

*Review of
Erosion and Sedimentation Program
Delegation to the North Carolina Department
Of Transportation, Division of Highways*

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INTRODUCTION

The Land Quality Section reviewed the program delegation to the North Carolina Department of Transportation (NC DOT) between August 24, 2015 and November 5, 2015. The projects selected for review were a mix of contract construction, design-build and maintenance. The review and the results reported here are in accordance with requirements of the Sedimentation Control Commission (SCC) delegation to the NC DOT and § 113A-54(d)(2) and § 113A-56(b).

§ 113A-54. POWERS AND DUTIES OF THE COMMISSION

(d) In implementing the erosion and sedimentation control program, the [Sedimentation Control] Commission shall:... (2) Assist and encourage other State agencies in developing erosion and sedimentation control programs to be administered in their jurisdictions. The Commission shall approve, approve as modified, or disapprove programs submitted pursuant to G.S. 113A-56 and from time to time shall review these programs for compliance with rules adopted by the Commission and for adequate enforcement.

§ 113A-56. JURISDICTION OF THE COMMISSION

(b) The [Sedimentation Control] Commission may delegate the jurisdiction conferred by G.S. 113A-56(a), in whole or in part, to any other State agency that has submitted an erosion and sedimentation control program to be administered by it, if the program has been approved by the Commission as being in conformity with the general State program.

PROJECT REVIEWS

Sixteen contract construction or design-build projects and two maintenance/force account projects were chosen based on the stage of construction and the significance of the projects. Projects were generally between 20 and 80 percent complete.

Land Quality Section personnel from the regional offices and central office accompanied NC DOT personnel to the 18 projects, which were inspected over several months. Each project review consisted of reviewing the erosion control plan for adequacy, inspecting the project for compliance, and examining the project files. Plans were available for review at all sites.

NC DOT is responsible for two types of inspections on each project. NPDES Self-Monitoring and SPCA Self-Inspections are conducted at least weekly by a project inspector from the office of the resident engineer for design-build or contract construction, or from the office of the county or district engineer for maintenance projects. There are 7 Roadside Environmental Unit Field Operations engineers, each covering 2 of the 14 divisions in the State. The engineers each have generally one technician, who inspects secondary road projects and some contract construction. REU Field Operations staff inspects all DOT projects. Projects are inspected monthly. Each project is evaluated on a scale of 1-10 for installation of measures, maintenance of measures, effectiveness of

measures, plan implementation and overall project evaluation. A score of 6 or less results in the issuance of an “Immediate Corrective Action” report (ICA). The weekly project inspections and monthly REU inspections were reviewed for each project.

Field data was collected on erosion and sediment control measure installation, maintenance and effectiveness. Timely provision of ground cover, adequacy of right-of-way, phasing of grading, field revisions and sedimentation damage were also evaluated. Each project was evaluated for overall compliance with the Sedimentation Pollution Control Act. A summary of the eighteen projects follows.

