



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

October 26, 2017

U.S. Army Corps of Engineers  
Asheville Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28805

ATTN: Ms. Crystal Amschler  
NCDOT Division 10 Coordinator

SUBJECT: **Revision Request for Section 404 Regional General Permit No. 31 and Section 401 General Water Quality Certification No. 3886** for the proposed Interstate 85 (I-85) Widening and Interchange Improvements from north of NC 73 (Davidson Highway / Exit 55) to north of SR 2180 (Lane Street/Exit 63), Cabarrus & Rowan Counties, Divisions 9 and 10. Federal Aid Project No. FANHIMF-085-2(61)55, TIP Project No. I-3802A.

Debit \$570.00 from WBS Element No. 36780.1.2

REFERENCE: 1) Section 404 General Permit No. 198200031 (GP 31), Action ID No. SAW-2008-03229, issued July 16, 2015; re-issued January 13, 2017.

2) Section 401 General Water Quality Certification No. 3886, NCDWR Project No. 20150362v.2, issued June 29, 2015; modified March 22, 2016, Project No. 20150362v.3; modified January 30, 2017, Project No. 20150362v.4.

Dear Madam:

Since the Section 404 General Permit 31 (GP 31) re-issuance on January 13, 2017 and the most recent Section 401 Water Quality Certification (WQC) modification on January 30, 2017, changes to the project design have occurred that will result in changes to the permit impacts associated with this project. The purpose of this letter is to request that the GP 31 be re-issued with the updated impacts included and the WQC be modified to reflect these revisions.

Revisions have been made at Sites 7, 7A, 14, and 22. Below are descriptions of the revisions at each of these sites. In addition to this cover letter, please find enclosed revised Wetland and Stream Permit Drawing Sheet Nos. 15 – 20, 41 – 44, 71 – 74, and 126 – 128 of 128; and the revised Mitigation Acceptance Letter from the N.C. Division of Mitigation Services (DMS).



## **Description of Changes to Each Site**

### *Wetland and Stream Permit Site 7 (Stream SCA)*

The pipe headwall at this location had to be moved. Therefore, an additional 10 linear feet of temporary surface impact has been added to Site 7 to accommodate the new headwall location. Impacts increased from 10 linear feet of temporary impacts to 20 linear feet.

### *Wetland and Stream Permit Site 7A (Stream SCA)*

Permanent surface water impacts were reduced from 120 linear feet to 23 linear feet, which is a reduction of 97 linear feet. Additionally, 24 linear feet of temporary stream impact was added to the site; previously, no temporary impacts occurred at this site.

### *Wetland and Stream Permit Site 14 (Wetland WP)*

The original design on Plan Sheet No. 18 called for the extension of a 36-inch corrugated metal pipe (CMP) underneath the roadway and associated stormwater system improvements on the upstream end of the pipe. It has since been decided to plug and fill the existing 36-inch CMP and install a 72-inch welded steel pipe via trenchless installation adjacent to the existing pipe. The stormwater system has been modified to connect to this new pipe configuration. This design change resulted in the addition of 0.02 acres of excavation (this is a new impact) and 0.02 acres of hand clearing at this site (previously, there was only <0.01 acres).

### *Wetland and Stream Permit Site 22 (Stream SCZ)*

Rip rap was added as outlet protection in the stream bed. The amount of impacts were not changed, but the description was changed from Bank Stabilization to Outlet Protection in the summary. Therefore, there was an increase in permanent fill of 15 linear feet, from 130 linear feet to 145 linear feet, and a reduction in bank stabilization of 15 linear feet, which eliminated all bank stabilization at this site.

## **Revised Total Impacts and Compensatory Mitigation**

Previously-permitted bank stabilization impacts for the entire project totaled 1,021 linear feet. The proposed total impacts for bank stabilization will now be 1,006 linear feet due to the change in activity type at Site 22. Previously-permitted overall permanent stream impacts (including bank stabilization) totaled 4,338 linear feet for the project. The proposed permanent stream impacts (including bank stabilization) now total 4,241 linear feet due to the reduction in impacts at Site 7A. Previously-permitted overall temporary stream impacts totaled 640 for the project. The proposed temporary stream impacts now total 674 linear feet, which includes the 10-foot increase at Site 7 and 24-foot increase at Site 7A.

Previously permitted riparian wetland impacts totaled 0.34 acres of permanent impacts and 0.07 acres of hand clearing. The proposed impacts now total 0.36 acres of permanent impacts and 0.09 acres of hand clearing.



**Table 1. I-3802A Revised Compensatory Mitigation Summary**

	<b>Stream Impacts in Length (ft.)</b>	<b>Riparian Wetland Impacts (ac.)</b>
Impacts Requiring Mitigation	<b>3,048<sup>1</sup></b>	<b>0.36</b>
Required NCDMS Mitigation	<b>1,838 @ 2:1</b>	<b>2:1</b>
	<b>1,210 @ 1:1</b>	
Total NCDMS Mitigation Required	<b>4,886</b>	<b>0.72</b>

<sup>1</sup> Of the 4,241 linear feet of permanent stream impact, 1,006 linear feet did not require mitigation from USACE since it was bank stabilization. An additional 187 linear feet at Site 19 did not require mitigation.

The previously-approved Section 404 permit stated that the USACE required 2:1 mitigation for 1,823 linear feet and 1:1 mitigation for 1,307 linear feet of permanent stream impacts, which totaled 4,953 linear feet of compensatory stream mitigation. The changes to Site 22 increased the amount of 2:1 mitigation by 15 linear feet. The changes at Site 7A reduced the amount of 1:1 mitigation required by 97 linear feet. The revised amounts are now 1,838 linear feet of permanent stream impacts at 2:1 mitigation and 1,210 linear feet of permanent stream impacts at 1:1 mitigation, which results in 4,886 linear feet of required compensatory stream mitigation. This is a reduction of 67 linear feet to the amount of required compensatory mitigation credits for USACE.

The previously-approved NCDWR certification required 2,737 linear feet of 1:1 mitigation (465 linear feet of which was for bank stabilization) for the entire project. Due to the reduction of stream impacts at Site 7A, the revised total is 2,640 linear feet of 1:1 mitigation (still with 465 linear feet comprised of bank stabilization). This amount is still less than the 4,886 linear feet of compensatory mitigation credits already required by the USACE. Therefore, NCDOT will continue to use the USACE mitigation requirement for mitigation purposes and is requesting 67 linear feet less of compensatory mitigation credits from the N.C. Division of Mitigation Services (DMS).

Due to the addition of excavation at Site 14, there was an increase in total mitigable riparian wetland impacts, from 0.34 acres to 0.36 acres. The NCDOT will now request that 0.36 acres of permanent riparian wetland impacts be mitigated for at a 2:1 ratio, totaling 0.72 acres of riparian wetland compensatory mitigation credits now being required.

A request is hereby made to the Department of the Army to modify the Section 404 GP 31 as required for T.I.P I-3082A. We are also hereby requesting a modification to the Section 401 Water Quality Certification from the NCDWR. A copy of this modification request and its distribution list will be posted on the NCDOT website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>, under *Quick Links> Permit Applications*. Thank you for your time and assistance with this project. Please contact James Mason at either [jmason@ncdot.gov](mailto:jmason@ncdot.gov) or at (919) 707-6136 if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. S. Harris III', with a horizontal line extending to the right.

Philip S. Harris III, P.E., C.P.M.  
Environmental Assessment Unit Head

cc: NCDOT Permit Application Standard Distribution List  
Khaled Al-Akhdar, Design Build





October 19, 2017

Mr. Philip S. Harris, III, P.E., CPM  
Project Development and Environmental Analysis Unit  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Subject: EEP Mitigation Acceptance Letter:

**I-3802A and B-5804**, I-85 from NC 73 in Cabarrus County (Exit 55) to Lane Street (Exit 63) and Replace Bridge 56 on SR 2000 (Brantley Road) over Lake Fisher, Cabarrus County

References: USACE 404 General Permit 31 issued July 16, 2015 (USACE Action ID 2008-03229)  
NCDWR 401 Water Quality Certification issued June 2, 2015 (NCDWR ID 2015-0362)

The purpose of this letter is to update you on the stream and wetland mitigation that the Division of Mitigation Services (DMS) has debited for the project. Based on the information supplied by you on October 12, 2017, the stream impact associated with these TIP numbers has decreased and the riparian wetland impact has increased. Once permit modifications are issued, the mitigation requirements and associated debits will be adjusted. Currently, the **total** anticipated impacts are located in CU 03040105 of the Yadkin River Basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

**Table 1 – Total Impacts – NCDOT TIP I-3802A / B-5804**

Yadkin 03040105 SP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1 (3:1)	Zone 2 (1.5:1)
Impacts (feet/acres)	0	0	3,048.0	0.36	0	0	0	0

The original permits authorized impacts and required stream and wetland mitigation were based on preliminary design. The NCDOT now has final design and impact information available for the project which decreased the amount of anticipated stream impacts; however, the riparian wetland impacts increased. Currently, DMS is providing stream and riparian wetland for the impacts associated with this project as required by the 404 and 401 Water Quality Certification issued in 2015, as shown in the below table (in mitigation credits):



**Table 2 – Current Permitted Impacts and Mitigation Requirements (based on 2015 permits) and Revised Anticipated Impacts (based on October 2017 mitigation request)**

Impact Type	2015 Permitted Impacts (feet / acre)	Mitigation Provided by DMS per Issued Permits (Credits)	Additional Impact (for approval)*	Revised Total Impacts**
Stream	3,130.0	4,953.0	-82.0	3,048.0
Riparian Wetland	0.34	0.68	0.02	0.36

\*Negative amount represents an anticipated decrease in total project impacts; a positive amount represents an anticipated increase in total project impacts.

\*\*Some of the stream and wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details. DMS will provide the amount of mitigation as determined by the regulatory agencies.

