



Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits
(along with corresponding Water Quality Certifications)

September 29, 2018 Ver 3

Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf>

A. Processing Information

County (or Counties) where the project is located: *

Wake

Is this project a public transportation project? *

☒ Yes ☐ No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project? *

☒ Yes ☐ No

(NCDOT only) T.I.P. or state project number:

I-5700

WBS # *

50118.1.FS1

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: *

☒ Section 404 Permit (wetlands, streams and waters, Clean Water Act)

☐ Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

1b. What type(s) of permit(s) do you wish to seek authorization? *

☐ Nationwide Permit (NWP)

☒ Regional General Permit (RGP)

☐ Standard (IP)

This form may be used to initiate the standard/individual permit process with the Corps. Please contact your Corps representative concerning submittals for standard permits. All required items that are not provided in the E-PCN can be added to the miscellaneous upload area located at the bottom of this form.

1c. Has the NWP or GP number been verified by the Corps? *

☒ Yes ☐ No

Regional General Permit (RGP) Number:

198200031 - NCDOT Bridges, Widening Projects 2015

RGP Numbers (for multiple RGPs):

List all RGP numbers you are applying for not on the drop down list.

1d. Type(s) of approval sought from the DWR: *

check all that apply

☒ 401 Water Quality Certification - Regular

☐ Non-401 Jurisdictional General Permit

☐ Individual Permit

☐ 401 Water Quality Certification - Express

☒ Riparian Buffer Authorization

1e. Is this notification solely for the record because written approval is not required?

*

For the record only for DWR 401 Certification:

☐ Yes ☒ No

For the record only for Corps Permit:

☐ Yes ☒ No

1f. Is this an after-the-fact permit application? *

☐ Yes

☒ No

1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?

If so, attach the acceptance letter from mitigation bank or in-lieu fee program

☐ Yes ☒ No

Acceptance Letter Attachment

Click the upload button or drag and drop files here to attach document

FILETYPE MUST BE PDF

1h. Is the project located in any of NC's twenty coastal counties? *

☐ Yes ☒ No

1j. Is the project located in a designated trout watershed? *

☐ Yes ☒ No

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

B. Applicant Information

1a. Who is the Primary Contact? *

NCDOT

1b. Primary Contact Email: *

driffey@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6151

1d. Who is applying for the permit? *

☒ Owner

(Check all that apply)

☐ Applicant (other than owner)

1e. Is there an Agent/Consultant for this project? *

☐ Yes ☒ No

2. Owner Information

2a. Name(s) on recorded deed: *

Mutiple Properties

2b. Deed book and page no.:

2c. Responsible party:

(for Corporations)

2d. Address *

Street Address

1598 Mail Service Center

Address Line 2

Qty

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

USA

2e. Telephone Number: *

(xxx)xxx-xxxx

(919)707-6000

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: *

pharris@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: *

I-40 and SR 3015 (Airport Blvd.) Interchange, Add Lane on I-40 WB from SR 3015 to I-540 [I-5700 Central]

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: *

Morrisville

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

Postal / Zip Code

State / Province / Region

Country

2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

Latitude: *

Longitude: *

35.8624

-78.8146

ex: 34.208504

-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: *

Stirrup Iron Creek / Brier Creek

3b. Water Resources Classification of nearest receiving water: *

C;NSW

[Surface Water Lookup](#)

3c. What river basin(s) is your project located in? *

Neuse

3d. Please provide the 12-digit HUC in which the project is located. *

030202010801

[River Basin Lookup](#)

4. Project Description and History

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: *

Land use consists of forested habitat with commercial development.

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? *

☐ Yes ☒ No ☐ Unknown

4d. Attach an 8 1/2 X 11 excerpt from the most recent version of the USGS topographic map indicating the location of the project site. (for DWR)

[Click the upload button or drag and drop files here to attach document](#)

File type must be pdf

4e. Attach an 8 1/2 X 11 excerpt from the most recent version of the published County NRCS Soil Survey map depicting the project site. (for DWR)

[Click the upload button or drag and drop files here to attach document](#)

File type must be pdf

4f. List the total estimated acreage of all existing wetlands on the property:

6.2

4g. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

5,968

4h. Explain the purpose of the proposed project: *

Purpose is to reduce existing and future congestion at the I-40 interchange with Airport Boulevard.

4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: *

Revise interchange and construct auxiliary lane on I-40 Westbound from SR 3015 (Airport Blvd) to I-540. The proposed project involves the conversion of the existing interchange to a diverging diamond interchange. Control of access will be adjusted and maintained to accommodated the proposed design. Standard road building equipment, such as trucks, dozers, and cranes will be used.

4j. Please upload project drawings for the proposed project.

[Click the upload button or drag and drop files here to attach document](#)

I-5700_Permit Drawings_(2019-05-02).pdf	57.3MB
I-5700_Permit Drawings_BUFFERS_(2019-05-02).pdf	9.83MB
I-5700_RDY_Plans.pdf	9.38MB
File type must be pdf	

5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? *

☒ Yes ☐ No ☐ Unknown

Comments:

Most recent field forms dated 11/7/2017.

5b. If the Corps made a jurisdictional determination, what type of determination was made? *

☒ Preliminary ☐ Approved ☐ Not Verified ☐ Unknown ☐ N/A

Corps AID Number:

Example: SAW-2017-99999

SAW-2015-01934

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): Greg Price
Agency/Consultant Company: Carolina Ecosystem Inc.
Other:

5d. List the dates of the Corp jurisdiction determination or State determination if a determination was made by the Corps or DWR.

June 6, 2018

5d1. Jurisdictional determination upload

Click the upload button or drag and drop files here to attach document

18-06-06_PJD_NCDOT_I-5700_I-40 at Airport Boulevard_Div5.pdf

117.6KB

File type must be PDF

6. Future Project Plans

6a. Is this a phased project? *

☐ Yes ☒ No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

D. Proposed Impacts Inventory

1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

☒ Wetlands ☒ Streams-tributaries ☒ Buffers
☐ Open Waters ☐ Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

"W." will be used in the table below to represent the word "wetland".

2a. Site # * (?)	2a1 Reason * (?)	2b. Impact type * (?)	2c. Type of W. *	2d. W. name *	2e. Forested *	2f. Type of Jurisdiction * (?)	2g. Impact area *
Site 3B	Excavation	P	Bottomland Hardwood Forest	WI	Yes	Both	0.005 (acres)
Site 4	Mechanized	P	Headwater Forest	WD	Yes	Both	0.006 (acres)
Site 8B	Fill	P	Bottomland Hardwood Forest	WH	Yes	Both	0.300 (acres)
Site 8B	Mechanized	P	Bottomland Hardwood Forest	WH	Yes	Both	0.070 (acres)
Site 10B	Mechanized	P	Non-Tidal Freshwater Marsh	WK	Yes	Both	0.030 (acres)
Site 10A	Mechanized	P	Non-Tidal Freshwater Marsh	WN	Yes	Both	0.006 (acres)

2g. Total Temporary Wetland Impact

0.000

2g. Total Permanent Wetland Impact

0.417

2g. Total Wetland Impact

0.417

2h. Comments:

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact [*] (?)	3b. Impact type [*]	3c. Type of impact [*]	3d. S. name [*]	3e. Stream Type [*] (?)	3f. Type of Jurisdiction [*]	3g. S. width [*]	3h. Impact length [*]
S1	Site 1 - Fill	Permanent	Rip Rap Fill	SL	Perennial	Both	5 Average (feet)	20 (linear feet)
S2	Site 1 - Fill	Temporary	Rip Rap Fill	SL	Perennial	Both	5 Average (feet)	15 (linear feet)
S3	Site 2A - Fill	Permanent	Other	SD	Intermittent	Both	2 Average (feet)	26 (linear feet)
S4	Site 2A - Fill	Temporary	Other	SD	Intermittent	Both	2 Average (feet)	12 (linear feet)
S5	Site 2B - Fill	Permanent	Bank Stabilization	SD	Intermittent	DWR	2 Average (feet)	40 (linear feet)
S6	Site 2B - Fill	Temporary	Bank Stabilization	SD	Intermittent	DWR	2 Average (feet)	10 (linear feet)
S7	Site 3A - Fill	Permanent	Culvert	Stirrup Iron Creek	Perennial	Both	15 Average (feet)	53 (linear feet)
S8	Site 3A - Fill	Permanent	Bank Stabilization	Stirrup Iron Creek	Perennial	DWR	15 Average (feet)	45 (linear feet)
S9	Site 3A - Fill	Temporary	Bank Stabilization	Stirrup Iron Creek	Perennial	DWR	15 Average (feet)	15 (linear feet)
S10	Site 3B - Fill	Temporary	Bank Stabilization	Stirrup Iron Creek	Perennial	DWR	15 Average (feet)	33 (linear feet)
S11	Site 4B - Fill	Permanent	Bank Stabilization	SF	Perennial	DWR	5 Average (feet)	23 (linear feet)
S12	Site 4B - Fill	Temporary	Bank Stabilization	SF	Perennial	DWR	5 Average (feet)	20 (linear feet)
S13	Site 5A - Fill	Permanent	Bank Stabilization	Brier Creek	Perennial	DWR	25 Average (feet)	10 (linear feet)
S14	Site 5A - Fill	Temporary	Bank Stabilization	Brier Creek	Perennial	DWR	25 Average (feet)	20 (linear feet)
S15	Site 5C - Fill	Permanent	Culvert	Brier Creek	Perennial	Both	25 Average (feet)	37 (linear feet)
S16	Site 5C - Fill	Permanent	Other	Brier Creek	Perennial	Both	25 Average (feet)	32 (linear feet)
S17	Site 5C - Fill	Permanent	Bank Stabilization	Brier Creek	Perennial	DWR	25 Average (feet)	86 (linear feet)
S18	Site 5D - Fill	Permanent	Rip Rap Fill	Brier Creek	Perennial	Both	25 Average (feet)	14 (linear feet)
S19	Site 5D - Fill	Temporary	Rip Rap Fill	Brier Creek	Perennial	Both	25 Average (feet)	38 (linear feet)
S20	Site 5E - Fill	Permanent	Culvert	Brier Creek	Perennial	Both	25 Average (feet)	176 (linear feet)
S21	Site 5E - Fill	Permanent	Bank Stabilization	Brier Creek	Perennial	DWR	25 Average (feet)	73 (linear feet)
S22	Site 5E - Fill	Temporary	Bank Stabilization	Brier Creek	Perennial	DWR	25 Average (feet)	20 (linear feet)
S23	Site 6 - Fill	Permanent	Other	SA	Intermittent	Both	2 Average (feet)	10 (linear feet)
S24	Site 6 - Fill	Temporary	Other	SA	Intermittent	Both	2 Average (feet)	10 (linear feet)
S25	Site 7 - Fill	Permanent	Other	SB	Intermittent	Both	1 Average (feet)	20 (linear feet)
S26	Site 7 - Fill	Temporary	Other	SB	Intermittent	Both	1 Average (feet)	24 (linear feet)
S27	Site 8A - Fill	Permanent	Fill	SH	Perennial	Both	3 Average (feet)	121 (linear feet)

S28	Site 9 - Fill	Permanent	Bank Stabilization	SE	Intermittent	DWR	4 <i>Average (feet)</i>	45 <i>(linear feet)</i>
S29	Site 9 - Fill	Temporary	Bank Stabilization	SE	Intermittent	DWR	4 <i>Average (feet)</i>	17 <i>(linear feet)</i>
S30	Site 10A - Fill	Permanent	Culvert	SJ	Perennial	Both	2 <i>Average (feet)</i>	7 <i>(linear feet)</i>
S31	Site 10A - Fill	Permanent	Other	SJ	Perennial	Both	2 <i>Average (feet)</i>	50 <i>(linear feet)</i>
S32	Site 10A - Fill	Temporary	Other	SJ	Perennial	Both	2 <i>Average (feet)</i>	17 <i>(linear feet)</i>
S33	Site 11 - Fill	Permanent	Culvert	SG	Perennial	Both	4 <i>Average (feet)</i>	17 <i>(linear feet)</i>
S34	Site 11 - Fill	Permanent	Rip Rap Fill	SG	Perennial	Both	4 <i>Average (feet)</i>	28 <i>(linear feet)</i>
S35	Site 11 -Fill	Temporary	Rip Rap Fill	SG	Perennial	Both	4 <i>Average (feet)</i>	23 <i>(linear feet)</i>
S36	Site 11A - Fill	Permanent	Bank Stabilization	SB (I-5506)	Perennial	DWR	12 <i>Average (feet)</i>	28 <i>(linear feet)</i>
S37	Site 11A - Fill	Temporary	Bank Stabilization	SB (I-5506)	Perennial	DWR	12 <i>Average (feet)</i>	10 <i>(linear feet)</i>
S38	Site 12 - Fill	Temporary	Bank Stabilization	SA (I-5506)	Intermittent	DWR	2 <i>Average (feet)</i>	40 <i>(linear feet)</i>
S39	Site 3B - Fill	Permanent	Bank Stabilization	Stirrup Iron Creek	Perennial	DWR	15 <i>Average (feet)</i>	15 <i>(linear feet)</i>
S40	Site 5C - Fill	Temporary	Bank Stabilization	Brier Creek	Perennial	DWR	25 <i>Average (feet)</i>	53 <i>(linear feet)</i>

** All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

976

3i. Total temporary stream impacts:

377

3i. Total stream and ditch impacts:

1353

3j. Comments:

Other in Column 3C = Channel Improvements and Rip Rap Fill = Scour hole stabilization.

6. Buffer Impacts (for DWR)

If project will impact a protected riparian buffer, then complete the chart below. Individually list all buffer impacts below.

6a. Project is in which protect basin(s)? *

Check all that apply.

☒ Neuse

☐ Catawba

☐ Goose Creek

☐ Other

☐ Tar-Pamlico

☐ Randleman

☐ Jordan Lake

6b. Impact Type * (?)	6c. Per or Temp * (?)	6d. Stream name *	6e. Buffer mitigation required? *	6f. Zone 1 impact *	6g. Zone 2 impact *
Site 1A Allowable	P	SL	No	634 <i>(square feet)</i>	0 <i>(square feet)</i>
Site 1B Allowable	P	SK	No	261 <i>(square feet)</i>	195 <i>(square feet)</i>
Site 2A Allowable	P	SD	No	2,889 <i>(square feet)</i>	0 <i>(square feet)</i>
Site 2B Mitigable	P	SD	Yes	1,108 <i>(square feet)</i>	50 <i>(square feet)</i>
Site 3A Allowable	P	Stirrup Iron Creek	No	4,098 <i>(square feet)</i>	919 <i>(square feet)</i>
Site 3B Allowable	P	Stirrup Iron Creek	No	1,357 <i>(square feet)</i>	367 <i>(square feet)</i>

Site 3C Mitigable	P	Stirrup Iron Creek	Yes	1,348 (square feet)	1,929 (square feet)
Site 4B Allowable	P	SF	No	605 (square feet)	414 (square feet)
Site 5 Mitigable	P	Brier Creek	Yes	2,867 (square feet)	1,390 (square feet)
Site 5A Allowable	P	Brier Creek	No	1,699 (square feet)	1,753 (square feet)
Site 5C Allowable	P	Brier Creek	No	9,315 (square feet)	1,967 (square feet)
Site 5D Allowable	P	Brier Creek	No	2,009 (square feet)	1,115 (square feet)
Site 5E Mitigable	P	Brier Creek	Yes	9,400 (square feet)	3,633 (square feet)
Site 8A Allowable	P	SH	No	4,932 (square feet)	4,741 (square feet)
Site 9 Allowable	P	SE	No	3,303 (square feet)	2,362 (square feet)
Site 10A Allowable	P	SJ	No	4,014 (square feet)	2,654 (square feet)
Site 11 Allowable	P	SG	No	3,629 (square feet)	1,937 (square feet)
Site 11A Allowable	P	SB (I-5506)	No	3,478 (square feet)	2,449 (square feet)

6h. Total buffer impacts:

	Zone 1	Zone 2
Total Temporary impacts:	0.00	0.00
	Zone 1	Zone 2
Total Permanent impacts:	56,946.00	27,875.00
	Zone 1	Zone 2
Total combined buffer impacts:	56,946.00	27,875.00

6i. Comments:

Supporting Documentation - i.e. Impact Maps, Plan Sheet, etc.

Click the upload button or drag and drop files here to attach document
File must be PDF

E. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: *

NCDOT minimized construction footprint and the right-of way requirements by converting the existing Airport Boulevard interchange into a diverging diamond as opposed to using a flyover interchange.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: *

Proposed culvert at Sta. 29+90 -Y3- will be buried 1' and has a 1' sill. Culvert barrel will be back filled with native material to sill height. Alignment is designed to minimize wetland and stream crossing impacts by using 2:1 slopes to reduce structure length and limit wetland impacts, by using grassed swales to the maximum extent practical, and by using open channel design with rip rap on banks only where practical in areas of parallel jurisdictional stream impacts. Channel improvements and bank stabilization will be used at culvert inlets and outlets to help stabilize channels and minimize erosion. Countersunk rip rap pads with armored slopes/banks will be used at pipe outlets to prevent scour holes, erosion, and to protect the existing channel. A filtration basin will provide water quality treatment for a broad spectrum of water quality parameters of concern. Design Standards in Sensitive Watersheds will be implemented.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

☒ Yes ☐ No

2c. If yes, mitigation is required by (check all that apply):

☒ DWR ☒ Corps

2d. If yes, which mitigation option(s) will be used for this project?

- ☐ Mitigation bank
- ☐ Payment to in-lieu fee program
- ☒ Permittee Responsible Mitigation

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's [RIBITS](#) website.

5. Complete if Using a Permittee Responsible Mitigation Plan

5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan including mitigation credits generated.

Wetland and stream mitigation will come from sites on the NCDOT Debit Ledger.

5b. Mitigation Plan Upload

Click the upload button or drag and drop files here to attach document

I-5700_Jeffreys Warehouse.pdf

File type must be pdf

204.72KB

6. Buffer mitigation (State Regulated Riparian Buffer Rules) - required by DWR

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? If yes, you must fill out this entire form - please contact DWR for more information.

- ☒ Yes
- ☐ No

6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation calculate the amount of mitigation required in the table below.

	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)	
Zone 1	Roadway Fill	14,723	3	44,169	

Zone 2 Roadway Fill 7,002 1.5 10,503

6f. Total buffer mitigation required

54672

6g. If buffer mitigation is required, is payment to a mitigation bank or NC Division of Mitigation Services proposed?

- ☐ Yes
- ☒ No

6i. If no, then discuss what type of mitigation is proposed.

Buffer mitigation will come from sites on the NCDOT Debit Ledger.

6j. Comments:

F. Stormwater Management and Diffuse Flow Plan (required by DWR)

*** Recent changes to the stormwater rules have required updates to this section .***

1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

- ☒ Yes
- ☐ No

1b. All buffer impacts and high ground impacts require diffuse flow or other form of stormwater treatment. If the project is subject to a state implemented riparian buffer protection program, include a plan that fully documents how diffuse flow will be maintained.

All Stormwater Control Measures (SCM)s must be designed in accordance with the [NC Stormwater Design Manual](#). Associated supplement forms and other documentation shall be provided.

What type of SCM are you providing?

- ☐ Level Spreader
- ☒ Vegetated Conveyance (lower SHWT)
- ☐ Wetland Swale (higher SHWT)
- ☐ Other SCM that removes minimum 30% nitrogen
- ☒ Proposed project will not create concentrated stormwater flow through the buffer
- (check all that apply)

For a list of options to meet the diffuse flow requirements, click [here](#).

Diffuse Flow Documentation

Click the upload button or drag and drop files here to attach document

File type must be PDF

2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? *

☒ Yes ☐ No

Comments:

G. Supplementary Information

1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? *

☒ Yes ☐ No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? *

☒ Yes ☐ No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) *

☒ Yes ☐ No

NEPA or SEPA Final Approval Letter

Click the upload button or drag and drop files here to attach document

FILETYPE MUST BE PDF

2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? *

☐ Yes ☒ No

3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? *

☐ Yes ☒ No

3b. If you answered "no," provide a short narrative description.

Due to the existing transportation facility located in an existing urban area, this project will neither influence nearby land uses nor stimulate growth.

4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? *

☐ Yes ☐ No ☒ N/A

5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? *

☒ Yes ☐ No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? *

☒ Yes ☐ No

5c. If yes, indicate the USFWS Field Office you have contacted.

Raleigh

5d. Is another Federal agency involved? *

☐ Yes ☒ No ☐ Unknown

5e. Is this a DOT project located within Division's 1-8? *

☒ Yes ☐ No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? *

USFWS Environmental Conservation Online System (ECOS) range by basin (IPAC) website and NCNHP database along with field surveys.

Consultation Documentation Upload

Click the upload button or drag and drop files here to attach document

20190430_letter_Service to NCDOT_I-5700.pdf

41.22KB

File type must be PDF

6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? *

☐ Yes ☒ No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? *

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpoweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? *

☐ Yes

☒ No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? *

NEPA documentation

7c. Historic or Prehistoric Information Upload

Click the upload button or drag and drop files here to attach document

File must be PDF

8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? *

☒ Yes

☐ No

8b. If yes, explain how project meets FEMA requirements:

NCDOT Hydraulics Unit coordination with FEMA

8c. What source(s) did you use to make the floodplain determination? *

FEMA Maps

Miscellaneous

Comments

Miscellaneous attachments not previously requested.

Click the upload button or drag and drop files here to attach document

File must be PDF or KMZ

Signature

*

☒ By checking the box and signing below, I certify that:

- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

Full Name: *

Mack Christopher Rivenbark, III

Signature

Mack C. Rivenbark, III

Date

8/2/2019

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. **SAW-2015-01934**

County: **Wake County** U.S.G.S. Quad: **Cary**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Property Owner/Applicant: **North Carolina Department of Transportation**

Philip Harris III

Address: **1598 Mail Service Center**

Raleigh, NC, 27699

Telephone Number: **919-707-6151**

Size (acres) **N/A**

Nearest Waterway **Brier Creek**

USGS HUC **03020201**

Nearest Town **Morrisville**

River Basin **Neuse**

Coordinates Latitude: **35.8619493268959**

Longitude: **-78.8154141318538**

Location description: **Study area for I-5700 at the interchange of I-40 and Airport Boulevard, in Morrisville, NC**

Indicate Which of the Following Apply:

A. Preliminary Determination

- ☒ There are waters, including wetlands, on the above described project area, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The waters, including wetlands, have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

B. Approved Determination

- ☐ There are waters of the U.S., including wetlands, on the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- ☐ We recommend you have the waters of the U.S., including wetlands, on your project area delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.
- ☐ The waters of the U.S., including wetlands, on your project area have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.
- ☐ The waters of the U.S., including wetlands, have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on _____. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- ☐ There are no waters of the U.S., to include wetlands, present on the above described project area which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

Placement of dredged or fill material within waters of the US, including wetlands, without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). Placement of dredged or fill material, construction or placement of structures, or work within navigable waters of the United States without a Department of the Army permit may constitute a violation of Sections 9 and/or 10 of the Rivers and Harbors Act (33 USC § 401 and/or 403). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Eric Alsmeyer at (919) 554-4884 X 23 or Eric.C.Alsmeier@usace.army.mil.**

C. Basis For Determination: N/A. An Approved JD has not been completed.

D. Remarks: Site visit on 3/29/2018.

E. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: _____

Date: **June 5, 2018** Expiration Date: **N/A**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Philip Harris III NCDOT	File Number: SAW-2015-01934	Date: June 5, 2018
Attached is:		See Section below
☐ INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
☐ PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
☐ PERMIT DENIAL	C	
☐ APPROVED JURISDICTIONAL DETERMINATION	D	
☒ PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

**District Engineer, Wilmington Regulatory Division,
Attn: Eric Alsmeyer
Raleigh Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587**

If you only have questions regarding the appeal process you may also contact:

**Mr. Jason Steele, Administrative Appeal Review Officer
CESAD-PDO
U.S. Army Corps of Engineers, South Atlantic Division
60 Forsyth Street, Room 10M15
Atlanta, Georgia 30303-8801
Phone: (404) 562-5137**

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:
---	-------	-------------------

For appeals on Initial Proffered Permits send this form to:

District Engineer, Wilmington Regulatory Division, Attn: Eric Alsmeyer, 69 Darlington Avenue, Wilmington, North Carolina 28403



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

April 30, 2019

Philip S. Harris, III, PE
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Mr. Harris:

This letter is in response to your letter of April 29, 2019 which provided the U.S. Fish and Wildlife Service (Service) with the biological conclusion of the North Carolina Department of Transportation that the proposed improvements to the interchange at I-40 and SR 3015 (Airport Boulevard) in Wake County (TIP I-5700) may affect, but are not likely to adversely affect the federally endangered Dwarf Wedgemussel (*Alasmidonta heterodon*), the federally threatened Yellow Lance (*Elliptio lanceolate*), and the federally proposed threatened Atlantic Pigtoe (*Fusconaia masoni*). The following response is provided in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to the information provided, mussel surveys were conducted in the project area on June 5, 7, and 21, 2018. The following streams were surveyed: Stirrup Iron Creek, UT to Stirrup Iron Creek, Brier Creek, UT to Brier Creek, and UT to UT to Brier Creek. The only mussel species observed were the common Eastern Elliptio (*Elliptio complanata*) and Paper Pondshell (*Utterbackia imbecillis*). No federally listed species have ever been observed in any of the surveyed streams.

Based on survey data and other available information, the Service concurs with your conclusion that the action may affect, but is not likely to adversely affect the Dwarf Wedgemussel, Yellow Lance, and Atlantic Pigtoe. The Atlantic Pigtoe is currently only a proposed species; however, this concurrence will be valid if and when the species becomes officially listed. We believe that the requirements of Section 7(a)(2) of the ESA have been satisfied. We remind you that obligations under Section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,


for Pete Benjamin
Field Supervisor

Electronic copy:

James Lastinger, USACE, Wake Forest, NC
Travis Wilson, NCWRC, Creedmoor, NC
Deanna Riffey, NCDOT, Raleigh, NC

Jeffrey's Warehouse Mitigation Site
ONEID 096-003

The Jeffrey's Warehouse Mitigation Site is located in Wayne County within the USGS hydrologic unit 03020201 of the Neuse River. NCDOT acquired the 93.16 acre site to mitigate for unavoidable, jurisdictional impacts associated with TIP R-1030AA. Monitoring requirements were performed from 2007 to 2011 and the site was closed out in 2012. Table 1 shows the final mitigation quantities approved for the site. The site has been placed on the NCDOT On-site Debit Ledger for use within HUC 03020201. Tables 2-6 indicate all mitigation debits that have occurred per regulatory agency approval.

In order to offset unavoidable impacts affiliated with TIP I-5700, the Jeffrey's Warehouse Mitigation Site will be debited 611 linear feet of Stream Restoration and 0.42 acres of Riparian Wetland restoration. Debits are shown below.

Table 1. Mitigation Quantities Approved

Mitigation Type	Debit Amount	Starting Amount	Notes
3020201	Non Riparian Wetland Restoration	16.23	
3020201	Riparian Wetland Preservation	12.36	
3020201	Riparian Wetland Restoration	3.66	
3020201	Stream Restoration	3731	
3020201	Buffer Restoration	316507	

Table 2. Mitigation Debits – Non Riparian Wetlands

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Non Riparian Restoration	2.76	Close Out	R-2719A	2008-02460	
Non Riparian Restoration	0.92	Close Out	B-4304	2004-20510	
Non Riparian Restoration	1.96	Close Out	R-2814A&B	2008-01316	

Table 3. Mitigation Debits – Riparian Wetland Preservation

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Riparian Wetland Preservation	3.05	Close Out	R-2814A&B	2008-01316	
Riparian Wetland Preservation	8.61	Close Out	R-2554A	2008-00252	

Table 4. Mitigation Debits – Riparian Wetland Restoration

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Riparian Wetland Restoration	2.49	Close Out	R-2814A&B	2008-01316	
Riparian Wetland Restoration	0.21	Close Out	R-2554A		
Riparian Wetland Restoration	0.22	Close Out	B-4659	2009-01781	2:1 Ratio
Riparian Wetland Restoration	0.3	Close Out	I-3318BB		Proposed Debit. NCDOT was required to mitigate at a 2:1 ratio
Riparian Wetland Restoration	0.42	Close Out	I-5700		

Table 5. Mitigation Debits – Stream Restoration

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Stream Restoration	452	Close Out	B-3528 226ft@2:1	2008-00153	226ft@2:1
Stream Restoration	61	Close Out	U-4011	2005-20914	
Stream Restoration	25	Close Out	U-3344A	2003-20445	
Stream Restoration	279	Close Out	EB-4993	2011-00602	
Stream Restoration	174	Close Out	R-3825a	2011-01695	
Stream Restoration	20	Close Out	I-5311/I-5338	2013-00068	

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Stream Restoration	151	Close Out	I-5506		Debit from the permit application
Stream Restoration	83	Close Out	Bridge 277 over Black Creek on Old stage Rd (SR 1006)		Unable to find documentation to confirm
Stream Restoration	611	Close Out	I-5700		

Table 6. Mitigation Debits – Buffer Restoration

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Buffer Restoration	38648	Close Out	B-4300	2004-20705	
Buffer Restoration	161453	Close Out	R-2719A	2008-02460	
Buffer Restoration	3653	Close Out	B-4304	2004-20510	
Buffer Restoration	16398	Close Out	B-4592	2008-02056	
Buffer Restoration	24458	Close Out	U-4703	2005-20126	
Buffer Restoration	45558	Close Out	U-3344A	2003-20445	
Buffer Restoration	11393	Close Out	Div Proj. SR 1340	2010-00420	
Buffer Restoration	2199	Close Out	DIV Proj SR1204	No action ID due to a non-reporting NWP14	

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Buffer Restoration	3861	Close Out	I-5311/I5338	2013-00068	

Talecris Mitigation Site
ONEID 051-010

The Talecris Mitigation Site is located in Johnson County within the USGS hydrologic unit 03020201 of the Neuse River. NCDOT acquired an easement from the Talecris Biotherapeutic facility for mitigation containing 1160 feet of stream enhancement, 75,000 sq ft of buffer restoration and 1 acre of wetland enhancement for unavoidable, jurisdictional impacts associated with WBS No. 59002.

NCDOT completed the initial planting of the site in February 2011. On October 7, 2014, an onsite meeting was held with NCDOT and NCDWR. Based on NCDWR's concerns, On February 4, 2015, NCDOT replanted the site with black willow and silky dogwood live stakes along the entire stream enhancement and 1 gallon green ash, sycamore, river birch, and swamp chestnut oak were planted within the buffer restoration area. NCDOT restarted the monitoring cycle in 2015 due to the entire site getting replanted. On August 3, 2016, an onsite Agency Meeting was held to review the wetland delineation for the site.

Table 1 shows the final mitigation quantities approved for the site. The site has been placed on the NCDOT On-site Debit Ledger for use within HUC 03020201. Table 2 indicates all mitigation debits that have occurred per regulatory agency approval.

The Talecris Mitigation Site will be debited 54,762 square feet of buffer enhancement to offset 14,723 square feet of zone 1 impacts and 7,002 square feet of zone 2 impacts to cover the impacts associated with I-5700.

Table 1. Mitigation Quantities Approved

HUC	Mitigation Type	Starting Amount	Additional Notes
3020201	Non Riparian Wetland Enhancement	0.87 (ac)	Updated based on delineation approved by agencies in 2016
3020201	Buffer Enhancement	70447 (Sq.Ft)	Updated based on delineation approved by agencies in 2016
3020201	Stream Enhancement	1552 (Ln.Ft.)	Updated based on delineation approved by agencies in 2016

Table 2. Mitigation Debits

TYPE	DEBIT AMOUNT	Status	SITE TIP	Action ID#	Notes
BUF_ENH	2103	Monitoring	WBS No. 59002	201000775	
BUF_ENH	8883	Monitoring	B-5326		Zone 1= 3:1 ratio Zone 2= 1.5:1 ratio
BUF_ENH	54,672	Monitoring	B-5326		Zone 1= 3:1 ratio Zone 2= 1.5:1 ratio

		North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS					
(Version 2.07; Released October 2016)							
WBS Element: 50118.1.FS1		TIP No.: I-5700		County(ies): Wake		Page 1 of 4	
General Project Information							
WBS Element:		50118.1.FS1		TIP Number:		I-5700	
NCDOT Contact:		Heather Montague		Contractor / Designer:		Dan Robinson	
Address:		NCDOT Environmental 2612 North Duke Street Durham, 27704		Address:		Kimley-Horn 421 Fayetteville Street Suite #600 Raleigh, NC, 27601	
Phone:		(919) 220-4600		Phone:		(919) 677-2178	
Email:		hwmontague@ncdot.gov		Email:		dan.robinson@kimley-horn.com	
City/Town:		Morrisville		County(ies):		Wake	
River Basin(s):		Neuse		CAMA County?		No	
Wetlands within Project Limits?		Yes					
Project Description							
Project Length (lin. miles or feet):		0.80		Surrounding Land Use:		Commercial and residential use.	
Proposed Project				Existing Site			
Project Built-Up Area (ac.):		37.1 ac.		33.8 ac.			
Typical Cross Section Description:		For -L- Airport Boulevard: Typical section includes 3 12'-15' lanes with turn lanes when necessary. Diverging diamond at interchange and 10' sidewalk. For -Y- I-40: Existing four lanes with added 12' auxiliary lane and 12' paved shoulder. 17' from auxiliary lane to guardrail. For Ramps: 12' lane with 6:1 side slopes		For -L- Airport Boulevard: 2 12' travel lanes with TWLTL. For -Y- I-40: Four 12' lanes on East and West bound with 12' exit ramps and on ramps. Existing site consists of commercial buildings, lightly wooded areas, and Interstate 40. Wetlands exist in the project corridor.			
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 46,500 Year: 2040		Existing: 33,660		Year: 2019	
General Project Narrative: (Description of Minimization of Water Quality Impacts)		This is a Division 5 managed project. Existing drainage patterns to be maintained to the best extent practical. Drainage systems sized with future development taken into account. The following items were incorporated for the Minimization of water quality Impacts: - Proposed culvert at Sta. 29+90 -Y3- was buried 1' and has a 1' sill. - Alignment was designed to minimize wetland and stream crossing impacts. - 2:1 Slopes were used to reduce structure length and limit wetland impacts. - Grass swales utilized to the maximum extent practical. - Use of open channel design with Rip Rap on Banks only where practical in areas of parallel jurisdictional stream impacts. - Channel Improvements and bank stabilization were used at culvert inlets and outlets to help stabilize channels and minimize erosion. - Countersunk rip rap pads with armored slopes/banks are used at pipe outlets to prevent scour holes, erosion, and to protect the existing channel. - The filtration basin (Sta. 19+52 -RPC-) will provide water quality treatment for a broad spectrum of water quality parameters of concern. As stormwater is temporarily detained, suspended sediments and some phosphorus are captured through sedimentation. During infiltration and other chemical processes, metals and additional phosphorus are removed. Microbial activity that occurs in the media helps to reduce nitrogen and hydrocarbons. As the surface layer is exposed to sunlight and allowed to dry, pathogens are treated. Median filters with relatively deep media layers can help abate runoff temperatures.					
Waterbody Information							
Surface Water Body (1):		Stirrup Iron Creek		NCDWR Stream Index No.:		27-33-4-2	
NCDWR Surface Water Classification for Water Body		Primary Classification:		Class C			
		Supplemental Classification:		Nutrient Sensitive Waters (NSW)			
Other Stream Classification:		None					
Impairments:		None					
Aquatic T&E Species?		No		Comments:			
NRTR Stream ID:		Stirrup Iron Creek		Buffer Rules in Effect:		Neuse	
Project Includes Bridge Spanning Water Body?		No		Deck Drains Discharge Over Buffer?		No	
Deck Drains Discharge Over Water Body?		No		(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)							



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 2.07; Released October 2016)

WBS Element: 50118.1.FS1 TIP No.: I-5700 County(ies): Wake Page 2 of 4

Additional Waterbody Information

Surface Water Body (2):	Brier Creek	NCDWR Stream Index No.:	27-33-4
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C	
Other Stream Classification:	Supplemental Classification:	Nutrient Sensitive Waters (NSW)	
Impairments:	None		
Aquatic T&E Species?	biological impairment		
NRTR Stream ID:	Comments: Biological Impairment for PCB Fish Tissue Advisory (Advisory, FC, NC).		
Project Includes Bridge Spanning Water Body?	Brier Creek	Buffer Rules in Effect:	Neuse
Deck Drains Discharge Over Water Body?	No	Dissipator Pads Provided in Buffer?	No
(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	



Page 3 of 4

Additional Comments



Level Spreaders, Hazardous Spill Basins, and Forebays

Additional Comments

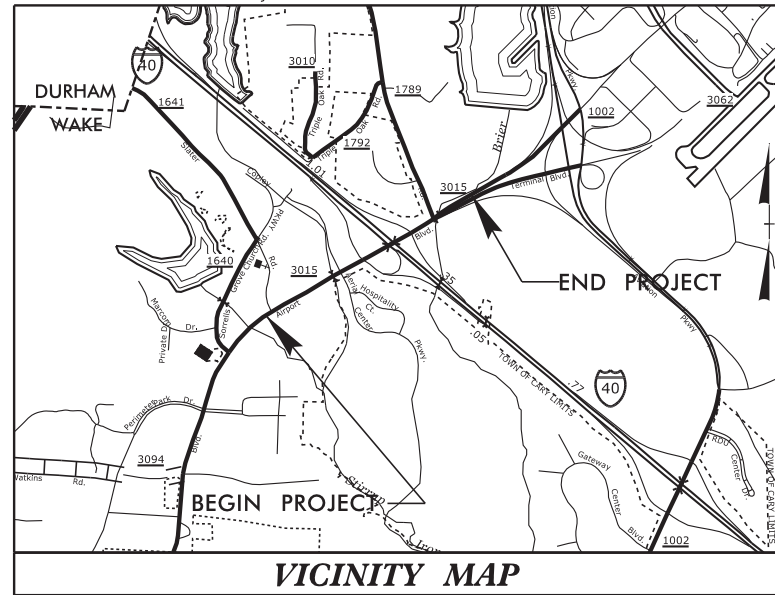
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09/08/99

TIP PROJECT: I-5700

CONTRACT:

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols
See Sheet 1C-1 For Survey Control Sheet



VICINITY MAP

PERMIT DRAWING
SHEET 1 OF 27

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

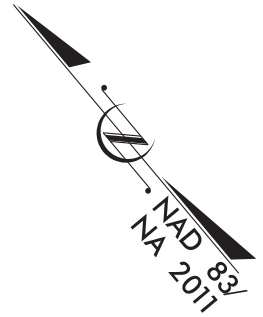
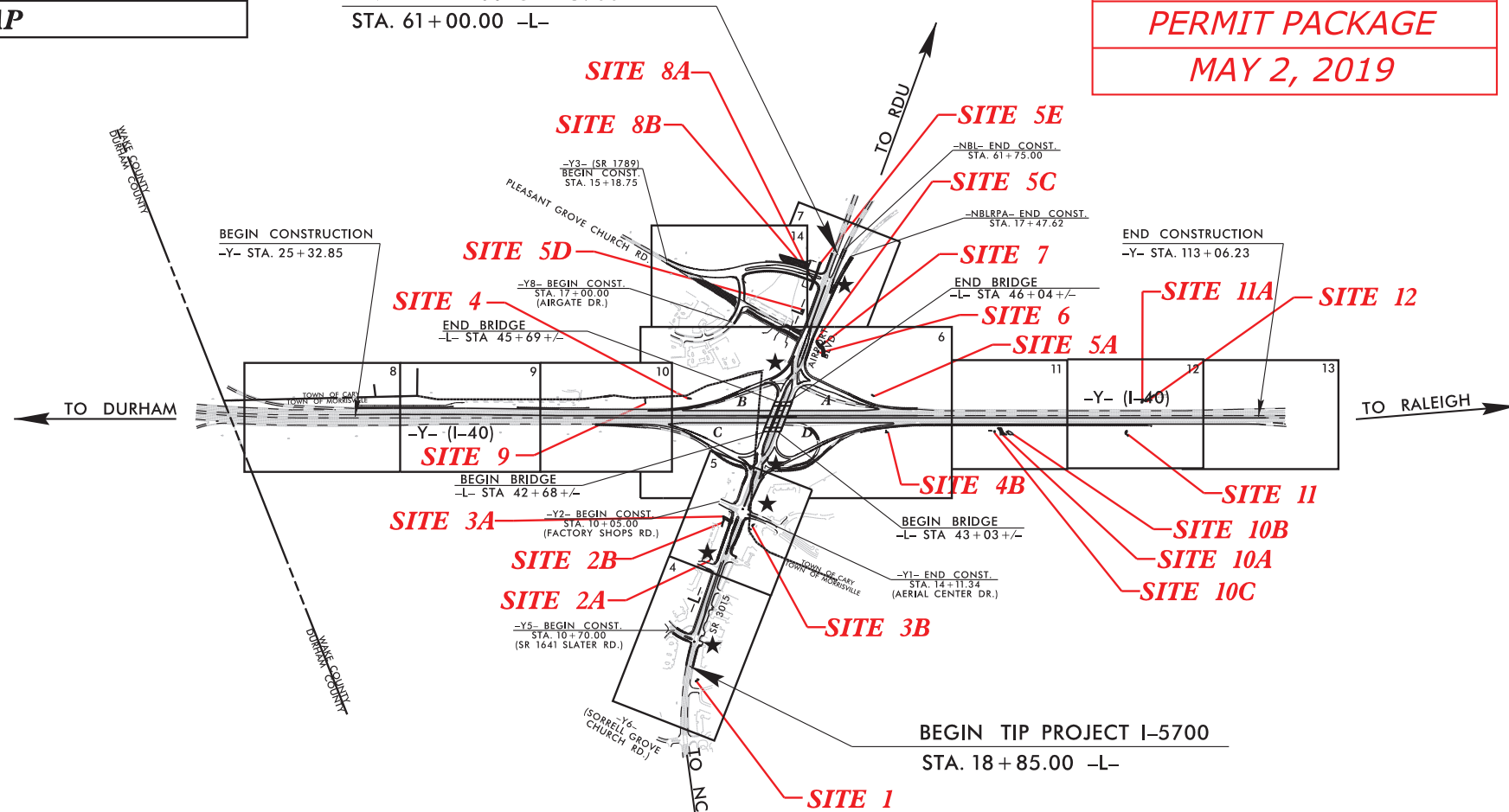
WAKE COUNTY

LOCATION: I-40 AND SR 3015 (AIRPORT BLVD.), REVISE INTERCHANGE
AND CONSTRUCT AUXILIARY LANE ON I-40 WESTBOUND
FROM SR 3015 (AIRPORT BLVD. TO I-540.

