US Army Corps
Of Engineers
Wilmington District

PUBLIC NOTICE

Issue Date: March 15, 2019
Comment Deadline: April 15, 2019
Corps Action ID Number: SAW-2018-02276

The Wilmington District, Corps of Engineers (Corps) received an application from the North Carolina Department of Transportation (NCDOT) seeking Department of the Army authorization to impact waters of the U.S., associated with the proposed widening of existing I-95 to an eight-lane median divided facility on existing location from Business Route 95 (exit 56) north to Interstate 40 (exit 81) in Cumberland, Harnett, and Johnston Counties, North Carolina.

Specific location information is described below. Construction plans are not attached to this Public Notice due to the large amount of pages. However, all construction plans can be found at the Wilmington District Web Site along with this Public Notice:

http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx

If you wish to have a paper copy of this Public Notice and/or the construction plans, please contact the individual identified at the end of this Notice.

Applicant: North Carolina Department of Transportation
c/o Mr. James Rerko
1000 Transportation Drive
Fayetteville, North Carolina 28302

AGENT (if applicable): Michael Baker International
Attn: Mr. Terry Burhans
8000 Regency Parkway, Suite 600
Cary, North Carolina 27518

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

Location Description:

Project Area: 26 miles
Nearest Town: Fayetteville, Dunn, Benson
Nearest Waterway: Cape Fear River, Black River, Neuse River
River Basin: 03030004, 03030006, and 03020201
Latitude and Longitude: 35.086094 N, -78.784738 W to 35.389959 to -78.517764 W

Existing Site Conditions

The project corridor is located within the existing I-95 corridor and extends from Eastover in Cumberland County to north of Benson in Johnston County. The southern portion of the project through Cumberland and Harnett Counties is located in the Cape Fear River Basin and lies within Hydrologic Unit Codes (HUCs) 03030004 (Subbasin Upper Cape Fear) and 03030006 (Subbasin Black River). The northern portion of the project through Johnston County is located in the Neuse River Basin and lies within HUC 03020201 (Subbasin Upper Neuse). This project is located within the Middle Atlantic Coastal Plain eco-region. The project crosses Baker Swamp, Black River, Stony Run, Mingo Swamp, Hannah Creek, and Driving Branch as well as several unnamed tributaries to waters of the US, and multiple wetlands.

Applicant's Stated Purpose

The proposed project would widen I-95 to eight lanes, increasing capacity and achieving a LOS D or better along the corridor. The project would also improve interchanges to meet current AASHTO standards. The portion of I-95 between Exits 56 and 81 has the highest average annual daily traffic (AADT) along the facility with 2016 volumes reaching almost 60,000 vehicles a day in southern Johnston County. The I-95 Planning and Finance Study Environmental Assessment (2012) forecast the 2040 Level of Service (LOS) along the I-5986 portion at I-95 at LOS F without widening to eight lanes.

Project Description

The NCDOT is proposing to widen an approximate 26-mile portion of existing Interstate 95 to an eight-lane median-divided facility on existing location through Cumberland, Harnett and Johnston Counties, North Carolina. The proposed project begins approximately a half-mile south of SR 1832/Murphy Road (Exit 55) where 4-lane I-95 would taper to 8-lanes at Business Route 95 (Exit 56) near Fayetteville in Cumberland County and extends north through Harnett County and into Johnston County to the Interstate 40 interchange (Exit 81), north of the City of Benson. The proposed project is listed in the approved 2018-2027 State Transportation Improvement Program (STIP) as Project Number I-5986 and is federally-funded. I-95 interchange improvements in Harnett County associated with this project are proposed as NCDOT STIP projects I-5877, I- 5878, and I-5883.

Based upon Final Permit Drawings for the proposed impacts to jurisdictional areas for the I-5986B - Section 1 (I-5877) project combined with Preliminary Permit drawings that calculate impacts based on preliminary slope stakes plus 25 feet for the remaining phases, there would be 16.579 aces of permanent wetland impacts and 5,697 linear feet of permanent stream impacts. Below are tables which include summaries of proposed impacts for the overall I-5986 project, broken out by section:

Table 1. Summary of Water Resources Impacted

Section	Design Stage	Proposed LET	Total # of Wetlands Impacted**	Total # of Streams Impacted**	Buffer Rule Impacts (Y/N)
I-5986B - Section 1 (I-5877)	Final	FY 2019	6	8	No
I-5986B - Section 2 (I-5878)	Preliminary*	FY 2021	3	4	No
I-5986B - Section 3 (I-5883)	Preliminary*	FY 2021	8	9	No
I-5986B - Section 4 (Johnston County)	Preliminary*	FY 2021	6	6	Yes
I-5986A (Cumberland County)	Preliminary*	FY 2019	34	12	No
		Totals	**57**	**39**	

*Preliminary impacts were determined by measuring 25' outside of preliminary slope stake limits.
** Features may be impacted at more than one Permit Site

Table 2. Summary of Wetland Impacts

Section	Design Stage	Total Wetland Impact Area (ac)	Impacts Requiring Mitigation (ac)
I-5986B - Section 1 (I-5877)	Final	1.351	1.351
I-5986B - Section 2 (I-5878)	Preliminary*	1.811	1.811
I-5986B - Section 3 (I-5883)	Preliminary*	0.915	0.915
I-5986B - Section 4 (Johnston County)	Preliminary*	2.444	2.444
I-5986A (Cumberland County)	Preliminary*	10.058	10.058
	Totals	**16.579**	**16.579**

*Preliminary impacts were determined by measuring 25' outside of preliminary slope stake limits.

Table 3. Summary of Stream Impacts

Section	Design Stage	Total Stream Impacts (lf)	Impacts Requiring Mitigation (lf)**
I-5986B - Section 1 (I-5877)	Final	1,465	1,208
I-5986B - Section 2 (I-5878)	Preliminary*	641	606
I-5986B - Section 3 (I-5883)	Preliminary*	1,539	1,433
I-5986B - Section 4 (Johnston County)	Preliminary*	923	859
I-5986A (Cumberland County)	Preliminary*	1,129	808
	Totals	**5,697**	**4,914**

*Preliminary impacts were determined by measuring 25' outside of preliminary slope stake limits.
**Mitigation determination requirements are detailed below for each section.

The STIP I-5986 project has been combined with and will include proposed activities from three additional separate interchange improvement projects. The entire 26-mile project corridor will be broken down into five phased sections, with the corridor widening activities being combined with the interchange improvements. The phases of the I-5986 project along with approximate section limits, length, and proposed construction letting are summarized in Table 4. Permit modification requests would be submitted as the final design is completed for each of the remaining sections according to the phasing dates provided below.

Table 4. I-5986 Project Phasing

Section	Approximate Section Limits	Approximate Length (mi)	Construction Letting
I-5986B - Section 1 (I-5877)	South of SR 1180 (Bud Hawkins Road – Exit 70) to North of SR 1002 (Long Branch Road – Exit 71)	3.3	May 2019
I-5986B - Section 2 (I-5878)	South of SR 1793 (Spring Branch Road – Exit 72) to North of US 421 (Cumberland Street – Exit 73)	1.8	July 2020
I-5986B - Section 3 (I-5883)	South of SR 1808 (Jonesboro Road – Exit 75) to North of SR 1709 (Hodges Chapel Road – Exit 77)	3.6	July 2020
I-5986B - Section 4 (Johnston County)	North of SR 1709 (Hodges Chapel Road – Exit 77)) to I-40 (Exit 81)	4	July 2020
I-5986A (Cumberland County)	I-95 Business Route (Exit 56) to South of SR 1811 (Bud Hawkins Road – Exit 70)	14.1	May 2019

Avoidance and Minimization

The applicant provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment: Avoidance measures were implemented to the extent possible during the planning and design phases, and minimization measures were incorporated into the project design. All jurisdictional features were delineated, field-verified, and surveyed within the study area. Proposed widening of I-95 towards the median in areas where possible has aided in reducing the project footprint and overall impact to jurisdictional resources. The designs were developed in more detail and adjusted to avoid and minimize impacts to jurisdictional areas. Project designs were reviewed during development stages by an interagency review team consisting of representatives from NCDOT, North Carolina Division of Water Resources (NCDWR), North Carolina Wildlife Resources Commission, Corps, and the applicant's consultant team. Input from parties concerned have helped develop appropriate and practicable steps to avoid and minimize impacts to sensitive areas.

General avoidance and minimization measures implemented by the NCDOT are as follows:

- NCDOT's Best Management Practices (BMPs) for the Protection of Surface Waters would be strictly enforced;
- Impacts to wetlands, streams, and open waters were avoided and/or minimized by adjusting alignments and slopes;
- 3:1 fill slopes have been used at stream and wetland crossings to reduce impacts and to promote sheet flow since shoulder berm gutter is not used;
- All storm drainage would be diffused and designed for non-erosive velocities before entering stream and wetland areas to the maximum extent practicable;
- Direct discharge of stormwater to streams has been avoided to the extent practicable;
- Rip rap stabilization on banks of jurisdictional streams would be

implemented to prevent erosion;

- Minimizing "in stream" activities;
- Decreasing the footprint of the proposed project through the reduction of right-of-way widths;
- Utilizing natural stream channel design principles when relocating streams.

Compensatory Mitigation

The applicant offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment: The proposed construction of I-5986 would result in unavoidable impacts to 16.579 acres of wetlands (3.741 acres of non-riparian wetlands; 12.838 acres of riparian wetlands) and 4,914 linear feet of jurisdictional stream (4,207 linear feet of perennial stream and 707 linear feet of intermittent stream) that would require mitigation. NC DOT has acquired the compensatory mitigation for unavoidable impacts from the North Carolina Department of Environmental Quality (NCDEQ) Division of Mitigation Services (DMS).

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 <u>no potential to cause an effect</u> 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 <u>no historic properties affected</u>. 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 <u>no historic properties affected</u> 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-indentified 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 US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect." The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with federal nexus in Divisions 1-8, which includes this project.

☐ The Corps determines that the proposed project may affect federally listed endangered or threatened species or their formally designated critical habitat. Consultation has been completed for this type of activity and the effects of the proposed activity have been evaluated and/or authorized by the National Marine Fisheries Service (NMFS) in the South Atlantic Regional Biological Opinion or its associated documents, including 7(a)(2) & 7(d) analyses and Critical Habitat assessments. A copy of this public notice will be sent to the NMFS.

☐ 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.

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, Transportation 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 April 8, 2019 to:

NCDWR Central Office
Attention: Ms. Amy Chapman, Transportation 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

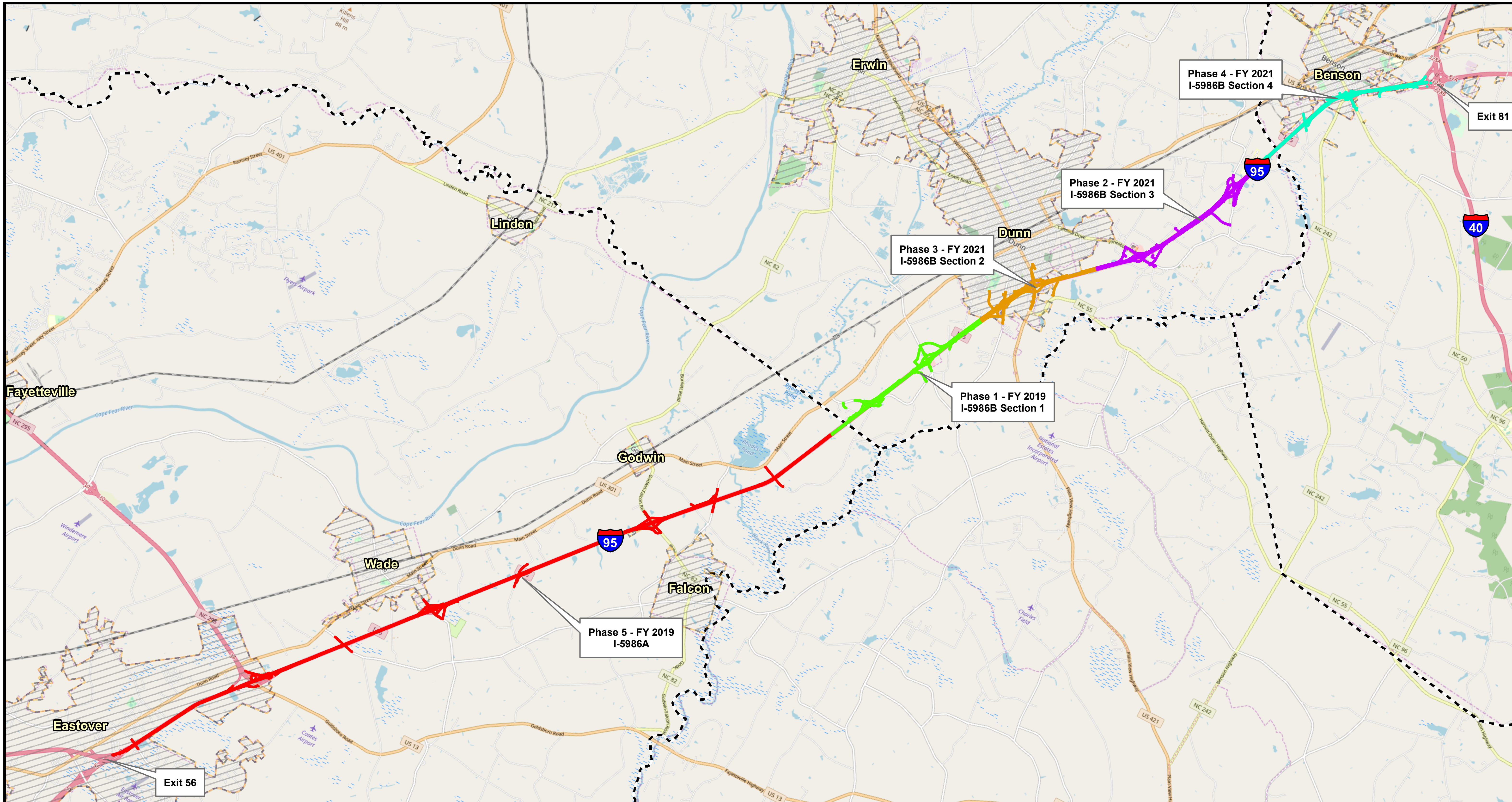
The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably 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.

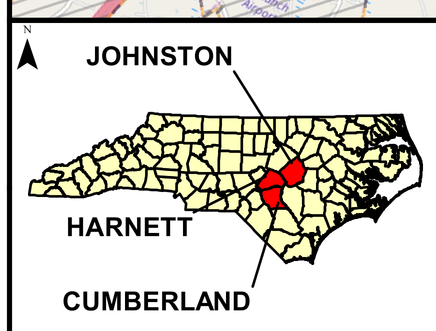
Commenting Information

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 will 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, April 15 2019. Comments should be submitted to Ms. Liz Hair,Wilmington Regulatory Field Office,, 69 Darlington Avenue, Wilmington, North Carolina 28403 , at (910) 251-4049 or by email at sarah.e.hair@usace.army.mil.





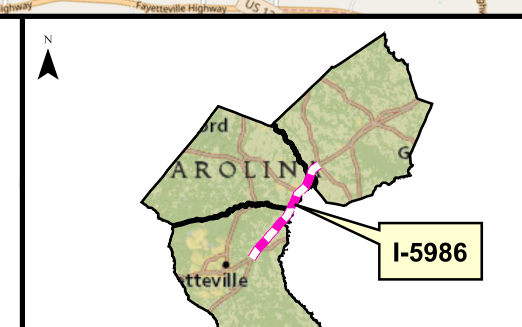
Legend

- Phase 1: I-5986B Section 1 - SAW-2016-00682 - Exits 70 & 71
- Phase 3: I-5986B Section 2 - SAW-2016-00688 - Exits 72 & 73
- Phase 2: I-5986B Section 3 - SAW-2016-00689 - Exits 75 & 77
- Phase 4: I-5986B Section 4 - SAW-2018-02276 - North of Hodges Chapel Road
- Phase 5: I-5986A - SAW-2018-02276 - Cumberland County
- Municipal Boundaries
- NC County Boundaries

N

Miles

0 0.5 1 2



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

I-95 WIDENING FROM EXIT 56 (I-95 BUSINESS/US 301) TO EXIT 81 (I-40).
CUMBERLAND, HARNETT, AND JOHNSTON COUNTIES
STIP PROJECT NO. I-5986

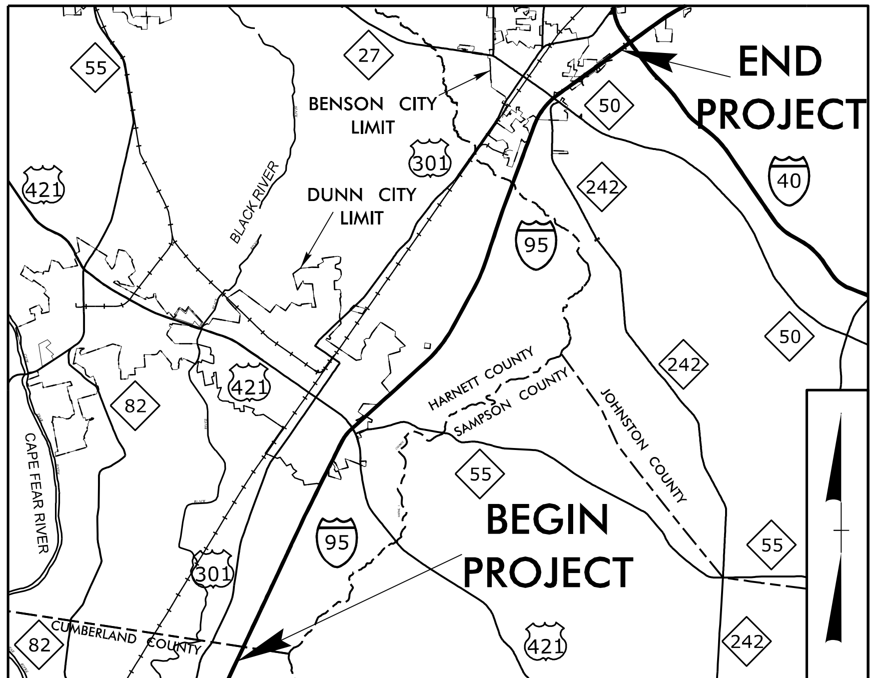
ATTACHMENT A: PROJECT PHASING MAP

PERMIT DRAWING
SHEET 1 OF 70

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5986B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
47532.1.3		PE

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



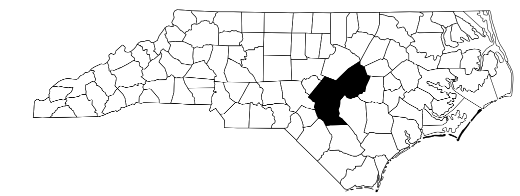
VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

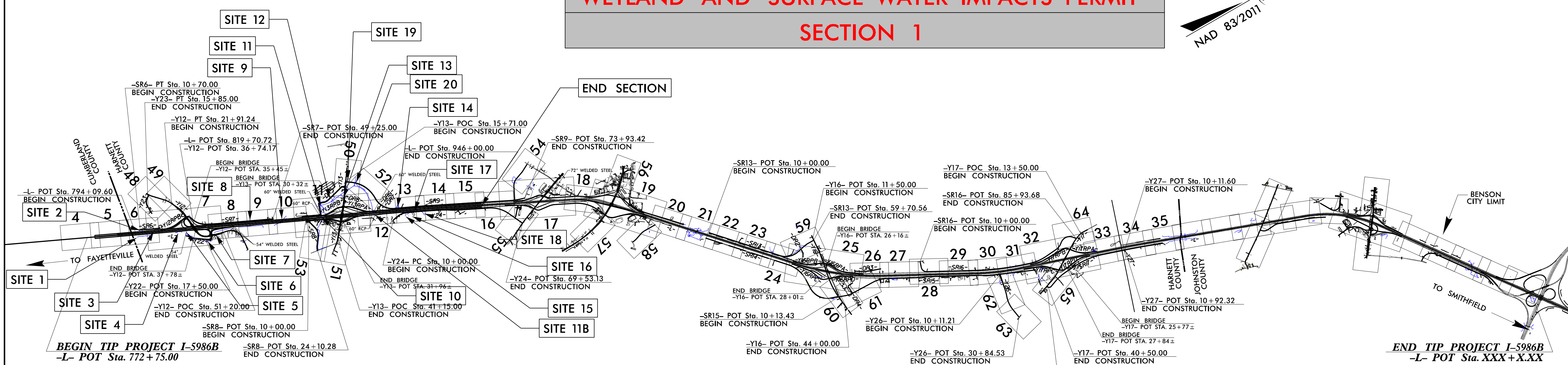
CUMBERLAND, HARNETT, AND JOHNSTON COUNTIES

LOCATION: I–95 FROM SR 1811 (BUD HAWKINS ROAD) (EXIT 70) TO I–40 (EXIT 81). WIDEN TO EIGHT LANES.

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS, CULVERTS, AND STRUCTURES



WETLAND AND SURFACE WATER IMPACTS PERMIT
SECTION 1



NOTES:

1. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
2. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ___.
3. THIS PROJECT IS WITHIN DUNN AND BENSON MUNICIPAL BOUNDARIES.
4. DESIGN EXCEPTION REQUIRED FOR HORIZONTAL ALIGNMENT AND HORIZONTAL STOPPING SIGHT DISTANCE ON SR 1811 (BUD HAWKINS ROAD) AND SR 1785 (ELM ST. EXT.). (SEE PLAN SHEETS 7, 12 & 13)

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TIP PROJECT: I-5986B

CONTRACT:

GRAPHIC SCALES

50 25 0 50 100 — PLANS

50 25 0 50 100 — PROFILE (HORIZONTAL)

10 5 0 10 20 — PROFILE (VERTICAL)

DESIGN DATA

ADT 2020 = 58,900
ADT 2040 = 75,700
K = 7 %
D = 55 %
T = 24 % *
V = 70 MPH
* (17% TTST + 7% DUALS)
FUNC CLASS = INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I 5986B = 11.865 MILES

LENGTH STRUCTURE TIP PROJECT I-5986B = 0.020 MILES

TOTAL LENGTH TIP PROJECT I-5986B = 11.885 MILES

Prepared In the Office of:
Michael Baker INTERNATIONAL
Michael Baker Engineering, Inc.
8000 Regency Parkway, Suite 600
Cary, NC 27518
Professional Corporation License Number: F-1084
FOR DIVISION OF HIGHWAYS

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 1, 2019

LETTING DATE:
JULY 21, 2020

SUSAN C. LANCASTER, P.E.
PROJECT ENGINEER

CURTIS TILLMAN, P.E.
PROJECT DESIGN ENGINEER

STEVE D. KENDALL, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

09/08/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_01.dgn
BSmith

DETAILS

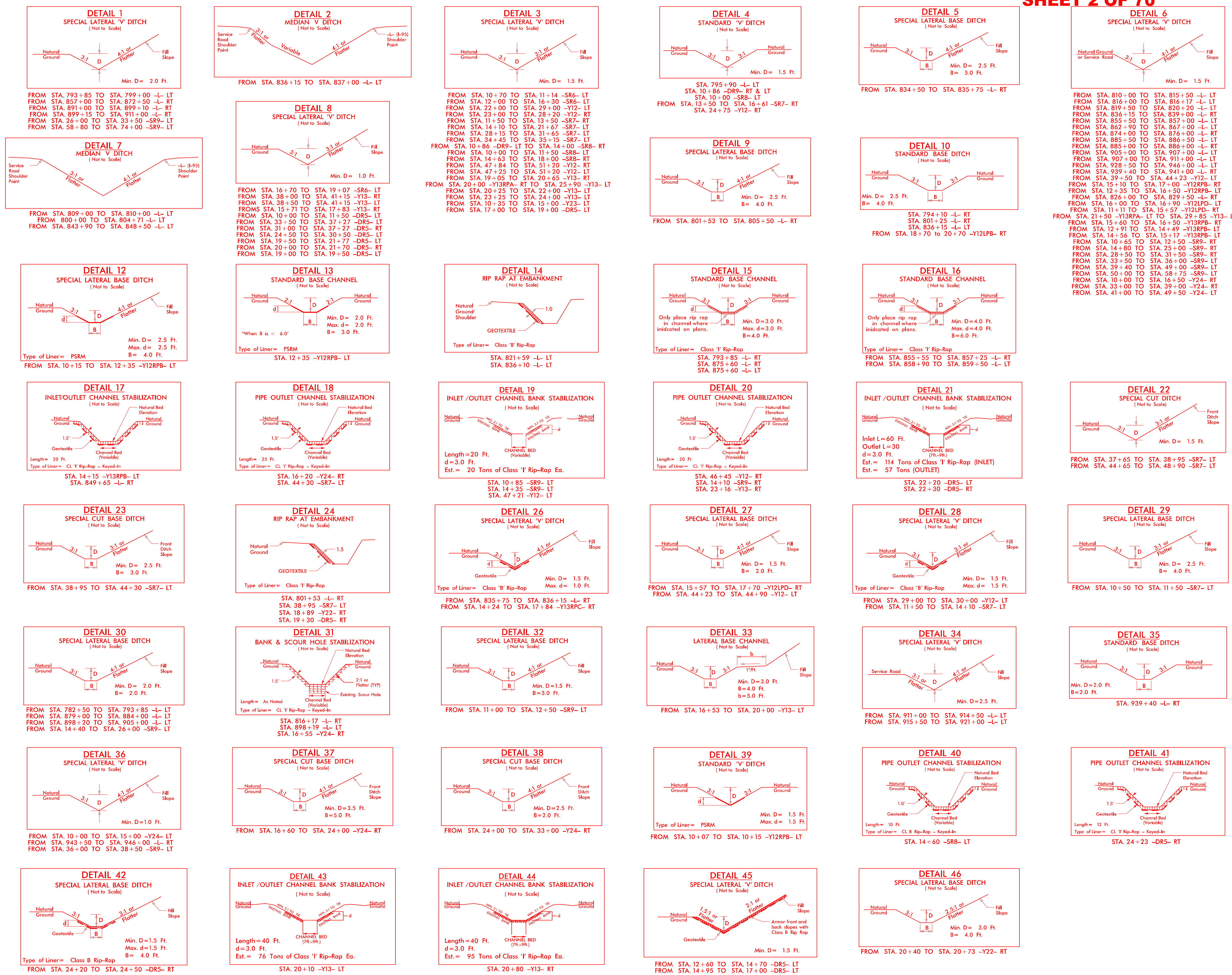
PERMIT DRAWING
SHEET 2 OF 70

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	02
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

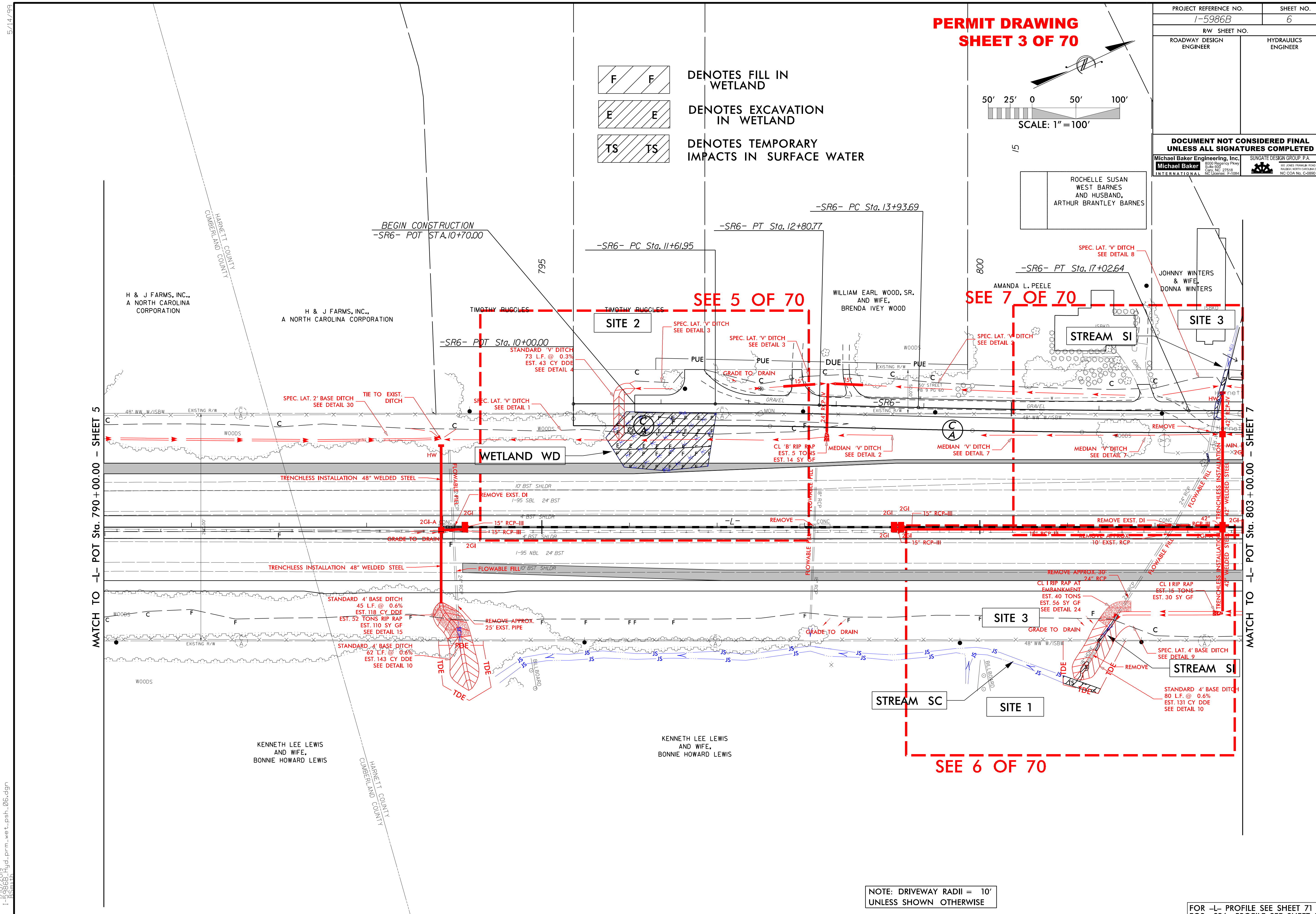
Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.



5/14/99

1/10/2019
I-5986B_Hyd_prm_wet_psh_02_details.dgn
BSmith


PROJECT REFERENCE NO.
SHEET NO.
I-5986B
6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 3 OF 70
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
SCALE: 1" = 100'
BEGIN CONSTRUCTION
-SR6- POT STA.10+70.00
-SR6- POT Sta. 10+00.00
-SR6- PC Sta. 11+61.95
-SR6- PT Sta. 12+80.77
-SR6- PC Sta. 13+93.69
-SR6- PT Sta. 17+02.64
H & J FARMS, INC., A NORTH CAROLINA CORPORATION
TIMOTHY RUGGLES
WILLIAM EARL WOOD, SR. AND WIFE, BRENDA IVEY WOOD
AMANDA L. PEELE
ROCHELLE SUSAN WEST BARNES AND HUSBAND, ARTHUR BRANTLEY BARNES
JOHNNY WINTERS & WIFE, DONNA WINTERS
KENNETH LEE LEWIS AND WIFE, BONNIE HOWARD LEWIS
HARNETT COUNTY
CUMBERLAND COUNTY
SEE 5 OF 70
SEE 7 OF 70
SEE 6 OF 70
SITE 1
SITE 2
SITE 3
WETLAND WD
STREAM SI
STREAM SC
STANDARD 'V' DITCH 73 L.F. @ 0.3% EST. 43 CY DDE SEE DETAIL 4
SPEC. LAT. 2' BASE DITCH SEE DETAIL 30
TIE TO EXIST. DITCH
SPEC. LAT. 'V' DITCH SEE DETAIL 1
SPEC. LAT. 'V' DITCH SEE DETAIL 3
SPEC. LAT. 'V' DITCH SEE DETAIL 8
GRADE TO DRAIN
CL 'B' RIP RAP EST. 5 TONS EST. 14 SY GF
MEDIAN 'V' DITCH SEE DETAIL 2
MEDIAN 'V' DITCH SEE DETAIL 7
TRENCHLESS INSTALLATION 48" WELDED STEEL
TRENCHLESS INSTALLATION 42" WELDED STEEL
REMOVE EXST. DI
FLOWABLE FILL
15" RCP-III
REMOVE APPROX. 10' EXST. RCP
REMOVE APPROX. 30' 24" RCP
CL I RIP RAP AT EMBANKMENT EST. 40 TONS EST. 56 SY GF SEE DETAIL 24
CL I RIP RAP EST. 15 TONS EST. 30 SY GF
STANDARD 4' BASE DITCH 45 L.F. @ 0.6% EST. 118 CY DDE EST. 52 TONS RIP RAP EST. 110 SY GF SEE DETAIL 15
STANDARD 4' BASE DITCH 62 L.F. @ 0.6% EST. 143 CY DDE SEE DETAIL 10
REMOVE APPROX. 25' EXST. PIPE
SPEC. LAT. 4' BASE DITCH SEE DETAIL 9
STANDARD 4' BASE DITCH 80 L.F. @ 0.6% EST. 131 CY DDE SEE DETAIL 10
MATCH TO -L- POT Sta. 790+00.00 - SHEET 5
MATCH TO -L- POT Sta. 803+00.00 - SHEET 7
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 71
FOR -SR6- PROFILE SEE SHEET 87
5/14/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_06.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. 8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084

SUNGATE DESIGN GROUP, P.A. NC COA No. C-0890

PERMIT DRAWING SHEET 4 OF 70

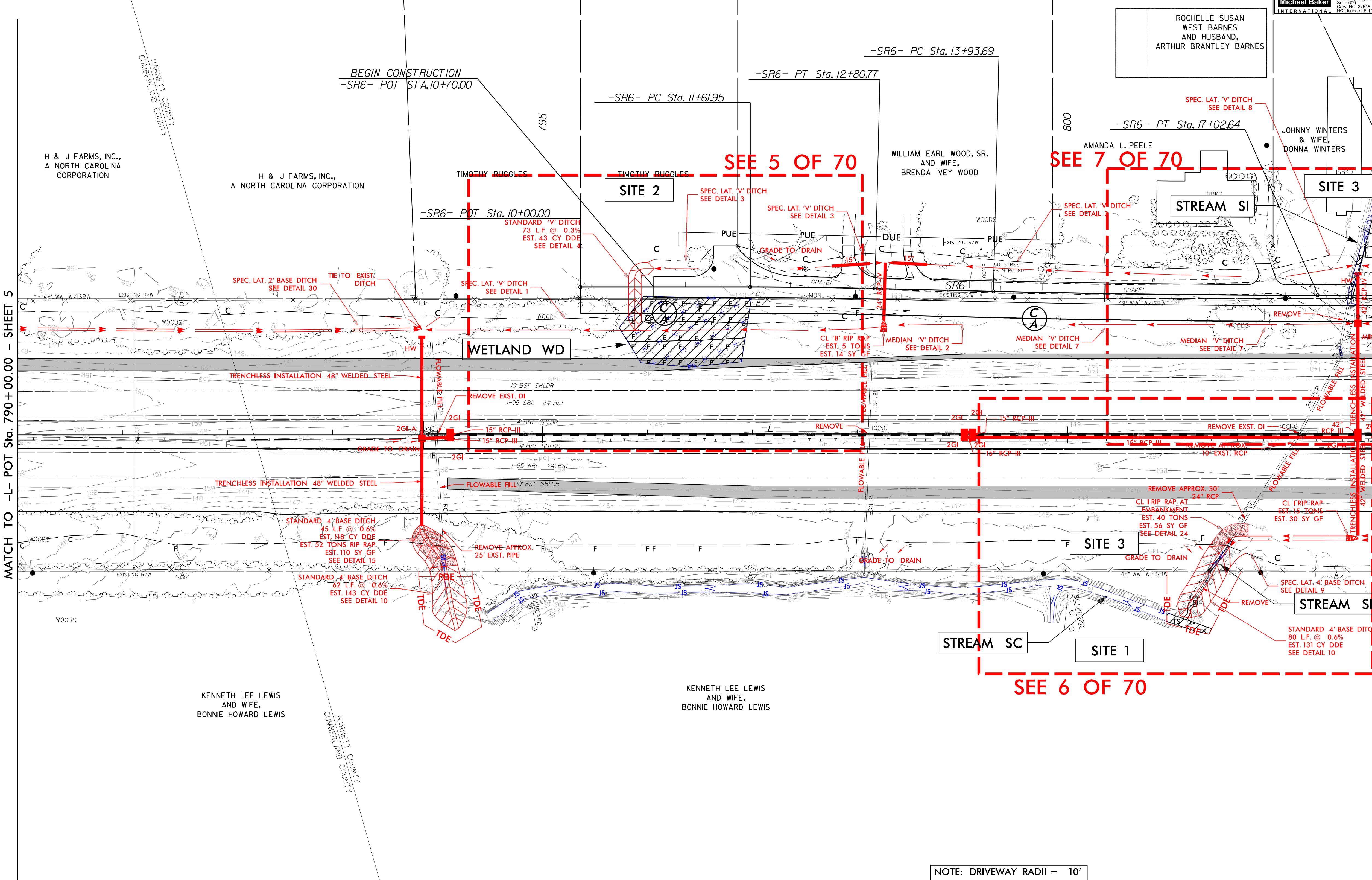
F F — DENOTES FILL IN WETLAND

E E — DENOTES EXCAVATION IN WETLAND

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

50' 25' 0 50' 100'

SCALE: 1" = 100'

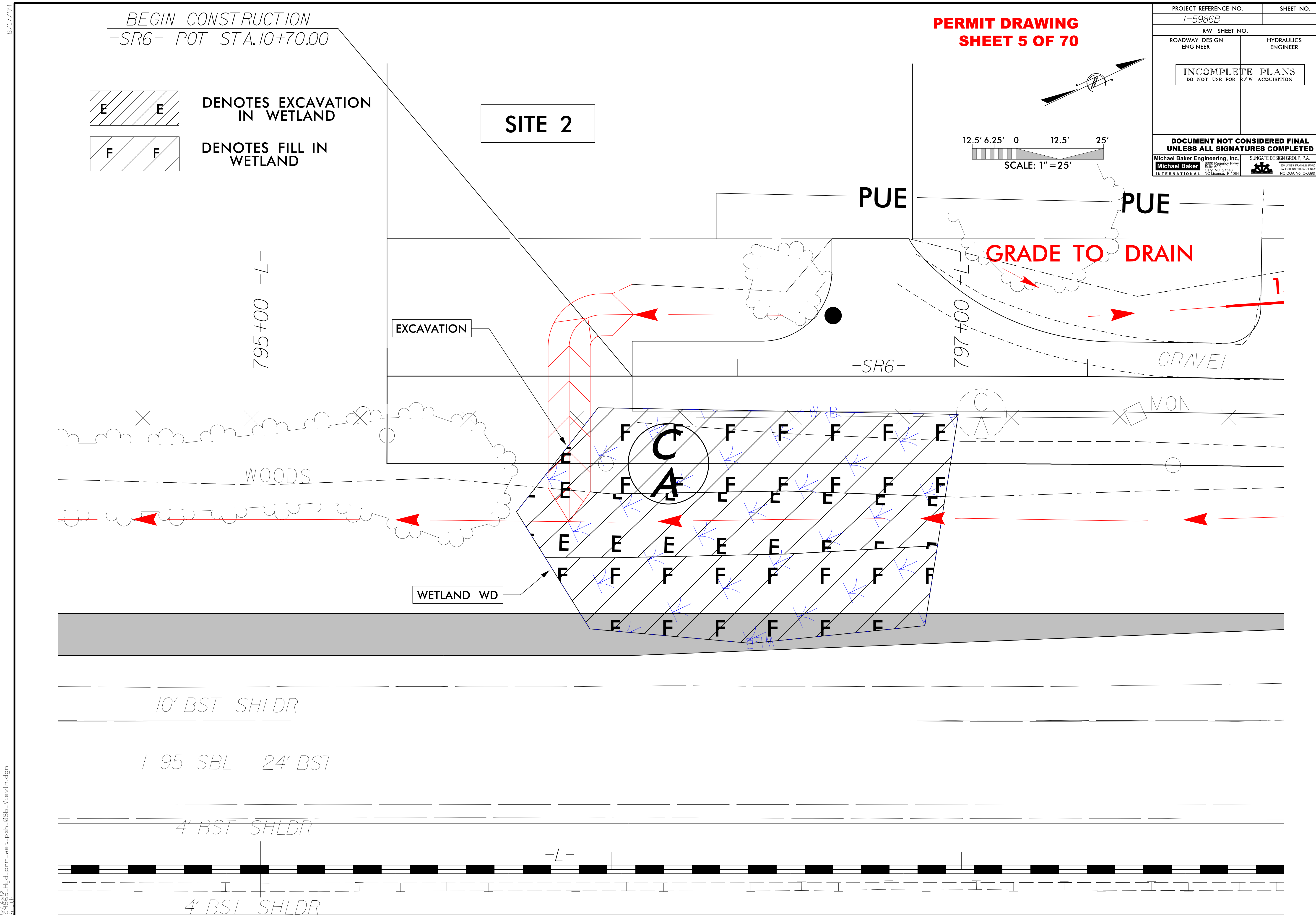


NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE

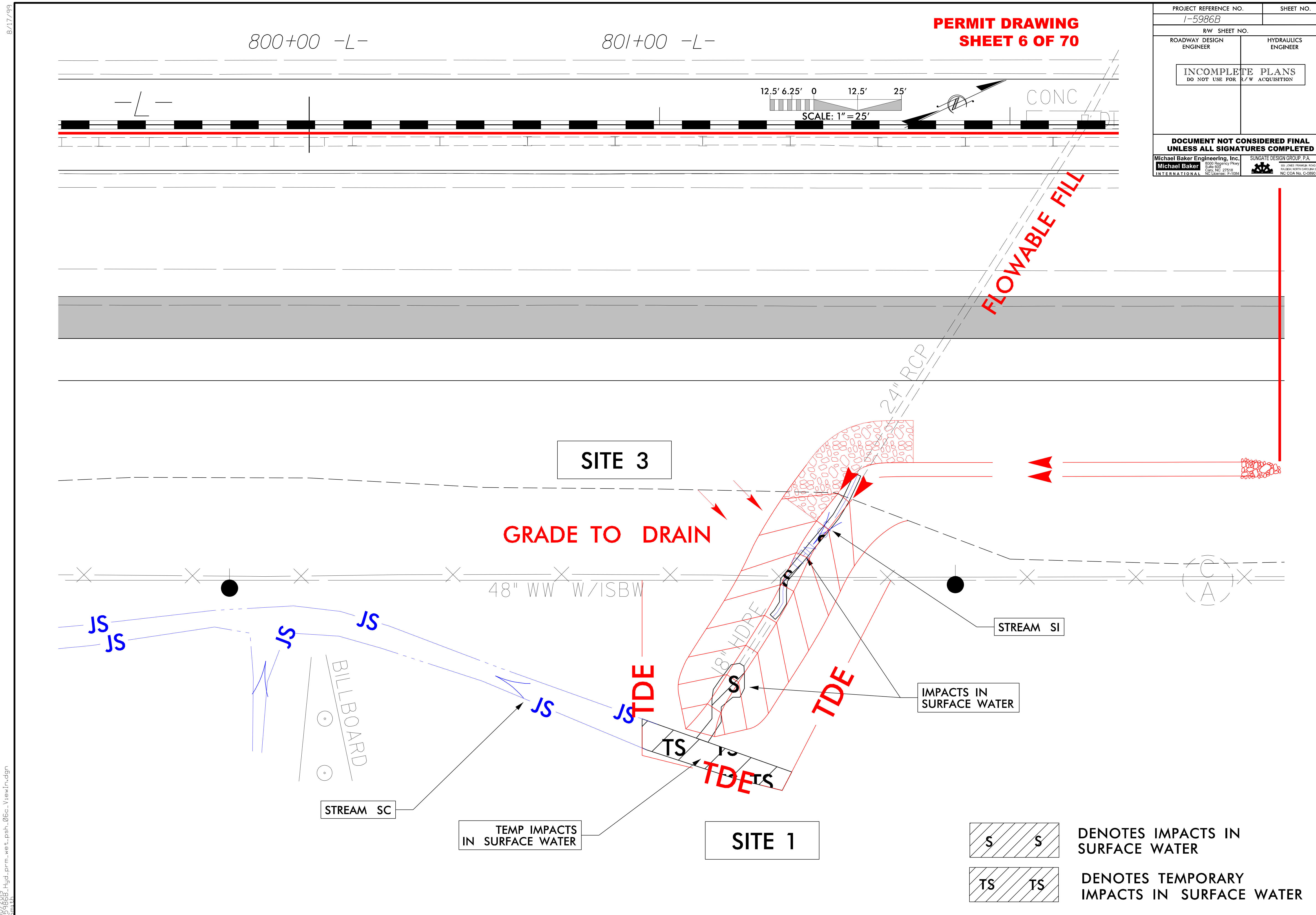
FOR -L- PROFILE SEE SHEET 71
FOR -SR6- PROFILE SEE SHEET 87

5/14/99

1/10/2019 I-5986B_Hyd_prm_wet_psh_06a.dgn

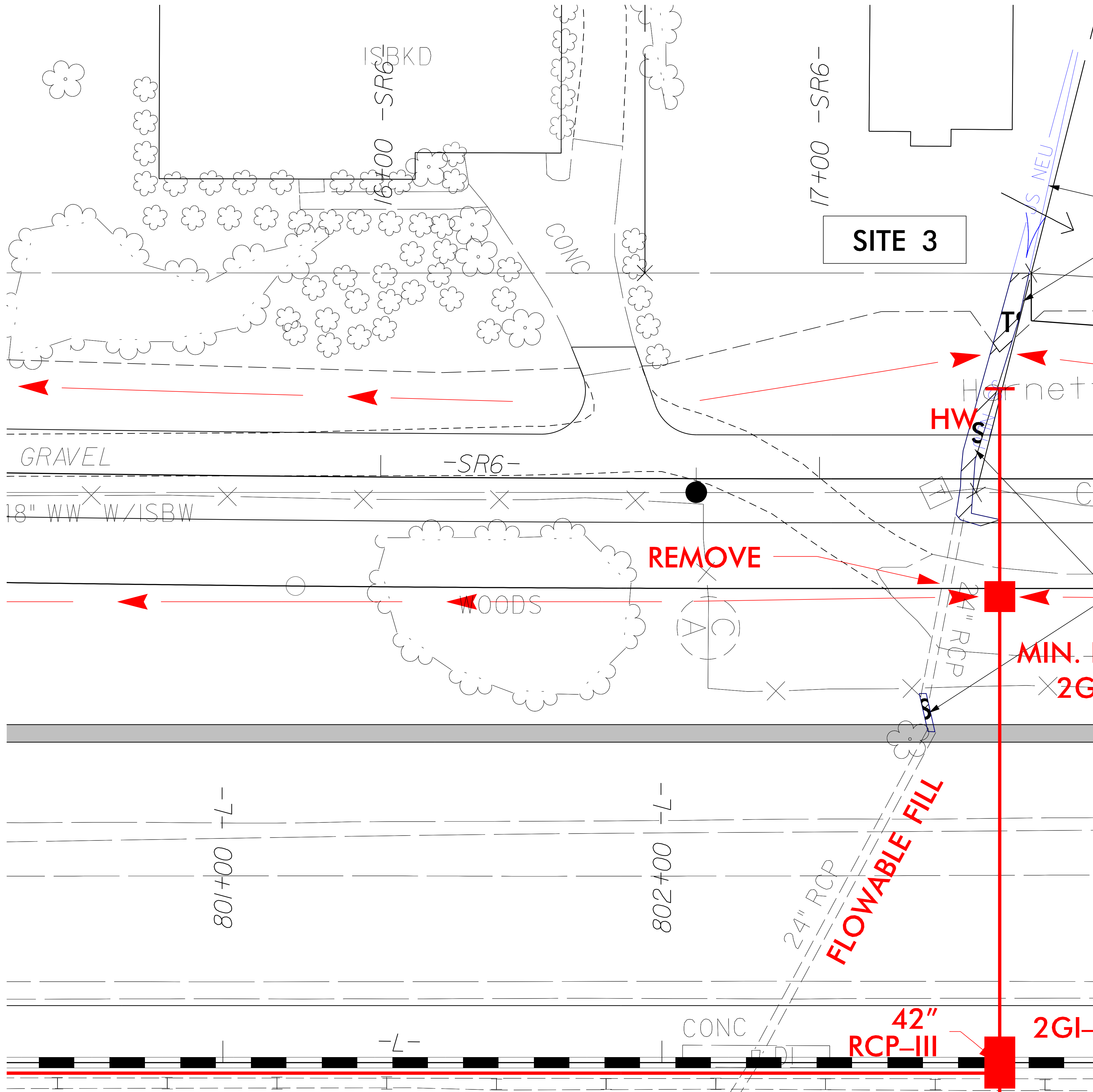


PERMIT DRAWING
SHEET 5 OF 70
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
BEGIN CONSTRUCTION
-SR6- POT STA.10+70.00
DENOTES EXCAVATION IN WETLAND
DENOTES FILL IN WETLAND
SITE 2
SCALE: 1" = 25'
PUE
PUE
GRADE TO DRAIN
EXCAVATION
-L-
795+00
797+00
-SR6-
GRAVEL
MON
WOODS
WETLAND WD
10' BST SHLDR
I-95 SBL 24' BST
4' BST SHLDR
-L-
4' BST SHLDR



8/17/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_06c_Viewin.dgn

PERMIT DRAWING
SHEET 7 OF 70



12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL
8000 Regency Pkwy
Suite 600
Cary, NC 27518
NC License: F-1084

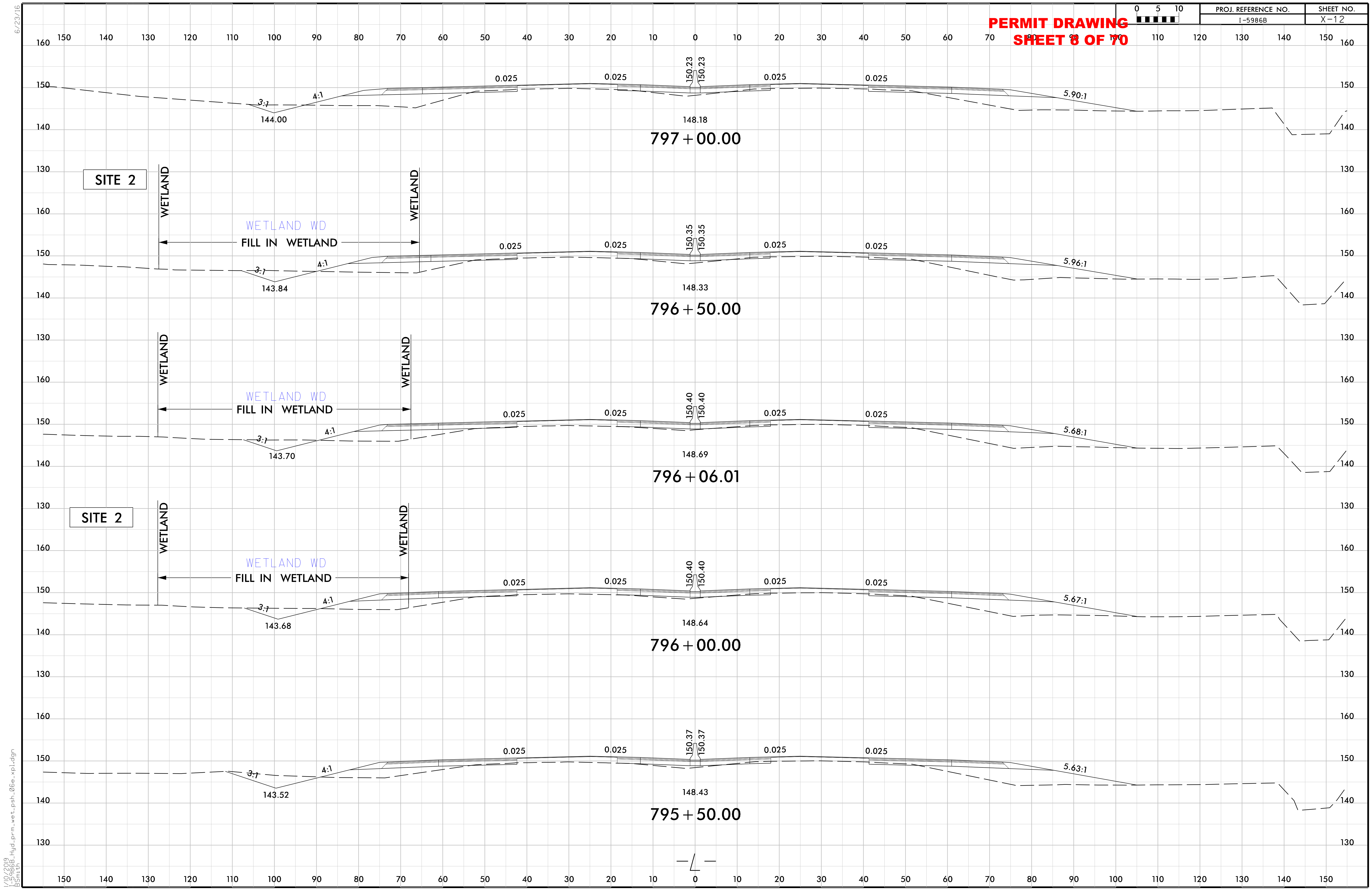
SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
NC COA No. C-0890

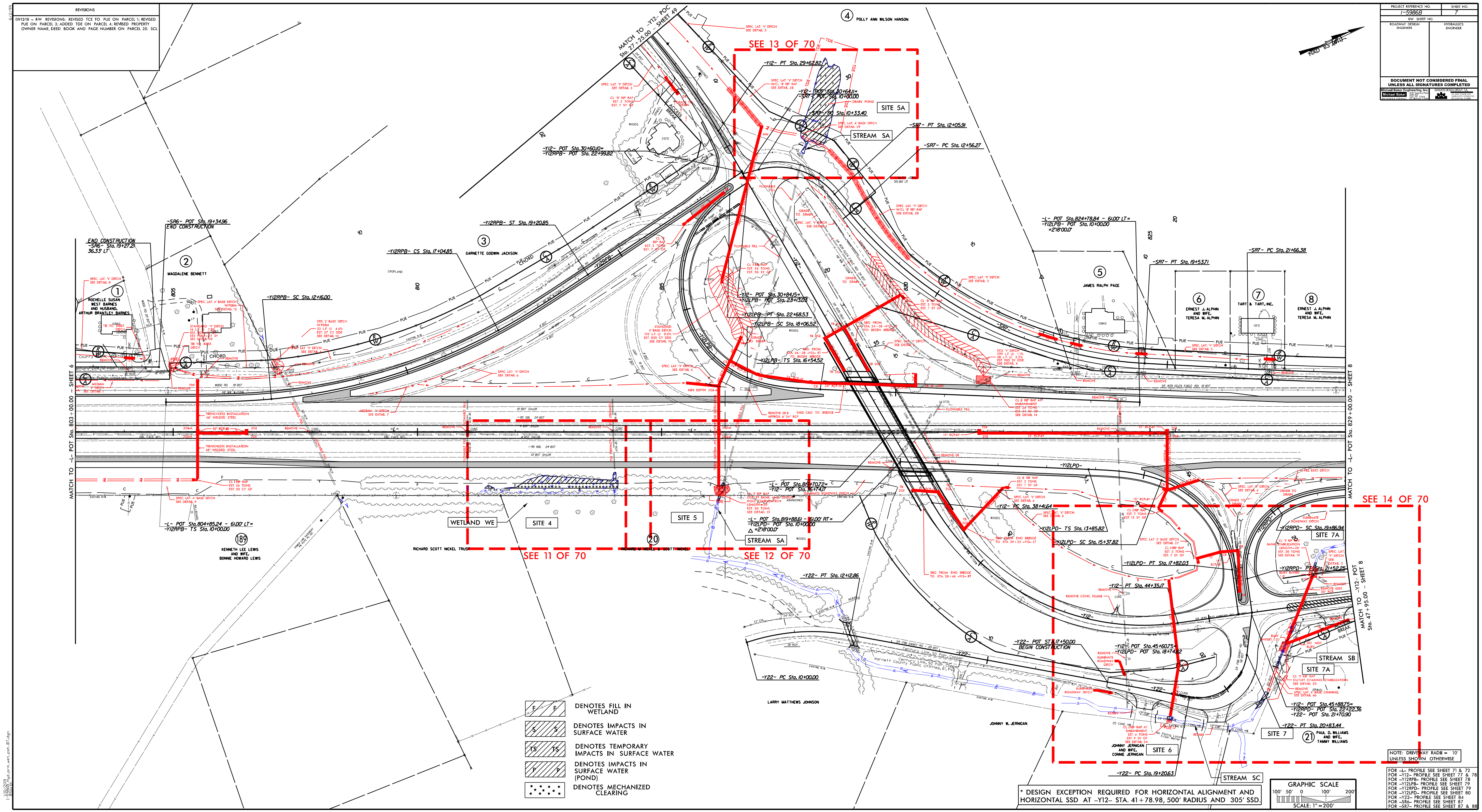
S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

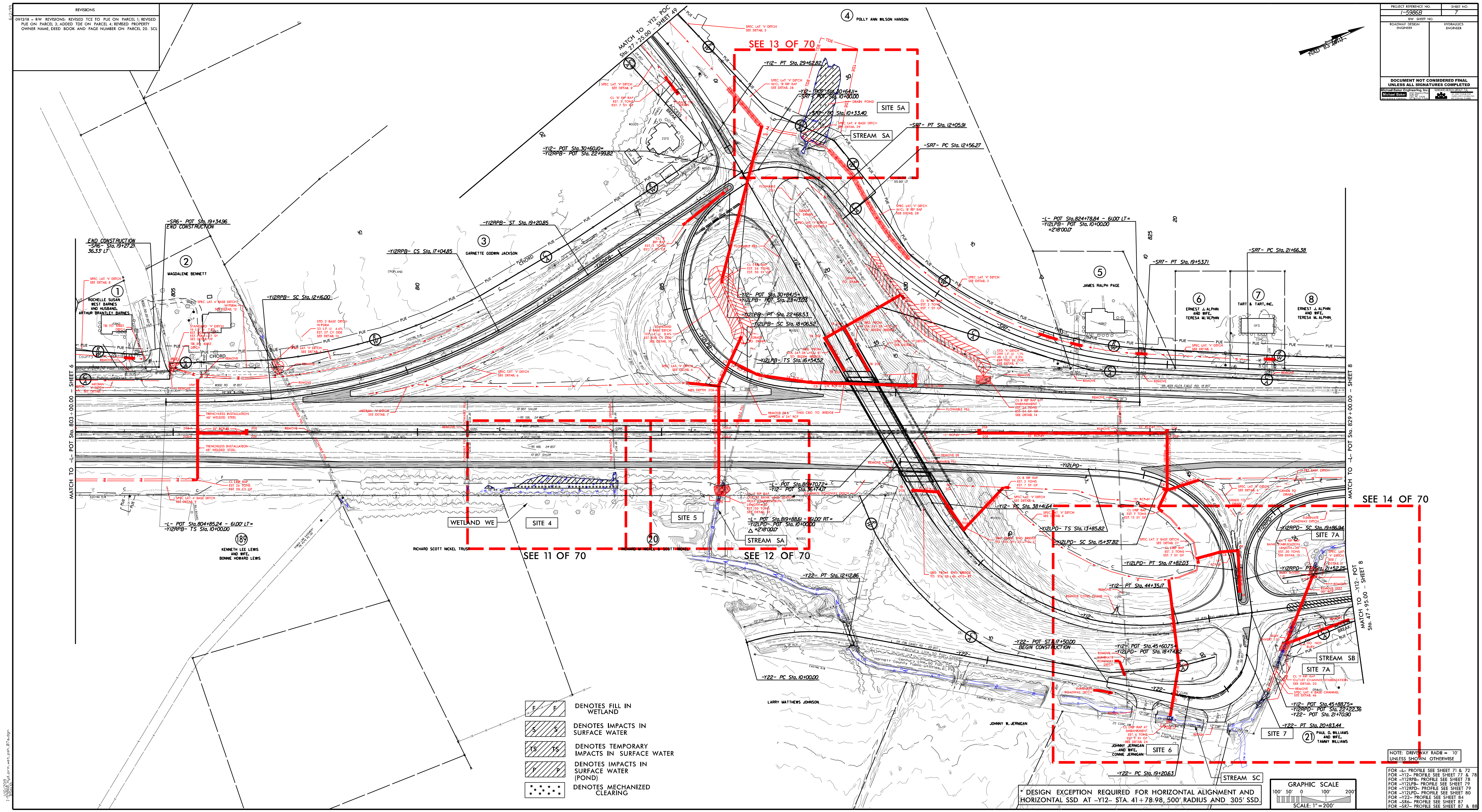
8/17/99

1/10/2019
I-5986B_Hyd_prm_wet_psh_06d_Viewin.dgn


PERMIT DRAWING
SHEET 8 OF 70
PROJ. REFERENCE NO.
I-5986B
SHEET NO.
X-12
0 5 10
797+00.00
144.00
148.18
150.23
150.23
3:1
4:1
0.025
5.90:1
SITE 2
WETLAND
WETLAND WD
FILL IN WETLAND
796+50.00
143.84
148.33
150.35
150.35
5.96:1
796+06.01
143.70
148.69
150.40
150.40
5.68:1
796+00.00
143.68
148.64
5.67:1
795+50.00
143.52
148.43
150.37
150.37
5.63:1
160
150
140
130
6/23/16
1/10/2019
I-5986B_Hyd_prm_wet_psh_06e_xpl.dgn
BSmith


REVISIONS
SEE 13 OF 70
SEE 11 OF 70
SEE 12 OF 70
SEE 14 OF 70
SITE 5A
STREAM SA
SITE 4
SITE 5
WETLAND WE
SITE 7A
STREAM SB
SITE 7
SITE 6
STREAM SC
END CONSTRUCTION
MAGDALENE BENNETT
GARNETTE GODWIN JACKSON
POLLY ANN WILSON HANSON
JAMES RALPH PAGE
TART & TART, INC.
RICHARD SCOTT NICKEL TRUST
LARRY MATTHEWS JOHNSON
JOHNNY B. JERNIGAN
KENNETH LEE LEWIS AND WIFE, BONNIE HOWARD LEWIS
PAUL D. WILLIAMS AND WIFE, TAMMY WILLIAMS
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER (POND)
DENOTES MECHANIZED CLEARING
* DESIGN EXCEPTION REQUIRED FOR HORIZONTAL ALIGNMENT AND HORIZONTAL SSD AT -Y12- STA. 41+78.98, 500' RADIUS AND 305' SSD.
GRAPHIC SCALE
SCALE: 1" = 200'
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
MATCH TO -L- POT Sta. 803+00.00 - SHEET 6
MATCH TO -L- POT Sta. 829+00.00 - SHEET 8

PERMIT DRAWING
SHEET 10 OF 70



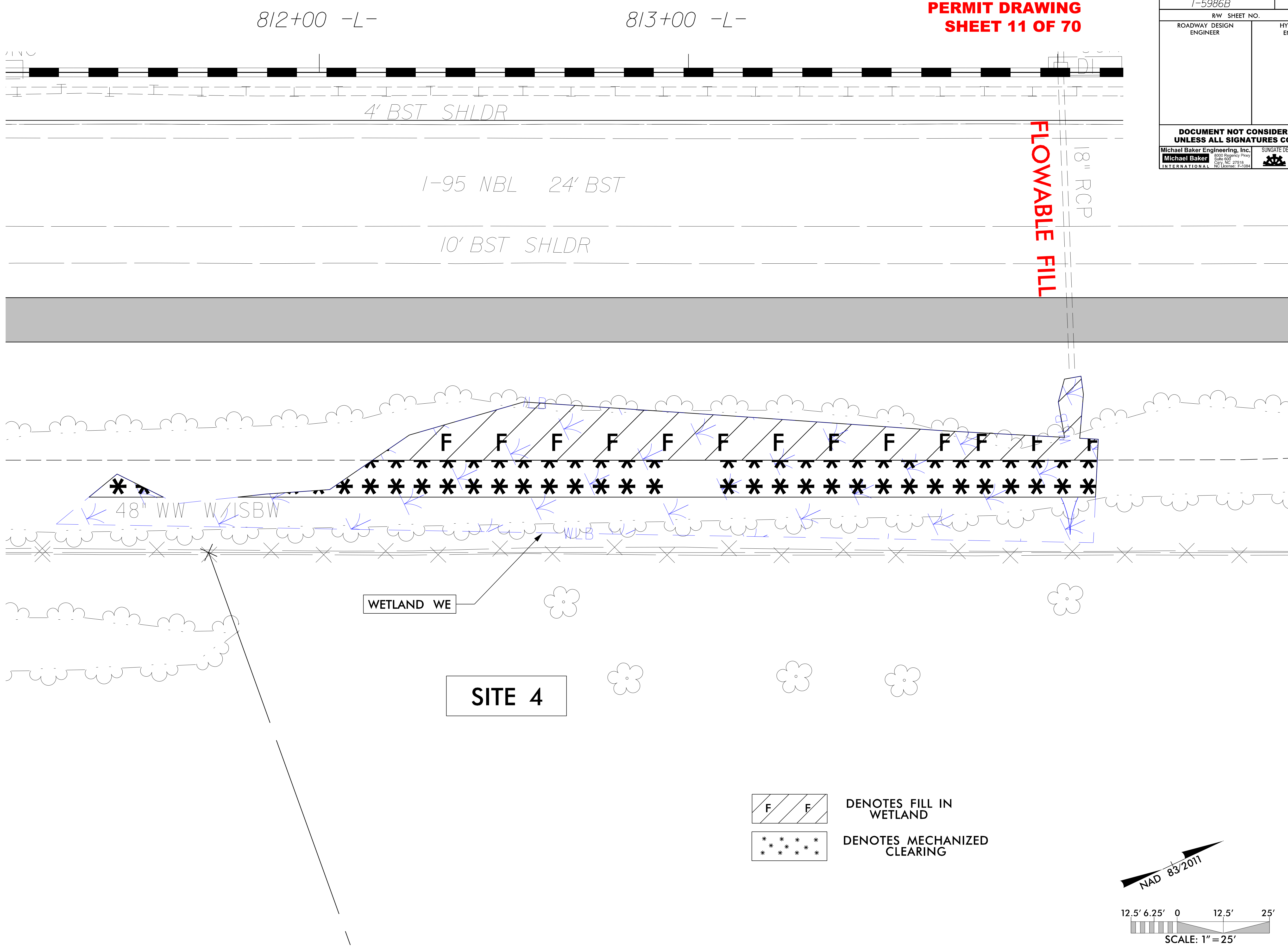
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL
8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084

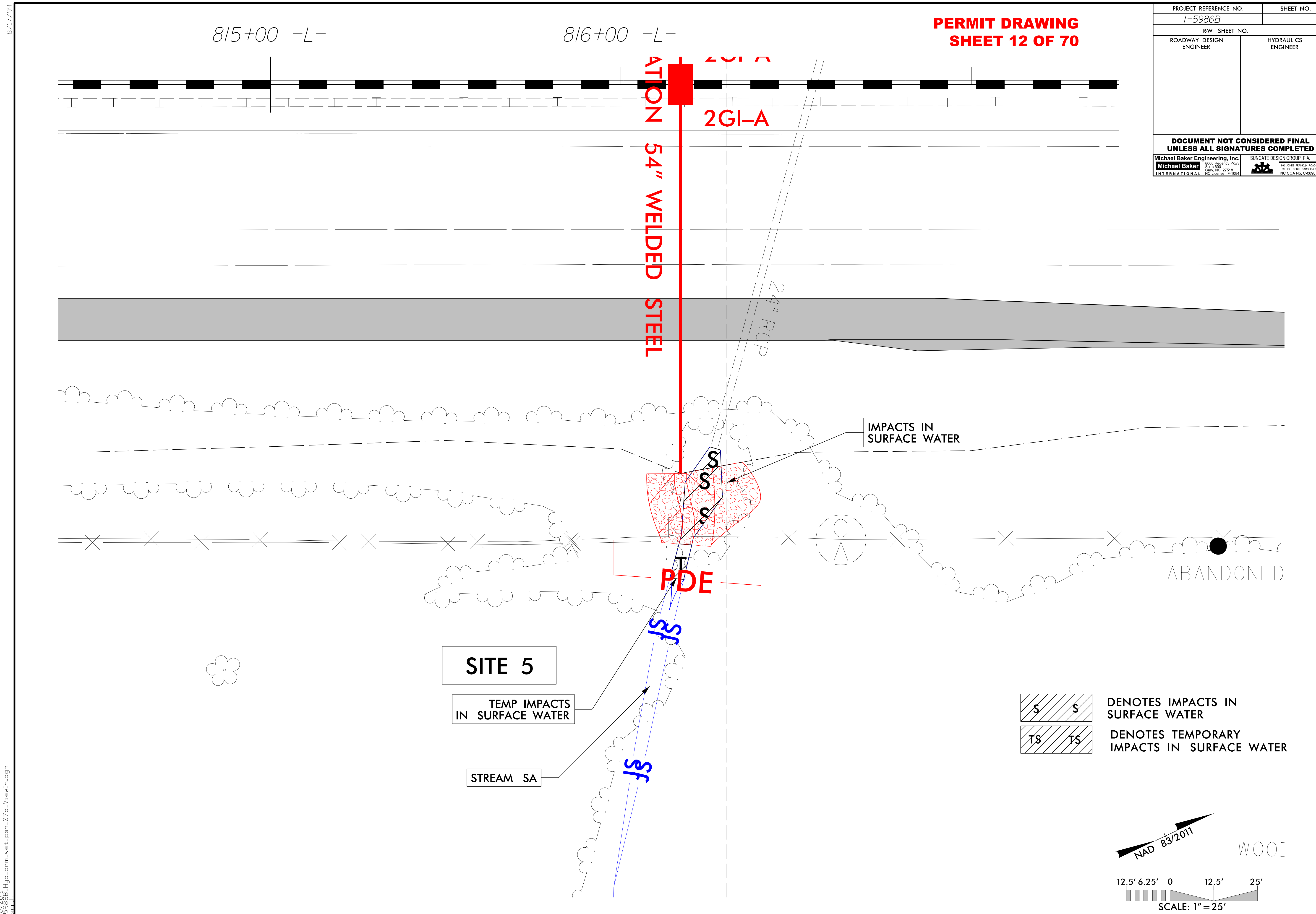
SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27606
NC COA No. C-0890

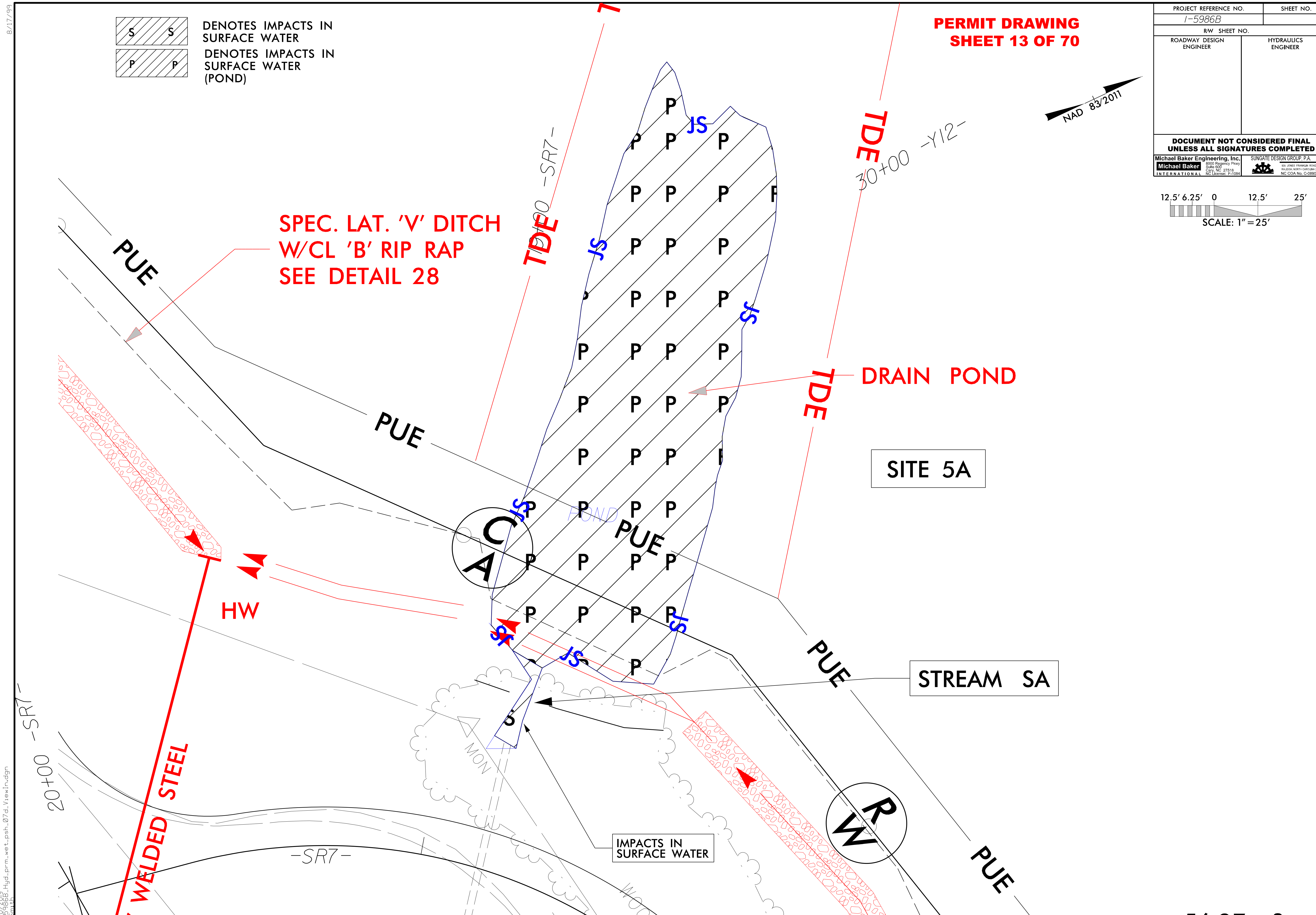
PERMIT DRAWING
SHEET 11 OF 70



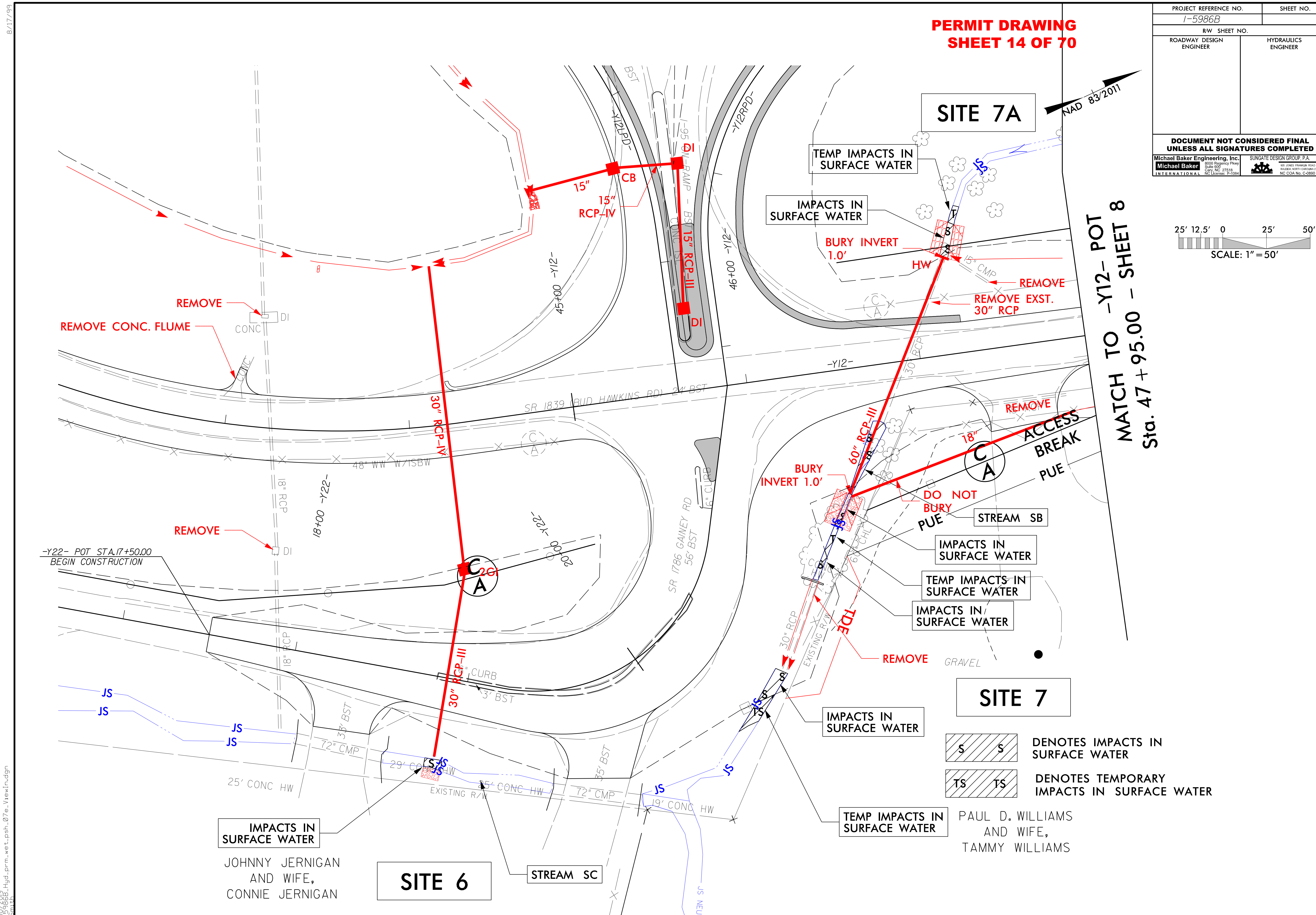
8/17/99

1/10/2019
I-5986B_Hyd_prm_wet_psh_07b_View1n.dgn
BSmith

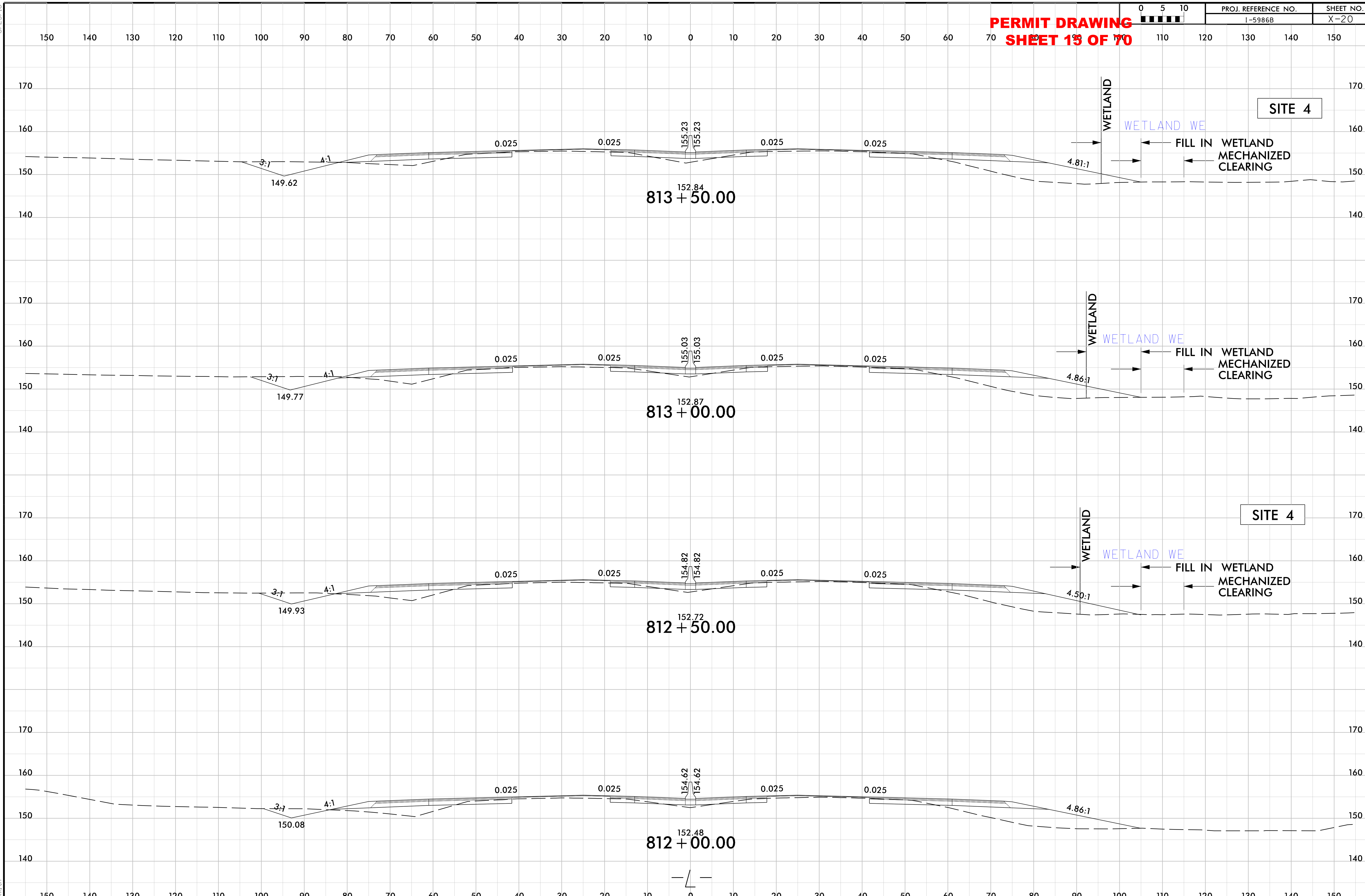

PERMIT DRAWING
SHEET 12 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
Michael Baker
INTERNATIONAL
8000 Regency Pkwy
Suite 600
Cary, NC 27518
NC License: F-1084
SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
NC COA No. C-0890
815+00 -L-
816+00 -L-
2GI-A
ATION 54" WELDED STEEL
24" RCP
IMPACTS IN SURFACE WATER
PDE
ABANDONED
SITE 5
TEMP IMPACTS IN SURFACE WATER
STREAM SA
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
NAD 83/2011
WOOD
12.5' 6.25' 0 12.5' 25'
SCALE: 1"=25'
8/17/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_07c_Viewin.dgn



PERMIT DRAWING
SHEET 13 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
SCALE: 1" = 25'
DENOTES IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER (POND)
SPEC. LAT. 'V' DITCH W/CL 'B' RIP RAP SEE DETAIL 28
DRAIN POND
SITE 5A
STREAM SA
IMPACTS IN SURFACE WATER
30+00 -Y12-
20+00 -SR7-
-SR7-
PUE
TDE
HW
WELDED STEEL
POND



PERMIT DRAWING
SHEET 14 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
SCALE: 1" = 50'
25' 12.5' 0 25' 50'
SITE 7A
SITE 7
SITE 6
MATCH TO -Y12- POT Sta. 47 + 95.00 - SHEET 8
TEMP IMPACTS IN SURFACE WATER
IMPACTS IN SURFACE WATER
BURY INVERT 1.0'
HW
REMOVE
REMOVE EXST. 30" RCP
15" CMP
REMOVE
REMOVE CONC. FLUME
CONC
DI
CB
15"
15" RCP-IV
15" RCP-III
30" RCP-IV
30" RCP-III
60" RCP-III
18"
-Y12LPD-
-Y12RPD-
I-95 ON-RAMP - BST
-Y12-
45+00 -Y12-
46+00 -Y12-
SR 1839 (BUD HAWKINS RD) 24' BST
48' WW W/ISBW
18" RCP
18+00 -Y22-
-Y22-
20+00
-Y22- POT STA.17+50.00 BEGIN CONSTRUCTION
SR 1786 GAINEY RD 56' BST
6" CURB
REMOVE
ACCESS BREAK
PUE
BURY INVERT 1.0'
DO NOT BURY
STREAM SB
TDE
EXISTING R/W
GRAVEL
30" RCP
JS
72" CMP
33' BST
29' CONC HW
25' CONC HW
15' CONC HW
19' CONC HW
35' BST
STREAM SC
JOHNNY JERNIGAN AND WIFE, CONNIE JERNIGAN
PAUL D. WILLIAMS AND WIFE, TAMMY WILLIAMS
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
8/17/99

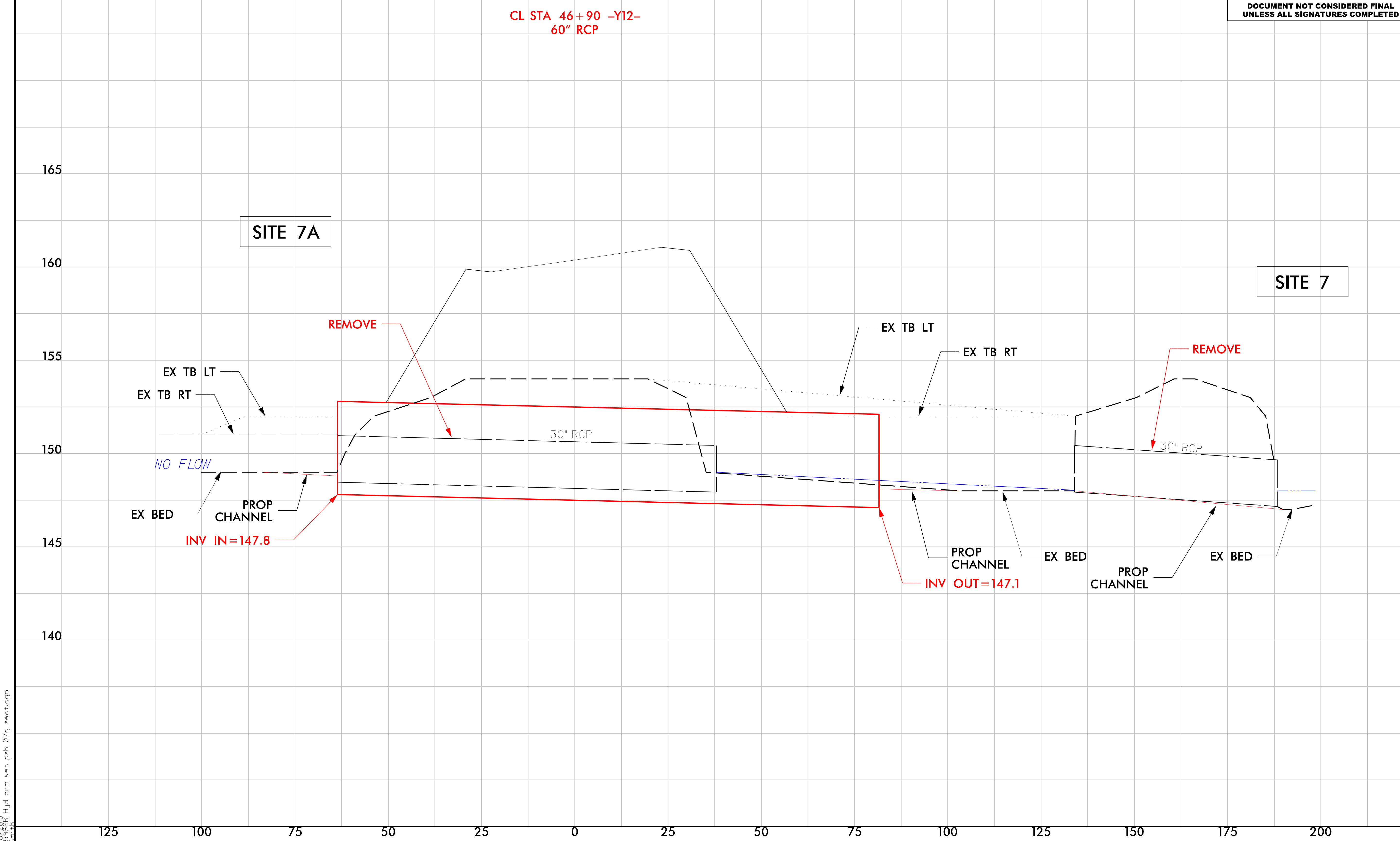

PERMIT DRAWING
SHEET 15 OF 70
PROJ. REFERENCE NO.
I-5986B
SHEET NO.
X-20
0 5 10
SITE 4
WETLAND
WETLAND WE
FILL IN WETLAND
MECHANIZED CLEARING
813 + 50.00
152.84
155.23
149.62
4.81:1
813 + 00.00
152.87
155.03
149.77
4.86:1
SITE 4
812 + 50.00
152.72
154.82
149.93
4.50:1
812 + 00.00
152.48
154.62
150.08
4.86:1
3:1
4:1
0.025

PERMIT DRAWING
SHEET 16 OF 70

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	7G
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



5/14/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_07g_sect.dgn

PROJECT REFERENCE NO. I-5986B | SHEET NO. 8

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

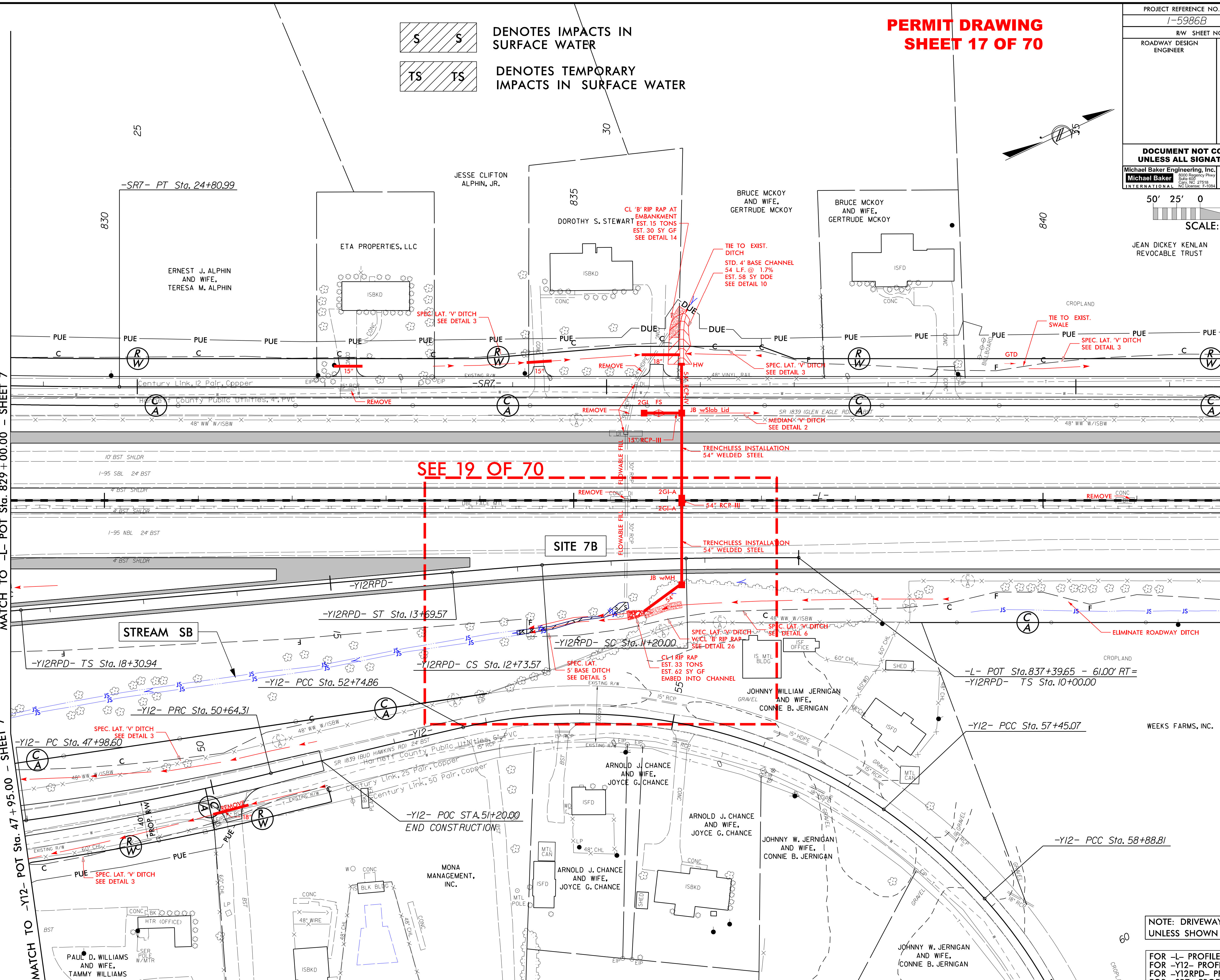
Michael Baker Engineering, Inc. 8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084

SUNGATE DESIGN GROUP, P.A. NC COA No. C-0890

PERMIT DRAWING
SHEET 17 OF 70

S S — DENOTES IMPACTS IN SURFACE WATER

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

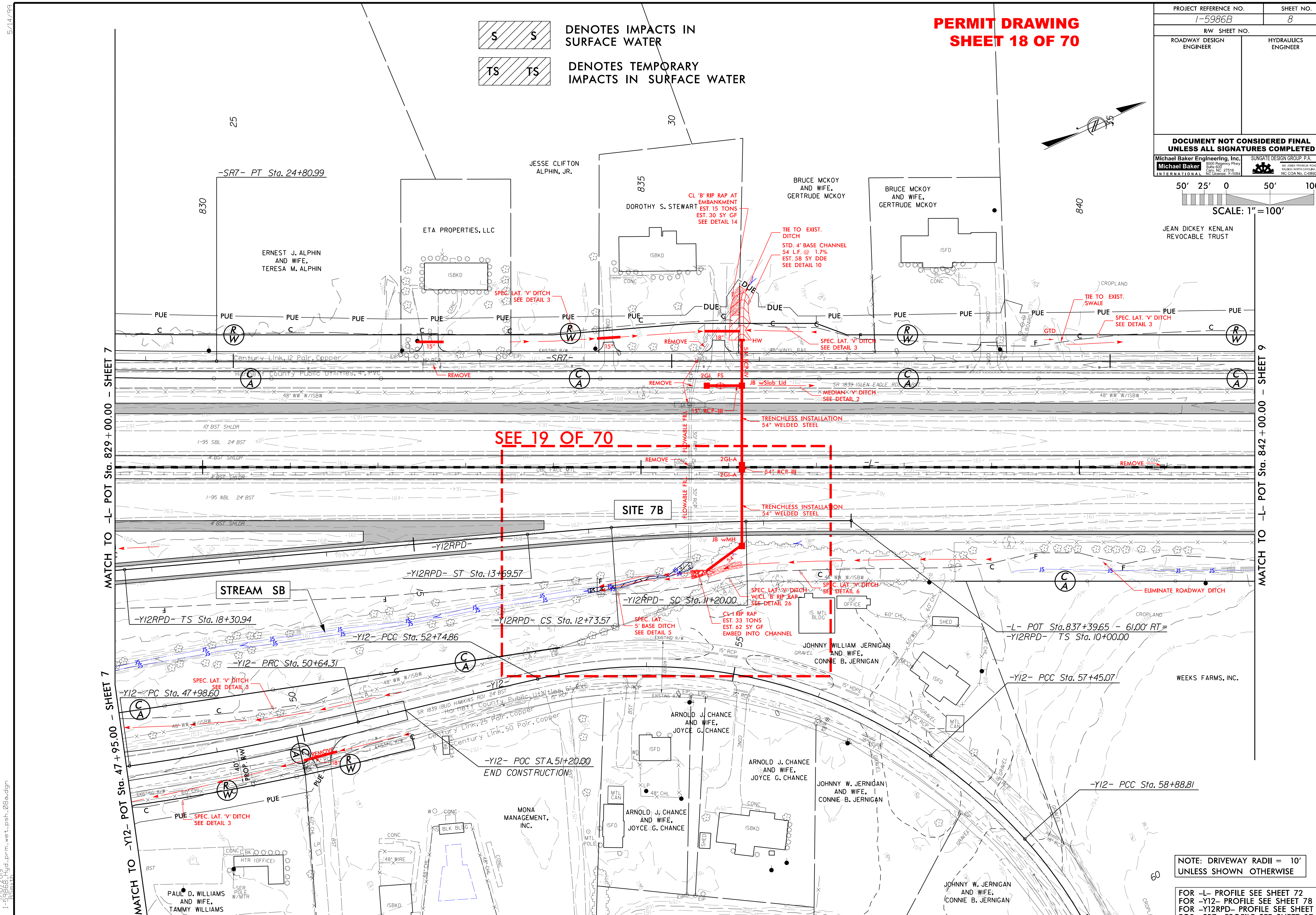


NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE

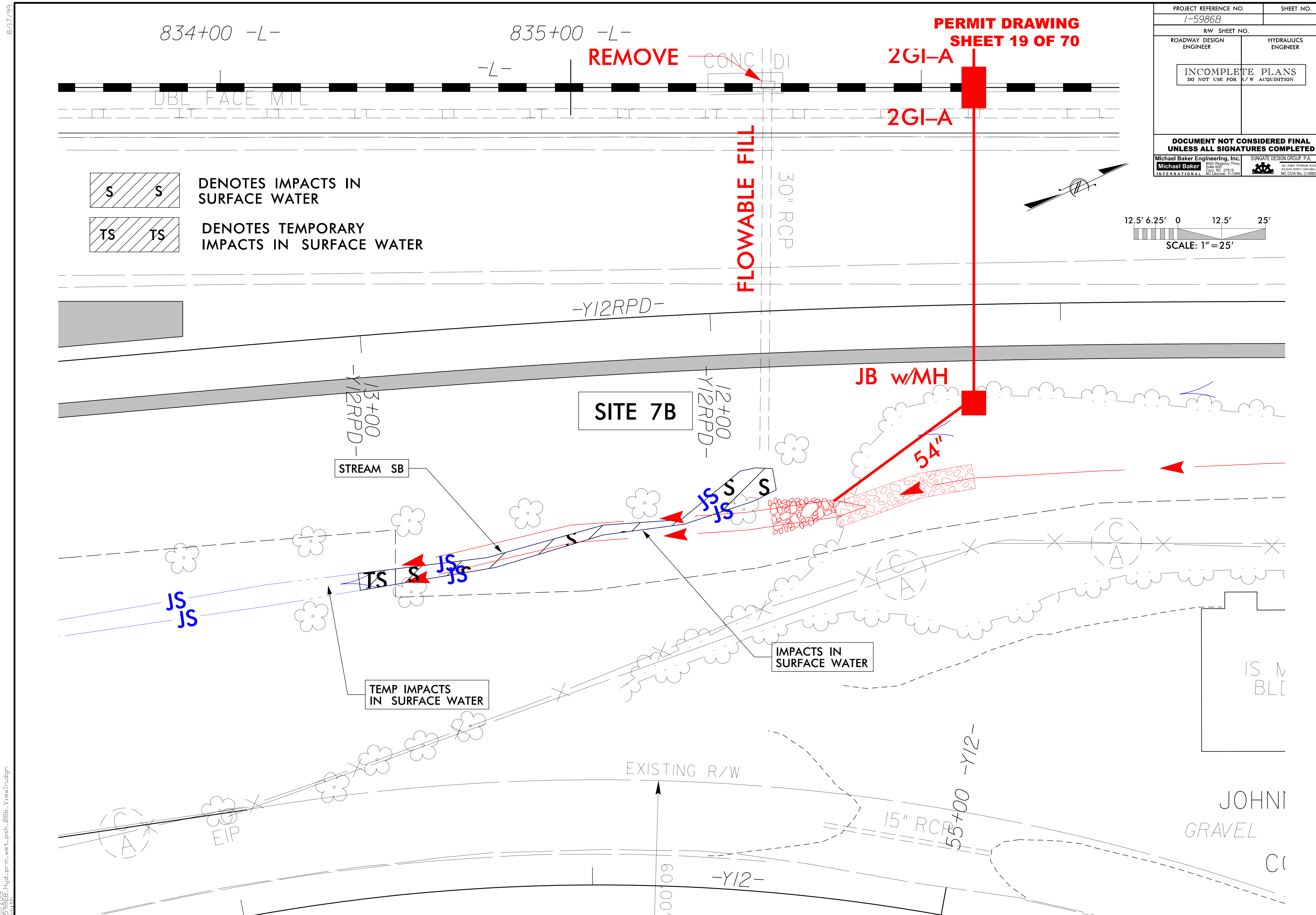
FOR -L- PROFILE SEE SHEET 72
FOR -Y12- PROFILE SEE SHEET 78
FOR -Y12RPD- PROFILE SEE SHEET 79
FOR -SR7- PROFILE SEE SHEET 87

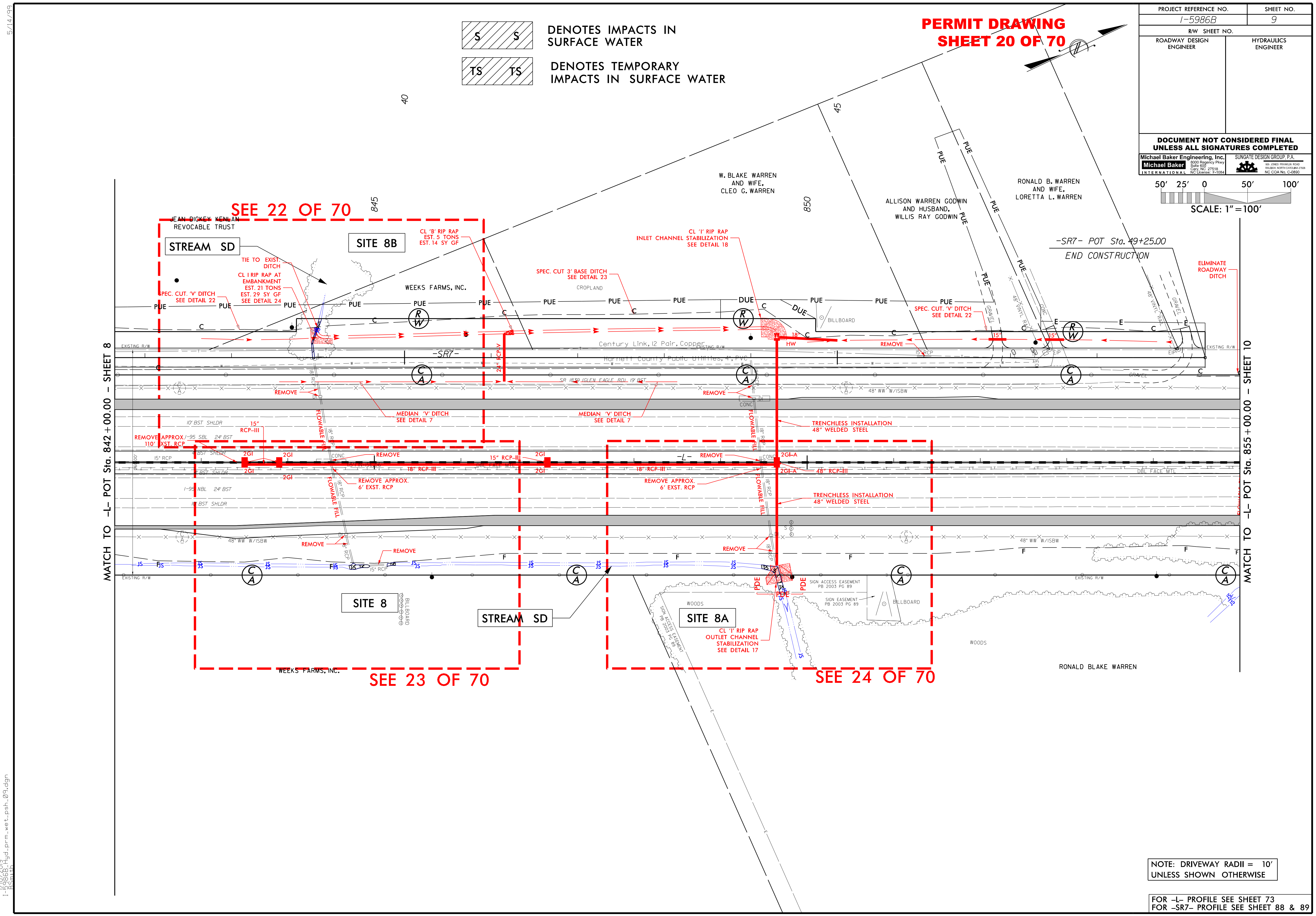
5/14/99

1/10/2019 I-5986B_Hyd_prm_wet_psh_08.dgn

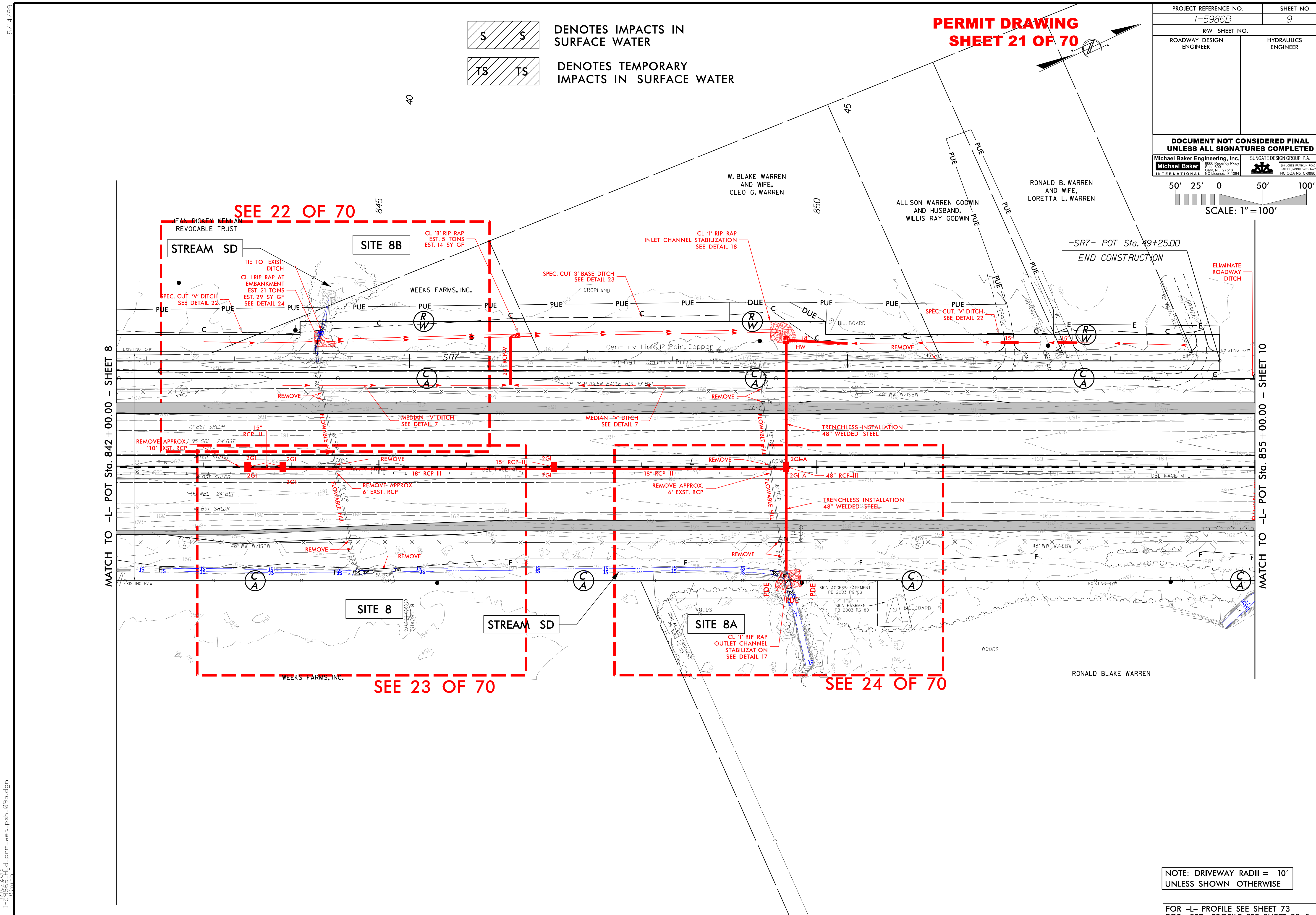


PROJECT REFERENCE NO.
I-5986B
SHEET NO.
8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 18 OF 70
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
SCALE: 1"=100'
50' 25' 0 50' 100'
SEE 19 OF 70
SITE 7B
STREAM SB
-SR7- PT Sta. 24+80.99
JESSE CLIFTON ALPHIN, JR.
ERNEST J. ALPHIN AND WIFE, TERESA M. ALPHIN
ETA PROPERTIES, LLC
DOROTHY S. STEWART
BRUCE MCKOY AND WIFE, GERTRUDE MCKOY
JEAN DICKEY KENLAN REVOCABLE TRUST
CL 'B' RIP RAP AT EMBANKMENT EST. 15 TONS EST. 30 SY GF SEE DETAIL 14
TIE TO EXIST. DITCH
STD. 4' BASE CHANNEL 54 L.F. @ 1.7% EST. 58 SY DDE SEE DETAIL 10
SPEC. LAT. 'V' DITCH SEE DETAIL 3
TIE TO EXIST. SWALE
JB w/Slab Lid
MEDIAN 'V' DITCH SEE DETAIL 2
TRENCHLESS INSTALLATION 54" WELDED STEEL
54" RCP-III
15" RCP-III
REMOVE
JB w/MH
SPEC. LAT. 'V' DITCH W/CL 'B' RIP RAP SEE DETAIL 26
SPEC. LAT. 'V' DITCH SEE DETAIL 6
ELIMINATE ROADWAY DITCH
SPEC. LAT. 5' BASE DITCH SEE DETAIL 5
CL I RIP RAP EST. 33 TONS EST. 62 SY GF EMBED INTO CHANNEL
-Y12RPD- ST Sta. 13+69.57
-Y12RPD- TS Sta. 18+30.94
-Y12RPD- CS Sta. 12+73.57
-Y12RPD- SC Sta. 11+20.00
-Y12- PCC Sta. 52+74.86
-Y12- PRC Sta. 50+64.31
-Y12- PC Sta. 47+98.60
-Y12- POC STA. 51+20.00
END CONSTRUCTION
-L- POT Sta. 837+39.65 - 61.00' RT = -Y12RPD- TS Sta. 10+00.00
-Y12- PCC Sta. 57+45.07
-Y12- PCC Sta. 58+88.81
JOHNNY WILLIAM JERNIGAN AND WIFE, CONNIE B. JERNIGAN
WEEKS FARMS, INC.
ARNOLD J. CHANCE AND WIFE, JOYCE G. CHANCE
JOHNNY W. JERNIGAN AND WIFE, CONNIE B. JERNIGAN
MONA MANAGEMENT, INC.
PAUL D. WILLIAMS AND WIFE, TAMMY WILLIAMS
MATCH TO -L- POT Sta. 829+00.00 - SHEET 7
MATCH TO -L- POT Sta. 842+00.00 - SHEET 9
MATCH TO -Y12- POT Sta. 47+95.00 - SHEET 7
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 72
FOR -Y12- PROFILE SEE SHEET 78
FOR -Y12RPD- PROFILE SEE SHEET 79
FOR -SR7- PROFILE SEE SHEET 87


PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 19 OF 70
834+00 -L-
835+00 -L-
-L-
REMOVE
CONC DI
2GI-A
2GI-A
DBL FACE MTL
FLOWABLE FILL
30" RCP
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
12.5' 6.25' 0 12.5' 25'
SCALE: 1"=25'
-Y12RPD-
-Y12RPD- 13+00
-Y12RPD- 12+00
JB w/MH
SITE 7B
54"
STREAM SB
IMPACTS IN SURFACE WATER
TEMP IMPACTS IN SURFACE WATER
EXISTING R/W
15" RCP
-Y12- 55+00
-Y12-
60.00'
EIP
GRAVEL
JOHN



PROJECT REFERENCE NO.
I-5986B
SHEET NO.
9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 20 OF 70
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
SCALE: 1" = 100'
50' 25' 0 50' 100'
SEE 22 OF 70
SEE 23 OF 70
SEE 24 OF 70
STREAM SD
SITE 8B
SITE 8
SITE 8A
JEAN DICKEY KENLAN REVOCABLE TRUST
WEEKS FARMS, INC.
W. BLAKE WARREN AND WIFE, CLEO G. WARREN
ALLISON WARREN GODWIN AND HUSBAND, WILLIS RAY GODWIN
RONALD B. WARREN AND WIFE, LORETTA L. WARREN
RONALD BLAKE WARREN
-SR7- POT Sta. 49+25.00
END CONSTRUCTION
MATCH TO -L- POT Sta. 842+00.00 - SHEET 8
MATCH TO -L- POT Sta. 855+00.00 - SHEET 10
CL 'B' RIP RAP EST. 5 TONS EST. 14 SY GF
CL 'I' RIP RAP INLET CHANNEL STABILIZATION SEE DETAIL 18
CL 'I' RIP RAP OUTLET CHANNEL STABILIZATION SEE DETAIL 17
CL I RIP RAP AT EMBANKMENT EST. 21 TONS EST. 29 SY GF SEE DETAIL 24
TIE TO EXIST. DITCH
SPEC. CUT 'V' DITCH SEE DETAIL 22
SPEC. CUT 3' BASE DITCH SEE DETAIL 23
MEDIAN 'V' DITCH SEE DETAIL 7
TRENCHLESS INSTALLATION 48" WELDED STEEL
REMOVE APPROX. 110' EXST. RCP
REMOVE APPROX. 6' EXST. RCP
ELIMINATE ROADWAY DITCH
FLOWABLE FILL
REMOVE
15" RCP-III
18" RCP-III
48" RCP-III
Century Link, 12 Pair, Copper
Harnett County Public Utilities, 4" PVC
SR 1839 (GLEN EAGLE RD)
BILLBOARD
CROPLAND
WOODS
SIGN ACCESS EASEMENT PB 2003 PG 89
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 73
FOR -SR7- PROFILE SEE SHEET 88 & 89
5/14/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_09.dgn


PERMIT DRAWING
SHEET 21 OF 70
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1" = 100'
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
SEE 22 OF 70
SEE 23 OF 70
SEE 24 OF 70
STREAM SD
SITE 8B
SITE 8
SITE 8A
JEAN DICKEY KENLAN REVOCABLE TRUST
WEEKS FARMS, INC.
W. BLAKE WARREN AND WIFE, CLEO G. WARREN
ALLISON WARREN GODWIN AND HUSBAND, WILLIS RAY GODWIN
RONALD B. WARREN AND WIFE, LORETTA L. WARREN
RONALD BLAKE WARREN
-SR7- POT Sta. 49+25.00
END CONSTRUCTION
TIE TO EXIST. DITCH
CL I RIP RAP AT EMBANKMENT EST. 21 TONS EST. 29 SY GF SEE DETAIL 24
SPEC. CUT 'V' DITCH SEE DETAIL 22
CL 'B' RIP RAP EST. 5 TONS EST. 14 SY GF
SPEC. CUT 3' BASE DITCH SEE DETAIL 23
CL 'I' RIP RAP INLET CHANNEL STABILIZATION SEE DETAIL 18
CL 'I' RIP RAP OUTLET CHANNEL STABILIZATION SEE DETAIL 17
MEDIAN 'V' DITCH SEE DETAIL 7
TRENCHLESS INSTALLATION 48" WELDED STEEL
REMOVE APPROX. 110' EXST. RCP
REMOVE APPROX. 6' EXST. RCP
ELIMINATE ROADWAY DITCH
FLOWABLE FILL
REMOVE
Century Link 12 Pair Copper
Harnett County Public Utilities 4" Pvc
SR 1839 (GLEN EAGLE RD) 19' BST
MATCH TO -L- POT Sta. 842+00.00 - SHEET 8
MATCH TO -L- POT Sta. 855+00.00 - SHEET 10
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 73
FOR -SR7- PROFILE SEE SHEET 88 & 89

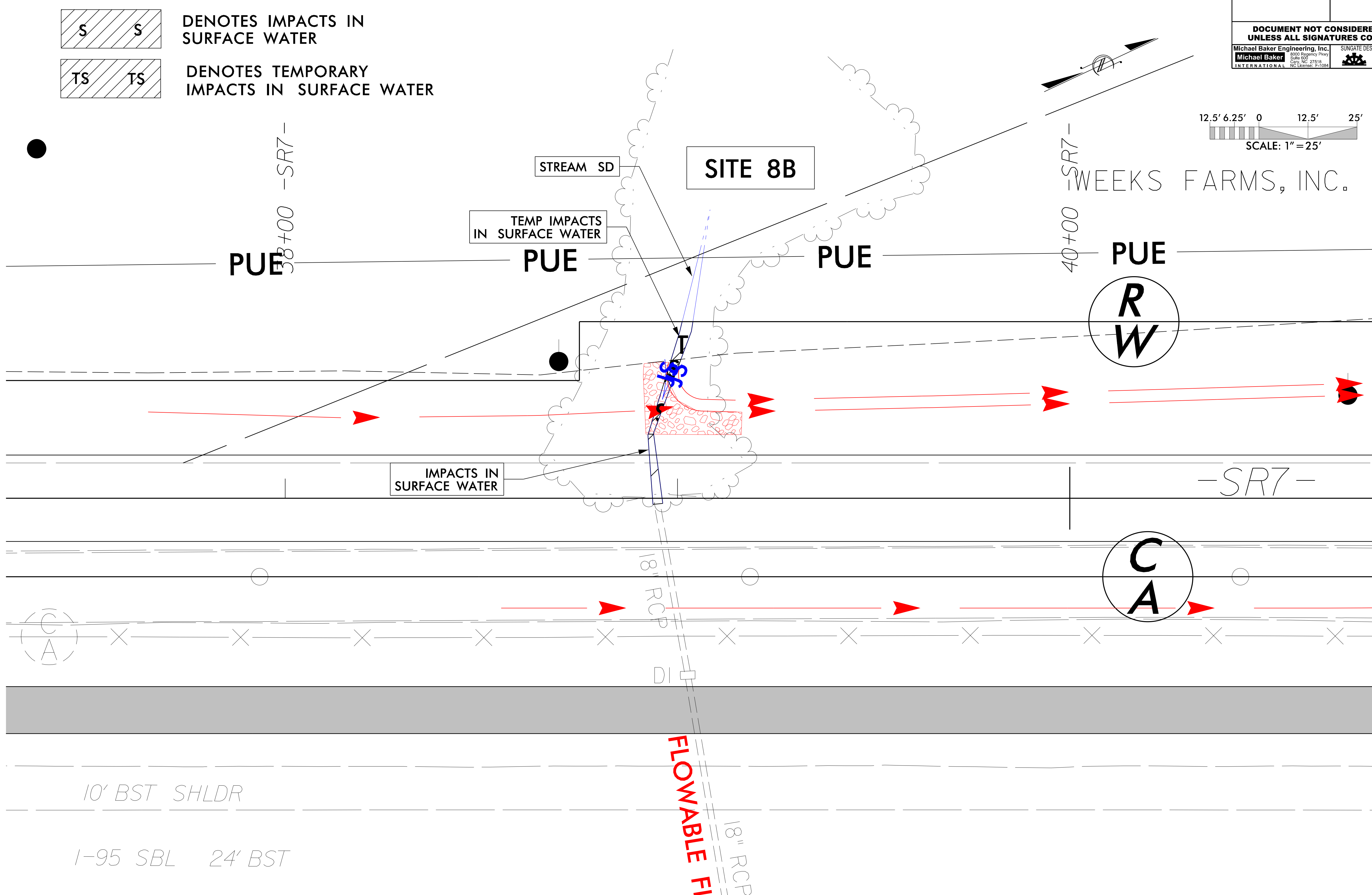
PERMIT DRAWING
SHEET 22 OF 70

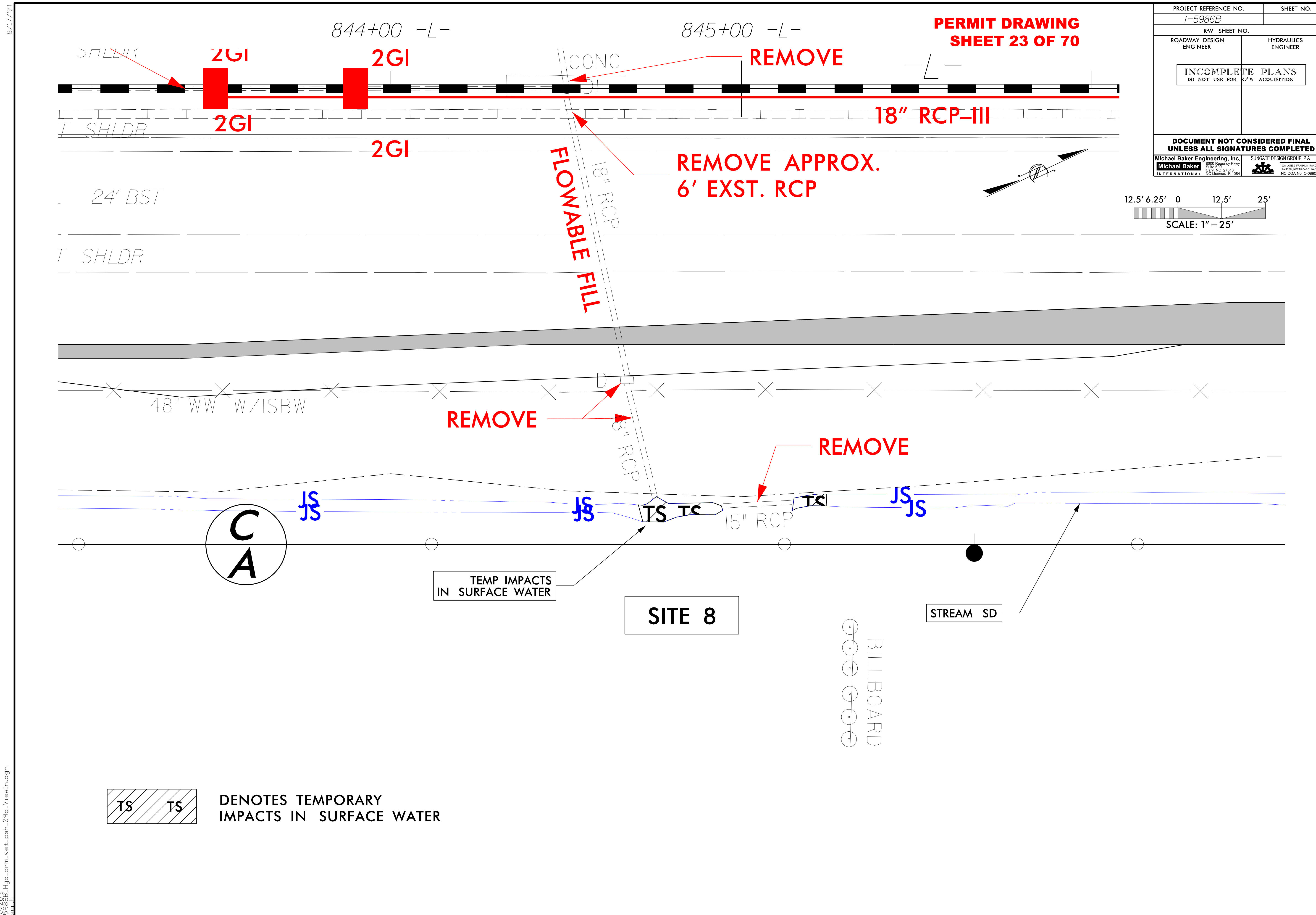
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

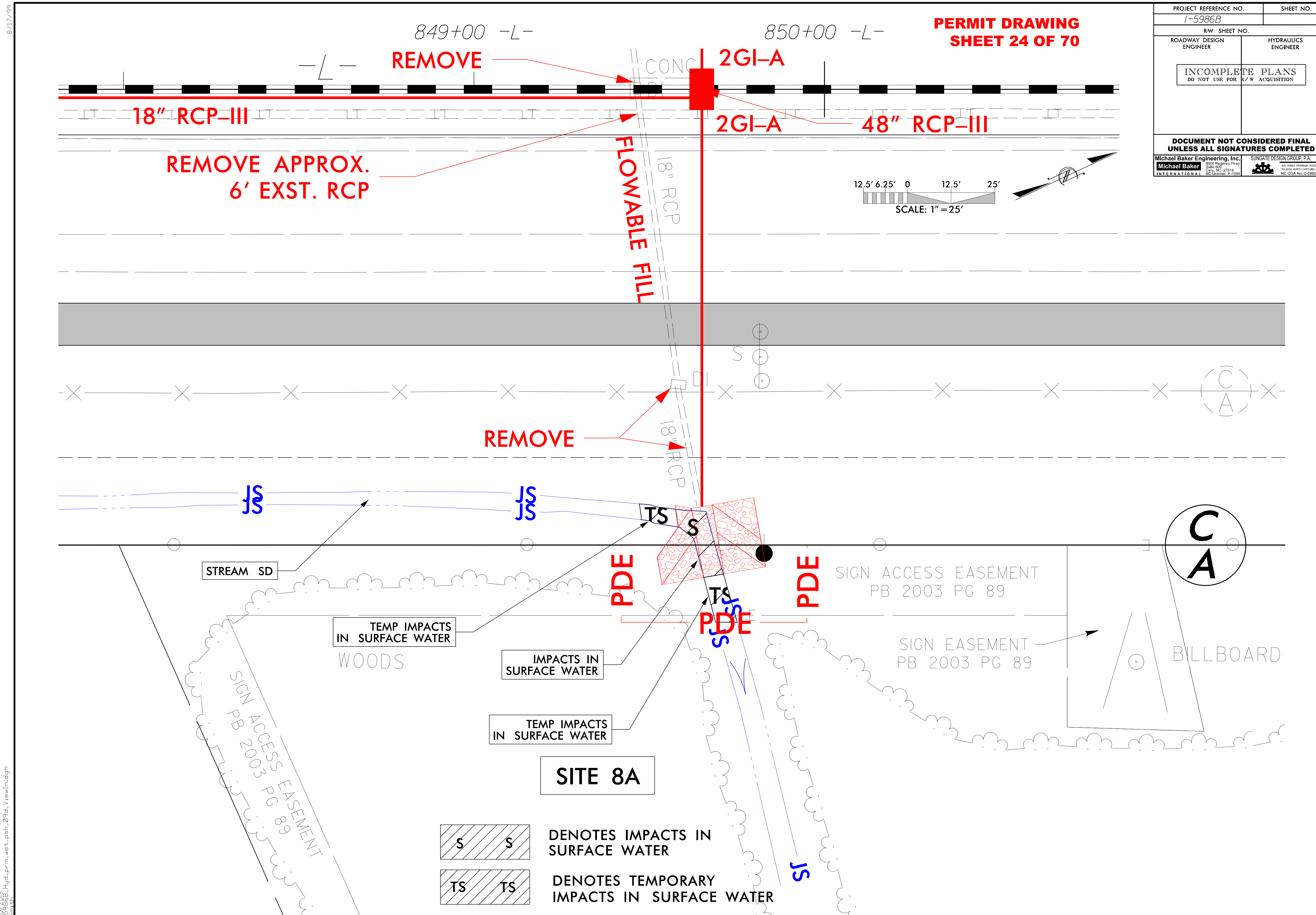
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL
SUNGATE DESIGN GROUP, P.A.





PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 23 OF 70
844+00 -L-
845+00 -L-
-L-
SHLDR
2GI
2GI
2GI
2GI
CONC
DI
REMOVE
18" RCP-III
REMOVE APPROX.
6' EXST. RCP
T SHLDR
24' BST
T SHLDR
FLOWABLE FILL
18" RCP
48" WW W/ISBW
DI
REMOVE
18" RCP
REMOVE
JS
JS
JS
JS
JS
JS
TS
TS
TS
15" RCP
C
A
TEMP IMPACTS
IN SURFACE WATER
SITE 8
STREAM SD
BILLBOARD
12.5' 6.25' 0 12.5' 25'
SCALE: 1"=25'
TS TS
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 24 OF 70
849+00 -L-
850+00 -L-
-L-
REMOVE
CONC
DI
2GI-A
18" RCP-III
2GI-A
48" RCP-III
REMOVE APPROX.
6' EXST. RCP
FLOWABLE FILL
18" RCP
12.5' 6.25' 0 12.5' 25'
SCALE: 1"=25'
S
DI
C
A
REMOVE
18" RCP
JS
JS
TS
S
STREAM SD
PDE
PDE
PDE
TS
SIGN ACCESS EASEMENT
PB 2003 PG 89
SIGN EASEMENT
PB 2003 PG 89
BILLBOARD
TEMP IMPACTS IN SURFACE WATER
WOODS
IMPACTS IN SURFACE WATER
TEMP IMPACTS IN SURFACE WATER
SIGN ACCESS EASEMENT
PB 2003 PG 89
SITE 8A
S S
DENOTES IMPACTS IN SURFACE WATER
TS TS
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
JS

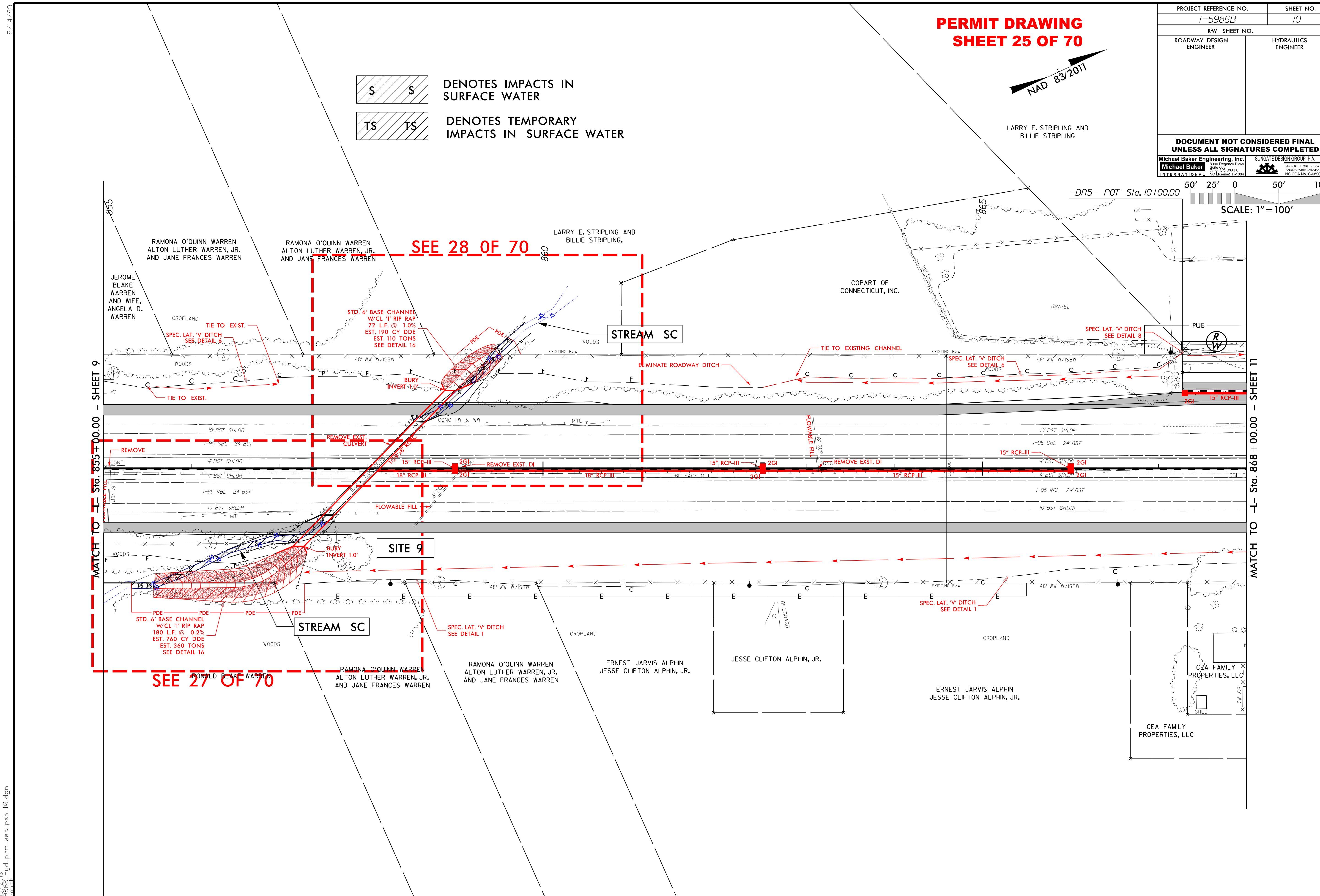
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. 8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084

SUNGATE DESIGN GROUP, P.A. NC COA No. C-0890

PERMIT DRAWING
SHEET 25 OF 70



FOR -L- PROFILE SEE SHEET 73
FOR -DR5- PROFILE SEE SHEET 94

5/14/99

1/10/2019 I-5986B_Hyd_prm_wet_psh_10.dgn

5/14/99

PERMIT DRAWING
SHEET 26 OF 70

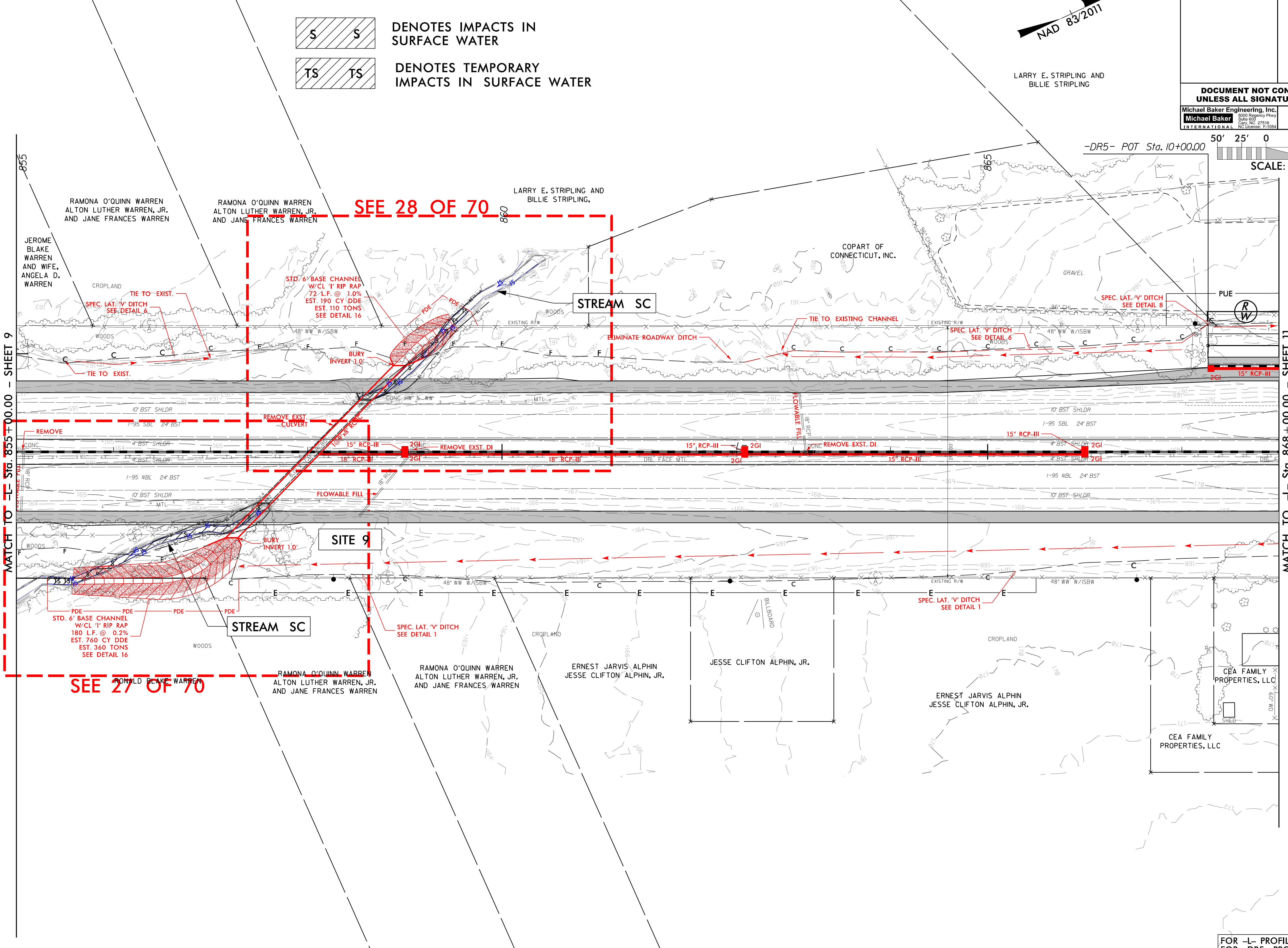
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL

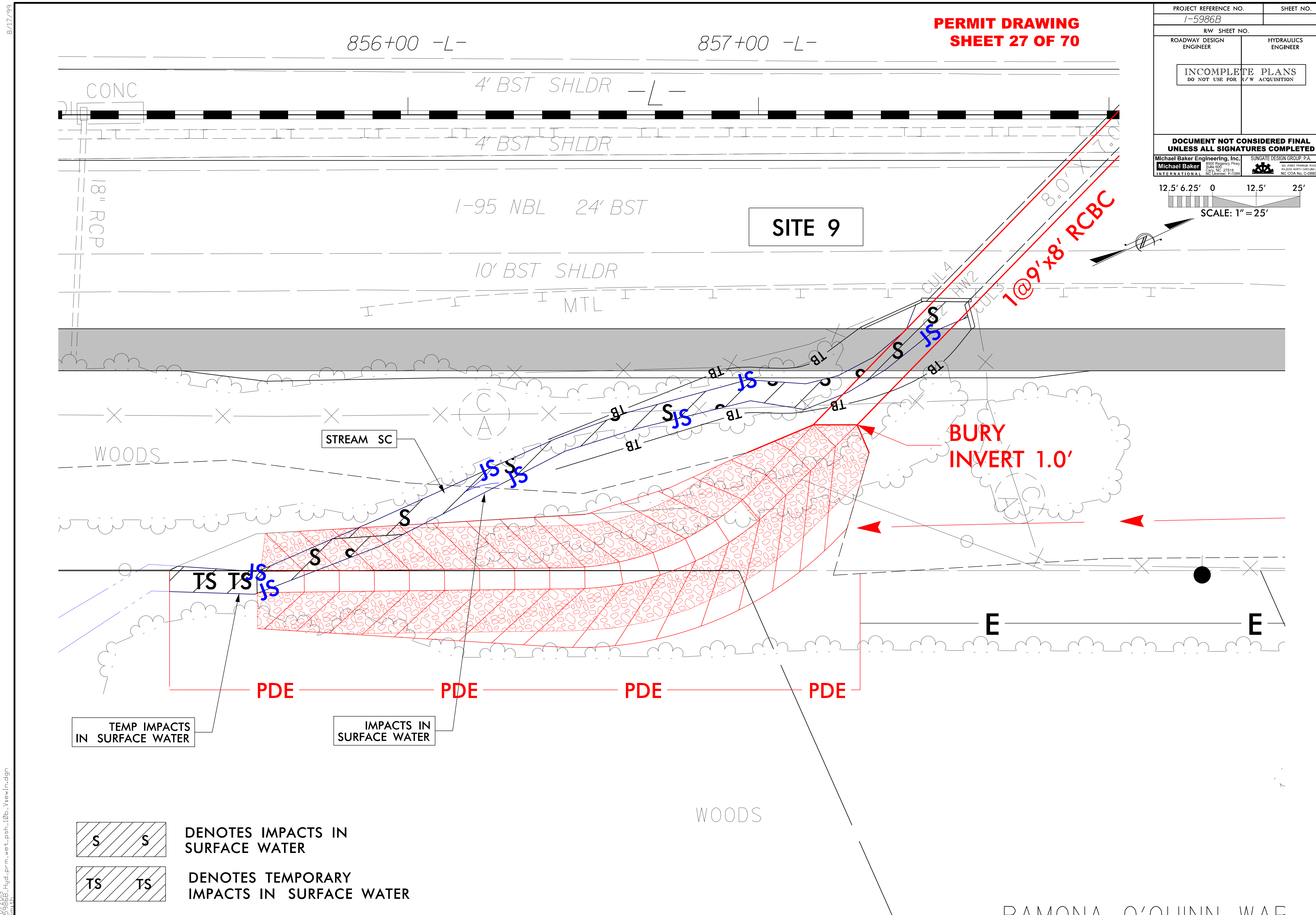
SUNGATE DESIGN GROUP, P.A.

SCALE: 1" = 100'



FOR -L- PROFILE SEE SHEET 73
FOR -DR5- PROFILE SEE SHEET 94

1/10/2019
I-5986B_Hyd_prm_wet_psh_10a.dgn



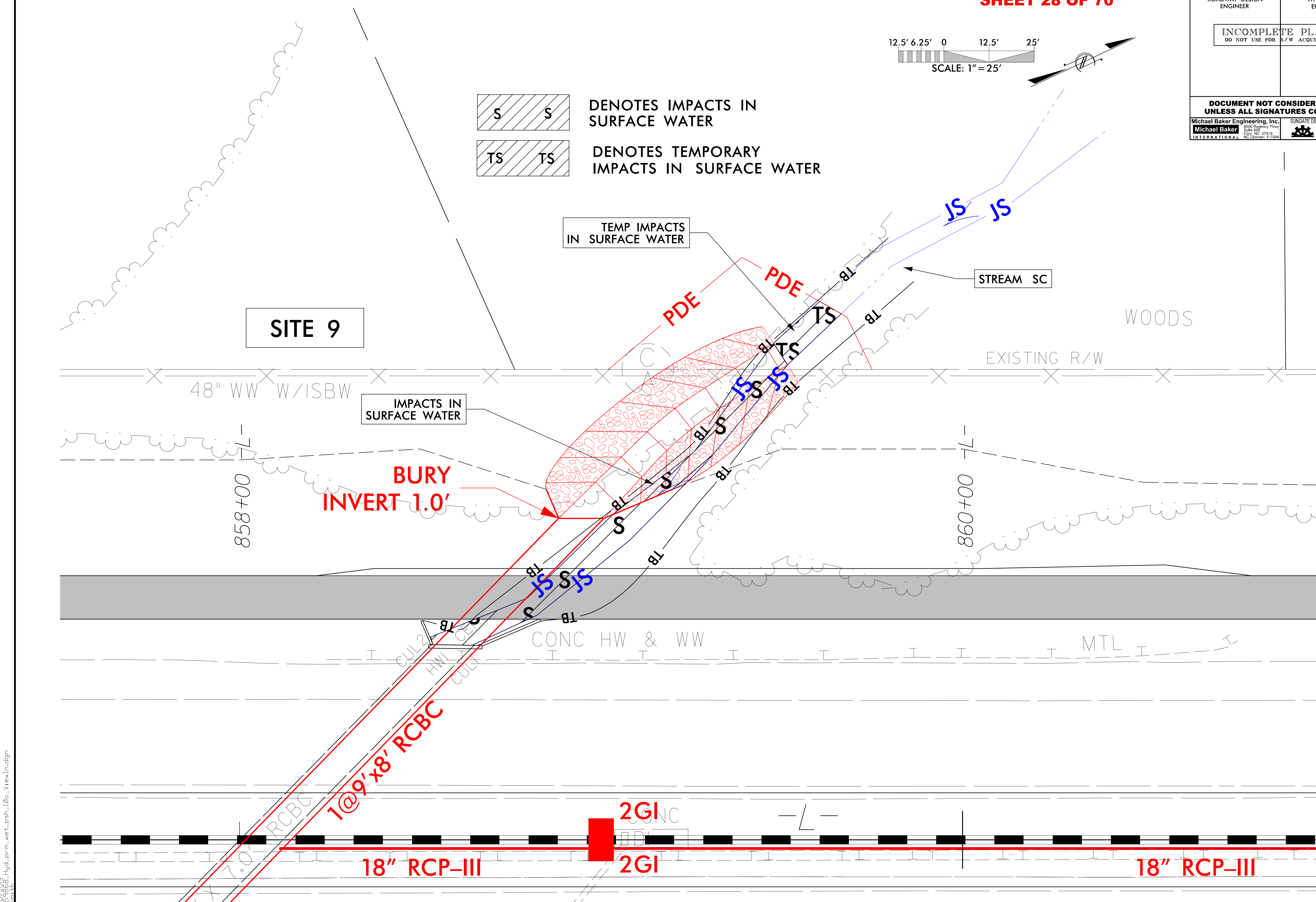
PERMIT DRAWING
SHEET 27 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1"=25'
856+00 -L-
857+00 -L-
CONC
4' BST SHLDR
-L-
4' BST SHLDR
18" RCP
I-95 NBL 24' BST
SITE 9
10' BST SHLDR
MTL
1@9'x8' RCBC
BURY INVERT 1.0'
STREAM SC
WOODS
PDE
E
TEMP IMPACTS IN SURFACE WATER
IMPACTS IN SURFACE WATER
WOODS
RAMONA O'QUINN WAR
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.



PROJECT REFERENCE NO.	SHEET NO.
I-5986B	57
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. 8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084
Michael Baker INTERNATIONAL

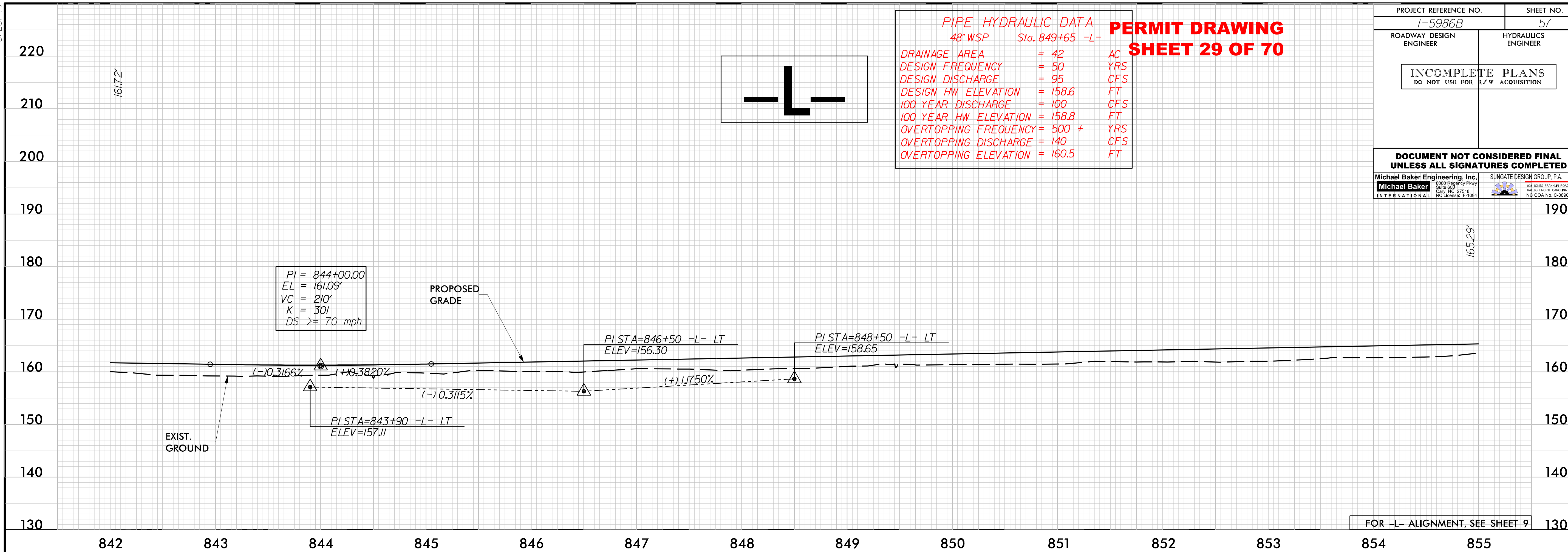
SUNGATE DESIGN GROUP, P.A. 905 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27606 NC COA No. C-0890

PERMIT DRAWING
SHEET 29 OF 70

PIPE HYDRAULIC DATA

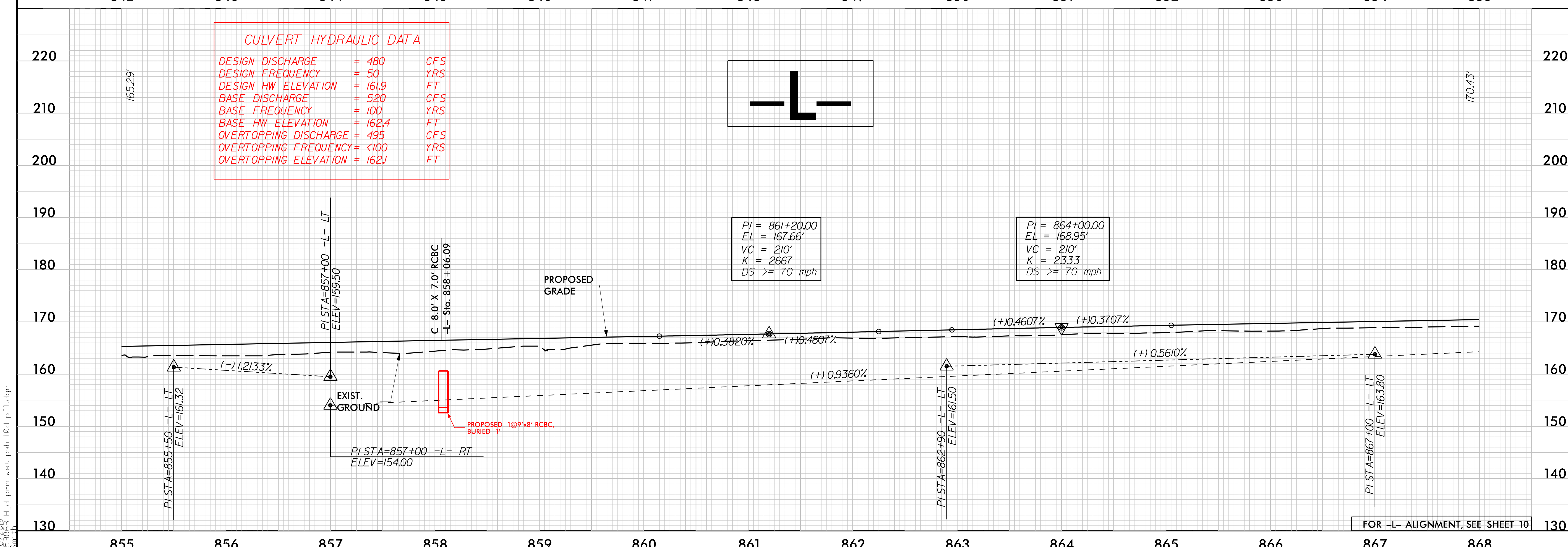
48" WSP Sta. 849+65 -L-

DRAINAGE AREA	=	42	AC
DESIGN FREQUENCY	=	50	YRS
DESIGN DISCHARGE	=	95	CFS
DESIGN HW ELEVATION	=	158.6	FT
100 YEAR DISCHARGE	=	100	CFS
100 YEAR HW ELEVATION	=	158.8	FT
OVERTOPPING FREQUENCY	=	500 +	YRS
OVERTOPPING DISCHARGE	=	140	CFS
OVERTOPPING ELEVATION	=	160.5	FT



CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	=	480	CFS
DESIGN FREQUENCY	=	50	YRS
DESIGN HW ELEVATION	=	161.9	FT
BASE DISCHARGE	=	520	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	162.4	FT
OVERTOPPING DISCHARGE	=	495	CFS
OVERTOPPING FREQUENCY	=	<100	YRS
OVERTOPPING ELEVATION	=	162.1	FT



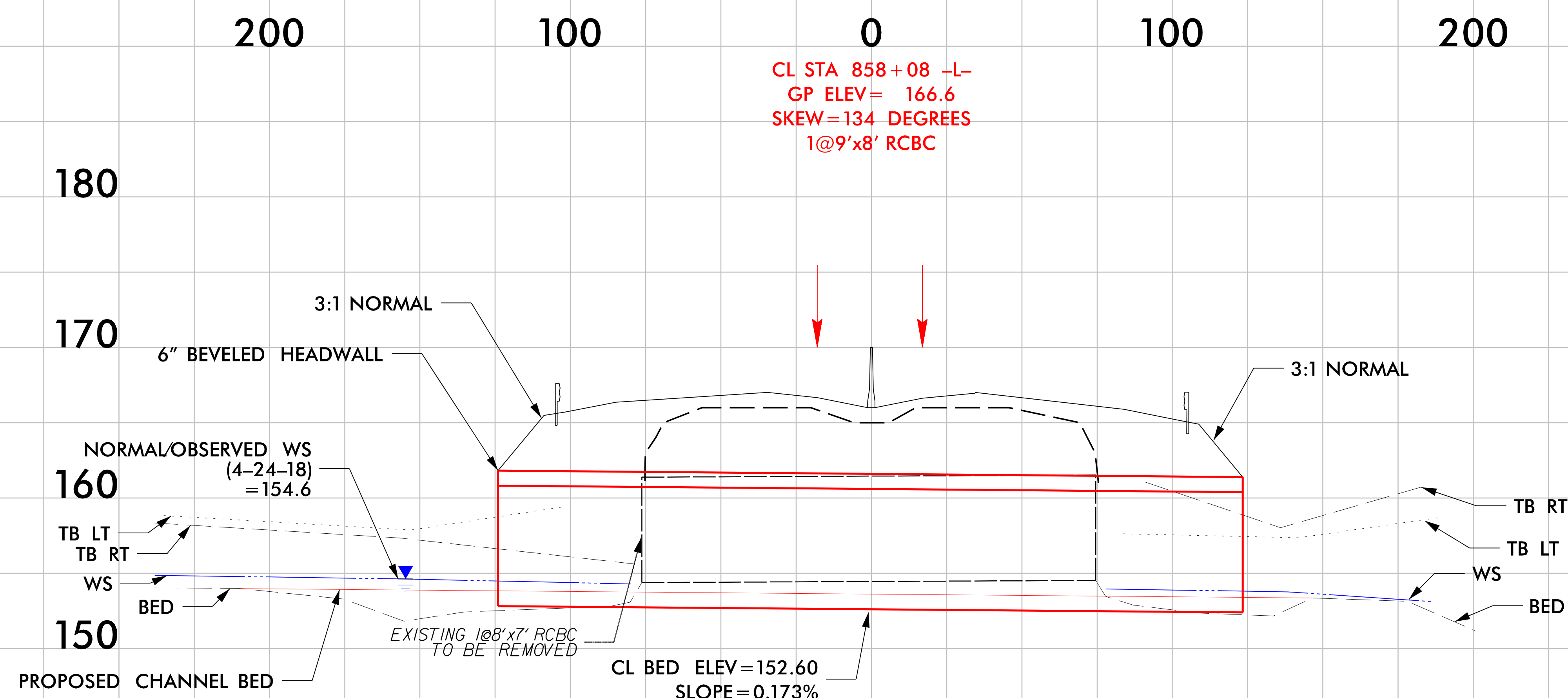
5/28/99
1/10/2019 I-5986B_Hyd_prm_wet_psh_10d_pfl.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	10E
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

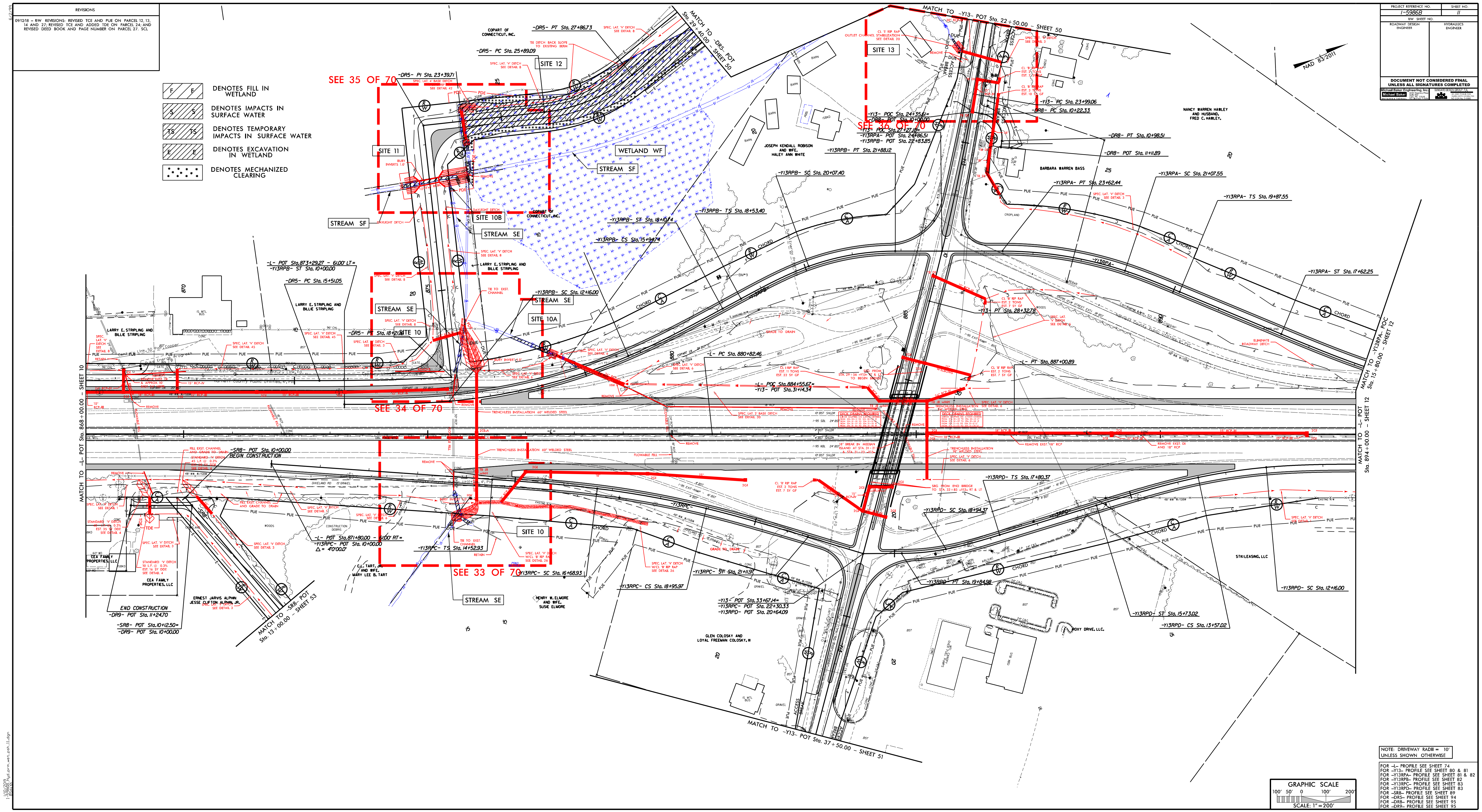
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SITE 9

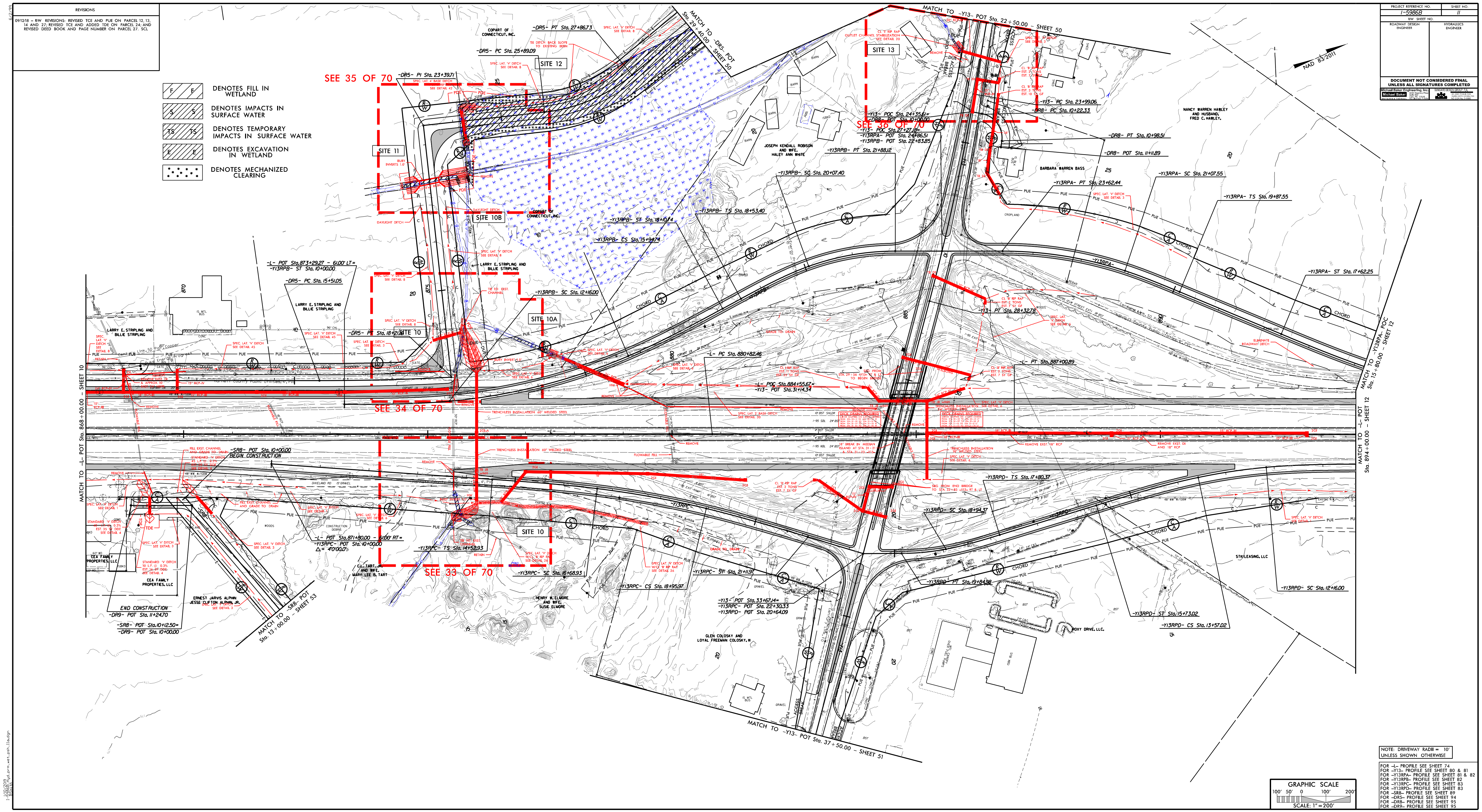


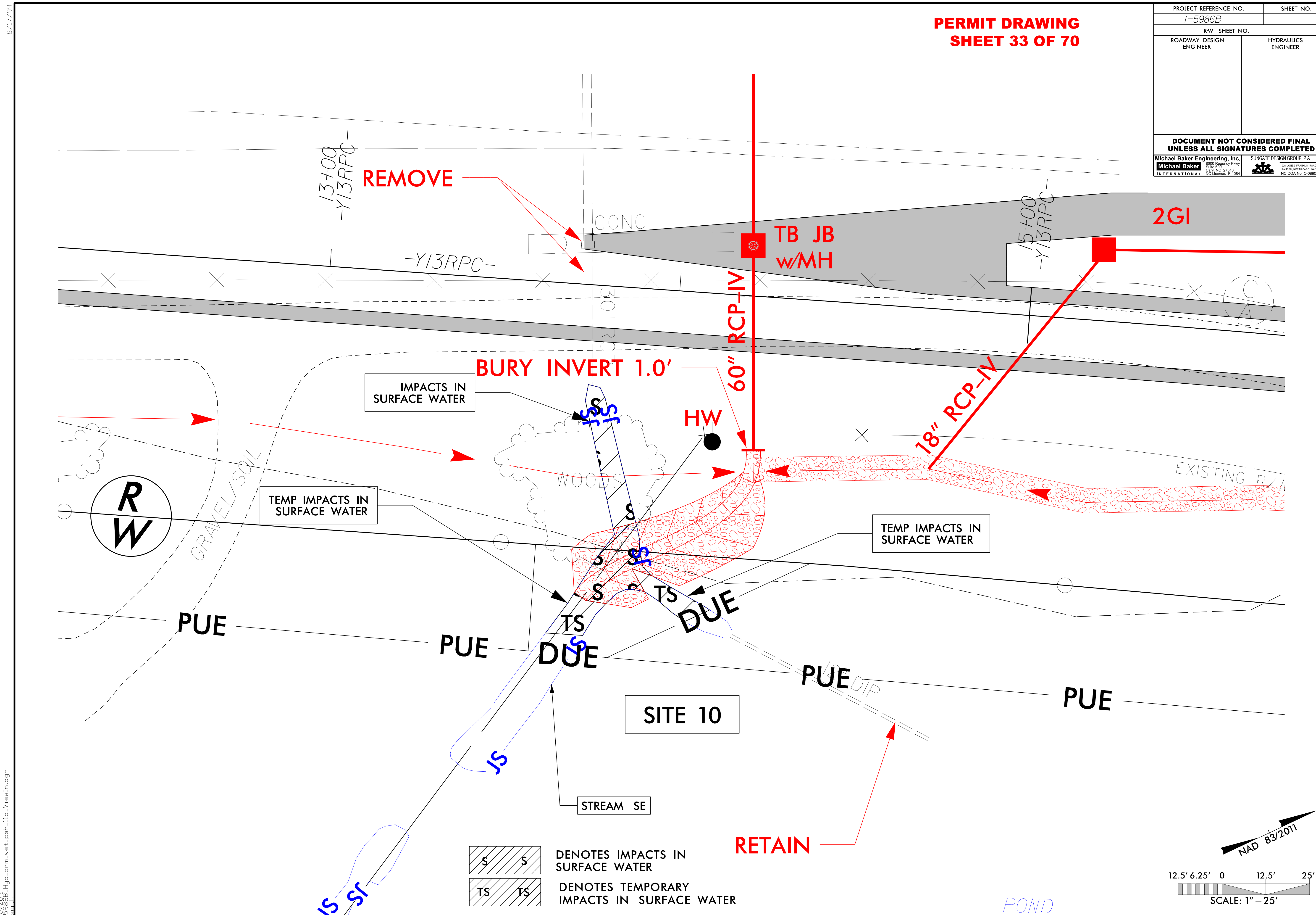
5/14/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_10e_sect.dgn

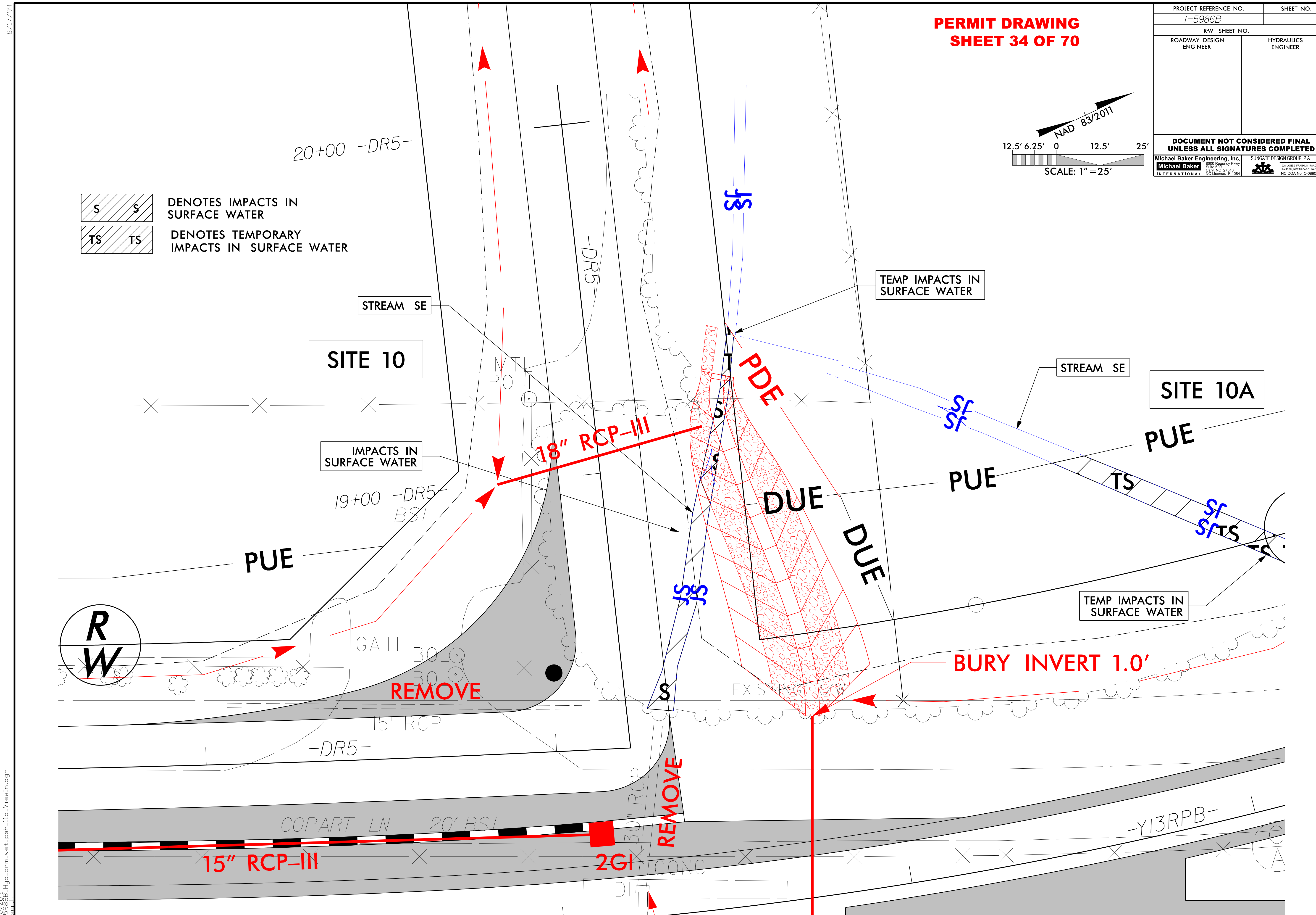
PERMIT DRAWING
SHEET 31 OF 70

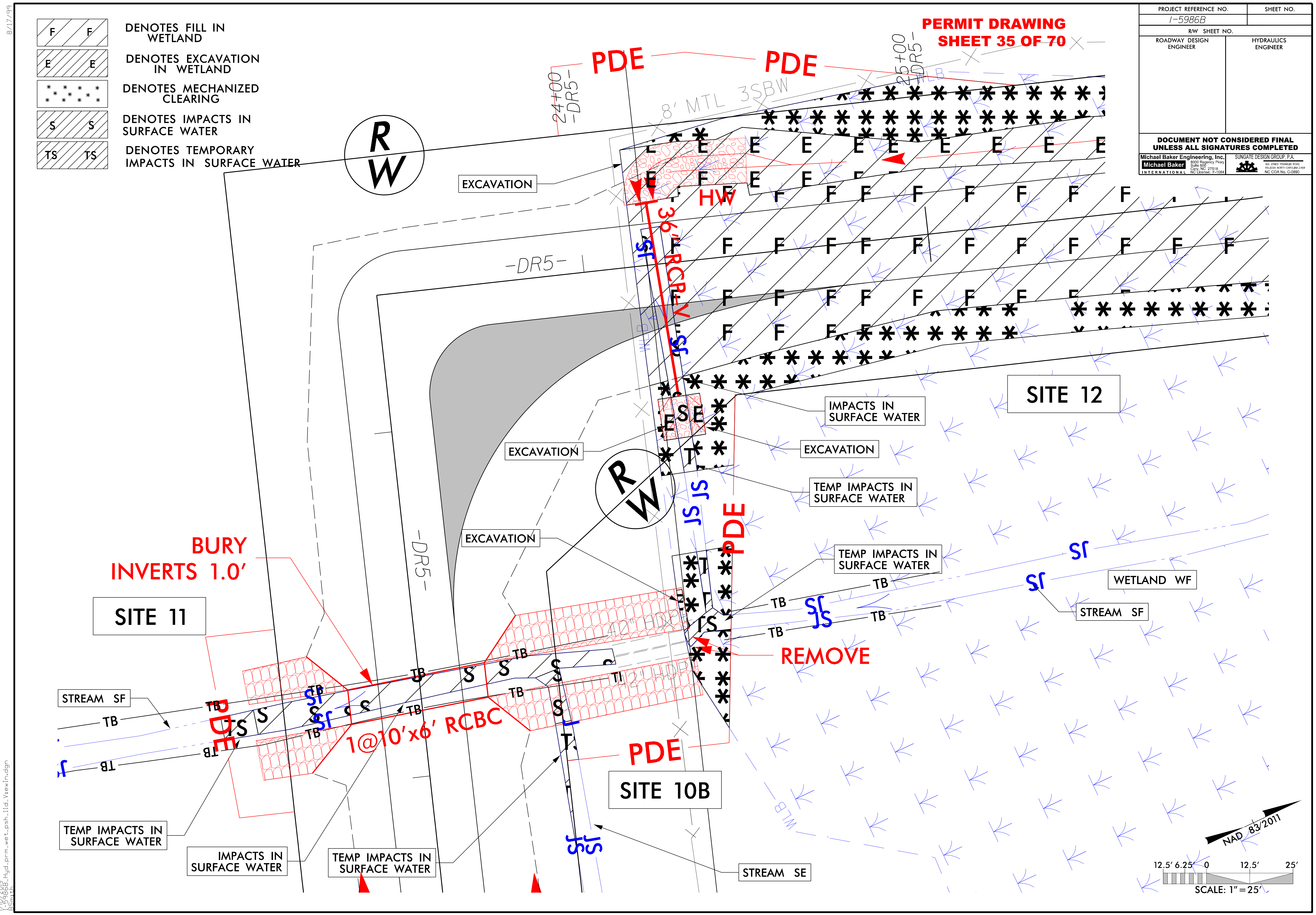


PERMIT DRAWING
SHEET 32 OF 70

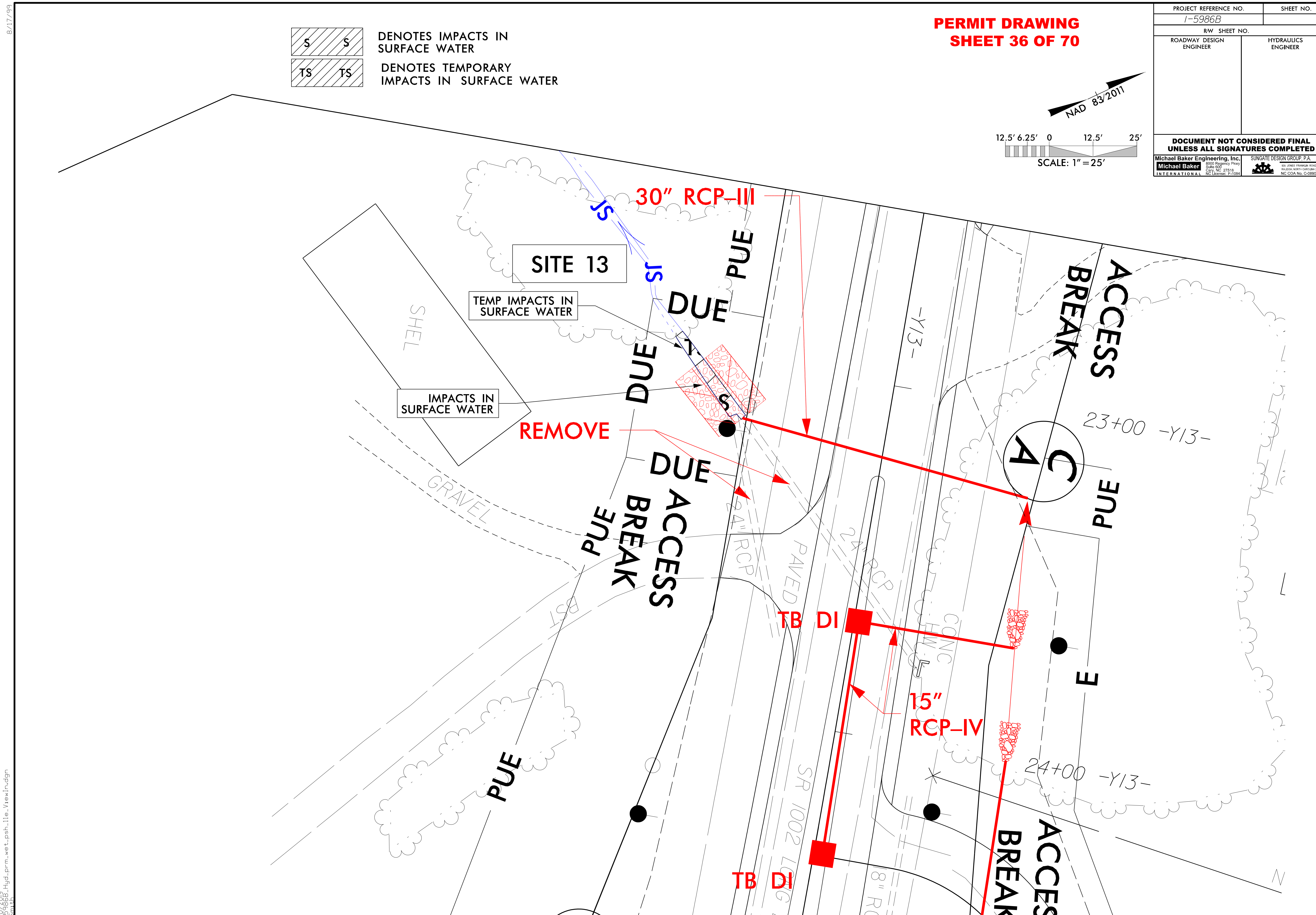



PERMIT DRAWING
SHEET 33 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
Michael Baker
INTERNATIONAL
SUNGATE DESIGN GROUP, P.A.
13+00
-Y13RPC-
REMOVE
CONC
TB JB
w/MH
2GI
15+00
-Y13RPC-
-Y13RPC-
60" RCP-IV
BURY INVERT 1.0'
18" RCP-IV
IMPACTS IN
SURFACE WATER
HW
WOODS
EXISTING R/W
R
W
GRAVEL/SOIL
TEMP IMPACTS IN
SURFACE WATER
TEMP IMPACTS IN
SURFACE WATER
TS
DUE
PUE
PUE
DUE
PUE
PUE
SITE 10
STREAM SE
RETAIN
DENOTES IMPACTS IN
SURFACE WATER
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
NAD 83/2011
12.5' 6.25' 0 12.5' 25'
SCALE: 1"=25'
POND


PERMIT DRAWING
SHEET 34 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
Michael Baker
INTERNATIONAL
8000 Regency Pkwy
Suite 600
Cary, NC 27518
NC License: F-1084
SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
NC COA No. C-0890
NAD 83/2011
12.5′ 6.25′ 0 12.5′ 25′
SCALE: 1″=25′
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
20+00 -DR5-
19+00 -DR5-
-DR5-
STREAM SE
SITE 10
SITE 10A
TEMP IMPACTS IN SURFACE WATER
IMPACTS IN SURFACE WATER
MTL POLE
18″ RCP-III
PDE
DUE
PUE
TS
BST
GATE
REMOVE
15″ RCP
BURY INVERT 1.0′
EXISTING R/W
COPART LN 20′ BST
15″ RCP-III
2GI
30″ RCP
CONC
-Y13RPB-



PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
PERMIT DRAWING
SHEET 35 OF 70
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
PDE
EXCAVATION
HW
36" RCP
-DR5-
SITE 12
IMPACTS IN SURFACE WATER
EXCAVATION
TEMP IMPACTS IN SURFACE WATER
BURY INVERTS 1.0'
SITE 11
TEMP IMPACTS IN SURFACE WATER
WETLAND WF
STREAM SF
REMOVE
STREAM SF
1@10'x6' RCBC
SITE 10B
TEMP IMPACTS IN SURFACE WATER
IMPACTS IN SURFACE WATER
STREAM SE
NAD 83/2011
SCALE: 1" = 25'



PERMIT DRAWING
SHEET 36 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
NAD 83/2011
12.5' 6.25' 0 12.5' 25'
SCALE: 1"=25'
SITE 13
TEMP IMPACTS IN SURFACE WATER
IMPACTS IN SURFACE WATER
30" RCP-III
REMOVE
15" RCP-IV
TB DI
TB DI
DUE
DUE
DUE
PUE
PUE
PUE
PUE
ACCESS BREAK
ACCESS BREAK
ACCESS BREAK
-Y13-
23+00 -Y13-
24+00 -Y13-
SHEL
GRAVEL
PAVED
SR 1002
CONC
24" RCP
24" RCP
8" RCP
JS
JS

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	94
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. Michael Baker INTERNATIONAL 8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084

SUNGATE DESIGN GROUP, P.A. NC COA No. C-0890

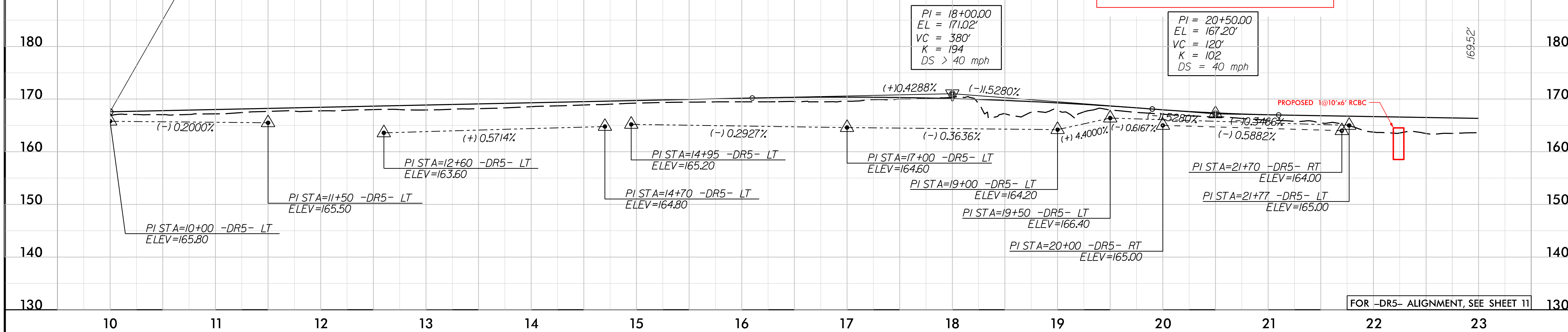
PERMIT DRAWING
SHEET 37 OF 70

5/28/99

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 380	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 166.3	FT
BASE DISCHARGE	= 440	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 166.8	FT
OVERTOPPING DISCHARGE	= 415	CFS
OVERTOPPING FREQUENCY	= <100	YRS
OVERTOPPING ELEVATION	= 166.6	FT

–DR5–

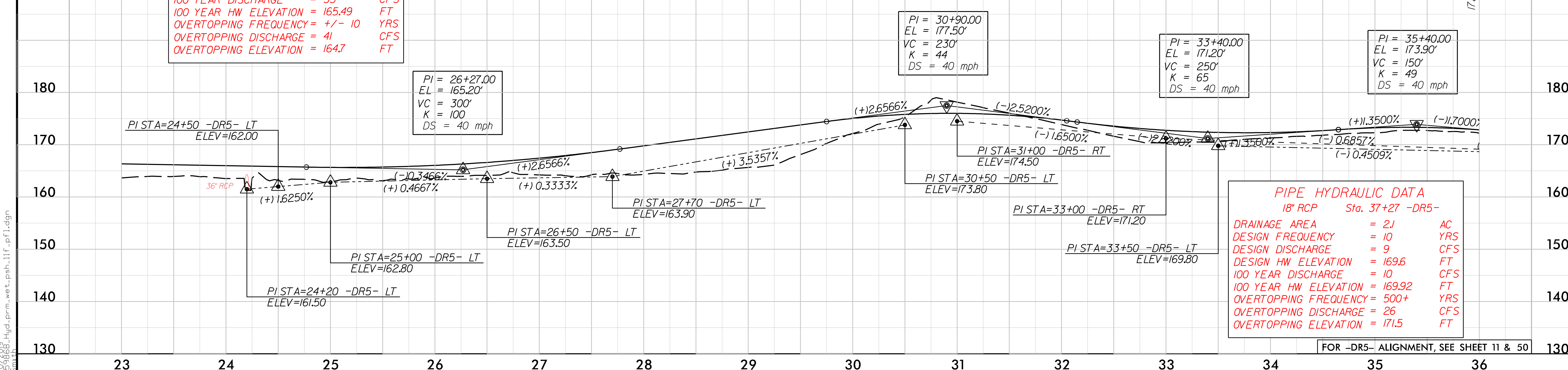


–DR5–

PIPE HYDRAULIC DATA

36" RCP Sta. 24+20 –DR5–

DRAINAGE AREA	= 15J	AC
DESIGN FREQUENCY	= 10	YRS
DESIGN DISCHARGE	= 43	CFS
DESIGN HW ELEVATION	= 164.8	FT
100 YEAR DISCHARGE	= 55	CFS
100 YEAR HW ELEVATION	= 165.49	FT
OVERTOPPING FREQUENCY	= +/- 10	YRS
OVERTOPPING DISCHARGE	= 41	CFS
OVERTOPPING ELEVATION	= 164.7	FT



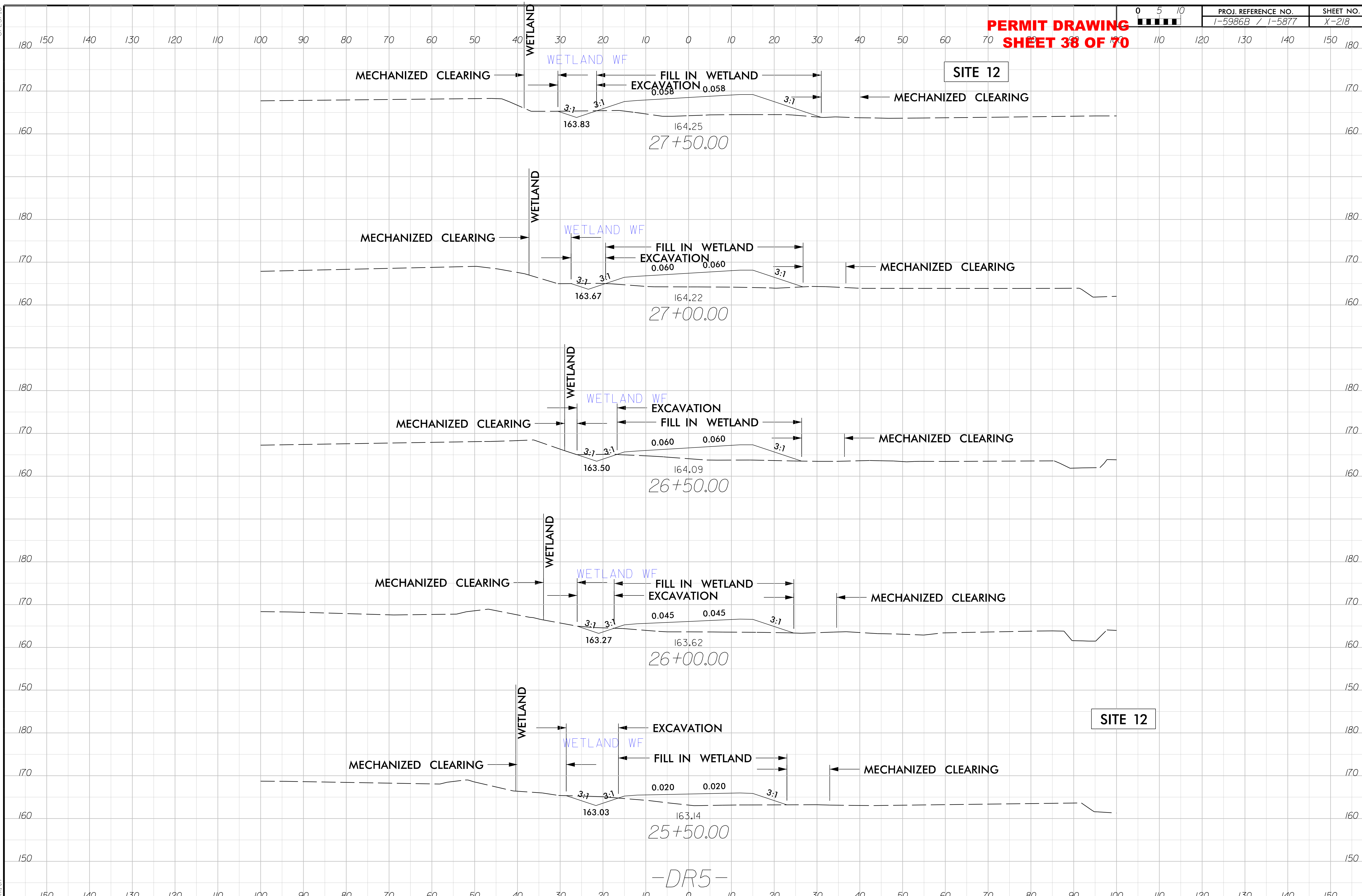
PIPE HYDRAULIC DATA

18" RCP Sta. 37+27 –DR5–

DRAINAGE AREA	= 2J	AC
DESIGN FREQUENCY	= 10	YRS
DESIGN DISCHARGE	= 9	CFS
DESIGN HW ELEVATION	= 169.6	FT
100 YEAR DISCHARGE	= 10	CFS
100 YEAR HW ELEVATION	= 169.92	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 26	CFS
OVERTOPPING ELEVATION	= 171.5	FT

1/10/2019
I-5986B_Hyd_prm_wet_psh_11f_pfl.dgn
JSmith

PROJ. REFERENCE NO.	SHEET NO.
I-5986B / I-5877	X-21B

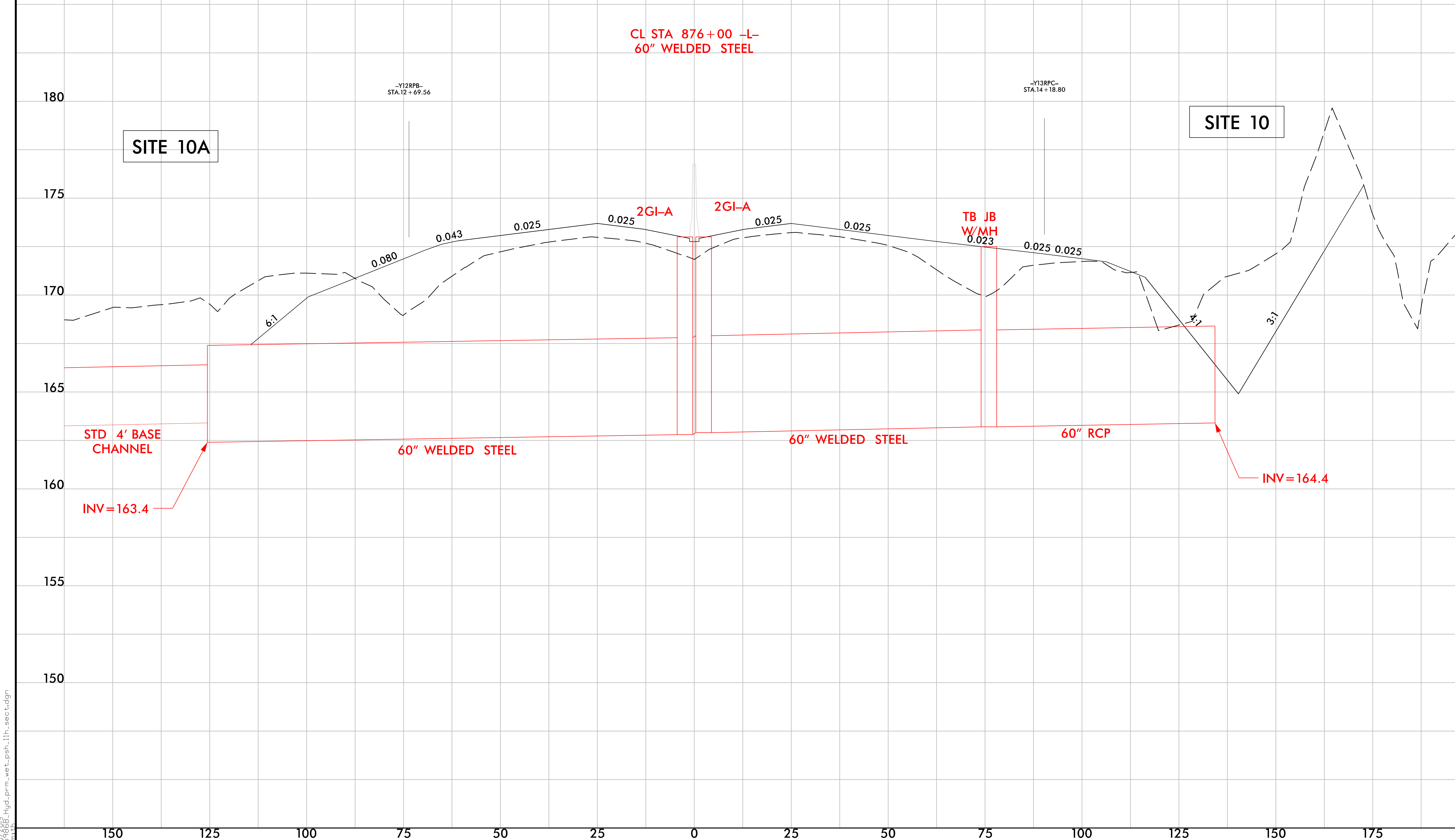


PERMIT DRAWING
SHEET 39 OF 70

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	11H
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



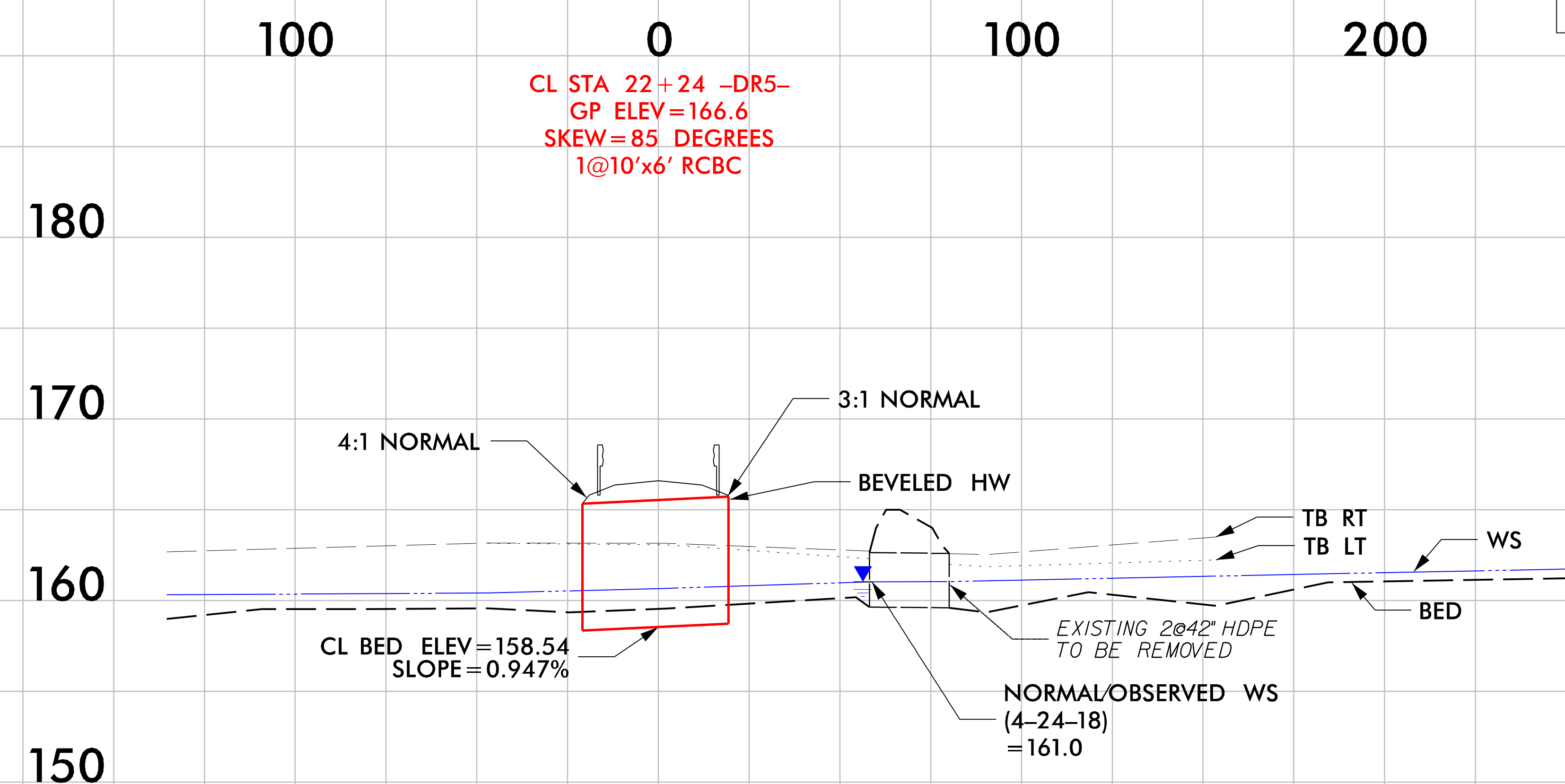
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	11J

ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER

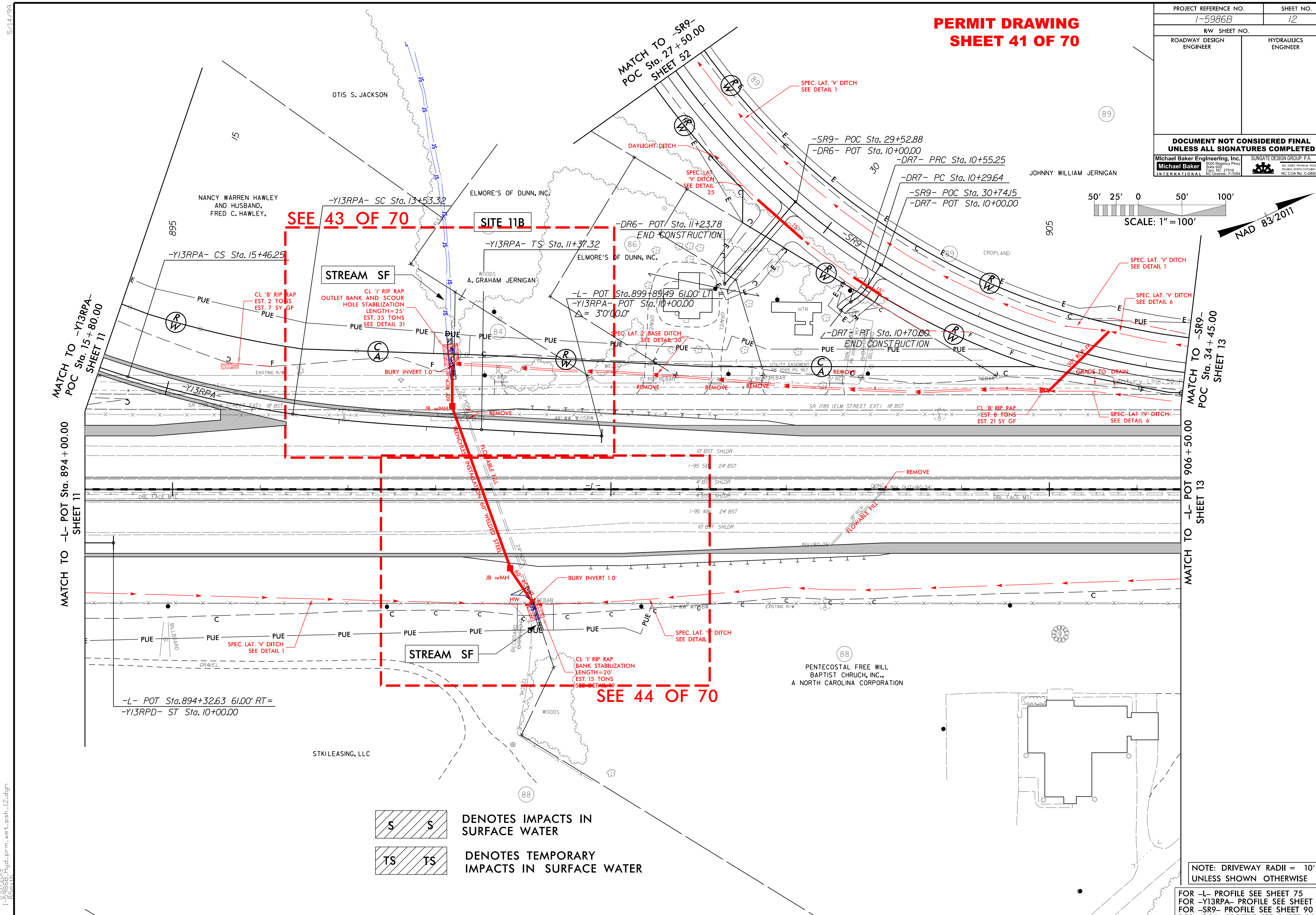
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

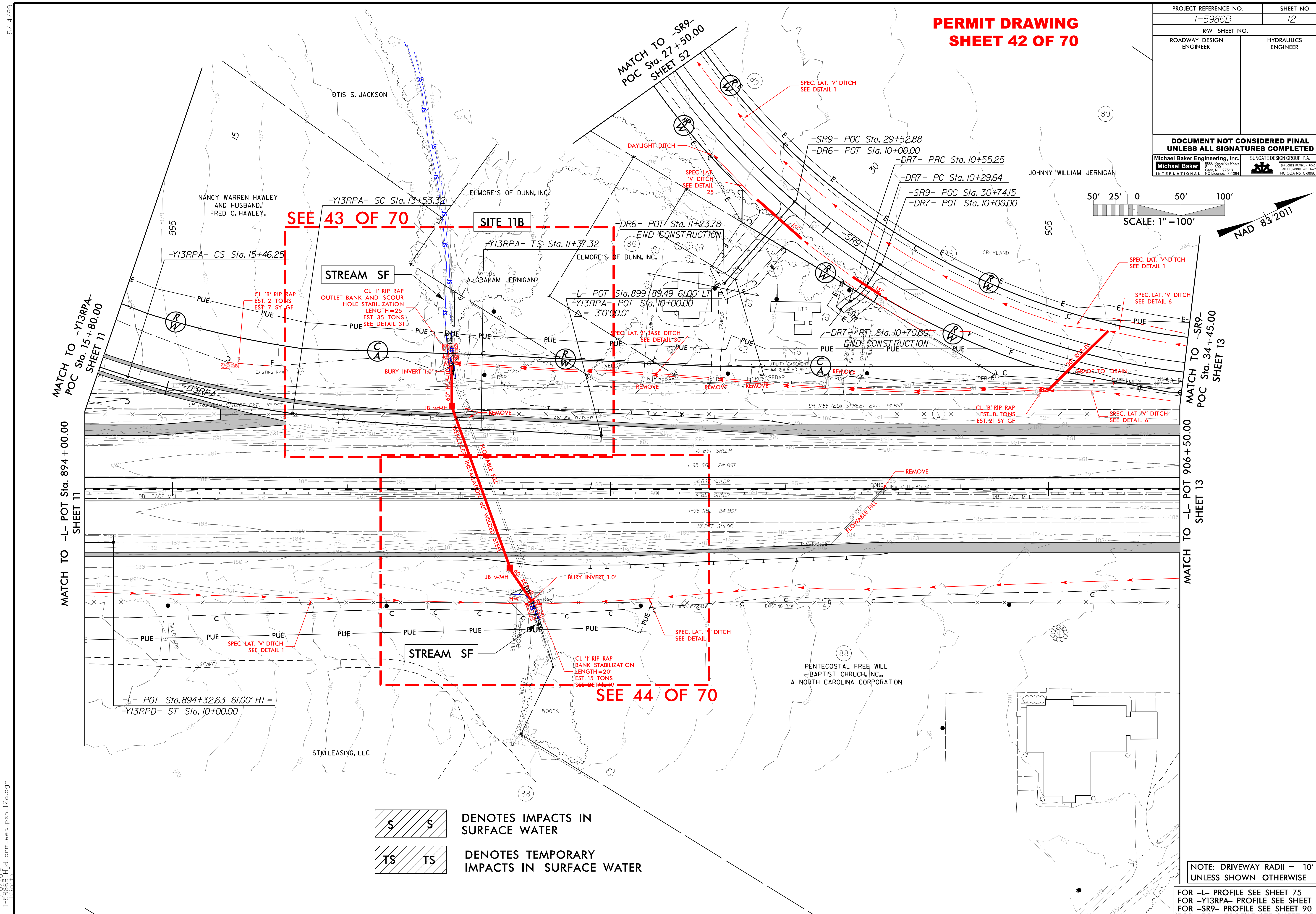
SITE 11



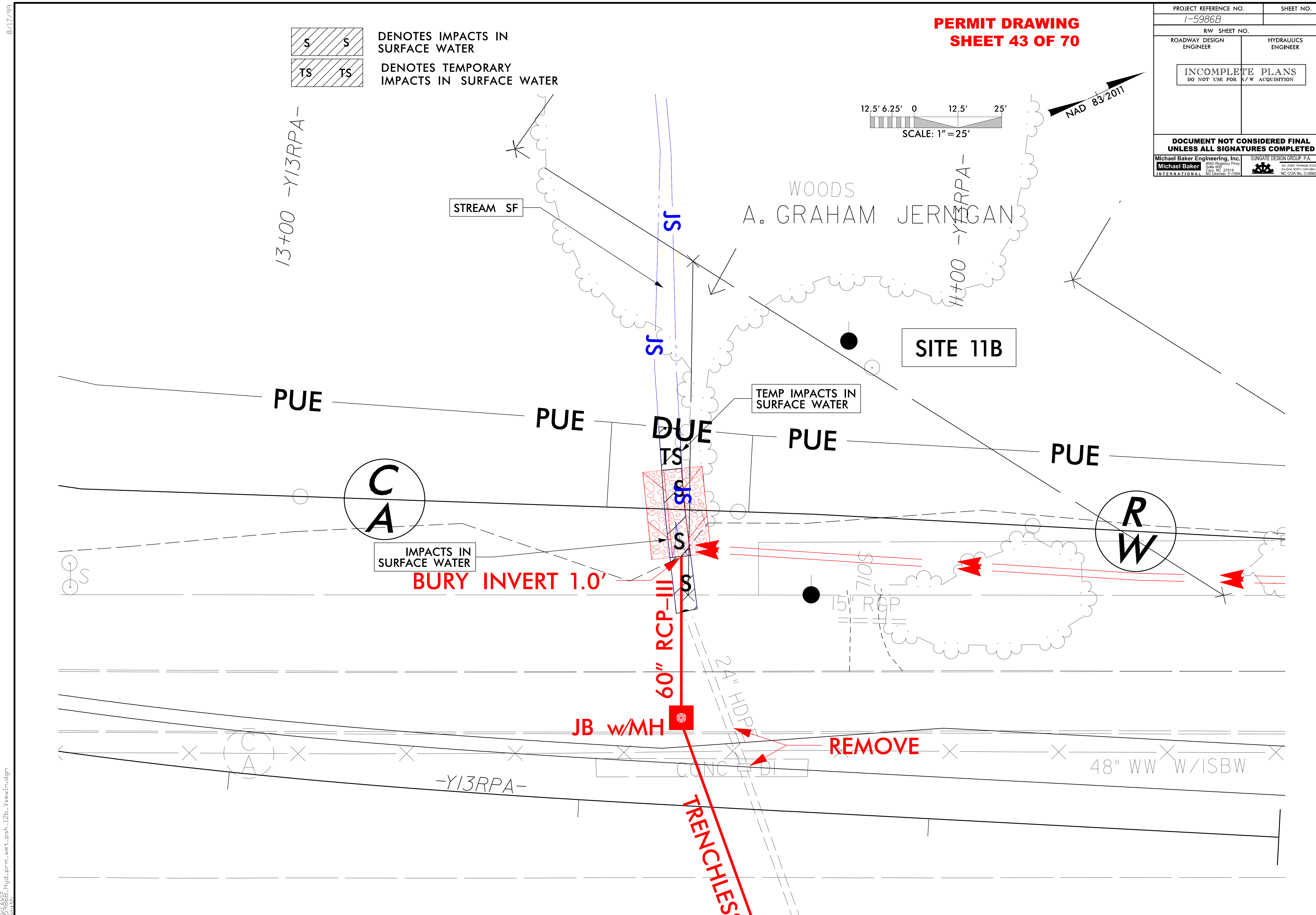
5/14/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_11J_sect.dgn



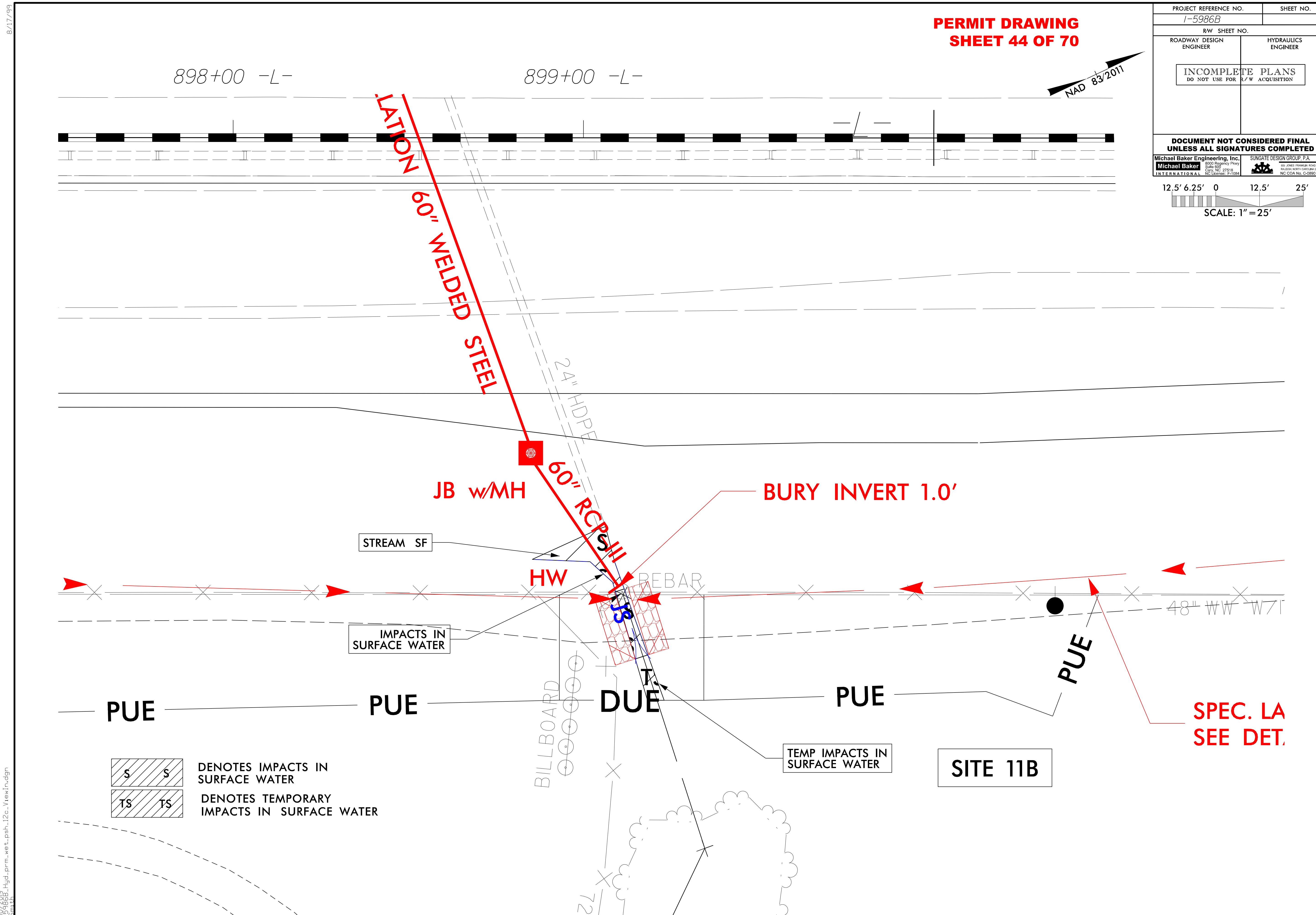
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
12
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 41 OF 70
MATCH TO -SR9- POC Sta. 27+50.00 SHEET 52
SPEC. LAT. 'V' DITCH SEE DETAIL 1
DAYLIGHT DITCH
-SR9- POC Sta. 29+52.88
-DR6- POT Sta. 10+00.00
-DR7- PRC Sta. 10+55.25
-DR7- PC Sta. 10+29.64
-SR9- POC Sta. 30+74.15
-DR7- POT Sta. 10+00.00
JOHNNY WILLIAM JERNIGAN
SCALE: 1" = 100'
NAD 83/2011
OTIS S. JACKSON
NANCY WARREN HAWLEY AND HUSBAND, FRED C. HAWLEY,
-Y13RPA- SC Sta. 13+53.32
ELMORE'S OF DUNN, INC.
SEE 43 OF 70
SITE 11B
-DR6- POT Sta. 11+23.78
END CONSTRUCTION
-Y13RPA- TS Sta. 11+37.32
ELMORE'S OF DUNN, INC.
-Y13RPA- CS Sta. 15+46.25
STREAM SF
A. GRAHAM JERNIGAN
CL 'B' RIP RAP EST. 2 TONS EST. 7 SY GF
CL 'I' RIP RAP OUTLET BANK AND SCOUR HOLE STABILIZATION LENGTH = 25' EST. 35 TONS SEE DETAIL 31
-L- POT Sta. 899+89.49 61.00' LT =
-Y13RPA- POT Sta. 10+00.00
Δ = 3°0'00.0"
SPEC. LAT. 2' BASE DITCH SEE DETAIL 30
-DR7- PT Sta. 10+70.00
END CONSTRUCTION
SPEC. LAT. 'V' DITCH SEE DETAIL 1
SPEC. LAT. 'V' DITCH SEE DETAIL 6
CROPLAND
MATCH TO -Y13RPA- POC Sta. 15+80.00 SHEET 11
MATCH TO -SR9- POC Sta. 34+45.00 SHEET 13
BURY INVERT 1.0'
REMOVE
GRADE TO DRAIN
CL 'B' RIP RAP EST. 8 TONS EST. 21 SY GF
SPEC. LAT. 'V' DITCH SEE DETAIL 6
SR 1785 (ELM STREET EXT) 18' BST
MATCH TO -L- POT Sta. 894+00.00 SHEET 11
MATCH TO -L- POT 906+50.00 SHEET 13
TRENCHLESS INSTALLATION 60" WELDED STEEL
FLOWABLE FILL
10' BST SHLDR
I-95 SBL 24' BST
4' BST SHLDR
I-95 NBL 24' BST
10' BST SHLDR
DBL FACE MTL
JB w/MH
BURY INVERT 1.0'
SPEC. LAT. 'V' DITCH SEE DETAIL
SPEC. LAT. 'V' DITCH SEE DETAIL 1
STREAM SF
CL 'I' RIP RAP BANK STABILIZATION LENGTH = 20' EST. 15 TONS SEE DETAIL 19
SEE 44 OF 70
PENTECOSTAL FREE WILL BAPTIST CHRUCH, INC., A NORTH CAROLINA CORPORATION
-L- POT Sta. 894+32.63 61.00' RT =
-Y13RPD- ST Sta. 10+00.00
STKI LEASING, LLC
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 75
FOR -Y13RPA- PROFILE SEE SHEET 81
FOR -SR9- PROFILE SEE SHEET 90
FOR -DR6- PROFILE SEE SHEET 95



PERMIT DRAWING
SHEET 42 OF 70
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
12
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1" = 100'
NAD 83/2011
MATCH TO -SR9- POC Sta. 27+50.00 SHEET 52
MATCH TO -Y13RPA- POC Sta. 15+80.00 SHEET 11
MATCH TO -L- POT Sta. 894+00.00 SHEET 11
MATCH TO -SR9- POC Sta. 34+45.00 SHEET 13
MATCH TO -L- POT 906+50.00 SHEET 13
SEE 43 OF 70
SEE 44 OF 70
SITE 11B
STREAM SF
OTIS S. JACKSON
NANCY WARREN HAWLEY AND HUSBAND, FRED C. HAWLEY,
ELMORE'S OF DUNN, INC.
A. GRAHAM JERNIGAN
JOHNNY WILLIAM JERNIGAN
PENTECOSTAL FREE WILL BAPTIST CHRUCH, INC., A NORTH CAROLINA CORPORATION
STKI LEASING, LLC
-Y13RPA- SC Sta. 13+53.32
-Y13RPA- CS Sta. 15+46.25
-Y13RPA- TS Sta. 11+37.32
-L- POT Sta. 899+89.49 61.00' LT =
-Y13RPA- POT Sta. 10+00.00
Δ = 3°0'00.0"
-DR6- POT Sta. 11+23.78 END CONSTRUCTION
-SR9- POC Sta. 29+52.88
-DR6- POT Sta. 10+00.00
-DR7- PRC Sta. 10+55.25
-DR7- PC Sta. 10+29.64
-SR9- POC Sta. 30+74.15
-DR7- POT Sta. 10+00.00
-DR7- PT Sta. 10+70.00 END CONSTRUCTION
-L- POT Sta. 894+32.63 61.00' RT =
-Y13RPD- ST Sta. 10+00.00
CL 'I' RIP RAP OUTLET BANK AND SCOUR HOLE STABILIZATION LENGTH = 25' EST. 35 TONS SEE DETAIL 31
CL 'B' RIP RAP EST. 2 TONS EST. 7 SY GF
CL 'B' RIP RAP EST. 8 TONS EST. 21 SY GF
CL 'I' RIP RAP BANK STABILIZATION LENGTH = 20' EST. 15 TONS SEE DETAIL 19
SPEC. LAT. 'V' DITCH SEE DETAIL 1
SPEC. LAT. 'V' DITCH SEE DETAIL 6
SPEC. LAT. 'V' DITCH SEE DETAIL 25
SPEC. LAT. 2' BASE DITCH SEE DETAIL 30
DAYLIGHT DITCH
GRADE TO DRAIN
BURY INVERT 1.0'
JB w/MH
REMOVE
FLOWABLE FILL
60" WELDED STEEL
CROPLAND
WOODS
GRAVEL
SR 1785 (ELM STREET EXT.) 18' BST
I-95 SBL 24' BST
I-95 NBL 24' BST
10' BST SHLDR
DBL FACE MTL
EXISTING R/W
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 75
FOR -Y13RPA- PROFILE SEE SHEET 81
FOR -SR9- PROFILE SEE SHEET 90
FOR -DR6- PROFILE SEE SHEET 95
5/14/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_12a.dgn



PROJECT REFERENCE NO.
I-5986B
SHEET NO.
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
Michael Baker
INTERNATIONAL
8000 Regency Pkwy
Suite 600
Cary, NC 27518
NC License: F-1084
SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
NC COA No. C-0890
PERMIT DRAWING
SHEET 43 OF 70
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
NAD 83/2011
13+00 -Y13RPA-
11+00 -Y13RPA-
WOODS
A. GRAHAM JERNIGAN
STREAM SF
SITE 11B
PUE
DUE
TEMP IMPACTS IN SURFACE WATER
IMPACTS IN SURFACE WATER
BURY INVERT 1.0'
60" RCP-III
JB w/MH
REMOVE
15" RCP
24" HDPE
CONC DI
48" WW W/ISBW
-Y13RPA-
TRENCHLESS



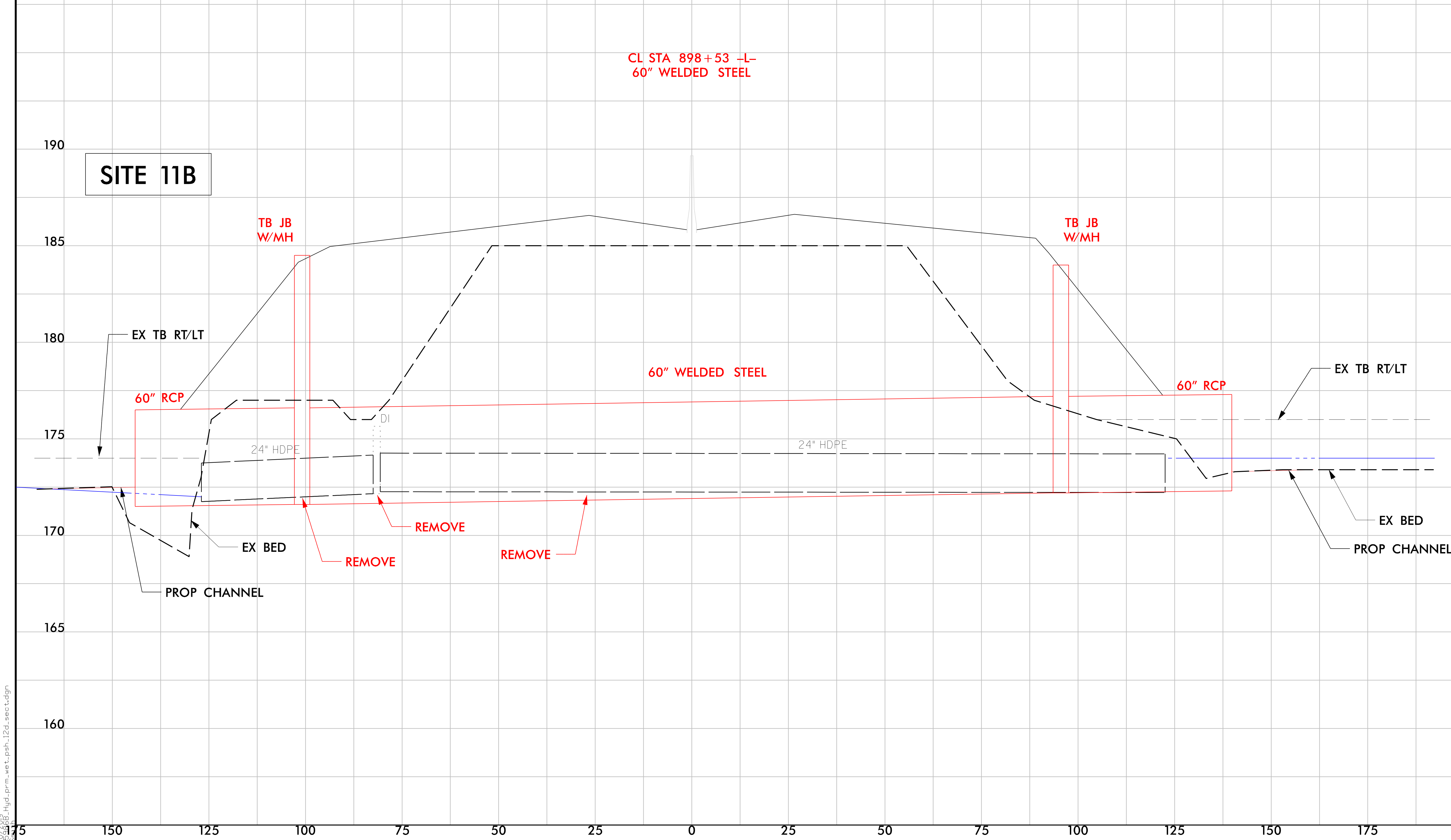
PERMIT DRAWING
SHEET 44 OF 70
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
Michael Baker
INTERNATIONAL
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
12.5' 6.25' 0 12.5' 25'
SCALE: 1"=25'
898+00 -L-
899+00 -L-
-L-
60" WELDED STEEL
24" HDPE
JB w/MH
60" RCP III
BURY INVERT 1.0'
STREAM SF
HW
REBAR
IMPACTS IN
SURFACE WATER
48" WW
PUE
DUE
BILLBOARD
TEMP IMPACTS IN
SURFACE WATER
SITE 11B
SPEC. LA
SEE DET.
DENOTES IMPACTS IN
SURFACE WATER
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
8/17/99

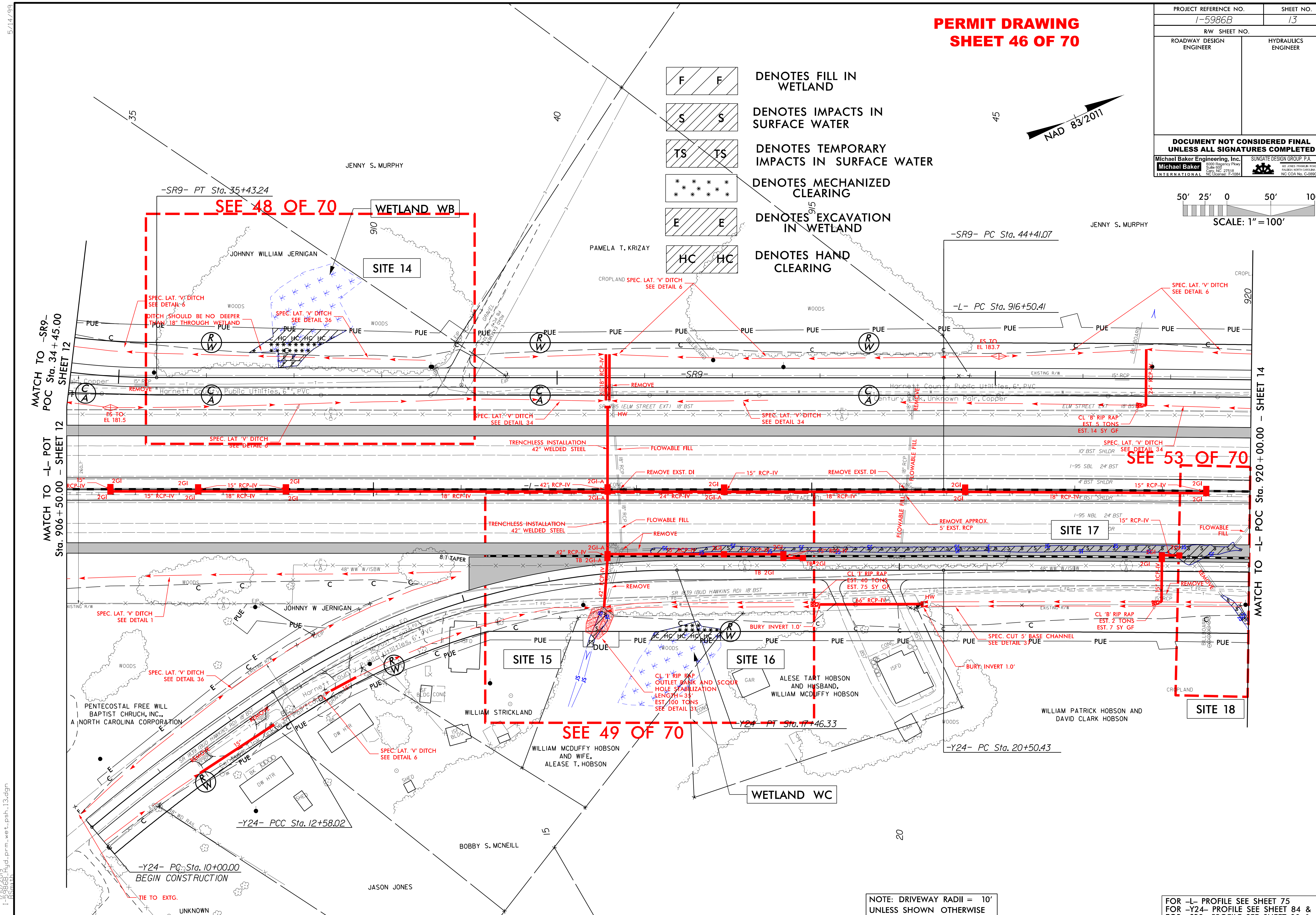
PERMIT DRAWING
SHEET 45 OF 70

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	12D
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED




PERMIT DRAWING
SHEET 46 OF 70
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
13
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
SCALE: 1" = 100'
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES MECHANIZED CLEARING
DENOTES EXCAVATION IN WETLAND
DENOTES HAND CLEARING
SEE 48 OF 70
SEE 49 OF 70
SEE 53 OF 70
WETLAND WB
WETLAND WC
SITE 14
SITE 15
SITE 16
SITE 17
SITE 18
-SR9- PT Sta. 35+43.24
-SR9- PC Sta. 44+41.07
-L- PC Sta. 916+50.41
-Y24- PT Sta. 17+46.33
-Y24- PC Sta. 20+50.43
-Y24- PCC Sta. 12+58.02
-Y24- PC Sta. 10+00.00
BEGIN CONSTRUCTION
MATCH TO -SR9- POC Sta. 34+45.00 SHEET 12
MATCH TO -L- POT Sta. 906+50.00 - SHEET 12
MATCH TO -L- POC Sta. 920+00.00 - SHEET 14
JENNY S. MURPHY
JOHNNY WILLIAM JERNIGAN
PAMELA T. KRIZAY
JOHNNY W JERNIGAN
PENTECOSTAL FREE WILL BAPTIST CHURCH, INC., A NORTH CAROLINA CORPORATION
WILLIAM STRICKLAND
ALESE TART HOBSON AND HUSBAND, WILLIAM MCDUFFY HOBSON
WILLIAM MCDUFFY HOBSON AND WIFE, ALESE T. HOBSON
WILLIAM PATRICK HOBSON AND DAVID CLARK HOBSON
BOBBY S. MCNEILL
JASON JONES
UNKNOWN
DITCH SHOULD BE NO DEEPER THAN 18" THROUGH WETLAND
TRENCHLESS INSTALLATION 42" WELDED STEEL
CL 'I' RIP RAP OUTLET BANK AND SCOUR HOLE STABILIZATION LENGTH=35' EST. 100 TONS SEE DETAIL 31
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 75
FOR -Y24- PROFILE SEE SHEET 84 & 85
FOR -SR9- PROFILE SEE SHEET 90 & 91

PERMIT DRAWING
SHEET 47 OF 70

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

F F — DENOTES FILL IN WETLAND

S S — DENOTES IMPACTS IN SURFACE WATER

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

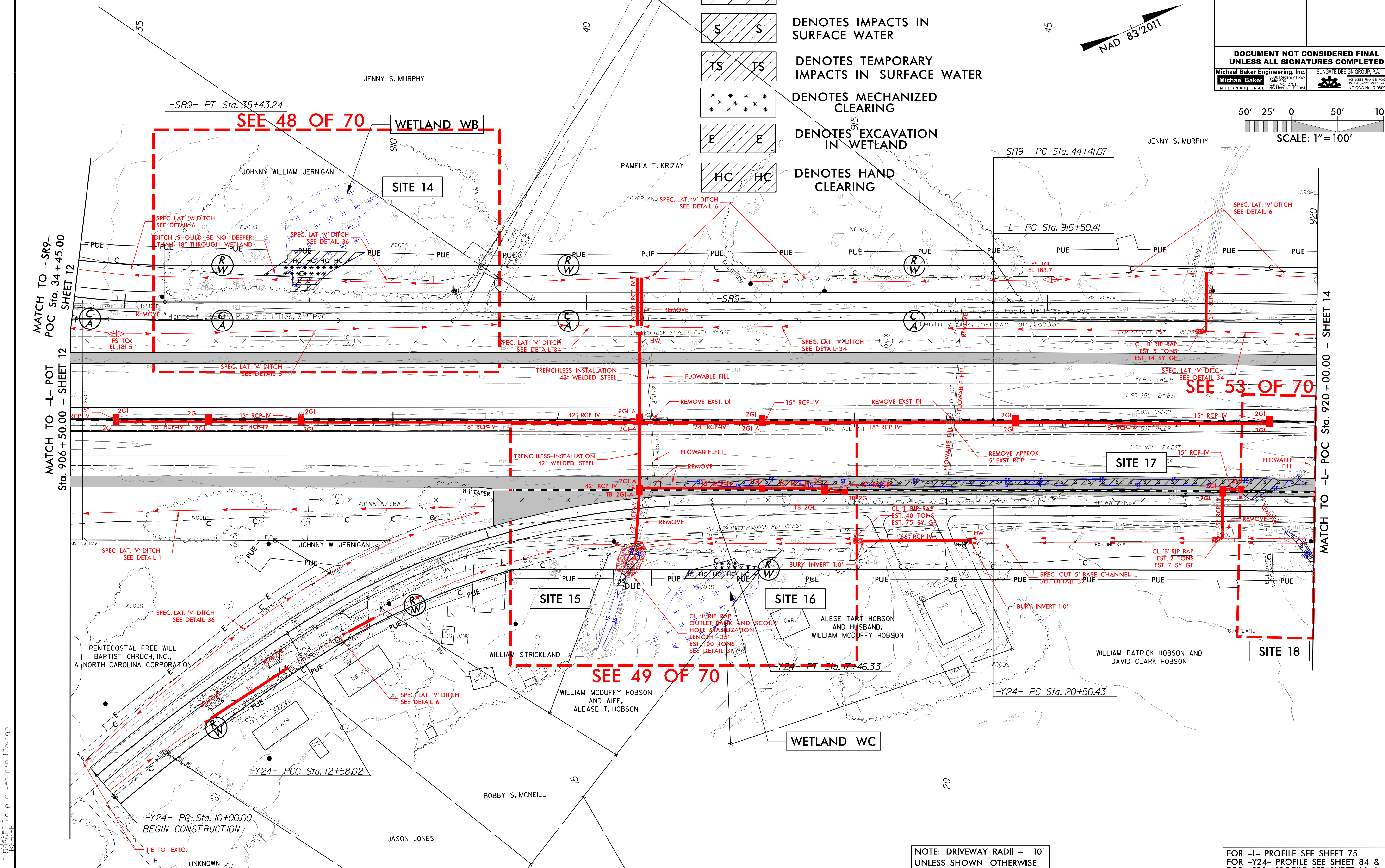
E E — DENOTES EXCAVATION IN WETLAND

HC HC — DENOTES HAND CLEARING

NAD 83/2011

50′ 25′ 0 50′ 100′

SCALE: 1″ = 100′

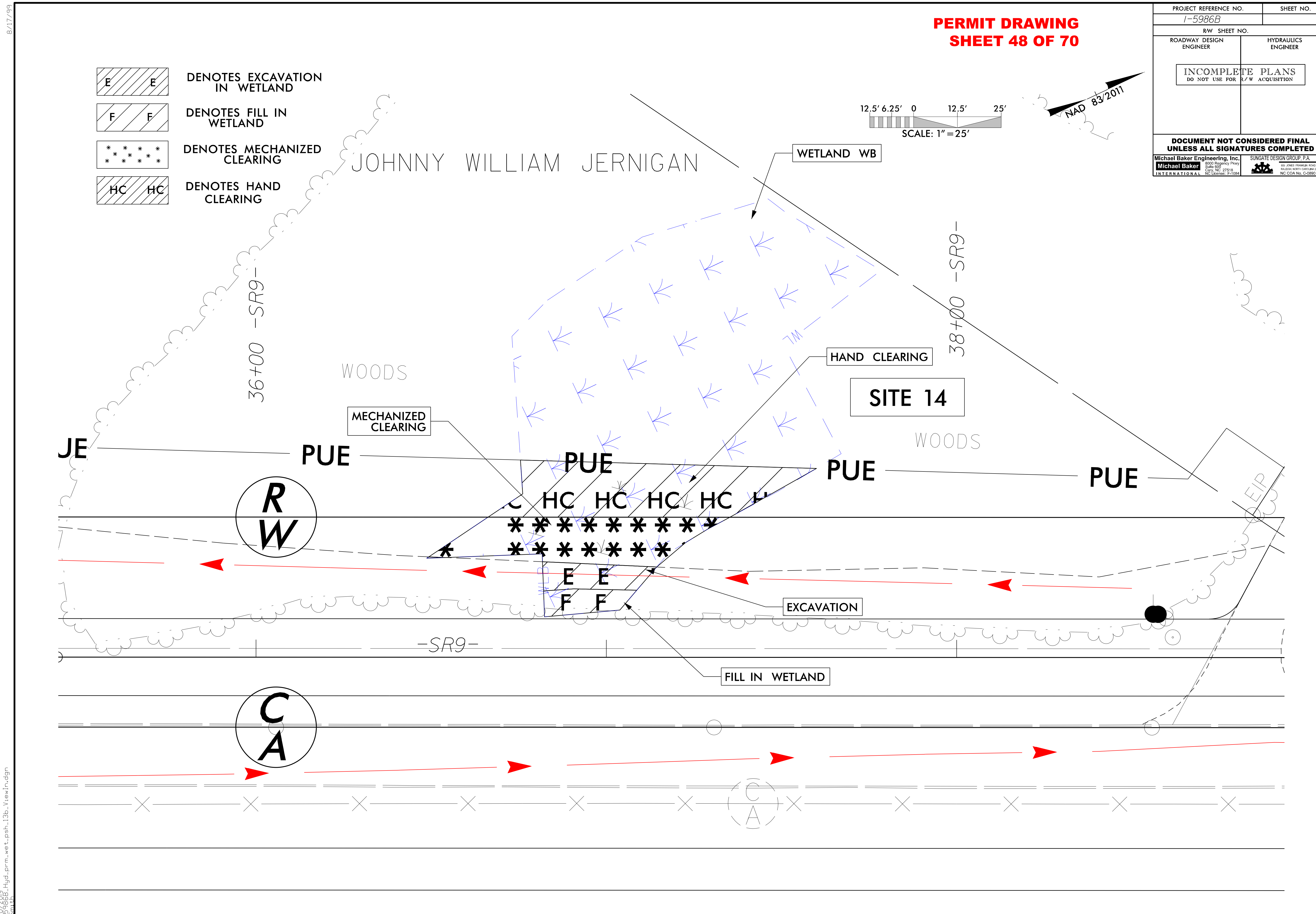


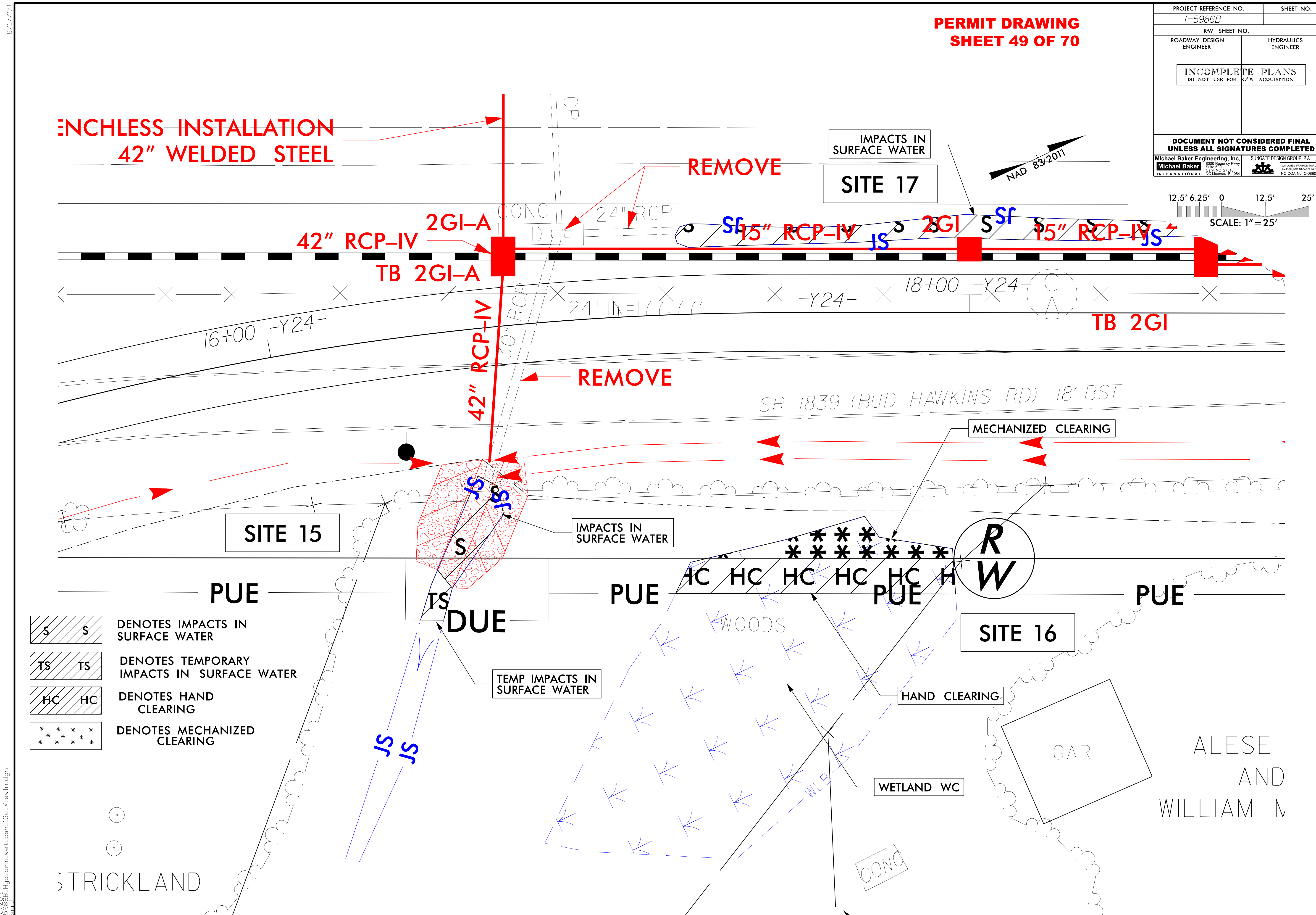
NOTE: DRIVEWAY RADII = 10′ UNLESS SHOWN OTHERWISE

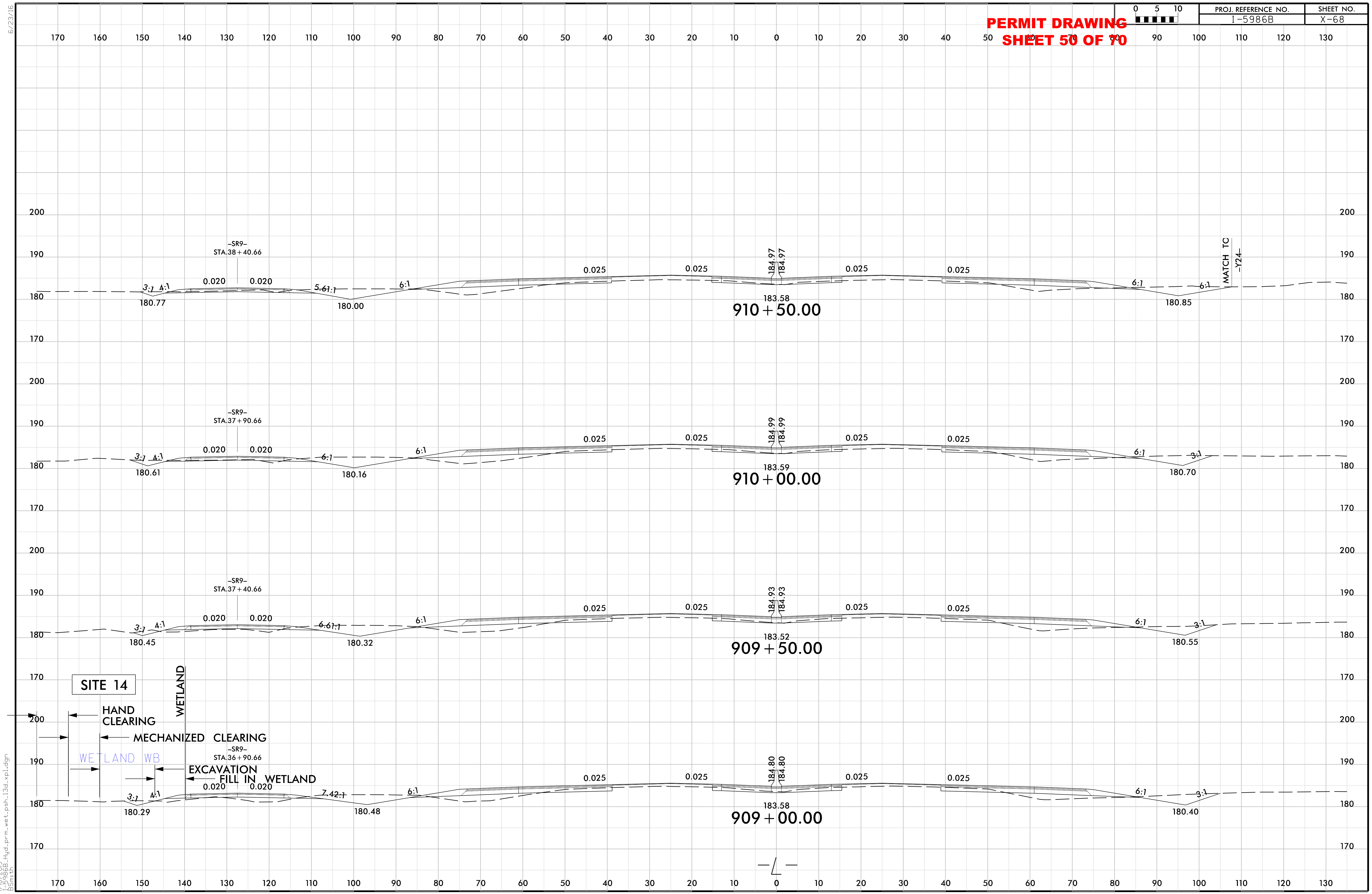
FOR -L- PROFILE SEE SHEET 75
FOR -Y24- PROFILE SEE SHEET 84 & 85
FOR -SR9- PROFILE SEE SHEET 90 & 91

5/14/99

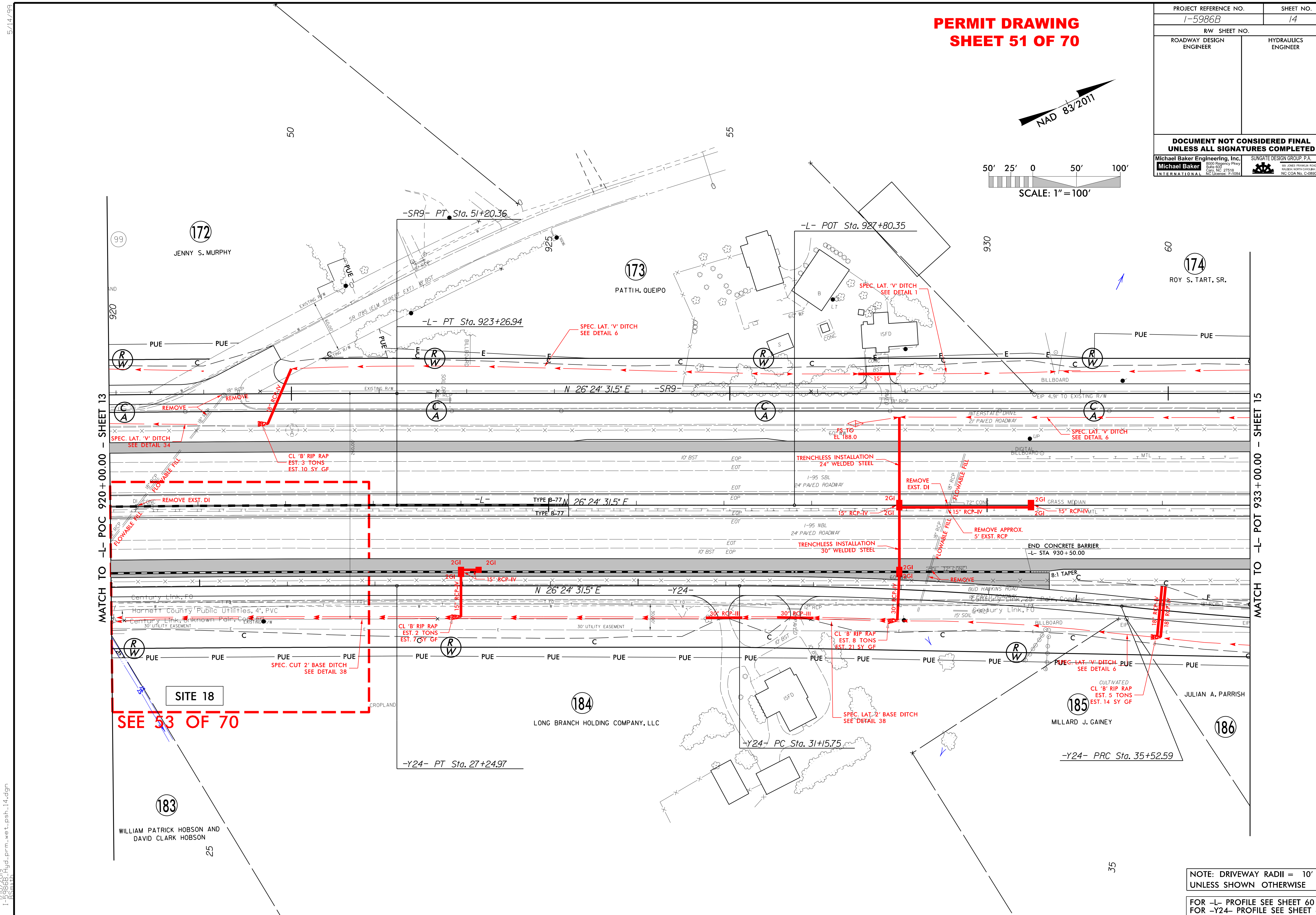
1/10/2019 I-5986B_Hyd_prm_wet_psh_13a.dgn


PERMIT DRAWING
SHEET 48 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL
8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084
SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27606
NC COA No. C-0890
DENOTES EXCAVATION IN WETLAND
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
DENOTES HAND CLEARING
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
NAD 83/2011
JOHNNY WILLIAM JERNIGAN
WETLAND WB
-SR9-
36+00
38+00
WOODS
HAND CLEARING
SITE 14
MECHANIZED CLEARING
PUE
EXCAVATION
FILL IN WETLAND
EIP
8/17/99


PERMIT DRAWING
SHEET 49 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
ENCHLESS INSTALLATION
42" WELDED STEEL
REMOVE
IMPACTS IN SURFACE WATER
SITE 17
2GI-A
42" RCP-IV
TB 2GI-A
CONC
DI
24" RCP
15" RCP-IV
2GI
TB 2GI
16+00 -Y24-
18+00 -Y24-
-Y24-
24" IN=177.77'
42" RCP-IV
REMOVE
SR 1839 (BUD HAWKINS RD) 18' BST
MECHANIZED CLEARING
SITE 15
IMPACTS IN SURFACE WATER
PUE
DUE
TS
R/W
SITE 16
HC
WOODS
TEMP IMPACTS IN SURFACE WATER
HAND CLEARING
WETLAND WC
WLB
GAR
CONC
ALESE
AND
WILLIAM M
STRICKLAND
JS
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES HAND CLEARING
DENOTES MECHANIZED CLEARING



PERMIT DRAWING
SHEET 50 OF 70
PROJ. REFERENCE NO.
I-5986B
SHEET NO.
X-68
0 5 10
-SR9-
STA.38+40.66
0.020
0.020
3:1
4:1
5.61:1
6:1
180.77
180.00
0.025
184.97
183.58
910+50.00
MATCH TC
-Y24-
180.85
-SR9-
STA.37+90.66
184.99
183.59
910+00.00
180.61
180.16
180.70
-SR9-
STA.37+40.66
6.61:1
184.93
183.52
909+50.00
180.45
180.32
180.55
SITE 14
HAND CLEARING
MECHANIZED CLEARING
WETLAND
WETLAND WB
EXCAVATION
FILL IN WETLAND
-SR9-
STA.36+90.66
7.42:1
184.80
183.58
909+00.00
180.29
180.48
180.40
6/23/16
1/10/2019
I-5986B_Hyd_prm_wet_psh_13d_xpl.dgn


PROJECT REFERENCE NO.
I-5986B
SHEET NO.
14
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 51 OF 70
NAD 83/2011
50' 25' 0 50' 100'
SCALE: 1" = 100'
-SR9- PT Sta. 51+20.36
-L- POT Sta. 927+80.35
-L- PT Sta. 923+26.94
JENNY S. MURPHY
PATTI H. QUEIPO
ROY S. TART, SR.
SPEC. LAT. 'V' DITCH SEE DETAIL 6
SPEC. LAT. 'V' DITCH SEE DETAIL 1
SPEC. LAT. 'V' DITCH SEE DETAIL 34
N 26° 24' 31.5" E
-SR9-
REMOVE
CL 'B' RIP RAP EST. 3 TONS EST. 10 SY GF
REMOVE EXST. DI
-L-
TYPE B-77
TRENCHLESS INSTALLATION 24" WELDED STEEL
TRENCHLESS INSTALLATION 30" WELDED STEEL
REMOVE EXST. DI
15" RCP-IV
2GI
REMOVE APPROX. 5' EXST. RCP
END CONCRETE BARRIER -L- STA 930+50.00
8:1 TAPER
MATCH TO -L- POC 920+00.00 - SHEET 13
MATCH TO -L- POT 933+00.00 - SHEET 15
-Y24-
Century Link, FO
Harnett County Public Utilities, 4", PVC
CL 'B' RIP RAP EST. 2 TONS EST. 7 SY GF
30" RCP-III
CL 'B' RIP RAP EST. 8 TONS EST. 21 SY GF
SPEC. CUT 2' BASE DITCH SEE DETAIL 38
SPEC. LAT. 2' BASE DITCH SEE DETAIL 38
SPEC. LAT. 'V' DITCH SEE DETAIL 6
CL 'B' RIP RAP EST. 5 TONS EST. 14 SY GF
SITE 18
SEE 53 OF 70
LONG BRANCH HOLDING COMPANY, LLC
MILLARD J. GAINEY
JULIAN A. PARRISH
WILLIAM PATRICK HOBSON AND DAVID CLARK HOBSON
-Y24- PT Sta. 27+24.97
-Y24- PC Sta. 31+15.75
-Y24- PRC Sta. 35+52.59
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 60
FOR -Y24- PROFILE SEE SHEET 69
FOR -SR9- PROFILE SEE SHEET 75

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	14

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

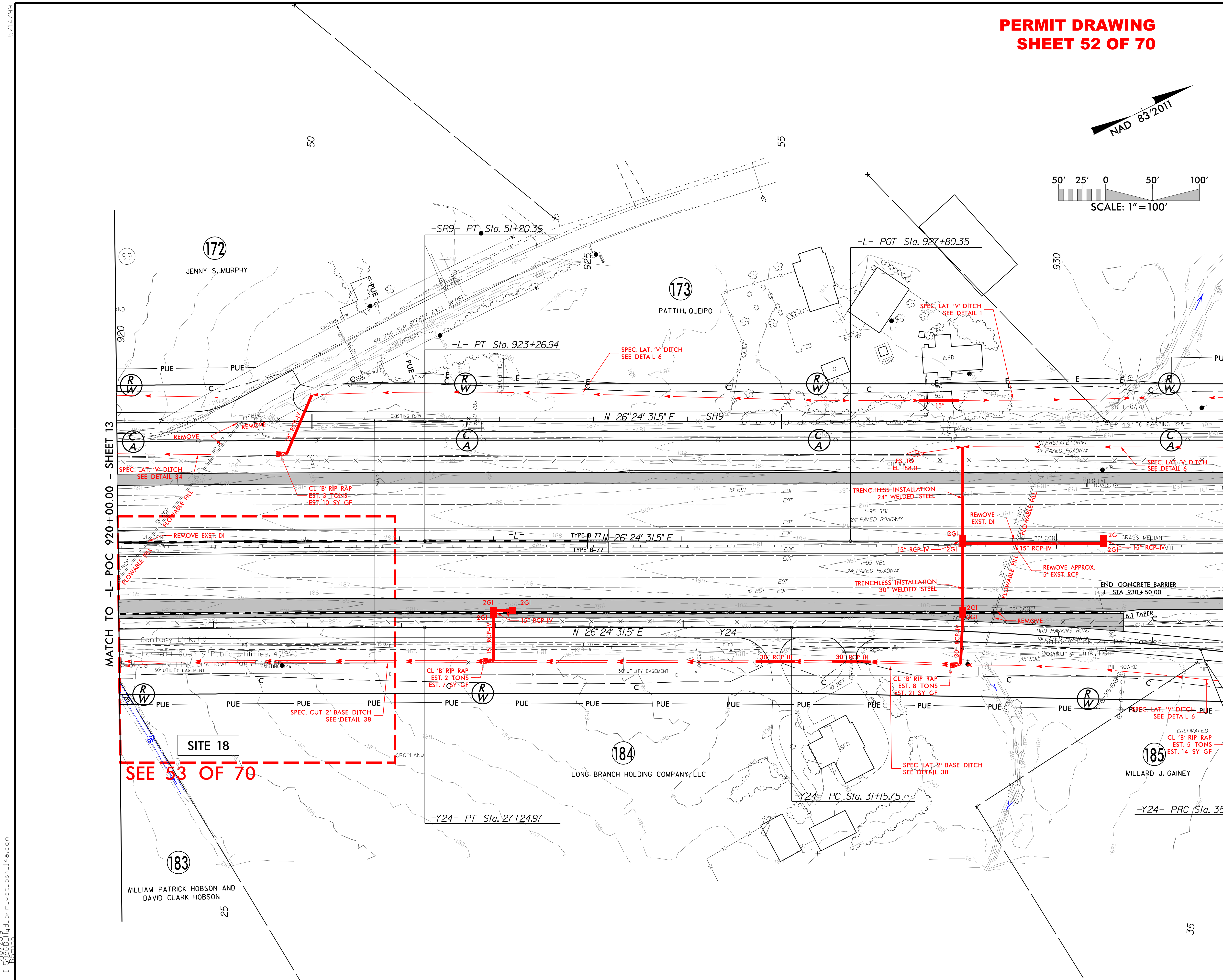
HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING
SHEET 52 OF 70



NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE

FOR -L- PROFILE SEE SHEET 60
FOR -Y24- PROFILE SEE SHEET 69
FOR -SR9- PROFILE SEE SHEET 75

5/14/99

1/10/2019 I-5986B_Hyd_prm_wet_psh_14a.dgn

PERMIT DRAWING
SHEET 53 OF 70

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

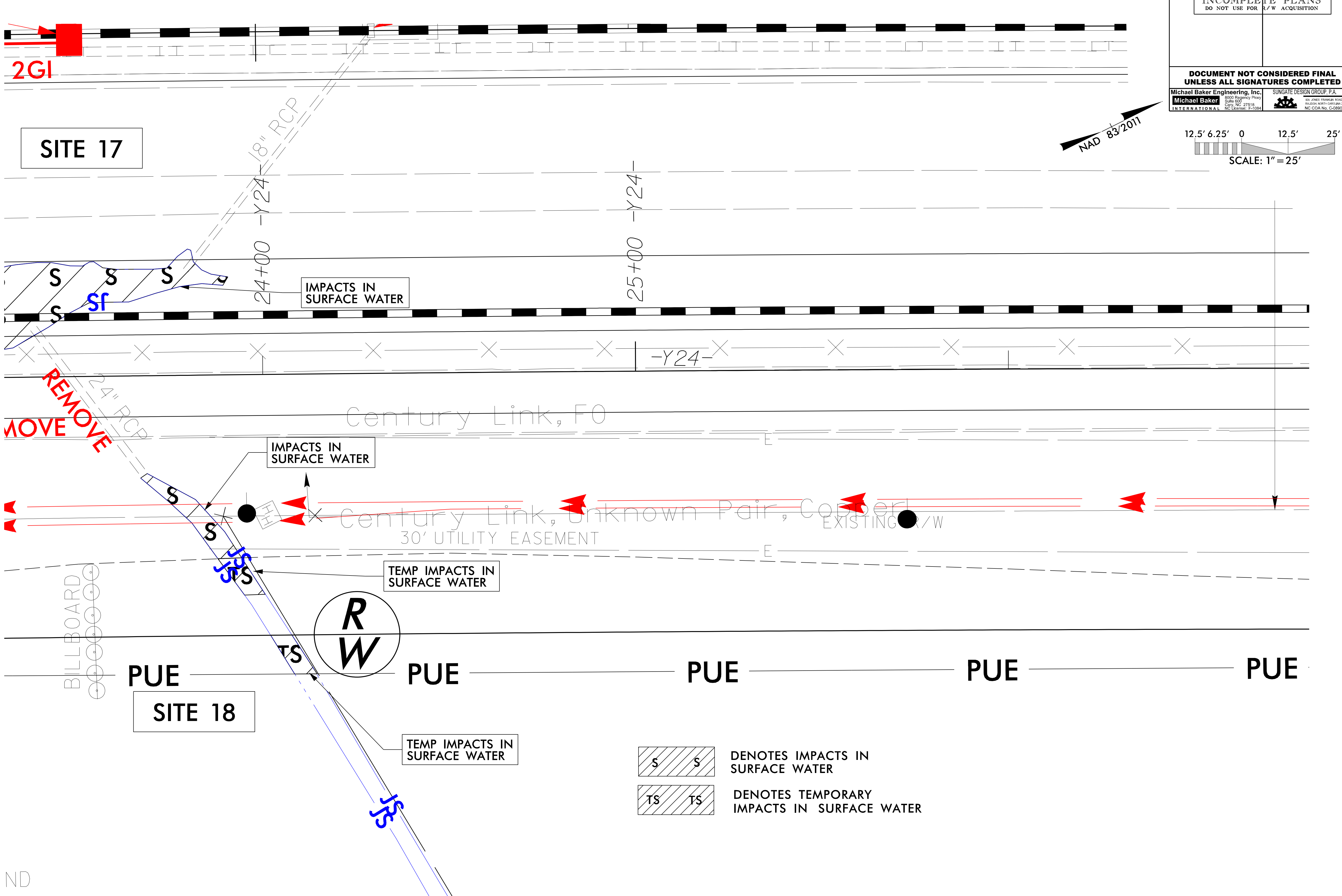
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

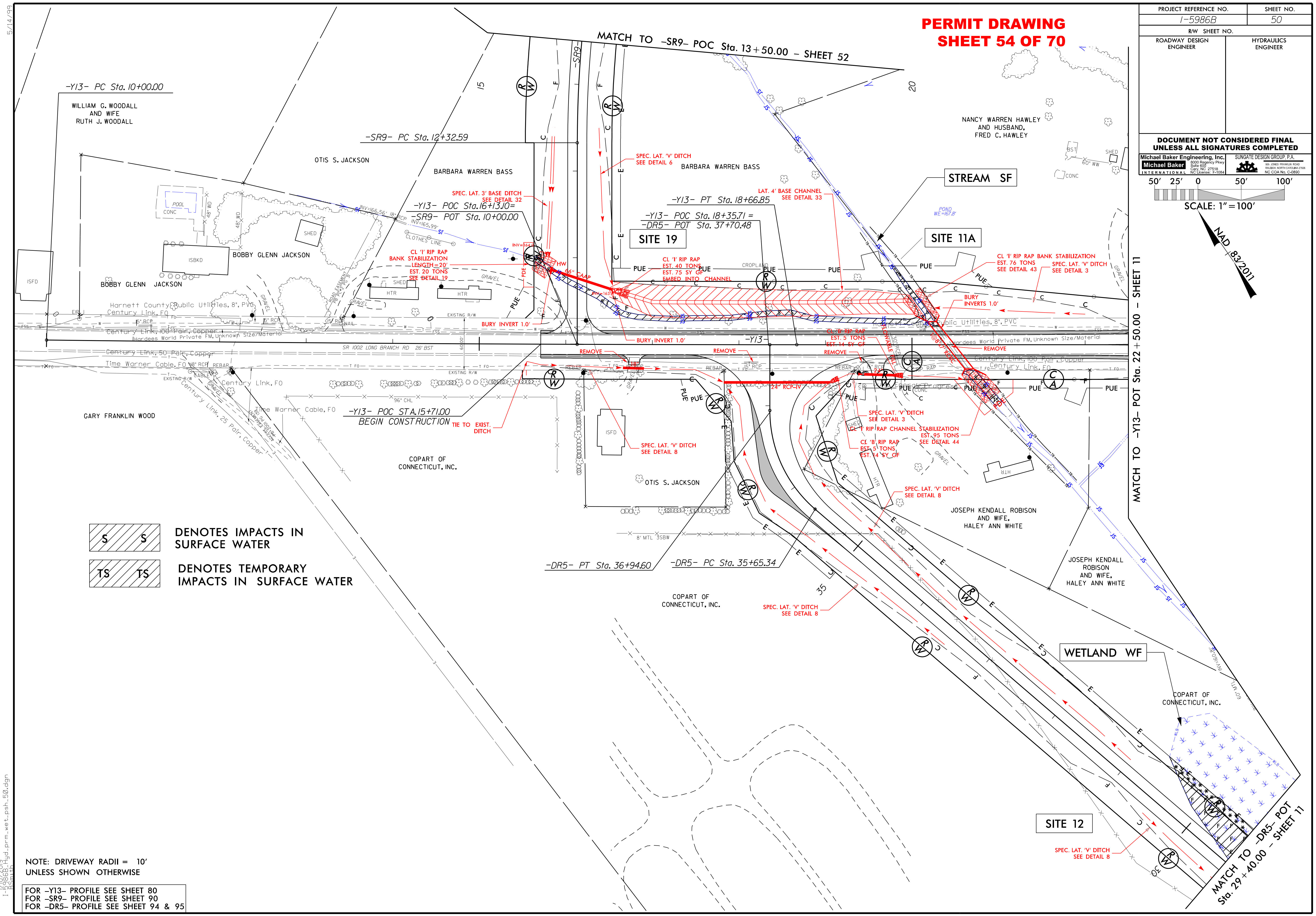
Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.