**This mitigation acceptance letter replaces the mitigation acceptance letters issued on April 13, 2015 and March 12, 2013.** DMS has previously made debits for the stream and wetland mitigation requirements to mitigation sites available in the cataloging unit based on the amounts required in the original permits issued in 2015. Upon issuance of the permit modifications for the project, EEP will make appropriate adjustments to the existing mitigation debits.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill  
Credit Management Supervisor

Cc: Ms. Crystal Amschler, USACE – Asheville Regulatory Field Office  
Ms. Amy Chapman, NCDWR  
File: I-3802A / B-5804 Adjustment





1" = 100'  
 GRAPHIC SCALE  
**PERMIT DRAWING SHEET 15 OF 128**

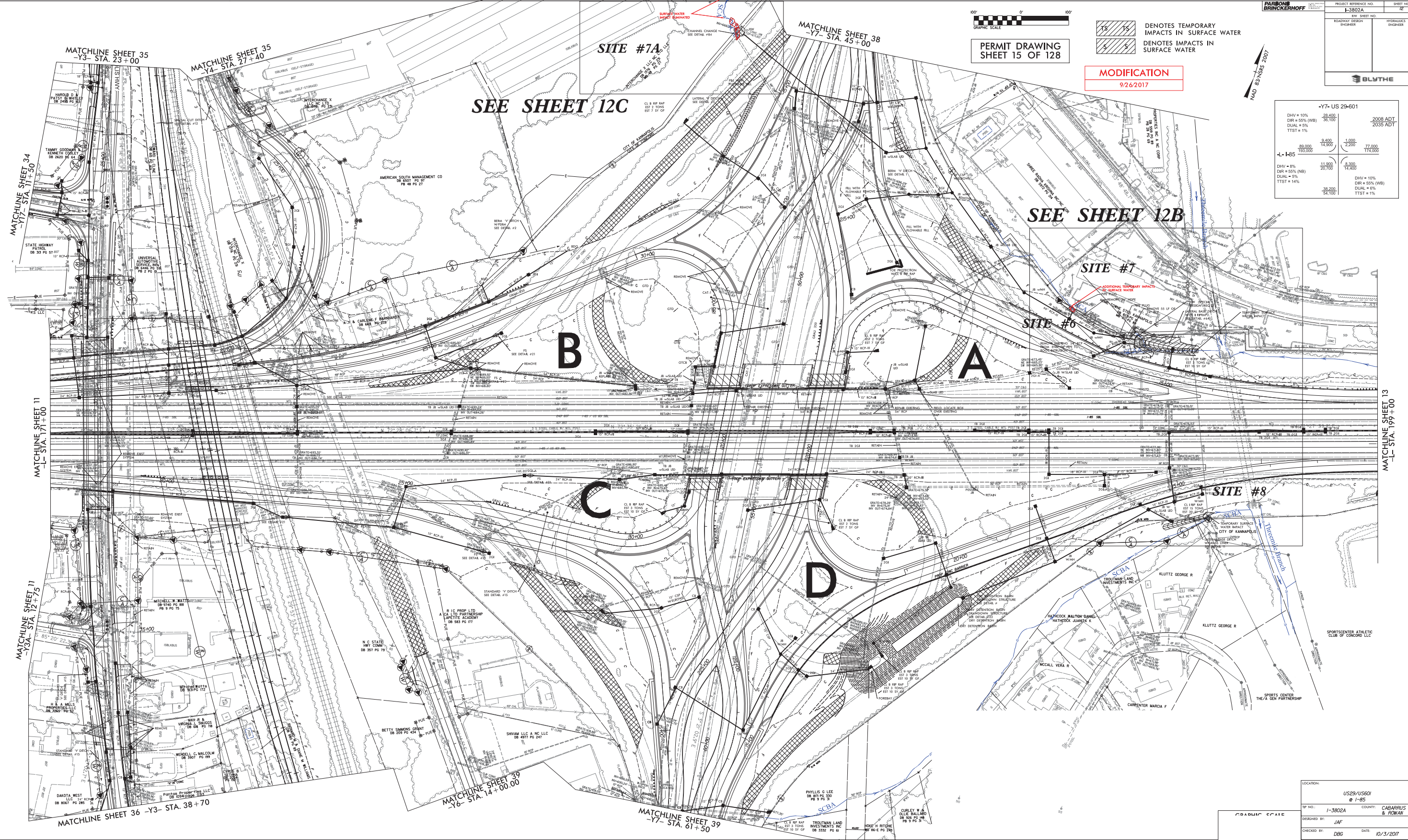
DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
 DENOTES IMPACTS IN SURFACE WATER

**MODIFICATION**  
 9/26/2017

-Y7-US 20-601

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DIR = 55% (WB)	38,100	2035 ADT
DUAL = 0%		
TTST = 1%		
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193,000	20,700	27,000
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DIV = 8%	11,800	8,300
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DUAL = 0%		
TTST = 14%	38,500	22,500
	54,100	

REVISIONS





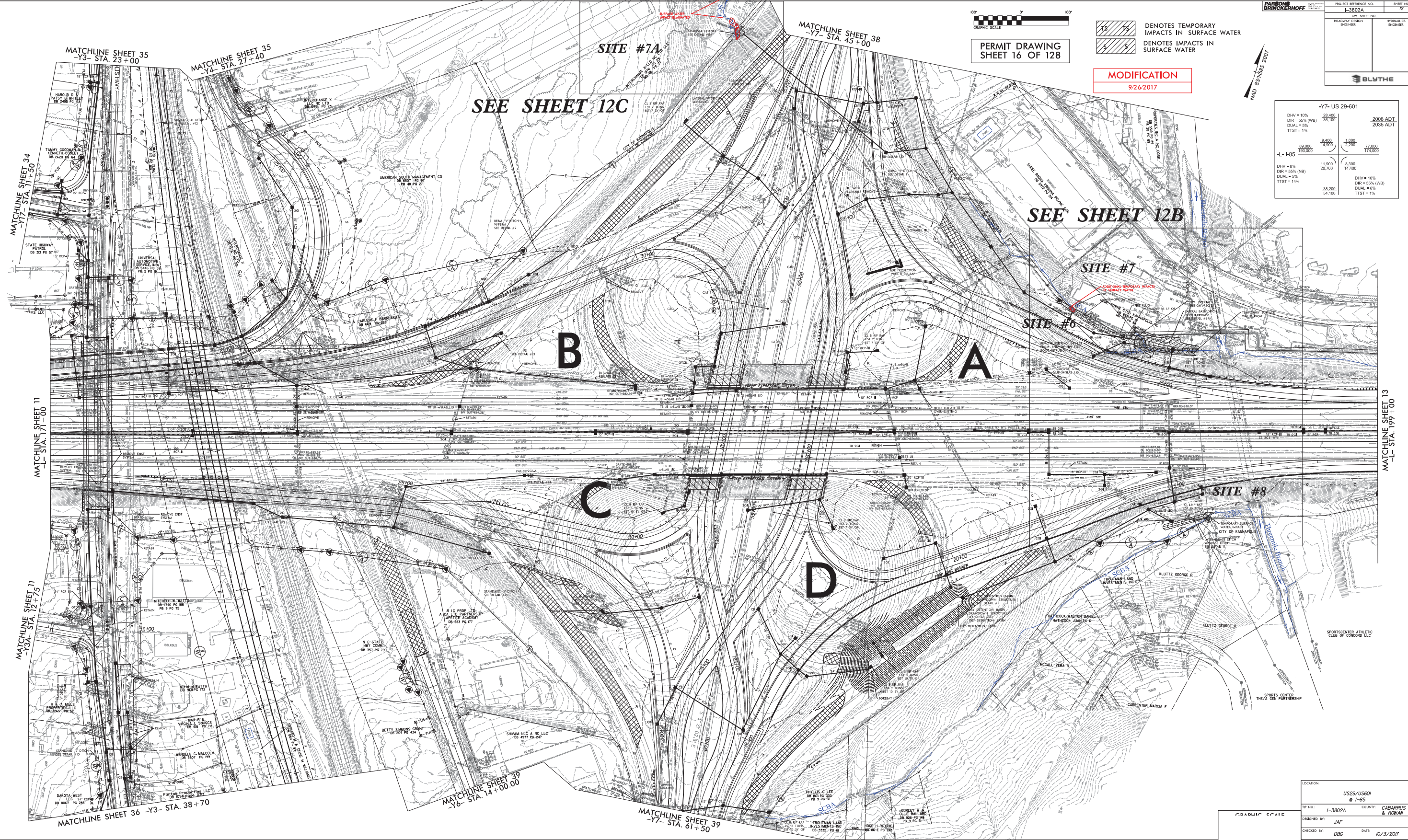
PERMIT DRAWING  
 SHEET 16 OF 128

DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
 DENOTES IMPACTS IN SURFACE WATER

MODIFICATION  
 9/26/2017



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DUAL = 0%			
TTST = 1%			
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	193,000	2,200	174,000
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	54,100		



