



# Delaware County Engineer

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## ROADWAY GENERAL NOTES

### **Note #DC-RD001**

#### **EXCAVATION AND EMBANKMENT CONSTRUCTION**

EXCAVATED SOILS ON THE PROJECT SITE MAY NOT BE SUITABLE FOR EMBANKMENT USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ANY ON-SITE SOIL USED AS EMBANKMENT MEETS THE REQUIREMENTS OF 203.

ITEM 203, EXCAVATION, INCLUDES WASTING ANY EXCAVATED MATERIAL WITHIN THE RIGHT-OF-WAY WITH THE APPROVAL OF THE ENGINEER OR OUTSIDE THE RIGHT-OF-WAY AT THE CONTRACTOR'S EXPENSE, IF NO SUITABLE AREAS EXIST FOR WASTING WITHIN THE RIGHT-OF-WAY.

ITEM 203, EMBANKMENT INCLUDES CONSTRUCTING EMBANKMENTS TO PLAN LINES AND INCLUDES FURNISHING AND PLACING SUITABLE BORROW MATERIAL AS SPECIFIED IN 203, WHEN REQUIRED. FOR SOIL BORROW OR OTHER MATERIALS NOT ALREADY CERTIFIED TO MEET 203 REQUIREMENTS, THE CONTRACTOR SHALL ALLOW THE ENGINEER 10 DAYS TO PERFORM IN SITU TESTS PRIOR TO USING THE MATERIAL.

PRIOR TO EARTH DISTURBING ACTIVITIES, INSTALL ALL REQUIRED EROSION CONTROL ITEMS AS SPECIFIED ON THE STORMWATER POLLUTION PREVENTION PLAN PREPARED BY THE CONTRACTOR. FOR EARTH DISTURBING WORK OUTSIDE THE WORK LIMITS, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS, IF REQUIRED, INCLUDING FOR BORROW AREAS. PROVIDE THE APPROPRIATE EROSION CONTROL MEASURES AS REQUIRED.

#### Designer Note:

*Use this note on all projects with earthwork.*

### **Note #DC-RD002**

#### **UNSUITABLE SUBGRADE SOILS**

IF UNSUITABLE SUBGRADE SOILS ARE ENCOUNTERED IN THE AREAS OF THE PROPOSED ROADBED, REMOVE AND REPLACE WITH SUITABLE MATERIAL MEETING THE REQUIREMENTS OF 203.02.R., OR WHEN REQUIRED BY THE ENGINEER, USE GRANULAR MATERIAL MEETING THE SPECIFICATIONS OF 703.16.C TYPE B GRANULAR MATERIAL (304, 411 OR 617 MATERIALS WITH 0 TO 20 PERCENT PASSING THE NO. 200 SIEVE). THE LIMITS OF THE MATERIAL TO BE REMOVED AND REPLACED SHALL BE AS DETERMINED BY THE ENGINEER.

PRIOR TO PLACING FILL, THE CONTRACTOR SHALL CROSS SECTION THE EXCAVATED AREAS AND DETERMINE THE VOLUME. THIS AREA CALCULATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTING EMBANKMENTS. MEASUREMENT SHALL BE MADE USING THE AVERAGE END AREA METHOD. IN SMALL OR IRREGULARLY SHAPED AREAS, MEASUREMENT MAY BE MADE BY WEIGHT WHEN APPROVED BY THE ENGINEER.

THE FOLLOWING QUANTITIES ARE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR USE IN THE WORK NOTED ABOVE:

ITEM 204, EXCAVATION OF SUBGRADE \_\_\_\_\_ CU.YD.  
ITEM 204, EMBANKMENT \_\_\_\_\_ CU.YD.  
ITEM 204, GRANULAR MATERIAL, TYPE B \_\_\_\_\_ CU.YD.  
ITEM 204, GEOTEXTILE FABRIC, TYPE D \_\_\_\_\_ SQ.YD.  
ITEM SPECIAL, GEOGRID \_\_\_\_\_ SQ.YD.

