

- NOTES
- ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
 - CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED GRADING/LAND DISTURBANCE AND DRIVEWAY PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
 - ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
 - CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES CALLED OUT TO REMAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
 - EROSION CONTROL IS FIELD PERFORMANCE BASED AND CONTRACTOR SHALL INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES NECESSARY TO ASSURE MAXIMUM PROTECTION OF THE SITE DURING DEMOLITION AND CLEARING.
 - CONTRACTOR TO COORDINATE TIMING OF DEMOLITION AND CONSTRUCTION WITH OWNER TO ENSURE EXISTING FACILITIES REMAIN ACCESSIBLE.
 - ALL DEBRIS, STRUCTURES AND UTILITIES TO BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE ARE NOT SHOWN ON THIS PLAN. ANY ADDITIONAL DEBRIS, STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER SHOULD BE DEMOLISHED AND REMOVED, SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS.



168 PATTON AVENUE
ASHEVILLE, NC 28801
PHONE (828) 456-8647
FAX (828) 252-5388

52 WALNUT STREET - SUITE 9
WAYNESVILLE, NC 28786
PHONE (828) 456-8647
FAX (828) 252-5388

Civil Design Concepts, P.A.
www.civildesignconcepts.com

NCBELS LICENSE # C-2194

NO.	DATE	DESCRIPTION	BY
1	08/17/2022	DESIGN DEVELOPMENT	EJM
2	09/16/2022	ISSUED FOR BID	EJM

EXISTING CONDITIONS & DEMO FOR:

RICHLAND CREEK GREENWAY

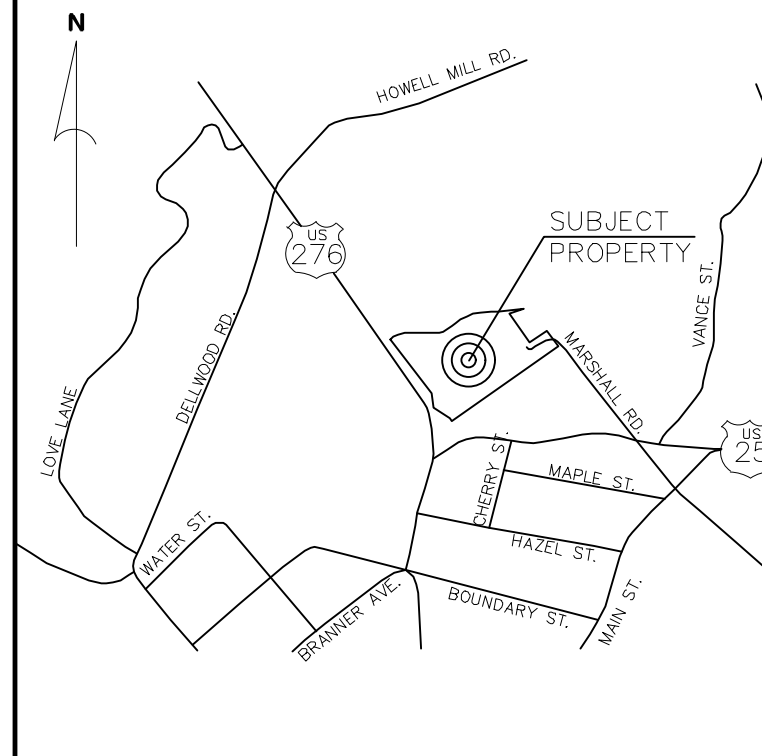
TOWN OF WAYNESVILLE - TOWN OF WAYNESVILLE, NORTH CAROLINA

DRAWN BY: DMS
CDC PROJECT NO.: 22213
NCDEO NO.: HAYWO-2021-002

SHEET

C100

- NOTES
1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
 2. SINGLE-PHASE CONSTRUCTION.
 3. ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
 4. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
 5. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES (SHOWN TO REMAIN) AND NEWLY COMPLETED WORK DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
 6. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
 7. SIDEWALKS SHALL BE CONSTRUCTED IN ORDER TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES. A MAXIMUM OF 5% SIDEWALK/CROSSWALK LONGITUDINAL SLOPE IS PERMITTED. A MAXIMUM OF 1/4" PER FOOT SIDEWALK/CROSSWALK CROSS SLOPE IS PERMITTED. ANY SIDEWALK/CROSSWALK INSTALLED WITH A STEEPER SLOPE SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.
 8. ALL RADII LISTED ARE FROM FACE OF CURB UNLESS OTHERWISE NOTED. ALL PARKING LOT RADII ARE 3' UNLESS OTHERWISE NOTED.
 9. ALL ROAD/PARKING LOT IMPROVEMENTS, STRIPING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE (MUTCD). CONTRACTOR MAY USE A PAINT SUITABLE FOR ASPHALT APPLICATION IN LIEU OF THERMOPLASTIC WITH PRIOR APPROVAL FROM THE ENGINEER.
 10. CURB END TREATMENT TO BE APPLIED TO ALL CURB ENDS. REFER TO CURB END TREATMENT DETAIL.



VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

OWNER/DEVELOPER: TOWN OF WAYNESVILLE
9 SOUTH MAIN STREET SUITE 110
WAYNESVILLE, NC 28786
ELIZABETH TEAGUE
(828) 456-8647

CIVIL ENGINEER: CIVIL DESIGN CONCEPTS, P.A.
168 PATTON AVENUE
ASHEVILLE, NC 28801
GREGORY HOFFMAN, P.E.
(828) 252-5388

CONTACT: GREGORY HOFFMAN, P.E.
(828) 252-5388

SURVEYOR: OWENS SURVEYING
19 FORGA PLAZA LOOP
WAYNESVILLE, NC 28786
RICHARD M. OWENS JR. P.L.S.
(828)456-9500

CONTACT: RICHARD M. OWENS JR. P.L.S.
(828)456-9500

PROJECT DATA

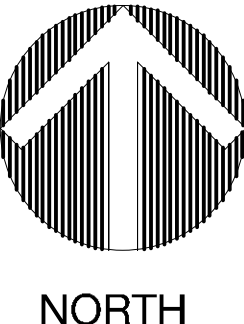
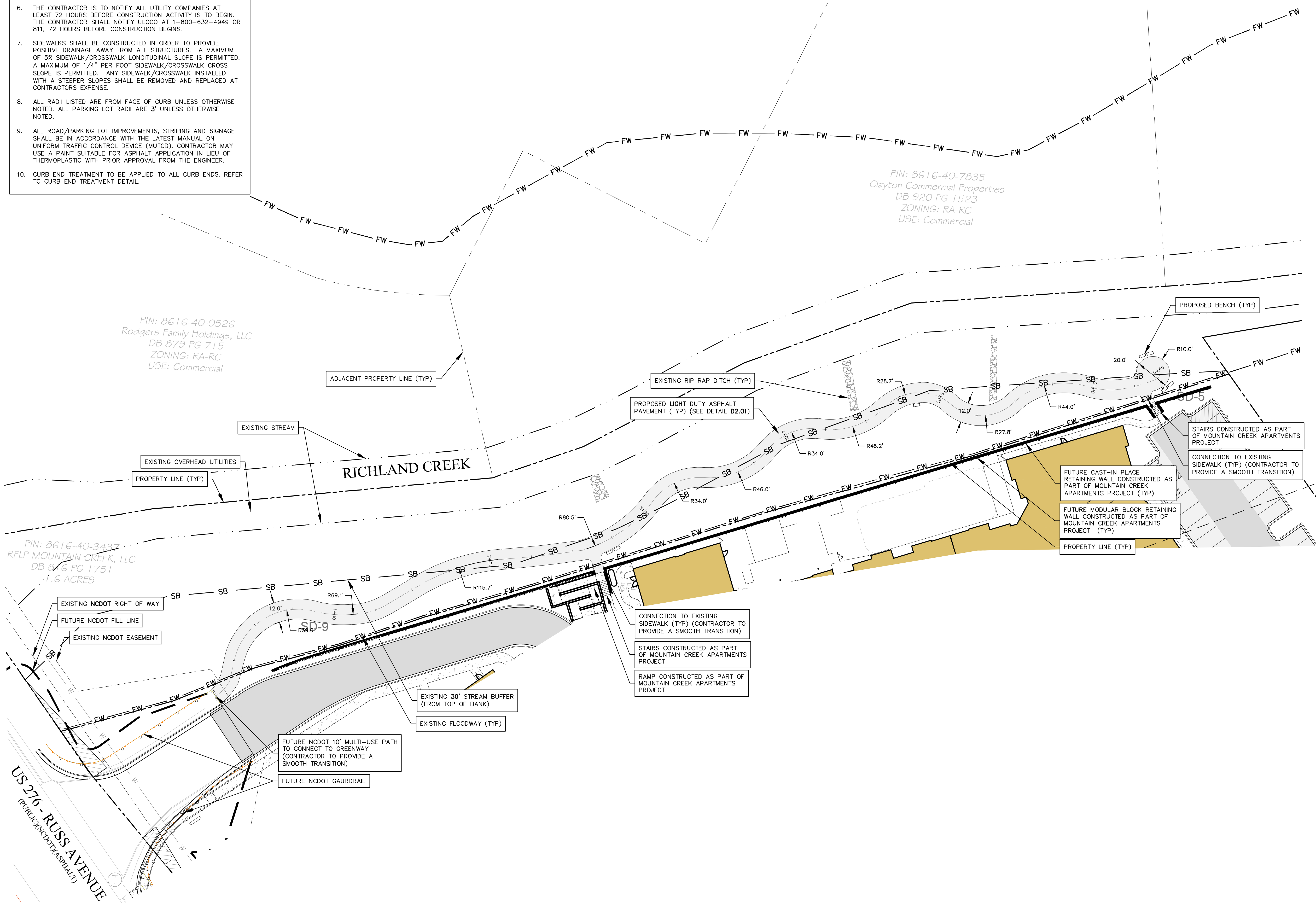
PIN: 8616-40-3447
ADDRESS: 366 RUSS AVENUE
DEED BOOK/PAGE: 1045/900
SITE ACREAGE: 1.56 ACRES
ZONING: RA-RC-CD (CONDITIONAL DISTRICT)

LATITUDE: 35.4990
LONGITUDE: -82.9856

DENSITY SUMMARY:
DISTURBED AREA: .31 AC

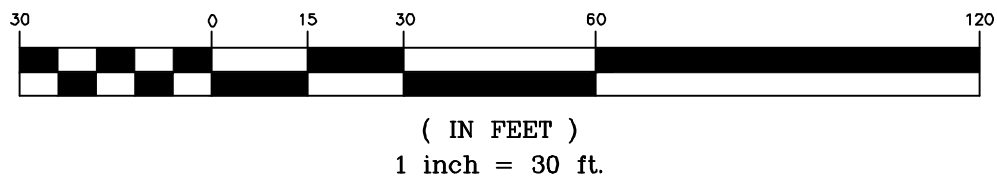
BUILDING DATA:
IMPERVIOUS CALCULATIONS:
PRE-DEVELOPMENT 0 ACRES (0%)
POST-DEVELOPMENT .18 ACRES (12%)

PERVIOUS:
1.56 ACRES (100%)
1.38 ACRES (88%)