SEE SHEET 12C

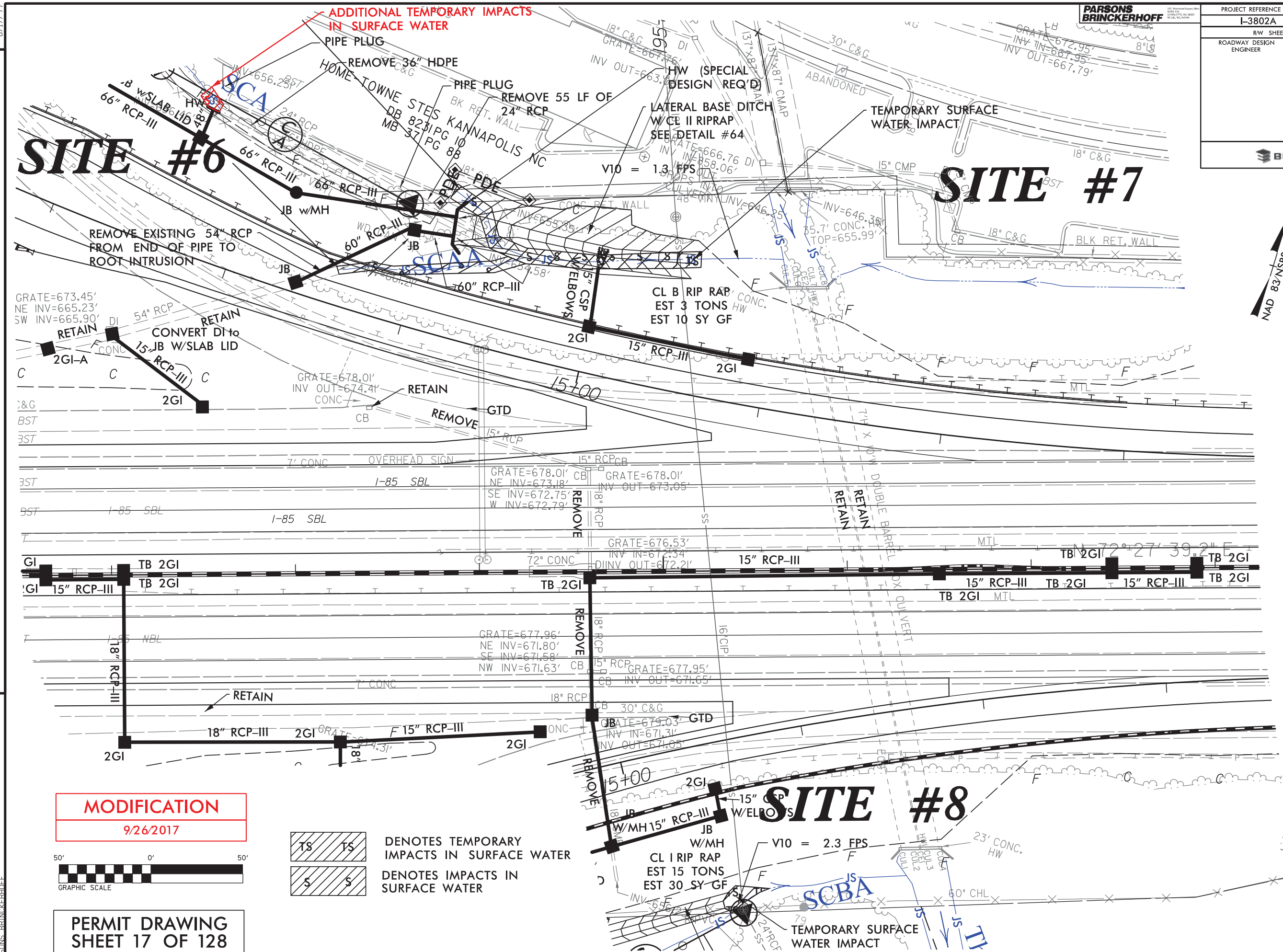
SEE SHEET 12B

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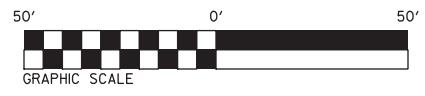
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PROJECT REFERENCE NO. I-3802A	SHEET NO. 12B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
BLYTHE	



**MODIFICATION**  
9/26/2017



DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
 DENOTES IMPACTS IN SURFACE WATER

**PERMIT DRAWING**  
**SHEET 17 OF 128**

REVISIONS

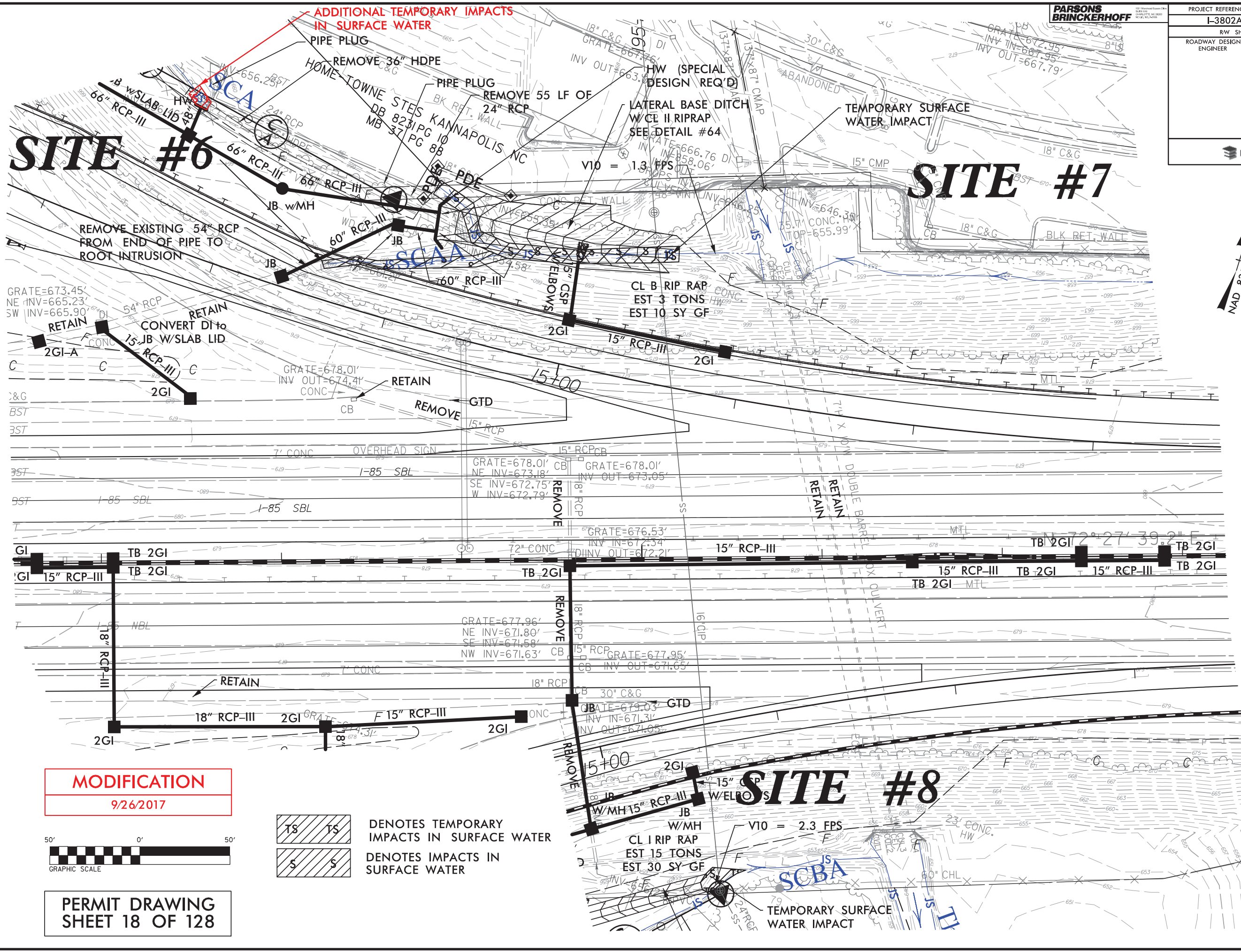
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NAD 83/NRS 2007



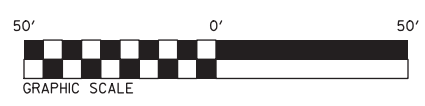
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**MODIFICATION**  
 9/26/2017



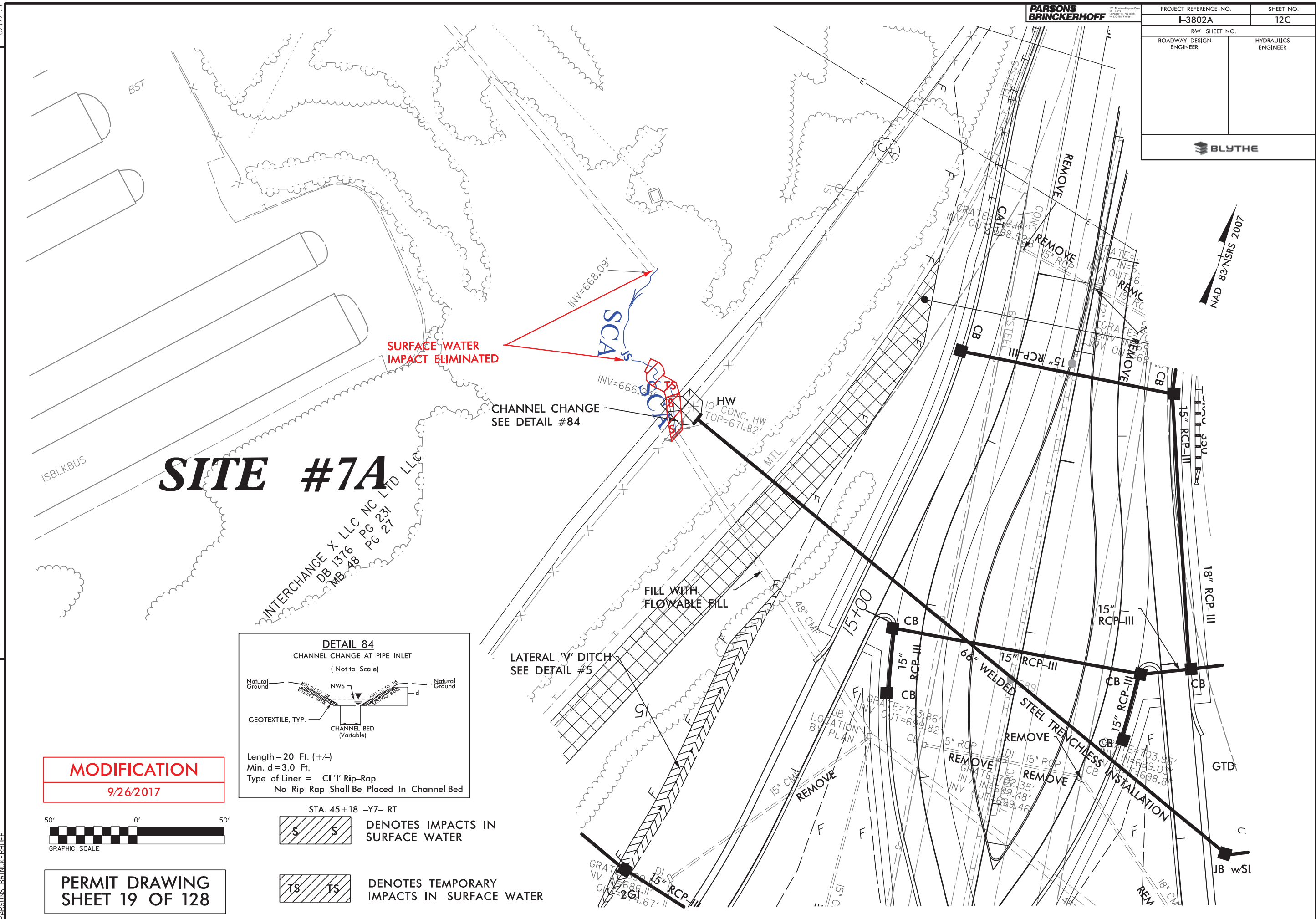
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**PERMIT DRAWING**  
**SHEET 18 OF 128**