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

END TIP PROJECT I-5700
STA. 61+00.00 -L-

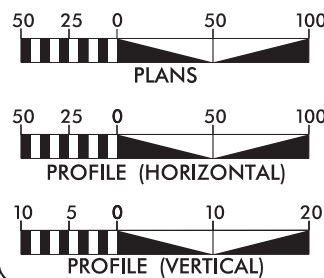
WETLAND AND STREAM
PERMIT PACKAGE
MAY 2, 2019



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MORRISVILLE.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD
THIS IS A PARTIAL CONTROLLED- ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS SHOWN ON THE PLANS.

★ PROPOSED SIGNALS

GRAPHIC SCALES



DESIGN DATA

ADT 2019 = 33,660
ADT 2040 = 46,500
K = 9 %
D = 65 %
T = 6 % *
V = 50 MPH
* TTST=2% DUAL=4%
FUNC CLASS=ARTERIAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5700 = 0.741 MILES
LENGTH STRUCTURE TIP PROJECT I-5700 = 0.057 MILES
TOTAL LENGTH OF TIP PROJECT I-5700 = 0.798 MILES



Prepared for the North Carolina Department
of Transportation in the Office of:

1223 JONES FRANKLIN ROAD
Raleigh, N.C. 27606
License No. F-43277
Box 999 851 8077
Fax: 919 851 8077

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 21, 2018

LETTING DATE:
SEPTEMBER 17, 2019

NCDOT CONTACT:

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

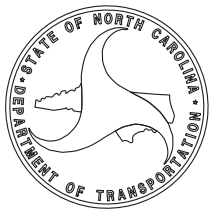
TATIA WHITE, PE, PLS
ROADWAY DESIGN PROJECT ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

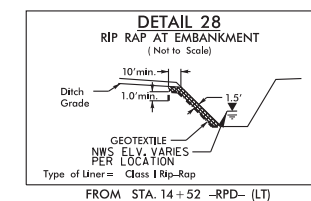
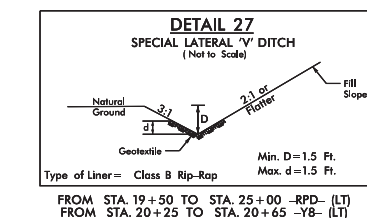
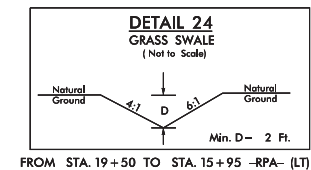
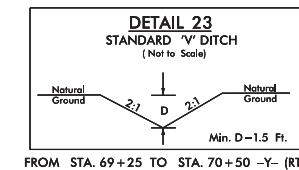
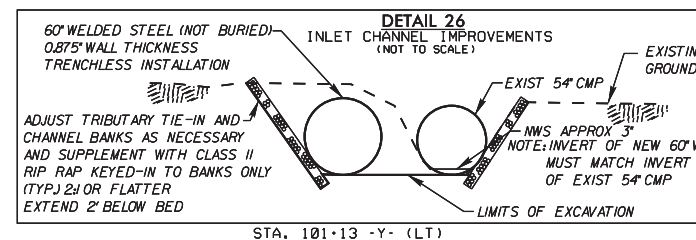
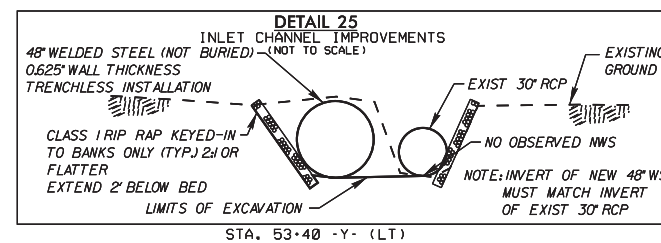
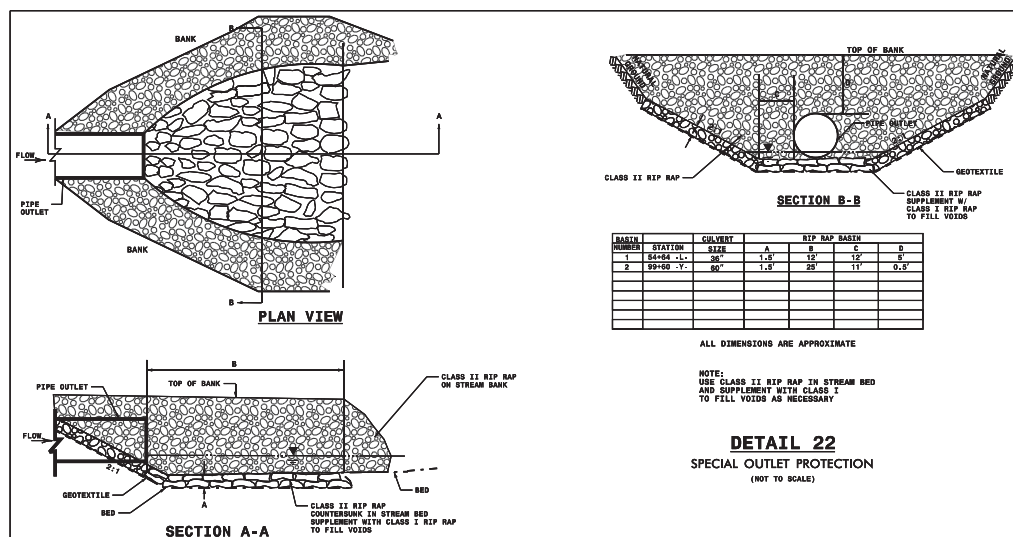
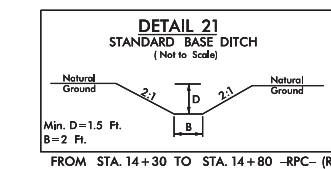
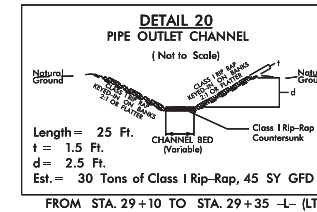
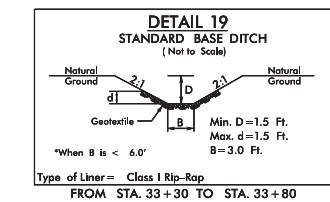
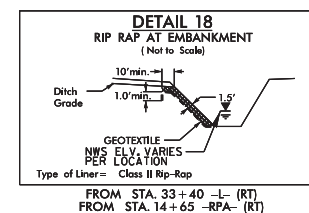
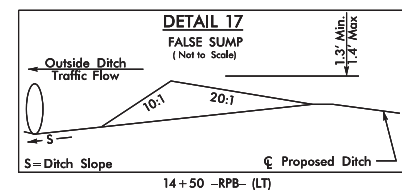
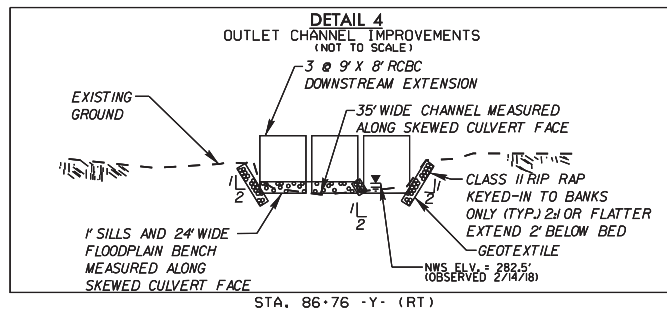
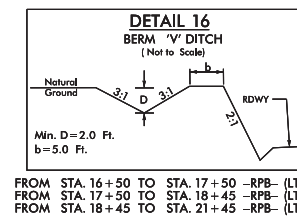
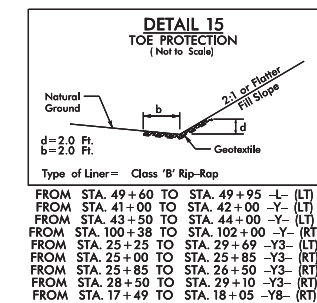
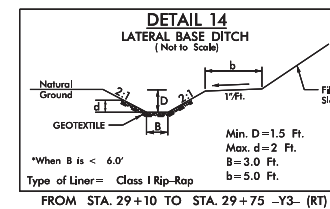
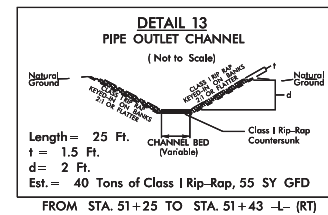
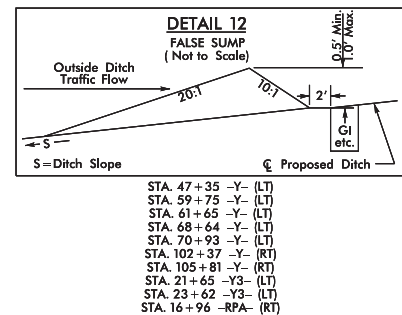
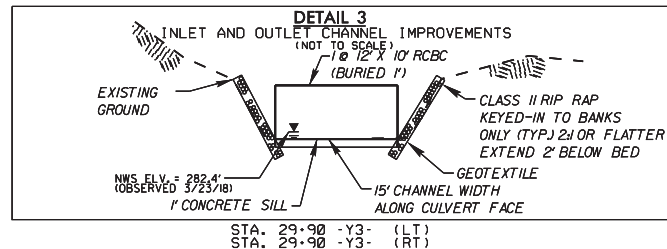
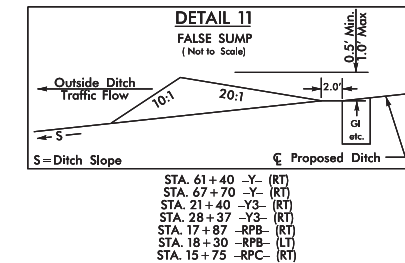
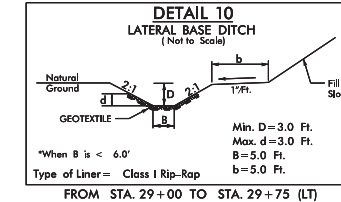
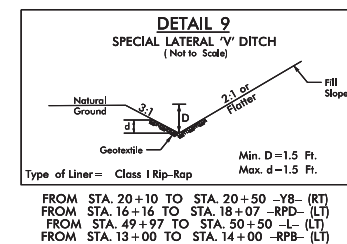
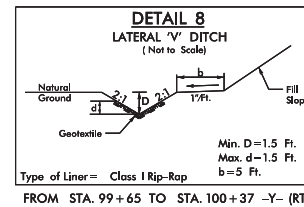
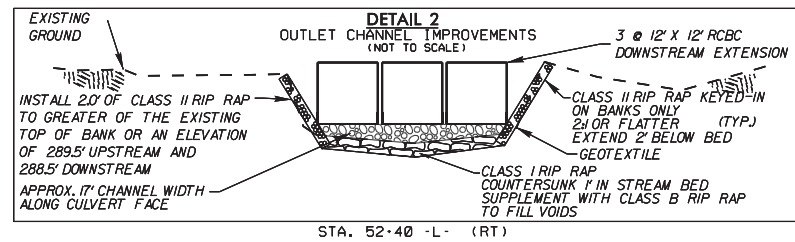
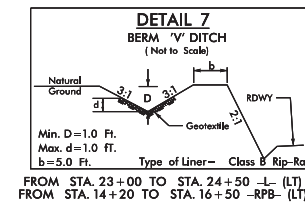
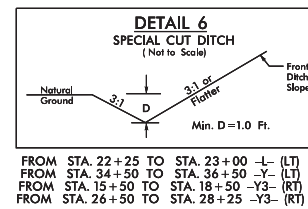
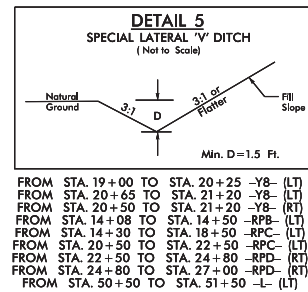
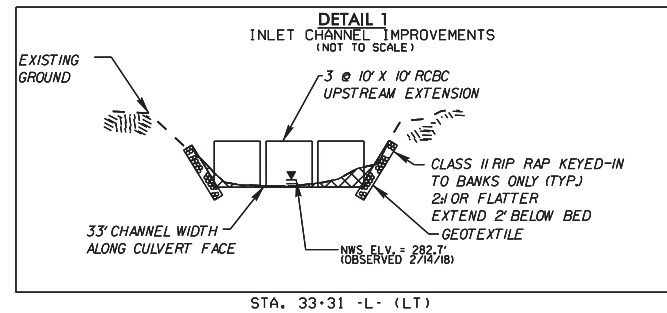
ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



PERMIT DRAWING
SHEET 3 OF 27

PROJECT REFERENCE NO.	SHEET NO.
1-5700	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SITE 1 - IMPACT ZOOM-IN
(SCALE: 1" = 50')



SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHT. 19 FOR -Y5- PROFILE

5/14/99

LEGEND



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 4 OF 27



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Raleigh, N.C. 27606
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Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Kimley»Horn

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PROJECT REFERENCE NO. SHEET NO.

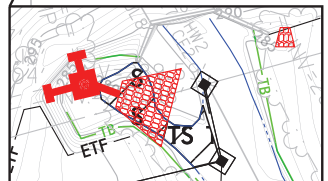
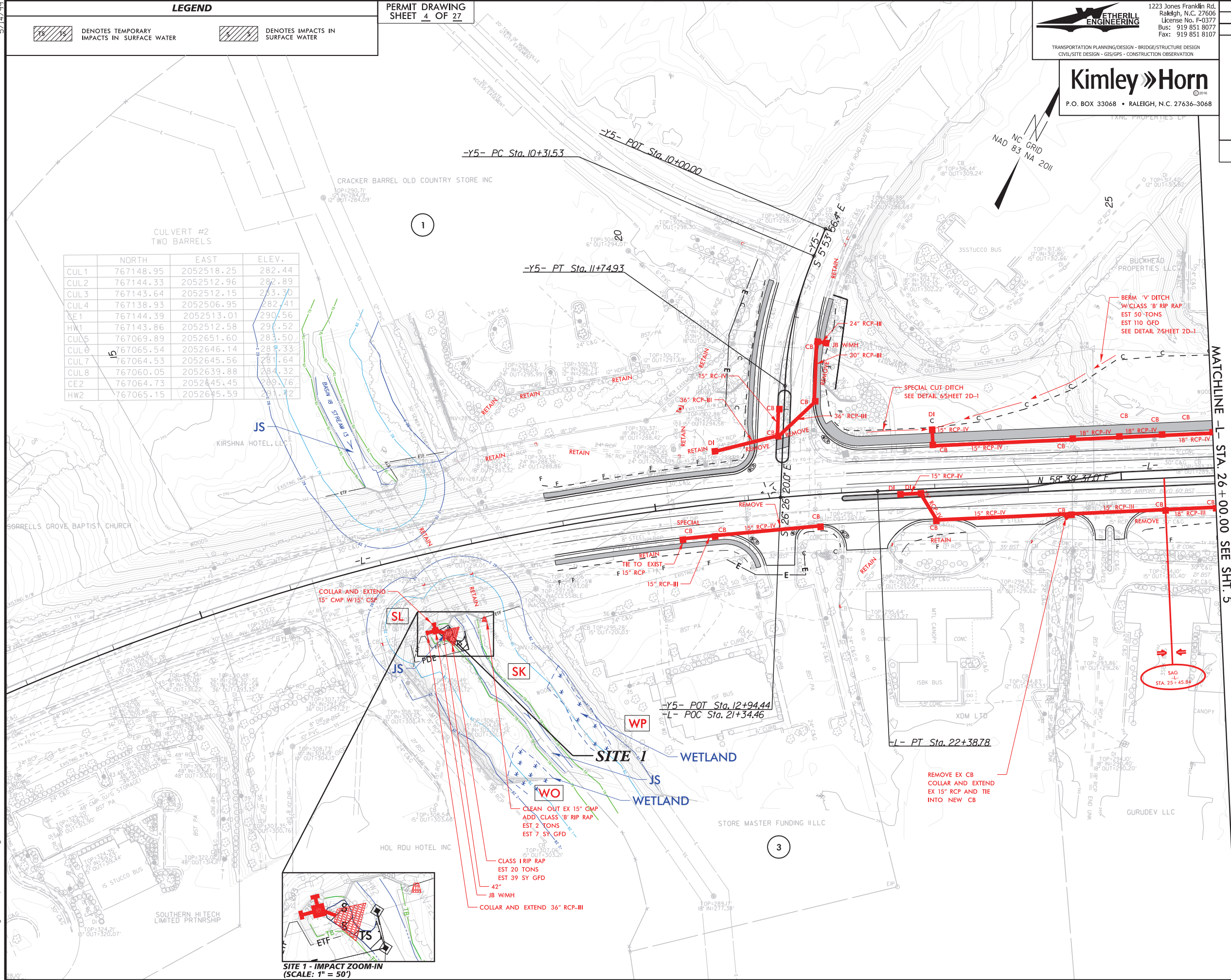
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RW SHEET NO.

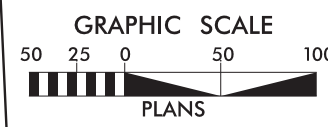
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

	NORTH	EAST	ELEV.
CUL1	767148.95	2052518.25	282.44
CUL2	767144.33	2052512.96	282.89
CUL3	767143.64	2052512.15	283.30
CUL4	767138.93	2052506.95	282.41
CE1	767144.39	2052513.01	290.56
HW1	767143.86	2052512.58	292.52
CUL5	767069.89	2052651.60	283.50
CUL6	767065.54	2052646.14	283.33
CUL7	767064.53	2052645.56	281.64
CUL8	767060.05	2052639.88	284.32
CE2	767064.73	2052645.45	289.76
HW2	767065.15	2052645.59	289.82



SITE 1 - IMPACT ZOOM-IN
(SCALE: 1" = 50')



★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHT. 19 FOR -Y5- PROFILE

7/24/2009
1-5700.mxd-wet-04.con.dgn

5/14/99

LEGEND



DENOTES EXCAVATION
IN WETLAND



DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 5 OF 27

	NORTH	EAST	ELEV.
CUL1	767996.90	2053907.59	282.71
CUL2	767992.17	2053899.10	280.98
CUL3	767991.64	2053898.27	280.99
CUL4	767986.83	2053889.93	280.97
CUL5	767986.36	2053888.99	280.42
CUL6	767981.56	2053880.63	281.31
CE1	767989.21	2053894.00	281.02
CUL7	767989.54	2053894.66	281.14
CUL8	767866.33	2053980.45	280.84
CUL9	767861.79	2053971.21	280.84
CUL10	767861.44	2053970.11	280.97
CUL11	767856.49	2053962.25	281.07
CUL12	767855.96	2053961.51	281.22
CE2	767851.50	2053953.39	280.91
HW2	767859.75	2053966.50	292.88



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Kimley » Horn

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

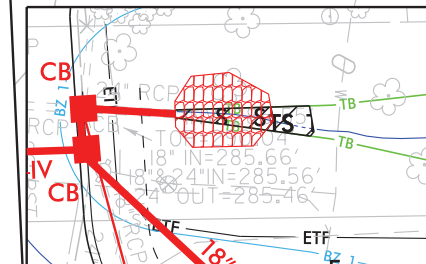
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RW SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



MATCHLINE -L- STA. 26+00.00 SEE SHT. 4

SITE 2A

SITE 2B

SITE 3B

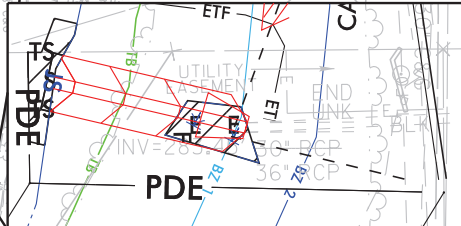
SITE 3A

-CUL- POT Sta. 35+70.00
-L- POT Sta. 35+70.00
OFF. = 39' RT.

-CUL- POT Sta. 35+70.00
-L- POT Sta. 35+70.00
OFF. = 27' RT.

-Y2- POT Sta. 12+31.08
-L- POT Sta. 34+66.90

CONTRACTOR TO
FIELD VERIFY OTCB
INVERT AND TIE IN,
CLEAN OUT SYSTEM



SITE 3B - IMPACT ZOOM-IN
(SCALE: 1" = 50')

GRAPHIC SCALE

50 25 0 50 100

PLANS

★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHT. 17 FOR -Y1- PROFILE
SEE SHT. 18 FOR -Y2- PROFILE

7/24/2019
1-5700_hyd_wet.psh05.dgn

5/14/99

LEGEND



DENOTES EXCAVATION
IN WETLAND



DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 6 OF 27

	NORTH	EAST	ELEV.
CUL1	767996.90	2053907.59	282.71
CUL2	767992.17	2053899.10	280.58
CUL3	767991.64	2053898.27	280.19
CUL4	767986.83	2053889.93	280.97
CUL5	767986.36	2053888.99	281.42
CUL6	767981.56	2053880.03	281.31
CE1	767989.21	2053894.66	281.02
CUL8	767989.54	2053894.66	280.97
CUL9	767861.44	2053970.48	280.97
CUL10	767856.49	2053962.25	281.07
CUL11	767855.96	2053961.51	281.22
CUL12	767851.50	2053966.50	280.91
CE2	767859.78	2053966.50	282.88
HW2	767859.89	2053966.50	282.88



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Kimley»Horn
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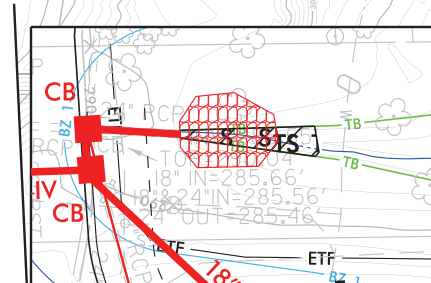
PROJECT REFERENCE NO. SHEET NO.

1-5700 5

RW SHEET NO.

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



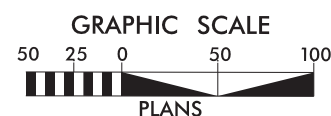
SITE 2A

SITE 2B

SITE 3A

SITE 3B

SITE 3B - IMPACT ZOOM-IN
(SCALE: 1" = 50')

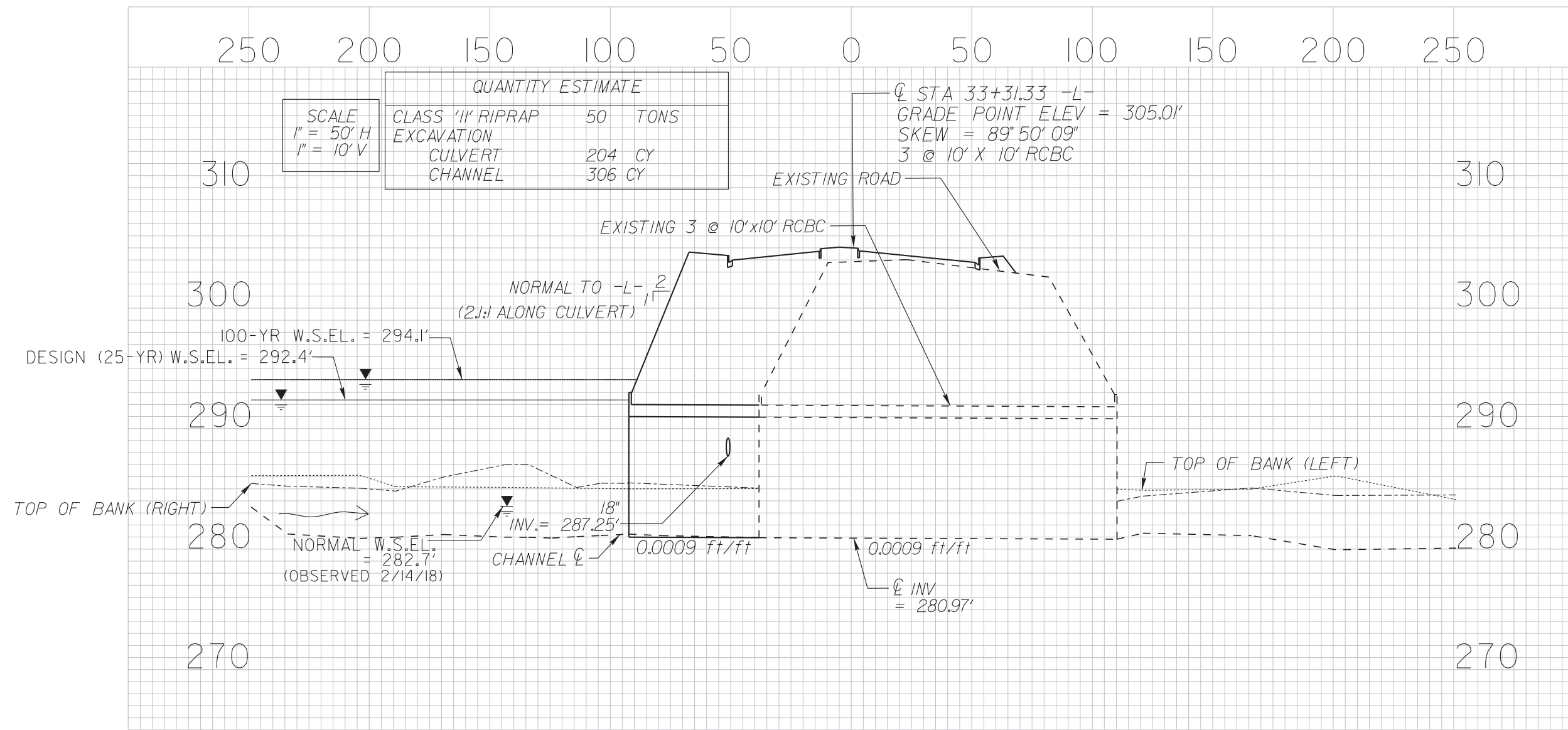


★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHT. 17 FOR -Y1- PROFILE
SEE SHT. 18 FOR -Y2- PROFILE

7/24/2019
1-5700.dwg-wet-psh05.con.dgn

SITE 3A - CULVERT EXTENSION



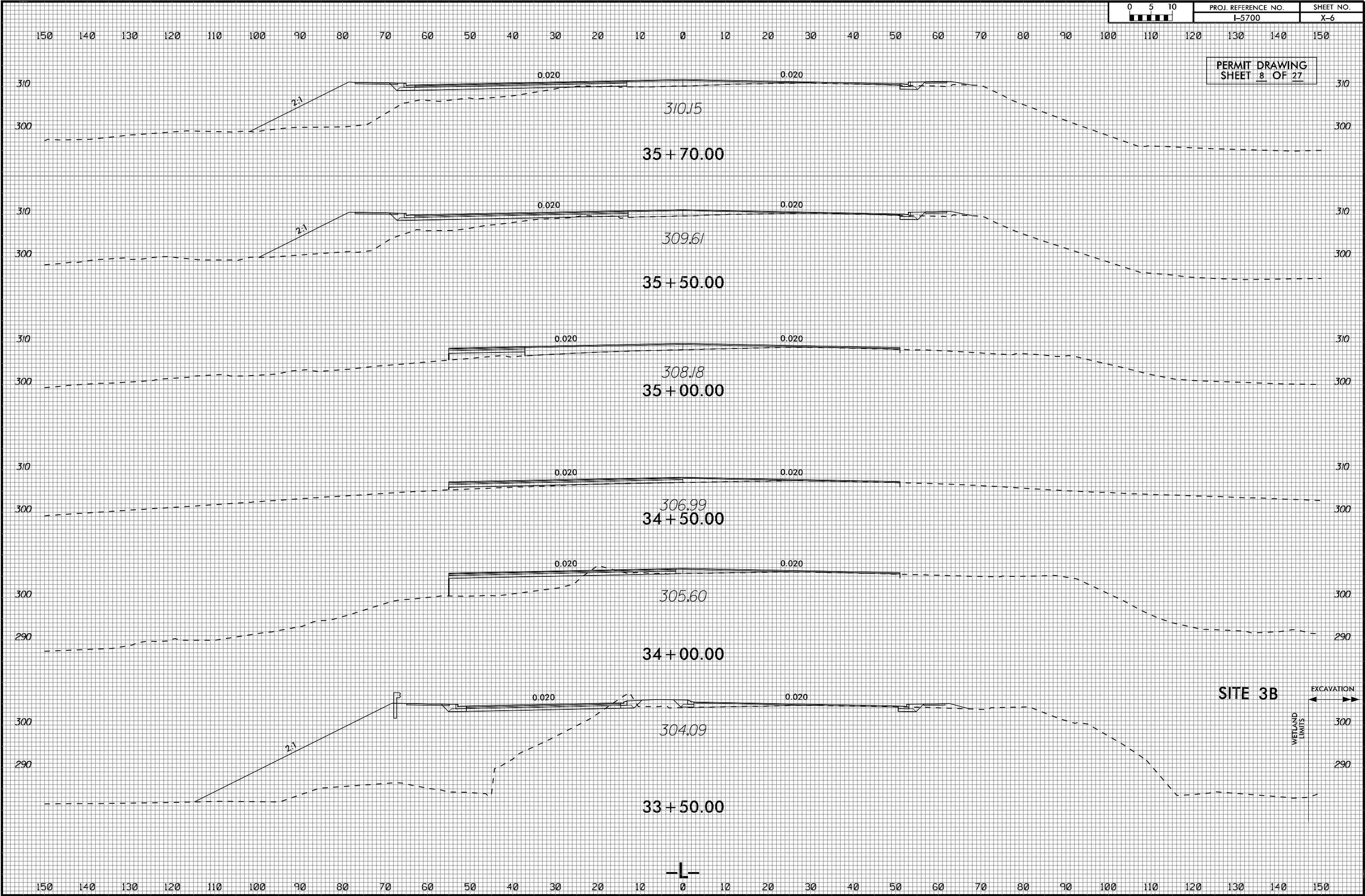
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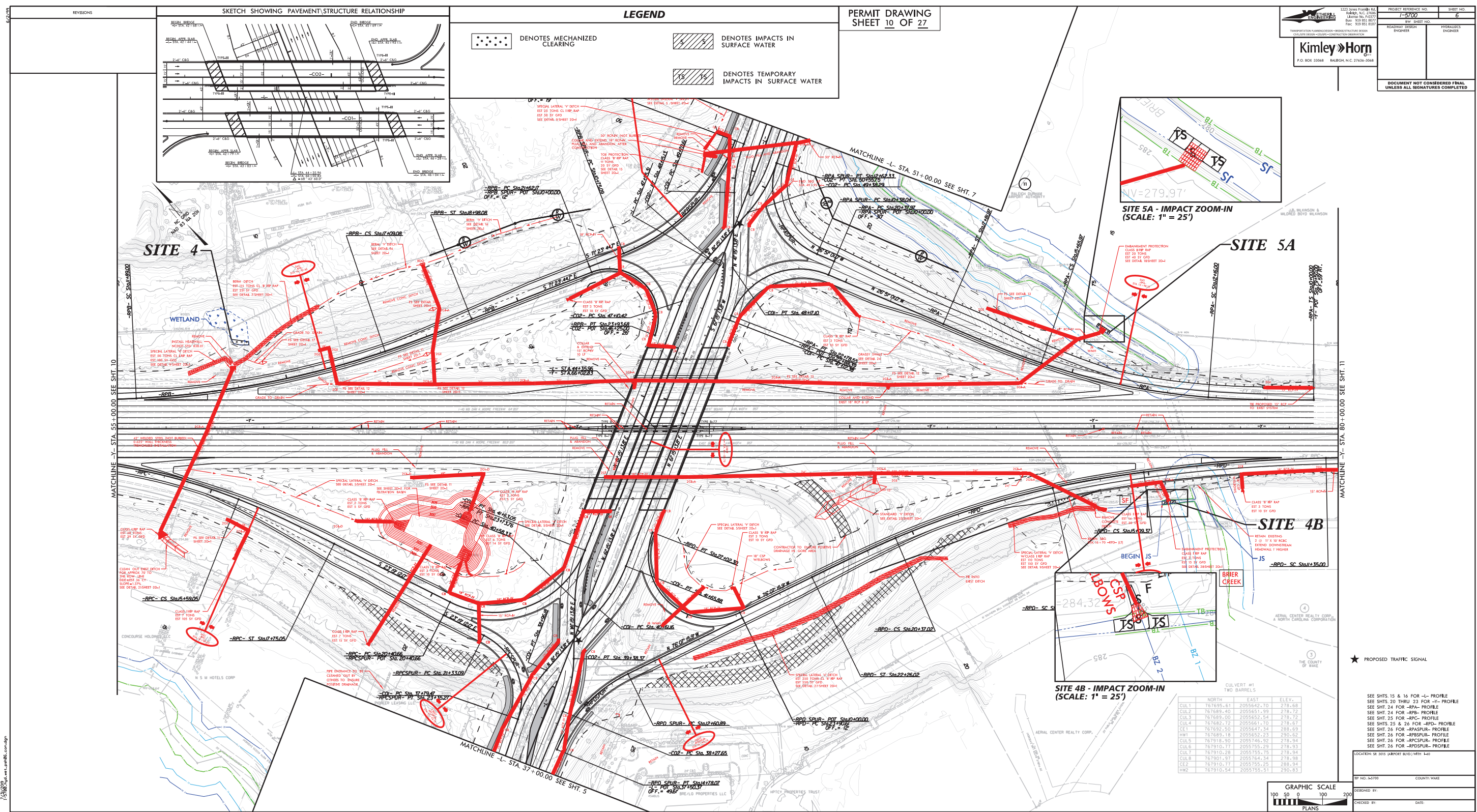
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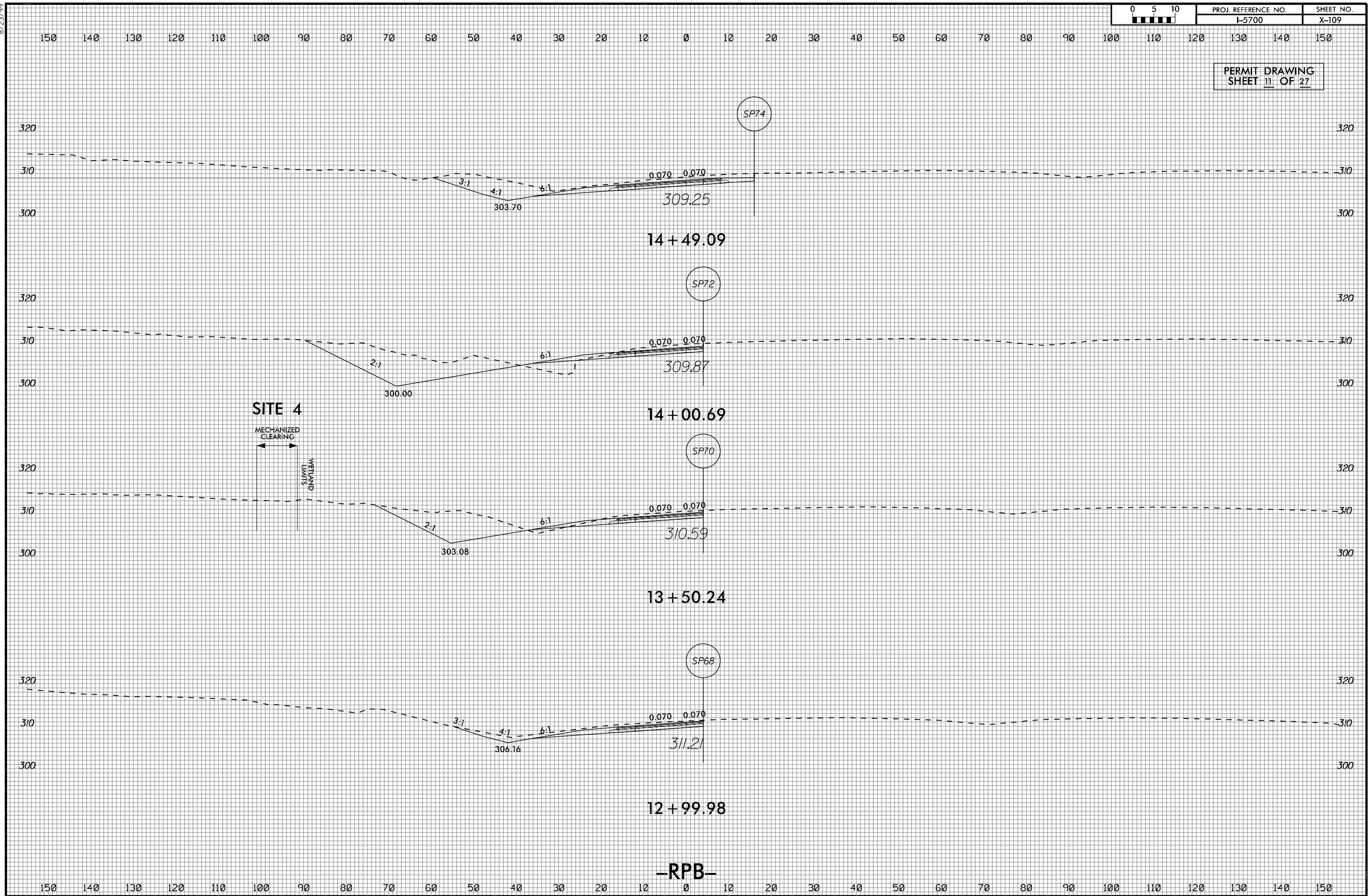
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PROJ. REFERENCE NO.	SHEET NO.
I-5700	X-6

