

ANNUAL REPORT FOR 2020



**Surf City Bridge Temporary Impact Site
Pender County
TIP No. B-4929
CAMA Permit No. 60-16**



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North Carolina Department of Transportation
August 2020

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SUMMARY

The Surf City Bridge Temporary Impact Site is located in Pender County. This is an annual report for temporary impacts associated with the bridge replacement of Bridge No. 16 on NC 50-210 over the Intracoastal Waterway. The project was accepted as complete on October 4, 2019.

The temporary impacts encompass approximately 0.03 acres for roadway/bridge and 0.10 acres for utility temporary impacts from temporary fill and hand clearing in CAMA wetlands. The area that was impacted is being monitored to ensure that it re-attains wetland jurisdictional status. The areas to the North of the Intracoastal Waterway where the temporary work bridge pilings were removed and the temporary utility impact areas adjacent to NC 50-210 were planted in June 2018. All other temporary impact areas were left to re-vegetate naturally. Hydrologic monitoring is not required for this site; however, vegetation monitoring is required for three years.

After the second year of monitoring, the Surf City Bridge Temporary Impact Site shows by visual observation that the temporarily impacted areas are re-attaining jurisdictional wetland status. Site 4 (temp. work bridge impact area) at Photo Point #2 is lacking re-vegetation at this time.

NCDOT proposes to plant the Site 4 (temp. work bridge impact area) at Photo Point #2 with a Black Needle Rush and Smooth Cordgrass during the April to May 2021 planting window. NCDOT will continue vegetation monitoring at the Surf City Bridge Temporary Impact Site in 2021.

1.0 INTRODUCTION

1.1 Project Description

The Surf City Bridge Temporary Impact Site is located in Pender County at Bridge No. 16 on NC 50-210 over the Intracoastal Waterway (Figure 1). The temporary impacts encompass approximately 0.03 acres for roadway/bridge and 0.10 acres for utility temporary impacts from temporary fill and hand clearing in CAMA wetlands. The area that was impacted is being monitored to ensure that it re-attains jurisdictional wetland status. Hydrologic monitoring is not required for this site; however, vegetation monitoring is required for three years.

1.2 Purpose

In order for a temporary impact site to be considered successful, a site must meet vegetation success criteria. This report details the vegetation monitoring in 2020 at the Surf City Bridge Temporary Impact Site. Hydrologic monitoring was not required for the site.

1.3 Project History

June 2018	Marsh Grass Planting
September 2019	Vegetation Monitoring (Year 1)
October 2019	Project Acceptance Date
August 2020	Vegetation Monitoring (Year 2)

1.4 Debit Ledger

The restoration of the Surf City Bridge temporary impact site was used entirely to compensate for temporary impacts on the B-4929 project. There were no wetland mitigation credits generated from the restoration of the impacted area.

2.0 VEGETATION: SURF CITY BRIDGE TEMPORARY IMPACT SITE (YEAR 2 MONITORING)

2.1 Success Criteria

CAMA Condition #25

Due to the possibility that shading, compaction, hand clearing, mechanized clearing, excavation, and/or other site alterations might prevent the temporary Coastal Wetland impacts from re-attaining pre-project wetland functions, the permittee shall provide an annual update on the Coastal Wetland areas temporarily impacted by this project. This annual update shall consist of photographs and a brief written report on the progress of these temporarily impacted areas in re-attaining their pre-project functions. The permittee shall schedule a meeting with DCM to verify the extent and location of the temporary impacts upon project completion. Within three years after project completion, the permittee shall hold another agency field meeting with DCM to determine if the Coastal Wetland areas temporarily impacted by this project have re-attained pre-project wetland functions, DCM will determine whether compensatory mitigation shall be required for these impacts.

2.2 Description of Species

The following wetland species were planted in the temporary impact areas to the North of the Intracoastal Waterway:

Juncus roemerianus, Black Needle Rush

Spartina alterniflora, Smooth Cordgrass

2.3 Results of Vegetation Monitoring

The temporary impacted area where the temporary impacts occurred is re-attaining wetland jurisdictional status, the planted marsh grass is surviving, and marsh grass is re-vegetating throughout the temporary impact areas. Site 4 (temporary work bridge area) at Photo Point #2 is lacking re-vegetation at this time. Other species noted within the temporary impacted areas included cattail, *Spartina patens*, glasswort, saltgrass, *Juncus* sp., big cordgrass, marsh-elder, and various marsh grass species.

2.4 Conclusions

There were approximately 0.03 acres for roadway/bridge and 0.10 acres for utility temporary impacts from temporary fill and hand clearing in CAMA wetlands. There were no plots established on the site. By visual observation, the Surf City Bridge Temporary Impact Site shows that the planted species are surviving and the impacted areas are re-attaining wetland jurisdictional status. Site 4 (temporary work bridge area) at Photo Point #2 is scheduled to be planted with the appropriate marsh grass species.

