STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

May 8, 2013

Charles Waklid
NC Division of Water Quality
Transportation and Permitting Unit
1650 Mail Service Center
Raleigh, NC 27699-1617

Subject: **Response to On Hold Letter** for request for Section 401 Water Quality Certification Modification, Wilmington Bypass from north of US 74/76 in Brunswick County to US 421 in New Hanover County. DWQ Project No. 10-0867v.4. TIP R-2633B.

Reference: NCDOT Modification Request, dated April 3, 2013
NCDWQ On Hold Letter, dated April 19, 2013, received April 26, 2013

Dear Sir:

Per the above-referenced On-Hold letter, the N.C. Department of Transportation (NCDOT) has reviewed your comments and addressed the issues identified. A copy of the letter is included for your convenience. We respectfully provide the following responses:

1. *Sites 3 & 5 – the cross section station numbers do not match the station numbers on the plan sheet. Also, the match line station numbers do not match the stations on the plan sheet. The station numbers in the impact summary and on the plan sheets run from 40+57 to 75+00 but the cross section numbers are listed as 345+00 to 375+00. Please change the cross section station and match line stations to coincide with the stations along the –L- line on the plan sheets.*

The station numbers on the impact summary sheet have been revised for sites 3 & 5. A slight change in the design for R-2633A resulted in the need for a geometric alignment shift for R-2633 BA (LREV) to tie the two sections together. Both sets of stations are correctly shown on the Permit Drawing Sheets 2, 3 ,9 &10 and an equality point is provided on Permit Drawing Sheets 9 &10.

2. *Site 6 – no cross sections were provided for the wetland impacts between Sta. 109+28 to 118+00 and 123+00 to 135+00. Please provide these cross sections.*

Representative cross sections were provided in the application. Nevertheless, additional cross sections are enclosed, providing a larger sampling of cross sections in jurisdictional areas.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000
FAX: 919-212-5785

WEBSITE:NCDOT.GOV

LOCATION:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

3. *Your application states in the Avoidance and Minimization section that 3:1 slopes will be used in wetland areas to minimize wetland impacts. Upon review of the application there are several cross sections that show greater than 3:1 slopes. Please correct.*

Sites 3, 5 & 6 permit drawings, cross sections, and impact summary sheet have been revised and are enclosed. As a result, proposed permanent fill has decreased at these sites by 1.42 acres. Additionally, we will submit a revised request to EEP for an updated acceptance letter.

4. *Site 7 (permit drawings 27/28), a wetland boundary limit is shown on the cross sections beyond the clearing limits however the plan sheets show that the entire right of way is within the wetland. Please clarify.*

The wetland boundary limits are outside of the fill slopes. A note has been added to the cross sections. Revised sheets for Site 7 (Permit drawings 27 and 28) are enclosed.

5. *Site 15 (permit drawing 43/44), please confirm that the impacts for the base ditch on the north side of the bridge are include in the Site 15 impacts listed in the impact summary sheet.*

The ditch impacts were included in the Site 15 impacts on the previously submitted wetland summary sheet.

6. *Has DOT received confirmation from USFWS that suitable habitat for Carex lutea does not exist within the project limits? Please provide a copy of correspondence to this affect.*

NCDOT conducted surveys on January 8, 2013, verifying that there is no suitable habitat for *Carex lutea*. As a result, NCDOT has issued a No Effect call. The NCDOT has a programmatic agreement with the USFWS, which precludes the need for project-specific Section 7 concurrence with No Effect calls. Therefore, the requirements of the federal Endangered Species Act have been met.

We believe that this new information addresses your concerns regarding the project and request that you to proceed with processing the permit application. A copy of this On-Hold response packet will be posted on the NCDOT Website https://connect.ncdot.gov/resources/Environmental/Pages/

If you have any questions or need additional information, please contact Rachelle Beauregard at rbeauregard@ncdot.gov or (919) 707-6105.

Sincerely,

E. L. Luck

for Gregory J. Thorpe, Ph.D., Manager
Project Development and Environmental Analysis Unit

cc:

Brad Shaver, USACE
Mason Herndon, NCDWQ
Stoney Mathis, Division 3 Environmental Officer
Travis Wilson, NC Wildlife Resources Commission
Chris Militscher, Environmental Protection Agency
Steve Sollod, NC Division of Coastal Management
Gary Jordan, US Fish and Wildlife Service
Sonia Carrillo, NCDWQ Central Office

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality
Charles Wakild, P. E.
Director

Pat McCrory
Governor

John E. Skvarla, III
Secretary

April 19, 2013

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Dr. Greg Thorpe, PhD., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Request for Modification to Individual Section 404 and Section 401 Water Quality Certification for the Wilmington Bypass from north of US 74/76 in Brunswick County to US 421 in New Hanover County. Federal Aid Project Nos. NHF-0017 (96) and STM-0017(97), WBS No. 34491.2.3, TIP No. R-2633B, DWQ Project No. 10-0867v.4

Dear Dr. Thorpe:

The Division of Water Quality has reviewed your submittal for a 401 Water Quality Certification modification for the aforementioned project. Review of your application revealed it lacking necessary information required for making an informed permit decision. The permit application was deficient in the following areas:

1. Sites 3 & 5 – the cross section station numbers do not match the station numbers on the plan sheet. Also, the match line station numbers do not coincide with the stations on the plan sheet. The station numbers in the impact summary and plan sheets run from Sta. 40+57 to 75+00 but the cross section numbers are listed as Sta. 345+00 to 375+00. Please change the cross section stations and match line stations to coincide with the stations along the -L- line on the plan sheets.
2. Site 6 – no cross sections were provided for the wetland impacts between Sta. 109+28 to 118+00 and 123+00 to 135+00. Please provide these cross sections.
3. Your application states in the "Avoidance and Minimization" section that 3:1 slopes will be used in wetland areas to minimize wetland impacts. Upon review of the application there are several cross sections that show greater than 3:1 slopes. Please correct.
4. Site 7 (permit drawings 27 /28), a wetland boundary limit is shown on the cross sections beyond the clearing limits however the plan sheets show that the entire right of way is within the wetland. Please clarify.
5. Site 15 (permit drawing 43/44), please confirm that the impacts for the base ditch on the north side of the bridge are include in the Site 15 impacts listed in the impact summary sheet.
6. The "Protected Species" section of the application states that Golden Sedge (*Carex Lutea*) was added to the USFWS list for New Hanover County just prior to the submittal of the original application and therefore was not included in the FEIS. Has NCDOT received correspondence from USFWS that concurs with NCDOT's recommendation that there is no suitable habitat for Carex lutea within the project limits and therefore the project will have "No Effect" on Golden Sedge? Please provide a copy of correspondence to this affect.

Therefore, pursuant to 15A NCAC 2H .0507(a) (5), we will have to place the permit application on hold until we are supplied the necessary information. You have 21 days to respond in writing with the requested information or notification to this office that the information is forthcoming. If, at the end of the 21 days, this office has not

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1617
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Phone: 919-807-6300 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org

received this information in writing, we will assume you are withdrawing your application and it will be returned. Furthermore, until the information is received by the NC Division of Water Quality, we request (by copy of this letter) that the US Army Corps of Engineers place the permit application on hold.

If you have any questions or require additional information, please contact Mason Herndon at (910) 308-4021 or mason.herndon@ncdenr.gov.

Sincerely,

Charles Wakild
Director

ec: Brad Shaver, US Army Corps of Engineers, Wilmington Field Office
Stoney Mathis, Division 3 Environmental Officer
Travis Wilson, NC Wildlife Resources Commission
Chris Militscher, Environmental Protection Agency
Steve Sollod, NC Coastal Management
Gary Jordon, US Fish and Wildlife Service
Sonia Carrillo, DWQ Central Regional Office
File Copy

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Internet: www.ncwaterquality.org

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

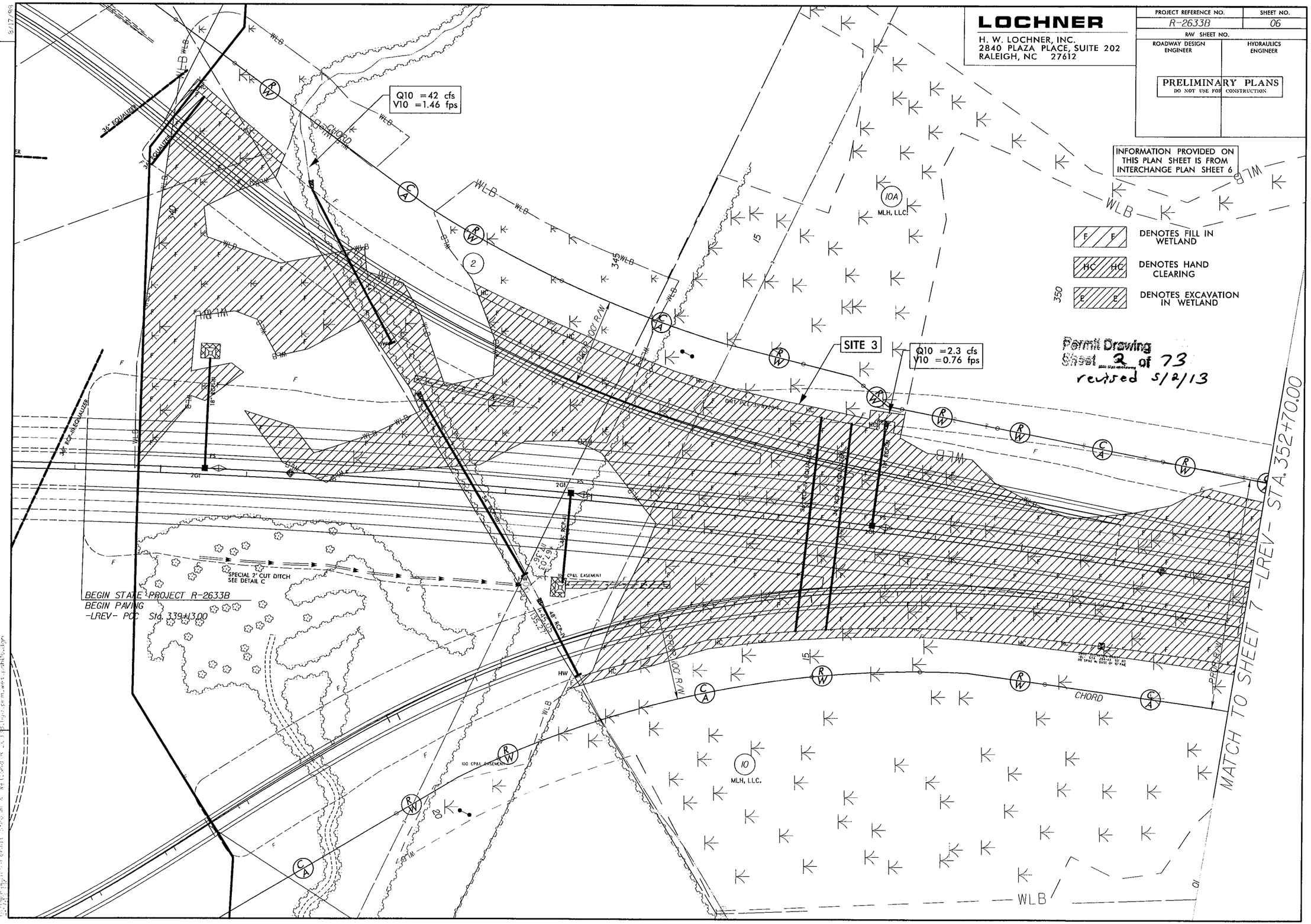
PROJECT REFERENCE NO.	SHEET NO.
R-2633B	06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INFORMATION PROVIDED ON THIS PLAN SHEET IS FROM INTERCHANGE PLAN SHEET 6

F F — DENOTES FILL IN WETLAND
HC HC — DENOTES HAND CLEARING
E E — DENOTES EXCAVATION IN WETLAND

Permit Drawing
Sheet 2 of 73
revised 5/2/13



REVISIONS

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
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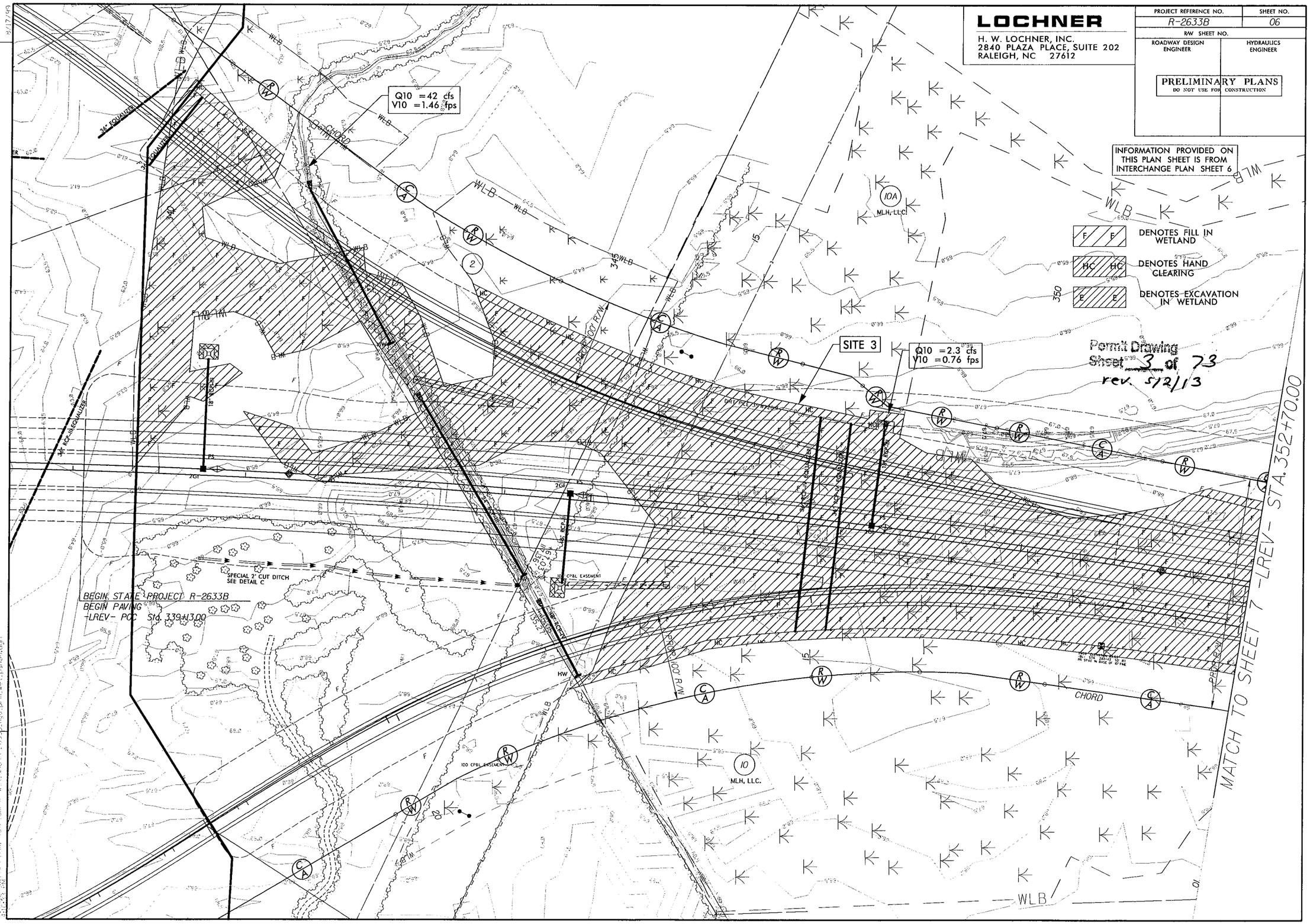
INFORMATION PROVIDED ON THIS PLAN SHEET IS FROM INTERCHANGE PLAN SHEET 6