8/17/99

1/10/2019
I-5986B_Hyd_prm_wet_psh_14b_ViewIn.dgn
BSmith


PERMIT DRAWING
SHEET 54 OF 70
PROJECT REFERENCE NO. I-5986B
SHEET NO. 50
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1"=100'
NAD 83/2011
MATCH TO -SR9- POC Sta. 13+50.00 - SHEET 52
MATCH TO -Y13- POT Sta. 22+50.00 - SHEET 11
MATCH TO -DR5- POT Sta. 29+40.00 - SHEET 11
-Y13- PC Sta. 10+00.00
-SR9- PC Sta. 12+32.59
-Y13- POC Sta. 16+13.10=
-SR9- POT Sta. 10+00.00
-Y13- PT Sta. 18+66.85
-Y13- POC Sta. 18+35.71 =
-DR5- POT Sta. 37+70.48
-Y13- POC STA. 15+71.00
BEGIN CONSTRUCTION
-DR5- PT Sta. 36+94.60
-DR5- PC Sta. 35+65.34
WILLIAM G. WOODALL AND WIFE RUTH J. WOODALL
OTIS S. JACKSON
BARBARA WARREN BASS
BOBBY GLENN JACKSON
NANCY WARREN HAWLEY AND HUSBAND, FRED C. HAWLEY
GARY FRANKLIN WOOD
COPART OF CONNECTICUT, INC.
JOSEPH KENDALL ROBISON AND WIFE, HALEY ANN WHITE
STREAM SF
SITE 19
SITE 11A
SITE 12
WETLAND WF
SPEC. LAT. 3' BASE DITCH SEE DETAIL 32
SPEC. LAT. 'V' DITCH SEE DETAIL 6
LAT. 4' BASE CHANNEL SEE DETAIL 33
CL 'I' RIP RAP BANK STABILIZATION LENGTH=20' EST. 20 TONS SEE DETAIL 19
CL 'I' RIP RAP EST. 40 TONS EST. 75 SY GF EMBED INTO CHANNEL
CL 'I' RIP RAP BANK STABILIZATION EST. 76 TONS SEE DETAIL 43
SPEC. LAT. 'V' DITCH SEE DETAIL 3
BURY INVERTS 1.0'
BURY INVERT 1.0'
CL 'B' RIP RAP EST. 5 TONS EST. 14 SY GF
CL 'I' RIP RAP CHANNEL STABILIZATION EST. 95 TONS SEE DETAIL 44
SPEC. LAT. 'V' DITCH SEE DETAIL 8
TIE TO EXIST. DITCH
REMOVE
SR 1002 LONG BRANCH RD 26' BST
Harnett County Public Utilities, 8", PVC
Century Link, FO
Time Warner Cable, FO
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -Y13- PROFILE SEE SHEET 80
FOR -SR9- PROFILE SEE SHEET 90
FOR -DR5- PROFILE SEE SHEET 94 & 95
5/14/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_50.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	50

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

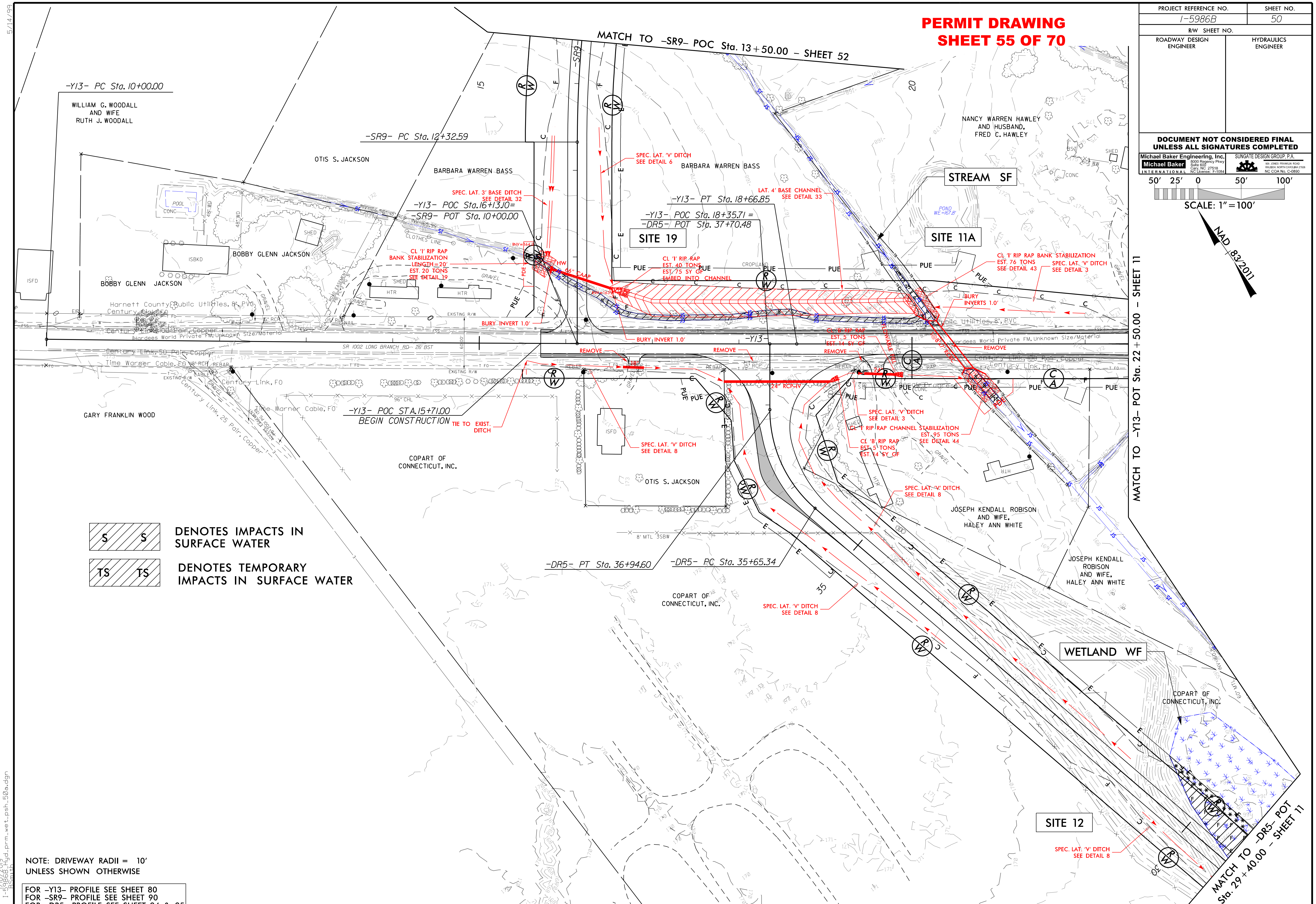
HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING SHEET 55 OF 70

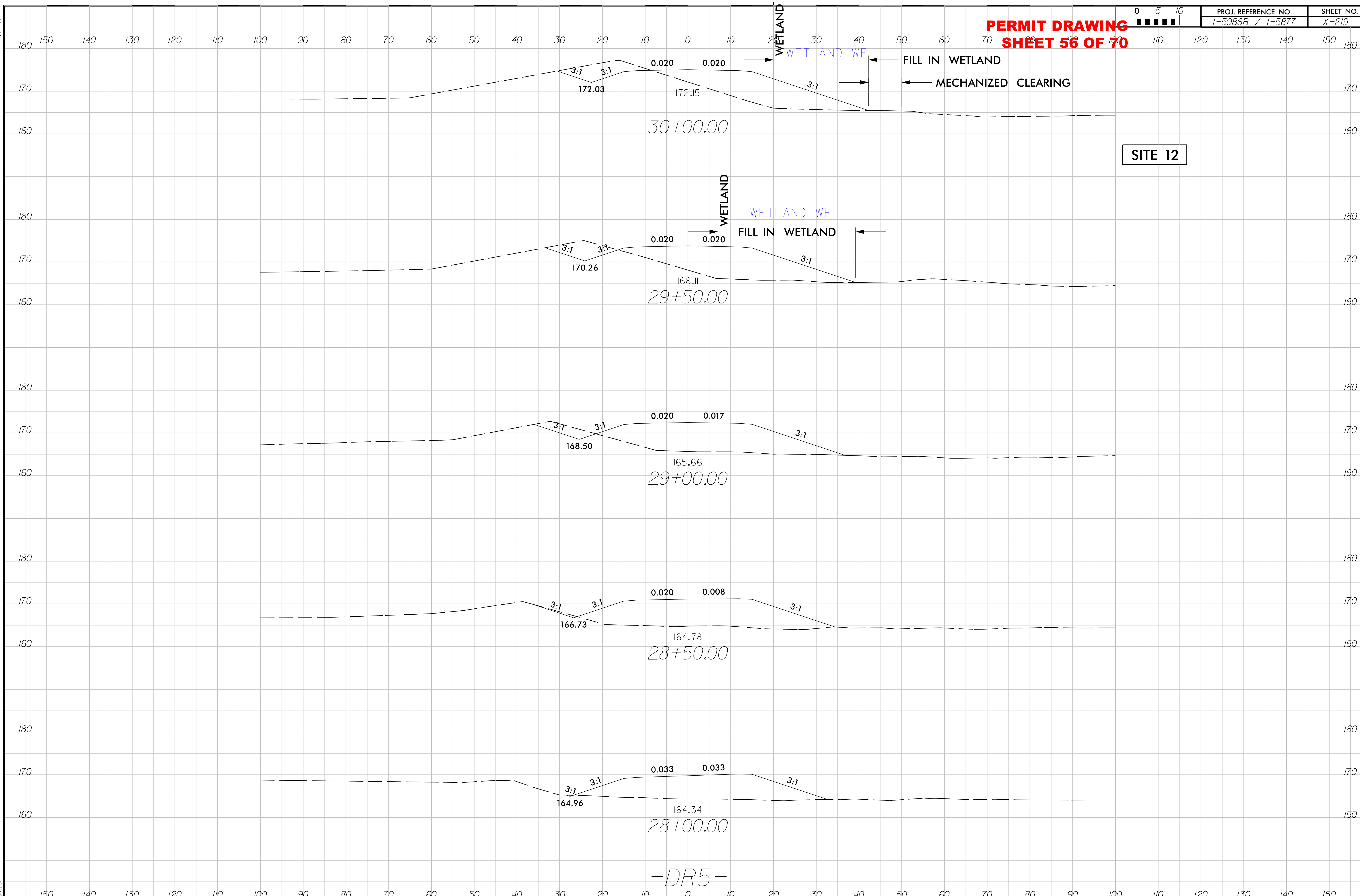


DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE

FOR -Y13- PROFILE SEE SHEET 80
FOR -SR9- PROFILE SEE SHEET 90
FOR -DR5- PROFILE SEE SHEET 94 & 95


PERMIT DRAWING
SHEET 56 OF 70
PROJ. REFERENCE NO.
I-5986B / I-5877
SHEET NO.
X-219
0 5 10
SITE 12
WETLAND
WETLAND WF
FILL IN WETLAND
MECHANIZED CLEARING
0.020
0.020
3:1
172.03
172.15
30+00.00
WETLAND
WETLAND WF
FILL IN WETLAND
0.020
0.020
170.26
168.11
29+50.00
0.020
0.017
168.50
165.66
29+00.00
0.020
0.008
166.73
164.78
28+50.00
0.033
0.033
164.96
164.34
28+00.00
-DR5-
180
170
160
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
6/23/16
1/10/2019
I-5986B_Hyd_prm_wet_psh_50b_xpl.dgn
BSmith

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	50C

ROADWAY DESIGN ENGINEER

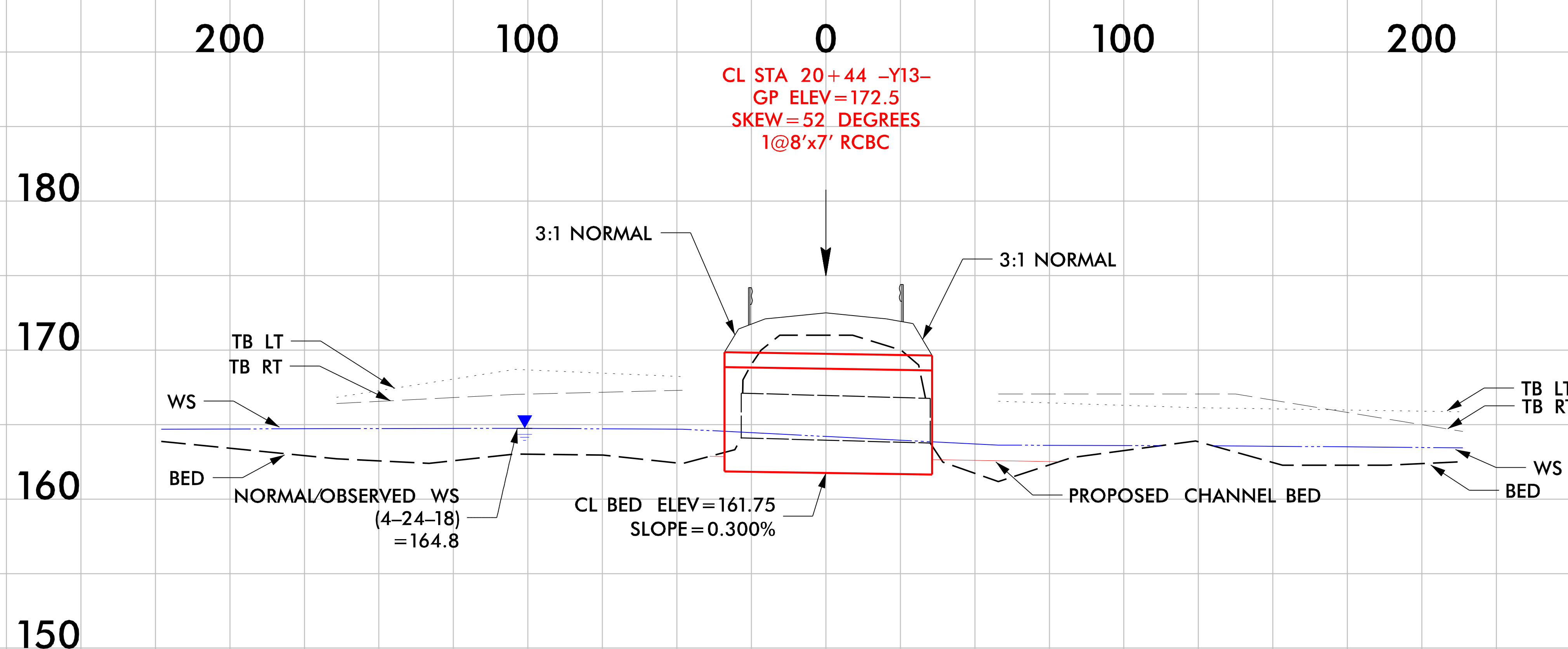
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 57 OF 70

SITE 11A



5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	50D

ROADWAY DESIGN ENGINEER

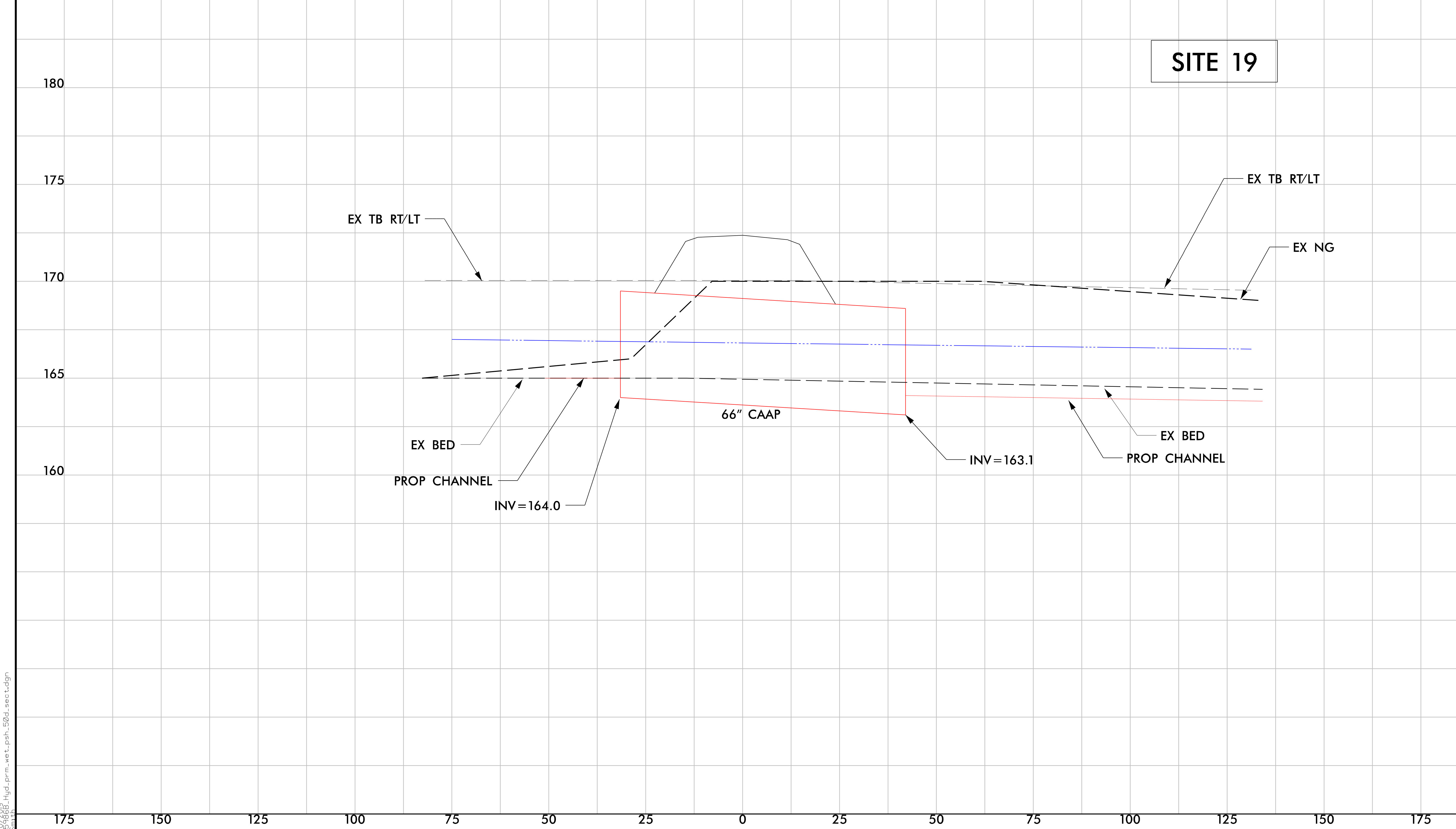
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

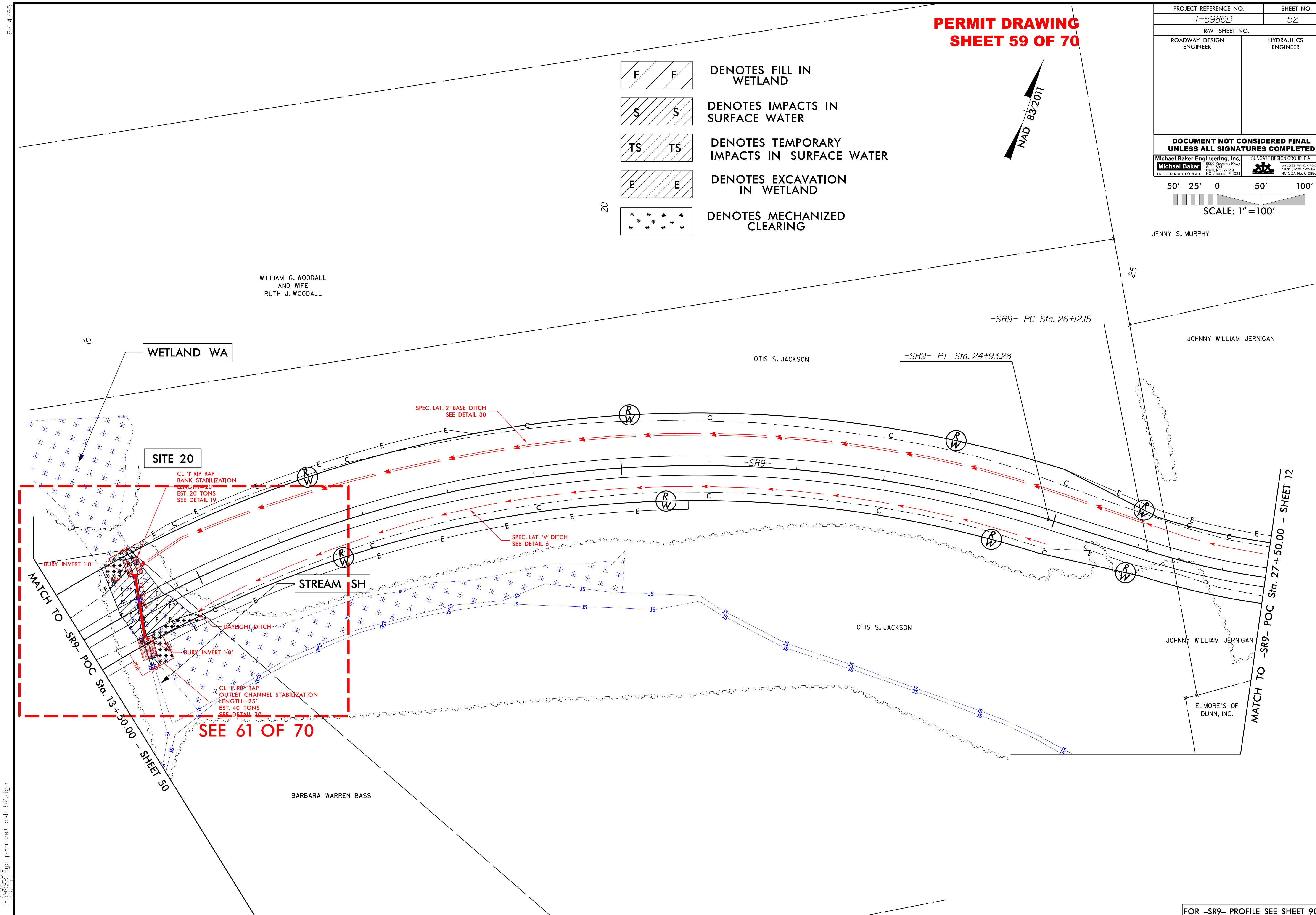
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

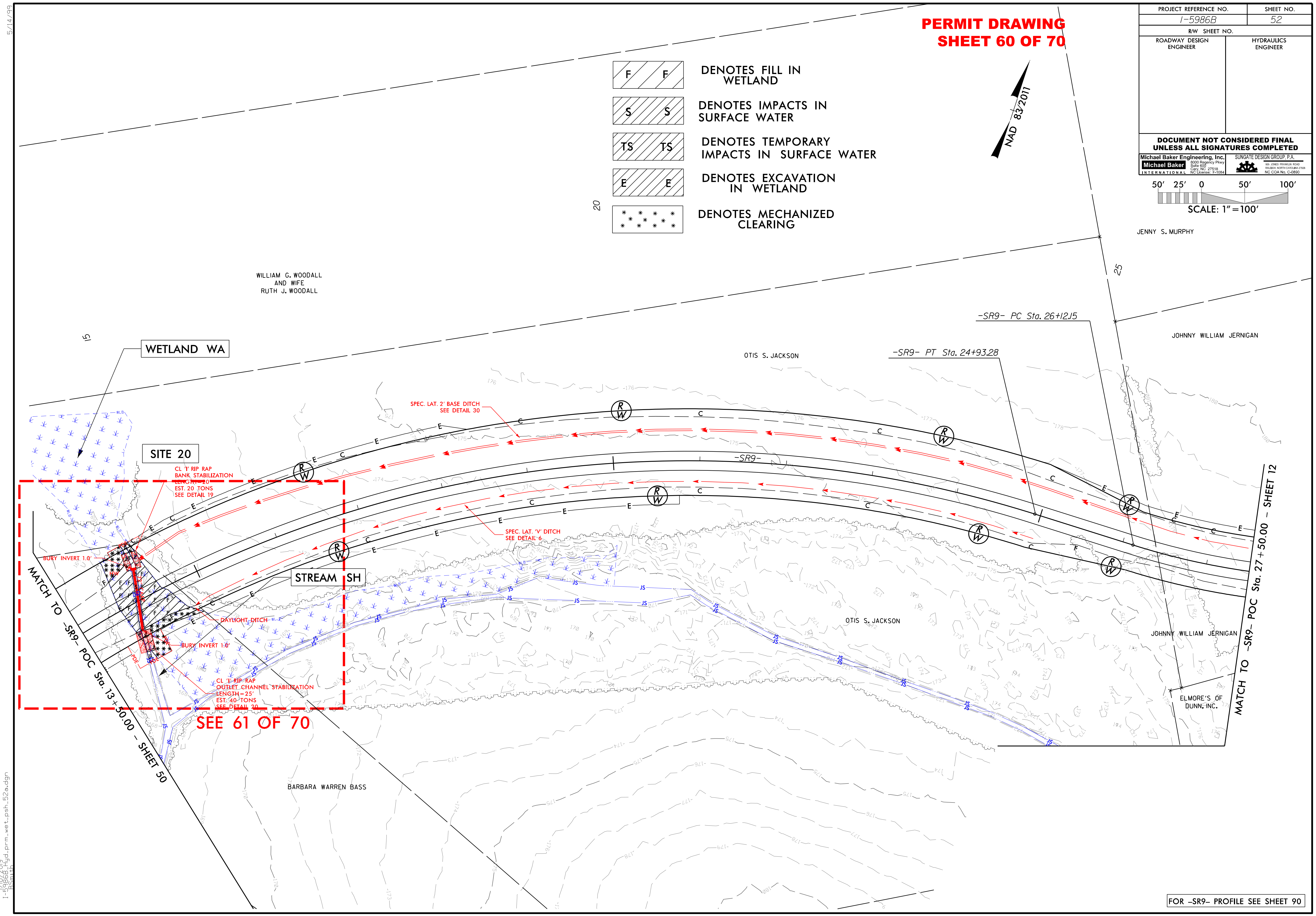
PERMIT DRAWING
SHEET 58 OF 70

CL STA 10+76 -SR9-
66" CAAP

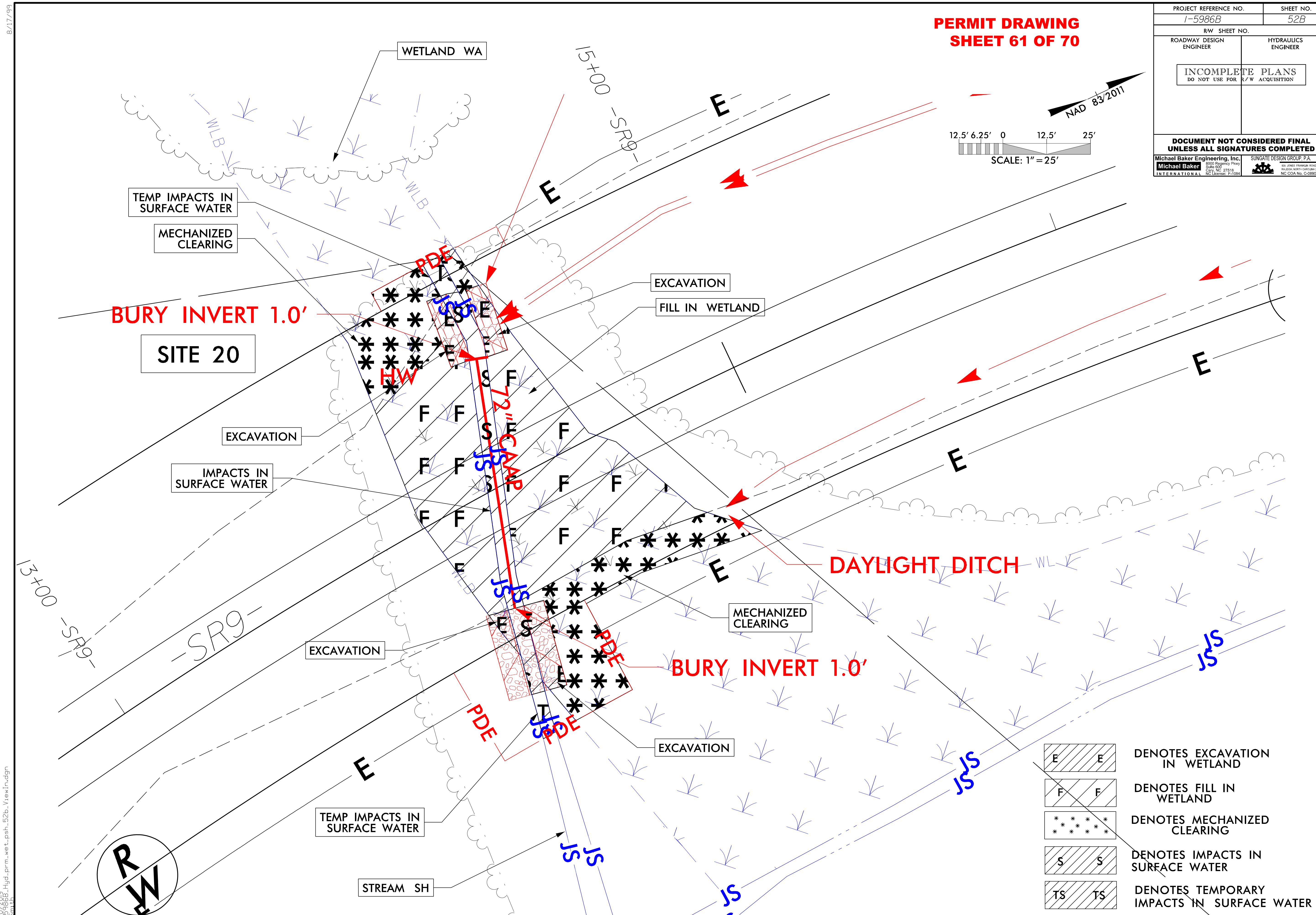


1/10/2019
I-5986B_Hyd_prm_wet_psh_50d_sect.dgn
BSmith


PERMIT DRAWING
SHEET 59 OF 70
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
52
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL
8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084
SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27606
NC COA No. C-0890
50' 25' 0 50' 100'
SCALE: 1"=100'
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
NAD 83/2011
JENNY S. MURPHY
WILLIAM G. WOODALL AND WIFE RUTH J. WOODALL
-SR9- PC Sta. 26+12.15
-SR9- PT Sta. 24+93.28
JOHNNY WILLIAM JERNIGAN
OTIS S. JACKSON
WETLAND WA
SITE 20
SPEC. LAT. 2' BASE DITCH SEE DETAIL 30
-SR9-
CL 'I' RIP RAP BANK STABILIZATION LENGTH=20' EST. 20 TONS SEE DETAIL 19
SPEC. LAT. 'V' DITCH SEE DETAIL 6
BURY INVERT 1.0'
STREAM SH
DAYLIGHT DITCH
BURY INVERT 1.0'
CL 'I' RIP RAP OUTLET CHANNEL STABILIZATION LENGTH=25' EST. 40 TONS SEE DETAIL 20
SEE 61 OF 70
MATCH TO -SR9- POC Sta. 13+50.00 - SHEET 50
MATCH TO -SR9- POC Sta. 27+50.00 - SHEET 12
ELMORE'S OF DUNN, INC.
BARBARA WARREN BASS
FOR -SR9- PROFILE SEE SHEET 90



PERMIT DRAWING
SHEET 60 OF 70
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
52
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1"=100'
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
NAD 83/2011
JENNY S. MURPHY
WILLIAM G. WOODALL AND WIFE RUTH J. WOODALL
-SR9- PC Sta. 26+12.15
-SR9- PT Sta. 24+93.28
JOHNNY WILLIAM JERNIGAN
OTIS S. JACKSON
WETLAND WA
SITE 20
SPEC. LAT. 2' BASE DITCH SEE DETAIL 30
-SR9-
CL 'I' RIP RAP BANK STABILIZATION LENGTH=20' EST. 20 TONS SEE DETAIL 19
SPEC. LAT. 'V' DITCH SEE DETAIL 6
BURY INVERT 1.0'
STREAM SH
DAYLIGHT DITCH
BURY INVERT 1.0'
CL 'I' RIP RAP OUTLET CHANNEL STABILIZATION LENGTH=25' EST. 40 TONS SEE DETAIL 20
SEE 61 OF 70
MATCH TO -SR9- POC Sta. 13+50.00 - SHEET 50
MATCH TO -SR9- POC Sta. 27+50.00 - SHEET 12
ELMORE'S OF DUNN, INC.
BARBARA WARREN BASS
FOR -SR9- PROFILE SEE SHEET 90
5/14/99
1/10/2019
I-5986B_Hyd_prm_wet_psh_52a.dgn



PROJECT REFERENCE NO.
I-5986B
SHEET NO.
52B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 61 OF 70
NAD 83/2011
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
WETLAND WA
TEMP IMPACTS IN SURFACE WATER
MECHANIZED CLEARING
BURY INVERT 1.0'
SITE 20
HW
72" CAAP
EXCAVATION
FILL IN WETLAND
IMPACTS IN SURFACE WATER
DAYLIGHT DITCH
MECHANIZED CLEARING
BURY INVERT 1.0'
EXCAVATION
TEMP IMPACTS IN SURFACE WATER
STREAM SH
15+00 -SR9-
13+00 -SR9-
-SR9-
PDE
JS
WLB
WL
DENOTES EXCAVATION IN WETLAND
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER

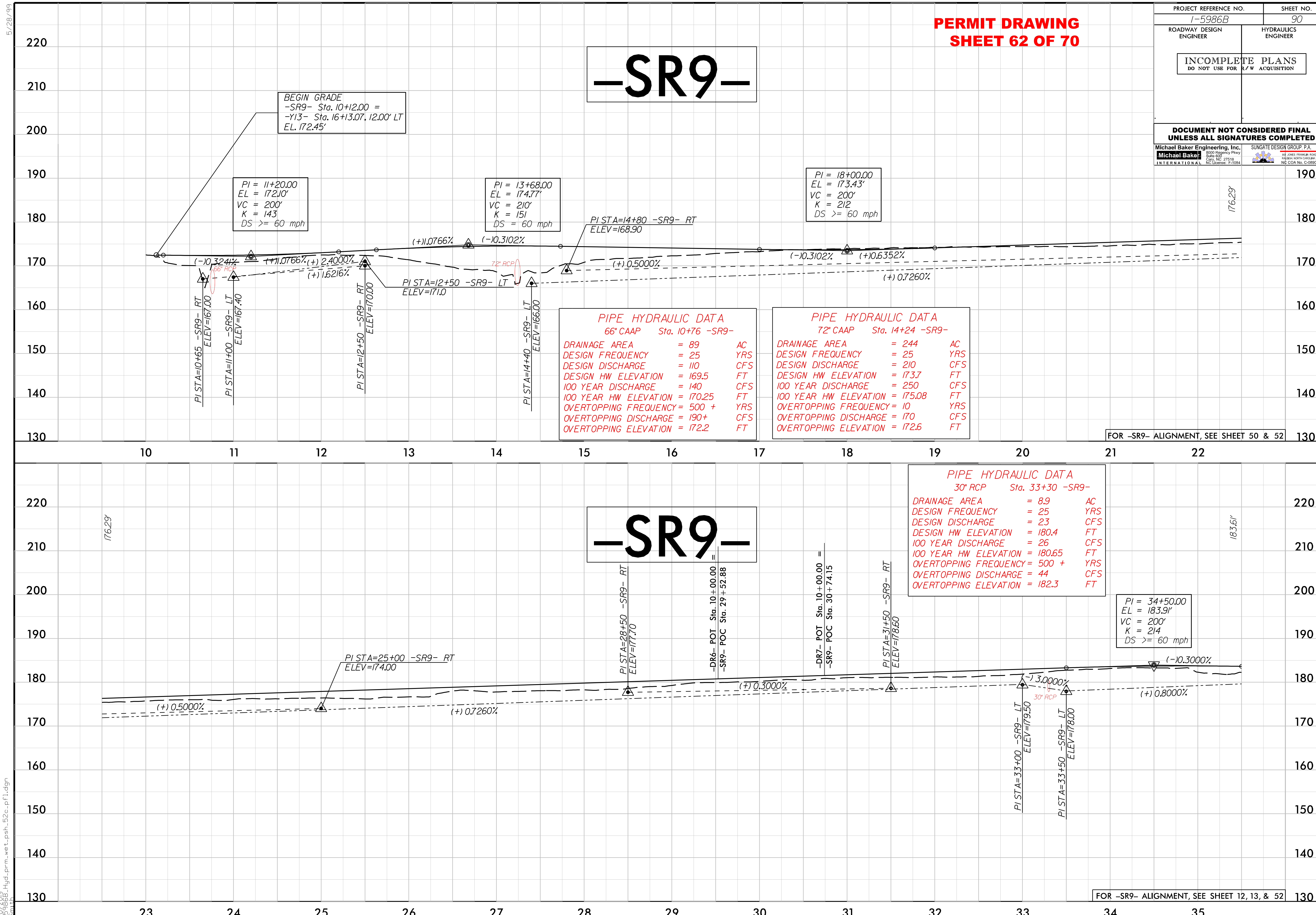
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	90
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. — SUNGATE DESIGN GROUP, P.A.

-SR9-



PIPE HYDRAULIC DATA
66" CAAP Sta. 10+76 -SR9-

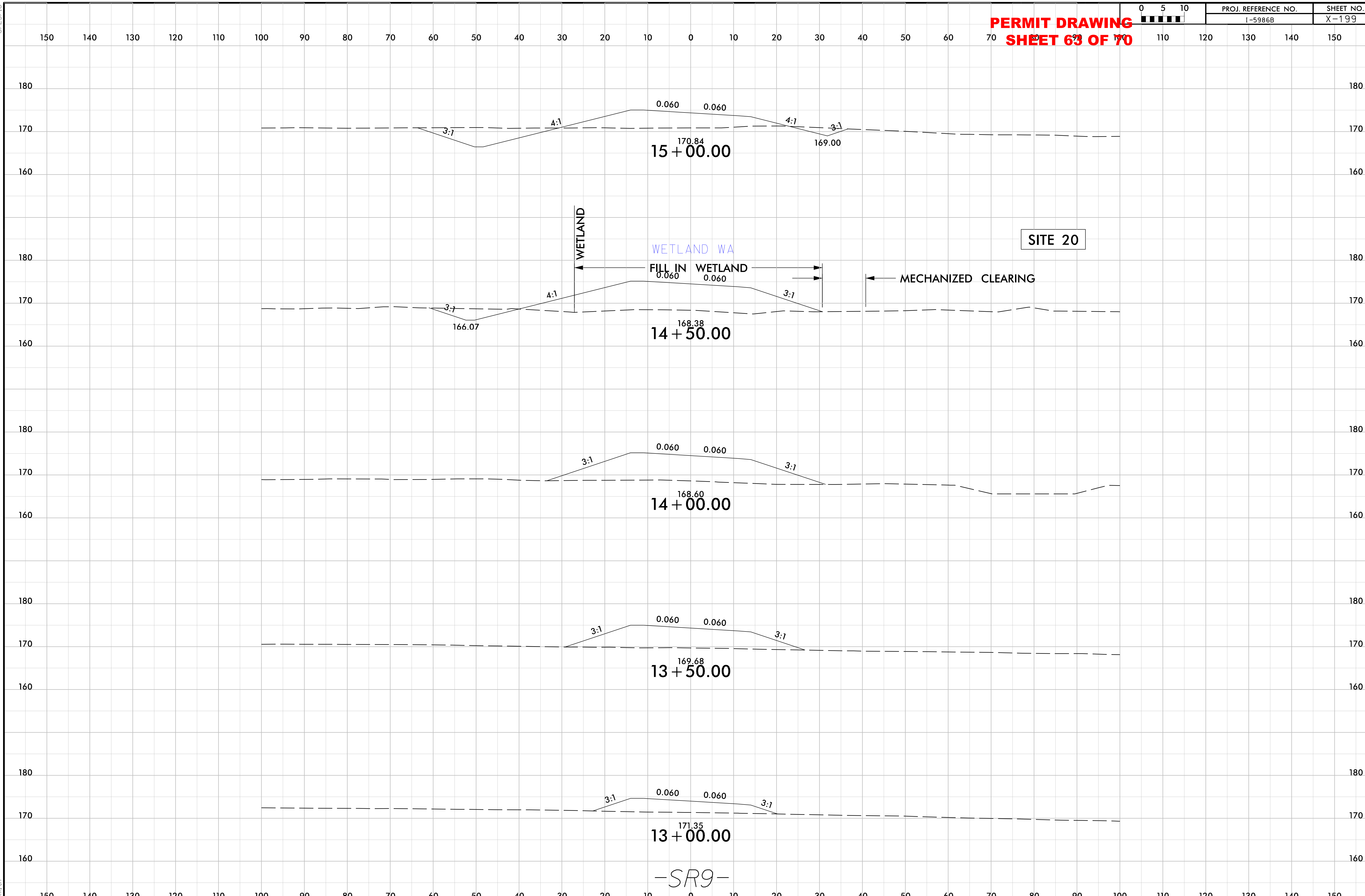
DRAINAGE AREA	= 89	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 110	CFS
DESIGN HW ELEVATION	= 169.5	FT
100 YEAR DISCHARGE	= 140	CFS
100 YEAR HW ELEVATION	= 170.25	FT
OVERTOPPING FREQUENCY	= 500 +	YRS
OVERTOPPING DISCHARGE	= 190+	CFS
OVERTOPPING ELEVATION	= 172.2	FT

PIPE HYDRAULIC DATA
72" CAAP Sta. 14+24 -SR9-

DRAINAGE AREA	= 244	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 210	CFS
DESIGN HW ELEVATION	= 173.7	FT
100 YEAR DISCHARGE	= 250	CFS
100 YEAR HW ELEVATION	= 175.08	FT
OVERTOPPING FREQUENCY	= 10	YRS
OVERTOPPING DISCHARGE	= 170	CFS
OVERTOPPING ELEVATION	= 172.6	FT

PIPE HYDRAULIC DATA
30" RCP Sta. 33+30 -SR9-

DRAINAGE AREA	= 8.9	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 23	CFS
DESIGN HW ELEVATION	= 180.4	FT
100 YEAR DISCHARGE	= 26	CFS
100 YEAR HW ELEVATION	= 180.65	FT
OVERTOPPING FREQUENCY	= 500 +	YRS
OVERTOPPING DISCHARGE	= 44	CFS
OVERTOPPING ELEVATION	= 182.3	FT



PROJ. REFERENCE NO.
I-5986B
SHEET NO.
X-199
PERMIT DRAWING
SHEET 63 OF 70
0 5 10
SITE 20
0.060
0.060
4:1
3:1
170.84
169.00
15 + 00.00
WETLAND
WETLAND WA
FILL IN WETLAND
MECHANIZED CLEARING
166.07
168.38
14 + 50.00
168.60
14 + 00.00
169.68
13 + 50.00
171.35
13 + 00.00
-SR9-
6/23/16
1/10/2019
I-5986B_Hyd_prm_wet_psh_52d_xpl.dgn
BSmith

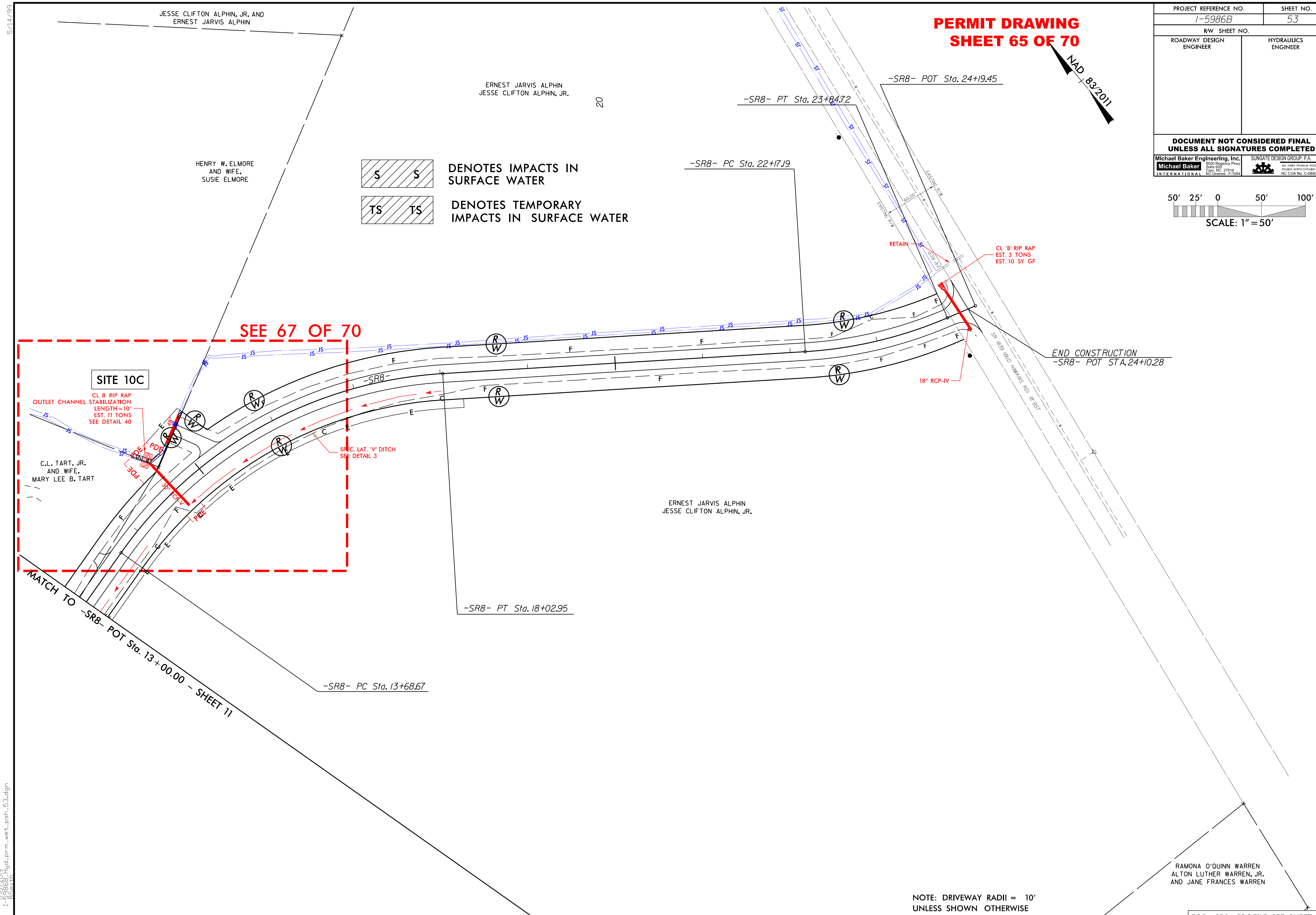
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	52E
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

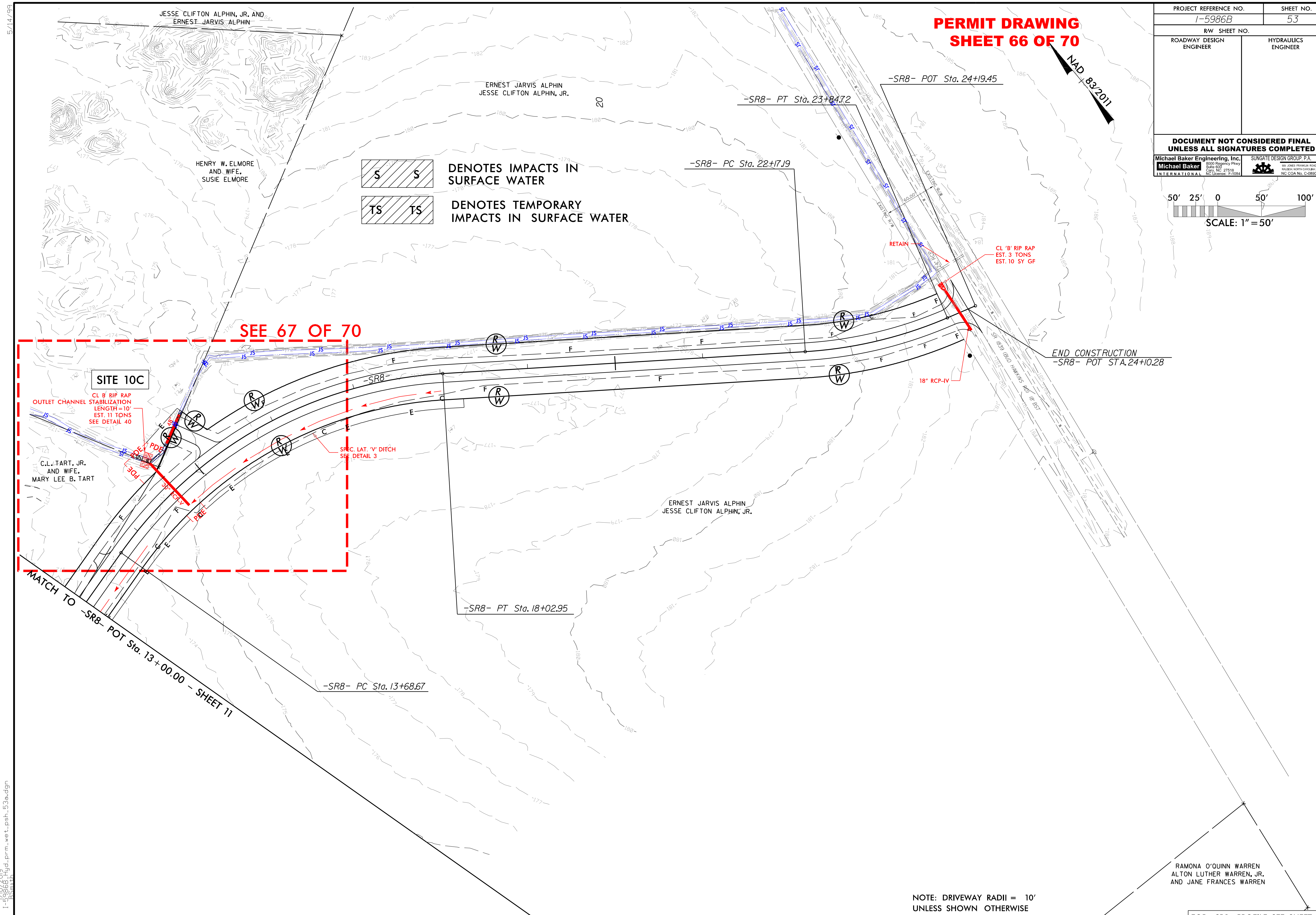
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

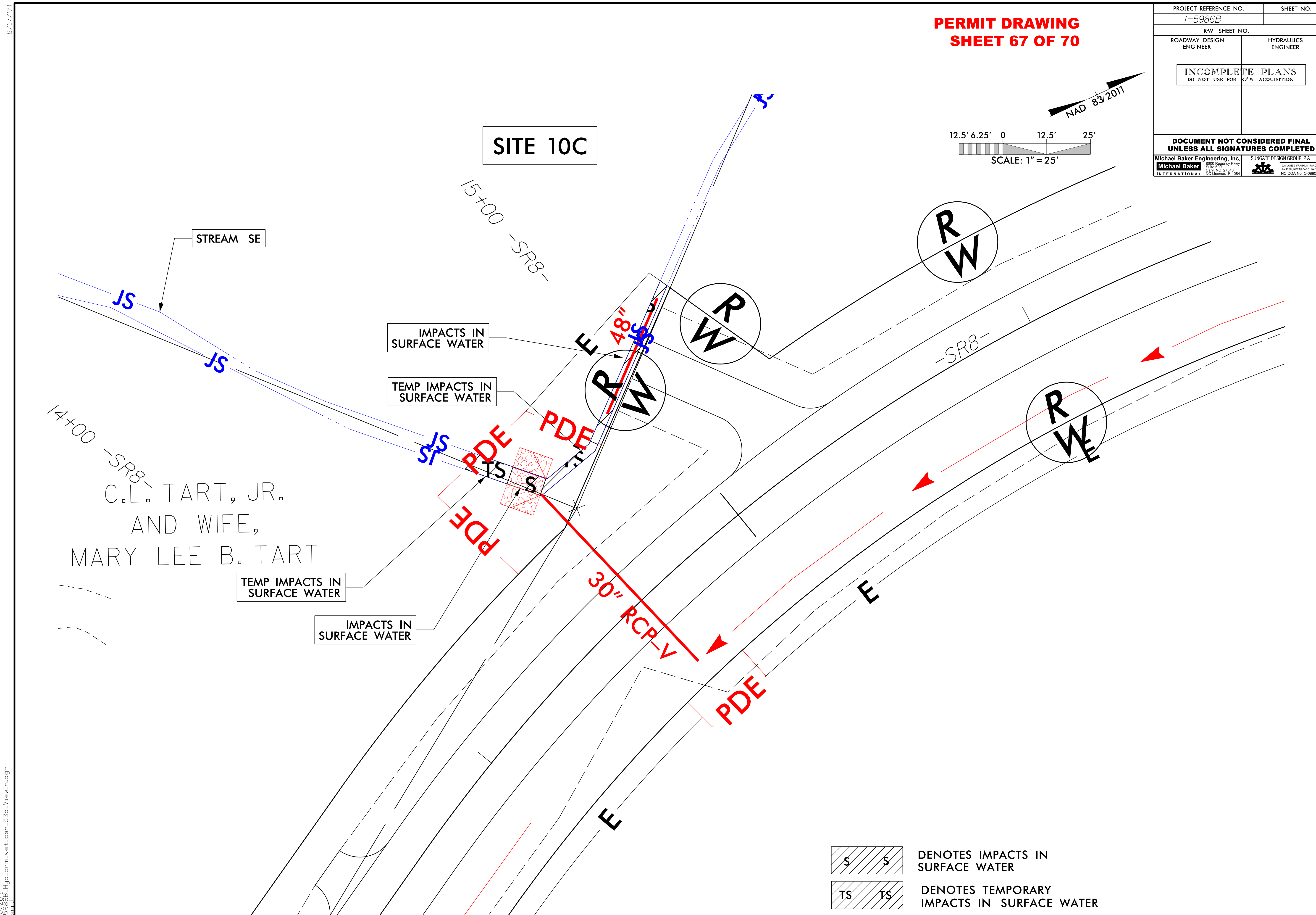
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 64 OF 70

SITE 20


PERMIT DRAWING
SHEET 65 OF 70
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
53
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
50' 25' 0 50' 100'
SCALE: 1" = 50'
JESSE CLIFTON ALPHIN, JR. AND ERNEST JARVIS ALPHIN
ERNEST JARVIS ALPHIN JESSE CLIFTON ALPHIN, JR.
HENRY W. ELMORE AND WIFE, SUSIE ELMORE
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
-SR8- POT Sta. 24+19.45
-SR8- PT Sta. 23+84.72
-SR8- PC Sta. 22+17.19
RETAIN
CL 'B' RIP RAP EST. 3 TONS EST. 10 SY GF
SEE 67 OF 70
SITE 10C
CL B RIP RAP OUTLET CHANNEL STABILIZATION LENGTH = 10' EST. 11 TONS SEE DETAIL 40
C.L. TART, JR. AND WIFE, MARY LEE B. TART
SPEC. LAT. 'V' DITCH SEE DETAIL 3
END CONSTRUCTION -SR8- POT STA. 24+10.28
18" RCP-IV
SR 1839 (BUD HAWKINS RD) 18' BST
ERNEST JARVIS ALPHIN JESSE CLIFTON ALPHIN, JR.
-SR8- PT Sta. 18+02.95
MATCH TO -SR8- POT Sta. 13+00.00 - SHEET 11
-SR8- PC Sta. 13+68.67
RAMONA O'QUINN WARREN ALTON LUTHER WARREN, JR. AND JANE FRANCES WARREN
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -SR8- PROFILE SEE SHEET 89


PROJECT REFERENCE NO.
I-5986B
SHEET NO.
53
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 66 OF 70
NAD 83/2011
SCALE: 1" = 50'
JESSE CLIFTON ALPHIN, JR. AND
ERNEST JARVIS ALPHIN
ERNEST JARVIS ALPHIN
JESSE CLIFTON ALPHIN, JR.
HENRY W. ELMORE
AND WIFE,
SUSIE ELMORE
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
-SR8- POT Sta. 24+19.45
-SR8- PT Sta. 23+84.72
-SR8- PC Sta. 22+17.19
RETAIN
CL 'B' RIP RAP
EST. 3 TONS
EST. 10 SY GF
SEE 67 OF 70
SITE 10C
CL B RIP RAP
OUTLET CHANNEL STABILIZATION
LENGTH = 10'
EST. 11 TONS
SEE DETAIL 40
C.L. TART, JR.
AND WIFE,
MARY LEE B. TART
SPEC. LAT. 'V' DITCH
SEE DETAIL 3
END CONSTRUCTION
-SR8- POT STA. 24+10.28
18" RCP-IV
SR 1839 (Bud Hawkins Rd) 18' BST
ERNEST JARVIS ALPHIN
JESSE CLIFTON ALPHIN, JR.
-SR8- PT Sta. 18+02.95
MATCH TO -SR8- POT Sta. 13+00.00 - SHEET 11
-SR8- PC Sta. 13+68.67
RAMONA O'QUINN WARREN
ALTON LUTHER WARREN, JR.
AND JANE FRANCES WARREN
NOTE: DRIVEWAY RADII = 10'
UNLESS SHOWN OTHERWISE
FOR -SR8- PROFILE SEE SHEET 89


PERMIT DRAWING
SHEET 67 OF 70
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
SITE 10C
15+00 -SR8-
14+00 -SR8-
-SR8-
STREAM SE
JS
IMPACTS IN SURFACE WATER
TEMP IMPACTS IN SURFACE WATER
C.L. TART, JR. AND WIFE, MARY LEE B. TART
TEMP IMPACTS IN SURFACE WATER
IMPACTS IN SURFACE WATER
PDE
48"
30" RCP-V
R/W
E
TS
S
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	800+95 to 801+38-L-RT	DRAINAGE DITCH							< 0.01		44	
2	795+73 to 796+99-L-LT	ROADWAY FILL	0.11		0.05							
3	801+10 to 803+74-L-	42" PIPE						< 0.01	< 0.01	121	19	
4	811+37 to 814+11-L-RT	ROADWAY FILL	0.05			0.05						
5	816+14 to 816+28-L-RT	54" PIPE						< 0.01	< 0.01	8	10	
		OUTLET CHANNEL						< 0.01		23		
5A	11+04 to 11+40-SR7-LT	ROADWAY FILL						< 0.01		24		
		POND						0.18				
6	18+84 to 18+94 -Y22-RT	BANK STABILIZATION						< 0.01		10		
7	20+15 to 20+39-Y22-RT	DRAINAGE DITCH						< 0.01	< 0.01	18	18	
7A	46+22 to 47+34-Y12-	60" PIPE						< 0.01		44		
		INLET BANK STABILIZATION						< 0.01	< 0.01	20	10	
		OUTLET CHANNEL						< 0.01	< 0.01	36	17	
7B	11+84 to 13+35-Y12RPD-RT	ROADWAY FILL						< 0.01	< 0.01	113	11	
8	844+71 to 845+24-L-RT	PIPE REMOVAL							< 0.01		33	
8A	849+47 to 849+75-L-RT	PIPE REMOVAL/DITCH							< 0.01		9	
		OUTLET CHANNEL						< 0.01		22		
8B	38+92 to 39+04-SR7-	PIPE REMOVAL/DITCH						< 0.01	< 0.01	18	16	
		CHANNEL REALIGNMENT						< 0.01		14		
9	855+32 to 859+66-L-	1 at 9'x8' RCBC						0.02	< 0.01	98	44	
		INLET CHANNEL						< 0.01	< 0.01	56	19	
		OUTLET CHANNEL						< 0.01	< 0.01	185	25	
TOTALS*:			0.16		0.05	0.05		0.25	0.04	810	275	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT COUNTY
I-5986B-SECTION 1
47532.1.3

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
10	875+41 to 875+82-L-	60" PIPE						0.01	< 0.01	105	47	
		INLET CHANNEL						< 0.01		41		
		OUTLET CHANNEL						< 0.01	0.01	34	13	
10A	14+58 to 15+95-Y13RPB-LT	36" PIPE						< 0.01		47		
		OUTLET CHANNEL						< 0.01	< 0.01	20	20	
		UTILITY							< 0.01		59	
10B	21+71 to 22+25-DR5-RT	ROADWAY FILL							< 0.01		40	
		CHANNEL REALIGNMENT						< 0.01		15		
10C	14+54 to 15+23-SR8-LT	30" PIPE							< 0.01			
		48" PIPE						< 0.01				
		OUTLET CHANNEL						< 0.01				
11	22+10 to 22+55-DR5-	1 at 9'x8' RCBC						< 0.01		39		
		INLET CHANNEL			< 0.01	0.01		< 0.01	< 0.01	38	29	
		OUTLET CHANNEL						< 0.01	< 0.01	29	10	
11A	19+83 to 21+03-Y13-	1 AT 8'x7' RCBC						< 0.01		8		
		INLET CHANNEL						< 0.01	< 0.01	40	17	
		OUTLET CHANNEL						< 0.01	< 0.01	42	10	
		UTILITY							< 0.01		22	
11B	898+13 to 899+23-L-	60" PIPE						0.01		34		
		INLET CHANNEL						< 0.01	< 0.01	20	13	
		OUTLET CHANNEL						< 0.01	< 0.01	25	12	
12	22+75 to 30+68-DR5-	ROADWAY FILL	0.61		0.09	0.22		< 0.01	< 0.01	53	10	
		BANK STABILIZATION						< 0.01		12		
TOTALS*:			0.61		0.09	0.23		0.09	0.05	602	302	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT COUNTY
I-5986B-SECTION 1
47532.1.3

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
13	875+41 to 875+82-L-	OUTLET CHANNEL						< 0.01	< 0.01	20	10	
14	36+49 to 37+35-SR9-LT	ROADWAY FILL	< 0.01		< 0.01	0.02						
		UTILITY					0.03					
15	16+32 to 16+62-Y24-RT	OUTLET CHANNEL						< 0.01	< 0.01	31	12	
16	17+24 to 17+95-Y24-RT	ROADWAY FILL				< 0.01						
		UTILITY					0.02					
17	913+16 to 919+91-L-RT	ROADWAY FILL						0.10				
18	23+67 to 24+00-Y24-RT	ROADWAY FILL						< 0.01	< 0.01			
		UTILITY							< 0.01			
19	15+51 to 19+93-Y13-LT	66" PIPE						0.01	< 0.01		16	
		BANK STABILIZATION						< 0.01				
		CHANNEL REALIGNMENT						0.05				
20	14+00 to 14+95-SR9-	72" PIPE	0.08		0.01	0.04		< 0.01		72		
		INLET CHANNEL						< 0.01	< 0.01	21	11	
		OUTLET CHANNEL						< 0.01	< 0.01	25	13	
	SHEET TOTALS		0.08		0.02	0.07	0.04	0.19	< 0.01	169	62	
	PAGE 68 TOTALS:		0.16		0.05	0.05		0.25	0.04	810	275	
	PAGE 69 TOTALS:		0.61		0.09	0.23		0.09	0.05	602	302	
TOTALS*:			0.85		0.16	0.34	0.04	0.53	0.09	1581	639	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT COUNTY
I-5986B-SECTION 1
47532.1.3

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	800+95 to 801+38-L-RT	DRAINAGE DITCH							0.007		44	
2	795+73 to 796+99-L-LT	ROADWAY FILL	0.111		0.051							
3	801+10 to 803+74-L-	42" PIPE						0.008	0.002	121	19	
4	811+37 to 814+11-L-RT	ROADWAY FILL	0.046			0.048						
5	816+14 to 816+28-L-RT	54" PIPE						0.001	0.001	8	10	
		OUTLET CHANNEL						0.004		23		
5A	11+04 to 11+40-SR7-LT	ROADWAY FILL						0.002		24		
		POND						0.182				
6	18+84 to 18+94 -Y22-RT	BANK STABILIZATION						0.001		10		
7	20+15 to 20+39-Y22-RT	DRAINAGE DITCH						0.003	0.003	18	18	
7A	46+22 to 47+34-Y12-	60" PIPE						0.005		44		
		INLET BANK STABILIZATION						0.002	0.001	20	10	
		OUTLET CHANNEL						0.002	0.001	36	17	
7B	1+84 to 13+35-Y12RPD-R	ROADWAY FILL						0.010	0.001	113	11	
8	844+71 to 845+24-L-RT	PIPE REMOVAL							0.003		33	
8A	849+47 to 849+75-L-RT	PIPE REMOVAL/DITCH							0.001		9	
		OUTLET CHANNEL						0.003		22		
8B	38+92 to 39+04-SR7-	PIPE REMOVAL/DITCH						0.001	0.001	18	16	
		CHANNEL REALIGNMENT						0.001		14		
9	855+32 to 859+66-L-	1 at 9'x8' RCBC						0.016	0.007	98	44	
		INLET CHANNEL						0.007	0.003	56	19	
		OUTLET CHANNEL						0.003	0.004	185	25	
TOTALS*:			**0.16**	**0.00**	**0.05**	**0.05**	**0.00**	**0.25**	**0.04**	**810**	**275**	**0**

*Rounded totals are sum of actual impacts

NOTES:

DATA ENTRY SHEET for impact totals to nearest 0.001 acre.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT COUNTY
I-5986B
47532.1.3

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
10	875+41 to 875+82-L-	60" PIPE						0.013	0.006	105	47	
		INLET CHANNEL						0.006		41		
		OUTLET CHANNEL						0.003	0.010	34	13	
10A	4+58 to 15+95-Y13RPB-L	36" PIPE						0.006		47		
		OUTLET CHANNEL						0.003	0.003	20	20	
		UTILITY							0.008		59	
10B	21+71 to 22+25-DR5-RT	ROADWAY FILL							0.002		40	
		CHANNEL REALIGNMENT						0.002		15		
10C	14+54 to 15+23-SR8-LT	30" PIPE							0.003			
		48" PIPE						0.003				
		OUTLET CHANNEL						0.001				
11	22+10 to 22+55-DR5-	1 at 9'x8' RCBC						0.006		39		
		INLET CHANNEL			0.001	0.011		0.004	0.003	38	29	
		OUTLET CHANNEL						0.005	0.002	29	10	
11A	19+83 to 21+03-Y13-	1 AT 8'x7' RCBC						0.001		8		
		INLET CHANNEL						0.005	0.002	40	17	
		OUTLET CHANNEL						0.009	0.002	42	10	
		UTILITY							0.002		22	
11B	898+13 to 899+23-L-	60" PIPE						0.013		34		
		INLET CHANNEL						0.002	0.001	20	13	
		OUTLET CHANNEL						0.003	0.002	25	12	
12	22+75 to 30+68-DR5-	ROADWAY FILL	0.613		0.088	0.215		0.006	0.001	53	10	
		BANK STABILIZATION						0.001		12		
TOTALS*:			**0.61**	**0.00**	**0.09**	**0.23**	**0.00**	**0.09**	**0.05**	**602**	**302**	**0**

*Rounded totals are sum of actual impacts

NOTES:

DATA ENTRY SHEET for impact totals to nearest 0.001 acre.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT COUNTY
I-5986B
47532.1.3

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
13	22+95 to 23+17-Y13-RT	OUTLET CHANNEL						0.002	0.001	20	10	
14	36+49 to 37+35-SR9-LT	ROADWAY FILL	0.004		0.005	0.019						
		UTILITY					0.026					
15	16+32 to 16+62-Y24-RT	OUTLET CHANNEL						0.006	0.002	31	12	
16	17+24 to 17+95-Y24-RT	ROADWAY FILL				0.008						
		UTILITY					0.018					
17	913+16 to 919+91-L-RT	ROADWAY FILL						0.101				
18	23+67 to 24+00-Y24-RT	ROADWAY FILL						0.003	0.001			
		UTILITY							0.001			
19	15+51 to 19+93-Y13-LT	66" PIPE						0.010	0.002		16	
		BANK STABILIZATION						0.004				
		CHANNEL REALIGNMENT						0.051				
20	14+00 to 14+95-SR9-	72" PIPE	0.080		0.010	0.041		0.008		72		
		INLET CHANNEL						0.002	0.001	21	11	
		OUTLET CHANNEL						0.003	0.001	25	13	
	SHEET TOTALS		**0.084**		**0.015**	**0.068**	**0.018**	**0.190**	**0.009**	**169**	**62**	**0**
	PAGE 68 TOTALS:		**0.16**	**0.00**	**0.05**	**0.05**	**0.00**	**0.25**	**0.04**	**810**	**275**	**0**
	PAGE 69 TOTALS:		**0.61**	**0.00**	**0.09**	**0.23**	**0.00**	**0.09**	**0.05**	**602**	**302**	**0**
TOTALS*:			**0.85**	**0.00**	**0.17**	**0.34**	**0.02**	**0.53**	**0.09**	**1581**	**701**	**0**

*Rounded totals are sum of actual impacts

NOTES:

DATA ENTRY SHEET for impact totals to nearest 0.001 acre.

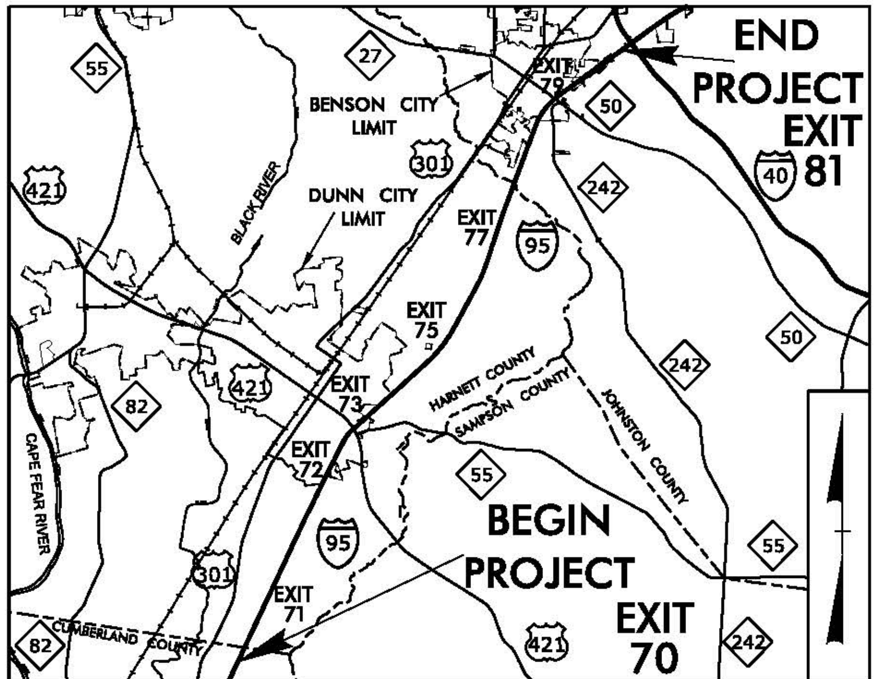
Revised 2018 Feb

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT COUNTY
I-5986B
47532.1.3

09/08/99

TIP PROJECT: I-5986B

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



VICINITY MAP
(Not to Scale)

PERMIT DRAWING
SHEET 1 OF 12

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5986B	1	

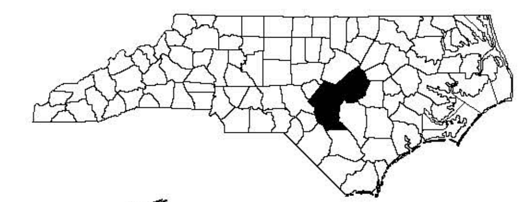
PROJ. REFERENCE NO.	STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
I-5986B	47532.1.3		PE
I-5986B	47532.2.3		R/W

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND, HARNETT, AND JOHNSTON COUNTIES

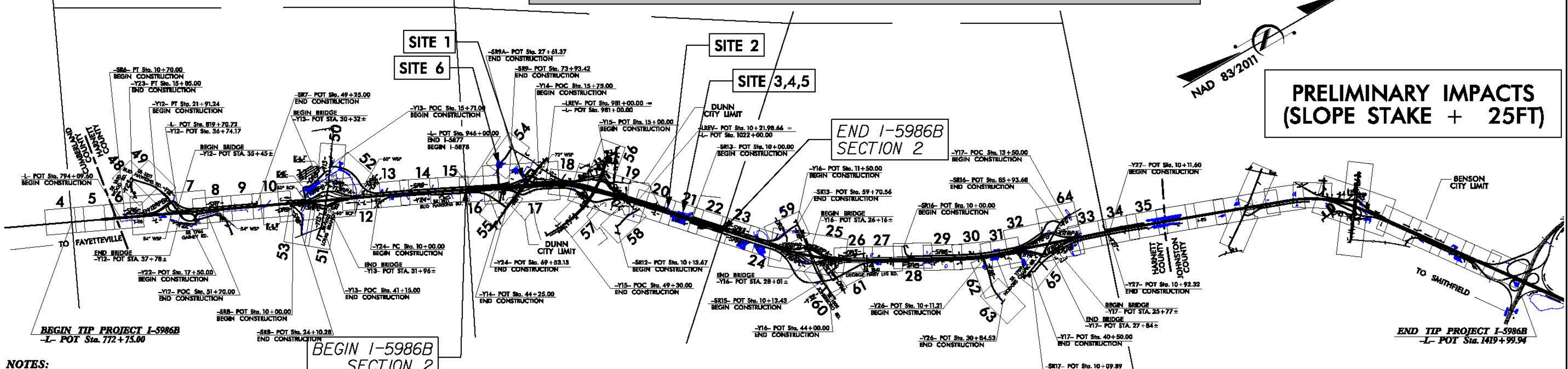
LOCATION: I-95 FROM SR 1811 (BUD HAWKINS ROAD) (EXIT 70) TO I-40 (EXIT 81). WIDEN TO EIGHT LANES.

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS, CULVERTS, AND STRUCTURES



WETLAND AND SURFACE WATER IMPACTS PERMIT
SECTION 2

PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)



NOTES:

1. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

2. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

3. THIS PROJECT IS WITHIN DUNN AND BENSON MUNICIPAL BOUNDARIES.

4. DESIGN EXCEPTION REQUIRED FOR HORIZONTAL ALIGNMENT AND HORIZONTAL STOPPING SIGHT DISTANCE ON SR 1811 (BUD HAWKINS ROAD) AND SR 1785 (ELM ST. EXT.). (SEE PLAN SHEETS 7, 12 & 13)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2020 = 58,900
ADT 2040 = 75,700
K = 7 %
D = 55 %
T = 24 % *
V = 70 MPH
* (17% TTST + 7% DUALS)
FUNC CLASS = INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I 5986B = 11.865 MILES

LENGTH STRUCTURE TIP PROJECT I-5986B = 0.020 MILES

TOTAL LENGTH TIP PROJECT I-5986B = 11.885 MILES

Prepared In the Office of:
Michael Baker INTERNATIONAL
Michael Baker Engineering, Inc.
8000 Regency Parkway, Suite 600
Cary, NC 27518
Professional Corporation License Number: F-1084
FOR DIVISION OF HIGHWAYS

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 1, 2019

LETTING DATE:
JULY 21, 2020

SUSAN C. LANCASTER, P.E.
PROJECT ENGINEER

CURTIS TILLMAN, P.E.
PROJECT DESIGN ENGINEER

STEVE D. KENDALL, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: P.E.

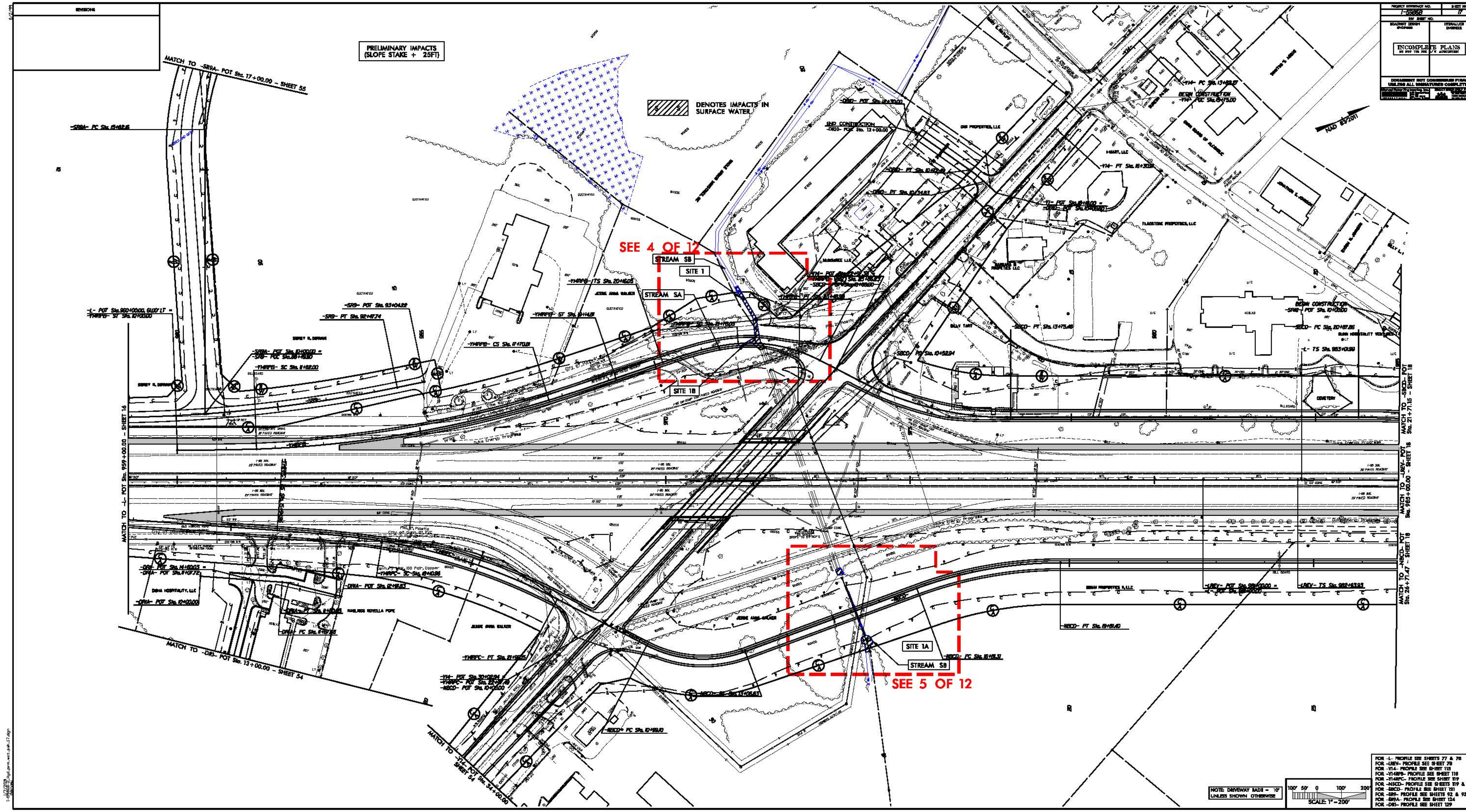
ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

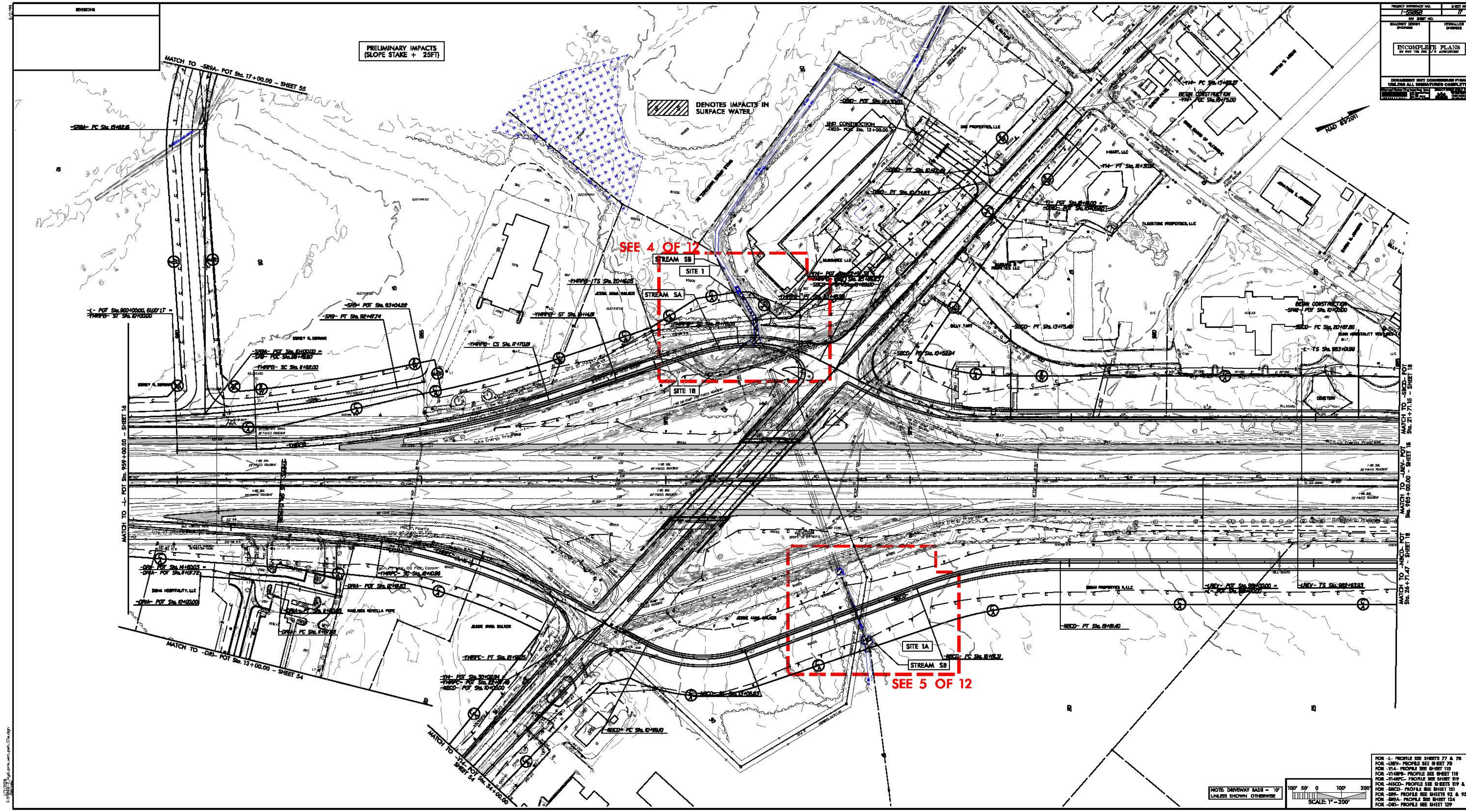
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

CONTRACT:

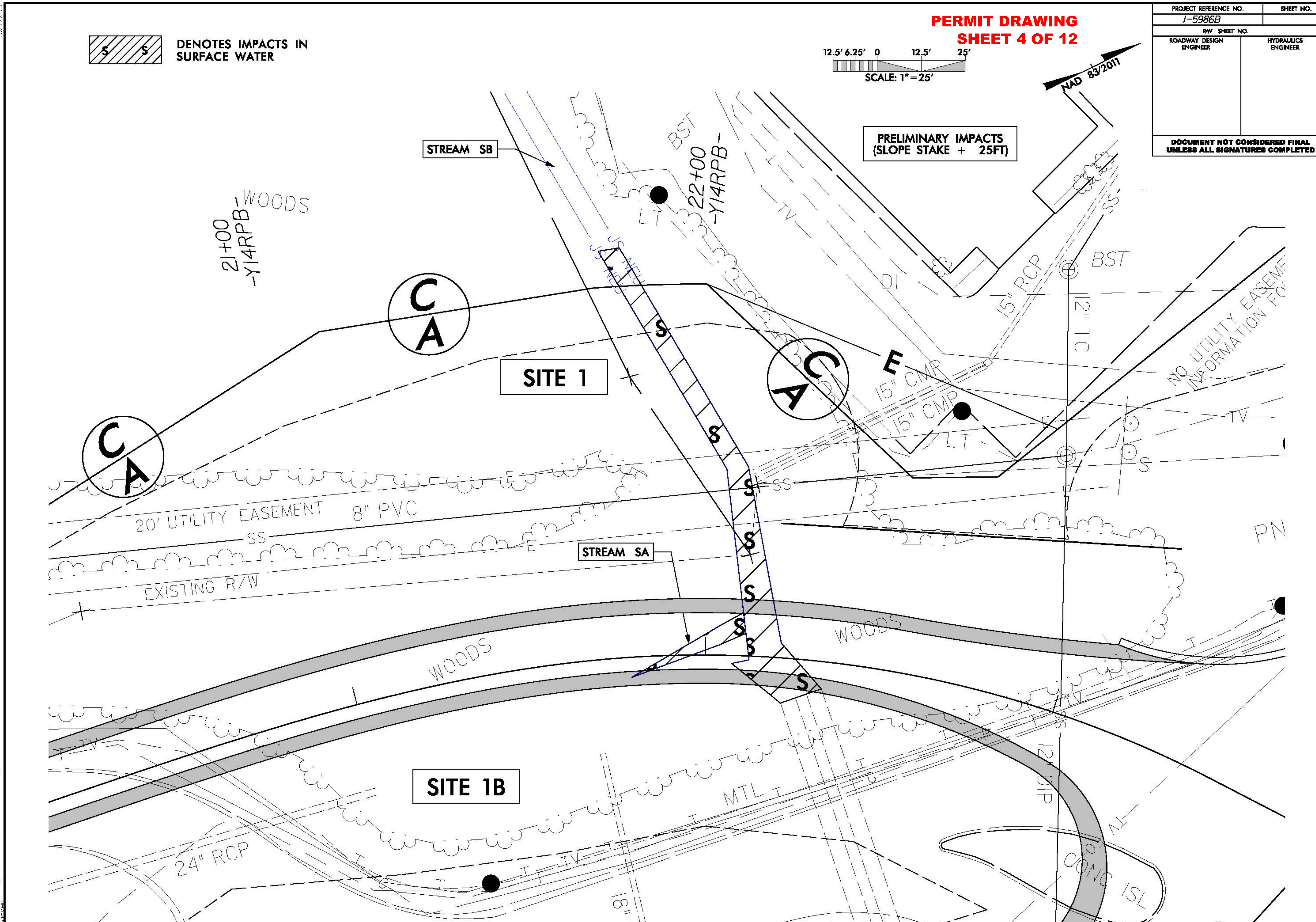
1/7/2019
I-5986B-2_Hyd_prm_wet_psh_01.dgn
jharvey


PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
DENOTES IMPACTS IN SURFACE WATER
SEE 4 OF 12
STREAM SB
SITE 1
STREAM SA
SITE 1B
SITE 1A
STREAM SB
SEE 5 OF 12
INCOMPLETE PLANS
MATCH TO -SR9A- POT Sta. 17+00.00 - SHEET 55
MATCH TO -DR1- POT Sta. 13+00.00 - SHEET 54
NOTE: DRIVEWAY RADII = '10' UNLESS SHOWN OTHERWISE
SCALE: 1" = 200'

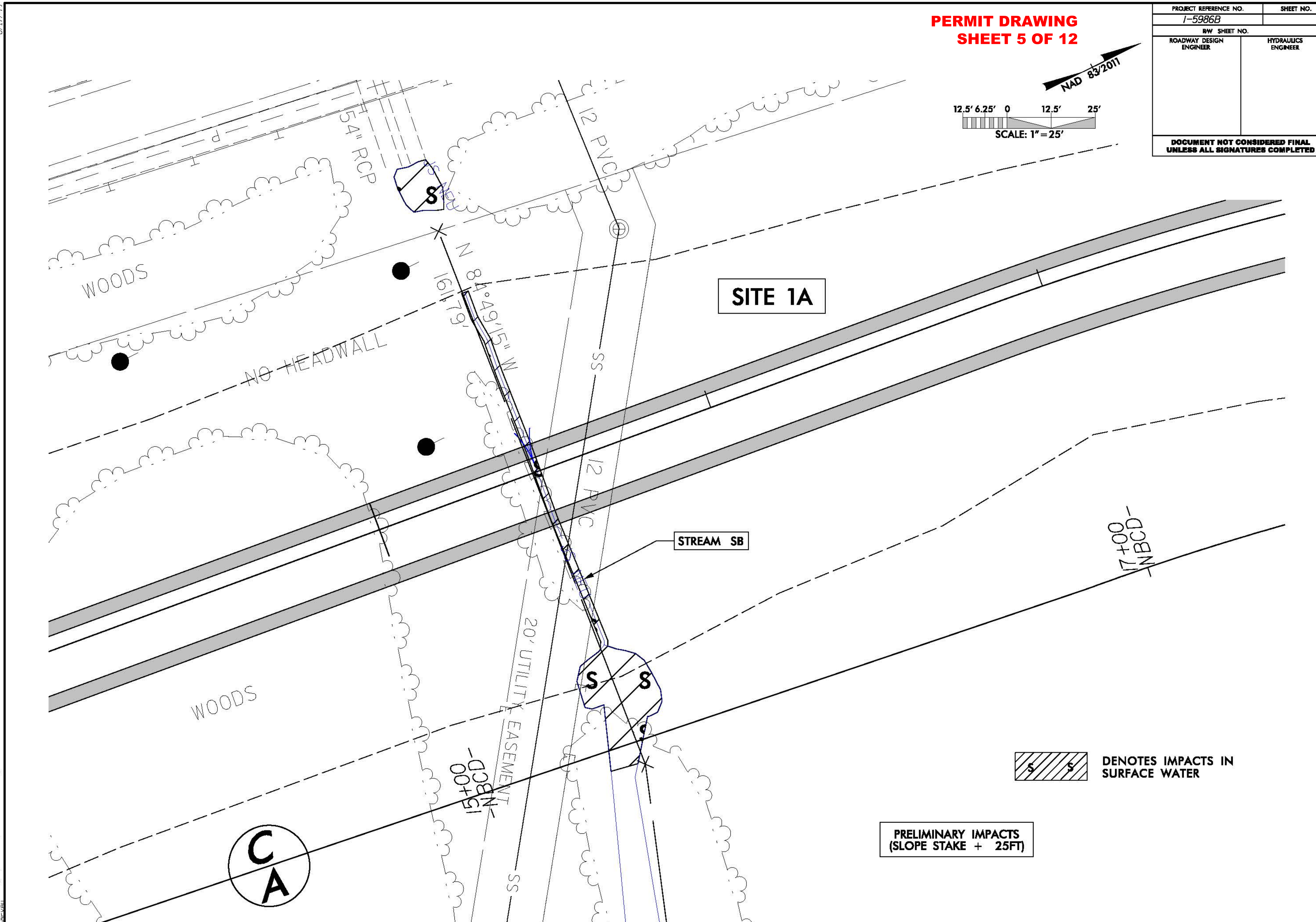
PERMIT DRAWING
SHEET 3 OF 12



8/17/99



1/7/2019
I-5986B-2_Hyd-prm_wet_psh_17b_ViewIn.dgn
harvey



8/17/99

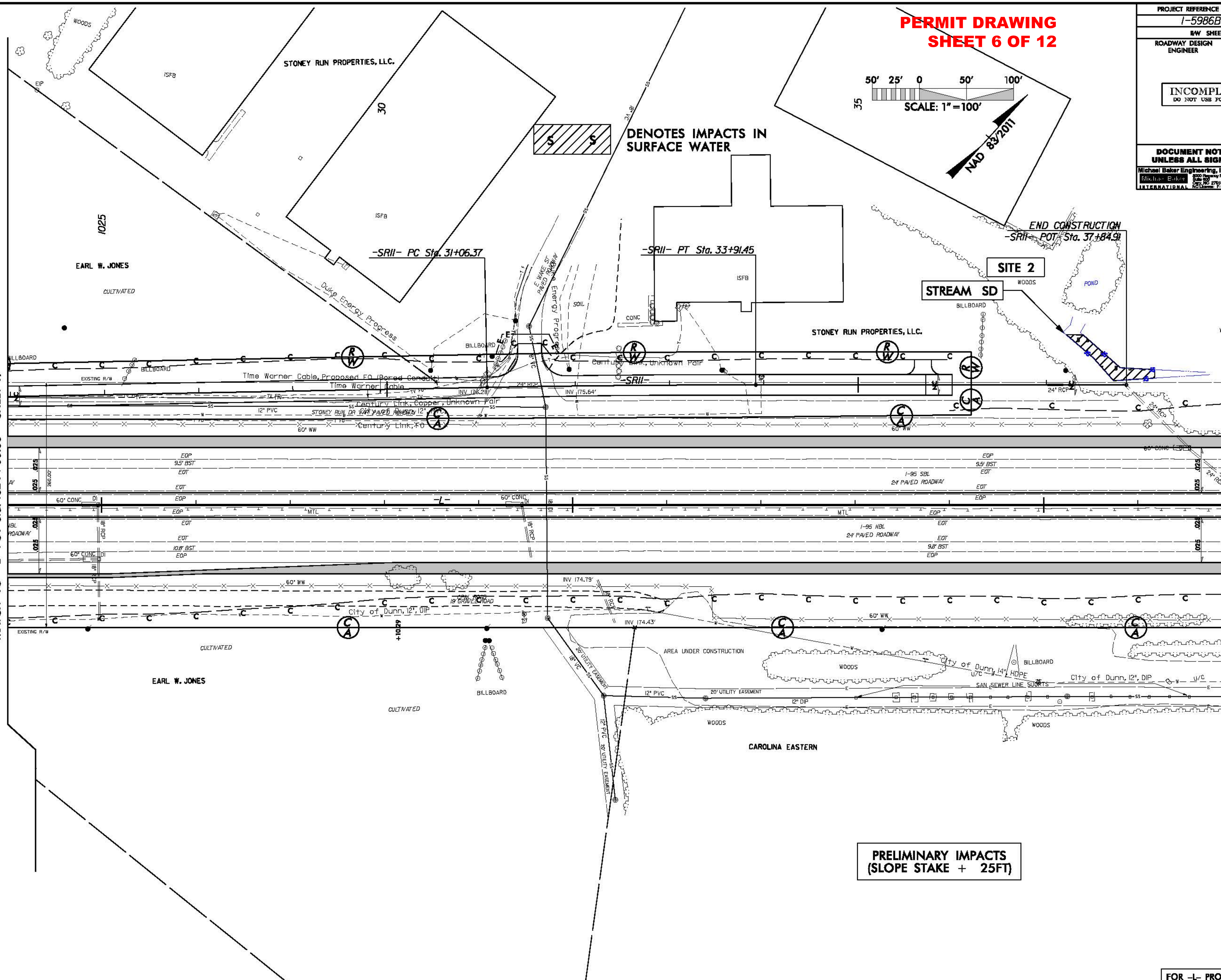
1/7/2019 I-5986B-2_Hyd_prm_wet_psh_17a_ViewIn.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.



FOR -L- PROFILE SEE SHEET 80
FOR -SR11- PROFILE SEE SHEET 125

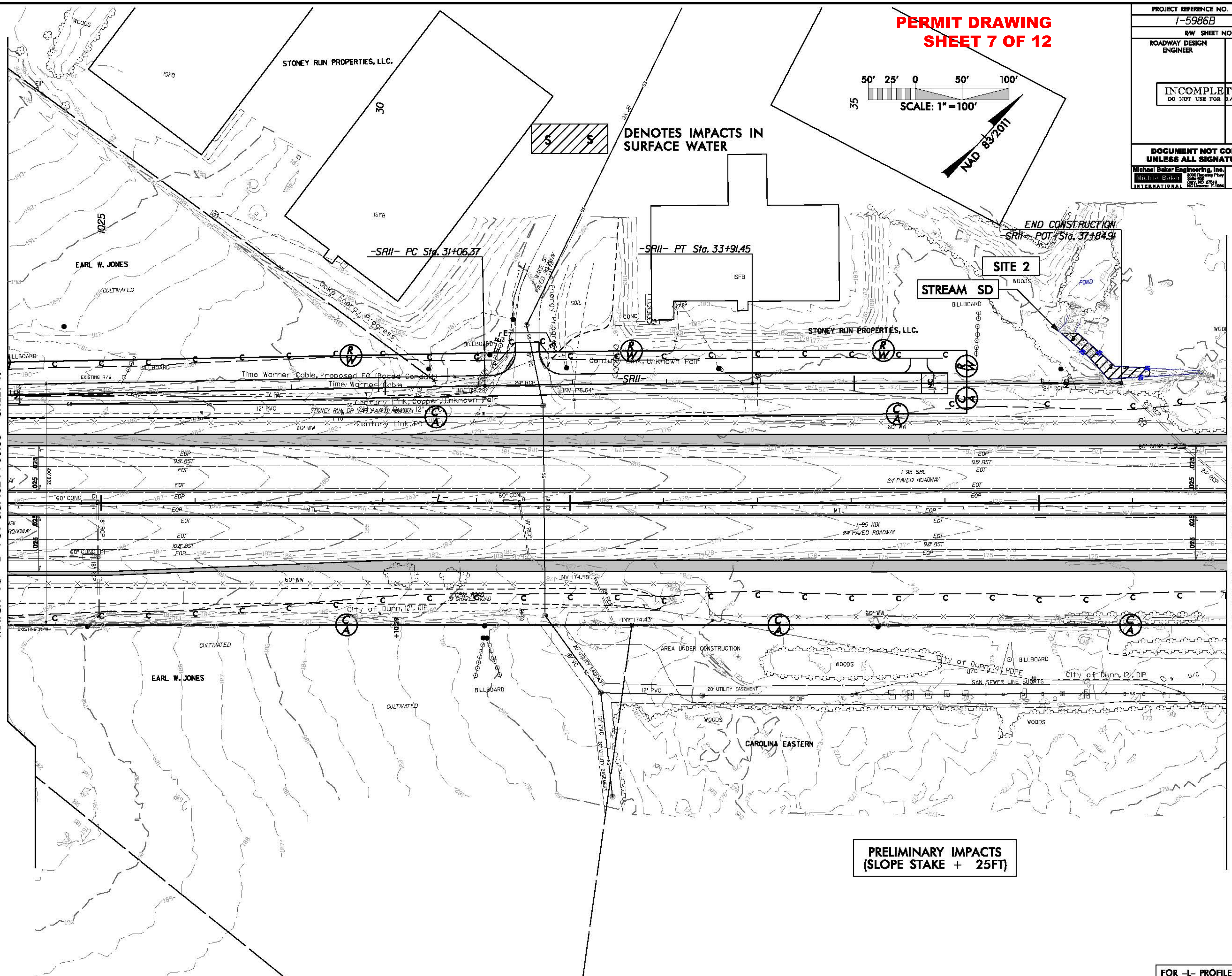
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.

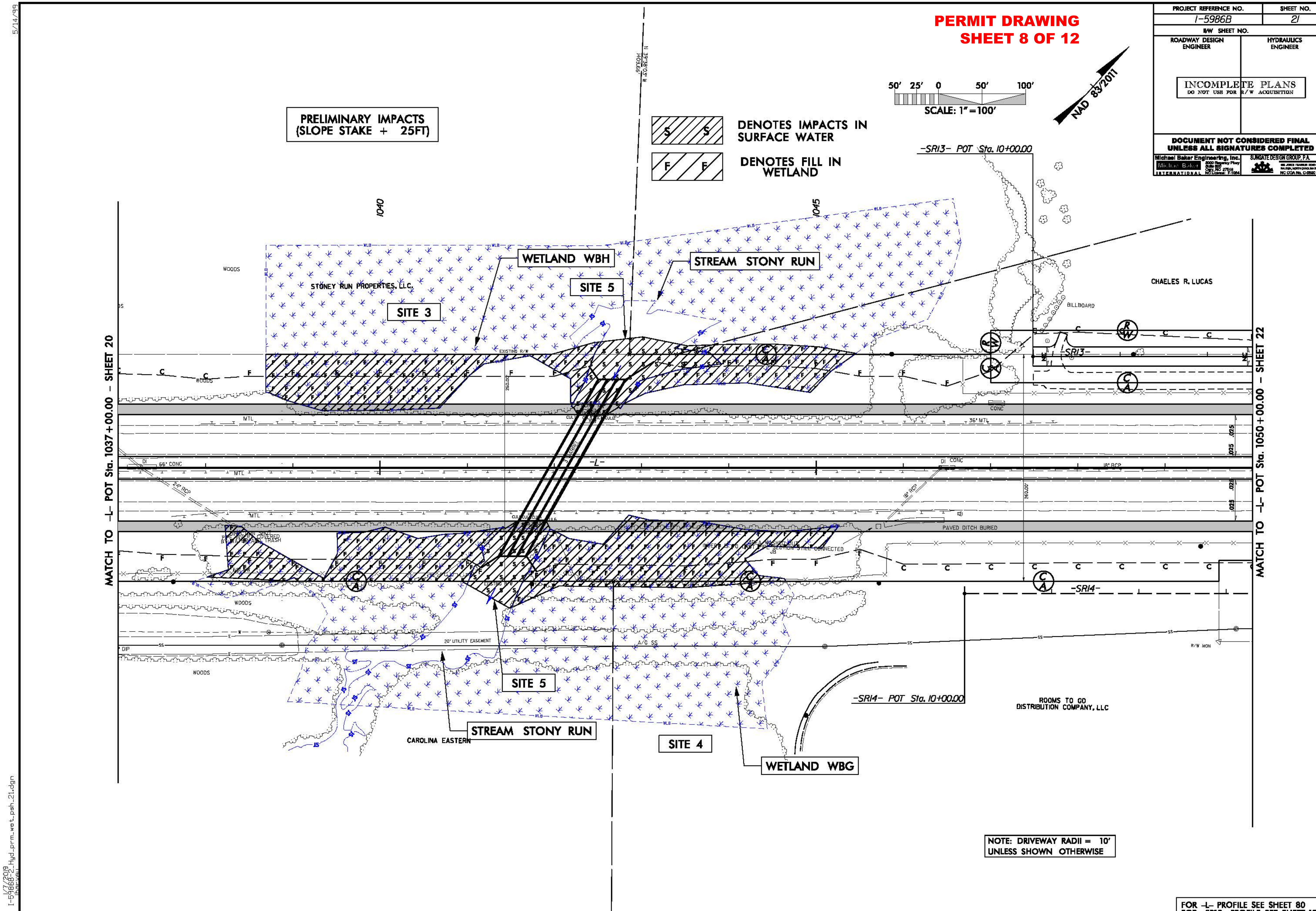
PERMIT DRAWING
SHEET 7 OF 12



PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

FOR -L- PROFILE SEE SHEET 80
FOR -SR11- PROFILE SEE SHEET 125

5/14/99
1/7/2019
I-5986B-2_Hyd_prm_wet_psh_20a.dgn



PERMIT DRAWING
SHEET 8 OF 12
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
21
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
SCALE: 1" = 100'
NAD 83/2011
-SR13- POT Sta. 10+00.00
-SR14- POT Sta. 10+00.00
WETLAND WBH
STREAM STONY RUN
SITE 5
SITE 3
SITE 4
WETLAND WBG
STONEY RUN PROPERTIES, LLC.
CHAELES R. LUCAS
ROOMS TO GO DISTRIBUTION COMPANY, LLC
CAROLINA EASTERN
WOODS
BILLBOARD
20' UTILITY EASEMENT
PAVED DITCH BURIED
MATCH TO -L- POT Sta. 1037+00.00 - SHEET 20
MATCH TO -L- POT Sta. 1050+00.00 - SHEET 22
1040
1045
-L-
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 80
FOR -SR13- PROFILE SEE SHEET 126
5/14/99
1/7/2019
I-5986B-2_Hyd_prm_wet_psh_21.dgn

PERMIT DRAWING
SHEET 9 OF 12

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. — Michael Baker INTERNATIONAL
SUNGATE DESIGN GROUP, P.A.

