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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.  
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

E. NORRIS TOLSON  
SECRETARY

March 12, 1999

Memorandum to: File  
From: Phillip Todd  
Subject: Field Review Notes for TIP No. A-9 DD

The project was reviewed on January 6, 1999. During this site visit, the original permit drawings were reviewed against the existing conditions. Revisions to the original permit drawings are needed in order to apply for the Section 404/ 401 permits. This information is based on permit drawings dated July 1998.

Site 1 (Permit Drawing Sheets 3, 4):

This site lies in association with Wolf Creek. This area is disturbed; an existing power line corridor lies between the mountain and existing NC 28. Vegetation includes rush (*Juncus effuses*), sedge (*Carex* sp.), privet (*Ligustrum sinense*), elderberry (*Sambucus canadensis*), tag alder (), blackberry (*Rubus* sp.) and greenbrier (*Smilax* sp.). This site exists from Station No. 12+40-LRev- to 15+00-LRev-. The Cowardin classification of the wetland is PSS1B/PEM1B. The DEM rating for this site is 49.

Wolf Creek will be relocated at this site. The relocation should be considered an impact because the stream channel will be relocated into the mountain.

Site 2 (Permit Drawing Sheet 8):

This site involves new two pipes along Wolf Creek. These pipes replace existing pipes off Y-lines. No wetlands are present.

Site 3 (Permit Drawing Sheet 8, 9, 10):

17+80 BLG

This site involves new two pipes along Wolf Creek and stream relocation. These pipes replace existing pipes off Y-lines.

An emergent wetland is present (rush and fescue) at Station No. 20+00. This wetland has a Cowardin classification of PEM1B and DEM rating of 25.

Site 4 (Permit Drawing Sheet 10, 15):

This site involves new two pipes along Wolf Creek and stream relocation. There is also a surface water impact (a pond) at Station No. 23+40-LRev-. These pipes replace existing pipes off Y-lines.

There is a small wetland impact at Station No. 23+60-LRev-. Vegetation of this wetland area is fescue (*Festuca* sp.) and rush. The Cowardin classification of the wetland is . The DEM rating for this site is 25.

PEM1B →

Site 5 (Permit Drawing Sheet 19, 20):

This site involves wetland impacts, stream relocation and pipe replacement. This site involves a disturbed wetland with emergent vegetation (Site 5A, Station No. 24+80-LRev- to Station No. 26+40-LRev-) and a maintained lawn wetland with emergent vegetation rush and fescue (Site 5B, Station No. 26+40 to Station No. 27+00).

Vegetation found in Site 5A includes rush and persistent herbaceous plants. The Cowardin classification of the wetland is PEM1B. The DEM rating for this site is 29.

Vegetation associated with Site 5B includes predominantly fescue and rush. The Cowardin classification of the wetland is PEM1B. The DEM rating for this site is 29.

The stream relocation involves a drainage ditch that was cut and lies adjacent to the existing roadway. There is also the relocation of Wolf Creek.

Site 6 (Permit Drawing Sheet 24, 25):

Begins 29+50

This site involves two wetland impacts, stream relocation of Wolf Creek and two pipe replacements. This wetland (Station No. 30+00 to Station No. 31+20 and Station 31+50 to Station No. 32+40) is maintained in a low growing state that is dominated by rush and fescue. The Cowardin classification of the wetland is PEM1B. The DEM rating for this site is 34.

Wolf Creek will be relocated and two pipes will be replaced on Y-lines.

Site 7 (Permit Drawing Sheet 28):

Surface water impact only.

34+60

Site 8 (Permit Drawing Sheet 29):

35 + 40

This site involves two wetland impacts, stream relocation of Wolf Creek and two pipe replacements. This wetland is maintained in a low growing state that is dominated by rush, black willow (*Salix nigra*), tag alder and elderberry. The Cowardin classification of the wetland is PSS1B/PEM1B. The DEM rating for this site is 62.

