



MEASURE	KEY	DESCRIPTION
PERMANENT SEEDING	(PS)	ESTABLISHMENT OF PERMANENT STAND OF GRASS AND/OR LEGUMES BY SEEDING AND MULCHING EXPOSED SOILS WITH A SEED MIXTURE APPROPRIATE FOR LONG TERM STABILIZATION. SEE EROSION CONTROL NARRATIVE FOR SEED MIX REQUIREMENTS.
MULCH FOR SEED	(MS)	APPLICATION OF A MULCH THAT WILL PROTECT THE SOIL SURFACE ON A TEMPORARY BASIS AND PROMOTE THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDINGS.
CONSTRUCTION ENTRANCE	(CE)	A STONE STABILIZED PAD SOMETIMES ASSOCIATED WITH A MUD RACK, AUTOMOTIVE SPRAY, OR OTHER MEASURES LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE.
GEOTEXTILE SILT FENCE	(GSF)	A TEMPORARY SEDIMENT BARRIER CONSISTING OF A GEOTEXTILE FABRIC PULLED TAUT AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED.
STONE CHECK DAM	(SCD)	A TEMPORARY OR PERMANENT STONE DAM PLACED ACROSS A DRAINAGEWAY.
HAYBALE BARRIER	(HB)	A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED BALES OF HAY OR STRAW.
WATER BAR	(WB)	A CHANNEL WITH A SUPPORTING BERM ON THE DOWN SLOPE SIDE CONSTRUCTED ACROSS A CONSTRUCTION ACCESS ROAD, DRIVEWAY, LOG ROAD OR OTHER ACCESS WAY.
TEMPORARY DIVERSION	(TD)	A TEMPORARY CHANNEL WITH A BERM OF TAMPED OR COMPACTED SOIL PLACED IN SUCH A MANNER SO AS TO DIVERT FLOWS.
TEMPORARY PIPE SLOPE DRAIN	(TSD)	A FLEXIBLE OF RIGID PIPE USED TO CONDUCT WATER FROM THE TOP OF A SLOPE TO THE TOE OF THE SLOPE.
TEMPORARY SEDIMENT TRAP	(TST)	A TEMPORARY PONDING AREA WITH A STONE OUTLET FORMED BY EXCAVATION AND/OR CONSTRUCTING AN EARTHEN EMBANKMENT.
DETENTION BASIN	(DB)	AN IMPOUNDMENT MADE BY CONSTRUCTING A DAM OR AN EMBANKMENT (EMBANKMENT DETENTION BASIN) OR BY EXCAVATING A PIT OR DUGOUT (EXCAVATED DETENTION BASIN).
LEVEL SPREADER	(LS)	AN OUTLET FOR DIVERSIONS AND OTHER WATER CONVEYENCES CONSISTING OF AN EXCAVATED DEPRESSION WITH A BROAD STABLE POINT OF DISCHARGE CONSTRUCTED AT ZERO GRADE ACROSS A SLOPE.
PERMANENT TURF REINFORCEMENT MAT	(TRM)	A MANUFACTURED MAT COMPOSED OF NON-BIODEGRADABLE POLYMER OR SYNTHETIC FIBERS MECHANICALLY, STRUCTURALLY, OR CHEMICALLY BOUND TO FORM A CONTINUOUS MATRIX.

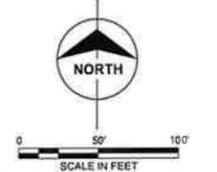
NEW ENGLAND EROSION CONTROL/RESTORATION MIX (TEMPORARY SEEDING)

THE NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES PROVIDES AN APPROPRIATE SELECTION OF NATIVE AND NATURALIZED GRASSES TO ENSURE THAT DRY AND RECENTLY DISTURBED SITES WILL BE QUICKLY REVEGETATED AND THE SOIL SURFACE STABILIZED. IT IS AN APPROPRIATE SEED MIX FOR ROAD CUTS, PIPELINES, STEEPER SLOPES, AND AREAS REQUIRING QUICK COVER DURING THE ECOLOGICAL RESTORATION PROCESS. THE MIX MAY BE APPLIED BY HYDRO-SEEDING, BY MECHANICAL SPREADER, OR ON SMALL SITES IT CAN BE SPREAD BY HAND. LIGHTLY RAKE, OR ROLL TO ENSURE PROPER SOIL-SEED CONTACT. BEST RESULTS ARE OBTAINED WITH A SPRING OR LATE SUMMER SEEDING. LATE SPRING THROUGH MID-SUMMER SEEDING WILL BENEFIT FROM A LIGHT MULCHING OF WEED-FREE STRAW TO CONSERVE MOISTURE. IF CONDITIONS ARE DRIER THAN USUAL, WATERING WILL BE REQUIRED. FERTILIZATION IS NOT REQUIRED UNLESS THE SOILS ARE PARTICULARLY INFERTILE. PREPARATION OF A CLEAN WEED FREE SEED BED IS NECESSARY FOR OPTIMAL RESULTS.

APPLICATION RATE: 35 LB/ACRE | 1250 SQ FT/LB

SPECIES: CREEPING RED FESCUE, (FESTUCA RUBRA), CANADA WILD RYE, (ELYMUS CANADENSIS), ANNUAL RYEGRASS, (LOLIUM MULTIFLORUM), PERENNIAL RYEGRASS, (LOLIUM PERENNE), BLUE GRAMA, (BOULETELOUA GRACILIS), LITTLE BLUESTEM, (SCHIZACHYRIUM SCOPARIUM), INDIAN GRASS, (SORGHASTRUM NUTANS), ROUGH BENTGRASS, (AGROSTIS SCABRA), UPLAND BENTGRASS, (AGROSTIS PERENNANS).

- NOTES:**
- CONSTRUCTION LAYDOWN AND STAGING AREAS SHALL BE RE-ESTABLISHED AS GREEN AREAS AT THE TERMINATION OF CONSTRUCTION. PORTIONS MAY BE ESTABLISHED AS OVERFLOW OR EMERGENCY PARKING WITH GRASS PAVE OR AN ENGINEER APPROVED TURF REINFORCEMENT OPTION.
 - TURF REINFORCEMENT MAT ON FILL AND CUT SLOPES SHALL BE ERONET C-125 LONG-TERM PHOTODEGRADABLE DOUBLE-NET BLANKET OR APPROVED EQUAL.
 - SEED MIX ON SLOPES SHALL BE NEW ENGLAND ROADSIDE MATRIX MIX DISTRIBUTED BY NEW ENGLAND WETLANDS PLANTS, INC. APPLY AT A RATE OF 35 POUNDS PER ACRE AND SUPPLEMENT WITH 5% ANNUAL RYE GRASS (BY WEIGHT) AT TIME OF APPLICATION.
 - ALL CUT AND FILL SIDE SLOPES ARE 2H:1V UNLESS OTHERWISE NOTED.
 - ALL AREAS WITHIN THE LIMITS OF DISTURBANCE WILL BE CLEARED UNLESS NOTED OTHERWISE.



ISSUED FOR PERMITTING

no.	date	by	ckd	description
C	09/20/19	KJE	-	ISSUED FOR PERMITTING
B	07/29/19	KJE	-	ISSUED FOR PERMITTING
A	07/15/19	KJE	-	ISSUED FOR REVIEW

BURNS & MCDONNELL

9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
FIRM LICENSE NO. PEC.000341

designed: K. ENGHOLM
detailed: S. NICHOLS

NTE CONNECTICUT, LLC
EROSION & SEDIMENT CONTROL PLAN
SHEET 1

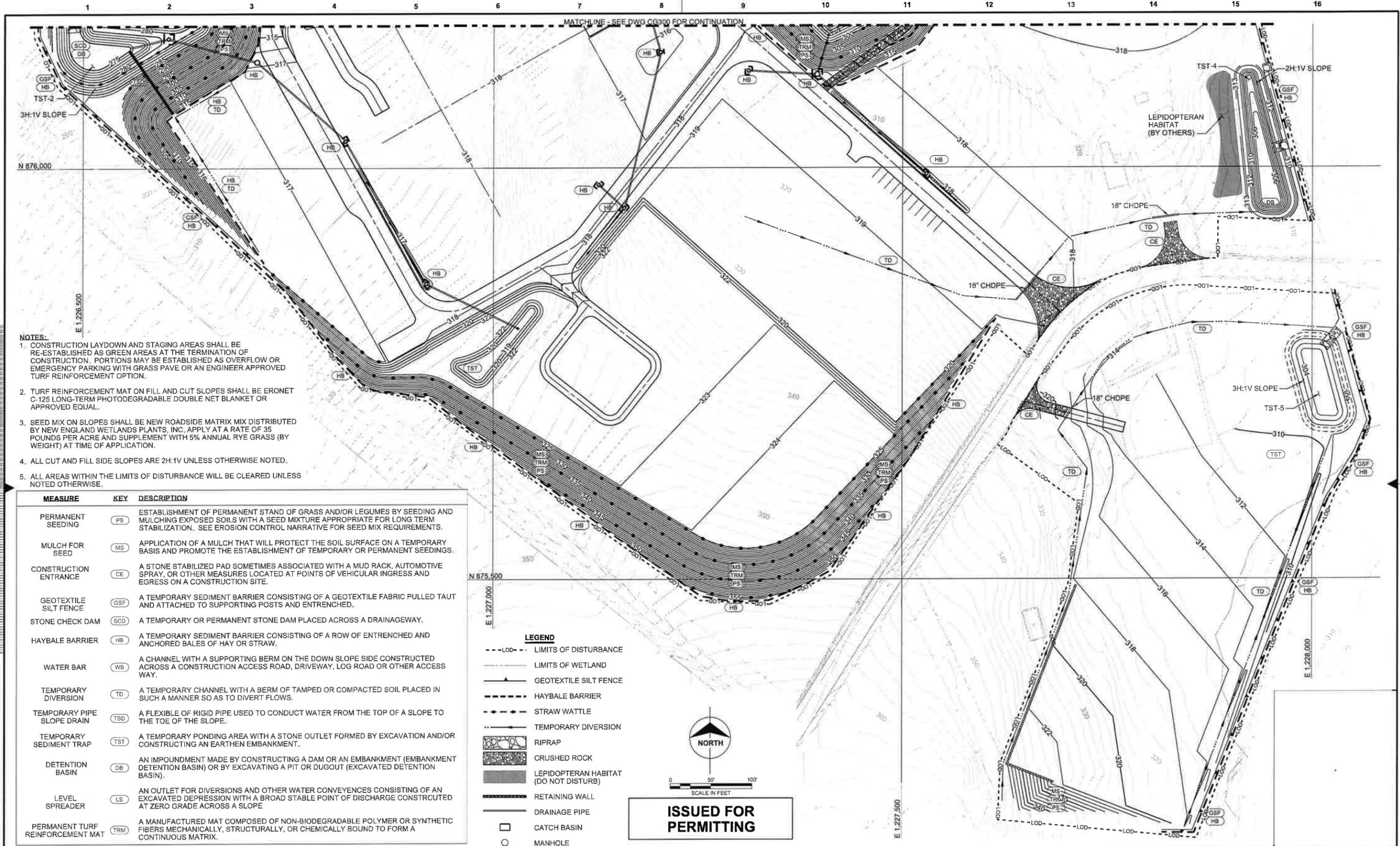
project: 111669
contract: 111669

drawing: **CG300** - **C**
rev.:

sheet 1 of 1 sheets
file 111669_CG300.DGN

9/19/2019 sknichols

COPYRIGHT © 2019 BURNS & MCDONNELL ENGINEERING COMPANY, INC.



- NOTES:**
- CONSTRUCTION LAYDOWN AND STAGING AREAS SHALL BE RE-ESTABLISHED AS GREEN AREAS AT THE TERMINATION OF CONSTRUCTION. PORTIONS MAY BE ESTABLISHED AS OVERFLOW OR EMERGENCY PARKING WITH GRASS PAVE OR AN ENGINEER APPROVED TURF REINFORCEMENT OPTION.
 - TURF REINFORCEMENT MAT ON FILL AND CUT SLOPES SHALL BE ERONET C-125 LONG-TERM PHOTODEGRADABLE DOUBLE NET BLANKET OR APPROVED EQUAL.
 - SEED MIX ON SLOPES SHALL BE NEW ROADSIDE MATRIX MIX DISTRIBUTED BY NEW ENGLAND WETLANDS PLANTS, INC. APPLY AT A RATE OF 35 POUNDS PER ACRE AND SUPPLEMENT WITH 5% ANNUAL RYE GRASS (BY WEIGHT) AT TIME OF APPLICATION.
 - ALL CUT AND FILL SIDE SLOPES ARE 2H:1V UNLESS OTHERWISE NOTED.
 - ALL AREAS WITHIN THE LIMITS OF DISTURBANCE WILL BE CLEARED UNLESS NOTED OTHERWISE.

