

LOG OF PROJECT
M-37 Shoulder Paving
Lake County
CS 43012
Page 1 of 5

PROJECT LOCATION

This project begins on M-37 at the north approach of 1 Mile Rd. The point of beginning is station 232+06 (CS 43012, C.S.M.P. 4.218). The project continues northerly along M-37 to a point 1000' north East End Dr. The point of ending is Station 258+25(CS 43012, C.S.M.P. 4.697. This project length is 0.479 miles.

PROJECT DESCRIPTION

This work is being bid out by the Lake County Road Commission on behalf of the Michigan Department of Transportation. This project provides for 0.479 miles of aggregate base course and shoulder paving, along M-37 through Peacock Township, Lake County.

PROGRESS CLAUSE

Start work within 10 days after receiving the notice of award or contract or as approved by MDOT project staff. In no case shall work commence prior to receipt of formal notice of award.

The entire project shall be completed on or before September 11, 2026

ITEMS OF WORK

Trenching, Aggregate Base Course and HMA Approach

In accordance with the typical cross sections, special details, Standard Plans, and the 2020 Standard Specifications for Construction, trench existing shoulder, place aggregate base, 4 inch and HMA approach.

Trenching	16	Sta
Aggregate Base, 4 inch	1,332	Syd
HMA Approach	220	Ton

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MAINTAINING TRAFFIC

Maintain traffic in accordance with the SPECIAL PROVISION FOR MAINTAINING TRAFFIC and as directed by the Engineer.

Channelizing Device, 42 inch, Fluorescent, Furn	60	Ea
Channelizing Device, 42 inch, Fluorescent, Oper	60	Ea
Traf Regulator Control	1	LSUM
Sign, Type B, Temp, Prismatic, Furn	328	Sft
Sign, Type B, Temp, Prismatic, Oper	328	Sft
Connected Arrow Board, Type C, Furn	2	Ea
Connected Arrow Board, Type C, Oper	2	Ea

The following quantities are provided for information only. Actual quantities will be paid for per the 2020 Standard Specifications for Construction.

Code	Type	Legend	Size	Area (Sft)	Number	Qty (Sft)
W3-4	B	BE PREPARED TO STOP	48"X48"	16	2	32
W3-5b	B	REDUCED SPEED ZONE AHEAD	48"X48"	16	2	32
W8-9	B	LOW SHOULDER	48"X48"	16	2	32
W20-1	B	ROAD WORK AHEAD	48"X48"	16	2	32
W20-4	B	ONE LANE ROAD AHEAD	48"X48"	16	2	32
W20-7a	B	SYMBOLIC FLAGGER	48"X48"	16	2	32
W21-5bR	B	Right Shoulder Closed Ahead	48"X48"	16	2	32
G20-2	B	END ROAD WORK	48"X24"	8	2	32
R5-18c	B	WORK ZONE BEGINS	48"X48"	16	2	32
R2-1	B	SPEED LIMIT	48"X60"	20	2	40

ENTIRE PROJECT QUANTITIES

The following quantities are estimated for use where needed throughout the project as directed by the Engineer.

Mobilization, Max 5%	1	LSUM
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GENERAL NOTES

UTILITIES

MISS DIG/UNDERGROUND UTILITY NOTIFICATION

Contact MISS DIG System, Inc. for the protection of underground utilities and in conformance with MCL 460.721 et seq, by phone at 811 or 800-482-7171 or via the web at <http://www.missdig811.org/>, a minimum of 3 working days prior to excavating, excluding weekends and holidays.

MDOT's roadway lighting system, Intelligent Transportation Systems (ITS) and other miscellaneous electrical systems are not part of MISS DIG. Contractors shall contact the following at least 5 business days in advance for staking requests. Note that these are not emergency contacts for damage to utilities.

Grand Region

All Grand Region staking requests shall be submitted using MDOT form 5300: <https://mdotjboss.state.mi.us/webforms/GetDocument.htm?fileName=5300.pdf>

Telephone inquiries can be made by calling the Grand Region Office at 616-451-3091

OLD PLANS

OLD ROAD PLANS

The following old road plans were referred to in the design of this project.

C.S. 43012 – J.N. 79565A – 2007 Mill/Fill

In addition, other old road plans that predate this project may be available. These plans may be reviewed in the Transportation Service Center (TSC) during normal working hours.

PROJECT SPECIFIC NOTES

SURVEY

STATIONING

Stationing on this project was taken from Right of Way plans (File 43-R-2), and distance meter readings which are not necessarily accurate. The stationing is relative to this project only and does not correspond to other stationing in the area. The following road Stationing and Control Section Mile Point (CSMP) locations are given for approximate correlation and information only.

<u>M-37</u>	<u>CSMP</u>	<u>STA</u>
POB/1 Mile Rd	4.218	232+06

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BASES

Use aggregate 21AA for aggregate base unless otherwise specified

NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the standard plan given below opposite each item unless otherwise indicated.

Title	Plan No.
ROAD	
SUPERELEVATION AND PAVEMENT CROWNS	R-107-H

SUBMITTAL LIST

MDOT Form 501 Materials Source List

HMA Quality Control Plan

Contractor Safety Program

Progress Schedule

Safety Program

Damage Claim Program

Form 1911 Job Mix Formula HMA Field Communication

LOG OF PROJECT

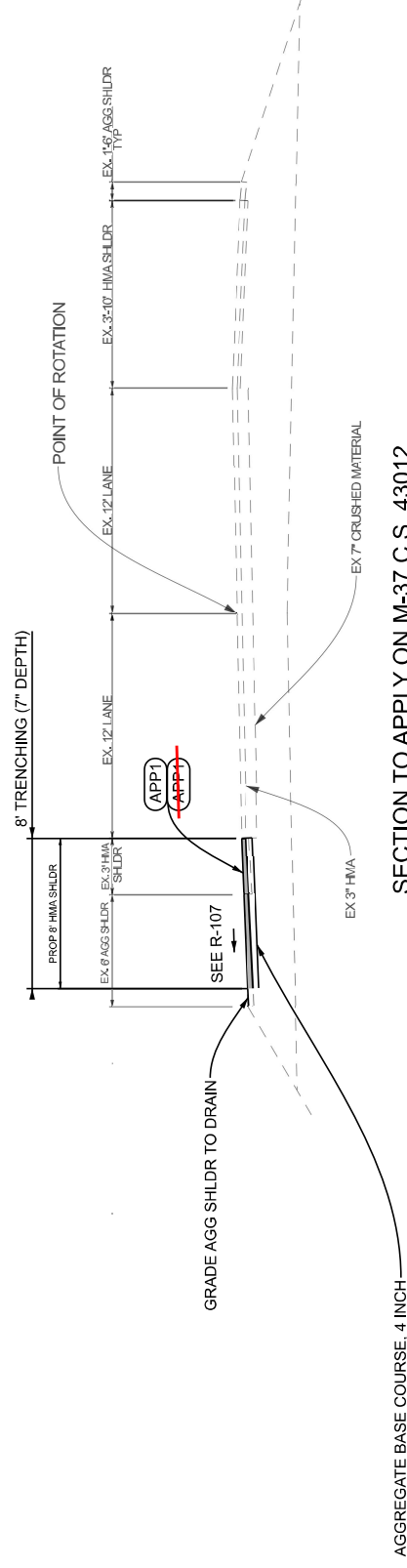
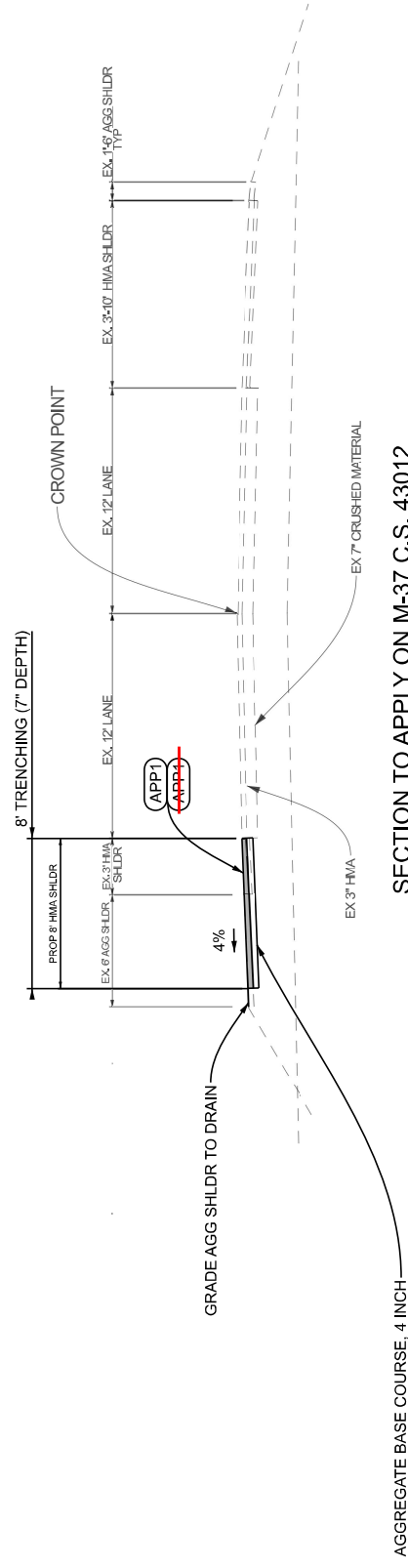
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Itemized Bid Sheet

