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11 -



SM No. CMP7184390021

# PROPOSAL AND CONTRACT DOCUMENTS

## FOR THE CONSTRUCTION OF

11

Scrub Seal & Mill & Overlay approximately 3 miles of SR 184 from Junction US 84 W East to Junction US 84 E, known as State Project No. MP-7184-39(002) / 307071301 in Lawrence County.

Project Completion: 44 Working Days

**(STATE DELEGATED)**

### NOTICE

**BIDDERS MUST COMPLETE AN ONLINE REQUEST  
FOR PERMISSION TO BID THIS PROJECT.**

Electronic addendum updates will be posted on [www.gomdot.com](http://www.gomdot.com)

**SECTION 900  
OF THE CURRENT  
2017 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION  
JACKSON, MISSISSIPPI**

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
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**PROJECT: MP-7184-39(002)/307071301 - Lawrence**

Progress Schedule

(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET  
OF SECTION 905 AS ADDENDA)

05/27/2020 12:59 PM

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

## SECTION 901 - ADVERTISEMENT

Electronic bids will be received by the Mississippi Transportation Commission at 10:00 o'clock A.M., Tuesday, June 23, 2020, from the Bid Express Service and shortly thereafter publicly read on the Sixth Floor for:

Scrub Seal & Mill & Overlay approximately 3 miles of SR 184 from Junction US 84 W East to Junction US 84 E, known as State Project No. MP-7184-39(002) / 307071301 in Lawrence County.

The attention of bidders is directed to the predetermined minimum wage rate set by the U. S. Department of Labor under the Fair Labor Standards Act.

The Mississippi Department of Transportation hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, age, disability, religion or national origin in consideration for an award.

The specifications are on file in the offices of the Mississippi Department of Transportation.

Contractors may request permission to bid online at <http://shopmdot.ms.gov> at no cost. Upon approval, Contractors shall be eligible to submit a bid using Bid Express at <http://bidx.com>. Specimen proposals may be viewed and downloaded online at no cost at <http://mdot.ms.gov> or purchased online at <http://shopmdot.ms.gov> at a cost of Ten Dollars (\$10.00) per proposal plus a small convenience fee. Cash or checks will not be accepted as payment.

Bid bond, signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent, with Power of Attorney attached, a Cashier's check or Certified Check for five (5%) percent of bid, payable to STATE OF MISSISSIPPI, must accompany each proposal.

The attention of bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.

MELINDA L. MCGRATH  
EXECUTIVE DIRECTOR



# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 1**

**CODE: (IS)**

**DATE: 03/01/2017**

**SUBJECT: Governing Specifications**

The current (2017) Edition of the Standard Specifications for Road and Bridge Construction adopted by the Mississippi Transportation Commission is made a part hereof fully and completely as if it were attached hereto, except where superseded by special provisions, or amended by revisions of the Specifications contained within this proposal. Copies of the specification book may be purchased from the MDOT Construction Division, or online at [shopmdot/default.aspx?StoreIndex=1](http://shopmdot/default.aspx?StoreIndex=1).

A reference in any contract document to controlling requirements in another portion of the contract documents shall be understood to apply equally to any revision or amendment thereof included in the contract.

In the event the plans or proposal contain references to the 2004 Edition of the Standard Specifications for Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 2017 Edition of the Standard Specifications.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 3**

**CODE: (SP)**

**DATE: 01/17/2017**

**SUBJECT: Final Clean-Up**

Immediately prior to final inspection for release of maintenance, the Contractor shall pick up, load, transport and properly dispose of all litter from the entire highway right-of-way that is within the termini of the project.

Litter shall include, but not be limited to, solid wastes such as glass, paper products, tires, wood products, metal, synthetic materials and other miscellaneous debris.

Litter removal is considered incidental to other items of work and will not be measured for separate payment.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 9**

**CODE: (IS)**

**DATE: 03/01/2017**

**SUBJECT: Federal Bridge Formula**

Bidders are hereby advised that the latest revision of Federal Highway Administration Publication No. FHWA-HOP-06-105, **BRIDGE FORMULA WEIGHTS**, dated August 2006, is made a part of this contract when applicable.

Prior to the preconstruction conference, the Contractor shall advise the Engineer, in writing, what materials, if any, will be delivered to the jobsite via Interstate route(s).

Copies of the **BRIDGE FORMULA WEIGHTS** publication may be obtained by contacting:

Federal Highway Administration  
400 7<sup>th</sup> Street, SW  
Washington, DC 20590  
(202) 366-2212

or

[http://www.ops.fhwa.dot.gov/Freight/publications/brdg\\_frm\\_wgths/bridge\\_formula\\_all\\_rev.pdf](http://www.ops.fhwa.dot.gov/Freight/publications/brdg_frm_wgths/bridge_formula_all_rev.pdf)

An on line **BRIDGE FORMULA WEIGHTS CALCULATOR** is available at

[http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc\\_page.htm](http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc_page.htm)

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 13**

**CODE: (IS)**

**DATE: 03/01/2017**

**SUBJECT: Safety Edge**

Bidders are hereby advised that the Shoulder Wedge (Safety Edge) specified in Section 401, Asphalt Pavements, shall only apply to the top two (2) lifts of asphalt. Open Graded Friction Courses (OGFC) are not to be considered a lift as it pertains to safety edge. Attached is a drawing showing the safety edge. Note that the shoulder dimensions in the bottom two drawings will be less than three feet (3').



# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 113**

**CODE: (SP)**

**DATE: 04/18/2017**

**SUBJECT: Tack Coat**

Bidders are advised that in addition to the products listed on the Department's APL as referenced in Subsection 401.03.1.2 on page 256, the Contractor may use one of the following as a tack coat.

- CSS-1
- CSS-1h
- SS-1
- SS-1h

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 296**

**CODE: (SP)**

**DATE: 07/25/2017**

**SUBJECT: Reduced Speed Limit Signs**

Bidders are advised that when the plans or contract documents require the speed limit on a project to be reduced, the Contractor shall begin work within 48 hours of installing the reduced speed limit signs. Should the Contractor not start work or have no plans to start work within 48 hours of installing the signs, the reduced speed limit signs shall be covered and existing speed limit signs uncovered.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 – NOTICE TO BIDDERS NO. 401**

**CODE: (SP)**

**DATE: 09/12/2017**

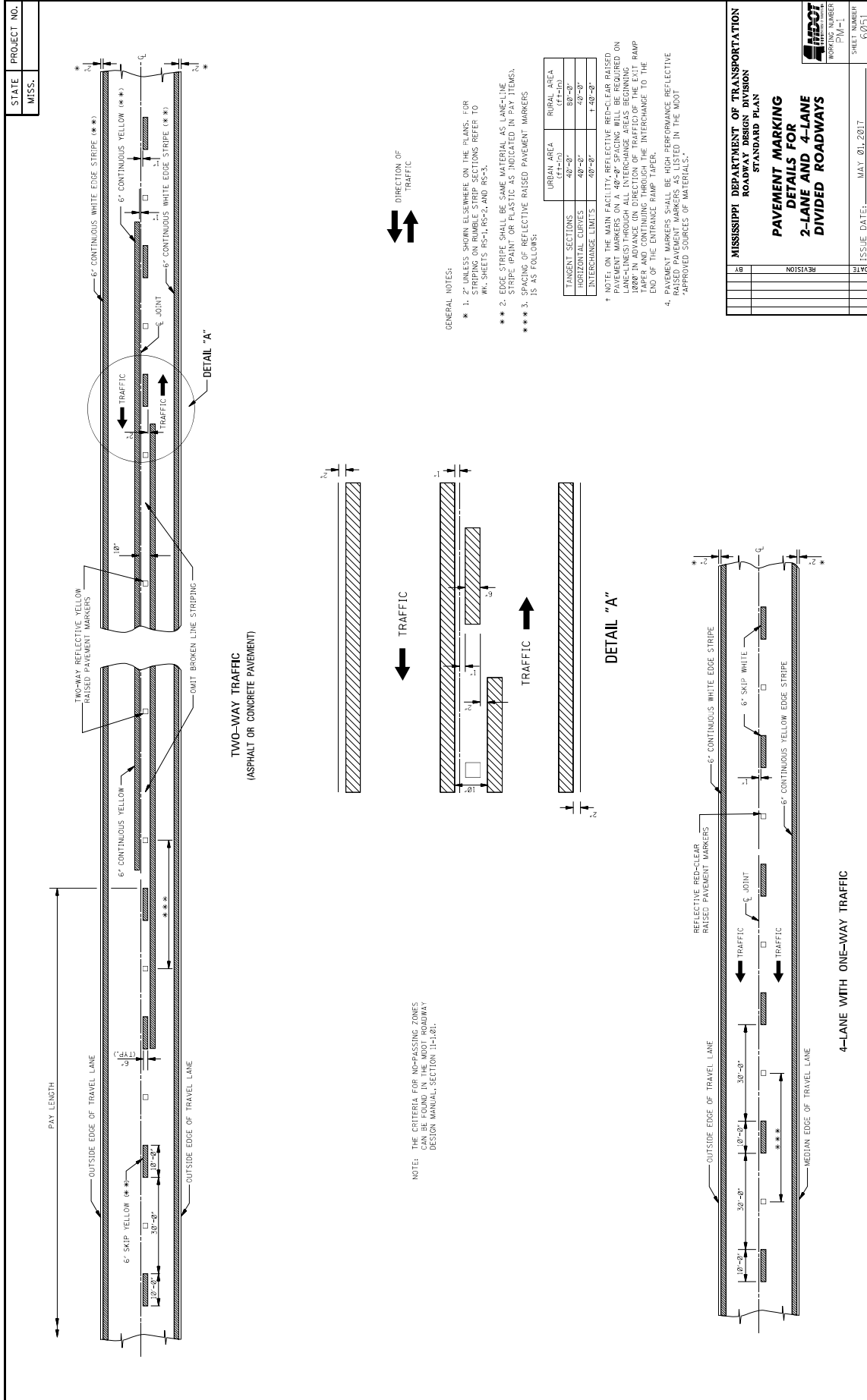
**SUBJECT: Standard Drawings**

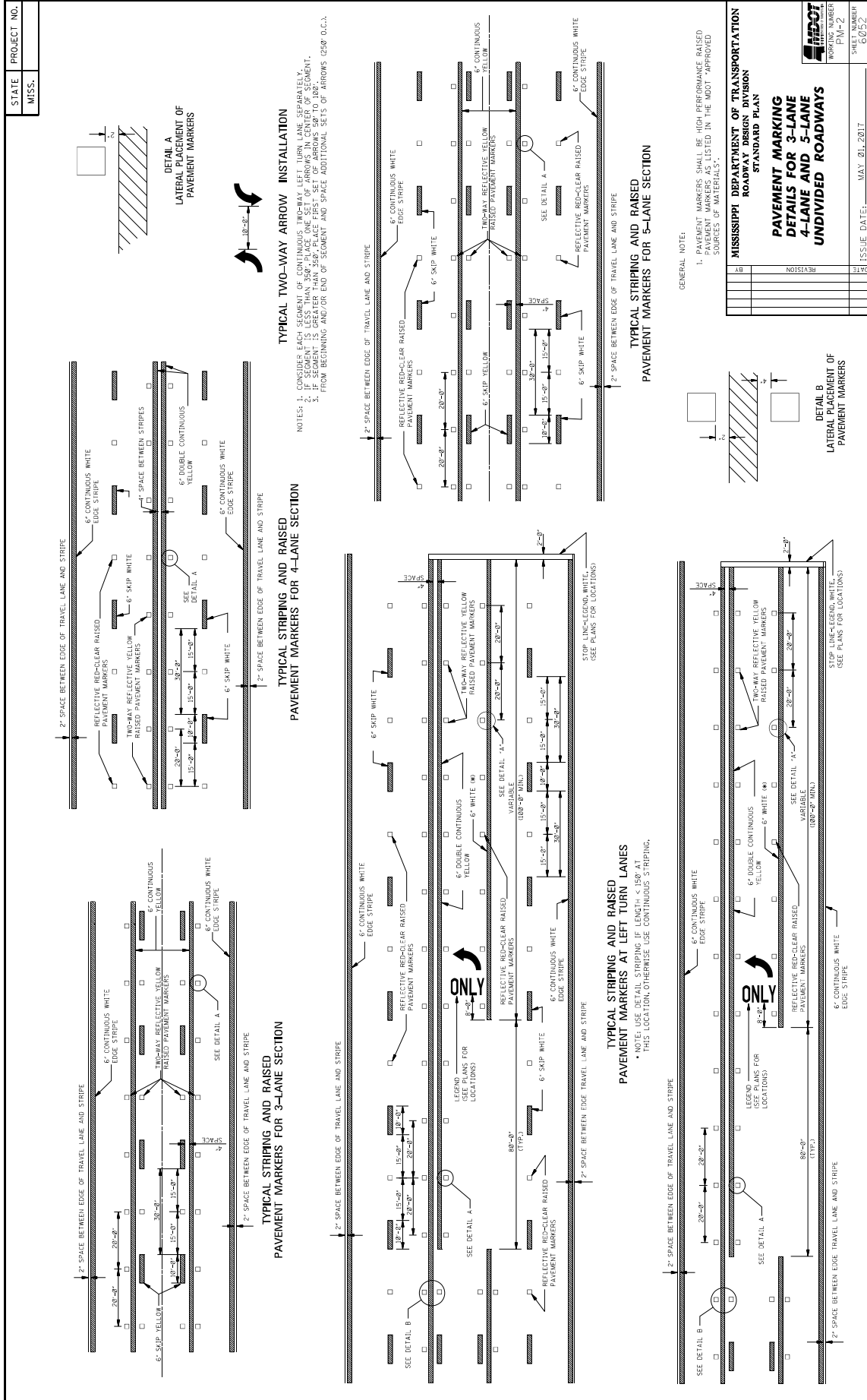
Standard Drawings attached hereto shall govern appropriate items of required work.

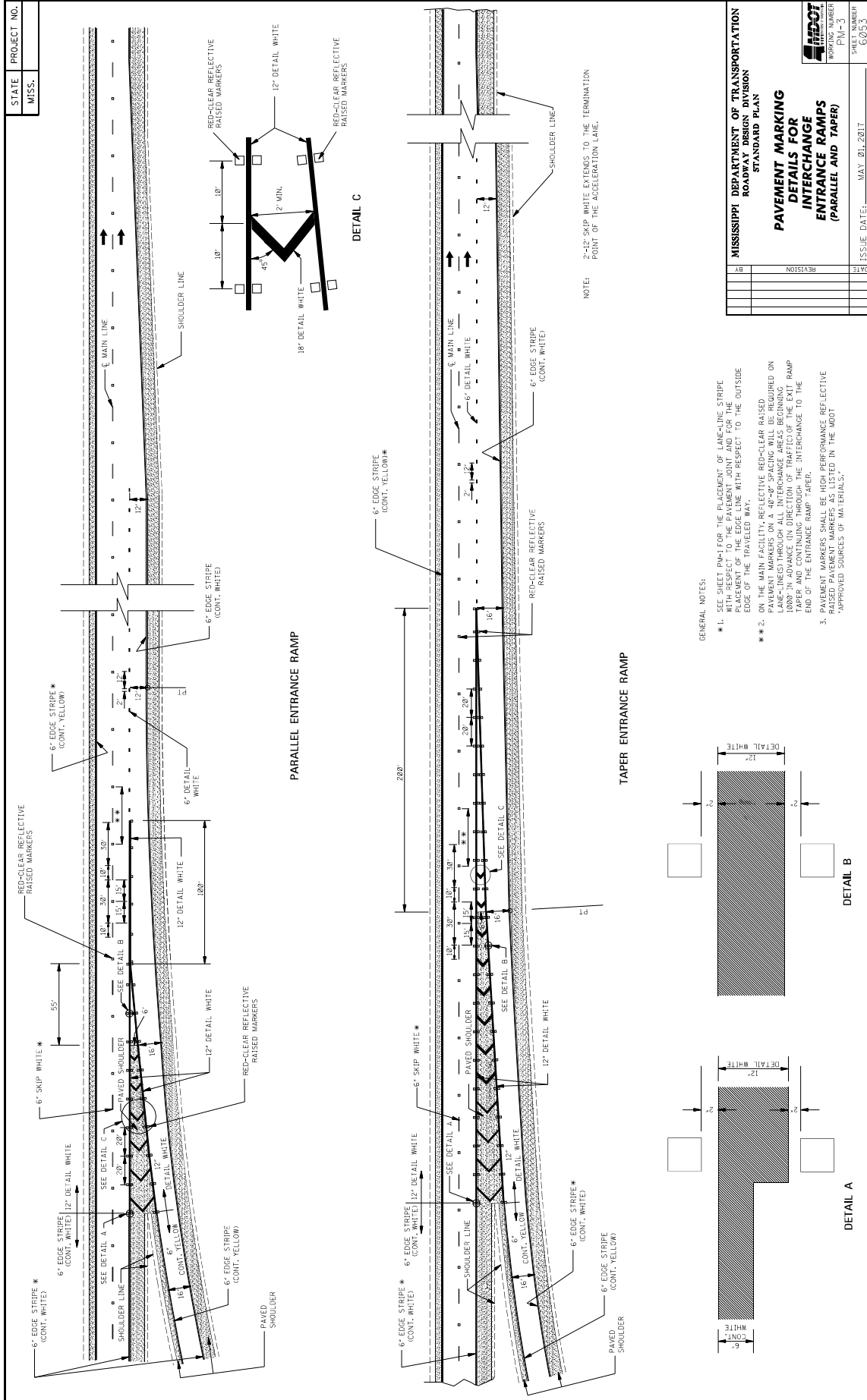
Larger copies of Standard Drawings may be purchased from:

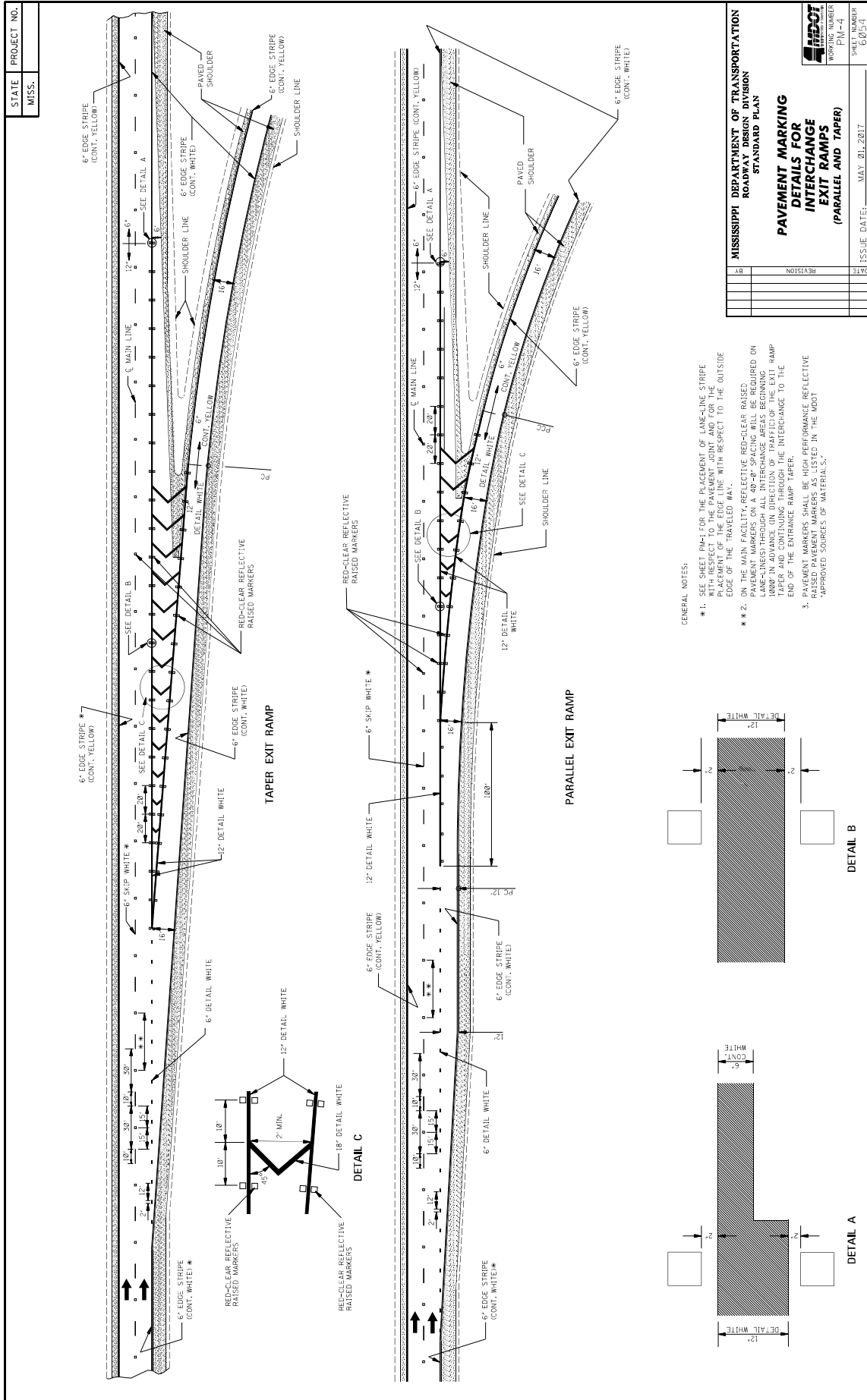
MDOT Plans Print Shop  
MDOT Shop Complex, Building C, Room 114  
2567 North West Street  
P.O. Box 1850  
Jackson, MS 39215-1850  
Telephone: (601) 359-7460  
or FAX: (601) 359-7461  
or e-mail: [plans@mdot.state.ms.us](mailto:plans@mdot.state.ms.us)







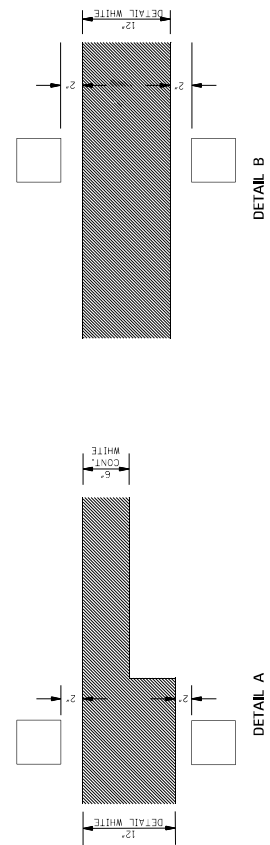




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MISS.	

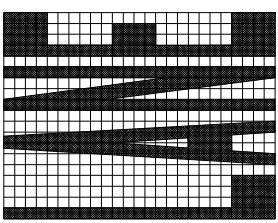
MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
<b>PAVEMENT MARKING DETAILS FOR INTERCHANGE EXIT RAMP (PARALLEL AND TAPER)</b>	
WORKING NUMBER	SHEET NUMBER
PM-4	602/5-1
DATE	ISSUE DATE
	MAY 01, 2017

- GENERAL NOTES:
- \*\* 1. SEE SHEET PM-1 FOR THE PLACEMENT OF LANE-LINE STRIPE WITH RESPECT TO THE PAVEMENT JOINT AND FOR THE PLACEMENT OF THE EDGE STRIPE WITH RESPECT TO THE EDGE OF THE PAVED SHOULDER.
  - \*\* 2. EDGE OF MAIN EXISTING REFLECTIVE ROADWAYS RANGES PAVEMENT MARKERS ON A 40'-0" SPACING WILL BE REQUIRED ON LANE-LINES THROUGH ALL INTERCHANGE AREAS BEGINNING 1000' IN ADVANCE IN DIRECTION OF TRAFFIC OF THE EXIT RAMP TAPER AND CONTINUING THROUGH THE INTERCHANGE TO THE END OF THE ENTRANCE RAMP TAPER.
  - 3. RAISED PAVEMENT MARKERS BE HIGH PERFORMANCE REFLECTIVE 'APPROVED SOURCES OF MATERIALS.'

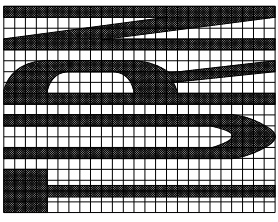


STATE MISS.	PROJECT NO.										
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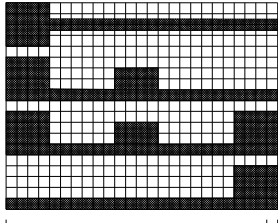
  



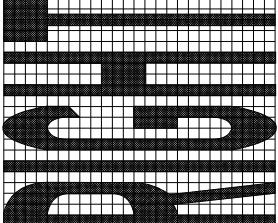
8'-4" x 6'-4" x 4"



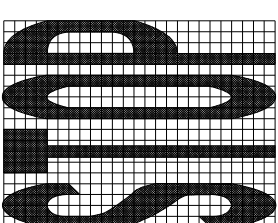
8'-4" x 6'-4" x 4"



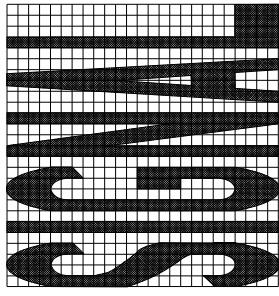
8'-4" x 6'-4" x 4"



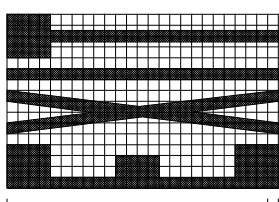
8'-4" x 7'-8" x 4"



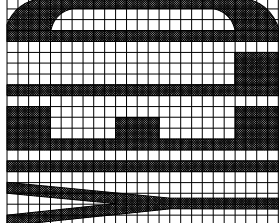
8'-4" x 6'-4" x 4"



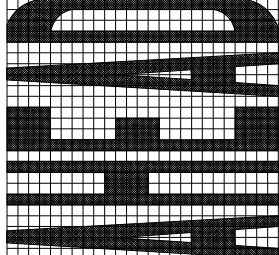
8'-4" x 8'-8" x 4"



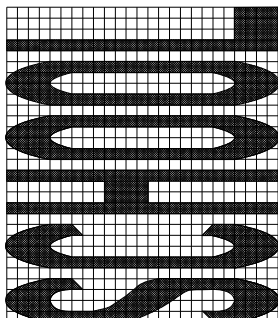
8'-4" x 5'-4" x 4"



8'-4" x 7'-8" x 4"



8'-4" x 8'-0" x 4"



8'-4" x 9'-8" x 4"

**GENERAL NOTES:**

- TWO HORIZONTAL GAPS (CAUSED BY TEMPLATE CONNECTIONS) OF 1/2" LESS THAN THE STRETCHING LETTERS SHALL BE SHOWN IN THE STRETCHING LETTERS.
- FOR OTHER DETAILS, SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- PAY QUANTITIES FOR PAVEMENT MARKING LEGENDS ARE AS FOLLOWS:

LEGEND	AREA (FT <sup>2</sup> )
STOP	24.6
RIGHT	28.6
LEFT	19.5
TRAFFIC	22.7
AHEAD	32.3
YIELD	26.8
EXIT	18.5
SIGNAL	32.5
SCHOOL	35.5

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION  
STANDARD PLAN**

**PAVEMENT MARKING  
LEGEND DETAILS**

	BY	REVISION	DATE

ISSUE DATE: MAY 01, 2017  
SHEET NUMBER: PM-5  
PROJECT NUMBER: 60355

STATE MISS.	PROJECT NO.	
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**THRU ARROW**

**TURN ARROW**

**LANE-REDUCTION ARROW**

**COMBINATION ARROW**

**ONLY**

**YIELD LINE**

**1-WAY ARROW**

LEGEND/SYMBOL	AREA (FT <sup>2</sup> )
ONLY	22.0
TURN ARROW	16.4
THRU ARROW	12.3
COMB. ARROW	27.5
1-WAY ARROW	24.3
LANE REDUCTION ARROW	40.0

**GENERAL NOTES:**

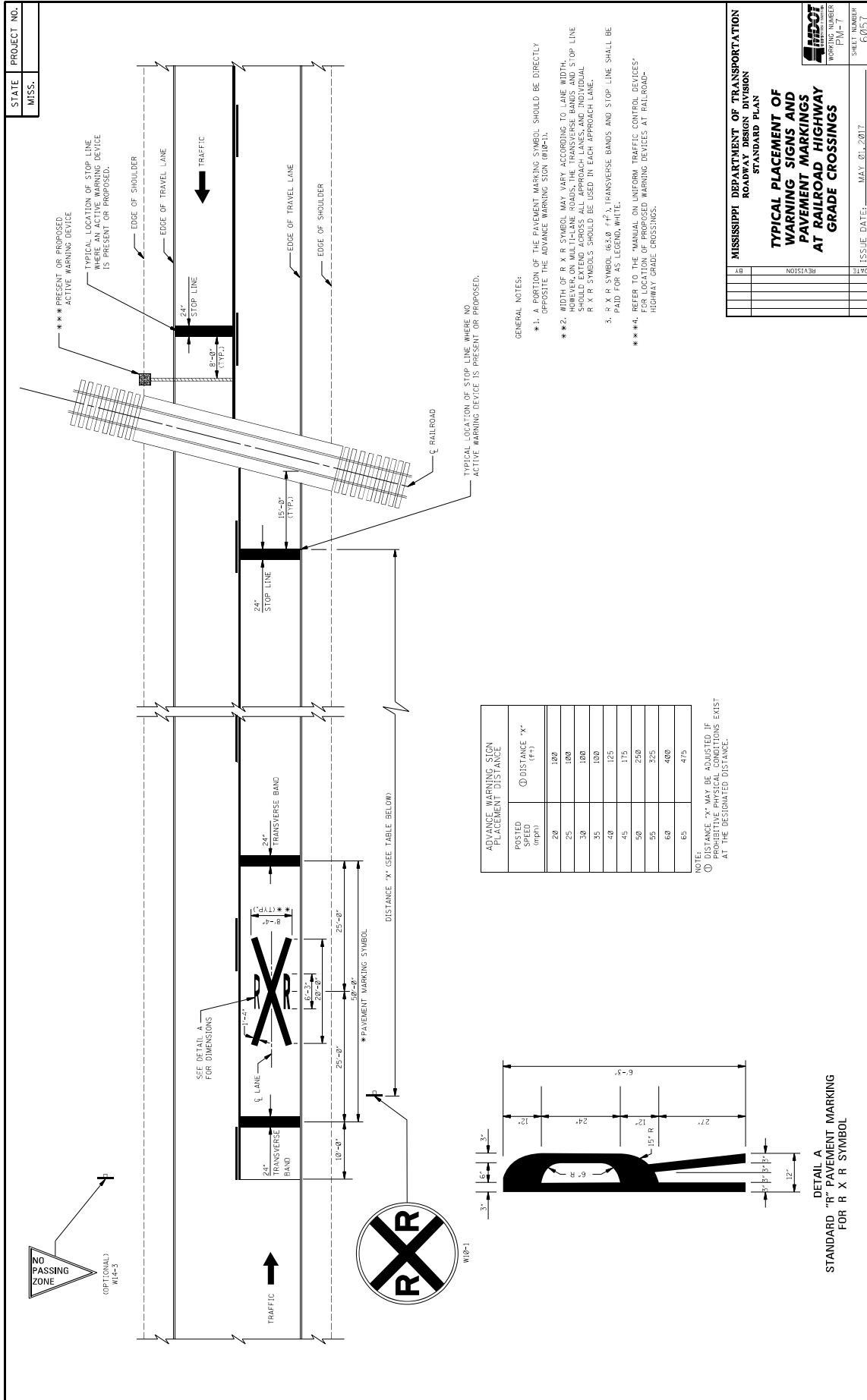
- TWO HORIZONTAL GAPS (CAUSED BY TEMPLATE CONNECTORS OF 1/16" OR LESS AND EXTENDING THE FULL WIDTH) ARE PERMITTED IN EACH LETTER.
- FOR OTHER DETAILS, SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- DIMENSIONS OF THE YIELD LINE MAY VARY WITH APPROVAL OF THE ENGINEER. SEE MUTCD, LATEST EDITION, FOR ALLOWABLE DIMENSIONS.
- PAY QUANTITIES FOR PAVEMENT MARKING LEGENDS ARE AS FOLLOWS:

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION  
STANDARD PLAN**

**PAVEMENT MARKING  
LEGEND DETAILS**

DATE	REVISION	BY

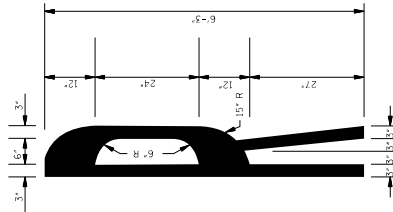
ISSUE DATE: MAY 01, 2017



- GENERAL NOTES:
- \*\* 1. A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).
  - \*\* 2. WIDTH OF R X R SYMBOL MAY VARY ACCORDING TO LANE WIDTH. SYMBOL SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
  - 3. R X R SYMBOL (63.0 x 47.1) TRANSVERSE BANDS AND STOP LINE SHALL BE PAID FOR AS LEGEND WHITE.
  - \*\* \* 4. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR LOCATION OF PROPOSED WARNING DEVICES AT RAILROAD-HIGHWAY GRADE CROSSINGS.

POSTED SPEED (mph)	ADVANCE WARNING SIGN PLACEMENT DISTANCE (ft)
20	100
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475

NOTE: DISTANCE 'X' MAY BE SHORTER IF PROTECTIVE PHYSICAL CONDITIONS EXIST AT THE DESIGNATED DISTANCE.



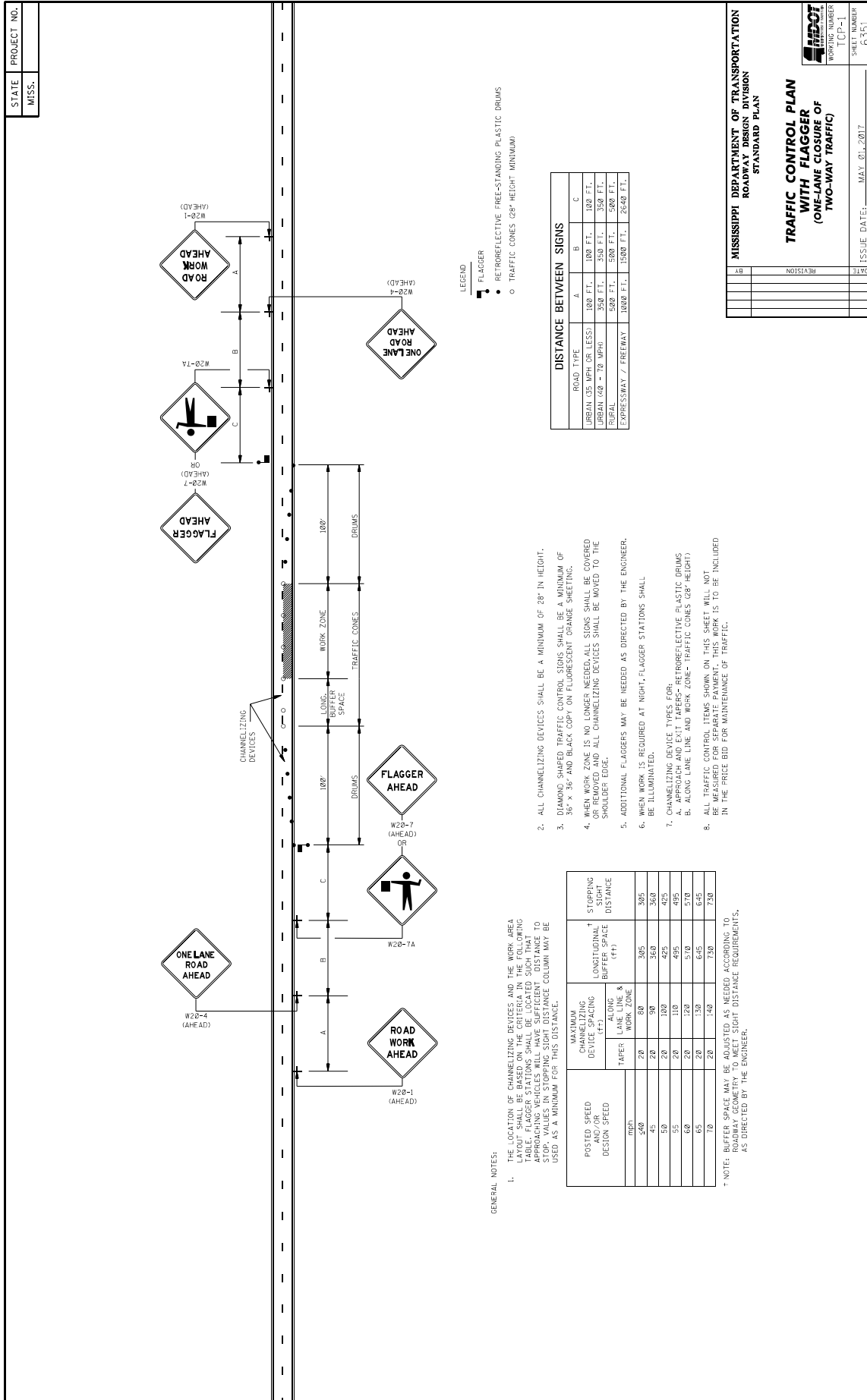
MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION  
STANDARD PLAN

**TYPICAL PLACEMENT OF WARNING SIGNS AND PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSINGS**

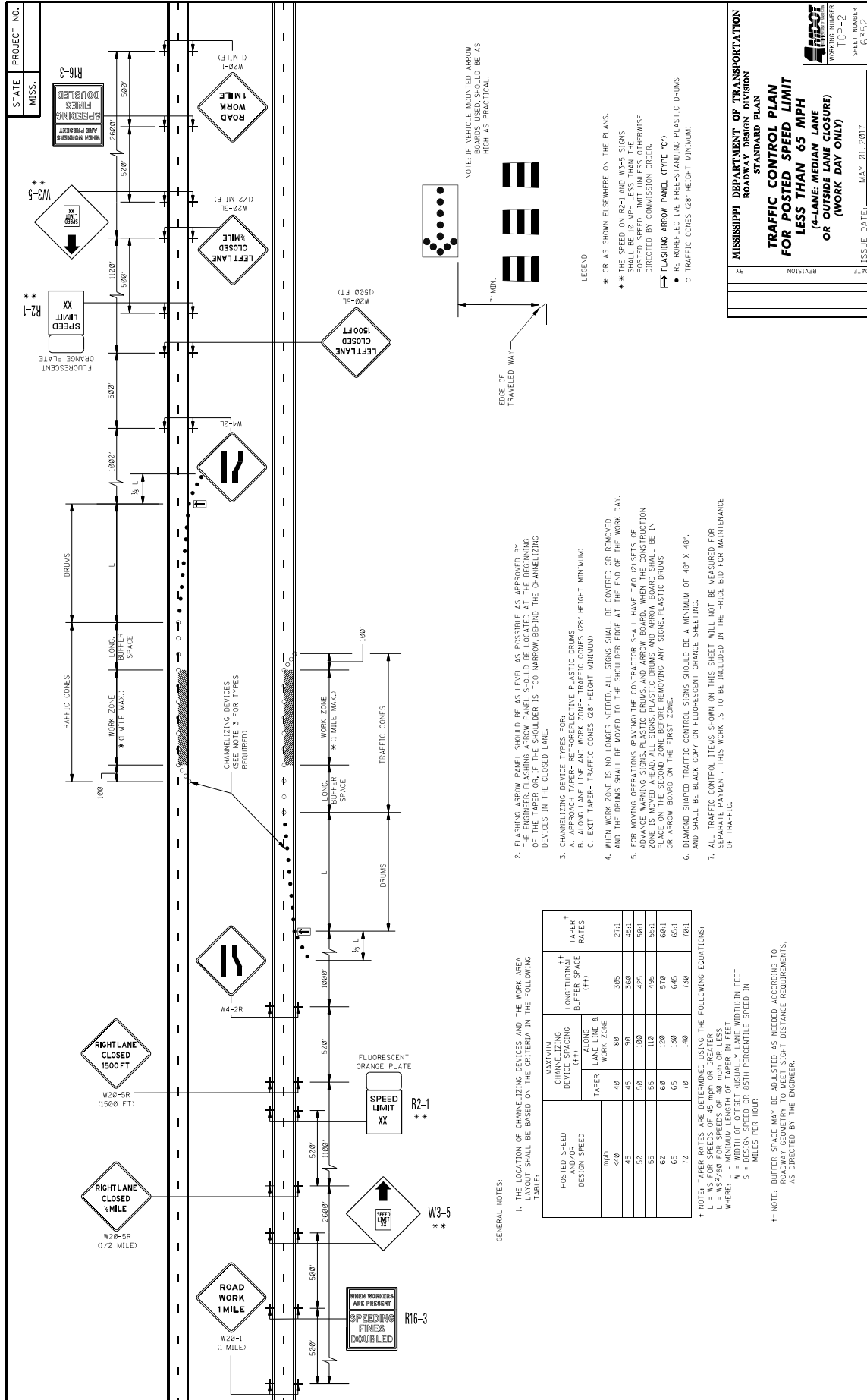
WORKING NUMBER: P10-1

SHEET NUMBER: 6031

ISSUE DATE: MAY 01, 2017







STATE PROJECT NO. MISS. R16-3

WORKERS ARE PRESENT SPEEDING FINES DOUBLED

W20-1 (1 MILE) ROAD WORK 1 MILE

W20-5P (1/2 MILE) LEFT LANE CLOSED 1/2 MILE

W20-5R (1500 FT) RIGHT LANE CLOSED 1500 FT

W4-2R

W20-5L (1500 FT) LEFT LANE CLOSED 1500 FT

W20-5

R2-1 SPEED LIMIT XX

W3-5

R16-3

WHEN WORKERS ARE PRESENT SPEEDING FINES DOUBLED

LEGEND

\* OR AS SHOWN ELSEWHERE ON THE PLANS.

