

Attachment 3:

Wetland and Surface Water Impacts Permit Drawings

09/08/99

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**CURRITUCK &
DARE COUNTIES**

LOCATION: MID-CURRITUCK BRIDGE FROM US 158 SOUTH OF COINJOCK
TO NC 12 SOUTH OF COROLLA

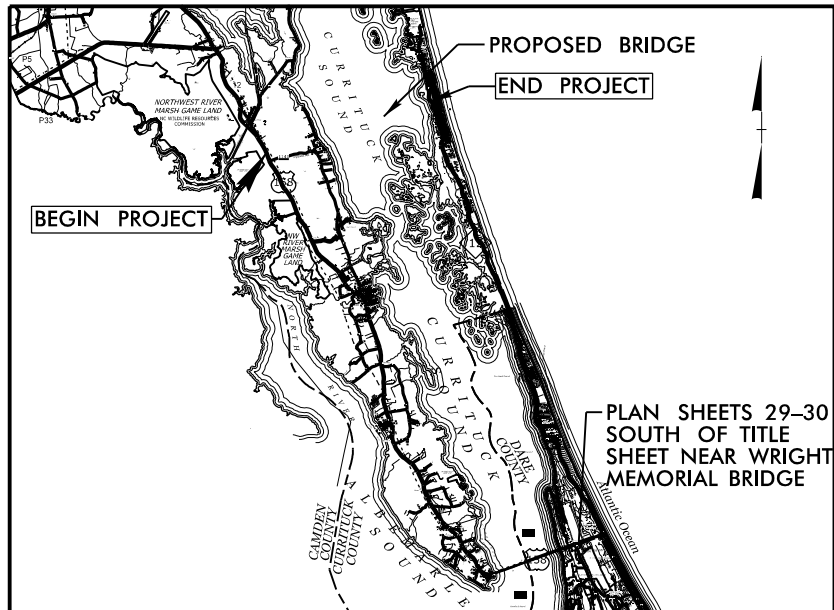
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND
STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

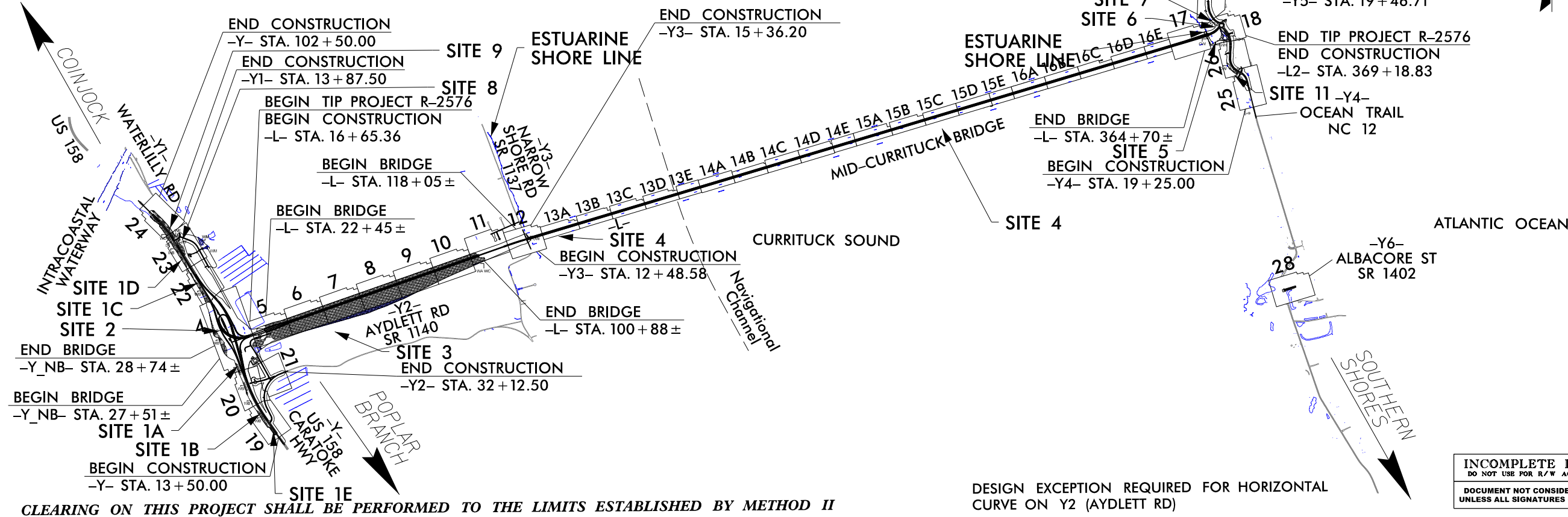
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2576	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34470.1.TA1	BRSTP-000(494)	P.E.	

PERMIT DRAWING
SHEET 1 OF 89

TIP PROJECT: R-2576

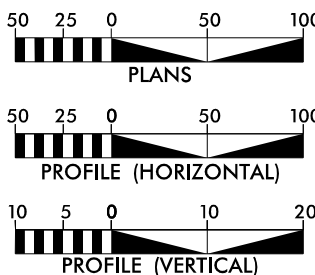


VICINITY MAP



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

GRAPHIC SCALES



DESIGN DATA

ADT 2020 = 11,800
ADT 2040 = 18,000
K = 9 %
D = 60 %
T = 7 % *
V = 60 MPH
* (TTST=2) + (DUAL=1)
+ (RV=4)
FUNC CLASS =
ARTERIAL STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2576 = 0.520 Miles
LENGTH STRUCTURES = 6.157 Miles
TOTAL LENGTH TIP PROJECT R-2576 = 6.677 Miles

PROJECT LEVEL TRAFFIC FORECAST (JUNE 2016) (SUMMER WEEKEND)

Prepared in the Office of:
LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FY 2024

LETTING DATE:
FY 2026

1223 Jones Farm Rd.
Raleigh, N.C. 27608
License No. 403377
Bridg. 919 851 8077
Fax: 919 851 8100
TRANSPORTATION PLANNING DESIGN • BRIDGE/STRUCTURE DESIGN
CIVIL/ENVIRONMENTAL DESIGN • CONSTRUCTION OBSERVATION

BRIAN K. EASON, PE
PROJECT ENGINEER

CHRISTINA L. YOKELEY, PE
PROJECT DESIGN ENGINEER

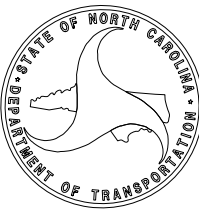
DENNIS JERNIGAN, PE
NCDOT /NCTA

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: _____ P.E.



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

4/23/2024
R:\HYDRAULICS\PERMITS-Environmental\psh\R2576_HYD_TSH.dgn
USER: MHarvey

PLAN SHEET / PERMIT SHEET

PLAN SHEET	PERMIT SHEET NUMBER	IMPACT NUMBER
TSH	1	–
SITES	1A	–
01B	1B	–
Details	2	–
2D-2	3	–
2D-3	4	–
2D-4	5	–
PSH04	6	1A, 2
PSH04 con	7	1A, 2
X-21 Y	8	1A
PSH04 Enlarg.	9	1A
PSH04 Enlarg.	10	2
PSH05	11	3
PSH05 con	12	3
PSH06	13	3
PSH06 con	14	3
PSH07	15	3
PSH07 con	16	3
PSH08	17	3
PSH08 con	18	3
PSH09	19	3
PSH09 con	20	3
PSH10	21	3
PSH10 con	22	3
PSH11	23	3
PSH11 con	24	3
PSH12	25	4
PSH12 con	26	4
PSH12 Enlarg.	27	4
PFL 52	28	4
PFL 53	29	4
13A	30	4
13B	31	4
13C	32	4
13D	33	4
13E	34	4
14A	35	4
14B	36	4
14C	37	4
14D	38	4
14E	39	4
15A	40	4
15B	41	4
15C	42	4
15D	43	4
15E	44	4

PLAN SHEET	PERMIT SHEET NUMBER	IMPACT NUMBER
16A	45	4
16B	46	4
16C	47	4
16D	48	4
16E	49	4
PFL 54	50	4
PSH17	51	4
PSH17A	52	4
PFL 55	53	4
PSH18	54	5, 6, 7
PSH18 con	55	5, 6, 7
PSH18 Enlarg.	56	5
PSH18 Enlarg.	57	6, 7
X-11 L2	58	5, 6
X-83 Y4	59	5
X-90 Y5	60	7
PSH19	61	1B, 1E
PSH19 con	62	1B, 1E
PSH19 Enlarg.	63	1B
PSH19 Enlarg.	64	1E
X-14 Y	65	1B
PSH22	66	1C
PSH22 con	67	1C
PSH22 Enlarg.	68	1C
X-22 Y	69	1C
X-23 Y	70	1C
PSH23	71	1D, 8,
PSH23 con	72	1D, 8,
PSH23 Enlarg.	73	1D, 8
X-27 Y	74	1D, 8
PSH24	75	9, 10
PSH24 con	76	9, 10
PSH24 Enlarg.	77	9, 10
X-29 Y	78	9, 10
X-30 Y	79	9, 10
X-31 Y	80	9, 10
PSH25	81	11
PSH25 con	82	11
X-79 Y4	83	11
PSH26	84	11
PSH26 con	85	11
PSH26 Enlarg.	86	11
PSH29	87	AEC
PSH29 con	87A	AEC
PSH30	88	AEC
PSH30 con	88A	AEC
IMPACT TABLE	89	-

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS
CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin (EIP)	
Computed Property Corner	
Existing Concrete Monument (ECM)	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	
Sign	
Well	
Small Mine	
Foundation	
Area Outline	
Cemetery	
Building	
School	
Church	
Dam	

HYDROLOGY:

Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
Proposed Lateral, Tail, Head Ditch	
False Sump	

RAILROADS:

Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point	
Primary Horiz and Vert Control Point	
Secondary Horiz and Vert Control Point	
Vertical Benchmark	
Existing Right of Way Monument	
Proposed Right of Way Monument (Rebar and Cap)	
Proposed Right of Way Monument (Concrete)	
Existing Permanent Easement Monument	
Proposed Permanent Easement Monument (Rebar and Cap)	
Existing C/A Monument	
Proposed C/A Monument (Rebar and Cap)	
Proposed C/A Monument (Concrete)	
Existing Right of Way Line	
Proposed Right of Way Line	
Existing Control of Access Line	
Proposed Control of Access Line	
Proposed ROW and CA Line	
Existing Easement Line	
Proposed Temporary Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage/Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	

VEGETATION:

Single Tree	
Single Shrub	
Hedge	

Woods Line	
Orchard	
Vineyard	

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
Paved Ditch Gutter	
Storm Sewer Manhole	
Storm Sewer	

UTILITIES:

* SUE – Subsurface Utility Engineering
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:	
Existing Power Pole	
Proposed Power Pole	
Existing Joint Use Pole	
Proposed Joint Use Pole	
Power Manhole	
Power Line Tower	
Power Transformer	
U/G Power Cable Hand Hole	
H-Frame Pole	
U/G Power Line Test Hole (SUE – LOS A)*	
U/G Power Line (SUE – LOS B)*	
U/G Power Line (SUE – LOS C)*	
U/G Power Line (SUE – LOS D)*	

TELEPHONE:

Existing Telephone Pole	
Proposed Telephone Pole	
Telephone Manhole	
Telephone Pedestal	
Telephone Cell Tower	
U/G Telephone Cable Hand Hole	
U/G Telephone Test Hole (SUE – LOS A)*	
U/G Telephone Cable (SUE – LOS B)*	
U/G Telephone Cable (SUE – LOS C)*	
U/G Telephone Cable (SUE – LOS D)*	
U/G Telephone Conduit (SUE – LOS B)*	
U/G Telephone Conduit (SUE – LOS C)*	
U/G Telephone Conduit (SUE – LOS D)*	
U/G Fiber Optics Cable (SUE – LOS B)*	
U/G Fiber Optics Cable (SUE – LOS C)*	
U/G Fiber Optics Cable (SUE – LOS D)*	

WATER:

Water Manhole	
Water Meter	
Water Valve	
Water Hydrant	
U/G Water Line Test Hole (SUE – LOS A)*	
U/G Water Line (SUE – LOS B)*	
U/G Water Line (SUE – LOS C)*	
U/G Water Line (SUE – LOS D)*	
Above Ground Water Line	

TV:

TV Pedestal	
TV Tower	
U/G TV Cable Hand Hole	
U/G TV Test Hole (SUE – LOS A)*	
U/G TV Cable (SUE – LOS B)*	
U/G TV Cable (SUE – LOS C)*	
U/G TV Cable (SUE – LOS D)*	
U/G Fiber Optic Cable (SUE – LOS B)*	
U/G Fiber Optic Cable (SUE – LOS C)*	
U/G Fiber Optic Cable (SUE – LOS D)*	

GAS:

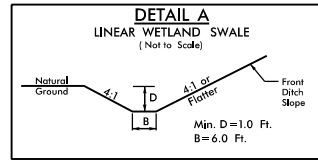
Gas Valve	
Gas Meter	
U/G Gas Line Test Hole (SUE – LOS A)*	
U/G Gas Line (SUE – LOS B)*	
U/G Gas Line (SUE – LOS C)*	
U/G Gas Line (SUE – LOS D)*	
Above Ground Gas Line	

SANITARY SEWER:

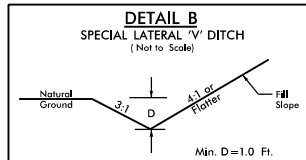
Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
SS Force Main Line Test Hole (SUE – LOS A)*	
SS Force Main Line (SUE – LOS B)*	
SS Force Main Line (SUE – LOS C)*	
SS Force Main Line (SUE – LOS D)*	

MISCELLANEOUS:

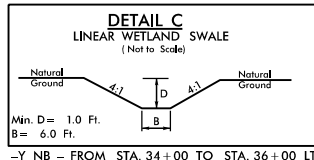
Utility Pole	
Utility Pole with Base	
Utility Located Object	
Utility Traffic Signal Box	
Utility Unknown U/G Line (SUE – LOS B)*	
U/G Tank; Water, Gas, Oil	
Underground Storage Tank, Approx. Loc.	
A/G Tank; Water, Gas, Oil	
Geoenvironmental Boring	
Abandoned According to Utility Records	
End of Information	



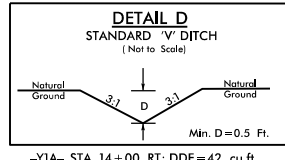
-Y2A- FROM STA. 12+00 TO STA. 16+00 LT
-Y2A- FROM STA. 12+00 TO STA. 17+00 RT
-Y2A- FROM STA. 24+00 TO STA. 25+00 LT
-Y- FROM STA. 22+85 TO STA. 32+50 RT
-Y- FROM STA. 36+00 TO STA. 41+50 RT
-RPD- FROM STA. 12+47 TO STA. 13+75 LT
-RPB- FROM STA. 10+00 TO STA. 12+00 LT
-RPB- FROM STA. 11+50 TO STA. 13+50 RT
-RPA- FROM STA. 14+50 TO STA. 15+00 RT
-Y NB- FROM STA. 29+75 TO STA. 35+00 RT
-Y NB- FROM STA. 30+66 TO STA. 34+00 LT
-Y NB- FROM STA. 24+50 TO STA. 25+00 RT
-Y2- FROM STA. 16+50 TO STA. 26+00 RT
-Y2- FROM STA. 18+00 TO STA. 25+50 LT
-Y4- FROM STA. 36+00 TO STA. 39+50 LT



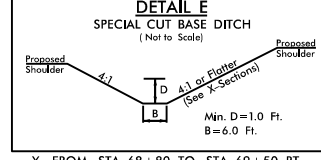
-Y2A- FROM STA. 17+00 TO STA. 17+50 LT
-Y2A- FROM STA. 25+00 TO STA. 27+00 LT
-Y- FROM STA. 33+00 TO STA. 36+00 RT
-Y- FROM STA. 41+50 TO STA. 43+00 RT
-Y2B- FROM STA. 9+58 RT TO STA. 11+34 LT
-Y NB- FROM STA. 20+00 TO STA. 24+50 RT
-Y NB- FROM STA. 35+00 TO STA. 39+00 RT
-RPB- FROM STA. 10+00 TO STA. 11+50 RT
-Y2- FROM STA. 10+65 TO STA. 15+50 RT
-Y2- FROM STA. 10+85 TO STA. 15+50 LT
-Y2- FROM STA. 25+50 TO STA. 26+10 LT
-Y2- FROM STA. 28+50 TO STA. 31+75 LT
-Y2B- FROM STA. 12+00 TO STA. 16+44 RT
-Y2B- FROM STA. 12+00 TO STA. 16+00 LT
-Y1A- FROM STA. 10+50 TO STA. 13+85 LT
-Y1A- FROM STA. 10+50 TO STA. 14+00 RT
-Y1A- FROM STA. 18+00 TO STA. 19+00 LT



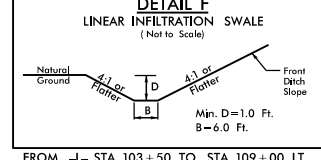
-Y NB- FROM STA. 34+00 TO STA. 36+00 LT
-Y NB- FROM STA. 38+50 TO STA. 41+50 LT



-Y1A- STA. 14+00 RT; DDE=42 cu.ft.
-Y1A- STA. 16+58 LT; DDE=185 cu.ft.
-Y1A- STA. 16+66 RT; DDE=60 cu.ft.
-Y1A- STA. 19+00 RT; DDE=94 cu.ft.



-Y- FROM STA. 68+80 TO STA. 69+50 RT



FROM -L- STA. 103+50 TO STA. 109+00 LT
FROM -L- STA. 103+50 TO STA. 109+50 RT

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

NC License
Number F-0159
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

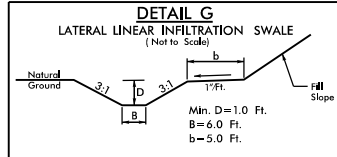
PROJECT REFERENCE NO. **R-2576**
ROADWAY DESIGN ENGINEER

SHEET NO. **2D-1**
PAVEMENT DESIGN ENGINEER

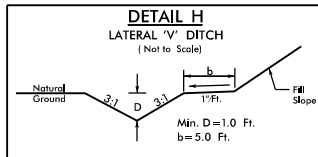
INCOMPLETE PLANS
DO NOT USE FOR A/C ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

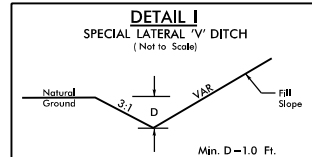
PERMIT DRAWING
SHEET 2 OF 89



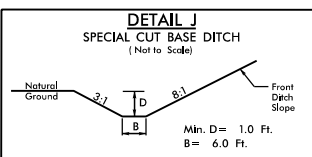
FROM -L- STA. 109+00 TO STA. 110+50 LT
FROM -L- STA. 109+50 TO STA. 110+50 RT



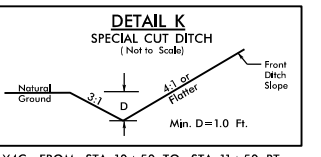
FROM -L- STA. 112+00 TO STA. 116+00 LT



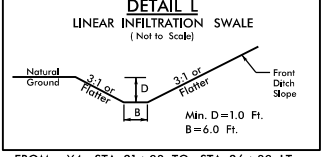
-Y- FROM STA. 70+50 TO STA. 72+50 RT



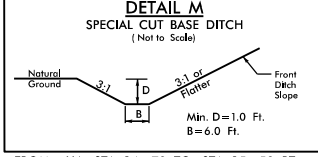
-Y- FROM STA. 72+50 TO STA. 84+50 RT



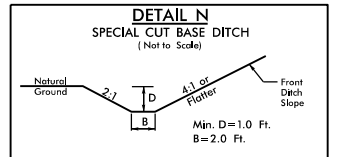
-Y4C- FROM STA. 10+50 TO STA. 11+50 RT
-Y4C- FROM STA. 10+50 TO STA. 11+50 LT
-Y- FROM STA. 15+00 TO STA. 16+00 RT
-Y2B- FROM STA. 10+75 LT TO STA. 11+50 RT
-Y7- FROM STA. 51+30 TO STA. 52+30 LT
-Y7- FROM STA. 58+27 TO STA. 59+50 LT



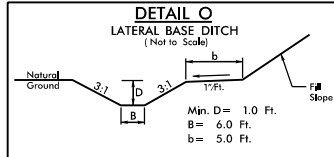
FROM -Y4- STA. 21+00 TO STA. 26+00 LT
FROM -Y4- STA. 20+50 TO STA. 22+50 RT
FROM -Y4- STA. 30+50 TO STA. 32+50 RT
FROM -Y4- STA. 37+00 TO STA. 37+50 RT
FROM -Y4- STA. 39+50 TO STA. 42+50 RT



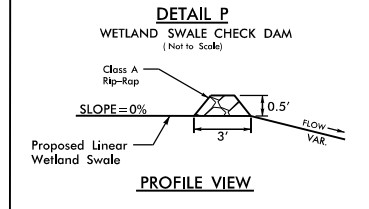
FROM -Y4- STA. 24+70 TO STA. 25+50 RT
FROM -Y4- STA. 30+50 TO STA. 32+50 RT
FROM -Y4- STA. 37+00 TO STA. 37+50 RT
FROM -Y4- STA. 39+50 TO STA. 42+50 RT



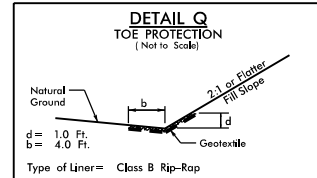
-Y- FROM STA. 32+50 TO STA. 33+00 RT



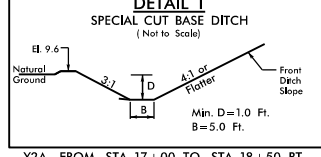
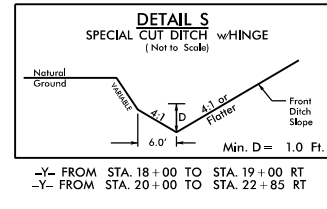
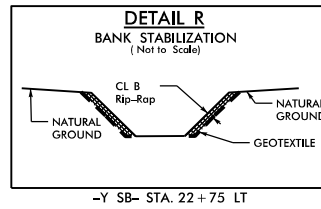
FROM -L- STA. 113+00 TO STA. 114+50 RT



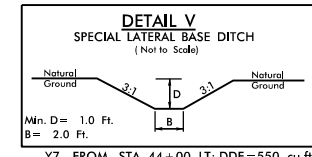
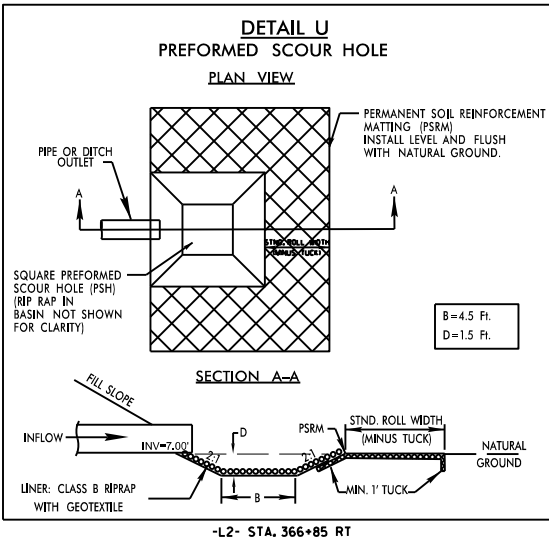
-Y2A- STA. 12+50 LT
-Y2A- STA. 13+00 RT
-Y2A- STA. 15+00 LT
-Y2A- STA. 15+00 RT
-Y2A- STA. 16+00 LT
-Y2A- STA. 16+50 RT
-Y2- STA. 18+50 RT
-Y2- STA. 22+00 LT
-Y2- STA. 22+50 RT
-Y2- STA. 23+00 LT
-Y2- STA. 24+50 RT
-Y2- STA. 25+50 LT
-Y2- STA. 25+50 RT
-Y- STA. 23+40 RT
-Y- STA. 28+75 RT
-Y- STA. 32+50 RT
-Y- STA. 34+00 RT
-Y- STA. 41+00 RT
-Y NB- STA. 31+50 LT
-Y NB- STA. 32+00 RT
-Y NB- STA. 32+50 LT
-Y NB- STA. 33+00 RT
-Y NB- STA. 40+00 LT
-Y NB- STA. 40+50 LT
-Y4- STA. 21+00 RT
-Y4- STA. 37+45 LT
-Y4- STA. 38+00 LT
-Y5- STA. 10+70 RT
-Y5- STA. 11+50 RT
-Y5- STA. 12+50 RT
-Y5- STA. 13+50 RT
-Y5- STA. 14+50 RT
-Y5R- STA. 12+70 RT



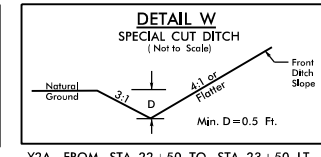
-Y- FROM STA. 21+77 TO STA. 23+70 LT
-Y- FROM STA. 40+83 TO STA. 42+54 LT
-Y- FROM STA. 84+63 TO STA. 90+06 RT
-Y- FROM STA. 91+24 TO STA. 99+89 RT
-Y- FROM STA. 94+20 TO STA. 98+11 LT
-Y1A- FROM STA. 24+37 TO STA. 24+57 LT
-Y1A- FROM STA. 24+59 TO STA. 24+92 RT



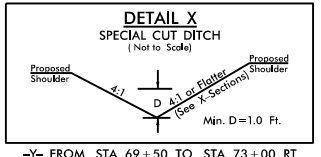
-Y2A- FROM STA. 17+00 TO STA. 18+50 RT



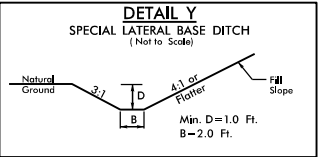
-Y7- FROM STA. 44+00 LT; DDE=550 cu.ft.



