



**US Army Corps  
Of Engineers**  
Wilmington District

# PUBLIC NOTICE

Issue Date: November 25, 2014  
Comment Deadline: December 26, 2014  
Corps Action ID Number: SAW-2014-00838

The Wilmington District, Corps of Engineers (Corps) received an application from the Federal Aviation Administration (FAA) seeking Department of the Army authorization for the construction of a new Airport Traffic Control Tower (ATCT) and associated structures and parking for the Charlotte Douglas International Airport (CLT) in Mecklenburg County, North Carolina.

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

**Applicant:** Federal Aviation Administration (FAA)  
Courtney Nolan, AJW-2E11D  
Terminal Engineering Center  
1701 Columbia Avenue  
College Park, Georgia 30337

**AGENT:** URS Corporation  
Mr. Chris Petterson  
6000 Fairview Road, Suite 200  
Charlotte, North Carolina 28210

## Authority

The Corps evaluates this application and decides whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of the following Statutory Authorities:

- Section 404 of the Clean Water Act (33 U.S.C. 1344)
- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

## Location

The project is located on the southern portion of the CLT site, located northwest of the intersection of West Boulevard with Billy Graham Parkway, in Charlotte, Mecklenburg County, North Carolina (N 35.204046, W -80.946237). The project area is adjacent to unnamed tributaries of Coffey Creek.

Project Area (acres):	10.5	Nearest Town: Charlotte
Nearest Waterway:	Coffey Creek	River Basin: 03050103
Latitude and Longitude:	35.203758 N, -80.944415 W	

**Existing Site Conditions**

The topography of the ATCT project study area is characterized as gently sloping with steeper areas occurring along drainage ways. Elevations range from a high of 700 feet to a low of 650 feet along tributaries. Land use in the study area is characterized by commercial landscapes, particularly the Charlotte Airport facility. Outside of the airport property, the land is mostly vacant wooded land or commercial. The project study alternatives are located within the Catawba (Hydrologic Unit 03050103) River Basin. Streams in the project area are tributaries to Coffey Creek. Other streams within the airport property drain into Toggart Creek and Tier Creek (the land on the northwester portion of the airport property including tributaries to Tier Creek, occur in the Catawba River Basin with Hydrologic Unit 03050101). Aquatic communities in the study area include both intermittent and perennial piedmont streams. One jurisdictional wetland adjacent to tributaries of Coffey Creek occurs within the study area.

**Applicant’s Stated Purpose**

The purpose of this project is to replace the existing ATCT facility that no longer provides adequate coverage of airfield traffic control needs. The existing ATCT structure has been in service for over 30 years and does not have sufficient height or ground position to provide required lines of sight across the airfield, particularly with the recent addition of the third parallel runway at CLT in 2010. Although a newly-sited ATCT would likely support a conceptual fourth 10,000 ft parallel runway included in the current airport master plan, the current need for the proposed ATCT is independent of any future runway expansion.

Proper positioning of the ATCT to provide adequate depth perception, lines of sight, and visibility of all areas on the airfield is vital for airport traffic control personnel to safely and efficiently manage aircraft movements. In addition to addressing these emerging visual flight safety needs, the new ATCT would include provisions for updated digital flight control components including the TRACON facility. The proposed ATCT would also improve operation conditions within the control cab including enhanced equipment layout, operating space and controller station visibility and ergonomics.

**Project Description**

The proposed project involves the construction of a 370 foot high ATCT, a Terminal Radar Approach Control (TRACON) building, a 239 space parking lot and access driveway, two stormwater BMP detention ponds and sewer lines to service facility. The proposed project would result in impact to 709 linear foot of intermittent stream channel and 0.007 acres of wetlands due to grading to facilitate the buildings and parking areas.

It should be noted that the ATCT project is considered to be a single and complete project with activities that have occurred on the greater Charlotte Airport property. The Corps has issued CLT two Nationwide Permits #39 (Action IDs 2000-31354 and 2003-30940) and three IPs (Action IDs 2006-32521, 2008-03090 and 2010-00837) for activities on the Charlotte Airport Property. There have also been a total of three permit modifications issued to CLT, two for the permit issued under Action ID 2006-32521 and one for the permit issued under Action ID 2008-03090. The total impact authorized under all of these permits is 25,444 linear feet of stream, 4.183 acres of wetlands, and 7.55 acres of open water. The table below details the permits issued for the Charlotte Airport Property.

Summary of past Charlotte Airport permitted actions

AID	Type of Permit	Issue Date	Additional Impacts Authorized	Total Impacts Authorized To Date:	Description of Work
2003-1354	NWP 39		296 lf stream	296 lf stream	Runway 23 Safety Area
2003-30940	NWP 39		269 lf stream	565 lf stream	National Guard Armory
2005-31167	----				Replaced with AID below
2006-32521	IP	3/20/2007	16,312 lf streams 0.432 ac wetlands 4.631 ac open waters	16,877 lf streams 0.432 ac wetlands 4.631 ac open waters	New parallel runway, runway extension, road relocations
		7/15/2009	5,247 lf stream 0.716 ac wetland 2.89 ac open water	22,124 lf stream 1.148 ac wetlands 7.552 ac open water	Additional impacts associated with the new parallel runway, runway extension, road relocations
		4/26/2010	*110 lf of stream  <b>Total authorized after modification **21,559 lf stream 1.148 ac wetlands 7.552 ac open water</b>	22,124 lf stream 1.148 ac wetlands 7.552 ac open water	construct part of the West Boulevard re-alignment
2008-03090	IP	7/17/2009	2,395 lf stream 3.035 ac wetlands	24,519 of stream 4.4183 ac wetlands 7.552 ac open water	Roadway improvements for the Little Rock Road entrance and modification to proposed parking areas. (Parking Deck)
		6/11/2012	776 lf  <b>Total authorized after modification 3,171 lf stream 3.035 ac wetland</b>	25,295 lf 4.4183 ac wetlands 7.552 ac open water	

2010-00837	IP	10/16 /2012	149 lf stream	25,444 lf stream 4.4183 ac wetlands 7.552 ac open water	Construction of Taxiway D
<b>Total Impacts for all cumulative activities on Charlotte Airport Property</b>				<b>25,444 lf stream 4.183 ac wetlands 7.552 ac open waters</b>	

\* Total impacts did not change with the final modification due to the fact that CDIA agreed to apply these new impacts toward the 21,559 lf total since they were unsure if all the proposed impacts would be completed in the near future.

\*\*The actual 4/26/2010 permit authorized 22,559 lf of stream channel. This is a typo and the actual impacts should have been 21,559 lf.

### **Avoidance and Minimization**

The applicant provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

The project footprint has been limited to the greatest extent practicable. Stormwater detention ponds were designed to avoid stream impacts.

### **Compensatory Mitigation**

The applicant offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment:

At this time the applicant has proposed no compensatory mitigation be performed to off-set impacts to intermittent streams. The applicant has requested that compensatory mitigation be waived for the project on the basis that the intermittent streams proposed for impact originate from stormwater runoff, drain a small watershed area (approximately 14 acres) and the streams have low habitat. The applicant further cites as justification to waive mitigation their conclusion that the groundwater connection to the streambed is primarily a result of bank erosion and channel incision and that the stream substrate contains mostly an aggregation of silt and sand.