MEASURE	KEY	DESCRIPTION
PERMANENT SEEDING	PS	ESTABLISHMENT OF PERMANENT STAND OF GRASS AND/OR LEGUMES BY SEEDING AND MULCHING EXPOSED SOILS WITH A SEED MIXTURE APPROPRIATE FOR LONG TERM STABILIZATION. SEE EROSION CONTROL NARRATIVE FOR SEED MIX REQUIREMENTS.
MULCH FOR SEED	MS	APPLICATION OF A MULCH THAT WILL PROTECT THE SOIL SURFACE ON A TEMPORARY BASIS AND PROMOTE THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDINGS.
CONSTRUCTION ENTRANCE	CE	A STONE STABILIZED PAD SOMETIMES ASSOCIATED WITH A MUD RACK, AUTOMOTIVE SPRAY, OR OTHER MEASURES LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE.
GEOTEXTILE SILT FENCE	Gsf	A TEMPORARY SEDIMENT BARRIER CONSISTING OF A GEOTEXTILE FABRIC PULLED TAUT AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED.
STONE CHECK DAM	SCD	A TEMPORARY OR PERMANENT STONE DAM PLACED ACROSS A DRAINAGEWAY.
HAYBALE BARRIER	HB	A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED BALES OF HAY OR STRAW.
WATER BAR	WB	A CHANNEL WITH A SUPPORTING BERM ON THE DOWN SLOPE SIDE CONSTRUCTED ACROSS A CONSTRUCTION ACCESS ROAD, DRIVEWAY, LOG ROAD OR OTHER ACCESS WAY.
TEMPORARY DIVERSION	TD	A TEMPORARY CHANNEL WITH A BERM OF TAMPED OR COMPACTED SOIL PLACED IN SUCH A MANNER SO AS TO DIVERT FLOWS.
TEMPORARY PIPE SLOPE DRAIN	TSD	A FLEXIBLE OF RIGID PIPE USED TO CONDUCT WATER FROM THE TOP OF A SLOPE TO THE TOE OF THE SLOPE.
TEMPORARY SEDIMENT TRAP	TST	A TEMPORARY PONDING AREA WITH A STONE OUTLET FORMED BY EXCAVATION AND/OR CONSTRUCTING AN EARTHEN EMBANKMENT.
DETENTION BASIN	DB	AN IMPOUNDMENT MADE BY CONSTRUCTING A DAM OR AN EMBANKMENT (EMBANKMENT DETENTION BASIN) OR BY EXCAVATING A PIT OR DUGOUT (EXCAVATED DETENTION BASIN).
LEVEL SPREADER	LS	AN OUTLET FOR DIVERSIONS AND OTHER WATER CONVEYANCES CONSISTING OF AN EXCAVATED DEPRESSION WITH A BROAD STABLE POINT OF DISCHARGE CONSTRUCTED AT ZERO GRADE ACROSS A SLOPE
PERMANENT TURF REINFORCEMENT MAT	TRM	A MANUFACTURED MAT COMPOSED OF NON-BIODEGRADABLE POLYMER OR SYNTHETIC FIBERS MECHANICALLY, STRUCTURALLY, OR CHEMICALLY BOUND TO FORM A CONTINUOUS MATRIX.

LEGEND

- L00--- LIMITS OF DISTURBANCE
- LIMITS OF WETLAND
- GEOTEXTILE SILT FENCE
- HAYBALE BARRIER
- STRAW WATTLE
- TEMPORARY DIVERSION
- RIPRAP
- CRUSHED ROCK
- LEPIDOPTERAN HABITAT (DO NOT DISTURB)
- RETAINING WALL
- DRAINAGE PIPE
- CATCH BASIN
- MANHOLE

NORTH

0 50' 100'

SCALE IN FEET

ISSUED FOR PERMITTING

COPYRIGHT © 2019 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

no.	date	by	ckd	description
C	09/20/19	KJE	-	ISSUED FOR PERMITTING
B	07/29/19	KJE	-	ISSUED FOR PERMITTING
A	07/15/19	KJE	-	ISSUED FOR REVIEW

BURNS & MCDONNELL

9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
FIRM LICENSE NO. PEC.000341

designed: K. ENGHOLM detailed: S. NICHOLS

KILLINGLY ENERGY CENTER
1X1 COMBINED CYCLE - MHPs
WINDHAM COUNTY, CONNECTICUT

NTE CONNECTICUT, LLC
EROSION & SEDIMENT CONTROL PLAN
SHEET 2

project: 111669 contract: _____
drawing: _____ rev: _____

CG301 - C

sheet 1 of 1 sheets
file 111669 CG301.DGN

EROSION AND SEDIMENT CONTROL PLAN:
REFERENCE IS MADE TO:

- CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL 2002 (2002 GUIDELINES),
- NRCS WSS (WEB SOIL SURVEY)

DEVELOPMENT CONTROL PLAN:

- DEVELOPMENT OF THE SITE WILL BE PERFORMED BY THE CONTRACTOR, WHO WILL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES REQUIRED THROUGHOUT CONSTRUCTION.
- THE SEDIMENTATION CONTROL MECHANISMS SHALL REMAIN IN PLACE FROM START OF CONSTRUCTION. TOWN OF KILLINGLY WILL BE NOTIFIED WHEN SEDIMENT AND EROSION CONTROL STRUCTURES ARE INITIALLY IN PLACE. ANY ADDITIONAL SOIL & EROSION CONTROL MEASURES REQUESTED BY THE TOWN OR ITS AGENT SHALL BE INSTALLED IMMEDIATELY ONCE THE PROPOSED DEVELOPMENT, SEEDING, AND PLANTING HAVE BEEN COMPLETED. THE REPRESENTATIVE SHALL AGAIN BE NOTIFIED TO INSPECT THE SITE. THE CONTROL MEASURES WILL NOT BE REMOVED UNTIL THIS INSPECTION IS COMPLETE.
- ALL STRIPPING IS TO BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA. TOPSOIL SHALL BE STOCKPILED SO THAT SLOPES DO NOT EXCEED 2 TO 1. A SILT FENCE OR HAY BALE SEDIMENT BARRIER IS TO SURROUND EACH STOCKPILE AND TEMPORARY VEGETATIVE COVER SHALL BE PROVIDED.
- DUST CONTROL WILL BE ACCOMPLISHED BY SPRAYING WITH WATER. THE APPLICATION OF CALCIUM CHLORIDE IS NOT PERMITTED ADJACENT TO WETLAND RESOURCE AREAS OR WITHIN 100' OF THESE AREAS.
- THE PROPOSED PLANTING SCHEDULE IS TO BE ADHERED TO DURING THE PLANTING OF DISTURBED AREAS THROUGHOUT THE PROPOSED CONSTRUCTION SITE.
- FINAL STABILIZATION OF THE SITE IS TO FOLLOW THE PROCEDURES OUTLINED IN "PERMANENT VEGETATIVE COVER". IF NECESSARY, A TEMPORARY VEGETATIVE COVER IS TO BE PROVIDED UNTIL A PERMANENT COVER CAN BE APPLIED.

SILT FENCE INSTALLATION AND MAINTENANCE:

- DIG A 6" DEEP TRENCH ON THE UPHILL SIDE OF THE BARRIER LOCATION.
- POSITION THE POSTS ON THE DOWNHILL SIDE OF THE BARRIER AND DRIVE THE POSTS 1.5 FEET INTO THE GROUND.
- LAY THE BOTTOM 6" OF THE FABRIC IN THE TRENCH TO PREVENT UNDERMINING AND BACKFILL.
- INSPECT AND REPAIR BARRIER AFTER HEAVY RAINFALL.
- INSPECTIONS WILL BE MADE AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER TO DETERMINE MAINTENANCE NEEDS.
- SEDIMENT DEPOSITS ARE TO BE REMOVED WHEN THEY REACH A HEIGHT OF 1 FOOT BEHIND THE BARRIER OR HALF THE HEIGHT OF THE BARRIER AND ARE TO BE DEPOSITED IN AN AREA WHICH IS NOT REGULATED BY THE INLAND WETLANDS COMMISSION.
- REPLACE OR REPAIR THE FENCE WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE FENCE HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE FENCE BECAUSE:
 - THE FENCE HAS BEEN OVERTOPPED, UNDERCUT OR BYPASSED BY RUNOFF WATER,
 - THE FENCE HAS BEEN MOVED OUT OF POSITION (KNOCKED OVER), OR
 - THE GEOTEXTILE HAS DECOMPOSED OR BEEN DAMAGED.

HAY BALE INSTALLATION AND MAINTENANCE:

- BALES SHALL BE PLACED AS SHOWN ON THE PLANS WITH THE ENDS OF THE BALES TIGHTLY ABUTTING EACH OTHER.
- EACH BALE SHALL BE SECURELY ANCHORED WITH AT LEAST 2 STAKES AND GAPS BETWEEN BALES SHALL BE WEDGED WITH STRAW TO PREVENT WATER FROM PASSING BETWEEN THE BALES.
- INSPECT BALES AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCHES OR GREATER TO DETERMINE MAINTENANCE NEEDS.
- REMOVE SEDIMENT BEHIND THE BALES WHEN IT REACHES HALF THE HEIGHT OF THE BALE AND DEPOSIT IN AN AREA WHICH IS NOT REGULATED BY THE INLAND WETLANDS COMMISSION.
- REPLACE OR REPAIR THE BARRIER WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE BARRIER HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE BARRIER BECAUSE:
 - THE BARRIER HAS BEEN OVERTOPPED, UNDERCUT, OR BYPASSED BY RUNOFF WATER,
 - THE BARRIER HAS BEEN MOVED OUT OF POSITION, OR
 - THE HAY BALES HAVE DETERIORATED OR BEEN DAMAGED.

STRAW WATTLE INSTALLATION AND MAINTENANCE:

- INSTALL STRAW WATTLES PER DETAILS AND NOTES ON DWG CG333.
- INSPECT AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER TO DETERMINE MAINTENANCE NEEDS.
- SEDIMENT DEPOSITS ARE TO BE REMOVED WHEN THEY REACH HALF THE HEIGHT OF THE STRAW WATTLE AND ARE TO BE DEPOSITED IN AN AREA WHICH IS NOT REGULATED BY THE INLAND WETLANDS COMMISSION.
- REPLACE OR REPAIR THE STRAW WATTLE WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE STRAW WATTLE HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE STRAW WATTLE BECAUSE:
 - THE STRAW WATTLE HAS BEEN OVERTOPPED, UNDERCUT OR BYPASSED BY RUNOFF WATER,
 - THE STRAW WATTLE HAS BEEN MOVED OUT OF POSITION OR
 - THE STRAW WATTLE HAS DECOMPOSED OR BEEN DAMAGED.

TURF REINFORCEMENT MAT INSTALLATION AND MAINTENANCE:

- INSTALL TURF REINFORCEMENT MAT PER DETAILS AND NOTES ON DWG CG332.
- INSPECT AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER TO DETERMINE MAINTENANCE NEEDS. INSPECT UNTIL TURF HAS BECOME ESTABLISHED. AFTER TURF HAS BECOME ESTABLISHED, INSPECT ANNUALLY OR AFTER MAJOR STORM EVENTS.
- MAT FAILURE HAS OCCURRED WHEN SOILS AND OR SEED HAVE WASHED AWAY RESULTING IN A SOIL SURFACE THAT CAN BE EXPECTED TO CONTINUE TO ERODE WHEN THE MAT HAS BECOME DISLODGED FROM THE SOIL SURFACE.
- WHEN REPETITIVE FAILURES OCCUR AT THE SAME LOCATION, DETERMINE IF ADDITIONAL CONTROLS ARE NEEDED.
- REPAIR OR REPLACE MAT FAILURES WITHIN ONE WORK DAY.

SEQUENCE OF CONSTRUCTION

- FLAG THE LIMITS OF CONSTRUCTION DISTURBANCE NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.
- CONTACT CALL BEFORE YOU DIG AT 1-800-922-4455 TO MARK OUT EXISTING UTILITIES.
- HOLD THE PRE-CONSTRUCTION MEETING.
- INSTALL THE ANTI-TRACKING CONSTRUCTION ENTRANCE(S).

