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.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO.	1	DATED	3/17/2025	ADDENDUM NO.		DATED	
ADDENDUM NO		DATED		ADDENDUM NO.		DATED	
ADDENDUM NO		DATED		ADDENDUM NO.		DATED	

Number	Description
1	Revised Notice To Bidders No. 6725; Revised Bid Items; Amendment EBSx Download Required.

TOTAL ADDENDA: 1
(Must agree with total addenda issued prior to opening of bids)

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.

SP-0022-01(087)/ 108240301000

Jones County(ies)

Revised 01/26/2016

For Informational Purposes Only

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6725 **CODE: (SP)**

DATE: 03/11/2025

SUBJECT: Scope of Work

PROJECT: SP-0022-01(087) / 108240301 -- Jones County

The contract documents do not include an official set of construction plans but may, by reference, include some Standard Drawings when so specified in a Notice to Bidders entitled, "Standard Drawings".

Work on the project shall consist of the following:

MILL AND OVERLAY SR 15 FROM QUEEN STREET TO NORTH OF AUDUBON DRIVE (10+00 TO 228+15 -- 4.13 MILES)

(A) Prior to the overlay, centerline alignment shall be determined by the Contractor by measuring the existing roadway at 500-foot intervals in tangent sections, and 100-foot intervals in horizontal curves. The existing shoulders shall be clipped full width and surplus material shall be spread along the edge of the shoulders, fore slopes, or other adjacent areas as directed by the Project Engineer and will be an absorbed item.

(B) All the transitions including E.O.P., B.O.P., bridge approaches, turn-outs and all tie-ins on SR 15 shall be fine milled 1½" & variable. The Contractor shall ensure water will not be trapped at milled locations. All milled material shall become the property of the Contractor except for approximately 1,000 Tons to be stockpiled for MDOT at the Maintenance facility located off US 11 & SR 590 in Ellisville, MS. See Typical Sections and Table 1 for milling areas.

(C) SR 15 shall be overlaid with 1½" of 9.5-mm, HT, Polymer Modified asphalt from Queen Street, (STA10+00) to north of Audubon Drive (STA 228+15). Prior to the surface course, the Contractor shall fine mill 1½", remove any failed areas on the main facility and repair by backfilling with 19-mm, HT asphalt as directed by the Project Engineer. No milled area shall remain open for more than five (5) days, at which time the Contractor shall place the surface lift of asphalt. Removal areas will be marked by MDOT personnel and include but are not limited to areas included in Table 2, (Approximately 193 Tons). Although it is anticipated the removal areas listed in Table 2 may be removed by milling, the Contractor shall be prepared to remove the area by other methods at no additional cost or time and should be bid accordingly in pay item 202-B: Removal of Asphalt Pavement. 9.5-mm, SMA asphalt shall be placed at the intersections of SR 15 & US 84 and SR 15 & Jefferson Street. The limits on which the 9.5-mm, SMA asphalt shall be placed at SR 15 & US 84 are where the existing SMA asphalt is currently placed, (Approximately 910 Tons). At the intersection of SR 15 & Jefferson St., the limits will be marked in the field, (Approximately 708 Tons) See Table 3. Publicly maintained roads or streets shall be surfaced using a 9.5-mm, MT asphalt to the existing R.O.W.; privately owned entrances shall be

surfaced a distance of 10 feet & variable from edge of pavement (Approximately 1,872 tons). Any site grading at local roads or drives will not be measured for separate payment but will be considered an absorbed item. Cross slopes shall be achieved by fine milling for a uniform cross slope of 2%. Curves should be checked for proper transitional slopes and super elevation slopes. If water stands when the project is complete, the Contractor shall correct at no additional cost to the State. See Typical Sections for asphalt structural requirements.

TABLE 1

PAY ITEM / LANE	BEGIN STATION	END STATION	WIDTH	LENGTH	SQUARE YARD
NORTH BOUND	10+00	228+15	36	21,815	87,260.000
SOUTH BOUND	10+00	228+15	36	21,815	87,260.000
Driveways					2,833.333
Local Roads					16,685.889
	TOTAL MILLING, SY				**194,039.222**

TABLE 2

PAY ITEM / LANE	BEGIN STATION	END STATION	WIDTH	LENGTH	SQUARE YARD
NORTH BOUND	60+84	62+34	12	150	200.000
	76+56	76+91	7	35	27.222
	25+94	26+94	12	100	133.333
	73+46	74+21	7	75	58.333
SOUTH BOUND	72+20	74+20	7	200	155.556
	TOTAL REMOVAL, SY				**574.444**
	TOTAL ASPHALT NEEDED, TON				**193.875**

TABLE 3

PAY ITEM / LANE	LOCATION	BEGIN STATION	END STATION	WIDTH	LENGTH	SQUARE Foot
SMA 907-405-A001	NB Mainline	23+28	25+32	36	204	7,344.000
	Mainline	25+32	30+97	86	565	48,590.000
15 & Jefferson	SB Mainline	23+28	25+32	30	204	6,120.000
	Jefferson St EAST	10+00	10+75	38	75	2,850.000
	Jefferson St WEST	10+00	10+85	36	85	3,060.000
	NW I-59 on-ramp	10+00	10+81	22	81	1,782.000
	NE I-59 off-ramp	10+00	10+82	40	82	3,280.000
15 & 84	Mainline 15 @ 84	52+84	59+44	107	660	70,620.000
	5th Street	10+00	10+77	62	77	4,774.000
	Hwy 84	10+00	12+15	86	215	18,490.000
		TOTAL Stone Matrix Asphalt, SF				166,910.000
		TOTAL Stone Matrix Asphalt, TON				1,616.941

(D) Smoothness incentive/disincentive will be governed by the Standard Specifications Subsection 907-403.03.2.1, Category B for MRI (mean roughness index). All incentive/disincentive will be based on theoretical tonnage placed on a 12' travel lane. Any site grading at local roads or drives will not be measured for separate payment but will be considered an absorbed item.

(E) The existing shoulders shall be raised to match the new pavement elevation by placing 1½" & variable of crushed stone on the shoulders. Placement of the crushed stone on the finished surface course shall not be permitted. The material shall be bladed, rolled and compacted to a finished slope of 4% where practical. Shoulders with existing adequate shoulder material in place shall be bladed to a slope of 4%, the cost of which shall be included in the prices of other items bid.

(F) Temporary striping shall conform to finished stripe specifications for alignment, neatness, reflectivity, and straightness. All permanent pavement markings on asphalt shall be hot thermoplastic. Edge lines will be placed to maintain the original lane width. Special care should be taken for the placement of thermoplastic detail stripe along the edge of pavement at turn-outs on all local roads and along tapers where detail stripe is required as per Typical PMD-1.

(G) High performance raised pavement markers shall be placed as per Standard Drawing sheet working number PM-2, for 5-Lane Undivided Roadways and PM-11 at intersecting roads. Any removal of existing raised pavement markers or rumble bars shall be considered an absorbed item. Only flexible adhesive shall be allowed for placement of raised pavement markers meeting the requirements of Subsection 720.03.7.7.

(H) All guardrail shall be MASH compliant. The Contractor shall furnish the Project Engineer two (2) copies of the manufacture's installation instructions prior to beginning guardrail operations. All terminal end sections shall be marked with a Samford Mean Streak grease pen to identify type installed. Any site grading and all fill material necessary at the guardrail locations will not be measured for separate payment but will be absorbed in other guardrail pay items. Guard rail pads

shall be overlaid prior to placing guardrail and will be paid for under 403-A015, 9.5-mm, ST, Asphalt Pavement.

(I) The Contractor shall erect and maintain construction signing, and provide all signs and traffic handling devices, and shall provide two portable R16-3 signs per work zone or lane closure in addition to signs required by standard drawings in accordance with Manual Uniform Traffic Control Devices (MUTCD). The cost shall be included in the price bid for pay item 907-618-A, Maintenance of Traffic.

(J) Incidental work such as removing vegetation, shaping and compaction of shoulder, removing excess asphalt material, project clean-up, and other incidental work necessary to complete the project will not be measured for separate payment, but will be included in other bid items, and must be performed during the operating hours for this project. The Contractor shall ensure that all inlets are protected from construction debris during milling and paving operations and all paved flumes are to be cleaned out upon completion of work to ensure all curbs properly drain.

(K) Working hours will be limited to night work only. Construction operations may begin at 7:00 PM - 6:00 AM Sunday through Thursday and cease Friday morning at 6:00 AM until the following Sunday at 7:00 PM. A lane rental fee of $5,000.00 shall be assessed for each full or partial five (5) minutes beyond the established time frame.

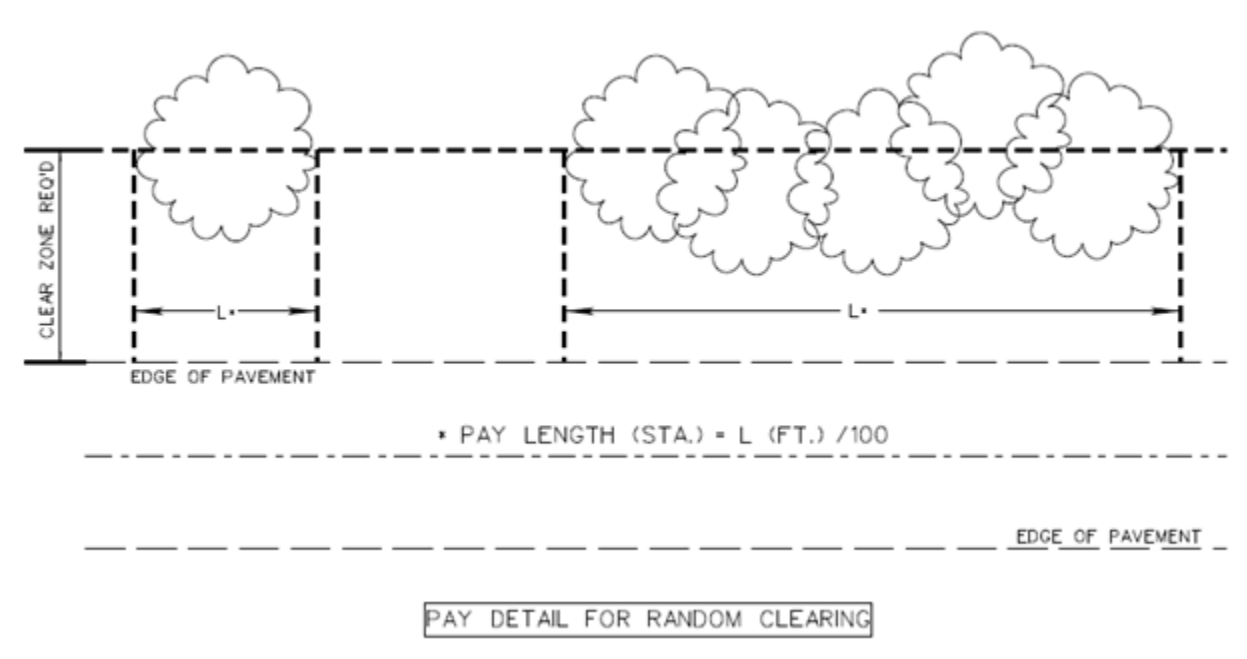
(L) Concrete pavement shall be removed at the two entrances of Alliance Energy Gas Station and Convenience Store just north of Jefferson St. and replace with 9.5-mm, HT asphalt. Any concrete paved ditch that is damaged at this location shall be removed, replaced and graded to drain.

(M) Traffic signals at several intersections shall be upgraded using the pay items for each intersection as shown in Table 4 below.

Table 4

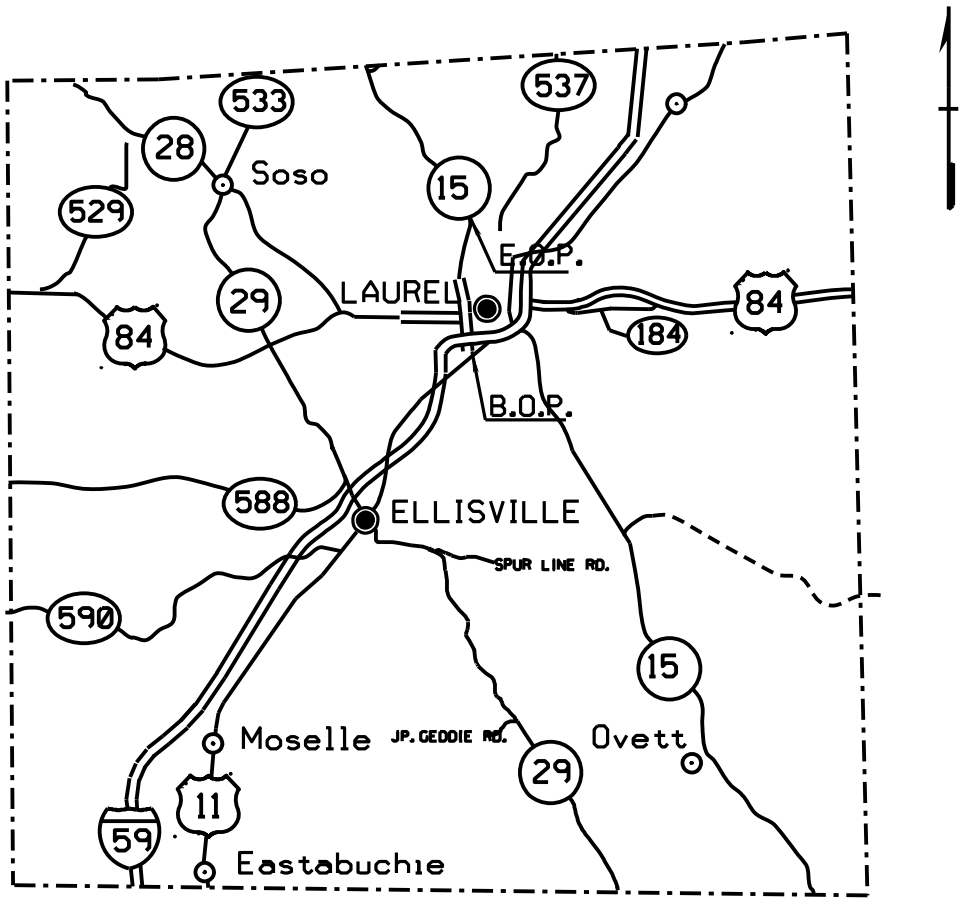
Pay Item	Location	Description	Quantity	Unit
907-632-D001	I-59 @ 16th Avenue	Solid State Traffic Actuated Controller, Type 1	1	EA
907-643-E001	I-59 @ 16th Avenue	Multi-Sensor Vehicle Detection Sensor	2	EA
907-643-A002	I-59 @ 16th Avenue	Video Vehicle Detection Sensor, Type 2	1	EA
907-643-C003	I-59 @ 16th Avenue	Video Vehicle Detection Processor, Type 2	1	EA
907-643-B001	I-59 @ 16th Avenue	Video Vehicle Detection Cable	440	LF
907-632-D001	I-59 @ Jefferson St	Solid State Traffic Actuated Controller, Type 1	1	EA
907-643-A002	I-59 @ Jefferson St	Video Vehicle Detection Sensor, Type 2	3	EA
907-643-E001	I-59 @ Jefferson St	Multi-Sensor Vehicle Detection Sensor	2	EA
907-643-B001	I-59 @ Jefferson St	Video Vehicle Detection Cable	350	LF
907-643-C003	I-59 @ Jefferson St	Video Vehicle Detection Processor, Type 2	1	EA
907-632-D001	MS 15 @ US 84	Solid State Traffic Actuated Controller, Type 1	1	EA
907-643-A002	MS 15 @ US 84	Video Vehicle Detection Sensor, Type 2	2	EA
907-643-E001	MS 15 @ US 84	Multi-Sensor Vehicle Detection Sensor	2	EA
907-643-B001	MS 15 @ US 84	Video Vehicle Detection Cable	855	LF
907-643-C003	MS 15 @ US 84	Video Vehicle Detection Processor, Type 2	1	EA
907-634-PP001	MS 15 @ US 84	Luminaire Fixture and Arm, Per Plans	4	EA
907-634-F002	MS 15 @ US 84	Traffic Signal Equipment Pole Mast Arm Extension	3	EA
907-636-B003	MS 15 @ US 84	Elec Cable, Undrgrd in Cond, IMSA 20-1, AWG 10, 2 Cond	725	LF
907-641-A002	MS 15 @ 10th Street	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2	4	EA
907-641-B002	MS 15 @ 10th Street	Signal Advanced Radar Vehicle Detection Sensor, Type 2	2	EA
907-641-D001	MS 15 @ 10th Street	Radar Vehicle Detection Cable	708	LF
907-641-F002	MS 15 @ 10th Street	Signal Radar Vehicle Detection Processor, Type 2	1	EA
907-632-D001	MS 15 @ 15th / Flynt	Solid State Traffic Actuated Controller, Type 1	1	EA
907-632-G001	MS 15 @ 15th / Flynt	Malfunction Management Unit	1	EA
907-641-A002	MS 15 @ 15th / Flynt	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2	4	EA
907-641-B002	MS 15 @ 15th / Flynt	Signal Advanced Radar Vehicle Detection Sensor, Type 2	2	EA
907-641-D001	MS 15 @ 15th / Flynt	Radar Vehicle Detection Cable	799	LF
907-641-F002	MS 15 @ 15th / Flynt	Signal Radar Vehicle Detection Processor, Type 2	1	EA
907-632-D001	MS 15 @ Wal-Mart	Solid State Traffic Actuated Controller, Type 1	1	EA
907-632-G001	MS 15 @ Wal-Mart	Malfunction Management Unit	1	EA
907-641-A002	MS 15 @ Wal-Mart	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2	4	EA
907-641-B002	MS 15 @ Wal-Mart	Signal Advanced Radar Vehicle Detection Sensor, Type 2	2	EA
907-641-D001	MS 15 @ Wal-Mart	Radar Vehicle Detection Cable	806	LF
907-641-F002	MS 15 @ Wal-Mart	Signal Radar Vehicle Detection Processor, Type 2	1	EA
907-632-G001	MS 15 @ 20th	Malfunction Management Unit	1	EA
907-641-A002	MS 15 @ 20th	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2	4	EA
907-641-B002	MS 15 @ 20th	Signal Advanced Radar Vehicle Detection Sensor, Type 2	2	EA
907-641-D001	MS 15 @ 20th	Radar Vehicle Detection Cable	1263	LF
907-641-F002	MS 15 @ 20th	Signal Radar Vehicle Detection Processor, Type 2	1	EA
907-641-A002	MS 15 @ Old Amy	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2	4	EA
907-641-B002	MS 15 @ Old Amy	Signal Advanced Radar Vehicle Detection Sensor, Type 2	2	EA
907-641-D001	MS 15 @ Old Amy	Radar Vehicle Detection Cable	1183	LF
907-641-F002	MS 15 @ Old Amy	Signal Radar Vehicle Detection Processor, Type 2	1	EA
907-632-D001	MS 15 @ Parker Dr	Solid State Traffic Actuated Controller, Type 1	1	EA
907-643-A002	MS 15 @ Parker Dr	Video Vehicle Detection Sensor, Type 2	2	EA
907-643-B001	MS 15 @ Parker Dr	Video Vehicle Detection Cable	706	LF
907-643-E001	MS 15 @ Parker Dr	Multi-Sensor Vehicle Detection Sensor	2	EA
907-643-C003	MS 15 @ Parker Dr	Video Vehicle Detection Processor, Type 2	1	EA
907-632-D001	MS 15 @ Bush Dairy	Solid State Traffic Actuated Controller, Type 1	1	EA
907-632-G001	MS 15 @ Bush Dairy	Malfunction Management Unit	1	EA
907-641-A002	MS 15 @ Bush Dairy	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2	4	EA
907-641-B002	MS 15 @ Bush Dairy	Signal Advanced Radar Vehicle Detection Sensor, Type 2	2	EA
907-641-D001	MS 15 @ Bush Dairy	Radar Vehicle Detection Cable	1175	LF
907-641-F002	MS 15 @ Bush Dairy	Signal Radar Vehicle Detection Processor, Type 2	1	EA

(N) Random clearing shall be performed within the specified clearing limits, including vegetation overhanging the edge of the clearing limits. Overhanging vegetation should be trimmed to a minimum height of thirty (30) feet above the ground elevation at the edge of the clearing limits. It is the intent of this Contract for the vegetation, with the exception of any merchantable timber that the Contractor desires, to be mulched onsite and left in place. **Mulching will be prohibited in residential locations that are maintained by adjacent landowners.** All vegetative material shall be removed from these areas and mulched at a location on the project where mulching is allowed. In the event random clearing is required in a residential location, when work is completed, the location shall be left as close to original condition as possible. Mulched material shall be spread such that no more than four inches (4") in depth of material is placed in any location. This work shall be paid for under pay item 201-D: Random Clearing, per Station. Each side of the roadway will be measured separately. Clearing within two (2) feet of fences, utilities, and other obstructions as directed by the Engineer within the ROW is to be omitted in order to avoid damages. The clearing limits are thirty (30) feet from the edge of the travel lane.

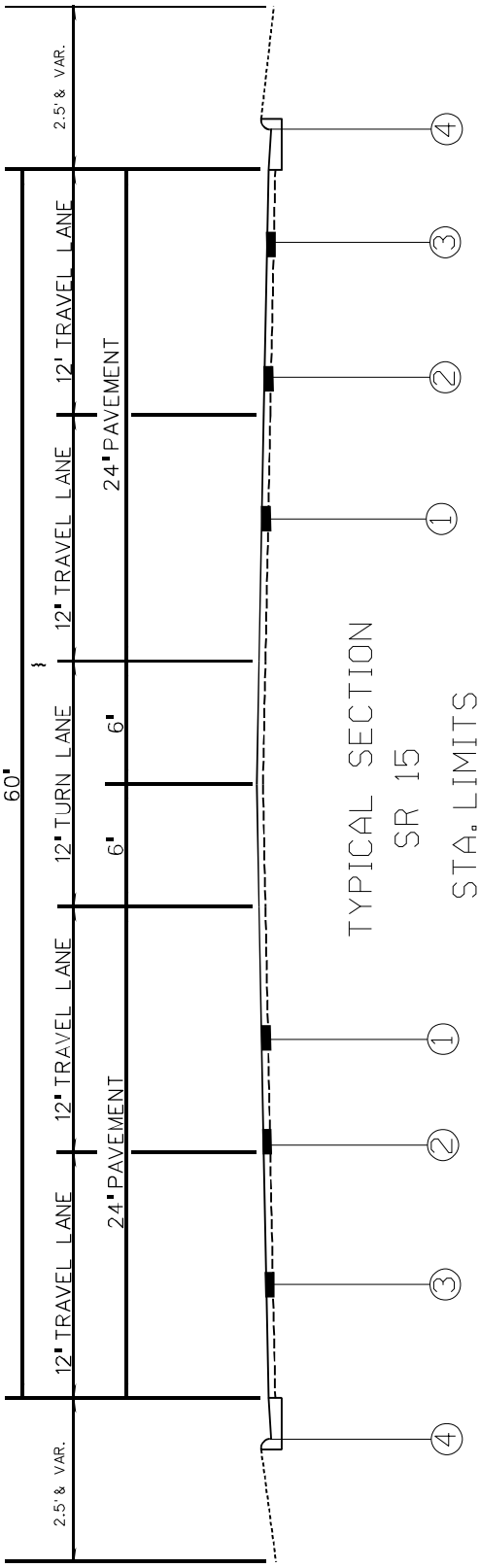


SP-0022-01(087)

JONES COUNTY



THE ABOVE REFERENCED PROJECT IS FOR OVERLAYING SR 15 FROM QUEEN STREET TO NORTH OF AUDUBON DRIVE STA 10+00 TO STA 228+15 4.13 MILES



TYPICAL SECTION
SR 15
STA. LIMITS
STA. 10+00 TO STA. 228+15

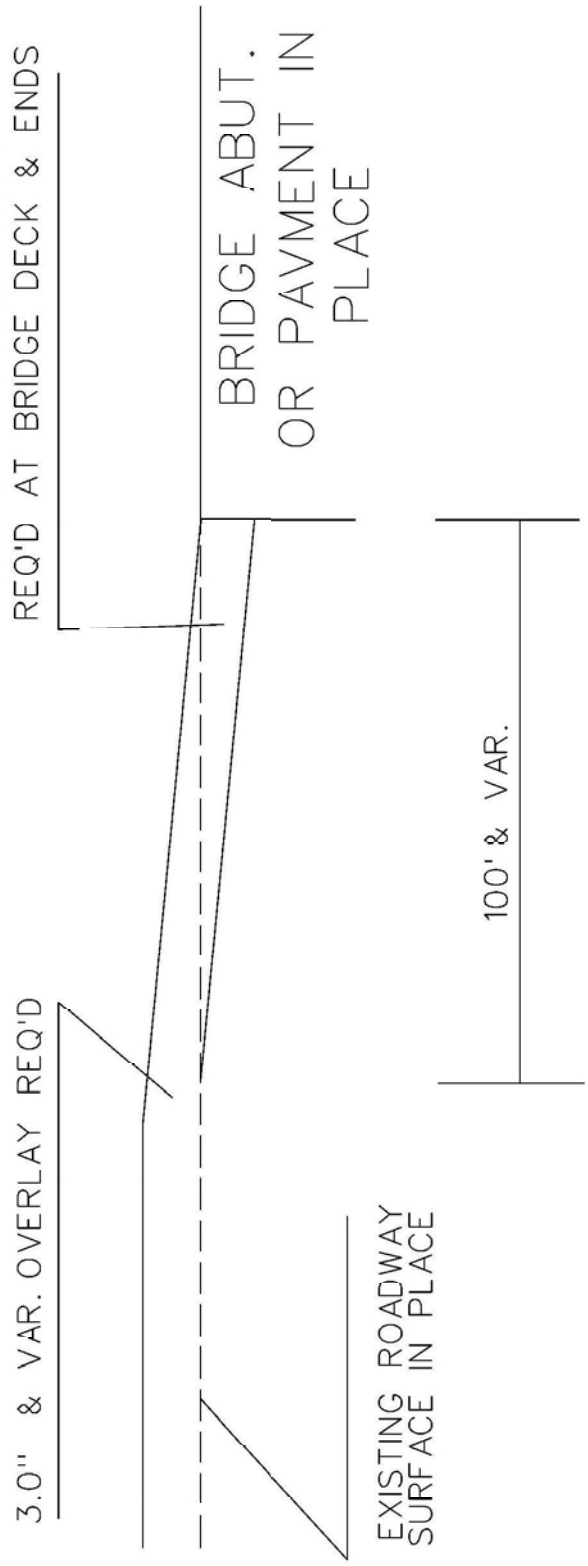
① FINE MILL 1.5" EXISTING ASPHALT PAVEMENT (STA. 10+00 TO STA. 228+15)

② 1.5" ASPHALT PAVEMENT, HT (9.5mm POLYMER MODIFIED MIXTURE) (1 @ 1.5")
(STA. 10+00 TO STA. 23+28)
(STA. 31+00 TO STA. 52+84)
(STA. 59+44 TO STA. 228+15)

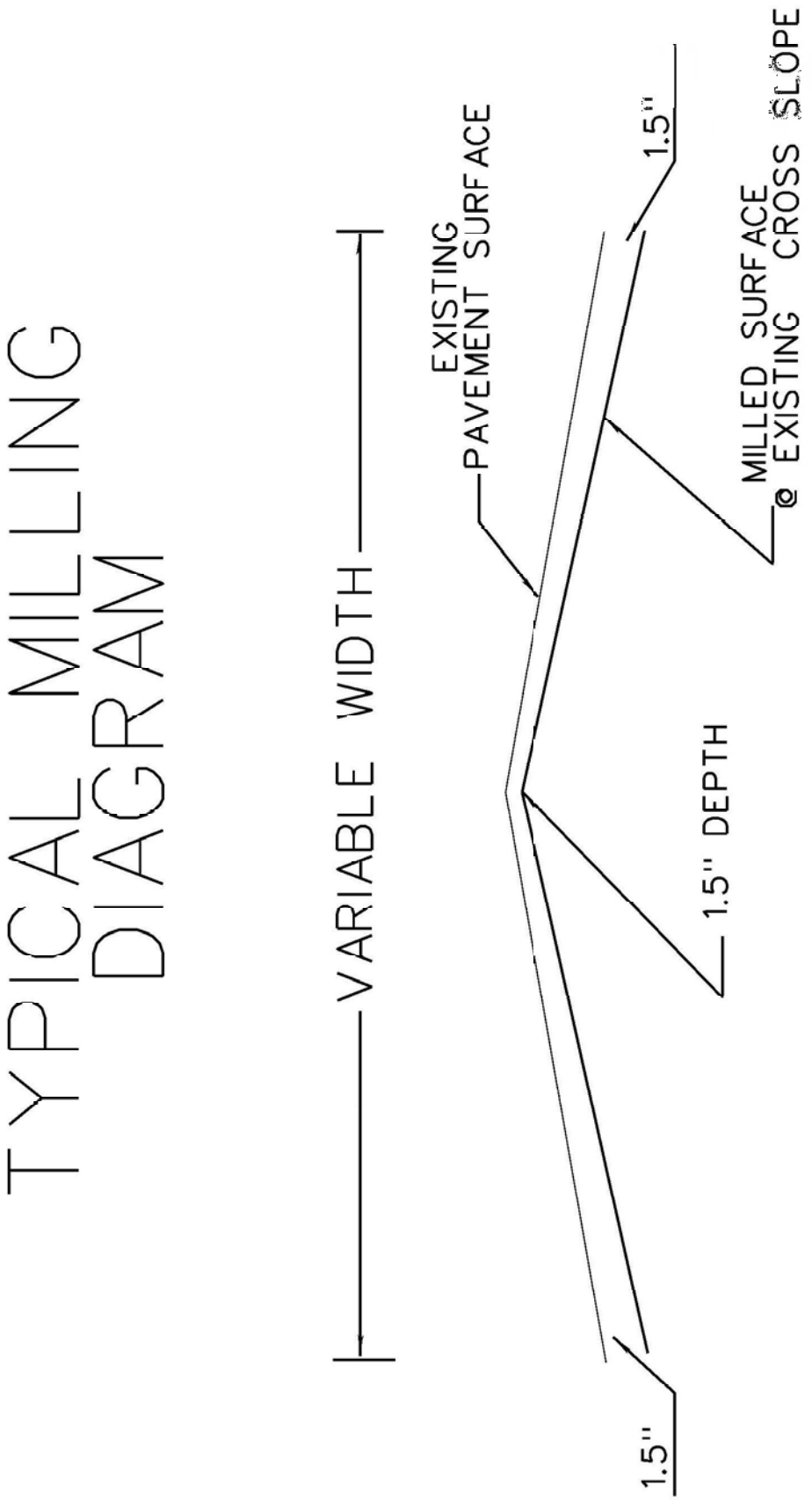
③ 1.5" STONE MATRIX ASPHALT, (9.5mm MIXTURE) (1 @ 1.5")
(STA. 23+28 TO STA. 31+00)
(STA. 52+84 TO STA. 59+44)

④ EXISTING CONCRETE CURB TO REMAIN IN PLACE

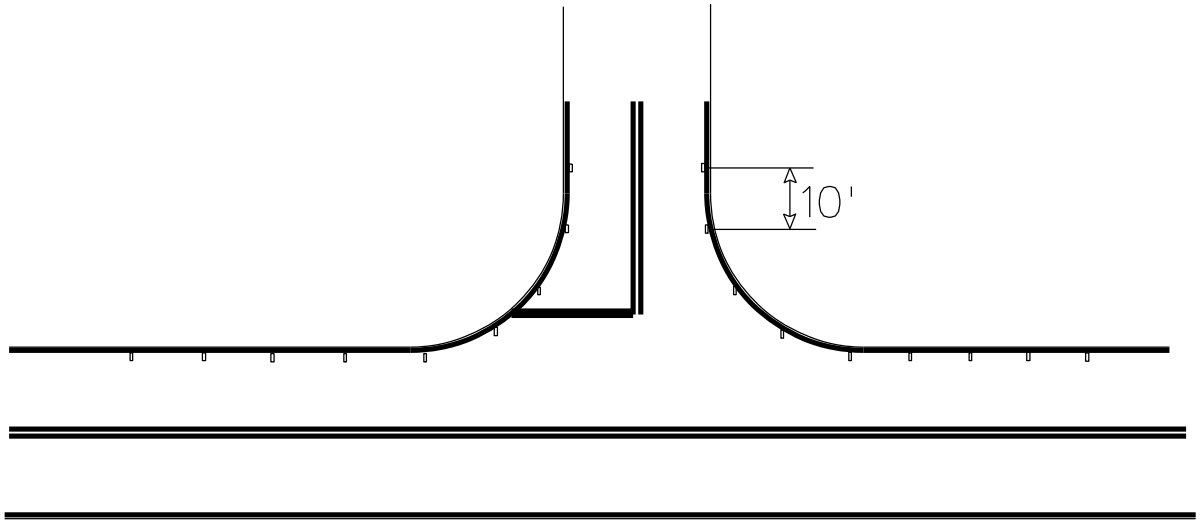
TYPICAL MILLED TRANSITION AT BRIDGE ABUT. OR PAVEMENT IN PLACE



TYPICAL MILLING DIAGRAM



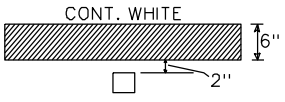
TYPICAL FOR RAISED PAVEMENT MARKERS PLACED ON SIDE ROAD RADIUS



NOTE 1. MARKERS SHALL BE PLACED EVERY 10 FEET.

NOTE 2. MARKERS SHALL BE VISIBLE FROM THE TRAVELING MOTORIST ON STATE DESIGNATED HIGHWAYS.