3.0 OVERALL CONCLUSIONS AND RECOMMENDATIONS

NCDOT proposes to plant the Site 4 (temp. work bridge impact area) at Photo Point #2 with a Black Needle Rush and Smooth Cordgrass during the April to May 2021 planting window. NCDOT proposes to continue vegetation monitoring at the Surf City Bridge Temporary Impact Site in 2021.

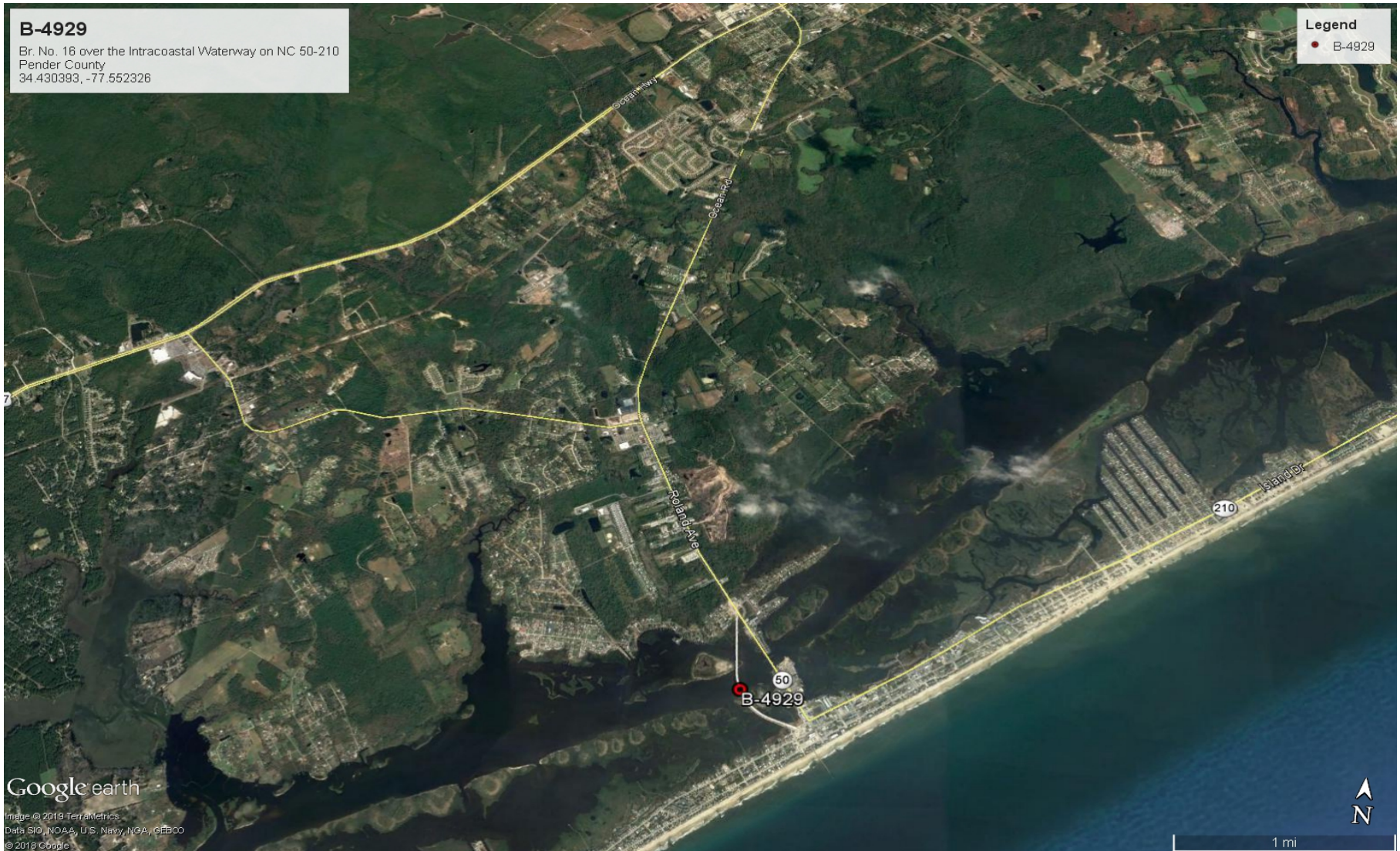


Figure 1. Vicinity Map

APPENDIX A

SITE PHOTOS, PERMIT DRAWINGS, & PHOTO POINT LOCATIONS

Surf City Bridge Temporary Impact Site



PP# 1 Site 4 (temporary work bridge)



PP#2 Site 4 (temporary work bridge)



PP#3 Site 6 (pipe cleanout area)



PP#4 Site 7 (pipe clean out area)



PP#5 Site 3CAMA (utility temp. impact)



PP#6 Site 3CAMA (utility temp. impact)