- CUT TREES AS NEEDED TO INSTALL EROSION AND SEDIMENT CONTROLS.
- INSTALL EROSION AND SEDIMENT CONTROLS SUCH AS SILT FENCE, HAYBALES, TEMPORARY SEDIMENT TRAPS OR BASINS, DIVERSIONS, AND STONE OR WOOD CHIP DIKES AND CHECK THAT DISCHARGE LOCATIONS ARE STABLE.
- CUT TREES WITHIN THE DEFINED CLEARING LIMITS AND REMOVE CUT WOOD. CHIP BRUSH, BRANCHES AND SMALL TREES AND STOCKPILE CHIPS FOR USE ON SITE FOR EROSION AND SEDIMENT CONTROL. REMOVE STUMPS AND TRANSPORT OFF SITE.
- STRIP AND STOCKPILE TOPSOIL WITHIN THE FOOTPRINT OF THE CONSTRUCTION PHASE AREA. INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS AROUND STOCKPILES AND PROVIDE TEMPORARY VEGETATIVE COVER. STUMPS WILL BE REMOVED AND TRANSPORTED OFF SITE.
- GRADE CONSTRUCTION STAGING AND LAYDOWN AREAS. INSTALL CRUSHED STONE OR ROLLED GRAVEL SURFACE AND GRADE TO PROVIDE POSITIVE DRAINAGE TO PERIMETER OF LAYDOWN AREA.
- MAKE REQUIRED CUTS AND FILLS AND CONSTRUCT RETAINING WALLS.
- ESTABLISH THE SUBGRADE FOR TOPSOIL AREAS, BUILDINGS, PERIMETER ROADWAY, AND PARKING AREAS. ALLOW FOR SUFFICIENT AREA AROUND BUILDING FOOTPRINTS FOR CONSTRUCTION ACTIVITIES.
- BEGIN BUILDING AND EQUIPMENT CONSTRUCTION.
- INSTALL UTILITIES AND DRAINAGE SYSTEMS.
- PREPARE SUB-BASE, SLOPES, PARKING AREAS, SHOULDER AREAS, ACCESS ROADS, AND ANY ADDITIONAL AREAS OF DISTURBANCE FOR FINAL GRADING.
- INSTALL TOPSOIL ON FILL AND CUT SLOPES, SEED DISTURBED AREAS, AND INSTALL EROSION CONTROL FABRIC TO PROTECT AGAINST RUNOFF EROSION OR RAINDROP IMPACT.
- INSTALL AND COMPACT PROCESSED AGGREGATE FOR PAVEMENT AREAS.
- INSTALL CRUSHED STONE SURFACES WHERE CALLED FOR ON THE DESIGN PLANS.
- PLACE REMAINING TOPSOIL WHERE REQUIRED AND COMPLETE PERIMETER LANDSCAPING. FINE GRADE, RAKE, SEED AND MULCH TO WITHIN 2' OF CURBS OR PAVED AREAS.
- UPON SUBSTANTIAL COMPLETION OF THE BUILDING(S) AND PLANT EQUIPMENT AREAS, COMPLETE THE BALANCE OF THE SITE WORK AND STABILIZATION OF REMAINING DISTURBED AREAS. INSTALL FIRST COURSE OF PAVING.
- WHEN ALL OTHER WORK HAS BEEN COMPLETED, REPAIR AND SWEEP ALL PAVED AREAS FOR FINAL COURSE OF PAVING. INSPECT DRAINAGE SYSTEM AND STORMWATER BASINS AND REMOVE ACCUMULATED SEDIMENT.
- INSTALL FINAL COURSE OF PAVEMENT.
- AFTER SITE IS STABILIZED, REMOVE EROSION AND SEDIMENT CONTROLS.

EROSION AND SEDIMENT CONTROL NARRATIVE:

PRINCIPLES OF EROSION AND SEDIMENT CONTROL:

THE PRIMARY FUNCTION OF EROSION AND SEDIMENT CONTROLS IS TO ABSORB EROSIONAL ENERGIES AND REDUCE RUNOFF VELOCITIES THAT FORCE THE DETACHMENT AND TRANSPORT OF SOIL AND/OR ENCOURAGE THE DEPOSITION OF ERODED SOIL PARTICLES BEFORE THEY REACH ANY SENSITIVE AREA.

KEEP LAND DISTURBANCE TO A MINIMUM:

THE MORE LAND THAT IS IN VEGETATIVE COVER, THE MORE SURFACE WATER WILL INFILTRATE INTO THE SOIL, THUS MINIMIZING STORMWATER RUNOFF AND POTENTIAL EROSION. KEEPING LAND DISTURBANCE TO A MINIMUM NOT ONLY INVOLVES MINIMIZING THE EXTENT OF EXPOSURE AT ANY ONE TIME, BUT ALSO THE DURATION OF EXPOSURE. PHASING, SEQUENCING, AND CONSTRUCTION SCHEDULING ARE INTERRELATED. PHASING DIVIDES A LARGE PROJECT INTO DISTINCT SECTIONS WHERE CONSTRUCTION WORK OVER A SPECIFIC AREA OCCURS OVER DISTINCT PERIODS OF TIME AND EACH PHASE IS NOT DEPENDENT UPON A SUBSEQUENT PHASE IN ORDER TO BE FUNCTIONAL. A SEQUENCE IS THE ORDER IN WHICH CONSTRUCTION ACTIVITIES ARE TO OCCUR DURING ANY PARTICULAR PHASE. A SEQUENCE SHOULD BE DEVELOPED ON THE PREMISE OF "FIRST THINGS FIRST" AND "LAST THINGS LAST" WITH PROPER ATTENTION GIVEN TO THE INCLUSION OF ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES. A CONSTRUCTION SCHEDULE IS A SEQUENCE WITH TIME LINES APPLIED TO IT AND SHOULD ADDRESS THE POTENTIAL OVERLAP OF ACTIONS IN A SEQUENCE WHICH MAY BE IN CONFLICT WITH EACH OTHER.

- LIMIT AREAS OF CLEARING AND GRADING. PROTECT NATURAL VEGETATION FROM CONSTRUCTION EQUIPMENT WITH FENCING, TREE ARMORING, AND RETAINING WALLS OR TREE WELLS.
- ROUTE TRAFFIC PATTERNS WITHIN THE SITE TO AVOID EXISTING OR NEWLY PLANTED VEGETATION.
- PHASE CONSTRUCTION SO THAT AREAS WHICH ARE ACTIVELY BEING DEVELOPED AT ANY ONE TIME ARE MINIMIZED AND ONLY THE AREA UNDER CONSTRUCTION IS EXPOSED. CLEAR ONLY THOSE AREAS ESSENTIAL FOR CONSTRUCTION.
- SEQUENCE THE CONSTRUCTION OF STORM DRAINAGE SYSTEMS SO THAT THEY ARE OPERATIONAL AS SOON AS POSSIBLE DURING CONSTRUCTION. ENSURE ALL OUTLETS ARE STABLE BEFORE OUTLETTING STORM DRAINAGE FLOW INTO THEM.
- SCHEDULE CONSTRUCTION SO THAT FINAL GRADING AND STABILIZATION IS COMPLETED AS SOON AS POSSIBLE.

SLOW THE FLOW:

DETACHMENT AND TRANSPORT OF ERODED SOIL MUST BE KEPT TO A MINIMUM BY ABSORBING AND REDUCING THE EROSION ENERGY OF WATER. THE EROSION ENERGY OF WATER INCREASES AS THE VOLUME AND VELOCITY OF RUNOFF INCREASES. THE VOLUME AND VELOCITY OF RUNOFF INCREASES DURING DEVELOPMENT AS A RESULT OF REDUCED INFILTRATION RATES CAUSED BY THE REMOVAL OF EXISTING VEGETATION, REMOVAL OF TOPSOIL, COMPACTION OF SOIL, AND THE CONSTRUCTION OF IMPERVIOUS SURFACES.

- USE DIVERSIONS, STONE DIKES, SILT FENCES, AND SIMILAR MEASURES TO BREAK FLOW LINES AND DISSIPATE STORM WATER ENERGY.
- AVOID DIVERTING ONE DRAINAGE SYSTEM INTO ANOTHER WITHOUT CALCULATING THE POTENTIAL FOR DOWNSTREAM FLOODING OR EROSION.

KEEP CLEAN RUNOFF SEPARATED:

CLEAN RUNOFF SHOULD BE KEPT SEPARATED FROM SEDIMENT LADEN WATER AND SHOULD NOT BE DIRECTED OVER DISTURBED AREAS WITHOUT ADDITIONAL CONTROLS. ADDITIONALLY, PREVENT THE MIXING OF CLEAN OFF-SITE GENERATED RUNOFF WITH SEDIMENT LADEN RUNOFF GENERATED ON-SITE UNTIL AFTER ADEQUATE FILTRATION OF ON-SITE WATERS HAS OCCURRED.

- SEGREGATE CONSTRUCTION WATERS FROM CLEAN WATER.
- DIVERT SITE RUNOFF TO KEEP IT ISOLATED FROM WETLANDS, WATERCOURSES, AND DRAINAGE WAYS THAT FLOW THROUGH OR NEAR THE DEVELOPMENT UNTIL THE SEDIMENT IN THAT RUNOFF IS TRAPPED OR DETAINED.

REDUCE ON-SITE POTENTIAL INTERNALLY AND INSTALL PERIMETER CONTROLS:

WHILE IT MAY SEEM LESS COMPLICATED TO COLLECT ALL WATERS TO ONE POINT OF DISCHARGE FOR TREATMENT AND JUST INSTALL A PERIMETER CONTROL, IT CAN BE MORE EFFECTIVE TO APPLY INTERNAL CONTROLS TO MANY SMALL SUB-DRAINAGE SEDIMENT TRAPS OR BASINS WITHIN THE SITE. BY REDUCING SEDIMENT LOADING FROM WITHIN THE SITE, THE CHANCE OF PERIMETER CONTROL FAILURE AND THE POTENTIAL OFF-SITE DAMAGE THAT IT CAN CAUSE IS REDUCED. IT IS GENERALLY MORE EXPENSIVE TO CORRECT OFF-SITE DAMAGE THAN IT IS TO INSTALL PROPER INTERNAL CONTROLS.

- CONTROL EROSION AND SEDIMENTATION IN THE SMALLEST DRAINAGE AREA POSSIBLE. IT IS EASIER TO CONTROL EROSION THAN TO CONTEND WITH SEDIMENT AFTER IT HAS BEEN CARRIED DOWNSTREAM AND DEPOSITED IN UNWANTED AREAS.
- DIRECT RUNOFF FROM SMALL DISTURBED AREAS TO ADJOINING UNDISTURBED VEGETATED AREAS TO REDUCE THE POTENTIAL FOR CONCENTRATED FLOWS AND INCREASE SETTLEMENT AND FILTERING OF SEDIMENTS.
- CONCENTRATED RUNOFF FROM DEVELOPMENT SHOULD BE SAFELY CONVEYED TO STABLE OUTLETS USING RIPRAPPED CHANNELS, WATERWAYS, DIVERSIONS, STORM DRAINS, OR SIMILAR MEASURES.
- DETERMINE THE NEED FOR SEDIMENT TRAPS OR BASINS. SEDIMENT TRAPS OR BASINS ARE REQUIRED ON LARGER DEVELOPMENTS WHERE MAJOR GRADING IS PLANNED AND WHERE IT IS IMPOSSIBLE OR IMPRACTICAL TO CONTROL EROSION AT THE SOURCE. SEDIMENT TRAPS OR BASINS ARE ALSO NEEDED ON LARGE AND SMALL SITES WHEN SENSITIVE AREAS SUCH AS WETLANDS, WATERCOURSES, AND STREETS WOULD BE IMPACTED BY OFF-SITE SEDIMENT DEPOSITION. DO NOT LOCATE SEDIMENT TRAPS OR BASINS IN WETLANDS OR PERMANENT OR INTERMITTENT WATERCOURSES. SEDIMENT TRAPS OR BASINS SHOULD BE LOCATED TO INTERCEPT RUNOFF PRIOR TO ITS ENTRY INTO THE WETLAND OR WATERCOURSE.
- GRADE AND LANDSCAPE AROUND BUILDINGS TO DIVERT WATER AWAY FROM THEM.

TEMPORARY VEGETATIVE COVER:

SEED SELECTION:

GRASS SPECIES SHALL BE APPROPRIATE FOR THE SEASON AND SITE CONDITIONS. APPROPRIATE SPECIES ARE OUTLINED IN FIGURE TS-2 IN THE 2002 GUIDELINES. FIGURE TS-2 IS ALSO PROVIDED ON DWG CG331.

TIMING CONSIDERATIONS:

SEED WITH A TEMPORARY SEED MIXTURE WITHIN 7 DAYS AFTER THE SUSPENSION OF GRADING WORK IN DISTURBED AREAS WHERE THE SUSPENSION OF WORK IS EXPECTED TO BE MORE THAN 30 DAYS BUT LESS THAN 1 YEAR.

SITE PREPARATION:

INSTALL NEEDED EROSION CONTROL MEASURES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, SEDIMENT TRAPS, AND GRASSED WATERWAYS.

GRADE ACCORDING TO PLANS AND ALLOW FOR THE USE OF APPROPRIATE EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.

