

Item 614 – Work Zone Pavement Markings

The following estimated quantities have been carried to the General Summary to be used as directed by the Engineer for work zone pavement markings per the requirements of CMS 614.04 and 614.11. Place temporary markings at the same locations as the proposed permanent pavement markings.

Work zone temporary marking widths shall be as given in CMS 614 or 641.

After planning and after the leveling course is completed use the following temporary markings:

- Item 614 – Work Zone Lane Line, Class III, 6", 642 Paint **25.82 Mile**
- Item 614 – Work Zone Edge Line, Class III, 6", 642 Paint **28.10 Mile**
- Item 614 – Work Zone Channelizing Line, Class III, 12", 642 Paint **13,972 FT**
- Item 614 – Work Zone Dotted Line, Class III, 6", 642 Paint..... **8,764 FT**
- Item 614 – Work Zone Stop Line, Class III, 642 Paint..... **224 FT**
- Item 614 – Work Zone Arrow, Class III, 642 Paint..... **42 Each**

After the surface course is placed, use the following temporary markings:

- Item 614 – Work Zone Lane Line, Class I, 6", 642 Paint **12.91 Mile**
- Item 614 – Work Zone Edge Line, Class I, 6", 642 Paint..... **14.05 Mile**
- Item 614 – Work Zone Channelizing Line, Class I, 12", 642 Paint **6,986 FT**
- Item 614 – Work Zone Dotted Line, Class I, 6", 642 Paint..... **4,382 FT**
- Item 614 – Work Zone Stop Line, Class I, 642 Paint..... **112 FT**
- Item 614 – Work Zone Arrow, Class I, 642 Paint..... **21 Each**

Permanent Pavement Markings

After placing the surface course, the Contractor may place permanent pavement marking instead of placing work zone pavement markings, which shall be non-performed at these locations.

Item 614 – Portable Changeable Message Signs, As Per Plan

The Contractor shall furnish, install, maintain and remove, when no longer needed, a changeable message sign. The sign shall be of a type shown on a list of approved PCMS units available on the [Office of Materials Management web page](#). The list contains Class A and B units with minimum legibility distances of 800 feet and 650 feet, respectively.

Each sign shall be trailer-mounted and equipped with a functional dimming mechanism, to dim the sign during darkness, and a tamper and vandal proof enclosure. Each sign shall be provided with appropriate training and operation instructions to enable on-site personnel to operate and troubleshoot the unit. The sign shall also be capable of being powered by an electrical service drop from a local utility company. The PCMS shall be delineated in accordance with [C&MS 614.03](#).

Placement, operation, maintenance and all activation of the signs by the Contractor shall be as directed by the Engineer. The PCMS shall be located in a highly visible position yet protected from traffic. The Contractor shall, at the direction of the Engineer, relocate the PCMS to improve visibility or accommodate changed conditions. When not in use, the PCMS shall be turned off. Additionally, when not in use for extended periods of time, the PCMS shall be turned away from all traffic.

The Engineer shall be provided access to each sign unit and shall be provided with appropriate training and operation instructions to enable **ODOT** personnel to operate and troubleshoot the unit, and to revise sign messages, if necessary.

All messages to be displayed on the sign will be provided by the Engineer. A list of all required pre-programmed messages will be given to the Contractor at the project preconstruction conference. The sign shall have the capability to store up to 99 messages. Message memory or pre-programmed displays shall not be lost as a result of power failures to the on-board computer. The sign legend shall be capable of being changed in the field. Three-line presentation formats with up to

six message phases shall be supported. PCMS format shall permit the complete message for each phase to be read at least twice.

The PCMS shall contain an accurate clock and programming logic which will allow the sign to be activated, deactivated or messages changed automatically at different times of the day for different days of the week.

(The PCMS shall contain a cellular telephone data link which will (in active cellular phone areas) allow remote sign activation, message changes, message additions and revisions to time of day programs. The system shall also permit verification of current and programmed messages. One remote data input device (laptop computer plus modem or equivalent) shall be furnished for use by the **District Traffic Engineer**, or equivalent, and shall be insured against theft.)The PCMS unit shall be maintained in good working order by the Contractor in accordance with the provisions of [C&MS 614.07](#). The Contractor shall, prior to activating the unit, make arrangements, with an authorized service agent for the PCMS, to assure prompt service in the event of failure. Any failure shall not result in the sign being out of service for more than 12 hours, including weekends. Failure to comply may result in an order to stop work and open all traffic lanes and/or in the Department taking appropriate action to safely control traffic. The entire cost to control traffic, accrued by the Department due to the Contractor's noncompliance, will be deducted from moneys due, or to become due the Contractor on his contract.