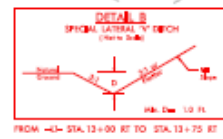
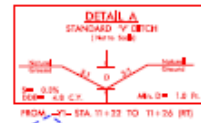
August 2020

PROJECT REFERENCE NO. B-4929	SHEET NO. 4
REV. SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

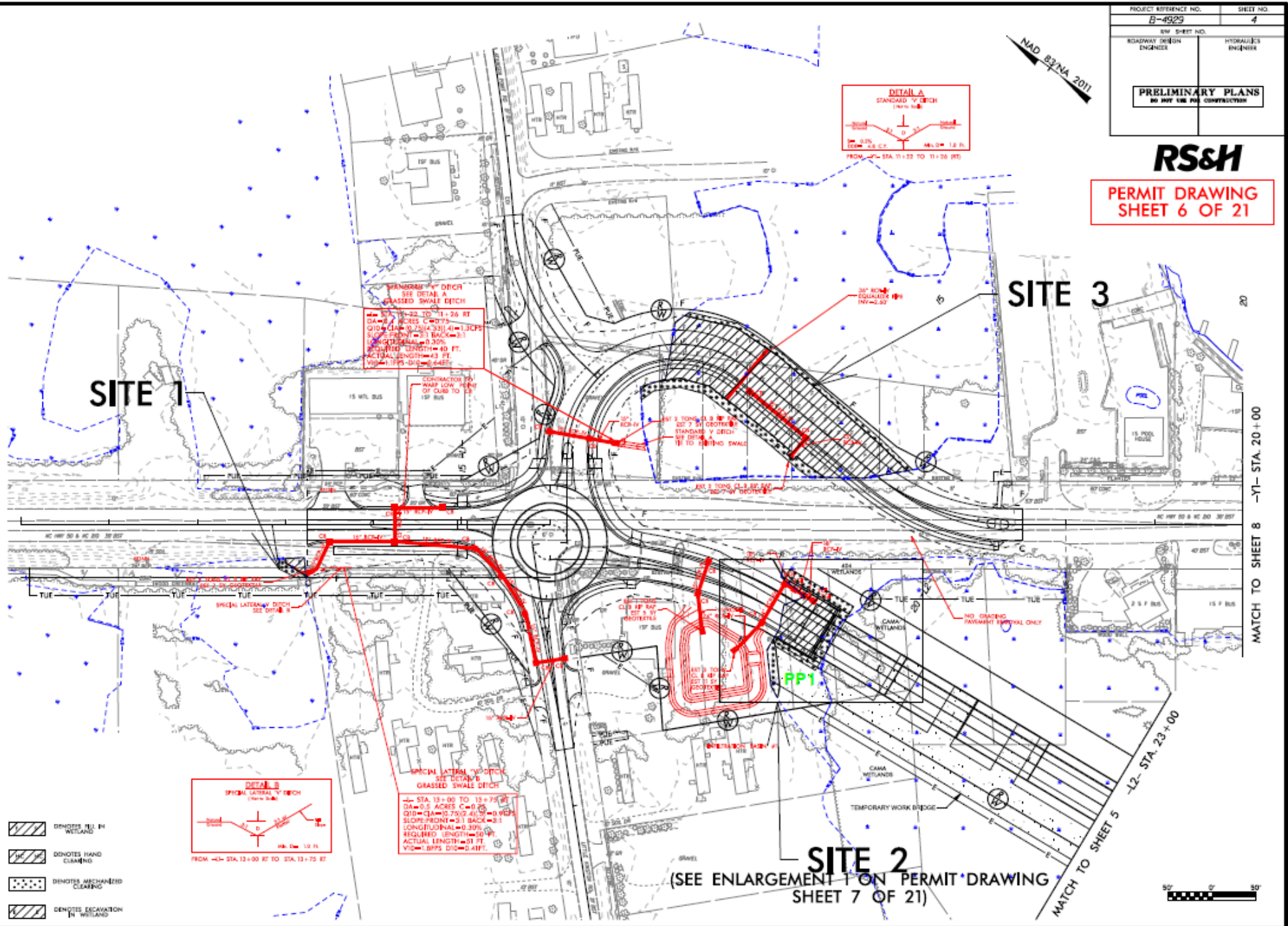
RS&H

PERMIT DRAWING
SHEET 6 OF 21

NAD 83/NA 2011



- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING
- DENOTES EXCAVATION IN WETLAND



SITE 2
(SEE ENLARGEMENT 1 ON PERMIT DRAWING SHEET 7 OF 21)

MATCH TO SHEET 5
-L2- STA. 23+00

MATCH TO SHEET 8
-Y1- STA. 20+00



B-17/19

PROJECT REFERENCE NO. B-4929	SHEET NO. 5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