F F DENOTES FILL IN WETLAND

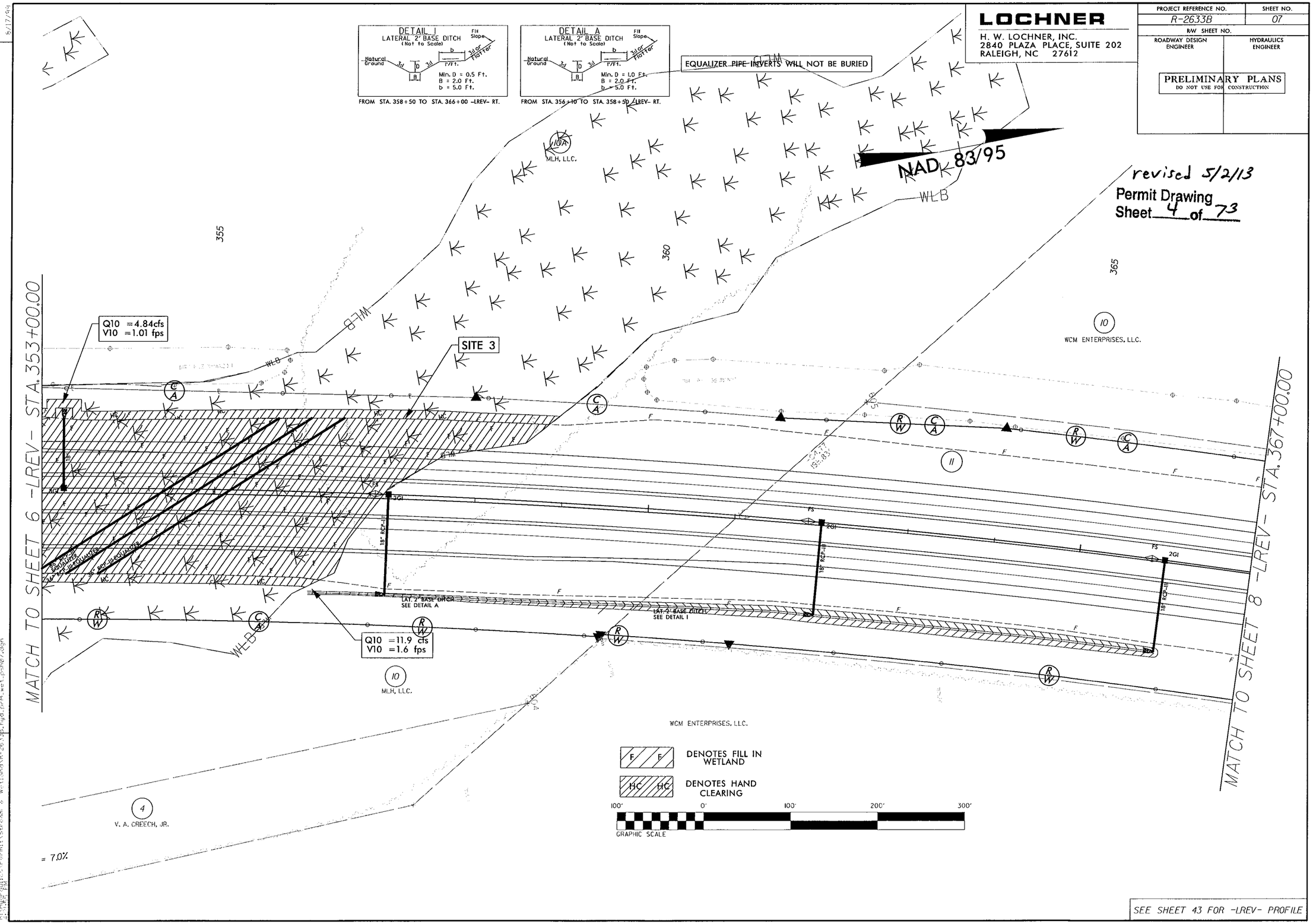
HC HC DENOTES HAND CLEARING

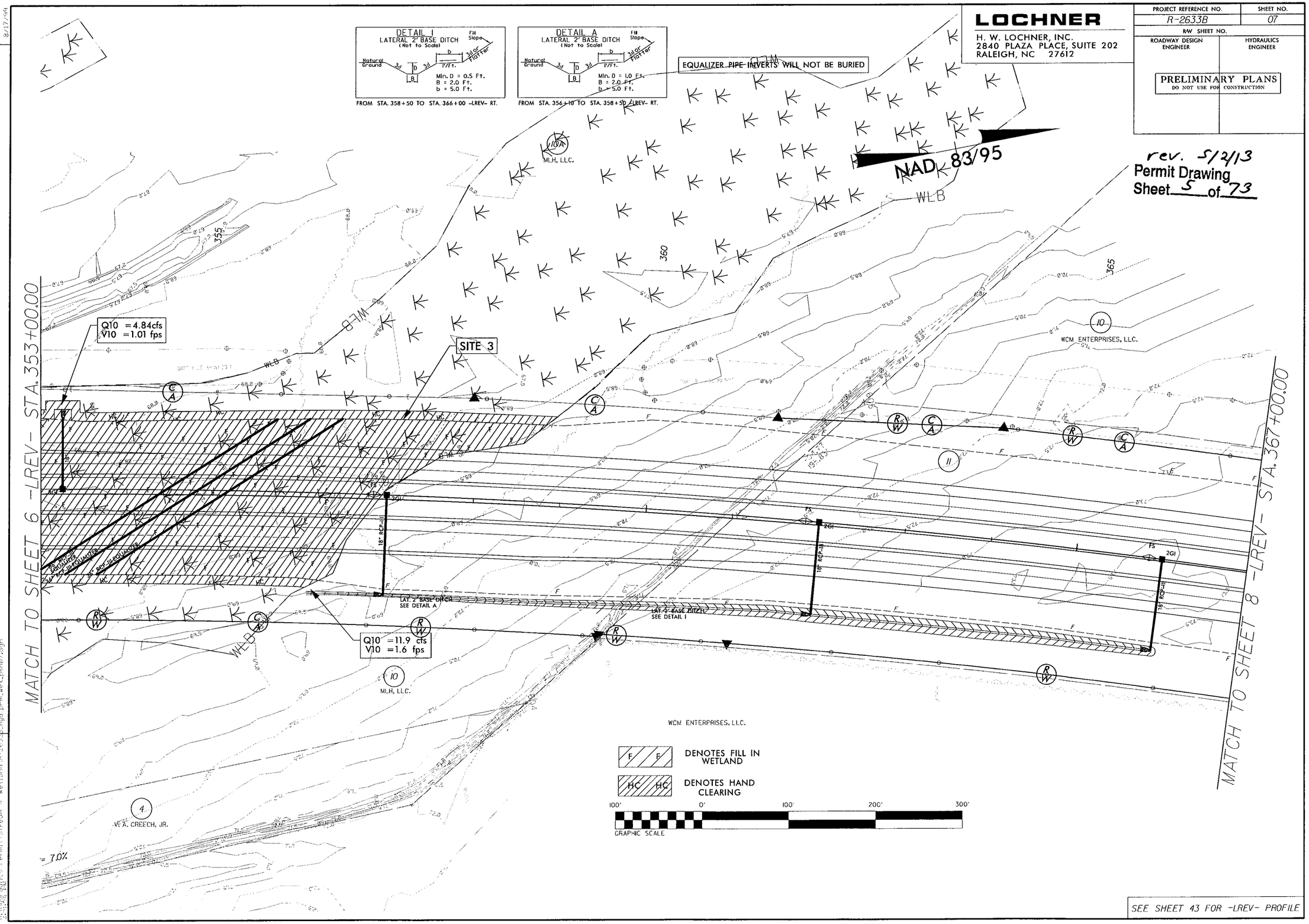
E E DENOTES EXCAVATION IN WETLAND

Permit Drawing
Sheet 3 of 73
rev. 5/2/13



REVISIONS


LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
PROJECT REFERENCE NO.
R-2633B
SHEET NO.
07
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
revised 5/2/13
Permit Drawing
Sheet 4 of 73
DETAIL I
LATERAL 2' BASE DITCH
(Not to Scale)
Min. D = 0.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
FROM STA. 358+50 TO STA. 366+00 -LREV- RT.
DETAIL A
LATERAL 2' BASE DITCH
(Not to Scale)
Min. D = 1.0 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
FROM STA. 356+10 TO STA. 358+50 -LREV- RT.
EQUALIZER PIPE INVERTS WILL NOT BE BURIED
NAD 83/95
MLH, LLC.
WCM ENTERPRISES, LLC.
V. A. GREECH, JR.
Q10 =4.84cfs
V10 =1.01 fps
SITE 3
Q10 =11.9 cfs
V10 =1.6 fps
18" RCP-III
LAT 2' BASE DITCH
SEE DETAIL A
LAT 2' BASE DITCH
SEE DETAIL I
MATCH TO SHEET 6 -LREV- STA. 353+00.00
MATCH TO SHEET 8 -LREV- STA. 367+00.00
= 7.0%
DENOTES FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
SEE SHEET 43 FOR -LREV- PROFILE
REVISIONS
R/W REVISION: 10/ /09 - NAME AND DEED CHANGE PARCEL 10. PROPERTY OWNER NAME CHANGE FROM WCM ENTERPRISES, LLC TO CKC, LLC
R/W REVISION: 11/ /09 - ADJUSTED MONUMENT ON PARCEL 10A. MOVED PROPERTY OWNER NAME ON PARCEL 11.

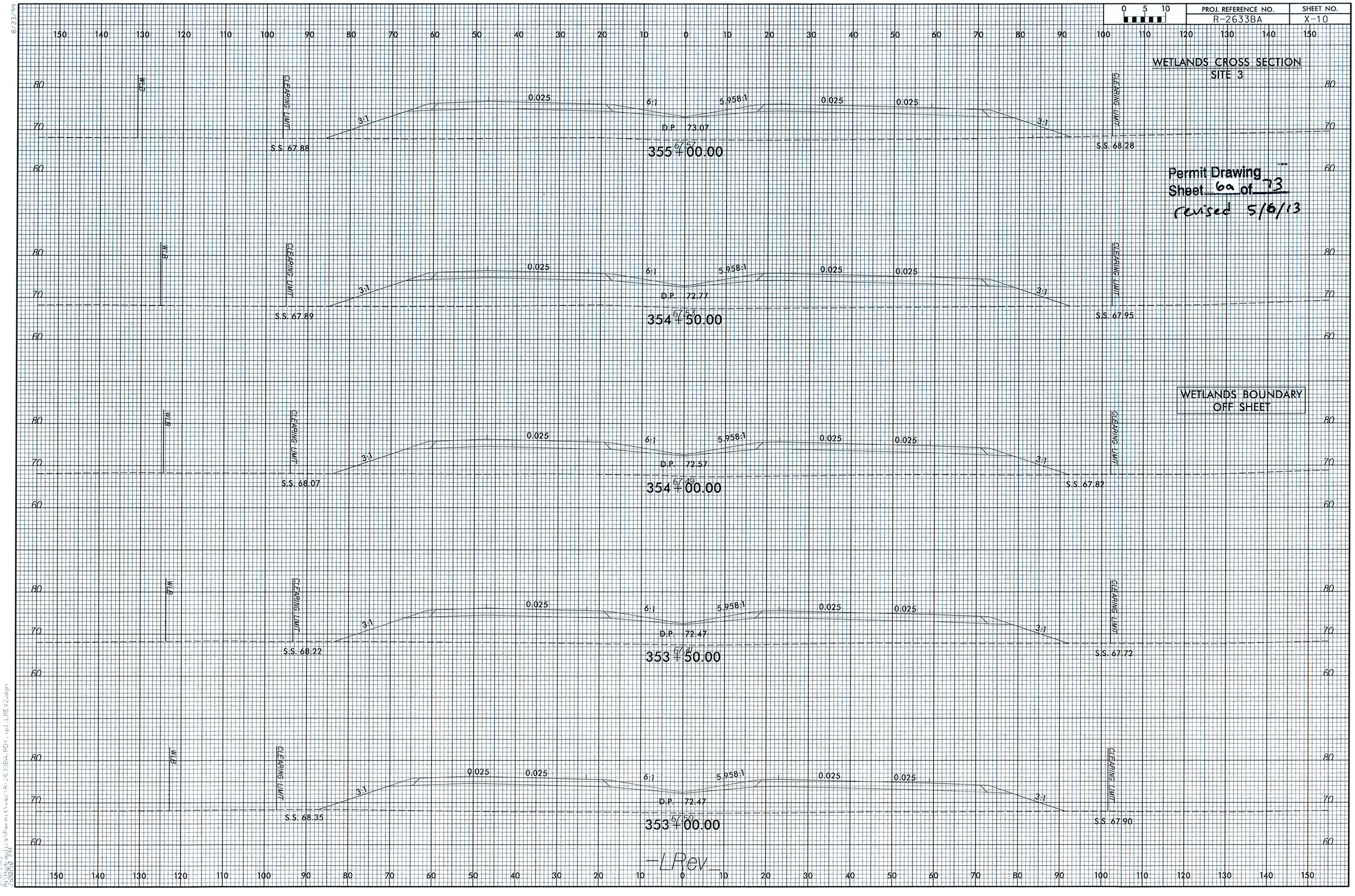

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
PROJECT REFERENCE NO.
R-2633B
SHEET NO.
07
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
rev. 5/2/13
Permit Drawing
Sheet 5 of 73
DETAIL I
LATERAL 2' BASE DITCH
(Not to Scale)
Fill Slope
Natural Ground
3:1
D
B
b
1'/Ft.
3:1 or Flatter
Min. D = 0.5 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
FROM STA. 358+50 TO STA. 366+00 -LREV- RT.
DETAIL A
LATERAL 2' BASE DITCH
(Not to Scale)
Min. D = 1.0 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
FROM STA. 356+10 TO STA. 358+50 -LREV- RT.
EQUALIZER PIPE INVERTS WILL NOT BE BURIED
NAD 83/95
MATCH TO SHEET 6 -LREV- STA. 353+00.00
MATCH TO SHEET 8 -LREV- STA. 367+00.00
Q10 = 4.84cfs
V10 = 1.01 fps
SITE 3
Q10 = 11.9 cfs
V10 = 1.6 fps
18" RCP-III
2GI
FS
HC
WLB
LAT. 2' BASE DITCH
SEE DETAIL A
LAT. 2' BASE DITCH
SEE DETAIL I
MLH, LLC.
WCM ENTERPRISES, LLC.
W. A. CREECH, JR.
355
360
365
= 7.0%
DENOTES FILL IN WETLAND
DENOTES HAND CLEARING
100' 0' 100' 200' 300'
GRAPHIC SCALE
SEE SHEET 43 FOR -LREV- PROFILE
REVISIONS
R/W REVISION: 10/ /09 - NAME AND DEED CHANGE PARCEL 10. PROPERTY OWNER NAME CHANGE FROM WCM ENTERPRISES,LLC TO CKC,LLC
R/W REVISION: 1/ /09 - ADJUSTED MONUMENT ON PARCEL 10A. MOVED PROPERTY OWNER NAME ON PARCEL 11.
8/17/99

PROJ. REFERENCE NO.	SHEET NO.
R-2633BA	X-10

0 5 10

WETLANDS CROSS SECTION
SITE 3

Permit Drawing
Sheet 6a of 73
Revised 5/6/13



WETLANDS BOUNDARY
OFF SHEET

-LRev-

8/23/99

5/6/2013
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PROJECT REFERENCE NO.	SHEET NO.
R-2633B	08
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