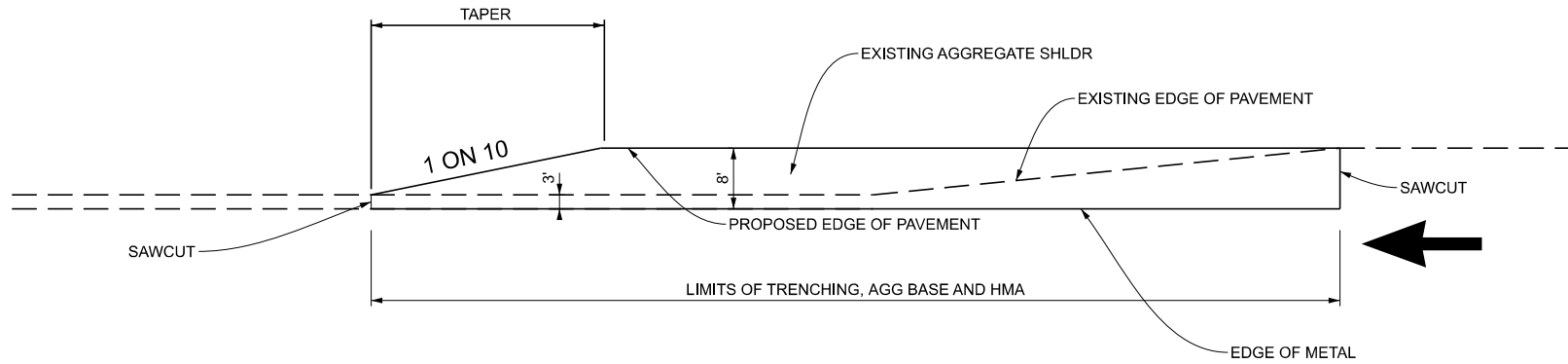
Contractor will provide a lump sum cost for performing the work detailed in the log of project.

Item Description	Quantity	Units	Unit Price	Total Price
M-37 Shoulder Paving	1	LSUM		

Company Name	
Company Address	
City, State, Zip Code	
Telephone Number	
Email	
Name (Printed)	
Signature	
Date	



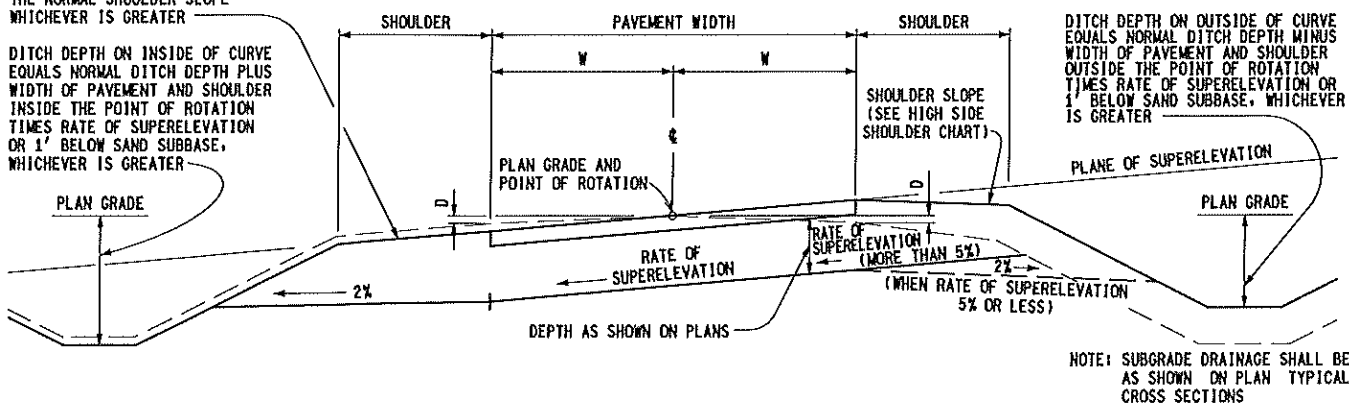
HMA APPLICATION ESTIMATE					
PUMP NO.	ITEM	RATE (BS PER STD)	PERFORMANCE GRADE	REMARKS	
APPI	HMA APPROACH	440 330	64-28	40MM-WM-900 4EML WMT-200	
	* BOND COAT		0.05-0.15 GAL		



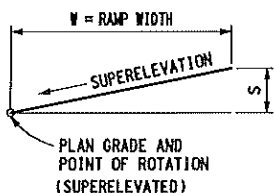
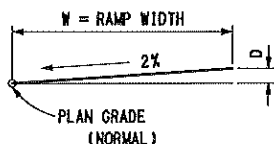
SHOULDER PAVING PLAN VIEW

SHOULDER SLOPE EQUALS THE RATE OF SUPERELEVATION OR THE NORMAL SHOULDER SLOPE WHICHEVER IS GREATER

DITCH DEPTH ON INSIDE OF CURVE EQUALS NORMAL DITCH DEPTH PLUS WIDTH OF PAVEMENT AND SHOULDER INSIDE THE POINT OF ROTATION TIMES RATE OF SUPERELEVATION OR 1' BELOW SAND SUBBASE, WHICHEVER IS GREATER



SUPERELEVATED FINISHED SECTION (TWO-WAY SHOWN)