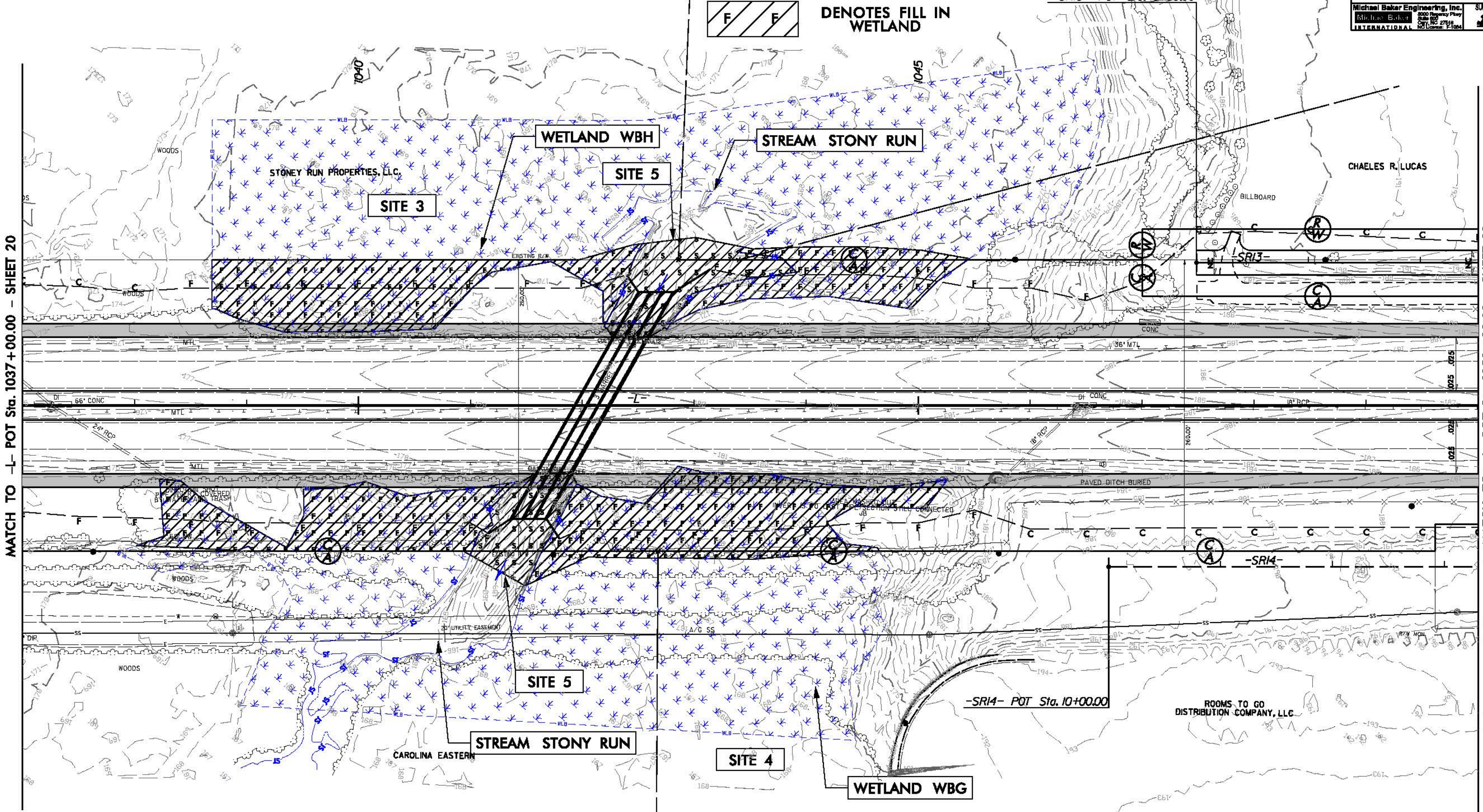
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

DENOTES IMPACTS IN SURFACE WATER

DENOTES FILL IN WETLAND

SCALE: 1" = 100'

NAD 83/2011

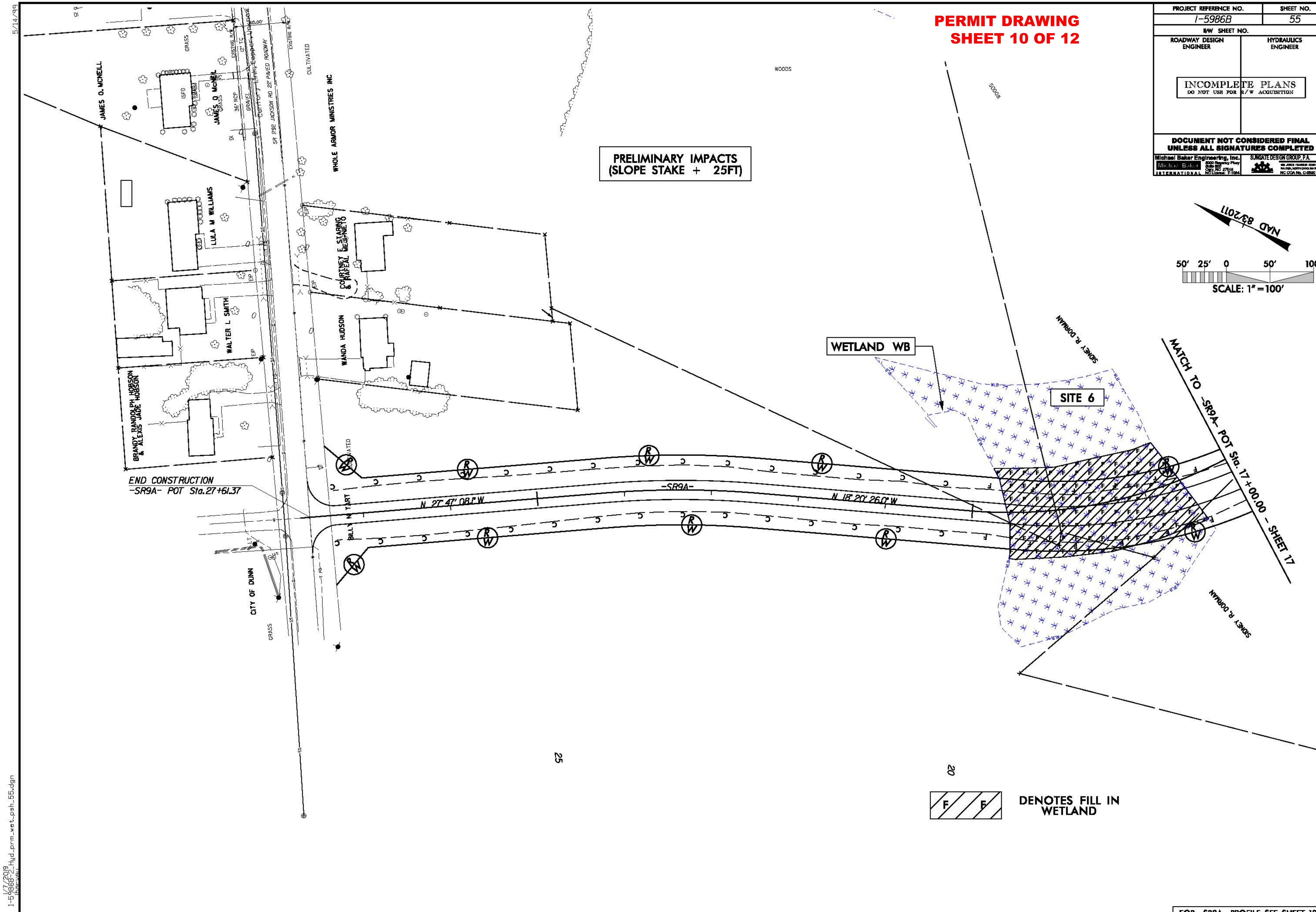


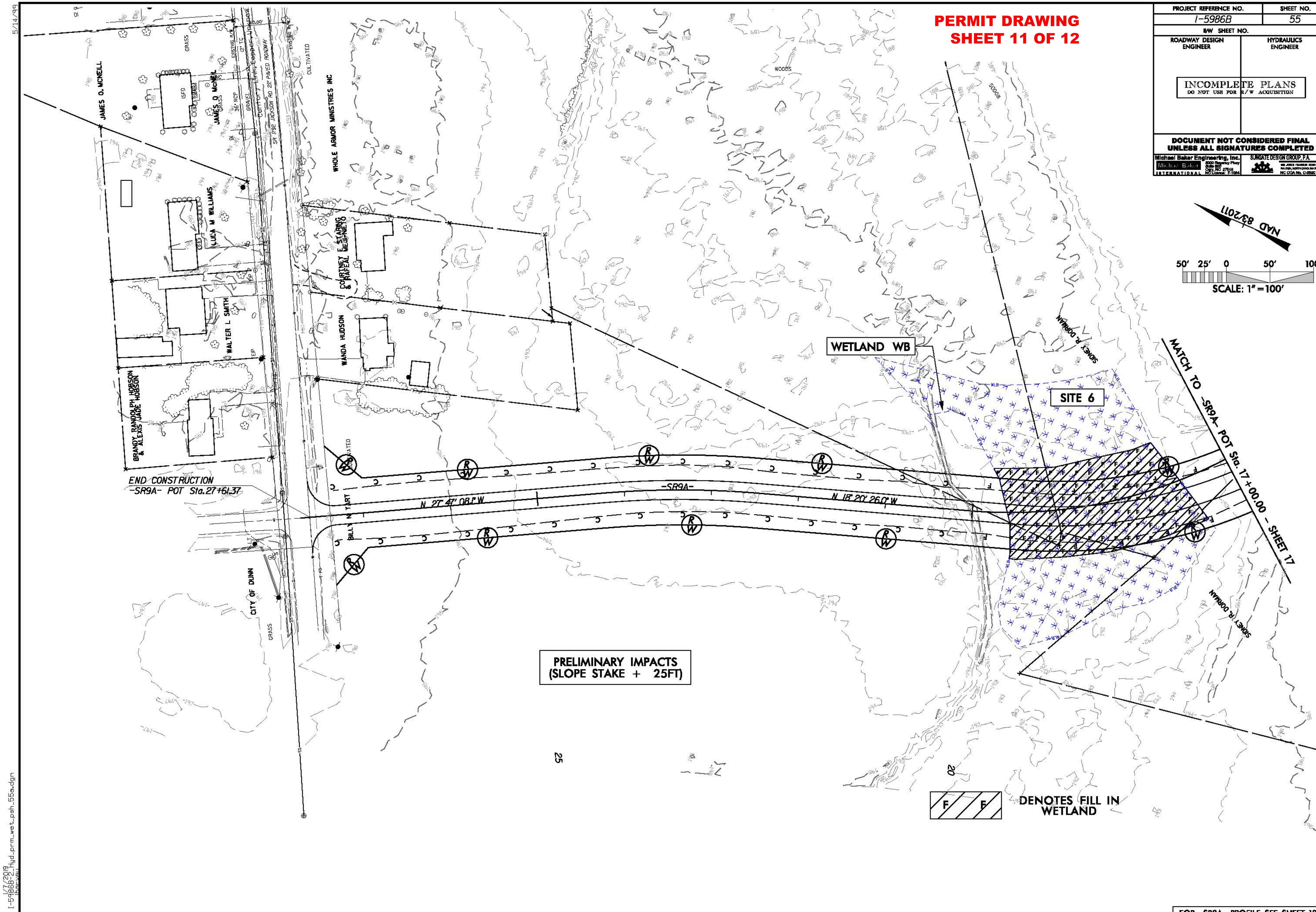
NOTE: DRIVEWAY RADII = 10'
UNLESS SHOWN OTHERWISE

FOR -L- PROFILE SEE SHEET 80
FOR -SR13- PROFILE SEE SHEET 126

5/14/99

1/7/2019
I-5986B-2_Hyd_prm_wet_psh_21a.dgn


PERMIT DRAWING
SHEET 10 OF 12
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
55
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
50' 25' 0 50' 100'
SCALE: 1" = 100'
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
WOODS
JAMES O. MCNEILL
JAMES O MCNEIL
LULA M WILLIAMS
WALTER L SMITH
BRANDY RANDOLPH HOBSON & ALEXIS JADE HOBSON
WHOLE ARMOR MINISTRIES INC
COURTNEY E STARLING & RAFEAL MESSINEO
WANDA HUDSON
CITY OF DUNN
SR 1792 JACKSON RD 22' PAVED ROADWAY
CULTIVATED
GRASS
END CONSTRUCTION
-SR9A- POT Sta.27+61.37
-SR9A-
N 27° 47' 08.1" W
N 18° 20' 26.0" W
WETLAND WB
SITE 6
SIDNEY R. DORMAN
MATCH TO -SR9A- POT Sta. 17+00.00 - SHEET 17
25
20
DENOTES FILL IN WETLAND
FOR -SR9A- PROFILE SEE SHEET 124
5/14/99
1/7/2019
I-5986B-2_Hyd_prm_wet_psh_55.dgn



PERMIT DRAWING
SHEET 11 OF 12
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
55
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
50' 25' 0 50' 100'
SCALE: 1" = 100'
WETLAND WB
SITE 6
MATCH TO -SR9A- POT Sta. 17+00.00 - SHEET 17
END CONSTRUCTION
-SR9A- POT Sta. 27+61.37
-SR9A-
N 27° 47' 08.1" W
N 18° 20' 26.0" W
JAMES O. MCNEILL
JAMES O MCNEILL
LUCIA M WILLIAMS
WALTER L SMITH
BRANDY RANDOLPH HOBSON & ALEXIS JADE HOBSON
WHOLE ARMOR MINISTRIES INC
COURTNEY E STARLING & RAFEAL MESSINEO
WANDA HUDSON
BILLY N TART
CITY OF DUNN
SIDNEY R. DORMAN
SR 1792 JACKSON RD 22' PAVED ROADWAY
CULTIVATED
WOODS
GRASS
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
DENOTES FILL IN WETLAND
FOR -SR9A- PROFILE SEE SHEET 124
5/14/99
1/7/2019
I-5986B-2_Hyd_prm_wet_psh_55a.dgn

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	21+77 to 22+34-Y14RPB-	ROADWAY FILL						0.02		140		
1A	15+48-NBCD-	ROADWAY FILL						0.02		157		
1B	21+04 to 22+11-Y14RPB-	ROADWAY FILL						< 0.01		35		
2	1035+24 to 1036+18-L-LT	ROADWAY FILL						0.03		101		
3	1038+02 to 1045+46-L-LT	ROADWAY FILL	0.56									
4	1038+70 to 1045+26-L-RT	ROADWAY FILL	0.75									
5	1041+00 to 1043+91 -L-	ROADWAY FILL						0.29		208		
6	17+58 to 19+60-SR9A-	ROADWAY FILL	0.50									
TOTALS*:			1.81					0.36		641	0	0

*Rounded totals are sum of actual impacts

NOTES:
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

Revised 2018 Feb

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
CUMBERLAND COUNTY
I-5986B-2
47532.1.3
SHEET 12 OF 12

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	21+77 to 22+34-Y14RPB-	ROADWAY FILL						0.024		140		
1A	15+48-NBCD-	ROADWAY FILL						0.020		157		
1B	21+04 to 22+11-Y14RPB-	ROADWAY FILL						0.003		35		
2	1035+24 to 1036+18-L-LT	ROADWAY FILL						0.028		101		
3	1038+02 to 1045+46-L-LT	ROADWAY FILL	0.564									
4	1038+70 to 1045+26-L-RT	ROADWAY FILL	0.749									
5	1041+00 to 1043+91 -L-	ROADWAY FILL						0.289		208		
6	17+58 to 19+60-SR9A-	ROADWAY FILL	0.498									
TOTALS*:			**1.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.36**	**0.00**	**641**	**0**	**0**

*Rounded totals are sum of actual impacts

NOTES:

PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

DATA ENTRY SHEET for impact totals to nearest 0.001 acre.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
CUMBERLAND COUNTY
I-5986B-2
47532.1.3

Revised 2018 Feb

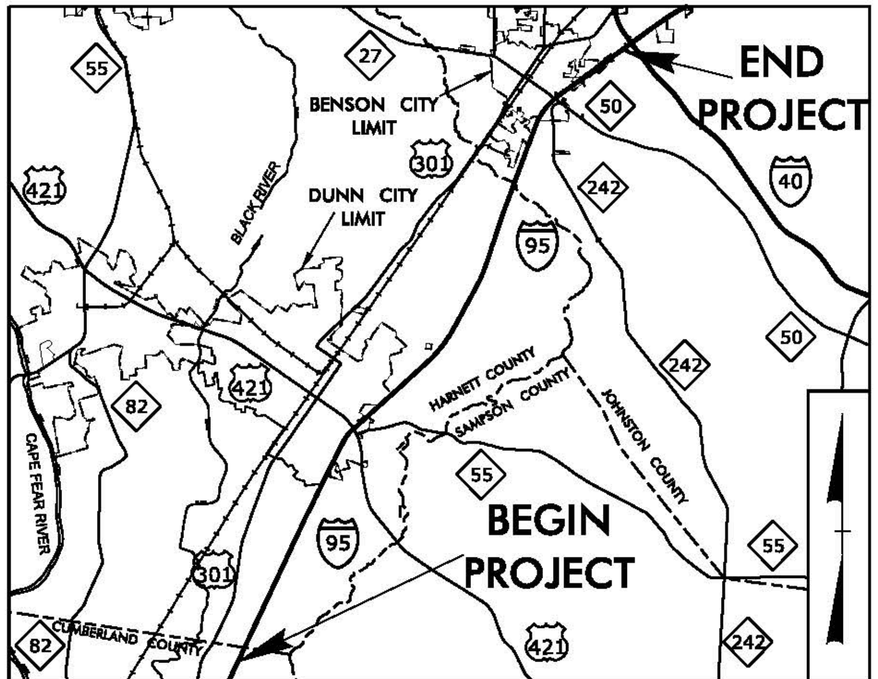
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5986B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47532.1.3		PE	

PERMIT DRAWING
SHEET 1 OF 31

TIP PROJECT: I-5986B

CONTRACT:

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



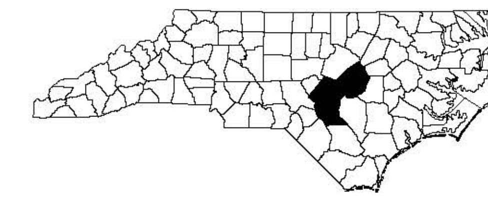
VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND, HARNETT, AND JOHNSTON COUNTIES

LOCATION: I-95 FROM SR 1811 (BUD HAWKINS ROAD) (EXIT 70) TO I-40 (EXIT 81). WIDEN TO EIGHT LANES.

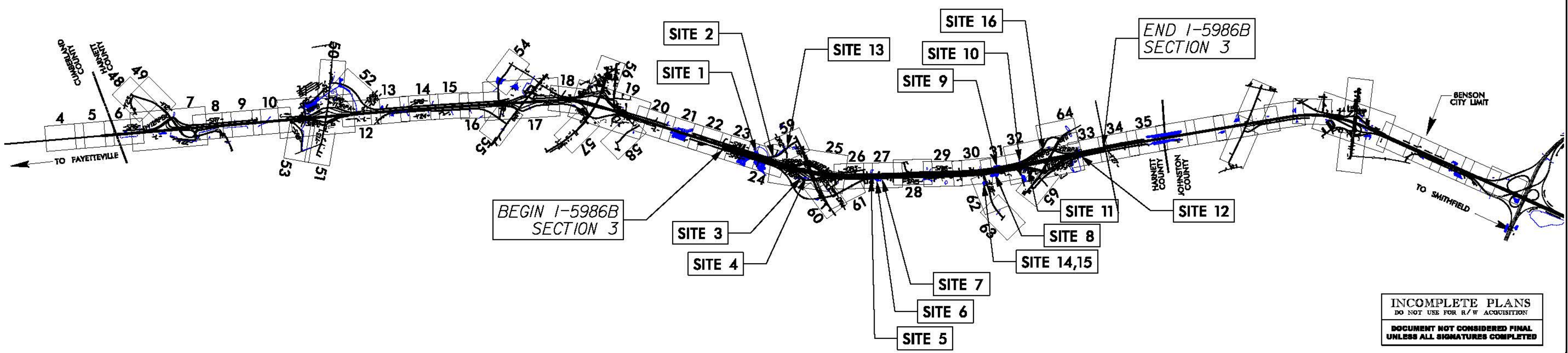
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS, CULVERTS, AND STRUCTURES



WETLAND AND SURFACE WATER IMPACTS PERMIT
SECTION 3

NAD 83/2011

PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2020 = 58,900
ADT 2040 = 75,700
K = 7 %
D = 55 %
T = 24 % *
V = 70 MPH
* (17% TTST + 7% DUALS)
FUNC CLASS = INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5986B = 11.865 MILES

LENGTH STRUCTURE TIP PROJECT I-5986B = 0.020 MILES

TOTAL LENGTH TIP PROJECT I-5986B = 11.885 MILES

Prepared In the Office of:
Michael Baker INTERNATIONAL
Michael Baker Engineering, Inc.
8000 Regency Parkway, Suite 600
Cary, NC 27518
Professional Corporation License Number: F-1084
FOR DIVISION OF HIGHWAYS

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 1, 2019

LETTING DATE:
JULY 21, 2020

SUSAN C. LANCASTER, P.E.
PROJECT ENGINEER

CURTIS TILLMAN, P.E.
PROJECT DESIGN ENGINEER

STEVE D. KENDALL, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

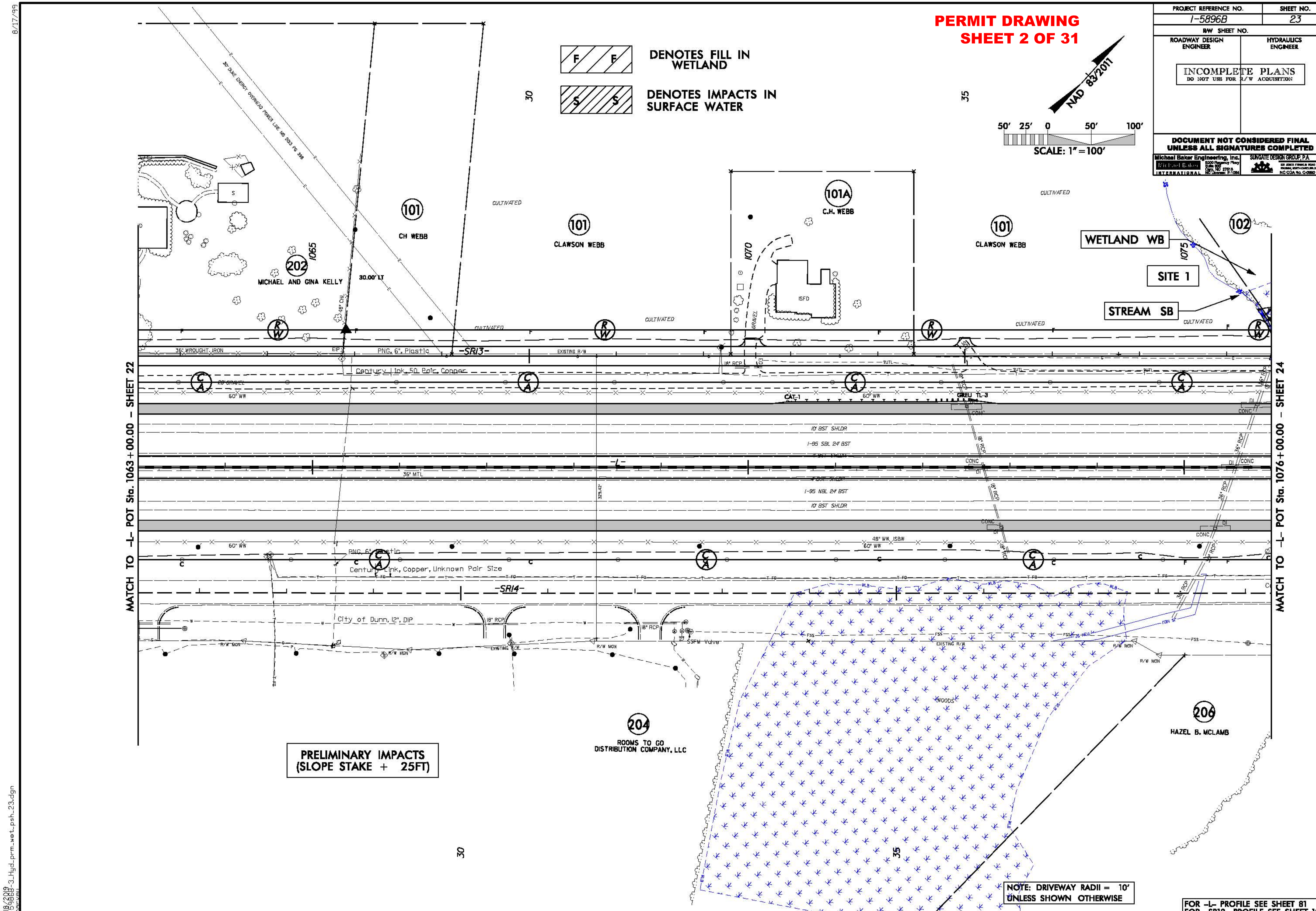
SIGNATURE: P.E.

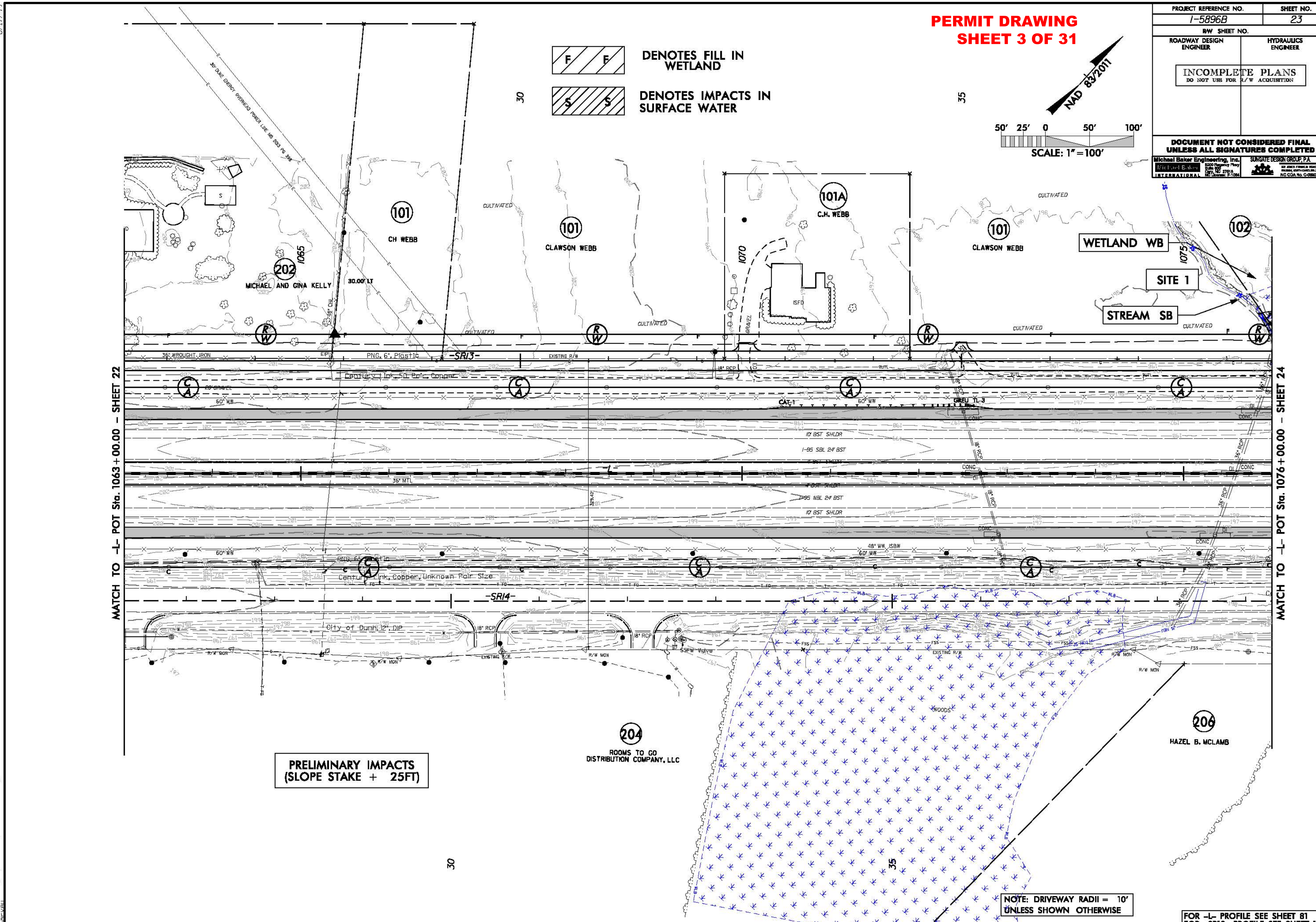
ROADWAY DESIGN ENGINEER

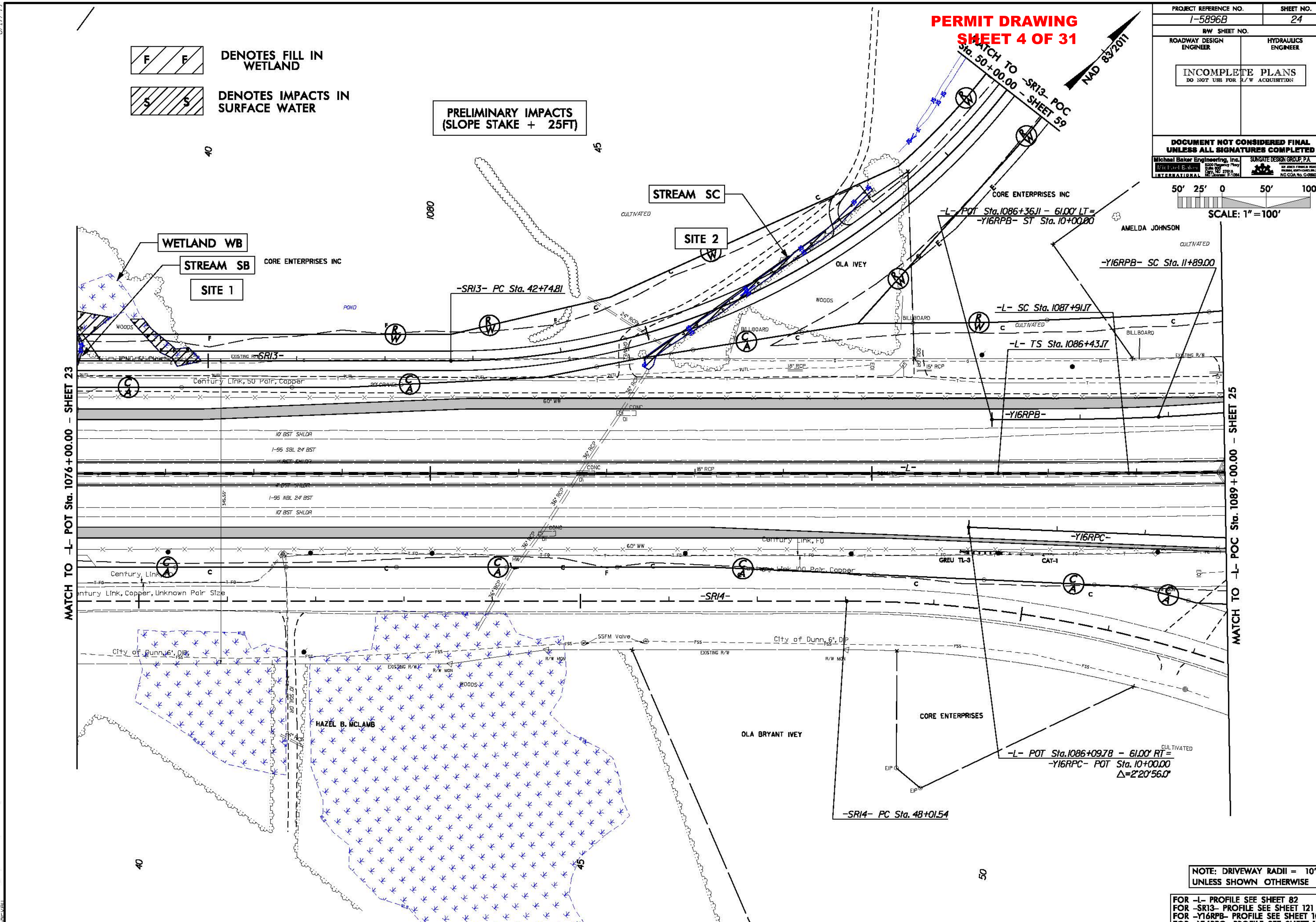
SIGNATURE: P.E.

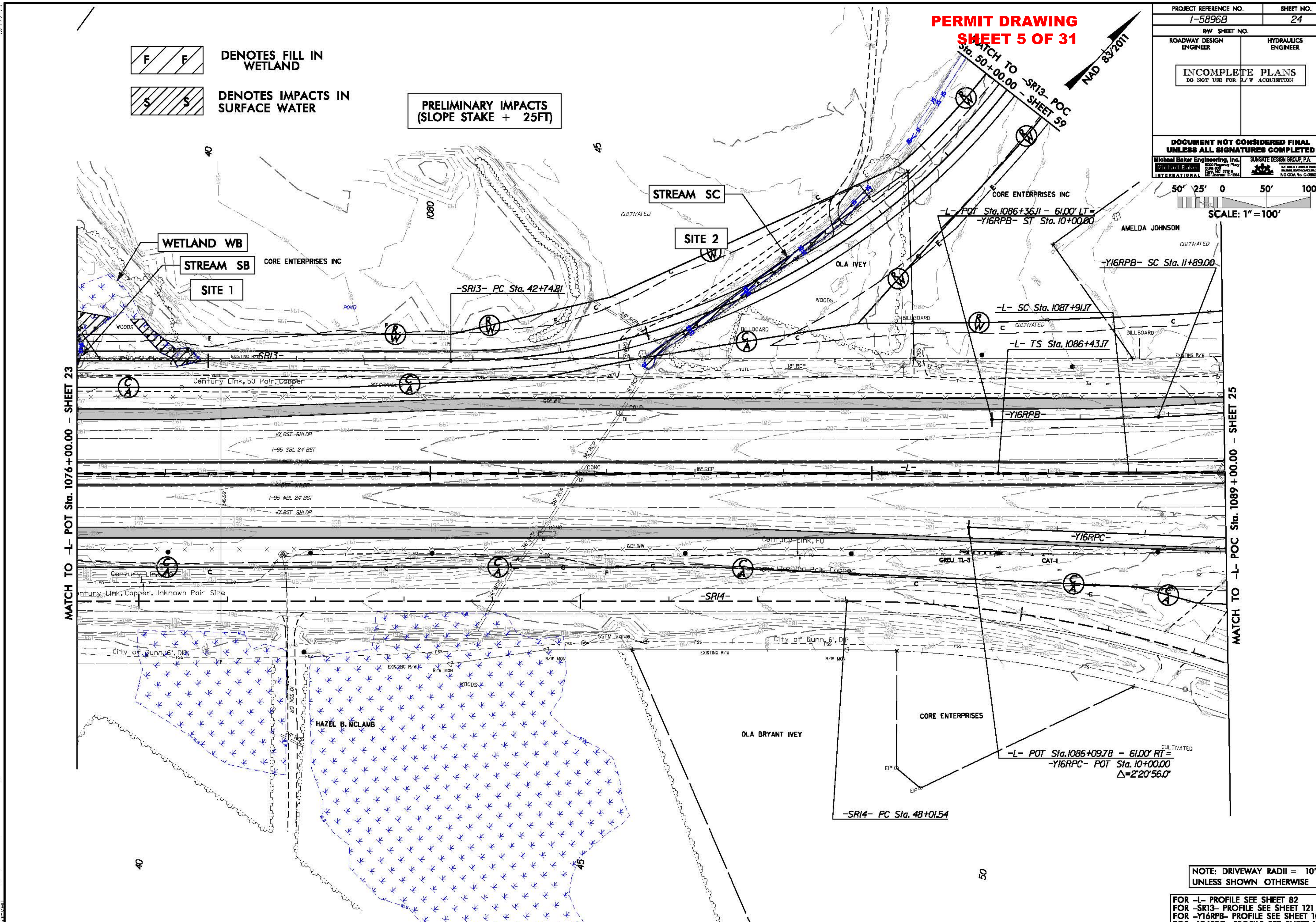
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

09/08/99
1/18/2019
I-5986B_3_Hyd_prm_wet_psh_01.dgn
jharvey

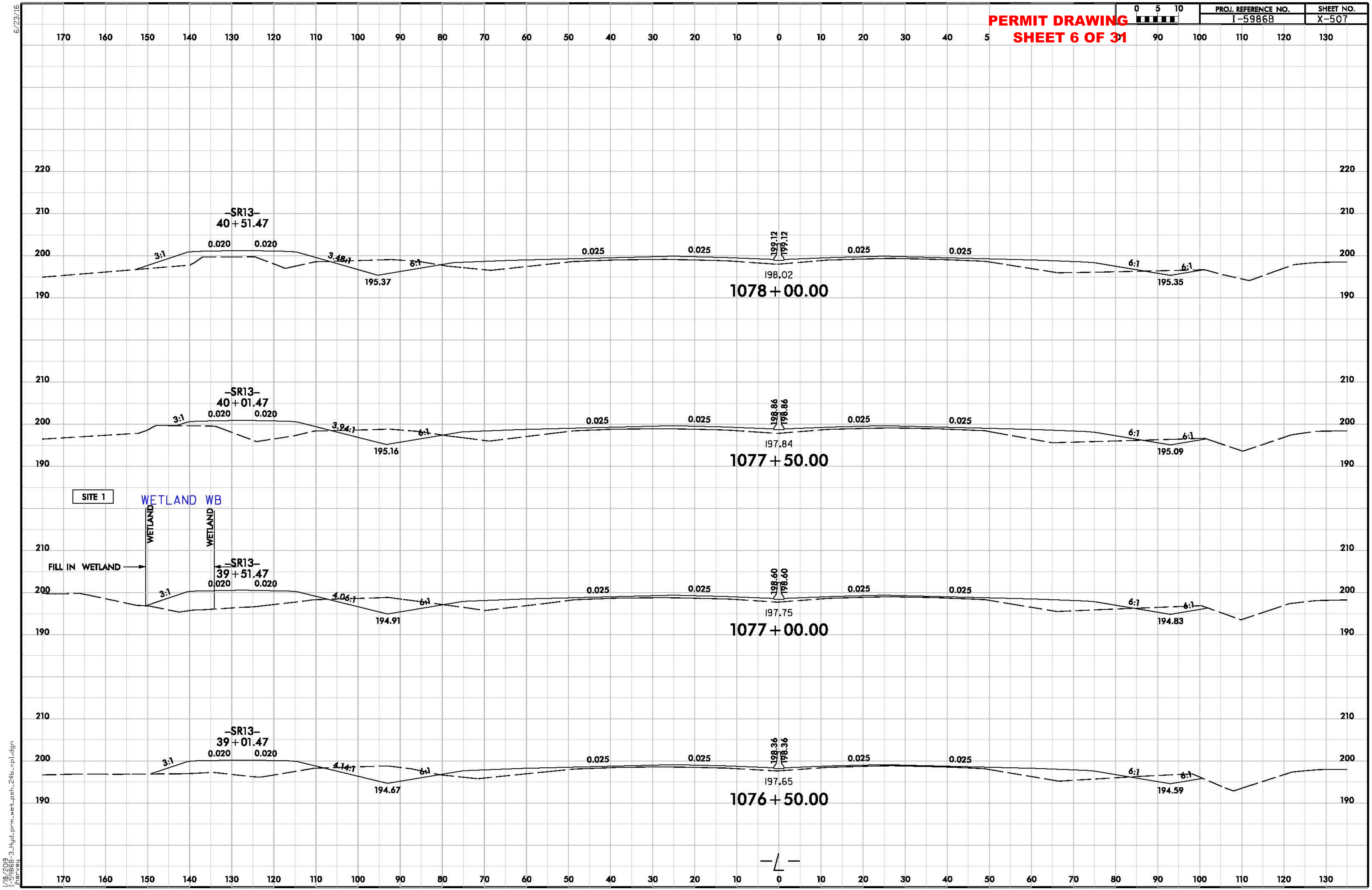

PERMIT DRAWING
SHEET 2 OF 31
PROJECT REFERENCE NO.
I-5896B
SHEET NO.
23
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
NAD 83/2011
SCALE: 1" = 100'
MICHAEL AND GINA KELLY
CH WEBB
CLAWSON WEBB
C.H. WEBB
WETLAND WB
SITE 1
STREAM SB
-SR13-
-L-
-SR14-
I-95 SBL 24' BST
I-95 NBL 24' BST
10' BST SHLDR
Century Link, 50 Pair, Copper
CenturyLink, Copper, Unknown Pair Size
City of Dunn, 12", DIP
MATCH TO -L- POT Sta. 1063+00.00 - SHEET 22
MATCH TO -L- POT Sta. 1076+00.00 - SHEET 24
ROOMS TO GO DISTRIBUTION COMPANY, LLC
HAZEL B. MCLAMB
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 81
FOR -SR13- PROFILE SEE SHEET 120

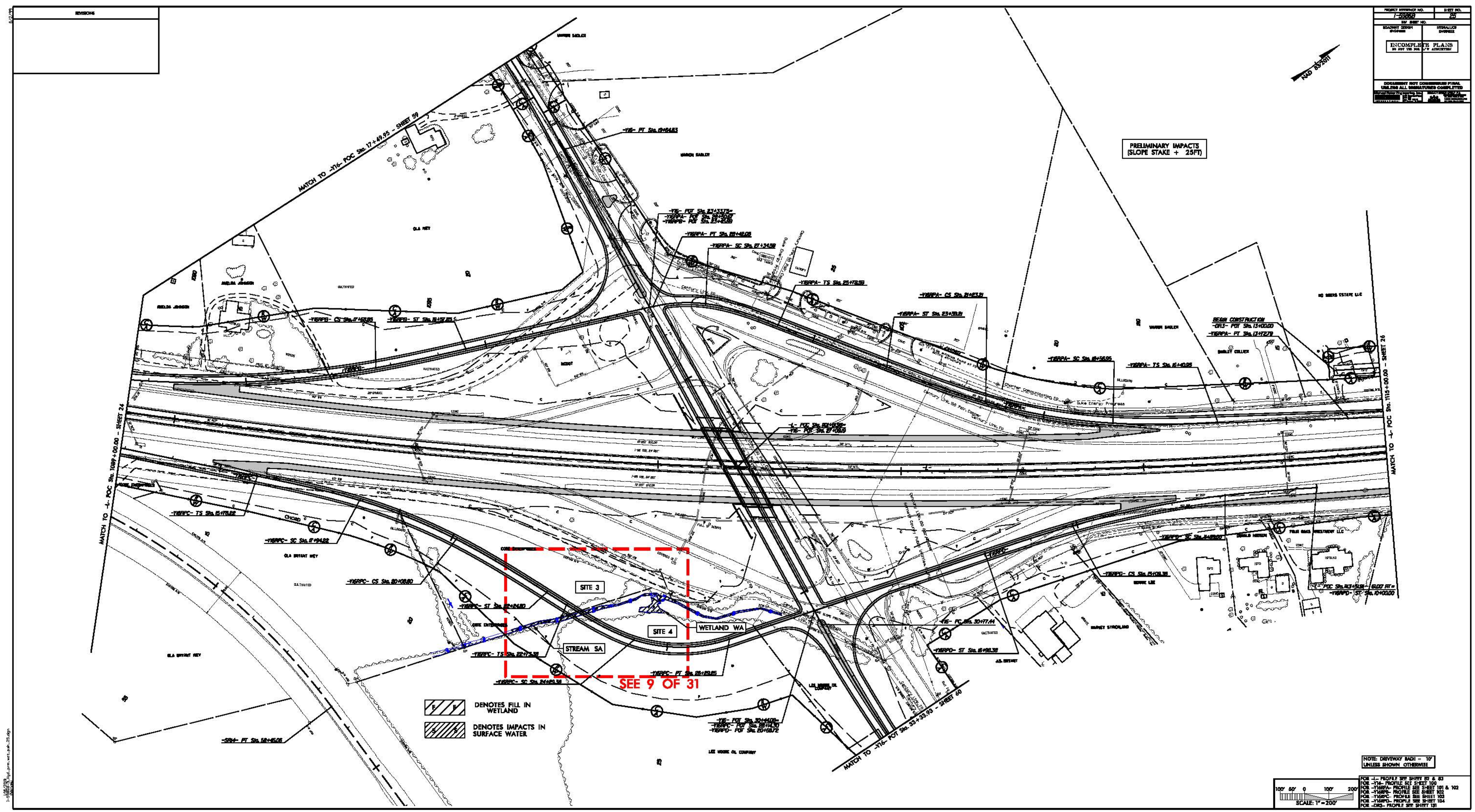

PERMIT DRAWING
SHEET 3 OF 31
PROJECT REFERENCE NO. I-5896B
SHEET NO. 23
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
NAD 83/2011
50' 25' 0 50' 100'
SCALE: 1" = 100'
MICHAEL AND GINA KELLY
CH WEBB
CLAWSON WEBB
C.H. WEBB
CLAWSON WEBB
WETLAND WB
SITE 1
STREAM SB
CULTIVATED
-SR13-
-SR14-
I-95 SBL 24' BST
I-95 NBL 24' BST
10' BST SHLDR
MATCH TO -L- POT Sta. 1063+00.00 - SHEET 22
MATCH TO -L- POT Sta. 1076+00.00 - SHEET 24
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
ROOMS TO GO DISTRIBUTION COMPANY, LLC
HAZEL B. MCLAMB
WOODS
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 81
FOR -SR13- PROFILE SEE SHEET 120
8/17/99

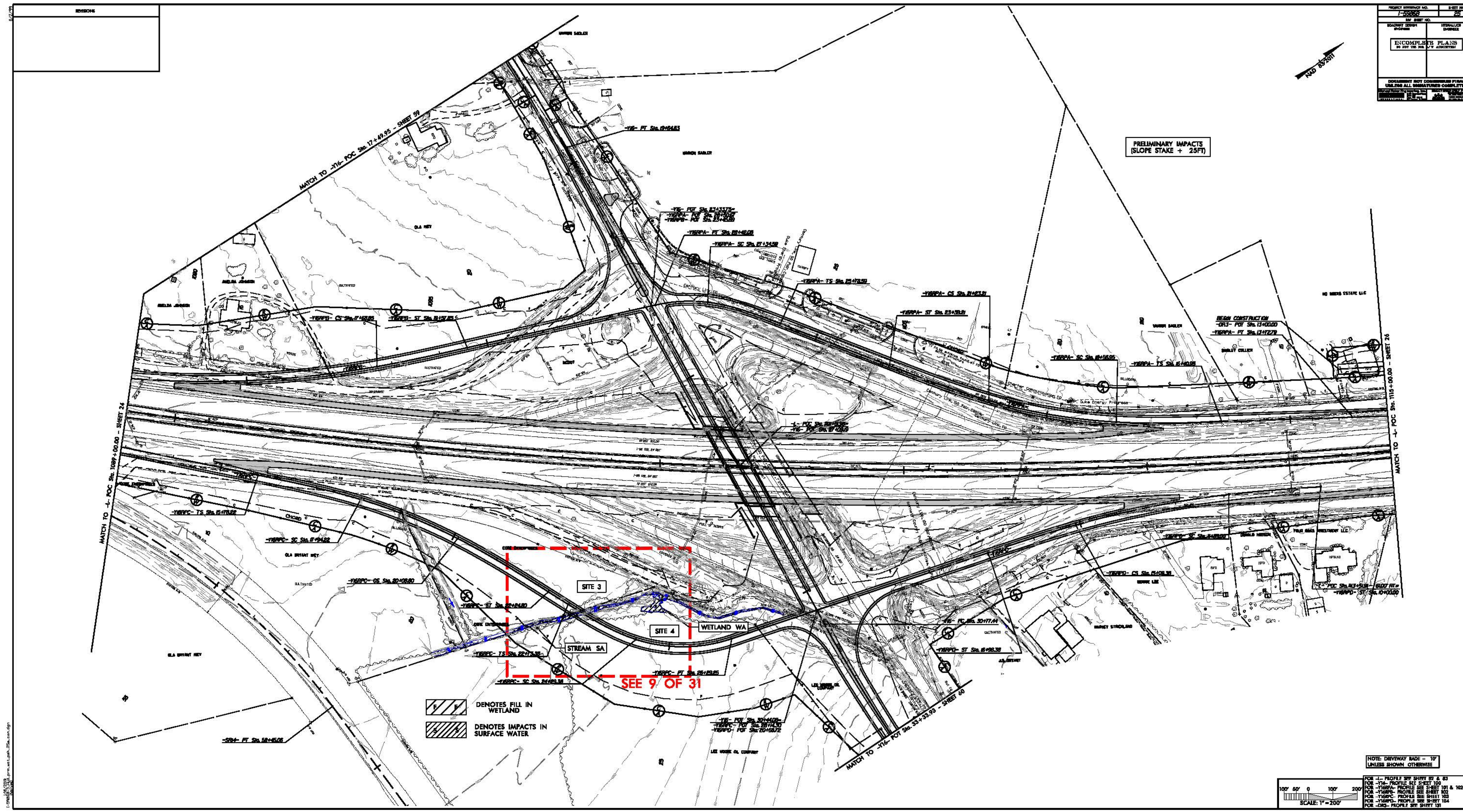

PERMIT DRAWING
SHEET 4 OF 31
PROJECT REFERENCE NO. I-5896B
SHEET NO. 24
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1" = 100'
50' 25' 0 50' 100'
NAD 83/2011
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
MATCH TO -SR13- POC Sta. 50+00.00 - SHEET 59
STREAM SC
SITE 2
WETLAND WB
STREAM SB
SITE 1
CORE ENTERPRISES INC
OLA IVEY
AMELDA JOHNSON
CULTIVATED
WOODS
POND
-SR13- PC Sta. 42+74.81
-L- POT Sta. 1086+36.11 - 61.00' LT = -Y16RPB- ST Sta. 10+00.00
-Y16RPB- SC Sta. 11+89.00
-L- SC Sta. 1087+91.17
-L- TS Sta. 1086+43.17
-Y16RPB-
-Y16RPC-
-L-
-SR13-
-SR14-
BILLBOARD
Century Link, 50 Pair, Copper
Century Link, FO
Century Link, 100 Pair, Copper
Century Link, Copper, Unknown Pair Size
City of Dunn, 6", DIP
SSFM Valve
60" WW
36" RCP
24" RCP
18" RCP
15" RCP
10' BST SHLDR
I-95 SBL 24' BST
I-95 NBL 24' BST
EXISTING R/W
HAZEL B. MCLAMB
OLA BRYANT IVEY
CORE ENTERPRISES
-L- POT Sta. 1086+09.78 - 61.00' RT = -Y16RPC- POT Sta. 10+00.00
Δ=2°20'56.0"
-SR14- PC Sta. 48+01.54
MATCH TO -L- POT Sta. 1076+00.00 - SHEET 23
MATCH TO -L- POC Sta. 1089+00.00 - SHEET 25
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 82
FOR -SR13- PROFILE SEE SHEET 121
FOR -Y16RPB- PROFILE SEE SHEET 102
FOR -Y16RPC- PROFILE SEE SHEET 103
8/17/99

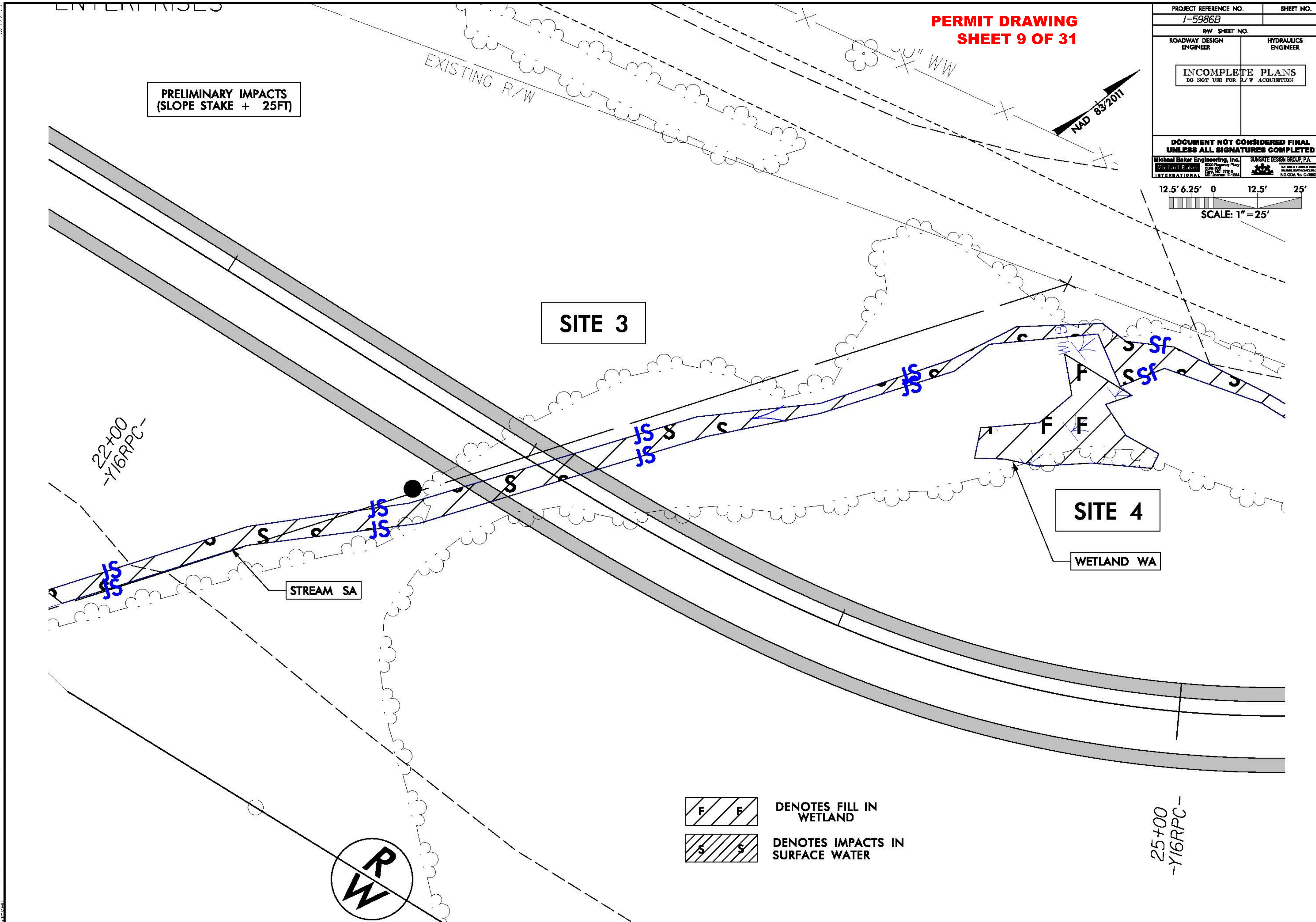


PERMIT DRAWING
SHEET 5 OF 31
PROJECT REFERENCE NO. I-5896B
SHEET NO. 24
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1" = 100'
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
MATCH TO -SR13- POC Sta. 50+00.00 - SHEET 59
NAD 83/2011
WETLAND WB
STREAM SB
SITE 1
STREAM SC
SITE 2
CORE ENTERPRISES INC
OLA IVEY
AMELDA JOHNSON
HAZEL B. MCLAMB
OLA BRYANT IVEY
CORE ENTERPRISES
-SR13- PC Sta. 42+74.81
-L- POT Sta. 1086+36.11 - 61.00' LT = -Y16RPB- ST Sta. 10+00.00
-Y16RPB- SC Sta. 11+89.00
-L- SC Sta. 1087+91.17
-L- TS Sta. 1086+43.17
-L- POT Sta. 1086+09.78 - 61.00' RT = -Y16RPC- POT Sta. 10+00.00 Δ=2°20'56.0"
-SR14- PC Sta. 48+01.54
-SR13-
-SR14-
-Y16RPB-
-Y16RPC-
-L-
MATCH TO -L- POT Sta. 1076+00.00 - SHEET 23
MATCH TO -L- POC Sta. 1089+00.00 - SHEET 25
Century Link, 50 Pair, Copper
Century Link, FO
City of Dunn, 6" DIP
I-95 SBL 24' BST
I-95 NBL 24' BST
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 82
FOR -SR13- PROFILE SEE SHEET 121
FOR -Y16RPB- PROFILE SEE SHEET 102
FOR -Y16RPC- PROFILE SEE SHEET 103

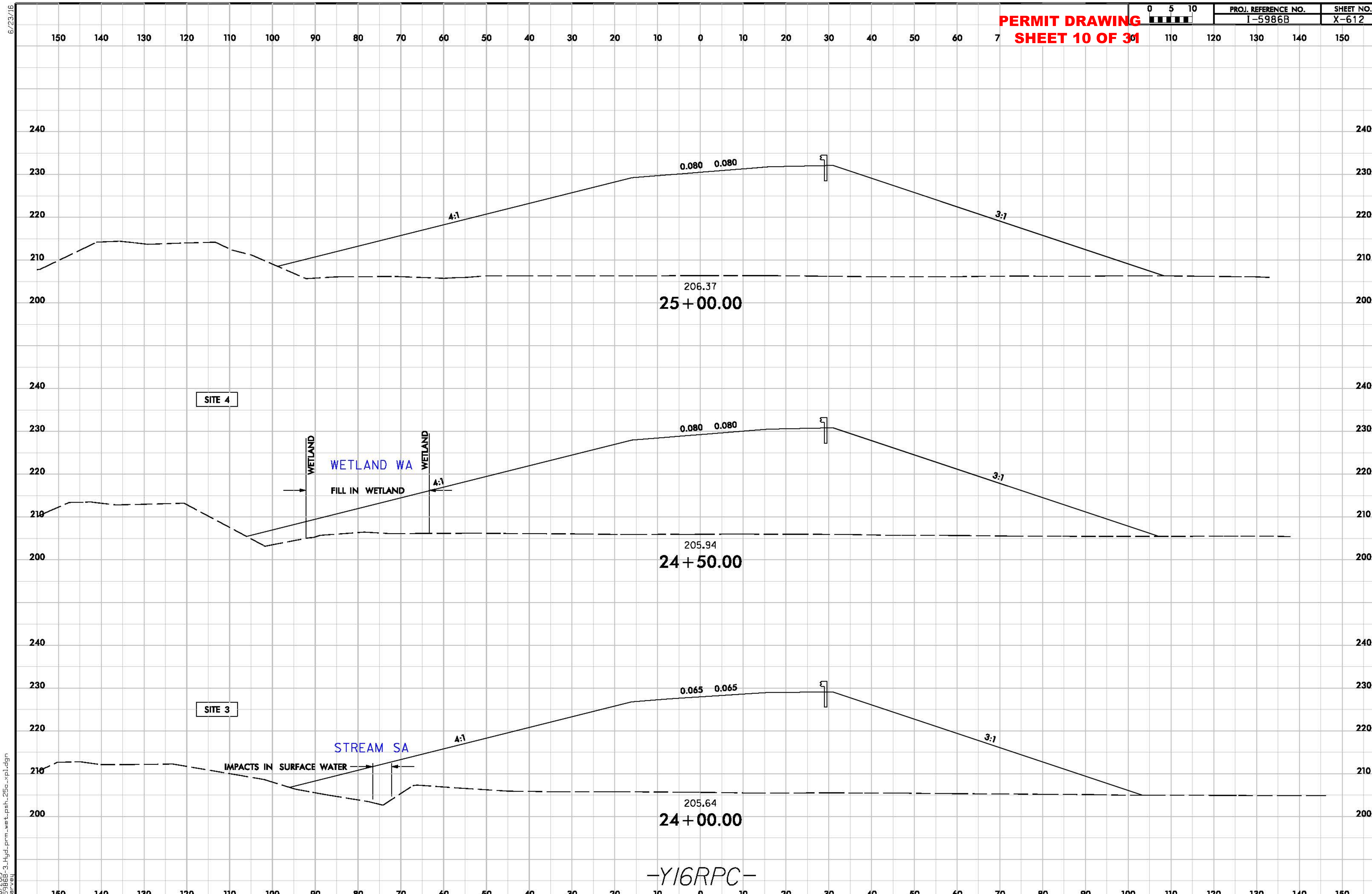

PERMIT DRAWING
SHEET 6 OF 31
PROJ. REFERENCE NO.
I-5986B
SHEET NO.
X-507
0 5 10
6/23/16
-SR13-
40+51.47
0.020
0.020
3:1
3.48:1
6:1
195.37
0.025
199.12
199.12
198.02
1078+00.00
6:1
6:1
195.35
-SR13-
40+01.47
3.94:1
195.16
198.86
198.86
197.84
1077+50.00
195.09
SITE 1
WETLAND WB
WETLAND
WETLAND
FILL IN WETLAND
-SR13-
39+51.47
4.06:1
194.91
198.60
198.60
197.75
1077+00.00
194.83
-SR13-
39+01.47
4.14:1
194.67
198.36
198.36
197.65
1076+50.00
194.59
-L-
1/18/2019
I-5986B-3_Hyd_prm_wet_psh_24b_xpl.dgn
harvey


PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
SITE 3
SITE 4
WETLAND WA
STREAM SA
SEE 9 OF 31
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
INCOMPLETE PLANS
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
SCALE: 1" = 200'


PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
SITE 3
SITE 4
WETLAND WA
STREAM SA
SEE 9 OF 31
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
ENCOMPLETE PLANS
NOTE: DRIVEWAY RADII = 10'
UNLESS SHOWN OTHERWISE
SCALE: 1" = 200'

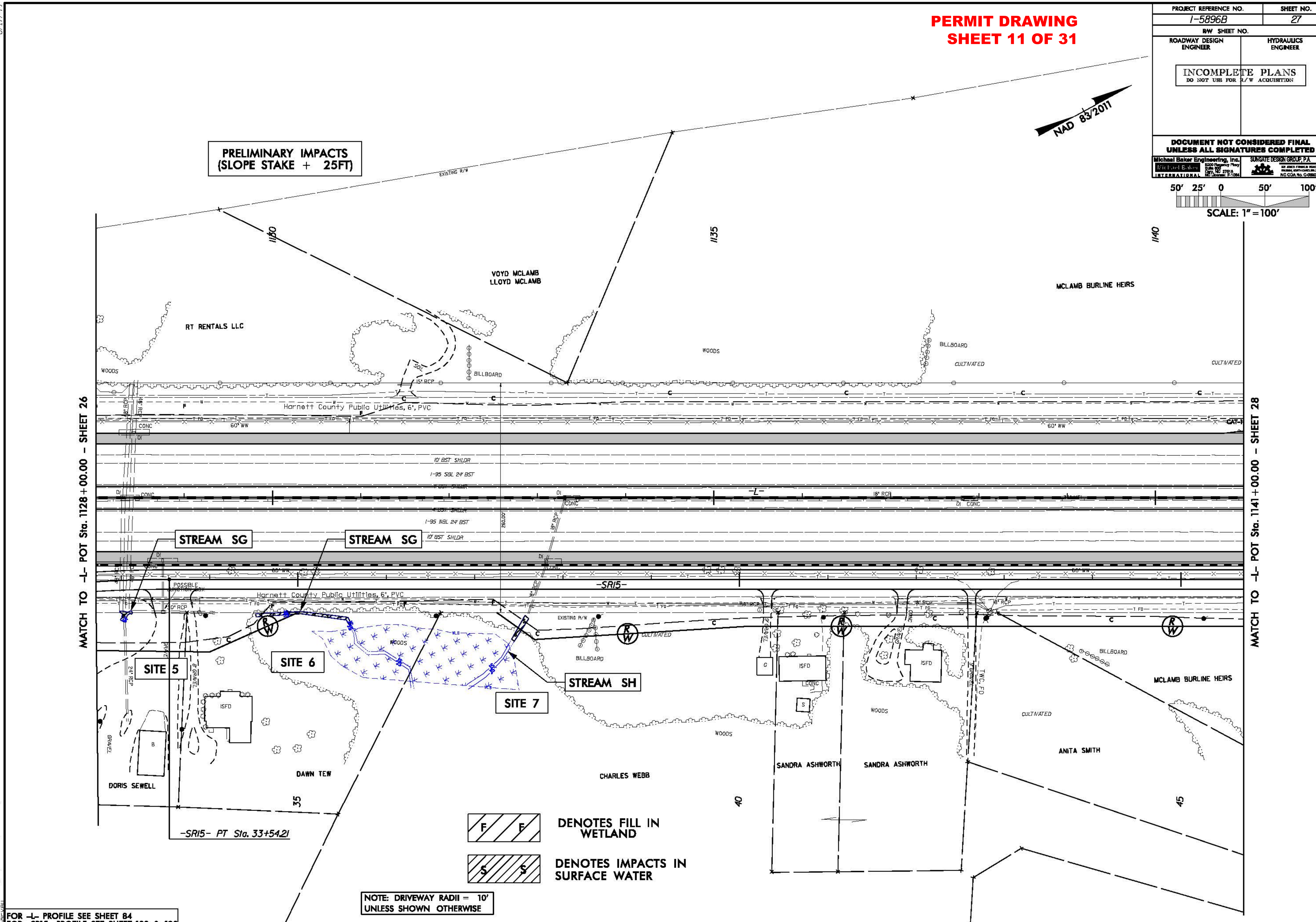

PERMIT DRAWING
SHEET 9 OF 31
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
NAD 83/2011
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
EXISTING R/W
SITE 3
SITE 4
22+00
-Y16RPC-
25+00
-Y16RPC-
STREAM SA
WETLAND WA
JS
S
F
R/W
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER

PROJ. REFERENCE NO.	SHEET NO.
I-5986B	X-612



6/23/16

1/18/2019
I-5986B-3_Hyd_prm_wet_psh_25c_xpl.dgn
harvey


PROJECT REFERENCE NO.
I-5896B
SHEET NO.
27
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1" = 100'
NAD 83/2011
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
EXISTING R/W
VOYD MCLAMB
LLOYD MCLAMB
MCLAMB BURLINE HEIRS
RT RENTALS LLC
WOODS
BILLBOARD
CULTIVATED
Harnett County Public Utilities, 6", PVC
60' WW
10' BST SHLDR
I-95 SBL 24' BST
-L-
18" RCP
I-95 NBL 24' BST
10' BST SHLDR
-SR15-
POSSIBLE
STREAM SG
STREAM SG
STREAM SH
SITE 5
SITE 6
SITE 7
EXISTING R/W
ISFD
DORIS SEWELL
DAWN TEW
CHARLES WEBB
SANDRA ASHWORTH
SANDRA ASHWORTH
ANITA SMITH
MCLAMB BURLINE HEIRS
MATCH TO -L- POT Sta. 1128+00.00 - SHEET 26
MATCH TO -L- POT Sta. 1141+00.00 - SHEET 28
1130
1135
1140
35
40
45
-SR15- PT Sta. 33+54.21
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
NOTE: DRIVEWAY RADII = 10'
UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 84
FOR -SR15- PROFILE SEE SHEET 122 & 123
8/17/99

PERMIT DRAWING
SHEET 12 OF 31

PROJECT REFERENCE NO.	SHEET NO.
I-5896B	27

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

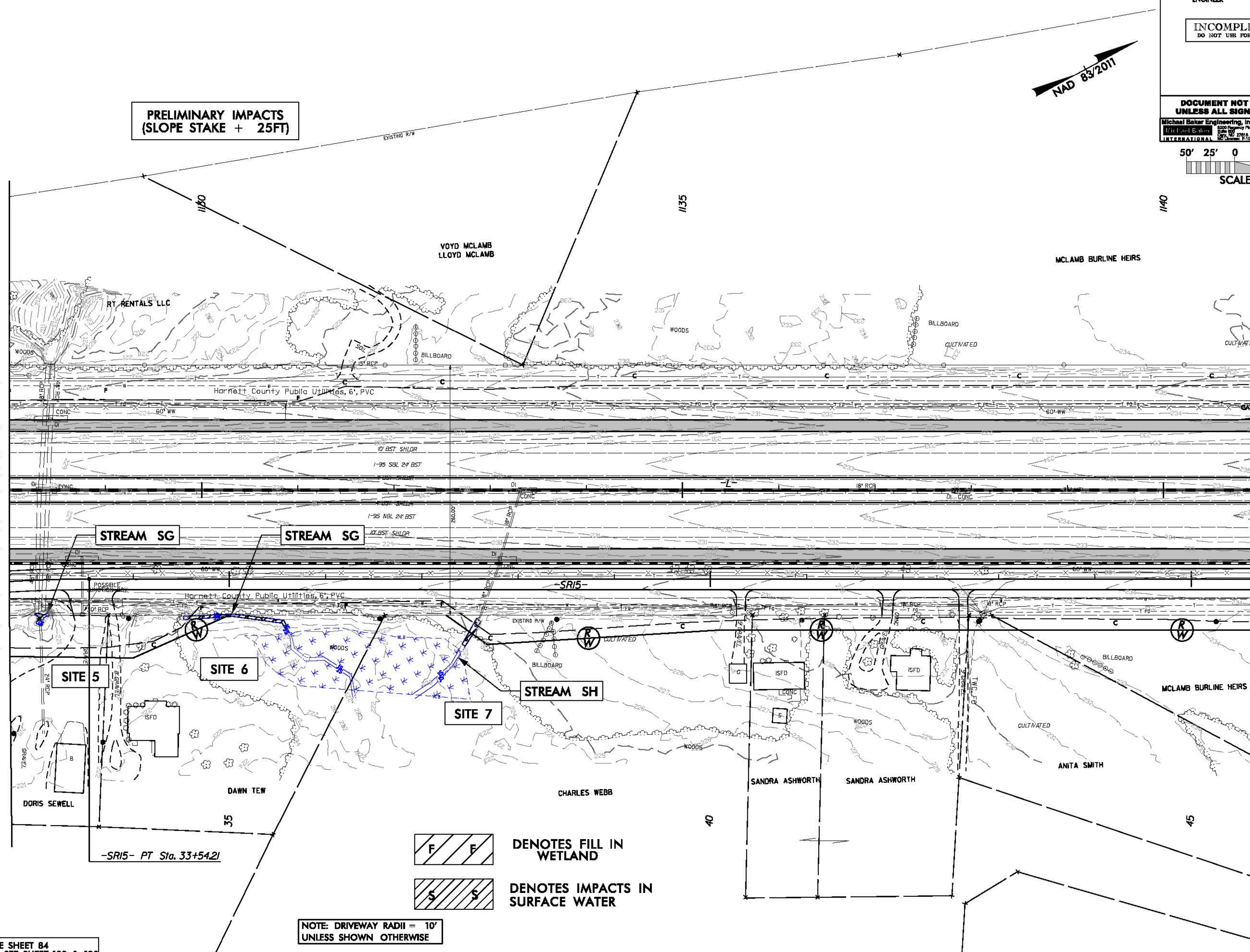
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. | SUNGATE DESIGN GROUP, P.A.

50' 25' 0 50' 100'
SCALE: 1" = 100'

PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)



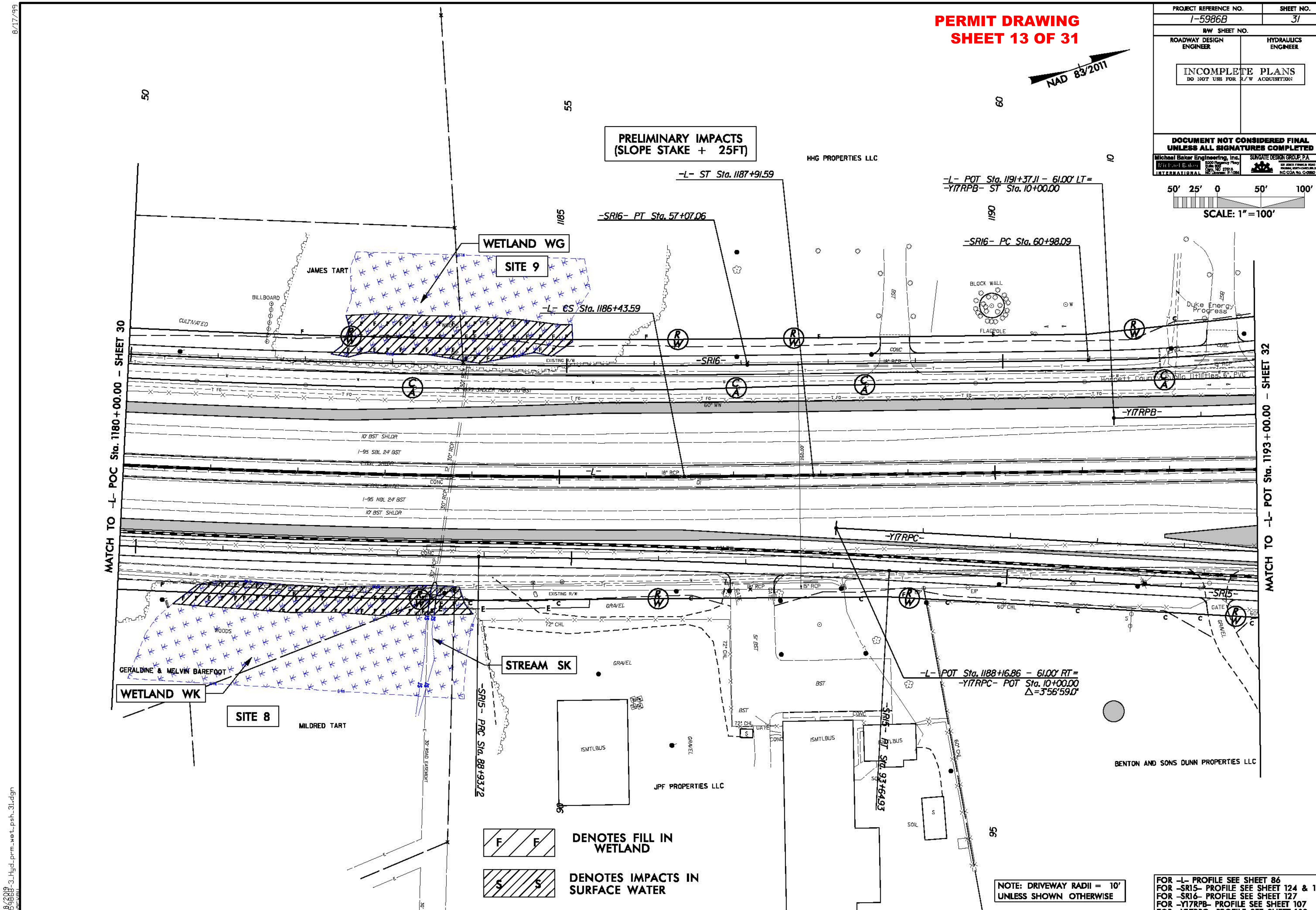
DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

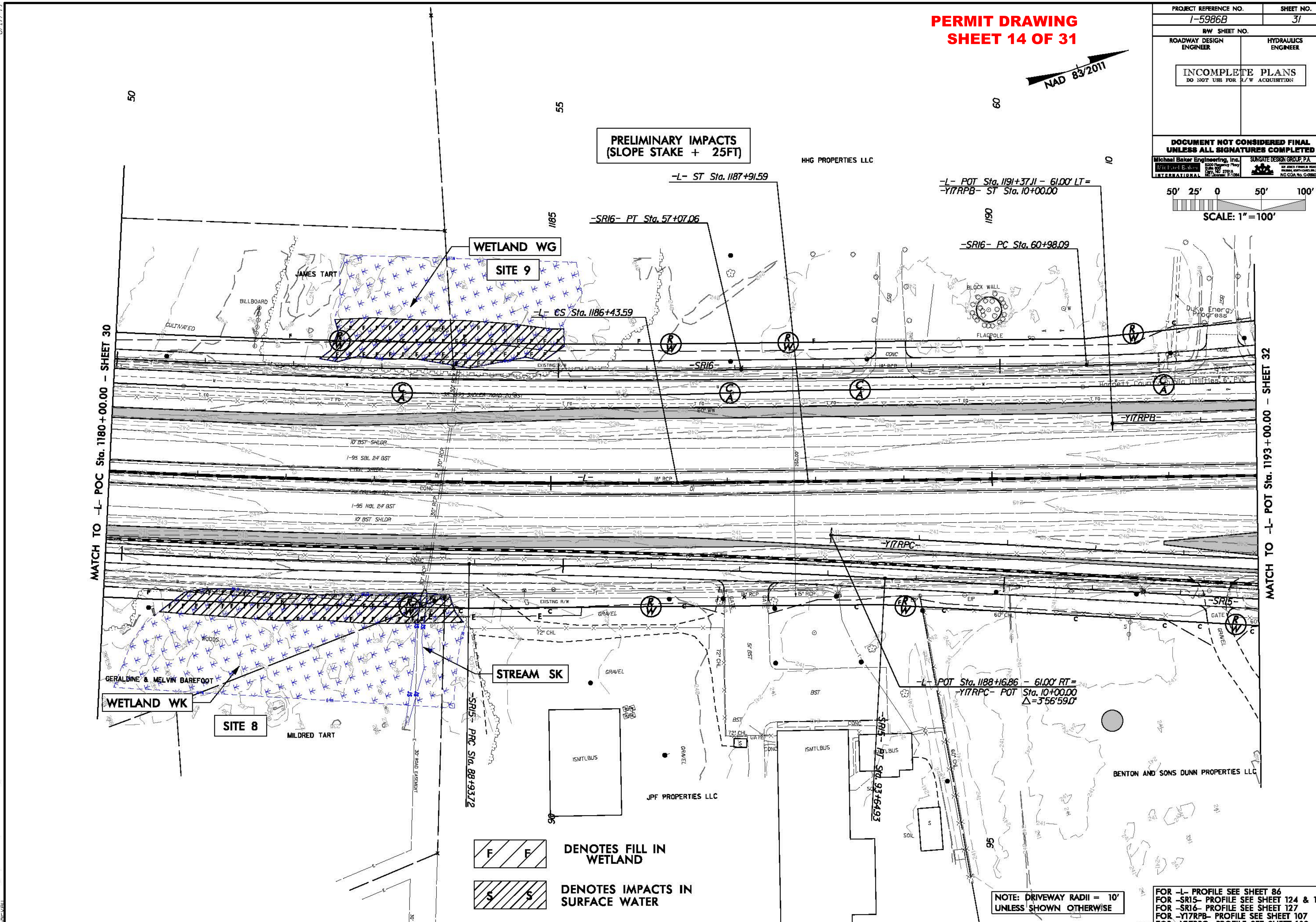
NOTE: DRIVEWAY RADII = 10'
UNLESS SHOWN OTHERWISE

FOR -L- PROFILE SEE SHEET 84
FOR -SR15- PROFILE SEE SHEET 122 & 123

8/17/99
1/18/2019
I-5896B-3_Hyd_prm_wet_psh_27a_con.dgn



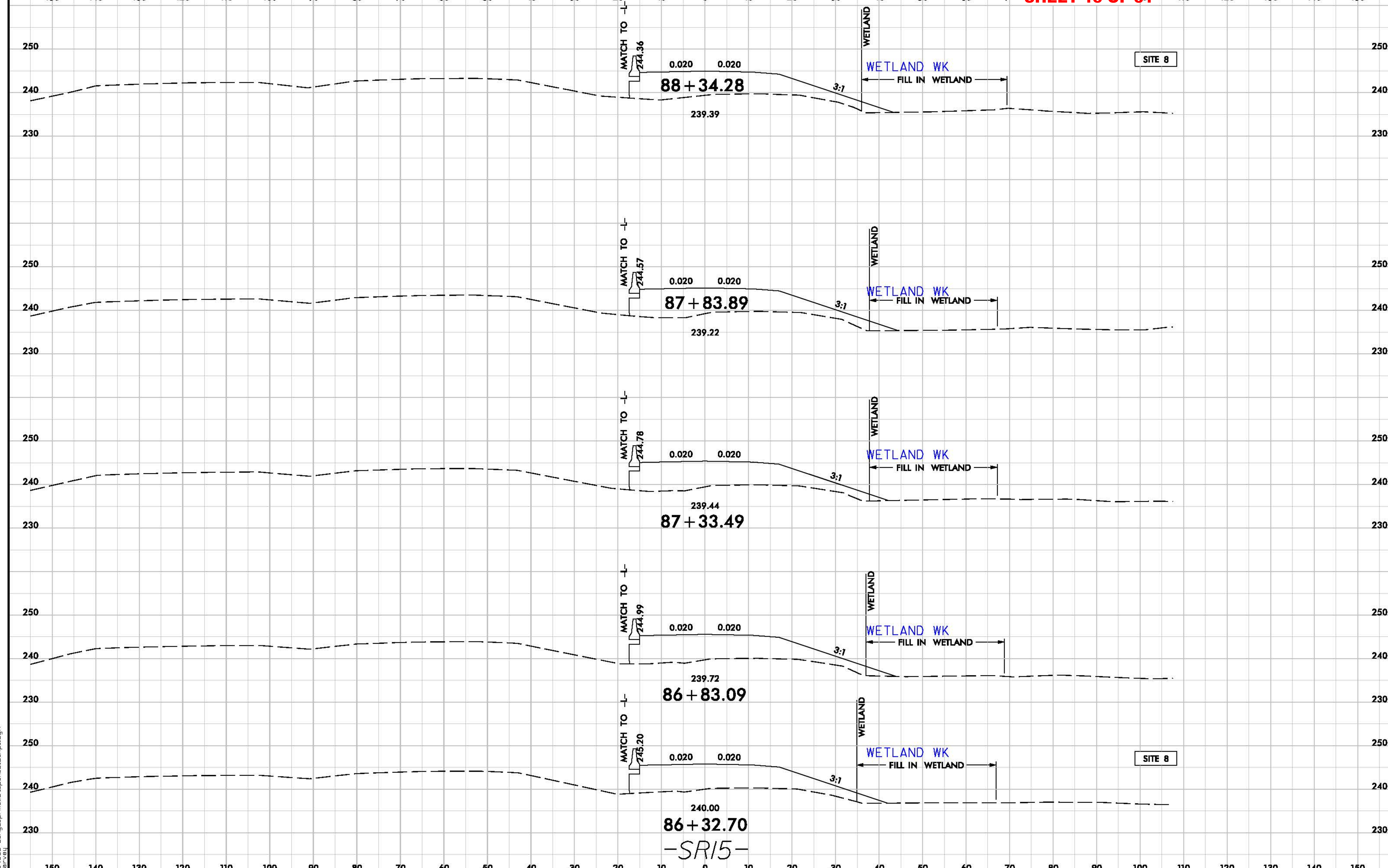
PERMIT DRAWING
SHEET 13 OF 31
PROJECT REFERENCE NO. I-5986B
SHEET NO. 31
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1"=100'
NAD 83/2011
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
HHG PROPERTIES LLC
-L- ST Sta. 1187+91.59
-L- POT Sta. 1191+37.11 - 61.00' LT = -Y17RPB- ST Sta. 10+00.00
-SR16- PT Sta. 57+07.06
-SR16- PC Sta. 60+98.09
-L- CS Sta. 1186+43.59
WETLAND WG
SITE 9
JAMES TART
BILLBOARD
CULTIVATED
BLOCK WALL
FLAGPOLE
Duke Energy Progress
-SR16-
-Y17RPB-
-Y17RPC-
-L-
I-95 SBL 24' BST
I-95 NBL 24' BST
10' BST SHLDR
MATCH TO -L- POC Sta. 1180+00.00 - SHEET 30
MATCH TO -L- POT Sta. 1193+00.00 - SHEET 32
-SR15-
STREAM SK
WETLAND WK
SITE 8
GERALDINE & MELVIN BAREFOOT
WOODS
MILDRED TART
-SR15- PRC Sta. 88+93.72
-L- POT Sta. 1188+16.86 - 61.00' RT = -Y17RPC- POT Sta. 10+00.00 Δ=3°56'59.0"
-SR15- PT Sta. 93+64.93
JPF PROPERTIES LLC
BENTON AND SONS DUNN PROPERTIES LLC
GRAVEL
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 86
FOR -SR15- PROFILE SEE SHEET 124 & 125
FOR -SR16- PROFILE SEE SHEET 127
FOR -Y17RPB- PROFILE SEE SHEET 107
FOR -Y17RPC- PROFILE SEE SHEET 108


PERMIT DRAWING
SHEET 14 OF 31
PROJECT REFERENCE NO. I-5986B
SHEET NO. 31
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
SCALE: 1"=100'
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
HHG PROPERTIES LLC
-L- ST Sta. 1187+91.59
-L- POT Sta. 1191+37.11 - 61.00' LT =
-Y17RPB- ST Sta. 10+00.00
-SR16- PT Sta. 57+07.06
-SR16- PC Sta. 60+98.09
WETLAND WG
SITE 9
JAMES TART
BILLBOARD
CULTIVATED
-L- CS Sta. 1186+43.59
BLOCK WALL
FLAGPOLE
Duke Energy Progress
Harnett County Public Utilities 6" PVC
MATCH TO -L- POC Sta. 1180+00.00 - SHEET 30
MATCH TO -L- POT Sta. 1193+00.00 - SHEET 32
I-95 SBL 24' BST
I-95 NBL 24' BST
10' BST SHLDR
-Y17RPB-
-Y17RPC-
-SR15-
-SR16-
EXISTING R/W
GRAVEL
72" CHL
WOODS
GERALDINE & MELVIN BAREFOOT
WETLAND WK
SITE 8
STREAM SK
MILDRED TART
-SR15- PRC Sta. 88+93.72
-L- POT Sta. 1188+16.86 - 61.00' RT =
-Y17RPC- POT Sta. 10+00.00
Δ=3°56'59.0"
-SR15- PT Sta. 93+64.93
JPF PROPERTIES LLC
BENTON AND SONS DUNN PROPERTIES LLC
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
NOTE: DRIVEWAY RADII = 10'
UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 86
FOR -SR15- PROFILE SEE SHEETS 124 & 125
FOR -SR16- PROFILE SEE SHEET 127
FOR -Y17RPB- PROFILE SEE SHEET 107
FOR -Y17RPC- PROFILE SEE SHEET 108

6/23/16

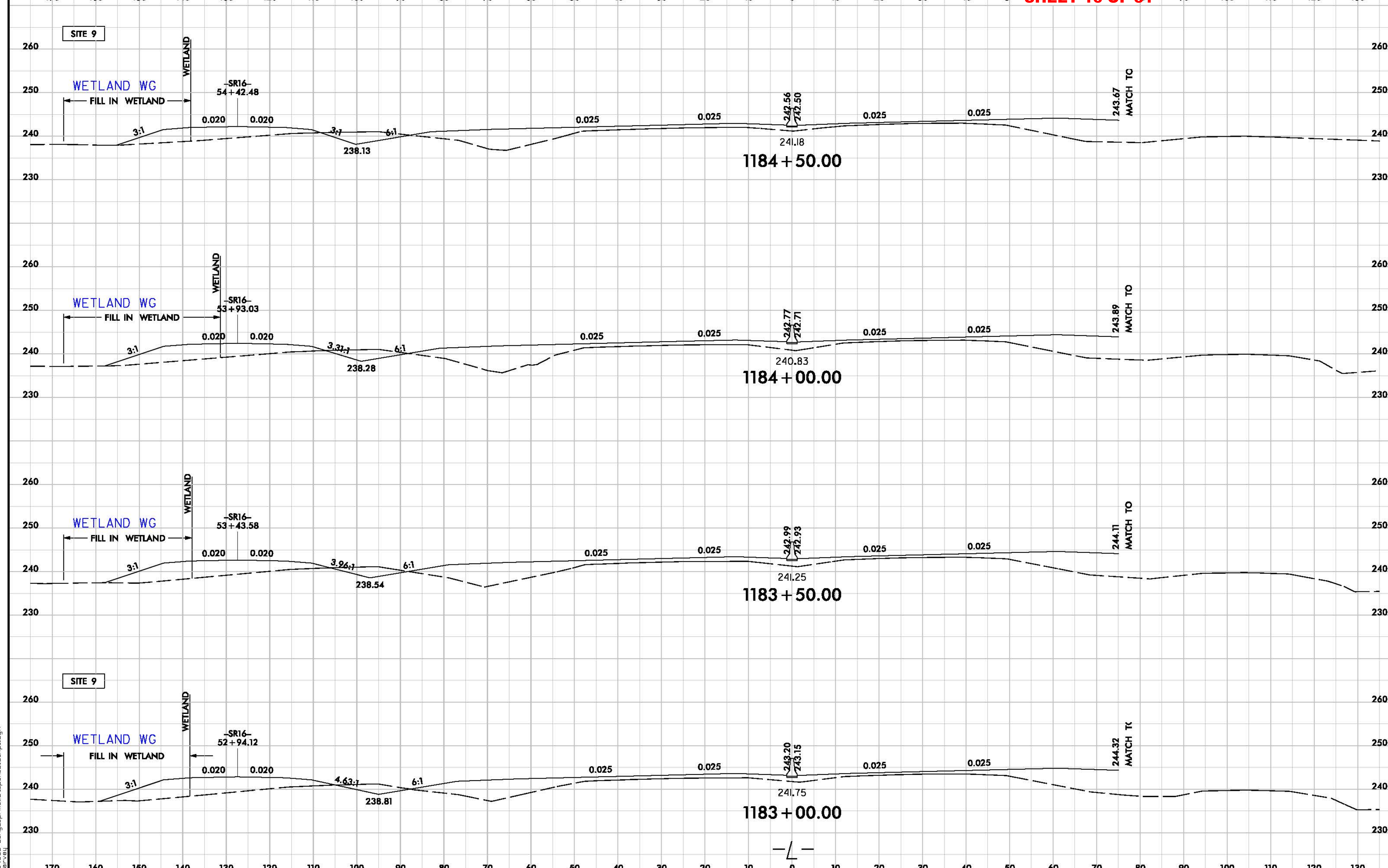
PERMIT DRAWING
SHEET 15 OF 31

PROJ. REFERENCE NO.	SHEET NO.
I-5986B	X-703



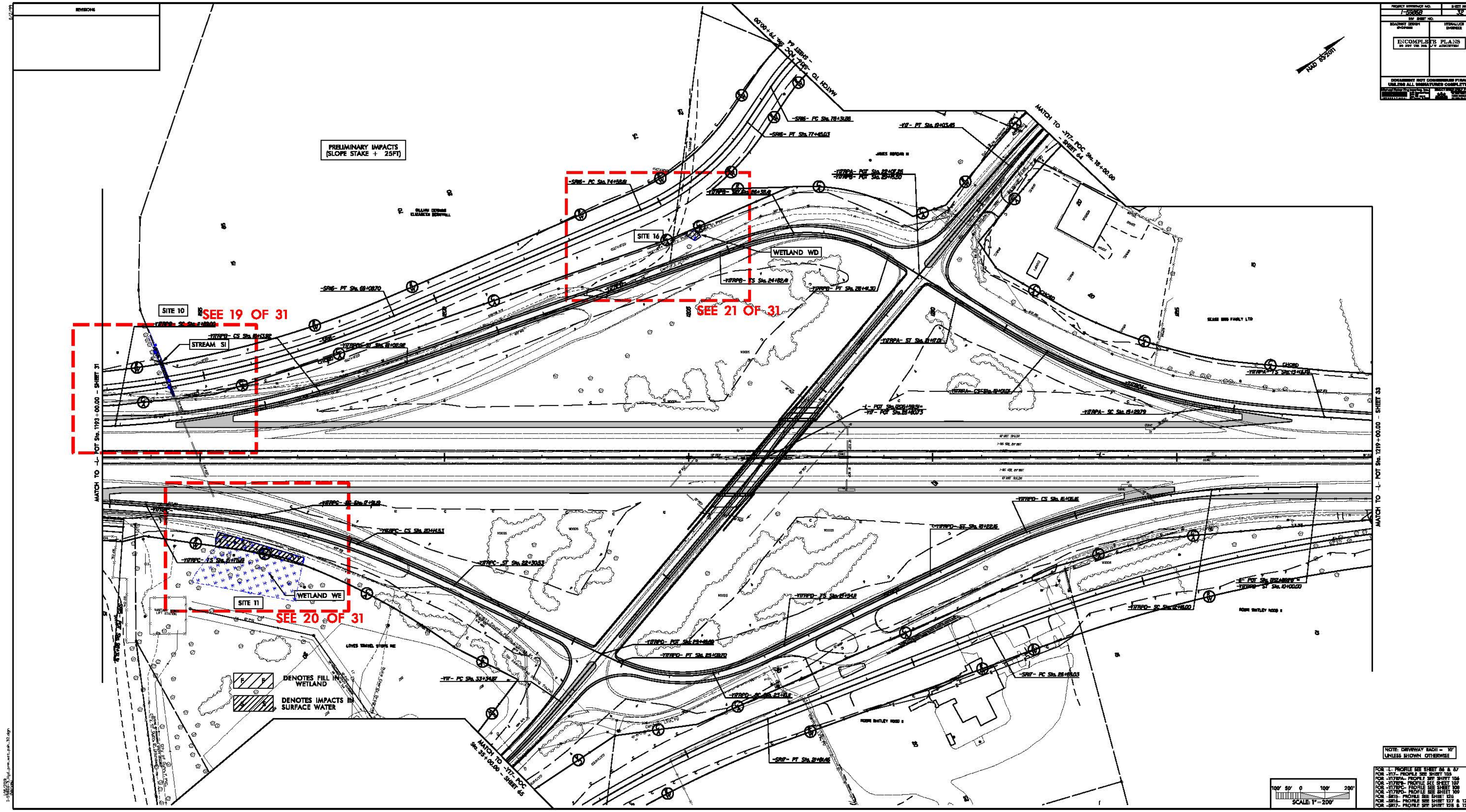
1/18/2019
I-5986B-3_Hyd_prm_wet_psh_31b_xpl.dgn
harvey

PROJ. REFERENCE NO.	SHEET NO.
I-5986B	X-557

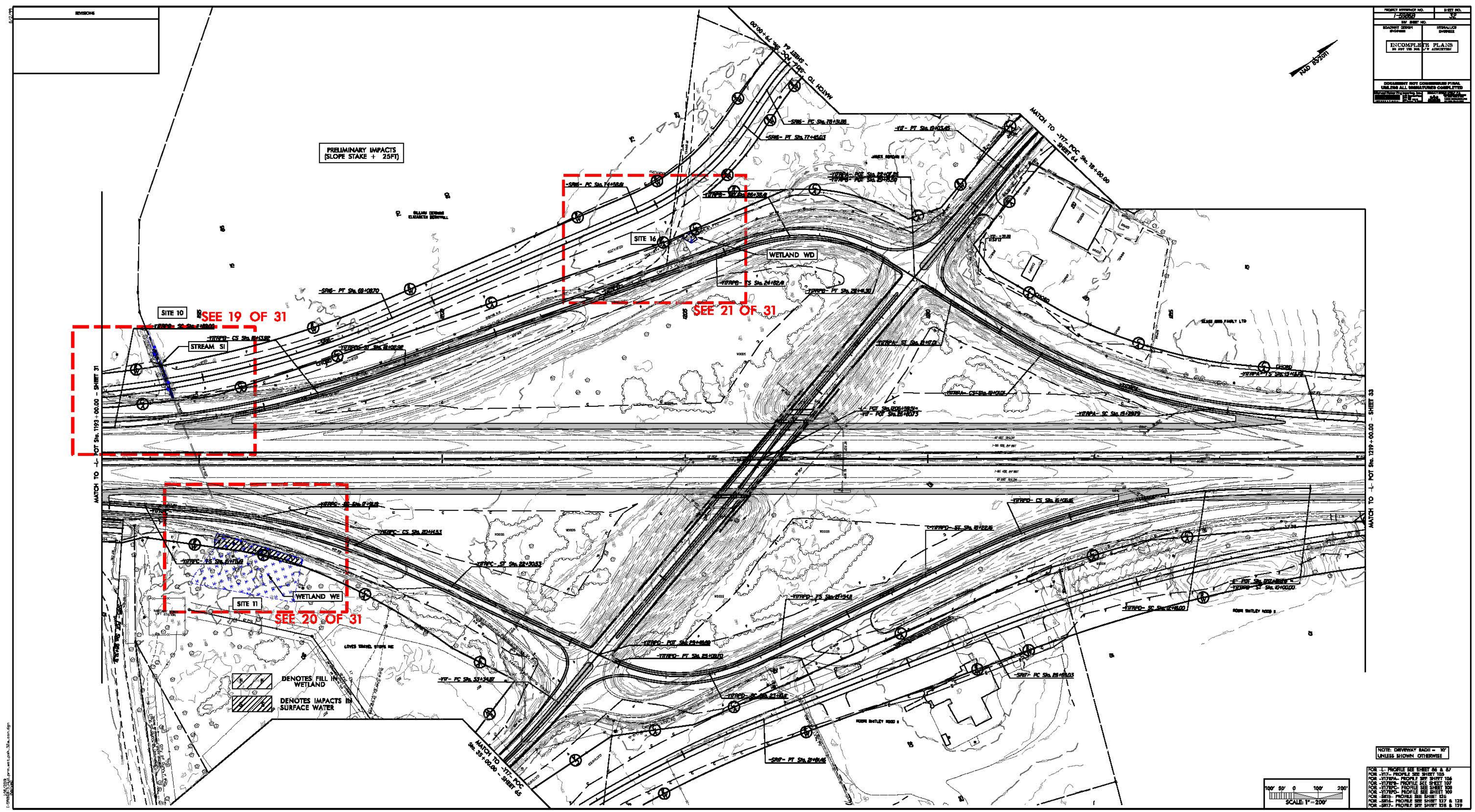


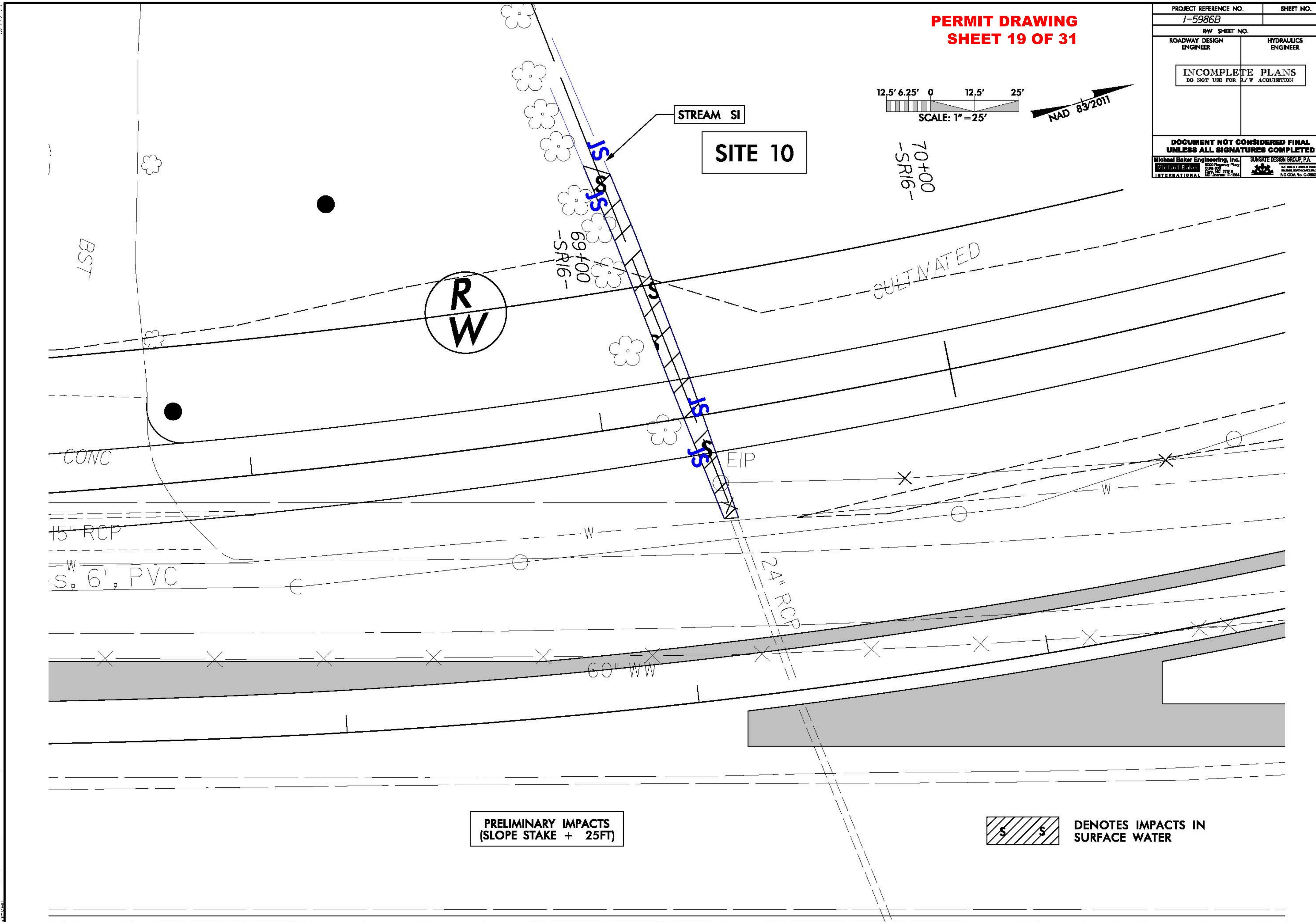
6/23/16
1/18/2019
I-5986B-3_Hyd_prm_wet_psh_31c_xpl.dgn
harvey

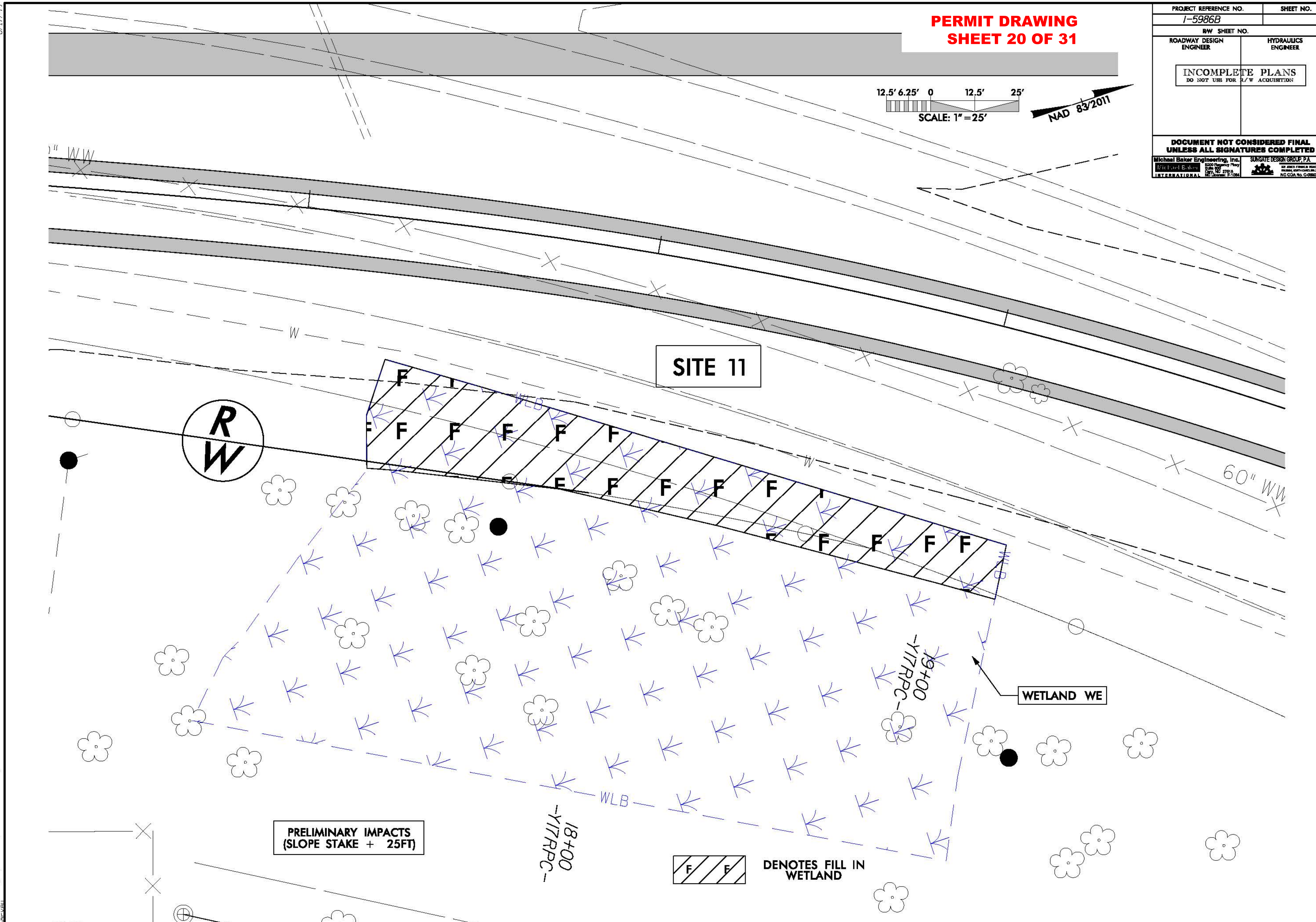
PERMIT DRAWING
SHEET 17 OF 31

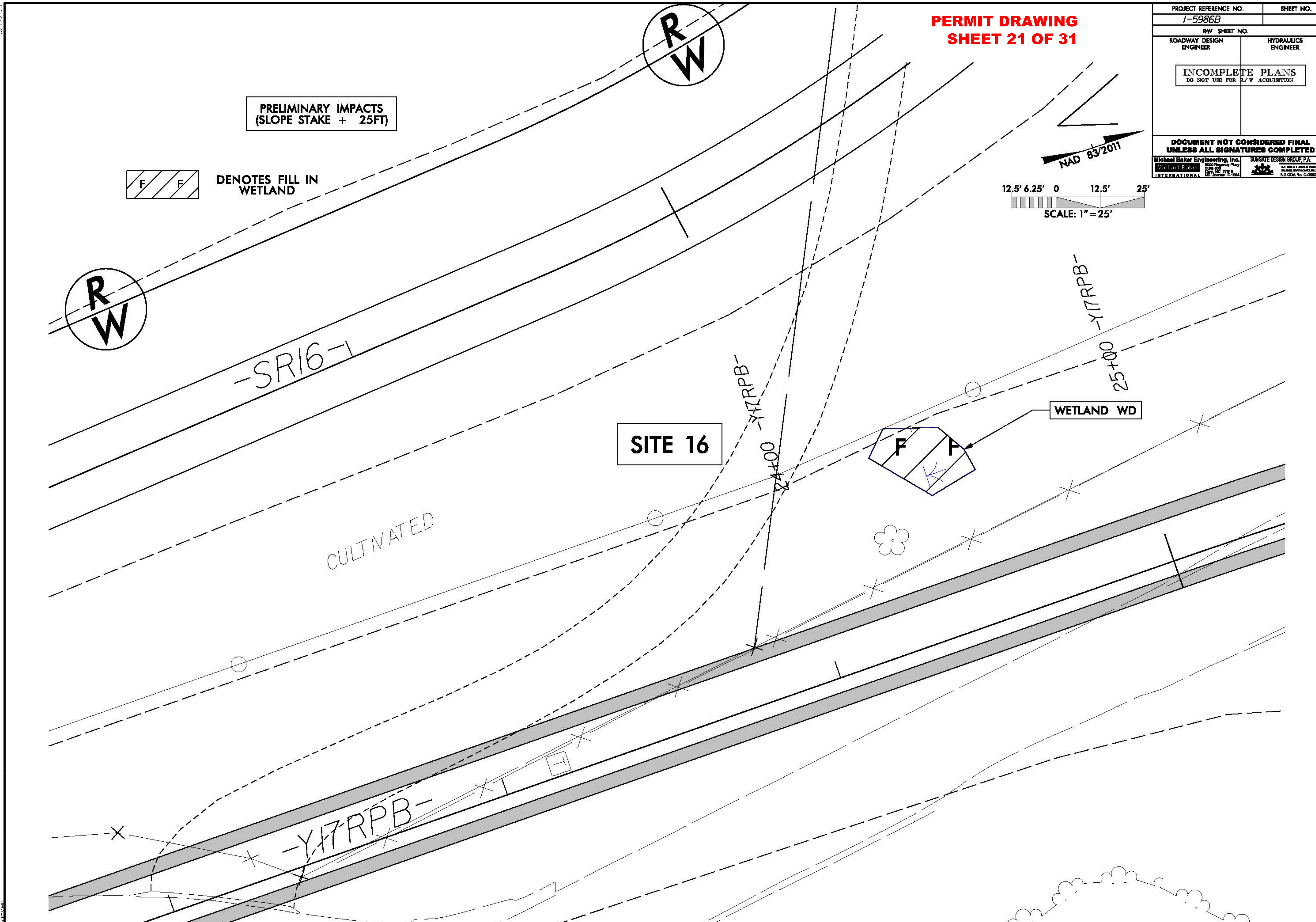


PERMIT DRAWING
SHEET 18 OF 31



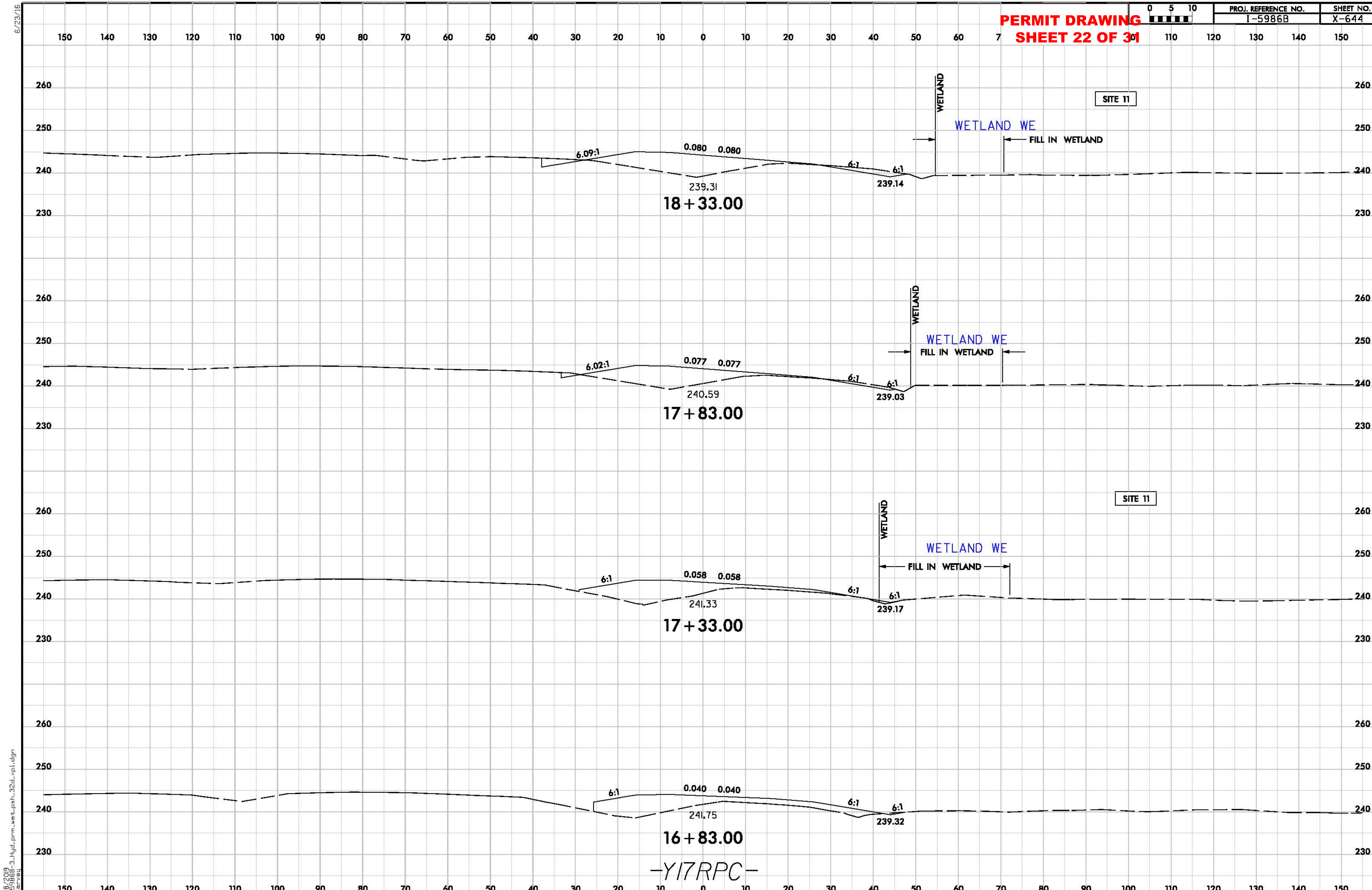

PERMIT DRAWING
SHEET 19 OF 31
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
NAD 83/2011
STREAM SI
SITE 10
-SR16- 69+00
-SR16- 70+00
JS
BST
R/W
CULTIVATED
CONC
EIP
15" RCP
S, 6", PVC
W
24" RCP
60" WW
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
DENOTES IMPACTS IN SURFACE WATER

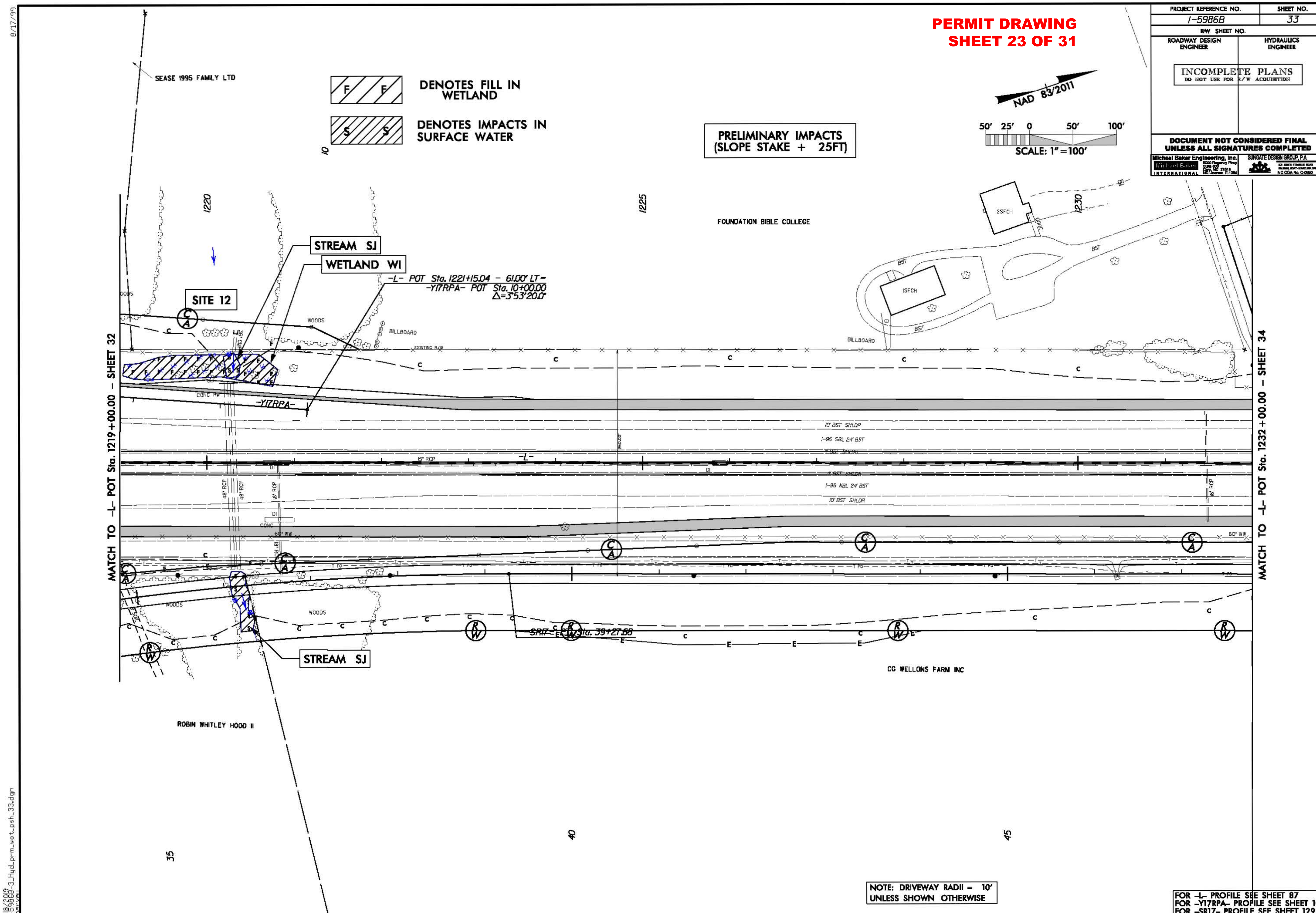

PERMIT DRAWING
SHEET 20 OF 31
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
12.5′ 6.25′ 0 12.5′ 25′
SCALE: 1″=25′
NAD 83/2011
SITE 11
R W
WLB
W
60″ WW
WETLAND WE
19+00 -Y17RPC-
18+00 -Y17RPC-
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
DENOTES FILL IN WETLAND
8/17/99

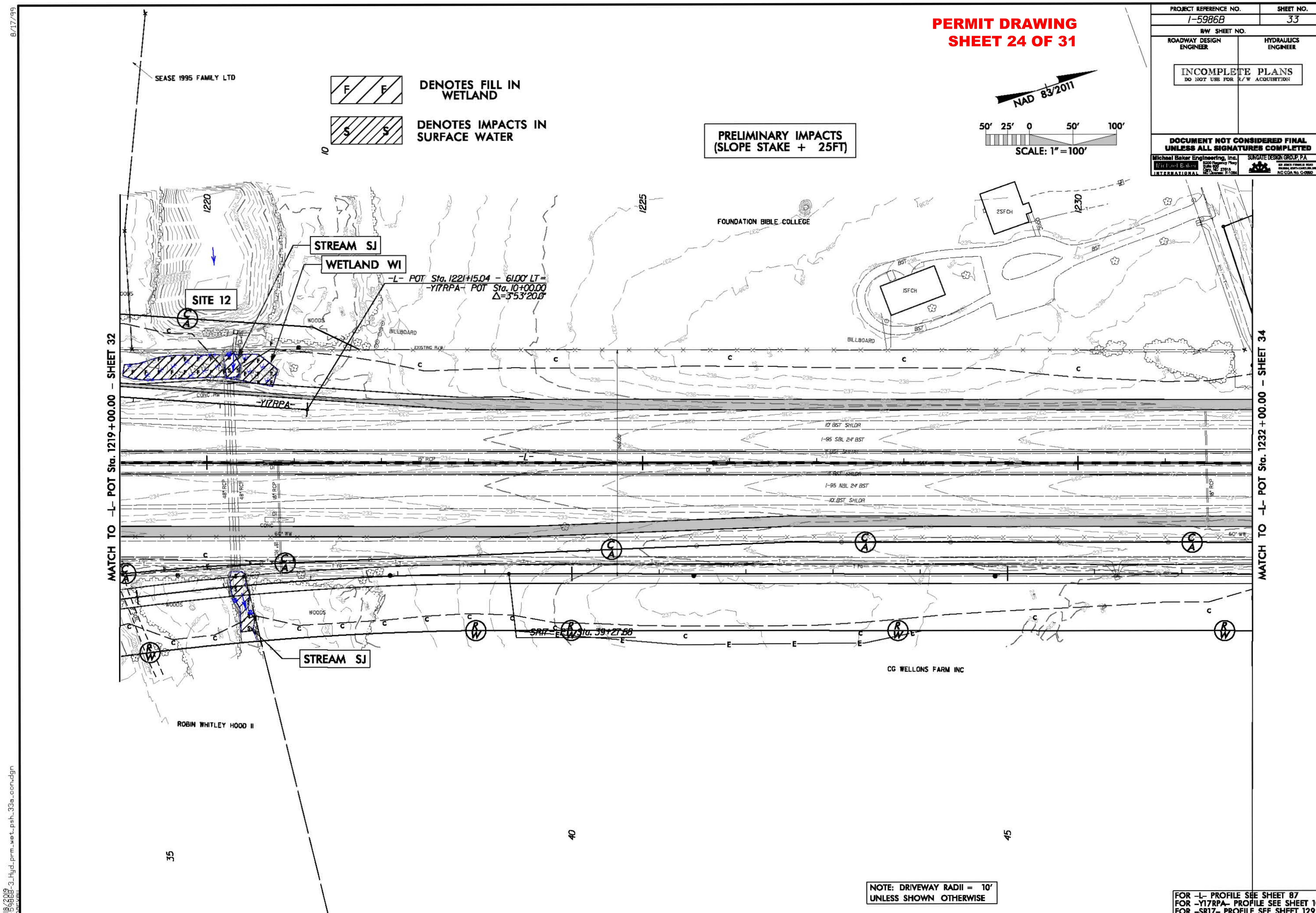

PERMIT DRAWING
SHEET 21 OF 31
PROJECT REFERENCE NO.
SHEET NO.
I-5986B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
F F
DENOTES FILL IN WETLAND
R/W
R/W
-SR16-
SITE 16
CULTIVATED
-Y17RPB-
24+00
-Y17RPB-
25+00
WETLAND WD
F F
-Y17RPB-

PERMIT DRAWING
SHEET 22 OF 31

PROJ. REFERENCE NO.	SHEET NO.
I-5986B	X-644

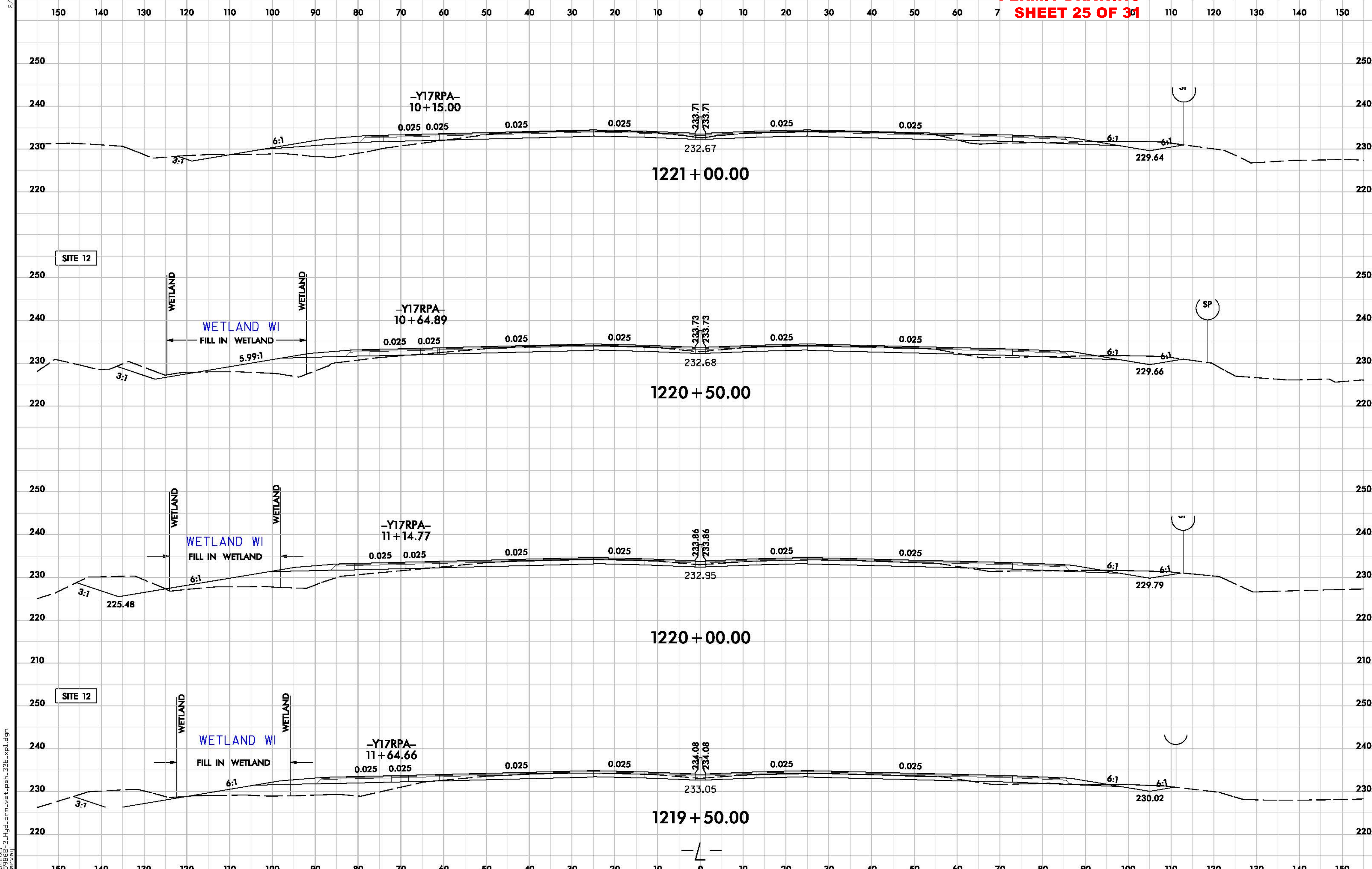



PERMIT DRAWING
SHEET 23 OF 31
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
33
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
NAD 83/2011
50' 25' 0 50' 100'
SCALE: 1"=100'
SEASE 1995 FAMILY LTD
FOUNDATION BIBLE COLLEGE
STREAM SJ
WETLAND WI
SITE 12
-L- POT Sta. 1221+15.04 - 61.00' LT=
-Y17RPA- POT Sta. 10+00.00
Δ=3°53'20.0"
MATCH TO -L- POT Sta. 1219+00.00 - SHEET 32
MATCH TO -L- POT Sta. 1232+00.00 - SHEET 34
BILLBOARD
WOODS
-Y17RPA-
10' BST SHLDR
I-95 SBL 24' BST
I-95 NBL 24' BST
-L-
-SR17- POT Sta. 39+27.88
CG WELLONS FARM INC
ROBIN WHITLEY HOOD II
NOTE: DRIVEWAY RADII = 10'
UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 87
FOR -Y17RPA- PROFILE SEE SHEET 106
FOR -SR17- PROFILE SEE SHEET 129
8/17/99
1/18/2019
I-5986B-3_Hyd_prm_wet_psh_33.dgn


PERMIT DRAWING
SHEET 24 OF 31
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
33
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
SCALE: 1"=100'
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
SEASE 1995 FAMILY LTD
STREAM SJ
WETLAND WI
SITE 12
-L- POT Sta. 1221+15.04 - 61.00' LT =
-Y17RPA- POT Sta. 10+00.00
Δ=3°53'20.0"
FOUNDATION BIBLE COLLEGE
BILLBOARD
-Y17RPA-
I-95 SBL 24' BST
I-95 NBL 24' BST
-L-
MATCH TO -L- POT Sta. 1219+00.00 - SHEET 32
MATCH TO -L- POT Sta. 1232+00.00 - SHEET 34
-SR17- POT Sta. 39+27.68
STREAM SJ
CG WELLONS FARM INC
ROBIN WHITLEY HOOD II
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -L- PROFILE SEE SHEET 87
FOR -Y17RPA- PROFILE SEE SHEET 106
FOR -SR17- PROFILE SEE SHEET 129
8/17/99