EQUALIZER PIPE INVERTS WILL NOT BE BURIED

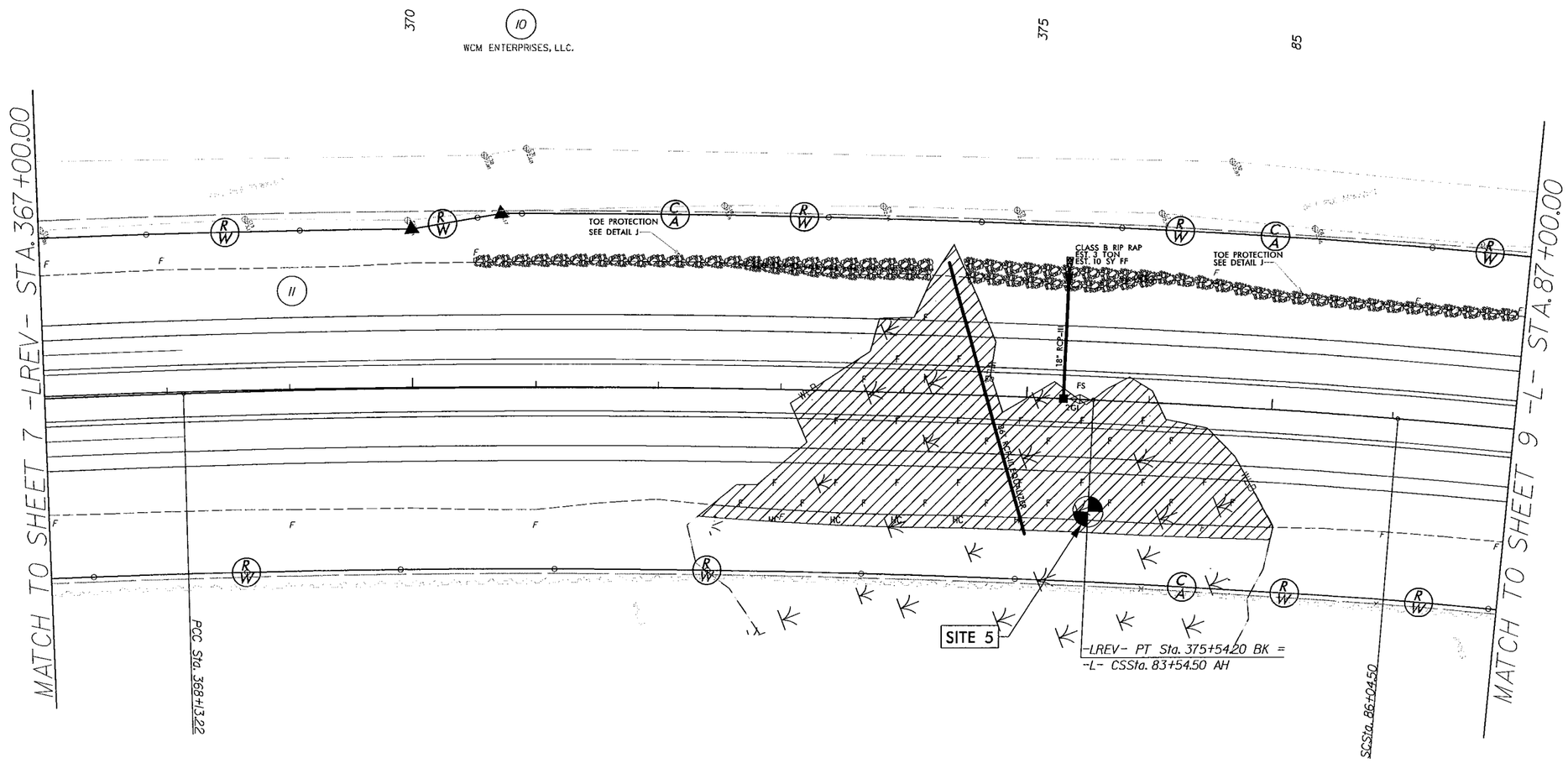
100' 0' 100' 200' 300'
GRAPHIC SCALE

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

rev. 5/2/13
Permit Drawing
Sheet 9 of 73

NAD 83/95



SEE SHEET 44 FOR -LREV- PROFILE

REVISIONS

R/W REVISION:10/ /09 - NAME AND DEED CHANGE PARCEL 10.
R/W REVISION:11/ /11 - MOVED OWNERS NAME ON PARCEL 11.

8/17/96

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	08
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

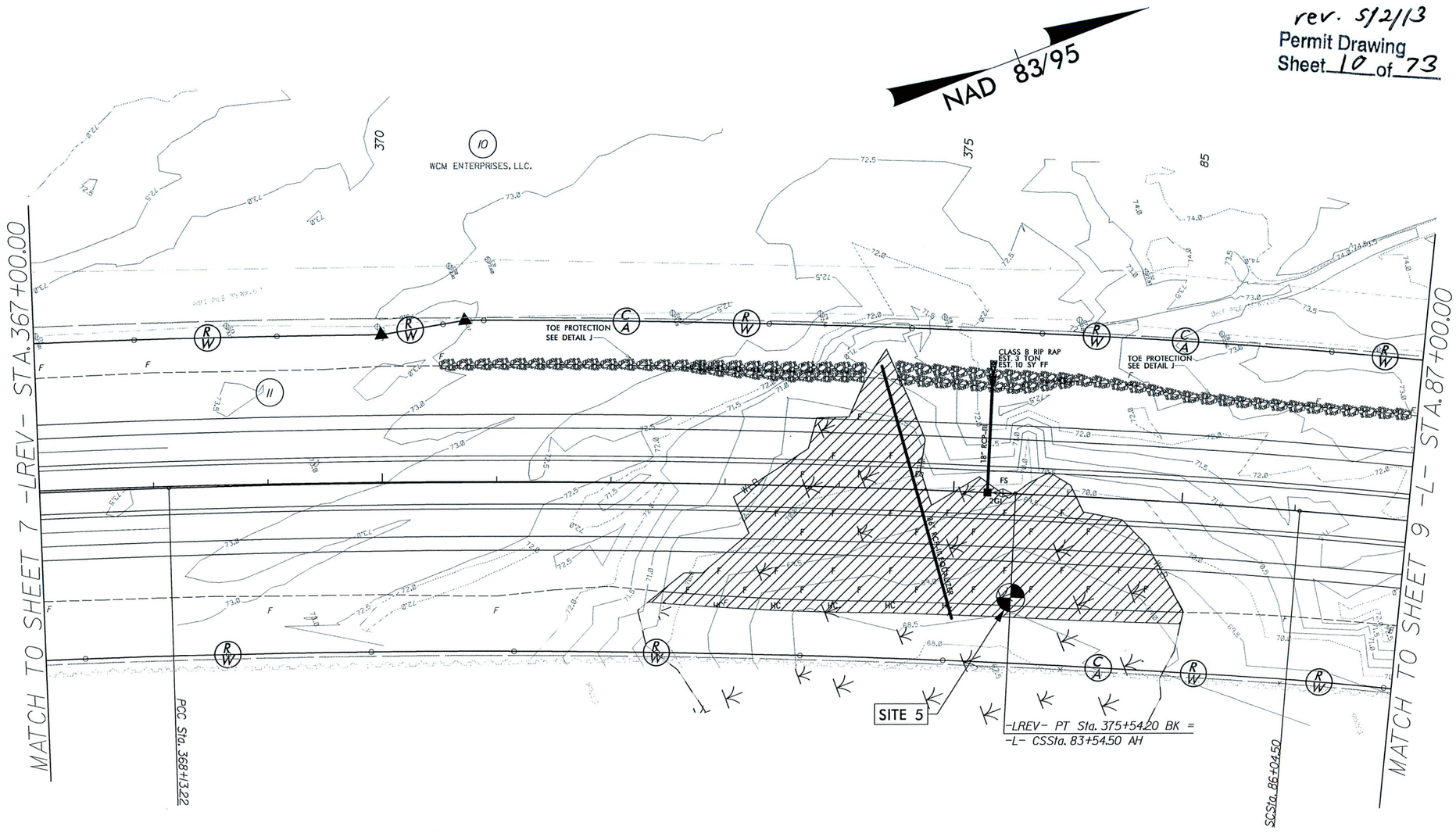
EQUALIZER PIPE INVERTS WILL NOT BE BURIED

100' 0' 100' 200' 300'
GRAPHIC SCALE

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

rev. 5/2/13
Permit Drawing
Sheet 10 of 73



SEE SHEET 44 FOR -LREV- PROFILE

REVISIONS

R/W REVISION: 10/ /09 – NAME AND DEED CHANGE PARCEL 10.
R/W REVISION: 1/ /11 – MOVED OWNERS NAME ON PARCEL 11.

8/17/99

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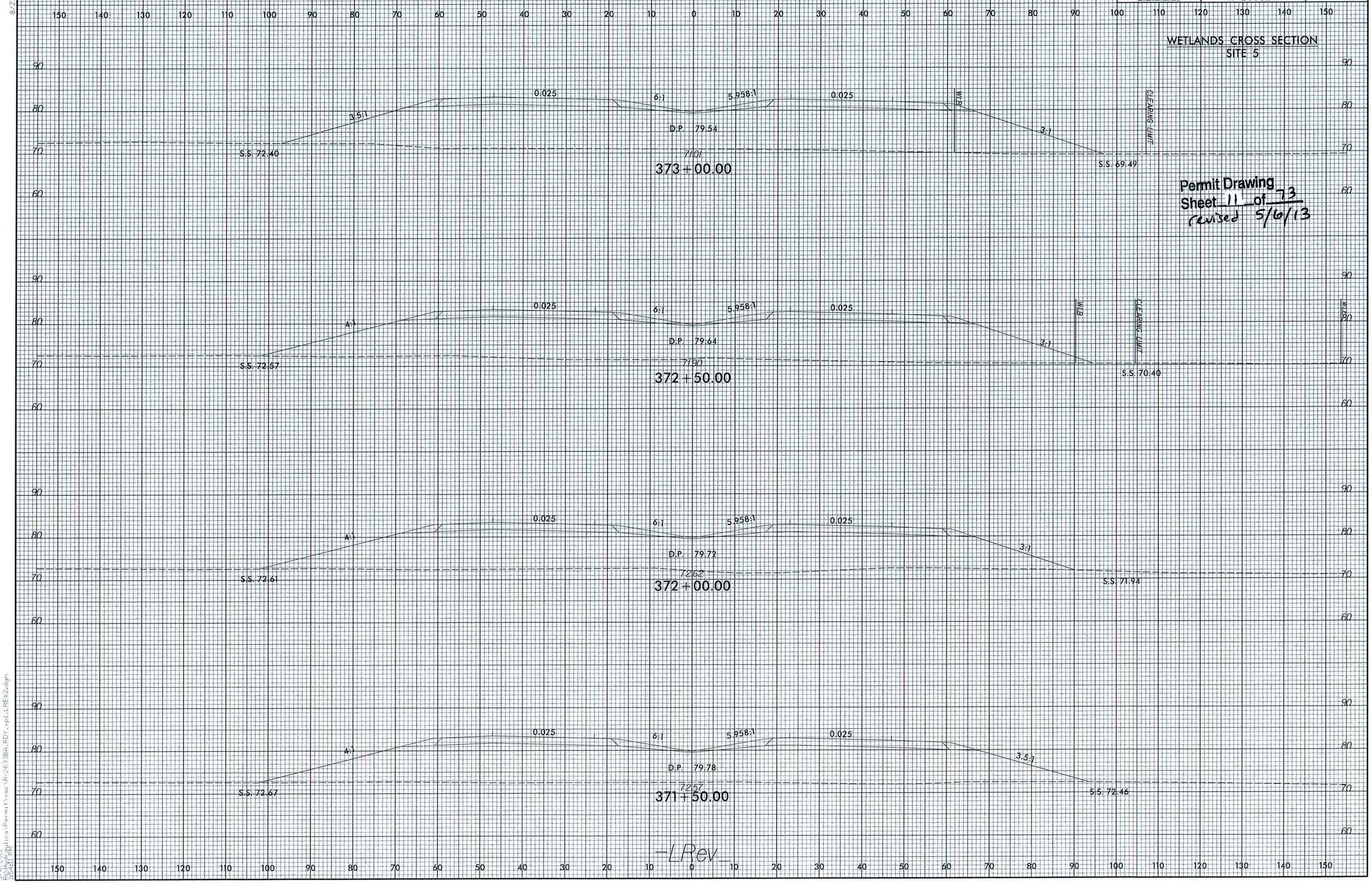
PROJ. REFERENCE NO.	SHEET NO.
R-2633BA	X-19

0 5 10

WETLANDS CROSS SECTION
SITE 5



Permit Drawing
Sheet 11 of 73
revised 5/6/13

5/6/2013
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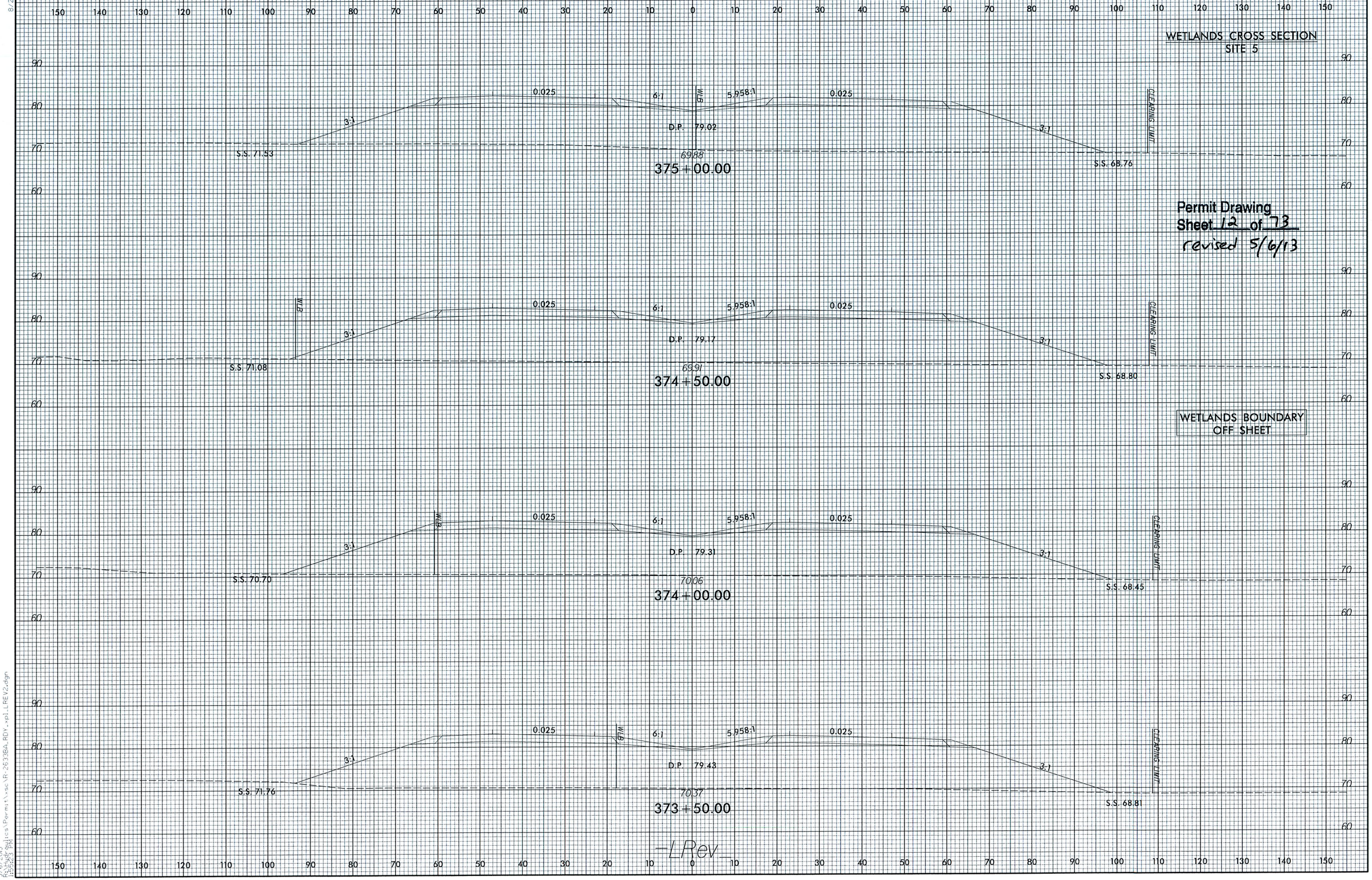
mattbell