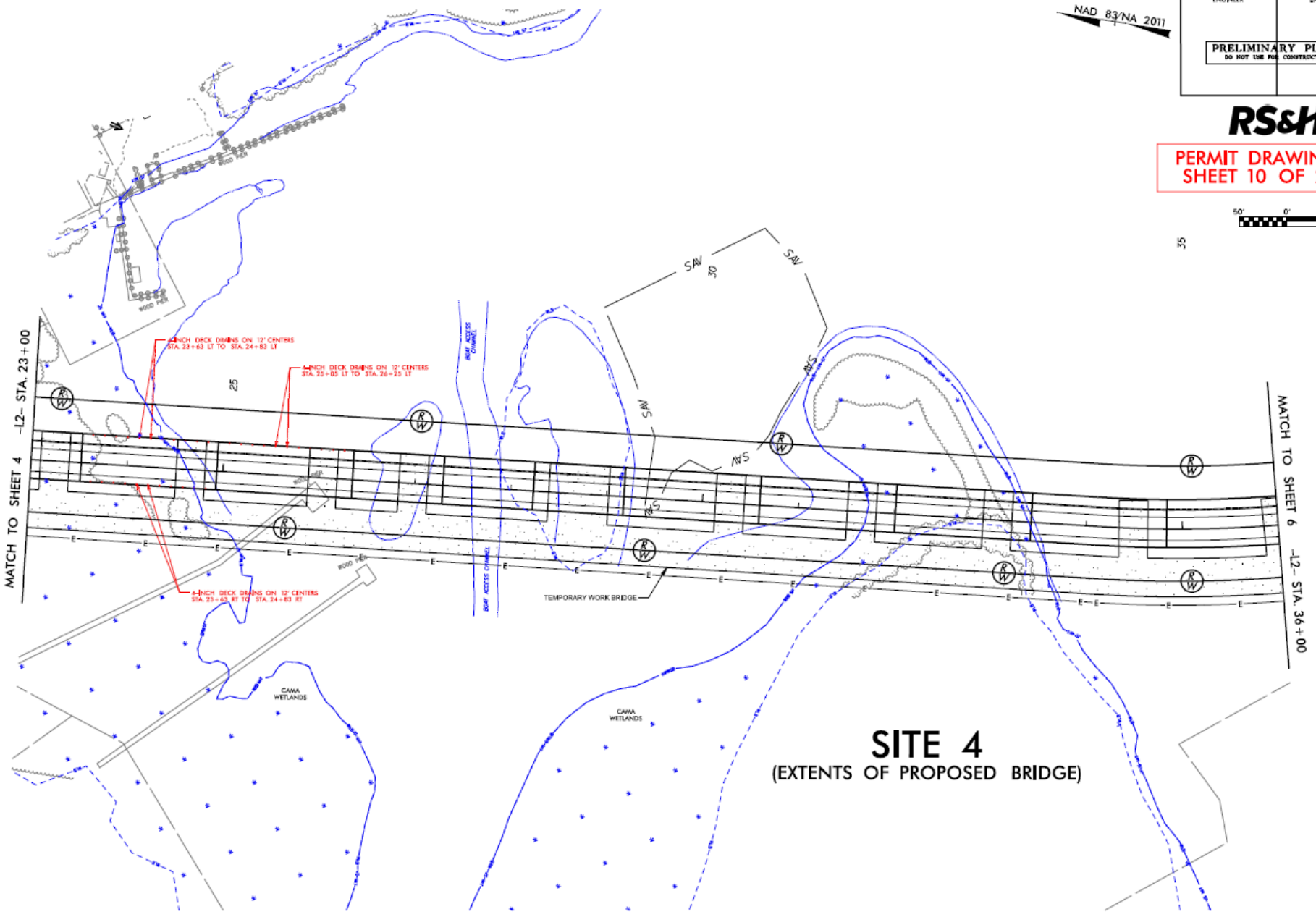
NAD 83/NA 2011

RS&H

PERMIT DRAWING
SHEET 10 OF 21



35



SITE 4

(EXTENTS OF PROPOSED BRIDGE)

\\rsandh\apps\external\2011\201108\081010\101010.dwg

8/27/11
12:59:30

MATCH TO SHEET 8 -ICW- STA. 19+25

PROJECT REFERENCE NO. B-4923	SHEET NO. 6
ROW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 82/NA 2011

