

# ROCKY RIVER GREENWAY, MOSS CREEK

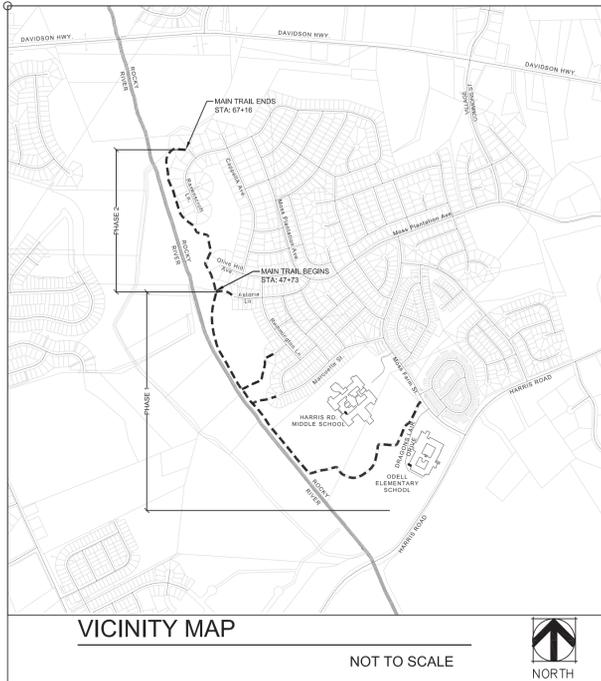
PHASE 2 STA: 47+73 - STA: 67+20

CITY OF CONCORD  
CABARRUS COUNTY, NC

PREPARED FOR:



DECEMBER 10, 2013  
ISSUED FOR BIDDING



NCDOT TIP: SR-500IBN  
WISS: 40924.3.65  
FA#: SRS-1004(54)

DISTURBED AREA PHASE 2 : 1.72 AC

## LEGENDS

LAYOUT LEGEND	
	10' WIDE TRAIL
	6' WIDE TRAIL
	BOARDWALK
	CONCRETE SIDEWALK
	CURB AND GUTTER
	PICNIC STRUCTURE
	TRASH RECEPTACLE PAD
	BENCH PAD
	PET WASTE STATION
	CONCRETE WHEEL STOPS
	SIGNAGE
	ACCESSIBLE RAMP

## GRADING AND EC LEGEND

	CONSTRUCTION ENTRANCE
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	SILT FENCE
	LIMITS OF DISTURBANCE
	RIP RAP
	ROCK CHECK DAMS
	ROCK INLET SEDIMENT TRAP
	PIPE AND HEAD WALL

## NOTES

### GENERAL GRADING & SITE NOTES:

- THE UTILITIES AND THE LOCATIONS THEREOF, SHOWN ON THE PLANS, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER, TELEPHONE, GAS, ETC.) WITHIN THE CONSTRUCTION AREA WITH THE OWNER AND/OR THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING ANY EXCAVATION. THE OMISSION OF, OR THE INCLUSION OF UTILITY LOCATIONS ON PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF, OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTACT U-LOCO (PH: 800-632-4949).
- BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM PLANS PREPARED BY CITY OF CONCORD ENGINEERING DEPARTMENT. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO STARTING WORK.
- APPROVAL OF PLANS DOES NOT AUTHORIZE GRADING OR ANY OTHER DISTURBANCE TO ADJACENT PROPERTIES.
- ALL CONSTRUCTION AND CONSTRUCTION MATERIALS SHALL CONFORM TO NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES AND NCDOT ROADWAY STANDARD DRAWINGS.
- CONTRACTOR SHALL REFER TO STAKING PLANS FOR THE LOCATION AND DIMENSIONS OF PROJECT. CONTRACTOR SHALL STAKE TRAIL ALIGNMENT AND FLAG LIMITS OF DISTURBANCE FOR APPROVAL FROM THE OWNER/LANDSCAPE ARCHITECT.
- CONTRACTOR TO PROVIDE ALL EROSION CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL AUTHORITIES.
- ALL LANDSCAPE AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- ANY GRADING BEYOND WHAT IS DEPICTED IN THE APPROVED AND PERMITTED PLANS IS A VIOLATION OF THE STATE'S EROSION CONTROL AND GRADING PERMIT AND MAY BE SUBJECT TO A FINE.
- CONTRACTOR IS REQUIRED TO PROVIDE NPDS MONITORING AND INSPECTIONS IN ACCORDANCE WITH NCDENR REQUIREMENTS. NPDES INSPECTION FORM (FORM SP700) ENTITLED INSPECTION RECORD FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000 CAN BE FOUND AT: [www.ncdot.org/doh/operations/dp\\_chief\\_eng/roadside/fieldsops/downloads/](http://www.ncdot.org/doh/operations/dp_chief_eng/roadside/fieldsops/downloads/) AND IS TO BE COMPLETED AS INDICATED ON THE FORM. ANY FINES ISSUED FOR FAILURE TO PERFORM INSPECTIONS, MAINTAIN RECORDS OR COMPLETE REPAIRS AND MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR TO SEED OR MULCH WITHIN LIMITS OF DISTURBANCE. CONTRACTOR TO SEED AND MULCH ALL DISTURBED AREAS.
- GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF SEDIMENT POLLUTION CONTROL ACT AND MAY BE SUBJECT TO A FINE.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY THE LANDSCAPE ARCHITECT OR NCDENR.
- ALL GRADED SLOPES MUST BE SEEDED AND MULCHED WITHIN 7 DAYS OF COMPLETED GRADING ON PERIMETER AREAS AND SLOPES GREATER THAN 3:1. ALL REMAINING DISTURBED AREAS ARE TO BE RESEDED WITHIN 14 DAYS.
- SLOPES SHALL BE GRADED NO GREATER THAN 2:1. ALL 2:1 SLOPES SHALL BE STABILIZED WITH STRAW MATTING AFTER SEEDING AND SOIL AMENDMENTS HAVE BEEN APPLIED.
- ALL CHANNELS SHALL BE LINED WITH EXCELSIOR MATTING AFTER SEEDING AND SOIL AMENDMENTS HAVE BEEN APPLIED.
- CONTRACTOR RESPONSIBLE FOR ALL TRAFFIC CONTROL DURING CONSTRUCTION TO ENSURE SAFETY OF ALL CONSTRUCTION WORKERS, PEDESTRIANS, AND VEHICULAR USERS.
- CONTRACTOR RESPONSIBLE FOR THE REMOVAL OF ALL EXISTING SILT FENCE

### GENERAL CLEARING NOTES:

- CLEAR AND GRUB TO 7' EITHER SIDE OF TRAIL CENTERLINE. REMOVE GROUND COVER, SHRUBS AND TREES INCLUDING MAJOR ROOT SYSTEMS.
- SELECTIVE CLEARING AS DETERMINED BY OWNER'S REPRESENTATIVE SHALL OCCUR WITHIN THE LIMITS OF CONSTRUCTION AS FOLLOWS: CUT TO GROUND ALL TREES 4" CAL. OR LESS AND SHRUBS GREATER THAN 24" IN HEIGHT.

### QUANTITY CONTROL NOTE:

ENGINEER'S NOTE OF STORMWATER NOTE CONTROL:  
THE STORMWATER MANAGEMENT STUDY INCLUDED WITH THIS PLAN INDICATES, TO THE BEST OF OUR KNOWLEDGE, BELIEF AND INFORMATION, THAT THERE WILL BE NO SUBSTANTIAL INCREASE IN DOWNSTREAM FLOODING, DRAINAGE OR EROSION PROBLEMS AS A RESULT OF THE PROPOSED DEVELOPMENT BETWEEN THE POINT WHERE THE RUNOFF DISCHARGES FROM THE PROPERTY TO WHERE THE SITE DEVELOPMENT AREA REPRESENTS LESS THAN 10 PERCENT OF THE TOTAL DRAINAGE AREA. THEREFORE, NO QUANTITY CONTROL IMPROVEMENT IS PROPOSED.

### WETLAND NOTES:

ALL NECESSARY APPROVALS WILL BE OBTAINED FROM THE STATE AND THE CORPS OF ENGINEERS PRIOR TO ANY WETLAND DISTURBANCE OR STREAM CROSSING/DISTURBANCE.

### UTILITY NOTES:

ALL RIMS AND COVERS OF EXISTING UTILITY STRUCTURES SHALL BE PLACED FLUSH WITH PROPOSED GRADES. ALL MANHOLES WITHIN THE FLOODPLAIN SHALL HAVE WATERTIGHT COVER, MAINTAIN 3" OF COVER OVER ALL SEWER MAINS.

### CONSTRUCTION & EROSION CONTROL SEQUENCE:

- CONTACT NCDENR, LAND QUALITY SECTION, MOORESVILLE REGIONAL OFFICE AT (704) 663-1699 TO NOTIFY THEM OF CONSTRUCTION START DATE AND TO SET UP AN ON-SITE PRECONSTRUCTION CONFERENCE IF REQUIRED BY NCDENR.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCES(S).
- INSTALL SILT FENCE, INLET PROTECTION, SEDIMENT TRAPS, DIVERSION DITCHES, TREE PROTECTION, AND OTHER MEASURES AS SHOWN ON PLANS. CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
- CALL NCDENR LAND QUALITY INSPECTOR FOR ON-SITE INSPECTION OF EROSION CONTROL MEASURES. WHEN APPROVED, BEGIN CLEARING AND GRUBBING AS SHOWN ON PLANS.
- BEGIN GRADING OPERATIONS.
- INSTALL STORM DRAIN. PROVIDE INLET PROTECTION AFTER PIPE IS INSTALLED.
- STABILIZE SITE AS AREAS ARE BROUGHT TO FINISH GRADE.
- AS FINAL GRADES ARE ESTABLISHED, SEED AND MULCH ALL DISTURBED AREAS WITHIN 7 DAYS ON PERIMETER AREAS AND SLOPES GREATER THAN 3:1 AND WITHIN 14 DAYS ON ALL OTHER AREAS. LINE CHANNELS WITH EXCELSIOR MATTING AND COVER SLOPES 2:1 OR STEEPER WITH STRAW MATTING.
- PAVE PATHWAY: INSTALL BOARDWALK, STAIRS, ECT.
- SEED AND MULCH ALL DISTURBED AREAS PER SEEDING SPECIFICATIONS. SEE EROSION CONTROL NOTE 5 BELOW.
- AFTER SITE HAS BECOME STABILIZED, REMOVE ALL REMAINING TEMPORARY EROSION CONTROL DEVICES, FINE GRADE AND STABILIZE THOSE AREAS.

### SUBSURFACE INFORMATION NOTE:

THERE IS NO SUBSURFACE INFORMATION AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHALL MAKE THEIR OWN INVESTIGATION OF SUBSURFACE CONDITIONS.

### FLOODWAY NOTE:

WITHIN THE LIMITS OF THE FLOODWAY, NO FILL OR INCREASE IN GROUND ELEVATION IS ALLOWED. ALL GRADING AND CONSTRUCTION SHALL MAINTAIN EXISTING GROUND ELEVATIONS (OR SLIGHTLY LOWER, WITHOUT CREATING DRAINAGE PROBLEMS). THE DESIGN INTENT WITHIN THESE LIMITS IS FOR THE FINISHED TOP OF THE TRAIL TO BE AT THE SAME GROUND ELEVATION AS EXISTING ADJOINING GROUND. IF, DURING CONSTRUCTION WITHIN THESE LIMITS, THIS DESIGN INTENT CONFLICTS WITH OTHER DESIGN PARAMETERS, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO CONSTRUCTION OF THE TRAIL. AFTER THE TRAIL IS CONSTRUCTED, THE CONTRACTOR SHALL HAVE AN AS-BUILT SURVEY PERFORMED OF THE SECTIONS LOCATED WITHIN THE FLOODWAY LIMITS BY A LICENSED SURVEYOR AND THE AS-BUILT SURVEY DATA PROVIDED IN DIGITAL FORMAT TO THE OWNER.