SEEDBED PREPARATION:

LOOSEN THE SOIL TO A DEPTH OF 3-4 INCHES WITH A SLIGHTLY ROUGHENED SURFACE. IF THE AREA HAS BEEN RECENTLY LOOSENED OR DISTURBED, NO FURTHER ROUGHENING IS REQUIRED. SOIL PREPARATION CAN BE ACCOMPLISHED BY TRACKING WITH A BULLDOZER, DISCING, HARROWING, RAKING, OR DRAGGING WITH A SECTION OF CHAIN LINK FENCE. AVOID EXCESSIVE COMPACTION OF THE SURFACE BY EQUIPMENT TRAVELING BACK AND FORTH OVER THE SURFACE. IF THE SLOPE IS TRACKED, THE CLEAT MARKS SHALL BE PERPENDICULAR TO THE ANTICIPATED DIRECTION OF THE SURFACE WATER FLOW.

IF SOIL TESTING IS NOT PRACTICAL OR FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 300 POUNDS PER ACRE OR 7.5 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT. ADDITIONALLY, LIME MAY BE APPLIED USING RATES GIVEN IN FIGURE TS-1 IN THE 2002 GUIDELINES.

SEEDING:

APPLY SEED UNIFORMLY BY HAND CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER, OR HYDROSEEDER AT A MINIMUM RATE FOR THE SELECTED SPECIES. INCREASE SEEDING RATES BY 10% WHEN HYDROSEEDING.

MULCHING:

TEMPORARY SEEDINGS MADE DURING OPTIMUM SEEDING DATES SHALL BE MULCHED ACCORDING TO THE RECOMMENDATIONS IN THE 2002 GUIDELINES. WHEN SEEDING OUTSIDE OF THE RECOMMENDED DATES, INCREASE THE APPLICATION OF MULCH TO PROVIDE 95%-100% COVERAGE.

MAINTENANCE:

INSPECT SEEDING AREAS AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER FOR SEED AND MULCH MOVEMENT AND RILL EROSION.

WHERE SEED HAS MOVED OR WHERE SOIL EROSION HAS OCCURRED, DETERMINE THE CAUSE OF THE FAILURE. REPAIR ERODED AREAS AND INSTALL ADDITIONAL CONTROLS IF REQUIRED TO PREVENT REOCCURRENCE OF EROSION.

CONTINUE INSPECTIONS UNTIL GRASS IS FIRMLY ESTABLISHED. GRASS SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED WHICH IS MATURE ENOUGH TO CONTROL SOIL EROSION AND TO SURVIVE SEVERE WEATHER CONDITIONS (APPROXIMATELY 80% VEGETATIVE COVER).

PERMANENT VEGETATIVE COVER:

REFER TO FIGURES PS-2 AND PS-3 IN THE 2002 GUIDELINES FOR SPECIFIC PERMANENT SEEDING MIXTURES, APPLICATIONS, AND DETAILS RELATED TO THE INSTALLATION AND MAINTENANCE OF A PERMANENT VEGETATIVE COVER. FIGURES PS-2 AND PS-3 ARE ALSO PROVIDED ON DWG CG331. IN GENERAL, THE FOLLOWING SEQUENCE OF OPERATIONS SHALL APPLY:

- TOPSOIL WILL BE REPLACED ONCE THE EXCAVATION AND GRADING HAS BEEN COMPLETED. TOPSOIL WILL BE SPREAD AT A MINIMUM COMPACTED DEPTH OF 4".
- ONCE THE TOPSOIL HAS BEEN SPREAD, ALL STONES 2" OR LARGER IN ANY DIMENSION WILL BE REMOVED AS WELL AS DEBRIS.
- APPLY AGRICULTURAL GROUND LIMESTONE AT A RATE OF 2 TONS PER ACRE OR 100 LBS PER 1000 SF. APPLY 10-10-10 FERTILIZER OR EQUIVALENT AT A RATE OF 300 LBS PER ACRE OR 7.5 LBS PER 1000 SF. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4".
- INSPECT SEEDBED BEFORE SEEDING. IF TRAFFIC HAS COMPACTED THE SOIL, RETILL COMPACTED AREAS.
- APPLY THE CHOSEN GRASS SEED MIX. THE RECOMMENDED SEEDING DATES ARE: APRIL 1 TO JUNE 15 & AUGUST 15 TO OCTOBER 1.
- MULCH IMMEDIATELY FOLLOWING SEEDING. IF A PERMANENT VEGETATIVE STAND CANNOT BE ESTABLISHED BY SEPTEMBER 30, APPLY A TEMPORARY COVER ON THE TOPSOIL SUCH AS NETTING, MAT, OR ORGANIC MULCH.

DEWATERING:

IF DEWATERING IS REQUIRED, A PUMPING OUTLET BASIN SHALL BE CONSTRUCTED AND UTILIZED AS DETAILED ON DWG CG332. PUMPING OUTLET BASIN SHALL BE LOCATED SUCH THAT FLOW LEAVING THE PUMPING OUTLET BASIN IS ROUTED THROUGH A TEMPORARY SEDIMENT TRAP.

ISSUED FOR PERMITTING



9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
FIRM LICENSE NO. PEC.000341

designed K. ENGHOLM
detailed S. NICHOLS

NTE CONNECTICUT, LLC EROSION & SEDIMENT CONTROL NOTES SHEET 1	
project 111669	contract
drawing CG330	rev. C
sheet 1 of 1	sheets
file 111669 CG330.DGN	

no.	date	by	ckd	description
C	09/20/19	KJE	-	ISSUED FOR PERMITTING
B	07/29/19	KJE	-	ISSUED FOR PERMITTING
A	07/15/19	KJE	-	ISSUED FOR REVIEW

COPYRIGHT © 2019 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

Figure TS-2 Temporary Seeding Rates and Dates

Species ¹	Seeding Rates (pounds/acre)	Optimum Seed Depth (inches)	Optimum Seeding Dates ¹										Plant Characteristics						
			3/15		4/15		5/15		6/15		7/15			8/15		9/15		10/15	
			3/1	3/15	4/1	4/15	5/1	5/15	6/1	6/15	7/1	7/15		8/1	8/15	9/1	9/15	10/1	10/15
Annual ryegrass <i>Lolium multiflorum</i>	40	1.0	0.5															May be added in mixes. Will grow out of most stands.	
Perennial ryegrass <i>Lolium perenne</i>	40	1.0	0.5															Use for winter cover. Tolerates cold and low moisture.	
Winter Rye <i>Secale cereale</i>	120	3.0	1.0															Quick germination and heavy sprout growth. Dies back in June with little regrowth.	
Oats <i>Avena sativa</i>	86	2.0	1.0															In northern CT will winter kill with the first killing frost and may through-out the state in severe winters.	
Winter Wheat <i>Triticum aestivum</i>	120	3.0	1.0															Quick germination with moderate growth. Dies back in June with no regrowth.	
Millet <i>Echinochloa crusgalli</i>	20	0.5	1.0															Warm season small grain. Dies with frost in September.	
Sudangrass <i>Sorghum sudanense</i>	39	0.7	1.0															Tolerates warm temperatures and droughty conditions.	
Blackberry <i>Rubus occidentalis</i>	15	0.4	1.0															Hardy plant that will seed itself and is good as a green manure crop.	
Weeping lovegrass <i>Eragrostis cymbalaria</i>	5	0.2	0.25															Warm-season perennial. May bunch. Tolerates hot, dry slopes and infertile soils. Excellent nurse crop. Usually winter kills.	
DOT All Purpose Mix ²	150	3.4	0.5															Suitable for all conditions.	

¹ May be planted throughout summer if soil moisture is adequate or can be irrigated. Fall seeding may be extended 15 days in the coastal towns.
² Seed at twice the indicated depth for sandy soils.
³ See Permanent Seeding Figure PS-3 for seeding mixture requirements.
⁴ Listed species may be used in combinations to obtain a broader time spectrum. If used in combinations, reduce each species planting rate by 20% of that listed.

Figure PS-2 Selecting Seed Mix to Match Need

Area To Be Seeded	Mixture Number ¹	
	Mowing Desired	Mowing Not Required
BORROW AREAS, ROADSIDES, DIKES, LEVEES, POND BANKS AND OTHER SLOPES AND BANKS		
A) Well or excessively drained soils ²	1, 2, 3, 4, 5 or 8	5, 6, 7, 8, 9, 10, 11, 12, 16, 22
B) Somewhat poorly drained soils ²	2	5, 6
C) Variable drainage soils ²	2	5, 6, 11
DRAINAGE DITCH AND CHANNEL BANKS		
A) Well or excessively drained soils ²	1, 2, 3, or 4	9, 10, 11, 12
B) Somewhat poorly drained soils ²	2	
C) Variable drainage soils ²	2	
DIVERSIONS		
A) Well or excessively drained soils ²	2, 3 or 4	9, 10, 11
B) Somewhat poorly drained soils ²	2	
C) Variable drainage soils ²	2	
EFFLUENT DISPOSAL		5 or 6
GRAVEL PITS³		20, 27, 28
GULLED AND ERODED AREAS		5, 9, 5, 8, 10, 11, 12
MINESPOIL & WASTE AND OTHER SPOIL BANKS (Of toxic substances & physical properties not limiting ³)		15, 16, 17, 18, 26, 27, 28
SHORELINES (Fluctuating water levels)		5 or 6
SKI SLOPES		4, 10
SOD WATERWAYS AND SPILLWAYS	1, 2, 5, 4, 6, 7, or 8	1, 2, 3, 4, 6, 7, or 8
SUNNY RECREATION AREAS (Picnic areas and playgrounds or driving and archery ranges, nature trails)	1, 2 or 23	
CAMPING AND PARKING, NATURE TRAILS (Shaded)	19, 21 or 23	
SAND DUNES (Blowing sand)		25
WOODLAND ACCESS ROADS, SKID TRAILS AND LOG YARDING AREAS		9, 10, 16, 22, 26
LAWNS AND HIGH MAINTENANCE AREAS	1, 19, 21 or 29	

¹ The numbers following in these columns refer to seed mixtures in Figure PS-3. Mixes for study areas are in **bold italics** print (including mixes 20 through 24).
² See county soil survey for drainage class. Soil surveys are available from the County Soil and Water Conservation District Office.
³ Use mix 26 when soil passing a 200 mesh sieve is less than 15% of total weight. Use mix 26 & 27 when soil passing a 200 mesh sieve is between 15 and 20% of total weight. Use mix 20, 27 & 28 when soil passing a 200 mesh sieve is above 20% of total weight.
⁴ DOT All purpose mix.
⁵ Wild flower mix containing New England Aster, Baby's Breath, Black Eye Susan, Gandy, Dwarf Columbine, Purple Coneflower, Lance-leaved Coreopsis, Goldenrover, Green Day, Scarlet Flax, Tongue, Gayfeather, Rocky Topspin, Spanish Larkspur, Gen Poppy, Spurred Snapdragon, Wallflower and/or Yarrow may be added to any seed mix given. Most seed suppliers carry a wild flower mixture that is suitable for the Northeast and contains a variety of both annual and perennial flowers. Seeding rates for the specific mixtures should be followed.
⁶ Considered to be a cool season mix.
⁷ Considered to be a warm season mix.