### **Essential Fish Habitat**

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, this Public Notice initiates the Essential Fish Habitat (EFH) consultation requirements. The Corps' initial determination is that the proposed project would not effect EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

## Cultural Resources

Pursuant to Section 106 of the National Historic Preservation Act of 1966, Appendix C of 33 CFR Part 325, and the 2005 Revised Interim Guidance for Implementing Appendix C, the District Engineer consulted district files and records and the latest published version of the National Register of Historic Places and initially determines that:

- Should historic properties, or properties eligible for inclusion in the National Register, be present within the Corps' permit area; the proposed activity requiring the DA permit (the undertaking) is a type of activity that will have no potential to cause an effect to an historic properties.
- No historic properties, nor properties eligible for inclusion in the National Register, are present within the Corps' permit area; therefore, there will be no historic properties affected. The Corps subsequently requests concurrence from the SHPO (or THPO).
- Properties ineligible for inclusion in the National Register are present within the Corps' permit area; there will be no historic properties affected by the proposed work. The Corps subsequently requests concurrence from the SHPO (or THPO).
- Historic properties, or properties eligible for inclusion in the National Register, are present within the Corps' permit area; however, the undertaking will have no adverse effect on these historic properties. The Corps subsequently requests concurrence from the SHPO (or THPO).
- Historic properties, or properties eligible for inclusion in the National Register, are present within the Corps' permit area; moreover, the undertaking may have an adverse effect on these historic properties. The Corps subsequently initiates consultation with the SHPO (or THPO).
- The proposed work takes place in an area known to have the potential for the presence of prehistoric and historic cultural resources; however, the area has not been formally surveyed for the presence of cultural resources. No sites eligible for inclusion in the National Register of Historic Places are known to be present in the vicinity of the proposed work. Additional work may be necessary to identify and assess any historic or prehistoric resources that may be present.

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

## Endangered Species

Pursuant to the Endangered Species Act of 1973, the Corps reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information:

- The Corps determines that the proposed project would not affect federally listed endangered or threatened species or their formally designated critical habitat.
- The Corps determines that the proposed project may affect federally listed endangered or threatened species or their formally designated critical habitat. The Corps initiates consultation under Section 7 of the ESA and will not make a permit decision until the consultation process is complete.
- The Corps is not aware of the presence of species listed as threatened or endangered or their critical habitat formally designated pursuant to the Endangered Species Act of 1973 (ESA) within the project area. The Corps will make a final determination on the effects of the proposed project upon additional review of the project and completion of any necessary biological assessment and/or consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service.

## Other Required Authorizations

The Corps forwards this notice and all applicable application materials to the appropriate State agencies for review.

**North Carolina Division of Water Resources (NCDWR):** The Corps will generally not make a final permit decision until the NCDWR issues, denies, or waives the state Certification as required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice, combined with the appropriate application fee, at the NCDWR Central Office in Raleigh constitutes initial receipt of an application for a 401 Certification. A waiver will be deemed to occur if the NCDWR fails to act on this request for certification within sixty days of receipt of a complete application. Additional information regarding the 401 Certification may be reviewed at the NCDWR Central Office, 401 and Buffer Permitting Unit, 512 North Salisbury Street, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for a 401 Certification should do so, in writing, by December 26, 2014 to:

NCDWR Central Office  
Attention: Ms. Karen Higgins, 401 and Buffer Permitting Unit  
(USPS mailing address): 1617 Mail Service Center, Raleigh, NC 27699-1617

Or,

(Physical address): 512 North Salisbury Street, Raleigh, North Carolina 27604

### **North Carolina Division of Coastal Management (NCDCM):**

- The application did not include a certification that the proposed work complies with and would be conducted in a manner that is consistent with the approved North Carolina Coastal Zone Management Program. Pursuant to 33 CFR 325.2(b)(2) the Corps cannot issue a Department of Army (DA) permit for the proposed work until the applicant submits such a certification to the Corps and the NCDCM, and the NCDCM notifies the Corps that it concurs with the applicant's consistency certification. As the application did not include the consistency certification, the Corps will request, upon receipt, concurrence or objection from the NCDCM.
- Based upon all available information, the Corps determines that this application for a Department of Army (DA) permit does not involve an activity which would affect the coastal zone, which is defined by the Coastal Zone Management (CZM) Act (16 U.S.C. § 1453).

### **Evaluation**

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

### **Commenting Information**

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidated State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

The Corps of Engineers, Wilmington District will receive written comments pertinent to the proposed work, as outlined above, until 5pm, December 26, 2014. Comments should be submitted to Crystal Amschler, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, North Carolina 28801-5006, at (828) 271-7980 ext 231.



### STREAM IMPACTS

STREAM DESIGNATION	IMPACT (LF) CLASSIFICATION		TOTAL IMPACT FEET
	EPHEMERAL	INTERMITTENT	
A	188	149	337
B	170	560	730
C	225	0	225
<b>TOTAL</b>	<b>583</b>	<b>709</b>	<b>1292</b>

### WETLAND IMPACTS

WETLAND NAME	IMPACT AREA	
B	0.007	ACRE
<b>TOTAL</b>	<b>0.007</b>	<b>ACRE</b>

WETLAND IMPACT AREAS 

- CENTER OF AIRPORT TRAFFIC CONTROL TOWER
- LIMITS OF BASE BUILDING AND LINK TO TOWER
- EXISTING OVERHEAD POWER LINES AND EASEMENT

SCALES SHOWN FOR 22" x 34" SHEET. ADJUST SCALES FOR OTHER SIZES. PAGE 2 OF 2

**URS**  
 400 Northpark Town Center, 1000 Abernathy Road, NE  
 Suite 900 Atlanta, Georgia 30328  
 Tel. No. (478)888-8800 Fax. (478)888-8499