PROJ. REFERENCE NO.	SHEET NO.
R-2633BA	X-20

0 5 10

WETLANDS CROSS SECTION
SITE 5



Permit Drawing
Sheet 12 of 73
revised 5/6/13

WETLANDS BOUNDARY
OFF SHEET

8/23/99

5/6/2013
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PROJECT REFERENCE NO.	SHEET NO.
R-2633B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PRELIMINARY PLANS
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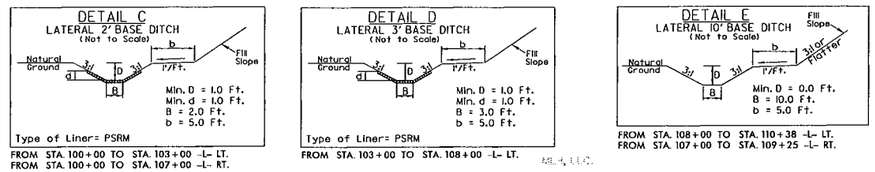
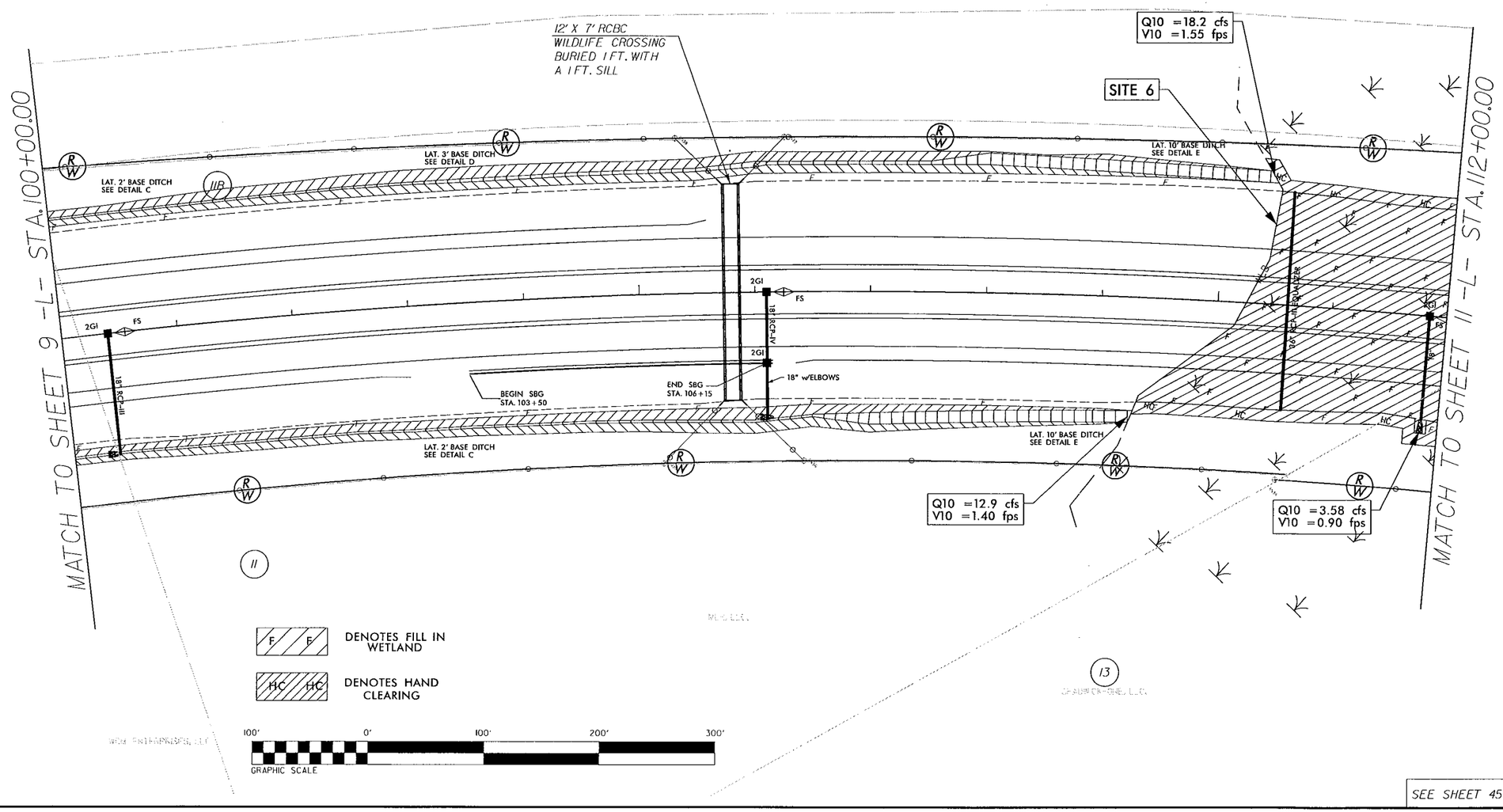
EQUALIZER PIPE INVERTS WILL NOT BE BURIED

NAD 83/95

rev. 5/2/13
Permit Drawing
Sheet 13 of 23





SEE SHEET 45 FOR -L- PROFILE

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PRELIMINARY PLANS
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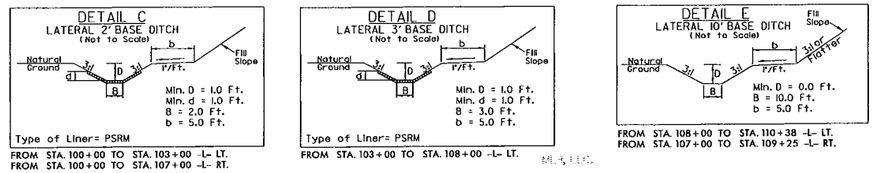


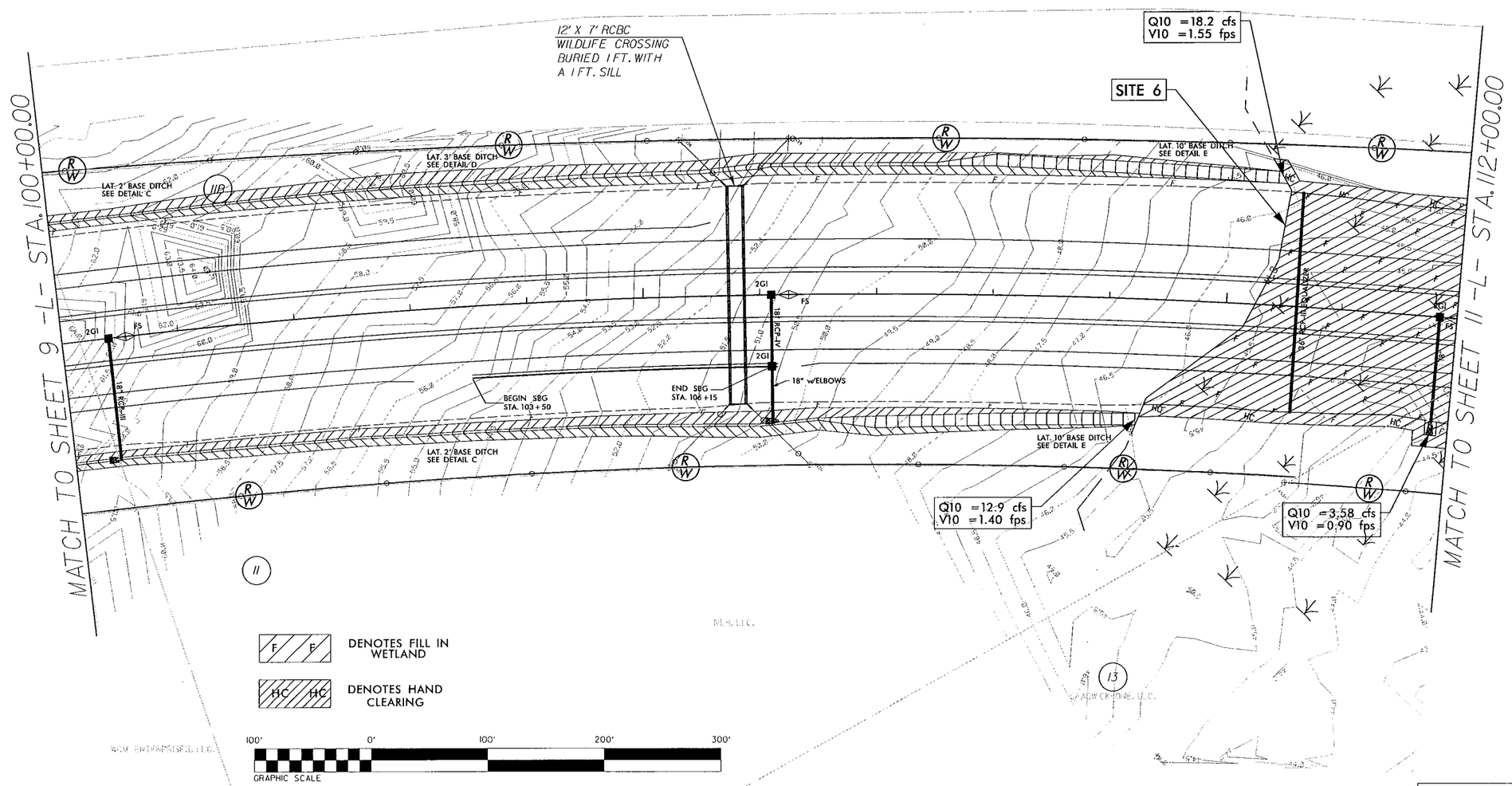
FROM STA. 100+00 TO STA. 103+00 -L- LT.
FROM STA. 100+00 TO STA. 107+00 -L- RT.

FROM STA. 103+00 TO STA. 108+00 -L- LT.

FROM STA. 108+00 TO STA. 110+38 -L- LT.
FROM STA. 107+00 TO STA. 109+25 -L- RT.

NAD 83/95

rev. 5/2/13
Permit Drawing
Sheet 14 of 73



SEE SHEET 45 FOR -L- PROFILE

REVISIONS

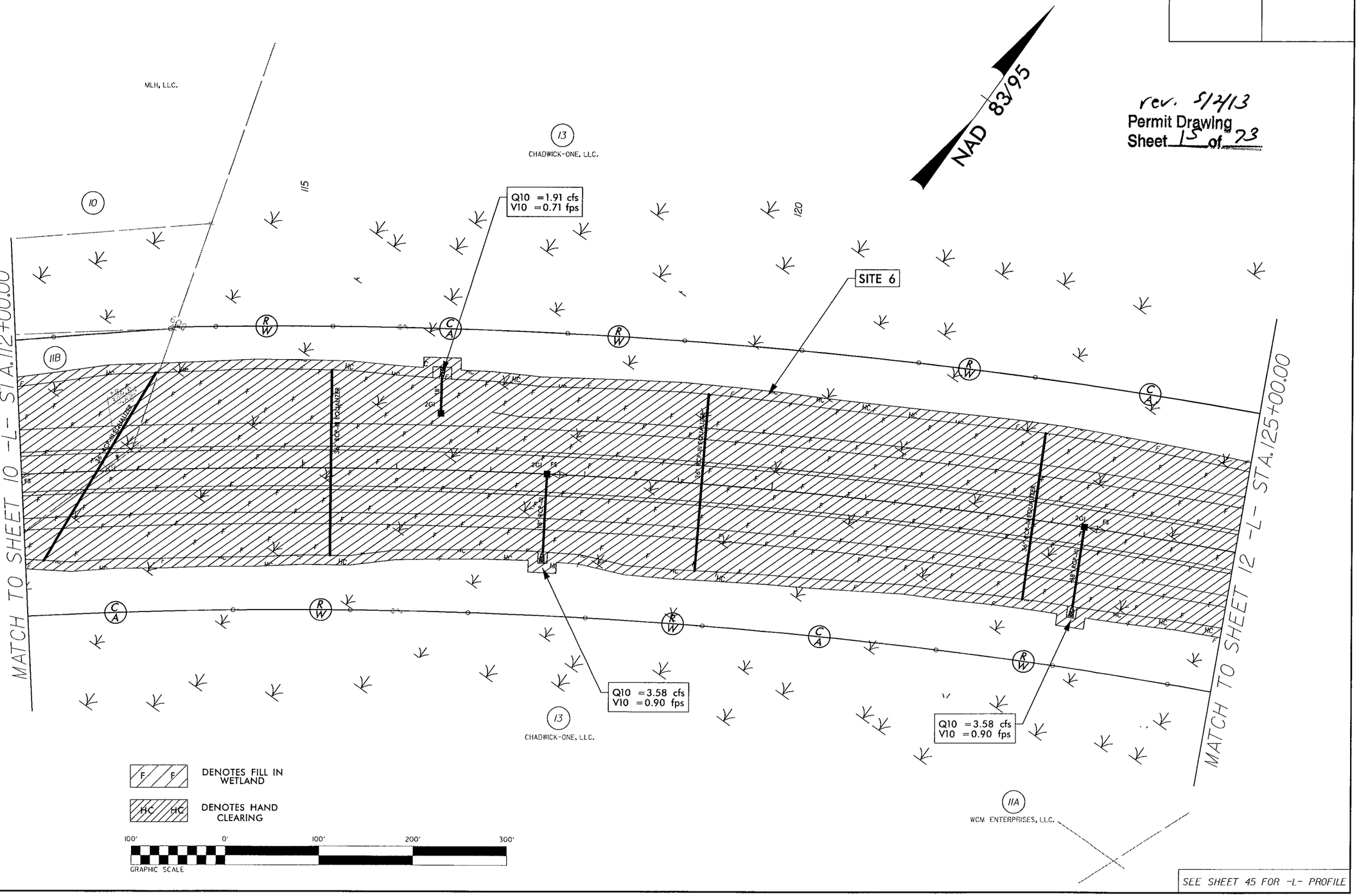
EQUALIZER PIPE INVERTS WILL NOT BE BURIED

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

rev. 5/2/13
Permit Drawing
Sheet 13 of 23



SEE SHEET 45 FOR -L- PROFILE

REVISIONS

8/17/99

5/2/2013
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EQUALIZER PIPE INVERTS WILL NOT BE BURIED

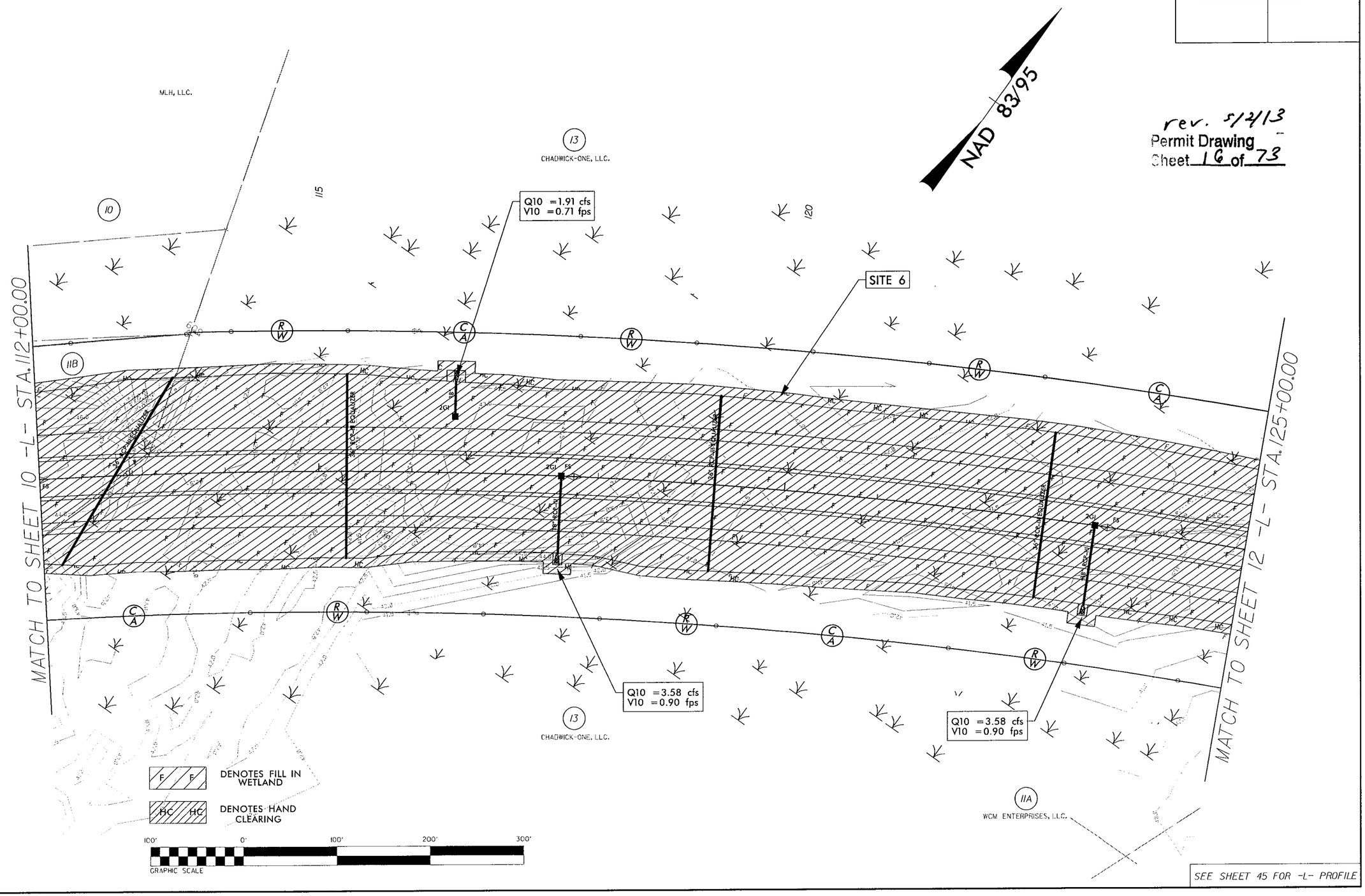
LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