CONTRACT OR DESIGN-BUILD PROJECTS

Division	County	TIP #	Route	Contract Amount	Length (miles)	Compliance Status
1	Washington	R-3620	R-3620 New Route from US 64 to NC 32	\$8,614,907.10	3.333	Out
2	Craven	K-5101	US 70 – Clarks Rest Area	\$905,711.66	0.5	In
3	Duplin	17BP.3.R.31	Bridge 23 and Bridge 24 (SR-1101)	\$1,004,585.82	0.2	In
3	Duplin	BD-5103V	Bridge 111 Over Halls Marsh NC-24 from Dowdy Rd to Mitchell Loop Rd	\$516,800.00	0.1	In
3	Sampson	R-2303C	US 70 East of K-95 from SR 2305 to East of SR 2310	\$39,234,386.71	6.949	Out
4	Johnston	W-5107	East of SR 2310	\$16,677,393.16	2.198	In
4	Wayne	R-2554C	Goldsboro Bypass	\$104,414,724.30	12.5	Out
5	Wake	U-4432	SR 1370 (Tryon Rd to US 70/NC 50) Roxboro Bypass (US-501 from NC-49 in Roxboro to SR-1602)	\$7,839,878.23	0.941	In
5	Person	R-2241A	SR-1121 (Ray Rd) from NC-210 to SR-1120 (Overhills Rd)	\$21,714,921.38	6.966	In
6	Harnett	U-3465	SR-1120 (Overhills Rd) Bridge #820006 over Gum Swamp	\$20,584,528.70	3.805	In
8	Scotland	17BP.8.R.58	Creek on SR 1001 (Marston Rd)	\$678,461.00	0.082	In
9	Forsyth	W-5209F	Reynolda Rd at Winona St Bridge #227 Over Rocky River on SR-1006	\$782,588.60	0.1	In
10	Cabarrus	B-4972	US-221 from South of NC-194 to US-221 Bypass	\$3,049,491.20	0.256	In
11	Ashe	R-2915D	US-221 Bypass	\$21,371,178.20	4.08	In
12	Cleveland	R-2707A, R-2707AB	US 74 Shelby Bypass, East SR 1318 to East SR 1315	\$33,122,503.58	5.05	Out
12	Cleveland	R-2707AA	US 74 Shelby Bypass, West of SR 1162 to East SR 1318	\$25,403,455.25	2.292	Out
13	Yancey	R-2519A	US-19 East from SR 1336 to SR-1186	\$41,527,279.98	11.92	In
14	Jackson	R-5000	New Location Connector from NC-116 to NC-107 in Webster	\$15,939,043.11	0.711	In

MAINTENANCE/FORCE ACCOUNT PROJECTS

Division	County	Route	Length	Compliance Status
5	Warren	SR-1529 (Big Reid Road)	0.97	In
7	Guilford	Strader Road (SR 2316)	1.6	In

PROJECT EVALUATIONS

New Route from US 64 to NC 32, R-3620

NC DOT Division 1, Washington County

Type of Project: Contract

Date of Inspection: 8/26/2015

Evaluation: Out of Compliance

Ranking on DOT Scale: 7

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0.6 in (8/25)

Inspection Scores: 8 (8/24), 9 (7/31), 8 (6/24)

Comments/Summary:

This is a 3.333 mile project with a budget of \$8,614,907.10. This project was approximately 40% complete at the time of inspection. The plan appeared to be adequate and measures were installed; however, maintenance of measures was an issue throughout. Problems were noted with silt fence not being toed in near a jurisdictional stream, silt fence outlets/wattles needing replacement / maintenance, proper installation and maintenance of slope drains and outlets, and stabilization of inactive and bare areas. Records (self-inspections and Roadside Environmental Unit inspection reports) were available for review and were (in general) complete. However, inspections within 24 hours of a ½ inch rain event needed to be performed/documented and all corrective actions taken needed to be documented.



Silt fence outlet needing maintenance (additional wattle(s))

US 70 – Clarks Rest Area, K-5101

NC DOT Division 2, Craven County

Type of Project: Contract

Date of Inspection: 8/26/2015

Evaluation: In Compliance

Ranking on DOT Scale: 9

Off-Site Sedimentation: No

Recent Project History:

Rainfall: N/A

Inspection Scores: 9 (8/11), 9 (7/8), 9 (6/11)

Comments/Summary:

This is was a less than 1 acre vertical construction project (approximately 0.5 miles) with a budget of \$905,711.66 and which had recently begun demolition. Although not required, an E&SC plan was designed and implemented. NPDES requirements did not apply since the site was less than 1 acre. The project was early in construction – adequate erosion and sedimentation control measures had been installed and demolition was ongoing. Recordkeeping for this project was well maintained.



