



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

July 11, 2013

Addendum No. 1

RE: Contract ID C203206

WBS # 50000.3.STR01T4A

F. A. # FRA-FR-HSR-0006-10-01-00

Cabarrus-Mecklenburg Counties (P-5208A, C & G)

North Carolina Railroad/ Norfolk Southern Mainline Haydock to Junker
Railroad Roadbed (MP-360 To MP-372.2)

July 16, 2013 Letting

To Whom It May Concern:

You are hereby notified that additional sub-surface information for this project has been posted to the web. This information will not be mailed out as a part of this addendum.

Reference is made to the plans and proposal form furnished to you on this project.

The following revisions have been made to the P-5208C (Part 2) Railroad Roadbed and Cross-Section plans:

Sheet No.	Revisions
1	Revised stationing for -Y6-. (Please note that this sheet should be the main title sheet for P-5208A but was incorrectly printed in the original printing as EC-01)
2	Right side of typical #2 revised to change the width and depth of sub-ballast
2A	Revised typical sections for -Y6-
2F	Added sub-surface drain
3A	Revised drainage structure number C0802
3C	Revised quantity for select granular material
8	Subsurface drain added plan view. Saddle Creek Rd. (-Y6-) design updated
25	Revised profile for Saddle Creek Rd. (-Y6-)
EC-01	Added note concerning 303d waters
EC-08	Saddle Creek Rd. (-Y6-) design updated

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT UNIT
1591 MAIL SERVICE CENTER
RALEIGH NC 27699-1591

TELEPHONE: 919-707-6900
FAX: 919-250-4119

WEBSITE: www.ncdot.gov

LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

C203206

P-5208A,C & G
Cabarrus-Mecklenburg

Sheet No.	Revisions
EC-22	Saddle Creek Rd. (-Y6-) design updated
X-23 thru X-27, X-47 and X-57,	Added subsurface drains to cross sections

Please delete the above listed sheets in your plans and staple the revised sheets thereto.

The following revision has been made to the P-5208C portion of the subsurface plans:

On Sheet No. 3B the earthwork balance information has been added. Please void Sheet No. 3B in your plans and staple the revised Sheet No. 3B thereto.

The following revisions have been made to the P-5208G (Part 3) Railroad Roadbed plans:

Sheet No.	Revisions
2A	Revised duplicate note on Typical Section No. 5 to read 6" compacted sub-ballast instead of 6" Asphalt Underlayment
3-D	Added "OMITTED" to parcels 4G and 5G
13	Removed easement on Parcel 4G
16	Removed easement on Parcel 5G
EC-13, EC-35	Revised to reflect changes to easement on parcel 4G
EC-16, EC-38	Revised to reflect changes to easement on parcel 5G

Please delete the above listed sheets in your plans and staple the revised sheets thereto.

The following revisions have been made to the P-5208A Structure plans:

The following list of sheets have been revised to change the foundation type for the Mallard Creek bridge to drilled piers and to make various other minor corrections to the plans. Please void the following list of sheets in your plans and staple the revised sheets thereto.

Sheet No.	Revisions
ST-02	Revised General Plan and Elevation to show modified Bents 1 and 2 foundation and battered piles at End Bents. Revised End Bent 2 footing elevation. Extended rip rap at End Bent 2 slope.
ST-03	Updated End Bent and Bent foundations. Increased spacing of piles at End Bents and modified Bents 1 and 2 from piles to drilled shafts. Updated foundation notes.
ST-05	Updated quantities on Total Bill of Material.
ST-07	Corrected dimension in Typical Deck Section.
ST-17	Modified End Bent 1 pile spacing. Adjusted End Bent 1 properties. Adjusted reinforcing callouts for clarity.
ST-18	Modified End Bent 1 pile spacing and batter. Adjusted reinforcing callouts for clarity.

