This document contains the latest set of approved Environmental Compliance notes for use within the Environmental Compliance Plans that are generated either by or on behalf of the Delaware Department of Transportation. These notes should not be modified from their original format/content without first consulting with the DelDOT Project Manager and/or Design Resource Engineer.

Any comments, questions or concerns regarding the content of this document should be brought to the attention of:

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GENERAL NOTES:

A. THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.

B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, CONTACT THE ENVIRONMENTAL STUDIES SECTION (302-760-2259 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.

C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

Approved for use.

NATURAL RESOURCE ISSUES:

A. PERMIT REQUIREMENTS/APPROVALS*:
U.S. ARMY CORPS OF ENGINEERS (COE): _____
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): _____
DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): _____
NCC DEPT. OF LAND USE (NCC): _____
CITY OF WILMINGTON (COW): _____
US COAST GUARD (USCG): _____

* THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THESE APPROVALS.
** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE THEY ARE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.

B. CONSTRUCTION RESTRICTIONS:
FISHERIES - _____
ENDANGERED SPECIES - _____
MIGRATORY BIRDS - _____

Approved for use.

CULTURAL RESOURCE ISSUES: A._____
Approved for use. The project-specific language will be provided by the Environmental Studies Section.

STREAM RESTORATION AND RIPRAP TREATMENT:

A. FOLLOW THE SPECIAL PROVISION FOR ITEM 707500 – CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL MUST CONFORM TO THE REQUIREMENTS OF ITEM 707500 – CHANNEL BED FILL. RECESS ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) ONE FOOT BELOW STREAM BED ELEVATION AND CHOKE WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH SPECIFIED MATERIAL. PAYMENT UNDER ITEM 209002 – BORROW, TYPE B. COVER THE RIPRAP WITH A MINIMUM OF 12" CHANNEL BED FILL. MATCH THE FINAL CHANNEL ELEVATIONS WITH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS WILL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM 707500 – CHANNEL BED FILL.

B. RESTORE OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) TO EXISTING CONDITIONS. FILL ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES WITH CHANNEL BED FILL. PAYMENT UNDER ITEM 707500 – CHANNEL BED FILL.

C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.

D. CHOKE ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, WITH DELAWARE #57 STONE. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PLACE AN ADDITIONAL 6-INCH TOPSOIL LAYER ON TOP OF THE RIPRAP. SLOPE SEEDING WILL BE DONE WITH ITEM 908019 – STREAMBANK SEED MIX, SEEDING. FOLLOWING THE SEEDING OPERATION, INSTALL ITEM 908020 – EROSION CONTROL BLANKET (ECB) MULCH, OR OTHER BLANKET AS SHOWN ON THE PLANS. ECB AT TOE OF SLOPE CAN BE EITHER TRENCHED IN OR STAPLED AT 6" ON CENTER. COMPLETE ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING PRIOR TO ANY RAIN EVENT. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

E. THE TOPSOIL/SEED/MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF THE PLACEMENT OCCURS AFTER STREAM DIVERSION REMOVAL, USE A TURBIDITY CURTAIN TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT WILL BE INCIDENTAL TO ITEM 909005 – STREAM DIVERSION.

Approved for use. Use this note when Stream Restoration is occurring on a project. Choose this alternative for projects without bridges or when streambanks above channel bed fill are not present beneath the bridge (pipe or box culverts, etc.)

STREAM RESTORATION AND RIPRAP TREATMENT:

A. FOLLOW THE SPECIAL PROVISION FOR ITEM 707500 – CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL MUST CONFORM TO THE REQUIREMENTS OF ITEM 707500 – CHANNEL BED FILL. RECESS ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) ONE FOOT BELOW STREAM BED ELEVATION AND CHOKE WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH SPECIFIED MATERIAL. PAYMENT UNDER ITEM 209002 – BORROW, TYPE B. COVER THE RIPRAP WITH A MINIMUM OF 12" CHANNEL BED FILL. MATCH THE FINAL CHANNEL ELEVATIONS WITH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS WILL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM 707500 – CHANNEL BED FILL.

B. RESTORE OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) TO EXISTING CONDITIONS. FILL ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES WITH CHANNEL BED FILL. PAYMENT UNDER ITEM 707500 – CHANNEL BED FILL.

C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.

D. CHOKE ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, WITH DELAWARE #57 STONE. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF CHANNEL BED FILL OR TOPSOIL (DEPENDING ON LOCATION AS INDICATED BELOW) THROUGH THE RIPRAP.

1. BENEATH THE BRIDGE: AFTER PLACING DELAWARE #57 STONE, PERFORM A FINAL CHOKE OF CHANNEL BED FILL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PAYMENT UNDER ITEM 707500 – CHANNEL BED FILL. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM.