Minor measures needed on a less than 1 acre Rest Area project in Craven County

Bridge 23 and Bridge 24 (SR 1101), 17BP.3.R.31

NC DOT Division 3, Duplin County

Type of Project: Contract

Date of Inspection: 8/27/2015

Evaluation: In Compliance

Ranking on DOT Scale: 8

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0.01 inches (8/26)

Inspection Scores: 8 (8/3), 9 (7/16)

Comments/Summary:

This is a bridge project with a total budget of \$1,004,585.82. This part of the project (Bridge 23) was approximately 85% complete. Bridge 23 is a 0.1 mile project with a budget of \$502,292.91. Construction of Bridge 24 had not yet started. The approved plan appeared adequate and had been implemented properly. Minor field adjustments had been made to the plan and documented properly. Overall, the site appeared well contained and protected. Recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was very good.

*Silt fence, Matting, Coir
Logs, Riprap, and Turbidity
Curtains being used for
protection during bridge
construction*



Bridge 111 over Halls Marsh, BD-5103V

NC DOT Division 3, Duplin County

Type of Project: Contract

Date of Inspection: 8/27/2015

Evaluation: In Compliance

Ranking on DOT Scale: 8

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0.5 inches (8/26)

Inspection Scores: 9 (8/3), 9 (7/16), 9 (6/10)

Comments/Summary:

This is a 0.1 mile bridge project with a budget of \$516,800.00. This project was approximately 95% complete and was primarily waiting on the establishment of permanent groundcover. The approved plan appeared adequate and had been implemented properly. It was recommended to add matting under one side of the new bridge. Existing wattles were providing containment and the area had been seeded and mulched with straw. Recordkeeping for this project was well maintained. Minor issues had been noted in the past, but were corrected in a reasonable timeframe and all relevant information was properly documented.

Good efforts at stabilization under one side of the bridge



NC 24 from SR 1404 (Dowdy Rd) to SR 1303 (Mitchell Loop Rd), R-2303C

NC DOT Division 3, Sampson County

Type of Project: Contract

Date of Inspection: 8/27/2015

Evaluation: Out of Compliance

Ranking on DOT Scale: 7

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0.5 inches (8/26), 0.3 inches (8/24)

Inspection Scores: 7 (8/20), 8 (7/15), 7 (6/18)

Comments/Summary:

This is a 6.949 mile project with a budget of \$39,234,386.71. This project was chosen as a follow-up to last year's annual DOT review, and was approximately 40% complete at the time of inspection.

Overall the project appeared to be improved over the previous year's inspection, and no offsite sedimentation was noted. However, there were several areas where maintenance of measures was needed and groundcover had not been established in a timely manner. Several slopes were bare/minimally covered and had developed rills and gullies. As a result, there was a potential for offsite sediment. Recordkeeping for this project was well maintained.



Unmaintained silt fence below bare slope and above stream; High potential for offsite sedimentation

US70 East of I-95 from SR 2305(Firetower Road) to east of SR 2310 (Davis Mill Road – Stevens Chapel Road), W-5107

NC DOT Division 4, Johnston County

Type of Project: Contract

Date of Inspection: 8/24/15

Evaluation: In Compliance

Ranking on DOT Scale: 8

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0 inches (8/23, 8/22, 8/21)

Inspection Scores: 9 (8/5), 8 (7/20), 8 (6/25)

Comments/Summary:

This is a 2.198 mile road project with a budget of \$16,677,393.16. This project was about 11% complete. The approved plan appeared to be adequate and was properly implemented. No revisions were made to the plan prior to our site visit. Minor maintenance and groundcover were needed. Measure installation was underway at several locations onsite. The site was well maintained and the recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was good.



Temporary groundcover establishment is underway on this newly constructed temporary skimmer basin.

US70 (Goldsboro Bypass) from East of SR 1556 (Wayne Memorial Dr) to East of SR 1323 (Promise Land Rd), R-2554C

NC DOT Division 4, Johnston County
Type of Project: Design-Build

Date of Inspection: 8/24/15
Evaluation: Out of Compliance
Ranking on DOT Scale: 7
Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0 inches (8/23, 8/22, 8/21)
Inspection Scores: 8 (7/23, 6/30, 5/21)

Comments/Summary:

This is a 12.5 mile road project with a budget of \$104,414,724.30. This project was about 82% complete. The approved plan appeared to be adequate and was properly implemented. Revisions were made to the plan that required approval from Roadside Environmental Unit prior to our site visit. This plan has been revised 7 times throughout construction. An Immediate Corrective Action (ICA) was issued for this project that was not inspected by the Washington Regional Office. Maintenance and groundcover were needed throughout site. Several stockpiles were located temporarily by yard inlets within the construction corridor. The recordkeeping via self-inspections for this project was not good. The Roadside Environmental Unit inspection reports for this project were good.