#### Designer Note:

*Use this note on all projects with earthwork that may require removal of unsuitable subgrade materials. For estimating purposes, use the following calculations to determine the required contingency quantities:*

#### *204, Excavation of Subgrade*

*For pavement widening sections, assume 25% of plan area of pavement widening times an average depth of 1.5 feet rounded up to the next 50CY increment. This item is intended for undercutting of pavement or shoulder sections where existing soils are poorly drained or not otherwise suitable for subgrade.*

*204, Embankment*

*Provide 25% of the calculated quantity of 204, Excavation of Subgrade. This item is intended for areas where soil or other non granular materials can be placed and compacted with large compaction equipment to required 203 compaction levels.*

*204, Granular Material, Type B*

*Provide 75% of the calculated quantity of 204, Excavation of Subgrade. This item is intended for areas which are inaccessible to large compaction equipment or in areas where groundwater may be a problem. This item is also used over Geogrid where there are very soft subgrade soils and additional undercutting is deemed not feasible by the construction engineer.*

*204, Geotextile Fabric, Type D*

*Provide 25% of the plan area used to calculate 204, Excavation of Subgrade. This item is intended for areas which have very soft or wet subgrade soils and additional undercutting is deemed not feasible by the construction engineer.*

*204, Geogrid*

*Provide 75% of the plan area used to calculate 204, Excavation of Subgrade.*

**Note #DC-RD003**

**ITEM 204E51001 – GEOGRID AS PER PLAN**

PROVIDE BIAXIAL GEOGRID REINFORCEMENT MATERIAL AS DIRECTED BY THE ENGINEER AT LOCATIONS SPECIFIED. THIS ITEM IS INTENDED FOR STRENGTHENING WEAK OR POORLY DRAINED EXISTING SOILS UNDER PLANNED EMBANKMENTS OR SUBGRADE.

GEOGRIDS SHALL NOT BE PLACED ON SOILS WHICH ARE EXPOSED TO LIME OR OTHER CHEMICALS. GEOGRIDS SHALL BE COVERED WITH A MINIMUM OF 6" OF 304, 411 OR 617 MATERIALS UNLESS DIRECTED OTHERWISE BY THE ENGINEER. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR THE INSTALLATION OF THE MATERIAL.

MATERIAL SHALL MANUFACTURED FROM POLYETHELENE, POLYPROPOLENE, OR POLYESTER, AND MEETING THE FOLLOWING PROPERTIES:

MINIMUM APERTURE DIMENSIONS - 0.50 IN. X 0.50 IN.

MAXIMUM APERTURE AREA - 1.25 SQ. IN.

PERCENT OPEN AREA - 50% TO 85%

MASS PER UNIT AREA - 6.0 TO 15.0 OZ. / SQ.YD. (ASTM D 5261)

MINIMUM ULTIMATE TENSILE STRENGTH (T ULT) - 2000 X 1300 LB. / FT. (ASTM D 6637)

MINIMUM TENSILE STRENGTH AT 2% STRAIN - 600 X 400 LB. / FT. (ASTM D 6637)

REDUCTION IN REQUIRED ULTIMATE STRENGTH AFTER 500 HOURS UV EXPOSURE - NONE (ASTM D 4355)

PAYMENT SHALL BE BASED ON THE NUMBER OF SQUARE YARDS OF PLAN AREA COVERED BY GEOGRID NOT INCLUDING OVERLAPS REQUIRED BY THE MANUFACTURER.

Designer

Note:

*Use this note only with note #DC-R002 where a contingency quantity for Geogrid is provided. This item is intended for areas which have very soft subgrade soils and additional undercutting is deemed not feasible by the construction engineer. 204, Granular Embankment (crushed stone) must be used in the first 6" over top of the geogrid to create the aggregate locking mechanism in the geogrid apertures. It is generally not advisable to install soil or other natural materials between this layer and the pavement section for compaction and settlement reasons.*

**Note #DC-RD004**

**ITEM 206 – CEMENT STABILIZED SUBGRADE, XX INCHES DEEP (MINIMUM WIDTH SHALL BE 8')**

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO BE USED AS PER ITEM 206 AT THE DIRECTION OF THE PROJECT ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THE STABILIZATION OF THE SUBGRADE AS PER ITEM 206.

ITEM 206 CEMENT STABILIZED SUBGRADE, XX INCHES DEEP  
XXXX SQ.YD.

ITEM 206 CEMENT XXX TON

ITEM 206 CURING COAT XXX SQ.YD.

ITEM 206 TEST ROLLING 3 HOUR

CALCULATIONS: (Just use 6% regardless of Depth)

CEMENT @ 69.3 LBS./SQ.YD.

7006 SQ.YD. x 69.3 LBS/SQ. YD. ~ 2000 = 243 TON

TEST ROLLING @ 1 HOUR/3,000 SQ.YD.