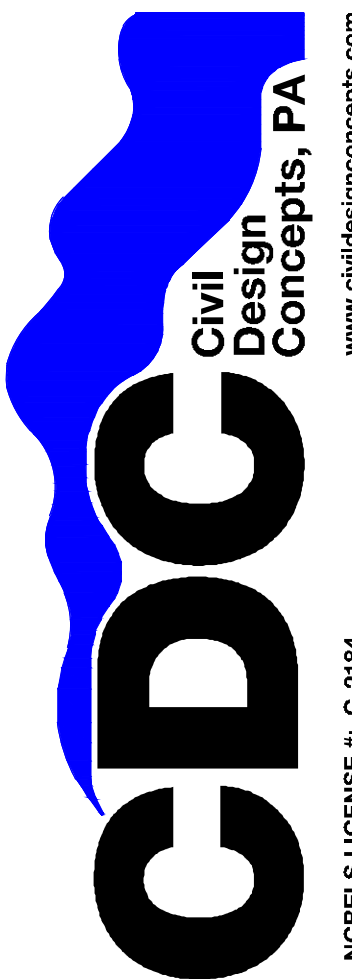


SITE PLAN

GRAPHIC SCALE

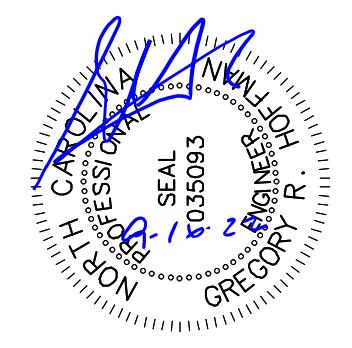


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NCBELS LICENSE # C-2194

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1	08/17/2022	DESIGN DEVELOPMENT	EJM
2	09/16/2022	ISSUED FOR BID	EJM



RICHLAND CREEK GREENWAY

SITE PLAN FOR:

DRAWN BY: DMS
CDC PROJECT NO.: 22213
NCDEO NO.: HAYWO-2021-002

SHEET

C200

NOTES

1. SEE GRADING, EROSION CONTROL, AND STORM DRAINAGE DETAIL SHEETS FOR ALL GENERAL NOTES, CONTRACTOR RESPONSIBLE FOR INCLUSION OF DETAILS SHEETS WITH ALL PLANS.
2. THIS PROJECT LIES WITHIN THE 100-YR FEMA FLOODPLAIN.
3. SOIL TYPE: UFA.
4. RETAINING WALLS:

ALL RETAINING WALL ELEVATIONS SHOWN ARE FROM TOP OF WALL TO EXISTING GRADE ELEVATION. CONTRACTOR TO ACCOUNT FOR FOOTER/COVER OVER FOOTER. REFER TO WALL DESIGN FOR FOOTER DESIGN. WALL DESIGN TO ALSO ACCOMMODATE STORM PIPE PENETRATIONS PER PLANS.

WALL DESIGN TO INCLUDE FOOTING DRAIN AND MINIMUM WIDTH OF 12" OF #57 WASHED STONE BEHIND WALL FROM BOTTOM TO TOP OF WALL.

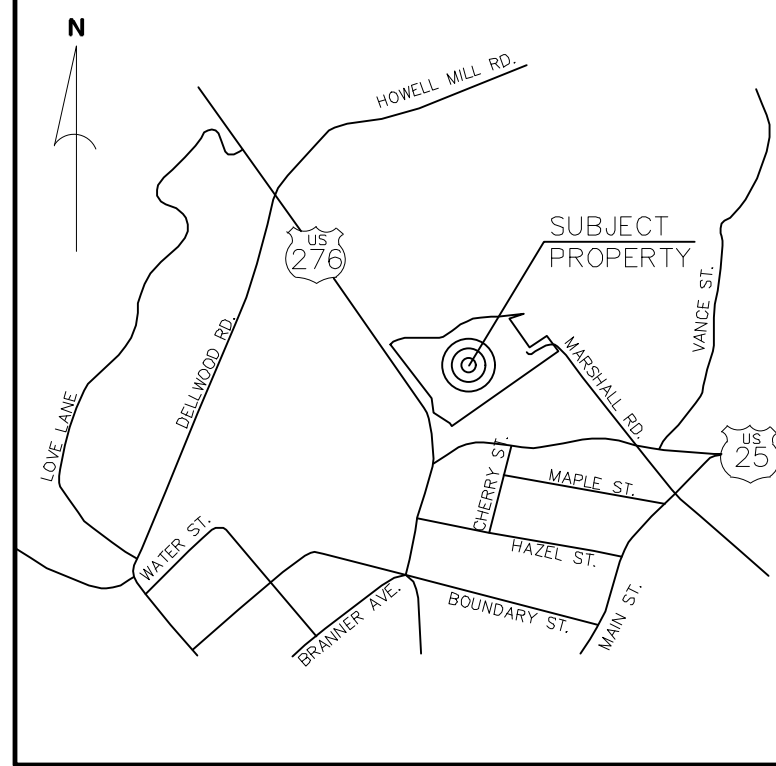
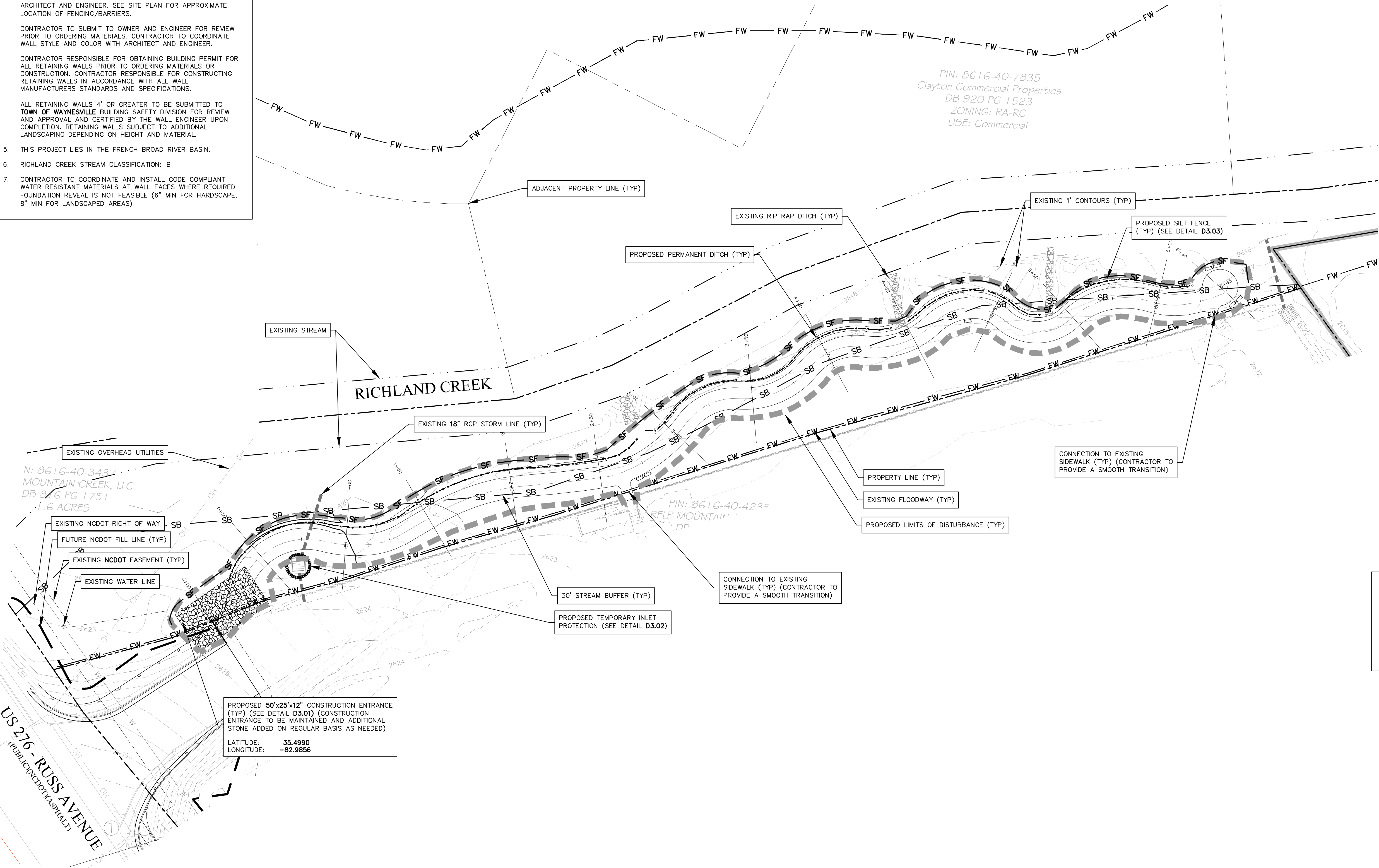
ALL RETAINING WALLS PROVIDING A CHANGE OF GRADE OF 30" OR MORE SHALL BE PROTECTED WITH A GUARDRAIL. THE GUARDRAIL SHALL BE 42" MINIMUM IN HEIGHT, AND PREVENT THE PASSAGE OF A 4" SPHERE UNLESS ADJACENT TO A WALKING SURFACE. COORDINATE BARRIER STYLE AND COLOR WITH ARCHITECT AND ENGINEER. SEE SITE PLAN FOR APPROXIMATE LOCATION OF FENCING/BARRIERS.

CONTRACTOR TO SUBMIT TO OWNER AND ENGINEER FOR REVIEW PRIOR TO ORDERING MATERIALS. CONTRACTOR TO COORDINATE WALL STYLE AND COLOR WITH ARCHITECT AND ENGINEER.

CONTRACTOR RESPONSIBLE FOR OBTAINING BUILDING PERMIT FOR ALL RETAINING WALLS PRIOR TO ORDERING MATERIALS OR CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR CONSTRUCTING RETAINING WALLS IN ACCORDANCE WITH ALL WALL MANUFACTURERS STANDARDS AND SPECIFICATIONS.

ALL RETAINING WALLS 4' OR GREATER TO BE SUBMITTED TO TOWN OF WAYNESVILLE BUILDING SAFETY DIVISION FOR REVIEW AND APPROVAL AND CERTIFIED BY THE WALL ENGINEER UPON COMPLETION. RETAINING WALLS SUBJECT TO ADDITIONAL LANDSCAPING DEPENDING ON HEIGHT AND MATERIAL.

5. THIS PROJECT LIES IN THE FRENCH BROAD RIVER BASIN.
6. RICHLAND CREEK STREAM CLASSIFICATION: B
7. CONTRACTOR TO COORDINATE AND INSTALL CODE COMPLIANT WATER RESISTANT MATERIALS AT WALL FACES WHERE REQUIRED FOUNDATION REVEAL IS NOT FEASIBLE (6" MIN FOR HARDSCAPE, 8" MIN FOR LANDSCAPED AREAS)



VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

OWNER/DEVELOPER: TOWN OF WAYNESVILLE
9 SOUTH MAIN STREET SUITE 110
WAYNESVILLE, NC 28786
CONTACT: ELIZABETH TEAGUE
(828) 456-8647

CIVIL ENGINEER: CIVIL DESIGN CONCEPTS, P.A.
168 PATTON AVENUE
ASHEVILLE, NC 28801
CONTACT: GREGORY HOFFMAN, P.E.
(828) 252-5388

SURVEYOR: OWENS SURVEYING
19 FORGA PLAZA LOOP
WAYNESVILLE, NC 28786
CONTACT: RICHARD M. OWENS JR. P.L.S.
(828)456-9500

PROJECT DATA

PIN: 8616-40-3447
ADDRESS: 366 RUSS AVENUE
DEED BOOK/PAGE: 1045/900
SITE ACREAGE: 1.56 ACRES
ZONING: RA-RC-CD (CONDITIONAL DISTRICT)

LATITUDE: 35.4990
LONGITUDE: -82.9856

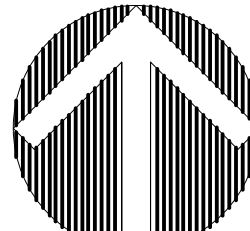
DENSITY SUMMARY:
DISTURBED AREA: .31 AC

BUILDING DATA:
IMPERVIOUS CALCULATIONS:
PRE-DEVELOPMENT 0 ACRES (0%)
POST-DEVELOPMENT .18 ACRES (12%)