Site 8A (Permit Drawing Sheet 33):

This site involves a wetland impact associated with the construction of a service access. This wetland is maintained in a low growing state that is dominated by rush and fescue. The Cowardin classification of the wetland is . The DEM rating for this site is .

Site 9 (Permit Drawing Sheet 34)

This site (Station No. 40+85 to Station No. 40+95) involves pipe extension and fill in wetlands. This is a forest seep (PFO1B) with a DEM rating of 28.

Site 10 (Permit Drawing Sheet 35)

This site (Station No. 45+10 to Station No. 45+35) involves pipe extension and fill in wetlands. This is a forest seep (PFO1B) with a DEM rating of 28.

Site 11 (Permit Drawing Sheet 29):

This site (at Station No. 48+80 to Station No. 51+40) involves a wetland impact and stream impact by extending the culvert for the Wolf Creek crossing. This wetland is predominantly maintained in a low growing state that is dominated by rush and fescue. A seep area is vegetated with tag alder and black willow. The Cowardin classification of the wetland is PEM1B and PSS1B. The DEM rating for this site is .

135

STATION # 45 + 10 #

STATION 40 + 85

WETLAND RATING WORKSHEET (4th VERSION)

Project Name: A 9 DD County: Currituck
Nearest Road: NC 28 Date:
Wetland Area (ac): Wetland Width (ft):
Name of Evaluator(s):

Wetland Location:
on sound or estuary pond or lake
on perennial stream
on intermittent stream
within interstream divide
other

Adjacent Land Use:
(Within 1/2 mi upstream, upslope, or radius)
forested/natural veg. %
agriculture/urbanized %
impervious surface %
Adjacent Special Natural Areas

Soils
Soil Series
predominantly organic (humus, muck or peat)
predominantly mineral (non-sandy)
predominantly sandy

Dominant Vegetation
(1)
(2)
(3)

Hydraulic Factors
freshwater brackish
steep topography
ditched or channelized
total wetland width >= 100 feet.

Flooding and Wetness
semipermanently to permanently flooded or inundated
seasonally flooded or inundated
intermittently flooded or temporary surface water
no evidence of flooding or surface water

Wetland Type (select one)
Bottomland Hardwood Forest
Swamp Forest Bog/Fen
Carolina Bay Headwater Forest
Pocosin Bog Forest
Pine Savannah Ephemeral Wetland
Freshwater Marsh Other: Forested Swamp

\*The rating system cannot be applied to salt or brackish marshes or stream channels.

Table with 3 columns: Factor, DEM Rating, and Calculation. Rows include Water Storage, Bank/Shoreline Stabilization, Pollutant Removal, Wildlife Habitat, Aquatic Life Value, Recreation/Education, and Wetland Score (TOTAL) = 28.

\* Add 1 point if in nonpoint source watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.

WETLAND RATING WORKSHEET (4th VERSION)

Project Name: \_\_\_\_\_ County: \_\_\_\_\_  
 Rest Road: \_\_\_\_\_ Date: \_\_\_\_\_  
 Land Area (ac): \_\_\_\_\_ Wetland Width (ft): \_\_\_\_\_  
 Name of Evaluator(s): \_\_\_\_\_

Land Location:  
 on sound or estuary pond or lake  
 on perennial stream  
 on intermittent stream  
 within interstream divide  
 other \_\_\_\_\_

Adjacent Land Use:  
 (Within 1/2 mi upstream, upslope, or radius)  
 forested/natural veg. \_\_\_\_\_ %  
 agriculture/urbanized \_\_\_\_\_ %  
 impervious surface \_\_\_\_\_ %  
 Adjacent Special Natural Areas \_\_\_\_\_

Soil Series \_\_\_\_\_  
 predominantly organic (humus, muck or peat)  
 predominantly mineral (non-sandy)  
 predominantly sandy

Dominant Vegetation  
 (1) \_\_\_\_\_  
 (2) \_\_\_\_\_  
 (3) \_\_\_\_\_

Hydrologic Factors  
 freshwater \_\_\_\_\_ brackish  
 steep topography  
 ditched or channelized  
 total wetland width  $\geq$  100 feet.