Figure PS-3 Seed Mixtures for Permanent Seeding

No.	Seed Mixture (Variety) ¹	Lbs/Acre	Lbs/1,000 Sq. Ft.
15	Kentucky Bluegrass Creeping Red Fescue (Pennlawn, Wintergreen) Perennial Ryegrass (Norlea, Manhattan)	20 20 5	.45 .45 .10
	Total	45	1.00
24	Creeping Red Fescue (Pennlawn, Wintergreen) Redtop (Strecker, Common) Tall Fescue (Kentucky 31) or Smooth Bromegrass (Saratoga, Lincoln)	20 2 20	.45 .05 .45
	Total	42	.95
35	Creeping Red Fescue (Pennlawn, Wintergreen) Bird's-foot Trefoil (Empire, Viking) with inoculant ¹ Tall Fescue (Kentucky 31) or Smooth Bromegrass (Saratoga, Lincoln)	20 8 20	.45 .20 .45
	Total	48	1.10
45	Creeping Red Fescue (Pennlawn, Wintergreen) or Tall Fescue (Kentucky 31) Redtop (Strecker, Common) Bird's-foot Trefoil (Empire, Viking) with inoculant ¹	20 2 8	.45 .05 .20
	Total	30	.70
55	White Clover Perennial Rye Grass	10 2	.25 .05
	Total	12	.30
65	Creeping Red Fescue Redtop (Strecker, Common) Perennial Rye Grass	2 2 20	.05 .05 .50
	Total	42	1.05
75	Smooth Bromegrass (Saratoga, Lincoln) Perennial Ryegrass (Norlea, Manhattan) Bird's-foot Trefoil (Empire, Viking) with inoculant ¹	15 5 10	.35 .10 .45
	Total	30	.79
85	Switchgrass (Blackwell, Shelter, Cave-in-rock) Weeping lovegrass Little Bluestem (Blaze, Aldous, Camper)	10 ¹ 5 10 ¹	.25 .07 .25
	Total	25	.57
95	Creeping Red Fescue (Pennlawn, Wintergreen) Crown Vetch (Chemung, Penngift) with inoculant ¹ (or Flatpea (Lathco) with inoculant ¹) Tall Fescue (Kentucky 31) or Smooth Bromegrass (Saratoga, Lincoln) Redtop (Strecker, Common)	10 15 (30) 15 2	.25 .55 (.75) .35 .05
	Total	42 (or 57)	1.00 (or 1.10)
105	Creeping Red Fescue (Pennlawn, Wintergreen) Redtop (Strecker, Common) Crown Vetch (Chemung, Penngift) with inoculant ¹ (or Flatpea (Lathco) with inoculant ¹)	20 2 15 (30)	.45 .05 .45 (.25)
	Total	37 (or 52)	.85 (or 1.25)
115	Bird's-foot Trefoil (Empire, Viking) with inoculant ¹ Crown Vetch (Chemung, Penngift) with inoculant ¹ Creeping Red Fescue (Pennlawn, Wintergreen) or Tall Fescue (Kentucky 31) or Smooth Bromegrass (Saratoga, Lincoln)	8 15 20	.20 .35 .35
	Total	43	1.00

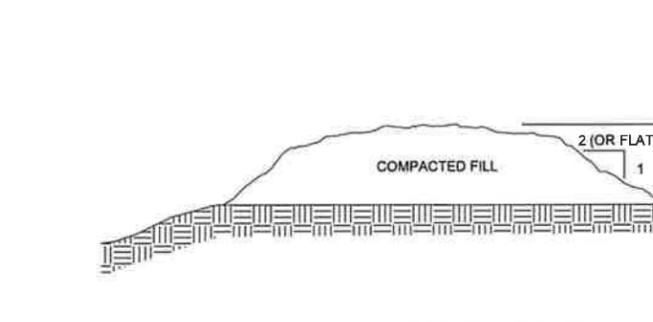
Figure PS-3 Seed Mixtures for Permanent Seeding (cont)

No.	Seed Mixture (Variety) ¹	Lbs/Acre	Lbs/1,000 Sq. Ft.
255	American Beachgrass (Cape)	58,500	1,515 culms/ 100 sq. ft.
265	Switchgrass (Blackwell, Shelter, Cave-in-rock) Big Bluestem (Niagra, Kaw) Little Bluestem (Blaze, Aldous, Camper) Sand Lovegrass (M-27, Bard) Bird's-foot Trefoil (Empire Viking)	4.0 4.0 2.0 1.5 2.0	.10 .10 .05 .03 .05
	Total	13.5	.33
275	Flatpea (Lathco) Perennial Pea (Lancet) Crown Vetch (Chemung, Penngift) Tall Fescue (Kentucky 31)	10 2 10 2	.20 .05 .20 .05
	Total	24	.65
285	Orchardgrass (Pennlate, Kay, Potomac) Tall Fescue (Kentucky 31) Redtop (Strecker, Common) Bird's-foot Trefoil (Empire Viking)	5 10 2 5	.10 .20 .05 .10
	Total	22	.45
29	Turf Type Tall Fescue (Bonanza, Mustang, Rebel II, Spartan, Jaguar) or Perennial Rye (Future 2000 mix: Fiesta II, Blazer II, and Dasher II)	175 to 250	6 to 8

¹ Use proper inoculant for legume seeds, use four times recommended rate when hydroseeding.
² Use pure live seed (PLS) = $\frac{\% \text{ Germination} \times \% \text{ Purity}}{100}$
 EXAMPLE: Common Bermuda seed with 70% germination and 80% purity = $\frac{70 \times 80}{100} = 56$ or $\frac{56}{100} = 56\%$
 $\frac{10 \text{ lbs. PLS mix}}{56\%} = 17.9 \text{ lbs/acre of tagged seed}$
³ DOT All purpose mix.
⁴ Wild flower mix containing New England Aster, Baby's Breath, Black Eye Susan, Gandy, Dwarf Columbine, Purple Coneflower, Lance-leaved Coreopsis, Goldenrover, Green Day, Scarlet Flax, Tongue, Gayfeather, Rocky Topspin, Spanish Larkspur, Gen Poppy, Spurred Snapdragon, Wallflower and/or Yarrow may be added to any seed mix given. Most seed suppliers carry a wild flower mixture that is suitable for the Northeast and contains a variety of both annual and perennial flowers. Seeding rates for the specific mixtures should be followed.
⁵ Considered to be a cool season mix.
⁶ Considered to be a warm season mix.

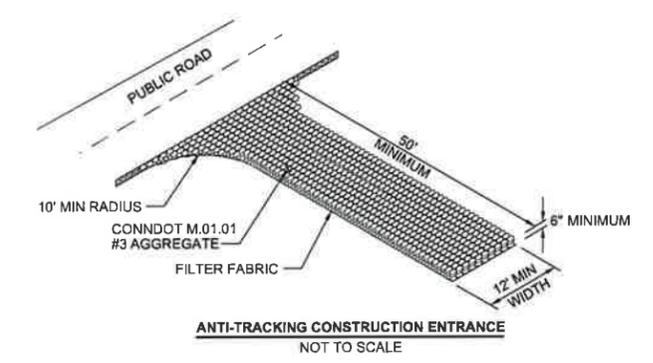
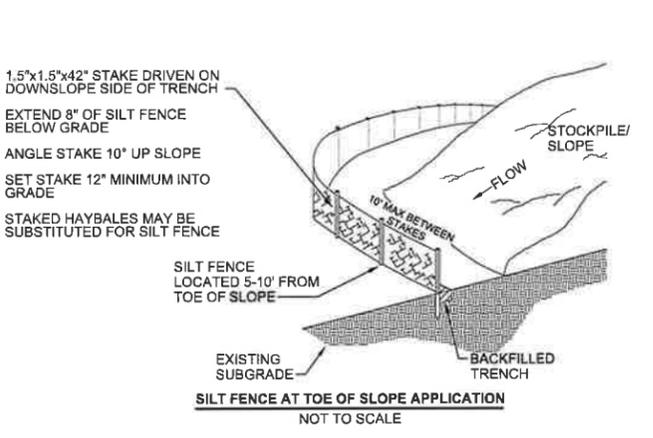
Figure PS-3 Seed Mixtures for Permanent Seeding (cont)

No.	Seed Mixture (Variety) ¹	Lbs/1,000 Lbs/Acre	No. Sq. Ft.
125	Switchgrass (Blackwell, Shelter, Cave-in-rock) Perennial Ryegrass (Norlea, Manhattan) Crown Vetch (Chemung, Penngift) with inoculant ¹	101 5 15	.25 .10 .32
	Total	121	1.05
135	Crown Vetch (Chemung, Penngift) with inoculant ¹ (or Flatpea (Lathco) with inoculant ¹) Switchgrass (Blackwell, Shelter, Cave-in-rock) Perennial Ryegrass (Norlea, Manhattan)	10 (30) 5 15	.25 (.75) .10 .10
	Total	20 (or 40)	.45 (or .95)
145	Crown Vetch (Chemung, Penngift) with inoculant ¹ (or Flatpea (Lathco) with inoculant ¹) Perennial Ryegrass (Norlea, Manhattan)	15 (50) 10	.35 (.75) .25
	Total	25 (or 40)	.60 (or 1.00)
155	Switchgrass (Blackwell, Shelter, Cave-in-rock) Big Bluestem (Niagra, Kaw) or Little Bluestem (Blaze, Aldous, Camper) Perennial Ryegrass (Norlea, Manhattan) Bird's-foot Trefoil (Empire, Viking) with inoculant ¹	5 ¹ 5 ¹ 5 2	.10 .10 .10 .05
	Total	17	.40
165	Tall Fescue (Kentucky 31) Flatpea (Lathco) with inoculant ¹	20 20	.45 .75
	Total	40	1.20
175	Deer Tongue (Tioga) with inoculant ¹ Bird's-foot Trefoil (Empire, Viking) with inoculant ¹ Perennial Ryegrass (Norlea, Manhattan)	10 ¹ 8 3	.25 .20 .07
	Total	21	.52
185	Deer Tongue (Tioga) with inoculant ¹ Crown Vetch (Chemung, Penngift) with inoculant ¹ Perennial Ryegrass (Norlea, Manhattan)	10 ¹ 15 3	.25 .45 .07
	Total	28	.67
195	Chewing Fescue Hard Fescue Colonial Bentgrass Bird's-foot Trefoil (Empire, Viking) with inoculant ¹ Perennial Ryegrass	55 30 5 10 20	.80 .70 .10 .20 .50
	Total	100	2.30
205	Deleted due to invasive species		
215	Creeping Red Fescue (Pennlawn, Wintergreen)		Total 60 1.35
225	Creeping Red Fescue (Pennlawn, Wintergreen) Tall Fescue (Kentucky 31)		Total 60 1.35
235	Creeping Red Fescue (Pennlawn, Wintergreen) Flatpea (Lathco) with inoculant ¹		Total 15 3.60
245	Tall Fescue (Kentucky 31)		Total 150 3.60



- STONE DIKES MAY BE USED IN SLOPING DITCHES OR CHANNELS TO SLOW VELOCITY OR TO CREATE SEDIMENT TRAPS.
- TEMPORARY DIVERSIONS TO REMAIN IN PLACE FOR MORE THAN 30 WORKING DAYS SHALL BE SEEDED, MULCHED, AND STABILIZED AS APPROPRIATE.
- REMOVE SEDIMENT AS NEEDED TO RETAIN POSITIVE FLOW WITHIN DIVERSION.
- ADDITIONAL DIVERSIONS MAY BE CONSTRUCTED WITH OWNER'S APPROVAL TO PROTECT CONTRACTOR'S WORK.

TEMPORARY DIVERSION CHANNEL
NOT TO SCALE



ISSUED FOR PERMITTING

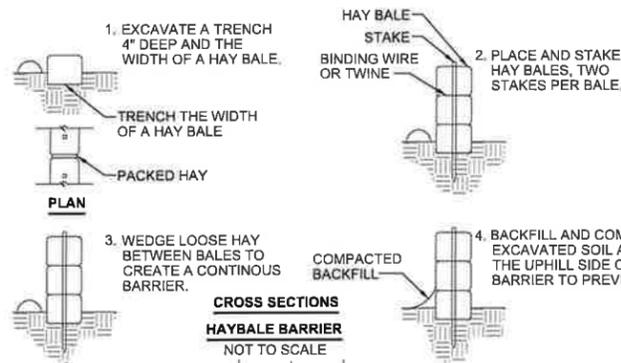
no.	date	by	ckd	description
B	07/29/19	KJE	-	ISSUED FOR PERMITTING
A	07/15/19	KJE	-	ISSUED FOR REVIEW

no.	date	by	ckd	description

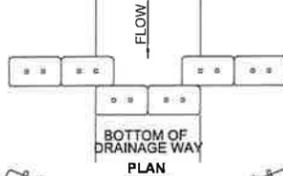
BURNS MCDONNELL	
9400 WARD PARKWAY KANSAS CITY, MO 64114 816-333-9400 FIRM LICENSE NO. PEC.000341	
designed K. ENGHOLM	detailed S. NICHOLS

NTE CONNECTICUT, LLC EROSION & SEDIMENT CONTROL NOTES SHEET 2	
project 111669	contract
drawing CG331	rev. B
sheet 1 of 1	sheets
file 111669 CG331.DGN	

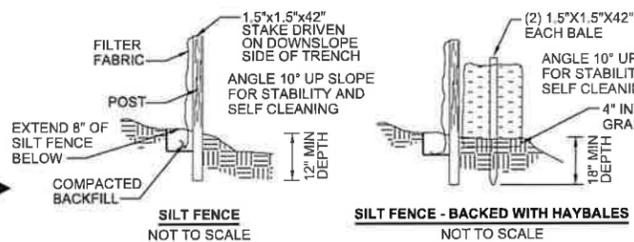
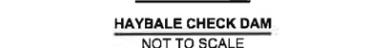
COPYRIGHT © 2019 BURNS & MCDONNELL ENGINEERING COMPANY, INC.