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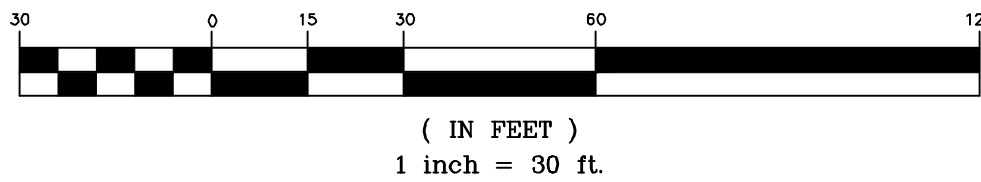
ROUGH GRADING & EROSION CONTROL LEGEND

LIMITS OF DISTURBANCE
SILT FENCE
EXISTING CONTOURS
STONE INLET PROTECTION

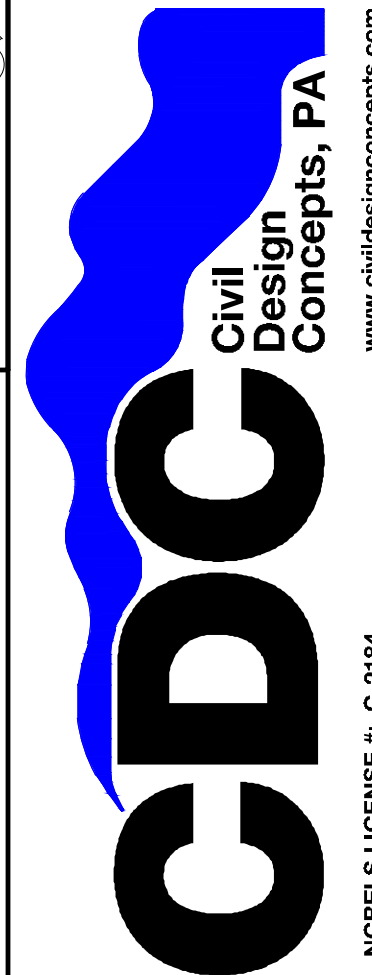


NORTH

GRADING, STORM & EROSION
CONTROL
GRAPHIC SCALE



168 PATTON AVENUE
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1	08/17/2022	DESIGN DEVELOPMENT	EJM
2	09/16/2022	ISSUED FOR BID	EJM



RICHLAND CREEK GREENWAY

GRADING AND EROSION CONTROL FOR

TOWN OF WAYNESVILLE - TOWN OF WAYNESVILLE, NORTH CAROLINA

DRAWN BY: DMS
CDC PROJECT NO.: 22213
NCDEQ NO.: HAYWO-2021-002

SHEET

C300

NOTES

- SEE GRADING, EROSION CONTROL, AND STORM DRAINAGE DETAIL SHEETS FOR ALL GENERAL NOTES, CONTRACTOR RESPONSIBLE FOR INCLUSION OF DETAILS SHEETS WITH ALL PLANS.
- THIS PROJECT LIES WITHIN THE 100-YR FEMA FLOODPLAIN.
- SOIL TYPE: UFA.**
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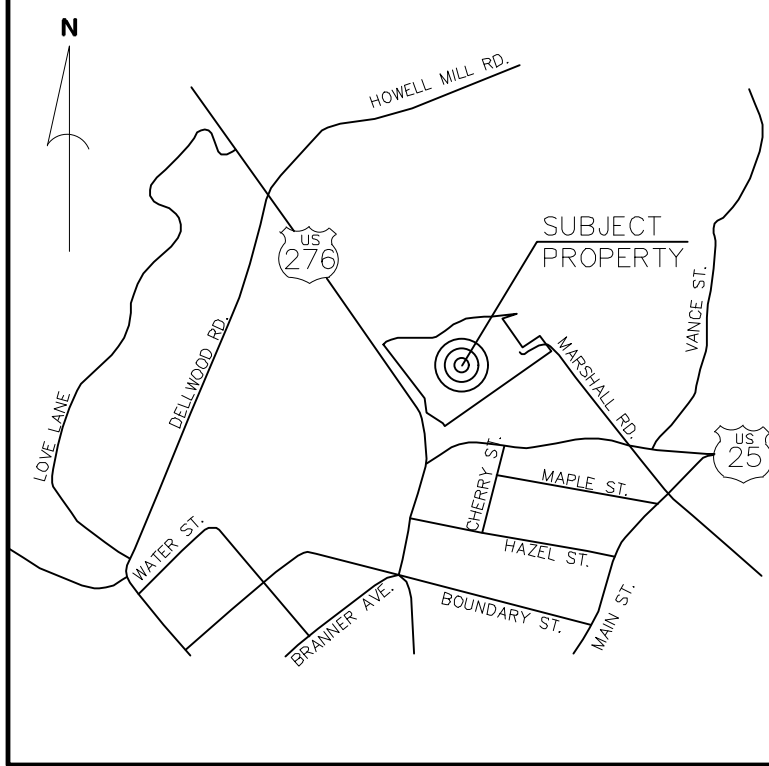
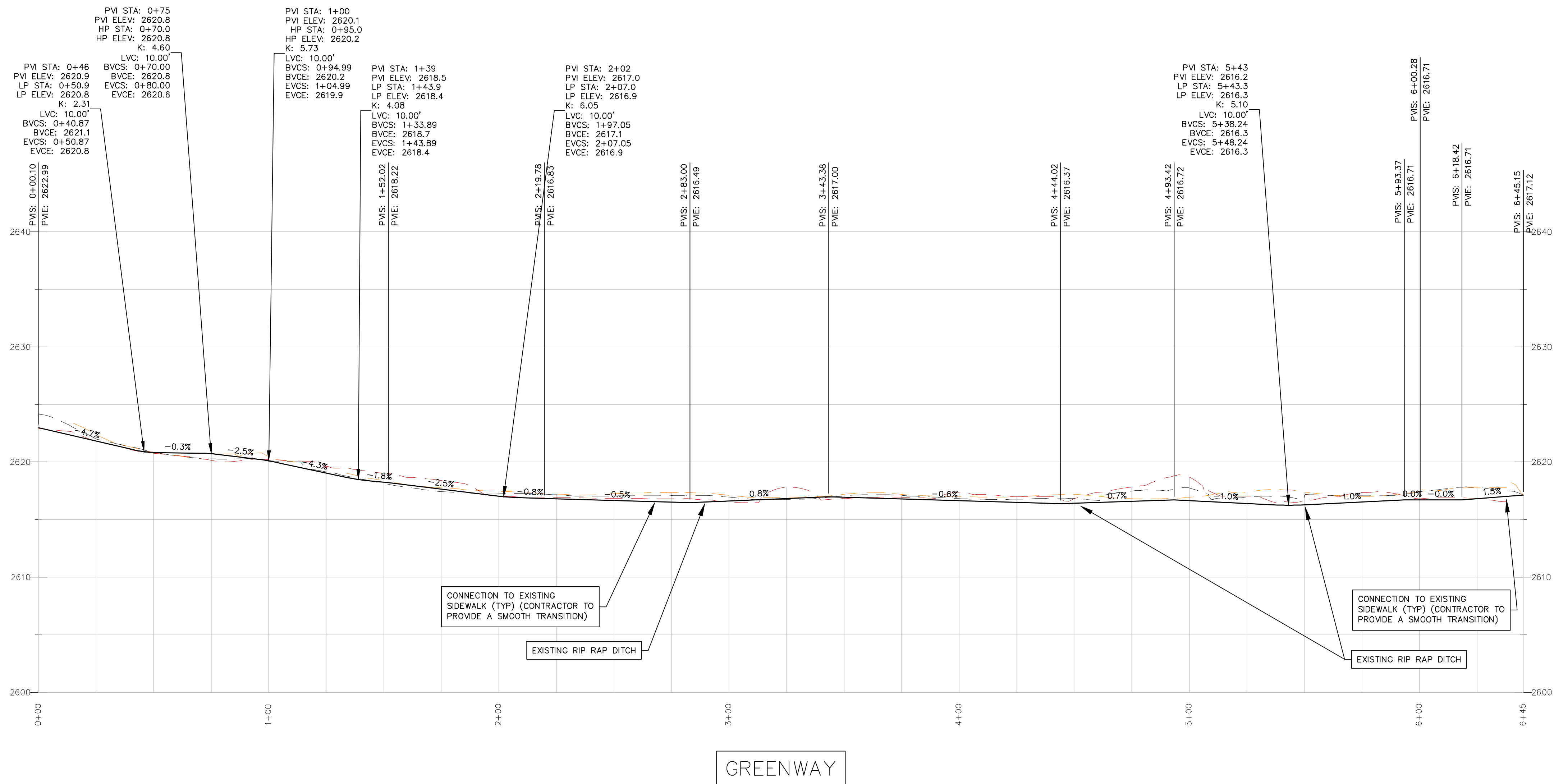
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- THIS PROJECT LIES IN THE FRENCH BROAD RIVER BASIN.
- RICHLAND CREEK STREAM CLASSIFICATION: B
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VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

OWNER/DEVELOPER: TOWN OF WAYNESVILLE
9 SOUTH MAIN STREET SUITE 110
WAYNESVILLE, NC 28786
ELIZABETH TEAGUE
(828) 456-8647

CONTACT:

CIVIL ENGINEER: CIVIL DESIGN CONCEPTS, P.A.
168 PATTON AVENUE
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SURVEYOR: OWENS SURVEYING
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CONTACT:

PROJECT DATA

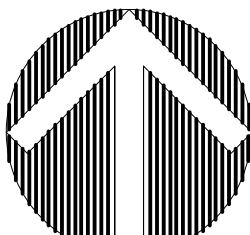
PIN: 8616-40-3447
ADDRESS: 366 RUSS AVENUE
DEED BOOK/PAGE: 1045/900
SITE ACREAGE: 1.56 ACRES
ZONING: RA-RC-CD (CONDITIONAL DISTRICT)

LATITUDE: 35.4990
LONGITUDE: -82.9856

DENSITY SUMMARY:
DISTURBED AREA: .31 AC

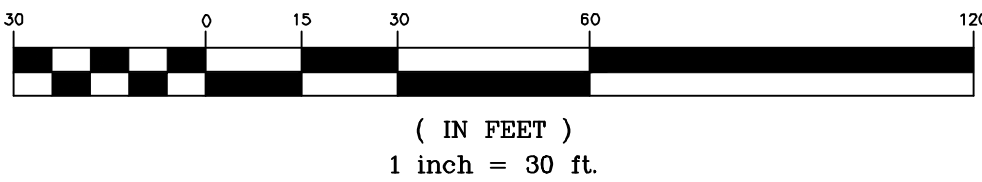
BUILDING DATA:
IMPERVIOUS CALCULATIONS:
PRE-DEVELOPMENT IMPERVIOUS: 0 ACRES (0%)
POST-DEVELOPMENT IMPERVIOUS: .18 ACRES (12%)
PERVIOUS: 1.56 ACRES (100%)
PERVIOUS: 1.38 ACRES (88%)

ROUGH GRADING & EROSION CONTROL LEGEND	
LIMITS OF DISTURBANCE	▬▬▬▬▬▬
SILT FENCE	— SF —
EXISTING CONTOURS	- - - - -
STONE INLET PROTECTION	○