Flooding and Wetness  
 semipermanently to permanently flooded or inundated  
 seasonally flooded or inundated  
 intermittently flooded or temporary surface water  
 no evidence of flooding or surface water

Land Type (select one)\*  
 Bottomland Hardwood Forest  
 Swamp Forest \_\_\_\_\_ Bog/Fen  
 Carolina Bay \_\_\_\_\_ Headwater Forest  
 Pocosin \_\_\_\_\_ Bog Forest  
 Pine Savannah \_\_\_\_\_ Ephemeral Wetland  
 Freshwater Marsh \_\_\_\_\_ Other:

The rating system cannot be applied to salt or brackish marshes or stream channels.

	DEM RATING	
SEDIMENT STORAGE	<u>2</u>	x 4.00 = <u>8</u>
RIPARIAN/SHORELINE STABILIZATION	<u>1</u>	x 4.00 = <u>4</u>
NUTRIENT REMOVAL	<u>2</u> *	x 5.00 = <u>10</u>
BIOLOGICAL LIFE HABITAT	<u>2</u>	x 2.00 = <u>4</u>
ESTHETIC LIFE VALUE	<u>2</u>	x 4.00 = <u>8</u>
RECREATION/EDUCATION	<u>1</u>	x 1.00 = <u>1</u>

WETLAND SCORE = 35  
 (TOTAL)

Add 1 point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.

STATION # 36 +40

WETLAND RATING WORKSHEET (4th VERSION)

Project Name: A-9 DD County:
Forest Road: NC 28 Date:
Wetland Area (ac): Wetland Width (ft):
Name of Evaluator(s):

Wetland Location:
on sound or estuary pond or lake
on perennial stream
on intermittent stream
within interstream divide
other

Adjacent Land Use:
(Within 1/2 mi upstream, upslope, or radius)
forested/natural veg. %
agriculture/urbanized %
impervious surface %
Adjacent Special Natural Areas

Soils
Soil Series
predominantly organic (humus, muck or peat)
predominantly mineral (non-sandy)
predominantly sandy

Dominant Vegetation
(1)
(2)
(3)

Hydraulic Factors
freshwater brackish
steep topography
ditched or channelized
total wetland width >= 100 feet.

Flooding and Wetness
semipermanently to permanently flooded or inundated
seasonally flooded or inundated
intermittently flooded or temporary surface water
no evidence of flooding or surface water

Wetland Type (select one)\*
Bottomland Hardwood Forest
Swamp Forest Bog/Fen
Carolina Bay Headwater Forest
Pocosin Bog Forest
Pine Savannah Ephemeral Wetland
Freshwater Marsh Other: BEAVER IMPOUNDMENT INFLUENCE

\*The rating system cannot be applied to salt or brackish marshes or stream channels.

Table with 3 columns: Factor, DEM Rating, and Weighted Value. Rows include Water Storage (3 x 4.00 = 12), Bank/Shoreline Stabilization (4 x 4.00 = 16), Pollutant Removal (4 \* x 5.00 = 20), Wildlife Habitat (3 x 2.00 = 6), Aquatic Life Value (4 x 4.00 = 16), Recreation/Education (2 x 1.00 = 2). Total Wetland Score = 62.

\* Add 1 point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.

WETLAND RATING WORKSHEET (4th VERSION)

Project Name: \_\_\_\_\_ County: \_\_\_\_\_  
 Rest Road: \_\_\_\_\_ Date: \_\_\_\_\_  
 Wetland Area (ac): \_\_\_\_\_ Wetland Width (ft): \_\_\_\_\_  
 Name of Evaluator(s): \_\_\_\_\_

Wetland Location:  
 on sound or estuary  
     pond or lake  
 on perennial stream  
 on intermittent stream  
 within interstream divide  
 other \_\_\_\_\_