NOTE 3. MARKERS SHALL BE HIGH PERFORMANCE TWO WAY CLEAR.



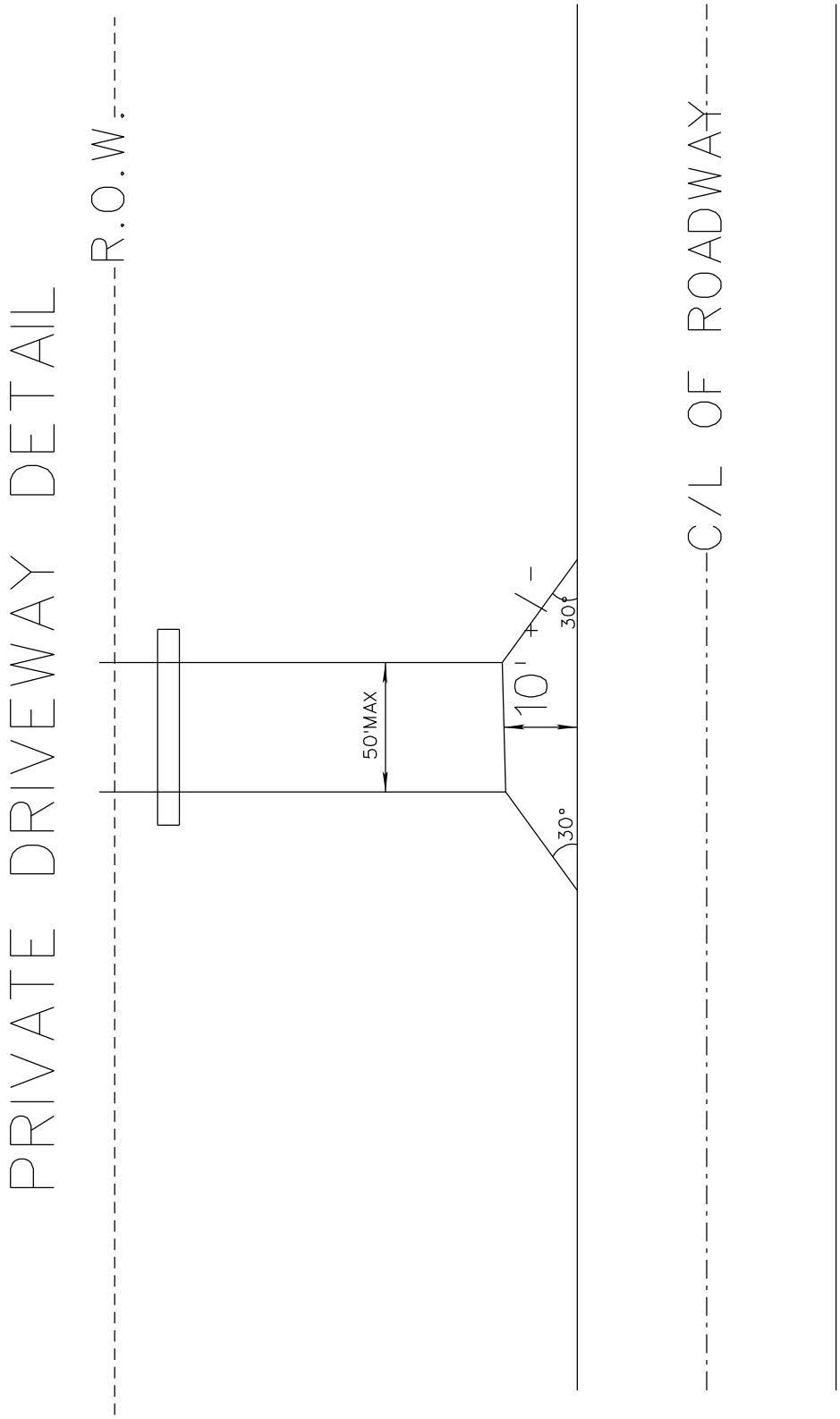
DETAIL A

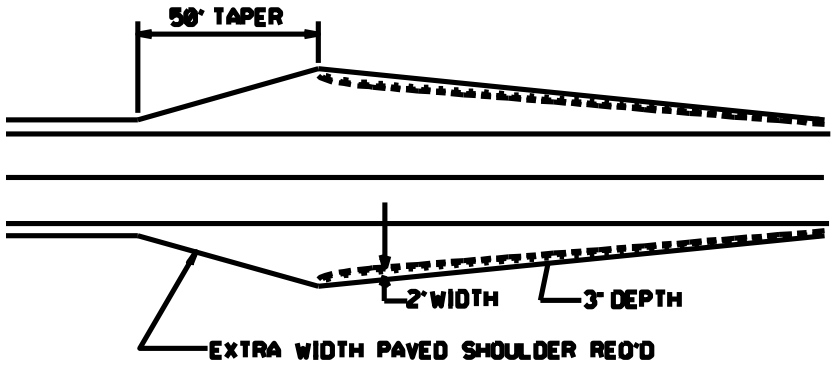
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

2-LANE

RAISED PAVEMENT MARKERS PLACED ON SIDE ROADS

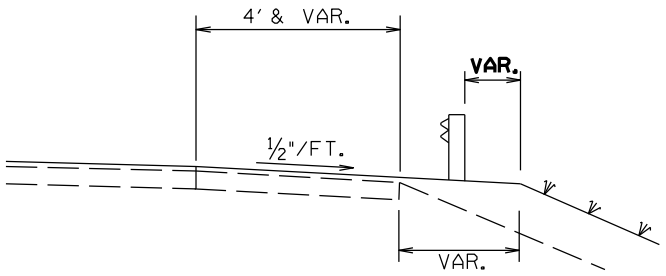
FILENAME:


PRIVATE DRIVEWAY DETAIL
R.O.W.
C/L OF ROADWAY
50'MAX
10' +/-
30°
30°



DETAIL OF INSTALLATION OF EXTRA WIDTH PAVED SHOULDERS AT BRIDGES

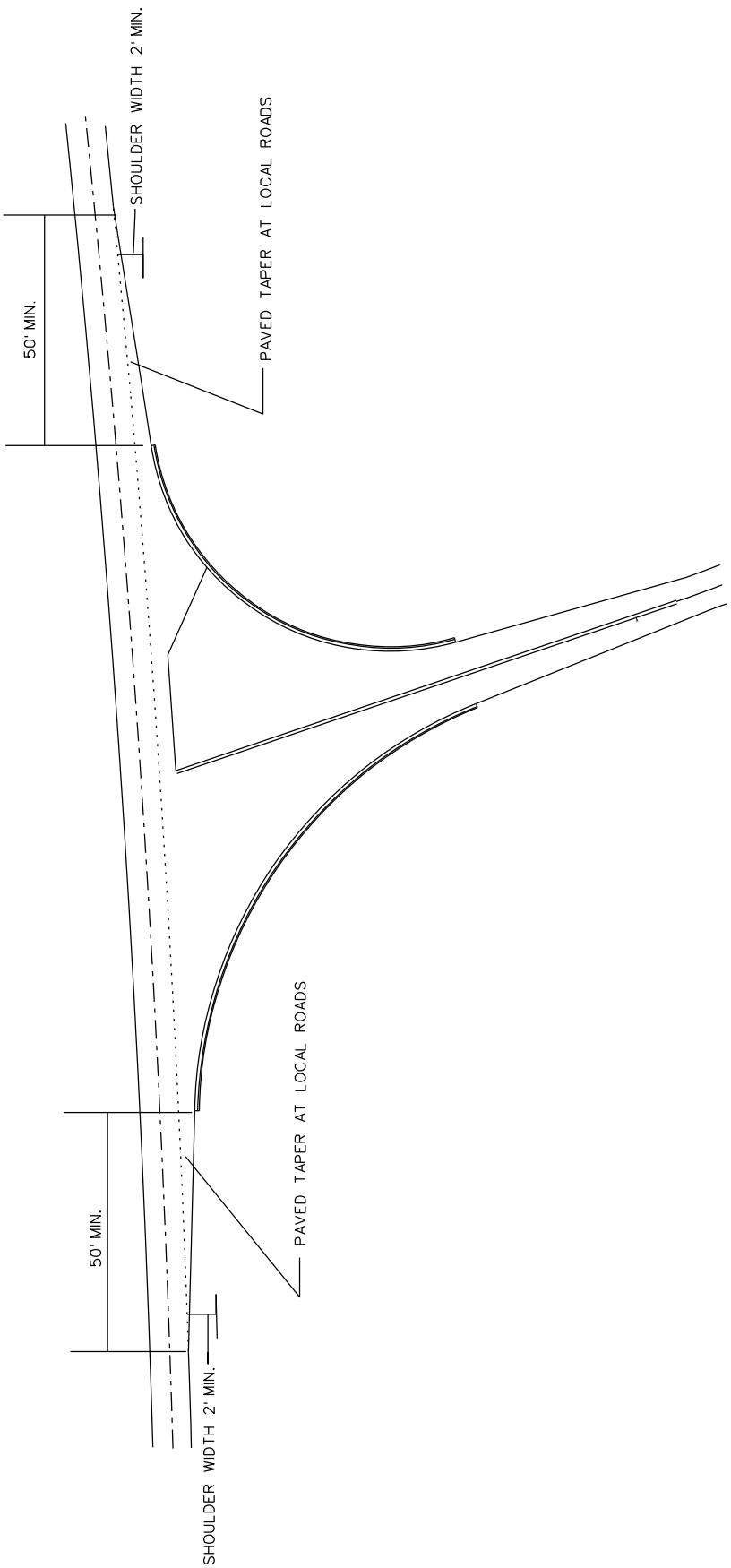
1. 3" AND VAR. DEPTH 9.5MM HOT BITUMINOUS PAVEMENT REQ'D



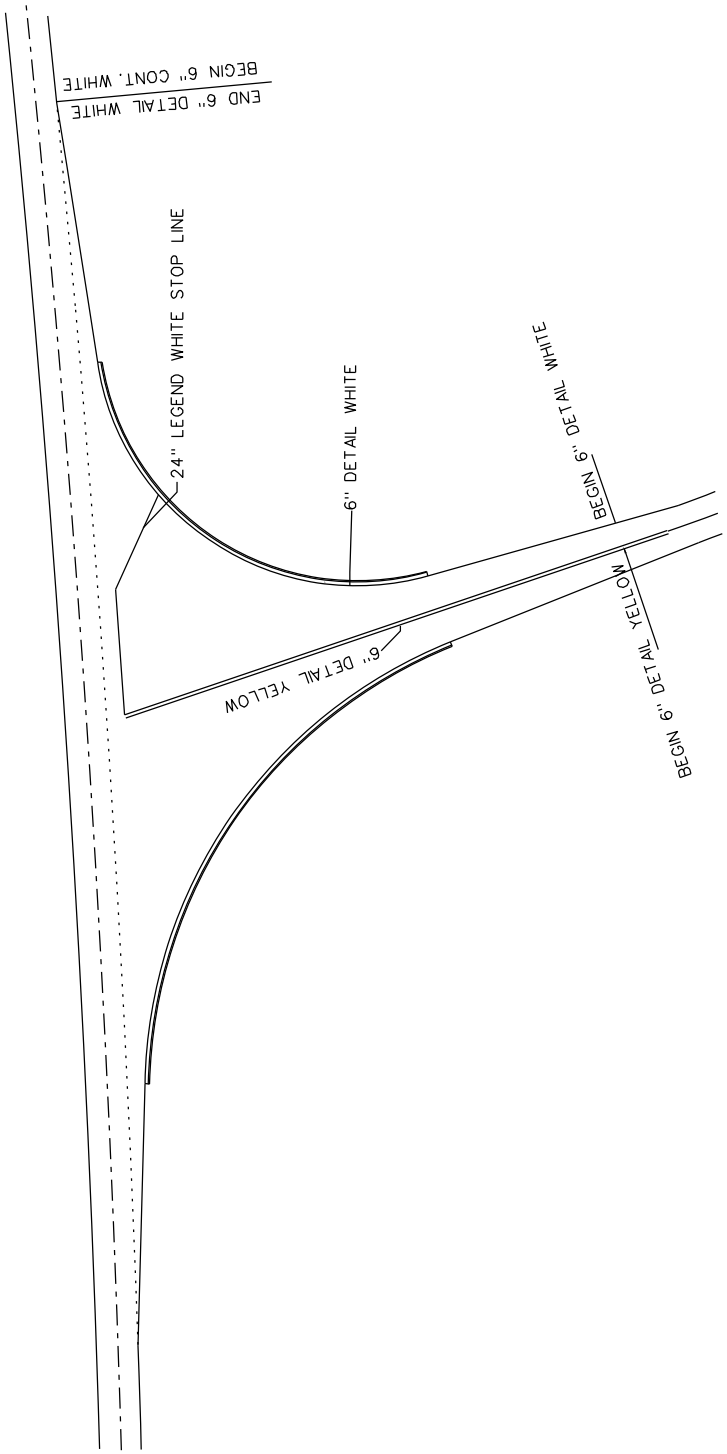
BOTH SIDES

TYPICAL SECTION
DETAILS OF PAVED SHOULDERS AT BRIDGE GUARD RAIL INSTALLATIONS

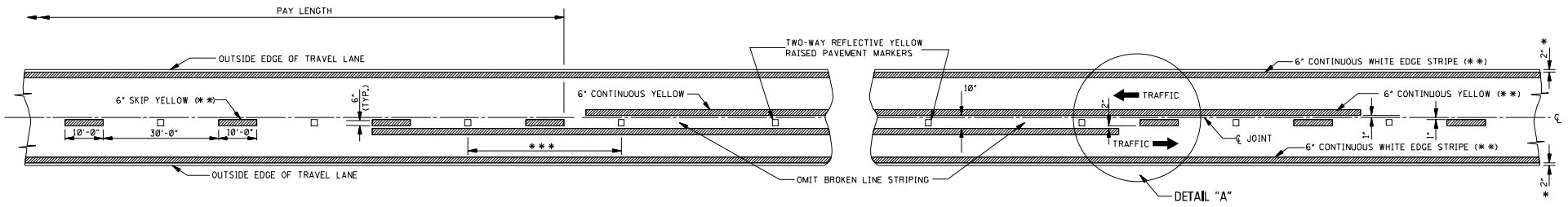
TYPICAL FOR PAVED TAPER AT LOCAL ROADS



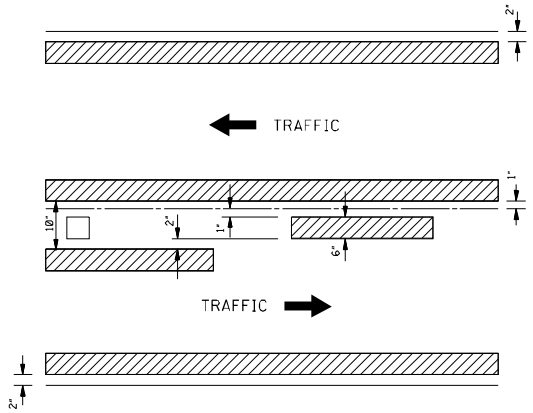
TYPICAL STRIPING FOR SIMPLE INTERSECTION AT LOCAL ROADS



STATE	PROJECT NO.
MISS.	



TWO–WAY TRAFFIC
(ASPHALT OR CONCRETE PAVEMENT)



DETAIL "A"

NOTE: THE CRITERIA FOR NO-PASSING ZONES CAN BE FOUND IN THE MDOT ROADWAY DESIGN MANUAL, SECTION 11-1.01.

DIRECTION OF TRAFFIC

GENERAL NOTES:

* 1. 2" UNLESS SHOWN ELSEWHERE ON THE PLANS. FOR STRIPING ON RUMBLE STRIP SECTIONS REFER TO WK. SHEETS RS-1, RS-2, AND RS-3.

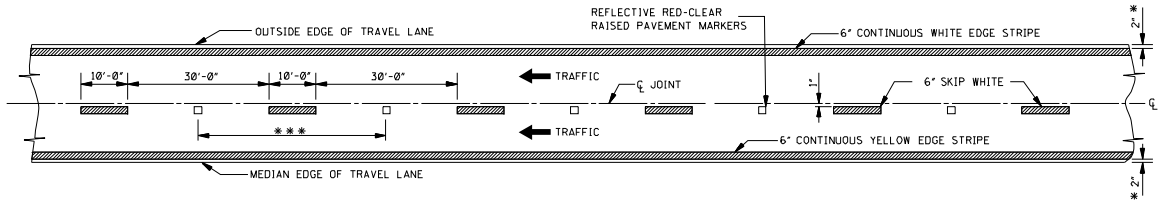
* * 2. EDGE STRIPE SHALL BE SAME MATERIAL AS LANE-LINE STRIPE (PAINT OR PLASTIC AS INDICATED IN PAY ITEMS).

* * * 3. SPACING OF REFLECTIVE RAISED PAVEMENT MARKERS IS AS FOLLOWS:

	URBAN AREA (ft-In)	RURAL AREA (ft-In)
TANGENT SECTIONS	40'-0"	40'-0"
HORIZONTAL CURVES	40'-0"	40'-0"
INTERCHANGE LIMITS	40'-0"	† 40'-0"

† NOTE: ON THE MAIN FACILITY, REFLECTIVE RED-CLEAR RAISED PAVEMENT MARKERS ON A 40'-0" SPACING WILL BE REQUIRED IN LANE-LINE(S) 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.

4. PAVEMENT MARKERS SHALL BE HIGH PERFORMANCE REFLECTIVE RAISED PAVEMENT MARKERS AS LISTED IN THE MDOT "APPROVED SOURCES OF MATERIALS."



4–LANE WITH ONE–WAY TRAFFIC

Notice To Bidders No. 6725 - Qtr.

BY	REVISION	DATE

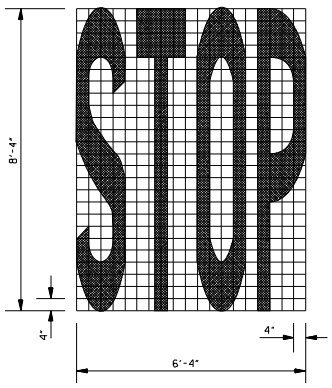
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

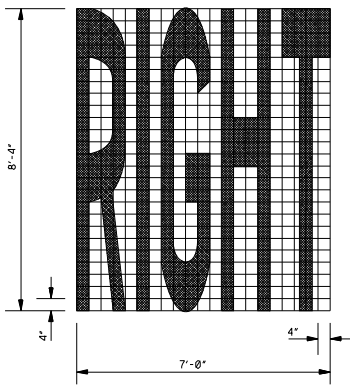
PAVEMENT MARKING DETAILS FOR 2–LANE AND 4–LANE DIVIDED ROADWAYS

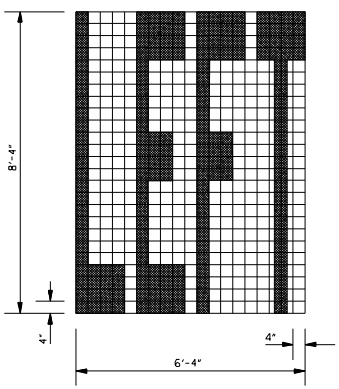
ISSUE DATE: AUGUST 01, 2017

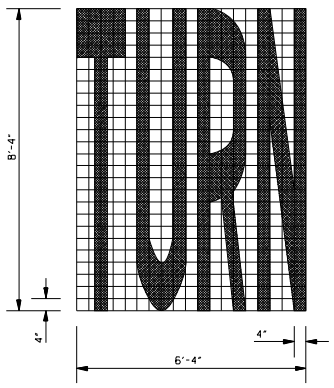
MDOT
WORKING NUMBER PM-1
SHEET NUMBER 6051

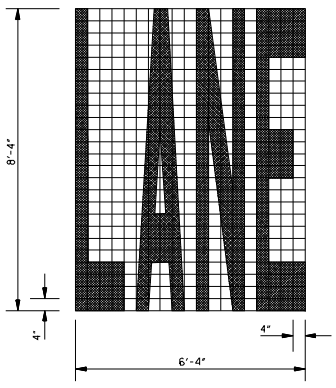
STATE	PROJECT NO.
MISS.	

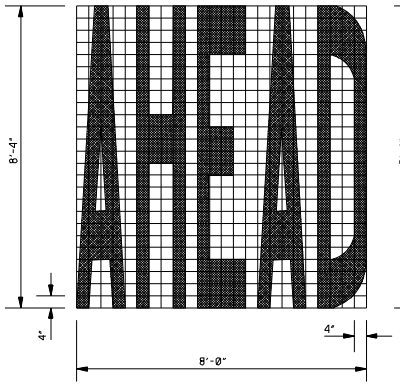


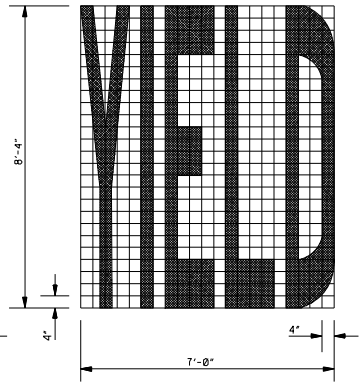


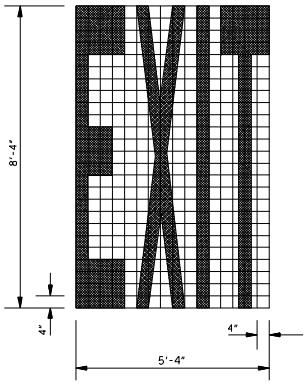


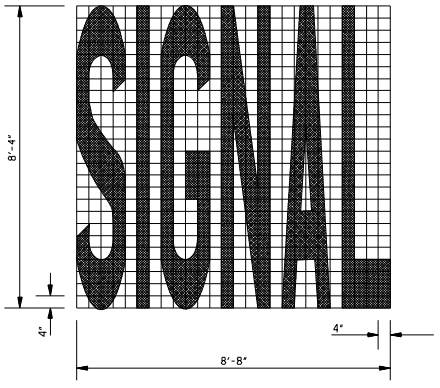


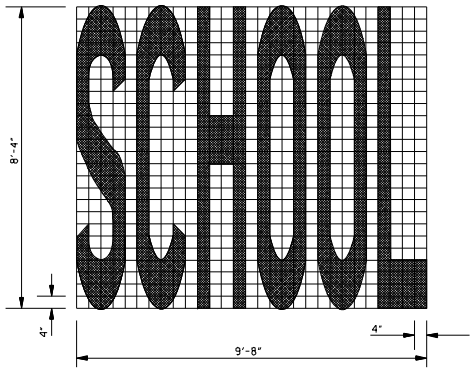












GENERAL NOTES:

1. TWO HORIZONTAL GAPS (CAUSED BY TEMPLATE CONNECTORS) OF 1½" OR LESS AND EXTENDING THE FULL WIDTH ARE PERMITTED IN EACH LETTER.
2. FOR OTHER DETAILS, SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. PAY QUANTITIES FOR PAVEMENT MARKING LEGENDS ARE AS FOLLOWS:

PAY QUANTITIES	
LEGEND	AREA (ft^2)
STOP	24.6
RIGHT	28.6
LEFT	19.5
TURN	27.3
LANE	22.7
AHEAD	32.3
YIELD	26.8
EXIT	18.5
SIGNAL	32.5
SCHOOL	35.5

DATE	REVISION	BY

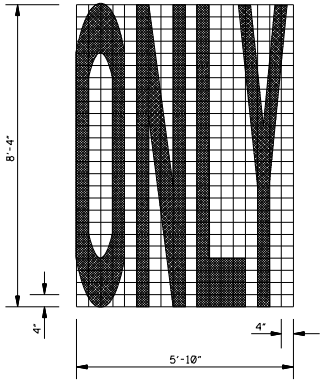
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

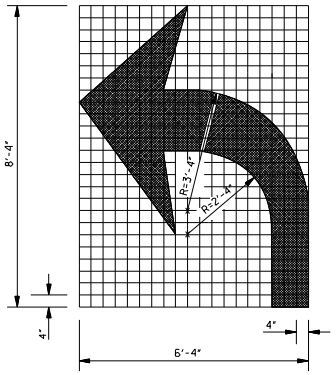
PAVEMENT MARKING LEGEND DETAILS

ISSUE DATE: AUGUST 01, 2017

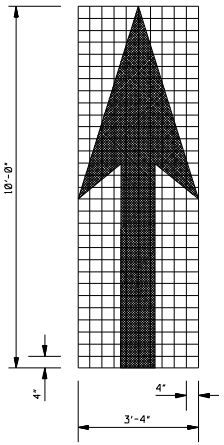
MDOT
WORKING NUMBER: PM-5
SHEET NUMBER: 6055

STATE	PROJECT NO.
MISS.	

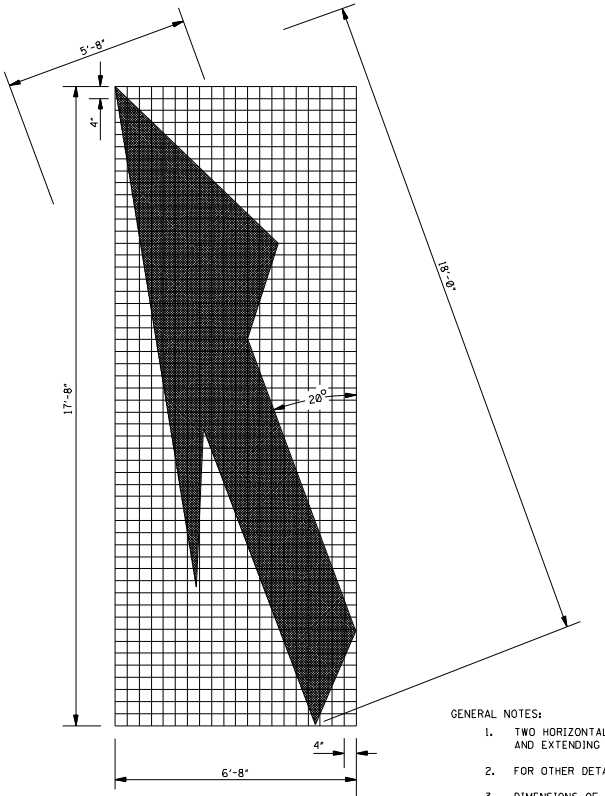




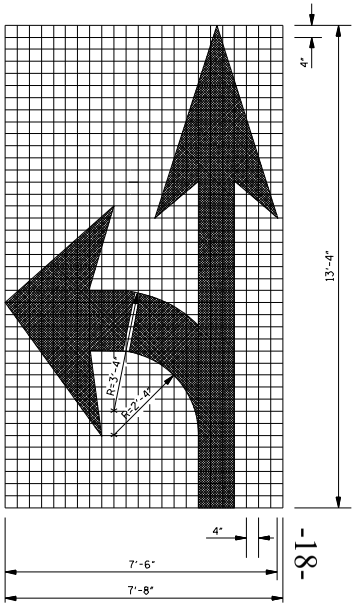
TURN ARROW



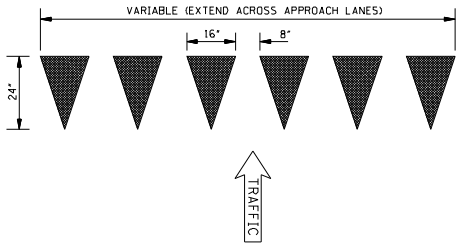
THRU ARROW



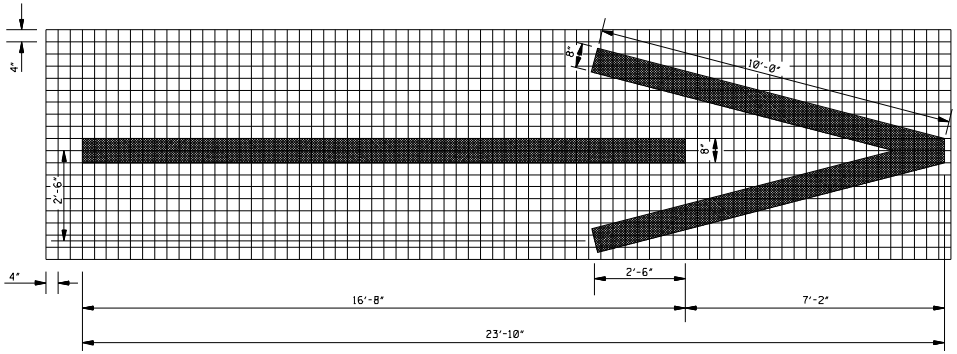
LANE-REDUCTION ARROW



COMBINATION ARROW



YIELD LINE



1-WAY ARROW

GENERAL NOTES:

1. TWO HORIZONTAL GAPS (CAUSED BY TEMPLATE CONNECTORS) OF 1½" OR LESS AND EXTENDING THE FULL WIDTH ARE PERMITTED IN EACH LETTER.
2. FOR OTHER DETAILS, SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. DIMENSIONS OF THE YIELD LINE MAY VARY WITH APPROVAL OF THE ENGINEER. SEE MUTCD, LATEST EDITION, FOR ALLOWABLE DIMENSIONS.
4. PAY QUANTITIES FOR PAVEMENT MARKING LEGENDS ARE AS FOLLOWS:

PAY QUANTITIES	
LEGEND/SYMBOL	AREA (ft^2)
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

BY	REVISION	DATE

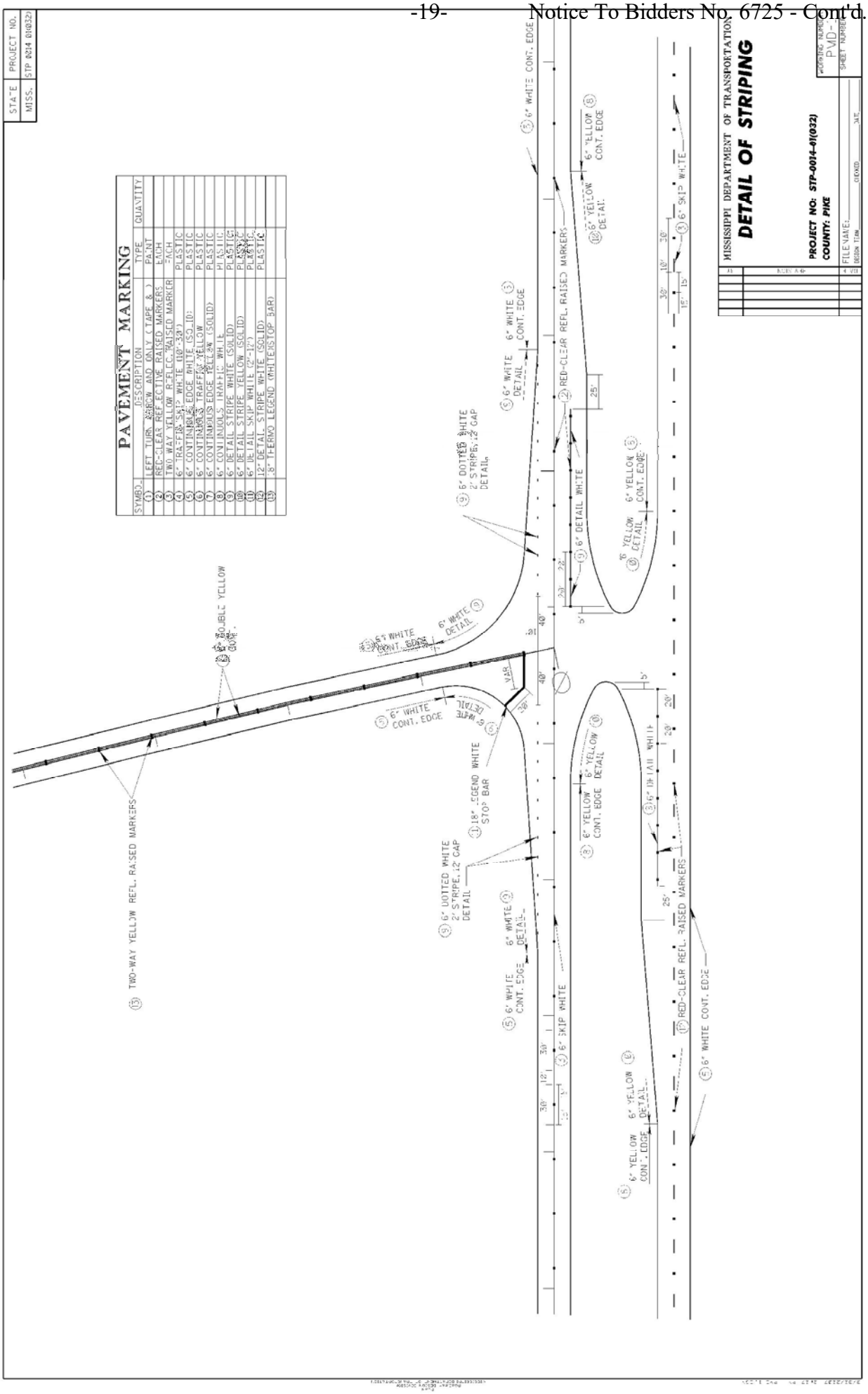
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

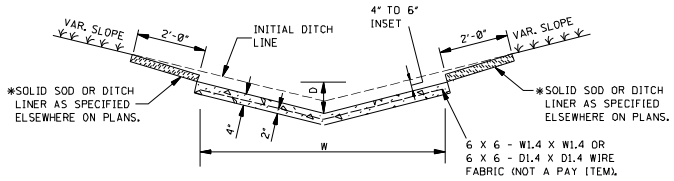
PAVEMENT MARKING LEGEND DETAILS

ISSUE DATE: AUGUST 01, 2017

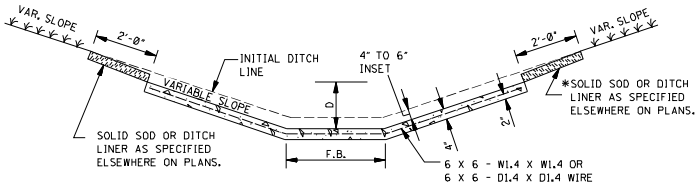
MDOT
WORKING NUMBER PM-6
SHEET NUMBER 6056

Notice To Bidders No. 6725 - Att.