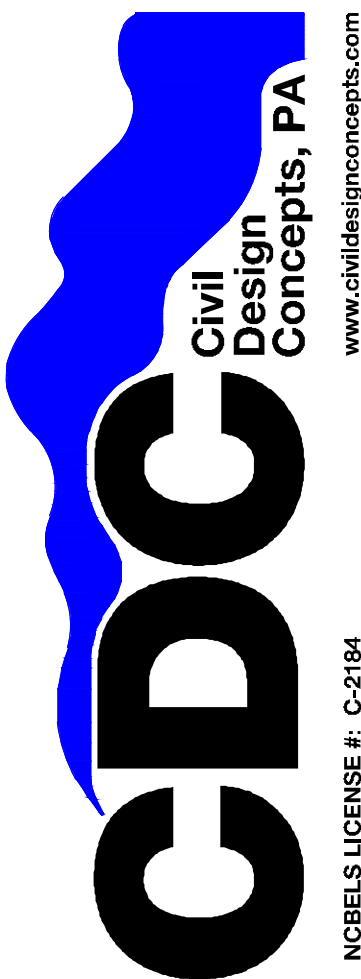
GREENWAY PROFILE

GRAPHIC SCALE



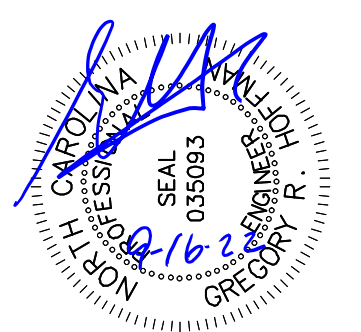
168 PATTON AVENUE
ASHEVILLE, NC 28801
PHONE (828) 252-5388
FAX (828) 252-5388

52 WALNUT STREET - SUITE 9
WAYNESVILLE, NC 28786
PHONE (828) 452-4410
FAX (828) 452-4410



NCBELS LICENSE #: C-2194

NO.	DATE	DESCRIPTION	BY
1	08/17/2022	DESIGN DEVELOPMENT	EJM
2	09/16/2022	ISSUED FOR BID	EJM



GREENWAY PROFILE FOR:

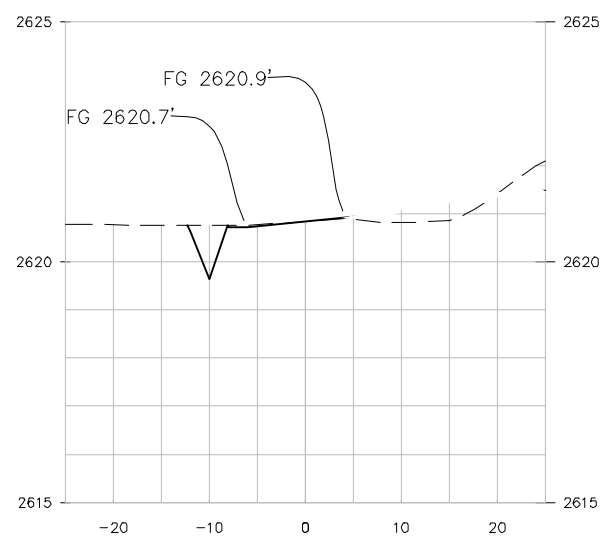
RICHLAND CREEK GREENWAY

TOWN OF WAYNESVILLE - TOWN OF WAYNESVILLE, NORTH CAROLINA

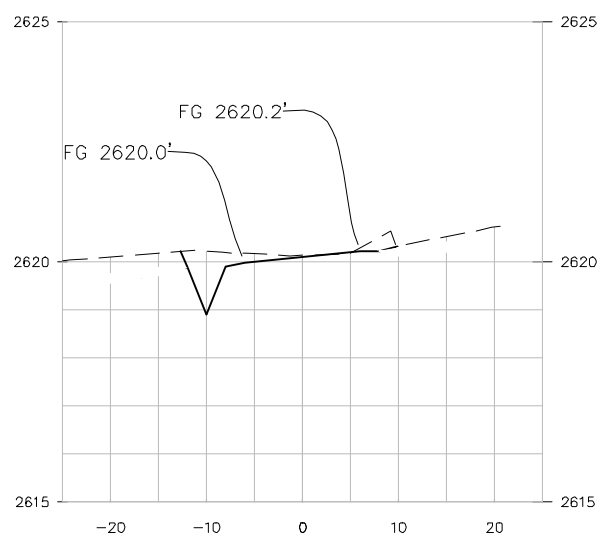
DRAWN BY: DMS
CDC PROJECT NO.: 22213
NCDEO NO.: HAYWO-2021-002

SHEET

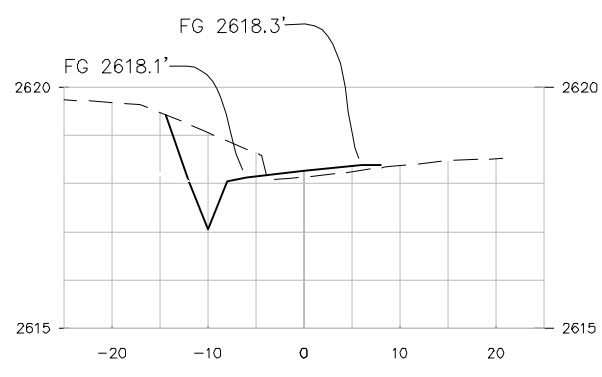
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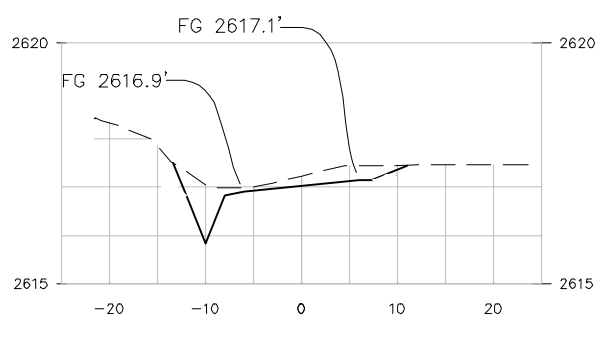
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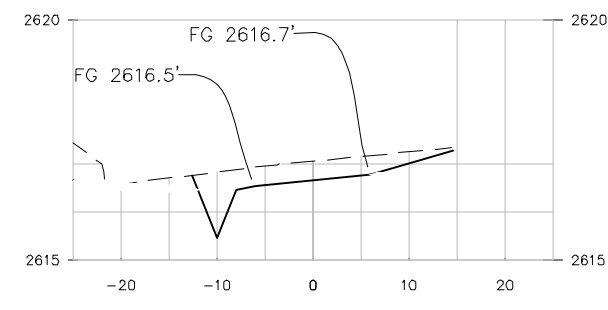
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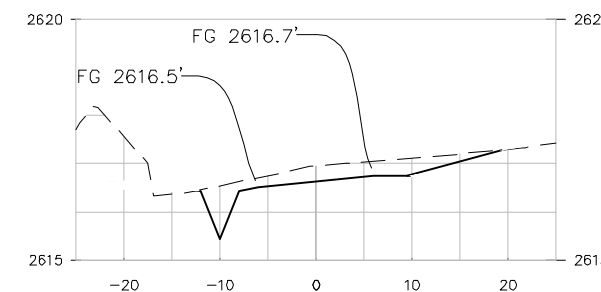
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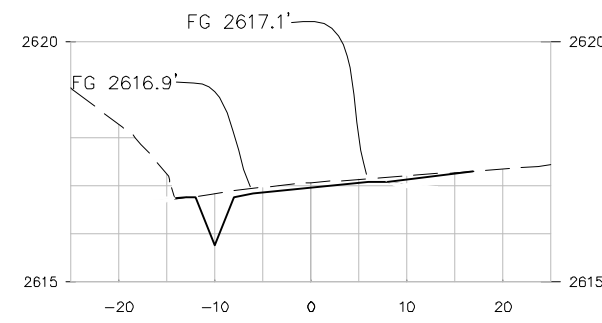
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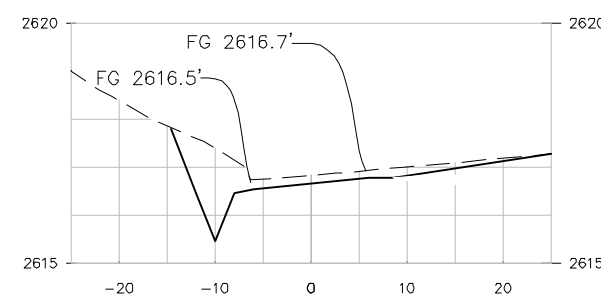
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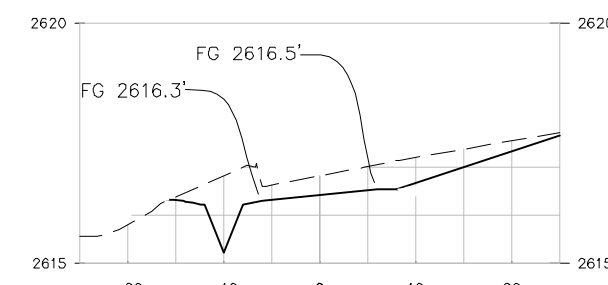
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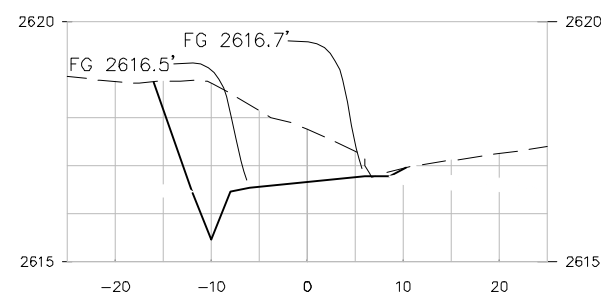
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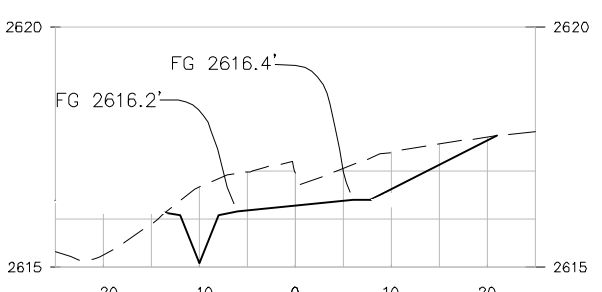
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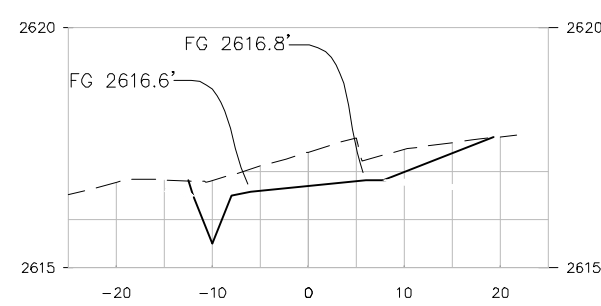
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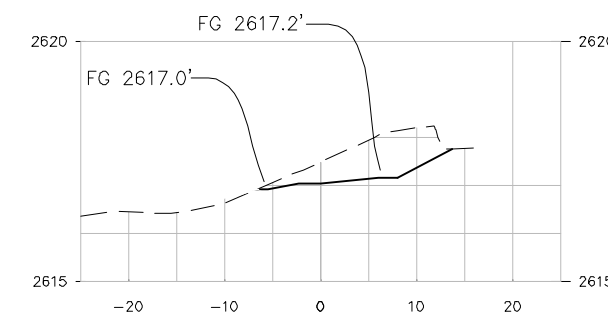
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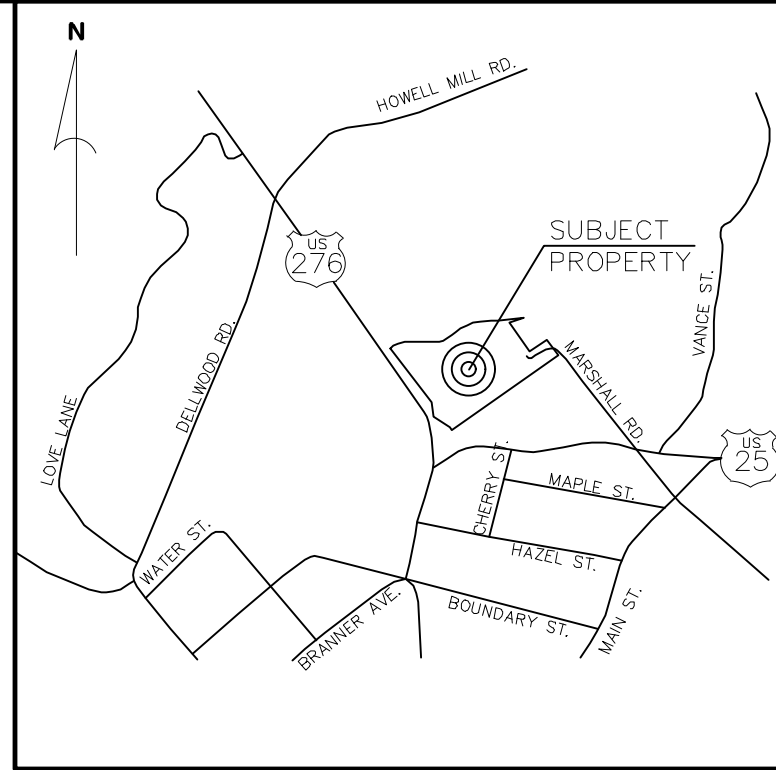
STA 5+50