PERMIT DRAWING
SHEET 8 OF 27







5/14/99

LEGEND



DENOTES FILL IN WETLAND



DENOTES IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 12 OF 27

SITE 6 REMOVED FROM 4B PLANS.
NOT IMPACTED BY PROPOSED WORK

SITE 7 REMOVED FROM 4B PLANS.
INCORPORATED INTO SITE 5C



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Kimley » Horn

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

7

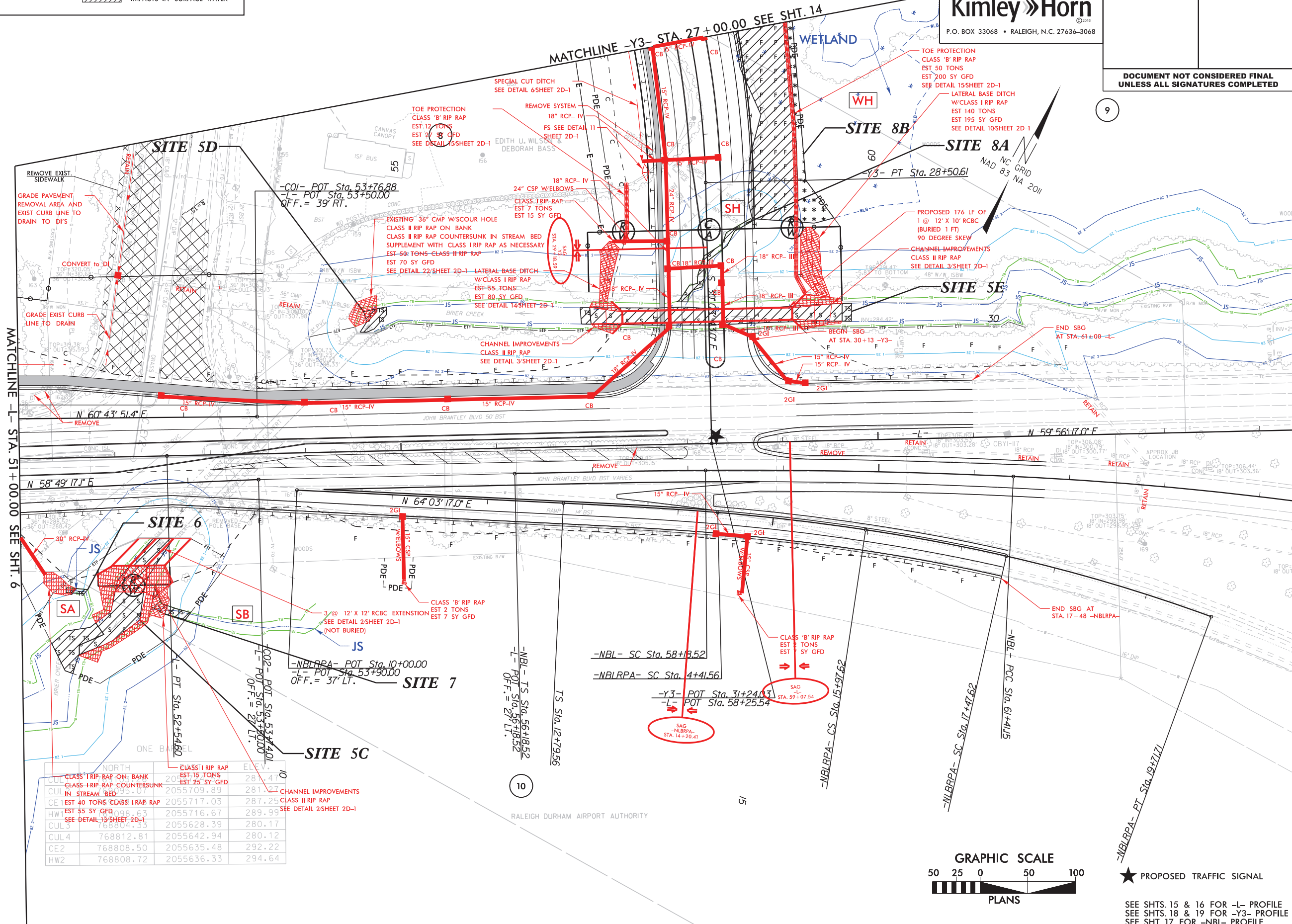
R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

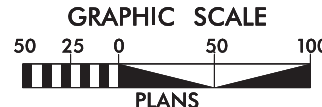
HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

9



	NORTH	CLASS I RIP RAP	ELEV.
CUL 1	768808.63	EST 15 TONS	287.47
CUL 2	768808.63	EST 25 SY GFD	287.47
CUL 3	768808.63	EST 25 SY GFD	287.47
CUL 4	768808.63	EST 25 SY GFD	287.47
CUL 5	768808.63	EST 25 SY GFD	287.47
CUL 6	768808.63	EST 25 SY GFD	287.47
CUL 7	768808.63	EST 25 SY GFD	287.47
CUL 8	768808.63	EST 25 SY GFD	287.47
CUL 9	768808.63	EST 25 SY GFD	287.47
CUL 10	768808.63	EST 25 SY GFD	287.47
CUL 11	768808.63	EST 25 SY GFD	287.47
CUL 12	768808.63	EST 25 SY GFD	287.47
CUL 13	768808.63	EST 25 SY GFD	287.47
CUL 14	768808.63	EST 25 SY GFD	287.47
CUL 15	768808.63	EST 25 SY GFD	287.47
CUL 16	768808.63	EST 25 SY GFD	287.47
CUL 17	768808.63	EST 25 SY GFD	287.47
CUL 18	768808.63	EST 25 SY GFD	287.47
CUL 19	768808.63	EST 25 SY GFD	287.47
CUL 20	768808.63	EST 25 SY GFD	287.47
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CUL 85	768808.63	EST 25 SY GFD	287.47
CUL 86	768808.63	EST 25 SY GFD	287.47
CUL 87	768808.63	EST 25 SY GFD	287.47
CUL 88	768808.63	EST 25 SY GFD	287.47
CUL 89	768808.63	EST 25 SY GFD	287.47
CUL 90	768808.63	EST 25 SY GFD	287.47
CUL 91	768808.63	EST 25 SY GFD	287.47
CUL 92	768808.63	EST 25 SY GFD	287.47
CUL 93	768808.63	EST 25 SY GFD	287.47
CUL 94	768808.63	EST 25 SY GFD	287.47
CUL 95	768808.63	EST 25 SY GFD	287.47
CUL 96	768808.63	EST 25 SY GFD	287.47
CUL 97	768808.63	EST 25 SY GFD	287.47
CUL 98	768808.63	EST 25 SY GFD	287.47
CUL 99	768808.63	EST 25 SY GFD	287.47
CUL 100	768808.63	EST 25 SY GFD	287.47



★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHTS. 18 & 19 FOR -Y3- PROFILE
SEE SHT. 17 FOR -NBL- PROFILE

7/24/2008 hyd_wet.psh07.dgn

5/14/99

LEGEND



DENOTES FILL IN WETLAND



DENOTES IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 13 OF 27

SITE 6 REMOVED FROM 4B PLANS.
NOT IMPACTED BY PROPOSED WORK

SITE 7 REMOVED FROM 4B PLANS.
INCORPORATED INTO SITE 5C



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Kimley » Horn

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

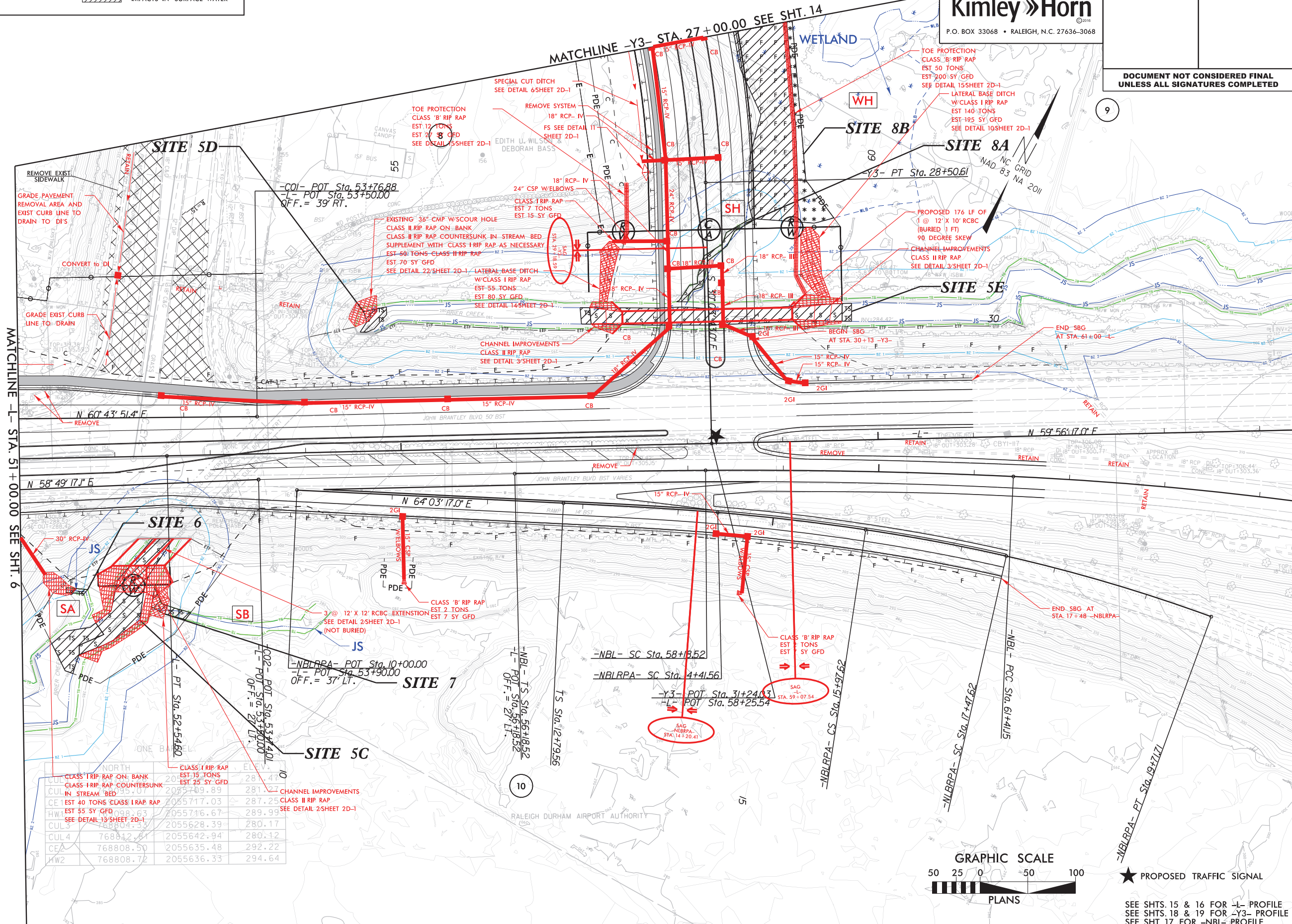
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R/W SHEET NO.

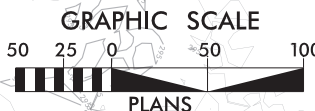
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



NORTH			
CUL 1	CLASS I RIP RAP ON BANK	EST 15 TONS	28.47
CUL 2	CLASS I RIP RAP COUNTERSUNK IN STREAM BED	EST 25 SY GFD	28.11
CE 1	EST 40 TONS CLASS I RIP RAP	2055717.03	287.25
HW 1	EST 55 SY GFD	2055716.67	289.99
CUL 3	SEE DETAIL 13/SHEET 2D-1	2055628.39	280.17
CUL 4	768842.81	2055642.94	280.12
CE 2	768808.50	2055635.48	292.22
HW 2	768808.72	2055636.33	294.64



★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHTS. 18 & 19 FOR -Y3- PROFILE
SEE SHT. 17 FOR -NBL- PROFILE

7/24/2018
1-5700.mxd-wet-13sh07.con.dgn

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PROJECT REFERENCE NO. SHEET NO.

1-5700

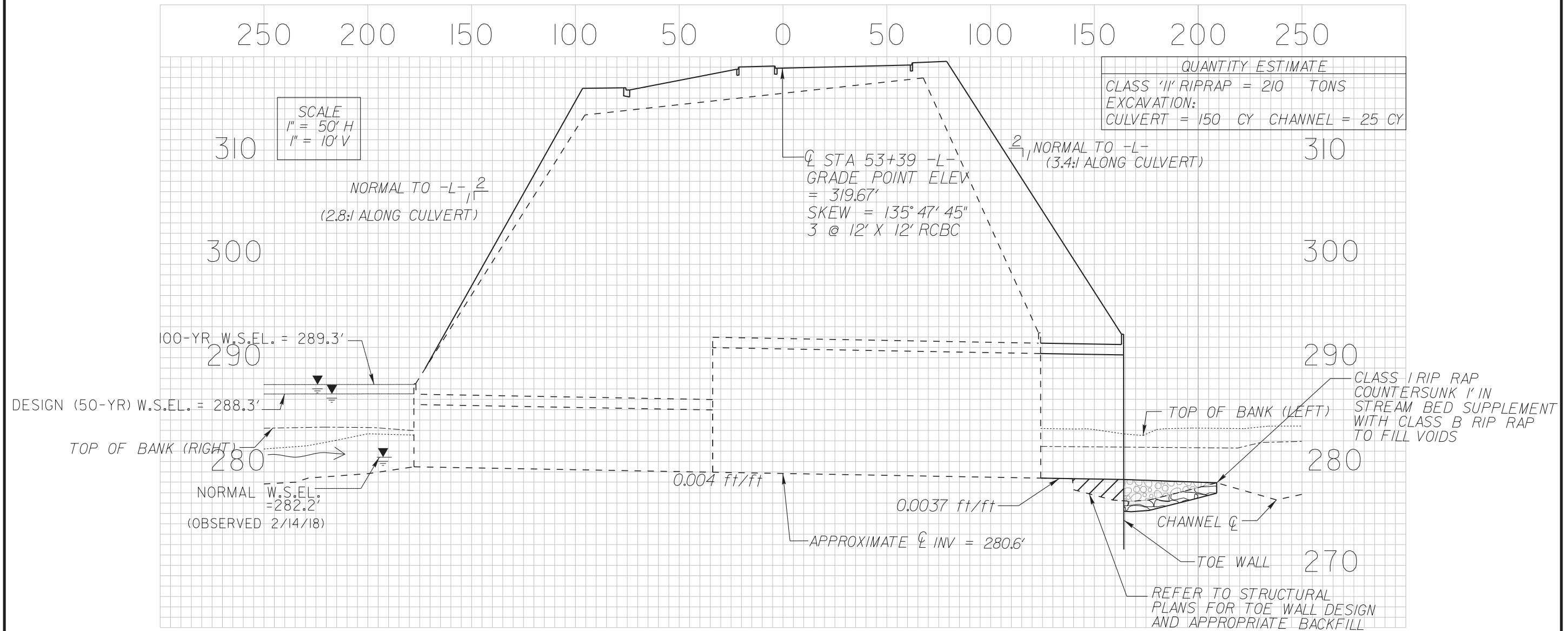
R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
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SITE 5C - CULVERT EXTENSION



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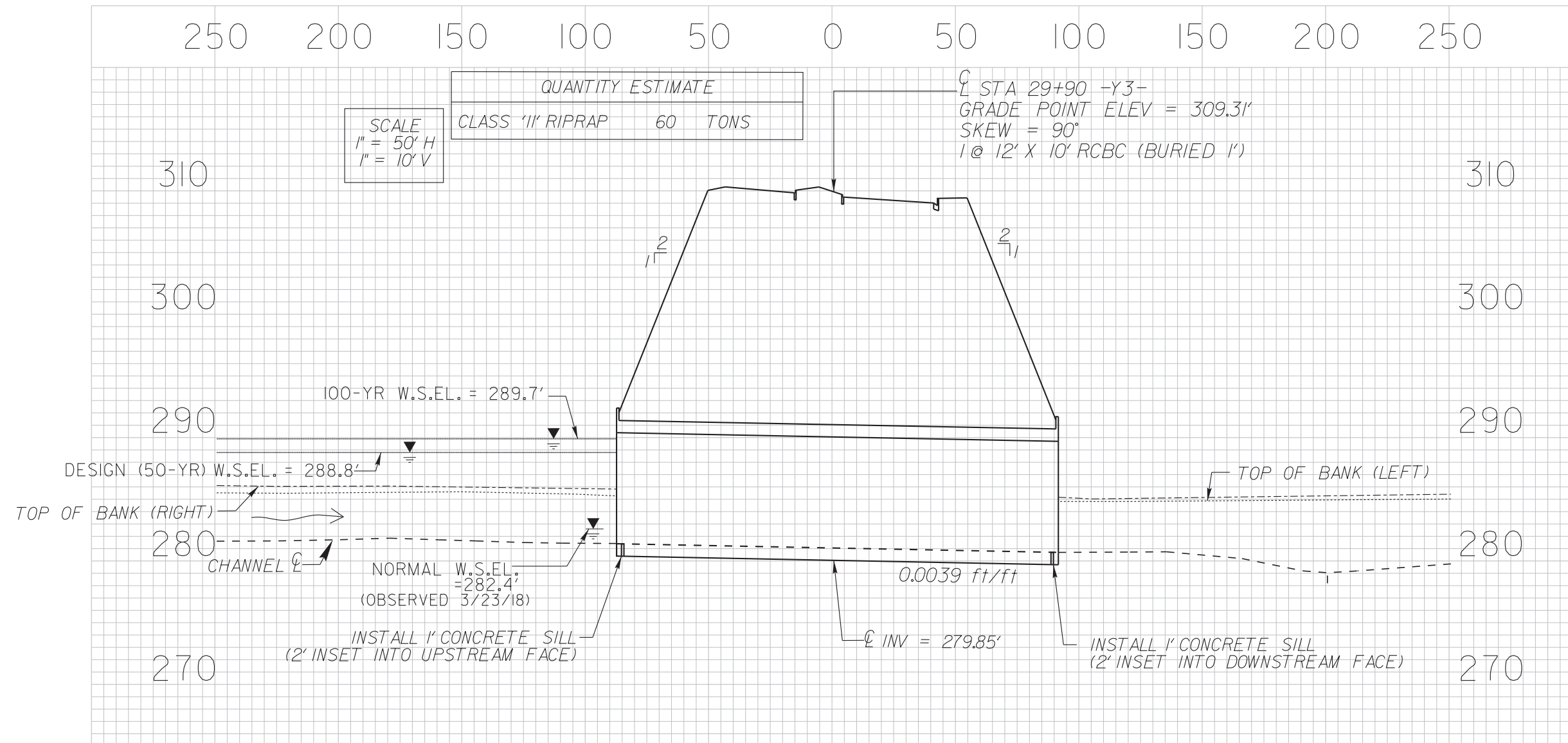
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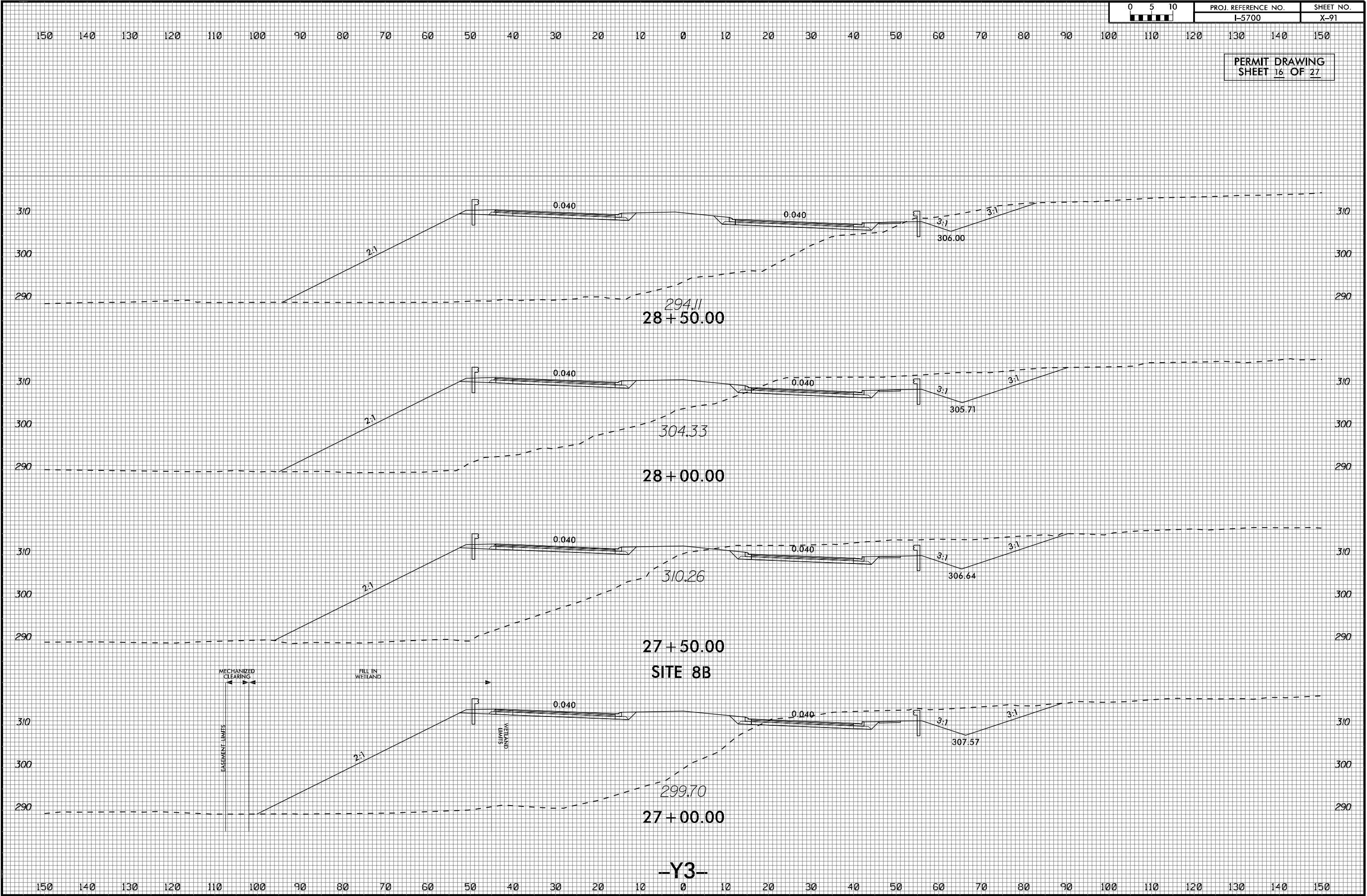
PROJECT REFERENCE NO.		SHEET NO.
I-5700		
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

SITE 5E - PROPOSED CULVERT



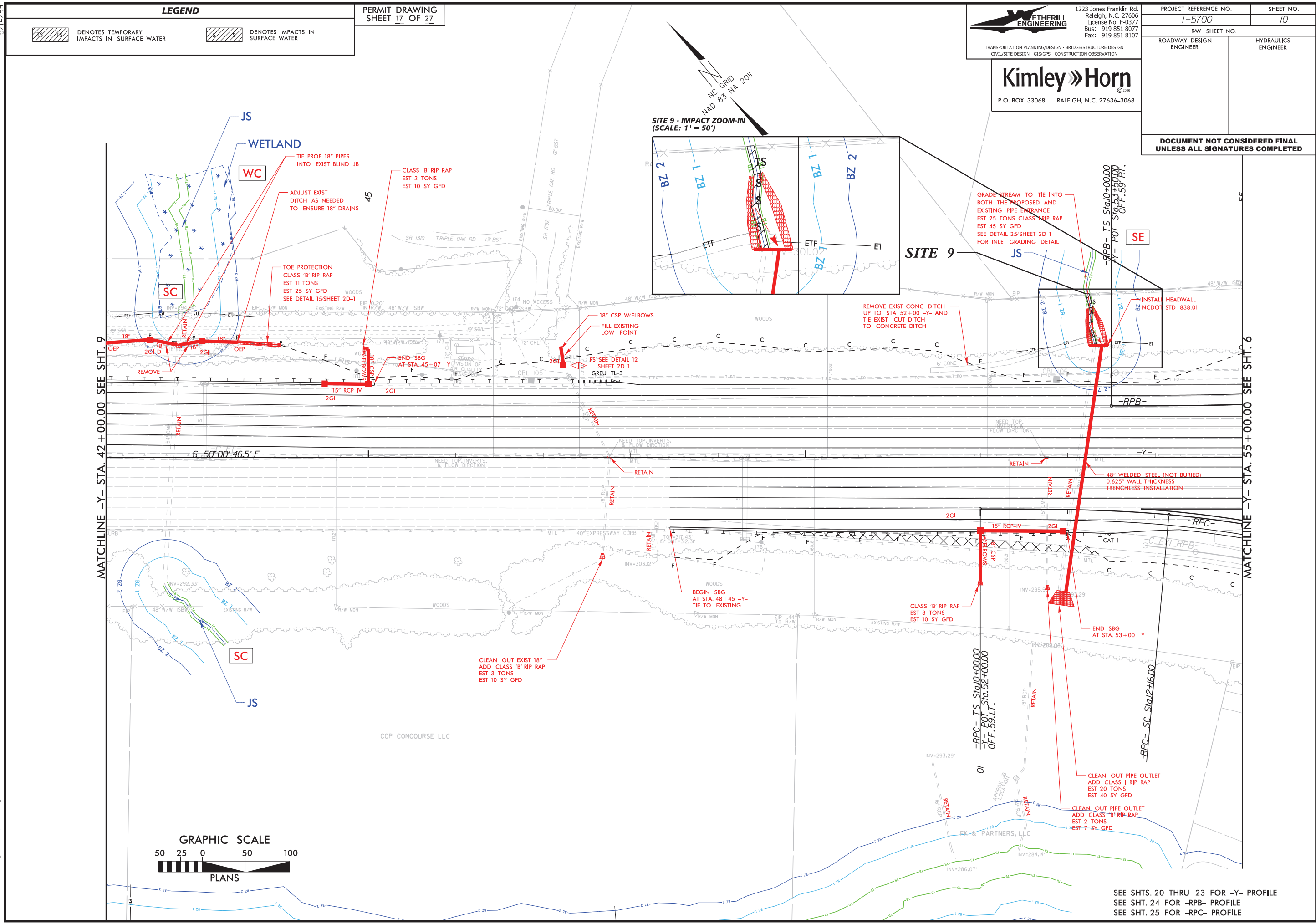
8/23/99

7/30/2008
K:\RAL_Roadway\01036438 - I-5700\Roadway\CorridorModeling\I-5700_rdy.xpl.Y3.permitdgn



PERMIT DRAWING
SHEET 17 OF 27

PROJECT REFERENCE NO.		SHEET NO.	
1-5700		10	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



5/14/99

LEGEND



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN
SURFACE WATER

PERMIT DRAWING
SHEET 18 OF 27



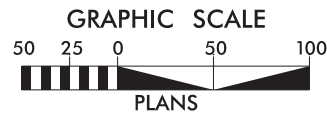
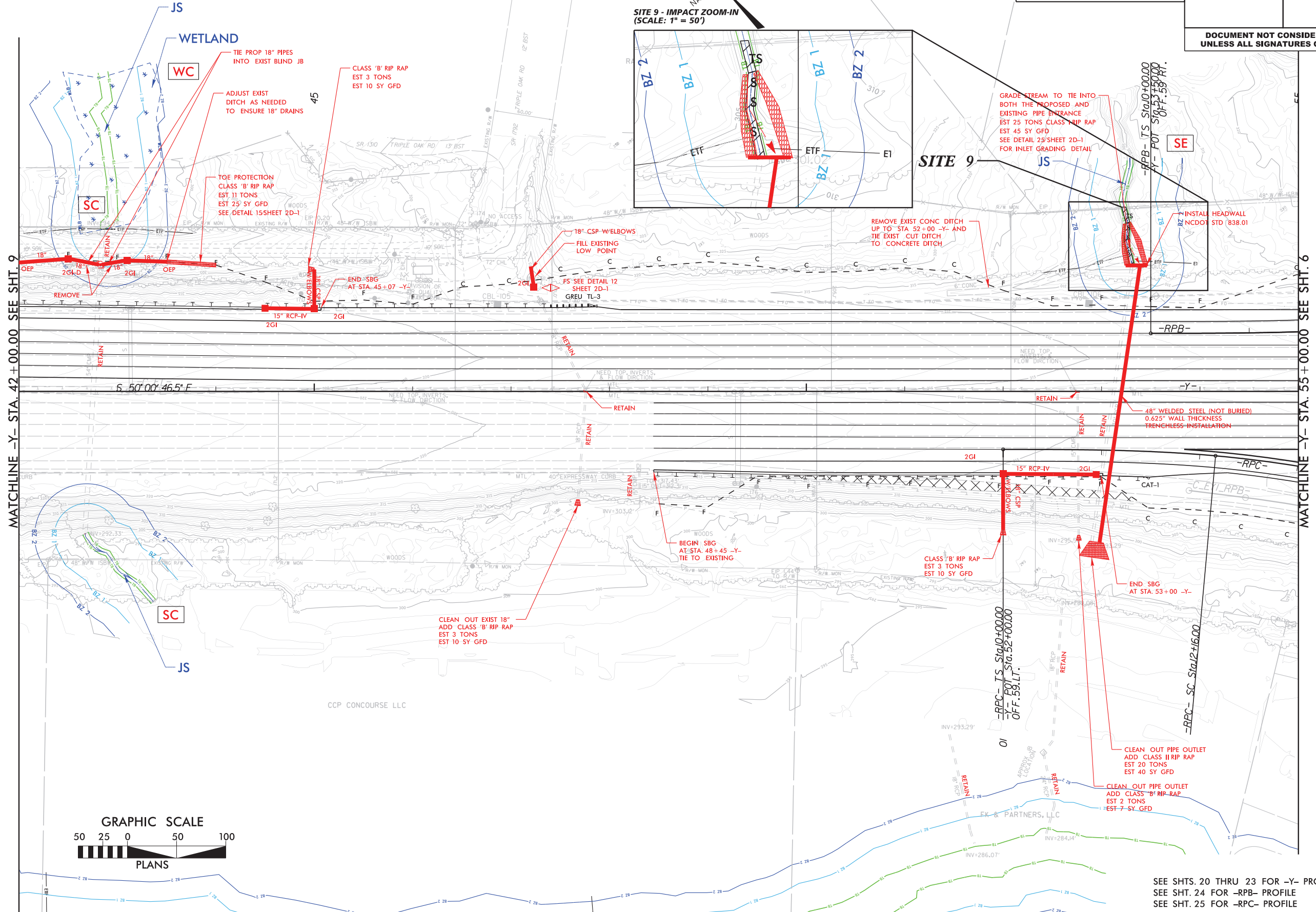
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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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PROJECT REFERENCE NO.		SHEET NO.
1-5700		10
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHT. 24 FOR -RPB- PROFILE
SEE SHT. 25 FOR -RPC- PROFILE

7/24/2019
1-5700-nhd-wet.psh10.con.dgn

5/14/99

LEGEND



DENOTES MECHANIZED
CLEARING



DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 19 OF 27



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

11

R/W SHEET NO.

