

TRAFFIC MAINTENANCE PLANS

TRAFFIC CONTROL TIMING AND SEQUENCE OF OPERATIONS FOR SLIDE AREA WORK

ALL SLIDE AREA WORK OPERATIONS SHALL BE CONDUCTED IN A MANNER THAT WILL ASSURE MINIMUM DANGER AND INCONVENIENCE TO THE HIGHWAY USERS. TRAFFIC MUST BE MAINTAINED AT ALL TIMES. HOWEVER, THE RIGHT NEARBOUND LANE MAY BE CLOSED TO ALLOW FOR THE SLIDE AREA WORK.

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIVERTED BY THE CONTRACTOR THROUGH THE USE OF A FLASHING ARROW, IN ADDITION TO THOSE PROVISIONS SET FORTH IN THE OHIO MANUAL OF TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE OPERATIONS LATEST EDITION.

TRAFFIC CONTROL MATERIALS

FLASHING PORTABLE BARRICADE

THIS ITEM OF WORK SHALL CONSIST OF PROVIDING, OPERATING, MAINTAINING AND SUBSEQUENTLY REMOVING A FLASHING PORTABLE BARRICADE AS HEREIN DESCRIBED, AND REFERRED TO _____.

THE BARRICADE SHALL CONSIST OF THE FOLLOWING COMPONENTS:

- (A) FLASHER BOARD WITH LAMPS
- (B) FLASHER CONTROL AND DIMMER
- (C) POWER SUPPLY
- (D) TRAILER AND FRAMEWORK

COMPONENT SPECIFICATIONS

- (A) FLASHER BOARD WITH LAMPS
THE FLASHER BOARD SHALL BE A MINIMUM SIZE OF 8' WIDE BY 4' HIGH AND SHALL BE CONSTRUCTED OF EXTERIOR PLYWOOD, ALUMINUM OR SIMILAR WEATHER RESISTANT MATERIAL. THE BOARD SHALL BE PAINTED WITH A FLAT BLACK WATERPROOF PAINT.

FIFTEEN HOODED FLASHER LENSES SHALL BE MOUNTED INTO THE BOARD WITH THE PATTERN AND APPROXIMATE DIMENSIONS SHOWN IN DIAGRAM A. HOODS SHALL BE AT LEAST FIVE INCHES LONG. FLASHERS SHALL BE SEALED BEAM UNITS WITH AMBER LENSES AND NOMINAL INPUT OF APPROXIMATELY 35 WATTS _____.

- (B) FLASHER CONTROL AND DIMMER
THE FLASHER CONTROL SHALL BE DESIGNED TO PROVIDE THE FOLLOWING SEPARATE DISPLAYS ON THE MESSAGE BOARD AND EACH DISPLAY SHALL BE COMPOSED OF THE REFERENCE NUMBERED FLASHER UNITS AS TABULATED AND SHOWN ON DIAGRAM A.
 - (1) LEFT ARROW: CONSISTING OF FLASHER UNITS NO'S 1, 3, 4, 5, 6, 7, 8, 9, 10, 11
 - (2) RIGHT ARROW: CONSISTING OF FLASHER UNITS NO'S 1, 2, 3, 4, 5, 7, 10, 13, 14, 15
 - (3) DOUBLE ARROW: CONSISTING OF FLASHER UNITS NO'S 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15
 - (4) BAR: CONSISTING OF FLASHER UNITS NO'S 1, 3, 4, 5, 7

THE ABOVE DISPLAYS SHALL BE SEPARATELY SELECTABLE BY A SWITCH (ES) AND WHEN SELECTED SHALL FLASH WITH APPROXIMATELY 50% ON TIME AND 50% OFF TIME. AS AN ALTERNATE, A SEQUENTIAL FLASHING MAY BE PROVIDED WHICH WILL ILLUMINATE THE TAIL OF THE ARROW (S) FIRST AND PROGRESS TO THE HEAD OF THE ARROW (S).

THE RATE OF FLASHING, SHALL BE APPROXIMATELY 30 CYCLES PER MINUTE.