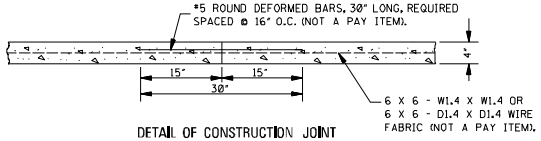

STATE
MISS.
PROJECT NO.
STP 0034 01(032)
PAVEMENT MARKING
SYMBOL
DESCRIPTION
TYPE
QUANTITY
(1) LEFT TURN ARROW AND ONLY (TAPE &)
PAINT
EACH
(2) RED-CLEAR REFLECTIVE RAISED MARKERS
EACH
(3) TWO WAY YELLOW REFLEC. RAISED MARKER
EACH
(4) 6" TRAFFIC "SKIP WHITE (10'-30')
PLASTIC
(5) 6" CONTINUOUS EDGE WHITE (SOLID)
PLASTIC
(6) 6" CONTINUOUS TRAFFIC YELLOW
PLASTIC
(7) 6" CONTINUOUS EDGE YELLOW (SOLID)
PLASTIC
(8) 6" CONTINUOUS WHITE
PLASTIC
(9) 6" DETAIL STRIPE WHITE (SOLID)
PLASTIC
(10) 6" DETAIL STRIPE YELLOW (SOLID)
PLASTIC
(11) 6" DETAIL SKIP WHITE (2'-12')
PLASTIC
(12) 12" DETAIL STRIPE WHITE (SOLID)
PLASTIC
(13) 8" TERMO LEGEND (WHITE/STOP BAR)
(13) TWO-WAY YELLOW REFL. RAISED MARKERS
(9) 6" DOTTED WHITE 2' STRIPE, 2' GAP DETAIL
(1) 18" LEGEND WHITE STOP BAR
(5) 6" WHITE CONT. EDGE
(5) 6" WHITE DETAIL
(2) RED-CLEAR REFL. RAISED MARKERS
(8) 6" YELLOW CONT. EDGE
(18) 6" YELLOW DETAIL
(3) 6" SKIP WHITE
(4) 6" SKIP WHITE
(6) 6" YELLOW DETAIL
(16) RED-CLEAR REFL. RAISED MARKERS
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DETAIL OF STRIPING
PROJECT NO: STP-0034-01(032)
COUNTY: PIKE
PVD-1
FILENAME:
DESIGN TEAM
CHKD
DATE
SHEET NUMBER



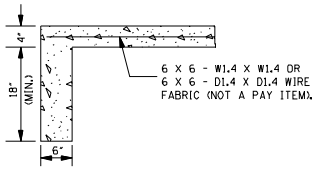
"V" TYPE SECTION



FLAT BOTTOM SECTION



DETAIL OF CONSTRUCTION JOINT



DETAIL OF TOE WALL

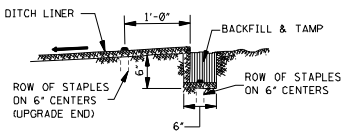
NOTE: TOE WALL REQUIRED UPSTREAM AND DOWNSTREAM.

CONCRETE PAVED DITCH

NOTES:

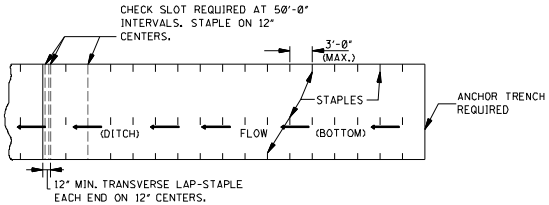
1. CONCRETE PAVED DITCHES SHALL BE GROOVED AT 20'-0" INTERVALS. THE GROOVES SHALL BE CUT TO A DEPTH OF NOT LESS THAN 1".
2. DIMENSIONS D & W ARE AS FOLLOWS:
   D(MINIMUM) = 6"
   D(NOMINAL) = 9"
   W(MINIMUM) = 24"
3. CHAIR SUPPORTS FOR THE WIRE MESH WILL NOT BE REQUIRED. HOWEVER, THE CONTRACTOR SHALL PLACE THE WIRE MESH IN A SATISFACTORY AND WORKMANLIKE MANNER TO ENSURE THAT THE FINAL POSITION IS REASONABLY NEAR THE POSITION INDICATED.

*4. CENTER ROW OF STAPLES MAY BE OMITTED ON DITCH LINER.

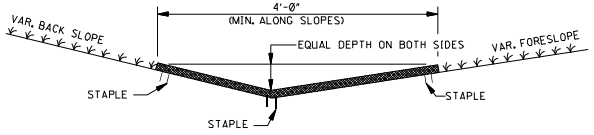


ANCHOR TRENCH DETAIL

NOTE: ANCHOR TRENCH REQUIRED AT THE BEGINNING AND ENDING OF EACH AREA TO BE COVERED, EXCEPT DOWNSTREAM END ADJOINING A STRUCTURE.



PLAN



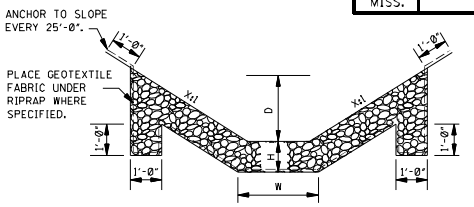
SECTION

DITCH LINER TREATMENT

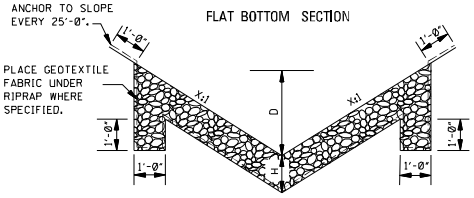
(EXCELSIOR BLANKET, JUTE MESH OR EROSION CONTROL FABRIC)

NOTE: DITCHES TREATED WITH DITCH LINER WILL BE VEGETATED PRIOR TO TREATMENT, UNLESS OTHERWISE INDICATED.

STATE	PROJECT NO.
MISS.	



FLAT BOTTOM SECTION



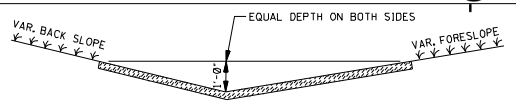
"V" TYPE SECTION

RIPRAP TREATMENT

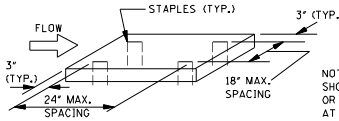
NOTES:

1. DIMENSIONS D, W AND X ARE VARIABLE AND ARE SHOWN ELSEWHERE ON THE PLANS.
2. THE RIPRAP SIZE AND MINIMUM DEPTH "H" FOR RIPRAP TREATMENT ARE AS FOLLOWS.

RIPRAP SIZE & MINIMUM DEPTH "H"	
H (in)	RIPRAP SIZE (lbs)
12"	100
18"	300



SOLID SOD TREATMENT



NOTE: SOLID SOD (STRIPS OR BLOCKS) SHOULD BE STAPLED, PINNED, PEGGED OR STAKED AT THE FOUR CORNERS OR AT THE MAXIMUM SPECIFIED SPACING.

GENERAL NOTE:

1. FOR LOCATION OF APPROPRIATE DITCH TREATMENTS, SEE PLAN SHEETS DENOTED BY THE FOLLOWING LEGEND OR AS DIRECTED BY THE ENGINEER.

DITCH LINER
SOLID SOD
CONCRETE PAVED DITCH
RIPRAP

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DETAILS OF TYPICAL DITCH TREATMENTS

BY	REVISION	DATE

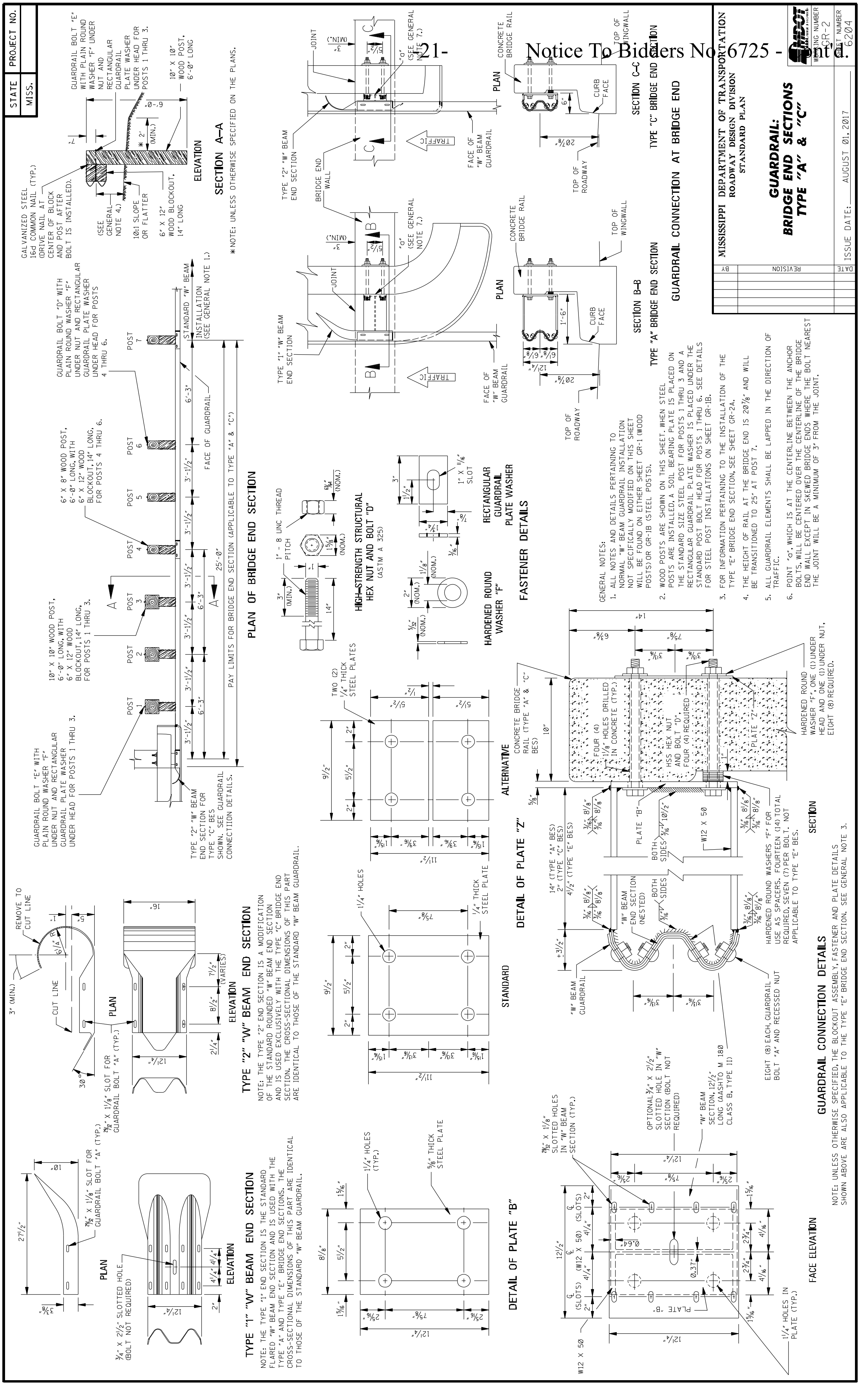
ISSUE DATE: AUGUST 01, 2017

MDOT

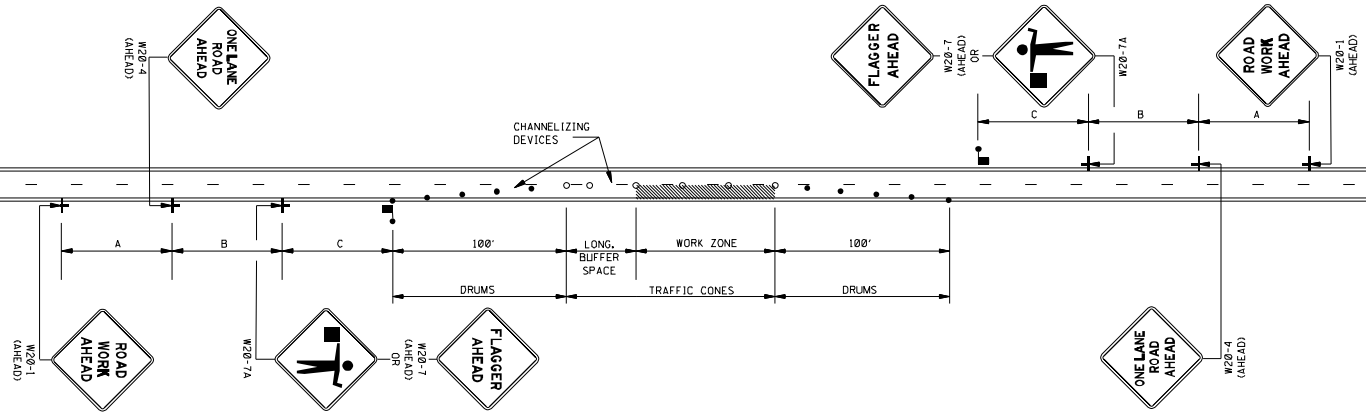
WORKING NUMBER DT-1

SHEET NUMBER 6123

Notice to Bidders No. 6725 - Qty.


MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
GUARDRAIL:
BRIDGE END SECTIONS
TYPE "A" & "C"
ISSUE DATE: AUGUST 01, 2017
GR-2
PLAN OF BRIDGE END SECTION
SECTION A-A
GUARDRAIL CONNECTION AT BRIDGE END
TYPE "A" BRIDGE END SECTION
TYPE "C" BRIDGE END SECTION
FASTENER DETAILS
TYPE "1" "W" BEAM END SECTION
TYPE "2" "W" BEAM END SECTION
DETAIL OF PLATE "B"
DETAIL OF PLATE "Z"
GUARDRAIL CONNECTION DETAILS
FACE ELEVATION

STATE	PROJECT NO.
MISS.	



LEGEND

- FLAGGER
- RETROREFLECTIVE FREE-STANDING PLASTIC DRUMS
- TRAFFIC CONES (28" HEIGHT MINIMUM)

GENERAL NOTES:

1. THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE. FLAGGER STATIONS SHALL BE LOCATED SUCH THAT APPROACHING VEHICLES WILL HAVE SUFFICIENT DISTANCE TO STOP. VALUES IN STOPPING SIGHT DISTANCE COLUMN MAY BE USED AS A MINIMUM FOR THIS DISTANCE.

POSTED SPEED AND/OR DESIGN SPEED	MAXIMUM CHANNELIZING DEVICE SPACING (ft)		† LONGITUDINAL BUFFER SPACE (ft)	STOPPING SIGHT DISTANCE
	TAPER	ALONG LANE LINE & WORK ZONE		
mph				
25	20	50	55	155
30	20	60	85	200
35	20	70	120	250
40	20	80	170	305
45	20	90	220	360
50	20	100	280	425
55	20	110	335	495
60	20	120	415	570
65	20	130	485	645

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

2. ALL CHANNELIZING DEVICES SHALL BE A MINIMUM OF 28" IN HEIGHT.
3. DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHALL BE A MINIMUM OF 36" x 36" AND BLACK COPY ON FLUORESCENT ORANGE SHEETING.
4. WHEN WORK ZONE IS NO LONGER NEEDED, ALL SIGNS SHALL BE COVERED OR REMOVED AND ALL CHANNELIZING DEVICES SHALL BE MOVED TO THE SHOULDER EDGE.
5. ADDITIONAL FLAGGERS MAY BE NEEDED AS DIRECTED BY THE ENGINEER.
6. WHEN WORK IS REQUIRED AT NIGHT, FLAGGER STATIONS SHALL BE ILLUMINATED.
7. CHANNELIZING DEVICE TYPES FOR:
   A. APPROACH AND EXIT TAPERS- RETROREFLECTIVE PLASTIC DRUMS
   B. ALONG LANE LINE AND WORK ZONE- TRAFFIC CONES (28" HEIGHT)
8. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

DISTANCE BETWEEN SIGNS			
ROAD TYPE	A	B	C
URBAN (35 MPH OR LESS)	100 FT.	100 FT.	100 FT.
URBAN (40 - 70 MPH)	350 FT.	350 FT.	350 FT.
RURAL	500 FT.	500 FT.	500 FT.
EXPRESSWAY / FREEWAY	1000 FT.	1500 FT.	2640 FT.

Notice To Bidders No. 6725 - Att.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

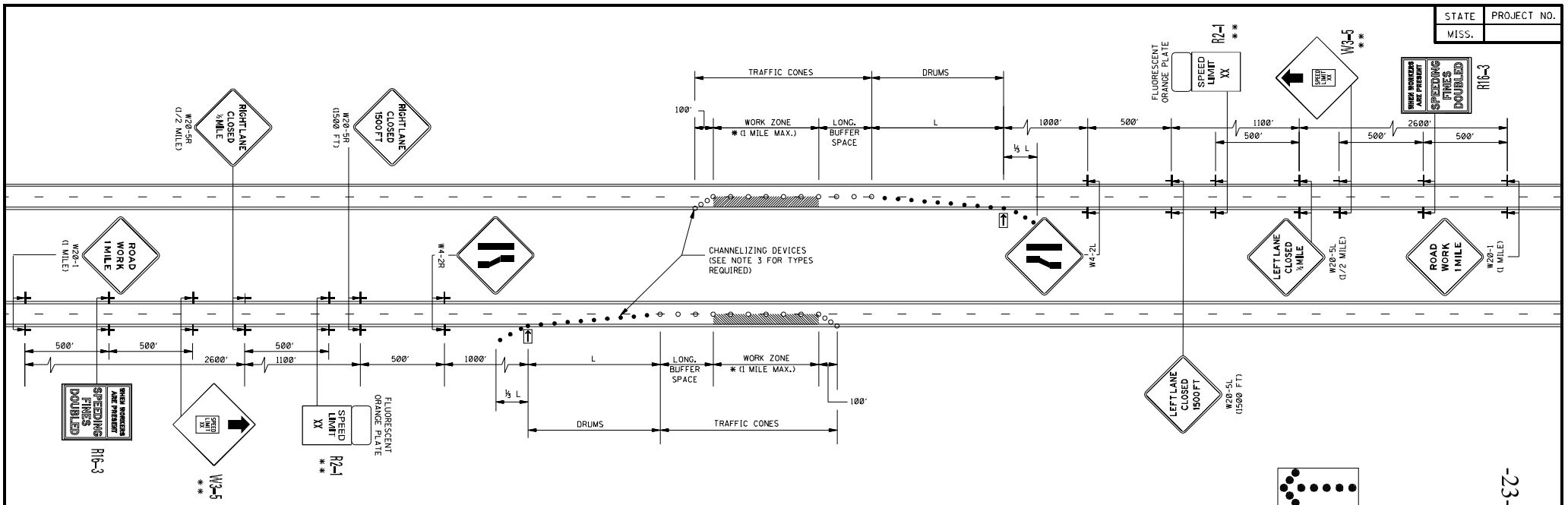
TRAFFIC CONTROL PLAN WITH FLAGGER
(ONE-LANE CLOSURE OF TWO-WAY TRAFFIC)

REVISION	BY	DATE

ISSUE DATE: AUGUST 01, 2017

MDOT
WORKING NUMBER TCP-1
SHEET NUMBER 6351

STATE	PROJECT NO.
MISS.	



GENERAL NOTES:

1. THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE:

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

† NOTE: TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:
L = WS FOR SPEEDS OF 45 mph OR GREATER
L = WS²/60 FOR SPEEDS OF 40 mph OR LESS
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.

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

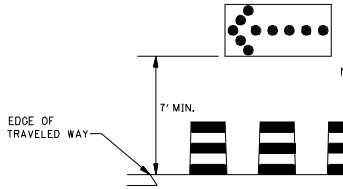
3. CHANNELIZING DEVICE TYPES FOR:
A. APPROACH TAPER- RETROREFLECTIVE PLASTIC DRUMS
B. ALONG LANE LINE AND WORK ZONE- TRAFFIC CONES (28" HEIGHT MINIMUM)
C. EXIT TAPER- TRAFFIC CONES (28" HEIGHT MINIMUM)

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 SEPARATE PAYMENT. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.



NOTE: IF VEHICLE MOUNTED ARROW BOARDS USED, SHOULD BE AS HIGH AS PRACTICAL.

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)

DATE	REVISION	BY

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) (WORK DAY ONLY)

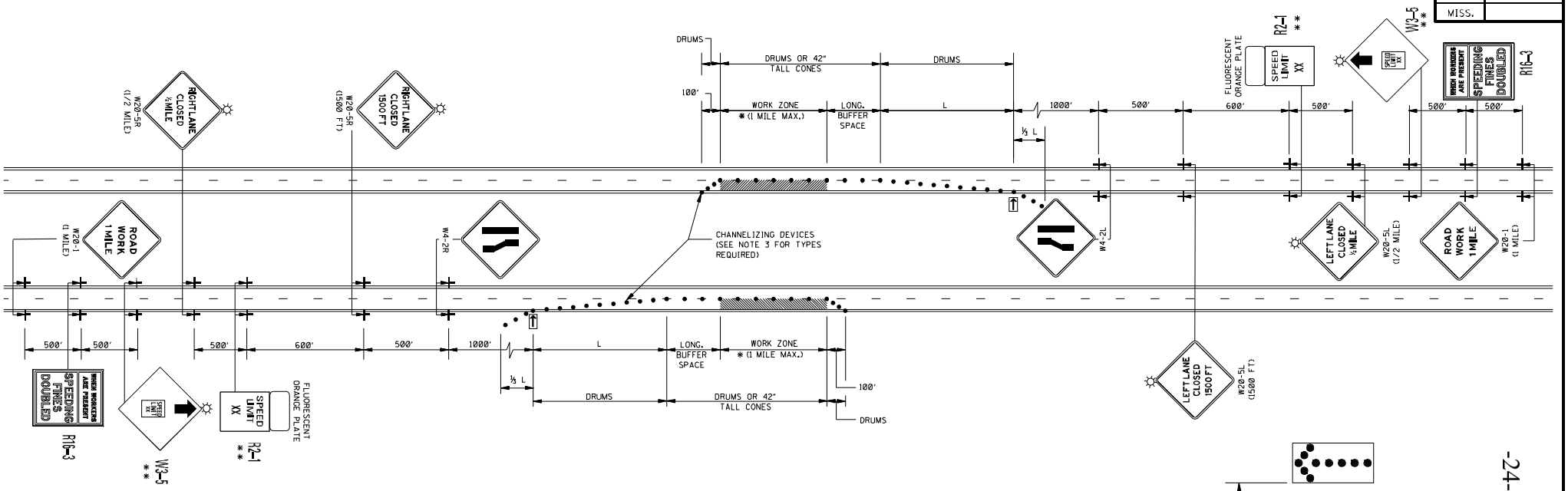
ISSUE DATE: AUGUST 01, 2017

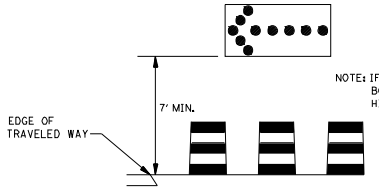
MDOT

WORKING NUMBER TCP-2

SHEET NUMBER 6352

STATE	PROJECT NO.
MISS.	





NOTE: IF VEHICLE MOUNTED ARROW BOARDS USED, SHOULD BE AS HIGH AS PRACTICAL.

GENERAL NOTES:

1. THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE:

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

† NOTE: TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:
L = WS FOR SPEEDS OF 45 mph OR GREATER
L = WS²/60 FOR SPEEDS OF 40 mph OR LESS
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.

2. FLASHING ARROW PANEL SHOULD BE AS LEVEL AS POSSIBLE AS APPROVED BY THE ENGINEER. FLASHING ARROW PANEL SHOULD BE LOCATED AT THE BEGINNING OF THE TAPER OR, IF THE SHOULDER IS TOO NARROW, BEHIND THE CHANNELIZING DEVICES IN THE CLOSED LANE.
3. CHANNELIZING DEVICES:
   A. ALL CHANNELIZING DEVICES IN TAPERS SHALL BE RETROREFLECTIVE FREE STANDING PLASTIC DRUMS.
   B. CHANNELIZING DEVICES IN TANGENTS MAY BE EITHER RETROREFLECTIVE FREE STANDING PLASTIC DRUMS OR 42" TALL CONES.
   C. ALL CHANNELIZING DEVICES SHALL BE RETROREFLECTIVE.
   D. RETROREFLECTORIZATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE M.U.T.C.D.
4. 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.
5. DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHOULD BE A MINIMUM OF 48" X 48", AND SHALL BE BLACK COPY ON FLUORESCENT ORANGE SHEETING.
6. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

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

TYPE "B" WARNING LIGHTS

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TRAFFIC CONTROL PLAN FOR POSTED SPEED LIMIT LESS THAN 65 MPH

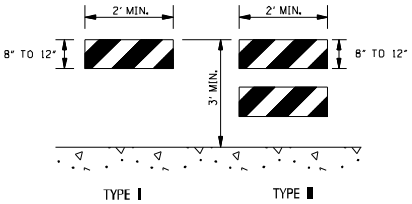
(4-LANE: MEDIAN LANE OR OUTSIDE LANE CLOSURE) (EXTENDED PERIOD)

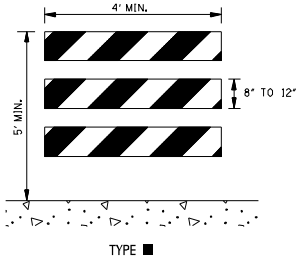
ISSUE DATE: AUGUST 01, 2017

MDOT
WORKING NUMBER TCP-3
SHEET NUMBER 6353

Notice To Bidders No. 6725 - Att.

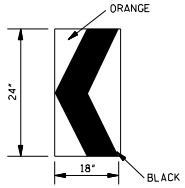
STATE	PROJECT NO.
MISS.	





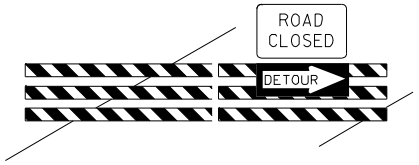
STANDARD BARRICADES

1. THE MARKING FOR BARRICADE RAILS SHALL BE ORANGE AND WHITE (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).
2. RAIL STRIPE SHOULD BE 6 INCHES, EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.
3. DO NOT PLACE SANDBAGS OR OTHER DEVICES TO PROVIDE MASS ON THE BOTTOM RAIL THAT WILL BLOCK VIEW OR RAIL FACE.
4. FOR ADDITIONAL INFORMATION OR DETAILS, SEE MUTCD, LATEST EDITION.
5. BARRICADES ARE CLASSIFIED BY FHWA AS CATEGORY II WORK ZONE DEVICES WHICH REQUIRE CRASHWORTHINESS ACCEPTANCE LETTERS. TO DATE, 2-IN. THICK TIMBER RAILS HAVE NOT BEEN SUCCESSFULLY CRASH TESTED. A LIST OF CRASHWORTHY BARRICADES AND OTHER CATAGORY II DEVICES CAN BE FOUND ON FHWA'S WEBSITE: http://safety.fhwa.dot.gov/roadway_dept/policy.guide/road_hardware/cat2.cfm



CHEVRON SIGN DETAIL

1. A CHEVRON SIGN CONSISTS OF A BLACK CHEVRON TYPE MARKING ON AN ORANGE BACKGROUND AND SHALL POINT IN THE DIRECTION OF TRAFFIC FLOW.
2. THE CHEVRON SIGN SHALL BE MOUNTED ON CRASHWORTHY SUPPORT.
3. 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.



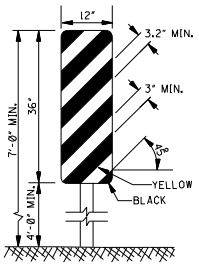
BARRICADE CLOSING A ROAD

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

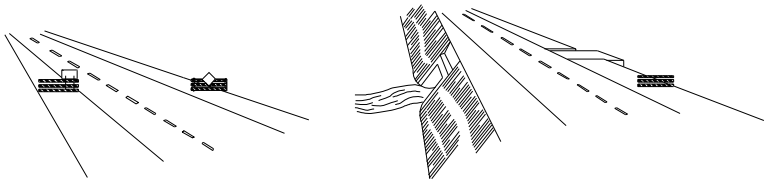
* 1. FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.

** 2. BARRICADES INTENDED FOR USE ON EXPRESSWAYS, FREEWAYS AND OTHER HIGH SPEED ROADWAYS, SHALL HAVE A MINIMUM OF 270 in^2 OF REFLECTIVE AREA FACING TRAFFIC.



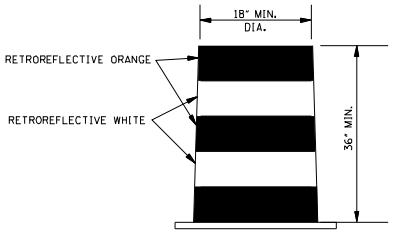
TYPE 3 OBJECT MARKER (OM-3R)

1. TYPE 3 OBJECT MARKERS SHALL BE USED AT ALL EXPOSED BRIDGE ABUTMENTS AND AT OTHER LOCATIONS AS DEEMED NECESSARY BY THE ENGINEER.
2. THE OM-3R IS SHOWN. THE OM-3L 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.
3. THE INSIDE EDGE OF THE MARKER SHALL BE IN LINE WITH THE INNER EDGE OF THE OBSTRUCTION.



WING BARRICADES

1. WING BARRICADES ARE TYPE III BARRICADES ERECTED ON THE SHOULDER ON ONE OR BOTH SIDES OF THE PAVEMENT TO GIVE THE SENSATION OF A NARROWING OR RESTRICTED ROADWAY. WING BARRICADES MAY BE USED AS A MOUNTING FOR THE ADVANCE WARNING SIGNS OR FLASHERS.
2. WING BARRICADES SHOULD BE USED:
   A. IN ADVANCE OF A CONSTRUCTION PROJECT EVEN WHEN NO PART OF THE ROADWAY IS ACTUALLY CLOSED.
   B. IN ADVANCE OF ALL BRIDGE OR CULVERT WIDENING OPERATIONS.



PLASTIC DRUM STRIPING DETAIL

1. 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 MARKING STANDARDS FOR BARRICADE. THE PREDOMINANT COLOR ON DRUMS SHALL BE ORANGE WITH FOUR (4) RETROREFLECTIVE, HORIZONTAL, CIRCUMFERENTIAL STRIPES (2 ORANGE & 2 WHITE) 6" WIDE.
2. DRUMS SHOULD NEVER BE PLACED IN THE ROADWAY WITHOUT WARNING SIGNS.
3. WHERE PRACTICAL PLASTIC DRUMS SHOULD BE PLACED NO CLOSER THAN 2'-0" FROM THE EDGE OF TRAVELED LANE.

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

HIGHWAY SIGN AND BARRICADE DETAILS FOR CONSTRUCTION PROJECTS

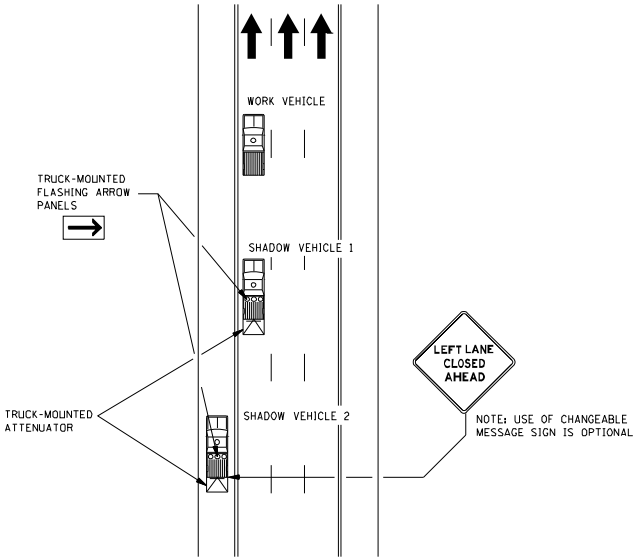
ISSUE DATE: AUGUST 01, 2017

MDOT
WORKING NUMBER: HCP-8
SHEET NUMBER: 6358

Notice to Bidders No. 6725 - Att.

STATE	PROJECT NO.
MISS.	