### SEEDING NOTES:

#### PERMANENT SEEDING

Permanent surface stabilization shall be installed for slopes 3:1 and steeper and perimeter areas within 7 days after final grade has been reached and within 14 days for all other areas. As necessary, fertilize, water, and reseed as required to establish and maintain a vigorous stand of grass.

GRADED SLOPES AND FILL - The angle for graded slopes and fill shall be no greater than the angle which can be retained by the vegetative cover or other adequate erosion control devices or structures. In any event slopes left exposed shall, within 7 working days of completion of any phase of grading, be planted or otherwise provided with ground cover, devices, or structures sufficient to restrain erosion.

SEED BED PREPARATION - The seed bed shall be prepared by pulverizing the soil in an approved manner to a depth of three inches for field conditions or slopes that are 3:1 or flatter and/or to a depth of one inch to three inches, as determined on site for slopes steeper than 3:1. Tillage shall continue until a well pulverized, firm, reasonably uniform seed bed is prepared conforming substantially to ground elevations as shown on the plans and/or as was existing prior to construction, blending uniformly into adjacent topography. Good surface drainage must be provided, allowances for settlement made and ground elevations adjusted accordingly. All stones, roots, sticks, rubbish and other objectionable material shall be removed.

The following material shall be used for reseeding disturbed areas (NOTE that all rates are per 1000 square feet):

Sept. 15 thru March 1	February 1 thru October 15	May 1 thru Sept. 30
6# Kentucky Fescue No. 31	6# Kentucky Fescue #31	Add 0.4# Sudan or Millet to above
2# Rye Grass	30# Fertilizer 10-10-10	100# Lime
30# Fertilizer 10-10-10	100# Lime	

MULCHING- After fertilizing, seeding, raking, and/or tilling, dried straw shall be uniformly spread (approximately 1/4 of the ground should remain visible to avoid smothering seedlings) over the area at the rate of 90 pounds per 1000 square feet. The straw shall be sprayed with liquid asphalt to bond it together and anchor it in place, preventing it from being scattered by wind and rain.

Liquid asphalt (thinned with kerosene) used during freezing weather shall be either rapid or medium curing, applied at a rate of 200 gallons per ton of straw (approximately 9 gallons per 1000 square feet).

Emulsified (thinned with water) used when temperatures are less severe shall be rapid curing only, applied at a rate of 150 gallons per ton of straw (approximately 7 gallons per 1000 square feet).

Jute matting or shall be used for temporary stabilization during the establishment of permanent cover on problem areas such as future grassed ditches, channels, long slopes and steep banks.

MAINTENANCE- The contractor shall maintain the seeded areas until there is a uniform growth three inches high. Maintenance shall consist of watering, weed and pest control (within established limits), fertilization, erosion repair, reseeding and all else necessary to establish a vigorous healthy and uniform stand of grass. All areas and spots which do not show a uniform stand of grass, for any reason, shall be treated repeatedly until a uniform stand is attained.

### EROISION CONTROL NOTES:

- FOR EROSION CONTROL MEASURE DETAILS AND SEDIMENT TRAP DETAILS, SEE THE EROSION CONTROL DETAIL SHEET. ALL EROSION CONTROL MEASURES SHALL BE SEEDED, MULCHED, AND ANCHORED UPON INSTALLATION.
- ON SITE BURIAL PITS ARE NOT ALLOWED.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN. GROUND COVER TO BE ESTABLISHED ON EXPOSED SLOPES AND PERIMETER AREAS WITHIN 7 CALENDAR DAYS, FOLLOWING COMPLETION OF ANY PHASE OF GRADING. PERMANENT GROUND COVER FOR ALL OTHER DISTURBED AREAS WITHIN 14 WORKING DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY THE ENGINEER.
- SLOPES SHALL BE GRADED NO STEEPER THAN 2:1.
- IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING, IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED DAILY UNTIL THE SLOPE IS BROUGHT TO GRADE.
- ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD BY THE CONTRACTOR. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY INSTALLATION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- CONTRACTOR SHALL COMPLETE ALL INSPECTION & REPORTING ACTIVITIES REQUIRED UNDER THE EROSION CONTROL PERMIT. REPORTS SHALL BE FORWARDED TO THE ENGINEER ON A MONTHLY BASIS.
- CUT AND FILL SLOPES THAT ARE (2:1) OR GREATER SHALL BE STABILIZED WITH PERMANENT SLOPE RETENTION DEVICES OR A SUITABLE COMBINATION OF PLANTINGS AND RETENTION DEVICES. SLOPES GREATER THAN (3:1) SHALL NOT BE STABILIZED WITH TURF GRASS BUT MUST BE STABILIZED WITH VEGETATION THAT REQUIRES MINIMAL MAINTENANCE. WEEPING LOVE GRASS, RED FESCUE OR OTHER APPROVED VARIETY.
- TREE PROTECTION FENCING ON THIS PROJECT WILL BE INSTALLED AND INSPECTED BEFORE THE GRADING PERMIT IS ISSUED.
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED IN BEST LOCATION BASED ON FIELD CONDITIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONSTRUCTION ENTRANCES AS NECESSARY TO PREVENT THE TRACKING OF SEDIMENT OFF-SITE.
- THE APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR AND ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.

### TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

#### SEEDING MIXTURE:

SPECIES	RATE (lb/acre)
Rye (grass)	40
German Millet	

In the Piedmont and Mountains, a small-stemmed Sudan grass may be substituted at a rate of 50 lb/acre

#### SEEDING DATES:

Mountains - May 15 - Aug. 15  
Piedmont - May 1 - Aug. 15  
Coastal Plain - Apr. 15 - Aug. 15

#### SOIL AMENDMENTS:

Follow recommendations of soil tests or apply 2000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

#### MULCH:

Apply 4000 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.

#### MAINTENANCE:

Referfertilize if growth is not fully adequate. Reseed, referfertilize and mulch immediately following erosion or other damage.

### TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER & EARLY SPRING

#### SEEDING MIXTURE:

SPECIES	RATE
Rye (grass)	120
Annual lespedeza (Kobe in Piedmont & Coastal Plain, Korean in Mountains)	50

omit annual lespedeza when duration of temporary cover is not to extend beyond June.

#### SEEDING DATES:

Mountains - Above 2500 ft.; Feb 15 - May 15  
Below 2500 ft.; Feb 1 - May 1  
Piedmont - Jan. 1 - May 1  
Coastal Plain - Dec. 1 - Apr. 15

#### SOIL AMENDMENTS:

Follow recommendations of soil tests or apply 2000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

#### MULCH:

Apply 4000 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.

#### MAINTENANCE:

Referfertilize if growth is not fully adequate. Reseed, referfertilize and mulch immediately following erosion or other damage.

### TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

#### SEEDING MIXTURE:

SPECIES	RATE (lb/acre)
Rye (grass)	120

#### SEEDING DATES:

Mountains - Aug. 15 - Dec. 15  
Coastal Plain & Piedmont - Aug. 15 - Dec. 30

#### SOIL AMENDMENTS:

Follow soil tests or apply 2000 lb/acre ground agricultural limestone and 1000 lb/acre 10-10-10 fertilizer.

#### MULCH:

Apply 4000 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.

#### MAINTENANCE:

Repair and referfertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont & Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

THE FOLLOWING NCDOT ROADWAY STANDARD DRAWINGS (ENGLISH) ARE APPLICABLE TO THESE PLANS AND ARE TO BE CONSIDERED A PART OF THESE PLANS BY REFERENCE:

300.01 PIPE INSTALLATION  
838.01 CONCRETE ENDWALL  
840.32 - BRICK JUNCTION BOX  
876.02 - RIP RAP PIPE OUTLETS  
1605.01 - TEMPORARY SILT FENCE  
1607.01 - CONSTRUCTION ENTRANCE  
1631.01 - MATTING INSTALLATION  
1633.02 - TEMP. ROCK SILT CHECK  
1635.01 - ROCK PIPE INLET SED. TRAP

## SHEET NO./TITLE

L0.1	COVER
L0.2	KEY MAP
L1.0	LAYOUT
L1.1	LAYOUT
L1.2	L&C DATA
C1.0	GRAD. & EC
C1.1	GRAD. & EC
D1.0	DETAILS
D1.1	DETAILS
D1.2	DETAILS
S1	DETAILS
S2	PLAN & DETAILS

## BID SET NO.

RECOMMENDED FOR CONSTRUCTION	
CABARRUS COUNTY	_____
N.C.D.O.T.	_____
N.C. GRADING	_____



SHEET L1.1  
SHEET C1.1

SHEET L1.0  
SHEET C1.0

**ROCKY RIVER  
GREENWAY,  
MOSS CREEK  
PHASE 2**  
CITY OF CONCORD  
CABARRUS COUNTY  
NORTH CAROLINA

SEALS:  
  
 12/10/13

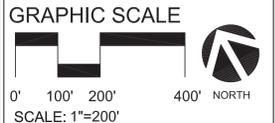
**ISSUED FOR  
BIDDING**

CLIENT:

CONSULTANTS:  
  
**STEWART**  
200 S. COLLEGE ST., STE. 720  
CHARLOTTE, NC 28202  
770-394-7965      FIRM LICENSE #: C-1051  
www.stewartinc.com  
PROJECT #: K11324.00

REVISIONS:

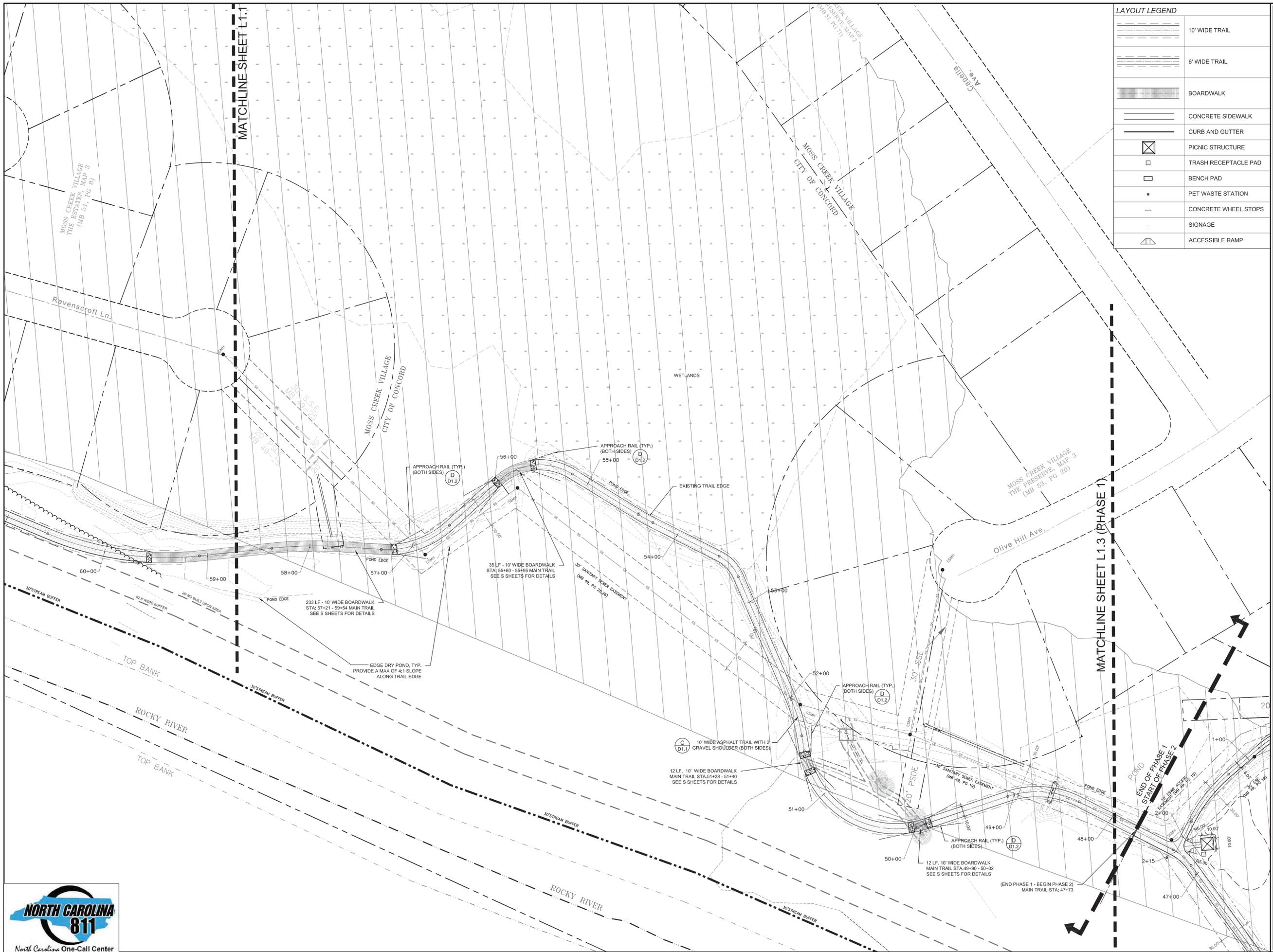
NO.	DESCRIPTION



DATE: DECEMBER 10, 2013  
 PROJECT NUMBER: K11324  
 FILE NAME: 11324 CD-X  
 DRAWN BY: CEB  
 APPROVED BY: JDO, JDW

TITLE:  
**LAYOUT PLAN**

SHEET:   L0.2



**LAYOUT LEGEND**

	10' WIDE TRAIL
	6' WIDE TRAIL
	BOARDWALK
	CONCRETE SIDEWALK
	CURB AND GUTTER
	PICNIC STRUCTURE
	TRASH RECEPTACLE PAD
	BENCH PAD
	PET WASTE STATION
	CONCRETE WHEEL STOPS
	SIGNAGE
	ACCESSIBLE RAMP

**ROCKY RIVER GREENWAY, MOSS CREEK PHASE 2**  
 CITY OF CONCORD  
 CABARRUS COUNTY  
 NORTH CAROLINA

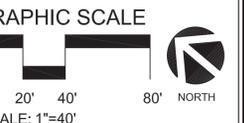
SEALS:

**ISSUED FOR BIDDING**

CLIENT:

CONSULTANTS:  
  
**STEWART**  
200 S. COLLEGE ST., STE. 720 CHARLOTTE, NC 28202 FIRM LICENSE #: C-1051 PROJECT #: K11324-00

REVISIONS:

SCALE: 1"=40'  
 DATE: DECEMBER 10, 2013  
 PROJECT NUMBER: K11324  
 FILE NAME: 11324 CD-X  
 DRAWN BY: CEB  
 APPROVED BY: JDO, JDW

TITLE:  
**LAYOUT PLAN**

SHEET: **L1.0**





**LAYOUT LEGEND**

	10' WIDE TRAIL
	6' WIDE TRAIL
	BOARDWALK
	CONCRETE SIDEWALK
	CURB AND GUTTER
	PICNIC STRUCTURE
	TRASH RECEPTACLE PAD
	BENCH PAD
	PET WASTE STATION
	CONCRETE WHEEL STOPS
	SIGNAGE
	ACCESSIBLE RAMP

NOTES:  
 1.) CONTRACTOR TO REMOVE EXISTING ENVIRONMENTAL SIGNAGE AND TURN OVER TO THE CITY FOR STORAGE AND RELOCATION

**ROCKY RIVER GREENWAY, MOSS CREEK PHASE 2**  
 CITY OF CONCORD  
 CABARRUS COUNTY  
 NORTH CAROLINA

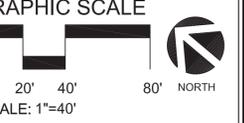
SEALS:

**ISSUED FOR BIDDING**

CLIENT:

CONSULTANTS:  
  
**STEWART**  
200 S. COLLEGE ST., STE. 720  
 CHARLOTTE, NC 28202  
 FIRM LICENSE # C-1051  
 www.stewartinc.com  
 PROJECT # K11324-00

REVISIONS:

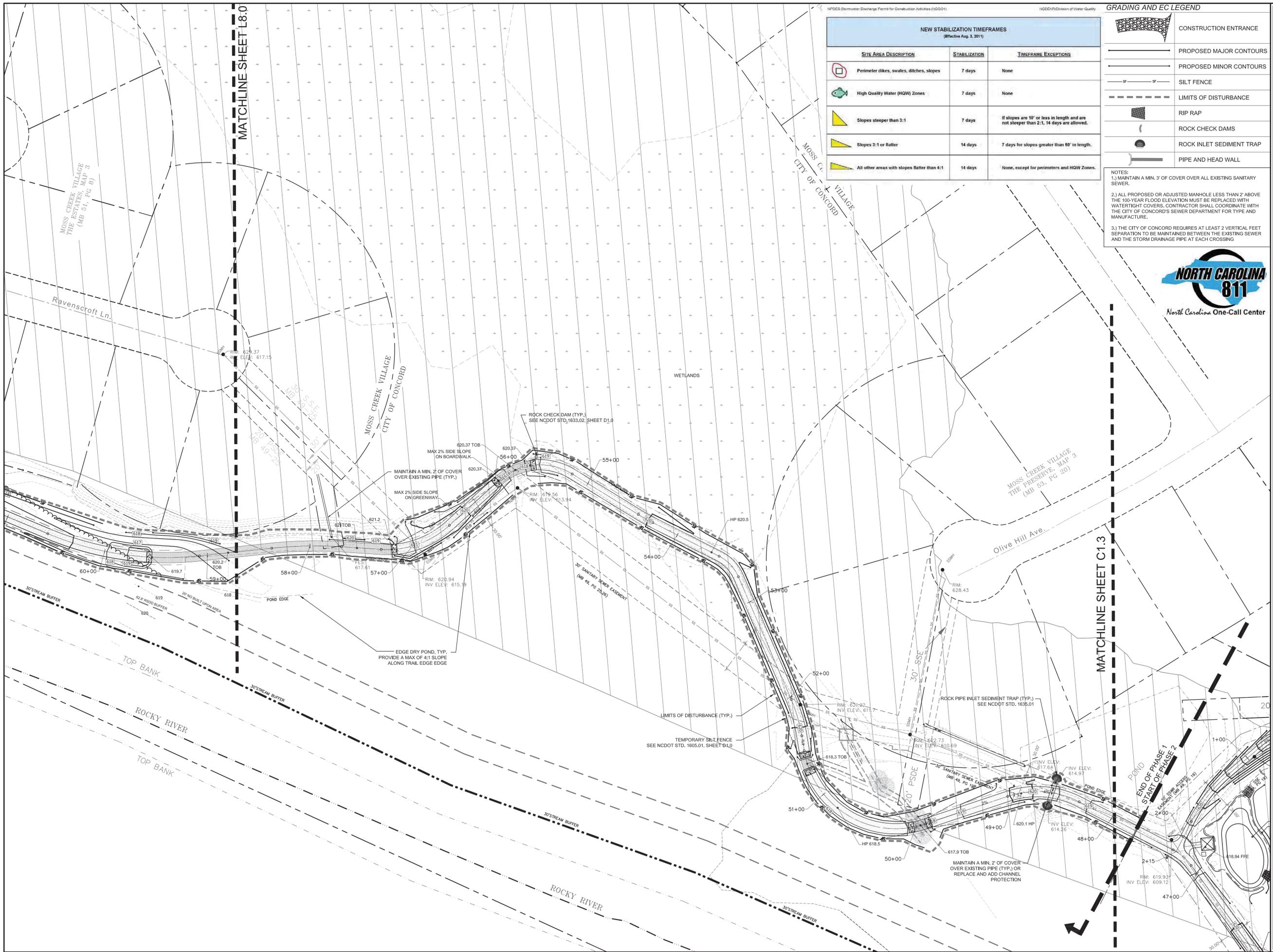



SCALE: 1"=40'  
 DATE: DECEMBER 10, 2013  
 PROJECT NUMBER: K11324  
 FILE NAME: 11324 CD-X  
 DRAWN BY: CEB  
 APPROVED BY: JDO, JDW

TITLE:  
**LAYOUT PLAN**

SHEET: **L1.1**





NEW STABILIZATION TIMEFRAMES  
(Effective Aug. 3, 2011)

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper 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 HQW Zones.

GRADING AND EC LEGEND

- CONSTRUCTION ENTRANCE
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- SILT FENCE
- LIMITS OF DISTURBANCE
- RIP RAP
- ROCK CHECK DAMS
- ROCK INLET SEDIMENT TRAP
- PIPE AND HEAD WALL

NOTES:  
 1.) MAINTAIN A MIN. 3' OF COVER OVER ALL EXISTING SANITARY SEWER.  
 2.) ALL PROPOSED OR ADJUSTED MANHOLE LESS THAN 2' ABOVE THE 100-YEAR FLOOD ELEVATION MUST BE REPLACED WITH WATER-TIGHT COVERS. CONTRACTOR SHALL COORDINATE WITH THE CITY OF CONCORD'S SEWER DEPARTMENT FOR TYPE AND MANUFACTURE.  
 3.) THE CITY OF CONCORD REQUIRES AT LEAST 2 VERTICAL FEET SEPARATION TO BE MAINTAINED BETWEEN THE EXISTING SEWER AND THE STORM DRAINAGE PIPE AT EACH CROSSING



**ROCKY RIVER GREENWAY, MOSS CREEK PHASE 2**  
 CITY OF CONCORD  
 CABARRUS COUNTY  
 NORTH CAROLINA

SEALS:

12/10/13

CLIENT:

CONSULTANTS:

**STEWART**  
 200 S. COLLEGE ST., STE. 720  
 CHARLOTTE, NC 28202  
 7704.334.7626

FIRM LICENSE #: C-1051  
 www.stewartinc.com  
 PROJECT #: K11324.00

**ISSUED FOR BIDDING**

REVISIONS:

NO.	DESCRIPTION

GRAPHIC SCALE

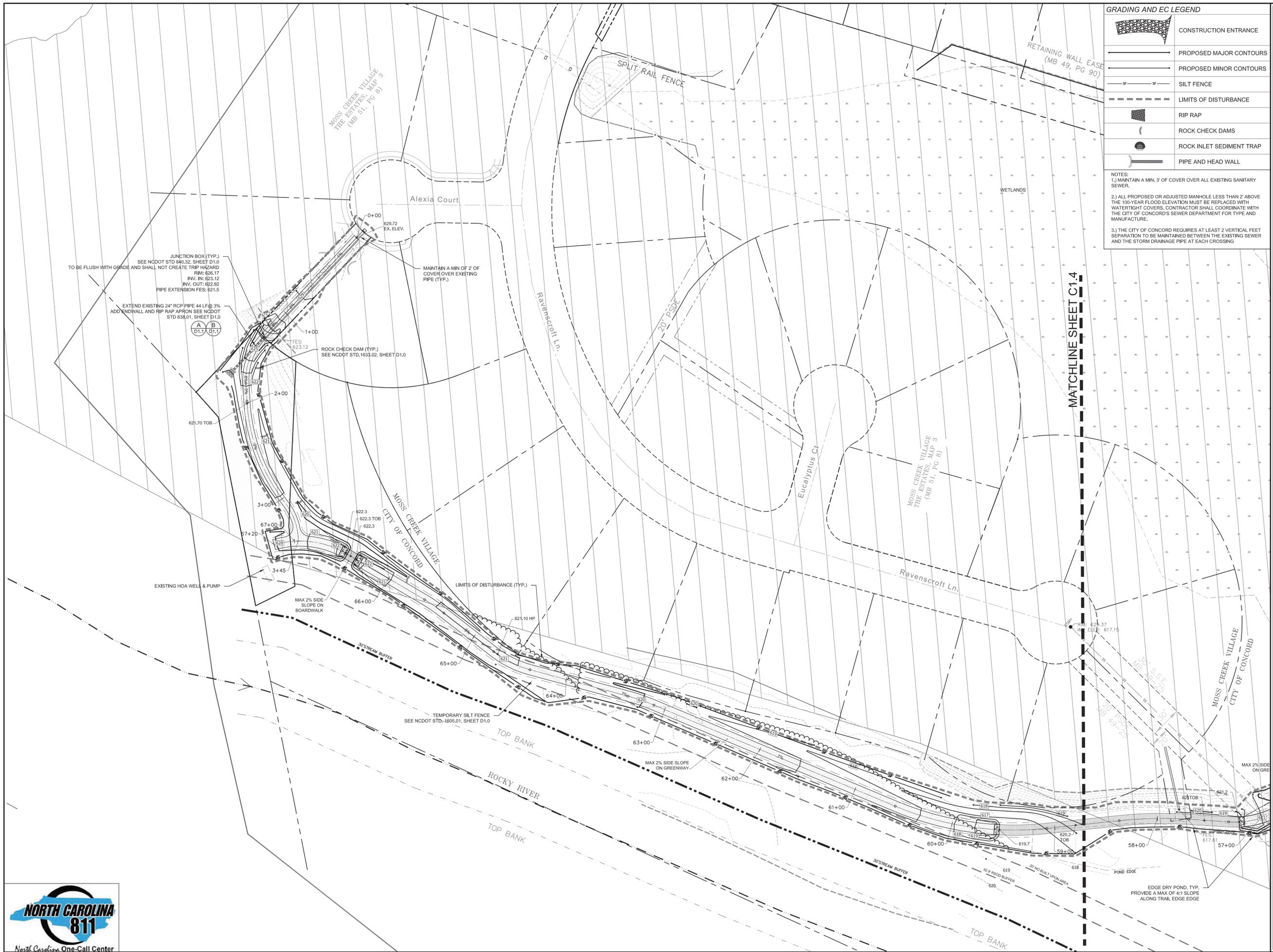
0' 20' 40' 80' NORTH

SCALE: 1"=40'

DATE: DECEMBER 10, 2013  
 PROJECT NUMBER: K11324  
 FILE NAME: 11324 CD-X  
 DRAWN BY: CEB  
 APPROVED BY: JDO, JDW

TITLE:  
**GRADING AND EROSION CONTROL PLAN**

SHEET: **C1.0**



**GRADING AND EC LEGEND**

	CONSTRUCTION ENTRANCE
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	SILT FENCE
	LIMITS OF DISTURBANCE
	RIP RAP
	ROCK CHECK DAMS
	ROCK INLET SEDIMENT TRAP
	PIPE AND HEAD WALL

**NOTES:**  
 1.) MAINTAIN A MIN. 3' OF COVER OVER ALL EXISTING SANITARY SEWER.  
 2.) ALL PROPOSED OR ADJUSTED MANHOLE LESS THAN 2' ABOVE THE 100-YEAR FLOOD ELEVATION MUST BE REPLACED WITH WATERTIGHT COVERS. CONTRACTOR SHALL COORDINATE WITH THE CITY OF CONCORD'S SEWER DEPARTMENT FOR TYPE AND MANUFACTURE.  
 3.) THE CITY OF CONCORD REQUIRES AT LEAST 2 VERTICAL FEET SEPARATION TO BE MAINTAINED BETWEEN THE EXISTING SEWER AND THE STORM DRAINAGE PIPE AT EACH CROSSING

**ROCKY RIVER GREENWAY, MOSS CREEK PHASE 2**  
 CITY OF CONCORD  
 CABARRUS COUNTY  
 NORTH CAROLINA

SEALS:

12/10/13

**ISSUED FOR BIDDING**

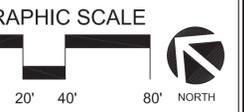
CLIENT:

CONCORD NORTH CAROLINA High Performance Living

CONSULTANTS:

**STEWART**  
 200 S. COLLEGE ST., STE. 720 CHARLOTTE, NC 28202 FIRM LICENSE # C-1051 PROJECT # 111324-00

REVISIONS:

SCALE: 1"=40'  
 DATE: DECEMBER 10, 2013  
 PROJECT NUMBER: K11324  
 FILE NAME: 11324 CD-X  
 DRAWN BY: CEB  
 APPROVED BY: JDO, JDW

**GRADING AND EROSION CONTROL PLAN**

SHEET:   C1.1  



ROCKY RIVER  
GREENWAY,  
MOSS CREEK  
PHASE 2  
CITY OF CONCORD  
CABARRUS COUNTY  
NORTH CAROLINA

SEALS:



12/10/13

ISSUED FOR  
BIDDING

CLIENT:



CONSULTANTS:



STEWART

200 S. COLLEGE ST., STE. 720  
CHARLOTTE, NC 28202  
770-334-7626

FIRM LICENSE # C-1051  
www.stewartinc.com  
PROJECT # K11324-00

REVISIONS:

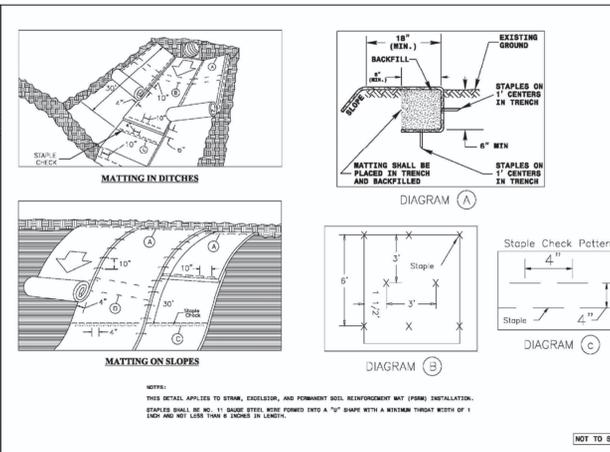
SCALE: VARIES  
DATE: DECEMBER 10, 2013  
PROJECT NUMBER: K11324  
FILE NAME: 11324 CD-DETAILS  
DRAWN BY: CEB  
APPROVED BY: JDO, JDW

TITLE:

DETAILS

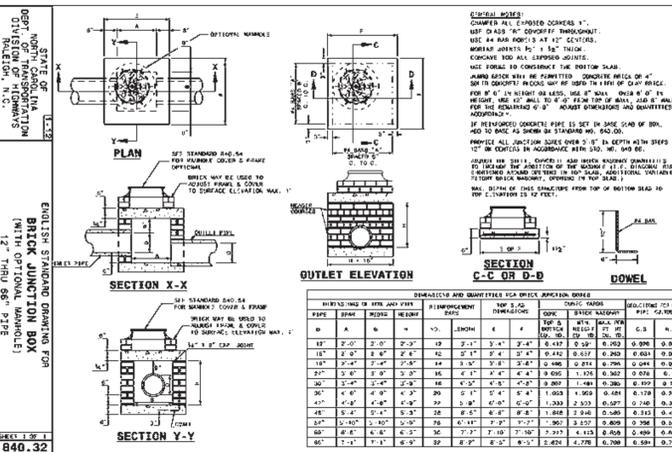
SHEET: D1.0

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



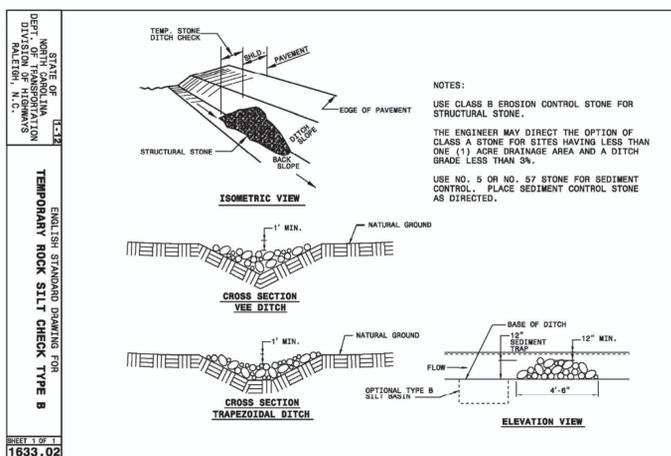
ENGLISH STANDARD DRAWING FOR  
MATTING INSTALLATION  
SHEET 1 OF 1  
1631.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



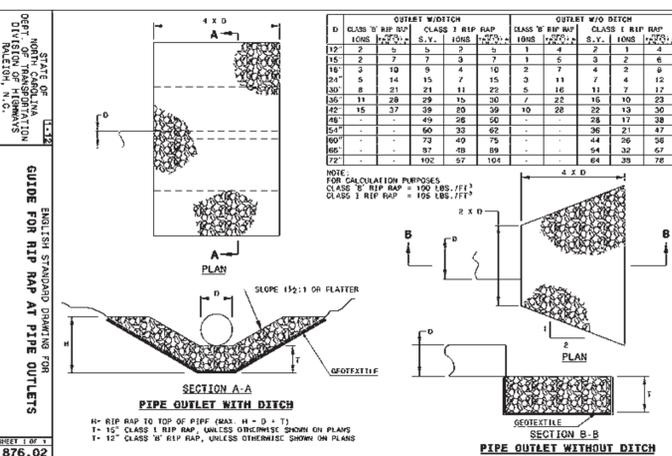
ENGLISH STANDARD DRAWING FOR  
BRICK JUNCTION BOX  
(WITH OPTIONAL MANHOLE)  
12" THRU 66" PIPE  
SHEET 1 OF 1  
840.32

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



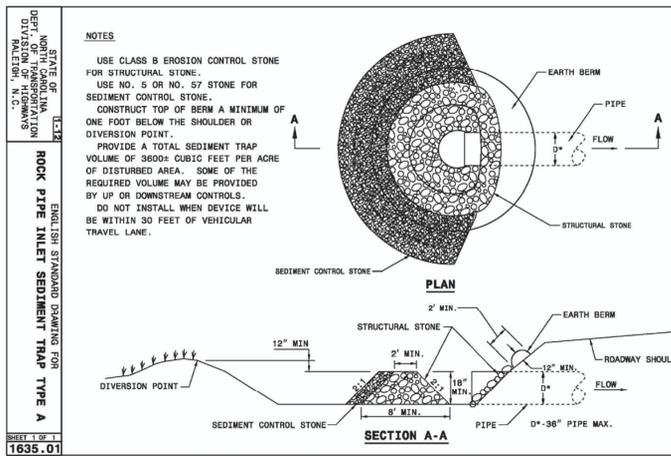
ENGLISH STANDARD DRAWING FOR  
TEMPORARY ROCK SILT CHECK TYPE B  
SHEET 1 OF 1  
1633.02

