

ADDENDUM No. 2

RFP No. 23-17

STREET RESURFACING PROJECT – 2023 **Due: May 17, 2023, at 10:00 A.M. (local time)**

The information contained herein shall take precedence over the original documents and all previous addenda (if any) and is appended thereto. **This Addendum includes one hundred and sixty (160) pages and thirty-seven (37) plan sheets.**

The Proposer is to acknowledge receipt of this Addendum No. 1, including all attachments in its Proposal by so indicating in the proposal that the addendum has been received. Proposals submitted without acknowledgement of receipt of this addendum may be considered non-conforming.

The following forms provided within the RFP Document should be included in submitted proposal:

- Attachment D - Prevailing Wage Declaration of Compliance
- Attachment E - Living Wage Declaration of Compliance
- Attachment G - Vendor Conflict of Interest Disclosure Form
- Attachment H - Non-Discrimination Declaration of Compliance

Proposals that fail to provide these completed forms listed above upon proposal opening may be rejected as non-responsive and may not be considered for award.

I. CORRECTIONS/ADDITIONS/DELETIONS

Changes to the RFP documents which are outlined below are referenced to a page or Section in which they appear conspicuously. Offerors are to take note in its review of the documents and include these changes as they may affect work or details in other areas not specifically referenced here.

Section/Page(s)	Change
Replace Pages 15-19 with addendum pages 4-8	The bid form has been amended to reflect item changes and one item removal; replaced HMA, 4EL with HMA LVSP; replaced HMA, Wedging, 4EL with HMA, Wedging, LVSP; removed Item _Monument Box, Adj. from bid form.
Detailed Specifications	Detailed Specification for Project Schedule was updated. Revised Contractor shall not have more than 3 operations occurring simultaneously at all locations. Revised liquidated damages.
Detailed Specification	Inserted Detailed Specification(s) for: Project Supervision; Debris or Materials in Traffic Lanes; High Visibility Clothing; Temporary Traffic Control Materials; Hot Mix Asphalt (HMA) Application Estimate; Construction Staging Areas; Open To Traffic; Force Account business Taxes; Force Account Mark-Up for Bond Premium, Insurance and Payroll Taxes; Delay Costs; Non-Compliance with Soil Erosion and Sedimentation Control

Requirements; Erosion Control, Inlet Protection, Fabric Drop; Aggregate Base Course; Wrapping Culvert and Storm Sewer Joints; Culvert and Sewer Bedding and Backfill; Sampling Asphalt Binder on Local Agency Projects; Recycled Hot Mix Asphalt Mixture on Local Agency Projects; Marshall Hot Mix Asphalt Mixture; Acceptance of Hot Mix Asphalt Mixture on Local Agency Projects; Permanent Acceptance for Jointed Plain Concrete Pavement; Curing Concrete Pavement Surfaces; Quality Control Acceptance of Portland Cement Concrete (for Local Agency Projects Only); Permanent Pavement Markings; Fluorescent Plastic Drum; Fluorescent 42 inch Channelizing Device; Traffic Control Quality and Compliance; Price Adjustment for Authorized Extensions of Time; Payment for Minor Traffic Device and Traffic Regulator Control; Sign, Type B, Temporary, Prismatic, Special; Delineation of Portable Changeable Message Sign; Supports for Temporary Signs; Security of Portable Changeable Message Signs; Measurement and Payment of Temporary Traffic Control Devices; Type III Barricades; Temporary Pavement Marking Revisions; Payment of Temporary Traffic Control Devices; Use of 42-inch Channelizing Devices; Industrial By-Products and Beneficial Re-Use; Crushed Concrete Near Water; Alternative Granular Materials for Fill and Subbase; Superpave Final Aggregate Blend requirements; Steel Reinforcement Revisions; Physical Requirements for Geotextiles; Hot-Pour Sealant for Construction; Permanent Pavement Marking Materials; Recycled Hot Mix Asphalt Mixture on Local Agency Projects; 1040A Cover Storm and Water; 1040AGS Sanitary.

Wage Decision

Highway wage decision in effect for the project are include with the addendum.

Plans

Sheet(s) 1-37	Changed date to match addendum 2 publish date. Update page numbers.
Sheet 1	Updated area maps to show Exmoor Rd., Newcastle Rd., Edinborough Rd., Stone Haven St., Mills Ct. and Olivia Ave. Added Exmoor Rd., Newcastle Rd., Edinborough Rd., Stone Haven St. and Mills Ct., Olivia Ave. and Granger Ave. to the sheet index.
Sheet 2	Changed sheet title name block from Notes & Miscellaneous Quantities to General Notes.
Sheet 13	Update Pavt Mrkg Ovly Cold Plastic, Speed Hump Chevron, White to Pavt Mrkg, Polyurea, Speed Hump Chevron, White.
Sheet(s) 13 -37	Added construction scope and sequencing description. Updated item quantity tables per sheet.
Sheet(s) 32-37	Added the missing coversheets for the streets for Exmoor Rd., Newcastle Rd., Mills Ct., Stonehaven Rd., Edinborough Rd. and Olivia Ave. The coversheets include estimated quantities.

II. QUESTIONS AND ANSWERS

The following Questions have been received by the City. Responses are being provided in accordance with the terms of the RFP. Respondents are directed to take note in its review of the documents of the following questions and City responses as they affect work or details in other areas not specifically referenced here.

Question 1: The plan sheets say to LVSP, the bid proposal form says to use 4EL, the asphalt specs are incomplete, the asphalt mix for the shared use path is not identified, and we do not know which asphalt binder the city has chosen to use for their mixes.

Answer 1: Reference Section I. Corrections/Additions/Deletions above.

Question 2: Does the above project currently have an estimated mobilization and completion date?

Answer 2: Mobilization is covered in general conditions. The completion date is stated in the Progress Schedule.

Question 3: After reviewing the bidding documents for this project, I noticed the following sections are missing from the table of contents.

- Sheet 07 - Concrete Speed Hump Detail
- Sheet 08 - Concrete Speed Table Detail
- Sheet 09 - Concrete Raise Cross Walk Detail
- Sheet 10 - Concrete Raise Intersection Detail
- Sheet 32 Exmoor Rd
- Sheet 33 Newcastle Rd
- Sheet 34 Mills Ct
- Sheet 35 Stonehaven
- Sheet 36 Edenborough Rd

Were these sections intentionally included in the specifications?

Answer 3: The sections were added. Reference updated plan sheets which are part of this addendum.

Company:

Project: 2023 Annual Resurfacing Program

File #: 2023-004

RFP#: 23-17

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated</u>		<u>Total Price</u>
			<u>Quantity</u>	<u>Unit Price</u>	
1047051	_Certified Payroll Compliance and Reporting	LS	1.00	\$ _____	\$ _____
1047051	_General Conditions, Max \$300,000.00	LS	1.00	\$ _____	\$ _____
1047051	_Project Supervision, Max \$50,000.00	LS	1.00	\$ _____	\$ _____
2020004	Tree, Rem, 6 inch to 18 inch	Ea	1.00	\$ _____	\$ _____
2030011	Dr Structure, Rem	Ea	100.00	\$ _____	\$ _____
2030015	Sewer, Rem, Less than 24 inch	Ft	960.00	_____	_____
2040005	Pavt, Rem	Syd	10.00	\$ _____	\$ _____
2047001	_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	9,870.00	\$ _____	\$ _____
2047001	_Exploratory Excavation, Vertical	Ft	3.00	\$ _____	\$ _____
2047011	_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	817.45	\$ _____	\$ _____
2050010	Embankment, CIP	Cyd	100.00	\$ _____	\$ _____
2050023	Granular Material, CI II	Cyd	30.00	\$ _____	\$ _____
2057011	_Grading, Driveway Approach	Syd	803.88	\$ _____	\$ _____
2057011	_Grading, Sidewalk	Syd	84.66	\$ _____	\$ _____
2057011	_Grading, Sidewalk Ramp	Syd	119.17	\$ _____	\$ _____
2057011	_Machine Grading, Special	Syd	72,459.48	\$ _____	\$ _____
2057021	_Undercutting, Type IIA	Cyd	7,908.26	\$ _____	\$ _____
2057021	_Undercutting, Type IIB	Cyd	30.00	\$ _____	\$ _____
2057021	_Undercutting, Type IIC	Cyd	75.00	\$ _____	\$ _____
2080036	Erosion Control, Silt Fence	Ft	420.00	\$ _____	\$ _____
2087050	Erosion Control, Inlet Protection, Fabric Drop	Ea	170.00	\$ _____	\$ _____
3010002	Subbase, CIP	Cyd	80.00	\$ _____	\$ _____
3027011	_Aggregate Base, 6 inch, Modified	Syd	150.00	\$ _____	\$ _____
3027031	_Aggregate Base, Modified	Ton	100.00	\$ _____	\$ _____

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			<u>Quantity</u>	<u>Unit Price</u>	
3057011	_Shared use Path, HMA Base Crushing and Shaping	Syd	358.00	\$ _____	\$ _____
3077021	_Trenching, Modified	Cyd	10.00	\$ _____	\$ _____
3080010	Geotextile, Stabilization	Syd	316.00	\$ _____	\$ _____
3087011	_Structural Geogrid (Base)	Syd	250.00	\$ _____	\$ _____
4020987	Sewer, CI IV, 12 inch, Tr Det B	Ft	900.00	\$ _____	\$ _____
4021260	Trench Undercut and Backfill	Cyd	100.00	\$ _____	\$ _____
4030200	Dr Structure, 24 inch dia	Ea	97.00	\$ _____	\$ _____
4030210	Dr Structure, 48 inch dia	Ea	1.00	\$ _____	\$ _____
4030280	Dr Structure, Adj, Add Depth	Ft	5.00	\$ _____	\$ _____
4037050	_Structure Covers	Ea	70.00	\$ _____	\$ _____
4037050	_Dr Structure Cover, Type K, Modified	Ea	117.00	\$ _____	\$ _____
4037050	_Adjust Structure Cover	Ea	252.00	\$ _____	\$ _____
4037050	_Dr Structure, Point	Ea	1.00	\$ _____	\$ _____
4037050	_Structure, Reconstruct	Ea	2.00	\$ _____	\$ _____
4047001	_Underdrain, Subgrade, 6 inch, Special	Ft	980.00	\$ _____	\$ _____
5010001	Pavt, Cleaning	LS	1.00	\$ _____	\$ _____
5010002	Cold Milling HMA Surface	Syd	69,794.96	\$ _____	\$ _____
5010005	HMA Surface, Rem	Syd	3,694.55	\$ _____	\$ _____
5010025	Hand Patching	Ton	100.00	\$ _____	\$ _____
5010703	HMA, LVSP	Ton	16,354.70	\$ _____	\$ _____
5017011	_Cold Milling for Concrete Curb and Gutter Reveal	Syd	771.67	\$ _____	\$ _____
5017011	_Cold Milling HMA Surface, Driveway Approach	Syd	115.00	\$ _____	\$ _____
5017011	_Cold Milling HMA Surface, Modified	Syd	300.00	\$ _____	\$ _____
5017031	_Hand Patching, Modified	Ton	25.00	\$ _____	\$ _____

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			<u>Quantity</u>	<u>Unit Price</u>	
5017031	_HMA, Wedging, 36A	Ton	16.00	\$ _____	\$ _____
6020054	Conc Pavt, Misc, Nonreinf, 8 inch	Syd	12.44	\$ _____	\$ _____
6027011	_Raised Crosswalk, Conc	Syd	273.00	\$ _____	\$ _____
6027011	_Raised Intersection, Conc	Syd	560.00	\$ _____	\$ _____
6027011	_Speed Hump, Conc	Syd	162.00	\$ _____	\$ _____
6027011	_Speed Table, Conc	Syd	70.00	\$ _____	\$ _____
6027021	_Flowable Fill	Cyd	202.92	\$ _____	\$ _____
8017011	_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	527.44	\$ _____	\$ _____
8017011	_Driveway, Nonreinf Conc, 8 inch, Modified	Syd	46.44	\$ _____	\$ _____
8027001	_Curb and Gutter, Conc, Barrier	Ft	5,977.50	\$ _____	\$ _____
8027001	_Curb and Gutter, Conc, Mountable	Ft	255.00	\$ _____	\$ _____
8027001	_Driveway Opening, Conc, Det M, Modified	Ft	3,560.00	\$ _____	\$ _____
8037001	_Detectable Warning Surface, Modified	Ft	454.00	\$ _____	\$ _____
8037010	_Sidewalk Ramp, Conc, 6 inch, Modified	Sft	592.17	\$ _____	\$ _____
8037010	_Sidewalk Retaining Wall, Integral, 6 inch to 18 inch Height	Sft	150.00	\$ _____	\$ _____
8037010	_Sidewalk Retaining Wall, Integral, 18 inch to 30 inch Height	Sft	50.00	\$ _____	\$ _____
8037010	_Sidewalk, Conc or Clay Brick Pavers, Rem and Reinstall	Sft	48.00	\$ _____	\$ _____
8037010	_Sidewalk, Conc, 4 inch, Modified	Sft	381.00	\$ _____	\$ _____
8037010	_Sidewalk, Conc, 6 inch, Modified	Sft	328.50	\$ _____	\$ _____
8037010	_Sidewalk, Conc, 8 inch, Modified	Sft	100.00	_____	_____
8060010	Shared use Path, Aggregate	Ton	25.00	\$ _____	\$ _____
8060040	Shared use Path, HMA	Ton	350.00	\$ _____	\$ _____
8067011	_Shared use Path, Grading, Modified	Syd	700.00	\$ _____	\$ _____
8067031	_Shared use Path, HMA, Wedging	Ton	100.00	\$ _____	\$ _____

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			<u>Quantity</u>		
8110214	Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	1,414.00	\$ _____	\$ _____
8110218	Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	968.00	\$ _____	\$ _____
8110321	Rem Curing Compound, for Spec Mrkg	Sft	1,008.00	\$ _____	\$ _____
8117050	_Pavt Mrkg, Polyurea, Speed Hump Chevron, White	Ea	28.00	\$ _____	\$ _____
8120012	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	82.00	\$ _____	\$ _____
8120013	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	82.00	\$ _____	\$ _____
8120035	Channelizing Device, 42 inch, Fluorescent, Furn	Ea	160.00	\$ _____	\$ _____
8120036	Channelizing Device, 42 inch, Fluorescent, Oper	Ea	160.00	\$ _____	\$ _____
8120140	Lighted Arrow, Type C, Furn	Ea	3.00	\$ _____	\$ _____
8120141	Lighted Arrow, Type C, Oper	Ea	3.00	\$ _____	\$ _____
8120252	Plastic Drum, Fluorescent, Furn	Ea	862.00	\$ _____	\$ _____
8120253	Plastic Drum, Fluorescent, Oper	Ea	862.00	\$ _____	\$ _____
8120310	Sign Cover	Ea	12.00	\$ _____	\$ _____
8120330	Sign, Portable, Changeable Message, Furn	Ea	4.00	\$ _____	\$ _____
8120331	Sign, Portable, Changeable Message, Oper	Ea	7.00	\$ _____	\$ _____
8120350	Sign, Type B, Temp, Prismatic, Furn	Sft	3,092.00	\$ _____	\$ _____
8120351	Sign, Type B, Temp, Prismatic, Oper	Sft	3,092.00	\$ _____	\$ _____
8120352	Sign, Type B, Temp, Prismatic, Special, Furn	Sft	768.00	\$ _____	\$ _____
8120353	Sign, Type B, Temp, Prismatic, Special, Oper	Sft	768.00	\$ _____	\$ _____
8120370	Traf Regulator Control	LS	1.00	\$ _____	\$ _____
8127050	_Pedestrian Type II Barricade, Temp	Ea	77.00	\$ _____	\$ _____
8127050	_Pedestrian Type II Channelizer, Temp	Ea	5.00	\$ _____	\$ _____
8127050	_Temporary No Parking Sign	Ea	644.00	\$ _____	\$ _____
8127051	_Minor Traffic Control, Max \$135,000.00	LS	1.00	\$ _____	\$ _____

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			<u>Quantity</u>	<u>Unit Price</u>	
8157060	_Irrigation System, Protection and Maintenance, Allowance	DLR	15,000.00	\$ 1.00	\$ 15,000
8167011	_Slope Restoration	Syd	4,055.98	\$	\$
8230421	Water Shutoff, Adj, Case 1	Ea	3.00	\$	\$
8507050	_HMA Surface, Around Structure Cover, Rem	Ea	7.00	\$	\$

TOTAL BID AMOUNT

\$ _____

Complete the entirety of work under this Contract in accordance with, and subject to, the scheduling requirements as outlined below, and all other requirements of the Contract Documents.

Organize, coordinate and diligently execute the work at the locations shown in the plans included herein. It is the City's expectation that approximately 75% of the work will be completed in 2023, with the balance of the work to be completed in 2024. A specific calendar/schedule for completing this work will be negotiated with the Contractor upon award of the project.

For the purpose of this Contract, the "Start of Work" definition is the date when the temporary "No-Parking" signs become effective and all required temporary traffic control and SESC measures are in place and ready for use. The City will consider individual streets phases to be open to traffic once they have met the "Approved for Traffic" requirements defined in subsection 107.21 of the Michigan Department of Transportation 2012 Standard Specifications for Construction. Within 10 days of opening the street to traffic the Contractor shall complete all work, which includes, but is not limited to, placement of permanent pavement markings, minor slope restoration, clean-up, street cleaning, underground utility and utility structure cleaning (minor street phases), the removal of all temporary traffic control and SESC devices and temporary "No Parking" signs, and other necessary work and as directed by the Engineer. Failure to complete work in a timely manner may result in the suspension of active project work or a delay in starting subsequently planned project work.

No work shall be performed during Holiday weekends as follows, unless approved in advance by the Engineer:

- Fourth of July, from 3:00 p.m. Monday July 3, 2023, through 7:00 a.m. Wednesday July 5, 2023
- Labor Day, from 3:00 p.m. Friday September 1, 2023 through 7:00 a.m. Tuesday September 5, 2023

No work shall be performed during University of Michigan home football games (see following dates) unless approved in advance by the Engineer:

- September 2, 2023
- September 9, 2023
- September 16, 2023
- September 23, 2023
- October 14, 2023
- November 4, 2023
- November 25, 2023

The Engineer shall limit the Contractor's work operations to the number of streets that, in its opinion, is reasonable to allow for proper and thorough inspection, and to limit traffic control and/or safety concerns. The Contractor shall not have more than three (3) operations occurring simultaneously at all locations during any work day.

The City expects to furnish the Contractor with two (2) copies of the Contract, for its execution, on or before **May 23, 2023**. The Contractor shall properly execute both copies of the Contract and return them, with the required Bonds and Insurance documentation, to the City by **June 6, 2023**. The Contractor shall not begin the work before the applicable date(s) as described herein without approval from the Project Engineer, and in no case before the receipt of the fully executed Contract and Notice to Proceed.

By no later than **June 9, 2023**, the Contractor shall submit a detailed schedule of work (progress schedule) for the Engineer's review and approval. The progress schedule must fully comply with the scheduling requirements contained on the Schedule of Streets. The schedule shall clearly indicate, in detail, the start and the finish date of each work task on each street. The Contractor shall update the approved progress schedule each week and present it to the Engineer at the weekly progress meeting and must consult with the Engineer for review and approval of any proposed deviations from the most current, approved, schedule.

The Contractor shall begin the work of this project on or after **June 20, 2023**, and only upon receipt of the fully executed Contract, Notice to Proceed and approved Progress Schedule. The City will consider granting appropriate time extensions should delays prevent the Contractor from starting work on this date.

Complete the entire project on or before **June 30, 2024**. Completion of the project means all locations shown on the Schedule of Streets are complete and ready for use in accordance with the "Completion of Work" as defined above.

Failure to open to traffic or complete all work as specified within the times specified, including time extensions granted thereto as determined by the Engineer, shall entitle the City to deduct dollar amounts specified in the Schedule of Streets as "Liquidated Damages" from the payments due the Contractor. **Liquidated damages of \$1,500 per calendar day will be assessed per street for any streets not completed within 40 calendar days of the Start of Work date.**

Time is of the essence in the performance of the work of this contract. The Contractor is expected to mobilize sufficient personnel and equipment and work throughout all authorized hours to complete the project by the intermediate (location specific) and final completion dates. Should the Contractor demonstrate that they must work on some Sundays in order to maintain the project schedule, they may do so between the hours of 9:00 a.m. and 5:00 p.m. with prior approval from the City. There will be no additional compensation due to the Contractor for work performed on Sundays. Any requests to work Sundays must be made to the Engineer no later than the prior Thursday.

The Engineer may delay or stop the work due to threatening weather conditions. No compensation shall be due the Contractor for unused materials or downtime due to rain, or the threat of rain. The Contractor is solely responsible for repairing all damages to the work and to the site, including any City infrastructure, and any adjacent properties resulting from its decision to work in the rain.

The Contractor shall not work in the dark except as approved by the Engineer and shall provide lighting for night work as detailed elsewhere in this contract. The Engineer may stop the work or may require the Contractor to defer certain work to another day, if, in the Engineer's opinion, the Contractor cannot be complete the work within the remaining daylight hours, or if inadequate daylight is present to properly perform or inspect the work. No compensation shall be due to the

Contractor for unused materials or downtime, when the Engineer directs work stoppage for reasons due to darkness and/or inadequate remaining daylight. The Contractor is solely responsible for repairing all damages to the work and to the site, including any City infrastructure, and any adjacent properties, which result from working in the dark.

Assessment of Liquidated Damages will occur until the required work is complete in the current construction season. If, with the Engineer's approval, work on any individual street extends beyond seasonal limitations, the assessment of Liquidated Damages will discontinue until the work resumes in the following construction season.

If the construction contract is not complete within the specified period(s) including any extensions of time granted thereto, at the sole discretion of the City of Ann Arbor it may terminate the Contract. Should this occur no additional compensation will be due to the Contractor, and the Contractor may be forbidden to bid on future City of Ann Arbor projects for a period of at least three (3) years. If the Engineer elects to terminate the Contract, payment for contract items with a Lump Sum unit price will be up to a maximum amount equal to the percentage of the contract work that is complete at the time of termination.

The City's decision to delete streets, add streets, change the construction limits on streets, or, the City's contribution to a delay of the construction on any one street shall not entitle the Contractor to receive additional compensation for work on any other street(s) or phase(s), nor shall it relieve the Contractor of any responsibilities for completion of work on any other street(s) or phase(s).

Include any/all efforts to organize, coordinate, and schedule the project work in the contract unit price bid for the pay item **General Conditions, Max \$_____**.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROJECT SUPERVISION

AA:DAD

1 of 4

03/04/20

a. Description. The Contractor shall provide supervision in accordance with the City of Ann Arbor Standard Specifications, subsections 104.07 and 107.15 of the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, and as described herein.

The Contractor shall designate a full-time Project Supervisor to act as the Contractor's agent/representative, and to be responsible for scheduling and coordination of all subcontractors, suppliers, other governmental agencies, and all public and private utility companies.

The Project Supervisor shall not be an active crewmember of the Contractor, shall not be an active member or employee of any subcontractor's work force, and shall not perform general or specialized labor tasks. The Project Supervisor shall be a full-time employee of the General Contractor and shall have all needed authority to make binding decisions on behalf of the Contractor in all matters pertaining to performance and execution of the work of the project.

The Project Supervisor shall work exclusively on this project and shall put forth his/her full effort into the organization and coordination of the work of this project.

One week prior to the pre-construction meeting, the Contractor shall designate a proposed Project Supervisor by name, and shall furnish the Engineer with a current, thorough, detailed summary of the proposed Project Supervisor's work history, outlining all previous supervisory experience on projects of a similar size and nature. The detailed work history shall include personal and professional references (names and phone numbers) of persons (previous owners or agents) who can attest to the qualifications and work history of the proposed Project Supervisor. Proposed candidates for Project Supervisor shall have a demonstrated ability to work harmoniously with the Engineer, the City, the public, subcontractors, and all other parties typically involved with work of this nature. The Engineer will have the authority to reject a proposed Project Supervisor whom he/she considers unqualified.

The Project Supervisor shall be available 24 hours-per-day to provide proper supervision, coordination and scheduling of the project for the duration of the Contract. The Contractor shall furnish the City with telephone numbers of the Project Supervisor in order to provide 24 hour-per-day access during business and non-business hours, including weekends and holidays.

The Project Supervisor shall be equipped by the Contractor with a "smart" mobile telephone with "data" and "text" capabilities to provide the City with 24 hour-per-day access to him/her during daily construction activities, during transit to and from the construction site, and during all non-business hours including weekends and holidays.

The Project Supervisor shall be equipped with assistants as necessary to provide project supervision as specified herein, and in accordance with the Contract.

1. Duties and Responsibilities. The Project Supervisor shall work harmoniously with the Engineer, the City, the public, subcontractors, and all other parties typically involved with work of this nature.

The Project Supervisor shall have a thorough, detailed understanding and working knowledge of all construction practices and methods specified elsewhere herein, as well as the handling, placement, testing and inspection of aggregates, aggregate products, bituminous concrete, Portland cement concrete materials, and other such materials and products related to the work of this project.

The Project Supervisor shall be responsible for all of the work of all of the Contractor, subcontractor and/or supplier work forces.

The Project Supervisor shall be responsible for proper and adequate maintenance (emissions, safety, and general operation) of all of the Contractor's, subcontractors' and suppliers' equipment and vehicles. The Project Supervisor shall make all needed diligent and good faith efforts to ensure that all equipment utilized in the performance of the work is properly maintained, safe, and complies with all legal and environmental requirements of the work as set forth in section 107.15 of the MDOT 2012 Standard Specifications for Construction.

The Project Supervisor shall be responsible for the legal, proper and safe parking/storage of all of the Contractor, subcontractor and/or supplier equipment, work vehicles, and employee's vehicles.

The Project Supervisor shall schedule and coordinate the work of all parties involved in the project, including utility companies, testing agencies, governmental agencies, all City departments (such as Utilities and Transportation), and City inspectors.

The Project Supervisor shall coordinate and schedule the work of any independent survey crews retained by the Engineer or City to witness and reset existing and new geographic/benchmark monuments. Failure to have existing monuments witnessed and reset may result in delays to the Contractor's work. Costs for such delays will be the Contractor's sole responsibility. The Project Supervisor shall also schedule and complete all needed survey request forms required to schedule the services of survey personnel to properly layout all elements of the project work in accordance with the City of Ann Arbor Public Services Area Standard Specifications and the MDOT 2012 Standard Specifications for Construction.

The Project Supervisor shall coordinate, and schedule inspection performed by the City and Consultants (including material testing firms) in a timely manner, to assure proper and timely testing and inspection of the work.

The Project Supervisor shall submit to the Engineer, an updated, detailed schedule of the proposed work on a weekly basis, and an update of all proposed changes on a daily basis.

The Project Supervisor and all subcontractors shall attend a weekly progress meeting chaired by the Engineer to discuss the work. Upon the completion of each meeting, the Engineer shall prepare and distribute, to all present, a written summary of the meeting's

minutes. Those in attendance shall review the minutes and, if necessary, comment on any deficiencies or errors prior to or at the next scheduled progress meeting.

2. **Additional Performance Requirements.** If, in the sole opinion of the Engineer, the Project Supervisor is not adequately performing the duties as outlined in this detailed specification, the following system of notices will be given to the contractor with the associated penalties:

First Notice – The Engineer will issue a warning in writing to the Contractor detailing the deficiencies in the Project Supervision. The Contractor must respond within seven (7) calendar days in writing with a plan to correct the stated deficiencies. Failure to respond within seven (7) calendar days will result in the issuing of a second notice.

Second Notice – The Engineer will issue a second warning in writing to the Contractor further detailing the deficiencies in the Project Supervision. The Engineer will deduct 10%, or \$10,000, whichever is greater, from the original contract amount bid for the Project Supervision contract item of work. The Contractor must respond within seven (7) calendar days in writing with a plan to correct the stated deficiencies. Failure to respond within seven (7) calendar days will result in the issuing of a third notice. At this time, the Engineer reserves the right to meet with personnel with the necessary authority within the Contractor's organization to discuss the deficiencies in the Project Supervision.

Third Notice – The Engineer will issue a third notice in writing to the Contractor further detailing the deficiencies in the Project Supervision. The Engineer will deduct 25%, or \$25,000, whichever is greater, from the original contract amount bid for the Project Supervision contract item of work, and the Contractor will remove and replace the Project Supervisor immediately with another individual approved by the Engineer.

Should, in the sole opinion of the Engineer, the Project Supervisor fail to perform his/her duties and responsibilities as described herein to such a degree that the successful completion of the project is put in jeopardy, the above system of notices may be foregone, and the Contractor shall immediately replace the Project Supervisor upon receipt of written notice. The Engineer, in its determination, will consider failure by the Contractor to provide adequate project supervision as a basis to suspend work without the extension of contract time or additional compensation.

If the original Project Supervision contract amount is insufficient to cover said deductions, the Engineer will reduce Project Supervision contract amount to zero and will generate a contract modification to assess a penalty to cover the difference between the Project Supervision contract amount and the total amount of the deduction(s). The expectation is that the Project Supervision contract amount will be sufficient to cover any deductions.

b. Materials. None Specified.

c. Construction. Not specified.

d. Measurement and Payment. Measure and pay for the completed work, as described, at the contract unit price using the following pay item:

Pay Item

Pay Unit

Project Supervision, Max \$___Lump Sum

Measure **Project Supervision, Max \$___** by the unit lump sum and pay for it at the contract unit price, which price includes costs for all labor, equipment and materials necessary to complete the work.

Measurement will be on a pro rata basis at the time of each progress payment and based on the ratio of work completed during the payment period and the total contract amount. When all of the work of this Contract is complete, the measurement of this item shall be 1.0 Lump Sum, less any deductions incurred for inadequate performance as described herein. This amount will not increase for any reason, including extensions of time, extras, and/or additional work.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DEBRIS OR MATERIALS IN TRAFFIC LANES

CFS:BRZ

1 of 1

APPR:EMB:DAJ:01-10-08
FHWA:APPR:06-01-11

Delete Subsection 104.07.B.2 on page 36 of the Standard Specifications for Construction, in its entirety and replace it with the following:

2. **Construction Safety Program.** Before beginning work on the project, the Contractor must submit a written "Construction Safety Program" that outlines the plan and procedures for preventing and mitigating accidents and fires on the project and meeting all health and safety requirements of the contract. Also in the program include provisions for meeting the requirements of subsection 812.03 and details for the materials and equipment that will be used to prevent construction related debris or materials from entering the open lanes of traffic and what actions, including traffic control measures, will be taken to immediately and safely remove the debris or material from the roadway. The Contractor must meet with the Engineer to discuss the "Construction Safety Program" and to develop mutual understandings to govern the administration and enforcement of the program.

Replace the second sentence in the first paragraph of Subsection 104.07.C.3 on page 37 of the Standard Specifications for Construction with the following:

The Contractor is responsible, at the Contractor's expense, to provide the necessary materials and equipment to prevent construction related debris or materials from entering the open lanes of traffic. This includes protection of traffic controls, removal of spilled materials or debris from the roadbed or drainage courses, and repair of damaged facilities necessary for public travel and safety.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
HIGH VISIBILITY CLOTHING

SSA:JDG

1 of 1

APPR:MWB:CRB:05-25-18
FHWA:APPR:06-01-18

Add the following, to the end, of subsection 104.07.B, Safety and Health Requirements, on page 36 of the Standard Specification for Construction:

4. **Worker Visibility.** All workers must wear high-visibility safety apparel as specified in the MMUTCD.

Costs incurred to comply with this requirement will be the responsibility of the Contractor.

Revise the second paragraph of subsection 812.03.G.8, on page 619 of the Standard Specification for Construction to read:

Equip traffic regulators with the following:

- a. High-visibility safety apparel as specified in the MMUTCD;
- b. "Stop/Slow" or "Stop/Stop" sign paddles; and
- c. A two-way radio system and a standby back-up system, if traffic regulators are not visible to each other.

Delete the subsection 922.11.B, on page 944 of the Standard Specification for Construction in its entirety and replace with the following:

- B. **Traffic Regulator's High-Visibility Safety Apparel.** Traffic regulators must wear high-visibility safety apparel as specified in the MMUTCD.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TEMPORARY TRAFFIC CONTROL MATERIALS

OFS:RAL

1 of 1

APPR:CRB:JFS:11-21-16
FHWA:APPR:11-22-16

Add the following subsection to subsection 105.01.B, on page 48 of the Standard Specifications for Construction:

1. Temporary traffic control materials that are covered in the Materials Quality Assurance Procedures Manual, section 4.10 *Temporary Traffic Control Certification and Acceptance Procedure*, are not required to be listed in the *Materials Source List*.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONSTRUCTION STAGING AREAS

DES:LFS

1 of 1

APPR:JJG:KAS:10-06-11
FHWA:APPR:10-11-11

Add the following subsection to section 107, on page 70 of the 2012 Standard Specifications for Construction:

107.22 Construction Staging Areas. The contractor must not use any public recreation area as a staging area, marshalling yard, storage facility, or for any other construction support unless it is defined in the contract.

Public recreation areas include: parks, trails, game areas, wildlife and waterfowl refuges, playgrounds, golf courses, athletic fields or similar areas which are publically owned by public school districts, local, state, or federal governments.

Any agreements negotiated between the Contractor and the owner of the public recreation area, before or after the award of the contract will not be considered valid by the Department.

If the Engineer determines the Contractor is in non-compliance with this subsection, penalties up to and including termination of the contract, in accordance with subsection 108.12, may be enacted as well as the immediate restoration of the public recreation area at the Contractor's cost.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
OPEN TO TRAFFIC

CFS:JJG

1 of 1

APPR:MB:DBP:07-07-17
FHWA:APPR:07-10-17

Delete subsection 107.21, on page 69 of the Standard Specifications for Construction, in its entirety and replace with the following:

107.21. Open to Traffic. The Contractor must not open the project or sections thereof to traffic until approved by the Engineer. Whenever the project or section thereof is in a condition suitable for traffic, the Engineer will determine if it is approved for traffic before project completion and the Contractor must open the project or section thereof to traffic as directed by the Engineer. To determine whether the project or section thereof is approved for traffic, the Engineer will verify that the surfacing material, shoulders, guardrails, signs, and other appurtenances are completed as required by the contract. The Engineer's approval of the project or section thereof for traffic does not constitute partial or final acceptance of the project or any part of it, or a waiver of any provision of the contract. The Contractor is not responsible for the costs of maintaining the section of the project opened for traffic.

If the Engineer approves the entire project or any section of it for traffic and the Contractor opens it to traffic before final acceptance and final payment, the Contractor must perform the remainder of the work in a manner that causes the least obstruction to traffic. The Contractor must make provisions for the safety of traffic as required by the contract. Legal weight restrictions, established by 1949 PA 300 as amended, local ordinances, or legal posting, apply to sections of the project opened to traffic.

Before the seasonal suspension, the Engineer will determine the work the Contractor must complete to bring the project to an acceptable condition for traffic and winter maintenance, including necessary traffic and erosion control measures. Until the Contractor completes this work, the Engineer will not designate the project as approved for traffic. On sections of the project opened to traffic, the Contractor must correct damage due to defective materials, to faulty workmanship, to operations of the Contractor, and to natural causes (except as provided in subsection 107.11 of the Standard Specifications for Construction), at no additional cost to the Department.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
FORCE ACCOUNT BUSINESS TAXES

CFS:RJC

1 of 1

APPR:JJG:JDM:04-14-15
FHWA:APPR:04-17-15

Delete subsection 109.05.D.8, on page 101 of the 2012 Standard Specifications for Construction in its entirety.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**FORCE ACCOUNT MARK-UP FOR BOND PREMIUM, INSURANCE AND PAYROLL
TAXES**

CFS:JJG

1 of 1

APPR:LFS:MB:08-12-16

FHWA:APPR:08-18-16

Delete subsection 109.05.D.4, on page 97 of the Standard Specifications for Construction, in its entirety.

Delete the first paragraph of subsection 109.05.D.3, on page 96 of the Standard Specifications for Construction, in its entirety and replace with the following:

3. **Labor.** The Engineer will pay the Contractor an amount equal to the sum of the following labor costs, plus 55 percent of the sum (for road work) or 60 percent of the sum (for bridge work) to cover the costs of field and home office overhead, bond premium, insurance, payroll taxes and to provide for a reasonable profit.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DELAY COSTS

CFS:JJG

1 of 1

APPR:RJC:MB:02-22-17
FHWA:APPR:02-27-17

Delete subsections 109.05.E.1.a through 109.05.E.1.e, on page 102 of the Standard Specifications for Construction, in their entirety and replace with the following:

- a. Proof of cost of project staff salaries, wages, payroll taxes and insurance.
- b. Proof of escalated cost for labor, equipment, and material.
- c. Proof of material storage costs.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**NON-COMPLIANCE WITH SOIL EROSION AND SEDIMENTATION CONTROL
REQUIREMENTS**

CFS:DMG

1 of 2

APPR:TWK:HZ:06-13-17
FHWA:APPR:06-13-17

a. Description. This special provision establishes negative adjustments related to the failure to properly install and maintain soil erosion and sedimentation control (SESC) measures and the conditions under which these adjustments will be determined and applied. Nothing in this special provision modifies section 107 of the Standard Specifications for Construction.

Delays to the project as a result of the Contractor conducting corrective actions for SESC measures do not constitute a valid reason for an extension of time.

Ensure deficiencies with SESC measures are corrected in the time frame stated herein. For those deficiencies not corrected within the stated time frame, the Engineer will make a negative adjustment to the contract as stated herein.

b. Materials. None specified.

c. Construction. Install all temporary erosion control measures identified on the plans and as directed by the Engineer for an impacted area of the project prior to the start of any earth disturbance including, but not limited to, clearing, grading and excavation in that area. The Engineer will inspect these measures every 7 days and within 24 hours after a precipitation event that results in a discharge from the site. Deficiencies will be documented on the National Pollutant Discharge Elimination System and SESC Inspection Report (MDOT Form 1126).

If at any time during the project, including the time during the seasonal suspension, the Engineer documents deficient SESC measures, the Engineer will provide written notification with instructions for corrective action to the Contractor. The time frame for completion of these corrective actions will be specified in the notification and will be discussed with the Contractor as necessary.

Deficiencies are defined as one or more of the following:

1. Failure to install or construct SESC measures shown on the plans or as directed by the Engineer;
2. Failure to maintain the measures;
3. Failure to conduct earth change activities in a manner consistent with all applicable environmental permit requirements;
4. Failure to comply with the area limitations or the time limitations stated in subsections 208.03.A and 208.03.B, respectively, of the Standard Specifications for Construction.

SESC deficiencies are either emergency or non-emergency and the time frame for corrective action is determined accordingly. Sediment leaving the right-of-way or entering a drainage structure, waters of the state, or loss of support of the roadbed impacting public safety constitutes an emergency and corrective actions must be completed within 24 hours of notification, including weekends or holidays regardless of whether the Contractor is working or not. Non-emergency deficiencies must be corrected within 5 calendar days of notification.

For those emergency corrective actions not completed within 24 hours of notification, the Contractor will be assessed \$100.00 per hour for every hour the deficiency remains uncorrected after the initial 24 hours of notification. For those non-emergency corrective actions not completed within 5 calendar days, the Contractor will be assessed \$500.00 per day for every day, or part thereof, the deficiency remains uncorrected after the initial 5 days of notification.

If it is not practicable to complete the non-emergency corrective actions within 5 calendar days, the Contractor must document the reasons and propose a corrective action plan to the Engineer within 5 days of notification. The corrective action plan must contain the Contractor's course of action and a time frame for completion. If the reasons and the corrective action plan are acceptable to the Engineer, the Contractor will be allowed to proceed with the plan as proposed without incurring a negative adjustment. If the approved corrective action plan is not completed as proposed, the Contractor will be assessed \$1000.00 per calendar day for every day, or part thereof, the deficiency remains uncorrected after the time frame is exceeded in the approved corrective action plan.

Correct, in the timeframe stated herein, all other emergency or non-emergency SESC deficiencies documented anywhere else on the project during completion of the approved corrective action plan.

d. Measurement and Payment. The Engineer will make the necessary monetary adjustment to the contract amount based on the length of time the Contractor allows the deficiencies to remain uncorrected after the time allowance stated herein and as described to cover any costs incurred by the Department as a result of SESC violations.

All costs associated with corrective actions required due to the Contractor's failure to properly install or maintain SESC measures on this project will be borne by the Contractor.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
EROSION CONTROL, INLET PROTECTION, FABRIC DROP

CFS:DMG

1 of 2

APPR:TWK:CP:03-22-18
FHWA:APPR:03-29-18

a. Description. This work consists of furnishing and installing acceptable alternatives to inlet protection devices (devices) listed in the *Soil Erosion and Sedimentation Control Manual* when the pay item Erosion Control, Inlet Protection, Fabric Drop is included in the contract.

This work consists of providing all labor, equipment and materials necessary to furnish, install, maintain, dispose of collected material and remove devices at the locations shown on the plans or as directed by the Engineer.

b. Materials. The following devices are approved for use as acceptable alternatives:

1. Siltsack Type B, Regular Flow, by ACF Environmental, Inc.
2. Inlet Pro Sediment Bag, Standard Flow, with optional foam deflector by Hanes Geo Components.
3. Dandy Curb Bag, Dandy Bag, Dandy Curb Sack, Dandy Sack, or Dandy Pop by Dandy Products, Inc.
4. Basin Bag, Regular Flow by CSI Geoturf.
5. Flexstorm Catch-It and Flexstorm Pure used with filter bag types FX, FX+, FXO, PC, PC+ or IL.

Ensure provided devices are sized appropriately for the drainage structures in which they will be installed.

c. Construction. Install, maintain and remove the devices according to the manufacturer's guidelines. Remove material collected by the devices according to the manufacturer's guidelines or as directed by the Engineer.

Dispose of collected material in accordance with subsection 205.03.P of the Standard Specifications for Construction. Those devices that are no longer needed and have been removed may be reused elsewhere on the project as approved by the Engineer.

d. 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
Erosion Control, Inlet Protection, Fabric Drop.....	Each

Erosion Control, Inlet Protection, Fabric Drop will be paid for as one each for each time the alternate device listed herein is installed, maintained, and removed at a separate location within the project limits.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
AGGREGATE BASE COURSE

CFS:JAR

1 of 1

APPR:JAR:ACR:06-26-03
FHWA:APPR:04-19-11

a. Description. This provision modifies the layer thickness requirements for placing and compacting aggregate base course. Delete the 6-inch maximum layer restriction in section 302 of the Standard Specifications for Construction and replace with the following:

Construct a test strip at the start of base work. Compact all layers to a uniform depth of not more than 10 inches (+3/4 inch). If the total plan base thickness exceeds 10 inches, construct the base in layers of equal thickness. Secure the Engineer's approval for the method of placement and compaction before continuing.

If the accepted method is subsequently modified, the Engineer may require another test strip to confirm compliance with the specification. The Engineer may remove a portion of a layer when conducting density testing to assure the compaction requirements are being met full-depth.

b. Measurement and Payment. All additional costs associated with constructing aggregate base course according to this special provision will be included in the related Aggregate Base pay item.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
WRAPPING CULVERT AND STORM SEWER JOINTS

CFS:DMG

1 of 1

APPR:TRK:DBP:05-31-18
FHWA:APPR:05-31-18

Delete the last two sentences in the first paragraph of subsection 401.03.C, on page 185 of the Standard Specifications for Construction, and replace with the following:

Wrap all culvert pipe joints with geotextile blanket regardless of size and material type. The geotextile blanket must be at least 36 inches wide and installed on the pipe exterior, centered on the joint. The ends of the geotextile blanket must overlap by at least 12 inches.

Delete the last two sentences in the first paragraph of subsection 402.03.C, on page 195 of the Standard Specifications for Construction, and replace with the following:

Wrap all sewer pipe joints with geotextile blanket regardless of size and material type. The geotextile blanket must be at least 36 inches wide and installed on the pipe exterior, centered on the joint. The ends of the geotextile blanket must overlap by at least 12 inches.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CULVERT AND SEWER BEDDING AND BACKFILL

BRG:TRK

1 of 2

APPR:JJG:DMG:09-21-15
FHWA:APPR:10-05-15

Delete subsection 401.03.A, on page 185 of the Standard Specifications for Construction, in its entirety and replace with the following:

A. **Excavation and Culvert Bedding.** Excavate in accordance with subsection 206.03.A. Construct pipe culvert bedding using granular material Class IIIA. Bedding must be placed at least 4 inches thick and uncompacted for the entire length of the culvert. Where rock or hardpan is encountered, excavate the trench to at least 6 inches below the proposed bottom of the pipe; place bedding using uncompacted granular material Class IIIA.

Where unstable soil conditions, or obstructions other than rock, require excavation of the trench below the elevation detailed on the plans; undercut, backfill, and compact the trench as directed by the Engineer. Use 6A, 17A, or 34R aggregate as backfill material for undercutting due to unstable soil conditions. Use 34R aggregate for bedding material in lieu of granular material Class IIIA. Place the backfill up to approximately 4 inches below the proposed bottom of the pipe. This work will be paid for as trench undercut and backfill according to subsection 402.04.E.

Delete subsection 401.03.D, on page 187 of the Standard Specifications for Construction, in its entirety and replace with the following:

D. **Backfilling.** Backfill culverts, within the limits of the roadbed, with granular material Class II, III, or IIIA. Place backfill in layers no greater than 10 inches thick and compact each layer to at least 95 percent of the maximum unit weight.

Backfill culvert downspouts, culverts, or portions of culvert outside the limits of the roadbed with granular or suitable material as detailed on the plans. Compact thoroughly as directed by the Engineer. Maintain at least 3 feet of cover, unless trimming for final grade.

Backfill smooth lined CPE and CPV with granular material Class IIIA to at least 1 foot above the pipe and as shown on the plans. The Engineer may allow the use of Class II, Class III or suitable material as backfill above this elevation. Place the backfill in layers no greater than 10 inches. Place the backfill equally on opposite sides of the pipe at the same time.

Stake, or use other methods to maintain the line and grade of the culvert during the backfilling operation.

Delete the last sentence of the second paragraph of subsection 402.03.A, on page 195 of the Standard Specifications for Construction, and replace with the following:

Place bedding using uncompacted granular material Class IIIA to the required elevation.

Delete the third paragraph of subsection 402.03.A, on page 195 of the Standard Specifications for Construction, and replace with the following:

Where unstable soil conditions, or obstructions other than rock, require excavation of the trench below the elevation detailed on the plans; undercut, backfill, and compact the trench as directed by the Engineer. Use 6A, 17A, or 34R aggregate as backfill material for undercutting due to unstable soil conditions. Use 34R aggregate for bedding material in lieu of granular material Class IIIA. Place the backfill up to approximately 4 inches below the proposed bottom of the pipe. This work will be paid for as trench undercut and backfill according to subsection 402.04.E.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SAMPLING ASPHALT BINDER ON LOCAL AGENCY PROJECTS

CFS:MF

1 of 1

APPR:JAR:JTL:12-19-01
FHWA:CON. APPR:06-06-11

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*.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
RECYCLED HOT MIX ASPHALT MIXTURE ON LOCAL AGENCY PROJECTS

CFS:KPK

1 of 2

APPR:JWB:CJB:02-26-20
FHWA:APPR:03-02-20

Add the following subsection to subsection 501.02.A.2 of the Standard Specifications for Construction.

- c. **Reclaimed Asphalt Pavement (RAP) and Binder Grade Selection.** The method for determining the binder grade in HMA mixtures incorporating RAP is divided into three categories designated Tier 1, Tier 2 and Tier 3. Each tier has a range of percentages that represent the contribution of the RAP binder toward the total binder, by weight. The tiers identified below apply to HMA mixtures with the following exception: Superpave mixture types EML, EML High Stress, EMH, EMH High Stress, and EH, EH High Stress used as leveling or top course must be limited to a maximum of 27 percent RAP binder by weight of the total binder in the mixture.

Recycled materials may be used as a substitute for a portion of the new materials required to produce HMA mixtures in accordance with contract.

- **Tier 1 (0% to 17% RAP binder by weight of the total binder in the mixture).** No binder grade adjustment is made to compensate for the stiffness of the asphalt binder in RAP.
- **Tier 2 (18% to 27% RAP binder by weight of the total binder in the mixture).** For all mixtures no binder grade change will occur in Tier 2 for all shoulder and temporary road mixtures.

Ensure the required asphalt binder grade is at least one grade lower for the low temperature than the design binder grade required for the specified project mixture type. Lowering the high temperature of the binder one grade is optional. For example, if the design binder grade for the mixture type is PG 58-22, the required grade for the binder in the HMA mixture containing RAP would be a PG 52-28 or a PG 58-28.

For Marshall Mixes, no binder grade change will be required when Average Daily Traffic (ADT) is above 7000 or Commercial Average Daily Traffic (CADT) is above 700. No binder grade change will occur for EL mixtures used as leveling or top course.

The asphalt binder grade can also be selected using a blending chart for high and low temperatures. Supply the blending chart and the RAP test data used in determining the binder selection according to *AASHTO M323*.

- **Tier 3 ($\geq 28\%$ RAP binder by weight of the total binder in the mixture).** The binder grade for the asphalt binder is selected using a blending chart for high and low temperatures per *AASHTO M323*. Supply the blending chart and the RAP test data

used in determining the binder selection.

CITY OF ANN ARBOR
 DETAILED SPECIFICATION
 FOR
HOT MIX ASPHALT (HMA) APPLICATION ESTIMATE

AA:DAD

1 of 2

03/28/22

a. Description. Perform this work in accordance with the requirements of section 501 of the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, and as herein specified.

b. Materials.

PAY ITEM	HMA MIX	APPLICATION RATE	ESTIMATED THICKNESS	BINDER PERFORMANCE GRADE	AWI (min)
Shared Use Paths					
Shared use Path, HMA	5E1	385 lb/syd	3.5 inches	PG 64-28	220
Shared use Path, HMA, Wedging	5E1	Varies between 55 and 250 lb/syd	Varies between 0.5 and 2.25 inches	PG 64-28	N/A
Minor (Local) Streets					
(1) HMA, LVSP	LVSP (top)	220 lb/syd	2.0 inches	PG 58-28	220
	LVSP (leveling)	220 lb/syd	2.0 inches	PG 58-28	N/A
(2) HMA, LVSP	LVSP (top)	165 lb/syd or 220 lb/syd	1.5 inches or 2.0 inches	PG 58-28	220
(3) Hand Patching	LVSP	Varies maximum = 330 lb/syd	Varies - maximum = 3.0 inches	PG 58-28	N/A
(4) HMA Approach	LVSP	Place in two courses/lifts at 220 lb/syd	Varies maximum = 2.0 inches/lift	PG 58-28	220
HMA, Wedging, 36A	36A	Varies between 110 and 330 lb/syd	Varies between 1.0 and 3.0 inches	PG 58-28	220

- (1) Applies to streets where asphalt pavement removal and replacement is full depth.
- (2) Applies to streets where asphalt pavement removal and replacement is only partial depth. See construction scope and sequencing notes on subset cover sheets for removal and replacement depth/thickness on these streets.
- (3) The Contractor may use alternative top course E mixes for Hand Patching with approval by the Engineer. LVSP is approved for use only on minor (local) streets.
- (4) HMA Approach mix shall match that used for mainline paving (top course) on the street for which the adjacent side street approaches are being paved unless otherwise approved or directed by the Engineer.

Use the respective mixes indicated above on Major and Local streets unless the plans note otherwise or directed otherwise by the Engineer. Submit mix designs and obtain approval from the Engineer for all HMA mixtures proposed for use. For approach and hand patching work on Major Streets, use the same HMA mixture respectively as specified for the top course unless otherwise approved by the Engineer.

Use 3.5% as target air void content of for leveling courses, top courses and shoulders paved in the same operation as the leveling and top courses. Use 3% as a target air void content of for base courses and shoulders not paved in the same operation as the leveling and top courses. Use 3% as a target air void content of for shared use paths.

The Performance Grade asphalt binder range for the HMA mixture shall be as noted above. Apply Bond Coat material accordance with the requirements of the Detailed Specification for HMA Paving.

Apply bond coat at a uniform rate between 0.05 and 0.10 gallons per square yard as directed and approved by the Engineer. Bond Coat is not a separate pay item; the HMA items of work for which it applies include payment for furnishing and placing bond coat.

c. Measurement and Payment. Measure and pay for this work as provided elsewhere in the contract documents.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
RECYCLED HOT MIX ASPHALT MIXTURE ON LOCAL AGENCY PROJECTS

CFS:KPK

1 of 2

APPR:JWB:CJB:03-13-14
FHWA:APPR:03-13-14

Add the following subsection to subsection 501.02.A.2, on page 234 of the Standard Specifications for Construction.

- c. **Reclaimed Asphalt Pavement (RAP) and Binder Grade Selection.** The method for determining the binder grade in HMA mixtures incorporating RAP is divided into three categories designated Tier 1, Tier 2 and Tier 3. Each tier has a range of percentages that represent the contribution of the RAP binder toward the total binder, by weight. The tiers identified below apply to HMA mixtures with the following exception: Superpave mixture types E3, E3 High Stress, E10, E10 High Stress, E30, E30 High Stress, E50, and E50 High Stress used as leveling or top course must be limited to a maximum of 27 percent RAP binder by weight of the total binder in the mixture.

Recycled materials may be used as a substitute for a portion of the new materials required to produce HMA mixtures in accordance with contract.

- **Tier 1 (0% to 17% RAP binder by weight of the total binder in the mixture).** No binder grade adjustment is made to compensate for the stiffness of the asphalt binder in RAP.
- **Tier 2 (18% to 27% RAP binder by weight of the total binder in the mixture).** For all mixtures no binder grade change will occur in Tier 2 for all shoulder and temporary road mixtures.

The required asphalt binder grade must be at least one grade lower for the low temperature than the design binder grade required for the specified project mixture type. Lowering the high temperature of the binder one grade is optional. For example, if the design binder grade for the mixture type is PG 58-22, the required grade for the binder in the HMA mixture containing RAP would be a PG 52-28 or a PG 58-28.