7006 SQ.YD. ~ 3,000 SQ. YD./HOUR = 3 HOUR

**Note #DC-RD005**

**USE OF RECYCLED ASPHALT CONCRETE PAVEMENT (RACP) AS EMBANKMENT**

DO NOT USE RECYCLED MATERIAL OR RACP AS EMBANKMENT WITHIN 3 FEET OF THE ROAD SUBGRADE OR FINISHED SHOULDER GRADE. IF RACP IS USED OUTSIDE THESE LIMITS, THE MATERIAL SHALL BE BLENDED WITH A MINIMUM OF 30% NATURAL SOILS OR GRANULAR MATERIAL AS SPECIFIED IN 703.16.

Designer Note:

*The note is required for all projects that have embankment construction.*

**Note #DC-RD006**

ITEM 690E50000 – MAILBOX AND SUPPORT, AS PER PLAN

THIS WORK SHALL CONSIST OF FURNISHING TEMPORARY MAILBOXES AND RE-ERECTING EXISTING MAILBOXES AND SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

THE CONTRACTOR SHALL REMOVE AND STORE THE EXISTING PERMANENT MAILBOXES AND SUPPORTS ONSITE IN A SAFE MANNER. THIS CAN BE DONE BY BUILDING A RACK SYSTEM, TEMPORARY HOLDING SYSTEM, OR OTHER MEANS. LAYING MAILBOXES ON THE GROUND WILL BE AN UNACCEPTABLE MANNER. ALL SHALL BE STORED IN THE CONTRACTOR AREA. THIS IS MEANT TO MAINTAIN THE INTEGRITY OF THE MAILBOX BEFORE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY MAILBOXES FOR ALL RESIDENTS, ALONG WITH THE ADDRESS MARKINGS, TO BE USED DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETE THE CONTRACTOR IS TO REINSTALL THE PERMANENT EXISTING MAILBOX WITH ITS CURRENT POST IF IN GOOD SHAPE OR REPLACE THE POST WITH A SIMILAR POST THAT WAS REMOVED.

IF A POST NEEDS REPLACED IT SHALL BE SIMILAR TO THE EXISING TYPE. THE STANDARD WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND AND CONFORM TO 710.14.

STELL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D. AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL – GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER 606.03 AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POSTMASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE FOR THE FINAL PERMANENT INSTALLATIONS AS WELL AS THE TEMPORARY BOXES. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX AND SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX AND SUPPORT SYSTEM, (SINGLE) (DOUBLE), AS PER PLAN.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 690E50000 – MAILBOX AND SUPPORT, AS PER PLANS                      XX EACH

## **EROSION CONTROL GENERAL NOTES**

### **Note #DC-EC001**

#### **SITE PREPARATION FOR SEEDING AND MULCHING**

IN ADDITION TO THE REQUIREMENTS OF 659.10, IN MAINTAINED LAWN AREAS REMOVE ALL STONES LARGER THAN 1/2-INCH BY RAKING OR OTHER METHODS APPROVED BY THE ENGINEER. IF THERE IS EXCESSIVE GRAVEL OR DEBRIS THAT CANNOT BE REMOVED BY CONVENTIONAL METHODS, PROVIDE 4-INCHES OF TOPSOIL AT NO ADDITIONAL COST TO THE COUNTY OVER THESE AREAS. TOPSOIL SHALL BE FERTILE, LOOSE, FRIABLE AND LOAMY AND NOT CONTAIN DEBRIS OR PARTICLES LARGER THAN 1/2-INCH IN ANY DIMENSION. TOPSOIL SHALL CONTAIN BETWEEN 6 AND 20 PERCENT ORGANIC MATERIAL AND NO MORE THAN 18% MOISTURE. TEST TOPSOIL ACCORDING TO SUPPLEMENT 1016.

#### Designer Note:

*Use this note on all projects requiring seeding and mulching.*

### **Note #DC-EC002**

#### **ITEM 659-TOPSOIL, AS PER PLAN**

PROVIDE PULVERIZED TOPSOIL THAT IS FERTILE, LOOSE, FRIABLE AND LOAMY AT LOCATIONS SHOWN IN THE PLAN OR AS DIRECTED BY THE ENGINEER. TOPSOIL SHALL BE FURNISHED FROM COMMERCIAL SOURCES (TOPSOIL SUPPLIERS) OR SHALL BE FURNISHED FROM STOCKPILES THAT ARE APPROVED BY THE DEPARTMENT.