DISCIPLINE: CIVIL

NAME: CHRIS M. PETERSON, PE  
 NORTH CAROLINA REG. #: 38025  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

URS project no. 15290056

**PERMIT SUBMITTAL**

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

**TOMB CIVIL  
STREAM AND WETLAND  
IMPACT EXHIBIT**

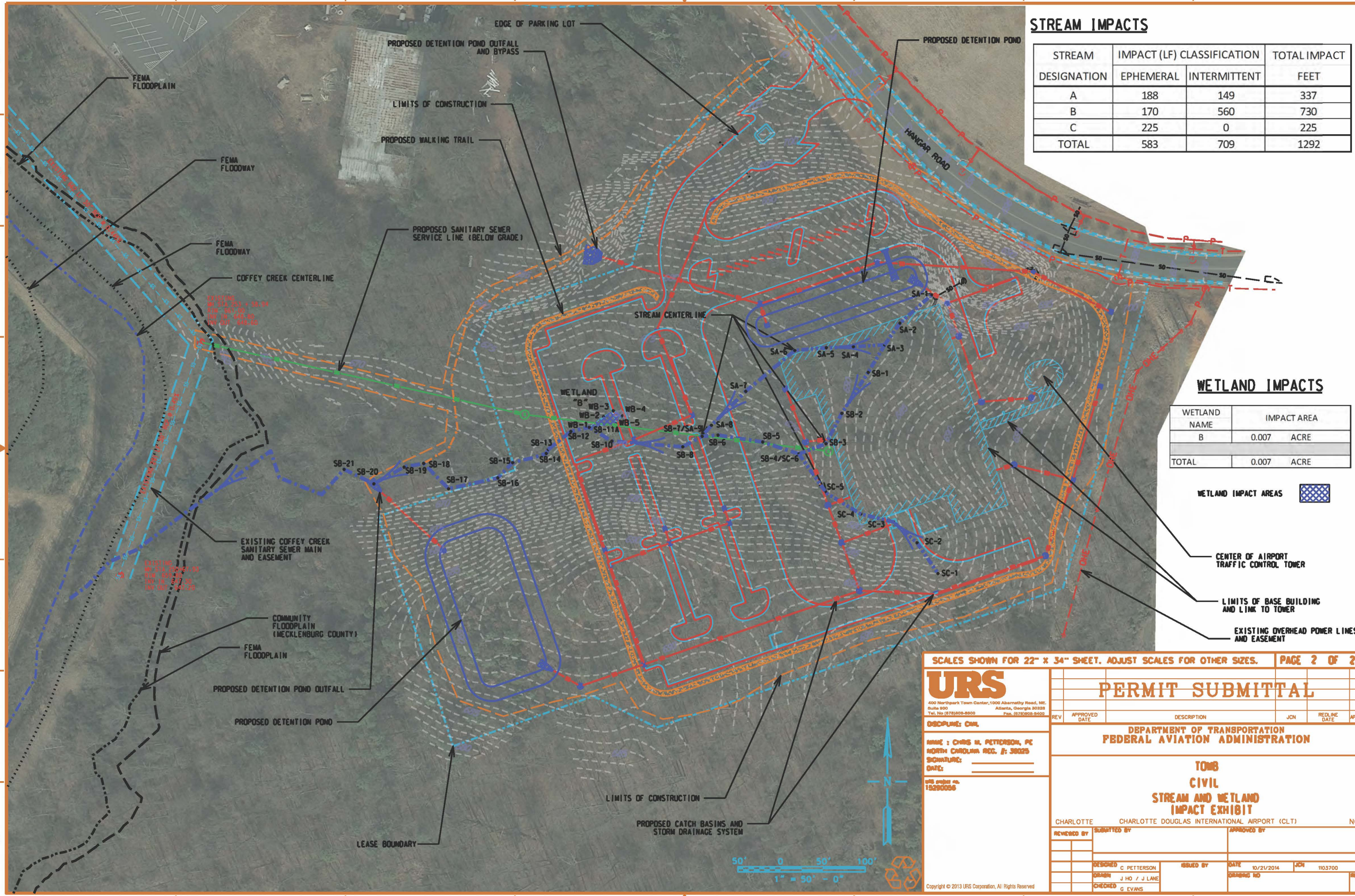
CHARLOTTE CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT (CLT) NC

REVIEWED BY	SUBMITTED BY	APPROVED BY

DESIGNED	C. PETERSON	ISSUED BY	DATE	10/21/2014	JCN	1103700
DRAWN	J. HO / J. LANE	CHECKED	G. EVANS			



C:\Users\cjpeter\OneDrive\Desktop\38041056 - Charlotte ATCT\Permits\MCOE Wetland Impact Exhibit.dgn  
 10/21/2014 10:54:10 AM  
 Plotted By: Chris M. Peterson





**Project Description**  
**Proposed Charlotte-Douglas International Airport**  
**Airport Traffic Control Tower/Terminal Radar Approach Control Facility**  
**Charlotte, Mecklenberg County, North Carolina**  
**October 10, 2014**

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## INTRODUCTION

The Federal Aviation Administration (FAA) proposes to construct a new Airport Traffic Control Tower (ATCT) and Terminal Radar Approach Control (TRACON) base building at the Charlotte-Douglas International Airport (CLT) located in Charlotte, Mecklenberg County, North Carolina. The new FAA owned and operated facility will replace the existing ATCT and TRACON which were commissioned in 1977 and 1979 respectively by the FAA. The proposed ATCT/TRACON site is located on the south side of Hangar Road, west of Yorkmont Road. The FAA ATCT/TRACON project is independent of other projects at the CLT Airport.

The existing tower cab is approximately 575 square feet (sf) with a floor height of 150 feet (ft) above ground level (AGL). The existing TRACON/base building is approximately 21,000 sf. Additional air traffic controller positions were added in 2010 which included one to the ATCT and three to the Terminal Radar Approach Control (TRACON). In addition to supporting CLT, the TRACON also provides service to Concord Regional Airport (JQF) and Hickory Regional Airport (HKY) ATCTs. JQF is the 5th busiest airport in North Carolina, which services a large number of NASCAR teams.

In Fiscal Year 2011 the Secretary of Department of Transportation (DOT) made a commitment to the airport sponsor that the FAA will support the replacement of the existing facility.

## PROJECT NEED

The existing ATCT cab is inadequate for current operations and necessary equipment upgrades. The new ATCT will be designed as an Major Activity Level ATCT to enhance safety and efficiency by providing adequate depth perception, line of sight, and visibility of all movement and non-movement areas at the airport. The new ATCT cab will be approximately 850 sf in size with a floor height of 335 ft AGL and provide the following essential improvements:

- improve visibility of airport surface;
- eliminate tower cab overcrowding of current operational equipment and positions;
- increase base building size for operational and administrative requirements; and
- provide adequate parking for all stationed staff and to accommodate shift changes, and visitor parking.

The existing TRACON/base building is overcrowded for the existing staff. The overcrowding extends to the available parking and during training days there are

significantly more vehicles than parking spaces available. The new TRACON base building will house the TRACON, maintenance and facility equipment, and the Air Traffic Management District Office. Additionally, the base building will house three System Support Centers (SSC), and their respective personnel; these functions need to be co-located for logistics purposes, including operations and training. The new TRACON base building will be approximately 42,000 gross sf.

## PROJECT LOCATION

The proposed ATCT and TRACON/base building site is located approximately 1,000 ft west of Yorkmont Road on the south side of Hangar Road. The project site encompasses approximately 10 acres, and is located in Charlotte, Mecklenberg County, North Carolina. The proposed new ATCT site coordinates are:

- Latitude 35°12'14.28"N
- Longitude: 80° 56' 35.76"W

## PROJECT DESCRIPTION

The CLT ATCT/TRACON replacement project includes Next Generation (NextGen) technology that enables safe and efficient airport operations. The proposed FAA owned and operated facility will include a lease area of approximately 10 acres. The primary features of the new ATCT will include:

- the new ATCT
- a new TRACON base building
- 239 parking spaces (7 handicap spaces) and 6 motorcycle
- perimeter security fence
- security guard booth
- access roads to accommodate tractor trailers and emergency vehicles (e.g., fire trucks) access to all sides of the building
- dual emergency generators and uninterruptible power supply system
- exterior fuel tank

Additional description of the proposed ATCT/TRACON and associated features are provided in the following paragraphs:

- Proposed site work includes fill placement and construction of a new one-story TRACON/base building and ATCT.
- The ATCT will be situated adjacent to the base building and connected via an enclosed building link. The tower shaft will be constructed of pre-cast concrete panels forming non-functional shaft supporting a 16-sided steel cab approximately 850 sf in size.
- A total of 239 parking spaces are proposed, along with associated driveways, which are located the minimum distance from the buildings to meet FAA security requirements.