C203206

P-5208A,C & G
Cabarrus-Mecklenburg

Sheet No.	Revisions
ST-19	Modified End Bent 1 pile spacing. Adjusted Wingwall properties. Adjusted reinforcing callouts for clarity.
ST-20	Modified End Bent 1 pile spacing. Adjusted reinforcing callouts for clarity.
ST-21	Modified reinforcing table to reflect adjustments to reinforcing steel details.
ST-22	Replaced pile foundation with drilled pier foundation. Adjusted Bent 1 properties. Adjusted reinforcing callouts for clarity.
ST-23	Replaced pile foundation with drilled pier foundation. Modified reinforcing table to reflect adjustments to reinforcing steel details.
ST-24	Replaced pile foundation with drilled pier foundation. Adjusted Bent 2 properties. Adjusted reinforcing callouts for clarity.
ST-25	Replaced pile foundation with drilled pier foundation. Modified reinforcing table to reflect adjustments to reinforcing steel details.
ST-26	Modified End Bent 2 pile spacing. Adjusted reinforcing callouts for clarity. Lowered bottom of footing three feet. Modified reinforcing table to reflect adjustments to reinforcing steel details.
ST-27	Modified End Bent 2 pile spacing and batter. Adjusted reinforcing callouts for clarity.
ST-28	Modified End Bent 2 pile spacing and batter. Adjusted reinforcing callouts for clarity. Modified reinforcing table to reflect adjustments to reinforcing steel details.
ST-29	Added rip rap at end bent 2 slope. Adjusted Estimated Quantities for rip rap and geotextile.
ST-30	Updated quantities on Total Bill of Material.
ST-31	Modified culvert pile spacing.
ST-32	Modified culvert pile spacing. Updated foundation notes.
ST-33	Modified culvert pile spacing.
ST-34	Modified culvert pile spacing.
ST-35	Modified quantities for piles.

The following revisions have been made to the proposal form:

On Page No. 11 a revision has been made to the project special provision entitled "Delay In Right Of Entry". Please void Page No. 11 in your proposal and staple the revised Page No. 11 thereto.

On Page No. 216 the first paragraph of the project special provision entitled "Reinforced Concrete Deck Slab" has been revised. Also, on Page No. 228 the chart within the project special provision entitled "Submittal of Working Drawings" has been revised to delete the reference to metal stay-in-place forms. Please void Page Nos. 216 and 228 in your proposal and staple the revised Page Nos. 216 and 228 thereto.

New Page Nos. 253 thru 255 have been added to include a project special provision for "Reinforced Backfill". Please staple new Page Nos. 253 thru 255 after Page No. 252 in your proposal.

C203206

P-5208A,C & G
Cabarrus-Mecklenburg

On the item sheets the following pay item quantities have been revised, added or deleted:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
10-0195000000-E-265	Select Granular Material	2,400 CY	650 CY
11-0196000000-E-SP	Geotextile For Soil Stabilization	4,100 SY	4,300 SY
14-0320000000-E-300	Foundation Conditioning Geotextile	500 SY	510 SY
16-0335400000-E-305	24" Drainage Pipe	115 LF	168 LF
57-1121000000-E-520	Aggregate Base Course	180 TON	275 TON
66-1489000000-E-610	Asphalt Concrete Base Course, Type B25.0B	2,125 TON	2,405 TON
67-1498000000-E-610	Asphalt Concrete Intermediate Course, Type I19.0B	630 TON	680 TON
68-1519000000-E-610	Asphalt Concrete Surface Course, Type S9.5B	680 TON	710 TON
69-1575000000-E-620	Asphalt Binder For Plant Mix	170 TON	190 TON
193-8091000000-N-410	Foundation Excavation For Bent 1 At Station 10282+62.09-M1-	Lump Sum	DELETED
194-8091000000-N-410	Foundation Excavation For Bent 2 At Station 10282+62.09-M1-	Lump Sum	DELETED
195-8096000000-E-450	Pile Excavation In Soil	1,428 LF	DELETED
196-8097000000-E-450	Pile Excavation Not In Soil	732 LF	DELETED
199-8112730000-N-450	PDA Testing	2 EA	1 EA
200-8113000000-N-411	SID Inspections	6 EA	14 EA
201-8115000000-N-411	CSL Testing	2 EA	4 EA
203-8147000000-E-420	Reinforced Concrete Deck Slab	15,251.1 SF	15,999.1 SF
204-8175000000-E-420	Class AA Concrete (Bridge)	1,912.7 CY	1,839.6 CY
205-8217000000-E-425	Reinforcing Steel (Bridge)	350,137 LB	413,487 LB