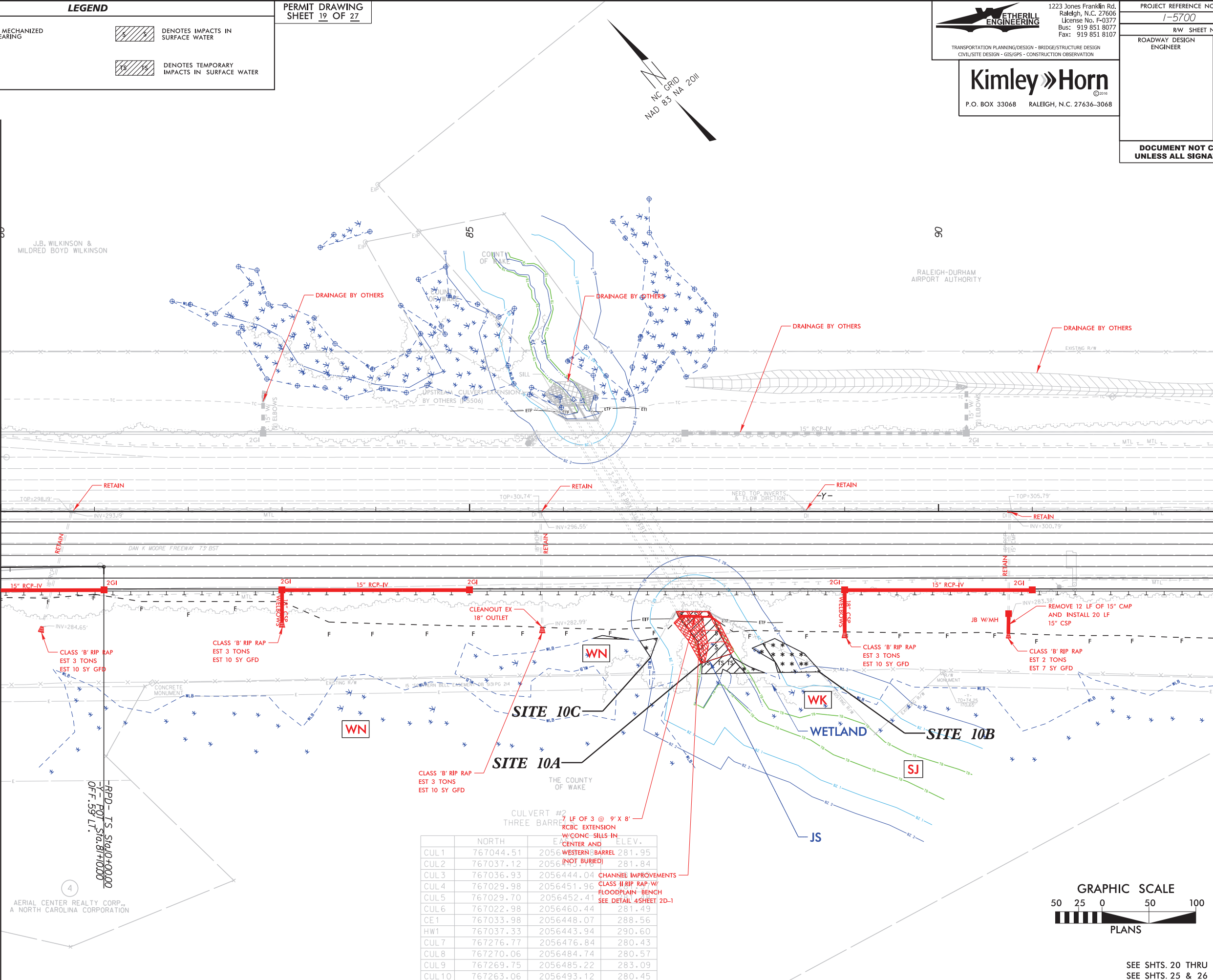
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

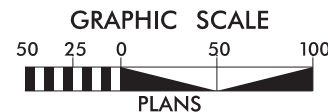
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -Y- STA. 80 + 00.00 SEE SHT. 6

MATCHLINE -Y- STA. 93 + 00.00 SEE SHT. 12



	NORTH	ELEV.	ELEV.
CUL1	767044.51	2056	281.95
CUL2	767037.12	2056	281.84
CUL3	767036.93	2056444.04	281.84
CUL4	767029.98	2056451.96	281.84
CUL5	767029.70	2056452.41	281.84
CUL6	767022.98	2056460.44	281.49
CE1	767033.98	2056448.07	288.56
HW1	767037.33	2056443.94	290.60
CUL7	767276.77	2056476.84	280.43
CUL8	767270.06	2056484.74	280.57
CUL9	767269.75	2056485.22	283.09
CUL10	767263.06	2056493.12	280.45



SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHTS. 25 & 26 FOR -RPD- PROFILE

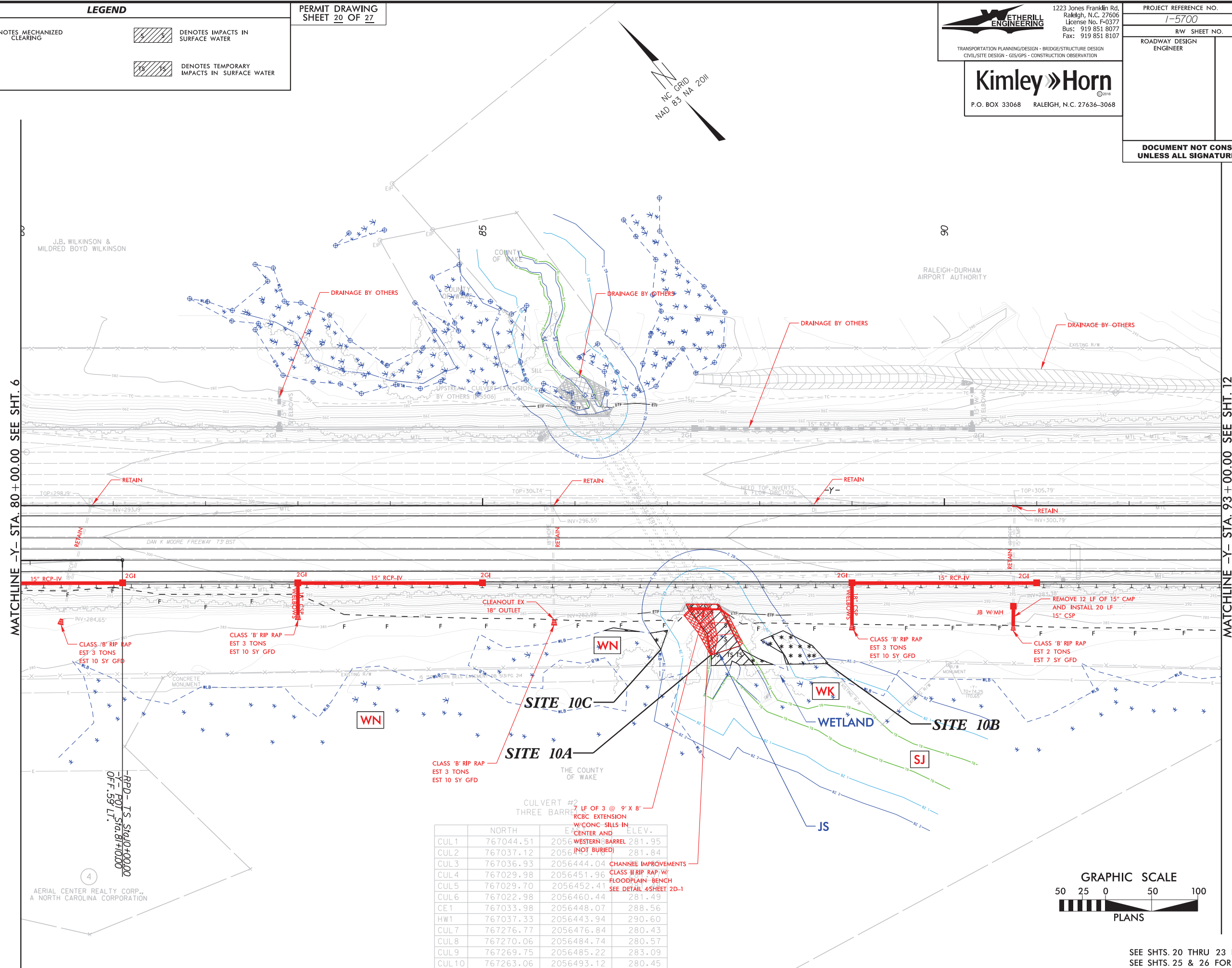
7/24/2008
i-5700_hyd_wet.psh11.dgn

I-5700_hyd_wet_psh11_con.dgn

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

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GRAPHIC SCALE

50 25 0 50 100

PLANS

SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHTS. 25 & 26 FOR -RPD- PROFILE

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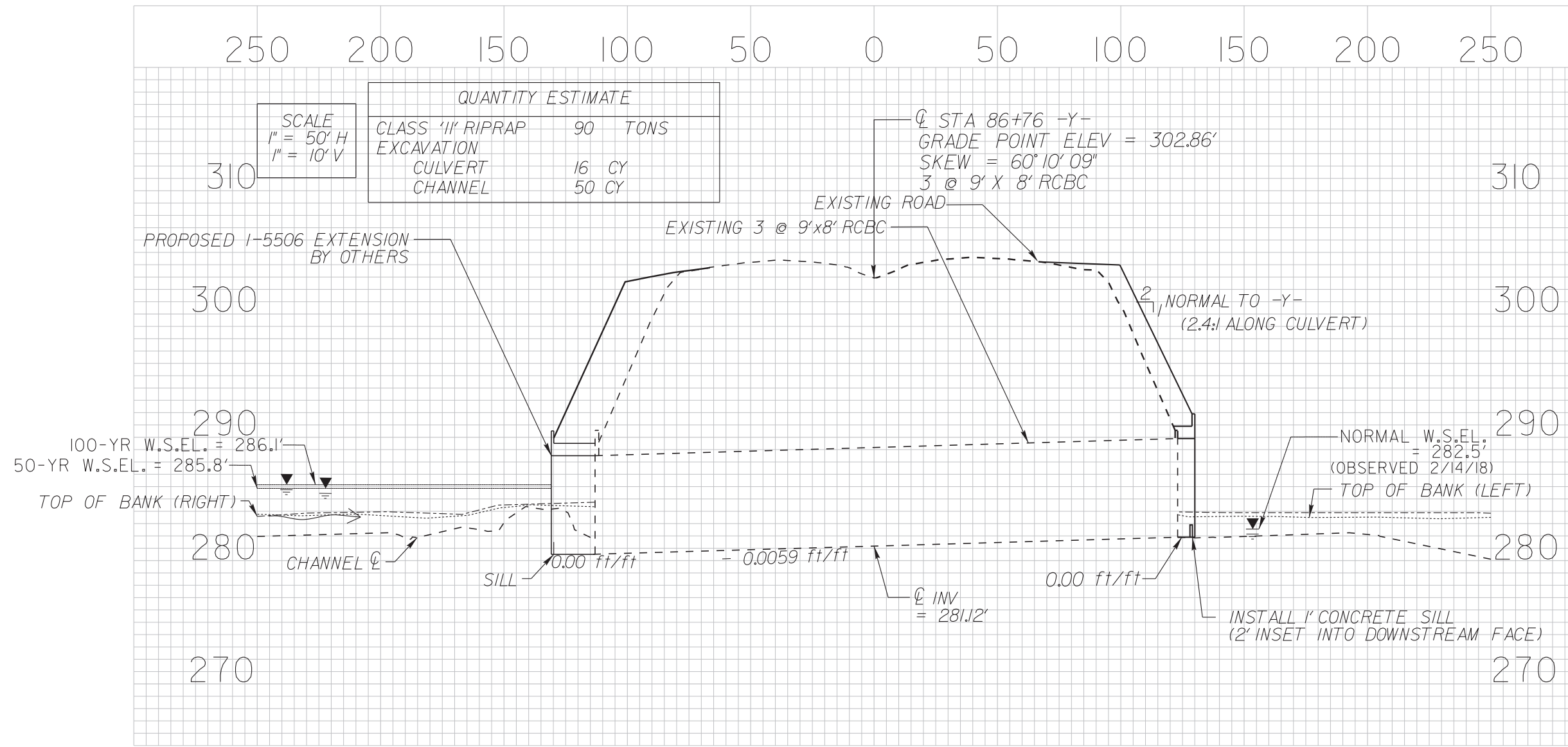
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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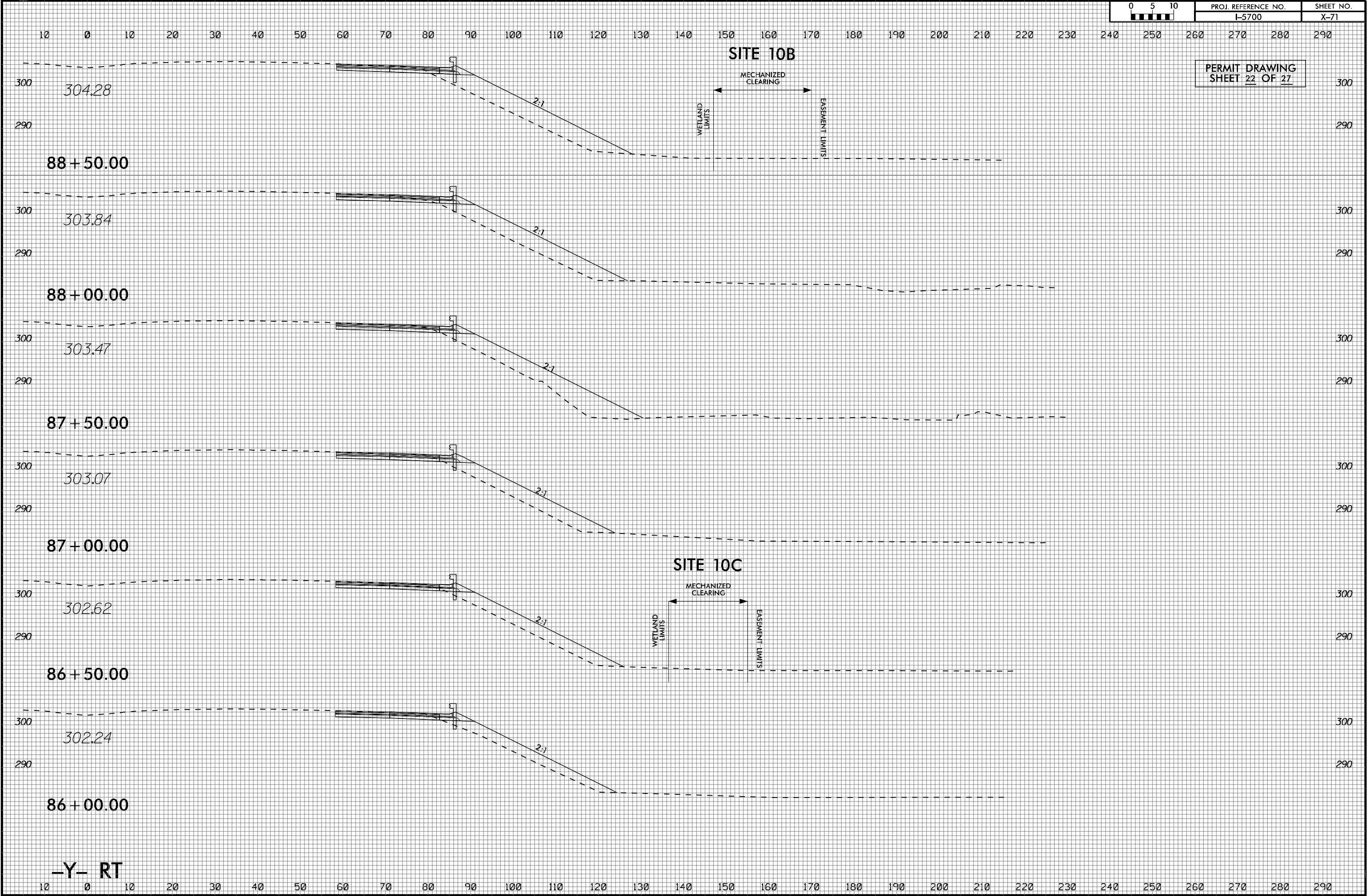
PROJECT REFERENCE NO.		SHEET NO.
I-5700		
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

SITE 10A - CULVERT EXTENSION



8/23/99

8/1/2018
K:\RAL_Roadway\011036438 - I-5700\Roadway\CorridorModeling\I-5700_rdy.xpl.Y_permt.dgn



5/14/99

LEGEND



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN
SURFACE WATER



DENOTES EXCAVATION

PERMIT DRAWING
SHEET 23 OF 27



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

12

R/W SHEET NO.

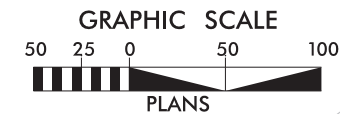
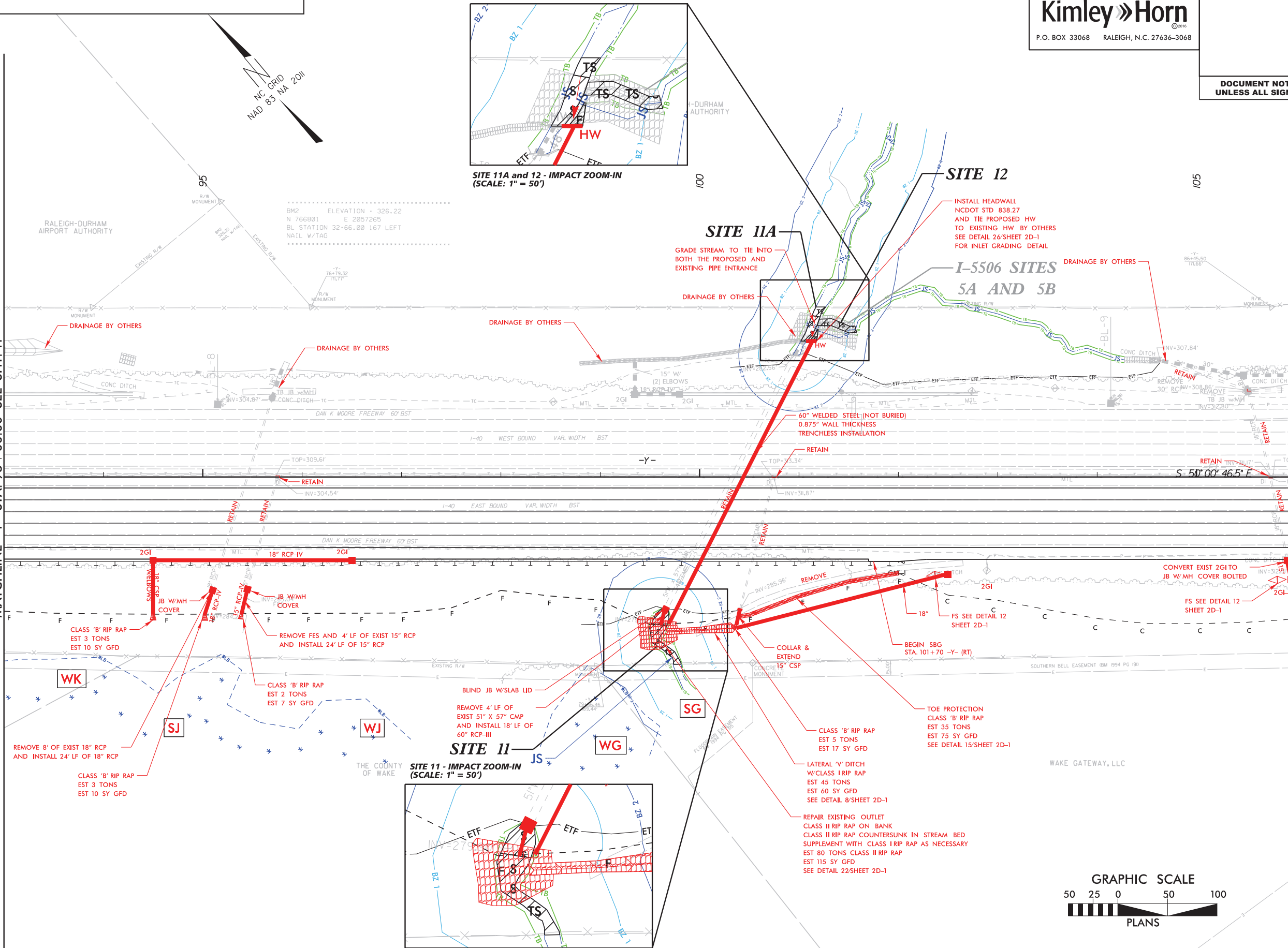
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -Y- STA. 93+00.00 SEE SHT. 11

MATCHLINE -Y- STA. 106+00.00 SEE SHT. 13



SEE SHTS. 20 THRU 23 FOR -Y- PROFILE

7/24/2008
1-5700-hyd-wet.psh12.dgn

5/14/99

LEGEND



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN
SURFACE WATER



DENOTES EXCAVATION

PERMIT DRAWING
SHEET 24 OF 27



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

12

R/W SHEET NO.

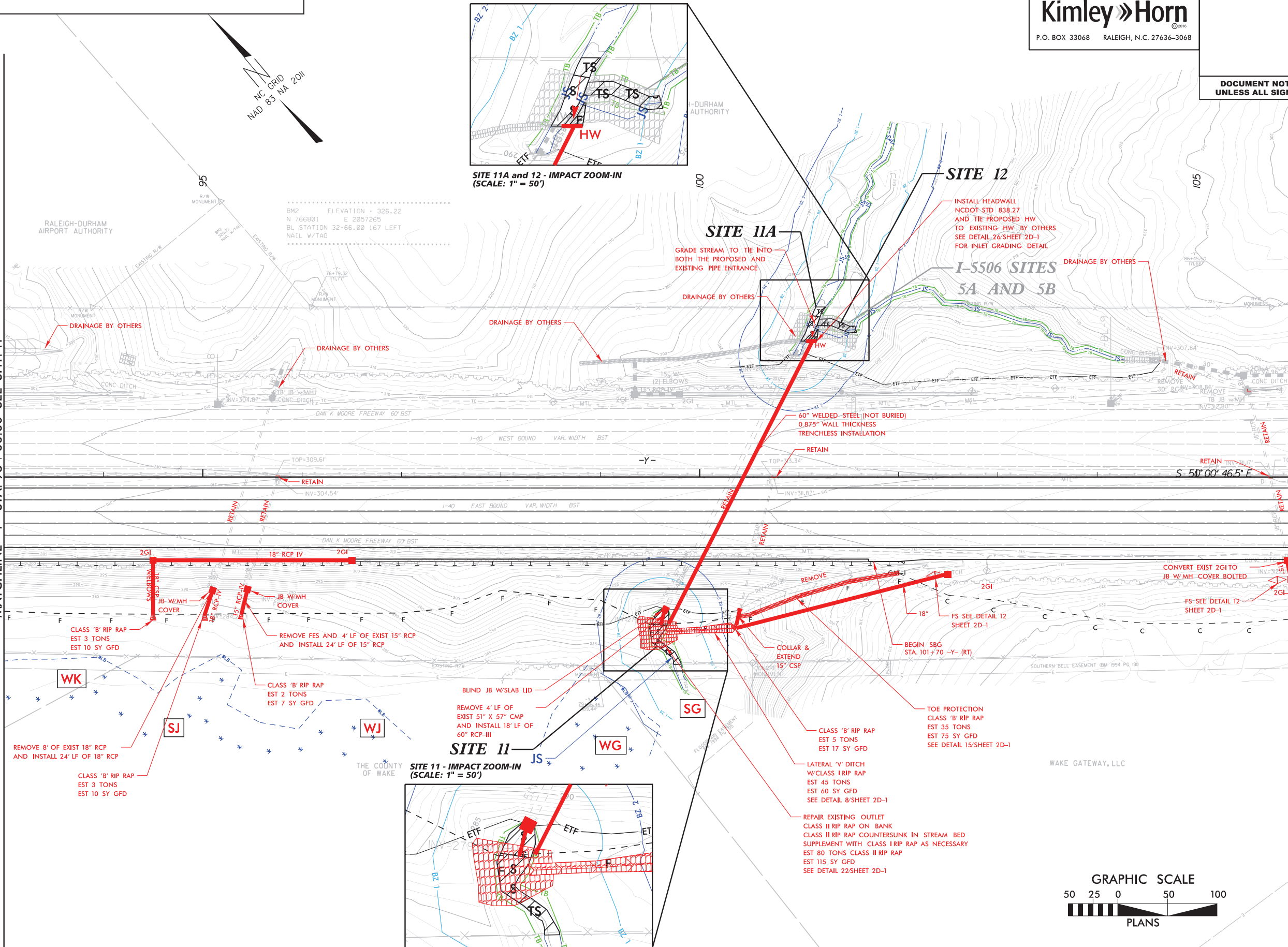
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

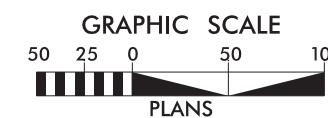
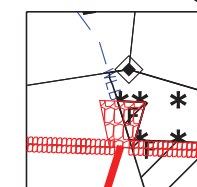
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MATCHLINE -Y- STA. 106+00.00 SEE SHT. 13

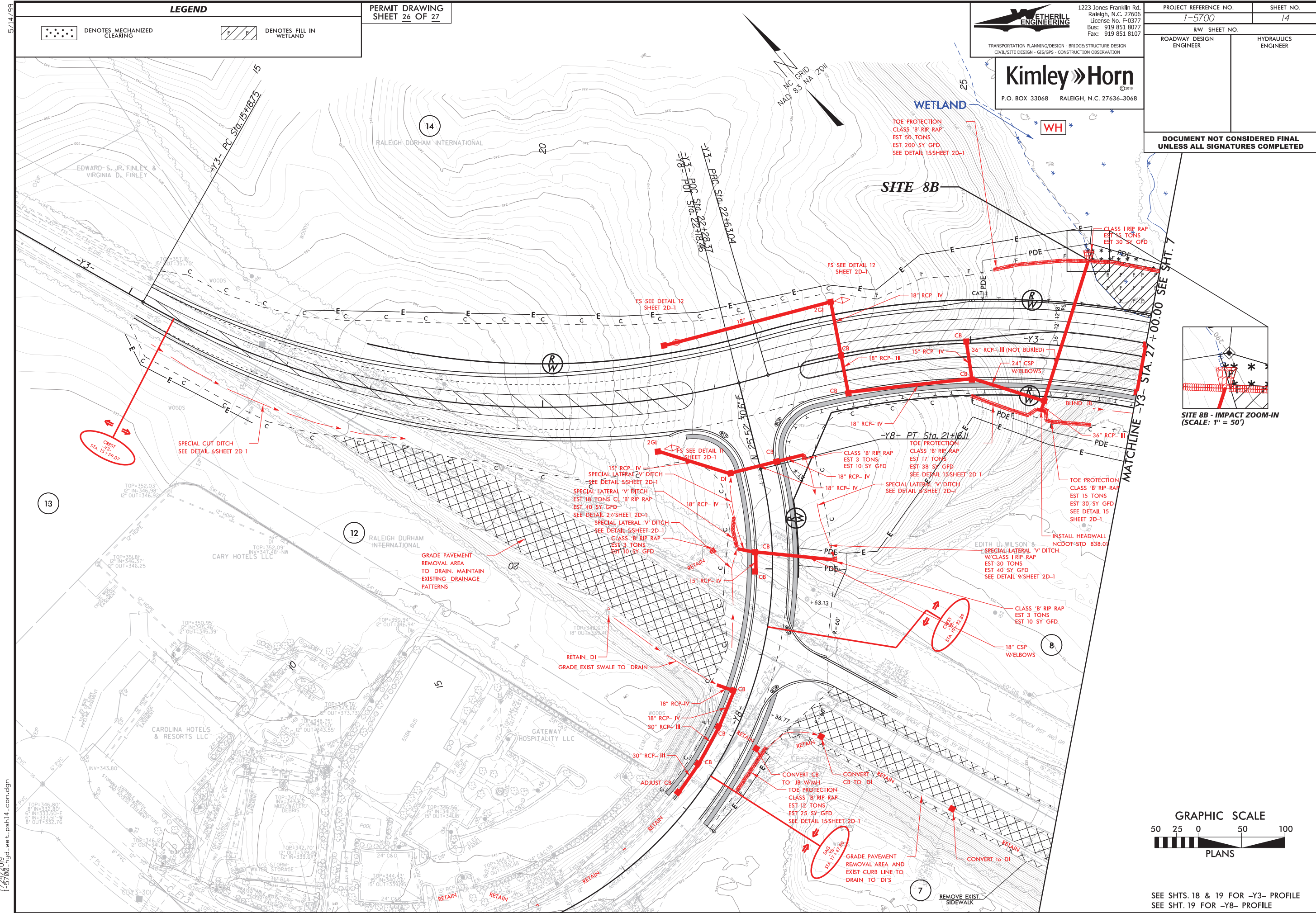


7/24/2019
1-5700.nyd_wet.psh12.con.dgn

SEE SHTS. 20 THRU 23 FOR -Y- PROFILE



SEE SHTS. 18 & 19 FOR -Y3- PROFILE
SEE SHT. 19 FOR -Y8- PROFILE



WETLAND AND SURACE WATER IMPACTS SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER 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)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	17+44/17+62 -L- (RT)	Scour Hole Stabilization						< 0.01	< 0.01	20	15	
2A	29+10/29+46 -L- (LT)	Channel Improvements						< 0.01	< 0.01	26	12	
2B	33+00/33+30 -L- (LT)	Bank Stabilization						< 0.01	< 0.01	40	10	
3A	33+30/33+51 -L- (LT)	3 @ 10'X10' RCBC Extension						0.03		53		
	33+30/33+51 -L- (LT)	Bank Stabilization						0.02	< 0.01	45	15	
3B	33+61/33+85 -L- (RT)	Excavation			< 0.01							
	33+24/33+38 -L- (RT)	Bank Stabilization						< 0.01	< 0.01	15	33	
4	14+02/14+36 -RPB- (RT)	Fill Slope				< 0.01						
4A	REMOVED AFTER 4B MEETING											
4B	14+52/14+80 -RPD- (LT)	Bank Stabilization						< 0.01	< 0.01	23	20	
5A	75+05/75+30 -Y- (LT)	Bank Stabilization						< 0.01	< 0.01	10	20	
5B	REMOVED DUE TO DESIGN CHANGE											
5C	51+50/52+59 -L- (RT)	3 @ 12'X12' RCBC Extension						0.02		37		
	51+50/52+59 -L- (RT)	Channel Improvements						0.02		32		
	51+50/52+59 -L- (RT)	Bank Stabilization						0.04	0.03	86	53	
5D	54+50/54+75 -Y- (LT)	Scour Hole Stabilization						< 0.01	< 0.01	14	38	
5E	29+90 -Y3- (CL)	Proposed 12'X10' RCBC						0.07		176		
	29+90 -Y3- (CL)	Bank Stabilization						0.03	< 0.01	73	20	
6	51+47/51+67 -L- (RT)	Channel Improvements						< 0.01	< 0.01	10	10	
7	52+38/52+76 -L- (RT)	Channel Improvements						< 0.01	< 0.01	20	24	
8A	29+75/28+90 -Y3- (CL)	Channel Fill						0.01		121		
8B	26+22/28+96 -Y3- (LT)	Fill Slope	0.30			0.07						
	26+25 -Y3- (CL)	Rip Rap Pad	< 0.01									
9	53+20/53+34 -Y- (LT)	Bank Stabilization						< 0.01	< 0.01	45	17	
10A	87+20/88+15 -Y- (RT)	3 @ 9'X8' RCBC Extension						< 0.01		7		
	87+20/88+15 -Y- (RT)	Channel Improvements						0.03	0.01	50	17	
10B	88+00/88+74 -Y- (RT)	3 @ 9'X8' RCBC Extension				0.03						
10C	86+82/87+00 -Y- (RT)	3 @ 9'X8' RCBC Extension				< 0.01						
11	95+48/99+77 -Y- (RT)	60" RCP Extension						< 0.01		17		
	95+48/99+77 -Y- (RT)	Scour Hole Stabilization						< 0.01	< 0.01	28	23	
11A	101+00/101+15 -Y- (LT)	Bank Stabilization						< 0.01	< 0.01	28	10	
12	101+15/101+57 -Y- (LT)	Diversion Channel							< 0.01		40	
TOTALS*:			0.30	0.00	0.01	0.11	0.00	0.33	0.10	976	377	0

*Rounded totals are sum of actual impacts

NOTES:

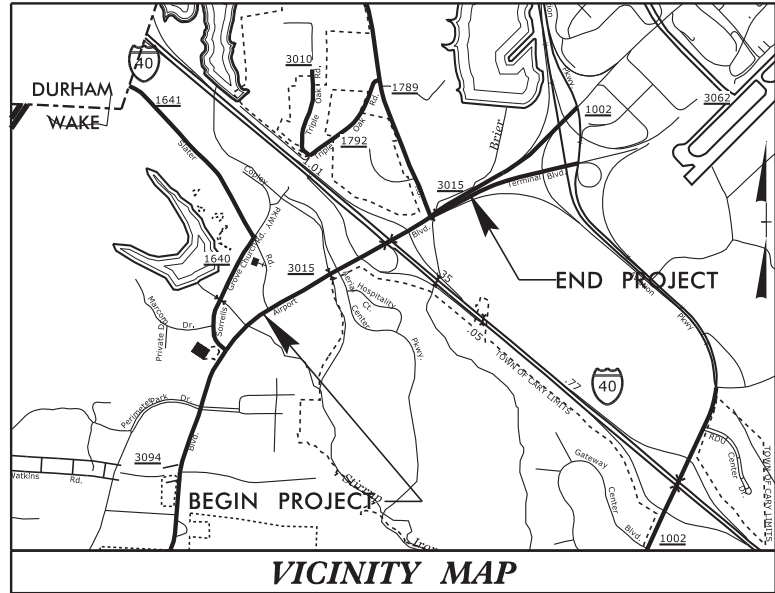
I-5506 Permit Sites have already been permitted and do not contribute to the total wetland and stream impacts for I-5700.
I-5506 Permit Site 5A (48" CMP)
Permanent SW Impacts: <0.01 ac.
Channel Impacts Permanent: 25 FT
I-5506 Permit Site 5B (Bank Stabilization)
Temporary SW Impacts: <0.01 ac.
Channel Impacts Temporary: 26 FT

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
5/2/2019
WAKE
I-5700
50118.1.FS1
SHEET 27 OF 27

TIP PROJECT: I-5700

CONTRACT: 1

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols
See Sheet 1C-1 For Survey Control Sheet



PERMIT DRAWING
SHEET 1 OF 11

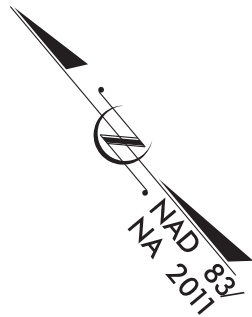
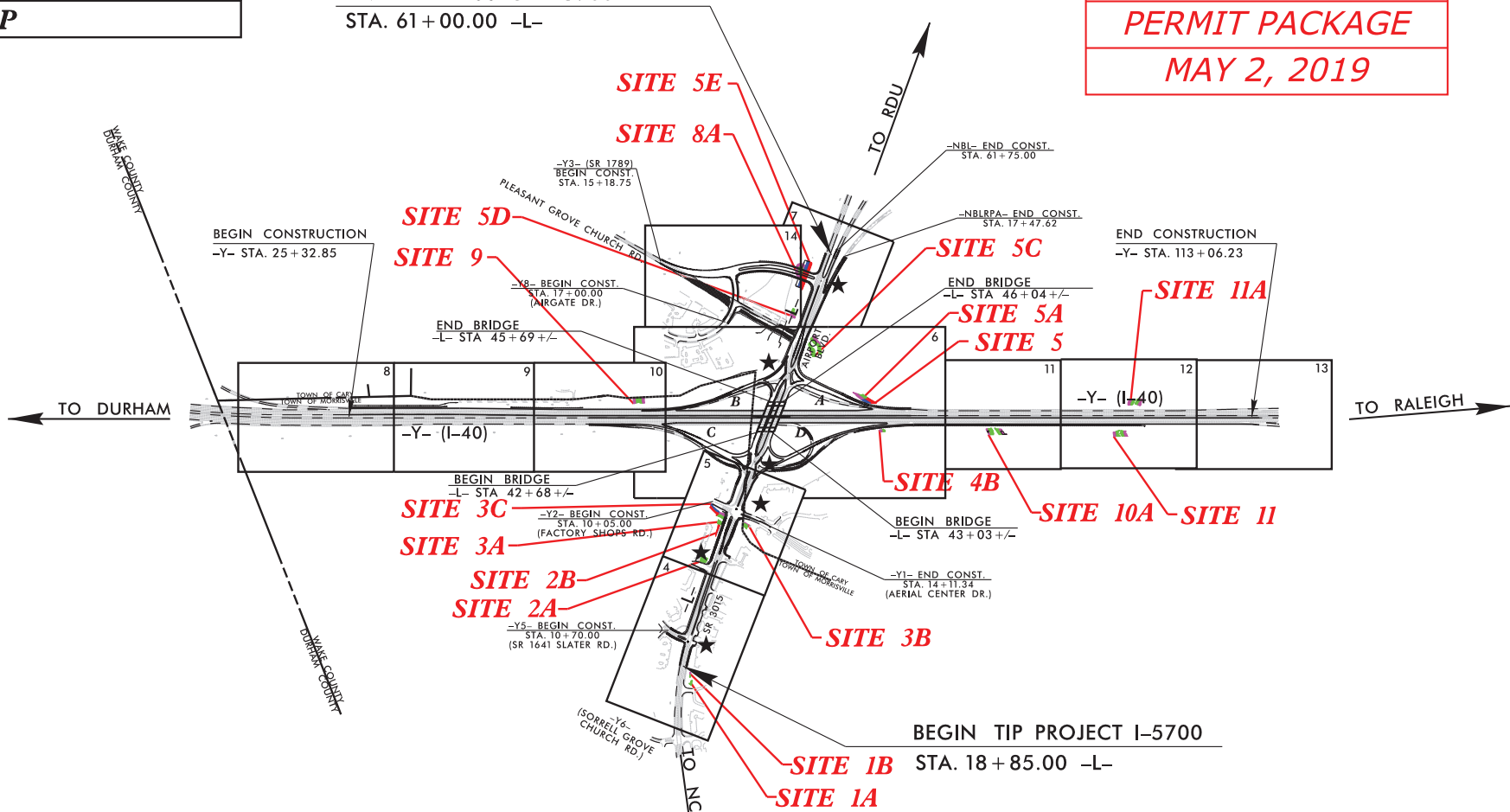
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS WAKE COUNTY

LOCATION: I-40 AND SR 3015 (AIRPORT BLVD.), REVISE INTERCHANGE
AND CONSTRUCT AUXILIARY LANE ON I-40 WESTBOUND
FROM SR 3015 (AIRPORT BLVD. TO I-540.

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

END TIP PROJECT I-5700
STA. 61+00.00 -L-

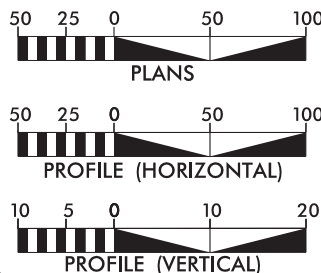
BUFFER
PERMIT PACKAGE
MAY 2, 2019



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MORRISVILLE.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD
THIS IS A PARTIAL CONTROLLED- ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS SHOWN ON THE PLANS.

