

# TRAFFIC CONTROL GENERAL NOTES

## ITEM 630 - SIGNING MISC.: (BY PROCESS), SIGN SUPPORTS

### GENERAL

OVERHEAD SIGN SUPPORTS CAN BE SEPARATED INTO MAJOR SECTIONS SUCH AS END FRAMES, TRUSSES, VERTICAL POLES AND CANTILEVER ARMS. DURING THE IMPLEMENTATION OF THIS WORK ITEM IT WILL BE BENEFICIAL TO REFER TO THE MAJOR SECTIONS OF THE OVERHEAD SIGN SUPPORTS RATHER THAN THE WHOLE SUPPORT. MORE SPECIFIC INSTRUCTIONS AND FLEXIBILITY CAN BE GIVEN BASED UPON THE UNIT OF MEASURE AND PAYMENT PER MAJOR SUPPORT SECTION.

THE PROTECTIVE COATING OF OVERHEAD SIGN SUPPORT SECTIONS SHALL BE A FOUR PART PROCESS TO INCLUDE SURFACE PREPARATION FOLLOWED BY A THREE STEP COATING SYSTEM. THIS THREE STEP COATING SYSTEM SHALL CONSIST OF AN EPOXY PRIME COAT, AN EPOXY INTERMEDIATE COAT, AND A URETHANE TOP COAT, WITH EACH COAT A DIFFERENT COLOR. FOR AN EXPLANATION OF THE MATERIALS TO BE USED SEE NOTE ENTITLED "COATING SYSTEM". THE PURPOSE OF THIS COATING IS TO PROVIDE PROTECTION FOR NEW (UNWEATHERED) AND OLDER (WEATHERED) GALVANIZED STEEL SUPPORT SECTIONS FROM CORROSIVE ELEMENTS IN THE ATMOSPHERE. COATING AND SURFACE PREPARATION OF THE NEW GALVANIZED SUPPORT SECTIONS SHOULD BE DONE BY THE MANUFACTURER.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION LAWS, RULES OR REGULATIONS OF FEDERAL, STATE, OR LOCAL AGENCIES. THE COATING MATERIALS SPECIFIED FOR THE WORK CAN BE HAZARDOUS TO THE HEALTH OF THE APPLICATOR IF NOT APPLIED AS PER THE MANUFACTURER'S INSTRUCTIONS. THE CONTRACTOR SHALL FOLLOW THE DATA SHEET AND THE LABEL ON THE PAINT CONTAINERS. THESE PRECAUTIONS SHALL INCLUDE THE USE OF RESPIRATORS AND EYE AND SKIN PROTECTION AS SPECIFIED. THE CONTRACTOR SHALL ALSO INSURE THAT HIS PAINTING OPERATIONS AND LOCATION WILL NOT ENDANGER OR ADVERSELY AFFECT THE PUBLIC IN GENERAL.

THE PROPOSED CLEANING AND COATING OPERATIONS SHALL BE PERFORMED ONLY WHEN THE AMBIENT TEMPERATURE IS 50 DEGREES F OR ABOVE FOR A PERIOD OF 24 CONTINUOUS HOURS. PAINT SHALL NOT BE APPLIED DURING RAIN, FOG, OR MIST, OR WHEN THE STEEL SURFACE TEMPERATURE IS LESS THAN 5 DEGREES F ABOVE THE DEW POINT. PAINT SHALL NOT BE APPLIED TO WET OR DAMP SURFACES OR ON FROSTED OR ICE COATED SURFACES. PAINT SHALL NOT BE APPLIED WHEN THE RELATIVE HUMIDITY IS GREATER THAN 85%. ALL STEEL SURFACES OF TRUSS AND END FRAMES INCLUDING THE WELDED AREAS, BALLAST ENCLOSURE MOUNTING BRACKET AND THE BASE PLATES ARE TO BE CLEANED AND COATED. BEFORE EACH COATING IS APPLIED, IT SHALL BE MIXED WITH AN APPROVED POWER MECHANICAL MIXER TO A UNIFORM CONSISTENCY WHICH SHALL BE MAINTAINED DURING ITS APPLICATION. EACH COAT SHALL BE APPLIED IN A WORKMANLIKE MANNER AS A CONTINUOUS FILM OF UNIFORM THICKNESS WHICH IS FREE OF HOLES, PORES, RUNS, OR SAGS. ALL COATS SHALL BE APPLIED BY BRUSH. THINNING OF PAINT IS STRICTLY PROHIBITED. PAINT NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED. THE COATING SHALL PENETRATE ALL JOINTS AND CONNECTIONS. THE ENGINEER SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY CLEANING OR COATING OPERATIONS SO THAT INSPECTION SERVICES CAN BE PROVIDED.