- Concrete walkways will be provided for access to parking areas. A paved walking trail for use by the occupants and for security inspections to the fenceline will be installed around the perimeter of the property, inside the fence.

## ALTERNATIVES ANALYSIS OVERVIEW

Alternative locations for the new ATCT and alternative designs were considered. To address procedural requirements, the no-build or no action alternative was also considered. The following sections describe these two types of alternatives and provide justification for the selected alternative.

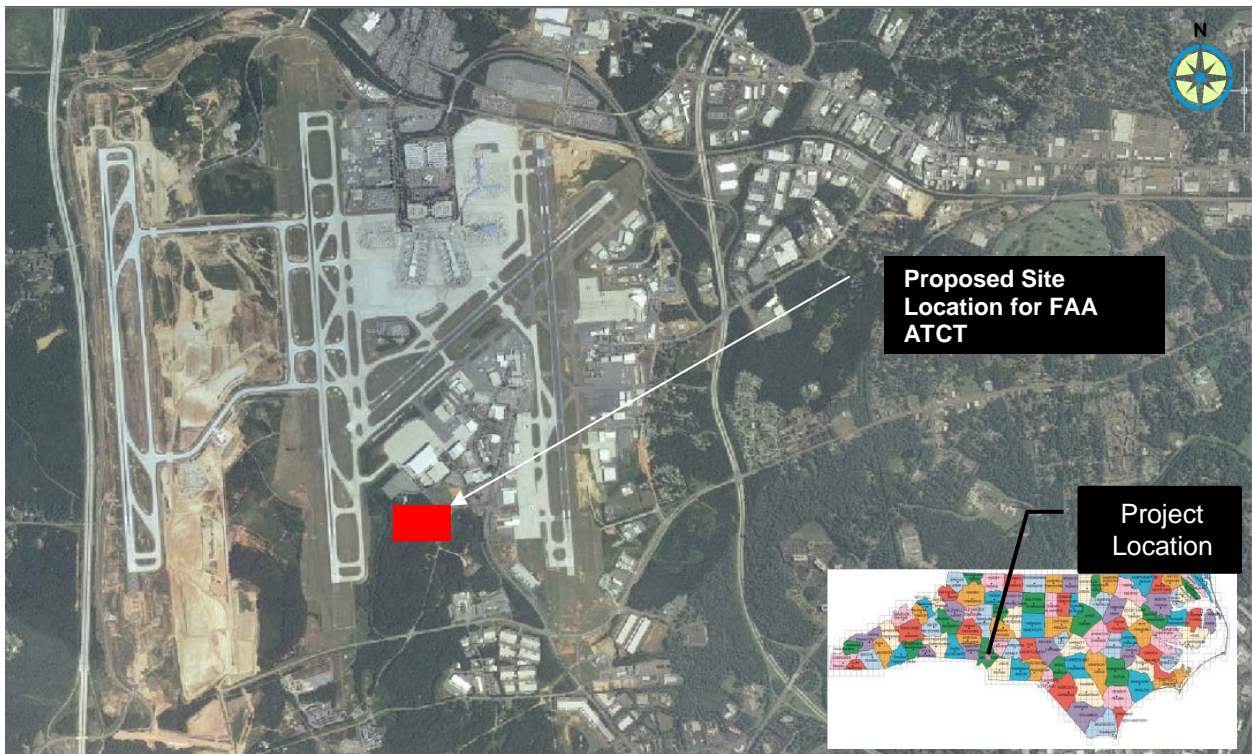
## LOCATION ALTERNATIVES

Six sites were evaluated covering each quadrant of the airport and three preferred sites were selected for the Comparative Safety Analysis, which took place during the ATCT siting process at the FAA's Airport Facilities Terminal Integration Laboratory (AFTIL). The siting review evaluated a number of factors, including visibility performance requirements, Federal laws, regulations, orders and standards that pertain to the siting of an ATCT, and operational requirements. All six sites were initially discussed and evaluated at the AFTIL I site visit, July 19, 2011. During the AFTIL I site evaluation, Sites 3, 4, and 6 were eliminated, and Sites 1, 2, and 2A were determined suitable for a more detailed evaluation. Site 3 did not provide a satisfactory view of thresholds 18R and 18L traffic issues. Site 4 required an AGL eye level of 500 ft and was rejected due to excessive height. Site 6 had several issues including unsatisfactory view of thresholds 18R and 18L problem areas, the view of Taxiway S was blocked by the fire station, and the height would need to be increased substantially to view operations on Taxiway C. In addition to these pre-identified sites, other sites were also evaluated during the AFTIL I.

Sites 1, 2, and 2A were further evaluated during the AFTIL II study, which occurred January 23 through January 27, 2012. Upon further evaluation, potential wetlands were identified on Site 1. No initial environmental issues were identified on Site 2 and 2A, resulting in Site 2A becoming the preferred site. Conceptual plans were drawn for the three selected sites and further analyzed before selecting the preferred site, Site 2A. Site 2 as well as Site 2A are located adjacent to a high-voltage powerline, requiring that the high-voltage powerline be relocated underground. It was determined that moving Site 2A an additional 50 feet to the west would eliminate the necessity for relocating the power line. The new position was designated Site 2B.

The AFTIL II evaluation included determining requisite eye level elevations in order to meet the visual requirements of FAA Order 6480.4A, as well as determining potential obstructions as defined in Federal Aviation Regulations Part 77. The analysis for each site initially examined the "eye level elevation" required for each location based on the runway visibility without regard to obstructions. Each site was then analyzed for height requirements based on existing obstructions between the proposed ATCT site and movement areas. Ground elevations and building heights were ascertained from the 3D Airport Layout Plan (ALP) provided by AFTIL.