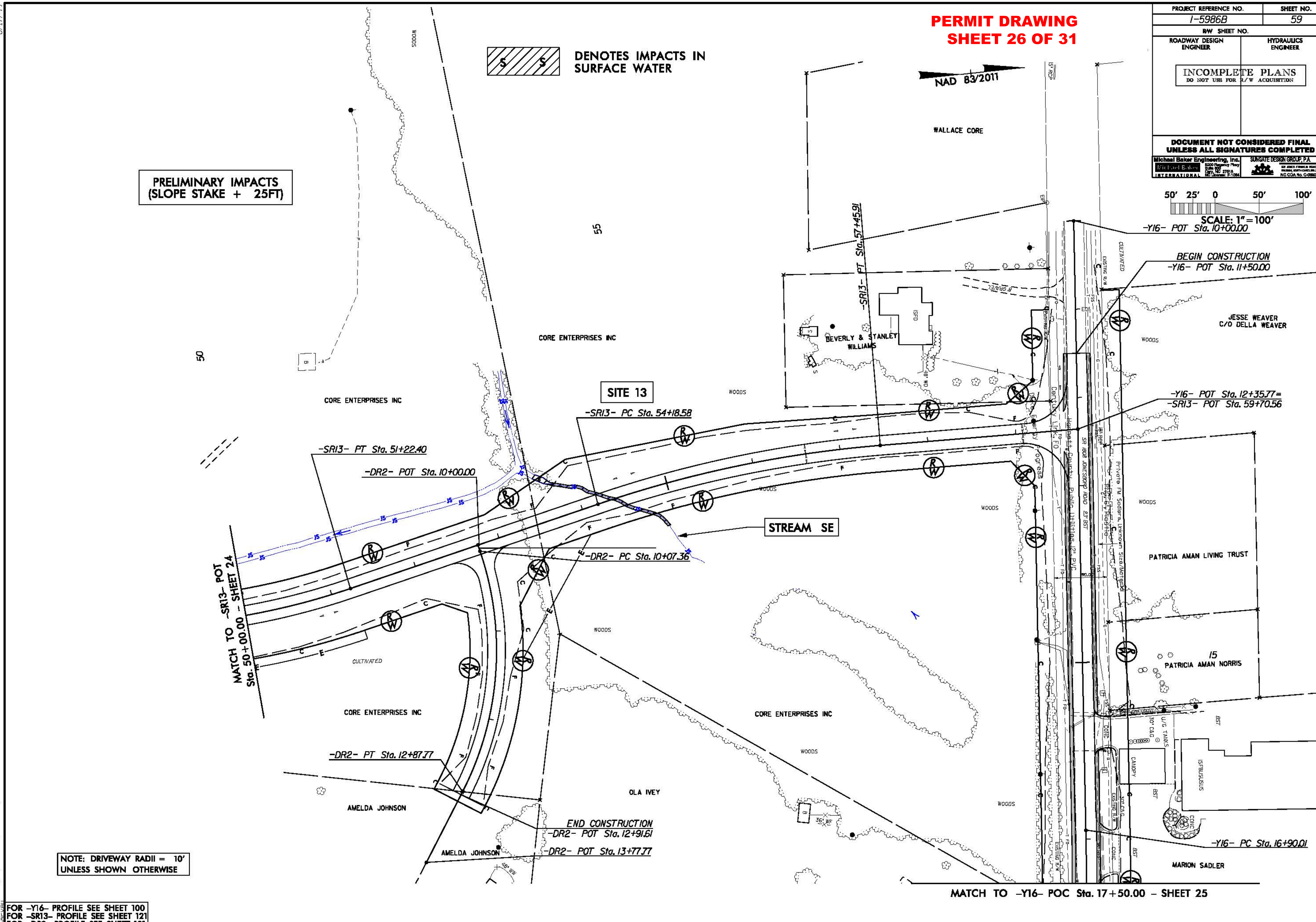
PERMIT DRAWING
SHEET 25 OF 31

PROJ. REFERENCE NO.	SHEET NO.
I-5986B	X-575

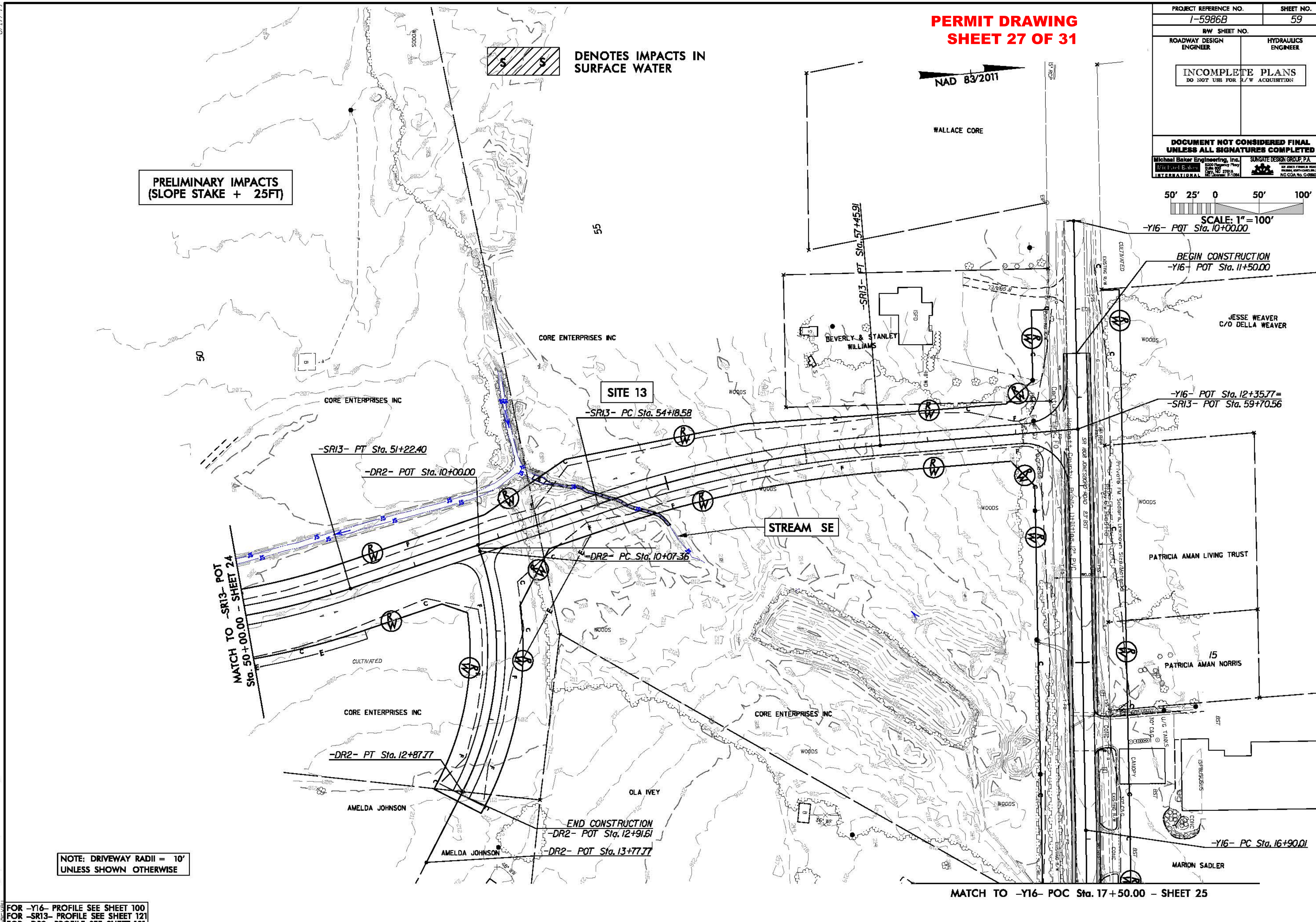


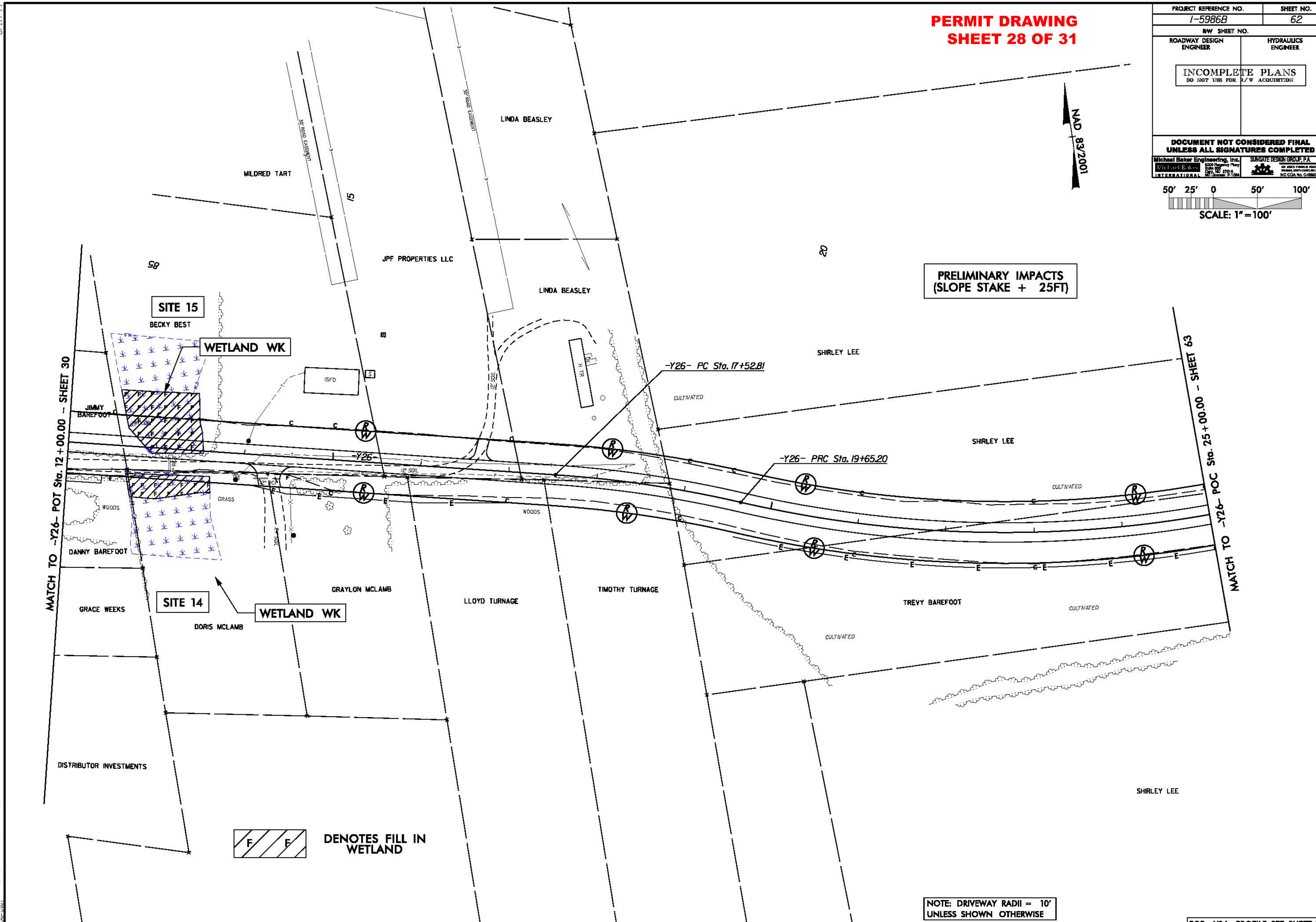
6/23/16

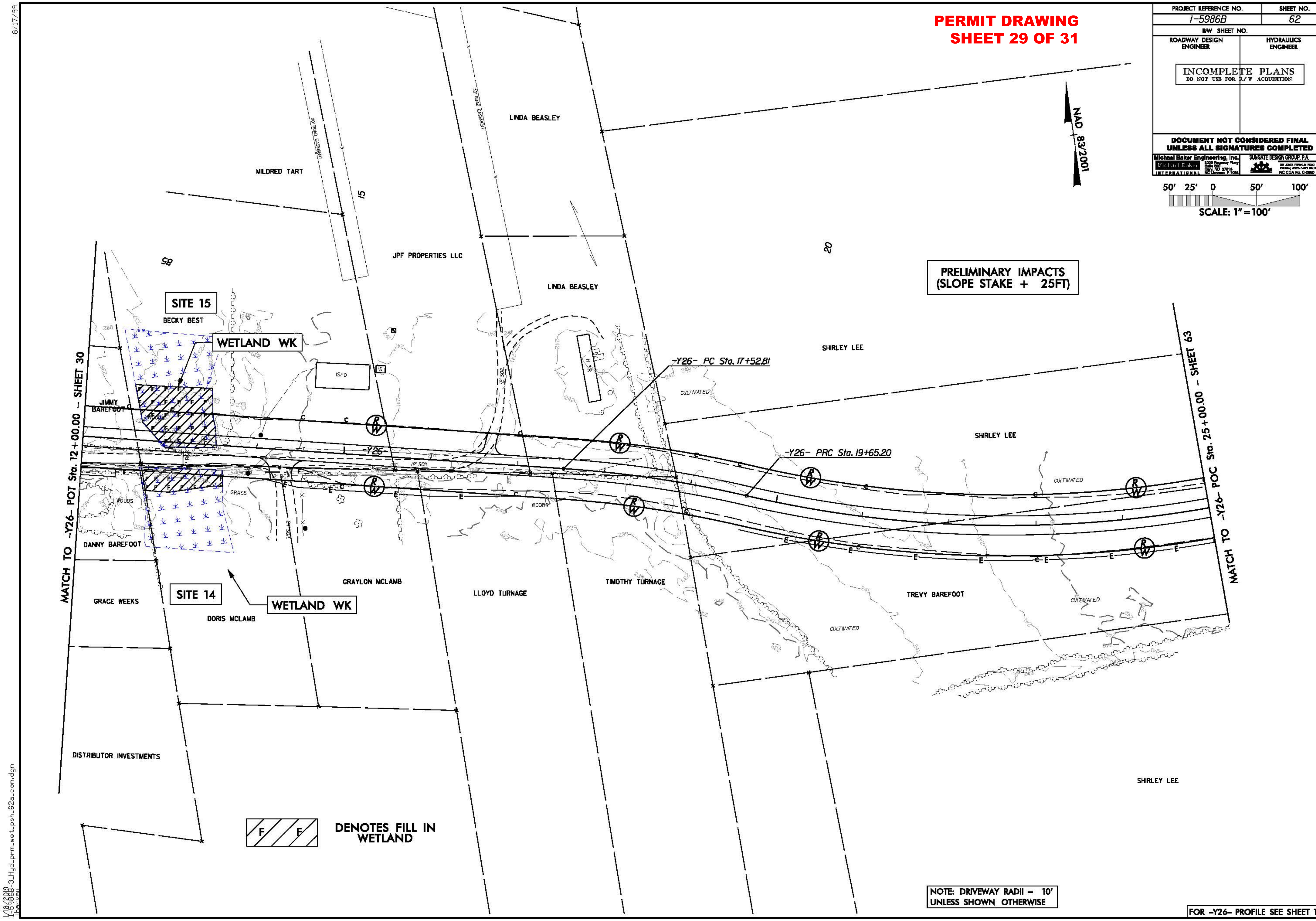
1/18/2019
I-5986B-3_Hyd_prm_wet_psh_33b_xpl.dgn
harvey



PERMIT DRAWING
SHEET 26 OF 31
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
59
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1" = 100'
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
NAD 83/2011
WALLACE CORE
-Y16- POT Sta. 10+00.00
BEGIN CONSTRUCTION
-Y16- POT Sta. 11+50.00
JESSE WEAVER C/O DELLA WEAVER
BEVERLY & STANLEY WILLIAMS
-SR13- PT Sta. 57+45.91
CORE ENTERPRISES INC
SITE 13
-SR13- PC Sta. 54+18.58
-Y16- POT Sta. 12+35.77=
-SR13- POT Sta. 59+70.56
-SR13- PT Sta. 51+22.40
-DR2- POT Sta. 10+00.00
STREAM SE
-DR2- PC Sta. 10+07.36
PATRICIA AMAN LIVING TRUST
MATCH TO -SR13- POT Sta. 50+00.00 - SHEET 24
CULTIVATED
WOODS
15
PATRICIA AMAN NORRIS
-DR2- PT Sta. 12+87.77
OLA IVEY
AMELDA JOHNSON
END CONSTRUCTION
-DR2- POT Sta. 12+91.61
-DR2- POT Sta. 13+77.77
-Y16- PC Sta. 16+90.01
MARION SADLER
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
MATCH TO -Y16- POC Sta. 17+50.00 - SHEET 25
FOR -Y16- PROFILE SEE SHEET 100
FOR -SR13- PROFILE SEE SHEET 121
FOR -DR2- PROFILE SEE SHEET 131


PERMIT DRAWING
SHEET 27 OF 31
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
59
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1"=100'
NAD 83/2011
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
WALLACE CORE
CORE ENTERPRISES INC
BEVERLY & STANLEY WILLIAMS
JESSE WEAVER C/O DELLA WEAVER
PATRICIA AMAN LIVING TRUST
PATRICIA AMAN NORRIS
MARION SADLER
OLA IVEY
AMELDA JOHNSON
SITE 13
STREAM SE
-Y16- POT Sta. 10+00.00
BEGIN CONSTRUCTION
-Y16- POT Sta. 11+50.00
-Y16- POT Sta. 12+35.77=
-SR13- POT Sta. 59+70.56
-SR13- PT Sta. 57+45.91
-SR13- PC Sta. 54+18.58
-SR13- PT Sta. 51+22.40
-DR2- POT Sta. 10+00.00
-DR2- PC Sta. 10+07.36
-DR2- PT Sta. 12+87.77
END CONSTRUCTION
-DR2- POT Sta. 12+91.61
-DR2- POT Sta. 13+77.77
-Y16- PC Sta. 16+90.01
MATCH TO -SR13- POT Sta. 50+00.00 - SHEET 24
MATCH TO -Y16- POC Sta. 17+50.00 - SHEET 25
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -Y16- PROFILE SEE SHEET 100
FOR -SR13- PROFILE SEE SHEET 121
FOR -DR2- PROFILE SEE SHEET 131
WOODS
CULTIVATED
8/17/99

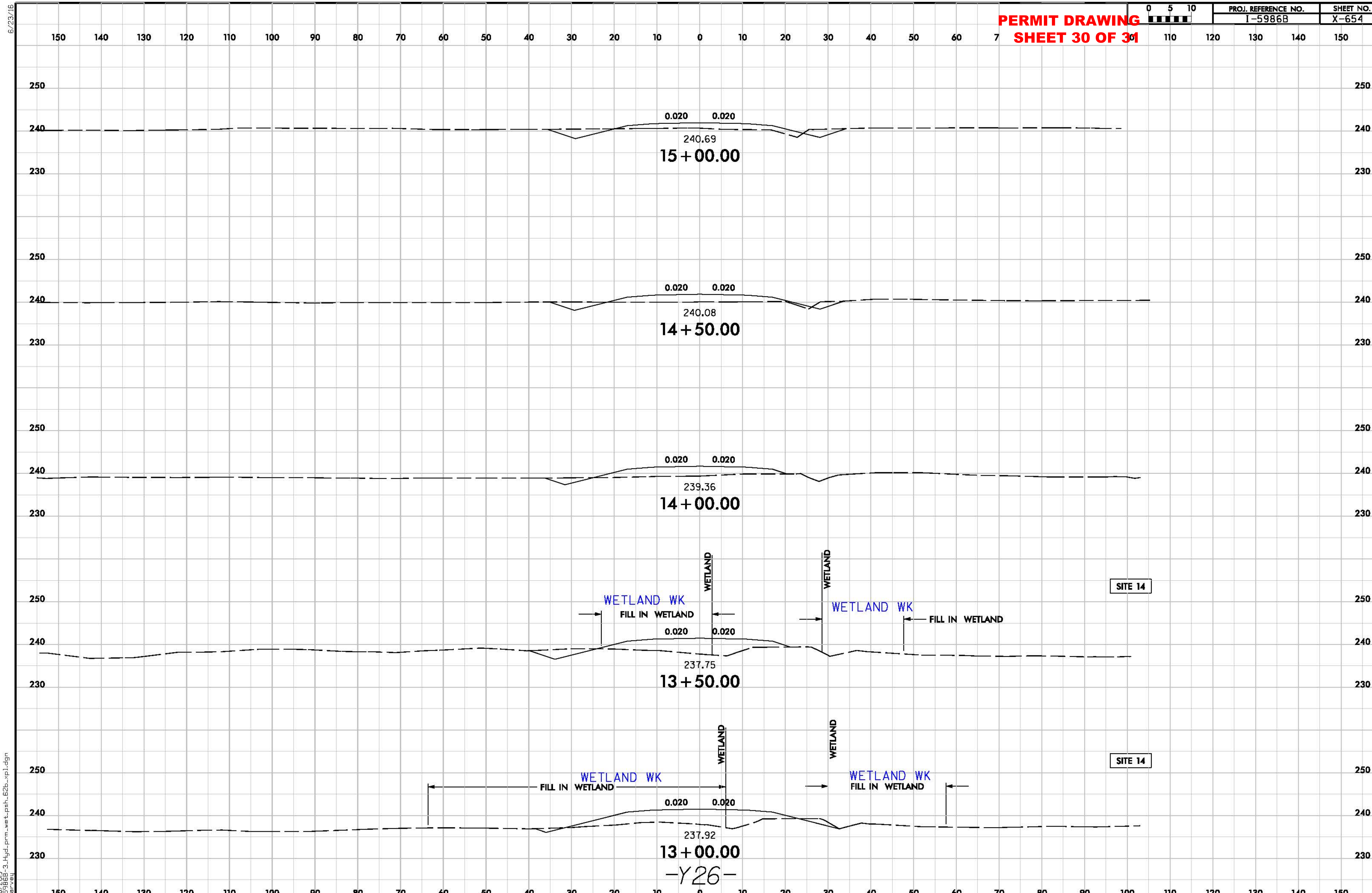

PERMIT DRAWING
SHEET 28 OF 31
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
62
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2001
SCALE: 1"=100'
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
SITE 15
SITE 14
WETLAND WK
WETLAND WK
MILDRED TART
LINDA BEASLEY
LINDA BEASLEY
JPF PROPERTIES LLC
BECKY BEST
JIMMY BAREFOOT
DANNY BAREFOOT
GRACE WEEKS
DORIS MCLAMB
GRAYLON MCLAMB
LLOYD TURNAGE
TIMOTHY TURNAGE
TREVY BAREFOOT
SHIRLEY LEE
SHIRLEY LEE
SHIRLEY LEE
DISTRIBUTOR INVESTMENTS
-Y26- PC Sta. 17+52.81
-Y26- PRC Sta. 19+65.20
-Y26-
MATCH TO -Y26- POT Sta. 12+00.00 - SHEET 30
MATCH TO -Y26- POC Sta. 25+00.00 - SHEET 63
CULTIVATED
WOODS
GRASS
DENOTES FILL IN WETLAND
NOTE: DRIVEWAY RADII = 10' UNLESS SHOWN OTHERWISE
FOR -Y26- PROFILE SEE SHEET 110



8/17/99

1/18/2019
I-5986B-3_Hyd_prm_wet_psh_62a_con.dgn

PROJ. REFERENCE NO.	SHEET NO.
I-5986B	X-654



6/23/16
1/8/2019
I-5986B-3_Hyd_prm_wet_psh_62b_xpl.dgn
harvey

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	1075+84 to 1077+41-L-LT	ROADWAY FILL	0.05					< 0.01		65		
2	44+86 to 48+09-SR13-	ROADWAY FILL						0.05		329		
3	22+04 to 27+47-Y16RPC-	ROADWAY FILL						0.06		582		
4	24+21 to 24+83-Y16RPC-LT	ROADWAY FILL	0.02									
5	32+96 to33+11-SR15-RT	ROADWAY FILL						< 0.01		12		
6	34+52 to 35+60-SR15RT	ROADWAY FILL						< 0.01		111		
7	37+43 to 37+61-SR15-RT	ROADWAY FILL						< 0.01		29		
8	85+45 to88+88-SR15-RT	ROADWAY FILL	0.22					< 0.01		38		
9	52+29 to 55+07-SR16-LT	ROADWAY FILL	0.26									
10	69+06 to 69+34-SR16-	ROADWAY FILL						0.01		106		
11	17+23 to 19+17-Y17RPC-RT	ROADWAY FILL	0.09									
12	10+37 to12+14-Y17RPA-RT	ROADWAY FILL	0.09					0.03		100		
13	53+57 to 54+92-SR13-	ROADWAY FILL						0.01		167		
14	12+67 to 13+62-Y26-RT	ROADWAY FILL	0.05									
15	12+67 to 13+62-Y26-LT	ROADWAY FILL	0.13									
16	24+28 to 24+55-Y17RPB-LT	ROADWAY FILL	< 0.01									
TOTALS*:			0.92					0.19		1539	0	0

*Rounded totals are sum of actual impacts

NOTES:
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT COUNTY
I-5986B-SECTION 3
47532.1.3

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	1075+84 to 1077+41-L-LT	ROADWAY FILL	0.045					0.005		65		
2	44+86 to 48+09-SR13-	ROADWAY FILL						0.046		329		
3	22+04 to 27+47-Y16RPC-	ROADWAY FILL						0.057		582		
4	24+21 to 24+83-Y16RPC-LT	ROADWAY FILL	0.017									
5	32+96 to33+11-SR15-RT	ROADWAY FILL						0.002		12		
6	34+52 to 35+60-SR15RT	ROADWAY FILL						0.008		111		
7	37+43 to 37+61-SR15-RT	ROADWAY FILL						0.003		29		
8	85+45 to88+88-SR15-RT	ROADWAY FILL	0.223					0.006		38		
9	52+29 to 55+07-SR16-LT	ROADWAY FILL	0.263									
10	69+06 to 69+34-SR16-	ROADWAY FILL						0.013		106		
11	17+23 to 19+17-Y17RPC-RT	ROADWAY FILL	0.087									
12	10+37 to12+14-Y17RPA-RT	ROADWAY FILL	0.094					0.034		100		
13	53+57 to 54+92-SR13-	ROADWAY FILL						0.012		167		
14	12+67 to 13+62-Y26-RT	ROADWAY FILL	0.051									
15	12+67 to 13+62-Y26-LT	ROADWAY FILL	0.126									
16	24+28 to 24+55-Y17RPB-LT	ROADWAY FILL	0.009									
TOTALS*:			**0.92**	**0.00**	**0.00**	**0.00**	**0.00**	**0.19**	**0.00**	**1539**	**0**	**0**

*Rounded totals are sum of actual impacts

NOTES:

PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

DATA ENTRY SHEET for impact totals to nearest 0.001 acre.

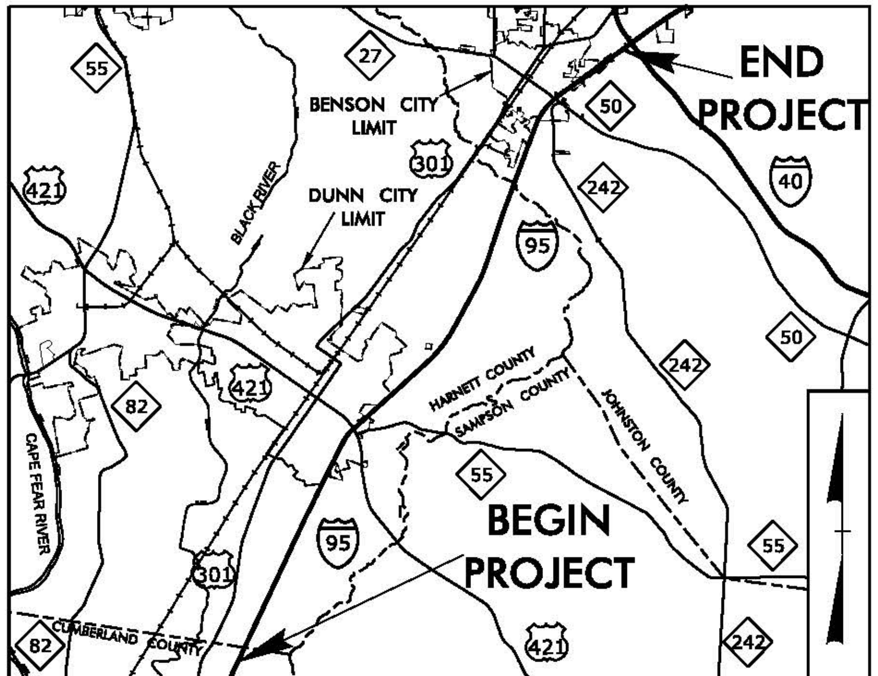
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT COUNTY
I-5986B-SECTION 3
47532.1.3

SHEET 31 OF 31

PERMIT DRAWING
SHEET 1 OF 19

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5986B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47532.1.3		PE	

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



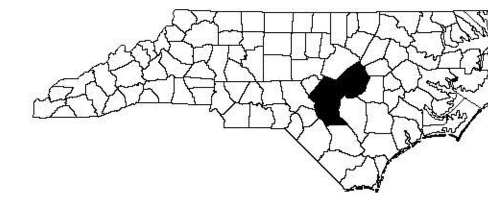
VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND, HARNETT, AND JOHNSTON COUNTIES

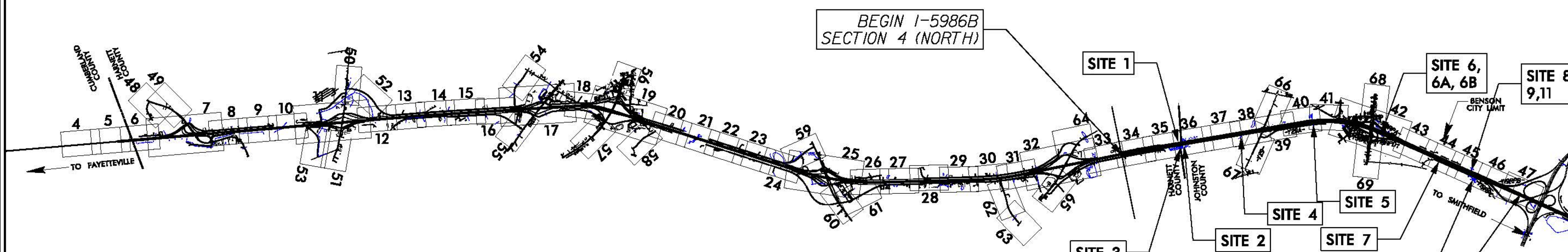
LOCATION: I-95 FROM SR 1811 (BUD HAWKINS ROAD) (EXIT 70) TO I-40 (EXIT 81). WIDEN TO EIGHT LANES.

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS, CULVERTS, AND STRUCTURES



WETLAND AND SURFACE WATER IMPACTS PERMIT
SECTION 4 (NORTH)

NAD 83/2011



PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TIP PROJECT: I-5986B

CONTRACT:

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2020 = 58,900
ADT 2040 = 75,700
K = 7 %
D = 55 %
T = 24 % *
V = 70 MPH
* (17% TTST + 7% DUALS)
FUNC CLASS = INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I 5986B = 11.865 MILES

LENGTH STRUCTURE TIP PROJECT I-5986B = 0.020 MILES

TOTAL LENGTH TIP PROJECT I-5986B = 11.885 MILES

Prepared In the Office of:
Michael Baker INTERNATIONAL
Michael Baker Engineering, Inc.
8000 Regency Parkway, Suite 600
Cary, NC 27518
Professional Corporation License Number: F-1084
FOR DIVISION OF HIGHWAYS

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 1, 2019

LETTING DATE:
JULY 21, 2020

SUSAN C. LANCASTER, P.E.
PROJECT ENGINEER

CURTIS TILLMAN, P.E.
PROJECT DESIGN ENGINEER

STEVE D. KENDALL, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

1/18/2019
I-5986B-4_Hyd_prm_wet_psh_01.dgn
jharvey

09/08/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	35
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 2 OF 19

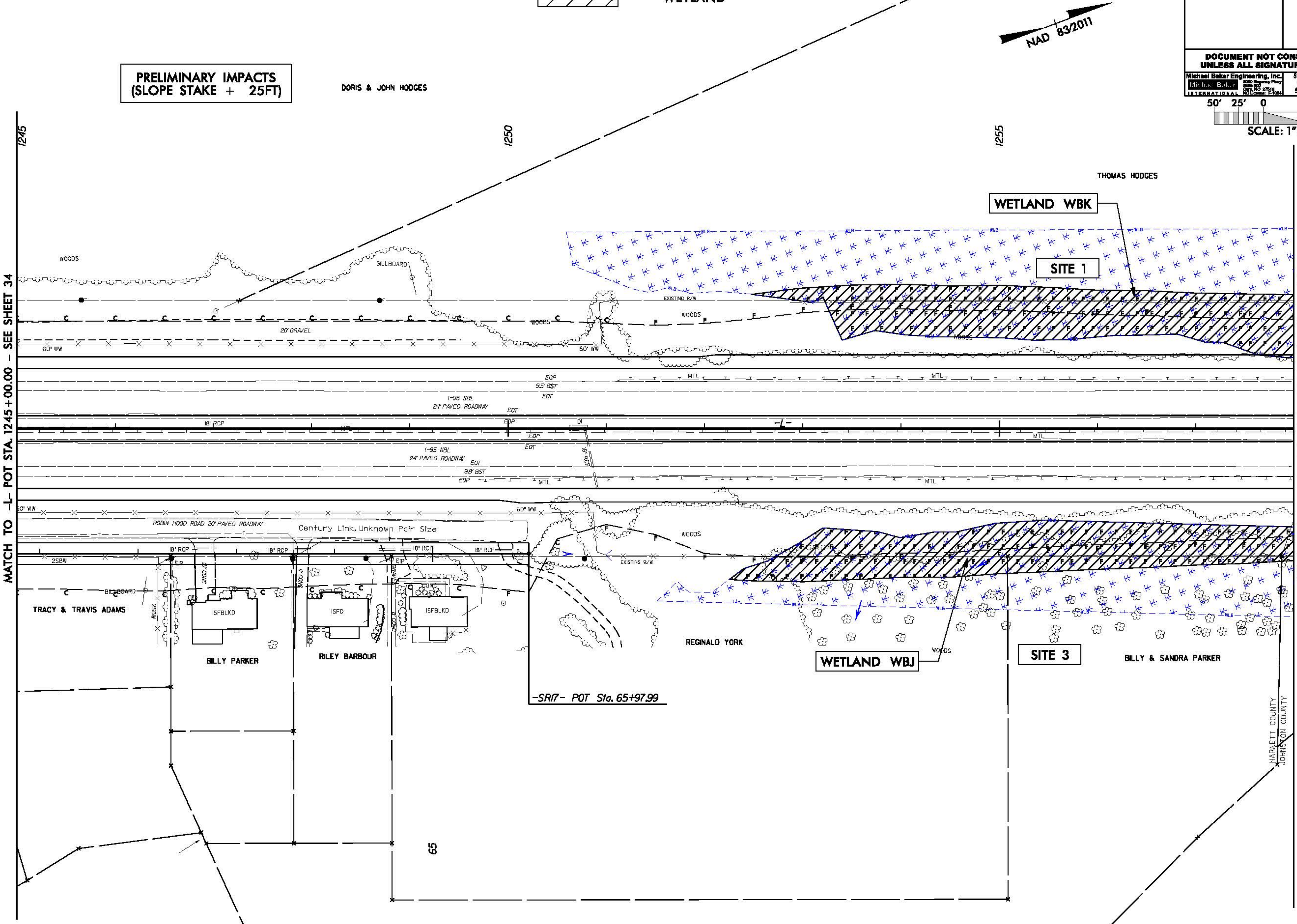
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.

SCALE: 1" = 100'

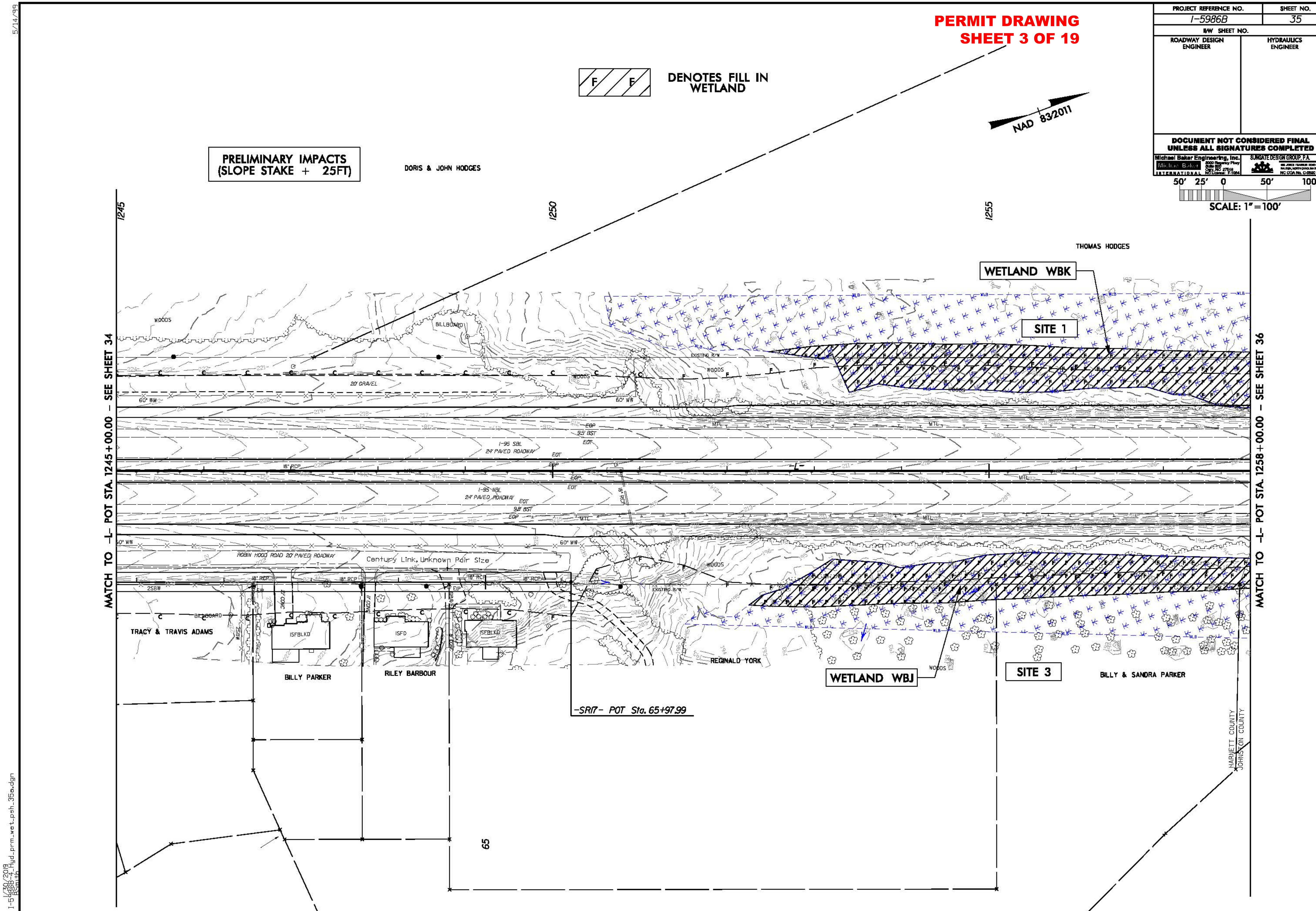
F F — DENOTES FILL IN WETLAND

PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)



5/14/99

1/30/2019
I-5986B-4_Hyd_prm_wet_psh_35.dgn



PERMIT DRAWING
SHEET 3 OF 19
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
35
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1" = 100'
NAD 83/2011
DENOTES FILL IN WETLAND
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
DORIS & JOHN HODGES
THOMAS HODGES
WETLAND WBK
SITE 1
WETLAND WBJ
SITE 3
1245
1250
1255
MATCH TO -L- POT STA. 1245+00.00 - SEE SHEET 34
MATCH TO -L- POT STA. 1258+00.00 - SEE SHEET 36
WOODS
BILLBOARD
20' GRAVEL
60' WW
I-95 SBL
24' PAVED ROADWAY
I-95 NBL
24' PAVED ROADWAY
ROBIN HOOD ROAD 20' PAVED ROADWAY
Century Link, Unknown Pair Size
EXISTING R/W
TRACY & TRAVIS ADAMS
BILLY PARKER
RILEY BARBOUR
REGINALD YORK
BILLY & SANDRA PARKER
-SR17- POT Sta. 65+97.99
65
HARNETT COUNTY
JOHNSTON COUNTY

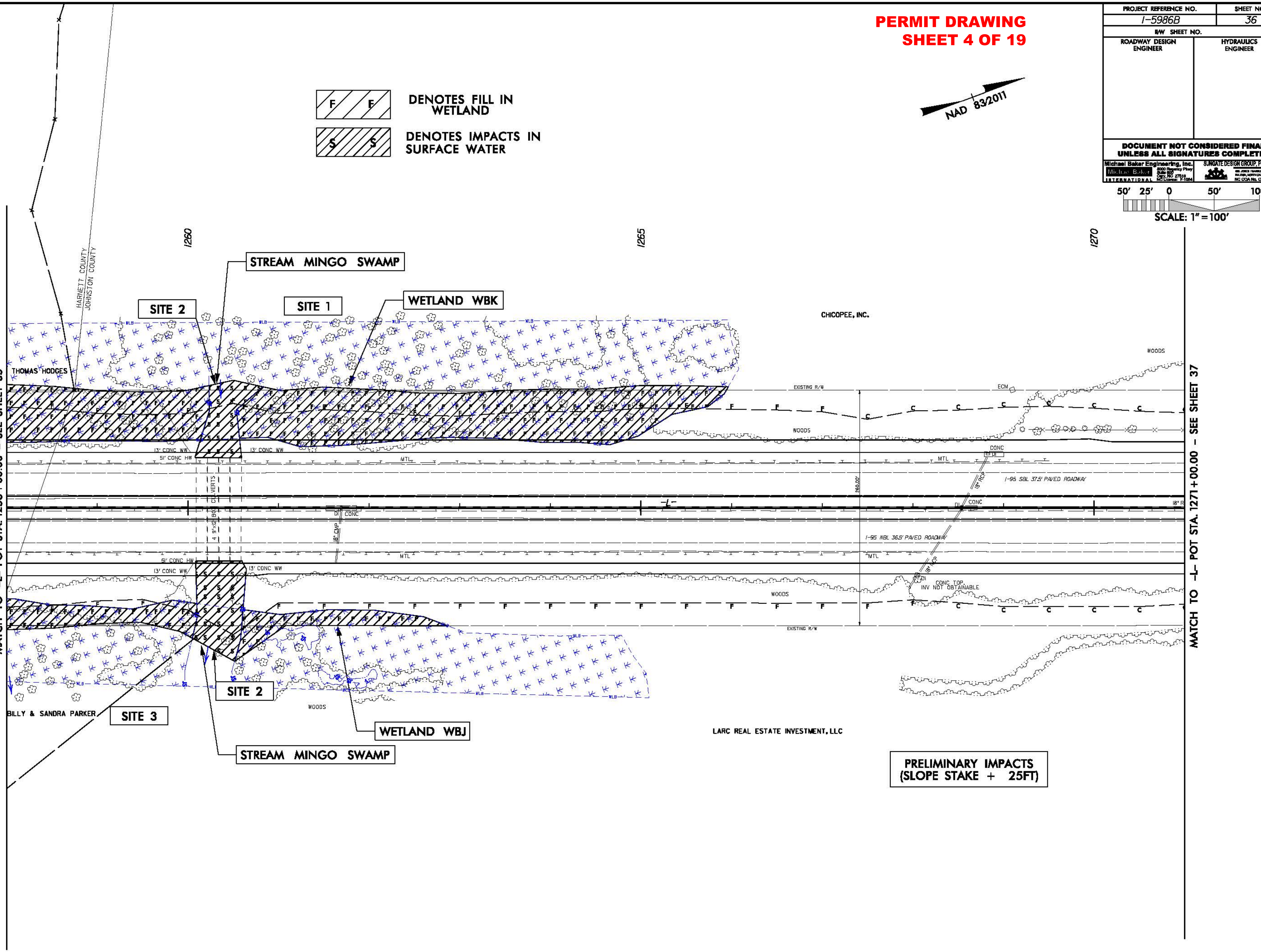
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	36
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING
SHEET 4 OF 19



5/14/99

1/30/2019 I-5986B-4_Hyd_prm_wet_psh_36.dgn BSmith

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	36
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

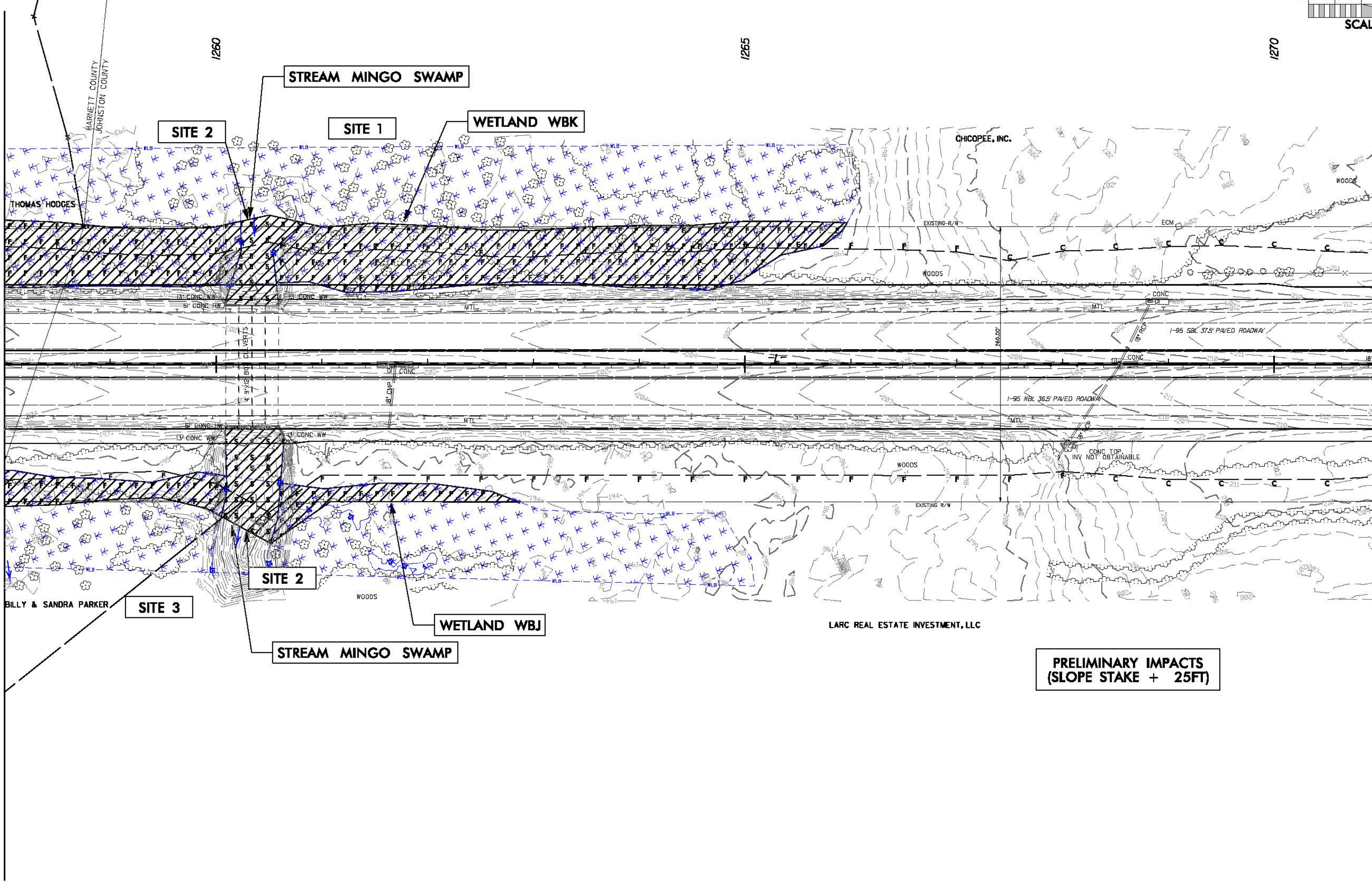
SUNGATE DESIGN GROUP, P.A.

SCALE: 1" = 100'

DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

NAD 83/2011



PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

5/14/99

1/30/2019
I-5986B-4_Hyd_prm_wet_psh_36a.dgn
BSmith

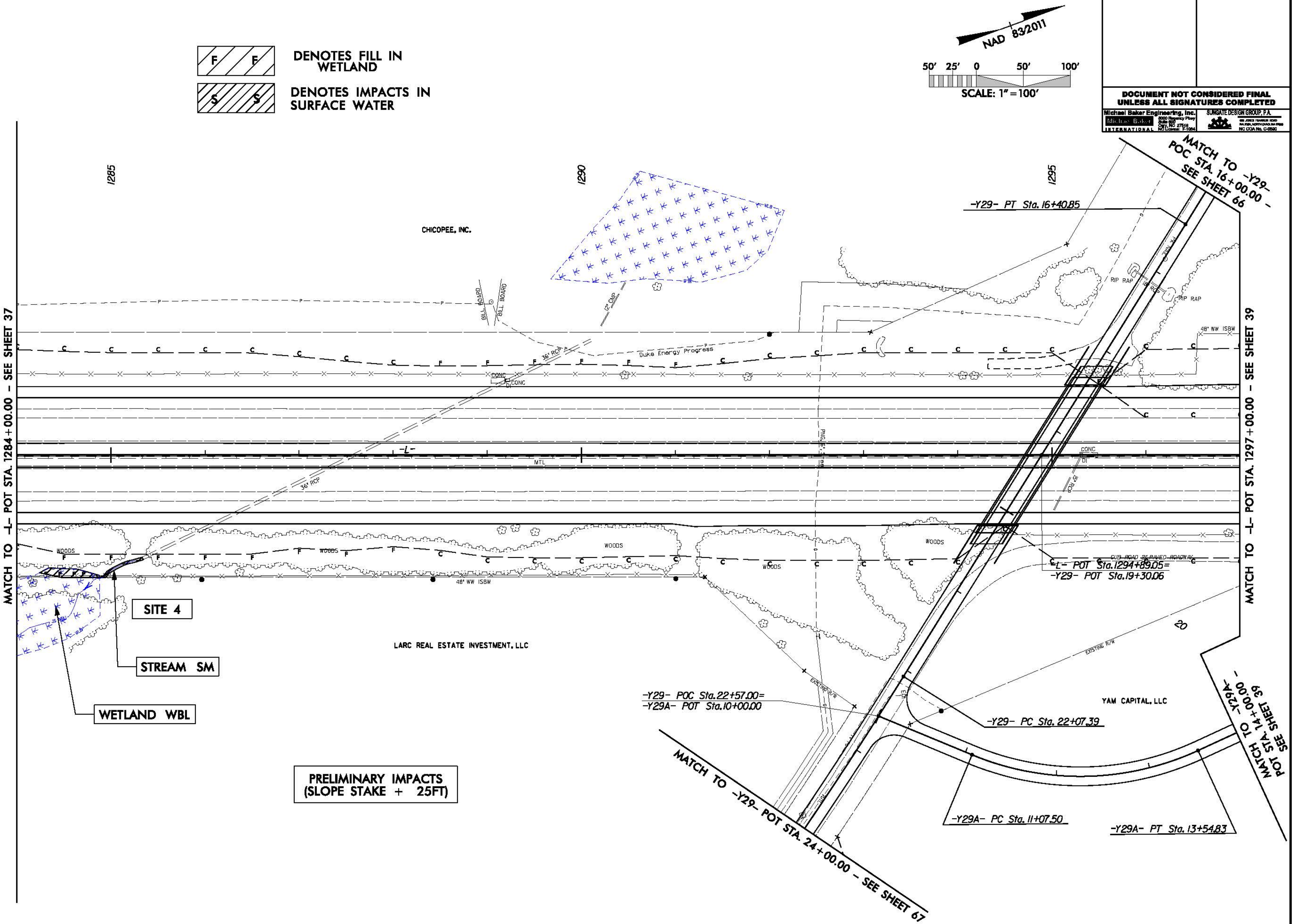
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	38

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. | SUNGATE DESIGN GROUP, P.A.



PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

5/14/99
1/18/2019
I-5986B-4_Hyd_prm_wet_psh_38.dgn

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	38
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 7 OF 19

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

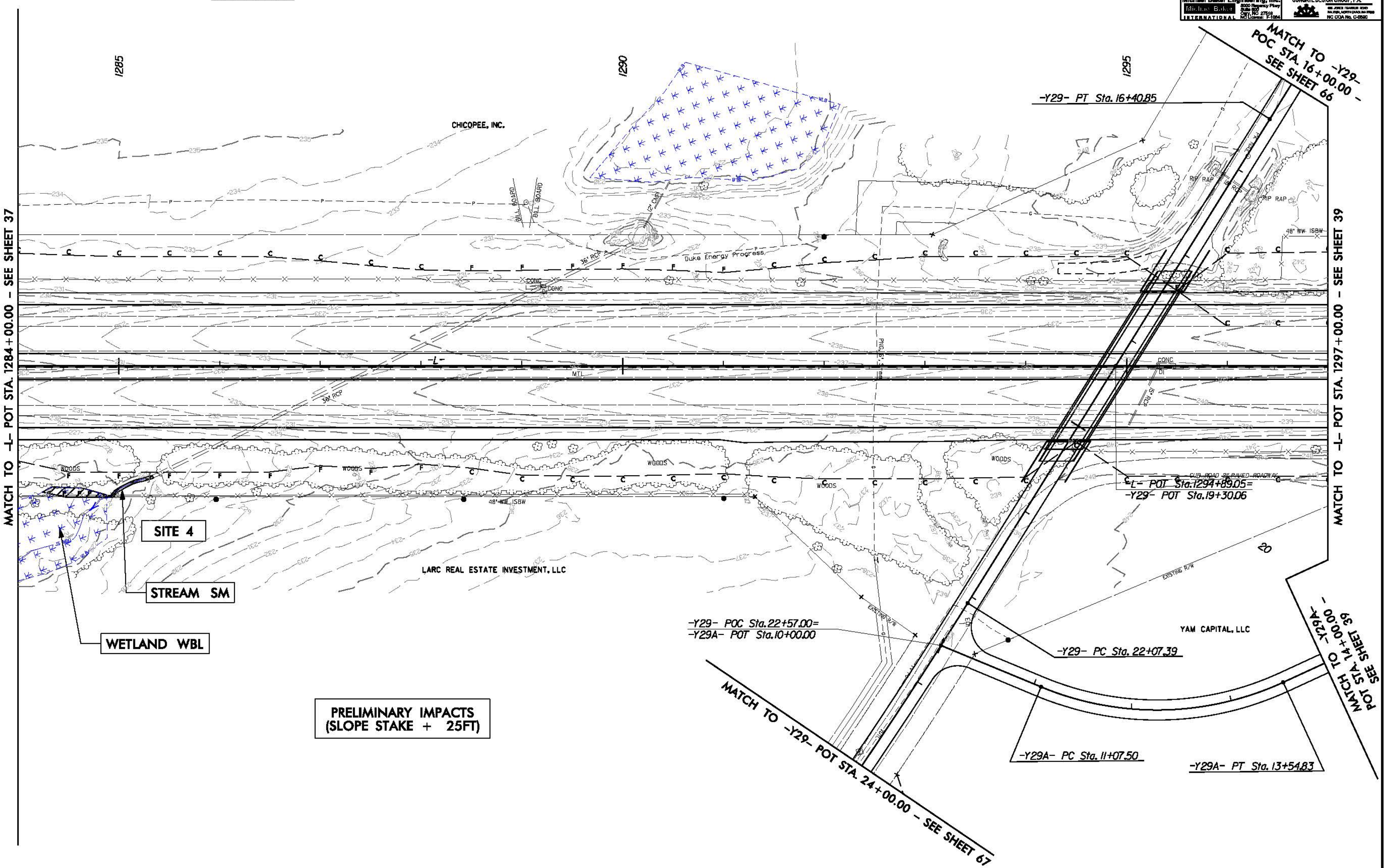
Michael Baker Engineering, Inc. — Michael Baker INTERNATIONAL
SUNGATE DESIGN GROUP, P.A.

NAD 83/2011

50' 25' 0 50' 100'
SCALE: 1" = 100'

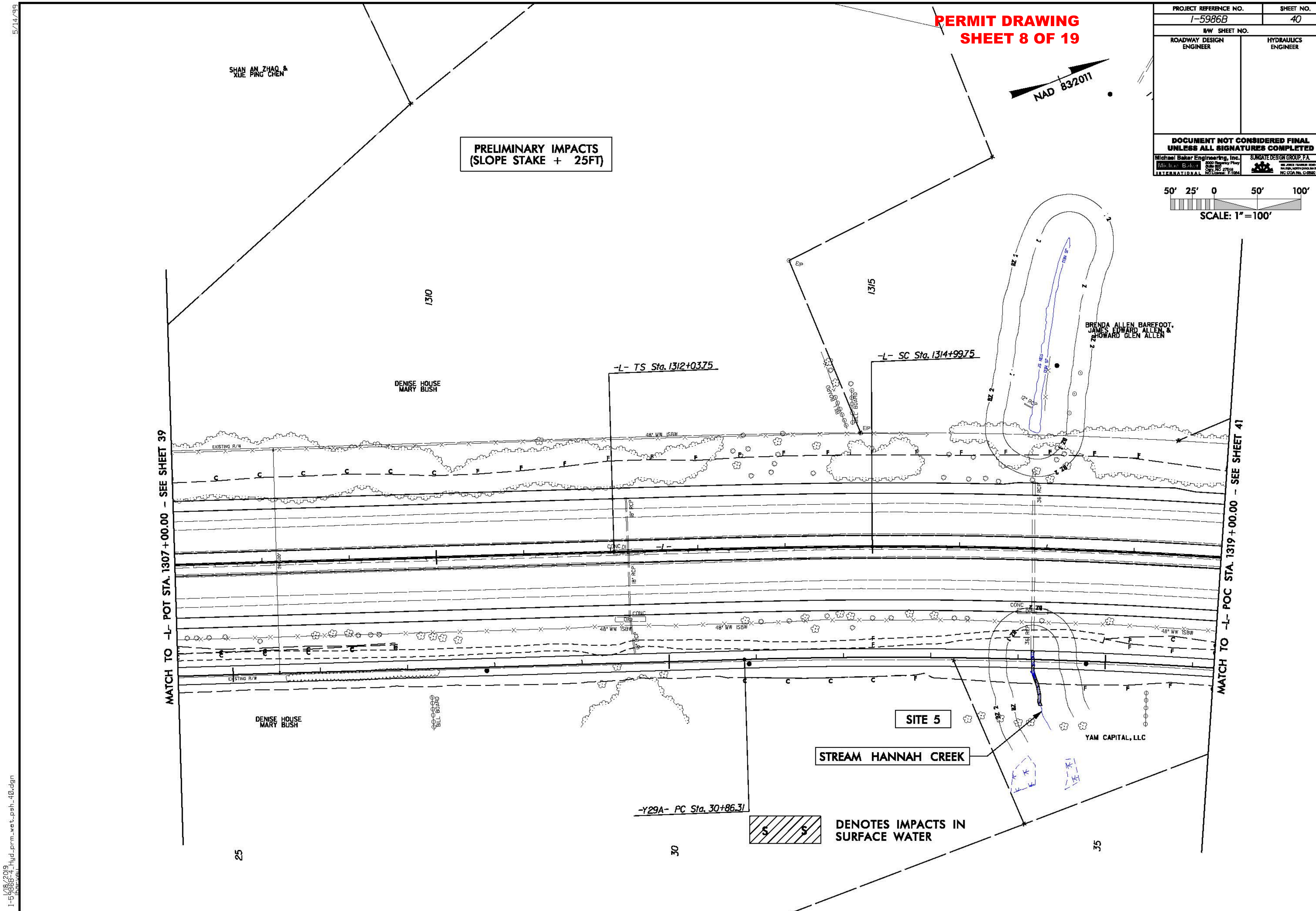
DENOTES FILL IN WETLAND

DENOTES IMPACTS IN SURFACE WATER

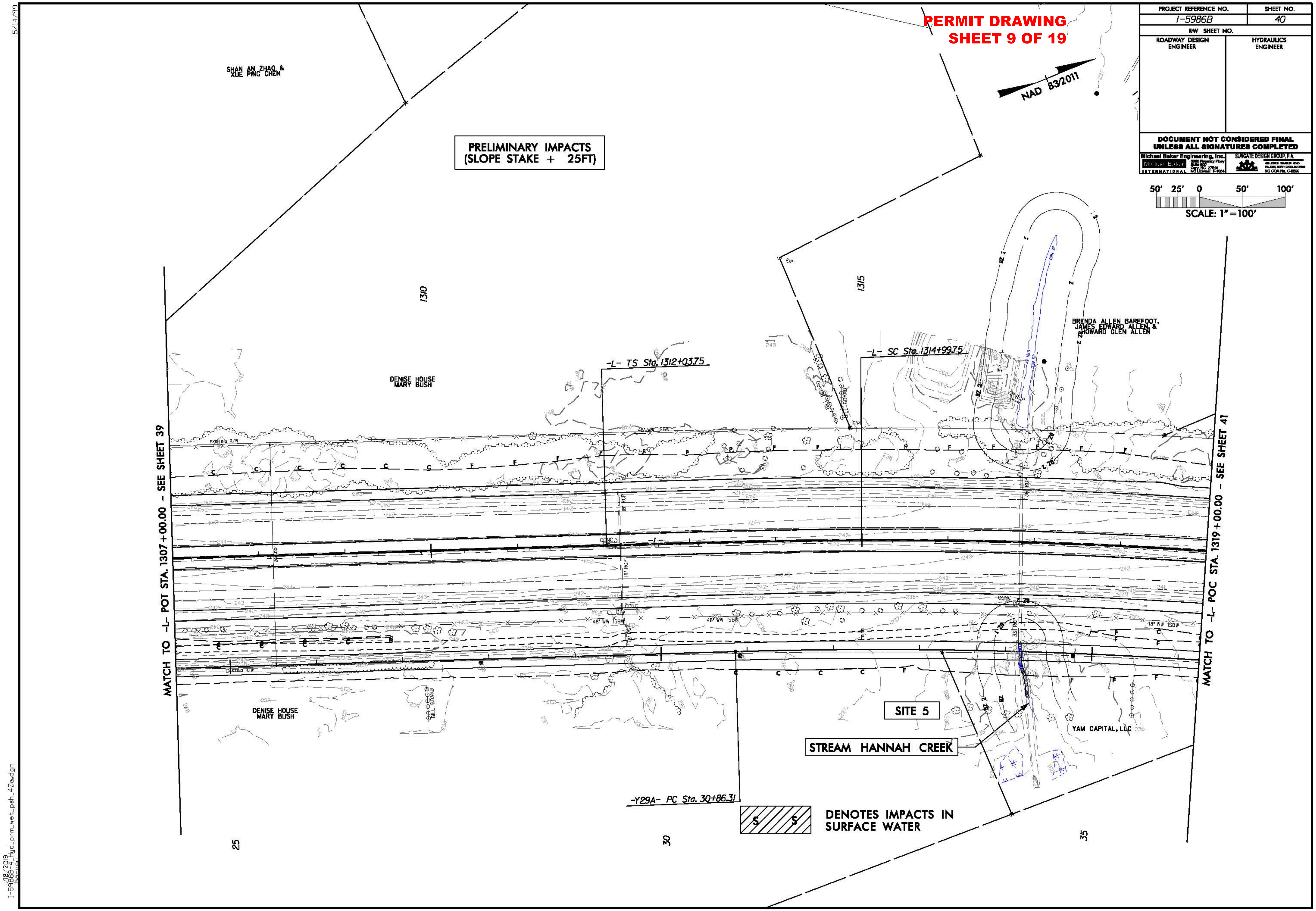


PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

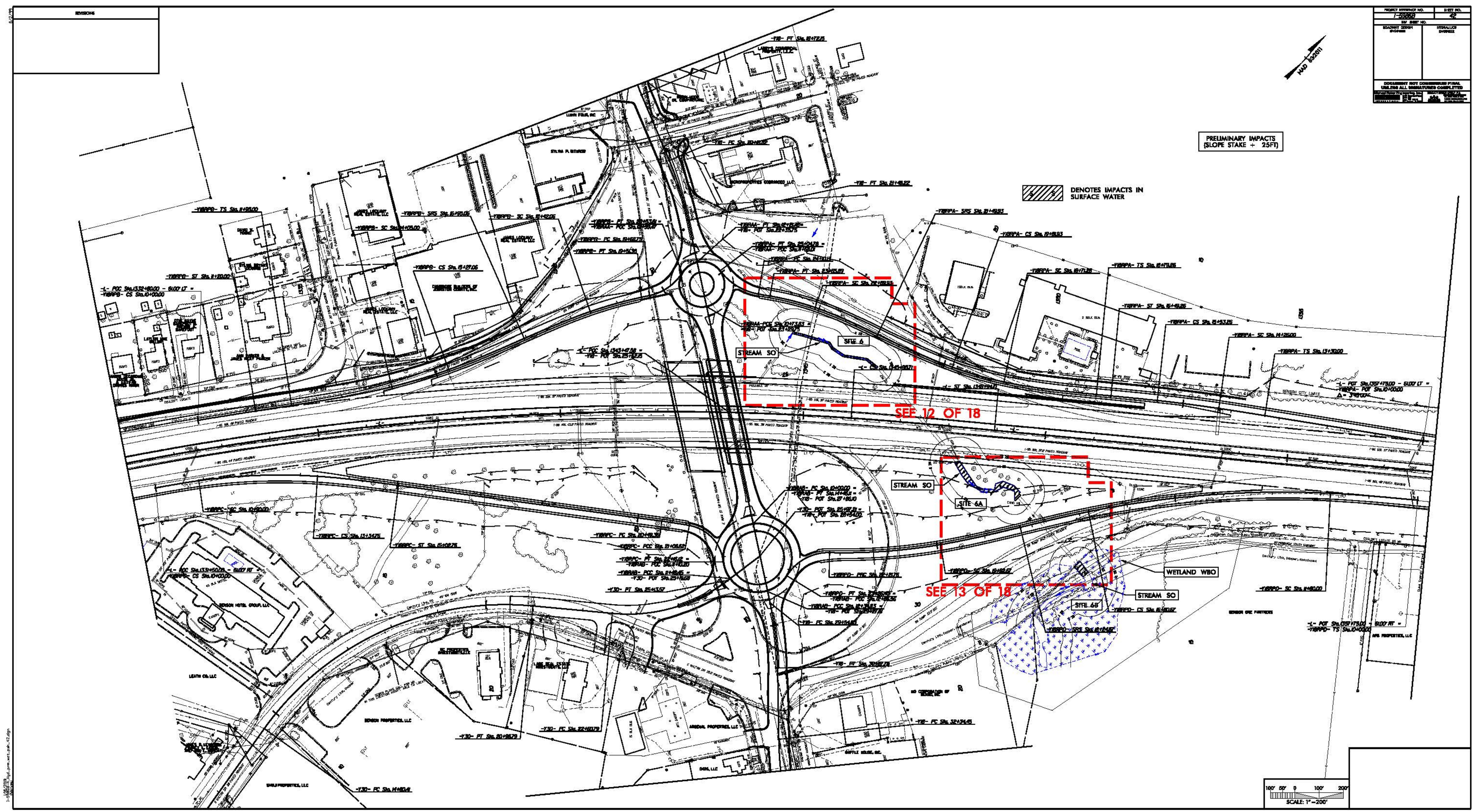
1/18/2019
I-5986B-4_Hyd_prm_wet_psh_38a.dgn

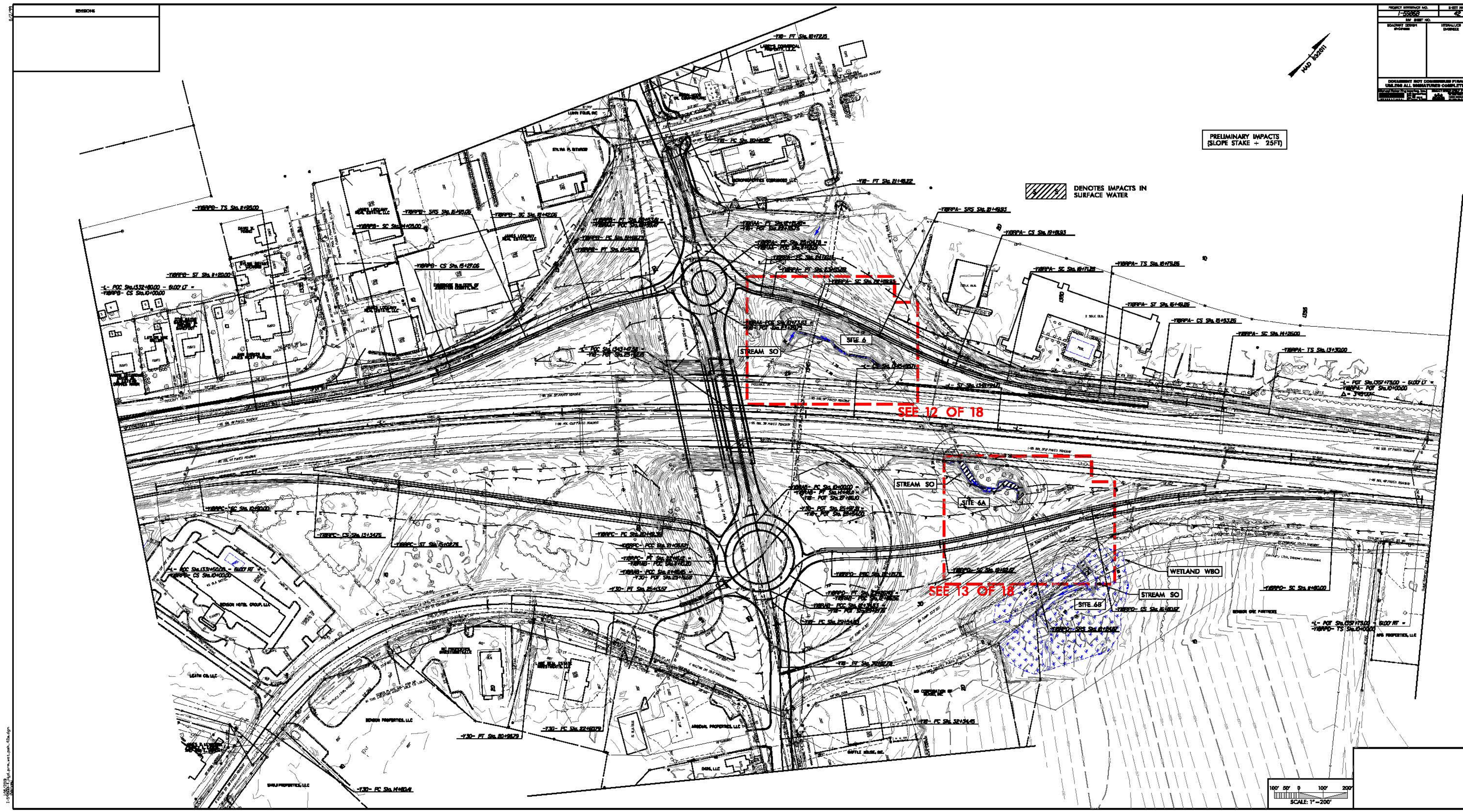


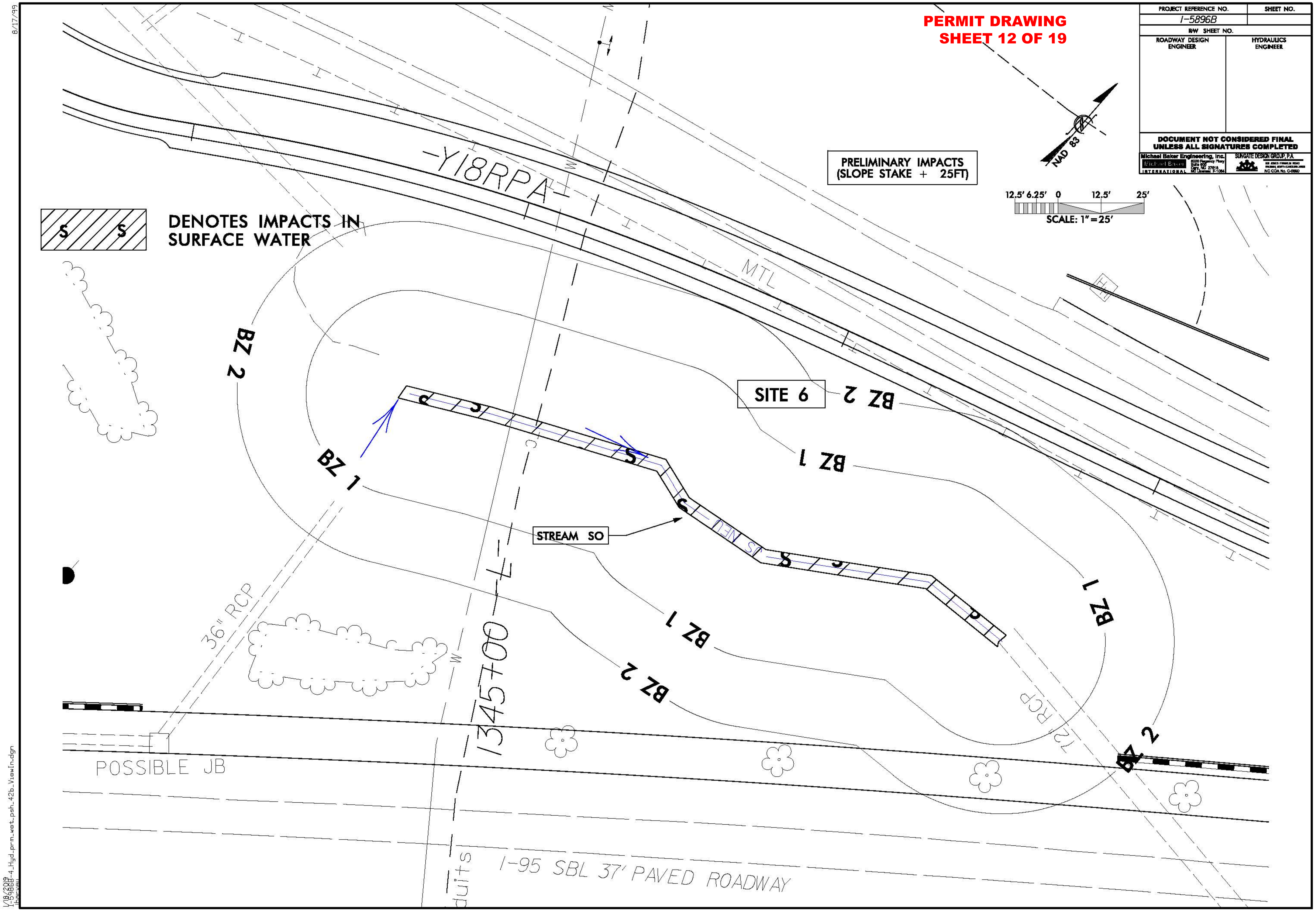
PERMIT DRAWING
SHEET 8 OF 19
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
40
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1"=100'
NAD 83/2011
SHAN AN ZHAO &
XUE PING CHEN
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
1310
1315
DENISE HOUSE
MARY BUSH
-L- TS Sta. 1312+03.75
-L- SC Sta. 1314+99.75
BRENDA ALLEN BAREFOOT,
JAMES EDWARD ALLEN, &
HOWARD GLEN ALLEN
MATCH TO -L- POT STA. 1307+00.00 - SEE SHEET 39
MATCH TO -L- POC STA. 1319+00.00 - SEE SHEET 41
DENISE HOUSE
MARY BUSH
BILL BOARD
SITE 5
STREAM HANNAH CREEK
YAM CAPITAL, LLC
-Y29A- PC Sta. 30+86.31
DENOTES IMPACTS IN
SURFACE WATER
25
30
35
5/14/99
1/18/2019
I-5986B-4_Hyd_prm_wet_psh_40.dgn


PERMIT DRAWING
SHEET 9 OF 19
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
40
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1"=100'
NAD 83/2011
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
SHAN AN ZHAO & XUE PING CHEN
1310
1315
-L- TS Sta. 1312+03.75
-L- SC Sta. 1314+99.75
DENISE HOUSE MARY BUSH
BRENDA ALLEN BAREFOOT, JAMES EDWARD ALLEN, & HOWARD GLEN ALLEN
MATCH TO -L- POT STA. 1307+00.00 - SEE SHEET 39
MATCH TO -L- POC STA. 1319+00.00 - SEE SHEET 41
48" WW ISBW
BILL BOARD
DENISE HOUSE MARY BUSH
SITE 5
STREAM HANNAH CREEK
YAM CAPITAL, LLC
-Y29A- PC Sta. 30+86.31
DENOTES IMPACTS IN SURFACE WATER
25
30
35
5/14/99
1/18/2019
I-5986B-4_Hyd_prm_wet_psh_40a.dgn

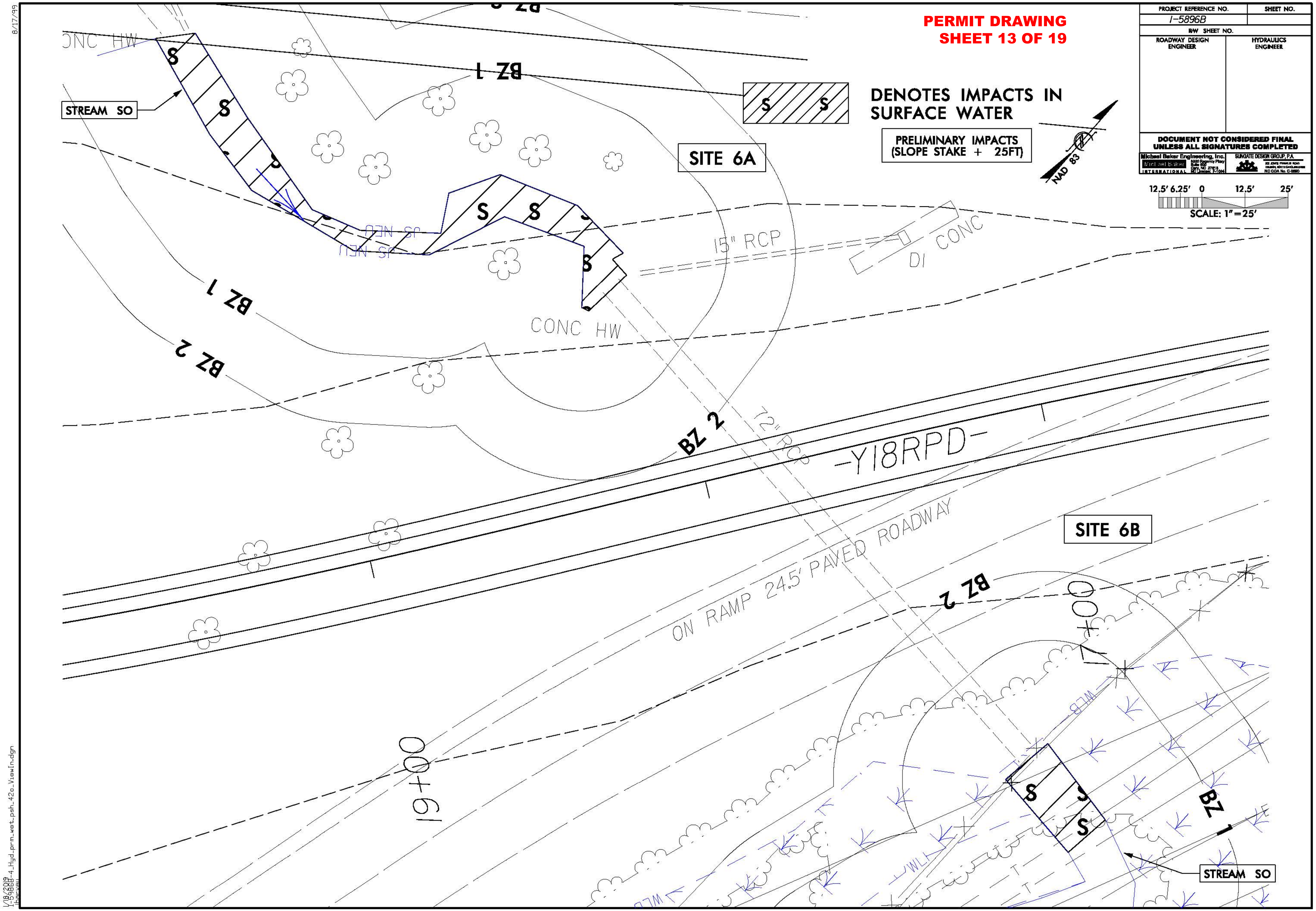
PERMIT DRAWING
SHEET 10 OF 19




REVISIONS
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
DENOTES IMPACTS IN
SURFACE WATER
STREAM SO
SITE 6
SEE 12 OF 18
SITE 6A
WETLAND WBO
SEE 13 OF 18
SITE 6B
SCALE: 1"=200'



PERMIT DRAWING
SHEET 12 OF 19
PROJECT REFERENCE NO.
SHEET NO.
I-5896B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
INTERNATIONAL
NC License: F-1084
SUNGATE DESIGN GROUP, P.A.
NC COA No. C-0890
NAD 83
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
12.5' 6.25' 0 12.5' 25'
SCALE: 1" = 25'
DENOTES IMPACTS IN SURFACE WATER
-Y18RPA-
MTL
SITE 6
STREAM SO
BZ 1
BZ 2
36" RCP
12" RCP
13+00 -L-
POSSIBLE JB
I-95 SBL 37' PAVED ROADWAY
8/17/99



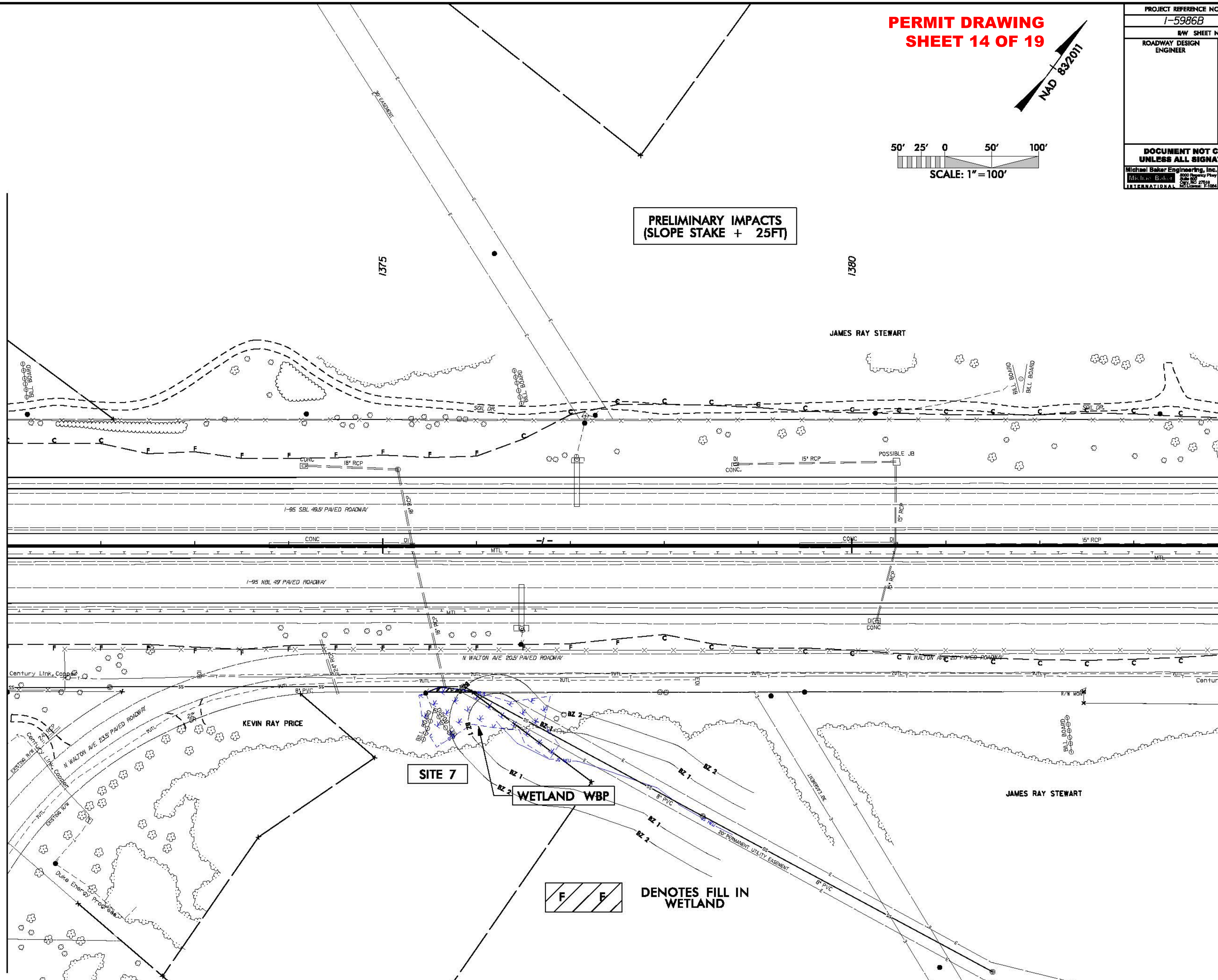
PERMIT DRAWING
SHEET 13 OF 19
PROJECT REFERENCE NO.
I-5896B
SHEET NO.
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
NAD 83
12.5' 6.25' 0 12.5' 25'
SCALE: 1"=25'
SITE 6A
SITE 6B
STREAM SO
BZ 1
BZ 2
CONC HW
15" RCP
DI CONC
72" RCP
-Y18RPD-
ON RAMP 24.5' PAVED ROADWAY
17+00
19+00
8/17/99

PERMIT DRAWING
SHEET 14 OF 19

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	44
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.



5/14/99
1/18/2019
I-5986B-4_Hyd_prm_wet_psh_44.dgn

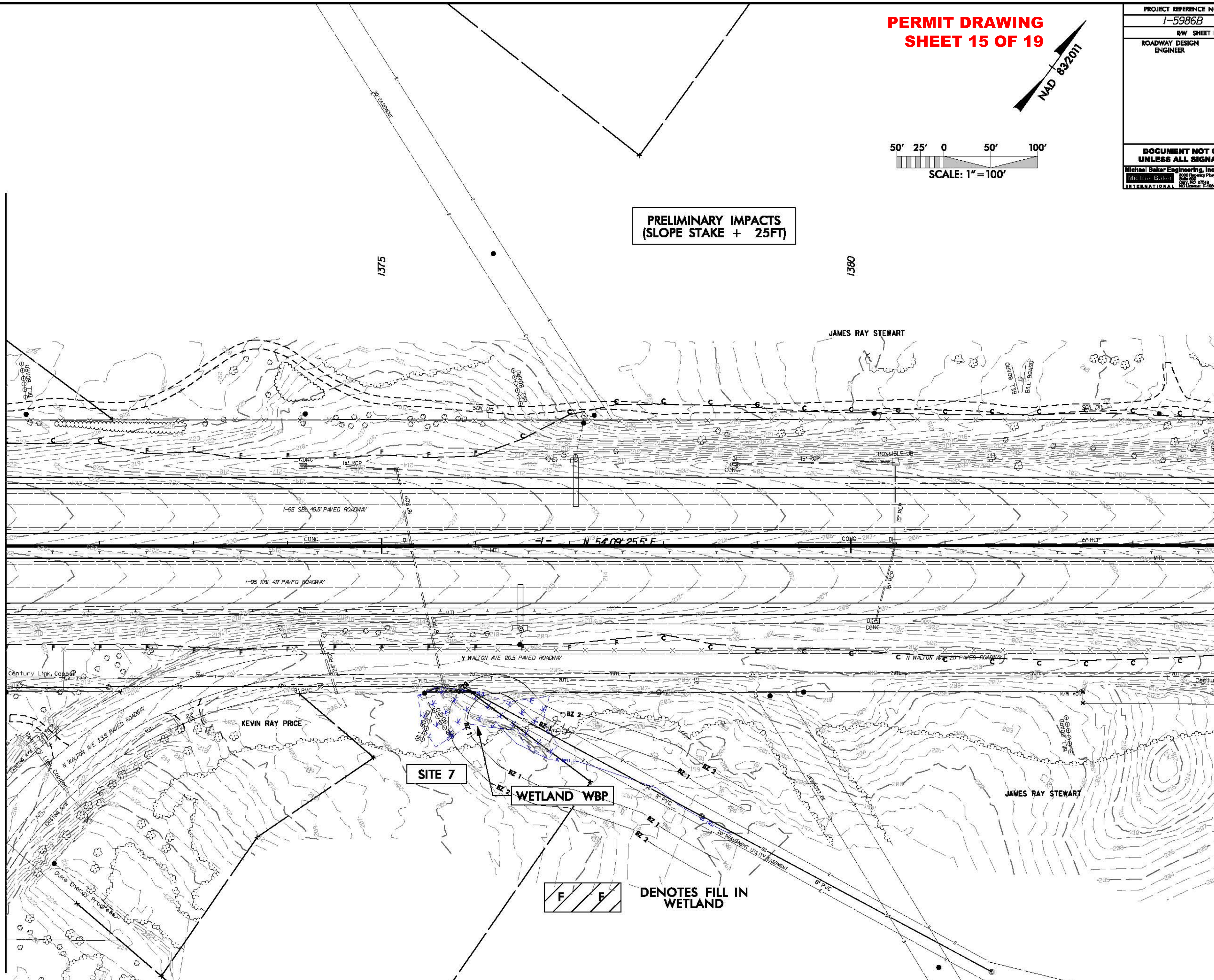
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	44
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. / Michael Baker INTERNATIONAL

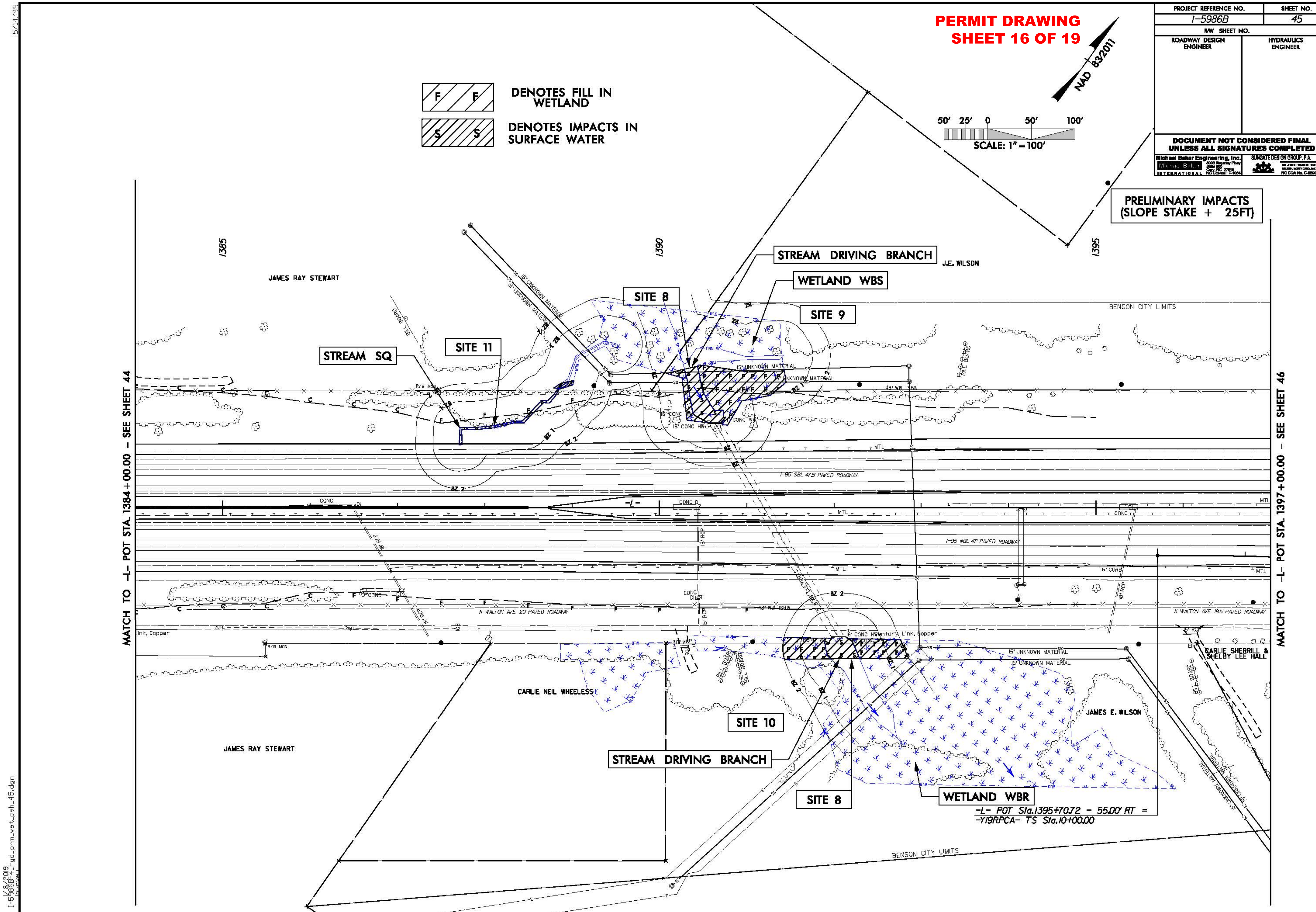
SUNGATE DESIGN GROUP, P.A.

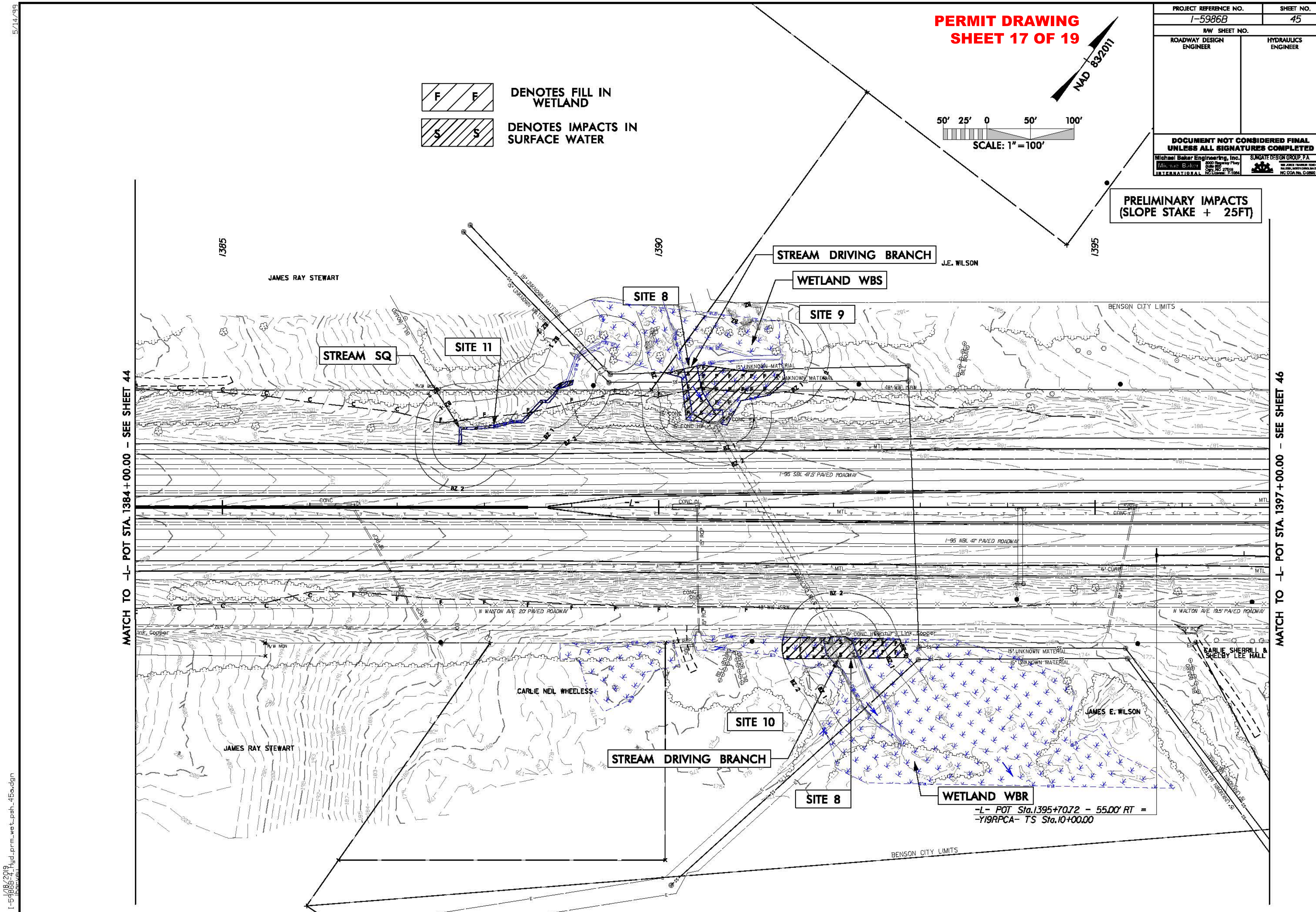
PERMIT DRAWING
SHEET 15 OF 19



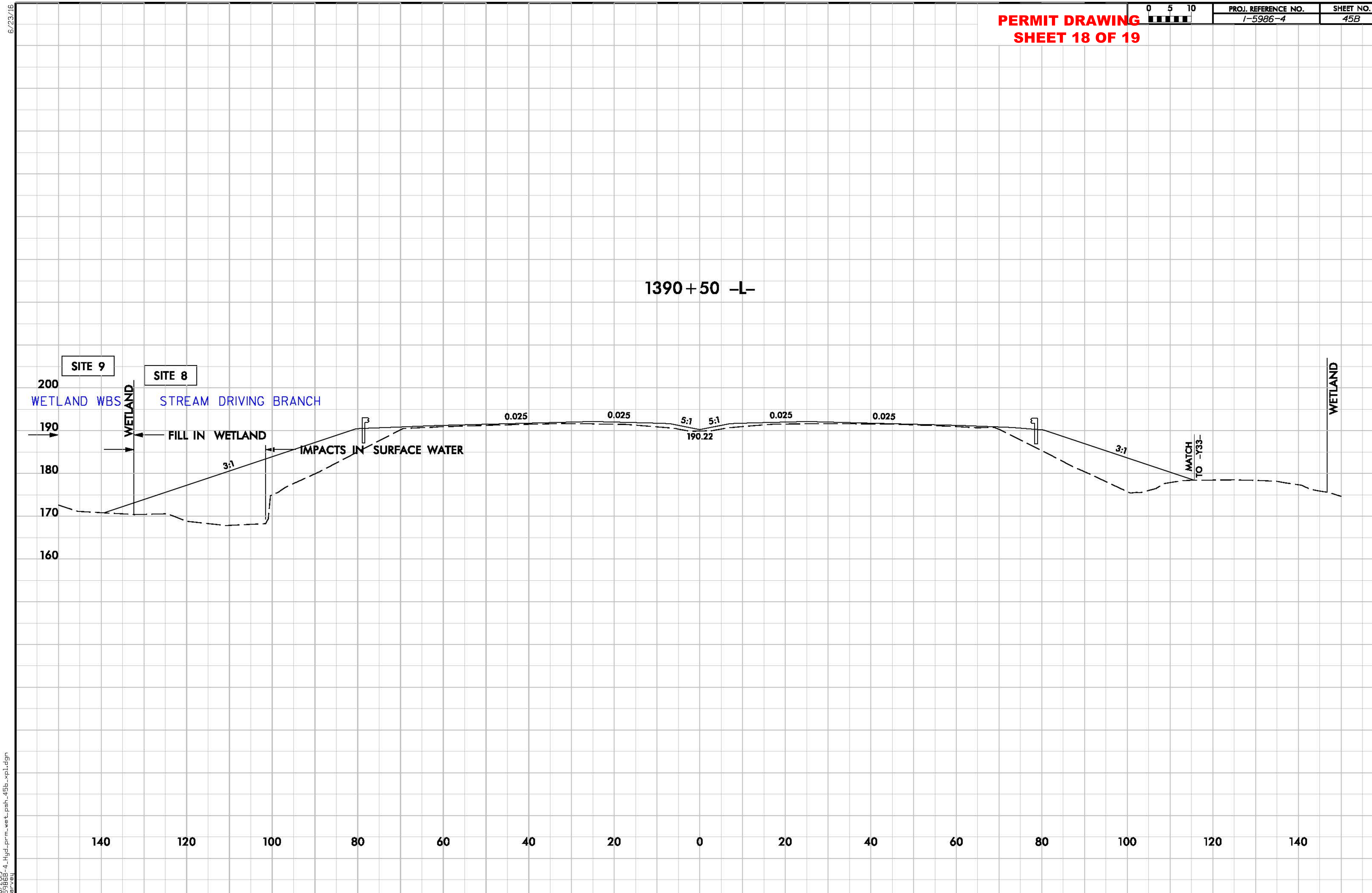
5/14/99

1/18/2019
I-5986B-4_Hyd_prm_wet_psh_44a.dgn


PERMIT DRAWING
SHEET 16 OF 19
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
45
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
SCALE: 1" = 100'
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
STREAM DRIVING BRANCH
WETLAND WBS
SITE 8
SITE 9
SITE 11
STREAM SQ
SITE 10
WETLAND WBR
JAMES RAY STEWART
J.E. WILSON
JAMES E. WILSON
CARLIE NEIL WHEELESS
CARLIE SHERRILL & SHELBY LEE HALL
BENSON CITY LIMITS
I-95 SBL 47.5' PAVED ROADWAY
I-95 NBL 47' PAVED ROADWAY
N WALTON AVE 20' PAVED ROADWAY
N WALTON AVE 19.5' PAVED ROADWAY
15" UNKNOWN MATERIAL
16' CONC HW
48" WM
MATCH TO -L- POT STA. 1384+00.00 - SEE SHEET 44
MATCH TO -L- POT STA. 1397+00.00 - SEE SHEET 46
1385
1390
1395
-L- POT Sta.1395+70.72 - 55.00' RT = -Y19RPCA- TS Sta.10+00.00
5/14/99
1/18/2019
I-5986B-4_Hyd_prm_wet_psh_45.dgn


PERMIT DRAWING
SHEET 17 OF 19
PROJECT REFERENCE NO.
I-5986B
SHEET NO.
45
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83/2011
SCALE: 1" = 100'
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
MATCH TO -L- POT STA. 1384+00.00 - SEE SHEET 44
MATCH TO -L- POT STA. 1397+00.00 - SEE SHEET 46
1385
1390
1395
JAMES RAY STEWART
J.E. WILSON
STREAM DRIVING BRANCH
WETLAND WBS
SITE 8
SITE 9
SITE 11
STREAM SQ
BENSON CITY LIMITS
I-95 SBL 47.5' PAVED ROADWAY
I-95 NBL 47' PAVED ROADWAY
N WALTON AVE 20' PAVED ROADWAY
N WALTON AVE 19.5' PAVED ROADWAY
CARLIE NEIL WHEELESS
CARLIE SHERRILL & SHELBY LEE HALL
JAMES E. WILSON
JAMES RAY STEWART
SITE 10
STREAM DRIVING BRANCH
SITE 8
WETLAND WBR
-L- POT Sta.1395+70.72 - 55.00' RT =
-Y19RPCA- TS Sta.10+00.00
BENSON CITY LIMITS
5/14/99
1/18/2019
I-5986-4_Hyd_prm_wet_psh_45a.dgn

PROJ. REFERENCE NO.	SHEET NO.
I-5986-4	45B



6/23/16
1/18/2019
I-5986-4_Hyd_prm_wet_psh_45b_xpl.dgn
harvey

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	1252+48 to 1265+96-L-LT	ROADWAY FILL	1.50									
2	1252+25 to 1263+87-L-RT	ROADWAY FILL						0.20		186		
3	1260+08 to 1260+65-L-	ROADWAY FILL	0.78									
4	1284+24 to 1285+34-L-RT	ROADWAY FILL	0.01					< 0.01		48		
5	1316+85 to 1317+00-L-RT	ROADWAY FILL						< 0.01		64		
6	1344+69 to 1346+45-L-LT	ROADWAY FILL						0.02		192		
6A	1347+18 to 1349+60-L-RT	ROADWAY FILL						0.04		174		
6B	16+70 to 17+70-Y18RPD-LT	ROADWAY FILL						0.01		28		
7	1375+48 to 1376+00-L-RT	ROADWAY FILL	< 0.01									
8	1387+79 to 1391+45-L-LT	ROADWAY FILL						0.03		69		
9	1387+79 to 1391+45-L-LT	ROADWAY FILL	0.10									
10	1391+47 to 1392+78-L-RT	ROADWAY FILL	0.06									
11	1387+71 to 1380+96-L-LT	ROADWAY FILL						< 0.01		162		
TOTALS*:			2.44					0.31		923	0	0

*Rounded totals are sum of actual impacts

NOTES:
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-18-2019
HARNETT, JOHNSTON COUNTY
I-5986B-SECTION 4
47532.1.3
SHEET 19 OF 19

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1	1252+48 to 1265+96-L-LT	ROADWAY FILL	1.501									
2	1252+25 to 1263+87-L-RT	ROADWAY FILL						0.199		186		
3	1260+08 to 1260+65-L-	ROADWAY FILL	0.778									
4	1284+24 to 1285+34-L-RT	ROADWAY FILL	0.010					0.003		48		
5	1316+85 to 1317+00-L-RT	ROADWAY FILL						0.005		64		
6	1344+69 to 1346+45-L-LT	ROADWAY FILL						0.018		192		
6A	1347+18 to 1349+60-L-RT	ROADWAY FILL						0.037		174		
6B	16+70 to 17+70-Y18RPD-LT	ROADWAY FILL						0.010		28		
7	1375+48 to 1376+00-L-RT	ROADWAY FILL	0.003									
8	1387+79 to 1391+45-L-LT	ROADWAY FILL						0.029		69		
9	1387+79 to 1391+45-L-LT	ROADWAY FILL	0.096									
10	1391+47 to 1392+78-L-RT	ROADWAY FILL	0.056									
11	1387+71 to 1380+96-L-LT	ROADWAY FILL						0.009		162		
TOTALS*:			**2.44**	**0.00**	**0.00**	**0.00**	**0.00**	**0.31**	**0.00**	**923**	**0**	**0**

*Rounded totals are sum of actual impacts

NOTES:

PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

DATA ENTRY SHEET for impact totals to nearest 0.001 acre.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-18-2019
HARNETT, JOHNSTON COUNTY
I-5986B-SECTION 4
47532.1.3

Revised 2018 Feb

See Sheet 1A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

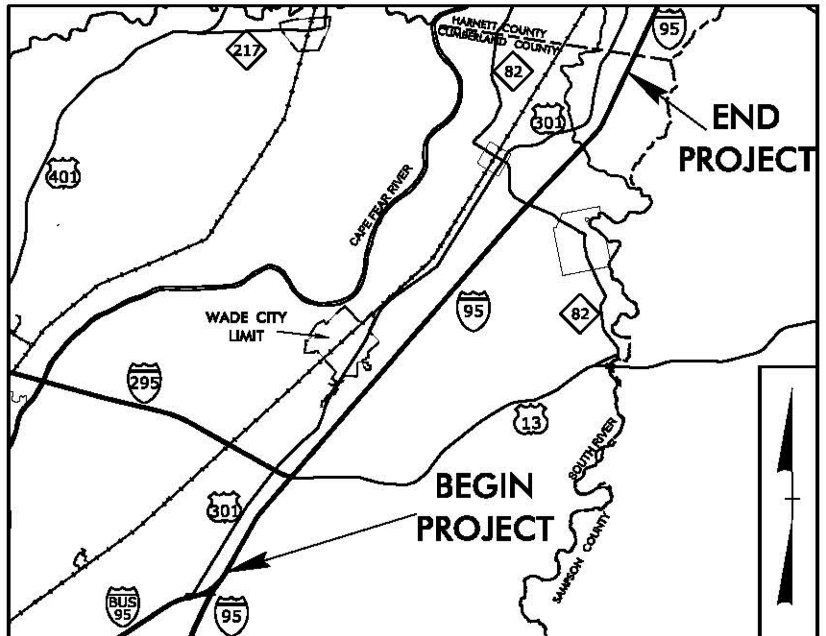
PERMIT DRAWING
SHEET 1 OF 94

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5986A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

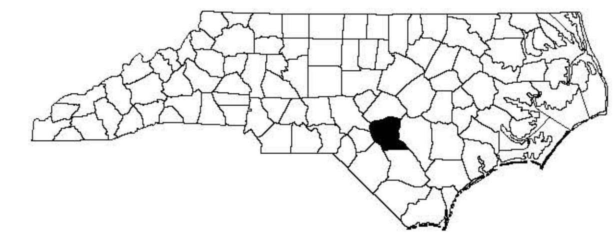
CUMBERLAND COUNTY

LOCATION: I-95 FROM I-95 BUS TO SR 1811 (BUD HAWKINS RD) (EXIT 70). WIDEN TO EIGHT LANES.

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS, CULVERTS, AND STRUCTURES

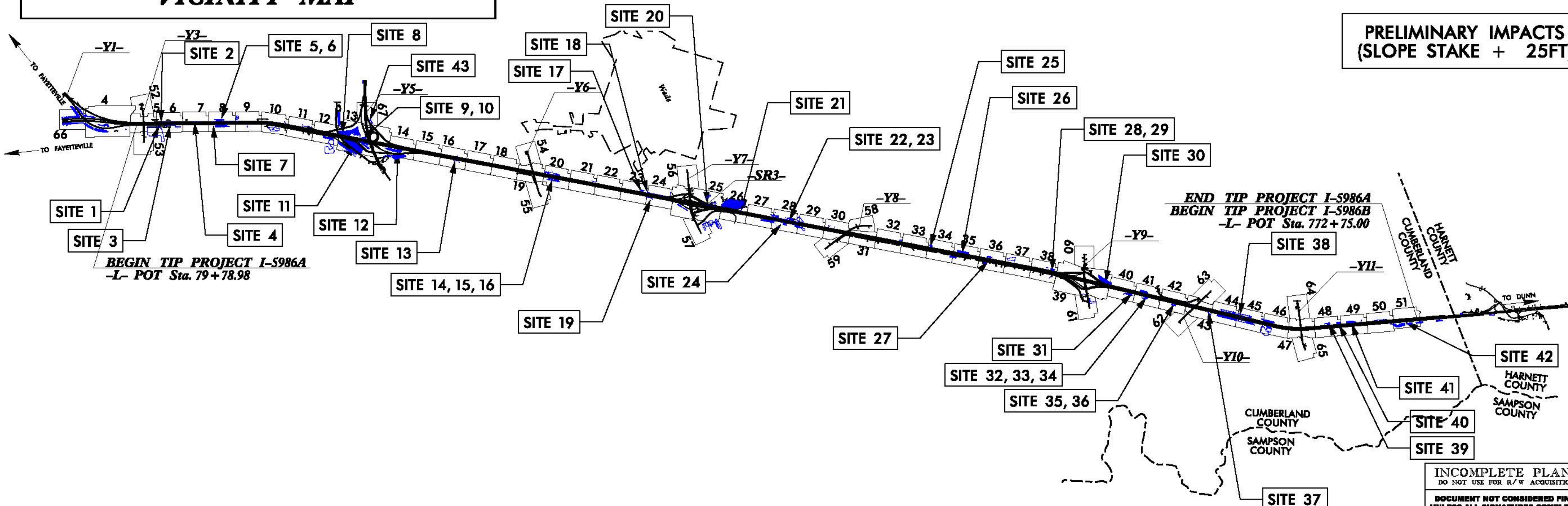


VICINITY MAP



WETLAND AND SURFACE WATER IMPACTS PERMIT
SECTION A

PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TIP PROJECT: I-5986A

CONTRACT:

GRAPHIC SCALES

50 25 0 50 100
PLANS
0
PROFILE (HORIZONTAL)
0
PROFILE (VERTICAL)

DESIGN DATA

ADT =
ADT =
K = %
D = %
T = % *
V = MPH
* TTST = DUAL
FUNC CLASS =
STATEWIDE TIER

PROJECT LENGTH

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

PROJECT ENGINEER

LETTING DATE:

PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

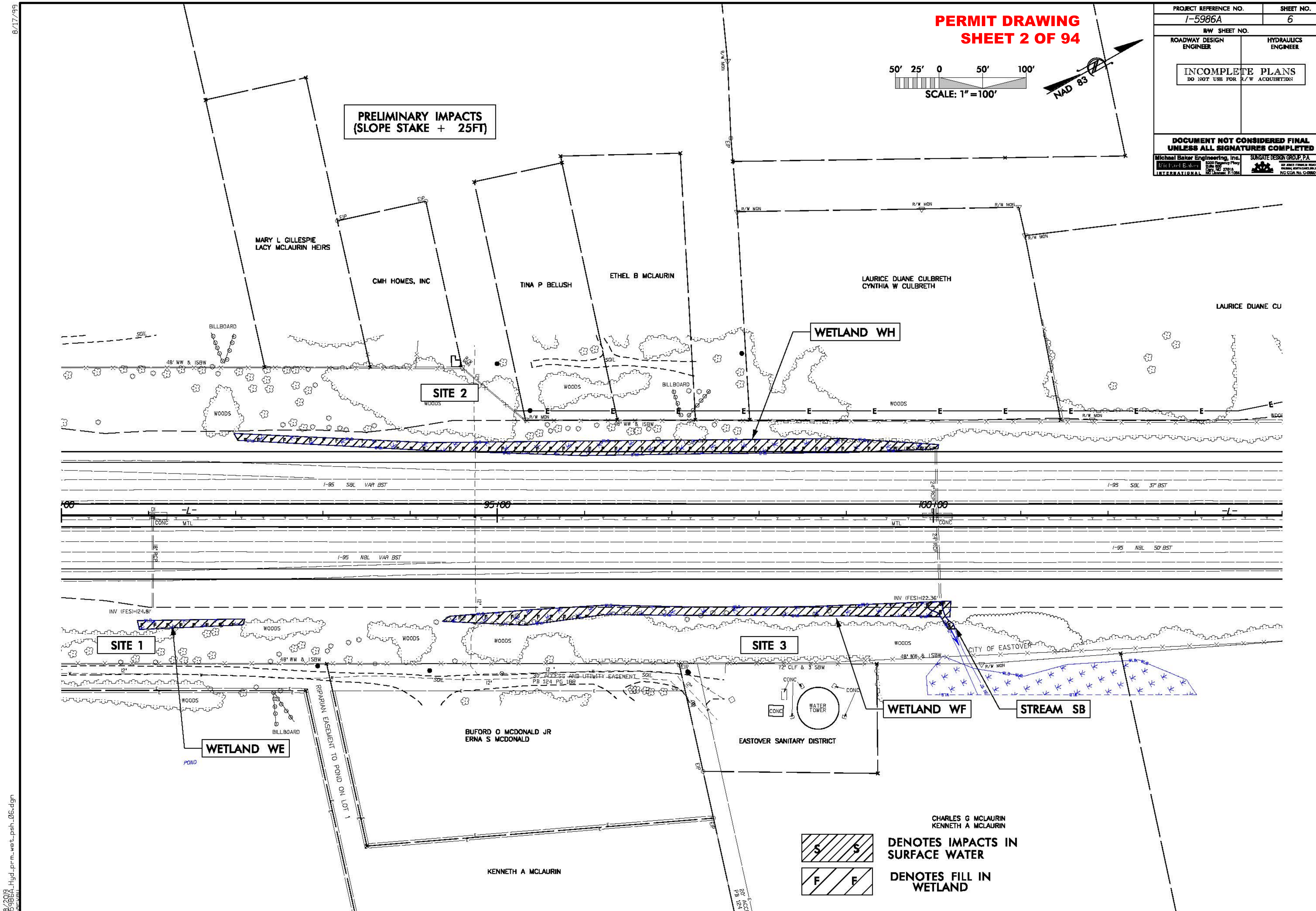
ROADWAY DESIGN ENGINEER

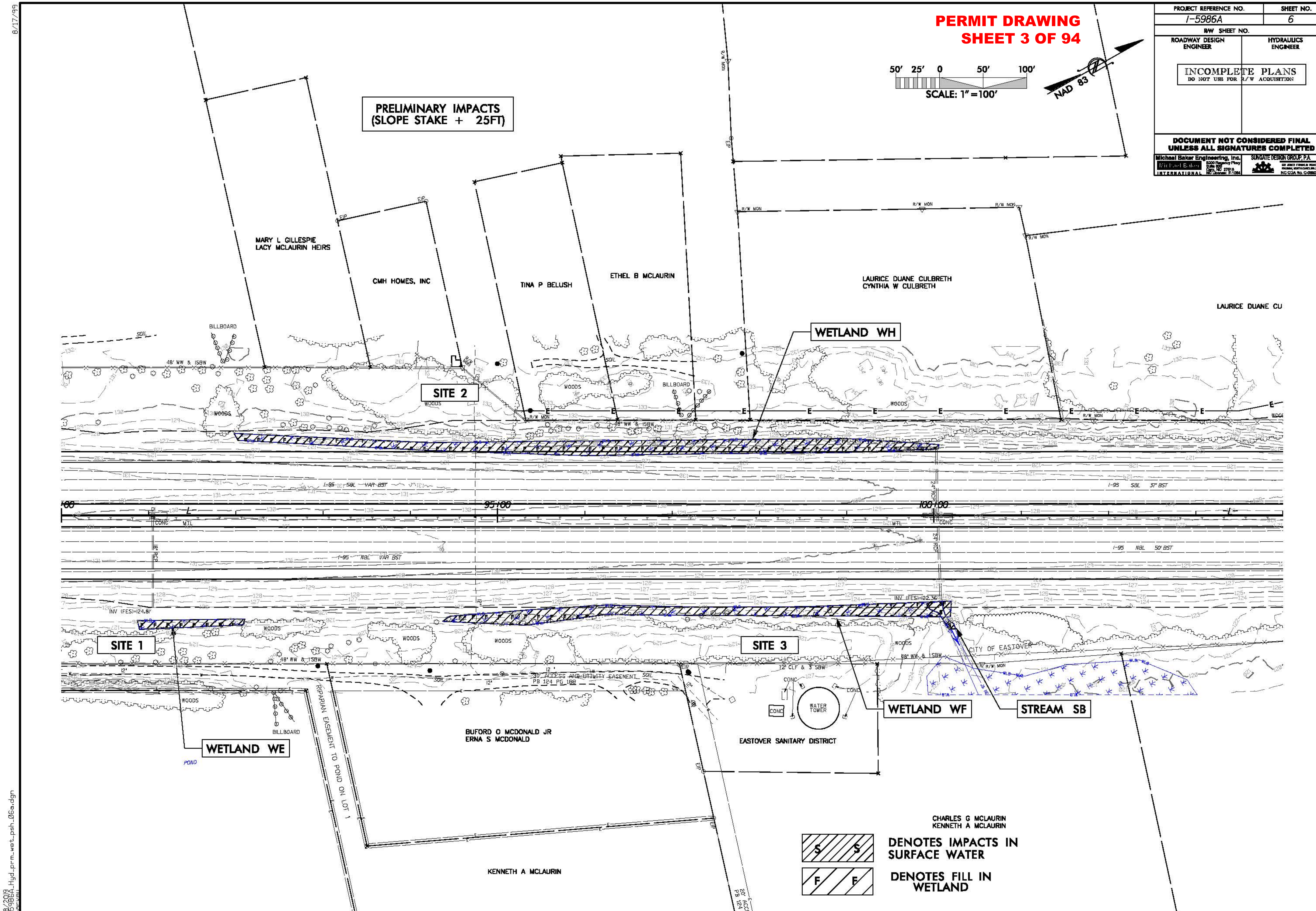
SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

09/08/99

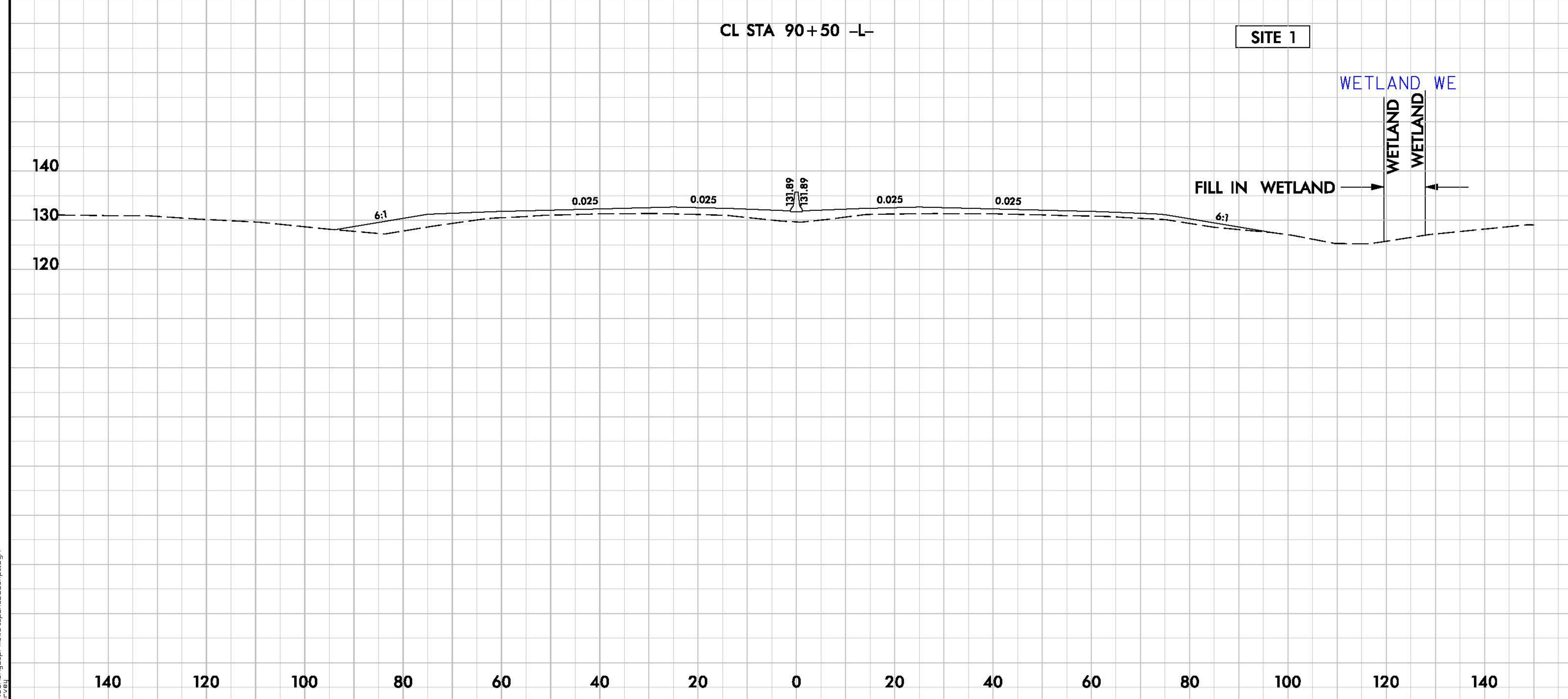
1/8/2019
I-5986A_Hyd_prm_wet_psh_01.dgn
jharvey


PERMIT DRAWING
SHEET 2 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1" = 100'
NAD 83
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
MARY L GILLESPIE
LACY MCLAURIN HEIRS
CMH HOMES, INC
TINA P BELUSH
ETHEL B MCLAURIN
LAURICE DUANE CULBRETH
CYNTHIA W CULBRETH
LAURICE DUANE CU
WETLAND WH
SITE 2
BILLBOARD
WOODS
I-95 SBL VAR BST
I-95 SBL 37' BST
95+00
100+00
-L-
CONC
MTL
I-95 NBL VAR BST
I-95 NBL 50' BST
INV (FES)=124.8'
INV (FES)=122.36'
SITE 1
SITE 3
CITY OF EASTOVER
30' ACCESS AND UTILITY EASEMENT
PB 124 PG 188
RIPARIAN EASEMENT TO POND ON LOT 1
WATER TOWER
WETLAND WF
STREAM SB
WETLAND WE
POND
BUFORD O MCDONALD JR
ERNA S MCDONALD
EASTOVER SANITARY DISTRICT
CHARLES G MCLAURIN
KENNETH A MCLAURIN
KENNETH A MCLAURIN
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_06.dgn



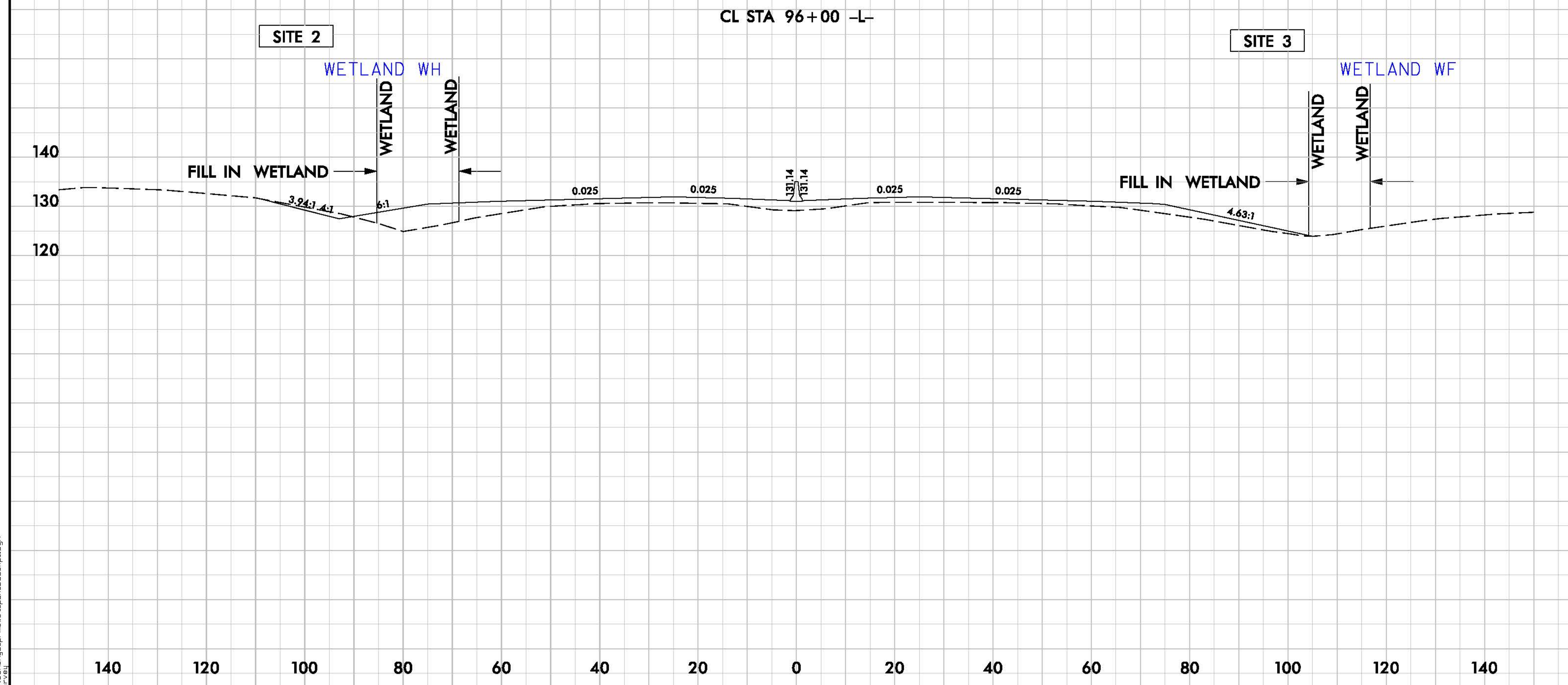
PERMIT DRAWING
SHEET 3 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1" = 100'
NAD 83
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
MARY L GILLESPIE
LACY MCLAURIN HEIRS
CMH HOMES, INC
TINA P BELUSH
ETHEL B MCLAURIN
LAURICE DUANE CULBRETH
CYNTHIA W CULBRETH
LAURICE DUANE CU
WETLAND WH
SITE 2
SITE 1
SITE 3
I-95 SBL VAR BST
I-95 SBL 37' BST
I-95 NBL VAR BST
I-95 NBL 50' BST
95+00
100+00
INV (FES)=124.8'
INV (FES)=122.36'
CITY OF EASTOVER
30' ACCESS AND UTILITY EASEMENT
PB 124 PG 188
RIPARIAN EASEMENT TO POND ON LOT 1
WATER TOWER
WETLAND WF
STREAM SB
WETLAND WE
POND
BUFORD O MCDONALD JR
ERNA S MCDONALD
EASTOVER SANITARY DISTRICT
CHARLES G MCLAURIN
KENNETH A MCLAURIN
KENNETH A MCLAURIN
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_06a.dgn

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	6B

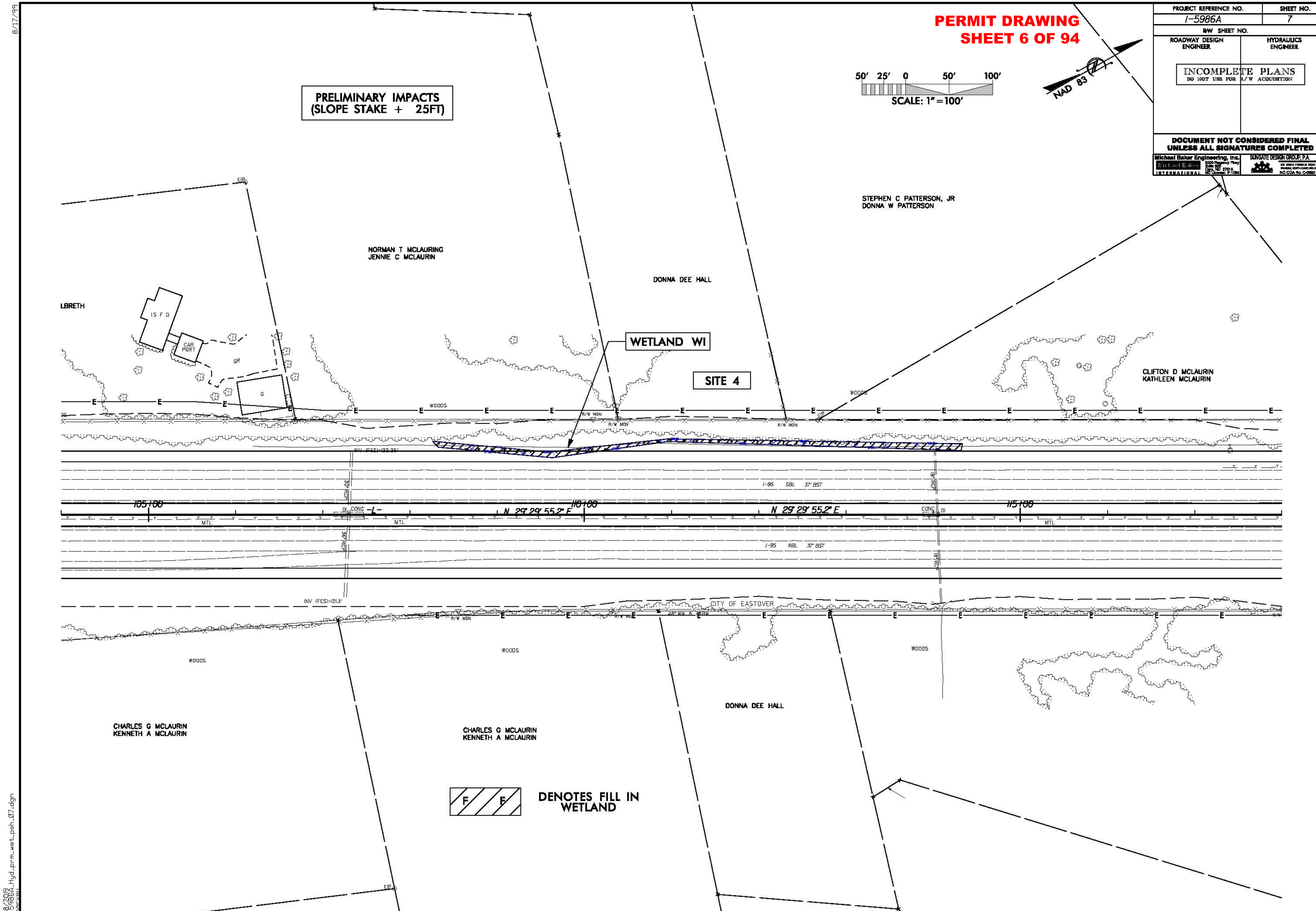


6/23/16
1/8/2019
I-5986A_Hyd_prm_wet_psh_06b_xpl.dgn
harvey

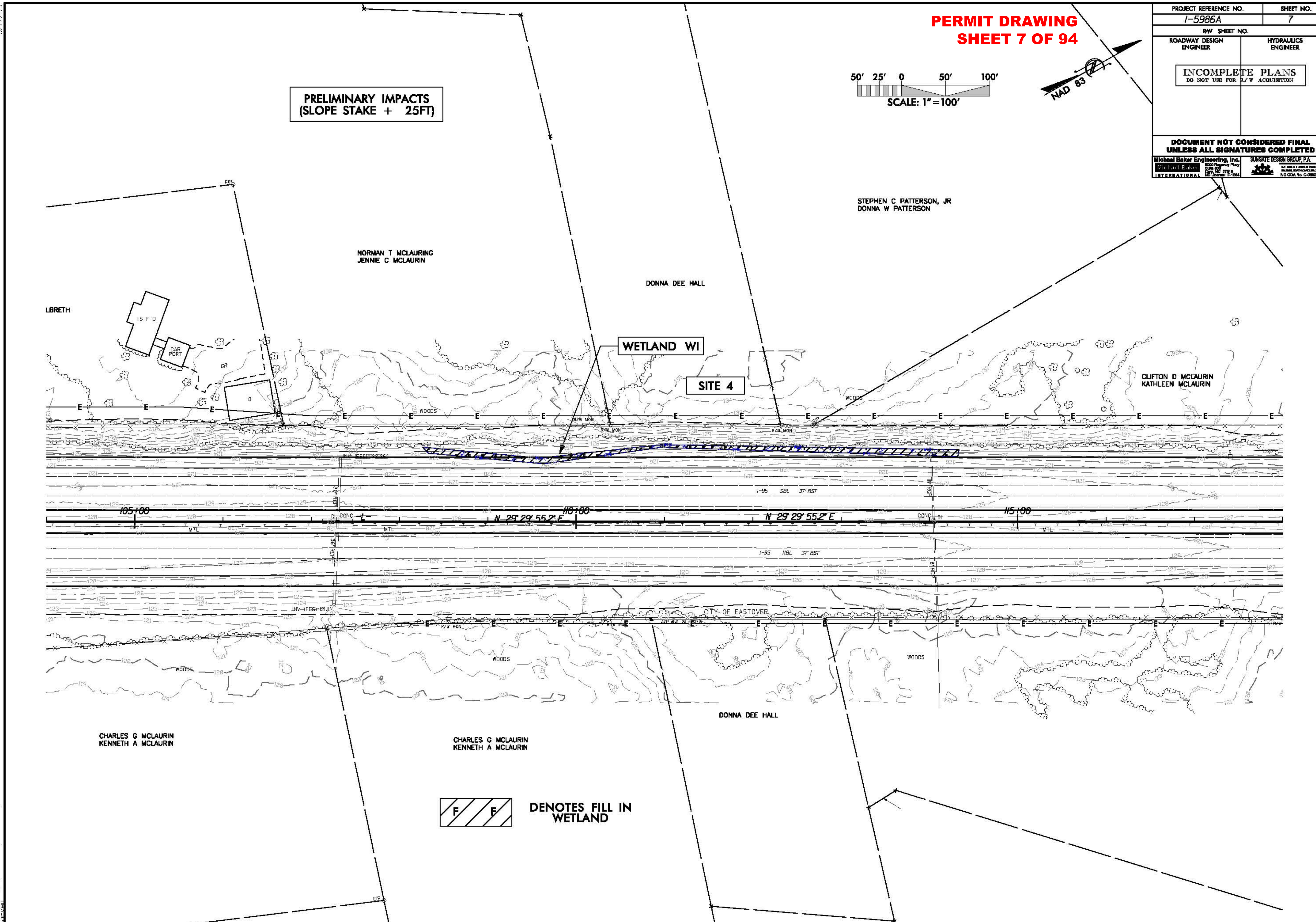
PROJ. REFERENCE NO.	SHEET NO.
I-5986A	6C