For Marshall Mixes, no binder grade change will be required when Average Daily Traffic (ADT) is above 7000 or Commercial Average Daily Traffic (CADT) is above 700. No binder grade change will occur for LVSP, E03 and E1 mixtures used as leveling or top course.

The asphalt binder grade can also be selected using a blending chart for high and low temperatures. Supply the blending chart and the RAP test data used in determining the binder selection according to *AASHTO M 323*.

- **Tier 3 (\geq 28% RAP binder by weight of the total binder in the mixture).** The binder

grade for the asphalt binder is selected using a blending chart for high and low temperatures per *AASHTO M 323*. Supply the blending chart and the RAP test data used in determining the binder selection.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MARSHALL HOT MIX ASPHALT MIXTURE

CFS:JWB

1 of 2

APPR:EHR:CJB:09-25-06
FHWA:APPR:06-06-11

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 pavement (RAP) for a portion of the new material required to produce HMA mixture is allowed provided that the mixture is designed and produced to meet all criteria specified herein, unless otherwise prohibited. RAP materials must be in accordance with the standard specifications.

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	4.00	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 Ratio (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.					

Table 2: Aggregate Properties

	Mixture No.				
	2C	3C	4C	13A	36A
	Percent Passing Indicated Sieve or Property Limit				
1½ 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
⅜ inch	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	40	40	40	40
Sand Ratio (max) (d)	-	-	-	50	50
<p>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 clay-ironstone particles must not exceed 12.0 percent for aggregates used in base and leveling courses.</p> <p>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.</p> <p>c. Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50</p> <p>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.</p>					

MICHIGAN
DEPARTMENT OF TRANSPORTATION

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

CFS:KPK

1 of 7

APPR:CJB:JWB:07-05-16

FHWA:APPR:07-05-16

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
		# 30 Sieve	±4.0	±6.0	±6.0	±9.0
		# 200 Sieve	±1.0	±2.0	±2.0	±3.0
3	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 3.5 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. At the Pre-Production or Pre-Construction meeting, the Engineer 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 with one part being for initial testing and the other part being held for possible dispute resolution testing. 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, except, if the first test results show that the HMA mixture is in specification, the Engineer has the option of not testing additional samples from that day.

At the Pre-Production or Pre-Construction meeting, the Engineer and Contractor will collectively determine the test method for measuring asphalt content (AC) using *MTM 319 (Determination of Asphalt Content from Asphalt Paving Mixtures by the Ignition Method)* or *MTM 325 (Quantitative Extraction of Bitumen from HMA Paving Mixtures)*. Back calculation will not be allowed for determining asphalt content.

Ensure all labs performing local agency acceptance testing are qualified labs per the *HMA Production Manual* and participate in the MDOT round robin process, or they must be *AASHTO Materials Reference Laboratory (AMRL)* accredited for *AASHTO T 30* or *T 27*, and *AASHTO T 164* or *T 308*. Ensure on non-National Highway System (NHS) routes, Contractor labs are made available, and may be used, but they must be qualified labs as previously stated. Contractor labs may not be used on NHS routes. Material acceptance testing will be completed by the Engineer within 14 calendar days, except holidays and Sundays, for projects with less than 5,000 tons (plan quantity) of HMA and within 7 calendars days, except holidays and Sundays, for projects with 5,000 tons (plan quantity) or more of HMA, after the Engineer has obtained the samples. QA test results will be provided to the Contractor after the Engineer receives the QC test results. Failure on the part of the Engineer or the laboratory to provide Quality Assurance test results within the specified time frame does not relieve the Contractor of their responsibility to provide an asphalt mix within specifications.

The correlation procedure for ignition oven will be established as follows. Asphalt binder content based on ignition method from MTM 319. Gradation (*ASTM D 5444*) and Crushed particle content (*MTM 117*) based on aggregate from *MTM 319*. The incineration temperature will be established at the Pre-Production Meeting. The Contractor will provide a laboratory mixture sample to the acceptance laboratory to establish the correction factor for each mix. Ensure this sample is provided to the Engineer a minimum of 14 calendar days prior to production.

For production/mainline type paving, the mixture may be accepted by visual inspection up to a quantity of 500 tons per mixture type, per project (not per day). For non-production type paving defined as driveways, approaches, and patching, visual inspection may be allowed regardless of the tonnage.

The mixture will be considered out-of-specification, as determined by the acceptance tests, if for any one mixture, two consecutive tests per parameter, (for Parameter 2, two consecutive aggregate gradations on one sieve) are outside Range 1 or Range 2 tolerance limits. If a parameter is outside of Range 1 tolerance limits and the second consecutive test shows that the parameter is outside of Range 2, then it will be considered to be a Range 1 out-of-specification. Consecutive refers to the production order and not necessarily the testing order. Out-of-specification mixtures are subject to a price adjustment per the Measurement and Payment section of this special provision.

Contractor operations will be suspended when the mixture is determined to be out-of-specification, but contract time will continue to run. The Engineer may issue a Notice of Non-Compliance with Contract Requirements (Form 1165), if the Contractor has not suspended operations and taken corrective action. Submit a revised JMF or proposed alterations to the plant and/or materials to achieve the JMF to the Engineer. Effects on the Aggregate Wear Index (AWI) and mix design properties will be taken into consideration. Production and placement cannot resume until receipt of the Engineer's approval to proceed.

Pavement in-place density will be measured using one of two approved methods. The method used for measuring in-place density will be agreed upon at a pre-production or pre-construction meeting.

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.

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

The Engineer may use the Roller Method with a nuclear or non-nuclear density gauge to document achieving optimal density as discussed below.

Use of the density gauge requires establishing a rolling pattern that will achieve the required in-place density. The Engineer will measure pavement density with a density gauge using the Gmm from the JMF for the density control target.

Use of the Roller Method requires developing and establishing density frequency curves, and meeting the requirements of Table 2. A density frequency curve is defined as the measurement and documentation of each pass of the finished roller until the in-place density results indicate a decrease in value. The previous recording will be deemed the optimal density. The Contractor is responsible for establishing and documenting an initial or QC rolling pattern that achieves the optimal in-place density. When the density frequency curve is used, the Engineer will run and document the density frequency curve for each half day of production to determine the number of passes to achieve the maximum density. Table 5, located at the end of this special provision, can be used as an aid in developing the density frequency curve. The Engineer will perform density tests using an approved nuclear or non-nuclear gauge per the manufacturer's recommended procedures.

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 frequency curve.
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.

Base Price. Price established by the Department to be used in calculating incentives and adjustments to pay items and shown in the contract.

If acceptance tests, as described in section c. of this special provision, show that a Table 1 mixture parameter exceeds the Range 1, but not the Range 2, tolerance limits, that mixture parameter will be subject to a 10 percent penalty. The 10 percent penalty will be assessed based on the acceptance tests only unless the Contractor requests that the 10,000 gram sample part retained for possible dispute resolution testing be tested. The Contractor has 4 calendar days from receipt of the acceptance test results to notify the Engineer, in writing, that dispute resolution testing is requested. The Contractor's QC test results for the corresponding QA test results must result in an overall payment greater than QA test results otherwise the QA tests will not be allowed to be disputed. The Engineer has 4 calendar days to send the dispute resolution sample to the lab once dispute resolution testing is requested. The dispute resolution sample will be sent to an independent lab selected by the Local Agency, and the resultant dispute test results will be used to determine the penalty per parameter, if any. Ensure the independent lab is a MDOT QA/QC qualified lab or an AMRL HMA qualified lab. The independent lab must not have conflicts of interest with the Contractor or Local Agency. If the dispute testing results show that the mixture parameter is out-of-specification, the Contractor will pay for the cost of the dispute resolution testing and the contract base price for the material will be adjusted, based on all test result parameters from the dispute tests, as shown in Table 3 and Table 4. If the dispute test results do not confirm the mixture parameter is out-of-specification, then the Local Agency will pay for the cost of the dispute resolution testing and no price adjustment is required.

If acceptance tests, as described in section c. of this special provision, show that a Table 1 mixture parameter exceeds the Range 2 tolerance limits, the 10,000 gram sample part retained for possible dispute resolution testing will be sent, within 4 calendar days, to the MDOT Central Laboratory for further testing. The MDOT Central Laboratory's test results will be used to determine the penalty per mixture parameter, if any. If the MDOT Central Laboratory's results do not confirm the mixture parameter is out-of-specification, then no price adjustment is required. If the MDOT Central Laboratory's results show that the mixture is out-of-specification and the Engineer approves leaving the out-of-specification mixture in place, the contract base price for the material will be adjusted, based on all parameters, as shown in Table 3 and Table 4.

In the case that the Contractor disputes the results of the test of the second sample obtained for a particular day of production, the test turn-around time frames given would apply to the second test and there would be no time frame on the first test.

The laboratory (MDOT Central Laboratory or independent lab) will complete all Dispute Resolution testing and return test results to the Engineer, who will provide them to the Contractor, within 13 calendar days upon receiving the Dispute Resolution samples.

In all cases, when penalties are assessed, the penalty applies to each parameter, up to two parameters, that is out of specification.

Table 3: Penalty Per Parameter

Mixture Parameter out-of-Specification per Acceptance Tests	Mixture Parameter out-of-Specification per Dispute Resolution Test Lab	Price Adjustment per Parameter
NO	N/A	None
YES	NO	None
	YES	Outside Range 1 but not Range 2: decrease by 10%
		Outside Range 2: decrease by 25%

The quantity of material receiving a price adjustment is defined as the material produced from the time the first out-of-specification sample was taken until the time the sample leading to the first in-specification test was taken.

Each parameter of Table 1 is evaluated with the total price adjustment applied to the contract base price based on a sum of the two parameter penalties resulting in the highest total price adjustment as per Table 4. For example, if three parameters are out-of-specification, with two parameters outside Range 1 of Table 1 tolerance limits, but within Range 2 of Table 1 limits and one parameter outside of Range 2 of Table 1 tolerance limits and the Engineer approves leaving the mixture in place, the total price adjustment for that quantity of material is 35 percent.

Table 4: Calculating Total Price Adjustment

Cost Adjustment as a Sum of the Two Highest Parameter Penalties		
Number of Parameters Out-of-Specification	Range(s) Outside of Tolerance Limits of Table 1 per Parameter	Total Price Adjustment
One	Range 1	10%
	Range 2	25%
Two	Range 1 & Range 1	20%
	Range 1 & Range 2	35%
	Range 2 & Range 2	50%
Three	Range 1, Range 1 & Range 1	20%
	Range 1, Range 1 & Range 2	35%
	Range 1, Range 2 & Range 2	50%
	Range 2, Range 2 & Range 2	50%

Table 5: Density Frequency Curve Development

Tested by: _____ Date/Time: _____

Route/Location:		Air Temp:
Control Section/Job Number:		Weather:
Mix Type:	Tonnage:	Gauge:
Producer:	Depth:	Gmm:

Roller #1 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Roller #2 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Roller #3 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Summary: _____

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PAVEMENT ACCEPTANCE FOR JOINTED PLAIN CONCRETE PAVEMENT

CFS:JFS

1 of 1

APPR:JAB:TES:05-18-11

FHWA:APPR:08-10-11

a. Description. This special provision defines the requirements for pavement acceptance that are in addition to those specified in section 602 of the Standard Specifications for Construction. When applicable, the condition for initial acceptance of the pavement according to the Materials and Workmanship Warranty still apply. This special provision does not relieve the Contractor of responsibility for the work according to subsection 107.11 of the Standard Specifications for Construction.

The Engineer will inspect the completed pavement for any visible indication of cracking. If cracking is found, decisions regarding corrective actions will be made jointly by the Engineer and the Construction Field Services Division, in accordance with Table 1.

All costs for the work required to repair or replace any unacceptable pavement are the responsibility of the Contractor. No time extensions will be granted to the Contractor for any required repair work to meet the requirements of this special provision.

For purposes of this special provision, a crack is defined as a fissure of varying length and orientation in the pavement that extends to some measurable depth. A crack may be a single entity or found in groups or clusters with possible associated distress features.

Table 1: Acceptance Factors and Corrective Action

Acceptance Factor	Length	Extent	Severity	Corrective Action (a)(d)
LC	any	single/multiple	all	Replace slab (b)
TC - \geq 1.5 ft. from TJ	any	single/multiple	all	Replace slab (b)
TC - $<$ 1.5 ft. from TJ	any	single/multiple	all	Replace joint (c)
LC = longitudinal crack		TJ = transverse joint		
TC = transverse crack				
<p>a. Repair must establish an acceptable transverse load transfer of efficiency greater than 90%.</p> <p>b. An appropriate corrective treatment (based on the specific crack's characteristics, its location relative to a longitudinal or transverse joint, and the corrective treatment's contribution toward the pavement's intended service life) may be proposed by the Contractor in lieu of full slab replacement. The Contractor's corrective treatment proposal is subject to approval by the Engineer.</p> <p>c. Full-depth PCC repair. FDR must be 6 feet long, minimum, by the entire lane width according to Standard Plan Series R-44. Install contraction joints (Type Crg) at both transverse joint locations.</p> <p>d. Do not overcut into the adjacent lane or shoulder.</p>				

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CURING CONCRETE PAVEMENT SURFACES

CFS:JFS

1 of 3

APPR:ARB:TES:10-23-19
FHWA:APPR:10-29-19

a. Description. This work sets forth requirements for curing horizontal and vertical surfaces of the concrete pavement. All work will be in accordance with the standard specifications, except as modified herein.

Curing requirements for temporary concrete pavements are not covered by this special provision and will be in accordance with the standard specifications.

b. Materials. Curing materials are specified in subsection 903.06.A of the Standard Specifications for Construction.

c. Construction. For concrete pavements other than temporary applications the following requirements apply.

1. Curing. Curing operations will take precedence over texturing in accordance with subsection 602.03.K of the Standard Specifications for Construction.

Include details for the operation and oversight of curing in the approved Quality Control (QC) plan.

The curing period will commence immediately after application of curing compound and must be continuously maintained until the pavement concrete attains the opening to traffic flexural strength.

Use the fully-automatic, self-propelled mechanical atomizing power sprayer approved by the Engineer to apply the curing compound. Operate the equipment to direct the curing compound onto the surface from two different lateral directions. Do not allow the sprayer to ride on the pavement surface. Ensure the sprayer covers the entire pavement horizontal and vertical surfaces with no puddling, dripping, or non-uniform application occurs.

A foot bridge, or other means, may be used to apply curing compound for concrete pavements and shoulders less than 24 feet wide. Ensure the atomizing mechanical sprayer is capable of uniformly applying the curing compound at the specified rate and timeliness, as described in this special provision.

Do not commence concrete paving until it is demonstrated to the Engineer that the curing materials and personnel are on site and the curing equipment is fully operational.

Maintain a thoroughly mixed compound in accordance with the manufacturer's recommendations. Do not dilute curing compound.

Protect curing compounds from freezing before application.

Temporarily suspend paving operations if it is observed that the curing operations are not in conformance with specification requirements. Resume paving only after action has been taken to correct deficiencies and it has been demonstrated that the corrective action will ensure contract compliance moving forward.

2. Time of Application. Place the curing compound within 30 minutes of screeding and floating the fresh concrete pavement surface or within 15 minutes after the sheen from bleed water has dissipated, whichever is greater. Where applicable, apply the second coat after the first coat dries, but do not allow more than 2 hours between coats. Temporarily suspend paving operations if it is observed that the maximum time limitations between finishing and curing, described above, have been exceeded. Place the curing compound on the edges within 30 minutes after permanent removal of curing blankets. If fixed-forms are removed within 7 days after concrete placement, coat the sides of the pavement with curing compound after removing the forms. Manually operated pressure-type sprayers may be used to coat the sides of formed pavement with curing compound, as approved by the Engineer.

3. Rate of Application. Apply one coat of curing compound at a minimum application rate of 1 gallon per 16 square yards on non-grooved surfaces and two coats at a minimum application rate of 1 gallon per 25 square yards for each coat on grooved surfaces. For grooved surfaces, apply the first coat within the required time of application, described above.

4. Uniformity of Application. Apply curing compound homogeneously to provide a uniform, solid, white opaque coverage on all exposed concrete surfaces (equal to a white sheet of typing paper). Immediately reapply curing compound to surfaces damaged by rain, tracking of the joint saw, Contractor foot traffic, or other activities. If the Engineer determines that the initial or corrective spraying results in unsatisfactory curing, the Engineer may require the Contractor to use the blanket curing method, at no additional cost to the Department.

Replace concrete showing damage due to inadequate curing, at no additional cost to the Department.

5. Protection from Cold Weather. If using cold-weather protection during the curing period, curing compound may be temporarily omitted, if approved by the Engineer.

Protect the concrete pavement from freezing for the entire curing period. Application of curing compound at the minimum rate specified in section c of this special provision is then required immediately after removal of cold-weather protection. Remove and replace concrete slabs damaged by cold weather, as directed by the Engineer, at no additional cost to the Department.

d. Acceptance. Pavement surfaces not in compliance with the curing requirements described in this special provision will be subject to a price adjustment (ADJ). A unit of pavement representing the area for price adjustment (ADJ) will include the entire width of concrete placement times the length of concrete that is not in compliance, as determined by the Engineer. Acceptance will be based on conformance with the time of application, rate of application, and uniformity of application described in section c of this special provision. One or more of the following criteria will warrant price adjustment (ADJ) for a unit of pavement.

1. Time of Application. Price adjustment (ADJ) will apply to all concrete surfaces not

receiving timely application of curing compound, irrespective of conformance with the rate or uniformity criteria.

2. Rate of Application. Price adjustment (ADJ) will apply to concrete surfaces not receiving the specified rate of curing compound within the specified time of application.

3. Uniformity of Application. Price adjustment (ADJ) will apply to concrete surfaces not uniformly coated at the minimum rate of application within the specified time of application.

ADJ = minus one dollar (- \$1.00) per square yard of finished concrete surface.

Positive price adjustment (ADJ) does not apply.

e. Measurement and Payment. All costs associated with this work will be included in the respective concrete pavement items.

Price adjustment (ADJ) described in section d of this special provision will apply to the respective concrete pavement item.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**QUALITY CONTROL AND ACCEPTANCE OF PORTLAND CEMENT CONCRETE
(FOR LOCAL AGENCY PROJECTS ONLY)**

CFS:JFS

1 of 21

APPR:TES:DBP:06-14-19
FHWA:APPR:06-14-19

a. Description. The Contractor must administer quality control (QC) and the Department will administer quality assurance (QA) procedures that will be used for acceptance of and payment for all Portland cement concrete (PCC) for the project. Except as explicitly modified by this special provision, all materials, test methods, and PCC mixture requirements of the standard specifications and the contract apply.

Do not place concrete until the Engineer's daily startup testing verifies that the fresh concrete properties have been met, in accordance with subsection d.2 of this special provision.

Provide the Engineer a minimum 24 hours notification prior to each concrete placement.

1. Terminology.

Air Content of Fresh Concrete. The recorded total air content of fresh concrete sampled and tested according to this special provision.

Air Content Test Results. The recorded air content of fresh concrete corresponding to the strength test specimens that were molded for acceptance.

Alkali-Silica Reactivity (ASR). A chemical reaction which occurs over time within concrete between high alkaline cement paste and reactive forms of silica found in some aggregates. In the presence of moisture, an expansive ASR gel is formed which can exert pressure within the concrete, causing random cracking and premature deterioration of the concrete. See subsection c.5.A of this special provision.

Base Price. Price established by the Department to be used in calculating incentives or adjustments to pay items and shown in the contract.

Concrete Mix Design. The process, by which the concrete mixture performance characteristics are defined, based on selected materials, performance requirements, environmental exposure considerations, placement methods, and other factors that control the plastic and hardened properties of the concrete in efforts to produce an economical and durable product.

Job Mix Formula (JMF). The actual batch quantities (mixture proportions) of each constituent included in the concrete mixture, based on adjustments to the target weights attained from the mix design process, necessary to optimize the concrete mixture properties.

Pay Factor (PF). The factor that is determined according to subsections d.3 of this special provision, used to calculate the price adjustment for a discrete quantity of concrete relative

to its respective level of quality. Pay factor will not exceed 1.00. Therefore, there will never be a positive pay adjustment.

Price Adjustment (ADJ). The price adjustment applied to the quantity of concrete represented by the respective quality index analysis described in subsections d.3 of this special provision.

Production Lot. A discrete cubic yard quantity of concrete containing the same JMF and used for the same application, as described in subsection d.2 of this special provision.

Quality Assurance (QA). Activities administered by the Engineer dealing with acceptance of the product, including, but not limited to, materials selection, sampling, testing, construction inspection, and review of Contractor QC documentation. All concrete QA sampling and testing will be administered by the Department. Department administered QA is described in section d of this special provision.

Quality Control (QC). All activities administered by the Contractor to monitor, assess, and adjust production and placement processes to ensure the final product will meet the specified levels of quality, including, but not limited to, training, materials selection, sampling, testing, project oversight and documentation. Contractor administered QC is described in section c of this special provision.

QC Action Limits. A range of values established by the Contractor in the QC plan that, if exceeded, requires that corrective action be taken by the Contractor to restore the continuity and uniformity of the mixture and methods in conformance with specification requirements. The QC action limits must not exceed the QC suspension limits.

QC Plan. The project-specific plan developed by the Contractor describing, in detail, all aspects of production and construction for the project to ensure consistent control of quality to meet specification requirements.

QC Plan Administrator. An employee of, or consultant engaged by the Contractor, responsible for developing and overseeing all aspects of QC for the project. This includes, but is not limited to preparing the QC plan, managing the Contractor QC personnel, communicating routinely with the production personnel to ensure quality, initiating corrective action and suspending operations when the process is found to be producing non-conforming materials, and preparing and submitting all necessary QC documentation to the Engineer within the specified time period.

QC Suspension Limits. A range of values defined in Table 1 that, if exceeded on a single QC test, requires that the Contractor suspend operations and determine, correct, and document the deficiencies before resuming production. The QC suspension limit must not exceed specification requirement thresholds.

Sample. A representative quantity of concrete taken during production which is used to measure the quality characteristics for the concrete.

Sampling Rate. The number of times the fresh concrete is sampled, as described in subsection d.2 of this special provision.

Small Incidental Quantity. A single day's placement of less than 20 cubic yards of concrete used for non-structural or non-pavement related applications, including, but not limited to:

curb and gutter, sidewalks and sidewalk ramps (excluding driveways and driveway ramps), installing sign or fence posts, guard rail or cable rail foundations (excluding end anchorage foundations), or other contract items where the small quantity of concrete is not paid for separately, as approved by the Engineer. Requirements for small incidental quantity consideration are described in subsections c.5.G, d.2.B and d.3 of this special provision. The corresponding weekly QA test results must meet specification limits defined in Table 3.

Specification Limits. The threshold values placed on a quality characteristic used to evaluate the quality of the material.

Strength Sample Test Result. The average of the two companion 28-day compressive strength test specimens taken from the same sample of concrete is considered a strength sample test result.

Strength Test Specimen. A strength test specimen is an individual 6-inch by 12-inch strength test cylinder or 4-inch by 8-inch strength test cylinder molded and cured according to *AASHTO T23/ASTM C 31* and tested according to *AASHTO T22/ASTM C 39*. All respective QC or QA strength test specimens must be the same nominal size. Strength test specimen cylinder size of 4-inch by 8-inch is permitted only if the nominal maximum coarse aggregate particle size, as specified for the coarse aggregate in the concrete mixture, is 1-inch, or less.

Sublot. A portion of a production lot, represented by a complete set of QA tests, as described in subsection d.2.A of this special provision. The Engineer and the Contractor may agree to reduce the typical subplot size based on project staging or other project conditions.

Supplementary Cementitious Materials (SCM). A mineral admixture (slag cement, fly ash) used to replace a portion of the Portland cement, either individually or as a blended cement, in the concrete mixture. SCM requirements are described in subsection c.5 of this special provision.

b. Materials. Mixture requirements must be in accordance with the contract.

c. Contractor Administered Quality Control (QC).

1. Contractor Quality Control Plan (QC plan). Prepare, implement, and maintain a QC plan specific to the project for concrete that will provide quality oversight for production, testing, and control of construction processes. The QC plan must be in conformance with the contract and must identify all procedures used to control production and placement including when to initiate corrective action necessary to maintain the quality and uniformity of the work.

Develop concrete mix designs and JMFs, as specified, and conduct QC sampling, testing, and inspection during all phases of the concrete work at the minimum frequency, or at an increased frequency sufficient to ensure that the work conforms to specification requirements.

Project-specific items required in the QC plan include (where applicable), but are not limited to the following:

A. Organization chart.

- B. QC Plan Administrator and contact information.
- C. The name(s) and credentials of the QC staff.
- D. Methods for interaction between production and QC personnel to engage timely corrective action, including suspension of work.
- E. Coordination of activities.
- F. Documentation, procedures, and submittals.
- G. Project and plant specifics.
- H. Concrete production facilities inspections and certifications.
- I. Current testing equipment calibration documentation including calibration factor.
- J. Testing and initial field curing facilities for QC and QA strength test specimens (AASHTO T23/ASTM C 31).
- K. Stockpile management plan.
- L. Corrective action plan.
- M. Mixing time and transportation, including time from batching to completion of delivery and batch placement rate (batches per hour), along with the manufacturer's documentation relative to the batching equipment's capabilities in terms of maximum mixing capacity and minimum mixing time (*ASTM C 94*).
- N. Placement and consolidation methods including monitoring of vibration, depth checks, and verification of pavement dowel bar alignment.
- O. Process for monitoring stability of air content of fresh concrete during concrete production and placement.
- P. Hot and cold weather protection considerations and methods.
- Q. Control charts with action and suspension limits.
- R. Verification for non-deleterious alkali-silica reactivity (see subsection c.5.A of this special provision).
- S. Mix design and JMFs.
- T. Proposed production lot size and location for use of each JMF on the project.
- U. The frequency of sampling, testing, and yield verification.
- V. Handling, protection, initial curing, and transporting of strength test specimens (*AASHTO T23/ASTM C31*).

- W. Methods to monitor construction equipment loading and open-to-traffic strengths.
- X. Finishing and curing procedure.
- Y. Ride quality control.
- Z. List of QC records to be submitted to the Engineer in accordance with subsection c.2 of this special provision.

Submit the QC plan, for the appropriate items of work, to the Engineer for review a minimum of 10 working days before the start of related work. The Engineer will notify the Contractor of any objections relative to the content of the QC plan within 5 working days of receipt of the QC plan. Do not begin concrete placement before acceptance of the QC plan by the Engineer. If the approved QC plan fails to provide acceptable work, or acceptable control of the work, the Engineer may require the Contractor to revise the QC plan. Revisions to the QC plan must be approved by the Engineer prior to resuming work.

2. QC Records. Maintain complete records of all QC tests and inspections. Document what action was taken to correct deficiencies. Include sufficient information to allow the test results to be correlated with the items of work represented.

Furnish one copy of all QC records, including test reports for the fresh concrete placement, to the Engineer within 24 hours after the date covered by the record in a format acceptable to the Engineer. The Engineer will withhold acceptance of the concrete for failure to provide properly documented and timely QC records and reports.

If the Engineer is performing QA sampling and testing at the same time the Contractor is performing QC sampling and testing, all associated QC records must include the appropriate production lot identification number that correlates with the Department's QA production lot identification number.

3. Personnel Requirements. The QC Plan Administrator must have full authority and responsibility to take all actions necessary for the successful implementation of the QC plan, including but not limited to, the following:

A. Monitoring and utilizing QC tests, control charts, and other QC practices to ensure that delivered materials and proportioning meets specification requirements.

B. Monitoring materials shipped to the project, prior to their use, to ensure their continued compatibility toward producing consistent quality.

C. Periodically inspecting all equipment utilized in transporting, proportioning, mixing, placing, consolidating, finishing, and curing to ensure proper operation.

D. Monitoring materials stockpile management, concrete batching, mixing, transporting, placement, consolidation, finishing, and curing to ensure conformance with specification requirements.

E. Maintaining and submitting all QC records and reports.

F. Directing the necessary corrective action to ensure continual conformance within

the QC action limits.

G. Suspending production for the project when suspension limits are exceeded.

H. Conducting or monitoring adjustments to the JMF.

Individuals performing QC tests must demonstrate that they are proficient and capable of sampling and testing concrete or aggregate, where applicable, in accordance with the associated test procedures and Department requirements prior to commencement of related work. Any adjustments to the JMF must be made by a certified concrete technician (Michigan Concrete Association (MCA) Michigan Level II).

4. QC Laboratory Requirements. Laboratories, including field laboratories and all associated testing equipment that prepare concrete mixes or perform QC testing, must demonstrate to the Engineer that they are equipped, staffed, calibrated, and managed so as to be capable of batching, and testing PCC in accordance with the applicable test methods and procedures. Mix designs and their accompanying JMFs must include a statement, signed by a certified concrete technician (MCA Michigan Level II), that all applicable standard test methods have been followed in verifying the mix design and JMF.

5. Mix Design and Documentation. Design concrete mixtures meeting the requirements specified in Table 1. Provide the grade of concrete for the section number reference application specified in Table 1, or as specified in the contract. Request variance in writing when proposing a mix design that exhibits temperature, slump or air content other than those specified. Include the proposed mix design, JMF, and associated trial batch verification test data. Do not use a grade of concrete with a lower specification limit (LSL) 28-day compressive strength greater than what is designated for the application.

Blended cement meeting the requirements of *ASTM C 595 Type II* is permitted.

Ensure supplementary cementitious materials are from an MDOT Approved Manufacturer. Slag cement must meet the requirements of subsection 901.06 of the Standard Specifications for Construction. Fly ash must meet the requirements of subsection 901.07 of the Standard Specifications for Construction.

Secure prior approval from the Engineer to use concrete intended for early opening to traffic to facilitate driveway gaps or other features necessary for required local access.

Unless otherwise specified in the contract, set accelerating admixtures are prohibited.

Optimized aggregate gradation is required for high performance concrete and concrete mixtures that are placed using a pump. Concrete mixtures for tremie and drilled shaft applications do not require optimized aggregate gradation. The physical requirements for coarse and intermediate aggregates specified in subsection 902.03.C of the Standard Specifications for Construction apply to high performance concrete pavement mixtures. The physical requirements for aggregates used in concrete mixtures for all other applications will be according to the contract.

Unless otherwise specified in the contract, provide either concrete Grade P1 or Grade D for bridge approach slab applications.

Unless otherwise specified in the contract, do not exceed 40 percent replacement of the Portland cement in the concrete mixture with a supplementary cementitious material. Do not exceed 40 percent total replacement of the Portland cement if more than one supplementary cementitious material is used in the concrete mixture.

Use the combined weight of all cementitious materials to determine compliance with the maximum water-cementitious ratio and cementitious material content requirements specified in Table 1.

For night casting, where applicable, a water-reducing admixture may be used in lieu of a water-reducing and retarding admixture, provided the concrete can be placed and finished in the sequence specified on the plans prior to initial set, is not subjected to residual vibration, or is not within the areas influenced by dead load deflections as a result of adjacent concrete placement operations. When the maximum air temperature is not forecast to exceed 60 degrees F for the day, the Contractor may use a water-reducing admixture or a water-reducing retarding admixture.

Table 1: Minimum Mix Design Requirements for Concrete

Mix Design Parameter	Grade of Concrete																												
	P1M (a,b,e)	P1 (a,b)	D,DM (a,b,e)	T	S1 (a)	S2,S2M (a,b,e)	S3/P2 (a)																						
Lower Specification Limit (LSL) (28-day compressive, psi)	3500	3500	4500	3500	4000	3500	3000																						
Rejection Limit for an Individual Strength Sample Test Result	3000	3000	4000	3000	3500	3000	2500																						
Maximum Water/Cementitious Ratio (lb/lb) (c)	0.45																												
Cementitious Material Content (lb/yd ³) (d)	470-564	517-611	517-658	517-611	517-611	517-611	489-517																						
Air Content (percent) (f)	5.5-8.5																												
Slump (inch) (max.)	(g)																												
Section Number Reference (h)	602, 603	602, 603, 801, 802, 803, 810	706, 711, 712	706, 718	705	401, 706, 712, 713, 718, 801, 802, 803, 810, 819	402, 403, 602, 803, 804, 806, 808, 810, 813, 814																						
<p>a. If the local average minimum temperature in the next 10 consecutive days is forecast to be below 40 degrees F, submit a revised QC plan for the Engineer's approval, addressing in detail changes in materials, concrete batching and mixing processes, construction methods, curing, and protection of the in situ concrete to ensure that the necessary quality characteristics of the hardened concrete product will not be compromised as a result of the cold weather. The revised QC plan must be approved by the Engineer prior to cold weather concrete placement. Do not remove supplementary cementitious material from the concrete mixture.</p> <p>b. Use aggregates from only geologically natural sources for pavement, shoulder, miscellaneous pavement (including ramps), concrete pavement overlay, bridge approach slab, structural concrete, drilled shaft, bridge railing, and bridge sidewalk applications.</p> <p>c. Use admixtures as listed in the Qualified Products Lists to reduce mixing water. Ensure concrete in concrete diaphragms contains a water-reducing admixture, or a water-reducing retarding admixture.</p> <p>d. Type III cement is not permitted.</p> <p>e. For grades of concrete requiring optimized gradation, aggregates must meet the physical requirements specified in subsection 902.03.C of the Standard Specifications for Construction.</p> <p>f. For action, suspension, and specification limits, see Tables 2 and 3, where applicable.</p> <p>g. The maximum slump for Grades P1, P1M, and P2 concrete is 3 inches or as documented on the approved JMF. All other grades of concrete will be according to Table 701-1 of the Standard Specifications for Construction.</p>																													
<p>h. Section Number Reference:</p> <table border="0"> <tr> <td>401 Pipe Culverts</td> <td>402 Storm Sewers</td> </tr> <tr> <td>403 Drainage Structures</td> <td>602 Concrete Pavement Construction</td> </tr> <tr> <td>603 Concrete Pavement Restoration</td> <td>705 Foundation Piling</td> </tr> <tr> <td>706 Structural Concrete Construction</td> <td>711 Bridge Railings</td> </tr> <tr> <td>712 Bridge Rehabilitation-Concrete</td> <td>713 Bridge Rehabilitation-Steel</td> </tr> <tr> <td>718 Drilled Shafts</td> <td>801 Concrete Driveways</td> </tr> <tr> <td>802 Concrete Curb, Gutter and Dividers</td> <td>803 Concrete Sidewalk, Sidewalk Ramps, and Steps</td> </tr> <tr> <td>804 Concrete Barriers and Glare Screens</td> <td>806 Shared Use Paths</td> </tr> <tr> <td>808 Fencing</td> <td>810 Permanent Traffic Signs and Supports</td> </tr> <tr> <td>813 Slope Protection</td> <td>814 Paved Ditches</td> </tr> <tr> <td>819 Electrical and Lighting</td> <td></td> </tr> </table>								401 Pipe Culverts	402 Storm Sewers	403 Drainage Structures	602 Concrete Pavement Construction	603 Concrete Pavement Restoration	705 Foundation Piling	706 Structural Concrete Construction	711 Bridge Railings	712 Bridge Rehabilitation-Concrete	713 Bridge Rehabilitation-Steel	718 Drilled Shafts	801 Concrete Driveways	802 Concrete Curb, Gutter and Dividers	803 Concrete Sidewalk, Sidewalk Ramps, and Steps	804 Concrete Barriers and Glare Screens	806 Shared Use Paths	808 Fencing	810 Permanent Traffic Signs and Supports	813 Slope Protection	814 Paved Ditches	819 Electrical and Lighting	
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A. Alkali-Silica Reactivity. Provide documentation to the Engineer that the concrete mixture does not present the potential for deleterious expansion caused by alkali-silica reactivity (ASR). Provide current ASR test results (valid for 2 years from completion of testing), for the fine aggregate that is proposed to be used in the concrete, from an independent testing laboratory proficient in ASR testing. The independent testing laboratory must certify in writing, including a signed statement that all testing was conducted in accordance with the designated standard test procedures, described herein. Test results must conform to the specified criterion for one of the following standard test methods. ASR testing is not required for concrete pavement repairs and temporary concrete pavements. Use the Rounding Method described in *ASTM E 29* when determining significant digits for reporting expansion test results.

(1) Method 1. *ASTM C 1293*. Concrete Prism Test. If the expansion of concrete prisms is not greater than 0.040 percent (rounded to the nearest 0.001 percent) after 1 year, the fine aggregate is considered non-deleterious to ASR and may be used in the JMF.

(2) Method 2. *ASTM C 1567*. Mortar Bar Test. If no previous test data are available for the fine aggregate that shows it is resistant to ASR using Method 1, above, replace 25 to 40 percent of the Portland cement in the concrete mixture with a supplementary cementitious material. A blended cement meeting the requirements of *ASTM C 595* containing the above Portland cement and supplementary cementitious material proportions may also be used.

Demonstrate the ability of the supplementary cementitious material to control the deleterious expansion caused by ASR by molding and testing mortar bars according to the standard test method described in *ASTM C 1567* using the mix proportions and constituent sources for both the aggregates and the cementitious materials that will be used for the project. Make at least three test specimens for each cementitious materials-aggregate combination. If the average of three mortar bars for a given cementitious materials-aggregate combination produces an expansion less than 0.10 percent (rounded to the nearest 0.01 percent) at 14 days of immersion, the JMF associated with that combination will be considered non-deleterious to ASR. If the average expansion is 0.10 percent (rounded to the nearest 0.01 percent) or greater, the JMF associated with that combination will be considered not sufficient to control the deleterious expansion caused by ASR and the JMF will be rejected.

(3) Method 3. *ASTM C 1260*. Mortar Bar Test. If the expansion of the mortar bars is less than 0.10 percent (rounded to the nearest 0.01 percent) at 14 days of immersion, the fine aggregate is considered non-deleterious to ASR and may be used in the concrete without the need for ASR mitigation.

The Engineer will not approve the use of the JMF if the expansion exceeds the respective threshold limits for the respective ASTM test method used.

B. Contractor Provided Mixes. Provide mix design and accompanying JMFs using the methods of verification included in this special provision. Include sufficient information on constituent materials and admixtures along with trial batch verified physical properties of the fresh concrete, mix proportions per cubic yard for all constituents and compressive strength test results necessary to allow the Engineer to

fully evaluate the expected performance of the concrete mixture.

(1) Mix Documentation. Prepare mix designs for each grade of concrete required on the project. Submit JMF for each mix design, including all required documentation, to the Engineer for review 10 working days before the anticipated date of placement. The Engineer will notify the Contractor of any objections within 5 working days of receipt of the mix documentation. Number or otherwise identify each JMF and reference all accompanying documentation to this identification. Reference each JMF to the appropriate method of verification. Mix design and JMF submittals that do not include all required documentation will be considered incomplete and the Engineer will return them without review.

Mix documentation is valid for 2 years provided the material characteristics have not deviated beyond the requirements specified in the contract.

All mix designs and accompanying JMFs must be traceable to a laboratory meeting the requirements of this special provision.

Submit mix design and JMF on the MDOT Job Mix Formula (JMF) Concrete Field Communication form (MDOT Form Number 1976); include accompanying documentation. List the source of materials, bulk density (unit weight) of coarse aggregate (rodding procedure or shoveling procedure), absorption of aggregates, relative density (specific gravity) of aggregates, aggregate correction factors, batch weights, and project specific or historical laboratory test data. Include the recorded air content of fresh concrete using the same admixture and cementitious material sources to be used in the production of the concrete for the project. A JMF will be approved only if all of the minimum mix design requirements specified in the contract have been met.

(2) Job Mix Formula (JMF). Select proportions for concrete mixtures according to *ACI Standard 211.1*. The volume (oven-dry-rodded) of coarse aggregate per unit volume of concrete must be 65 percent, minimum.

Four methods of verification of proposed JMF are acceptable.

(a) Method 1. Trial Batches. Verification of JMF is based on trial batches with the same materials and proportions proposed for use on the project. Prepare at least one trial batch for each mix design in sufficient time before starting concrete placement to allow for review according to subsection c.5.B.(1) of this special provision. Provide the results of temperature, slump, density (unit weight), air content of fresh concrete, 28-day compressive strength, and age of concrete at the time of strength testing, for a minimum of three independent samples. All samples may be taken from a single trial batch for a mix design provided the trial batch is at least four cubic yards in volume. For JMF trial batch verification purposes only, 7-day compressive strength test results which report at least 70 percent of the specified 28-day lower specification limit (LSL) will be sufficient documentation in lieu of 28-day compressive strengths. The average of at least two strength test specimens represents one compressive strength sample test result for each independent sample. Provide the necessary ASR documentation as described in subsection c.5.A of this special provision.

(b) Method 2. Same Mix. Verification of JMF is based on the concrete producer's experience with the same mix design, JMF, and the same materials. Provide the results of temperature, slump, density (unit weight), air content of fresh concrete, 28-day compressive strength, and age of concrete at the time of strength testing, for a minimum of three independent samples. The average of at least two strength test specimens represents one compressive strength sample test result for each independent sample. Do not substitute material types or sources, including admixtures or cementitious materials, nor change mix proportions in the JMF. Provide the necessary ASR documentation as described in subsection c.5.A of this special provision.

(c) Method 3. Similar Mix. Verification of JMF is based on requirements described in Method 2, in subsection c.5.B.(2).(b) of this special provision. Substitution of coarse aggregate source is permitted if the new source is of the same geologic type as the original aggregate, and conforms to the specification requirements for the application. Substitution of fine aggregate is permitted only if the new source has been tested for ASR. Provide the necessary ASR documentation as described in subsection c.5.A of this special provision.

Provide the supporting laboratory trial batch documentation and accompanying calculations showing how the mix proportions in the JMF were adjusted, based on the documented differences in relative density (specific gravity), bulk density (unit weight) and absorption of the substituted aggregate sources, to produce a theoretical yield of 100 percent and the required fresh concrete properties.

(d) Method 4. Annual Verification. At the Engineer's option, verification may be accepted annually for a concrete producer rather than on a project basis provided the sources and proportions of the constituent materials, including cementitious materials and source and types admixtures, do not change. If the project is the continuation of work in progress during the previous construction season and written certification is submitted to the Engineer that materials from the same source and with the same mixture properties are to be used, the Engineer may waive the requirement for annual renewal verification of the JMF for the project. Provide the necessary ASR documentation as described in subsection c.5.A of this special provision.

C. Department Provided Mixes. Unless otherwise specified in the contract or approved by the Engineer, the Engineer will provide the concrete JMF for the following types of concrete regardless of the total quantity for the project.

- (1) Structural concrete patching mixtures, mortar and grout.
- (2) Bridge deck overlay concrete mixtures.
- (3) Project-specific concrete mixtures and grades not defined in Table 1.

Provide all other mix designs and accompanying JMF's according to subsection c.5.B of this special provision.

The ASR documentation for the fine aggregate described in subsection c.5.A of this special provision must accompany the Contractor's request for the concrete JMF.

D. Changes in Materials and Proportions. Any changing from one approved JMF to another for the same grade of concrete must have prior approval by the Engineer.

Prior to batching, verify that the proposed JMF changes will not affect the properties of the fresh concrete (slump, temperature, air content, density (unit weight), workability), nor result in deleterious mortar bar expansion as a result of ASR, as described in subsection c.5.A of this special provision.

Record all changes to JMF in the QC records along with the rationale for the change.

E. QC Sampling and Testing. Conduct startup sampling and testing for temperature, slump, density (unit weight), and air content on the first load. Do not place concrete until testing verifies that the fresh concrete properties have not exceeded the QC action and suspension limit thresholds specified in Table 2 and the testing correlation requirements of subsection d.1.B of this special provision have been met. Continue testing subsequent loads as described in the QC plan, for each grade of concrete delivered to the work site each day. The QC sampling and testing must be random and independent from the Agencies QA sampling and testing.

Provide the curing facilities in accordance with subsection d.2.C of this special provision prior to start of concrete production.

Perform QC sampling and testing for air content of fresh concrete that is either slipformed or pumped, as described in the QC plan. Sample and test a representative haul unit of concrete immediately after its discharge but before the slipform paver or pump hopper, where applicable. Sample and test the concrete representing the same haul unit, again, after the slipform paver or after discharge from the pump (without interruption or alteration of the pumping operation), where applicable. If the difference in measured air content between the two test locations for the same concrete is greater than 1.5 percent air by volume of concrete, suspend operations and administer corrective action. Resume concrete placement only after taking the necessary corrective action to reduce the loss in air content of fresh concrete between the two test locations, as approved by the Engineer. Document the corrective action to be taken in the QC records and make the necessary changes to the QC plan, where applicable.

Concrete exceeding the maximum specification limits for slump or temperature must be rejected regardless of the total mixing time at the time of arrival to the project.

The Engineer may require the Contractor to administer additional QC sampling and testing if the Engineer determines the Contractor's current QC sampling and testing methodology is shown to be insufficient to ensure continual control of the quality of the concrete.

Take the appropriate corrective action, as described in the QC plan, when QC testing shows the QC action limits for any quality characteristic are exceeded. Suspend production if any of the QC suspension limits are exceeded or if the corrective action is not sufficient to restore the quality to acceptable levels.

Resume production only after making all necessary adjustments to bring the mixture into conformance with all applicable specifications and receiving approval to resume work

from the Engineer. Document these adjustments in the QC records.

Table 2: QC Action and Suspension Limits

Quality Characteristic	Action Limits	Suspension Limits
Air Content (percent)	See Note Below	< 5.0 or > 9.0
Air Content Loss (percent)	As Defined in the Contractor QC plan	Greater than 1.5
Conc. Temp. (Deg. F)		< 45 or > 90 at time of placement
Slump (max.) (inch)		See Table 1, footnote (g)
Density (unit weight)		N/A
Note: Action limits must be defined in the Contractor QC plan and cannot be < 5.5 or > 8.5. Suspend work if air content is < 5.0 or > 9.0 percent after pump or paver, regardless of the air content loss.		

F. Work Progress Test Specimens. Determine the strength of concrete for opening to construction traffic or regular traffic, for removing shoring and forms, or for similar purposes in accordance with subsections 104.11, 601.03.H and 701.03.D of the Standard Specifications for Construction, and as approved by the Engineer. Cure work progress test specimens in the same manner as the in-situ concrete. Allow the Engineer to witness testing of work progress test specimens.

The maturity method may be used to determine the in-place, opening-to-traffic flexural strength, provided the necessary preliminary flexural strength versus time-temperature factor correlation, using the same materials and JMF, is established according to Department procedures and approved by the Engineer before placing the concrete.

G. Reduced QC for Small Incidental Quantities. If approved by the Engineer, reduced levels of on-site QC testing for concrete may be considered for small incidental quantities defined in subsection a.1 of this special provision.

Unless approved by the Engineer, multiple small incidental quantities, including ones that are consecutively placed throughout the project on the same day, are not eligible for reduced QC consideration if the total plan quantity of concrete for the item exceeds 100 cubic yards in volume. Include details for reduced QC testing and oversight in the approved QC plan, and in accordance with following:

- (1) The small incidental quantity of concrete will be limited to a single day's concrete placement of a maximum 20 cubic yards in volume.
- (2) The small incidental quantity of concrete is not an integral part of a structural load bearing element.
- (3) The Engineer received written certification from the Contractor that the concrete supplier has a current QC plan in place and available for review upon request by the Engineer.
- (4) The concrete supplier employs a certified concrete technician (MCA Michigan Level II) available at the plant or on call during concrete placement to validate and authorize modifications to the concrete JMF, as necessary.
- (5) Prior to the first concreting operation, concrete representing the JMF for the small incidental quantity has been sampled and tested by a certified concrete technician (MCA Michigan Level I or II) to verify that, historically, the JMF produced a

concrete mixture meeting the minimum requirements for density (unit weight), slump, air content, and strength. Annual verification may be acceptable provided there are no changes to the material types or sources, including the cementitious materials and admixtures.

(6) The Engineer verified that the temperature, slump, and air content conform to specification requirements at the start of the day's concreting operation associated with the small incidental quantity.

(7) The Engineer is notified and provided sufficient opportunity to witness concrete placement.

d. Department Administered Quality Assurance (Acceptance).

1. Department Quality Assurance Plan (QA plan). The Engineer will be responsible for administering the quality-based acceptance and will institute any actions necessary toward its successful implementation.

Acceptance of concrete pavement repair mixtures and concrete mixtures not included in Table 1 will be in accordance with the contract.

The Engineer will develop and follow a QA plan. The Engineer will provide the QA plan to the QC Plan Administrator a minimum of 5 working days prior to the pre-production meeting. The QA plan will be reviewed at the pre-production meeting and any proposed changes will be documented.

The nominal QA strength test specimen size, defined in subsection a.1 of this special provision will be noted in the QA plan.

A. Personnel Requirements. The personnel responsible for field inspection and for obtaining QA samples will possess the required qualifications to collect QA samples. Sampling will be performed by a certified concrete technician (MCA Michigan Level I or II) or (MCAT) certified aggregate technician, where applicable.

B. Testing Correlation. Prior to initial concrete placement, the testing personnel for both the Engineer's QA and Contractor's QC will use the equipment they have assigned to the project to conduct side by side correlation testing of the same concrete used on the project to verify correlation of both the Department's and the Contractor's test results for temperature and air content of fresh concrete. Additional side by side correlation testing will be conducted whenever there is a change in QC or QA equipment and/or testing personnel for the project, or as directed by the Engineer. The temperature measuring devices used for QC and QA must correlate with each other within 2 degrees F. If the air content results of the side by side tests conducted by the QC and QA testers and equipment differ by more than 0.8 percent air by volume of concrete, a referee air content test of fresh concrete must be conducted by a third party, designated by the Engineer but independent of the project, prior to commencement or continuation of concrete placement in efforts to resolve issues associated with non-correlation.

C. Laboratory Facilities. The testing laboratory with responsibility for acceptance testing on this project is the Department testing laboratory, or a qualified facility under the authority of the Engineer.

2. QA Sampling and Testing. The Engineer will verify the Contractor's daily startup sampling and testing of temperature, slump, and air content of fresh concrete on the first load; conduct QA sampling and testing; monitor Contractor adherence to the QC plan; and inspect field placed materials in such a manner as to ensure that all concrete for the project is represented. The testing correlation requirements of subsection d.1.B of this special provision must be met prior to concrete placement.

The following *ASTM* test methods will apply. The Department's established procedures for sampling and testing are acceptable alternatives.

C 31 Practice for Making and Curing Concrete Test Specimens in the Field

C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens

C 78 Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)

C 138 Test Method for Density (Unit Weight), Yield and Air Content (Gravimetric) of Concrete

C 143 Test Method for Slump of Hydraulic-Cement Concrete

C 172 Practice for Sampling Freshly Mixed Concrete

C 173 Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method

C 231 Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

C 293 Test Method for Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)

A. Lot Size and Make Up. A production lot will not include more than one grade of concrete, concrete of the same grade having different specified slump or air content, or concrete of the same grade having different mix designs, or JMFs. Lot size and makeup will be determined by the Engineer, based on site conditions. A production lot may consist of a single day's production, individual concrete structural elements (eg. footing, column, pier cap, deck, bridge approach slab), or any combination thereof, provided they are of the same JMF. Each production lot will be divided into sublots of approximately equal size, as determined by the Engineer. The minimum number of sublots will be one per production lot, with the maximum number of sublots based on the anticipated total quantity of concrete to be placed and site conditions. A minimum of one subplot will be required for each day of production.

B. Sampling. QA sampling and testing will be conducted by the Engineer during concrete placement. Where practical, the random number method (as described in the "Random Sampling for Quality Control/Quality Assurance Projects" section of the Materials Quality Assurance Procedures Manual) will be used to determine the sampling locations. The sampling rate will be determined by the Engineer, based on the anticipated total quantity of concrete to be placed and site conditions, with a minimum of one sampling for each day of production.

At the option of the Engineer, small incidental quantities as defined in subsection a.1 of this special provision may be accepted (visually inspected and noted on the Inspector's Daily Report) without daily 28-day compressive strength QA test specimens provided there is a current acceptable strength test history of the JMF for the project prior to placement of the small incidental quantity. One set of compressive strength QA test specimens will then be molded for each small incidental quantity JMF at least once per week during production, thereafter, as determined by the Engineer (note the test results or identification number for the corresponding weekly QA compressive strength test result on the Inspector's Daily Report for each small incidental quantity). Quality control testing and daily QA testing for temperature, slump, and air content of fresh concrete are still required. Reduced QC for small incidental quantities, as described in subsection c.5.G of this special provision, may be considered.

The QA sampling rate and sample location will be based on cubic yard quantities.

Samples for acceptance will be taken at the point of discharge from the haul unit, at approximately the middle one-third of the load. Mix adjustments to the concrete contained within the haul unit selected for QA sampling and testing (beyond normal QC) will not be permitted prior to QA sampling and testing. QA sampling will be random and without prior notification.

The Engineer will perform QA sampling and testing for air content loss of fresh concrete that is either slipformed or pumped, (1) at least once during each day of production, (2) whenever the concrete pump is relocated, where applicable, or (3) whenever there is a significant change in the boom configuration or operation of the concrete pump, or there is a significant change in the characteristics of the paving operation during concrete placement. Concrete will be sampled from a representative haul unit immediately after its discharge but before the slipform paver or pump hopper, where applicable. The concrete representing the same haul unit will then be sampled and tested after the slipform paver or after discharge from the pump (without interruption or alteration of the pumping operation), where applicable. If the difference in measured air content between the two test locations for the same concrete is greater than 1.5 percent air by volume of concrete, the Engineer will issue a Notice of Non-Compliance with Contract Requirements (Form 1165), as described in subsection d.2.D of this special provision. The Contractor may resume concrete placement only after the necessary corrective action is taken to reduce the loss in air content of fresh concrete between the two test locations, as approved by the Engineer. Document the corrective action that was taken by the Contractor.

C. Testing. The location(s) within the project limits for QA testing of the fresh concrete and placement of curing facilities for initial curing of the 28-day compressive strength QA test cylinders will be determined by the Engineer in conformance with the following criteria:

(1) The elapsed time between obtaining the first and the final portion of the composite sample must not exceed 15 minutes.