**CROSS SECTIONS
HAYBALE BARRIER**
NOT TO SCALE

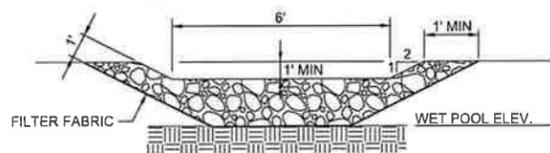


**CROSS SECTION
HAYBALE CHECK DAM**
NOT TO SCALE

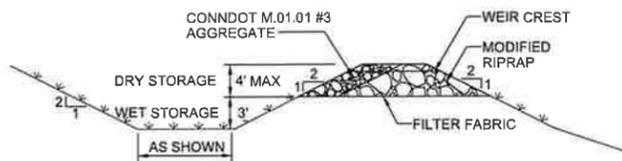


SILT FENCE
NOT TO SCALE

SILT FENCE - BACKED WITH HAYBALES
NOT TO SCALE



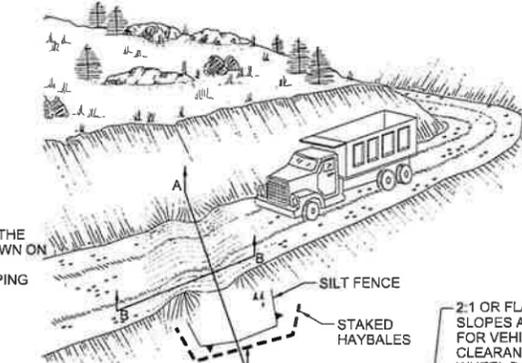
SECTION THROUGH LEVEL SPREADER
NOT TO SCALE



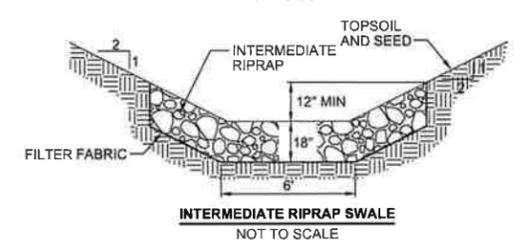
TEMPORARY SEDIMENT TRAP
NOT TO SCALE

NOTES:

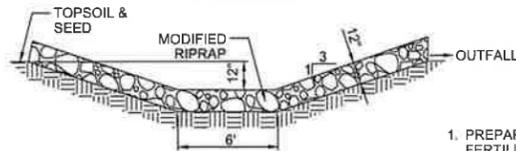
- INSPECT THE BASIN AT LEAST ONCE A WEEK AND AFTER RAINFALL EVENTS OF 0.5" OR GREATER.
- REMOVE SEDIMENT WHEN DEPOSITS REACH APPROXIMATELY 1/2 THE HEIGHT OF THE WET STORAGE. SEDIMENT SHALL BE DEPOSITED IN AN AREA WHICH IS NOT REGULATED BY THE INLAND WETLANDS COMMISSION.
- REPLACE OR REPAIR WITHIN 24-HOURS OF OBSERVED FAILURE. FAILURE MAY INCLUDE:
 - OVERTOPPING, UNDERCUTTING, OR BYPASSED BY RUNOFF WATER.
 - STONE FILTER HAS BEEN MOVED OR KNOCKED OVER.



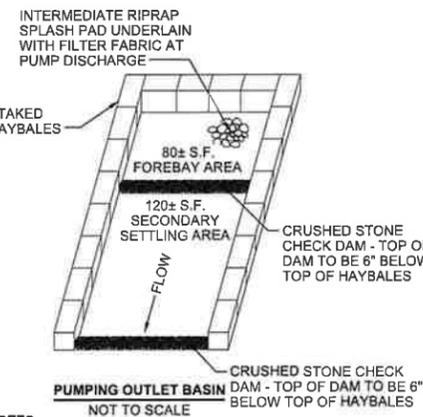
WATER BAR DETAIL
NOT TO SCALE



INTERMEDIATE RIPRAP SWALE
NOT TO SCALE

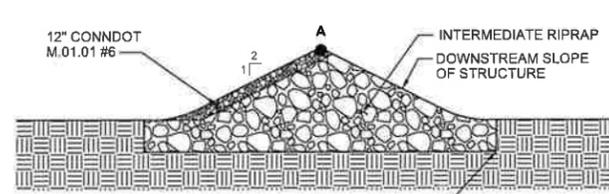


SECTION THROUGH LEVEL SPREADER
NOT TO SCALE

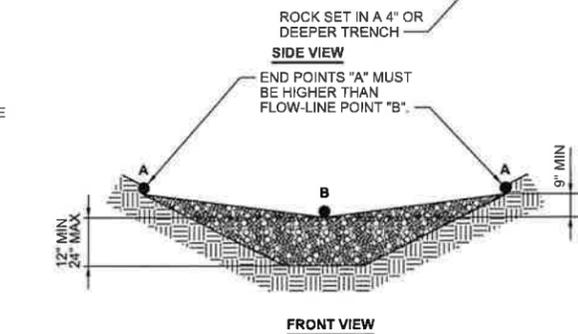


NOTES:

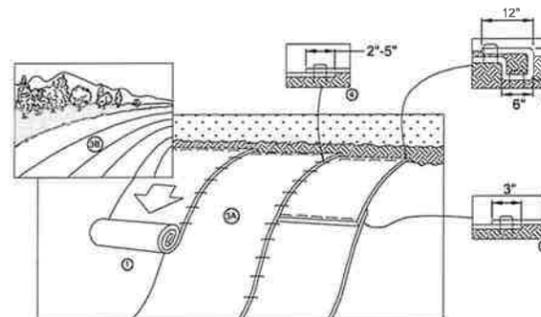
- TO BE USED IN THE EVENT THAT DEWATERING IS REQUIRED.
- LOCATE BASINS OUTSIDE OF WETLANDS.



TYPICAL STONE DIKE
NOT TO SCALE



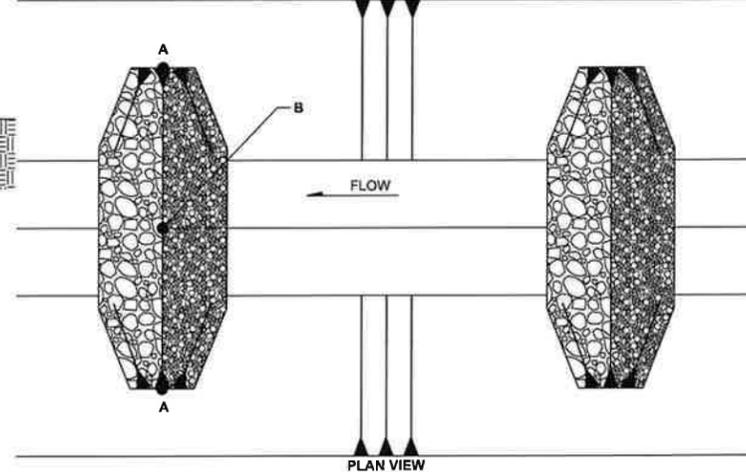
FRONT VIEW



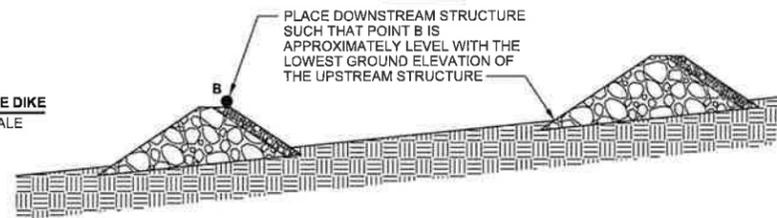
NOTES:

- IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
- TURF REINFORCEMENT MAT SHALL BE NORTH AMERICAN GREEN ERONET C-125 LONG TERM PHOTODEGRADABLE BLANKET OR APPROVED EQUIVALENT.

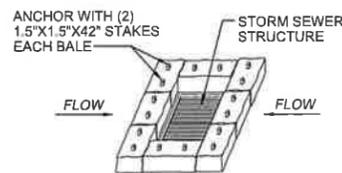
TURF REINFORCEMENT MAT INSTALLATION
NOT TO SCALE



PLAN VIEW



FLOWLINE PROFILE
NOT TO SCALE



HAYBALE INSTALLATION AT CATCH BASIN
NOT TO SCALE

- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
- CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

ISSUED FOR PERMITTING

**BURNS
MCDONNELL**

9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
FIRM LICENSE NO. PEC.000341

designed K. ENGHOLM detailed S. NICHOLS

NTE CONNECTICUT, LLC
EROSION & SEDIMENT CONTROL
DETAILS
SHEET 1

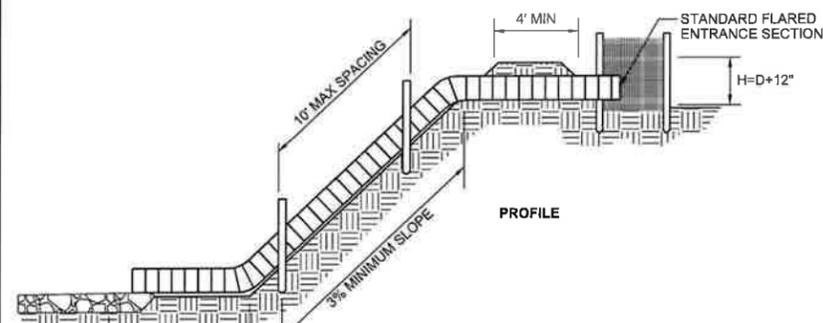
project 111669 contract

drawing **CG332** rev. **B**

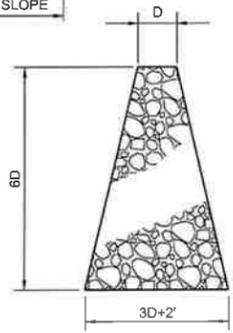
sheet 1 of 1 sheets
file 111669 CG332.DGN

KILLINGLY ENERGY CENTER
1X1 COMBINED CYCLE - MHPS
WINDHAM COUNTY, CONNECTICUT

no.	date	by	ckd	description	no.	date	by	ckd	description
B	07/29/19	KJE	-	ISSUED FOR PERMITTING					
A	07/15/19	KJE	-	ISSUED FOR REVIEW					

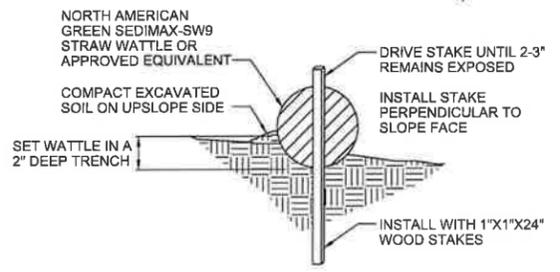
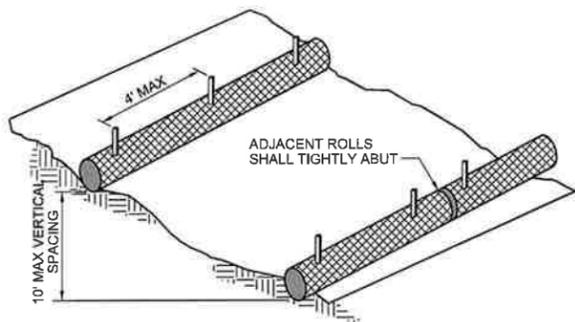


SIZE OF SLOPE DRAIN	
MAX DRAINAGE AREA (AC)	PIPE DIAMETER (IN)
0.5	12
2.5	18
5.0	24



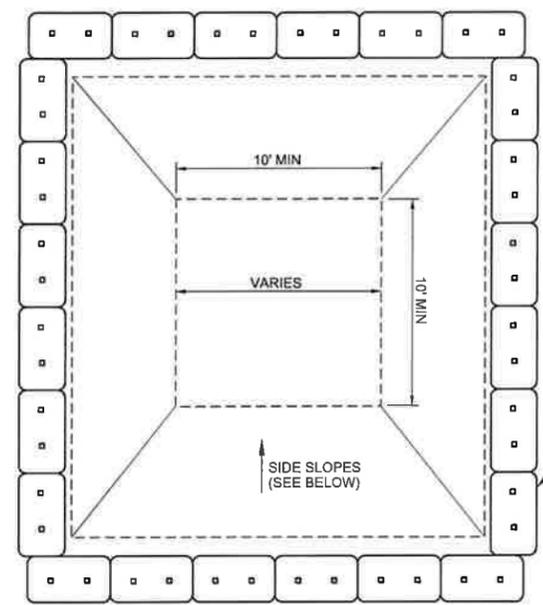
- NOTES:**
1. THE PIPE SLOPE DRAIN SHALL HAVE A SLOPE OF 3% OR STEEPER.
 2. TOP OF THE EARTH DIKE OVER THE INLET PIPE AND ALL DIKES CARRYING WATER TO THE PIPE SHALL BE AT LEAST 1 FOOT HIGHER THAN THE TOP OF THE PIPE.
 3. ADD 0.3 FOOT TO DIKE HEIGHT OF SETTLEMENT.
 4. SOIL AROUND AND UNDER THE SLOPE PIPE SHALL BE HAND TEMPERED IN 4-INCH LIFTS.
 5. THE PIPE SHALL BE CHDPE WITH WATERTIGHT CONNECTIONS.
 6. PIPE ANCHORS TO BE PLACED AT 10' MAXIMUM SPACING.
 7. RIPRAP TO BE MODIFIED RIPRAP AT LEAST 12" THICK AND PRESSED INTO THE SOIL.
 8. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

TEMPORARY PIPE SLOPE DRAIN DETAIL
NOT TO SCALE

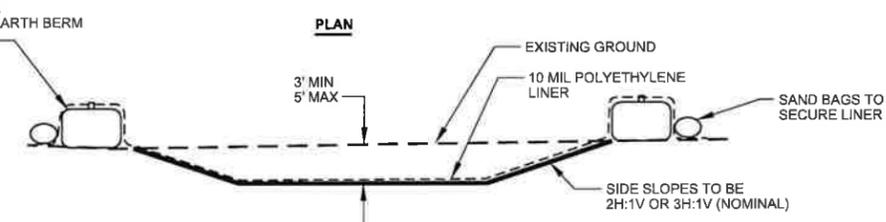


- NOTES:**
1. INSTALL PER MANUFACTURE'S RECOMMENDATIONS.