The Contractor shall be responsible for 24-hour-per-day operation and maintenance of these signs on the project for the duration of the phases when the plan requires their use.

Payment for the above described item shall be at the contract unit price. Payment shall include all labor, materials, equipment, fuels, lubricating oils, software, hardware and incidentals to perform the above described work.

The estimated quantity provides for 5 PCMS units at 3 months each.

- Item 614 – Portable Changeable Message Sign,
As Per Plan **15 SNMT**

Portable Changeable Message Signs for Lane Closure(s)

The Contractor shall place a PCMS 0.5 to 2 miles in advance of any lane closures or as directed by the Engineer. The PCMS shall read: ROAD WORK AHEAD/RIGHT (LEFT) (2) LANE(S) CLOSED. If traffic becomes congested and there is stopped traffic, the message board shall be changed to: STOPPED TRAFFIC AHEAD/PREPARE TO STOP. The WTS shall be responsible for monitoring traffic during lane closures and changing the message signs as necessary. The message shall be changed when there is no lane closure (e.g. ROAD WORK AHEAD/NIGHTLY LANE CLOSURES), or per the Engineer.

Item 614 – Law Enforcement Officer with Patrol Car for Assistance

Use of Law Enforcement Officers (LEOs) by contractors other than the uses specified below will not be permitted at project cost. LEOs should not be used where the OMUTCD intends that flaggers be used.

In addition to the requirements of CMS 614 and the latest edition of the OMUTCD, a uniformed LEO with an official patrol car (car with top-mounted emergency flashing lights and complete markings of the appropriate law enforcement agency) shall be provided for the following traffic control tasks:

- During the entire advance preparation and closure sequence where complete blockage of traffic is required.
- During a traffic signal installation when impacting the normal function of the signal or the flow of traffic or when traffic needs to be directed through an energized traffic signal contrary to the signal display (e.g., directing motorists through a red light).

In addition to the requirement of CMS 614 and the OMUTCD, a uniformed LEO with an official patrol car (car with top-mounted emergency flashing lights and complete markings of the appropriate law enforcement agency) may be provided for the following traffic control tasks as approved by the Engineer:

- For lane closures: during initial set-up periods, tear down periods, substantial shifts of a closure point or when new lane closure arrangements are initiated for long-term lane closures/shifts (for the first and last day of major changes in traffic control setup).
 - For operations without positive protection occurring within 10 feet of an open traveled lane that meet all of the following criteria:
 - On a multi-lane divided interstate, other freeway or expressway; and
 - An authorized speed limit of 45 mph or greater that is in effect at the time of the operation; and,
 - AADT of 50,000 (or AADT of 30,000 with 25% or higher percent trucks)

"Without positive protection" means use of drums, cones, shadow vehicle, etc, without protection from portable barrier or other rigid barrier along the work area. This phrase does not apply to cases where positive protection is required. Mobile operations are regarded as "without positive protection". For work zones using a combination of barrier and temporary traffic control devices (cones, drums, etc), the designation shall be based upon the type of devices used in the area that workers are located.

If multiple active localized qualifying work areas occur without positive protection, per mainline traffic direction, provide a uniformed LEO and official patrol car in advance of:

- The first active work area that drivers will encounter; or
- The active work area laterally closest to the open traveled lane; or
- Other location as approved by the Engineer.

In general, LEOs should be positioned in advance of and on the same side as the lane restriction (or at the point of road closure), and to manually control traffic movements through signalized intersections in work zones.

LEOs should not forgo their traffic control responsibilities to apprehend motorists for routine traffic violations. However, if a motorist's actions are considered to be reckless, then pursuit of the motorist is appropriate.

The LEOs work at the direction of the Contractor. The Contractor is responsible for securing the services of the LEOs with the appropriate agencies and communicating the intentions of the plans with respect to duties of the LEOs. The Engineer shall have final control over the LEOs' duties and placement, and will resolve any issues that may arise between the two parties.