\*\* THE SPEED ON R2-1 AND W3-5 SIGNS SHALL BE 10 MPH LESS THAN THE POSTED SPEED LIMIT UNLESS OTHERWISE DIRECTED BY COMMISSION ORDER.

FLASHING ARROW PANEL (TYPE 'C')

RETROREFLECTIVE FREE-STANDING PLASTIC DRUMS

TRAFFIC CONES (28" HEIGHT MINIMUM)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION  
STANDARD PLAN

**TRAFFIC CONTROL PLAN  
FOR POSTED SPEED LIMIT  
LESS THAN 65 MPH  
(4-LANE; MEDIAN LANE  
OR OUTSIDE LANE CLOSURE)  
OR (WORK DAY ONLY)**

ISSUE DATE: MAY 01, 2017

WORKING NUMBER TPC-2

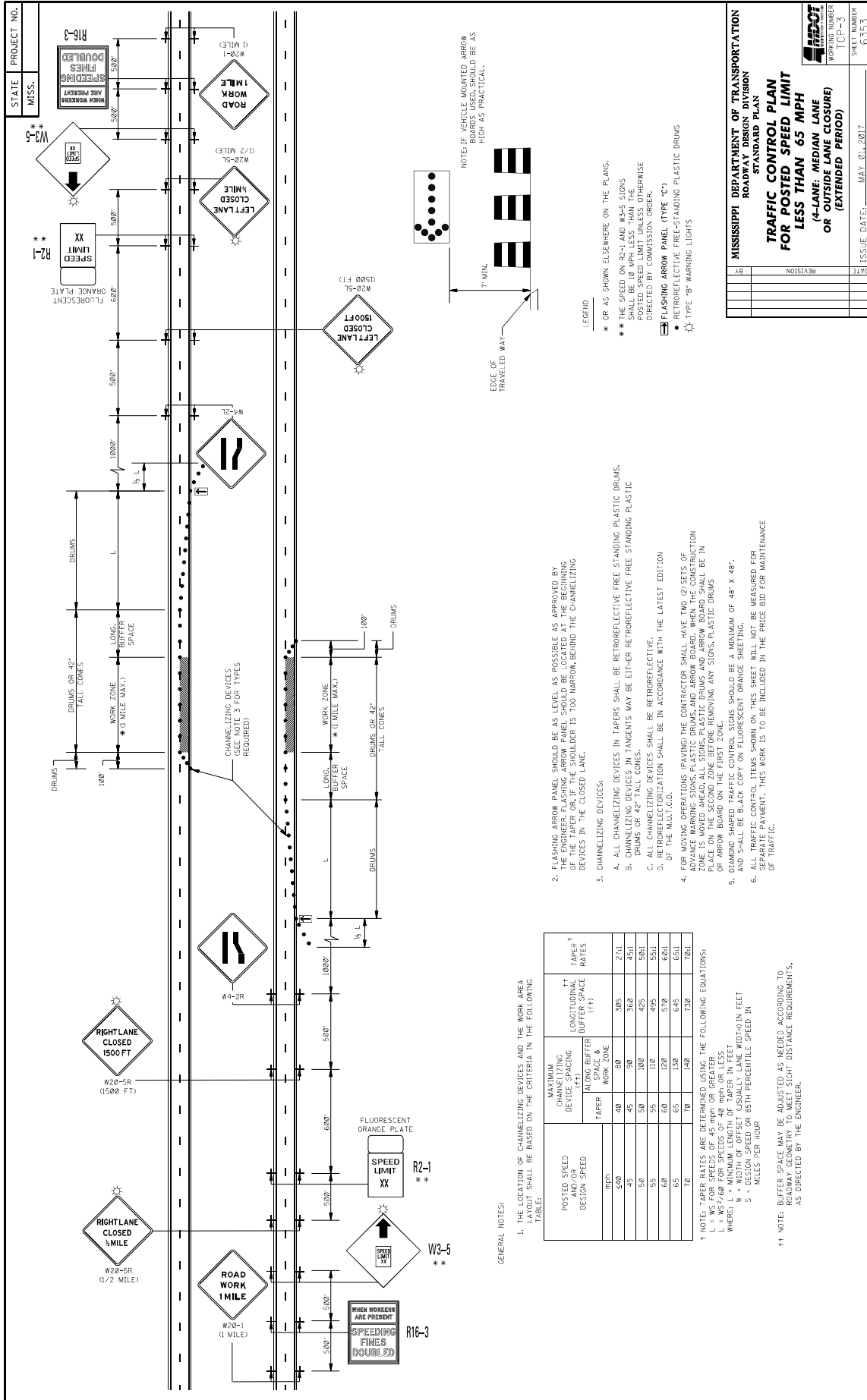
SHEET NUMBER 6352

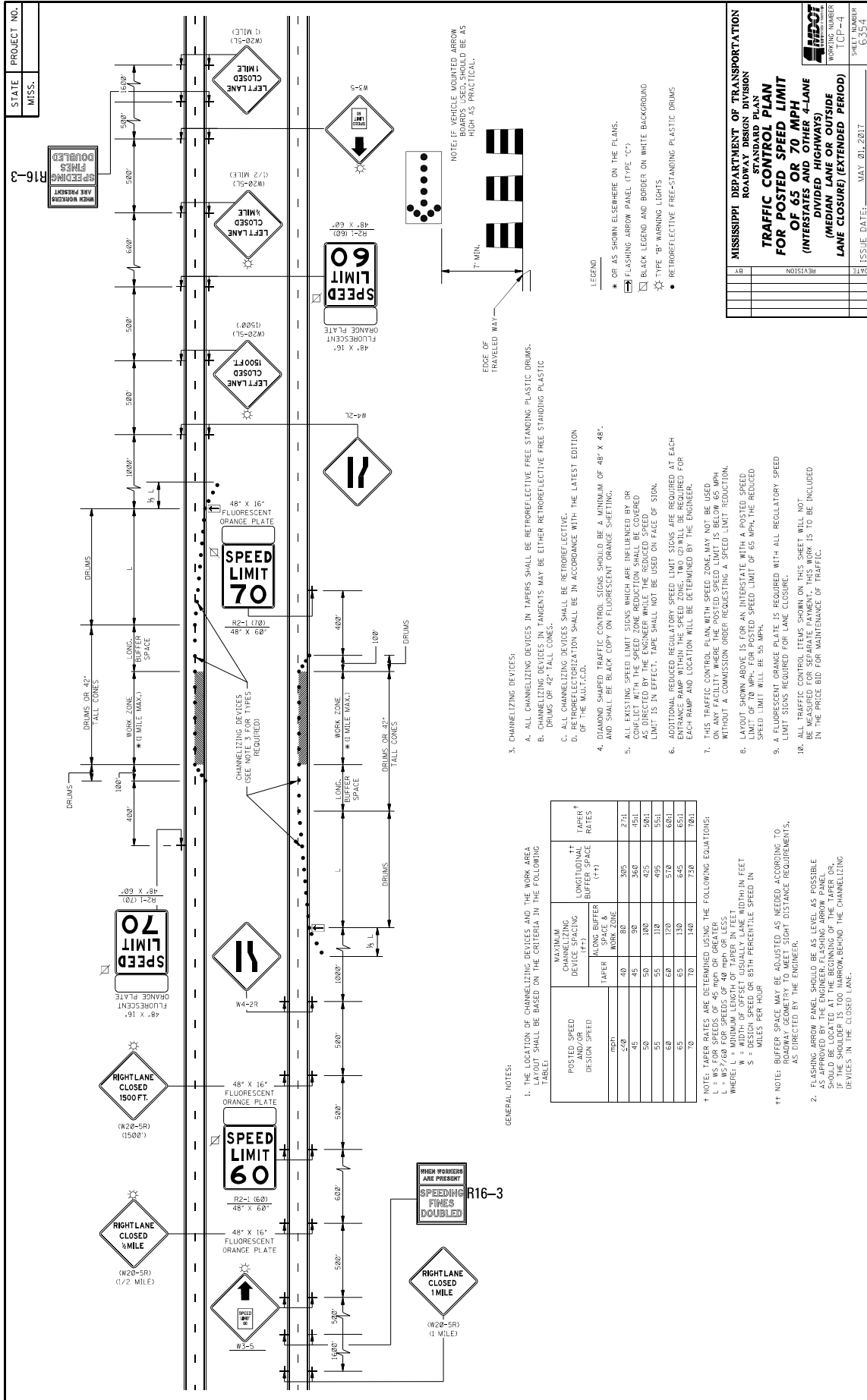
1. THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE:
2. FLASHING ARROW PANEL SHOULD BE AS LEVEL AS POSSIBLE AS APPROVED BY THE DESIGN ENGINEER. THE PANEL SHOULD BE PLACED AT THE END OF THE TAPER OR IF THE SHOULDER IS TOO NARROW, BEHIND THE CHANNELIZING DEVICES IN THE CLOSED LANE.
3. CHANNELIZING DEVICES TYPES FOR:
  - A. APPROACH TAPER- RETROREFLECTIVE PLASTIC DRUMS
  - B. ALONG LANE LINE AND WORK ZONE- TRAFFIC CONES (28" HEIGHT MINIMUM)
  - C. EXIT TAPER- TRAFFIC CONES (28" HEIGHT MINIMUM)
4. WHEN WORK ZONE IS NO LONGER NEEDED, ALL SIGNS SHALL BE COVERED OR REMOVED AND THE DRUMS SHALL BE MOVED TO THE SHOULDER EDGE AT THE END OF THE WORK DAY.
5. FOR MOVING OPERATIONS (PAVING) THE CONTRACTOR SHALL HAVE TWO (2) SETS OF ADVANCE WARNING SIGNS, PLASTIC DRUMS, AND ARROW BOARD. WHEN THE CONSTRUCTION ZONE IS MOVED AHEAD, ALL SIGNS, PLASTIC DRUMS AND ARROW BOARD SHALL BE IN PLACE ON THE SECOND ZONE BEFORE REMOVING ANY SIGNS, PLASTIC DRUMS OR ARROW BOARD ON THE FIRST ZONE.
6. DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHOULD BE A MINIMUM OF 48" X 48" AND SHALL BE BLACK COPY ON FLUORESCENT ORANGE SHEETING.
7. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

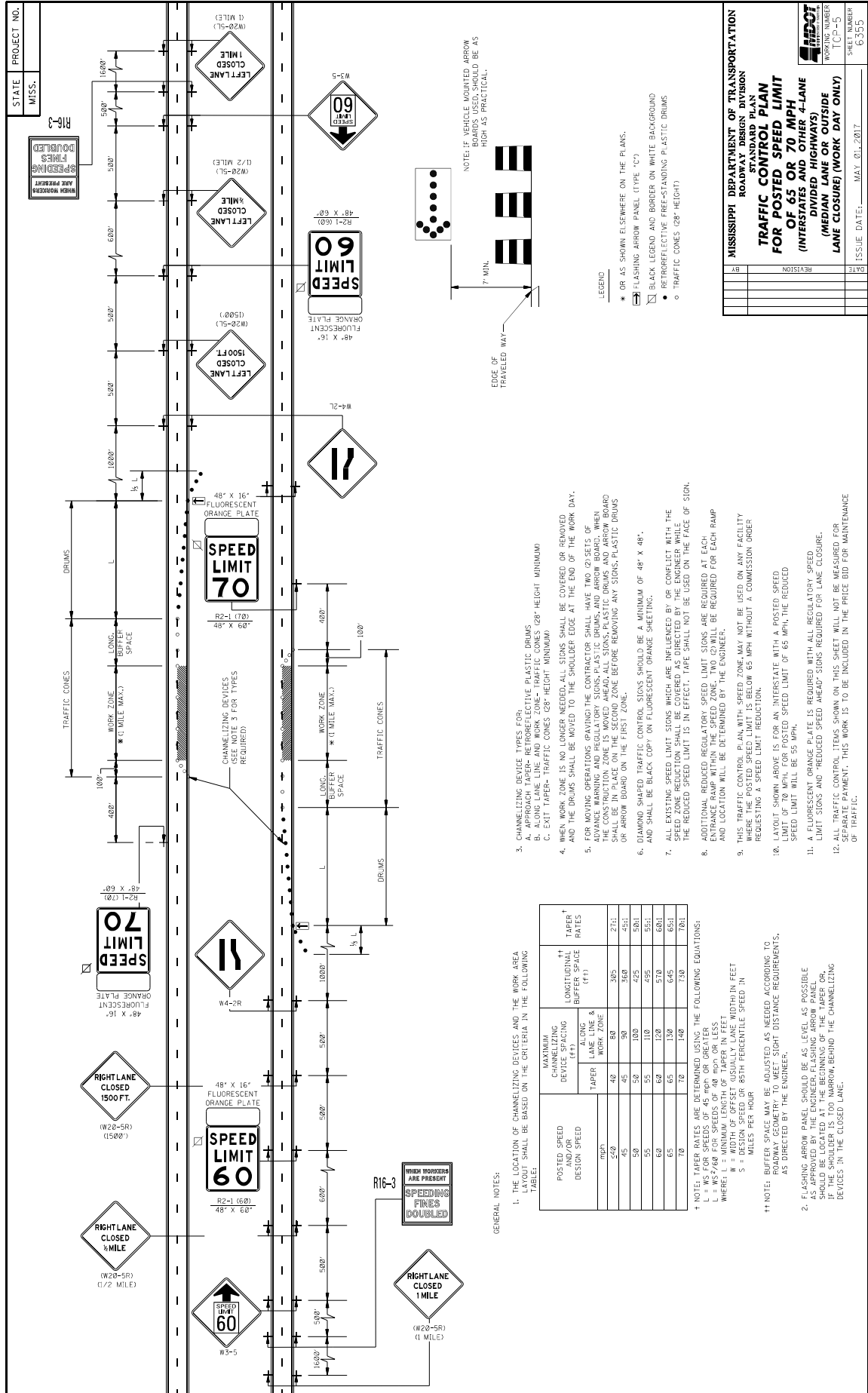
POSTED SPEED AND/OR DESIGN SPEED	MAXIMUM CHANNELIZING DEVICE SPACING (FT)		LONGITUDINAL BUFFER SPACE (FT)	TAPER RATES
	LANE LINE & WORK ZONE	EXIT TAPER		
45	40	80	305	27:1
50	45	90	360	45:1
55	50	100	425	50:1
60	55	110	495	55:1
65	60	120	570	60:1
70	65	130	645	65:1
75	70	140	730	70:1

† NOTE: TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:  
 L = WS FOR SPEEDS OF 45 MPH OR GREATER  
 L = WS FOR SPEEDS OF 30 MPH OR GREATER  
 WHERE: L = MINIMUM LENGTH OF TAPER IN FEET  
 W = WIDTH OF OFFSET (USUALLY LANE WIDTH IN FEET)  
 S = DESIGN SPEED OR 85TH PERCENTILE SPEED IN MILES PER HOUR

†† NOTE: BUFFER SPACE MAY BE ADJUSTED AS NEEDED ACCORDING TO ROADWAY GEOMETRY TO MEET SIGHT DISTANCE REQUIREMENTS, AS DIRECTED BY THE ENGINEER.







STATE PROJECT NO. MISS.

ISSUE DATE: MAY 01, 2017

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION

TRAFFIC CONTROL PLAN  
FOR POSTED SPEED LIMIT  
OF 65 OR 70 MPH  
(INTERSTATES AND OTHER 4-LANE  
DIVIDED HIGHWAYS)  
(MEDIAN LANE OR OUTSIDE  
LANE CLOSURE) (WORK DAY ONLY)

WORKING NUMBER: TCC-5  
SHEET NUMBER: 6355

- GENERAL NOTES:
1. THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE:
  2. CHANNELIZING DEVICES TYPES FOR:
    - A. APPROACH TAPER- RETROREFLECTIVE PLASTIC DRUMS
    - B. ALONG LANE LINE AND WORK ZONE- TRAFFIC CONES (28" HEIGHT MINIMUM)
    - C. EXIT TAPER- TRAFFIC CONES (28" HEIGHT MINIMUM)
  3. WHEN WORK ZONE IS NO LONGER NEEDED- ALL SIGNS SHALL BE COVERED OR REMOVED AND THE DRUMS SHALL BE MOVED TO THE SHOULDER EDGE AT THE END OF THE WORK DAY.
  4. FOR MOVING OPERATIONS (PAVING) THE CONTRACTOR SHALL HAVE TWO (2) SETS OF ADVANCE WARNING AND REGULATORY SIGNS- PLASTIC DRUMS AND ARROW BOARD. WHEN THE WORK ZONE REDUCTION SHALL BE COVERED AS DIRECTED BY THE ENGINEER WHILE OR ARROW BOARD ON THE SECOND ZONE BEFORE REMOVING ANY SIGNS, PLASTIC DRUMS OR ARROW BOARD ON THE FIRST ZONE.
  5. DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHOULD BE A MINIMUM OF 48" X 48", AND SHALL BE BLACK COPY ON FLOURESCENT ORANGE SHEETING.
  6. ALL EXISTING SPEED LIMIT SIGNS WHICH ARE INVIOLATED BY OR CONFLICT WITH THE SPEED ZONE REDUCTION SHALL BE COVERED AS DIRECTED BY THE ENGINEER WHILE THE REDUCED SPEED LIMIT IS IN EFFECT. TAPE SHALL NOT BE USED ON THE FACE OF SIGN.
  7. ADDITIONAL APPROVED REGULATORY SPEED LIMIT SIGNS ARE REQUIRED AT EACH ENTRANCE RAMP WITHIN THE SPEED ZONE. TWO (2) WILL BE REQUIRED FOR EACH RAMP AND LOCATION WILL BE DETERMINED BY THE ENGINEER.
  8. THIS TRAFFIC CONTROL PLAN WITH SPEED ZONE MAY NOT BE USED ON ANY FACILITY REQUESTING A SPEED LIMIT REDUCTION.
  9. LIMIT OF 70 MPH FOR POSTED SPEED LIMIT OF 65 MPH WITHOUT A COMMISSION ORDER REQUESTING A SPEED LIMIT REDUCTION.
  10. LAYOUT SHOWN ABOVE IS FOR AN INTERSTATE WITH A POSTED SPEED LIMIT OF 70 MPH. LIMIT OF 65 MPH FOR POSTED SPEED LIMIT OF 65 MPH, THE REDUCED SPEED LIMIT WILL BE 55 MPH.
  11. A FLOURESCENT ORANGE PLATE IS REQUIRED WITH ALL REGULATORY SPEED LIMIT SIGNS AND "REDUCED SPEED AHEAD" SIGNS REQUIRED FOR LANE CLOSURE.
  12. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

POSTED SPEED AND/OR DESIGN SPEED (mph)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)		LONGITUDINAL BUFFER SPACE (FT)	TAPER* RATES
	LANE LINE & WORK ZONE	WORK ZONE		
45	40	80	305	27:1
50	45	90	360	45:1
55	50	100	425	50:1
60	55	110	495	55:1
65	60	120	570	60:1
70	65	130	645	65:1
75	70	140	730	70:1

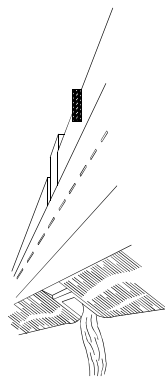
\* NOTE: TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:  
 L = MS FOR SPEEDS OF 45 MPH OR GREATER  
 L = MS FOR SPEEDS OF 30 MPH OR GREATER  
 WHERE: L = MINIMUM LENGTH OF TAPER IN FEET  
 M = WIDTH OF OFFSET (USUALLY LANE WIDTH IN FEET)  
 S = DESIGN SPEED OR 85TH PERCENTILE SPEED IN MILES PER HOUR

\*\* NOTE: BUFFER SPACE MAY BE ADJUSTED AS NEEDED ACCORDING TO LOCALITY AND LIGHT DISTANCE REQUIREMENTS, AS DIRECTED BY THE ENGINEER.

2. FLASHING ARROW PANEL SHOULD BE AS LEVEL AS POSSIBLE AND SHOULD BE LOCATED AT THE BEGINNING OF THE TAPER OR IF THE SHOULDER IS TOO NARROW BEHIND THE CHANNELIZING DEVICES IN THE CLOSED LANE.

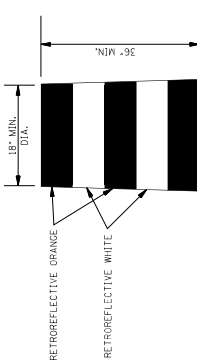
STATE MISS.

PROJECT NO.



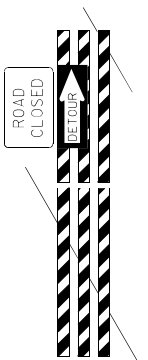
**WING BARRICADES**

- WING BARRICADES ARE TYPE III BARRICADES ERECTED ON THE SHOULDER OF HIGHWAY OR RESTRICTED ROADWAY. WING BARRICADES MAY BE USED AS A MOUNTING FOR THE ADVANCE WARNING SIGNS OR FLASHERS.
- WING BARRICADES SHOULD BE USED:
  - IN ADVANCE OF A CONSTRUCTION PROJECT EVEN WHEN NO PART OF THE ROADWAY IS ACTUALLY CLOSED.
  - IN ADVANCE OF ALL BRIDGE OR CULVERT WIDENING OPERATIONS.

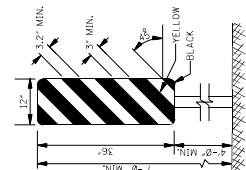


**PLASTIC DRUM STRIPING DETAIL**

- PLASTIC DRUMS SHALL BE ON END AND USED AS AN EXPEDIENT METHOD FOR TRAFFIC CHANNELIZATION. THE COLOR AND MARKING OF DRUMS SHALL BE CONSISTENT WITH THE MARKING OF THE ROADWAY. THE DRUMS SHALL BE MARKED WITH RETROREFLECTIVE HORIZONTAL, CIRCUMFERENTIAL STRIPES 12 ORANGE & 2 WHITE 6" WIDE.
- DRUMS SHOULD NEVER BE PLACED IN THE ROADWAY WITHOUT WARNING SIGNS.
- WHERE PRACTICAL PLASTIC DRUMS SHOULD BE PLACED NO CLOSER THAN 3'-0" FROM THE EDGE OF TRAVELED LANE.



**BARRICADE CLOSING A ROAD**

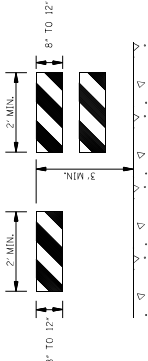


**TYPE 3 OBJECT MARKER (OM-3R)**

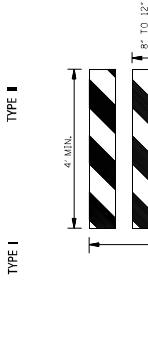
- TYPE 3 OBJECT MARKERS SHALL BE USED AT ALL EXPOSED BRIDGE ABUTMENTS AND AT OTHER LOCATIONS AS DEEMED NECESSARY BY THE ENGINEER.
- THE OM-3R IS SIMILAR EXCEPT THE STRIPES SLOPE DOWNWARD FROM THE UPPER LEFT SIDE TO THE LOWER RIGHT SIDE AND SHALL BE PLACED ON THE LEFT SIDE OF THE OBJECT.
- THE INSIDE EDGE OF THE MARKER SHALL BE IN LINE WITH THE INNER EDGE OF THE OBSTRUCTION.

**BARRICADE CHARACTERISTICS**

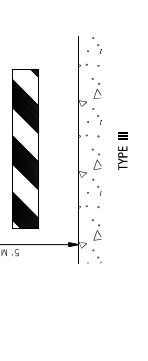
	I	II	III
WIDTH OF RAIL **	8" MIN. - 12" MAX.	8" MIN. - 12" MAX.	8" MIN. - 12" MAX.
LENGTH OF RAIL **	24" MIN.	24" MIN.	48" MIN.
WIDTH OF STRIPE *	6"	6"	6"
HEIGHT	36" MIN.	36" MIN.	60" MIN.
NUMBER OF RETROREFLECTORIZED RAIL FACES	2 (ONE EACH DIRECTION)	4 (TWO EACH DIRECTION)	3 IF FACING TRAFFIC IN ONE DIRECTION 6 IF FACING TRAFFIC IN TWO DIRECTIONS



**TYPE I**



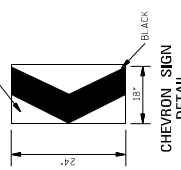
**TYPE II**



**TYPE III**

**STANDARD BARRICADES**

- THE MARKING FOR BARRICADE RAILS SHALL BE ORANGE AND WHITE (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).
- RAIL STRIPE SHALL BE 6 INCHES EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.
- DO NOT PLACE SANDBAGS OR OTHER DEVICES TO PROVIDE MASS ON THE BOTTOM RAIL THAT WILL BLOCK VIEW OR RAIL FACE.
- FOR ADDITIONAL INFORMATION OR DETAILS SEE MUTCD, LATEST EDITION.
- BARRICADES ARE CLASSIFIED BY FHWA AS CATEGORY II WORK ZONE DEVICES WHICH REQUIRE SUCCESSFUL CRASH TESTING. A LIST OF CRASHWORTHY BARRICADES AND OTHER CATEGORY II DEVICES CAN BE FOUND ON FHWA'S WEBSITE: [http://safety.fhwa.dot.gov/roadway\\_dept/policy\\_guidance/road\\_hardware/cat2.cfm](http://safety.fhwa.dot.gov/roadway_dept/policy_guidance/road_hardware/cat2.cfm)



**CHEVRON SIGN DETAIL**

- A CHEVRON SIGN CONSISTS OF A BLACK CHEVRON TYPE MARKING ON AN ORANGE BACKGROUND AND SHALL POINT IN THE DIRECTION OF TRAFFIC FLOW.
- THE CHEVRON SIGN SHALL BE MOUNTED ON CRASHWORTHY SUPPORT.
- CHEVRON SIGNS MAY BE USED TO SUPPLEMENT OTHER STANDARD DEVICES WHERE ONE OR MORE LANES ARE CLOSED FOR CONSTRUCTION OR MAINTENANCE. THEY SHOULD BE PLACED APPROXIMATELY 2'-0" BEHIND THE LANE TRANSITION STRIPE.

STATE MISS.

PROJECT NO.

WORKING NUMBER  
TCP-6

SHEET NUMBER  
6350

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**  
ROADWAY DESIGN DIVISION  
STANDARD PLAN

**HIGHWAY SIGN AND BARRICADE DETAILS FOR CONSTRUCTION PROJECTS**

ISSUE DATE: MAY 01, 2017

STATE MISS.	PROJECT NO.	
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### MOBILE OPERATIONS ON MULTILANE ROAD

**MOBILE OPERATIONS ON MULTILANE ROAD**

### MOBILE OPERATIONS ON TWO-LANE ROAD

**MOBILE OPERATIONS ON TWO-LANE ROAD**

**NOTES FOR MULTILANE LANE OPERATION:**

- VEHICLES USED FOR THESE OPERATIONS SHOULD BE MADE HIGHLY VISIBLE WITH APPROPRIATE EQUIPMENT, SUCH AS FLASHING LIGHTS, ROTATING BEACONS, FLASHS, SIGNS, OR ARROW PANELS.
- SHADOW VEHICLE 2 SHOULD BE EQUIPPED WITH AN ARROW PANEL AND TRUCK MOUNTED ATTENUATOR (TMA), AN APPROPRIATE LANE CLOSURE SIGN SHOULD BE LEGIBLY DISPLAYED ON SHADOW VEHICLE 2 SO AS NOT TO OBSCURE THE ARROW PANEL.
- SHADOW VEHICLE 1 SHOULD BE EQUIPPED WITH AN ARROW PANEL AND TRUCK-MOUNTED ATTENUATOR (TMA).
- SHADOW VEHICLE 2 SHOULD TRAVEL AT A VARYING DISTANCE FROM THE WORK OPERATION SO AS TO PROVIDE ADEQUATE SIGHT DISTANCE FOR TRAFFIC APPROACHING FROM THE REAR.
- WHEN ADEQUATE SHOULDER WIDTH IS NOT AVAILABLE, SHADOW VEHICLE 2 SHOULD BE ELIMINATED.
- ON HIGH-SPEED ROADWAYS, A THIRD SHADOW VEHICLE SHOULD BE USED (I.e., VEHICLE 3 ON THE SHOULDER OF PRACTICALLY, VEHICLE 2 IN THE CLOSED LANE, AND VEHICLE 1 IN THE CLOSED LANE).
- ARROW PANELS SHALL BE AS A MINIMUM TYPE B, 60" X 30" IN ACCORDANCE WITH THE CRITERIA PRESENTED IN THE MUTCD.
- WORK SHOULD NORMALLY BE DONE DURING OFF-PEAK HOURS.
- VEHICLE-MOUNTED SIGNS SHOULD BE MOUNTED WITH THE BOTTOM OF THE SIGN LOCATED AT A MINIMUM HEIGHT OF 48" ABOVE THE PAVEMENT AND SHALL NOT BE OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
- ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

**NOTES FOR TWO-LANE OPERATION:**

- WHERE PRACTICAL AND WHEN NEEDED, THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS. IF THIS CAN NOT BE DONE FREQUENTLY AS AN ALTERNATIVE, A "DO NOT PASS" SIGN MAY BE PLACED ON THE REAR OF THE VEHICLE BLOCKING THE LANE.
- THE DISTANCE BETWEEN THE WORK AND SHADOW VEHICLES MAY VARY ACCORDING TO TERRAIN, PAINT DRYING TIME, AND OTHER FACTORS. SHADOW VEHICLES ARE USED TO WARN TRAFFIC OF THE OPERATION AHEAD. WHENEVER ADEQUATE SIGHT DISTANCE IS NOT AVAILABLE, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. THE SHADOW VEHICLE SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ADDITIONAL SHADOW VEHICLES TO WARN AND REDUCE THE SPEED OF ONCOMING OR OPPOSING TRAFFIC MAY BE USED. POLICE PATROL CARS MAY BE USED FOR THIS PURPOSE.
- A TRUCK-MOUNTED ATTENUATOR (TMA) SHOULD BE USED ON THE SHADOW VEHICLE AND MAY BE USED ON THE WORK VEHICLE.
- THE WORK VEHICLE SHALL BE EQUIPPED WITH BEACONS, AND THE SHADOW VEHICLE SHALL BE EQUIPPED WITH BEACONS. HIGH-BEAM LIGHTS AND WORK LIGHTS MOUNTED ON THE REAR, ADJACENT TO THE SIGN, SHADOW AND WORK VEHICLES SHALL DISPLAY FLASHING OR ROTATING BEACONS BOTH FORWARD AND TO THE REAR.
- VEHICLE-MOUNTED SIGNS SHOULD BE MOUNTED WITH THE BOTTOM OF THE SIGN LOCATED AT A MINIMUM HEIGHT OF 48" ABOVE THE PAVEMENT AND SHALL NOT BE OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
- ARROW BOARD TO BE USED IN CAUTION MODE.
- ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

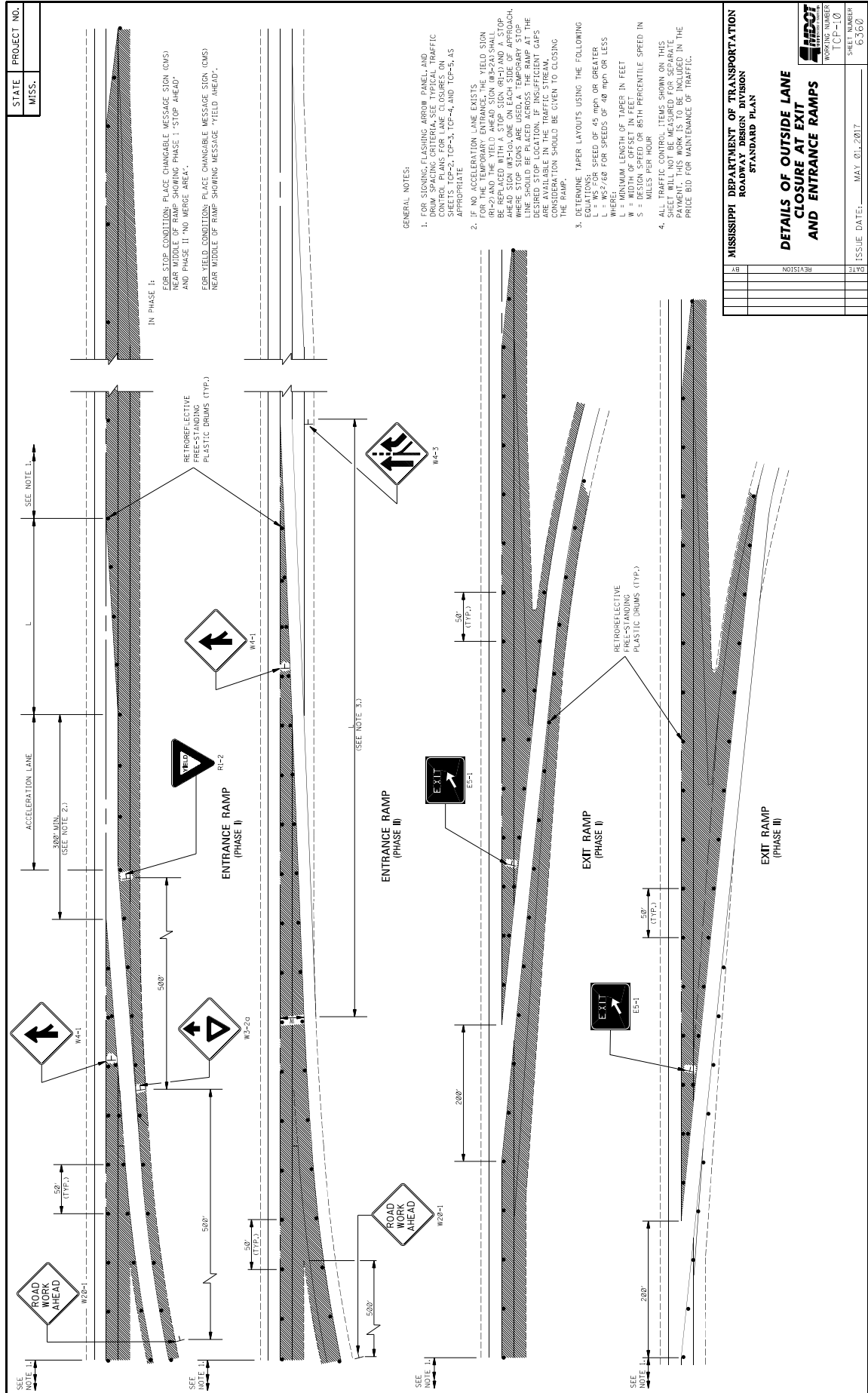
**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**  
ROADWAY DESIGN DIVISION  
STANDARD PLAN