(2) Testing for slump, temperature, and air content of fresh concrete must begin within 5 minutes after obtaining the final portion of the composite sample.

(3) Molding of the 28-day compressive strength QA test cylinders must begin within 15 minutes after obtaining the final portion of the composite sample.

(4) The concrete sample must be protected from the sun, wind, and other sources of rapid evaporation, and from contamination.

Two QA concrete strength test specimens per sample will be molded for 28-day compressive strength QA testing.

The Contractor will provide curing facilities equipped to ensure the proper environment for the Agencies QA concrete strength test specimens during initial cure. Each initial cure facility must provide ventilation or insulation, where applicable, to ensure the ambient temperature surrounding the specimens is maintained according to *AASHTO T23/ASTM C 31*. Failure by the Contractor to maintain the proper curing environment during initial cure will not be basis for rejection of samples or claims against the Department. Each initial curing facility must be capable of being locked, using an Department provided padlock. The Contractor will ensure that all initial curing facilities are accounted for at all time, and protected against theft and damage. The Contractor will place and secure each initial cure facility throughout the project limits in such a manner so as to minimize excessive transport of the test specimens prior to initial cure, as follows:

(5) Immediately after finishing molded specimens, the Engineer will move the QA concrete strength test specimens to the closest initial cure facility provided by the Contractor.

(6) Immediately after all QA concrete strength test specimens are placed into the cure facility and the proper initial curing conditions have been established, the Engineer will secure the facility using the Department provided padlock. Access to the QA concrete strength test specimens, thereafter, must be coordinated with the Engineer and will only be permitted in the presence of the Engineer.

(7) The Engineer will transport the QA concrete strength test specimens within 48 hours after molding, but not prior to 8 hours after final set of the concrete, from the initial curing facility to the Department's designated testing laboratory for final curing and strength testing. The specimens will be protected with a suitable cushioning material to prevent damage from jarring during transport. The total transportation time must not exceed 4 hours prior to commencement of final curing.

D. QA Stop Production Criteria. The Engineer will issue a Notice of Non-Compliance with Contract Requirements (Form 1165) and concrete production must stop when one or more of the following are observed.

(1) The QA testing shows that one or more of the suspension limits for quality characteristics defined in Table 2 are in non-compliance.

(2) The QC plan is not being followed.

(3) Segregation, excessive slumping of unsupported slipformed edges, or other notable changes in the fresh concrete properties is observed that may prevent proper placement, consolidation and finishing, or compromise the performance or long-term durability of the finished product.

(4) The required curing system is not being applied in a timely manner, as specified by the contract.

(5) If the measured air content loss between the two testing locations for the same concrete is greater than 1.5 percent air by volume of concrete as described in subsections c.5.E and d.2.B of this special provision.

(6) If the air content of fresh concrete is less than 5.0 or greater than 9.0 percent after pump or paver, regardless of the recorded QC or QA air content loss through the pump or paver.

The Engineer will issue a Notice to Resume Work (Form 1165) only after all necessary adjustments are made to restore conformance with all applicable specifications, and the appropriate documentation is made in the QC records.

E. QA Records. The Engineer will maintain a complete record of all QA tests and inspections. The records will contain, as a minimum, signed originals of all QA test results and raw data, random numbers used (where applicable) and resulting calculations. The QA test results will not be provided to the Contractor until the corresponding QC test results are received by the Engineer.

3. Quality Index Analysis. The Engineer's QA test results will be used to determine the pay factor (PF) and price adjustment (ADJ). The Contractor's QC test results will not be used for pay factor and price adjustment analysis. The Engineer will complete pay factor and price adjustment analysis within 7 working days after completion of all 28-day compressive strength testing for the representative production lot or quantity of concrete. The quality index parameter specification limits are defined in Table 3. Unless otherwise specified in the contract, concrete not conforming to the requirements specified in Table 3 is rejectable and subject to further evaluation. All values of PF and OLPF in these formulae are decimal, not percent. All values of PF and OLPF are rounded to two decimal places.

Price adjustment for 28-day compressive strength deficiencies will be based on test results for the corresponding weekly QA test specimens and the pay factor (PFs) calculated according to the formula defined in subsection d.3.A. The price adjustment (ADJ) = (PFs – 1)(Price).

Table 3: Quality Index Parameter Specification Limits

Quality Characteristic	Specification Limits
Air Content of Fresh Concrete (percent)	5.5 – 8.5
Rejection Limit (percent)	<5.0 or >9.0
Conc. Temp. (deg. F)	45 - 90 at time of placement
Slump (max.) (inch)	See Table 1, footnote (g)
28-day Compressive Strength (psi)	For LSL see Table 1
Rejection Limit - 28-day Compressive Strength	See Table 1

A. Pay Factor for 28-Day Compressive Strength (PFs).

$$PFs = \frac{\text{Tested Strength}}{LSL}$$

Where:

PFs = Pay Factor for 28-day compressive strength (not to exceed 1.00)

Tested Strength = QA 28-day compressive strength sample test result

LSL = Lower specification limit (see Table 1)

If the tested strength does not meet the rejection limit specified in Table 1, the Engineer will require additional evaluation as described in subsection d.4 of this special provision.

B. Pay Factor for Air Content of Fresh Concrete (PFac). The pay factor for air content of fresh concrete (PFac) will be according to Table 4.

Table 4: Air Content of Fresh Concrete Pay Factor (PFac)

Air Content of Fresh Concrete (percent)	Pay Factor (PFac)
5.5 – 8.5	1.00
5.0 – 5.4	0.50
Below 5.0	Rejection
8.6 – 9.0	0.75
Above 9.0	Rejection

If the air content of fresh concrete is below 5.0 or above 9.0 percent, the Engineer will elect to do one of the following.

(1) Require removal and replacement of the entire quantity of concrete represented by the test with new testing conducted on the replacement concrete and repeat the evaluation procedure.

(2) Allow submittal of a corrective action plan for the Engineer's approval. If the Engineer does not approve the plan for corrective action, subsection d.3.B.(1) of this special provision will be applied. All costs associated with plan submittal and corrective action under this subsection will be borne by the Contractor.

C. Overall Lot Pay Factor (OLPF). The following formulae are used to calculate the OLPF and ADJ. The OLPF will not exceed 1.00.

$$\text{OLPF} = (0.60 \times \text{PFs}) + (0.40 \times \text{PFac})$$

$$\text{ADJ} = (\text{OLPF} - 1)(\text{Price})$$

ADJ = Price adjustment per pay unit to be applied to the quantity represented by the QA test

Price = Base price established for the pay item

4. Evaluation of Rejectable Concrete. The Engineer will require additional evaluation to decide what further action may be warranted, as described below. Acceptance for air content of fresh concrete will be based on QA test results reported at the time of concrete placement.

If the Engineer determines that non-destructive testing (NDT) is appropriate, this work will be

done by the Contractor in the presence of the Engineer within 45 calendar days from concrete placement. All costs associated with this work will be borne by the Contractor. A complete set of non-destructive tests must be conducted (in accordance with the respective standard test method) at a minimum three randomly selected locations. If NDT is used to estimate the in-situ strength, a calibrated relationship between the project JMF under evaluation and the NDT apparatus must have been established prior to NDT testing according to its respective standard test method.

If the 28-day compressive strength QA test results show that the rejection limit (as specified in Table 1) has not been achieved, the quantity of concrete under evaluation will be rejected and the Engineer will require additional evaluation to decide what further action may be warranted.

Propose an evaluation plan and submit it to the Engineer for approval before proceeding. The results from NDT will be used only to decide what further action is required. This determination will be made by the Engineer, as follows:

A. For non-structural concrete. If no test result from non-destructive testing falls below the lower specification (LSL) 28-day compressive strength, the represented quantity of concrete under evaluation will remain in place and a pay factor for 28-day compressive strength (PFs) of 1.00 will be applied for overall lot pay factor (OLPF) and price adjustment (ADJ) determinations according to subsection d.3 of this special provision.

B. For structural concrete (including overhead sign foundations). If no test result from non-destructive testing falls below the lower specification limit 28-day compressive strength, the represented quantity of concrete under evaluation will remain in place and a pay factor for 28-day compressive strength (PFs) of 0.85 will be applied for overall lot pay factor (OLPF) and price adjustment (ADJ) determinations according to subsection d.3 of this special provision.

C. If one or more of the non-destructive test results fall below the lower specification limit (LSL) 28-day compressive strength, the Engineer may elect to do one of the following:

(1) Require removal and replacement of the entire rejected quantity of concrete, including new initial tests for pay factor (PF) determination and price adjustment conducted according to subsection d.3 of this special provision.

(2) Allow the Contractor to submit a plan for corrective action, for the Engineer's approval, to address the disposition of the rejected concrete. If the Engineer does not approve the plan for corrective action, subsection d.4.C.(1) of this special provision will be applied. All costs associated with plan submittal and corrective action under this subsection will be borne by the Contractor.

(3) Allow the in-situ quantity of concrete under evaluation to remain in place and a pay factor (PFs) of 0.50 will be applied for overall lot pay factor (OLPF) and price adjustment (ADJ) determinations according to subsection d.3 of this special provision.

e. Measurement and Payment. If a price adjustment is made for reasons included in this special provision, that adjustment will be made using the base price established for the specific item. If a contract unit price requires adjustment for other reasons not described in this special provision, the adjustments will be made using the unit price and the adjustments will be

cumulative.

Separate payment will not be made for providing, implementing, and maintaining an effective QC program. All costs associated with this work will be included in the applicable unit prices for the concrete items. Failure by the Contractor to maintain the proper curing environment during initial cure will not be basis for claim against the Department.

All costs associated with providing, locating, relocating, maintaining, and securing the adequate number of portable initial curing facilities for both the QC and QA strength test specimens will be included in the applicable unit prices for the concrete items. No additional payment will be permitted. The Contractor is responsible for damage, theft, subsequent replacement, and removal after completion of the work for each curing facility used on the project.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKINGS

PMK:MKB

1 of 3

APPR:MWB:CRB:02-05-19
FHWA:APPR:02-21-19

Add the following to the end of the list of materials in subsection 811.02, on page 588 of the Standard Specifications for Construction:

Modified Urethane Pavement Marking Material	920
Preformed Thermoplastic Pavement Marking Material	920

Ensure preformed thermoplastic materials for surface applications have a thickness of 90 mils and preformed thermoplastic materials for recessed applications have a thickness of 125 mils.

Add the following paragraph after the first paragraph of subsection 811.03.B, on page 589 of the Standard Specifications for Construction:

If pavement marking plan sheets and/or Witness, Log are included in the project the markings will be laid out by the Contractor prior to the permanent markings being applied. Layout is considered incidental to placement of permanent pavement markings. Provide the Engineer documented notice at least 2 calendar days prior to the Contractor pavement marking crew arriving onsite to layout and place the permanent pavement markings to enable the Engineer or a representative being onsite for review of the layout prior to the marking application. Notify the Engineer if it is discovered during layout that the pavement width or geometry has been altered or is different from the planned or logged configuration. The Contractor and Engineer will discuss and document the resolution for marking layout in such areas. If pavement marking plans and/or Witness, Log are not in the project, it is the responsibility of the Engineer to provide layout for the permanent pavement markings.

Add the following rows to Table 811-1 of subsection 811.03.B, on page 591 of the Standard Specifications for Construction:

Polyurea	20	Binder (gal)	5.5	8.25	11	17	22	33	44	66
		Bead (lb)	As directed by the manufacturer							
Modified Urethane	20	Binder (gal)	5.5	8.25	11	17	22	33	44	66
		Bead (lb)	As directed by the manufacturer							

Add the following paragraph after the fifth paragraph on page 592 of subsection 811.03.B, of the Standard Specifications for Construction:

Beads are not to be placed in liquid shadow markings.

Add the following subsections after the last paragraph of subsection 811.03.D.7.c, on page 595 of the Standard Specifications for Construction:

- 8. **Modified Urethane.** Ensure the pavement is free of excess surface and subsurface moisture that may affect bonding. The Engineer will not decide the suitability of specific days for the application of modified urethane.

Surface preparation requirements for special, and longitudinal modified urethane pavement markings depend on surface conditions.

Prepare new HMA surfaces and HMA surfaces open to traffic for 10 days or less with no oil drips, residue, debris, or temporary or permanent markings, by cleaning the marking area with compressed air.

Prepare new PCC surfaces and PCC surfaces free of oil drips, residue, and debris, temporary, or permanent markings, by removing the curing compound from the area required for pavement markings.

Prepare existing HMA or PCC surfaces that do not have existing markings, but may have oil drip areas, debris, or both, by scarifying the marking area using non-milling grinding teeth or shot blasting. The Engineer will allow the use of water blasting to scarify the marking area on PCC surfaces.

Prepare existing HMA or PCC surfaces with existing pavement markings and that may have oil drip areas, debris, or both, by using the following methods:

- a. For existing liquid pavement markings, scarify the proposed marking area using non-milling grinding teeth or shot blast. Occasionally existing liquid pavement markings will require complete removal, which will be determined by the Engineer.
- b. For existing cold plastic markings, completely remove the existing markings.

- 9. **Preformed Thermoplastic.** Ensure the pavement is free of excess surface and subsurface moisture that may affect bonding. The Engineer will not decide the suitability of specific days for the application of preformed thermoplastic.

Heat and apply the preformed thermoplastic material as recommended by the manufacturer. Feather all edges of the material with a putty knife while the preformed thermoplastic is still soft.

Modify the following row in Table 811-2 of subsection 811.03.D, on page 596 of the Standard Specifications for Construction to read as follows:

Thermoplastic	50	50	May 1	Nov. 1
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Add the following rows to Table 811-2 of subsection 811.03.D, on page 596 of the Standard Specifications for Construction:

Modified Urethane	40	40	Apr. 15	Nov. 15
Preformed Thermoplastic	35	35	Apr. 15	Nov. 15

Add the following pay items to the list of pay items in subsection 811.04, on page 598 of the Standard Specifications for Construction:

- Pavt Mrkg, Modified Urethane, (symbol).....Each
- Pavt Mrkg, Modified Urethane, (legend)Each
- Pavt Mrkg, Modified Urethane, __ inch, Crosswalk.....Foot
- Pavt Mrkg, Modified Urethane, __ inch, Stop BarFoot
- Pavt Mrkg, Modified Urethane, __ inch, Cross Hatching, (color).....Foot
- Pavt Mrkg, Modified Urethane, __ inch, (color).....Foot
- Pavt Mrkg, Ovly Cold Plastic, __ inch, Shadow Tape, Black.....Foot
- Pavt Mrkg, Ovly Cold Plastic, __ inch, Wet Reflective, (color)Foot
- Pavt Mrkg, Preformed Thermoplastic, (symbol).....Each
- Pavt Mrkg, Preformed Thermoplastic, (route) Route Shield, __ foot by __ foot.....Each
- Pavt Mrkg, Preformed Thermoplastic, (legend).....Each
- Pavt Mrkg, Preformed Thermoplastic, __ inch, Crosswalk.....Each
- Pavt Mrkg, Preformed Thermoplastic, __ inch, Stop BarFoot
- Pavt Mrkg, Preformed Thermoplastic, __ inch, Cross Hatching, (color)Each
- Pavt Mrkg, (binder), __ inch, Shadow Liquid, Black.....Foot
- Pavt Mrkg, Wet Reflective Waterborne, 2nd Application, __ inch, (color).....Foot

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
FLUORESCENT PLASTIC DRUM

OFS:RAL

1 of 2

APPR:CRB:MWB:06-21-17
FHWA:APPR:07-21-17

a. Description. This work consists of furnishing, installing, maintaining, relocating, and removing a fluorescent plastic drum as identified in the contract.

b. Materials. Provide a fluorescent plastic drum that is crashworthy in accordance with the *National Cooperative Highway Research Program Report 350 (NCHRP 350)* or *Manual for Assessing Safety Hardware (MASH)*, in addition to meeting the following requirements:

1. Provide a plastic drum and ballast in accordance with the standard specifications.

2. Equip the drum with reflective sheeting that meets the requirements of *ASTM D 4956* for reboundable Type IV Fluorescent Orange, and reboundable Type IV White. This sheeting must also meet the dimensional and installation requirements of Special Detail WZD-125. The florescent orange sheeting must have a Daytime Luminance factor that meets or exceeds 20 based on *Table 2 of ASTM D 4956 - Daytime Luminance Factor (Y%)^A*. The white sheeting must have a Daytime Luminance factor that meets or exceeds 27 based on *Table 2 of ASTM D 4956 - Daytime Luminance Factor (Y%)^A*.

A. Use sheeting from one of the following manufacturers or an approved equal:

(1) WR-7100 (white) and WR-7114(fluorescent orange), manufactured by Avery Dennison - Reflective Solutions, 7542 N. Natchez Ave. Nilis, IL, 60714, (877)-214-0909.

(2) 3910 (white) and 3914 (fluorescent orange) Diamond Grade Flexible Work Zone Sheeting, manufactured by 3M Traffic Safety & Security Division, 3M Center, 225-4N-14 St. Paul, MN, 55144, (800)-553-1380.

c. Construction. Install the fluorescent plastic drums at locations specified in the contract or as directed by the Engineer.

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

Pay Item	Pay Unit
Plastic Drum, Fluorescent, Furn	Each
Plastic Drum, Fluorescent, Oper.....	Each

1. **Plastic Drum, Fluorescent, Furn** will be paid for as specified in subsection 812.04.C of the Standard Specifications for Construction.

2. **Plastic Drum, Fluorescent, Oper** will be paid for as specified in subsection 812.04.D of the Standard Specifications for Construction.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
FLUORESCENT 42 INCH CHANNELIZING DEVICE

OFS:RAL

1 of 2

APPR:CRB:MWB:06-21-17
FHWA:APPR:07-21-17

a. Description. This work consists of furnishing, installing, maintaining, relocating, and removing a fluorescent 42 inch channelizing device as identified in the contract.

b. Materials. Provide a fluorescent 42 inch channelizing device that is crashworthy in accordance with the *National Cooperative Highway Research Program Report 350 (NCHRP 350)* or *Manual for Assessing Safety Hardware (MASH)*, in addition to meeting the following requirements:

1. Provide a plastic 42 inch channelizing device and ballast in accordance with the standard specifications.

2. Equip the 42 inch channelizing device with at least four 6-inch bands of reflective sheeting that meet the requirements of *ASTM D 4956* for reboundable Type IV Fluorescent Orange, and reboundable Type IV White. The topmost reflectorized stripe must be orange and alternate in color. The fluorescent orange sheeting must have a Daytime Luminance factor that meets or exceeds 20 based on *Table 2 of ASTM D 4956 - Daytime Luminance Factor (Y%)^A*. The white sheeting must have a Daytime Luminance factor that meets or exceeds 27 based on *Table 2 of ASTM D 4956 - Daytime Luminance factor (Y%)^A*.

A. Use sheeting from one of the following manufacturers or an approved equal:

(1) WR-7100 (white) and WR-7114 (fluorescent orange), manufactured by Avery Dennison - Reflective Solutions, 7542 N. Natchez Ave. Nilus, IL, 60714, (877)-214-0909;

(2) 3910 (white) and 3914 (fluorescent orange) Diamond Grade Flexible Work Zone Sheeting, manufactured by 3M Traffic Safety & Security Division, 3M Center, 225-4N-14 St. Paul, MN, 55144, (800)-553-1380.

c. Construction. Install the fluorescent 42 inch channelizing device at locations as specified in the contract or as directed by the Engineer.

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

Pay Item	Pay Unit
Channelizing Device, 42 inch, Fluorescent, Furn.....	Each
Channelizing Device, 42 inch, Fluorescent, Oper	Each

1. **Channelizing Device, 42 inch, Fluorescent, Furn** will be paid for as specified in subsection 812.04.C of the Standard Specifications for Construction.

2. **Channelizing Device, 42 inch, Fluorescent, Oper** will be paid for as specified in subsection 812.04.D of the Standard Specifications for Construction.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TRAFFIC CONTROL QUALITY AND COMPLIANCE

OPR:JJG

1 of 2

APPR:CER:DBP:01-20-11
FHWA:APPR:06-20-11

Delete the subsection 812.03.C, Deficient Traffic Control Operations on page 601 of the Standard Specifications for Construction in its entirety, and replace with the following.

C. Deficient Traffic Control Operations.

1. Traffic Control Quality and Compliance. The following applies to all aspects of the traffic control plan and traffic control devices except the Type D lights on plastic drums which are covered elsewhere in the contract.

a. Traffic Control not Anticipated in Design. If at any time during the project, including the time during the seasonal suspension, the Engineer documents that the traffic control requires improvements beyond the scope of the Traffic Control Plan, the Engineer will provide written instructions to the Contractor and traffic control supplier what improvements are required. The Contractor must develop and submit to the Engineer for approval, a written implementation schedule for improvements. If the schedule is not approved, or if the schedule is approved but is not followed, the Department will adjust the contract according to subsection 812.03.C.1.c.iii. If the implementation schedule is not followed, the Engineer will notify the Contractor and traffic control supplier in writing that they are in violation of this subsection. The work of making traffic control improvements directed by the Engineer that are beyond the scope of the Traffic Control Plan will be paid for as extra work.

b. As Designed Traffic Control. If at any time during the project, including the time during the seasonal suspension, the Engineer documents that the traffic control is deficient, inadequate or improperly placed, the Engineer will provide written notification with instructions for corrective action to the Contractor and traffic control supplier. Upon receipt of the notification of corrective action, the Contractor has 4 hours to correct the traffic control. If the traffic control cannot be corrected within the 4 hour time period, the Contractor will develop a written implementation schedule for the corrective action and submit the schedule to the Engineer for approval within 1 hour of receiving the written notification. If the schedule is not approved, or if the schedule is approved but is not followed, the Department will adjust the contract according to subsection 812.03.C.1.c.iii. If the implementation schedule is not followed, the Engineer will notify the Contractor and traffic control supplier in writing that they are in violation of this subsection.

c. Corrective Action. The Engineer will give written notification to the Contractor as identified above. Failure to make corrections within the timeframe required may result in the following actions by the Engineer:

- i. Stop work on the project until the Contractor completes corrective action,
- ii. Order corrective action by others in accordance with subsection 107.07, subsection 108.02, subsection 812.03.B, and in the interest of public safety.
- iii. A contract price adjustment will be made in the amount of \$100 per hour for every hour or portion thereof the improvements or corrective action remains incomplete as described herein. If improvements or corrections have not been made to the satisfaction of the Department, the contract will be adjusted until the traffic control is acceptable.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PRICE ADJUSTMENTS FOR AUTHORIZED EXTENSIONS OF TIME

CFS:MB

1 of 2

APPR:JJG:CRB:02-01-18
FHWA:APPR:02-02-18

Delete section 812.04.U, Price Adjustments for Authorized Extensions of Time, on page 631 and 632 of the Standard Specifications for Construction in its entirety and replace with the following.

U. Price Adjustments for Authorized Extensions of Time. The Department will not adjust the unit price for **TS, Temp, Furn** for authorized extensions of time.

The Department will not make price adjustments for temporary traffic control devices, **Minor Traf Devices**, and **Traf Regulator Control** during authorized extensions of time if liquidated damages are assessed in accordance with subsection 108.10. If liquidated damages are not assessed, the Department will adjust unit prices for the following:

1. **TS, Temp, Oper;**
2. **PTS System, Temp, Oper;**
3. Items designated as Furnished, Operated, or Standby, unless otherwise specified;
4. Items paid for as Each or Foot as documented by the Department and maintained on the Department website at:
http://www.michigan.gov/mdot/0,4616,7-151-9622_11044_11367---,00.html; and
5. Items measured as lump sum if they are used or required on the worksite during authorized extensions of time except that **Minor Traf Devices** will not be adjusted when conspicuity tape is the only minor traffic control device in service or required during the authorized extension of time.
6. Items not in use reserved by the Engineer as standby.

The Department will use the following formula to calculate the unit price adjustments. The adjustment for **Minor Traf Devices** will be at a daily rate of (A/B) not to exceed \$900.00 per calendar or work day and the adjustment for **Traf Regulator Control** will be at a daily rate of (A/B) not to exceed \$650.00 per calendar or work day. When calculating the adjustment, either calendar or working days will be used for both original contract time and additional days.

$(A/B) \times C = \text{unit price adjustment}$

Formula 812-1

where:

A = Original contract unit price

B = Original contract time

C = Additional days the item was in use or required to be on standby during the authorized extension of time.

The Department will determine the number of additional days the item is on standby or in use in calendar days.

For calendar date projects, the original contract time will be calculated as the number of calendar days from the actual start date to the following order of precedence date as identified within the contract:

- a. The latest Open to Traffic date if removal of all traffic control devices coincides with this date.
- b. The latest interim completion date for each season of work if all contract work must be completed in its entirety except turf establishment and watering and cultivating.
- c. The original contract completion date.

For work day projects if an authorized extension of time extends into the next construction season, including seasonal suspension periods during which a traffic control item is on standby or in use, the original contract time will be the calendar days between the first work day and the expiration of the original contract completion.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PAYMENT FOR MINOR TRAFFIC DEVICES AND TRAFFIC REGULATOR CONTROL

OPR:JJG

1 of 1

APPR:BJO:DBP:07-19-11
FHWA:APPR:07-19-11

Delete Table 812-1 in subsection 812.04.E, on page 625 of the Standard Specifications for Construction, in its entirety and replace with the following.

Table 812-1 Partial Payment Schedule for Minor Traf Devices and Traffic Regulator Control

Percent of Original Contract Amount Earned	Total Percent of Unit Price Paid
First Use	15
25	30
50	55
75	80
90	100

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SIGN, TYPE B, TEMPORARY, PRISMATIC, SPECIAL

COS:CRB

1 of 2

APPR:MWB:CGB:04-29-19
FHWA:APPR:05-07-19

a. Description. This work consists of fabricating, placing, maintaining, removing, and/or relocating the Type B, Temporary, Prismatic, Special signs identified in the proposal or on the plans. The signs have non-standard legends and may be project specific.

b. Materials. Use prismatic grade reflective sheeting, as described in section 922 of the Standard Specifications for Construction.

Ensure all temporary signs meet the specifications in subsection 812.03.D.1 of the Standard Specifications for Construction and be approved by the Engineer prior to use.

Route markers or overlays used in the fabrication or modification of Type B, Temporary, Prismatic, Special signs must either be directly applied to the Type B, Temporary, Prismatic, Special sign face or be fabricated utilizing Type III or Type IV substrate as defined in section 919 of the Standard Specifications for Construction. Overlays or route markers fabricated with Type II substrates are prohibited.

c. Construction. The Type B, Temporary, Prismatic, Special signs must meet the requirements for Sign, Type B, Temp, Prismatic, Furn and Sign, Type B, Temp, Prismatic, Oper as outlined in section 812 of the Standard Specifications for Construction.

Ensure Type B, Temporary, Prismatic, Special signs are not fabricated with vertical seams. Horizontal seams are not to cross through the sign legend.

Temporary Type IV substrate sign overlays may be used to modify the legends of Type B, Temporary, Prismatic, Special signs.

Install Type B, Temporary, Prismatic, Special signs on driven sign supports, in accordance with subsections 812.03, 919.04 and section 912 of the Standard Specifications for Construction, unless otherwise indicated on the plans, in the proposal or approved by the Engineer.

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

Pay Item	Pay Unit
Sign, Type B, Temp, Prismatic, Spec, Furn	Square Foot
Sign, Type B, Temp, Prismatic, Spec, Oper	Square Foot

1. **Sign, Type B, Temp, Prismatic, Spec, Furn** will be paid for the same as described for the pay item Sign, Type __, Temp, Prismatic, Furn in subsection 812.04.C of the Standard

Specifications for Construction. In addition, the pay item includes the fabrication of all initial route markers and overlays for the Type B, Temporary, Prismatic, Special signs.

2. **Sign, Type B, Temp, Prismatic, Spec, Oper** will be paid for the same as described for the pay item Sign, Type __, Temp, Prismatic, Oper in subsections 812.04.D and 812.04.B of the Standard Specifications for Construction.

Payment for operated items also includes the removal of all portable or driven sign supports (including post stubs and ballast) used to install the Type B, Temporary, Prismatic, Special signs.

Payment for operated items will also include the installation and/or removal of all overlays used to modify portions of Type B, Temporary, Prismatic, Special signs as specified on the plans, in the proposal or required by the Engineer and includes all equipment and material necessary to install and/or remove the overlays as required for the life of the contract. When sign overlays, including different route markers, are used to modify portions of Type B, Temporary, Prismatic, Special signs, only the overlay will be paid for as additional square footage of **Sign, Type B, Temp, Prismatic, Spec, Furn.**

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DELINEATION OF PORTABLE CHANGEABLE MESSAGE SIGN

OFS:RAL

1 of 1

APPR:CRB:MB:05-01-18
FHWA:APPR:05-02-18

Delete subsection 812.03.D.15, on page 614 of the 2012 Standard Specifications for Construction, in its entirety and replace with the following:

15. **Portable Changeable Message Signs.** Use portable changeable message signs (PCMS) as required. Delineate the PCMS with three plastic drums or three 42 inch channelizing devices. If the PCMS is in use, rest the tires on the ground with wheel chocks or elevate the trailer, with the bottom of the tires above the ground. If a PCMS is not needed, turn it off and remove it from the clear zone in accordance with subsection 812.03.G.5.

The Department will allow use of PCMS for either advance time notification for future events including closures and planned maintenance work or information including detours or alternative routes during current events; incident management; construction zone backups; or similar conditions.

Do not use generic, non-emergency safety messages. If power to the PCMS is lost, use four corner flash mode (an asterisk in each corner of the board, flashing) as the default setting. Ensure message sequences consist of no greater than two messages with a 2-second display time for each message.

Do not use PCMS for the following:

- a. Replacing MMUTCD required static signing or pavement markings;
- b. Replacing a lighted arrow;
- c. Advance notice of new traffic signals or signs; or
- d. Advertising.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SUPPORTS FOR TEMPORARY SIGNS

OPR:CRB

1 of 1

APPR:MWB:DBP:06-26-12
FHWA:APPR:08-18-12

Delete the last paragraph of subsection 812.03.D.3, on page 604 of the Standard Specifications for Construction in its entirety, and replace with the following.

Mount construction signs on portable sign support standards only if signs are to remain in place for 14 days or less, or as allowed by the Engineer if fixed supports are not possible.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SECURITY OF PORTABLE CHANGEABLE MESSAGE SIGNS

OFS:CRB

1 of 1

APPR:LWB:DBP:10-09-13
FHWA:APPR:10-09-13

a. Description. This work consists of making certain the portable changeable message sign (PCMS) is secure, and complies with the following:

1. Create unique usernames and passwords (not defaults) for access to the PCMS local controls.
2. Remove all literature (manuals, instructions, etc.) from the PCMS controller enclosure.
3. Use a padlock, keyed lock, etc to prevent access to the controller enclosure.
4. Provide the Engineer up to 3 keys, or the lock combination, as well as the usernames and passwords.
5. Provide at minimum, one classroom style training session of 2 hours, on PCMS field equipment, including but not limited to: posting and removal of messages, diagnosing field equipment malfunctions including messaging and communications errors. All training schedules, syllabus and materials are to be supplied by the Contractor and approved by the Engineer prior to delivery of training. Unless otherwise specified by the Engineer, the number of participants at each training session will be limited to a maximum of 20 individuals

MDOT reserves the right to take full messaging control of any PCMS at any time throughout the duration of the project. This includes posting any message determined to be appropriate by MDOT

MDOT may, at any time, inspect PCMS boards that are on site to verify that the security measures in this special provision are being followed.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MEASUREMENT AND PAYMENT OF TEMPORARY TRAFFIC CONTROL DEVICES

OFS:CRB

1 of 1

APPR:MWB:JJG:02-27-14

FHWA:APPR:03-04-14

Delete subsection 812.04.A.4, on page 624 of the Standard Specifications for Construction in its entirety.

Delete the second paragraph of subsection 812.04.C, on page 624 of the Standard Specifications for Construction in its entirety, and replace with the following:

The Engineer will measure **Sign, Type __, Temp, Prismatic, Furn** as the total cumulative area of the maximum number of each sign legend that is in use during the course of the project unless previously paid. The unit price for **Sign, Type __, Temp, Prismatic, Furn** includes the cost of portable or driven sign supports.

Delete the second paragraph of subsection 812.04.D, on page 624 of the Standard Specifications for Construction in its entirety, and replace with the following:

The Engineer will measure **Sign, Type __, Temp, Prismatic, Oper** as the total cumulative area of the maximum number of each sign legend that is in use during the course of the project unless previously paid.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TYPE III BARRICADES

DES:DBP

1 of 1

APPR:MWB:CRB:08-07-15
FHWA:APPR:08-23-15

Delete the first sentence for the second paragraph in subsection 812.03.D.8 on page 606 of the Standard Specifications for Construction, and replace with the following:

Light Type III barricades with two, Type C or Type D warning lights, fastened to the uprights above the top rail, provided these warning lights each weigh 3.3 pounds or less.

Delete the following pay items from the list in subsection 812.04 on page 622 of the Standard Specifications for Construction.

Barricade, Type III, High Intensity, Furn.....	Each
Barricade, Type III, High Intensity, Oper	Each
Barricade, Type III, High Intensity, Double Sided, Furn	Each
Barricade, Type III, High Intensity, Double Sided, Oper	Each

Renumber the existing subsection 812.04.A.5 on page 624 of the Standard Specifications for Construction, as follows:

4. The manufacturer's invoiced cost for damaged equipment included in a lump sum pay item for maintaining traffic.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TEMPORARY PAVEMENT MARKING REVISIONS

COS:CGB

1 of 4

APPR:MWB:MKB:06-14-19
FHWA:APPR:06-26-19

Delete subsection 812.03.D.11.a, on page 610 of the Standard Specifications for Construction, in its entirety and replace with the following:

- a. **Temporary Pavement Marking - Wet Reflective Type R.** Use temporary wet reflective pavement marking Type R (removable tape) when temporary pavement markings must be placed on finished pavements and are not in the exact location as future permanent markings or at the discretion of the Engineer when temporary markings must be removed during the life of a project.

Ensure prior to installation the pavement surface is air blown or brushed to remove surface dust and dirt. Remove curing compound from new concrete surfaces before applying Type R Tape.

Place wet reflective Type R tape when it is used as a 4-foot dash or full-length skip line as defined in the contract to temporarily mark finished pavement prior to the placement of permanent markings in accordance with the manufacturer's specifications for existing temperature and pavement condition. Offset the dash or skip lines 1 foot from the permanent marking so that the permanent markings can be placed prior to the removal of the 4-foot dashes or full-length skip lines. Do not use 4-foot dashes or full-length skip lines to temporarily mark a solid edge line. Ensure damaged or missing tape of more than 2 consecutive skip lines is replaced within 24 hours after notification by the Engineer. Failure to replace the tape within the 24-hour time period may result in a contract price adjustment as described in 12SP-812C - Traffic Control Quality and Compliance.

- i. Between April 15 and November 1, place wet reflective Type R tape not used as a skip line in accordance with the manufacturer's specifications for existing temperature and pavement condition. Replace wet reflective Type R tape of more than 50 cumulative feet that fails within 24 hours after notification by the Engineer. Failure to replace the tape within the 24-hour time period may result in a contract price adjustment as described in 12SP-812C - Traffic Control Quality and Compliance.
- ii. From November 2 to December 1 and March 15 to April 14, place wet reflective Type R tape for all temporary shifts and tapers when pavement surfaces are dry and air temperatures are 40 degrees Fahrenheit (F) and rising. Ensure all wet reflective Type R tape placed during these times is placed during approved daytime hours negotiated between the Engineer and the Contractor or daytime hours required in the contract.

Do not place wet reflective Type R tape within 24 hours of predicted precipitation, or 24 hours after any precipitation. The Contractor will be paid to repair locations that fail during these times unless the Engineer determines the failure is due to improper

- surface preparation, or failure to follow these requirements. Repairs, if required, will be paid for at a negotiated price between the Engineer and the Contractor for the associated work.
- iii. Use temporary wet reflective pavement marking Type NR paint, for all tapers and shifts when ambient air temperature is less than 40 degrees F. To remove the wet reflective Type NR paint, use the least abrasive technique as directed by the Engineer to minimize scarring. If the approved pavement marking removal pay item is not part of the contract, the cost of the removal of Type NR pavement markings will be negotiated between the Engineer and the Contractor.
 - iv. Wet reflective Type R tape is not to be placed between December 2 and March 14.

Delete subsection 812.03.D.11.b, on page 610 of the Standard Specifications for Construction, in its entirety and replace with the following:

b. Temporary Pavement Marking - Wet Reflective Type NR.

- i. **Wet Reflective Type NR Paint.** Use temporary pavement marking Wet Reflective Type NR paint when temporary pavement markings must be placed on pavement to be removed or replaced during construction. It also must be used when temporary markings line up exactly with the placement of permanent markings and may be grooved out prior to recessing permanent markings. The temporary pavement marking material must be compatible with the material specified for the permanent markings if permanent markings are to be placed on top of temporary markings.

Place Wet Reflective Type NR paint in accordance with section 811. Place the material binder at a thickness of 18 mils while driving at a maximum rate of 8 miles per hour. Drop wet reflective optics and glass beads at a rate as recommended by the manufacturer for an approved wet reflective system. Ensure the proposed wet reflective optic is approved by the Engineer.

Place Wet Reflective Type NR paint, used as a 4-foot dash or full-length skip line as defined in the contract, to temporarily mark finished pavement prior to the placement of permanent markings, in the exact location as the permanent marking such that its removal is not necessary. Only use Wet Reflective Type NR markings compatible with the permanent pavement marking material specified on the project as a 4-foot dash or full-length skip line. Do not use 4-foot dashes or full-length skip lines to temporarily mark a solid edge line.

- ii. **Wet Reflective Type NR Tape.** Use temporary pavement marking Wet Reflective Type NR Tape as a 4-foot dash or full-length skip line as defined in the contract to temporarily mark a white skip line or yellow centerline on base or leveling course pavement. Wet Reflective Type NR tape must not be used to temporarily mark a solid edge line. Wet Reflective Type NR tape is not to be used on the wearing course of asphalt or on existing pavement. Place Wet Reflective Type NR tape in accordance with section 811.

Delete the following pay items from the list of pay items in subsection 812.04, on page 623

of the Standard Specifications for Construction:

Pavt Mrkg, Type R, 4 inch, (color), Temp	Foot
Pavt Mrkg, Type NR, Tape, 4 inch, (color), Temp.....	Foot
Pavt Mrkg, Type NR, Paint, 4 inch, (color), Temp.....	Foot

Add the following pay items to the list of pay items in subsection 812.04, on page 623 of the Standard Specifications for Construction:

Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, (color), Temp	Foot
Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, (color), Temp	Foot
Pavt Mrkg, Wet Reflective, Type NR, Tape, 4 inch, (color), Temp	Foot
Pavt Mrkg, Wet Reflective, Type R, Tape, 8 inch, (color), Temp	Foot
Pavt Mrkg, Wet Reflective, Type NR, Paint, 8 inch, (color), Temp	Foot
Pavt Mrkg, Wet Reflective, Type NR, Tape, 8 inch, (color), Temp	Foot

Delete subsection 812.04.N.2, on page 629 of the Standard Specifications for Construction, in its entirety and replace with the following:

2. **Non-Removable (Type NR) Pavement Markings.** The unit price for the relevant **Pavt Mrkg, Wet Reflective, Type NR, Paint, Temp** and **Pavt Mrkg, Wet Reflective, Type NR, Tape, Temp** pay items include the cost of providing and placing temporary pavement markings.

Delete subsection 812.04.N.3, on page 629 of the Standard Specifications for Construction, in its entirety and replace with the following:

3. **Removable (Type R) Pavement Markings.** The unit prices for **Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, (color), Temp** and **Pavt Mrkg Cover, Type R, (color)** include the cost of providing, placing, maintaining, removing and disposing of temporary pavement marking. Payment will be per foot measured along the length of the placed pavement marking.

Delete subsection 922.06.A.1 on page 937 of the Standard Specifications for Construction in its entirety and replace with the following:

1. **Pavement Marking, Wet Reflective, Type R.** Provide wet reflective Type R temporary pavement marking as preformed tape. Select wet reflective Type R markings from the Qualified Products List (922.06A). Apply and remove preformed tape in accordance with the manufacturer's instructions. The tape must remain flexible and conform to the texture of the pavement surface during use.

Delete subsection 922.06.A.2, on page 937 of the Standard Specifications for Construction, in its entirety and replace with the following:

2. **Pavement Marking, Wet Reflective, Type NR Paint.** Provide Wet Reflective Type NR

temporary pavement markings as paint reflectorized with a wet reflective optic system recommended by the manufacturer and as approved by the Engineer, as required.

- a. **Wet Night Retro Reflective Optics.** Select wet reflective optics from the Qualified Products List (920.02C) or an alternative that exceeds the requirements in Table 922-2 as approved by the Engineer:

Table 922-2 Temporary Wet Reflective Type NR Pavement Markings		
Average Initial Retro reflectivity at 30-meter geometry in mcd/lux/sq m with flow of placement		
Test Method	Color	
	White	Yellow
Dry (<i>ASTM E 1710</i>)	700	500
Wet Recovery (<i>ASTM E 2177</i>)	250	200

Ship the material to the job site or Contractor’s yard in sturdy containers marked in accordance with subsection 920.01.A of the Standard Specifications for Construction.

Select glass beads for corresponding materials in accordance to subsection 920.02 of the Standard Specifications for Construction.

Submit to the Engineer prior to the start of work a general certification from the manufacturer that when applied in accordance with the construction methods herein, the glass beads and wet reflective optics will meet the minimum requirements shown in Table 922-2.

- b. **Binder Material for Temporary Wet Reflective Type NR Pavement Markings.** Select the liquid applied pavement marking from one of the materials from the following Qualified Products Lists to use as a binder for the wet reflective optics or use an alternative as approved by the Engineer:

- 811.03D1 Waterborne, Liquid Pavement Marking Material
- 811.03D2 Low Temperature Waterborne, Liquid Pavement Marking Material
- 811.03D3 Regular Dry Paint, Liquid Pavement Marking Material

- 3. **Pavement Marking, Wet Reflective, Type NR Tape.** Provide Wet Reflective Type NR temporary pavement markings as preformed tape. The tape must remain flexible and conform to the texture of the pavement surface during use. Select wet reflective Type NR tape from the Qualified Products List (922.06A).

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PAYMENT OF TEMPORARY TRAFFIC CONTROL DEVICES

OFS:CRB

1 of 1

APPR:CGB:MB:08-26-16
FHWA:APPR:09-13-16

Delete subsection 812.04.A Damage Compensation, on page 623 of the Standard Specifications for Construction, in its entirety and replace with the following:

A. Damage Compensation. Notify the Engineer of damaged temporary traffic control devices. Before replacement and disposal, allow the Engineer to verify the condition of damaged temporary traffic control devices eligible for payment. Damage will be assumed to have occurred from vehicular traffic unless otherwise documented. The Department will pay as follows, for replacing temporary traffic control devices or equipment that are placed appropriately and damaged by vehicular traffic, other than the Contractor's vehicles and equipment.. Devices will be assumed to be placed appropriately unless otherwise documented. Replacement will be made up to project completion (excluding water and cultivating), as follows:

1. The **Furnished** unit price for temporary traffic control devices paid for as furnished pay items, excluding Plastic Drums and 42 inch channelizing devices;
2. The unit price for devices not paid for as **Furnished**;
 - a. Plastic Drums and 42 inch Channelizing Devices will be paid for at a set rate of \$35 per Plastic Drum and \$18 per damaged 42 inch Channelizer.
 - i. Prior to payment the Plastic Drum or 42 inch Channeling Device must be classified as unacceptable, per the ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features (ATSSA QG), and spray-painted with an X.
 - ii. All Plastic Drums and 42 inch Channelizing Devices that are classified as marginal, per the ATSSA QG, during the project, will have blue survey ribbon tied to the handle. MDOT will be responsible for marking marginal devices. Removal and replacement will take place as defined under the Quality Classifications and Requirements Section of the ATSSA QG and will be at no additional cost to the Department.
 - If at any time, any Contactor, is witnessed tampering with the marginal marking method, the Engineer may require all marginal devices on the project to be upgraded to acceptable outside the timeframes detailed in the ATSSA QG.
3. The manufacturer's invoice cost for devices required by the Engineer and not included in the unit price for other relevant pay items;
4. The manufacturer's invoiced cost for damaged equipment included in a lump sum pay item for maintaining traffic.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
USE OF 42-INCH CHANNELIZING DEVICES

OFS:RAL

1 of 1

APPR:CRB:MB:06-30-17
FHWA:APPR:07-21-17

Delete subsection 812.03.D.6, on page 605 of the Standard Specifications in its entirety and replace it with the following:

6. **42-inch Channelizing Devices.** Provide and install 42-inch tall, retro-reflective plastic channelizing devices as shown on the plans, or directed by the Engineer. Do not attach lights.
- a. **Daytime Use.** The Department will allow the daytime use of 42-inch channelizing devices in tapers and tangents for the following:
- i. Capital Preventative Maintenance (CPM) projects, pavement marking, chip seal, microsurface, and crack-filling projects;
 - ii. Any projects where the use of plastic drums restricts proposed lane widths to less than 11 feet, including shy distance; or
 - iii. Work durations of 12 hours or less.

The devices must be placed such that spacing does not exceed the maximum values described in Table 812-1:

Table 812-1		
Maximum Spacing for 42-inch Channelizing Devices		
Work Zone Speed Limit	Taper	Tangent
< 45 mph	1.0 S	2.0 S
≥ 45 mph	50 feet	100 feet
S=Work Zone Speed Limit (mph)		

- b. **Nighttime Use.** The Department will allow the nighttime use of 42-inch channelizing devices in tangents and tapers for the following:
- i. Capital Preventative Maintenance (CPM) projects, pavement marking, chip seal, microsurface, and crack-filling projects;
 - ii. Any projects where the use of plastic drums restricts proposed lane widths to less than 11 feet, including shy distance; or
 - iii. Work durations of 12 hours or less.

Place the devices a maximum distance of 50 feet apart in tangent sections, and a maximum of 25 feet apart in tapers. These spacing requirements apply for all speed limits.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
INDUSTRIAL BY-PRODUCTS AND BENEFICIAL RE-USE

ENV:HLZ

1 of 1

APPR:JJG:JFS:09-11-14

APPR: FHWA: 09-11-14

a. Description. For this project, regardless of the application, the use of industrial by-products, covered in 2014 PA 178, is prohibited unless the use and application of a particular material is covered elsewhere in the contract.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CRUSHED CONCRETE NEAR WATER

CFS:JFS

1 of 1

APPR:KAS:DBP:02-24-12
FHWA:APPR:02-24-12

Add the following paragraph after the first paragraph of Subsection 902.05 on page 743 of the Standard Specifications for Construction:

The use of crushed concrete is prohibited on the project within 100 feet of any water course (stream, river, county drain, etc.) and lake, regardless of the application or location of the water course or lake relative to the project limits.

Add the following paragraph after the first paragraph of Subsection 902.06 on page 743 of the Standard Specifications for Construction:

The use of crushed concrete is prohibited on the project within 100 feet of any water course (stream, river, county drain, etc.) and lake, regardless of the application or location of the water course or lake relative to the project limits.

Add the following paragraph after the fourth paragraph of Subsection 902.07 on page 744 of the Standard Specifications for Construction:

The use of crushed concrete is prohibited on the project within 100 feet of any water course (stream, river, county drain, etc.) and lake, regardless of the application or location of the water course or lake relative to the project limits.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
ALTERNATIVE GRANULAR MATERIALS FOR FILL AND SUBBASE

CFS:SAB

1 of 1

APPR:JFS:DMG:04-03-12

FHWA:APPR:04-09-12

Delete subsection 902.07.A, on page 744, of the Standard Specifications for Construction, in its entirety and replace with the following:

A. Class I, Class IIAA, or Dense-Graded Aggregate 21A, 21AA and 22A material for Class II material;

Delete subsection 902.07.B, on page 744, of the Standard Specifications for Construction, in its entirety and replace with the following:

B. Class I, Class II, Class IIA, Class IIAA, Class IIIA or Dense-Graded Aggregate 21A, 21AA and 22A material for Class III material;

Delete subsection 902.07.C, on page 744, of the Standard Specifications for Construction, in its entirety and replace with the following:

C. Class I material for Class IIAA material; and

Add the following subsection to Section 902.07, on page 744, of the Standard Specifications for Construction.

D. Dense-Graded Aggregate 21A, 21AA and 22A material for Class IIA.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SUPERPAVE FINAL AGGREGATE BLEND REQUIREMENTS

CFS:KPK

1 of 2

APPR:JFS:CJB:05-31-18

FHWA:APPR:06-06-18

a. Description. This special provision establishes the Superpave final aggregate blend gradation requirements and the Superpave final aggregate blend physical requirements.

b. Materials. Replace Table 902-5 and Table 902-6 of the Standard Specifications for Construction with the following tables.

Table 902-5						
Superpave Final Aggregate Blend Gradation Requirements						
Standard Sieve	Percent Passing Criteria (control points)					
	Mixture Number					
	5	4	3 Leveling Course	3 Base Course	2	LVSP (a)
1½ inch	—	—	—	—	100	—
1 inch	—	—	100	100	90–100	—
¾ inch	—	100	90–100	90–100	≤90	100
½ inch	100	90–100	≤90	≤90	—	75–95
⅜ inch	90–100	≤90	—	—	—	60–90
No. 4	≤90	—	—	—	—	45–80
No. 8	47-67	39-58	35–52	23–52	19–45	30–65
No. 16	—	—	—	—	—	20–50
No. 30	—	—	—	—	—	15–40
No. 50	—	—	—	—	—	10–25
No. 100	—	—	—	—	—	5–15
No. 200	2.0–10.0	2.0–10.0	2.0–8.0	2.0–8.0	1.0–7.0	3–6
a. For LVSP, less than 50 percent of the material passing the No. 4 sieve may pass the No. 30 sieve.						

Table 902-6 Superpave Final Aggregate Blend Physical Requirements													
Est. Traffic (million ESAL)	Mix Type	Percent Crushed Minimum Criteria		Fine Aggregate Angularity Minimum Criteria		% Sand Equivalent Minimum Criteria		Los Angeles Abrasion % Loss Maximum Criteria		% Soft Particles Maximum Criteria (a)		% Flat and Elongated Particles Maximum Criteria (b)	
		Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course	Top & Leveling Courses	Base Course
< 0.3	LVSP	55/—	—	—	—	40	40	45	45	10	10	—	—
< 0.3	E03	55/—	—	—	—	40	40	45	45	10	10	—	—
≥0.3 - <1.0	E1	65/—	—	40	—	40	40	40	45	10	10	—	—
≥1.0 - < 3	E3	75/—	50/—	43	40	40	40	35	40	5	5	10	10
≥3 - <10	E10	85/80	60/—	45	40	45	45	35	40	5	5	10	10
≥10 - <30	E30	95/90	80/75	45	40	45	45	35	35	3	4.5	10	10
≥30 - <100	E50	100/100	95/90	45	45	50	50	35	35	3	4.5	10	10

(a) Soft particles maximum is the sum of the shale, siltstone, ochre, coal, clay-ironstone and particles that are structurally weak or are non-durable in service.
 (b) Maximum by weight with a 1 to 5 aspect ratio.

Note: "85/80" denotes that 85 percent of the coarse aggregate has one fractured face and 80 percent has at least two fractured faces.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
STEEL REINFORCEMENT REVISIONS

OFS:MJF

1 of 2

APPR:JSW:POJ:12-19-18
FHWA:APPR:12-19-18

Delete the first three paragraphs under subsection 905.03, on page 767 of the Standard Specifications for Construction, and replace with the following:

905.03 Steel Bar Reinforcement for Structures. Deformed steel bars used for non-prestressed concrete reinforcement must meet the requirements of ASTM A615 Grade 60, ASTM A706 Grade 60, or ASTM A996 (Type A or Type R) Grade 60, unless otherwise required.

Deformed steel bars used for prestressed concrete reinforcement must meet the requirements of ASTM A615 Grade 60, ASTM A706 Grade 60, or ASTM A996 (Type A) Grade 60, unless otherwise required.

Delete subsection 905.03.C on page 768 of the Standard Specifications for Construction, in its entirety and replace with the following:

C. Epoxy Coating. Epoxy coated steel reinforcement bars must be coated in accordance with ASTM A775. Epoxy coated steel welded wire reinforcement must be coated in accordance with ASTM A884, Class A, Type 1. The following exceptions and additions apply:

1. Select coating material from the Qualified Products List.
2. The Department may test samples to determine thickness of coating, adhesion of coating, and holidays. Coat more steel reinforcement than shown on the plans to allow splicing to replace steel reinforcement removed for test samples.
3. Include written certification that the reinforcing bars or steel welded wire reinforcement were cleaned, coated, and tested in accordance with ASTM A775 or ASTM A884, as applicable, from the coating applicator.
4. Repair damage to the coating in accordance with subsection 706.03.E.8.

Delete the first paragraph under subsection 905.05, on page 768 of the Standard Specifications for Construction, in its entirety and replace with the following:

Deformed steel bars must meet the requirements of ASTM A615 Grades 40, 50, or 60, ASTM A706, or ASTM A996 (Type A or Type R).