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



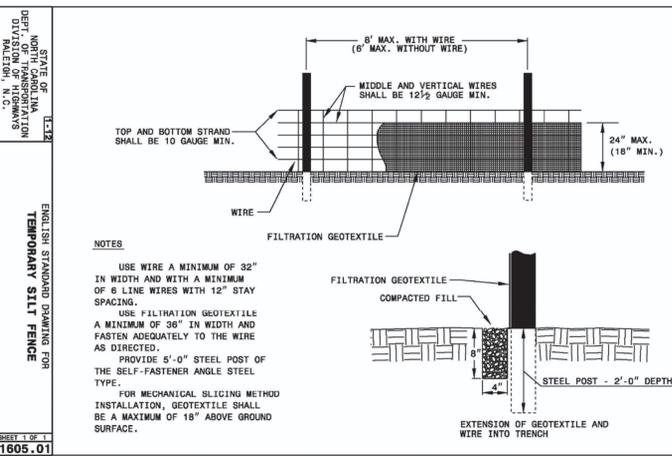
ENGLISH STANDARD DRAWING FOR  
GUIDE FOR RIP RAP AT PIPE OUTLETS  
SHEET 1 OF 1  
876.02

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



ENGLISH STANDARD DRAWING FOR  
ROCK PIPE INLET SEDIMENT TRAP TYPE A  
SHEET 1 OF 1  
1635.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



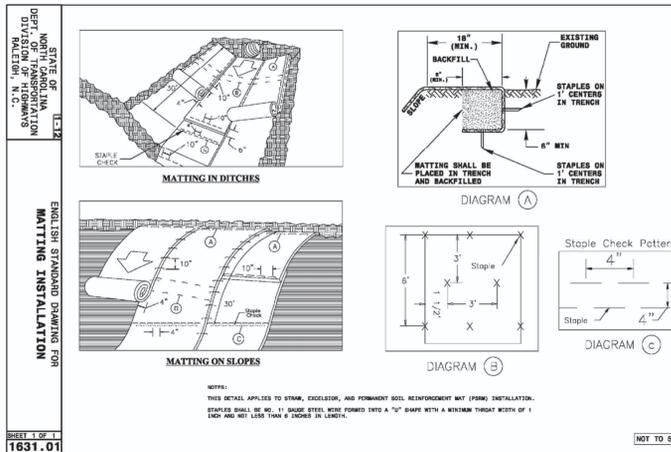
ENGLISH STANDARD DRAWING FOR  
TEMPORARY SILT FENCE  
SHEET 1 OF 1  
1605.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



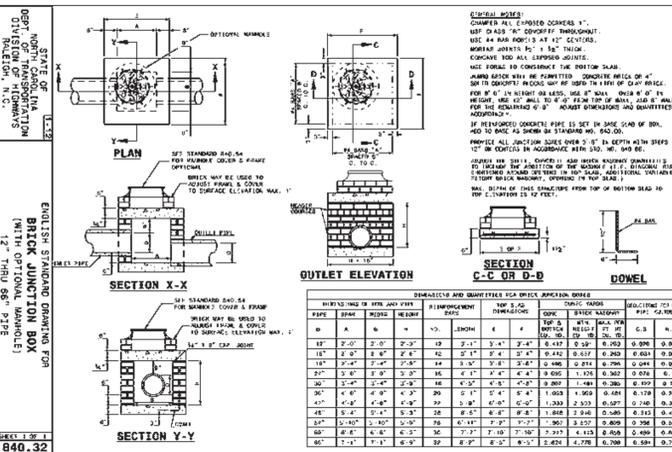
ENGLISH STANDARD DRAWING FOR  
GRAVEL CONSTRUCTION ENTRANCE  
SHEET 1 OF 1  
1607.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



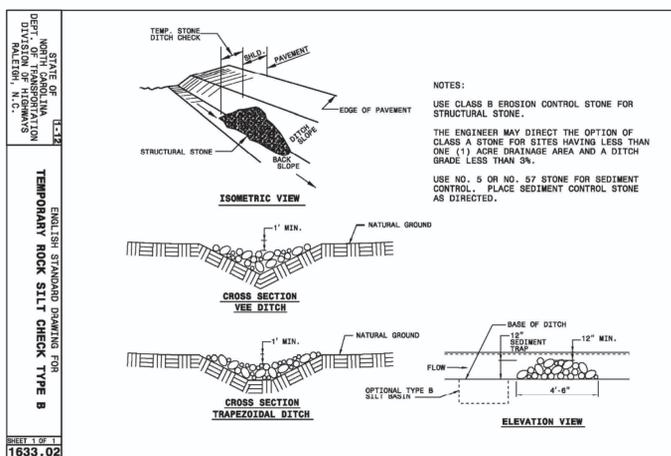
ENGLISH STANDARD DRAWING FOR  
METHOD OF PIPE INSTALLATION  
FLEXIBLE PIPE  
SHEET 1 OF 3  
300.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



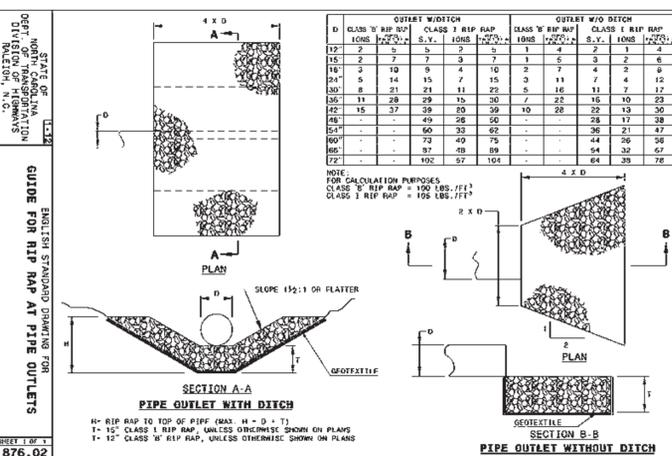
ENGLISH STANDARD DRAWING FOR  
METHOD OF PIPE INSTALLATION  
RIGID PIPE  
SHEET 1 OF 3  
300.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



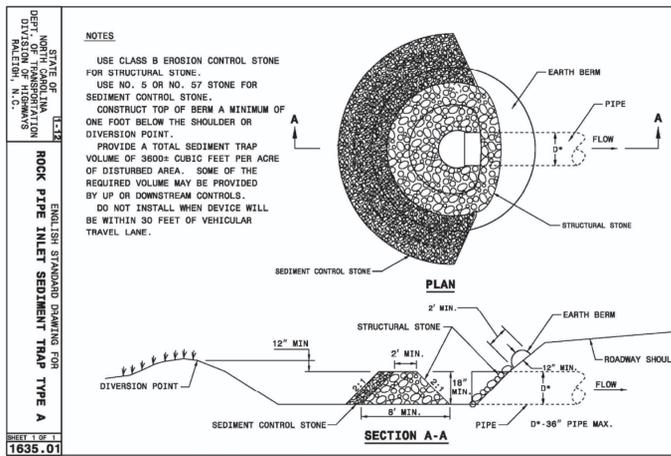
ENGLISH STANDARD DRAWING FOR  
CONCRETE ENDWALL FOR SINGLE  
AND DOUBLE PIPE CULVERTS  
15" THRU 48" PIPE - 90° SKEW  
SHEET 1 OF 3  
838.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



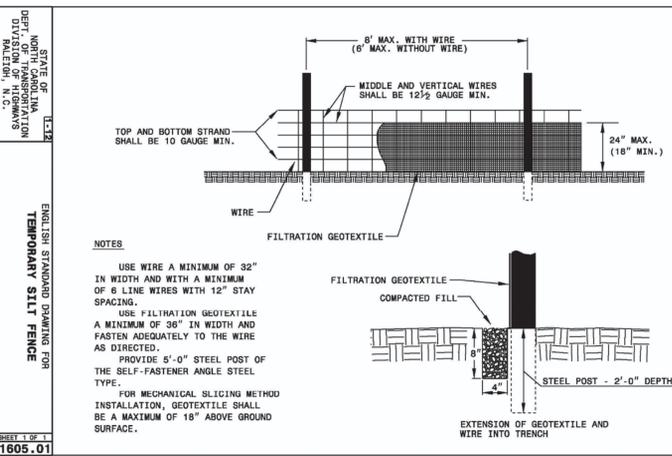
ENGLISH STANDARD DRAWING FOR  
CONCRETE ENDWALL FOR SINGLE  
AND DOUBLE PIPE CULVERTS  
15" THRU 48" PIPE - 90° SKEW  
SHEET 2 OF 3  
838.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



ENGLISH STANDARD DRAWING FOR  
CONCRETE ENDWALL FOR SINGLE  
AND DOUBLE PIPE CULVERTS  
15" THRU 48" PIPE - 90° SKEW  
SHEET 3 OF 3  
838.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



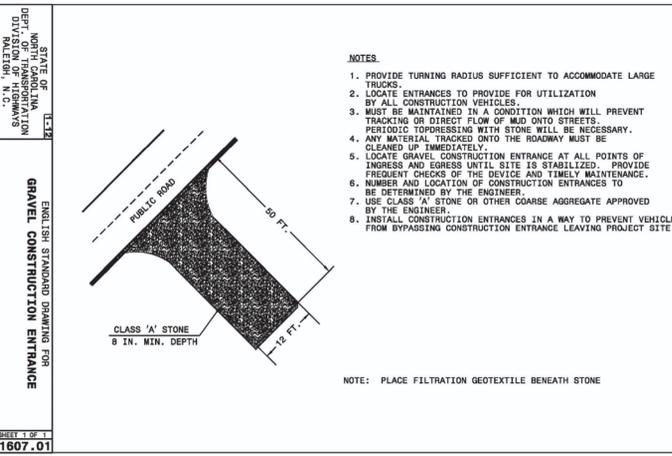
ENGLISH STANDARD DRAWING FOR  
CONCRETE ENDWALL FOR SINGLE  
AND DOUBLE PIPE CULVERTS  
15" THRU 48" PIPE - 90° SKEW  
SHEET 3 OF 3  
838.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

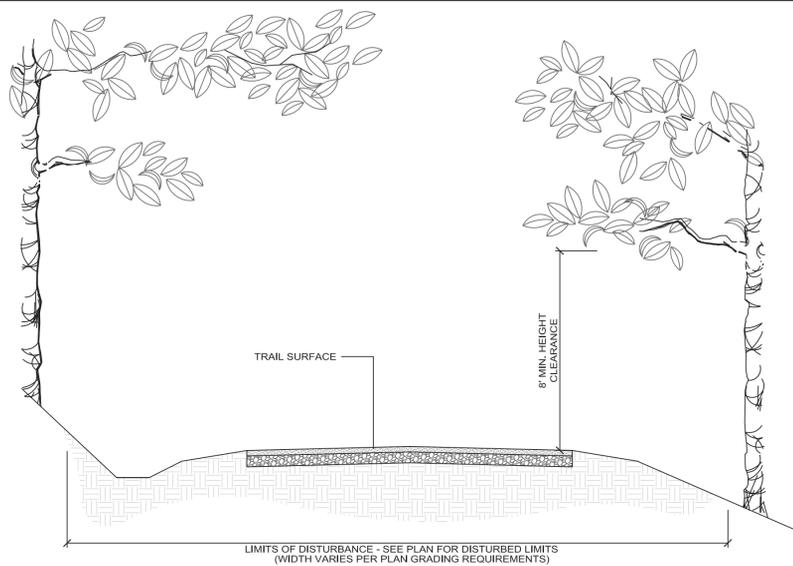


ENGLISH STANDARD DRAWING FOR  
CONCRETE ENDWALL FOR SINGLE  
AND DOUBLE PIPE CULVERTS  
15" THRU 48" PIPE - 90° SKEW  
SHEET 3 OF 3  
838.01