Adjacent Land Use:  
 (Within 1/2 mi upstream,  
 upslope, or radius)  
 forested/natural veg. \_\_\_\_\_ %  
 agriculture/urbanized \_\_\_\_\_ %  
 impervious surface \_\_\_\_\_ %  
 Adjacent Special Natural Areas  
 \_\_\_\_\_

Soil Series \_\_\_\_\_  
 predominantly organic  
 (humus, muck or peat)  
 predominantly mineral (non-sandy)  
 predominantly sandy

Dominant Vegetation  
 (1) \_\_\_\_\_  
 (2) \_\_\_\_\_  
 (3) \_\_\_\_\_

Hydrologic Factors  
 freshwater \_\_\_\_\_ brackish  
 steep topography  
 ditched or channelized  
 total wetland width  $\geq$  100 feet.

Flooding and Wetness  
 semipermanently to  
 permanently flooded or  
 inundated  
 seasonally flooded or  
 inundated  
 intermittently flooded or  
 temporary surface water  
 no evidence of flooding or  
 surface water

Wetland Type (select one)\*  
 Bottomland Hardwood Forest  
 Swamp Forest \_\_\_\_\_ Bog/Fen  
 Carolina Bay \_\_\_\_\_ Headwater Forest  
 Pocosin \_\_\_\_\_ Bog Forest  
 Pine Savannah \_\_\_\_\_ Ephemeral Wetland  
 Freshwater Marsh \_\_\_\_\_ Other:

The rating system cannot be applied to salt or brackish marshes or stream channels.

	DEM RATING	
WATER STORAGE	_____	x 4.00 = _____
WETLAND/SHORELINE STABILIZATION	_____	x 4.00 = _____
POLLUTANT REMOVAL	_____*	x 5.00 = _____
WILDLIFE HABITAT	_____	x 2.00 = _____
ESTHETIC LIFE VALUE	_____	x 4.00 = _____
RECREATION/EDUCATION	_____	x 1.00 = _____

WETLAND SCORE = \_\_\_\_\_  
 (TOTAL)

deduct 1 point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.



SITE 5

STATION # 24180

WETLAND RATING WORKSHEET (4th VERSION)

Project Name: A-9 DD County: GERSHAM
Forest Road: NC 28 Date:
Wetland Area (ac): Wetland Width (ft):
Name of Evaluator(s):

Wetland Location:

- on sound or estuary pond or lake
on perennial stream
on intermittent stream
within interstream divide
other

Adjacent Land Use:

- (Within 1/2 mi upstream, upslope, or radius)
forested/natural veg.
agriculture/urbanized
impervious surface
Adjacent Special Natural Areas

Soils

- Soil Series
predominantly organic (humus, muck or peat)
predominantly mineral (non-sandy)
predominantly sandy

Dominant Vegetation

- (1)
(2)
(3)

Hydraulic Factors

- freshwater brackish
steep topography
ditched or channelized
total wetland width >= 100 feet.

Flooding and Wetness

- semipermanently to permanently flooded or inundated
seasonally flooded or inundated
intermittently flooded or temporary surface water
no evidence of flooding or surface water

Wetland Type (select one)\*

- Bottomland Hardwood Forest
Swamp Forest Bog/Fen
Carolina Bay Headwater Forest
Pocosin Bog Forest
Pine Savannah Ephemeral Wetland
Freshwater Marsh Other:

\*The rating system cannot be applied to salt or brackish marshes or stream channels.

Table with 3 columns: Factor, DEM Rating, and Calculation. Rows include Water Storage, Bank/Shoreline Stabilization, Pollutant Removal, Wildlife Habitat, Aquatic Life Value, and Recreation/Education.

WETLAND SCORE = 29 (TOTAL)

\* Add 1 point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.