Delete subsection 905.06, on page 768 of the Standard Specifications for Construction, in its entirety and replace with the following:

905.06 Steel Welded Wire Reinforcement. Welded steel wire reinforcement must meet the requirements of ASTM A1064 and fabricated as required.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PHYSICAL REQUIREMENTS FOR GEOTEXTILES

CFS:RBE

1 of 1

APPR:DMG:RWS:08-06-15

FHWA:APPR:08-11-15

Delete Table 910-1 on page 813 of the Standard Specifications for Construction in its entirety and replace with the following:

Table 910-1: Physical Requirements for Geotextiles

Geotextile Category	Property				
	Grab Tensile Strength (minimum) (pounds)	Trapezoid Tear Strength (minimum) (pounds)	CBR Puncture Strength (minimum) (pounds)	Permittivity per second (minimum)	Apparent Opening Size (maximum) (millimeters)
	Test Method				
	<i>ASTM D 4632</i>	<i>ASTM D 4533</i>	<i>ASTM D 6241</i>	<i>ASTM D 4491</i>	<i>ASTM D 4751</i>
Geotextile Blanket (a)	90	45	230	0.5	0.21
Geotextile Liner	200	75	440	0.5	0.21
Heavy Geotextile Liner	270	100	620	0.5	0.21
Woven Geotextile Separator (<50% elongation)	270	100	620	0.05	0.425
Non-Woven Geotextile Separator (>50% elongation)	200	75	440	0.05	0.425
Stabilization Geotextile	270	100	620	0.05	0.50
Silt Fence	100 (b)	45	---	0.1	0.60
Drainage Geocomposites	90	45	230	0.5	0.21
<p>a. For pipe wrap where backfill around the pipe meets granular material Class IIAA requirements; geotextiles, including knitted polyester sock, which meet the following minimum requirements in the applied condition are permitted: Mass/Unit Area: 3.0 oz/yd²; Mullen burst strength: 100 psi; maximum apparent opening size must be 0.30 mm for pavement and foundation underdrains, and 0.60 mm in other areas. The fluid displacement rate for the Mullen burst test equipment must be 170 mL/min ±5 mL/min. Subtract tare strength from the ultimate burst strength as specified in <i>ASTM D 3786</i>.</p> <p>b. Elongation at the specified grab tensile strength no greater than 40% for silt fence.</p>					

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
HOT-POURED SEALANT FOR CONSTRUCTION

CFS:ARB

1 of 1

APPR:RAG:TES:06-11-18
FHWA APPR:06-11-18

Delete subsection 914.04, on pages 836 and 837 of the Standard Specifications for Construction, in its entirety and replace with the following:

914.04. Hot-Poured Sealant. Provide a material listed in Table 914-1 or an approved equal, as determined by the Engineer.

Table 914-1 Hot-Poured Sealant	
Product Name	Manufacturer
MACSEAL 6690-4 MOD	McAsphalt, Ind.
Roadsaver 522	Crafco
Deery 101 ELT	Crafco
RP Type 3725	Right Pointe
Elastoflex 72	Maxwell Products
Dura-Fill 3725	P & T Products
3405-M Michigan	W.R. Meadows

Legibly mark material containers with a non-fading, weather-resistant ink or paint. Include the manufacturer's name or trade name, batch number, recommended pouring temperature, and the maximum safe heating temperature on the label.

Where required, use a backer rod meeting the requirements of *ASTM D 5249, Type 1*.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKING MATERIALS

PMK:MKB

1 of 4

APPR:MWB:CRB:02-05-19
FHWA:APPR:02-21-19

Delete the content of section 920, on page 890 of the 2012 Standard Specifications for Construction in its entirety and replace it with the following:

920.01. Marking Materials. Select pavement marking materials from the Qualified Products List unless specified otherwise by special provision in the contract.

When selecting preformed thermoplastic products, ensure preformed thermoplastic materials have a thickness of 90 mils for surface applications and a thickness of 125 mils for recessed applications. For black liquid shadow markings and blue markings used in parking areas, choose a specified binder material and color from the Qualified Products List or select a white specified binder material from the Qualified Products List and tint the product to the appropriate color.

Use liquid applied pavement marking materials manufactured in the previous 12 months or within the shelf-life directed by the manufacturer, whichever is less. Use solid applied materials within the shelf-life directed by the manufacturer. Provide certification that liquid and solid applied pavement marking materials have been stored per the manufacturer's requirements. Materials not in compliance will be rejected and removed at the Contractor's expense.

Pavement marking materials must meet the general packaging and labeling requirements of subsection 920.01.A, and applicable specific material requirements of subsection 920.01.B.

A. General Packaging and Labeling. Material containers or packages must be marked on the tops and sides, using a durable, weather-resistant marking. Include the following information:

1. Manufacturer's name and address,
2. Description of the material,
3. Product identification number,
4. Lot or Batch number,
5. Date of manufacture,
6. Volume and
7. Weight.

B. Packaging and Labeling for Cold Plastic and Thermoplastic Markings.

1. **Cold Plastic.** Containers or packages of cold plastic material and the core of each roll must be marked with the information specified in subsection 920.01.A.
2. **Thermoplastic.** In addition to the requirements of subsection 920.01.A, thermoplastic material must be packaged in non-stick containers, and labeled with "heat to manufacturer-recommended temperature range," or a Department-approved equal.

920.02. Glass Beads and Wet Reflective Optics.

A. Glass Bead and Wet Reflective Optics Packaging and Labeling. Glass beads and wet reflective (WR) optics must be packaged in moisture resistant bags and labeled to include the following information:

1. Manufacturer's name and address,
2. Shipping point,
3. Trademark or name,
4. The wording "Glass Beads" or "the appropriate optic type",
5. Specification number,
6. Weight,
7. Lot or Batch number, and
8. Date of manufacture.

Drop-on AASHTO M247 Type I beads, herein referred to as standard glass beads, must meet the general requirements of subsection 920.02.B and the applicable requirements for specific applications of subsection 920.02.D. WR optics must meet the general requirements of subsection 920.02.C and the applicable requirements for specific applications of subsection 920.02.D. Large glass beads must meet federal specification TTB-1325 for a Type 4 glass bead.

All glass beads and WR optics to be used on Federal-aid projects must contain no more than 200 parts per million of arsenic or lead, as determined in accordance with Environmental Protection Agency testing methods 3052, 6010B, or 6010C.

B. General Requirements for Standard Glass Beads. Standard glass beads must meet the physical characteristics and gradation requirements specified in Table 920-1, unless otherwise specified in subsection 920.02.D for specific applications.

Table 920-1 General Requirements for Standard Glass Bead	
Physical characteristics (MTM 711)	
General Appearance	Transparent, clean, smooth, free from milkiness, pits, or excessive air bubbles
Shape	Spherical with $\geq 75\%$ true spheres

Color	Colorless, very light gray, very light gray tinge, or bright white
Index of Refraction	≥1.50
Alkalinity	≤2.0
Gradation Requirements (MTM 711)	
Sieve Size (No.)	Total Percent Passing
20	100
30	75–95
50	15–35
100	0–5

C. **General Requirements for WR Optics.** WR optics must meet the retroreflectivity requirements specified in Table 920-2.

Table 920-2		
General WR Optics Requirements		
Average Initial Retroreflectivity at 30 meter geometry in mcd/lux/m²		
Test Method	Color	
	White	Yellow
Dry (ASTM E 1710)	700	500
Wet Recovery (ASTM E 2177)	250	200
Wet Continuous (ASTM E 2832)	100	75

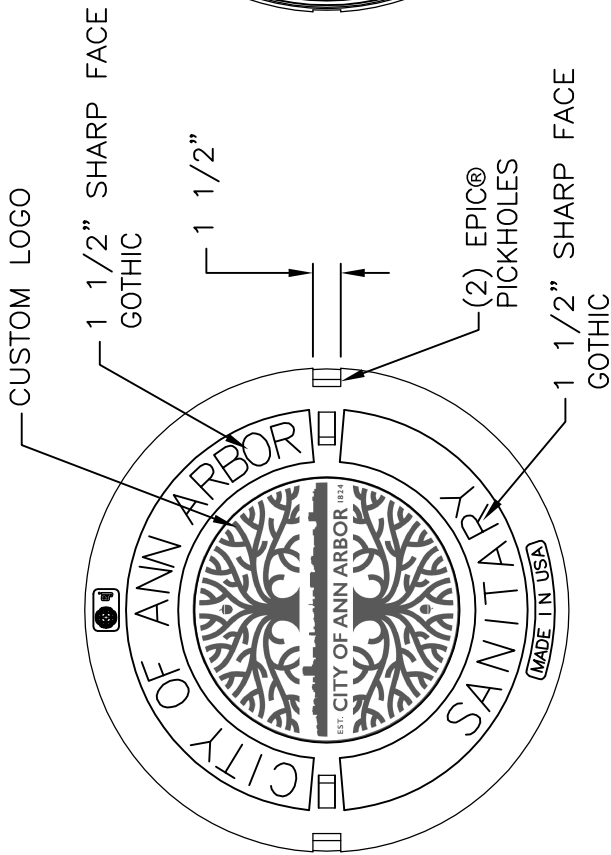
D. **Glass Bead and WR Optics Requirements for Specific Applications.** For specific applications, glass beads and WR optics must be as follows:

1. For recessed longitudinal markings, use a double drop system of large and standard glass beads, a double drop system of WR optics and standard glass beads, or an Engineer-approved alternate.
2. **Waterborne and Low Temperature Waterborne.** Standard and large glass beads for use with waterborne marking material and low temperature waterborne marking material require a moisture resistant coating and a silane coating. The type, gradation, and application rates for WR optics used with waterborne and low temperature waterborne marking materials must meet the waterborne manufacturer's recommendations.
3. **Regular Dry.** Standard and large glass beads for use with regular dry marking material may have a moisture resistant coating, a silane coating, or both. The type, gradation, and application rates for WR optics used with regular dry marking materials must meet the regular dry manufacturer's recommendations.
4. **Thermoplastic.** Standard and large glass beads for thermoplastic marking material must have a moisture resistant coating. The type, gradation, and application rates for WR optics

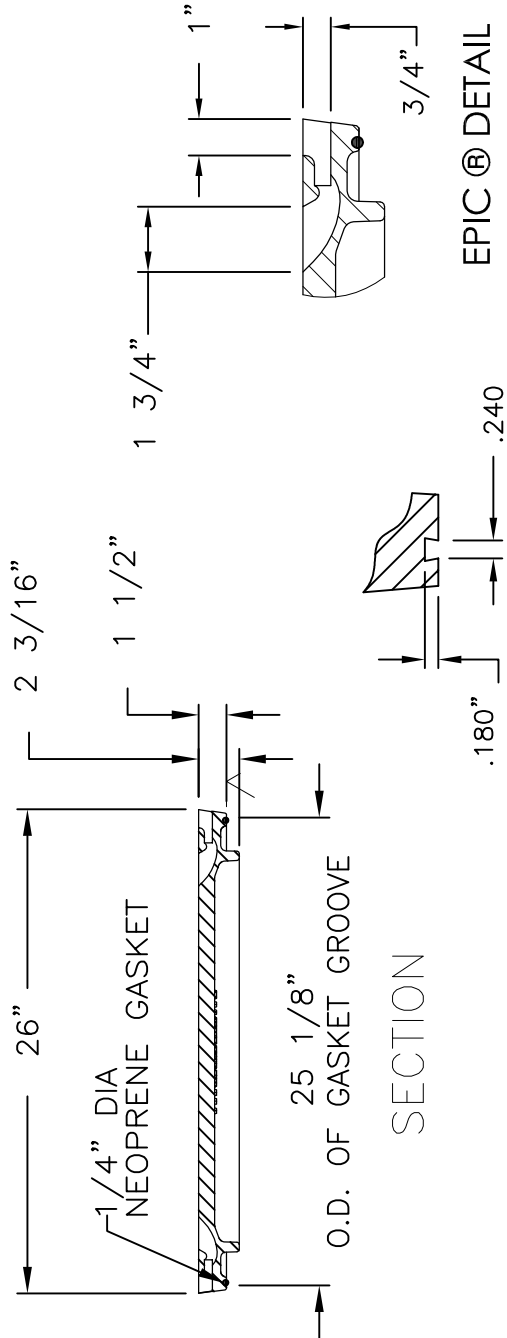
used with thermoplastic marking materials must meet the thermoplastic manufacturer's recommendations.

5. **Sprayable Thermoplastic.** The type, gradation, and application rates for standard and large glass beads and WR optics used with sprayable thermoplastic marking material must meet the sprayable thermoplastic manufacturer's recommendation.
6. **Polyurea.** The type, gradation, and application rates for standard and large glass beads and WR optics used with polyurea marking material must meet the polyurea manufacturer's recommendation.
7. **Modified Urethane.** The type, gradation, and application rates for standard and large glass beads and WR optics used with modified urethane marking material must meet the modified urethane manufacturer's recommendation.

1040AGS Cover



BOTTOM VIEW



SECTION

GROOVE DETAIL

EPIC® DETAIL

Product Number

001040326

Design Features

- Materials Gray Iron (CL35B)
- Design Load Heavy Duty
- Open Area n/a
- Coating Dipped
- Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

Drawing Revision

5/11/2018 Designer: DAE
8/29/2018 Revised By: DAE

Disclaimer

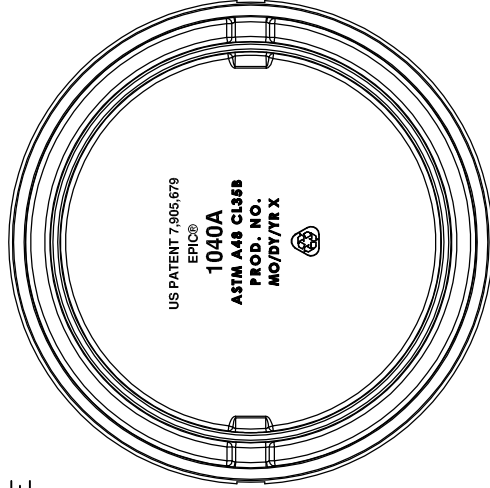
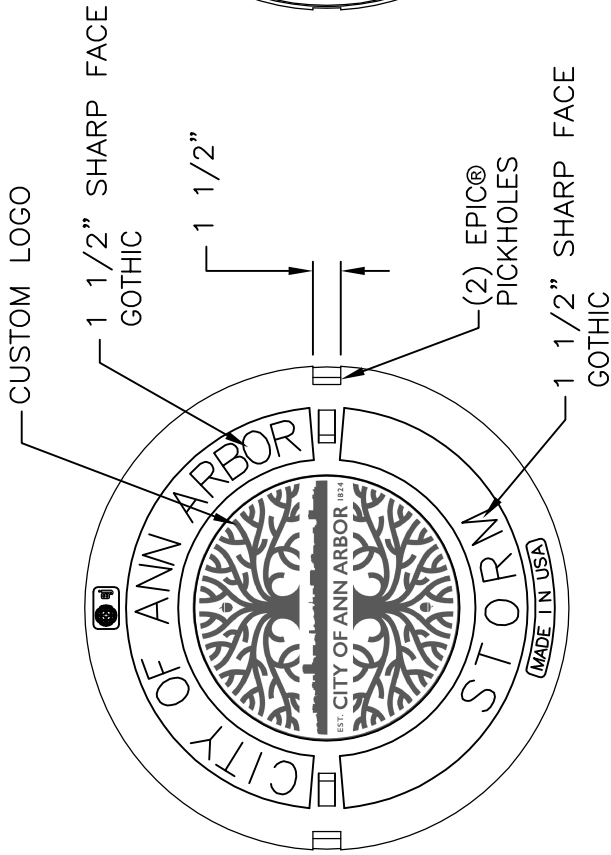
Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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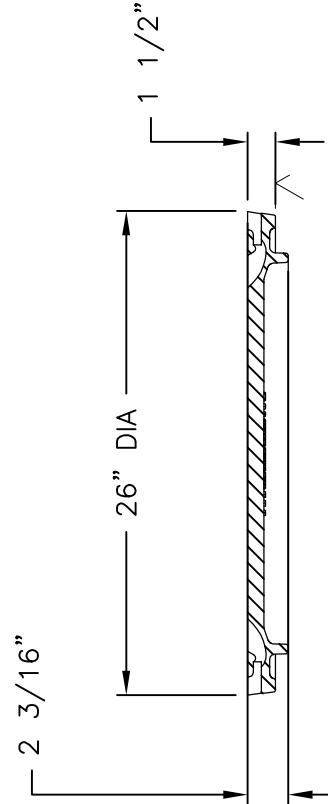
Contact

800 626 4653
ejco.com

1040A Cover



BOTTOM VIEW



SECTION



EPICOR® DETAIL

Product Number

001040325

Design Features

- Materials Gray Iron (CL35B)
- Design Load Heavy Duty
- Open Area n/a
- Coating Dipped
- Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

Drawing Revision

5/4/2018 Designer: DAE
8/29/2018 Revised By: DAE

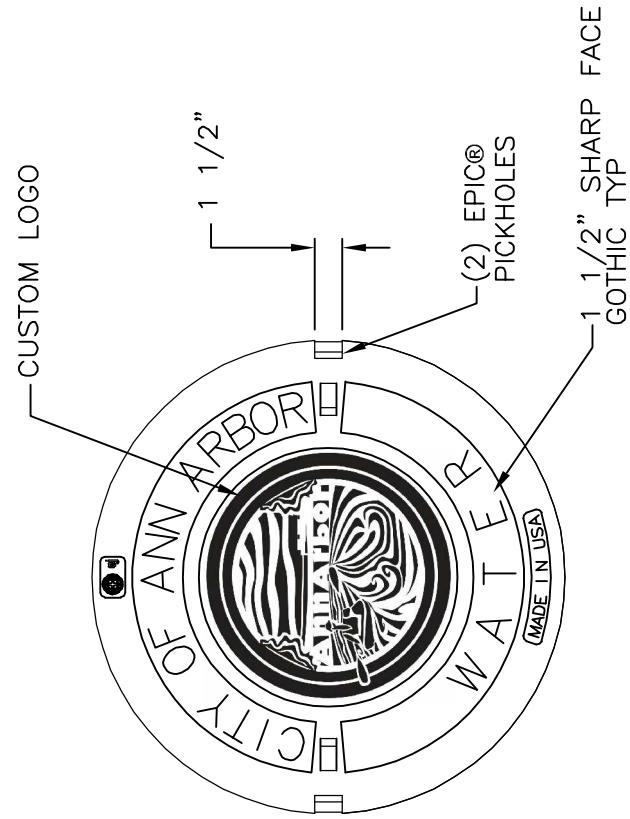
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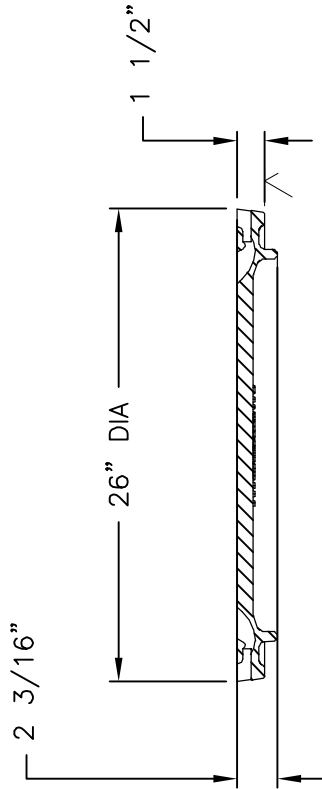
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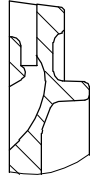
1040A Cover



BOTTOM VIEW



SECTION



EPIC® DETAIL

Product Number
001040570

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Undipped
- Designates Machined Surface

Certification

- ASTM A48
- Country of Origin: USA

Drawing Revision

3/15/2018 Designer: MAH
1/8/2021 Revised By: MAH

Disclaimer

Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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"General Decision Number: MI20230001 03/17/2023

Superseded General Decision Number: MI20220001

State: Michigan

Construction Types: Highway (Highway, Airport & Bridge
xxxxxx
and Sewer/Incid. to Hwy.)

Counties: Michigan Statewide.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered	. Executive Order 14026
into on or after January 30,	generally applies to the
2022, or the contract is	contract.
renewed or extended (e.g., an	. The contractor must pay
option is exercised) on or	all covered workers at
after January 30, 2022:	least \$16.20 per hour (or
	the applicable wage rate
	listed on this wage
	determination, if it is

| higher) for all hours
| spent performing on the
| contract in 2023.

|
| If the contract was awarded on |. Executive Order 13658
| or between January 1, 2015 and | generally applies to the
| January 29, 2022, and the | contract.
| contract is not renewed or |. The contractor must pay
all | covered workers at least
| extended on or after January | \$12.15 per hour (or the
| 30, 2022: | applicable wage rate
| listed | on this wage
| determination, | if it is higher) for all
| hours spent performing on
| that contract in 2023.

|

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker

protections under the Executive Orders is available at
<http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/06/2023
1	02/03/2023
2	02/17/2023
3	03/17/2023

CARP0004-004 06/01/2019

REMAINDER OF STATE

	Rates	Fringes
CARPENTER (Piledriver).....	\$ 27.62	20.59

CARP0004-005 06/01/2018

LIVINGSTON (Townships of Brighton, Deerfield, Genoa,
 Hartland,
 Oceola & Tyrone), MACOMB, MONROE, OAKLAND, SANILAC, ST.
 CLAIR
 AND WAYNE COUNTIES

	Rates	Fringes
CARPENTER (Piledriver).....	\$ 30.50	27.28

ELEC0017-005 06/01/2022

STATEWIDE

	Rates	Fringes
Line Construction		
Groundman/Driver.....	\$ 29.57	7.20+32%
Journeyman Signal Tech, Communications Tech, Tower Tech & Fiber Optic Splicers.	\$ 43.90	7.20+32%

Journeyman Specialist.....	\$ 50.49	7.20+32%
Operator A.....	\$ 37.13	7.20+32%
Operator B.....	\$ 34.67	7.20+32%

Classifications

Journeyman Specialist: Refers to a crew of only one person working alone.

Operator A: Shall be proficient in operating all power equipment including: Backhoe, Excavator, Directional Bore and Boom/Digger truck.

Operator B: Shall be proficient in operating any 2 of the above mentioned pieces of equipment listed under Operator A.

ENGI0324-003 06/01/2022

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LENAWEE, LIVINGSTON, MACOMB, MIDLAND, MONROE, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLAIR, SANILAC, SHIAWASSEE, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

	Rates	Fringes
OPERATOR: Power Equipment (Steel Erection)		
GROUP 1.....	\$ 51.02	24.85
GROUP 2.....	\$ 52.02	24.85
GROUP 3.....	\$ 49.52	24.85
GROUP 4.....	\$ 50.52	24.85
GROUP 5.....	\$ 48.02	24.85
GROUP 6.....	\$ 49.02	24.85
GROUP 7.....	\$ 47.75	24.85
GROUP 8.....	\$ 48.75	24.85
GROUP 9.....	\$ 47.30	24.85
GROUP 10.....	\$ 48.30	24.85
GROUP 11.....	\$ 46.57	24.85

GROUP 12.....	\$ 47.57	24.85
GROUP 13.....	\$ 46.21	24.85
GROUP 14.....	\$ 47.21	24.85
GROUP 15.....	\$ 45.57	24.85
GROUP 16.....	\$ 42.37	24.85
GROUP 17.....	\$ 27.89	12.00
GROUP 18.....	\$ 31.38	24.85

FOOTNOTE:

Paid Holidays: New Year's Day, Memorial Day, Fourth of July,
 Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Engineer when operating combination of boom and jib
 400' or longer

GROUP 2: Engineer when operating combination of boom and jib
 400' or longer on a crane that requires an oiler

GROUP 3: Engineer when operating combination of boom and jib
 300' or longer

GROUP 4: Engineer when operating combination of boom and jib
 300' or longer on a crane that requires an oiler

GROUP 5: Engineer when operating combination of boom and jib
 220' or longer

GROUP 6: Engineer when operating combination of boom and jib
 220' or longer on a crane that requires an oiler

GROUP 7: Engineer when operating combination of boom and jib
 140' or longer

GROUP 8: Engineer when operating combination of boom and jib
140' or longer on a crane that requires an oiler

GROUP 9: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level)

GROUP 10: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level) on a crane that requires an oiler

GROUP 11: Engineer when operating combination of boom and jib
120' or longer

GROUP 12: Engineer when operating combination of boom and jib
120' or longer on a crane that requires an oiler

GROUP 13: Crane operator; job mechanic and 3 drum hoist and excavator

GROUP 14: Crane operator on a crane that requires an oiler

GROUP 15: Hoisting operator; 2 drum hoist and rubber tired backhoe

GROUP 16: Forklift and 1 drum hoist

GROUP 17: Compressor or welder operator

GROUP 18: Oiler

ENGI0324-004 06/01/2022

AREA 1: ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, EATON, HILLSDALE, IONIA, KALAMAZOO, KENT, LAKE, MANISTEE, MASON,

MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA,
 OTTAWA,
 ST. JOSEPH, VAN BUREN

AREA 2: ANTRIM, BENZIE, CHARLEVOIX, EMMET, GRAND TRAVERSE,
 KALKASKA, LEELANAU, MISSAUKEE AND WEXFORD COUNTIES:

	Rates	Fringes
OPERATOR: Power Equipment (Steel Erection)		
AREA 1		
GROUP 1.....	\$ 51.02	24.85
GROUP 2.....	\$ 47.75	24.85
GROUP 3.....	\$ 46.21	24.85
GROUP 4.....	\$ 42.37	24.85
GROUP 5.....	\$ 27.89	12.00
GROUP 6.....	\$ 31.38	24.85
AREA 2		
GROUP 1.....	\$ 51.02	24.85
GROUP 2.....	\$ 47.75	24.85
GROUP 3.....	\$ 46.21	24.85
GROUP 4.....	\$ 42.37	24.85
GROUP 5.....	\$ 27.89	12.00
GROUP 6.....	\$ 31.38	24.85

FOOTNOTES:

Crane operator with main boom and jib 300' or longer:
 \$1.50
 additional to the group 1 rate. Crane operator with main
 boom and jib 400' or longer: \$3.00 additional to the
 group
 1 rate.

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of
 July,
 Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

GROUP 1: Crane Operator with main boom & jib 400', 300',
 or
 220' or longer.

GROUP 2: Crane Operator with main boom & jib 140' or longer,
Tower Crane; Gantry Crane; Whirley Derrick.

GROUP 3: Regular Equipment Operator, Crane, Dozer, Loader,
Hoist, Straddle Wagon, Mechanic, Grader and Hydro Excavator.

GROUP 4: Air Tugger (single drum), Material Hoist Pump 6" or over,
Elevators, Brokk Concrete Breaker.

GROUP 5: Air Compressor, Welder, Generators, Conveyors

GROUP 6: Oiler and fire tender

ENGI0324-005 09/01/2022

AREA 1: GENESEE, LAPEER, LIVINGSTON, MACOMB, MONROE, OAKLAND,
ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALCONA, ALLEGAN, ALGER, ALPENA, ANTRIM, ARENAC, BARAGA,
BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX,
CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON,
EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT,
HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON,
ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KWEENAW,
LAKE, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE,
MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM,
MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON,
OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON,
SAGINAW, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST. JOSEPH,
TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

Rates

Fringes

OPERATOR: Power Equipment
 (Underground construction
 (including sewer))

AREA 1:

GROUP 1.....	\$ 39.38	24.85
GROUP 2.....	\$ 34.65	24.85
GROUP 3.....	\$ 33.92	24.85
GROUP 4.....	\$ 33.35	24.85
GROUP 5.....	\$ 24.90	12.05

AREA 2:

GROUP 1.....	\$ 37.67	24.85
GROUP 2.....	\$ 32.78	24.85
GROUP 3.....	\$ 32.28	24.85
GROUP 4.....	\$ 32.00	24.85
GROUP 5.....	\$ 24.90	12.05

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Backfiller tamper; Backhoe; Batch plant operator (concrete); Clamshell; Concrete paver (2 drums or larger);

Conveyor loader (Euclid type); Crane (crawler, truck type or pile driving); Dozer; Dragline; Elevating grader; Endloader; Gradall (and similar type machine); Grader; Mechanic; Power shovel; Roller (asphalt); Scraper (self-propelled or tractor drawn); Side boom tractor (type D-4 or equivalent and larger); Slip form paver; Slope paver; Trencher (over 8 ft. digging capacity); Well drilling rig; Concrete pump with boom operator; Hydro Excavator

GROUP 2: Boom truck (power swing type boom); Crusher; Hoist;

Pump (1 or more - 6-in. discharge or larger - gas or diesel- powered or powered by generator of 300 amperes or more - inclusive of generator); Side boom tractor (smaller than type D-4 or equivalent); Tractor (pneu-tired, other than backhoe or front end loader); Trencher (8-ft. digging capacity and smaller); Vac Truck and End dump operator;

GROUP 3: Air compressors (600 cfm or larger); Air compressors

(2 or more-less than 600 cfm); Boom truck (non-swinging, non-powered type boom); Concrete breaker (self-propelled or truck mounted - includes compressor); Concrete paver (1 drum-1/2 yd. or larger); Elevator (other than passenger); Maintenance person; Pump (2 or more-4-in. up to 6-in. discharge-gas or diesel powered - excluding submersible pumps); Pumpcrete machine (and similar equipment); Wagon drill (multiple); Welding machine or generator (2 or more-300 amp. or larger - gas or diesel powered)

GROUP 4: Boiler; Concrete saw (40 hp or over); Curing machine

(self-propelled); Farm tractor (with attachment); Finishing machine (concrete); Hydraulic pipe pushing machine; Mulching equipment; Pumps (2 or more up to 4-in. discharge, if used 3 hours or more a day, gas or diesel powered - excluding submersible pumps); Roller (other than asphalt); Stump remover; Trencher (service); Vibrating compaction equipment, self-propelled (6 ft. wide or over); Sweeper (Wayne type); Water wagon and Extend-a boom forklift

Group 5: Fire Person, Oiler

* ENGI0324-006 06/01/2022

GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW, WAYNE,
ALCONA,
ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY,
BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX,
CHEBOYGAN,
CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON,
EATON,
EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT,
HILLSDALE,
HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA,
JACKSON,

KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER,
 LEELANAU,
 LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE,
 MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM,
 MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON,
 OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON,
 SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT,
 SHIAWASSEE, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

	Rates	Fringes
Power equipment operators: (AIRPORT, BRIDGE & HIGHWAY CONSTRUCTION)		
GROUP 1.....	\$ 38.86	24.85
GROUP 2.....	\$ 32.13	24.85
GROUP 3.....	\$ 31.57	24.85
GROUP 4.....	\$ 31.40	24.85

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Asphalt plant operator; Crane operator (does not include work on bridge construction projects when the crane operator is erecting structural components); Dragline operator; Shovel operator; Locomotive operator; Paver operator (5 bags or more); Elevating grader operator; Pile driving operator; Roller operator (asphalt); Blade grader operator; Trenching machine operator (ladder or wheel type); Auto-grader; Slip form paver; Self-propelled or tractor-drawn scraper; Conveyor loader operator (Euclid type); Endloader operator (1 yd. capacity and over); Bulldozer; Hoisting engineer; Tractor operator; Finishing machine operator (asphalt); Mechanic; Pump operator (6-in. discharge or over, gas, diesel powered or generator of 300 amp. or larger); Shouldering or gravel distributing machine operator (self-propelled); Backhoe (with over 3/8 yd. bucket); Side boom tractor (type D-4 or equivalent or larger); Tube finisher (slip form paving); Gradall (and

similar type machine); Asphalt paver (self-propelled); Asphalt planer (self-propelled); Batch plant (concrete-central mix); Slurry machine (asphalt); Concrete pump (3 in. and over); Roto-mill; Swinging boom truck (over 12 ton capacity); Hydro demolisher (water blaster); Farm-type tractor with attached pan; Vacuum truck operator; Batch Plant (concrete dry batch); Concrete Saw Operator (40h.p. or over); Tractor Operator (farm type); Finishing Machine Operator (concrete); Grader Operator (self-propelled fine grade or form (concrete)).

GROUP 2: Screening plant operator; Washing plant operator; Crusher operator; Backhoe (with 3/8 yd. bucket or less); Side boom tractor (smaller than D-4 type or equivalent); Sweeper (Wayne type and similar equipment); Grease Truck; Air Compressor Operator (600 cu.ft. per min or more); Air Compressor Operator (two or more, less than 600 cfm);

GROUP 3: Boiler fire tender; Tractor operator (farm type with attachment); Concrete Breaker; Wagon Drill Operator;

GROUP 4: Oiler; Fire tender; Trencher (service); Flexplane operator; Cleftplane operator; Boom or winch hoist truck operator; Endloader operator *under 1 yd. capacity);

Roller Operator (other than asphalt); Curing equipment operator (self-propelled); Power bin operator; Plant drier (6 ft. wide or over); Guard post driver operator (power driven); All mulching equipment; Stump remover; Concrete pump (under 3-in.); Mesh installer (self-propelled); End dump; Skid Steer.

ENGI0324-007 05/01/2022

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC,
 HOUGHTON,
 IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE,
 ONTONAGON
 AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
OPERATOR: Power Equipment		
(Steel Erection)		
Compressor, welder and forklift.....	\$ 37.40	24.60
Crane operator, main boom & jib 120' or longer.....	\$ 43.87	24.60
Crane operator, main boom & jib 140' or longer.....	\$ 44.17	24.60
Crane operator, main boom & jib 220' or longer.....	\$ 44.17	24.60
Mechanic with truck and tools.....	\$ 43.00	24.60
Oiler and fireman.....	\$ 35.86	24.60
Regular operator.....	\$ 41.22	24.60

 ENGI0324-008 10/01/2020

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA,
 BARRY,
 BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX,
 CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA,
 DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND
 TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM,
 IONIA,
 IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT,
 KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON,
 LUCE,
 MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA,
 MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY,
 MONROE,
 MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON,
 OSCEOLA,
 OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW,
 ST.

CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE,
 TUSCOLA,
 VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

	Rates	Fringes
OPERATOR: Power Equipment (Sewer Relining)		
GROUP 1.....	\$ 35.37	14.31
GROUP 2.....	\$ 33.33	14.31

SEWER RELINING CLASSIFICATIONS

GROUP 1: Operation of audio-visual closed circuit TV system,
 including remote in-ground cutter and other equipment used
 in connection with the CCTV system

GROUP 2: Operation of hot water heaters and circulation systems,
 water jetters and vacuum and mechanical debris removal systems

ENGI0325-012 05/01/2022

	Rates	Fringes
Power equipment operators - gas distribution and duct installation work:		
GROUP 1.....	\$ 34.83	24.85
GROUP 2.....	\$ 32.55	24.85

SCOPE OF WORK: The construction, installation, treating and
 and
 reconditioning of pipelines transporting gas vapors
 within
 cities, towns, subdivisions, suburban areas, or within
 private property boundaries, up to and including private
 meter settings of private industrial, governmental or
 other

premises, more commonly referred to as "distribution work," starting from the first metering station, connection, similar or related facility, of the main or cross country pipeline and including duct installation.

Group 1: Backhoe, crane, grader, mechanic, dozer (D-6 equivalent or larger), side boom (D-4 equivalent or larger), trencher(except service), endloader (2 yd. capacity or greater).

GROUP 2: Dozer (less than D-6 equivalent), endloader (under 2 yd. capacity), side boom (under D-4 capacity), backfiller, pumps (1 or 2 of 6-inch discharge or greater), boom truck (with powered boom), tractor (wheel type other than backhoe or front endloader). Tamper (self-propelled), boom truck (with non-powered boom), concrete saw (20 hp or larger), pumps (2 to 4 under 6-inch discharge), compressor (2 or more or when one is used continuously into the second day) and trencher(service). Oiler, hydraulic pipe pushing machine, grease person and hydrostatic testing operator.

IRON0008-007 06/01/2022

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
Ironworker - pre-engineered metal building erector.....	\$ 23.70	6.95

IRONWORKER

General contracts		
\$10,000,000 or greater.....	\$ 38.14	28.70
General contracts less		
than \$10,000,000.....	\$ 38.14	28.70

Paid Holidays: New Year's Day, Memorial Day, July 4th,
 Labor
 Day, Thanksgiving Day & Christmas Day.

IRON0025-002 06/01/2022

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON,
 CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO,
 ISABELLA, JACKSON, LAPEER, LIVINGSTON, MACOMB, MIDLAND,
 MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE,
 ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR,
 TUSCOLA,
 WASHTENAW AND WAYNE COUNTIES:

	Rates	Fringes
Ironworker - pre-engineered metal building erector		
ALLEGAN, ANTRIM, BARRY, BENZIE, BRANCH, CALHOUN, CHARLEVOIX, EATON, EMMET, GRAND TRAVERSE, HILLSDALE, IONIA, KALAMAZOO, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH, VAN BUREN AND WEXFORD COUNTIES:.	\$ 24.59	25.43
Bay, Genesee, Lapeer, Livingston (east of Burkhardt Road), Macomb, Midland, Oakland, Saginaw, St. Clair, The University		

of Michigan, Washtenaw (east of U.S. 23) & Wayne...	\$ 25.81	26.43
IRONWORKER		
Ornamental and Structural...	\$ 34.50	38.44
Reinforcing.....	\$ 31.43	34.77

IRON0055-005 07/01/2022

LENAWEE AND MONROE COUNTIES:

	Rates	Fringes
IRONWORKER		
Pre-engineered metal buildings.....	\$ 23.59	19.35
All other work.....	\$ 33.00	27.20

IRON0292-003 06/01/2020

BERRIEN AND CASS COUNTIES:

	Rates	Fringes
IRONWORKER (Including pre-engineered metal building erector).....	\$ 31.75	22.84

LAB00005-006 10/01/2022

	Rates	Fringes
Laborers - hazardous waste abatement: (ALCONA, ALPENA, ANTRIM, BENZIE, CHARLEVOIX, CHEBOYGAN, CRAWFORD, EMMET, GRAND TRAVERSE, IOSCO, KALKASKA, LEELANAU, MISSAUKEE, MONTMORENCY, OSCODA, OTSEGO, PRESQUE ISLE AND WEXFORD COUNTIES - Zone 10)		

Levels A, B or C.....	\$ 17.45	12.75
class b.....	\$ 18.64	12.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 16.45	12.75
class a.....	\$ 17.64	12.90
Zone 10		
Laborers - hazardous waste abatement: (ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES - Zone 11)		
Levels A, B or C.....	\$ 25.18	12.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 22.58	12.90
Laborers - hazardous waste abatement: (ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, IONIA COUNTY (except the city of Portland); KALAMAZOO, KENT, LAKE, MANISTEE, MASON, MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH AND VAN BUREN COUNTIES - Zone 9)		
Levels A, B or C.....	\$ 21.88	13.26
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 20.80	12.90
Laborers - hazardous waste		

abatement: (ARENAC, BAY, CLARE, GLADWIN, GRATIOT, HURON, ISABELLA, MIDLAND, OGEMAW, ROSCOMMON, SAGINAW AND TUSCOLA COUNTIES - Zone 8)		
Levels A, B or C.....\$ 23.74		12.95
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....\$ 20.80		12.90
Laborers - hazardous waste abatement: (CLINTON, EATON AND INGHAM COUNTIES; IONIA COUNTY (City of Portland); LIVINGSTON COUNTY (west of Oak Grove Rd., including the City of Howell) - Zone 6)		
Levels A, B or C.....\$ 26.33		12.95
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....\$ 24.64		12.90
Laborers - hazardous waste abatement: (GENESEE, LAPEER AND SHIAWASSEE COUNTIES - Zone 7)		
Levels A, B or C.....\$ 24.20		13.80
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....\$ 23.20		13.80
Laborers - hazardous waste abatement: (HILLSDALE, JACKSON AND LENAWEЕ COUNTIES - Zone 4)		
Levels A, B or C.....\$ 27.13		14.95
Work performed in conjunction with site		

preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 24.17	12.90
Laborers - hazardous waste abatement: (LIVINGSTON COUNTY (east of Oak Grove Rd. and south of M-59, excluding the city of Howell); AND WASHTENAW COUNTY - Zone 3)		
Levels A, B or C.....	\$ 29.93	14.20
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 28.93	14.20
Laborers - hazardous waste abatement: (MACOMB AND WAYNE COUNTIES - Zone 1)		
Levels A, B or C.....	\$ 29.93	16.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 28.93	16.90
Laborers - hazardous waste abatement: (MONROE COUNTY - Zone 4)		
Levels A, B or C.....	\$ 31.75	14.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 31.75	14.90
Laborers - hazardous waste abatement: (OAKLAND COUNTY and the Northeast portion of LIVINGSTON COUNTY bordered by Oak Grove Road on the West and M-59 on the South - Zone 2)		

Level A, B, C.....	\$ 29.93	16.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 28.93	16.90
Laborers - hazardous waste abatement: (SANILAC AND ST. CLAIR COUNTIES - Zone 5)		
Levels A, B or C.....	\$ 26.21	16.62
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 24.75	16.35

LAB00259-001 09/01/2022

AREA 1: MACOMB, OAKLAND AND WAYNE COUNTIES
AREA 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONROE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW AND WEXFORD COUNTIES

	Rates	Fringes
Laborers - tunnel, shaft and caisson:		
AREA 1		
GROUP 1.....	\$ 23.62	16.95
GROUP 2.....	\$ 23.73	19.95
GROUP 3.....	\$ 23.79	16.95
GROUP 4.....	\$ 23.97	16.95
GROUP 5.....	\$ 24.22	16.95
GROUP 6.....	\$ 24.55	16.95
GROUP 7.....	\$ 17.83	16.95
AREA 2		
GROUP 1.....	\$ 25.15	12.95
GROUP 2.....	\$ 25.24	12.95
GROUP 3.....	\$ 25.34	12.95
GROUP 4.....	\$ 25.50	12.95
GROUP 5.....	\$ 25.76	12.95
GROUP 6.....	\$ 26.07	12.95
GROUP 7.....	\$ 18.34	12.95

SCOPE OF WORK: Tunnel, shaft and caisson work of every type and description and all operations incidental thereto, including, but not limited to, shafts and tunnels for sewers, water, subways, transportation, diversion, sewerage, caverns, shelters, aquifers, reservoirs, missile silos and steel sheeting for underground construction.

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Tunnel, shaft and caisson laborer, dump, shanty, hog house tender, testing (on gas) and watchman

GROUP 2: Manhole, headwall, catch basin builder, bricklayer tender, mortar machine and material mixer

GROUP 3: Air tool operator (jackhammer, bush hammer and grinder), first bottom, second bottom, cage tender, car pusher, carrier, concrete, concrete form, concrete repair,

cement invert laborer, cement finisher, concrete shoveler,
 conveyor, floor, gasoline and electric tool operator, gunite, grout operator, welder, heading dinky person, inside lock tender, pea gravel operator, pump, outside lock tender, scaffold, top signal person, switch person, track, tigger, utility person, vibrator, winch operator, pipe jacking, wagon drill and air track operator and concrete saw operator (under 40 h.p.)

GROUP 4: Tunnel, shaft and caisson mucker, bracer, liner plate, long haul dinky driver and well point

GROUP 5: Tunnel, shaft and caisson miner, drill runner, key board operator, power knife operator, reinforced steel or mesh (e.g. wire mesh, steel mats, dowel bars, etc.)

GROUP 6: Dynamite and powder

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter boxes, flagstones, etc.

* LABO0334-001 09/01/2022

	Rates	Fringes
Laborers - open cut:		
ZONE 1 - MACOMB, OAKLAND		
AND WAYNE COUNTIES:		
GROUP 1.....	\$ 23.47	16.72
GROUP 2.....	\$ 23.58	16.72
GROUP 3.....	\$ 23.63	16.72
GROUP 4.....	\$ 23.71	16.72
GROUP 5.....	\$ 24.17	16.72
GROUP 6.....	\$ 22.00	16.72
GROUP 7.....	\$ 17.84	16.72

ZONE 2 - LIVINGSTON COUNTY
 (east of M-151 (Oak Grove
 Rd.)); MONROE AND

WASHTENAW COUNTIES:

GROUP 1.....	\$ 25.20	16.72
GROUP 2.....	\$ 24.91	16.72
GROUP 3.....	\$ 25.03	16.72
GROUP 4.....	\$ 25.10	16.72
GROUP 5.....	\$ 25.25	16.72
GROUP 6.....	\$ 22.55	16.72
GROUP 7.....	\$ 22.11	16.72

ZONE 3 - CLINTON, EATON,
 GENESEE, HILLSDALE AND
 INGHAM COUNTIES; IONIA
 COUNTY (City of Portland);
 JACKSON, LAPEER AND
 LENAWEE COUNTIES;
 LIVINGSTON COUNTY (west of
 M-151 Oak Grove Rd.);
 SANILAC, ST. CLAIR AND

SHIAWASSEE COUNTIES:

GROUP 1.....	\$ 23.39	16.72
GROUP 2.....	\$ 23.13	16.72
GROUP 3.....	\$ 23.25	16.72
GROUP 4.....	\$ 23.30	16.72
GROUP 5.....	\$ 23.44	16.72
GROUP 6.....	\$ 20.74	16.72
GROUP 7.....	\$ 22.23	16.72

ZONE 4 - ALCONA, ALLEGAN,
 ALPENA, ANTRIM, ARENAC,
 BARRY, BAY, BENZIE,
 BERRIEN, BRANCH,
 CALHOUN, CASS, CHARLEVOIX,
 CHEBOYGAN, CLARE,
 CRAWFORD, EMMET,
 GLADWIN, GRAND TRAVERSE,
 GRATIOT AND HURON
 COUNTIES; IONIA COUNTY
 (EXCEPT THE CITY OF
 PORTLAND); IOSCO,
 ISABELLA, KALAMAZOO,
 KALKASKA, KENT,
 LAKE, LEELANAU, MANISTEE,
 MASON, MECOSTA, MIDLAND,

MISSAUKEE, MONTCALM,
 MONTMORENCY, MUSKEGON,
 NEWAYGO, OCEANA, OGEMAW,
 OSCEOLA, OSCODA, OTSEGO,
 OTTAWA, PRESQUE ISLE,
 ROSCOMMON, SAGINAW, ST.
 JOSEPH, TUSCOLA, VAN BUREN
 AND WEXFORD COUNTIES:

GROUP 1.....	\$ 22.42	16.72
GROUP 2.....	\$ 22.15	16.72
GROUP 3.....	\$ 22.26	16.72
GROUP 4.....	\$ 22.33	16.72
GROUP 5.....	\$ 22.45	16.72
GROUP 6.....	\$ 19.67	16.72
GROUP 7.....	\$ 22.30	16.72

ZONE 5 - ALGER, BARAGA,
 CHIPPEWA, DELTA,
 DICKINSON, GOGEBIC,
 HOUGHTON, IRON,
 KEWEENAW, LUCE, MACKINAC,
 MARQUETTE, MENOMINEE,
 ONTONAGON AND SCHOOLCRAFT
 COUNTIES:

GROUP 1.....	\$ 22.24	16.72
GROUP 2.....	\$ 22.38	16.72
GROUP 3.....	\$ 22.51	16.72
GROUP 4.....	\$ 22.56	16.72
GROUP 5.....	\$ 22.64	16.72
GROUP 6.....	\$ 19.99	16.72
GROUP 7.....	\$ 22.45	16.72

SCOPE OF WORK:

Open cut construction work shall be construed to mean work which requires the excavation of earth including industrial, commercial and residential building site excavation and preparation, land balancing, demolition and removal of concrete and underground appurtenances, grading, paving, sewers, utilities and improvements; retention, oxidation, flocculation and irrigation facilities, and also

including but not limited to underground piping, conduits, steel sheeting for underground construction, and all work incidental thereto, and general excavation. For all areas except the Upper Peninsula, open cut construction work shall also be construed to mean waterfront work, piers, docks, seawalls, breakwalls, marinas and all incidental work. Open cut construction work shall not include any structural modifications, alterations, additions and repairs to buildings, or highway work, including roads, streets, bridge construction and parking lots or steel erection work and excavation for the building itself and back filling inside of and within 5 ft. of the building and foundations, footings and piers for the building. Open cut construction work shall not include any work covered under Tunnel, Shaft and Caisson work.

OPEN CUT LABORER CLASSIFICATIONS

GROUP 1: Construction laborer

GROUP 2: Mortar and material mixer, concrete form person, signal person, well point person, manhole, headwall and catch basin builder, headwall, seawall, breakwall and dock builder

GROUP 3: Air, gasoline and electric tool operator, vibrator operator, driller, pump person, tar kettle operator, bracer, rodder, reinforced steel or mesh person (e.g., wire mesh, steel mats, dowel bars, etc.), welder, pipe jacking and boring person, wagon drill and air track operator and concrete saw operator (under 40 h.p.), windlass and tugger person and directional boring person

GROUP 4: Trench or excavating grade person

GROUP 5: Pipe layer (including crock, metal pipe, multi-plate or other conduits)

GROUP 6: Grouting man, audio-visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work and the installation and repair of water service pipe and appurtenances

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter boxes, flagstones, etc.

LABO0465-001 06/01/2022

LABORER: Highway, Bridge and Airport Construction

AREA 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALLEGAN, BARRY, BAY, BERRIEN, BRANCH, CALHOUN, CASS, CLINTON, EATON, GRATIOT, HILLSDALE, HURON, INGHAM, JACKSON, KALAMAZOO, LAPEER, LENAWEE, LIVINGSTON, MIDLAND, MUSKEGON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, ST. JOSEPH, TUSCOLA AND VAN BUREN COUNTIES

AREA 3: ALCONA, ALPENA, ANTRIM, ARENAC, BENZIE, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, IONIA, IOSCO, ISABELLA, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MONTMORENCY, NEWAYGO, OCEANA, OGEMAW, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON AND WEXFORD COUNTIES

AREA 4: ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC,
 HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE,
 MENOMINEE,
 ONTONAGON AND SCHOOLCRAFT COUNTIES

	Rates	Fringes
LABORER (AREA 1)		
GROUP 1.....	\$ 32.02	13.95
GROUP 2.....	\$ 32.15	13.95
GROUP 3.....	\$ 32.33	13.95
GROUP 4.....	\$ 32.41	13.95
GROUP 5.....	\$ 32.62	13.95
GROUP 6.....	\$ 32.92	13.95
LABORER (AREA 2)		
GROUP 1.....	\$ 26.92	12.90
GROUP 2.....	\$ 27.12	12.90
GROUP 3.....	\$ 27.36	12.90
GROUP 4.....	\$ 27.71	12.90
GROUP 5.....	\$ 27.58	12.90
GROUP 6.....	\$ 27.92	12.90
LABORER (AREA 3)		
GROUP 1.....	\$ 26.22	12.90
GROUP 2.....	\$ 26.43	12.90
GROUP 3.....	\$ 26.72	12.90
GROUP 4.....	\$ 27.16	12.90
GROUP 5.....	\$ 26.78	12.90
GROUP 6.....	\$ 27.21	12.90
LABORER (AREA 4)		
GROUP 1.....	\$ 26.22	12.90
GROUP 2.....	\$ 26.43	12.90
GROUP 3.....	\$ 26.72	12.90
GROUP 4.....	\$ 27.16	12.90
GROUP 5.....	\$ 26.78	12.90
GROUP 6.....	\$ 27.21	12.90

LABORER CLASSIFICATIONS

GROUP 1: Asphalt shoveler or loader; asphalt plant misc.;
 burlap person; yard person; dumper (wagon, truck, etc.);
 joint filling laborer; miscellaneous laborer; unskilled
 laborer; sprinkler laborer; form setting laborer; form

stripper; pavement reinforcing; handling and placing (e.g., wire mesh, steel mats, dowel bars); mason's tender or bricklayer's tender on manholes; manhole builder; headwalls, etc.; waterproofing, (other than buildings) seal coating and slurry mix, shoring, underpinning; pressure grouting; bridge pin and hanger removal; material recycling laborer; horizontal paver laborer (brick, concrete, clay, stone and asphalt); ground stabilization and modification laborer; grouting; waterblasting; top person; railroad track and trestle laborer; carpenters' tender; guard rail builders' tender; earth retention barrier and wall and M.S.E. wall installer's tender; highway and median installer's tender (including sound, retaining, and crash barriers); fence erector's tender; asphalt raker tender; sign installer; remote control operated equipment.

GROUP 2: Mixer operator (less than 5 sacks); air or electric tool operator (jackhammer, etc.); spreader; boxperson (asphalt, stone, gravel); concrete paddler; power chain saw operator; paving batch truck dumper; tunnel mucker (highway work only); concrete saw (under 40 h.p.) and dry pack machine; roto-mill grounds person.

GROUP 3: Tunnel miner (highway work only); finishers tenders; guard rail builders; highway and median barrier installer; earth retention barrier and wall and M.S.E. wall installer's (including sound, retaining and crash barriers); fence erector; bottom person; powder person; wagon drill and air track operator; diamond and core drills; grade checker; certified welders; curb and side rail setter's tender.

GROUP 4: Asphalt raker

GROUP 5: Pipe layers, oxy-gun

GROUP 6: Line-form setter for curb or pavement; asphalt screed checker/screw man on asphalt paving machines.

LABO1076-005 04/01/2022

MICHIGAN STATEWIDE

	Rates	Fringes
LABORER (DISTRIBUTION WORK)		
Zone 1.....	\$ 25.17	13.32
Zone 2.....	\$ 23.47	13.40
Zone 3.....	\$ 21.60	13.45
Zone 4.....	\$ 20.97	13.43
Zone 5.....	\$ 21.00	13.40

DISTRIBUTION WORK - The construction, installation, treating and reconditioning of distribution pipelines transporting coal, oil, gas or other similar materials, vapors or liquids, including pipelines within private property boundaries, up to and including the meter settings on residential, commercial, industrial, institutional, private and public structures. All work covering pumping stations and tank farms not covered by the Building Trades Agreement. Other distribution lines with the exception of sewer, water and cable television are included.

Underground Duct Layer Pay: \$.40 per hour above the base pay rate.

- Zone 1 - Macomb, Oakland and Wayne
- Zone 2 - Monroe and Washtenaw
- Zone 3 - Bay, Genesee, Lapeer, Midland, Saginaw, Sanilac, Shiawassee and St. Clair
- Zone 4 - Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon and Schoolcraft
- Zone 5 - Remaining Counties in Michigan

PAIN0022-002 07/01/2008

HILLSDALE, JACKSON AND LENAWEE COUNTIES; LIVINGSTON COUNTY (east of the eastern city limits of Howell, not including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES:

	Rates	Fringes
PAINTER.....	\$ 25.06	14.75

FOOTNOTES: For all spray work and journeyman rigging for spray work, also blowing off, \$0.80 per hour additional (applies only to workers doing rigging for spray work on off the floor work. Does not include setting up or moving rigging on floor surfaces, nor does it apply to workers engaged in covering up or tending spray equipment. For all sandblasting and spray work performed on highway bridges, overpasses, tanks or steel, \$0.80 per hour additional. For all brushing, cleaning and other preparatory work (other than spraying or steeplejack work) at scaffold heights of fifty (50) feet from the ground or higher, \$0.50 per hour additional. For all preparatorial work and painting performed on open steel under forty (40) feet when no scaffolding is involved, \$0.50 per hour additional. For all swing stage work-window jacks and window belts-exterior and interior, \$0.50 per hour additional. For all spray work and sandblaster work to a scaffold height of forty (40) feet above the floor level, \$0.80 per hour additional. For all preparatorial work and painting on all highway bridges or

overpasses up to forty (40) feet in height, \$0.50 per hour additional. For all steeplejack work performed where the elevation is forty (40) feet or more, \$1.25 per hour additional.

