2250-003 Ennis Solar LLC 447 Sheriff Johnson Road - Lillington, NC IFC Drawings

12.09.2018 Revised 01.16.2019



VICINITY MAP

Sheet #	Description	Revision #	Date
C0	COVER SHEET	3	1/16/2019
C1	EXISTING CONDITIONS PLAN	3	1/16/2019
C2	SITE PLAN	3	1/16/2019
C3	EROSION CONTROL PLAN - OVERALL	3	1/16/2019
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C8	SITE DETAILS	3	1/16/2019
C9	SITE DETAILS	3	1/16/2019
C10	DRIVEWAY PLAN	3	1/16/2019







contours shown hereon were	BARROW & BARROW, PA Professional Land Surveying 115 HERITAGE CROSSING SNOW HILL, NC 28580 PHONE: (252)747-5111 www.barrowandbarrow.com	Berimeter Pointe Parkway, Suite 350 Charlotte, NC 28208 (Charlotte, NC 28208 th 204.521.9880 DA4.521.9880 DA4.521.9880 DA4.521.9880 DA4.521.9880 DA4.521.9880 DA4.521.9880
AND	eY - NC 27546 NC 27546 RTH CAROLINA	Corp. NC license: F-1320 PROFESSIONAL SEAL
DED DED SUPPOPERSCENTIFICATION Value Marker Strukt V/F DAVID WAYNE PAGE 816 PIN#0080-57-2378 N/F THE ENNIS TRUST DEED BOOK 1689, PAGE 816 PIN#0080-57-2378 N/F DAVID WAYNE PAGE 4 PIN#0080-57-6769 V/F DAVID WAYNE PAGE 4 PIN#0080-57-6769 Noil © base of bent EIP CONTROL POINT "BB1" GRID TO GROUND LOCALIZATION NAM 63(2011) NAM 63(2011)	- ALTA/NSPS LAND TITLE SURVE ENNIS SOLAR, LCC ENNIS SOLAR, LCC 600 SHERIFE JOHNSON ROAD, LILLINGTON, N NEILLS CREEK TOWNSHIP, HARNETT COUNTY, NOF SEPTEMBER 19, 2018	VOLTAIC POWER PLANT - 4,560 kWac / 6,156 kWdc 3 ENNIS SOLAR, LLC RIFF JOHNSON ROAD -ON, NC 27546 FOR CONSTRUCTION
was drawn under my supervision from an actual GPS (or GNSS) survey made under my supervision and the following information was used to perform the survey: Class of survey: Class A Positional accuracy: 0.016(m) RMS Type of GPS (or GNSS) field procedure: RTK Date(s) of survey: September 19, 2018 Datum/Epoch: NAD_83(2011) Geoid model: GEOID12A Combined grid factor: 0.99987110 Units: US Survey Feet	ons; correct legal	PHOTO 2250-00 447 SHE LILLING ISSUED
urvey/ Horizontal positions are referenced to NAD83\NSRS (2011) Vertical positions are referenced to NAD83\NSRS (2011) Vertical positions are referenced to NAD83\NSRS (2011) To: Stewart Title Guaranty Company; Ennis Solar, LLC, a North Carolina limited liability company; This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, dated February 23, 2016, and includes Items: 1,2,3,4,6(A),6(b),7(a),7(b),8,9,10(a),10(b),11*,13,14,16,17,18,19,20 (\$1,000,000), (graphically depict all setback lines and offset easements or servitudes benefitting the surveyed property and disclosed in record documents provided to the surveyor) of Table A thereof; and that this map meets the requirements of The Standards of Practice for Surveying in North Carolina (21 NCAC 56.1600). The field work was completed on September 14, 2018. The ratio of precision of this survey as calculated is 1:10,000+. * item 11 limited to visible surface evidence of underground utilities, including utilty markings (by others) Surveyor's Printed Name Surveyor's Signature L-2997 License Number September 18, 2018 Date of Map	Image: Weight of the state	1 ISSUE IFC 12.09.18 3 DRB COM. 01.16.19 - -



Cover			Area (acres)	<u>SILE D</u>
as			41.86	RIVER F
				DOWNS
			1	CLASSI
			1.09	
	Qty	Area/Inv		
Jads	3	500	0.03	
		Area/post		
	4000	0.0159	0.0073	
emain			0.00	
Total			42.99	FR
ecent Impervious			2.63	RE
				SIE

