

**Cuyahoga County
Department of Public Works
Cuyahoga County Engineer's
Sample Erosion Control Notes**

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Note to Designer: In addition, the ODOT Location and Design (L&D) Manual (Volume 2) Erosion Notes most frequently used are: the Designer Note for E101 and E102 Sodding.

ITEM 659 - SEEDING AND MULCHING, AS PER PLAN (10/31/2013)

WHEN THE ABOVE ITEM IS CALLED FOR ON THE PLANS OR IN THE PROPOSAL, ALL APPLICABLE PROVISIONS OF ITEM 659, AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SHALL APPLY UNLESS MODIFIED HEREIN.

659.07 SEEDS. UNLESS OTHERWISE DIRECTED/APPROVED BY THE ENGINEER, HIGH QUALITY GERMINATION RATES ARE REQUIRED.

659.09 NATIVE GRASSES AND WILDFLOWERS. UNLESS OTHERWISE DIRECTED/APPROVED BY THE ENGINEER, THE FOLLOWING SEED MIXTURE CLASS(ES) SHALL BE USED: (SEE DESIGNER NOTE).

659.10 SITE PREPARATION. IN ADDITION TO "AREAS IN FRONT OF RESIDENCES, COMMERCIAL PROPERTIES, ETC." REFERRED TO IN 659.10(A), THE SPECIAL PREPARATION SHALL BE EXTENDED TO ENCOMPASS ALL LAWNS AND/OR LAWN-LIKE AREAS AS DETERMINED BY THE ENGINEER. REMOVE ALL STONES 1-INCH OR GREATER BY APPROVED METHODS/EQUIPMENT SUCH AS "ROCK HOUNDING", RAKING, ETC.

659.11 PLACING TOPSOIL. TOPSOIL SHALL BE PLACED AND SPREAD TO A MINIMUM COMPACTED DEPTH OF TWO (2) INCHES. THE FINISHED TOPSOIL SURFACES SHALL BE SEEDED AND MULCHED WITHIN SEVENTY-TWO (72) HOURS OF THEIR ACCEPTED COMPLETION.

659.13 MULCHING OPERATION. UNLESS OTHERWISE DIRECTED OR APPROVED BY THE ENGINEER, STRAW MULCH (PER 659.14) OR COMPOST MULCH (PER 659.16) SHALL BE USED.

659.17 WATERING. IN ADDITION TO THE REQUIREMENTS OF 659.17, THE SEED BED SHALL BE KEPT ACCEPTABLY MOIST UNTIL THE SEED HAS GERMINATED; ALL AT THE DIRECTION OR APPROVAL OF THE ENGINEER.

659.23 PERFORMANCE. THE COUNTY WILL INSPECT ALL SEEDED AREAS NO EARLIER THAN ONE (1) MONTH AND NO LATER THAN NINE (9) MONTHS AFTER FINAL/COMPLETED SEEDING; ALL AT THE DISCRETION/DETERMINATION OF THE ENGINEER.

659.24 METHOD OF MEASUREMENT. SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659 - SEEDING AND MULCHING, AS PER PLAN ARE BASED ON THESE LIMITS.

659.25 BASIS OF PAYMENT. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR THE ACTUALLY COMPLETED AND ACCEPTED QUANTITIES OF:

ITEM 659 - SEEDING AND MULCHING, AS PER PLAN	SQ.YD.
ITEM 659 - SOIL ANALYSIS TEST	EACH
ITEM 659 - TOPSOIL	CU.YD.
ITEM 659 - COMMERCIAL FERTILIZER	TON
ITEM 659 - LIME	ACRE
ITEM 659 - WATER	M GAL.
ITEM 659 - MOWING	M SQ.FT.

THE QUANTITY FOR ITEM 659 SEEDING AND MULCHING, AS PER PLAN IS CALCULATED ON THE CROSS-SECTION SHEETS, PLAN SHEETS AND/OR ELSEWHERE ON THE PLANS AND CARRIED TO THE GENERAL SUMMARY.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS IN ACCORDANCE WITH THE SPECIFICATIONS:

ITEM 659 - SOIL ANALYSIS TEST	_____ EACH
ITEM 659 - TOPSOIL	_____ CU.YD.
ITEM 659 - COMMERCIAL FERTILIZER	_____ TON
ITEM 659 - LIME	_____ ACRE
ITEM 659 - WATER	_____ M GAL.
ITEM 659 - MOWING	_____ M SQ.FT.