 PAIN0312-001 06/01/2018

EXCLUDES: ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland); INCLUDES: Barry, Berrien, Branch, Calhoun, Cass, Hillsdale, Kalamazoo, St. Joseph, Van Buren

	Rates	Fringes
PAINTER		
Brush and roller.....	\$ 23.74	13.35
Spray, Sandblast, Sign		
Painting.....	\$ 24.94	13.35

 PAIN0845-003 05/10/2018

CLINTON COUNTY; EATON COUNTY (does not include the townships of Bellevue and Olivet); INGHAM COUNTY; IONIA COUNTY (east of Hwy. M 66); LIVINGSTON COUNTY (west of the eastern city limits of Howell, including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); AND SHIAWASSEE COUNTY (Townships of Bennington, Laingsbury and Perry):

	Rates	Fringes
PAINTER.....	\$ 25.49	13.74

PAIN0845-015 05/10/2018

MUSKEGON COUNTY; NEWAYGO COUNTY (except the Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, Monroe, Norwich and Wilcox); OCEANA COUNTY; OTTAWA COUNTY (except the townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):

	Rates	Fringes
PAINTER.....	\$ 25.49	13.74

PAIN0845-018 05/10/2018

ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland); IONIA COUNTY (west of Hwy. M-66); KENT, MECOSTA AND MONTCALM COUNTIES; NEWAYGO COUNTY (Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, Monroe, Norwich and Wilcox); OSCEOLA COUNTY (south of Hwy. #10); OTTAWA COUNTY (Townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):

	Rates	Fringes
PAINTER.....	\$ 25.49	13.74

FOOTNOTES: Lead abatement work: \$1.00 per hour additional.

PAIN1011-003 06/02/2022

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC,
HOUGHTON,
IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE,
ONTONAGON
AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
PAINTER.....	\$ 24.66	14.99

FOOTNOTES: High pay (bridges, overpasses, watertower): 30
to
80 ft.: \$.65 per hour additional. 80 ft. and over: \$1.30
per hour additional.

PAIN1474-002 06/01/2010

HURON COUNTY; LAPEER COUNTY (east of Hwy. M-53); ST. CLAIR,
SANILAC AND TUSCOLA COUNTIES:

	Rates	Fringes
PAINTER.....	\$ 23.79	12.02

FOOTNOTES: Lead abatement work: \$1.00 per hour
additional.
Work with any hazardous material: \$1.00 per hour
additional. Sandblasting, steam cleaning and acid
cleaning:
\$1.00 per hour additional. Ladder work at or above 40
ft.,
scaffold work at or above 40 ft., swing stage, boatswain
chair, window jacks and all work performed over a falling
height of 40 ft.: \$1.00 per hour additional. Spray gun
work, pick pullers and those handling needles, blowing
off

by air pressure, and any person rigging (setting up and moving off the ground): \$1.00 per hour additional.
 Steeplejack, tanks, gas holders, stacks, flag poles, radio towers and beacons, power line towers, bridges, etc.: \$1.00 per hour additional, paid from the ground up.

 PAIN1803-003 06/01/2019

ALCONA, ALPENA, ANTRIM, ARENAC, BAY, BENZIE, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, GRATIOT, IOSCO, ISABELLA, KALKASKA, LAKE, LEELANAU, MANISTEE, MASON, MIDLAND, MISSAUKEE, MONTMORENCY AND OGEMAW COUNTIES; OSCEOLA COUNTY (north of Hwy. #10); OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW AND WEXFORD COUNTIES:

	Rates	Fringes
PAINTER		
Work performed on water, bridges over water or moving traffic, radio and powerline towers, elevated tanks, steeples, smoke stacks over 40 ft. of falling heights, recovery of lead-based paints and any work associated with industrial plants, except maintenance of industrial plants.....	\$ 25.39	14.68
All other work, including maintenance of industrial plant.....	\$ 25.39	14.68

FOOTNOTES: Spray painting, sandblasting, blowdown associated with spraying and blasting, water blasting and work involving a swing stage, boatswain chair or spider: \$1.00

per hour additional. All work performed inside tanks, vessels, tank trailers, railroad cars, sewers, smoke stacks, boilers or other spaces having limited egress not including buildings, opentop tanks, pits, etc.: \$1.25 per hour additional.

PLAS0514-001 06/01/2018

ZONE 1: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, SAGINAW, WASHTENAW AND WAYNE COUNTIES

ZONE 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
ZONE 1.....	\$ 31.47	13.81
ZONE 2.....	\$ 29.97	13.81

PLUM0190-003 05/01/2015

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA,

DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MONROE, MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

	Rates	Fringes
Plumber/Pipefitter - gas distribution pipeline:		
Welding in conjunction with gas distribution pipeline work.....	\$ 33.03	20.19
All other work:.....	\$ 24.19	12.28

TEAM0007-004 06/01/2020

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST.

CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND,
 WASHTENAW
 AND WAYNE COUNTIES

	Rates	Fringes
TRUCK DRIVER		
AREA 1		
Euclids, double bottoms and lowboys.....	\$ 28.05	.50 + a+b
Trucks under 8 cu. yds.....	\$ 27.80	.50 + a+b
Trucks, 8 cu. yds. and over.....	\$ 27.90	.50 + a+b
AREA 2		
Euclids, double bottomms and lowboys.....	\$ 24.895	.50 + a+b
Euclids, double bottoms and lowboys.....	\$ 28.15	.50 + a+b
Trucks under 8 cu. yds.....	\$ 27.90	.50 + a+b
Trucks, 8 cu. yds. and over.....	\$ 28.00	.50 + a+b

Footnote:

- a. \$470.70 per week
- b. \$68.70 daily

TEAM0247-004 04/01/2013

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC,
 BARAGA,
 BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS,
 CHARLEVOIX,
 CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA,
 DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE,
 GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO,
 IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT,
 KEWEENAW,
 LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE,
 MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE,
 MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW,

ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SANILAC, SCHOOLCRAFT, SHIAWASSEE, SAGINAW, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

	Rates	Fringes
Sign Installer		
AREA 1		
GROUP 1.....	\$ 21.78	11.83
GROUP 2.....	\$ 25.27	11.8375
AREA 2		
GROUP 1.....	\$ 22.03	11.83
GROUP 2.....	\$ 25.02	11.8375

FOOTNOTE:

a. \$132.70 per week, plus \$17.80 per day.

SIGN INSTALLER CLASSIFICATIONS:

GROUP 1: performs all necessary labor and uses all tools required to construct and set concrete forms required in the installation of highway and street signs

GROUP 2: performs all miscellaneous labor, uses all hand and power tools, and operates all other equipment, mobile or otherwise, required for the installation of highway and street signs

TEAM0247-010 04/01/2018

AREA 1: LAPEER AND SHIAWASSEE COUNTIES

AREA 2: GENESEE, MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

	Rates	Fringes
TRUCK DRIVER (Underground construction)		
AREA 1		
GROUP 1.....	\$ 23.82	19.04
GROUP 2.....	\$ 23.91	19.04
GROUP 3.....	\$ 24.12	19.04
AREA 2		
GROUP 1.....	\$ 24.12	19.04
GROUP 2.....	\$ 24.26	19.04
GROUP 3.....	\$ 24.45	19.04

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

SCOPE OF WORK: Excavation, site preparation, land balancing, grading, sewers, utilities and improvements; also including but not limited to, tunnels, underground piping, retention, oxidation, flocculation facilities, conduits, general excavation and steel sheeting for underground construction. Underground construction work shall not include any structural modifications, alterations, additions and repairs to buildings or highway work, including roads, streets, bridge construction and parking lots or steel erection.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Truck driver on all trucks (EXCEPT dump trucks of 8 cubic yards capacity or over, pole trailers, semis, low boys, Euclid, double bottom and fuel trucks)

GROUP 2: Truck driver on dump trucks of 8 cubic yards capacity or over, pole trailers, semis and fuel trucks

GROUP 3: Truck driver on low boy, Euclid and double bottom

* SUMI2002-001 05/01/2002

	Rates	Fringes
Flag Person.....	\$ 10.10 **	0.00
LINE PROTECTOR (ZONE 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE)....	\$ 22.89	13.45
LINE PROTECTOR (ZONE 2: STATEWIDE (EXCLUDING GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE).....	\$ 20.19	13.45
Pavement Marking Machine (ZONE 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES) Group 1.....	\$ 30.52	13.45
Pavement Marking Machine (ZONE 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE) Group 2.....	\$ 27.47	13.45
Pavement Marking Machine (ZONE 2: STATEWIDE (EXCLUDING GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES) Group 1.....	\$ 26.92	13.45
Pavement Marking Machine (ZONE 2: STATEWIDE (EXCLUDING GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE) Group 2.....	\$ 24.23	13.45

WORK CLASSIFICATIONS:

PAVEMENT MARKER GROUP 1: Drives or operates a truck mounted striper, grinder, blaster, groover, or thermoplastic melter for the placement or removal of temporary or permanent pavement markings or markers.

PAVEMENT MARKER GROUP 2: Performs all functions involved for the placement or removal of temporary or permanent pavement markings or markers not covered by the classification of Pavement Marker Group 1 or Line Protector.

LINE PROTECTOR: Performs all operations for the protection or removal of temporary or permanent pavement markings or markers in a moving convoy operation not performed by the classification of Pavement Marker Group 1. A moving convoy operation is comprised of only Pavement Markers Group 1 and Line Protectors.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave

for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the

cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator

(See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"



CITY OF ANN ARBOR ENGINEERING

STREET RESURFACING PROJECT - 2023

RFP# 23-17, FILE No. 2023-004

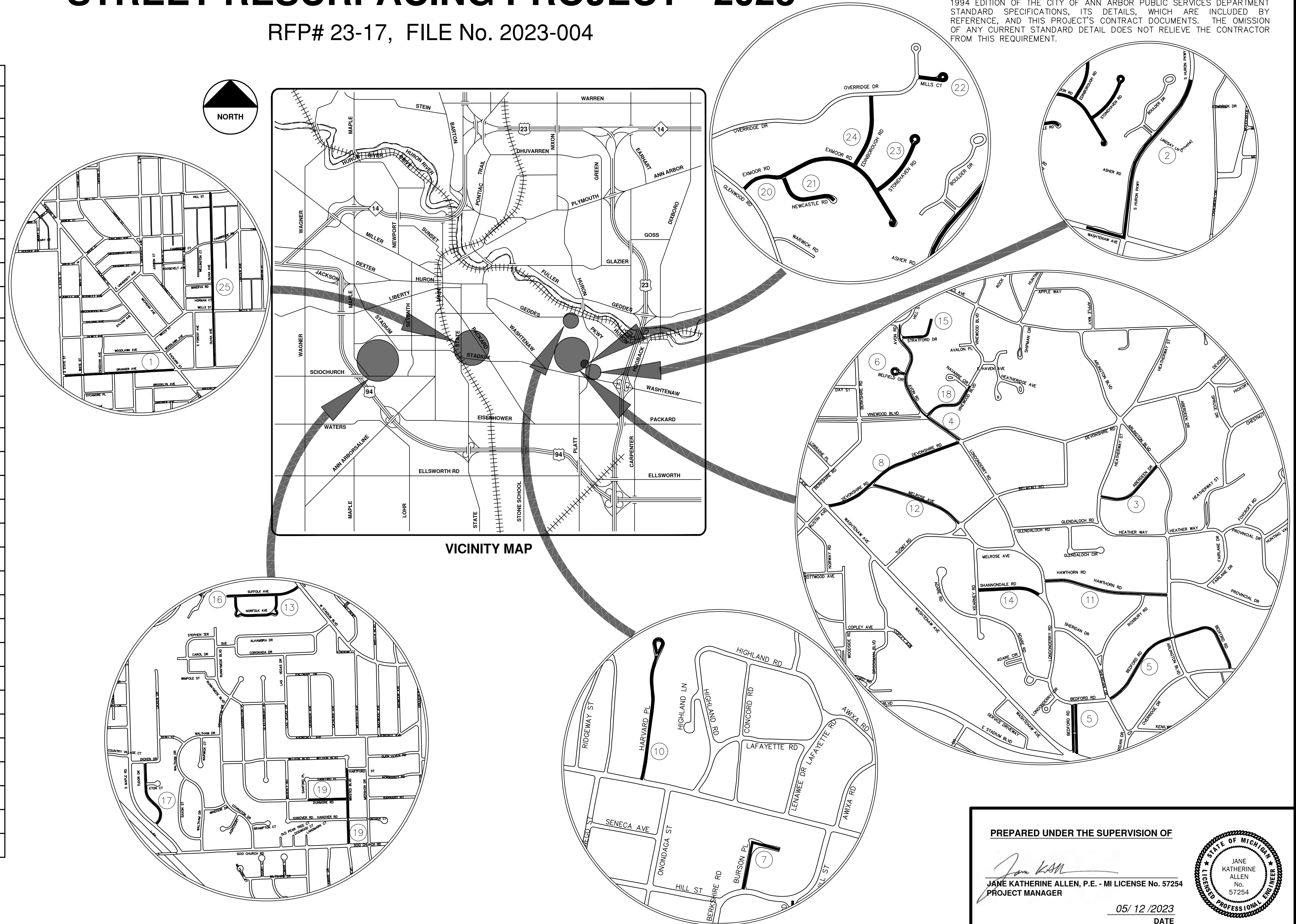
NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

SHEET INDEX		
SHEET NO.	TITLE	MAP INDEX NO. (THIS SHEET)
1	COVER SHEET	
2	NOTES AND MISCELLANEOUS QUANTITIES	
3	SOIL EROSION AND SEDIMENTATION CONTROL (SESC) NOTES AND DETAILS	
4-5	DETAILS	
5-6	TRAFFIC CALMING DETAILS	
11-12	LOCAL STREET TRAFFIC CONTROL PLANS	
13	GRANGER TRAFFIC CALMING	1
14	S. HURON PKWY HMA PATH	2
15	ABERDEENDR	3
16	AVON RD	4
17	BEDFORD RD	5
18	BELFIELD CIR	6
19	BURSON PL	7
20	DEVONSHIRE RD	8
21	DUNMOOR RD	9
22	HARVARD PL	10
23	HAWTHORNE RD	11
24	MELROSE RD	12
25	NORFOLK ST	13
26	SHANNONDALE RD	14
27	STRATFORD DR	15
28	SUFFOLK ST	16
29	TUDOR DR	17
30	VINEWOOD BLVD	18
31	WINSTEAD BLVD	19
32	EXMOOR RD	20
33	NEWCASTLE RD	21
34	MILLS CT	22
35	STONHAVEN RD	23
36	EDINBOROUGH RD	24
37	OLIVIA AVE	25



REV.	DATE	DESCRIPTION
02	05/12/2023	ADDENDUM 2
00	04/28/2023	RFP SET

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48107-8647
ANN ARBOR 734-794-6410
WWW.A2GOV.ORG



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
COVER SHEET
SCALE
DRAWING No. 2023-004-1
SHEET No. 1 OF 37

PREPARED UNDER THE SUPERVISION OF
Jane K. Allen
JANE KATHERINE ALLEN, P.E. - MI LICENSE No. 57254
PROJECT MANAGER
05/12/2023
DATE



GENERAL NOTES:

- Driveways and entrances to buildings, real property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.
- The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.
- During non-working hours no more than ten (10) feet of trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the items of work being undertaken and will not be paid for separately.
- The location of material stock piles and on-site staging areas shall be approved by the Engineer.
- For mainline HMA Paving, the width of the mat for each pass of the paver shall be not less than 10.5', nor greater than 16', except as noted in the plans and as directed by the Engineer. The Engineer will direct the layout of all HMA Longitudinal Joints during construction.
- All excavation required to construct sidewalk and sidewalk ramps shall be included in the contract pay item "Grading, Sidewalk and Sidewalk Ramps".
- Some storm sewer may unavoidably become damaged during construction, or it may be determined by the Engineer that existing storm sewer needs to be replaced. In either case the Engineer may direct the sewer to be removed and replaced. The removal of existing sewer and drainage structures, as required, shall be included in the respective contract pay items "Sewer, Rem, Less than 24 inch" and "Dr Structure, Rem". The replacement sewer shall be installed and paid for at the corresponding contract unit price, if contained within the contract, for the various types and sizes of sewer to be replaced.
- The Contractor shall remove and stockpile on site at a location mutually agreed upon by the Contractor and Engineer any/all existing City owned structure covers designated for salvage, and within two days of their removal deliver them to the W.R. Wheeler Service Center (4251 Stone School Rd, Ann Arbor, MI). Any structure covers not designated for salvage shall become the property of the Contractor and disposed of, as required, by the Contractor.
- Payment for drainage structure sumps where specified shall be included in the payment for the various drainage structures sizes and/or types.
- Where pipes of different sizes or materials are joined, Fernco Flexible Couplings with stainless steel shear rings shall be used. The Contractor's purchase price for these devices, including shipping, shall be paid as an extra. Prior to payment for this item, the Contractor shall submit receipts for the Engineer's review and approval. All other costs associated with the installation of these devices shall be included in the payment for the sewer.
- Where storm sewer is to be removed and replaced or added, all pipe shall be installed using the utility trench details shown elsewhere in the plan sheets and/or detailed in the specifications. Trench Details I and V require the use of MDOT Class II Granular Material.
- If the Contractor encounters existing edge drain(s) during construction of the proposed edge drains, inlet leads, or catch basins, it shall be capped at each end to prevent material from entering the pipe. The cost of this work will not be paid for separately, but shall be included in the particular item of work being performed when existing edge drain(s) are encountered.
- In areas where edge drain cannot be installed in accordance with the details, the edge drain shall be installed at the depth as indicated on the plans, or as directed by the Engineer. In no case shall the edge drain be installed at a grade less than 0.50% or at a depth less than 6 inches above the invert of the lowest outlet pipe.
- Existing street name signs, guide, bus stop, and regulatory signs which conflict with the proposed construction shall be removed prior to construction, stored in a manner which will prevent damage, and re-set in locations as directed by the Engineer. This work will not be paid for separately, but shall be included in the contract pay item "Minor Traf Devices."
- All curb, sidewalk, driveway approach removals shall be approved by the Engineer before the work is performed.
- Place 4 inches (minimum) thickness Granular Material Class II compacted to 95% of its max. dry density under concrete sidewalk as shown on the details. This work shall be included in the contract item "Subbase, CIP."
- Place 6 inches (minimum) Granular Material Class II compacted to 95% of its max. dry density under concrete driveway approaches, and 6 inches (minimum) Dense-Graded Aggregate 21AA compacted to 98% of its max. dry density under HMA driveway approaches. This work shall be included in the respective contract pay items "Subbase, CIP" and "Aggregate Base, 6 inch, Modified".
- A uniform coat(s) of curing compound shall be applied according to the Standard Specifications and Special Provisions regardless of the difficulty involved. The Contractor shall take care to prevent overspray when applying curing compound. Several different methods may need to be developed to protect various situations, but all methods used to prevent overspray of the curing compound shall be completely effective. Methods used shall be approved by the Engineer prior to use, however approval of a method does not guarantee success or acceptability. No additional compensation shall be made for complying with these requirements.

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT*	CITY OF ANN ARBOR ENGINEERING
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR ENGINEERING
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
RIGHT-OF-WAY PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
* NO COST TO CONTRACTOR	

PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
EGLE WATER MAIN CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
EGLE SANITARY SEWER CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
WATER	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
SANITARY		
STORM		
FORESTRY		
SIGNS SIGNALS STREET LIGHTS		MARK MORENO (734) 794-6361
FIBER OPTIC	CITY OF ANN ARBOR INFORMATION TECHNOLOGY LARCUM CITY HALL 301 E. HURON STREET ANN ARBOR, MI 48107	(734) 794-6550
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	ANTHONY IGNASIAK (734) 397-4447
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SOUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	STEVEN ALLSHOUSE (734) 996-5381
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016
FIBER OPTIC	WINDSTREAM 1295 S LINDEN ROAD, SUITE B FLINT, MI 48532	GREG SERICH (810) 244-3500
STREET LIGHTING	DTE ENERGY 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	LANCE ALLEY (734) 397-4188



02	ADDENDUM 2	05/12/2023	04/28/2023	CE	CE	JA	CHECKED
00	RFP SET			AG/CE			DRAWN
							DATE
							DESCRIPTION
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
GENERAL NOTES

SCALE: NTS
DRAWING No. 2023-004-2

GENERAL
 NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
4. EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR.
6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
7. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF

- WATER TRUCKS AND/OR OTHER METHODS APPROVED BY THE ENGINEER.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
 11. THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
 12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

1. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:

- 1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- 1.2. STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.
- 1.3. INSTALL WATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- 1.4. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- 1.5. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- 1.6. COMPLETE ALL FINE GRADING.

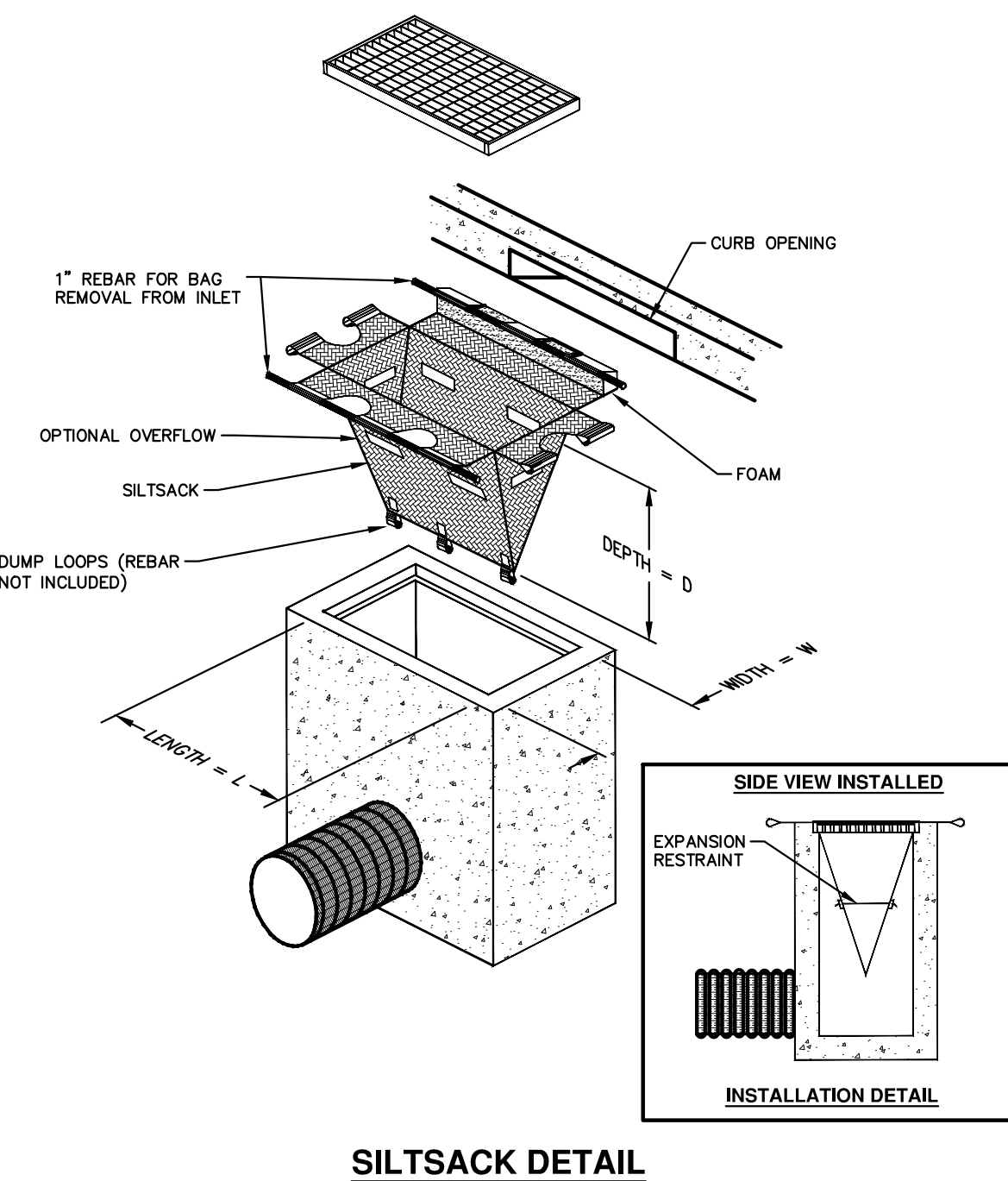
- 1.7. TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- 1.8. REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- 1.9. CLEAN OUT STORM SEWER SYSTEMS.
- 1.10. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 1.11. ALL TEMP. SOIL EROSION CONTROL MEASURES MUST BE REMOVED, WITH ENGINEERS APPROVAL, PRIOR TO FINAL INSPECTION

NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

TEMPORARY SEEDING:

1. SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
2. ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

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NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK

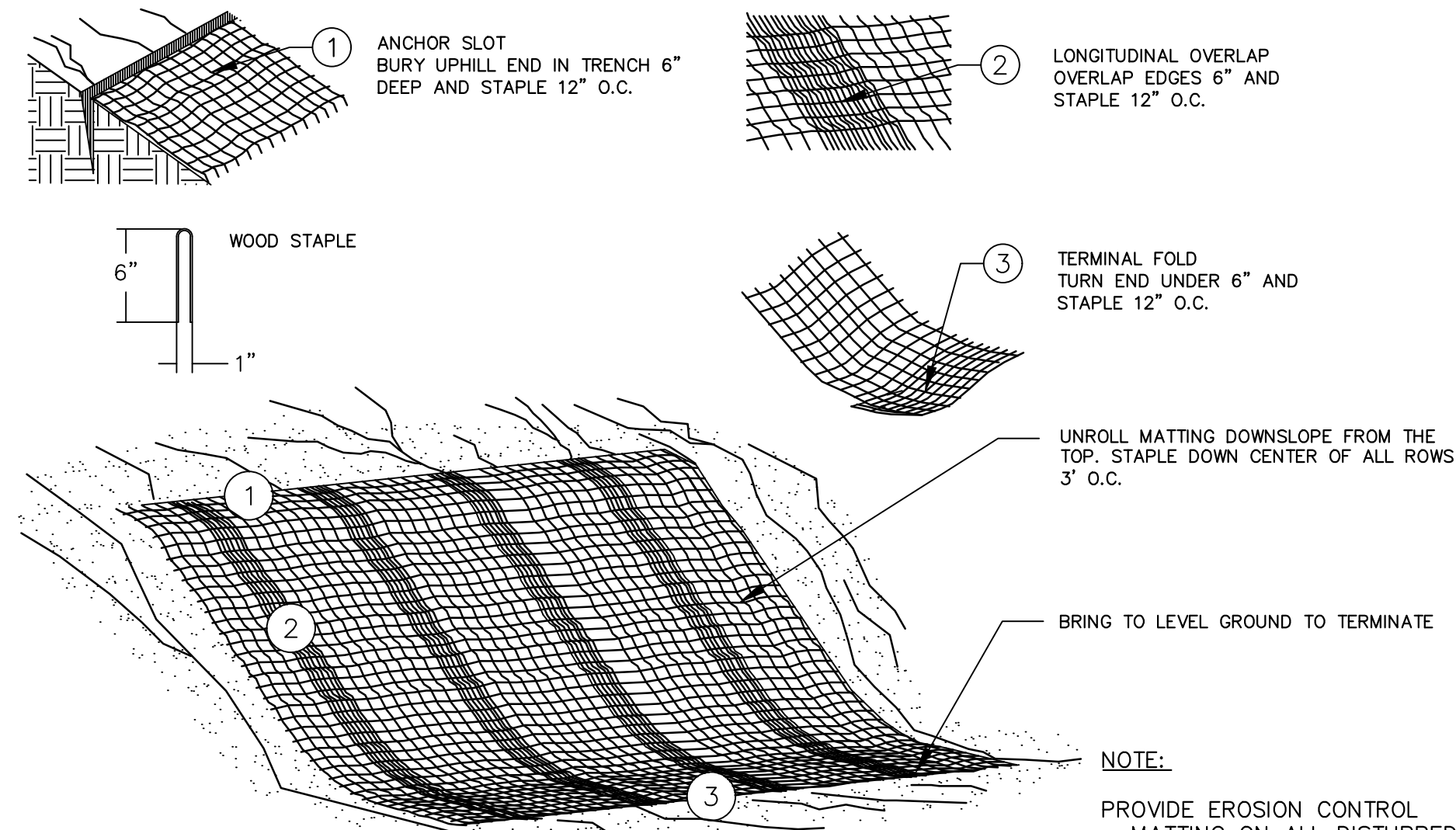
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

OIL-ABSORBANT SILTSACK

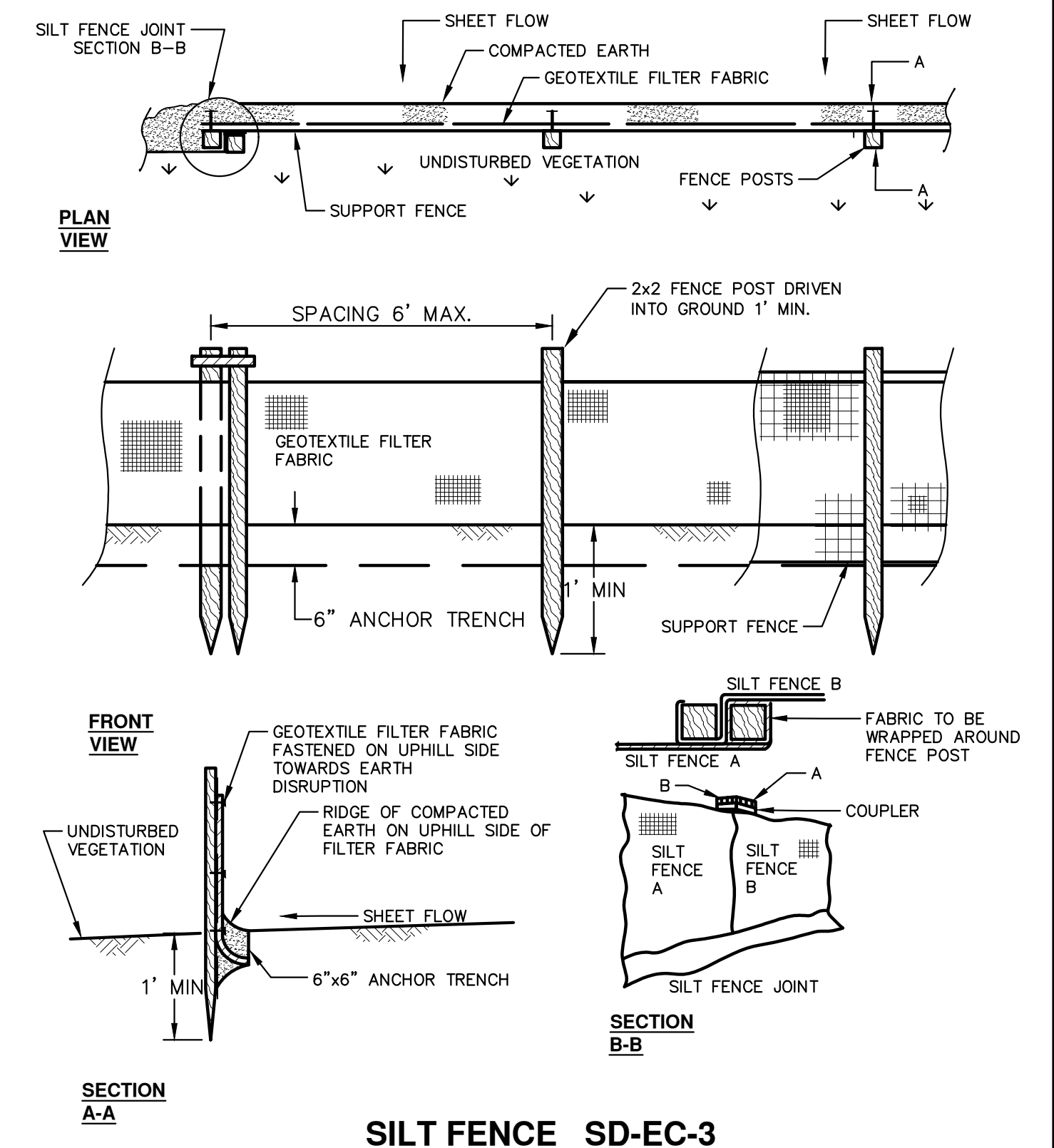
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR INSTALL THE REBAR AS SHOWN IN THIS DETAIL TO PROVIDE A FULLY FUNCTIONING UNIT. ALL COSTS ASSOCIATED WITH FURNISHING, CLEANING AS MANY TIMES AS REQUIRED, DISPOSAL OF SEDIMENT, AND REMOVING THE INLET FILTER WHEN NO LONGER NEEDED IS INCLUDED IN THE ITEM OF WORK AND WILL NOT BE PAID FOR SEPARATELY.



MULCH BLANKET DETAIL

APPLIES TO ALL AREAS TO BE PERMANENTLY RESTORED WITH GRASS. SEE LANDSCAPE PLANS FOR MORE DETAILS.



SILT FENCE SD-EC-3

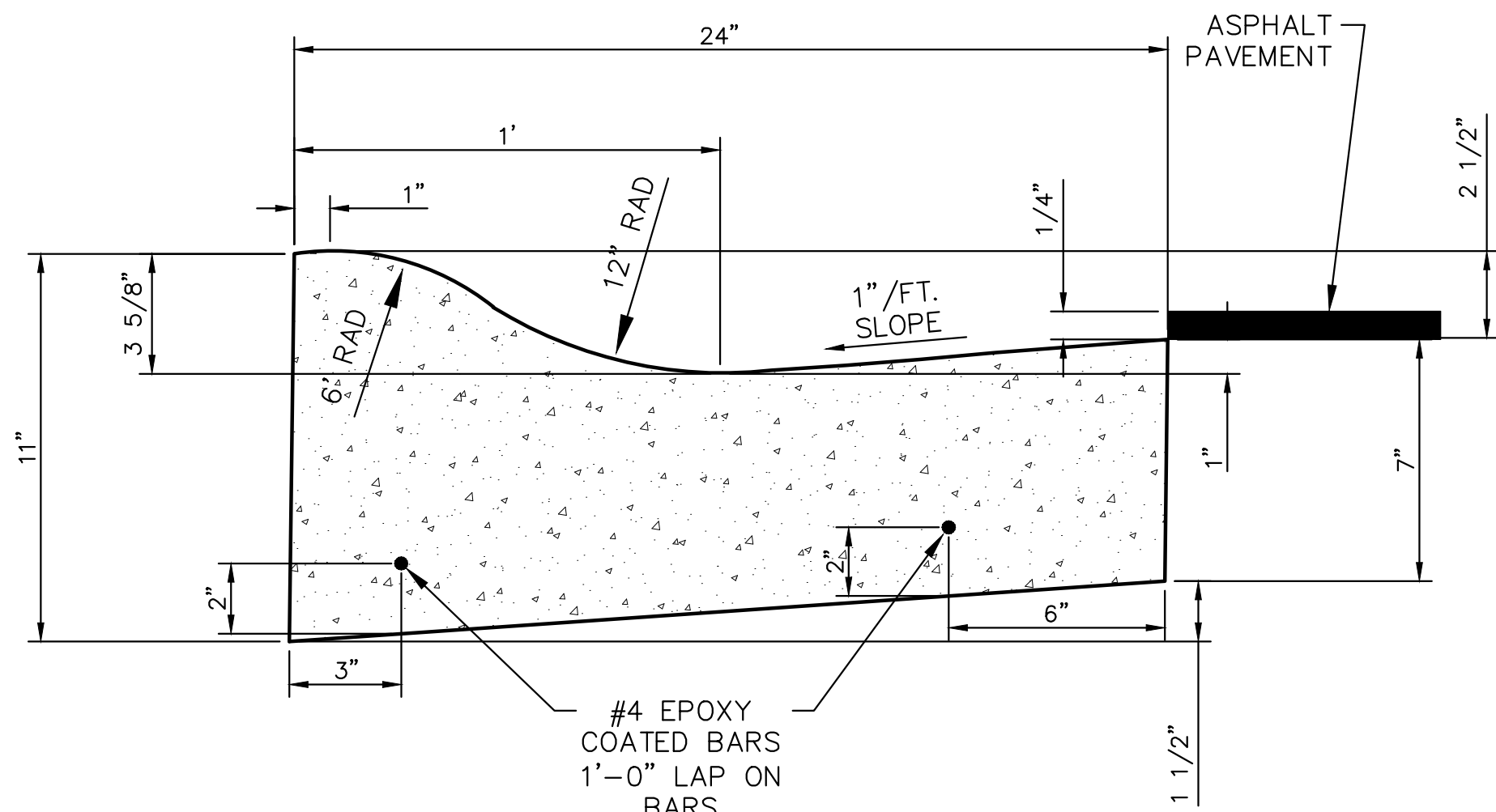
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Know what's below. Call before you dig.

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
 STREET RESURFACING PROJECT - 2023

SESC NOTES AND DETAILS
 DRAWING No. 2023-004-3
 SHEET No. 3 OF 37

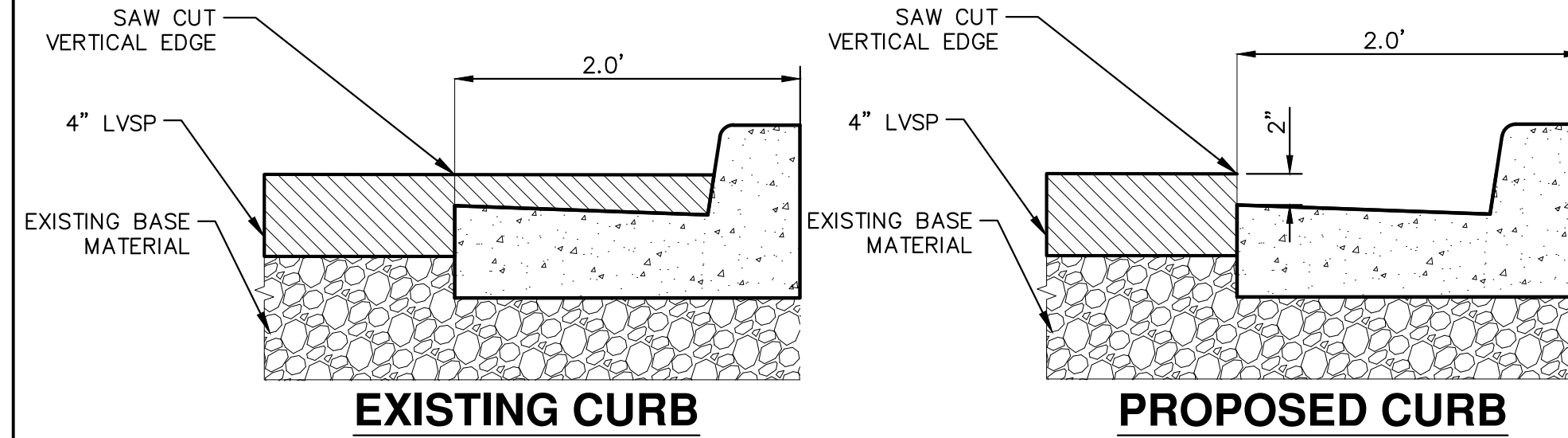
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NOTES:

- FRONT EDGE OF INLET CASTINGS SHALL BE FLUSH WITH FRONT EDGE OF GUTTER (EDGE-OF-METAL).
- THIS DETAIL SHALL BE USED FOR MOUNTABLE CURB AND GUTTER ON ASPHALT STREETS. SEE SD-R-3 FOR MOUNTABLE CURB AND GUTTER ON CONCRETE STREETS.

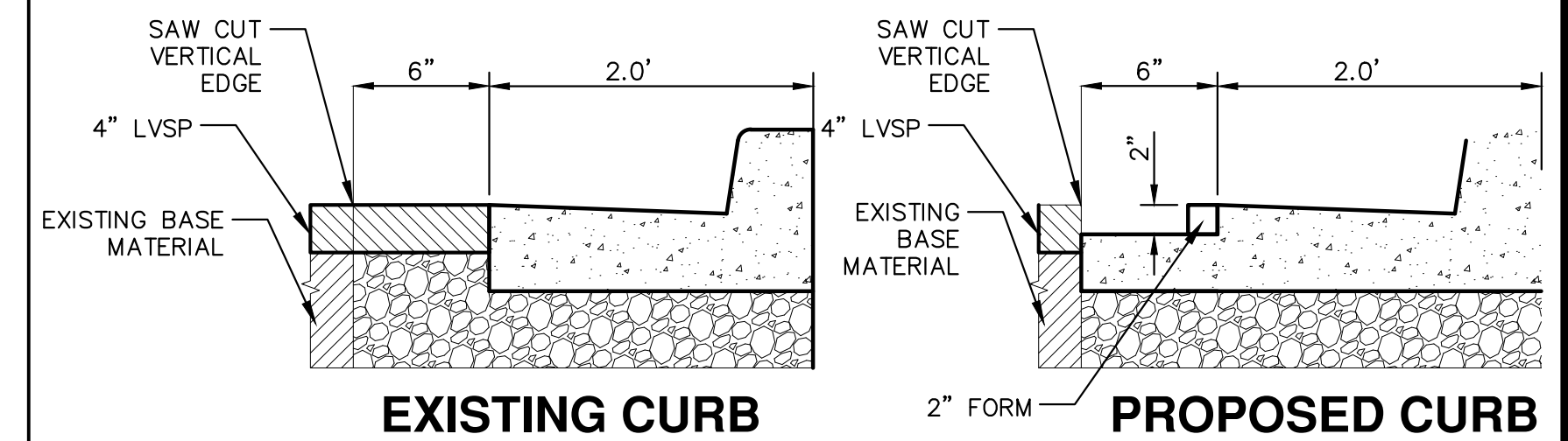
MOUNTABLE CURB & GUTTER FOR ASPHALT STREETS SD-R-2



NOTES:

- SAWCUT A VERTICAL EDGE 2' FROM BACK OF CURB.
- REMOVE CURB THIS INCLUDES THE HMA IN GUTTER-PAN.
- EXCAVATE DOWN TO OBTAIN GRADE FOR FULL WIDTH OF EXISTING SAW CUT TAKING CARE NOT TO DAMAGE THE HMA EDGE.
- PLACE BACK FORMS TO ALIGN WITH EXISTING CURB ON EACH SIDE, POUR CONCRETE USING THE HMA EDGE AS A FORM LEAVING THE CONCRETE A MINIMUM OF 2" DOWN FROM EXISTING HMA ROAD GRADE, UNLESS OTHERWISE DIRECTED BY THE PROJECT MANAGER.
- ANY NON VERTICAL EDGES WILL BE APPROVED BY INSPECTION PRIOR TO POURING CURB, THE NEED TO SAW CUT OUT TO TWO FOOT TO CLEAN UP THE EDGE AND PATCH BACK IN WITH HMA MAY BE NEEDED.

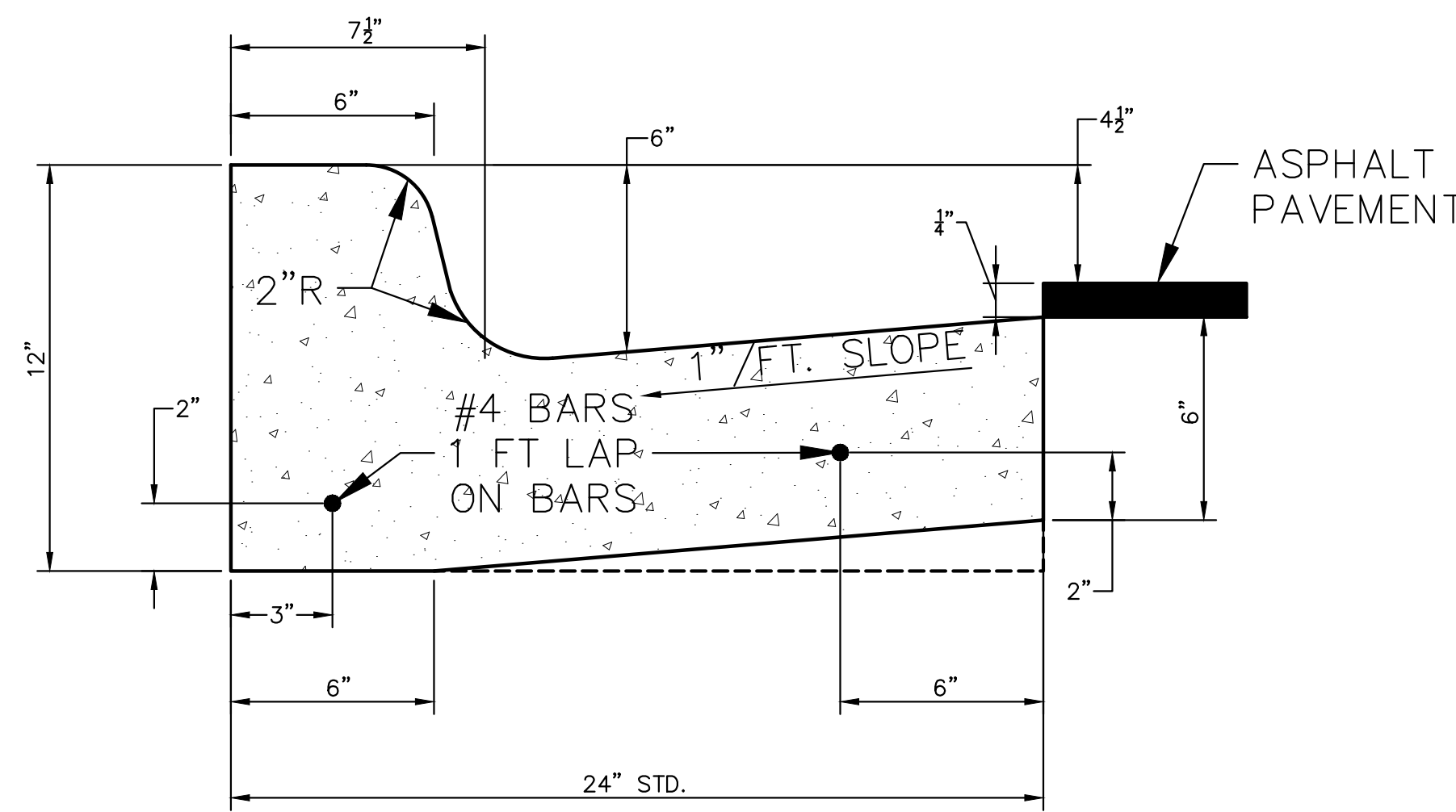
CURB REMOVAL & REPLACE OVERLAID MODIFIED



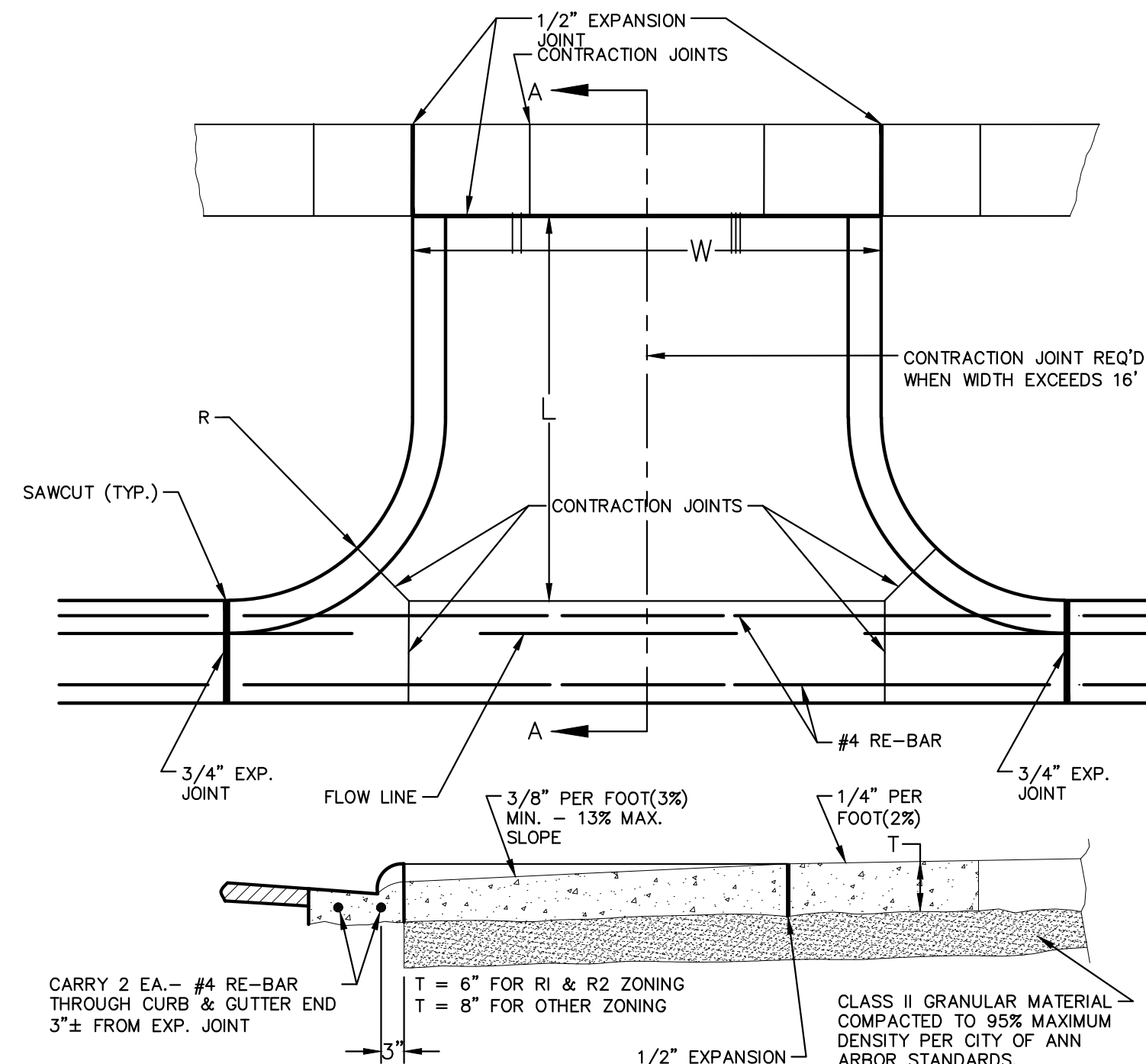
NOTES:

- SAWCUT A VERTICAL EDGE 2.5' FROM BACK OF CURB.
- REMOVE CURB AND 6" OF HMA IN FRONT OF CURB.
- EXCAVATE DOWN TO OBTAIN GRADE FOR FULL WIDTH OF TRENCH.
- PLACE BACK FORMS AT 2' FROM THE BACK FORM PLACE A 2" FORM (TOP OF FORM TO BE FLUSH WITH WHERE EDGE OF METAL IS TO BE AT THE CORRECT ELEVATION ALLOWING TO CREATE A 2" STEP). POUR CONCRETE MONOLITHICALLY OUT TO THE EXISTING HMA LEAVING IT 2" DOWN FROM THE NEW EDGE OF METAL AND THE EXISTING HMA
- ANY NON VERTICAL EDGES WILL BE APPROVED BY INSPECTION PRIOR TO POURING CURB, THE NEED TO SAW CUT TO CLEAN UP THE EDGE MAY BE NEEDED.

CURB REMOVAL & REPLACE NON-OVERLAID MODIFIED



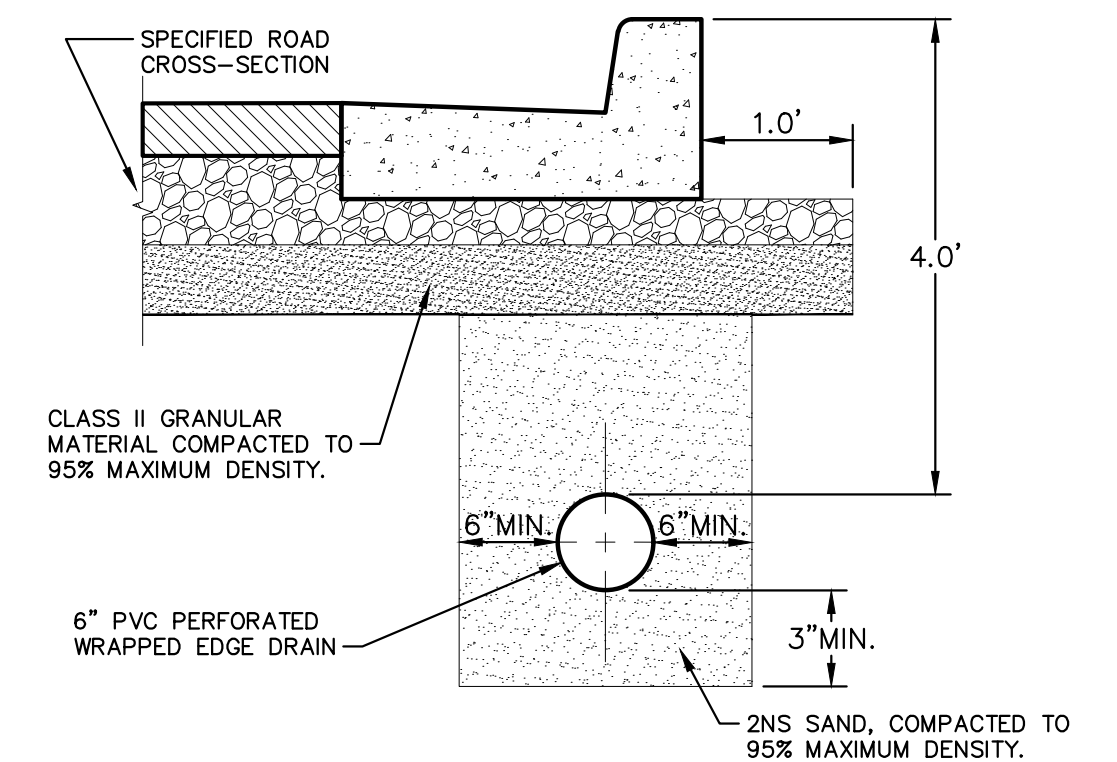
BARRIER CURB AND GUTTER SD-R-1



NOTE:

- DRIVE APPROACH TO BE CLASS 'A' CONCRETE.
- R(RADIUS) AND W(DRIVE WIDTH) AS REQUIRED FOR ZONING BY CITY CODE
- IF GUTTER IS OVERLAPPED, GUTTER OF THE APPROACH SHALL BE AT SAME ELEVATION AS EXISTING GUTTER AND ASPHALT WEDGE SHALL BE PLACED IN THE APPROACH.