DDRESS: 447 SHERIFF JOHNSON ROAD, LILLINGTON NC BASIN: CAPE FEAR STREAM WATERBODY: EAST BUIES CREEK IFICATION: WS-IV, P r Supply Watershed: Dunn 🖉 JSE CLASSIFICATION: AGRICULTURAL & RURAL RESIDENTIAL greengo -----GREENGO ENERGY US, INC. JM SETBACK REQUIREMENTS: 1447 S. TRYON STREET CHARLOTTE, NC 28203 1. TOPOGRAPHIC DATA & EXISTING IMPROVEMENTS SHOWN ON THIS PLAN IS PER SURVEY DATA PROVIDED BY BARROW & BARROW, PA. 2. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND MUST BE FIELD VERIFIED. CALL NC ONE CALL CENTER BEFORE DIGGING AT 811. 3. COPIES OF ALL PERMITS AND APPROVED PLANS MUST BE KEPT ON-SITE IN A PERMIT BOX THAT IS CONSPICUOUSLY LOCATED AND EASILY ACCESSIBLE DURING CONSTRUCTION. 4. A SEDIMENTATION & EROSION CONTROL PERMIT AND GRADING PERMIT WILL BE OBTAINED FROM NCDEQ PRIOR TO ANY CONSTRUCTION BEGINNING. 5. A DRIVEWAY PERMIT WILL BE APPROVED BY NCDOT PRIOR TO BEGINNING CONSTRUCTION. FINAL DRIVEWAY LOCATION(S) & REQUIREMENTS ARE SUBJECT TO PERMIT REVIEW AND APPROVAL. 6. PROPOSED ACCESS GATE(S) & FENCING ARE 7' TALL CHAIN LINK . GATES WILL BE LOCKED WITH STANDARD KEYED OR COMBINATION LOCK. EMERGENCY PERSONNEL (AS DESIGNATED BY HARNETT COUNTY) WILL BE PROVIDED A KEY OR COMBINATION FOR 24 / 7 ACCESS. 7. THE ELECTRICAL DISCONNECT SWITCH SHALL BE CLEARLY IDENTIFIED AND UNOBSTRUCTED AT ALL TIMES. THE OWNER MUST FILE A MAP WITH THE HARNETT COUNTY PUBLIC SAFETY DEPARTMENT DEPICTING WHERE THE DISCONNECT SWITCH IS LOCATED, AND SUPPLY ALL EMERGENCY CONTACT INFORMATION TO EMERGENCY PERSONNEL TO HAVE ON FILE. 8. LAND CLEARING SHOWN IN JURISDICTIONAL AREAS IS NOT CONSIDERED A DISCHARGE OF DREDGE MATERIAL AS DEFINED IN SECTION 232.2 (3)(ii) "Activities that involve only the cutting or removing of vegetation above the ground (e.g., mowing, rotary cutting, and chainsawing) where the activity neither substantially disturbs the root system nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material." 9. THE PROPERTY DOES CONTAIN FLOOD HAZARD AREAS AS ON THE LATEST FIRM PANEL #37200068000J 10. ALL GRADING SHOWN WITHIN THE FLOOD HAZARD AREA (APPROX 1.55 ACRES) IS TEMPORARY AND SHALL BE RESTORED TO EXISTING CONTOUR ELEVATIONS

- 11. CONDITIONAL USE PERMIT #BA-CU-10-18 WAS APPROVED ON 4/9/18
- 12. ENNIS SOLAR LLC SHALL BE RESPONSIBLE FOR MAINTENANCE OF PARKING AND ALL LANDSCAPE BUFFERING
- 13. ANY SIGNAGE SHALL BE SET BACK AT LEAST 10' FROM THE NCDOT ROW.

AS THE OWNER OF RECORD, I HEREBY FORMALLY CONSENT TO THE PROPOSED DEVELOPMENT SHOWN ON THIS SITE PLAN AND ALL REGULATIONS AND REQUIREMENTS OF THE HARNETT COUNTY



DRWN HKG CHKD US/GG SCALE AS SHOWN DATE 11/08/2018

SITE PLAN

C2

SUITE 201

AND THE PUBLIC.

2. ALL PAVEMENT CUTS SHALL BE REPLACED ACCORDING TO NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

1"= 100'

0 50' 100'

200'







0

SCALE: 1"= 80' 40' 80'





EROSION CONTROL NOTES:

- 1. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NCDENR STAFF. ANY LAND-DISTURBING ACTIVITY >1 ACRES REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(PERMIT NO.NCG010000). ANY PERMIT NONCOMPLIANCE IS A VIOLATION OF THE CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES.
- 2. ANY OFF-SITE BORROW AND WASTE REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN, A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT OR PER DIVISION OF SOLID WASTE MANAGEMENT OR DIVISION OF WATER RESOURCES RULES AND REGULATIONS. [15A NCAC 4B .0110]
- 3. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE NCDENR EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- 4. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE NCDENR EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- 5. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING 6. TEMPORARY/PERMANENT DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT OF WAY MUST BE PRESENTED AT PRE-CONSTRUCTION MEETING
- 7. TOTAL DENUDED AREA: 33.15 ACRES
- RIVER BASIN: CAPE FEAF
- 9. SHADE BUFFER LAND CLEARING SHOWN IN JURISDICTIONAL AREAS IS NOT CONSIDERED A DISCHARGE OF DREDGE MATERIAL AS DEFINED IN SECTION 232.2 (3)(ii) "Activities that involve only the cutting or removing of vegetation above the ground (e.g., mowing, rotary cutting, and chainsawing) where the activity neither substantially disturbs the root system nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material.
- 10. ALL COMPACTION SHOULD BE TO THE SAME 95% SPMDD AT +-2% OF OPTIMUM MC
- 11. MAXIMUM HEIGHT OF TEMPORARY SOIL STOCKPILES SHALL BE 20' with 2:1 MAX SLOPES. STABILIZE STOCKPILES LEFT IN PLACE MORE THAN 7 DAYS.