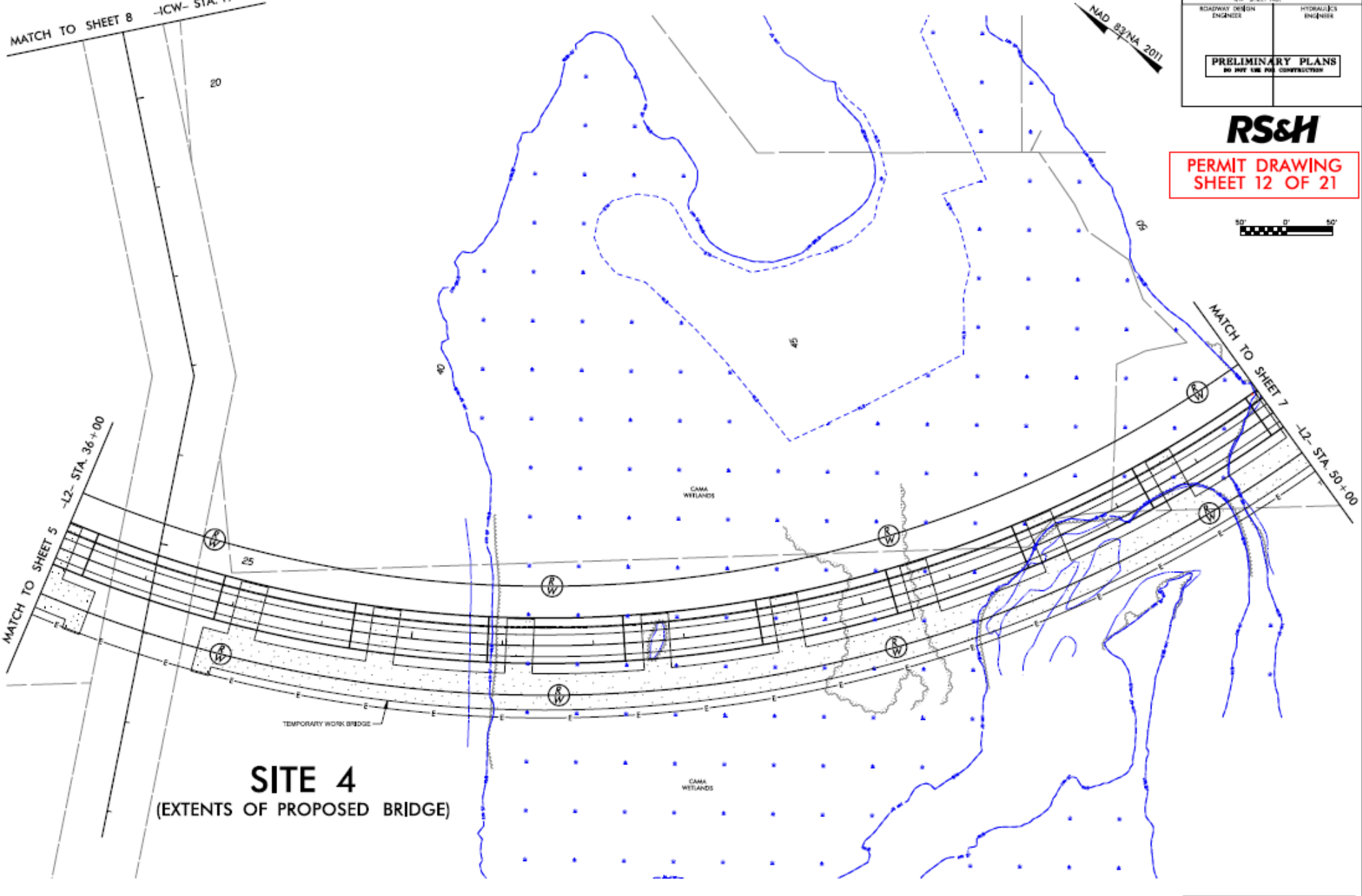
RS&H

PERMIT DRAWING
SHEET 12 OF 21



MATCH TO SHEET 5 -L2- STA. 36+00

MATCH TO SHEET 7 -L2- STA. 50+00



SITE 4
(EXTENTS OF PROPOSED BRIDGE)

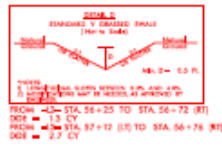
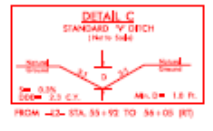
TEMPORARY WORK BRIDGE

FOR -L2- PROFILE, SEE SHEET 11

PROJECT REFERENCE NO.	SHEET NO.
B-4929	7
ROADWAY DESIGN ENGINEER	HYDRAULIC ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