TYPE 'M' DRIVE APPROACH SD-R-6



NOTES:

- FOR PAVEMENT BASE AND SUBBASE THICKNESS, SEE TYPICAL PAVEMENT CROSS-SECTION.
- DENSITY TESTING PER CITY OF ANN ARBOR SPECIFICATIONS.
- TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION, ONLY.
- ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS.

TYPICAL EDGE DRAIN TRENCH SD-TD-10



02	ADDENDUM 2	05/12/2023	CE	CE	JA	CHECKED
00	RFP SET	04/28/2023	AG/CE	AG/CE	JA	DRAWN
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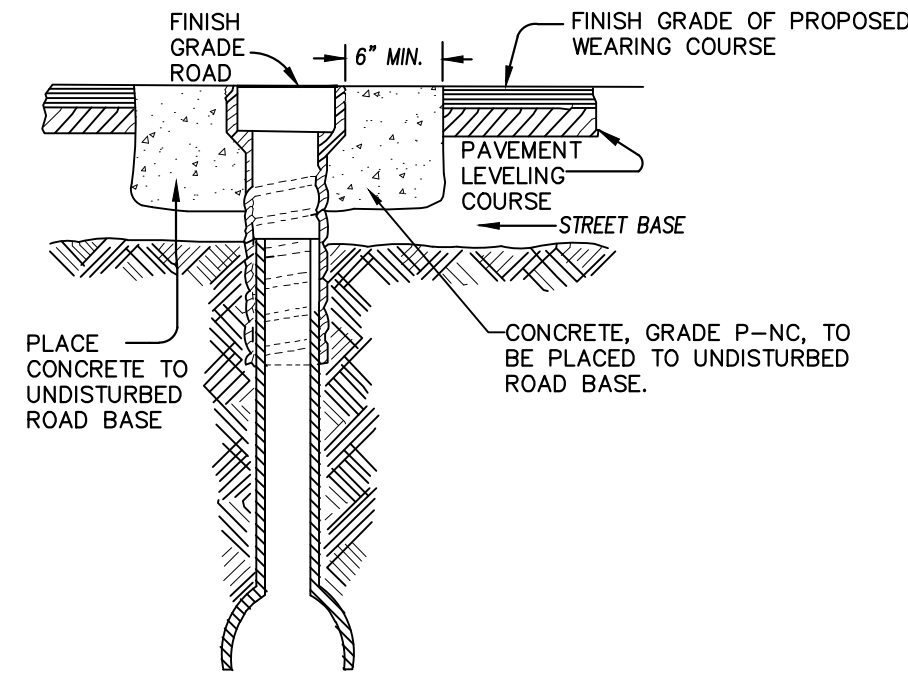
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
DETAILS

SCALE: NTS
DRAWING No. 2023-004-4
SHEET No.

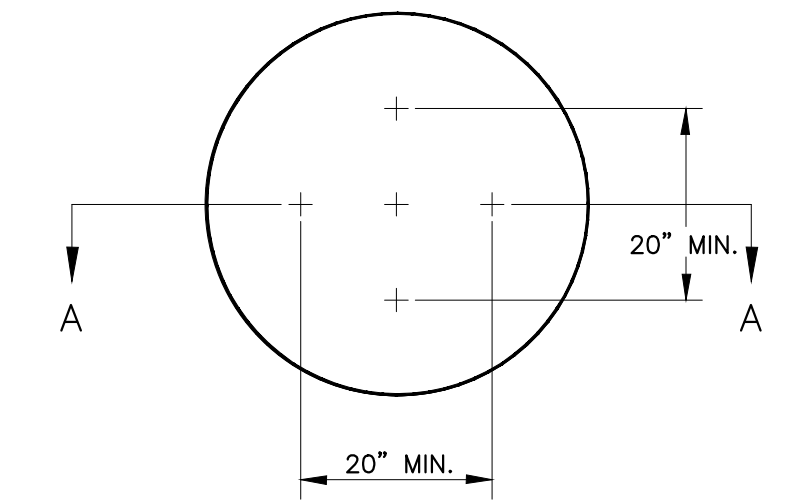
AFTER WEARING COURSE, CORE PAVEMENT TO THE MINIMUM SHOWN IN DETAIL AND RAISE BOX IN CONCRETE TO PROPOSED FINISH STREET GRADE. PLACE AND FINISH APPROVED CONCRETE PER THE CONTRACT REQUIREMENTS AROUND ADJUSTED CASTING



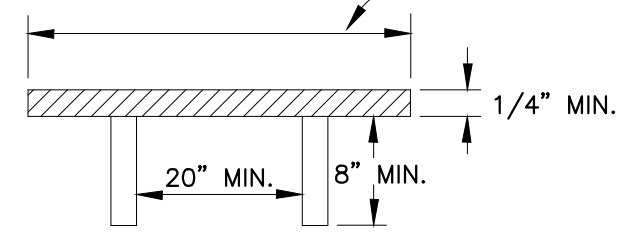
NOTE: RAISE CASTING TO PROPOSED FINISH STREET GRADE AFTER PLACEMENT OF WEARING COURSE WITH ENGINEER APPROVED CONCRETE.

CITY OF ANN ARBOR STANDARD SD-GU-7 APPLIES TO: SEE PLANS FOR LOCATIONS

WATER VALVE BOX ADJUSTMENT



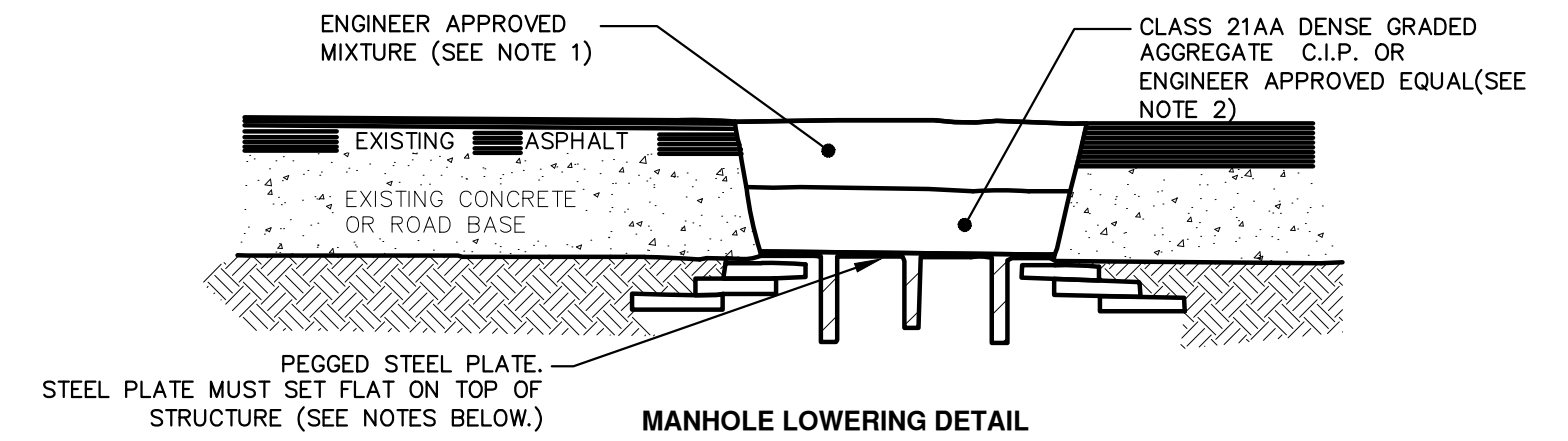
NOTE: PLATE MAY BE CIRCULAR, SQUARE OR RECTANGULAR SECTION A - A 6\"/>



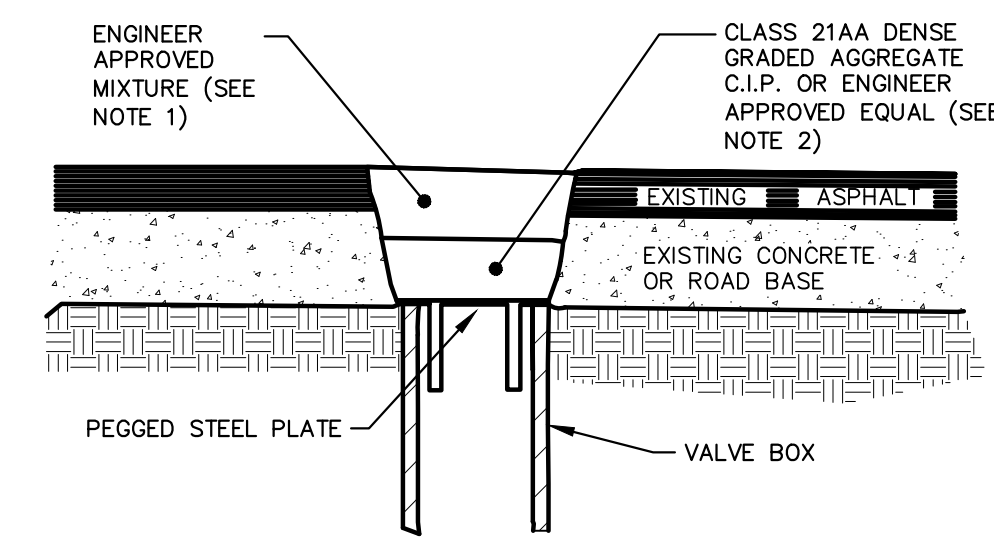
1/4\"/>

STEEL PLATES WILL BE FIELD INSPECTED AND MAY BE REJECTED IF ITS HORIZONTAL AND STRUCTURAL INTEGRITY SHOW SIGNS OF DAMAGE.

STRUCTURE PLATE



MANHOLE LOWERING DETAIL

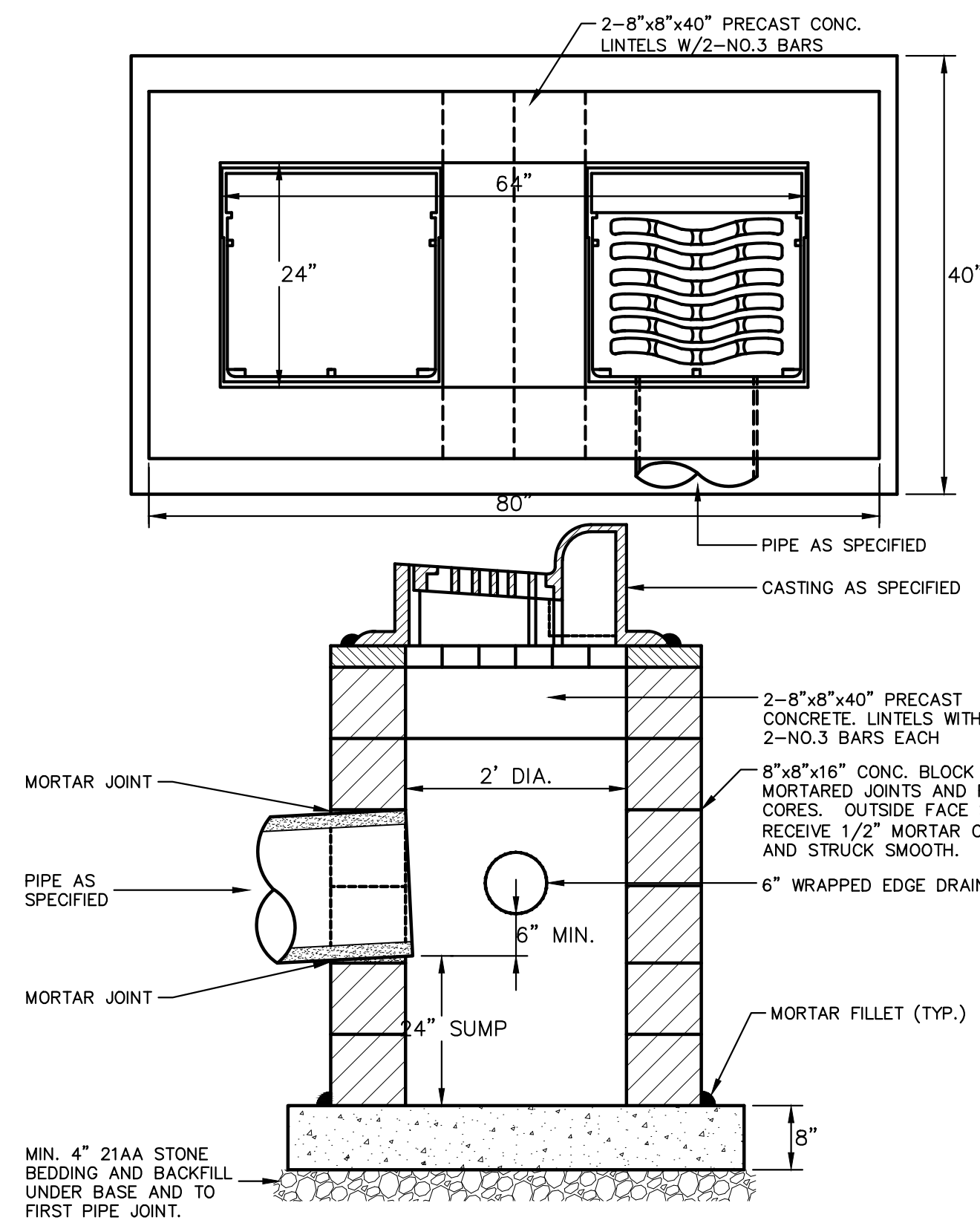


VALVE BOX LOWERING DETAIL (SEE NOTE 3)

NOTES:

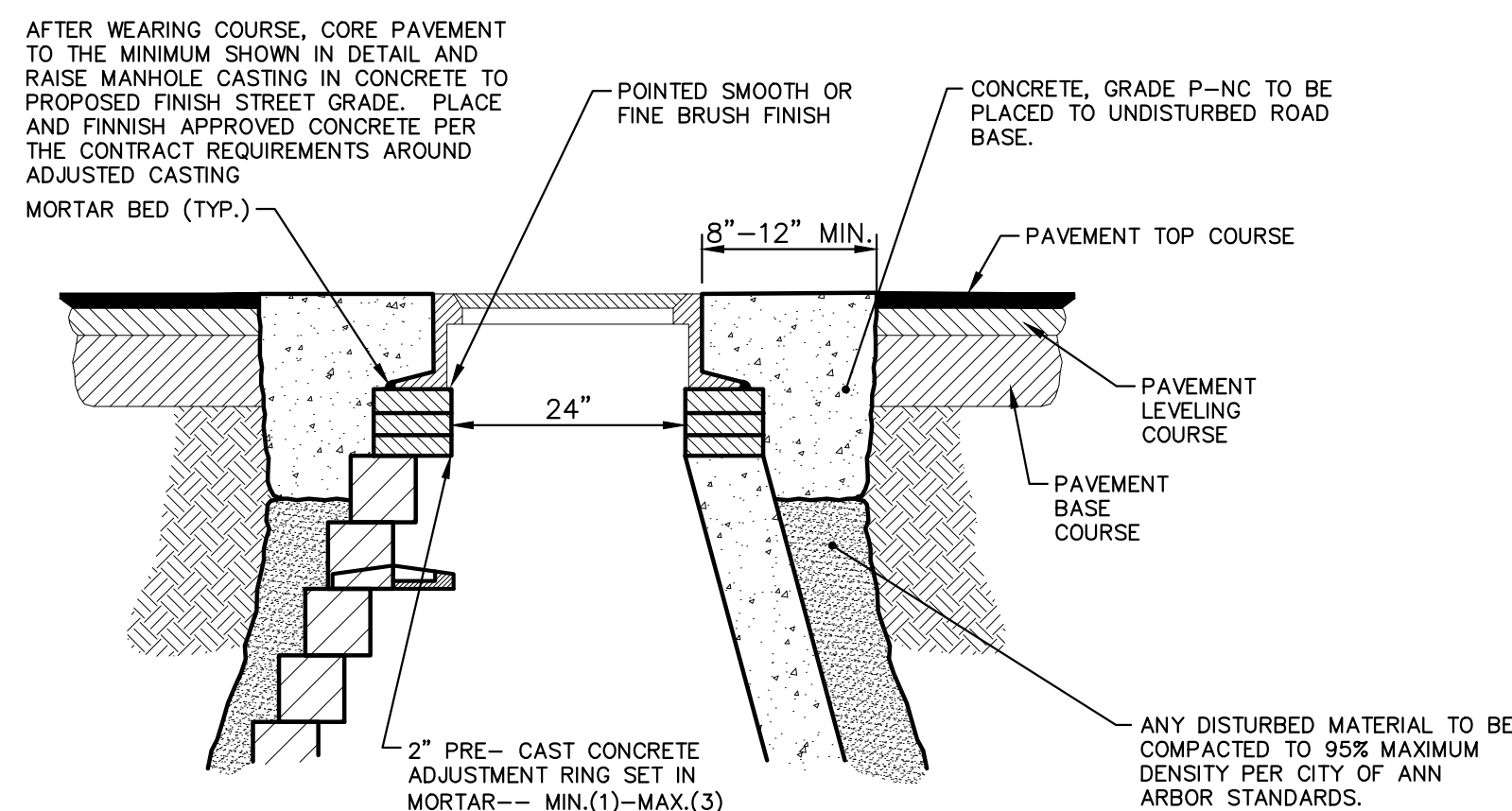
- IF TRAFFIC IS TO BE MAINTAINED ON THE ROADWAY BEFORE OR AFTER THE COLD MILLING OPERATION, THE STRUCTURE SHALL BE LOWERED TO THE EXTENT THAT A MINIMUM OF THREE(3) INCHES OF ENGINEER APPROVED ASPHALT OR OTHER MATERIAL REMAINS TO SUPPORT TRAFFIC.
- IF THE ROADWAY BEING MILLED IS CLOSED TO TRAFFIC, THE STRUCTURE SHALL BE LOWERED SUCH THAT THE STEEL PLATE IS A MINIMUM OF EIGHT (8) INCHES BELOW THE PROPOSED ROAD GRADE TO ALLOW THE MILL TO SAFELY PASS OVER WITHOUT COMING IN TO CONTACT WITH THE PLATE AND THE RESULTING VOID SHALL BE FILLED WITH COMPACTED CLASS 21AA DENSE GRADED AGGREGATE OR ENGINEER APPROVED EQUAL.
- WHERE A MONUMENT IS TO BE LOWERED, THE CONTRACTOR SHALL GIVE THE ENGINEER A MINIMUM OF 48 HOURS WRITTEN NOTICE SO THAT THE MONUMENT CAN BE PROPERLY WITNESSED OR PROTECTED. FAILURE TO DO SO SHALL RESULT IN THE ENGINEER REPLACING SAID MONUMENT AT THE CONTRACTORS EXPENSE.
- PLACE NON-WOVEN GEOTEXTILE BLANKET OVER EXPOSED STRUCTURE OPENING PRIOR TO PLACEMENT OF PEGGED STEEL PLATE. BLANKET SHALL EXTEND NO MORE THAN 3 INCHES BEYOND THE EDGE OF THE PLATE WITH ANY EXCESS BEING TUCKED BENEATH THE PLATE.
- STEEL PLATES WILL BE FIELD INSPECTED AND MAY BE REJECTED IF ITS HORIZONTAL AND STRUCTURAL INTEGRITY SHOW SIGNS OF DAMAGE.

MANHOLE & VALVE/MONUMENT BOX LOWERING



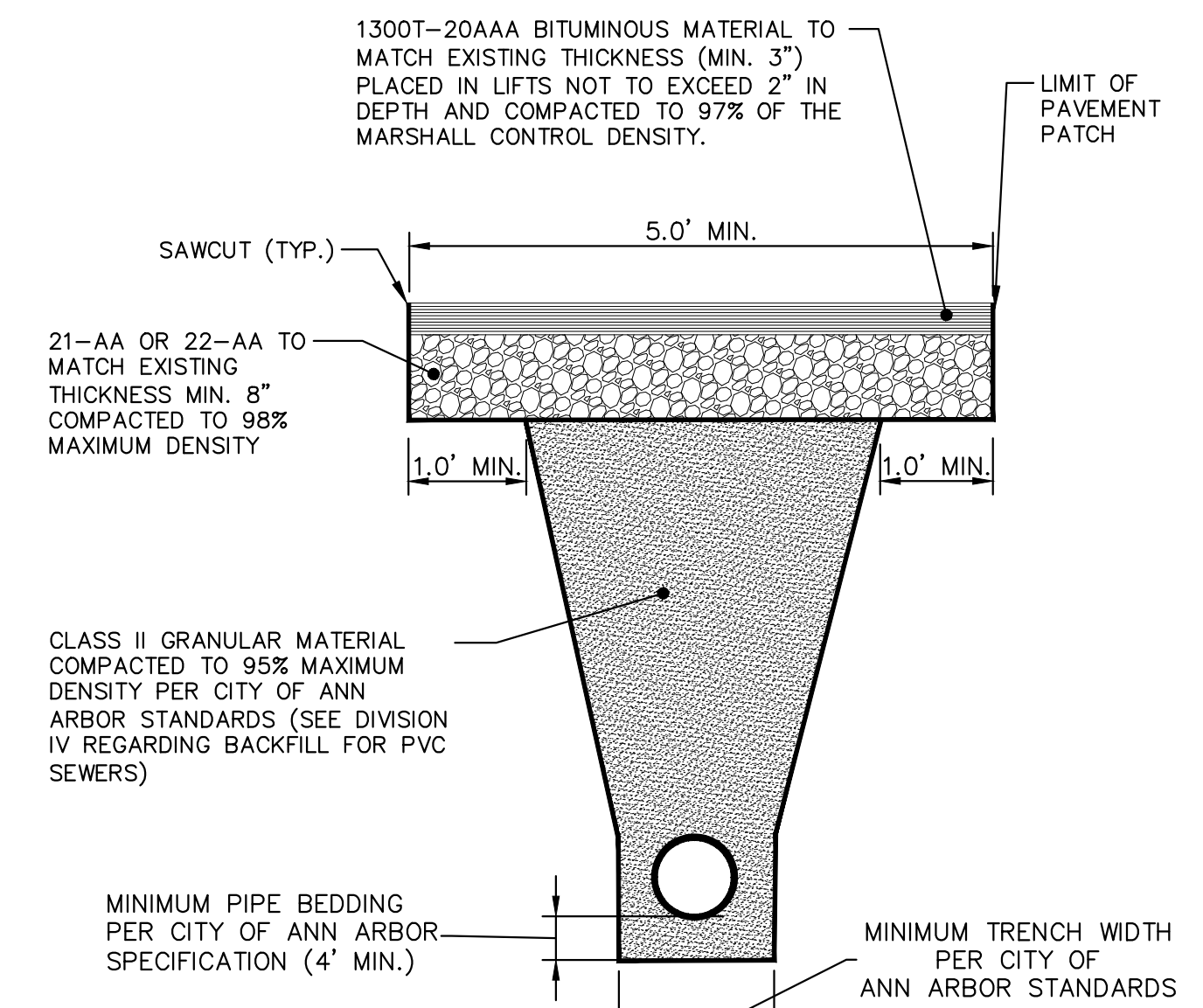
- NOTES:
- FRONT EDGE OF INLET CASTINGS SHALL BE FLUSH WITH THE FRONT EDGE OF GUTTER (EDGE-OF-METAL)
 - 2' SUMP REQUIRED ON ALL DRAINAGE STRUCTURES

DOUBLE INLET STRUCTURE SD-S-11



NOTE: IF MANHOLE WILL BE PLACED IN GRAVEL ROAD, CASTING TO BE SET TO 8\"/>

MANHOLE CASTING ADJUSTMENT SD-GU-6



NOTES:

- DENSITY TESTING PER CITY ANN ARBOR SPECIFICATION
- TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY.
- ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS

UTILITY TRENCH-TYPE I SD-TD-1 (UNDER BITUMINOUS SURFACE)

T:\2023004\Plan Production\Cover Sheet 2023004.dwg - Plot Date: 5/11/2023 1:04:59 PM



Know what's below. Call before you dig.

02	ADDENDUM 2	05/12/2023	04/28/2023	DATE	DESCRIPTION
00	RFP SET			REV.	
CE				CHECKED	
JA				DRAWN	

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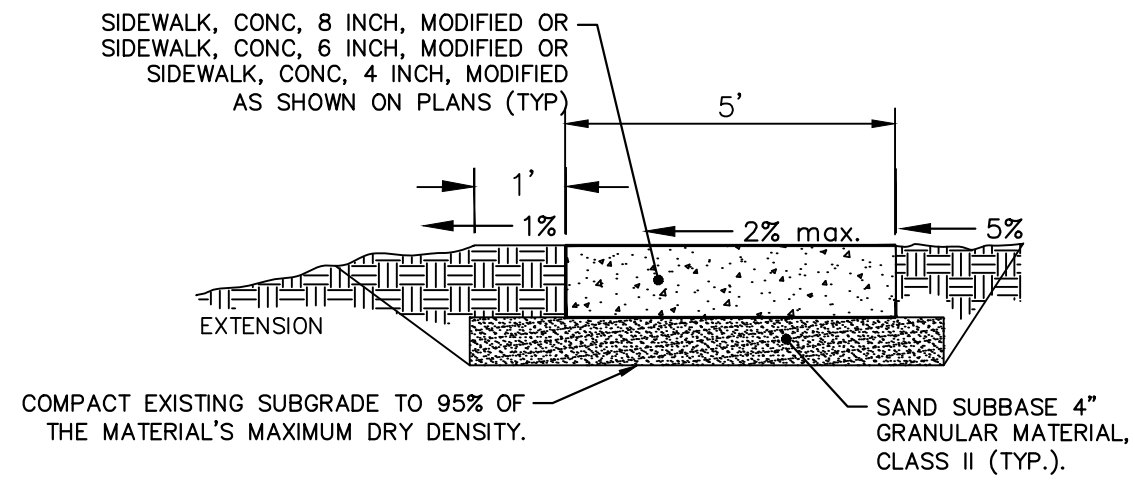


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
DETAILS 2 OF 3

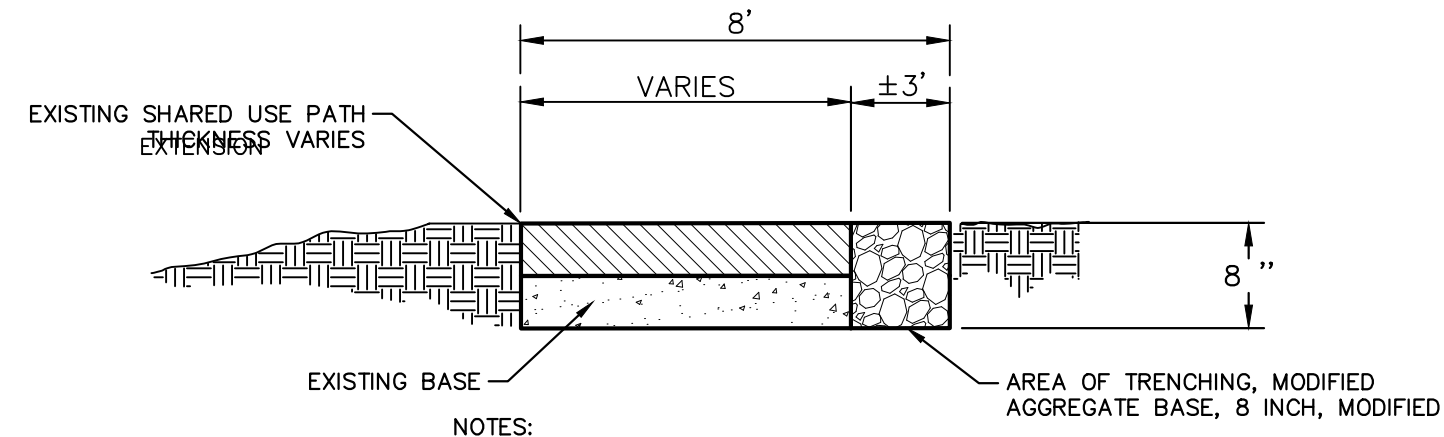
SCALE: NTS
DRAWING NO. 2023-004-5

SHEET No.

5 OF 37



TYPICAL 5 FT SIDEWALK SECTION



NOTES:

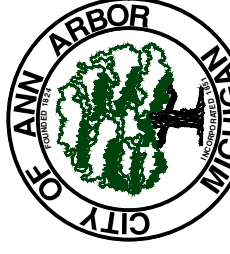
1. PATH TRENCHING WIDTH MAY VARY. PERFORM TRENCHING CONSTRUCTION TO PROVIDE FOR A UNIFORMED 8 FOOT WIDE SHARED USE PATH SURFACE.
2. PERFORM TRENCHING EXCAVATION TO A DEPTH OF 8 INCHES FROM THE TOP OF EXISTING HMA PATH.
3. PLACE 8 INCHES OF 21AA AGGREGATE COMPACTED TO 98 % MAXIMUM DENSITY.
4. PERFORM DENSITY TESTING PER CITY OF ANN ARBOR SPECIFICATIONS.

SHARED USE PATH TRENCHING



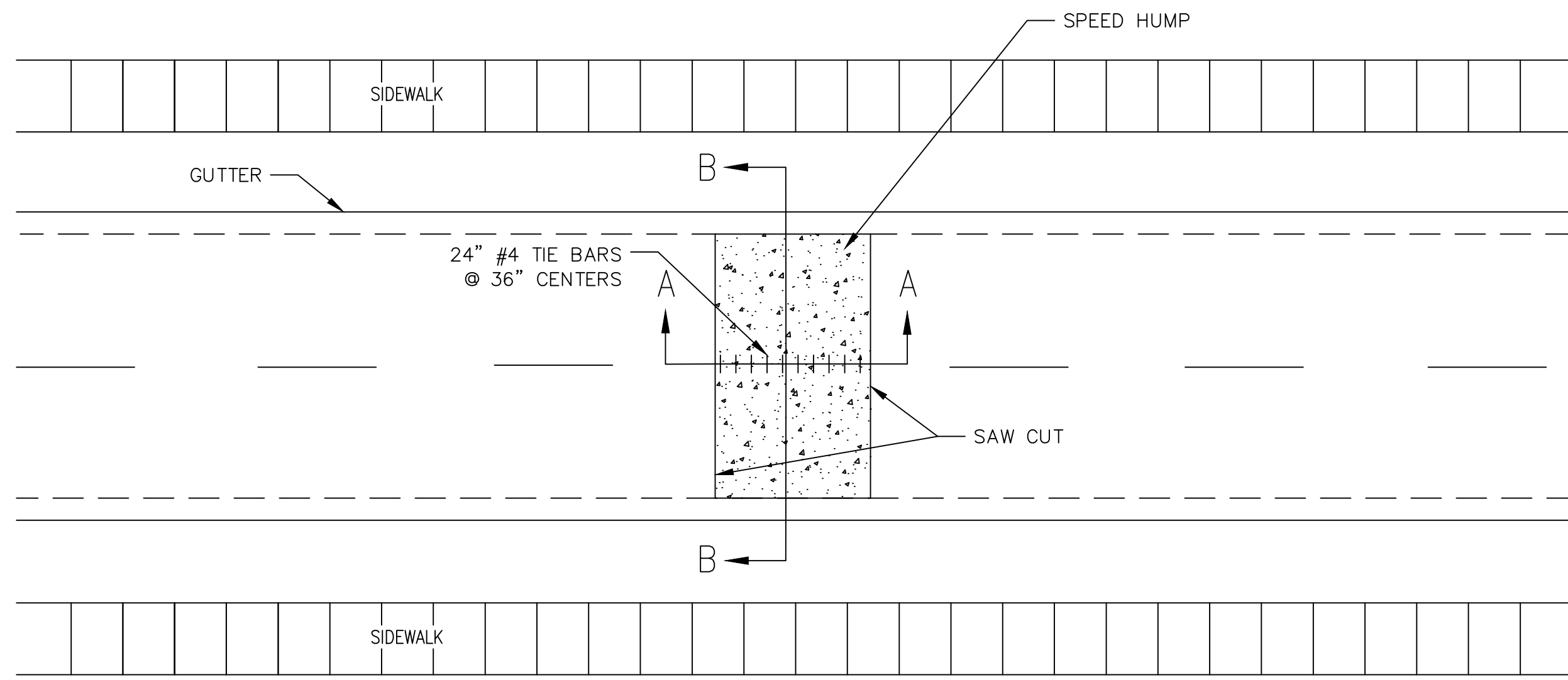
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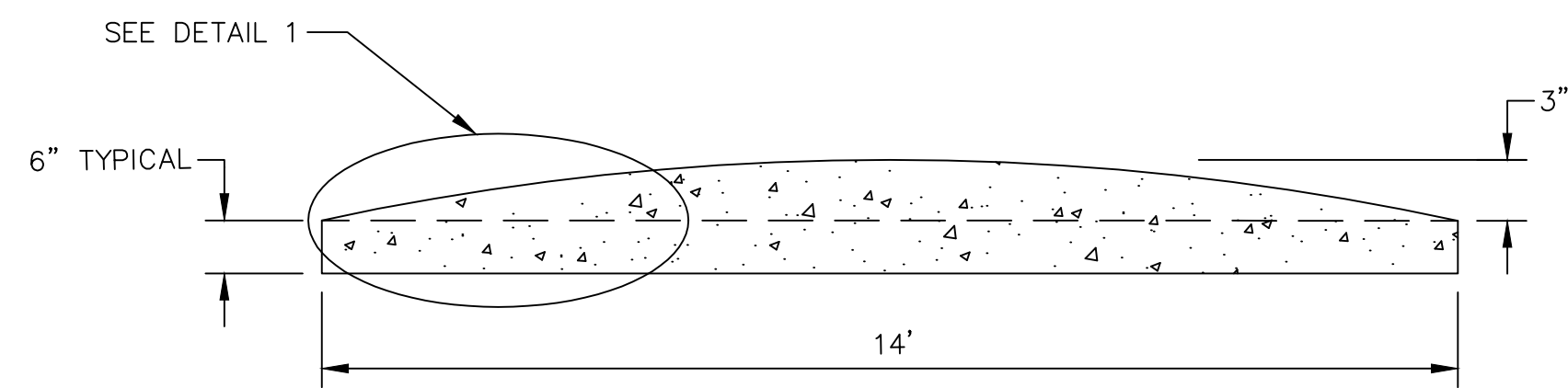


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
SCALE : NTS
DRAWING No. 2023-004-6
DETAILS 3 OF 3

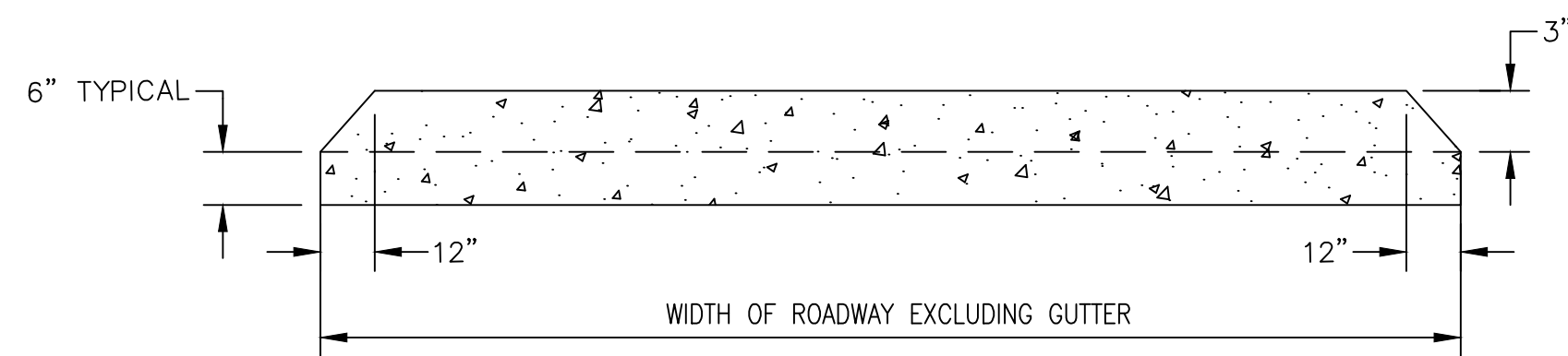
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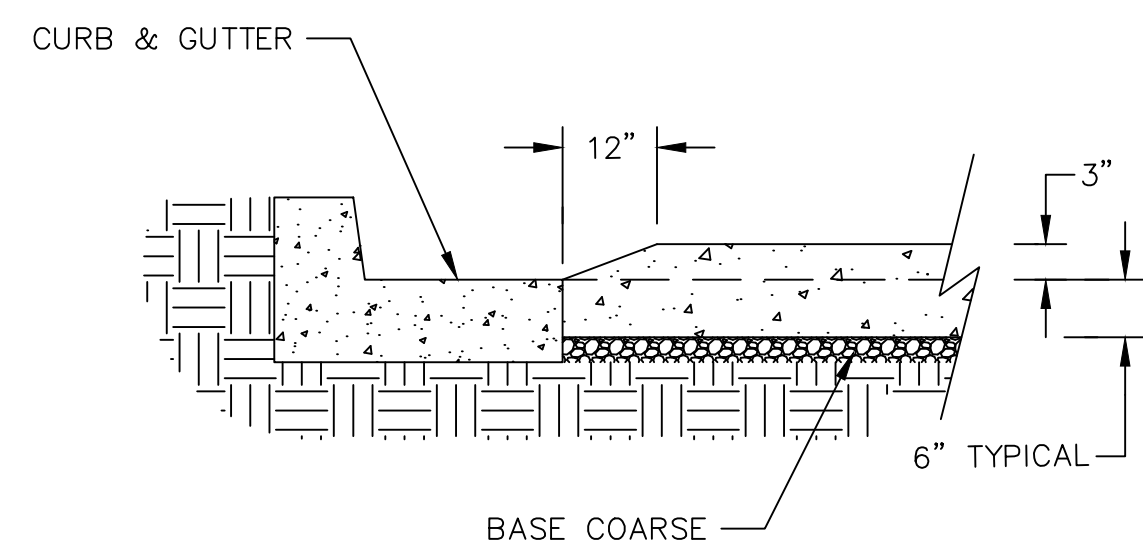
PLAN VIEW



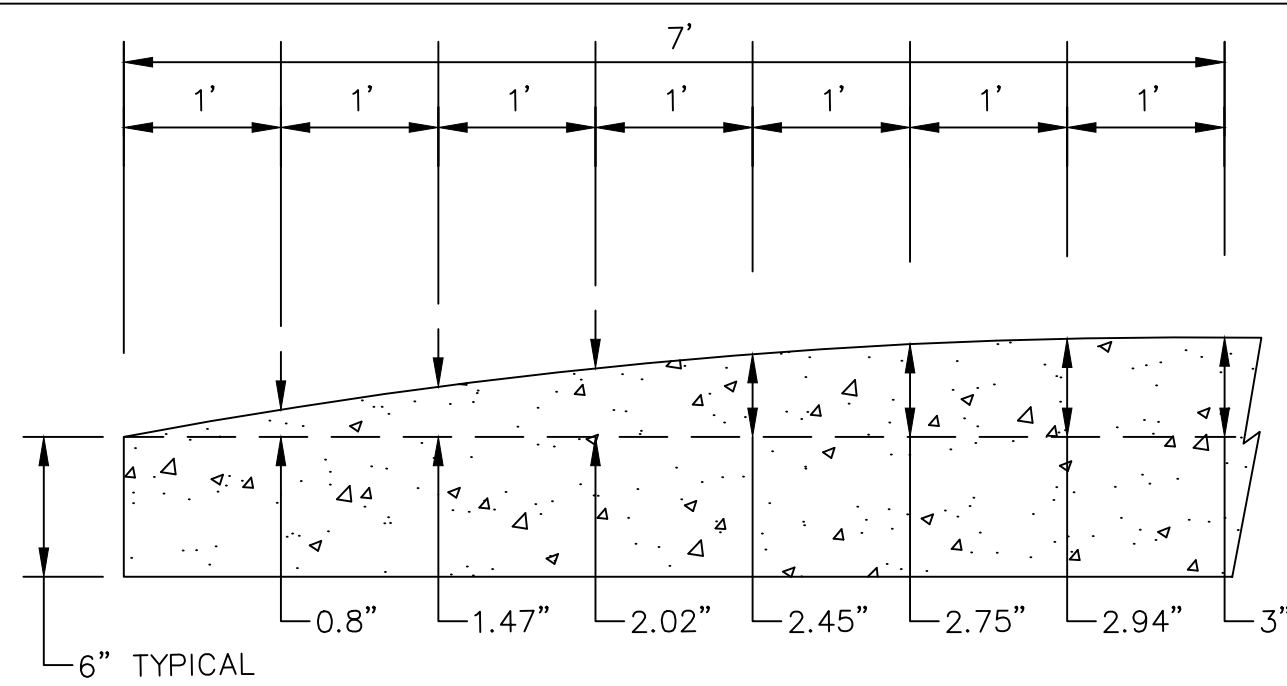
SECTION AA



SECTION BB



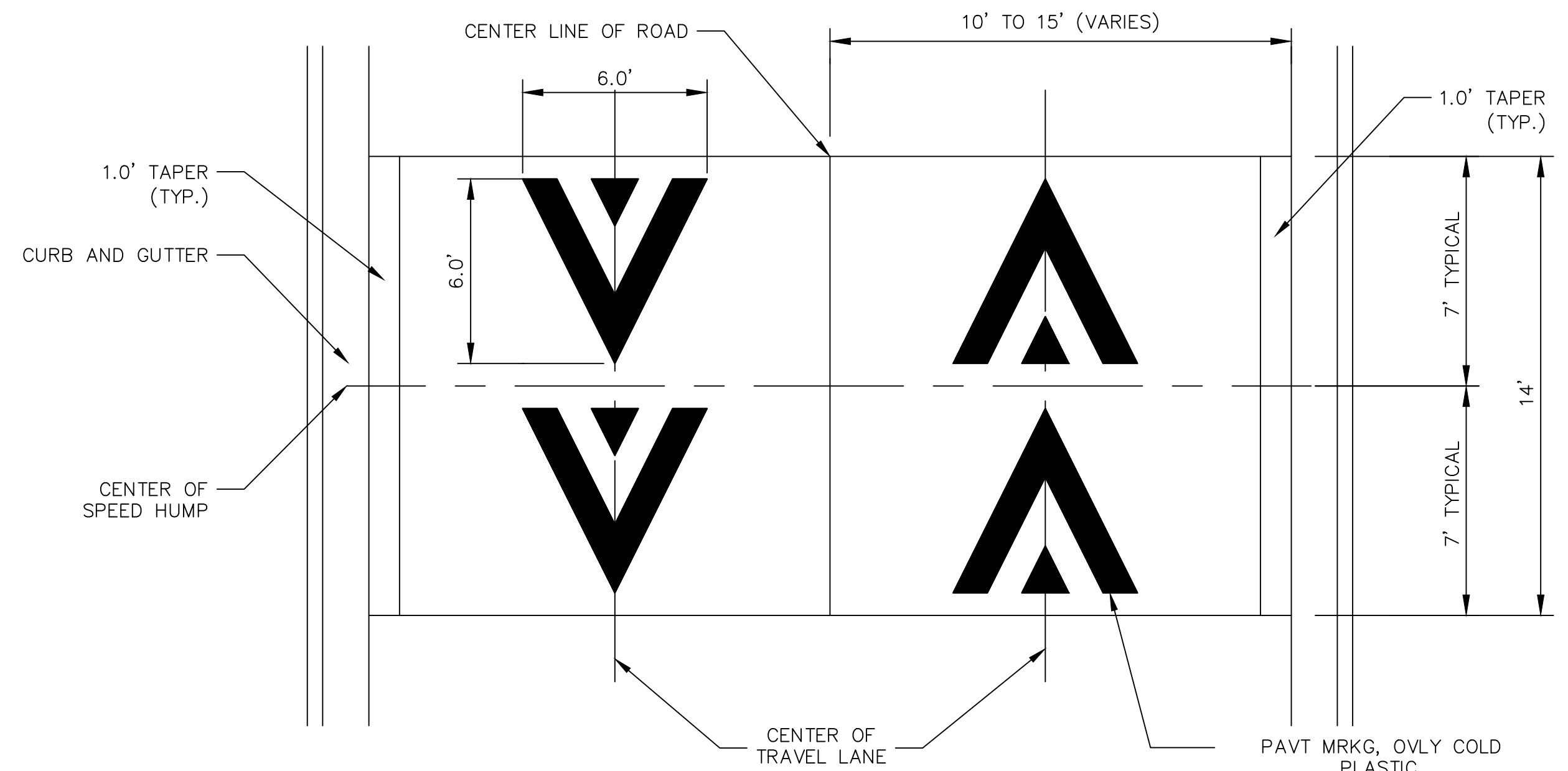
CURB DETAIL



DETAIL 1

CONCRETE SPEED HUMP DETAIL

SCALE: NOT TO SCALE



PAVEMENT MARKING DETAIL

SCALE: NOT TO SCALE

PAVT MRKG, OVLY COLD PLASTIC, SPEED HUMP CHEVRON, WHITE/ PAVT MRKG, POLYUREA, SPEED HUMP CHEVRON, WHITE

GENERAL NOTES

1. RAISED INTERSECTIONS SHALL FOLLOW THE SAME TAPER REQUIREMENT AS THE SPEED HUMPS DETAILED HEREIN.
2. PAYMENT FOR PAVEMENT MARKINGS FOR SPEED HUMPS AND RAISED INTERSECTIONS SHALL BE INCLUDED IN THE RESPECTIVE BID ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.



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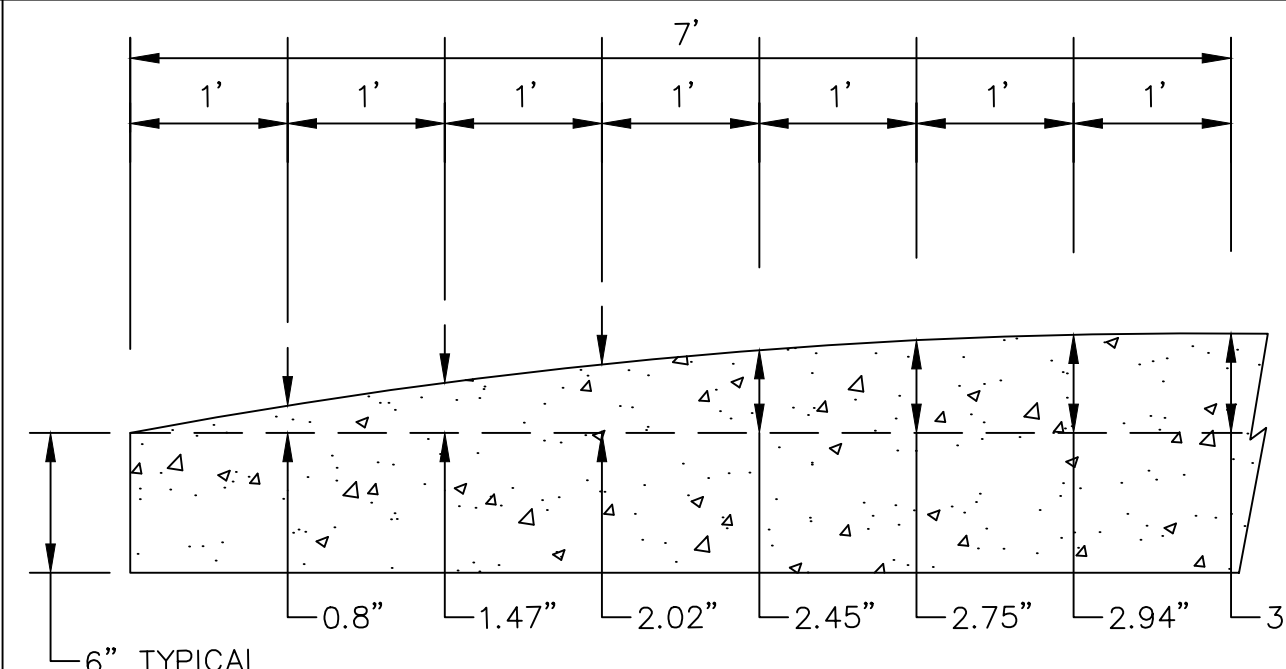
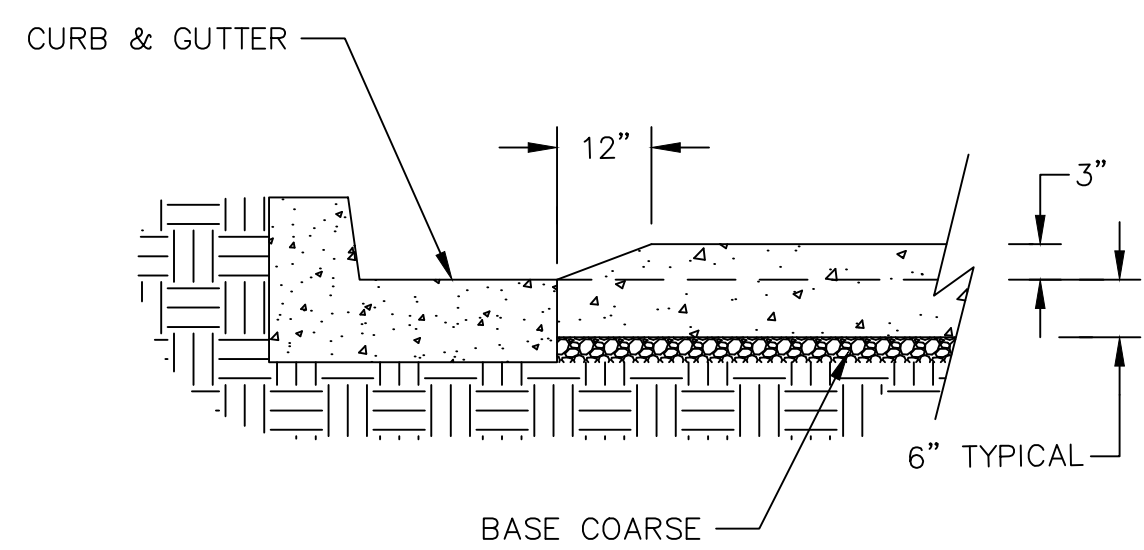
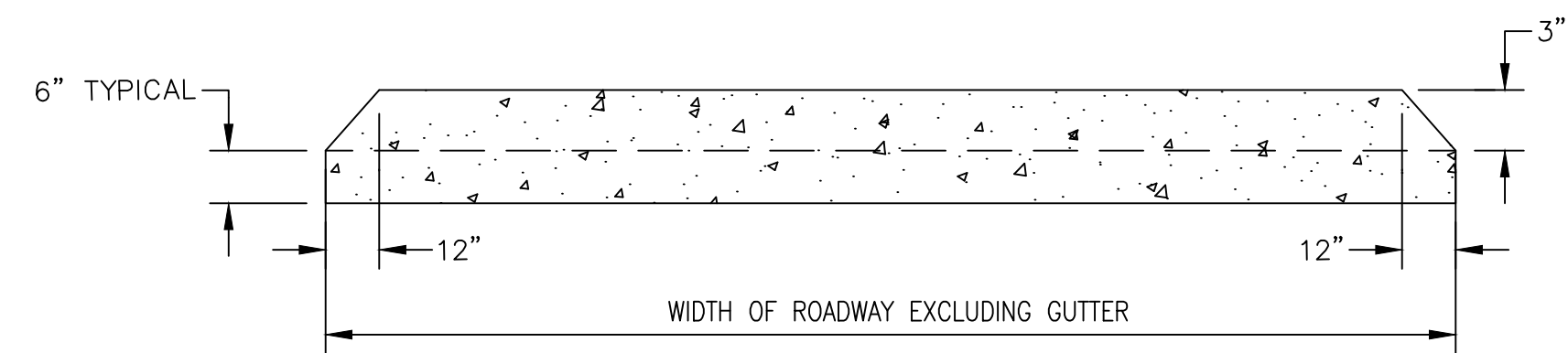
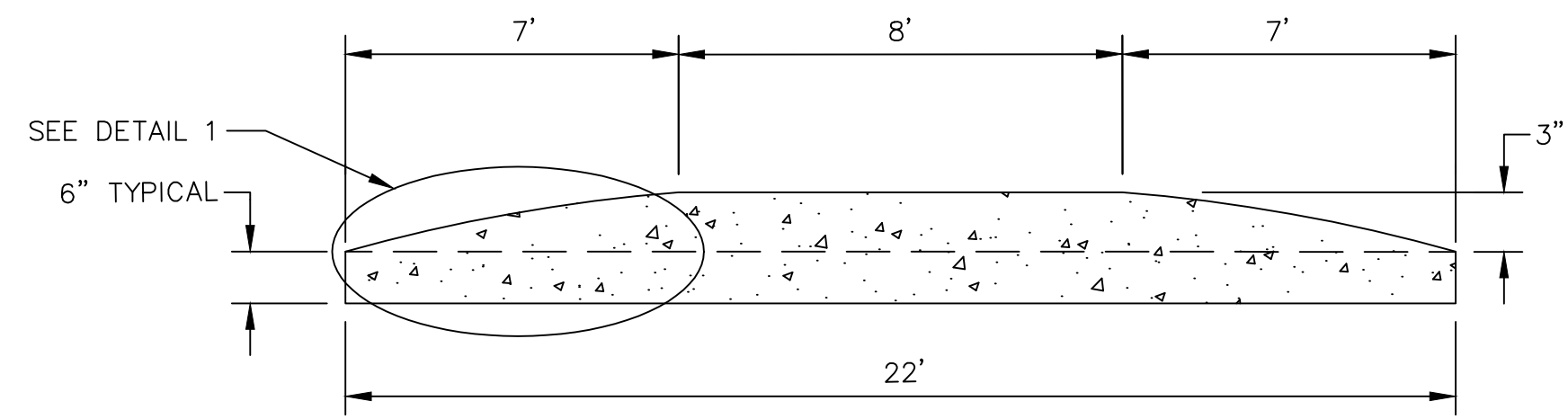
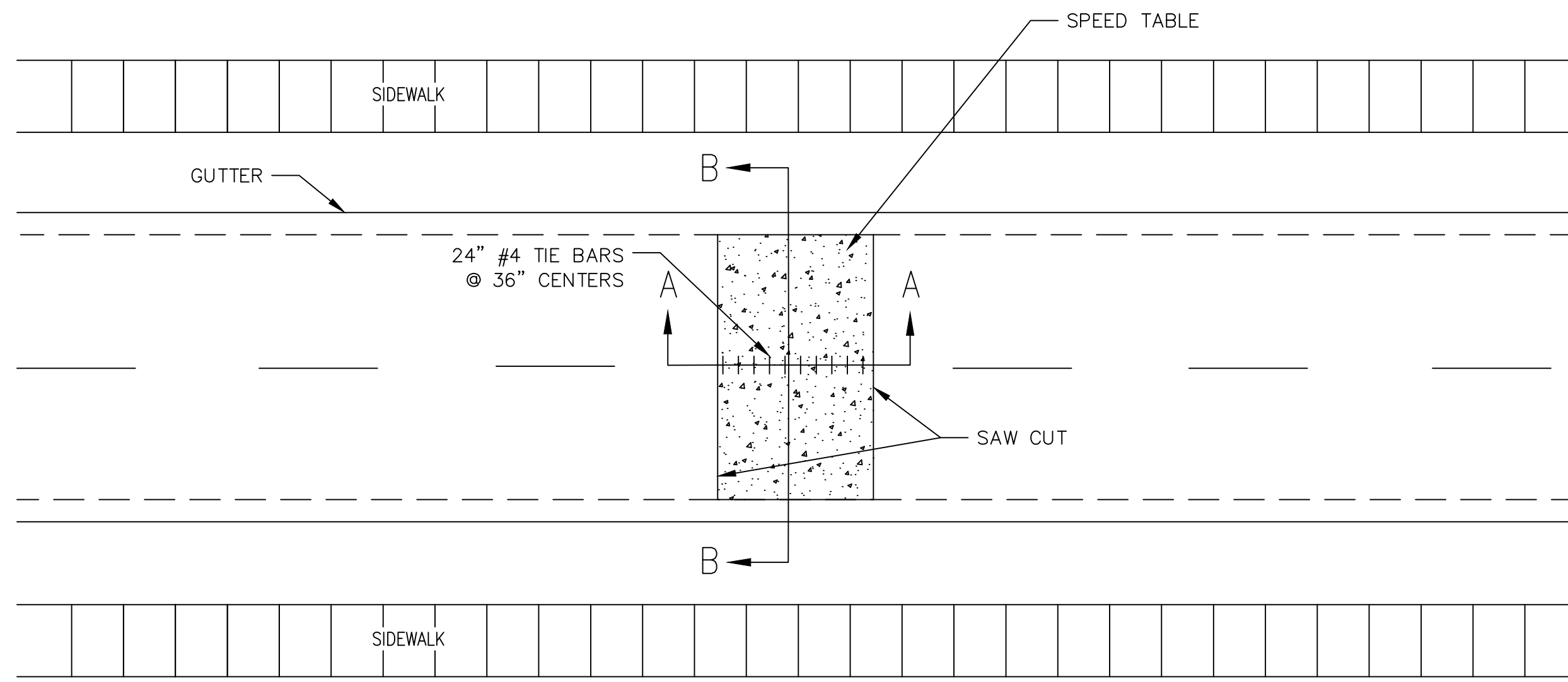
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
CONCRETE SPEED HUMP DETAIL

SCALE PLAN: NTS
DRAWING No. 2023-004-7

SHEET No.