**TRAFFIC CONTROL PLAN**  
**MOBILE OPERATIONS**  
**MULTILANE ROADS**  
**TWO-LANE ROADS**

NO.	REVISION	DATE

ISSUE DATE: MAY 01, 2017

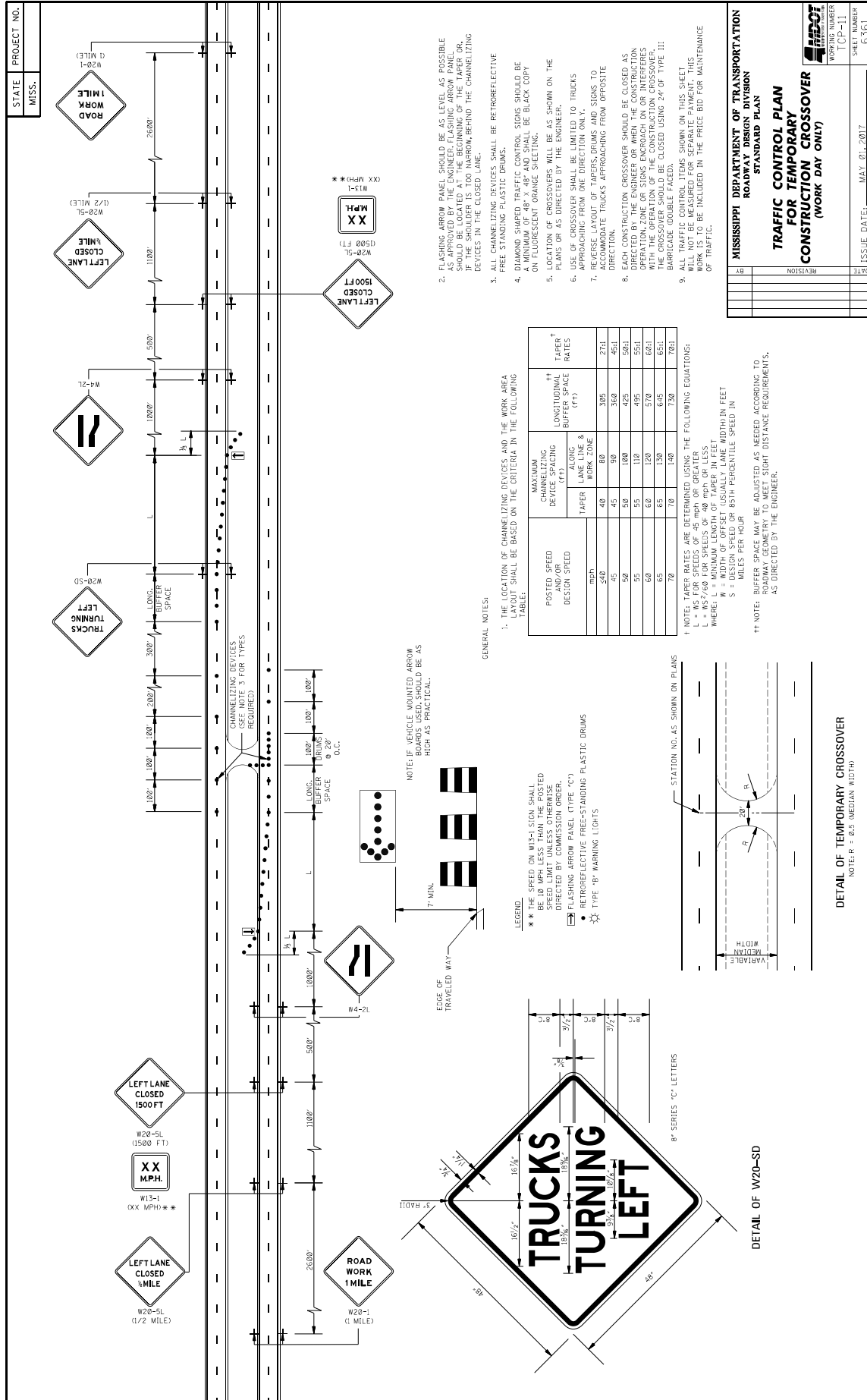
SHEET NUMBER TCP-9	PROJECT NUMBER G339
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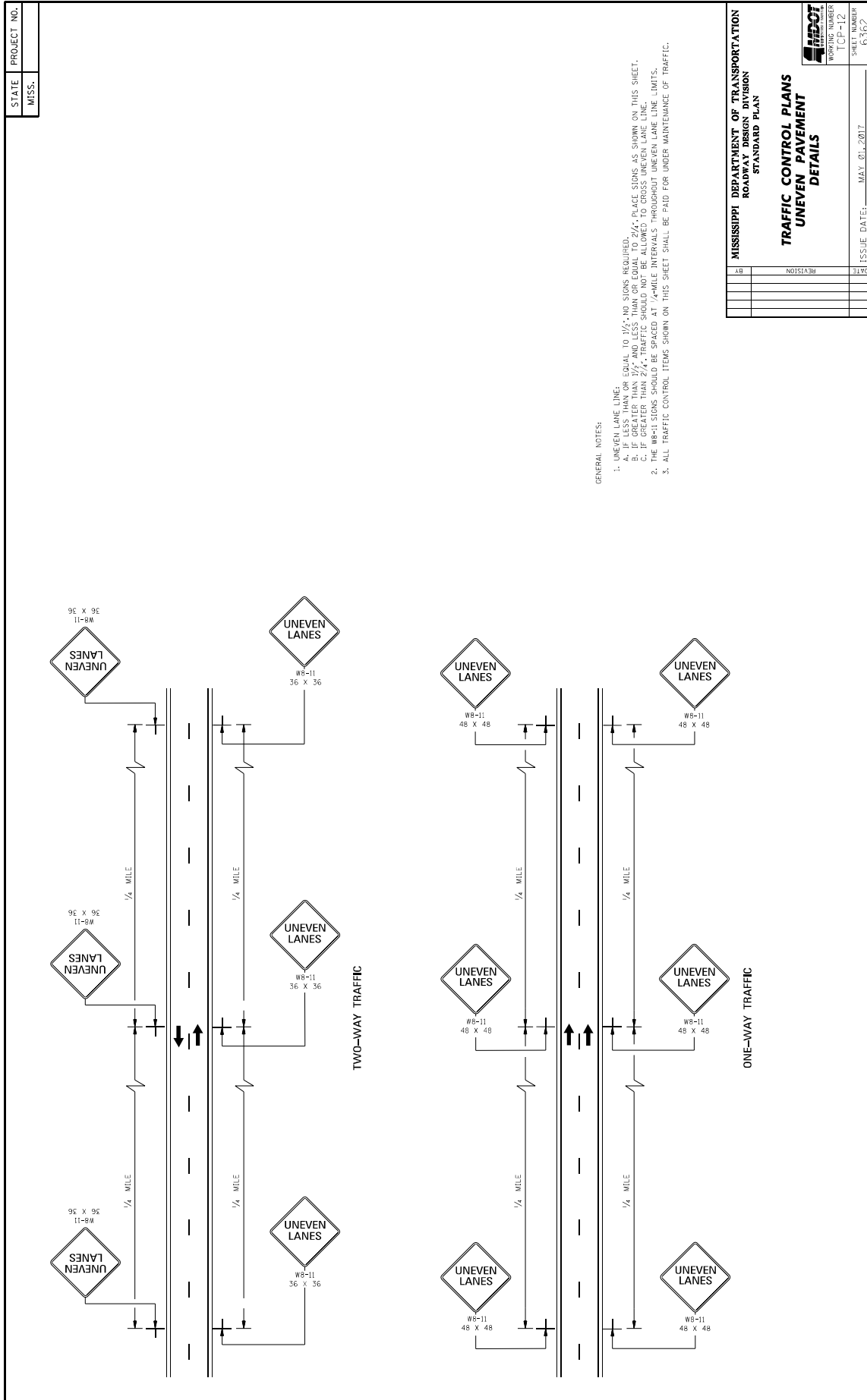
GENERAL NOTES:

- FOR SIGNING FLASHING ARROW PANEL AND DRUM SPACING CRITERIA, SEE TYPICAL TRAFFIC CONTROL PLANS FOR LANE CLOSURES ON APPROXIMATELY 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000, 3200, 3400, 3600, 3800, 4000, 4200, 4400, 4600, 4800, 5000, 5200, 5400, 5600, 5800, 6000, 6200, 6400, 6600, 6800, 7000, 7200, 7400, 7600, 7800, 8000, 8200, 8400, 8600, 8800, 9000, 9200, 9400, 9600, 9800, 10000 FEET.
- IF NO ACCELERATION LANE EXISTS FOR THE TEMPORARY LANE ENTRIES (R4-2) AND THE YIELD AHEAD SIGN (R4-2) SHALL BE REPLACED WITH A STOP SIGN (R4-1) AND A STOP LINE. STOP SIGNS ARE USED AT A TEMPORARY STOP LINE SHOULD BE PLACED ACROSS THE RAMP AT THE DESIRED STOP LOCATION. IF INSUFFICIENT GAPS ARE AVAILABLE TO MAINTAIN A SINGLE LANE OF TRAFFIC, CONSIDERATION SHOULD BE GIVEN TO CLOSING THE RAMP.
- DETERMINE TAPER LAYOUTS USING THE FOLLOWING EQUATIONS: SPEEDS OF 45 MPH OR GREATER  
 $L = WS^2/60$  FOR SPEEDS OF 40 MPH OR LESS  
 WHERE:  
 L = MINIMUM LENGTH OF TAPER IN FEET  
 S = DESIGN SPEED OR 80TH PERCENTILE SPEED IN MILES PER HOUR  
 W = DESIGN WIDTH OF TAPER IN FEET  
 ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE BIDDING. ALL ITEMS WILL BE MEASURED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

STATE PROJECT NO. MISS.	
MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
DETAILS OF OUTSIDE LANE CLOSURE AT EXIT AND ENTRANCE RAMP	
DATE	ISSUE DATE: MAY 01, 2017
BY	WORKING NUMBER TCP-110
REVISION	SHEET NUMBER G300







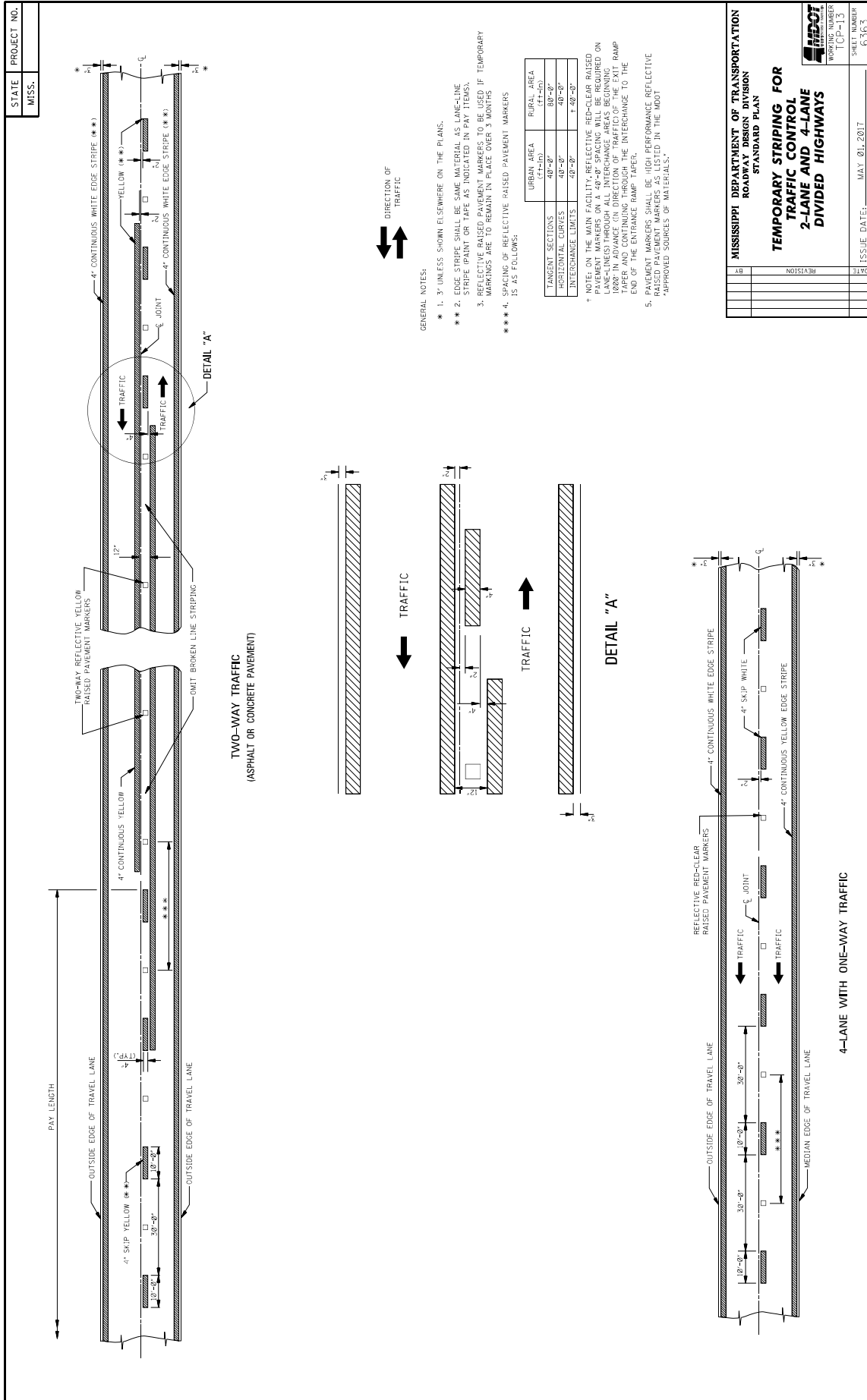
DATE	BY	REVISION	BY	REVISION	BY	REVISION	BY	REVISION	BY

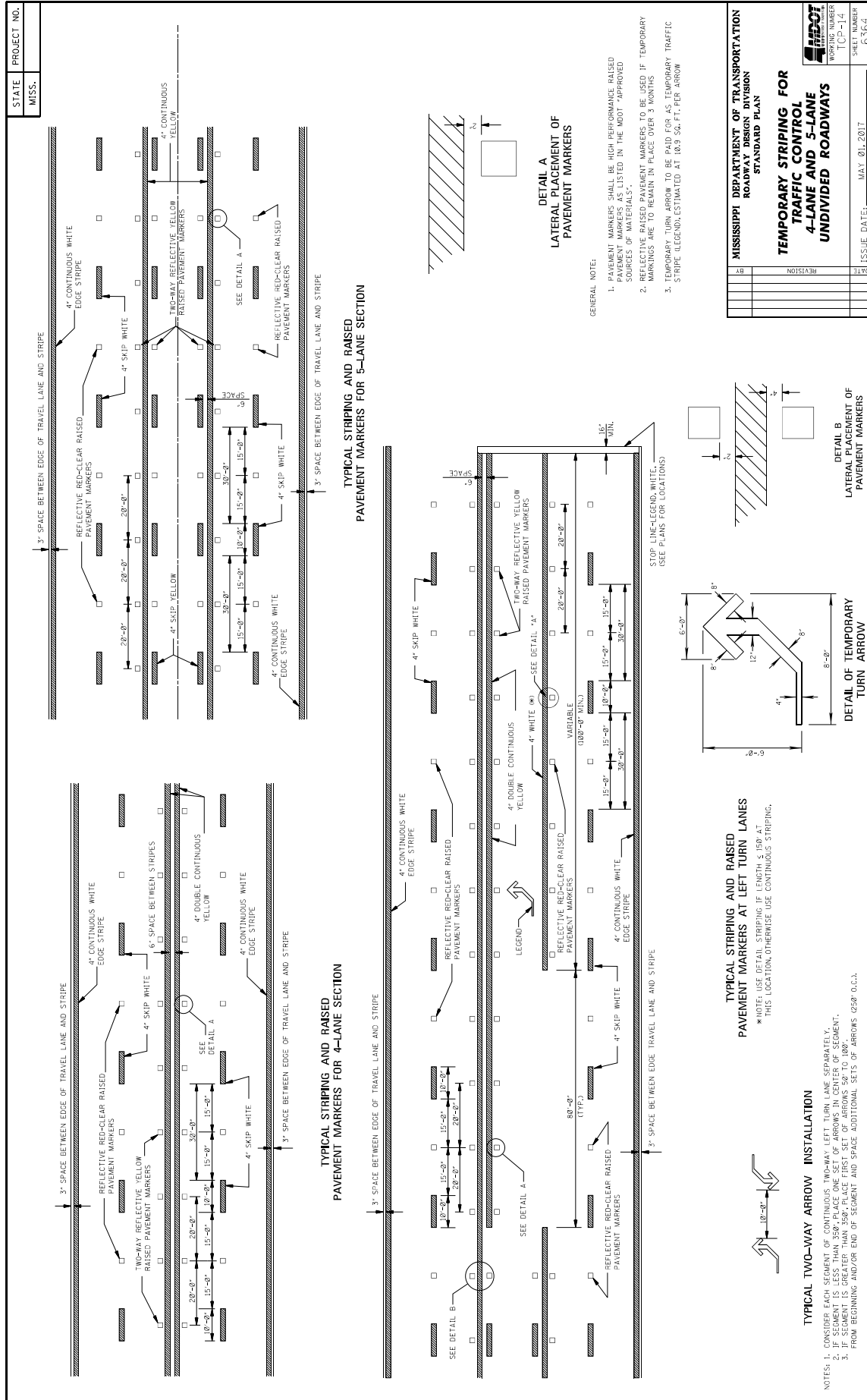
MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION  
STANDARD PLAN

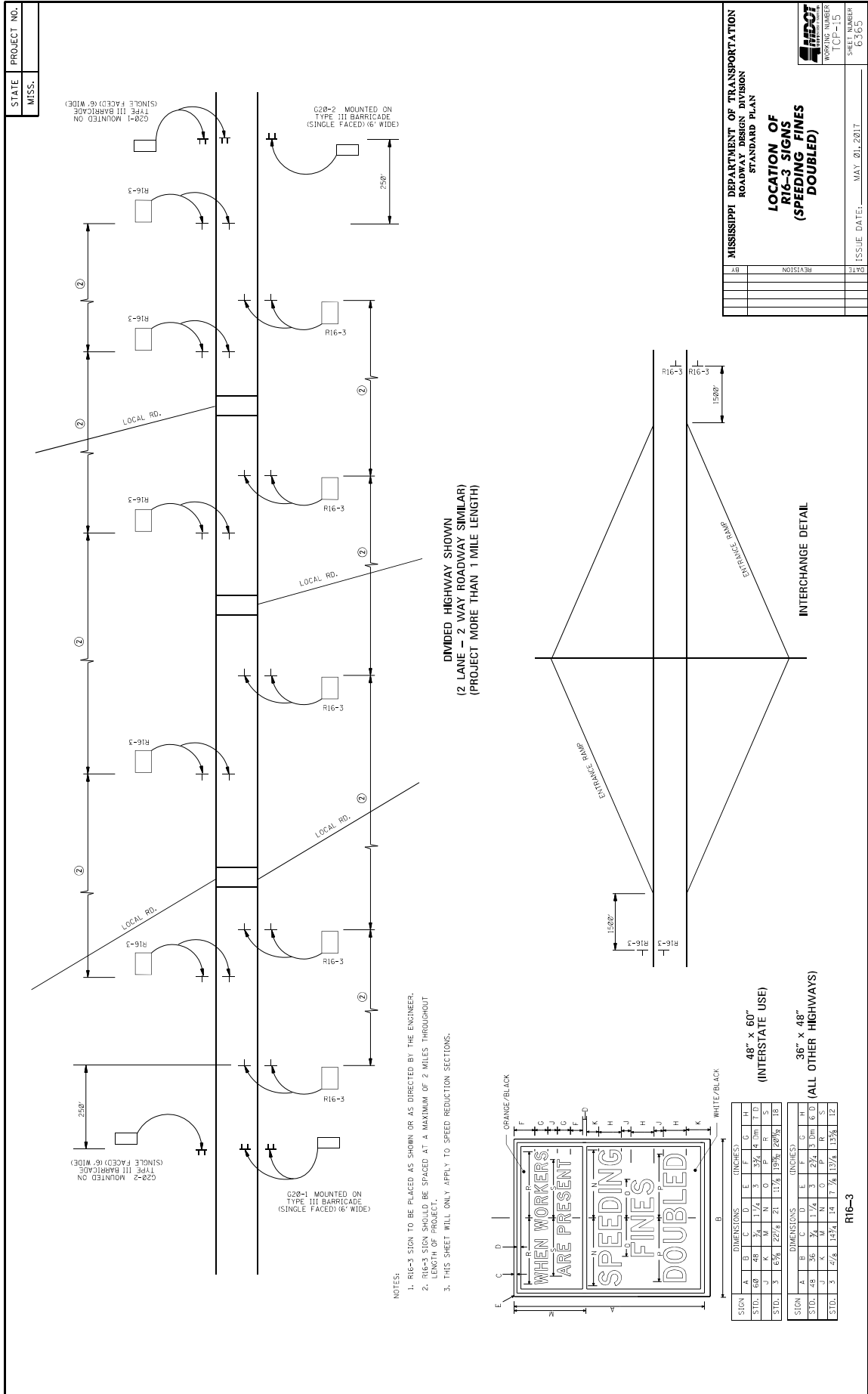
**TRAFFIC CONTROL PLANS  
UNEVEN PAVEMENT  
DETAILS**

SHEET NUMBER  
TCP-12  
6262

ISSUE DATE: MAY 01, 2017



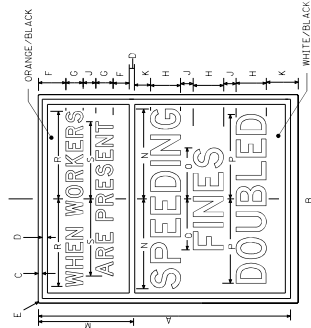




STATE	PROJECT NO.
MISS.	

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
<b>LOCATION OF R16-3 SIGNS (SPEEDING FINES DOUBLED)</b>	
WORKING NUMBER	ICP-15
SHEET NUMBER	6365
DATE	
BY	
REVISION	
ISSUE DATE	MAY 20, 2017

- NOTES:
1. R16-3 SIGN TO BE PLACED AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  2. R16-3 SIGN SHOULD BE SPACED AT A MAXIMUM OF 2 MILES THROUGHOUT LENGTH OF PROJECT.
  3. THIS SHEET WILL ONLY APPLY TO SPEED REDUCTION SECTIONS.



SIGN		DIMENSIONS (INCHES)												
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
STD.	6-0	48	36	1-1/4	5-1/4	4	1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
SIGN		DIMENSIONS (INCHES)												
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
STD.	3	47/8	14 1/2	14	7 1/8	13 1/8	13 1/8	12						

**R16-3**

**48" x 60"**  
(INTERSTATE USE)

**36" x 48"**  
(ALL OTHER HIGHWAYS)

STATE MISS.	PROJECT NO.	
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**TYPICAL SHOULDER CLOSURE**

(1) TO BE USED WITH EIGHT (8) FOOT OR GREATER WIDTH IMPROVED SHOULDER.  
(2) TO BE USED WHEN CONSTRUCTION VEHICLES (EQUIPMENT) ENCRUSHES ON OR WITHIN TWO (2) FEET OF THE SHOULDER BREAK.

**TYPICAL SHOULDER WORK #1**  
(SEE NOTE A-I THIS SHEET)

**TYPICAL SHOULDER WORK #2**

NOTE:  
WORK OUTSIDE TWO (2) FOOT AND WITHIN TEN (10) FEET OF THE SHOULDER BREAK MAY BE PROTECTED BY PLACING DRUMS ALONG THE SHOULDER EDGE 300 FEET PRIOR TO AND 50 FEET BEYOND THE WORK AREA, OR SEE NOTE A-3 THIS SHEET.

**DETAIL OF DRUM PLACEMENT AT PAVEMENT EDGE DROP-OFF**

GRANULAR MATERIAL REQUIRED (SAME CLASSIFICATION AS SHOULDER MATERIAL. SEE TYPICAL SECTIONS)

**NOTES:**

- \* A. PAVEMENT EDGE DROP-OFF
  - 1. IF LESS THAN TWO AND ONE QUARTER (2.25) INCHES-NO PROTECTION REQUIRED. PLACE A SHOULDER SIGN (W21-5) 500 FEET IN ADVANCE OF WORK ZONE SHOULDER AND A LOW SHOULDER SIGN (W8-9) AT THE BEGINNING AND THROUGHOUT THE WORK ZONE B (1538'+O.C.).
  - 2. TWO AND ONE QUARTER TO THREE INCHES-PLACE DRUMS, VERTICAL PANELS OR BARRICADES EVERY 120 FEET ON TANGENT SECTIONS FOR SPEEDS OF 50 MILES PER HOUR OR GREATER. CONES MAY BE USED IN PLACE OF DRUMS, PANELS, AND BARRICADES DURING DAYLIGHT HOURS. FOR TANGENT SECTIONS WITH SPEEDS LESS THAN 50 MILES PER HOUR AND FOR CURVES, DEVICES SHOULD BE PLACED EVERY 50 FEET. SPACING FOR TAPERS SHOULD BE IN ACCORDANCE WITH THE MULTIPLIER  $L/3L$ , WHERE L IS THE TAPER LENGTH IN FEET.
  - 3. GREATER THAN THREE (3) INCHES-POSITIVE SEPARATION OR WEDGE WITH 4:1 OR FLATTER SLOPE NEEDED. IF THERE IS EIGHT (8) FEET OR MORE DISTANCE BETWEEN THE EDGE OF TRAVEL LANE AND DROP-OFF, THEN DRUMS, PANELS OR BARRICADES MAY BE USED.
  - 4. FOR TEMPORARY CONDITIONS, DROP-OFFS GREATER THAN THREE (3) INCHES MAY BE PROTECTED WITH DRUMS, VERTICAL PANELS OR BARRICADES FOR SHORT DISTANCES DURING DAYLIGHT HOURS WHILE WORK IS BEING DONE IN THE DROP-OFF AREA.
  - 5. LESSER TREATMENTS THAN THOSE DESCRIBED ABOVE MAY BE CONSIDERED FOR LOW-VOLUME LOCAL STREETS.
- B. DRUM SPACING
  - 1. TANGENTS =  $2 \times S$
  - 2. WHERE  $S =$  SPEED IN MPH (POSTED OR 85 PERCENTILE)
  - 3. WHERE  $L =$  TAPER LENGTH IN FEET
  - 4. WHERE  $W =$  WIDTH OF OFFSET IN FEET
- C. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER MAINTENANCE OF TRAFFIC.
 

TABLE V-1. GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE	
X = SPEED (MPH)	LENGTH (FEET)
25	35
30	45
35	55
40	65
45	75
50	85
55	95
60	105
65	115

\* \* \* POSTED SPEED, OFF-PEAK 85 PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN DIVISION  
STANDARD PLAN

**TRAFFIC CONTROL DETAILS  
DRUM PLACEMENT  
AND SHOULDER CLOSURE**

DATE	REVISION

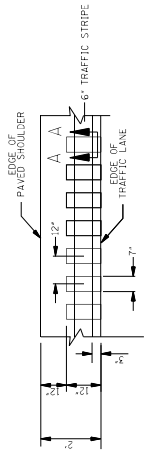
ISSUE DATE: MAY 01, 2017

WORKING NUMBER: T-CP-16

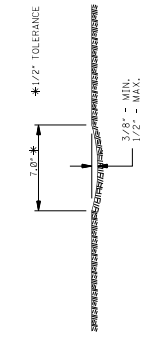
PROJECT NUMBER: G5366

STATE	PROJECT NO.
MISS.	

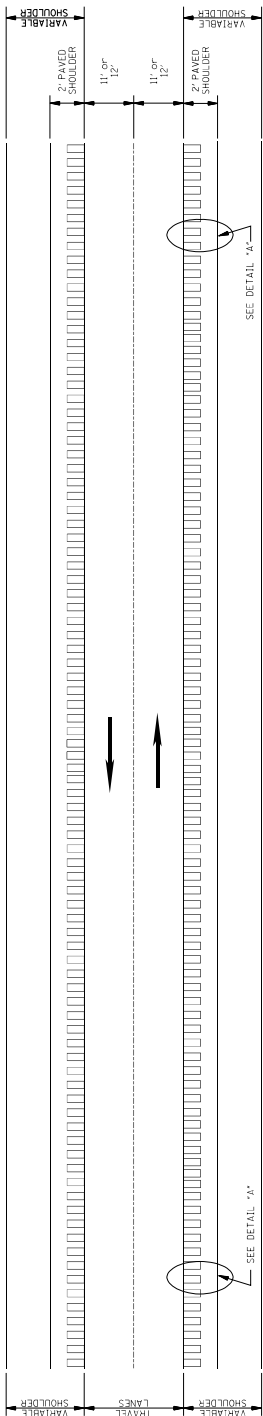
- GENERAL NOTES
- GROUND-IN RUMBLE STRIPES SHALL BE APPLIED ON LEFT AND RIGHT SHOULDERS OF ALL PAVED SHOULDERS ON THIS PROJECT.
  - GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO ALL PAVED SHOULDERS ON ALL ROADWAYS OR OTHER INTERUPTIONS IN NORMAL SHOULDER WIDTH AS DIRECTED BY THE ENGINEER.
  - COST TO BE PAID FOR USING APPROPRIATE PAY ITEMS.
  - GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO:
    - MAINLINE
    - INTERSECTING ROADWAY IF OVERLAD OR RECONSTRUCTED BEYOND NORMAL MAINLINE R.O.W.
    - ANY ROADWAY WITH EXISTING RUMBLE STRIPES PRIOR TO CONSTRUCTION.
  - DO NOT USE WHERE TRAVEL LANE IS LESS THAN 11' WIDE.



DETAIL "A"



SECTION "A-A"

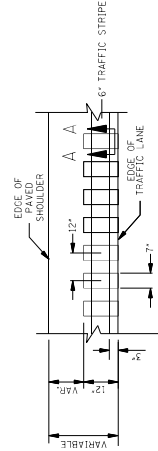


PLAN  
NOT TO SCALE

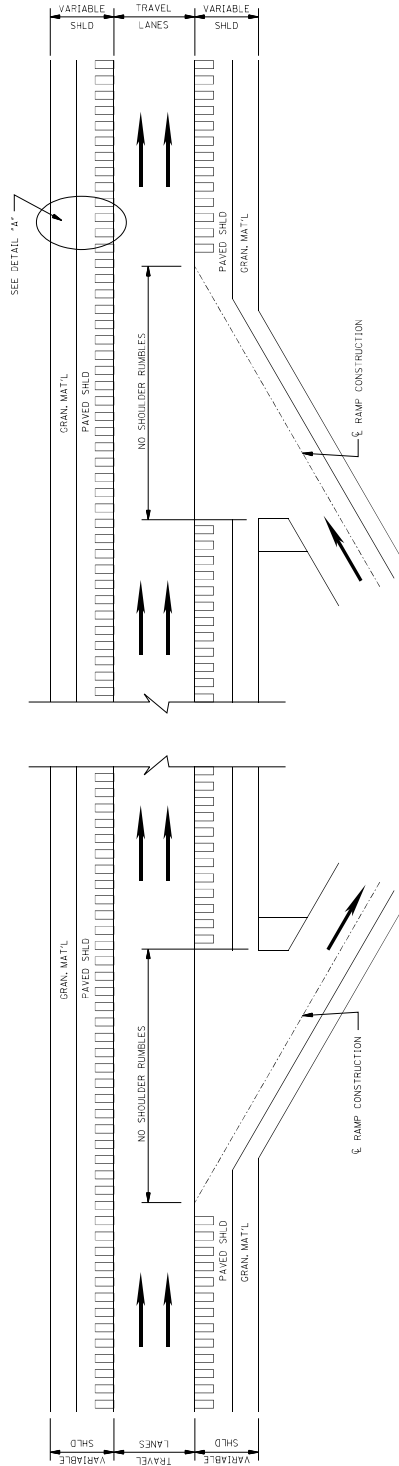
MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
<b>RUMBLE STRIPES 2-LANE HIGHWAYS (ASPHALT LANES, 2-FT ASPHALT SHOULDERS)</b>	
BY	REVISION
DATE	ISSUE DATE: MAY 21, 2017
SHEET NUMBER RS-1 6064-1	

STATE	PROJECT NO.
MISS.	

- GENERAL NOTES
- GROUND-IN RUMBLE STRIPES SHALL BE APPLIED ON LEFT AND RIGHT SHOULDERS OF ALL PAVED SHOULDERS ON THIS PROJECT.
  - GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO ALL PAVED SHOULDERS ON ROADWAYS OR OTHER INTERSECTIONS IN NORMAL SHOULDER WIDTH AS DIRECTED BY THE ENGINEER.
  - COST TO BE PAID FOR USING APPROPRIATE PAY ITEMS.
  - GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO:
    - MAINLINE
    - INTERSECTING ROADWAY IF OVERLAD OR RECONSTRUCTED BEYOND NORMAL MAINLINE R.O.W.
    - ANY ROADWAY WITH EXISTING RUMBLE STRIPES PRIOR TO CONSTRUCTION.

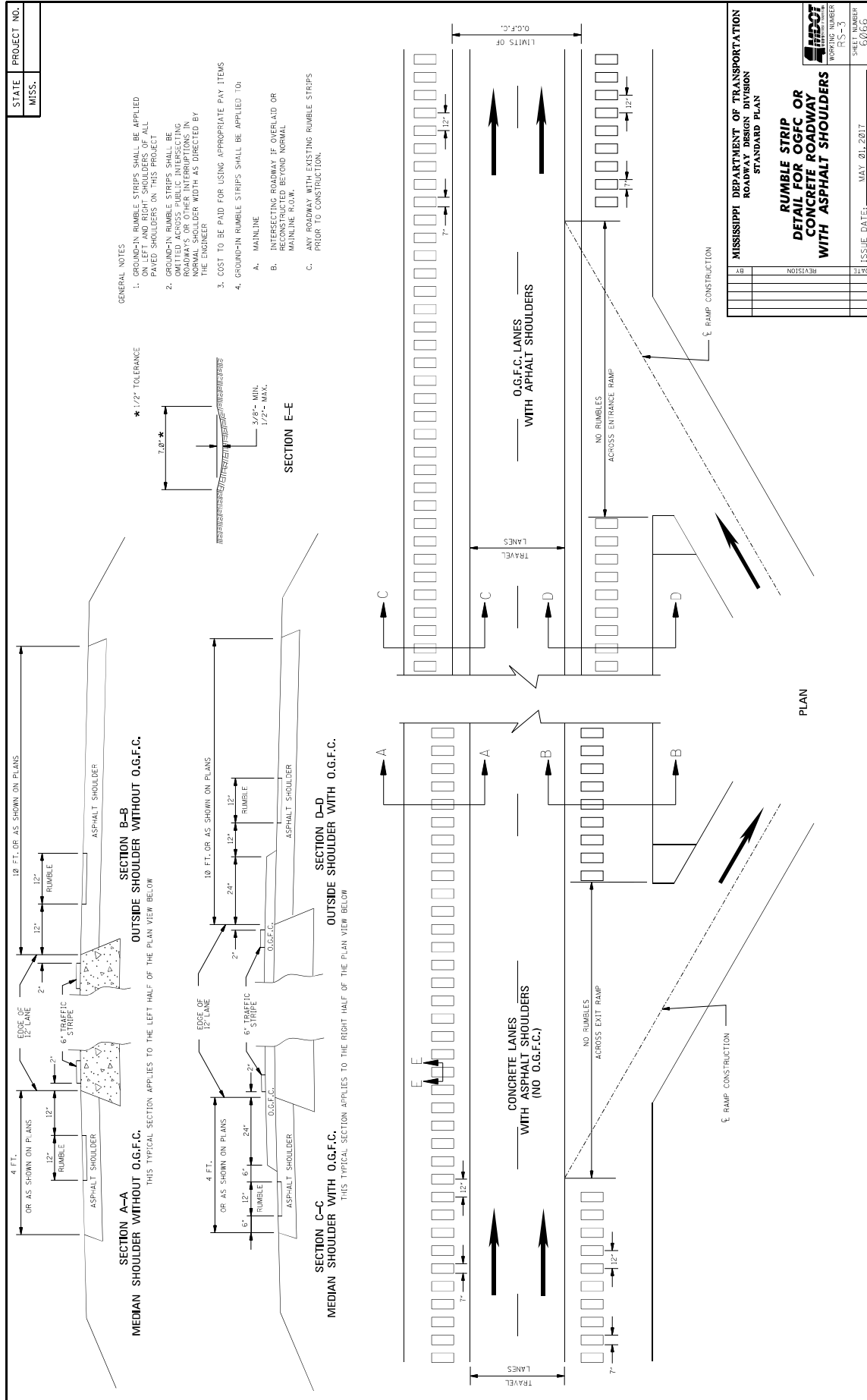


SECTION "A-A"



PLAN  
NOT TO SCALE  
DETAILS OF  
RUMBLE STRIPES

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
<b>RUMBLE STRIPES 4-LANE HIGHWAYS (ASPHALT LANES, 2-FT OR WIDER, ASPHALT SHOULDERS)</b>	
BY	REVISION
DATE	ISSUE DATE: MAY 21, 2017
SHEET NUMBER R-3-2	PROJECT NUMBER 60603





**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 445**

**CODE: (SP)**

**DATE: 10/10/2017**

**SUBJECT: Mississippi Agent or Qualified Nonresident Agent**

Bidders are hereby advised of the requirements of Subsections 102.08, 103.05.2, and 107.14.2.1 of the *2017 Standard Specifications for Road and Bridge Construction* as it refers to bonding agents. Proposal guaranties, bonds, and liability insurance policies must be signed by a **Mississippi Agent or Qualified Nonresident Agent.**

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 447**

**CODE: (SP)**

**DATE: 10/18/2017**

**SUBJECT: Traffic on Milled Surface in Rural Areas**

Bidders are hereby advised that when the main lanes of a roadway are fine milled, traffic will be allowed to run on a milled surfaces for up to seven (7) calendar days. The Contractor will be assessed a penalty of \$5,000 per calendar day afterwards until the milled surfaces are covered with the next lift of asphalt. It shall be the Contractor's responsibility to ensure that the milling operations do not commence until such time as forecasted weather conditions are suitable enough to allow the placement of the asphalt pavement after the milling operations.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 516

CODE: (IS)

DATE: 11/28/2017

SUBJECT: Errata and Modifications to the 2017 Standard Specifications

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
16	102.06	In the seventh full paragraph, change “Engineer” to “Director.”
33	105.05.1	In the sixth sentence, change “Contract Administration Engineer” to “Contract Administration Director.”
34	105.05.2.1	In subparagraph 2, change “SWPPP, ECP” to “SWPPP and the ECP”
35	105.05.2.2	In subparagraphs 2, add “ and” to the end of the sentence. In subparagraph 3, remove “, and” and add “.”.
90	109.04.2	In the last paragraph of subparagraph (a), place a period “.” at the end of the sentence.
93	109.04.2	In the last paragraph of subparagraph (g), place a period “.” at the end of the sentence. Also, in the first paragraph of subparagraph (h), place a period “.” at the end of the sentence.
97	109.07	Under ADJUSTMENT CODE, subparagraph (A1), change “HMA mixture” to “Asphalt mixtures.”
98	109.11	In the third sentence, change “Engineer” to “Director.”
219	308.04	In the last sentence of the last paragraph, change “Contractor’s decision” to “Engineer’s decision.”
300	405.02.5.9	In the first sentence of the second paragraph, change “Hot Mix Asphalt” to “Asphalt Mixtures.”
502	630.01.1	In the first paragraph, change “AASHTO” to “AASHTO’s LRFD”.
636	646.05	Change “each” to “per each” for the pay item units of payment.
640	656.02.6.2	In item 7), change “down stream” to “downstream”.
688	630.03.2	Change the subsection number from “630.03.2” to “680.03.2.”

- 725      702.08.3      In the second sentence of the first paragraph, change “hot-mix” to “asphalt.”
  
- 954      804.02.13.1.6      In the definition for “M” in the % Reduction formulas, change “paragraph 7.3” to “paragraph 5.3.”