ALL FLASHER LAMPS SHALL BE ILLUMINATED TO A UNIFORM INTENSITY AND THE INTENSITY SHALL BE VARIABLE BY MEANS OF A PHOTOCELL CONTROLLED DIMMER CIRCUIT WHICH SHALL REDUCE LAMP OUTPUT DURING LOW AMBIENT LIGHT CONDITIONS. BOTH THE PHOTOCELL CIRCUIT AND THE DIMMER CIRCUIT SHALL BE EXTERNALLY ADJUSTABLE.

ALL CONTROLS AND SWITCHES SHALL BE HOUSED IN A LOCKED WEATHERPROOF CABINET.

- (C) POWER SUPPLY
THE POWER SUPPLY SHALL CONSIST OF A GENERATOR AND A 4 CYCLE GALOLINE ENGINE DESIGNED FOR HEAVY CONTINUOUS DUTY. THE ENGINE GENERATOR SET SHALL BE OF ADEQUATE CAPACITY TO SUPPLY ELECTRICAL ENERGY TO ALL FLASHER UNITS TO THE CONTROL CIRCUITRY, AND TO CHARGE A STORAGE BATTERY.

THE ENGINE SHALL BE OF MODERN DESIGN TO PROVIDE LOW EMISSION OF POLLUTANTS, SHALL BE PROPERLY MUFFLED IN ORDER THAT IT WILL NOT PRODUCE EXCESSIVE NOISE AND SHALL BE WATERPROOF. IT SHALL BE PROVIDED WITH AN ELECTRIC STARTER OPERATED FROM THE STORAGE BATTERY AND WITH A FUEL TANK OF SUFFICIENT SIZE TO PROVIDE UNATTENDED OPERATION FOR A MINIMUM OF 24 HOURS.

THE GENERATOR SHALL BE WEATHERPROOF AND QUIET IN OPERATION.

THE ENGINE-GENERATOR SET SHALL BE ENCLOSED IN A LOCKABLE MESH ENCLOSURE TO PREVENT ACCIDENTAL OR MALICIOUS TAMPERING AND TO REDUCE HAZARD OF MOVING PARTS, SHOCKS OR BURNS. THE FUEL TANK SHALL HAVE A LOCKABLE CAP.

- (D) TRAILER AND FRAMEWORK
THE FOREGOING COMPONENTS SHALL BE MOUNTED ON A TRAILER OF ADEQUATE CAPACITY TO SUPPORT THE COMPONENTS AND TO RESIST A WIND LOAD OF 25 P.S.F. THE TRAILER SHALL HAVE WARNING DEVICES IN CONFORMANCE WITH THE OHIO REVISED CODE AS APPLICABLE TO USE ON HIGHWAYS WITHIN THE STATE OF OHIO. THE TRAILER SHALL BE EQUIPPED WITH LEVELING JACKS TO PROVIDE STABLE SUPPORT OF THE COMPONENTS WHEN THE TRAILER IS NOT HITCHED TO A VEHICLE. THE ENTIRE CONFIGURATION SHALL BY ITSELF, BE STABLE IN WINDS EXERTING A FORCE UP TO 20 P.S.F. IN ANY DIRECTION.

THE FRAMEWORK SHALL PROVIDE SECURE MOUNTING FOR ALL COMPONENTS AND THE FLASHER BOARD SHALL BE LOCATED IN A VERTICAL POSITION OF A MINIMUM DISTANCE OF 10 FT. FROM GROUND LINE TO CENTERLINE OF ARROW DURING OPERATION. THE FLASHER BOARD SHALL FOLD FLAT FOR STORAGE OR TRAILERING. THE UNIT SHALL BE SO DESIGNED TO EASILY PERMIT ONE MAN TO RAISE AND LOWER THE FLASHER BOARD.

GENERAL REQUIREMENTS

THE ENTIRE BARRICADE SHALL BE DESIGNED FOR OPERATION IN EXTREMES OF HUMIDITY UP TO 100% AND TEMPERATURE FROM -30 DEGREES TO +120 DEGREES. THE BARRICADE SHALL PRESENT NO HAZARDS OF MOVING PARTS, ELECTRICAL SHOCK, FIRE, BURNS OR SHARP EDGES.