rev. 5/2/13
Permit Drawing
Sheet 16 of 73



SEE SHEET 45 FOR -L- PROFILE

REVISIONS

8/17/99

LOCHNER

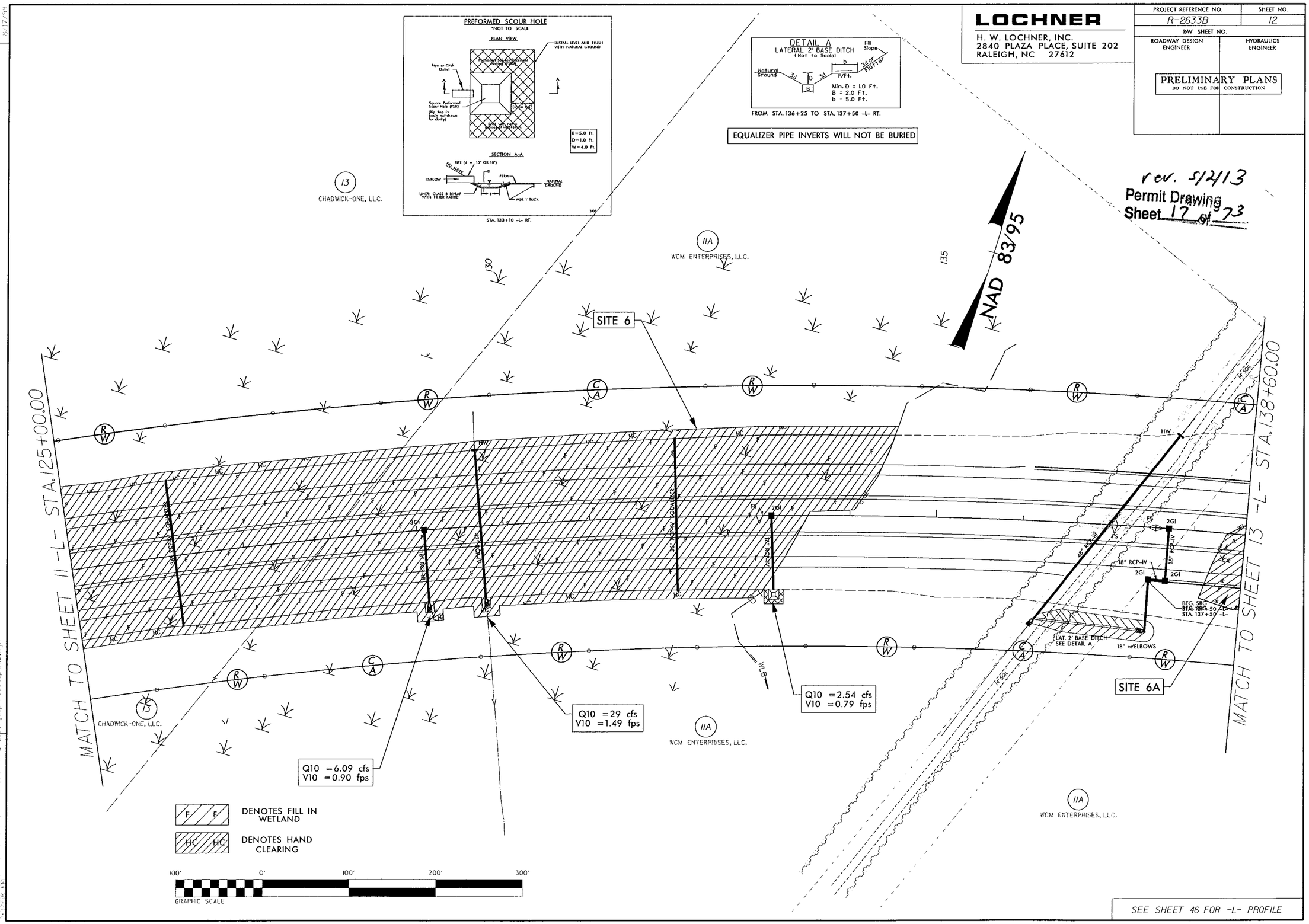
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

rev. 5/24/13
Permit Drawing
Sheet 17 of 73

REVISIONS



SEE SHEET 46 FOR -L- PROFILE

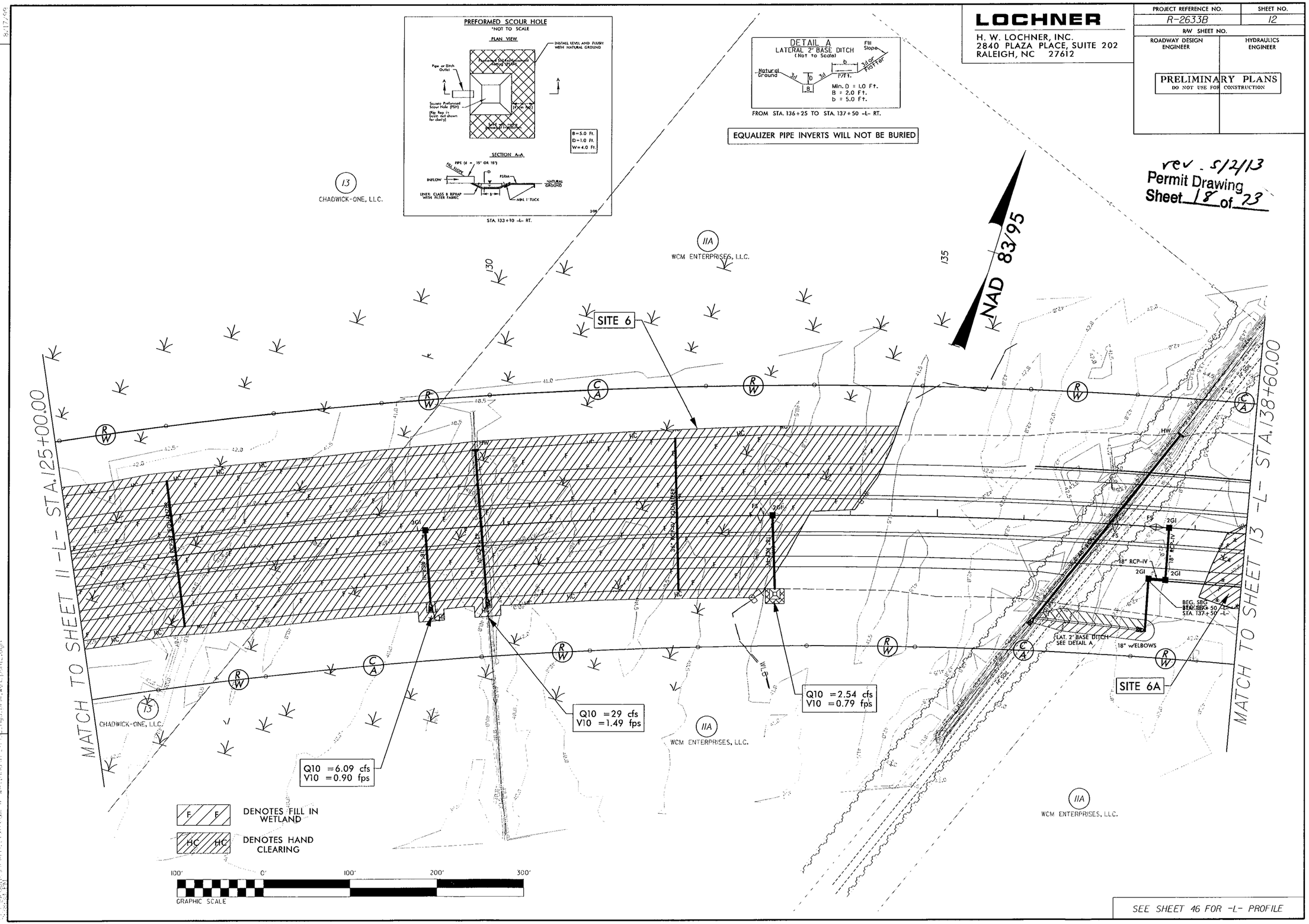
LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

rev. 5/2/13
Permit Drawing
Sheet 18 of 23



SEE SHEET 46 FOR -L- PROFILE

REVISIONS

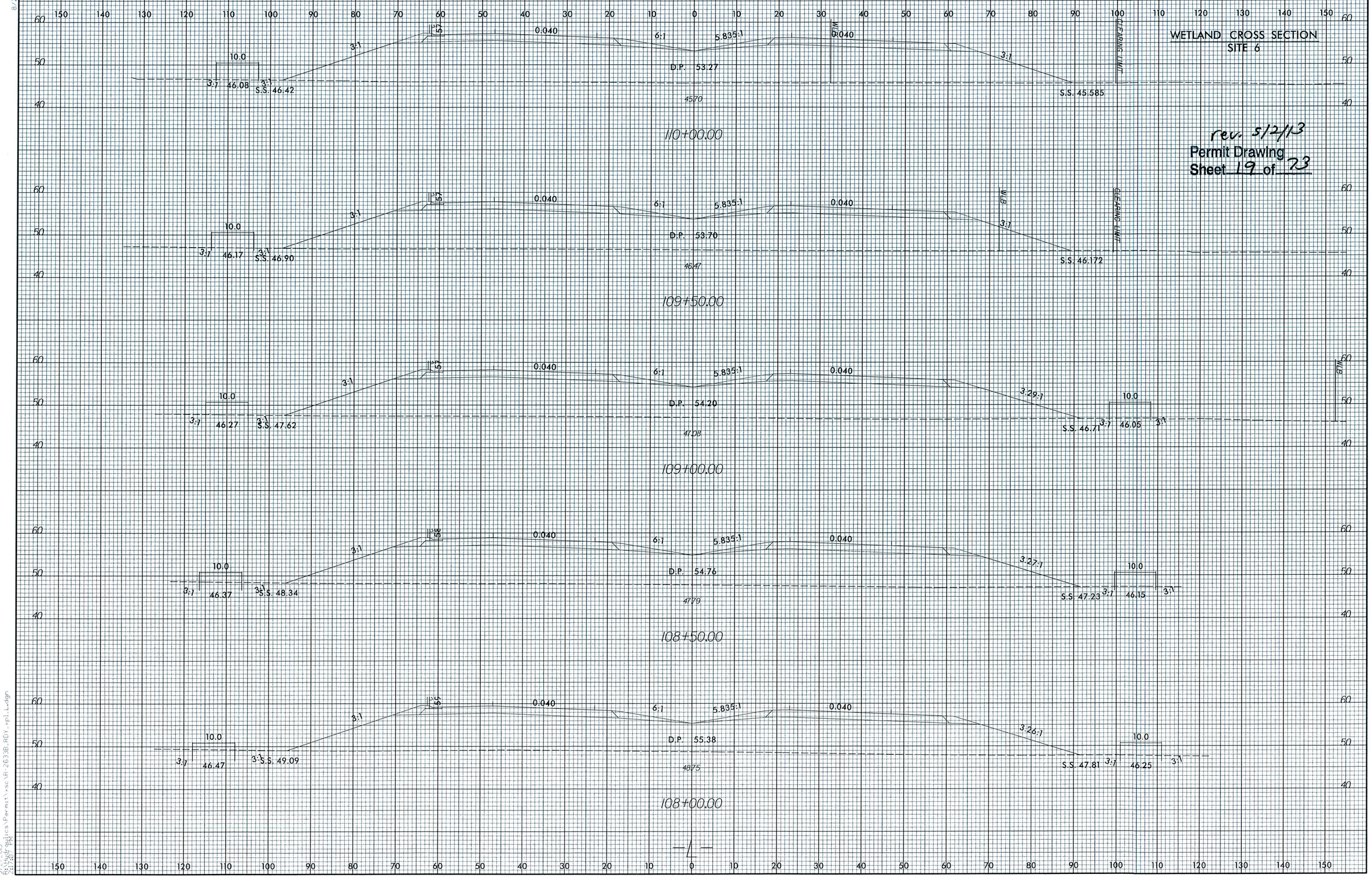
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-60

0 5 10

WETLAND CROSS SECTION
SITE 6

rev. 5/2/13

Permit Drawing
Sheet 19 of 23



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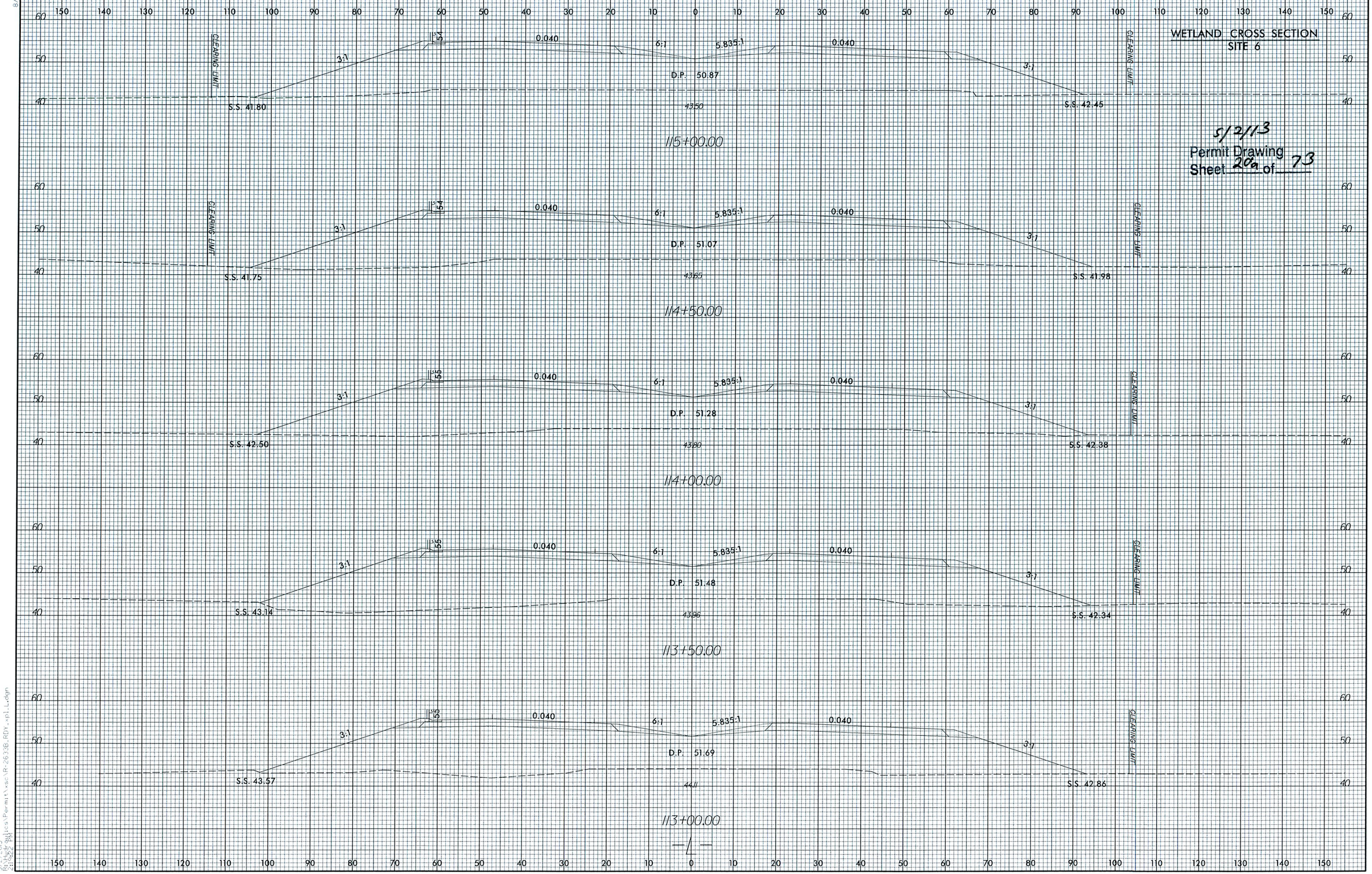
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-62