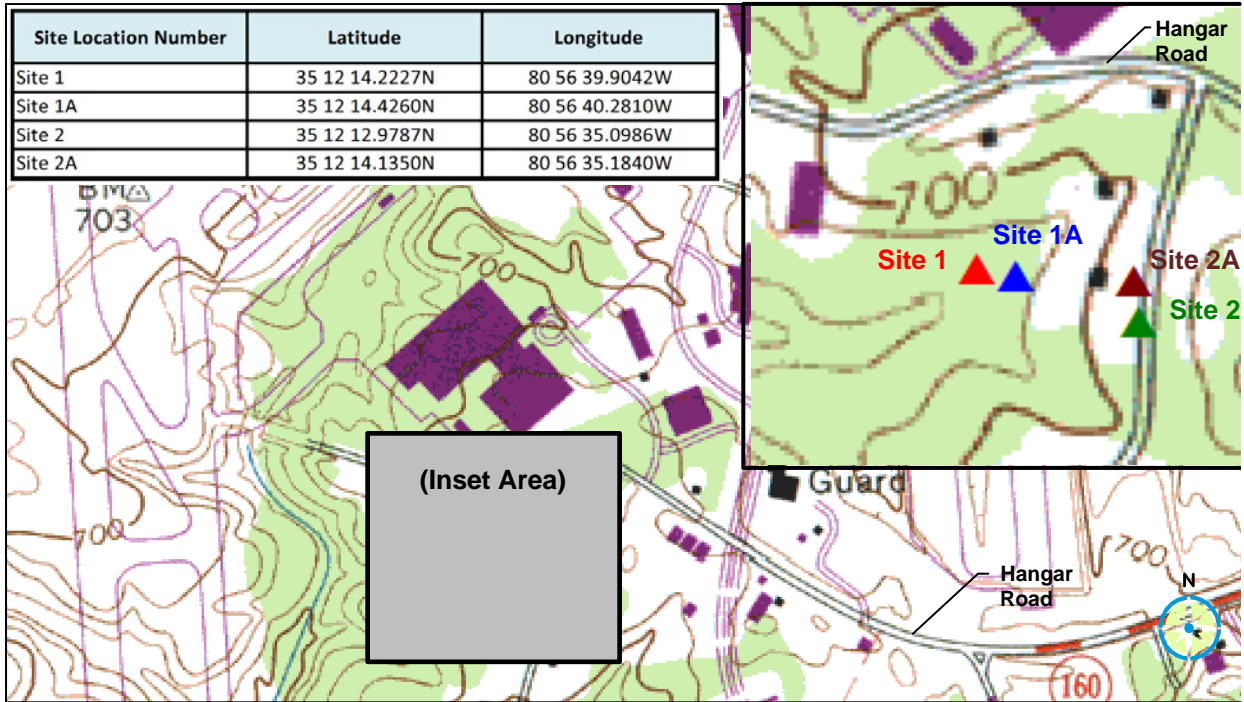
Copies of the approved Siting Report, Environmental Due Diligence Audit and Environmental Assessment for the project are provided in the appendix. Please refer to these document(s) for a thorough assessment of the location alternatives and justification for the selected alternative.



**Figure 1-1 Alternative ATCT Site Locations, CLT, Charlotte, NC**  
Source: 2011 USDA NRCS Image; North Carolina, Inset location map, MapTech, Inc.



**Figure 3-2 Aerial Perspective, Alternative ATCT Sites 1 and 2A, CLT**  
Source: 2011 USDA Aerial Imagery



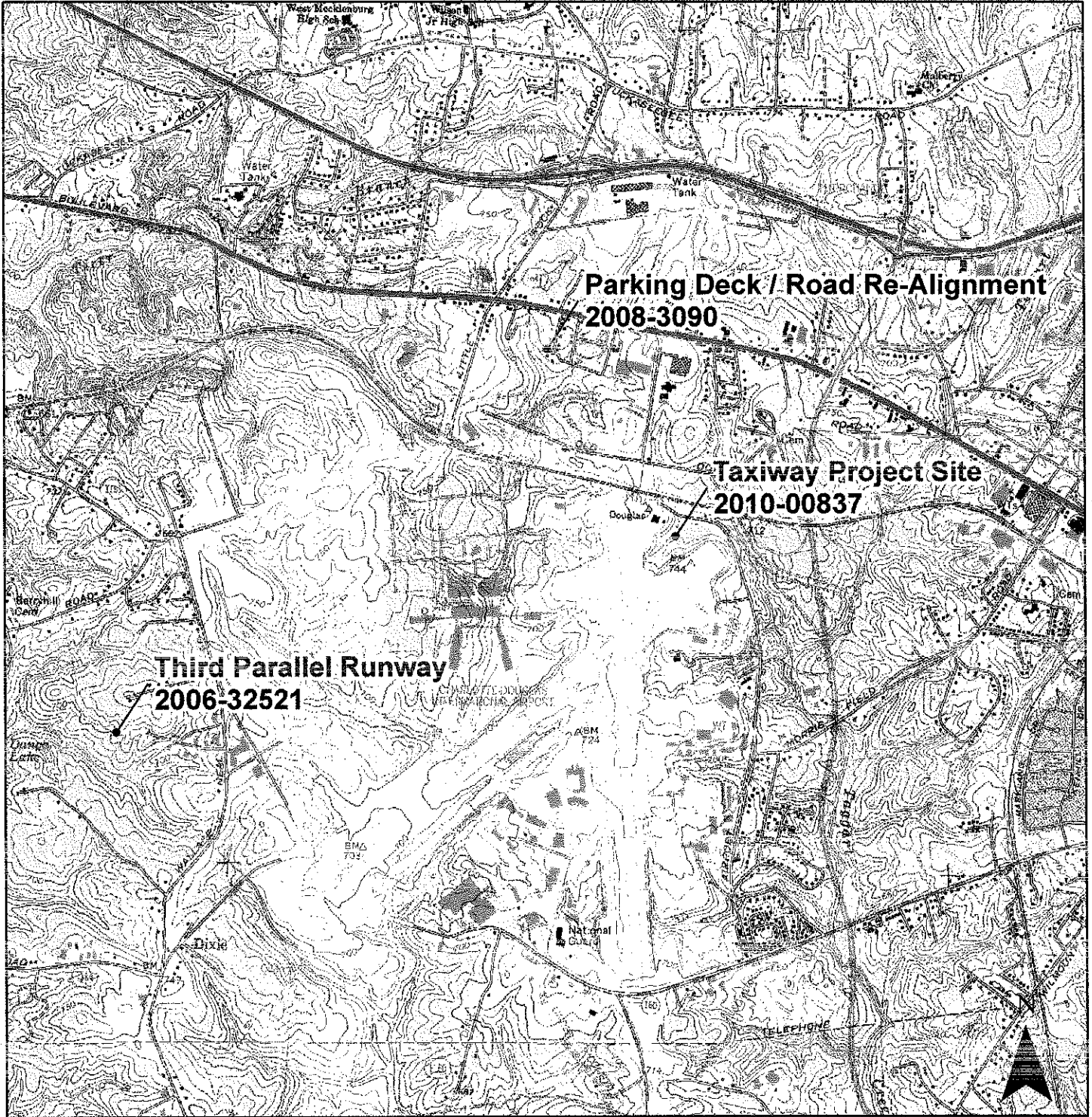
**Figure 3-1 Proposed ATCT Alternative Sites, CLT, Charlotte, NC**  
 Source: USGS Topographic Mapping; 7.5 minute Charlotte West Quadrangle



**Plans for previously authorized permits associated with  
the Charlotte Airport**

**Master plan showing approximate locations of projects  
for each Action ID**

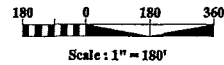
# CDIA Permit Actions



**Action ID 2006-32521 Plan showing activities authorized  
by the 4/26/2010 permit modification**



**Action ID 2006-32521 Plan showing activities authorized  
with the 3/20/2007 permit and the 7/15/2009 permit  
modification**