USE AND OPERATION

THE BARRICADES SHALL BE LOCATED AS SHOWN IN THE MAINTENANCE OF TRAFFIC DRAWINGS _____ OR AS DIRECTED BY THE ENGINEER AND OPERATED CONTINUOUSLY DURING TRAFFIC MAINTENANCE PERIODS. THE CONTRACTOR SHALL SUPPLY ALL FUEL, LUBRICANTS AND PARTS NECESSARY TO OBTAIN CONTINUOUS OPERATION AND SHALL PROVIDE ALL SERVICE. THE CONTRACTOR SHALL ARRANGE, WITH THE ENGINEER AN ACCEPTABLE METHOD OF OBTAINING SERVICE FOR A MALFUNCTIONING BARRICADE WITHIN 30 MINUTES OF REPORTED MALFUNCTION. IN THE EVENT THAT SERVICE TO THE MALFUNCTIONING UNIT IS NOT PROVIDED WITHIN THE ALLOTTED TIME, THE STATE MAY ELECT TO PERFORM THE NECESSARY SERVICE AND BILL THE CONTRACTOR FOR THE COST OF PARTS, COMMODITIES, EQUIPMENT RENTAL AND LABOR REQUIRED TO REPAIR THE BARRICADE AND/OR TO PROVIDE TEMPORARY PROTECTION OF TRAFFIC.

WHEN NOT IN USE, THE BARRICADE SHALL BE STORED AT A LOCATION WHICH WILL NOT BE HAZARDOUS TO TRAFFIC OR PEDESTRIANS.

AT THE COMPLETION OF THE PROJECT THE BARRICADE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.

THE PAYMENT FOR ITEM FLASHING PORTABLE BARRICADE WILL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614 MAINTAINING TRAFFIC, INCLUDING MAINTENANCE AND OPERATION AS REQUIRED, AND REMOVAL WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, FUELS, OILS AND PARTS REQUIRED TO OBTAIN THE SPECIFIED OPERATION.

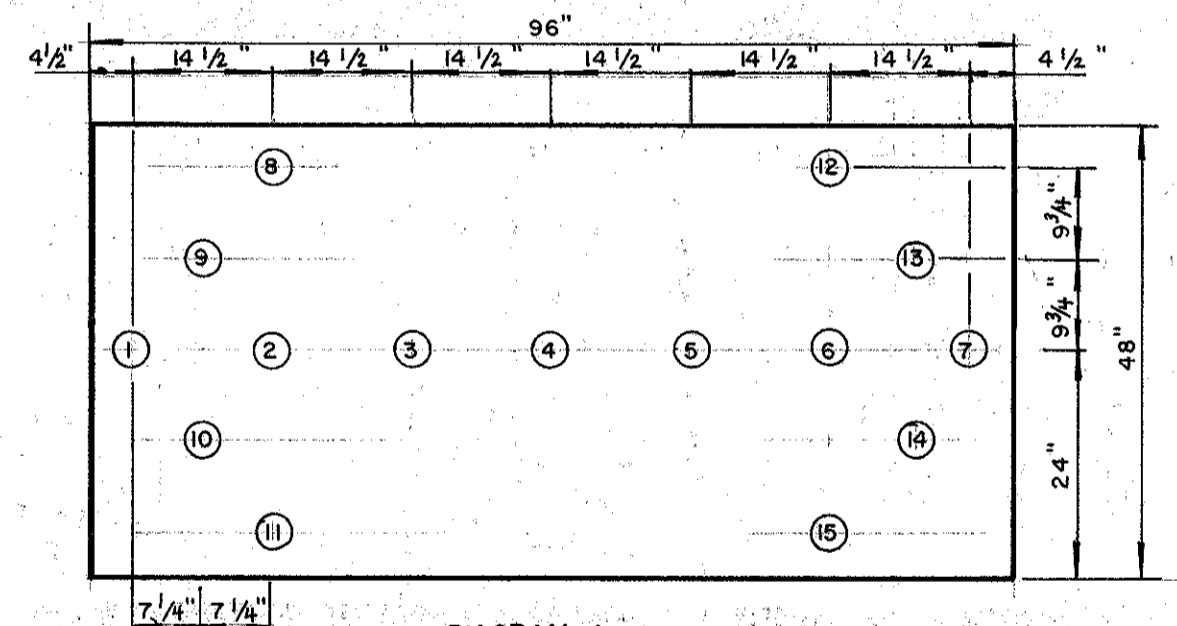


DIAGRAM A
FLASHER BOARD

SIGN

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZE, SHALL BE AS PROVIDED IN THE OHIO MANUAL OF TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE OPERATIONS LATEST EDITION.