Temporary slope drain was not anchored well and the joints leaked contributed to deposition at the silt fence.

SR 1370 (Tryon Rd) from West of Bridge #259 Over Norfolk Southern Railway to US 70/NC 50(Wilmington St), U-4432

NC DOT Division 5, Wake County
Type of Project: Contract

Date of Inspection: 8/24/15
Evaluation: In Compliance
Ranking on DOT Scale: 8
Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0 inches (8/23, 8/22, 8/21)
Inspection Scores: 8 (7/31), 8 (6/29), 9 (6/4)

Comments/Summary:

This is a 0.941 mile road project with a budget of \$7,839,878.23. This project was approximately 45% complete. The approved plan appeared to be adequate and was properly implemented. Additional sediment control measures protected the outlet end of several stormwater pipes. No revisions were made to the plan prior to our site visit. PAMs were used on site. The site was well maintained and the recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was good.



Designated concrete washout area near bridge where contractor is actively working.

Big Reid Road, SR 1529, 5C.093050

NC DOT Division 5, Warren County

Type of Project: Maintenance

Date of Inspection: 9/28/15

Evaluation: In Compliance

Ranking on DOT Scale: 9

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 3.1 inches (9/28)

Inspection Scores: 8 (9/16)

Comments/Summary:

This is a 0.97 mile maintenance project which began approximately 40 days prior to this site visit and was 75% complete. The approved plan appeared to be adequate and was properly implemented. Minor field adjustments were made to the plan and documented properly. PAMs were used on site. The site was well maintained and the recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was excellent.



Smaller Sediment control measures such as this Silt Basin type B prove to be effective on linear project as shown here where it contained the previous day's rainfall event.

US 501 from NC 49 Roxboro to South of SR 1602, R-2241A

NC DOT Division 5, Person County

Type of Project: Contract

Date of Inspection: 9/28/15

Evaluation: In Compliance

Ranking on DOT Scale: 8

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0.3 inches (9/27), 0.5 inches (9/26), 2.0 inches (9/25)

Inspection Scores: 8 (9/15), 8 (8/13)

Comments/Summary:

This is a 6.966 mile project with a budget of \$21,714,921.38. This project was approximately 72% complete. The approved plan appeared to be adequate and was properly implemented. Minor field adjustments were made to the plan and documented properly. Problems were noted on previous internal inspections and repairs made onsite and documented in the self-inspections. Several corrective actions mentioned during the inspection were being repaired by the contractor prior to leaving the site. Overall the disturbed area was well maintained and the recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was excellent, very detailed.



Great use of rolled erosion control product and groundcover in the construction corridor.

SR-1121 (Ray Rd) from NC-210 to SR-1120 (Overhills Rd)

NC DOT Division 6, Harnett County

Type of Project: Contract

Date of Inspection: 10/30/2015

Evaluation: In Compliance

Ranking on DOT Scale: 8 (overall), 7 (maintenance)

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 1.25 inches (10/29), 0.25 inches (10/28), and 0.10 inches (10/27)

Inspection Scores: 8 (10/13), 9 (9/4), 9 (8/17)

Comments/Summary:

This is a 3.805 mile construction project with a budget of \$20,584,528.70. This is an urbanization project intended to alleviate traffic congestion between multiple schools and businesses on Ray Road. The site was originally single lane traffic, and is being upgraded to multiple lanes including roundabouts and sidewalks. The plan was adequate and properly implemented; however, there were some areas of the project which needed minor maintenance due to recent rains. Recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was adequate.