2. ALL OTHER LOCATIONS: FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PLACE AN ADDITIONAL 6-INCH TOPSOIL LAYER ON TOP OF THE RIPRAP. SLOPE SEEDING WILL BE DONE WITH ITEM 908019 – STREAMBANK SEED MIX, SEEDING. FOLLOWING THE SEEDING OPERATION, INSTALL ITEM 908020 – EROSION CONTROL BLANKET (ECB) MULCH, OR OTHER BLANKET AS SHOWN ON THE PLANS. ECB AT TOE OF SLOPE CAN BE EITHER TRENCHED IN OR STAPLED AT 6" ON CENTER. COMPLETE ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING PRIOR TO ANY RAIN EVENT. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

E. THE TOPSOIL/SEED/MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF THE PLACEMENT OCCURS AFTER STREAM DIVERSION REMOVAL, USE

A TURBIDITY CURTAIN TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT WILL BE INCIDENTAL TO ITEM 909005 – STREAM DIVERSION.

Approved for use. Use this note when Stream Restoration is occurring on a project. Choose this alternative when streambanks above channel bed fill are present beneath the bridge (bridges with abutments, etc.)

PROTECTION OF RESOURCES:

A. KEEP CLEARING IN WETLAND AREAS TO A MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. SUPPORT ALL EQUIPMENT TRAVERSING WETLANDS AND SUBAQUEOUS LAND ON MATS. PAYMENT FOR MATS WILL BE MADE UNDER ITEM 621500 – TEMPORARY TIMBER MAT. IN WETLAND AREAS THAT ARE CLEARED, NO GRUBBING EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS AND RIPRAP PROTECTION IS PERMITTED. CUT VEGETATION FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT). RESTORE TEMPORARILY DISTURBED WETLAND AREAS TO GRADE AND SEED WITH ITEM 908017 - TEMPORARY GRASS SEEDING (ANNUAL RYEGRASS).

B. USE SILT FENCE OR CONSTRUCTION SAFETY FENCE ALONG THE LIMITS OF CONSTRUCTION IN ALL AREAS WHERE WATER/WETLANDS ARE BEING IMPACTED (AS SHOWN ON ENVIRONMENTAL COMPLIANCE SHEETS), AND ALSO IN ANY AREA WHERE WATER/WETLANDS EXIST WITHIN 20 FEET OF THE LIMIT OF CONSTRUCTION (AS SHOWN ON CONSTRUCTION PLAN SHEETS). ANY CONTRACTOR ACCESS BEYOND THE LIMIT OF CONSTRUCTION IS STRICTLY PROHIBITED.

C. USE SANDBAGS OR COMPOST FILTER LOG (CFL) TO SECURE SILT FENCE AT AREAS ADJACENT TO WOODED UPLANDS/ ALL WETLANDS IN LIEU OF TRENCHING UNLESS PROPER EROSION AND SEDIMENT CONTROL CANNOT BE MAINTAINED. REMOVE SANDBAGS AND CFLS (AND CONTENTS) IN THEIR ENTIRETY WHEN NO LONGER NEEDED. SANDBAGS/CFLS USED TO SECURE THE SILT FENCE IS INCIDENTAL TO ITEM 905001 - SILT FENCE. THE ENVIRONMENTAL STUDIES SECTION (302-760-2259 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.

D. CLEARLY MARK ALL TREES TO BE REMOVED WITH PAINT PRIOR TO THE EROSION AND SEDIMENT CONTROL MEETING.

Approved for use. This note is used, as applicable, when wetlands and/ or wooded uplands are present. Site Conditions determine which notes are included on the plans.

PLANTING GUIDANCE, WORK DONE BY DELDOT: PLANTING GUIDANCE (INFORMATION ONLY, WORK TO BE DONE BY OTHERS. THERE WILL BE NO PAYMENT FOR PLANTING ON THIS CONTRACT.) UPON FINAL ACCEPTANCE OF THE CONTRACT, NOTIFY THE ENVIRONMENTAL STUDIES SECTION (302-760-2259 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) AND ROADSIDE ENVIRONMENTAL (DARIN CALLAWAY, 302-760-2186) OF COMPLETION. PLANT APPROPRIATE TREES AND/OR SHRUBS IN A NATURALIZED PATTERN (MINIMUM 8', MAXIMUM 12' CENTERS) IN TEMPORARILY DISTURBED WOODED WETLAND AREAS WITHIN THE LOC. FINAL PLANT COUNTS WILL BE BASED ON FIELD CONDITIONS AND DETERMINED BY THE ROADSIDE ENVIRONMENTAL ADMINISTRATOR OR APPOINTED DESIGNEE. SPECIFIC PLANT SELECTION IS ALSO AT THEIR DISCRETION BUT MUST BE A NATIVE SPECIES APPROVED BY THE DELAWARE DEPARTMENT OF NATURAL RESOURCES. ON THIS PROJECT, DNREC WSLS REQUIRES THAT A PLANTING PLAN BE SUBMITTED FOR APPROVAL PRIOR TO ACTUAL WORK.
This note is only to be used as directed by the Environmental Studies Section. Note that the Environmental Studies Section may request the last sentence to be deleted.