6/23/16
1/8/2019
I-5986A_Hyd_prm_wet_psh_06c_xpl.dgn
harvey


PERMIT DRAWING
SHEET 6 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
7
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
50' 25' 0 50' 100'
SCALE: 1" = 100'
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
NORMAN T MCLAURING
JENNIE C MCLAURIN
DONNA DEE HALL
STEPHEN C PATTERSON, JR
DONNA W PATTERSON
LBRETH
CAR PORT
WETLAND WI
SITE 4
CLIFTON D MCLAURIN
KATHLEEN MCLAURIN
WOODS
R/W MON
INV (FES)=123.25'
I-95 SBL 37' BST
105+00
110+00
115+00
N 29° 29' 55.2" E
-L-
MTL
I-95 NBL 37' BST
INV (FES)=121.11'
CITY OF EASTOVER
WOODS
DONNA DEE HALL
CHARLES G MCLAURIN
KENNETH A MCLAURIN
CHARLES G MCLAURIN
KENNETH A MCLAURIN
DENOTES FILL IN WETLAND
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_07.dgn

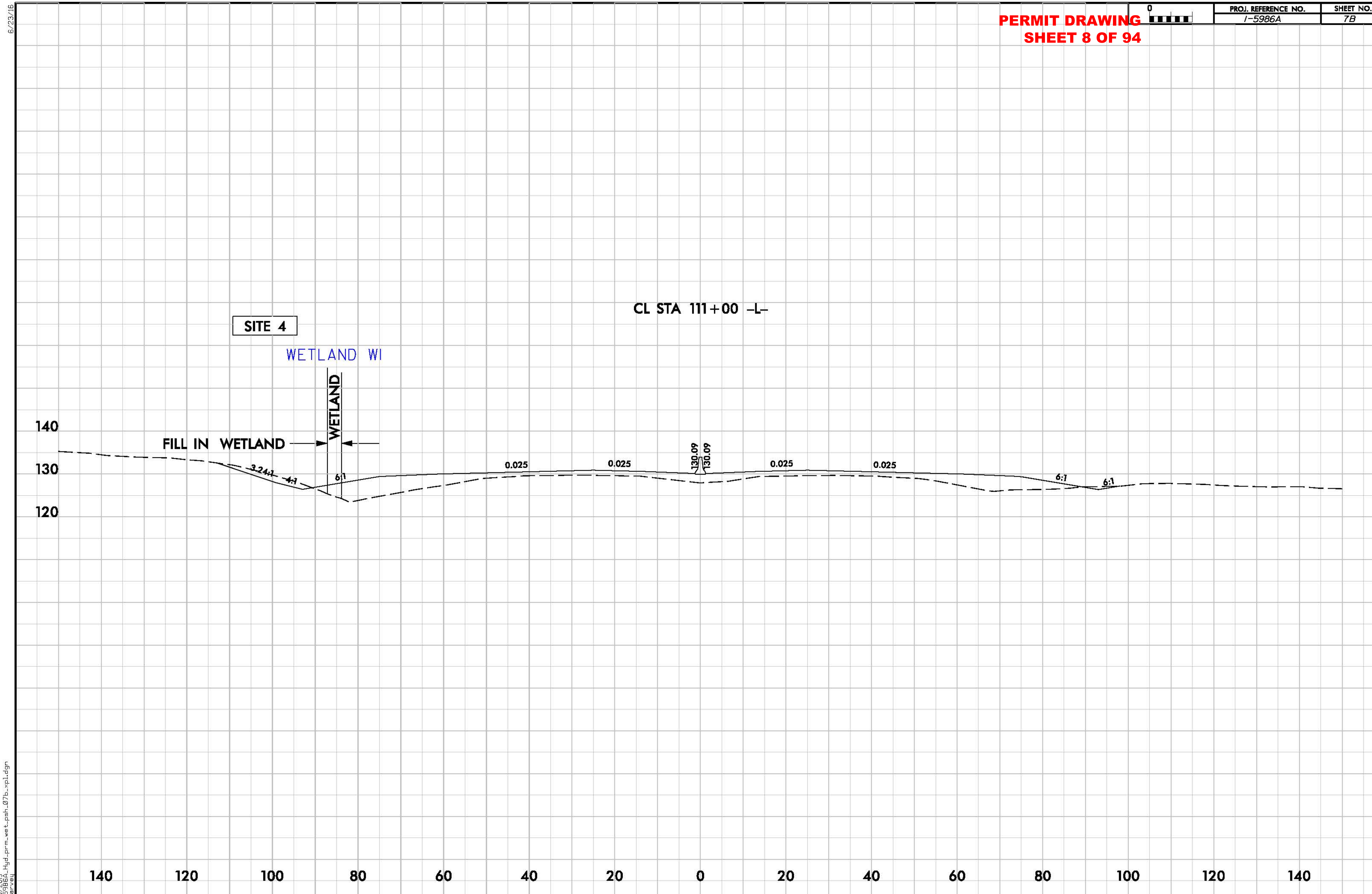
8/17/99



1/8/2019
I-5986A_Hyd_prm_wet_psh_07a.dgn

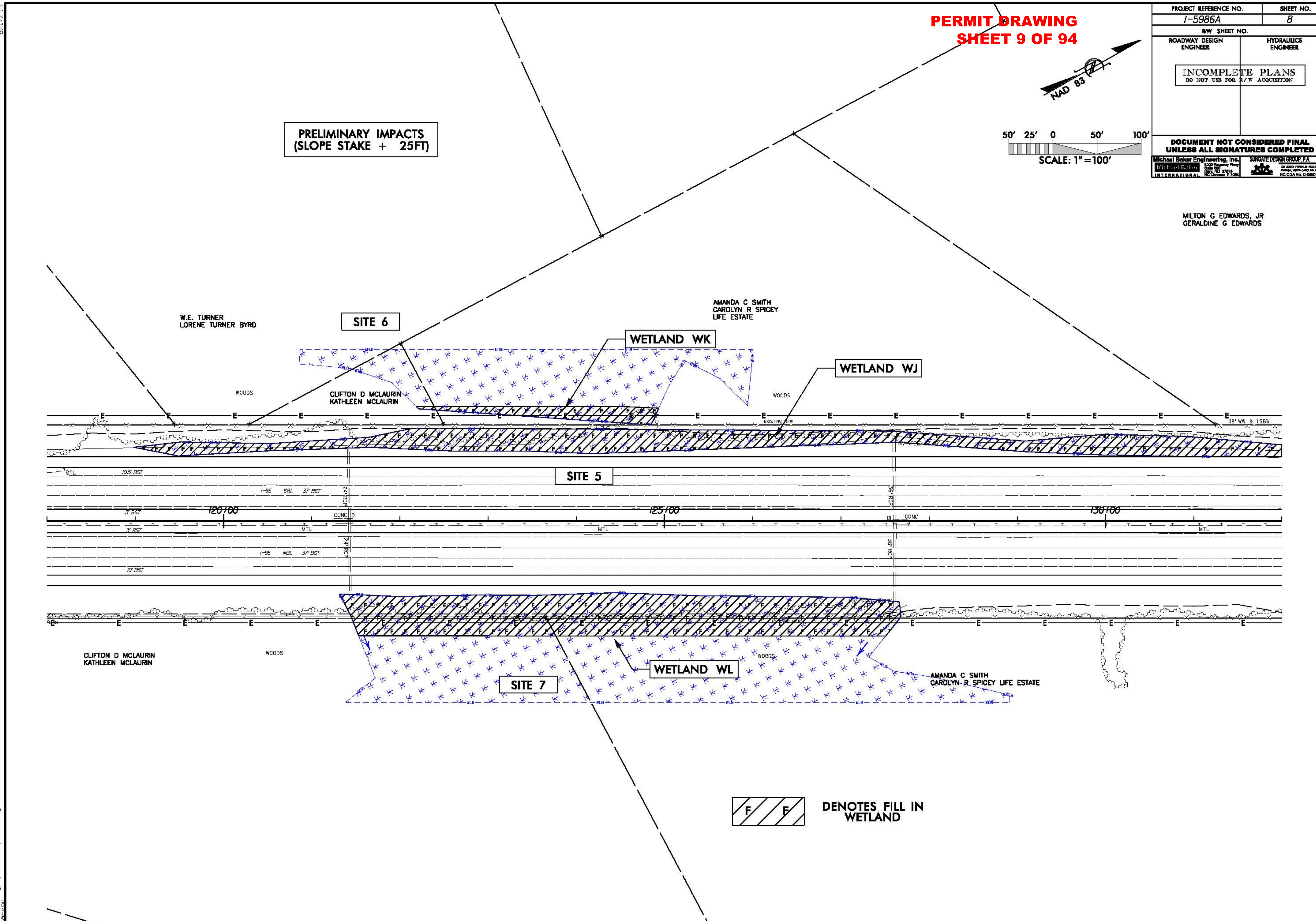
PERMIT DRAWING
SHEET 8 OF 94

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	7B



6/23/16

1/8/2019
I-5986A_Hyd_prm_wet_psh_07b_xpl.dgn
harvey



PERMIT DRAWING
SHEET 9 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
50' 25' 0 50' 100'
SCALE: 1" = 100'
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
MILTON G EDWARDS, JR
GERALDINE G EDWARDS
W.E. TURNER
LORENE TURNER BYRD
SITE 6
AMANDA C SMITH
CAROLYN R SPICEY
LIFE ESTATE
WETLAND WK
WETLAND WJ
WOODS
CLIFTON D MCLAURIN
KATHLEEN MCLAURIN
SITE 5
I-95 SBL 37' BST
I-95 NBL 37' BST
120+00
125+00
130+00
CLIFTON D MCLAURIN
KATHLEEN MCLAURIN
WETLAND WL
SITE 7
AMANDA C SMITH
CAROLYN R SPICEY LIFE ESTATE
DENOTES FILL IN WETLAND
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_08.dgn

PERMIT DRAWING
SHEET 10 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

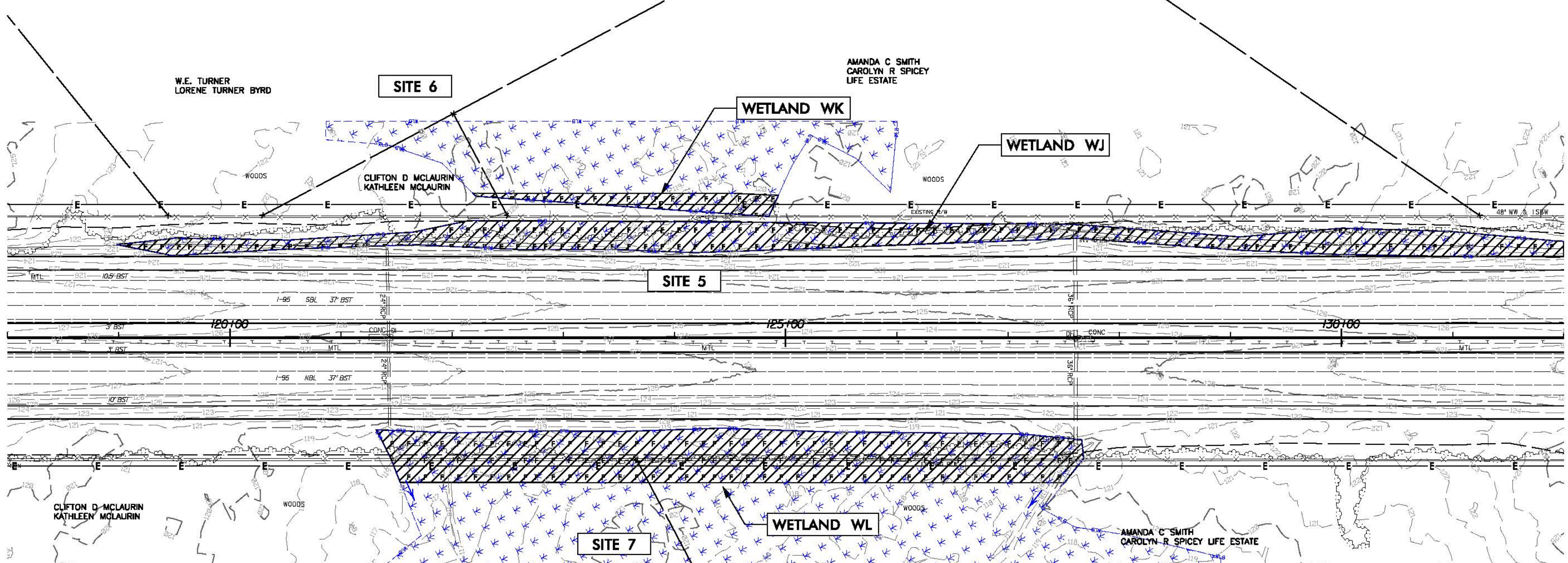
NAD 83

50' 25' 0 50' 100'

SCALE: 1" = 100'

PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

MILTON G EDWARDS, JR
GERALDINE G EDWARDS

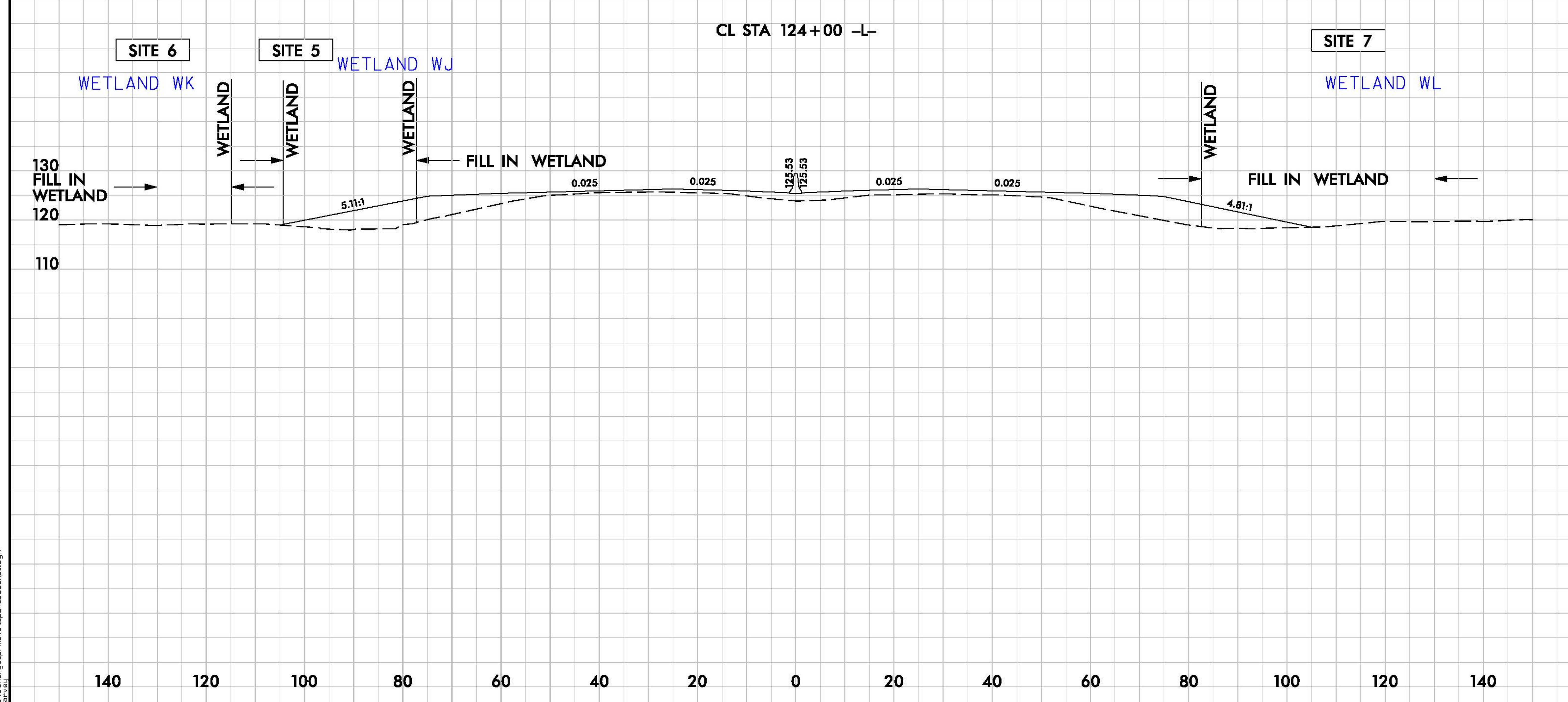


DENOTES FILL IN
WETLAND

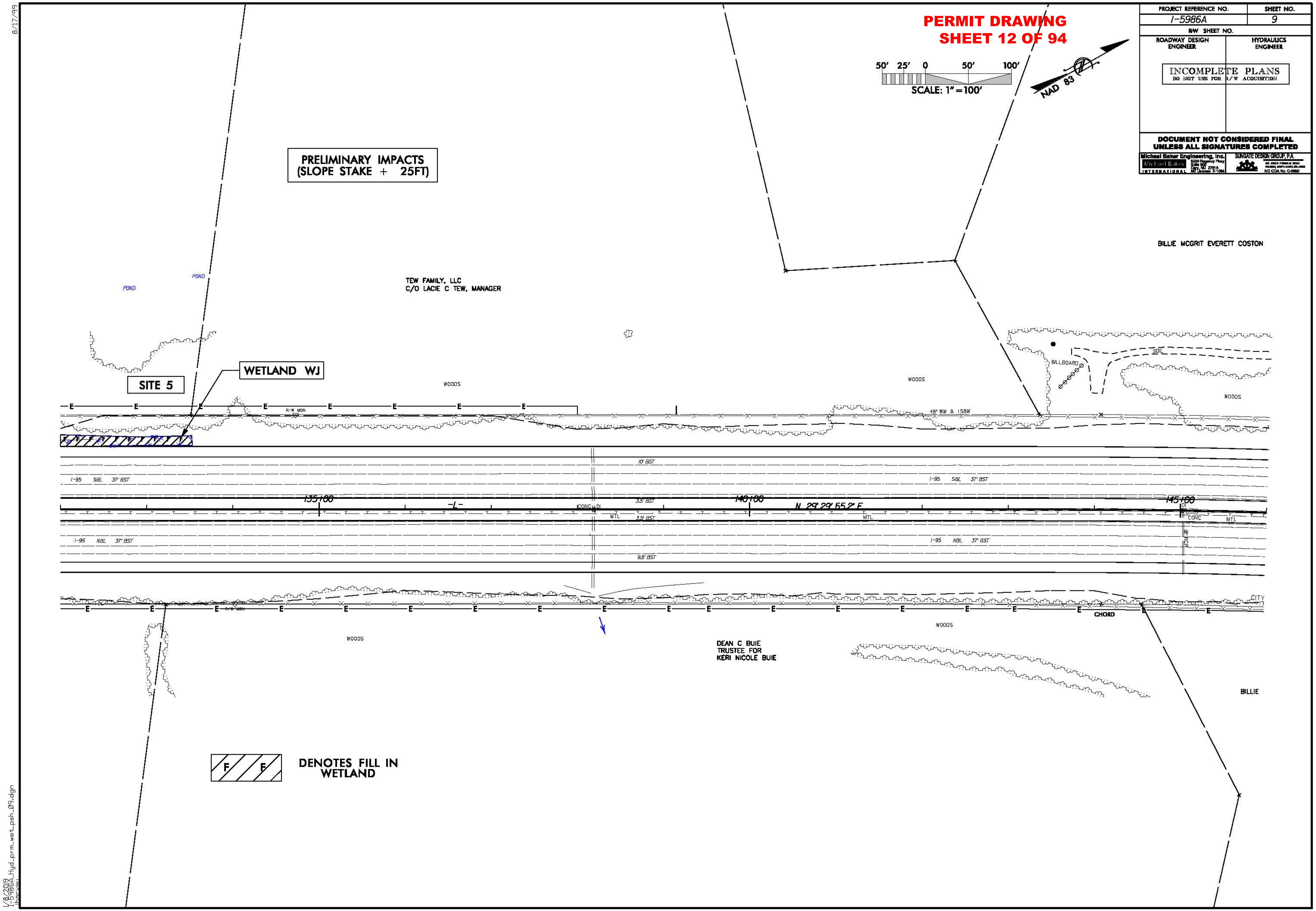
8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_08a.dgn

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	7B



6/23/16
1/8/2019
I-5986A_Hyd_prm_wet_psh_08b_xpl.dgn
harvey



PERMIT DRAWING
SHEET 12 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1" = 100'
NAD 83
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
TEW FAMILY, LLC
C/O LACIE C TEW, MANAGER
BILLIE MCGRIT EVERETT COSTON
POND
POND
WETLAND WJ
SITE 5
WOODS
WOODS
WOODS
BILLBOARD
SOIL
48' WW & 15BW
R/W MON
10' BST
I-95 SBL 37' BST
I-95 SBL 37' BST
135+00
-L-
140+00
N 29° 29' 55.2" E
145+00
3.5' BST
3.5' BST
MTL
MTL
MTL
CONC
I-95 NBL 37' BST
I-95 NBL 37' BST
9.5' BST
WOODS
WOODS
CHORD
CITY
DEAN C BUIE
TRUSTEE FOR
KERI NICOLE BUIE
BILLIE
DENOTES FILL IN WETLAND
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_09.dgn

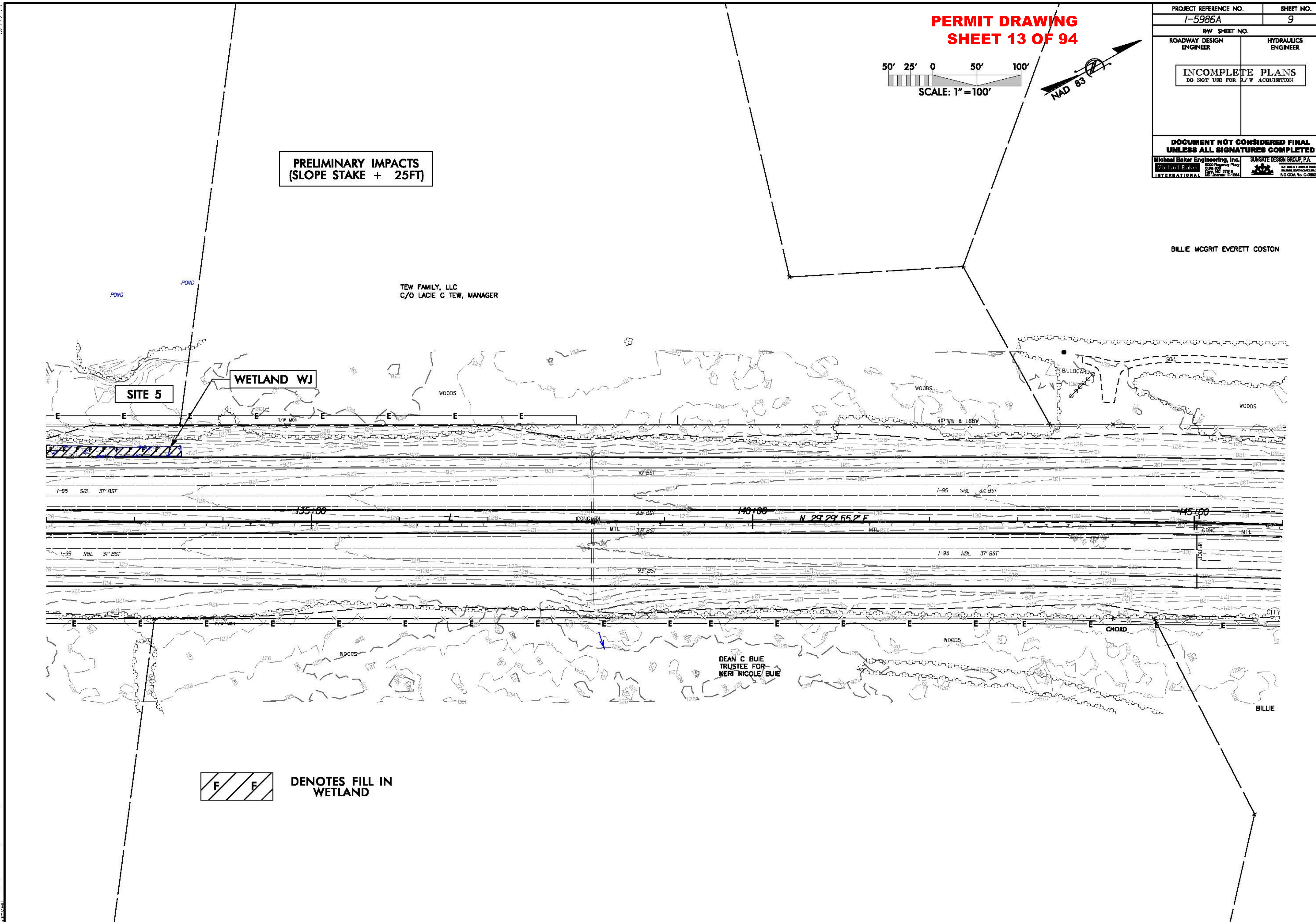
PERMIT DRAWING
SHEET 13 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_09a.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

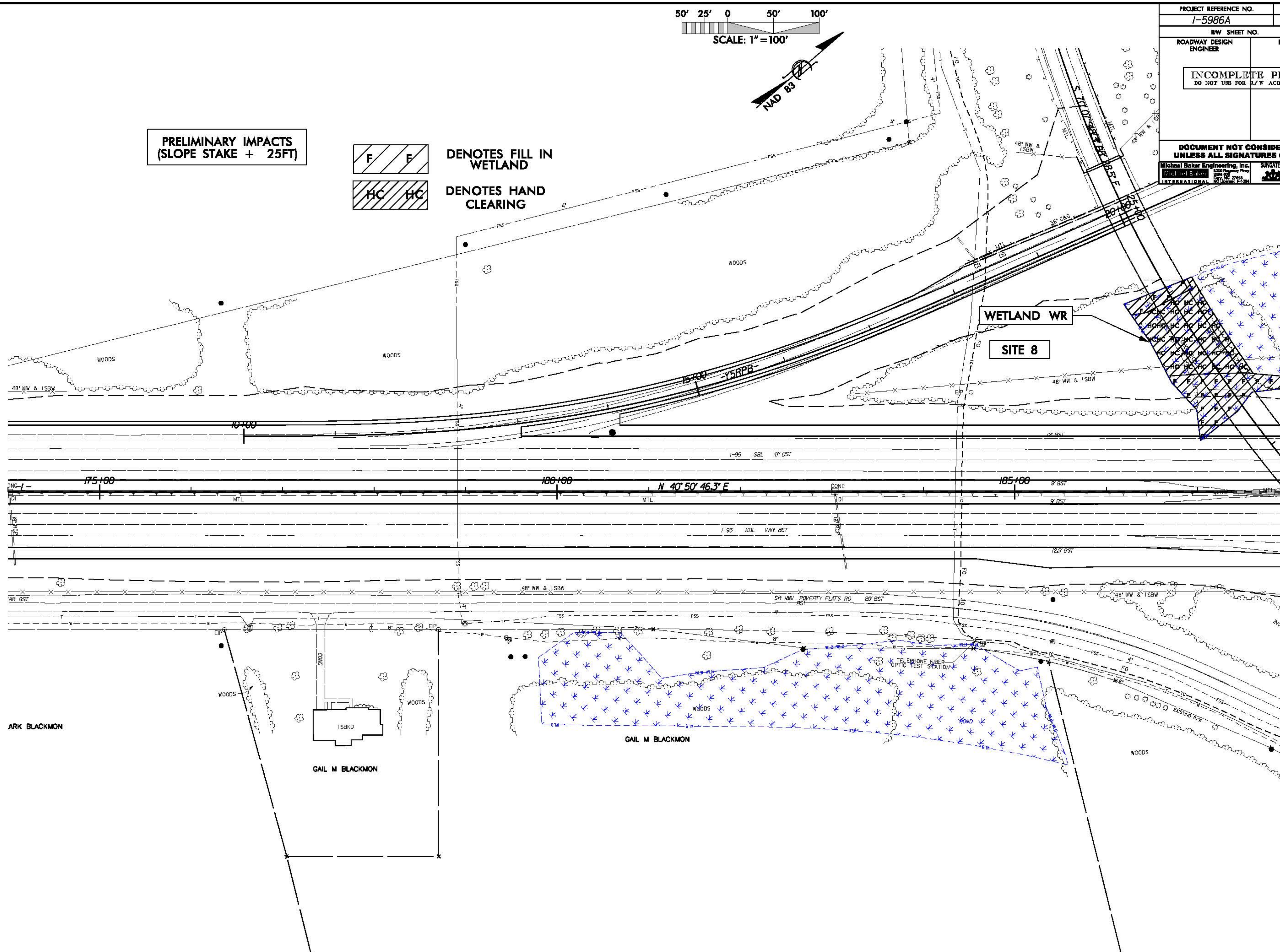
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

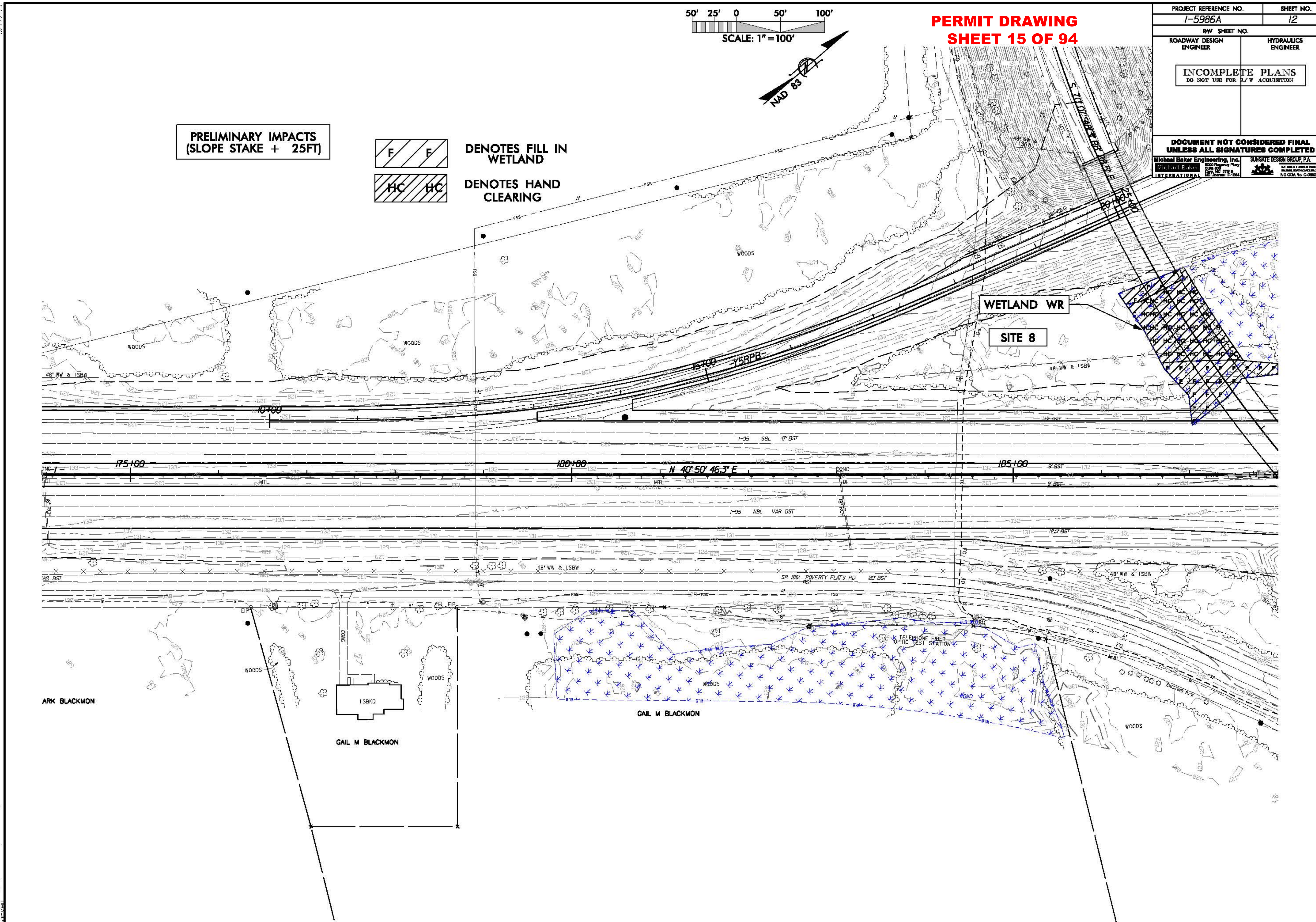
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

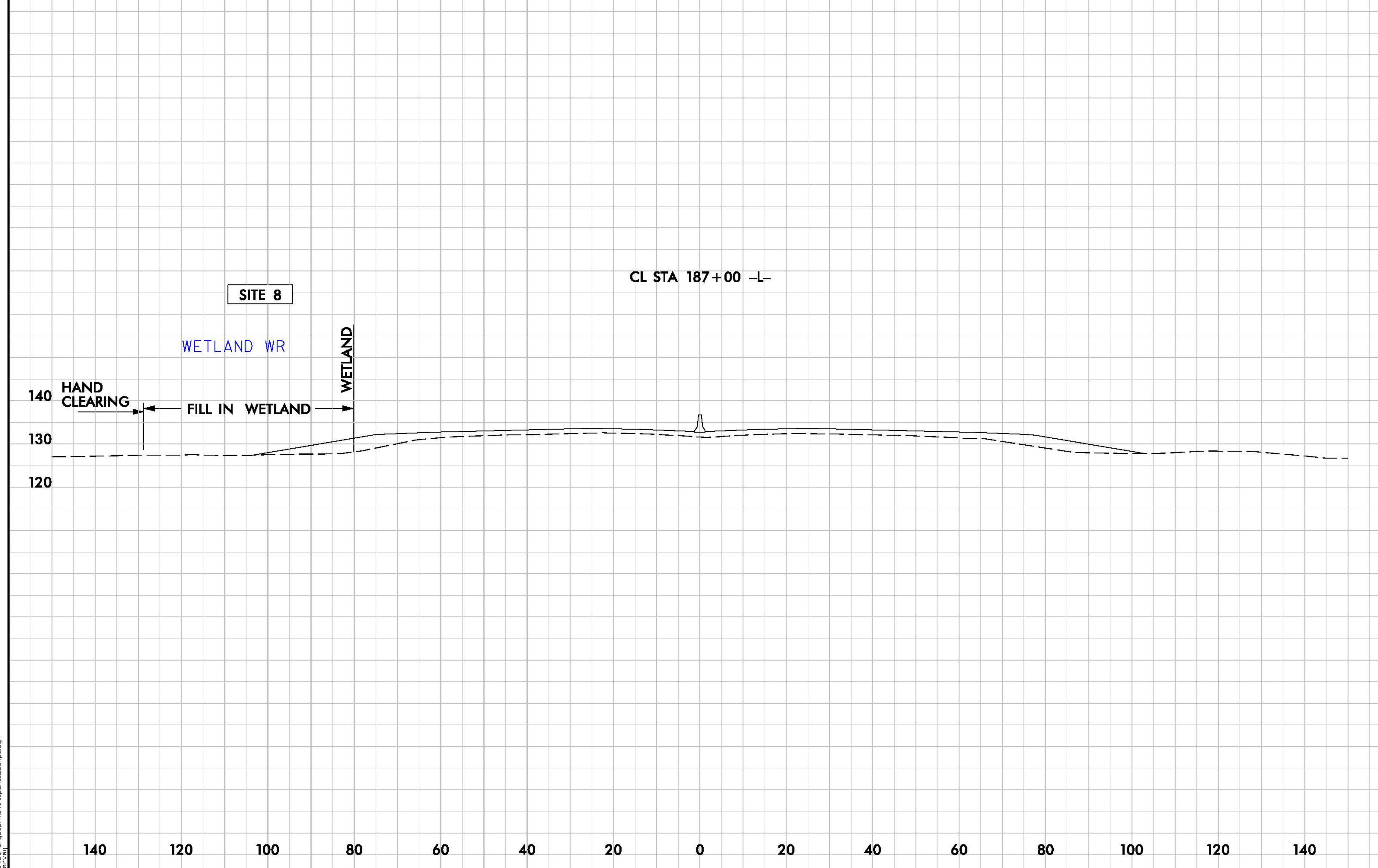
NC COA No. C-0880



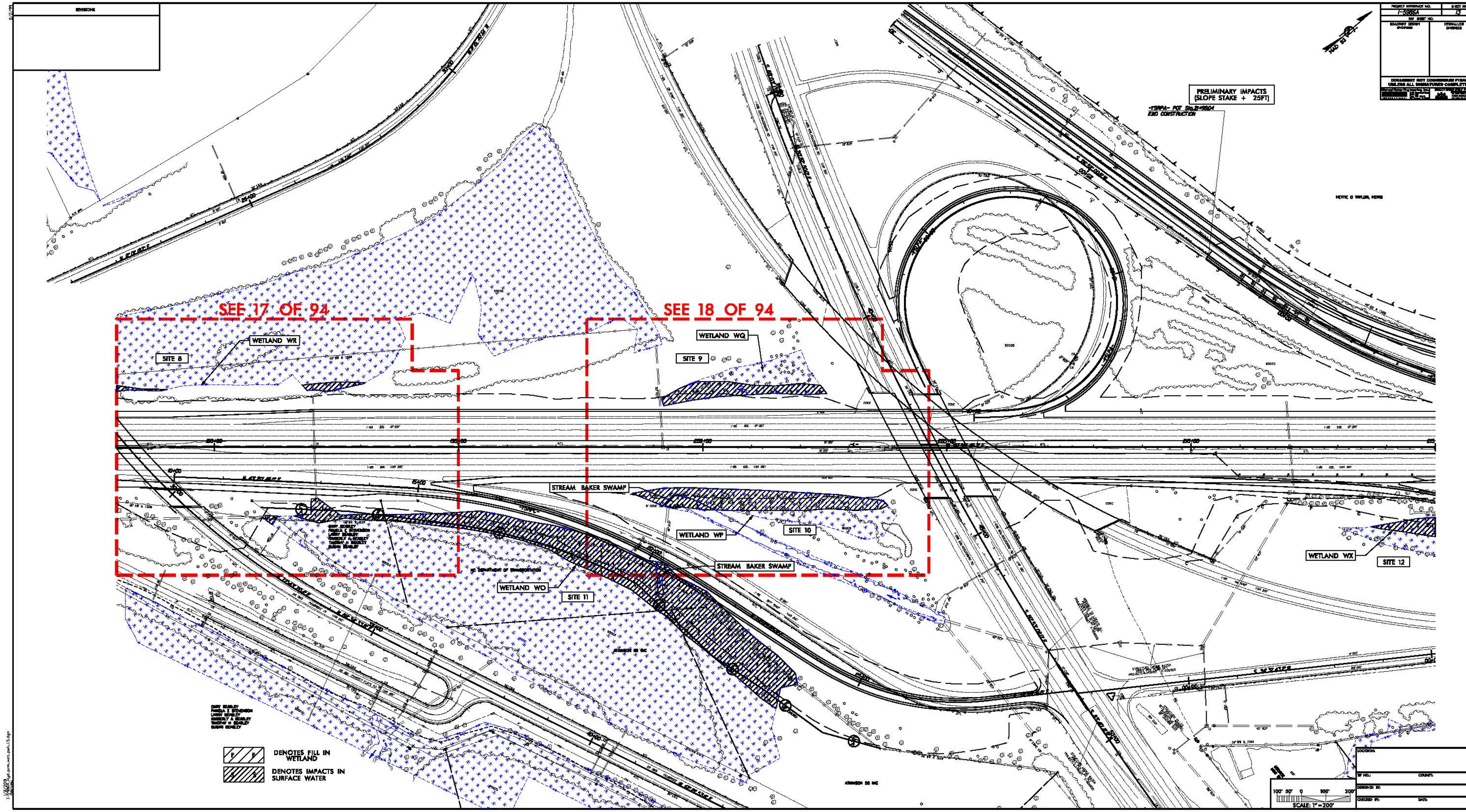

PERMIT DRAWING
SHEET 15 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
12
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1"=100'
NAD 83
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
F F
DENOTES FILL IN WETLAND
HC HC
DENOTES HAND CLEARING
WETLAND WR
SITE 8
WOODS
-Y5RPB-
10+00
15+00
20+00
25+00
-L-
175+00
180+00
185+00
N 40°50'46.3" E
I-95 SBL 47' BST
I-95 NBL VAR BST
SR 1861 POVERTY FLATS RD 20' BST
48" WW & 15BW
TELEPHONE FIBER OPTIC TEST STATION
ARK BLACKMON
GAIL M BLACKMON
1 SBKD

6/23/16

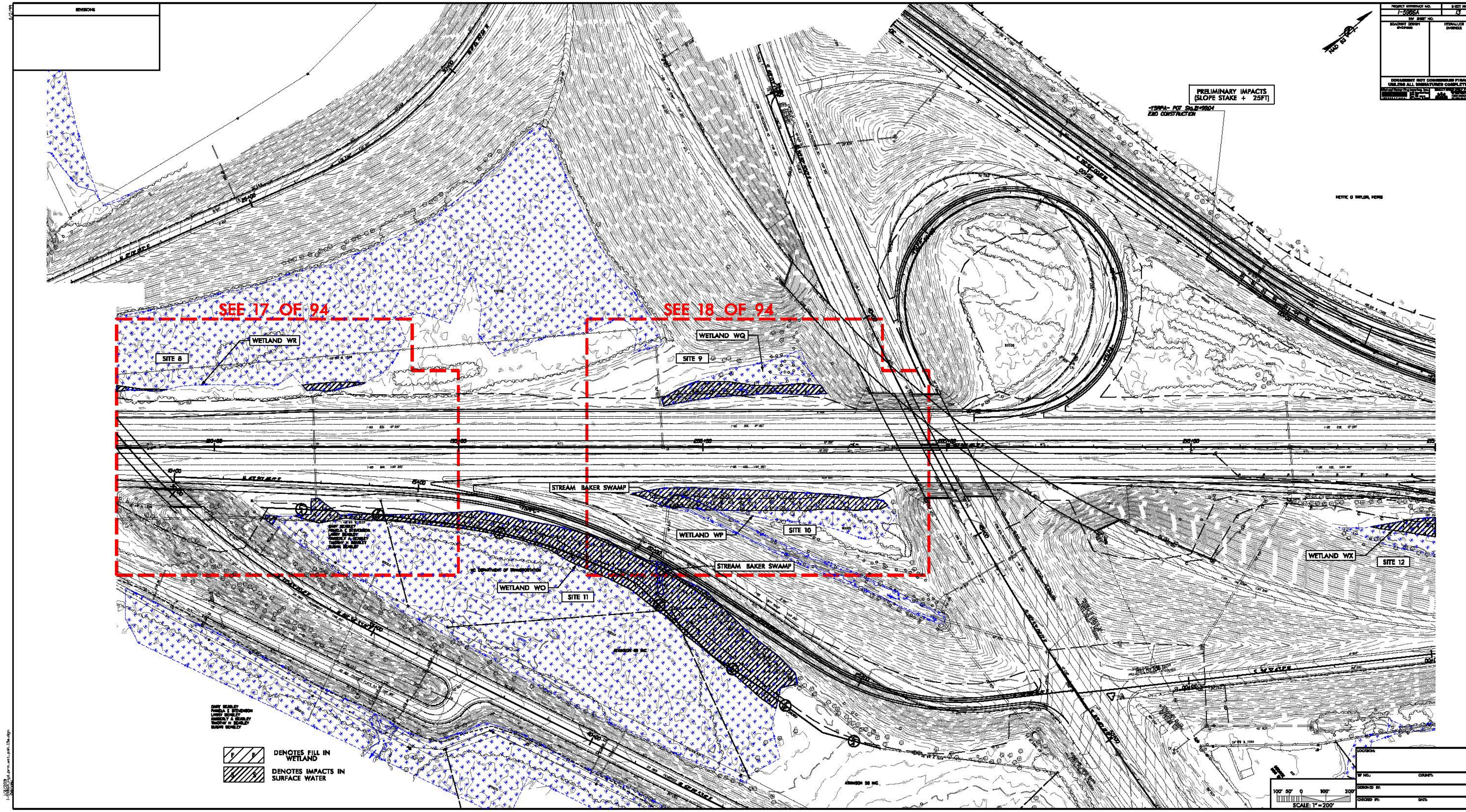
PROJ. REFERENCE NO.	SHEET NO.
I-5986A	7B



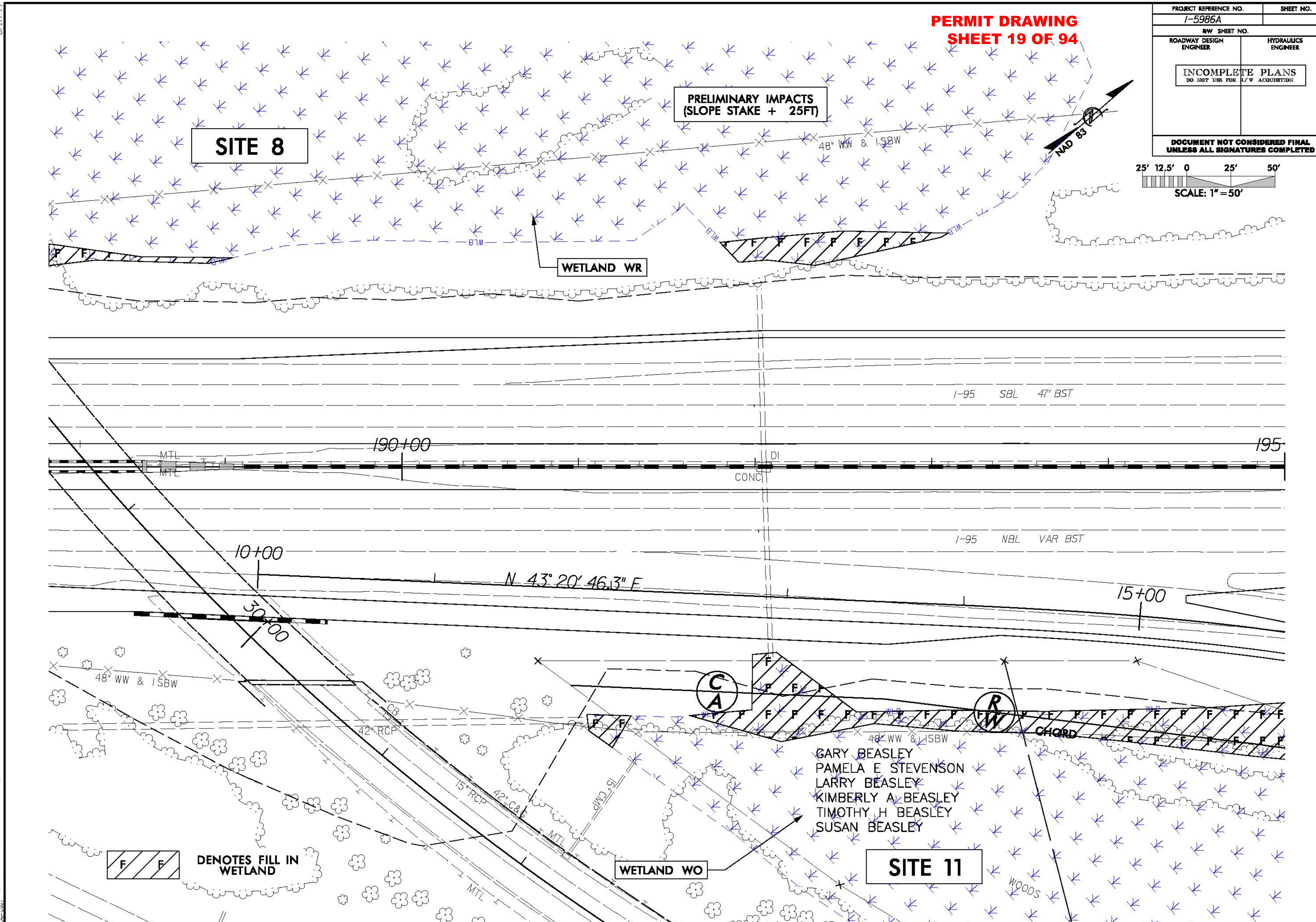
1/8/2019
I-5986A_Hyd_prm_wet_psh_12b_xpl.dgn
jharvey


PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
SEE 17 OF 94
SEE 18 OF 94
WETLAND WR
SITE 8
WETLAND WQ
SITE 9
STREAM BAKER SWAMP
WETLAND WP
SITE 10
STREAM BAKER SWAMP
WETLAND WO
SITE 11
WETLAND WX
SITE 12
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
SCALE: 1" = 200'

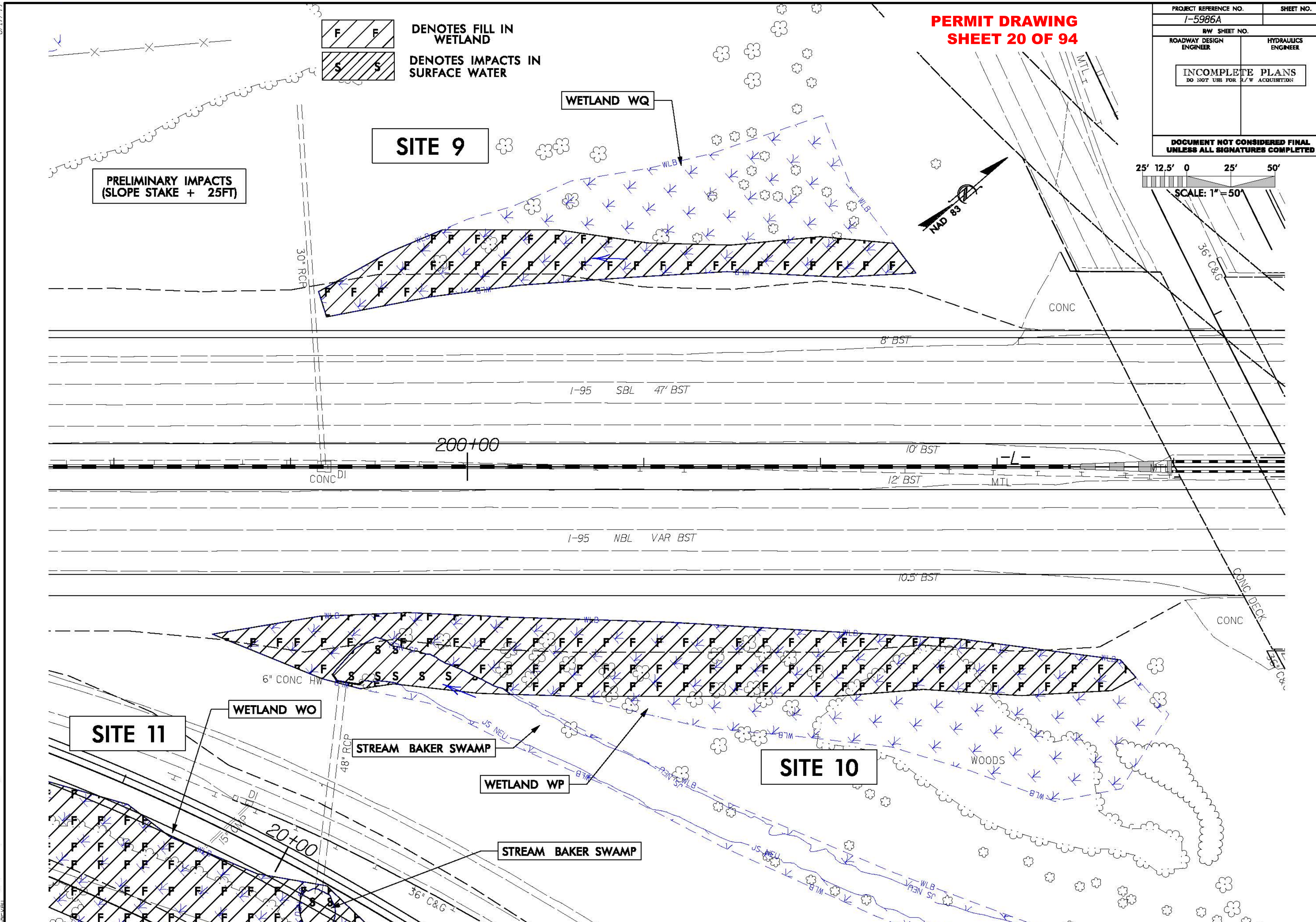
PERMIT DRAWING
SHEET 18 OF 94



8/17/99



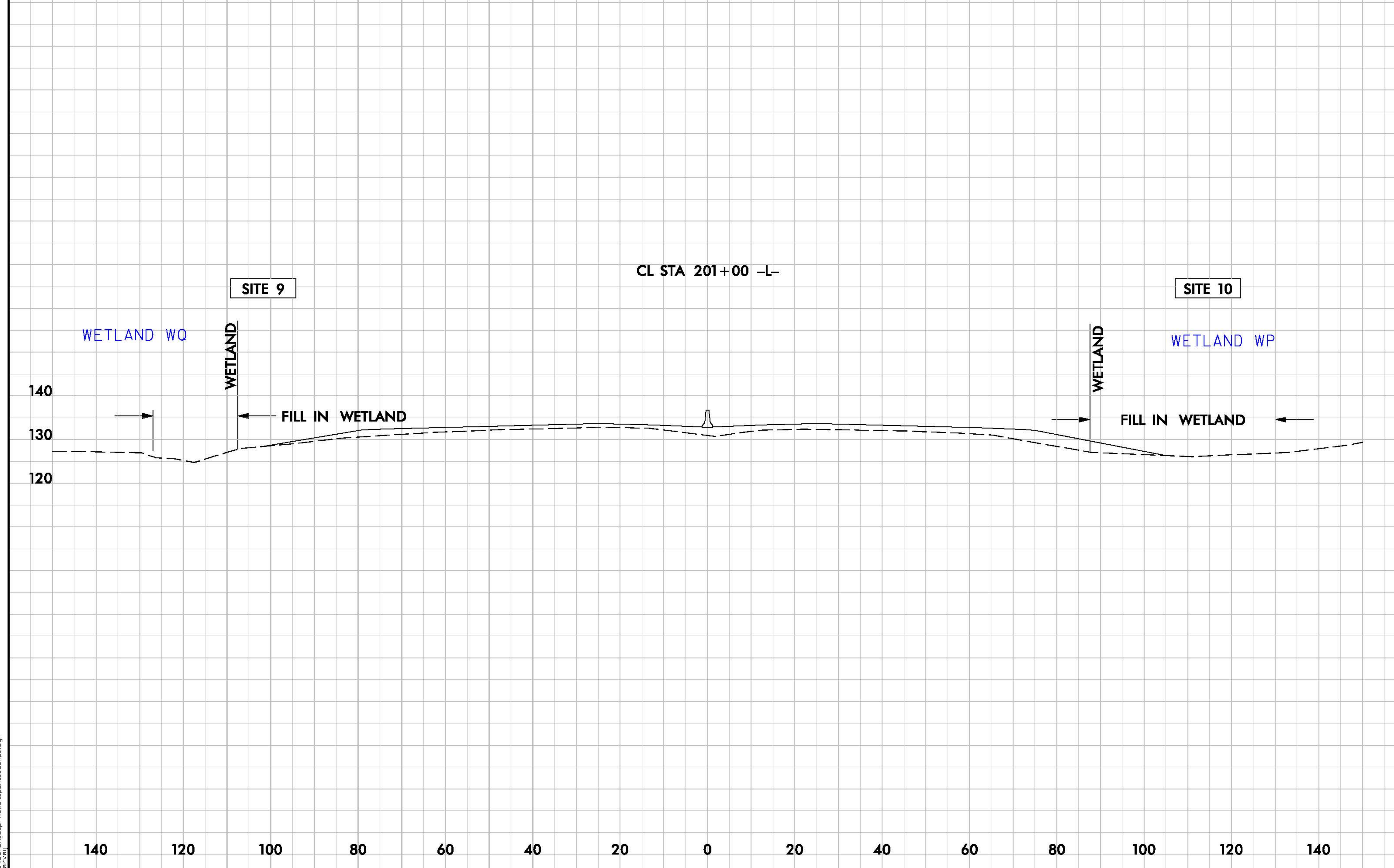
1/8/2019
I-5986A_Hyd_prm_wet_psh_13b_ViewIn.dgn
harveu



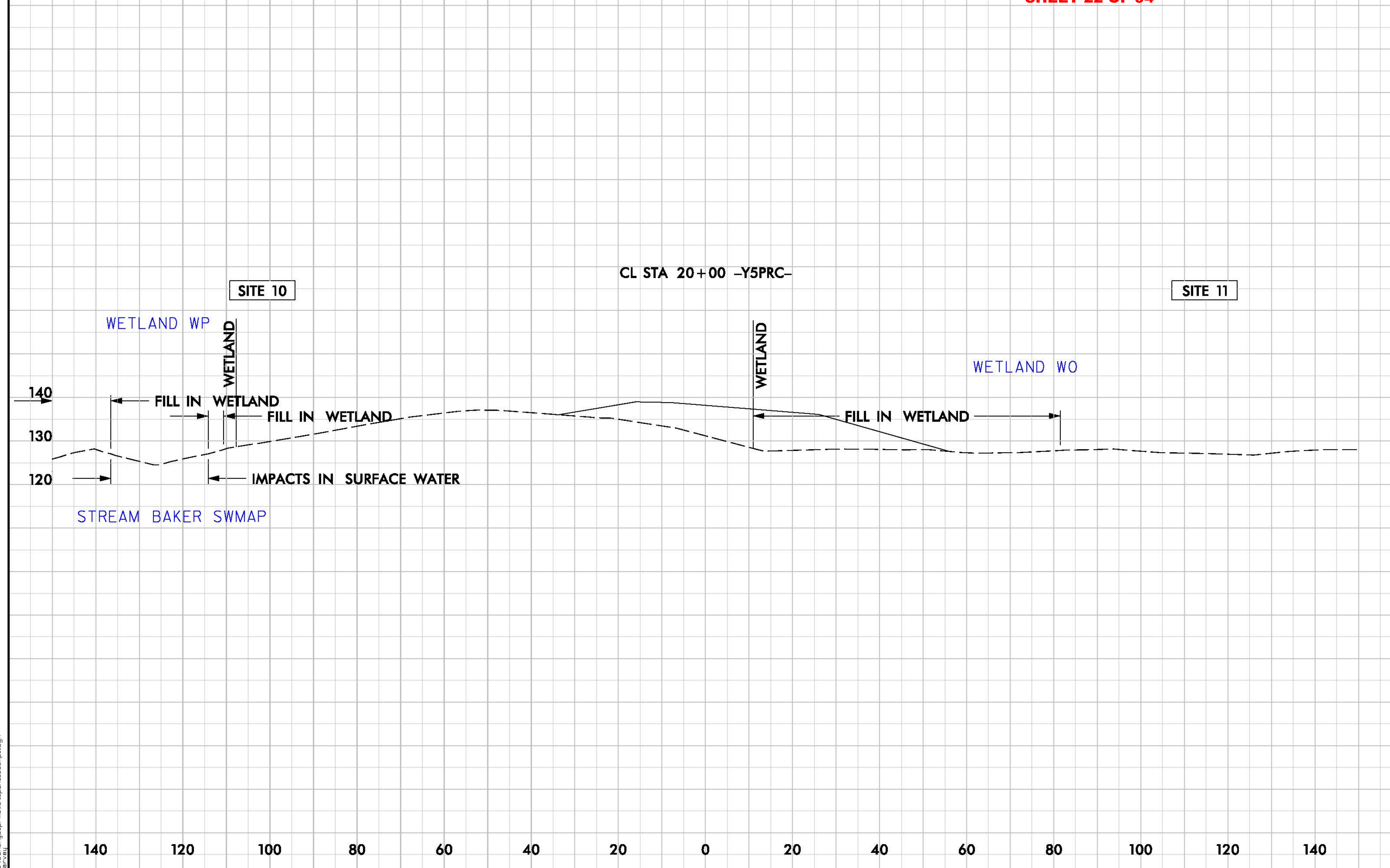
8/17/99

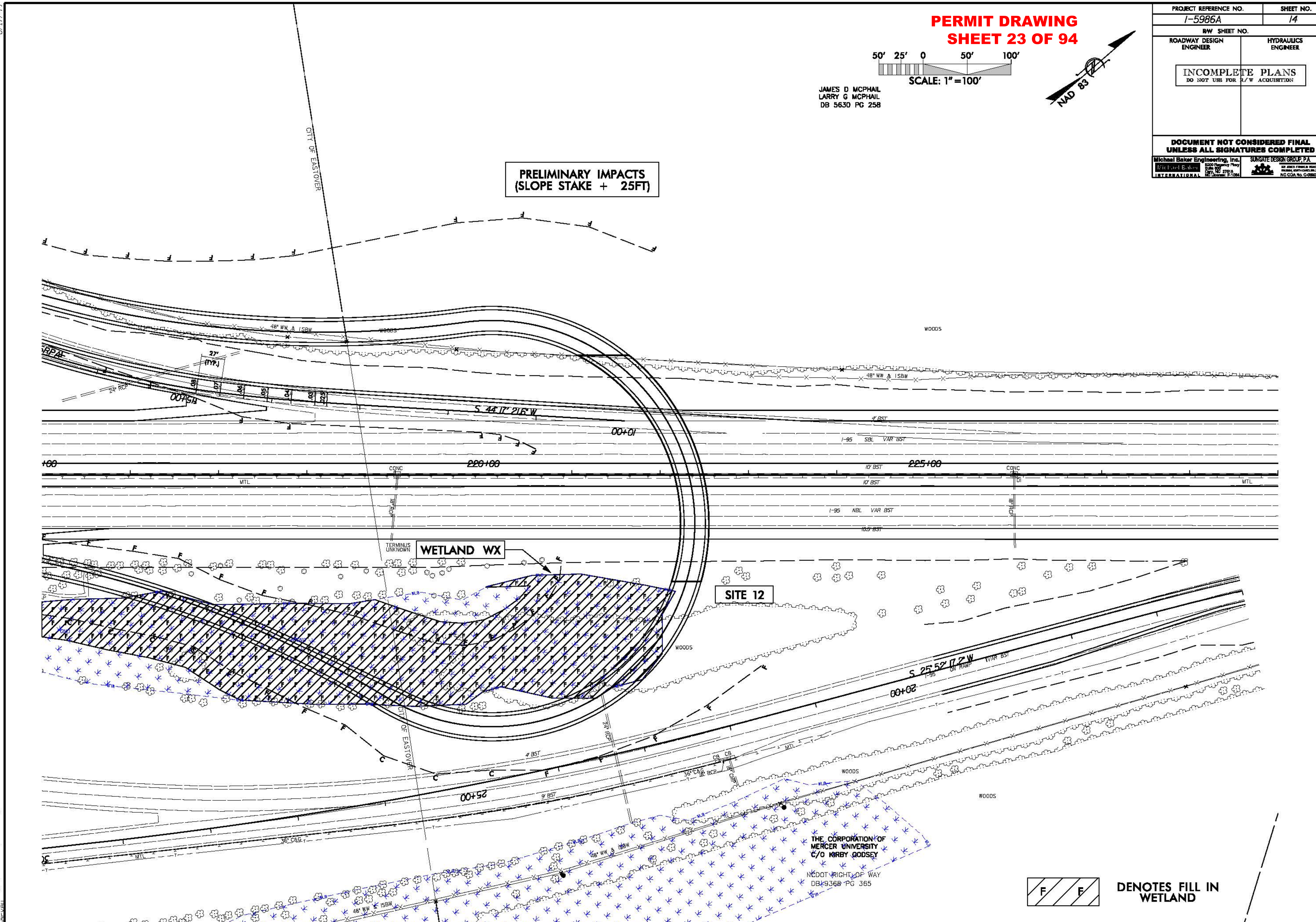
1/8/2019 I-5986A_Hyd_prm_wet_psh_13a_ViewIn.dgn

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	13D



PROJ. REFERENCE NO.	SHEET NO.
I-5986A	13E




PERMIT DRAWING
SHEET 23 OF 94
PROJECT REFERENCE NO.
SHEET NO.
I-5986A
14
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1" = 100'
NAD 83
JAMES D MCPHAIL
LARRY G MCPHAIL
DB 5630 PG 258
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
CITY OF EASTOVER
WOODS
S 44°17' 21.6" W
220+00
225+00
I-95 SBL VAR BST
I-95 NBL VAR BST
TERMINUS UNKNOWN
WETLAND WX
SITE 12
S 25°52' 17.2" W
20+00
25+00
THE CORPORATION OF MERCER UNIVERSITY
C/O KIRBY GODSEY
NCDOT RIGHT OF WAY
DB 9368 PG 365
DENOTES FILL IN WETLAND
8/17/99

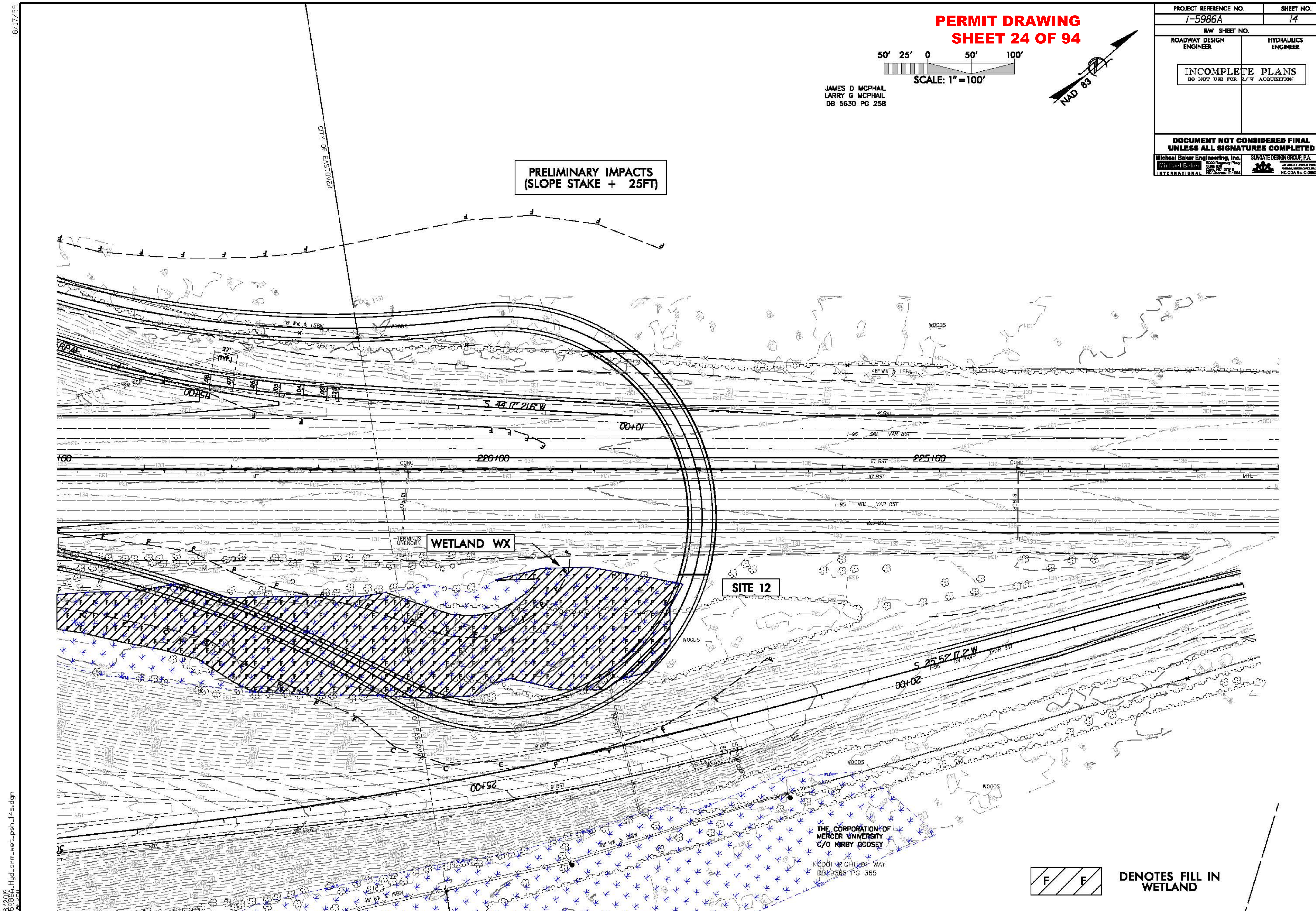
PERMIT DRAWING
SHEET 24 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

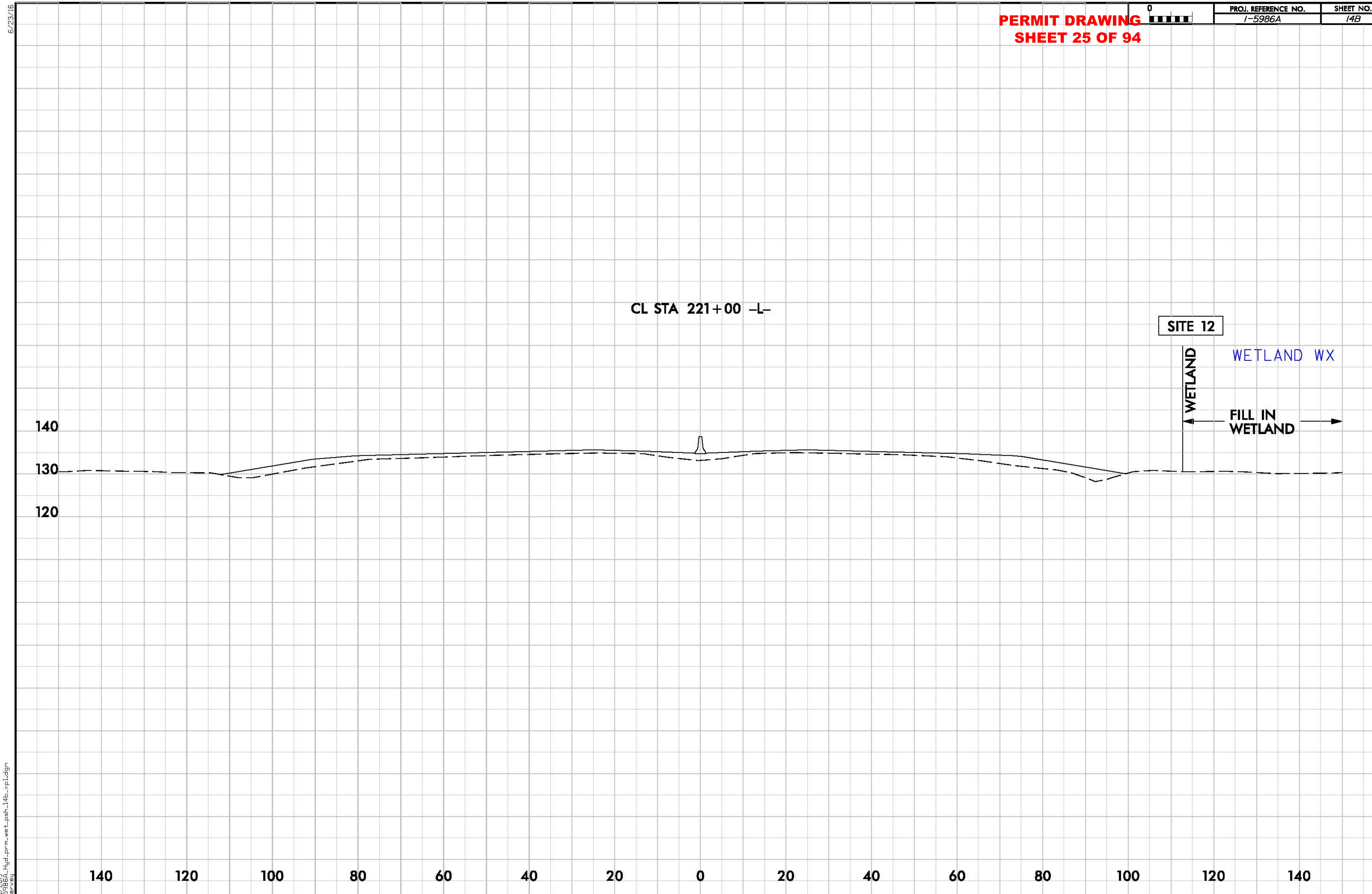
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.



PROJ. REFERENCE NO.	SHEET NO.
I-5986A	14B



6/23/16

1/8/2019
I-5986A_Hyd_prm_wet_psh_14b_xpl.dgn
harvey

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	16

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

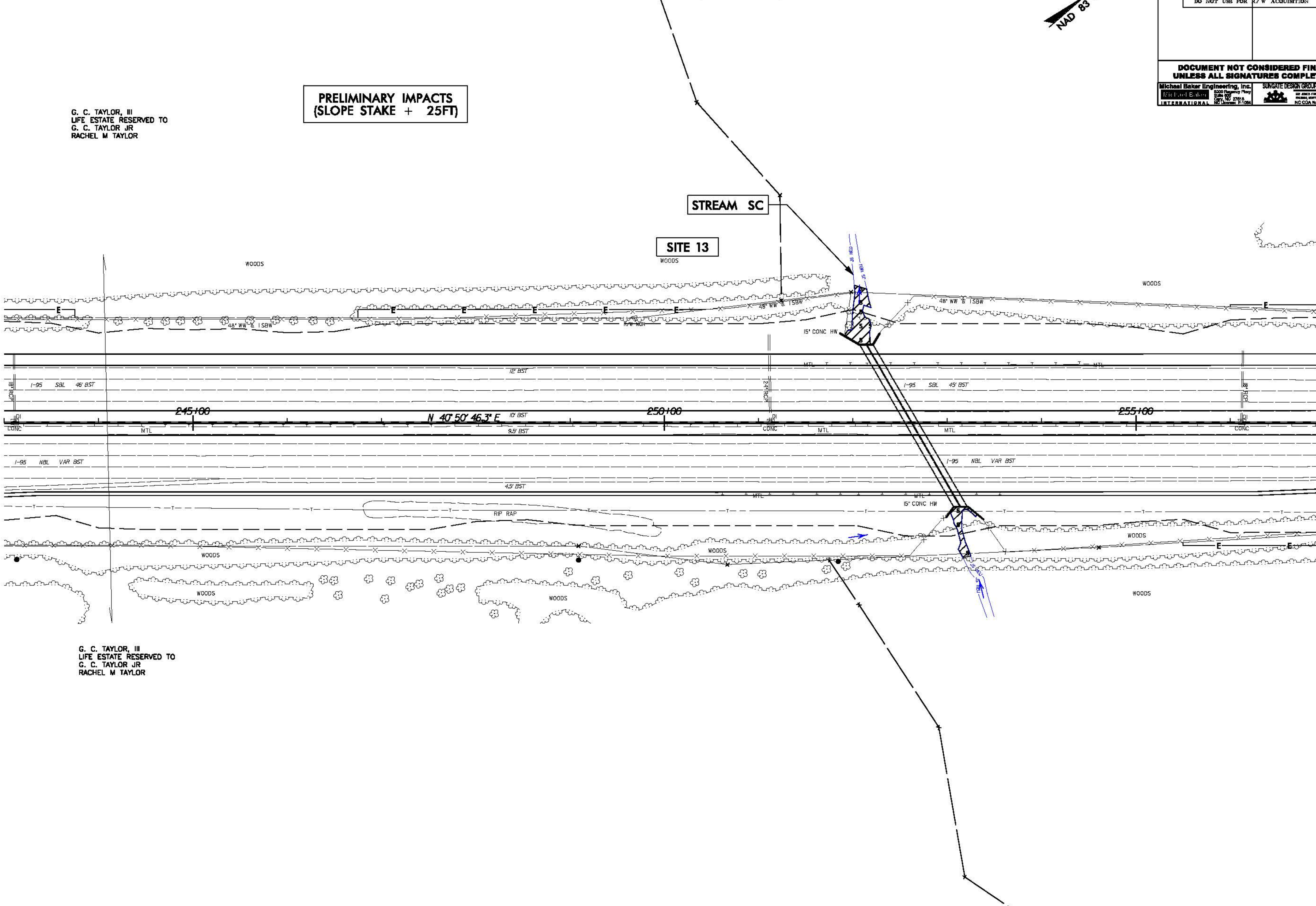
SUNGATE DESIGN GROUP, P.A.

50' 25' 0 50' 100'

SCALE: 1" = 100'

DENOTES IMPACTS IN SURFACE WATER

NAD 83



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_16.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

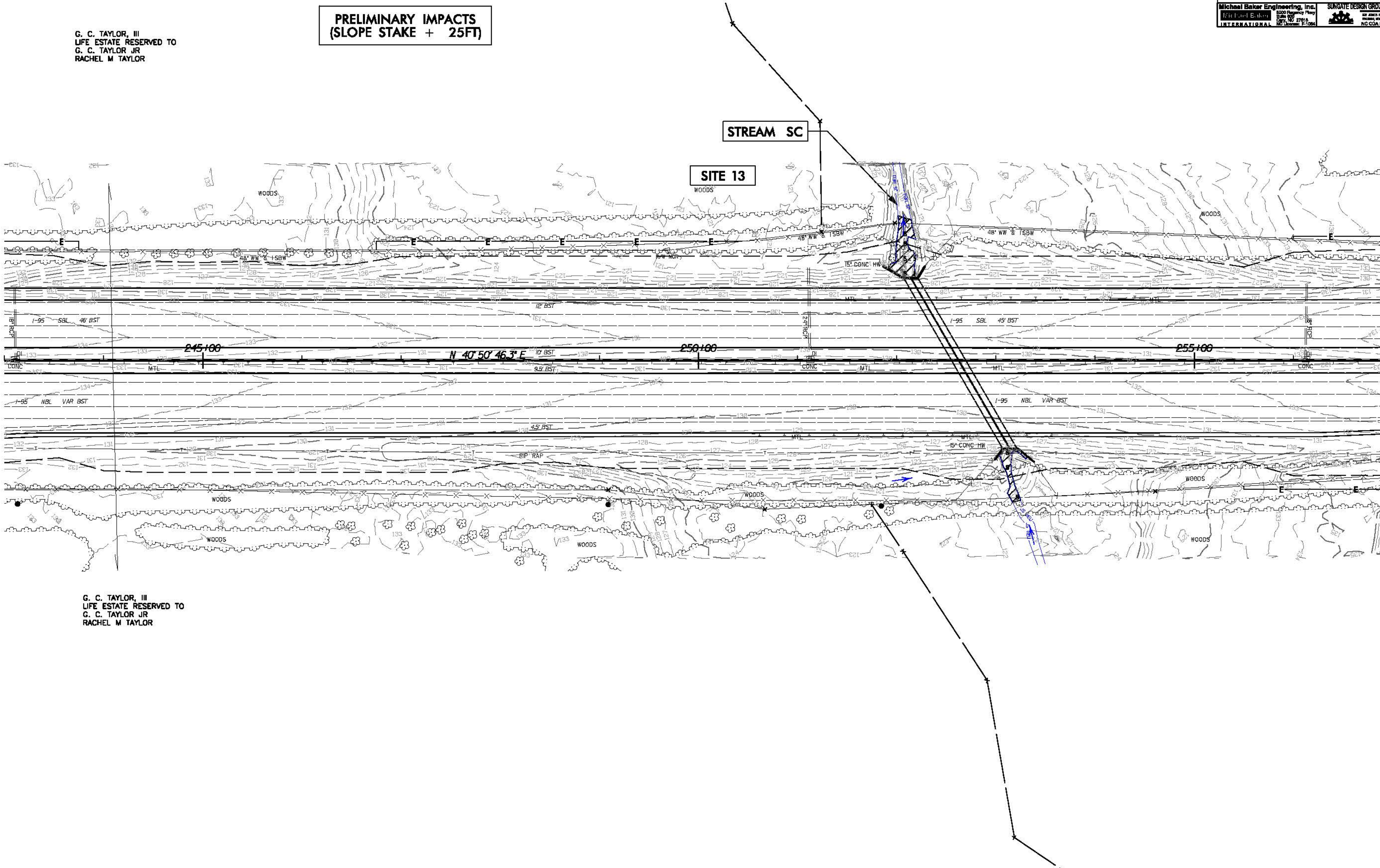
Michael Baker Engineering, Inc. — SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING
SHEET 27 OF 94

SCALE: 1" = 100'

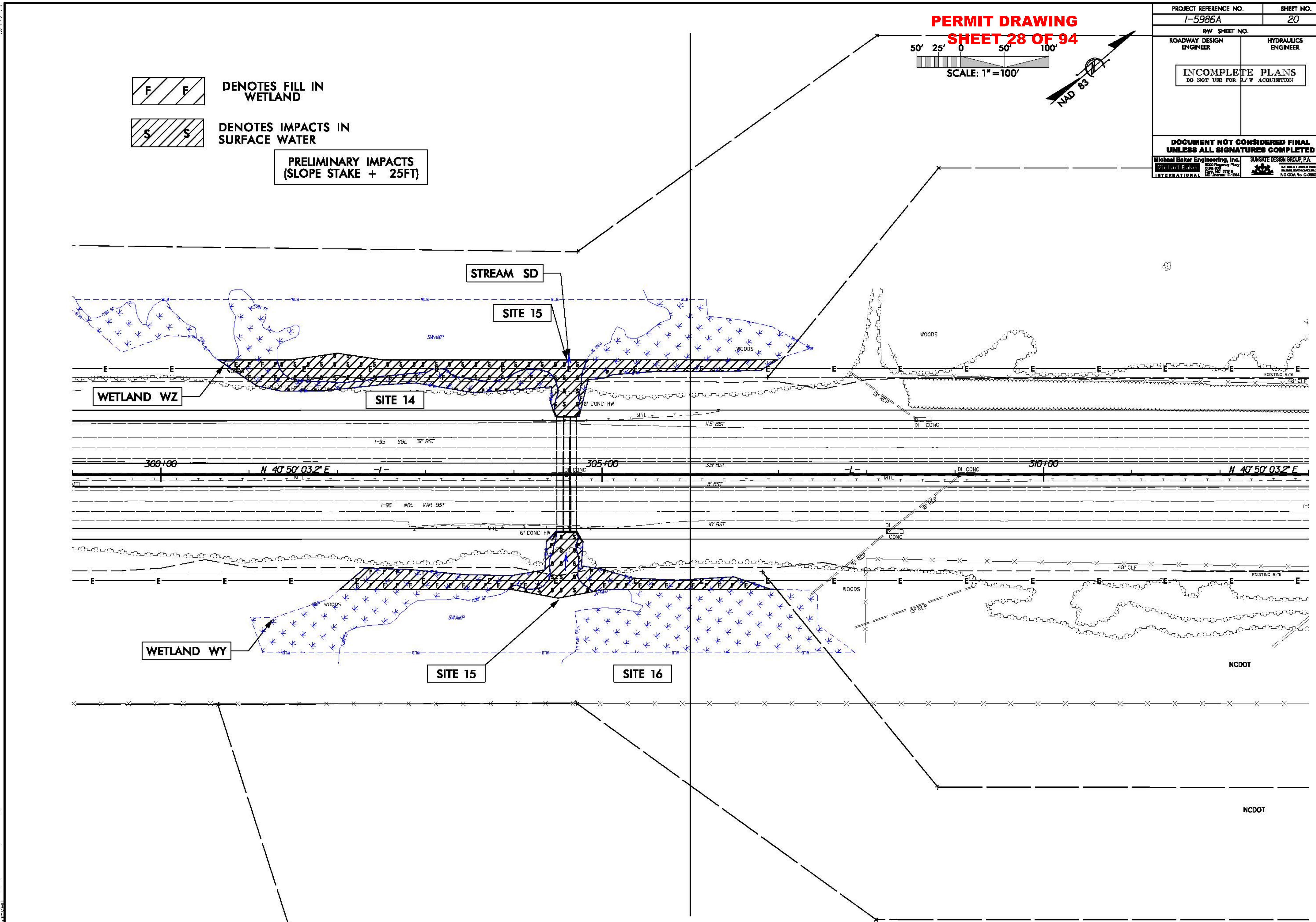
DENOTES IMPACTS IN SURFACE WATER

NAD 83



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_16a.dgn



PERMIT DRAWING
SHEET 28 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
20
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1" = 100'
NAD 83
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
STREAM SD
SITE 15
WETLAND WZ
SITE 14
WETLAND WY
SITE 15
SITE 16
SWAMP
WOODS
6' CONC HW
I-95 SBL 37' BST
I-95 NBL VAR BST
300+00
305+00
310+00
N 40° 50' 03.2" E
-L-
DI CONC
48" CLF
EXISTING R/W
NCDOT
NCDOT
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_20.dgn

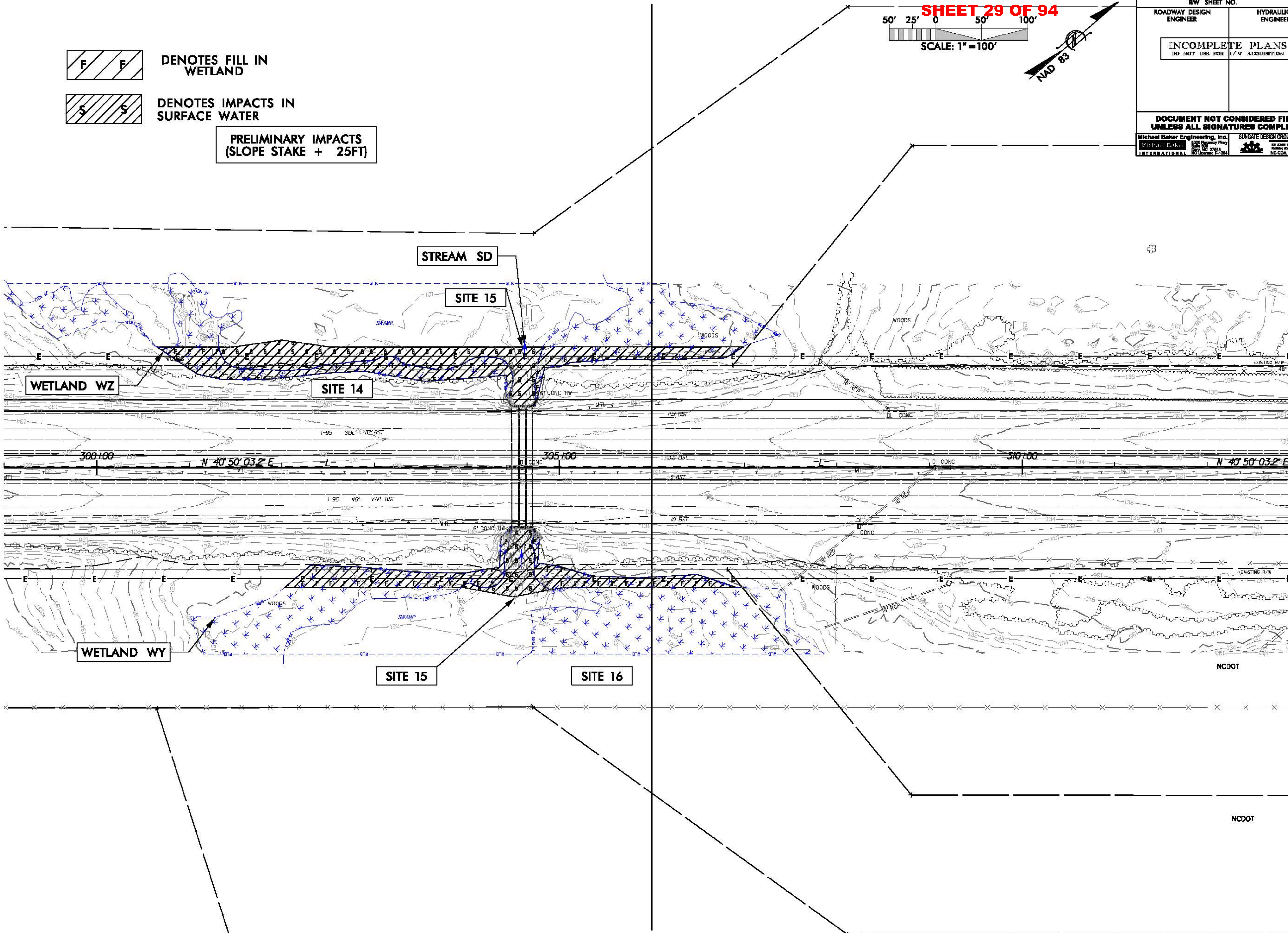
PROJECT REFERENCE NO.	SHEET NO.
I-5986A	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

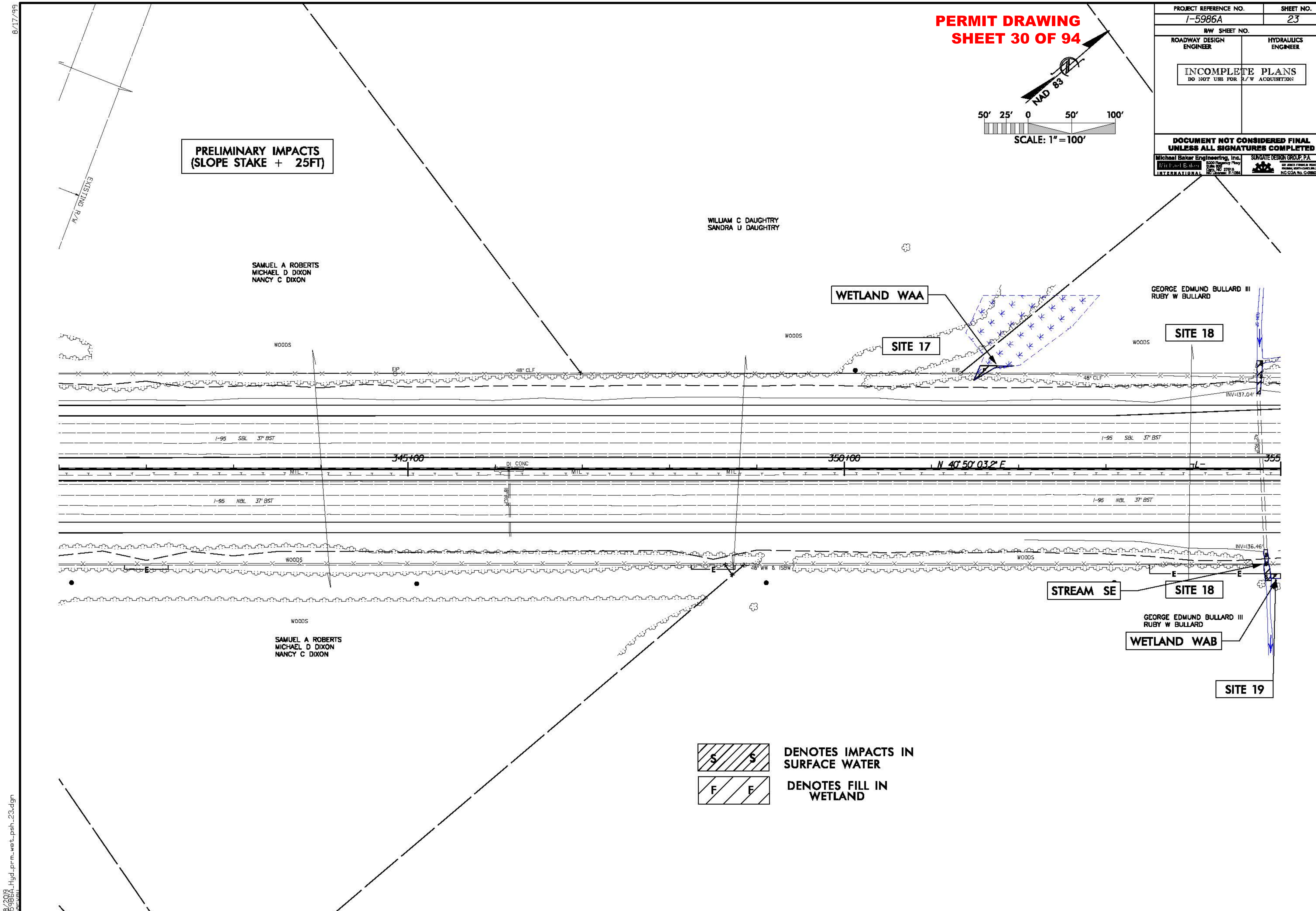
Michael Baker Engineering, Inc.

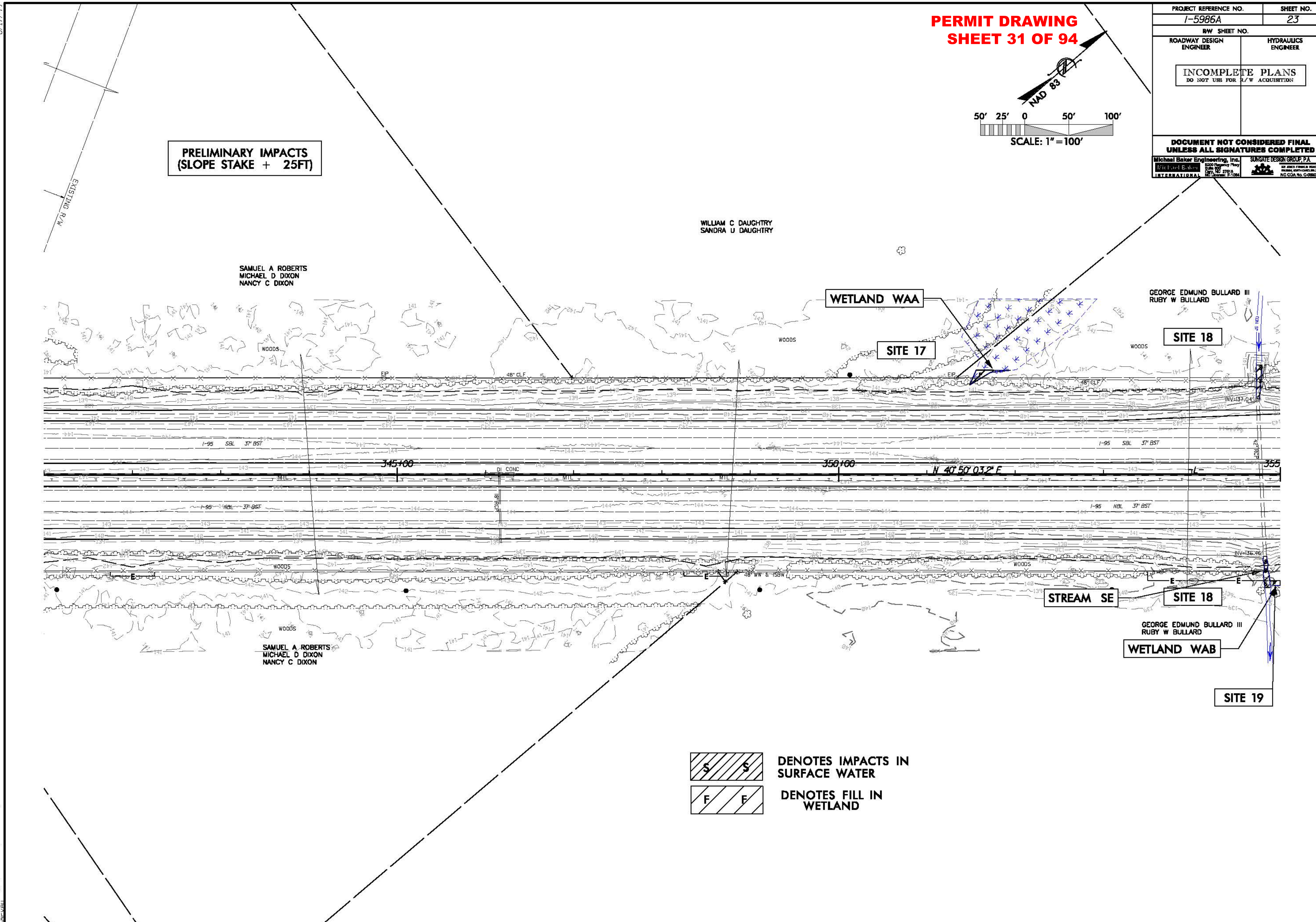
SUNGATE DESIGN GROUP, P.A.



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_20a.dgn


PERMIT DRAWING
SHEET 30 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
23
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
50' 25' 0 50' 100'
SCALE: 1" = 100'
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
EXISTING R/W
SAMUEL A ROBERTS
MICHAEL D DIXON
NANCY C DIXON
WILLIAM C DAUGHTRY
SANDRA U DAUGHTRY
GEORGE EDMUND BULLARD III
RUBY W BULLARD
WETLAND WAA
SITE 17
SITE 18
WOODS
48" CLF
EIP
INV=137.04'
I-95 SBL 37' BST
345+00
350+00
N 40°50'03.2" E
355
DI CONC
MIL
I-95 NBL 37' BST
INV=136.46'
48" WW & ISBW
STREAM SE
SITE 18
GEORGE EDMUND BULLARD III
RUBY W BULLARD
WETLAND WAB
SITE 19
SAMUEL A ROBERTS
MICHAEL D DIXON
NANCY C DIXON
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_23.dgn


PERMIT DRAWING
SHEET 31 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
23
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
50' 25' 0 50' 100'
SCALE: 1" = 100'
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
EXISTING R/W
WILLIAM C DAUGHTRY
SANDRA U DAUGHTRY
SAMUEL A ROBERTS
MICHAEL D DIXON
NANCY C DIXON
WETLAND WAA
SITE 17
SITE 18
GEORGE EDMUND BULLARD III
RUBY W BULLARD
WOODS
I-95 SBL 37' BST
345+00
350+00
N 40°50'03.2" E
DI CONC
I-95 NBL 37' BST
STREAM SE
SITE 18
GEORGE EDMUND BULLARD III
RUBY W BULLARD
WETLAND WAB
SITE 19
SAMUEL A ROBERTS
MICHAEL D DIXON
NANCY C DIXON
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_23a.dgn

PERMIT DRAWING
SHEET 32 OF 94

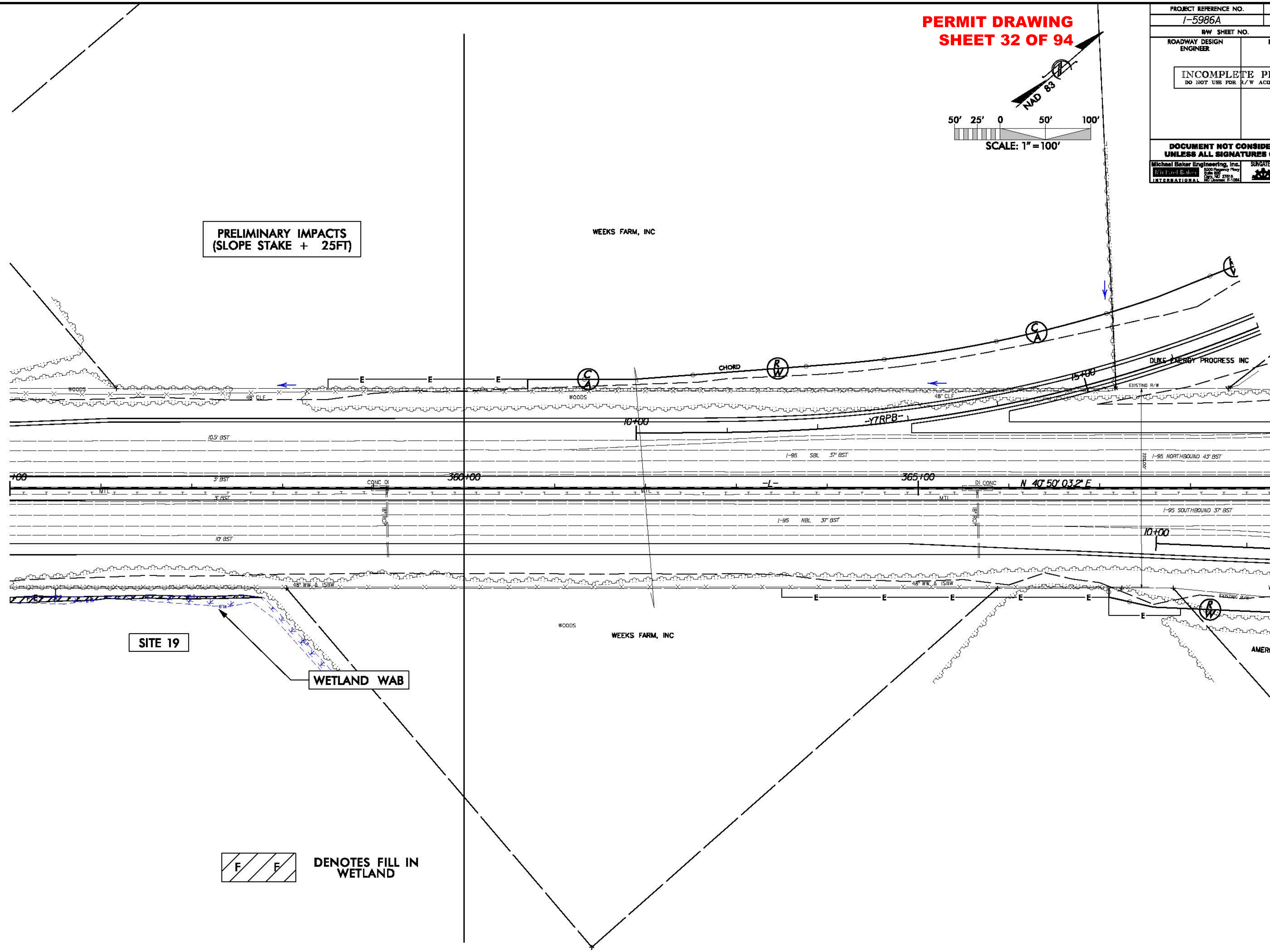
PROJECT REFERENCE NO.	SHEET NO.
I-5986A	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.



F F DENOTES FILL IN WETLAND

8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_24.dgn

PERMIT DRAWING
SHEET 33 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	24

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

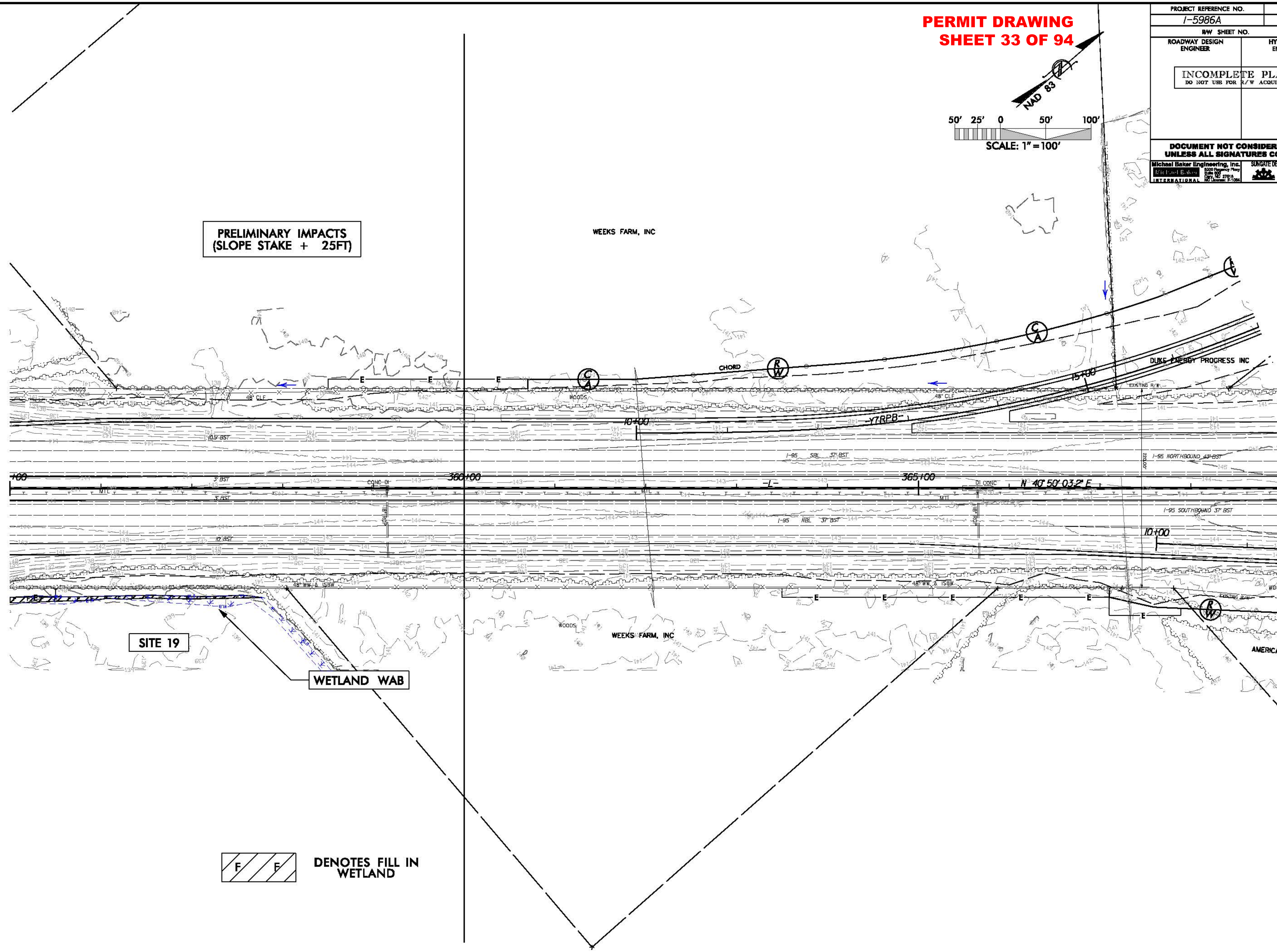
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

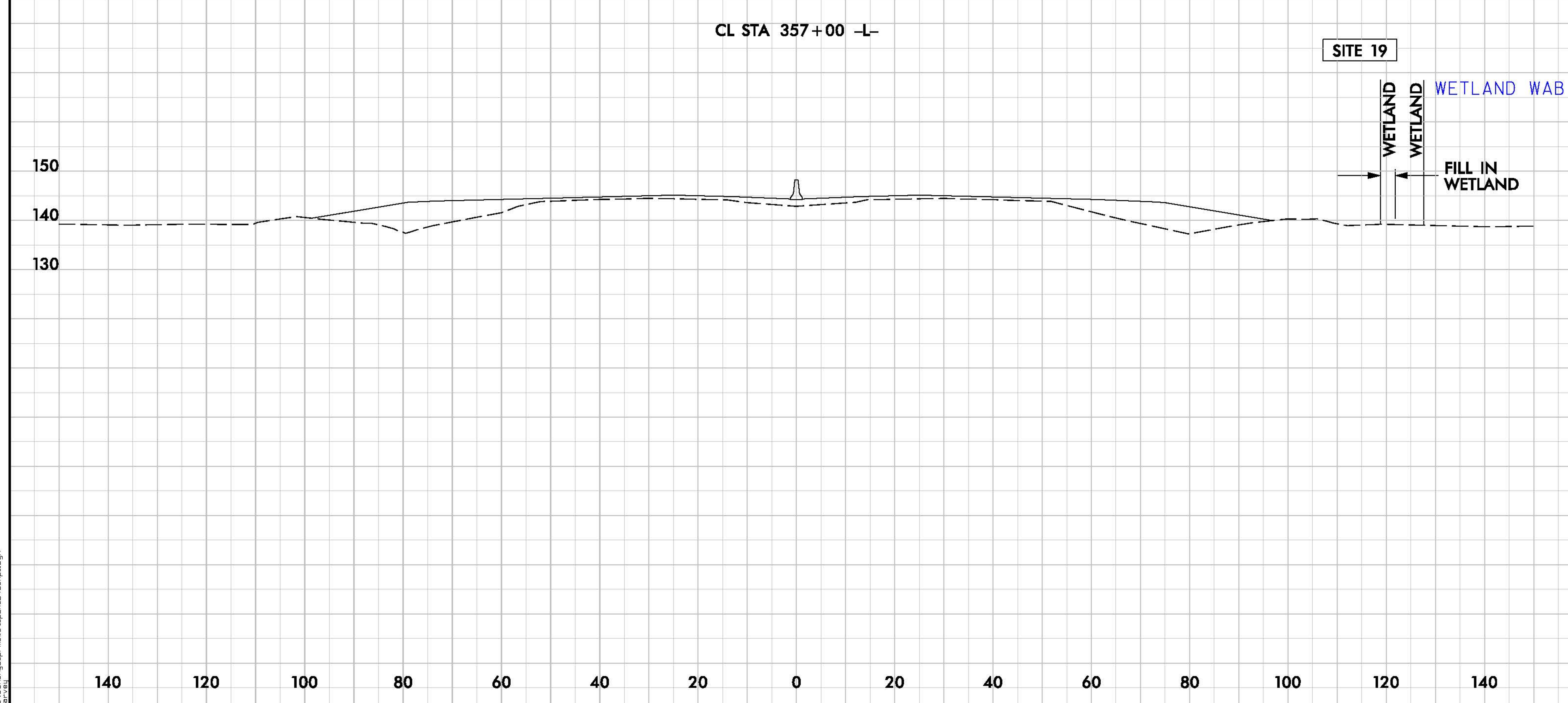
SUNGATE DESIGN GROUP, P.A.



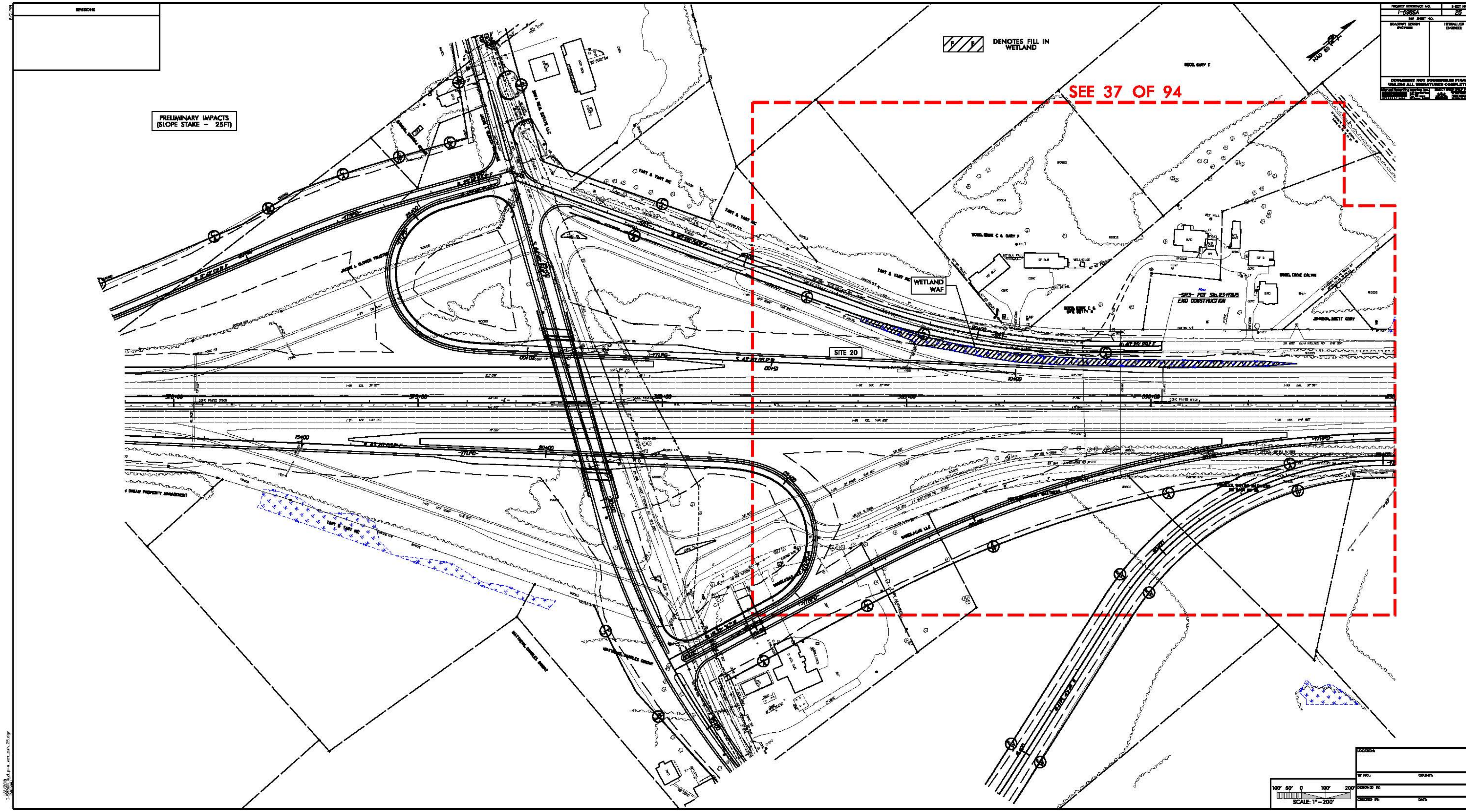
8/17/99

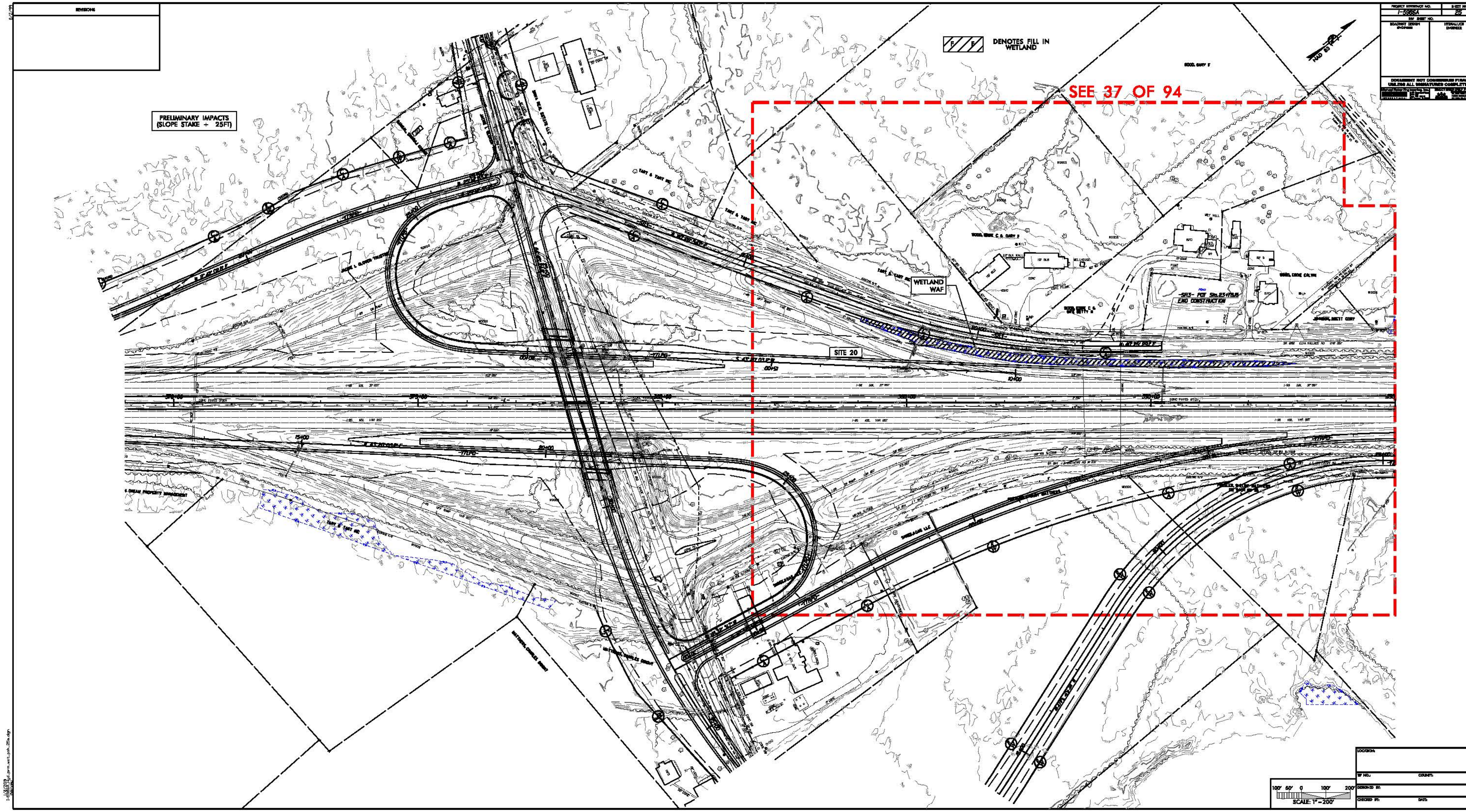
1/8/2019
I-5986A_Hyd_prm_wet_psh_24a.dgn

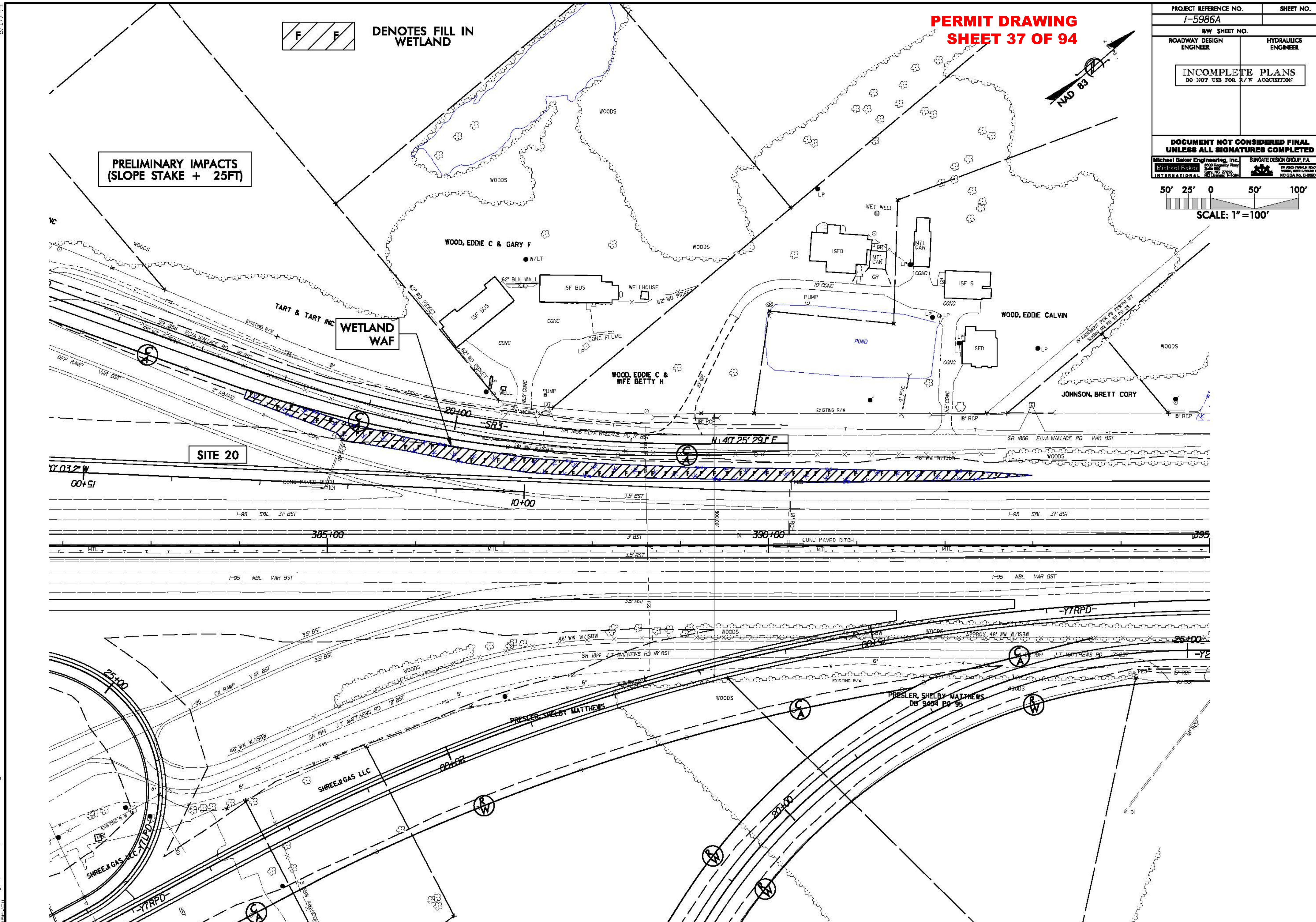
PERMIT DRAWING
SHEET 34 OF 94



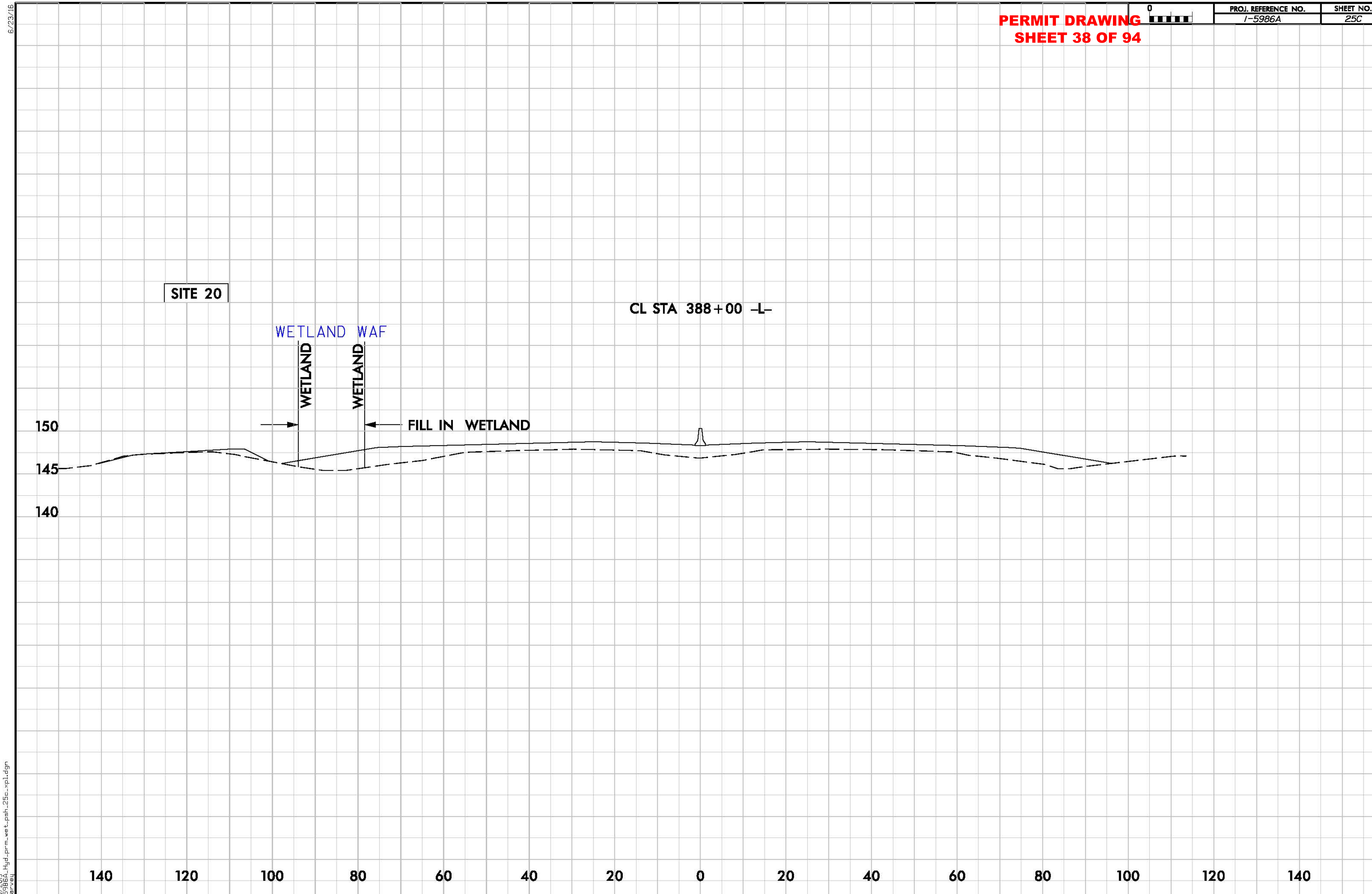
6/23/16
1/8/2019
I-5986A_Hyd_prm_wet_psh_24b_xpl.dgn
harvey


REVISIONS
DENOTES FILL IN WETLAND
SEE 37 OF 94
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
WETLAND
WAF
SITE 20
END CONSTRUCTION
SCALE: 1" = 200'


DENOTES FILL IN WETLAND
SEE 37 OF 94
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
WETLAND WAF
SITE 20
SCALE: 1"=200'


PERMIT DRAWING
SHEET 37 OF 94
PROJECT REFERENCE NO.
SHEET NO.
I-5986A
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
SCALE: 1" = 100'
DENOTES FILL IN WETLAND
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
SITE 20
WETLAND WAF
WOOD, EDDIE C & GARY F
WOOD, EDDIE C & WIFE BETTY H
WOOD, EDDIE CALVIN
JOHNSON, BRETT CORY
TART & TART INC
PRESLER, SHELBY MATTHEWS
PRESLER, SHELBY MATTHEWS DB 9404 PG 95
SHREEJI GAS LLC
SR 1856 ELVA WALLACE RD
SR 1814 J.T. MATTHEWS RD
I-95 SBL 37' BST
I-95 NBL VAR BST
I-95 ON RAMP
385+00
390+00
10+00
15+00
20+00
25+00
-SR3-
-Y7RPD-
POND
WOODS
8/17/99

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	25C



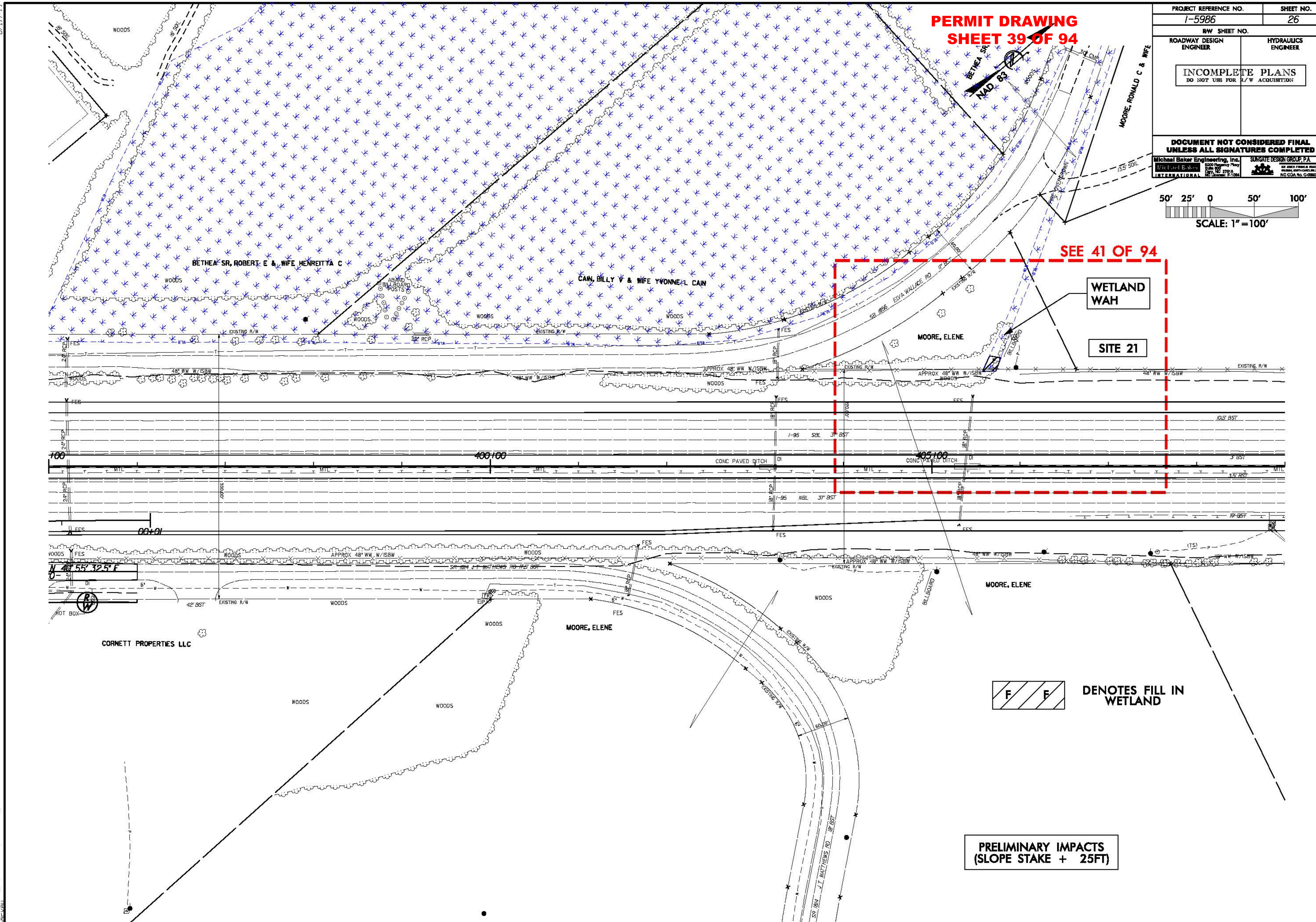
PROJECT REFERENCE NO.	SHEET NO.
I-5986	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

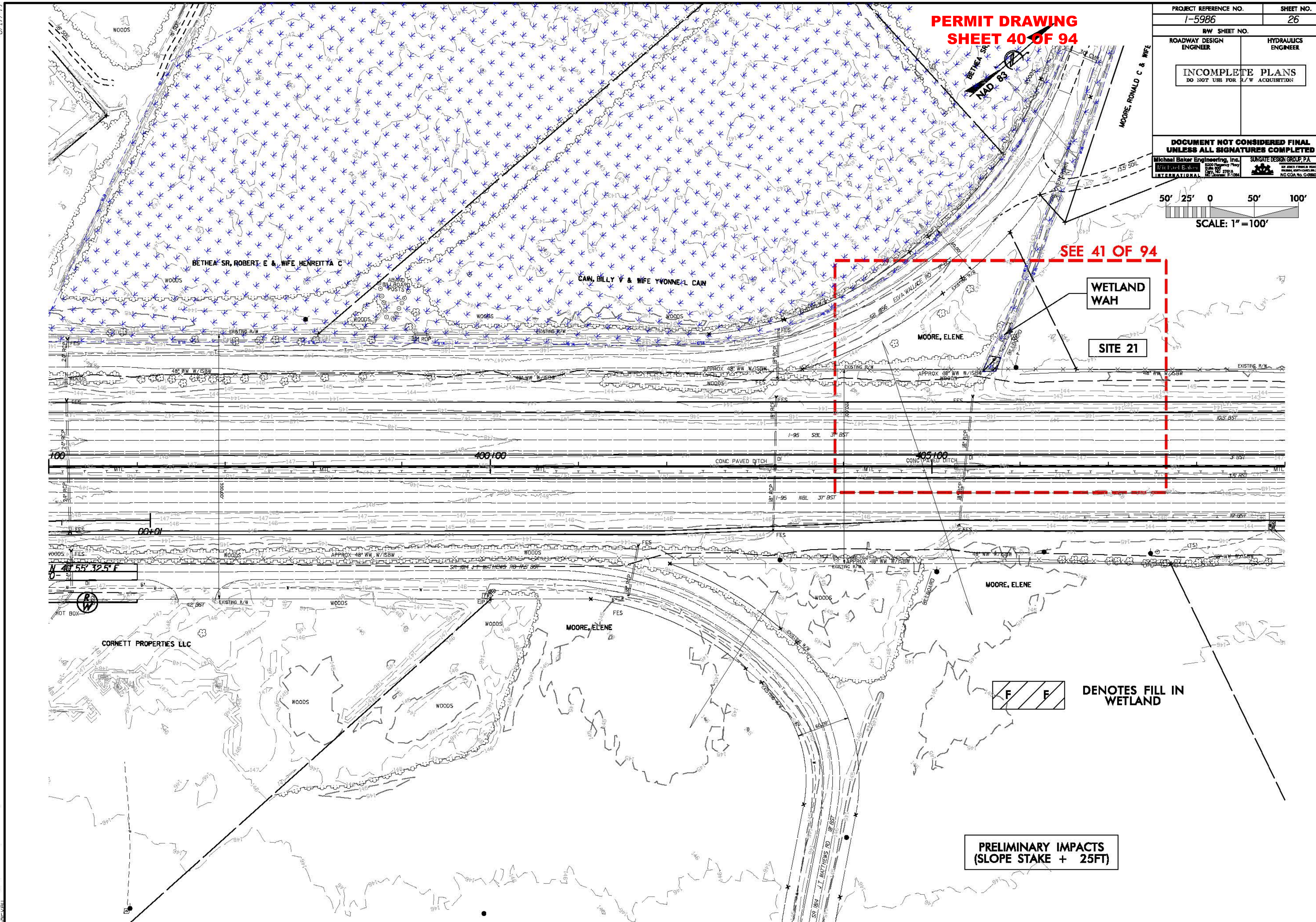
SUNGATE DESIGN GROUP, P.A.