RAMPS

LEGEND

- NC = NORMAL CROWN RATE
- W = DISTANCE IN FEET FROM POINT OF ROTATION TO FARTHEST OUTSIDE EDGE
- $D = W \times NC$
- θ = RATE OF SUPERELEVATION
- $S = W \times \theta$
- C = CROWN RUNOUT / TANGENT RUNOUT (ADVERSE CROWN REMOVED)
- L = TRANSITION LENGTH OR SUPERELEVATION RUNOFF OF INSIDE OR OUTSIDE EDGE OF PAVEMENT
- $\Delta\%$ = SUPERELEVATION TRANSITION SLOPE OF PAVEMENT EDGES

HIGH SIDE SHOULDER CHART

WHEN RATE OF FULL SUPERELEVATION IS	SHOULDER SLOPE AT FULL SUPERELEVATION EQUALS
FROM 2% TO 3%	RATE OF SUPERELEVATION MINUS NORMAL SHOULDER SLOPE
3% TO AND INCLUDING 5%	
OVER 5%	

NOTES:

THE CROWN POINT AND POINT OF ROTATION WILL NORMALLY BE AT THE CENTER OF TWO-LANE AND FOUR-LANE UNDIVIDED PAVEMENTS AND AT THE EDGE OF AN INSIDE LANE OF FIVE-LANE UNDIVIDED PAVEMENTS. THE POINT OF ROTATION WILL NORMALLY BE AT THE INSIDE EDGES OF DIVIDED PAVEMENTS.

THE CROWN IS TO BE REMOVED IN SUPERELEVATION SECTIONS.

ON URBAN SERVICE ROADS AND URBAN FREE ACCESS TRUNKLINE CURVES WHERE DRIVEWAYS ARE PREVALENT, AND WHERE NORMAL SUPERELEVATION CANNOT BE OBTAINED, A MINIMUM OF 1.5% TO 2% SUPERELEVATION IN THE DIRECTION OF THE CURVE MAY BE USED TO REMOVE THE ADVERSE CROWN.

DESIGN MODIFICATION OF TRANSITIONS, POINT OF ROTATION, AND CROWNS MAY BE NECESSARY TO IMPROVE RIDING QUALITY AND APPEARANCE.

THE LOCATION, LENGTH OF SUPERELEVATION TRANSITIONS, CROWN RUNOFF LENGTHS, SUPERELEVATION RATES, AND POINT OF ROTATION WILL BE AS SPECIFIED ON THE PLANS.

SPIRAL LENGTHS WILL BE EQUAL TO OR LONGER THAN TRANSITION SLOPE LENGTHS.

SPIRAL TRANSITIONS SHOULD BE USED ON NEW ALIGNMENTS, BASED ON THE DESIGN SPEED OF THE CURVE AND THE RADIUS AS SHOWN IN THE TABLE. THE TABLE GIVES THE MAXIMUM RADIUS IN WHICH A SPIRAL SHOULD BE USED.

BEGIN THE HIGH SIDE SHOULDER TRANSITION AT THE PAVEMENT CROWN RUN OUT POINT (CROWN REMOVED). TRANSITION THE SHOULDER IN THE DISTANCE "L" TO THE SHOULDER SLOPE RATE REQUIRED AT FULL PAVEMENT SUPERELEVATION.

IF THE RATE OF FULL PAVEMENT SUPERELEVATION IS GREATER THAN THE NORMAL SHOULDER SLOPE, BEGIN THE LOW SIDE SHOULDER TRANSITION WHEN THE PAVEMENT REACHES THE SAME PLANE AND SLOPE RATE AS THE NORMAL SHOULDER.

WHEN TRANSITIONING THE SHOULDER SLOPE TO/FROM A BRIDGE SECTION, CALCULATE THE TRANSITION DISTANCE USING THE SUPERELEVATION TRANSITION SLOPE ($\Delta\%$) REQUIRED FOR THE CURVE, OR IN TANGENT SECTIONS, USE THE MINIMUM VALUE FOR SUPERELEVATION TRANSITION SLOPE ($\Delta\%$) GIVEN IN THE TABLE, IN THE COLUMN FOR THE SPEED OF THE ROADWAY. (TRANSITION DISTANCE = SHOULDER WIDTH $\times$ (RATE OF BRIDGE SHOULDER SUPERELEVATION MINUS RATE OF ROAD SHOULDER SUPERELEVATION) $\times$ 100 / $\Delta\%$)



PREPARED BY
DESIGN DIVISION

DRAWN BY: B.L.T.

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DEPARTMENT DIRECTOR
Kirk T. Staudle

APPROVED BY: *John C. Friend*
ENGINEER OF DELIVERY

APPROVED BY: *Mark A. Van Pelt*
ENGINEER OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SUPERELEVATION AND PAVEMENT CROWNS

9-10-2010
F.H.W.A. APPROVAL

10-19-2009
PLAN DATE

R-107-H

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RATE OF SUPERELEVATION AND SUPERELEVATION TRANSITION SLOPE																						
RADIUS (FEET)	30 MPH		35 MPH		40 MPH		45 MPH		50 MPH		55 MPH		60 MPH		65 MPH		FREEWAYS				URBAN FREEWAYS AND URBAN RAMPS	
																	70 MPH		75 MPH		60 MPH	
	e %	Δ%	e %	Δ%	e %	Δ%	e %	Δ%	e %	Δ%	e %	Δ%	e %	Δ%	e %	Δ%	e %	Δ%	e %	Δ%	e %	Δ%
23000	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---
20000	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---
17000	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---
14000	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	2.0	0.31	2.0	0.30	NC	---
12000	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	2.0	0.32	2.0	0.31	2.0	0.30	NC	---
10000	NC	---	NC	---	NC	---	NC	---	NC	---	NC	---	2.0	0.36	2.0	0.32	2.1	0.31	2.3	0.31	2.0	0.34
8000	NC	---	NC	---	NC	---	NC	---	2.0	0.40	2.0	0.38	2.1	0.36	2.3	0.33	2.6	0.32	2.9	0.31	2.0	0.34
6000	NC	---	NC	---	NC	---	2.0	0.40	2.0	0.40	2.3	0.39	2.7	0.37	3.0	0.34	3.3	0.33	3.7	0.33	2.4	0.36
5000	NC	---	NC	---	2.0	0.40	2.0	0.40	2.3	0.41	2.7	0.39	3.1	0.38	3.5	0.35	3.9	0.34	4.4	0.34	2.8	0.37
4000	NC	---	2.0	0.45	2.0	0.40	2.4	0.41	2.8	0.42	3.3	0.40	3.8	0.39	4.2	0.37	4.7	0.36	5.3	0.35	3.3	0.39
3500	NC	---	2.0	0.45	2.2	0.41	2.6	0.42	3.1	0.42	3.6	0.41	4.2	0.40	4.7	0.38	5.2	0.37	5.9	0.36	3.5	0.40
3000	2.0	0.50	2.0	0.45	2.5	0.42	3.0	0.43	3.5	0.43	4.1	0.42	4.7	0.41	5.2	0.39	5.9	0.38	6.5	0.37	3.8	0.41
2500	2.0	0.50	2.4	0.46	2.9	0.43	3.5	0.44	4.1	0.44	4.7	0.43	5.3	0.42	5.9	0.41	6.5	0.39	7.0	0.38	4.2	0.42
2000	2.3	0.51	2.9	0.48	3.5	0.45	4.1	0.46	4.7	0.45	5.4	0.44	6.1	0.43	6.6	0.42	7.0	0.40	R MIN. = 2344'		4.6	0.44
1800	2.5	0.52	3.1	0.49	3.8	0.46	4.4	0.47	5.1	0.46	5.7	0.45	6.4	0.44	6.9	0.43	R MIN. = 1922'				4.8	0.44
1600	2.7	0.52	3.4	0.50	4.1	0.48	4.8	0.48	5.4	0.47	6.1	0.45	6.7	0.44	7.0	0.43					4.9	0.45
1400	3.0	0.53	3.7	0.51	4.5	0.49	5.1	0.49	5.8	0.48	6.5	0.46	6.9	0.45	R MIN. = 1565'						R MIN. = 1412'	
1200	3.4	0.54	4.1	0.52	4.9	0.50	5.6	0.50	6.3	0.49	6.8	0.47	R MIN. = 1263'									
1150	3.5	0.55	4.3	0.53	5.0	0.51	5.7	0.50	6.4	0.49	6.9	0.47										
1000	3.8	0.56	4.6	0.54	5.4	0.52	6.1	0.52	6.7	0.49	R MIN. = 1008'											
900	4.1	0.57	4.8	0.55	5.7	0.53	6.4	0.52	6.9	0.50												
820	4.3	0.57	5.1	0.55	5.9	0.54	6.6	0.53	7.0	0.50												
800	4.4	0.58	5.1	0.56	6.0	0.54	6.7	0.53	7.0	0.50												
720	4.6	0.58	5.4	0.57	6.3	0.55	6.9	0.54	R MIN. = 794'													
700	4.7	0.59	5.5	0.57	6.3	0.56	6.9	0.54														
600	5.0	0.60	5.9	0.58	6.7	0.57	R MIN. = 614'															
500	5.4	0.61	6.4	0.60	7.0	0.58																
450	5.7	0.62	6.6	0.61	R MIN. = 464'																	
400	6.0	0.63	6.8	0.61																		
350	6.3	0.64	7.0	0.62																		
300	6.7	0.65	R MIN. = 327'																			
265	6.9	0.66																				
225	7.0	0.66																				
	R MIN. = 222'																					