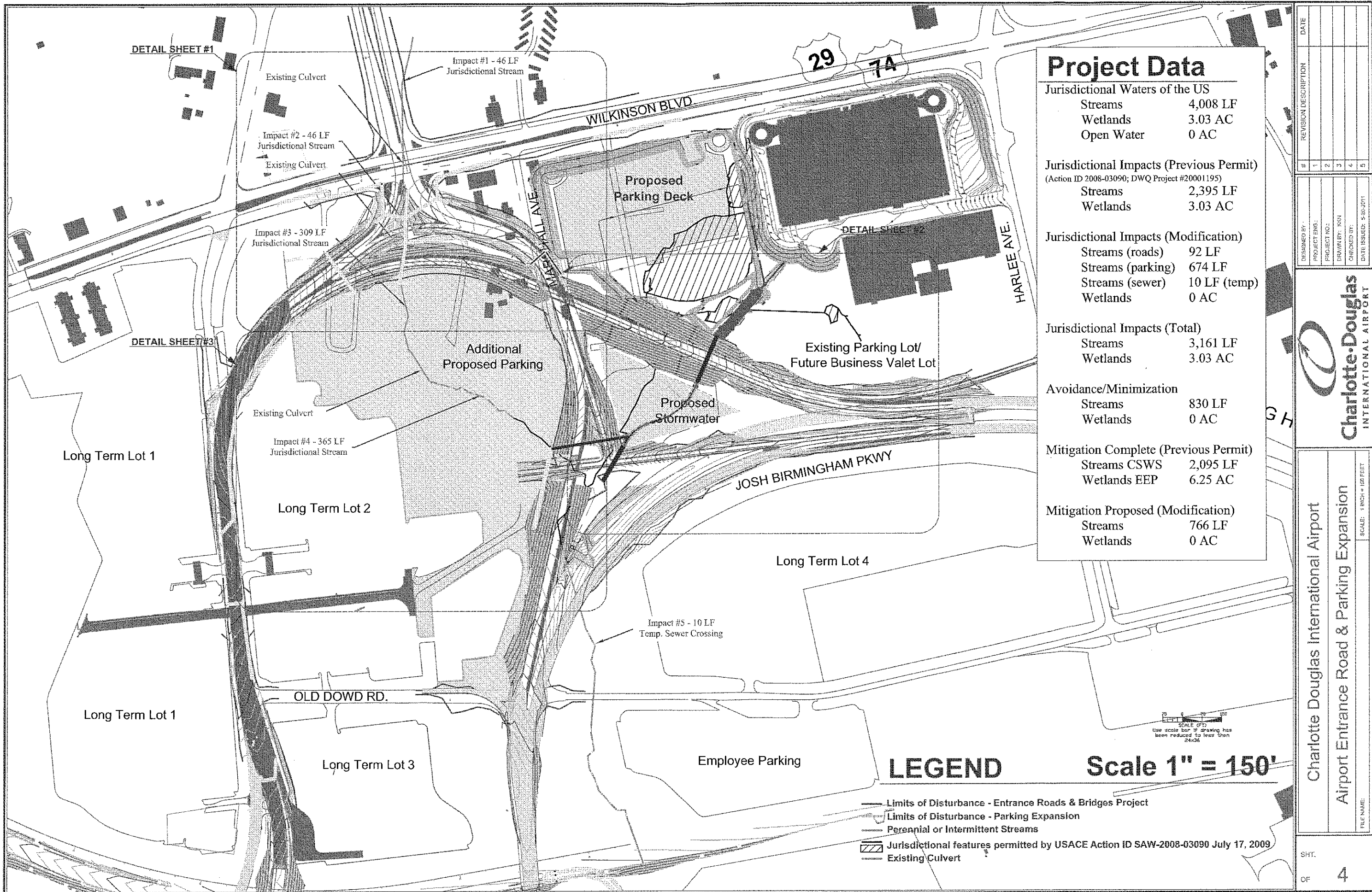
STV/Ralph Whitehead Associates, Inc.  
1000 West Morehead St., Ste. 200  
Charlotte, NC 28208



**Charlotte-Douglas**  
INTERNATIONAL AIRPORT

**Action ID 2008-03090 Plan showing activities authorized  
by the 7/17/2009 permit and the 6/11/2012 permit  
modification**





### Project Data

Jurisdictional Waters of the US	
Streams	4,008 LF
Wetlands	3.03 AC
Open Water	0 AC
Jurisdictional Impacts (Previous Permit) (Action ID 2008-03090; DWQ Project #20001195)	
Streams	2,395 LF
Wetlands	3.03 AC
Jurisdictional Impacts (Modification)	
Streams (roads)	92 LF
Streams (parking)	674 LF
Streams (sewer)	10 LF (temp)
Wetlands	0 AC
Jurisdictional Impacts (Total)	
Streams	3,161 LF
Wetlands	3.03 AC
Avoidance/Minimization	
Streams	830 LF
Wetlands	0 AC
Mitigation Complete (Previous Permit)	
Streams CSWS	2,095 LF
Wetlands EEP	6.25 AC
Mitigation Proposed (Modification)	
Streams	766 LF
Wetlands	0 AC