STA 6+00



STA 6+40



VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

OWNER/DEVELOPER: TOWN OF WAYNESVILLE
9 SOUTH MAIN STREET SUITE 110
WAYNESVILLE, NC 28786
CONTACT: ELIZABETH TEAGUE
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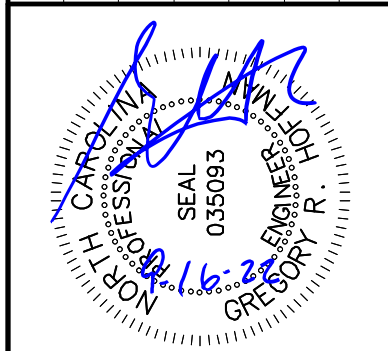
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IMPERVIOUS CALCULATIONS:
PRE-DEVELOPMENT 0 ACRES (0%)
POST-DEVELOPMENT .18 ACRES (12%)
IMPERVIOUS 1.56 ACRES (100%)
PERVIOUS 1.38 ACRES (88%)

168 PATTON AVENUE
ASHEVILLE, NC 28801
PHONE (828) 456-8647
FAX (828) 252-5388

52 WALNUT STREET - SUITE 9
WAYNESVILLE, NC 28786
PHONE (828) 456-4410
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CDC Civil Design Concepts, PA
www.civildesignconcepts.com
NCBELS LICENSE #: C-2194

NO.	DATE	DESCRIPTION	BY
1	08/17/2022	DESIGN DEVELOPMENT	EJM
2	09/16/2022	ISSUED FOR BID	EJM



GREENWAY CROSS SECTIONS FOR:

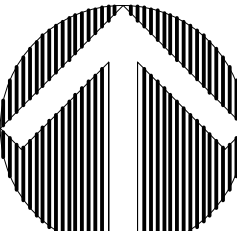
RICHLAND CREEK GREENWAY

TOWN OF WAYNESVILLE - TOWN OF WAYNESVILLE, NORTH CAROLINA

DRAWN BY: DMS/
CDC PROJECT NO.: 22213
NCDEQ NO.: HAYWO-2021-002

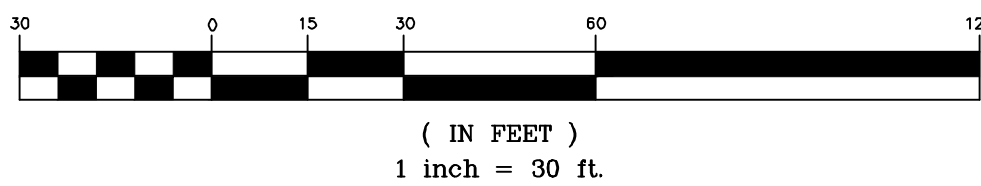
SHEET

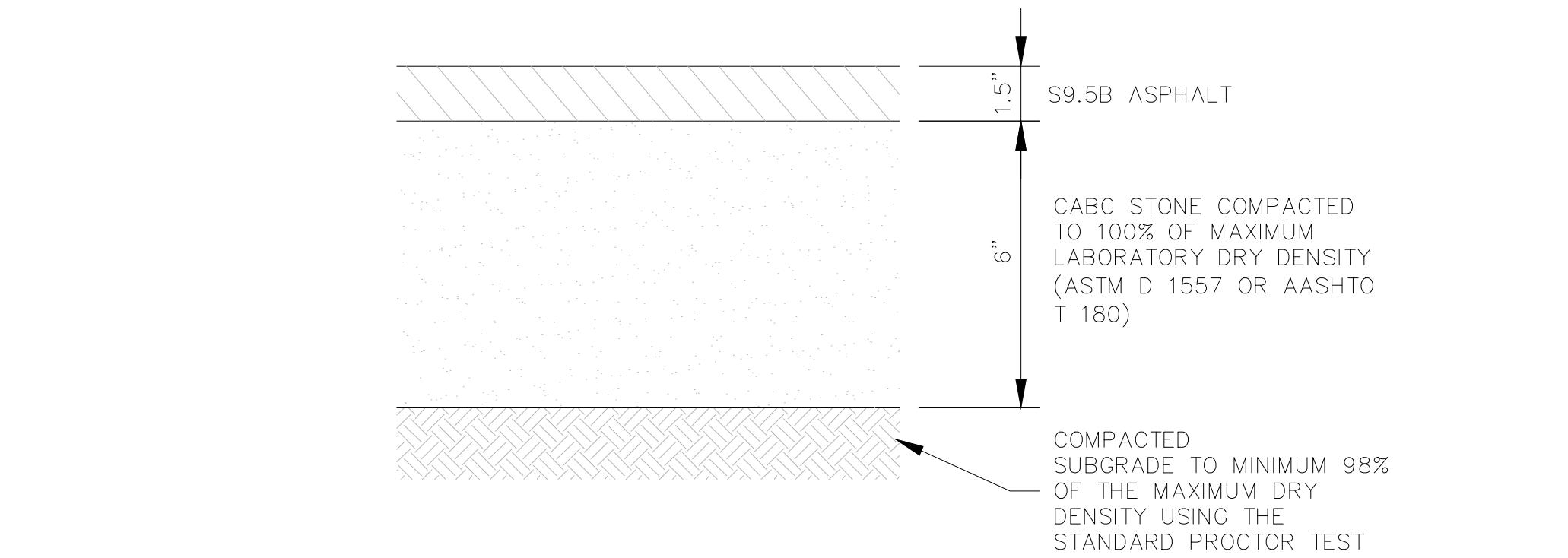
C302



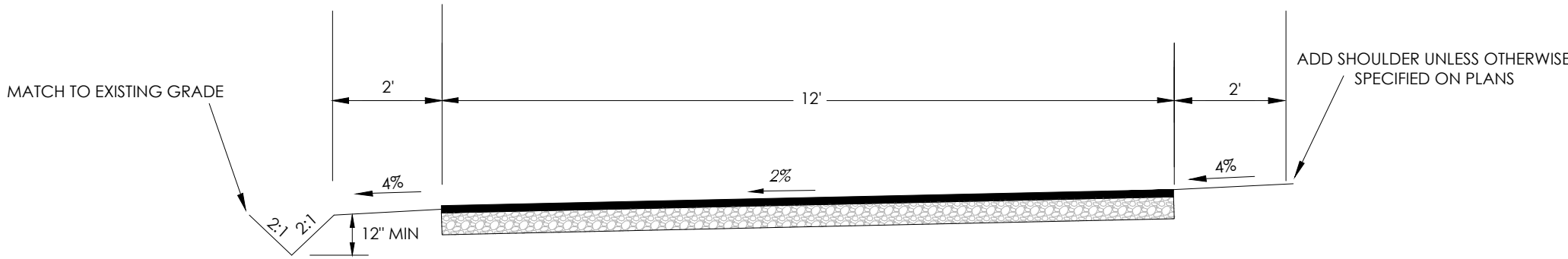
GREENWAY CROSS SECTIONS

GRAPHIC SCALE



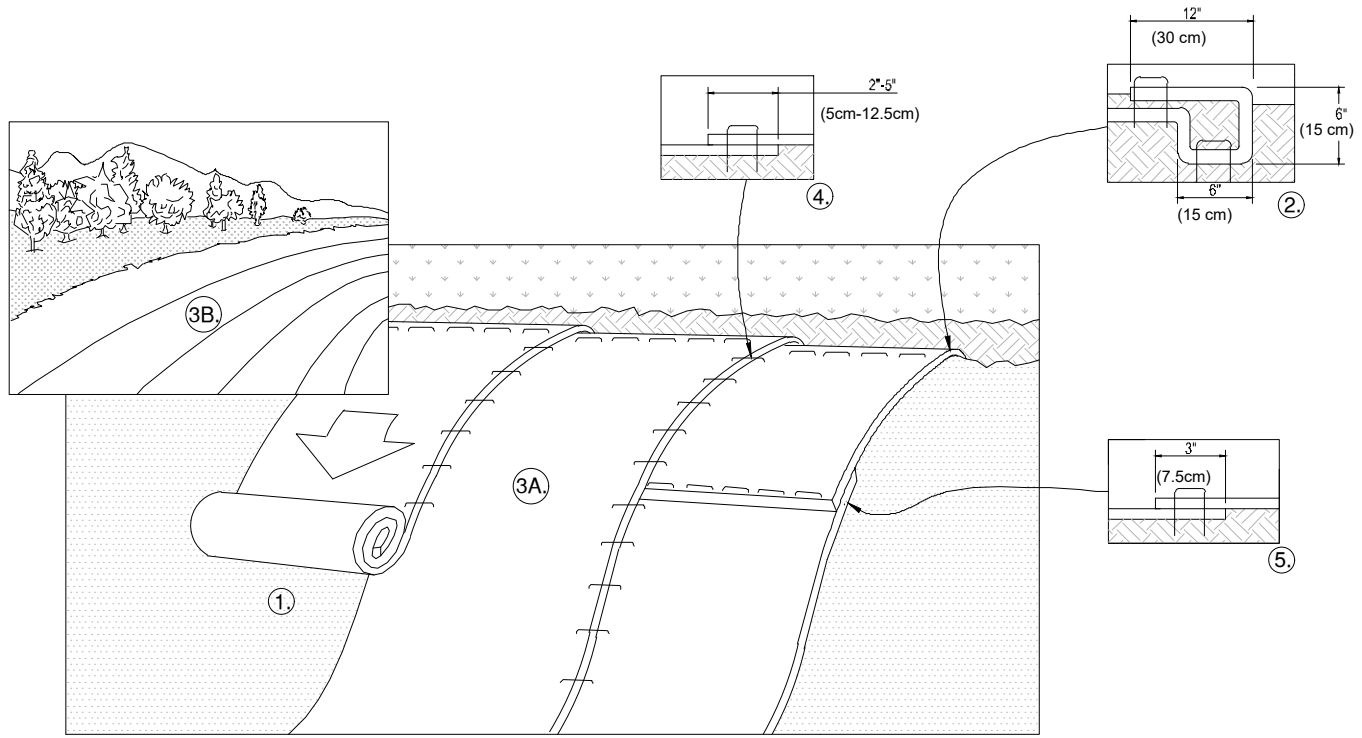


D2.01 TYPICAL LIGHT DUTY ASPHALT GREENWAY CROSS SECTION
NOT TO SCALE



D2.02 TYPICAL SUPER ELEVATED ROAD SECTION WITH DITCH
ON ONE SIDE
NOT TO SCALE

SITE DETAILS

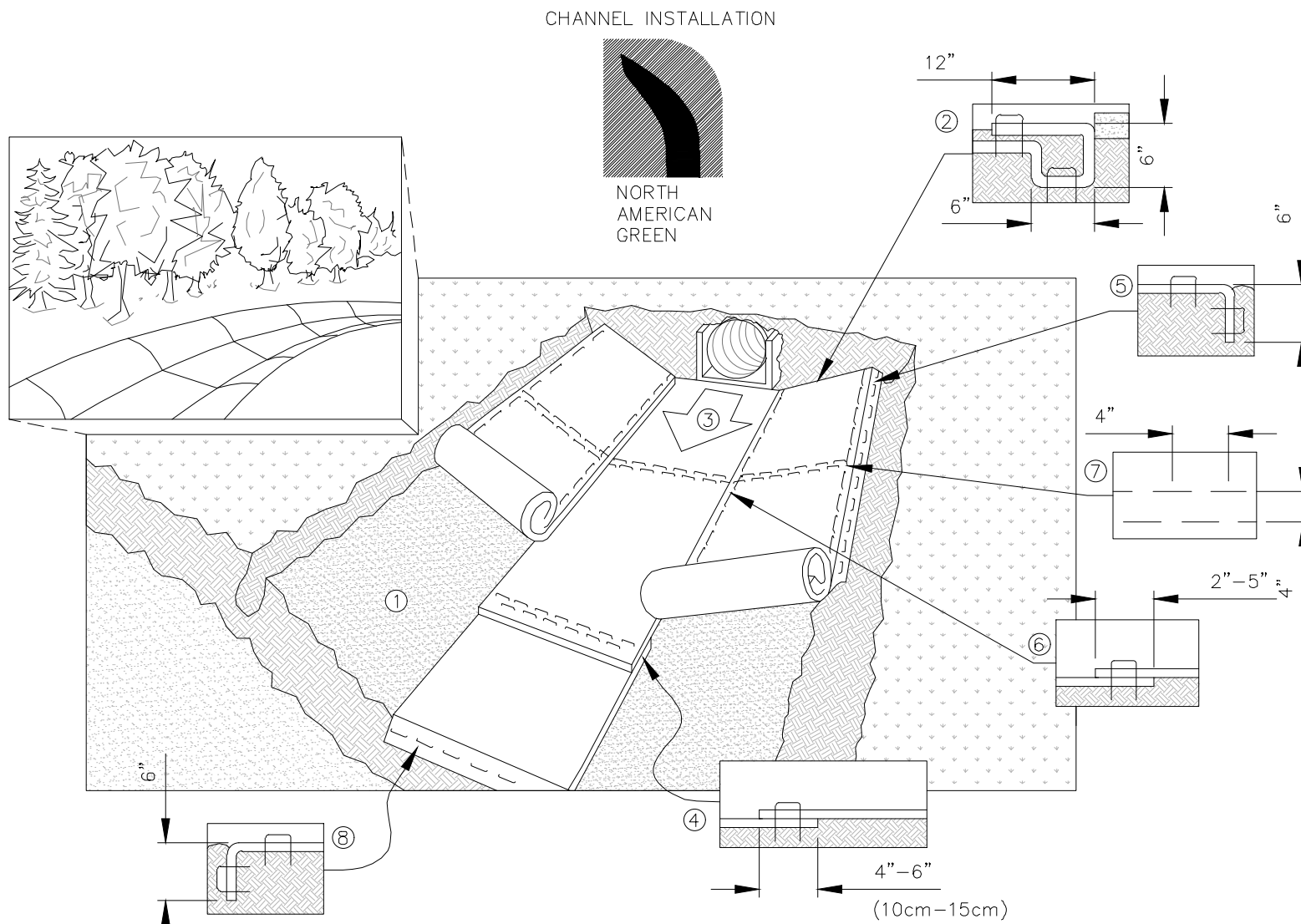


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. 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.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) 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.
5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL SLOPE MATTING INSTALLATION

NOT TO SCALE



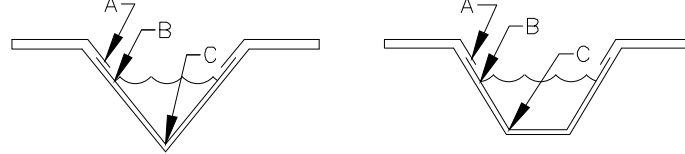
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. 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.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" (10cm-15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5cm-12.5cm) (DEPENDING ON BLANKET TYPE) AND STAPLED. 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 BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:

- * HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

- ** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.



CHANNEL LINER INSTALLATION

NOT TO SCALE

CONSTRUCTION SEQUENCE

1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2. FLAG WORK LIMITS AND MARK TREE & BUFFER AREAS FOR PROTECTION.
3. HOLD PRE-CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.
4. INSTALL TEMPORARY CONSTRUCTION ENTRANCE AND CULVERT AS NEEDED WITH INLET PROTECTION.
5. INSTALL SEDIMENT BASIN AS THE FIRST GRADING ACTIVITY. STABILIZE BANKS AS EARLY AS POSSIBLE. DO NOT CONSTRUCT BASINS OR CONDUCT MAJOR GRADING ACTIVITIES DURING WET WEATHER OR PERIODS OF PREDICTED WET WEATHER.
6. INSTALL ALL EROSION CONTROL MEASURES AS REQUIRED BY NCDEQ INCLUDING; SILT FENCES, WATTLES, BARRIERS, AND DIVERSION DITCHES AS NEEDED.
7. CALL NCDEQ INSPECTOR TO APPROVE PERIMETER EROSION CONTROL DEVICES.
8. PROCEED WITH CLEARING & GRUBBING AND ROUGH GRADING.
9. APPLY TEMPORARY SEEDING PER GROUND STABILIZATION SCHEDULE.
10. CONSTRUCT PROPOSED STORM DRAINAGE SYSTEM WITH INLET AND OUTLET PROTECTION.
11. ONCE ALL DISTURBED AREAS ARE STABILIZED, CONTACT THE INSPECTOR TO VERIFY SEDIMENT BASIN CAN BE REMOVED.
12. INSPECT STORM SYSTEM AND REMOVE ANY SEDIMENT. THEN REMOVE SEDIMENT BASIN AND INSTALL STORMWATER CONTROL MEASURE.
13. COMPLETE FINAL GRADING AND STABILIZE WITH PERMANENT SEEDING, MULCH, AND LANDSCAPE.
14. CALL NDEQ ASHEVILLE REGIONAL OFFICE AT 828-296-4500 TO SCHEDULE FINAL INSPECTION PRIOR TO FILING NOTICE OF TERMINATION.

MAINTENANCE INSPECTIONS SHALL BE PERFORMED WEEKLY AND AFTER EACH RAINFALL. ALL REPAIRS NECESSARY SHOULD BE MADE IMMEDIATELY AND IN STRICT ACCORDANCE WITH NCDEQ STANDARDS AND NPDES PERMIT.

NCDEQ EROSION CONTROL NOTES

GENERAL: ALL EROSION CONTROL MEASURES ARE TO BE PERFORMED IN STRICT ACCORDANCE WITH REQUIREMENTS OF NCDEQ. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE COMPLIED WITH FOR ALL WORK.

1. OBTAIN PROVISIONAL PERMIT.
 2. INSTALL ALL EROSION CONTROL MEASURES AS REQUIRED.
 3. OBTAIN GRADING PERMIT THROUGH ON-SITE INSPECTION BY A REPRESENTATIVE OF NCDEQ.
 4. PROCEED WITH GRADING, CLEARING, AND GRUBBING.
 5. SEED AND MULCH DENUDED AREA WITHIN EITHER 7 CALENDAR DAYS (SLOPES GREATER THAN 3:1) OR 14 CALENDAR DAYS (3:1 OR FLATTER). AFTER FINISHED GRADE ARE ESTABLISHED, TEMPORARY SEEDING AND SOIL AMENDMENTS SHALL BE PLACED ON A PREPARED SEEDBED AT THE FOLLOWING RATES PER ACRE.
- | | |
|-----------------------|-----------|
| LIME | 2,000 LBS |
| FERTILIZER (10-10-10) | 1,000 LBS |
| STRAW MULCH | 4,000 LBS |
- FOR LATE WINTER/EARLY SPRING SEEDING ADD TO THE ABOVE:
- | | |
|-------------|---|
| RYE GRAIN | 120 LBS |
| SWITCHGRASS | 50 LBS (OMIT IF COVER IS NOT TO EXTEND BEYOND JUNE) |
- FOR SUMMER SEEDING ADD:
- | | |
|---------------|--------|
| GERMAN MILLET | 40 LBS |
|---------------|--------|
- FOR FALL ADD:
- | | |
|-----------|---------|
| RYE GRAIN | 120 LBS |
|-----------|---------|
- IF HYDROSEEDING IS USED, WOOD CELLULOSE MAY BE SUBSTITUTED FOR STRAW MULCH AT THE RATE OF 1,000 LBS PER ACRE.
6. MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
 7. REMOVE SOIL EROSION CONTROL MEASURES AND STABILIZE THESE AREA.
 8. REQUEST FINAL APPROVAL BY NCDEQ.

PERMANENT SEEDING MEASURES

ALL PERMANENT MEASURES ARE TO BE PERFORMED IN STRICT ACCORDANCE WITH REQUIREMENTS OF NCDEQ. THE FOLLOWING APPLY TO AREAS WITHIN NCDEQ PERMANENT SEEDING MIXTURE AREA #1M:

SEEDING MIXTURE:

SPECIES	RATE (LB/ACRE)
TALL FESCUE	100
PANICUM VIRGATUM	10
REDDTOP	5
KENTUCKY BLUEGRASS	5

NURSE PLANTS:

BETWEEN MAY 1 AND AUG. 15, ADD 10 LB/ACRE GERMAN MILLET OR 15 LB/ACRE SUDAGRASS. PRIOR TO MAY 1 OR AFTER AUG. 15, ADD 40 LB/ACRE RYE (GRAIN). IT MAY BE BENEFICIAL TO PLANT THE GRASSES IN LATE SUMMER AND OVERSEED THE SWITCHGRASS IN MARCH.

SEEDING DATES:	BEST	POSSIBLE
BELOW 2500 FT:	AUG. 15 - SEPT. 1 MAR. 1 - APR. 1	JULY 25 - SEPT 15 MAR. 1 - MAY 10
ABOVE 2500 FT:	JULY 25 - AUG. 15 MAR. 20 - APR. 20	JULY 15 - AUG. 30 MAR. 5 - MAY 15

COMPLETE SEEDING EARLIER IN FALL, AND START LATER IN SPRING ON NORTH- AND EAST-FACING SLOPES.

SOIL AMENDMENTS:

APPLY LIME AND FERTILIZER ACCORDING TO THE RESULTS OF A NC DEPARTMENT OF AGRICULTURE SOIL TEST

MULCH:

APPLY 4,000-5,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCHING MATERIAL. ANCHOR MULCH BY TACKING WITH ASPHALT, ROVING, OR NETTING. NETTING IS THE PREFERRED ANCHORING METHOD ON STEEP SLOPES.

MAINTENANCE:

MOW NO MORE THAN ONCE A YEAR. REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. RESEED, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY.

1) GROUND STABILIZATION

SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES, AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES GREATER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HOW ZONES)

*EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE. (SECTION II.B(2)(B))

2) BUILDING WASTE HANDLING

- NO PAINT OR LIQUID WASTE IN STREAM OR STORM DRAINS.
- DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
- EARTHEN-MATERIAL STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
- CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS, OR BUFFERS.