NOTES:

LOOP RAMPS SHALL HAVE A 7% RATE OF SUPERELEVATION.

THE RATE OF SUPERELEVATION FOR CURVES APPROACHING RAMP TERMINALS (STOPPING CONDITION) SHOULD BE LIMITED TO 5% MAX.

IF DELTA VALUES FROM THE CHART CANNOT BE OBTAINED FOR THE DESIGN RADIUS, USE THE MAXIMUM DELTA VALUE FOR THE CORRESPONDING SPEED.

FOR RADIUS LESS THAN THOSE TABULATED, (BUT NOT LESS THAN R MIN.), USE e_{max} . MAXIMUM SUPERELEVATION FOR URBAN FREEWAYS AND URBAN RAMPS (WITH A 60 MPH DESIGN SPEED) IS 5%, OTHERWISE $e_{max} = 7\%$.

NOTES:

LOOP RAMPS SHALL HAVE A 7% RATE OF SUPERELEVATION.

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FOR RADII LESS THAN THOSE TABULATED, (BUT NOT LESS THAN R MIN.), USE θ_{max} . MAXIMUM SUPERELEVATION FOR URBAN FREEWAYS AND URBAN RAMPS (WITH A 60 MPH DESIGN SPEED) IS 5%, OTHERWISE $\theta_{max} = 7\%$.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SUPERELEVATION AND
PAVEMENT CROWNS**

9-10-2010
F.H.W.A. APPROVAL

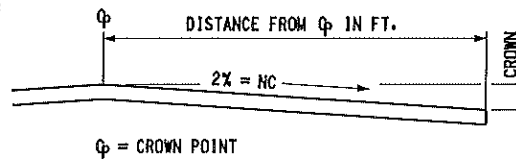
10-19-2009
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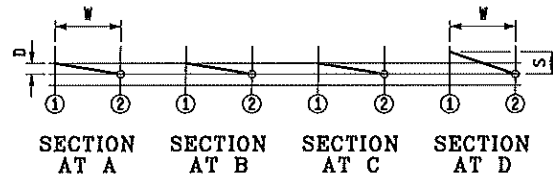
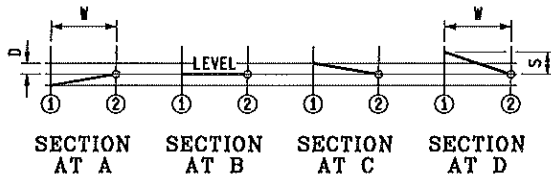
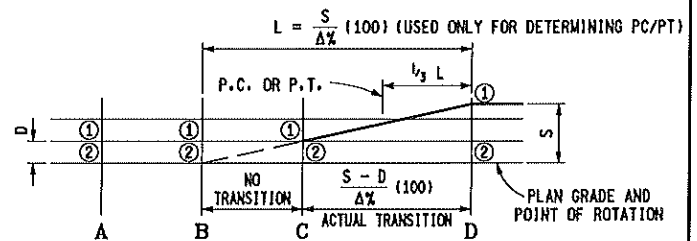
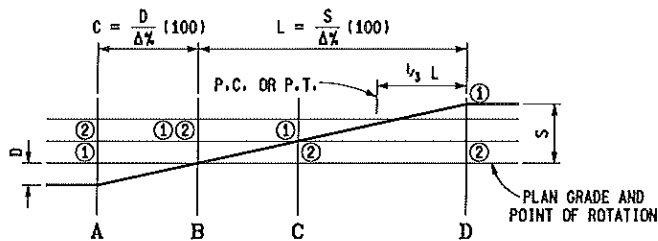
SHEET
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ABBREVIATIONS FOR
SPIRALED RAMP AND ROADWAYS:

T.S. = TANGENT TO SPIRAL
S.T. = SPIRAL TO TANGENT
C.S. = CURVE TO SPIRAL
S.C. = SPIRAL TO CURVE

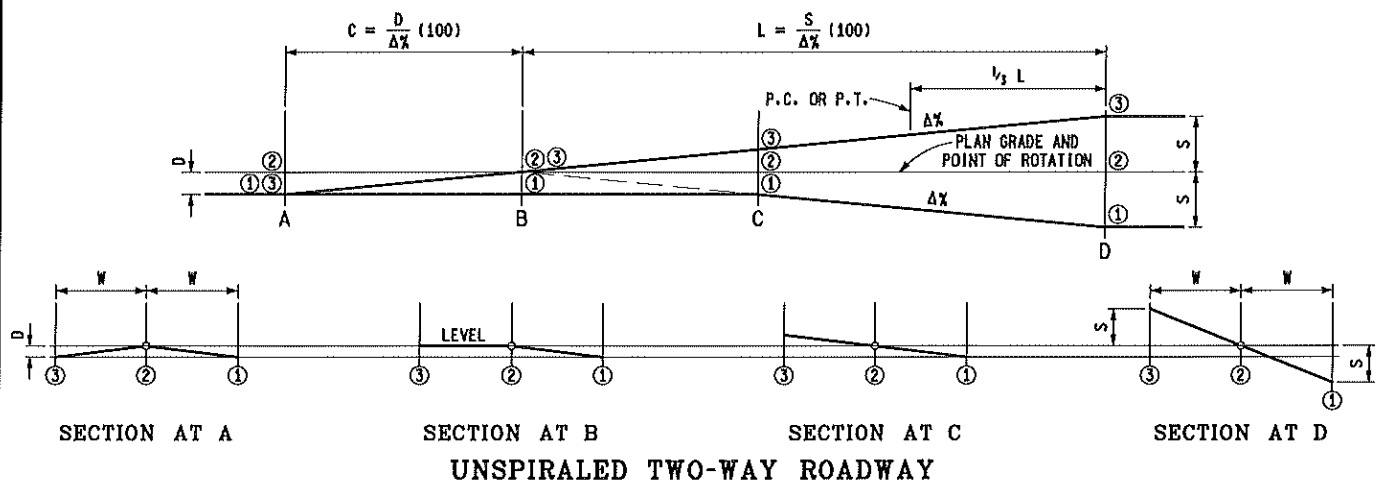


SPIRAL CURVE TRANSITIONS			
DESIGN SPEED (MPH)	MAXIMUM RADIUS (FEET)	DESIGN SPEED (MPH)	MAXIMUM RADIUS (FEET)
30	456	60	1822
35	620	65	2138
40	810	70	2479
45	1025	75	2846
50	1265	80	3238
55	1531		