C203206

P-5208A,C & G
Cabarrus-Mecklenburg

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
206-8238000000-E-425	Spiral Column Reinforcing Steel (Bridge)	32,454 LB	44,056 LB
207-8355000000-E-450	HP 14X89 Steel Piles	6,189 LF	3,043 LF
209-8391000000-N-450	Steel Pile Points	94 EA	192 EA
210-8440000000-E-454	Method A Waterproofing	530 SY	DELETED
211-8453000000-E-454	Method B Dampproofing	803.3 SY	871.3 SY
214-8608000000-E-876	Rip Rap Class II (2'-0" Thick)	396 TON	702 TON
215-8622000000-E-876	Geotextile For Drainage	267 SY	364 SY
236-8105500000-E-411	5'-0" Dia. Drilled Piers In Soil	NEW ITEM	133 LF
237-8105600000-E-411	5'-0" Dia. Drilled Piers Not In Soil	NEW ITEM	139 LF
238-8893000000-E-SP	Reinforced Backfill	NEW ITEM	210 SY

The Contractor's bid must be based on these revised pay item quantities and added items. The contract will be prepared accordingly.

The Expedite File has been updated to reflect these revisions. Please download the Expedite Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

Sincerely,



R. A. Garris, PE
Contract Officer

RAG/jag
Attachments

cc: Mr. Ron Hancock, PE
Mr. Louis Mitchell, PE
Ms. D. M. Barbour, PE
Mr. J. V. Barbour, PE
Mr. Paul Worley, CPM
Mr. R.E. Davenport, PE
Ms. Lori Strickland
Project File (2)

Mr. Ray Arnold, PE
Ms. Natalie Roskam, PE
Mr. Ronnie Higgins
Mr. Larry Strickland
Ms. Marsha Sample
Ms. Penny Higgins
Ms. Jaci Kincaid

C203206 (P-5208A, C, G)

11

Revised 7-11-13
Cabarrus/Mecklenburg Counties**DELAY IN RIGHT OF ENTRY:**

(7-1-95)

108

SP1 G22 A

The Contractor will not be allowed right of entry to the parcels listed below before **August 17, 2013** unless otherwise permitted by the Engineer and except as noted below.

<u>Parcel No.</u>	<u>Property Owner</u>	
001A	Lisa Grass	
002A	Lida E. Kiser	
003A	Cabarrus County	
004, 5, 6A	Foy K. and Mildred Horton	
007A	Robert Leon Hapeman & Holly F. Hapeman	(Delay til 09-17-2013)
001C	James Houston, Jr.	
002C	Town of Harrisburg	
004C	Chemical Specialties, Inc.	
001G	Millbrook Road Associates, LLC	
002G	Duke Energy Corporation	
003G	Tridolph, LLC, et al	
006G	Amanda & Associates	
007G	City of Charlotte	
008G	Royal Realty II, LLC (Stein Fibers?)	
009G	Villages at Back Creek HOA, Inc.	
010G	Judy K. Watson	
011A	Morrison Ridge LP	(Delay til 09-17-2013)
011G	Alan E. Roland and Linda Roland	
012G	TSG Properties, LLC	
014G	Kenneth W. Martin & Joan C. Martin	
015G	Walter & Teresa Surma & Mark C. Smith	
016G	Ted & Shirley Hildreth	
017G	German Automotive, Inc. & 911 Shop	
018G	Raymond Bennett Mullis	
019G	Alan R. Kessel	
020G	Rommer 1800, LLC	
021G	Redus NC Housing, LLC	

PROGRESS SCHEDULE (RAIL):

(2-19-13)

SP1 G25

The Contractor shall prepare and submit for review and approval a Progress Schedule as set forth in Section 108 of the *Standard Specification*, the Railroad Coordination Special Provision, and as amended herein.

The schedule shall include activity descriptions with beginning and ending dates, partial completion (in percentage or time format). Railroad roadbed activities should include beginning and ending stations of roadbed section. The schedule shall include activities or milestones indicating when NSR flagmen and construction forces should be mobilized to the site.