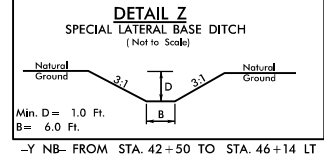
-Y2A- FROM STA. 22+50 TO STA. 23+50 LT



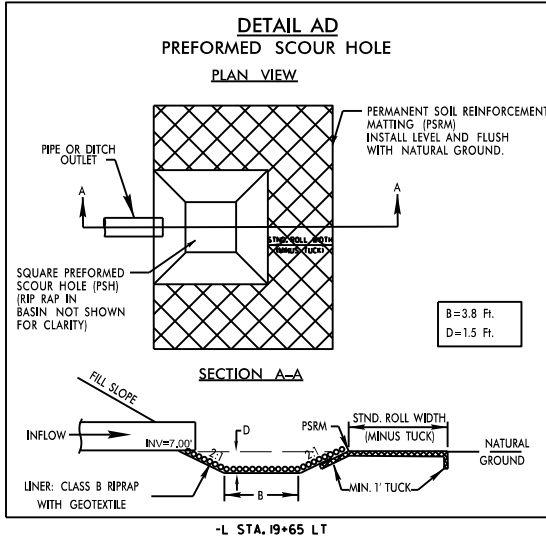
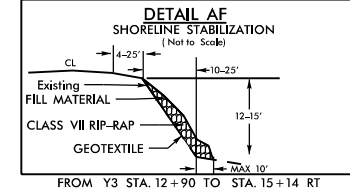
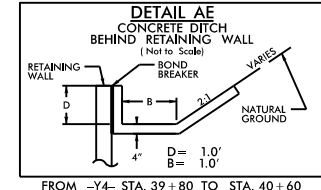
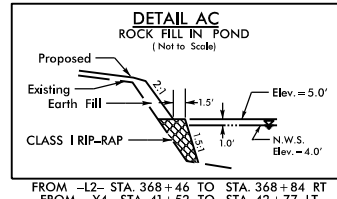
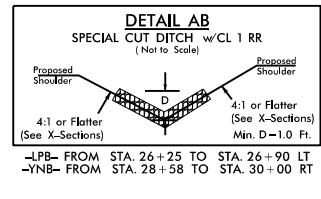
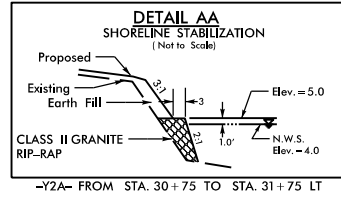
-Y- FROM STA. 69+50 TO STA. 73+00 RT



-Y2- FROM STA. 26+00 TO STA. 31+75 RT
-Y2A- FROM STA. 16+00 TO STA. 17+00 LT

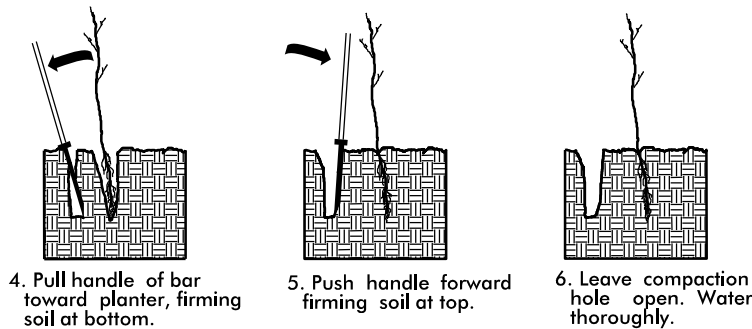
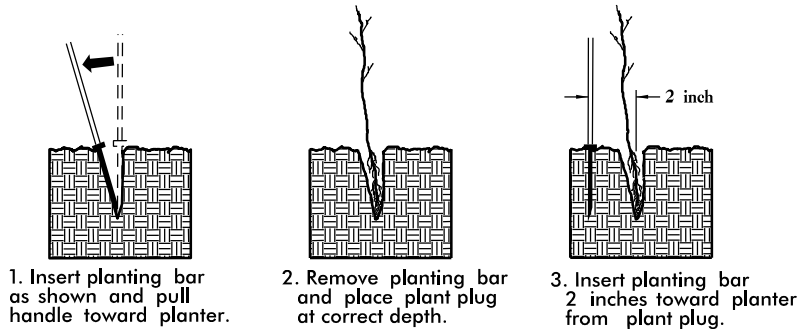


-Y NB- FROM STA. 42+50 TO STA. 46+14 LT



PLANTING DETAILS

DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



PLANTING NOTES:

PLANTING BAG
During planting, plant plugs shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.



KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



WET SWALE GRASS PLANTING

WETLAND GRASS SPECIES SHALL BE PLANTED 18" ON CENTER, APPROXIMATELY 19,360 PLANTS PER ACRE.

NOTE: SEE WET SWALE GRASS PLANTING DETAIL

WET SWALE GRASS PLANTING

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

ZONE 1

50% SAGITTARIA LANCIFOLIA	BULL TONGUE	1.5" X 5" DEEP PLUG
50% SCHOENOPLECTUS TABERNAEMONTANI	SOFTSTEM BULLRUSH	1.5" X 5" DEEP PLUG

ZONE 2

50% CAREX VULPINOIDA	FOX SEDGE	1.5" X 5" DEEP PLUG
50% JUNCUS EFFUSUS	SOFT RUSH	1.5" X 5" DEEP PLUG

ZONE 3

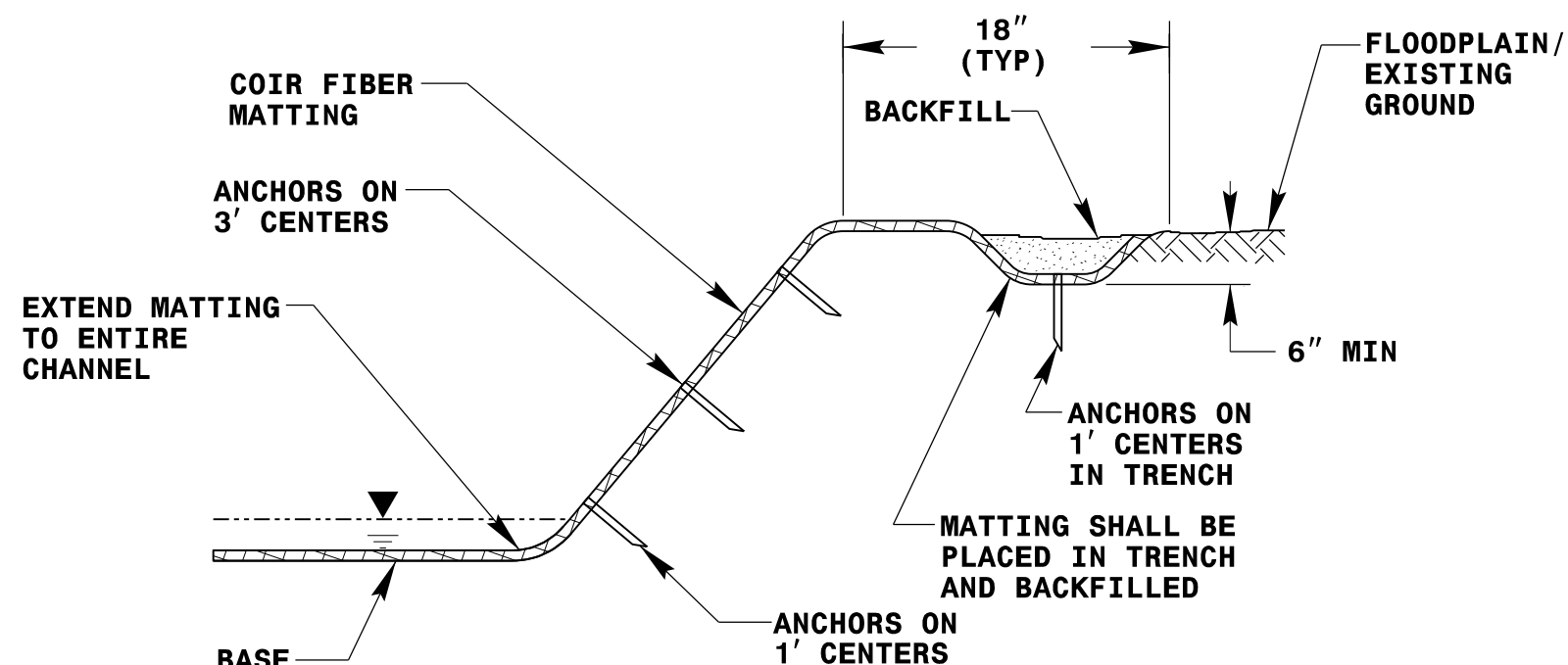
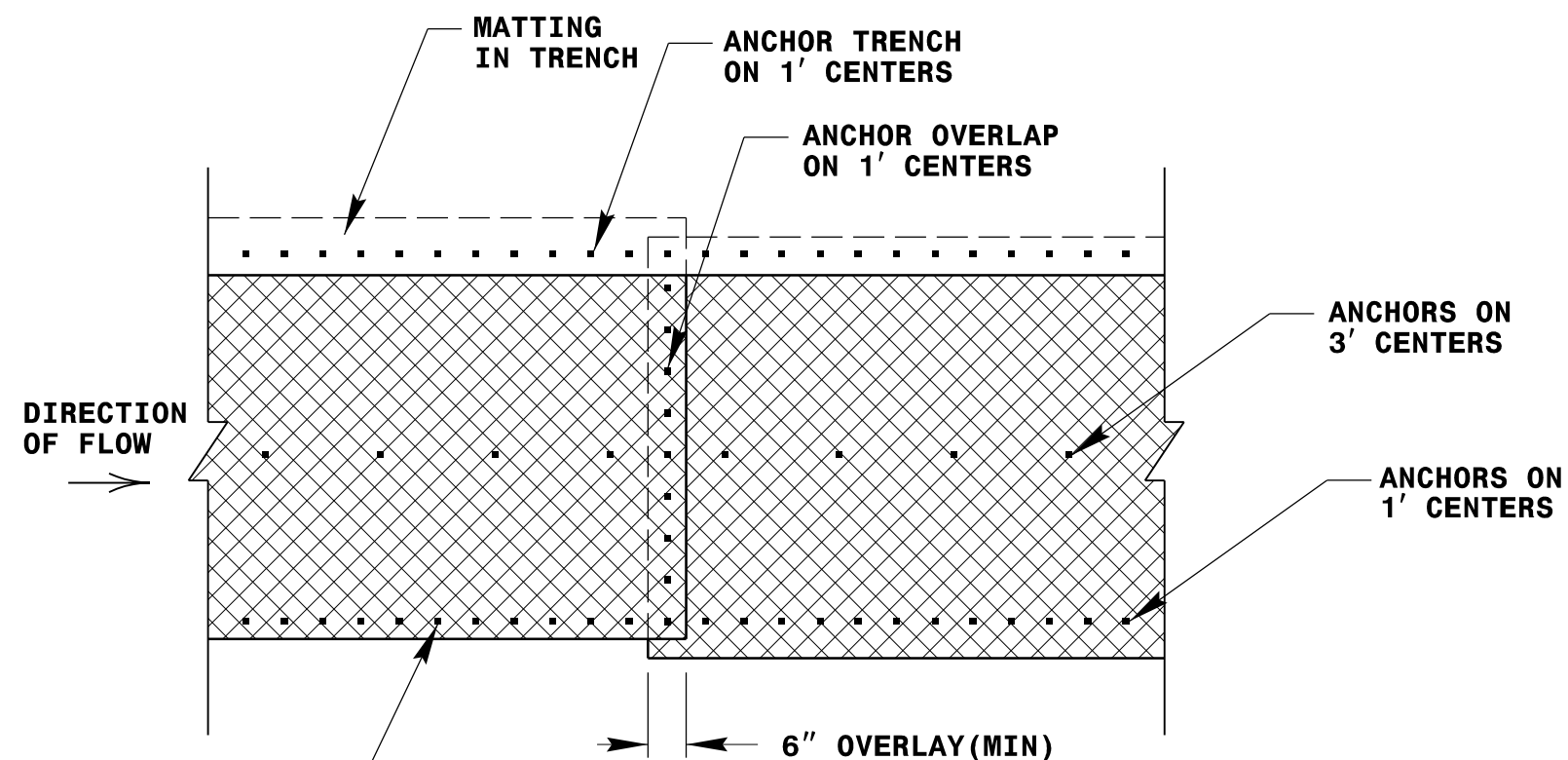
SEE PROJECT SPECIAL PROVISION FOR SEED MIX

WETLAND GRASS PLANTING
DETAIL SHEET 1 OF 3

N.C.D.O.T.- ROADSIDE ENVIRONMENTAL UNIT

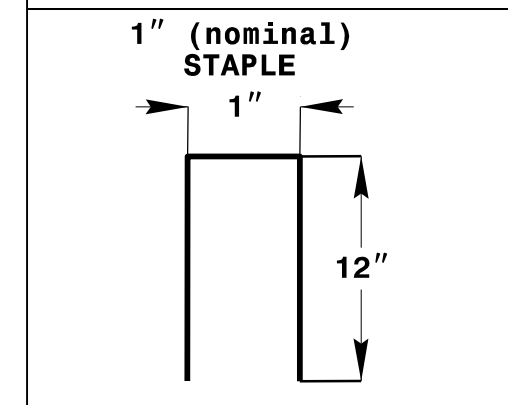
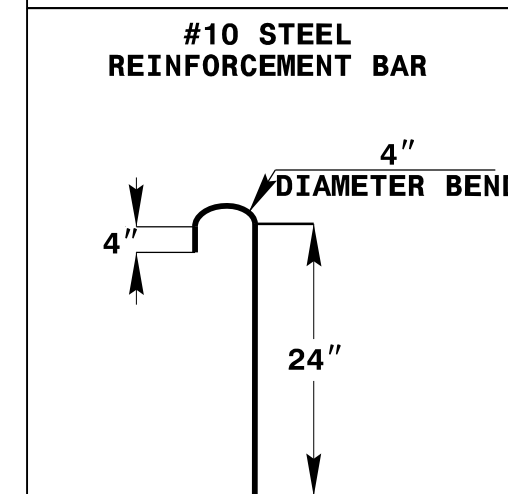
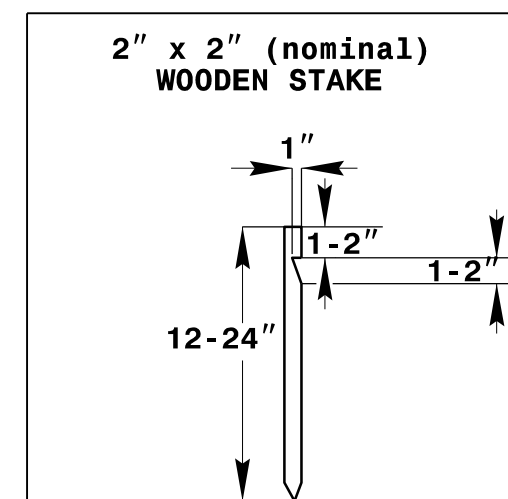
PROJECT REFERENCE NO.	SHEET NO.
R-2576	2D-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 3 OF 89



COIR FIBER MATTING DETAIL

NOT TO SCALE



ANCHOR OPTIONS

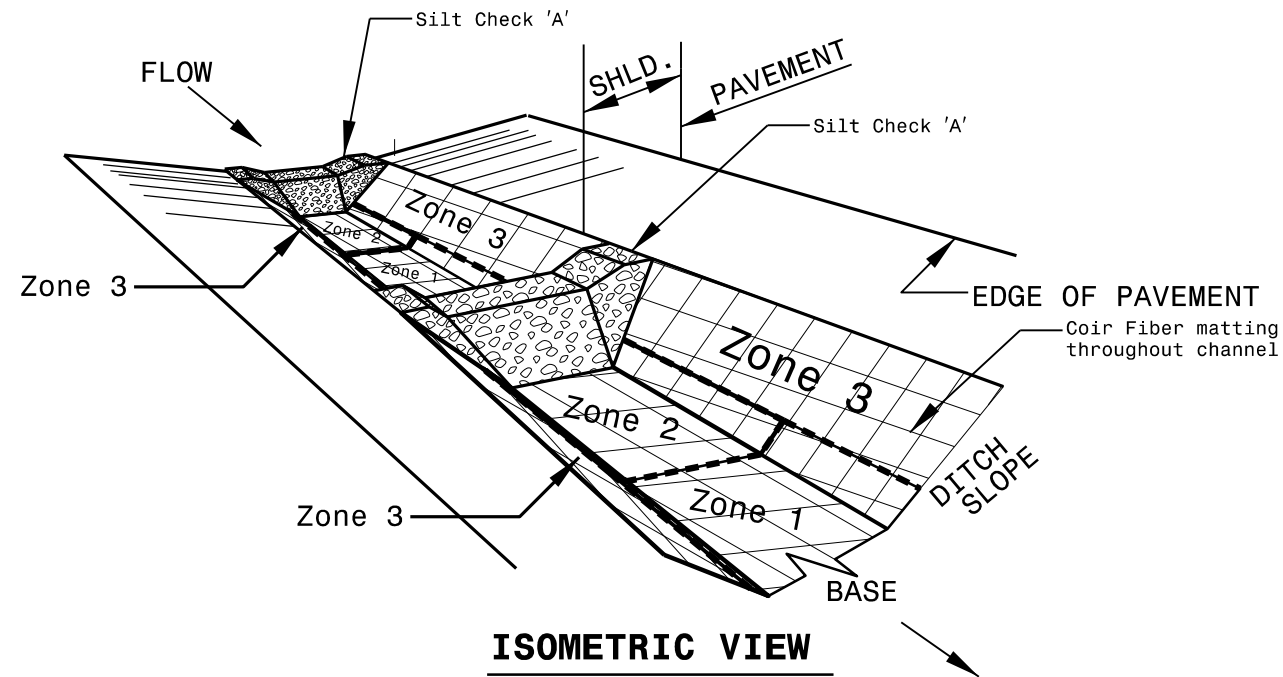
WET SWALE DETAIL SHEET 2 OF 3

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

WET SWALE GRASS PLANTING DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-2576	2D-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

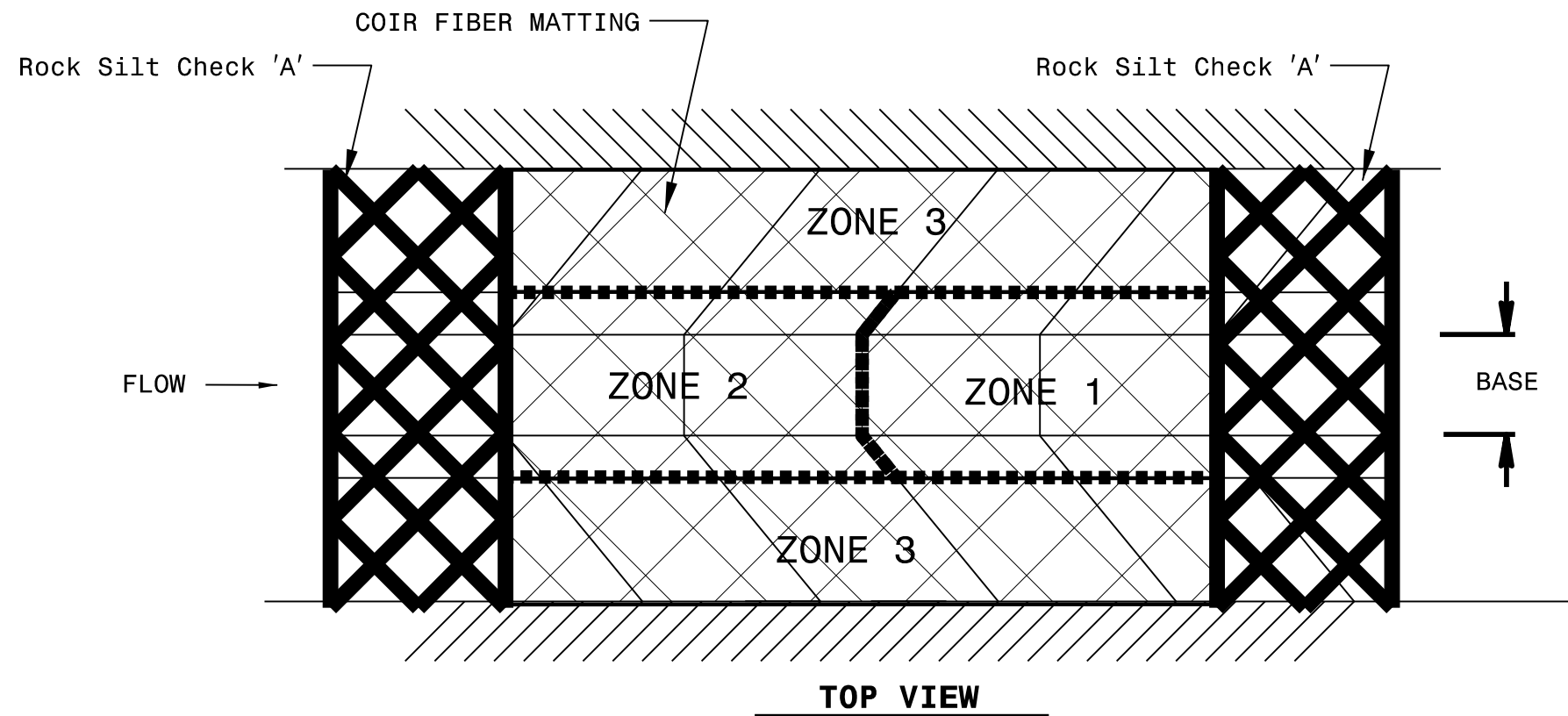
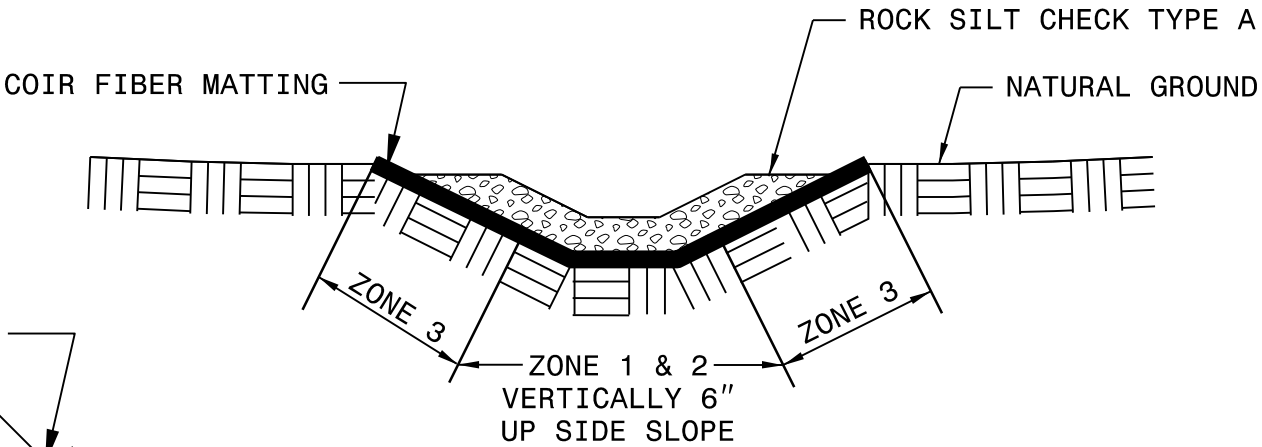
PERMIT DRAWING
SHEET 5 OF 89



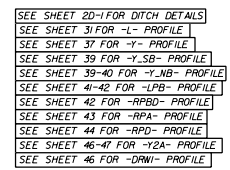
NOTES:

SEE DETAIL "XX" FOR SWALE DIMENSIONS.

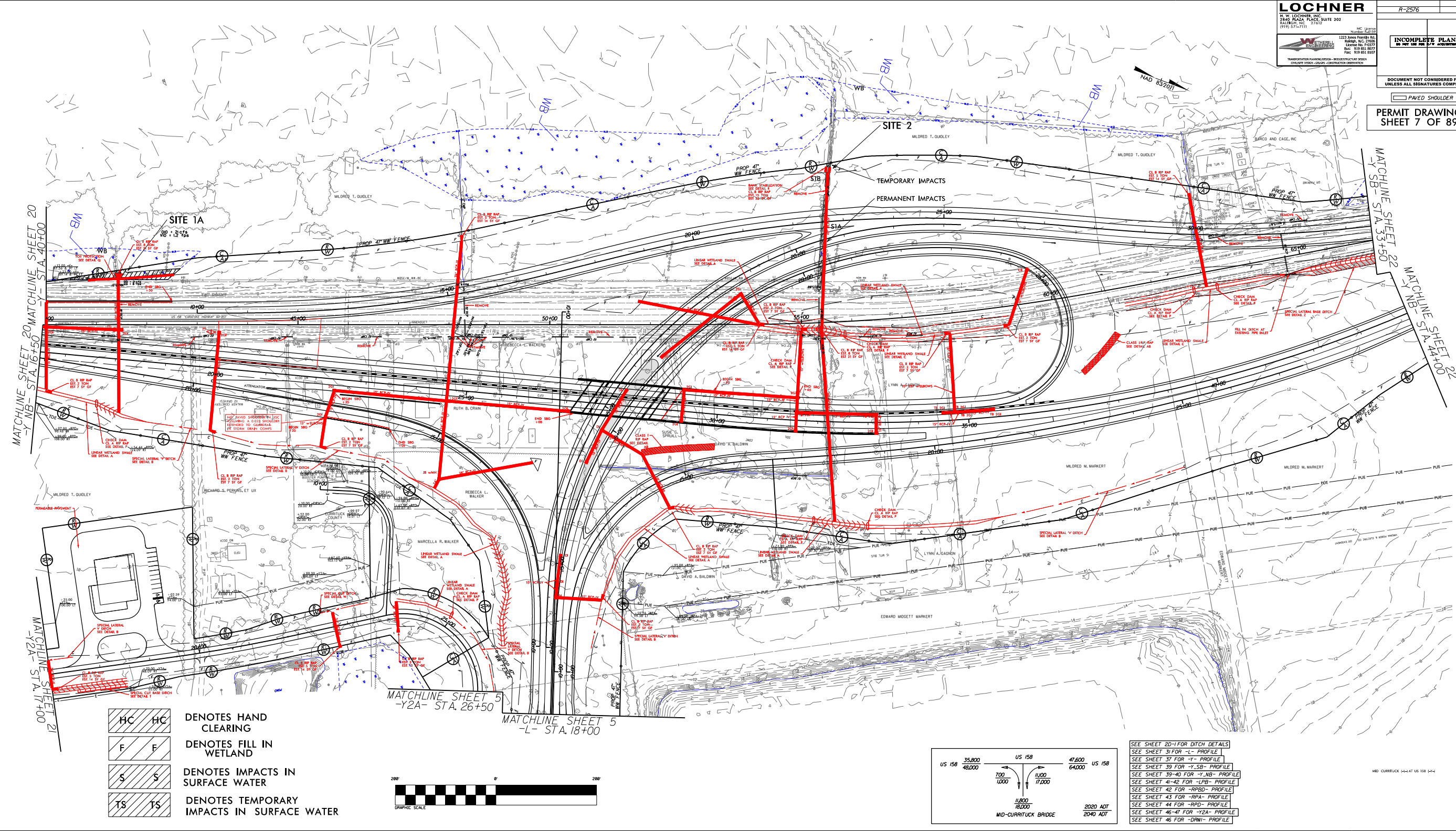
INSTALL COIR MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS AND DETAIL 2 OF 3.