UNSPIRALED RAMP (CROWN ADVERSE TO SUPER)

UNSPIRALED RAMP (CROWN SAME DIRECTION AS SUPER)



UNSPIRALED TWO-WAY ROADWAY

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

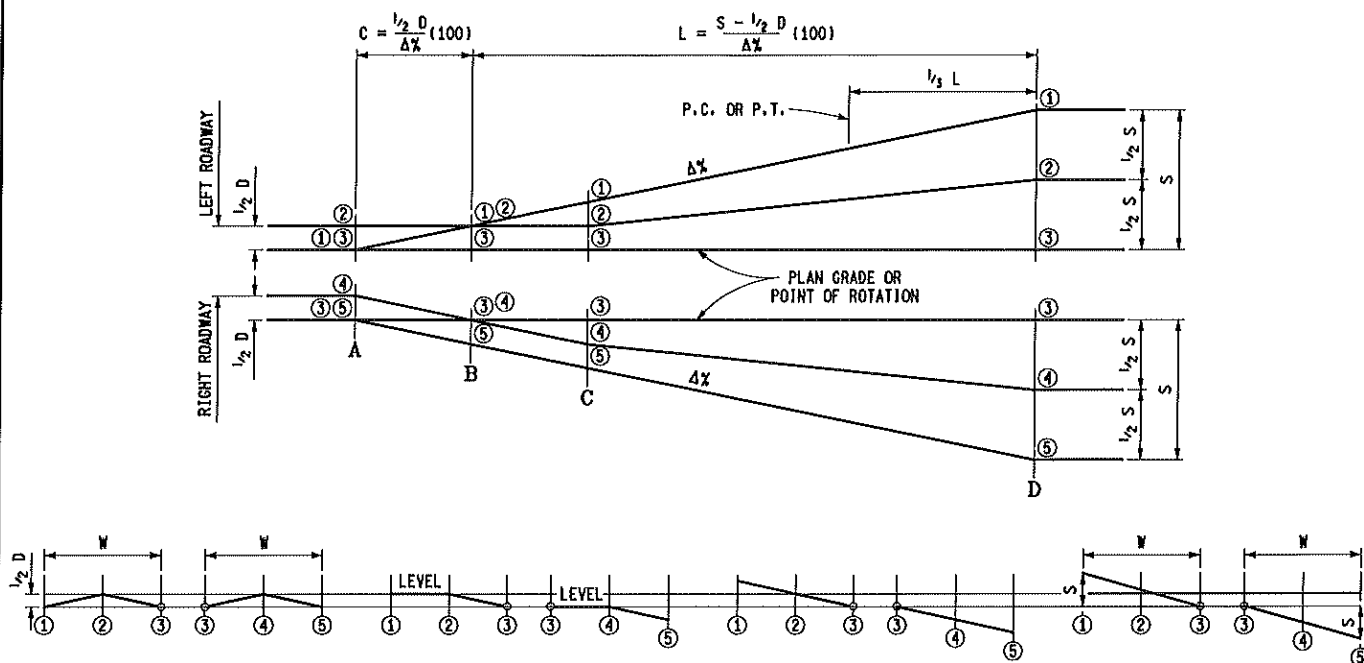
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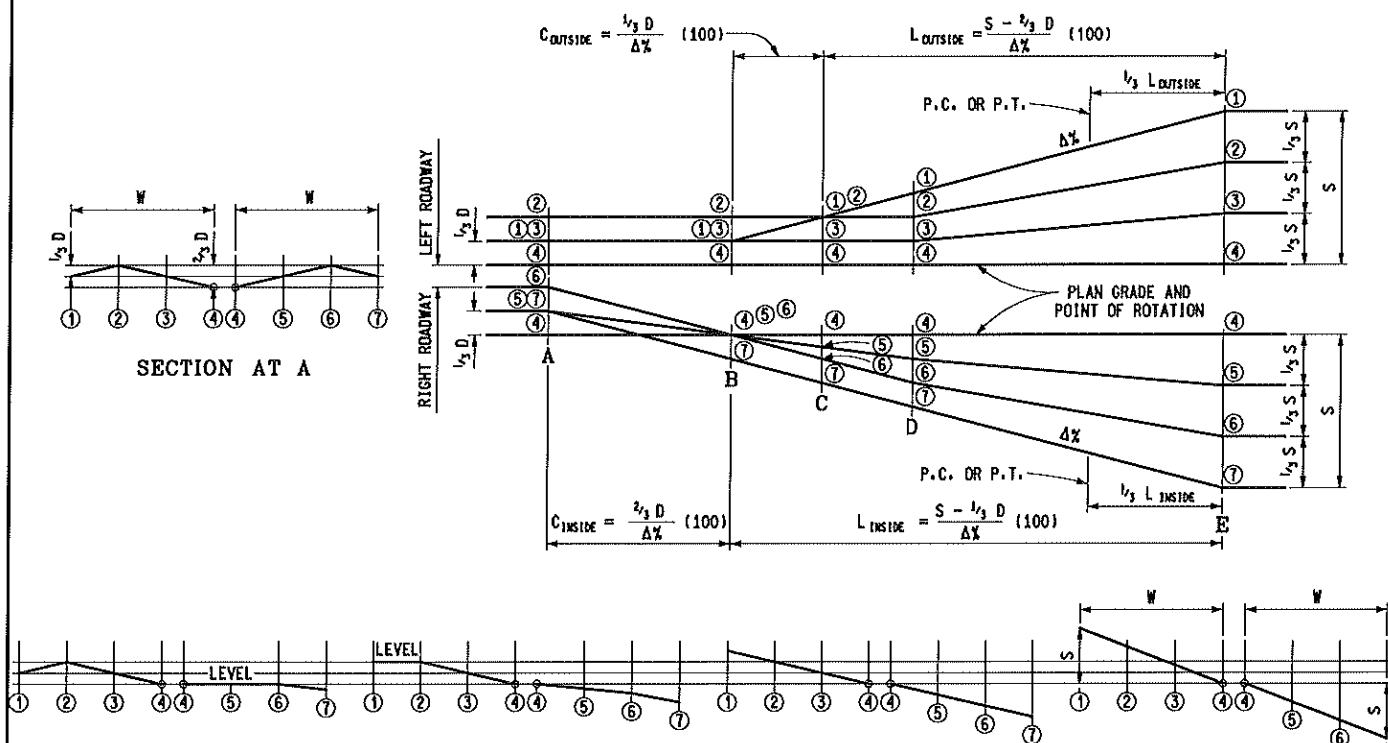
SECTION AT A