#	REVISION DESCRIPTION	DATE

DESIGNED BY:	PROJECT ENG.:	DESIGNED BY:	CHECKED BY:	DATE ISSUED:
				5/20/2011



### LEGEND

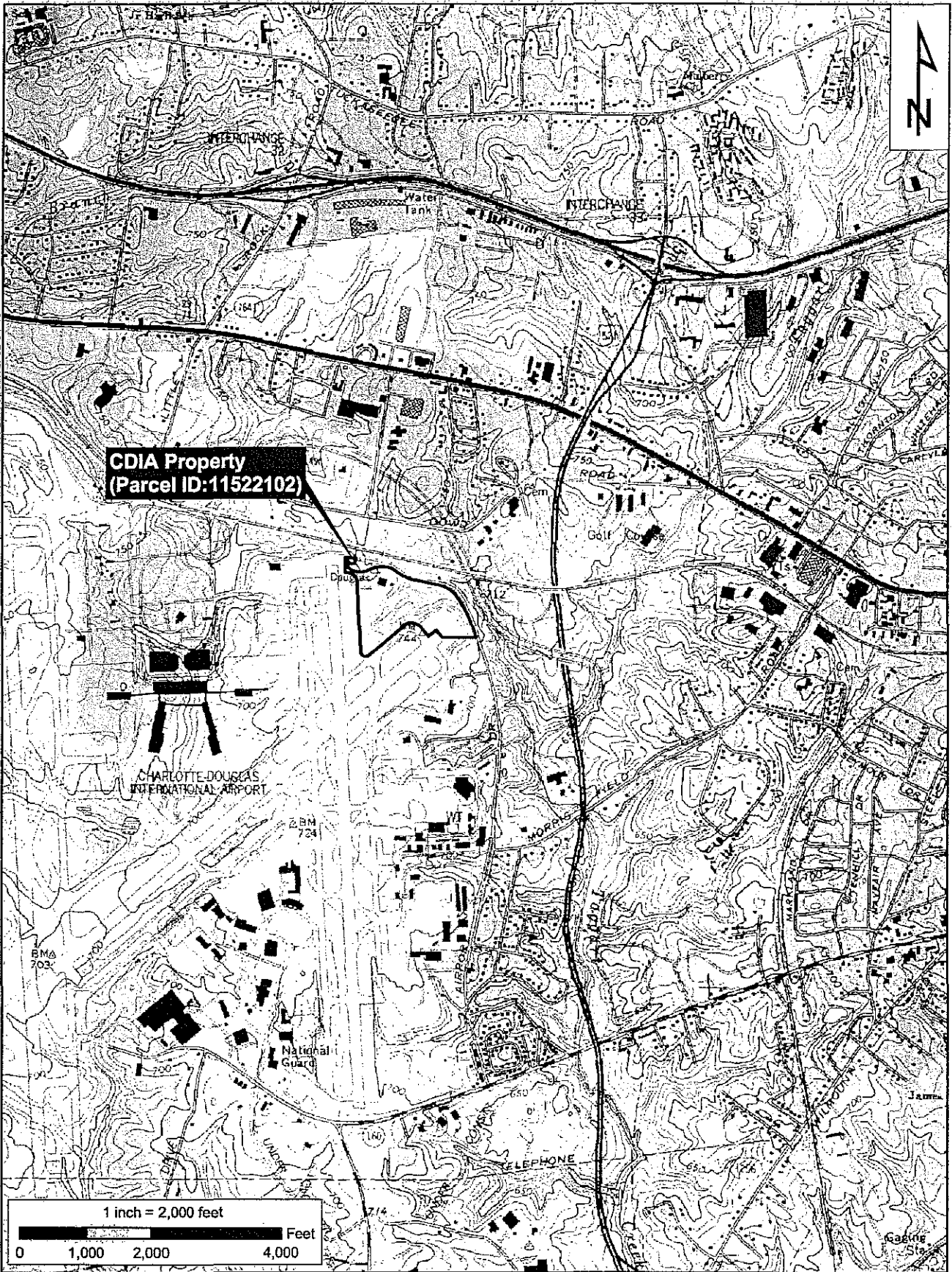
- Limits of Disturbance - Entrance Roads & Bridges Project
- Limits of Disturbance - Parking Expansion
- Perennial or Intermittent Streams
- ▨ Jurisdictional features permitted by USACE Action ID SAW-2008-03090 July 17, 2009
- Existing Culvert

**Scale 1" = 150'**

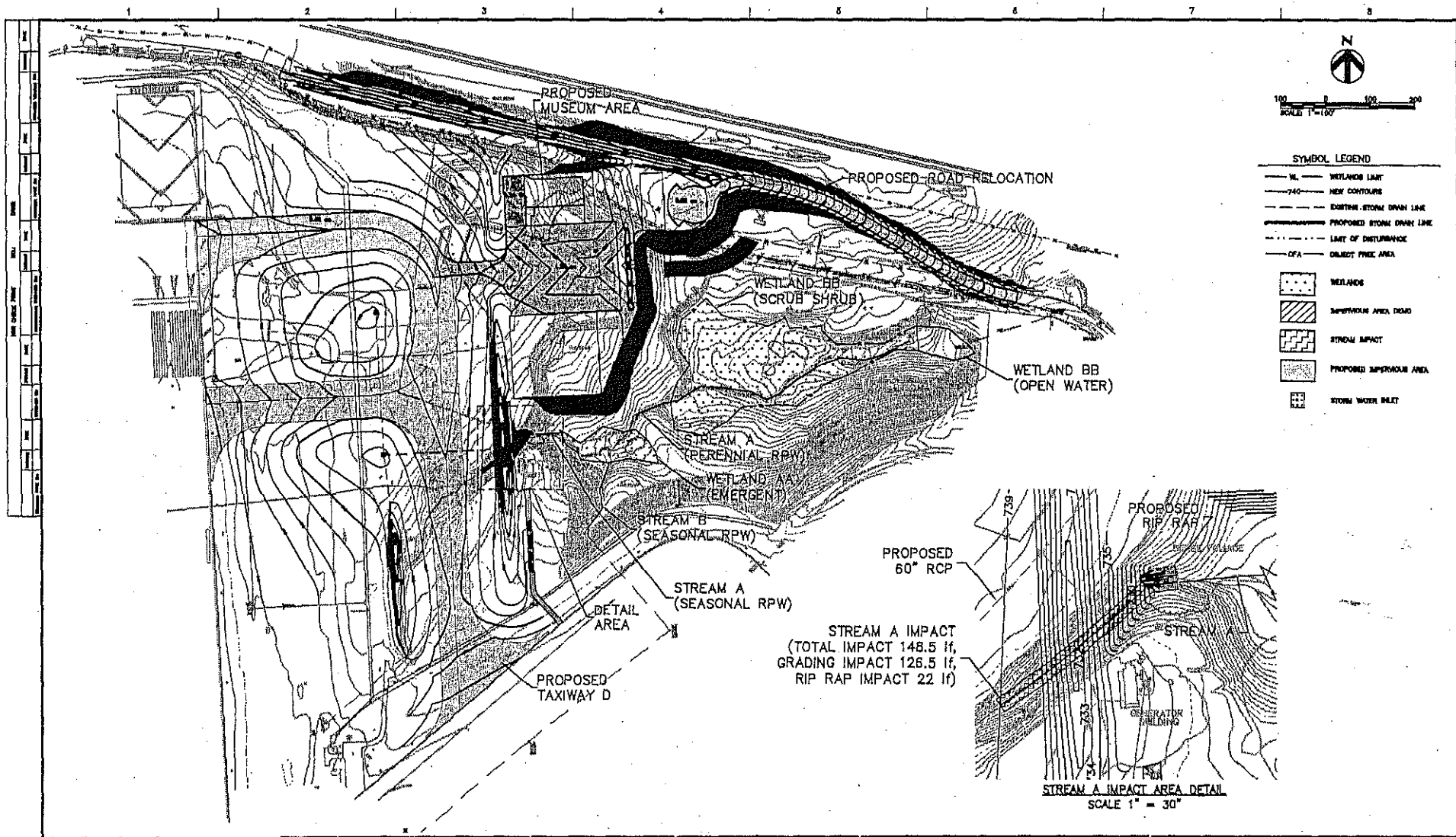
SCALE (FT)  
Use scale bar if drawing has been reduced to less than 24x36

Charlotte Douglas International Airport  
Airport Entrance Road & Parking Expansion  
SCALE: 1" = 150 FEET  
FILE NAME:

**Action ID 2010-00837 Plan showing activities authorized  
by the 10/16/2012 permit**



Data Sources: First Dataset - USGS, 1984; D:\GIS\Projects\100062\_CharlotteDouglasIntlAirport\770\_CDIA\AdditionalServicesTask\_TaxiwayD\map\_dowshnd\401\Cell1\_Latest\_Update\ref\_02-04-10