MOBILE OPERATIONS ON MULTILANE ROAD

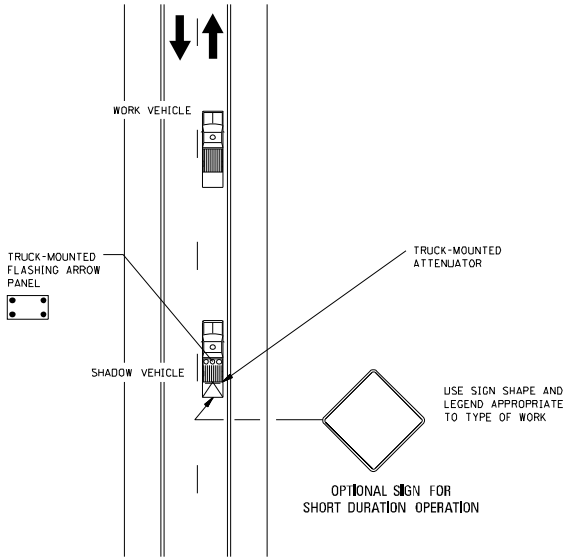


MOBILE OPERATIONS ON MULTILANE ROAD

NOTES FOR MULTILANE LANE OPERATION:

1. VEHICLES USED FOR THESE OPERATIONS SHOULD BE MADE HIGHLY VISIBLE WITH APPROPRIATE EQUIPMENT, SUCH AS FLASHING LIGHTS, ROTATING BEACONS, FLAGS, SIGNS, OR ARROW PANELS.
2. SHADOW VEHICLE 2 SHOULD BE EQUIPPED WITH AN ARROW PANEL AND TRUCK MOUNTED ATTENUATOR (TMA). AN APPROPRIATE LANE CLOSURE SIGN SHOULD BE PLACED ON SHADOW VEHICLE 2 SO AS NOT TO OBSCURE THE ARROW PANEL.
3. SHADOW VEHICLE 1 SHOULD BE EQUIPPED WITH AN ARROW PANEL AND TRUCK-MOUNTED ATTENUATOR (TMA).
4. 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.
5. WHEN ADEQUATE SHOULDER WIDTH IS NOT AVAILABLE, SHADOW VEHICLE 2 SHOULD BE ELIMINATED.
6. ON HIGH-SPEED ROADWAYS, A THIRD SHADOW VEHICLE SHOULD BE USED (i.e., VEHICLE 3 ON THE SHOULDER (IF PRACTICAL), VEHICLE 2 IN THE CLOSED LANE, AND VEHICLE 1 IN THE CLOSED LANE).
7. ARROW PANELS SHALL BE AS A MINIMUM TYPE B, 60" X 30" IN ACCORDANCE WITH THE CRITERIA PRESENTED IN THE MUTCD.
8. WORK SHOULD NORMALLY BE DONE DURING OFF-PEAK HOURS.
9. 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.
10. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

MOBILE OPERATIONS ON TWO–LANE ROAD



MOBILE OPERATIONS ON TWO–LANE ROAD

NOTES FOR TWO-LANE OPERATION:

1. 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.
2. 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 STOPPING SIGHT DISTANCE EXISTS TO THE REAR, THE SHADOW VEHICLE 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.
3. 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.
4. A TRUCK-MOUNTED ATTENUATOR (TMA) SHOULD BE USED ON THE SHADOW VEHICLE AND MAY BE USED ON THE WORK VEHICLE.
5. THE WORK VEHICLE SHALL BE EQUIPPED WITH BEACONS, AND THE SHADOW VEHICLES SHALL BE EQUIPPED WITH TWO HIGH-INTENSITY FLASHING 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.
6. 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.
7. ARROW BOARD TO BE USED IN CAUTION MODE.
8. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TRAFFIC CONTROL PLAN MOBILE OPERATIONS MULTILANE ROADS AND TWO–LANE ROADS

ISSUE DATE: AUGUST 01, 2017

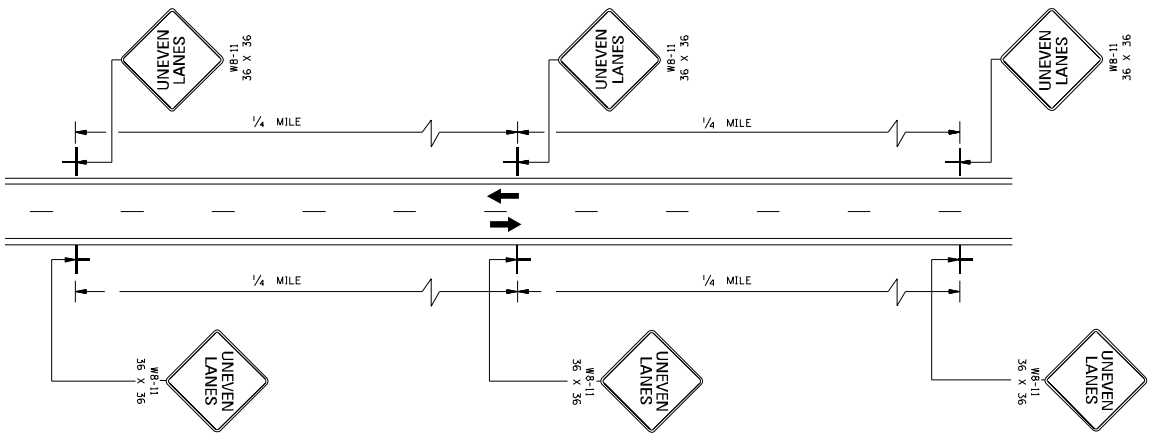
MDOT

WORKING NUMBER TCP-9

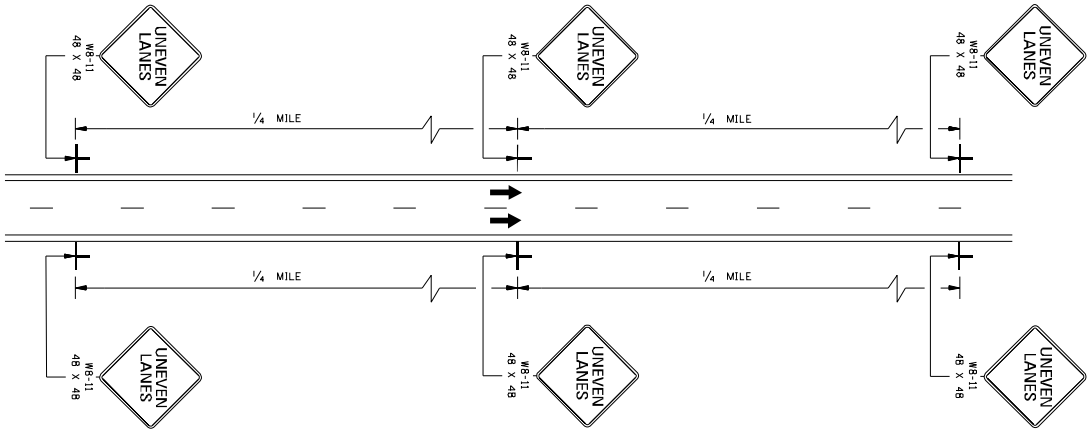
SHEET NUMBER 6359

Notice To Bidders No. 6725 - Att.

STATE	PROJECT NO.
MISS.	



TWO–WAY TRAFFIC



ONE–WAY TRAFFIC

GENERAL NOTES:

1. UNEVEN LANE LINE:
   A. IF LESS THAN OR EQUAL TO 1½", NO SIGNS REQUIRED.
   B. IF GREATER THAN 1½" AND LESS THAN OR EQUAL TO 2¼", PLACE SIGNS AS SHOWN ON THIS SHEET.
   C. IF GREATER THAN 2¼", TRAFFIC SHOULD NOT BE ALLOWED TO CROSS UNEVEN LANE LINE.
2. THE W8-11 SIGNS SHOULD BE SPACED AT ¼-MILE INTERVALS THROUGHOUT UNEVEN LANE LINE LIMITS.
3. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER MAINTENANCE OF TRAFFIC.

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TRAFFIC CONTROL PLANS UNEVEN PAVEMENT DETAILS

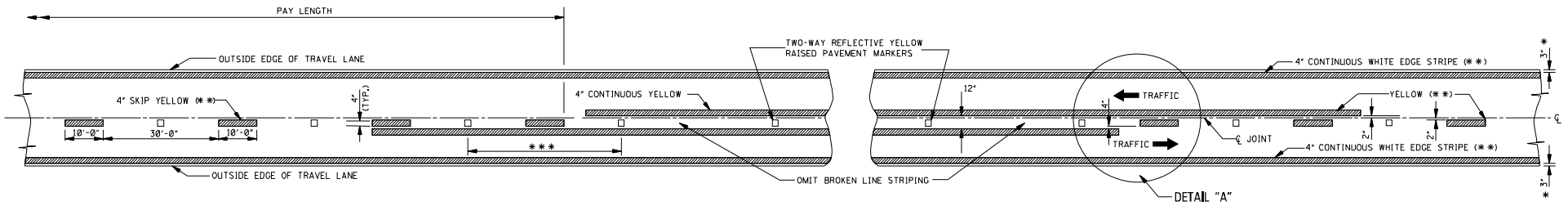
ISSUE DATE: AUGUST 01, 2017

MDOT

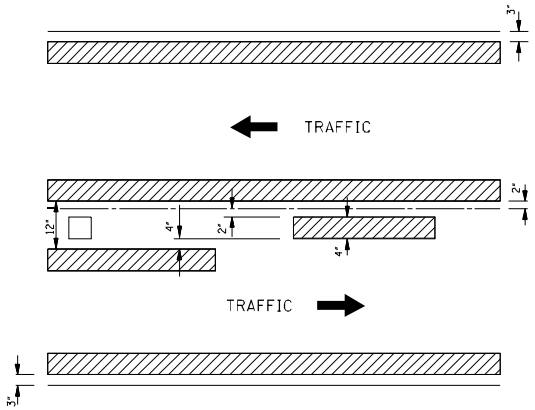
WORKING NUMBER TCP-12

SHEET NUMBER 6362

STATE	PROJECT NO.
MISS.	



TWO–WAY TRAFFIC
(ASPHALT OR CONCRETE PAVEMENT)



DETAIL "A"

GENERAL NOTES:

* 1. 3" UNLESS SHOWN ELSEWHERE ON THE PLANS.

** 2. EDGE STRIPE SHALL BE SAME MATERIAL AS LANE-LINE STRIPE (PAINT OR TAPE AS INDICATED IN PAY ITEMS).

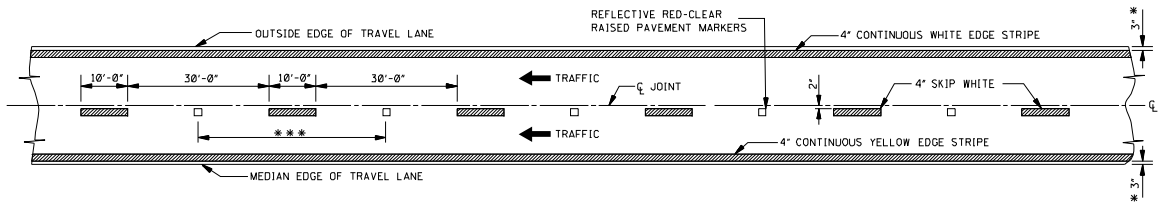
3. REFLECTIVE RAISED PAVEMENT MARKERS TO BE USED IF TEMPORARY MARKINGS ARE TO REMAIN IN PLACE OVER 3 MONTHS

*** 4. SPACING OF REFLECTIVE RAISED PAVEMENT MARKERS IS AS FOLLOWS:

	URBAN AREA (ft-in)	RURAL AREA (ft-in)
TANGENT SECTIONS	40'-0"	40'-0"
HORIZONTAL CURVES	40'-0"	40'-0"
INTERCHANGE LIMITS	40'-0"	† 40'-0"

† NOTE: ON THE MAIN FACILITY, REFLECTIVE RED-CLEAR RAISED PAVEMENT MARKERS ON A 40'-0" SPACING WILL BE REQUIRED ON LANE-LINE(S) 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.

5. PAVEMENT MARKERS SHALL BE HIGH PERFORMANCE REFLECTIVE RAISED PAVEMENT MARKERS AS LISTED IN THE MDOT "APPROVED SOURCES OF MATERIALS."



4–LANE WITH ONE–WAY TRAFFIC

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TEMPORARY STRIPING FOR TRAFFIC CONTROL 2–LANE AND 4–LANE DIVIDED HIGHWAYS

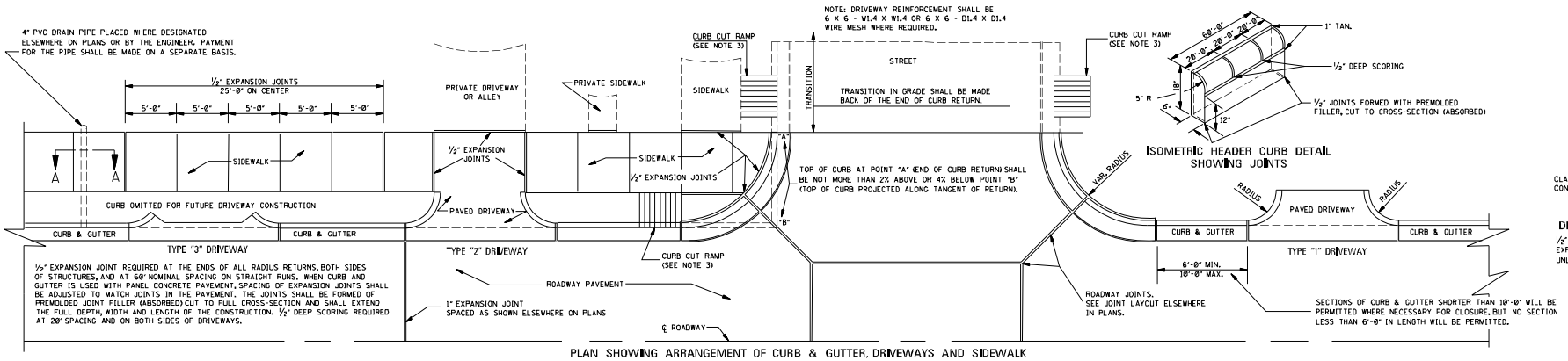
DATE	REVISION	BY

ISSUE DATE: AUGUST 01, 2017

MDOT
WORKING NUMBER TCP-13
SHEET NUMBER 6363

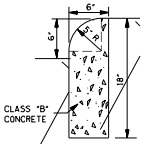
Notice To Bidders No. 6725 - Att.

STATE	PROJECT NO.
MISS.	



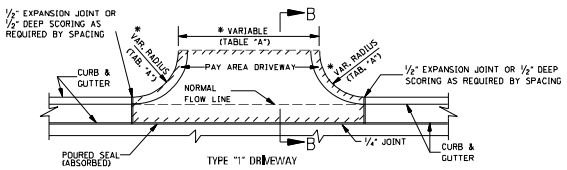
PLAN SHOWING ARRANGEMENT OF CURB & GUTTER, DRIVEWAYS AND SIDEWALK

ISOMETRIC HEADER CURB DETAIL SHOWING JOINTS



DETAIL OF HEADER CURB

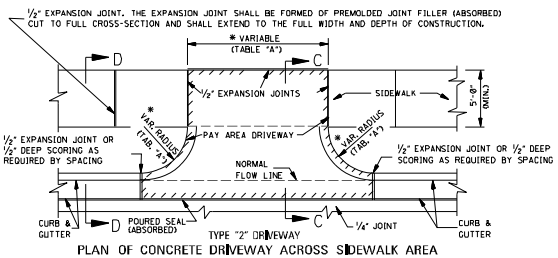
½" CONTRACTION JOINTS REQUIRED AT 20' O.C. EXPANSION JOINTS REQUIRED AT 60' O.C. UNLESS OTHERWISE DIRECTED BY ENGINEER.



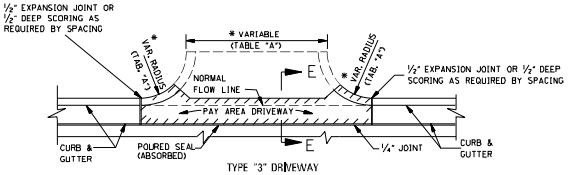
PLAN OF CONCRETE DRIVEWAY

11.058 yd² FOR DRIVEWAY 16'-0" IN WIDTH. 0.574 yd² FOR EACH ADDED OR SUBTRACTED FOOT OF WIDTH.
NOTE: THIS DRIVEWAY AREA EXAMPLE IS COMPUTED ON THE BASIS OF 3'-0" RADIUS. PAYMENT FOR CURB RADIUS SHALL BE INCLUDED IN COMPENSATION FOR DRIVEWAY.

* TABLE "A"		
DRIVEWAY TYPE	DRIVEWAY WIDTH	CURB RETURN RADIUS
RESIDENTIAL	16'	5' - 10'
COMMERCIAL / INDUSTRIAL	30' - 50'	10' - 30'

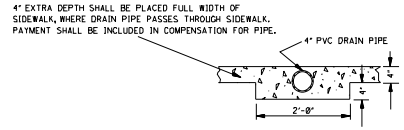


PLAN OF CONCRETE DRIVEWAY ACROSS SIDEWALK AREA

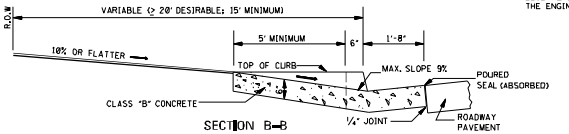


PLAN–CURB OMITTED FOR FUTURE DRIVEWAY CONSTRUCTION

NOTE: THIS TYPE CONSTRUCTION SHALL BE USED WHERE DESIGNATED ELSEWHERE ON PLANS OR BY THE ENGINEER.



SECTION A–A



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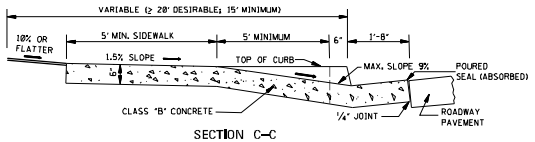

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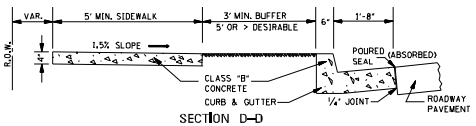
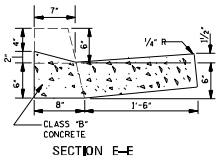
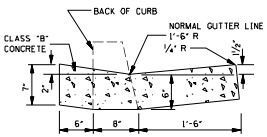


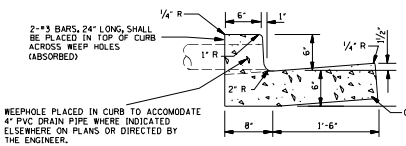
SECTION D–D



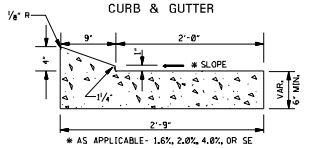
SECTION E–E



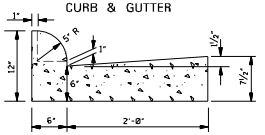
DETAIL OF VALLEY GUTTER



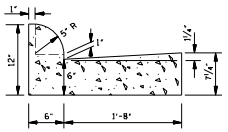
TYPE "1"
DETAIL OF COMBINATION CURB & GUTTER



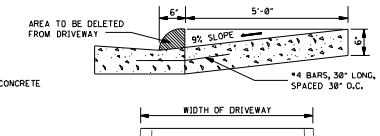
TYPE "2"
DETAIL OF COMBINATION CURB & GUTTER

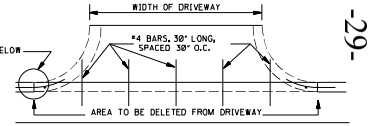


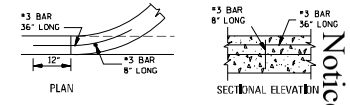
TYPE "3A"
DETAIL OF COMBINATION CURB & GUTTER



TYPE "3B"
DETAIL OF COMBINATION CURB & GUTTER







PERMISSIBLE DRIVEWAY CONSTRUCTION METHOD FOR SLIP–FORM PLACEMENT OF CURB & GUTTER

GENERAL NOTES:

1. TRAVERSE CONTRACTION JOINTS ARE REQUIRED AT 20' ON CENTER FOR ALL CONCRETE DRIVEWAYS THAT EXTEND PAST THE END OF THE CURB RETURN. A ½" WIDE EXPANSION JOINT IS REQUIRED AT THE END OF THE CURB RETURN AND AT 60' ON CENTER THROUGHOUT THE LENGTH OF THE DRIVEWAY. A LONGITUDINAL CONTRACTION JOINT IS REQUIRED FOR ALL DRIVEWAYS EXCEEDING 20' IN WIDTH.
2. SEE WK. NOS. CR-1, CR-2, CR-3 & CR-4 FOR DETAILS OF CURB-CUT RAMPS.
3. MAXIMUM 2% CROSS-SLOPE ON SIDEWALKS.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DRIVEWAYS, CURB & GUTTER, & SIDEWALK

DATE	REVISION	BY

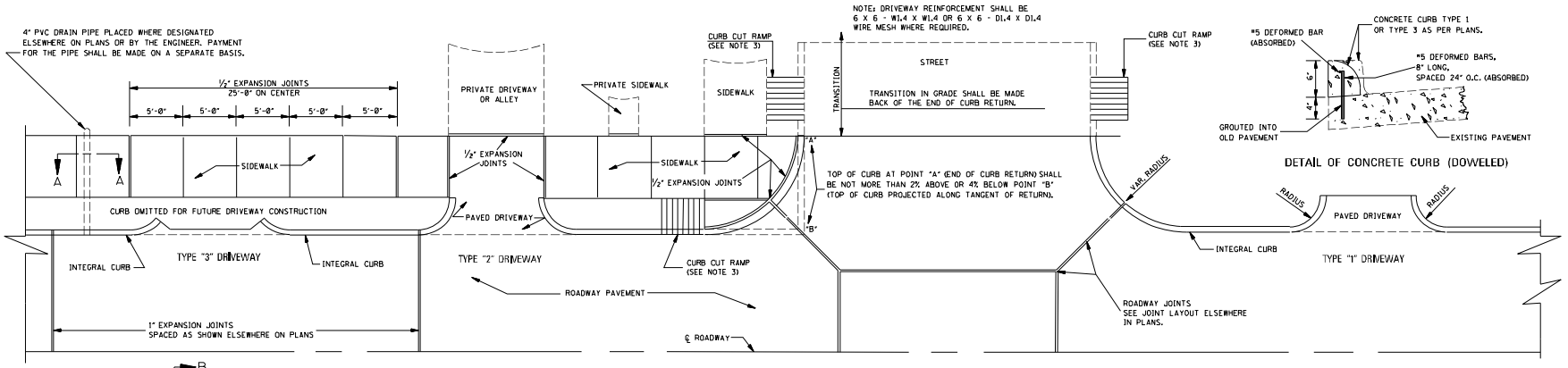
ISSUE DATE: AUGUST 01, 2017

MDOT
WORKING NUMBER: SD-1
SHEET NUMBER: 6419

-29-

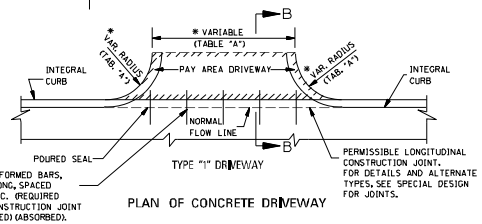
Notice To Bidders No. 6725 - Att. 2

STATE	PROJECT NO.
MISS.	



PLAN SHOWING ARRANGEMENT OF INTEGRAL CURB, DRIVEWAYS AND SIDEWALK

DETAIL OF CONCRETE CURB (DOWELED)

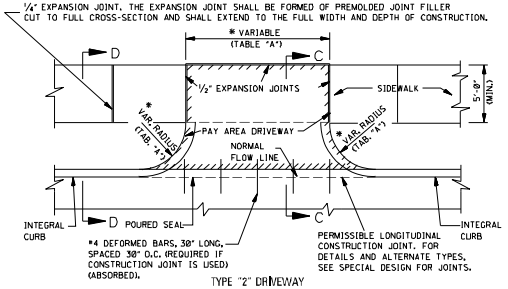


TYPE "1" DRIVEWAY

PLAN OF CONCRETE DRIVEWAY

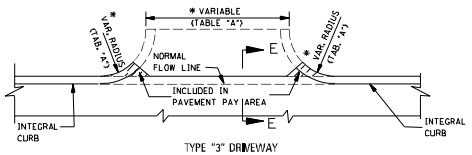
*TABLE "A"		
DRIVEWAY TYPE	DRIVEWAY WIDTH (ft)	CURB RETURN RADIUS (ft)
RESIDENTIAL	16'	5' - 10'
COMMERCIAL/ INDUSTRIAL	30' - 50'	10' - 30'

5.761 yd² FOR DRIVEWAY 16'-0" IN WIDTH.
0.333 yd² FOR EACH ADDED OR SUBTRACTED FOOT OF WIDTH.
NOTE: THIS DRIVEWAY AREA EXAMPLE IS COMPUTED ON THE BASIS OF 3'-0" RADIUS. PAYMENT FOR CURB RADIUS SHALL BE INCLUDED IN COMPENSATION FOR DRIVEWAY.



TYPE "2" DRIVEWAY

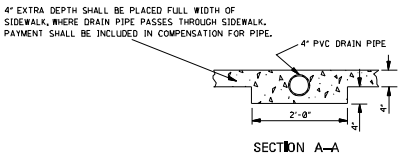
PLAN OF CONCRETE DRIVEWAY ACROSS SIDEWALK AREA



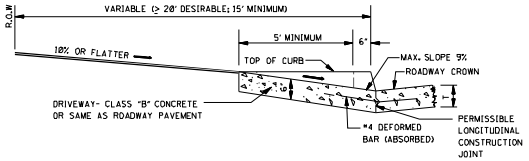
TYPE "3" DRIVEWAY

PLAN—CURB OMITTED FOR FUTURE DRIVEWAY CONSTRUCTION

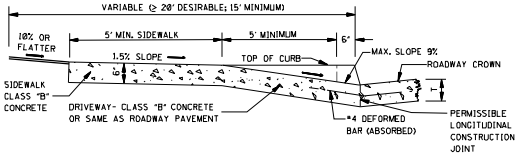
NOTE: THIS TYPE CONSTRUCTION SHALL BE USED WHERE DESIGNATED ELSEWHERE ON PLANS OR BY THE ENGINEER.



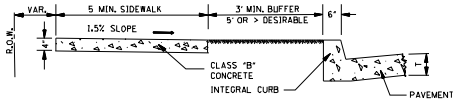
SECTION A—A



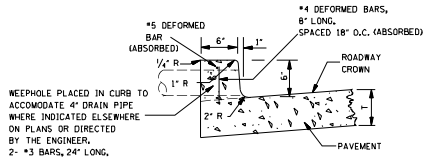
SECTION B—B



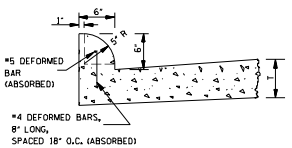
SECTION C—C



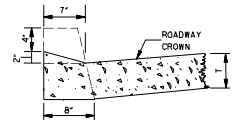
SECTION D—D



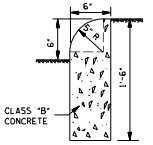
TYPE "1" DETAIL OF INTEGRAL CURB



TYPE "3" DETAIL OF INTEGRAL CURB

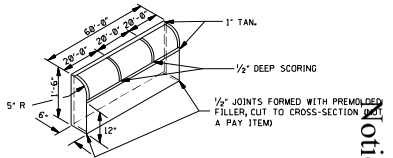


SECTION E—E



DETAIL OF HEADER CURB

CONTRACTION JOINTS REQUIRED AT 20' O.C.
EXPANSION JOINTS REQUIRED AT 60' O.C.
UNLESS OTHERWISE DIRECTED BY ENGINEER.



ISOMETRIC HEADER CURB DETAIL SHOWING JOINTS

GENERAL NOTES:

1. TRAVERSE CONTRACTION JOINTS ARE REQUIRED AT 20' ON CENTER FOR ALL CONCRETE DRIVEWAYS THAT EXTEND PAST THE END OF THE CURB RETURN. A ½" WIDE EXPANSION JOINT IS REQUIRED AT THE END OF THE CURB RETURN AND AT 60' ON CENTER THROUGHOUT THE LENGTH OF THE DRIVEWAY. A LONGITUDINAL CONTRACTION JOINT IS REQUIRED FOR ALL DRIVEWAYS EXCEEDING 20' IN WIDTH.
2. SEE WK. NOS. CR-1, CR-2, CR-3 & CR-4 FOR DETAILS OF CURB-CUT RAMPS.
3. MAXIMUM 2% CROSS-SLOPE ON SIDEWALKS.

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DRIVEWAYS, INTEGRAL CURB & SIDEWALK

MDOT

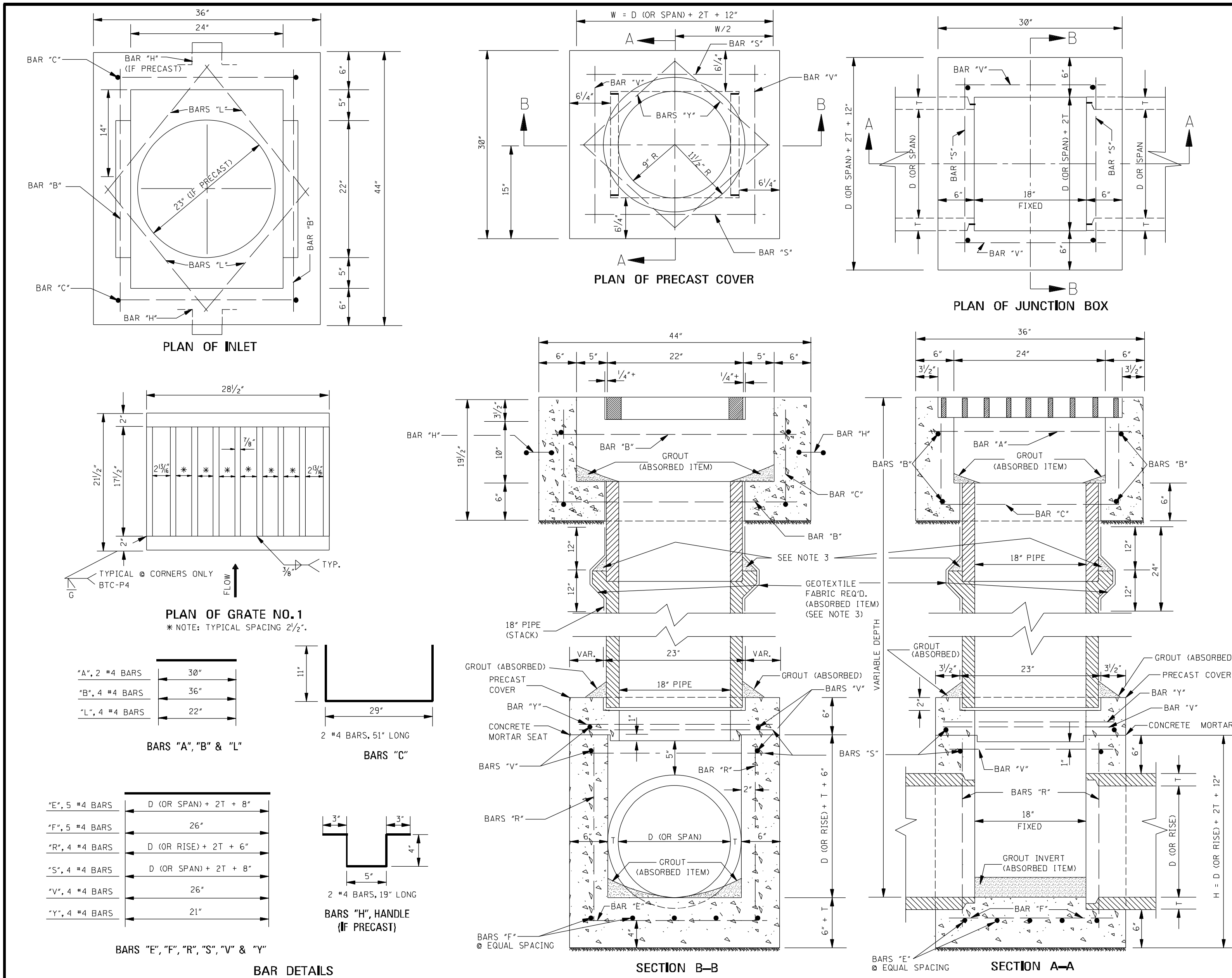
WORKING NUMBER: SD-2

SHEET NUMBER: 6420

ISSUE DATE: AUGUST 01, 2017

Notice To Bidders No 6725 - Qty. 0-

STATE	PROJECT NO.
MISS.	



QUANTITIES FOR JUNCTION BOX & INLET

PIPE SIZE	T	CONC. (yd^3)	STEEL (lbs)	PIPE OPENING DEDUCTION (yd^3)
18"	2½"	0.914	64	0.053
24"	3"	1.065	69	0.091
30"	3½"	1.225	74	0.138
36"	4"	1.393	79	0.196
42"	4½"	1.570	84	0.263
48"	5"	1.754	89	0.340
22" X 13"	2½"	0.923	67	0.053
29" X 18"	3"	1.068	70	0.087
36" X 23"	3½"	1.244	75	0.129
44" X 27"	4"	1.408	81	0.185
51" X 31"	4½"	1.600	86	0.245

NOTES:

1. 2 PIPE OPENINGS HAVE BEEN DEDUCTED FROM JUNCTION BOX.
2. 0.378 yd^3 CLASS "B" CONCRETE AND 24 lbs REINFORCING STEEL INCLUDED FOR INLET.

GENERAL NOTES:

1. QUANTITIES SHOWN WILL BE THE BASIS OF PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
2. ANY STACK PIPE THAT MUST BE CUT OFF WILL BE PAID FOR AT FULL PIPE LENGTH AS THOUGH INSTALLED.
3. EACH STACKED PIPE JOINT SHALL BE SEALED WITH BUTYL PER C990 OR RUBBER GASKET PER C443 AND C1619, THEN WRAPPED WITH GEOTEXTILE FABRIC, 24" WIDE, AASHTO M 288 EOS= 100+. THE FABRIC SHALL OVERLAP A MINIMUM OF 12" AT THE WRAP AND SHALL BE SECURED WITH STRING OR WIRE FOR BACKFILLING. THE COST SHALL BE ABSORBED IN OTHERS ITEMS BID.
4. THE CONTRACTOR HAS THE OPTION TO PROVIDE GRATE NO. 1 OR GRATE NO. 2 AS SHOWN ON SHEET IG-
5. CONCRETE SHALL BE CLASS "B" CONCRETE AND REINFORCING STEEL SHALL BE DEFORMED BARS.