SITE 4

STATION # 23+60

WETLAND RATING WORKSHEET (4th VERSION)

Project Name: A-9 DD County: GRAHAM  
 Rest Road: NC 28 Date: \_\_\_\_\_  
 Land Area (ac): \_\_\_\_\_ Wetland Width (ft): \_\_\_\_\_  
 Name of Evaluator(s): \_\_\_\_\_

Land Location:  
 on sound or estuary pond or lake  
 on perennial stream  
 on intermittent stream  
 within interstream divide  
 other \_\_\_\_\_

Adjacent Land Use:  
 (Within 1/2 mi upstream, upslope, or radius)  
 forested/natural veg. \_\_\_\_\_ %  
 agriculture/urbanized \_\_\_\_\_ %  
 impervious surface \_\_\_\_\_ %  
 Adjacent Special Natural Areas \_\_\_\_\_

Soil Series \_\_\_\_\_  
 predominantly organic (humus, muck or peat)  
 predominantly mineral (non-sandy)  
 predominantly sand

Dominant Vegetation  
 (1) \_\_\_\_\_  
 (2) \_\_\_\_\_  
 (3) \_\_\_\_\_

Hydrologic Factors  
 freshwater \_\_\_\_\_ brackish  
 steep topography  
 ditched or channelized  
 total wetland width  $\geq$  100 feet.

Flooding and Wetness  
 semipermanently to permanently flooded or inundated  
 seasonally flooded or inundated  
 intermittently flooded or temporary surface water  
 no evidence of flooding or surface water

Land Type (select one):  
 Bottomland Hardwood Forest  
 Swamp Forest \_\_\_\_\_ Bog/Fen  
 Carolina Bay \_\_\_\_\_ Headwater Forest  
 Pocosin \_\_\_\_\_ Bog Forest  
 Pine Savannah \_\_\_\_\_ Ephemeral Wetland  
 Freshwater Marsh \_\_\_\_\_ Other:

The rating system cannot be applied to salt or brackish marshes or stream channels.

	DEM RATING	
WATER STORAGE	<u>1</u>	x 4.00 = <u>4</u>
WATER/SHORELINE STABILIZATION	<u>1</u>	x 4.00 = <u>4</u>
POLLUTANT REMOVAL	<u>2</u> *	x 5.00 = <u>10</u>
WILDLIFE HABITAT	<u>1</u>	x 2.00 = <u>2</u>
ESTHETIC LIFE VALUE	<u>1</u>	x 4.00 = <u>4</u>
RECREATION/EDUCATION	<u>1</u>	x 1.00 = <u>1</u>

WETLAND SCORE = 25  
 (TOTAL)

Add 1 point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.

Station # 12+33

SITE 1

WETLAND RATING WORKSHEET (4th VERSION)

Project Name: A-9DD County: GRAHAM
Nearest Road: NC 28 Date:
Wetland Area (ac): Wetland Width (ft):
Name of Evaluator(s):

Wetland Location:

- on sound or estuary pond or lake
on perennial stream
on intermittent stream
within interstream divide
other

Adjacent Land Use:

- (Within 1/2 mi upstream, upslope, or radius)
forested/natural veg. %
agriculture/urbanized %
impervious surface %
Adjacent Special Natural Areas

Soils

- Soil Series
predominantly organic (humus, muck or peat)
predominantly mineral (non-sandy)
predominantly sandy

Dominant Vegetation

- (1)
(2)
(3)

Hydraulic Factors

- freshwater brackish
steep topography
ditched or channelized
total wetland width >= 100 feet.

Flooding and Wetness

- semipermanently to permanently flooded or inundated
seasonally flooded or inundated
intermittently flooded or temporary surface water
no evidence of flooding or surface water

Wetland Type (select one)\*

- Bottomland Hardwood Forest
Swamp Forest
Carolina Bay
Pocosin
Pine Savannah
Freshwater Marsh
Bog/Fen
Headwater Forest
Bog Forest
Ephemeral Wetland
Other:

\*The rating system cannot be applied to salt or brackish marshes or stream channels.

DEM RATING

Table with 3 columns: Category, DEM Rating, and Calculation. Rows include WATER STORAGE, BANK/Shoreline Stabilization, Pollutant Removal, Wildlife Habitat, Aquatic Life Value, and Recreation/Education.