IN ADDITION TO THE REQUIREMENTS OF 659, TOPSOIL SHALL CONTAIN BETWEEN 6 PERCENT AND 20 PERCENT ORGANIC MATERIAL. TOPSOIL SHALL NOT CONTAIN MORE THAN 18% MOISTURE AND SHALL BE FREE OF WEEDS AND OTHER DELETERIOUS MATERIAL. TOPSOIL SHALL NOT CONTAIN MORE THAN 5 PERCENT OF MATERIAL NOT PASSING THE 1/2-INCH SIEVE, OR ANY MATERIAL 1-INCH OR LARGER IN ANY DIMENSION. FOR TOPSOIL TO BE CONSIDERED LOAMY, ENSURE THAT THE FRACTION PASSING THE NO. 10 SIEVE DOES NOT CONTAIN MORE THAN 40 PERCENT CLAY. TEST FOR ACIDITY OR ALKALINITY AND ENSURE THAT PH IS BETWEEN 6 AND 7. TEST TOPSOIL ACCORDING TO SUPPLEMENT 1016.

#### Designer Note:

*Use this note on project that have areas to be seeded in lawns or other highly maintained areas.*

## **DRAINAGE GENERAL NOTES**

### **Note #DC-DR001**

#### **CONCRETE ENCASEMENT FOR PIPES**

FOR ALL CULVERT AND SEWER PIPES SPECIFIED IN THE PLANS AND/OR PIPES WITH LESS THAN 24" OF COVER BETWEEN TOP OF PIPE AND PAVEMENT OR TREATED SHOULDER SUBGRADE, CONCRETE ENCASEMENT SHALL BE PROVIDED FOR THE FULL WIDTH OF THE TRENCH AND WITHIN LIMITS OF THE PAVEMENT OR TREATED SHOULDERS. CONCRETE SHALL EXTEND VERTICALLY TO THE PAVEMENT OR SHOULDER SUBGRADE, OR MAY EXTEND INTO THE PAVEMENT SECTION IF ALLOWED BY THE ENGINEER.

FOR AREAS NOT REQUIRING OPENING TO TRAFFIC WITHIN 3 DAYS, PROVIDE CLASS F OR CLASS C CONCRETE. FOR AREAS THAT REQUIRE OPENING TO TRAFFIC WITHIN 24 HOURS, PROVIDE CLASS MS OR FS CONCRETE, AT NO ADDITIONAL COST. CONCRETE SHALL BE PLACED AT A MAXIMUM SLUMP OF 7 INCHES, PROVIDED THE INCREASE IN SLUMP IS ACHIEVED BY ADDING A CHEMICAL ADMIXTURE CONFORMING TO THE REQUIREMENTS OF 705.12, TYPE F OR G.

CONCRETE SHALL NOT BE DROPPED WITH A FREE-FALL DISTANCE OF GREATER THAN 5 FEET. CONCRETE PLACED WHEN THE ATMOSPHERIC TEMPERATURE IS 32 °F OR LESS, OR IF WEATHER FORECASTS PREDICT THESE TEMPERATURES DURING THE CURING PERIOD, NON-CHLORIDE ACCELERATING ADMIXTURES SHALL BE PROVIDED. CHLORIDE ADMIXTURES MAY BE USED ONLY WITH APPROVAL OF THE ENGINEER.

NO ADDITIONAL COMPENSATION WILL BE MADE FOR OVER-EXCAVATED TRENCHES OR ADDITIONAL LENGTH OF PIPE ENCASED WHEN NOT PRE-APPROVED BY THE ENGINEER. BELOW ARE THE DRAINAGE RUNS THAT WILL NEED ENCASEMENT:

#### **Designer Note:**

*Use this note when there is sewer pipe with less than 24" of cover to subgrade or is otherwise specified by the Department. Engineer will list the "D" runs here so the contractor knows which runs will need the encasement.*

## **PAVEMENT GENERAL NOTES**

### **Note #DC-PA001**

#### **ITEM 407-TACK COAT AND ITEM 408- PRIME COAT**

THE ENGINEER SHALL ADJUST THE RATE OF APPLICATION IN THE FIELD OF THE 407 TACK COAT AND 408 PRIME COAT AS NEEDED. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE FOR THESE ITEMS. DO NOT ORDER MATERIALS FOR THESE ITEMS UNLESS AUTHORIZED BY THE ENGINEER.