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 1225**

**CODE: (SP)**

**DATE: 11/13/2018**

**SUBJECT: Early Notice to Proceed**

Bidders are advised that if an early notice to proceed is allowed by the Department and the Contractor experiences problems or delays between the early notice to proceed date and the original notice to proceed date, this shall not be justification for any monetary compensation or an extension of contract time.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1226

CODE: (SP)

DATE: 11/16/2018

SUBJECT: Material Storage Under Bridges

Bidders are advised that Subsection 106.08 of the Standard Specifications allows the Contractor to store materials and equipment on portions of the right-of-way. However, the Contractor will not be allowed to store or stockpile materials under bridges without written permission from the Project Engineer. The Contractor shall submit a detailed request of all proposed materials to be stored under bridges to the Engineer a minimum of 14 calendar days prior to anticipated storage. This detail shall include, but not limited to, bridge location, material type, material quantity, and duration of storage. The Project Engineer and any other needed Division will review this information and determine whether to grant approval. The Contractor shall not store any material under any bridge without written approval from the Project Engineer.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 1241**

**CODE: (SP)**

**DATE: 11/27/2018**

**SUBJECT: Fuel and Material Adjustments**

Bidder's attention is brought to the last paragraph of Subsection 109.07 of the Standard Specifications which states that no fuel or material adjustment will be made after the completion of contract time. Any fuels consumed or materials incorporated into the work during the monthly estimate period falling wholly after the expiration of contract time will not be subject a fuel or material adjustment.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2061

CODE: (IS)

DATE: 11/05/2019

SUBJECT: Reflective Sheeting for Signs

Bidders are hereby advised that the retroreflective sign sheeting used for signs on this project shall be as listed below and shall meet the requirements of Subsection 721.06.

### **Temporary Construction Signs**

Temporary traffic control (orange) sign sheeting shall be a minimum Type IX Fluorescent Orange sheeting.

### **Permanent Signs**

Permanent signs, except signs on traffic signal poles/mast arms, shall be as follows:

- Brown background sheeting on guide signs shall be a minimum Type VIII sheeting,
- Green and blue background sheeting on guide signs shall be a minimum Type IX sheeting, and
- All white, yellow, fluorescent yellow, and fluorescent yellow/green sheeting shall be Type XI sheeting.



## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 2206**

**CODE: (IS)**

**DATE: 01/14/2020**

**SUBJECT: MASH Compliant Devices**

Bidders are hereby advised that compliance associated with the requirements of meeting either the National Cooperative Highway Research Program (NCHRP) Report 350 or the Manual for Assessing Safety Hardware (MASH) for installations of certain traffic control devices and permanent safety hardware devices (guardrails, guardrail terminals, permanent portable barriers, cast-in-place barriers, all other permanent longitudinal barriers, crash cushions, cable barriers, cable barrier terminals, bridge rails, bridge rail transitions, all other terminals, sign supports, and all other breakaway hardware) as listed throughout the Standard Specifications and/or the Standard Drawings, or both, is now replaced with the requirements of meeting the 2016 version of MASH after December 31, 2019. This change applies to new permanent installations and to full replacements of existing installations.

At the preconstruction conference or prior to starting any work on the project, the Contractor shall submit a letter stating that the traffic control devices and permanent safety hardware devices as outlined within the paragraph above that are to be used on the project are certified to meet MASH 2016.

When a MASH 2016-compliant device does not exist for the new permanent installations and/or full replacement installations of permanent safety hardware devices, as listed above, a MASH 2009-compliant or a NCHRP 350-compliant device may be proposed by the Contractor for the project. A written request for such instances must be submitted by the Contractor either at the preconstruction conference or prior to starting any work on the project. The Contractor shall submit the following items to the Project Engineer: (1) a detailed list of the proposed devices and locations thereof; and (2) certification letters indicating that the proposed devices are compliant with either MASH 2009 or NCHRP 350.

When a MASH 2016-compliant device does not exist for the temporary work zone traffic control devices (Category 1, Category 2, and Category 3 devices), a MASH 2009-compliant or a NCHRP 350-compliant device may be proposed by the Contractor for the project. Temporary work zone traffic control devices (Category 1, Category 2, and Category 3 devices) that are MASH 2009-compliant or NCHRP 350-compliant that have been in use prior to December 31, 2019, and that have a remaining service life may be proposed for use throughout their normal service life on the project by the Contractor. For either of these scenarios for temporary work zone traffic control devices, a written request must be submitted by the Contractor either at the preconstruction conference or prior to starting any work on the project. The Contractor shall submit the following items to the Project Engineer: (1) a detailed list of the proposed devices and locations thereof; and (2) certification letters indicating that the proposed devices are compliant with either MASH 2009 or NCHRP 350.

Work will only be allowed to proceed after the Department has granted written concurrence(s) with the proposed request(s) as listed above.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 2273**

**CODE: (SP)**

**DATE: 02/12/2020**

**SUBJECT: Mississippi Special Fuel Tax Law**

Bidder's attention is brought to the second paragraph of Subsection 107.02 of the Standard Specifications which states that all Contractors and Subcontractors must comply with all requirements contained in the Mississippi Special Fuel Tax Law, Section 27-55-501, *et seq.* Attached are two Fact Sheets provided by the Mississippi Department of Revenue (MDOR) with additional information.

## Gasoline and Dyed Diesel Used for Non-Highway Purposes

*Mississippi provides a reduced rate for gasoline and dyed diesel used for non-highway purposes. The reduced rates are 6.44 cents per gallon and 5.75 cents per gallon of gasoline or dyed diesel. These fuels are generally taxed at 18 cents per gallon if for on road use.*

### Gasoline Used for Non-Highway Purposes

You may be entitled to a refund of 11.56 cents per gallon (making this an equivalent to a tax rate of 6.44 cents per gallon) if you desire to purchase gasoline to be used off road. The gasoline must be used for agricultural, maritime, industrial, manufacturing, domestic or non-highway purposes only.

Examples of non-highway include gasoline used in boats, golf carts, machinery used for manufacturing or farm equipment used exclusively in plowing, planting or harvesting farm products.

### Refund Gasoline User

The refund is based on the amount of gallons used. Before a refund is issued, you are required to...

1. Obtain a refund gasoline user's permit and a certificate for refund booklet from the Department of Revenue;
2. Have a storage tank marked "REFUND GASOLINE"; and,
3. Purchase the gasoline from someone who holds a refund gasoline dealer's permit.

No refund will be allowed for gasoline used in motor vehicles owned or operated by a government entity or used in Mississippi government contracts.

### Refund Gasoline Dealer

You must obtain a refund gasoline dealer's permit from the Department of Revenue before selling refund gasoline. At no time should the gasoline be delivered to a tank that is not properly marked. The gasoline must be dyed a distinctive mahogany color at the time of delivery.

The Department of Revenue may waive the dye requirement if the dye may cause damage to the equipment. The refund gasoline user is required to obtain the waiver from the Department of Revenue.

### Dyed Diesel Used for Non-Highway Purposes

Unlike gasoline, you are not required to apply for a refund if you desire to purchase dyed diesel to be used off road. Mississippi provides a reduced rate of 5.75 cents per gallon on dyed diesel used off road. Diesel used on road is subjected to 18 cents per gallon. Dyed diesel used in motor vehicles owned or operated by a government entity or used in Mississippi government contracts will be subjected to 18 cents per gallon.

### Dyed Diesel Used on the Highway

Any person who purchases, receives, acquires or uses dyed diesel for highway use will be liable to pay 18 cents per gallon and subject to a penalty in the amount of \$1000.

### Identifying Dyed Diesel

Storage facilities for dyed diesel must be plainly marked "NONHIGHWAY DIESEL FUEL" or "NONHIGHWAY KEROSENE". Retailers are also required to mark all pumps or dispensing equipment.



## Special Fuel Used on Government Contracts

### State and Local Government Contracts

Special fuel purchased, acquired or used in performing contracts with the State of Mississippi, counties, municipalities or any political subdivision is taxed at a rate of 18 cents per gallon. Special fuel includes but is not limited to the following:

- Dyed diesel fuel;
- Kerosene;
- Undyed diesel fuel; and,
- Fuel oil.

State and local government contracts include construction, reconstruction and maintenance or repairs of projects such as roads, bridges, water systems, sewer systems, buildings, drainage canals and recreational facilities. The Department of Revenue may require contractors to remit the excise tax directly to the state in lieu of paying the tax to a distributor.

### Special Fuel Direct Pay Permit

Contractors that remit the excise tax to the state will be issued a Special Fuel Direct Pay Permit. This permit relieves the distributor from collecting the tax and requires the contractor to file a monthly special fuel return. The distributor should include the contractor’s permit number on all invoices that are related to tax-free sales.

The contractor is required to furnish a surety or cash bond guaranteeing the payment of the excise tax prior to receiving the Special Fuel Direct Pay Permit. The Department of Revenue may accept a contractors tax bond if the bond covers the excise tax levied on special fuel.

### Special Fuel Distributors

If the contractor does not have a Special Fuel Direct Pay Permit, distributors are required to collect the 18 cents excise tax and remit the tax to the Department of Revenue. The additional 12.25 cents levied on special fuel (excluding undyed diesel) should be reported on schedules 5F and 5G of the special fuel return.

### Environmental Protection Fee

Special fuel distributors are required to collect the environmental protection fee even if the contractor has a Special Fuel Direct Pay Permit. The fee is levied at 4/10<sup>ths</sup> of a cent per gallon. The fee is suspended or reinstated when the trust fund has exceeded or fallen below the obligatory balance.

### Penalties

Any person who knowingly and willfully purchases untaxed fuel for use in equipment utilized on a road or highway construction site in this state is guilty of a misdemeanor and, upon conviction, shall be fined not less than \$1,000 or more than \$100,000, or imprisoned in the county jail for not more than one year, or both.



**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904- NOTICE TO BIDDERS NO. 2365**

**CODE: (SP)**

**DATE: 03/23/2020**

**SUBJECT: Special Project Signs**

Bidders are advised that this project will require Special Project Signs. The signs and posts will be State Furnished and Contractor will only be required to install, maintain, and remove the signs. The signs shall be erected prior to beginning any construction and remain in place for the duration of the project. The signs shall be installed near the beginning and end of the project at locations approved by the Engineer. The signs will remain the property of the Department at the end of the project. All costs for special project signs should be included in the bid price for pay item 618-A: Maintenance of Traffic.



6.0" Radius, 0.8" Border, Blue on White;

"Project Funded By" D 2K; "Mississippi Lottery" D 2K; "Thank Your" E 2K; "State Legislator" E 2K;

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 2541**

**CODE: (SP)**

**DATE: 5/01/2020**

**SUBJECT: Contract Time**

**PROJECT: MP-7184-39(002) / 307071301 – Lawrence County**

The completion of work to be performed by the Contractor for this project will not be a specified date but shall be when all allowable working days are assessed, or any extension thereto as provided in Subsection 108.06. It is anticipated that the Notice of Award will be issued no later than July 14, 2020 and the date for Notice to Proceed / Beginning of Contract Time will be August 13, 2020.

Should the Contractor request a Notice to Proceed earlier than August 13, 2020 and it is agreeable with the Department for an early Notice to Proceed, the requested date will become the new Notice to Proceed date. Regardless of whether or not an early Notice to Proceed is granted, contract time will start at the original Notice to Proceed date.

All requests for an early Notice to Proceed shall be sent to the Project Engineer who will forward it to the Contract Administration Division.

44Working Days have been allowed for the completion of work on this project.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 – NOTICE TO BIDDERS NO. 2542**

**CODE: (SP)**

**DATE: 5/19/2020**

**SUBJECT: Scope of Work**

**PROJECT: MP-7184-39(002) / 307071301 -- Lawrence County**

The contract documents do not include an official set of construction plans, but may, by reference, include some Standard Drawings or Special Drawings when so specified in a Notice to Bidders entitled “Standard Drawings.” All other references to “plans” in the contract documents and Standard Specifications for Road and Bridge Construction are to be disregarded.

The work to be accomplished using the pay items and corresponding specifications set forth in this contract is to resurface the SR 184 in Lawrence County with a 1½” lift of 9.5-mm, ST, asphalt.

1. Segment One is 5,000 feet long, begins approximately 133 feet from the intersection with US Highway 84 Westbound located approximately 2.55 miles from the Lawrence/Jefferson Davis County Line, and extends north and east toward Silver Creek. This segment will receive a scrub seal prior to the overlay, with the exception of the first 150 feet which will be a fine-milled transition with overlay. Segment One will have rumble stripe.
2. Segment Two is 5,217 feet long begins at the end of Segment One and extends east through Silver Creek ending 350 feet east of the bridge end. This segment will be fine-milled 1½” deep prior to receiving the overlay. Segment Two includes fine-milling and overlaying all legs of the triangular intersection with Ferguson Road, westward along Ferguson Road to the end of the transition back to normal width. Also included in this segment is repair of the bridge ends.
3. Segment Three is 4,800 feet long, begins at the end of Segment Two, and extends south and east to approximately 130 feet north of the intersection with US Highway 84 Westbound located approximately one-half mile from the Lawrence/Jefferson Davis County Line. This segment will receive a scrub seal prior to the overlay with the exception of the last 150 feet which will be a fine-milled transition with overlay. Segment Three will have rumble stripe.

Work on the Project shall consist of the following:

1. The Contractor shall erect and maintain construction signing, providing all signs, setting up night-time lane closures (if needed) and traffic handling devices in accordance with the Traffic Control Plan. The cost for this work is to be included in the price bid for pay item 618-A: Maintenance of Traffic. Fluorescent orange sheeting shall be used on all construction and traffic control signs except for those designated in the standards to be black legend and border on white background.



2. Prior to scrub seal or resurfacing, the existing unpaved shoulders that are high shall be bladed to drain and surplus material shall be spread along the edge of the shoulders, foreslopes or other adjacent areas as directed by the Project Engineer. The cost of this work shall be included in other items bid.
3. The Contractor shall protect all existing elements of the roadway including, but not limited to, bridges, culverts, signs, lighting, curb, curb and gutter, concrete islands and concrete driveways. The Contractor shall repair or replace any elements damaged by the Contractor's operation at no cost to the Department.
4. Incidental work such as removing vegetation, shaping of shoulders, removing excess asphalt material, project clean-up and other work necessary to complete the project will not be measured separately for payment, but the cost will be included in other bid items.
5. Asphalt at the bridge ends shall be fine-milled 4" deep at a width of 28 feet and a length of 50 feet immediately adjacent to each bridge end. The milling depth shall taper from 4" to 1½" in 150 feet, as shown in the bridge end repair detail. The area will receive 2½" of 12.5-mm, ST, asphalt prior to the 1½" of 9.5-mm, ST, asphalt overlay. The milling and placement of the 12.5-mm asphalt shall be completed on the same day it is begun.
6. The Contractor shall install the scrub seal in full lane width segments 12 feet wide, as indicated in the typical sections, but shall not include paved tapers nor the outside two feet (2') where the lane width is 14 feet.
7. The Contractor shall fine-mill all existing asphalt from designated areas within the project limits including adjacent local road turn-outs, driveway pads and shoulders. The depth for fine milling is one and one-half inches (1½"). Shoulders, turn lanes and driveway pads will be fine-milled to the same depth as the adjacent travel lanes. Other areas to be milled include the BOP, the EOP and local road turnouts that have concrete curb but are not adjacent to the full-width fine-milled roadway.
8. It is the Contractor's responsibility to insure the drainage of surface water from milled areas.
9. The Contractor shall correct drainage in the location of the connector to Ferguson Road West by milling the cross-slope to drain and blading high shoulders, as shown on the intersection detail and typical sections.
10. Temporary wedges of asphalt (paper joints) shall be placed immediately after milling, shall match the full milled width, and be maintained by the Contractor for as long as they are in place to allow the safe transition of traffic. There is no direct pay item for this work and the cost is to be included in other items bid. Traffic on the milled surface shall be allowed not more than seven (7) days before the new surface shall be placed.
11. The Contractor shall overlay the entire project including shoulders, local road turn-outs and driveway pads with 1½" of 9.5-mm, ST, asphalt.
12. The Contractor shall place granular material on unpaved shoulders that are low, shaping them to a uniform width and 4% cross-slope, as per the typical sections and as directed by the Engineer.
13. Temporary striping and pavement markings shall conform to finished stripe specifications for alignment, reflectivity, straightness and neatness. Temporary striping shall be placed for safe movement of traffic immediately after required operations remove or cover existing striping.

14. Rumble stripe shall be installed from the BOP north and east 5,000 feet, and from the east bridge end to the EOP, 4,800 feet. All permanent pavement markings are to be hot thermoplastic, double drop, as per the pay item description.
15. All concrete curb within the project limits shall be painted in accordance with the detail included.

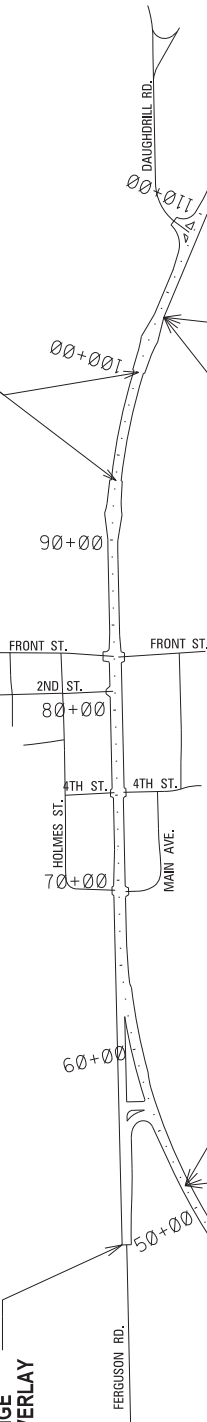
**Project Locations Table**

<b>Route</b>	<b>Description</b>	<b>Northing</b>	<b>Easting</b>
SR 184	BOP (Sta. 1+33)	31° 35' 36.41" N	90° 01' 04.43" W
SR 184	End Segment One, scrub seal, and begin Segment Two, fine-mill and overlay (Sta. 51+33)	31° 36' 14.28" N	90° 00' 29.82" W
Ferguson Road	West project limit	31° 36' 17.71" N	90° 00' 33.74" W
SR 184	End Segment Two, fine-mill and overlay, and begin Segment Three, scrub seal (Sta. 151+50)	31° 36' 15.65" N	89° 59' 30.78" W
SR 184	EOP (Sta. 153+00)	31° 35' 39.47" N	89° 58' 58.62" W

STATE PROJECT NO.	
MISS. MP-7184-39(002)	

**FERGUSON ROAD INTERCHANGE  
WEST LIMIT OF MILL AND OVERLAY**

SILVER CREEK  
COMMUNITY



**SEGMENT TWO  
MILL AND OVERLAY  
STA. 51+33 TO STA. 103+50**

**SEGMENT ONE  
SCRUB SEAL & OVERLAY  
STA. 2+83 TO STA. 51+33**

**SEGMENT THREE  
SCRUB SEAL AND OVERLAY  
STA. 103+50 TO STA. 151+50**

**STA. 1+33 TO STA. 2+83  
B.O.P. MILLING TRANSITION**

**STA. 151+50 TO STA. 153+00  
E.O.P. MILLING TRANSITION**

US HWY 84 WB  
US HWY 84 EB

Notice to Bidders No. 25

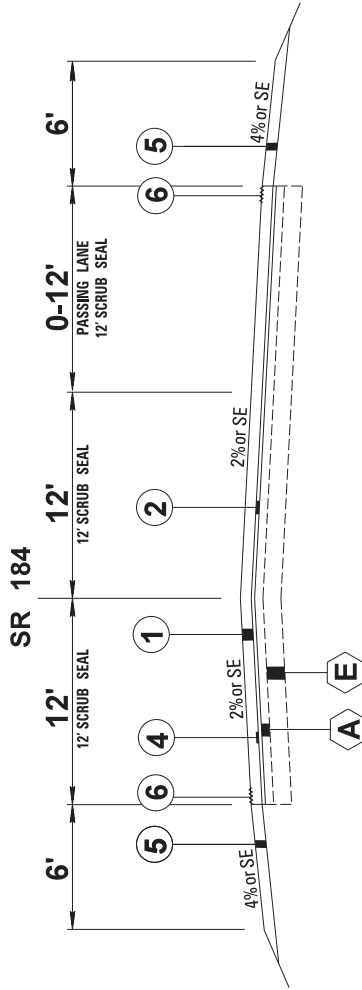
MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
PROJECT LAYOUT SR 184	
PROJ. NO.: MP-7184-39(002) COUNTY: LAWRENCE	
DATE	FILENAME:
REVISION	DESIGN TEAM
BY	CHECKED
	DATE
	SHEET NUMBER
	1



STATIONING IS NOT EXACT AND IS BASED ON THE FOLLOWING:  
NEAR B.O.P.: STA. 0+00 CL SR 184 = CL WB US HWY 84  
NEAR E.O.P.: STA. 154+26 CL SR 184 = CL WB US HWY 84

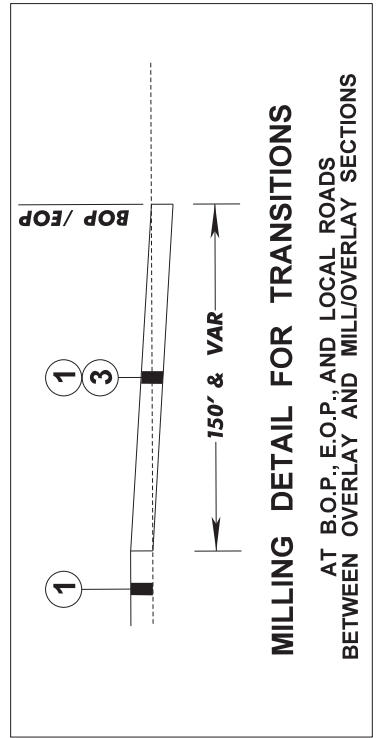
### PROPOSED

- 1 1.50" 9.5MM ASPHALT, ST REQ'D
- 2 0.375" SCRUB SEAL REQ'D
- 3 1.50" FINE MILLING REQ'D
- 4 TACK COAT REQ'D
- 5 1.50" AND VAR. DEPTH CLASS 6 GROUP D GRANULAR MATERIAL REQ'D
- 6 RUMBLE STRIPE REQ'D
- 7 BLADE SUFFICIENTLY TO DRAIN ROADWAY, COST TO BE ABSORBED



### TYPICAL SECTION SR 184 SCRUB SEAL AND OVERLAY

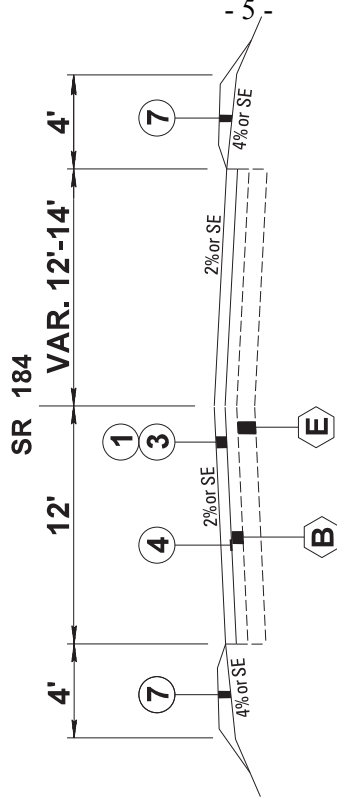
STA. 2+83 TO STA. 51+33  
 12' PASSING LANE STA. 20+00 TO STA. 26+50



### MILLING DETAIL FOR TRANSITIONS AT B.O.P., E.O.P., AND LOCAL ROADS BETWEEN OVERLAY AND MILL/OVERLAY SECTIONS

### EXISTING

- A 3" EXISTING BITUMINOUS PAVEMENT
- B 4.5" EXISTING BITUMINOUS PAVEMENT
- C NOT USED THIS SHEET
- D NOT USED THIS SHEET
- E 12" EXISTING GRANULAR BASE
- F NOT USED THIS SHEET

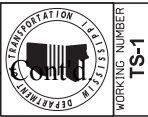


### TYPICAL SECTION SR 184 MILL AND OVERLAY

STA. 51+33 TO STA. 58+00 (12' LT & RT)  
 STA. 64+00 TO STA. 67+00 (12' LT, 14' RT)

Notice to Bidders No. 25

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
TYPICAL SECTION SR 184	
PROJ. NO.: MP-7184-39(002)	
COUNTY: LAWRENCE	
WORKING NUMBER	TS-1
FILE NAME:	DESIGN TEAM
DATE	CHECKED
REVISION	DATE
BY	



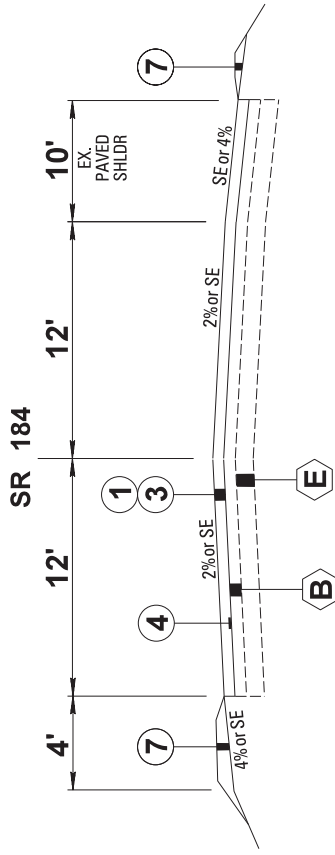
SHEET NUMBER  
2

**PROPOSED**

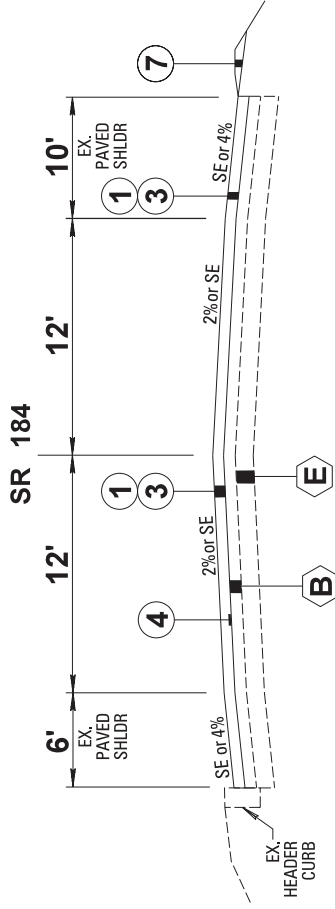
- 1 1.50" 9.5MM ASPHALT, ST REQ'D
- 2 NOT USED THIS SHEET
- 3 1.50" FINE MILLING REQ'D
- 4 TACK COAT REQ'D
- 5 NOT USED THIS SHEET
- 6 NOT USED THIS SHEET
- 7 BLADE SUFFICIENTLY TO DRAIN ROADWAY, COST TO BE ABSORBED

**EXISTING**

- A NOT USED THIS SHEET
- B 4.5" EXISTING BITUMINOUS PAVEMENT
- C NOT USED THIS SHEET
- D NOT USED THIS SHEET
- E 12" EXISTING GRANULAR BASE
- F NOT USED THIS SHEET

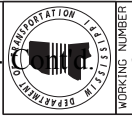


**TYPICAL SECTION SR 184  
 MILL AND OVERLAY**  
 STA. 58+00 to STA. 60+00



**TYPICAL SECTION SR 184  
 MILL AND OVERLAY**  
 STA. 60+00 to STA. 64+00

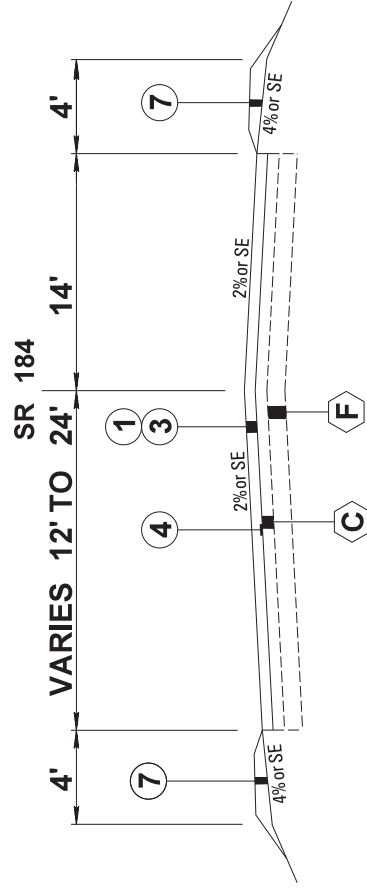
MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
BY	REVISION
<b>TYPICAL SECTION SR 184</b>	
PROJ. NO.: MP-7184-39(002)	
COUNTY: LAWRENCE	
FILE NAME:	CHECKED: _____
DESIGN TEAM:	DATE: _____
SHEET NUMBER	3



WORKING NUMBER  
**TS-2**  
 SHEET NUMBER  
**3**

**PROPOSED**

- 1 1.50" 9.5MM ASPHALT, ST REQ'D
- 2 0.375" SCRUB SEAL REQ'D
- 3 1.50" FINE MILLING REQ'D
- 4 TACK COAT REQ'D
- 5 NOT USED THIS SHEET
- 6 NOT USED THIS SHEET
- 7 BLADE SUFFICIENTLY TO DRAIN ROADWAY, COST TO BE ABSORBED

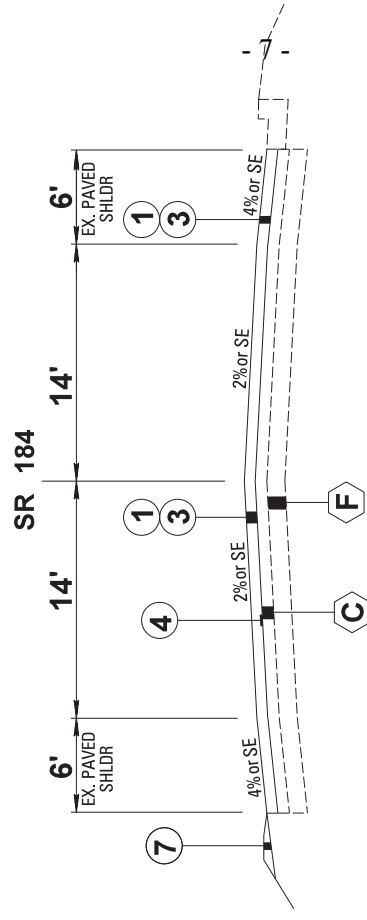


**TYPICAL SECTION SR 184  
MILL AND OVERLAY**

STA. 67+00 TO STA. 71+75 (VAR. 12'-24' LT)  
 STA. 71+75 TO STA. 75+00 (14' LT)  
 STA. 84+00 TO STA. 93+51 (14' LT)

**EXISTING**

- A NOT USED THIS SHEET
- B NOT USED THIS SHEET
- C 6" EXISTING BITUMINOUS PAVEMENT
- D NOT USED THIS SHEET
- E NOT USED THIS SHEET
- F 12" EXISTING GRANULAR BASE, TOP 4" TREATED



NO EXISTING CURB & GUTTER

HALF SECTION  
EXISTING CURB & GUTTER

**TYPICAL SECTION SR 184  
MILL AND OVERLAY**

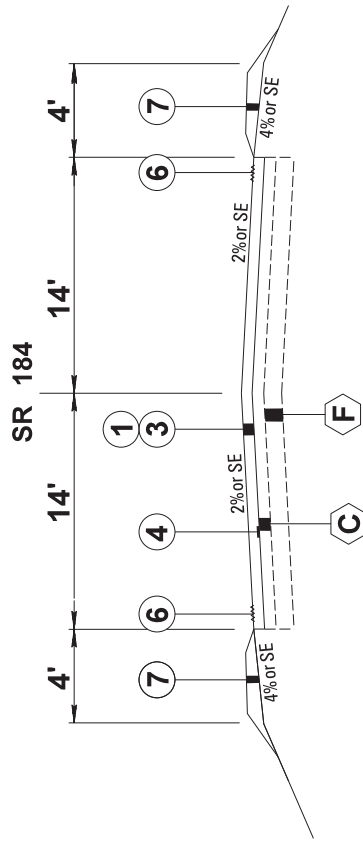
STA. 75+00 TO STA. 78+00  
 No Existing Curb and Gutter  
 STA. 78+00 TO 84+00  
 Existing Curb and Gutter Left and Right

Notice to Bidders No. 254

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
BY	REVISION
TYPICAL SECTION SR 184	
PROJ. NO.: MP-7184-39(002) COUNTY: LAWRENCE	
DATE	FILE NAME
	DESIGN TEAM
	CHECKED
	DATE
	SHEET NUMBER
	4

**PROPOSED**

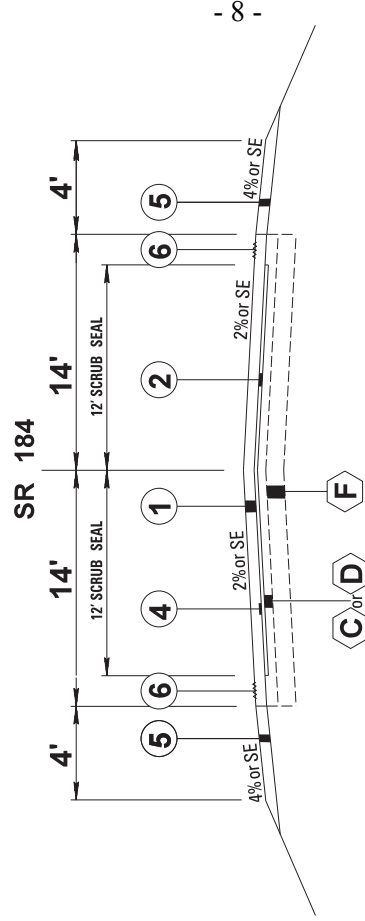
- 1 1.50" 9.5MM ASPHALT, ST REQ'D
- 2 0.375" SCRUB SEAL REQ'D
- 3 1.50" FINE MILLING REQ'D
- 4 TACK COAT REQ'D
- 5 1.50" AND VAR. DEPTH CLASS 6 GROUP D GRANULAR MATERIAL REQ'D
- 6 RUMBLE STRIPE REQ'D
- 7 BLADE SUFFICIENTLY TO DRAIN ROADWAY, COST TO BE ABSORBED
- 8 2.50" 12.5mm ASPHALT, ST REQ'D
- 9 4" AND VARIABLE FINE MILLING REQ'D



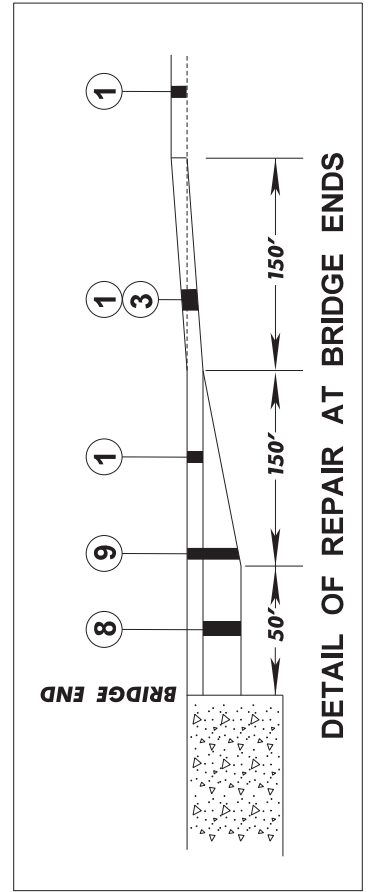
**TYPICAL SECTION SR 184  
 MILL AND OVERLAY**  
 STA. 100+04 TO STA. 103+50

**EXISTING**

- A NOT USED THIS SHEET
- B NOT USED THIS SHEET
- C 6" EXISTING BITUMINOUS PAVEMENT
- D 9" EXISTING BITUMINOUS PAVEMENT
- E NOT USED THIS SHEET
- F 12" EXISTING GRANULAR BASE, TOP 4" TREATED



**TYPICAL SECTION SR 184  
 SCRUB SEAL AND OVERLAY**  
 STA. 103+50 TO STA. 146+85 (EX. C)  
 STA. 146+85 TO STA. 151+50 (EX. D)



**DETAIL OF REPAIR AT BRIDGE ENDS**

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
<b>TYPICAL SECTION SR 184</b>	
PROJ. NO.: MP-7184-39(002) COUNTY: LAWRENCE	
DATE	FILENAME:
REVISION	REVISION TEAM
BT	CHECKED: _____ DATE _____
SHEET NUMBER <b>5</b>	

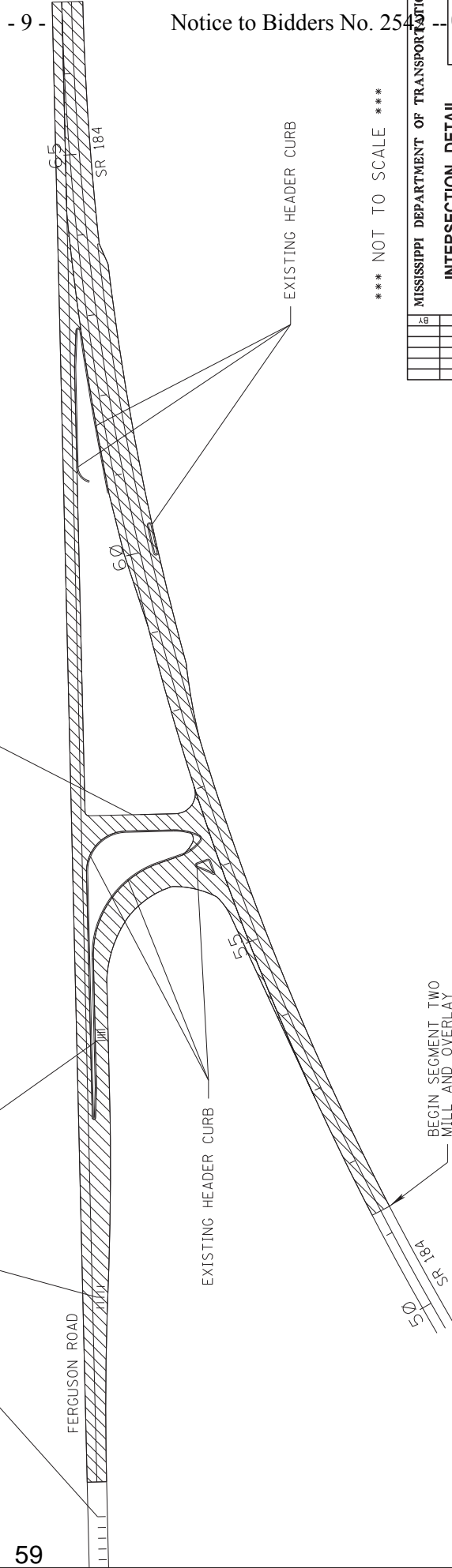
FMS CON. 307071/301000  
 STATE PROJECT NO. MISS. MP-7184-39(002)



USE FINE MILLING TO CREATE FULL-WIDTH 2% CROSS SLOPE (NO CROWN) DRAINING TO THE EAST TO IMPROVE DRAINAGE ON THE CONNECTOR TO FERGUSON ROAD WEST.