R-2576	4
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
☐ PAVED SHOULDER	
PERMIT DRAWING SHEET 6 OF 89	



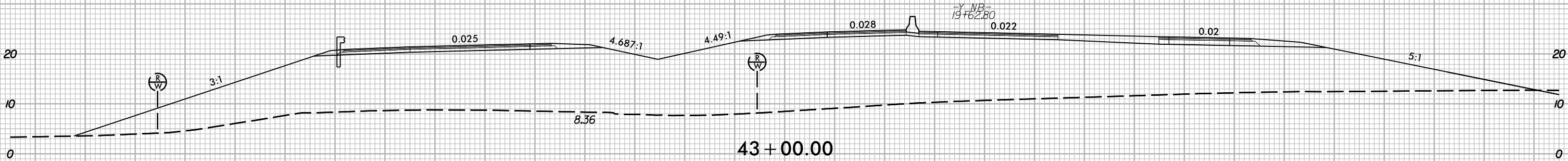
R-2576	4
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
☐ PAVED SHOULDER	
PERMIT DRAWING SHEET 7 OF 89	



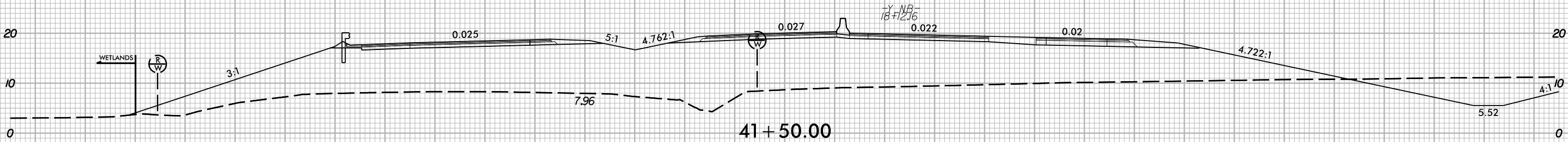
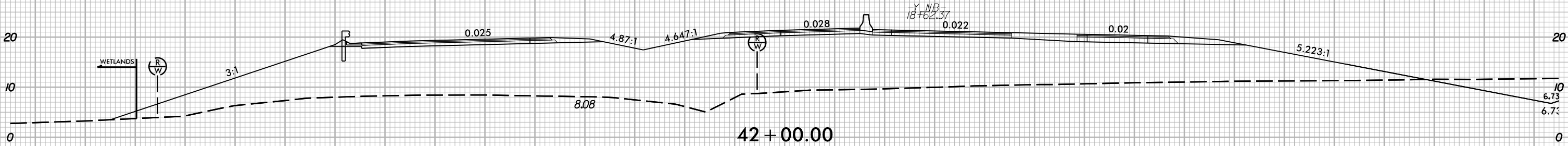
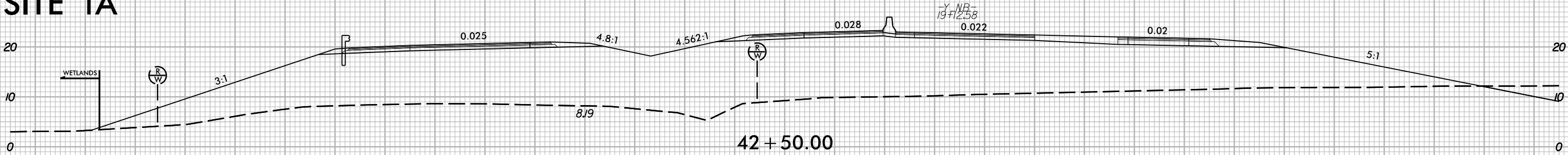
6/23/16

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190

PERMIT DRAWING
SHEET 8 OF 89



SITE 1A



-Y-

SITE 1A

CL. B RIP RAP
EST. 8 TON
EST 21 SY GF

TOE PROTECTION
SEE DETAIL Q

WLB

R

$$\frac{Q|O}{V|O} = \frac{21 \text{ cfs}}{1.2 \text{ fps}}$$

END SBG
+ 50

REMOVE

**DENOTES HAND
CLEARING**

DENOTES FILL IN WETLAND

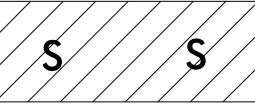
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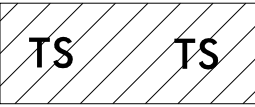
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PERMIT DRAWING
SHEET 10 OF 89

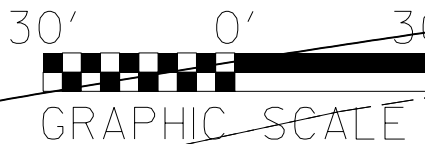
MILDRED T. QUIDLEY

SITE 2

 DENOTES IMPACTS IN
SURFACE WATER

 DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NAD 83



BANK STABILIZATION
SEE DETAIL R
CL. B RIP RAP
EST. 15 TON
EST 32 SY GF

REMOVE

S1B

TEMPORARY IMPACTS

PERMANENT IMPACTS

25+00

S1A

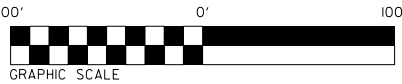
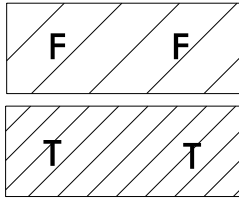
42" RCP-IV

NEAR WETLAND SWALE
SEE DETAIL A

2GI 0436

LINEAR WETLAND SWALE
SEE DETAIL A

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DENOTES FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND (MATTING)

PERMIT DRAWING
SHEET 12 OF 89

6" SCUPPER ON 12' CENTERS
88' & 89' SPANS = 7 SCUPPERS LT. & RT.
100' SPAN = 8 SCUPPERS LT. & RT.
73' SPAN = 6 SCUPPERS LT. & RT.
70' SPAN = 5 SCUPPERS LT. & RT.

EDWARD MIDGETT MARKERT

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Fax: 919 851 8107



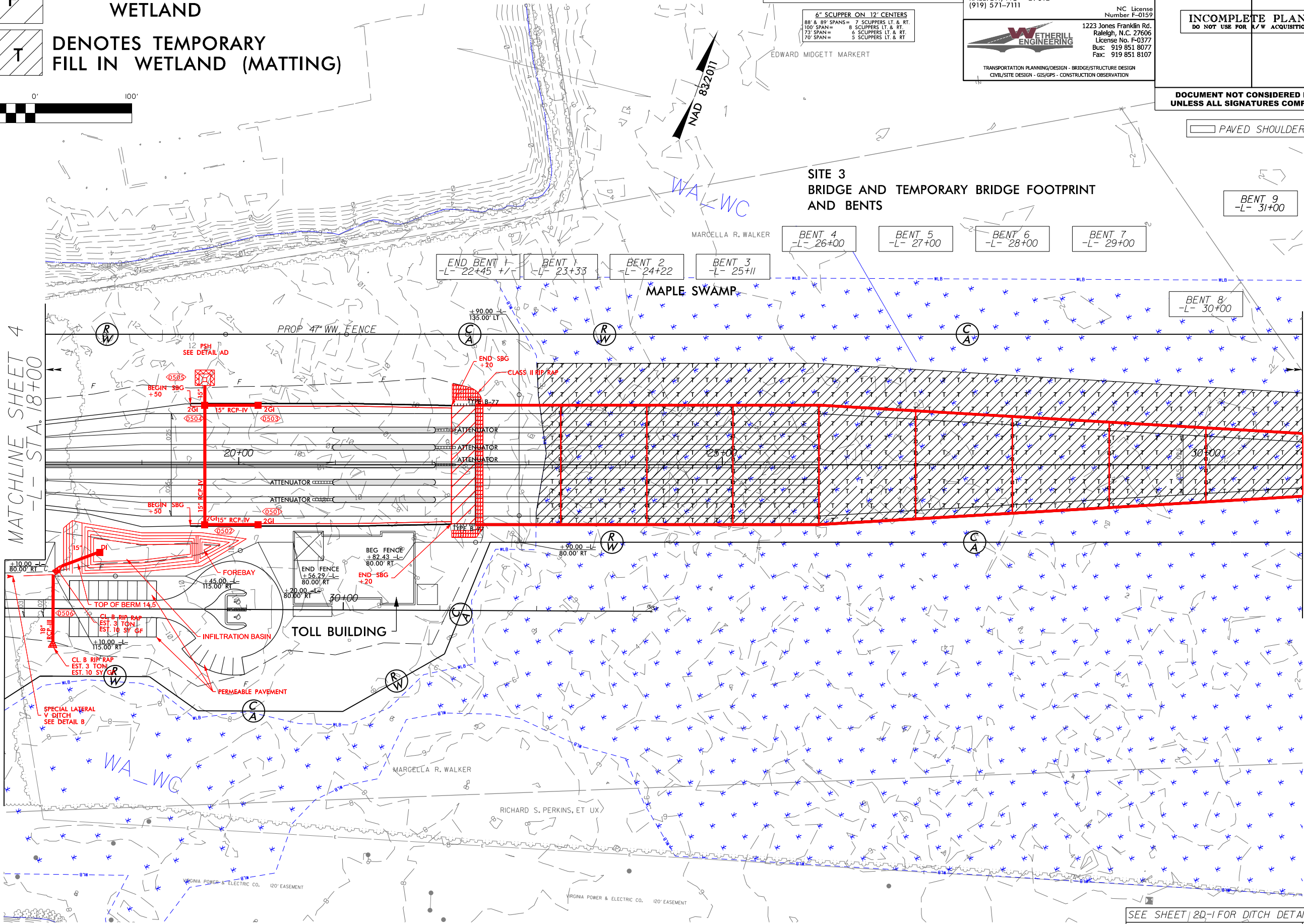
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.		SHEET NO.	
R-2576		5	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

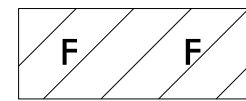
PAVED SHOULDER

MATCHLINE SHEET 4
-L- STA. 18+00
MATCHLINE SHEET 4
-Y2A- STA. 26+50

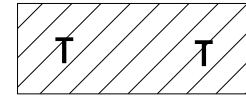


MATCHLINE SHEET 6
-L- STA. 31+00

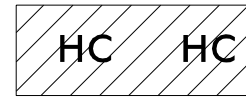
SEE SHEET 20-1 FOR DITCH DETAILS
SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 47 FOR -Y2A- PROFILE



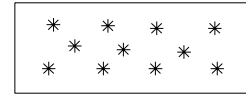
**DENOTES FILL IN
WETLAND (AT BENTS)**



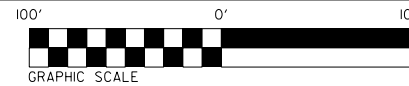
DENOTES TEMPORARY
 FILL IN WETLAND (MATTING,
 CONT AT TEMP BENTS WHEN
 MATTING ENDS NEXT TO BRIDGE)



DENOTES HAND
CLEARING



DENOTES MECHANIZED
CLEARING



PERMIT DRAWING
SHEET 13 OF 89

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

6" SCUPPER ON 12' CENTERS	
88' & 89' SPANS=	7 SCUPPERS LT. & RT.
100' SPAN=	8 SCUPPERS LT. & RT.
73' SPAN=	6 SCUPPERS LT. & RT.
70' SPAN=	5 SCUPPERS LT. & RT.

PROJECT REFERENCE NO.	SHEET NO.
R-2576	6

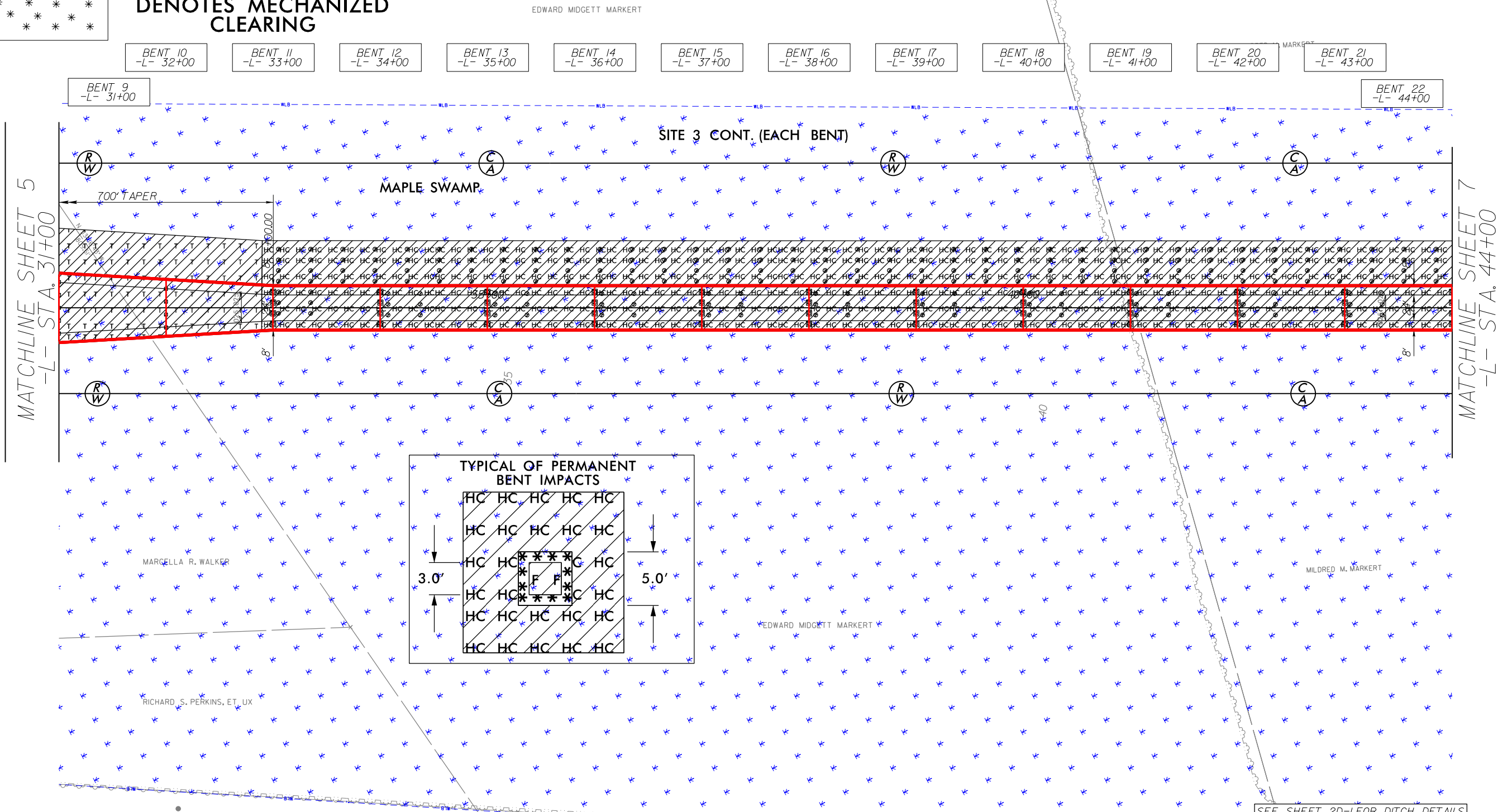
R-2576

6ROADWAY DESIGN
ENGINEERSPAVEMENT DESIGN
CHAPTER 10

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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

PAVED SHOULDER



SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 32 FOR -L- PROFILE

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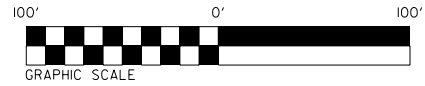
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PERMIT DRAWING
SHEET 14 OF 89

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

PROJECT REFERENCE NO.
R-2576

SHEET NO.
6

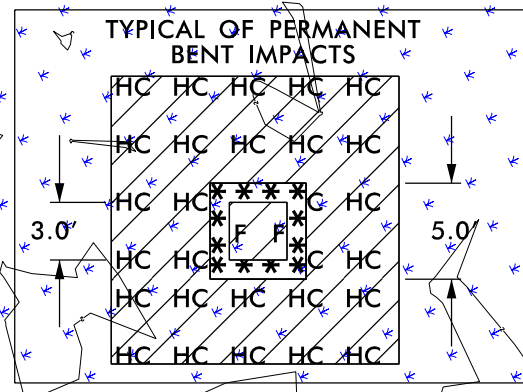
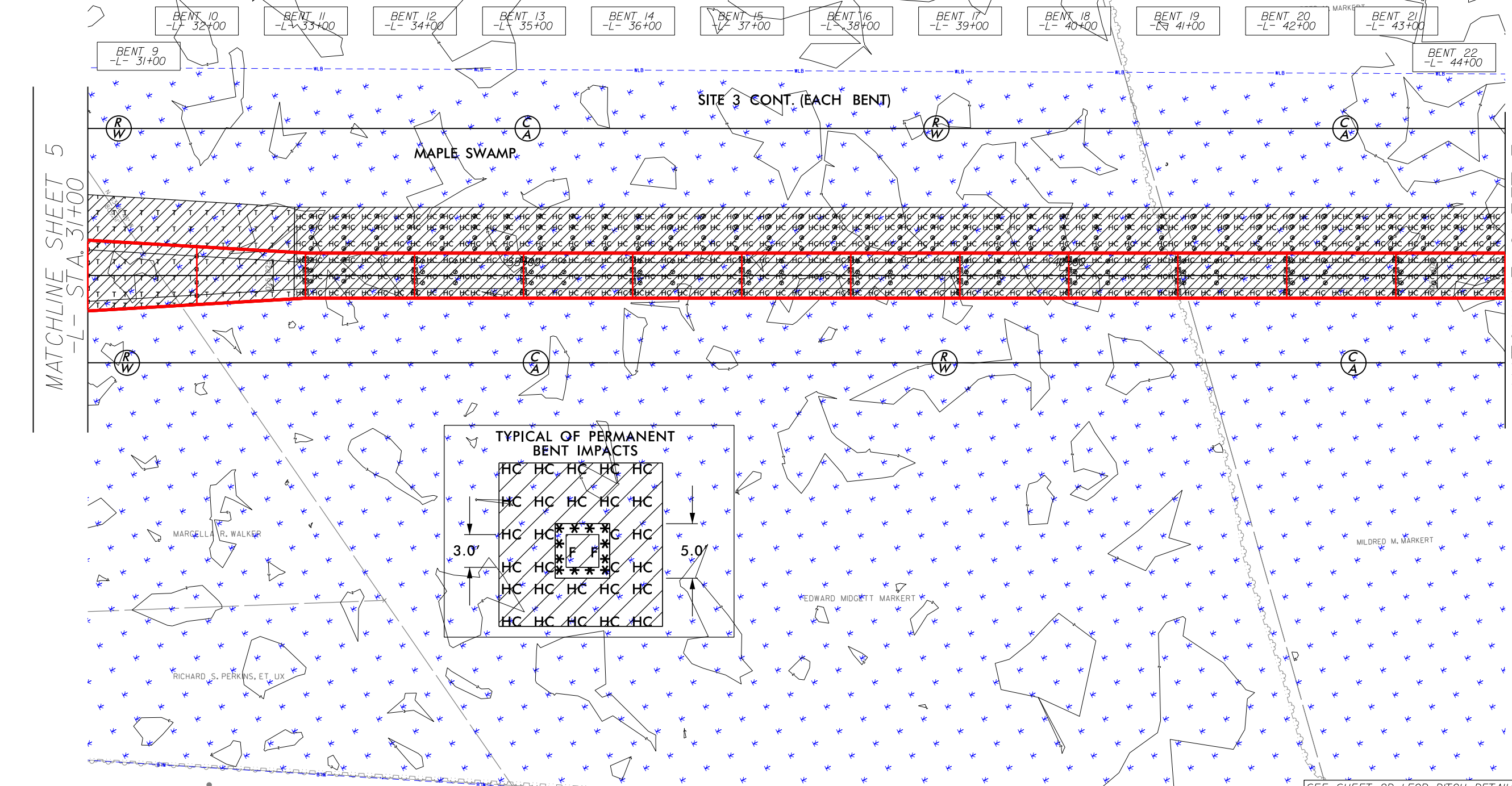
ROADWAY DESIGN
ENGINEER

PAVEMENT DESIGN
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

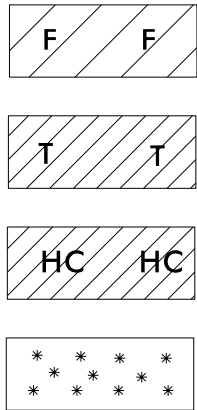
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER



SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 32 FOR -L- PROFILE

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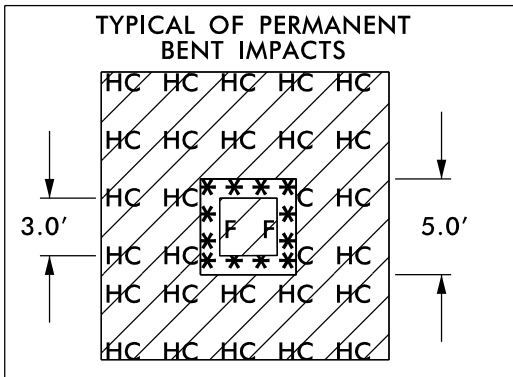


DENOTES FILL IN WETLAND (AT BENTS)

DENOTES TEMPORARY FILL IN WETLAND (MATTING, CONT AT TEMP BENTS WHEN MATTING ENDS NEXT TO BRIDGE)

DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING



**PERMIT DRAWING
SHEET 15 OF 89**

100' 0' 100'

GRAPHIC SCALE

6" SCUPPER ON 12" CENTERS
88' & 89' SPANS - 7 SCUPPERS LT. & RT.
100' SPAN - 8 SCUPPERS LT. & RT.
73' SPAN - 6 SCUPPERS LT. & RT.
70' SPAN - 5 SCUPPERS LT. & RT.

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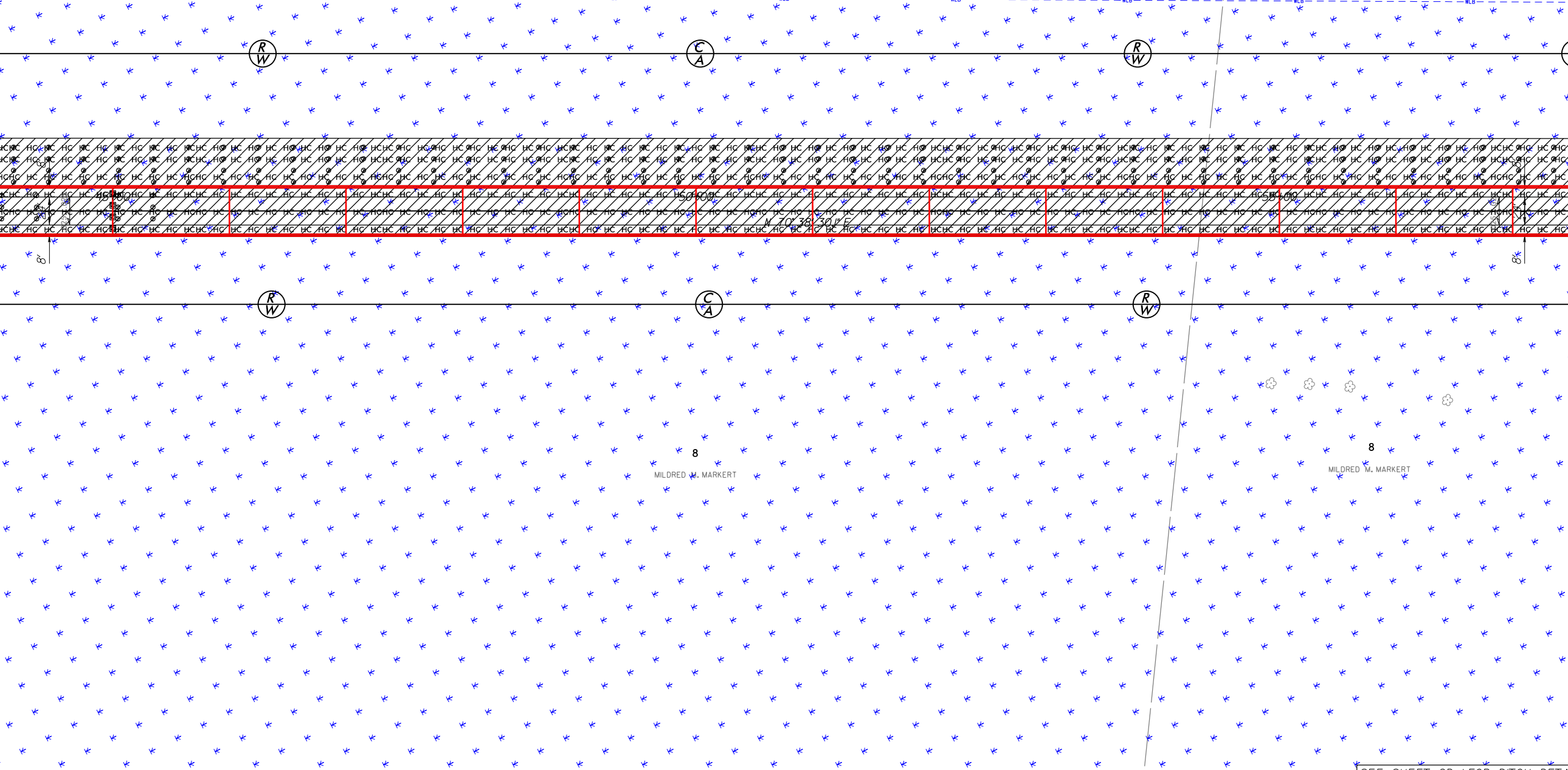
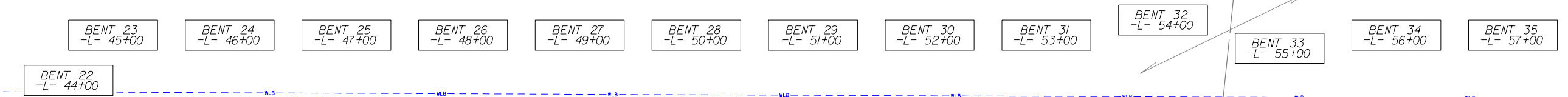
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576		SHEET NO. 7	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PAVED SHOULDER			

MATCHLINE SHEET 6
-L- STA. 44+00

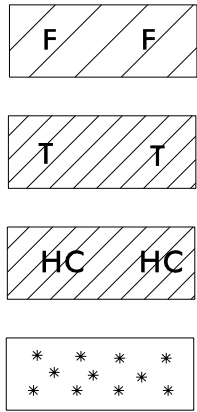


MATCHLINE SHEET 8
-L- STA. 57+50

SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 32 FOR -L- PROFILE

6/22/99

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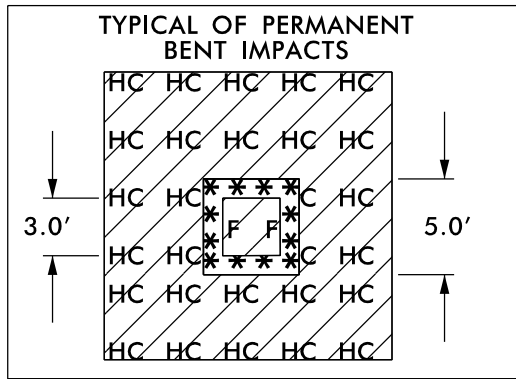


DENOTES FILL IN WETLAND (AT BENTS)

DENOTES TEMPORARY FILL IN WETLAND (MATTING, CONT AT TEMP BENTS WHEN MATTING ENDS NEXT TO BRIDGE)

DENOTES HAND CLEARING

DENOTES MECHANIZED CLEARING



PERMIT DRAWING
SHEET 16 OF 89

GRAPHIC SCALE

6" SCUPPER ON 12" CENTERS
88' & 89' SPANS - 7 SCUPPERS LT. & RT.
100' SPAN - 8 SCUPPERS LT. & RT.
73' SPAN - 6 SCUPPERS LT. & RT.
70' SPAN - 5 SCUPPERS LT. & RT.