★ PROPOSED SIGNALS

GRAPHIC SCALES



DESIGN DATA

ADT 2019 = 33,660
ADT 2040 = 46,500
K = 9 %
D = 65 %
T = 6 % *
V = 50 MPH
* TTST=2% DUAL=4%
FUNC CLASS=ARTERIAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5700 = 0.741 MILES
LENGTH STRUCTURE TIP PROJECT I-5700 = 0.057 MILES
TOTAL LENGTH OF TIP PROJECT I-5700 = 0.798 MILES



Prepared for the North Carolina Department
of Transportation in the Office of:

1223 JONES FRANKLIN ROAD
Raleigh, N.C. 27606
License No. F-43277
Box: 919 851 8077
Fax: 919 851 8077

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 21, 2018

LETTING DATE:
SEPTEMBER 17, 2019

NCDOT CONTACT:

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

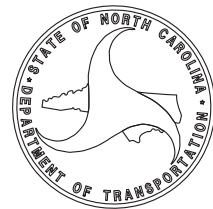
TATIA WHITE, PE, PLS
ROADWAY DESIGN PROJECT ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5700	1	
STATE PROJ.NO.	F.A. PROJ.NO.	DESCRIPTION	
50118.1.FS1	NHPP-040-1(259)286	PE	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

5/14/99

LEGEND



ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2

PERMIT DRAWING
SHEET 3 OF 11

	NORTH	EAST	ELEV.
CUL1	767148.95	2052518.25	282.44
CUL2	767144.33	2052512.96	282.89
CUL3	767143.64	2052512.15	283.30
CUL4	767138.93	2052506.95	282.41
CE1	767144.39	2052513.01	290.56
HW1	767143.86	2052512.58	292.52
CUL5	767069.89	2052651.60	283.50
CUL6	767065.54	2052646.14	288.33
CUL7	767064.53	2052645.56	281.64
CUL8	767060.05	2052639.88	284.32
CE2	767064.73	2052645.45	289.76
HW2	767065.15	2052645.59	291.82

CULVERT #2
TWO BARRELS



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Kimley»Horn

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

4

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

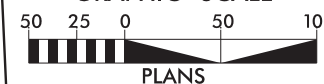
HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



MATCHLINE -L- STA. 26+00.00 SEE SHT. 5

GRAPHIC SCALE



★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHT. 19 FOR -Y5- PROFILE

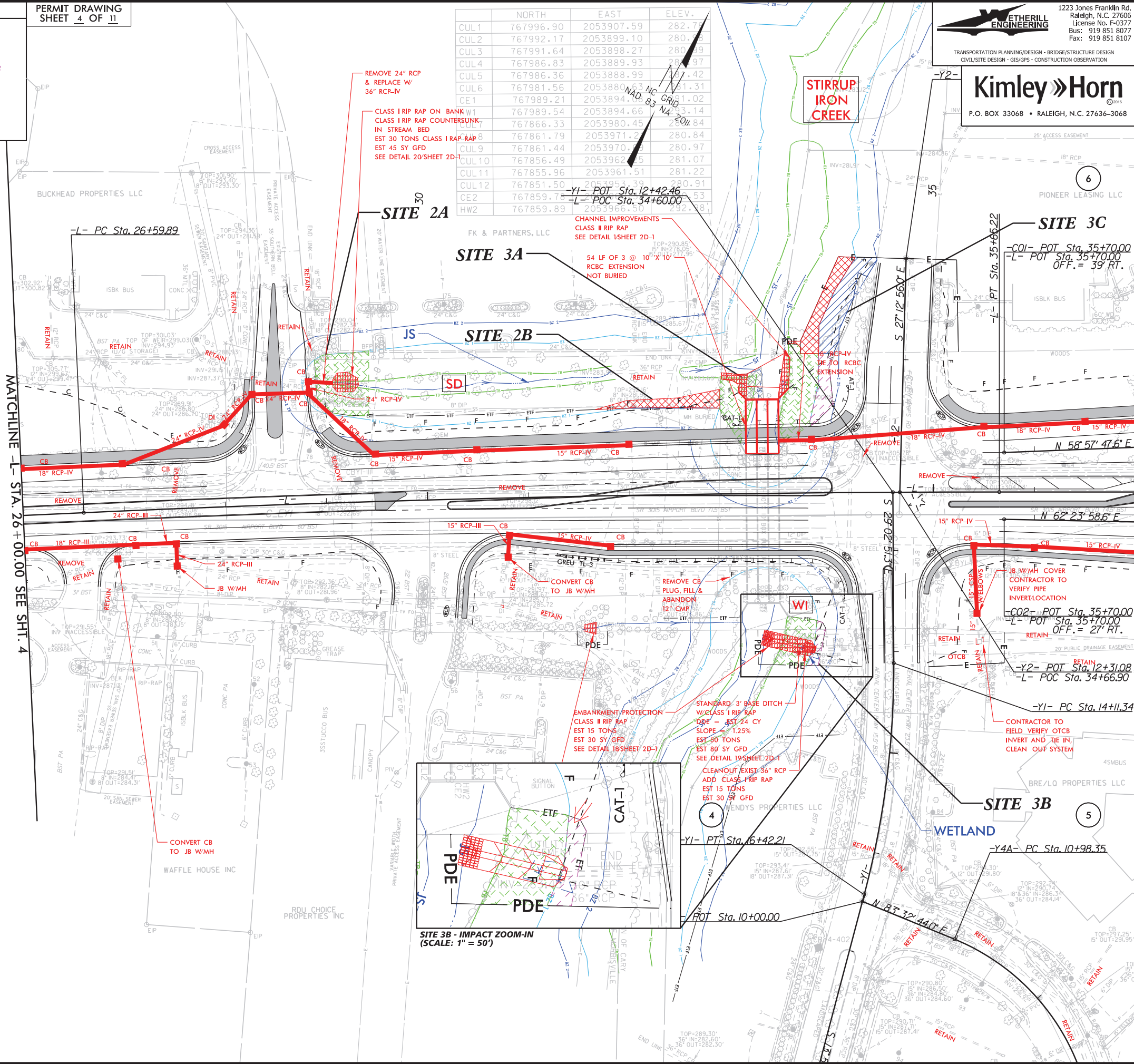
7/14/2008 1-5700_hyd.bur_psh04.dgn

5/14/99

LEGEND

- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

PERMIT DRAWING
SHEET 4 OF 11



PROJECT REFERENCE NO.
1-5700

SHEET NO.
5

RW SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

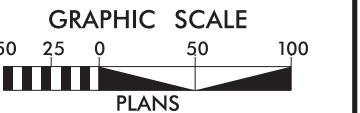
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ETHERILL ENGINEERING

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★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHT. 17 FOR -Y1- PROFILE
SEE SHT. 18 FOR -Y2- PROFILE

7/14/2008 hyd.bur.psh05.dgn

5/14/99

LEGEND

- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

PERMIT DRAWING
SHEET 6 OF 11

SITE 6 FROM 4B PLANS REMOVED.
NOT IMPACTED BY PROPOSED WORK

SITE 7 FROM 4B PLANS REMOVED.
INCORPORATED INTO SITE 5C



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

7

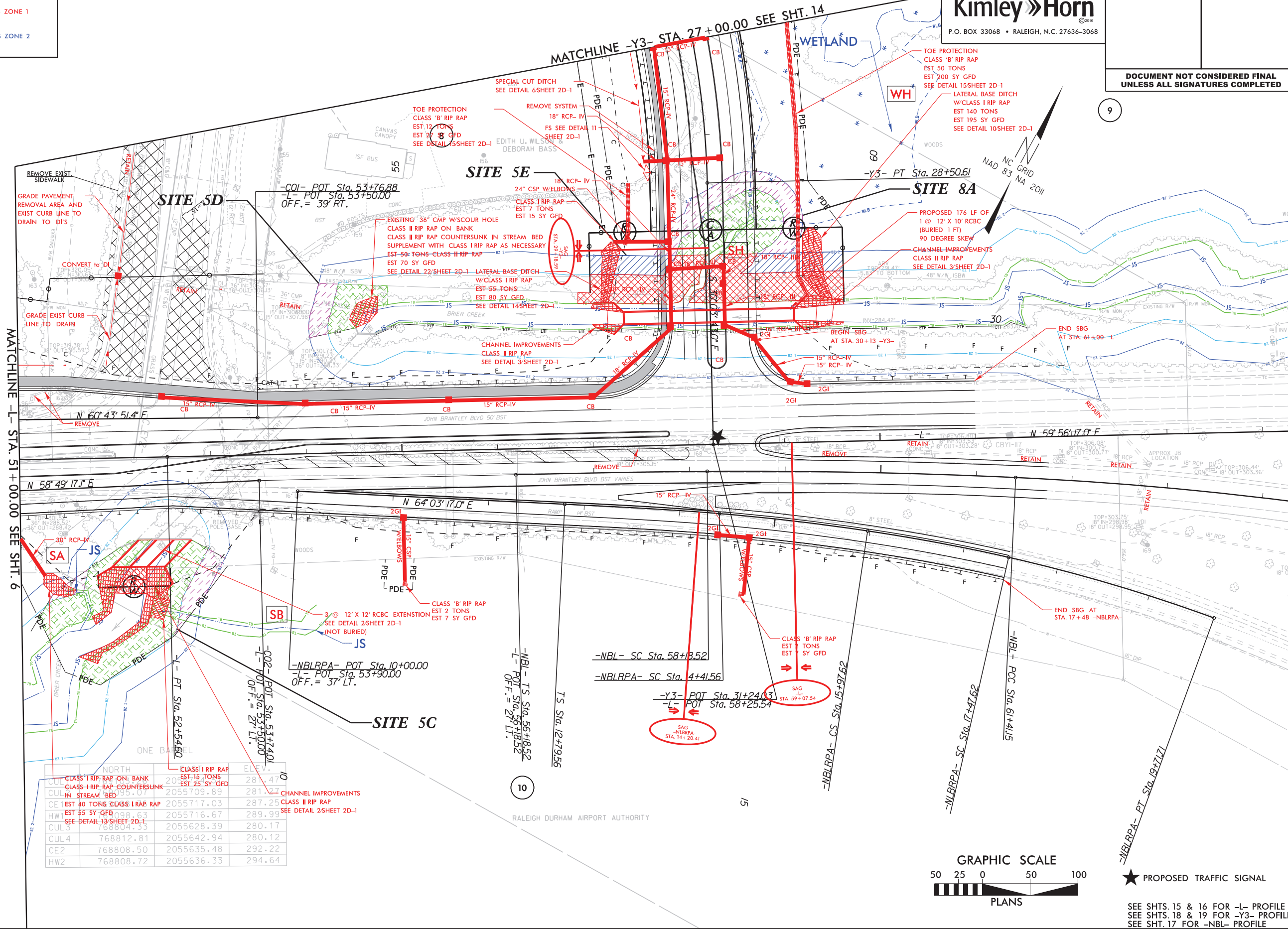
R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

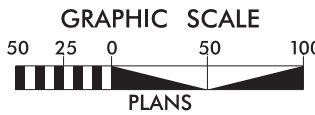
HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

9



NORTH		CLASS I RIP RAP	ELEV.
CUL 1	768808.63	EST 15 TONS	287.47
CUL 2	768808.63	EST 25 SY GFD	287.47
CUL 3	768808.63	EST 25 SY GFD	287.47
CUL 4	768808.63	EST 25 SY GFD	287.47
CUL 5	768808.63	EST 25 SY GFD	287.47
CUL 6	768808.63	EST 25 SY GFD	287.47
CUL 7	768808.63	EST 25 SY GFD	287.47
CUL 8	768808.63	EST 25 SY GFD	287.47
CUL 9	768808.63	EST 25 SY GFD	287.47
CUL 10	768808.63	EST 25 SY GFD	287.47
CUL 11	768808.63	EST 25 SY GFD	287.47
CUL 12	768808.63	EST 25 SY GFD	287.47
CUL 13	768808.63	EST 25 SY GFD	287.47
CUL 14	768808.63	EST 25 SY GFD	287.47
CUL 15	768808.63	EST 25 SY GFD	287.47
CUL 16	768808.63	EST 25 SY GFD	287.47
CUL 17	768808.63	EST 25 SY GFD	287.47
CUL 18	768808.63	EST 25 SY GFD	287.47
CUL 19	768808.63	EST 25 SY GFD	287.47
CUL 20	768808.63	EST 25 SY GFD	287.47
CUL 21	768808.63	EST 25 SY GFD	287.47
CUL 22	768808.63	EST 25 SY GFD	287.47
CUL 23	768808.63	EST 25 SY GFD	287.47
CUL 24	768808.63	EST 25 SY GFD	287.47
CUL 25	768808.63	EST 25 SY GFD	287.47
CUL 26	768808.63	EST 25 SY GFD	287.47
CUL 27	768808.63	EST 25 SY GFD	287.47
CUL 28	768808.63	EST 25 SY GFD	287.47
CUL 29	768808.63	EST 25 SY GFD	287.47
CUL 30	768808.63	EST 25 SY GFD	287.47
CUL 31	768808.63	EST 25 SY GFD	287.47
CUL 32	768808.63	EST 25 SY GFD	287.47
CUL 33	768808.63	EST 25 SY GFD	287.47
CUL 34	768808.63	EST 25 SY GFD	287.47
CUL 35	768808.63	EST 25 SY GFD	287.47
CUL 36	768808.63	EST 25 SY GFD	287.47
CUL 37	768808.63	EST 25 SY GFD	287.47
CUL 38	768808.63	EST 25 SY GFD	287.47
CUL 39	768808.63	EST 25 SY GFD	287.47
CUL 40	768808.63	EST 25 SY GFD	287.47
CUL 41	768808.63	EST 25 SY GFD	287.47
CUL 42	768808.63	EST 25 SY GFD	287.47
CUL 43	768808.63	EST 25 SY GFD	287.47
CUL 44	768808.63	EST 25 SY GFD	287.47
CUL 45	768808.63	EST 25 SY GFD	287.47
CUL 46	768808.63	EST 25 SY GFD	287.47
CUL 47	768808.63	EST 25 SY GFD	287.47
CUL 48	768808.63	EST 25 SY GFD	287.47
CUL 49	768808.63	EST 25 SY GFD	287.47
CUL 50	768808.63	EST 25 SY GFD	287.47
CUL 51	768808.63	EST 25 SY GFD	287.47
CUL 52	768808.63	EST 25 SY GFD	287.47
CUL 53	768808.63	EST 25 SY GFD	287.47
CUL 54	768808.63	EST 25 SY GFD	287.47
CUL 55	768808.63	EST 25 SY GFD	287.47
CUL 56	768808.63	EST 25 SY GFD	287.47
CUL 57	768808.63	EST 25 SY GFD	287.47
CUL 58	768808.63	EST 25 SY GFD	287.47
CUL 59	768808.63	EST 25 SY GFD	287.47
CUL 60	768808.63	EST 25 SY GFD	287.47
CUL 61	768808.63	EST 25 SY GFD	287.47
CUL 62	768808.63	EST 25 SY GFD	287.47
CUL 63	768808.63	EST 25 SY GFD	287.47
CUL 64	768808.63	EST 25 SY GFD	287.47
CUL 65	768808.63	EST 25 SY GFD	287.47
CUL 66	768808.63	EST 25 SY GFD	287.47
CUL 67	768808.63	EST 25 SY GFD	287.47
CUL 68	768808.63	EST 25 SY GFD	287.47
CUL 69	768808.63	EST 25 SY GFD	287.47
CUL 70	768808.63	EST 25 SY GFD	287.47
CUL 71	768808.63	EST 25 SY GFD	287.47
CUL 72	768808.63	EST 25 SY GFD	287.47
CUL 73	768808.63	EST 25 SY GFD	287.47
CUL 74	768808.63	EST 25 SY GFD	287.47
CUL 75	768808.63	EST 25 SY GFD	287.47
CUL 76	768808.63	EST 25 SY GFD	287.47
CUL 77	768808.63	EST 25 SY GFD	287.47
CUL 78	768808.63	EST 25 SY GFD	287.47
CUL 79	768808.63	EST 25 SY GFD	287.47
CUL 80	768808.63	EST 25 SY GFD	287.47
CUL 81	768808.63	EST 25 SY GFD	287.47
CUL 82	768808.63	EST 25 SY GFD	287.47
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CUL 84	768808.63	EST 25 SY GFD	287.47
CUL 85	768808.63	EST 25 SY GFD	287.47
CUL 86	768808.63	EST 25 SY GFD	287.47
CUL 87	768808.63	EST 25 SY GFD	287.47
CUL 88	768808.63	EST 25 SY GFD	287.47
CUL 89	768808.63	EST 25 SY GFD	287.47
CUL 90	768808.63	EST 25 SY GFD	287.47
CUL 91	768808.63	EST 25 SY GFD	287.47
CUL 92	768808.63	EST 25 SY GFD	287.47
CUL 93	768808.63	EST 25 SY GFD	287.47
CUL 94	768808.63	EST 25 SY GFD	287.47
CUL 95	768808.63	EST 25 SY GFD	287.47
CUL 96	768808.63	EST 25 SY GFD	287.47
CUL 97	768808.63	EST 25 SY GFD	287.47
CUL 98	768808.63	EST 25 SY GFD	287.47
CUL 99	768808.63	EST 25 SY GFD	287.47
CUL 100	768808.63	EST 25 SY GFD	287.47



★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHTS. 18 & 19 FOR -Y3- PROFILE
SEE SHT. 17 FOR -NBL- PROFILE

7/24/2008 hyd.bur.f.psh07.dgn

5/14/99

LEGEND



ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2

PERMIT DRAWING
SHEET 7 OF 11



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Kimley»Horn

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

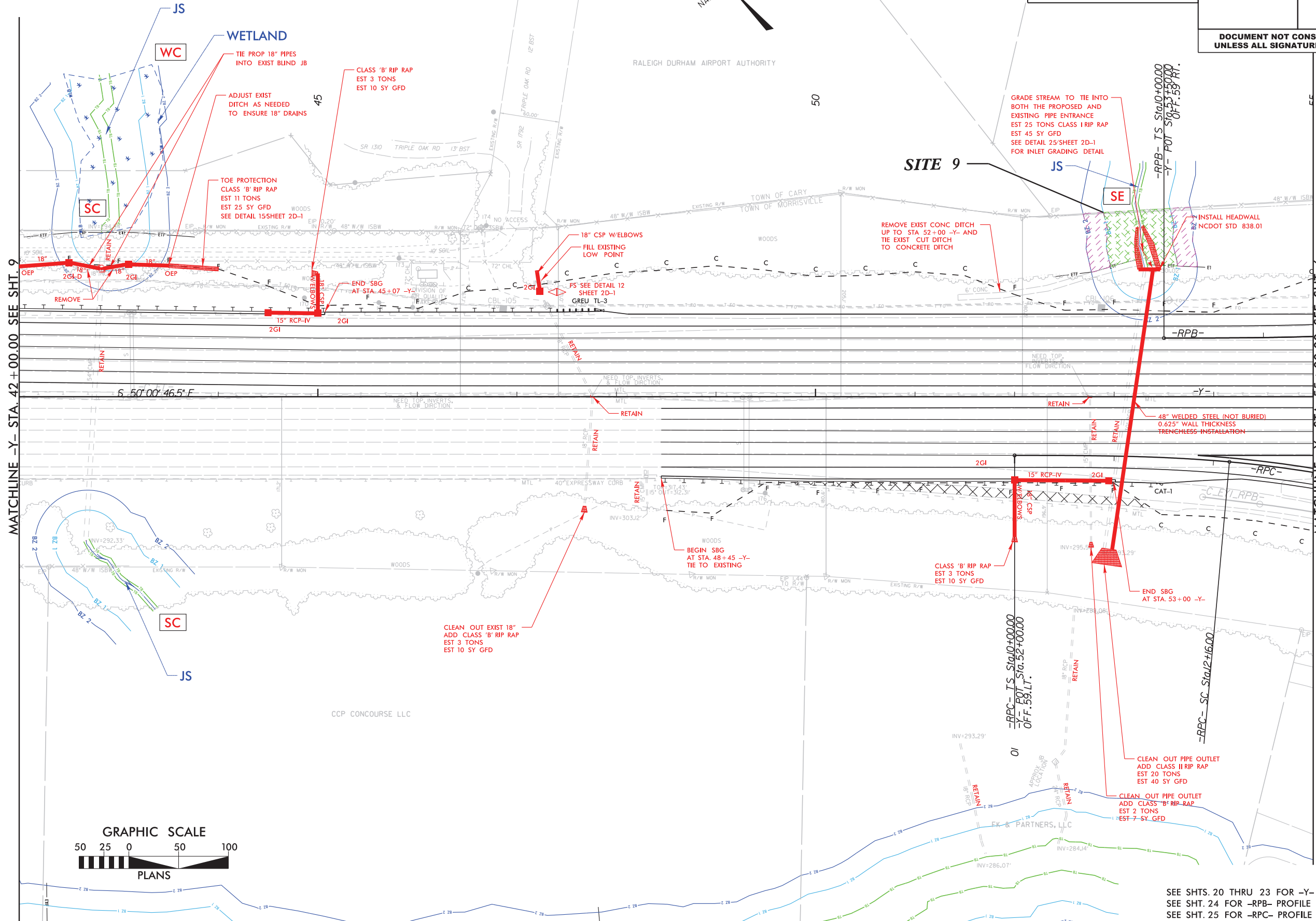
10

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
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GRAPHIC SCALE

50 25 0 50 100

PLANS

SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHT. 24 FOR -RPB- PROFILE
SEE SHT. 25 FOR -RPC- PROFILE

7/14/2008
1-5700-hyd-buf_psh10.dgn

5/14/99

LEGEND

- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2

PERMIT DRAWING
SHEET 8 OF 11



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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PROJECT REFERENCE NO.

1-5700

SHEET NO.

11

R/W SHEET NO.

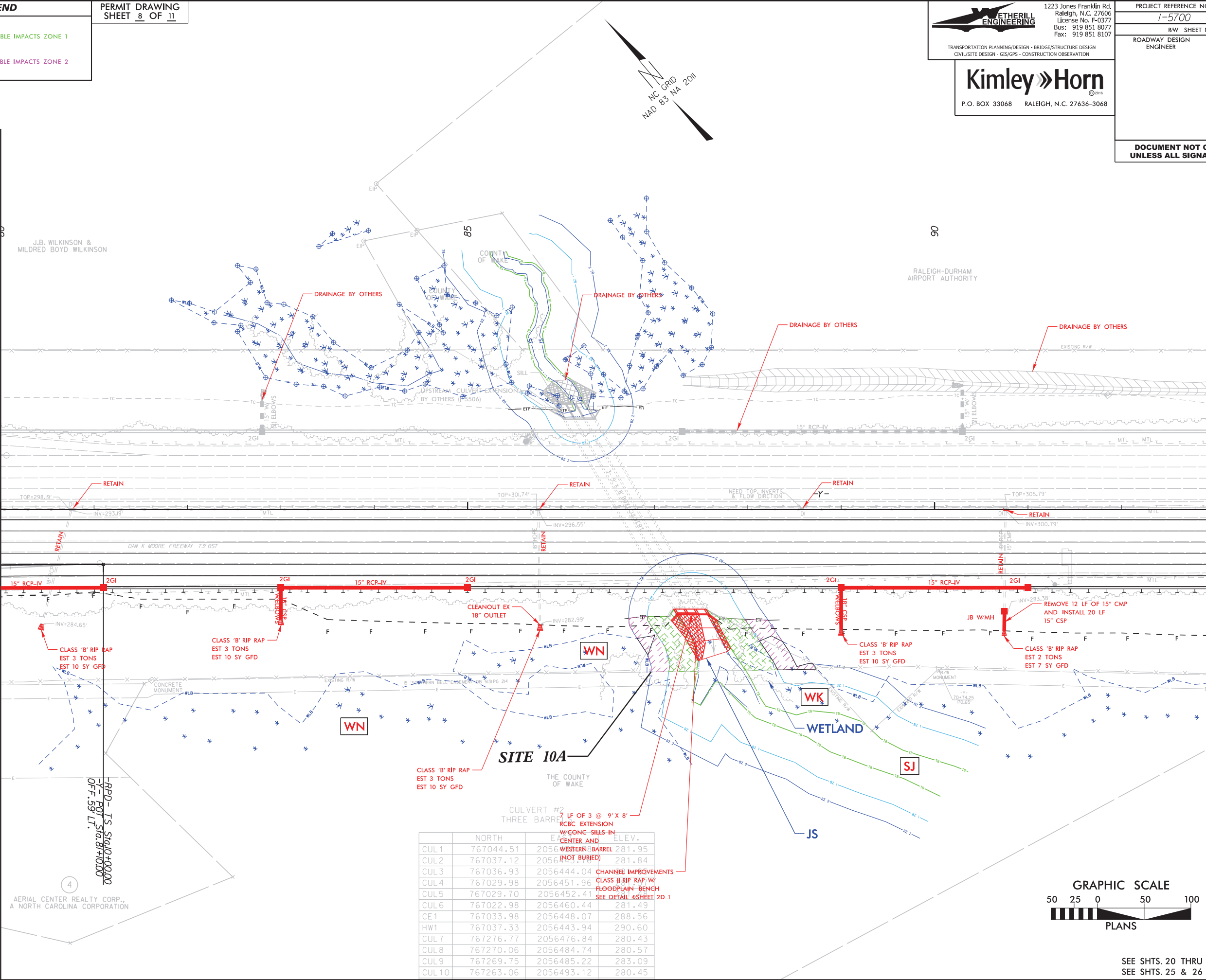
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

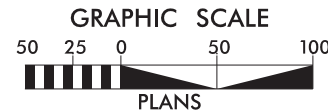
DOCUMENT NOT CONSIDERED FINAL
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MATCHLINE -Y- STA. 80 + 00.00 SEE SHT. 6

MATCHLINE -Y- STA. 93 + 00.00 SEE SHT. 12



	NORTH	ELEV.	ELEV.
CUL1	767044.51	2056	281.95
CUL2	767037.12	2056	281.84
CUL3	767036.93	2056444.04	281.84
CUL4	767029.98	2056451.96	281.84
CUL5	767029.70	2056452.41	281.84
CUL6	767022.98	2056460.44	281.49
CE1	767033.98	2056448.07	288.56
HW1	767037.33	2056443.94	290.60
CUL7	767276.77	2056476.84	280.43
CUL8	767270.06	2056484.74	280.57
CUL9	767269.75	2056485.22	283.09
CUL10	767263.06	2056493.12	280.45



SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHTS. 25 & 26 FOR -RPD- PROFILE

7/24/2008
1-5700.hyd.buf_psh11.dgn

RIPARIAN BUFFER IMPACTS SUMMARY													
			IMPACTS									BUFFER REPLACEMENT	
Site No.	Station (From/To)	Structure Size / Type	TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft²)	ZONE 2 (ft²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)		
1A	17+08/17+61 -L- (RT)	Scour Hole Stabilization	X			634	0	634					
1B	17+85/18+40 -L- (RT)	Bank Stabilization	X			261	195	456					
2A	28+93/29+46 -L- (LT)	Channel Improvements	X			2889		2889					
2B	31+68/32+90 -L- (LT)	Proposed Fill Slope			X				1108	50	1158		
3A	32+90/34+46 -L- (LT)	3 @ 10' x 10' RCBC Extension	X			4098	919	5017					
3B	33+42/33+92 -L- (RT)	Bank Stabilization	X			1357	367	1724					
3C	33+58/34+46 -L- (LT)	Proposed Fill Slope			X				1348	1929	3277		
4	4B MEETING SITE NOT IN BUFFER ZONE												
4A	JS NOT SUBJECT TO BUFFER RULES												
4B	14+14/14+70 -RPD- (LT)	Bank Stabilization	X			605	414	1019					
5	13+42/15+03 -RPA- (LT)	Proposed Fill Slope			X				2867	1390	4257		
5A	15+03/15+68 -RPA- (LT)	Bank Stabilization	X			1699	1753	3452					
5B	REMOVED DUE TO DESIGN CHANGE												
5C	51+23/52+50 -L- (RT)	3 @ 12' x 12' RCBC Extension	X			9315	1967	11282					
5D	54+05/54+89 -L- (LT)	Scour Hole Stabilization	X			2009	1115	3124					
5E	57+00/59+65 -L- (LT)	Proposed 12' x 10' RCBC	X						9400	3633	13033		
6	JS NOT SUBJECT TO BUFFER RULES												
7	JS NOT SUBJECT TO BUFFER RULES												
8A	28+40/29+25 -Y3- (CL)	Channel Fill	X			4932	4741	9673					
8B	4B MEETING SITE NOT IN BUFFER ZONE												
9	52+69/53+84 -Y- (LT)	Bank Stabilization	X			3303	2362	5665					
10A	86+73/88+54 -Y- (RT)	3 @ 9' x 8' RCBC Extension	X			4014	2654	6667					
11	98+97/100+37 -Y- (RT)	Scour Hole Stabilization	X			3629	1937	5566					
11A	100+40/101+90 -Y- (LT)	Bank Stabilization	X			3478	2449	5927					
12	JS NOT SUBJECT TO BUFFER RULES												
TOTALS*:						42223	20873	63096	14723	7002	21725	0	0

NOTES:
I-5506 Permit Sites have already been permitted and do not contribute to the total buffer impacts for I-5700.
I-5506 Permit Site 4 (48" CMP)
Allowable Zone 1 Impacts: 4150 SF
Allowable Zone 2 Impacts: 418 SF
Total Allowable Impacts: 4569 SF

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
5/2/2019
WAKE
I-5700
50118.1.FS1
SHEET 10 OF 11

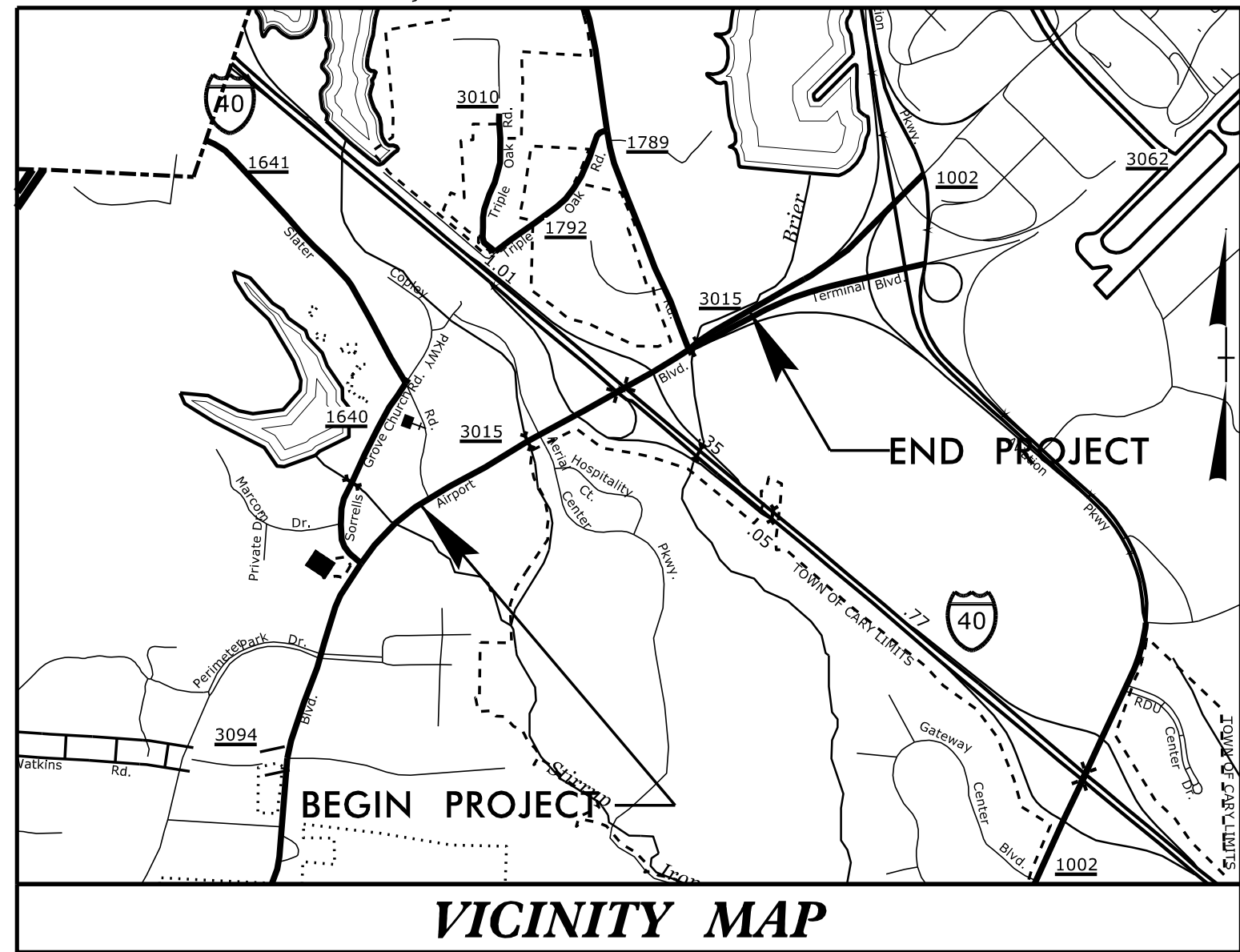
WETLANDS IN BUFFER IMPACTS SUMMARY

			WETLANDS IN BUFFERS	
SITE NO.	STATION (FROM/TO)		ZONE 1 (ft ²)	ZONE 2 (ft ²)
3B	33+61/33+85 -L- (RT)		177.24	52.74
8A	28+37/28+94 -Y3- (LT)		803	1374
10A	86+81/88+74 -Y- (RT)		322	1062
TOTAL:			1302	2489

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
5/2/2019
WAKE
I-5700
50118.1.FS1

SHEET 11 OF 11

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols
See Sheet 1C-1 For Survey Control Sheet



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

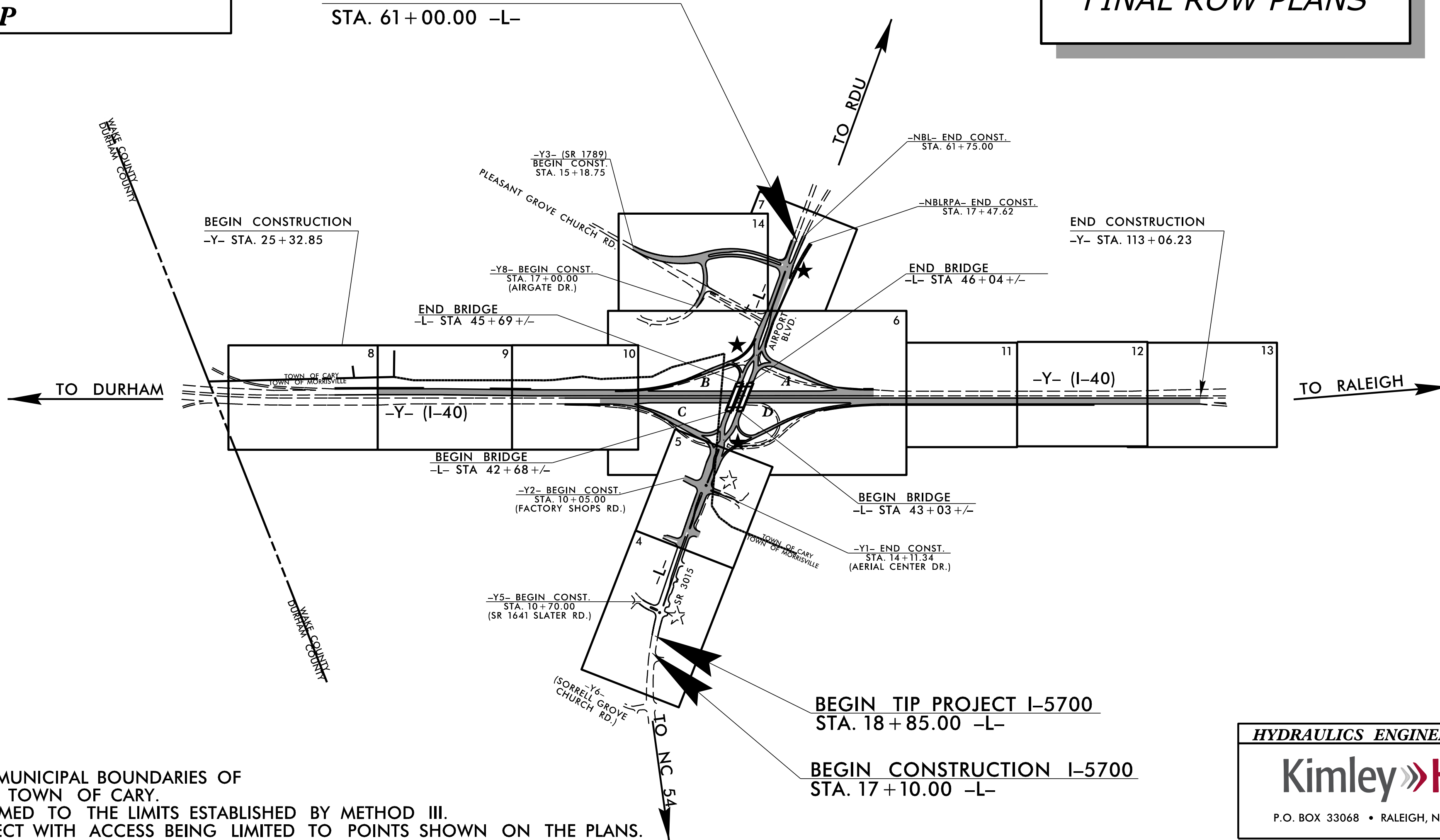
WAKE COUNTY

LOCATION: I-40 AND SR 3015 (AIRPORT BLVD.), REVISE INTERCHANGE
AND CONSTRUCT AUXILIARY LANE ON I-40 WESTBOUND
FROM SR 3015 (AIRPORT BLVD.) TO I-540.

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

END TIP PROJECT I-5700
STA. 61+00.00 -L-

FINAL ROW PLANS

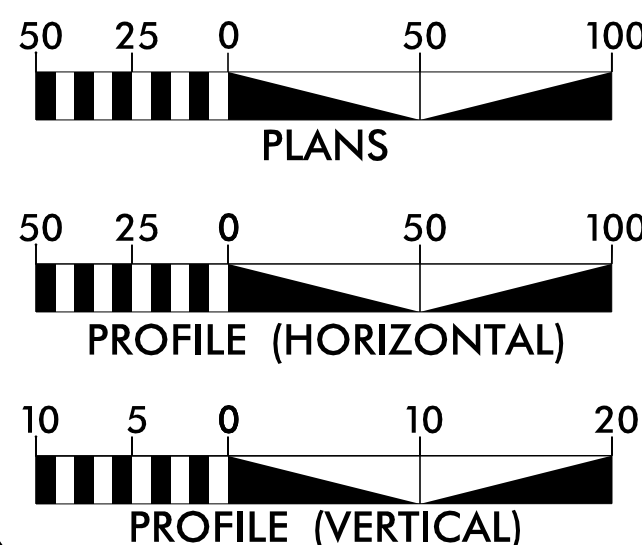


★ PROPOSED SIGNALS
☆ EXISTING SIGNALS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF
THE TOWN OF MORRISVILLE AND TOWN OF CARY.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A PARTIAL CONTROLLED- ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS SHOWN ON THE PLANS.

GRAPHIC SCALES



DESIGN DATA

ADT 2019 = 33,660
ADT 2040 = 46,500
K = 9 %
D = 65 %
T = 6 % *
V = 50 MPH
* TTST=2% DUAL=4%
FUNC CLASS=ARTERIAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5700 = 0.741 MILES
LENGTH STRUCTURE TIP PROJECT I-5700 = 0.057 MILES
TOTAL LENGTH OF TIP PROJECT I-5700 = 0.798 MILES



Prepared for the North Carolina Department
of Transportation in the Office of:

1223 JONES FRANKLIN ROAD
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8077

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 24, 2018

LETTING DATE:
SEPTEMBER 17, 2019

NCDOT CONTACT:

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

PAMELA R. WILLIAMS, PE
ROADWAY DESIGN PROJECT ENGINEER

HYDRAULICS ENGINEERING FIRM

Kimley»Horn

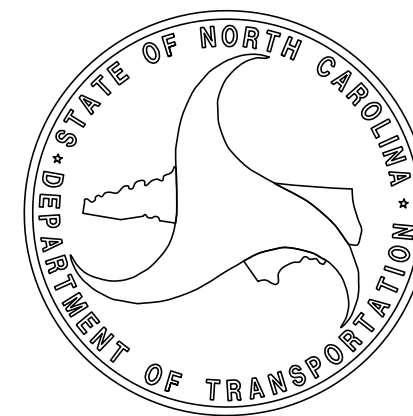
P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.