Project Special Provisions: Structures

216

Revised 7-11-13

Project Number: P-5208G

Mecklenburg County

CONDUIT IN PARAPETS

(SPECIAL)

Conduit in the parapets shall be 4" diameter PVC conduit conforming to applicable Underwriters Laboratory specifications and shall be located as shown on the Plans. Provisions shall be made for expansion between the deck slab and abutment backwalls and between deck slabs at expansion joints. Couplings shall be provided behind backwalls for connection to the 4" diameter rigid pipe. If non-PVC fittings, couplings, or other incidental items are required, they must be fully compatible with PVC conduit. Details and material data shall be submitted by the Contractor to the Engineer for approval by the Railroad Company of all materials required for this work. The entire cost of furnishing and installing all conduit, expansion fittings, couplings and incidental items required for this work shall be included in the bid price for "Conduit in Parapet", Lump Sum.

REINFORCED CONCRETE DECK SLAB

(SPECIAL)

General

This provision shall govern materials, forming and all other related work in the construction of a reinforced concrete deck slab in accordance with applicable parts of the Standard Specifications, the details shown on the plans, and as outlined in these special provisions. For structural steel spans, plans for the concrete deck slab are detailed for a cast-in-place slab using removable forms.

Materials

Unless otherwise noted on the plans, all cast-in-place concrete shall be Class AA conforming to the requirements of Section 1000 of the Standard Specifications as modified by the general notes in the plans.

Construction Methods

Design and construction requirements of the standard details and Sections 420 and 1070 of the Standard Specifications shall govern.

No profile grade line adjustment will be allowed unless permitted by the Engineer.

Curing methods for the concrete will conform to Section 420 of the Standard Specifications.

Measurement

Reinforced concrete deck slab constructed under this item will be measured by the square feet of horizontal surface area using the nominal dimensions and configuration shown in the "Layout for Computing Area of

Project Special Provisions: Structures

228

Revised 7-11-13

Project Number: P-5208G

Mecklenburg County

Expansion Joint Seals (strip seals)	9	0	"Strip Seals"
Falsework & Forms ² (substructure)	8	0	Article 420-3 & "Falsework and Formwork"
Falsework & Forms (superstructure)	8	0	Article 420-3 & "Falsework and Formwork"
Girder Erection over Railroad	5	0	Railroad Provisions
Maintenance and Protection of Traffic Beneath Proposed Structure	8	0	"Maintenance and Protection of Traffic Beneath Proposed Structure at Station _____"
Metal Bridge Railing	8	0	Plan Note
Metalwork for Elastomeric Bearings ^{4,5}	7	0	Article 1072-8
Miscellaneous Metalwork ^{4,5}	7	0	Article 1072-8
Optional Disc Bearings ⁴	8	0	"Optional Disc Bearings"
Overhead and Digital Message Signs (DMS) (metalwork and foundations)	13	0	Applicable Provisions
Placement of Equipment on Structures (cranes, etc.)	7	0	Article 420-20
Pot Bearings ⁴	8	0	"Pot Bearings"
Precast Concrete Box Culverts	2, then 1 reproducible	0	"Optional Precast Reinforced Concrete Box Culvert at Station _____"
Prestressed Concrete Cored Slab (detensioning sequences) ³	6	0	Article 1078-11
Prestressed Concrete Deck Panels	6 and 1 reproducible	0	Article 420-3
Prestressed Concrete Girder (strand elongation and detensioning sequences)	6	0	Articles 1078-8 and 1078- 11
Removal of Existing Structure over Railroad	5	0	Railroad Provisions

253

New 7-11-13

P-5208A, Haydock to Junker Railroad Roadbed

Roadbed

Project Special Provisions: Geotechnical

Prepared for:

NCDOT Rail Division



FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881



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REINFORCED BACKFILL:

(SPECIAL)

Description

Construct Reinforced Backfill consisting of select material and geogrid reinforcements in the reinforced zone at locations indicated on the Structure Plans. Reinforced Backfill is required to stabilize slopes at locations shown in the plans and as directed.

Materials

Refer to Division 10 of the *Standard Specifications*.