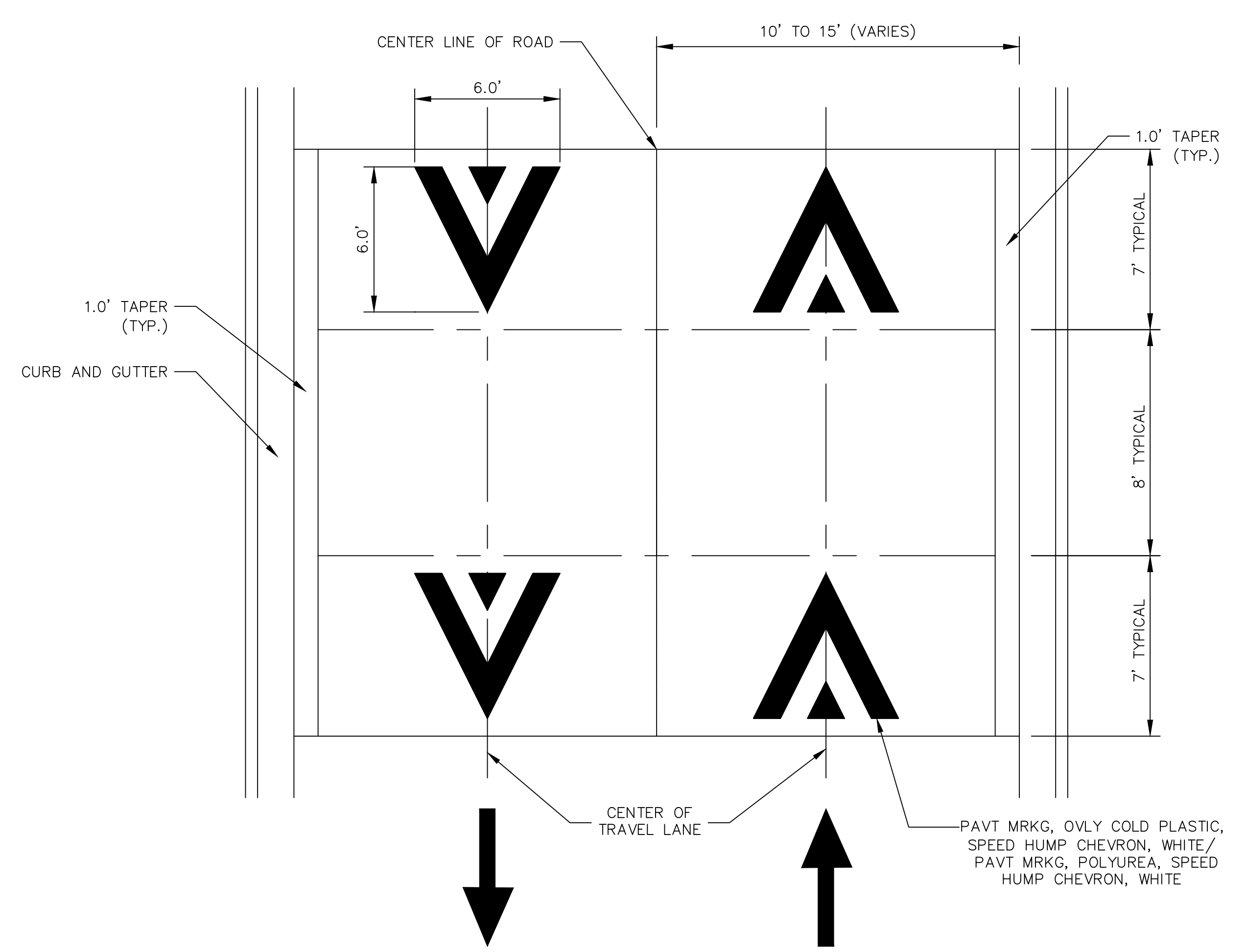
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CONCRETE SPEED TABLE DETAIL

SCALE: NOT TO SCALE



PAVEMENT MARKING DETAIL

SCALE: NOT TO SCALE

GENERAL NOTES

1. RAISED INTERSECTIONS SHALL FOLLOW THE SAME TAPER REQUIREMENT AS THE SPEED HUMPS DETAILED HEREIN.
2. PAYMENT FOR PAVEMENT MARKINGS FOR SPEED HUMPS AND RAISED INTERSECTIONS SHALL BE INCLUDED IN THE RESPECTIVE BID ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.



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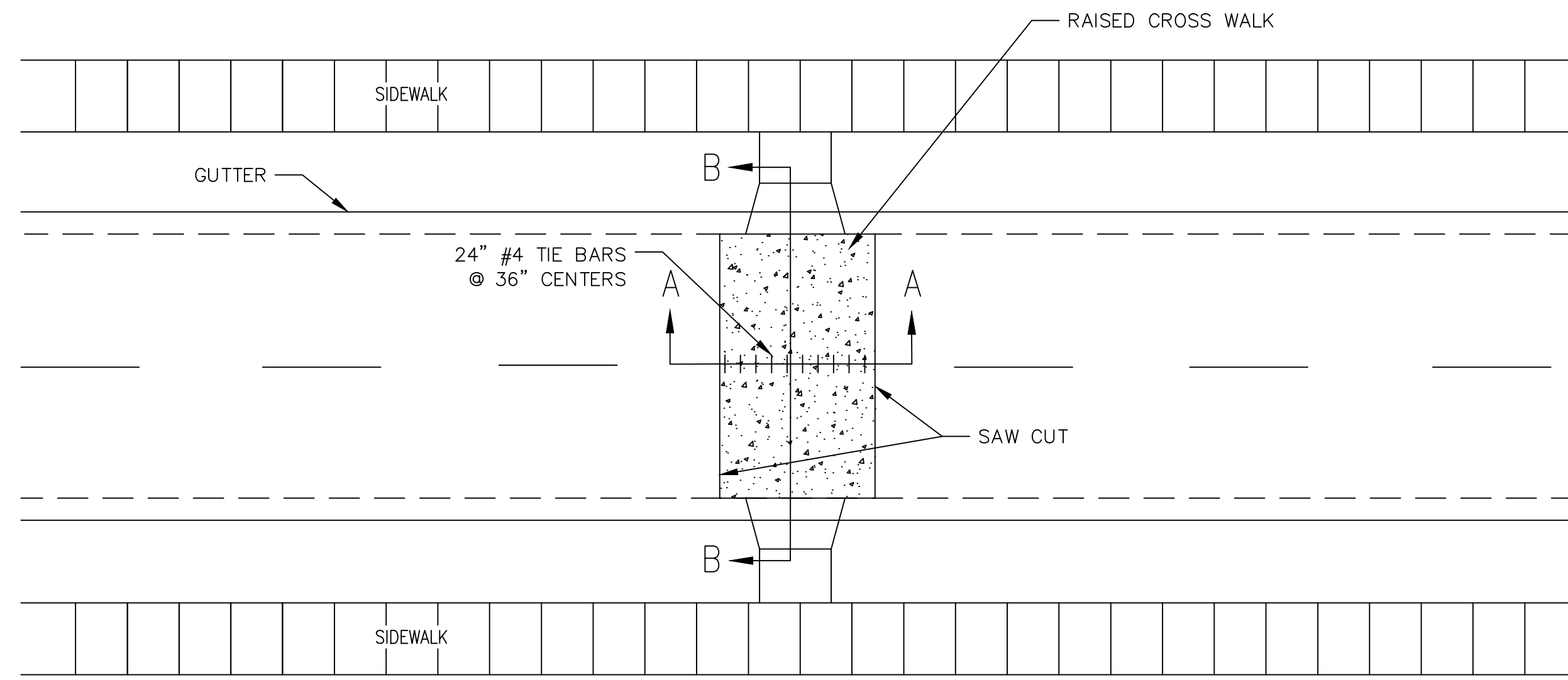
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
CONCRETE SPEED TABLE DETAIL

SCALE PLAN: NTS
DRAWING No: 2023-004-8

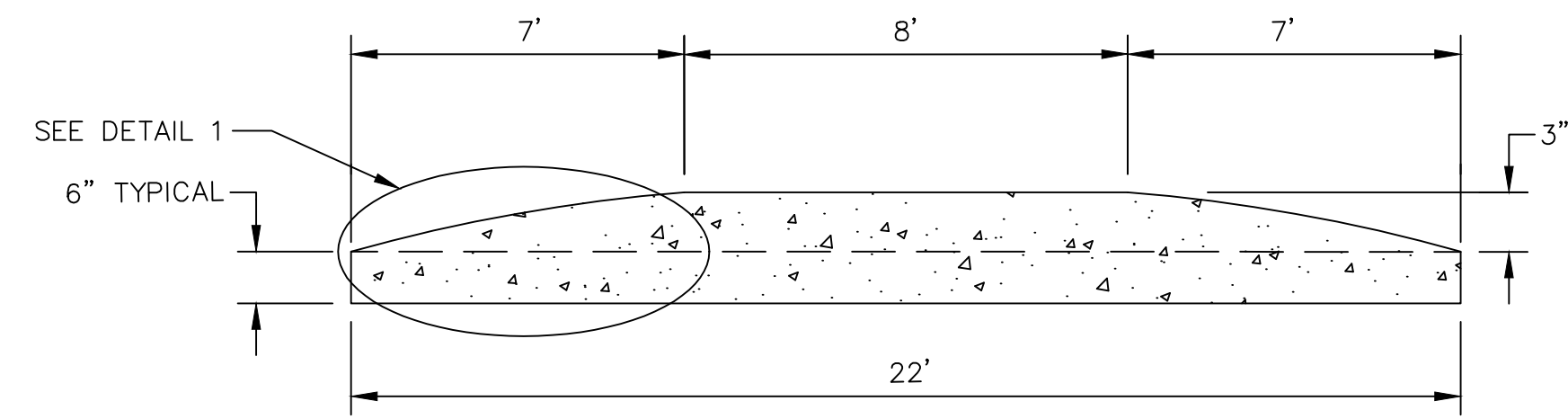
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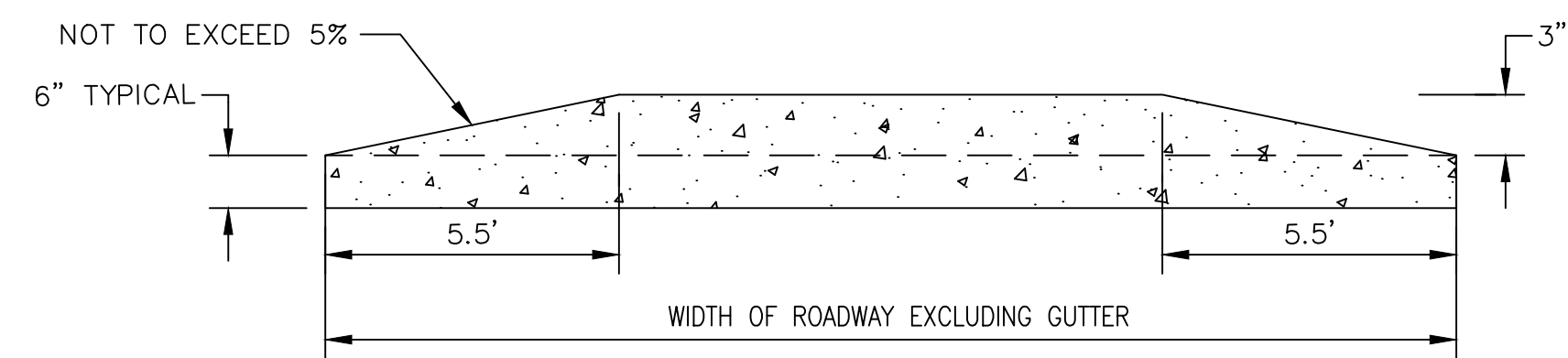
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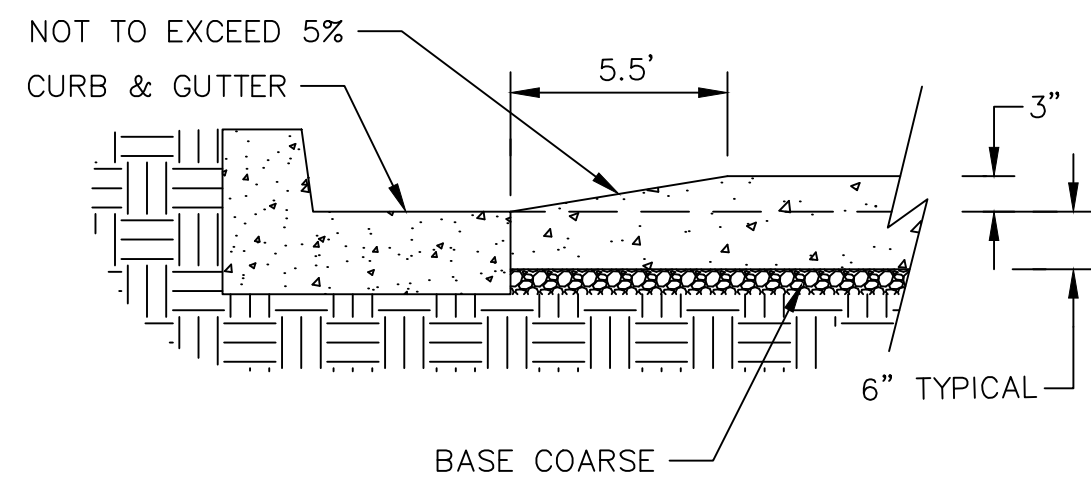
PLAN VIEW



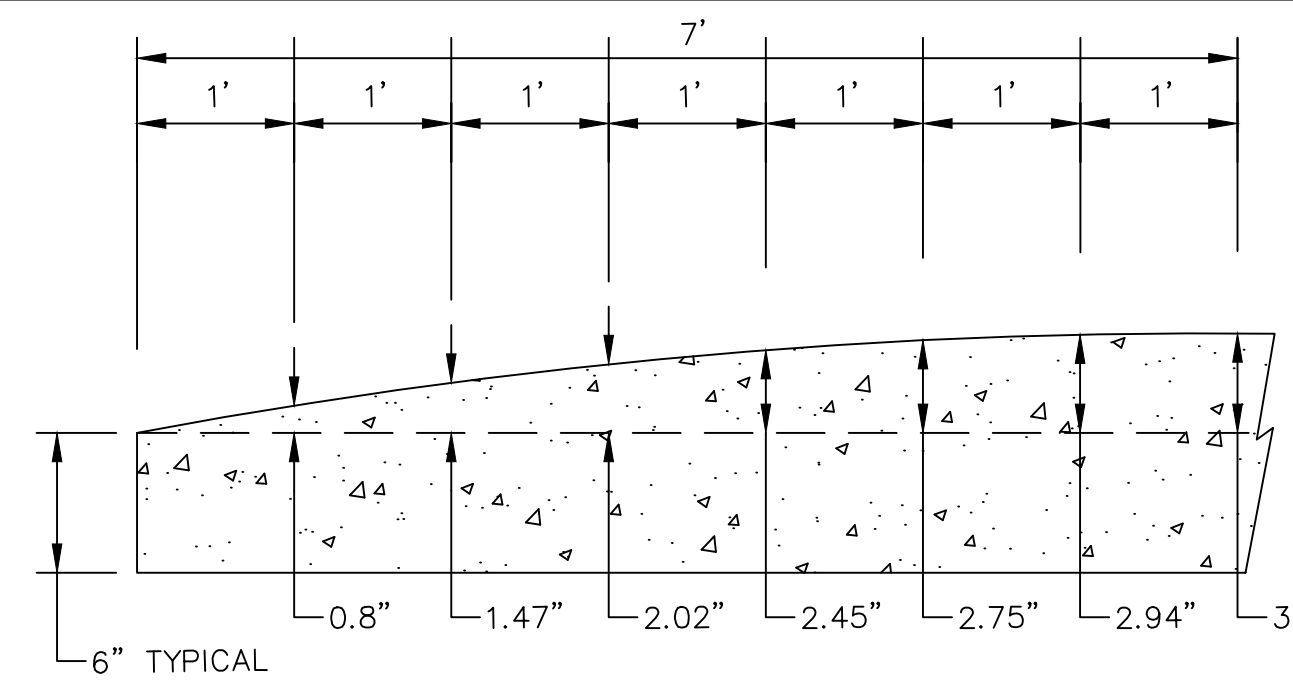
SECTION AA



SECTION BB



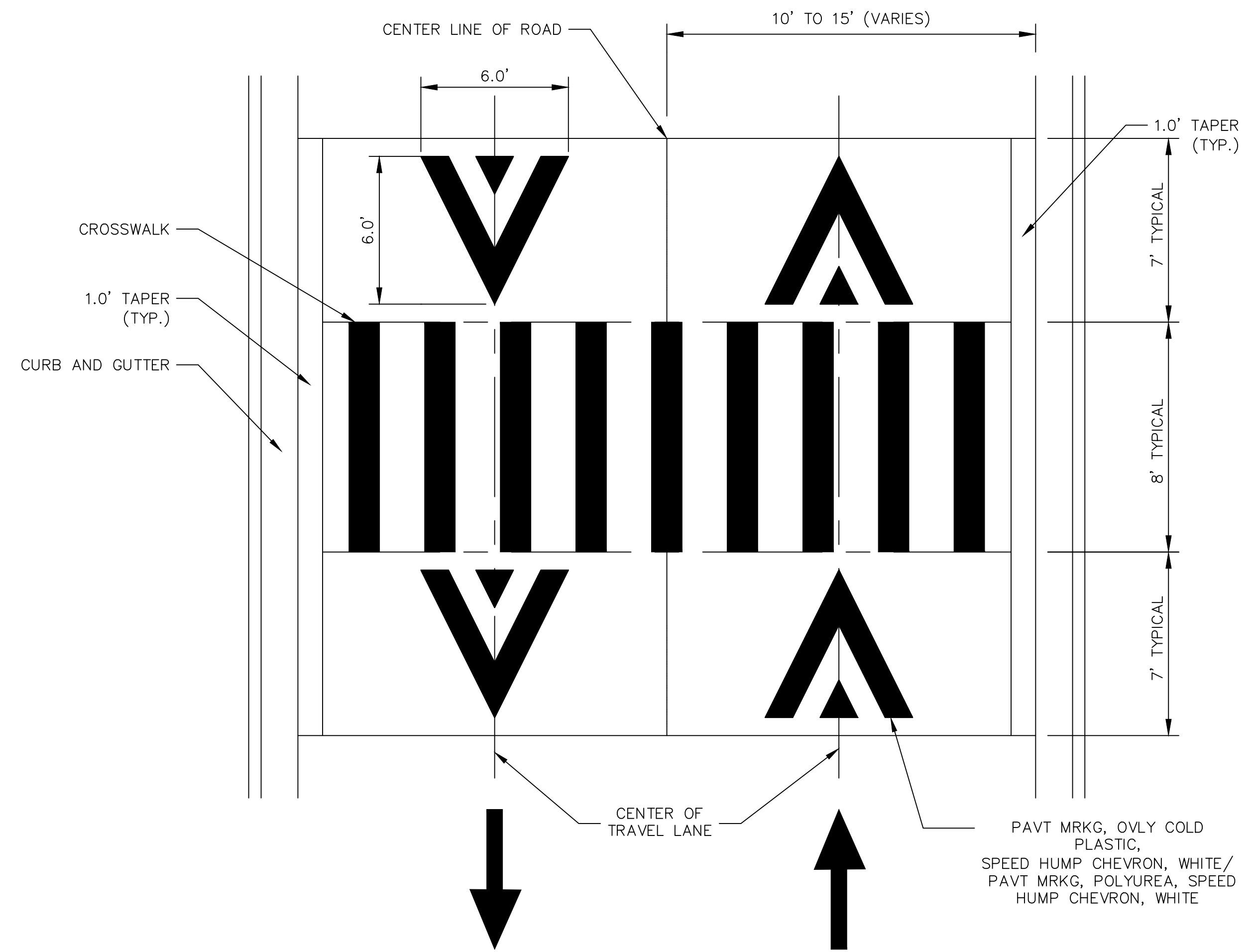
CURB DETAIL



DETAIL 1

CONCRETE RAISE CROSS WALK DETAIL

SCALE: NOT TO SCALE



PAVEMENT MARKING DETAIL

SCALE: NOT TO SCALE

GENERAL NOTES

1. RAISED INTERSECTIONS SHALL FOLLOW THE SAME TAPER REQUIREMENT AS THE SPEED HUMPS DETAILED HEREIN.
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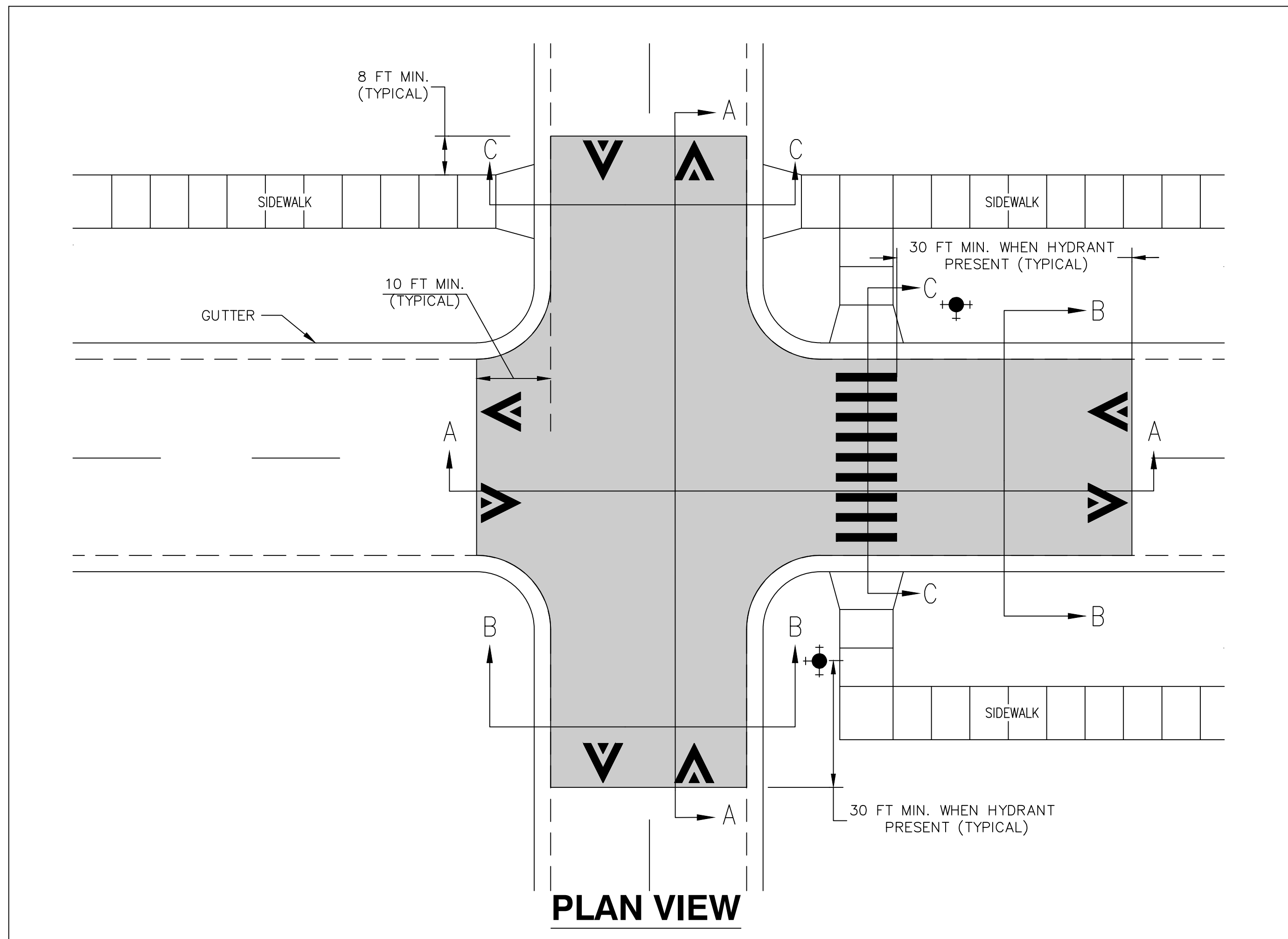


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
CONCRETE RAISE CROSS WALK DETAIL

SCALE PLAN: NTS
DRAWING No. 2023-004-9

SHEET No.

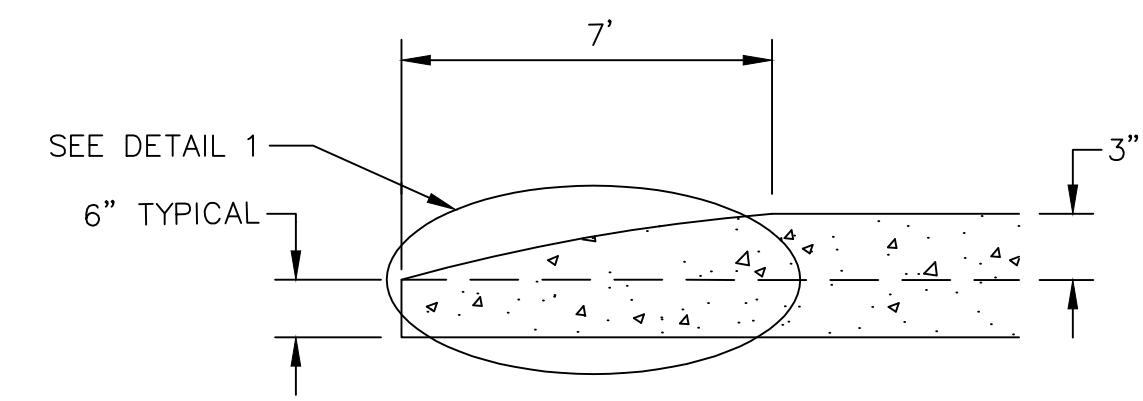
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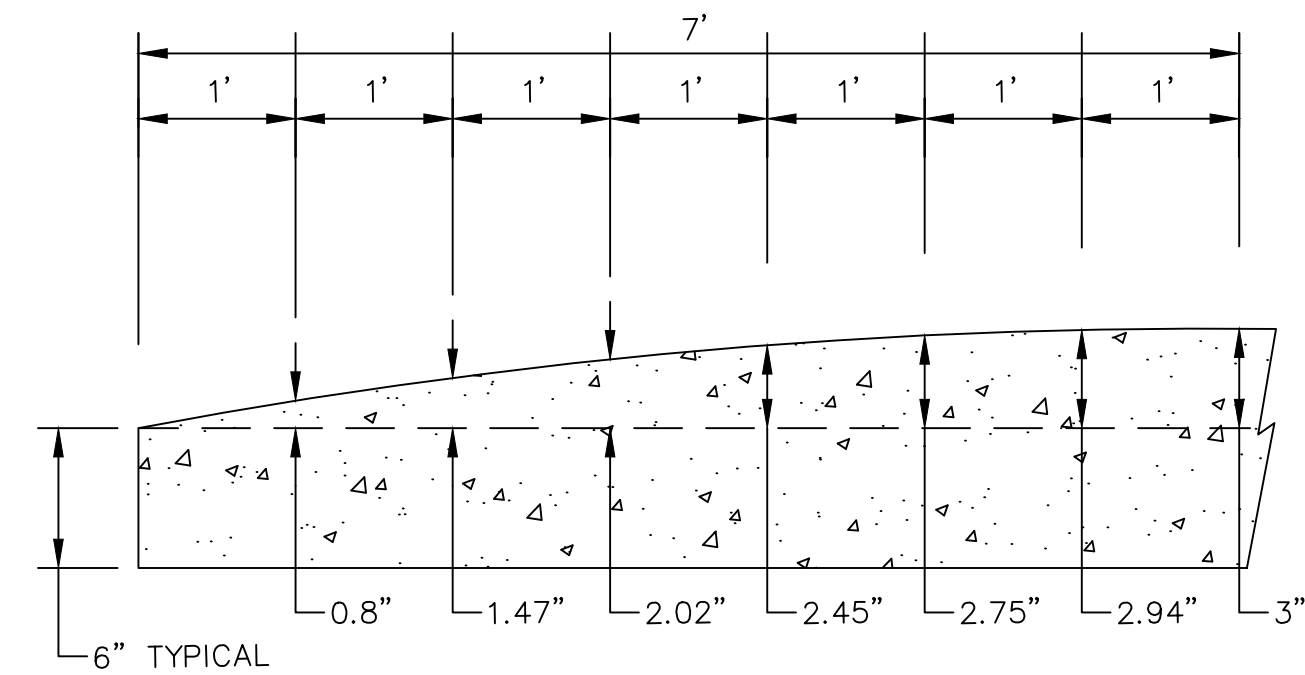
PLAN VIEW

GENERAL NOTES

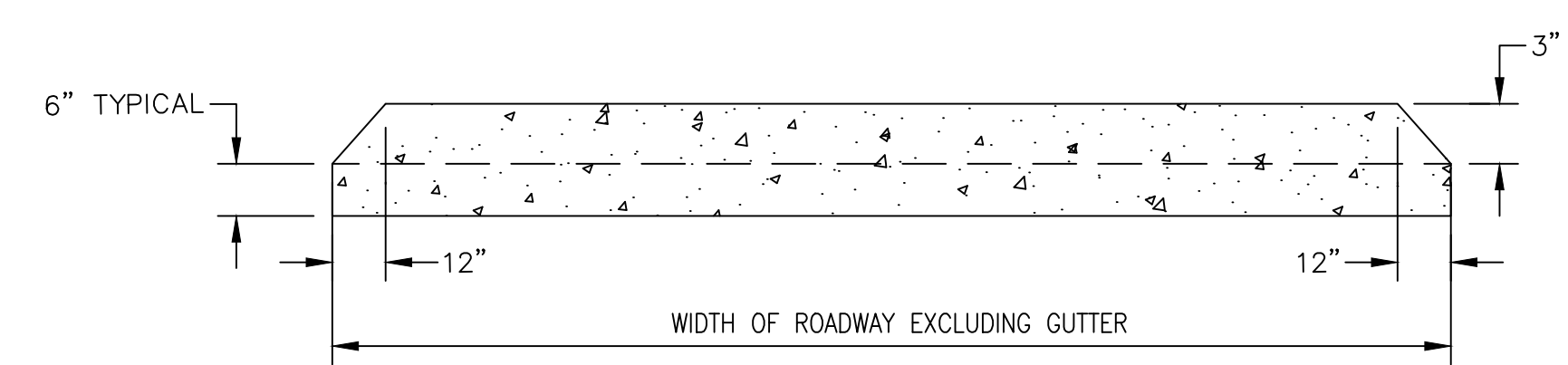
1. RAISED INTERSECTIONS SHALL FOLLOW THE SAME TAPER REQUIREMENT AS THE SPEED HUMPS DETAILED HEREIN.
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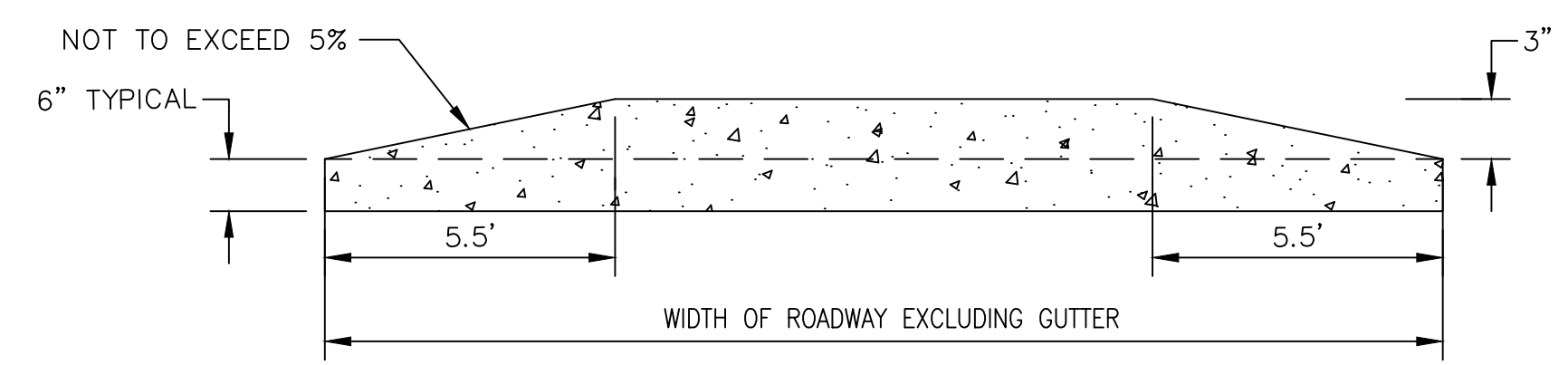
SECTION AA



DETAIL 1



SECTION BB



SECTION CC

CONCRETE RAISE INTERSECTION DETAIL

SCALE: NOT TO SCALE



02	ADDENDUM 2	05/12/2023	CE	CE	JA	CHECKED
00	RFP SET	04/28/2023	AG/CE	AG/CE	JA	DRAWN
						REV.
						DESCRIPTION

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STREET RESURFACING PROJECT - 2023
 CONCRETE RAISE INTERSECTION DETAIL

SCALE PLAN: NTS
 DRAWING No. 2023-004-10



TRAFFIC CONTROL SIGN			
	SIGN	NUMBER	QUANTITY
①		W20-1 36x36	32
②		D3-1	2
③		D3-1	2
④		D3-1	2
⑤		D3-1	7
⑥		D3-1	2
⑦		D3-1	2
⑧		D3-1	3
⑨		D3-1	2

CONSTRUCTION NOTES:

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING. VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



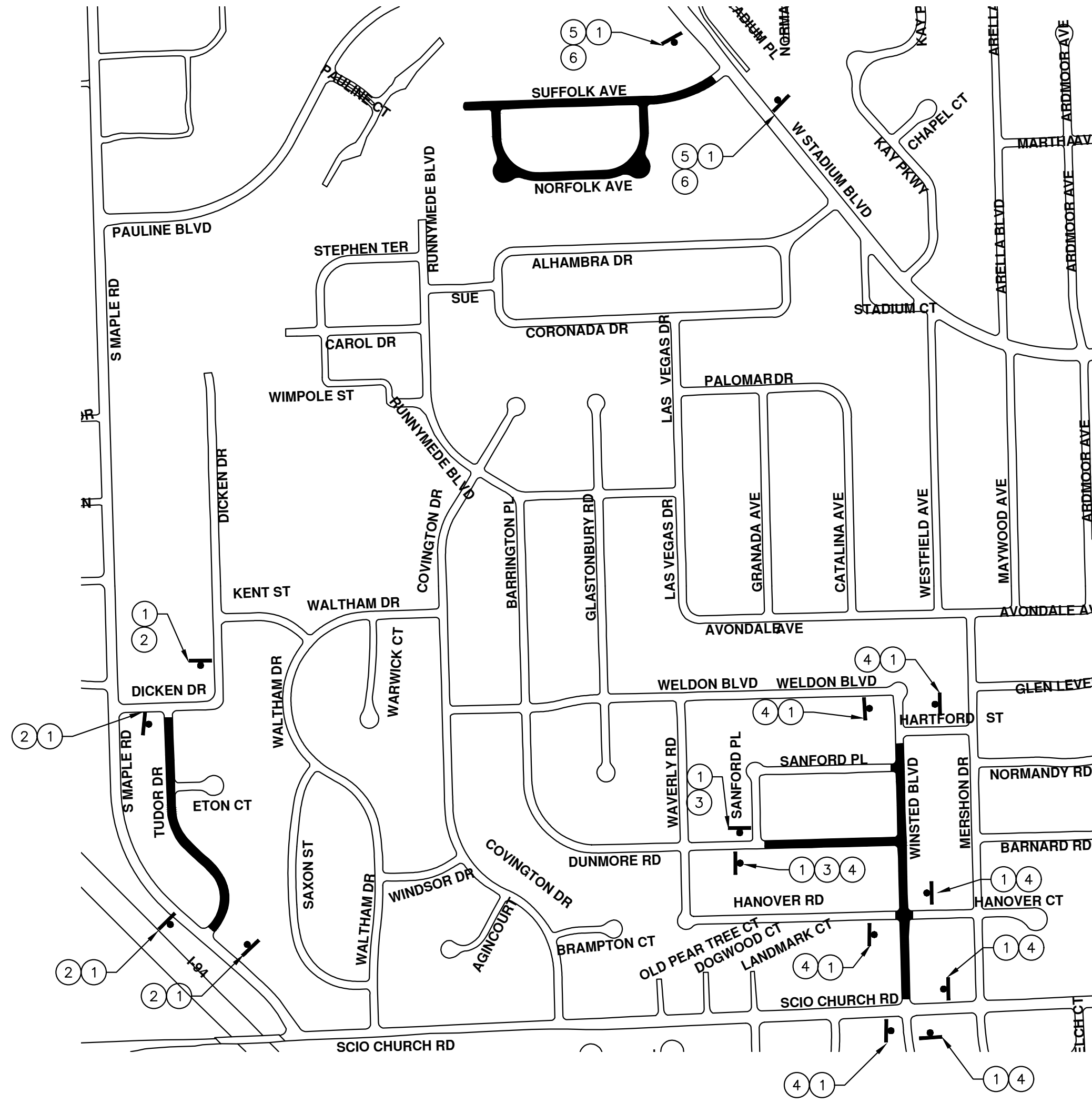
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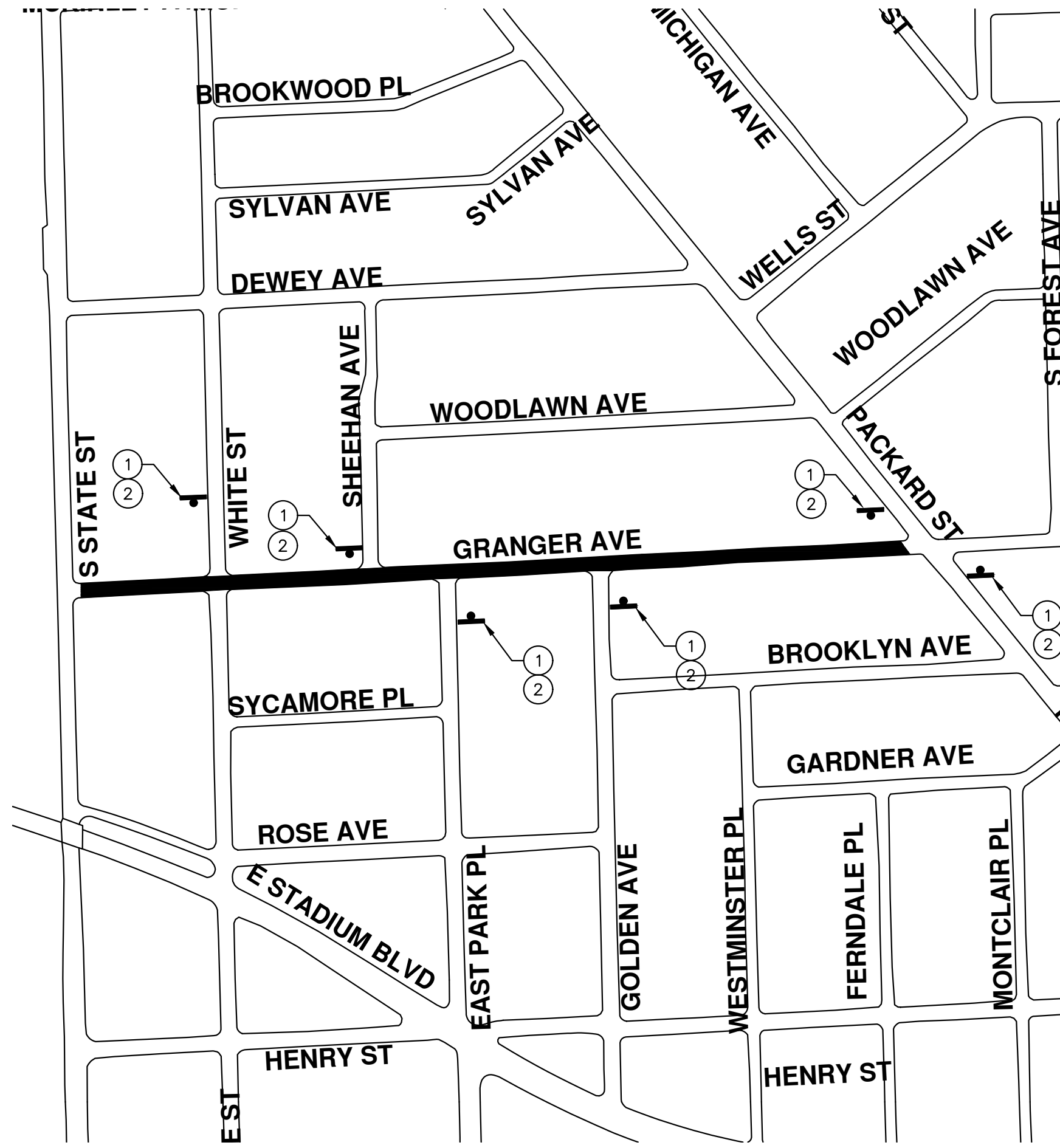


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
LOCAL STREET TRAFFIC CONTROL

SCALE: NTS
DRAWING No. 2023-004-11



TRAFFIC CONTROL SIGN			
	SIGN	NUMBER	QUANTITY
①		W20-1 36x36	2
②		D3-1	2
③		D3-1	2
④		D3-1	2
⑤		D3-1	2
⑥		D3-1	2



TRAFFIC CONTROL SIGN			
	SIGN	NUMBER	QUANTITY
①		W20-1 36x36	6
②		D3-1	6

CONSTRUCTION NOTES:
 PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING.
 VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



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 STREET RESURFACING PROJECT - 2023
 LOCAL STREET TRAFFIC CONTROL-2

SCALE: NTS
 DRAWING No.
 2023-004-12

SHEET No.

REV.	DATE	DESCRIPTION
02	05/12/2023	ADDENDUM 2
00	04/28/2023	RFP SET
		DRAWN
		CHECKED



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: GRANGER TRAFFIC CALMING

RFP# 23-17, FILE No. 2023-004

HMA Surface, Rem	Syd	903.00
_ Raised Crosswalk, Conc	Syd	273.00
_ Raised Intersection, Conc	Syd	560.00
_ Speed Table, Conc	Syd	70.00
Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	512.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	184.00
_ Pavt Mrkg, Polyurea, Speed Hump Chevron, White	Ea	28.00
Channelizing Device, 42 inch, Fluorescent, Furn	Ea	100.00
Channelizing Device, 42 inch, Fluorescent, Oper	Ea	100.00
Sign, Type B, Temp, Prismatic, Furn	Sft	189.00
Sign, Type B, Temp, Prismatic, Oper	Sft	189.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	40.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	40.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
18.00	*D3-1	Street Name Sign	4.00	4.00
8.00	W20-1	Road Work Ahead Sign	9.00	9.00
6.00	W20-2	Detour Ahead	9.00	9.00
6.00	W20-3	Road Closed Ahead	9.00	9.00
8.00	W20-5R	Right Lane Closed Ahead	9.00	9.00
2.00	M4-8a	Detour Ends	3.00	3.00
4.00	M4-9S	Arrow ^ Detour	5.00	5.00
6.00	M4-9R	Right Arrow -----> Detour	5.00	5.00
4.00	M4-9L	Left Arrow <----- Detour	6.00	6.00
5.00	R11-4	Road Closed To Thru Traffic	12.50	12.50
		TOTAL		71.50

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS. OBTAIN AN APPROVED MAINTENANCE OF TRAFFIC (M.O.T.) PLAN FROM THE ENGINEER PRIOR TO COMMENCING WITH ANY WORK.

PHASE 1 (SOUTH SIDE OF STREET):
1. INSTALL NO PARKING SIGNS (AS REQUIRED), COVER ANY CONFLICTING STREET PARKING SIGNS AS DIRECTED BY THE ENGINEER AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE M.O.T. PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES FOR ALL PHASES.

2. PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AS IDENTIFIED AND DIRECTED BY THE ENGINEER. THIS WORK MAY BE DONE DURING PHASE 1 FOR ALL PHASES UTILIZING FLAG CONTROL OR OTHER TEMPORARY TRAFFIC CONTROLS APPROVED BY THE ENGINEER.

3. CONDUCT REMOVAL WORK RELATED TO TRAFFIC CALMING DEVICES.

4. INSTALL TRAFFIC CALMING DEVICES AS SHOWN ON THE PLANS.

5. COMPLETE ALL PHASE 1 RESTORATION WORK AS REQUIRED AND REMOVE NO PARKING SIGNS.

PHASE 2 (NORTH SIDE OF STREET):
1. INSTALL NO PARKING SIGNS (AS REQUIRED), COVER ANY CONFLICTING STREET PARKING SIGNS AS DIRECTED BY THE ENGINEER, AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE M.O.T. PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS.

2. PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL NOT COMPLETED DURING PHASE 1 AS IDENTIFIED AND DIRECTED BY THE ENGINEER.

3. CONDUCT REMOVAL WORK RELATED TO TRAFFIC CALMING DEVICES.

4. INSTALL TRAFFIC CALMING DEVICES AS SHOWN ON THE PLANS.

5. COMPLETE RESTORATION AS REQUIRED.

6. CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.

7. COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES AND ALL OTHER NECESSARY CLEAN UP.

8. REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.

9. OPEN STREET TO ALL TRAFFIC UPON APPROVAL OF THE ENGINEER.

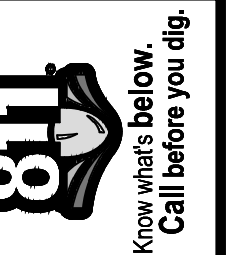
NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



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	05/12/2023			DATE
	04/28/2023			DATE
02	ADDENDUM 2			REV.
00	RFP SET			REV.
				DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
ANN ARBOR 734-794-6410
WWW.A2gov.ORG



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
GRANGER TRAFFIC CALMING
DRAWING No. 2023-004-13
SHEET No. 13 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: S. HURON PKWY HMA PATH

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS SHARED USE PATH IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ACTIVITIES LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS. OBTAIN AN APPROVED MAINTENANCE OF TRAFFIC (M.O.T.) PLAN FROM THE ENGINEER PRIOR TO COMMENCING WITH ANY WORK. ANY/ALL TEMPORARY LANE CLOSURES REQUIRED FOR THIS WORK SHALL SET UP AND REMOVED, RESPECTIVELY, AT THE BEGINNING AND END OF EACH WORK DAY. COORDINATE THIS WORK WITH THE CITY OF ANN ARBOR PARKS DEPARTMENT.

1. IMPLEMENT M.O.T. PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
2. PERFORM TREE REMOVAL AND/OR TRIMMING/PRUNING AS REQUIRED TO FACILITATE THE SHARED USE REHABILITATION AND AS DIRECTED BY THE ENGINEER.
3. REMOVE OVERBURDEN OF VEGETATION AND SOILS ALONG EACH SIDE OF THE PATH.
4. PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) REMOVAL AND HAND PATHING AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
5. COMPLETE NECESSARY HMA SURFACE REMOVAL AND EARTHWORK/GRADING AS REQUIRED TO ACHIEVE A CONSISTENT (8 FOOT WIDTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER) FOR ITS ENTIRE LENGTH AND TO MATCH GRADES OF EXISTING FACILITIES ADJACENT TO THE PATH (E.I., SIDEWALKS, SHARED USE PATHS, RAMPS, CURB CUTS, DRIVEWAYS, ETC.) ALL AS DIRECTED BY THE ENGINEER.
6. CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH SHARED USE PATH HOT MIX ASPHALT (HMA) TOP/OVERLAY COURSE USING 5E1 HMA MIXTURE.
7. COMPLETE ALL SLOPE RESTORATION WORK.
8. COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES AND PAVEMENT AND ALL OTHER NECESSARY CLEAN UP.
9. REMOVE ALL SESC MEASURES, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
10. OPEN SHARED USE PATH TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

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PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.