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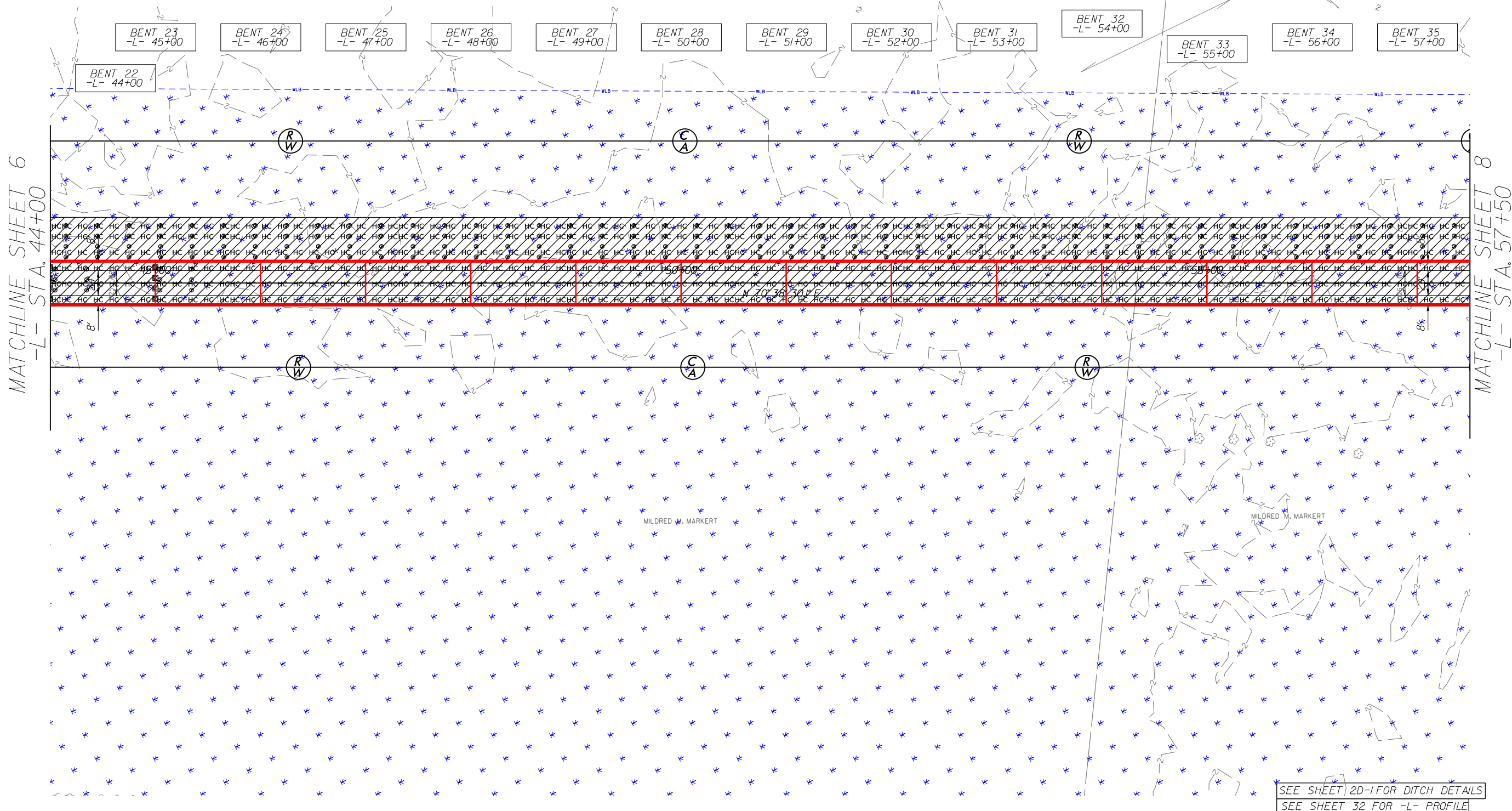
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Fax: 919 851 8107

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

PROJECT REFERENCE NO. R-2576		SHEET NO. 7	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PAVED SHOULDER			



SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 32 FOR -L- PROFILE

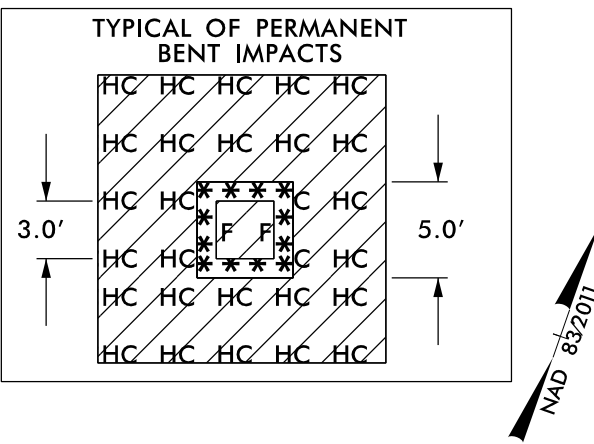
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4/23/2024
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DENOTES TEMPORARY
FILL IN WETLAND (MATTING,
CONT AT TEMP BENTS WHEN
MATTING ENDS NEXT TO BRIDGE)

DENOTES FILL IN
WETLAND (AT BENTS)

DENOTES HAND
CLEARING

DENOTES MECHANIZED
CLEARING



PERMIT DRAWING
SHEET 17 OF 89

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License No. F-0377
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Fax: 919 851 8107

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

PROJECT REFERENCE NO. R-2576		SHEET NO. 8	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

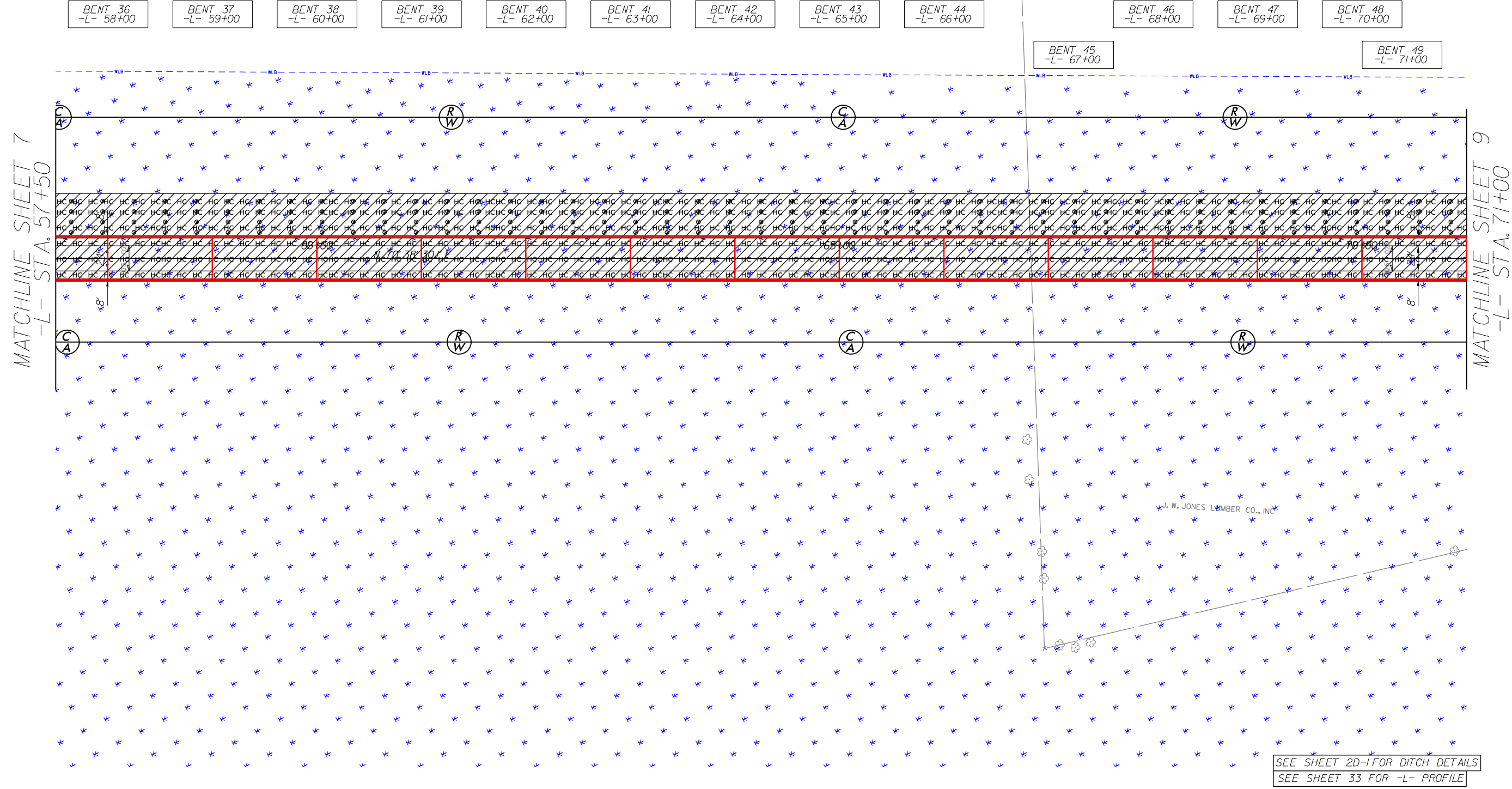
PAVED SHOULDER

100' 0' 100'

GRAPHIC SCALE

6" SCUPPER ON 12' CENTERS

88' & 89' SPANS = 7 SCUPPERS LT. & RT.
100' SPAN = 8 SCUPPERS LT. & RT.
73' SPAN = 6 SCUPPERS LT. & RT.
70' SPAN = 5 SCUPPERS LT. & RT.



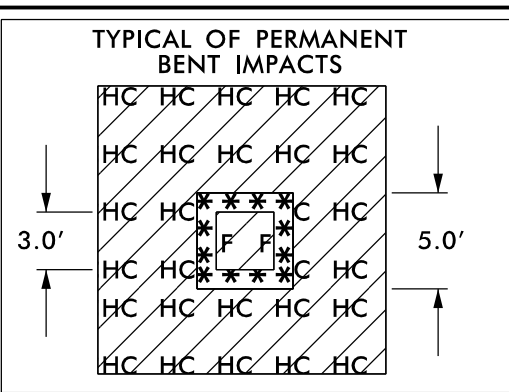
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DENOTES TEMPORARY
FILL IN WETLAND (MATTING,
CONT AT TEMP BENTS WHEN
MATTING ENDS NEXT TO BRIDGE)

DENOTES FILL IN
WETLAND (AT BENTS)

DENOTES HAND
CLEARING

DENOTES MECHANIZED
CLEARING



PERMIT DRAWING
SHEET 18 OF 89

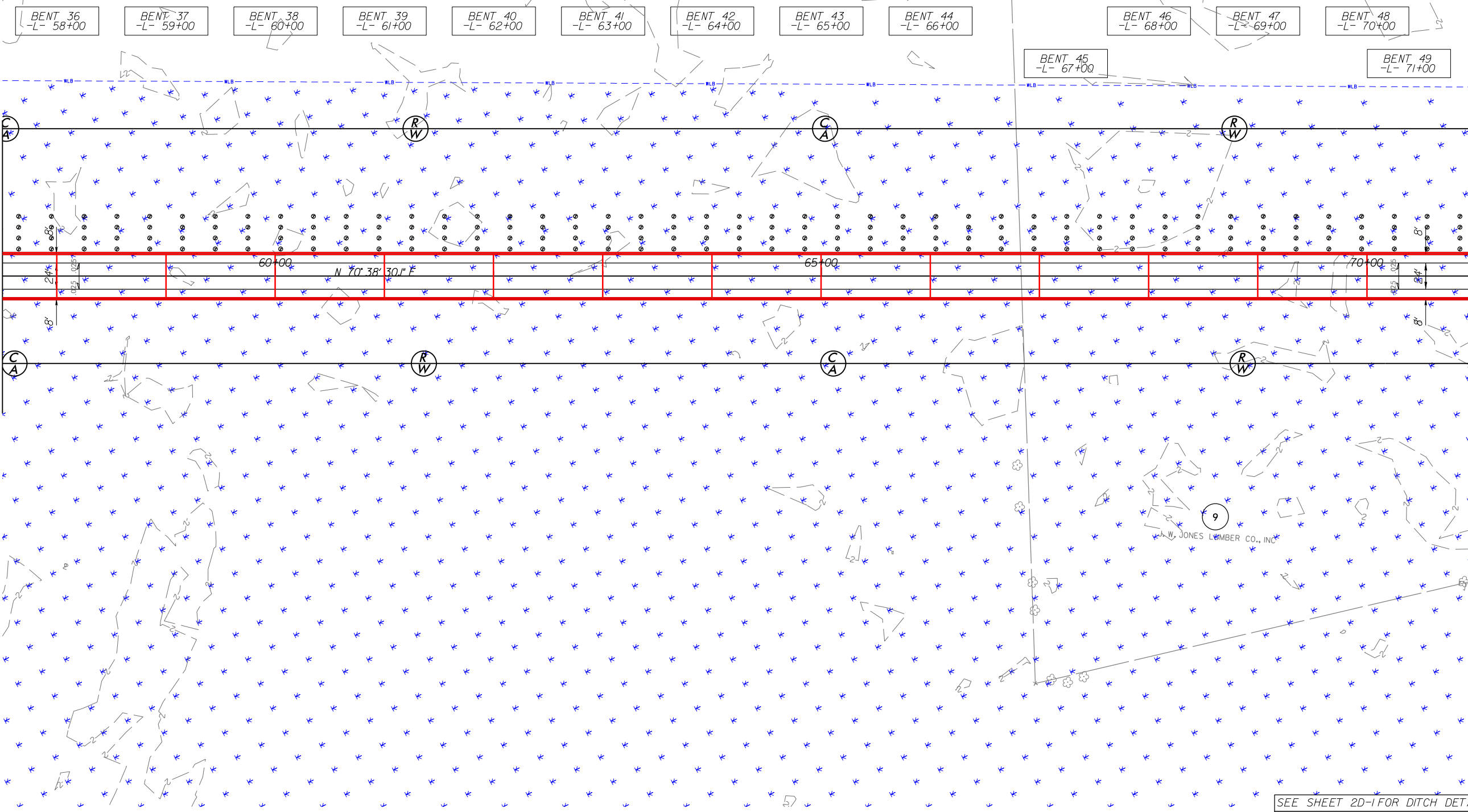
LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159
**WETHERILL
ENGINEERING**
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

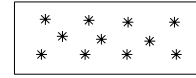
PROJECT REFERENCE NO. <i>R-2576</i>		SHEET NO. <i>8</i>	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE SHEET 7
-L- STA. 57+50

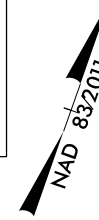


MATCHLINE SHEET 9
-L- STA. 71+00

SEE SHEET 20-I FOR DITCH DETAILS
SEE SHEET 33 FOR -L- PROFILE

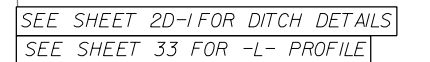


DENOTES MECHANIZED
CLEARING



J. W. JONES LUMBER CO., INC.

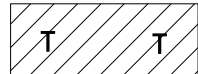
PAVED SHOULDER



6/22/99
4/23/2024
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USER: mlovey



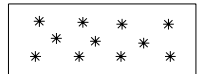
DENOTES FILL IN
WETLAND (AT BENTS)



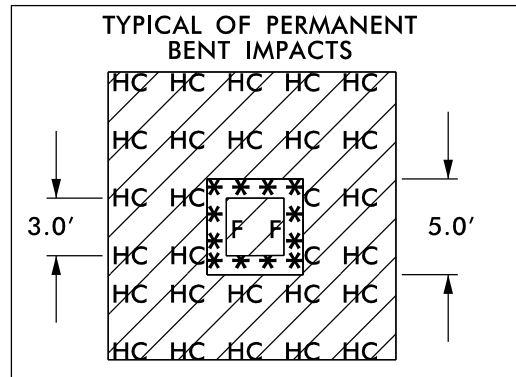
DENOTES TEMPORARY
FILL IN WETLAND (MATTING,
CONT AT TEMP BENTS WHEN
MATTING ENDS NEXT TO BRIDGE)



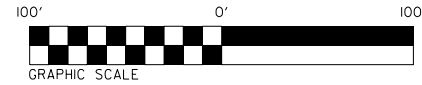
DENOTES HAND
CLEARING



DENOTES MECHANIZED
CLEARING



PERMIT DRAWING
SHEET 20 OF 89



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Number F-0159



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

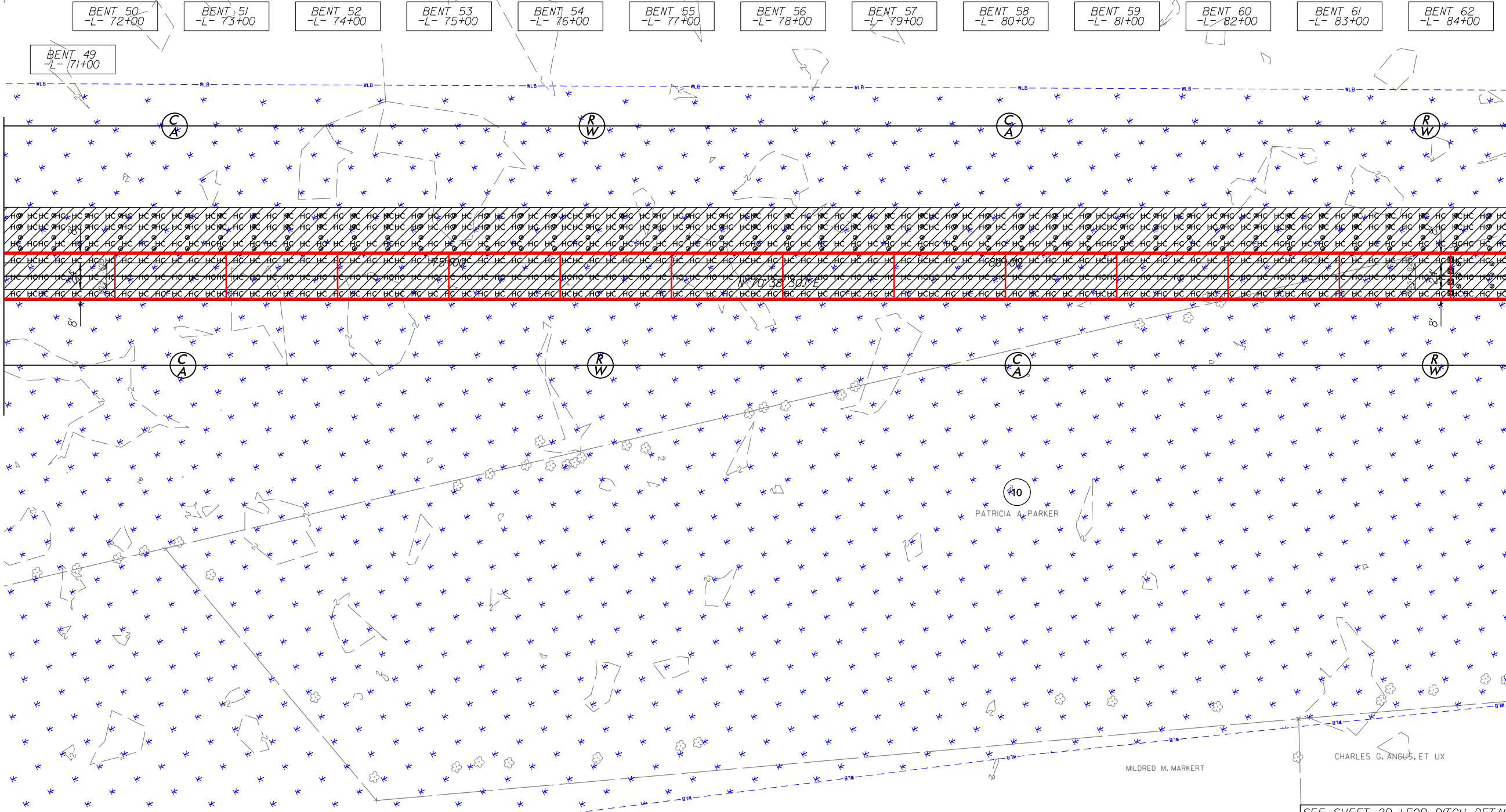
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.		SHEET NO.	
R-2576		9	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

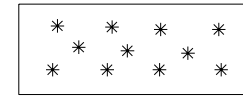
PAVED SHOULDER

MATCHLINE SHEET 8
-L- STA. 71+00



MATCHLINE SHEET 10
-L- STA. 84+50

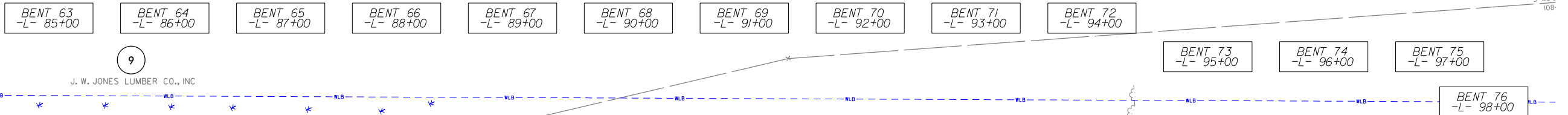
SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 33 FOR -L- PROFILE



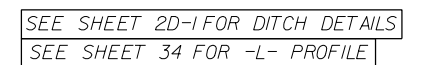
**DENOTES MECHANIZED
CLEARING**

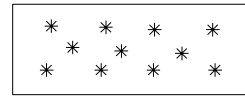


☐ PAVED SHOULDER

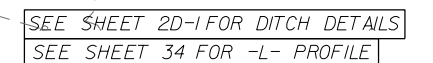
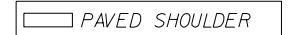
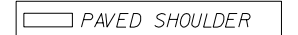


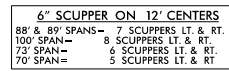
MATCHLINE SHEET 11
-L- STA. 98+00



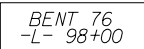


DENOTES MECHANIZED
CLEARING





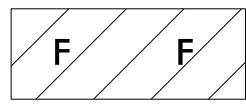
☐ PAVED SHOULDER



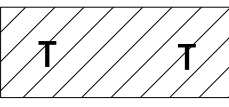
MATCHLINE SHEET 12
-L- STA. 111+50

SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 47 FOR -Y3B- PROFILE
SEE SHEET 34 FOR -L- PROFILE

6/2/2024 8:13/2024 I:\projects\PERMITS-Environmental\psh\R2576.HVD_psh11_con.dgn USER: mlovey



DENOTES FILL IN WETLAND (AT BENTS)



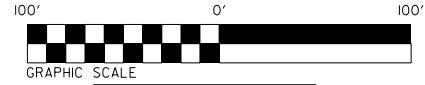
DENOTES TEMPORARY FILL IN WETLAND (MATTING)

PERMIT DRAWING
SHEET 24 OF 89

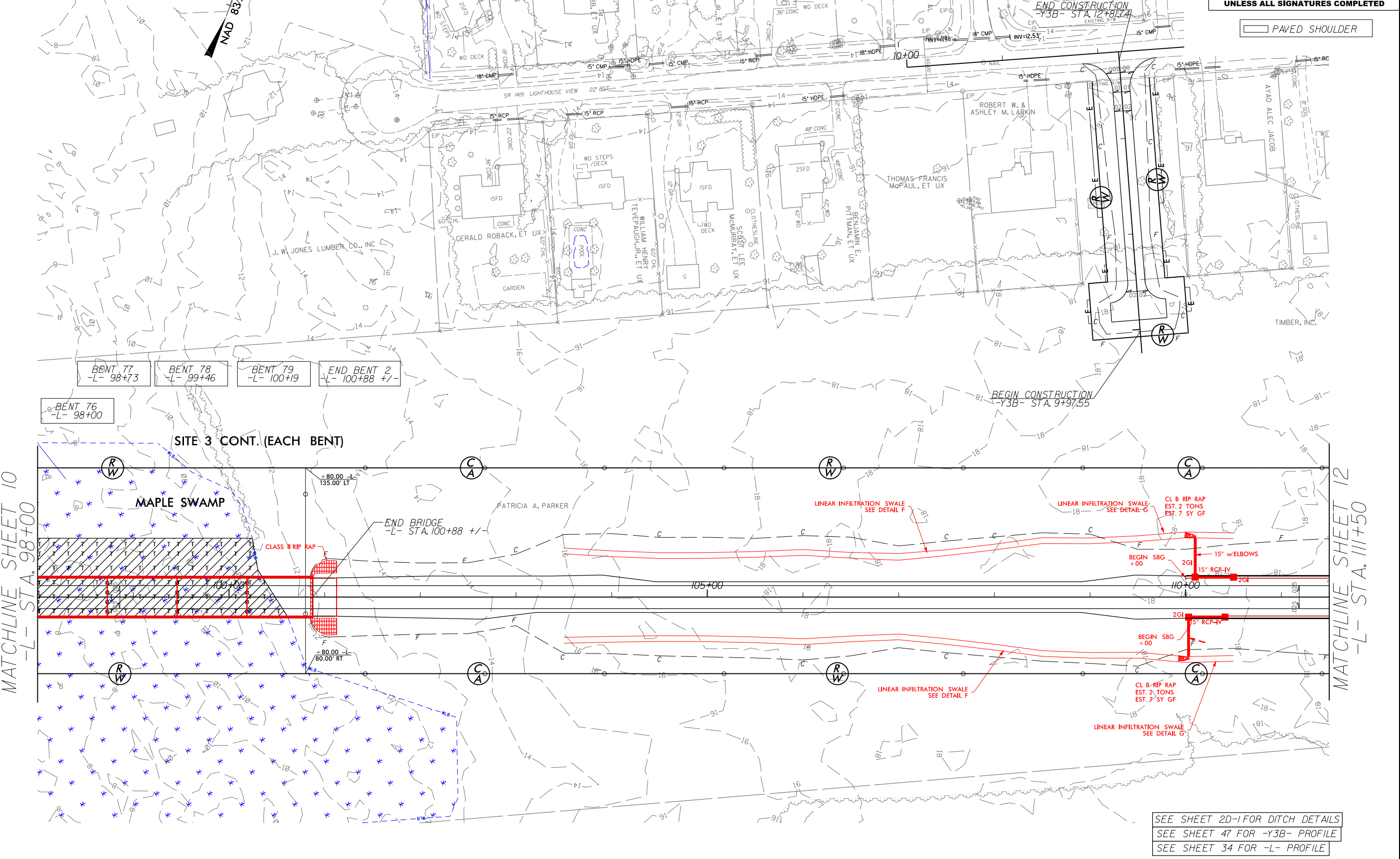
LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License Number F-0159
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
WETHERILL ENGINEERING
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>R-2576</i>		SHEET NO. <i>11</i>	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



6" SCUPPER ON 12' CENTERS
88' & 89' SPANS - 7 SCUPPERS LT. & RT.
100' SPAN - 8 SCUPPERS LT. & RT.
73' SPAN - 6 SCUPPERS LT. & RT.
70' SPAN - 5 SCUPPERS LT. & RT.



SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 47 FOR -Y3B- PROFILE
SEE SHEET 34 FOR -L- PROFILE

6/2/2024

6/13/2024
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PERMIT DRAWING
SHEET 25 OF 89

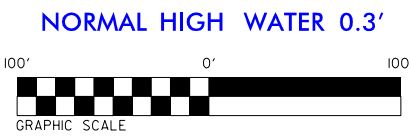
LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159

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Fax: 919 851 8107

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

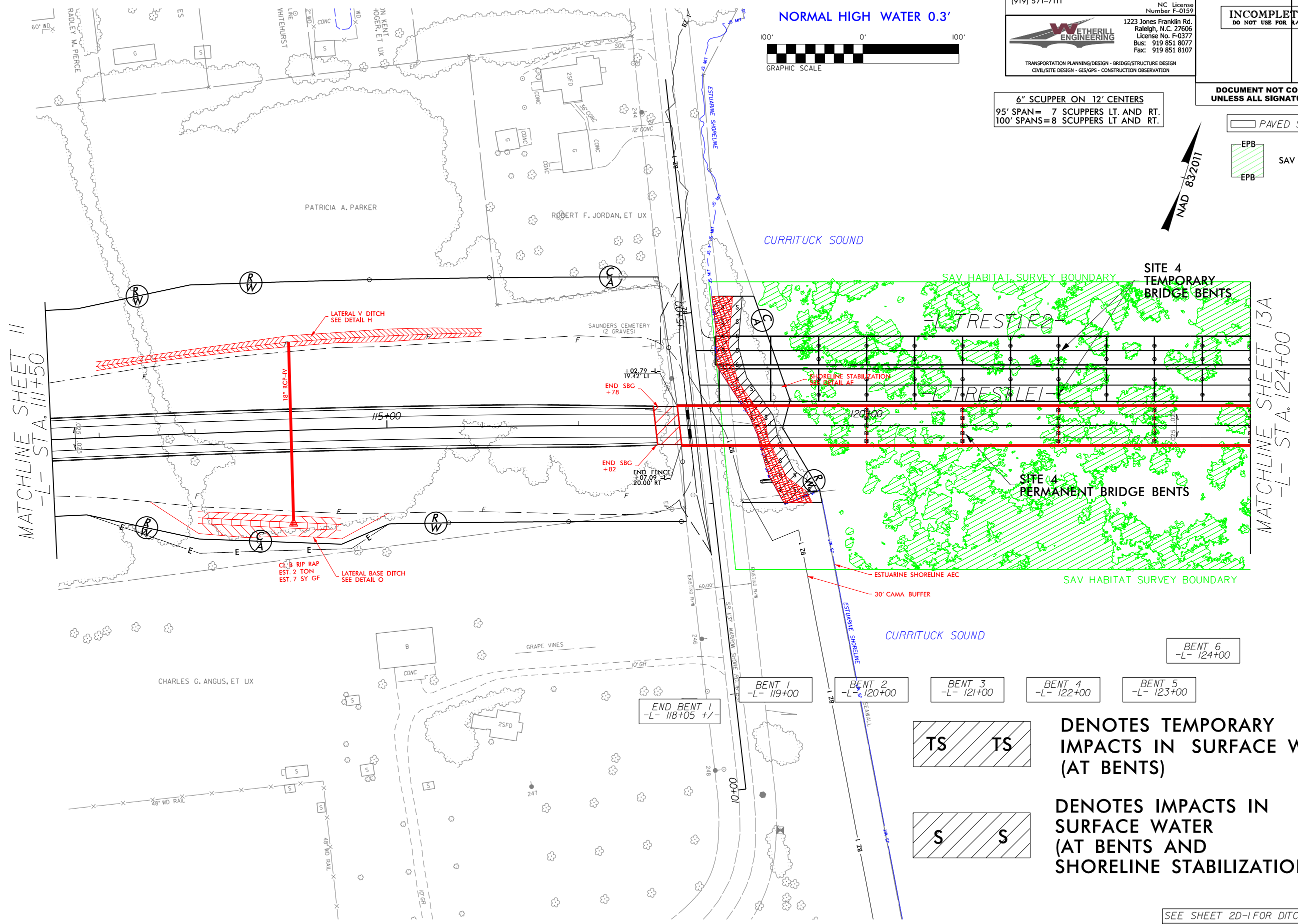
PROJECT REFERENCE NO.		SHEET NO.	
R-2576		12	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT. AND RT.

PAVED SHOULDER

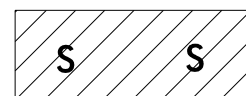
EPB SAV HABITAT



- BENT 1 -L- 119+00
- BENT 2 -L- 120+00
- BENT 3 -L- 121+00
- BENT 4 -L- 122+00
- BENT 5 -L- 123+00
- BENT 6 -L- 124+00



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
(AT BENTS)



DENOTES IMPACTS IN
SURFACE WATER
(AT BENTS AND
SHORELINE STABILIZATION)

SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 35 FOR -L- PROFILE
SEE SHEET 47 FOR -Y3- PROFILE

6/2/99

6/13/2024
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USER: jlochner

PERMIT DRAWING
SHEET 26 OF 89

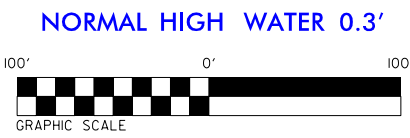
LOCHNER
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RALEIGH, NC 27612
(919) 371-7111

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Number F-0159

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Fax: 919 851 8107

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

PROJECT REFERENCE NO. <i>R-2576</i>		SHEET NO. <i>12</i>	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



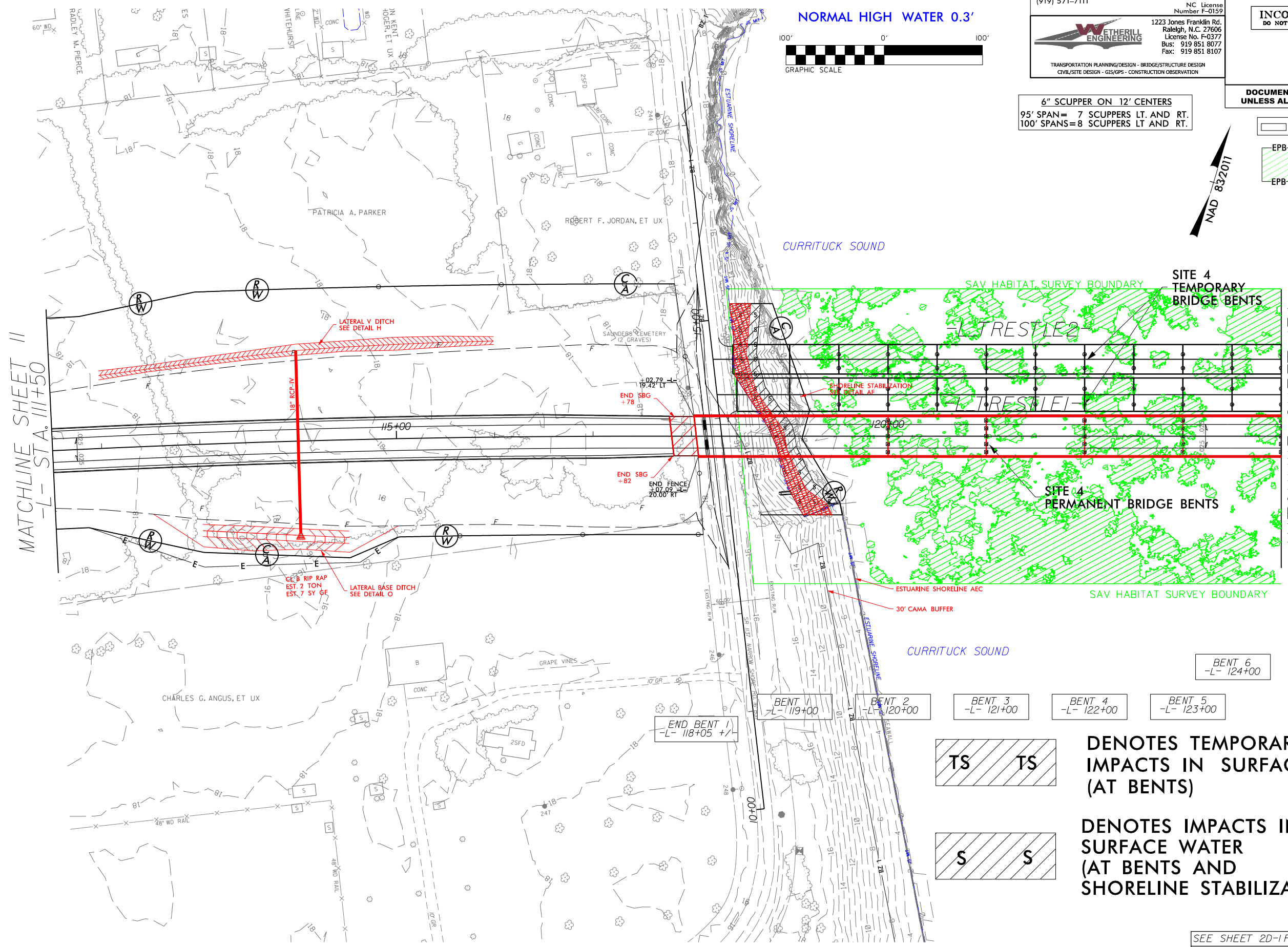
6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT. AND RT.

- PAVED SHOULDER
- EPB SAV HABITAT



MATCHLINE SHEET 11
-L- STA. 111+50

MATCHLINE SHEET 13A
-L- STA. 124+00



END BENT 1
-L- 118+05 +/-

BENT 1
-L- 119+00

BENT 2
-L- 120+00

BENT 3
-L- 121+00

BENT 4
-L- 122+00

BENT 5
-L- 123+00

BENT 6
-L- 124+00

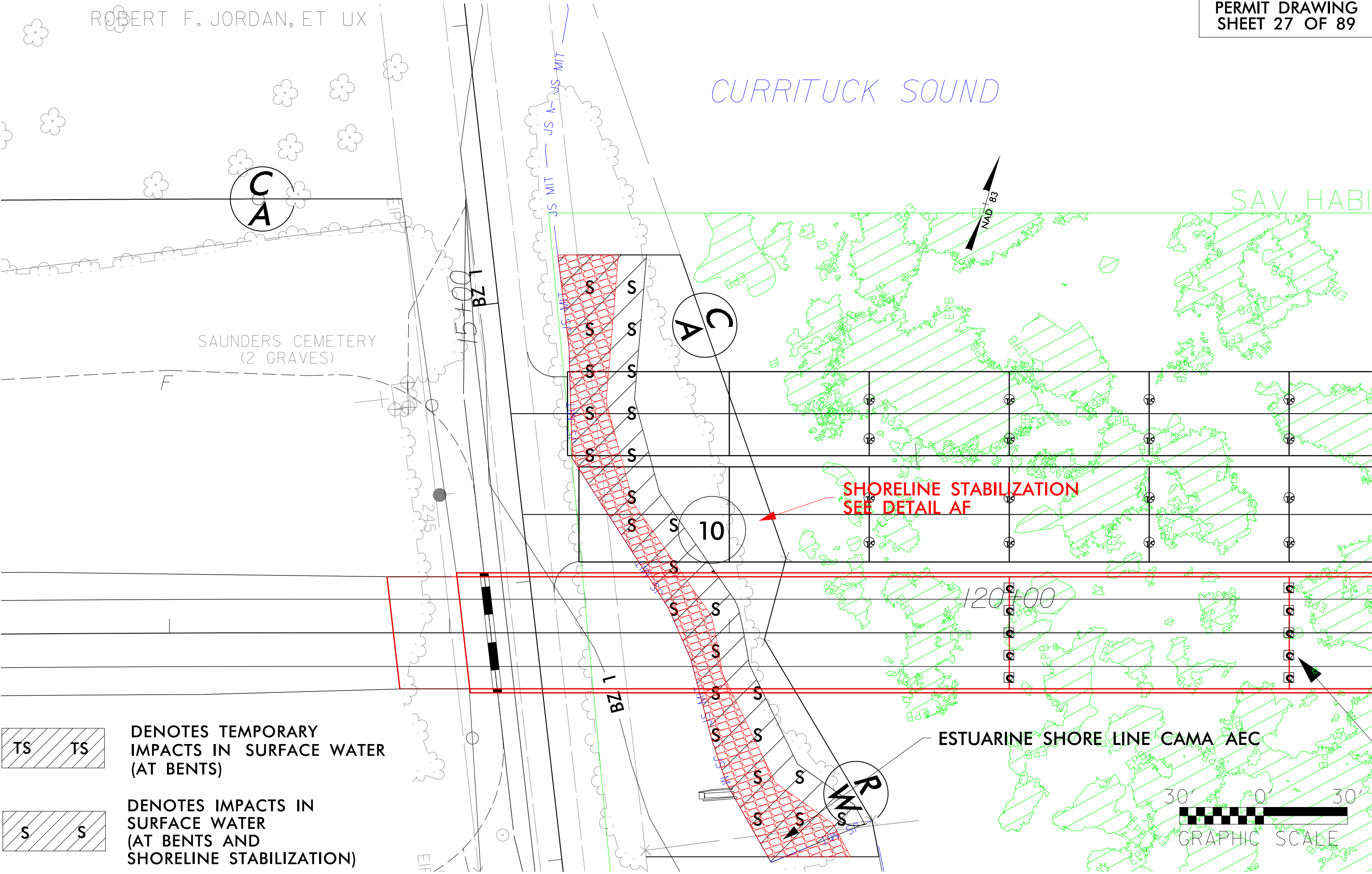
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DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
(AT BENTS)

S S

DENOTES IMPACTS IN
SURFACE WATER
(AT BENTS AND
SHORELINE STABILIZATION)

SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 35 FOR -L- PROFILE
SEE SHEET 47 FOR -Y3- PROFILE



5/28/99

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NC License
Number F-0159



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License No. F-0377
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Fax: 919 851 8107

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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

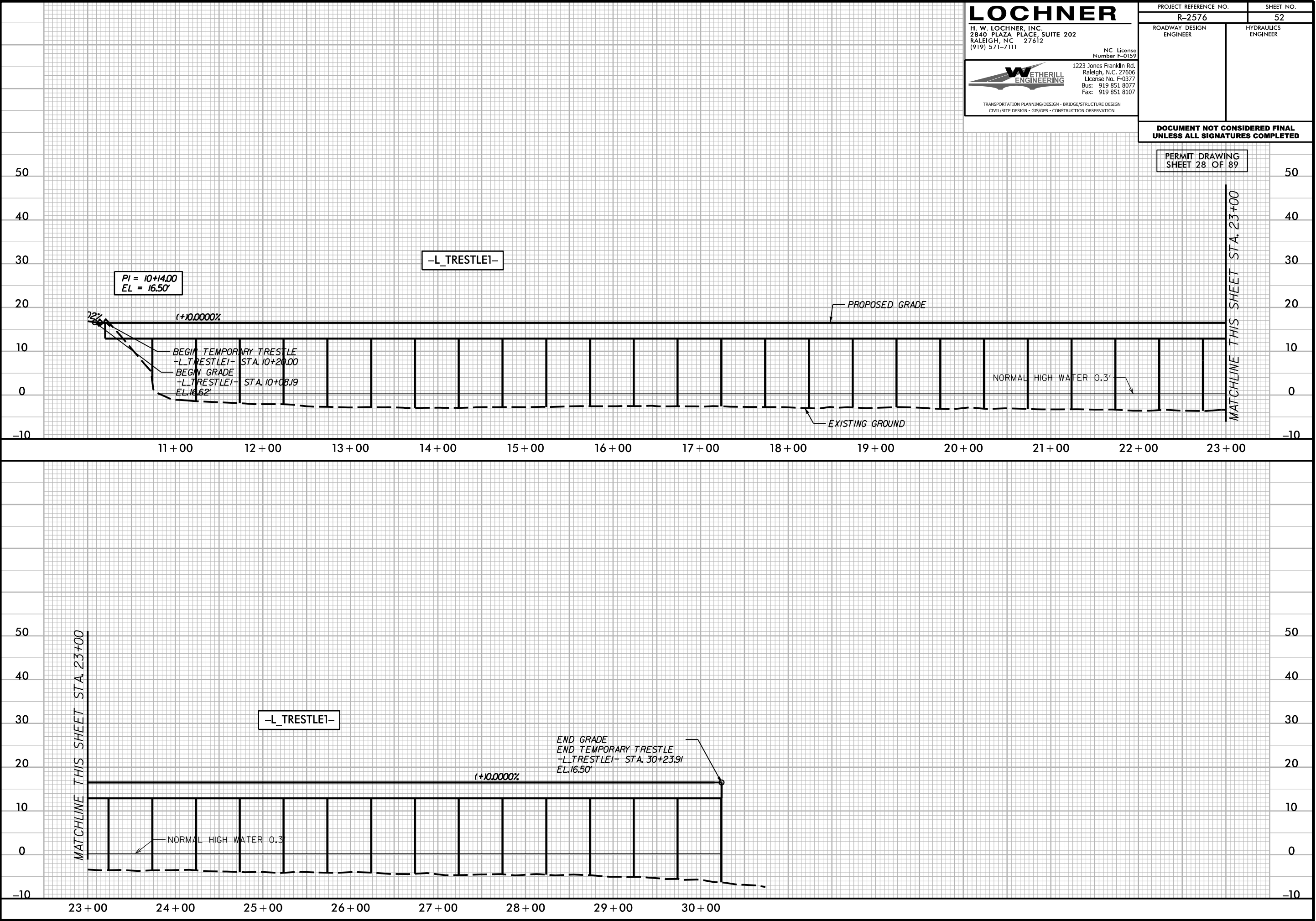
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ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 28 OF 89



4/23/2024
R-2576_rdy.pfl_52.dgn
H:\Projects\2576\Drawings

5/28/99

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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

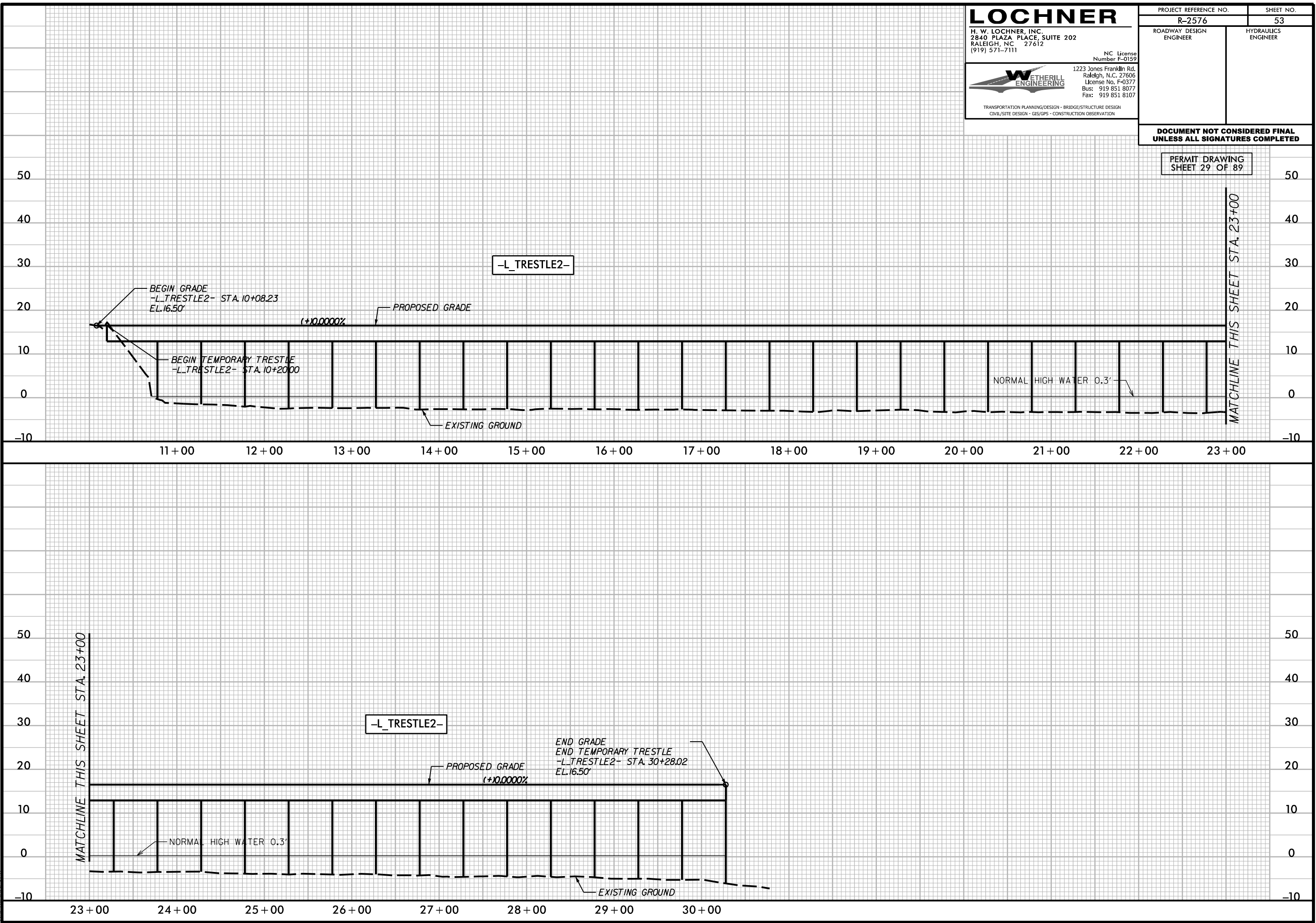
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ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 29 OF 89



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H:\Projects\2576\Drawings

EPB SAV HABITAT EPB

PERMIT DRAWING
SHEET 30 OF 89

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Fax: 919 851 8107

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

PROJECT REFERENCE NO. SHEET NO.

R-2576

13A

RW SHEET NO.

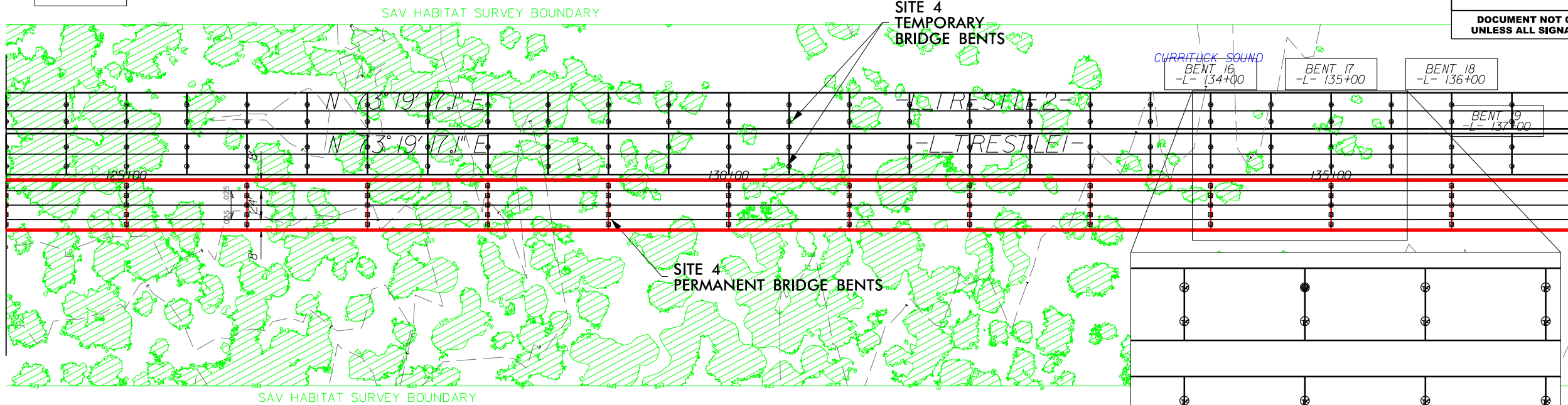
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

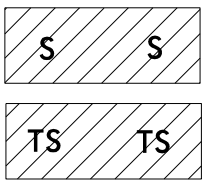
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

MATCHLINE SHEET 12
-L- STA. 124+00

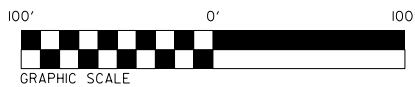


MATCHLINE SHEET 13B
-L- STA. 137+00



DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
(CONSTRUCTION BRIDGES)



6" SCUPPER ON 12' CENTERS
95' SPAN = 7 SCUPPERS LT. AND RT.
100' SPANS = 8 SCUPPERS LT. AND RT.

TYPICAL OF BENT AND
TEMPORARY BRIDGE BENT IMPACTS

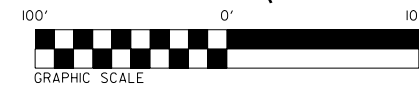




**DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)**



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
(CONSTRUCTION BRIDGES)

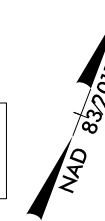


6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.