ALL SIGNS SHALL BE REFLECTORIZED WITH REFLECTORIZED SHEETING.

BARRELS

ALL BARRELS SHALL BE 55 GALLON STEEL DRUMS PAINTED WITH ORANGE ENAMEL. THESE SHALL BE SUBSTANTIALLY FREE FROM RUST AND MAJOR DEFORMITIES, AND SHALL BE FILLED WITH SUFFICIENT GRANULAR MATERIAL TO INSURE STABILITY. ORANGE WARNING SIGNS AND ORANGE DRUMS WITH WHITE STRIPES SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE OPERATIONS LATEST EDITION. ALL BARRELS USED FOR CHANNELIZATION SHALL BE EQUIPPED WITH STEADY-BURNING WARNING LIGHTS.

FLASHING AND STEADY-BURNING WARNING LIGHTS

THE WARNING LIGHTS SHALL BE 12 VOLT BATTERY OPERATED MODELS WITH MINIMUM 7" DIAMETER AMBER LENSES. THE FLASHING CYCLE SHALL BE SUCH THAT THE ON TIME IS 25% OR MORE. THESE SHALL BE SINGLE FACED AND ERECTED WITH THAT FACE CLEARLY VISIBLE TO ON-COMING TRAFFIC. OPERATION OF THE WARNING LIGHTS SHALL BE EITHER CONTINUOUS OR SOLAR SWITCH CONTROLLED.

SMALL BARRICADES

TYPE II BARRICADES SHALL BE USED TO CLOSE LANES FOR THE SLOPE AREA WORK. THESE SHALL BE OF EITHER WOOD OR METAL. WIDTH OF TOP HORIZONTAL MEMBER SHALL BE 31" MINIMUM NOMINAL SIZE. A SINGLE FACED WARNING LIGHT SHALL BE LOCATED AT THE TOP OF THE BARRICADE AT THE END NEAREST TO TRAFFIC. THE LIGHT SHALL FACE ON-COMING TRAFFIC. THE BARRICADES SHALL BE OF SUFFICIENT STABILITY SO THAT WIND OR TRAFFIC AIR TURBULENCE WILL NOT UPSET THEM.

ALL TYPE II BARRICADES USED FOR CHANNELIZATION SHALL BE EQUIPPED WITH STEADY-BURNING, WARNING LIGHTS.

TEMPORARY GUARD RAIL, AS PER PLAN

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING AND PLACING 55 GALLON BARRELS AND TYPE 6 GUARDRAIL AS SHOWN ON THE TRAFFIC CONTROL PLAN AND AS PER 606.04.

THE RAIL ELEMENTS SHALL BE SECURELY BOLTED TO THE TRAFFIC SIDE OF THE DRUMS AND PERFORCED BY USING 4"x4"x1/4" (MINIMUM) PLATE WASHERS ON THE INSIDE OF THE DRUMS IN A MANNER SATISFACTORY TO THE ENGINEER.

SALVAGED BARRELS AND GUARDRAIL MAY BE USED BY THE CONTRACTOR, IF IN GOOD CONDITION AND SUBJECT TO THE APPROVAL OF THE ENGINEER.

GUARDRAIL MAINTENANCE SHALL BE DONE IMMEDIATELY. NO GUARDRAIL SHALL BE IN A HAZARDOUS CONDITION AT ANY TIME.

THIS WORK SHALL BE BID AND PAID FOR AS A PART OF THE LUMP SUM ITEM 614 MAINTAINING TRAFFIC.

TRAFFIC MAINTENANCE

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON ALL ROADWAYS EXCEPT AS PREVIOUSLY SPECIFIED IN THE NOTES. THE SPECIFIC USAGE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT SHALL BE AS PROVIDED ON SHEET _____ OF THESE PLANS, AND ALL CASES WHERE THESE PLANS AND SPECIFICATIONS DO NOT PROVIDE FOR THE DETAILS OF A CERTAIN TRAFFIC CONTROL DEVICE OR ITS USAGE, THE OHIO MANUAL OF TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE OPERATION LATEST EDITION, SHALL BE FOLLOWED AS TO SUCH DETAILS.

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED WHENEVER THEY ARE NOT APPLICABLE.

THE COST FOR ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE ITEMS, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.