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



ENGLISH STANDARD DRAWING FOR  
CONCRETE ENDWALL FOR SINGLE  
AND DOUBLE PIPE CULVERTS  
15" THRU 48" PIPE - 90° SKEW  
SHEET 3 OF 3  
838.01



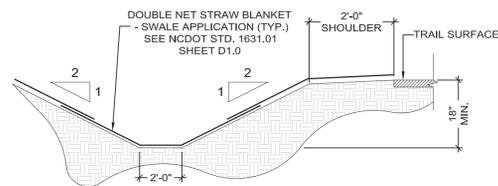
**NOTES:**

1. THIS DETAIL IS INTENDED FOR VEGETATIVE CLEARING ONLY. SEE ADDITIONAL DETAILS FOR INFORMATION REGARDING TRAIL CONSTRUCTION.
2. CONTRACTOR TO REMOVE THE FOLLOWING VEGETATION LOCATED WITHIN THE LIMITS OF DISTURBANCE (APPROX. 20' WIDTH): GRASSES, GROUNDCOVERS, SHRUBS, SAPLINGS, AND TREES WITH A CALIPER OF LESS THAN 4". VEGETATION SHALL BE CUT BACK FLUSH TO GROUND. TREES WITH A CALIPER OF 4" OR GREATER ARE TO REMAIN IF POSSIBLE. CONTRACTOR TO REMOVE LOWER LIMBS AND/OR HANGING BRANCHES WITHIN THE LIMITS OF DISTURBANCE TO PROVIDE THE APPROPRIATE HEIGHT CLEARANCE AS SHOWN ABOVE.
3. THE CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS TO EXISTING GRADE UNLESS SHOWN OTHERWISE IN THE PLANS.
4. ALL DISTURBED AREAS TO BE SEEDED.

**A TRAIL CLEARING AND GRUBBING**

NOT TO SCALE

SOURCE: STEWART



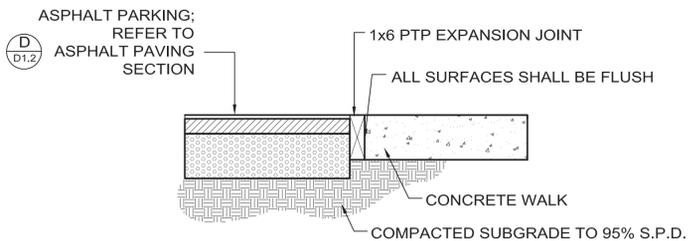
**NOTES:**

1. ALL DISTURBED AREAS ARE TO BE SEEDED, STRAWED, AND STABILIZED. ADDITIONAL EROSION CONTROL MEASURES MAY BE DEEMED NECESSARY UPON SITE INSPECTION.
2. SEE PLANS FOR SWALE LOCATIONS AND DRAINAGE DIRECTION.
3. MINIMUM SWALE SLOPE SHALL BE 1%.
4. IN AREAS WHERE NO TAIL DITCH IS INDICATED ON PLANS, THE CONTRACTOR SHALL GRADE SHOULDERS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE TRAIL.

**B TYPICAL SWALE / DITCH SECTION**

NOT TO SCALE

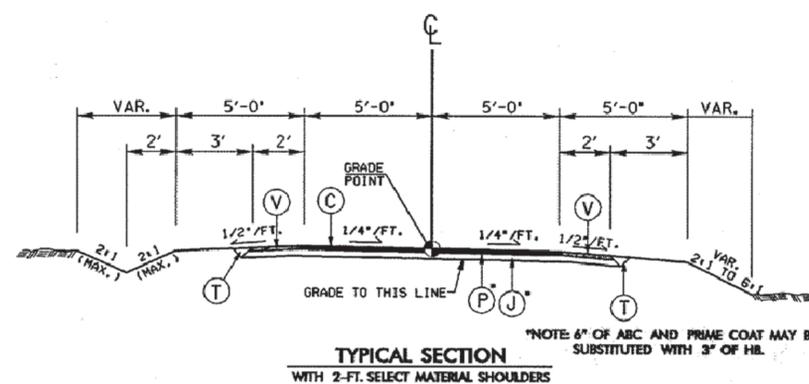
SOURCE: STEWART



**D CONCRETE TO ASPHALT TRANSITION**

SCALE: 1"=1'-0"

SOURCE: STEWART



PAVEMENT SCHEDULE	
C	PROP. APPROX. 3" BIT. CONC. SURFACE COURSE, TYPE SF 9.5 A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
J	PROP. 6" AGGREGATE BASE COURSE.
P	PRIME COAT AT THE RATE OF 0.35 GAL. PER SQ. YD.
T	EARTH MATERIAL
V	PROPOSED APPROXIMATE 2" OF SELECT GRANULAR MATERIAL.

**C TYPICAL ASPHALT TRAIL DETAIL**

NTS

**ROCKY RIVER  
GREENWAY,  
MOSS CREEK  
PHASE 2**  
CITY OF CONCORD  
CABARRUS COUNTY  
NORTH CAROLINA

SEALS:



12/10/13

**ISSUED FOR  
BIDDING**

CLIENT:



CONSULTANTS:



**STEWART**

200 S. COLLEGE ST., STE. 720  
CHARLOTTE, NC 28202  
F: 704.334.7925

FIRM LICENSE # C-1051  
www.stewartinc.com  
PROJECT # K11324-09

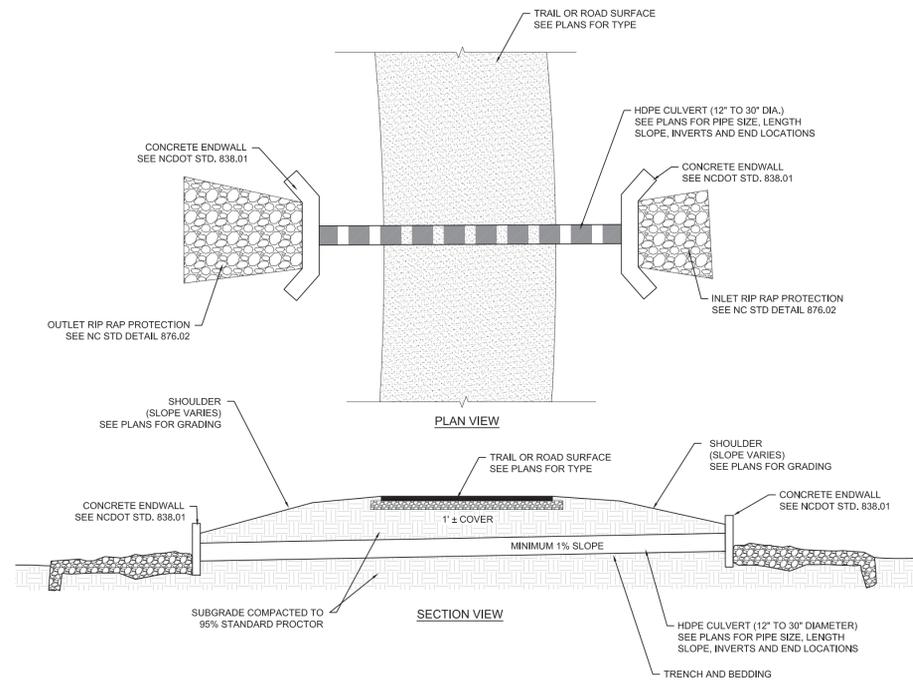
REVISIONS:

SCALE: VARIES  
DATE: DECEMBER 10, 2013  
PROJECT NUMBER: K11324  
FILE NAME: 11324 CD-DETAILS  
DRAWN BY: CEB  
APPROVED BY: JDO, JDW

TITLE:

**DETAILS**

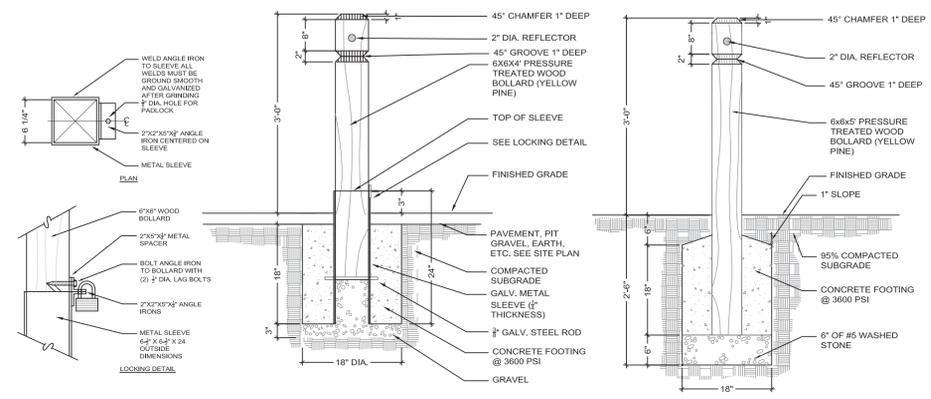
SHEET:  D1.1



NOTES:  
 1. PIPE LENGTH VARIES. SEE PLANS FOR APPROXIMATE LENGTH.  
 2. HDPE PIPE TO BE ADS N-12 WITH SOIL TIGHT JOINTS (ASTM 2648) OR APPROVED EQUAL. HANCOR 'MEGA GREEN' (N-12 ST 1B) WITH 40% RECYCLED CONTENT IS RECOMMENDED.  
 3. CONTRACTOR IS TO MAINTAIN 1 FOOT MINIMUM COVER IN ROADWAYS.

**A** TRAIL AND ROADWAY CULVERT (12" - 30" PIPE)  
 NOT TO SCALE

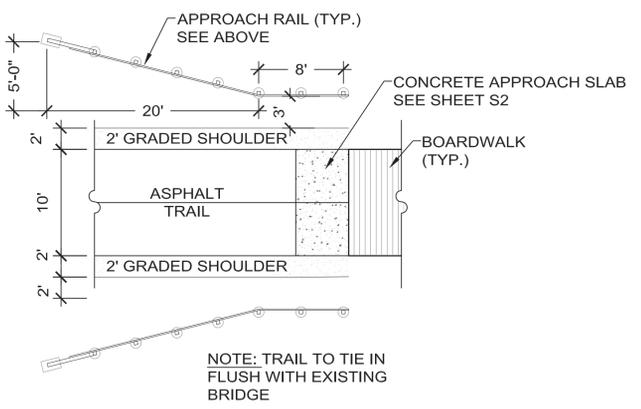
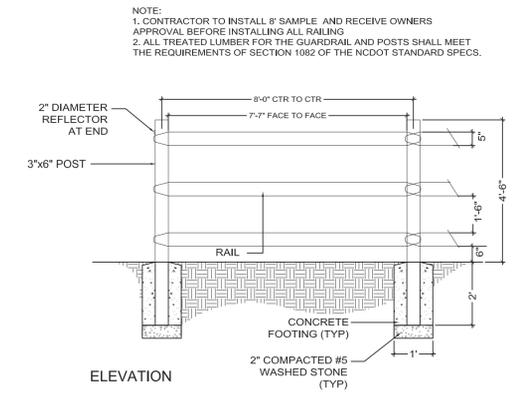
SOURCE: STEWART



NOTES:  
 1. ALL METAL COMPONENTS ARE TO BE FABRICATED, GROUND SMOOTH AND HOT-DIPPED GALVANIZED.  
 2. ALL METAL COMPONENTS MUST HAVE A SMOOTH FINISHED, GALVANIZED SURFACE.  
 3. SPACER AND ANGLE IRON TO BE FLUSH, MOUNTED AT CENTER OF BOLLARD.  
 4. HOLES FOR PADLOCK MUST LINE UP WHEN BOLLARD IS INSERTED INTO SLEEVE.  
 5. SLEEVE SHALL BE INSTALLED SUCH THAT LOCK IS ON SIDE TOWARDS ENTRANCE.