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_26.dgn

8/17/99



1/8/2019
I-5986A_Hyd_prm_wet_psh_26a.dgn

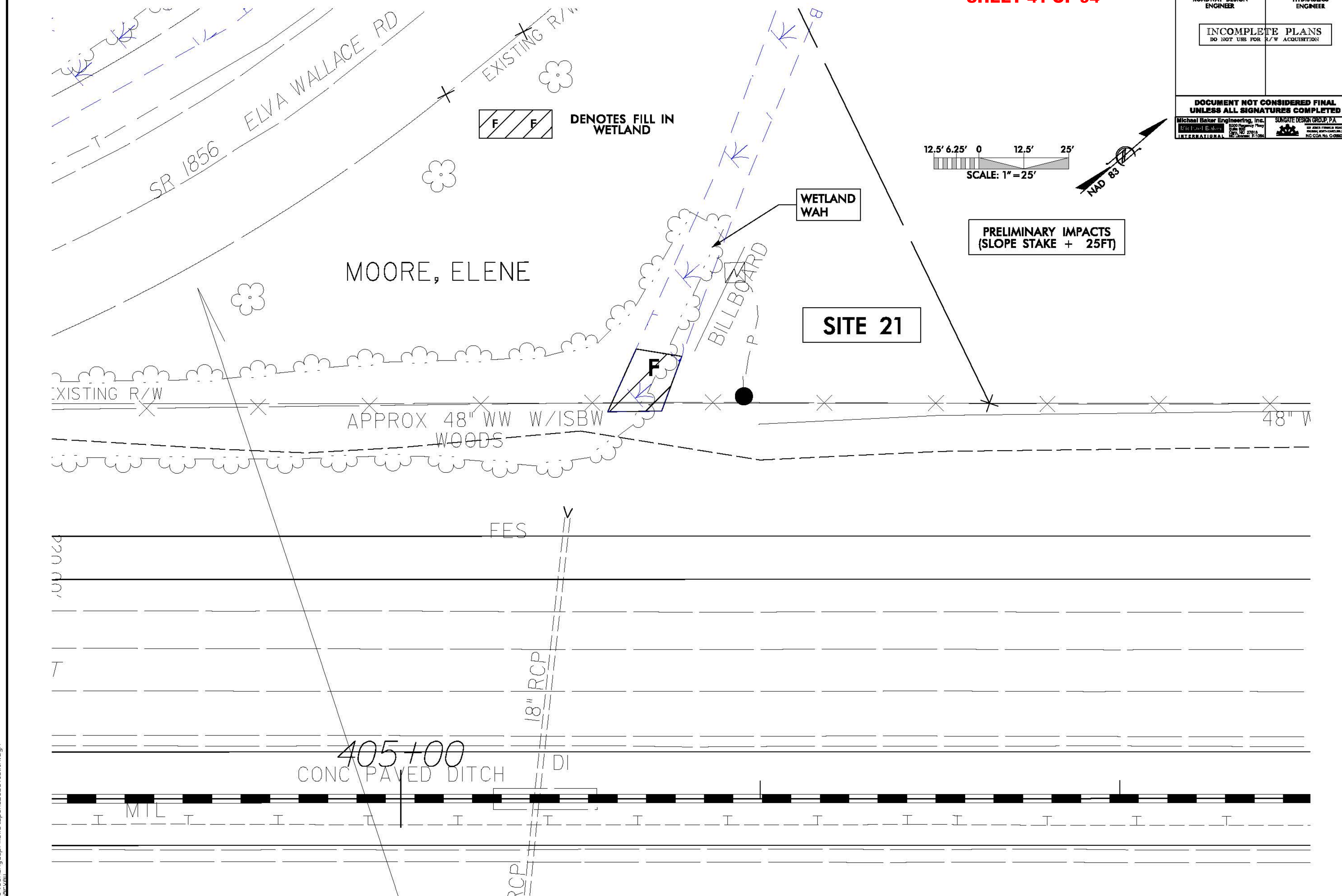
PROJECT REFERENCE NO.	SHEET NO.
I-5986	

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

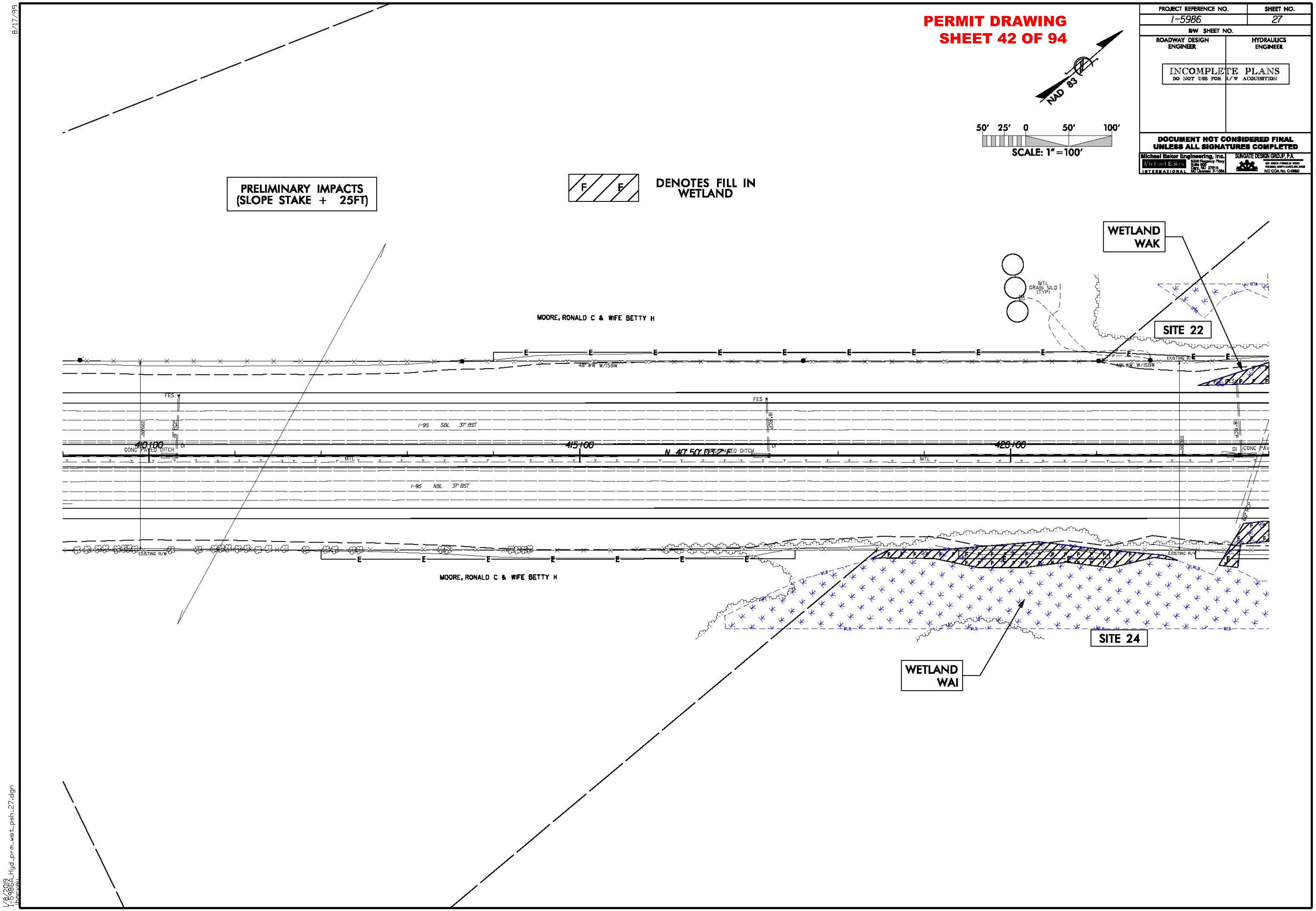
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_26b_Viewin.dgn



PERMIT DRAWING
SHEET 42 OF 94
PROJECT REFERENCE NO.
I-5986
SHEET NO.
27
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
50' 25' 0 50' 100'
SCALE: 1" = 100'
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
DENOTES FILL IN WETLAND
WETLAND WAK
SITE 22
MTL GRAIN SILO (TYP)
MOORE, RONALD C & WIFE BETTY H
I-95 SBL 37' BST
I-95 NBL 37' BST
410+00
415+00
420+00
CONC PAVED DITCH
FES
18" RCP
EXISTING R/W
WETLAND WAI
SITE 24
8/17/99
1/8/2019

PERMIT DRAWING
SHEET 43 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986	27

R/W SHEET NO.

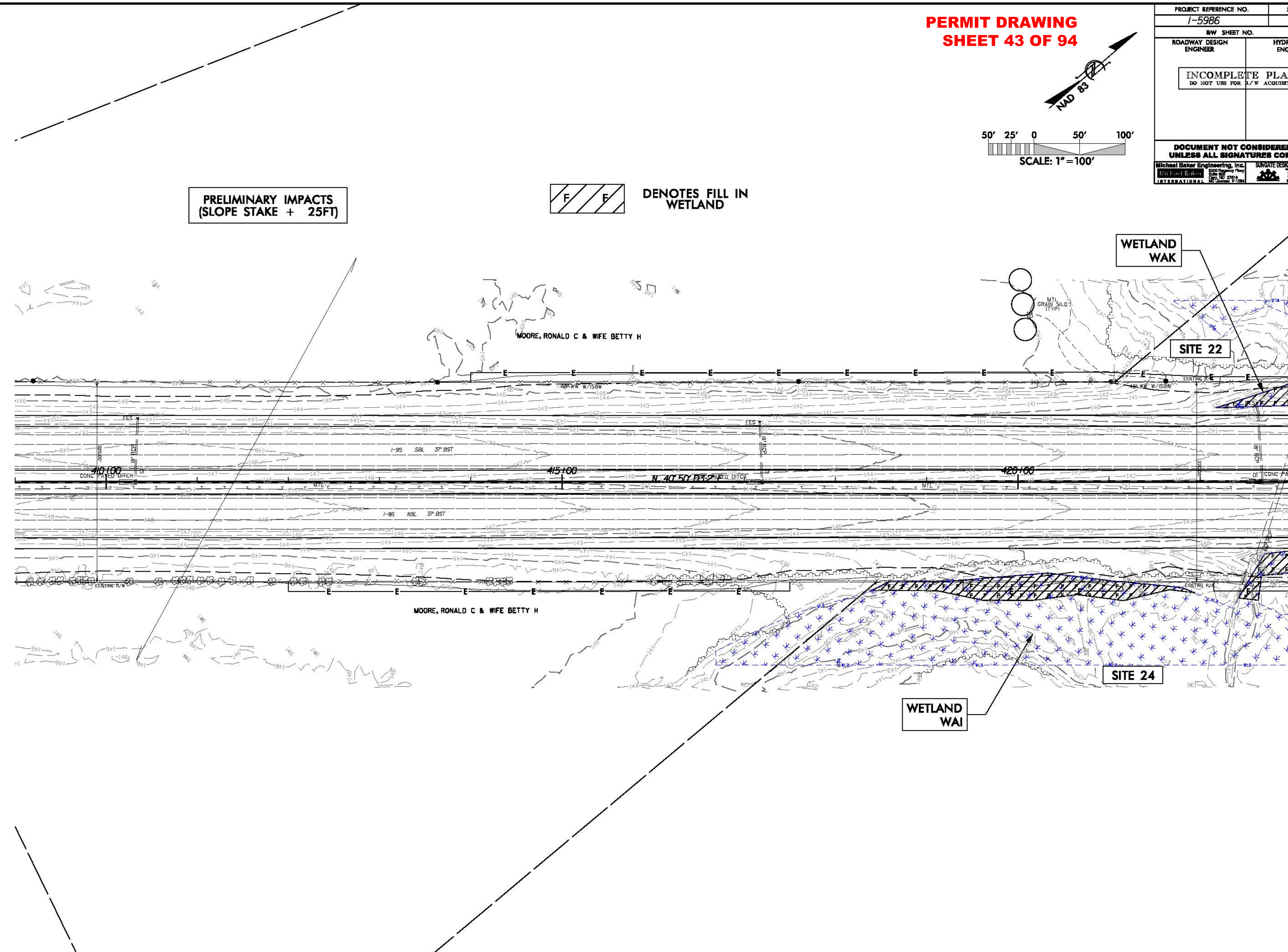
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

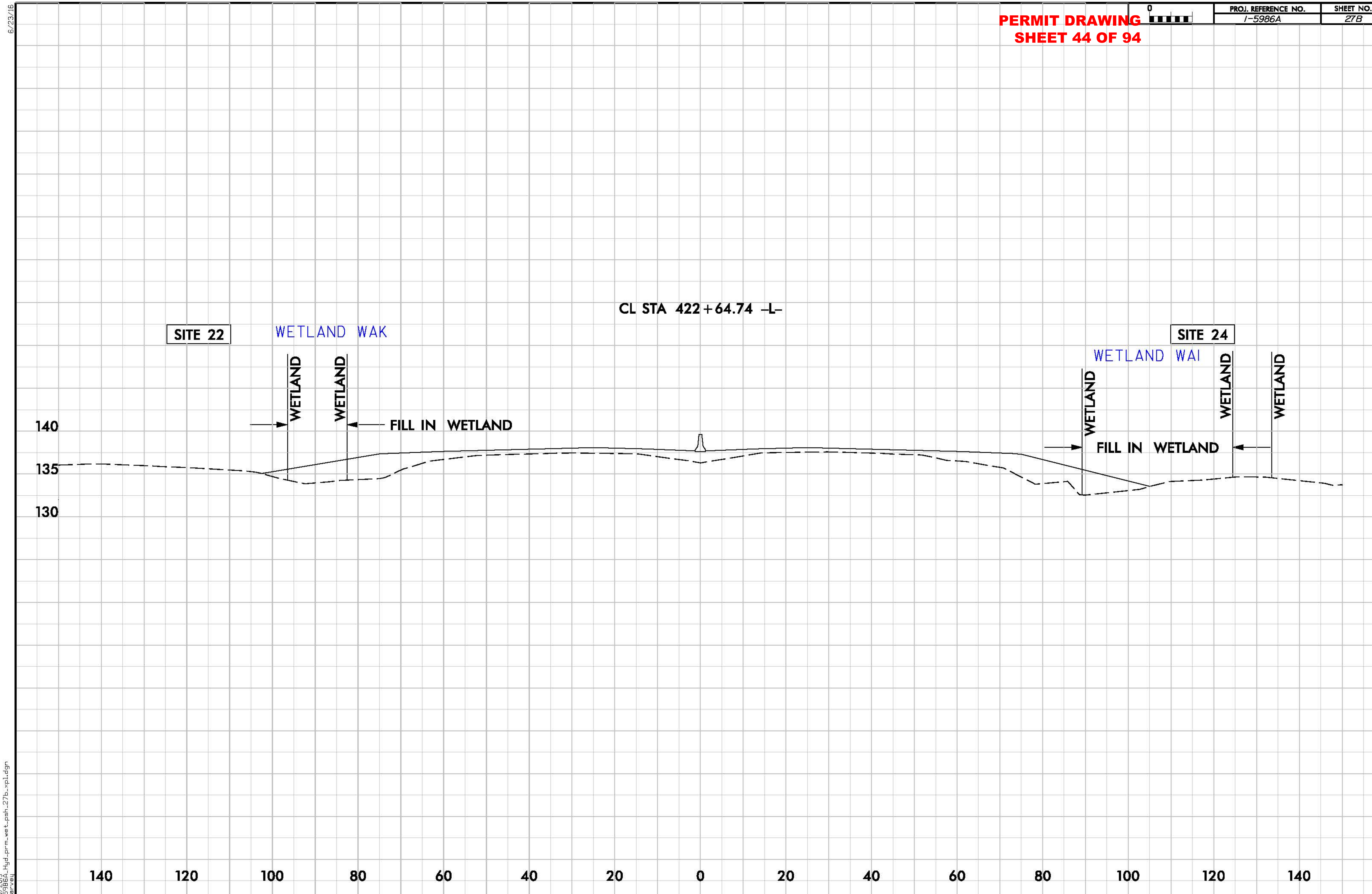
SUNGATE DESIGN GROUP, P.A.



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_27a.dgn

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	27B



6/23/16
1/8/2019
I-5986A_Hyd_prm_wet_psh_27b_xpl.dgn
harvey

PERMIT DRAWING
SHEET 45 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986	28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.

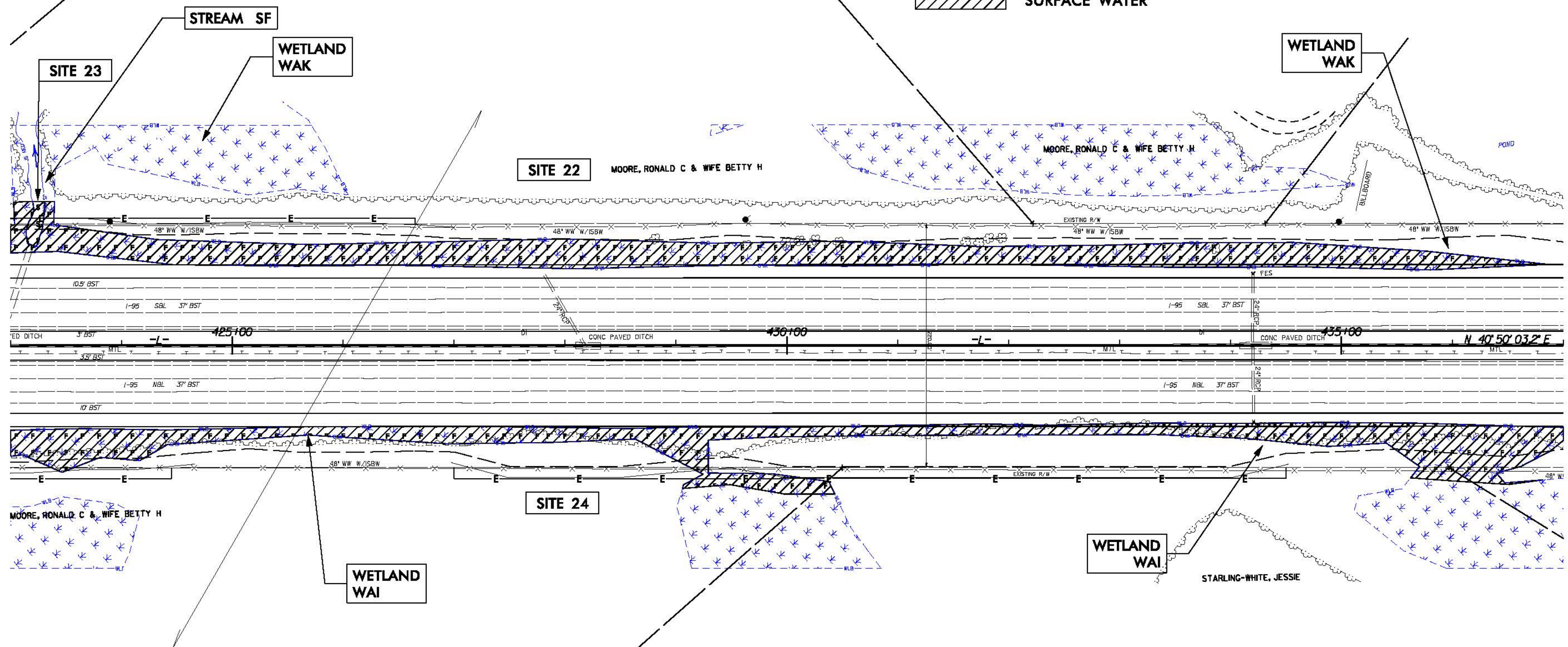
NAD 83

SCALE: 1" = 100'

PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_28.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986	28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. — Michael Baker INTERNATIONAL

SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING
SHEET 46 OF 94

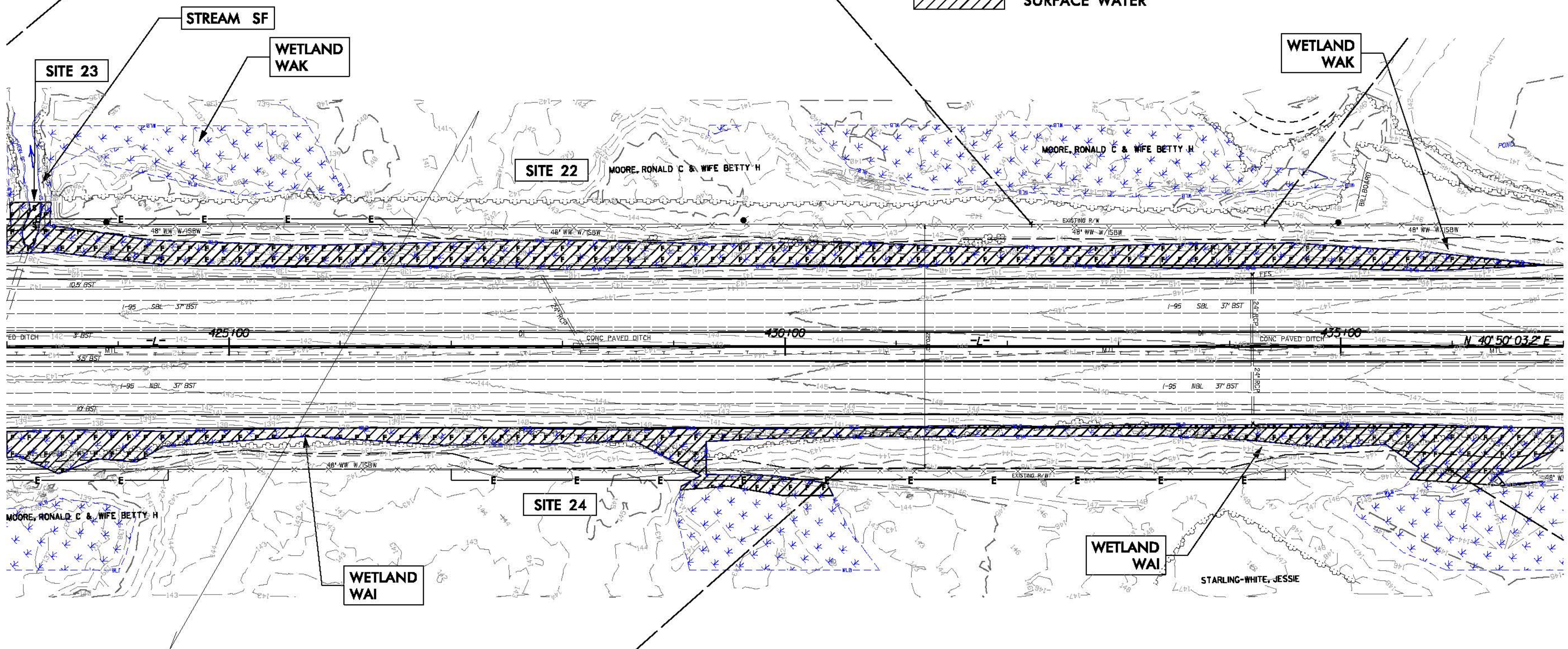
NAD 83

50' 25' 0 50' 100'
SCALE: 1" = 100'

PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

F F — DENOTES FILL IN WETLAND

S S — DENOTES IMPACTS IN SURFACE WATER



1/8/2019
I-5986A_Hyd_prm_wet_psh_28a.dgn
bgrven

PERMIT DRAWING
SHEET 47 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986	29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

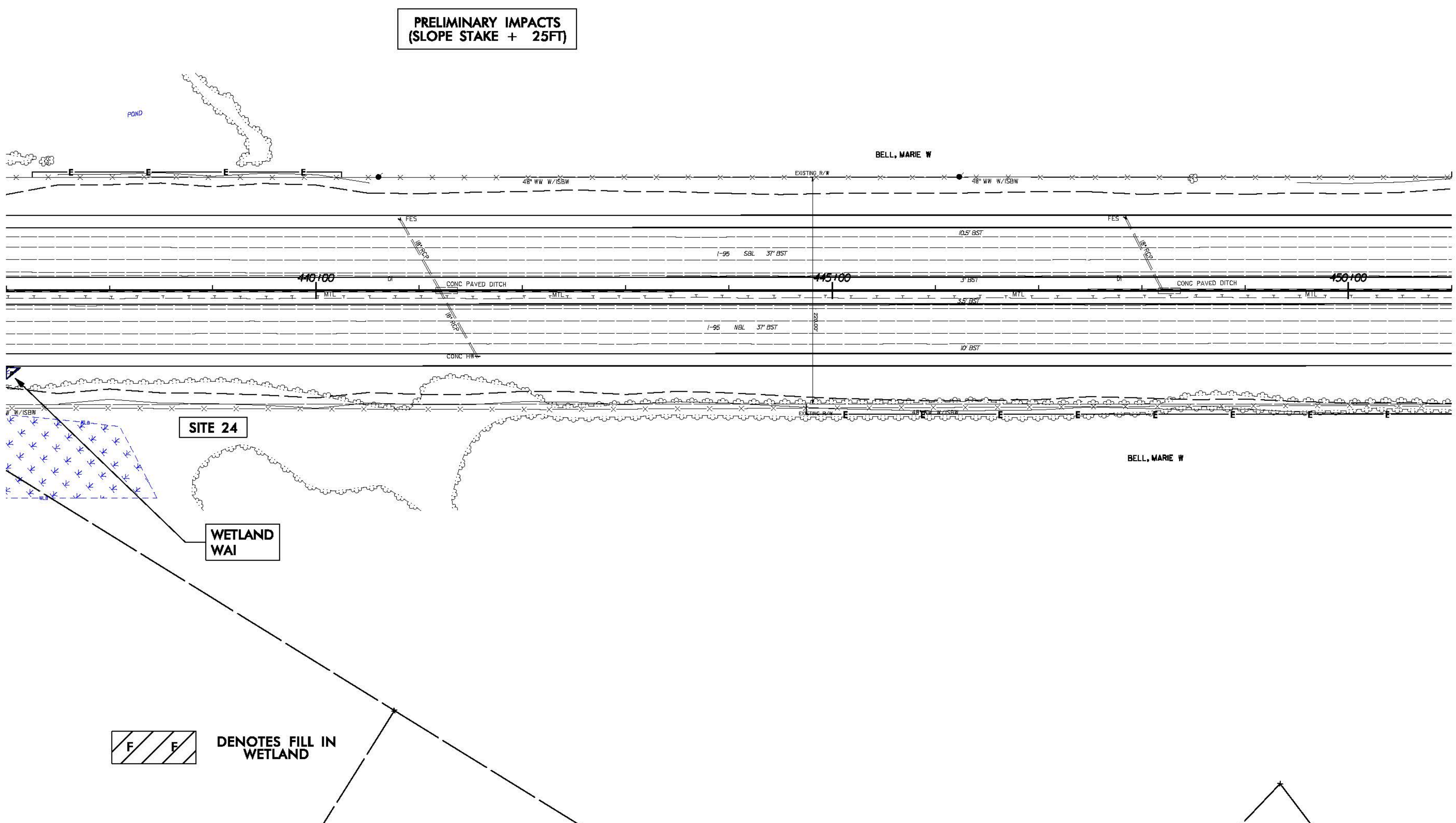
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.

NAD 83

50' 25' 0 50' 100'
SCALE: 1" = 100'



8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_29.dgn

PERMIT DRAWING
SHEET 48 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986	29

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

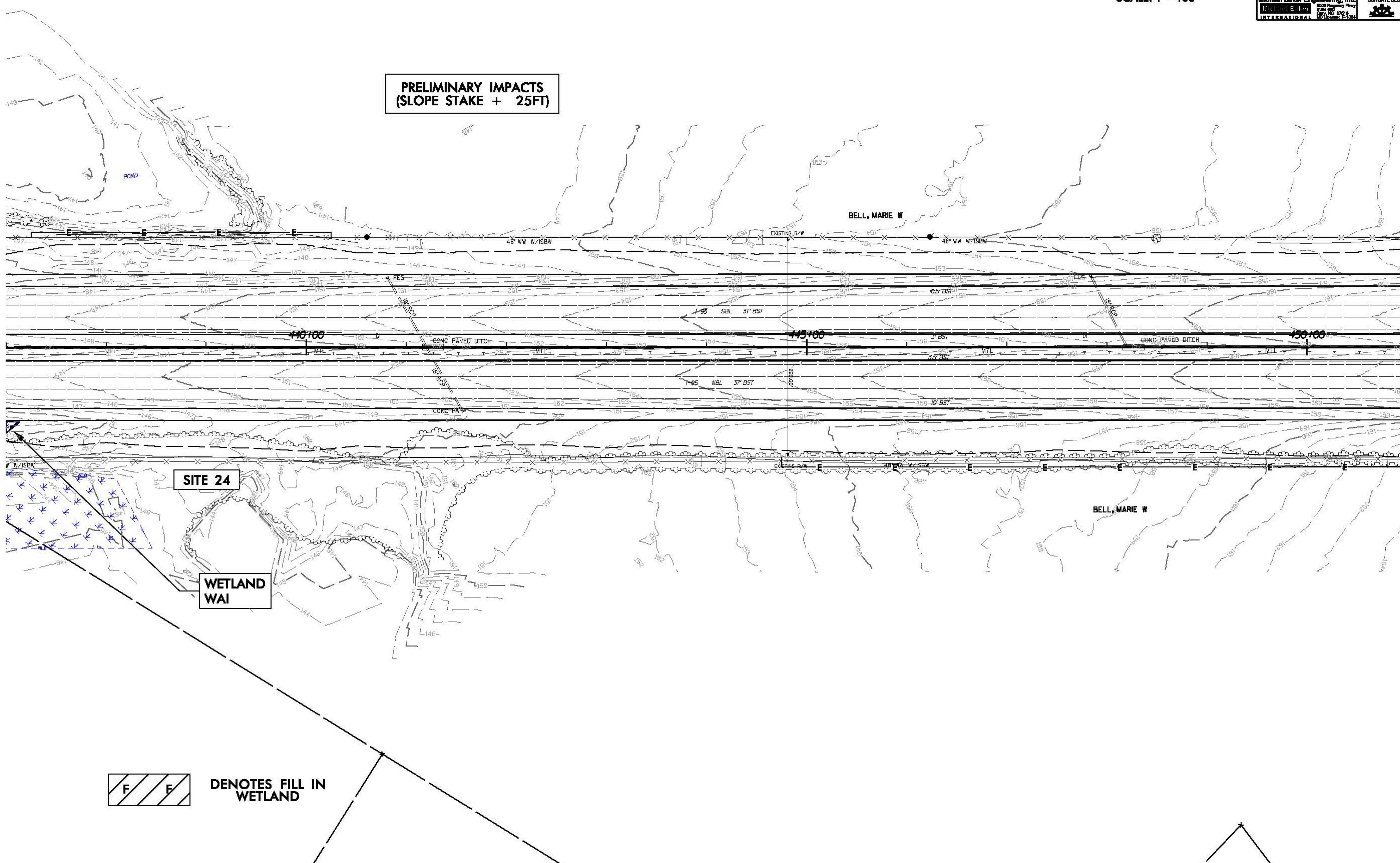
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

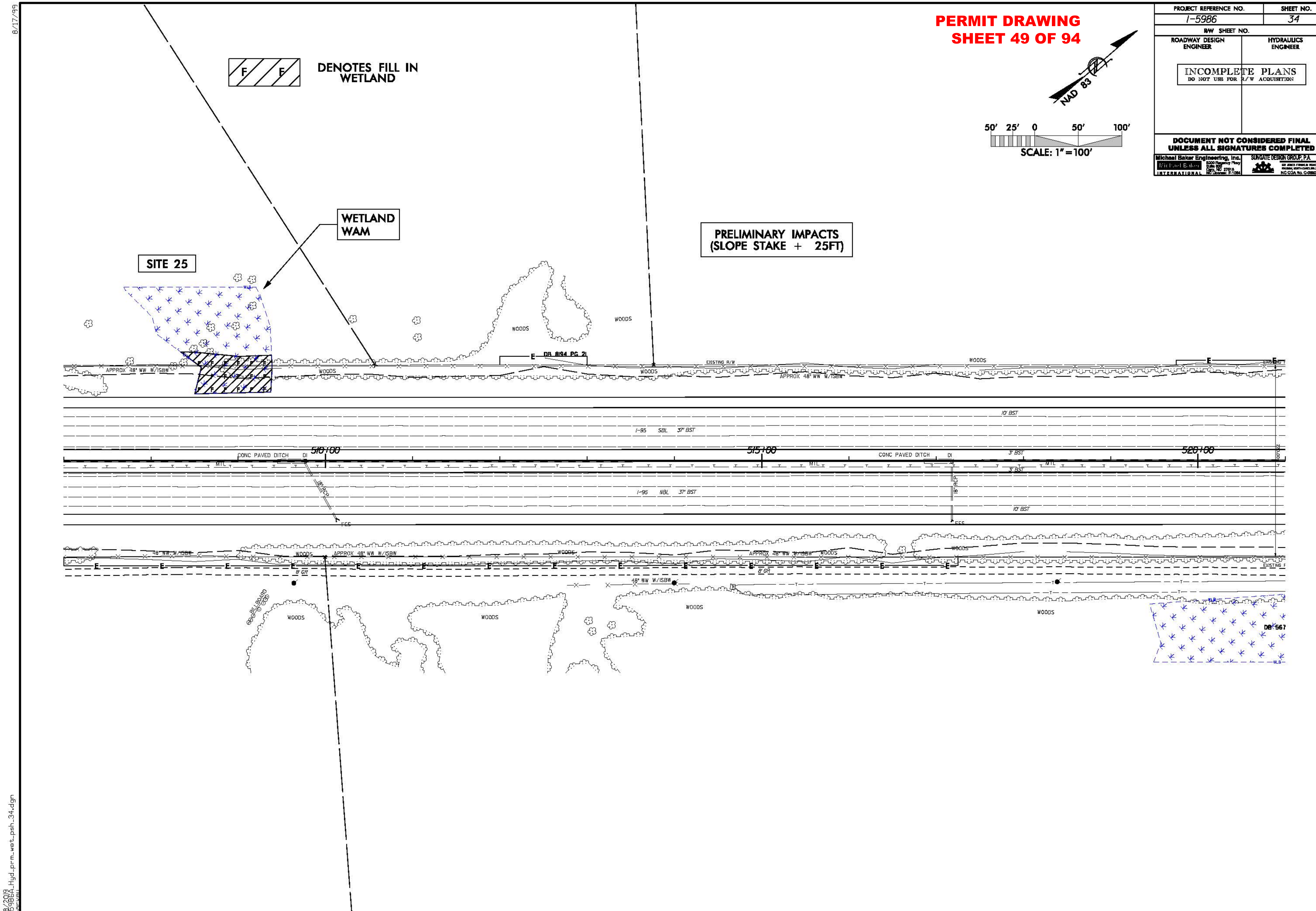
NAD 83

50' 25' 0 50' 100'
SCALE: 1"=100'



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_29a.dgn


PERMIT DRAWING
SHEET 49 OF 94
PROJECT REFERENCE NO.
I-5986
SHEET NO.
34
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
50' 25' 0 50' 100'
SCALE: 1" = 100'
DENOTES FILL IN WETLAND
WETLAND WAM
SITE 25
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
WOODS
DB 8194 PG 21
EXISTING R/W
APPROX 48" WW W/ISBW
10' BST
I-95 SBL 37' BST
510+00
515+00
520+00
CONC PAVED DITCH
DI
MTL
3' BST
18" RCP
I-95 NBL 37' BST
FES
8' GR
48" WW W/ISBW
DB 567
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_34.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986	34
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

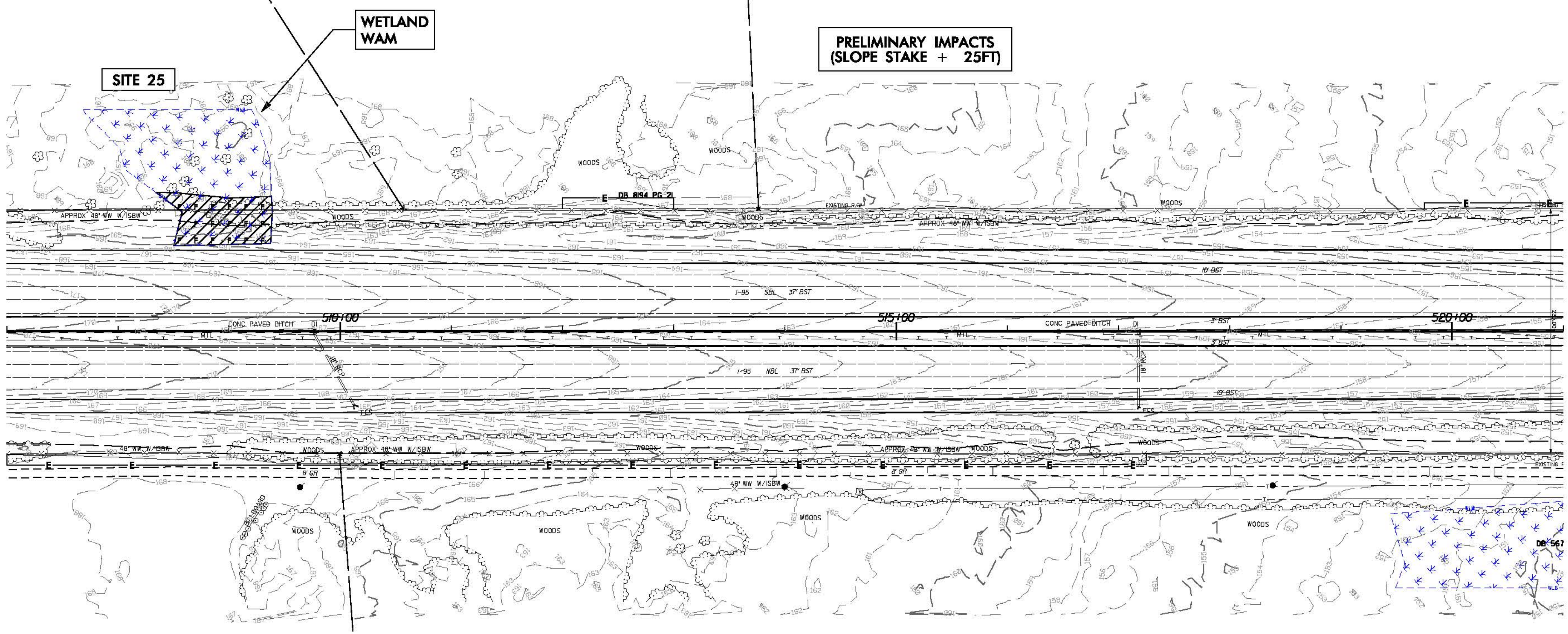
PERMIT DRAWING
SHEET 50 OF 94

NAD 83

50' 25' 0 50' 100'

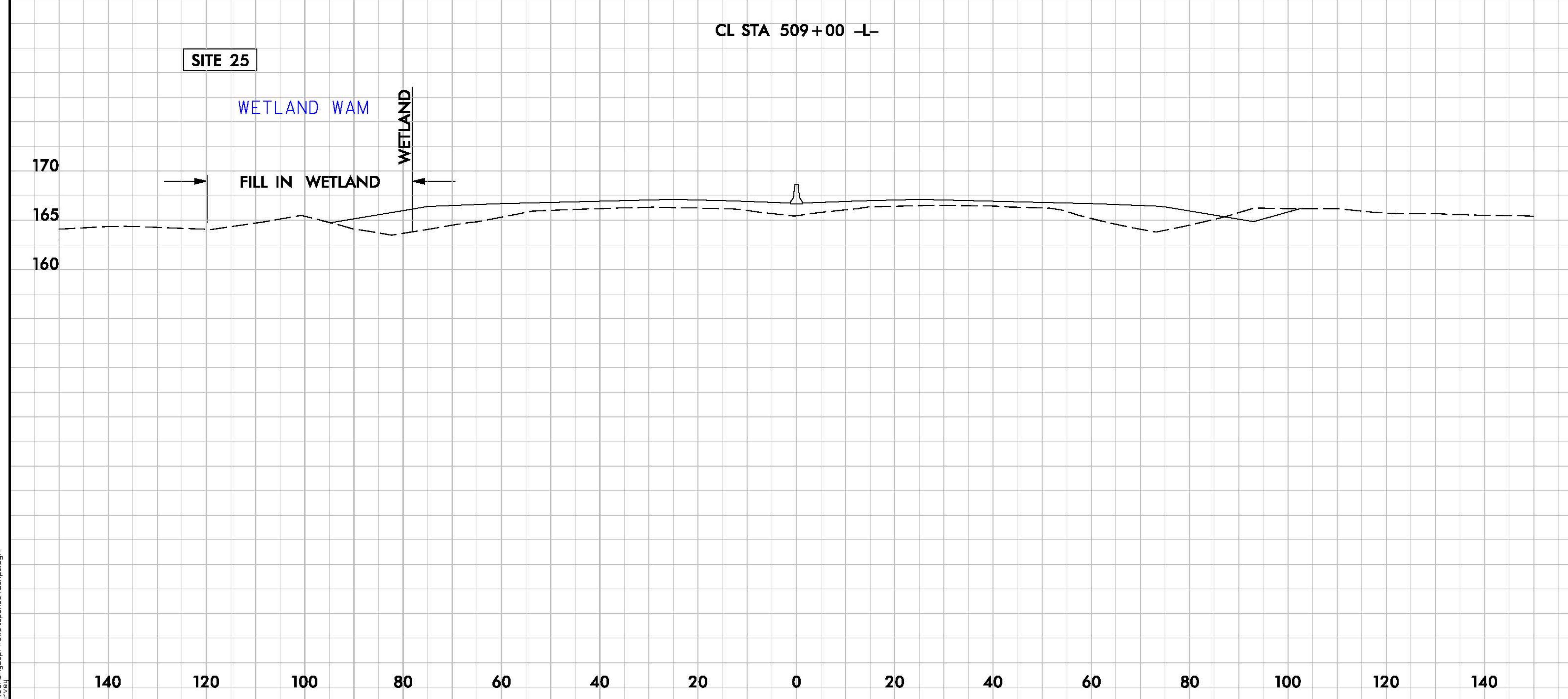
SCALE: 1" = 100'

F F DENOTES FILL IN WETLAND



1/8/2019
I-5986A_Hyd_prm_wet_psh_34a.dgn

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	34B



6/23/16

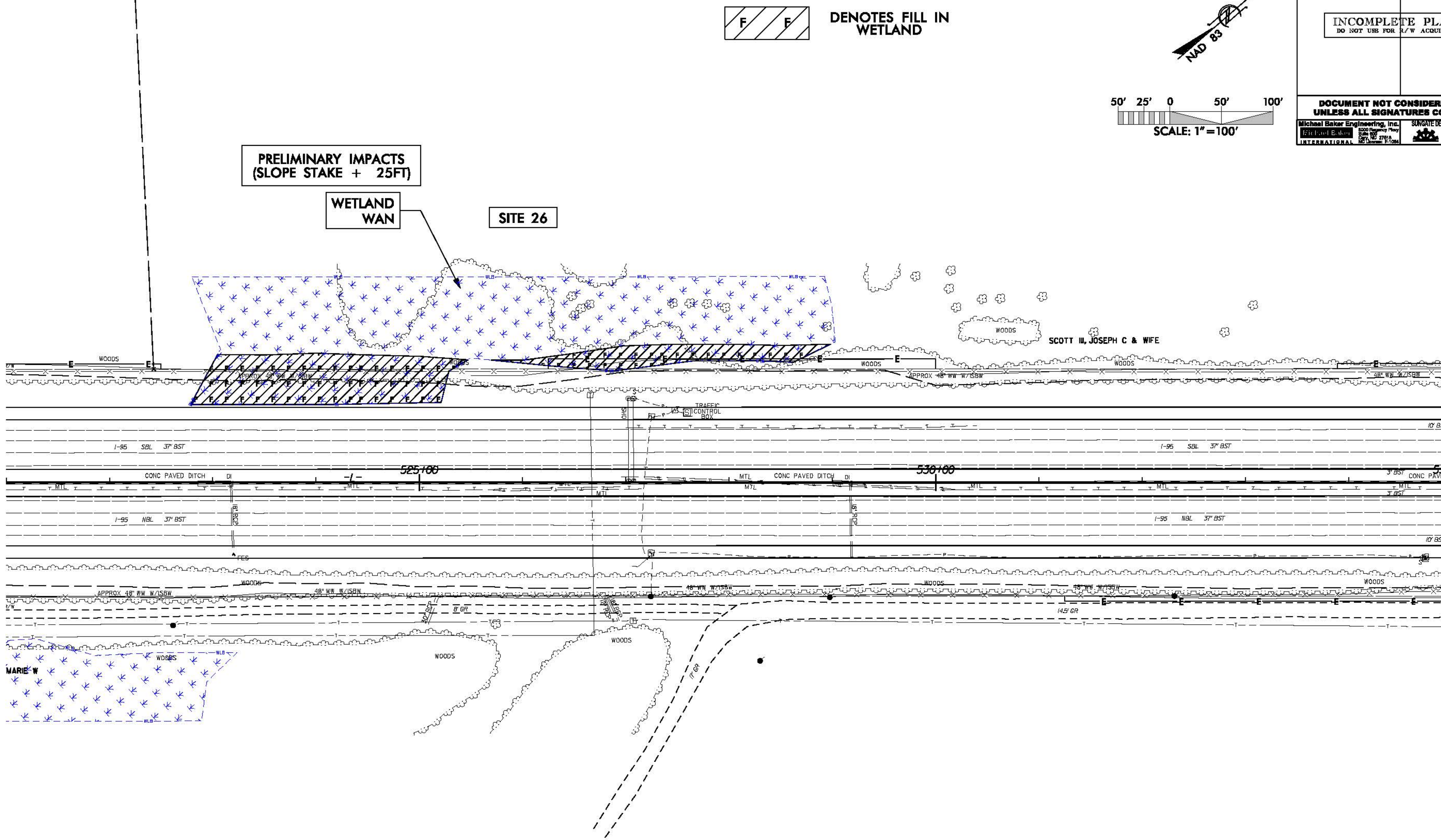
1/8/2019
I-5986A_Hyd_prm_wet_psh_34b_xpl.dgn
harvey

PROJECT REFERENCE NO.	SHEET NO.
I-5986	35
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. — SUNGATE DESIGN GROUP, P.A.



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_35.dgn

8/17/99

PERMIT DRAWING
SHEET 53 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986	35
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

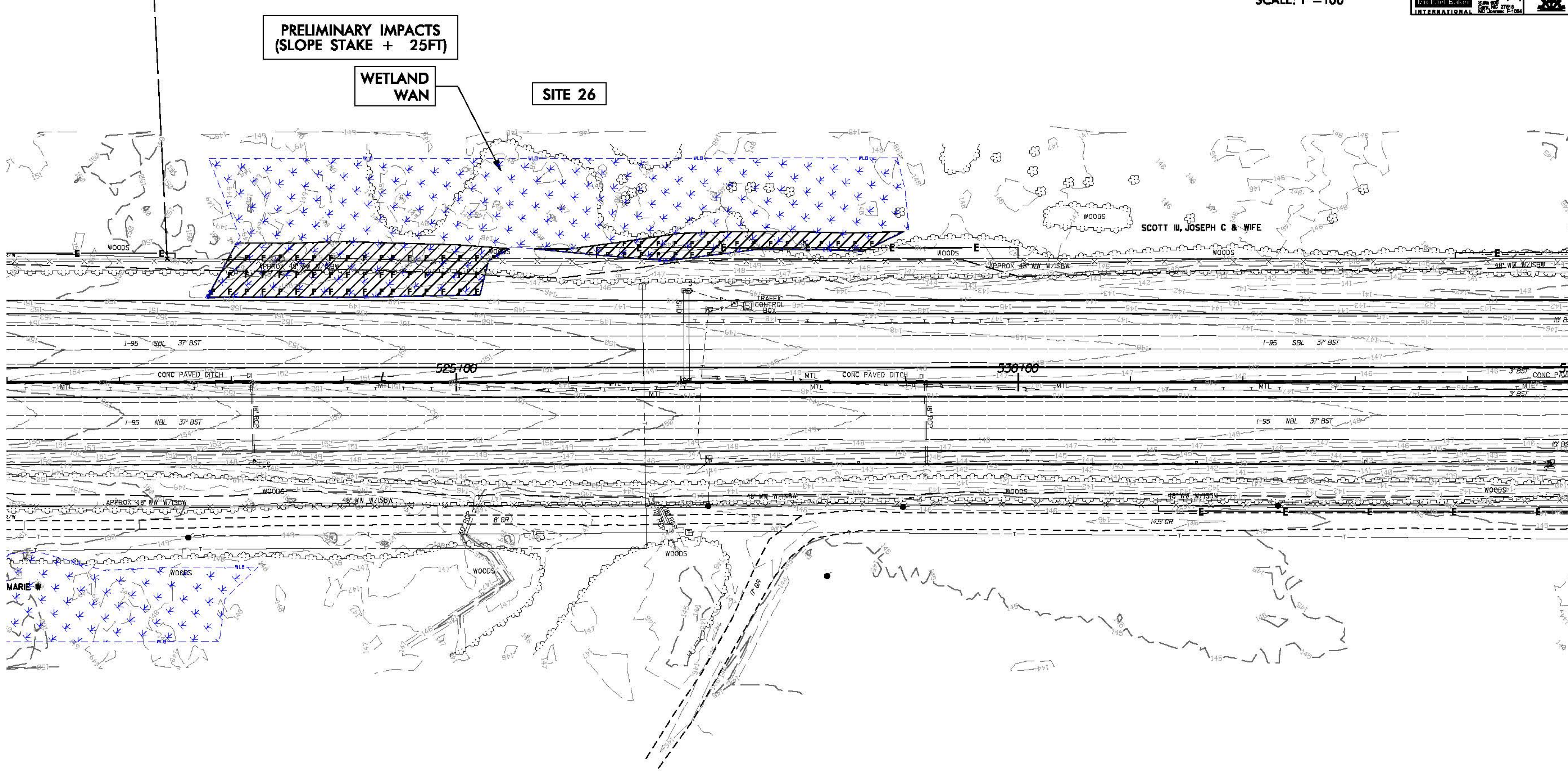
SUNGATE DESIGN GROUP, P.A.

F F — DENOTES FILL IN WETLAND

NAD 83

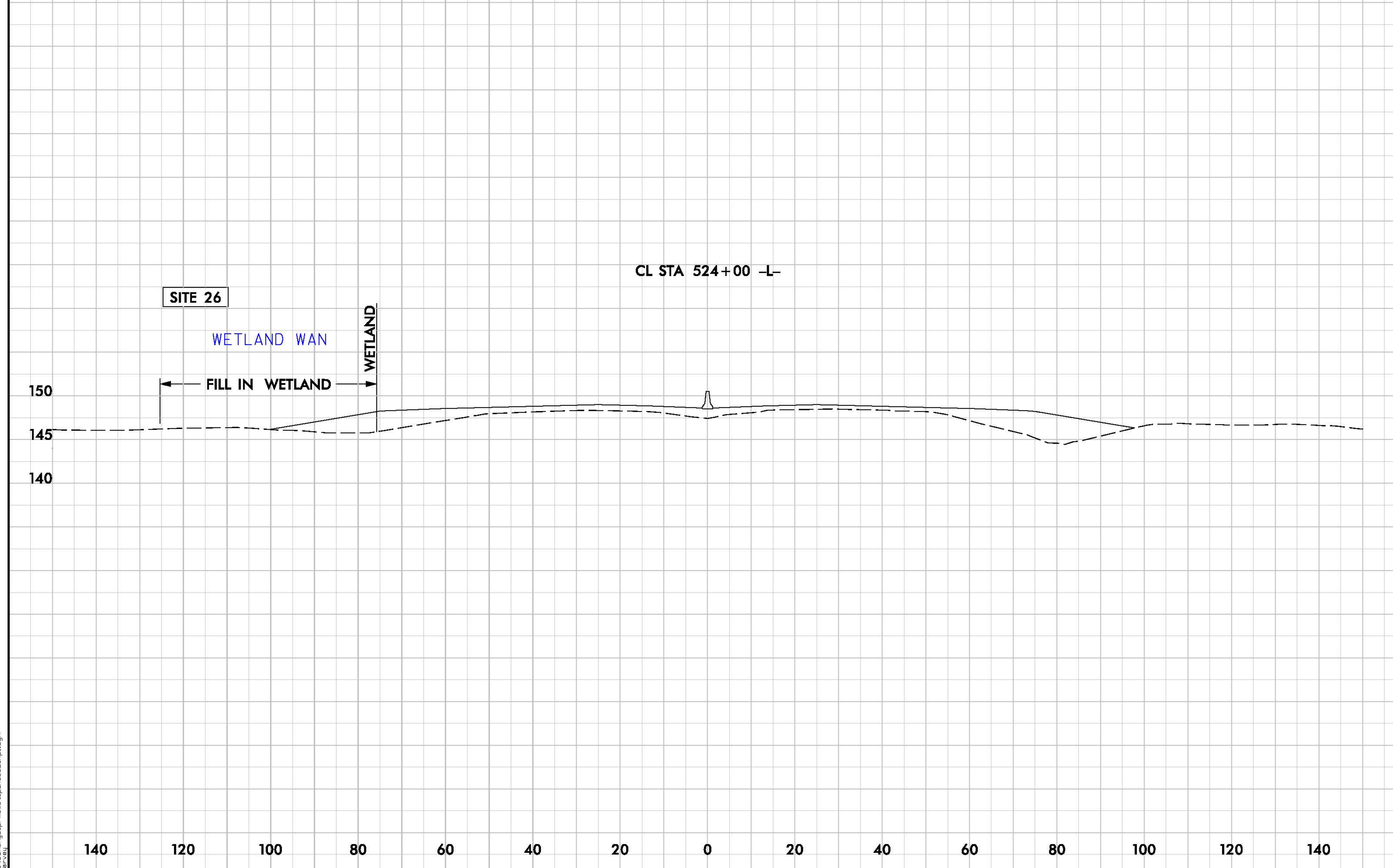
50' 25' 0 50' 100'

SCALE: 1" = 100'



1/8/2019
I-5986A_Hyd_prm_wet_psh_35a.dgn

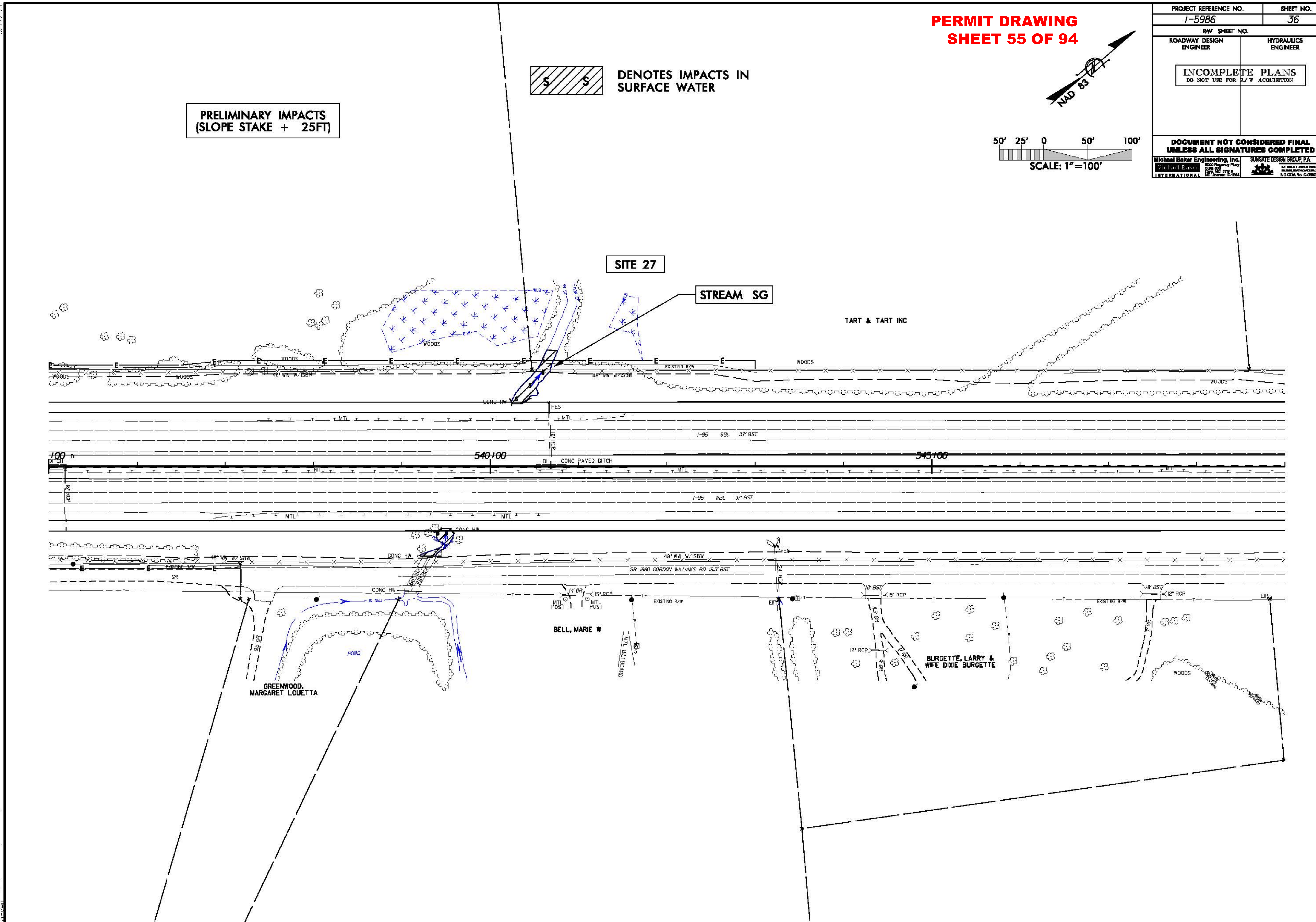
PROJ. REFERENCE NO.	SHEET NO.
I-5986A	35B



6/23/16

PERMIT DRAWING
SHEET 55 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986	36



ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986	36
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL

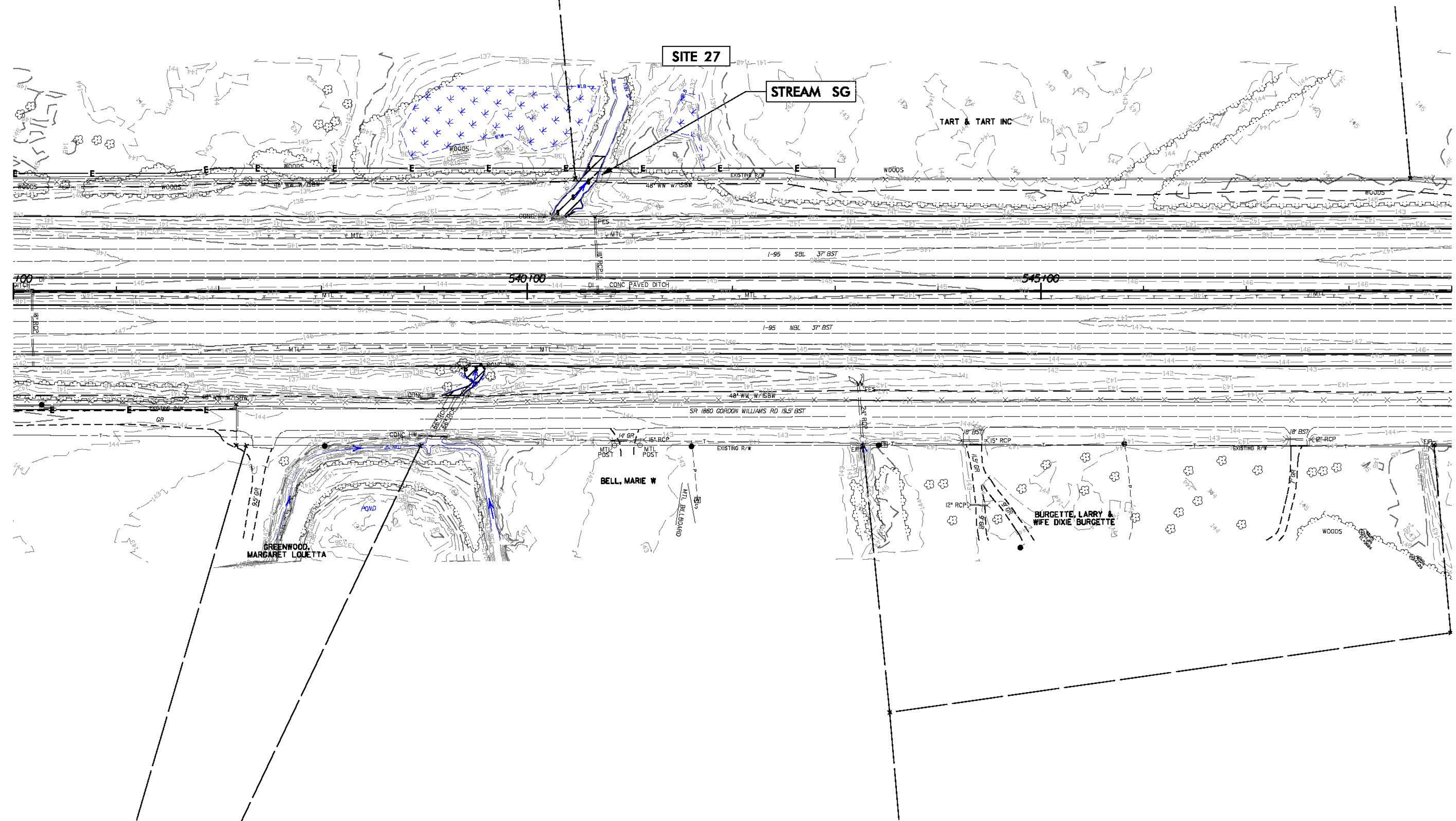
SUNGATE DESIGN GROUP, P.A.

NAD 83

50' 25' 0 50' 100'
SCALE: 1" = 100'

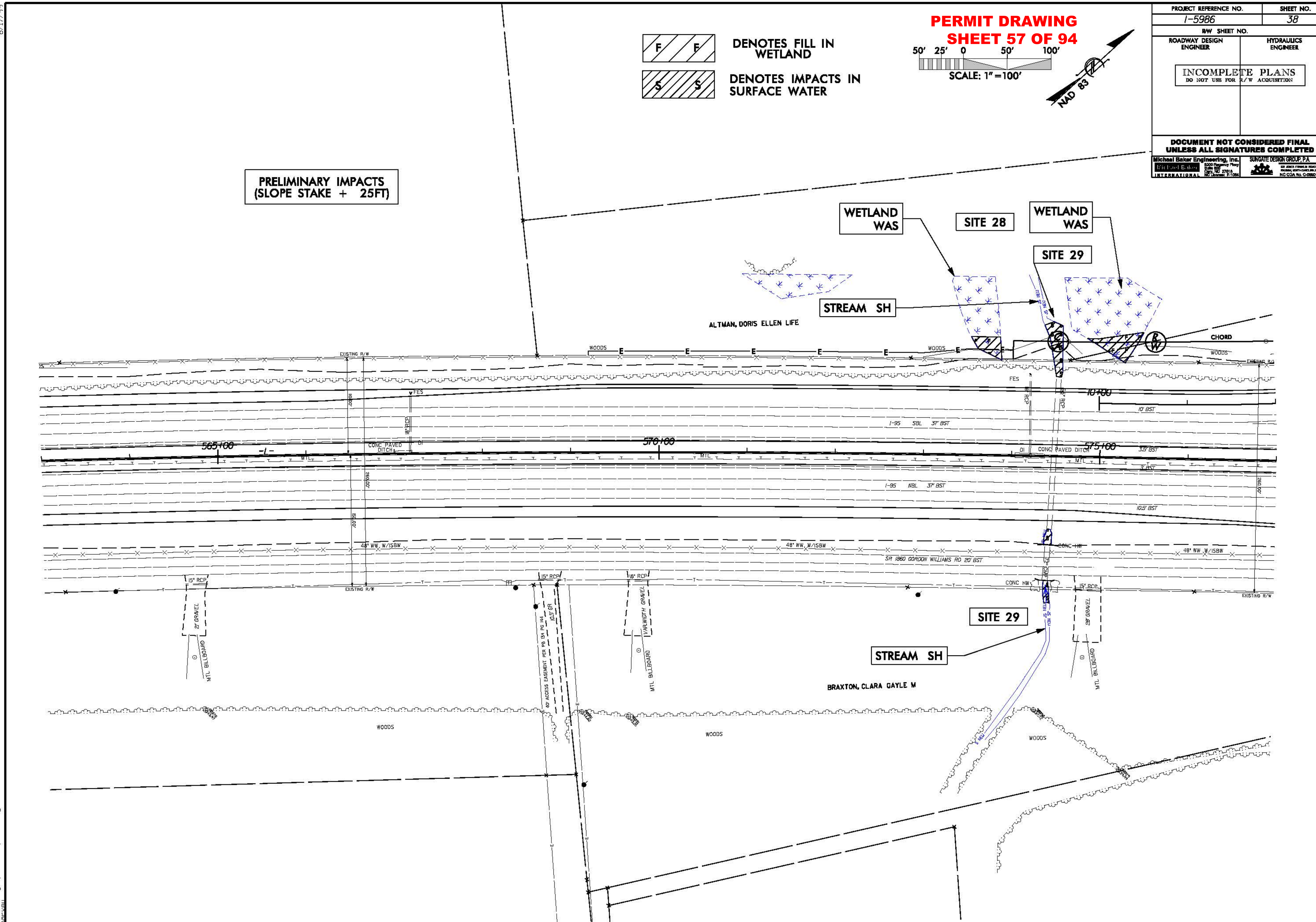
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

DENOTES IMPACTS IN SURFACE WATER



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_36a.dgn



PERMIT DRAWING
SHEET 57 OF 94
PROJECT REFERENCE NO.
I-5986
SHEET NO.
38
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
SCALE: 1" = 100'
NAD 83
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
WETLAND WAS
SITE 28
WETLAND WAS
SITE 29
STREAM SH
ALTMAN, DORIS ELLEN LIFE
CHORD
WOODS
EXISTING R/W
565+00
570+00
575+00
-L-
CONC PAVED DITCH
I-95 SBL 37' BST
I-95 NBL 37' BST
48" WW W/ISBW
SR 1860 GORDON WILLIAMS RD 20' BST
15" RCP
CONC HW
SITE 29
STREAM SH
BRAXTON, CLARA GAYLE M
MTL BILLBOARD
WOODS
8/17/99
1/8/2019
I_5986A_Hyd_prm_wet_psh_38.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986	38

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. — INTERNATIONAL

SUNGATE DESIGN GROUP, P.A. — NC COA No. C-0000

PERMIT DRAWING
SHEET 58 OF 94

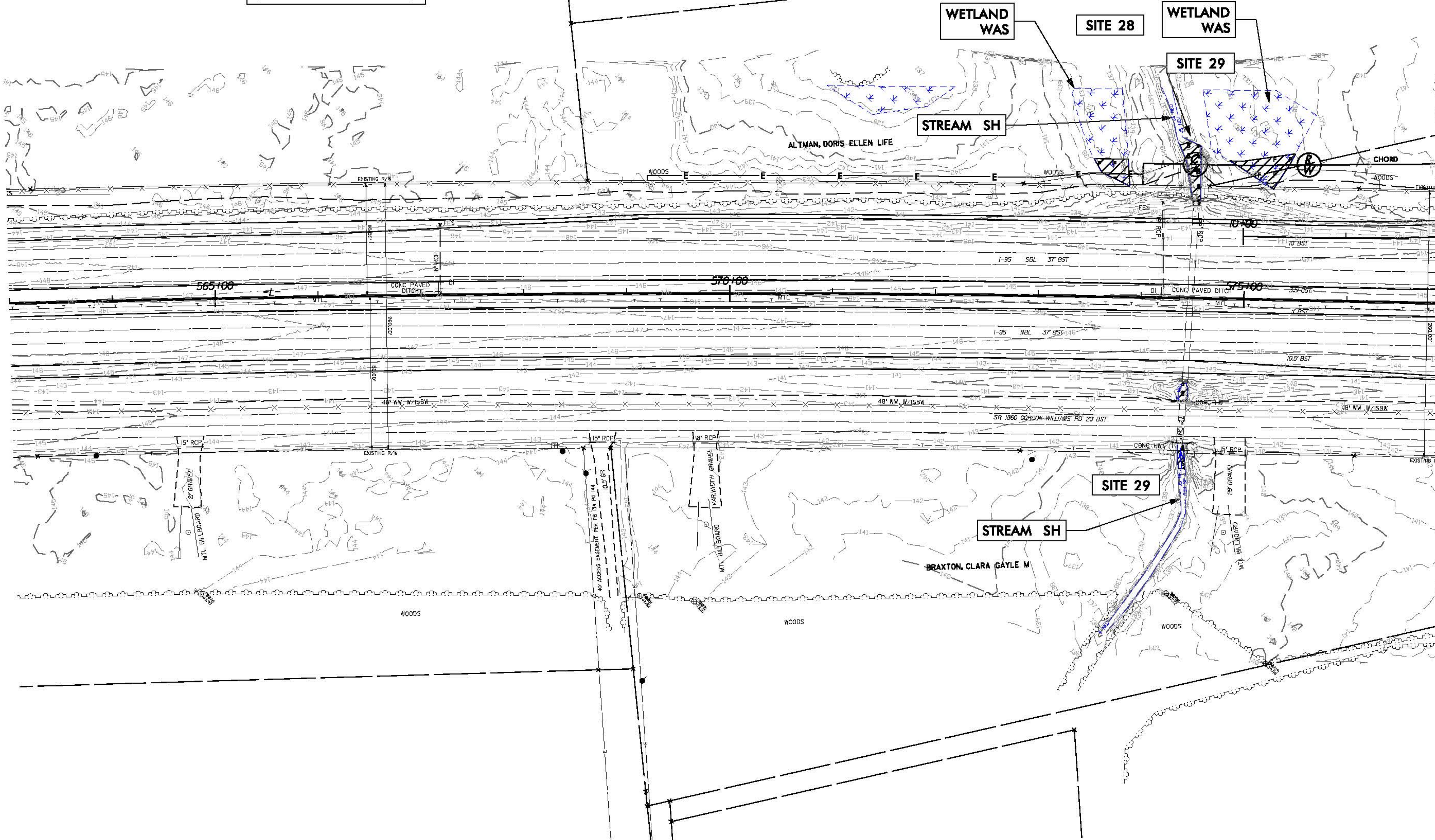
F F — DENOTES FILL IN WETLAND

S S — DENOTES IMPACTS IN SURFACE WATER

50' 25' 0 50' 100'
SCALE: 1" = 100'

NAD 83

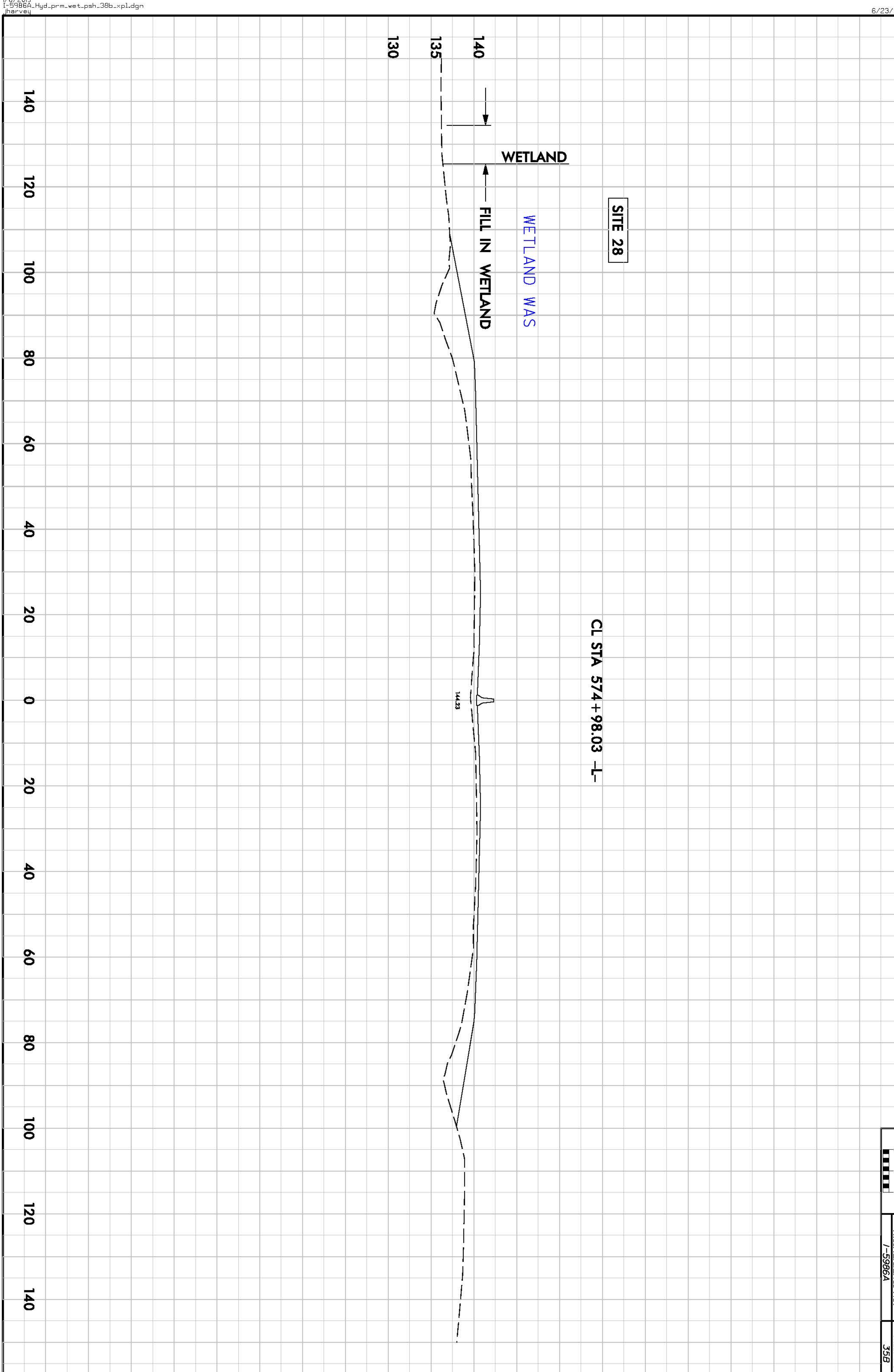
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)



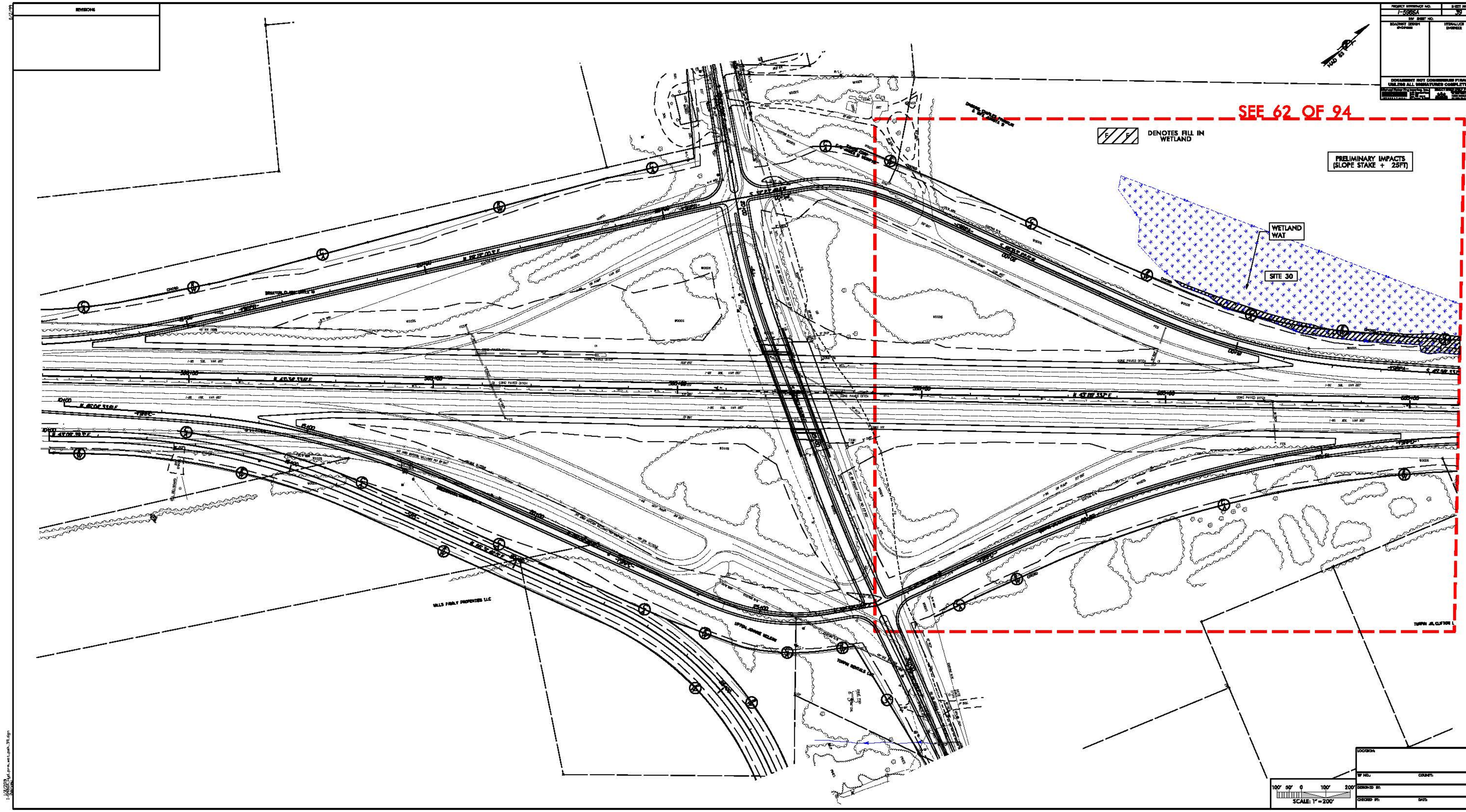
1/8/2019
I-5986A_Hyd_prm_wet_psh_38a.dgn

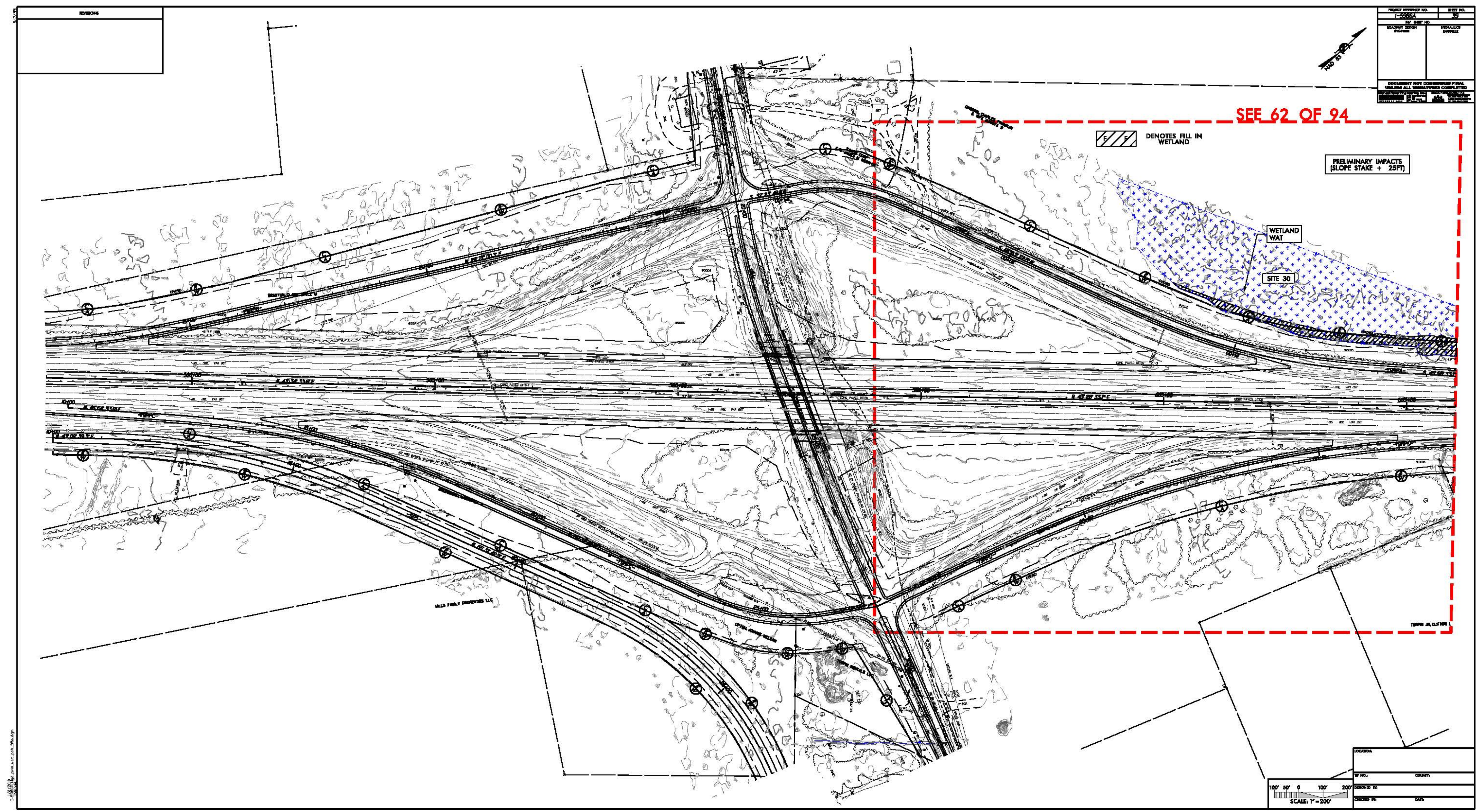
1/8/2019
I-5986A_Hyd_prm_wet_psh_38b_xpl.dgn
jharvey

6/23/16



PERMIT DRAWING
SHEET 60 OF 94



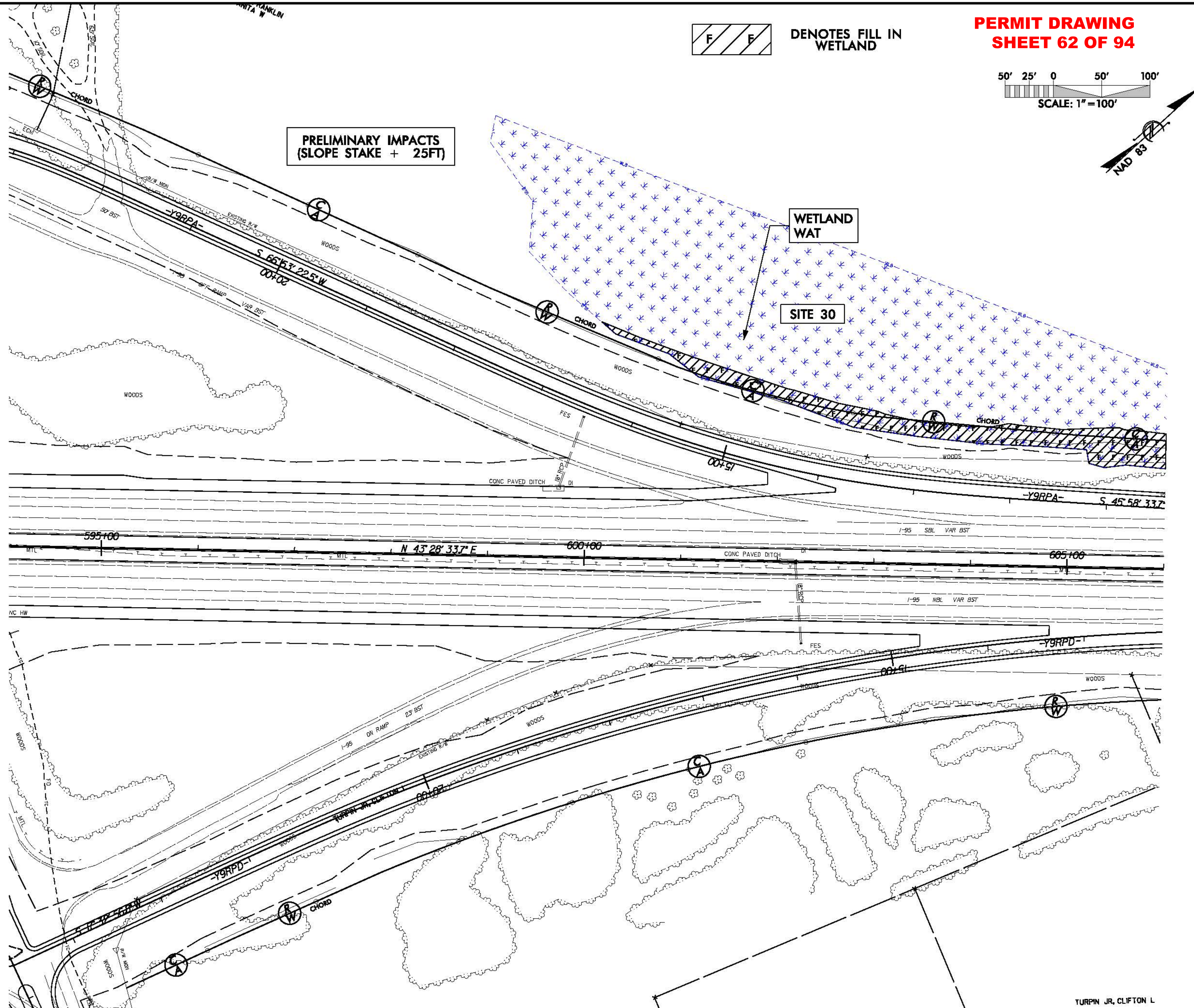

SEE 62 OF 94
DENOTES FILL IN WETLAND
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
WETLAND WAT
SITE 30
SCALE: 1" = 200'

PERMIT DRAWING
SHEET 62 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

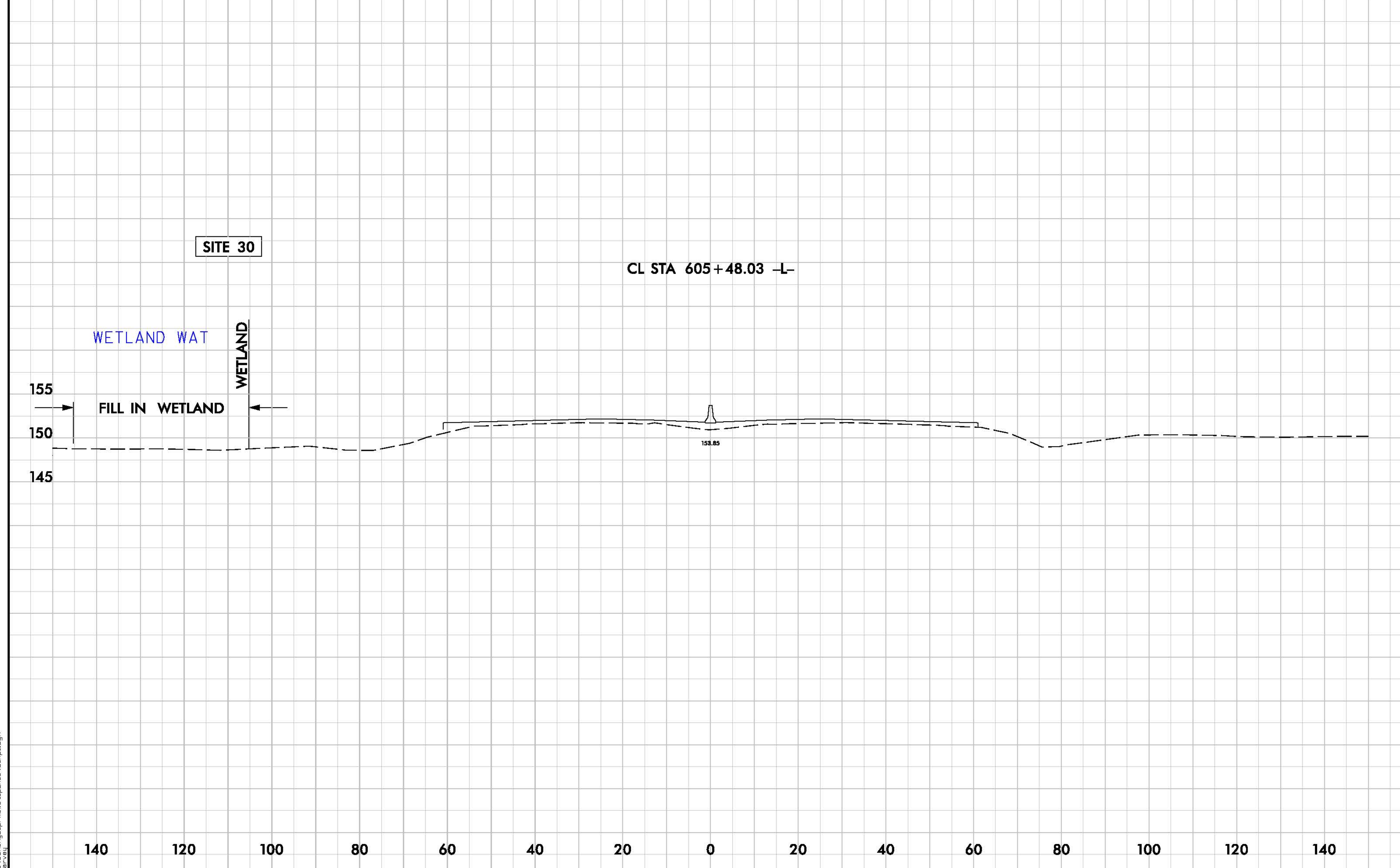
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



8/17/99

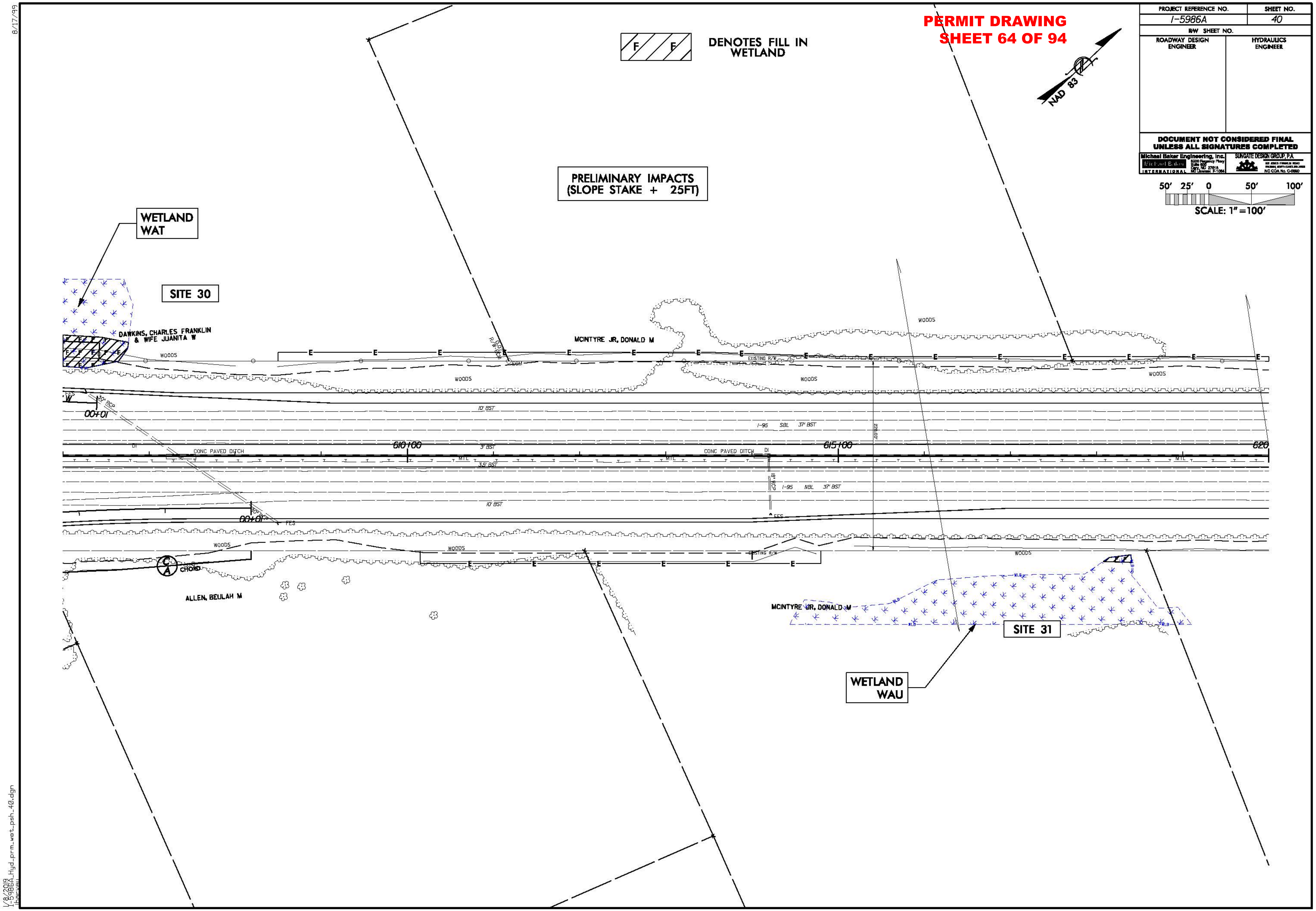
1/8/2019
I-5986A_Hyd_prm_wet_psh_39b_ViewIn.dgn

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	39C



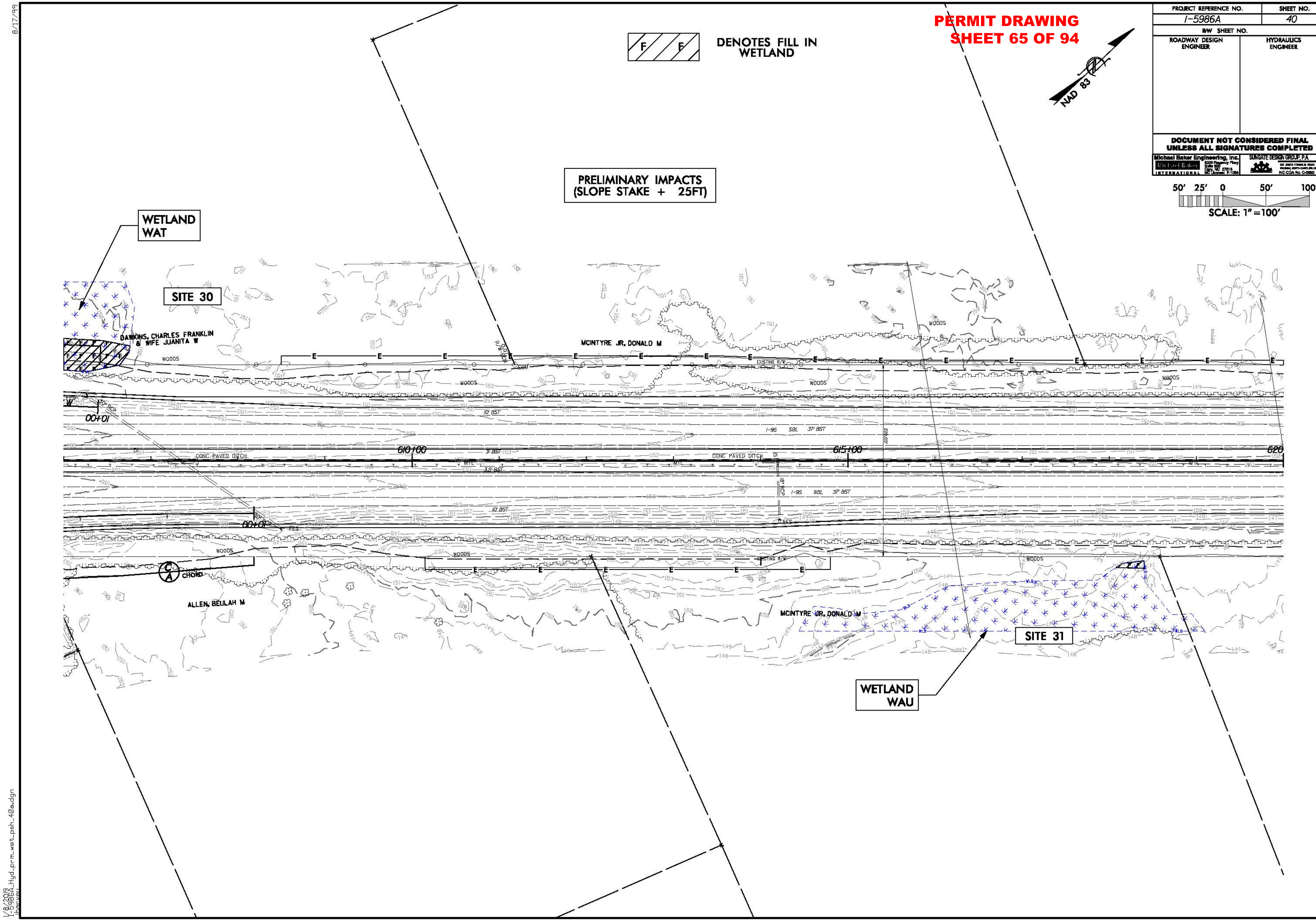
6/23/16

1/8/2019
I-5986A_Hyd_prm_wet_psh_39c_xpl.dgn
harvey

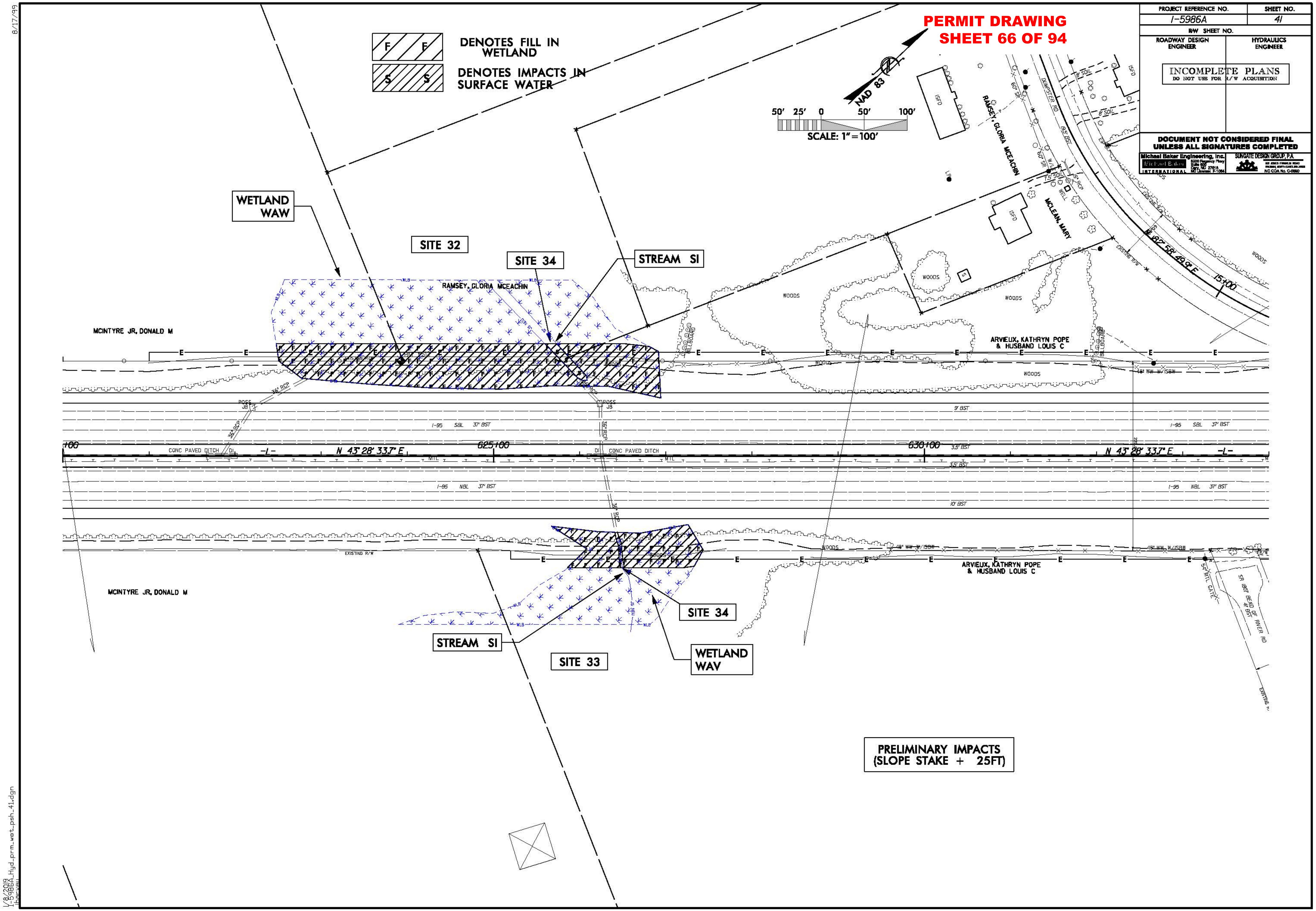


PERMIT DRAWING
SHEET 64 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
40
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
50' 25' 0 50' 100'
SCALE: 1" =100'
DENOTES FILL IN WETLAND
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
WETLAND
WAT
SITE 30
DAWKINS, CHARLES FRANKLIN & WIFE JUANITA W
MCINTYRE JR, DONALD M
WOODS
EXISTING R/W
10' BST
I-95 SBL 37' BST
CONC PAVED DITCH
610+00
615+00
620
3' BST
3.5' BST
MTL
I-95 NBL 37' BST
00+01
FES
CHORD
ALLEN, BEULAH M
MCINTYRE JR, DONALD M
SITE 31
WETLAND
WAU
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_40.dgn

8/17/99



1/8/2019
I-5986A_Hyd_prm_wet_psh_40a.dgn
barvell



PROJECT REFERENCE NO.
I-5986A
SHEET NO.
41
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
PERMIT DRAWING
SHEET 66 OF 94
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
NAD 83
SCALE: 1" = 100'
WETLAND WAW
SITE 32
SITE 34
STREAM SI
RAMSEY, GLORIA MCEACHIN
MCINTYRE JR, DONALD M
ARVIEUX, KATHRYN POPE & HUSBAND LOUIS C
MCLEAN, MARY
WOODS
N 43° 28' 33.7" E
625+00
630+00
CONC PAVED DITCH
I-95 SBL 37' BST
I-95 NBL 37' BST
15+00
STREAM SI
SITE 33
SITE 34
WETLAND WAV
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
8/17/99
1/8/2019

PERMIT DRAWING
SHEET 67 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	41

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

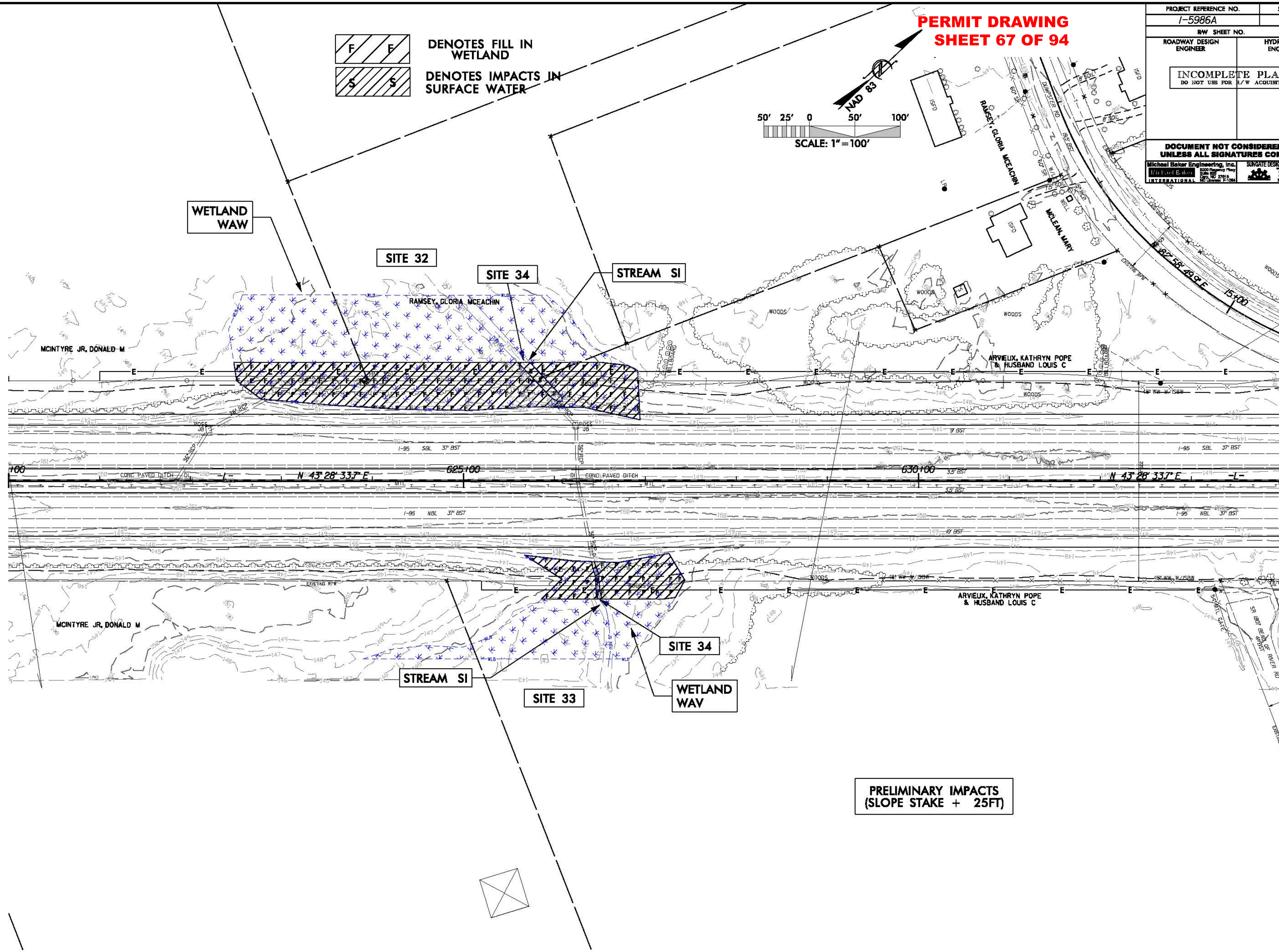
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. — SUNGATE DESIGN GROUP, P.A.

F — DENOTES FILL IN WETLAND

S — DENOTES IMPACTS IN SURFACE WATER



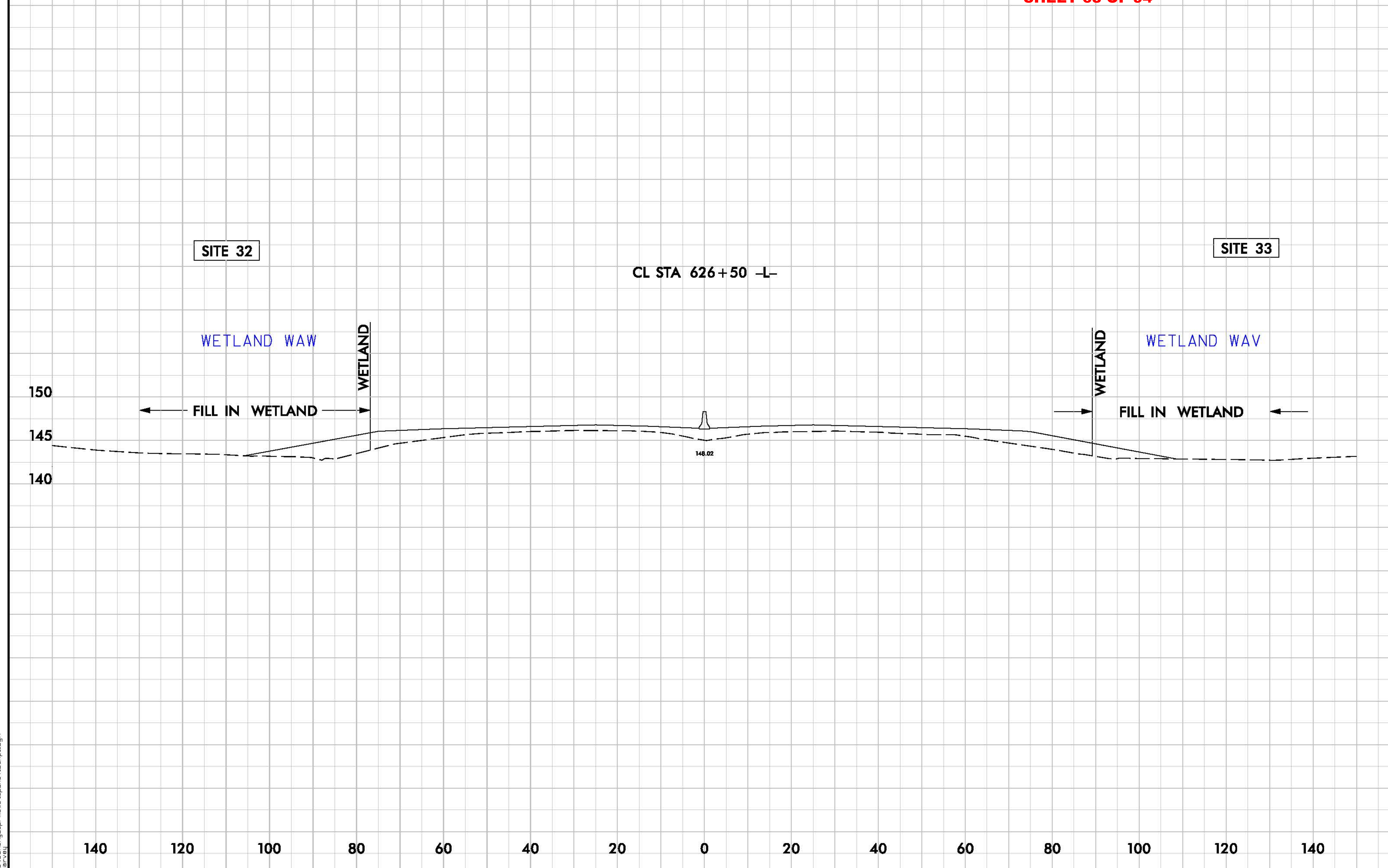
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_41a.dgn

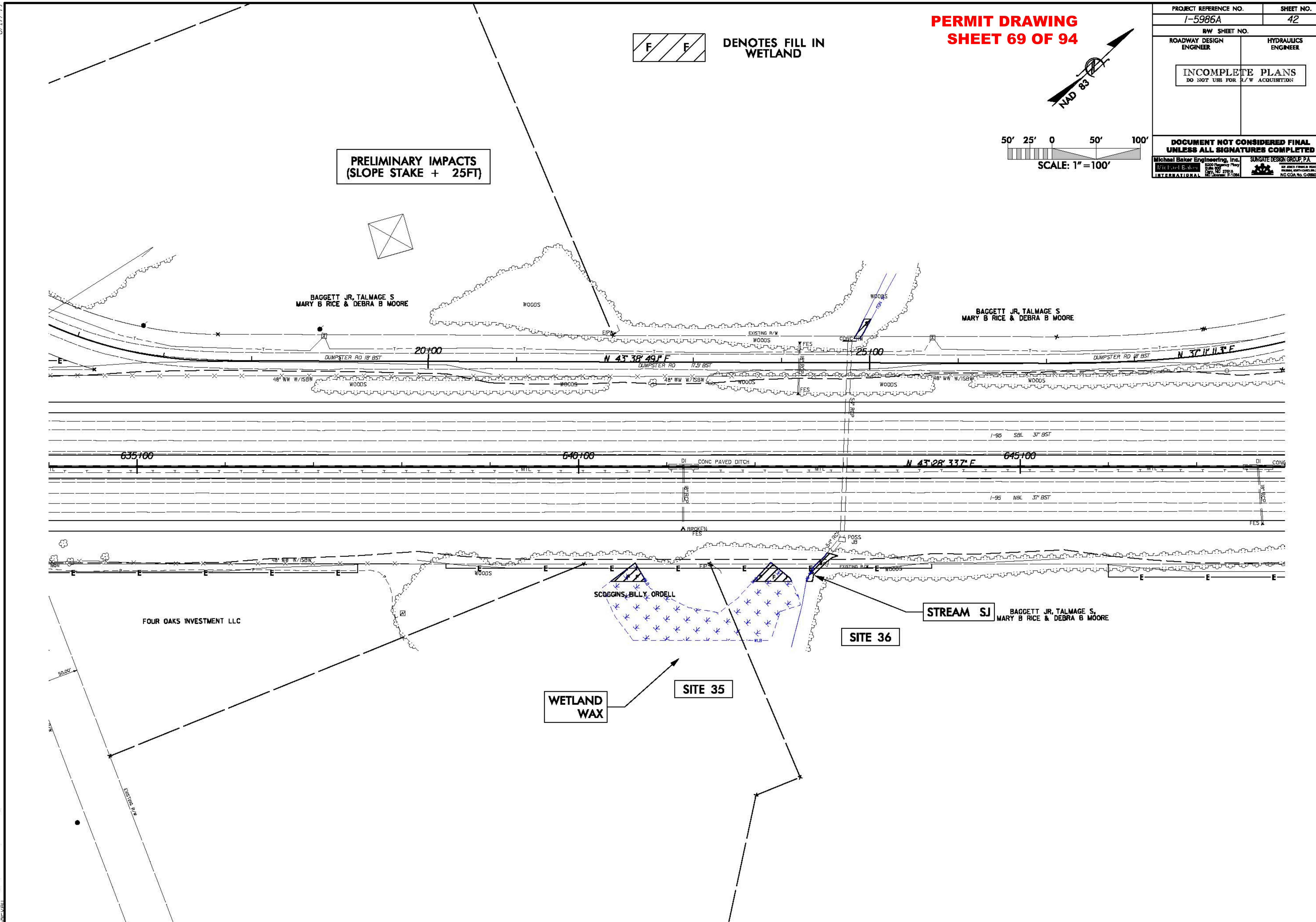
PERMIT DRAWING
SHEET 68 OF 94

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	41B



6/23/16

1/8/2019
I-5986A_Hyd_prm_wet_psh_41b_xpl.dgn
jharvey


PERMIT DRAWING
SHEET 69 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
42
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
NAD 83
50' 25' 0 50' 100'
SCALE: 1" = 100'
DENOTES FILL IN WETLAND
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
BAGGETT JR, TALMAGE S
MARY B RICE & DEBRA B MOORE
WOODS
EXISTING R/W
DUMPSTER RD 18' BST
20+00
25+00
N 43° 38' 49.1" E
N 37° 11' 11.3" E
48" WW W/ISBW
FES
I-95 SBL 37' BST
635+00
640+00
645+00
N 43° 28' 33.7" E
CONC PAVED DITCH
I-95 NBL 37' BST
BROKEN FES
POSS JB
SCOGGINS, BILLY ORDELL
FOUR OAKS INVESTMENT LLC
STREAM SJ
SITE 36
SITE 35
WETLAND WAX
EXISTING R/W
8/17/99

PERMIT DRAWING
SHEET 70 OF 94

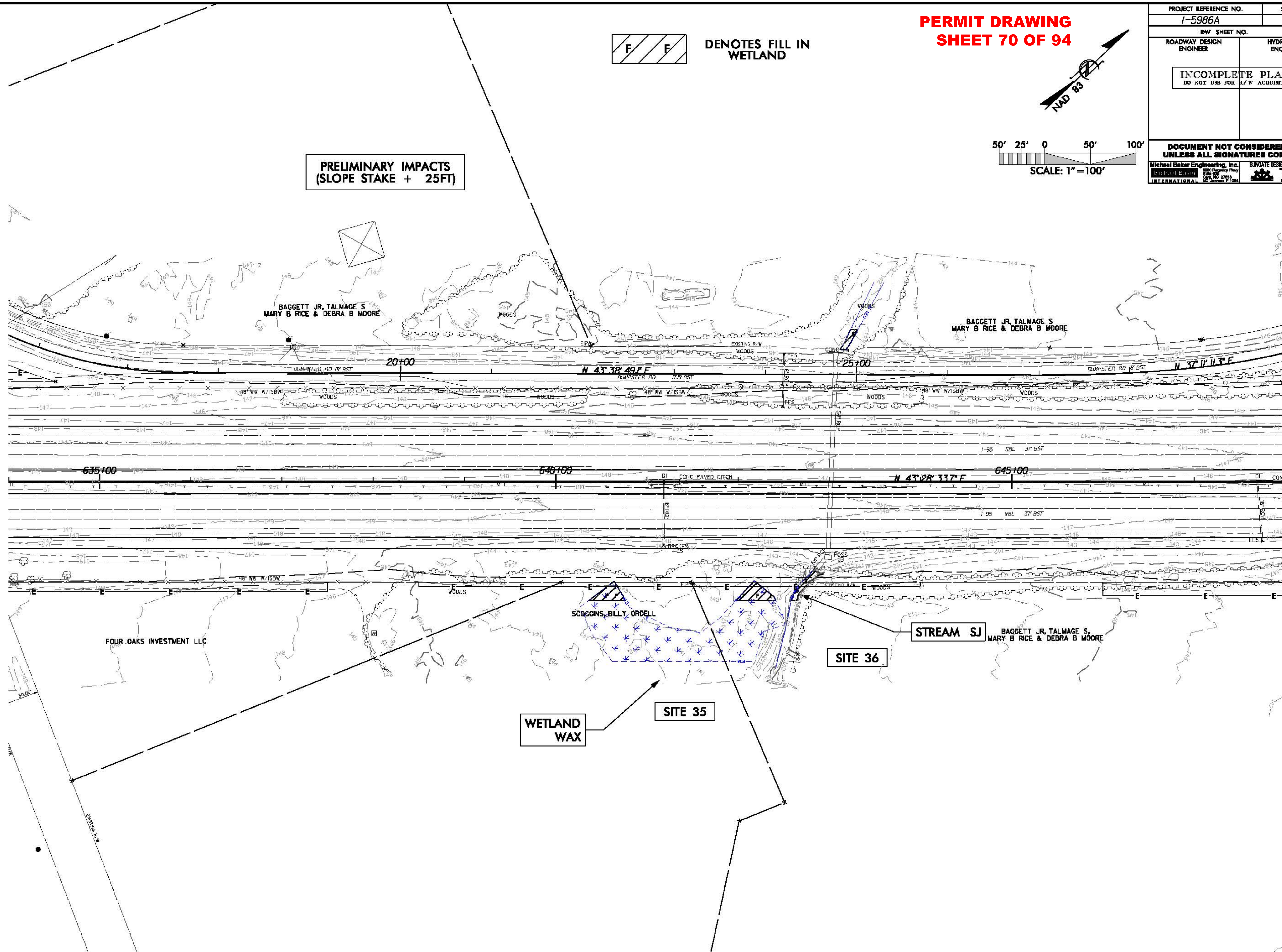
PROJECT REFERENCE NO.	SHEET NO.
I-5986A	42
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.