TYPICAL STRAW WATTLE DETAIL
NOT TO SCALE



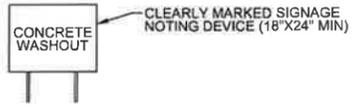
PLAN



SECTION

CONCRETE WASHOUT
NOT TO SCALE

- NOTES:**
1. CONCRETE WASHOUT(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT SHALL BE ENTIRELY SELF-CONTAINED.
 2. SURFACE DISCHARGE IS UNACCEPTABLE. THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, SHALL BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT FOR CONTAINMENT.
 3. SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. CONCRETE WASHOUT(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHOD.
 4. CONCRETE WASHOUT(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY, ADEQUATE HOLDING CAPACITY, LEAKS, TEARS, OR OVERFLOWS. CONCRETE WASHOUTS SHALL ALSO BE CHECKED AFTER HEAVY RAINS.
 5. HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S DEPTH. THE WASTE CAN BE STORED AT AN UPLAND LOCATION, AS APPROVED BY THE ENGINEER. ALL CONCRETE WASTE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL APPLICABLE LAWS, REGULATIONS, AND GUIDELINES.



HAY BALES OR COMPACTED EARTH BERM (SEE NOTE 2)

Scale For Noting

INCHES

COPYRIGHT © 2019 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

no.	date	by	ckd	description	no.	date	by	ckd	description
C	09/20/19	KJE	-	ISSUED FOR PERMITTING					
B	07/29/19	KJE	-	ISSUED FOR PERMITTING					
A	07/15/19	KJE	-	ISSUED FOR REVIEW					

BURNS & MCDONNELL

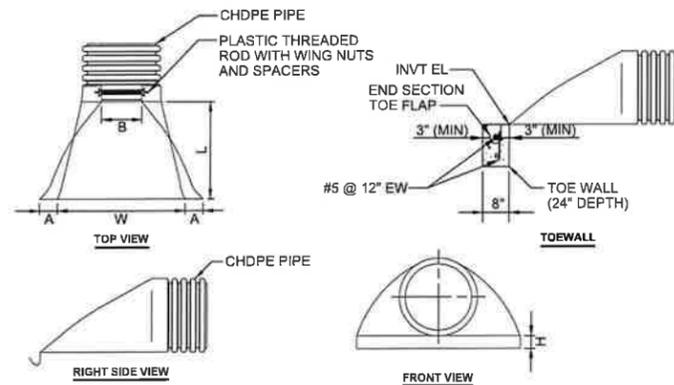
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
FIRM LICENSE NO. PEC.000341

designed: K. ENGHOLM
detailed: S. NICHOLS

ISSUED FOR PERMITTING

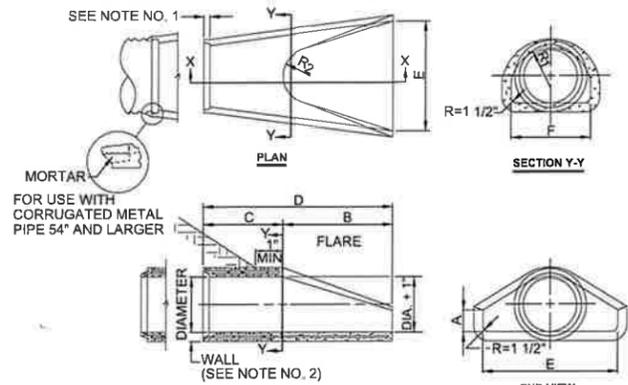
KILLINGLY ENERGY CENTER
1X1 COMBINED CYCLE - MHPs
WINDHAM COUNTY, CONNECTICUT

NTE CONNECTICUT, LLC EROSION & SEDIMENT CONTROL DETAILS SHEET 2	
project 111669	contract
drawing CG333	rev. C
sheet 1 of 1	sheets
file 111669 CG333.DGN	



DIMENSIONS FOR CHDPE CULVERT END					
PIPE SIZE (IN)	A (IN)	B (IN, MAX)	H (IN)	L (IN)	W (IN)
15	6.50	10.00	6.50	25.00	29.00
18	7.50	15.00	6.50	32.00	35.00
24	7.50	18.00	6.50	36.00	45.00
30	7.50	22.00	8.60	58.00	63.00

FLARED END SECTION DETAIL (CHDPE)
NOT TO SCALE

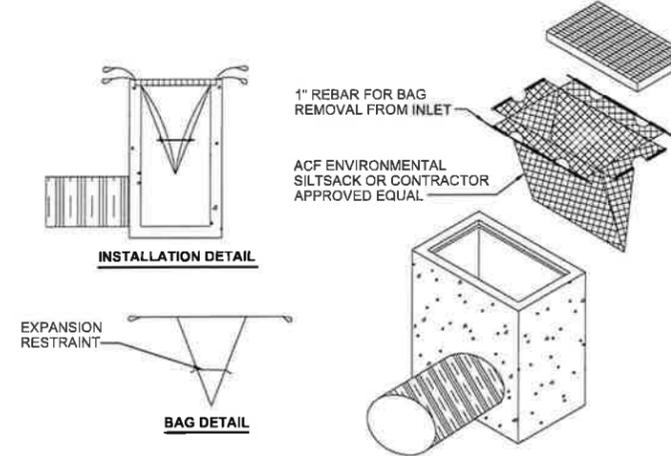


NOTES:

- JOINTS SHALL BE TONGUE AND GROOVE OR BELL AND SPIGOT AS REQUIRED TO CONFORM TO PIPE INSTALLED.
- WALL THICKNESS SHALL CONFORM TO PIPE THICKNESS.

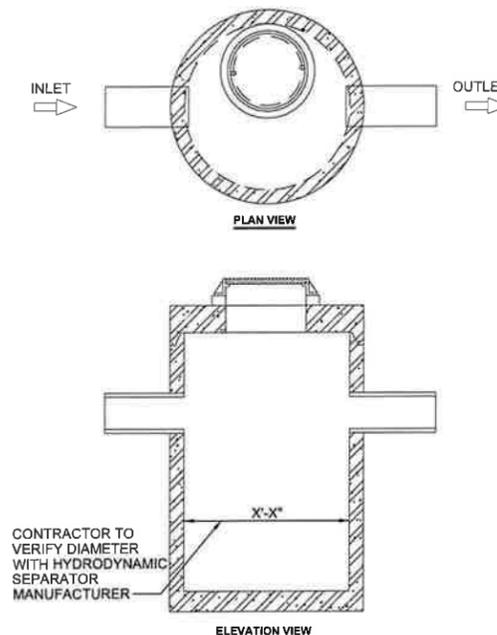
DIMENSIONS FOR REINFORCED CONCRETE CULVERT END										FLARED REINFORCEMENT	
DIA.	A	B	C	D	E	F	R1	R2			
15"	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0 3/8"	1'-0 1/2"	11"	0.054	0.054	

FLARED END SECTION DETAIL (REINFORCED CONCRETE)
NOT TO SCALE



- NOTES:**
- BAGS MAY BE USED IN LIEU OF OR IN COMBINATION WITH STAKED HAYBALES
 - BAGS SHOULD BE CLEANED OUT AFTER EVERY RAIN EVENT AND/OR AS NEEDED.

SILTBAG INLET SEDIMENT CONTROL DEVICE
NOT TO SCALE

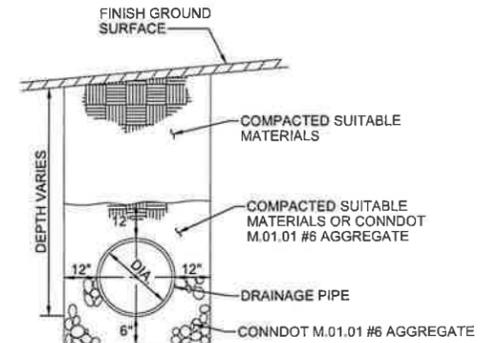


- NOTES (HYDRODYNAMIC SEPARATOR):**
- WATER QUALITY STRUCTURE SHALL MEET CT DEEP DESIGN REQUIREMENTS. THE WATER QUALITY FLOW SHALL BE DIRECTED TO THE STRUCTURE AND THE STRUCTURE SHALL BE DESIGNED TO TREAT THE WATER QUALITY FLOW STATED BELOW. FLOWS GREATER THAN THE WATER QUALITY FLOW SHALL BE BY-PASSED.
 - HYDRODYNAMIC SEPARATOR SHALL BE CONTAINED IN ONE CIRCULAR STRUCTURE.
 - HYDRODYNAMIC SEPARATOR SHALL RETAIN FLOATABLES AND TRAPPED SEDIMENT UP TO AND INCLUDING PEAK TREATMENT CAPACITY.
 - HYDRODYNAMIC SEPARATOR SHALL NOT BE COMPROMISED BY EFFECTS OF DOWNSTREAM TAILWATER.
 - HYDRODYNAMIC SEPARATOR SHALL HAVE NO INTERNAL COMPONENTS THAT OBSTRUCT MAINTENANCE ACCESS.
 - PIPE ORIENTATION MAY VARY; SEE SITE PLAN FOR SIZE AND LOCATION.
 - CAST IRON MANHOLE FRAMES, GRATES, AND COVERS CAPABLE OF WITHSTANDING H20 LOADING TO BE SUPPLIED WITH SYSTEM; SUBCONTRACTOR IS RESPONSIBLE FOR RISERS AND INSTALLATION.
 - SUBCONTRACTOR SHALL PREPARE EXCAVATION AND PROVIDE EQUIPMENT FOR OFF-LOADING & SETTING AT TIME OF DELIVERY.
 - SUBCONTRACTOR SHALL HAVE THE HYDRODYNAMIC SEPARATOR INSPECTED BY THE MANUFACTURER'S REPRESENTATIVE FOR PROPER INSTALLATION. SUBCONTRACTOR SHALL OBTAIN FROM THE REPRESENTATIVE WRITTEN CONFIRMATION THAT THE UNIT IS INSTALLED ACCORDING TO THE MANUFACTURER'S REQUIREMENTS AND WILL BE COVERED UNDER THE MANUFACTURER'S WARRANTY.
 - HYDRODYNAMIC SEPARATOR SHALL BE APPROVED BY CONNDOT. AS OF OCTOBER 2015, THE FOLLOWING MODELS/MANUFACTURERS WERE APPROVED:
FLOGARD DUAL-VORTEX - OLDCASTLE STORMWATER SOLUTIONS
DOWNSTREAM DEFENDER - HYDRO INTERNATIONAL
CDS - CONTECH STORMWATER SOLUTIONS
VORTSENTRY - CONTECH STORMWATER SOLUTIONS
HYDROGUARD - HYDROWORKS LLC
STORMCEPTOR - RINKER MATERIALS
 - HYDRODYNAMIC SEPARATOR MANUFACTURER SHALL PROVIDE TRAINING TO OWNER'S MAINTENANCE STAFF ON PROPER MAINTENANCE OF UNIT.