TIP PROJECT: I-5700

CONTRACT:

6/2/99

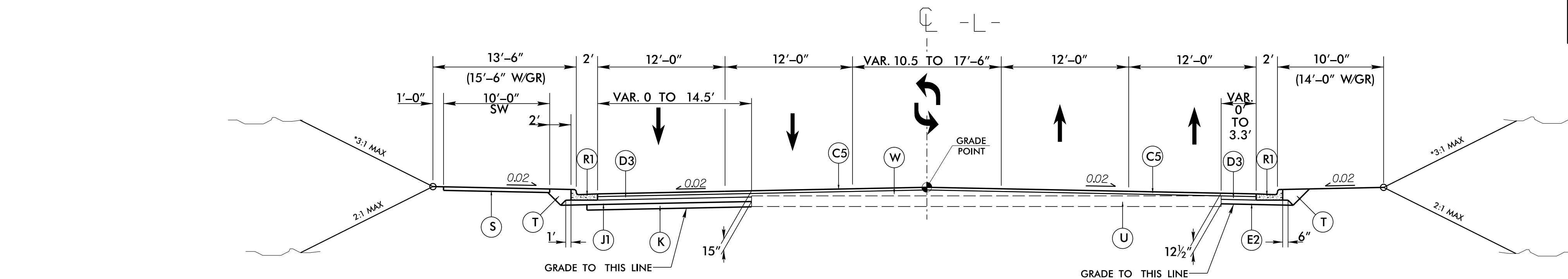


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PROJECT REFERENCE NO.		SHEET NO.
1-5700		2A-2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	

DOCUMENT NOT CONSIDERED FINAL
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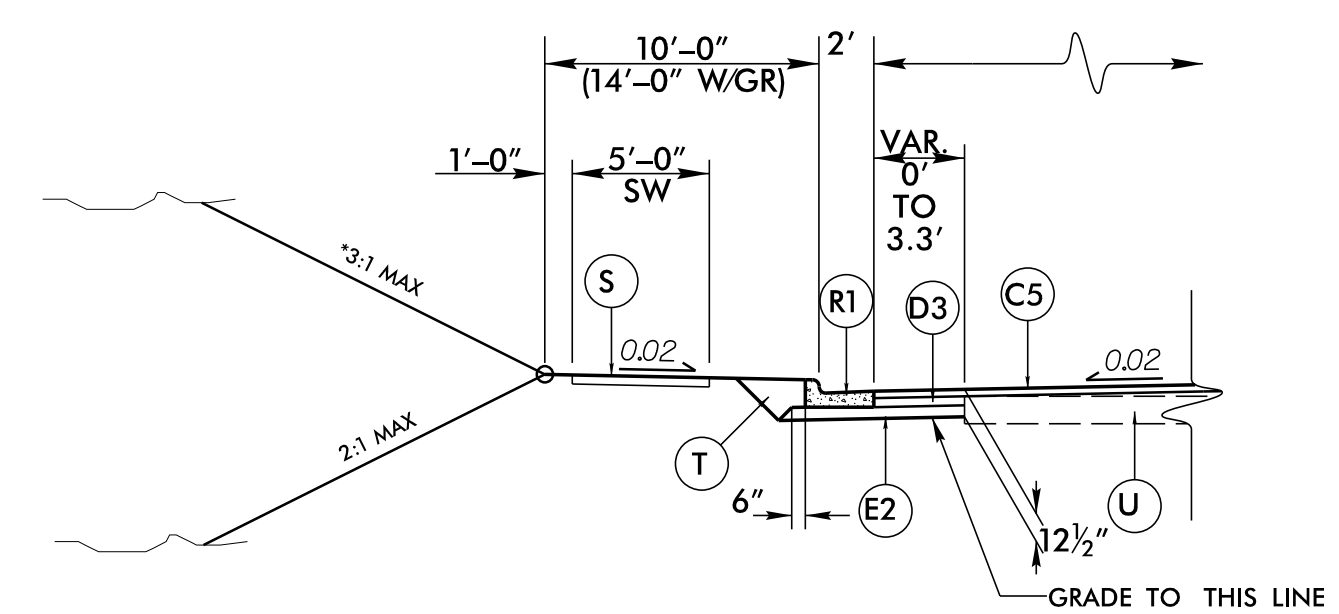
PAVEMENT SCHEDULE	
C5	3" S9.5C
D3	4" I19.5C
E2	5 1/2" B25.0C
J1	8" ABC
K	STABILIZATION
R1	2'-6" C&G
R2	1'-6" C&G
R3	CONC. ISLAND
S	4" CONC. SW
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	1 1/2" MILLING
W	WEDGING



TYPICAL SECTION NO. 1

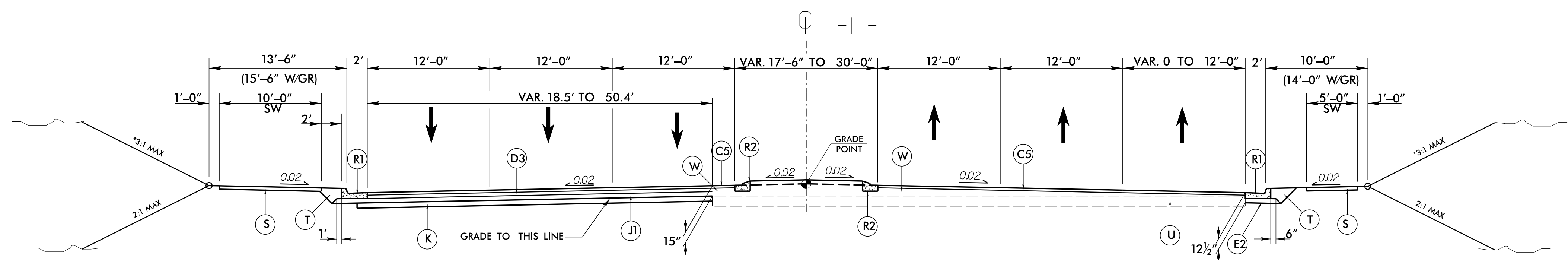
-L- (AIRPORT BOULEVARD)
*NOTE: 3:1 MAXIMUM CUT SLOPES ARE BEING UTILIZED DUE TO PRESENCE OF TRIASSIC SOILS.
USE TYPICAL SECTION NO. 1
-L- STA. 19+60.00 TO 22+24.95

NOTE: TRANSITION FROM EXISTING PAVEMENT TO
TYPICAL SECTION NO. 1 -L- STA. 18+85.00 TO 19+60.00



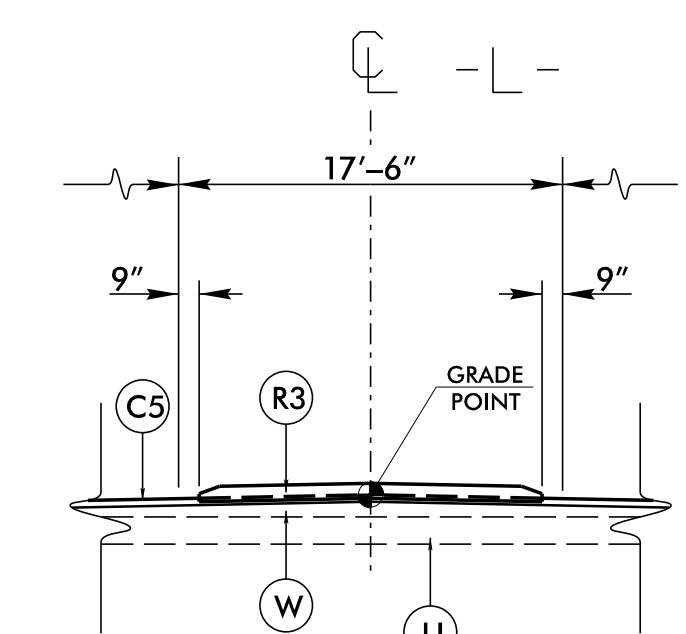
PARTIAL TYPICAL SECTION NO. 1

USE IN CONJUNCTION WITH TS NO. 1
USE PARTIAL TYPICAL SECTION NO. 1
-L- STA. 18+85.00 TO 21+11.49 LT.
-L- STA. 18+85.00 TO 21+06.42 RT.



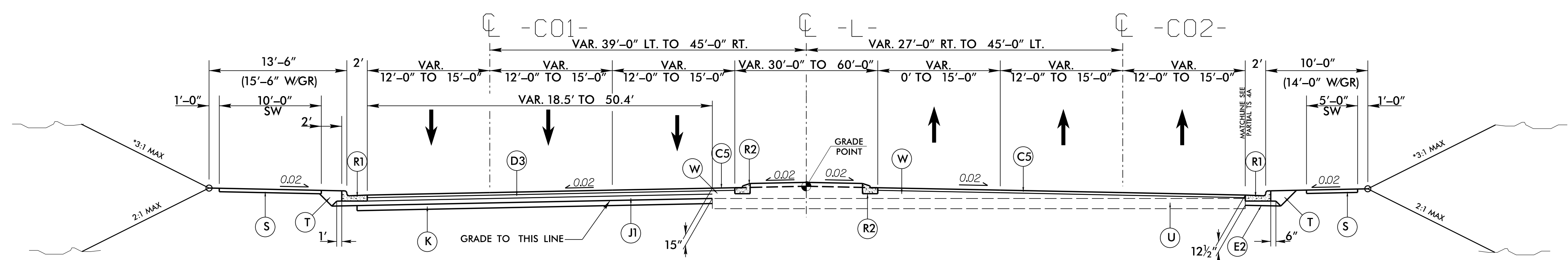
TYPICAL SECTION NO. 2

-L- (AIRPORT BOULEVARD)
*NOTE: 3:1 MAXIMUM CUT SLOPES ARE BEING UTILIZED DUE TO PRESENCE OF TRIASSIC SOILS.
USE TYPICAL SECTION NO. 2
-L- STA. 22+24.95 TO 35+70



PARTIAL TYPICAL SECTION NO. 2

USE IN CONJUNCTION WITH TS NOS. 2 & 3
USE PARTIAL TYPICAL SECTION NO. 2
-L- STA. 22+00.00 TO 24+00.00
-L- STA. 26+82.55 TO 27+82.55
-L- STA. 35+95.00 TO 38+68.00



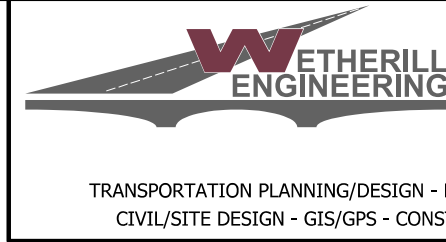
TYPICAL SECTION NO. 3

-L- (AIRPORT BOULEVARD)
*NOTE: 3:1 MAXIMUM CUT SLOPES ARE BEING UTILIZED DUE TO PRESENCE OF TRIASSIC SOILS.
USE TYPICAL SECTION NO. 3
-L- STA. 35+70.00 TO 39+07.67
-L- STA. 46+26.56 TO 53+50.00

9/24/2008 Rdy_psh02A-2.Typ.dgn
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USER:Rdy

6/2/99

9/24/2018
11:57:08
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11:58:00



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Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.

1-5700

ROADWAY DESIGN
ENGINEER

SHEET NO.

2A-3

PAVEMENT DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE

C5 3" S9.5C

D3 4" I19.5C

E2 5½" B25.0C

J1 8" ABC

K STABILIZATION

R1 2'-6" C&G

R2 1'-6" C&G

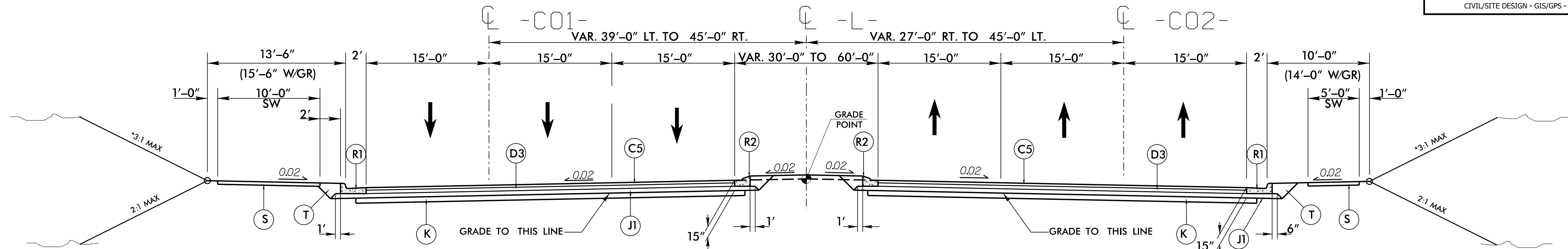
S 4" CONC. SW

T EARTH MATERIAL

U EXIST. PAVEMENT

V1 1½" MILLING

W WEDGING



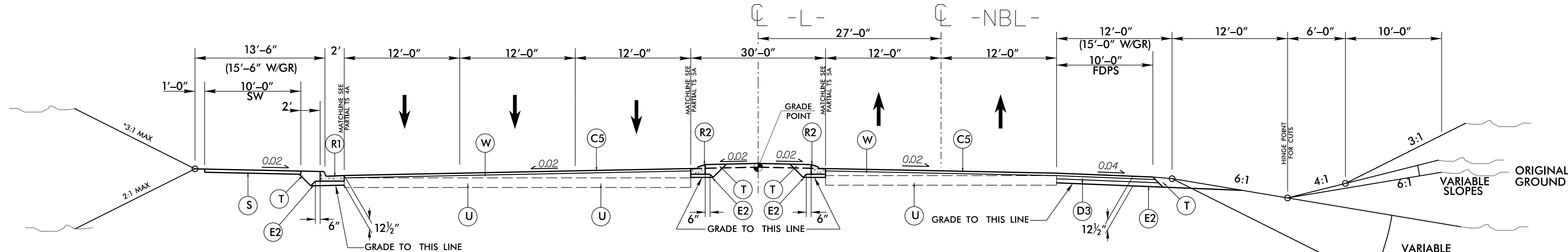
TYPICAL SECTION NO. 4

-L- (AIRPORT BOULEVARD)

*NOTE: 3:1 MAXIMUM CUT SLOPES ARE BEING UTILIZED DUE TO PRESENCE OF TRIASSIC SOILS.

USE TYPICAL SECTION NO. 4

-L- STA. 39+07.67 TO 42+68+/- (BEG. BR.) LT.
-L- STA. 39+07.67 TO 43+03+/- (BEG. BR.) RT.
-L- STA. 45+69+/- (END BR.) LT. TO 49+26.56
-L- STA. 46+04+/- (END BR.) RT. TO 49+26.56



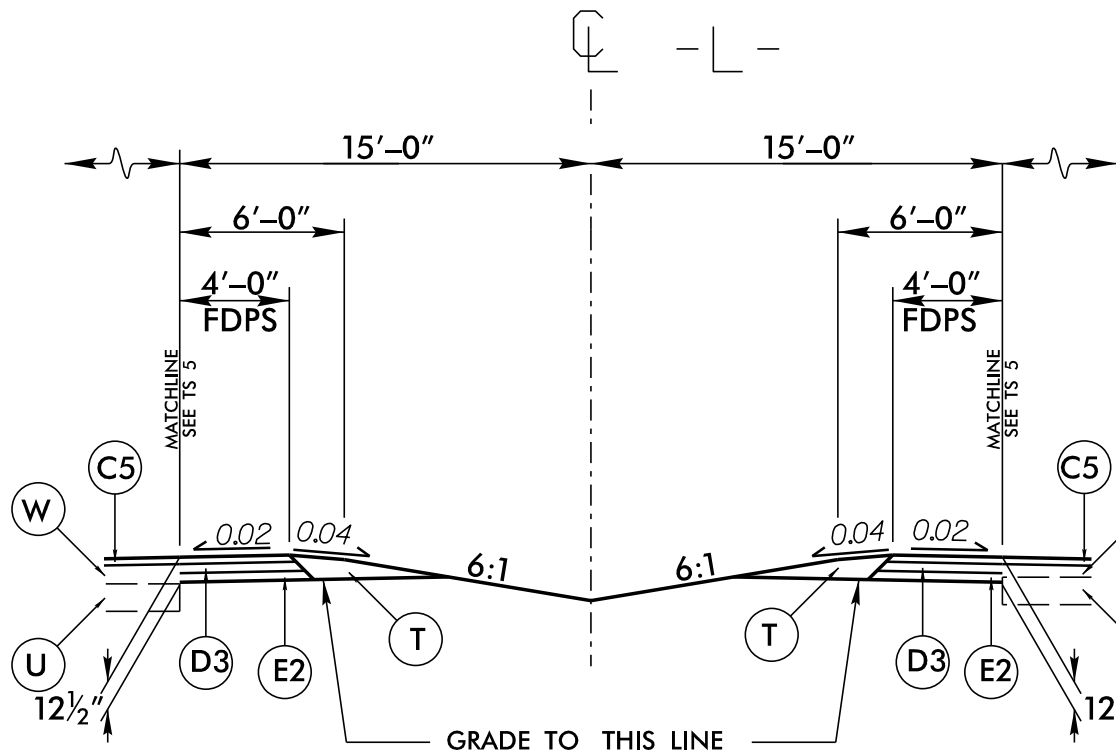
TYPICAL SECTION NO. 5

-L- (AIRPORT BOULEVARD)

*NOTE: 3:1 MAXIMUM CUT SLOPES ARE BEING UTILIZED DUE TO PRESENCE OF TRIASSIC SOILS.

USE TYPICAL SECTION NO. 5

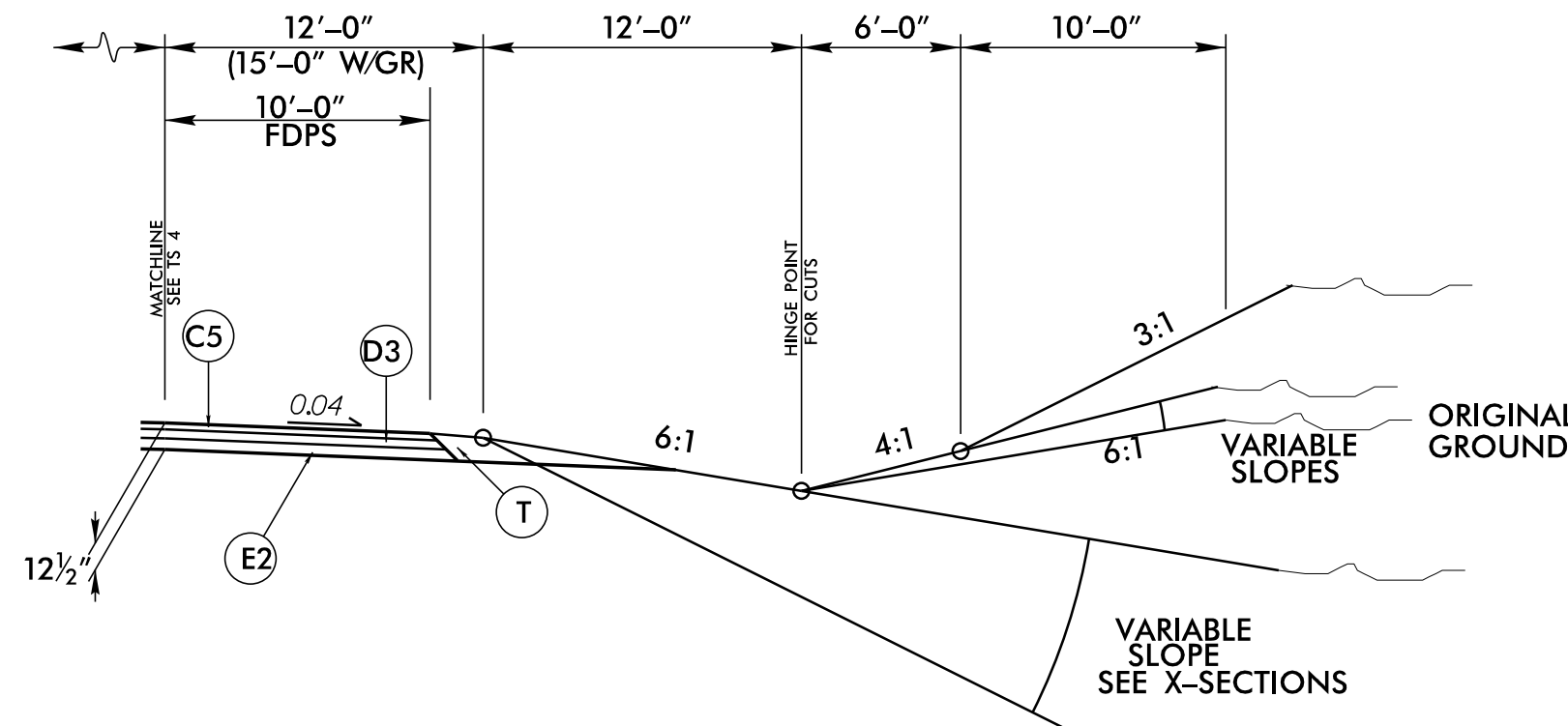
-L- STA. 53+50.00 TO 61+00.00
-NBL- STA. 58+18.52 TO 61+75.00



TYPICAL SECTION NO. 5A

USE PARTIAL TYPICAL SECTION 5A IN
CONJUNCTION W/TS NO. 5

USE TYPICAL SECTION NO. 5A
-L- STA. 58+69.56 TO -NBL- STA. 61+75.00 RT.
-L- STA. 58+69.56 TO 61+00.00 LT.

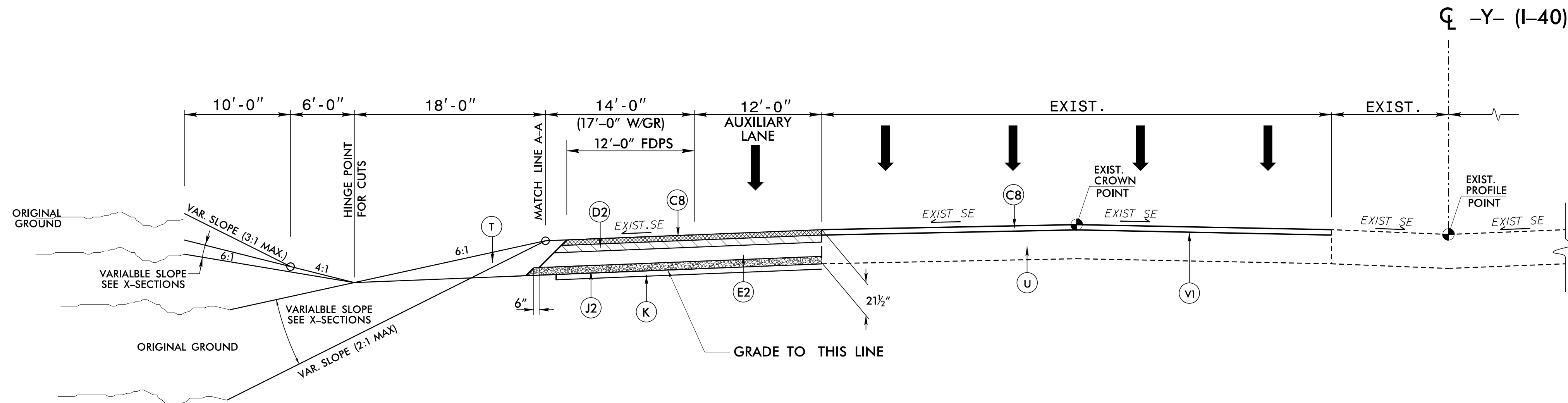


TYPICAL SECTION NO. 3A

USE PARTIAL TYPICAL SECTION 4A IN
CONJUNCTION W/TS NOS. 3 & 5

USE TYPICAL SECTION NO. 3A
-L- STA. 50+40.52 TO 53+50.00 RT.
-L- STA. 59+25.54 TO 61+00.00 LT.

6/2/99 9/24/2008 Rdj_psh02A-4_Typ.dgn

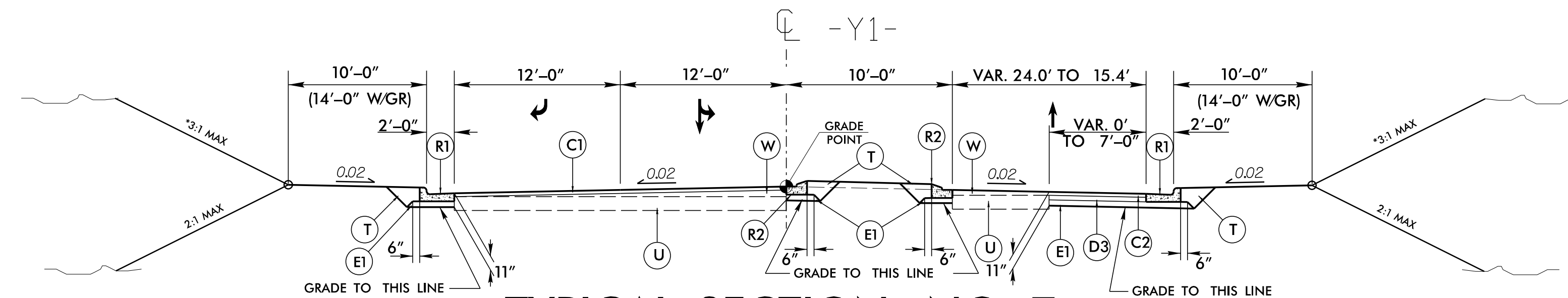


TYPICAL SECTION NO. 6

-Y- (I-40)

USE TYPICAL SECTION NO. 4A

-Y- STA. 25+32.85 TO 53+50.00 LT.
-Y- STA. 48+45.00 TO 52+00.00 RT. (INVERT TYPICAL)
-Y- STA. 81+10.00 TO 113+06.23 RT. (INVERT TYPICAL)

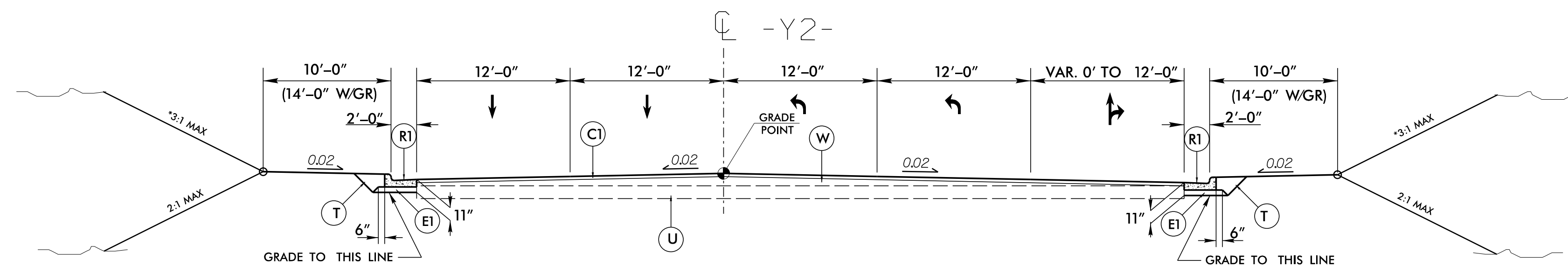


TYPICAL SECTION NO. 7

-Y1- (AERIAL CENTER PARKWAY)

USE TYPICAL SECTION NO. 7

-Y1- STA. 12+97.46 TO 14+11.34



TYPICAL SECTION NO. 8

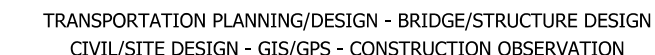
-Y2- (FACTORY SHOPS RD.)

USE TYPICAL SECTION NO. 8

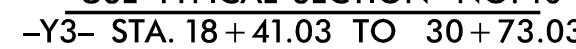
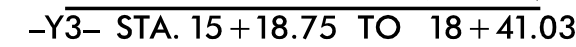
-Y2- STA. 10+05.00 TO 11+76.05

PROJECT REFERENCE NO.	SHEET NO.
I-5700	2A-4
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	

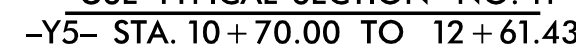
PAVEMENT SCHEDULE		
C1	1 1/2"	S9.5B
C2	3"	S9.5B
C8	3"	S9.5D
D2	3"	I19.5C
D3	4"	I19.5C
E1	4"	B25.0C
E2	5 1/2"	B25.0C
J2	10"	ABC
K		STABILIZATION
R1	2'-6"	C&G
R2	1'-6"	C&G
S	4"	CONC. SW
T		EARTH MATERIAL
U		EXIST. PAVEMENT
V1	1 1/2"	MILLING
W		WEDGING



**DOCUMENT NOT CONSIDERED FINAL
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PAVEMENT SCHEDULE	
C1	1½" S9.5B
C2	3" S9.5B
D3	4" I19.5C
E1	4" B25.0C
R1	2'-6" C&G
R2	1'-6" C&G
S	4" CONC. SW
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	1½" MILLING
W	WEDGING



NOTE: RAISED ISLAND TO BE CONSTRUCTED AT FOLLOWING LOCATION:
-Y5- STA. 11+79.34 TO 12+57.35

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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.

1-5700

SHEET NO.

2A-6

ROADWAY DESIGN
ENGINEER

PAVEMENT DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
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PAVEMENT SCHEDULE

C2 3" S9.5B

C5 3" S9.5C

D2 3" I19.5C

D3 4" I19.5C

E1 4" B25.0C

E2 5 1/2" B25.0C

J1 8" ABC

K STABILIZATION

R1 2'-6" C&G

R2 1'-6" C&G

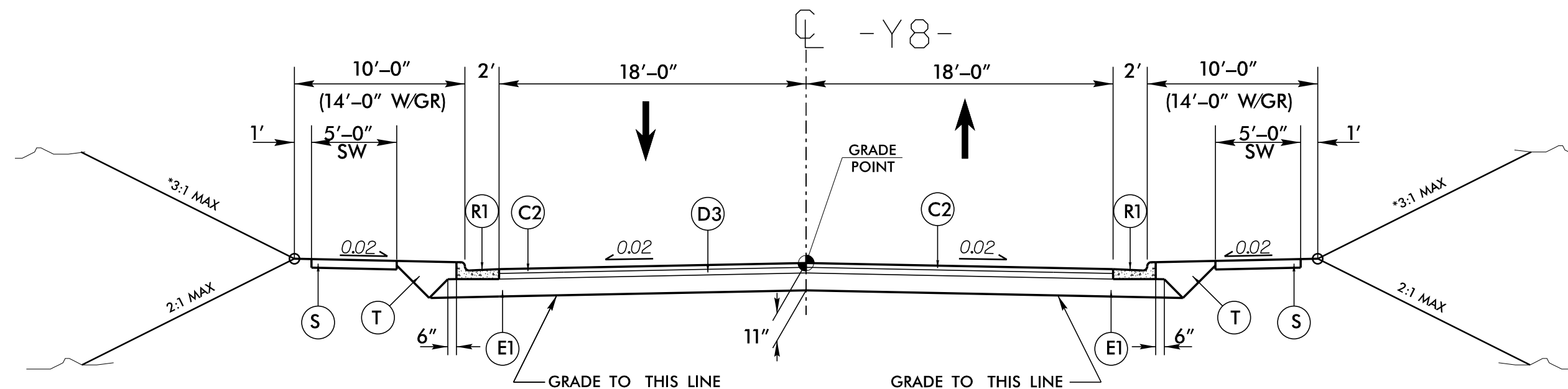
S 4" CONC. SW

T EARTH MATERIAL

U EXIST. PAVEMENT

V1 1 1/2" MILLING

W WEDGING



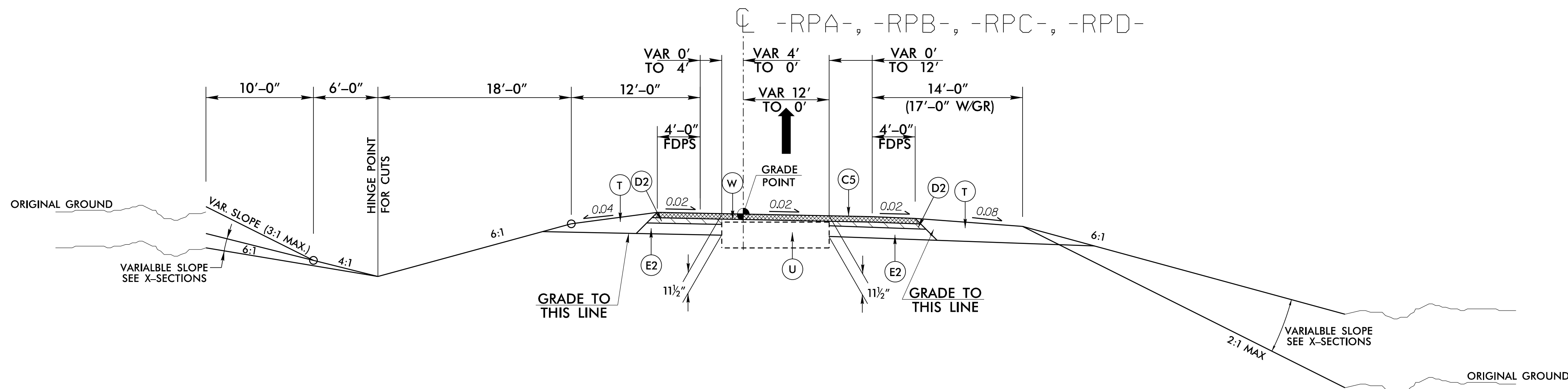
TYPICAL SECTION NO. 12

-Y8- (AIRGATE DR.)

*NOTE: 3:1 MAXIMUM CUT SLOPES ARE BEING UTILIZED DUE TO PRESENCE OF TRIASSIC SOILS.

USE TYPICAL SECTION NO. 12

-Y8- STA. 17+00.00 TO 21+78.46



TYPICAL SECTION NO. 13

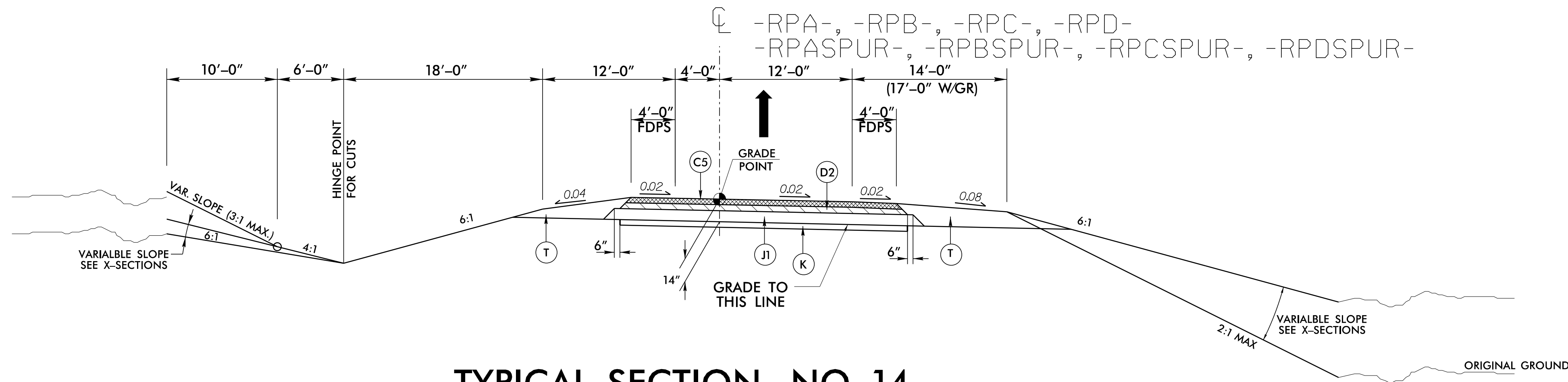
USE TYPICAL SECTION NO. 13

-RPA- STA. 10+00.00 TO 11+50.00

(MIRROR) -RPB- STA. 10+00.00 TO 11+50.00

-RPC- STA. 10+00.00 TO 11+00.00

(MIRROR) -RPD- STA. 10+00.00 TO 12+50.00



TYPICAL SECTION NO. 14

USE TYPICAL SECTION NO. 14

-RPA- STA. 11+50.00 TO 22+25.73

(MIRROR) -RPB- STA. 11+50.00 TO 23+93.68

-RPC- STA. 11+00.00 TO 22+86.11

(MIRROR) -RPD- STA. 12+50.00 TO 26+69.97

-RPASPUR- STA. 10+00.00 TO 12+06.55

-RPBSPUR- STA. 10+00.00 TO 14+09.31

-RPCSPUR- STA. 20+40.66 TO 22+80.65

-RPDSPUR- STA. 10+00.00 TO 14+78.07

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6/2/99



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.

1-5700

SHEET NO.