DESIGN AGENCY



DESIGNER
JDA

REVIEWER
DAB 07/31/25

PROJECT ID
103073

SHEET TOTAL
P.13 | P.26

SHEET NUMBER											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
8-10	11-15	17	18								01/NHS	EXT	TOTAL				
ROADWAY																	
3.1											3.1	209	60201	3.1	STA	LINEAR GRADING, AS PER PLAN	9
36											36	623	39501	36	EACH	MONUMENT ASSEMBLY ADJUSTED TO GRADE, AS PER PLAN	
4											4	623	39601	4	EACH	MONUMENT ASSEMBLY RECONSTRUCTED TO GRADE, AS PER PLAN	
EROSION CONTROL																	
											1,000	832	30000	1,000	EACH	EROSION CONTROL	
DRAINAGE																	
45											45	611	98631	45	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	9
5											5	611	98634	5	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
8											8	611	99655	8	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	
1											1	611	99660	1	EACH	MANHOLE RECONSTRUCTED TO GRADE	
500											500	SPECIAL	61199820	500	LB	MISCELLANEOUS METAL	
PAVEMENT																	
1,250											1,250	251	01001	1,250	SY	PARTIAL DEPTH PAVEMENT REPAIR (441), AS PER PLAN A	10
750											750	251	01001	750	SY	PARTIAL DEPTH PAVEMENT REPAIR (441), AS PER PLAN B	
		844									844	254	01001	844	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	
		222,917									222,917	421	10010	222,917	SY	MICROSURFACING, SURFACE COURSE	
		222,917									222,917	421	10020	222,917	SY	MICROSURFACING, LEVELING COURSE	
52											52	617	10101	52	CY	COMPACTED AGGREGATE, AS PER PLAN	10
13.89											13.89	618	40601	13.89	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	10
TRAFFIC CONTROL																	
			1,127								1,127	621	00100	1,127	EACH	RPM	
			915								915	621	54000	915	EACH	RAISED PAVEMENT MARKER REMOVED	
			14.06								14.06	646	10010	14.06	MILE	EDGE LINE, 6"	
			12.91								12.91	646	10110	12.91	MILE	LANE LINE, 6"	
			6,986								6,986	646	10310	6,986	FT	CHANNELIZING LINE, 12"	
			112								112	646	10400	112	FT	STOP LINE	
			160								160	646	10620	160	FT	CHEVRON MARKING	
			21								21	646	20300	21	EACH	LANE ARROW	
			2								2	646	20320	2	EACH	WRONG WAY ARROW	
			2								2	646	20350	2	EACH	LANE REDUCTION ARROW	
			4,382								4,382	646	20504	4,382	FT	DOTTED LINE, 6"	
	30										30	646	50300	30	MILE	REMOVAL OF PAVEMENT MARKING	
MAINTENANCE OF TRAFFIC																	
	100										100	614	11110	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	5										5	614	12484	5	EACH	WORK ZONE INCREASED PENALTIES SIGN	
	25										25	614	13001	25	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN	12
	15										15	614	18601	15	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	13
	12.91										12.91	614	20110	12.91	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
	25.82										25.82	614	20560	25.82	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
	14.05										14.05	614	22110	14.05	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
	28.1										28.1	614	22360	28.1	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
	6,986										6,986	614	23210	6,986	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
	13,972										13,972	614	23690	13,972	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
	4,382										4,382	614	24202	4,382	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	
	8,764										8,764	614	24612	8,764	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	
	112										112	614	26200	112	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
	224										224	614	26610	224	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
	21										21	614	30200	21	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
	42										42	614	30650	42	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT	
	300										300	630	97800	300	SF	SIGNING, MISC. ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	
	21										21	808	18700	21	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
	18										18	896	00012	18	SNMT	PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS II	
	6										6	896	00021	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	13
INCIDENTALS																	
											LS	614	11000	LS		MAINTAINING TRAFFIC	
6											6	619	16011	6	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	8
LS											LS	623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	8
											LS	624	10000	LS		MOBILIZATION	

General Summary

DESIGN AGENCY

 DESIGNER
 JDA
 REVIEWER
 DAB 07/31/25
 PROJECT ID
 103076
 SHEET TOTAL
 P.16 P.26