0 5 10

WETLAND CROSS SECTION
SITE 6

5/2/13
Permit Drawing
Sheet 20a of 73



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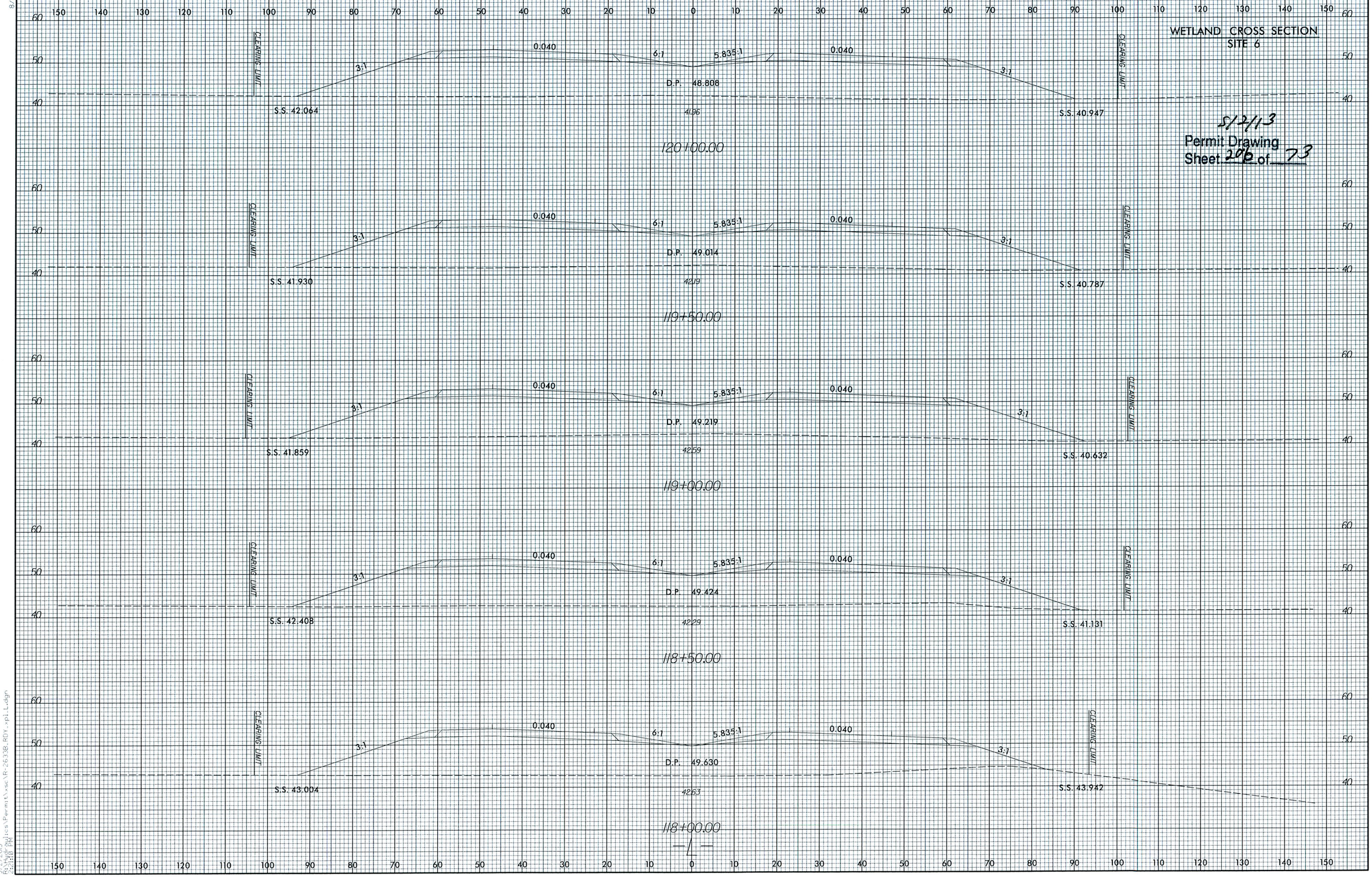
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2633B	X-64

WETLAND CROSS SECTION
SITE 6

5/2/13
Permit Drawing
Sheet 20b of 23



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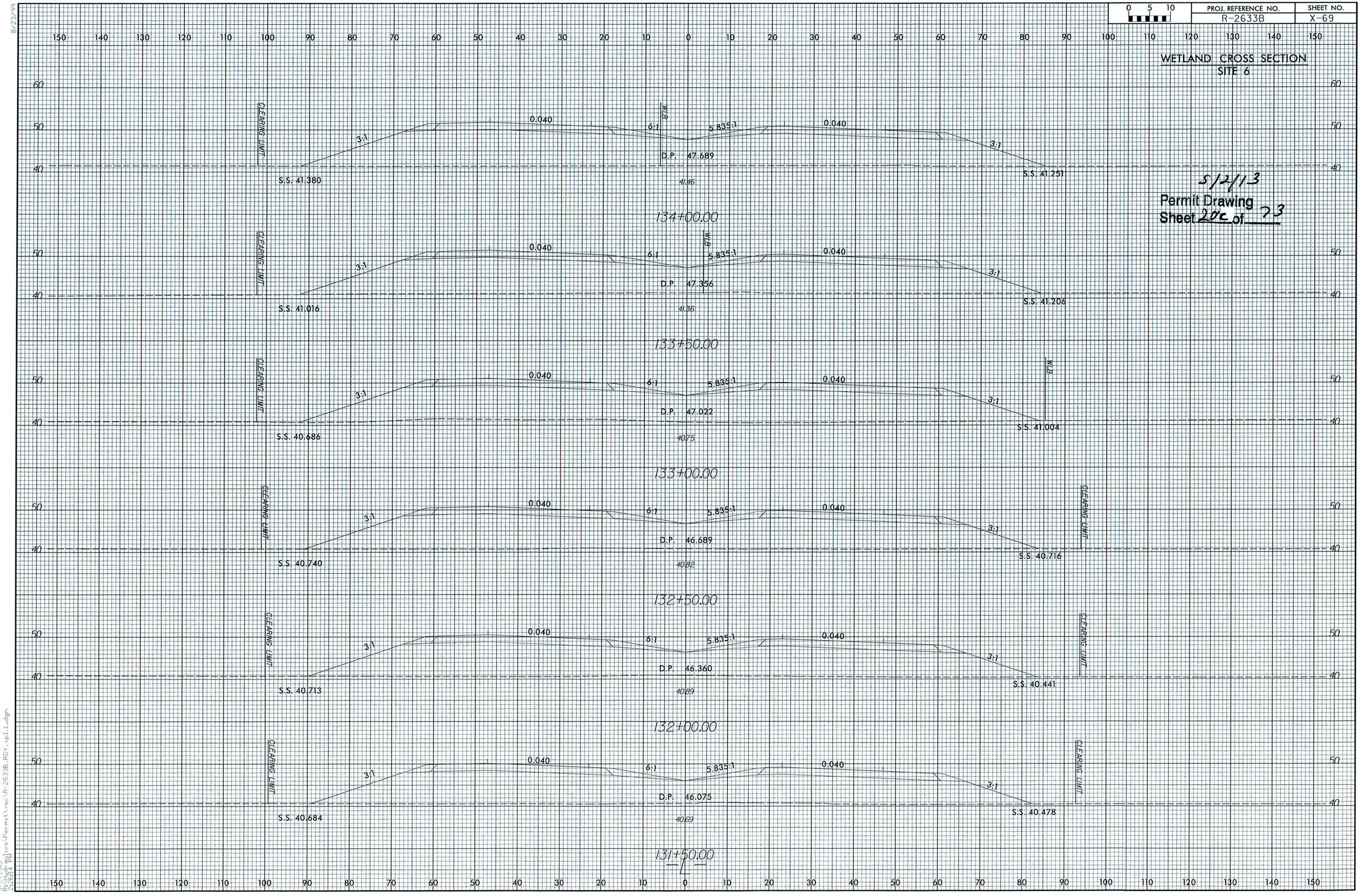
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-69

0 5 10

WETLAND CROSS SECTION
SITE 6

5/2/13
Permit Drawing
Sheet 20c of 23



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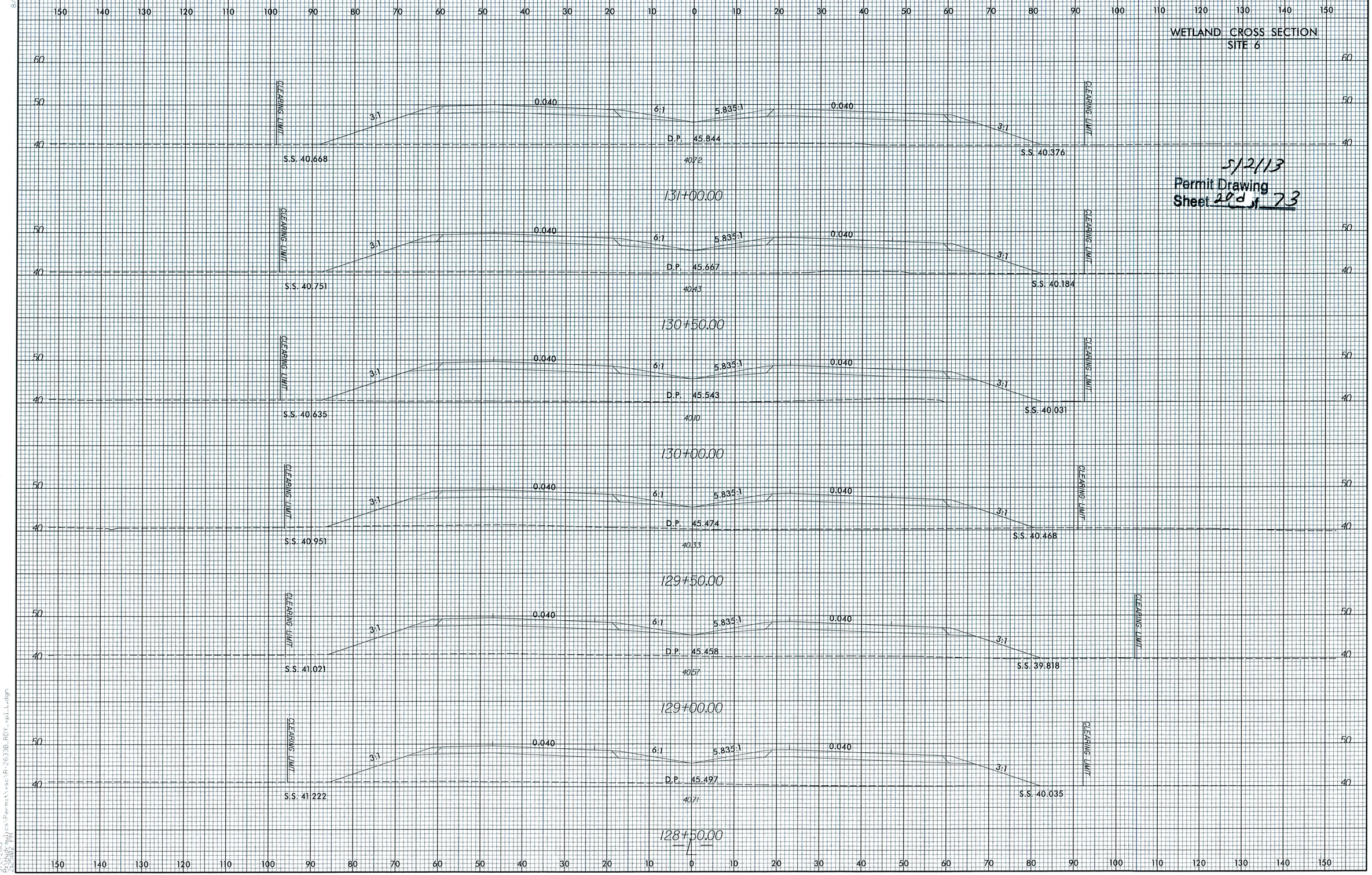
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-68

0 5 10

WETLAND CROSS SECTION
SITE 6

5/2/13
Permit Drawing
Sheet 20 of 23



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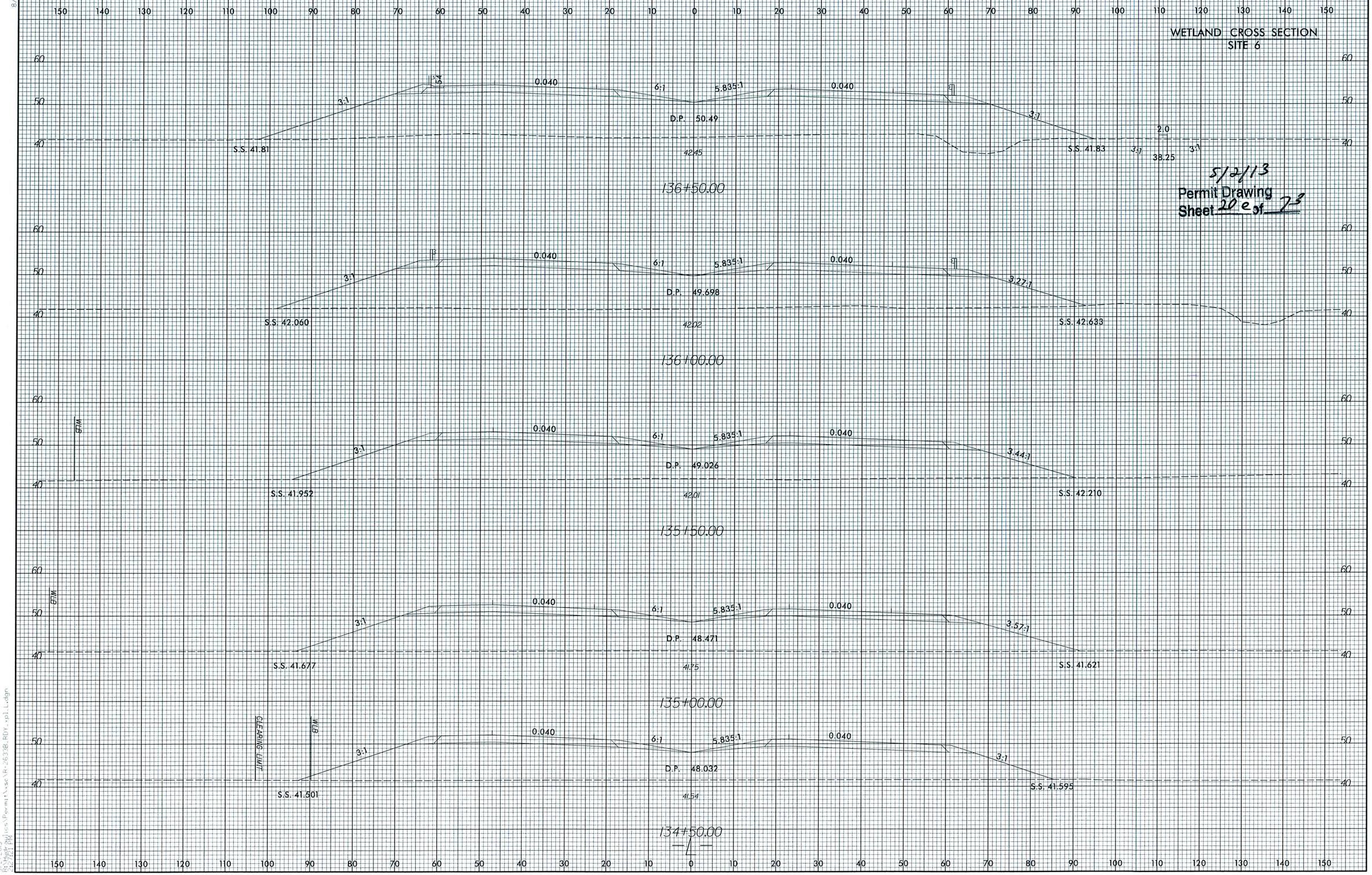
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-70

WETLAND CROSS SECTION
SITE 6



5/2/13
Permit Drawing
Sheet 20 e of 23

8/23/99

5/7/2013
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Plans\Permit\sc\R-2633B_RDY_pl_L.dgn

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 21 of 73
rev. 5/24/13

Q10 = 2.03 cfs
V10 = 1.02 fps

NOTE: A RAILROAD CROSSING AGREEMENT WILL BE NEEDED AT THIS LOCATION (-L- Sta.147+38.89).

EQUALIZER PIPE INVERTS WILL NOT BE BURIED

NAD 83/95

SITE 6A

SITE 6B

SITE 7

13A
CHADWICK-ONE, LLC

15
BARNEY L. PADGETT ET UX

11A
WCM ENTERPRISES, LLC.