STOP RUMBLES REQ'D SEE SPECIAL DESIGN SHEET SDSSR-1

59



Notice to Bidders No. 254

\*\*\* NOT TO SCALE \*\*\*

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
	
<b>INTERSECTION DETAIL</b>	
<b>SR 184 AT FERGUSON RD</b>	
PROJ. NO.: MP-7184-39(002)	
COUNTY: LAWRENCE	
WORKING NUMBER	DATE
<b>IDET-1</b>	
SHEET NUMBER	CHECKED
<b>6</b>	DATE
DESIGN TEAM	



SIGNS REQUIRED (CONT'D)				
SIGN NO.	SIZE	QUAN. REQ'D.	TOTAL AREA SQ. FT.	REMARKS
G20 - 1	60" X 24"	2	10.00	END ROAD WORK
G20 - 2	48" X 24"	5	4.50	END ROAD WORK
G20 - 4	36" X 18"	4.50		PILOT CAR FOLLOWING
M1 - 1	24" X 24"	4.00		1 OR 2 DIGIT
M1 - 1	30" X 24"	5.00		3 DIGIT
M1 - 4	24" X 24"	4.00		1 OR 2 DIGIT
M1 - 4	30" X 24"	5.00		3 DIGIT
M1 - 5	24" X 24"	4.00		1 OR 2 DIGIT
M1 - 5	30" X 24"	5.00		3 DIGIT
M3 - 1	24" X 12"	2.00		NORTH-TO-Road
M3 - 1	30" X 15"	3.13		DIGIT-RT. MARKER
M3 - 2	24" X 12"	2.00		DIGIT-RT. MARKER
M3 - 2	30" X 15"	3.13		DIGIT-RT. MARKER
M3 - 3	24" X 12"	2.00		DIGIT-RT. MARKER
M3 - 3	30" X 15"	3.13		DIGIT-RT. MARKER
M3 - 4	24" X 12"	2.00		DIGIT-RT. MARKER
M3 - 4	30" X 15"	3.13		DIGIT-RT. MARKER
M4 - 8	24" X 12"	2.00		DETOUR
M4 - 8	30" X 15"	3.13		DETOUR
M4 - 9	48" X 36"	12.00		DETOUR
M4 - 9L	48" X 36"	12.00		DETOUR
M4 - 9BL	48" X 36"	12.00		DETOUR
M4 - 9SL	48" X 36"	12.00		DETOUR
M4 - 9BSL	48" X 36"	12.00		DETOUR
M4 - 9R	48" X 36"	12.00		DETOUR
M4 - 9BR	48" X 36"	12.00		DETOUR
M4 - 9SR	48" X 36"	12.00		DETOUR
M4 - 9BSR	48" X 36"	12.00		DETOUR
M4 - 10L	48" X 18"	6.00		DETOUR
M4 - 10R	48" X 18"	6.00		DETOUR
M4 - 5	24" X 12"	2.00		TO
M5 - 1L	21" X 15"	2.19		TO
M5 - 1R	21" X 15"	2.19		TO
M5 - 2L	21" X 15"	2.19		TO
M5 - 2R	21" X 15"	2.19		TO
M5 - 3L	21" X 15"	2.19		TO
M5 - 3R	21" X 15"	2.19		TO
M6 - 1R	21" X 15"	2.19		TO
M6 - 2L	21" X 15"	2.19		TO
M6 - 2R	21" X 15"	2.19		TO
M6 - 3	21" X 15"	2.19		TO
R1 - 1	36" OCTAGON	7.46		STOP
R1 - 1	48" OCTAGON	13.25		STOP
R1 - 2	48" X 48"	6.93		YIELD
R1 - 2	60" X 60"	10.83		YIELD

SIGNS REQUIRED (CONT'D)				
SIGN NO.	SIZE	QUAN. REQ'D.	TOTAL AREA SQ. FT.	REMARKS
R1 - 3	18" X 9"	1.13		3-WAY
R1 - 3	24" X 12"	2.00		4 WAY ETC.
R2 - 1	24" X 30"	5.00		SPEED LIMIT
R2 - 1	36" X 48"	12.00		SPEED LIMIT
R2 - 1	48" X 60"	26.00		SPEED LIMIT
R3 - 1	48" X 48"	16.00		NO LEFT TURN
R3 - 1	48" X 48"	16.00		NO RIGHT TURN
R3 - 2	36" X 36"	9.00		NO U-TURN
R3 - 2	48" X 48"	16.00		NO U-TURN
R3 - 3	30" X 36"	7.50		NO U-TURN
R3 - 3	30" X 36"	7.50		NO U-TURN
R3 - 3	30" X 36"	7.50		NO U-TURN
R3 - 3	30" X 36"	7.50		NO U-TURN
R3 - 7L	30" X 30"	6.25		LEFT LANE TURN LEFT
R3 - 7R	30" X 30"	6.25		RIGHT LANE TURN RIGHT
R4 - 1	24" X 30"	5.00		DO NOT PASS
R4 - 1	48" X 60"	20.00		DO NOT PASS
R4 - 2	24" X 30"	5.00		PASS WITH CARE
R4 - 2	48" X 60"	20.00		PASS WITH CARE
R4 - 7	48" X 60"	20.00		DO NOT ENTER
R4 - 8	48" X 60"	20.00		DO NOT ENTER
R5 - 1	48" X 48"	16.00		WRONG WAY
R5 - 10	42" X 30"	8.75		WRONG WAY
R6 - 1L	36" X 12"	3.00		ONE WAY
R6 - 1R	36" X 12"	3.00		ONE WAY
R6 - 2L	24" X 30"	5.00		ONE WAY
R6 - 2R	24" X 30"	5.00		ONE WAY
R11 - 2	48" X 30"	10.00		ROAD CLOSED
R11 - 3	60" X 30"	12.50		ROAD CLOSED
R11 - 3B	60" X 30"	12.50		ROAD CLOSED
R11 - 4	60" X 30"	12.50		ROAD CLOSED
R11 - 4	96" X 36"	24.00		ROAD CLOSED
R12 - 1	36" X 48"	12.00		WEIGHT EXCEEDED
R16 - 3	36" X 60"	20.00		WEIGHT EXCEEDED
R16 - 3	48" X 60"	20.00		WEIGHT EXCEEDED
W1 - 1L	48" X 48"	16.00		WORKERS AHEAD
W1 - 1R	48" X 48"	16.00		WORKERS AHEAD
W1 - 2L	48" X 48"	16.00		WORKERS AHEAD
W1 - 2R	48" X 48"	16.00		WORKERS AHEAD
W1 - 3L	48" X 48"	16.00		WORKERS AHEAD
W1 - 3R	48" X 48"	16.00		WORKERS AHEAD
W1 - 4aL	48" X 48"	16.00		WORKERS AHEAD
W1 - 4aR	48" X 48"	16.00		WORKERS AHEAD
W1 - 5L	48" X 48"	16.00		WORKERS AHEAD
W1 - 5R	48" X 48"	16.00		WORKERS AHEAD
W1 - 6L	48" X 24"	8.00		BE PREPARED TO STOP
W1 - 6R	48" X 24"	8.00		BE PREPARED TO STOP
W1 - 6R	60" X 30"	12.50		BE PREPARED TO STOP
W1 - 6R	60" X 30"	12.50		BE PREPARED TO STOP
W1 - 7	48" X 24"	8.00		WORKERS
W1 - 7	48" X 24"	8.00		WORKERS

SIGNS REQUIRED (CONT'D)				
SIGN NO.	SIZE	QUAN. REQ'D.	TOTAL AREA SQ. FT.	REMARKS
W1 - 7	60" X 30"	12.50		BE PREPARED TO STOP
W1 - 8L	18" X 24"	3.00		BE PREPARED TO STOP
W1 - 8L	36" X 48"	12.00		BE PREPARED TO STOP
W1 - 8R	18" X 24"	3.00		BE PREPARED TO STOP
W1 - 8R	36" X 48"	12.00		BE PREPARED TO STOP
W1 - 9L	48" X 48"	16.00		BE PREPARED TO STOP
W1 - 9R	48" X 48"	16.00		BE PREPARED TO STOP
W3 - 10	48" X 48"	16.00		BE PREPARED TO STOP
W3 - 20	48" X 48"	16.00		BE PREPARED TO STOP
W3 - 3	48" X 48"	16.00		BE PREPARED TO STOP
W3 - 5	48" X 48"	16.00		BE PREPARED TO STOP
W4 - 1L	48" X 48"	16.00		BE PREPARED TO STOP
W4 - 1R	48" X 48"	16.00		BE PREPARED TO STOP
W4 - 2L	48" X 48"	16.00		BE PREPARED TO STOP
W4 - 2R	48" X 48"	16.00		BE PREPARED TO STOP
W5 - 10	48" X 48"	16.00		BE PREPARED TO STOP
W6 - 1	48" X 48"	16.00		BE PREPARED TO STOP
W6 - 2	48" X 48"	16.00		BE PREPARED TO STOP
W6 - 3	48" X 48"	16.00		BE PREPARED TO STOP
W8 - 1	48" X 48"	16.00		BE PREPARED TO STOP
W8 - 4	48" X 48"	16.00		BE PREPARED TO STOP
W8 - 6	48" X 48"	16.00		BE PREPARED TO STOP
W8 - 7	48" X 48"	16.00		BE PREPARED TO STOP
W8 - 9	48" X 48"	16.00		BE PREPARED TO STOP
W8 - 11	36" X 36"	9.00		BE PREPARED TO STOP
W8 - 12	48" X 48"	16.00		BE PREPARED TO STOP
W10 - 1	36" DIA.	7.07		BE PREPARED TO STOP
W10 - 1	24" X 24"	4.00		BE PREPARED TO STOP
W13 - 1	48" X 48"	16.00		BE PREPARED TO STOP
W14 - 3	36" X 48" X 48"	5.56		BE PREPARED TO STOP
W14 - 3	48" X 64" X 64"	9.89		BE PREPARED TO STOP
W16 - 2	24" X 18"	3.00		BE PREPARED TO STOP
W19 - 2	48" X 48"	16.00		BE PREPARED TO STOP
W20 - 1	48" X 48"	16.00		BE PREPARED TO STOP
W20 - 1	36" X 36"	9.00		BE PREPARED TO STOP
W20 - 2	48" X 48"	16.00		BE PREPARED TO STOP
W20 - 3	48" X 48"	16.00		BE PREPARED TO STOP
W20 - 4	48" X 48"	16.00		BE PREPARED TO STOP
W20 - 4	48" X 48"	16.00		BE PREPARED TO STOP
W20 - 5L	48" X 48"	16.00		BE PREPARED TO STOP
W20 - 5R	48" X 48"	16.00		BE PREPARED TO STOP
W20 - 7B	36" X 36"	9.00		BE PREPARED TO STOP
W20 - 70	48" X 48"	16.00		BE PREPARED TO STOP
W21 - 1	36" X 36"	9.00		BE PREPARED TO STOP
W21 - 10	36" X 36"	9.00		BE PREPARED TO STOP

SIGNS REQUIRED (CONT'D)				
SIGN NO.	SIZE	QUAN. REQ'D.	TOTAL AREA SQ. FT.	REMARKS
W21 - 2	36" X 36"	9.00		FRESH OIL (TAR)
W21 - 3	48" X 48"	16.00		ADVANCE ROAD WORK AHEAD
W21 - 4	36" X 36"	9.00		ADVANCE ROAD WORK AHEAD
W21 - 6	36" X 36"	9.00		ADVANCE ROAD WORK AHEAD
W24 - 1L	48" X 48"	16.00		ADVANCE ROAD WORK AHEAD
W24 - 1R	48" X 48"	16.00		ADVANCE ROAD WORK AHEAD
W24 - 1BL	48" X 48"	16.00		ADVANCE ROAD WORK AHEAD
W24 - 1BR	48" X 48"	16.00		ADVANCE ROAD WORK AHEAD
W24 - 1BL	48" X 48"	16.00		ADVANCE ROAD WORK AHEAD
W24 - 1BR	48" X 48"	16.00		ADVANCE ROAD WORK AHEAD
VP - 1L	12" X 36"	3.00		ADVANCE ROAD WORK AHEAD
VP - 1R	12" X 36"	3.00		ADVANCE ROAD WORK AHEAD
OM - 3L	12" X 36"	3.00		ADVANCE ROAD WORK AHEAD
OM - 3R	12" X 36"	3.00		ADVANCE ROAD WORK AHEAD
TOTAL SIGN AREA		LESS THAN 10 SQ. FT.	194.24 SQ. FT.	
TOTAL SIGN AREA		10 SQ. FT. OR MORE	396.50 SQ. FT.	

- NOTES**
- INTERSTATE ROUTE MARKER
  - UNITED STATES ROUTE MARKER
  - STATE ROUTE MARKER
  - COLORS OF CARDINAL DIRECTION MARKERS AND DIRECTIONAL ARROWS SHALL BE APPROPRIATE TO MATCH ACCOMPANYING ROUTE MARKERS.
  - BLACK STRIPES ON YELLOW BACKGROUND
  - INTERSTATE USE ONLY
  - TOP OF SIGN - BLACK LETTERING ON ORANGE BACKGROUND, BOTTOM OF SIGN - BLACK LETTERING ON WHITE BACKGROUND
- THE BACKGROUND OF ALL WARNING SIGNS ("W" SERIES) EXCEPT W10-1 SHALL BE ORANGE. THE W10-1 BACKGROUND SHALL BE YELLOW IN ALL CASES.

Notice to Bidders No. 25

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

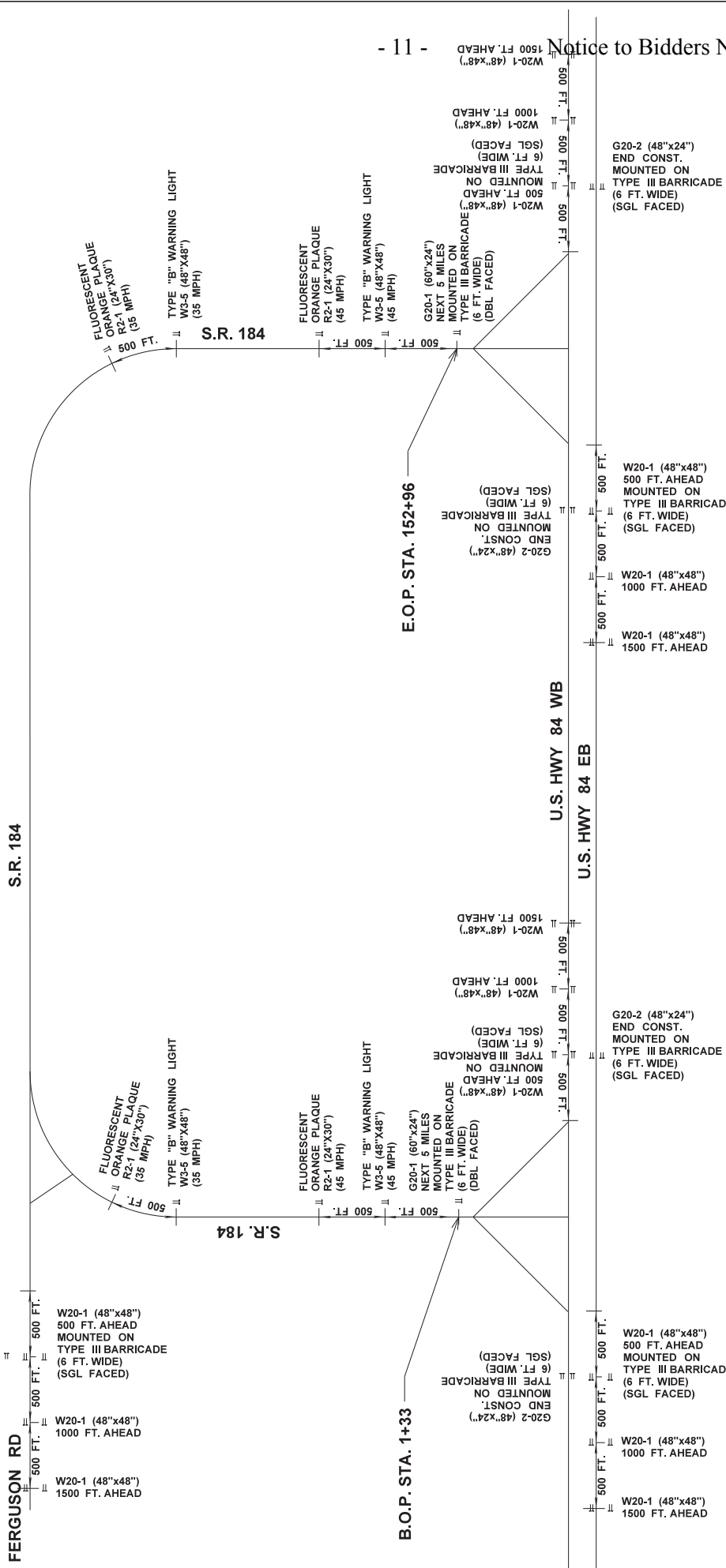
ESTIMATED QUANTITIES FOR TRAFFIC CONTROL SIGNS

PROJ. NO.: MP-7184-39(002)  
 COUNTY: LAWRENCE

WORKING NUMBER TCPO-1  
 SHEET NUMBER 7

FILE NAME: \_\_\_\_\_  
 DESIGN TEAM: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_

ALL TRAFFIC CONTROL ITEMS SHALL BE INCLUDED IN BID FOR PAY ITEM 618-A001, MAINTENANCE OF TRAFFIC. FLUORESCENT ORANGE SHEETING SHALL BE USED ON ALL CONSTRUCTION AND TRAFFIC CONTROL SIGNS.



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Notice to Bidders No. 25

\*\*\* NOT TO SCALE \*\*\*

**NOTE: FOR SCRUB SEAL OPERATIONS NEED TO FOLLOW SPECIAL PROVISION 907-414-1**

**NOTE: W20-1 (48"x48") WILL BE REQ'D ON ALL LOCAL ROADS.**

**NOTE: AT THE END OF THE WORK DAY, W3-5, R16-3, AND R2-1 (45 MPH) SIGNS SHALL BE COVERED.**

**ADDITIONAL TRAFFIC CONTROL SIGNS REQUIRED:**

R4-1 "DO NOT PASS"; R4-2 "PASS WITH CARE"; AND W14-3 "NO PASSING ZONE" SIGNS ARE REQUIRED IN ACCORDANCE WITH SUB-SECTION 907-618 AND AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF "NO PASSING ZONES" ARE 1,000' OR MORE, INSTALL ADDITIONAL "DO NOT PASS" AND "NO PASSING ZONE" SIGNS ON MAXIMUM SPACING OF 750'.

ALL TRAFFIC CONTROL ITEMS SHALL BE INCLUDED IN BID FOR PAY ITEM 618-A. MAINTENANCE OF TRAFFIC. FLUORESCENT ORANGE SHEETING SHALL BE USED ON ALL CONSTRUCTION AND TRAFFIC CONTROL SIGNS EXCEPT FOR R4-1 AND R4-2 SIGNS WHICH SHALL BE BLACK LEGEND ON WHITE BACKGROUND.

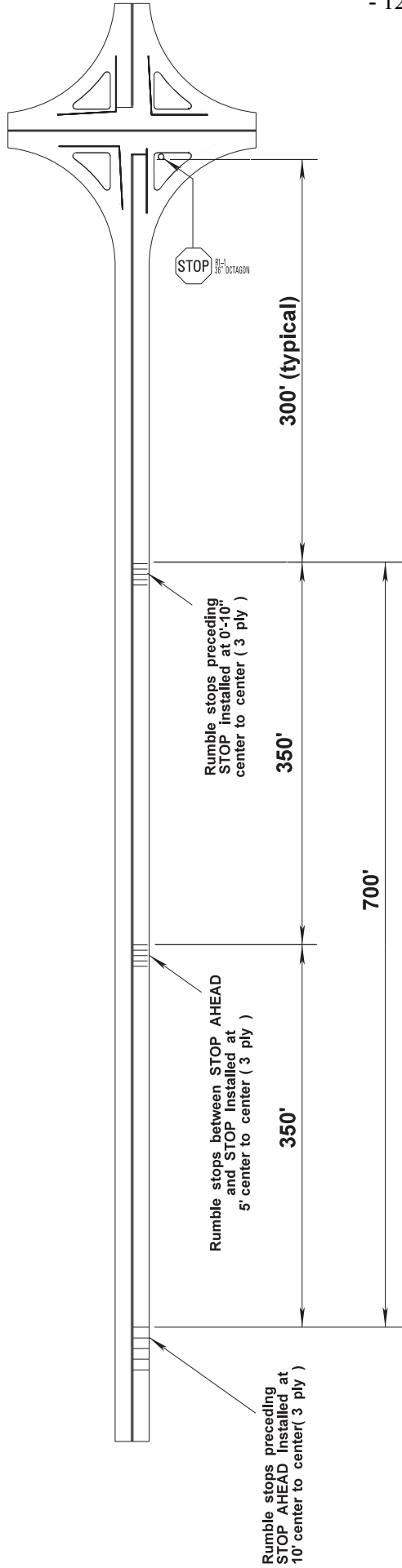
**DETAIL OF CONSTRUCTION SIGNING**

PROJ. NO.: MP-7184-39(002)  
 COUNTY: LAWRENCE

FLENAME: \_\_\_\_\_  
 DESIGN TEAM: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

WORKING NUMBER: DCS-1  
 SHEET NUMBER: 8



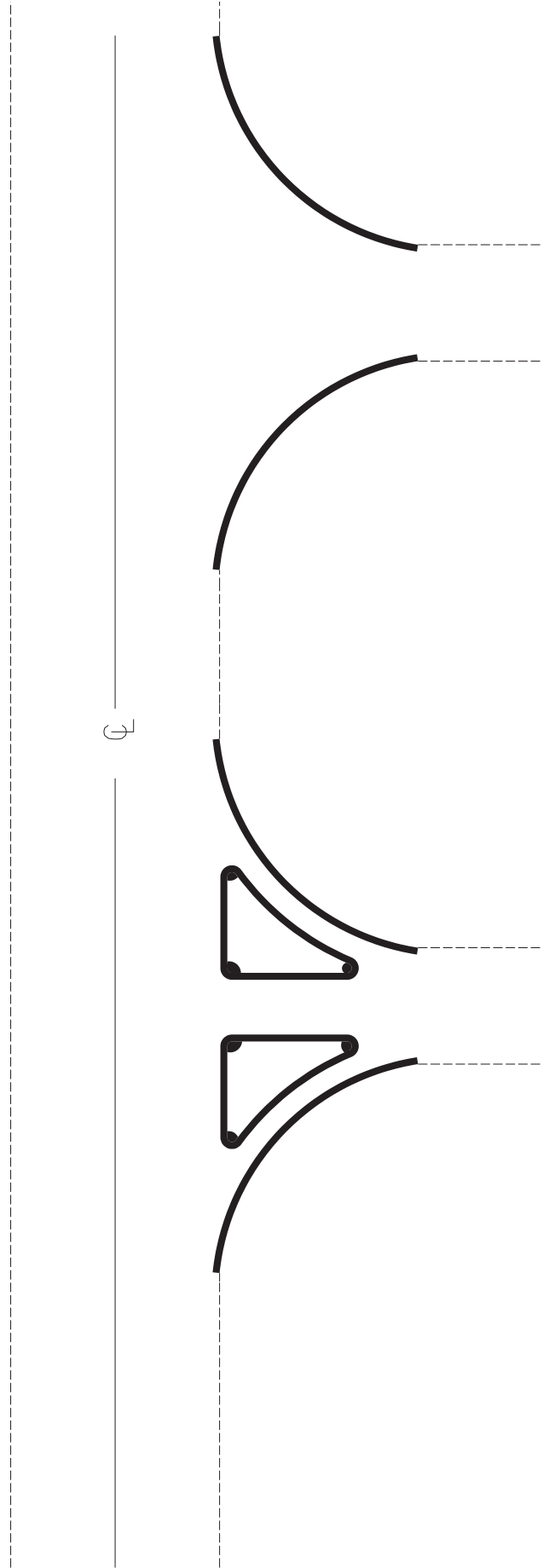
- 12 -

Notice to Bidders No. 25


**THIS DRAWING IS  
 NOT TO SCALE**

- NOTES:**  
 Install rumble stop bars as shown :
1. 1 set of rumble stops approx. 250' from STOP AHEAD
  2. 1 set of rumble stops approx. 300' from STOP
  3. 1 set of rumble stops approx. Halfway between first and last set
  4. Rumble stops to be 6" thermoplastic ( 120 mil/each ply, 360 mil total)
  5. 5 rumble stops per set minimum
  6. Installation may vary due to terrain
  7. Signs should be 48" for channelized intersection, 36" for non-channelized intersection

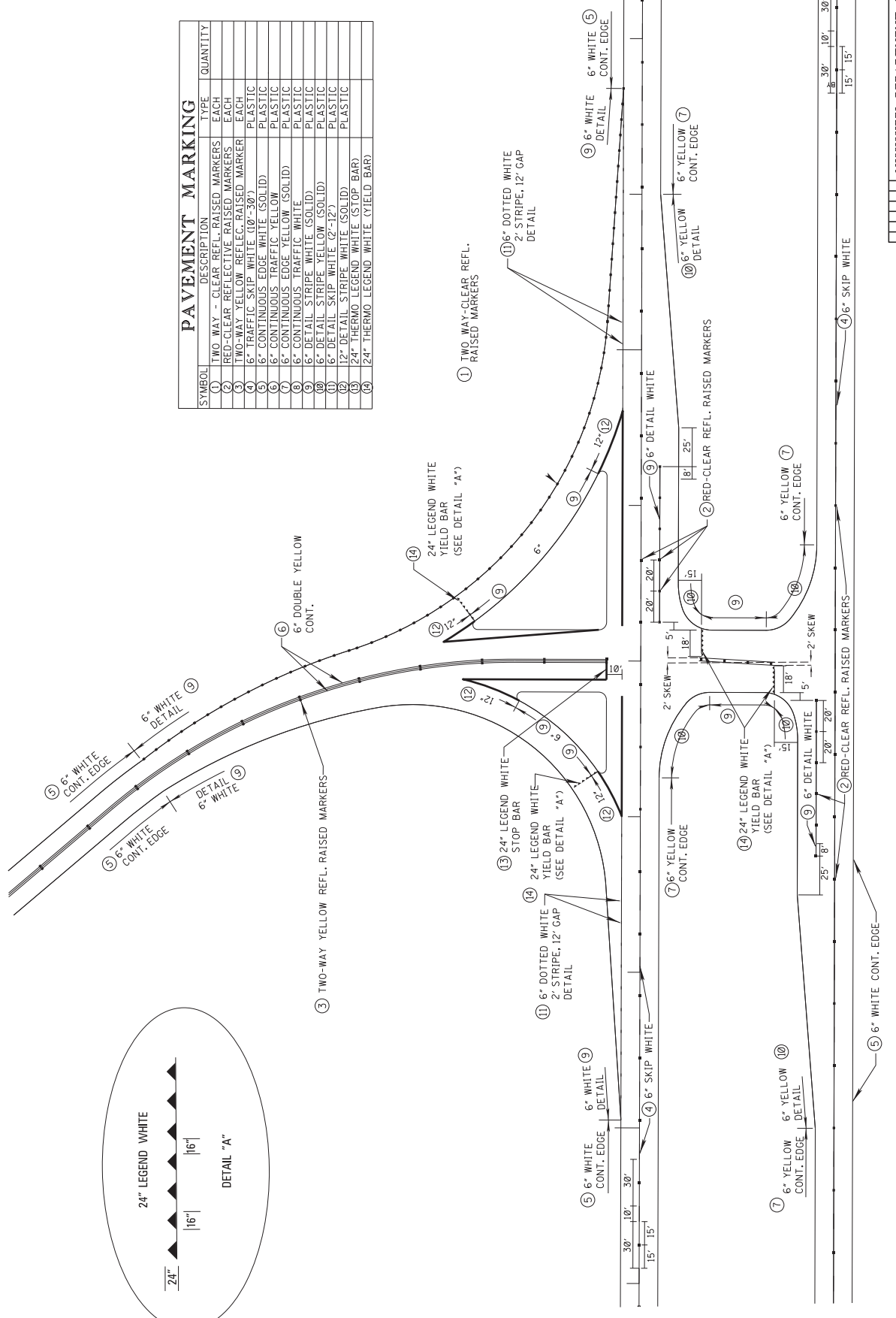
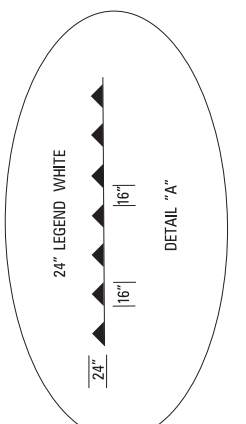
MISSISSIPPI DEPARTMENT OF TRANSPORTATION			STOP SIGN RUMBLES  PROJ. NO.: MP-7184-39(002) COUNTY: LAWRENCE	WORKING NUMBER	SHEET NUMBER
DATE	REVISION			SDSSR-1	9
FILENAME:	REVISION TEAM	CHECKED:	DATE:		



ALL ASPHALT AND CONCRETE CURBS ALONG RAMPS, LOCAL ROADS, ETC. FROM B.O.P. TO E.O.P. SHALL BE PAINTED (TWO APPLICATIONS) WITH WHITE TRAFFIC PAINT AND TRAFFIC BEADS; COST TO BE ABSORBED IN OTHER PAY ITEMS.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
 DETAIL FOR CURB AND ISLAND PAINTING	
PROJ. NO.: MP-7184-39(002) COUNTY: LAWRENCE	
DATE	FILE NAME
REVISION	ISSION TEAM
BY	CHECKED
	DATE
	SHEET NUMBER
	10

PAVEMENT MARKING			
SYMBOL	DESCRIPTION	TYPE	QUANTITY
1	TWO WAY - CLEAR REF. RAISED MARKERS	EACH	
2	RED-CLEAR REF. RAISED MARKERS	EACH	
3	TWO-WAY YELLOW REF. RAISED MARKERS	EACH	
4	6" TRAFFIC SKIP WHITE (10'-30')	PLASTIC	
5	6" CONTINUOUS EDGE WHITE (SOLID)	PLASTIC	
6	6" CONTINUOUS TRAFFIC YELLOW (SOLID)	PLASTIC	
7	6" CONTINUOUS TRAFFIC WHITE (SOLID)	PLASTIC	
8	6" CONTINUOUS TRAFFIC WHITE (SOLID)	PLASTIC	
9	6" DETAIL STRIPE WHITE (SOLID)	PLASTIC	
10	6" DETAIL STRIPE YELLOW (SOLID)	PLASTIC	
11	6" DETAIL STRIPE WHITE (2'-12')	PLASTIC	
12	12" DETAIL STRIPE WHITE (SOLID)	PLASTIC	
13	24" THERMO LEGEND WHITE (STOP BAR)		
14	24" THERMO LEGEND WHITE (YIELD BAR)		

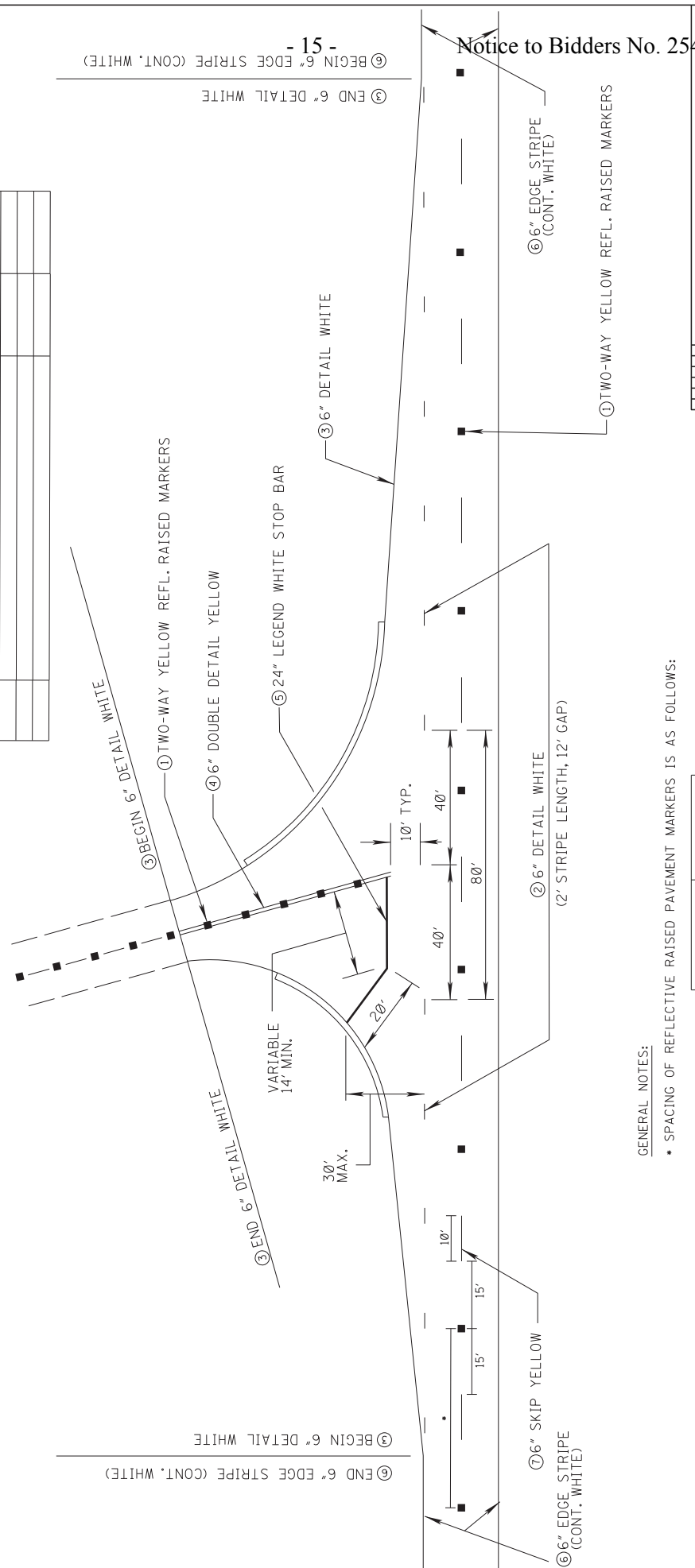


MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**DETAIL OF STRIPING**  
**CHANNELIZED INTERSECTION**  
 WORKING NUMBER  
**PROJ. NO.: MP-7184-39(002)**  
 COUNTY: LAWRENCE  
 SHEET NUMBER  
**PMD-4**  
 11

DATE	REVISION

FILE NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DESIGN TEAM: \_\_\_\_\_ CHECKED: \_\_\_\_\_

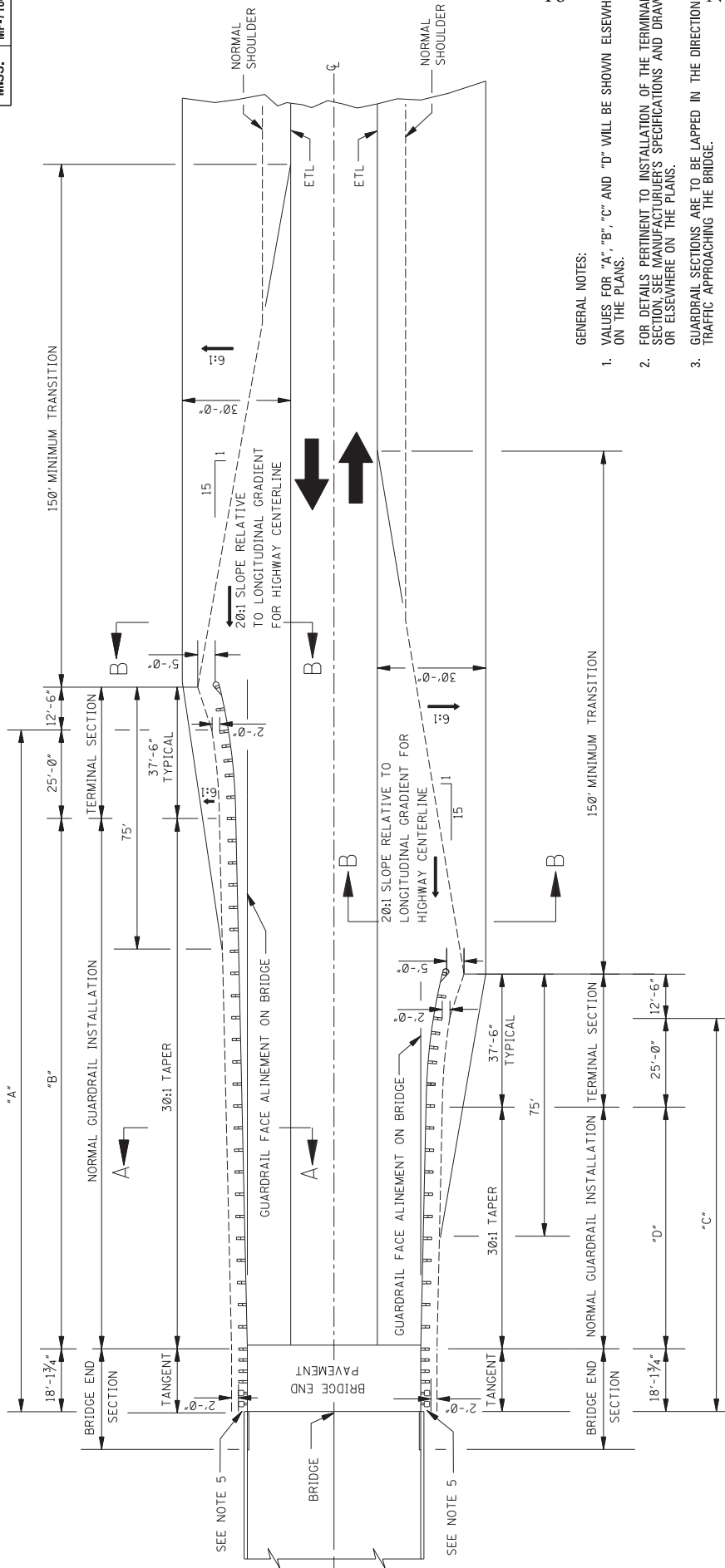
PAVEMENT MARKING			
SYMBOL	DESCRIPTION	TYPE	QUANTITY
(1)	TWO-WAY YELLOW RELEC. RAISED MARKER	EACH	
(2)	6" DETAIL SKIP WHITE (2'-12")	PLASTIC	
(3)	6" DETAIL STRIPE WHITE (SOLID)	PLASTIC	
(4)	6" DETAIL STRIPE YELLOW (SOLID)	PLASTIC	
(5)	24" THERMO LEGEND WHITE (STOP BAR)	PLASTIC	
(6)	6" CONTINUOUS EDGE WHITE (SOLID)	PLASTIC	
(7)	6" TRAFFIC SKIP YELLOW (10'-30')	PLASTIC	



GENERAL NOTES:  
 \* SPACING OF REFLECTIVE RAISED PAVEMENT MARKERS IS AS FOLLOWS:

TANGENT SECTIONS	URBAN AREA (FT - IN)	RURAL AREA (FT - IN)
HORIZONTAL CURVES	40' - 0"	80' - 0"
INTERCHANGE LIMITS	40' - 0"	40' - 0"

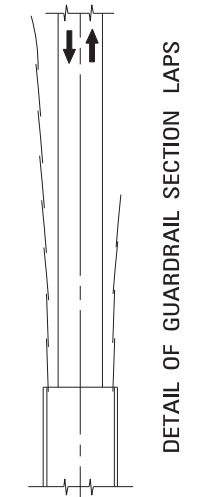
MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**DETAIL OF STRIPING  
 NON-CHANNELIZED  
 INTERSECTION**  
 PROJ. NO.: MP-7184-39(002)  
 COUNTY: LAWRENCE  
 FILENAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DESIGN TEAM \_\_\_\_\_ CHECKED: \_\_\_\_\_  
 SHEET NUMBER: **12**



PLAN

GENERAL NOTES:

- VALUES FOR "A", "B", "C" AND "D" WILL BE SHOWN ELSEWHERE ON THE PLANS.
- FOR DETAILS PERTINENT TO INSTALLATION OF THE TERMINAL SECTION, SEE MANUFACTURER'S SPECIFICATIONS AND DRAWINGS OR ELSEWHERE ON THE PLANS.
- GUARDRAIL SECTIONS ARE TO BE LAPPED IN THE DIRECTION OF TRAFFIC APPROACHING THE BRIDGE.
- THE OVERALL LENGTH OF GUARDRAIL IS MEASURED FROM CONNECTING END ON THE BRIDGE.
- THE SHOULDER WIDTH AT THE BRIDGE END SHALL BE SUFFICIENTLY WIDE TO PROVIDE A MINIMUM OF 2'-0" BEHIND THE BACK OF POST BEFORE THE SLOPE BREAK (HINGEPOINT.)
- TYPE DETAILS AND LIMITS OF GUARDRAIL BRIDGE END SECTION WILL BE SHOWN ELSEWHERE ON THE PLANS.