SECTION AT B

SECTION AT C

SECTION AT D

UNSPIRALED FOUR LANE DIVIDED ROADWAY



SECTION AT A

SECTION AT B

SECTION AT C

SECTION AT D

SECTION AT E

UNSPIRALED SIX LANE DIVIDED ROADWAY

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

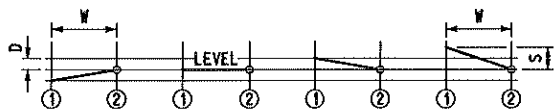
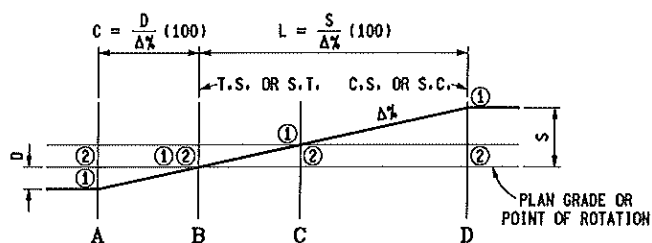
SUPERELEVATION AND PAVEMENT CROWNS

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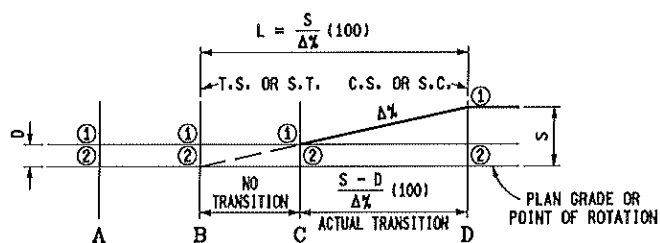
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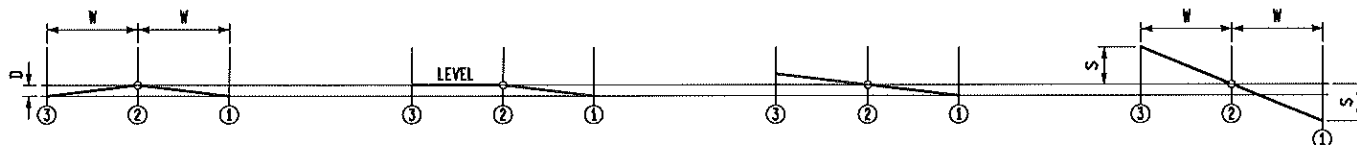
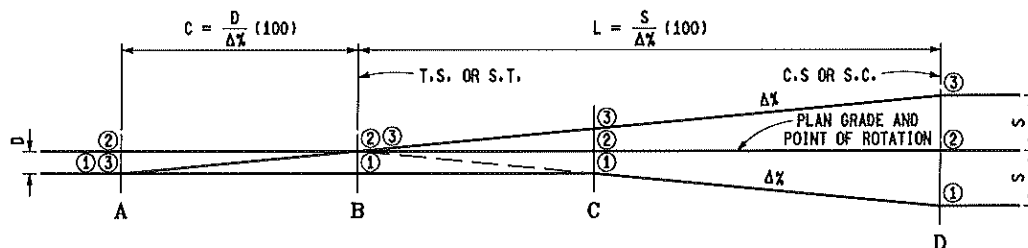
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SPIRALED RAMP (CROWN ADVERSE TO SUPER)



SECTION AT A SECTION AT B SECTION AT C SECTION AT D

SPIRALED RAMP (CROWN SAME DIRECTION AS SUPER)



SECTION AT A

SECTION AT B

SECTION AT C

SECTION AT D

SPIRALED TWO-WAY ROADWAY

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

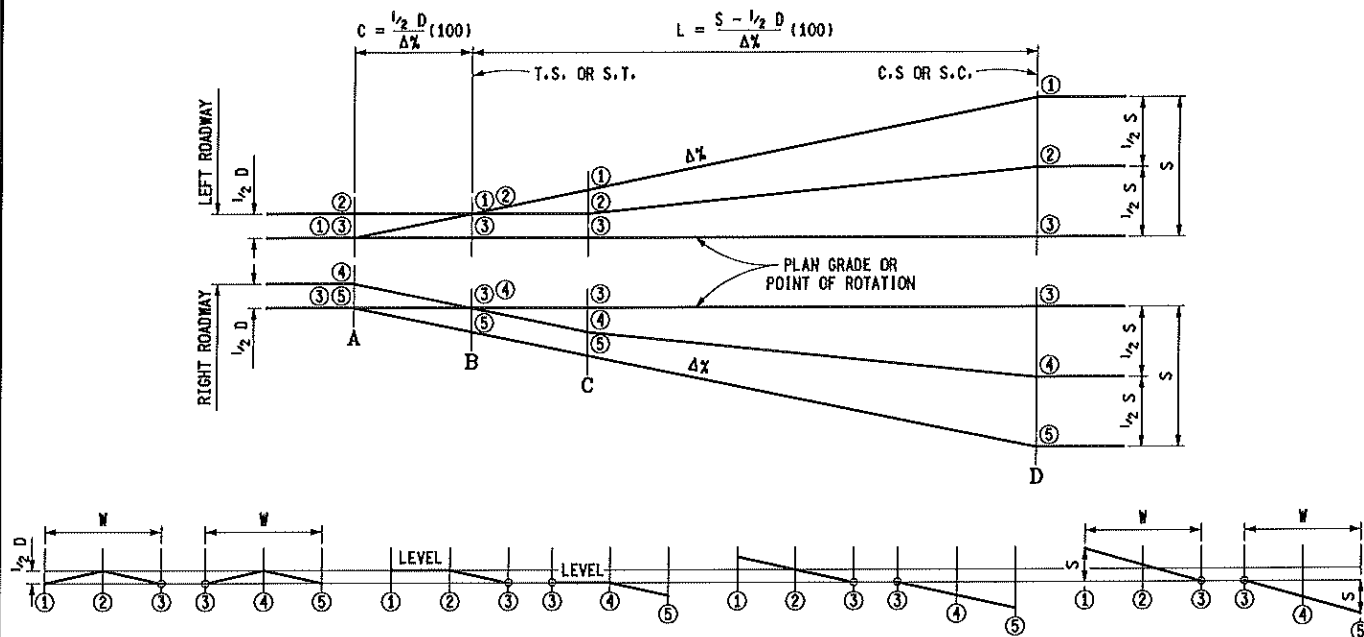
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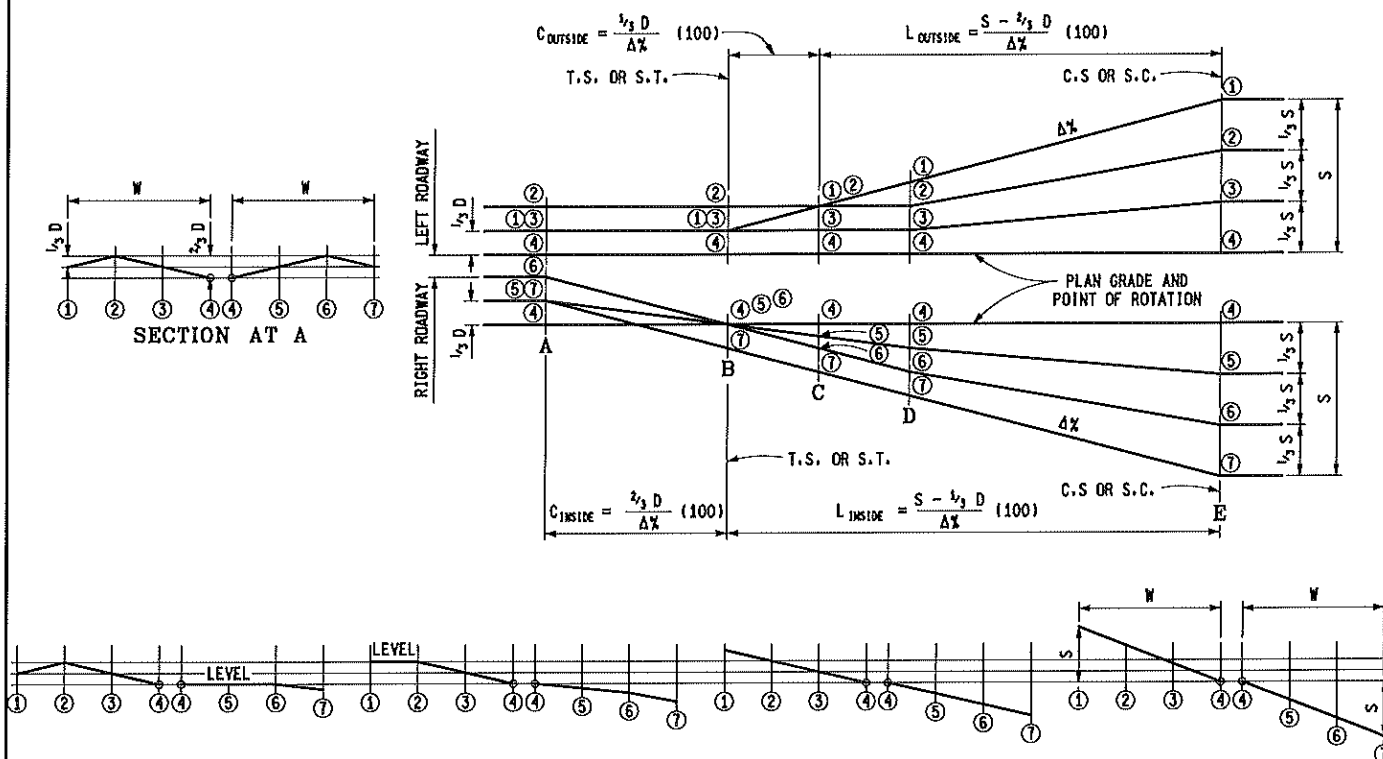
SECTION AT A