#### Designer Note:

*Use this note on all projects requiring asphalt concrete pavement.*

### **Note #DC-PA002**

#### **SAWCUTS AND ASPHALT CONCRETE JOINTS**

THE COST OF SAWCUTS, BUTT JOINTS AND SEALING THESE JOINTS THAT ARE NOT SEPARATELY ITEMIZED IN THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE PAVING ITEMS. ALL JOINTS BETWEEN EXISTING AND PROPOSED ASPHALT CONCRETE PAVEMENT SHALL BE SEALED WITH AN 8" WIDE ASPHALT CEMENT (AC) BAND OF LIQUID ASPHALT MEETING 702.02, 702.03 OR 702.04 AT NO ADDITIONAL COST.

#### Designer Note:

*Use this note on all projects requiring asphalt concrete pavement.*

### **Note #DC-PA003**

#### **ITEM 452 – \_\_\_" NON-REINFORCED CONCRETE PAVEMENT, MISC.: \_\_\_" NON-REINFORCED STAMPED COLORED CONCRETE PAVEMENT**

THIS ITEM SHALL CONSIST OF CONSTRUCTING DECORATIVE, NON-REINFORCED CONCRETE AT THE LOCATIONS SPECIFIED IN THE PLANS. THE CONCRETE SHALL BE CLASS QC 1, AS PER CMS SECTION 499. THE REQUIREMENTS OF ITEM 452 SHALL APPLY, EXCEPT AS FOLLOWS: DO NOT COMPLY WITH THE REQUIREMENTS OF 451.08, 451.10, AND 451.15.

RADIAL JOINTS HAVING A DEPTH OF \_\_\_ INCHES SHALL BE SAWED AT 20 FOOT SPACING WITHIN 24 HOURS OF CONCRETE PLACEMENT.

AFTER PLACEMENT OF CONCRETE, THE CONTRACTOR SHALL APPLY AN ACRYLIC BASED CONCRETE SEALER AND CURING AGENT. THE SEALER SHALL HAVE A MEDIUM TO HIGH GLOSS AND BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT THE BRAND NAME AND TECHNICAL DAT FOR THE CONCRETE SEALER TO THE ENGINEER FOR APPROVAL NO LESS THAN 14 DAYS PRIOR TO USE.

A CONCRETE PIGMENT SHALL BE ADDED TO THE CONCRETE TO PRODUCE A DARK BROWN COLOR. THE CONTRACTOR SHALL SUBMIT THE TECHNICAL DATA AND COLOR SAMPLE OF THE CONCRETE PIGMENT TO THE ENGINEER FOR APPROVAL NO LESS THAN 14 DAYS PRIOR TO USE. AN APPROVED SET RETARDING ADMIXTURE CONFORMING TO 705.12 TYPE B OR D SHALL BE USED WHEN THE NOMINAL TEMPERATURE OF THE CONCRETE EXCEEDS 50°F.

THE STAMP SHALL BE A FLEXIBLE URETHANE TYPE WITH A RANDOM SANDSTONE OR FLAGSTONE PATTERN AND SHALL PRODUCE A SIMULATED STONE TEXTURE. THE STONE SHALL HAVE A MINIMUM NOMINAL DIMENSION OF 8 IN X 8 IN AND A MAXIMUM NOMINAL DIMENSION OF 24 IN X 24 IN.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER SQUARE YARD AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK NOTED ABOVE.

## **LIGHTING GENERAL NOTES**

**Note #DC-LT001**

### **ITEM SPECIAL – TEMPORARY LIGHTING**

IF THE PERMANENT HIGHWAY LIGHTING SYSTEM SHOWN ON THE PLANS WILL NOT BE COMPLETED AND ACCEPTED BY THE OPENING DATE OF THE ROUNDABOUT, THE CONTRACTOR MAY FURNISH AND INSTALL TEMPORARY LIGHT POLES AND LUMINAIRES MEETING THE REQUIREMENTS OF THE PERMANENT SYSTEM EXCEPT THAT THE HEIGHT MAY VARY FROM THE PROPOSED POLES BY UP TO 5 FEET LESS OR 10 FEET GREATER IN HEIGHT, AND MAY BE DIFFERENT SHAPE, MATERIAL AND COLOR. LUMINAIRE SUPPORTS MAY BE PLACED WITHIN 5 FEET Laterally OF THE PERMANENT LOCATIONS OR ON THE PERMANENT FOUNDATIONS. LUMINAIRES MAY BE A DIFFERENT MODEL WITH SUBSTANTIALLY THE SAME LIGHT OUTPUT AND PATTERN AS THE PERMANENT SYSTEM AS DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT THE DESIGN DATA FOR A TEMPORARY SYSTEM NO LESS THAN 30 DAYS PRIOR TO INSTALLATION FOR ACCEPTANCE.