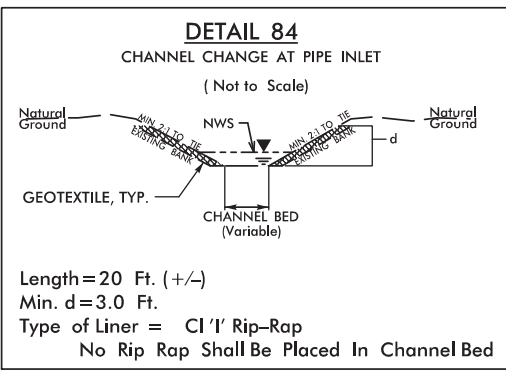
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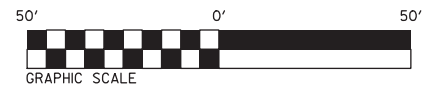
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# SITE #7A



**MODIFICATION**  
9/26/2017



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**SHEET 19 OF 128**

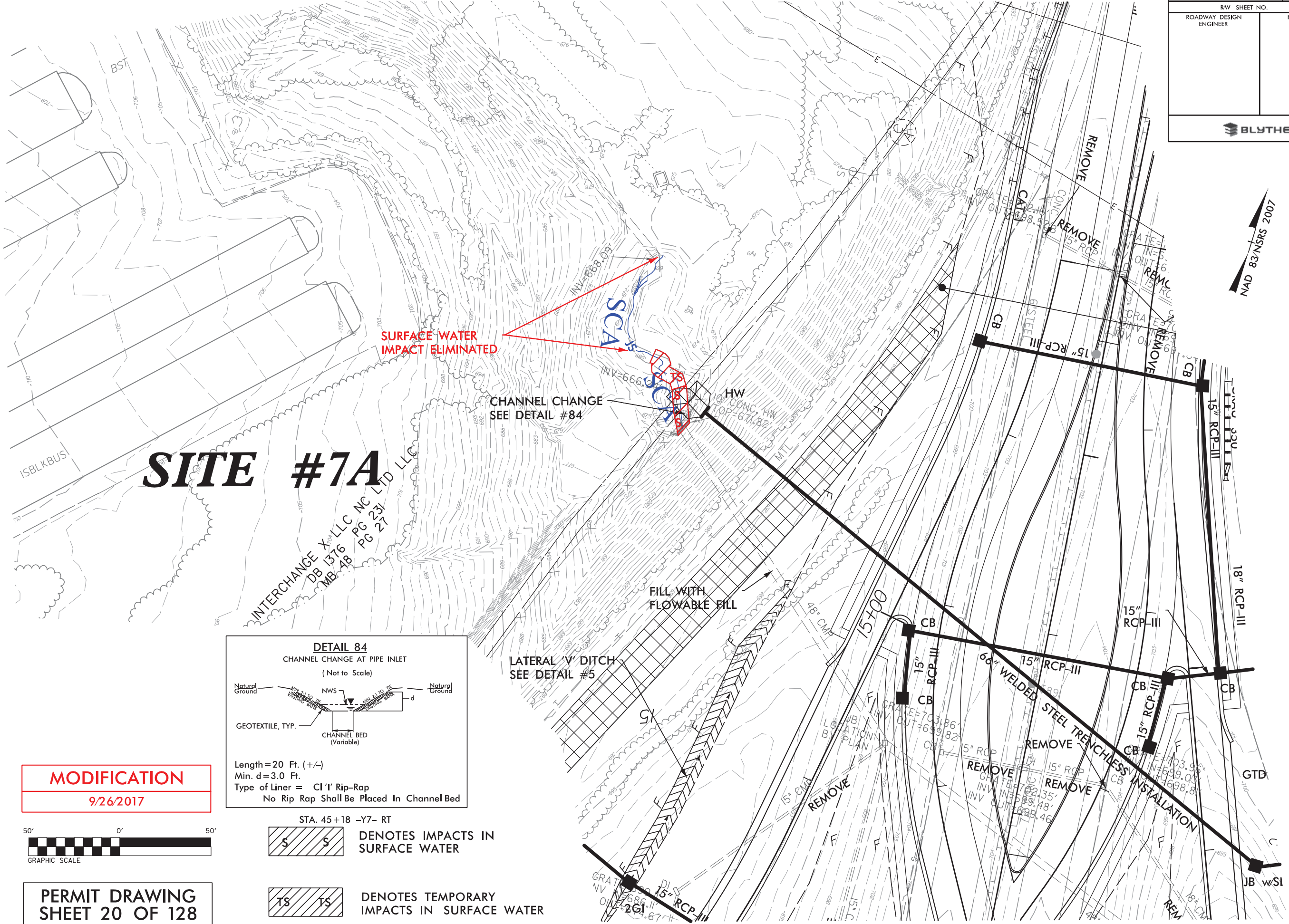
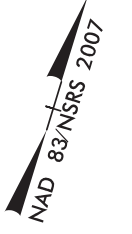
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<b>BLYTHE</b>	



# SITE #7A

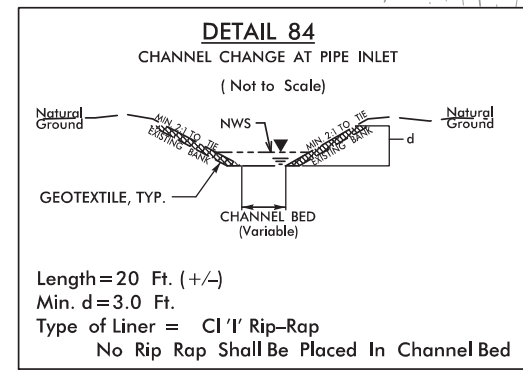
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**SURFACE WATER  
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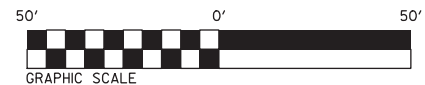
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SEE DETAIL #84

LATERAL 'Y' DITCH  
SEE DETAIL #5

FILL WITH  
FLOWABLE FILL



**MODIFICATION**  
9/26/2017

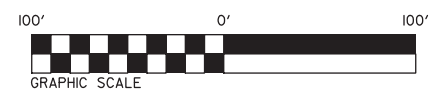
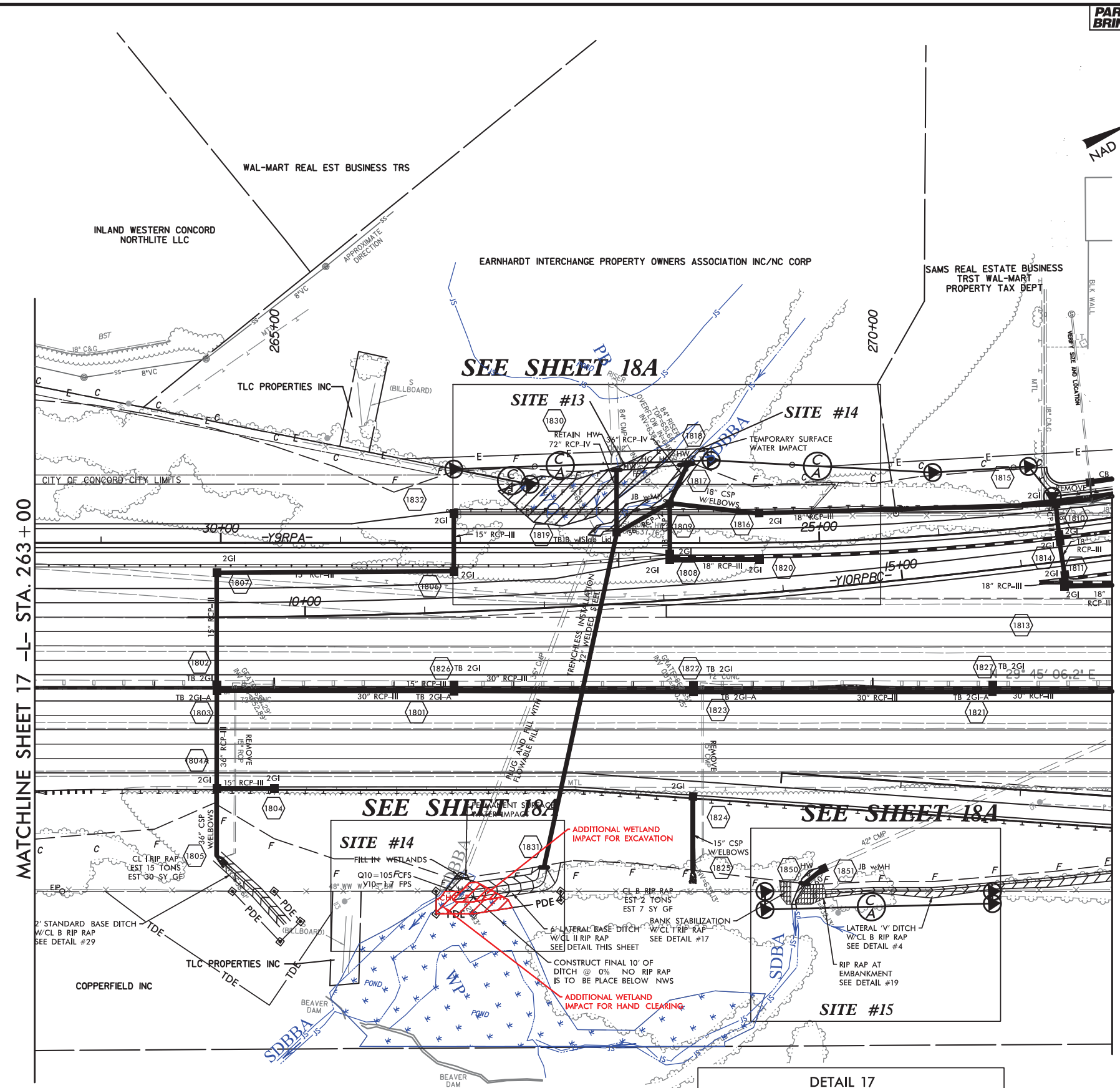
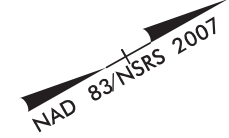