HYDRODYNAMIC SEPARATOR DESIGN DATA			
LOCATION	HDS-1	HDS-2	HDS-3
DRAINAGE AREA (AC)	1.95	4.12	6.96
IMPERVIOUS AREA (AC)	0.61	0.83	2.74
WATER QUALITY FLOW RATE (CFS)	0.55	0.39	1.35
WATER QUALITY VOLUME (AC-FT)	0.054	0.079	0.234
PEAK FLOWRATE FOR 10-YEAR STORM QPEAK (CFS)	6.7	6.2	25.4

HYDRODYNAMIC SEPARATOR TO HAVE MINIMUM 1.0 CY OF SEDIMENT STORAGE

HYDRODYNAMIC SEPARATOR
NOT TO SCALE



- NOTE:**
- PROVIDE WATER TIGHT GASKETED PIPE FOR INSTALLATIONS IN FILL SLOPES

DRAINAGE PIPE INSTALLATION DETAIL
NOT TO SCALE

COPYRIGHT © 2019 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

no.	date	by	ckd	description	no.	date	by	ckd	description
C	09/20/19	KJE	-	ISSUED FOR PERMITTING					
B	07/29/19	KJE	-	ISSUED FOR PERMITTING					
A	07/15/19	KJE	-	ISSUED FOR REVIEW					

BURNS & MCDONNELL

9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
FIRM LICENSE NO. PEC.000341

designed: K. ENGHOLM
detailed: S. NICHOLS

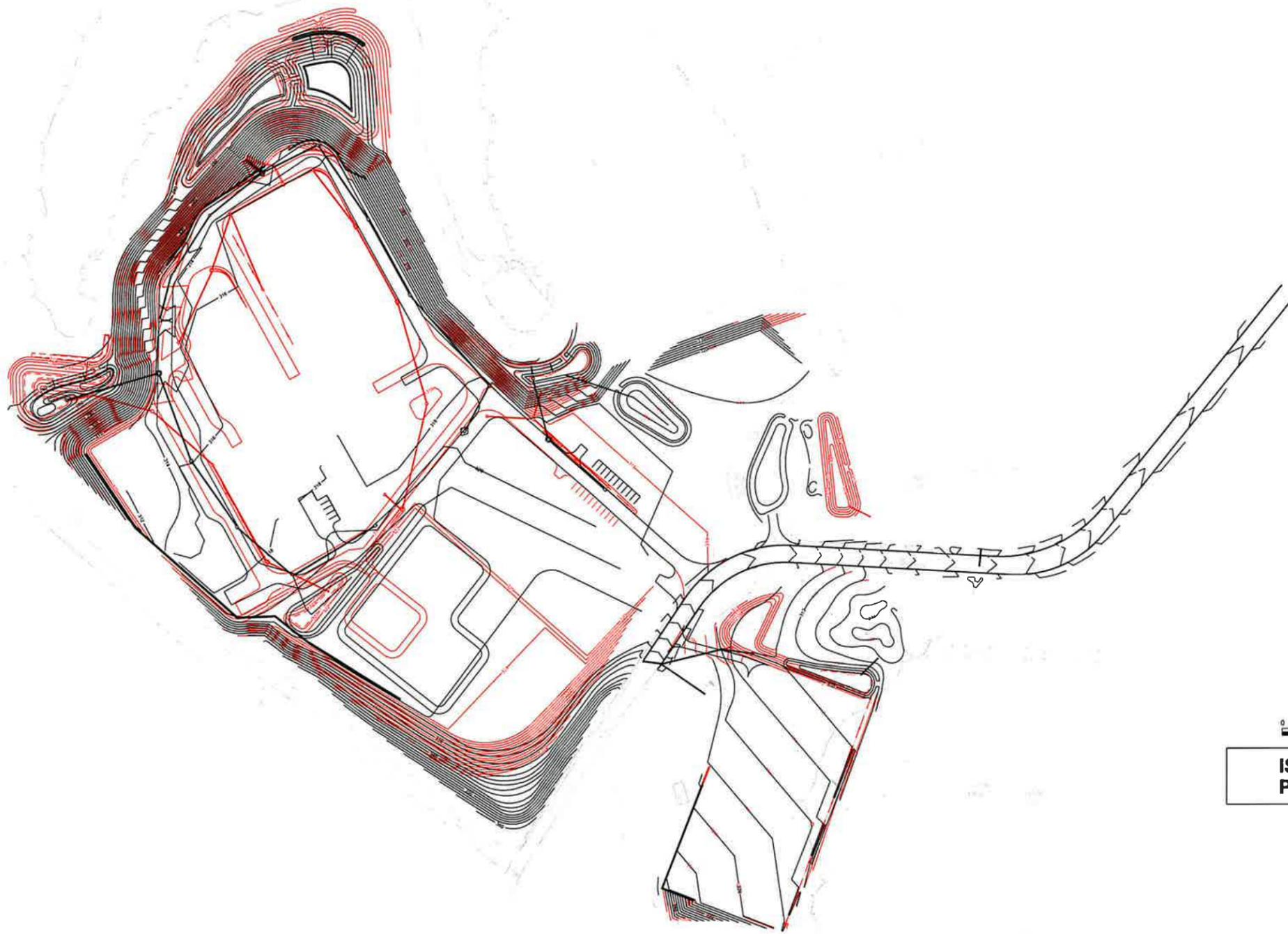
ISSUED FOR PERMITTING

KILLINGLY ENERGY CENTER
1X1 COMBINED CYCLE - MHPS
WINDHAM COUNTY, CONNECTICUT

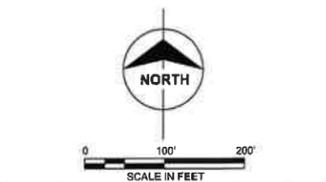
NTE CONNECTICUT, LLC
MISCELLANEOUS DETAILS

project: 111669 contract: _____
drawing: _____ rev. _____
CG334 - C
sheet 1 of 1 sheets
file 111669 CG334.DGN
9/19/2019 sknichols

KEY PLAN:
 — PROPOSED DESIGN
 — ORIGINAL DESIGN
 - - - EXISTING WETLAND



Scale For Microlining
 Meters
 Scale For Macrofitting
 Inches



ISSUED FOR PERMITTING

COPYRIGHT © 2018 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

no.	date	by	ckd	description	no.	date	by	ckd	description
C	09/20/19	KJE	-	ISSUED FOR PERMITTING					
B	07/29/19	KJE	-	ISSUED FOR PERMITTING					
A	07/16/19	KJE	-	ISSUED FOR REVIEW					

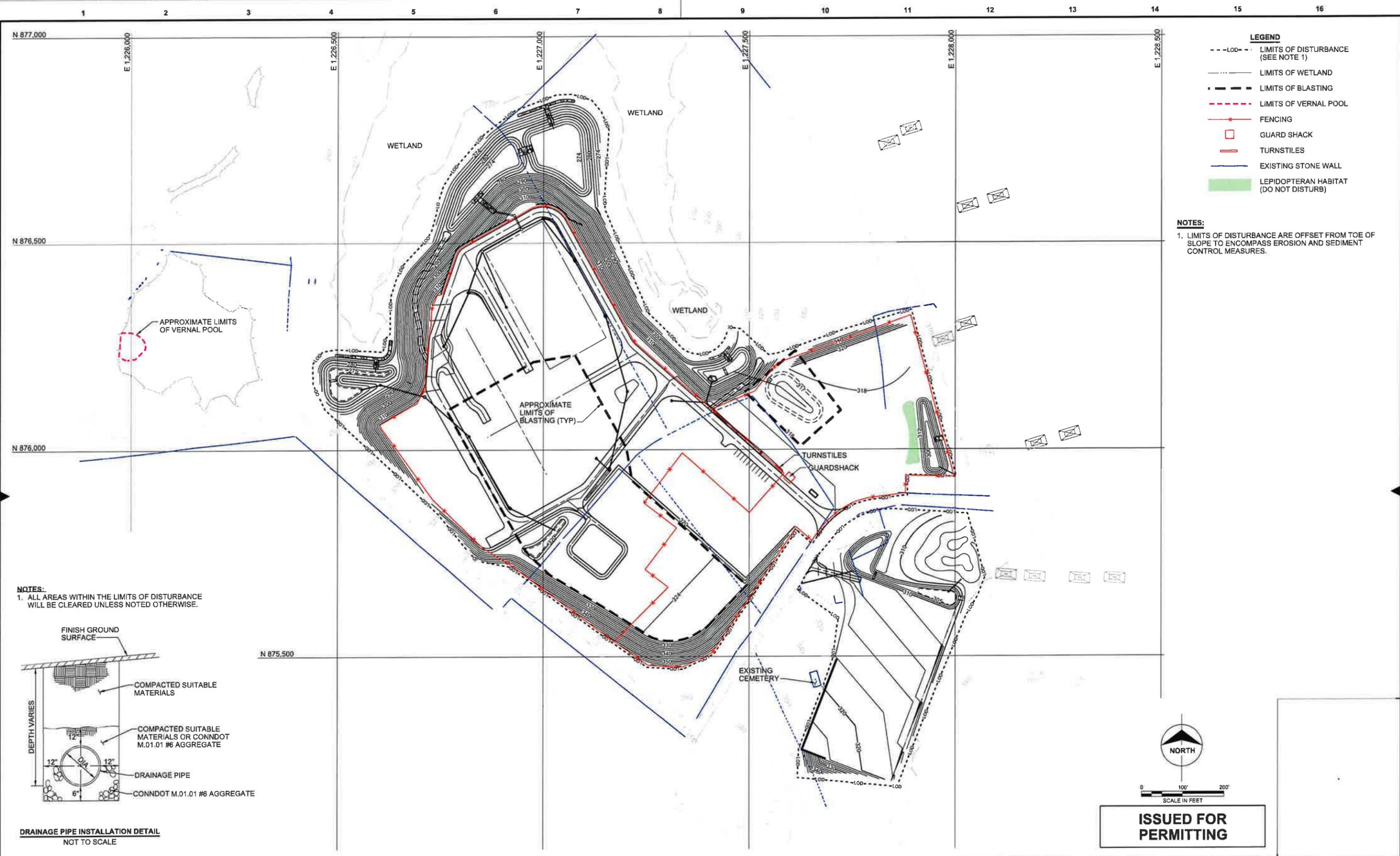
BURNS & MCDONNELL
 9400 WARD PARKWAY
 KANSAS CITY, MO 64114
 816-333-9400
 FIRM LICENSE NO. PEC.000341

designed: K. ENGHOLM
 detailed: S. NICHOLS

NTE CONNECTICUT, LLC
 GRADING COMPARISON PLAN

project: 111669 contract:
 drawing: CG340 rev. C
 sheet 1 of 1 sheets

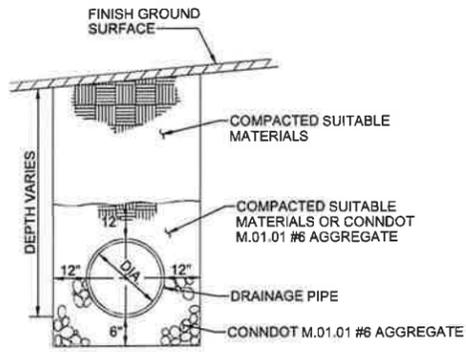
file: 111669_CG340.DGN
 9/19/2019 USERNAME



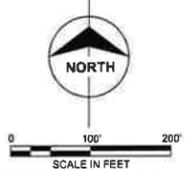
- LEGEND**
- LOD--- LIMITS OF DISTURBANCE (SEE NOTE 1)
 - LIMITS OF WETLAND
 - .-.-.- LIMITS OF BLASTING
 - - - - - LIMITS OF VERNAL POOL
 - +--- FENCING
 - GUARD SHACK
 - TURNSTILES
 - EXISTING STONE WALL
 - LEPIDOPTERAN HABITAT (DO NOT DISTURB)

NOTES:
 1. LIMITS OF DISTURBANCE ARE OFFSET FROM TOE OF SLOPE TO ENCOMPASS EROSION AND SEDIMENT CONTROL MEASURES.

NOTES:
 1. ALL AREAS WITHIN THE LIMITS OF DISTURBANCE WILL BE CLEARED UNLESS NOTED OTHERWISE.



DRAINAGE PIPE INSTALLATION DETAIL
 NOT TO SCALE



ISSUED FOR PERMITTING

COPYRIGHT © 2019 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

no.	date	by	ckd	description	no.	date	by	ckd	description
C	09/20/19	KJE	-	ISSUED FOR PERMITTING					
B	07/29/19	KJE	-	ISSUED FOR PERMITTING					
A	07/16/19	KJE	-	ISSUED FOR REVIEW					

BURNS & MCDONNELL

9400 WARD PARKWAY
 KANSAS CITY, MO 64114
 816-333-9400
 FIRM LICENSE NO. PEC.000341

designed: K. ENGHOLM
 detailed: S. NICHOLS

KILLINGLY ENERGY CENTER
 1X1 COMBINED CYCLE - MHPS
 WINDHAM COUNTY, CONNECTICUT

NTE CONNECTICUT, LLC
 SITE ARRANGEMENT
 PHASE 1 DEVELOPMENT PLAN

project	111669	contract	
drawing	CG341	rev.	C
sheet	1	of	1
		sheets	

9/19/2019 3:58:58 PM