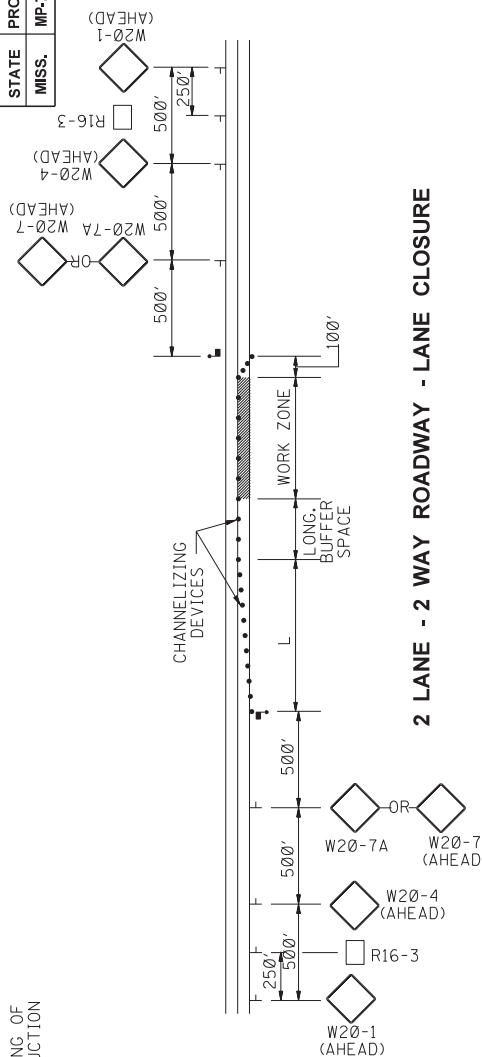


DETAIL OF GUARDRAIL SECTION LAPS

- (11) 3.00" OF EXCESS EXCAVATION REQUIRED
- (12) 3.00" OF 9.5mm, ST ASPHALT (COMPACTED) REQ'D
- (13) 3.00" OF 9.5mm ST ASPHALT (NON-COMPACTED) REQ'D

MISSISSIPPI DEPARTMENT OF TRANSPORTATION		
GUARDRAIL: TYPICAL INSTALLATION AT BRIDGE APPROACHES FOR 2-LANE, 2-WAY HIGHWAY		
PROJ. NO.: MP-7184-39(002)		WORKING NUMBER SDGR-4A
COUNTY: LAWRENCE		SHEET NUMBER 13
DATE	DESIGN TEAM	CHECKED

BEGINNING OF CONSTRUCTION  
 500'

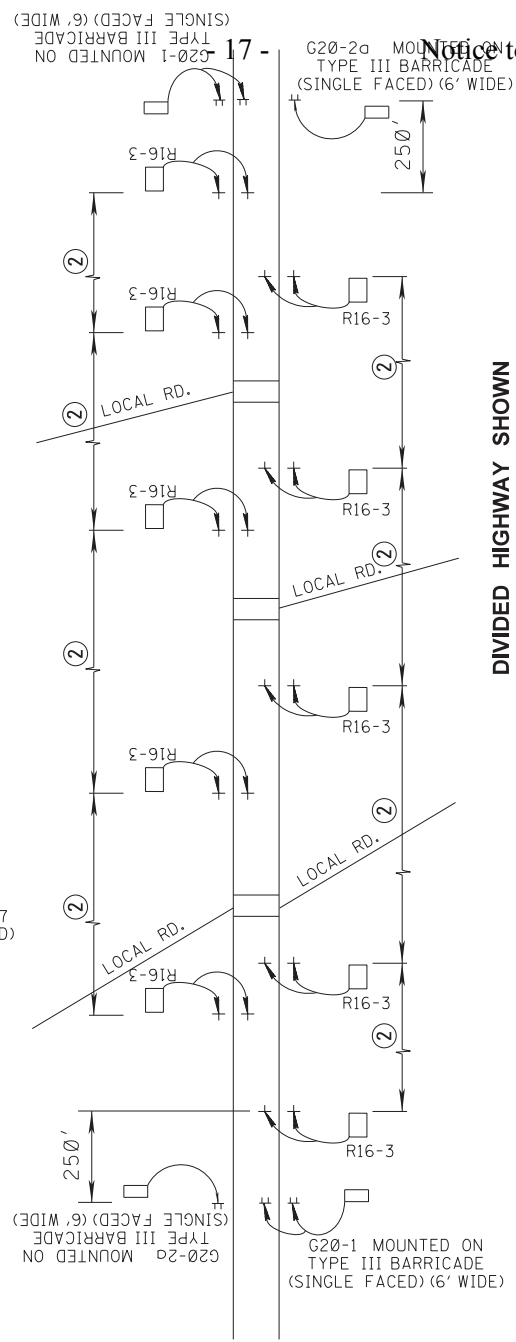


**2 LANE - 2 WAY ROADWAY - LANE CLOSURE**

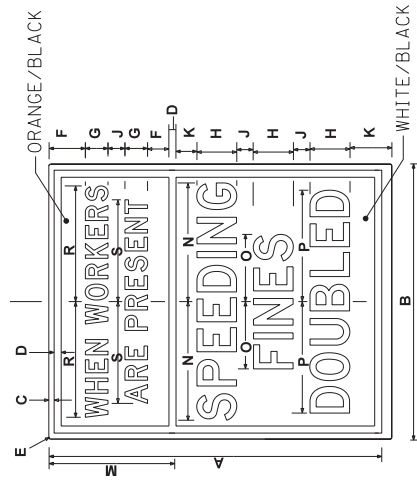
**DIVIDED HIGHWAY  
 (PROJECTS LESS THAN 1 MILE LENGTH)**

**NOTES**

- ① R16-3 SIGN TO BE PLACED AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- ② R16-3 SIGN SHALL BE SPACED AT A MAXIMUM OF 2 MILES THROUGHOUT LENGTH OF PROJECT.
- ③ ALL R16-3 SIGNS WILL BE PAID UNDER THE PAY ITEM NUMBER 618-A001, MAINTENANCE OF TRAFFIC.



**DIVIDED HIGHWAY SHOWN  
 (2 LANE - 2 WAY ROADWAY SIMILAR)  
 (PROJECT MORE THAN 1 MILE LENGTH)**

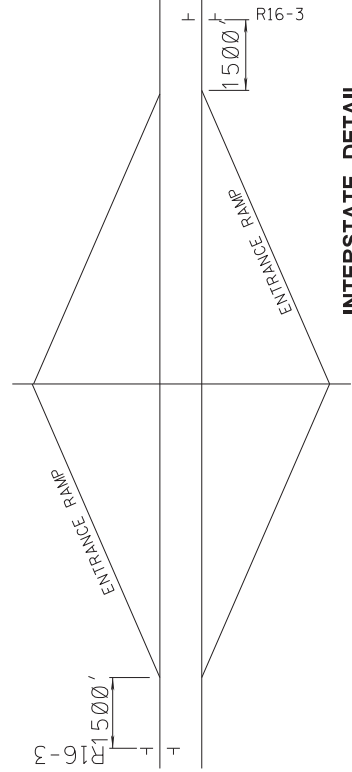


SIGN	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	I	J	K	L
STD.	60	48	3/4	1 1/4	3	3 3/4	4	Dm	7	D		
STD.	3	6 5/8	22 1/8	21	11 7/8	19 7/8	20 5/8	18				
SIGN	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	I	J	K	L
STD.	48	36	3/4	1 1/4	3	2 3/4	3	Dm	6	D		
STD.	3	4 1/8	14 3/4	14	7 7/8	13 7/8	13 3/8	12				

**R16-3**

48" x 60"  
 (INTERSTATE USE)

36" x 48"  
 (ALL OTHER HIGHWAYS)



**INTERSTATE DETAIL**

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

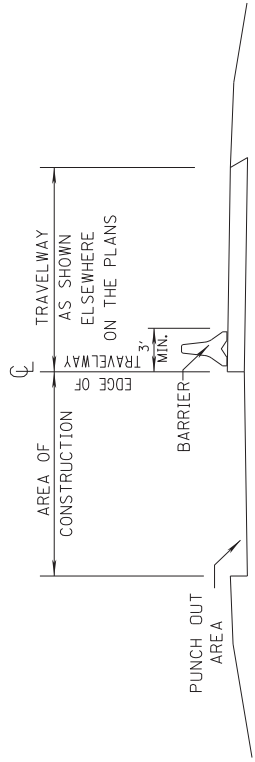
LOCATION OF R16-3 SIGNS

PROJ. NO.: MP-7184-39(002)  
 COUNTY: LAWRENCE

WORKING NUMBER: LRS-1  
 SHEET NUMBER: 14

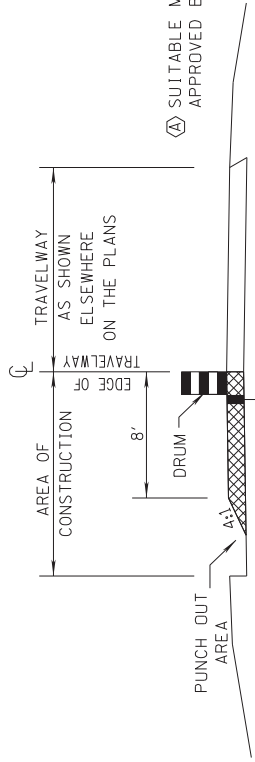
DATE: \_\_\_\_\_  
 DESIGN TEAM: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_





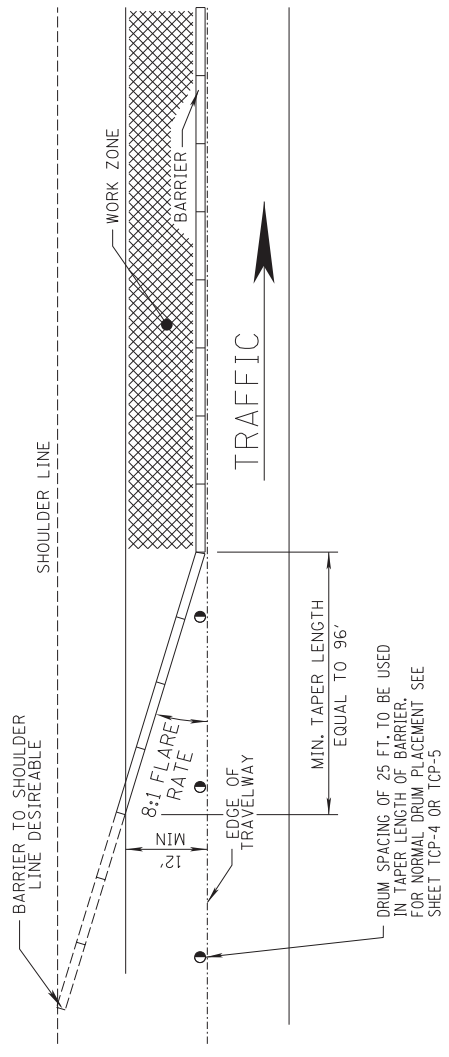
**ELEVATION VIEW FOR POSITIVE BARRIER**

- ① POSITIVE BARRIER IS REQ'D IN THE AREA OF OPEN PUNCH OUTS THAT ARE WITHIN EIGHT (8) FEET OF THE TRAVELWAY WHENEVER ACTUAL REPAIR WORK IS NOT BEING PERFORMED WITHIN THE LANE CLOSURE.
- ② DELINEATORS REQUIRED ON ALL NON-REFLECTIVE BARRIER, AS SHOWN ON WORKING NO. CMB-3.



**ELEVATION VIEW FOR DRUM**

- ① WHILE WORK IS BEING PERFORMED WITHIN THE LANE CLOSURE, DROP-OFFS MUST BE PROTECTED WITH DRUMS, ETC. IN EMERGENCIES EXCAVATED SECTION MAY BE BACKFILLED WITH GRANULAR MATERIAL, STONE OR OTHER APPROVED MATERIAL TO AVOID OVERNIGHT DROP-OFFS.
- ② LANE CLOSURES WITH OPEN PUNCH OUT AREAS MAY NOT BE LEFT UNATTENDED WHEN DRUMS ARE BEING USED FOR LANE CLOSURE
- ③ MATERIAL USED TO SUPPORT POSITIVE BARRIER MUST BE AT SAME ELEVATION AS PAVEMENT IN ADJACENT TRAVELWAY.



**DETAIL OF TAPER FOR POSITIVE BARRIER IN WORK ZONE**

**GENERAL NOTES**

- ① ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER OTHER BID ITEMS.
- ② FOR DETAILS OF DRUM PLACEMENT SEE TCP-4 OR TCP-5.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
 LANE CLOSURE DETAILS  
 FOR FULL-DEPTH  
 PAVEMENT REPAIR

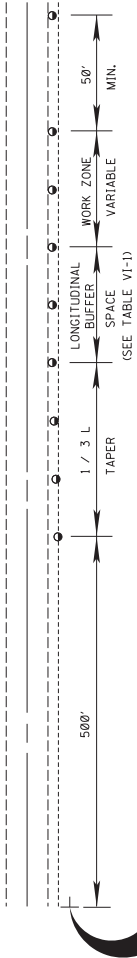
PROJ. NO.: MP-7184-39(002)  
 COUNTY: LAWRENCE

WORKING NUMBER  
 LCDPR

DATE: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DESIGN TEAM: \_\_\_\_\_

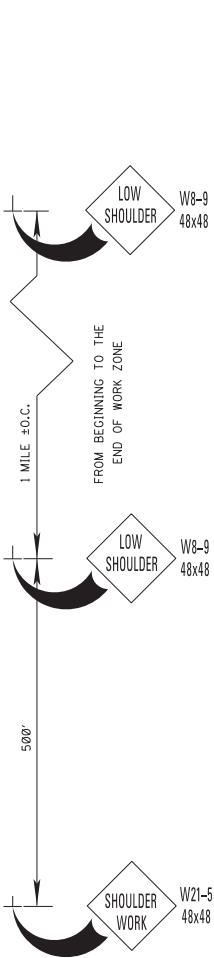
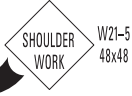
FILE NAME: \_\_\_\_\_  
 SHEET NUMBER: 15

PLASTIC DRUMS  
 (SEE NOTE FOR SPACING)



**TYPICAL SHOULDER CLOSURE**

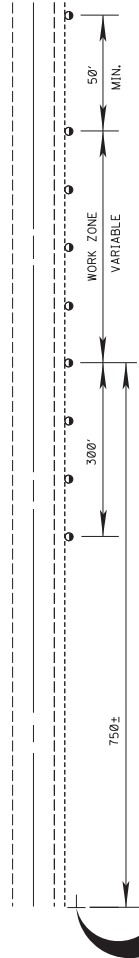
- (1) TO BE USED WITH EIGHT (8) FOOT OR GREATER WIDTH IMPROVED SHOULDER.
- (2) TO BE USED WHEN CONSTRUCTION VEHICLES (EQUIPMENT) ENDOUCHES ON OR WITHIN TWO (2) FEET OF THE SHOULDER BREAK.



**TYPICAL SHOULDER WORK #1  
 (SEE NOTE A-1 THIS SHEET)**

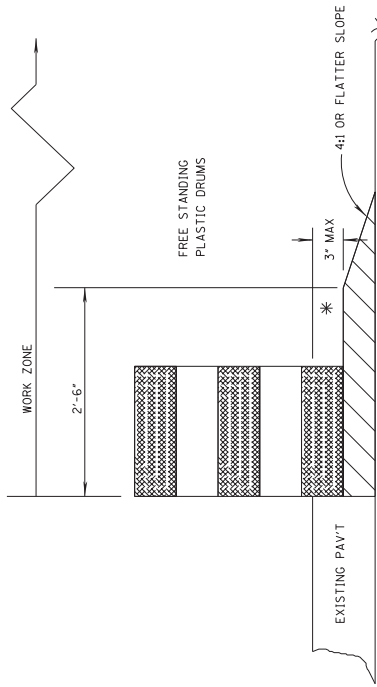


PLASTIC DRUMS  
 (SEE NOTE FOR SPACING)



**TYPICAL SHOULDER WORK #2**

NOTE:  
 WORK OUTSIDE TWO (2) FOOT AND WITHIN TEN (10) FEET OF THE SHOULDER BREAK MAY BE PROTECTED BY PLACING DRUMS ALONG THE SHOULDER EDGE, 300 FEET PRIOR TO AND 50 FEET BEYOND THE WORK AREA, OR SEE NOTE A-3 THIS SHEET.



GRANULAR MATERIAL REQUIRED  
 (SAME CLASSIFICATION AS SHOULDER MATERIAL,  
 SEE TYPICAL SECTIONS)

**DETAIL OF DRUM PLACEMENT AT  
 PAVEMENT EDGE DROP-OFF**

NOTES:

- \* A. PAVEMENT EDGE DROP-OFF

- IF LESS THAN TWO AND ONE QUARTER (2.25) INCHES-NO PROTECTION REQUIRED. PLACE A SHOULDER WORK SIGN (W21-5) 500 FEET IN ADVANCE OF WORK ZONE SHOULDER AND A LOW SHOULDER SIGN (W8-9) AT THE BEGINNING AND THROUGHOUT THE WORK ZONE (1 MILE ±0.0.1).
- TWO AND ONE QUARTER TO THREE INCHES-PLACE DRUMS, VERTICAL PANELS OR BARRICADES EVERY 100 FEET ON TANGENT SECTIONS FOR SPEEDS OF 50 MILES PER HOUR OR GREATER. CONES MAY BE USED IN PLACE OF DRUMS, PANELS, AND BARRICADES DURING LIGHT HOURS. FOR TANGENT SECTIONS WITH SPEEDS LESS THAN 50 MILES PER HOUR AND FOR CURVES, DEVICES SHOULD BE PLACED EVERY 50 FEET. SPACING FOR TAPERS SHOULD BE IN ACCORDANCE WITH THE M.U.T.C.D. (1 / 3 L, WHERE L IS THE TAPER LENGTH IN FEET).
- GREATER THAN THREE (3) INCHES-POSITIVE SEPARATION OR WEDGE WITH 4:1 OR FLATTER SLOPE NEEDED. IF THERE IS EIGHT (8) FEET OR MORE DISTANCE BETWEEN THE EDGE OF TRAVEL LANE AND DROP-OFF, THEN DRUMS, PANELS OR BARRICADES MAY BE USED.
- FOR TEMPORARY CONDITIONS, DROP-OFFS GREATER THAN THREE (3) INCHES MAY BE PROTECTED WITH DRUMS, VERTICAL PANELS OR BARRICADES FOR SHORT DISTANCES DURING DAYLIGHT HOURS WHILE WORK IS BEING DONE IN THE DROP-OFF AREA.
- LESSER TREATMENTS THAN THOSE DESCRIBED ABOVE MAY BE CONSIDERED FOR LOW-VOLUME LOCAL STREETS.

**B. DRUM SPACING**

- TANGENTS =  $2 \times S$
- TAPERS =  $L / 3$   
 WHERE L = S x W  
 L = TAPER LENGTH IN FEET  
 S = SPEED IN MPH (POSTED OR 85 PERCENTILE)  
 W = WIDTH OF OFFSET IN FEET

C. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER MAINTENANCE OF TRAFFIC.

TABLE VI-1. GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE

* SPEED (MPH)	LENGTH (FEET)
20	35
25	55
30	75
35	120
40	170
45	220
50	280
55	335
60	415
65	485

\* POSTED SPEED, OFF-PEAK 85 PERCENTILE SPEED FOR WORKING, OR THE ANTICIPATED OPERATING SPEED IN MPH.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
 TRAFFIC CONTROL DETAILS  
 DRUM PLACEMENT AND  
 SHOULDER CLOSURE

WORKING NUMBER SDTCP-16  
 SHEET NUMBER 16

PROJ. NO.: MP-7184-39(002)  
 COUNTY:

FILE NAME: \_\_\_\_\_ DATE \_\_\_\_\_  
 DESIGN TEAM \_\_\_\_\_ CHECKED \_\_\_\_\_


STATE	MISS	PROJECT NO.	MP-7184-39(002)
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**SUMMARY OF QUANTITIES (SHEET 1)**

PAY ITEM NO.	PAY ITEM	UNIT	LAWRENCE : 307071-301000	
			Prelim	Final
202-B240	Removal of Traffic Stripe	LF	2,608	
203-G002	Excess Excavation, LVM, AH	CY	155	
304-A008	Granular Material, LVM, Class 6, Group D	CY	561	
403-A003	12.5-mm, ST, Asphalt Pavement	TON	214	
403-A015	9.5-mm, ST, Asphalt Pavement	TON	5,553	
406-D001	Fine Milling of Bituminous Pavement, All Depths	SY	31,425	
407-A001	Asphalt for Tack Coat	GAL	4,432	
412-A001	Pre-Grinding	SF	804	
907-414-A001	Scrub Seal (Seal Aggregate Size No. 7)	SY	26,900	
423-A001	Rumble Strips, Ground In	MI	4	
618-A001	Maintenance of Traffic	LS	1	
618-B001	Additional Construction Signs	SF	1	
619-A1001	Temporary Traffic Stripe, Continuous White	MI	11	
619-A2001	Temporary Traffic Stripe, Continuous Yellow	MI	10	
619-A3002	Temporary Traffic Stripe, Skip White	LF	875	
619-A4002	Temporary Traffic Stripe, Skip Yellow	MI	1	
619-A5001	Temporary Traffic Stripe, Detail	LF	11,555	
619-A6002	Temporary Traffic Stripe, Legend	LF	736	
907-619-B001	Temporary Portable Rumble Strips	LF	66	
620-A001	Mobilization	LS	1	
907-624-B003	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White, High Contrast	LF	1,304	
907-624-D001	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow, High Contrast	LF	1,304	
	OR			
628-H001	6" High Performance Cold Plastic Traffic Stripe, Continuous White	LF	1,304	
628-J001	6" High Performance Cold Plastic Traffic Stripe, Continuous Yellow	LF	1,304	
626-A002	6" Thermoplastic Double Drop Traffic Stripe, Skip White	LF	875	
626-C002	6" Thermoplastic Double Drop Edge Stripe, Continuous White	MI	6	
626-D001	6" Thermoplastic Double Drop Traffic Stripe, Skip Yellow	MI	1	
626-E001	6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow	MI	5	
626-G002	Thermoplastic Detail Stripe, White	LF	8,522	
626-G003	Thermoplastic Detail Stripe, Yellow	LF	3,033	
626-H005	Thermoplastic Legend, White	LF	736	
627-H002	Chip Seal Reflective Raised Markers, Two-Way Yellow	EA	500	
627-J001	Two-Way Clear Reflective High Performance Raised Markers	EA	370	
627-L001	Two-Way Yellow Reflective High Performance Raised Markers	EA	398	
627-P001	Two-Way Blue Reflective High Performance Raised Markers	EA	5	

- ① To be performed at guardrail in preparation for paving
- ② Fine Milling is 1.5" and variable depth at various locations throughout the project, except for 1245 SY at bridge end repairs, where it is 4" and variable depth.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**  
**SUMMARY OF QUANTITIES**



Working Number: SQ-1  
 Sheet Number: 1

PROJ NO: MP-7184-39(002)  
 COUNTY: LAWRENCE

FILENAME: SQS 307071  
 Design Team: BZ  
 Checked: \_\_\_\_\_ Date: \_\_\_\_\_

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 2543**

**CODE: (SP)**

**DATE: 4/6/2018**

**SUBJECT: Aggregates for Chip Seals and Scrub Seals**

**PROJECT: MP-7184-39(002) / 307071301 – Lawrence County**

The Bidder's attention is hereby called to the following requirements pertaining to deleterious substances in aggregates used in chip seals and scrub seals.

In accordance with Section 703.14, Aggregate for Chip Seals, Subsection 703.14.2.2, All Materials: The quantity of deleterious substances shall not exceed the limits set out in Subsection 703.03.2.1 for general use.

In accordance with Subsection 703.03.2.1, Deleterious Substances, the quantity of deleterious substances shall not exceed the following limits:

Material passing the No. 200 sieve: Limestone – Maximum Percent (%) by mass shall be 1.5%.

The aggregate shall meet the Gradation Requirements For Cover Aggregate. The quantity of deleterious substances shall not exceed 1.5 % by weight passing the No. 200 sieve and shall be **wash tested** in accordance with AASHTO T 11.

The aggregate will be sampled from the project site stockpile.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-102-2

CODE: (IS)

DATE: 11/22/2017

SUBJECT: **Bidding Requirements and Conditions**

Section 102, Bidding Requirements and Conditions, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-102.01--Prequalification of Bidders.** Delete the last sentence of the third paragraph of Subsection 102.01 on page 13, and substitute the following.

The Bidder's Certificate of Responsibility number must be on file with the Department's Contract Administration Division prior to request for permission to bid.

**907-102.02--Contents of Proposal Forms.** Delete the fourth paragraph in Subsection 102.02 on page 13, and substitute the following.

Prospective bidders must complete an online request for permission to be eligible to bid a project. Upon approval, the bidder will be authorized to submit a bid electronically using Bid Express at <http://bidx.com>.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-103-2

CODE: (SP)

DATE: 06/22/2017

SUBJECT: Award and Execution of Contract

Section 103, Award and Execution of Contract, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-103.01--Consideration of Proposal.** Delete the second and third paragraphs of Subsection 103.01 on page 19, and substitute the following.

**907-103.01.1--For Projects Constructed Without Federal Funds.** Resident Contractors actually domiciled in Mississippi are to be granted preference over nonresidents in awarding of Contracts financed 100% with State funds.

In consideration of proposals that are equal to or in excess of \$50,000 and financed 100% with State funds, a nonresident bidder domiciled in a state having laws granting preference to local Contractors will be considered for such contracts on the same basis as the nonresident bidder's state awards contracts to Mississippi Contractors bidding under similar circumstances. When a nonresident Contractor submits a bid equal to or in excess of \$50,000 on a contract financed 100% with State funds, a copy of the current laws from the state of domicile and an explanation thereof pertaining to treatment of nonresident Contractors shall be attached. If no preferential treatment is provided for Contractors in the state of domicile and contracts are awarded to the lowest responsible bidder, a statement to this effect shall be attached. Should the attachment not accompany the bid when submitted, the Contractor shall have 10 days following the opening of the bids to furnish the required information to the Contract Administration Director for attachment to the bid. Failure to provide the attachment within 10 days will result in the nonresident Contractor's bid being rejected and not considered for award. As used herein, the term "resident Contractor" includes a nonresident person, firm or corporation that has been qualified to do business in this State and has maintained a permanent full-time office in the State of Mississippi for two years prior to the submission of the bid, and the subsidiaries and affiliates of such a person, firm or corporation.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-109-1**

**CODE: (SP)**

**DATE: 05/08/2019**

**SUBJECT: Measurement and Payment**

Section 109, Measurement and Payment, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-109.01--Measurement of Quantities.** Delete the sixth full paragraph of Subsection 109.01 on page 88, and substitute the following.

If appropriate based on the specific circumstances of the project, the Contractor may request that material specified to be measured by the cubic yard or ton be converted to the other measure. The Contractor must submit this request to the Engineer. The Engineer will provide an approval or denial in writing. The decision is in the sole discretion of the Engineer. If approved, factors for this conversion will be determined by the District Materials Engineer and agreed to by the Contractor. The conversion of the materials along with the conversion factor will be incorporated into the Contract by supplemental agreement. The supplemental agreement must be executed before such method of measurement is used.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-414-1**

**CODE: (SP)**

**DATE: 05/02/2017**

**SUBJECT: Polymer Modified Asphalt Rejuvenating Scrub Seal**

Section 907-414, Scrub Seal, is hereby added to and made a part of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

**SECTION 907-414 -- POLYMER MODIFIED ASPHALT REJUVENATING  
SCRUB SEAL**

**907-414.01--Description.** This work shall consist of, but not be limited to, furnishing all labor, materials, equipment and transportation for the application of a polymer modified asphalt rejuvenating scrub seal. All ingredients shall be properly proportioned, mixed, and spread on the paved surface in accordance with this Specification and as directed by the Engineer.

**907-414.02--Materials.**

**907-414.02.1--Aggregate.** Unless otherwise noted, the aggregate material shall be one of the seal aggregate cover materials listed in and meeting the requirements of Subsection 703.14 of the Standard Specifications.

**907-414.02.2--Asphalt Emulsion for Scrub Seal.** The asphalt emulsion for scrub seal shall meet the requirements of the following table and shall be composed of a polymer modifier, a petroleum based rejuvenating agent, and asphalt.



Test on Emulsion	Method	Specification	
		(min)	(max)
Viscosity @77 (SFS)	AASHTO T 59	50	350
Residue, w% <sup>(1)</sup>	AASHTO T 59	60	-
Storage Stability, 24 h, %	AASHTO T 59	-	1.0
Sieve, w%	AASHTO T 59		0.1
Oil distillate, w%	AASHTO T 59		0.5
<b>Test on Residue<sup>(1)</sup></b>			
Viscosity @ 140°F, P	AASHTO T 202	-	3000
Penetration @ 4°C (39.2°F), 200 g, 60 sec	AASHTO T 59	30	-
<b>Test on Polymer Modifier</b>			
Swelling in rejuvenating agent, %; 48 hours exposure @ 104°F	ASTM D 471 <sup>(2)</sup> Modified	-	40% intact film
<b>Test on Rejuvenating Agent</b>			
Flash point, COC, °F	AASHTO T 48	380	-
Viscosity @ 140°F, CST	AASHTO T 201	50	175
Saturate, % by weight	ASTM D 2007	-	30
Asphaltenes	ASTM D 2007	-	1.0
Test on Residue			
Weight Change, %			6.5
Viscosity Ratio			3

- (1) Exception to AASHTO T59: Bring the temperature on the lower thermometer slowly to 350°F plus or minus 10°F. Maintain at this temperature for 20 minutes. Complete total distillation in 60 plus or minus 5 minutes from first application of heat.
- (2) Polymer Modifier Testing: Suitable substrate for film formation shall be polyethylene boards, silicone rubber sheeting, glass, or any substrate which produces a cured film of uniform cross-section. Polymer film shall be prepared from latex as follows:

Resistance to Swelling: Polymer films shall be formed by using a 50 mil drawdown bar and drawing down 50 mils of the latex on polyethylene boards. Films shall be cured for 14 days at 75°F and 50% humidity. Samples for resistance to swelling in rejuvenating agent shall be 1” by 2” rectangles cut from the cured film. Cut at least 3 specimens for each sample to be tested for swelling. Fill 3- 8 oz ointment tins with at least a ½” deep of rejuvenating agent. Swelling samples shall be weighed and then placed in the ointment tins on top of the rejuvenating agent. Then, add at least another ½” deep of rejuvenating agent over each of the latex samples. The ointment tins shall be covered and placed in an oven at 104°F for the specified 48 hours +/- 15 minutes. The ointment tins are allowed to cool to 75°F and then the latex films are removed from the tins. Unabsorbed rejuvenating agent is removed from the intact latex film by scraping with a rubber policeman and blotting with paper towels. If the latex film does not remain intact during removal from the tins or while removing the unabsorbed rejuvenating agent the sample shall be rejected. After the rejuvenating agent is removed from the samples they are then weighed. Percent swelling is reported as weight increase of the polymer film; report mass increase as a percent by weight of the original latex film mass upon exposure of films to the rejuvenating agent.

When a fog seal is required, the asphalt emulsion shall meet the requirements of Subsection 702.07.

**907-414.02.2.1--Certification and Acceptance.** The Emulsion supplier shall submit a certification that the polymer modified rejuvenating emulsion meets the requirements of the specification. The certification shall be submitted to the Engineer prior to starting the work. The Engineer will sample the polymer modified rejuvenating emulsion according to Department procedures. Final acceptance of the emulsion for scrub seal will be based on the Manufacturer's Certification and testing conducted by the Department.

**907-414.03--Construction Requirements.** The attached sign drawings shall be used during scrub seal operations. Prior to any sealing operation, the rectangular "Loose Rock" signs shall be installed and remain in place until all sealing operations are complete. Prior to any daily sealing operation, the portable "Loose Rock" signs shall be installed in accordance with the attached drawings. Portable signs shall be installed and remain in place on a daily basis in the active sealing area. Payment for signs shown on the sign detail drawings shall be made under pay item no. 618-A, Maintenance of Traffic.

**907-414.03.1--Preparation.** The work shall be done in the following order: Prepare the pavement surface; apply the asphalt emulsion for scrub seal and scrub the applied emulsion with a scrub broom as specified herein; apply the aggregate, roll the aggregate, broom the aggregate with a secondary broom when specified; and sweep up and dispose of excess aggregate. Excess aggregate shall be removed from the project unless otherwise approved by the Engineer.

Prior to the scrub seal operation, the Contractor shall remove any and all vegetation within the limits of the scrub seal installation. The use of herbicides will be allowed at the discretion of the Engineer.

If used, the herbicide shall be applied at least 10 days prior to the scrub seal operation, or as directed by the manufacturer of the approved herbicide. The application of the herbicide shall be performed in accordance with all applicable regulations. Any and all fines or clean-up costs for unlawful misuse or discarding of herbicides shall be the sole responsibility of the Contractor. Mixtures and spread rates for the herbicides shall be determined by the manufacturer's specifications. Wash down of equipment or discarding of herbicides shall not enter catch basins or positive drainage facilities.

Prior to the scrub seal operation, the Contractor shall remove all existing thermoplastic striping, thermoplastic legends and raised pavement markers within the scrub seal limits. Removal shall be performed to the satisfaction of the Engineer.

Prior to the scrub seal operation, all drain inlet covers, monument covers, and all other utility covers shall be protected from the Contractor's scrub seal operations by applying a sheet of plastic over the exposed facilities, or other methods approved by the Engineer. All traces of plastic, residual emulsion and aggregate shall be removed from covered objects after the application of the scrub seal and/or prior to final inspection of the project.

Immediately prior to the scrub sealing operations, the Contractor shall sweep the entire pavement surface.

**907-414.03.2--Application.** The scrub seal shall be applied from edge of pavement to edge of pavement. The edges of the scrub seal application shall be maintained in a neat and uniform line. Scrub seal shall not be applied on concrete gutters or pads unless directed by the Engineer.

The application of the asphalt emulsion for scrub seal shall be applied only when the ambient and pavement temperatures are above 70°F.

The asphalt emulsion for scrub seal shall be applied with a distributor truck at the following target rates. The actual emulsion application rate shall be determined from the surface demands and aggregate used. Any adjustments of the application rate shall be approved by the Engineer, and manufacturer’s representative if necessary.

The optimum application rate of bituminous material is dependent on the chosen seal aggregate gradation as well as the condition of the pavement in which the bituminous surface treatment is to be applied. The application rate of the bituminous material may be adjusted by the Engineer based on field conditions at the time of construction. Following are target application rates for bituminous material.

<b>Seal Aggregate Gradation</b>	<b>Bituminous Material</b>	<b>Target Application Rate (gal/yd<sup>2</sup>)</b>	<b>Tolerance</b>
Size No. 7	Emulsified Asphalt	0.33	+0.03
Size No. 8 or 89	Emulsified Asphalt	0.30	+0.03

Note: Emulsified Asphalt shall not be diluted. A sample of emulsified asphalt should be obtained from the Contractor’s distributor on the first day of production and thereafter at a frequency not to exceed 1 sample per 50,000 gallons. Because the time between sampling of the emulsified asphalt and the testing of the material can affect the test results, samples should be sent to the MDOT Central Lab for testing as soon as possible.

The asphalt emulsion for scrub seal temperature when applied shall be a minimum of 140° to 180°F. For smaller areas, the emulsion may be applied with a wand. The emulsion shall be immediately broomed to fill cracks and voids. The emulsion scrub broom shall be as described below.

Immediately following the application of the emulsion to the road surface, the material shall be scrubbed with a scrub broom for the purpose of forcing the emulsion into the existing surface and distributing the emulsion evenly over variable road surface contours.

The application of the asphalt emulsion for scrub seal and scrub broom operation shall cease 40 feet prior to the end of the application. The remaining asphalt emulsion for scrub seal shall be dragged out by the scrub broom, and the remaining emulsified material required to complete the pass shall be applied only by the distributor truck, at the specified rate.

Immediately following the scrubbing of emulsion, aggregate shall be applied at the following application rates.

Size 7 Slag, Stone, Gravel or Expanded Clay	= 0.30 ±0.02 ft <sup>3</sup> / yd <sup>2</sup>
Size 8 Expanded Clay	= 0.25 ±0.02 ft <sup>3</sup> / yd <sup>2</sup>
Size 89 Slag, Stone, or Gravel	= 0.25 ±0.02 ft <sup>3</sup> / yd <sup>2</sup>

The actual aggregate application rate shall be as required by the surface demands and the emulsion used. The rate shall be adjusted, within the specified limit, up or down so that no “bleed through” occurs during rolling.

During the first day of production and at least once a week thereafter, the application rate of the aggregate shall be verified by the Department to assure that the appropriate application rate of the aggregate is applied. The rate can be verified by placing a tarp of at least 1.0 yd<sup>2</sup> area on the roadway surface. After allowing the aggregate spreader to pass over the tarp, the aggregate on the tarp should be collected and weighed to determine the weight of aggregate. The measured weight should then be compared to the target weight calculated using the following formula.

$$W = 0.85(G_{sb})(U_w)(R)(A)(e)$$

Where:

- W = target weight of aggregate in lbs.
- G<sub>sb</sub> = bulk specific gravity of aggregate
- U<sub>w</sub> = Unit weight of water at 70°F = 62.3 lbs./ft<sup>3</sup>
- R = target application rate in ft<sup>3</sup>/yd<sup>2</sup>
- A = area of tarp in yd<sup>2</sup>
- e = air voids in loose aggregate = 0.4

G<sub>sb</sub> for gravel = 2.650

G<sub>sb</sub> for limestone = 2.700

Note: Bulk specific gravities of expanded clay and steel slag should be obtained from the seal aggregate supplier.