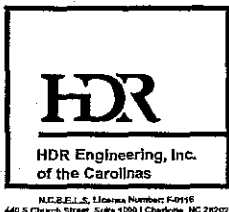
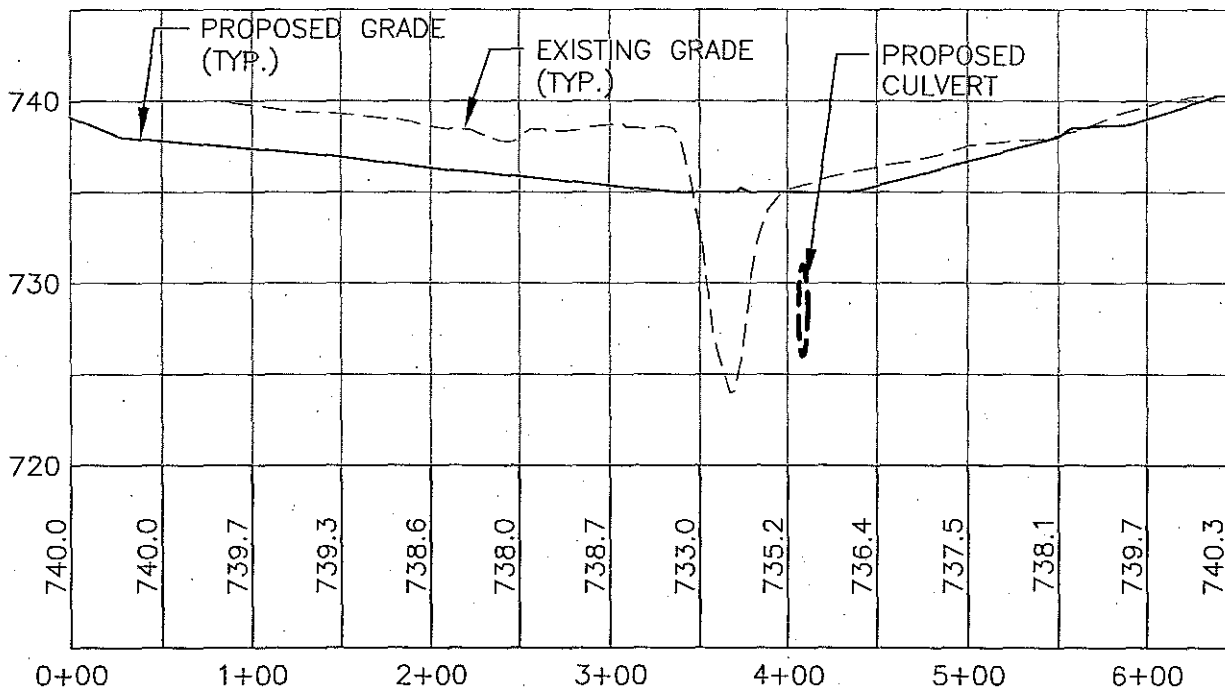
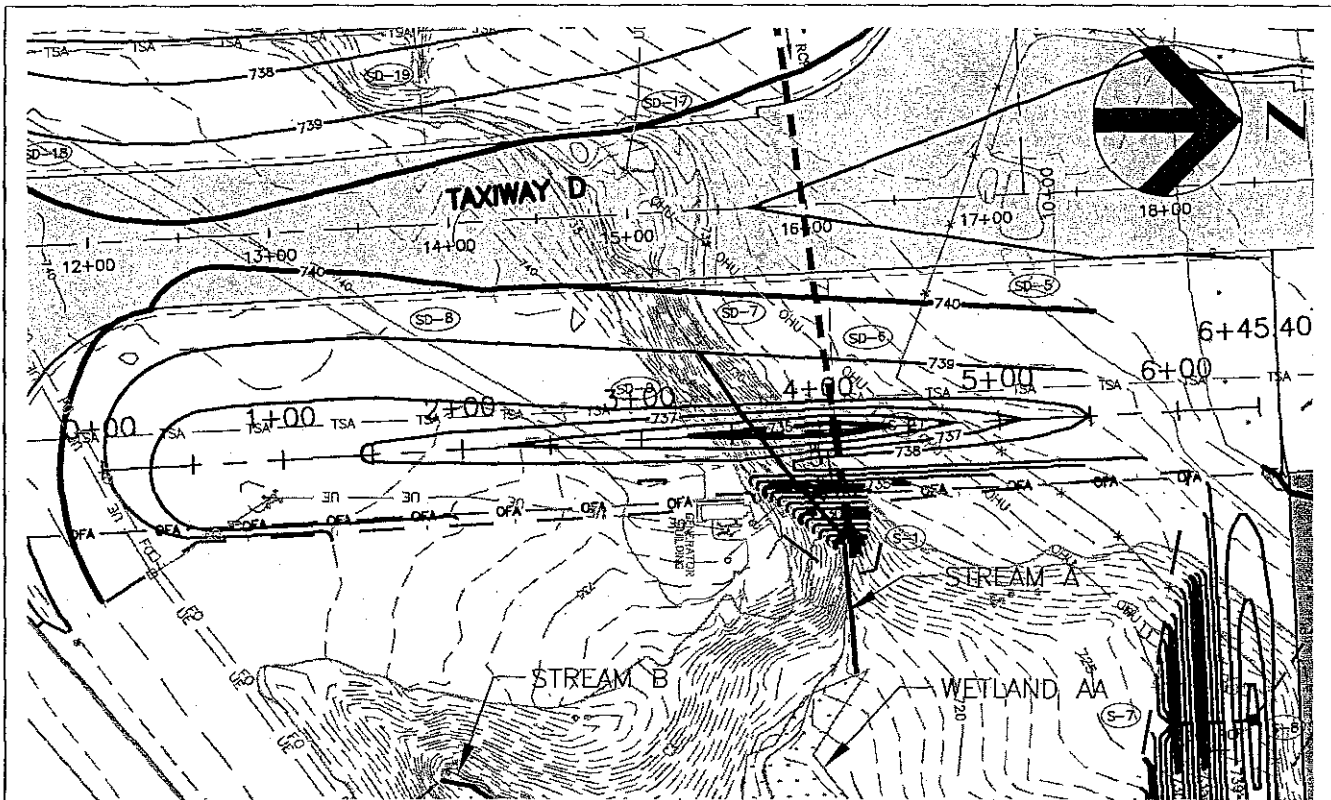


NO.	DATE	DESCRIPTION	BY	APP'D
1	08/11/2010	ENVIRONMENTAL PERMITTING UPDATE	134312	
2	06/14/2010	ENVIRONMENTAL PERMITTING UPDATE	134312	

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**CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT  
TAXIWAY D STREAM IMPACT PLAN**

**FILENAME: TAXIWAY D PLAN**  
**SCALE: 1" = 100'**  
**SHEET: FIGURE 4**



**CDIA TAXIWAY  
 CULVERT CROSS-SECTION**

CDIA

DATE  
 3/11/10

FIGURE  
 FIG. 5