RS&H

**PERMIT DRAWING
SHEET 14 OF 21**



NAD 83
VARIABLE
2011

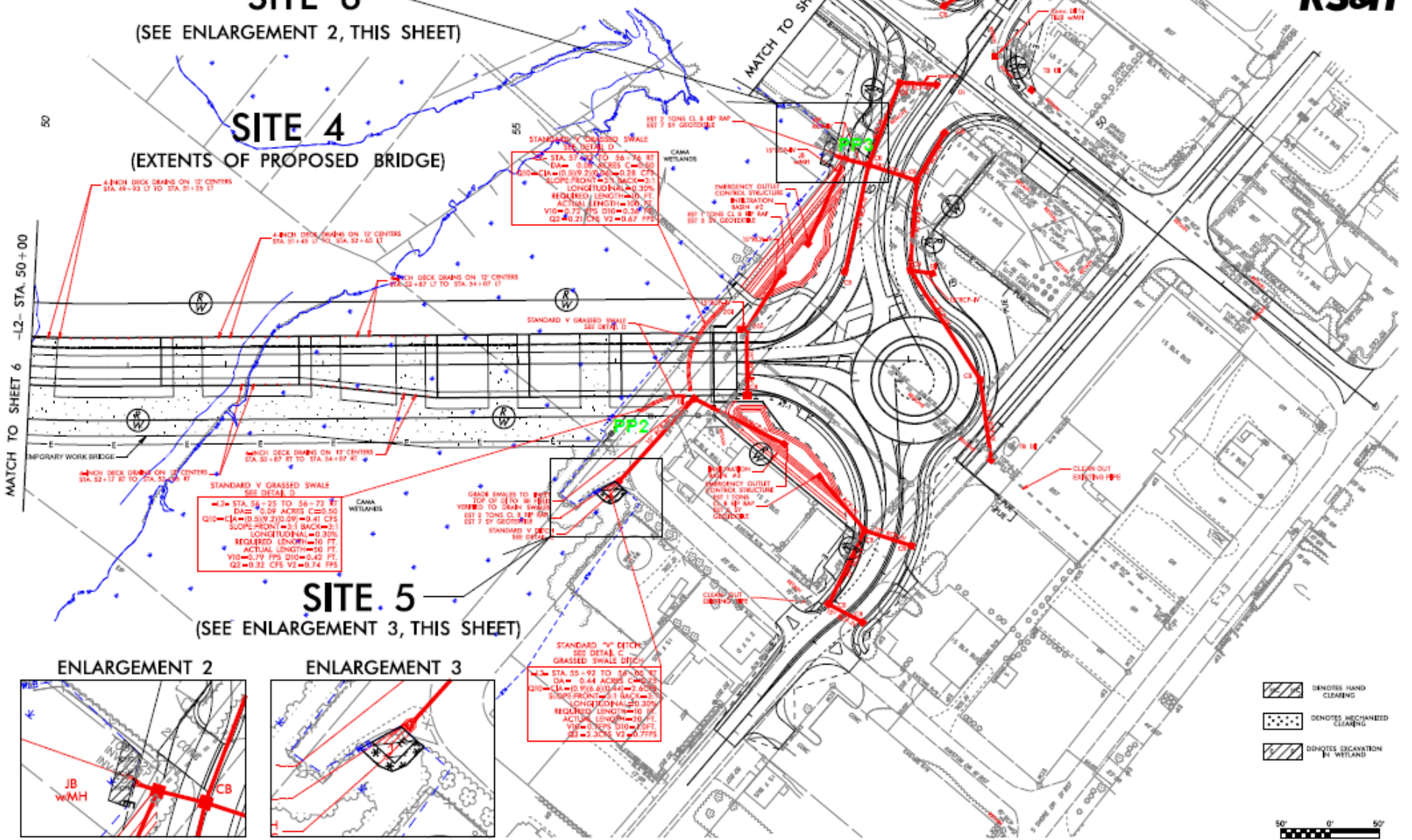
SITE 6
(SEE ENLARGEMENT 2, THIS SHEET)

SITE 4
(EXTENTS OF PROPOSED BRIDGE)

SITE 5
(SEE ENLARGEMENT 3, THIS SHEET)

MATCH TO SHEET 6 -L2- STA. 50+00

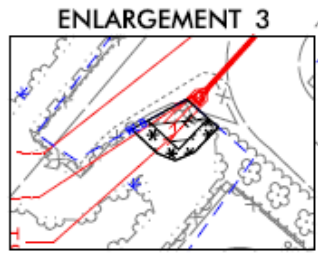
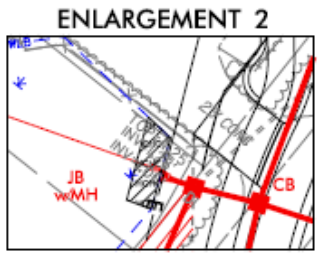
MATCH TO SHEET 9 -Y1- STA. 47+00



STANDARD V GRASSED SWALE
SEE DETAIL C
-L2- STA. 51+92 TO 56+75 RT
DA = 0.08 ACRES C=25.00
SLOPE FRONT = 2:1 BACK = 2:1
LONGITUDINAL = 0.30%
REQUIRED LENGTH = 10 FT
ACTUAL LENGTH = 10 FT
V10 = 0.72 FPS D10 = 0.30 FPS
Q2 = 0.21 CFS V2 = 0.67 FPS

STANDARD V GRASSED SWALE
SEE DETAIL C
-L2- STA. 54+25 TO 56+75 RT
DA = 0.09 ACRES C=25.00
SLOPE FRONT = 2:1 BACK = 2:1
LONGITUDINAL = 0.30%
REQUIRED LENGTH = 10 FT
ACTUAL LENGTH = 50 FT
V10 = 0.71 FPS D10 = 0.42 FT
Q2 = 0.32 CFS V2 = 0.74 FPS