SECTION AT B

SECTION AT C

SECTION AT D

SPIRALED FOUR LANE DIVIDED ROADWAY



SECTION AT B

SECTION AT C

SECTION AT D

SECTION AT E

SPIRALED SIX LANE DIVIDED ROADWAY

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

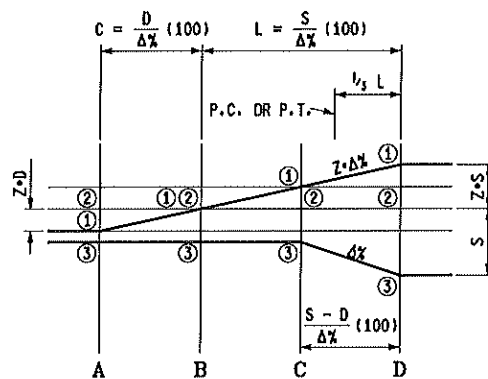
SUPERELEVATION AND PAVEMENT CROWNS

9-10-2010
F.H.W.A. APPROVAL

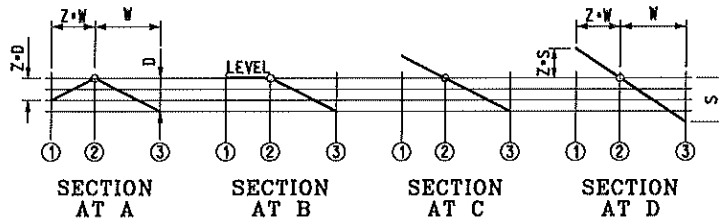
10-19-2009
PLAN DATE

R-107-H

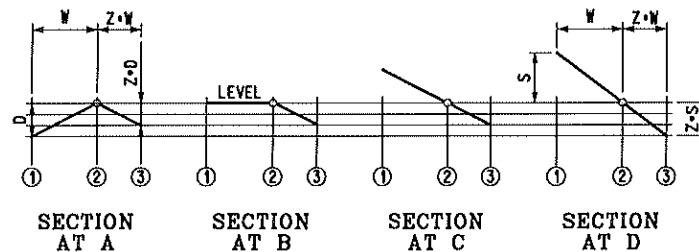
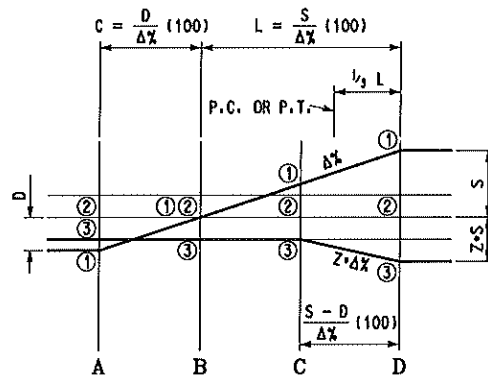
SHEET
6 OF 7



Z VALUES FOR UNSPIRALED TWO WAY ROADWAYS WITH AN ODD NUMBER OF LANES	
NUMBER OF LANES	Z
3	$\frac{1}{2}$
5	$\frac{2}{3}$
7	$\frac{3}{4}$



UNSPIRALED TWO WAY ROADWAY WITH ODD NUMBER OF LANES
(FARTHEST EDGE ON LOW SIDE)



UNSPIRALED TWO WAY ROADWAY WITH ODD NUMBER OF LANES
(FARTHEST EDGE ON HIGH SIDE)

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SHEET
7 OF 7

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC

CAD:DRW

1 of 5

a. Description. This special provision consists of requirements and restrictions to maintain traffic on M-37 in Peacock Township, Lake County.

b. General. Maintain traffic throughout the project in accordance with the standard specifications, typicals, and supplemental specifications in the contract and as described on the plans for this project.

c. Construction Influence Area (CIA). The CIA includes the right-of-way of the following roadways, within the approximate limits described below:

1. On M-37 from approximately 1 Mile Road to ½ mile north of 1 Mile Road

2. In addition, the CIA includes the right-of-way of any designated detour route or alternate route, intersecting roads and ramps adjacent to the work zone for a distance of approximately 1/4 mile in advance of the work zone or as far as the construction or detour signing extends. The roads include but are not limited to 1 Mile Road, Delong Drive, Lone Pine Drive, Bartlett Road, East End Street and Canahan Drive.

d. Traffic Restrictions. Maintain traffic in accordance with the Maintaining Traffic Typicals contained herein, except as noted below. Changes or adjustments to the Maintaining Traffic Typicals may be necessary to fit field conditions, subject to approval of the Engineer or as determined by the Engineer.