WETLAND SCORE = 49 (TOTAL)

\* Add 1 point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JAMES B. HUNT JR.  
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

E. NORRIS TOLSON  
SECRETARY

January 11, 1999

Memorandum to: File  
From: Phillip Todd  
Subject: Field Review Notes for TIP No. A-9 DD

The project was reviewed on January 6, 1999. During this site visit, the original permit drawings were reviewed against the existing conditions. Revisions to the original permit drawings are needed in order to apply for the Section 404/ 401 permits.

Site 1 (Permit Drawing Sheets 3, 4):

*P881/EM1B*  
This site lies in association with Wolf Creek. This area is disturbed; an existing power line corridor lies between the mountain and existing NC 28. Vegetation includes rush (*Juncus effusus*), sedge (*Carex* sp.), privet (*Ligustrum sinense*), (*Sambucus canadensis*), blackberry (*Rubus* sp.) and greenbrier (*Smilax* sp.). The Cowardin classification of the wetland is . The DEM rating for this site is . *49*

Wolf Creek will be relocated at this site. The relocation should be considered an impact because the stream channel will be relocated into the mountain.

Site 2 (Permit Drawing Sheet 8):

This site involves new two pipes along Wolf Creek. These pipes replace existing pipes off Y-lines. No wetlands are present.

Site 3 (Permit Drawing Sheet 8, 9, 10):

This site involves new two pipes along Wolf Creek and stream relocation. These pipes replace existing pipes off Y-lines. No wetlands are present.

*PEM1B*

*DEM 25*

Site 4 (Permit Drawing Sheet 10, 15):

This site involves new two pipes along Wolf Creek and stream relocation. There is also a surface water impact (a pond) at Station No. 23+40-LRev-. These pipes replace existing pipes off Y-lines.

There is a small wetland impact at Station No. 23+60-LRev-. Vegetation of this wetland area is fescue (*Festuce* sp.) and rush. The Cowardin classification of the wetland is . The DEM rating for this site is .

Site 5 (Permit Drawing Sheet 19, 20):

This site involves wetland impacts, stream relocation and pipe replacement. This site involves a disturbed wetland with (Site 5A, Station No. 24+80-LRev- and 26+40-LRev-) and a maintained lawn wetland with (Site 5B, ).

Vegetation found in Site 5A includes . The Cowardin classification of the wetland is . The DEM rating for this site is .

Vegetation associated with Site 5B includes predominantly fescue and rush. The Cowardin classification of the wetland is . The DEM rating for this site is .

The stream relocation involves a drainage ditch that was cut and lies adjacent to the existing roadway. There is also the relocation of Wolf Creek.

Site 6 (Permit Drawing Sheet 24, 25):

This site involves two wetland impacts, stream relocation of Wolf Creek and two pipe replacements. This wetland is maintained in a low growing state that is dominated by rush and fescue. The Cowardin classification of the wetland is . The DEM rating for this site is .

Wolf Creek will be relocated and two pipes will be replaced on Y-lines.

Site 7 (Permit Drawing Sheet 28):

Surface water impact only.

Site 8 (Permit Drawing Sheet 29):

This site involves two wetland impacts, stream relocation of Wolf Creek and two pipe replacements. This wetland is maintained in a low growing state that is dominated by rush and fescue. The Cowardin classification of the wetland is . The DEM rating for this site is .

Site 8A (Permit Drawing Sheet 33):

Permit B

29

Permit B

34

Permit B / Permit B

62

Permit B

25

This site involves a wetland impact associated with the construction of a service access. This wetland is maintained in a low growing state that is dominated by rush and fescue. The Cowardin classification of the wetland is . The DEM rating for this site is .

Site ~~9~~ (Permit Drawing Sheet 29):

This site involves two wetland impacts, stream relocation of Wolf Creek and two pipe replacements. This wetland is maintained in a low growing state that is dominated by rush and fescue. The Cowardin classification of the wetland is . The DEM rating for this site is .

PSS1/EM1 B

STE 10  

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PSS 1 B