TO PROVIDE ASSURANCES THAT NO THINNING OF THE PROTECTIVE COATING MATERIAL IS BEING DONE, PERIODIC CHECKS BY A STATE INSPECTOR WILL BE MADE OF THE MATERIAL. THESE CHECKS WILL BE MADE UTILIZING A VISCOSITY TEST CUP PROCEDURE AS PROVIDED BY THE MANUFACTURER OF THE MATERIAL. THE FREQUENCY OF THESE CHECKS WILL BE DETERMINED BY THE ENGINEER BASED UPON FIELD EVALUATION AND JOB PERFORMANCE.

IF THE VISCOSITY CHECK REVEALS THAT THE MATERIAL HAS BEEN THINNED, IMMEDIATE REJECTION OF THE MATERIAL SHALL BE MADE. THIS REJECTION SHALL REQUIRE THE CONTRACTOR TO IMMEDIATELY STOP USING THE MATERIAL AND PROVIDE NEW MATERIAL OF THE PROPER SPECIFICATION PER PLAN. IN ADDITION, THE COATING OF THE SIGN SUPPORT WITH THE NON-APPROVED MATERIAL SHALL BE CONSIDERED UNACCEPTABLE. THEREFORE THE SUPPORT SHALL BE STRIPPED AND RE-COATED WITH APPROVED MATERIAL (UNTHINNED MATERIAL).

3 TO 4 VISCOSITY CHECKS INDICATING A PERPETUAL QUALITY CONTROL PROBLEM (THINNED MATERIAL) SHALL BE CONSIDERED SUFFICIENT JUSTIFICATION TO TERMINATE THE CONTRACT.

THE COST FOR THE VISCOSITY TEST KIT SHALL BE BORN BY THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THE ITEM SPECIALS PER COAT. THE TEST KIT SHALL CONTAIN ITEMS SUCH AS INSTRUCTIONS, VISCOSITY CUP, STANDARD COMPARISON RATES, CARRYING CASE, CLEANING EQUIPMENT, STOPWATCH, ETC. THE KIT SHALL BE GIVEN TO THE STATE INSPECTOR FOR USE DURING THE PERFORMANCE OF THE WORK. AFTER THE PROJECT IS COMPLETE, THE TEST KIT SHALL REVERT TO THE STATE AS STATE PROPERTY.

### COATING SYSTEM

THE COATING SYSTEM SHALL CONSIST OF A POLYAMIDE-CURED EPOXY PRIME COAT, A POLYAMIDE-CURED EPOXY INTERMEDIATE COAT AND AN ALIPHATIC POLYURETHANE TOP COAT. THE COATING MATERIALS USED SHALL BE THOSE AS LISTED FROM ONE OF THE FOLLOWING MANUFACTURERS OR AN APPROVED EQUAL:

1. AMERON  
210 NORTH BERRY STREET  
BREA, CALIFORNIA 92622  
LOCAL TELEPHONE CONTACT : (419) 885-5336  
PRIME COAT : AMERCOAT 385  
INTERMEDIATE COAT : AMERLOCK 400  
TOP COAT : AMERCOAT 450 HS
2. ICI/DEVOE COATINGS  
5480 CLOVERLEAF PKWY. #5  
VALLEY VIEW, OHIO 44125  
LOCAL TELEPHONE CONTACT : (216) 328-1581  
PRIME COAT : DEVVAN 4170 CORROSION RESISTANT EPOXY  
INTERMEDIATE COAT : DEVVAN 4170 CORROSION RESISTANT EPOXY  
TOP COAT : DEVTHANE 4708 ALIPHATIC URETHANE ENAMEL
3. PORTER PAINT CO.  
400 SOUTH 13TH STREET  
LOUISVILLE, KY 40201  
LOCAL TELEPHONE CONTACT : (419) 666-0026  
PRIME COAT : PORTER PAINTS MCR 4300  
INTERMEDIATE COAT : PORTER PAINTS MCR 4300  
TOP COAT : PORTER PAINTS HYTHANE
4. POLYCARB  
33095 BAINBRIDGE ROAD  
P.O. BOX 39278  
OLON, OHIO 44139  
LOCAL TELEPHONE CONTACT : (440) 248-1223  
PRIME COAT : MARK-60 (ULTRAPOX)  
INTERMEDIATE COAT : MARK-60 (ULTRAPOX)  
TOP COAT : MARK-73 (ULTRA-KOTE)
5. SHERWIN-WILLIAMS COMPANY  
671 BETA DRIVE  
MAYFIELD VILLAGE, OHIO 44143  
LOCAL TELEPHONE CONTACT : (440) 461-3310  
PRIME COAT : TILE-CLAD II HI-BILD PRIMER  
INTERMEDIATE COAT : HI-SOLIDS CATALYZED EPOXY  
TOP COAT : HI-BILD ALIPHATIC POLYURETHANE ENAMEL

ALL THREE COATS OF THE SYSTEM SHALL BE MANUFACTURED BY THE SAME COMPANY TO INSURE COMPATIBILITY AMONG COATS.