Designer Note: This note is typically used on all County Projects. Overall note content should be edited as required. Class 1 seed mixture shall be specified for tree lawns, yard lawns and other lawn-like areas along residential and commercial frontages. For slope areas 3:1 and greater, refer to Table 659.09-1. If more than one class of seed mixture is proposed, list and clearly specify/delineate their intended use in 659.09 above or provide separate pay items listing the different classes in 659.25 above. Also include "Item 671 – Erosion Control Mat" for slope areas 3:1 and greater. For resurfacing projects where full width treelawn grading (209) is not required and is not specified on the Typical Section(s), add the following first section:

"659.01 DESCRIPTION. THE COST FOR ANY INCIDENTAL GRADING REQUIRED TO PROPERLY PLACE THE TOPSOIL, SEEDING AND MULCHING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 659 – SEEDING AND MULCHING, AS PER PLAN."

If the seeding and mulching quantity is estimated (not calculated) add the estimated quantity of Item 659 - Seeding and Mulching, As Per Plan to the top of the list in the last paragraph and eliminate the preceding paragraph regarding the seeding and mulching calculation.

See ODOT L&D - E 101 Designer Note for guidelines on estimating the required quantities, except that for Topsoil (2") use 55.6 Cu. Yds. per 1,000 Sq. Yds. of permanent seeded area and for water add a sufficient quantity to keep the seed bed moist prior to germination.

CUY-E02

ITEM 660 – SODDING UNSTAKED, AS PER PLAN (09/29/2003)

THE PREPARATION OF SODDED AREAS SHALL INCLUDE TWO (2) INCHES OF TOPSOIL FURNISHED AND PLACED BENEATH THE SOD IN ACCORDANCE WITH ITEM 659.

PAYMENT FOR PREPARING AND PLACING SODDED AREAS, INCLUDING THE TWO (2) INCH TOPSOIL BED, WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR ITEM 660 – SODDING UNSTAKED, AS PER PLAN.

Designer Note: Include this note for County projects where Item 660 Sodding is used. For sodded placements on slopes steeper than 3:1 specify Item 660 – Sodding Staked, As Per Plan. Also add an appropriately edited version of ODOT L&D Manual note E102 to the plans.

CUY-E03

ITEM 660 – SODDING UNSTAKED, AS PER PLAN (09/29/2003)

ESTIMATED QUANTITIES OF SODDING HAVE BEEN PROVIDED IN THE GENERAL SUMMARY FOR GRASS AREAS DAMAGED DURING THE CONSTRUCTION OF THE IMPROVEMENT. DAMAGED AREAS SHALL BE KEPT TO A MINIMUM. PAYMENT FOR PREPARING SOD AREAS SHALL INCLUDE A TWO (2) INCH TOPSOIL BED FURNISHED AND PLACED BENEATH THE SOD IN ACCORDANCE WITH ITEM 659. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR ITEM 660 – SODDING UNSTAKED, AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 660 – SODDING UNSTAKED, AS PER PLAN _____ SQ.YD.

Designer Note: If quantity is calculated elsewhere in the plans, revise last paragraph accordingly. Edit note to fit project, sodding is not always appropriate. Should seeding be more appropriate revise plan requirement accordingly. Typically used on County rehab projects where the plan work requires partial re-sodding. Also add an appropriately edited version of ODOT L&D Manual note E102 to the plans.

CUY-E04

ITEM 832 – EROSION CONTROL (10/31/2013)

THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED FOR TEMPORARY SEDIMENT AND EROSION CONTROL (TSEC) IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATION 832 :

ITEM 832 – EROSION CONTROL _____ EACH

UNLESS OTHERWISE APPROVED BY THE ENGINEER, DAMAGED FILTER FABRIC FENCE SHALL BE REPLACED IN LIEU OF ANY/ALL METHODS OF REPAIR.

Designer Note: This note should be located on the Project Site Plan. In the event that a Project Site Plan is not required, the note should be placed in the Erosion Control section of the General Notes. See SS 832 to explain quantity determination.

ITEM 832 – STORM WATER POLLUTION PREVENTION PLAN (07/16/2009)

PER “PART III.G.2.e POST – CONSTRUCTION STORM WATER MANAGEMENT REQUIREMENTS” OF THE OHIO EPA’S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (APPENDIX E OF SS 832), THE DETAILED DRAWINGS AND MAINTENANCE PLANS FOR ALL **MANUFACTURED** POST-CONSTRUCTION STORM WATER BMPs SHALL BE PROVIDED TO THE ENGINEER BY THE CONTRACTOR.

COST FOR THE ABOVE WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 832 – STORM WATER POLLUTION PREVENTION PLAN.

Designer Note: This note should be located on the Project Site Plan for projects that utilize manufactured BMPs. The designer is responsible for providing the location and description of the proposed post-construction BMPs on the project site plan (Per 1308.2 of the ODOT L&D Manual, Vol. 3) and for the detailed rationale for the proposed post-construction BMPs selected for the project per the requirements of Part III.G.2.e of the NPDES permit. In addition, the Designer is responsible for providing the detailed drawings and maintenance plans (per Part III.G.2.e of the NPDES permit) for all non-manufactured BMPs.