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TYPE II MEDIAN INLET
(51" PIPE AND UNDER)

MDOT

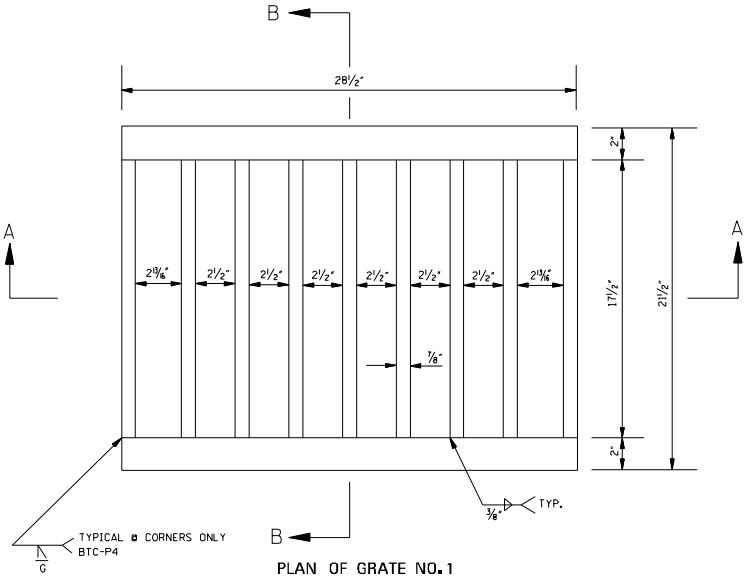
ISSUE DATE: AUGUST 01, 2017

WORKING NUMBER MI-2

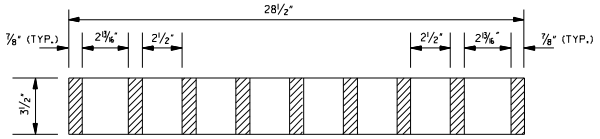
SHEET NUMBER 6511

STATE	PROJECT NO.
MISS.	

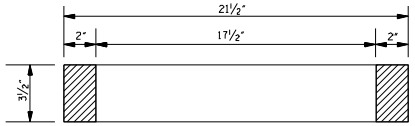
GRATE NO. 1



PLAN OF GRATE NO. 1

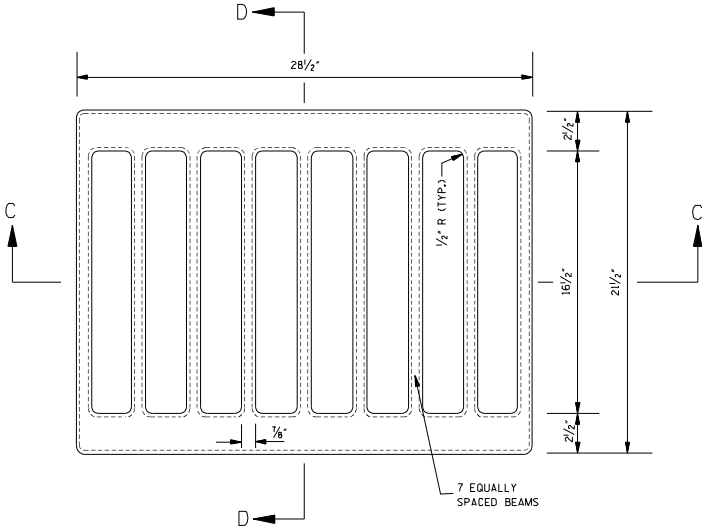


SECTION A–A

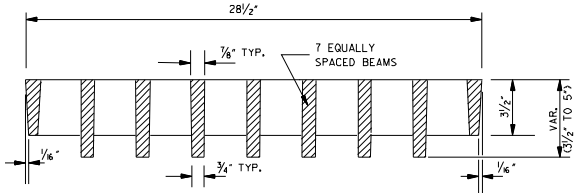


SECTION B–B

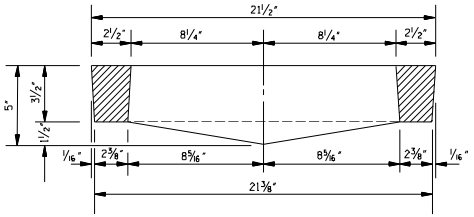
GRATE NO. 2



PLAN OF GRATE NO. 2



SECTION C–C



SECTION D–D

GENERAL NOTES:

1. BASIS OF PAYMENT WILL BE 250 lbs OF GRATING FOR EITHER GRATE.
2. GRATE NO.1
   THE GRATE SHALL BE WELDED STEEL (ASTM A 588).
3. GRATE NO.2
   THE GRATE SHALL BE DUCTILE IRON (ASTM A 536, GRADE 80-55-06).

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DETAILS OF GRATES FOR MEDIAN INLETS

MDOT
DRAWING NUMBER: IG-1
SHEET NUMBER: 6516

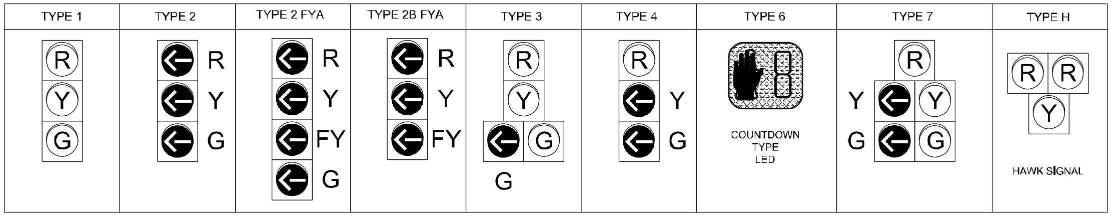
ISSUE DATE: AUGUST 01, 2017

Notice To Bidders No. 6725 - Qtr.

FMS CONUPDATE

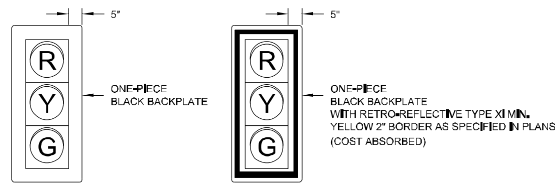
STATE	PROJECT NO.
MISS.	

DETAIL OF TYPICAL TRAFFIC SIGNAL HEADS



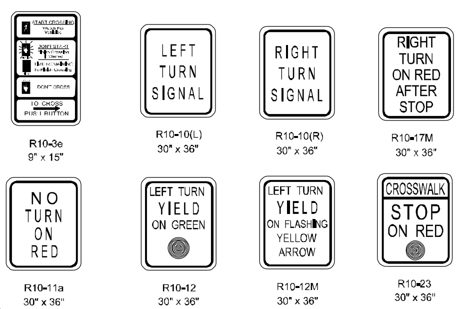
NOTES:
1. ALL SIGNAL HEADS SHALL BE BLACK IN COLOR UNLESS OTHERWISE NOTED ON THE PLANS.
2. ALL SIGNAL HEADS SHALL BE L.E.D. LENSES UNLESS OTHERWISE NOTED ON THE PLANS. TYPE "A" SIGNAL HEAD IS TO BE GEOMETRICALLY PROGRAMMED VIA LOUVERS.
3. LETTER "R" ON HEAD TYPES MEANS RIGHT TURN ARROW(S).
4. TYPE 6 SIGNAL HEAD SYMBOLS/NUMBERS SHALL BE FULLY ILLUMINATED (NO OUTLINE SYMBOLS ALLOWED). THERE IS A SEPARATE PAY ITEM FOR PEDESTRIAN PUSHBUTTON. PEDESTRIAN PUSHBUTTON SHALL BE FURNISHED WITH R10-3e SIGN. (COST ABSORBED).
5. ALL FYA SIGNAL HEAD SHALL BE FURNISHED WITH R10-12M SIGN. WHEN NOTED ON PLANS, TYPE 4 & 5 SIGNAL HEADS SHALL BE FURNISHED WITH R10-10L , R10-10R, OR R10-17M SIGN. TYPE 7 SIGNAL HEAD SHALL BE FURNISHED WITH R10-12 SIGN. TYPE 7 R REQUIRES NO SIGN. TYPE H SIGNAL HEAD SHALL BE FURNISHED WITH R10-23 SIGN WHEN INDICATED ON PLANS. COST OF SIGNAL SIGNS, MOUNTING BRACKETS, HARDWARE, AND LABOR SHALL BE COST ABSORBED.
6. FOR SPAN WIRE INSTALLATION, THE HOUSING FOR THE RED INDICATION OF A TYPE 7 HEAD, SHALL BE ALUMINUM.

DETAIL OF TRAFFIC SIGNAL WITH BACKPLATE



NOTE:
ALL SIGNAL HEADS SHALL INCLUDE BACKPLATES AND VISORS UNLESS OTHERWISE NOTED ON TRAFFIC SIGNAL INSTALLATION SHEETS.

DETAIL OF TYPICAL TRAFFIC SIGNAL SIGNS

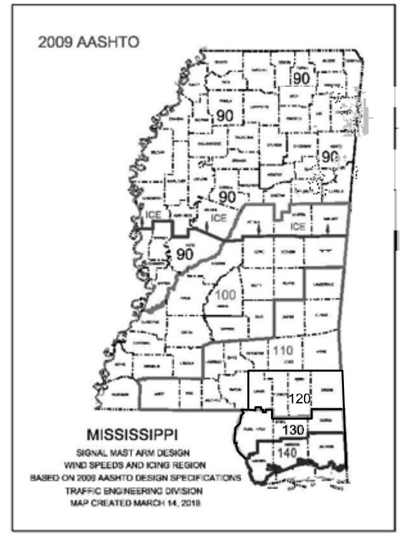


NOTES:
1. ALUMINUM SIGN BLANKS ARE TO BE ALUMINUM ALLOY 5052-H38 AND 0.10" THICK.
2. THE SIGNS SHALL BE SUPPLIED WITH MOUNTING BRACKETS AND HARDWARE AS REQUIRED.
3. NUMBER 12 PLATED JACK CHAINS SHALL BE ATTACHED TO THE BOTTOM OF ALL SPAN WIRE MOUNTED SIGNS.
4. CHAINS SHALL BE ATTACHED TO SIGN AND TETHER USING "S" HOOKS.
5. THE SIZE OF THE SIGN BLANK, LEGEND, BORDER AND THE COLOR OF THE BACKGROUND AND LEGEND IS TO CONFORM TO THE M.U.T.C.D. (LATEST EDITION).
6. REFLECTIVE SHEETING FOR TRAFFIC SIGNS SHALL BE TYPE XI PRISMATIC RETROREFLECTIVE SHEETING.

SIGNAL PLAN LEGEND

Symbol	Description
	SIGNAL HEAD REQUIRED / TYPE
	PEDESTRAIN HEAD REQUIRED
	EXISTING SIGNAL HEAD
	SIGN
OR	VEHICLE LOOP DETECTOR
	QUADRAPOLE VEHICLE LOOP DETECTOR
	VEHICLE LOOP DETECTOR NUMBER
	WIRELESS MAGNETOMETER SENSOR
	BASE MOUNTED CABINET FOR SIGNAL CONTROLLER
	POLE MOUNTED CABINET FOR SIGNAL CONTROLLER
	EXISTING POLE
	POLE REQUIRED
	NEW PEDESTAL POLE
	MAST ARM POLE REQUIRED
	EXISTING PULLBOX
OR	PULLBOX REQUIRED (TYPE SPECIFIED ON PLAN SHEETS)
	RADAR DETECTOR (RD)
	VIDEO DETECTOR (VD)
	MULTI SENSOR DETECTOR (MS)
	OPTICAL DETECTOR UNIT
	CONDUIT
	ROLL PIPE
	LUMINAIRE
	DECORATIVE LUMINAIRE
	GROUND MOUNTED PEDESTAL SERVICE PANEL
	RADIO INTERCONNECT ANTENNA
	TWO-WAY WIRELESS ANTENNA
	WIRELESS REPEATER
CCTV	PTZ / FIXED CAMERA
P.B.	PUSH BUTTON
S.C.	SHIELDED CABLE
POW	POWER CABLE
LUM	LUMINAIRE POWER CABLE
ODC	OPTICAL DETECTOR CABLE
8c	NUMBER OF CONDUCTORS
I.C.	INTERCONNECT CABLE
RAD	RADIO COMMUNICATIONS CABLE
FO	FIBER OPTIC CABLE (72 SM)
FO DROP	FIBER DROP CABLE (12 SM)
DC	DETECTION CABLE
	STOP BAR DETECTION ZONE
	ADVANCED DETECTION ZONE

WIND SPEEDS AND ICING REGION MAP



2009/2013 AASHTO WIND LOAD LIST BY COUNTY

COUNTY	BASIC WIND SPEED MPH	ICE LOADING REQD
Adams	100	NO
Alcorn	90	YES
Amite	110	NO
Attala	100	YES
Benton	90	YES
Bolivar	90	YES
Calhoun	90	YES
Carroll	90	YES
Chickasaw	90	YES
Choctaw	90	YES
Claiborne	100	NO
Clarke	110	NO
Clay	90	YES
Coahoma	90	YES
Copiah	90	NO
Covington	110	NO
DeSoto	90	YES
Forrest	120	NO
Franklin	100	NO
George	130	NO
Greene	120	NO
Grenada	90	YES
Hancock	140	NO
Harrison	140	NO
Hinds	100	NO
Holmes	90	YES
Humphreys	90	YES
Issaquena	90	NO
Itawamba	90	YES
Jackson	140	NO
Jasper	110	NO
Jefferson	100	NO

COUNTY	BASIC WIND SPEED MPH	ICE LOADING REQD
Jefferson Davis	110	NO
Jones	110	NO
Kemper	100	NO
Lafayette	90	YES
Lamar	120	NO
Lauderdale	110	NO
Lawrence	110	NO
Leake	100	NO
Lee	90	YES
Leflore	90	YES
Lincoln	100	NO
Lowndes	90	YES
Madison	100	NO
Marion	110	NO
Marshall	90	YES
Monroe	90	YES
Montgomery	90	YES
Neshoba	100	NO
Newton	100	NO
Noxubee	100	YES
Oktibbeha	90	YES
Panola	90	YES
Pearl River	130	NO
Perry	120	NO
Pike	110	NO
Pontotoc	90	YES
Prentiss	90	YES
Quitman	90	YES
Rankin	100	NO
Scott	100	NO
Sharkey	90	NO
Simpson	100	NO
Smith	100	NO
Stone	130	NO
Sunflower	90	YES
Tallahatchie	90	YES
Tate	90	YES
Tippah	90	YES
Tishomingo	90	YES
Tunica	90	YES
Union	90	YES
Walthall	110	NO
Warren	90	NO
Washington	90	YES
Wayne	110	NO
Webster	90	YES
Wilkinson	100	NO
Winston	100	YES
Yalobusha	90	YES
Yazoo	90	NO

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL HEADS, TRAFFIC SIGNAL SIGNS AND WIND SPEEDS

PROJ. NO.:
COUNTY:

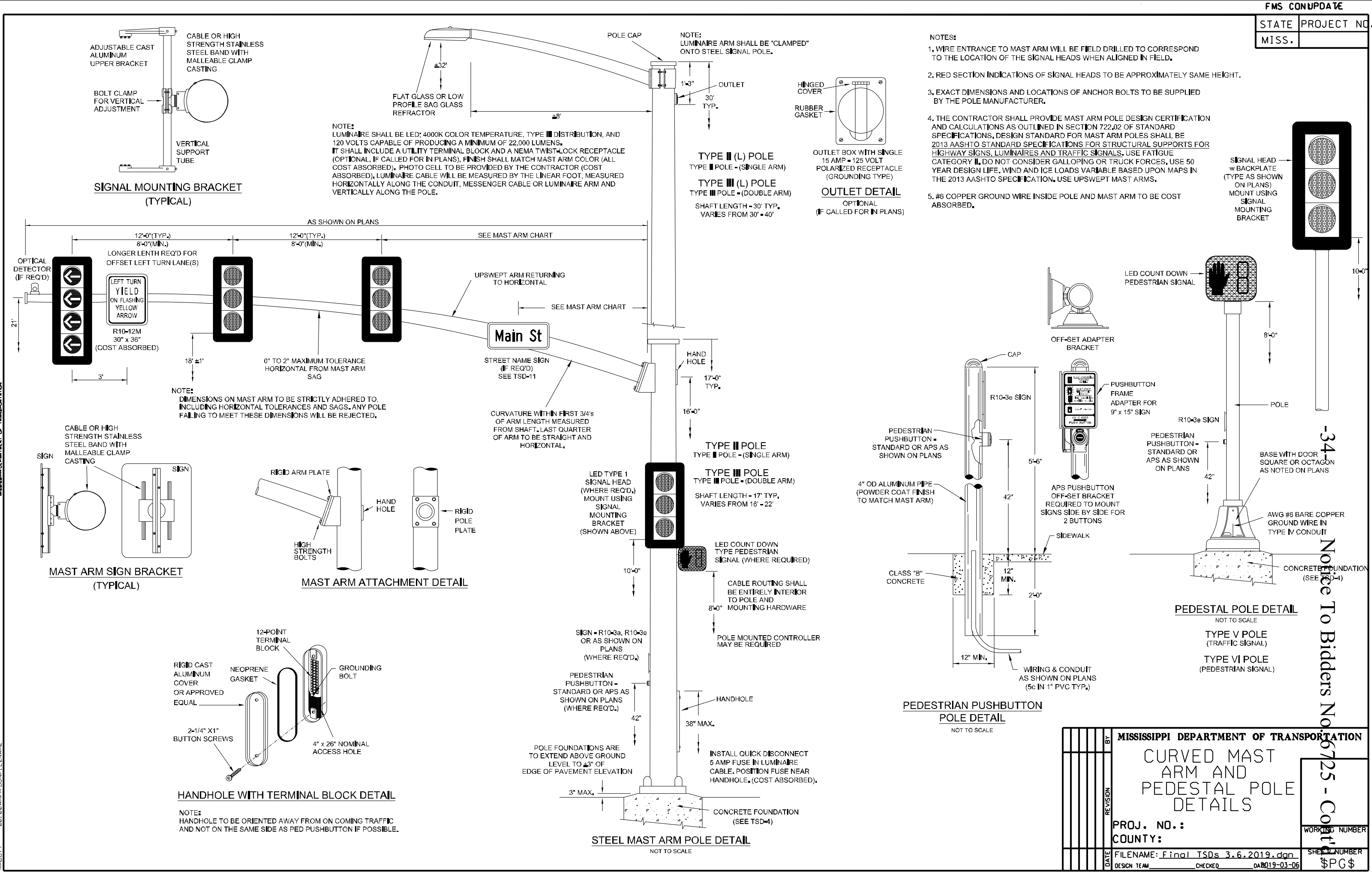
DATE | REVISION | BY

FILENAME: Final TSDs 3.6.2019.dgn
DESIGN TEAM ________ CHECKED ________ DATE 2019-03-06

WORKING NUMBER
SHEET NUMBER PG

PLAN ROADWAY DESIGN DIVISION MISSISSIPPI DEPARTMENT OF TRANSPORTATION

MMDDYY 00:00AMPM DGNFILENAME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STATE PROJECT NO.
MISS.
NOTES:
1. WIRE ENTRANCE TO MAST ARM WILL BE FIELD DRILLED TO CORRESPOND TO THE LOCATION OF THE SIGNAL HEADS WHEN ALIGNED IN FIELD.
2. RED SECTION INDICATIONS OF SIGNAL HEADS TO BE APPROXIMATELY SAME HEIGHT.
3. EXACT DIMENSIONS AND LOCATIONS OF ANCHOR BOLTS TO BE SUPPLIED BY THE POLE MANUFACTURER.
4. THE CONTRACTOR SHALL PROVIDE MAST ARM POLE DESIGN CERTIFICATION AND CALCULATIONS AS OUTLINED IN SECTION 722.02 OF STANDARD SPECIFICATIONS. DESIGN STANDARD FOR MAST ARM POLES SHALL BE 2013 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. USE FATIGUE CATEGORY II. DO NOT CONSIDER GALLOPING OR TRUCK FORCES. USE 50 YEAR DESIGN LIFE. WIND AND ICE LOADS VARIABLE BASED UPON MAPS IN THE 2013 AASHTO SPECIFICATION. USE UPSWEPT MAST ARMS.
5. #6 COPPER GROUND WIRE INSIDE POLE AND MAST ARM TO BE COST ABSORBED.
SIGNAL MOUNTING BRACKET
(TYPICAL)
ADJUSTABLE CAST ALUMINUM UPPER BRACKET
CABLE OR HIGH STRENGTH STAINLESS STEEL BAND WITH MALLEABLE CLAMP CASTING
BOLT CLAMP FOR VERTICAL ADJUSTMENT
VERTICAL SUPPORT TUBE
NOTE:
LUMINAIRE SHALL BE LED: 4000K COLOR TEMPERATURE, TYPE III DISTRIBUTION, AND 120 VOLTS CAPABLE OF PRODUCING A MINIMUM OF 22,000 LUMENS. IT SHALL INCLUDE A UTILITY TERMINAL BLOCK AND A NEMA TWIST-LOCK RECEPTACLE (OPTIONAL, IF CALLED FOR IN PLANS). FINISH SHALL MATCH MAST ARM COLOR (ALL COST ABSORBED). PHOTO CELL TO BE PROVIDED BY THE CONTRACTOR (COST ABSORBED). LUMINAIRE CABLE WILL BE MEASURED BY THE LINEAR FOOT, MEASURED HORIZONTALLY ALONG THE CONDUIT, MESSENGER CABLE OR LUMINAIRE ARM AND VERTICALLY ALONG THE POLE.
FLAT GLASS OR LOW PROFILE SAG GLASS REFRACTOR
POLE CAP
NOTE:
LUMINAIRE ARM SHALL BE "CLAMPED" ONTO STEEL SIGNAL POLE.
OUTLET
TYPE II (L) POLE
TYPE II POLE - (SINGLE ARM)
TYPE III (L) POLE
TYPE III POLE - (DOUBLE ARM)
SHAFT LENGTH - 30' TYP. VARIES FROM 30' - 40'
HINGED COVER
RUBBER GASKET
OUTLET BOX WITH SINGLE 15 AMP - 125 VOLT POLARIZED RECEPTACLE (GROUNDING TYPE)
OUTLET DETAIL
OPTIONAL (IF CALLED FOR IN PLANS)
AS SHOWN ON PLANS
12'-0"(TYP.) 8'-0"(MIN.)
SEE MAST ARM CHART
OPTICAL DETECTOR (IF REQ'D)
LONGER LENTH REQ'D FOR OFFSET LEFT TURN LANE(S)
LEFT TURN YIELD ON FLASHING YELLOW ARROW
R10-12M 30" x 36" (COST ABSORBED)
UPSWEPT ARM RETURNING TO HORIZONTAL
Main St
STREET NAME SIGN (IF REQ'D) SEE TSD-11
0" TO 2" MAXIMUM TOLERANCE HORIZONTAL FROM MAST ARM SAG
NOTE:
DIMENSIONS ON MAST ARM TO BE STRICTLY ADHERED TO, INCLUDING HORIZONTAL TOLERANCES AND SAGS. ANY POLE FAILING TO MEET THESE DIMENSIONS WILL BE REJECTED.
CURVATURE WITHIN FIRST 3/4's OF ARM LENGTH MEASURED FROM SHAFT. LAST QUARTER OF ARM TO BE STRAIGHT AND HORIZONTAL.
HAND HOLE
TYPE II POLE
TYPE II POLE - (SINGLE ARM)
TYPE III POLE
TYPE III POLE - (DOUBLE ARM)
SHAFT LENGTH - 17' TYP. VARIES FROM 16' - 22'
LED TYPE 1 SIGNAL HEAD (WHERE REQ'D.) MOUNT USING SIGNAL MOUNTING BRACKET (SHOWN ABOVE)
LED COUNT DOWN TYPE PEDESTRIAN SIGNAL (WHERE REQUIRED)
CABLE ROUTING SHALL BE ENTIRELY INTERIOR TO POLE AND MOUNTING HARDWARE
POLE MOUNTED CONTROLLER MAY BE REQUIRED
SIGN - R10-3a, R10-3e OR AS SHOWN ON PLANS (WHERE REQ'D.)
PEDESTRIAN PUSHBUTTON - STANDARD OR APS AS SHOWN ON PLANS (WHERE REQ'D.)
HANDHOLE
POLE FOUNDATIONS ARE TO EXTEND ABOVE GROUND LEVEL TO ±3" OF EDGE OF PAVEMENT ELEVATION
INSTALL QUICK DISCONNECT 5 AMP FUSE IN LUMINAIRE CABLE. POSITION FUSE NEAR HANDHOLE. (COST ABSORBED).
CONCRETE FOUNDATION (SEE TSD-4)
STEEL MAST ARM POLE DETAIL
NOT TO SCALE
MAST ARM SIGN BRACKET
(TYPICAL)
SIGN
RIGID ARM PLATE
HIGH STRENGTH BOLTS
RIGID POLE PLATE
MAST ARM ATTACHMENT DETAIL
12-POINT TERMINAL BLOCK
GROUNDING BOLT
RIGID CAST ALUMINUM COVER OR APPROVED EQUAL
NEOPRENE GASKET
2-1/4" X1" BUTTON SCREWS
4" x 26" NOMINAL ACCESS HOLE
HANDHOLE WITH TERMINAL BLOCK DETAIL
NOTE:
HANDHOLE TO BE ORIENTED AWAY FROM ON COMING TRAFFIC AND NOT ON THE SAME SIDE AS PED PUSHBUTTON IF POSSIBLE.
OFF-SET ADAPTER BRACKET
PUSHBUTTON FRAME ADAPTER FOR 9" x 15" SIGN
APS PUSHBUTTON OFF-SET BRACKET REQUIRED TO MOUNT SIGNS SIDE BY SIDE FOR 2 BUTTONS
CAP
R10-3e SIGN
PEDESTRIAN PUSHBUTTON - STANDARD OR APS AS SHOWN ON PLANS
4" OD ALUMINUM PIPE (POWDER COAT FINISH TO MATCH MAST ARM)
SIDEWALK
CLASS "B" CONCRETE
WIRING & CONDUIT AS SHOWN ON PLANS (5c IN 1" PVC TYP.)
PEDESTRIAN PUSHBUTTON POLE DETAIL
NOT TO SCALE
SIGNAL HEAD w BACKPLATE (TYPE AS SHOWN ON PLANS) MOUNT USING SIGNAL MOUNTING BRACKET
LED COUNT DOWN PEDESTRIAN SIGNAL
POLE
BASE WITH DOOR SQUARE OR OCTAGON AS NOTED ON PLANS
AWG #6 BARE COPPER GROUND WIRE IN TYPE IV CONDUIT
CONCRETE FOUNDATION (SEE TSD-4)
PEDESTAL POLE DETAIL
NOT TO SCALE
TYPE V POLE
(TRAFFIC SIGNAL)
TYPE VI POLE
(PEDESTRIAN SIGNAL)
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
CURVED MAST ARM AND PEDESTAL POLE DETAILS
PROJ. NO.:
COUNTY:
FILENAME: Final TSDs 3.6.2019.dgn
DESIGN TEAM CHECKED DATE 2019-03-06
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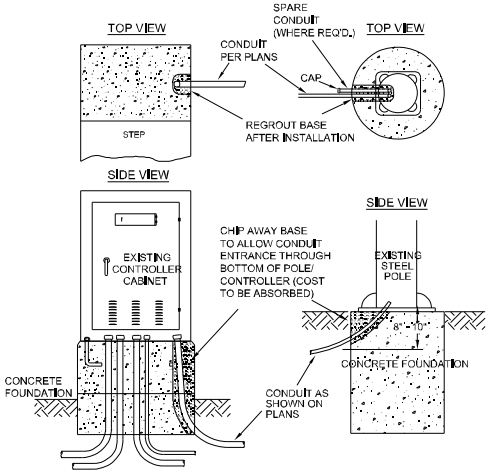
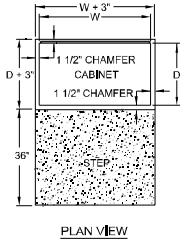
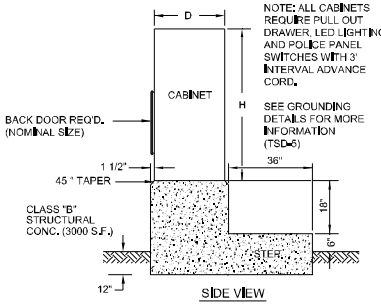


CONDUIT ENTRANCE DETAIL
(EXISTING CABINET OR POLE)



PLAN VIEW



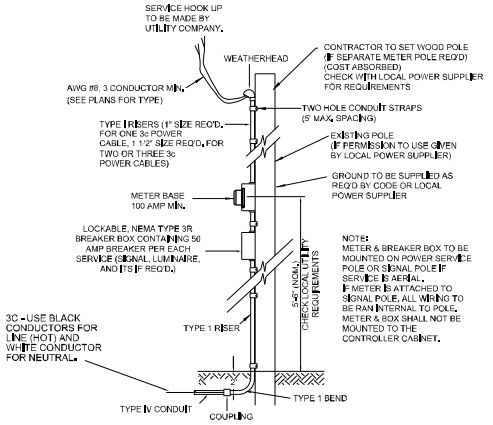
SIDE VIEW

NOTE:
THE BASE MOUNTED CABINET IS TO BE SITUATED IN THE OPTIMUM POSITION FOR VIEWING THE CONTROLLER OPERATION AND THE ON STREET SIGNAL DISPLAYS SIMULTANEOUSLY. THIS POSITION IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

CABINET INFORMATION

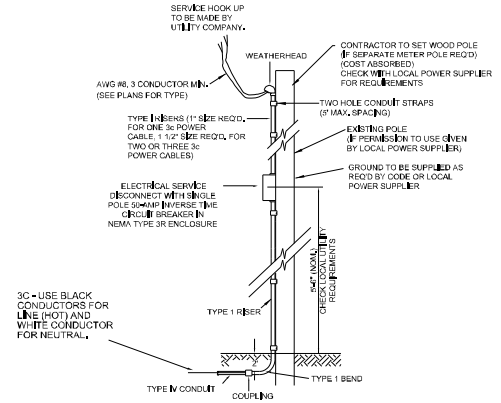
TYPE	SIZE (MIN.)	LOAD BAY
TYPE I CABINET	51"H x 30"W x 18"D	8 POSITION
TYPE II CABINET	51"H x 36"W x 18"D	12 POSITION
TYPE III CABINET	56"H x 44"W x 27"D	16 POSITION
TYPE IV CABINET	56"H x 57"W x 29"D	16 POSITION
TYPE V CABINET	77"H x 44"W x 27"D	16 POSITION

TYPE I AND II MAY BE POLE OR BASE MOUNTED, ALL OTHERS ARE BASE MOUNT. CONTRACTOR TO VERIFY CABINET SIZE BEFORE POURING FOUNDATION.



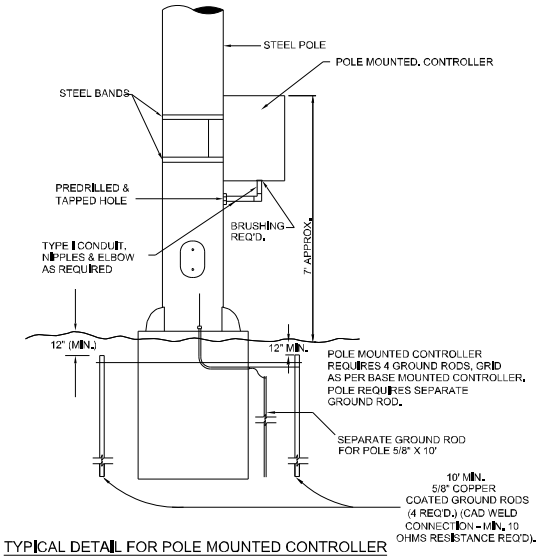
POWER SERVICE DETAIL

TO BE USED WHEN METER IS SET ON POLE.



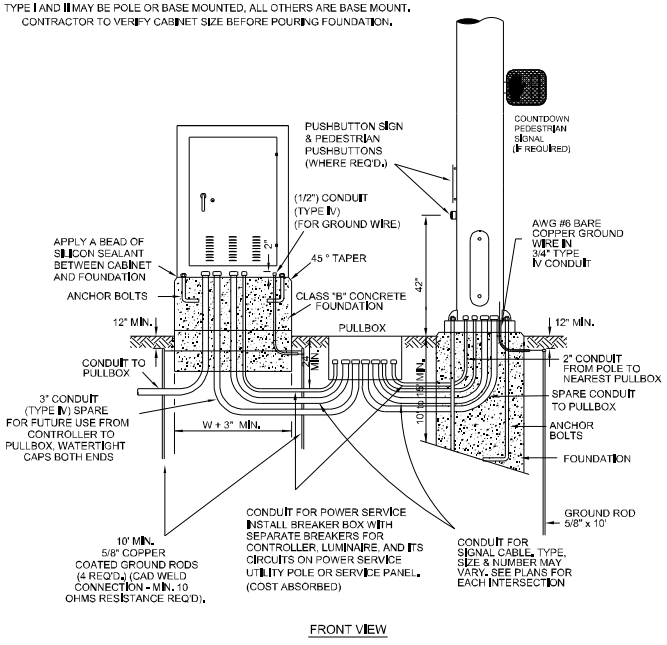
POWER SERVICE DETAIL

TO BE USED FOR POWER SERVICE PEDESTAL - SEE TSD-7 FOR DETAILS.