PAYMENT FOR THIS ITEM, IF PERFORMED, INCLUDES ALL LABOR, MATERIALS, EQUIPMENT, MAINTENANCE OF TRAFFIC, AND INCIDENTALS TO FURNISH, INSTALL, OPERATE, PROVIDE ELECTRICAL ENERGY, MAINTAIN AND REMOVE THE TEMPORARY SYSTEM UNTIL THE PROPOSED LIGHT SYSTEM IS INSTALLED AND ACCEPTED.

Designer Note:

*Use this note on all roundabout projects.*

## **MAINTENANCE OF TRAFFIC GENERAL NOTES**

### **Note #DC-MT001**

#### **MAINTENANCE OF TRAFFIC GENERAL NOTES**

IN ADDITION TO THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS INDICATED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION AND ITEM 614, COMPLY WITH THE FOLLOWING REQUIREMENTS:

BEFORE WORK BEGINS, DESIGNATE A PERSON UNDER THE CONTRACTOR'S EMPLOYMENT TO BE RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL DEVICES ASSOCIATED WITH THIS PROJECT. THIS PERSON MUST BE AVAILABLE TO BE CONTACTED 24 HOURS A DAY BY THE DELAWARE COUNTY ENGINEER AND ALL INTERESTED LAW ENFORCEMENT AGENCIES IN THE EVENT THAT ANY PROBLEMS ARISE DURING NON-WORKING HOURS. THIS PERSON SHALL CORRECT ANY DEFICIENCIES WITHIN 4 HOURS OF NOTIFICATION BY THE ENGINEER OR LAW ENFORCEMENT AGENCIES. SUBMIT TO THE ENGINEER, IN WRITING, THE NAME AND TELEPHONE NUMBER OF THIS PERSON NO LESS THAN THREE (3) WORKING DAYS BEFORE INSTALLATION OF ANY TRAFFIC CONTROL DEVICES. DELAWARE COUNTY ENGINEER, 50 CHANNING STREET, DELAWARE, OHIO 43015, PHONE: 740-833-2400, FAX: 740-833-2399.

FURNISH, ERECT, AND MAINTAIN SIGNS, SIGN SUPPORTS, AND BARRICADES OF THE TYPE AND LOCATION SHOWN IN THESE PLANS. PAYMENT FOR ALL DETOUR SIGNING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 614,     (MAINTAINING TRAFFIC OR DETOUR SIGNING)    .

THE CONTRACTOR MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THERE FROM. DO NOT PLACE AN ALTERNATE PLAN INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR MAINTENANCE OF TRAFFIC:

ITEM 614, MAINTAINING TRAFFIC   LUMP SUM  
ITEM 614, DETOUR SIGNING       LUMP SUM

#### Designer Note:

*Use this note on all projects that require a closure of the road with a posted detour. Provide ODOT plan insert sheet 2010160, available here: <http://www.dot.state.oh.us/traffic/Publication%20Manuals/PIS/PISs.htm>*

*Fill in the pay item blanks with the appropriate items. On most projects, it is desirable to have separate pay items for Item 614, Maintaining Traffic and Item 614, Detour Signing. If the project is small or there is minimal signing required, it may be appropriate to include all work in Item 614, Maintaining Traffic.*

### **Note #DC-MT002**

#### **LOCAL ACCESS**

MAINTAIN INGRESS AND EGRESS TO ALL PROPERTIES AFFECTED BY THIS IMPROVEMENT AT ALL TIMES. ANY COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO MAINTAIN LOCAL ACCESS TO PROPERTIES.