3) DISCHARGES TO FEDERALLY-LISTED WATERS

- REQUIREMENTS ARE THE SAME AS IN PREVIOUS PERMIT.
- THE PERMIT ALLOWS REDUCTION FROM THE 20 ACRE MINIMUM IF THE DIRECTOR OF DWQ DETERMINES THAT OTHER SCMS PROVIDE EQUIVALENT PROTECTION.

4) SELF-INSPECTION REQUIREMENTS

- SAME WEEKLY INSPECTION REQUIREMENTS.
- SAME RAIN GAUGE & INSPECTIONS AFTER 0.5" RAIN EVENT.
- INSPECTIONS ARE ONLY REQUIRED DURING "NORMAL BUSINESS HOURS."
- RECORDS MUST BE KEPT FOR 3 YEARS AND AVAILABLE ON-SITE DURING BUSINESS HOURS UNLESS A SITE-SPECIFIC EXEMPTION IS APPROVED.
- RECORDS MUST BE KEPT FOR 3 YEARS AND AVAILABLE UPON REQUEST.
- ELECTRONICALLY-AVAILABLE RECORDS MAY BE SUBSTITUTED UNDER CERTAIN CONDITIONS.
- ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND CONDITIONS RECORDED ON NCDEQ SELF-INSPECTION AND SELF-MONITORING COMBINED FORM LOCATED AT [HTTPS://DEQ.NC.GOV/ABOUT/DIVISIONS/ENERGY-MINERAL-LAND-RESOURCES/EROSION-SEDIMENT-CONTROL/FORMS](https://deq.nc.gov/about/divisions/energy-mineral-land-resources/erosion-sediment-control/forms)

5) IMPLEMENTATION OF NEW PERMIT CONDITIONS

- PROJECTS PERMITTED UNDER THE PREVIOUS PERMIT CAN CONTINUE TO FOLLOW THE PREVIOUSLY-PERMITTED CONDITIONS.
- COMPLETE APPLICATIONS RECEIVED PRIOR TO AUGUST 3, 2011 CAN FOLLOW CONDITIONS OF APPROVED APPLICATION.
- APPLICATIONS RECEIVED AFTER AUGUST 2, 2011 MUST COMPLY WITH NEW PERMIT CONDITIONS.

6) CONDITIONS IN EROSION & SEDIMENTATION CONTROL PLANS

- DESIGNATION ON THE PLANS WHERE 7 AND 14-DAY GROUND STABILIZATION REQUIREMENTS ON THE NPDES PERMIT APPLY.
- DESIGNATION ON THE PLANS WHERE BASINS THAT COMPLY WITH THE SURFACE-WITHDRAWAL REQUIREMENTS OF THE NPDES PERMIT ARE LOCATED.

7) SEDIMENT BASINS

- OUTLET STRUCTURES MUST WITHDRAW FROM BASIN SURFACE UNLESS DRAINAGE AREA IS LESS THAN 1 ACRE.
- USE ONLY DWQ-APPROVED FLOCCULANTS.

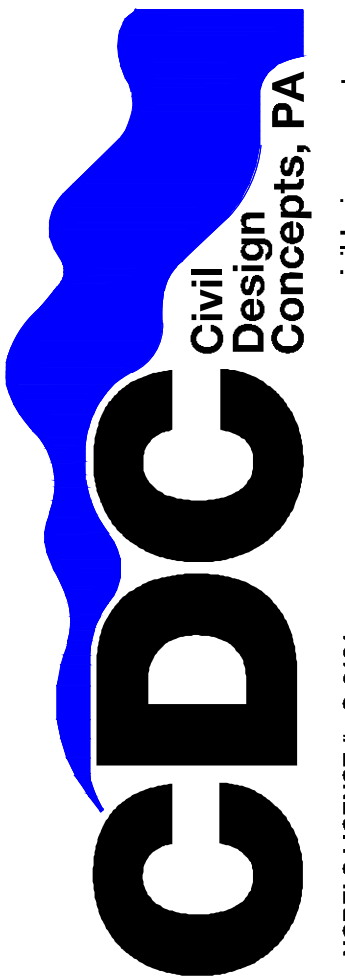
GENERAL CONSTRUCTION NOTES

1. ALL GRADING, STORM INSTALLATION, AND SOIL EROSION CONTROL MEASURES ON THIS SITE MUST BE AUTHORIZED BY PERMITS ISSUED BY NCDEQ. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED GRADING, EROSION CONTROL, STORM WATER, LAND DISTURBANCE, AND ASSOCIATED NON-GRADING PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
3. ALL CONSTRUCTION SHALL BE UNDER THE INSPECTION OF THE ENGINEER. THE OWNER, NCDEQ, THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO BEGINNING WORK. ANY WORK COVERED PRIOR TO ENGINEER'S INSPECTION IS SUBJECT TO UNCOVERING AND BACKFILLING AT THE CONTRACTOR'S EXPENSE.
4. ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. PROTECT EXISTING SITE FEATURES (SHOWN TO REMAIN) AND NEWLY COMPLETED WORK DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES, AS WELL AS THE PROJECT PLANS AND SPECIFICATIONS, AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY NC ONE CALL AT 811, 48 HOURS BEFORE CONSTRUCTION BEGINS. NOTIFY THE ENGINEER AT LEAST 72 HOURS BEFORE STARTING CONSTRUCTION ACTIVITIES.
8. EROSION CONTROL IS A FIELD PERFORMANCE BASED ACTIVITY; AND ADDITIONAL SILT FENCES, TEMPORARY SEDIMENT BASINS, AND ALL OTHER MEASURES MAY NEED TO BE ADDED IN ADDITION TO THE APPROVED PLAN AS NECESSARY. MEASURES SHOWN CAN AND SHOULD BE ADJUSTED TO ASSURE MAXIMUM PROTECTION ON SITE. CONTRACTOR SHALL ADD ADDITIONAL MEASURES AS NEEDED IN ENVIRONMENTALLY SENSITIVE AREAS.
9. CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MAINTAINING, AND REMOVING ALL NECESSARY EROSION AND SEDIMENTATION CONTROL MEASURES.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSSES WHETHER THE CONTRACTOR PERFORMS THE WORK OR A UTILITY COMPANY PERFORMS THE WORK.
11. ALL AREAS WHERE THERE IS EXPOSED DIRT SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS NOTES IN THE PLANS. SITE STABILIZATION IS A PERFORMANCE BASED REQUIREMENT, AND THE SITE WILL NOT BE ACCEPTED UNTIL PERMANENT VEGETATION IS ESTABLISHED TO THE SATISFACTION OF THE ENGINEER.
12. ALL HIGH DENSITY POLYETHYLENE (HDPE) CORRUGATED STORM SEWER DETENTION PIPE SHALL BE TYPE "S" HANGDOR SURELOK AND/OR APPROVED EQUIVALENT WITH WATER TIGHT JOINTS MEETING AASHTO M252, M294 OR MP7. ALL HDPE PIPE IS TO BE INSTALLED ACCORDINGLY TO MANUFACTURERS SPECIFICATIONS AND IN ACCORDANCE WITH ASTM D2321 WITH THE EXCEPTION THAT MINIMUM COVER IN TRAFFIC LOAD AREA SHALL BE 24" FOR 4'-48" AND 18" FOR 60". PIPE MATERIAL SHALL MEET THE PRODUCT SPECIFICATIONS OF ASTM F667 AND SHALL HAVE A SMOOTH WALL INTERIOR. FOR ALL STORM SYSTEMS, WORK MUST BEGIN AT THE LOW POINT OF THE SYSTEMS. NOTIFY THE ENGINEER IMMEDIATELY OF ANY VARIANCES FROM EXPECTED CONDITIONS.
13. CURB INLET FRAME, GRATE AND HOOD SHALL CONFORM TO NCDDOT 840.03E, DROP INLET FRAME AND GRATE SHALL CONFORM TO NCDDOT 840.16. FIELD INLET COVER SHALL CONFORM TO NCDDOT STANDARD DETAIL 840.03, OPENING FACING UPSTREAM. MANHOLE RING AND LID TO CONFORM TO NCDDOT 840.54. OPEN THROAT INLETS TO CONFORM TO NCDDOT 840.04 WITH A MANHOLE RING AND LID INSTALLED IN THE TOP FOR ACCESS TO THE STRUCTURE. SET ACCESS POINT ADJACENT TO A STRUCTURE WALL AS TO ALLOW ACCESS TO STEPS.
14. CONCRETE AND MASONRY SHALL MEET THE REQUIREMENTS OF APPROPRIATE SECTION OF NCDDOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES (LATEST EDITION). CONCRETE SHALL BE CLASS A OR B, 4000 PSI MINIMUM, MEETING THE REQUIREMENTS OF SECTION 900, CONSTRUCTED IN ACCORDANCE WITH SECTION 825. MASONRY SHALL MEET THE REQUIREMENTS OF SECTION 940, CONSTRUCTED IN ACCORDANCE WITH SECTION 830 AND/OR 834.
15. TRENCH BACKFILL AND COMPACTION TESTING SHALL BE PERFORMED BY A CERTIFIED SOILS LABORATORY UNDER ALL PAVED AREAS.
16. CONTRACTOR RESPONSIBLE FOR KEEPING ACCURATE LOG OF SITE CONDITIONS IN ACCORDANCE WITH NPDES PERMIT. MAINTENANCE INSPECTIONS SHALL BE PERFORMED WEEKLY AND AFTER EACH RAINFALL. ALL REPAIRS NECESSARY SHOULD BE MADE IMMEDIATELY AND IN STRICT ACCORDANCE WITH NCDEQ STANDARDS AND NPDES PERMIT. CONTRACTOR SHALL SUPPLY THE ENGINEER WITH RECORD OF DEVIATIONS FROM PLANS FOR PREPARATION OF FINAL RECORD DRAWINGS.
17. ALL SLOPES GREATER THAN 2:1 SLOPE AND OVER 5' IN HEIGHT SHALL BE CERTIFIED BY A LICENSED PROFESSIONAL AS REQUIRED BY NCDEQ.
18. CONTRACTOR IS REQUIRED TO OBTAIN AND PROVIDE A COPY OF THE EROSION CONTROL PERMIT FOR ANY OFFSITE BORROW/ SPOIL AREA. CONTRACTOR MUST PROVIDE COPY OF PERMIT TO NCDEQ INSPECTOR PRIOR TO CONSTRUCTION.
19. IF BORROWED OR WASTE FILL MATERIAL IS GENERATED, AN APPROVED GRADING PERMIT MUST BE SECURED FOR THE BORROW OR WASTE MATERIAL SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.
20. ALL FILL SLOPES SHALL BE COMPACTED FULL DEPTH TO NOT LESS THAN 95% MAXIMUM DENSITY (STANDARD PROCTOR), SHALL BE PLACED ON A SURFACE CLEARED OF GROWTH AND DEBRIS, AND BE PROPERLY BENCHED AND DRAINED.
21. COMPACTION REPORTS MUST BE PROVIDED TO NCDEQ STORMWATER SERVICES DIVISION INDICATING THAT FILL HAS BEEN COMPACTED TO NOT LESS THAN 95% MAXIMUM DENSITY (STANDARD PROCTOR).
22. ALL FILL MATERIAL, UNLESS A PERMIT FROM NCDEQ DIVISION OF WASTE MANAGEMENT TO OPERATE A LANDFILL IS ON FILE FOR THE OFFICIAL SITE, SHALL BE FREE OF ORGANIC OR OTHER DEGRADABLE MATERIALS, MASONRY, CONCRETE, AND BRICK SIZES EXCEEDING 12 INCHES, AND ANY MATERIALS WHICH COULD CAUSE THE SITE TO BE REGULATED AS A LANDFILL BY THE STATE OF NORTH CAROLINA.