**PERMIT DRAWING  
SHEET 20 OF 128**

- STA. 45+18 -Y7- RT**  
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- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS

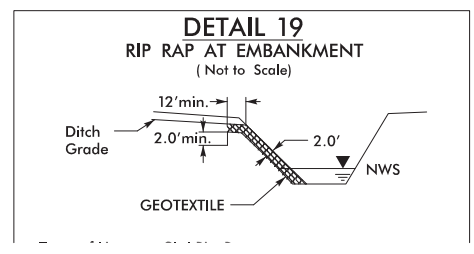
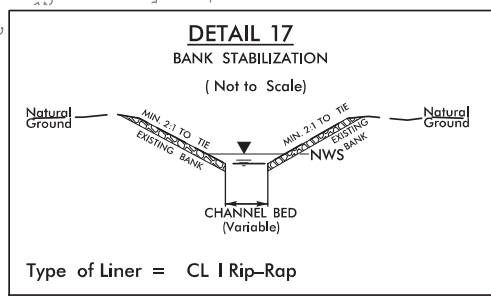
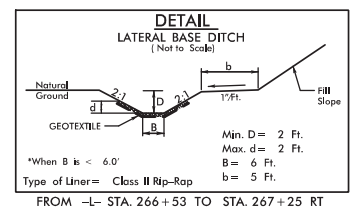
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**MODIFICATION**  
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**PERMIT DRAWING**  
SHEET 41 OF 128

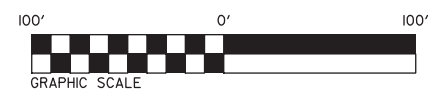
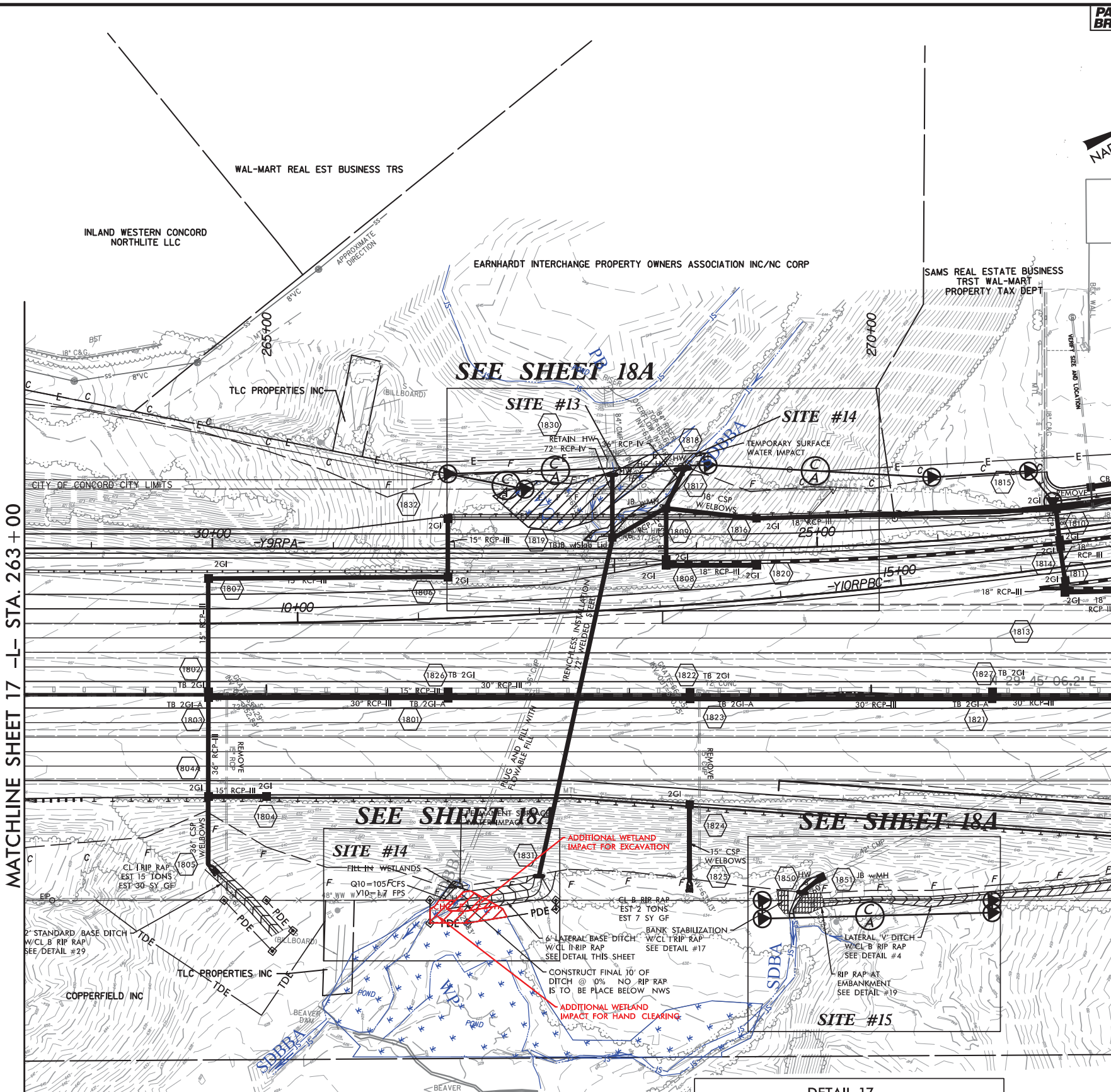
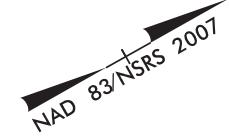
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- DENOTES HAND CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES EXCAVATION IN WETLAND



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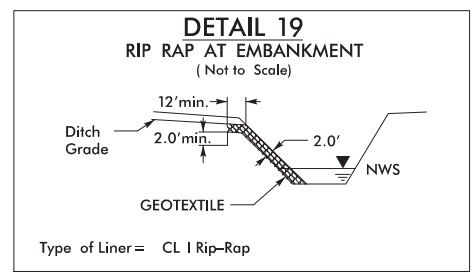
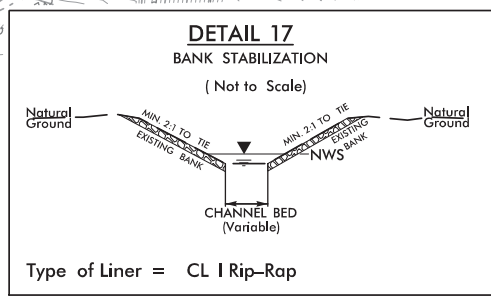
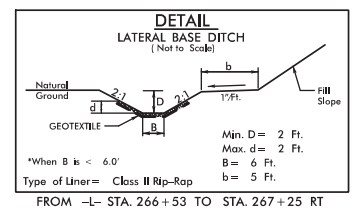




**MODIFICATION**  
9/26/2017

**PERMIT DRAWING**  
**SHEET 42 OF 128**

- DENOTES FILL IN WETLAND
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- DENOTES EXCAVATION IN WETLAND



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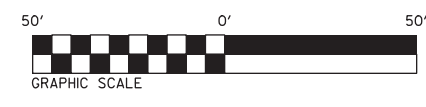
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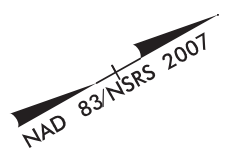
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- DENOTES HAND CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
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- DENOTES EXCAVATION IN WETLAND