SELF INSPECTION REQUIREMENTS

- 1. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING SEDIMENTATION CONTROL BASINS, SEDIMENTATION TRAPS. SEDIMENTATION PONDS. ROCK DAMS. TEMPORARY DIVERSIONS. TEMPORARY SLOPE DRAINS. ROCK CHECK DAMS. SEDIMENT FENCE OR BARRIERS, ALL FORMS OF INLET PROTECTION, STORM DRAINAGE FACILITIES, ENERGY DISSIPATERS, STABILIZATION METHODS OF OPEN CHANNELS, AND GROUND COVER SHALL BE INSPECTED BY THE OWNER OR DESIGNATED REPRESENTATIVE.
- 2. THE DIMENSIONS OF THE BASINS SHALL BE CHECKED AND COMPARED TO THE DIMENSIONS ON THE APPROVED SEDIMENTATION AND EROSION CONTROL PLAN, NOTIFY THE DESIGNER IF THE DIMENSIONS OF ANY OF THE EROSION CONTROL MEASURES DEVIATE FROM THE PI ANS
- 3. A "SELF-INSPECTION REPORT FORM FOR LAND DISTURBING ACTIVITY" (AS REQUIRED BY NCGS 113A-54.1) IS PROVIDED WITHIN THE SPECS. ALTERNATIVELY THE OWNER OR DESIGNATED REPRESENTATIVE COMPLETING THE INSPECTIONS MAY MAKE NOTATIONS ON THE COPY OF THE APPROVED FROSION AND SEDIMENTATION CONTROL PLAN THAT IS KEPT ON THE PROJECT SITE DOCUMENTATION SHALL BE ACCOMPLISHED BY INITIALING AND DATING EACH MEASURE OR PRACTICE SHOWN ON A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT THAT LISTS EACH MEASURE PRACTICE OR DEVICE SHOWN ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. ALL DOCUMENTATION AND/OR REPORTS
- 4. THE SELF-INSPECTION REPORT IS TO BE COMPLETED AFTER EACH PHASE OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS COMPLETE. THESE PHASES APPLY FOR THIS PROJECT
- 4.1. INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL MEASURES;
- 4.2. CLEARING AND GRUBBING OF EXISTING GROUND COVER;
- 4.3. COMPLETION OF ANY PHASE OF GRADING OF SLOPES OR FILLS; 4.4. INSTALLATION OF STORM DRAINAGE FACILITIES;

OF INSPECTIONS MUST BE MADE AVAILABLE ON THE SITE.

- 4.5. COMPLETION OF CONSTRUCTION OR DEVELOPMENT;
- 4.6. ESTABLISHMENT OF PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION.

TEMPORARY SEEDING SCHEDULE

SEEDING MIXTURE SPECIES RATE (LB/ACRE)

GERMAN MILLET

IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUNDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE SEEDING DATES

APRIL 15 - AUG. 15 SOIL AMENDMEN

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE MULCH

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL FIBER MULCH IS ALSO ACCEPTABLE

AINTENANCE FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

MULCH

SEEDING MIXTURE RATE (LB/ACRE) SPECIES RYE (GRAIN)

SEEDING DATES AUG 15 - DEC 30

SOIL AMENDMENT FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE.

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK

WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL. FIBER MULCH IS ALSO ACCEPTABLE. SUBMIT MIX FOR APPROVAL MAINTENANCE

FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

LATE WINTER/EARLY SPRING

SEEDING MIXTURE RATE (LB/ACRE) SPECIES

ANNUAL RYE KOBE LESPEDEZA 50

SEEDING DATES

SOIL AMENDMENTS FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE.

MULCH APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK

WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL. FIBER MULCH IS ALSO ACCEPTABLE. SUBMIT MIX FOR APPROVAL MAINTENANCE

FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

SILT FENCE CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. 2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.)

3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST. 4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH. 5. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN

SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES. 6. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.

7. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER 8. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.

9. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF T11E BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE. 10. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

INSTALLATION SPECIFICATIONS

1. THE BASE OF BOTH END POSTS SHOULD BE AT LEAST ONE FOOT HIGHER THAN THE MIDDLE OF THE FENCE. CHECK WITH A LEVEL IF NECESSARY.

2. INSTALL POSTS 4 FEET APART IN CRITICAL AREAS AND 6 FEET APART ON STANDARD APPLICATIONS. 3. INSTALL POSTS 2 FEET DEEP ON THE DOWNSTREAM SIDE OF THE SILT FENCE, AND AS CLOSE AS POSSIBLE TO THE FABRIC, ENABLING POSTS TO SUPPORT THE FABRIC FROM UPSTREAM WATER PRESSURE

4. INSTALL POSTS WITH THE •NIPPLES FACING AWAY FROM THE SILT FABRIC.

5. ATTACH THE FABRIC TO EACH POST WITH THREE TIES, ALL SPACED WITHIN THE TOP 8 INCHES OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1 INCH VERTICALLY APART. ALSO, EACH TIE SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.

6. WRAP APPROXIMATELY 6 INCHES OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.

7. NO MORE THAN 24 INCHES OF A 36 INCH FABRIC IS ALLOWED ABOVE GROUND LEVEL. 8. THE INSTALLATION SHOULD BE CHECKED AND CORRECTED FOR ANY DEVIATIONS BEFORE COMPACTION.

9. COMPACTION IS VITALLY IMPORTANT FOR EFFECTIVE RESULTS. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF

THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQUARE INCH. COMPACT THE UPSTREAM SIDE FIRST, AND THEN EACH SIDE TWICE FOR A TOTAL OF 4 TRIPS.

MAINTENANCE 1. INSPECT AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. CHECK FOR EROSION, PIPING, AND DISPLACEMENT. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. 2. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR NEXT RAIN.

3. REMOVE SILT FENCE AND UNSTABLE SEDIMENT DEPOSITS AND BRING AREA TO GRADE AND STABILIZE AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

CONSTRUCTION SEQUENCE

MEASURES.