MATCH TO SHEET 12 -L- STA. 138+60.00

MATCH TO SHEET 14 -L- STA. 152+00.00

-L-

WLB

CSX RR TRACKS

18" GLASS IV

18" RCP-IV

18" ELBOWS

END SBG STA. 145+61 -L-

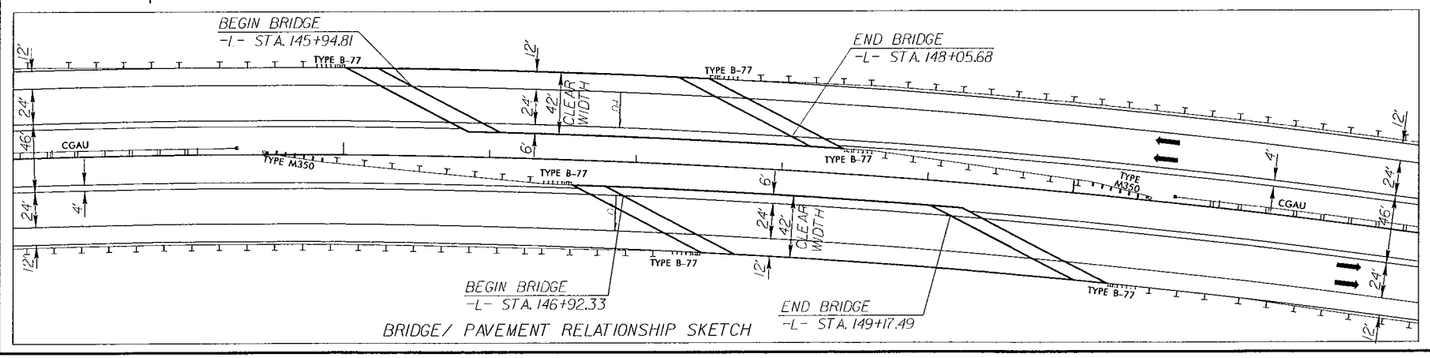
BEGIN SBG STA. 151+17

END SBG STA. 151+24

GRAPHIC SCALE
100' 0' 100' 200' 300'

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING



BRIDGE/ PAVEMENT RELATIONSHIP SKETCH

SEE SHEET 46 FOR -L- PROFILE

REVISIONS

10/ /09 - CHANGED PARCEL #11 TO 11A COMBINED PARCEL 13 AND 14 AND ELIMINATED 14. CORRECTED PROPERTY LINES AND RAILROAD R/W LINE ON PARCEL 15.
11/ /11 - CHANGED PARCEL #13 TO 13A. ADDED CA AND FENCE TO RAILROAD R/W. CHANGED STATION ON MONUMENT TO 142+31.19 LT.

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

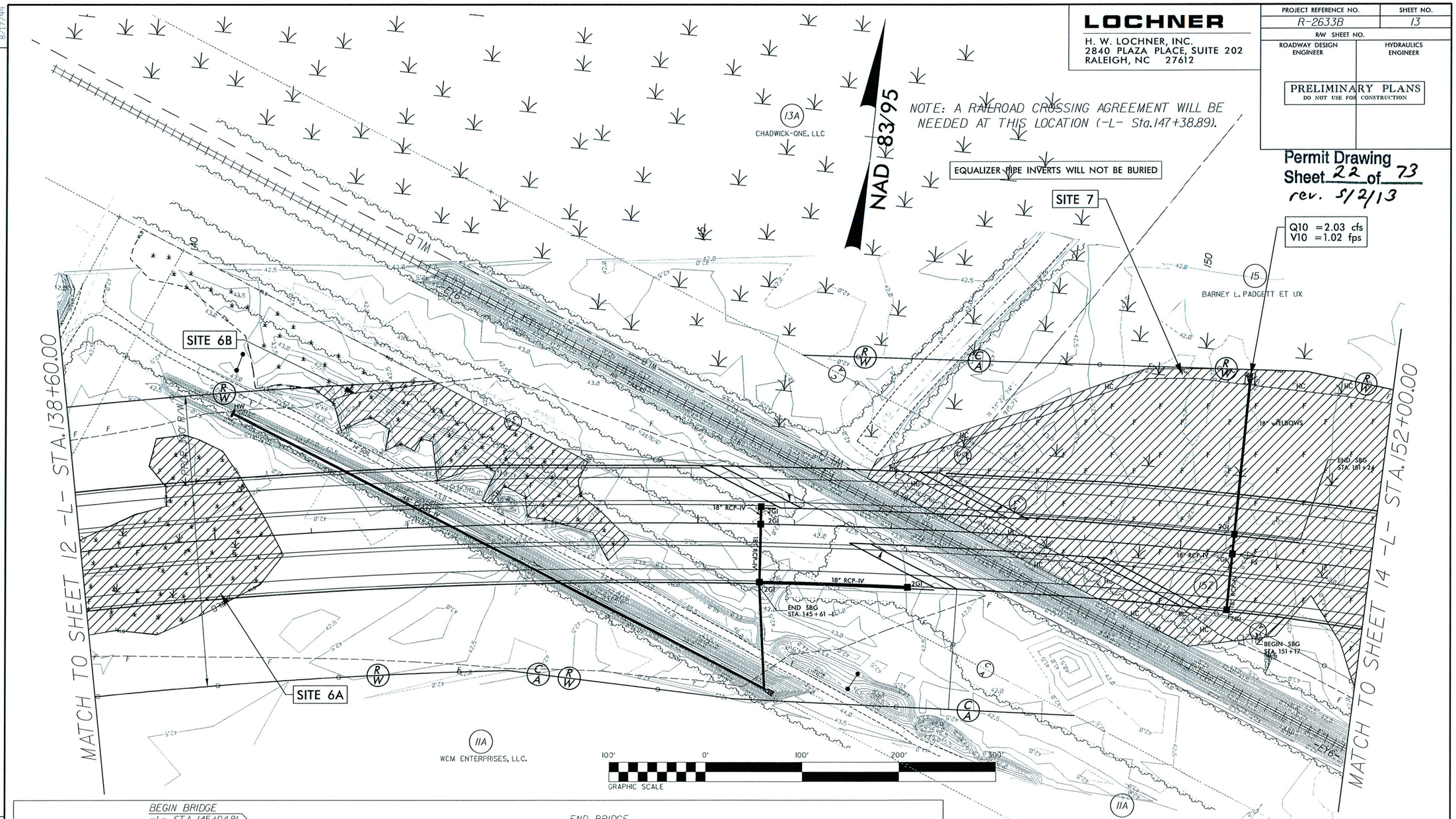
PROJECT REFERENCE NO.	SHEET NO.
R-2633B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

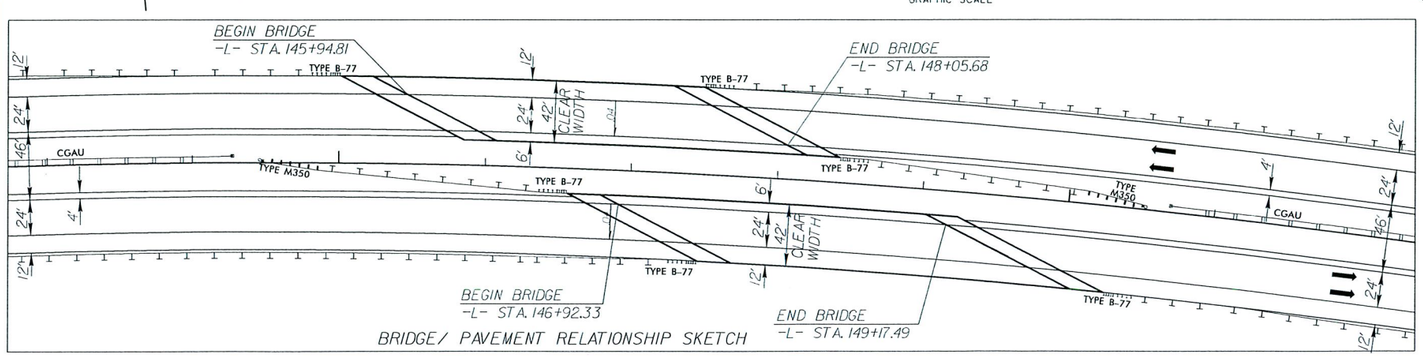
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 22 of 73
rev. 5/2/13

REVISIONS
10/ /09 - CHANGED PARCEL #11 TO 11A. COMBINED PARCEL 13 AND 14 AND ELIMINATED 14. CORRECTED PROPERTY LINES AND RAILROAD R/W LINE ON PARCEL 15.
1/ /11 - CHANGED PARCEL #13 TO 13A. ADDED CA AND FENCE TO RAILROAD R/W. CHANGED STATION ON MONUMENT TO 142+31.19 LT.

8/17/99





BRIDGE/ PAVEMENT RELATIONSHIP SKETCH

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

SEE SHEET 46 FOR -L- PROFILE

5/2/2013
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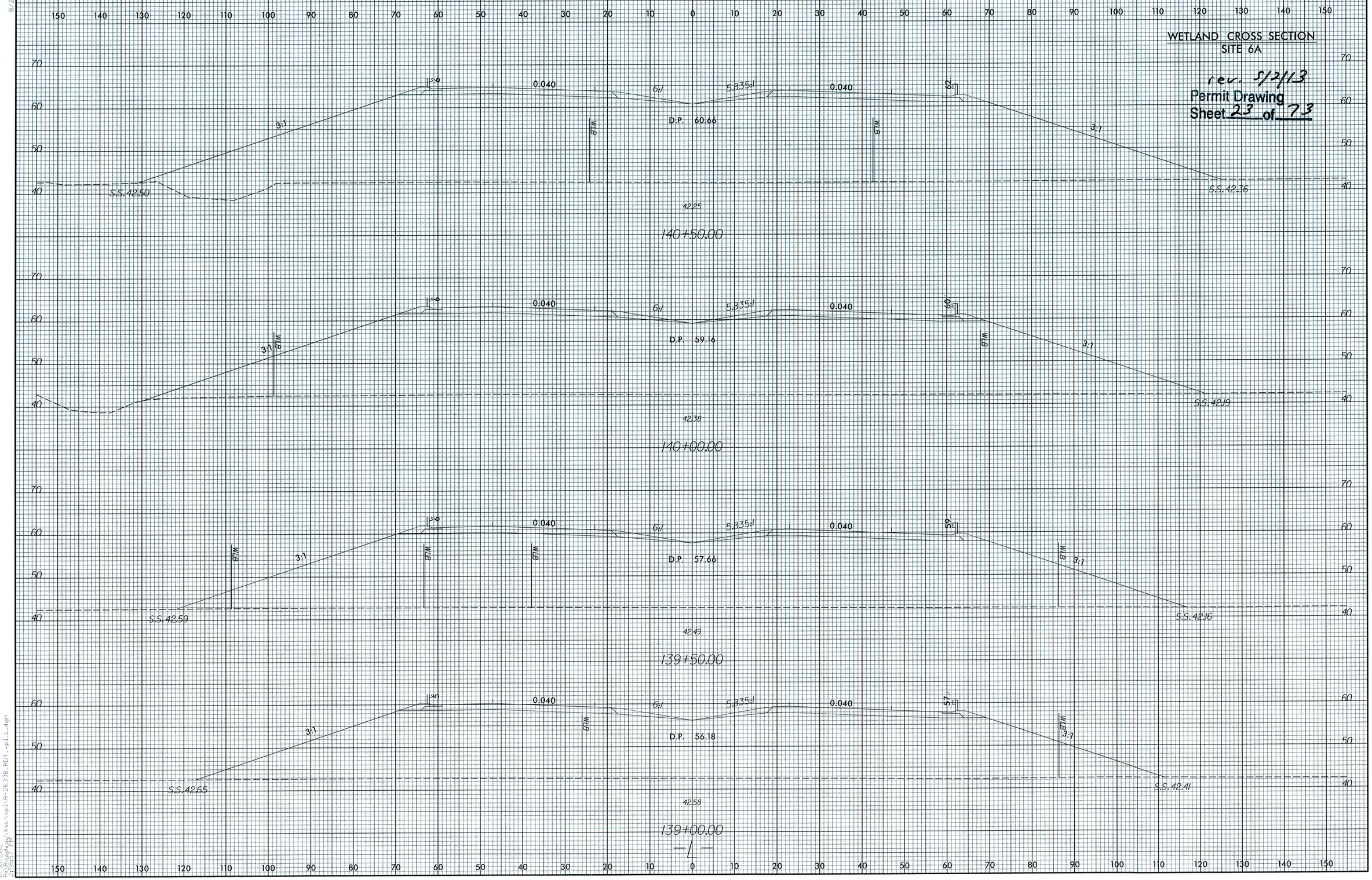
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-72

0 5 10

WETLAND CROSS SECTION
SITE 6A

rev. 5/2/13

Permit Drawing
Sheet 23 of 73



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11/30/2012
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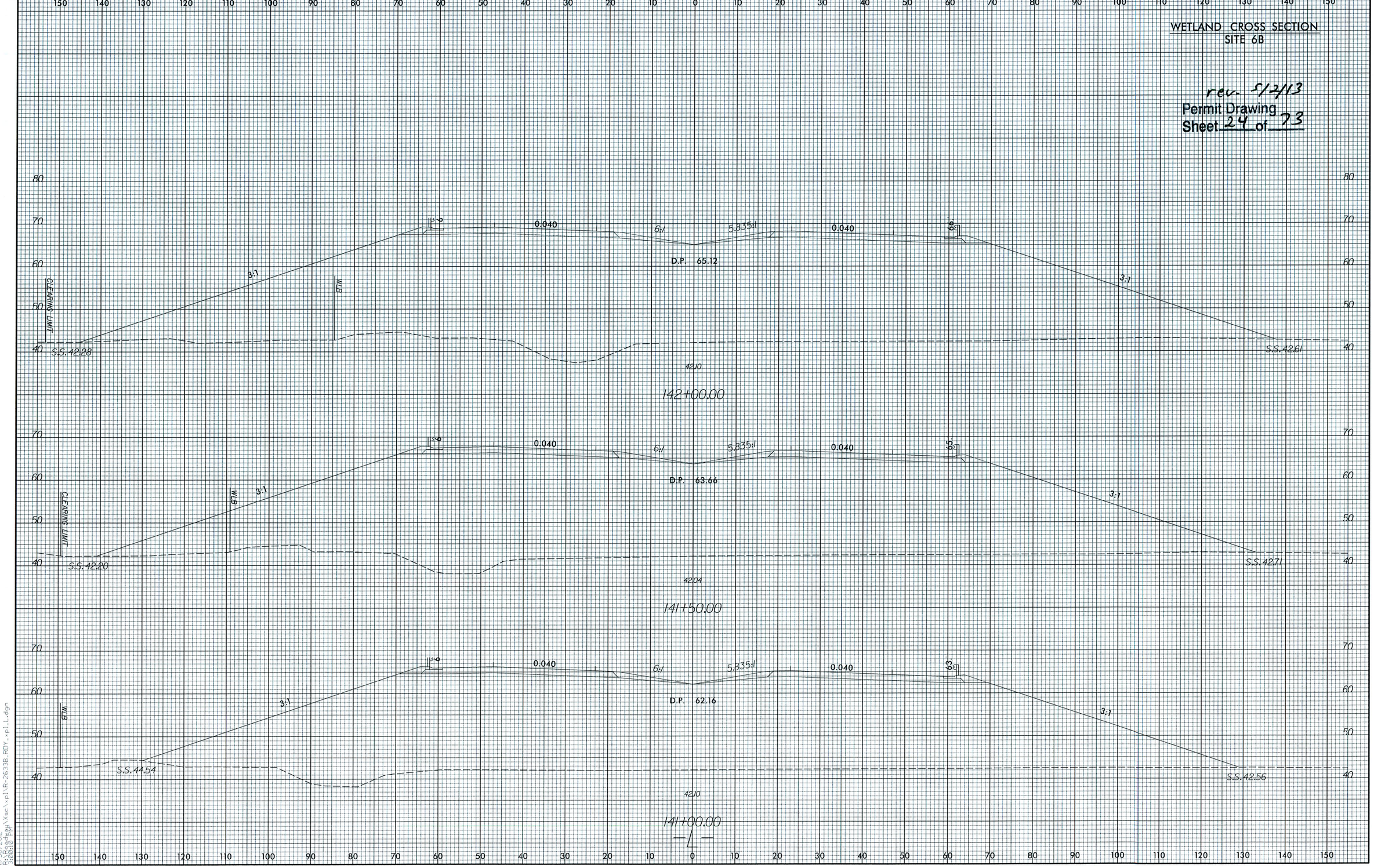
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-73

WETLAND CROSS SECTION
SITE 6B

rev. 5/2/13

Permit Drawing
Sheet 24 of 73



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11/30/2012
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LOCHNER	PROJECT REFERENCE NO.	SHEET NO.
H. W. LOCHNER, INC. 2840 PLAZA PLACE, SUITE 202 RALEIGH, NC 27612	R-2633B	14
	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

rev. 5/2/13
Permit Drawing
Sheet 25 of 73

100' 0' 100' 200' 300'
GRAPHIC SCALE

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

EQUALIZER PIPE INVERTS WILL NOT BE BURIED

NAD 83/95

15
BARNEY L. PADGETT ET UX

SITE 7

155

160

MATCH TO SHEET 13 -L- STA. 152+00.00

MATCH TO SHEET 15 -L- STA. 166+00.00

Q10 =0.51 cfs
V10 =0.78 fps

Q10 =6.68 cfs
V10 =1.14 fps

Q10 =6.06 cfs
V10 =1.10 fps

18" WELBOWS

END SBG STA. 165+08

END SBG STA. 165+44

15
BARNEY L. PADGETT ET UX

11A
WCM ENTERPRISES, LLC.