EROSION CONTROL MAINTENANCE NOTES:

1. INSPECT EROSION CONTROL MEASURES ONCE A WEEK AND AFTER EVERY SIGNIFICANT RAINFALL. CONTRACTOR TO INSPECT MEASURES FOR COMPLIANCE WITH PLANS AND DETAILS, INCLUDING SEDIMENT ACCUMULATION BEYOND DETAIL ALLOWANCE, AND ALSO DAMAGE OR FAILURE OF MEASURES.
2. WHEN SEDIMENT ACCUMULATION EXCEEDS DETAIL ALLOWANCE, CONTRACTOR TO REMOVE SEDIMENT AND/OR DEBRIS, AND RELOCATE TO ANOTHER AREA WITH SEDIMENT CONTROLS.
3. WHEN MEASURES ARE FOUND TO BE DAMAGED, CONTRACTOR TO REPAIR IMMEDIATELY TO BRING MEASURES BACK INTO COMPLIANCE WITH PLANS AND DETAILS.
4. IF MEASURES ARE FOUND TO BE INSUFFICIENT, CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS NEEDED TO ENSURE SEDIMENT REMAINS CONTROLLED ONSITE AS REQUIRED.
5. CONTRACTOR TO REMOVE MEASURES AND BRING AREA TO GRADE ONCE CONFORMANCE OF SITE STABILIZATION HAS BEEN REQUESTED AND RECEIVED FROM PROJECT ENGINEER.

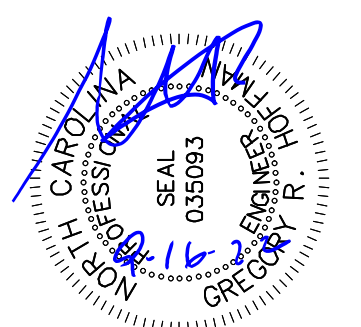
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NCBELS LICENSE #: C-2184

DATE	DESCRIPTION	BY
08/17/2022	DESIGN DEVELOPMENT	
09/16/2022	ISSUED FOR BID	



ROUGH GRADING & EC DETAILS FOR:
RICHLAND CREEK GREENWAY
TOWN OF WAYNESVILLE - TOWN OF WAYNESVILLE, NORTH CAROLINA

DRAWN BY: DMS
CDC PROJECT NO.: 22213
NCDEQ NO.: HAYWO-2021-002

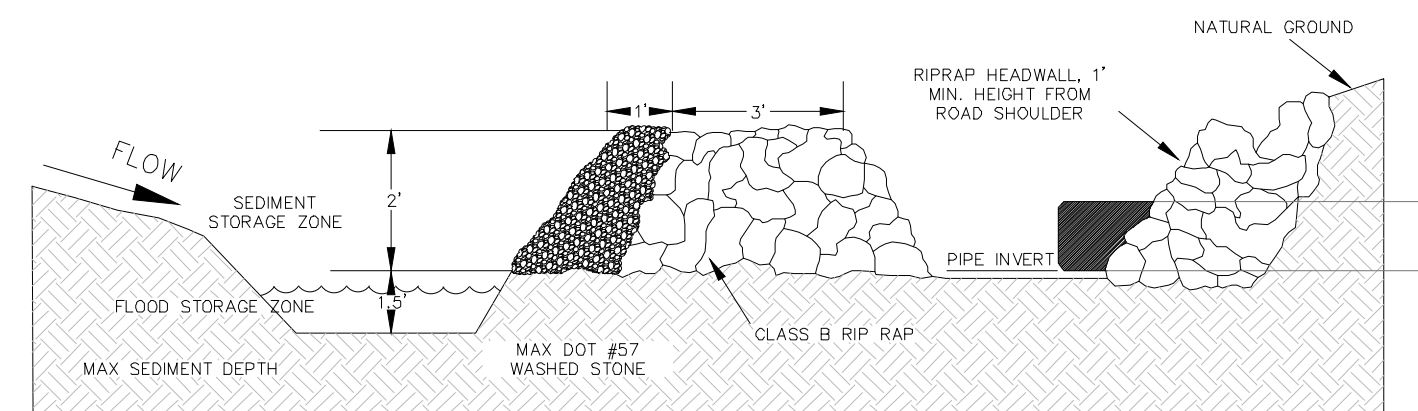
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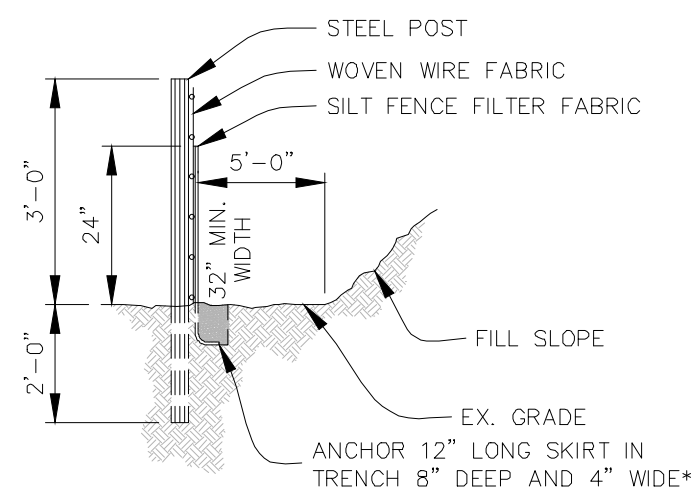


1. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM AN EXISTING ROAD.
2. FILTER FABRIC SHALL BE PLACED UNDER. THE ENTRANCE/EXIT SHALL BE MIRAFI 500 OR EQUAL.
3. STONE TO BE 2 - 3 INCH WASHED STONE.
4. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
5. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
6. WHEN NECESSARY WHEELS MUST BE CLEANED TO REMOVE SEDIMENT FROM THE ENTRANCE OF THE CRUSHED STONE STREET. WHEN WASHING IS REQUIRED, SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN

NOT TO SCALE



ROCK PIPE INLET PROTECTION



SIDE VIEW

CONSTRUCTION NOTES:

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" 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 TO THE FULL LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4" MIN. OVERLAP TO THE NEXT POST.
4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE PILE. EXTEND THE WIRE TO THE SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN THE FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC TIES SHOULD HAVE A MIN. 50 LB TENSILE STRENGTH.
5. EXCAVATE A TRENCH APPROXIMATELY 4" WIDE AND 8" DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
6. PLACE 12" OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
7. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
8. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

MATERIALS NOTES:

1. USE A SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 5461, AND WHICH SHOWN IN TABLE 6.6.2D OF THE NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
2. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120°F.
3. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.33 LB./LINEAR FT STEEL WITH A MINIMUM LENGTH OF 5 FEET, AND THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
4. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES.

NOTES:

USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT
EXCEED 1/4 ACRE AND NEVER IN AREAS OF
CONCENTRATED FLOW

- * FOR REPAIR OF SILT FENCE FAILURES, USE No. 57 WASHED STONE. AS AN ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

NOT TO SCALE

(D3.03)

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NO.	DATE	DESCRIPTION	BY
1	09/17/2022	DESIGN DEVELOPMENT	EJM
2	09/16/2022	ISSUED FOR BID	EJM



ROUGH GRADING & EC DETAILS FOR:

RICHLAND CREEK GREENWAY

TOWN OF WAYNESVILLE - TOWN OF WAYNESVILLE, NORTH CAROLINA

DRAWN BY: DMS
CDC PROJECT NO.: 22213
NCDEQ NO.: HAYWO-2021-002

SHEET

C932

ROUGH GRADING & EC DETAILS

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activities being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none">• Temporary grass seed covered with straw or other mulches and tackifiers• Hydroseeding• Rolled erosion control products with or without temporary grass seed• Appropriately applied straw or other mulch• Plastic sheeting	<ul style="list-style-type: none">• Permanent grass seed covered with straw or other mulches and tackifiers• Geotextile fabrics such as permanent soil reinforcement matting• Hydroseeding• Shrubs or other permanent plantings covered with mulch• Uniform and evenly distributed ground cover sufficient to restrain erosion• Structural methods such as concrete, asphalt or retaining walls• Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

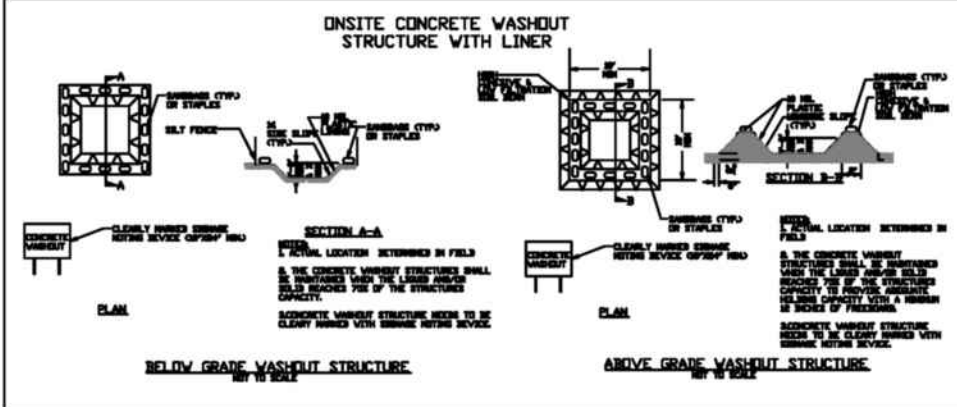
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

**PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-measuring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Description of whether the measures were operating properly, 4. Description of maintenance needs for the measure, 5. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of this required reports to the appropriate Division Regional Office per Part II, Section C, Item (2)(c) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

**PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site
In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This General Permit as well as the Certificate of Coverage, after it is received.
- (b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years
All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

**PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

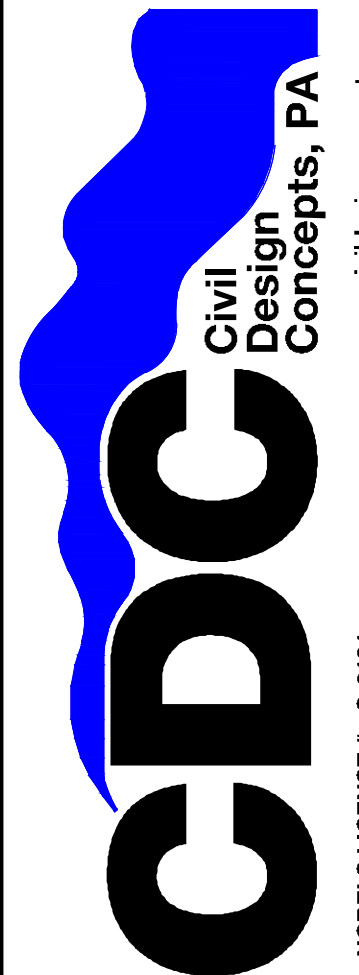
- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items.
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit.
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.
- (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above.
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.



NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

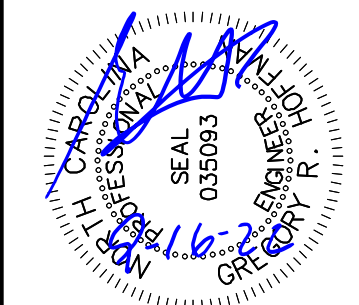
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NCBELS LICENSE #: C-2184

NO.	DATE	DESCRIPTION	BY
1	08/17/2022	DESIGN DEVELOPMENT	EJM
2	09/16/2022	ISSUED FOR BID	EJM



RICHLAND CREEK GREENWAY

NCG01 FORM

DRAWN BY: DMS
CDC PROJECT NO.: 22213
NCDEQ NO.: HAYW-2021-002

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