Stabilization of slopes along portions of Ray Road project, right

Tiered skimmer basin, below



Strader Road, SR-2316, 7C.041250

NC DOT Division 7, Guilford County

Type of Project: Maintenance

Date of Inspection: 10/21/2015

Evaluation: In Compliance

Ranking on DOT Scale: 9

Off-Site Sedimentation: No

Recent Project History:

Rainfall: None within preceding 3 days

Inspection Scores: 9 (10/2), 9 (9/2), 9 (8/5)

Comments/Summary:

This is a 1.6 mile maintenance project with a budget of \$650,000.00, which was approximately 90% complete at the time of inspection. This project was a good example of phased construction done properly – one section was cleared and grubbed, graded, and stabilized prior to the next section being opened up. The site was originally a dirt road which was being upgraded to a paved road. The plan was adequate and properly implemented; minor field adjustments had been made to the plan to add additional measures where needed. In many areas, DOT had enough right of way (60 feet) that the existing ditchline did not have to be disturbed. Recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was excellent.



Phased Construction on a Road Maintenance Project, Guilford County

Bridge #820006 over Gum Swamp Creek on SR 1001 (Marston Rd)

NC DOT Division 8, Scotland County

Type of Project: Design-Build

Date of Inspection: 11/02/2015

Evaluation: In Compliance

Ranking on DOT Scale: 8

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 1.5 inches (11/02), 0.80 inches (10/28), and 0.50 inches (10/12)

Inspection Scores: 8 (10/19), 8 (8/28)

Comments/Summary:

This is a 0.082 mile bridge replacement project with a budget of \$678,461.00. The plan was adequate and properly implemented. Coir fiber matting, wattles, and silt fence were used to protect sensitive areas around wingwalls. There was one small area of erosion, adjacent to the right end bent on the south side of bridge, which needed minor maintenance due to recent rains. Recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was adequate. Site received approximately 1.5 inches of rain on the day of inspection.

Stabilized area along wingwall, left



Slope protected with coir fiber matting and wattles, below



NC-67 Reynolda Road at Winona Street, W-5209F

NC DOT Division 9, Forsyth County

Type of Project: Contract

Date of Inspection: 10/21/2015

Evaluation: In Compliance

Ranking on DOT Scale: 8

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0.051 inches on 10/17

Inspection Scores: 8 (10/14), 8 (9/22)

Comments/Summary:

This is a 0.1 mile safety improvement project with a budget of \$782,588.60 and was approximately 80% complete at the time of inspection. This project involved a culvert extension, curb and gutter construction, grading work, and the removal of an existing culvert on the abandoned alignment. The plan was adequate and properly implemented, although minor silt fence maintenance was needed in a few areas. It was suggested to place a wattle perpendicular to the silt fence at the private driveway at the end of each workday. In addition, concrete was being washed out in a designated area but a lined pit was needed. Contaminated soil from a known (old) gas station had been stockpiled and covered appropriately. Recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was adequate.

Culvert work at Reynolda Road/Winona Street project, Forsyth County



Bridge No. 227 over Rocky River on SR 1006

NC DOT Division 10, Cabarrus County

Type of Project: Contract

Date of Inspection: 11/05/2015

Evaluation: In Compliance

Ranking on DOT Scale: 8 (overall), 7 (maintenance)

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 1.75 inches (11/03), 1.0 inch (11/02), and 1.0 inch (10/28)

Inspection Scores: 8 (10/27), 8 (9/17), 8 (9/2)

Comments/Summary:

This is a 0.256 mile bridge replacement project with a budget of \$3,049,491.20. One side of the site had been cleared but not grubbed, in order to limit the amount of disturbance before necessary. The plan was adequate and properly implemented. The site had experienced flash flood conditions during the week prior to inspection. The contractor had done exemplary work in correcting damage to installed measures. It was suggested to reinstall wattles along the approach to Rocky River. Recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was adequate.