**C** BOLLARDS  
 NTS

SOURCE: STEWART



**D** APPROACH RAILS  
 SCALE: 1/8" = 1' 0"

SOURCE: STEWART

ROCKY RIVER  
 GREENWAY,  
 MOSS CREEK  
 PHASE 2  
 CITY OF CONCORD  
 CABARRUS COUNTY  
 NORTH CAROLINA

SEALS:  
  
 12/10/13

ISSUED FOR  
 BIDDING



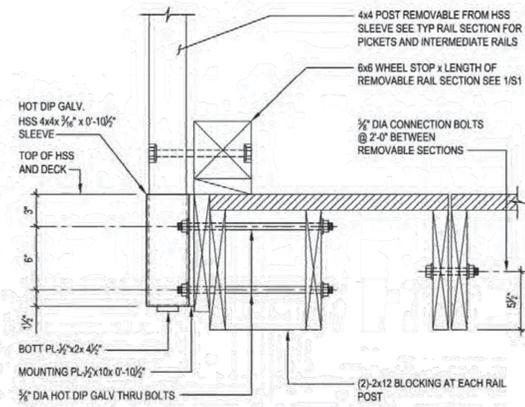
CONSULTANTS:  
  
**STEWART**  
 200 S. COLLEGE ST., STE. 720 FIRM LICENSE # C-1051  
 CHARLOTTE, NC 28202 www.stewartinc.com  
 T.704.334.7925 PROJECT # K11324.00

REVISIONS:

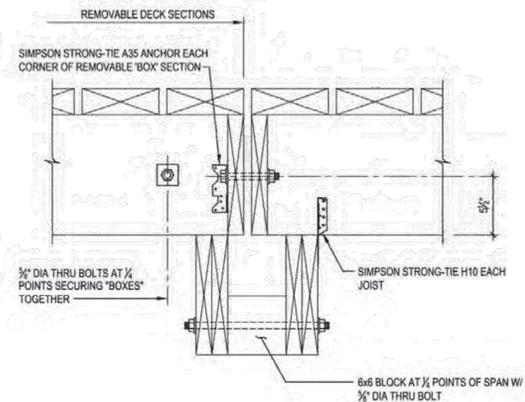
SCALE: VARIES  
 DATE: DECEMBER 10, 2013  
 PROJECT NUMBER: K11324  
 FILE NAME: 11324 CD-DETAILS  
 DRAWN BY: CEB  
 APPROVED BY: JDO, JDW

TITLE:  
 DETAILS

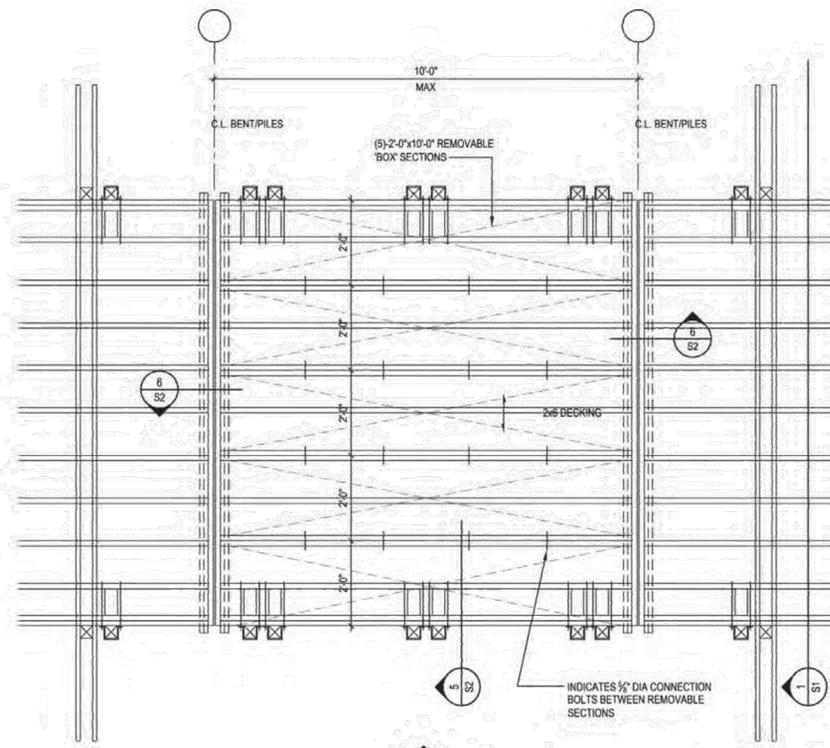
SHEET:  D1.2



**5 SECTION**  
1 1/2" = 1'-0"  
Dwg # 120348-S7021.dwg

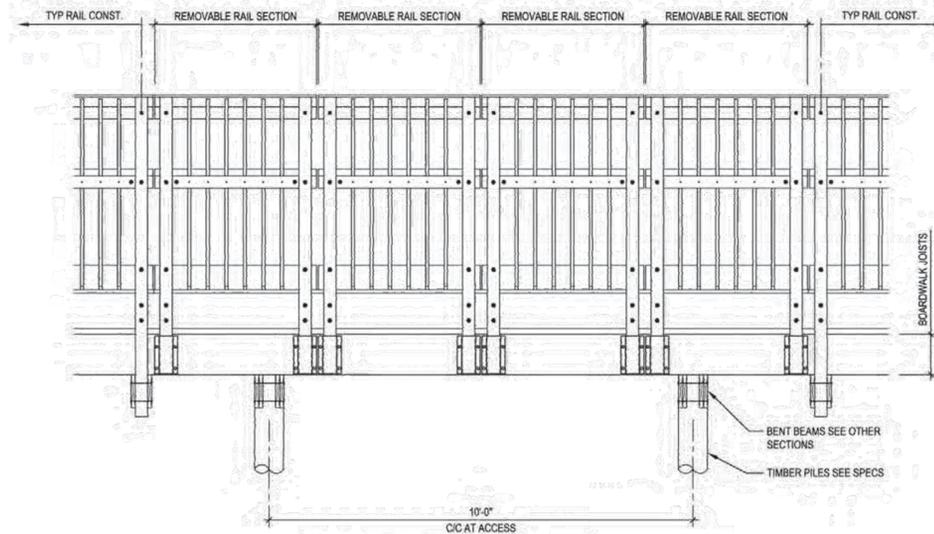


**6 SECTION**  
1 1/2" = 1'-0"  
Dwg # 120348-S7021.dwg



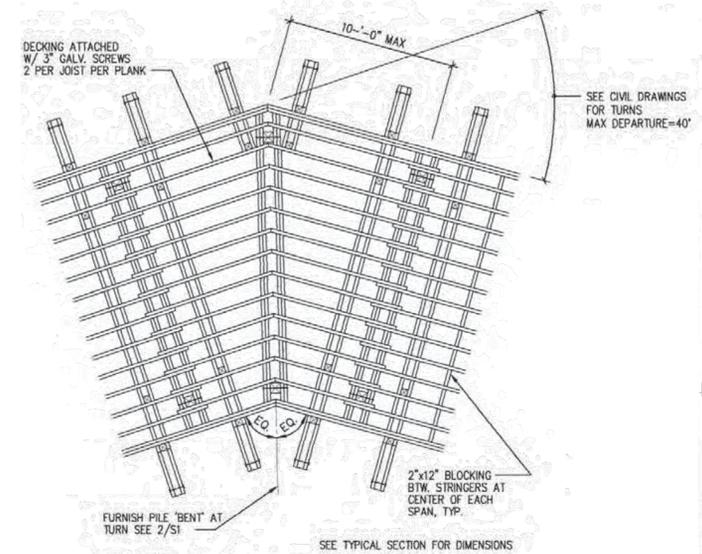
**PARTIAL PLAN AT ACCESS**

1/2" = 1'-0"  
Dwg # 120348-S7020.dwg

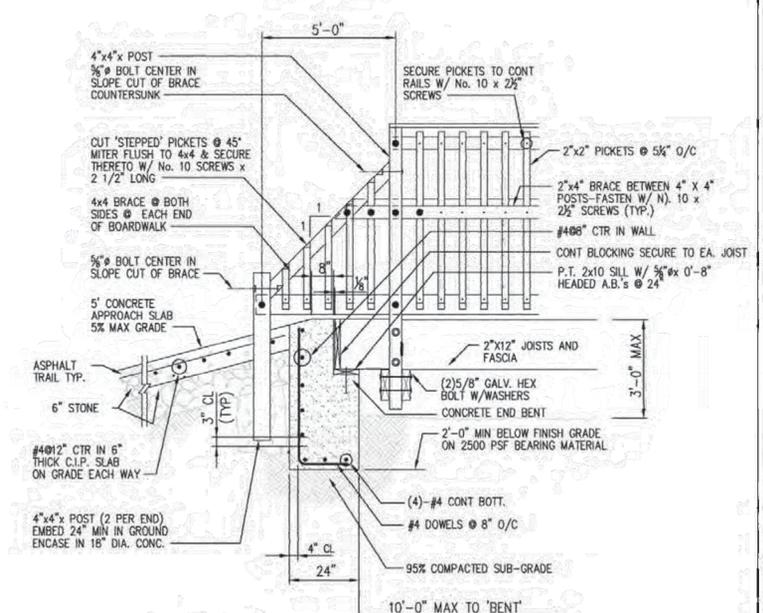


**3 PARTIAL ELEVATION AT ACCESS**

1/2" = 1'-0"  
Dwg # 120348-S7020.dwg



**1 PLAN @ BOARDWALK TURN**  
NTS  
Dwg # 120348-S7004.dwg



**2 BOARDWALK TRANSITION TO GRADE**  
NTS  
Dwg # 120348-S7006.dwg



ROCKY RIVER  
GREENWAY,  
MOSS CREEK  
PHASE 2  
CITY OF CONCORD  
CABARRUS COUNTY  
NORTH CAROLINA



ISSUED FOR  
BIDDING



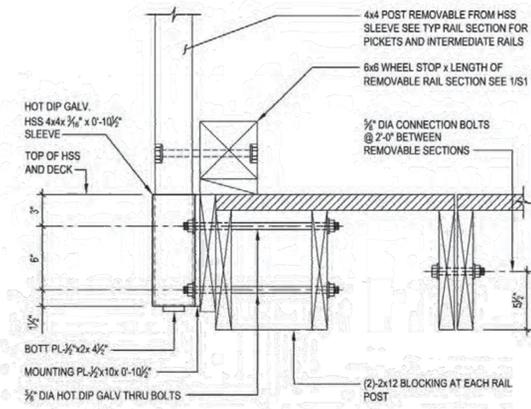
REVISIONS:

NO.	DATE	DESCRIPTION

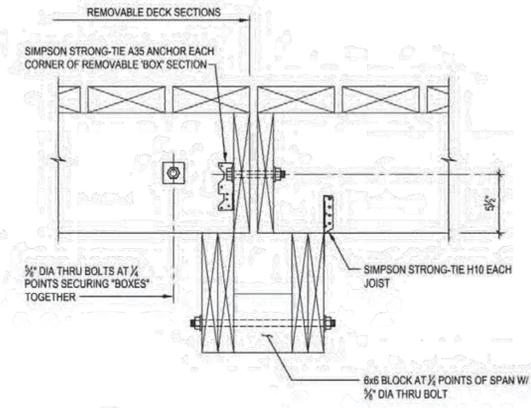
SCALE: VARIES  
DATE: DECEMBER 10, 2013  
PROJECT NUMBER: K11324  
FILE NAME: 11324 CD-DETAILS  
DRAWN BY: CEB  
APPROVED BY: JDO, JDW

TITLE:  
**DETAILS**

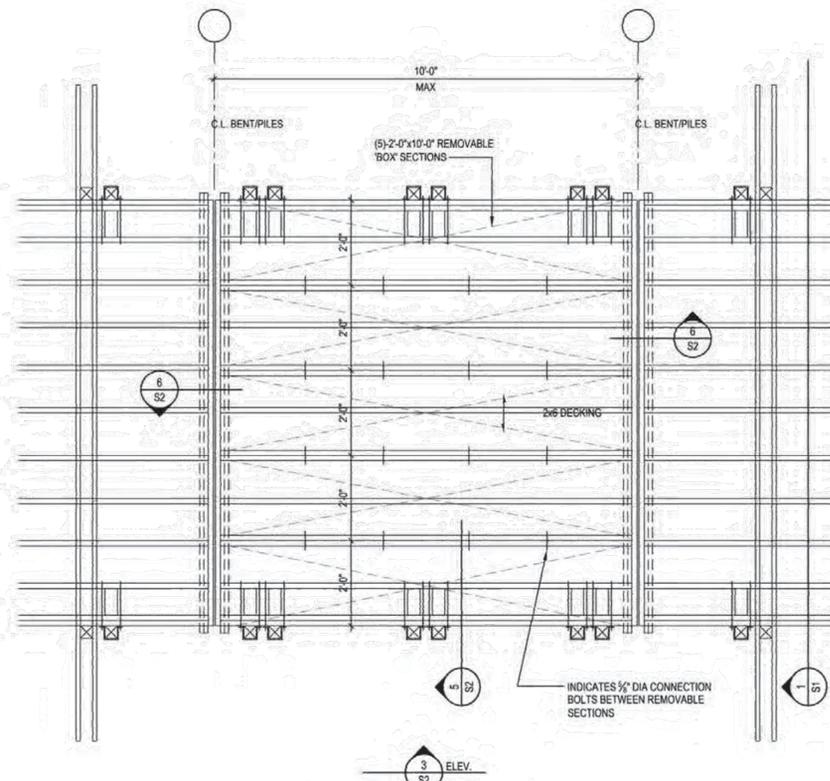
SHEET: **S1**



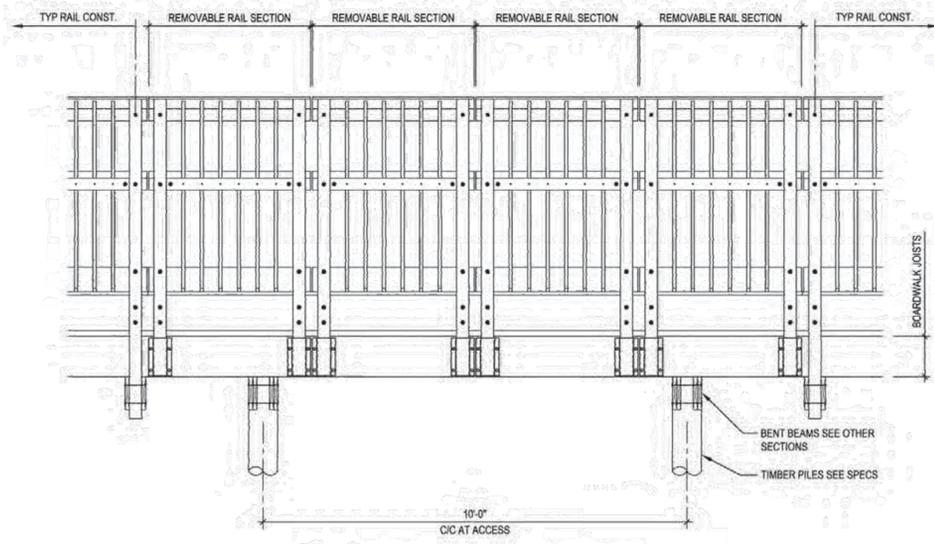
**5 SECTION**  
1 1/2" = 1'-0"  
Dwg # 120348-S7021.dwg



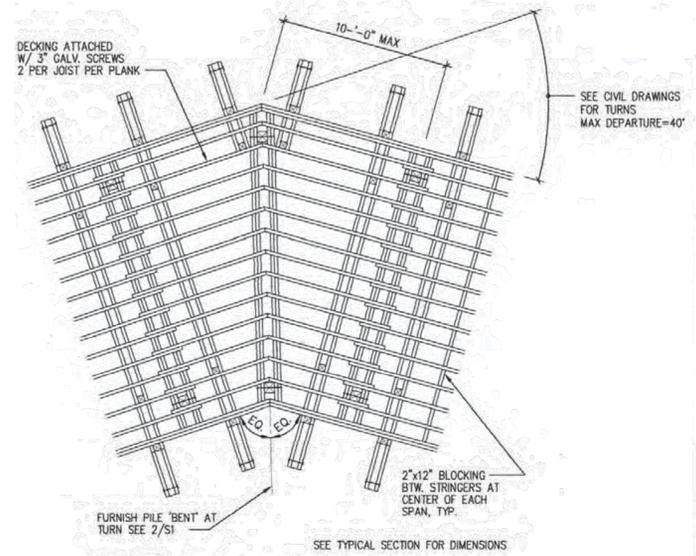
**6 SECTION**  
1 1/2" = 1'-0"  
Dwg # 120348-S7021.dwg



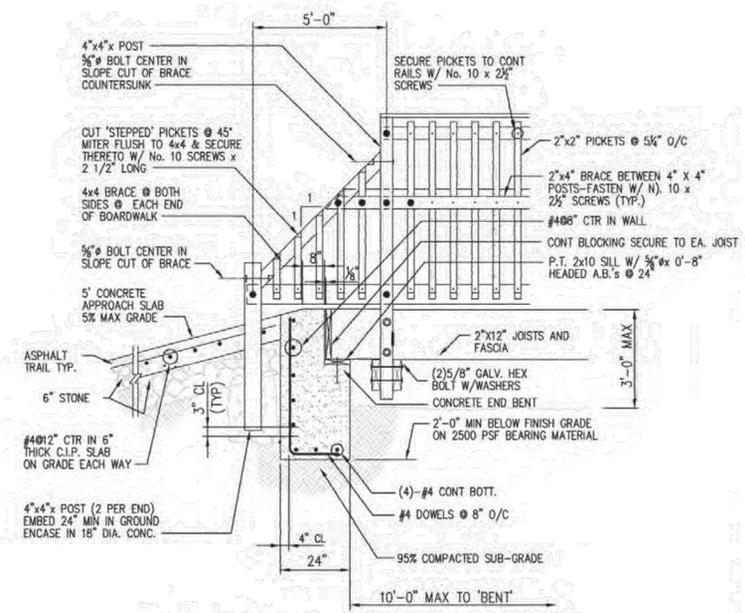
**PARTIAL PLAN AT ACCESS**  
1/2" = 1'-0"  
Dwg # 120348-S7020.dwg



**3 PARTIAL ELEVATION AT ACCESS**  
1/2" = 1'-0"  
Dwg # 120348-S7020.dwg



**1 PLAN @ BOARDWALK TURN**  
NTS  
Dwg # 120348-S7004.dwg



**2 BOARDWALK TRANSITION TO GRADE**  
NTS  
Dwg # 120348-S7006.dwg



ROCKY RIVER  
GREENWAY,  
MOSS CREEK  
PHASE 2  
CITY OF CONCORD  
CABARRUS COUNTY  
NORTH CAROLINA



ISSUED FOR  
BIDDING



REVISIONS:

SCALE: VARIES  
DATE: DECEMBER 10, 2013  
PROJECT NUMBER: K11324  
FILE NAME: 11324 CD-DETAILS  
DRAWN BY: CEB  
APPROVED BY: JDO, JDW

TITLE:  
PLANS AND DETAILS

SHEET: S2

J:\CAD DATA\Projects\11324 Rocky River Greenway CDs\Drawings\Construction Documents\FINAL DRAWINGS\Phase 2\DATA TABLES\_PRESENTATION\_DUMB\_2\_ConstSetPhase2.dwg Dec 12, 2013 - 12:15pm

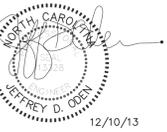
MAIN TRAIL					
Number	Length	Radius	Line/Chord	Direction	A Value
C22	71.457	90.000	N35° 41'	30.04°W	
C23	155.589	90.000	N8° 53'	44.01°W	
C24	36.630	150.000	N33° 38'	03.28°E	
C25	27.817	40.000	N6° 42'	58.64°E	
C26	16.072	200.000	N10° 54'	13.50°W	
C27	77.027	60.000	N45° 22'	45.78°W	
C28	71.967	90.000	N59° 14'	57.52°W	
C29	67.594	400.000	N41° 10'	57.02°W	
C30	150.092	300.000	N31° 41'	26.99°W	
C31	26.504	200.000	N21° 09'	16.25°W	
C32	39.489	100.000	N13° 38'	17.15°W	
C33	22.768	157.133	N5° 22'	33.31°W	
C34	72.952	89.959	N38° 50'	10.72°W	
C35	77.458	120.000	S38° 00'	55.96°W	
L38	102.111		N32° 57'	44.09°W	
L39	84.318		N58° 25'	15.99°W	
L40	14.609		N40° 37'	47.97°E	
L41	129.045		N26° 38'	18.44°E	
L42	72.077		N13° 12'	21.17°W	
L43	75.120		N8° 36'	05.83°W	
L44	64.012		N82° 09'	25.73°W	
L45	38.720		N36° 20'	29.30°W	
L46	70.548		N46° 01'	24.73°W	
L47	253.519		N17° 21'	29.25°W	
L48	98.546		N24° 57'	03.25°W	
L49	68.954		N2° 19'	31.05°W	
L50	87.577		N9° 36'	34.61°W	

ACCESS TRAIL 4					
Number	Length	Radius	Line/Chord	Direction	A Value
C65	48.799	60.000	S70° 07'	09.55°W	
C66	106.720	175.000	S29° 20'	56.50°W	
C67	39.648	60.000	S30° 48'	34.02°W	
L68	132.267		N86° 34'	50.56°W	
L69	17.149		S46° 49'	09.66°W	



**ROCKY RIVER  
GREENWAY,  
MOSS CREEK  
PHASE 2**  
CITY OF CONCORD  
CABARRUS COUNTY  
NORTH CAROLINA

SEALS:



**ISSUED FOR  
BIDDING**

CLIENT:



CONSULTANTS:



**STEWART**

200 S. COLLEGE ST., STE. 720 FIRM LICENSE # C-1051  
CHARLOTTE, NC 28202 www.stewarteng.com  
PROJECT # K11324.00

REVISIONS:

NO.	DATE	DESCRIPTION



SCALE: 1"=40'  
DATE: DECEMBER 10, 2013  
PROJECT NUMBER: 11324  
FILE NAME: 11324 CD-X  
DRAWN BY: CEB  
APPROVED BY: KPA, JDW

TITLE:  
**LINE AND CURVE  
DATA SHEET  
(PHASE 2)**

SHEET:   L1.2