SAV HABITAT

PERMIT DRAWING
SHEET 31 OF 89



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Number F-0159



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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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

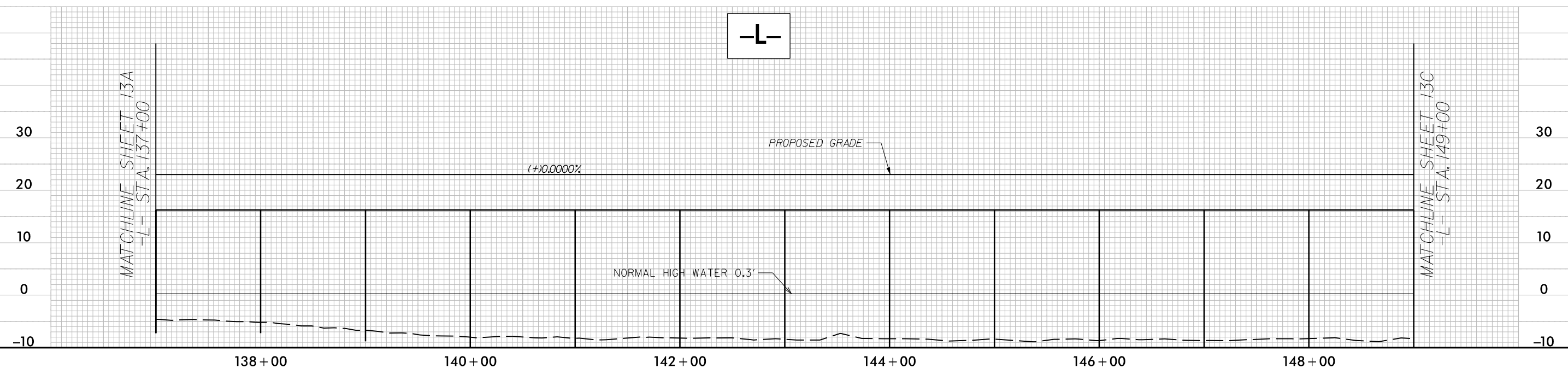
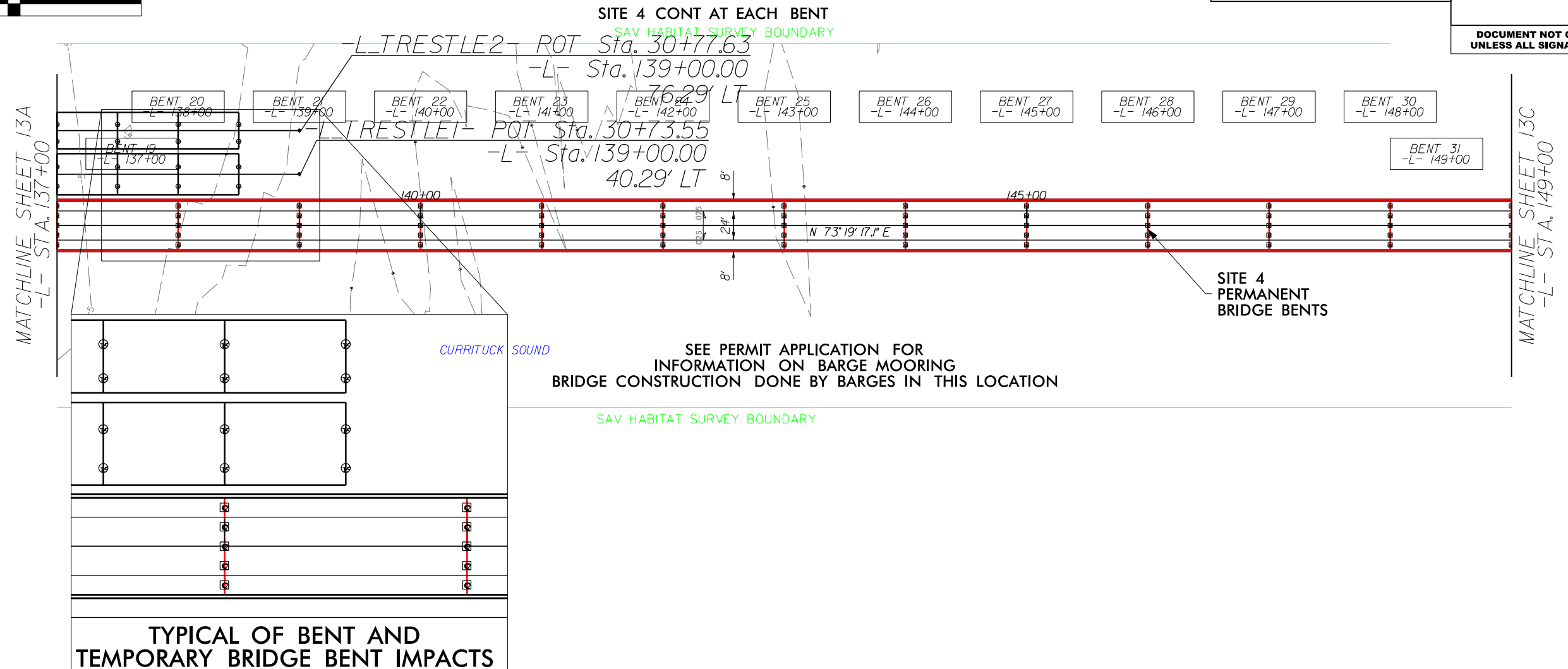
13B

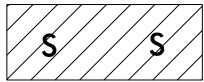
R/W SHEET NO.

ROADWAY DESIGN
ENGINEERHYDRAULICS
ENGINEER

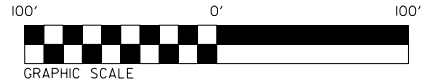
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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





DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)

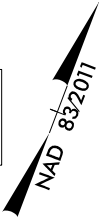


6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.



SAV HABITAT

PERMIT DRAWING
SHEET 32 OF 89



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Bus: 919 851 8077
Fax: 919 851 8107

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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

13C

RW SHEET NO.

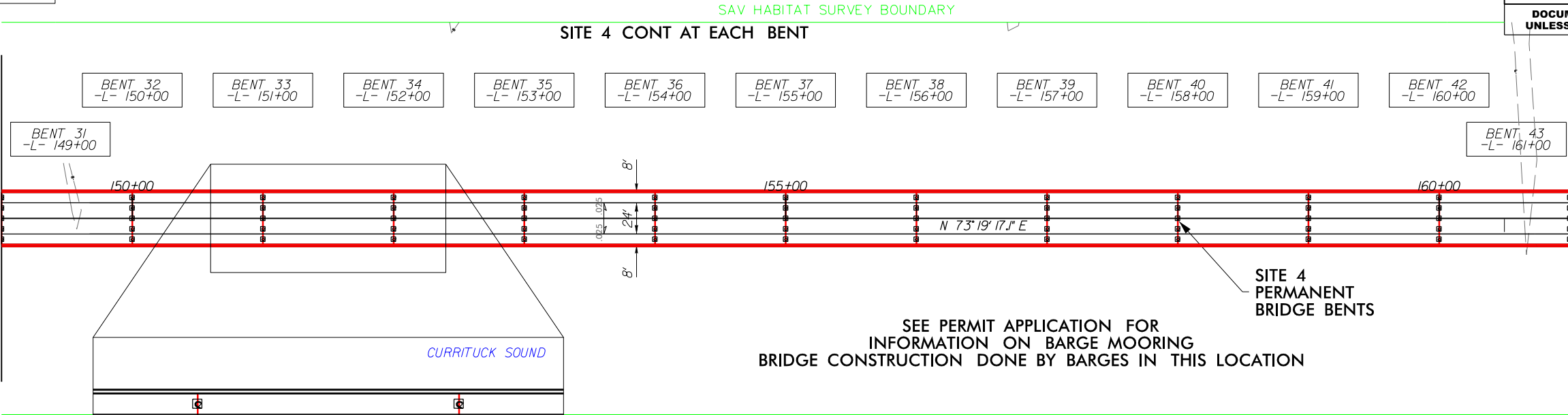
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

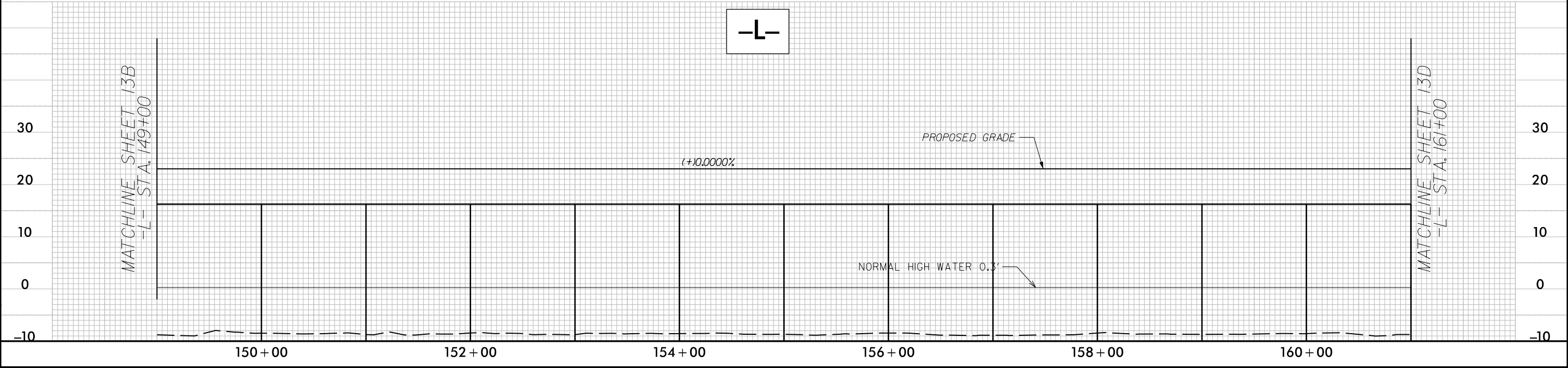
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-L- STA. 149+00

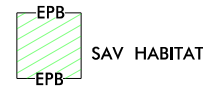


SEE PERMIT APPLICATION FOR
INFORMATION ON BARGE MOORING
BRIDGE CONSTRUCTION DONE BY BARGES IN THIS LOCATION

TYPICAL OF BENT AND
TEMPORARY BRIDGE BENT IMPACTS

-L-



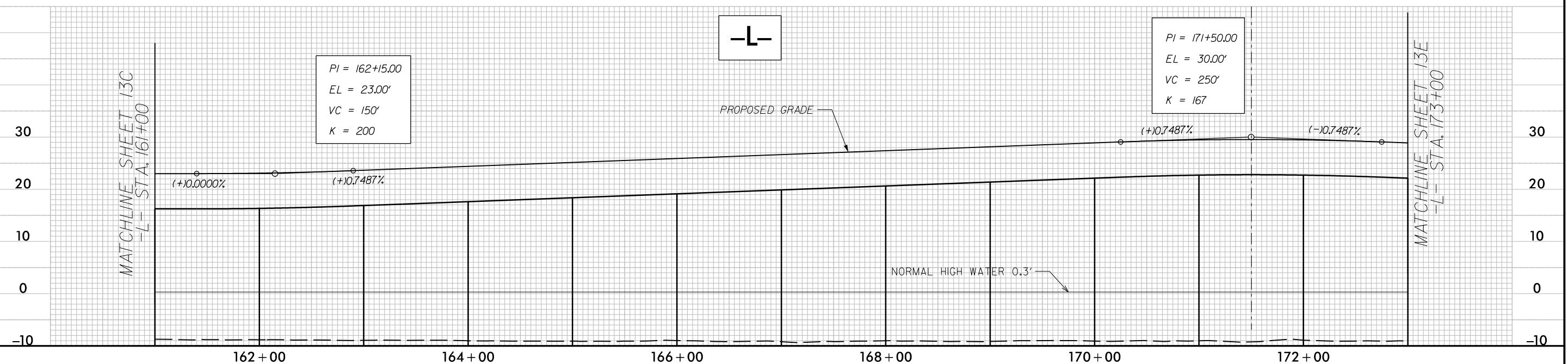


PERMIT DRAWING
SHEET 33 OF 89

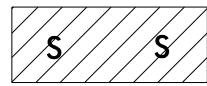
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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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

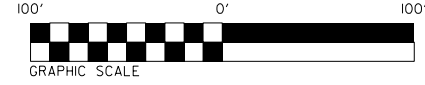
TYPICAL OF BENT AND
TEMPORARY BRIDGE BENT IMPACTS



4/23/2024
R:\Hydraulics\PERMITS-Environmental\psh\R2576_hyd_psh13D_bridge.dgn
USER: MHarvey



DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)



6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.

SEE PERMIT APPLICATION FOR
INFORMATION ON BARGE MOORING
BRIDGE CONSTRUCTION DONE BY BARGES IN THIS LOCATION

CURRITUCK SOUND



LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

NC License
Number F-0159

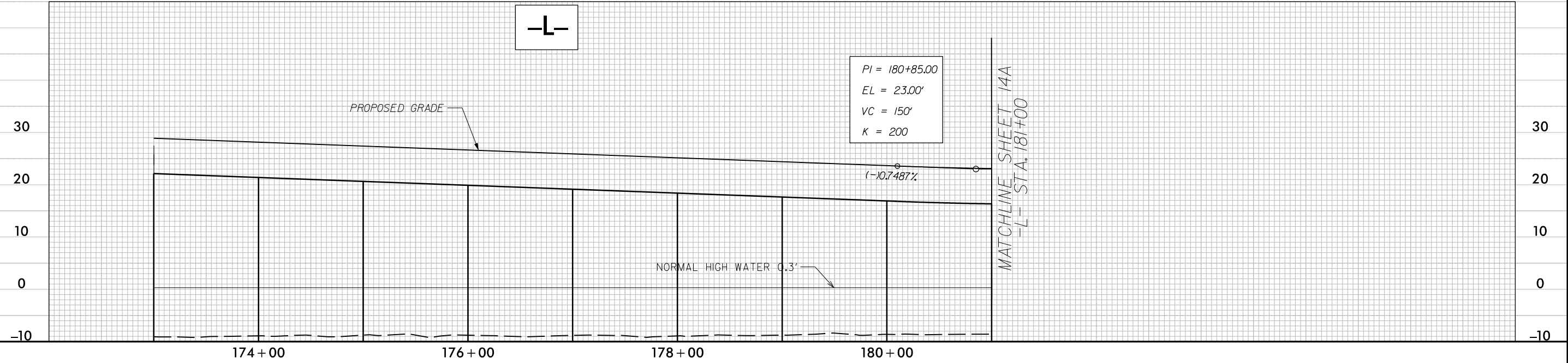
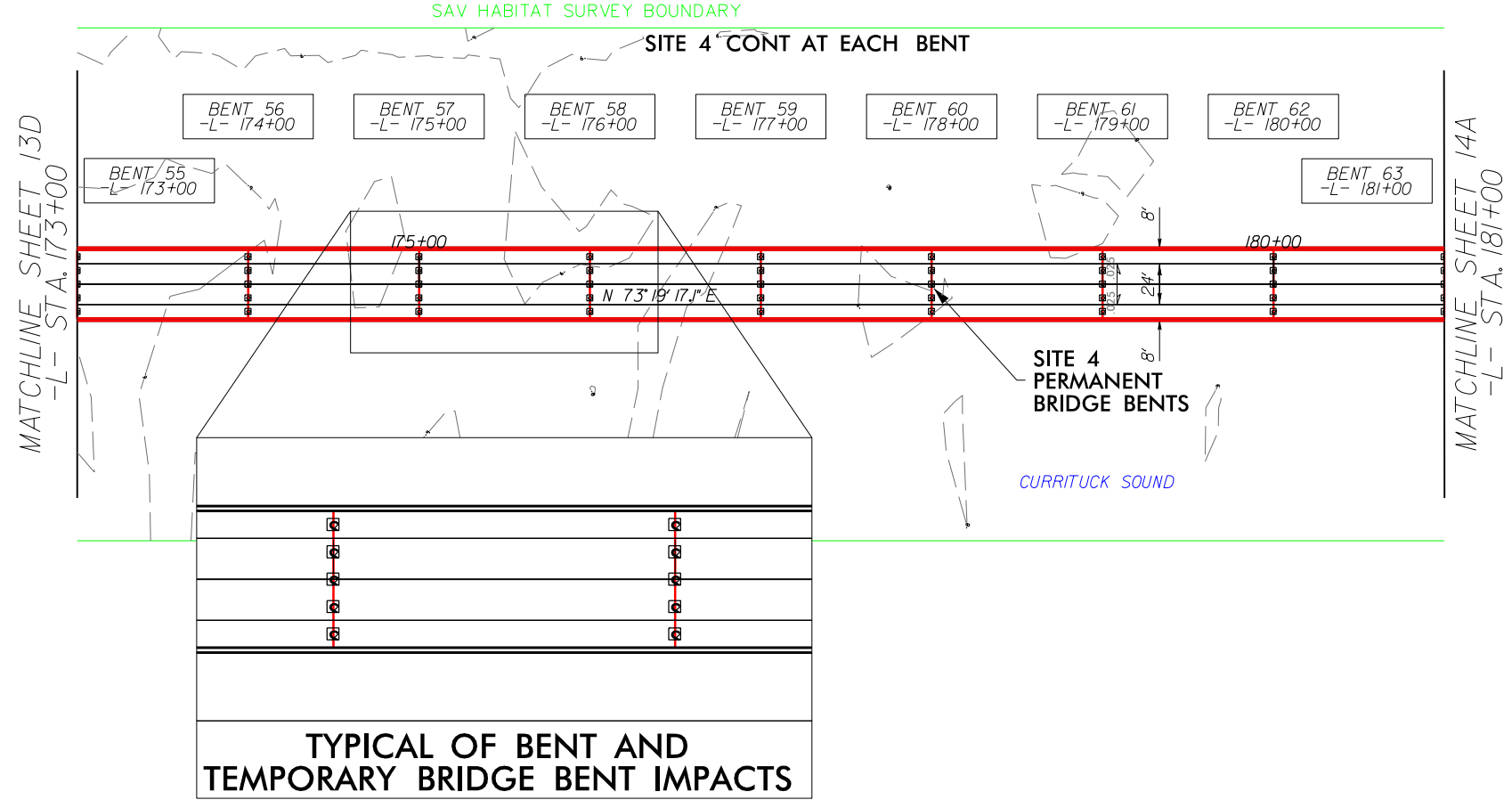


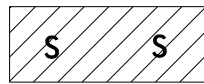
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

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

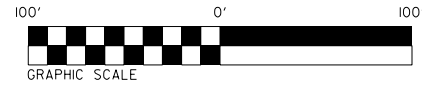
PERMIT DRAWING
SHEET 34 OF 89

PROJECT REFERENCE NO.		SHEET NO.	
R-2576		13E	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			





DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)



6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.

PERMIT DRAWING
SHEET 35 OF 89



SAV HABITAT

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

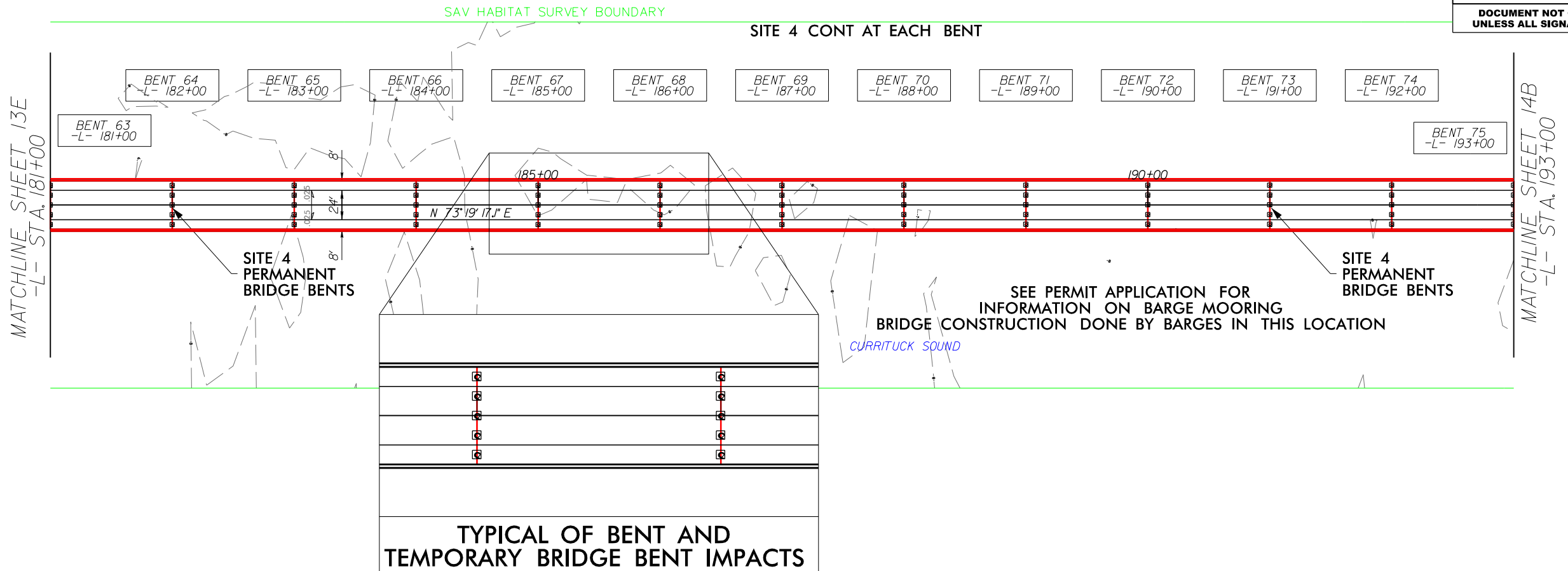
NC License
Number F-0159



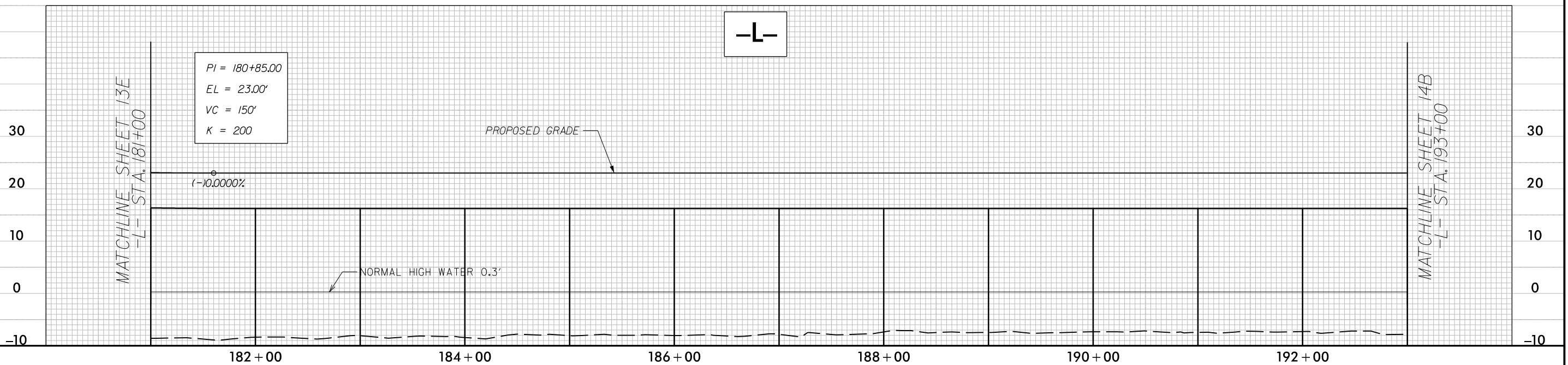
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

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

PROJECT REFERENCE NO.		SHEET NO.	
R-2576		14A	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



TYPICAL OF BENT AND
TEMPORARY BRIDGE BENT IMPACTS



100'

0'

100'

GRAPHIC SCALE

6" SCUPPER ON 12' CENTERS

95' SPAN= 7 SCUPPERS LT. AND RT.

100' SPANS=8 SCUPPERS LT AND RT.

EPB

EPB

SAV HABITAT

PERMIT DRAWING

SHEET 36 OF 89

LOCHNER

H. W. LOCHNER, INC.

2840 PLAZA PLACE, SUITE 202

RALEIGH, NC 27612

(919) 571-7111

NC License Number F-0159

WETHERILL

ENGINEERING

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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

14B

ROADWAY DESIGN ENGINEER

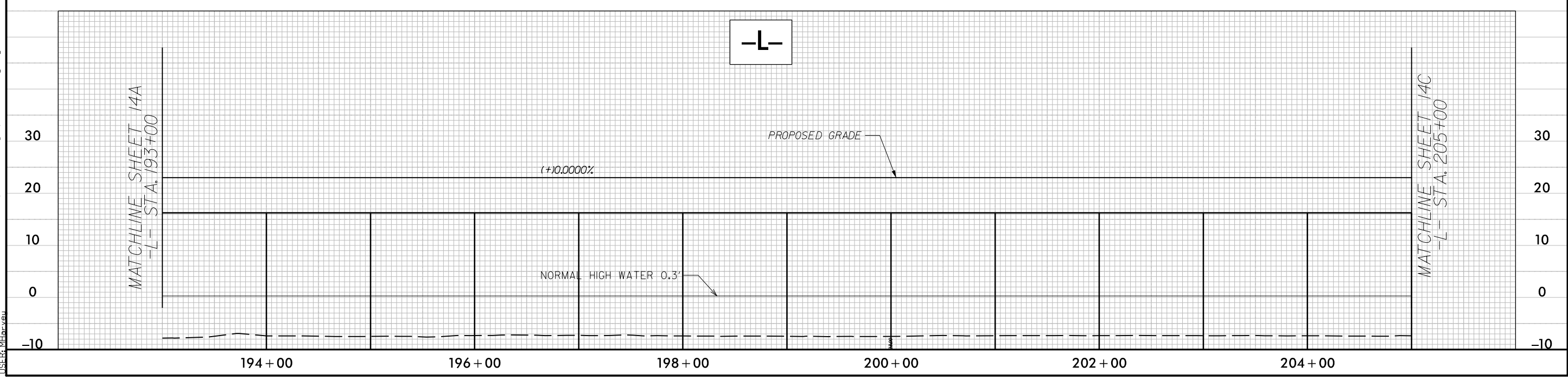
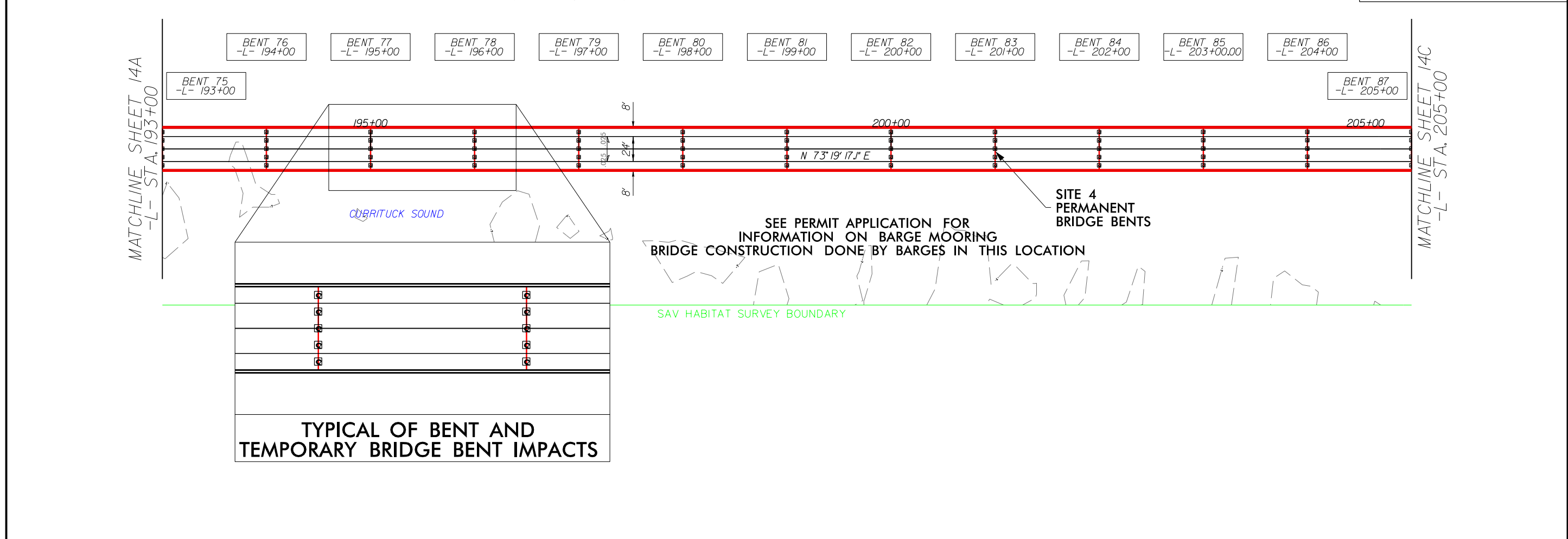
HYDRAULICS ENGINEER