Temporary silt ditch lined with riprap and wattles, right

Bridge approach leading to Rocky River, below



US-221 from South of NC-194 to US-221 Bypass, R-2915D

NC DOT Division 11, Ashe County

Type of Project: Contract

Date of Inspection: 10/22/2015

Evaluation: In Compliance

Ranking on DOT Scale: 8 (overall), 7 (maintenance)

Off-Site Sedimentation: No

Recent Project History:

Rainfall: None within preceding 3 days

Inspection Scores: 8 (10/19), 8 (9/16)

Comments/Summary:

This is a 4.08 mile project with a budget of \$21,371,178.20, and is part of an overall larger project (approximately 16 miles total). The project was approximately 20-25% complete at the time of inspection. The plan was adequate and had generally been implemented well; however, there were several areas of the project which needed maintenance. In addition, additional construction entrance/exits were needed in a couple of locations. This project did have a trout buffer variance, and the streams onsite appeared to be well protected. Recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was adequate.



Measures in ditchline, left

*Stabilization of slopes,
below*



US 74 (Shelby Bypass) East SR 1318 (Kimbrell Rd) to East SR 1315 (Plato Lee Rd), R-2707AB

NC DOT Division 12, Cleveland County

Type of Project: Contract

Date of Inspection: 9/23/15

Evaluation: Out of Compliance

Ranking on DOT Scale: 7

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0 inches (9/22), last rainfall event 8/23/15

Inspection Scores: 8 (8/28), 8 (7/31)

Comments/Summary:

This is part of a 5.05 mile project with a budget of \$33,122,503.58. This project was approximately 42% complete. The approved plan appeared to be adequate and was properly implemented. Minor field adjustments were made to the plan and documented properly. This area appeared to be in a drought and lack of vegetative groundcover throughout the site was an issue at the time of inspection. Several corrective actions mentioned during the inspection were being repaired by the contractor prior to leaving the site. Overall the disturbed area was maintained and the recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was good.



Innovative stream crossing with riprap approaches, geotextile underlayment, and wattles to minimize deposition from the sides.

US 74 (Shelby Bypass) West of SR 1162 (Peachtree Rd) to East SR 1318 (Kimbrell Rd), R-2707AA

NC DOT Division 12, Cleveland County
Type of Project: Contract

Date of Inspection: 9/23/15
Evaluation: Out of Compliance
Ranking on DOT Scale: 7
Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0 inches (9/20), last rainfall event 0.2 inches on 9/12/15
Inspection Scores: 9 (8/28), 8 (7/31), 8 (5/21)

Comments/Summary:

This is part of a 2.292 mile project with a budget of \$25,403,455.25. This project was approximately 80% complete. The approved plan appeared to be adequate and was properly implemented. Minor field adjustments were made to the plan and documented properly. An ICA was issued on this project in August 2014 and a follow up inspection was performed by NCDEQ's Mooresville Regional Office. Lack of rain has made establishment of vegetation difficult on this site. Groundcover was evident in areas where establishment occurred early in the construction process when there were more periodic rainfall events. Good usage of smaller inline sediment control measures were observed on this project. Overall the disturbed area was maintained and the recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was good.



Installation of inline sediment and erosion control measures under way.

US 19 East from East SR 1336 (Jacks Creek Rd) to SR 1186 (Old US 19), R-2519A

NC DOT Division 13, Yancey County

Type of Project: Contract

Date of Inspection: 9/24/15

Evaluation: In Compliance

Ranking on DOT Scale: 8

Off-Site Sedimentation: No

Recent Project History:

Rainfall: 0 inches (9/24, 9/23, 9/22)

Inspection Scores: 8 (9/9), 7 (8/25), 7 (7/21)

Comments/Summary:

This is part of an 11.92 mile project with a budget of \$41,527,279.98. This project was approximately 70% complete and began in 2012. The plan approved was under the previous NCG01000. The approved plan appeared to be adequate and was properly implemented. Minor field adjustments were made to the plan and documented properly. Smaller soil stockpiles were being placed within 50 feet of yard/curb inlets. Great containment of sedimentation bag for stream pump around operation. Overall the disturbed area was adequately maintained and the recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was good.



Several stockpiles were located less than 50 ft from surface inlets.