TYPICAL DETAIL FOR POLE MOUNTED CONTROLLER

NOT TO SCALE



FRONT VIEW

TYPICAL DETAIL OF BASE FOR CONTROLLER EQUIPMENT CABINET

NOT TO SCALE

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

MOODY Y 80L 80AMPH.DGN FILENAME

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

CONTROLLER CABINET AND POWER SERVICE DETAILS

PROJ. NO.:

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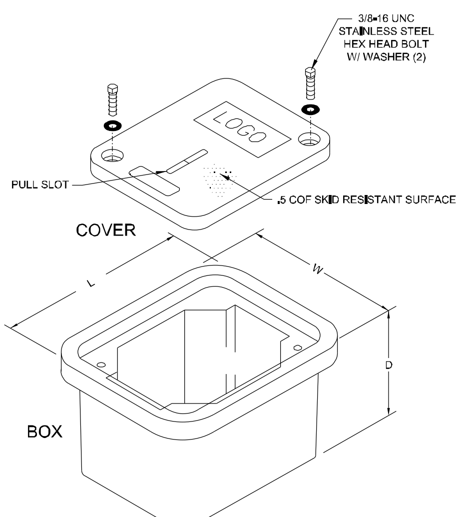
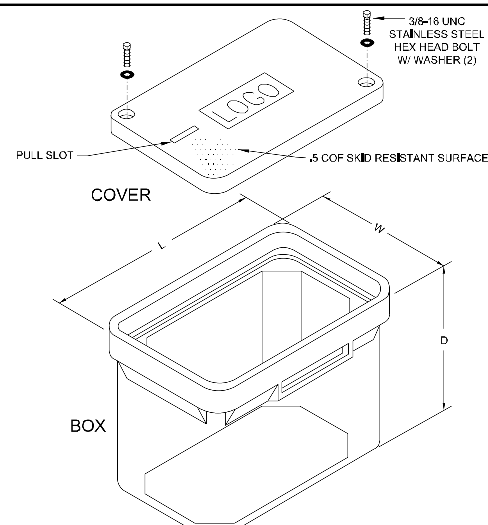
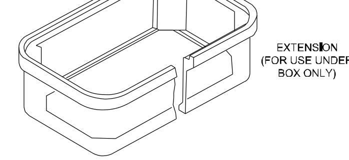


TYPE 1 PULLBOX
NOT TO SCALE



TYPE 2 or 3 PULLBOX
NOT TO SCALE



PULLBOX NOTES:

1. GRADE LEVEL PULL BOX, ENCLOSURES, STRUCTURAL JUNCTION BOXES AND COVERS SHALL MEET THE REQUIREMENTS OF SUBSECTION 722.06 OF SPECS. ALL PULLBOXES SHALL BE TIER 22 = 22,500-POUND DESIGN LOAD, 33,750-POUND TEST LOAD.

2. IN GENERAL, TYPE 2 BOXES ARE USED FOR CORNERS WHERE SIGNAL CONDUIT UNDER ROADWAY AND TO SIGNAL POLE MEET, TYPE 3 BOXES ARE USED AT CONTROLLER CORNER WHERE ADDITIONAL ROOM FOR EXTRA CONDUIT IS REQUIRED.

3. LOGOS SHALL READ TRAFFIC, SIGNAL, OR TRAFFIC SIGNAL.

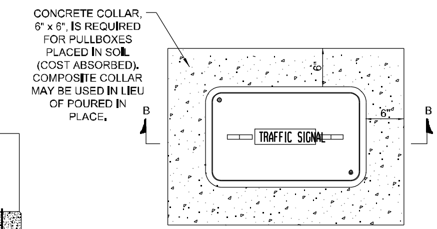
4. PULLBOXES SHALL NOT BE LOCATED IN THE ROADWAY, SIDEWALK, DRIVEWAY OR OTHER PATHWAY SURFACES UNLESS SPECIFICALLY REQUIRED ON THE PLANS. THEY SHALL NOT BE LOCATED IN DRAINAGE COLLECTION AREAS AND LOCATIONS WHERE DRAINAGE RUNOFF OCCURS SHOULD BE AVOIDED WHENEVER POSSIBLE.

5. THE FINAL GRADE OF PULLBOX TOP SHALL BE FLUSH WITH ADJACENT MATERIAL WHEN THEY MUST BE INSTALLED WITHIN SIDEWALKS, ISLANDS OR BARRIER WALLS. THE FINAL GRADE OF TOP LOCATED IN SOIL OR SODDED AREAS SHALL BE APPROXIMATELY ONE (1) INCH HIGHER THAN ADJACENT EARTH OR SODDED AREAS.

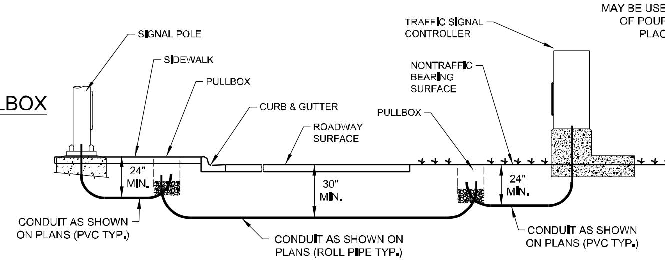
NOMINAL MINIMUM DIMENSIONS (W x L x D)

DIM	TYPE 1	TYPE 2	TYPE 3
W	11"	13"	17"
L	18"	24"	30"
D	12"	18"	24"

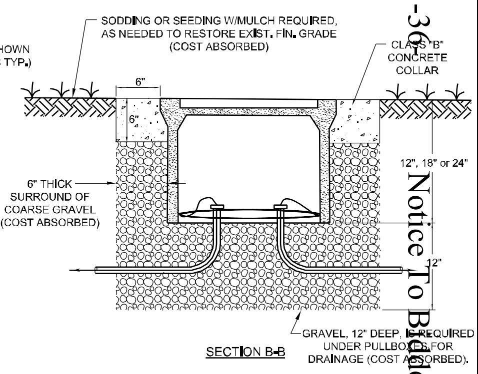
COLLARS AND GRAVEL UNDER PULLBOX REQUIRED FOR ALL TYPES OF PULLBOXES



PLAN VIEW

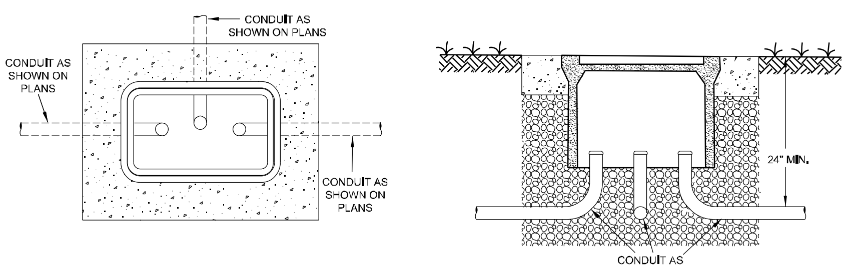


TYPICAL CONDUIT INSTALLATION SECTION
NOT TO SCALE

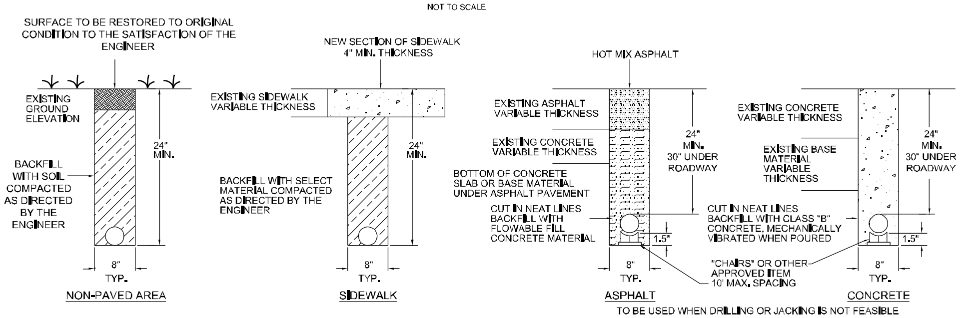


SECTION B-B

COLLAR AND GRAVEL DETAIL
NOT TO SCALE



CONDUIT AT PULLBOX DETAIL
NOT TO SCALE



CONDUIT TRENCHING DETAIL
NOT TO SCALE

CONDUIT NOTES:

1. TOP OF CONDUIT DEPTH SHALL BE A MINIMUM OF 24" UNLESS WHEN INSTALLED UNDER PAVED ROADWAY WHERE IT SHALL BE 30" MINIMUM DEPTH.

2. CONDUIT BORED OR DRILLED UNDER RAILROAD SHALL BE 10' MIN. BELOW RR BED, CONDUIT BORED OR DRILLED UNDER STREAMS SHALL BE 5' MIN. BELOW STEAM BED, BORE LOGS WILL BE REQUIRED FOR EACH LOCATION.

3. PULL TAPE SHALL BE INSTALLED INTO EACH EMPTY CONDUIT (COST ABSORBED).

4. CONDUIT TO BE SEALED WITH DUCT SEALER ONCE CABLE IS INSTALLED. BLANK DUCT PLUGS SHALL BE INSTALLED IN EACH EMPTY CONDUIT.

5. SAWCUT SIDEWALK AT EXISTING JOINTS AND REPLACE ENTIRE SECTION TO MATCH EXISTING MATERIAL. WHEN NEW SIDEWALK IS BEING CONSTRUCTED, CONDUIT, PULLBOX, AND POLE ARE TO BE INSTALLED BEFORE SIDEWALK IS POURED.

6. TYPE I CONDUIT IS RIGID GALV. STEEL; TYPE IV CONDUIT IS PVC; FLEXIBLE CONDUIT AND ROLL PIPE ARE HDPE.

7. ELECTRICAL SUBCONTRACTOR SHALL COORDINATE CONDUIT INSTALLATION WORK UNDER ROADWAY WITH ROADWAY CONSTRUCTION PHASING IN ORDER TO MINIMIZE JACKING.

8. MATERIAL REMOVED THAT IS NOT SUITABLE FOR BACKFILL OR IS EXCESS SHALL BE DISPOSED OF BY THE CONTRACTOR (COST ABSORBED).

9. CONDUIT WILL BE MEASURED PER LINEAR FEET TO THE NEAREST FOOT FROM CENTER TO CENTER OF PULL BOX AND/OR FOUNDATION. MEASUREMENT IN UNDERGROUND CONDUIT IS ONLY IN THE HORIZONTAL PLANE AND NO ADDITIONAL QUANTITY SHALL BE ADDED FOR CONDUIT DEPTH OR CHANGE IN ELEVATION OF THE CONDUIT. ANY ABOVE GROUND VERTICAL CONDUIT RUNS, AS INDICATED IN THE PLANS, SHALL BE MEASURED PER LINEAR FEET TO THE NEAREST FOOT.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PULL BOX AND CONDUIT TRENCHING DETAILS

PROJ. NO.:
COUNTY:

FILENAME: Final TSDs 3.6.2019.dgn
DESIGN TEAM ____ CHECKED ____ DATE 2019-03-06

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ROADWAY DESIGN DIVISION PLAN MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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DIMENSION CHART

LANE WIDTH	"A"	"B"	"C"
10'	2.5'	2.5'	5'
11'	2.5'	3'	6'
12'	3'	3'	6'
14'	3'	4'	8'

MINIMUM LOOP SEPARATION WHEN NO LANE LINES ARE PRESENT IS 3'

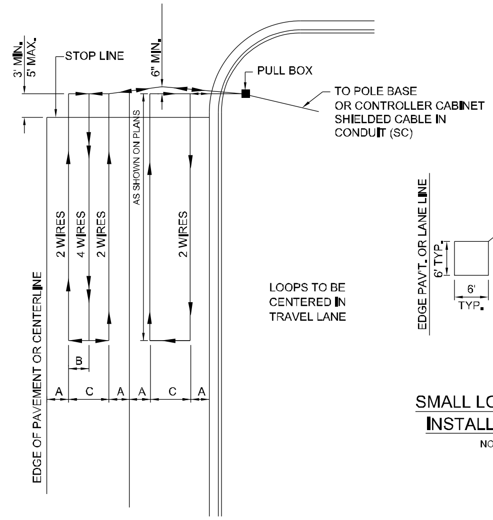
WIRE CHART

LOOP	TURNS (# OF WIRES)
6' x 6'	3
6' x <20'	3
6' x >20'	2
6' x 50' QUAD	2-4-2

PAY QUANTITY CHART

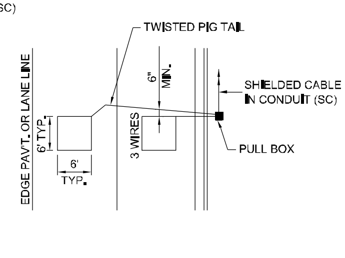
LOOP	LINEAR FEET
6' x 6'	24
6' x 50' BOX	112
6' x 50' QUAD	162

PLUS HOMERUN (SEE NOTE 1.)



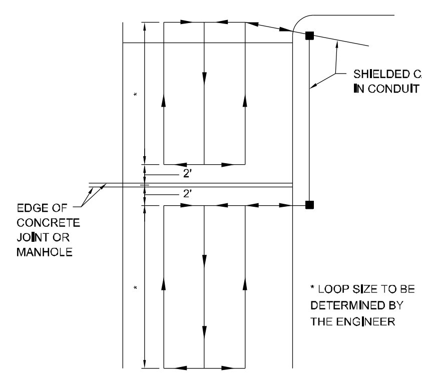
LARGE LOOP DETECTOR INSTALLATION DETAIL

NOT TO SCALE



SMALL LOOP DETECTOR INSTALLATION DETAIL

NOT TO SCALE



TYPICAL DETAIL OF LOOP DETECTOR WHERE TRANSVERSE CONCRETE JOINTS, MANHOLES, ETC. ARE ENCOUNTERED

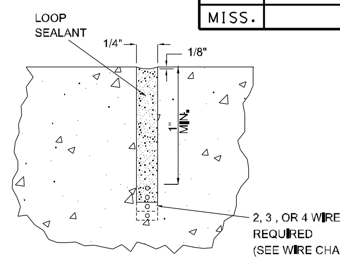
NOT TO SCALE

NOTES:

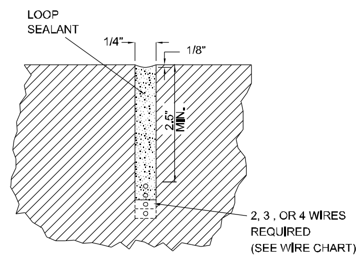
1. VEHICLE LOOP ASSEMBLY WILL BE MEASURED BY THE LINEAR FOOT COMPUTED HORIZONTALLY, REGARDLESS OF NUMBER OF TURNS, IN WHICH THE LOOP WIRE IS INSTALLED AND WILL INCLUDE THE LOOP LEAD-IN TO THE PULL BOX. SHIELDED CABLE WILL BE MEASURED BY THE LINEAR FOOT, MEASURED HORIZONTALLY ALONG THE CONDUIT OR MESSENGER CABLE AND VERTICALLY ALONG THE POLE.

2. FOR NEW CONSTRUCTION OR OVERLAY, VEHICLE LOOP ASSEMBLIES SHALL BE INSTALLED IN THE TOP LAYER OF BINDER OR EXISTING SURFACE BEFORE THE FINAL SURFACE COURSE IS APPLIED.

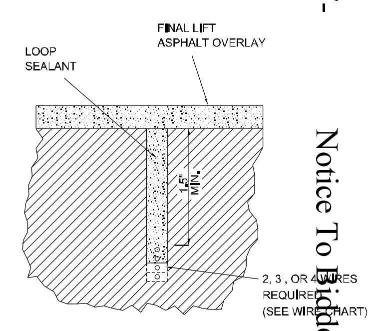
3. NO LOOPS ARE TO BE INSTALLED THROUGH, OVER, OR UNDER TRANSVERSE CONCRETE JOINTS IN CONCRETE PAVEMENT, AND NO MANHOLES, INLETS, ETC. MAY BE LOCATED WITHIN A LOOP. IF ANY OF THE ABOVE ARE ENCOUNTERED THE LOCATION OF THE LOOP MAY BE VARIED SLIGHTLY AS DIRECTED BY THE ENGINEER. IF THE ABOVE ITEMS ARE UNAVOIDABLE, SMALLER LOOPS AS SHOWN BELOW MAY BE USED. SMALLER LOOPS USED TO REPLACE ONE LARGE LOOP MAY BE CONNECTED IN SERIES TO ONE CHANNEL.



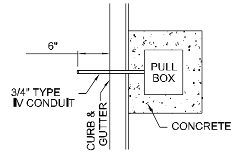
CONCRETE



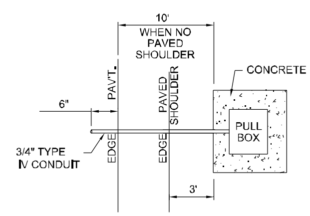
IN PLACE ASPHALT



ASPHALT (NEW CONSTRUCTION)



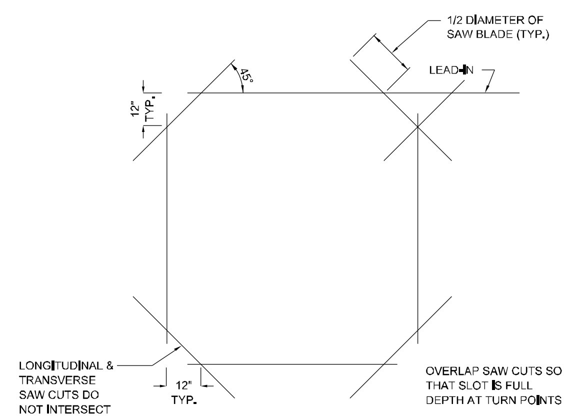
CURB AND GUTTER



SHOULDER SECTION

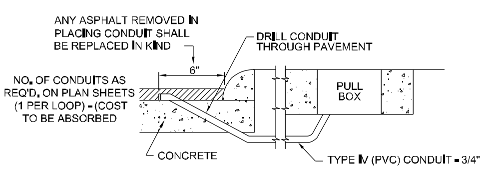
LOOP PULL BOX LOCATION DETAIL

NOT TO SCALE

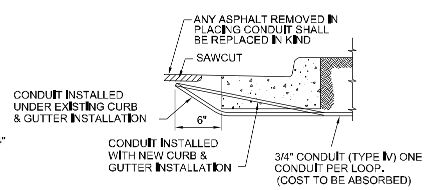


LOOP SLOT CONSTRUCTION DETAIL

NOT TO SCALE



SIDE



HOMERUN CONDUIT INSTALLATION DETAIL

NOT TO SCALE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

LOOP DETECTOR DETAILS

PROJ. NO.:
COUNTY:

FILENAME: Final TSDs 3.6.2019.dgn
DESIGN TEAM ____ CHECKED ____ DATE 2019-03-06

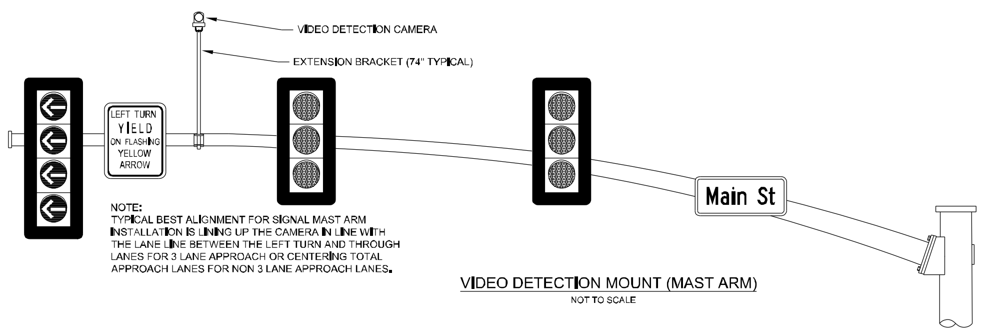
WORKING NUMBER

SHEET NUMBER PG

REVISION BY DATE

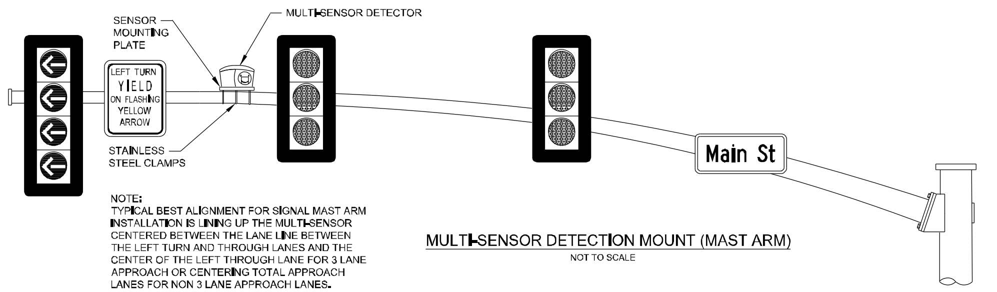
FMS CONUPDATE

STATE	PROJECT NO.
MISS.	



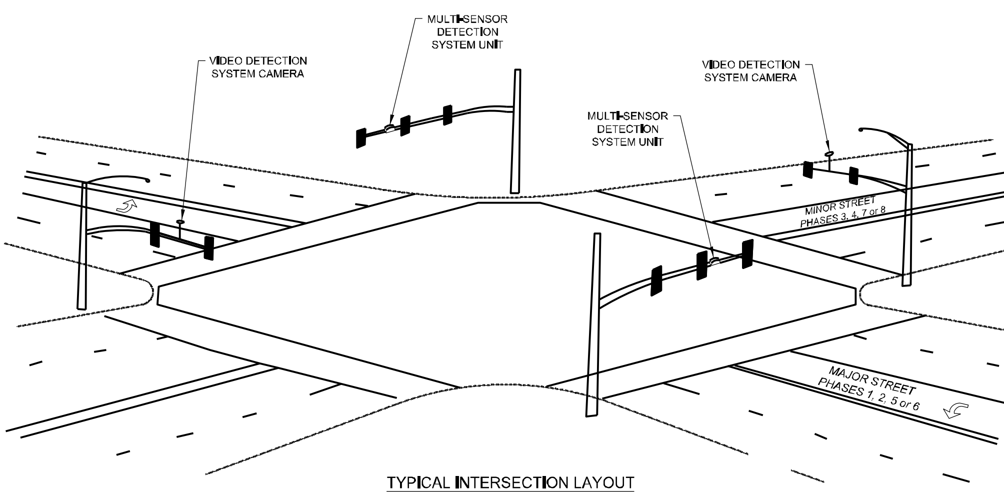
NOTE:
TYPICAL BEST ALIGNMENT FOR SIGNAL MAST ARM INSTALLATION IS LINING UP THE CAMERA IN LINE WITH THE LANE LINE BETWEEN THE LEFT TURN AND THROUGH LANES FOR 3 LANE APPROACH OR CENTERING TOTAL APPROACH LANES FOR NON 3 LANE APPROACH LANES.

VIDEO DETECTION MOUNT (MAST ARM)
NOT TO SCALE



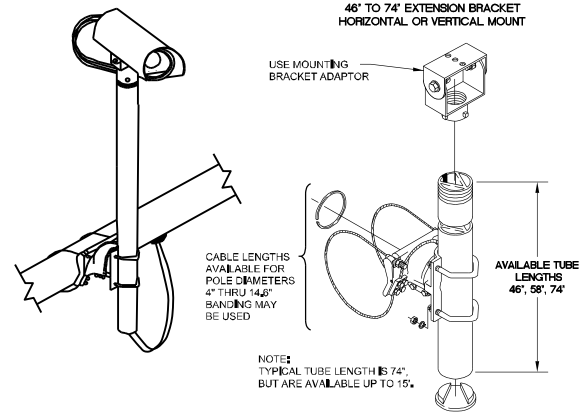
NOTE:
TYPICAL BEST ALIGNMENT FOR SIGNAL MAST ARM INSTALLATION IS LINING UP THE MULTI-SENSOR CENTERED BETWEEN THE LANE LINE BETWEEN THE LEFT TURN AND THROUGH LANES AND THE CENTER OF THE LEFT THROUGH LANE FOR 3 LANE APPROACH OR CENTERING TOTAL APPROACH LANES FOR NON 3 LANE APPROACH LANES.

MULTI-SENSOR DETECTION MOUNT (MAST ARM)
NOT TO SCALE



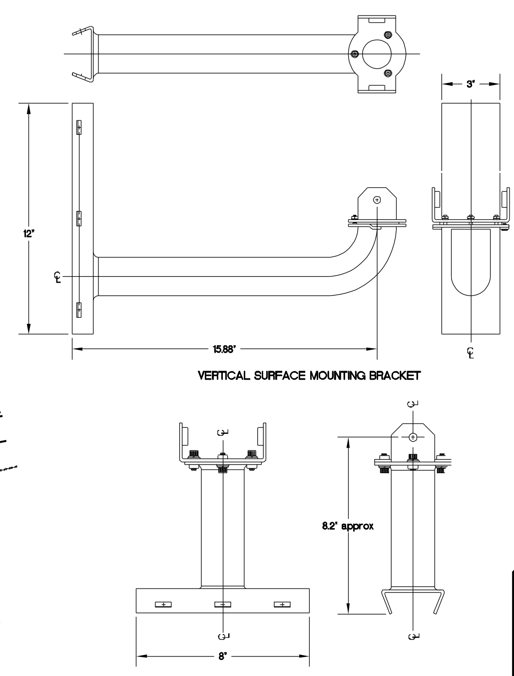
TYPICAL INTERSECTION LAYOUT
NOT TO SCALE

46" TO 74" EXTENSION BRACKET HORIZONTAL OR VERTICAL MOUNT



NOTE:
TYPICAL TUBE LENGTH IS 74", BUT ARE AVAILABLE UP TO 15'.

VIDEO DETECTION EXTENSION BRACKET
NOT TO SCALE



VERTICAL SURFACE MOUNTING BRACKET

HORIZONTAL MOUNTING BRACKET

TYPICAL CAMERA MOUNTING BRACKETS
NOT TO SCALE

GENERAL NOTES:

1. TYPE 1 VIDEO VEHICLE DETECTION (VVD) WILL PROVIDE PRESENCE OR PULSE DETECTION OF VEHICLES, BICYCLES, AND PEDESTRIANS FOR TRAFFIC SIGNAL CONTROLLER INPUTS. THERE ARE TWO VARIATIONS OF TYPE 1 VIDEO VEHICLE DETECTION: TYPE 1A CAMERA WITH INDEPENDENT VIDEO DETECTION PROCESSOR, TYPE 1B A SINGLE INTEGRATED CAMERA WITH VIDEO DETECTION PROCESSOR. THE WORK SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO FURNISH, INSTALL, AND TEST THE VIDEO VEHICLE DETECTION EQUIPMENT, COMPLETE AND READY FOR SERVICE.

TYPE 2 VIDEO VEHICLE DETECTION (VVD) WILL PROVIDE PRESENCE OR PULSE DETECTION OF VEHICLES, BICYCLES, AND PEDESTRIANS FOR TRAFFIC SIGNAL CONTROLLER INPUTS. TYPE 2 VIDEO VEHICLE DETECTION SHALL BE DESIGNED TO BE SPAN WIRE MOUNTED. THE WORK SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO FURNISH, INSTALL, AND TEST THE VIDEO VEHICLE DETECTION EQUIPMENT, COMPLETE AND READY FOR SERVICE.

THE MULTI-SENSOR VEHICLE DETECTION (MSVD) WILL PROVIDE DETECTION OF VEHICLES ON A ROADWAY USING A MULTI-SENSOR DETECTION FOR TRAFFIC SIGNAL CONTROLLER INPUTS. THE MULTI-SENSOR SHALL UTILIZE TWO (2) DIFFERENT SENSORS OF DIFFERENT TECHNOLOGIES, VIDEO IMAGING AND RADAR, TO DETECT AND TRACK VEHICLES. THE MODULE SHALL PROCESS INFORMATION FROM BOTH VIDEO IMAGING AND RADAR SENSORS SIMULTANEOUSLY IN REAL-TIME. THE WORK SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO FURNISH, INSTALL, AND TEST THE MULTI-SENSOR VEHICLE DETECTION EQUIPMENT, COMPLETE AND READY FOR SERVICE.

2. INSTALL VIDEO DETECTION PROCESSOR UNIT(S) INSIDE CONTROLLER CABINET UNLESS OTHERWISE NOTED ON PLANS.

3. AIM THE CAMERA SO THE HORIZON IS NOT VISIBLE IN THE FIELD OF VIEW.

4. INSURE WATER -TIGHT CABLE ENTRY AND EXIT POINTS FOR CONNECTIONS.

5. CONTRACTOR TO USE MANUFACTURE'S SUPPLIED OR APPROVED CABLE, CONNECTIONS AND MOUNTING HARDWARE.

6. DETECTION SUPPLIER TO ASSIST CONTRACTOR WITH INFORMATION ON BEST MOUNTING POSITION (LOCATION ON ARM, MOUNTING HEIGHT, ETC.).

7. POWER AND VIDEO / MUTI-SENSOR CABLE PROVIDED SHALL BE AS RECOMMENDED BY THE MANUFACTURER FOR OPTIMAL VIDEO DETECTION PERFORMANCE. THE POWER AND VIDEO / MUTI-SENSOR CABLE MAY BE INSTALLED UNDER THE SAME OUTER JACKET. THE CABLES WILL BE MEASURED BY THE LINEAR FOOT, MEASURED HORIZONTALLY ALONG THE CONDUIT, MESSENGER CABLE OR MAST ARM AND VERTICALLY ALONG THE POLE.

8. SURGE PROTECTION DEVICES SHALL BE PROVIDED FOR ALL NEW OR ADDED VIDEO DETECTION DEVICES AS RECOMMENDED BY THE MANUFACTURER.

9. ALL DETECTION UNITS SHALL BE NETWORKABLE DEVICES AND BE ON THE MDOT NETWORK IF NOTED ON PLANS.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

VIDEO/ MULTI-SENSOR DETECTION INSTALLATION FOR TRAFFIC SIGNALS

PROJ. NO.:
COUNTY:

WORKING NUMBER
SHEET NUMBER PG

FILENAME: Final TSDs 3.6.2019.dgn
DESIGN TEAM ______ CHECKED ______ DATE 2019-03-06

DATE | REVISION | BY

MMDDYY 00:00AMPM DGNFILENAME

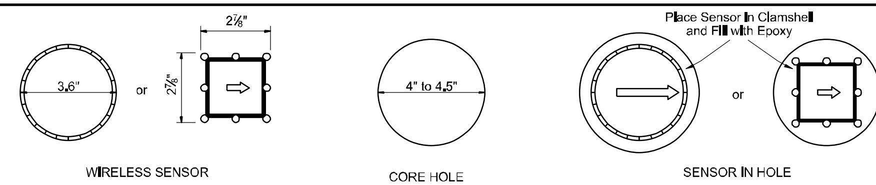
MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION PLAN

FMS CONUPDATE

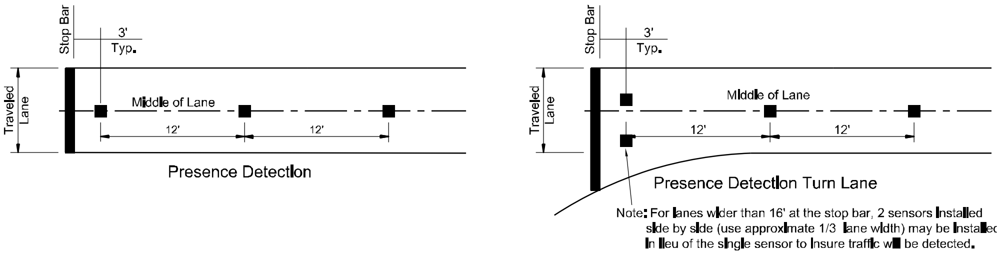
STATE	PROJECT NO.
MISS.	

VDS INSTALLATION PROCEDURE

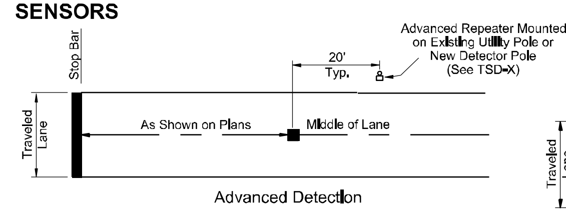
1. Prior to Installation, note sensors lane number, and location.
2. Unless otherwise specified, Install the sensor in middle of the lane.
3. Point the arrow on the sensor's label in the direction of traffic flow.
4. Core a hole at least 2.25" deep, so that when installed, the top of the sensor is at least 0.25" below the surface.
5. Make sure the sensor installs flat in the core hole and is not tilted.
6. If Multiple sensors are installed per lane, see diagram for spacing.
7. Record distances between each sensor pair.
8. Sensors to include protective plastic casing
9. Alternative Sensor Depths are also acceptable as per Engineer's directive.



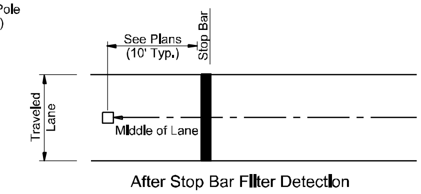
SENSORS

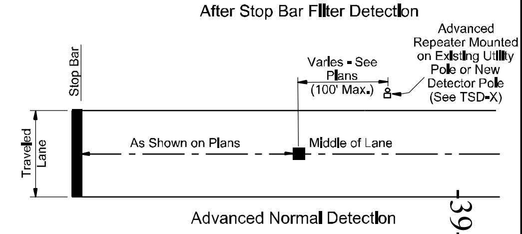


SIGNAL ACTUATION DETECTION

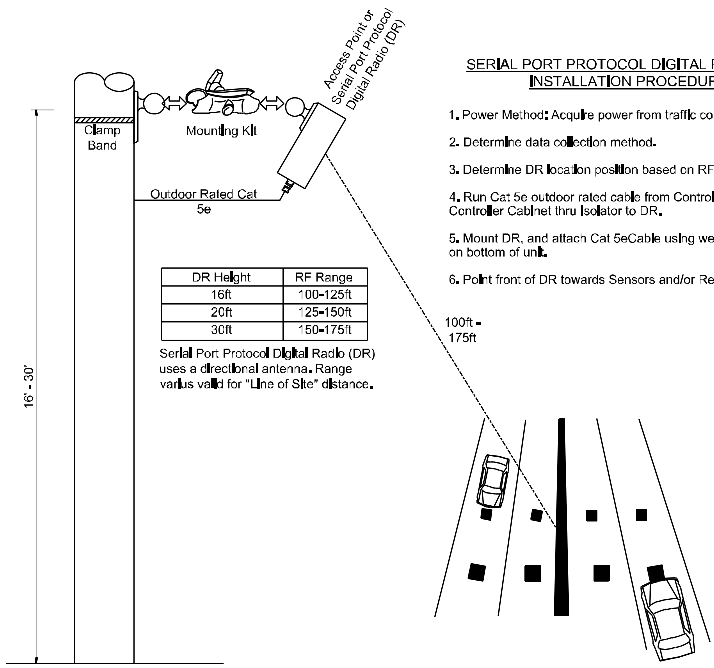


Note: Single sensors to be placed in center of travel lane. Fluid trail may help with exact location.