SEE SHEET 47 FOR -L- PROFILE | SEE SHEET 64 FOR -RAMP_B2- PROFILE

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2633B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

rev. 5/2/13
Permit Drawing
Sheet 26 of 73

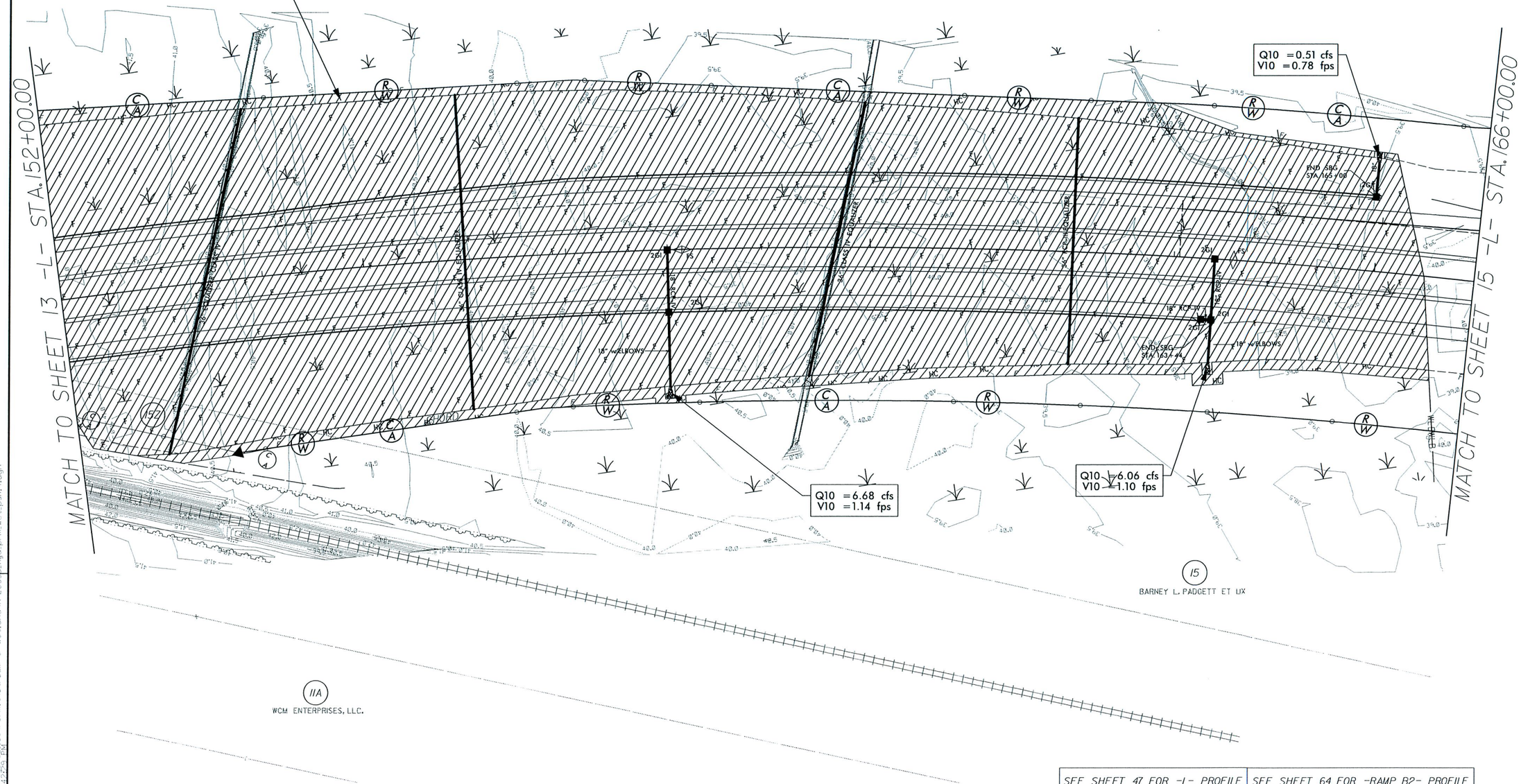
100' 0' 100' 200' 300'
GRAPHIC SCALE

F F DENOTES FILL IN WETLAND

HC HC DENOTES HAND CLEARING

EQUALIZER PIPE INVERTS WILL NOT BE BURIED

NAD 83/95



SEE SHEET 47 FOR -L- PROFILE | SEE SHEET 64 FOR -RAMP_B2- PROFILE

REVISIONS

8/17/99

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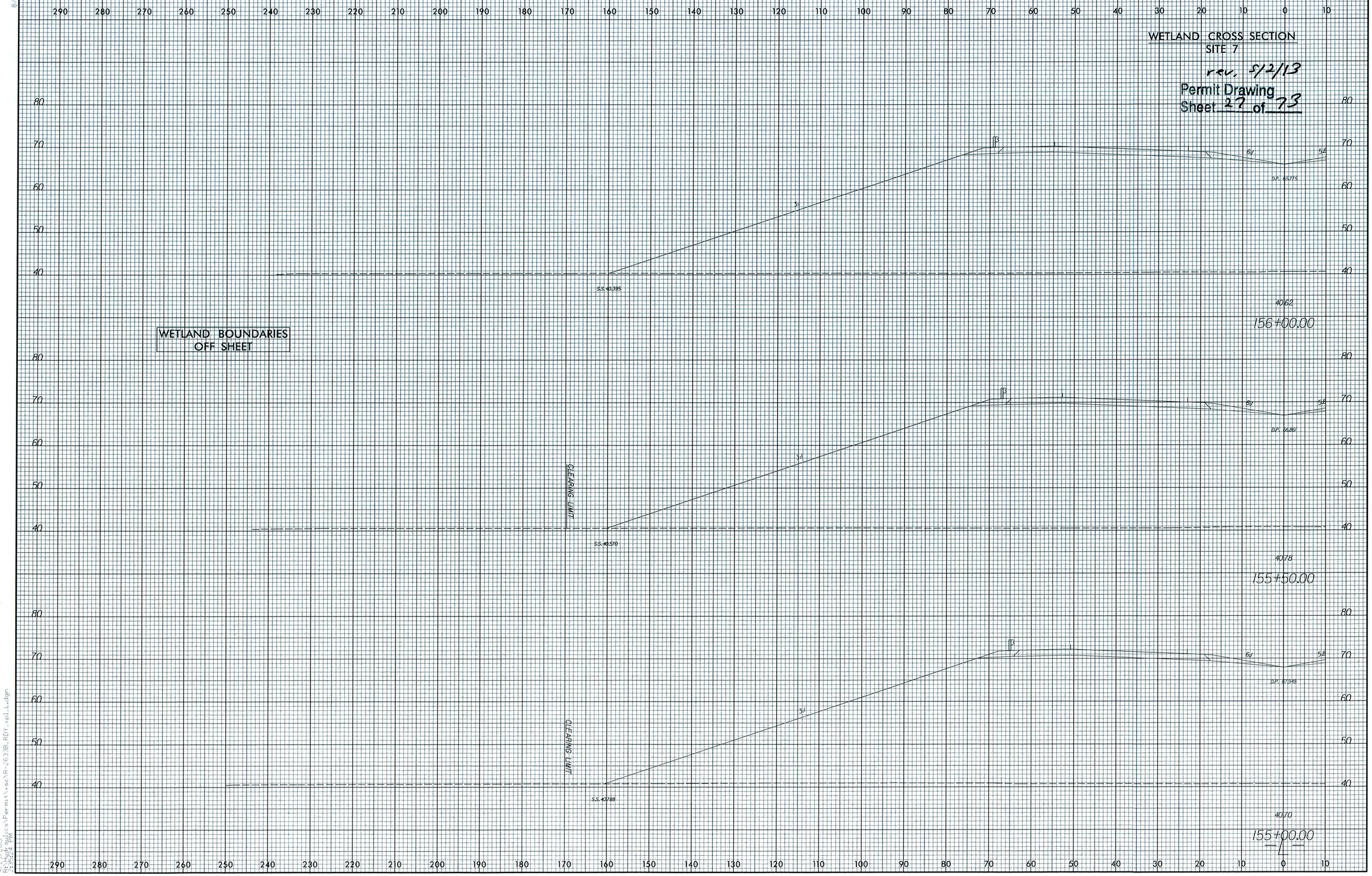
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-83

0 5 10

WETLAND CROSS SECTION
SITE 7

rev. 5/2/13

Permit Drawing
Sheet 22 of 73



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jcarter

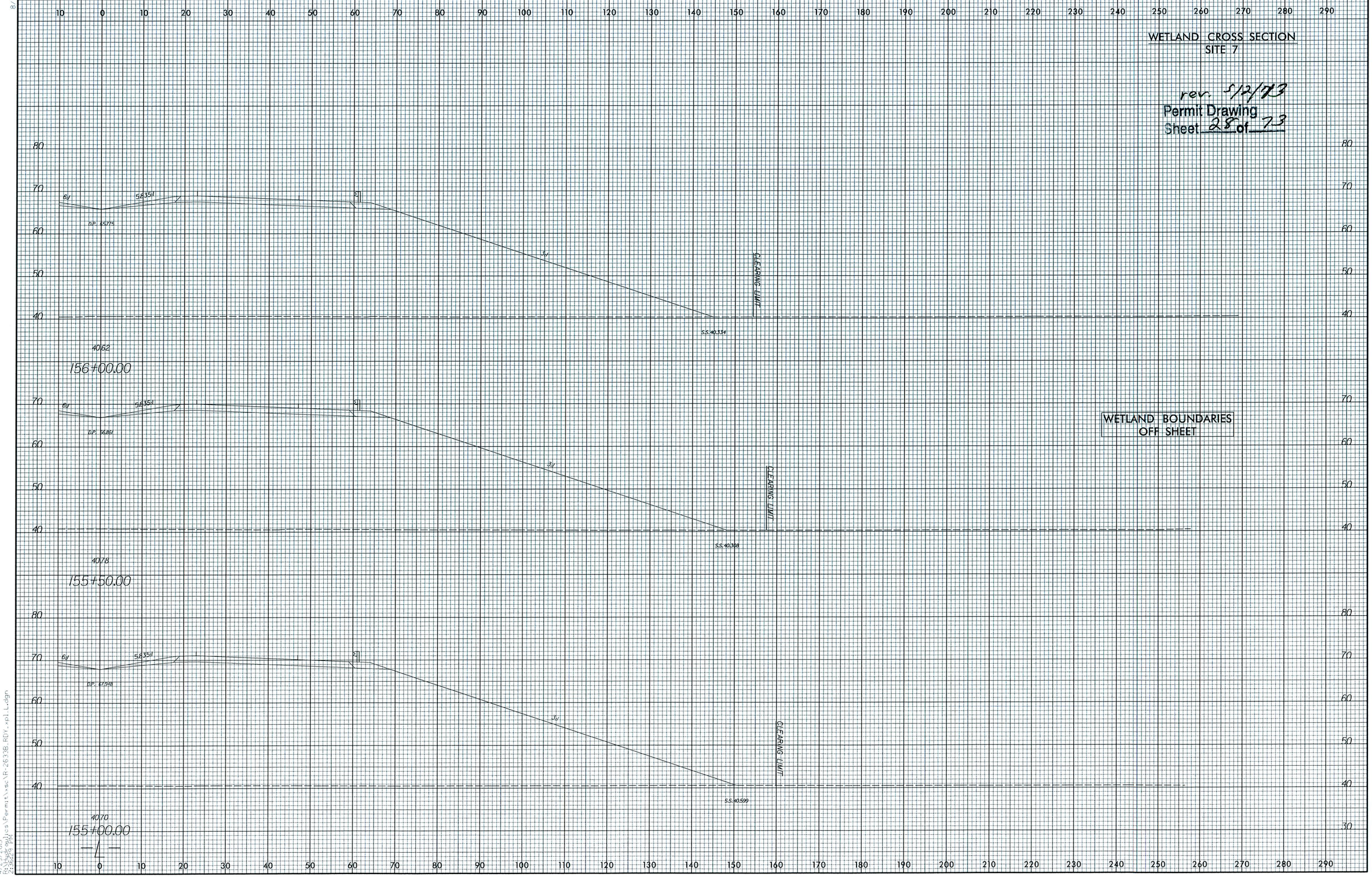
PROJ. REFERENCE NO.	SHEET NO.
R-2633B	X-108

0 5 10

WETLAND CROSS SECTION
SITE 7

rev. 5/12/23

Permit Drawing
Sheet 28 of 73



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WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: 404 Permanent Fill In Wetlands (ac)	CAMA Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	404 Hand Clearing in Wetlands (ac)	CAMA Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1***	~~-L- 24+75 Lt.~~	~~Roadway Fill~~												
2***	~~-L- 37+96 Rt.~~	~~Bridge~~												
3****	-LREV- 339+73 to 358+92	Roadway Fill	7.45			0.03		0.58						
4	-RP_D1- 22+60	Deleted due to new JS delineation												
5*	-LREV- 372+74 to -L-85+08	Roadway Fill	1.04					0.12						
6*	-L- 109+28 to 134+54	Roadway Fill	9.72					1.13						
6A**	-L- 138+11 to 140+70	Roadway Fill	0.68											
6B**	-L- 141+20 to 144+29	Roadway Fill	0.41					0.02						
7*	-L- 146+78 to 165+66	Roadway Fill	10.55					0.98						
8	-L 166+60	Deleted due to new JS delineation												
9*	-L- 186+97 to 191+88	Roadway Fill	1.04					0.09						
10	-RP_D2- 19+20 Lt.	Deleted due to new JS delineation												
11*	-L- 194+75 to 216+13	Roadway Fill; 3@42"	8.72					0.93		0.07	<0.01	205	20	
12	-L- 230+39 to 242+11	Deleted due to new JS delineation												
13	-L- 256+36 to 265+87	Deleted due to new JS delineation												
14*	-L- 264+32 to 266+94	Bridge					0.03	0.20		<0.01				
		Temp. Work Bridge						0.10						
15*	319+46 to 387+92	Bridge	0.05				1.17	10.06	8.20	0.13	0.03			
		Temp. Work Bridge						6.43	4.70					
16*	-L- 399+43 to 400+51	Roadway Fill	0.22											
17***	~~-Y5-16+25 Rt~~	~~48" RCP~~												
18***	~~-Y5-16+25 Lt~~	~~18" RCP~~												
19*	-Y7- 52+09	Culvert								<0.01	<0.01	5	39	
	-Y7 DET- 16+45	Detour Culvert			0.06			0.03			0.61		90	
20*	-Y8- 47+74 to 49+88	Bridge	<0.01				0.04	0.17						
	-Y8- 48+78 to 49+95	Temp. Work Bridge						0.14						
TOTALS:			39.88		0.06	0.03	1.24	20.98	12.90	0.20	0.63	210	149	0.00

Site 14 See Structures sheet for Bridge Impacts on Cartwheel Branch
Site 15 Impacts for Permanent Dual Bridges CAMA=0.07 Ac, 404=0.07 Ac, Surface Water=0.0 1Ac; Total=0.15 Ac.
Site 15 Impacts for Temporary Work Bridge CAMA=0.16 Ac, 404=0.21 Ac, Surface Water=0.0 1 Ac; Total=0.38 Ac.
* Revised due to new JS Delineation
** New Site due to new JS Delineation
*** Sites 1, 2, 17, and 18 are now permitted with R-2633AA & AB and the impacts are included with that project.
**** A portion of Site 3 is now permitted with R-2633AA & AB and the impacts are included with that project.
0.75 acres of Temp. Fill in 404 Wetlnads in the Hand Clearing areas for Erosion Control Measures

ATN Revised 3/31/05

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

BRUNSWICK AND NEW HANOVER COUNTIES
WBS - 34491.1.2 (R-2633B)

rev. 5/2/13