- G INSTALL GRAVEL ACCESS DRIVES AND PERIMETER FENCING

- FOLLOWING SCHEDULE:
- I.1.
- CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- 1.3. CONDITIONS IN MEETING THE STABILIZATION REQUIREMENTS ABOVE, THE FOLLOWING CONDITIONS OR EXEMPTIONS SHALL APPLY:

- J. COMPLETE ALL CONSTRUCTION WITHIN THESE PROJECT LIMITS.
- BE MAINTAINED TO MAX. 50% CAPACITY UNTIL AREAS THEY SERVE ARE FULLY STABILIZED

- Q. ESTIMATED TIME BEFORE FINAL STABILIZATION IS 6 MONTHS

PERMANENT SEEDING SCHEDULE SEEDBED PREPARATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE. 2. RIP HARDPAN, GRUBBED AREAS TO 6 INCHES DEPTH. (DO NOT RIP EXIST, PERMANENTLY STABILIZED AREAS) 3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND 4. APPLY FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*). 5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4-6" DEEP. 6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK

AFTER SEEDING. SEEDING MAY BE DONE BY BROADCAST. PLOWING OR DRILLING. 7 INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIR OR RESERVINGS WITHIN THE PLANTING SEASON IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES

RATE (lbs/Acre) JNHULLED BERMUDA GRASS IMPROVED TALL FESCUE CREEPING RED FESCUE DURANA WHITE CLOVER BROWNTOP MILLET (CAN USE ANNUAL RYE IN LIEU OF MILLET IN FALL/EARLY SPRING)

*FROM MAY-AUGUST, HULLED BERMUDA SHOULD BE USED.

SEEDING DATES POSSIBI F BEST APRIL 1-JULY 25

JULY 25-OCTOBER.15 MAR.1-APRIL 1

PPLY FERTILIZER ACCORDING TO SOILS TESTS, OR APPLY 500 LB/AC 10-10-10 FERTILIZER, OR 50 LB/AC NITROGEN FROM TURF-TYPE SLOW-RELEASE FERTILIZER. ADD 25-50 LB/AC NITROGEN AT 2-3 WEEK INTERVALS THROUGH SUMMER.

MULCH

SOIL AMENDMENTS

MAINTENANCE

MAINTENANCE

FVFNT

FOR NEXT RAIN.

TRACKED ONTO PUBLIC ROADWAYS

MATERIAL	RATE PER ACRE	NOTES
STRAW	1-2 TONS	Should come fro
WOOD FIBER	0.5-1 TONS	May be hydrosee

OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.

LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

SILT FENCE OUTLET CONSTRUCTION SPECIFICATIONS

INLET. SPACE POSTS EVENLY A MAXIMUM OF 4 FEET APART.

PIPING, AND DISPLACEMENT. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE

IAINTENANC FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. WATER AS NEEDED AND MOW 5"-6" HEIGHT. TOPDRESS WITH 40 LB/AC NITROGEN IN APRIL, 50 LB IN MAY, 50 LB IN JUNE, 30 LB IN JULY, 25-50 LB IN AUGUST.

A. CONTACT NCDENR EROSION CONTROL INSPECTOR TO INFORM HIM/HER THAT CONSTRUCTION IS READY TO BEGIN.

B. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH THE NCDENR EROSION CONTROL INSPECTOR, CONTRACTOR, AND THE DESIGNER TO DISCUSS EROSION CONTROL

C. INSTALL CONSTRUCTION ENTRANCE, AND ASSOCIATED STORM DRAINAGE AS SHOWN ON THE PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE MEASURES. INSTALL INLET, PIPE, FLARED END SECTION AND INLET/OUTLET PROTECTION UNDER THE DRIVEWAY WHEN CONSTRUCTION ENTRANCE IS CONSTRUCTED.

D. INSTALL PERIMETER SILT FENCE, SEDIMENT BASINS, DIVERSIONS AND STONE OUTLETS AROUND SITE

E. COMPLETE SELF INSPECTION REPORT FOR THE PRE EROSION CONTROL PHASE

F. TEMP. SEED/HYDRO SEED THE ENTIRE DENUDED AREA . SEE SEEDING SCHEDULE FOR SEED TYPE, DATES, AND RATES FOR DISTURBED AREAS WITH GRADED SLOPES FLATTER THAN 3:1.

H. COMPLETE SELF INSPECTION REPORT FOR THE POST EROSION CONTROL PHASE.

I. SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE

ALL PERIMETER DIKES, SWALES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

I.2. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14

1.4. EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE. 1.5. ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY THE GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE IS FLATTER THAN 4:1. SLOPES LESS THAN 50' SHALL APPLY GROUND COVER WITHIN 14 DAYS EXCEPT WHEN SLOPES ARE STEEPER THAN 3:1, THE 7 DAY REQUIREMENT APPLIES.

1.6. ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT.

1.7. SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT EXCEPT WHEN THE SLOPE IS STEEPER THAN 2:1.

1.8. ALTHOUGH STABILIZATION IS USUALLY SPECIFIED AS GROUND COVER, OTHER METHODS, SUCH AS CHEMICAL STABILIZATION, MAY BE ALLOWED ON A CASE-BY-CASE BASIS.

PORTIONS OF A SITE THAT ARE LOWER IN ELEVATION THAN ADJACENT DISCHARGE LOCATIONS AND ARE NOT EXPECTED TO DISCHARGE DURING CONSTRUCTION MAY BE EXEMPT FROM THE TEMPORARY GROUND COVER REQUIREMENTS IF IDENTIFIED ON THE APPROVED E&SC PLAN OR ADDED BY THE PERMITTING AUTHORITY.

K. EROSION CONTROL MEASURES (FENCES, COMPOST SOCKS, ETC ...) DIRECTLY AFFECTED BY THIS CONTRACT SHALL BE MAINTAINED/REMOVED UNDER THIS CONTRACT. DEVICES SHALL

L. PROVIDE PERMANENT GRASSING FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER)

M. CONTACT NCDENR FOR PERMISSION TO REMOVE EROSION CONTROL DEVICES.

N. REMOVE ALL EROSION CONTROL DEVICES AS INDICATED ON PLANS. SPREAD AND SEED ACCUMULATED SEDIMENT

O. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPT. OF AGRICULTURE.

P. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION.

om wheat or oats and must be tacked down ded. Do not use in hot, dry weather.

CONSTRUCTION ENTRANCE CONSTRUCTION SPECIFICATIONS

CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND

. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET. . USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING HE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2- INCH STONE AFTER EACH RAINFALL INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.

3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACE A 2-FOOT LAP OF WIRE MESH UNDER THE GRAVEL FOR ANCHORING.

4. PLACE CLEAN GRAVEL (NCDOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE AND SMOOTH TO AN EVEN GRADE.

1. INSPECT AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. CHECK FOR EROSION,

2. CLEAN WIRE MESH OF ANY DEBRIS TO PROVIDE ADEQUATE FLOW FOR NEXT RAINFALL

3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME

4. REMOVE SILT FENCE AND UNSTABLE SEDIMENT DEPOSITS AND BRING AREA TO GRADE AND STABILIZE AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

ROCK INLET PROTECTION SPECIFICATIONS

- CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL. 2. INSTALL THE CLASS B OR CLASS I RIPRAP IN A SEMI-CIRCLE AROUND THE PIPE INLET. THE STONE SHOULD BE BUILT UP HIGHER ON EACH END WHERE IT TIES INTO THE EMBANKMENT THE MINIMUM CREST WIDTH OF THE RIPRAP SHOULD BE 3 FEET, WITH A MINIMUM BOTTOM WIDTH OF 11 FEET. THE MINIMUM HEIGHT SHOULD BE 2 FEET, BUT ALSO 1 FOOT LOWER THAN THE SHOULDER OF THE EMBANKMENT OR DIVERSIONS.
- 3. A 1 FOOT THICK LAYER OF NC DOT #5 OR #57 STONE SHOULD BE PLACED ON THE OUTSIDE SLOPE OF THE RIPRAP. 4. THE SEDIMENT STORAGE AREA SHOULD BE EXCAVATED AROUND THE OUTSIDE OF THE
- STONE HORSESHOE 18 INCHES BELOW NATURAL GRADE 5. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, FILL DEPRESSION AND
- ESTABLISH FINAL GRADING ELEVATIONS, COMPACT AREA PROPERLY, AND STABILIZE WITH GROUND COVER.

MAINTENANCE

INSPECT ROCK PIPE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.

CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY. AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED,

REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND COVER (SURFACE STABILIZATION).

TEMPORARY DIVERSION CONSTRUCTION SPECIFICATIONS

1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. 2. ENSURE THAT THE MINIMUM CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS. 3. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION

PLUS THE SPECIFIED SETTLEMENT 4. PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE REGRADING AND CI FANOUT

5. VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION, UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS. MAINTENANCE

INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED. REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

MAINTENANCE PLAN:

Gravel Construction Entrance: Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require

periodic topdressing with 2" stone. After each rainfall, inspect any structure used to trap sediment and clean out as necessary. Immediately remove all objectionable materials spilled, washed, or tracked onto public roadways Silt Fence:

Inspect silt fence at least weekly and after each rainfall. Make any required repairs immediately. Should the fabric collapse, tear, decompose, or become ineffective, replace it promptly. Remove sediment deposits when it reaches 0.5' full. Take care to avoid damaging silt fence during cleanout. After the contributing drainage area has been properly stabilized, remove all materials and unstable sediment deposits, bring the area to grade and stabilize it. The engineer may direct that additional silt fencing or erosion control matting be installed at any time prior to final

Stone Opening in Silt Fence:

Inspect inlets at least weekly and after each significant (½ inch or greater) rainfall event. Clear the mesh wire of any debris or other objects to provide adequate flow for subsequent rains. Take care not to damage or undercut the wire mesh during sediment removal. Replace stone as needed

Rip Rap Outlet Protection:

Inspect riprap outlet structures weekly and after significant (1/2 inch or greater) rainfall events to see if any erosion around or below the riprap has taken place, or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

Check Dam:

Check sediment basins after each rainfall. Remove sediment and restore original volume when sediment accumulates to about one-half the design volume. Sediment should be placed above the basin and adequately stabilized. Check the structure for erosion, piping, and rock displacement weekly and after each significant (1/2 inch or greater) rainstorm and repair immediately. Remove the structure and any unstable sediment immediately after the construction site has been permanently stabilized. Smooth the basin site to blend with the surrounding area and stabilize. All water and sediment should be removed from the basin prior to dam removal. Sediment should be placed in designated disposal areas and not allowed to flow into streams or drainage ways during structure removal.

STORM READINESS:

IN THE EVENT OF A FORECASTED WEATHER EVENT, CONTRACTOR SHALL TAKE THE FOLLOWING PRECAUTIONS IN READINESS:

- Contractors should conduct extra inspections to ensure BMPs are in place before they leave site for the day.
- Ensure sites including landfills are properly graded and systems are ready for an influx of water. Ensure containments have enough freeboard to accommodate heavy rains without overflowing
- Once the rain passes, ensure contractors inspect and drain containments as necessary. Inspect sites with land-disturbing activities within 24-hours (if it is safe) and document the inspectior
- If a release is identified, notify your environmental coordinator. Ensure yard sump pumps are operating properly and are capable of handling an influx of storm water. 8. Ensure all loose equipment is properly secured. This should include light plants, port-a-potties, etc.

CHECK DAM CONSTRUCTION SPECIFICATIONS

1. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION. 2. KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.

3. EXTEND STONE AT LEAST L5 FEET BEYOND THE DITCH BANK (FIGURE 6.83B) TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM

4.SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.

5. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION. 6.MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE. 7. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

MAINTENANCE INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFT.ER EACH SIGNIFICANT (1/2 INCH OR GREATER RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED

ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL (PRACTICE 6.31, RIPRAP-LINE AND PAVED CHANNELS).

REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

Porous Baffle Construction Specifications

1. Grade the basin so that the bottom is level front to back and side to side.

2. Install the coir fiber baffles immediately upon excavation of the basins.

3. Install posts across the width of the sedin1ent trap (Practice 6.62, Sediment Fence).

4. Steel posts should be driven to a depth of 24 inches and spaced a maximum of 4 feet apart. The top of the fabric should be a minimum of 6 inches higher than the invert of the spillway. Tops of baffles should be a minimum of 2 inches lower than

the top of the earthen embankment.

5. Install at least three rows of baffles between the inlet and outlet discharge point. Basins less than 20 feet in length may use 2 baffles.

6. Attach a 9 gauge high tension wire strand to the steel posts at a height of 6 inches above the spillway elevation with plastic ties or wire fasteners to prevent sagging. If the temporary sediment basin will be converted to a permanent storm water basin of a greater depth, the baffle height should be based on the pool depth during use as a temporary sediment

7. Extend 9 gauge minimum high tension wire strand to side of basin or install steel T-posts to anchor baffle to side of basin and secure to vertical end posts as shown in Figure 6.6Sb.

8. Drape the coir fiber mat over the wire strand mounted at a height of 6 inches above the spillway elevation. Secure the coir fiber mat to the wire strand with plastic ties or wire fasteners. Anchor the matting to the sides and floor of the basin with 12 inch wire staples, approximately 1 ft. apart, along the bottom and side slopes of the basin.

9. Do not splice the fabric, but use a continuous piece across the basin

10. Adjustments may be required in the stapling requirements to fit individual site conditions.

Maintenance

1. Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately 2. Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective,

replace it promptly.

3. Remove sediment deposits when it reaches half full to provide adequate storage volume for the next rain and to reduce pressure on the baffles.

4. Take care to avoid damaging the baffles during cleanout, and replace if damaged during cleanout operations. Sediment depth should never exceed half the designed storage depth.

5. After the contributing drainage area has been properly stabilized, remove all baffle materials and unstable sediment deposits, bring the area to grade, and stabilize it.

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Skimmer Basin Construction Specifications

material to the designated disposal area. Place temporary sediment control measures below basin as

1. Clear, grub, and strip the area under the embankment of all vegetation and root mat. Remove all surface soil containing high amounts of organic matter and stockpile or dispose of it properly. Haul all objectionable

fill material around the pipe spillway in 4-inch layers and compact it under and around the pipe to at least the same density as the adjacent embankment. Care must be taken not to raise the pipe from the firm contact with its foundation when compacting under the pipe haunches.

dam after the embankment is complete.

Faircloth & Son.).

timbe

Place a minimum depth of 2 feet of compacted backfill over the pipe spillway before crossing it with

5. Assemble the skimmer following the manufacturer's instructions, or as designed.

side of the basin. This will be used to pull the skimmer to the side for maintenance

construction equipment. In no case should the pipe conduit be installed by cutting a trench through the

6. Lay the assembled skimmer on the bottom of the basin on a 4' x 4' stone pad using 3" stone with the

skimmer over the excavated pit or support. Be sure to attach a rope to the skimmer and anchor it to the

achievement of planned elevations, grade, design width, and entrance and exit channel slopes are critical

impermeable geotextile fabric. The fabric must be wide and long enough to cover the bottom and sides and

extend onto the top of the dam for anchoring in a trench. The edges may be secured with 8-inch staples or

pins. The fabric must be long enough to extend down the slope and exit onto stable ground. The width of

the fabric must be one piece, not joined or spliced; otherwise water can get under the fabric. If the length

of the fabric is insufficient for the entire length of the spillway, multiple sections, spanning the complete

width, may be used. The upper section(s) should overlap the lower section(s) so that water cannot flow

8. Inlets-Discharge water into the basin in a manner to prevent erosion. Use temporary slope drains or

diversions with outlet protection to divert sediment- laden water to the upper end of the pool area to

improve basin trap efficiency (References: Runoff Control Measures and Outlet Protection).

9. Erosion control-Construct the structure so that the disturbed area is minimized. Divert surface water

away from bare areas. Complete the embankment before the area is cleared. Stabilize the emergency

spillway embankment and all other disturbed areas above the crest of the principal spillway immediately

11. After all the sediment producing areas have been permanently stabilized, remove the structure and all

1. Inspect skimmer sediment basins at least weekly and after each significant (one-half inch or greater)

rainfall event and repair immediately. Remove sediment and restore the basin to its original dimensions

when sediment accumulates to one-half the height of the first baffle. Pull the skimmer to one side so that

the sediment underneath it can be excavated. Excavate the sediment from the entire basin, not just around

the skimmer or the first cell. Make sure vegetation growing in the bottom of the basin does not hold down

2. Repair the baffles if they are damaged. Re anchor the baffles if water is flowing underneath or around

3. If the skimmer is clogged with trash and there is water in the basin, usually jerking on the rope will make

skimmer over to the side of the basin and remove the debris. Also check the orifice inside the skimmer to

4. If the skimmer arm or barrel pipe is clogged, the orifice can be removed and the obstruction cleared with

5. Check the fabric lined spillway for damage and make any required repairs with fabric that spans the full

width of the spillway. Check the embankment, spillways, and outlet for erosion damage, and inspect the

embankment for piping and settlement. Make all necessary repairs immediately. Remove all trash and

other debris from the skimmer and pool areas. Freezing weather can result in ice forming in the basin.