STANDARD V-DITCH
SEE DETAIL C
GRASSED SWALE DITCH
-L2- STA. 55+92 TO 56+75 RT
DA = 0.44 ACRES C=25.00
SLOPE FRONT = 2:1 BACK = 2:1
LONGITUDINAL = 0.30%
REQUIRED LENGTH = 10 FT
ACTUAL LENGTH = 10 FT
V10 = 0.69 FPS D10 = 0.27 FT
Q2 = 2.30 CFS V2 = 0.77 FPS



- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING
- DENOTES EXCAVATION BY WETLAND



8/17/18

C:\projects\181104\181104.dwg

PROJECT REFERENCE NO. B-4929	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

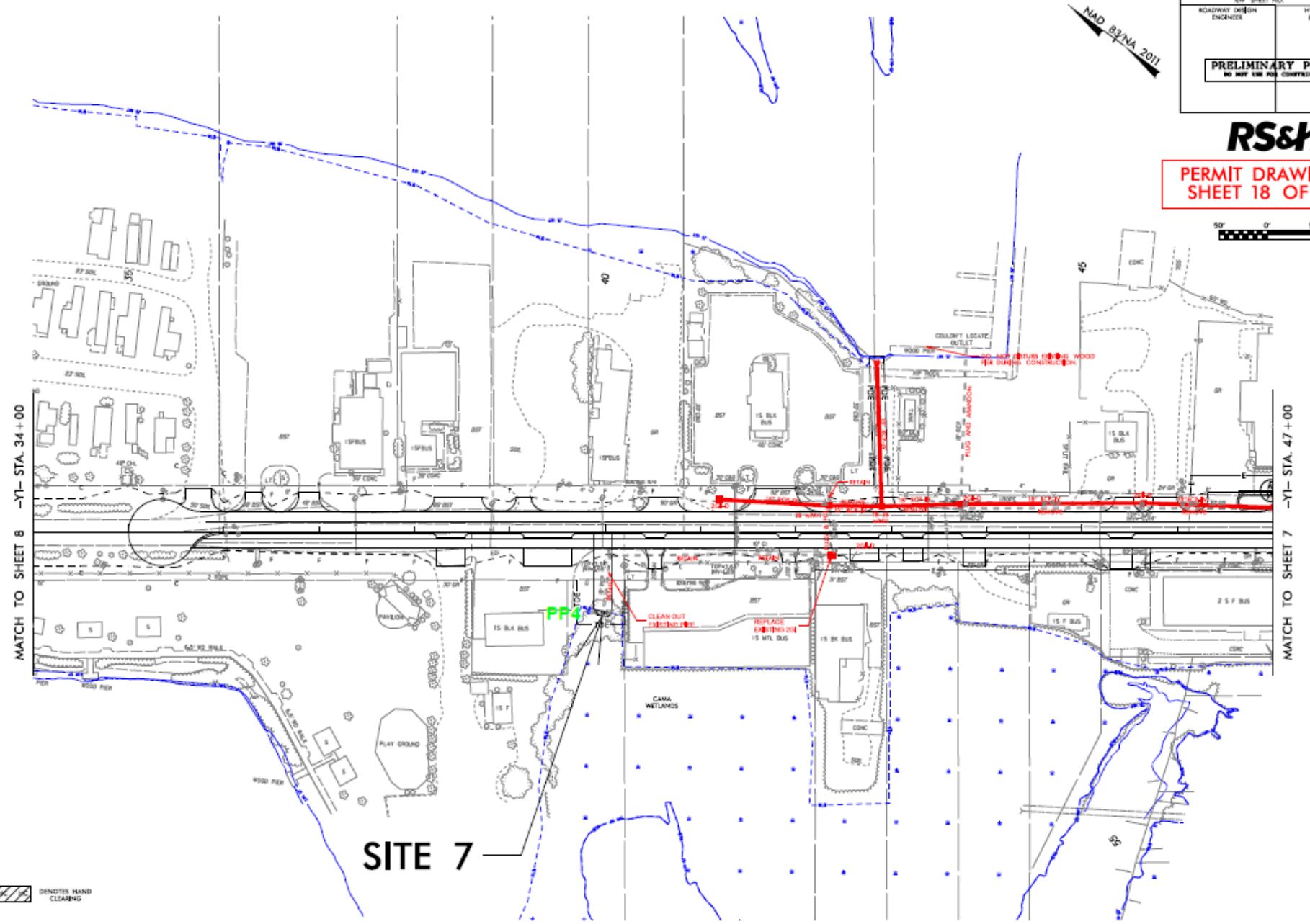
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