_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	40.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	44.39
_Grading, Sidewalk	Syd	28.44
_Grading, Sidewalk Ramp	Syd	38.84
_Undercutting, Type IIA	Cyd	800.00
Erosion Control, Silt Fence	Ft	100.00
Erosion Control, Inlet Protection, Fabric Drop	Ea	16.00
_Shared use Path, HMA Base Crushing and Shaping	Syd	858.00
Geotextile, Stabilization	Syd	200.00
_Adjust Structure Cover	Ea	6.00
HMA Surface, Rem	Syd	728.00
Hand Patching	Ton	23.85
_Curb and Gutter, Conc, Barrier	Ft	45.50
_Sidewalk Ramp, Conc, 6 inch, Modified	Sft	271.50
_Sidewalk Retaining Wall, Integral, 6 inch to 18 inch Height	Sft	60.00
_Sidewalk, Conc, 4 inch, Modified	Sft	306.00
Shared use Path, Aggregate	Ton	35.00
Shared use Path, HMA	Ton	635.00
_Shared use Path, Grading, Modified	Syd	753.00
_Shared use Path, HMA, Wedging	Ton	125.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	15.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	15.00
Channelizing Device, 42 inch, Fluorescent, Furn	Ea	90.00
Channelizing Device, 42 inch, Fluorescent, Oper	Ea	90.00
Lighted Arrow, Type C, Furn	Ea	1.00
Lighted Arrow, Type C, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	40.00
Plastic Drum, Fluorescent, Oper	Ea	40.00
Sign, Portable, Changeable Message, Furn	Ea	4.00
Sign, Portable, Changeable Message, Oper	Ea	4.00
Sign, Type B, Temp, Prismatic, Furn	Sft	172.00
Sign, Type B, Temp, Prismatic, Oper	Sft	172.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Pedestrian Type II Barricade, Temp	Ea	21.00
_Slope Restoration	Syd	1,807.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
4.00	G20-2	End Road Work	4.50	18.00
2.00	W3-5B	Reduce Speed Zone	9.00	18.00
2.00	W4-2R	Lane Ends / Right	9.00	18.00
4.00	W20-1	Road Work Ahead Sign	9.00	36.00
2.00	W20-5R	Right Lane Closed Ahead	9.00	18.00
4.00	R5-18C	Work Zone Begins	16.00	64.00
		TOTAL		172.00



	CE	JA	CHECKED
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02	ADDENDUM 2		REV.
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CITY OF ANN ARBOR
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ANN ARBOR 734-794-6410
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
S. HURON PKWY HMA PATH
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-14

SHEET No.
14 OF 37

T:\2023004\Plan Production\2023004 S Huron Parkway HMA Path Cover Sheet.dwg - Plot Date: 5/11/2023 1:05:39 PM - _a2 standard bw.stb - Plot Date: 5/11/2023 1:05:39 PM

© STREET RESURFACING PROJECT - 2023; BID No. 23-17; 2023-004



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: ABERDEEN DR

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

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CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARILY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

NOTES:

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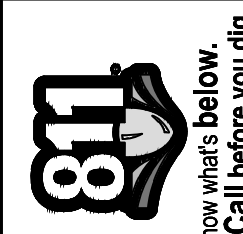
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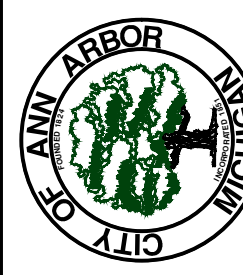
Dr Structure, Rem	Ea	6.00
Sewer, Rem, Less than 24 inch	Ft	60.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	162.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	21.33
_Grading, Driveway Approach	Syd	21.33
_Machine Grading, Special	Syd	2436.00
_Undercutting, Type IIA	Cyd	730.80
Erosion Control, Inlet Protection, Fabric Drop	Ea	7.00
Dr Structure, 24 inch dia	Ea	6.00
_Dr Structure Cover, Type K, Modified	Ea	12.00
_Adjust Structure Cover	Ea	14.00
_Underdrain, Subgrade, 6 inch, Special	Ft	70.00
Cold Milling HMA Surface	Syd	2436.00
HMA Surface, Rem	Syd	40.00
HMA, LVSP	Ton	535.92
_Flowable Fill	Cyd	3.50
_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	21.33
_Curb and Gutter, Conc, Barrier	Ft	120.00
_Driveway Opening, Conc, Det M, Modified	Ft	42.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	13.00
Plastic Drum, Fluorescent, Furn	Ea	25.00
Plastic Drum, Fluorescent, Oper	Ea	25.00
Sign, Type B, Temp, Prismatic, Furn	Sft	115.00
Sign, Type B, Temp, Prismatic, Oper	Sft	115.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	40.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	40.00
_Temporary No Parking Sign	Ea	22.00
_Slope Restoration	Syd	50.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
10.00	*D3-1	Street Name Sign	4.00	40.00
5.00	W20-1	Road Work Ahead Sign	9.00	45.00
5.00	W20-3	Road Closed Ahead	9.00	45.00
2.00	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		155.00



	CE	JA	CHECKED
	CE	AG/CE	DRAWN
05/12/2023			DATE
04/28/2023			DATE
02	ADDENDUM 2		REV.
00	RFP SET		REV.
			DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
ANN ARBOR 734-794-6410
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
ABERDEEN DR
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-15
SHEET No.
15 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: AVON RD

RFP# 23-17, FILE No. 2023-004

NOTES:

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CONSTRUCTION SCOPE AND SEQUENCING:

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

1. INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
2. PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BYTHE ENGINEER.
3. CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
4. INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
5. PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
6. TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED.COORDINTATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
7. REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
8. PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER,
9. PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
10. GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
11. UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
12. CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
13. CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
14. CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
15. ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINTATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
16. CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
17. CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
18. COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
19. REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
20. OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	7.00
Sewer, Rem, Less than 24 inch	Ft	70.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	525.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	30.00
_Grading, Driveway Approach	Syd	30.00
_Machine Grading, Special	Syd	5,778.74
_Undercutting, Type IIA	Cyd	1,733.62
Erosion Control, Inlet Protection, Fabric Drop	Ea	15.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	70.00
Dr Structure, 24 inch dia	Ea	7.00
_Dr Structure Cover, Type K, Modified	Ea	7.00
_Adjust Structure Cover	Ea	23.00
_Dr Structure, Point	Ea	1.00
_Underdrain, Subgrade, 6 inch, Special	Ft	70.00
HMA Surface, Rem	Syd	116.67
HMA, LVSP	Ton	1,271.32
_Flowable Fill	Cyd	9.72
_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	30.00
_Curb and Gutter, Conc, Barrier	Ft	290.00
_Curb and Gutter, Conc, Mountable	Ft	235.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	30.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	4.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	4.00
Plastic Drum, Fluorescent, Furn	Ea	40.00
Plastic Drum, Fluorescent, Oper	Ea	40.00
Sign, Type B, Temp, Prismatic, Furn	Sft	158.00
Sign, Type B, Temp, Prismatic, Oper	Sft	158.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	48.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	48.00
_Temporary No Parking Sign	Ea	11.00
_Slope Restoration	Syd	77.22

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
2.00	*D3-1	Street Name Sign	4.00	8.00
7.00	W20-1	Road Work Ahead Sign	9.00	63.00
7.00	W20-3	Road Closed Ahead	9.00	63.00
2.00	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		159.00

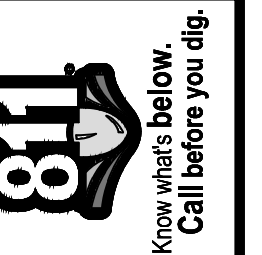
NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			DATE
02	ADDENDUM 2			REV.
	RFP SET			DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR MI 48106-8647
734.794.4110
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
AVON RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-16



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: BEDFORD RD

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING: BEDFORD ARLINGTON TO SHARIDAN

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

CONSTRUCTION SCOPE AND SEQUENCING: BEDFORD WASHTENAW TO LONDONDERRY

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- REMOVE EXISTING HMA SURFACE (PARTIAL DEPTH - 2 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE ADDITIONAL HMA REMOVAL AND/OR BASE REPAIRS DIRECTED BY THE ENGINEER.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES AS REQUIRED.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Bedford Arlington to Sharidan		
Dr Structure, Rem	Ea	7.00
Sewer, Rem, Less than 24 inch	Ft	70.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	426.00
_Exploratory Excavation, Vertical	Ft	3.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	4.00
_Grading, Driveway Approach	Syd	4.00
_Machine Grading, Special	Syd	2,769.44
_Undercutting, Type IIA	Cyd	831.00
Erosion Control, Inlet Protection, Fabric Drop	Ea	8.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	70.00
Dr Structure, 24 inch dia	Ea	7.00
_Dr Structure Cover, Type K, Modified	Ea	7.00
_Dr Structure Cover, Type Q, Modified	Ea	9.00
_Dr Structure, Adj, Case 1, Modified	Ea	9.00
_Dr Structure, Temp Lowering, Modified	Ea	11.00
_Underdrain, Subgrade, 6 inch, Special	Ft	70.00
Cold Milling HMA Surface	Syd	2,769.44
HMA Surface, Rem	Syd	105.00
HMA, LVSP	Ton	612.00
_Flowable Fill	Cyd	8.00
_Driveway, Nonreinfc Conc, 6 inch, Modified	Syd	4.00
_Curb and Gutter, Conc, Barrier	Ft	270.00
_Driveway Opening, Conc, Det M, Modified	Ft	156.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	26.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	2.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	2.00
Plastic Drum, Fluorescent, Furn	Ea	50.00
Plastic Drum, Fluorescent, Oper	Ea	50.00
Sign, Type B, Temp, Prismatic, Furn	Sft	133.00
Sign, Type B, Temp, Prismatic, Oper	Sft	133.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	48.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	48.00
_Temporary No Parking Sign	Ea	30.00
_Slope Restoration	Syd	100.00
Gate Box, Adj, Case 1	Ea	2.00

Bedford Washtenaw to Londonderry		
Dr Structure, Rem	Ea	2.00
Sewer, Rem, Less than 24 inch	Ft	20.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	40.00
_Machine Grading, Special	Syd	2,639.00
_Undercutting, Type IIA	Cyd	791.70
Erosion Control, Inlet Protection, Fabric Drop	Ea	6.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	20.00
Dr Structure, 24 inch dia	Ea	2.00
_Dr Structure Cover, Type K, Modified	Ea	2.00
_Dr Structure Cover, Type Q, Modified	Ea	3.00
_Dr Structure, Adj, Case 1, Modified	Ea	7.00
_Dr Structure, Temp Lowering, Modified	Ea	7.00
_Underdrain, Subgrade, 6 inch, Special	Ft	20.00
Cold Milling HMA Surface	Syd	2,639.00
HMA Surface, Rem	Syd	8.89
HMA, LVSP	Ton	580.58
_Curb and Gutter, Conc, Barrier	Ft	40.00
Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	192.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	30.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	4.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	4.00
Plastic Drum, Fluorescent, Furn	Ea	20.00
Plastic Drum, Fluorescent, Oper	Ea	20.00
Sign, Type B, Temp, Prismatic, Furn	Sft	97.00
Sign, Type B, Temp, Prismatic, Oper	Sft	97.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	32.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	32.00
_Pedestrian Type II Barricade, Temp	Ea	6.00
_Temporary No Parking Sign	Ea	34.00
_Slope Restoration	Syd	10.00
Gate Box, Adj, Case 1	Ea	1.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
8.00	*D3-1	Street Name Sign	4.00	32.00
4.00	W20-1	Road Work Ahead Sign	9.00	36.00
4.00	W20-3	Road Closed Ahead	9.00	36.00
2.00	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		129.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
12.00	*D3-1	Street Name Sign	4.00	48.00
6.00	W20-1	Road Work Ahead Sign	9.00	54.00
6.00	W20-3	Road Closed Ahead	9.00	54.00
2.00	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		181.00

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

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PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



			CE	JA	CHECKED
			CE	AG/CE	DRAWN
	05/12/2023	04/28/2023			DATE
	02	00			REV.
					DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
PO BOX 8647
ANN ARBOR MI 48107-8647
734.794.4410
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
BEDFORD RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-17

SHEET No.
17 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: BELFIELD CIR

BID No. 23-17, FILE No. 2023-004

NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	2.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	40.00
_Machine Grading, Special	Syd	875.42
_Undercutting, Type IIA	Cyd	262.63
Erosion Control, Inlet Protection, Fabric Drop	Ea	3.00
Dr Structure, 24 inch dia	Ea	2.00
_Dr Structure Cover, Type K, Modified	Ea	2.00
_Adjust Structure Cover	Ea	1.00
_Underdrain, Subgrade, 6 inch, Special	Ft	20.00
Cold Milling HMA Surface	Syd	875.42
HMA Surface, Rem	Syd	10.00
HMA, LVSP	Ton	200.00
_Flowable Fill	Cyd	2.00
_Curb and Gutter, Conc, Barrier	Ft	40.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	2.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	2.00
Plastic Drum, Fluorescent, Furn	Ea	15.00
Plastic Drum, Fluorescent, Oper	Ea	15.00
Sign, Type B, Temp, Prismatic, Furn	Sft	49.00
Sign, Type B, Temp, Prismatic, Oper	Sft	49.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Temporary No Parking Sign	Ea	10.00
_Slope Restoration	Syd	15.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
2.00	W20-5R	Right Lane Closed Ahead	9.00	18.00
1.00	R11-4	Road Closed To Thru Traffic	12.50	13.00
		TOTAL		65.00

NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			REV.
				DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
734.794.4410
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
BELFIELD CIR
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-18

SHEET No.
18 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: BURSON PL

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARILY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.

Dr Structure, Rem	Ea	1.00
Sewer, Rem, Less than 24 inch	Ft	10.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	295.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	40.00
_Grading, Driveway Approach	Syd	40.00
_Machine Grading, Special	Syd	1,900.00
_Undercutting, Type IIA	Cyd	570.00
Erosion Control, Silt Fence	Ft	100.00
Erosion Control, Inlet Protection, Fabric Drop	Ea	4.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	10.00
Dr Structure, 24 inch dia	Ea	1.00
_Dr Structure Cover, Type K, Modified	Ea	2.00
_Adjust Structure Cover	Ea	2.00
_Structure, Reconstruct	Ea	1.00
_Underdrain, Subgrade, 6 inch, Special	Ft	10.00
Cold Milling HMA Surface	Syd	1,900.00
HMA Surface, Rem	Syd	70.00
HMA, LVSP	Ton	425.00
_Cold Milling for Concrete Curb and Gutter Reveal	Syd	166.00
_Cold Milling HMA Surface, Driveway Approach	Syd	50.00
_HMA, Wedging, 36A	Ton	5.00
_Flowable Fill	Cyd	6.00
_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	40.00
_Curb and Gutter, Conc, Barrier	Ft	175.00
_Driveway Opening, Conc, Det M, Modified	Ft	120.00
Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	64.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	1.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	25.00
Plastic Drum, Fluorescent, Oper	Ea	25.00
Sign, Type B, Temp, Prismatic, Furn	Sft	49.00
Sign, Type B, Temp, Prismatic, Oper	Sft	49.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Pedestrian Type II Barricade, Temp	Ea	4.00
_Temporary No Parking Sign	Ea	15.00
_Slope Restoration	Syd	100.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
2.00	W20-3	Road Closed Ahead	9.00	18.00
1.00	R11-4	Road Closed To Thru Traffic	12.50	13.00
		TOTAL		65.00



	CE	JA	CHECKED
	CE	AG/CE	DRAWN
05/12/2023			DATE
04/28/2023			DATE
ADDENDUM 2			DESCRIPTION
RFP SET			REV.
02	00		REV.

CITY OF ANN ARBOR
PUBLIC SERVICES
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ANN ARBOR, MI 48106-8647
ANN ARBOR 734-794-6410
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
BURSON PL
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-19



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: DEVONSHIRE RD

RFP# 23-17, FILE No. 2023-004

NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING: DEVONSHIRE (MELROSE TO LONDONDERRY)

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

CONSTRUCTION SCOPE AND SEQUENCING: DEVONSHIRE (WASHTENAW TO MELROSE)

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

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- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- REMOVE EXISTING HMA SURFACE (PARTIAL DEPTH - 2 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE ADDITIONAL HMA REMOVAL AND/OR BASE REPAIRS DIRECTED BY THE ENGINEER.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES AS REQUIRED.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
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- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	4.00
Sewer, Rem, Less than 24 inch	Ft	40.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	384.00
_Machine Grading, Special	Syd	3,339.00
_Undercutting, Type IIA	Cyd	1,001.70
Erosion Control, Inlet Protection, Fabric Drop	Ea	10.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	40.00
Dr Structure, 24 inch dia	Ea	4.00
_Dr Structure Cover, Type K, Modified	Ea	4.00
_Adjust Structure Cover	Ea	11.00
_Underdrain, Subgrade, 6 inch, Special	Ft	40.00
Cold Milling HMA Surface	Syd	3,339.00
HMA, LVSP	Ton	734.58
_Flowable Fill	Cyd	5.00
_Curb and Gutter, Conc, Barrier	Ft	330.00
_Driveway Opening, Conc, Det M, Modified	Ft	54.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	2.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	2.00
Plastic Drum, Fluorescent, Furn	Ea	30.00
Plastic Drum, Fluorescent, Oper	Ea	30.00
Sign, Type B, Temp, Prismatic, Furn	Sft	110.00
Sign, Type B, Temp, Prismatic, Oper	Sft	110.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	20.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	20.00
_Temporary No Parking Sign	Ea	32.00
_Slope Restoration	Syd	110.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
6.00	*D3-1	Street Name Sign	4.00	24.00
3.00	W20-1	Road Work Ahead Sign	9.00	27.00
3.00	W20-3	Road Closed Ahead	9.00	27.00
2.00	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		103.00

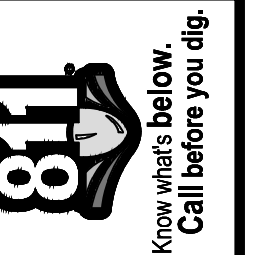
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		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			REV
D2	ADDENDUM 2			DESCRIPTION
00	RFP SET			REV

CITY OF ANN ARBOR
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ANN ARBOR, MI 48106-8647
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
DEVONSHIRE RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-20



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: DUNMOOR RD

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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Dr Structure, Rem	Ea	3.00
Sewer, Rem, Less than 24 inch	Ft	30.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	544.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	7.00
_Grading, Driveway Approach	Syd	96.11
_Machine Grading, Special	Syd	1,891.00
_Undercutting, Type IIA	Cyd	567.30
Erosion Control, Inlet Protection, Fabric Drop	Ea	6.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	30.00
Dr Structure, 24 inch dia	Ea	3.00
_Dr Structure Cover, Type K, Modified	Ea	3.00
_Structure Covers	Ea	1.00
_Adjust Structure Cover	Ea	1.00
_Underdrain, Subgrade, 6 inch, Special	Ft	30.00
Cold Milling HMA Surface	Syd	1,891.00
HMA Surface, Rem	Syd	70.00
HMA, LVSP	Ton	416.02
_Flowable Fill	Cyd	6.00
_Curb and Gutter, Conc, Barrier	Ft	310.00
_Driveway Opening, Conc, Det M, Modified	Ft	234.00
_Detectable Warning Surface, Modified	Ft	6.00
_Sidewalk Ramp, Conc, 6 inch, Modified	Sft	7.00
_Sidewalk, Conc, 6 inch, Modified	Sft	36.00
Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	90.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	15.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	4.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	4.00
Plastic Drum, Fluorescent, Furn	Ea	22.00
Plastic Drum, Fluorescent, Oper	Ea	22.00
Sign, Type B, Temp, Prismatic, Furn	Sft	61.00
Sign, Type B, Temp, Prismatic, Oper	Sft	61.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Pedestrian Type II Barricade, Temp	Ea	3.00
_Temporary No Parking Sign	Ea	15.00
_Slope Restoration	Syd	65.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
8.00	*D3-1	Street Name Sign	4.00	32.00
4.00	W20-1	Road Work Ahead Sign	9.00	36.00
4.00	W20-3	Road Closed Ahead	9.00	36.00
2.00	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		129.00

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

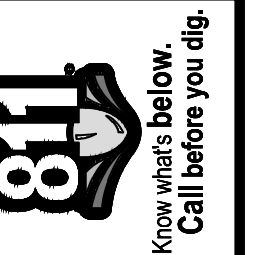
NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			DATE
02	ADDENDUM 2			REV.
00	RFP SET			REV.

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
734.794.4110
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
DUNMOOR RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-21

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CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: HARVARD PL

RFP# 23-17, FILE No. 2023-004

Dr Structure, Rem	Ea	2.00
Sewer, Rem, Less than 24 inch	Ft	20.00
_ Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	648.00
_ Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	44.79
_ Grading, Driveway Approach	Syd	44.79
_ Machine Grading, Special	Syd	1,694.68
Erosion Control, Inlet Protection, Fabric Drop	Ea	3.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	20.00
Dr Structure, 24 inch dia	Ea	2.00
_ Dr Structure Cover, Type K, Modified	Ea	2.00
_ Structure Covers	Ea	1.00
_ Adjust Structure Cover	Ea	8.00
_ Underdrain, Subgrade, 6 inch, Special	Ft	20.00
Cold Milling HMA Surface	Syd	1,694.68
HMA Surface, Rem	Syd	144.00
HMA, LVSP	Ton	447.69
_ Cold Milling for Concrete Curb and Gutter Reveal	Syd	100.00
_ Cold Milling HMA Surface, Driveway Approach	Syd	60.00
_ HMA, Wedging, 36A	Ton	6.00
_ Flowable Fill	Cyd	13.00
_ Driveway, Nonreinf Conc, 6 inch, Modified	Syd	44.79
_ Curb and Gutter, Conc, Barrier	Ft	495.00
_ Driveway Opening, Conc, Det M, Modified	Ft	153.00
Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	72.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	6.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	1.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	60.00
Plastic Drum, Fluorescent, Oper	Ea	60.00
Sign Cover	Ea	4.00
Sign, Type B, Temp, Prismatic, Furn	Sft	49.00
Sign, Type B, Temp, Prismatic, Oper	Sft	49.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_ Pedestrian Type II Barricade, Temp	Ea	4.00
_ Temporary No Parking Sign	Ea	30.00
_ Slope Restoration	Syd	175.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
2.00	W20-3	Road Closed Ahead	9.00	18.00
1.00	R11-4	Road Closed To Thru Traffic	12.50	13.00
		TOTAL		65.00

NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARILY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

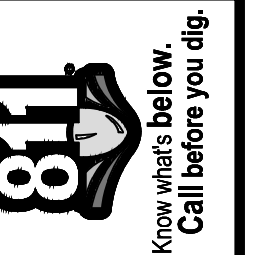
NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

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PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



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		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			DATE
02	ADDENDUM 2			REV.
				DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
734-794-6410
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
HARVARD PL
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-22
SHEET No.
22 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: HAWTHORNE RD

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

1. INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
2. PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED ANDDIRECTED BYTHE ENGINEER.
3. CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
4. INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
5. PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
6. TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
7. REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
8. PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
9. PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
10. GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
11. UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
12. CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
13. CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
14. CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
15. ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
16. CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
17. CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
18. COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
19. REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
20. OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	4.00
Sewer, Rem, Less than 24 inch	Ft	40.00
_ Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	488.00
_ Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	62.89
_ Grading, Driveway Approach	Syd	62.89
_ Machine Grading, Special	Syd	4,676.67
_ Undercutting, Type IIA	Cyd	1,402.80
Erosion Control, Inlet Protection, Fabric Drop	Ea	8.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	40.00
Dr Structure, 24 inch dia	Ea	4.00
_ Dr Structure Cover, Type K, Modified	Ea	6.00
_ Structure Covers	Ea	10.00
_ Adjust Structure Cover	Ea	14.00
_ Underdrain, Subgrade, 6 inch, Special	Ft	40.00
Cold Milling HMA Surface	Syd	4,676.67
HMA Surface, Rem	Syd	4.00
HMA, LVSP	Ton	1,028.87
_ Flowable Fill	Cyd	9.04
_ Driveway, Nonreinf Conc, 6 inch, Modified	Syd	62.89
_ Curb and Gutter, Conc, Barrier	Ft	170.00
_ Driveway Opening, Conc, Det M, Modified	Ft	218.00
_ Sidewalk, Conc or Clay Brick Pavers, Rem and Reinstall	Sft	48.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	3.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	3.00
Plastic Drum, Fluorescent, Furn	Ea	20.00
Plastic Drum, Fluorescent, Oper	Ea	20.00
Sign, Type B, Temp, Prismatic, Furn	Sft	128.00
Sign, Type B, Temp, Prismatic, Oper	Sft	128.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	40.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	40.00
_ Temporary No Parking Sign	Ea	38.00
_ Slope Restoration	Syd	121.33

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
10	*D3-1	Street Name Sign	4.00	40.00
5	W20-1	Road Work Ahead Sign	9.00	45.00
5	W20-3	Road Closed Ahead	9.00	45.00
2	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		155.00

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			DATE
				DESCRIPTION
02	ADDENDUM 2			REV.
00	RFP SET			REV.

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR MI 48106-8647
734.794.4410
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
HAWTHORNE RD
SUBSET COVER SHEET



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: MELROSE RD

RFP# 23-17, FILE No. 2023-004

NOTES

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CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	2.00
Sewer, Rem, Less than 24 inch	Ft	20.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	71.00
_Machine Grading, Special	Syd	1,232.18
_Undercutting, Type IIA	Cyd	370.00
Erosion Control, Inlet Protection, Fabric Drop	Ea	3.00
Sewer, Cl IV, 12 inch, Tr Det B	Ft	20.00
Dr Structure, 24 inch dia	Ea	2.00
_Dr Structure Cover, Type K, Modified	Ea	2.00
_Adjust Structure Cover	Ea	11.00
_Underdrain, Subgrade, 6 inch, Special	Ft	20.00
Cold Milling HMA Surface	Syd	1,232.18
HMA Surface, Rem	Syd	18.00
HMA, LVSP	Ton	271.08
_Curb and Gutter, Conc, Barrier	Ft	50.00
_Driveway Opening, Conc, Det M, Modified	Ft	21.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	2.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	2.00
Plastic Drum, Fluorescent, Furn	Ea	20.00
Plastic Drum, Fluorescent, Oper	Ea	20.00
Sign, Type B, Temp, Prismatic, Furn	Sft	115.00
Sign, Type B, Temp, Prismatic, Oper	Sft	115.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	40.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	40.00
_Pedestrian Type II Barricade, Temp	Ea	6.00
_Temporary No Parking Sign	Ea	34.00
_Slope Restoration	Syd	18.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
10.00	*D3-1	Street Name Sign	4.00	40.00
5.00	W20-1	Road Work Ahead Sign	9.00	45.00
5.00	W20-3	Road Closed Ahead	9.00	45.00
2.00	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		155.00

NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



			CE	JA	CHECKED
			CE	AG/CE	DRAWN
	05/12/2023	04/28/2023		DATE	
02	ADDENDUM 2				REV.
00	RFP SET				DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1667
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
MELROSE RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-24
SHEET No.
24 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: NORFOLK ST

RFP# 23-17, FILE No. 2023-004

Dr Structure, Rem	Ea	8.00
Sewer, Rem, Less than 24 inch	Ft	60.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	919.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	144.78
_Grading, Driveway Approach	Syd	138.11
_Machine Grading, Special	Syd	4,775.55
_Undercutting, Type IIA	Cyd	1,432.66
Erosion Control, Inlet Protection, Fabric Drop	Ea	9.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	60.00
Dr Structure, 24 inch dia	Ea	8.00
_Dr Structure Cover, Type K, Modified	Ea	8.00
_Structure Covers	Ea	4.00
_Adjust Structure Cover	Ea	20.00
_Underdrain, Subgrade, 6 inch, Special	Ft	80.00
Cold Milling HMA Surface	Syd	4,775.55
HMA Surface, Rem	Syd	179.77
HMA, LVSP	Ton	1,051.00
_Flowable Fill	Cyd	21.05
_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	138.11
_Curb and Gutter, Conc, Barrier	Ft	368.00
_Driveway Opening, Conc, Det M, Modified	Ft	551.00
_Detectable Warning Surface, Modified	Ft	10.00
_Sidewalk Ramp, Conc, 6 inch, Modified	Sft	60.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	2.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	2.00
Plastic Drum, Fluorescent, Furn	Ea	46.00
Plastic Drum, Fluorescent, Oper	Ea	46.00
Sign, Type B, Temp, Prismatic, Furn	Sft	61.00
Sign, Type B, Temp, Prismatic, Oper	Sft	61.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Pedestrian Type II Barricade, Temp	Ea	4.00
_Temporary No Parking Sign	Ea	31.00
_Slope Restoration	Syd	195.44

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
2.00	W20-3	Road Closed Ahead	9.00	18.00
2.00	R11-4	Road Closed To Thru Traffic	12.50	25.00
		TOTAL		77.00

NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

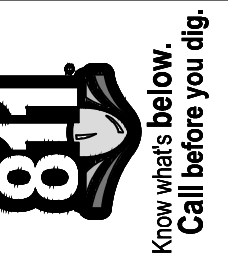
NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
02	ADDENDUM 2			REV.
00	RFP SET			DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR MI 48107-8647
734.794.4410
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
NORFOLK ST
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-25
SHEET No.
25 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: SHANNONDALE RD

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH – APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER,
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	4.00
Sewer, Rem, Less than 24 inch	Ft	40.00
_ Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	240.00
_ Machine Grading, Special	Syd	2,320.00
_ Undercutting, Type IIA	Cyd	696.00
Erosion Control, Inlet Protection, Fabric Drop	Ea	6.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	40.00
Dr Structure, 24 inch dia	Ea	4.00
_ Dr Structure Cover, Type K, Modified	Ea	4.00
_ Structure Covers	Ea	6.00
_ Adjust Structure Cover	Ea	6.00
_ Underdrain, Subgrade, 6 inch, Special	Ft	40.00
Cold Milling HMA Surface	Syd	2,320.00
HMA Surface, Rem	Syd	53.33
HMA, LVSP	Ton	510.00
_ Flowable Fill	Cyd	1.30
_ Curb and Gutter, Conc, Barrier	Ft	180.00
_ Driveway Opening, Conc, Det M, Modified	Ft	60.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	15.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	2.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	2.00
Plastic Drum, Fluorescent, Furn	Ea	20.00
Plastic Drum, Fluorescent, Oper	Ea	20.00
Sign, Type B, Temp, Prismatic, Furn	Sft	97.00
Sign, Type B, Temp, Prismatic, Oper	Sft	97.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	32.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	32.00
_ Temporary No Parking Sign	Ea	19.00
_ Slope Restoration	Syd	53.33

Quantity	Sign Code	Description	"Total Area (Sft)"
8.00	*D3-1	Street Name Sign	32.00
4.00	W20-1	Road Work Ahead Sign	36.00
4.00	W20-3	Road Closed Ahead	36.00
2.00	R11-4	Road Closed To Thru Traffic	25.00
		TOTALS	129.00

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

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PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			REV
02	ADDENDUM 2			DESCRIPTION
00	RFP SET			REV

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
734-794-6410
www.aagov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
SHANNONDALE RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-26
SHEET No.
26 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: STRATFORD DR

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BYTHE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINTATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS COORDINTATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

_ Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	100.00
_ Machine Grading, Special	Syd	1,166.66
_ Undercutting, Type IIA	Cyd	400.00
_ Structure Covers	Ea	2.00
_ Adjust Structure Cover	Ea	2.00
Cold Milling HMA Surface	Syd	1,166.66
HMA Surface, Rem	Syd	35.00
HMA, LVSP	Ton	280.00
_ Cold Milling for Concrete Curb and Gutter Reveal	Syd	166.67
_ Cold Milling HMA Surface, Driveway Approach	Syd	5.00
_ HMA, Wedging, 36A	Ton	2.00
_ Flowable Fill	Cyd	3.00
_ Curb and Gutter, Conc, Barrier	Ft	100.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	1.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	12.00
Plastic Drum, Fluorescent, Oper	Ea	12.00
Sign, Type B, Temp, Prismatic, Furn	Sft	61.00
Sign, Type B, Temp, Prismatic, Oper	Sft	61.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_ Temporary No Parking Sign	Ea	16.00
_ Slope Restoration	Syd	25.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
2.00	W20-3	Road Closed Ahead	9.00	18.00
1.00	R11-4	Road Closed To Thru Traffic	12.50	13.00
		TOTAL		65.0000

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			DATE
02	ADDENDUM 2			DESCRIPTION
00	RFP SET			REV.

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR MI 48107-8647
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
STRATFORD DR
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-27

SHEET No.
27 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: SUFFOLK ST

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

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NOTES:

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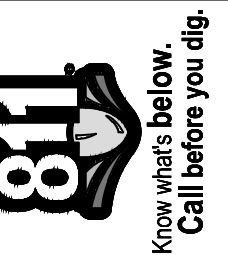
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Dr Structure, Rem	Ea	3.00
Sewer, Rem, Less than 24 inch	Ft	30.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	305.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	45.77
_Grading, Driveway Approach	Syd	45.77
_Machine Grading, Special	Syd	4,760.35
_Undercutting, Type IIA	Cyd	1,428.11
Erosion Control, Inlet Protection, Fabric Drop	Ea	6.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	30.00
Dr Structure, 24 inch dia	Ea	3.00
_Dr Structure Cover, Type K, Modified	Ea	3.00
_Adjust Structure Cover	Ea	14.00
_Underdrain, Subgrade, 6 inch, Special	Ft	30.00
Cold Milling HMA Surface	Syd	4,760.35
HMA Surface, Rem	Syd	67.78
HMA, LVSP	Ton	1,047.28
Conc Pavt, Misc, Nonreinf, 8 inch	Syd	12.44
_Flowable Fill	Cyd	5.65
_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	33.33
_Driveway, Nonreinf Conc, 8 inch, Modified	Syd	12.44
_Curb and Gutter, Conc, Barrier	Ft	60.00
_Driveway Opening, Conc, Det M, Modified	Ft	245.00
Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	80.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	14.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	1.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	43.00
Plastic Drum, Fluorescent, Oper	Ea	43.00
Sign, Type B, Temp, Prismatic, Furn	Sft	49.00
Sign, Type B, Temp, Prismatic, Oper	Sft	49.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Pedestrian Type II Barricade, Temp	Ea	2.00
_Temporary No Parking Sign	Ea	29.00
_Slope Restoration	Syd	67.78

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
2.00	W20-3	Road Closed Ahead	9.00	18.00
1.00	R11-4	Road Closed To Thru Traffic	12.50	13.00
		TOTAL		65.00



		CE	JA	CHECKED
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	05/12/2023			DATE
	04/28/2023			DATE
02	ADDENDUM 2			DESCRIPTION
00	RFP SET			REV.

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR MI 48107-8647
734.794.4110
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
SUFFOLK ST
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-28



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: TUDOR DR

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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Dr Structure, Rem	Ea	6.00
Sewer, Rem, Less than 24 inch	Ft	60.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	774.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	164.00
_Grading, Driveway Approach	Syd	133.33
_Grading, Sidewalk	Syd	22.22
_Grading, Sidewalk Ramp	Syd	8.33
_Machine Grading, Special	Syd	3,074.23
_Undercutting, Type IIA	Cyd	922.27
Erosion Control, Inlet Protection, Fabric Drop	Ea	11.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	60.00
Dr Structure, 24 inch dia	Ea	6.00
_Dr Structure Cover, Type K, Modified	Ea	6.00
_Structure Covers	Ea	9.00
_Adjust Structure Cover	Ea	15.00
_Underdrain, Subgrade, 6 inch, Special	Ft	60.00
Cold Milling HMA Surface	Syd	2,800.00
HMA Surface, Rem	Syd	164.89
HMA, LVSP	Ton	710.00
_Cold Milling for Concrete Curb and Gutter Reveal	Syd	316.33
_HMA, Wedging, 36A	Ton	3.00
_Flowable Fill	Cyd	12.00
_Curb and Gutter, Conc, Barrier	Ft	390.00
_Driveway Opening, Conc, Det M, Modified	Ft	384.00
Curb Ramp Opening, Conc	Ft	18.00
_Detectable Warning Surface, Modified	Ft	15.00
_Sidewalk Ramp, Conc, 6 inch, Modified	Sft	75.00
Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	224.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	34.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	6.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	6.00
Lighted Arrow, Type C, Furn	Ea	1.00
Lighted Arrow, Type C, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	40.00
Plastic Drum, Fluorescent, Oper	Ea	40.00
Sign, Portable, Changeable Message, Furn	Ea	2.00
Sign, Portable, Changeable Message, Oper	Ea	2.00
Sign, Type B, Temp, Prismatic, Furn	Sft	361.00
Sign, Type B, Temp, Prismatic, Oper	Sft	61.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	24.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	24.00
_Pedestrian Type II Barricade, Temp	Ea	3.00
_Temporary No Parking Sign	Ea	27.00
_Slope Restoration	Syd	110.00
Water Shutoff, Adj, Case 1	Ea	1.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
8.00	*D3-1	Street Name Sign	4.00	32.00
4.00	W20-1	Road Work Ahead Sign	9.00	36.00
4.00	W20-3	Road Closed Ahead	9.00	36.00
2.00	R11-3a	Road Closed Local Traffic Only	12.50	25.00
		TOTAL		129.00



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			DATE
02	ADDENDUM 2			REV.
00	RFP SET			REV.
				DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1667
734.794.8410
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
TUDOR DR
SUBSET COVER SHEET



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: VINEWOOD BLVD

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	2.00
Sewer, Rem, Less than 24 inch	Ft	20.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	61.00
_Machine Grading, Special	Syd	1,716.00
_Undercutting, Type IIA	Cyd	514.80
Erosion Control, Inlet Protection, Fabric Drop	Ea	4.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	20.00
Dr Structure, 24 inch dia	Ea	2.00
_Dr Structure Cover, Type K, Modified	Ea	4.00
_Structure Covers	Ea	9.00
_Adjust Structure Cover	Ea	6.00
_Underdrain, Subgrade, 6 inch, Special	Ft	20.00
Cold Milling HMA Surface	Syd	1,716.00
HMA Surface, Rem	Syd	20.00
HMA, LVSP	Ton	380.00
_Flowable Fill	Cyd	2.00
_Curb and Gutter, Conc, Barrier	Ft	40.00
_Driveway Opening, Conc, Det M, Modified	Ft	21.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	13.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	2.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	2.00
Plastic Drum, Fluorescent, Furn	Ea	20.00
Plastic Drum, Fluorescent, Oper	Ea	20.00
Sign, Type B, Temp, Prismatic, Furn	Sft	97.00
Sign, Type B, Temp, Prismatic, Oper	Sft	97.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	32.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	32.00
_Temporary No Parking Sign	Ea	16.00
_Slope Restoration	Syd	15.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
8.0000	*D3-1	Street Name Sign	4.0000	32.0000
4.0000	W20-1	Road Work Ahead Sign	9.0000	36.0000
4.0000	W20-3	Road Closed Ahead	9.0000	36.0000
2.0000	R11-4	Road Closed To Thru Traffic	12.5000	25.0000
		TOTAL		129.0000

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



	CE	JA	CHECKED
	CE	AG/CE	DRAWN
05/12/2023	04/28/2023	DATE	
02	ADDENDUM 2	RFP SET	REV.
			DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
ANN ARBOR 811
734.794.4110
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
VINEWOOD BLVD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-30



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: WINSTEAD BLVD

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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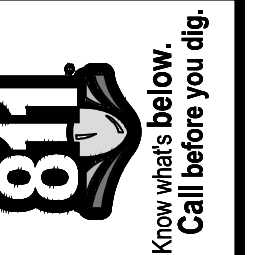
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Dr Structure, Rem	Ea	9.00
Sewer, Rem, Less than 24 inch	Ft	90.00
_ Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	234.00
_ Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	13.33
_ Grading, Sidewalk Ramp	Syd	13.33
_ Machine Grading, Special	Syd	3,506.05
_ Undercutting, Type IIA	Cyd	1,051.82
Erosion Control, Silt Fence	Ft	20.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	90.00
Dr Structure, 24 inch dia	Ea	9.00
_ Structure Covers	Ea	9.00
_ Adjust Structure Cover	Ea	11.00
_ Underdrain, Subgrade, 6 inch, Special	Ft	90.00
Cold Milling HMA Surface	Syd	3,506.05
HMA Surface, Rem	Syd	52.00
HMA, LVSP	Ton	771.33
_ Cold Milling for Concrete Curb and Gutter Reveal	Syd	6.00
_ Flowable Fill	Cyd	4.33
_ Curb and Gutter, Conc, Barrier	Ft	172.00
_ Driveway Opening, Conc, Det M, Modified	Ft	61.00
_ Detectable Warning Surface, Modified	Ft	20.00
_ Sidewalk Ramp, Conc, 6 inch, Modified	Sft	120.00
_ Sidewalk, Conc, 6 inch, Modified	Sft	120.00
Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft	90.00
Pavt Mrkg, Thermopl, 24 inch, Stop Bar	Ft	15.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	14.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	14.00
Plastic Drum, Fluorescent, Furn	Ea	41.00
Plastic Drum, Fluorescent, Oper	Ea	41.00
Sign, Type B, Temp, Prismatic, Furn	Sft	160.00
Sign, Type B, Temp, Prismatic, Oper	Sft	160.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	32.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	32.00
_ Pedestrian Type II Barricade, Temp	Ea	8.00
_ Temporary No Parking Sign	Ea	32.00
_ Slope Restoration	Syd	60.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
18.00	*D3-1	Street Name Sign	4.00	72.00
9.00	W20-1	Road Work Ahead Sign	9.00	81.00
9.00	W20-3	Road Closed Ahead	9.00	81.00
7.00	R11-4	Road Closed To Thru Traffic	12.50	88.00
		TOTAL		322.00



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			REV.
02	ADDENDUM 2			DESCRIPTION
00	RFP SET			REV.

CITY OF ANN ARBOR
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
WINSTEAD BLVD
SUBSET COVER SHEET



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: EXMOOR RD

RFP# 23-17, FILE No. 2023-004

NOTES:

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20. OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	9.00
Sewer, Rem, Less than 24 inch	Ft	90.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	800.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	33.33
_Grading, Driveway Approach	Syd	33.33
_Machine Grading, Special	Syd	6,589.00
_Undercutting, Type IIA	Cyd	1,976.70
Erosion Control, Silt Fence	Ft	100.00
Erosion Control, Inlet Protection, Fabric Drop	Ea	20.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	90.00
Dr Structure, 24 inch dia	Ea	9.00
_Dr Structure Cover, Type K, Modified	Ea	9.00
_Structure Covers	Ea	5.00
_Adjust Structure Cover	Ea	16.00
_Underdrain, Subgrade, 6 inch, Special	Ft	90.00
Cold Milling HMA Surface	Syd	6,589.00
HMA Surface, Rem	Syd	100.00
HMA, LVSP	Ton	1,449.58
_Flowable Fill	Cyd	12.00
_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	33.33
_Curb and Gutter, Conc, Barrier	Ft	440.00
_Driveway Opening, Conc, Det M, Modified	Ft	360.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	3.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	3.00
Plastic Drum, Fluorescent, Furn	Ea	50.00
Plastic Drum, Fluorescent, Oper	Ea	50.00
Sign, Type B, Temp, Prismatic, Furn	Sft	92.00
Sign, Type B, Temp, Prismatic, Oper	Sft	92.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	12.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	12.00
_Temporary No Parking Sign	Ea	65.00
_Slope Restoration	Syd	180.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
8.00	*D3-1	Street Name Sign	4.00	32.00
4.00	W20-1	Road Work Ahead Sign	9.00	36.00
4.00	W20-3	Road Closed Ahead	9.00	36.00
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		TOTAL		103.00

NOTES:

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THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023			DATE
	04/28/2023			DATE
02	ADDENDUM 2			REV.
00	RFP SET			REV.
				DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR MI 48107-8647
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
EXMOOR RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-32
SHEET No.
32 OF 37



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: NEWCASTLE RD

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BYTHE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH – APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER,
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	2.00
Sewer, Rem, Less than 24 inch	Ft	20.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	302.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	27.22
_Grading, Driveway Approach	Syd	27.22
_Machine Grading, Special	Syd	2,276.78
_Undercutting, Type IIA	Cyd	683.03
Erosion Control, Inlet Protection, Fabric Drop	Ea	5.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	20.00
Dr Structure, 24 inch dia	Ea	2.00
_Dr Structure Cover, Type K, Modified	Ea	4.00
_Structure Covers	Ea	7.00
_Adjust Structure Cover	Ea	13.00
_Underdrain, Subgrade, 6 inch, Special	Ft	20.00
Cold Milling HMA Surface	Syd	2,276.78
HMA Surface, Rem	Syd	67.11
HMA, LVSP	Ton	501.00
_Flowable Fill	Cyd	6.00
_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	27.22
_Curb and Gutter, Conc, Barrier	Ft	168.00
_Driveway Opening, Conc, Det M, Modified	Ft	134.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	1.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	40.00
Plastic Drum, Fluorescent, Oper	Ea	40.00
Sign, Type B, Temp, Prismatic, Furn	Sft	49.00
Sign, Type B, Temp, Prismatic, Oper	Sft	49.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Temporary No Parking Sign	Ea	18.00
_Slope Restoration	Syd	80.44

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
2.00	W20-3	Road Closed Ahead	9.00	18.00
1.00	R11-4	Road Closed To Thru Traffic	12.50	13.00
		TOTAL		65.00

NOTES:

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THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

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	04/28/2023			DATE
02	ADDENDUM 2			REV.
00	RFP SET			REV.
				DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR MI 48107-8647
ANN ARBOR 734-794-8410
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
NEWCASTLE RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-33



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: MILLS CT

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

1. INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
2. PERFORM SAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BY THE ENGINEER.
3. CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
4. PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
5. REMOVE EXISTING HMA SURFACE (PARTIAL DEPTH- 2 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE ADDITIONAL HMA REMOVAL AND/OR BASE REPAIRS DIRECTED BY THE ENGINEER.
6. CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) TOP COURSE USING LVSP HMA MIXTURE
7. CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES AS REQUIRED.
8. CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
9. CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
10. COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
11. REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
12. OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Erosion Control, Inlet Protection, Fabric Drop	Ea	2.00
Cold Milling HMA Surface	Syd	1,549.78
HMA, 4EL	Ton	175.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	1.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	13.00
Plastic Drum, Fluorescent, Oper	Ea	13.00
Sign, Type B, Temp, Prismatic, Furn	Sft	31.00
Sign, Type B, Temp, Prismatic, Oper	Sft	31.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	8.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	8.00
HMA Surface, Around Structure Cover, Rem	Ea	3.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
2.00	W20-3	Road Closed Ahead	9.00	18.00
1.00	R11-4	Road Closed To Thru Traffic	12.50	13.00
		TOTAL		65.00



			CE	JA	CHECKED
			CE	AG/CE	DRAWN
	05/12/2023	04/26/2023			DATE
02	ADDENDUM 2				REV.
					DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
734.794.4110
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
MILLS CT
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-34



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: STONEHAVEN

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

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CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BYTHE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINTATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH – APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER.
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS COORDINTATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	1.00
Sewer, Rem, Less than 24 inch	Ft	10.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	450.00
_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	6.00
_Grading, Driveway Approach	Syd	6.00
_Machine Grading, Special	Syd	2,101.56
_Undercutting, Type IIA	Cyd	630.47
Erosion Control, Silt Fence	Ft	100.00
Erosion Control, Inlet Protection, Fabric Drop	Ea	4.00
Sewer, CI IV, 12 inch, Tr Det B	Ft	10.00
Dr Structure, 24 inch dia	Ea	1.00
_Dr Structure Cover, Type K, Modified	Ea	3.00
_Structure Covers	Ea	2.00
_Adjust Structure Cover	Ea	6.00
_Underdrain, Subgrade, 6 inch, Special	Ft	10.00
Cold Milling HMA Surface	Syd	2,101.56
HMA Surface, Rem	Syd	100.00
HMA, LVSP	Ton	462.00
_Flowable Fill	Cyd	8.33
_Driveway, Nonreinf Conc, 6 inch, Modified	Syd	6.00
_Curb and Gutter, Conc, Barrier	Ft	315.00
_Curb and Gutter, Conc, Mountable	Ft	20.00
_Driveway Opening, Conc, Det M, Modified	Ft	115.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	1.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	1.00
Plastic Drum, Fluorescent, Furn	Ea	40.00
Plastic Drum, Fluorescent, Oper	Ea	40.00
Sign, Type B, Temp, Prismatic, Furn	Sft	49.00
Sign, Type B, Temp, Prismatic, Oper	Sft	49.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Temporary No Parking Sign	Ea	20.00
_Slope Restoration	Syd	100.44

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
2.00	W20-1	Road Work Ahead Sign	9.00	18.00
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		TOTAL		65.00

NOTES:

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PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



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02	ADDENDUM 2			REV.
00	RFP SET			REV.
				DESCRIPTION

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 864
ANN ARBOR MI 48107-0864
734.794.4410
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
STONEHAVEN
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-35



CITY OF ANN ARBOR ENGINEERING

PROJECT LOCATION: EDINBOROUGH RD

RFP# 23-17, FILE No. 2023-004

NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 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 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.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

CONSTRUCTION SCOPE AND SEQUENCING

PERFORM WORK ON THIS STREET IN ACCORDANCE WITH THE "SCHEDULE OF STREETS". COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER. CONSTRUCTION ON THIS STREET INCLUDES, BUT IS NOT LIMITED TO, THE WORK ITEMS LISTED BELOW. PERFORM THE WORK IN THE ORDER INDICATED UNLESS OTHERWISE AUTHORIZED OR DIRECTED BY THE ENGINEER AND NOT UNTIL LOCATING ALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS NOTED ON THE PLANS AND IN THE CONTRACT SPECIFICATIONS.

- INSTALL NO PARKING SIGNS (AS REQUIRED), AND ONCE THE SIGNS ARE ENFORCEABLE IMPLEMENT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND PERMISSIBLE TRAFFIC RESTRICTIONS, AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) MEASURES.
- PERFORMSAWCUTS FOR HOT MIX ASPHALT (HMA) AND CONCRETE REMOVAL AS IDENTIFIED AND DIRECTED BYTHE ENGINEER.
- CONDUCT REMOVAL WORK RELATED TO PAVEMENT, DRAINAGE, AND CONCRETE ITEMS WITH EXCEPTION TO COLD MILLING.
- INSTALL PROPOSED DRAINAGE STRUCTURES, STORM SEWER, AND UNDERDRAIN AS REQUIRED.
- PERFORM ALL CONCRETE WORK, INCLUDING RESTORATION, AS REQUIRED.
- TEMPORARY LOWER ALL STRUCTURE COVERS LOCATED WITHIN THE EXISTING PAVEMENT, INCLUDING GATE AND MONUMENT BOXES AS REQUIRED. COORDINATE THE LOWERING OF PRIVATE UTILITY STRUCTURE COVERS AND BOXES WITH APPLICABLE UTILITY OWNER.
- REMOVE ALL OF THE EXISTING HMA SURFACE (FULL DEPTH - APPROXIMATELY ±4 INCHES) BY COLD MILLING. THIS MAY ALSO INCLUDE REMOVAL OF THE ROAD BASE MATERIAL TO A DEPTH DETERMINED BY THE ENGINEER.
- PROOF ROLL AND PERFORM UNDERCUTS AND/OR BASE REPAIRS AS DIRECTED BY THE ENGINEER,
- PLACE AGGREGATE BASE MATERIAL AS REQUIRED AND DIRECTED BY THE ENGINEER.
- GRADE, SHAPE, AND COMPACT THE EXISTING/PLACED BASE MATERIAL AS DIRECTED BY THE ENGINEER.
- UPON APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HOT MIX ASPHALT (HMA) LEVELING COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (LEVELING COURSE) AS REQUIRED.
- CLEAN PAVEMENT AND WITH APPROVAL FROM THE ENGINEER PLACE 2.0 INCH HMA TOP COURSE USING LVSP HMA MIXTURE.
- CLEAN PAVEMENT AND PLACE SIDE STREET HMA APPROACHES (TOP COURSE) AS REQUIRED.
- ADJUST ALL STRUCTURE COVERS, INCLUDING GATE AND MONUMENT BOXES, TO THEIR FINISHED ELEVATIONS IN FINISHED CONCRETE AS REQUIRED PER THE CONTRACT SPECIFICATIONS. COORDINATE THE ADJUSTMENT OF PRIVATE UTILITY STRUCTURES AND BOXES WITH APPLICABLE UTILITY OWNER.
- CLEAN PAVEMENT AND PLACE HMA APPROACHES OR WEDGING FOR DRIVEWAYS AS REQUIRED.
- CLEAN PAVEMENT AND COMPLETE ALL PAVEMENT MARKINGS AS REQUIRED.
- COMPLETE ALL MISCELLANEOUS CONSTRUCTION INCLUDING CLEANING OF STRUCTURES, ALL OTHER NECESSARY CLEAN UP, AND FINAL RESTORATION.
- REMOVE ALL SESC MEASURES, NO PARKING SIGNS, MISS DIG FLAGS, AND TEMPORARY TRAFFIC CONTROL DEVICES.
- OPEN STREET TO TRAFFIC UPON APPROVAL OF THE ENGINEER.

Dr Structure, Rem	Ea	3.00
Sewer, Rem, Less than 24 inch	Ft	30.00
_Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	120.00
Erosion Control, Inlet Protection, Fabric Drop	Ea	5.00
Sewer, Cl IV, 12 inch, Tr Det B	Ft	30.00
Dr Structure, 24 inch dia	Ea	3.00
_Dr Structure Cover, Type K, Modified	Ea	3.00
_Structure Covers	Ea	4.00
_Adjust Structure Cover	Ea	5.00
_Structure, Reconstruct	Ea	1.00
Cold Milling HMA Surface	Syd	2,330.00
HMA Surface, Rem	Syd	14.00
HMA, LVSP	Ton	193.00
_Flowable Fill	Cyd	3.00
_Curb and Gutter, Conc, Barrier	Ft	90.00
_Driveway Opening, Conc, Det M, Modified	Ft	30.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	2.00
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	2.00
Plastic Drum, Fluorescent, Furn	Ea	20.00
Plastic Drum, Fluorescent, Oper	Ea	20.00
Sign, Type B, Temp, Prismatic, Furn	Sft	97.00
Sign, Type B, Temp, Prismatic, Oper	Sft	97.00
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	16.00
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	16.00
_Temporary No Parking Sign	Ea	19.00
_Slope Restoration	Syd	30.00

Quantity	Sign Code	Description	Area (sft)	"Total Area (Sft)"
4.00	*D3-1	Street Name Sign	4.00	16.00
4.00	W20-1	Road Work Ahead Sign	9.00	36.00
4.00	W20-3	Road Closed Ahead	9.00	36.00
4.00	R11-3a	Road Closed Local Traffic Only	12.50	50.00
		TOTAL		138.00

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THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, INCLUDING REFERENCED MDOT PUBLICATIONS, AND THE PROJECT CONTRACT DOCUMENTS.

PLACE APPLICABLE D3-1 SIGN IN ADVANCE OF WORK PERFORMED ON EACH STREET PRIOR TO WORK BEGINNING AS SHOWN IN THE LOCAL TRAFFIC CONTROL PLAN. VERIFY EXACT SIGN QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING AND PLACING TRAFFIC DEVICES.



		CE	JA	CHECKED
		CE	AG/CE	DRAWN
	05/12/2023	04/28/2023	DATE	
02	ADDENDUM 2	RFP SET	DESCRIPTION	REV.

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 864
ANN ARBOR MI 48107-0864
734.794.4410
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
STREET RESURFACING PROJECT - 2023
EDINBOROUGH RD
SUBSET COVER SHEET

SCALE
DRAWING No.
2023-004-36