Precautions should be taken in the winter to prevent plugging with ice.

a plumber's snake or by flushing with water. Be sure and replace the orifice before repositioning the

the skimmer bob up and down and dislodge the debris and restore flow. If this does not work, pull the

the unstable sediment. Smooth the area to blend with the adjoining areas and stabilize properly

after construction (References: Surface Stabilization)

(References: Surface Stabilization).

see if it is clogged; if so remove the debris.

Maintenance

the skimmer.

skimmer.

10. Install porous baffles as specified in Practice 6.65, Porous Baffles.

under the fabric. Secure the upper edge and sides of the fabric in a trench with staples or pins. (Adapted

from "A Manual for Designing, Installing and Maintaining Skimmer Sediment Basins." February, 1999. J.W.

flexible joint at the inlet of the barrel pipe. Attach the flexible joint to the barrel pipe and position the

7. Earthen spillways-Install the spillway in undisturbed soil to the greatest extent possible. The

to the successful operation of the spillway. The spillway should be lined with laminated plastic or

Do not use pervious material such as sand gravel or crushed stope as backfill around the pipe. Place the

excavating a shallow pit under the skimmer or providing a low support under the skimmer of stone or

4. Place the barrel (typically 4-inch Schedule 40 PVC pipe) on a firm, smooth foundation of impervious soil.

3. Shape the basin to the specified dimensions. Prevent the skimming device from settling into the mud by

objectionable material. Place the fill in lifts not to exceed 9 inches, and machine compact it. Over fill the

2. Ensure that fill material for the embankment is free of roots, woody vegetation, organic matter, and other

embankment 6 inches to allow for settlement.



LANDSCAPE NOTES

- 1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUANTITY OF PLANTS SHOWN ON PLAN. ANY DISCREPANCIES BETWEEN QUANTITIES ON PLAN AND PLANT LIST SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND ANY FIELD ADJUSTMENTS OR QUANTITY ADJUSTMENTS MUST BE AUTHORIZED PRIOR TO PLANTING.
- 2. ALL TREES, SHRUBS AND PLANTS SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (ANSI Z60.1
- 3. ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING.
- 4. THE TOP OF ALL ROOT BALLS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE, AS BORN TO PREVIOUS GROWING CONDITIONS.
- 5. ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO BACKFILLING.
- 6. MULCH A MINIMUM 4 FOOT AREA AROUND EACH TREE. MULCH SHALL BE 3-4" THICK.
- 7. LANDSCAPE CONTRACTOR SHALL REMOVE TOP 2/3 WIRE BASKETS, TOP 1/3 OF BURLAP AND ASSOCIATED TWINE AND STRAPPING FROM TREE ROOT BALLS PRIOR TO FINAL ACCEPTANCE OF PLANTS.
- 8. CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITIES LOCATED AND CLEARLY PAINTED WITHIN 10 DAYS OF ANY GROUND DISTURBING ACTIVITY. OWNER WILL NOT PAY FOR UTILITY REPAIRS DUE TO FAILURE TO MARK AND OBSERVE UTILITY LOCATIONS.
- 9. REFER TO NOTES ON C6 FOR TEMPORARY SEEDING SPECIFICATIONS

LEGEND <u>SYMBOL</u>

SOLAR ARRAY PASTURE MIX (CONDITION1)

SOLAR ARRAY PASTURE MIX (CONDITION 2 & 3)

SEEDING CONDITIONS:

- **CONDITION #1 -** INITIAL DRILL OR BROADCAST SEEDING OF ARRAY AREAS
- CONDITION #2 DRILL SEEDING AREAS BETWEEN THE ARRAY PANELS.
- **CONDITION #3 -** BROADCAST SEEDING UNDER ARRAY PANELS.

Solar Array Pasture Mix: Condition #1 & 2

SPECIES UNHULLED BERMUDA GRASS* RATE (lbs/Acre) IMPROVED TALL FESCUE CREEPING RED FESCUE DURANA WHITE CLOVER SIDE OATS GRAMA CENTIPEDE GRASS BROWNTOP MILLET (CAN USE ANNUAL RYE IN LIEU OF MILLET IN FALL/EARLY SPRING) *FROM MAY-AUGUST, HULLED BERMUDA SHOULD BE USED.

Solar Array Pasture Mix: Condition #3

SPECIES	RATE (lbs/Acre)
CREEPING RED FESCUE	45
DURANA WHITE CLOVER	10
DIXIE RESEEDING CRIMSON CLOVER	5

3

			PLANTIN	IG SCHI		·i	
LEGEND	KEY	QTY	BOTANICAL NAME	COMMON NAME	COND	REMARKS	SPREAD
	ILV	9	ILEX x Nellie R Stevens	Nellie Stevens Holly	6' B&B/CONT.	Evergreen	
A A A	VIB	87	Viburnum x awabuki "Chindo"	Chindo Viburnum	24" Cont	Evergreen	
		~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			~~~~~~	$\sim$
<u>د کې </u>	MG	38	Magnolia grandiflora 'Little Gem'	Little Gem Magnolia	6' B&B/cont	Evergreen	
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SC	ALE:	1"=	100'
0	50'	1(	20'