ADAPTIVE CONTROL DETECTION



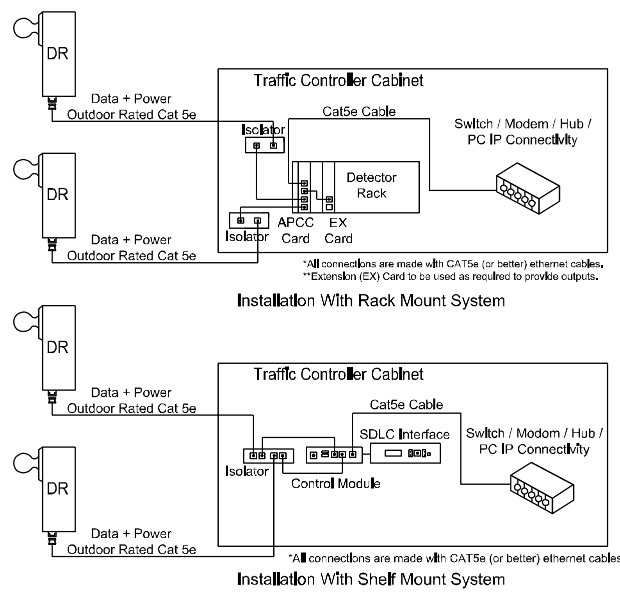
SERIAL PORT PROTOCOL DIGITAL RADIO (DR) INSTALLATION PROCEDURE

1. Power Method: Acquire power from traffic controller using Isolator.
2. Determine data collection method.
3. Determine DR location position based on RF range limitations.
4. Run Cat 5e outdoor rated cable from Control Module in Traffic Controller Cabinet thru Isolator to DR.
5. Mount DR, and attach Cat 5eCable using weatherproof connector on bottom of unit.
6. Point front of DR towards Sensors and/or Repeaters.

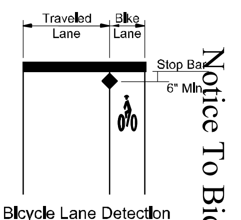
DR Height	RF Range
16ft	100-125ft
20ft	125-150ft
30ft	150-175ft

Serial Port Protocol Digital Radio (DR) uses a directional antenna. Range varius valid for "Line of Site" distance.

DIGITAL RADIO



SIGNAL CONTROLLER EQUIPMENT



Note: Position sensor at least 6" from stop bar at the edge of the bicycle lane and aimed across the bicycle lane. The sensor should point at a 45 degree angle towards oncoming traffic.

BICYCLE PRESENCE DETECTION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

WIRELESS SENSOR INSTALLATION DETAILS FOR TRAFFIC SIGNALS

PROJ. NO.:
COUNTY:

FILENAME: Final TSDs 3.6.2019.dgn
DESIGN TEAM ____ CHECKED ____ DATE 2019-03-06

WORKING NUMBER

SHEET NUMBER PG

TRAFFIC SIGNAL GENERAL NOTES

1. POLES, SIGNAL HEADS, EQUIPMENT BOXES, PULLBOXES AND CONDUIT LOCATIONS MAY BE VARIED SLIGHTLY TO FIT FIELD CONDITIONS AS DIRECTED BY THE PROJECT ENGINEER. HOWEVER, SIGNAL HEAD OR POLE LOCATIONS SHALL BE WITHIN REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND HIGHWAY DESIGN AND OPERATIONAL PRACTICES RELATED TO HIGHWAY SAFETY.

2. THE CONTRACTOR SHALL PROVIDE MAST ARM POLE DESIGN CERTIFICATION AND CALCULATIONS AS OUTLINED IN SECTION 722.02 OF STANDARD SPECIFICATIONS. DESIGN STANDARD FOR MAST ARMS POLES SHALL BE 2013 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. USE FATIGUE CATEGORY II, USE 50 YEAR DESIGN SERVICE LIFE AND DO NOT CONSIDER GALLOPING OR TRUCK-INDUCED GUSTS. WIND AND ICE LOADS VARIABLE BASED UPON MAPS IN THE 2013 AASHTO SPECIFICATION. USE UPSWEPT MAST ARMS UNLESS OTHERWISE NOTED ON PLANS. SEE TSD 3.

3. DETERMINATION OF REQUIRED SIZES, LENGTHS AND GAUGES OF TYPE I - XI STEEL POLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SECTION 722.02 OF THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED IN PLANS OR SPECIFICATIONS.

4. TRAFFIC SIGNAL MAST ARM POLES SHALL BE HOT DIPPED GALVANIZED WITH FINISH APPROVED BY THE PROJECT ENGINEER.

5. TRAFFIC SIGNAL MAST ARM POLES REQUIRING LUMINAIRES ARE DESIGNATED BY (L). ALL LUMINAIRES SHALL BE LED UNLESS OTHERWISE NOTED ON PLANS.

6. STAINLESS STEEL TAG ATTACHED TO THE POLE SHAFT USING 3/16 INCH STAINLESS STEEL POP RIVETS WITH PROPERTIES AND INFORMATION AS FOLLOWS:
   - MINIMUM 1/16 INCH THICKNESS
   - MINIMUM 1/4 INCH STAMPED LEGEND WITH FOLLOWING INFORMATION:
     – MANUFACTURER NAME
     – MONTH / YEAR OF MANUFACTURE
     – UNIQUE IDENTIFYING NUMBER FOR FUTURE MANUFACTURER REFERENCE
     – EXTERNAL PROJECT NUMBER FROM THE PLANS COVER SHEET (EXAMPLE: STP-XXXX-XX...)

   TAG TO BE INSTALLED ON SHAFT SIDE OPPOSITE THE MAINLINE HIGHWAY AND LOCATED APPROXIMATELY 48 INCHES ABOVE THE TOP OF BASE PLATE.

7. THE TOP OF THE STRAIN POLE FOUNDATION SHALL BE 6" ABOVE THE GROUND. THE CONTRACTOR SHALL PROVIDE POLES OF SUFFICIENT LENGTH PLUS 2 FEET TO PROVIDE REQUIRED VERTICAL CLEARANCE OF THE TRAFFIC SIGNAL HEADS WITHOUT EXTENDING THE FOUNDATION ABOVE THE GROUND LINE OF THE POINT WHERE THE POLE IS LOCATED, EVEN THOUGH THIS MAY BE BELOW THE FINISHED GRADE OF THE ROADWAY.

8. ALL STRAIN POLES AT AN INTERSECTION SHALL BE THE SAME DIAMETER AND UTILIZE THE SAME BOLT CIRCLE SPACING.

9. POLE FOUNDATIONS AND BASE MOUNTED CABINET FOUNDATIONS, GRADE SHALL BE ESTABLISHED TO ±3" OF EDGE OF PAVEMENT ELEVATION UNLESS APPROVED BY SIGNAL PROJECT ENGINEER.

10. TRAFFIC SIGNAL HEADS SHALL BE BLACK IN COLOR UNLESS OTHERWISE NOTED ON PLANS WITH BLACK BACK PLATES

11. PEDESTRIAN HEADS SHALL BE BLACK IN COLOR UNLESS OTHERWISE NOTED ON PLANS.

12. PEDESTRIAN PUSHBUTTONS SHALL BE EITHER STANDARD PUSHBUTTONS OR APS (ACCESSIBLE PEDESTRIAN SYSTEM) STYLE AS NOTED ON PLANS. SIGNS TO BE INCLUDED IN PAY ITEM FOR PEDESTRIAN PUSHBUTTONS AT NO ADDITIONAL COST. SIDE OF POLE LOCATIONS OF PUSHBUTTONS MAY BE FIELD ADJUSTED. PUSHBUTTON HARDWARE SHALL BE BLACK IN COLOR UNLESS OTHERWISE NOTED ON PLANS.

13. FIELD DRILL AND TAP EXISTING POLES WHERE PEDESTRIAN SIGNALS AND PUSHBUTTONS ARE REQUIRED ON PLANS. (ABSORBED ITEM).

14. TRAFFIC SIGNAL CABINETS AND CONTROLLERS SHALL BE WIRED TO PROVIDE FOR ALL PHASES INCLUDING FUTURE PHASES IN ACCORDANCE WITH THE PHASE SEQUENCE DIAGRAM.

15. ALL TRAFFIC SIGNAL CONTROLLERS SHALL BE ETHERNET READY, AND COMPATIBLE WITH MDOT'S EXISTING TRAFFIC SIGNAL MANAGEMENT SOFTWARE. ALL TRAFFIC SIGNAL CONTROLLER FIRMWARE SHALL BE CAPABLE OF DELAYING THE ONSET OF THE FLASHING YELLOW ARROW. ALL MMU'S SHALL BE ETHERNET READY, 16 CHANNEL, AND CAPABLE OF RUNNING 12 DIFFERENT MODES OF FLASHING YELLOW ARROW OPERATION. THE CONTRACTOR SHALL COORDINATE WITH MDOT FOR IP ADDRESSES ON ALL NETWORKABLE DEVICES. DEVICES INCLUDE BUT NOT LIMITED TO: CONTROLLER, MMU WITH SDLC CABLE (CONFLICT MONITOR), AND DETECTION UNITS. TRAFFIC SIGNAL CONTROLLER CABINET SHALL HAVE A 16 LOAD BAY FACILITY, REAR ACCESS DOOR, LAPTOP TRAY, AND DUAL POSITION INTERNAL LED LIGHTING. ALL TRAFFIC SIGNAL CONTROLLER CABINETS SHALL HAVE A 5 POSITION CARD RACK AND ONE 175 WATT MINIMUM POWER SUPPLY AND 4 AVAILABLE SLOTS UNLESS OTHERWISE NOTED ON PLANS. SEE 907-632.02.6.1.

16. FOR PROTECTED/PERMITTED LEFT TURN PHASING USING TYPE 2 FYA TRAFFIC SIGNAL HEADS, OPERATION SHALL BE AS FOLLOWS: THE PROTECTED PHASE OF THIS OPERATION SHALL DISPLAY A SOLID GREEN ARROW, FOLLOWED BY A SOLID YELLOW ARROW, AND ENDING WITH A SOLID RED ARROW. THE PERMITTED PORTION OF THIS OPERATION SHALL START WITH A FLASHING YELLOW ARROW, FOLLOWED BY A SOLID YELLOW ARROW, AND ENDING WITH A SOLID RED ARROW. THERE SHALL BE A DELAY (AS DIRECTED BY THE PROJECT ENGINEER) BETWEEN THE END OF THE PROTECTED PORTION OF THIS OPERATION AND THE BEGINNING OF THE PERMITTED PORTION OF THIS OPERATION. DURING THIS DELAY, THE OPPOSING PHASE THRU HEADS ARE CAPABLE OF DISPLAYING A GREEN BALL. SIGNAL CONTROLLER WITH FIRMWARE NECESSARY TO ACCOMPLISH THIS DELAY SHALL BE PROVIDED.

17. POLES AND FOUNDATIONS OF EXISTING SIGNAL INSTALLATION REMOVALS SHALL BE CUT OFF 6" BELOW GROUND, REMOVED AND AREA RESTORED TO MATCH ADJACENT SURFACE AS DIRECTED BY THE PROJECT ENGINEER.

18. ALL REMOVED EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS SPECIFIC ITEMS ARE NOTED IN THE PLANS TO BE SALVAGED AS DIRECTED BY THE PROJECT ENGINEER.

19. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ELECTRICAL SERVICE FROM THE POWER COMPANY SERVICE POINT TO THE POWER SERVICE PEDESTAL. FOR SPAN WIRE INSTALLATION, POWER SHALL RUN FROM THE POWER COMPANY SERVICE POINT AERIAL TO THE SIGNAL POLE NEAREST THE CONTROLLER, THE SERVICE SHALL THEN RUN TO THE CONTROLLER AS SHOWN ON THE PLANS. FOR MAST ARM INSTALLATION, POWER SHALL RUN FROM THE POWER COMPANY SERVICE POINT UNDERGROUND DIRECTLY TO THE POWER SERVICE PEDESTAL, THEN TO THE CONTROLLER CABINET, AS SHOWN ON THE PLANS. A DISCONNECT SHALL BE INSTALLED AT THE POWER COMPANY SERVICE POLE FOR MAST ARM INSTALLATIONS.

20. POWER SERVICE METER SHALL NOT BE MOUNTED ON THE CONTROLLER CABINET OR MAST ARM POLE SHAFTS. A SEPARATE POWER SERVICE PEDESTAL FOR MOUNTING THESE ITEMS IS REQUIRED. (SEE TSD-6 & TSD-7). BLACK CONDUCTORS SHALL BE USED FOR ALL LINE (HOT) WIRES AND WHITE CONDUCTORS SHALL BE USED FOR ALL NEUTRAL WIRES.

21. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE THE NECESSARY ARRANGEMENTS WITH THE LOCAL POWER COMPANY TO PROVIDE THE POWER SUPPLY ASSEMBLY FOR ANY NEW INSTALLATION. THE CONTRACTOR SHALL PAY FOR, AT NO COST TO THE DEPARTMENT, ALL DEPOSITS, HOOK-UP CHARGES, OR OTHER SERVICE FEES REQUIRED BY THE POWER COMPANY FOR THE ESTABLISHMENT OF NEW SERVICE. THE COST OF ALL SUCH FEES SHALL BE CONSIDERED INCIDENTAL AND ABSORBED WITHIN EXISTING PAY ITEMS. THE DEPARTMENT OR THE LOCAL AGENCY WILL BE RESPONSIBLE FOR PAYMENT OF THE MONTHLY SERVICE BILL FOR THE NEW POWER SERVICE INSTALLATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SWAP THE ELECTRICAL SERVICE ACCOUNT OVER TO THE DEPARTMENT OR LOCAL AGENCY.
WHEN ELECTRIC POWER SERVICE EXISTS AND IS USED FOR THE OPERATION OF AN EXISTING SYSTEM, THE MONTHLY SERVICE FEES SHALL CONTINUE TO BE PAID BY THE DEPARTMENT OR THE LOCAL AGENCY. IF THE EXISTING POWER SERVICE IS INTENDED FOR USE WITH A NEW SIGNAL SYSTEM, THEN ANY SERVICE CHARGE FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SIMILARLY, IF AN EXISTING POWER SERVICE IS TO BE DISCONNECTED, ANY SERVICE CHARGE FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF ALL SUCH FEES SHALL BE CONSIDERED INCIDENTAL AND ABSORBED WITHIN EXISTING PAY ITEMS.

22. WHEN CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY SIGNALS TO ACCOMMODATE ROADWAY CONSTRUCTION, IT SHALL BE PAID FOR UNDER PAY ITEM 619-H1, TRAFFIC SIGNAL, LUMP SUM, UNLESS OTHERWISE NOTED ON PLANS.

23. VEHICLE LOOP ASSEMBLIES SHALL BE INSTALLED IN THE TOP LAYER OF BINDER OR EXISTING SURFACE BEFORE THE FINAL SURFACE COURSE IS APPLIED (BASED ON 2" FINAL LIFT MAXIMUM).

24. WHEN RADAR, VIDEO , OR MULTI-SENSOR DETECTION IS USED, THE SYSTEM MAY REQUIRE BOTH STOP BAR AND ADVANCE DETECTION. TSI PLANS SHOW A GENERIC LAYOUT FOR DETECTION; DETECTOR MAY BE RELOCATED PER MANUFACTURER'S RECOMMENDATIONS. THERE SHALL BE NO EXTRA PAY FOR MOVING OF DETECTORS OTHER THAN CABLE LENGTHS. MANUFACTURER TO HAVE FACTORY REP ON SITE DURING INSTALLATIONS UNLESS CERTIFIED BY THE MANUFACTURER. DETECTION CABLE WILL BE MEASURED BY THE LINEAR FOOT, MEASURED HORIZONTALLY ALONG THE CONDUIT. MESSENGER CABLE OR MAST ARM AND VERTICALLY ALONG THE POLE. DETECTION CABLE FOR CAMERAS, THE POWER AND VIDEO CABLE MAY BE IN THE SAME JACKET.
ALL DETECTION UNITS SHALL BE NETWORKABLE DEVICES AND BE ON THE MDOT NETWORK IF NOTED ON PLANS.

25. ALL GROUNDING EQUIPMENT SHALL BE COST ABSORBED.

26. MESSENGER CABLE AND OTHER SUPPORTING DEVICES WHERE REQUIRED SHALL BE ABSORBED IN THE PAY ITEMS FOR SIGNAL CABLE.

27. THE CONTRACTOR SHALL STAKE THE LOCATION OF EACH POLE FOUNDATION AND NOTIFY THE PROJECT ENGINEER FOR CONCURRENCE IN THE LOCATION BEFORE PROCEEDING WITH THE PURCHASE OF THE POLE.

28. THE CONTRACTOR SHALL BE REQUIRED TO ADEQUATELY AND COMPLETELY COVER TRAFFIC SIGNAL HEADS DURING TIMES THAT THEY ARE NOT IN OPERATION WITH A DURABLE, OUTDOOR- HARDENED MATERIAL THAT CONTRASTS WITH THE COLOR OF THE HEAD THAT CLEARLY DESIGNATES THAT THE SIGNAL IS NOT IN "STOP AND GO" MODE. HEAD COVERS ARE TO BE APPROVED BY THE PROJECT ENGINEER.

29. A NEW TRAFFIC SIGNAL INSTALLATION SHALL BE PUT IN FLASH OPERATION FOR A PERIOD OF THREE (3) TO SEVEN (7) DAYS PRIOR TO THE ACTIVATION OF THE SIGNAL'S "STOP AND GO" OPERATION. ACTIVATION OF NEW TRAFFIC SIGNALS SHALL BE DURING A MID-WEEK WEEKDAY (TUESDAY – THURSDAY) DURING A NON-PEAK TIME AND SHALL BE COORDINATED WITH THE PROJECT ENGINEER. UPON INITIAL INSPECTION AND ACCEPTANCE TESTING OF THE NEW TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL REQUEST THE START OF THE 30 DAY BURN-IN PERIOD TO COMMENCE, AS OUTLINED IN SUBSECTION 631.03.4 OF THIS SPECIFICATION. ANY NOTED DEFICIENCIES FOUND WITHIN THAT 30 DAY PERIOD SHALL BE CORRECTED TO THE SATISFACTION OF THE PROJECT ENGINEER. THE 30 DAY BURN-IN PERIOD MUST COMMENCE WITHIN THE CONTRACT TIME, AND BEFORE SUBSTANTIAL COMPLETION OF THE PROJECT IS GRANTED.

30. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING FINAL INSPECTION MEETING WITH DISTRICT OFFICE, PROJECT OFFICE AND TRAFFIC ENGINEERING FOR SIGNAL PORTION OF THE PROJECT.

Note To Bidders No. 6725

DESIGNED BY:
DETAILED BY:
CHECKED BY:
DATE:

FMS CON: /
PROJECT NO.: -40-
COUNTY:

TRAFFIC SIGNAL GENERAL NOTES

SHEET ID
TSD-1

SHEET NO.
A001

PLAN SHEET

10/24/2024 3:49:18 PM TSD's updated 9-17-24.dgn

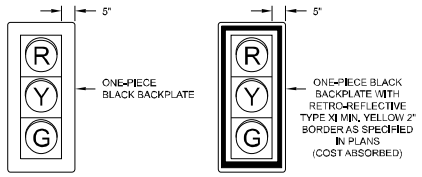
DETAIL OF TYPICAL TRAFFIC SIGNAL HEADS

TYPE 1	TYPE 2	TYPE 2 FYA	TYPE 2B FYA	TYPE 2P FYA	TYPE 3	TYPE 4	TYPE 6	TYPE 7	TYPE H	TYPE 9
R Y G	R Y G	R Y FY G	R Y/FY G BIMODAL YELLOW/YELLOW STEADY YELLOW & FLASHING ARROW IN SAME MIDDLE SECTION	R Y FY	R Y G	R Y G	COUNTDOWN TYPE LED	R Y Y G G	R R Y HAWK SIGNAL	G

NOTES:

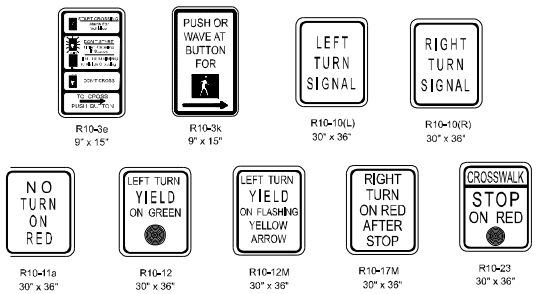
1. ALL SIGNAL HEADS SHALL BE BLACK IN COLOR UNLESS OTHERWISE NOTED ON THE PLANS.
2. ALL SIGNAL HEADS SHALL BE L.E.D. LENSES UNLESS OTHERWISE NOTED ON THE PLANS. TYPE "A" SIGNAL HEAD IS TO BE GEOMETRICALLY PROGRAMMED VIA LOUVERS.
3. LETTER "R" ON HEAD TYPES MEANS RIGHT TURN ARROW(S).
4. TYPE 6 SIGNAL HEAD SYMBOLS/NUMBERS SHALL BE FULLY ILLUMINATED (NO OUTLINE SYMBOLS ALLOWED). THERE IS A SEPARATE PAY ITEM FOR PEDESTRIAN PUSHBUTTON. PEDESTRIAN PUSHBUTTON SHALL BE FURNISHED WITH R10-3e SIGN. (COST ABSORBED).
5. ALL FYA SIGNAL HEAD SHALL BE FURNISHED WITH R10-12M SIGN.
   WHEN NOTED ON PLANS, TYPE 4 & 5 SIGNAL HEADS SHALL BE FURNISHED WITH R10-10L , R10-10R, OR R10-17M SIGN.
   TYPE 7 SIGNAL HEAD SHALL BE FURNISHED WITH R10-12 SIGN, TYPE 7 R REQUIRES NO SIGN.
   TYPE H SIGNAL HEAD SHALL BE FURNISHED WITH R10-23 SIGN WHEN INDICATED ON PLANS.
   COST OF SIGNAL SIGNS, MOUNTING BRACKETS, HARDWARE, AND LABOR SHALL BE COST ABSORBED.
6. FOR SPAN WIRE INSTALLATION, THE HOUSING FOR THE RED INDICATION OF A TYPE 7 HEAD, SHALL BE ALUMINUM.

DETAIL OF TRAFFIC SIGNAL WITH BACKPLATE



NOTE:
ALL SIGNAL HEADS SHALL INCLUDE BACKPLATES AND VISORS UNLESS OTHERWISE NOTED ON TRAFFIC SIGNAL INSTALLATION SHEETS.

DETAIL OF TYPICAL TRAFFIC SIGNAL SIGNS

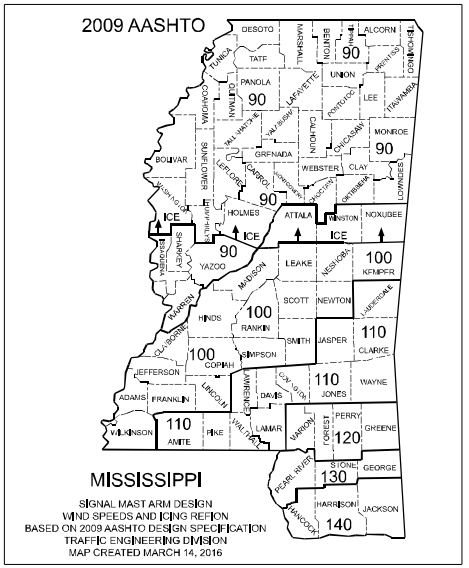


NOTES:

1. ALUMINUM SIGN BLANKS ARE TO BE ALUMINUM ALLOY 5052-H38 AND 0.10" THICK.
2. THE SIGNS SHALL BE SUPPLIED WITH MOUNTING BRACKETS AND HARDWARE AS REQUIRED.
3. NUMBER 12 PLATED JACK CHAINS SHALL BE ATTACHED TO THE BOTTOM OF ALL SPAN WIRE MOUNTED SIGNS.
4. CHAINS SHALL BE ATTACHED TO SIGN AND TETHER USING "S" HOOKS.
5. THE SIZE OF THE SIGN BLANK, LEGEND, BORDER AND THE COLOR OF THE BACKGROUND AND LEGEND IS TO CONFORM TO THE M.U.T.C.D. (LATEST EDITION).
6. REFLECTIVE SHEETING FOR TRAFFIC SIGNS SHALL BE TYPE XI PRISMATIC RETROREFLECTIVE SHEETING.

SIGNAL PLAN LEGEND

①▶	SIGNAL HEAD REQUIRED / TYPE
⑥	PEDESTRIAN HEAD REQUIRED
	EXISTING SIGNAL HEAD
	SIGN
OR □	VEHICLE LOOP DETECTOR
	QUADRAPOLE VEHICLE LOOP DETECTOR
①	VEHICLE LOOP DETECTOR NUMBER
Ⓜ	WIRELESS MAGNETOMETER SENSOR
	BASE MOUNTED CABINET FOR SIGNAL CONTROLLER
	POLE MOUNTED CABINET FOR SIGNAL CONTROLLER
	EXISTING POLE
	POLE REQUIRED
	NEW PEDESTAL POLE
	MAST ARM POLE REQUIRED
	EXISTING PULLBOX
② OR ■	PULLBOX REQUIRED (TYPE SPECIFIED ON PLAN SHEETS)
	RADAR DETECTOR (RD)
	VIDEO DETECTOR (VD)
	MULTI SENSOR DETECTOR (MS)
	OPTICAL DETECTOR UNIT
	CONDUIT
	ROLL PIPE
	LUMINAIRE
	DECORATIVE LUMINAIRE
	GROUND MOUNTED PEDESTAL SERVICE PANEL
	RADIO INTERCONNECT ANTENNA
	TWO-WAY WIRELESS ANTENNA
	WIRELESS REPEATER
CCTV	PTZ / FIXED CAMERA
P.B.	PUSH BUTTON
S.C.	SHIELDED CABLE
POW	POWER CABLE
LUM	LUMINAIRE POWER CABLE
ODC	OPTICAL DETECTOR CABLE
6c	NUMBER OF CONDUCTORS
I.C.	INTERCONNECT CABLE
RAD	RADIO COMMUNICATIONS CABLE
FO	FIBER OPTIC CABLE (72 SM)
FO DROP	FIBER DROP CABLE (12 SM)
DC	DETECTION CABLE
	STOP BAR DETECTION ZONE
	ADVANCED DETECTION ZONE



2009/2013 AASHTO WIND LOAD LIST BY COUNTY

COUNTY	BASIC WIND SPEED MPH	ICE LOADING REQD	COUNTY	BASIC WIND SPEED MPH	ICE LOADING REQD
ADAMS	100	NO	LEFLORE	90	YES
ALCORN	90	YES	LINCOLN	100	NO
AMITE	110	NO	LOWNDES	90	YES
ATTALA	100	YES	MADISON	100	NO
BENTON	90	YES	MARION	110	NO
BOLIVAR	90	YES	MARSHALL	90	YES
CALHOUN	90	YES	MONROE	90	YES
CARROLL	90	YES	MONTGOMERY	90	YES
CHICKASAW	90	YES	NESHOBA	100	NO
CHOCTAW	90	YES	NEWTON	100	NO
CLAIBORNE	100	NO	NOXUBEE	100	YES
CLARKE	110	NO	OKTIBBEHA	90	YES
CLAY	90	YES	PANOLA	90	YES
COAHOMA	90	YES	Pearl River	130	NO
COPIAH	90	NO	PERRY	120	NO
COVINGTON	110	NO	PIKE	110	NO
DESOTO	90	YES	PONTOTOC	90	YES
FORREST	120	NO	PRENTISS	90	YES
FRANKLIN	100	NO	QUITMAN	90	YES
GEORGE	130	NO	RANKIN	100	NO
GREENE	120	NO	SCOTT	100	NO
GRENADA	90	YES	SHARKEY	90	NO
HANCOCK	140	NO	SIMPSON	100	NO
HARRISON	140	NO	SMITH	100	NO
HINDS	100	NO	STONE	130	NO
HOLMES	90	YES	SUNFLOWER	90	YES
HUMPHREYS	90	YES	TALLAHATCHIE	90	YES
ISSAQUENA	90	NO	TATE	90	YES
ITAWAMBA	90	YES	TIPPAH	90	YES
JACKSON	140	NO	TISHOMINGO	90	YES
JASPER	110	NO	TUNICA	90	YES
JEFFERSON	100	NO	UNION	90	YES
Jefferson Davis	110	NO	WALTHALL	110	NO
JONES	110	NO	WARREN	90	NO
KEMPER	100	NO	WASHINGTON	90	YES
LAFAYETTE	90	YES	WAYNE	110	NO
LAMAR	120	NO	WEBSTER	90	YES
LAUDERDALE	110	NO	WILKINSON	100	NO
LAWRENCE	110	NO	WINSTON	100	YES
LEAKE	100	NO	YALOBUSHA	90	YES
LEE	90	YES	YAZOO	90	NO

DEPARTMENT OF TRANSPORTATION MISSISSIPPI

MDOT MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DESIGNED BY:
DETAILED BY:
CHECKED BY:
DATE:

FMS CON: /
PROJECT NO.:
COUNTY:

-41-

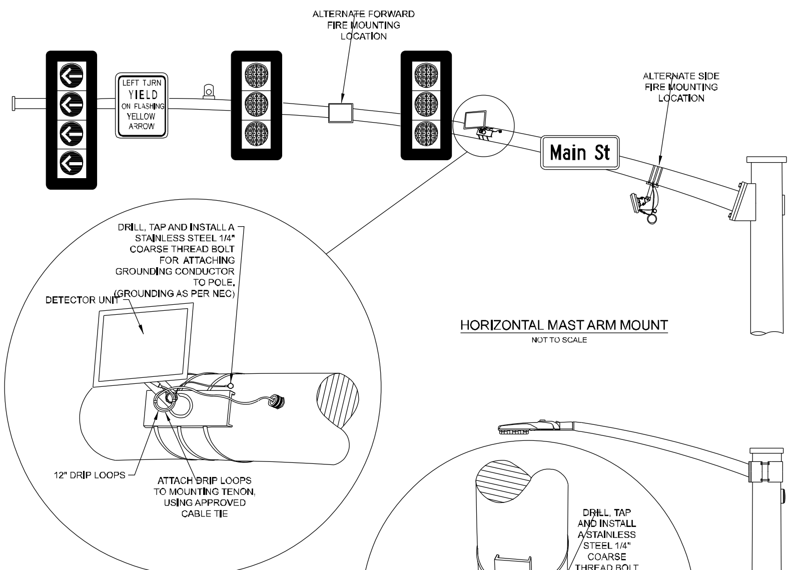
Notice To Bidders No. 6725 - Cont...

SHEET ID
TSD-2

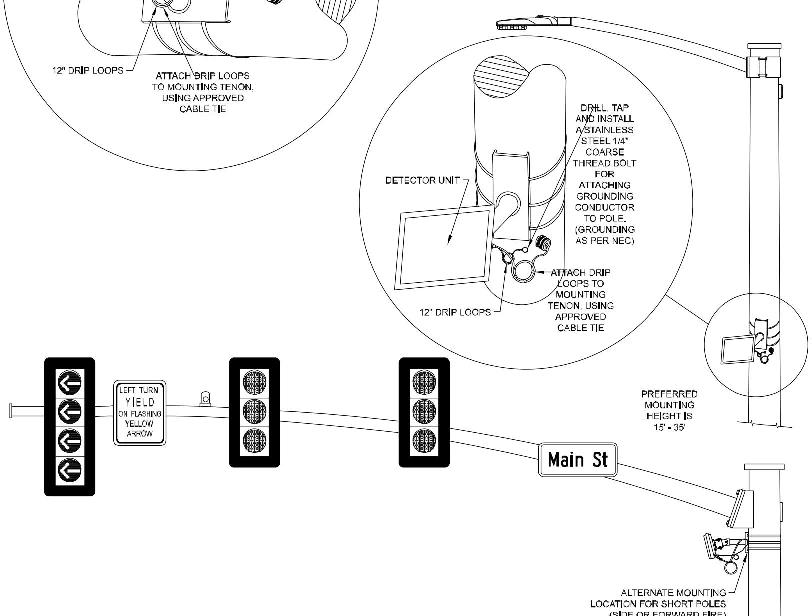
SHEET NO.
A002

PLAN SHEET

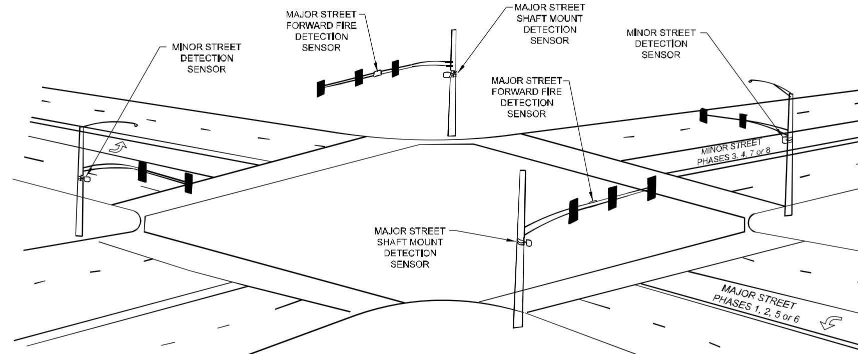
10/24/2024 3:49:18 PM TSD's updated 9-17-24.dgn



HORIZONTAL MAST ARM MOUNT
NOT TO SCALE



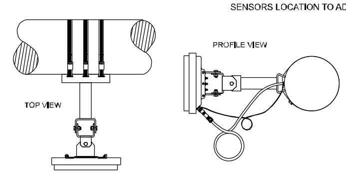
VERTICAL SIGNAL SHAFT MOUNT
NOT TO SCALE



TYPICAL INTERSECTION LAYOUT
NOT TO SCALE

NOTE:
SENSORS LOCATION TO ADJUSTED AS PER MANUFACTURERS RECOMMENDATIONS.