Item	Section
Anchor Pins	1056-2
Select Material – Class IV, V, or VI	1016

Unless required otherwise in the plans, use Class IV, VI or VI select material in the reinforced zone as shown on the plans.

(A) Geogrid – Tencate Mirafi Miragrid 20XT (or approved equivalent)

Handle and store geogrid in accordance with Article 1056-2 of the *Standard Specifications*. Define “machine direction” (MD) and “cross-machine direction” (CD) for geogrids in accordance with ASTM D4439. Test geogrids in accordance with ASTM D6637. Provide a geogrid with design strengths that meet or exceed the following:

GEOGRID FOR REINFORCED BACKFILL REQUIREMENTS		
Property	Requirement (MARV*)	Test Method
Tensile Strength @ 5% Strain	5,300 lbs/ft	ASTM D6637
Tensile Strength @ Ultimate	13,700 lbs/ft	ASTM D6637
Long Term Allowable Design Load	7,500 lbs/ft	GRI GG-4(b)

* Minimum Average Roll Value (MARV)

Construction Methods

Before starting End Bent construction, the Engineer may require a preconstruction meeting to discuss the construction and inspection of the Reinforced Backfill. If required, schedule this meeting after all material certifications have been submitted. The Designers, Resident or District Engineer, Geotechnical Operations Engineer, Contractor and Superintendent should attend this preconstruction meeting.

Excavate as necessary for the Reinforced Backfill in accordance with the contract. Maintain a horizontal clearance of at least 12” between the ends of the geogrid and the limits of the reinforced zone as shown in the plans. Notify the Engineer when the foundation excavation is complete. Do not place geogrid until excavation dimensions and backfill materials are approved. The first layer of geogrids should be installed at the Bottom of Footing (BOF) elevation of 547.9 feet. Subsequent layers should be installed at 18” vertical spaced intervals to elevation 561.4

New 7-11-13

feet. Select backfill should continue to the Top of Backwall elevation 564.4 feet. The geogrids should be fastened to the backwall via mechanical connections. The contractor should submit a detailed installation plan to the Engineer for review and approval.

Place geogrids within 3" of locations shown in the plans and in slight tension free of kinks, folds, wrinkles or creases. Install geogrids with the MD perpendicular to the end bent. The MD is the direction of the length or long dimension of the geogrid roll. The geogrid may not be spliced in the principal strength direction through overlap, sewing, or mechanical connection. Therefore, the geogrid should be installed in one continuous piece with the principal strength direction extending the full length of the reinforced area. Overlap adjacent geogrids at least 18" with seams oriented parallel to the roadbed centerline. Hold geogrids in place with wire staples or anchor pins as needed. Contact the Engineer when existing or future obstructions such as foundations, pavements, pipes, inlets or utilities will interfere with geogrids.

Place select material in the reinforced zone in 8" to 10" thick lifts. Compact Class IV, V, or VI select material with a vibratory compactor to the satisfaction of the Engineer. Do not displace or damage geogrids when placing and compacting select material. End dumping directly on geogrids is not permitted. Do not operate heavy equipment on geogrids until they are covered with at least 8" of select material. To prevent damaging geogrids, minimize turning and avoid sudden braking and sharp turns with compaction equipment. Replace any damaged geogrids to the satisfaction of the Engineer.

Measurement and Payment

Reinforced Backfill will be measured and paid in square yards. Reinforced Backfill will be measured along the faces of Reinforced Backfill geogrids as the square yards of Reinforced Backfill. No payment will be made for repairing damaged Reinforced Backfill geogrids.

The contract unit price for *Reinforced Backfill* will be full compensation for providing labor, tools, equipment and *Reinforced Backfill* materials, compacting select materials and supplying and placing geogrids, select material, and any incidentals necessary to construct *Reinforced Backfill*. The contract unit price for *Reinforced Backfill* will also be full compensation for excavating and transporting, placement, and compaction of select fill material and removing excavated materials to install *Reinforced Backfill*. 2,400 square yards shall be used for bidding purposes.

Payment will be made under:

Pay Item
Reinforced Backfill

Pay Unit
Square Yard