1. Utilize the following Maintaining Traffic Typicals:

- A. 100-GEN-KEY
- B. 101-GEN-SPACING-CHARTS
- C. 102-GEN-NOTES
- D. 103-GEN-SIGN
- E. 104-GEN-AB
- F. 106-GEN-SPEED-NFW
- G. 107-GEN-SPEED
- H. 110-TR-NFW-2L

I. WZD-125-E

2. Do not deliver material, or close lanes during the holiday periods as defined in Table 1.

Table 1: 2026 Holiday Periods

Holiday	Start Date and Time	End Date and Time
Independence Day	Noon; Thursday, July 2 nd	6:00 AM, Monday, July 6 th
Labor Day	Noon; Thursday, September 3 rd	6:00 AM, Tuesday, September 8 th

3. Perform work and lane closures within the allowable time frames as shown in Table 2, unless otherwise approved by the Engineer. Traffic switch operations on freeways may take place within the allowable times listed below in the traffic restriction tables and/or as otherwise approved by the Engineer. Additional lane, ramp, and/or roadway closures and shifts may be implemented during maintaining traffic stage and traffic switch operations with prior Engineer approval.

Table 2: M-37 Northbound/Southbound Traffic Restrictions

Closure Type	Start Time	End Time	M	Tu	W	Th	F	Sa	Su
Shoulder Closures	00:00	24:00	∞	∞	∞	∞	0	0	0
Single Lane Closures	☀	▼	∞	∞	∞	∞	0	0	0
☀ = half hour before sunrise as defined by the National Oceanic and Atmospheric Administration (NOAA) ▼ = half hour after sunset as defined by NOAA ∞ = Closure is allowed, and the frequency is not limited during the project timeframe # = The number of times closures can take place during the project timeframe.									

4. Maintain a minimum of one lane of traffic in each direction at all times on *. (And all intersecting roads and ramps, except where detoured.)

6. No more than 1 closure is allowed in each direction of travel at the same time.

A. The maximum closure length is 1/2 mile unless otherwise approved by the Engineer.

7. Close any dedicated lanes (exit, ramp, turn, etc.) prior to the location under construction.

8. When a lane is closed, place channelizing devices at cross streets and major drives to form a radius that clearly defines the approaches to the through and turning traffic.

9. Maintain access to all driveways as directed by the Engineer unless prior agreements are made with the respective property owners.

e. Traffic General.

1. For any lane open to traffic, provide a minimum lane width of 11 feet with 2 feet of shy distance on both sides unless identified otherwise on plans.

2. Do not close lanes or utilize traffic regulation sequences where work can be accomplished with a shoulder closure. Do not occupy any part of the active traffic lane with personnel or equipment when utilizing a shoulder closure. Place lane closures and traffic regulation operations only in areas as show on the plans unless otherwise directed by the Engineer.

3. Prior to shifting traffic onto shoulders or opening any lanes/shoulders and/or ramps, remove, by sweeping all accumulated debris that has collected within the shoulder and/or within the closed lane/shoulder.

4. A speed reduction will be used. Set the work zone speed limit on M-37 to 55 miles per hour (mph).

5. Develop and submit to the Engineer an Internal Traffic Control Plan (ITCP) per subsection 104.11.B of the Standard Specifications for Construction. The requirements listed herein are the requirements for a Type A ITCP. Submit the Type A ITCP at the preconstruction meeting. The Engineer will have 7 calendar days to review the ITCP for approval or provide comments for revisions required to obtain approval. Include in the ITCP, at a minimum, the proposed ingress/egress locations for construction equipment and vehicles, traffic control devices that will be utilized to warn the motoring public of ingress/egress locations, and measures that will be taken to ensure compliance with the ITCP. Ensure that the ITCP minimizes conflicts between construction vehicles and motorists and maintains overall safety and mobility within the work zone. No work may begin prior to approval of the ITCP. Additional time required to obtain an approved ITCP will not be cause for delay or impact claims. All costs associated with obtaining an approved ITCP, providing and executing all parts of the approved ITCP including required traffic control devices, or resolving an incomplete or unacceptable ITCP will be borne by the Contractor.

6. The Engineer will be responsible for notifying emergency services, transit agencies, law enforcement and schools prior to any lane closures, detours or major traffic shifts. In addition, the Contractor will be responsible for working with and complying with any coordination that is necessary with the Department and emergency services, transit agencies, law enforcement and schools.

7. Obtain all necessary permits from local governments within areas of local jurisdiction, including noise/dust ordinance waivers when required, prior to placing construction signing on local roads.

8. Remove all temporary traffic control devices from MDOT right-of-way during any shut down periods unless needed for directly maintaining or channelizing traffic. No additional payment will be made for removal and/or redeployment of these devices except for in the case of an approved extension of time.

9. Cover or remove construction signing that refers to work zone speed when work at a location is planned to be inactive for a period greater than 2 days, unless otherwise specified on the plans or as directed by the Engineer.

10. Once work is initiated that includes any lane restrictions, that work must be continued daily until completed. A lack of work activity for more than 3 days will require the removal of lane closures at no expense to the Department.

f. Traffic Regulator Control.

1. Maintain two-way traffic at all times on M-37 using traffic regulator control. A traffic regulator sequence is allowed to cover a maximum closure length of 1/2 mile. Place the arrow panel, signs and channelizing taper for the traffic regulator operation at locations approved by the Engineer for adequate visibility by oncoming traffic.

2. Do not utilize more than 1 traffic regulator operation(s) at one time on M-37

3. Crossroads should remain open to traffic at all times. Use intermediate traffic regulators at each intersection approach and commercial driveways within the closure limits, as directed by the Engineer. Use traffic regulator control as directed by the Engineer for cross street traffic while paving through intersections.

g. Earthwork and Excavation.

1. Restore undercuts or excavations in the work areas within 3 feet of the active traffic lanes to no steeper than a 1 on 4 slope from the edge of the roadway at the end of each work day. If this condition is not met, provide a nighttime closure.

2. Delineate excavated areas located within 3 feet of traffic with channelizing devices at 20 feet spacing along the excavated area, and 100 feet before the area, or as shown on the maintaining traffic plans.

h. Hot Mix Asphalt (HMA) Work.

1. Place W8-9 ("LOW SHOULDER") signs in advance of and every mile within the shoulder drop off.

i. Traffic Control Devices. Ensure all traffic control devices are in accordance with the *MMUTCD* and must meet the "acceptable" criteria as defined in the *ATSSA* publication entitled "*Quality Guidelines for Temporary Traffic Control Devices and Features*" at the time of initial deployment and after each major stage change.

1. During non-working periods, place applicable advance signs and channelizing devices at specific locations, as directed by the Engineer, at no additional cost to the Department.

2. Notify the Engineer 24 hours in advance of when traffic control devices are being delivered to the project site, to allow for initial inspection of devices to take place.

3. Remove from the project site all traffic control devices (including detour signing) no longer needed for a particular operation and equipment for construction within 3 calendar days of reopening the shoulder/lane/roadway.

4. Channelizing Devices.

A. Ensure all devices have sufficient ballast to prevent moving or tipping. If moving or tipping occurs, place additional ballast, as directed by the Engineer, at no additional cost to the Department. No more than two ballasts are allowed on each channelizing device.

B. Do not use caution tape on channelizing devices for traffic control and/or pedestrian traffic control on this project.

5. Temporary Signs.

A. Fabricate, install, and remove temporary sign overlays on existing signs with the pay item for Sign, Type B, Temp, Prismatic, Furn. Attach the overlay in accordance with subsection 812.03.D.2 of the Standard Specifications for Construction.

j. Measurement and Payment. Payment will be in accordance with the standard specifications unless otherwise specified. No additional payment will be made for the following activities:

1. Transporting traffic control items from site to site.
2. Providing sufficient vehicles and staff to make changes as-needed on site during work.
3. Providing sufficient vehicles and staff to remove closures from the roadway.