Upon determining the target weight, it should be compared to the actual measured weight. If the difference in the target weight and the actual measured weight is over 2.5 pounds, the aggregate distributor should be adjusted such that the spread rate is within the above tolerance. The above procedure shall be repeated until the spread rate is within the allowable tolerance.

If at any point during production, excessive aggregate is noted, the aggregate application rate should be verified and the spread rate adjusted. The intent is to minimize the amount of excess aggregate. Excess aggregate removed from the roadway surface after brooming shall be removed from the job site and should not be reused in the aggregate operation.

The dry aggregate shall be spread uniformly to cover the bituminous material with the quantity of mineral aggregate specified by the Engineer. All deficient areas shall be covered by additional material. All excess cover material shall be removed from the surface and stockpiled or used as directed.

A minimum of two self-propelled pneumatic-tired rollers shall be used for the required rolling of the aggregate. The pneumatic-tired rollers shall be in good working condition and actively rolling at all times during the scrub seal operation. The pneumatic-tired rollers shall be minimum 5-ton rollers. The pneumatic-tired rollers shall be operated in such a manner to prevent the dislodging of newly applied aggregate.

If specified, a fog seal will be placed at a rate of 0.11 gallons per square yard, or as directed by the Project Engineer. The fog seal shall not be placed until after final brooming.

**907-414.03.3--Stockpile Sites.** Sites for stockpiles of materials shall be grubbed and cleaned prior to storing the aggregates, and the ground shall be firm, smooth, and well drained.

**907-414.03.4--Equipment.** The following equipment shall be used for the scrub-seal operations.

- A. **Asphalt Distributor.** The asphalt distributor for application of the emulsion shall have a full circulation spray bar that is adjustable to at least sixteen feet (16') wide in two (2) feet increments and capable of heating and circulating the emulsion simultaneously. It must have computerized rate control for adjusting and controlling the application from the cab within 0.01 gallons per square yard increments. The distributor shall also be equipped with a volume measuring device and a thermometer for measuring the emulsion temperature in the tank.
- B. **Scrub Broom.** A scrub broom as described herein shall be used to scrub the emulsion after application. The scrub broom frame shall be constructed of metal. The scrub broom shall be attached to and pulled by the distributor truck. The scrub broom must be equipped with a means of raising and lowering the scrub broom at desired points. It shall be towable in the elevated position to the next area of construction. The weight of the broom assembly shall be such that it does not squeegee the emulsion off the roadway surface.

The main body of the scrub broom shall have a frame size as shown in the drawing at the end of this special provision. The nearest and furthest members, paralleling the back of the distributor truck, and diagonal members shall be equipped with street brooms. The leading member and the trailing member shall have broom heads angled at 10 to 15 degrees off the centerline of the supporting member. The diagonal members shall have broom heads attached in line with the centerline of the supporting member. Each individual street broom attached to the scrub broom assembly shall be 3.5 inches wide x 6.5 inches high x 16 inches long and have stiff nylon bristles. Bristle height is to be maintained at a minimum of five inches (5"). The scrub broom shall be equipped with hinged wing assemblies attached to the main body not to exceed 4.5 feet per side, with diagonals and equipped with street brooms. The purpose of the maximum rigid frame width and the hinged wing extensions is not only for maximum width of 16 feet but to maintain the scrubbing process evenly as contours and cross-sections change across the existing road surface.

- C. **Aggregate Spreader.** A self-propelled aggregate spreader with front discharge that can evenly distribute aggregate.

- D. Roller. A minimum of two (2) pneumatic rollers weighing at least five (5) tons each.
- E. Power Broom. Two (2) mechanically powered kick-brooms or vacuum type brooms.

**907-414.03.5--Opening to Traffic.** Unless otherwise advised, the Contractor’s operations shall be schedule such that all lanes of traffic are open to the traveling public at the end of each day. Considering time needed for curing and preparation prior to opening traffic, the Contractor should not apply bituminous material two (2) hours before dusk, or longer, to allow sufficient time for bonding of the aggregates.

After the scrub seal has been rolled and the bituminous material has cured a minimum of one (1) hour, or longer if necessary to sufficiently hold the aggregate in place, the Contractor shall perform an initial brooming operation consisting of lightly sweeping excess aggregate material from the surface. After the initial brooming has been completed, public traffic will be allowed on the roadway.

Immediately the next morning, a final brooming shall be performed to remove any remaining excess aggregate material from the previous day’s seal operation.

**907-414.04--Method of Measurement.** Scrub seal shall be measured by the square yard.

Accepted quantities for asphalt for fog seal will be measured by the gallon as prescribed in Subsection 109.01. Unless otherwise specified, distributor tank measurement will be used. The volume of material over five percent (5%) above the quantity ordered for each shot will be deducted from measured quantities, except that 15 percent will be allowed for irregular areas where hand spraying is necessary.

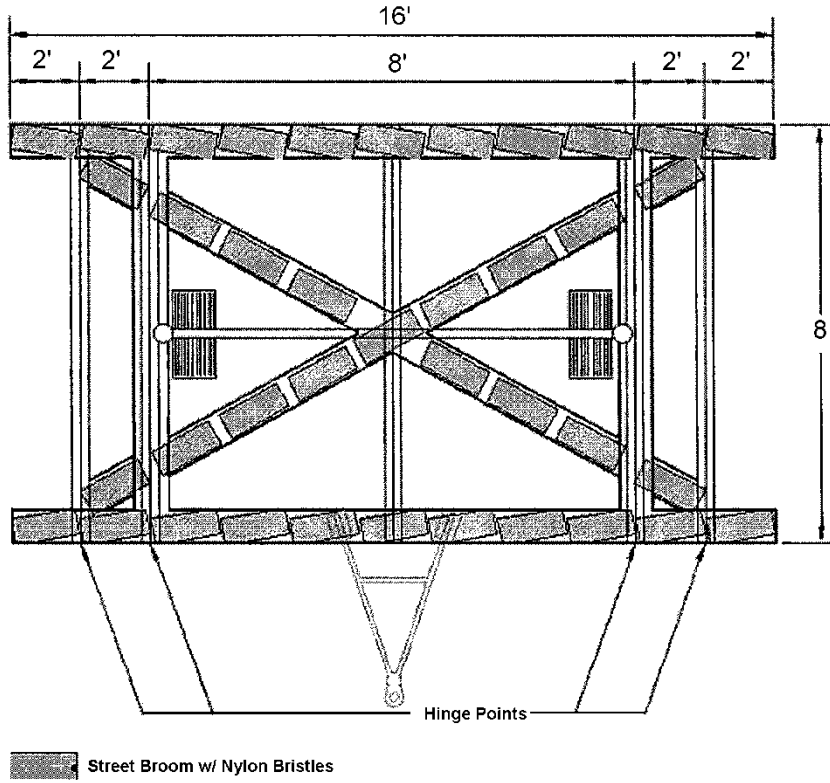
**907-414.05--Basis of Payment.** Scrub seal, measured as prescribed above, will be paid for at the contract bid price per square yard, which shall be full compensation for furnishing all labor, materials, equipment, temporary markers, vegetation removal, cleaning of the surface, pre-sweeping, post-sweeping, doing all the work involved in mixing, applying and protecting the polymer modified asphaltic rejuvenating scrub seal, and all incidentals necessary to complete the work.

Asphalt for fog seal will be paid for at the contract unit price per gallon, which shall be full compensation for furnishing all labor, materials, equipment, applying and protecting the fog seal, and all incidentals necessary to complete the work.

Payment will be made under:

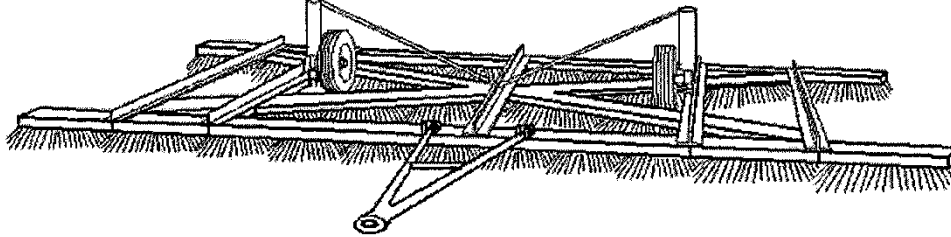
907-414-A: Scrub Seal - per square yard

907-414-B: Asphalt for Fog Seal - per gallon

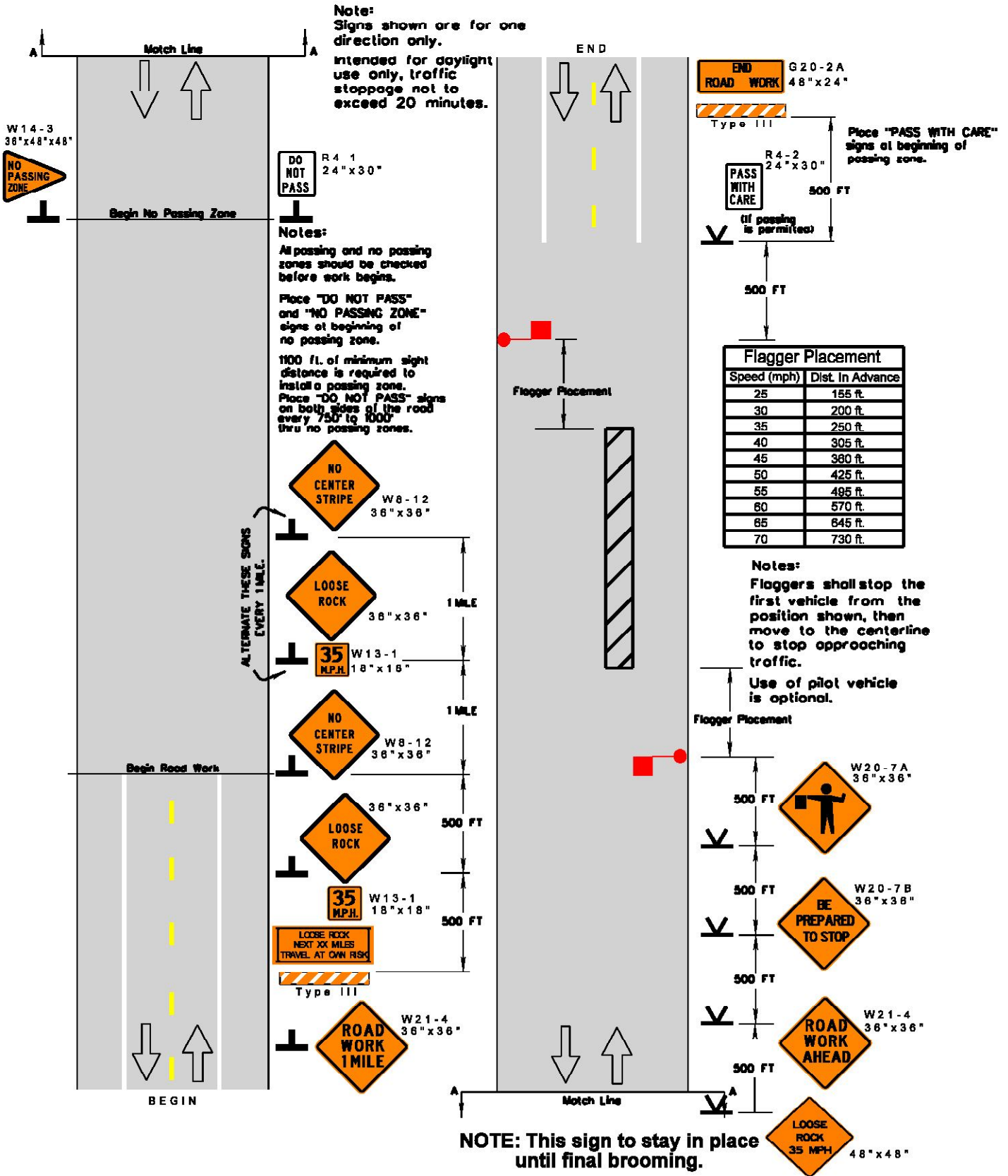


Lift For Wheels (Typical)

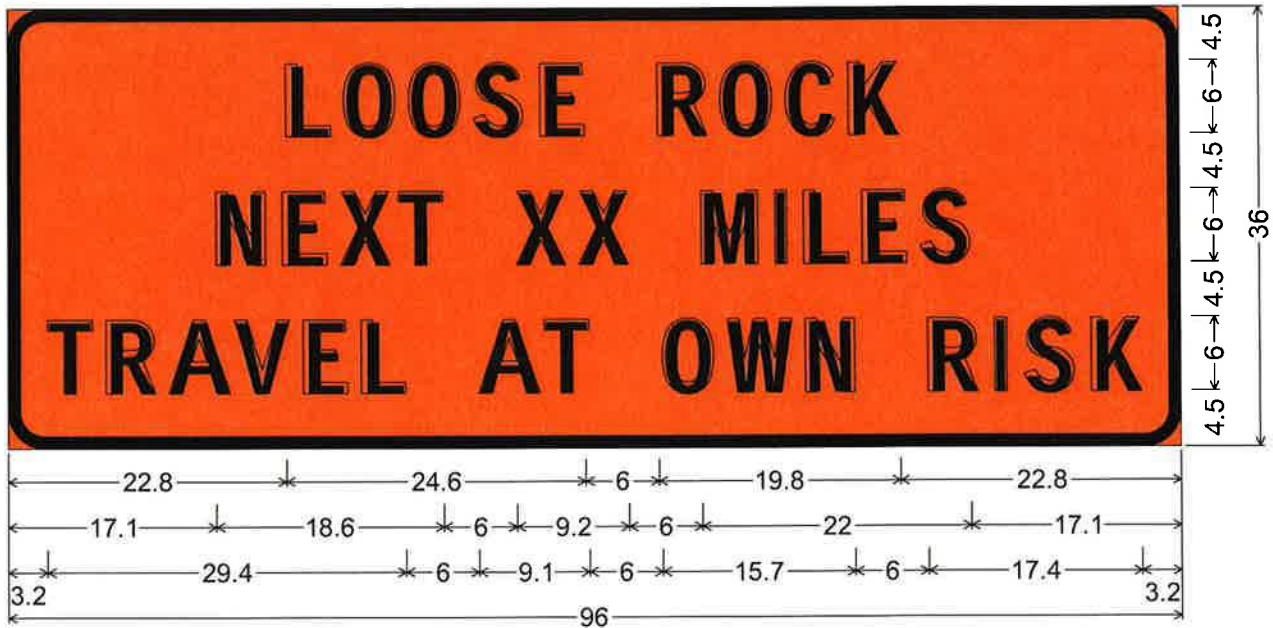
Note: Wheels are up and the broom is in the scrub position.



### Scrub Broom





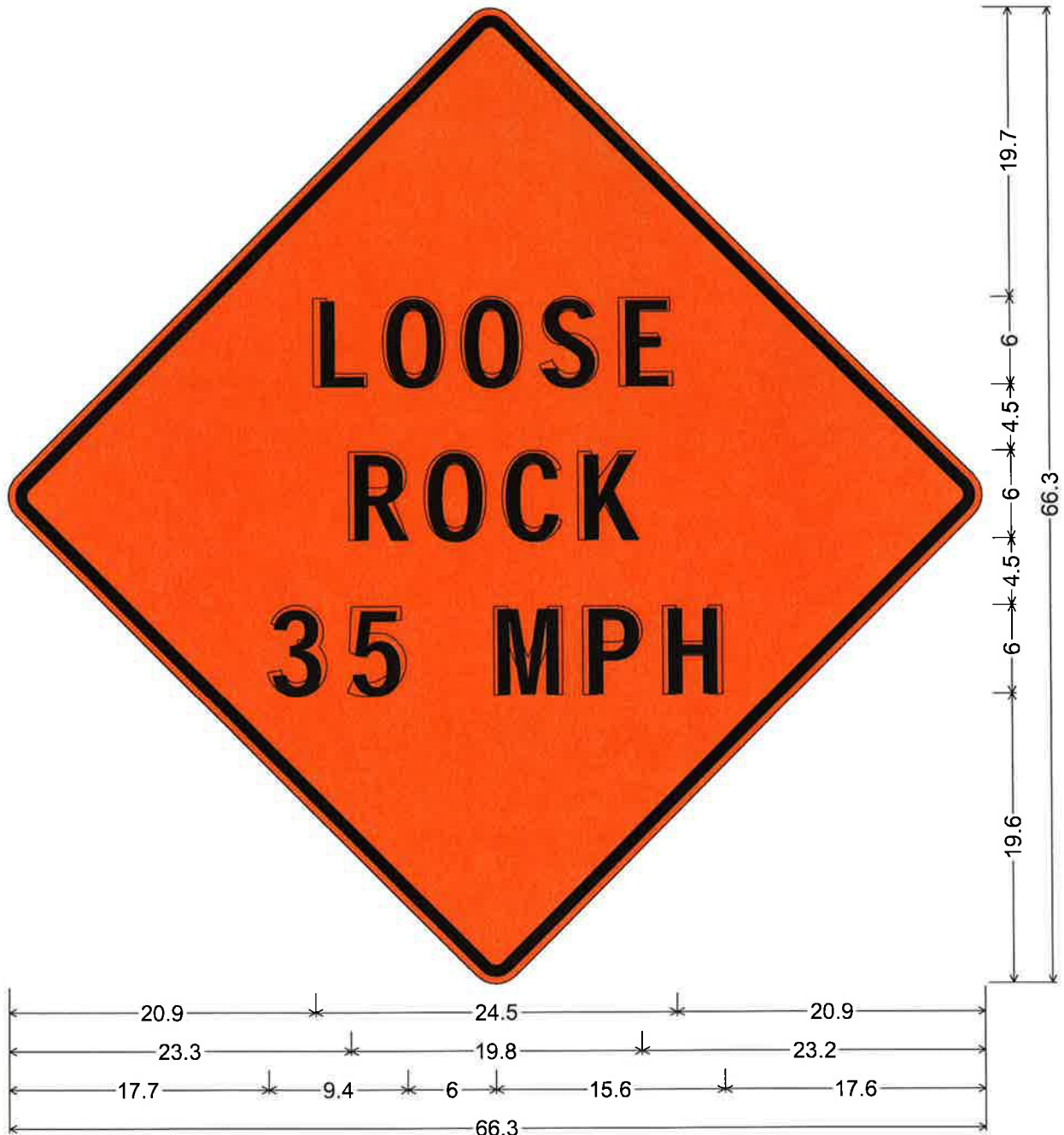


3.0" Radius, 1.0" Border, Black on Orange;

"LOOSE ROCK" D; "NEXT XX MILES" D; "TRAVEL AT OWN RISK" D;

Table of letter and object lefts.

<b>L</b>	<b>O</b>	<b>O</b>	<b>S</b>	<b>E</b>	<b>R</b>	<b>O</b>	<b>C</b>	<b>K</b>						
22.8	27.6	33.0	38.3	43.7	53.4	58.5	63.9	69.0						
<b>N</b>	<b>E</b>	<b>X</b>	<b>T</b>	<b>X</b>	<b>X</b>	<b>M</b>	<b>I</b>	<b>L</b>	<b>E</b>	<b>S</b>				
17.1	22.5	27.3	32.1	41.7	46.9	56.9	63.0	65.3	70.1	74.9				
<b>T</b>	<b>R</b>	<b>A</b>	<b>V</b>	<b>E</b>	<b>L</b>	<b>A</b>	<b>T</b>	<b>O</b>	<b>W</b>	<b>N</b>	<b>R</b>	<b>I</b>	<b>S</b>	<b>K</b>
3.2	8.0	13.2	18.6	24.2	29.0	38.6	44.0	53.7	59.0	65.4	75.4	80.9	83.2	88.6



48.0" across sides 1.9" Radius, 0.8" Border, 0.5" Indent, Black on Orange;

"LOOSE" D; "ROCK" D; "35 MPH" D;

Table of letter and object lefts.

<b>L</b>	<b>O</b>	<b>O</b>	<b>S</b>	<b>E</b>
20.9	25.7	31.0	36.4	41.8
<b>R</b>	<b>O</b>	<b>C</b>	<b>K</b>	
23.3	28.4	33.8	38.9	
<b>3</b>	<b>5</b>	<b>M</b>	<b>P</b>	<b>H</b>
17.7	23.1	33.1	39.2	44.6

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-619-6

CODE: (SP)

DATE: 03/21/2018

SUBJECT: Temporary Portable Rumble Strips

Section 619, Traffic Control for Construction Zones, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-619.02--Materials.** After Subsection 619.02.15 on page 472, add the following.

**907-619.02.16--Temporary Portable Rumble Strips.** Temporary portable rumble strips shall be RoadQuake manufactured by PSS and meet the following requirements:

- capable of being installed without adhesives or bolts,
- have a minimum weight of 100 pounds,
- have a minimum overall length of 11 feet,
- have a minimum width of 12 inches, and
- have a maximum height of 3/4 inch.

Temporary portable rumble strips shall be installed in accordance with the attached details, or as directed by the Engineer.

**907-619.03--Construction Requirements.** After Subsection 619.03.11 on page 476, add the following.

**907-619.03.16--Temporary Portable Rumble Strips.** Temporary portable rumble strips shall be placed at locations shown on the traffic control plans, attached drawing, or as directed by the Engineer. The rumble strips shall be removed when lane closures are removed, relocated when lane closures are relocated, or as directed by the Engineer.

Prior to placement of the rumble strips, the roadway shall be cleaned to be free of dust, sand, and other materials that may cause slippage. The minimum roadway temperature at the time of installation shall be in accordance with manufacturer recommendations.

A minimum of three (3) temporary portable rumble strips shall be arranged in an array. The spacing of temporary portable rumble strips in each array shall be on 15-foot centers. One array of three (3) strips shall be used in each lane. The rumble strips shall be regularly monitored and maintained to ensure they stay in place under traffic.

**907-619.04--Method of Measurement.** At the end of Subsection 619.04 on page 478, add the following.

Temporary Portable Rumble Strips will be measured for payment by the linear foot only when a pay item for temporary portable rumble strips is included in the contract. Otherwise, temporary portable rumble strips will be included in the cost of pay item 618-A, Maintenance of Traffic. The quantity of temporary portable rumble strips will be the length of rumble strips approved by the Engineer to be in-place on the project at any one time.

**907-619.05--Basis of Payment.** After the fifth paragraph of Subsection 619.05 on page 478, add the following.

Temporary Portable Rumble Strips measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for cleaning the roadway surface, installing the rumble strips, maintenance and repair of the strips, cleaning and resetting of the strips, removal and replacement, and for all labor, equipment, tools, and incidentals necessary to complete the work.

After the last pay item listed on page 480, add the following.

907-619-B: Temporary Portable Rumble Strips - per linear foot



**Detail of Temporary Portable Rumble Strips**

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-624-1

CODE: (SP)

DATE: 01/17/2017

SUBJECT: Inverted Profile Thermoplastic Traffic Stripe

Section 907-624, Inverted Profile Thermoplastic Traffic Stripe, is hereby added to and made part of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

**907-624.01--Description.** Inverted profile thermoplastic pavement markings consists of furnishing materials and placing inverted profile thermoplastic pavement markings in reasonably close conformity with these specifications and the details shown on the plans or established.

Inverted profile thermoplastic pavement markings, high contract, shall consist of furnishing materials and placing inverted profile thermoplastic pavement markings over a black thermoplastic pavement marking in order to enhance the marking's visibility.

**907-624.02--Materials.**

**907-624.02.1--General.** The inverted profile thermoplastic marking material shall consist of an alkyd/maleic or hydrocarbon based formulation. The material shall be so manufactured as to be applied to the pavement in a molten form, with internal and surface application of glass spheres, and upon cooling to normal pavement temperature, shall produce an adherent, reflectorized pavement marking of specified thickness and width, capable of resisting deformation.

Materials shall be obtained from approved sources as listed on the Department's "List of Approved Sources" for Inverted Profile Thermoplastic Pavement Marking Materials. The material shall not scorch, break down, discolor, or deteriorate when held at the application temperature for four hours or when reheated four times to the application temperature. Temperature-vs-viscosity characteristics of the plastic material shall remain constant when reheated four times, and shall be the same from batch to batch.

The thermoplastic material shall be a product especially compounded for pavement markings. The pavement markings shall maintain their original dimension and shall not smear or spread under normal traffic at temperatures below 140°F. The markings shall have a uniform cross section. Pigment shall be evenly dispersed throughout its thickness. The exposed surface shall be free from tack and shall not be slippery when wet. The material shall not lift from pavement in freezing weather. Cold ductility of the material shall be such as to permit normal movement with the pavement surface without chipping or cracking.

Black thermoplastic compound for the placement of inverted profile thermoplastic pavement markings, high contract, shall consist of a hydrocarbon or alkyd/maleic based formulation.

The manufacturers of the thermoplastic compound, glass beads and epoxy primer sealer shall furnish to the Engineer three copies of certified test reports showing results of all tests specified herein and shall further certify that the materials meet all requirements. The Contractor shall provide the warranty as specified herein to the Engineer.

**907-624.02.2--Inverted Profile Thermoplastic Material.** The thermoplastic material shall consist of homogeneously mixed pigments, fillers, resins and glass beads, and shall be available in both white and yellow. The material shall be free from all skins, dirt, and foreign objects. Materials shall conform to AASHTO M 249 with the following modifications:

**907-624.02.2.1--Intermixed Glass Beads.** The thermoplastic material shall contain a minimum of 40 percent Class H glass beads by weight. Class H glass beads shall meet the requirements of ASTM D 1155, and shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO M 247, Section 4.4.2. Class H beads shall have a minimum of 70 percent true spheres and the +20 sieve shall be tested visually.

The gradation of the Class H beads shall meet the following:

<b><u>U. S. Standard Sieve</u></b>	<b><u>% Passing</u></b>
12	100
14	95 - 100
16	80 - 100
18	30 - 100
20	15 - 100
30	10 - 100
50	0 - 50
100	0 - 5

**907-624.02.2.2--Binder Content.** The binder content of the thermoplastic material shall be 19 percent minimum.

**907-624.02.2.3--Titanium Dioxide.** The titanium dioxide shall meet ASTM D 476, Type II, Rutile grade - 10 percent minimum titanium content.

**907-624.02.2.4--Yellow Pigment.** The yellow pigment for the yellow thermoplastic material shall be five (5) percent minimum.

**907-624.02.2.5--Specific Gravity.** The specific gravity of the thermoplastic pavement marking material shall not exceed 2.35.

**907-624.02.2.6--Flow Characteristics.**

**907-624.02.2.6.1--Flowability.** After heating the thermoplastic material for four (4) hours ±5 minutes at 425 ±3°F and testing flowability, the white thermoplastic shall have a maximum percent residue of 22 percent and the yellow thermoplastic shall have a maximum residue of 24 percent.

**907-624.02.2.6.2--Flow Resistance.** The material shall exhibit a maximum flow of 10%. The material's ability to form ribs on the markings shall be evaluated by casting a disc of material approximately 3.5 inches wide by 1.0 inch long by and 0.60 inch deep. After the material is cooled to ambient temperature, measure the exact height. The material shall then be stored at 190°F for four (4) hours. After the material is cooled to ambient temperature, re-measure the exact height and express the flow resistance as a flow percentage.

**907-624.02.2.7--Reflectivity.** The initial reflectance for the in-place marking shall have a minimum reflectance value of 450 mcd/ft<sup>2</sup> for white and 350 mcd/ft<sup>2</sup> for yellow, when measured with a MiroLux Ultra 30 retroreflectometer, or approved equal.

**907-624.02.2.8--Wet Reflectivity.** The initial reflectance for the in-place marking when wet shall have a minimum reflectance value of 200 mcd/ft<sup>2</sup> for white and 175 mcd/ft<sup>2</sup> for yellow, when measured with an approved retroreflectometer. The stripe shall be wetted utilizing a pump type sprayer for five (5) seconds. After 30 seconds, place the retroreflectometer on the stripe and measure the reflectance.

**907-624.02.2.9--Inverted Profile.** The thermoplastic pavement marking material shall be applied to have individual profiles having a minimum height of 0.140 inches with the recessed inverted profiles having a thickness of 0.025 to 0.050 inches. The profiles shall be well defined, spaced approximately one (1) inch apart, and not excessively run back together.

**907-624.02.3--Black Pavement Marking Material for High Contrast Inverted Profile Pavement Markings.**

**907-624.02.3.1--General.** In the molten state, the material shall not give off fumes that are toxic or otherwise injurious to persons or property. The manufacturer shall provide material safety data sheets for the product.

The temperature versus viscosity characteristic of the plastic material shall remain constant and the material shall not deteriorate in any manner during three reheating processes. There shall be no obvious change in color of the material as a result of up to three reheatings, or in maintaining the material at application temperature up to an aggregate time of four (4) hours, or from batch to batch. The maximum elapsed time after application at which normal traffic will leave no impression or imprint on the new stripe shall be 30 seconds when the air and road surface temperature is approximately 68 ±5°F. The applied stripe shall remain free from tack and shall not lift from the pavement under normal traffic conditions within a road temperature range of -20°F to 150°F. The stripe shall maintain its original dimensions and placement. Cold ductility of the material shall be such as to permit normal dimensional distortion as a result of tire impact within the temperature range specified.

The material shall provide a stripe that has a uniform thickness throughout its cross section.

**907-624.02.3.2--Binder.** The binder shall be hydrocarbon or alkyd/maleic based. The binder shall consist of a homogeneous mixture of pigment, fillers, resins, waxes and plasticizers. The total



binder content shall be well distributed throughout the compound. The binder shall be free from all foreign objects or ingredients that would cause bleeding, staining or discoloration. The binder shall be 19 percent minimum by weight of the thermoplastic compound.

**907-624.02.3.3--Pigment.** The pigment used for black pavement marking compound shall be as required and shall be uniformly distributed throughout the marking compound.

**907-624.02.3.4--Filler.** The filler to be incorporated with the resins shall be a white calcium carbonate, silica or any approved substitute.

**907-624.02.3.5--Specific Gravity.** The specific gravity of the marking compound shall not exceed 2.0.

**907-624.02.3.6--Softening Point.** After heating the marking compound for 4 hours  $\pm$ 5 minutes at  $375 \pm 3^\circ\text{F}$  and testing in accordance with ASTM E 28, the material shall have a minimum softening point of  $180^\circ\text{F}$  as measured by the ring and ball method.

**907-624.02.3.7--Tensile Bond Strength.** After heating the marking compound for 4 hours  $\pm$ 5 minutes at  $375 \pm 3^\circ\text{F}$ , the tensile bond strength shall exceed 180 psi when tested in accordance with ASTM D 4806. The material shall be applied to unprimed, sandblasted Portland cement concrete block at a thickness of 0.0625-inch and at a temperature of  $375 \pm 3^\circ\text{F}$ . The test shall be conducted at room temperature.

**907-624.02.3.8--Impact Resistance.** After heating the marking compound for 4 hours  $\pm$ 5 minutes at  $375 \pm 3^\circ\text{F}$ , the impact resistance shall be a minimum of 50 inch-pounds minimum when tested in accordance with ASTM D 2794. No cracks or bond loss shall occur when a 0.0625-inch thick film drawdown is made at  $375 \pm 3^\circ\text{F}$  on an unprimed sandblasted Portland cement concrete block. The sample is tested with a male indenter 5/8-inch and no female Die at room temperature.

**907-624.02.3.9--Identification.** Each package of material shall be stenciled with the manufacturer's name, the type of material and specification number, the month and year the material was packaged and lot number. The letters and numbers used in the stencils shall be a minimum of 1/2 inch in height.

**907-624.02.3.10--Packaging.** The material shall be packaged in suitable containers that will not adhere to the product during shipment and storage. The container of pavement marking material shall weigh approximately 50 lbs. Each container shall designate the color, type of resin, type of application and user information. The label shall warn the user that the material shall be heated in the range of  $350^\circ$  to  $425^\circ\text{F}$ .

**907-624.02.3.11--Storage Life.** The material shall meet the requirements of this specification for a period of one year. The material must also meet uniformly with no evidence of skins or unmelted particles for this one-year period. The manufacturer shall replace any material not meeting the above requirements.

**907-624.02.3.12--Certifications.** The material manufacturer shall furnish a certified copy of material test reports to the Engineer.

**907-624.02.4--Drop-On Glass Beads.** Drop-on glass beads shall be separated into two (2) classes, as follows:

**907-624.02.4.1--Class G Glass Beads.** Class G glass beads shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO M 247, Section 4.4.2 and shall exhibit the following characteristics:

- **Color and Clarity:** The glass beads shall be colorless and clear, and shall be free of carbon residues.
- **Index of Refraction:** minimum 1.50
- **Roundness:** The glass beads shall have a minimum of 80% true spheres per screen for the two highest sieve quantities, determined visually, and a maximum of 3% angular particles per sieve, determined visually. The remaining sieves shall have a minimum of 75% true spheres, determined visually per aspect ratio using microfiche reader.
- **Air Inclusions:** 10% maximum
- **Specific Gravity:** The specific gravity of the glass beads shall be a minimum of 2.50.
- **Gradation:** The gradation of Class G glass beads shall be as follows:

<u>U. S. Standard Sieve</u>	<u>% Passing</u>
12	100
14	100 - 95
16	100 - 80
18	100 - 20
20	90 - 20
30	100 - 50
Pan	100 - 90

All Class G glass beads shall be coated with an adhesion promoting coating.

**907-624.02.4.2--Class H Glass Beads.** Class H glass beads shall meet the requirements of ASTM D 1155, and shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO M 247, Section 4.4.2. Class H beads shall have a minimum of 70 percent true spheres and the +20 sieve shall be tested visually.

The gradation of the Class H beads shall meet the following:

<u>U. S. Standard Sieve</u>	<u>% Passing</u>
16	99 - 100
20	75 - 100
30	55 - 95
50	10 - 35
100	0 - 5

**907-624.03--Construction Requirements.**

**907-624.03.1--Equipment.** The application equipment shall be specifically designed for placing thermoplastic material in a hot molten state on the pavement surface utilizing a pressure type application method. The thermoplastic stripe shall be formed by a die that is allowed to drag along in proximity with the pavement surface. The die is pulled forward by a special linkage that will allow it to automatically level itself as to float and remain parallel with the pavement surface. The traffic stripe shall be formed by reason that the hot thermoplastic material is forced under pressure through four sides to the die onto the pavement surface. The top of the die shall be enclosed and provide entry means for the hot molten thermoplastic material to enter the die cavity. The bottom of the die shall contain a movable door that is remote controlled so as to start or stop the flow of thermoplastic material onto the pavement surface. When the movable door is open, thermoplastic material can flow through the die and will apply a thermoplastic stripe that will be formed rearward of the advancing die. The pavement surface shall be at the bottom of the die enclosure. Thermoplastic material shall be fed to the die under pressure through flexible oil-jacketed stainless steel hoses. The thermoplastic material must be either pumped or fed from a pressure vessel to the die under pressure in order to obtain the proper adhesion with the pavement surface.

The system shall consist of a low pressure drop-on type glass bead gun, (bead coat #1). The thermoplastic die shall be oil-jacketed on four (4) sides and is formed from a single solid block of steel. The glass bead gun shall dispense glass beads onto the hot thermoplastic stripe from a height of approximately one (1) inch above the pavement surface. The point at which the glass beads strike the surface of the stripe shall be approximately three inches (3”) behind the strike point of the thermoplastic material itself. This reflective bead coat #1 shall utilize Class G glass beads as specified herein, and shall provide a surface coating of 50 percent of the thermoplastic stripe surface. Of this 50 percent stripe coverage, at least 50 percent of the beads shall be embedded to a depth of 60 percent of their diameter.

A second curtain coater, low pressure drop-on type glass bead gun capable of applying a continuous sheet or ribbon of glass beads, shall follow at an interval of approximately 10 inches behind the first bead gun. This second glass bead gun shall apply bead coat #2 which will form a continuous drop-on coat of Class H glass beads immediately in front of the profiling device. This second curtain of glass beads shall have a low impact speed so that they are not forced into the stripe under pressure.

A special rotatable wheel profiling device shall be located approximately eight (8) inches behind bead gun #2. This rotatable wheel device shall be approximately seven (7) inches in diameter and shall have a plurality of spaced projections located around its circumference. The profiling device shall be wider than the stripe being applied in order that the stripe shall be adequately covered. The projections on the rotatable profiling device shall have an angular profiling surface set at an angle to the pavement surface. The rotatable profile device shall be mounted with an automatic leveling device to the same carriage assembly as the thermoplastic gun. This is required so that a traffic stripe of accurate and uniform definition can be obtained. The inverted profile grooves shall be pressed into the hot molten thermoplastic stripe within one (1) second of the thermoplastic material application in order to insure proper bead adhesion to the stripe. Using rollers to place grooves in the traffic stripe utilizing a separate vehicle or grooves that are not pressed within one

(1) second of the thermoplastic material application will not be allowed. To insure that no thermoplastic material adheres to the wheel as it rotates and profiles the stripe, a small air atomizer water jet shall apply a thin mist coat of water to the rotatable profile wheel. It is the intent of this specification that a minimum amount of water be used and that no water puddles greater than ¼ inch in diameter be allowed to accumulate on the pavement surface in proximity to the freshly placed stripe. Excess water on the pavement surface can cause bond failure of the thermoplastic material.

All parts of the thermoplastic holding tank including manifolds, hoses, pipes, dies, etc., shall be oil-jacketed to insure accurate temperature control. The thermoplastic material shall be preheated in kettles designed specifically for that purpose. Each kettle of preheated thermoplastic material shall be properly mixed and heated to the correct application temperature. The preheated material shall then be fed to the thermoplastic gun for application.

The striping machine shall contain enough glass beads and water to apply one full kettle of thermoplastic material.

**907-624.03.2--Cleaning of Pavement Surface.** Immediately before application, the areas to receive markings shall be cleaned thoroughly using equipment capable of cleaning without damaging the pavement surface. This will include, but not be limited to, all vegetation, loose soil, oils, and other debris. On areas of pavement cured with compound, the membrane shall be removed completely by "shot" blasting, sand blasting or other approved method. Striping shall follow as closely as practical after the pavement surface has been cleaned.

**907-624.03.3--Application Over Existing Striping.** Where shown on the plans or directed by the Engineer, the existing traffic stripe shall be removed by grinding or sandblasting. When placing inverted profile thermoplastic pavement markings on existing pavement that has more than one light coat (pavement not showing through stripe) of striping material, the existing stripe shall be removed to the point that 80 percent of the pavement surface is visible.

Removal of existing stripe will be paid for as a separate item of work.

Where unsatisfactory striping performed by the Contractor must be removed and replaced in accordance with these specifications, the Contractor shall use the removal method described above. No payment will be made for removal or replacement of the Contractor's unsatisfactory striping.