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Q10	BASIN	VOLUME BASIN SURFACE AREA C		CLEANOUT		_		-		SKIMMER						
	REQ'D	PROV.	REQ'D	PROV.	DEPTH	(FEET) (FEET) (FEET) (FEET) (FEET) OF		H Z L T W SKIMMER SKIMMER ORIFICE		ORIFICE	BOTTOM	IOM BASIN TOP				
CFS)	(CF)	(CF)	(SF)	(SF)	H/2	<b>、</b>	<b>、</b> ,			<b>( )</b>	DIAMETER	DIAMETER	ELEVATION		E	
6.65	8,568	9,011	5,411	6,517	0.75	1.50	4.00	20.00	2.00	5.00	4.00	2.75	205.00	209.00		
9.17	9,864	12,011	6,230	13,437	0.63	1.25	4.00	20.00	2.25	5.00	4.00	3.00	204.00	208.00		

					DITINUELO										
ASIN NO.	RISER DIAMETER	BARREL DIAMETER	SKIMMER DIAMETER	SKIMMER ORIFICE	BARREL SLOPE	D	S	Н	Y	z	SEDIMENT STORAGE REQUIRED (CUFT.)	ELEV. A	ELEV. B	ANTI-SEEP COLLAR	SPILLWAY WIDTH
3	42"	30"	6"	5"	0.5%	12"	5.5'x5.5'	4.80'	5.80'	3.80'	22,194	184.00	189.90	5.5'X5.5'	NA
4	42"	30"	6"	4"	0.5%	12"	5.5'x5.5'	2.66'	3.66'	1.75'	16,722	186.00	189.66	5.5'X5.5'	NA

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA

STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE BEING CONSTRUCTED. ALL SPILLWAYS SHOULD BE LINED WITH FABRIC OR RIP-RAP. EMBANKMENT SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY AT +-2% OPTIMUM MOISTURE CONTENT. IF UNABLE TO GET COMPACTION AROUND OUTLET PIPE, BACKFILL AROUND PIPE UP TO THE HAUNCH WITH FLOWABLE

3. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA IN SUCH A MANNER

5. CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.

PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE BASIN SHOULD ALSO BE ORIENTED SUCH THAT THE FILTER

UNDISTURBED AREAS IN DRAINAGE BASIN ARE TAKEN AROUND OR THROUGH THE DENUDED AREA BY NON EROSIVE MEASURE THEN BASINS MAY BE SEIZED BY DENLIDED ACRES. RECOMMENDED STORAGE IS 1800 CUBIC FEET OF STORAGE PER ACRE OF DRAINAGE

11. WHENEVER TOPOGRAPHY ALLOWS, THE BASIN LENGTH SHOULD BE TWICE (2X) THE BASIN WIDTH, TO ALLOW FOR SETTLING.

14. FOR SLOPES GREATER THAN 10' IN LENGTH AND PROTECTED BY SILT FENCE AT THE TOE OF THE SLOPE, SLOPE TERRACING WILL

15. THE BERM ON SEDIMENT BASINS SHALL BE SEEDED ONCE FINAL GRADE HAS BEEN REACHED. THE SILT FENCE MAY BE REMOVED IF PERMISSION HAS BEEN GRANTED BY THE NCDENR LAND QUALITY INSPECTOR AFTER THE GRASS HAS GERMINATED AND STABLE

16. WASHED STONE AND WIRE BACKING SHALL BE USED WITH SILT FENCE WHENEVER SILT FENCE IS PLACED AT THE TOE OF A

- RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIP-RAPPED SHALL BE UNDERCUT SO THAT THE
- PLACING EITHER LOOSE OR COMPACTED FILL IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.

OUTLET	CFS	PIPE DIA. "Do"	APRON LENGTH "L"	WIDTH @ FES "3Do"	APRON DEPTH "D"	STONE AVG.	E SIZE: MAX.
FES#2	59.77	3'	20'	9'	18"	8"	12"
FES#4	3.9	1.25'	9'	3.75'	12"	6"	8"
DC-1	29.45	2.5'	16'	7.5'	12"	6"	8"
DC-2	9.0	2.0'	12'	6'	12"	6"	8"

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	3	DRB COM. 01.16.19				
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SIGHT DISTANCE (ft) PER 10 M	PH OF ARTE	RIAL DESIC	<b>JN SPEED</b> SINC		
Design Vehicle Crossing the Arterial Two Four Six					
	Lanes	Lanes	Lanes		
Passenger Vehicle	100	120	130		
Single Unit Truck	130	150	170		
WB-50 Tractor Trailer	170	200	210		

HC-27 PPON HC-27 Pleming Road	GREENGO ENERGY US, INC. 1447 S. TRYON STREET SUITE 201 CHARLOTTE, NC 28203 +1 (866) 877-0778			
N.T.S.	♦ Descrimeter Pointe Parkway, Suite 350 Charlotte, NC 28208 www.benesch.com P 704.521.9880			
	Corp. I	NC license: F-1320		
	PHOTOVOLTAIC POWER PLANT - 4,560 kWac / 6,156 kWdc	2250-003 ENNIS SOLAR, LLC 447 SHERIFF JOHNSON ROAD LILLINGTON, NC 27546 ISSUED FOR CONSTRUCTION		
	1 2 3	ISSUE IFC 12.09.18 NCDOT 12.15.18 DRB COM. 01.16.19		
ENT OF ALL BARRICADES, SURE THE SAFETY OF WORKERS CCORDING TO NORTH CAROLINA T = 30'	PROJ # DRWN CHKD SCALE DATE DATE	#     2250-003       HKG     US/GG       US/GG     AS SHOWN       11/08/2018       /EWAY PERMIT       EXHIBIT		
5' 30' 60'	C10			



VICINITY MAP

1. CONTRACTOR IS RESPONSIBLE FOR PLACEME SIGNAGE, FLAGGERS, SHORING, ETC., TO ENS AND THE PUBLIC.

2. ALL PAVEMENT CUTS SHALL BE REPLACED ACC DEPARTMENT OF TRANSPORTATION

SCALE 0 15