RS&H

PERMIT DRAWING
SHEET 18 OF 21



NAD 83/NA 2011

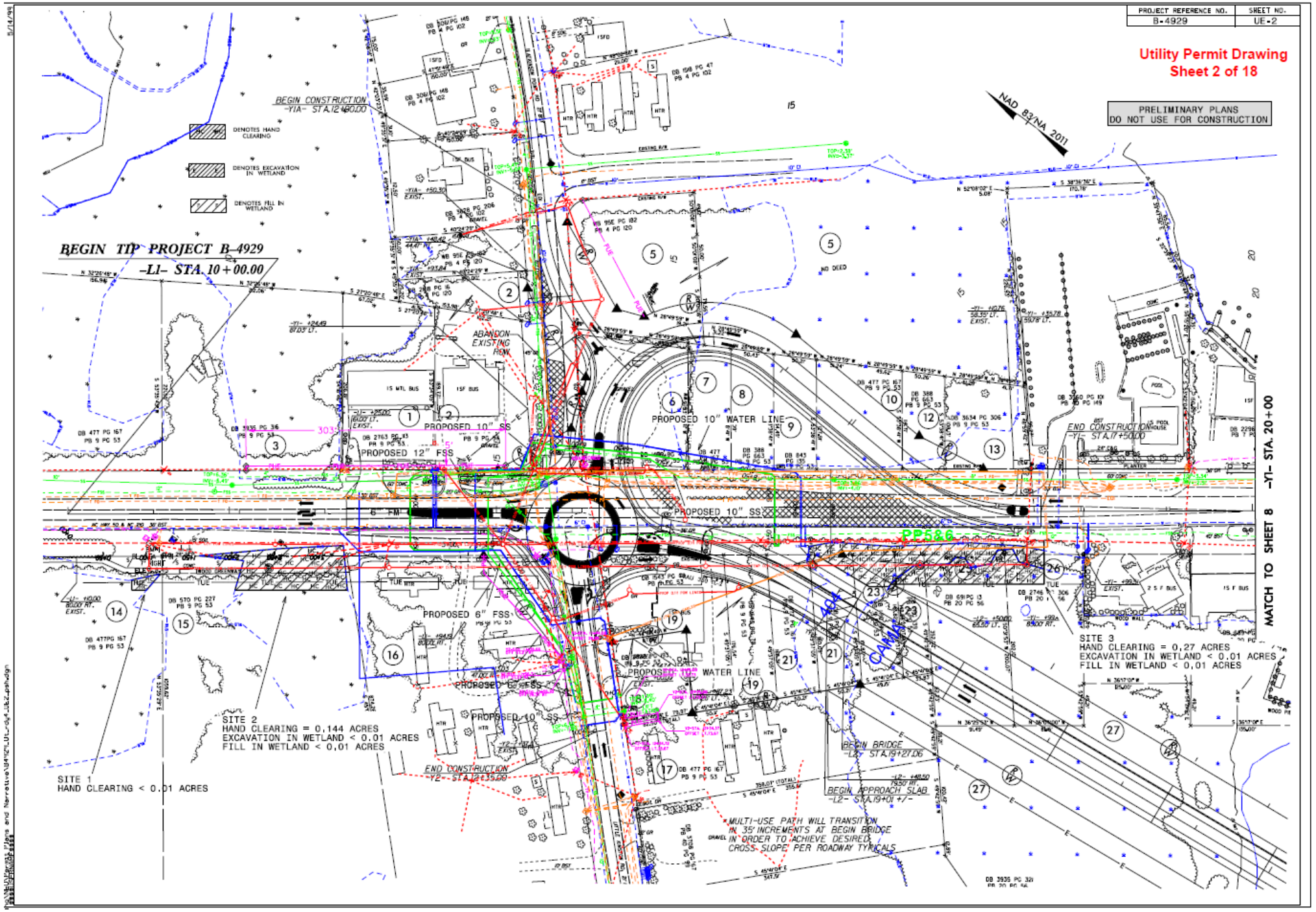


SITE 7

DENOTES HAND CLEARING

**Utility Permit Drawing
Sheet 2 of 18**

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



BEGIN TIP PROJECT B-4929
-LI- STA. 10 + 00.00

BEGIN CONSTRUCTION
-Y1A- STA. 12 + 60.00

NAD 83/NA 2011

- DENOTES HAND CLEARING
- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND

MATCH TO SHEET 8 -Y1- STA. 20 + 00

SITE 2
HAND CLEARING = 0.144 ACRES
EXCAVATION IN WETLAND < 0.01 ACRES
FILL IN WETLAND < 0.01 ACRES

SITE 1
HAND CLEARING < 0.01 ACRES

SITE 3
HAND CLEARING = 0.27 ACRES
EXCAVATION IN WETLAND < 0.01 ACRES
FILL IN WETLAND < 0.01 ACRES

MULTI-USE PATH WILL TRANSITION
IN 35' INCREMENTS AT BEGIN BRIDGE
DRAVEL IN ORDER TO ACHIEVE DESIRED
CROSS-SLOPE PER ROADWAY TYPICALS

B-4929-UE-2.dwg and Narrative\Utility\UT-02.dwg, jlbz, pph/dgn