**907-624.03.4--Surface Conditions.** When placing inverted profile thermoplastic pavement markings, no striping shall be permitted when the pavement surface temperature is less than 60°F. A non-contact infrared pyrometer shall be furnished by the Contractor for use by the Engineer for verification of the temperature. Striping shall not be performed when there is moisture on the pavement surface or when winds exceed 12 mph. When unseen moisture is suspected to be present, a moisture test shall be performed. The test shall be as follows:

- 1) Place a piece of roofing felt on the pavement surface.
- 2) Pour 0.5 gallon of thermoplastic material at application temperature onto the paper.

- 3) After two (2) minutes, lift the paper and inspect to see if moisture has been drawn from the pavement.
- 4) If moisture is present, striping is not to begin until the surface is moist free.

Documentation of weather and pavement conditions shall be recorded as part of completing the MDOT Inverted Profile Thermoplastic Pavement Marking Inspectors Report.

**907-624.03.5--Application.** Prior to the placement of pavement markings, the Contractor shall furnish the Engineer three copies of the manufacturer's warranty stating that the manufacturer will guarantee the pavement marking to meet the requirements of this specification.

The thermoplastic material shall be preheated and thoroughly mixed. The application temperature of the thermoplastic material shall be between 400°F and 430°F. A digital thermometer complete with a 24-inch probe shall be furnished by the Contractor for use by the Engineer for verification of the temperature.

When measured at the highest point of the profile, the cold thickness of the in-place thermoplastic stripe shall be a minimum of 0.140 inch for Inverted Profile Thermoplastic Pavement Markings. The thickness of the thermoplastic material in the bottom of the profiles shall range from 0.025 to 0.050 inch. The individual profiles shall be located transversely across the stripe at intervals of approximately one (1) inch. The bottoms of these intervals shall be between 3/32 inch and 5/16 inch wide. In order to drain water and to reflect light, it is normal for the top surface of the inverted profiles to be irregular. The application rate of thermoplastic material for Inverted Profile Thermoplastic Pavement Markings shall be a minimum of 2700± pounds per mile for a continuous 6-inch stripe.

The application rate for Class G glass beads (bead coat #1) shall be 300± pounds per mile for 6-inch continuous stripe.

The application rate for Class H glass beads (bead coat #2) shall be 300± pounds per mile for 6-inch continuous stripe.

The thickness of the striping materials shall be verified periodically (at least every 1320 feet) and any thickness more than five (5) percent under the designated thickness shall be reworked. A consistent, uncorrected under-run will not be allowed and the Contractor will be required to install the specified minimum thickness of 0.140 inch. A wet thickness gauge and cold thickness gauge shall be furnished by the Contractor for use by the Engineer for the verification of film thickness.

When striping over existing painted stripe (one light coat), on old oxidized asphalt, on all concrete surfaces or on asphalt surfaces when ambient temperatures are below 70°F, a two component epoxy primer sealer shall be used and installed as recommended in writing by the thermoplastic material manufacturer. The epoxy primer sealer shall be EX255/EX256 as manufactured by Crown Paint Company of Oklahoma City, Oklahoma, or approved equal. The Contractor shall furnish certification of compatibility of the epoxy primer sealer to be used with the thermoplastic material supplied. If an alternate epoxy primer sealer to the EX255/EX256 is used, the Contractor

shall furnish a mill analysis and proof of adequate performance of the alternate epoxy primer sealer when used with thermoplastic pavement markings.

**907-624.03.6--Inverted Profile Thermoplastic Traffic Stripe, High Contrast.** Before applying the black pavement marking material, the Contractor shall remove any dirt, glaze, grease or any other material that would reduce the adhesion of the thermoplastic to the pavement.

The pavement marking material shall be installed in a molten state by the spray method at a minimum temperature of 350°F and a maximum temperature of 425°F. Scorching or discoloration of material shall be cause for rejection by the Engineer. The machinery shall be constructed so that all mixing and conveying parts, up to and including the thermoplastic gun, maintain the material in the molten state.

The pavement marking materials shall not be applied when air and pavement surface temperatures are below 60°F or when the surface of the pavement contains any evidence of moisture.

The pavement marking material shall be applied at a thickness of not less than 0.040-inch.

The equipment used to install hot applied pavement marking material shall provide continuous mixing and agitation of the material while maintaining a minimum temperature exceeding 400°F. A strainer shall be in place between the main material reservoir and the gun to prevent accumulation and clogging. The equipment shall be constructed for easy accessibility to parts requiring cleaning and maintenance.

After the black thermoplastic pavement markings are applied, inverted profile thermoplastic markings shall be placed over the black thermoplastic pavement markings in accordance with the specifications and to the dimensions and details shown on the plans or established.

**907-624.03.7--Warranty.** The manufacturer shall warrant that the inverted profile thermoplastic markings will meet the minimum performance level of 150 mcd/fc/sq. ft. dry and 75 mcd/fc/sq. ft. wet for a period of 48 months from the date of final inspection when exposed to normal roadway conditions regardless of the average daily traffic. Failure to meet this requirement will result in the total replacement of the portion of the stripe shown to be below these minimums. All costs of labor, material and other incidentals necessary for the replacement of unacceptable pavement markings shall be at no additional costs to the State.

Compliance will be determined by an average brightness reading over a minimum zone marking length of 300 linear feet, using an approved reflectometer. The zone of measurement referred to includes centerline stripe, edge lines and skip lines.

<b>Performance Requirements:</b>	<b>White</b>		<b>Yellow</b>	
	<b><u>Dry</u></b>	<b><u>Wet</u></b>	<b><u>Dry</u></b>	<b><u>Wet</u></b>
Initial Reflectivity, mcd/fc/sq. ft.	450	200	350	175
48-Month Retained Reflectivity	150	75	150	75

The measurement procedure for this warranty will entail a visual night inspection by a manufacturer representative and a MDOT representative to identify areas of the installation, which appear to be below the specified minimum, warranted reflectance value. All reflectance measurements for dry conditions shall be made on a clean dry surface at a minimum temperature of 40°F. All reflectance measurements for wet conditions shall be made using the setting conditions of Subsection 907-624.02.2.8 at a minimum temperature of 40°F.

Measurement intervals for installations with areas less than, or equal to, three (3) miles shall be at a minimum of three (3) check points for each zone. These check points should include the start point, approximate mid-point and the end point.

Measurement intervals for installations with areas greater than three (3) miles shall be at a minimum of three (3) check points, one at the start point, one at the end point and additional measurements spaced at 3-mile intervals between the start and end points of the area in question.

The number of measurements at each check point for each zone will be as follows:

- (A) Skip Lines: Eighteen (18) measurements, distributed over six (6) skip lines, shall be made at each check point.
- (B) Center Lines and/or Edge Lines: Eighteen (18) measurements shall be made over 300 linear feet of continuous stripe.

When taking reflectivity measurements, the value of the measurement shall be determined by averaging three measurements; one at the left edge of the stripe, one at the center of the stripe and one at the right edge of the stripe.

In addition, the reflectance values measured at each check point shall be averaged by zone to determine conformance to the minimum warranted reflective values.

**907-624.04--Method of Measurement.** Inverted profile thermoplastic traffic stripe of the type specified will be measured by the mile or by the linear foot, as indicated, from end-to-end of individual stripes. In the case of skip lines the measurement will include skips. The length used to measure centerline and edge stripes will be the horizontal length computed along the stationed control line. Inverted profile thermoplastic detail traffic stripe will be measured by the linear foot from end-to-end of individual stripes. Measurements will be made along the surface of each stripe and will exclude skip intervals where skips are specified. Stripes more than six (6) inches in width will be converted to equivalent lengths of six-inch widths.

**907-624.05--Basis of Payment.** Inverted profile thermoplastic traffic stripe, measured as prescribed above, will be paid for at the contract unit price per mile or linear foot, as applicable, which shall be full compensation for completing the work.

Payment will be made under:

907-624-A:	6" Inverted Profile Thermoplastic Traffic Stripe, Skip White *	- per linear foot or mile
907-624-B:	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White *	- per linear foot or mile
907-624-C:	6" Inverted Profile Thermoplastic Traffic Stripe, Skip Yellow *	- per linear foot or mile
907-624-D:	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow *	- per linear foot or mile
907-624-E:	Inverted Profile Thermoplastic Detail Traffic Stripe, <u>Color</u> *	- per linear foot

\* High Contrast may be specified



# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-701-1

CODE: (SP)

DATE: 10/23/2018

SUBJECT: Hydraulic Cement

Section 701, Hydraulic Cement, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-701.01--General.** In the first sentence of the third paragraph of Subsection 701.01 on page 718, change “mills” to “plants.”

In the second sentence of the seventh paragraph of Subsection 701.01 on pages 718 and 719, change “shall” to “will.”

**907-701.02--Portland Cement.**

**907-701.02.1-General.**

**907-701.02.1.2--Alkali Content.** Delete the sentence in Subsection 701.02.1.2 on page 719, and substitute the following.

The Equivalent alkali content for all cement types in this Subsection shall not exceed 0.60%.

**907-701.02.2--Replacement by Other Cementitious Materials.** Delete the paragraph in Subsection 701.02.2 on page 719, and substitute the following.

The maximum replacement of cement by weight is 25% for fly ash or 50% for ground granulated blast furnace slag (GGBFS). Replacement contents below 20% for fly ash or 45% for GGBFS may be used, but will not be given any special considerations, such as the maximum acceptance temperature for portland cement concrete containing pozzolans in Subsection 804.02.13.1.5. Special considerations shall only apply for replacement of cement by fly ash or GGBFS.

Delete Subsection 701.02.2.1 on pages 719 and 720, and substitute the following.

**907-701.02.2.1--Portland Cement Concrete Exposed to Soluble Sulfate Conditions or Seawater.**

When portland cement concrete is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall be as follows in Table 1. Class C fly ash shall not be used as a replacement for cement in any of the sulfate exposure conditions listed in Table 1.

**Table 1- Cementitious Materials for Soluble Sulfate Conditions or Seawater**

Sulfate Exposure	Water-soluble sulfate (SO <sub>4</sub> ) in soil, % by mass	Sulfate (SO <sub>4</sub> ) in water, ppm	Cementitious material required
Moderate and Seawater	0.10 - 0.20	150 - 1,500	Type I cement with one of the following replacements of cement by weight: 24.5 - 25.0% Class F fly ash, or 49.5 - 50.0% GGBFS or Type II <sup>*,**</sup> cement
Severe	0.20 - 2.00	1,500 - 10,000	Type I cement with a replacement by weight of 49.5 - 50.0% GGBFS, or Type II <sup>*</sup> cement with one of the following replacements of cement by weight: 24.5 - 25.0% Class F fly ash, or 49.5 - 50.0% GGBFS

\* Type III cement conforming to AASHTO M85 with a maximum 8% tricalcium aluminate (C<sub>3</sub>A) may be used in lieu of Type II cement as allowed in Subsection 701.02.1; this cement is given the designation “Type III(MS).”

\*\* Class F fly ash or GGBFS may be added as a replacement for cement as allowed in Subsection 907-701.02.2.

Delete Subsection 701.02.2.2 on page 720, and substitute the following.

**907-701.02.2.2--Portland Cement for Soil Stabilization Exposed to Soluble Sulfate Conditions or Seawater.** When portland cement for use in soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall meet the requirements of Subsection 701.02.2.1.

**907-701.04--Blended Hydraulic Cement.**

**907-701.04.1--General.** Delete Subsection 701.04.1.1 on page 720, and substitute the following.

**907-701.04.1.1--Types of Blended Hydraulic Cement.** Blended hydraulic cements (blended cements) shall be of the following types and conform to AASHTO M 240:

- Type IL – Portland-limestone cement
- Type IP – Portland-pozzolan cement
- Type IS – Portland blast-furnace slag cement

Blended cement Types IL, IP, and IS meeting the “MS” sulfate resistance requirement listed in AASHTO M 240, Table 3 shall have the “(MS)” suffix added to the type designation.

**907-701.04.1.2--Alkali Content.** Delete the sentence in Subsection 701.04.1.2 on page 720, and substitute the following.

All blended cement types shall be made with clinker that would result in cement meeting the requirements of Subsection 701.02.1.2 when used in the production of AASHTO M 85, Type I or Type II cement.

**907-701.04.2--Replacement by Other Cementitious Materials.** Delete the paragraph in Subsection 701.04.2 on page 720, and substitute the following.

The maximum replacement of blended cement Type IL by weight is 35% for fly ash or 50% for GGBFS. Replacement contents below 20% for fly ash or 45% for GGBFS may be used, but will not be given any special considerations, such as the maximum acceptance temperature for blended cement concrete containing pozzolans in Subsection 804.02.13.1.5. Special considerations shall only apply for replacement of blended cement by fly ash or GGBFS.

No additional cementitious materials, such as portland cement, blended cement, fly ash, GGBFS, or others, shall be added to or as a replacement for blended cement Types IP and IS.

Delete Subsection 701.04.2.1 on pages 720 and 721, and substitute the following.

**907-701.04.2.1--Blended Cement Concrete Exposed to Soluble Sulfate Conditions or Seawater.** When blended cement concrete is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall be as follows in Table 2. Class C fly ash shall not be used as a replacement for cement in any of the sulfate exposure conditions listed in Table 2.

**Table 2- Cementitious Materials for Soluble Sulfate Conditions or Seawater**

Sulfate Exposure	Water-soluble sulfate (SO <sub>4</sub> ) in soil, % by mass	Sulfate (SO <sub>4</sub> ) in water, ppm	Cementitious material required
Moderate and Seawater	0.10 - 0.20	150 - 1,500	Type IL (MS)* cement, Type IL cement with one of the following replacements of cement by weight: 24.5 - 35.0% Class F fly ash, or 49.5 - 50.0% GGBFS, Type IP (MS) cement, or Type IS (MS) cement
Severe	0.20 - 2.00	1,500 - 10,000	Type IL cement with a replacement of cement by weight of 49.5 - 50.0% GGBFS, or Type IL (MS) cement with one of following replacements of cement by weight: 24.5 - 35.0% Class F fly ash, or 49.5 - 50.0% GGBFS

- \* Class F fly ash or GGBFS may be added as a replacement for cement as allowed in Subsection 907-701.04.2.

Delete Subsection 701.04.2.2 on page 721, and substitute the following.

**907-701.04.2.2--Blended Cement for Soil Stabilization Exposed to Soluble Sulfate Conditions or Seawater.** When blended cement for use in soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash or GGBFS shall meet the requirements of Subsection 701.04.2.1.

Delete Subsection 701.04.3 on page 721.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-702-4**

**CODE: (IS)**

**DATE: 09/11/2018**

**SUBJECT: Bituminous Materials**

Section 702, Bituminous Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-702.04--Sampling.** Delete the sentence in Subsection 702.04 on page 722, and substitute the following.

Sampling of bituminous materials shall be as set out in AASHTO R 66.

**907-702.07--Emulsified Asphalt.** Delete the last sentence in Subsection 702.07 on page 724, and substitute the following.

Asphalt for fog seal shall conform to the requirements of Subsection 907-702.12, Table V.

**907-702.12--Tables.** Delete Table V in Subsection 702.12 on page 729, and substitute the following.

**TABLE V  
SPECIFICATION FOR FOG SEAL**

Test Requirements	LD-7		CHPF-1		Test Method
	Min.	Max.	Min.	Max.	
Viscosity, Saybolt Furol, @ 25°C, Sec.	10	100	-	100	AASHTO T 72
Storage Stability Test, 24 hr, %	-	1	-	1	AASHTO T 59
Settlement, 5 day, %	-	5	-	-	AASHTO T 59
Oil Distillate, %	-	1	-	-	AASHTO T 59
Sieve Test, % *	-	0.3	-	0.1	AASHTO T 59
Residue by Distillation, %	40	-	40	-	AASHTO T 59
<b>Test on Residue from Distillation</b>					
Penetration @ 25°C, 100g, 5 sec	-	20	40	90	AASHTO T 49
Softening Point, °C	65	-	-	-	ASTM D 36
Solubility in trichloroethylene, %	97.5	-	-	-	AASHTO T 44
Elastic Recovery @ 25°C, %	-	-	40	-	AASHTO T 301
Original DSR @ 82° (G*/Sinδ, 10 rad/sec)	1	-	-	-	AASHTO T 111

\* The Sieve Test result is tested for reporting purposes only and may be waived if no application problems are present in the field.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-703-1**

**CODE: (IS)**

**DATE: 06/13/2018**

**SUBJECT: Gradation**

Section 703, Aggregates, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-703.03--Course Aggregates for Hydraulic Cement Concrete.**

**907-703.03.2--Detail Requirements.**

**907-703.03.2.4--Gradation.** In the table in Subsection 703.03.2.4 on page 734, add 100 for the percent passing by weight on the 1½-inch sieve for Size No. 67 aggregates.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-705-1**

**CODE: (IS)**

**DATE: 06/13/2018**

**SUBJECT: Stone Riprap**

Section 705, Stone Blanket Protection and Filter Blanket Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-705.04--Stone Riprap.** Delete the last sentence of the first paragraph of Subsection 705.04 on page 750, and substitute the following.

Quality requirements for rock to be furnished under these specifications will come from a pre-approved source and be visually approved prior to use.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-707-2

CODE: (SP)

DATE: 06/05/2019

SUBJECT: Joint Materials

Section 707, Joint Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-707.02.3--Wood.** Delete paragraph (b) of Subsection 707.02.3 on page 755, and substitute the following:

- (b) Dimensions shall be as shown on the plans. Dimensions shown on the plans are “dressed” sizes in accordance with Table 3 of the American Softwood Lumber Standard, SP-20. At the discretion of the Engineer, a 3/4-inch dressed board may be used in lieu of a 1-inch dressed board. A tolerance of plus or minus 1/16 inch thickness and plus or minus 1/8 inch width will be permitted. For slip-form paving a tolerance of minus 1/4 inch on each end in length will be permitted.

**907-707.06--Flexible Plastic Gasket for Joining Conduit.** Delete the third paragraph of Subsection 707.06 on page 756, and substitute the following.

The Department may require the performance test described in ASTM C 990.



**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-711-2**

**CODE: (IS)**

**DATE: 09/11/2018**

**SUBJECT: Plain Steel Wire**

Section 711, Reinforcement and Wire Rope, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-711.02--Deformed and Plain Carbon-Steel Bars for Concrete Reinforcing.**

**907-711.02.3--Steel Welded and Non-Welded Wire Reinforcement, Plain and Deformed, for Concrete.**

**907-711.02.3.1--Plain Steel Wire.** Delete the sentence in Subsection 711.02.3.1 on pages 780 and 781, and substitute the following.

Plain steel wire and plain steel welded wire shall conform to the requirements of AASHTO M 336.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-720-2**

**CODE: (IS)**

**DATE: 09/11/2018**

**SUBJECT: Acceptance Procedure for Glass Beads**

Section 720, Pavement Marking Materials, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-720.01--Glass Beads.**

**907-720.01.4--Acceptance Procedures.** Delete the last sentence of the paragraph in Subsection 720.01.4 on page 841, and substitute the following.

Acceptance sampling and testing of glass beads will be in accordance with the Department's Materials Division Inspection, Testing, and Certification Manual, Section 2.9.2 -- Glass Beads.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SPECIAL PROVISION NO. 907-721-1**

**CODE: (SP)**

**DATE: 11/05/2019**

**SUBJECT: Materials for Signing**

Section 721, Materials for Signing, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-721.06--Reflective Sheeting.**

**907-720.06.2--Performance Requirements.** Delete Table 4 and Table 5 in Subsection 721.06.2 on pages 860 & 861, and substitute the following.

**MINIMUM COEFFICIENTS OF RETROREFLECTION  
Candela per foot candle per square foot (cd/ft<sup>2</sup>)  
Per ASTM Designation D4956**

**TABLE 4  
Type IX Sheeting**

Observation Angle	Entrance Angle	White	Yellow	Green	Red	Blue	Fluorescent Yellow/Green	Fluorescent Yellow	Fluorescent Orange
0.2°	-4.0°	380	285	38	76	17	300	230	115
0.2°	+30.0°	215	162	22	43	10	170	130	65
0.5°	-4.0°	240	180	24	48	11	190	145	72
0.5°	+30.0°	135	100	14	27	6.0	110	81	41
1.0°	-4.0°	80	60	8.0	16	3.6	64	48	24
1.0°	+30.0°	45	34	4.5	9.0	2.0	36	27	14

**TABLE 5  
Type XI Sheeting**

Observation Angle	Entrance Angle	White	Yellow	Green	Red	Blue	Brown	Fluorescent Yellow/Green	Fluorescent Yellow	Fluorescent Orange
0.2°	-4.0°	580	435	58	87	26	17	460	350	175
0.2°	+30.0°	220	165	22	33	10	7.0	180	130	66
0.5°	-4.0°	420	315	42	63	19	13	340	250	125
0.5°	+30.0°	150	110	15	23	7.0	5.0	120	90	45
1.0°	-4.0°	120	90	12	18	5.0	4.0	96	72	36
1.0°	+30.0°	45	34	5.0	7.0	2.0	1.0	36	27	14

# SECTION 905 - PROPOSAL

Date \_\_\_\_\_

Mississippi Transportation Commission  
Jackson, Mississippi

Sirs: The following proposal is made on behalf of \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_

for constructing the following designated project(s) within the time(s) hereinafter specified.

The plans are composed of drawings and blue prints on file in the offices of the Mississippi Department of Transportation, Jackson, Mississippi.

The Specifications are the current Standard Specifications of the Mississippi Department of Transportation approved by the Federal Highway Administration, except where superseded or amended by the plans, Special Provisions and Notice(s) to Bidders attached hereto and made a part thereof.

I (We) certify that I (we) possess a copy of said Standard and any Supplemental Specifications.

Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporation. I (We) certify that I (we) have carefully examined the Plans, the Specifications, including the Special Provisions and Notice(s) to Bidders, herein, and have personally examined the site of the work. On the basis of the Specifications, Special Provisions, Notice(s) to Bidders, and Plans, I (we) propose to furnish all necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials in the manner specified. I (We) understand that the quantities mentioned herein are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid, in accordance with the above.

I (We) acknowledge that this proposal will be found irregular and/or non-responsive unless a certified check, cashier's check, or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law) is submitted electronically with the proposal or is delivered to the Contract Administration Engineer prior to the bid opening time specified in the advertisement.

**INSTRUCTION TO BIDDERS: Alternate and Optional Items on Bid Schedule.**

1. Two or more items entered opposite a single unit quantity WITHOUT DEFINITE DESIGNATION AS "ALTERNATE ITEMS" are considered as "OPTIONAL ITEMS". Bidders may or may not indicate on bids the Optional Item proposed to be furnished or performed WITHOUT PREJUDICE IN REGARD TO IRREGULARITY OF BIDS.
2. Items classified on the bid schedule as "ALTERNATE ITEMS" and/or "ALTERNATE TYPES OF CONSTRUCTION" must be preselected and indicated on bids. However, "Alternate Types of Construction" may include Optional Items to be treated as set out in Paragraph 1, above.
3. Optional items not preselected and indicated on the bid schedule MUST be designated in accordance with Subsection 102.06 prior to or at the time of execution of the contract.
4. Optional and Alternate items designated must be used throughout the project.

I (We) further propose to perform all "force account or extra work" that may be required of me (us) on the basis provided in the Specifications and to give such work my (our) personal attention in order to see that it is economically performed.

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) shall submit electronically with our proposal or deliver prior to the bid opening time a certified check, cashier's check or bid bond for **five percent (5%) of total bid** and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

**SECTION 905 -- PROPOSAL (CONTINUED)**

I (We) hereby certify by digital signature and electronic submission via Bid Express of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Respectfully Submitted,

DATE \_\_\_\_\_

\_\_\_\_\_  
Contractor

BY \_\_\_\_\_  
Signature

TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of \_\_\_\_\_ and the names, titles and business addresses of the executives are as follows:

\_\_\_\_\_  
President Address

\_\_\_\_\_  
Secretary Address

\_\_\_\_\_  
Treasurer Address

The following is my (our) itemized proposal.

Scrub Seal & Mill & Overlay approximately 3 miles of SR 184 from Junction US 84 W East to Junction US 84 E, known as State Project No. MP-7184-39(002) / 307071301 in Lawrence County.

Line no.	Item Code	Adj Code	Quantity	Units	Description[Fixed Unit Price]
<b>Roadway Items</b>					
0010	202-B240		2,608	Linear Feet	Removal of Traffic Stripe
0020	203-G002	(E)	155	Cubic Yard	Excess Excavation, LVM, AH
0030	304-A008	(GY)	561	Cubic Yard	Granular Material, LVM, Class 6, Group D
0040	403-A003	(BA1)	214	Ton	12.5-mm, ST, Asphalt Pavement
0050	403-A015	(BA1)	5,553	Ton	9.5-mm, ST, Asphalt Pavement
0060	406-D001		31,425	Square Yard	Fine Milling of Bituminous Pavement, All Depths
0070	407-A001	(A2)	4,432	Gallon	Asphalt for Tack Coat
0080	412-A001		804	Square Feet	Pre-Grinding (\$3.25)
0090	423-A001		4	Mile	Rumble Strips, Ground In
0100	618-A001		1	Lump Sum	Maintenance of Traffic
0110	618-B001		1	Square Feet	Additional Construction Signs (\$10.00)
0120	619-A1001		11	Mile	Temporary Traffic Stripe, Continuous White
0130	619-A2001		10	Mile	Temporary Traffic Stripe, Continuous Yellow
0140	619-A3002		875	Linear Feet	Temporary Traffic Stripe, Skip White
0150	619-A4002		1	Mile	Temporary Traffic Stripe, Skip Yellow
0160	619-A5001		11,555	Linear Feet	Temporary Traffic Stripe, Detail
0170	619-A6002		736	Linear Feet	Temporary Traffic Stripe, Legend
0180	620-A001		1	Lump Sum	Mobilization
0190	626-A002		875	Linear Feet	6" Thermoplastic Double Drop Traffic Stripe, Skip White
0200	626-C002		6	Mile	6" Thermoplastic Double Drop Edge Stripe, Continuous White
0210	626-D001		1	Mile	6" Thermoplastic Double Drop Traffic Stripe, Skip Yellow
0220	626-E001		5	Mile	6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow
0230	626-G002		8,522	Linear Feet	Thermoplastic Detail Stripe, White
0240	626-G003		3,033	Linear Feet	Thermoplastic Detail Stripe, Yellow
0250	626-H005		736	Linear Feet	Thermoplastic Legend, White
0260	627-H002		500	Each	Chip Seal Reflective Raised Markers. Two-Way Yellow
0270	627-J001		370	Each	Two-Way Clear Reflective High Performance Raised Markers
0280	627-L001		398	Each	Two-Way Yellow Reflective High Performance Raised Markers
0290	627-P001		5	Each	Two-Way Blue Reflective High Performance Raised Markers
0300	907-414-A001		26,900	Square Yard	Scrub Seal
0310	907-619-B001		66	Linear Feet	Temporary Portable Rumble Strips
<b>ALTERNATE GROUP AA NUMBER 1</b>					
0320	907-624-B003		1,304	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White, High Contrast
0330	907-624-D001		1,304	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Continous Yellow, High Contrast
<b>ALTERNATE GROUP AA NUMBER 2</b>					

<b>Line no.</b>	<b>Item Code</b>	<b>Adj Code</b>	<b>Quantity</b>	<b>Units</b>	<b>Description Fixed Unit Price </b>
0340	628-H001		1,304	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Continuous White
0350	628-J001		1,304	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Continuous Yellow

For Informational Purposes Only

SECTION 905 - COMBINATION BID PROPOSAL (Continued)

**CONDITIONS FOR COMBINATION BID**

If a bidder elects to submit a combined bid for two or more of the contracts listed for this month's letting, the bidder must complete and execute these sheets of the proposal in each of the individual proposals to constitute a combination bid. In addition to this requirement, each individual contract shall be completed, executed and submitted in the usual specified manner.

Failure to execute this Combination Bid Proposal in each of the contracts combined will be just cause for each proposal to be received and evaluated as a separate bid.

It is understood that the Mississippi Transportation Commission not only reserves the right to reject any and all proposals, but also the right to award contracts upon the basis of lowest separate bids or combination bids most advantageous to the State.

It is further understood and agreed that the Combination Bid Proposal is for comparison of bids only and that each contract shall operate in every respect as a separate contract in accordance with its proposal and contract documents.

I (We) agree to complete each contract on or before its specified completion date.

\*\*\*\*\*

**COMBINATION BID PROPOSAL**

This proposal is tendered as one part of a Combination Bid Proposal utilizing option \_\_\_\* of Subsection 102.11 on the following contracts:

\* Option to be shown as either (a), (b), or (c).

	<u>Project No.</u>	<u>County</u>	<u>Project No.</u>	<u>County</u>
1.	_____	_____	6.	_____
2.	_____	_____	7.	_____
3.	_____	_____	8.	_____
4.	_____	_____	9.	_____
5.	_____	_____	10.	_____

(a) If Combination A has been selected, your Combination Bid is complete.

(b) If Combination B has been selected, then complete the following page.



SECTION 905 - COMBINATION BID PROPOSAL (Continued)

Project Number	Pay Item Number	Unit	Unit Price Reduction	Total Item Reduction	Total Contract Reduction
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

For Informational Purposes Only

SECTION 905 - COMBINATION BID PROPOSAL (Continued)

Project Number	Pay Item Number	Unit	Unit Price Reduction	Total Item Reduction	Total Contract Reduction
9.					
10.					

(c) If Combination C has been selected, then initial and complete ONE of the following.

\_\_\_\_\_ I (We) desire to be awarded work not to exceed a total monetary value of \$ \_\_\_\_\_.

\_\_\_\_\_ I (We) desire to be awarded work not to exceed \_\_\_\_\_ number of contracts.



TO: EXECUTIVE DIRECTOR, MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
JACKSON, MISSISSIPPI

**CERTIFICATE**

If awarded this contract, I (we) contemplate that portions of the contract will be sublet. I (we) certify that those subcontracts which are equal to or in excess of fifty thousand dollars (\$50,000.00) will be in accordance with regulations promulgated and adopted by the Mississippi State Board of Contractors on September 8, 2011.

I (we) agree that this notification of intent DOES NOT constitute APPROVAL of the subcontracts.

_____	_____
(Individual or Firm)	(Address)
_____	_____
(Individual or Firm)	(Address)
_____	_____
(Individual or Firm)	(Address)
_____	_____
(Individual or Firm)	(Address)

NOTE: Failure to complete the above DOES NOT preclude subsequent subcontracts. Subsequent subcontracts, if any, equal to or in excess of fifty thousand dollars (\$50,000.00) will be in accordance with regulations promulgated and adopted by the Mississippi State Board of Contractors on September 8, 2011.

Contractor \_\_\_\_\_

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**  
**CERTIFICATION**

I, \_\_\_\_\_,  
(Name of person signing bid)

individually, and in my capacity as \_\_\_\_\_ of  
(Title of person signing bid)

\_\_\_\_\_  
(Name of Firm, partnership, or Corporation)

do hereby certify under penalty of perjury under the laws of the United States and the State of Mississippi

that \_\_\_\_\_, Bidder  
(Name of Firm, Partnership, or Corporation)

on Project No. **MP-7184-39(002)/ 307071301000**

in **Lawrence** \_\_\_\_\_ County(ies), Mississippi, has not either directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds are not currently under suspension, debarment, voluntary exclusion or determination of ineligibility; nor have a debarment pending; nor been suspended, debarred, voluntarily excluded or determined ineligible within the past three years by the Mississippi Transportation Commission, the State of Mississippi, any other State or a federal agency; nor been indicted, convicted or had a civil judgment rendered by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

Do exceptions exist and are made a part thereof?            Yes / No

Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

All of the foregoing is true and correct.

(1/2016 S)

SECTION 902

CONTRACT FOR MP-7184-39(002)/ 307071301000

LOCATED IN THE COUNTY(IES) OF Lawrence

STATE OF MISSISSIPPI,  
COUNTY OF HINDS

This contract entered into by and between the Mississippi Transportation Commission on one hand, and the undersigned contractor, on the other witnesseth;

That, in consideration of the payment by the Mississippi Transportation Commission of the prices set out in the proposal hereto attached, to the undersigned contractor, such payment to be made in the manner and at the time of times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all materials and equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertising according to law, the Advertisement, the instructions to bidders, the proposal for the contract, the specifications, the revisions of the specifications, the special provisions, and also the plans for the work herein contemplated, said plans showing more particularly the details of the work to be done, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid; or from the action of the elements and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work, exceptions being those specifically set out in the contract; and for faithfully completing the whole work in good and workmanlike manner according to the approved Plans, Specifications, Special Provisions, Notice(s) to Bidders and requirements of the Mississippi Department of Transportation.

It is further agreed that the work shall be done under the direct supervision and to the complete satisfaction of the Executive Director of the Mississippi Department of Transportation, or his authorized representatives, and when Federal Funds are involved subject to inspection at all times and approval by the Federal Highway Administration, or its agents as the case may be, or the agents of any other Agency whose funds are involved in accordance with those Acts of the Legislature of the State of Mississippi approved by the Governor and such rules and regulations issued pursuant thereto by the Mississippi Transportation Commission and the authorized Federal Agencies.

The Contractor agrees that all labor as outlined in the Special Provisions may be secured from list furnished by

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Contractor(s)

By \_\_\_\_\_

MISSISSIPPI TRANSPORTATION COMMISSION

Title \_\_\_\_\_

By \_\_\_\_\_

Signed and sealed in the presence of:  
(names and addresses of witnesses)

Executive Director

\_\_\_\_\_

Secretary to the Commission

Award authorized by the Mississippi Transportation Commission in session on the \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, Minute Book No. \_\_\_\_\_, Page No. \_\_\_\_\_.

Revised 8/06/2003

**SECTION 903**  
**PERFORMANCE AND PAYMENT BOND**

CONTRACT BOND FOR: MP-7184-39(002)/307071301000

LOCATED IN THE COUNTY(IES) OF: Lawrence

STATE OF MISSISSIPPI,  
COUNTY OF HINDS

Know all men by these presents: that we, \_\_\_\_\_  
\_\_\_\_\_  
(Contractor)

Principal, a \_\_\_\_\_

residing at \_\_\_\_\_ in the State of \_\_\_\_\_

and \_\_\_\_\_

(Surety)  
residing at \_\_\_\_\_ in the State of \_\_\_\_\_,

authorized to do business in the State of Mississippi, under the laws thereof, as surety, effective as of the contract date

shown below, are held and firmly bound unto the State of Mississippi in the sum of \_\_\_\_\_

\_\_\_\_\_ Dollars, lawful money of the United States of America, to be paid to it for which payment well and truly to be made, we bind ourselves, our heirs, administrators, successors, or assigns jointly and severally by these presents.

The conditions of this bond are such, that whereas the said \_\_\_\_\_

principal, has (have) entered into a contract with the Mississippi Transportation Commission, bearing the date of

\_\_\_\_\_ day of \_\_\_\_\_ A.D. \_\_\_\_\_ hereto annexed, for the construction of certain projects(s) in

the State of Mississippi as mentioned in said contract in accordance with the Contract Documents therefor, on file in the

offices of the Mississippi Department of Transportation, Jackson, Mississippi.

Now therefore, if the above bounden \_\_\_\_\_

in all things shall stand to and abide by and well and truly observe, do keep and perform all and singular the terms, covenants, conditions, guarantees and agreements in said contract, contained on his (their) part to be observed, done, kept and performed and each of them, at the time and in the manner and form and furnish all of the material and equipment specified in said contract in strict accordance with the terms of said contract which said plans, specifications and special provisions are included in and form a part of said contract and shall maintain the said work contemplated until its final completion and acceptance as specified in Subsection 109.11 of the approved specifications, and save harmless said Mississippi Transportation Commission from any loss or damage arising out of or occasioned by the negligence, wrongful or criminal act, overcharge, fraud, or any other loss or damage whatsoever, on the part of said principal (s), his (their) agents, servants, or employees in the performance of said work or in any manner connected therewith, and shall be liable and responsible in a civil action instituted by the State at the instance of the Mississippi Transportation Commission or any officer of the State authorized in such cases, for double any amount in money or property, the State may lose or be overcharged or otherwise defrauded of, by reason of wrongful or criminal act, if any, of the Contractor(s), his (their) agents or employees, and shall promptly pay the said agents, servants and employees and all persons furnishing labor, material, equipment or supplies therefor, including premiums incurred, for Surety Bonds, Liability Insurance, and Workmen's Compensation Insurance; with the additional obligation that such Contractor shall promptly make payment of all taxes, licenses, assessments, contributions, damages,

any liquidated damages which may arise prior to any termination of said principal's contract, any liquidated damages which may arise after termination of the said principal's contract due to default on the part of said principal, penalties and interest thereon, when and as the same may be due this state, or any county, municipality, board, department, commission or political subdivision: in the course of the performance of said work and in accordance with Sections 31-5-51 et seq. Mississippi Code of 1972, and other State statutes applicable thereto, and shall carry out to the letter and to the satisfaction of the Executive Director of the Mississippi Department of Transportation, all, each and every one of the stipulations, obligations, conditions, covenants and agreements and terms of said contract in accordance with the terms thereof and all of the expense and cost and attorney's fee that may be incurred in the enforcement of the performance of said contract, or in the enforcement of the conditions and obligations of this bond, then this obligation shall be null and void, otherwise to be and remain in full force and virtue.

_____	_____
(Contractors) Principal	Surety
By _____	By _____
	(Signature) Attorney in Fact
	Address _____
	_____
Title _____	_____
(Contractor's Seal)	(Printed) MS Agent
	_____
	(Signature) MS Agent
	Address _____
	_____
	_____
	(Surety Seal)
	_____
	Mississippi Insurance ID Number



# BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we \_\_\_\_\_  
Contractor

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State ZIP

As principal, hereinafter called the Principal, and \_\_\_\_\_  
Surety

a corporation duly organized under the laws of the state of \_\_\_\_\_

as Surety, hereinafter called the Surety, are held and firmly bound unto State of Mississippi, Jackson, Mississippi

As Obligee, hereinafter called Obligee, in the sum of **Five Per Cent (5%) of Amount Bid**

Dollars(\$ \_\_\_\_\_ )

for the payment of which sum will and truly to be made, the said Principal and said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for **Scrub Seal & Mill & Overlay approximately 3 miles of SR 184 from Junction US 84 W East to Junction US 84 E, known as State Project No. MP-7184-39(002) / 307071301 in Lawrence County.**

NOW THEREFORE, the condition of this obligation is such that if the aforesaid Principal shall be awarded the contract, the said Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation to be void; otherwise the Principal and Surety will pay unto the Obligee the difference in money between the amount of the bid of the said Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former, but in no event shall liability hereunder exceed the penal sum hereof.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Principal) (Seal)  
By: \_\_\_\_\_  
(Name) (Title)

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Surety) (Seal)  
By: \_\_\_\_\_  
(Attorney-in-Fact)

\_\_\_\_\_  
(MS Agent)

\_\_\_\_\_  
Mississippi Insurance ID Number