New Location Connector from NC-116 to NC-107 in Webster, R-5000

NC DOT Division 14, Jackson County

Type of Project: Contract

Date of Inspection: 10/7/15

Evaluation: In Compliance

Ranking on DOT Scale: 8

Off-Site Sedimentation: No

Recent Project History:

Rainfall: No rainfall in the previous 3 days; most recent rain was approx. 2.25 from 10/2-10/3

Inspection Scores: 8 (9/2), 8 (8/5), 8 (7/9)

Comments/Summary:

This is part of a 0.711 mile project with a budget of \$15,939,043.11. This project was approximately 80-85% complete at the time of inspection. The approved plan appeared to be adequate and was properly implemented. Minor field adjustments were made to the plan and one major change to the plan was approved through the hydraulic unit. One comment noted was that drainage areas needed to be checked for the additional traps/basins added during construction. It appeared that some may have a drainage area greater than 1 acre; if so, those basins must be designed with top dewatering. Maintenance was needed in several areas. Overall the disturbed areas were adequately maintained and the recordkeeping (self-inspections and Roadside Environmental Unit inspection reports) for this project was good.



*Slope Stabilization
Efforts Underway*

ISSUES NOTED AND RECOMMENDATIONS

Concrete Washouts

As noted last year, any project involving concrete (including those with sidewalks or curb and gutter) should have a designated concrete washout location identified on the approved plan, and a detail(s) provided for its construction/maintenance. Concrete washouts (and earthen material stockpiles) should be located at least 50 feet from storm drains and streams unless no reasonable alternatives are available.

Improvement in the installation of concrete washouts onsite was noted throughout this year's review. However, DOT staff and contractors need to be reminded to use the washouts – there were several instances of improperly installed, maintained, or used concrete washout pits during this review. DOT is actively working toward finding solutions to some of their more difficult concrete projects. They have identified possible alternative designs for concrete washouts and are seeking approval from the Stormwater program.

Timely Establishment of Groundcover

The current NPDES General Construction Stormwater Permit requires establishment of groundcover (temporary or permanent) within 7 to 14 days. Several projects appeared to have areas where groundcover had not been established during the required timeframes. Temporary cover (even a thick layer of mulch) may be used if conditions do not allow for establishment of permanent groundcover. It should also be documented which General Construction Stormwater Permit applies to a particular project. A copy of this permit should be kept with the approved plans/documents onsite.

DOT should remind staff that erosion control plans expire three years following the date of approval, if no land disturbing activity has been undertaken (15A NCAC 04B .0129). If work onsite does not begin within three years of plan approval, then that plan will expire and a new plan must be approved in accordance with current standards (both E&SC and NPDES construction stormwater).

Inadequate Inlet Protection

Wattles are not suitable for inlet protection with significant bare areas draining to the inlet. All inlets onsite should be protected and maintained regularly to ensure adequate performance.

Practice Good Site Management

Good site management can increase the potential for success of erosion and sedimentation control. Several sites had issues with stockpiles being placed (for over 24 hours) along inadequately protected inlets without additional erosion and sedimentation control measures. Relying on one downstream measure to protect the site is not always sound practice. In the case of the Goldsboro Bypass project, the Roadside Environmental Unit inspector had noted concerns about these stockpiles and requested corrective actions be taken by the contractor to minimize this sedimentation potential. During our initial inspection, staff noted the same issues. In addition, inlet protections called for on the plan were not installed, and one of the basins being relied upon as the sole protection had already been converted to a stormwater pond and was no longer functioning as an erosion and sedimentation control basin.

Maintenance of Measures

Many of the issues with sites noted on this year's review were the result of inadequate maintenance of measures. DOT should focus on maintenance issues during their regular inspections and make it a priority to obtain compliance from the contractor on this item. Several projects noted maintenance issues repeatedly that were ultimately corrected, but not in a timely manner. If compliance with maintenance requirements is not obtained within a reasonable timeframe, then DOT should consider using other tools, including the issuance of ICAs, in order to gain compliance.