2A-7

ROADWAY DESIGN
ENGINEER

PAVEMENT DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE

C2 3" S9.5B

D1 2½" I19.5C

E1 4" B25.0C

R1 2'-6" C&G

R2 1'-6" C&G

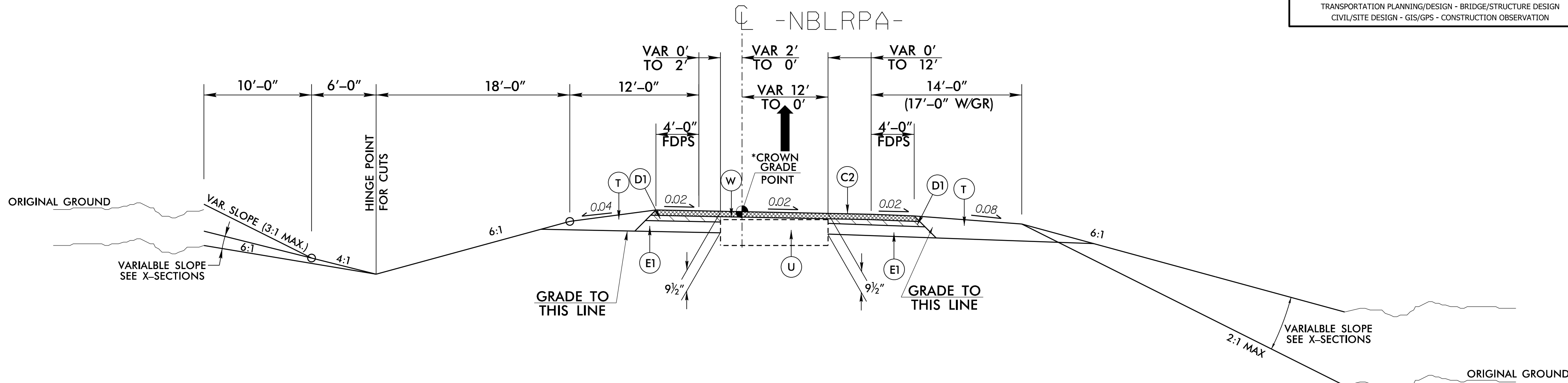
S 4" CONC. SW

T EARTH MATERIAL

U EXIST. PAVEMENT

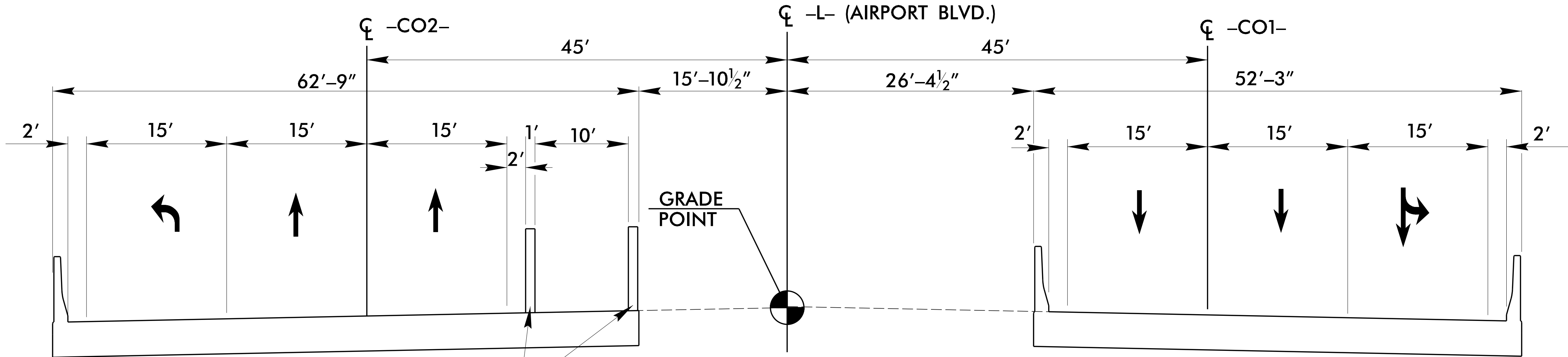
V1 1½" MILLING

W WEDGING



TYPICAL SECTION NO. 15

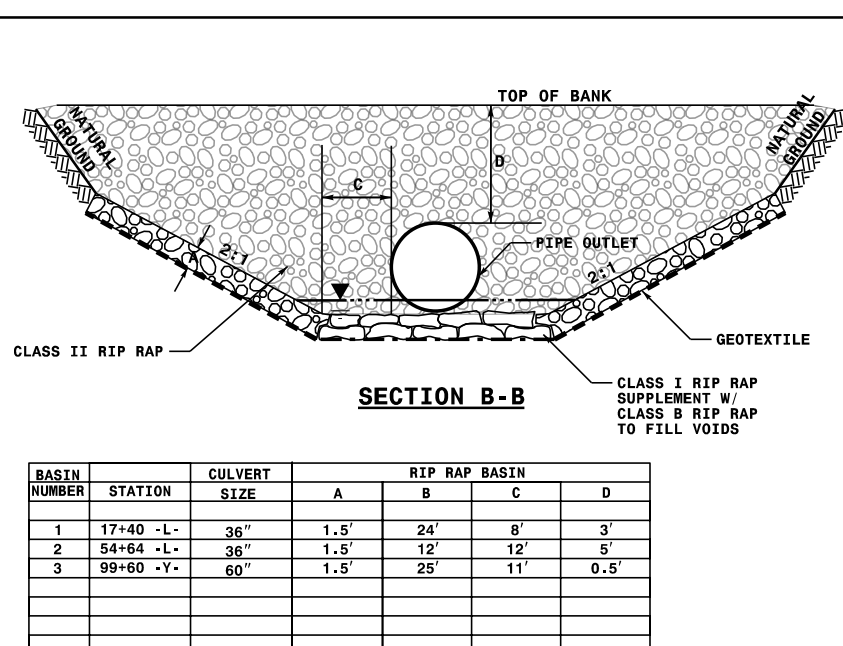
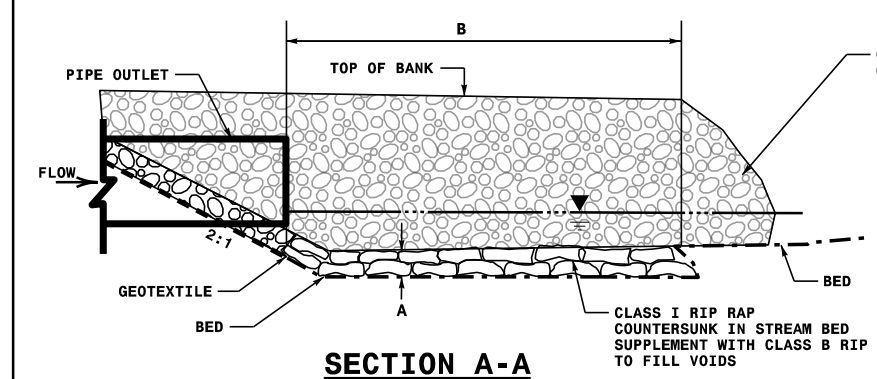
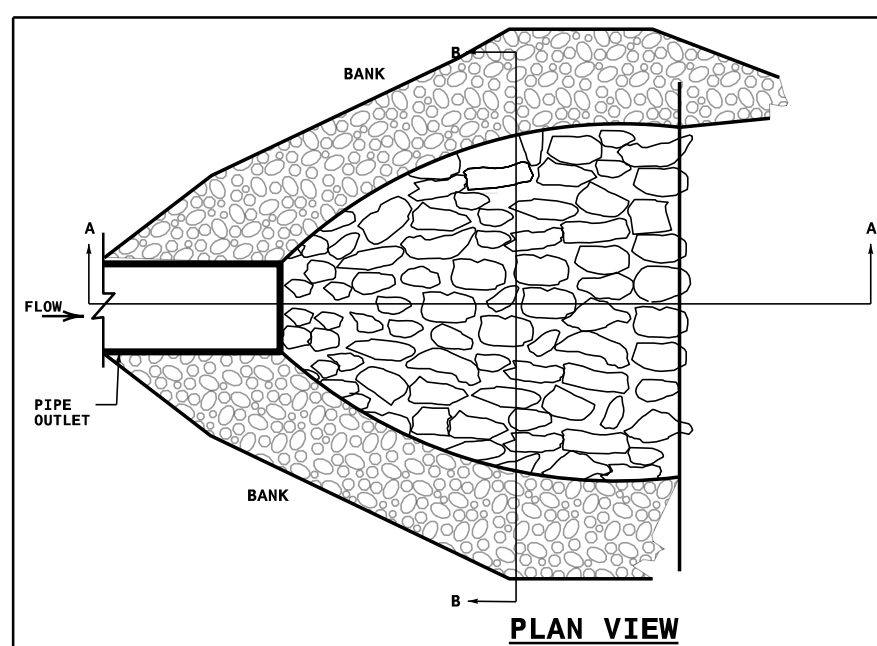
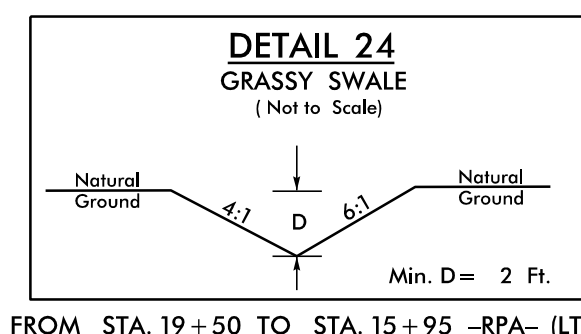
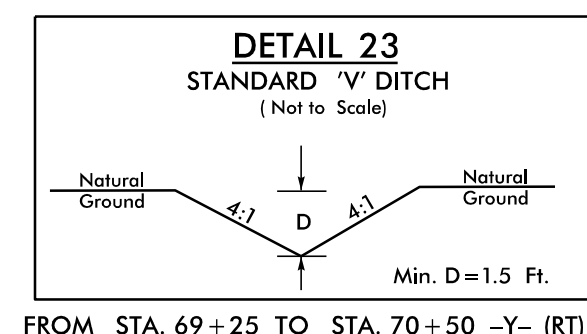
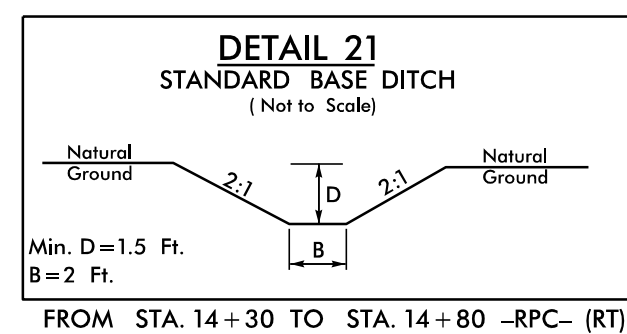
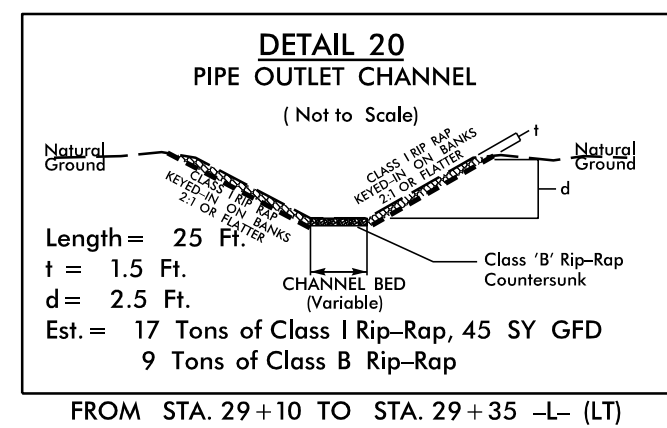
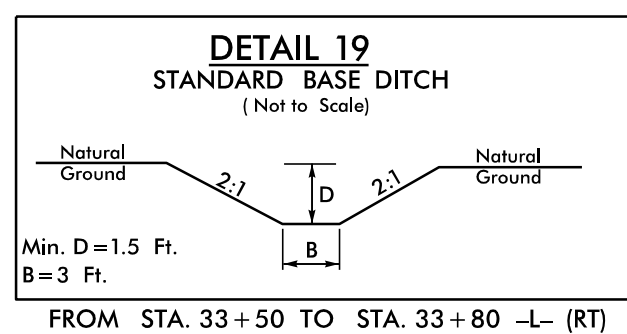
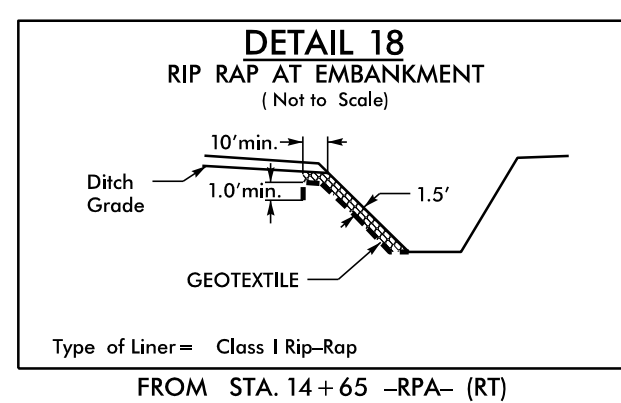
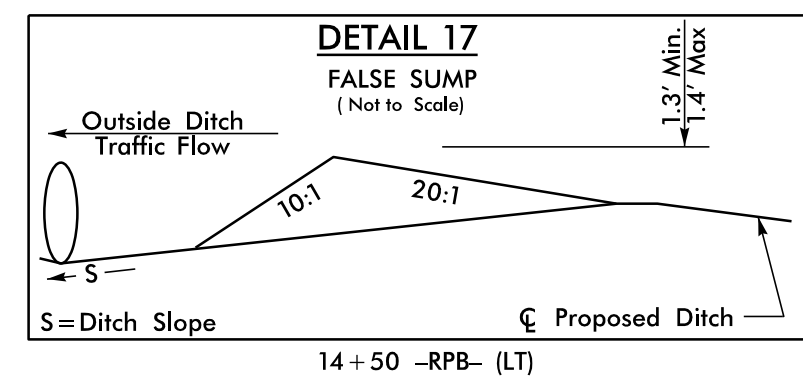
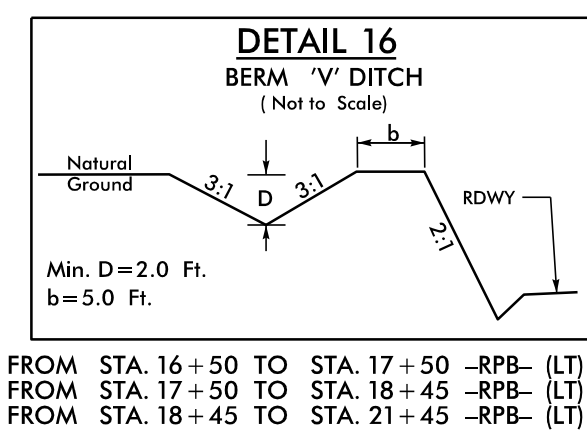
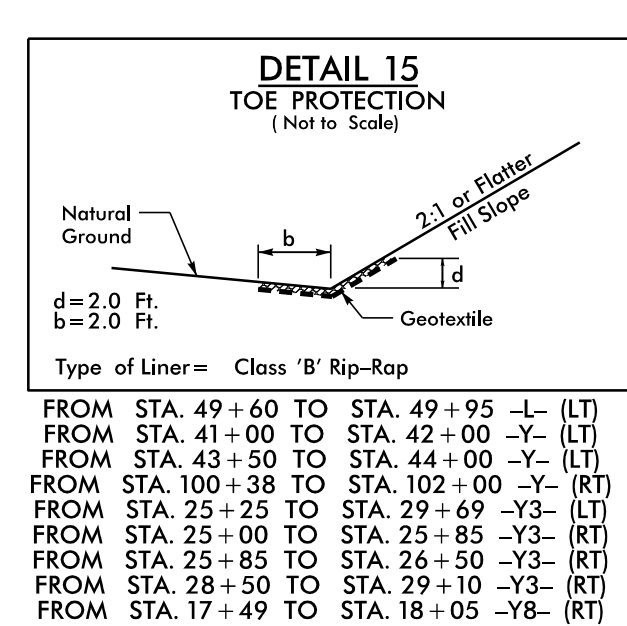
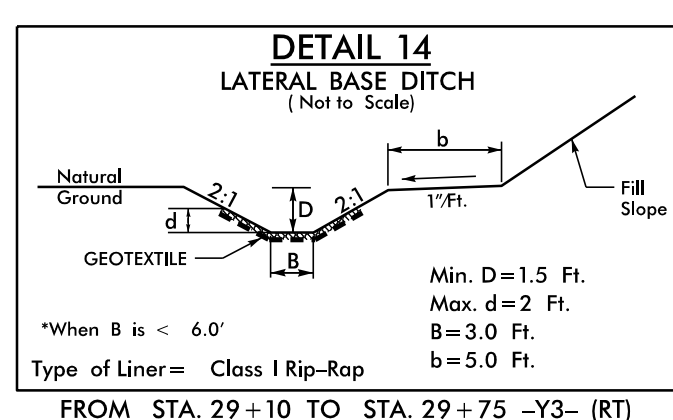
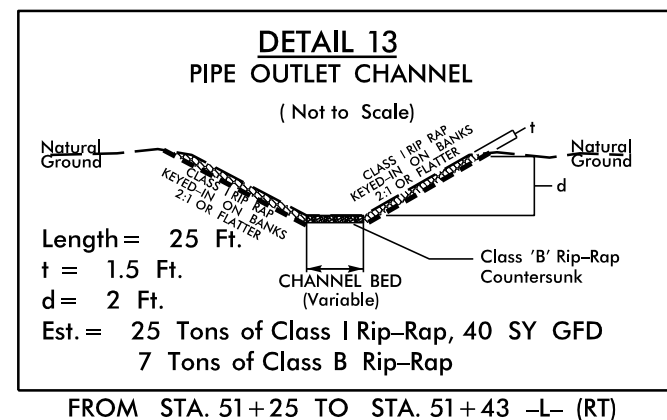
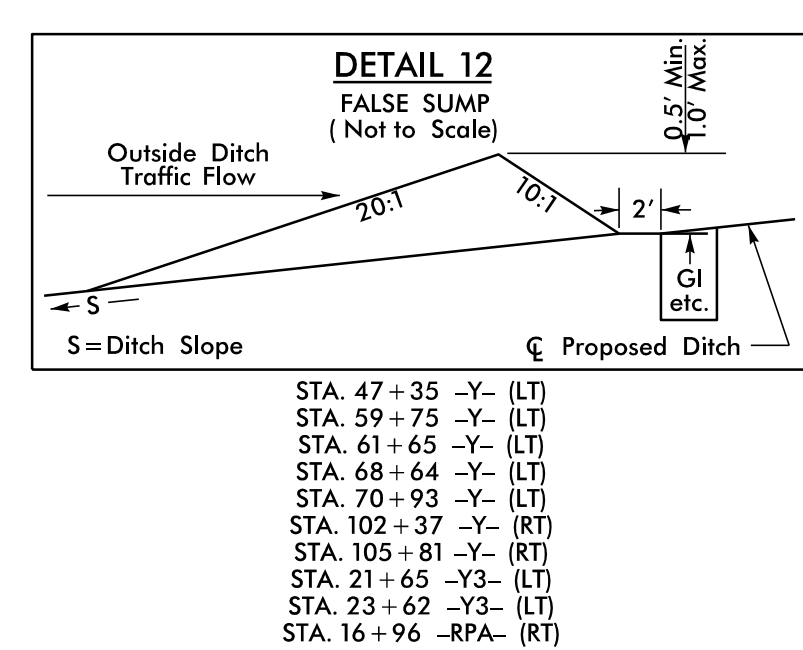
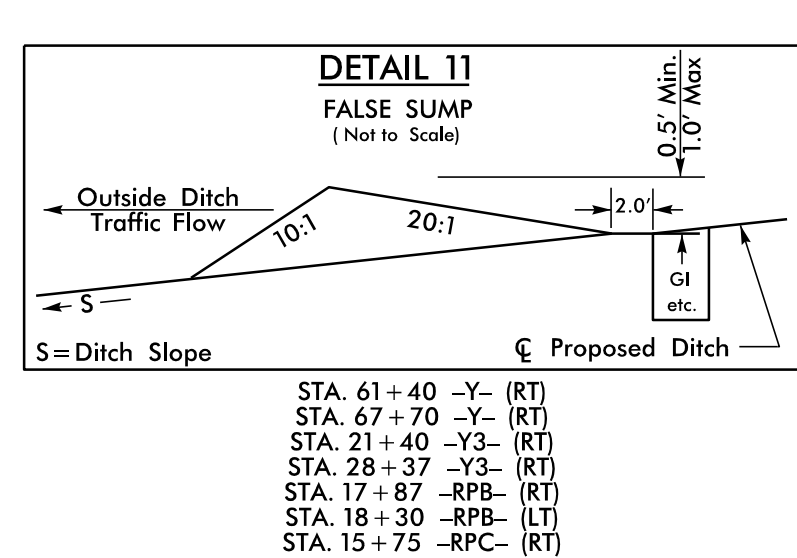
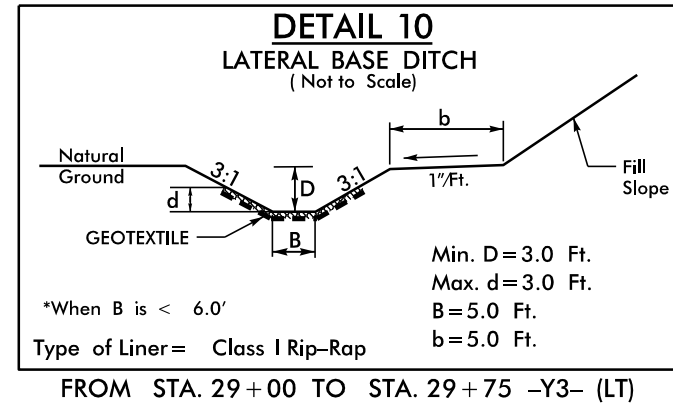
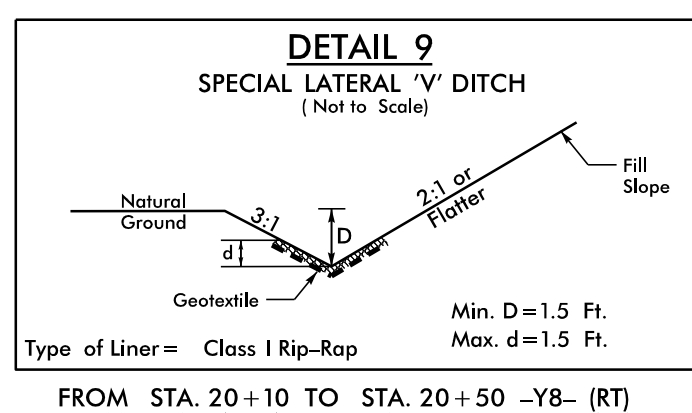
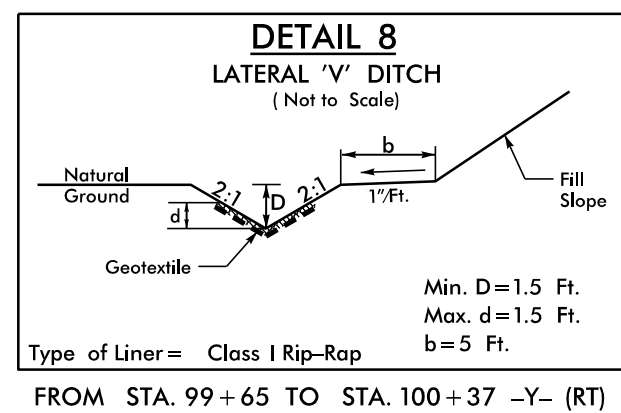
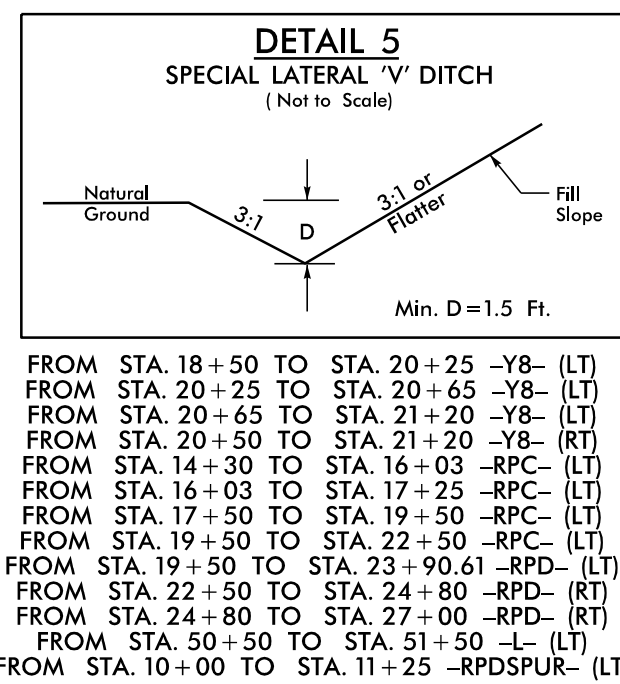
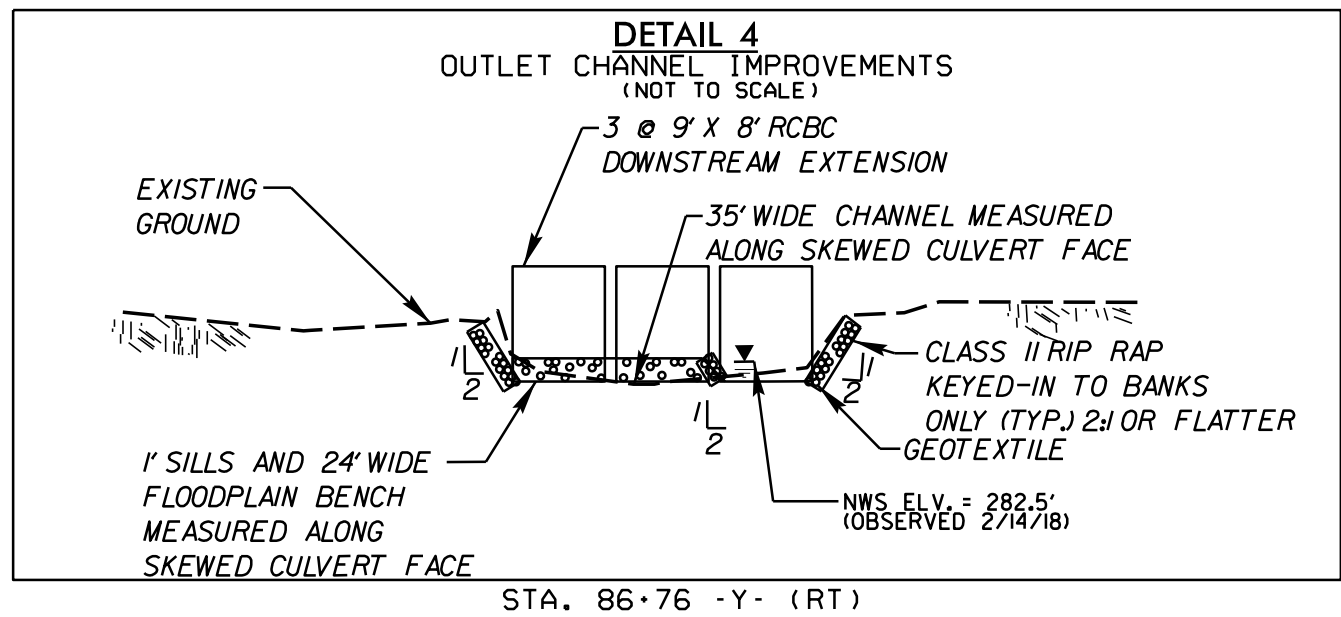
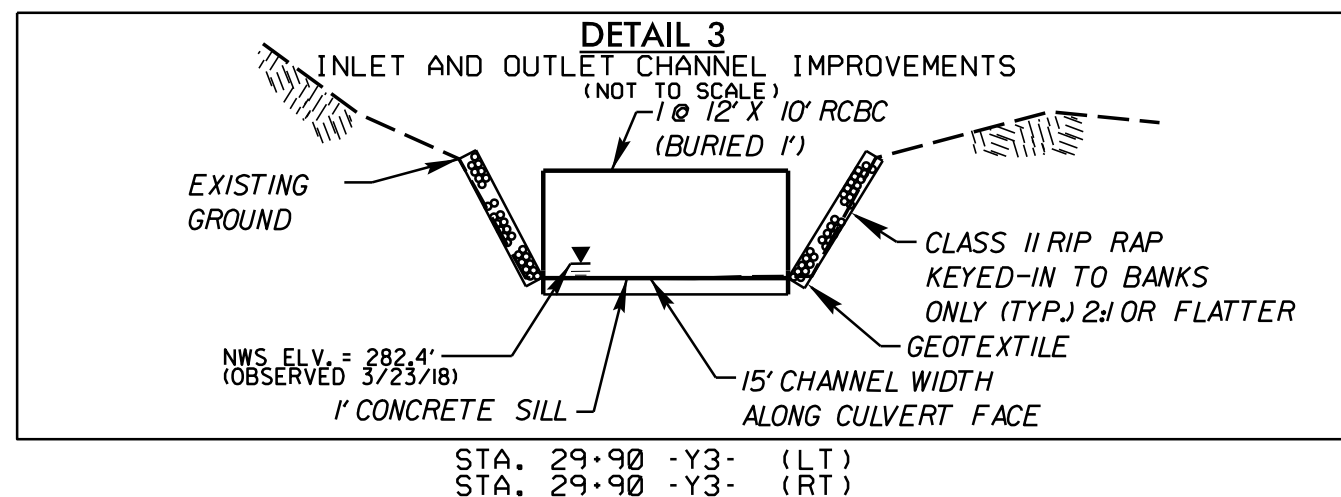
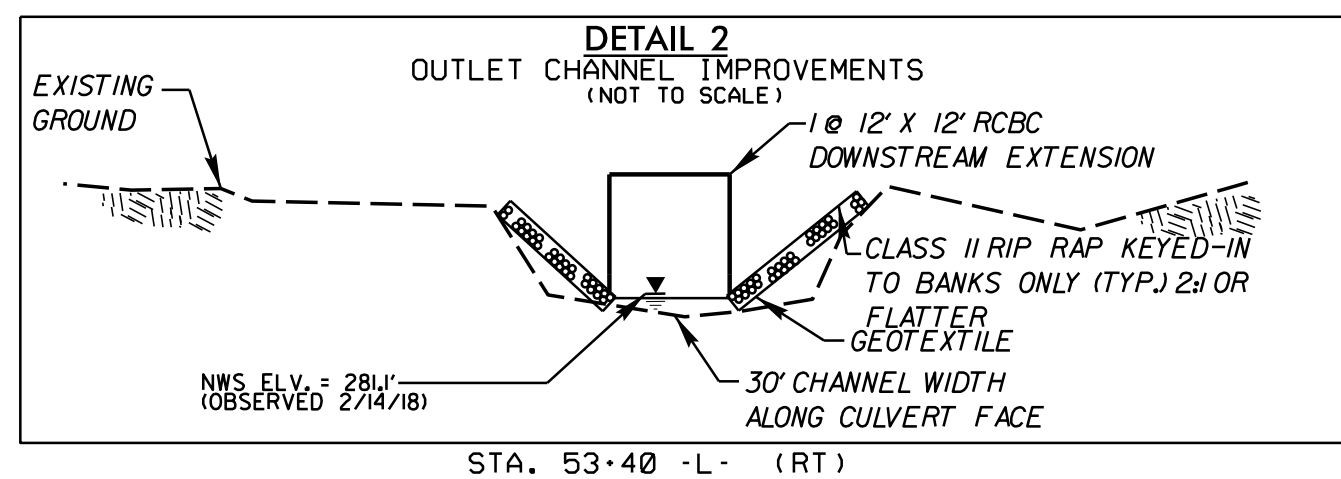
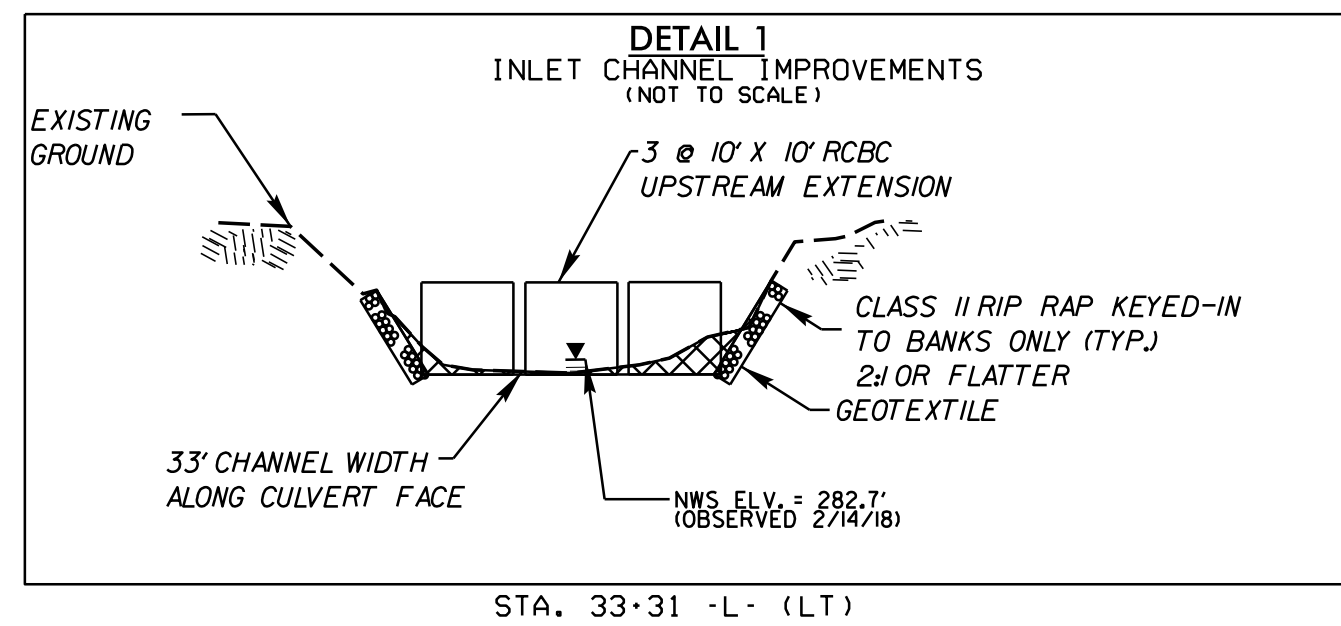
USE TYPICAL SECTION NO. 15
-NBLRPA- STA. 12+29.11 TO 17+47.62



TYPICAL SECTION NO. 16

-L- (AIRPORT BOULEVARD)

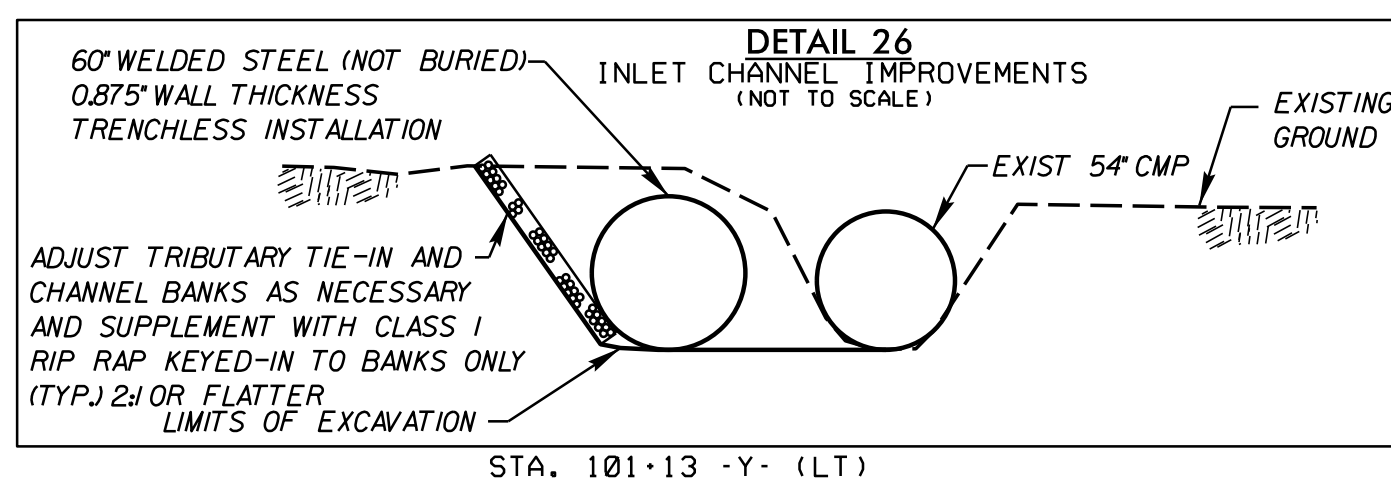
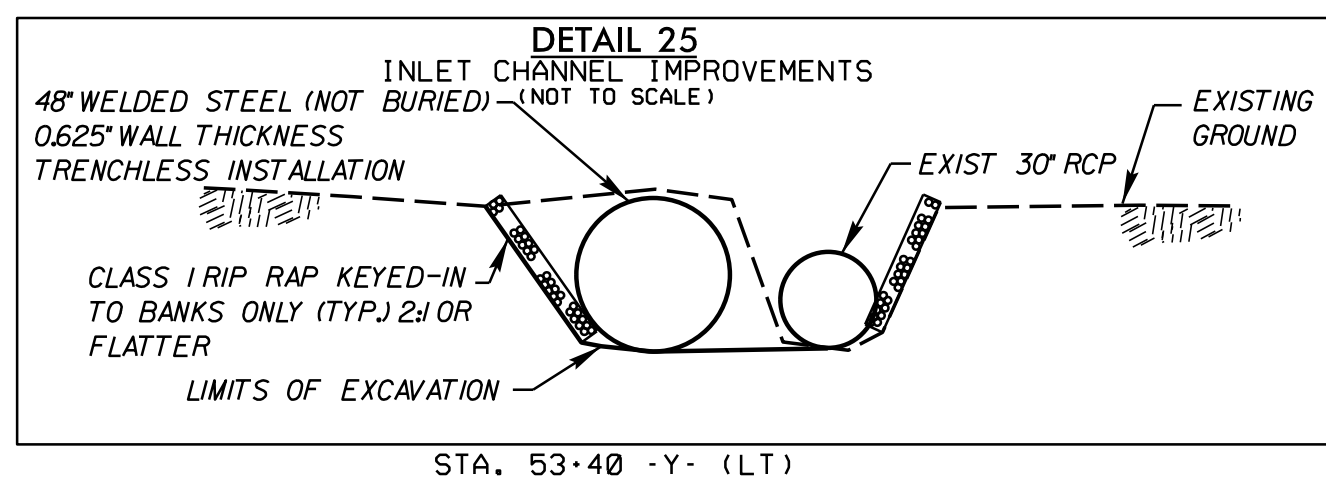
USE TYPICAL SECTION NO. 16
-L- STA. 42+68+/- (BEG. BR.) TO 45+69+/- (END BR.) LT.
-L- STA. 43+03+/- (BEG. BR.) TO 46+04+/- (END BR.) RT.