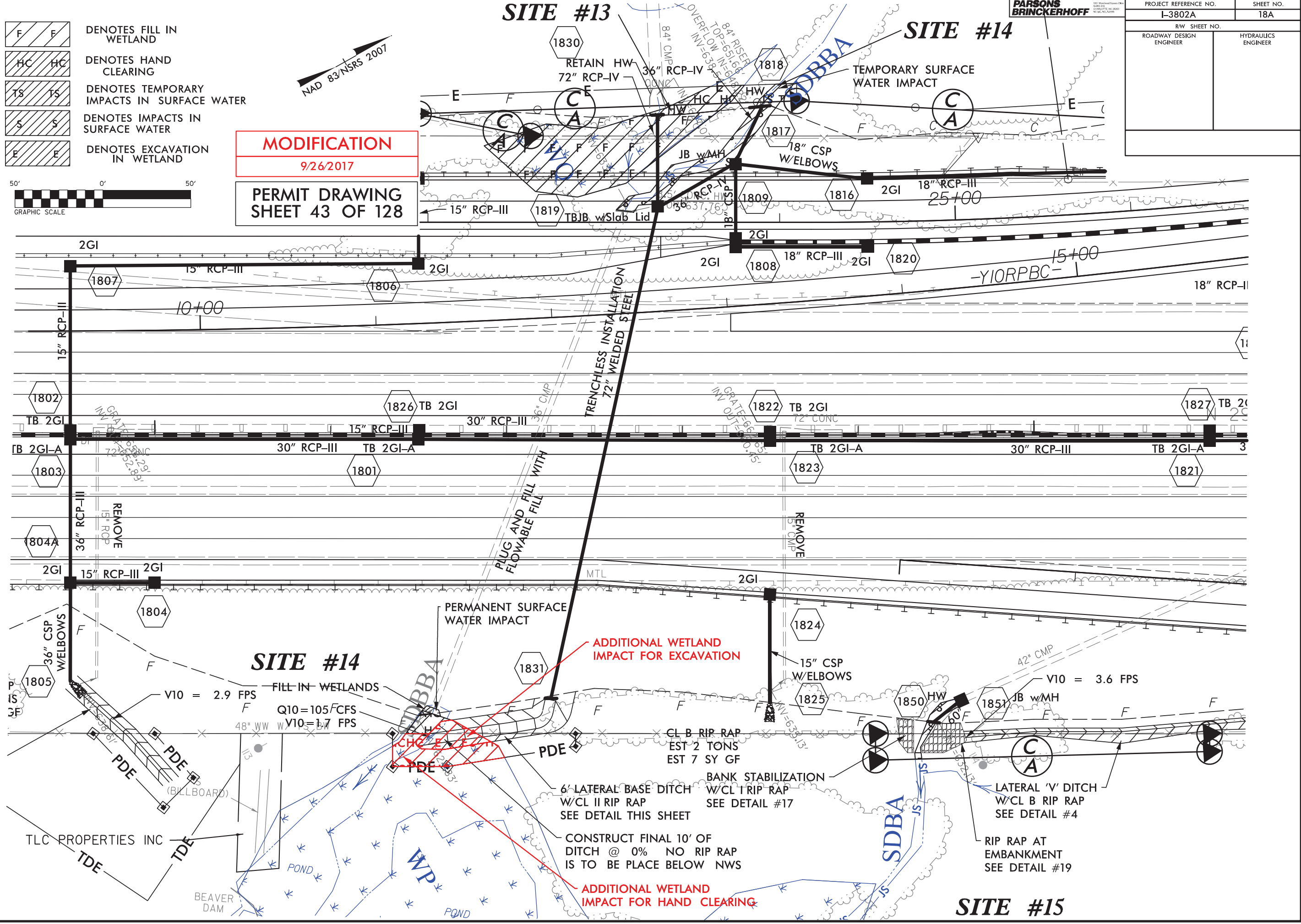
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**PERMIT DRAWING SHEET 43 OF 128**



## SITE #13

## SITE #14

PROJECT REFERENCE NO. I-3802A	SHEET NO. 18A
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



REVISIONS

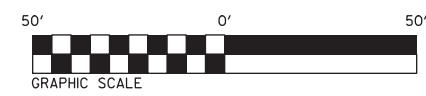
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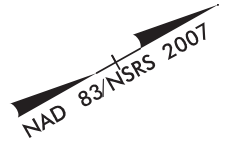
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PARSONS BRINCKERHOFF

- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
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- DENOTES EXCAVATION IN WETLAND



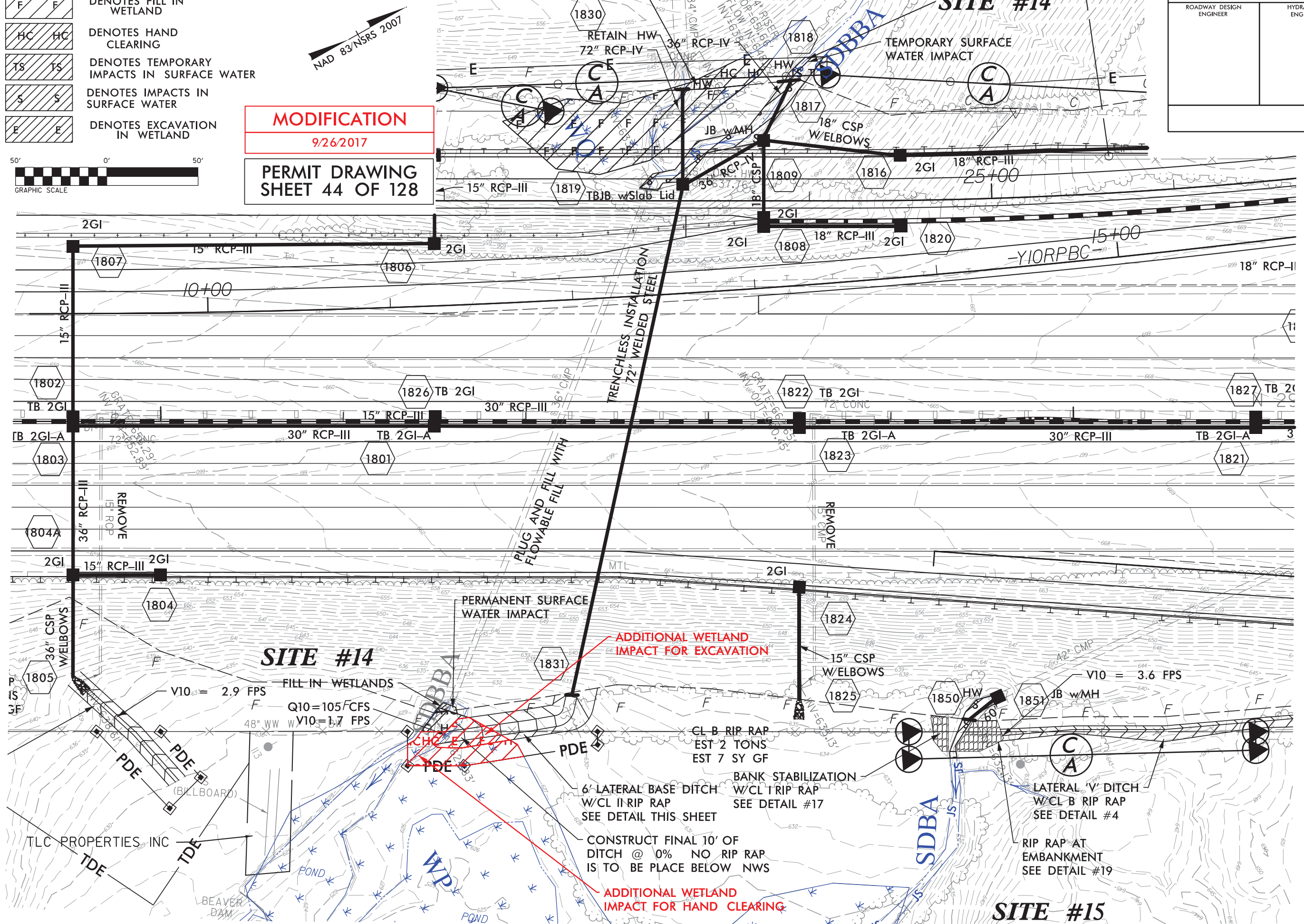
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9/26/2017  
**PERMIT DRAWING SHEET 44 OF 128**



PROJECT REFERENCE NO. I-3802A		SHEET NO. 18A	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

**SITE #13**

**SITE #14**



REVISIONS

ADDITIONAL WETLAND IMPACT FOR EXCAVATION

ADDITIONAL WETLAND IMPACT FOR HAND CLEARING

**SITE #14**

**SITE #15**

TLC PROPERTIES, INC

BEAVER DAM

FILL IN WETLANDS  
 $V_{10} = 2.9$  FPS  
 $Q_{10} = 105$  FCFS  
 $W_{V10} = 1.7$  FPS

CL B RIP RAP  
 EST 2 TONS  
 EST 7 SY GF

6' LATERAL BASE DITCH  
 W/CL I RIP RAP  
 SEE DETAIL THIS SHEET

BANK STABILIZATION  
 W/CL I RIP RAP  
 SEE DETAIL #17

LATERAL 'V' DITCH  
 W/CL B RIP RAP  
 SEE DETAIL #4

RIP RAP AT  
 EMBANKMENT  
 SEE DETAIL #19

$V_{10} = 3.6$  FPS

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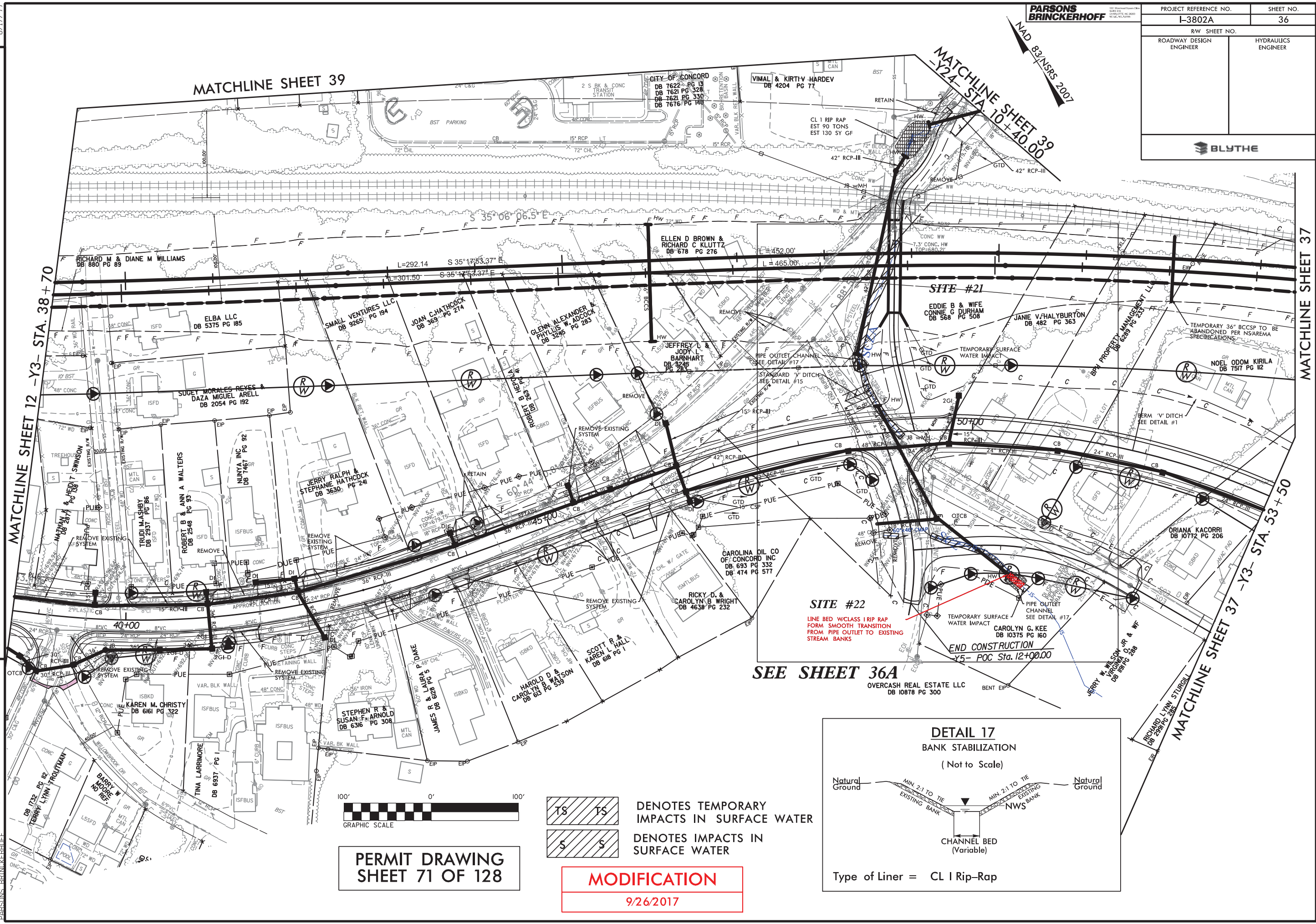
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PROJECT REFERENCE NO. I-3802A	SHEET NO. 36
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
BLYTHE	