PELCO PART NO.:
SP-4156



SENSOR MOUNTING BRACKET DETAILS
NOT TO SCALE

GENERAL NOTES:

1. THIS DETAIL SHEET IS GENERIC. SIGNAL RADAR VEHICLE DETECTION (SRVD) SHALL BE INSTALLED AT LOCATIONS USING MOUNTING HARDWARE AS PER MANUFACTURERS RECOMMENDATIONS.

2. SIGNAL RADAR VEHICLE DETECTION (SRVD) SHALL PROVIDE TRAFFIC PARAMETERS NECESSARY TO THE TRAFFIC SIGNAL CONTROLLER OPERATION FOR VEHICLE DETECTION. DETECTION SHALL EITHER BE STOP BAR OR ADVANCED. ALL SIGNAL RADAR VEHICLE DETECTION SHALL BE SUPPLIED FROM THE SAME MANUFACTURER PER CONSTRUCTION PROJECT.

3. FOR ADVANCE DETECTION, CONTRACTOR SHALL MAXIMIZE SIZE OF ADVANCED DETECTION ZONE AND CONFIGURE FOR CONTINUOUS DILEMMA / DECISION ZONE PROTECTION - LOCATION ON AN APPROACH WHERE, BASED ON SPEED, IT IS UNKNOWN IF A VEHICLE WILL MAKE THE DECISION TO STOP OR GO IF THE SIGNAL TURNS YELLOW. ADVANCE DETECTORS SHALL BE SET UP WITH A PRIORITY CHANNEL AND SET THE DISCOVERY THRESHOLD AT AN ADEQUATE LEVEL TO DISTINGUISH BETWEEN LARGER VEHICLES (I.E.: SEMI-TRUCKS, BUSES, ETC.) AND SMALLER PASSENGER VEHICLES. A SEPARATE CHANNEL SHALL BE SET TO SET UP A QUEUE FLUSH ZONE. ALL PARAMETERS SHALL BE APPROVED BY THE PROJECT ENGINEER.

4. TYPE 1 SRVD SHALL BE USED FOR BASIC VEHICLE DETECTION AT SIGNALIZED INTERSECTIONS. TYPE 2 SRVD SHALL HAVE ALL OF THE FUNCTIONALITY OF THE TYPE 1 SRVD WITH ADDITIONAL FEATURES OF UTILIZING A MATRIX OF RADAR SIGNALS FOR TWO-DIMENSIONAL COVERAGE AND SHALL TRACK VEHICLES THROUGH EACH TYPE OF DETECTION'S SPECIFIED AREA OF COVERAGE. THE TYPE 2 SRVD SHALL REPORT REAL-TIME DETECTION OF BOTH MOVING AND STOPPED VEHICLES.

5. THE SRVD STOP BAR MICROWAVE SHALL OPERATE IN THE 24.0 TO 24.25 GHZ FREQUENCY BAND. THE ADVANCE RADAR HAS THE OPTION TO EITHER BE IN THE 24 GHZ BAND OR IN THE 10.5 GHZ BAND. NEITHER STOP BAR NOR ADVANCED RADAR SHALL INTERFERE WITH ANY EXISTING OR PROPOSED TRAFFIC SIGNAL CONTROL AND INTELLIGENT TRANSPORTATION SYSTEM (ITS) EQUIPMENT. SHOULD FREQUENCIES OF OTHER ITS EQUIPMENT BE IN THE SAME BAND, OR CONFLICT WITH DETECTION, THE CONTRACTOR SHALL MOVE AND SPACE THE LESS CRITICAL ITS DEVICE, AS DESIGNATED BY THE PROJECT ENGINEER SO AS NOT TO INTERFERE WITH VEHICLE DETECTION.

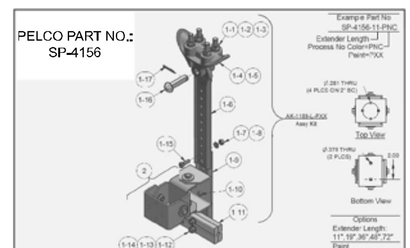
6. THE RADAR UNITS SHALL OPERATE IN ALL WEATHER CONDITIONS AND COMPLY WITH THE APPLICABLE STANDARDS STATED IN THE NEMA TS 2-2003 STANDARD FOR SHOCK, VIBRATION, AND TEMPERATURE. ALL UNITS SHALL BE RATED FOR UP TO 95% RELATIVE HUMIDITY, NON-CONDENSING.

7. THE RADAR UNITS SHALL BE FCC CERTIFIED UNDER CFR 47, PART 15.

8. ALL BOLTS, NUTS AND WASHERS SHALL BE 304, OR 316 STAINLESS STEEL UNLESS NOTED OTHERWISE.

9. ALL DETECTION UNITS SHALL BE NETWORKABLE DEVICES AND BE ON THE MDOT NETWORK IF NOTED ON PLANS.

PELCO PART NO.:
SP-4156



ITEM	PART NUMBER	DESCRIPTION	QTY
1	AK-1189-11-PXX	Assy Kit, Span Wire Clamp w/ 10 Hole Extender Connector, 11" Extender & Stabilizer, Alum	1
1-1	FS-1305-SS	Nut, Hex 1/2"-13, Type 304 Stainless	4
1-2	FS-2507-SS	U-Bolt, 1/2"-13 x 2-1/8" x 49/64" x 1-3/8", Type 304 Stainless	2
1-3	FS-4202-SS	Lock Washer, Split, 1/2", Type 304 Stainless	4
1-4	SE-4064-M2	Clamp Body, Span Wire, 1/2" Wide w/ Stainless Bushing, Alum	1
1-5	SE-0462-M1	Cable Bar, Span Wire Clamp, Alum	1
1-6	SE-0536-M2	Hanger, Extender Connector, 10 Hole w/ Stainless Bushing, 535 Alum	1
1-7	FS-1301-SS	Nut, Hex 5/16"-18, Type 304 Stainless	4
1-8	FS-4201-SS	Lock Washer, Split, 5/16", Type 304 Stainless	4
1-9	SE-0507-11	Extender w/ Holes, 11" Long, Alum	1
1-10	FS-2319-SS	Bolt, Hex Hd, 5/16"-18 x 1-1/4", Type 304 Stainless	2
1-11	SE-4234-M2	Bar, Universal Stabilizer, 2" x 6", for 1/4" to 1/2" Dia Cable & 3/8" Hardware, Alum	2
1-12	FS-2310-SS	Bolt, Hex Hd, 3/8"-16 x 2-1/4", Type 304 Stainless	2
1-13	FS-1303-SS	Nut, Hex 3/8"-16, Type 304 Stainless	2
1-14	FS-4205-SS	Lock Washer, Split, 3/8", Type 304 Stainless	2
1-15	FS-2306-SS	Bolt, Hex Hd, 5/16"-18 x 1", Type 304 Stainless	2
1-16	FS-6300-SS	Pin, Clevis 5/8" X 2-1/4", Stainless	1
1-17	FS-6100-SS	Pin, Cotter, Humped, 5/32" X 1.775", 304 Stainless	1
2	SH-0568-PXX	Bracket, Wavetronix Radar Mount, 3-Piece, Alum	1

SPAN WIRE ADVANCE SENSOR MOUNTING BRACKET DETAILS
NOT TO SCALE

MDOT
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

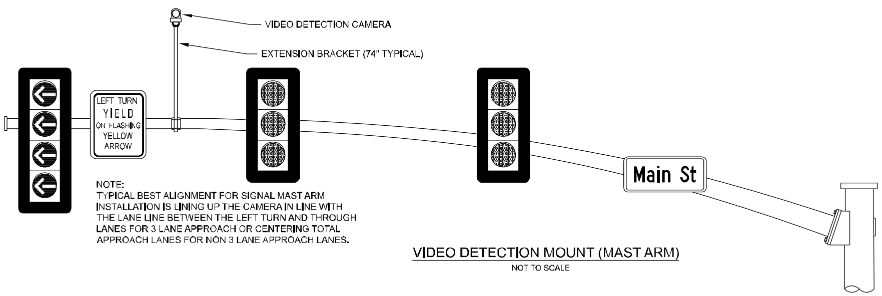
DESIGNED BY:
DETAILED BY:
CHECKED BY:
DATE:

FMS CON: /
PROJECT NO.:
COUNTY:

SRVD RADAR INSTALLATION
FOR TRAFFIC SIGNALS

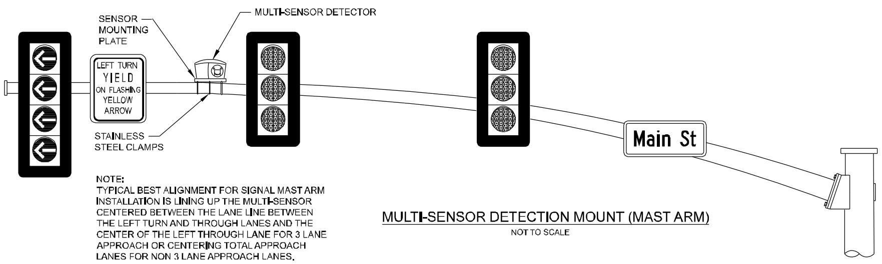
SHEET ID
TSD-SR-C

SHEET NO.
A017



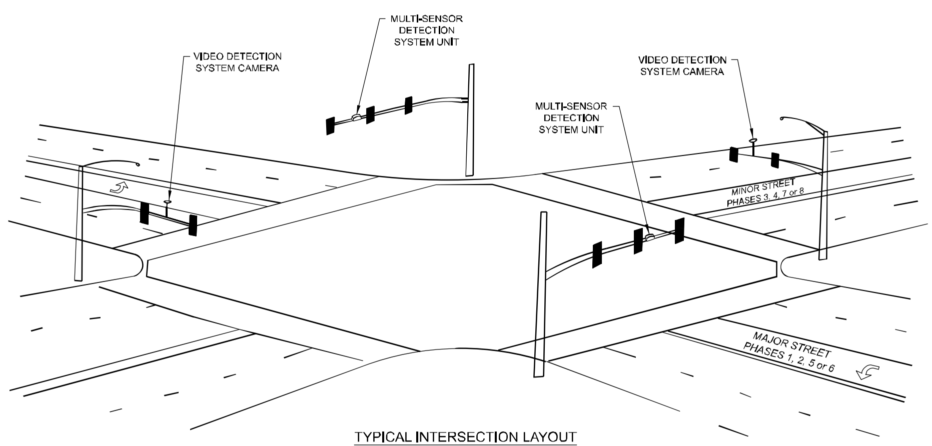
NOTE:
TYPICAL BEST ALIGNMENT FOR SIGNAL MAST ARM INSTALLATION IS LINING UP THE CAMERA IN LINE WITH THE LANE LINE BETWEEN THE LEFT TURN AND THROUGH LANES FOR 3 LANE APPROACH OR CENTERING TOTAL APPROACH LANES FOR NON 3 LANE APPROACH LANES.

VIDEO DETECTION MOUNT (MAST ARM)
NOT TO SCALE



NOTE:
TYPICAL BEST ALIGNMENT FOR SIGNAL MAST ARM INSTALLATION IS LINING UP THE MULTI-SENSOR CENTERED BETWEEN THE LANE LINE BETWEEN THE LEFT TURN AND THROUGH LANES AND THE CENTER OF THE LEFT THROUGH LANE FOR 3 LANE APPROACH OR CENTERING TOTAL APPROACH LANES FOR NON 3 LANE APPROACH LANES.

MULTI-SENSOR DETECTION MOUNT (MAST ARM)
NOT TO SCALE

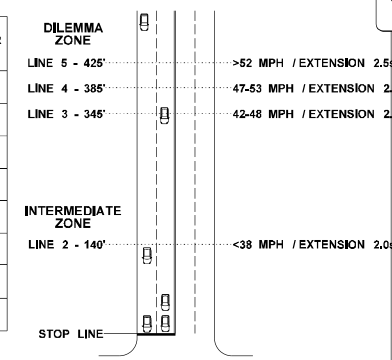


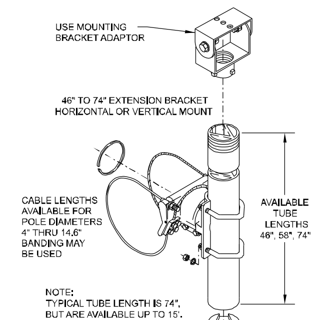
TYPICAL INTERSECTION LAYOUT
NOT TO SCALE

TRIP LINE ID	SPEED (MPH)	TRIP LINE DISTANCE (FT)	TRIP LINE WIDTH (FT)	SPEED THRESHOLD (MPH)	EXTENSION (SECONDS)	CONTROLLER SETTINGS
Dilemma Radar Zone Settings						
5	55	425	+/-20	>52	2.5	Call + Ext
4	50	385	+/-20	47-53	2.5	Call + Ext
3	45	345	+/-20	42-48	2.4	Call + Ext
Intermediate Radar Zone Settings						
2	Low Speed	140	+/-20	<38	2.0	Call + Ext
Video Stop Bar Detection Zone Settings						
All - Each Lane 40' Zone 0 Extension						Call

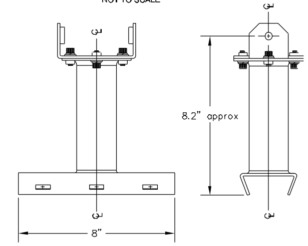
ADVANCED DETECTION DILEMMA ZONE SETTINGS

NOTES:
1. RED EXTENSION IS NOT REQUIRED.
2. CONTRACTOR SHALL SET UP THE ZONES ABOVE AS PER MANUFACTURER'S RECOMMENDATIONS, TO BE APPROVED BY PROJECT ENGINEER.
3. THESE SET UP PARAMETERS ARE AVAILABLE AS A DEFAULT PROGRAM THAT CAN BE UPLOADED TO THE PROCESSOR.





VIDEO DETECTION EXTENSION BRACKET
NOT TO SCALE



TYPICAL CAMERA MOUNTING BRACKET
NOT TO SCALE

GENERAL NOTES:
1. TYPE 1 VIDEO VEHICLE DETECTION (VVD) WILL PROVIDE PRESENCE OR PULSE DETECTION OF VEHICLES, BICYCLES, AND PEDESTRIANS FOR TRAFFIC SIGNAL CONTROLLER INPUTS. THERE ARE TWO VARIATIONS OF TYPE 1 VIDEO VEHICLE DETECTION: TYPE 1A CAMERA WITH INDEPENDENT VIDEO DETECTION PROCESSOR, TYPE 1B A SINGLE INTEGRATED CAMERA WITH VIDEO DETECTION PROCESSOR. THE WORK SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO FURNISH, INSTALL, AND TEST THE VIDEO VEHICLE DETECTION EQUIPMENT, COMPLETE AND READY FOR SERVICE.

TYPE 2 VIDEO VEHICLE DETECTION (VVD) WILL PROVIDE PRESENCE OR PULSE DETECTION OF VEHICLES, BICYCLES, AND PEDESTRIANS FOR TRAFFIC SIGNAL CONTROLLER INPUTS. TYPE 2 VIDEO VEHICLE DETECTION SHALL BE DESIGNED TO BE SPAN WIRE MOUNTED. THE WORK SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO FURNISH, INSTALL, AND TEST THE VIDEO VEHICLE DETECTION EQUIPMENT, COMPLETE AND READY FOR SERVICE.

THE MULTI-SENSOR VEHICLE DETECTION (MSVD) WILL PROVIDE DETECTION OF VEHICLES ON A ROADWAY USING A MULTI-SENSOR DETECTION FOR TRAFFIC SIGNAL CONTROLLER INPUTS. THE MULTI-SENSOR SHALL UTILIZE TWO (2) DIFFERENT SENSORS OF DIFFERENT TECHNOLOGIES, VIDEO IMAGING AND RADAR, TO DETECT AND TRACK VEHICLES. THE MODULE SHALL PROCESS INFORMATION FROM BOTH VIDEO IMAGING AND RADAR SENSORS SIMULTANEOUSLY IN REAL-TIME. THE WORK SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO FURNISH, INSTALL, AND TEST THE MULTI-SENSOR VEHICLE DETECTION EQUIPMENT, COMPLETE AND READY FOR SERVICE.

2. INSTALL VIDEO DETECTION PROCESSOR UNIT(S) INSIDE CONTROLLER CABINET UNLESS OTHERWISE NOTED ON PLANS.

3. AIM THE CAMERA SO THE HORIZON IS NOT VISIBLE IN THE FIELD OF VIEW.

4. INSURE WATER -TIGHT CABLE ENTRY AND EXIT POINTS FOR CONNECTIONS.

5. CONTRACTOR TO USE MANUFACTURE'S SUPPLIED OR APPROVED CABLE, CONNECTIONS AND MOUNTING HARDWARE.

6. DETECTION SUPPLIER TO ASSIST CONTRACTOR WITH INFORMATION ON BEST MOUNTING POSITION (LOCATION ON ARM, MOUNTING HEIGHT, ETC.).

7. POWER AND VIDEO / MUTI-SENSOR CABLE PROVIDED SHALL BE AS RECOMMENDED BY THE MANUFACTURER FOR OPTIMAL VIDEO DETECTION PERFORMANCE. THE POWER AND VIDEO / MUTI-SENSOR CABLE MAY BE INSTALLED UNDER THE SAME OUTER JACKET. THE CABLES WILL BE MEASURED BY THE LINEAR FOOT, MEASURED HORIZONTALLY ALONG THE CONDUIT, MESSENGER CABLE OR MAST ARM AND VERTICALLY ALONG THE POLE.

8. SURGE PROTECTION DEVICES SHALL BE PROVIDED FOR ALL NEW OR ADDED VIDEO DETECTION DEVICES AS RECOMMENDED BY THE MANUFACTURER.

9. ALL DETECTION UNITS SHALL BE NETWORKABLE DEVICES AND BE ON THE MDOT NETWORK IF NOTED ON PLANS.

MDOT
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

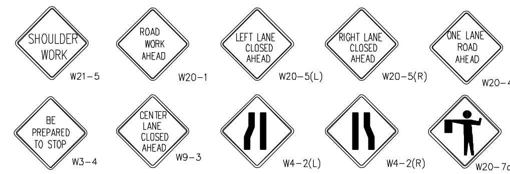
DESIGNED BY:
DETAILED BY:
CHECKED BY:
DATE:
FMS CON: /
PROJECT NO.:
COUNTY:

VIDEO / MULTI-SENSOR DETECTION INSTALLATION FOR TRAFFIC SIGNALS

SHEET ID TSD-2V-B
SHEET NO. A019

TRAFFIC CONTROL PLAN
(TYPICAL SIGNAL INSTALLATION)

SIGN LEGEND



GENERAL NOTES:

1. ADDITIONAL ADVANCE WARNING SIGNS MAY BE NECESSARY, ANY ADDITIONAL SIGNS SHOULD BE INCLUDED UNDER PAY ITEM 618-A, MAINTENANCE OF TRAFFIC.

2. POST MOUNTED SIGNS SHALL HAVE A 7' MINIMUM MOUNTING HEIGHT.

3. PAYMENT FOR ALL SIGNS, CONES, DRUMS, CONCRETE BARRIERS, STEEL PLATES AND OTHER MATERIALS, BARRICADES, LABOR AND INCIDENTALS REQUIRED TO IMPLEMENT THE TRAFFIC CONTROL PLAN SHALL BE INCLUDED UNDER PAY ITEM 618-A, MAINTENANCE OF TRAFFIC.

4. APPROACH SIDE TRAFFIC CONTROL TO BE USED WHEN WORK OCCURS ON EITHER THE APPROACH SIDE OR THE FAR SIDE OF THE INTERSECTION. FAR SIDE TRAFFIC CONTROL IS NOT NEEDED WHEN WORK IS CONFINED TO THE APPROACH SIDE ONLY.

5. FOR A DIVIDED HIGHWAY SITUATION, A SECOND SET OF ADVANCE WARNING SIGNS SHALL BE ERECTED IN MEDIAN AREA (8' MIN. MEDIAN WIDTH REQUIRED).

LEGEND

○ DRUMS (30' MAXIMUM SPACING) - CONES SHALL BE NARROW PROFILE WITH A MINIMUM HEIGHT OF 28 INCHES AND A MINIMUM WEIGHT OF TEN (10) POUNDS. CONES USED IN SPEED ZONES EQUAL TO OR GREATER THAN 45 MPH SHALL BE NARROW PROFILE WITH A MINIMUM HEIGHT OF 28 INCHES AND A MINIMUM WEIGHT OF FIFTEEN (15) POUNDS, ALL CONES SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.

W20-1 SIGNS - SEE SIGN LEGEND MIN. SIZE 48" x 48", BLACK ON ORANGE BACKGROUND

FLAGGER WITH PADDLE - 18" STOP/SLOW PADDLES ACCEPTED AS PROPER TRAFFIC CONTROL DEVICES SHALL BE USED, HAND HELD FLAGS SHALL NOT BE FOR FLAGGING OPERATION.

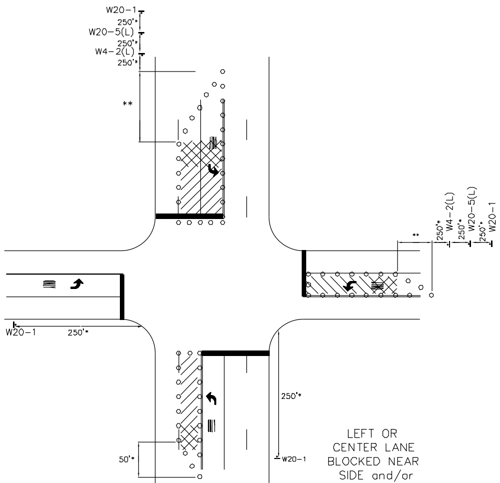
WORK AREA

BUFFER AREA

* CONSIDERED MINIMUM DISTANCE - ENGINEER TO DETERMINE APPROPRIATE SPACING IN THE FIELD

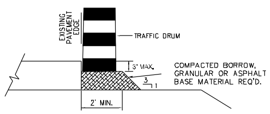
**

SPEED LIMIT M.P.H.	BUFFER FEET	TAPER LENGTH (Feet) (Per 12' Lane Shift)
20	115	80
25	155	125
30	200	180
35	250	245
40	305	320
45	360	540
50	425	600
55	495	660
60	570	720
65	645	780
70	730	840



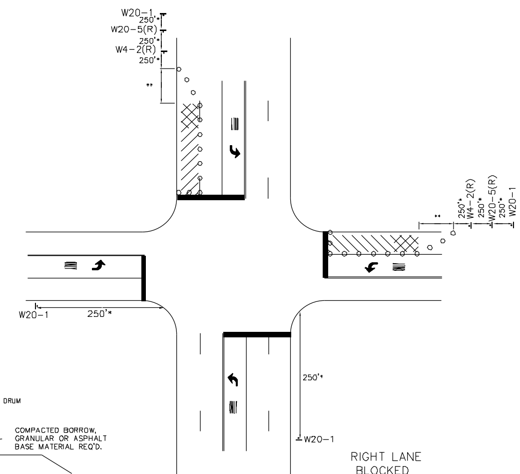
LEFT OR CENTER LANE BLOCKED NEAR SIDE and/or FAR SIDE

(NOT TO SCALE)



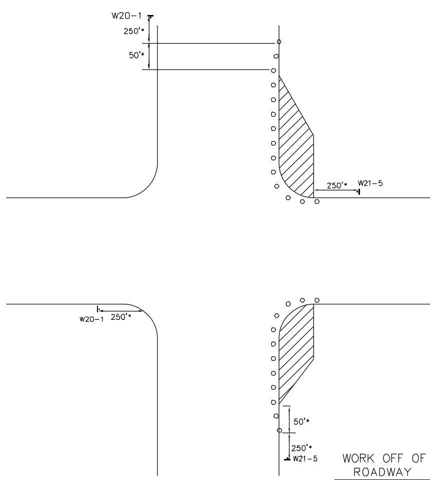
DRUM PLACEMENT ON LOW SHOULDERS OR WIDENING

CONTRACTOR SHALL PLACE PLASTIC DRUMS ADJACENT TO ROADWAY IN AREAS WHERE THE WIDENING HAS NOT BEEN CONSTRUCTED TO WITHIN TWO INCHES OF EXISTING PAVEMENT ELEVATIONS. DRUMS REQUIRED WHERE WORK ZONE INCLUDES UNDERCUT SHOULDER AND REMOVAL OF CURB & GUTTER. DRUMS TO BE PLACED AS SHOWN IN DETAILS. LEFT FOR NIGHT OPERATION OR SUSPENSIONS OF WORK. COST TO BE ABSORBED (UNDER PAY ITEM 618-A).



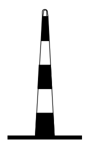
RIGHT LANE BLOCKED

(NOT TO SCALE)



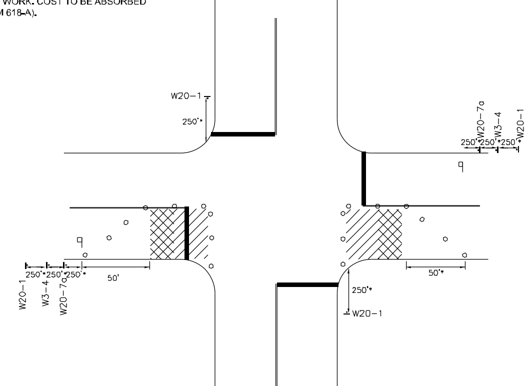
WORK OFF OF ROADWAY

(NOT TO SCALE)



TRAFFIC CONE

CONES SHALL BE NARROW PROFILE WITH A MINIMUM HEIGHT OF 28 INCHES AND A MINIMUM WEIGHT OF TEN (10) POUNDS. CONES USED IN SPEED ZONES EQUAL TO OR GREATER THAN 45 MPH SHALL BE NARROW PROFILE WITH A MINIMUM HEIGHT OF 28 INCHES AND A MINIMUM WEIGHT OF FIFTEEN (15) POUNDS. ALL CONES SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.



ONE LANE OPERATION

(NOT TO SCALE)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

MDOT

DESIGNED BY:

DETAILED BY:

CHECKED BY:

DATE:

FMS CON: /

PROJECT NO.:

COUNTY:

SHEET ID TSP-10

SHEET NO. A025

Mill & Overlay approximately 4 miles of SR 15 from Queen Street to north of Audubon Drive, known as State Project No. SP-0022-01(087) / 108240301 in Jones County.

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
			Roadway Items		
0010	201-D001		19	Station	Random Clearing
0020	202-B007		600	Square Yard	Removal of Asphalt Pavement, All Depths
0030	202-B063		18	Square Yard	Removal of Concrete Paved Ditch
0040	202-B073		407	Square Yard	Removal of Concrete Pavement, All Depths
0050	202-B088		824	Linear Feet	Removal of Curb & Gutter, All Types
0060	202-B158		500	Linear Feet	Removal of Guard Rail, Including Rails, Posts and Terminal Ends
0070	202-B191		104	Linear Feet	Removal of Pipe, 8" And Above
0080	202-B240		936	Linear Feet	Removal of Traffic Stripe
0090	206-A001	(S)	162	Cubic Yard	Structure Excavation
0100	206-B001	(E)	15	Cubic Yard	Select Material for Undercuts, Contractor Furnished, FM
0110	221-A001	(S)	4	Cubic Yard	Concrete Paved Ditch
0120	406-D001		194,200	Square Yard	Fine Milling of Bituminous Pavement, All Depths
0130	407-A001	(A2)	19,500	Gallon	Asphalt for Tack Coat
0140	503-C010		524	Linear Feet	Saw Cut, Full Depth
0150	601-B001	(S)	7	Cubic Yard	Class "B" Structural Concrete, Minor Structures
0160	603-CA011	(S)	104	Linear Feet	18" Reinforced Concrete Pipe, Class III
0170	604-A001		1,100	Pounds	Castings
0180	604-B001		500	Pounds	Gratings
0190	606-B003		200	Linear Feet	Guard Rail, Class A, Type 1, 'W' Beam, Metal Post
0200	606-E005		4	Each	Guard Rail, Terminal End Section, Flared
0210	606-G002		4	Each	Special Sections, Guard Rail Bridge End Connector
0220	609-D012	(S)	824	Linear Feet	Combination Concrete Curb and Gutter Type 3A Modified
0230	614-A001	(S)	130	Square Yard	Concrete Driveway, Without Reinforcement
0240	618-B001		10	Square Feet	Additional Construction Signs [$10.00]
0250	619-A1001		14	Mile	Temporary Traffic Stripe, Continuous White
0260	619-A2001		15	Mile	Temporary Traffic Stripe, Continuous Yellow
0270	619-A3001		17	Mile	Temporary Traffic Stripe, Skip White
0280	619-A4002		10	Mile	Temporary Traffic Stripe, Skip Yellow
0290	619-A5001		33,000	Linear Feet	Temporary Traffic Stripe, Detail
0300	619-A6002		7,600	Linear Feet	Temporary Traffic Stripe, Legend
0310	620-A001		1	Lump Sum	Mobilization
0320	630-F006		18	Each	Delineators, Guard Rail, White

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
0330	630-G005		4	Each	Type 3 Object Markers, OM-3R or OM-3L, Post Mounted
0340	907-403-A004	(BA1)	200	Ton	19-mm, HT, Asphalt Pavement
0350	907-403-A014	(BA1)	1,900	Ton	9.5-mm, MT, Asphalt Pavement
0360	907-403-D007	(BA1)	15,559	Ton	9.5-mm, HT, Asphalt Pavement, Polymer Modified
0370	907-405-A001	(BA1)	1,675	Ton	Stone Matrix Asphalt, 9.5 mm Mixture
0380	907-618-A001		1	Lump Sum	Maintenance of Traffic
0390	907-626-A007		9	Mile	6" Thermoplastic Double Drop Traffic Stripe, Skip White
0400	907-626-C012		8	Mile	6" Thermoplastic Double Drop Edge Stripe, Continuous White
0410	907-626-D003		5	Mile	6" Thermoplastic Double Drop Traffic Stripe, Skip Yellow
0420	907-626-E003		7	Mile	6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow
0430	907-626-G006		21,200	Linear Feet	Thermoplastic Double Drop Detail Stripe, White
0440	907-626-G007		11,400	Linear Feet	Thermoplastic Double Drop Detail Stripe, Yellow
0450	907-626-H002		6	Each	Thermoplastic Legend, Interstate Shield
0460	907-626-H006		7,600	Square Feet	Thermoplastic Double Drop Legend, White
0470	907-626-H007		7,600	Linear Feet	Thermoplastic Double Drop Legend, White
0480	907-627-J001		1,300	Each	Two-Way Clear Reflective High Performance Raised Markers
0490	907-627-K001		2,700	Each	Red-Clear Reflective High Performance Raised Markers
0500	907-627-L001		2,800	Each	Two-Way Yellow Reflective High Performance Raised Markers
0510	907-627-P001		30	Each	Two-Way Blue Reflective High Performance Raised Markers
0512	907-632-D001		7	Each	Solid State Traffic Actuated Controller, Type 1
0514	907-632-G001		4	Each	Malfunction Management Unit
0520	907-634-F002		3	Each	Detector Pole with Foundation, 35' Pole
0530	907-634-PP001		4	Each	Luminaire Fixture and Arm, Per Plans
0540	907-636-B003		725	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 10, 2 Conductor
0550	907-641-A002		24	Each	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2
0560	907-641-B002		12	Each	Signal Advanced Radar Vehicle Detection Sensor, Type 2
0570	907-641-D001		5,934	Linear Feet	Radar Vehicle Detection Cable
0580	907-641-F002		6	Each	Signal Radar Vehicle Detection Processor, Type 2
0590	907-643-B001		2,351	Linear Feet	Video Vehicle Detection Cable
0600	907-643-C003		4	Each	Video Vehicle Detection Processor, Type 2
0610	907-643-E001		8	Each	Multi-Sensor Vehicle Detection Sensor
			ALTERNATE GROUP AA NUMBER 1		
0620	304-F002	(GT)	138	Ton	Size 610 Crushed Stone Base
			ALTERNATE GROUP AA NUMBER 2		

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
0630	304-F003	(GT)	138	Ton	Size 825B Crushed Stone Base
			ALTERNATE GROUP BB NUMBER 1		
0640	907-624-A002		736	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Skip White
0650	907-624-B002		368	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White
0660	907-624-D002		368	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow
			ALTERNATE GROUP BB NUMBER 2		
0670	907-628-G003		736	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Skip White
0680	907-628-H005		368	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Continuous White
0690	907-628-J003		368	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Continuous Yellow