#### Designer Note:

*Use this note on projects that have local residences within the work limits.*

### **Note #DC-MT003**

#### **NOTICE OF CLOSURE**

NOTIFY THE ENGINEER IN WRITING AT LEAST 7 DAYS IN ADVANCE OF INTENDED ROAD CLOSURE. THE     (COUNTY/CONTRACTOR)     SHALL PROVIDE AND MAINTAIN   #   CLASS   A OR B   PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 1061. PCMS'S SHALL BE POSITIONED TO DISPLAY THE DATE AND DURATION OF THE ROAD CLOSURE FOR THE PERIOD OF TIME AND AT LOCATIONS SPECIFIED IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.

PROVIDE THE FOLLOWING MESSAGES, OR OTHER MESSAGES AS DIRECTED BY THE ENGINEER (\* DENOTES LIMITS OF EACH SCREEN MESSAGE):

\*  
\_\_\_\_\_  
\*  
\_\_\_\_\_  
\*  
\_\_\_\_\_  
\*  
\_\_\_\_\_



\* \_\_\_\_\_ \*

Designer Note:

Use this note on projects that require closure of the road. Fill in the blank with who will be responsible for providing PCMS. Class "A" PCMS is used for roads with speeds 45mph and over. Class "B" PCMS is used for roads 40mph and under. The note may include the second paragraph defining the actual messages to be displayed, especially if the Contractor is to provide signs.

Examples:

\*ROAD CLOSED AHEAD\*

\*BEGINNING JAN 1\*

\*FOR 60 DAYS\*

\*USE DETOUR\*

## **STRUCTURE GENERAL NOTES**

### **Note #DC-BR001**

#### **CONCRETE CURING AND PLACEMENT REQUIREMENTS**

THE REQUIREMENTS OF 511.17 SHALL APPLY EXCEPT THAT \_(BEAMS/GIRDERS/SLAB)\_ SHALL NOT BE PLACED UNTIL ABUTMENT CONCRETE AT OR BELOW THE BEAM SEAT HAS CURED FOR A MINIMUM OF 7 DAYS AND HAS REACHED A COMPRESSIVE STRENGTH OF 60% DESIGN STRENGTH. MEASUREMENT SHALL BE DETERMINED BY THE DEPARTMENT'S CONCRETE TEST CYLINDERS.

Designer Note:

Use this note on all bridge projects with structural beams or girders that bear on abutment concrete. This note is intended to clarify 511.17 and to ensure that abutment concrete is of adequate strength to support dead load of beams or girders. Change text to the applicable type of superstructure as needed.

### **Note #DC-BR003**

#### **CONTAINMENT OF POLLUTANTS**

THE CONTRACTOR SHALL PROVIDE A PLAN AND METHOD TO CONTAIN ALL POTENTIAL POLLUTANTS INCLUDING SOLVENTS, PAINTS, SEALERS, OIL, GREASE, ETC., ENTERING THE WATER. THE PROPOSED CONTAINMENT PLAN SHALL BE SUBMITTED IN WRITING TO THE ENGINEER NO LESS THAN 14 DAYS PRIOR TO BEGINNING CONSTRUCTION. WORK SHALL NOT BEGIN UNTIL THE ENGINEER APPROVES THE PLAN IN WRITING. THIS PLAN SHALL BE INCIDENTAL TO THE BRIDGE ITEMS.

Designer Note:

This note may be required whenever the project is in or over a waterway that is a public drinking water supply, such as a reservoir, or other any other major water course.

### **NOTE #DC-BR004**

#### **DEMOLITION DEBRIS**

NO PORTIONS OF THE DEMOLITION DEBRIS SHALL FALL INTO THE WATER. THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD OF REMOVING THE EXISTING STRUCTURE TO THE ENGINEER NO LESS THAN 14 DAYS PRIOR TO STARTING REMOVAL OPERATIONS. NO REMOVALS SHALL BE PERFORMED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

Designer Note:

This note maybe required whenever the project is in or over a waterway that is a public drinking water supply, such as a reservoir, or other any other major water course.

### **Note #DC-BR005**

#### **ITEM 516-ELASTOMERIC BEARINGS**

DESTRUCTIVE TESTING BY AN INDEPENDENT LABORATORY SHALL BE REQUIRED AS STATED IN 711.23. THE CONTRACTOR SHALL PROVIDE CERTIFIED TEST RESULTS NO LESS THAN 14 DAYS BEFORE BEARINGS ARE INCORPORATED INTO THE WORK.

Designer Note:

Use this note on all bridge projects with elastomeric bearings. This note is intended to clarify and enforce the requirements of destructive testing of a sample bearing as required in 711.23.