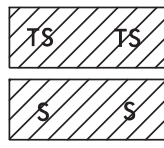
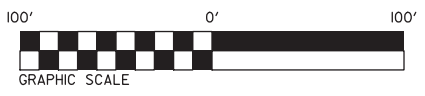
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REVISIONS

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PARSONS BRINCKERHOFF

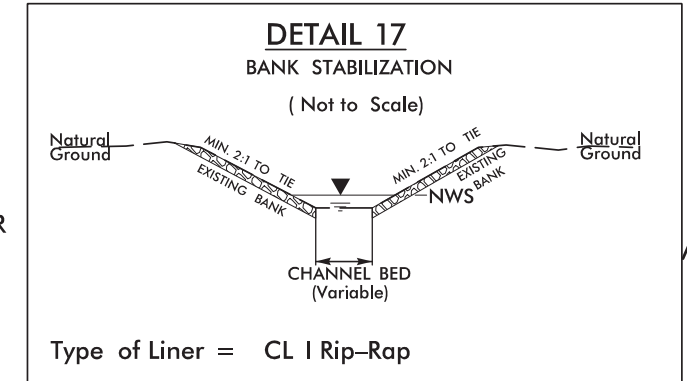
**PERMIT DRAWING  
SHEET 71 OF 128**



TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
S S DENOTES IMPACTS IN SURFACE WATER

**MODIFICATION**  
9/26/2017

**SEE SHEET 36A**



**SITE #22**  
LINE BED W/CLASS I RIP RAP  
FORM SMOOTH TRANSITION  
FROM PIPE OUTLET TO EXISTING  
STREAM BANKS

**END CONSTRUCTION**  
Y5- POC Sta. 12+00.00

OVERCASH REAL ESTATE LLC  
DB 10878 PG 300

**MATCHLINE SHEET 37**  
-Y3- STA. 53+50

**MATCHLINE SHEET 12**  
-Y3- STA. 38+70

**MATCHLINE SHEET 39**

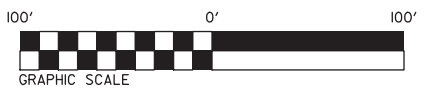
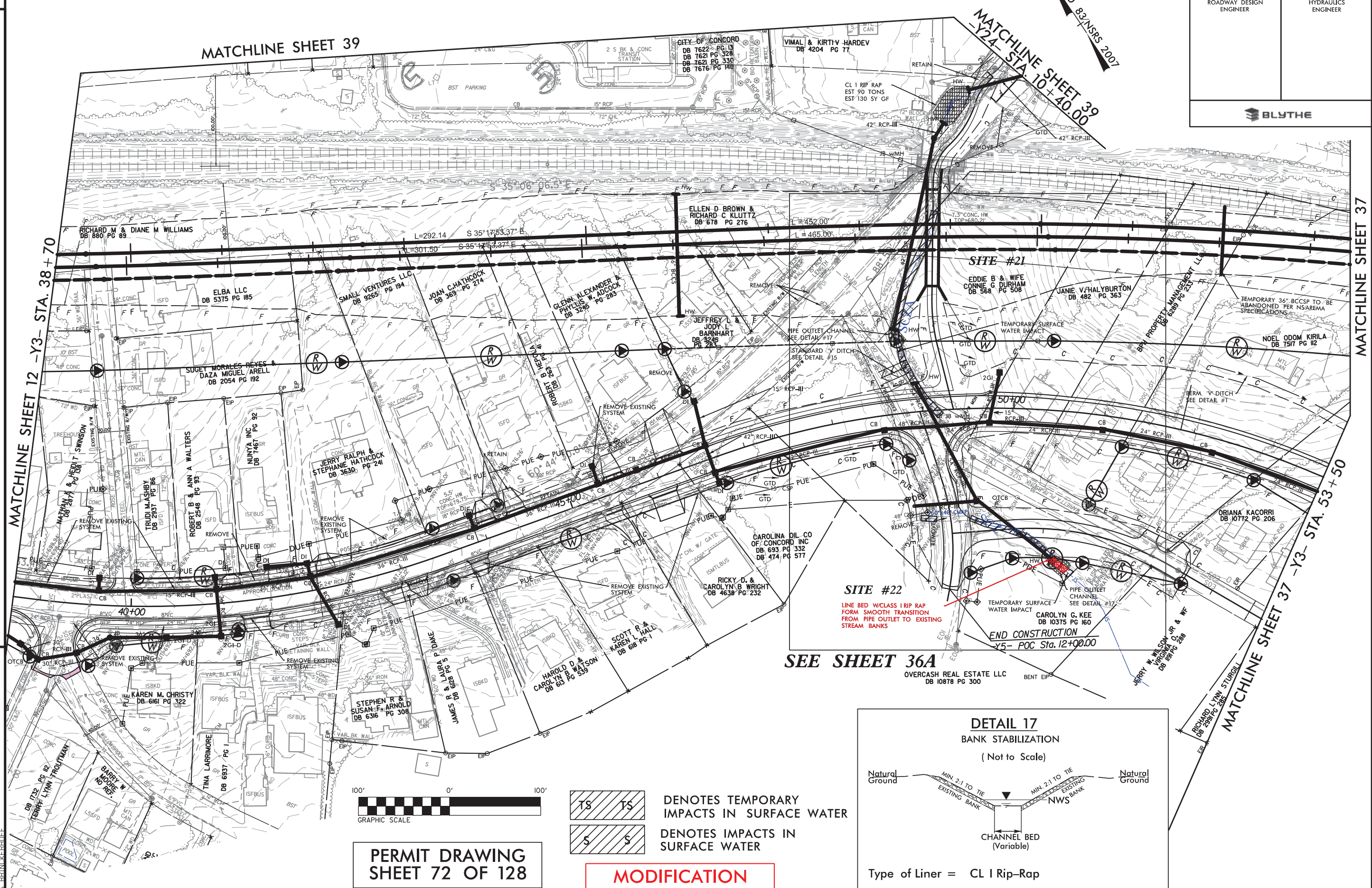
**MATCHLINE SHEET 39**  
-Y2- STA. 10+40.00



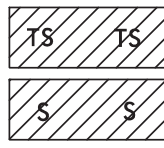
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PARSONS BRINCKERHOFF

PROJECT REFERENCE NO.	SHEET NO.
I-3802A	36
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BLYTHE

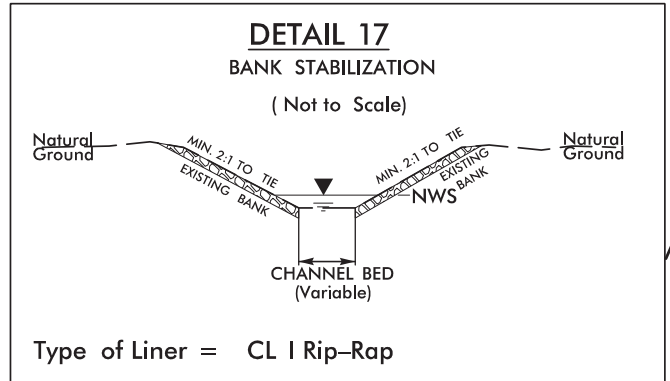


PERMIT DRAWING  
SHEET 72 OF 128



TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
S S DENOTES IMPACTS IN SURFACE WATER