BASIN NUMBER	STATION	CULVERT SIZE	RIP RAP BASIN			
			A	B	C	D
1	17+40 -L-	36"	1.5'	24"	8'	3'
2	54+64 -L-	36"	1.5'	12'	12'	5'
3	90+60 -Y-	60"	1.5'	25'	11'	6.5'

ALL DIMENSIONS ARE APPROXIMATE

NOTE: USE CLASS I RIP RAP IN STREAM BED AND SUPPLEMENT WITH CLASS B TO FILL VOIDS AS NECESSARY

DETAIL 22
SPECIAL OUTLET PROTECTION
(Not to Scale)




5/14/99

9/24/2018 15700_Rdy_psh05.dgn

Kimley»Horn
P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

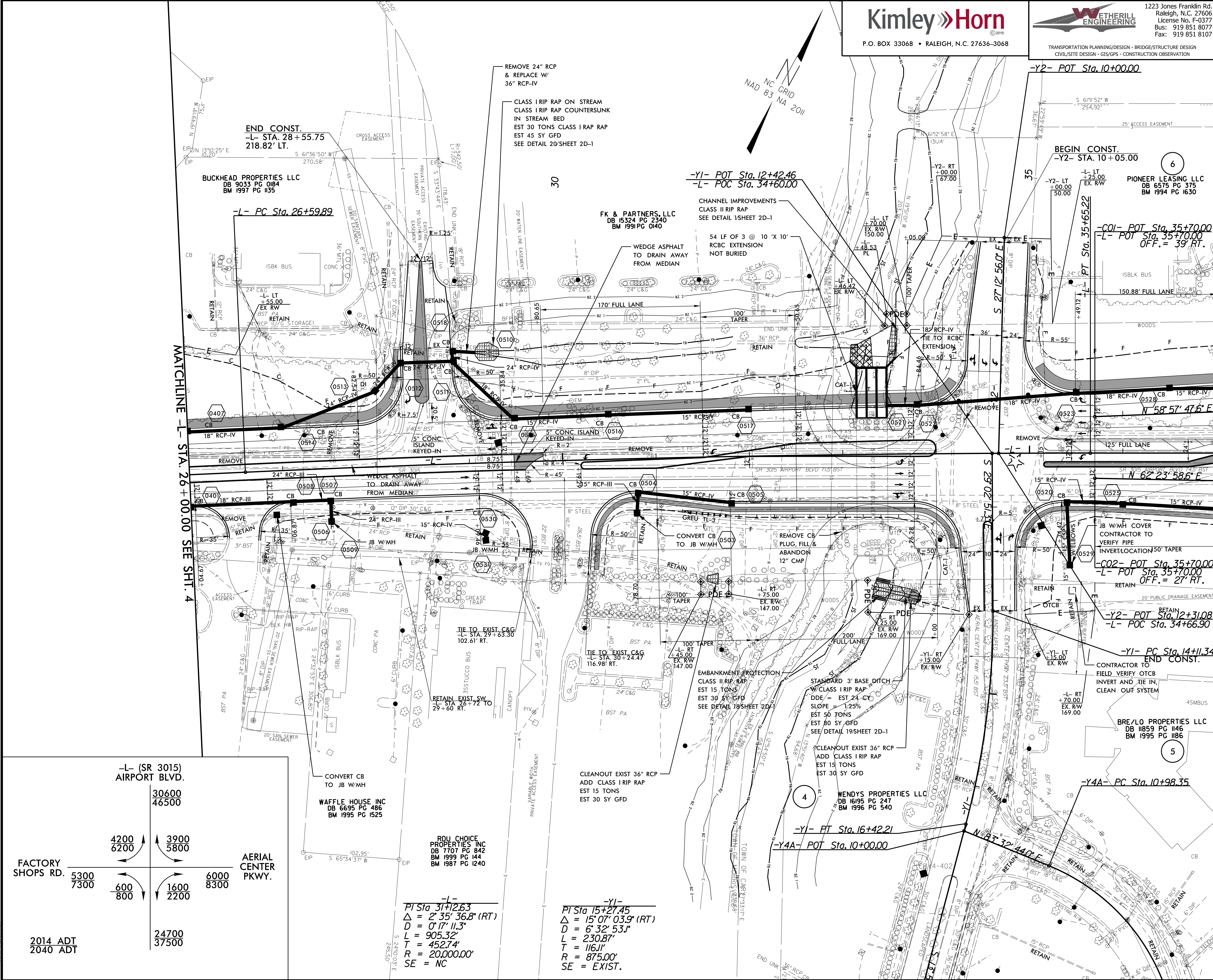
WETHERILL ENGINEERING
TRANSPORTATION PLANNING/DESIGN • BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN • GIS/GPS • CONSTRUCTION OBSERVATION

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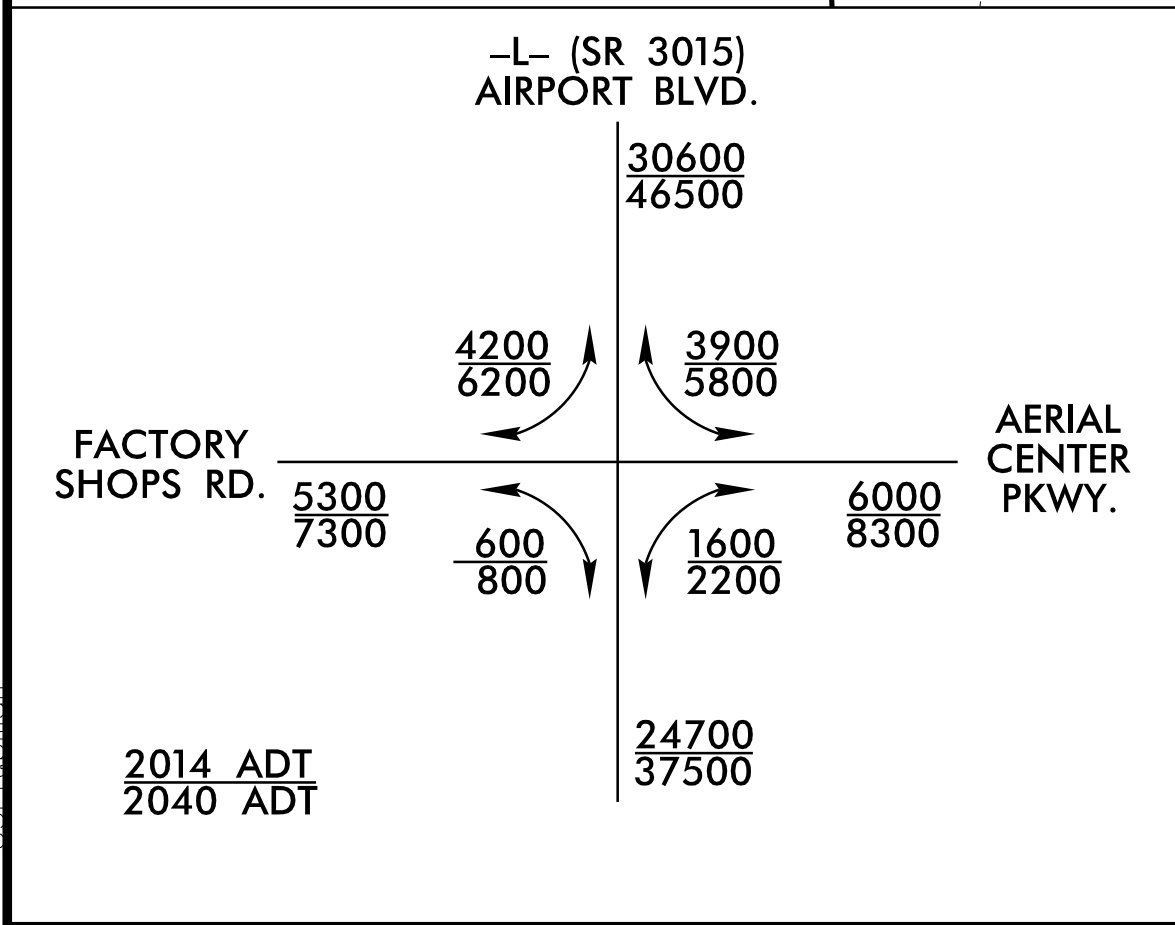
PROJECT REFERENCE NO.	SHEET NO.
1-5700	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

- ★ PROPOSED TRAFFIC SIGNAL
- ☆ EXISTING TRAFFIC SIGNAL
- PROP CONC SIDEWALK



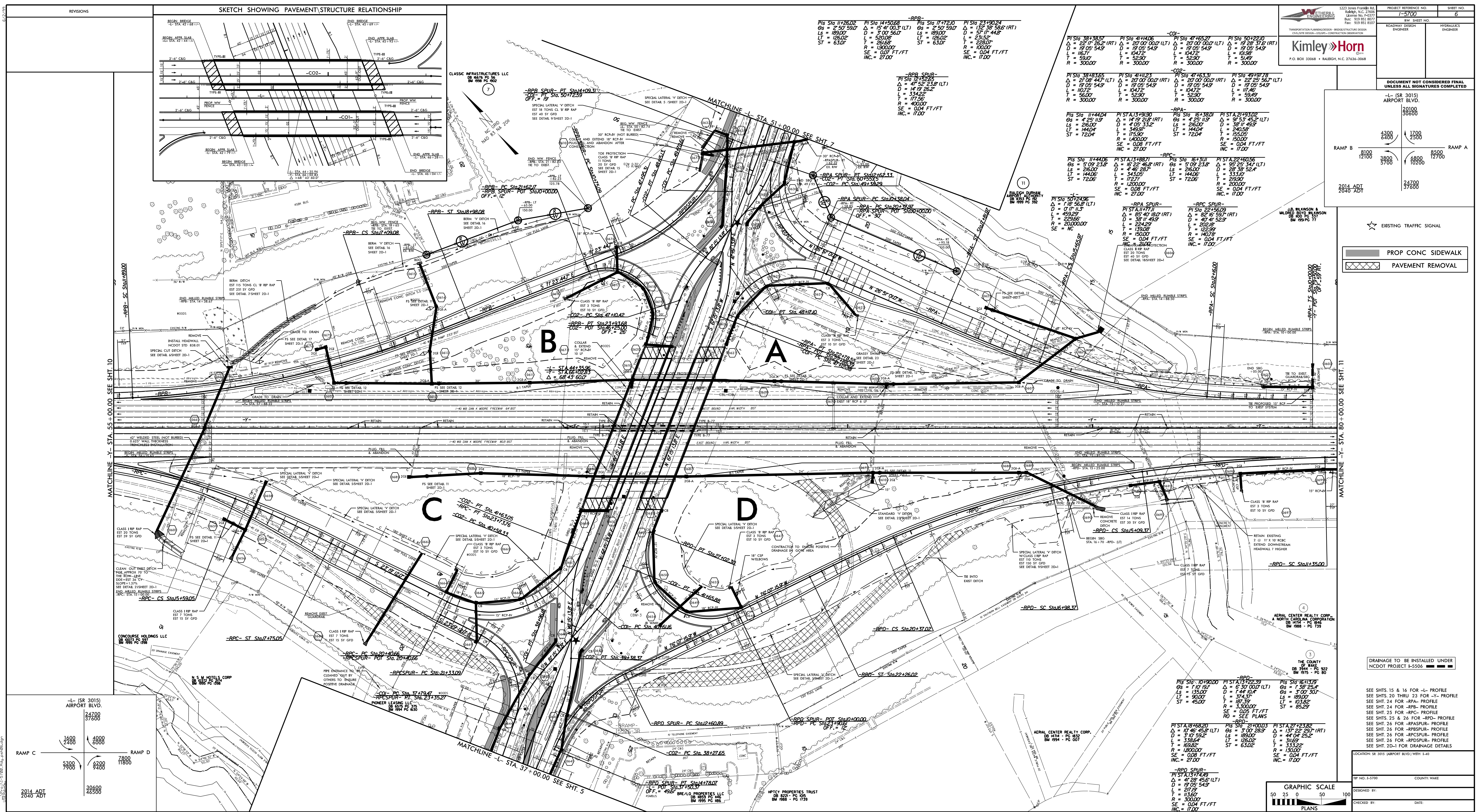
MATCHLINE -L- STA. 37+00.00 SEE SHT. 6

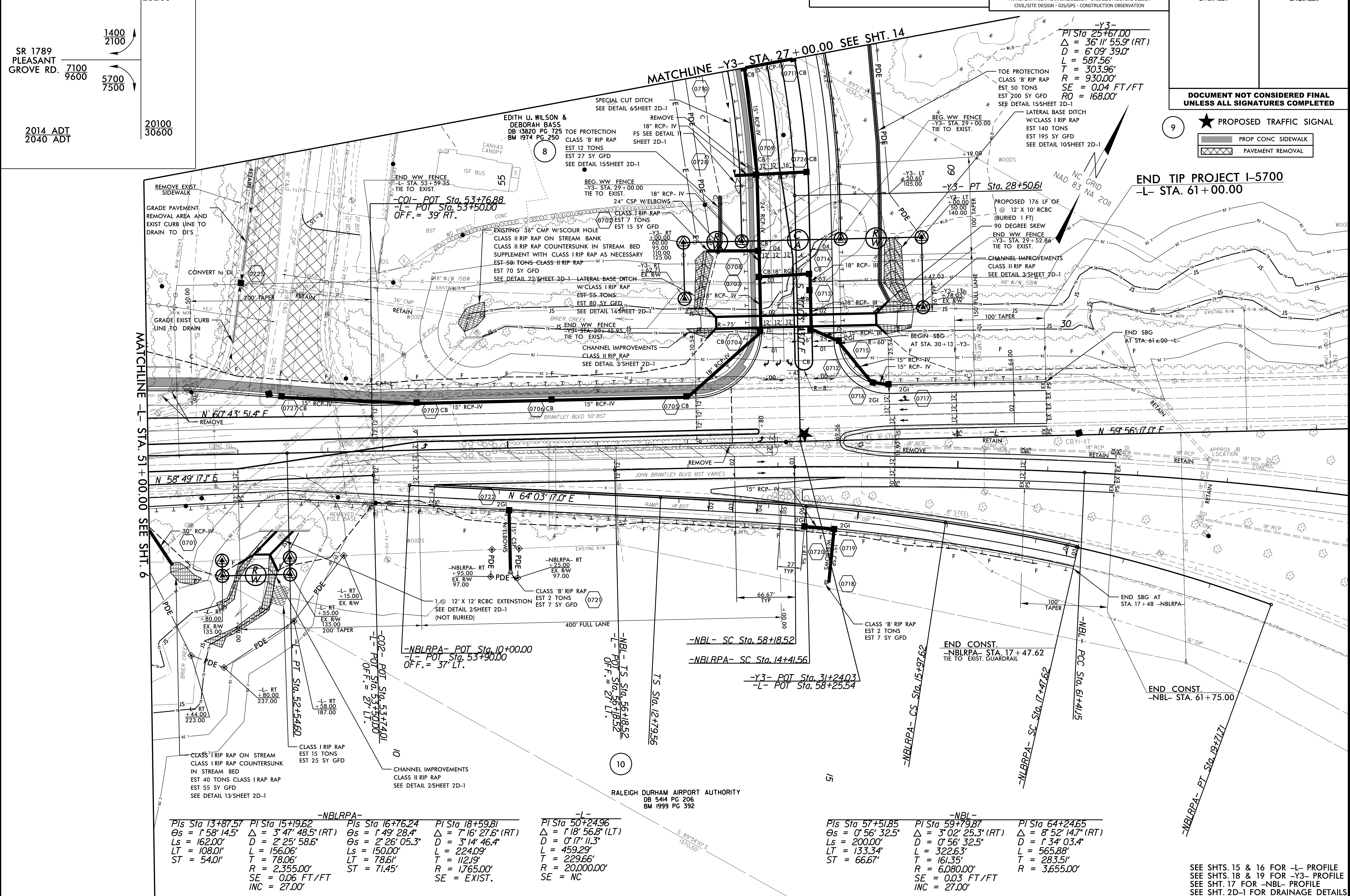


-L-
PI Sta 31+26.3
Δ = 2° 35' 36.8" (RT)
D = 0' 17" 11.3"
L = 905.32'
T = 452.74'
R = 20,000.00'
SE = NC

-Y1-
PI Sta 15+27.45
Δ = 15° 07' 03.9" (RT)
D = 6' 32' 53.1"
L = 230.87'
T = 116.11'
R = 875.00'
SE = EXIST.

SEE SHTS. 15 & 16 FOR -L- PROFILE
SEE SHT. 17 FOR -Y1- PROFILE
SEE SHT. 18 FOR -Y2- PROFILE
SEE SHT. 2D-1 FOR DRAINAGE DETAILS





...\\Proj1\I-5700_Rdy_psh08.dgn
SFR:bmail

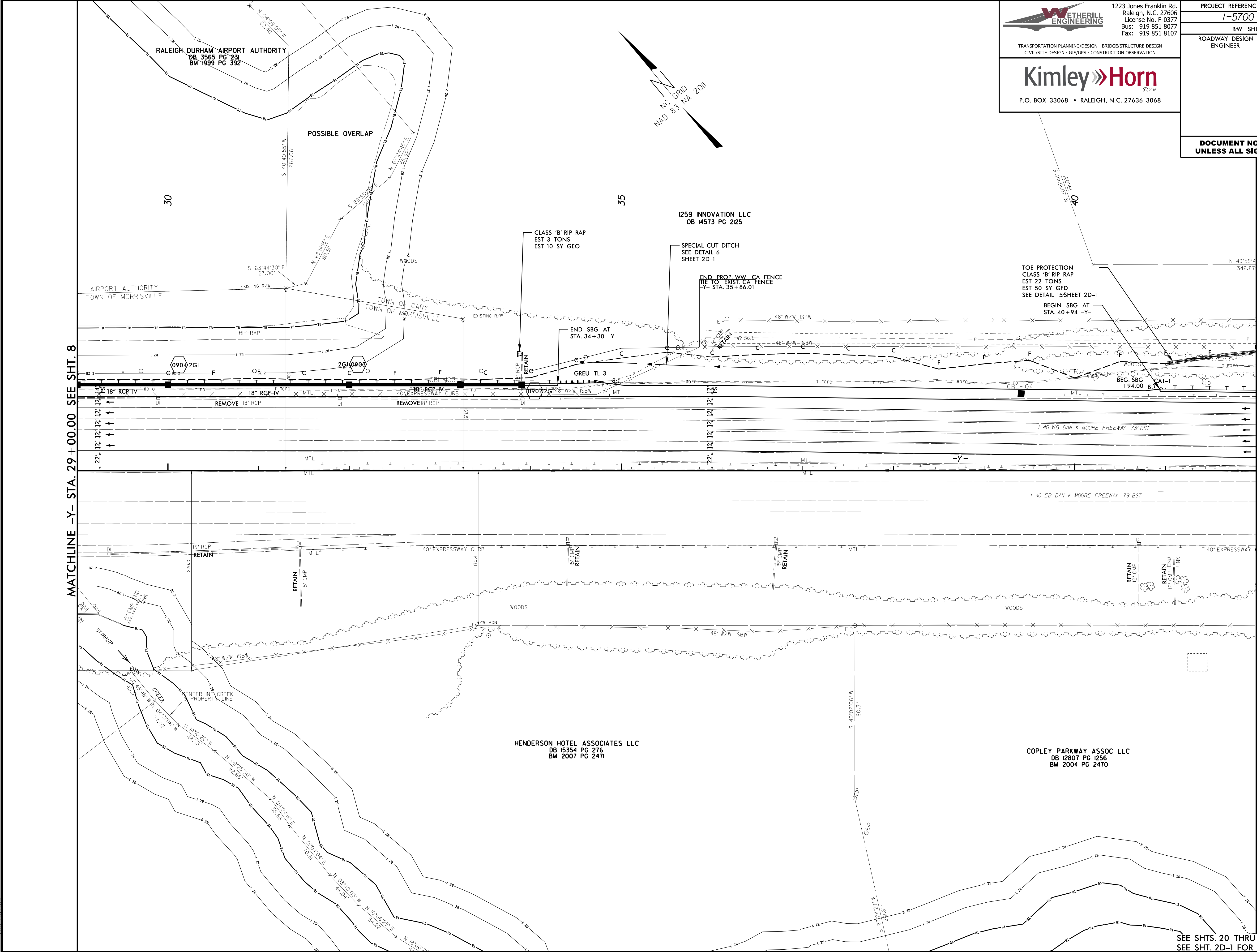
SLATER ROAD I LLC
DB 16199 PG 2760
BM 2017 PG 709



SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHT. 2D-1 FOR DRAINAGE DETAILS

5/14/99

9/24/2018 11:5700_Rdy_psh09.dgn
11:57:00



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO. SHEET NO.

1-5700

9

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -Y- STA. 29+00.00 SEE SHT. 8

MATCHLINE -Y- STA. 42+00.00 SEE SHT. 10

SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHT. 2D-1 FOR DRAINAGE DETAILS

5/14/99

9/24/2018 15:00:00 5700_Rd4_esh10.dgn
USER:RDP

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WETHERILL ENGINEERING

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

PROJECT REFERENCE NO. SHEET NO.

1-5700 10

R/W SHEET NO.

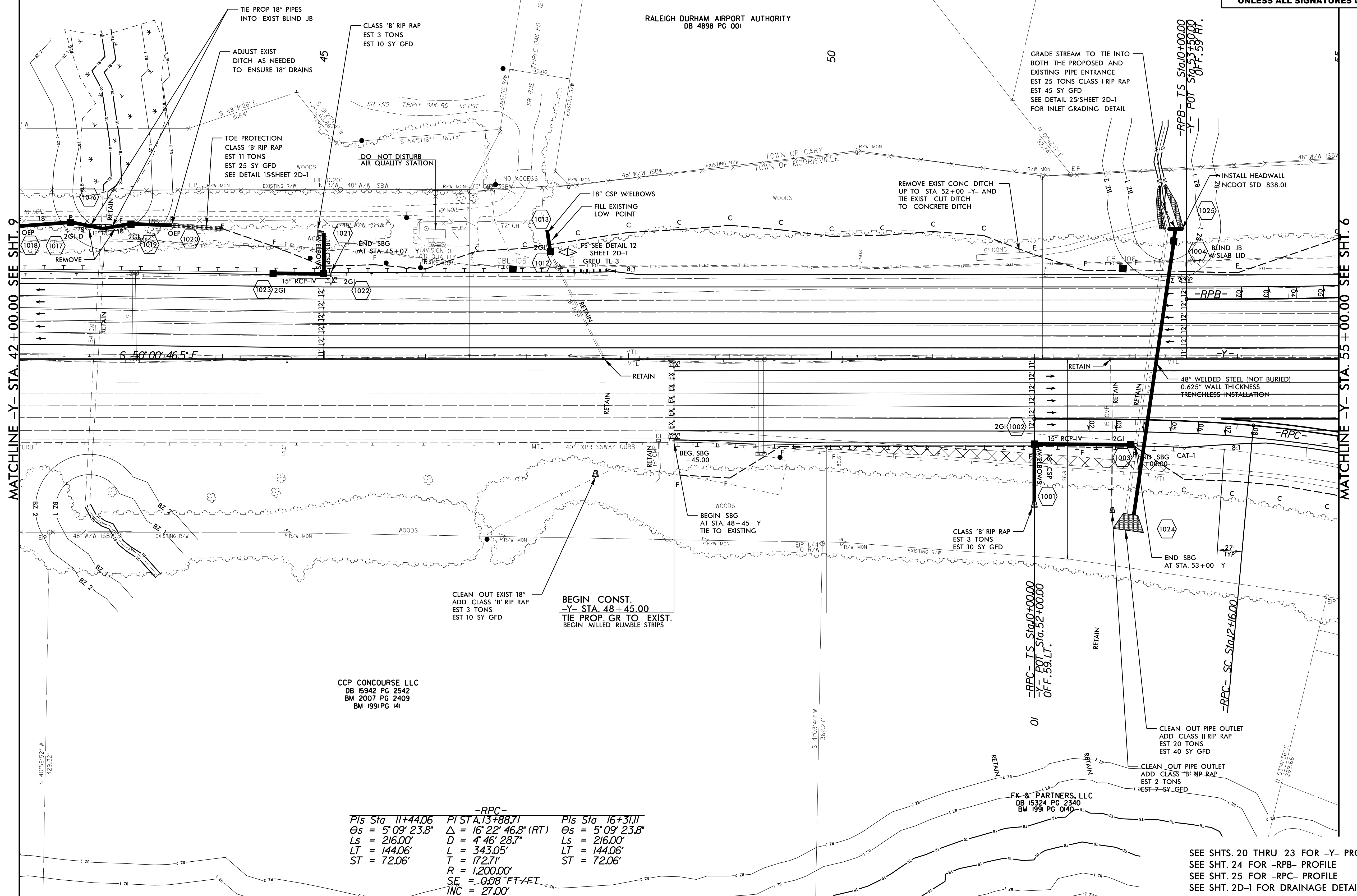
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
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-RPB-
Pls Sta 11+26.02 PI Sta 14+50.68 Pls Sta 17+72.10
 $\Theta_s = 2' 50'' 59.0''$ $\Delta = 15' 41'' 00.3''$ (LT) $\Theta_s = 2' 50'' 59.0''$
 $L_s = 189.00'$ $D = 3' 00'' 56.0''$ $L_s = 189.00'$
 $LT = 126.02'$ $L = 520.08'$ $LT = 126.02'$
 $ST = 63.01'$ $T = 261.68'$ $ST = 63.01'$
 $R = 1,900.00'$
 $SE = 0.07$ FT/FT
 $INC. = 27.00'$

RALEIGH DURHAM AIRPORT AUTHORITY
DB 4898 PG 001

WINDSOR HOTELS CORP
RAVANU CORPORATION
DB 1531 PG 1500
BM 2000 PG 803



CCP CONCOURSE LLC
DB 15942 PG 2542
BM 2007 PG 2409
BM 1991 PG 141

-RPC-
Pls Sta 11+44.06 PI Sta 13+88.71 Pls Sta 16+31.11
 $\Theta_s = 5' 09'' 23.8''$ $\Delta = 16' 22'' 46.8''$ (RT) $\Theta_s = 5' 09'' 23.8''$
 $L_s = 216.00'$ $D = 4' 46'' 28.7''$ $L_s = 216.00'$
 $LT = 144.06'$ $L = 343.05'$ $LT = 144.06'$
 $ST = 72.06'$ $T = 172.71'$ $ST = 72.06'$
 $R = 1,200.00'$
 $SE = 0.08$ FT/FT
 $INC. = 27.00'$

SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHT. 24 FOR -RPB- PROFILE
SEE SHT. 25 FOR -RPC- PROFILE
SEE SHT. 2D-1 FOR DRAINAGE DETAILS

5/14/99

9/24/2018 11:57:00_Rdy_eshl.dgn
USER:RDP



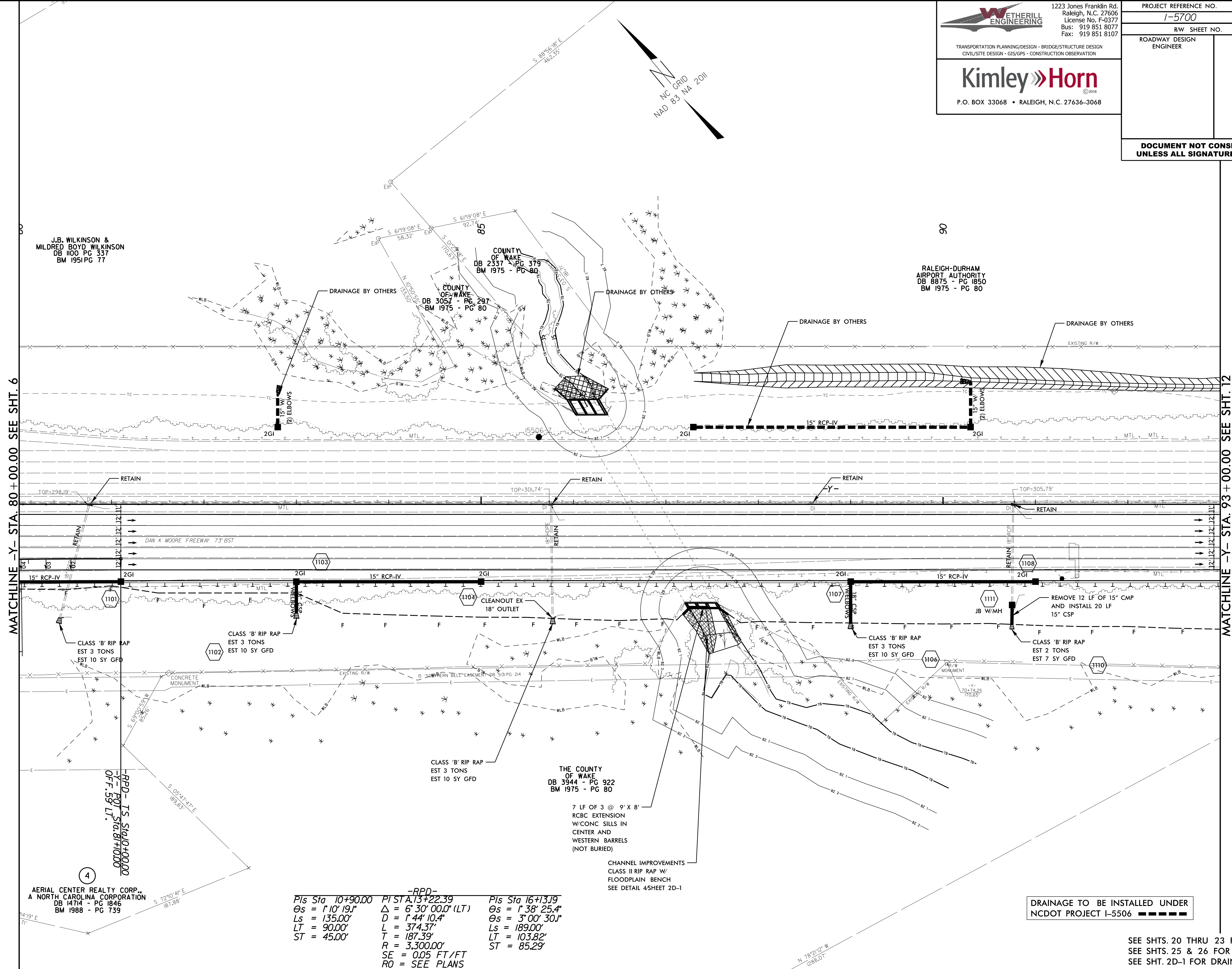
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PROJECT REFERENCE NO.		SHEET NO.
I-5700		11
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
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-RPD-		
Pls Sta 10+90.00	PI STA 13+22.39	Pls Sta 16+13.19
$\Delta s = 1' 10' 19.1''$	$\Delta = 6' 30' 00.0'' (LT)$	$\Delta s = 1' 38' 25.4''$
$Ls = 135.00'$	$D = 1' 44' 10.4''$	$\Delta s = 3' 00' 30.1''$
$LT = 90.00'$	$L = 374.37'$	$Ls = 189.00'$
$ST = 45.00'$	$T = 187.39'$	$LT = 103.82'$
	$R = 3,300.00'$	$ST = 85.29'$
	$SE = 0.05 \text{ FT/FT}$	
	$RO = \text{SEE PLANS}$	

DRAINAGE TO BE INSTALLED UNDER
NCDOT PROJECT I-5506

SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHTS. 25 & 26 FOR -RPD- PROFILE
SEE SHT. 2D-1 FOR DRAINAGE DETAILS



5/14/99

9/24/2018
C:\Users\jld\OneDrive\Documents\5700_Rd4_psh13.dgn
JLD

RALEIGH-DURHAM
AIRPORT AUTHORITY
DB 3565 - PG 231
BM 1999 - PG 392

NC GRID
NAD 83 NA 2011



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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PROJECT REFERENCE NO.

I-5700

SHEET NO.

13

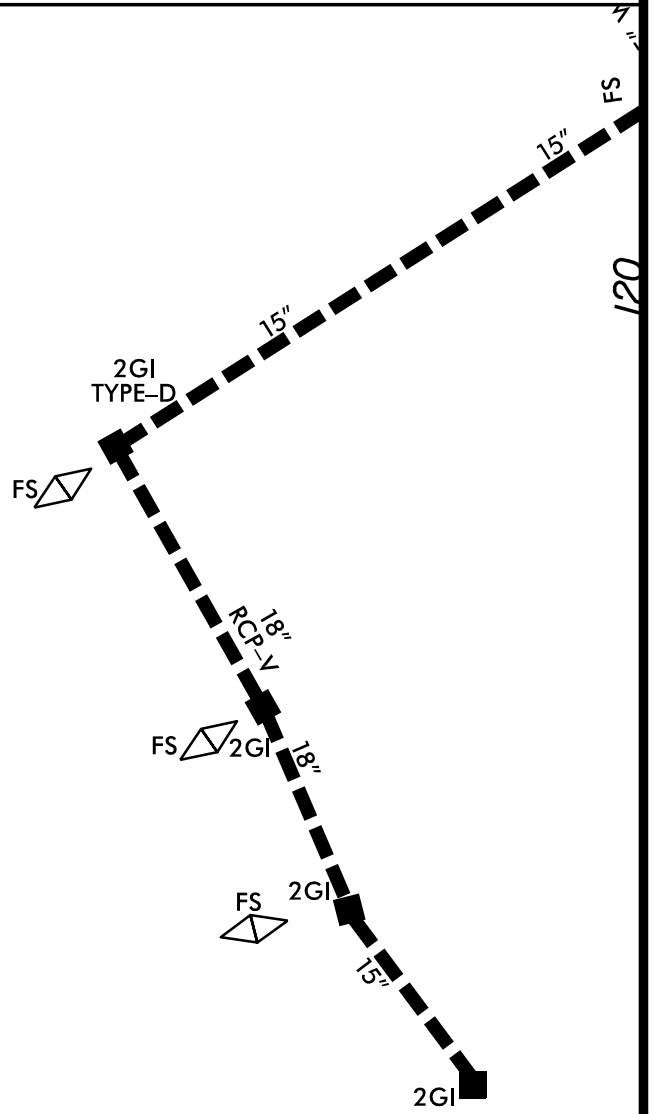
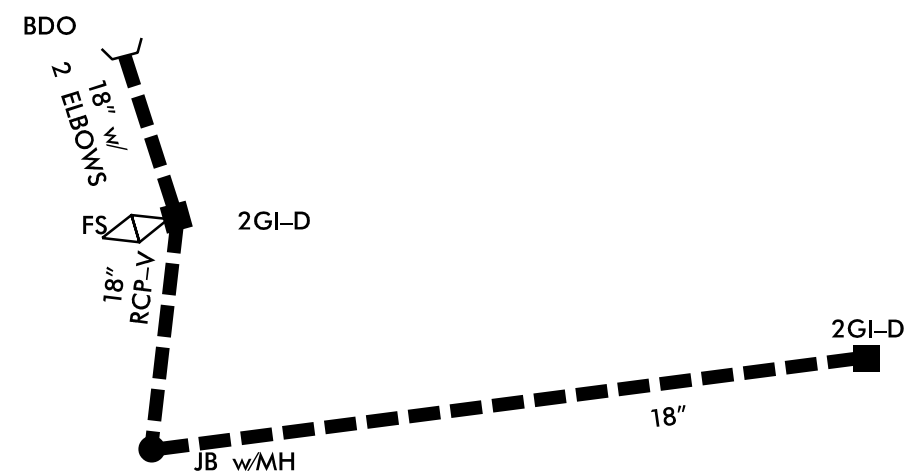
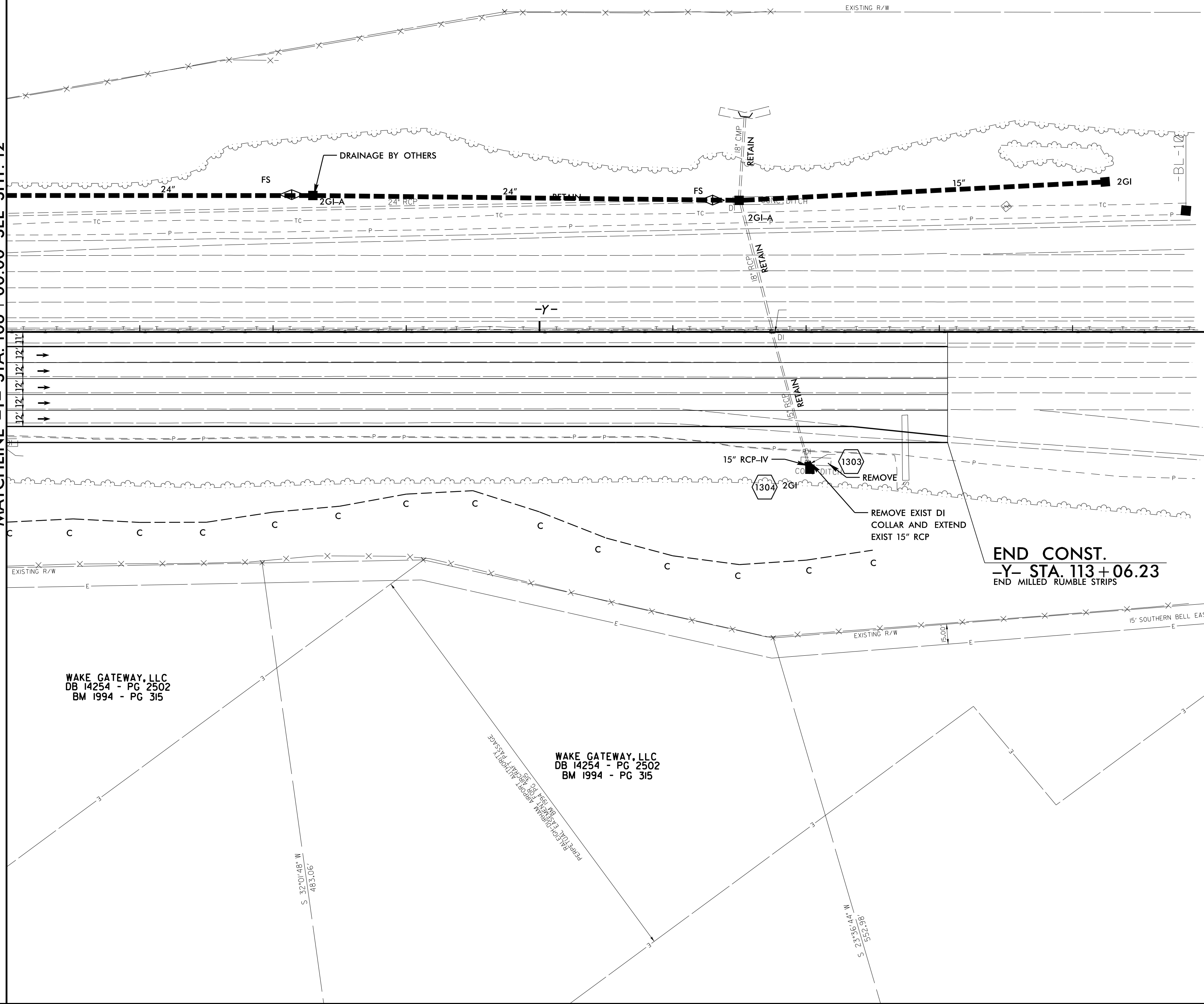
RW SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

MATCHLINE -Y- STA. 106+00.00 SEE SHT. 12



END CONST.
-Y- STA. 113+06.23
END MILLED RUMBLE STRIPS

WAKE GATEWAY, LLC
DB 14254 - PG 2502
BM 1994 - PG 315

WAKE GATEWAY, LLC
DB 14254 - PG 2502
BM 1994 - PG 315

DRAINAGE TO BE INSTALLED UNDER
NCDOT PROJECT I-5506

SEE SHTS. 20 THRU 23 FOR -Y- PROFILE
SEE SHT. 2D-1 FOR DRAINAGE DETAILS



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PROJECT REFERENCE NO. SHEET NO.

1-5700 14

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

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PROP CONC SIDEWALK
PAVEMENT REMOVAL

5/14/2018

9/24/2018 1-5700-Rd4-esht14.dgn
USER:RDM

-Y8-
PI Sta 22+46.92
 $\Delta = 139^\circ 44' 53.0''$ (LT)
 $D = 12^\circ 41' 24.3''$
 $L = 1,012.4'$
 $T = 1,232.05'$
 $R = 451.50'$
 $SE = 0.04$ FT/FT
 $RO = 104.00'$

-Y3-
PI Sta 19+12.12
 $\Delta = 45^\circ 51' 15.9''$ (LT)
 $D = 6^\circ 09' 39.0''$
 $L = 744.29'$
 $T = 393.37'$
 $R = 930.00'$
 $SE = 0.04$ FT/FT
 $RO = 168.00'$

PI Sta 25+67.00
 $\Delta = 36^\circ 11' 55.9''$ (RT)
 $D = 6^\circ 09' 39.0''$
 $L = 587.56'$
 $T = 303.96'$
 $R = 930.00'$
 $SE = 0.04$ FT/FT
 $RO = 168.00'$

NC GRID
NAD 83 NA 2011

TOE PROTECTION
CLASS 'B' RIP RAP
EST 50 TONS
EST 200 SY GFD
SEE DETAIL 15SHEET 2D-1

MATCHLINE -Y3- STA. 27+00.00 SEE SHT. 7

SEE SHTS. 18 & 19 FOR -Y3- PROFILE
SEE SHT. 19 FOR -Y8- PROFILE
SEE SHT. 2D-1 FOR DRAINAGE DETAILS