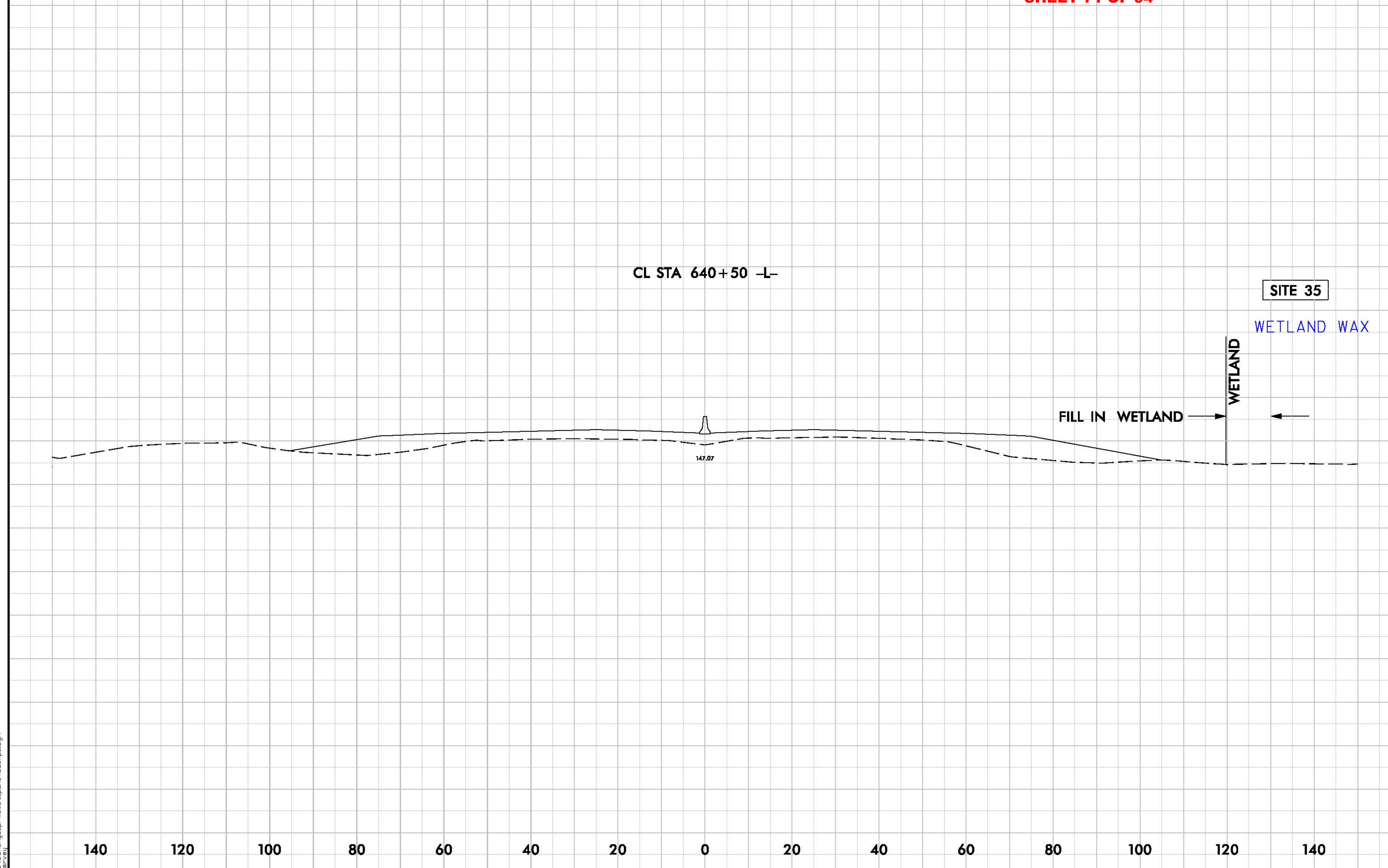
F F DENOTES FILL IN WETLAND



8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_42a.dgn

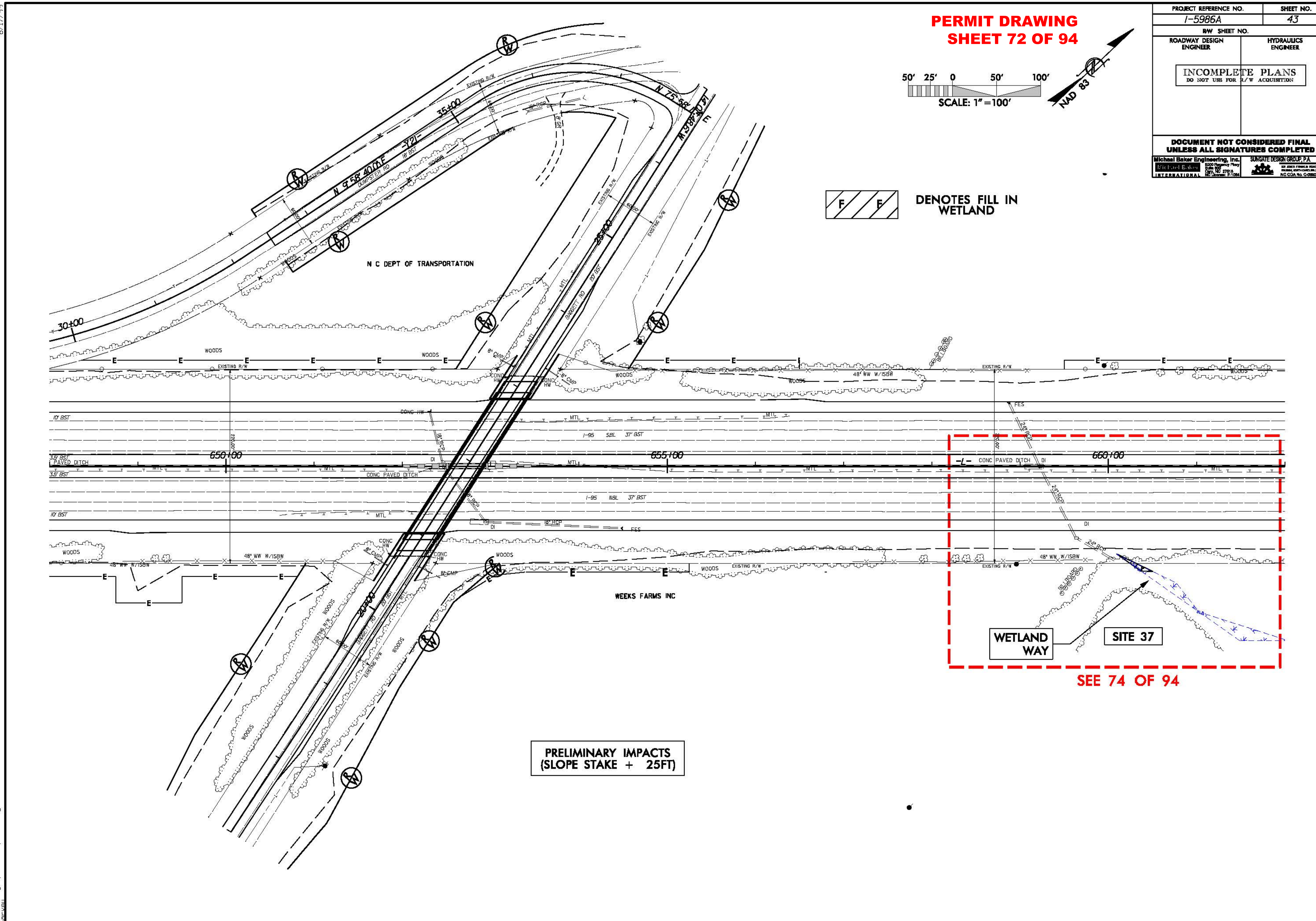
PERMIT DRAWING
SHEET 71 OF 94

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	42B



6/23/16

1/8/2019
I-5986A_Hyd_prm_wet_psh_42b_xpl.dgn
harvey


PERMIT DRAWING
SHEET 72 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
43
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
50' 25' 0 50' 100'
SCALE: 1" = 100'
NAD 83
DENOTES FILL IN WETLAND
N C DEPT OF TRANSPORTATION
WEEKS FARMS INC
DUMPSTER RD
BAGGETT RD
I-95 SBL 37' BST
I-95 NBL 37' BST
CONC PAVED DITCH
650+00
655+00
660+00
30+00
35+00
25+00
20+00
-Y21-
-L-
48" WW W/ISBW
EXISTING R/W
WOODS
WETLAND WAY
SITE 37
SEE 74 OF 94
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
8/17/99
I-5986A_Hyd_prm_wet_psh_43.dgn

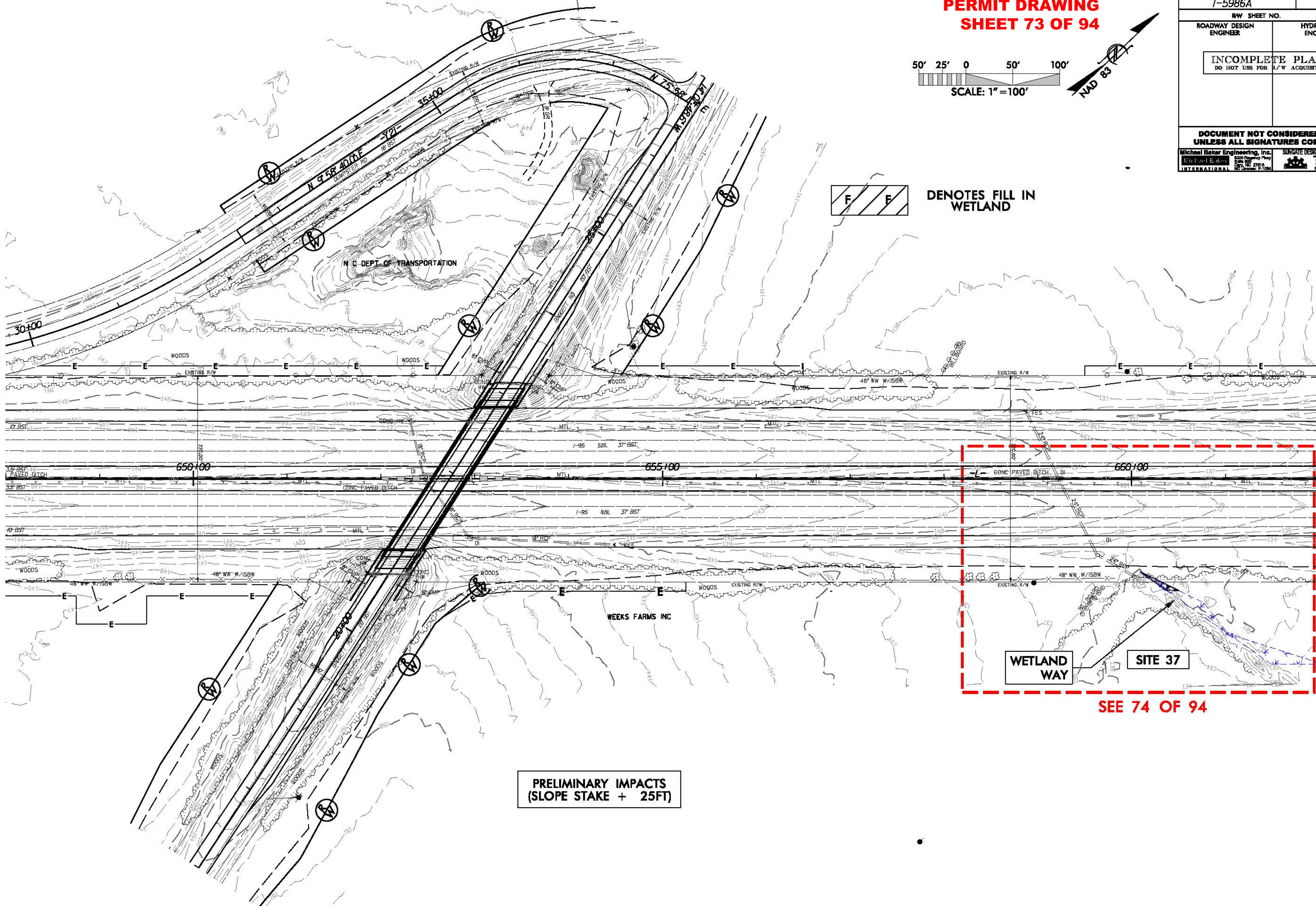
PERMIT DRAWING
SHEET 73 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	43
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.



8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_43a.dgn

8/17/99

PERMIT DRAWING
SHEET 74 OF 94

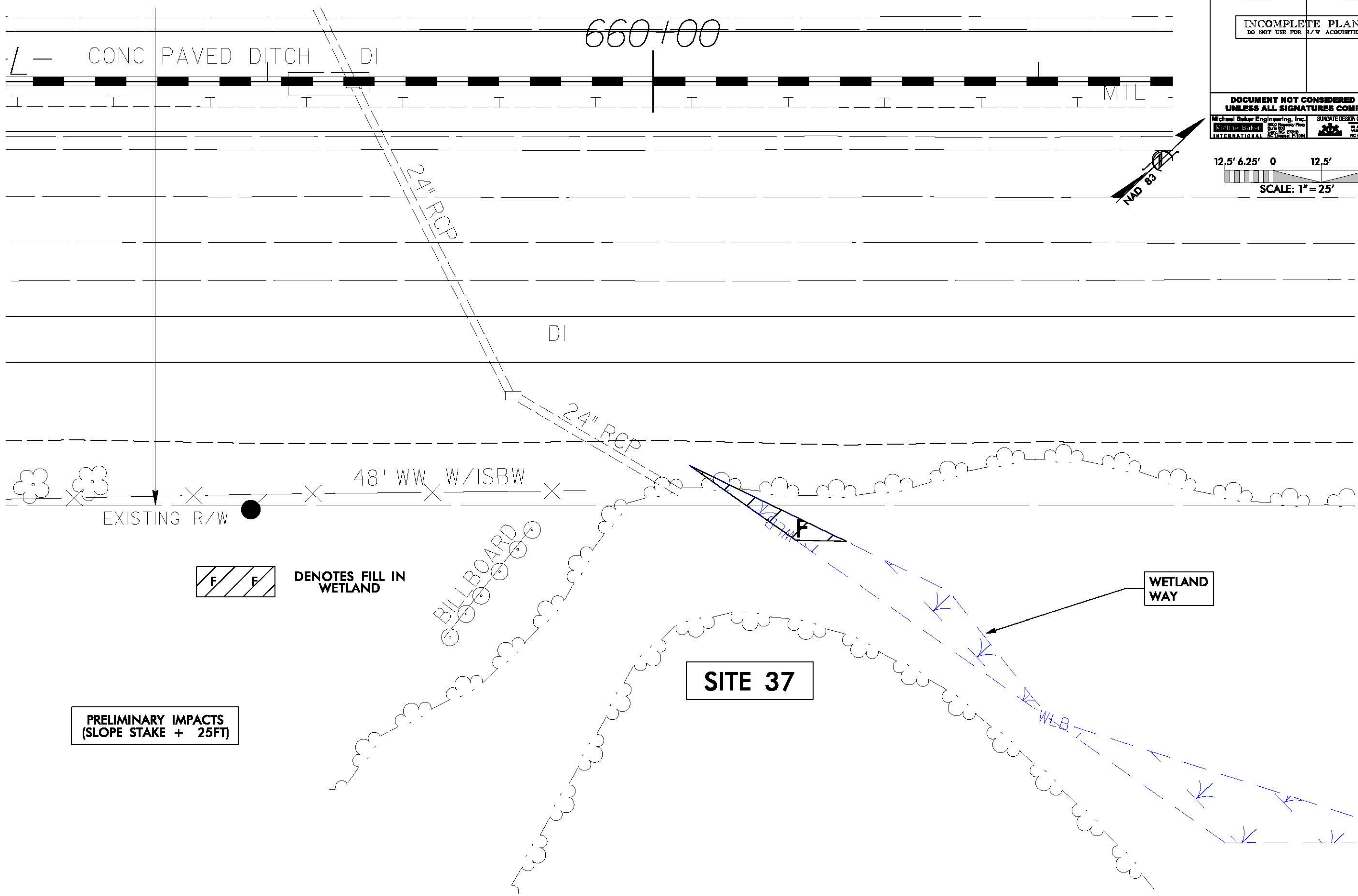
PROJECT REFERENCE NO.	SHEET NO.
I-5986	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.



1/8/2019 I-5986A_Hyd_prm_wet_psh_43b_ViewIn.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	44

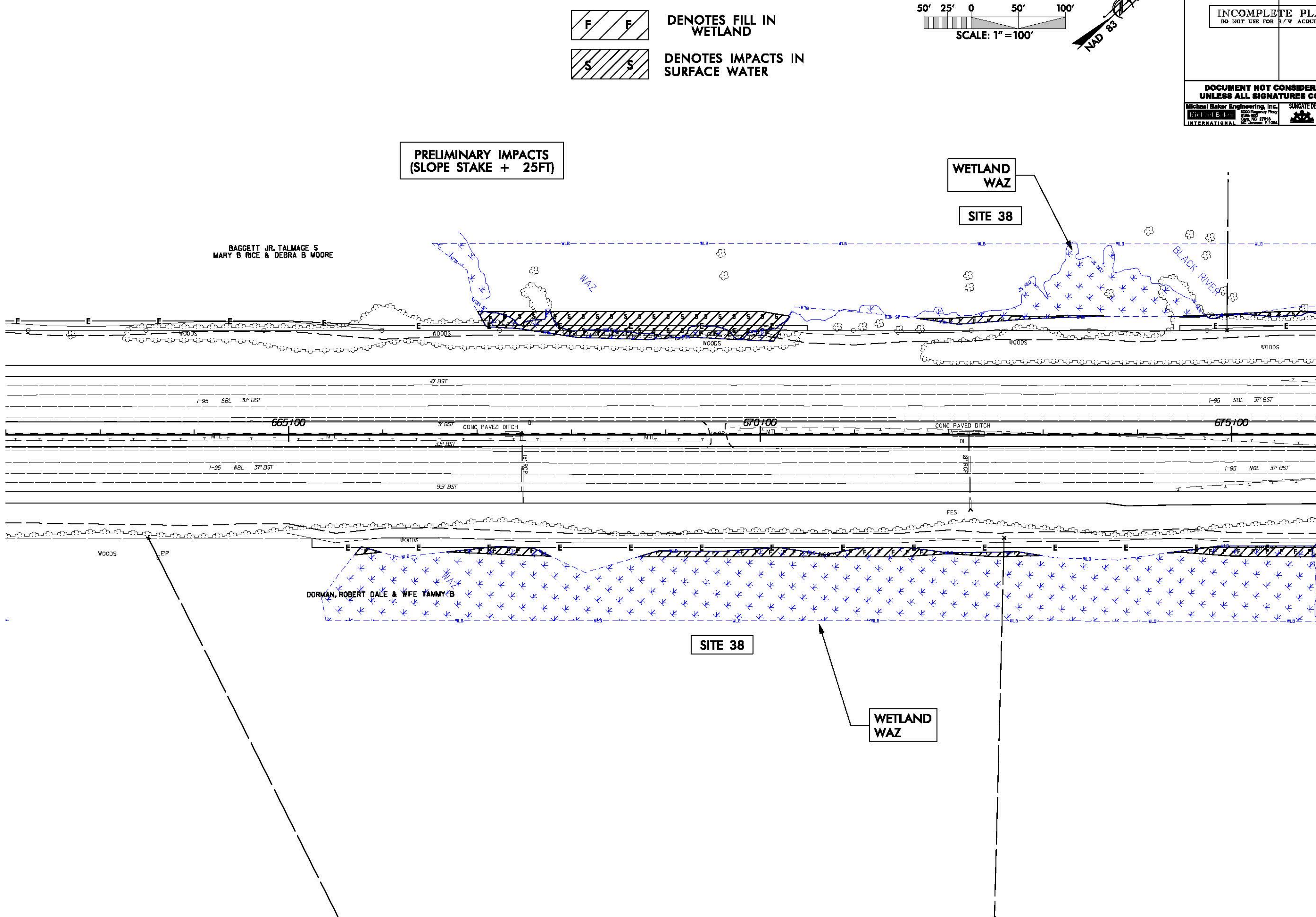
R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_44.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	44

R/W SHEET NO.

ROADWAY DESIGN ENGINEER — HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

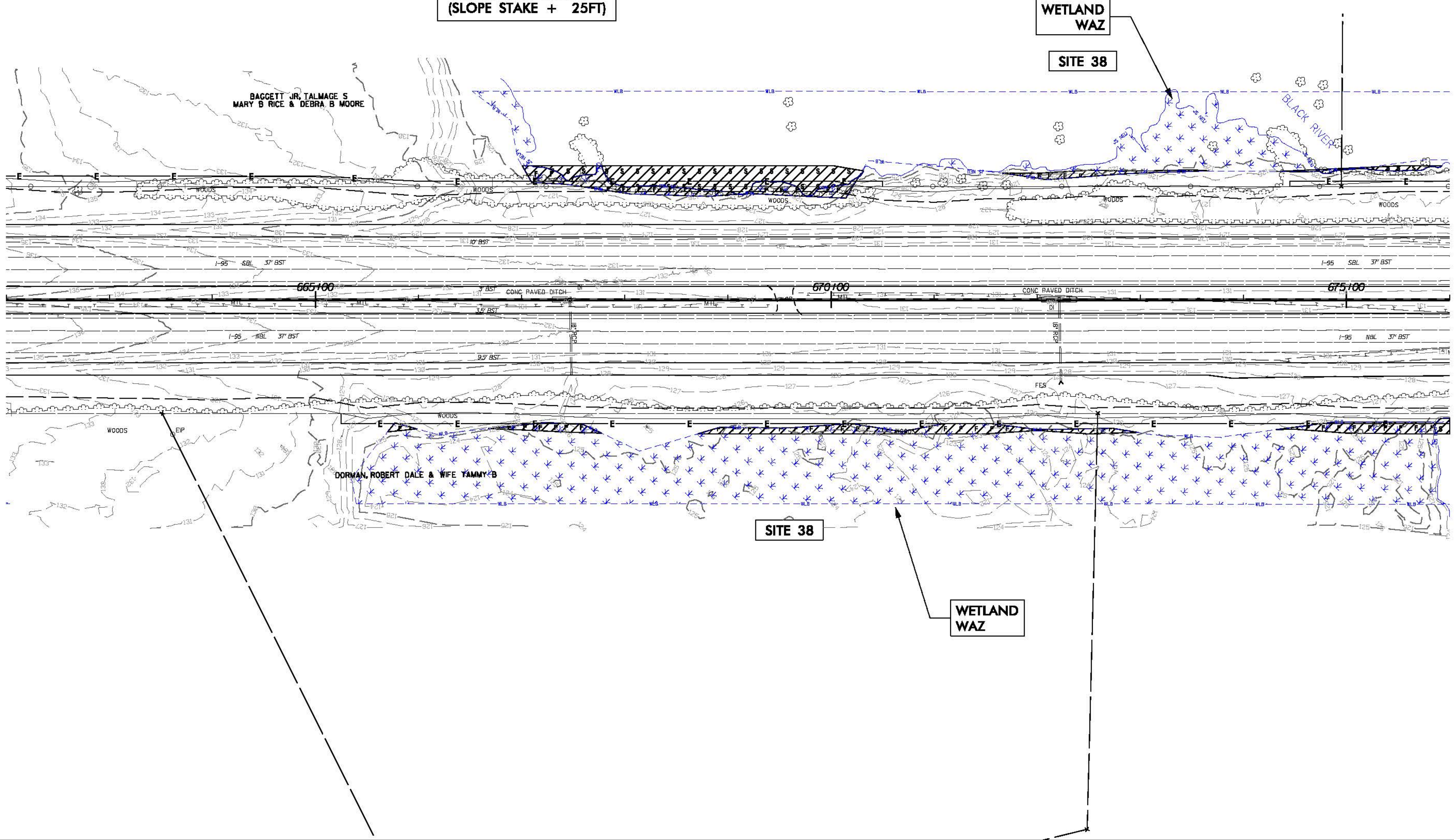
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. — SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING
SHEET 76 OF 94

F F — DENOTES FILL IN WETLAND

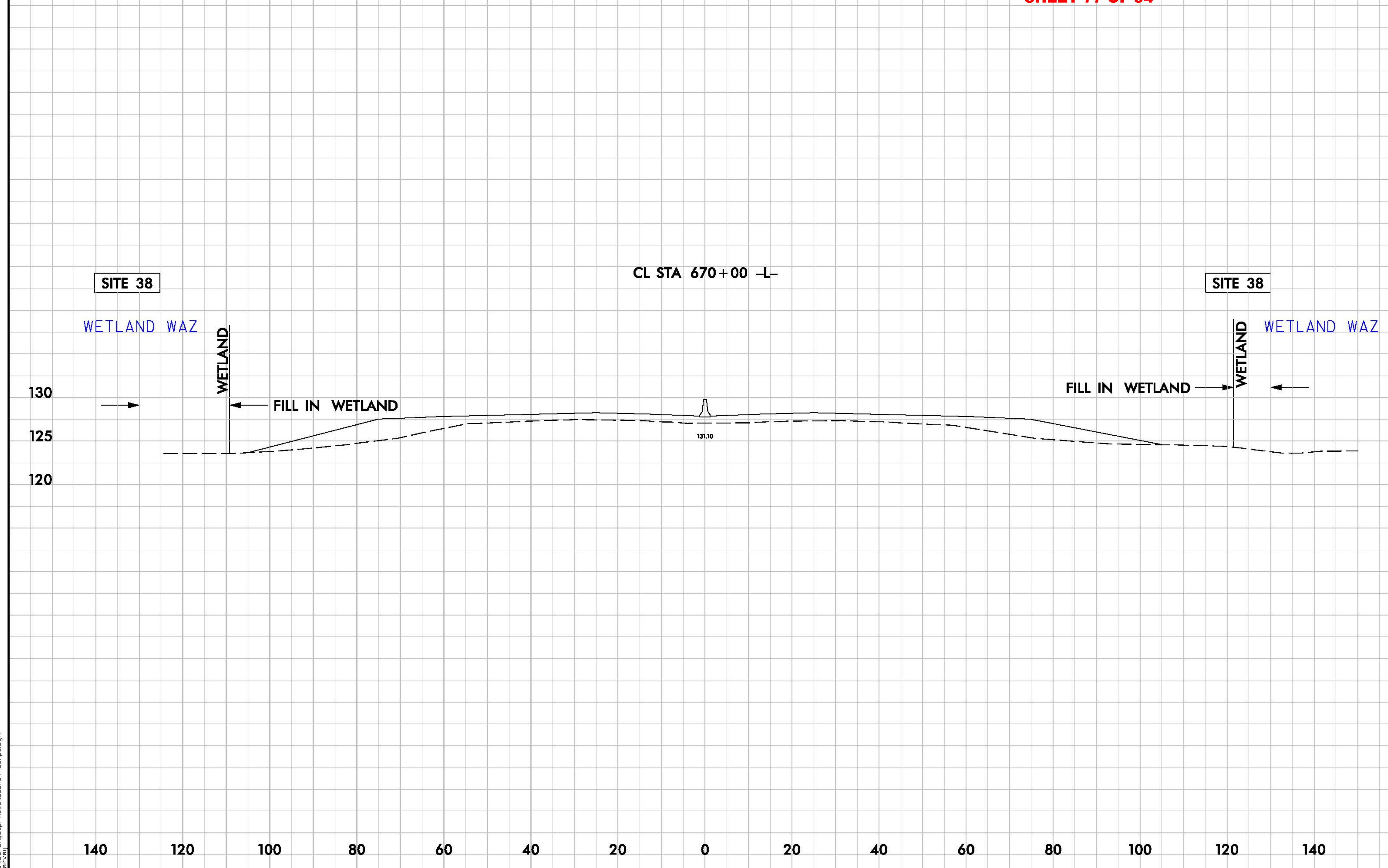
S S — DENOTES IMPACTS IN SURFACE WATER



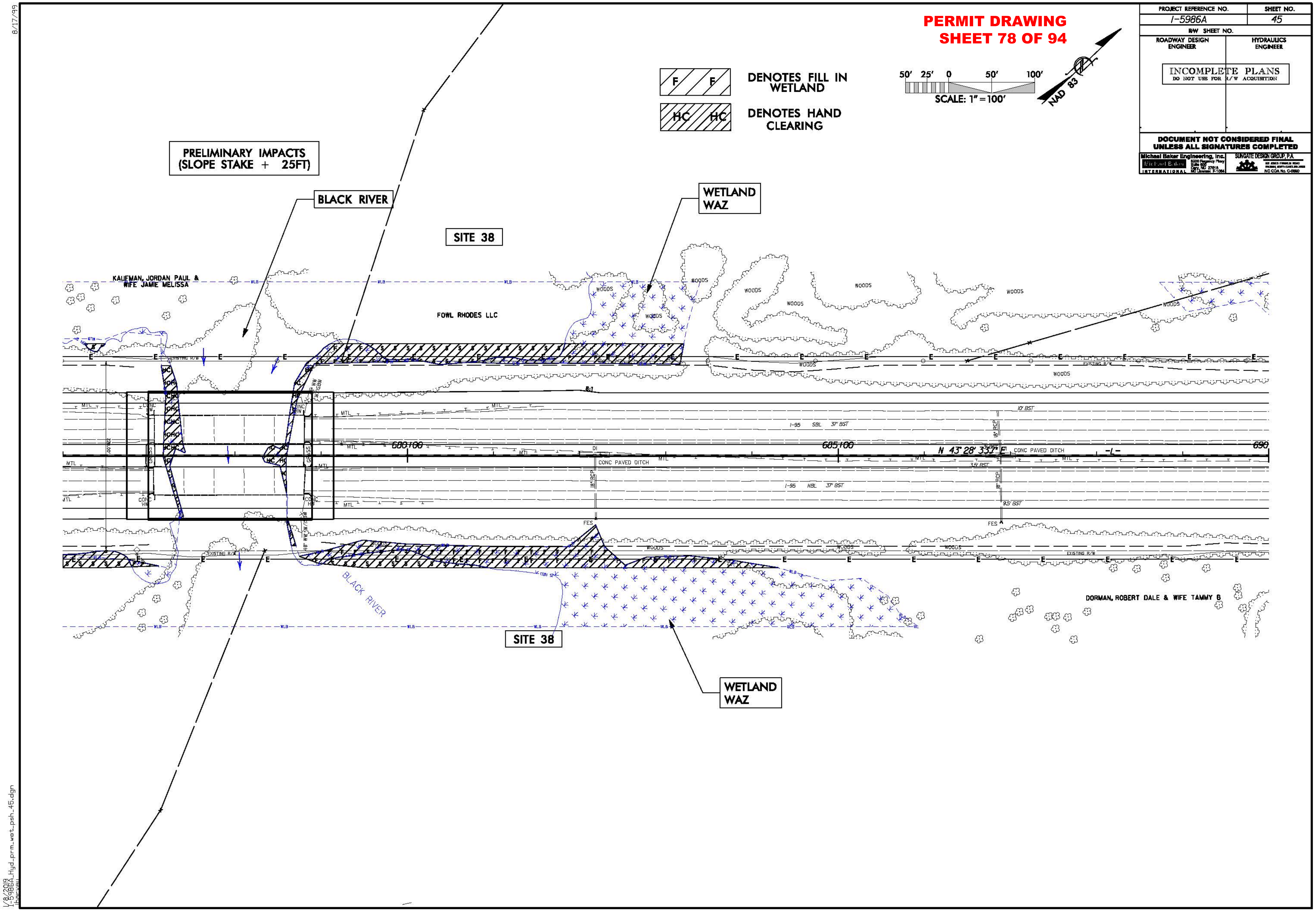
1/8/2019
I-5986A_Hyd_prm_wet_psh_44a.dgn

PERMIT DRAWING
SHEET 77 OF 94

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	42B



6/23/16
1/8/2019
I-5986A_Hyd_prm_wet_psh_44b_xpl.dgn
harvey


PERMIT DRAWING
SHEET 78 OF 94
PROJECT REFERENCE NO.
I-5986A
SHEET NO.
45
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
DENOTES FILL IN WETLAND
DENOTES HAND CLEARING
SCALE: 1" = 100'
NAD 83
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
BLACK RIVER
SITE 38
WETLAND
WAZ
KAUFMAN, JORDAN PAUL & WIFE JAMIE MELISSA
FOWL RHODES LLC
WOODS
EXISTING R/W
I-95 SBL 37' BST
I-95 NBL 37' BST
680+00
685+00
690
N 43° 28' 33.7" E
CONC PAVED DITCH
-L-
10' BST
9.5' BST
FES
BLACK RIVER
SITE 38
WETLAND
WAZ
DORMAN, ROBERT DALE & WIFE TAMMY B
8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_45.dgn

PERMIT DRAWING
SHEET 79 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	45
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

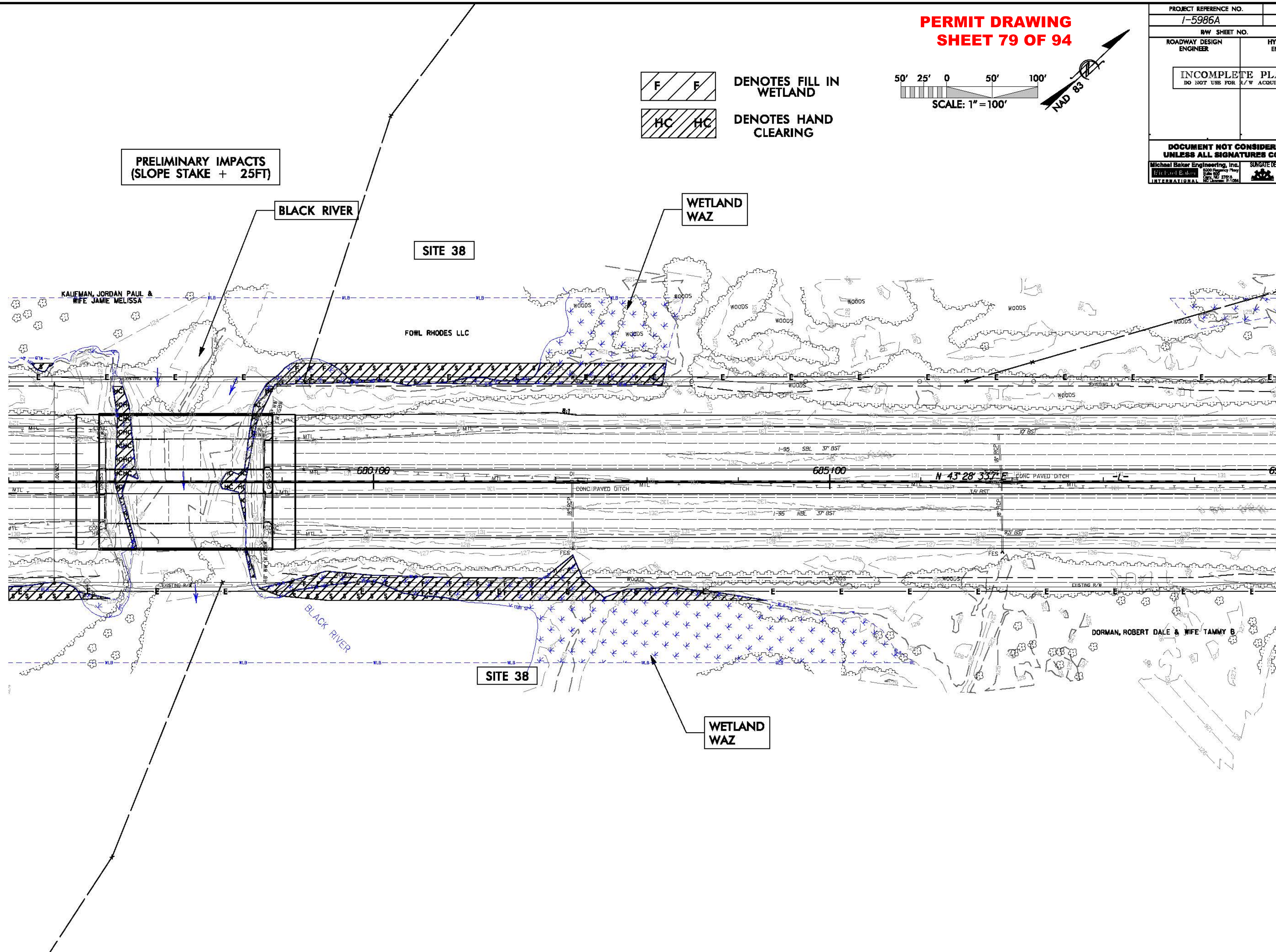
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.

F F — DENOTES FILL IN WETLAND

HC HC — DENOTES HAND CLEARING

50' 25' 0 50' 100'
SCALE: 1" = 100'

NAD 83



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_45a.dgn

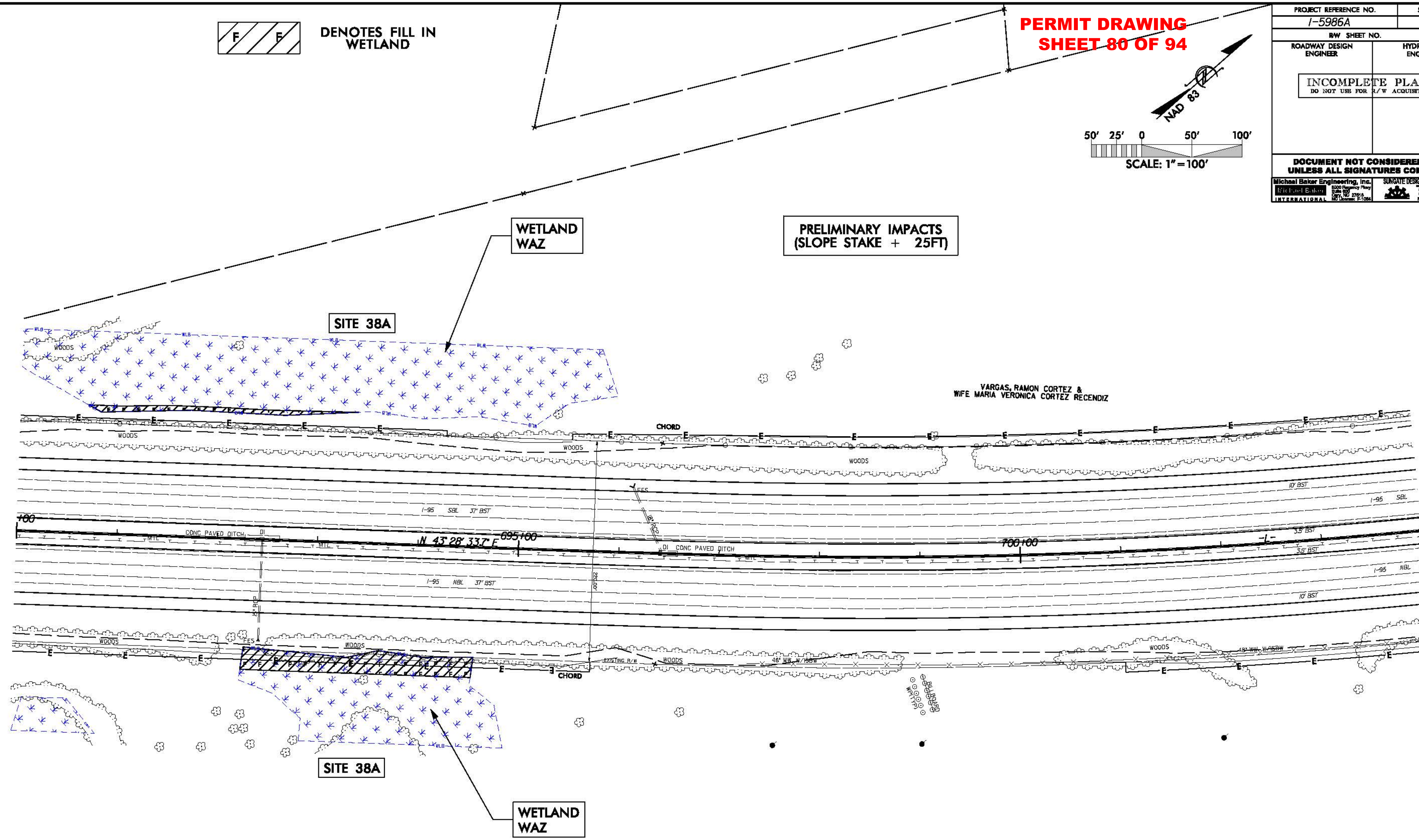
PERMIT DRAWING
SHEET 80 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	46
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
INTERNATIONAL
SUNGATE DESIGN GROUP, P.A.



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_46.dgn

8/17/99

PERMIT DRAWING
SHEET 81 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	46
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

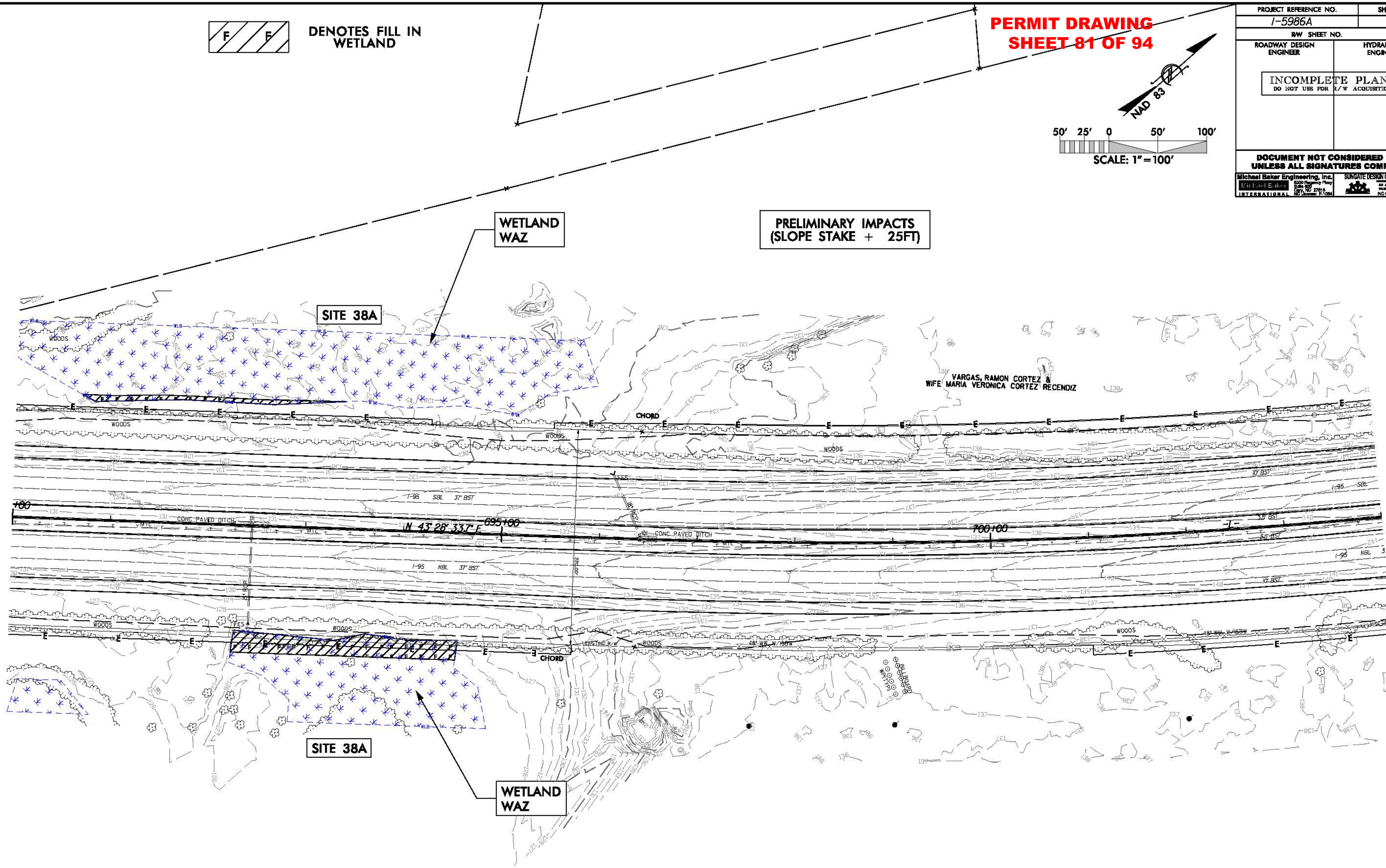
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
INTERNATIONAL

SUNGATE DESIGN GROUP, P.A.

F F DENOTES FILL IN WETLAND



1/8/2019
I-5986A_Hyd_prm_wet_psh_46a.dgn

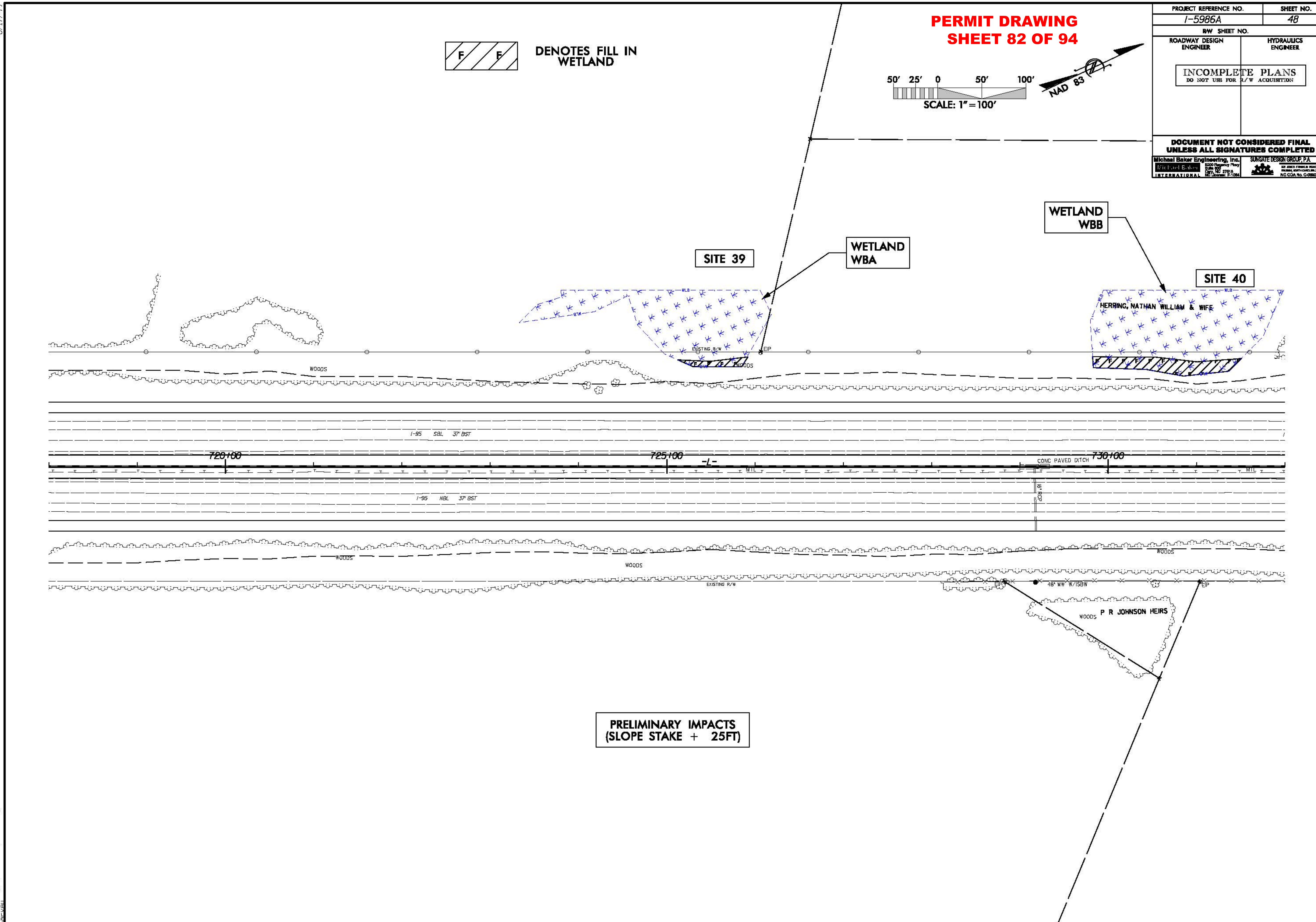
PROJECT REFERENCE NO.	SHEET NO.
I-5986A	48

R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.



8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_48.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	48
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

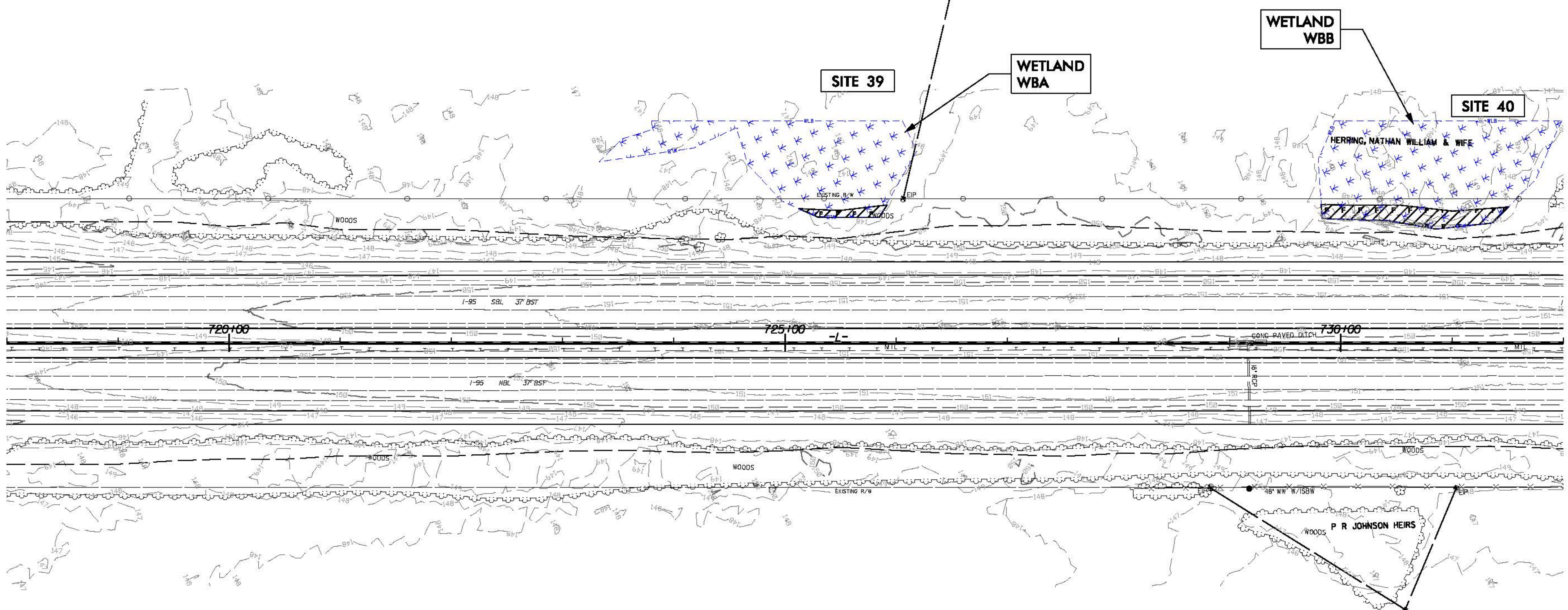
Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL
8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084

SUNGATE DESIGN GROUP, P.A.
NC COA No. C-0580

F F DENOTES FILL IN WETLAND

50' 25' 0 50' 100'
SCALE: 1" = 100'

NAD 83

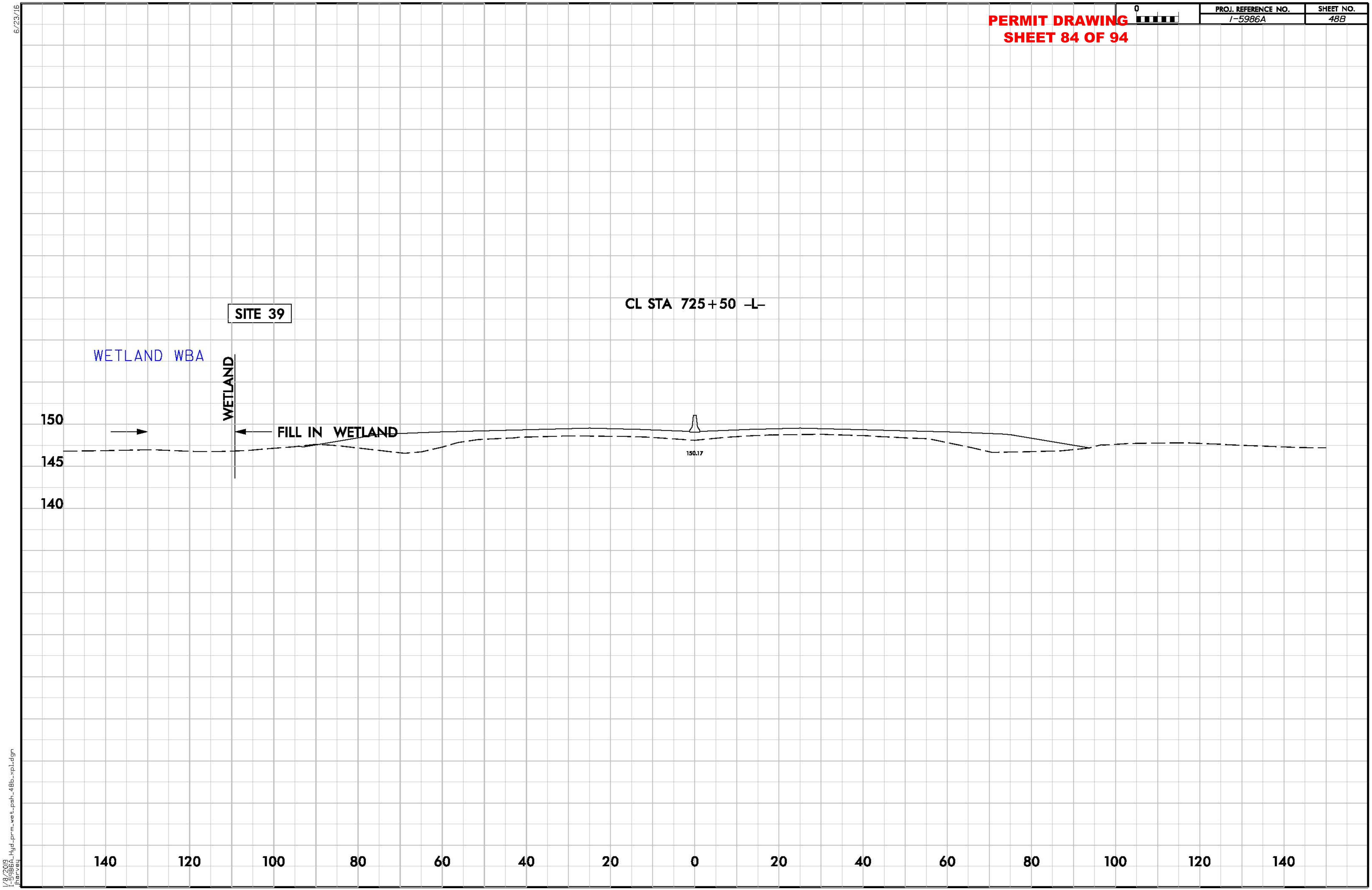


PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

8/17/99

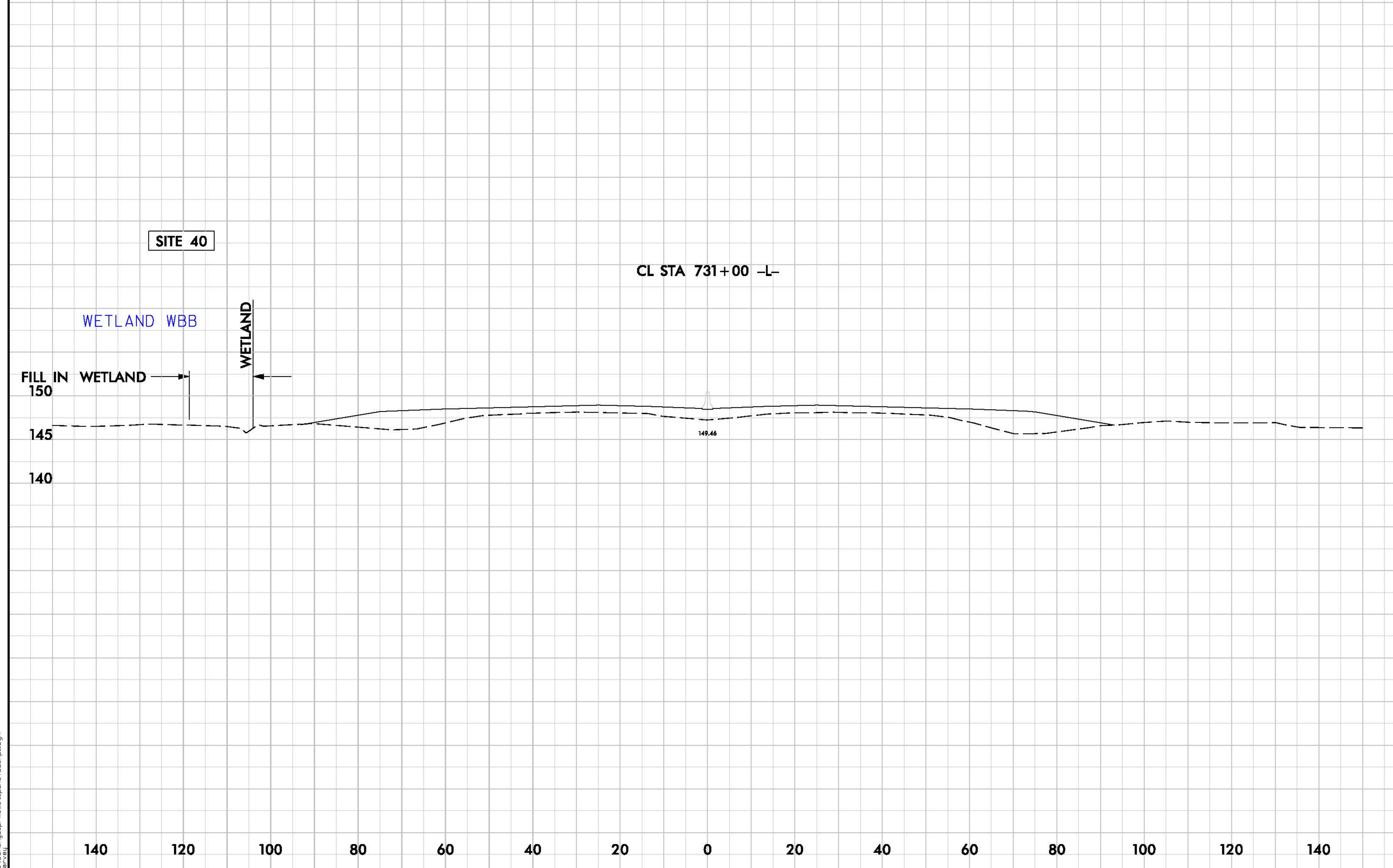
1/8/2019
I-5986A_Hyd_prm_wet_psh_48a.dgn
harveu

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	48B



PERMIT DRAWING
SHEET 85 OF 94

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	48C



6/23/16

1/8/2019
I-5986A_Hyd_prm_wet_psh_48c_xpl.dgn
harveg

PERMIT DRAWING
SHEET 86 OF 94

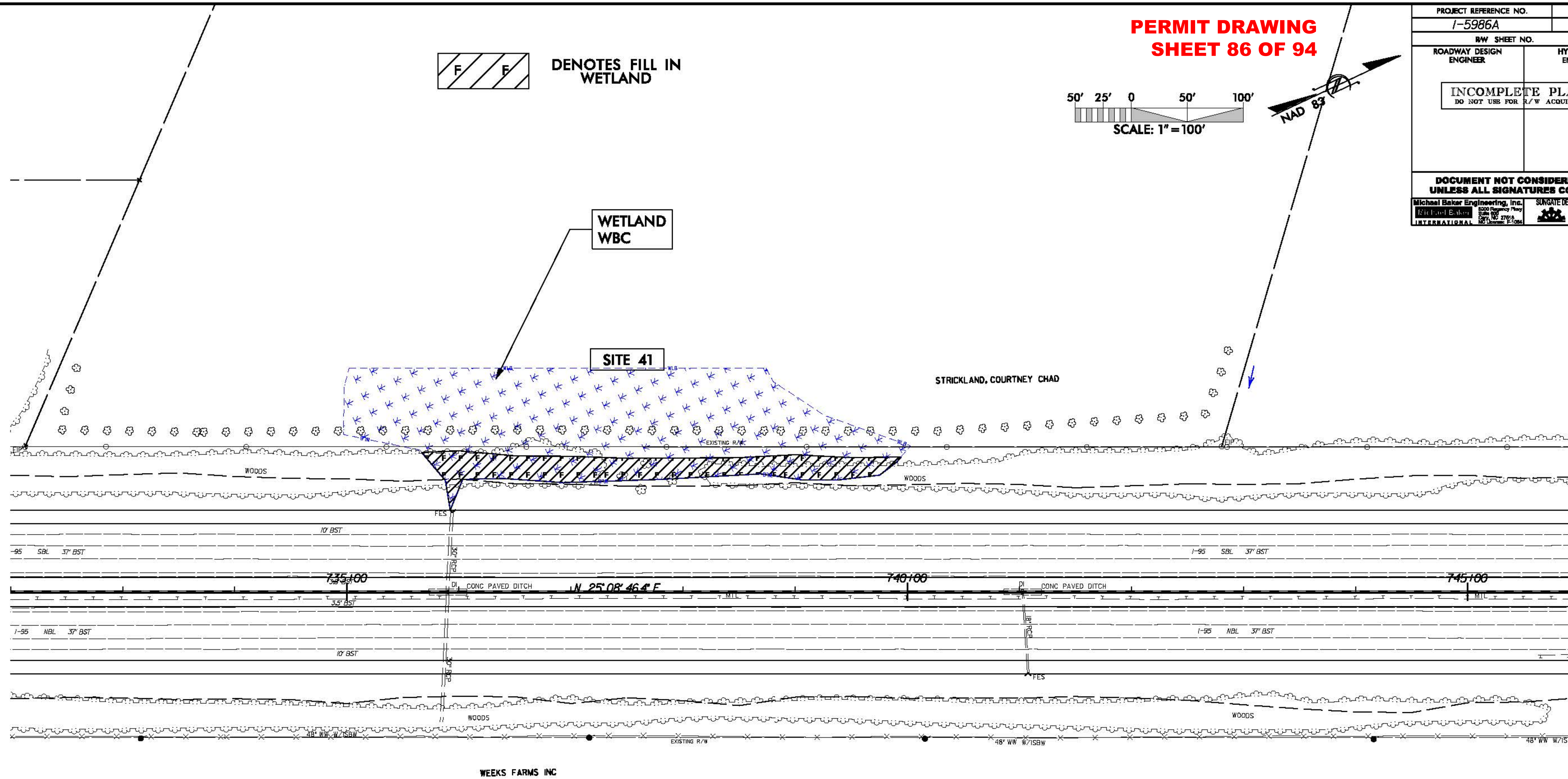
PROJECT REFERENCE NO.	SHEET NO.
I-5986A	49
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL
8000 Regency Pkwy Suite 600 Cary, NC 27518 NC License: F-1084

SUNGATE DESIGN GROUP, P.A.
NC COA No. C-0890



PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_49.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	49
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

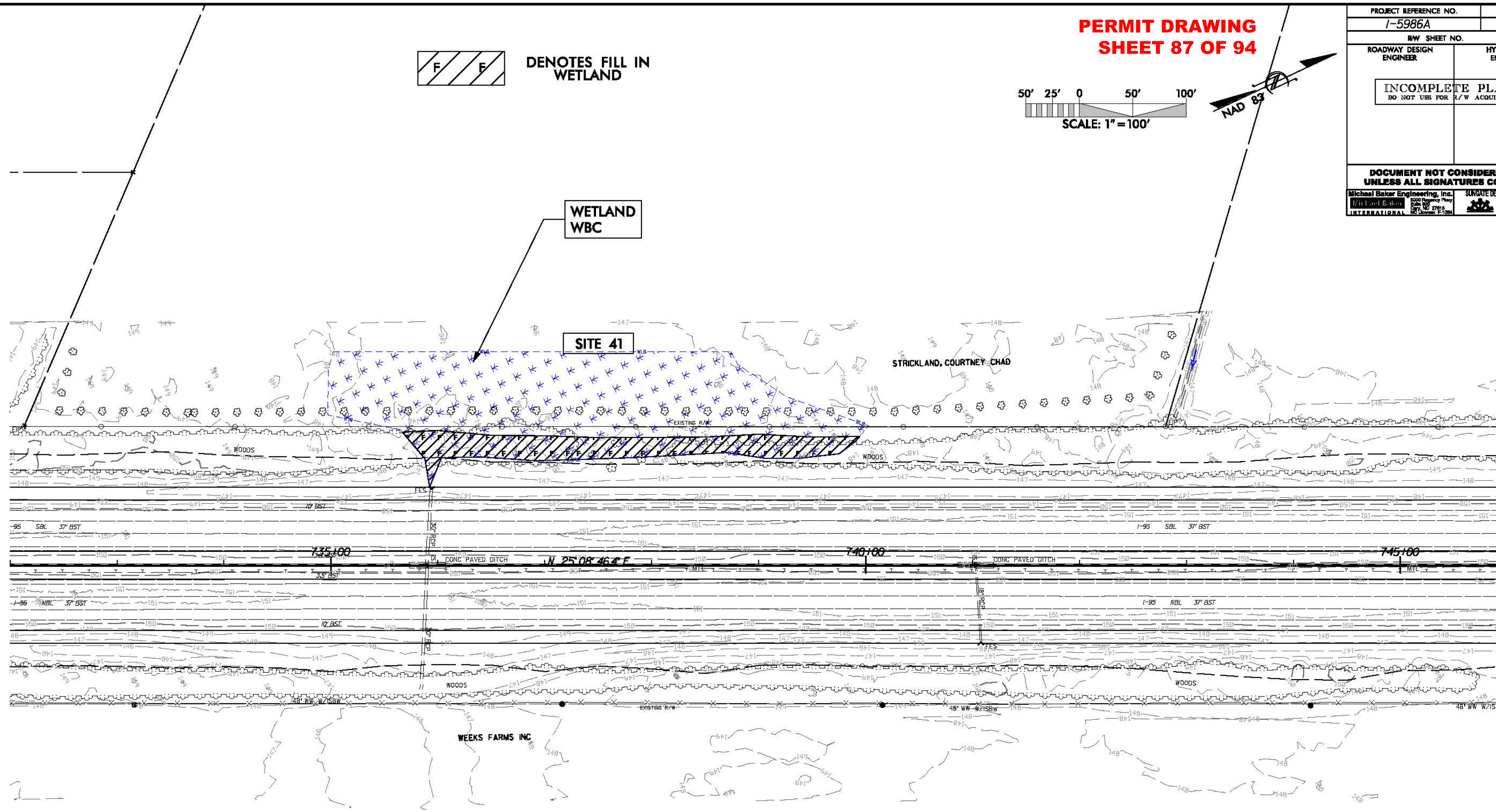
Michael Baker Engineering, Inc. — SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING
SHEET 87 OF 94

F F DENOTES FILL IN WETLAND

SCALE: 1" = 100'

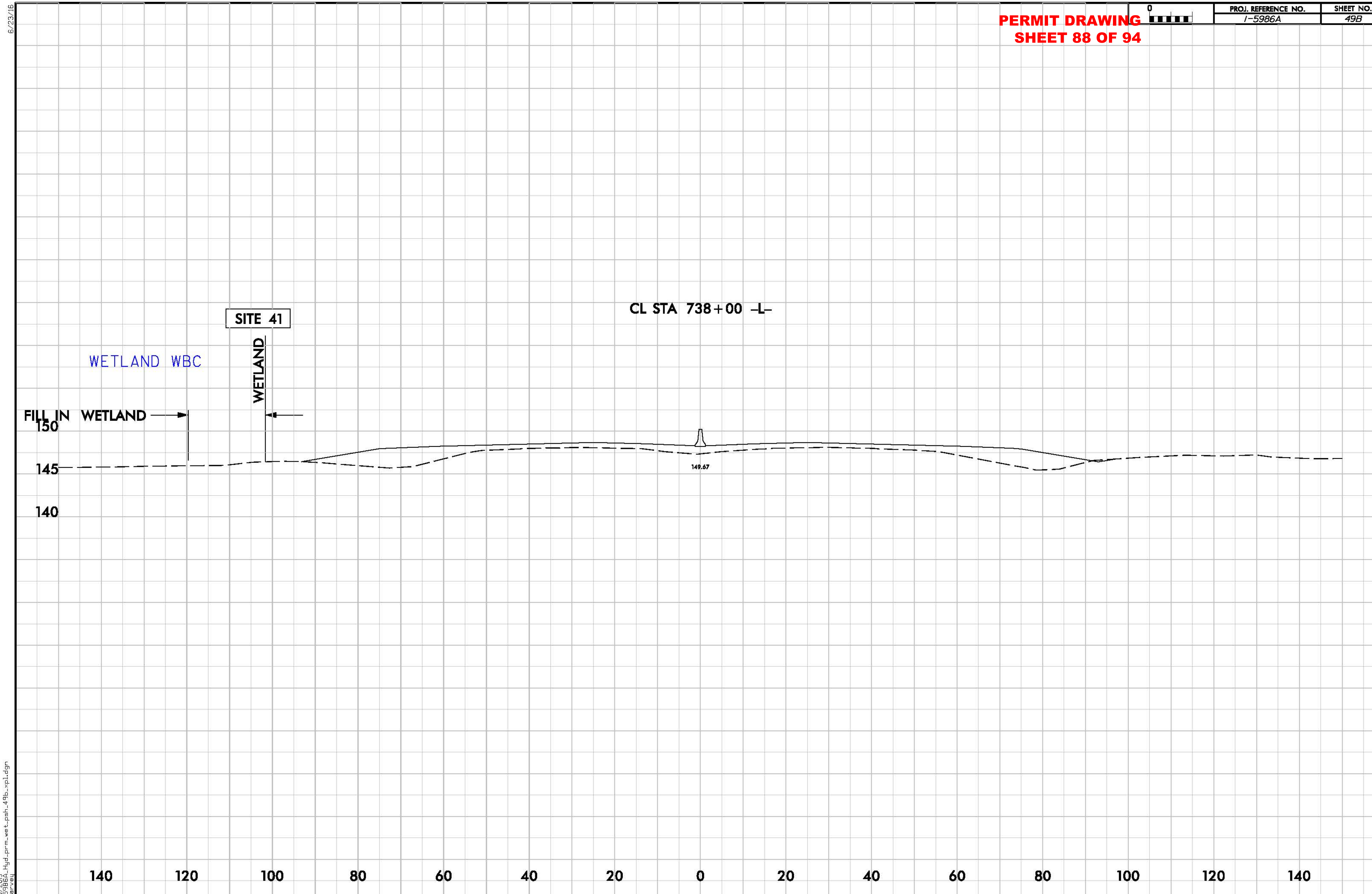
NAD 83



PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

1/8/2019
I-5986A_Hyd_prm_wet_psh_49a.dgn
lharvey

PROJ. REFERENCE NO.	SHEET NO.
I-5986A	49B



PERMIT DRAWING
SHEET 89 OF 94

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	51

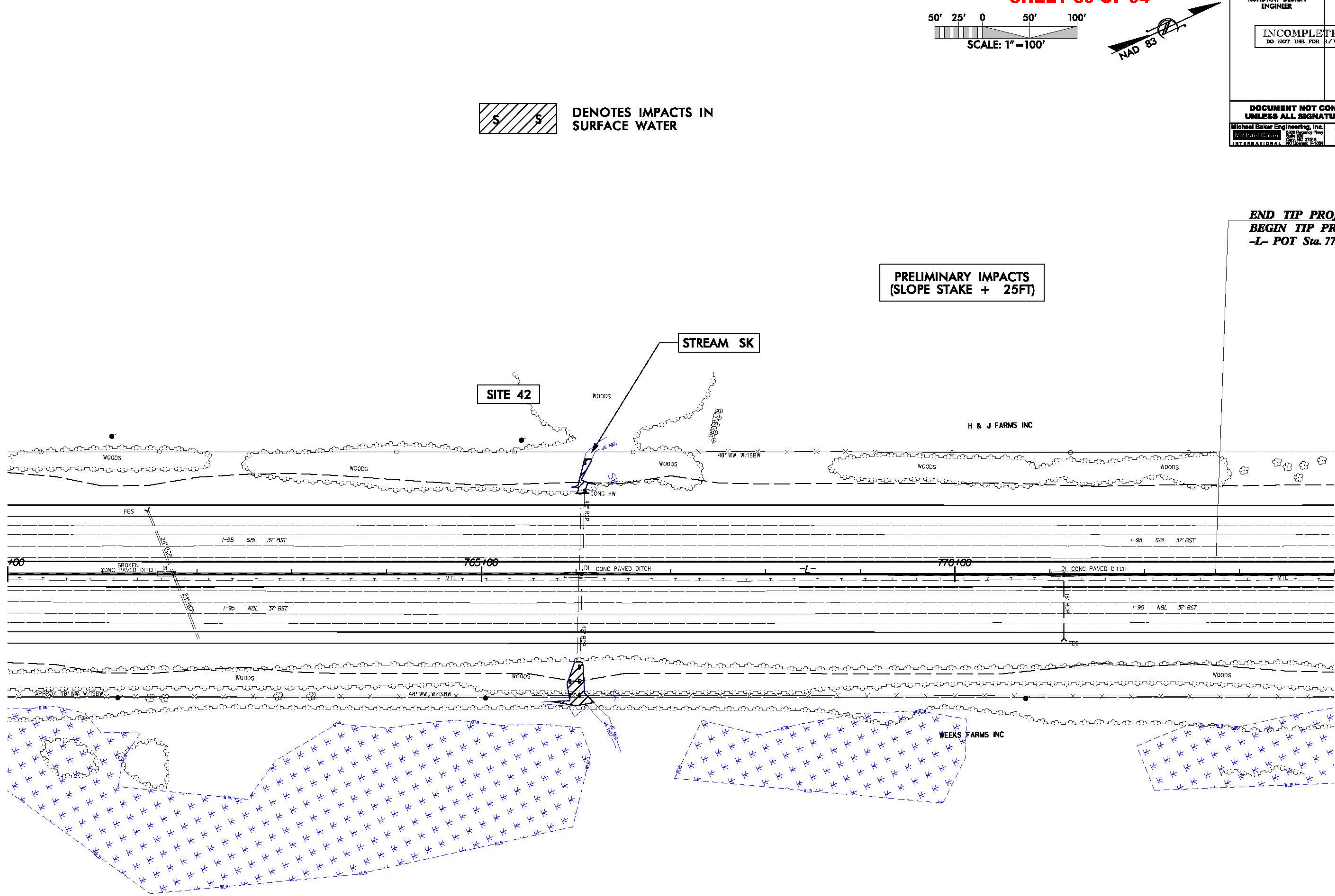
R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. | SUNGATE DESIGN GROUP, P.A.



8/17/99
1/8/2019
I-5986A_Hyd_prm_wet_psh_51.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	51
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc. — SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING
SHEET 90 OF 94

50' 25' 0 50' 100'
SCALE: 1" = 100'

NAD 83

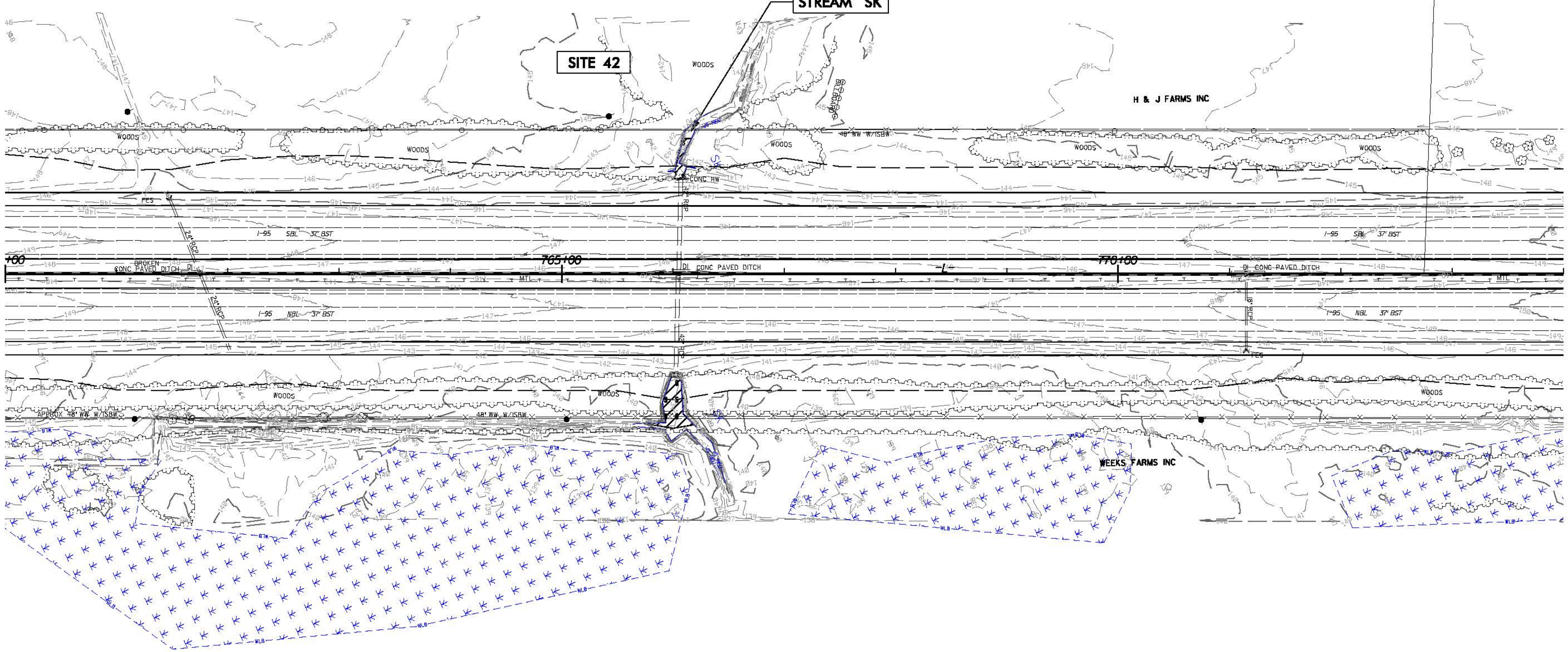
DENOTES IMPACTS IN SURFACE WATER

END TIP PROJECT I-5986A
BEGIN TIP PROJECT I-5986B
-L- POT Sta. 772+75.00

PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

STREAM SK

SITE 42



1/8/2019
I-5986A_Hyd_prm_wet_psh_51a.dgn

PERMIT DRAWING
SHEET 91 OF 94

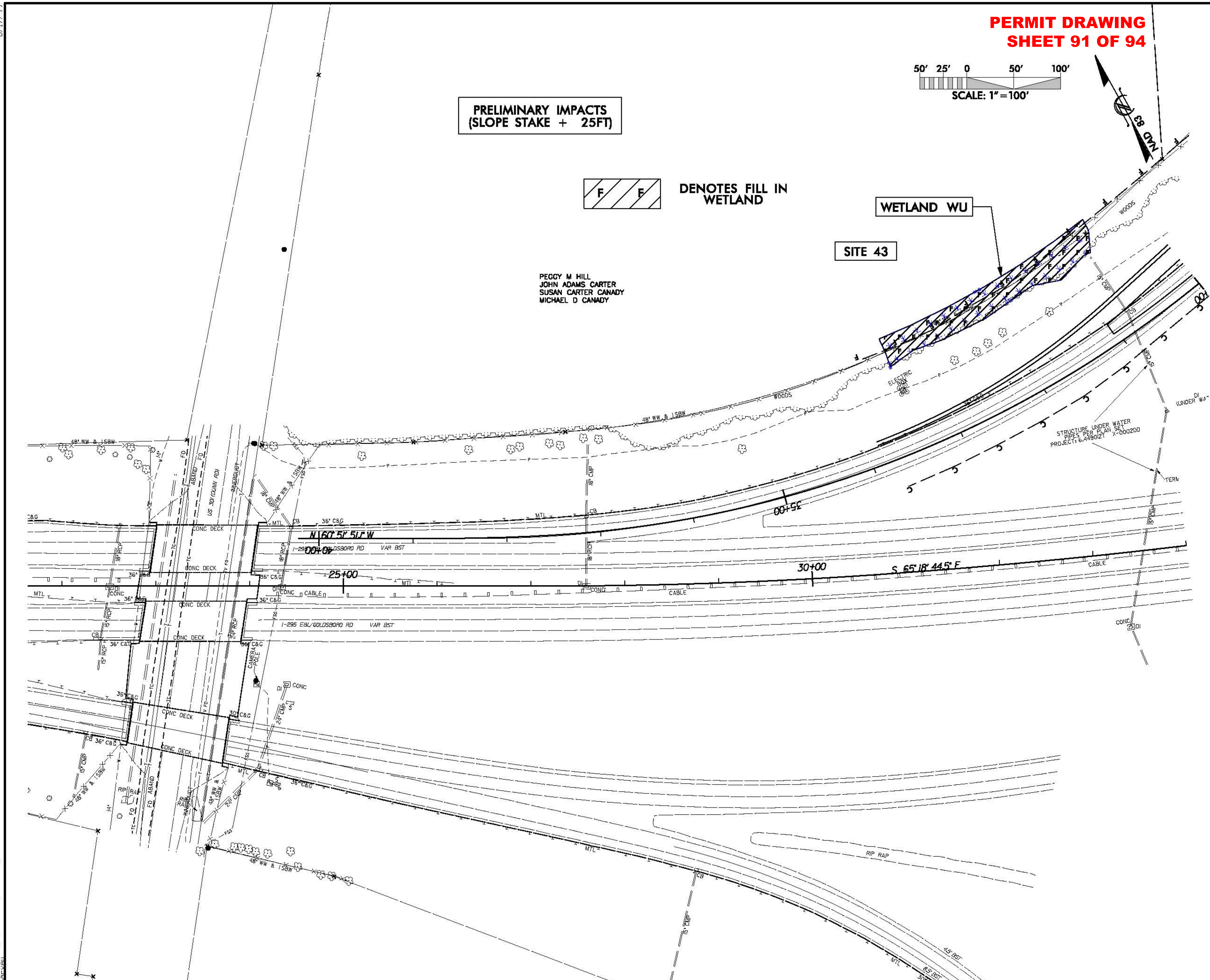
PROJECT REFERENCE NO.	SHEET NO.
I-5986A	67
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.



8/17/99

1/8/2019
I-5986A_Hyd_prm_wet_psh_67.dgn

PROJECT REFERENCE NO.	SHEET NO.
I-5986A	67
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

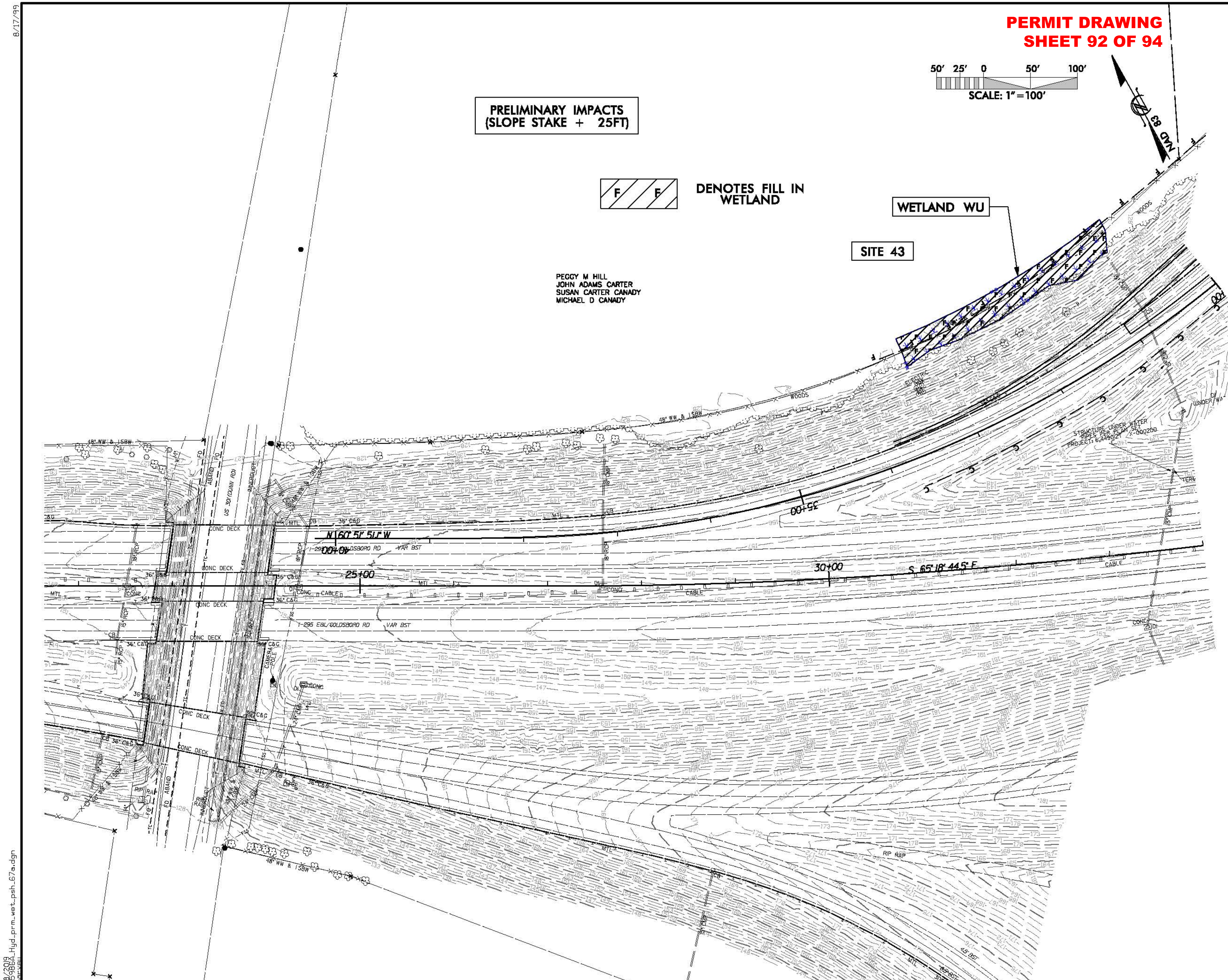
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.

SUNGATE DESIGN GROUP, P.A.

PERMIT DRAWING
SHEET 92 OF 94



WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	90+87 to 92+10-L-RT	ROADWAY FILL	0.02									
2	91+98 to 100+06-L-LT	ROADWAY FILL	0.23									
3	94+37 to 100+20-L-RT	ROADWAY FILL	0.16					< 0.01		38		
4	108+26 to 114+34-L-LT	ROADWAY FILL	0.08									
5	118+98 to 133+53L-L-LT	ROADWAY FILL	0.54									
6	122+19 to 124+94-L-LT	ROADWAY FILL	0.07									
7	121+32 to 127+68-L-RT	ROADWAY FILL	0.65									
8	186+19 to 193+09-L-LT	ROADWAY FILL	0.17				0.17					
9	199+16 to 202+54-L-LT	ROADWAY FILL	0.18									
10	198+56 to 203+79-L-RT	ROADWAY FILL	0.37					0.04		70		
11	11+89 to 23+93-Y5RPC-RT	ROADWAY FILL	1.35					0.02		63		
12	213+68 to 222+17-L-RT	ROADWAY FILL	1.66									
13	251+91 to 253+32-L-	ROADWAY FILL						0.03		116		
14	300+64 to 306+99-L-LT	ROADWAY FILL	0.13									
15	301+32 to 304+90-L-	ROADWAY FILL						0.25		138		
16	302+03 to 307+02-L-RT	ROADWAY FILL	0.18									
17	351+049 to 351+95-L-RT	ROADWAY FILL	< 0.01									
18	354+73 to 354+90-L-	ROADWAY FILL						< 0.01		130		
19	354+90 to 357+78-L-RT	ROADWAY FILL	0.02									
20	384+05 to 292+99-L-LT	ROADWAY FILL	0.28									
21	405+58 to 405+78-L-LT	ROADWAY FILL	< 0.01									
22	422+17 to 437+17-L-LT	ROADWAY FILL	0.67									
23	423+14 to 423+31-L-LT	ROADWAY FILL						0.01		40		
TOTALS*:			6.78				0.17	0.36		595	0	0

*Rounded totals are sum of actual impacts

NOTES:
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
CUMBERLAND COUNTY
I-5986A
47532.1.3

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No. #REF!	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
24	418+39 to 437+17-L-RT	ROADWAY FILL	0.76									
25	508+34 to 509+39-L-LT	ROADWAY FILL	0.09									
26	522+79 to 528+98-L-LT	ROADWAY FILL	0.36									
27	539+19 to 540+76-L-	ROADWAY FILL						0.03		114		
28	573+52 to 575+47-L-	ROADWAY FILL	0.04									
29	574+35 to 574+56-L-	ROADWAY FILL						0.02		106		
30	600+13 to 606+75-L-LT	ROADWAY FILL	0.31									
31	618+08 to 618+41-L-RT	ROADWAY FILL	< 0.01									
32	622+48 to 626+94-L-LT	ROADWAY FILL	0.48									
33	625+60 to 626+52-L-	ROADWAY FILL						0.02		101		
34	625+67 to 627+43-L-RT	ROADWAY FILL	0.14									
35	640+37 to 642+41-L-RT	ROADWAY FILL	0.02									
36	642+58 to 643+31-L-	ROADWAY FILL						0.01		67		
37	660+09 to 660+50-L-RT	ROADWAY FILL	< 0.01									
38	665+70 to 684+31-L-	ROADWAY FILL	0.52					0.32		60		
		BRIDGE					0.08					
38A	690+67 to 694+59-L-	ROADWAY FILL	0.13									
39	725+12 to 725+92-L-LT	ROADWAY FILL	0.01									
40	729+82 to 731+51-L-LT	ROADWAY FILL	0.05									
41	735+67 to 739+95-L-LT	ROADWAY FILL	0.19									
42	761+05-L-	ROADWAY FILL						0.02		86		
43	30+59 to 33+43-Y5LPDA-RT	ROADWAY FILL	0.17									
	PAGE TOTAL FROM SHEET 93		**6.78**				0.17	**0.36**		**595**		
TOTALS*:			10.06				0.25	0.78		1129		

*Rounded totals are sum of actual impacts

NOTES:
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
CUMBERLAND COUNTY
I-5986A
47532.1.3

Revised 2018 Feb

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	90+87 to 92+10-L-RT	ROADWAY FILL	0.024									
2	91+98 to 100+06-L-LT	ROADWAY FILL	0.233									
3	94+37 to 100+20-L-RT	ROADWAY FILL	0.156					0.007		38		
4	108+26 to 114+34-L-LT	ROADWAY FILL	0.076									
5	118+98 to 133+53L-L-LT	ROADWAY FILL	0.536									
6	122+19 to 124+94-L-LT	ROADWAY FILL	0.073									
7	121+32 to 127+68-L-RT	ROADWAY FILL	0.648									
8	186+19 to 193+09-L-LT	ROADWAY FILL	0.170				0.165					
9	199+16 to 202+54-L-LT	ROADWAY FILL	0.183									
10	198+56 to 203+79-L-RT	ROADWAY FILL	0.371					0.035		70		
11	11+89 to 23+93-Y5RPC-RT	ROADWAY FILL	1.352					0.018		63		
12	213+68 to 222+17-L-RT	ROADWAY FILL	1.659									
13	251+91 to 253+32-L-	ROADWAY FILL						0.034		116		
14	300+64 to 306+99-L-LT	ROADWAY FILL	0.133									
15	301+32 to 304+90-L-	ROADWAY FILL						0.247		138		
16	302+03 to 307+02-L-RT	ROADWAY FILL	0.178									
17	351+049 to 351+95-L-RT	ROADWAY FILL	0.005									
18	354+73 to 354+90-L-	ROADWAY FILL						0.009		130		
19	354+90 to 357+78-L-RT	ROADWAY FILL	0.024									
20	384+05 to 292+99-L-LT	ROADWAY FILL	0.284									
21	405+58 to 405+78-L-LT	ROADWAY FILL	0.005									
22	422+17 to 437+17-L-LT	ROADWAY FILL	0.672									
23	423+14 to 423+31-L-LT	ROADWAY FILL						0.010		40		
TOTALS*:			**6.78**	**0.00**	**0.00**	**0.00**	**0.17**	**0.36**	**0.00**	**595**	**0**	**0**

*Rounded totals are sum of actual impacts

NOTES:

PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

DATA ENTRY SHEET for impact totals to nearest 0.001 acre.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
CUMBERLAND COUNTY
I-5986A
47532.1.3

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
24	418+39 to 437+17-L-RT	ROADWAY FILL	0.761									
25	508+34 to 509+39-L-LT	ROADWAY FILL	0.087									
26	522+79 to 528+98-L-LT	ROADWAY FILL	0.364									
27	539+19 to 540+76-L-	ROADWAY FILL						0.032		114		
28	573+52 to 575+47-L-	ROADWAY FILL	0.035									
29	574+35 to 574+56-L-	ROADWAY FILL						0.024		106		
30	600+13 to 606+75-L-LT	ROADWAY FILL	0.305									
31	618+08 to 618+41-L-RT	ROADWAY FILL	0.004									
32	622+48 to 626+94-L-LT	ROADWAY FILL	0.480									
33	625+60 to 626+52-L-	ROADWAY FILL						0.016		101		
34	625+67 to 627+43-L-RT	ROADWAY FILL	0.139									
35	640+37 to 642+41-L-RT	ROADWAY FILL	0.021									
36	642+58 to 643+31-L-	ROADWAY FILL						0.010		67		
37	660+09 to 660+50-L-RT	ROADWAY FILL	0.003									
38	665+70 to 684+31-L-	ROADWAY FILL	0.516					0.318		60		
		BRIDGE					0.080					
38A	690+67 to 694+59-L-	ROADWAY FILL	0.129									
39	725+12 to 725+92-L-LT	ROADWAY FILL	0.012									
40	729+82 to 731+51-L-LT	ROADWAY FILL	0.054									
41	735+67 to 739+95-L-LT	ROADWAY FILL	0.194									
42	761+05-L-	ROADWAY FILL						0.023		86		
43	30+59 to 33+43-Y5LPDA-RT	ROADWAY FILL	0.172									
	PAGE TOTAL FROM SHEET 93		**6.78**				**0.17**	**0.36**		**595**		
TOTALS*:			**10.06**	**0.00**	**0.00**	**0.00**	**0.25**	**0.78**	**0.00**	**1129**	**0**	**0**

*Rounded totals are sum of actual impacts

NOTES:

PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)

DATA ENTRY SHEET for impact totals to nearest 0.001 acre.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
CUMBERLAND COUNTY
I-5986A
47532.1.3
SHEET 94 OF 94

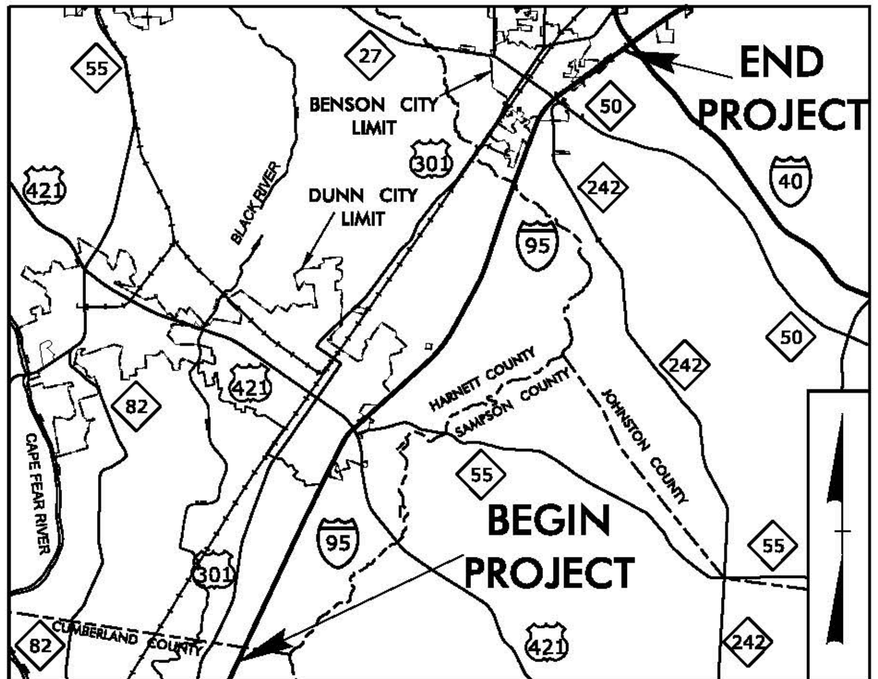
Attachment E: I-5986 Buffer Impact Permit Drawings

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5986B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47532.1.3		PE	

TIP PROJECT: I-5986B

CONTRACT:

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



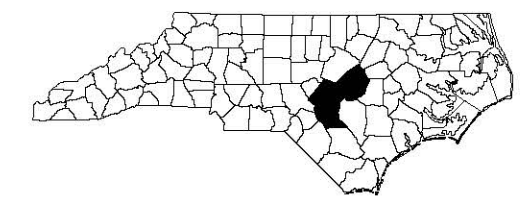
VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND, HARNETT, AND JOHNSTON COUNTIES

LOCATION: I-95 FROM SR 1811 (BUD HAWKINS ROAD) (EXIT 70) TO I-40 (EXIT 81). WIDEN TO EIGHT LANES.

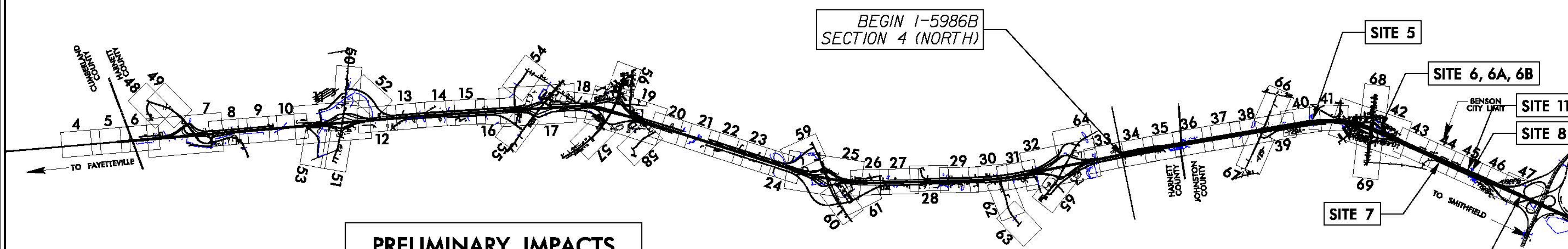
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS, CULVERTS, AND STRUCTURES



BUFFER IMPACTS PERMIT

SECTION 4 (NORTH)

NAD 83/2011



PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2020 = 58,900
ADT 2040 = 75,700
K = 7 %
D = 55 %
T = 24 % *
V = 70 MPH
* (17% TTST + 7% DUALS)
FUNC CLASS = INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I 5986B = 11.865 MILES

LENGTH STRUCTURE TIP PROJECT I-5986B = 0.020 MILES

TOTAL LENGTH TIP PROJECT I-5986B = 11.885 MILES

Prepared In the Office of:
Michael Baker INTERNATIONAL
Michael Baker Engineering, Inc.
8000 Regency Parkway, Suite 600
Cary, NC 27518
Professional Corporation License Number: F-1084
FOR DIVISION OF HIGHWAYS

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 1, 2019

LETTING DATE:
JULY 21, 2020

SUSAN C. LANCASTER, P.E.
PROJECT ENGINEER

CURTIS TILLMAN, P.E.
PROJECT DESIGN ENGINEER

STEVE D. KENDALL, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: P.E.

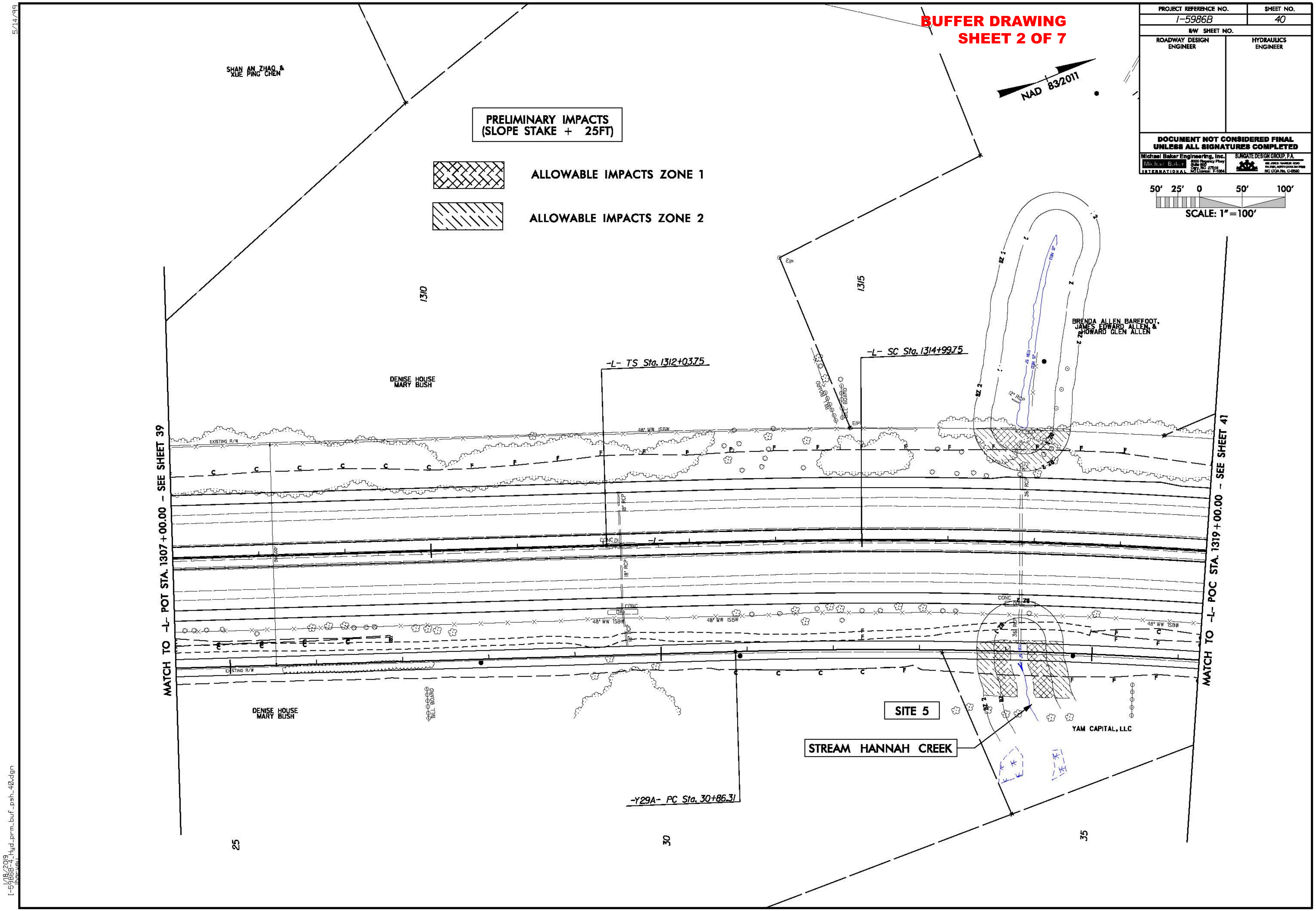
ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

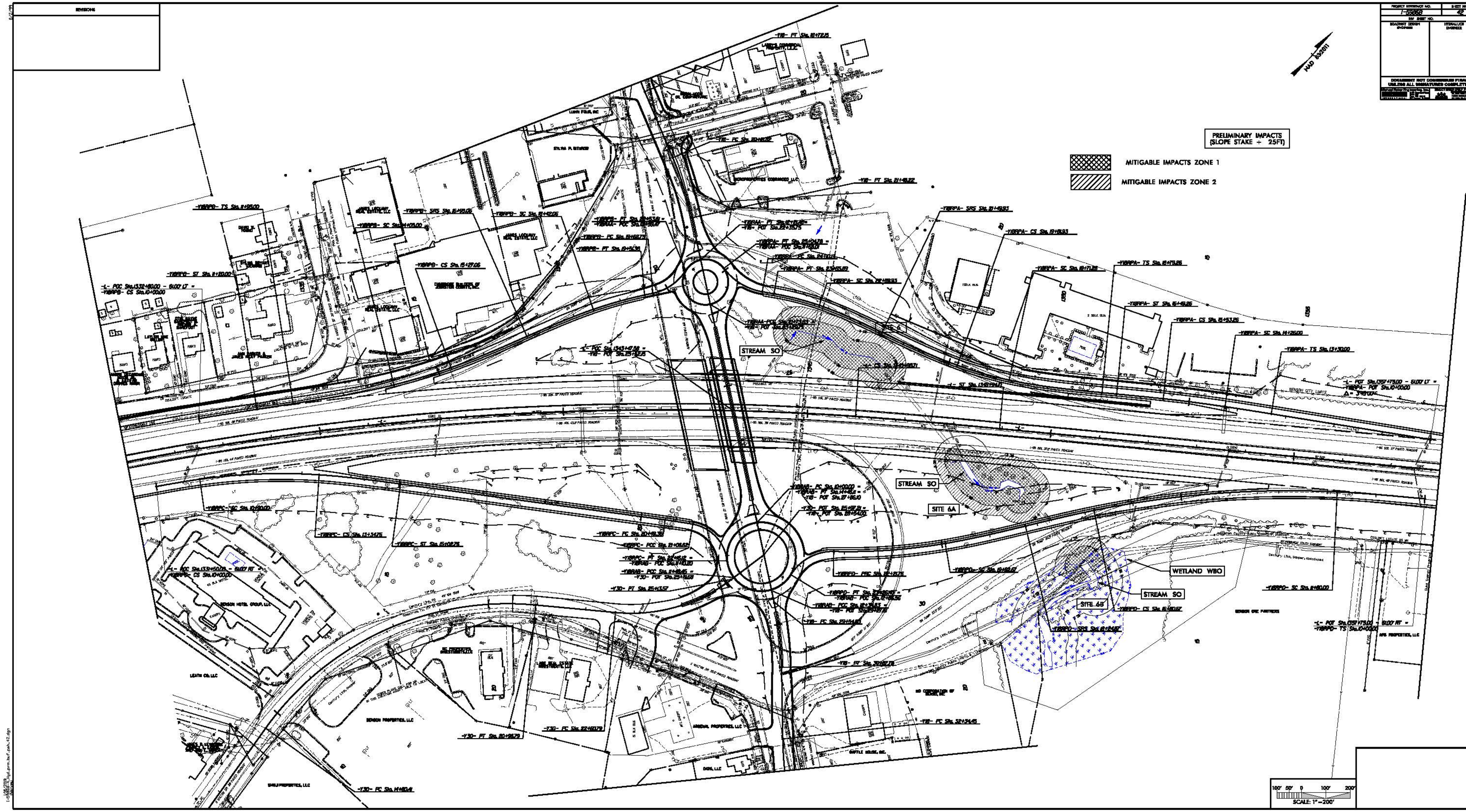
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

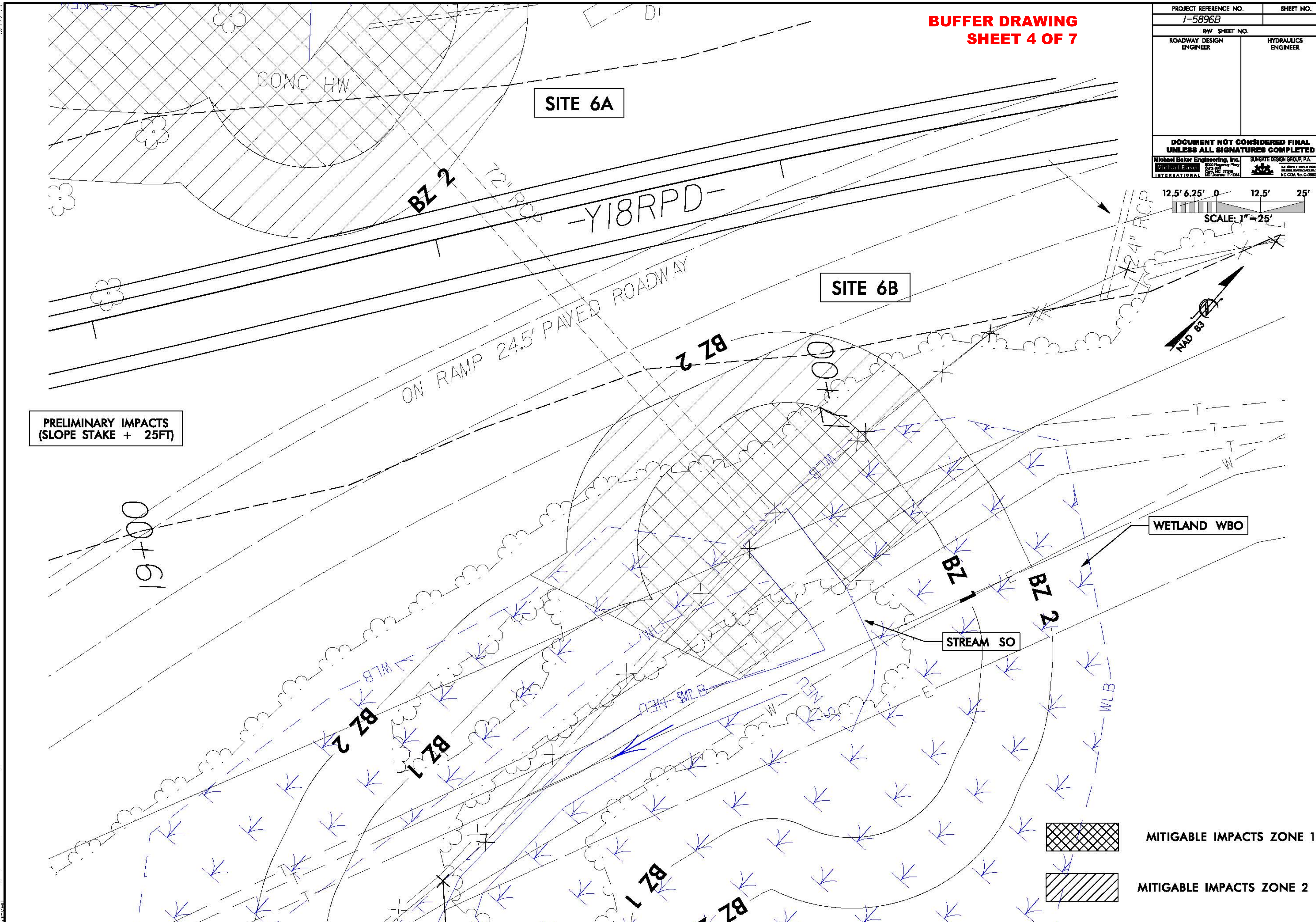
09/08/99

1/18/2019
I-5986B-4_Hyd_prm_buf_psh_01.dgn
jharvey


PROJECT REFERENCE NO.
I-5986B
SHEET NO.
40
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
BUFFER DRAWING
SHEET 2 OF 7
NAD 83/2011
50' 25' 0 50' 100'
SCALE: 1"=100'
SHAN AN ZHAO &
XUE PING CHEN
PRELIMINARY IMPACTS
(SLOPE STAKE + 25FT)
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
1310
1315
DENISE HOUSE
MARY BUSH
-L- TS Sta. 1312+03.75
-L- SC Sta. 1314+99.75
BRENDA ALLEN BAREFOOT,
JAMES EDWARD ALLEN, &
HOWARD GLEN ALLEN
MATCH TO -L- POT STA. 1307+00.00 - SEE SHEET 39
MATCH TO -L- POC STA. 1319+00.00 - SEE SHEET 41
EXISTING R/W
48" WW ISBW
BILL BOARD
SITE 5
STREAM HANNAH CREEK
YAM CAPITAL, LLC
-Y29A- PC Sta. 30+86.31
25
30
35
5/14/99
1/18/2019
I-5986B-4_Hyd_prm_buf_psh_40.dgn

BUFFER DRAWING
SHEET 3 OF 7




BUFFER DRAWING
SHEET 4 OF 7
PROJECT REFERENCE NO.
SHEET NO.
I-5896B
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
Michael Baker Engineering, Inc.
SUNGATE DESIGN GROUP, P.A.
SCALE: 1" = 25'
SITE 6A
SITE 6B
CONC HW
72" RCP
24" RCP
-Y18RPD-
ON RAMP 24.5' PAVED ROADWAY
BZ 2
BZ 1
19+00
NAD 83
PRELIMINARY IMPACTS (SLOPE STAKE + 25FT)
WETLAND WBO
STREAM SO
WLB
MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2

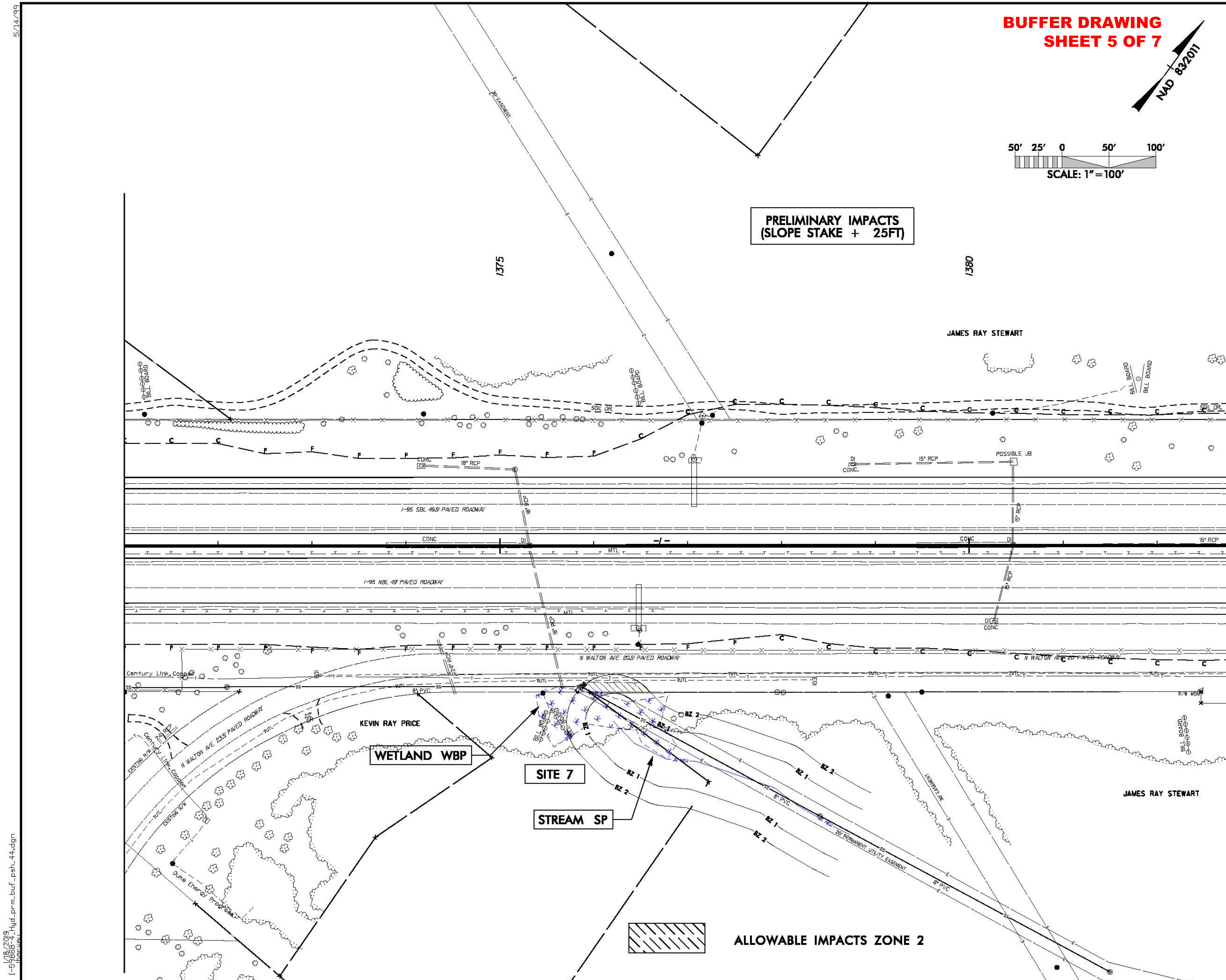
BUFFER DRAWING
SHEET 5 OF 7

PROJECT REFERENCE NO.	SHEET NO.
I-5986B	44
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

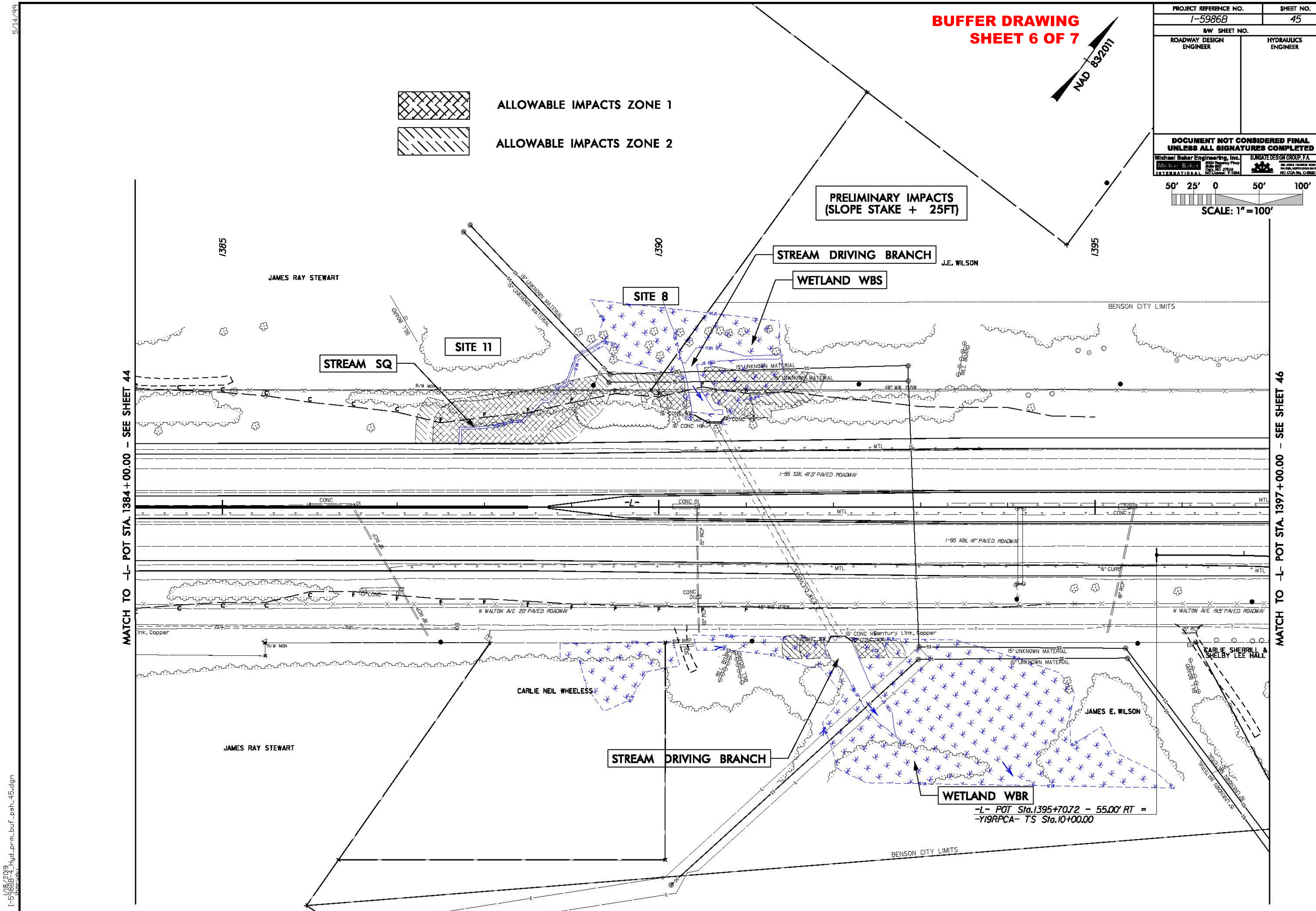
Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL

SUNGATE DESIGN GROUP, P.A.



5/14/99

1/18/2019
I-5986B-4_Hyd_prm_buf_psh_44.dgn



5/14/99
1/18/2019
I-5986B-4_Hyd_prm_buf_psh_45.dgn

RIPARIAN BUFFER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	IMPACTS: TYPE: ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ALLOWABLE: ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	MITIGABLE: ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	BUFFER REPLACEMENT: ZONE 1 (ft^2)	ZONE 2 (ft^2)
5	1316+27 to 1317+54-L-	ROADWAY FILL	X			4419	5255	9674					
6	1344+24 to 1346+94-L-LT	ROADWAY FILL	X						14343	12530	26873		
6A	1347+68 to 1350+09-L-RT	ROADWAY FILL	X						13546	10120	23666		
6B	16+61 to 17+96-Y18RPD-LT	ROADWAY FILL	X						3684	2921	6605		
7	1375+82 to 1376+60-L-RT	ROADWAY FILL	X				688	688					
8	1389+73 to 1391+85-L-	ROADWAY FILL	X			6599	3531	10130					
11	1387+21 to 1389+73-L-LT	ROADWAY FILL	X			8639	3995	12634					
TOTALS*:						**19657**	**13469**	**33126**	**31573**	**25571**	**57144**	**0**	**0**

NOTES:

Revised 2018 Feb

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT, JOHSNTON COUNTY
I-5986B-SECTION 4
47532.1.3

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS ZONE 1 (ft^2)	WETLANDS IN BUFFERS ZONE 2 (ft^2)
6B	16+61 to 17+96-Y18RPD-LT		1638	899
8	1389+73 to 1391+85-L-		4428	1302
11	1387+21 to 1389+73-L-LT		77	
TOTAL:			6143	2201

Revised 2018 Feb

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1-8-2019
HARNETT, JOHNSTON COUNTY
I-5986B-SECTION 4
47532.1.3
SHEET 8 OF 8