### COATING, EPOXY PRIME COAT, SUPPORT SECTIONS

THIS ITEM SHALL CONSIST OF ONE ( 1 ) COAT OF AN EPOXY PRIMER TO SUPPORT SECTIONS. THE TOTAL DRY FILM THICKNESS OF THIS COAT SHALL BE BETWEEN 1.5 AND 2.0 MILS. IF MORE THAN ONE PASS IS NECESSARY TO OBTAIN THE REQUIRED THICKNESS, THAT COAT SHALL BE BORNE BY THE CONTRACTOR.

THIS COAT SHALL IN ALL CASES BE APPLIED BY BRUSH OVER SURFACES THAT WERE PREPARED EARLIER THAT SAME DAY. THE THINNING OF THE EPOXY MATERIAL IS STRICTLY PROHIBITED. MATERIAL NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED.

WHEN THE AVERAGE DRY FILM THICKNESS OF THIS COAT OVER THE ENTIRE SUPPORT SECTION IS LESS THAN THE SPECIFIED 1.5 BUT IS AT LEAST 1.25 MILS, THE CONTRACT BID PRICE FOR THIS ITEM SHALL BE REDUCED IN DIRECT PROPORTION TO THE PERCENT DEFICIENCY OF COATING UP TO 16-2/3%. IF THE DEFICIENCY OF COATING IS MORE THAN 16-2/3% ( I.E. THE AVERAGE DRY FILM THICKNESS IS LESS THAN 1.25 MILS ) THE WORK FOR THIS ITEM SHALL BE CONSIDERED UNSATISFACTORY AND SHALL BE RECOATED AT THE FULL EXPENSE OF THE CONTRACTOR, INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL.

THE EPOXY PRIME COAT CHOSEN BY THE CONTRACTOR SHALL BE ONE OF THE FOLLOWING TWO-COMPONENT COMPOSITIONS CONFORMING TO ITS LISTED PROPERTIES:

AMERCOAT 385  
% SOLIDS BY VOLUME : 47% +/- 3 %  
POT LIFE : 8 HRS. @ 77 DEGREES F (25 DEGREES C)  
DRYING TIME : 4 HRS. @ 77 DEGREES F

DEVVAN 4170 CORROSION RESISTANT EPOXY PRIMER 5465 SERIES  
% SOLIDS BY VOLUME : 54% +/- 1%  
% SOLIDS BY WEIGHT : 71 % +/- 1%  
POT LIFE : 4 HRS. @ 77 DEGREES F  
DRYING TIME : TOUCH 1-2 HRS., RECOAT 7 HRS.  
VISCOSITY : 95-100 KU

MCR-4301 EPOXY PRIMER  
% SOLIDS BY VOLUME : 48.0% +/- 2%  
POT LIFE : 30 HRS. @ 50-60 DEGREES F  
16 HRS. @ 80-100 DEGREES F  
DRYING TIME : 4-6 HRS. @ 50-60 DEGREES F

MARK-60 ULTRAPOX  
% SOLIDS BY WEIGHT : 70-75% +/- 2%  
POT LIFE : 6 HRS. @ 75 DEGREES F  
DRYING TIME : 2-3 HRS. INITIAL SET @ 75 DEGREES F  
VISCOSITY : 300-500 CPS @ 75 DEGREES F

TILE-CLAD II HI-BILD PRIMER  
% SOLIDS BY VOLUME : 48% +/- 2%  
% SOLIDS BY WEIGHT : 63% +/- 2%  
POT LIFE : 8 HRS. @ 77 DEGREES F  
@ 77 DEGREES F  
DRYING TIME : 1 HR. TO TOUCH, 6 HRS. TO RECOAT

FOR NEW SUPPORT SECTIONS THIS PRIME COAT SHALL BE DONE AT THE MANUFACTURER OF THE SUPPORT SECTIONS. VERIFICATION BY THE MANUFACTURER OF THE COATING MATERIAL FOR THE PRIME COAT PROCEDURES WILL BE REQUIRED. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING OR OTHER SURFACE DAMAGE TO THE PRIME COAT.

THE PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING COSTS, AND MATERIALS NECESSARY TO ACCOMPLISH THIS ITEM OF WORK. THIS PRIME COAT SHALL BE MANUFACTURED BY THE SAME COMPANY SUPPLYING THE INTERMEDIATE AND TOP COATS. A PROPERLY CALIBRATED DRY FILM THICKNESS INSTRUMENT WILL BE USED TO CHECK THE COATING.

BASIS OF PAYMENT WILL BE AS FOLLOWS:  
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