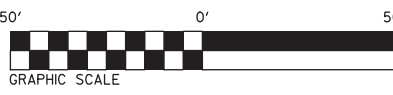
**MODIFICATION**  
9/26/2017



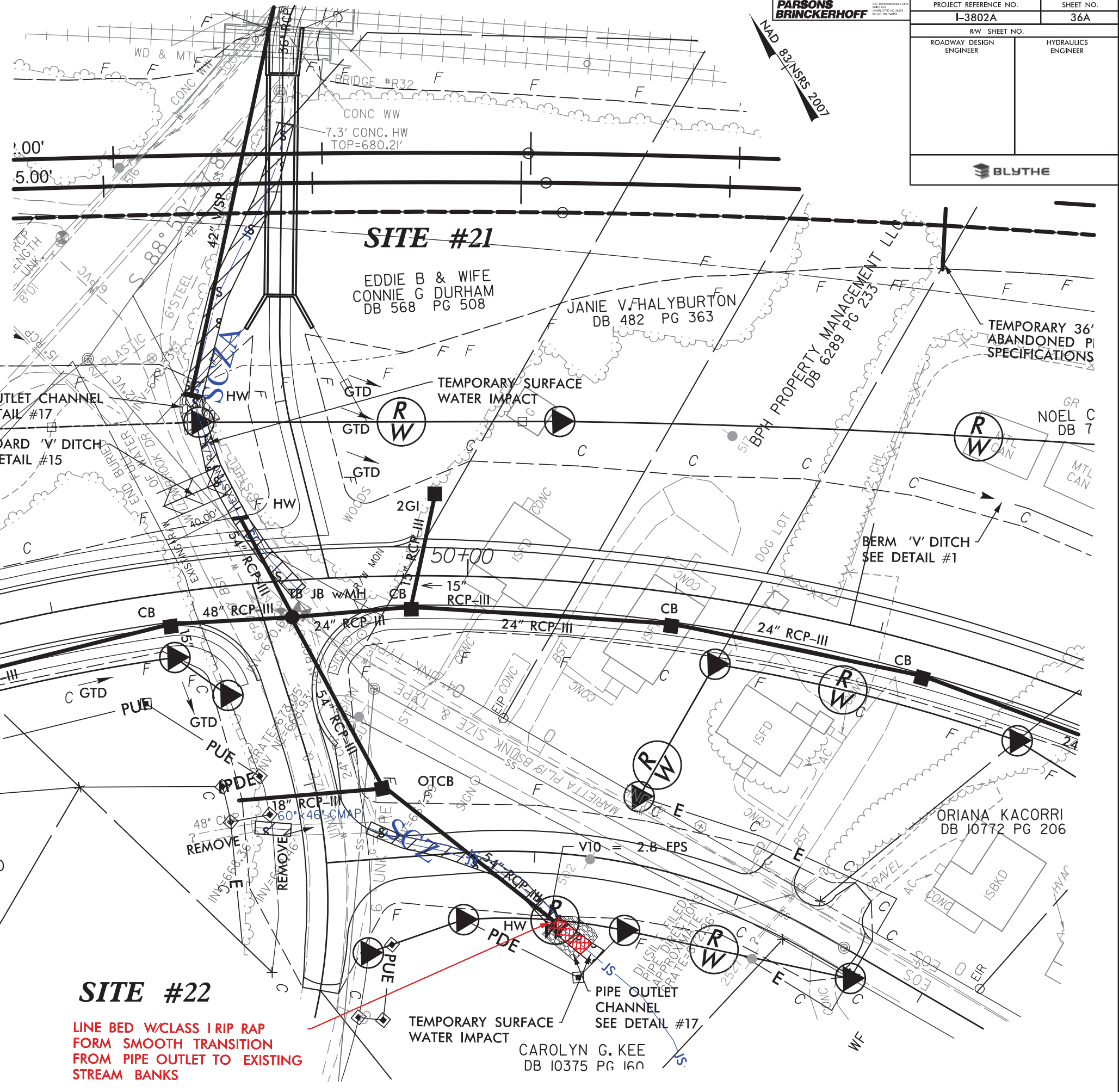


TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
S S DENOTES IMPACTS IN SURFACE WATER

**MODIFICATION**  
9/26/2017



PERMIT DRAWING SHEET 73 OF 128



**SITE #22**  
LINE BED W/CLASS I RIP RAP  
FORM SMOOTH TRANSITION  
FROM PIPE OUTLET TO EXISTING  
STREAM BANKS

REVISIONS

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10/17/2017  
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PARSONS BRINCKERHOFF







WETLAND PERMIT IMPACT 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	83+00 -L-	BANK STABILIZATION						< 0.01	< 0.01	15	10	
2	94+68 -L-	BANK STABILIZATION						0.04	< 0.01	172	20	
3	97+00 -L-	EXTEND EX 30" RCP-III						< 0.01	< 0.01	15	20	
4	157+27 -L-	EXTEND EX 42" RCP-III						< 0.01	< 0.01	7	10	
4	157+25 -L-	BANK STABILIZATION						< 0.01	< 0.01	14	10	
6	193+25 -L-	FILL						0.01		95		
7	193+00 -L-	6' LATERAL BASE DITCH						0.03	< 0.01	140	20	
7A	44+87 -Y7-	REPLACE EXIST. 48" CMP						< 0.01	< 0.01	23	24	
8	195+25 -L-	4' LATERAL BASE DITCH							< 0.01		15	
9	205+50 -L-	BANK STABILIZATION						< 0.01	< 0.01	9	5	
9A	205+50 -L-	BANK STABILIZATION						< 0.01	< 0.01	5	5	
10	230+75 - 237+60 -L-	CHANNEL CHANGE						0.11	< 0.01	666	30	
10A	229+40 -L-	BANK STABILIZATION						< 0.01	< 0.01	7	12	
12	241+00 / 248+00 -L-	BANK STABILIZATION						0.01	< 0.01	22	20	
12	241+40 -L-	EXTEND EX 48" RCP-III						< 0.01	< 0.01	25	10	
UC-1	257+45 -L-	6" WATER LINE							0.01		56	
12A	257+45 -L-	BANK STABILIZATION						< 0.01	< 0.01	21	20	
13	267+70 -L-	EXTEND 36" CSP	0.08				0.01					
14	268+45 -L-	18" RCP-III						0.03	< 0.01	106	16	
14	267+00 -L-	FILL	< 0.01		< 0.01		< 0.01	< 0.01		3		
14	267+00 - 267+25 -L-	6' LATERAL BASE DITCH			< 0.01		0.02					
15	269+50 -L-	EXTEND EX 42" CMP						< 0.01		23		
15	269+50 -L-	BANK STABILIZATION						< 0.01	< 0.01	20	4	
15	271+00 -L-	FILL						0.01		60		
SHEET 120 SUBTOTALS*:			0.08		0.02		0.03	0.26	0.05	1448	307	0

\*Rounded subtotals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 9/26/2017  
 CABARRUS AND ROWAN  
 I-3802A  
 C203328  
 SHEET 126 OF 128



**WETLAND PERMIT IMPACT 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)
16	279+00 -L-	FILL	< 0.01									
17	305+00 -L-	FILL, OTCB					0.01		< 0.01		10	
17	306+00 -L-	EXTEND 30" RCP-IV						< 0.01		12		
17	306+00 -L-	BANK STABILIZATION						< 0.01	< 0.01	16	6	
17A	317+76 -L-	BANK STABILIZATION						< 0.01	< 0.01	8	10	
17B	322+90 -L-	BANK STABILIZATION						< 0.01	< 0.01	6	5	
18	338+00 -L-	BANK STABILIZATION						0.03	< 0.01	185	35	
18	338+00 -L-	BANK STABILIZATION						0.02		30		
19	340+00 -L-	FILL			< 0.01			0.07	< 0.01	356	15	
20	350+50 -L-	EXTEND 54" RCP-III						< 0.01	< 0.01	12	10	
20	352+00 -L-	BANK STABILIZATION						< 0.01	< 0.01	22	10	
21	48+75 -Y3-	FILL						0.04		210		
21	48+75 -Y3-	BANK STABILIZATION						< 0.01	< 0.01	15	20	
22	50+00 -Y3-	FILL, EXTEND 54" RCP-III						0.02		130		
22	50+00 -Y3-	OUTLET PROTECTION						< 0.01	< 0.01	15	10	
23	58+00 -Y3-	FILL	0.10				< 0.01	0.04	0.01	135	65	
23	58+00 -Y3-	BANK STABILIZATION						< 0.01	< 0.01	11	10	
24	16+00 -Y34-	EXTEND 36" RCP-III	< 0.01					0.01	< 0.01	80	10	
SHEET 121 SUBTOTALS*:			0.11		< 0.01		0.02	0.24	0.04	1243	216	0

\*Rounded subtotals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 9/26/2017  
 CABARRUS AND ROWAN  
 I-3802A  
 C203328



WETLAND PERMIT IMPACT 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)
25	388+34 -L-	CHANNEL CHANGE						0.01	< 0.01	63	10	
25	388+34 -L-	BANK STABILIZATION						< 0.01		35		
26	388+34 -L-	72" WSP WORK AREA					0.02					
27	405+66 -L-	EXTEND 48" RCP						< 0.01		14		
27	405+66 -L-	CHANNEL CHANGE						0.01	< 0.01	56	7	
27	405+66 -L-	BANK STABILIZATION						< 0.01	< 0.01	31	12	
28	412+82 -L-	EXTEND 72" RCP /42" WSP						0.02		76		
28	412+82 -L-	CHANNEL CHANGE						0.01	< 0.01	43	12	
28	412+82 -L-	BANK STABILIZATION						0.02	< 0.01	73	17	
29	20+91 -Y13RPA-	42" RCP						0.01		93		
29	20+91 -Y13RPA-	OUTFALL CHANNEL						< 0.01	< 0.01	35	8	
30	437+82 -L-	48" WSP						< 0.01		34		
30	437+82 -L-	CHANNEL CHANGE						< 0.01	< 0.01	10	11	
30	437+82 -L-	BANK STABILIZATION						0.01	< 0.01	71	10	
31	437+82 -L-	CHANNEL CHANGE						< 0.01	< 0.01	37	11	
32	449+92 -L-	BANK STABILIZATION						0.02	< 0.01	106	23	
33	470+69 / 473+73 -L-	LATERAL BASE DITCH	0.11		0.04		0.02					
34	470+85 / 477+45 -L-	LATERAL BASE DITCH						0.03		427		
34	470+85 / 477+45 -L-	42" ALTERNATE PIPE						0.02		234		
34	470+85 / 477+45 -L-	BANK STABILIZATION						< 0.01		13		
35	478+17 -L-	BANK STABILIZATION						0.02	< 0.01	99	30	
SHEET 126 SUBTOTALS*:			0.08		0.02		0.03	0.26	0.05	1448	307	0
SHEET 127 SUBTOTALS*:			0.11		< 0.01		0.02	0.24	0.04	1243	216	0
SHEET 128 SUBTOTALS*:			0.11		0.04		0.04	0.22	0.03	1550	151	0
PROJECT TOTALS*:			0.30	0.00	0.06	0.00	0.09	0.72	0.11	4241	674	0

\*Rounded subtotals and totals are sum of actual impacts

NOTES: In addition to the project totals listed above, this permit includes a total of 0.01 acres of Temporary Impacts in Wetlands for Erosion Control Devices per the NCDOT Roadside Environmental Unit.

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 9/28/2017  
 CABARRUS AND ROWAN  
 I-3802A  
 C203328