INCOMPLETE PLANS

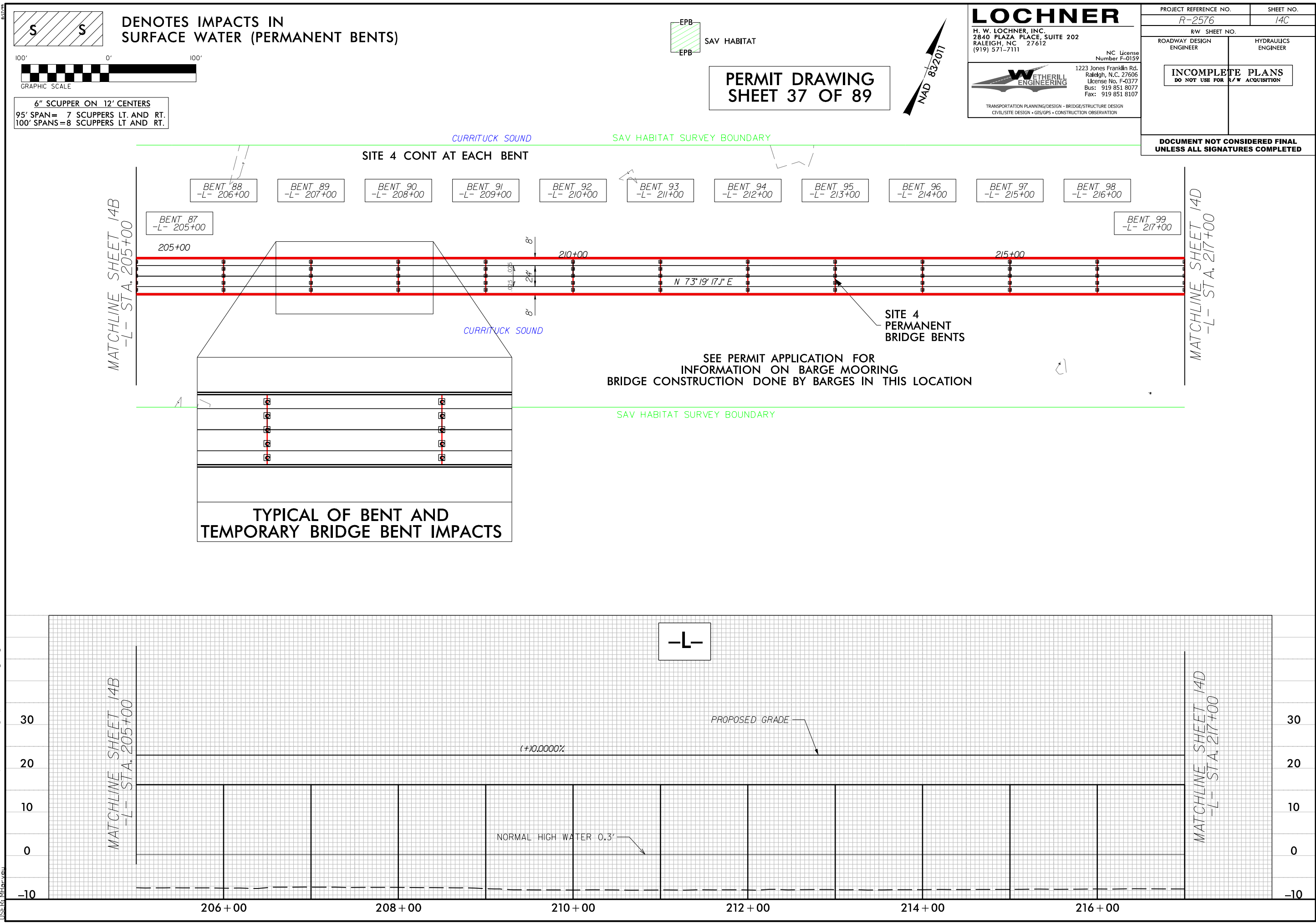
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UNLESS ALL SIGNATURES COMPLETED



4/23/2024
R:\11\Hyd\Permits-Environmental\psh\R2576_hyd_psh14B_bridge.dgn
USER: mbarber





100' 0' 100'

GRAPHIC SCALE

6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.

100' 0' 100'

GRAPHIC SCALE

CURRITUCK SOUND SAV HABITAT SURVEY BOUNDARY

SITE 4 CONT AT EACH BENT

EPB SAV HABITAT EPB

PERMIT DRAWING
SHEET 37 OF 89

NAD 83 2011

LOCHNER

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RALEIGH, NC 27612
(919) 571-7111

NC License
Number F-0159

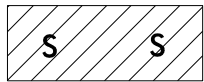
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

WETHERILL
ENGINEERING

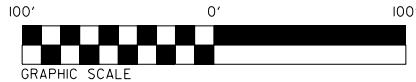
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>R-2576</i>		SHEET NO. <i>14C</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

4/23/2024
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USER: M...
PROJECT: R-2576
FILE: psh14C_bridge.dgn



DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)



6" SCUPPER ON 12' CENTERS
95' SPAN = 7 SCUPPERS LT. AND RT.
100' SPANS = 8 SCUPPERS LT. AND RT.



SAV HABITAT

PERMIT DRAWING
SHEET 38 OF 89

LOCHNER

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2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159



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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

14D

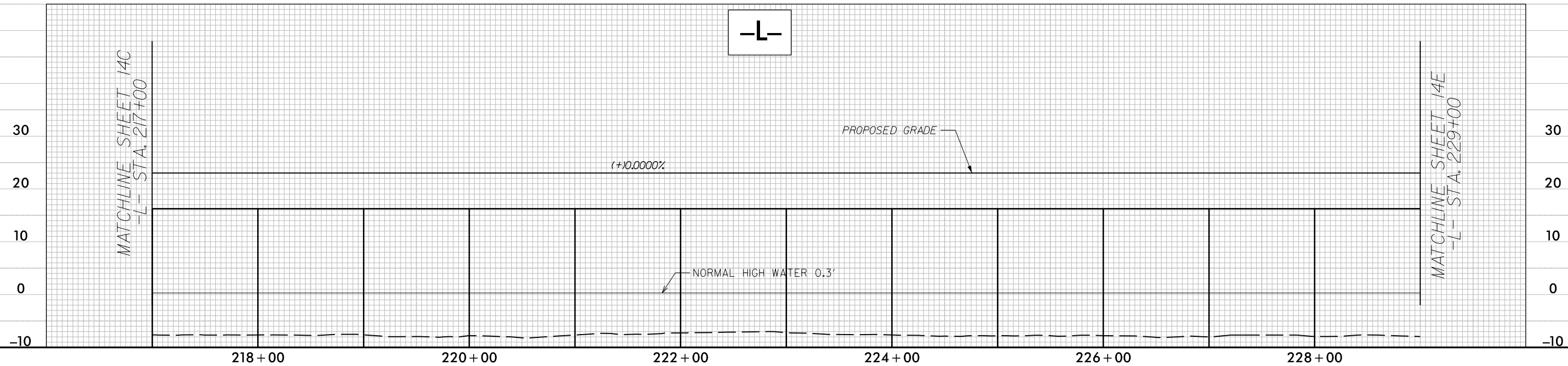
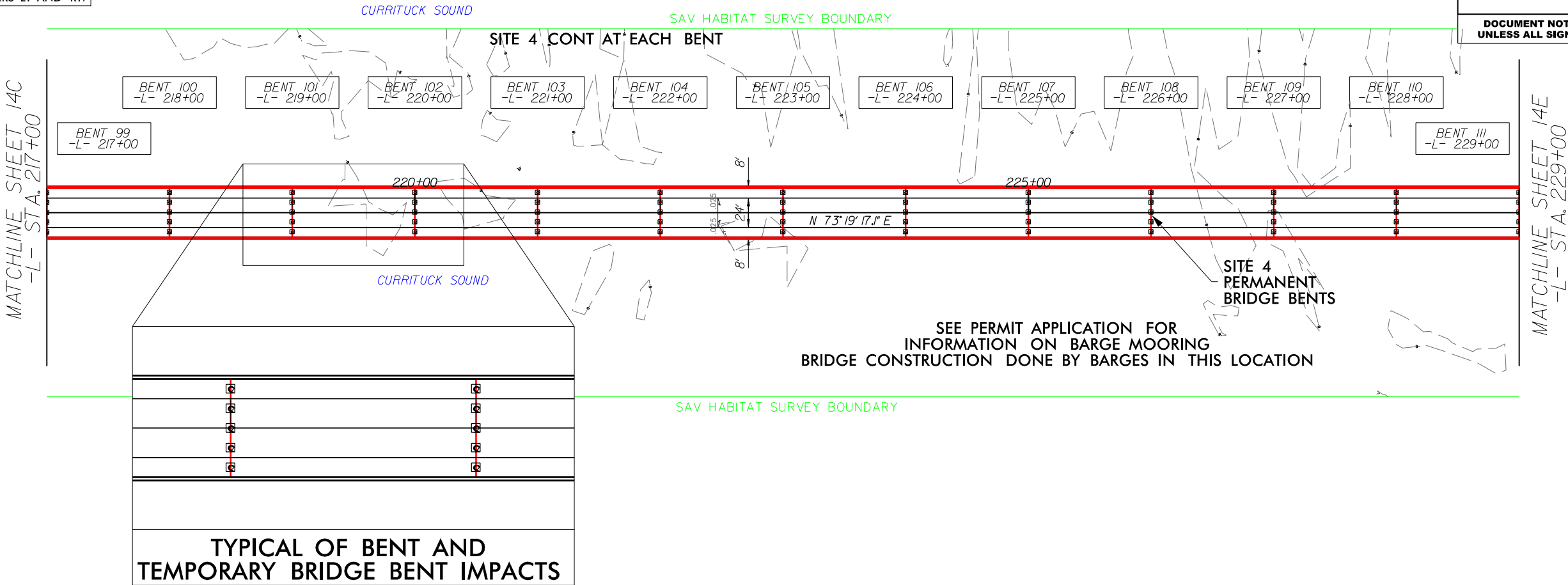
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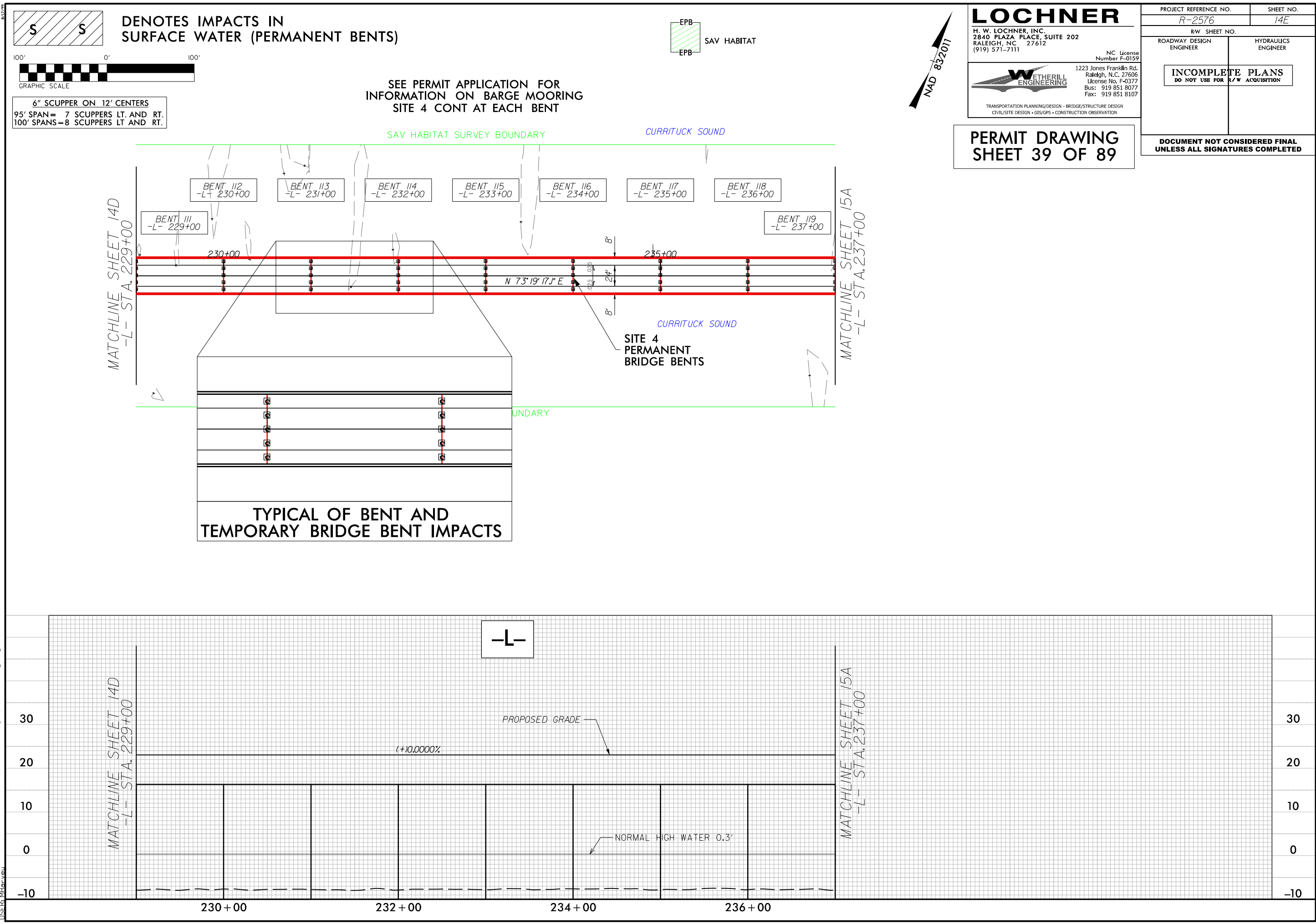
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

INCOMPLETE PLANS
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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

PERMIT DRAWING
SHEET 39 OF 89

PROJECT REFERENCE NO.

R-2576

SHEET NO.

14E

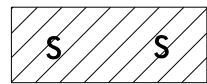
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ROADWAY DESIGN
ENGINEER

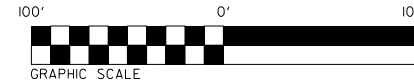
HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)



6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.



SAV HABITAT

PERMIT DRAWING
SHEET 40 OF 89

LOCHNER

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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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

15A

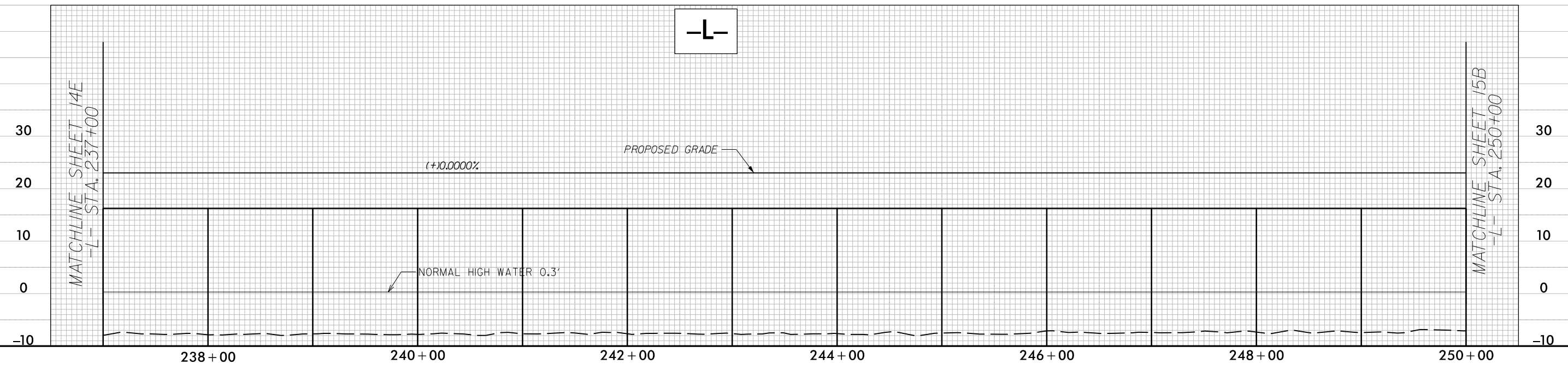
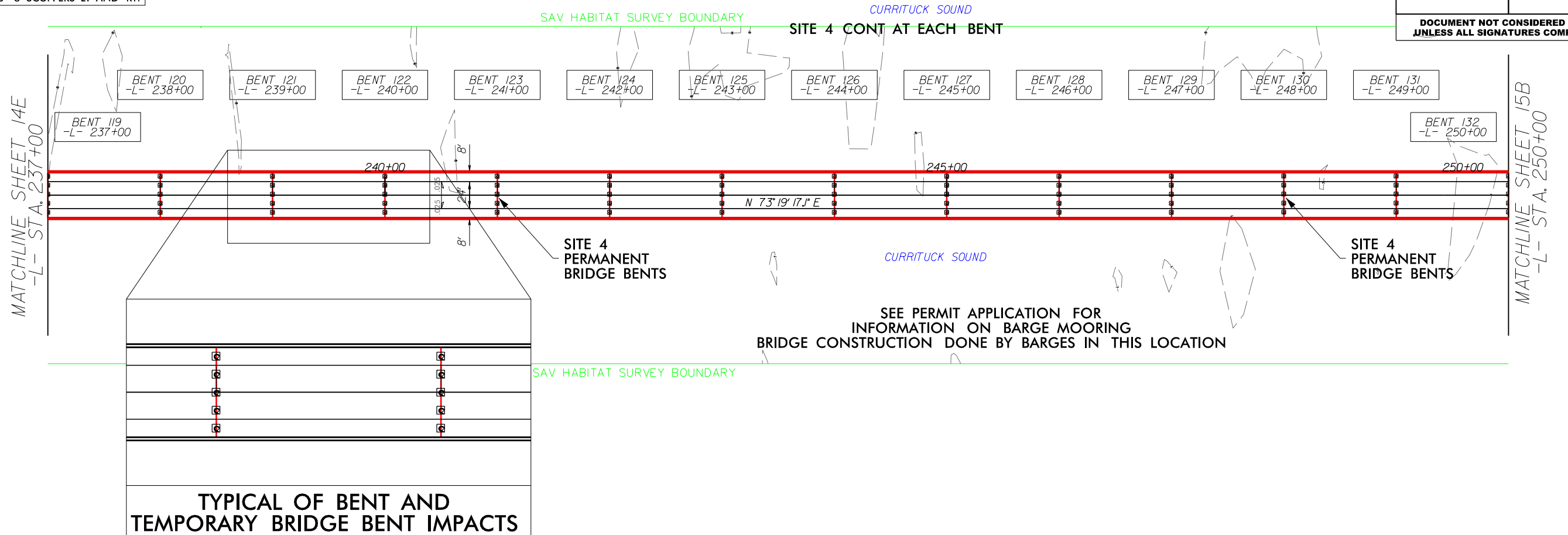
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ROADWAY DESIGN
ENGINEER

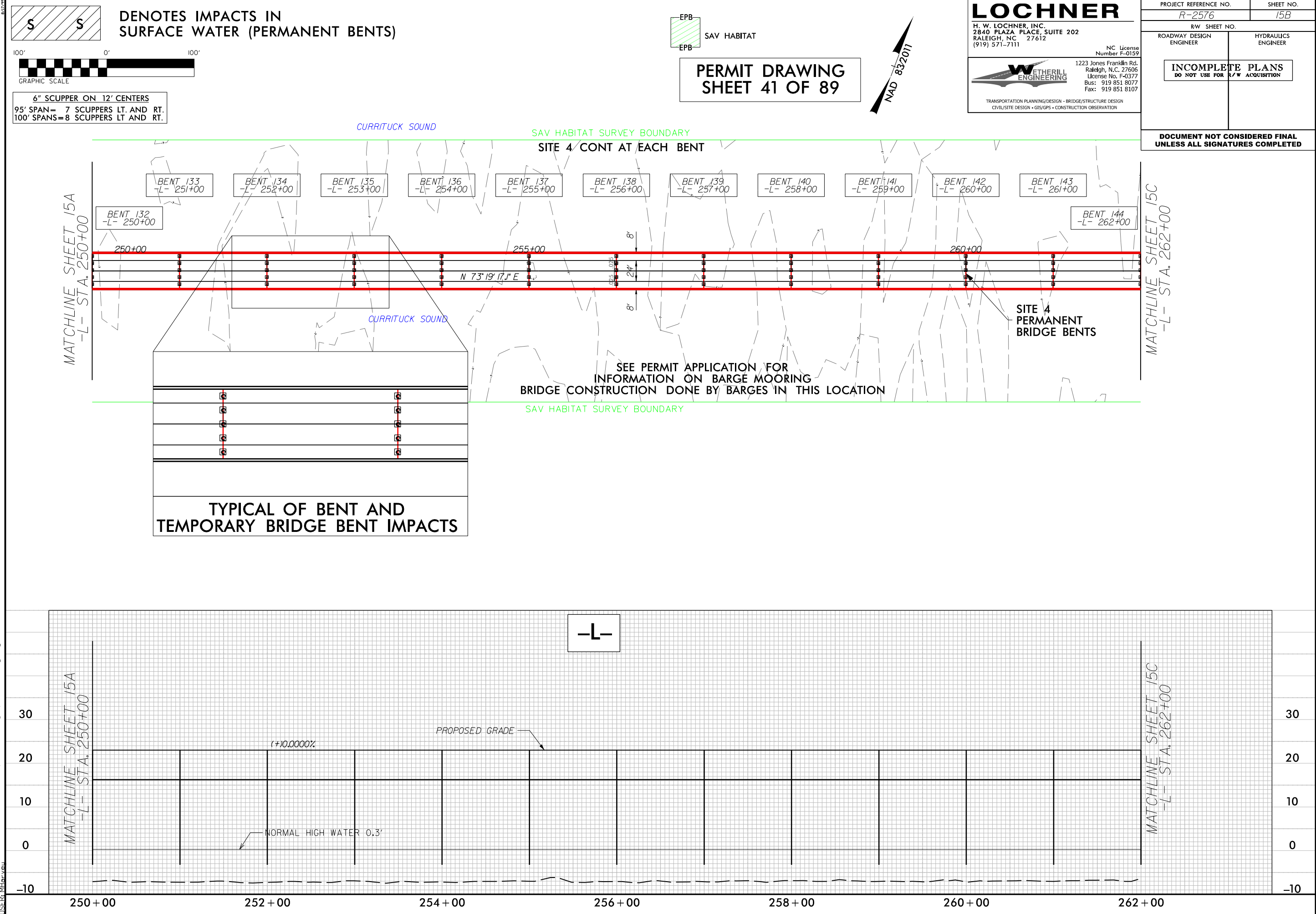
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ENGINEER

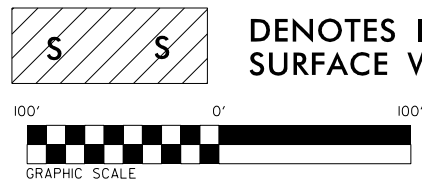
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DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

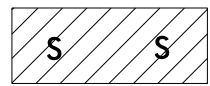


4/23/2024
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USER: Mhovey





6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.

 DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)

 SAV HABITAT

PERMIT DRAWING
SHEET 42 OF 89

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159

 WETHERILL
ENGINEERING

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

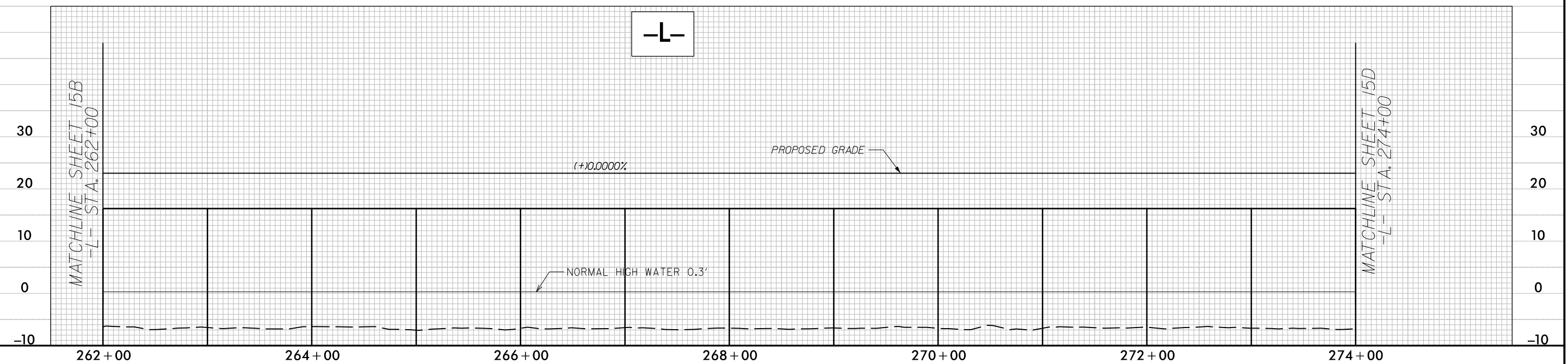
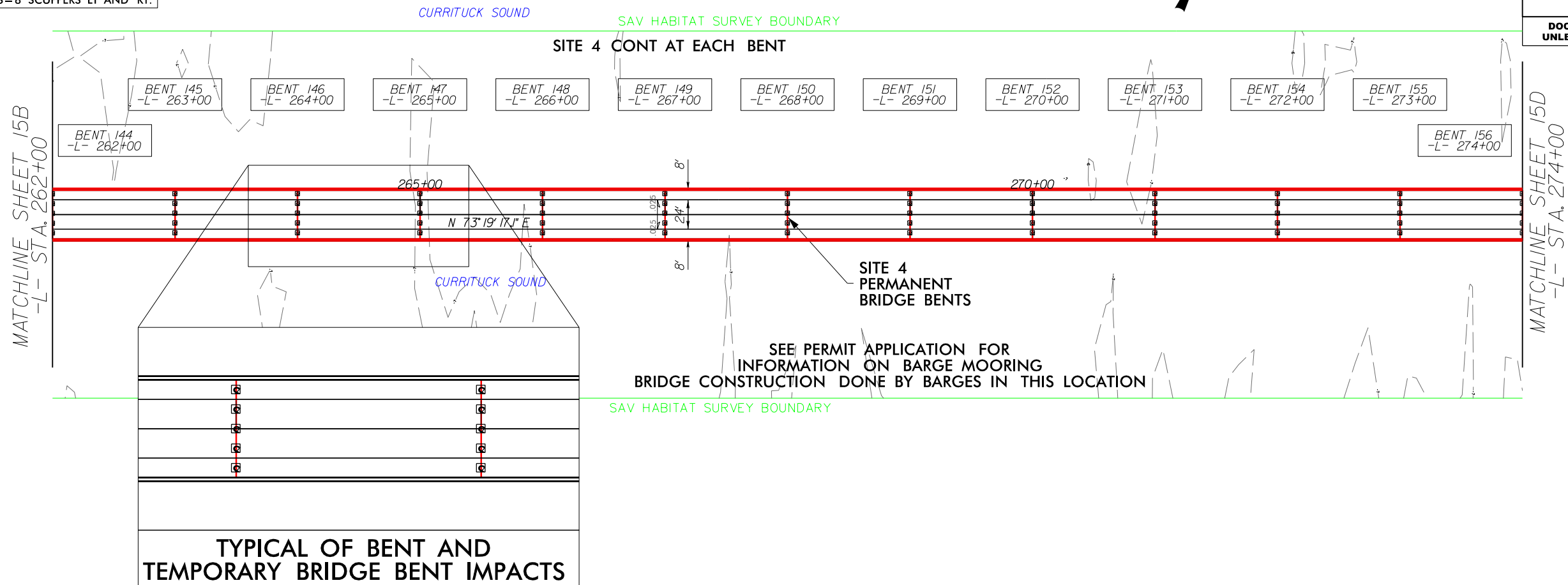
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. *R-2576* SHEET NO. *15C*

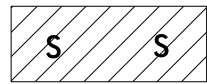
RW SHEET NO.
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR A/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



4/23/2024
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USER: M. J. J.



DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)

PERMIT DRAWING
SHEET 43 OF 89



SAV HABITAT

6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.

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2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
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NC License
Number F-0159



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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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

15D

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

MATCHLINE SHEET 15C
-L- STA. 274+00

CURRITUCK SOUND

BENT 156
-L- 274+00

BENT 157
-L- 275+00

BENT 158
-L- 276+00

BENT 159
-L- 277+00

BENT 160
-L- 278+00

BENT 161
-L- 279+00

BENT 162
-L- 280+00

BENT 163
-L- 281+00

BENT 164
-L- 282+00

SITE 4
PERMANENT
BRIDGE BENTS

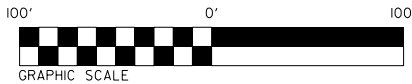
SEE PERMIT APPLICATION FOR
INFORMATION ON BARGE MOORING
BRIDGE CONSTRUCTION DONE BY BARGES IN THIS LOCATION

SAV HABITAT SURVEY BOUNDARY

BENT 165
-L- 283+00

BENT 166
-L- 284+00

BENT 167
-L- 285+00



TYPICAL OF BENT AND
TEMPORARY BRIDGE BENT IMPACTS

-L-

MATCHLINE SHEET 15C
-L- STA. 274+00

30
20
10
0
-10

274+00

276+00

278+00

280+00

282+00

284+00

286+00

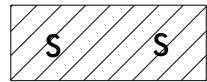
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PROPOSED GRADE

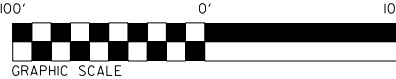
NORMAL HIGH WATER 0.3'

MATCHLINE SHEET 15E
-L- STA. 286+00

30
20
10
0
-10



DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)



BENT 169
-L- 287+00

BENT 170
-L- 288+00

BENT 171
-L- 289+00

BENT 172
-L- 290+00

BENT 173
-L- 291+00

BENT 174
-L- 292+00

BENT 175
-L- 293+00

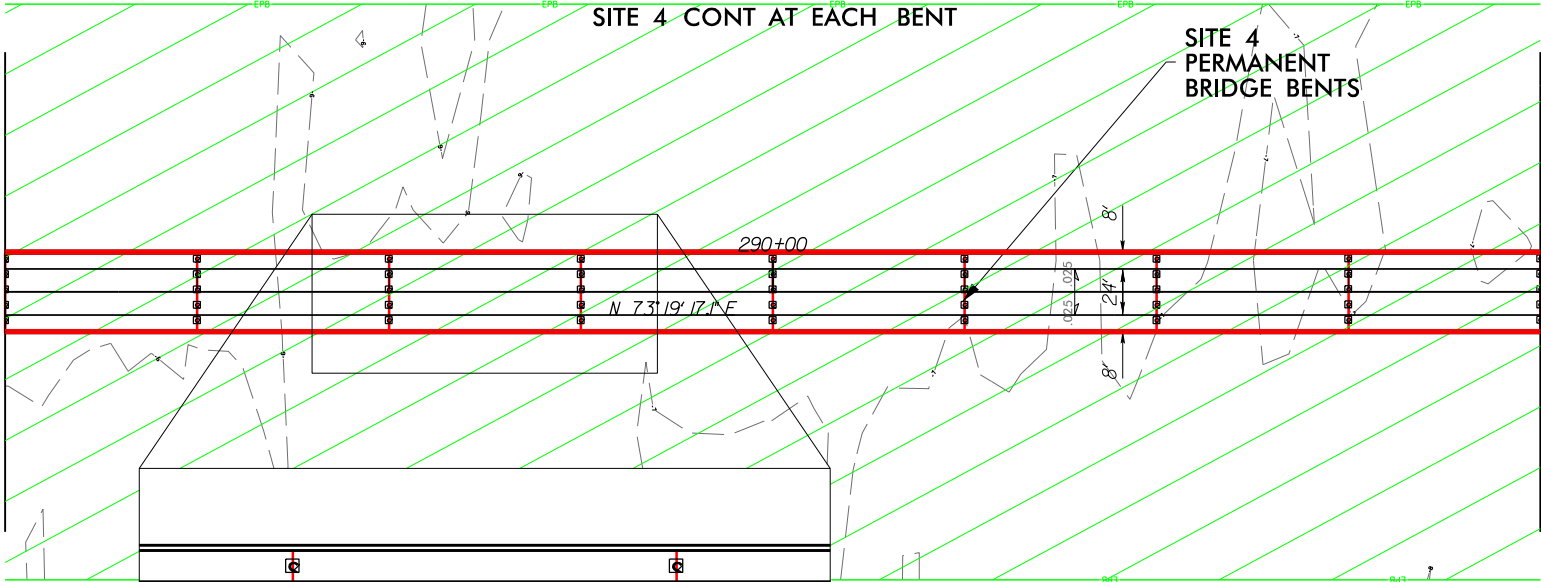
BENT 168
-L- 286+00

CURRITUCK SOUND

SEE PERMIT APPLICATION FOR
INFORMATION ON BARGE MOORING
BRIDGE CONSTRUCTION DONE BY BARGES IN THIS LOCATION

BENT 176
-L- 294+00

MATCHLINE SHEET 15D
-L- STA. 286+00



MATCHLINE SHEET 16A
-L- STA. 294+00

TYPICAL OF BENT AND
TEMPORARY BRIDGE BENT IMPACTS

-L-

30
20
10
0
-10

MATCHLINE SHEET 15D
-L- STA. 286+00

286+00

288+00

290+00

292+00

294+00

MATCHLINE SHEET 16A
-L- STA. 294+00

30
20
10
0
-10

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

NC License
Number F-0159



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

PERMIT DRAWING
SHEET 44 OF 89

6" SCUPPER ON 12' CENTERS

95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.

PROJECT REFERENCE NO.

R-2576

SHEET NO.

15E

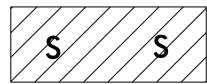
RW SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)

PERMIT DRAWING
SHEET 45 OF 89



SAV HABITAT

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(919) 571-7111

NC License
Number F-0159



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Bus: 919 851 8077
Fax: 919 851 8107

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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

16A

RW SHEET NO.

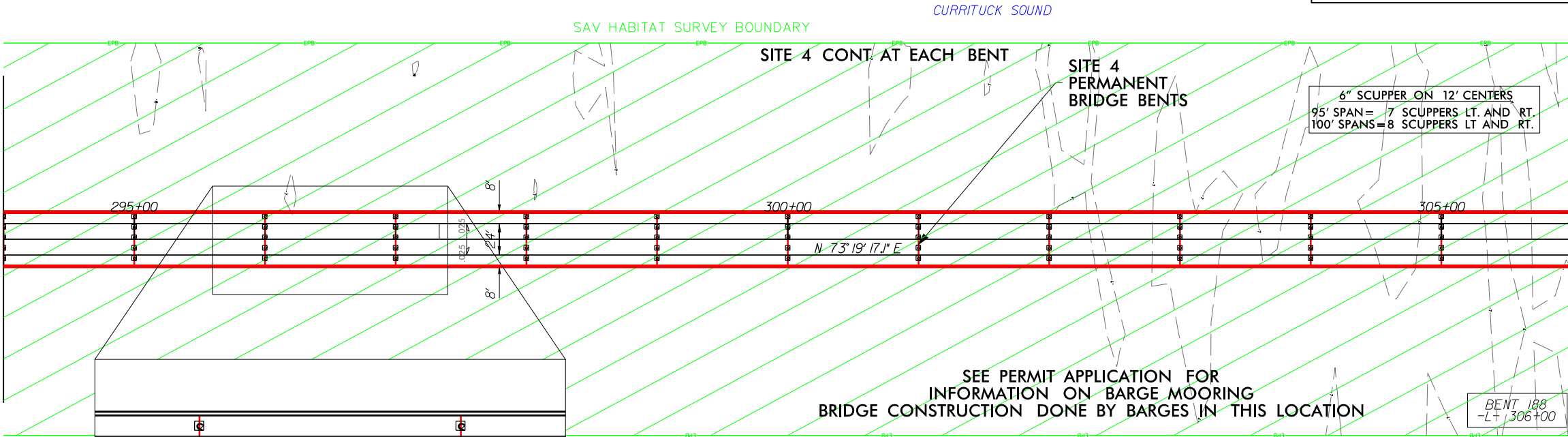
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

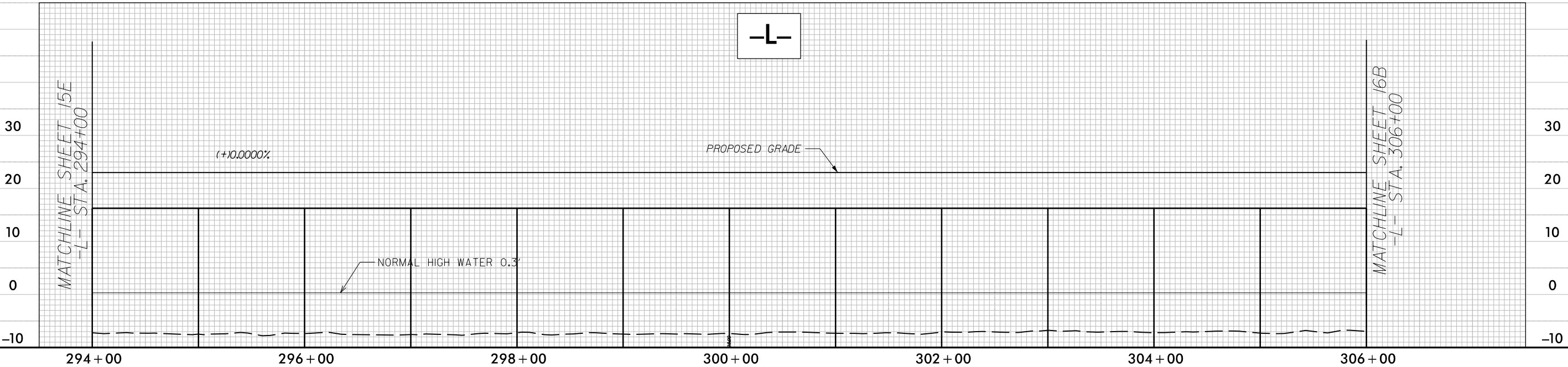
MATCHLINE SHEET 15E
-L- STA. 294+00

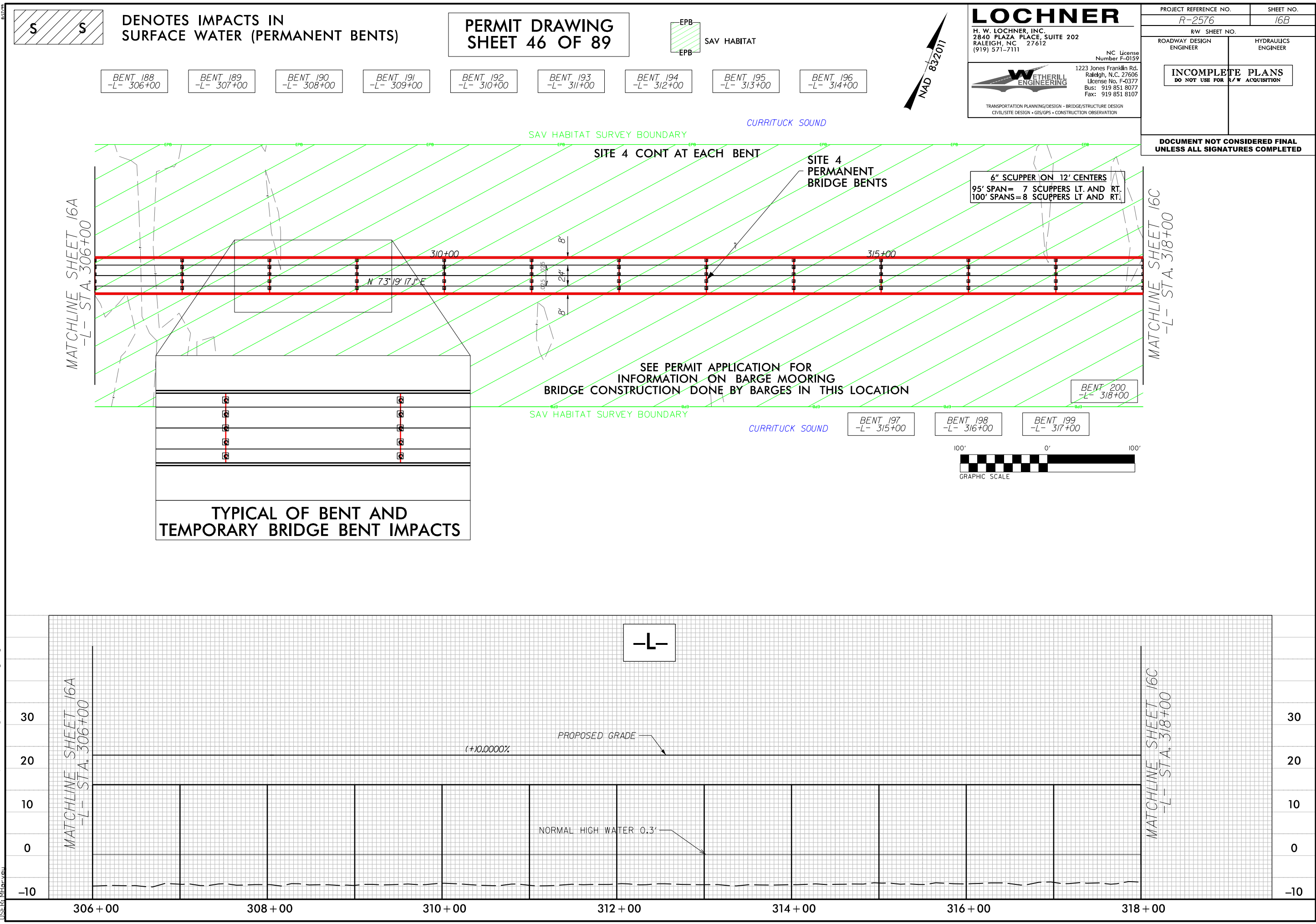


MATCHLINE SHEET 16B
-L- STA. 306+00

TYPICAL OF BENT AND
TEMPORARY BRIDGE BENT IMPACTS

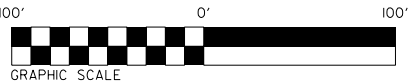
-L-





-10

6" SCUPPER ON 12' CENTERS
95' SPAN = 7 SCUPPERS LT. AND RT.
100' SPANS = 8 SCUPPERS LT AND RT.



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RALEIGH, NC 27612
(919) 871-7111

NC License
Number F-0159



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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

PROJECT REFERENCE NO. SHEET NO.

R-2576

16D

RW SHEET NO.

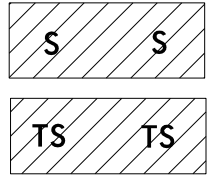
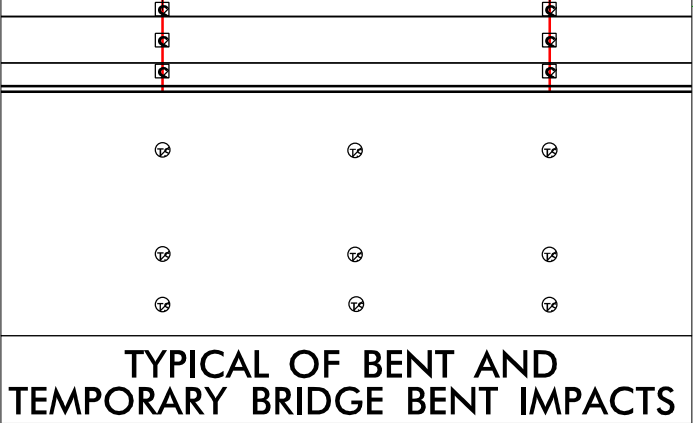
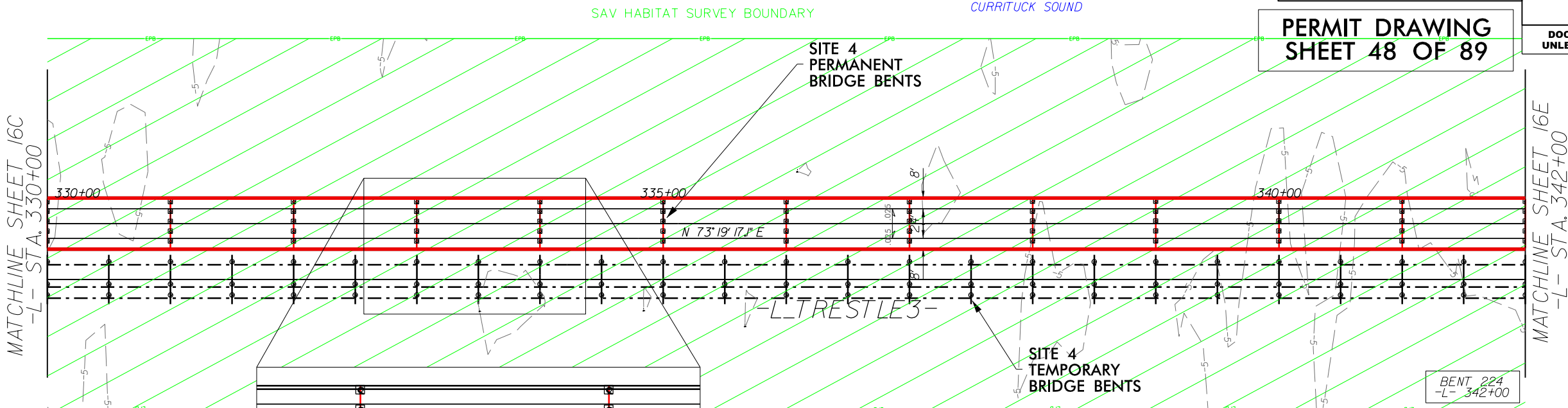
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

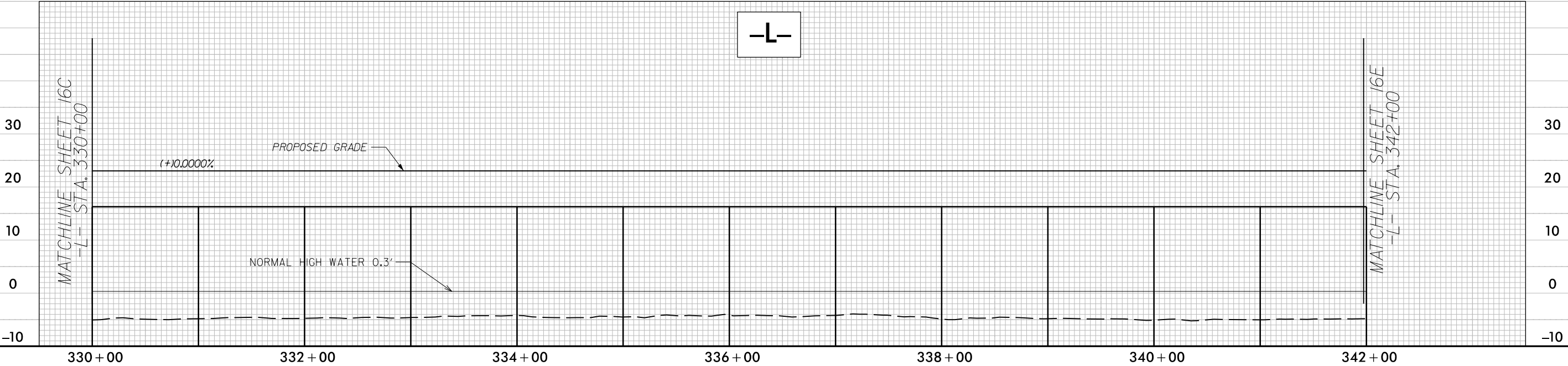
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 48 OF 89



DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
(CONSTRUCTION BRIDGES)



4/23/2024
F:\1\Projects\PERMITS-Environmental\psh\R2576_hyd_psh16E_bridge.dgn
USER: M16E

8/12/24

BENT 224
-L- 342+00

BENT 225
-L- 343+00

BENT 226
-L- 344+00

BENT 227
-L- 345+00

BENT 228
-L- 346+00

BENT 229
-L- 347+00

BENT 230
-L- 348+00

BENT 231
-L- 349+00

BENT 232
-L- 350+00

BENT 233
-L- 351+00

EPB
SAV HABITAT
EPB



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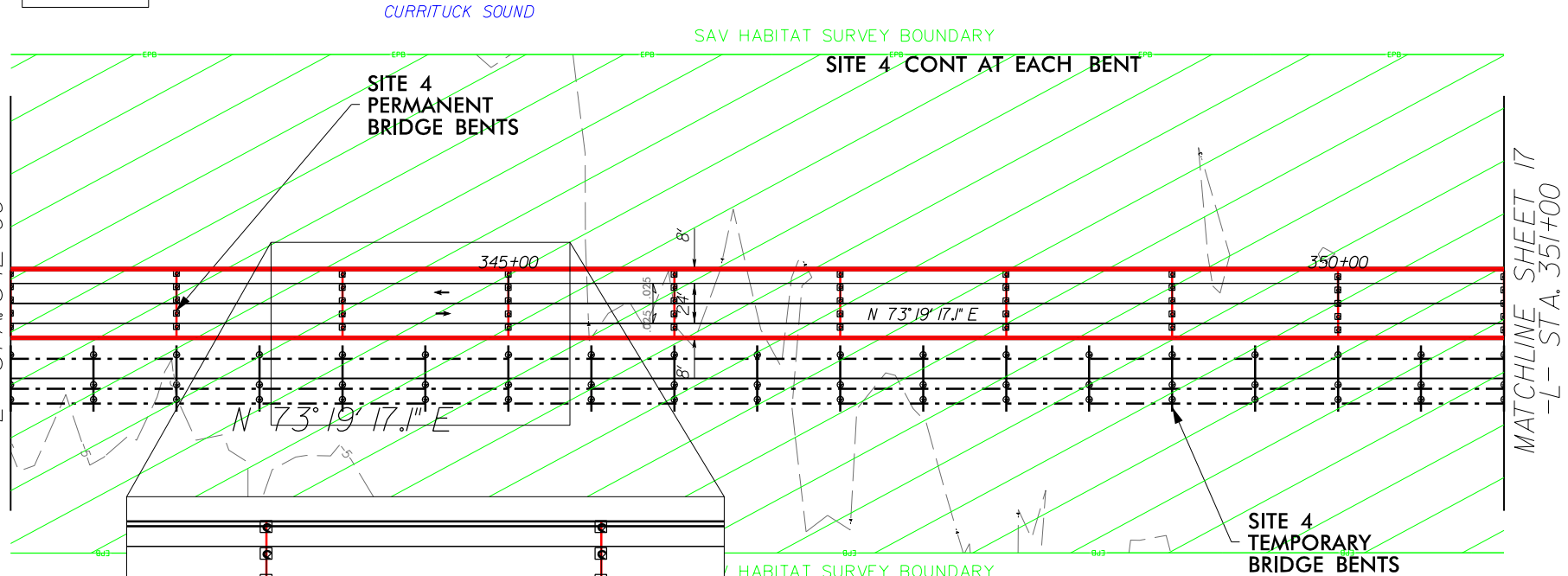
1223 Jones Franklin Rd.
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Fax: 919 851 8107

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

**PERMIT DRAWING
SHEET 49 OF 89**

PROJECT REFERENCE NO.		SHEET NO.	
R-2576		16E	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

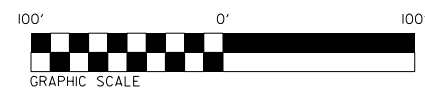
MATCHLINE SHEET 16D
-L- STA. 342+00



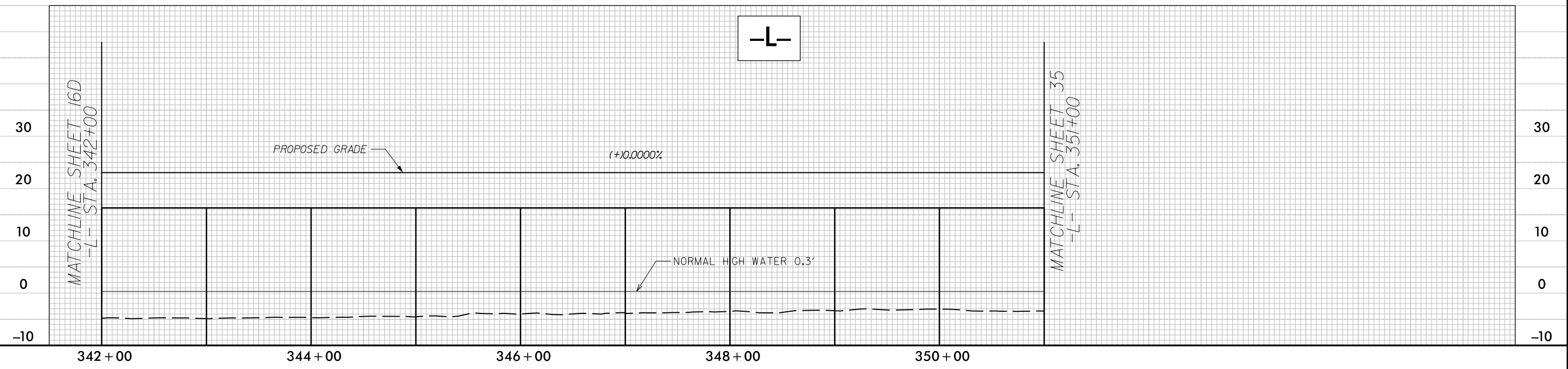
DENOTES IMPACTS IN
SURFACE WATER (PERMANENT BENTS)

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
(CONSTRUCTION BRIDGES)

6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.



**TYPICAL OF BENT AND
TEMPORARY BRIDGE BENT IMPACTS**



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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

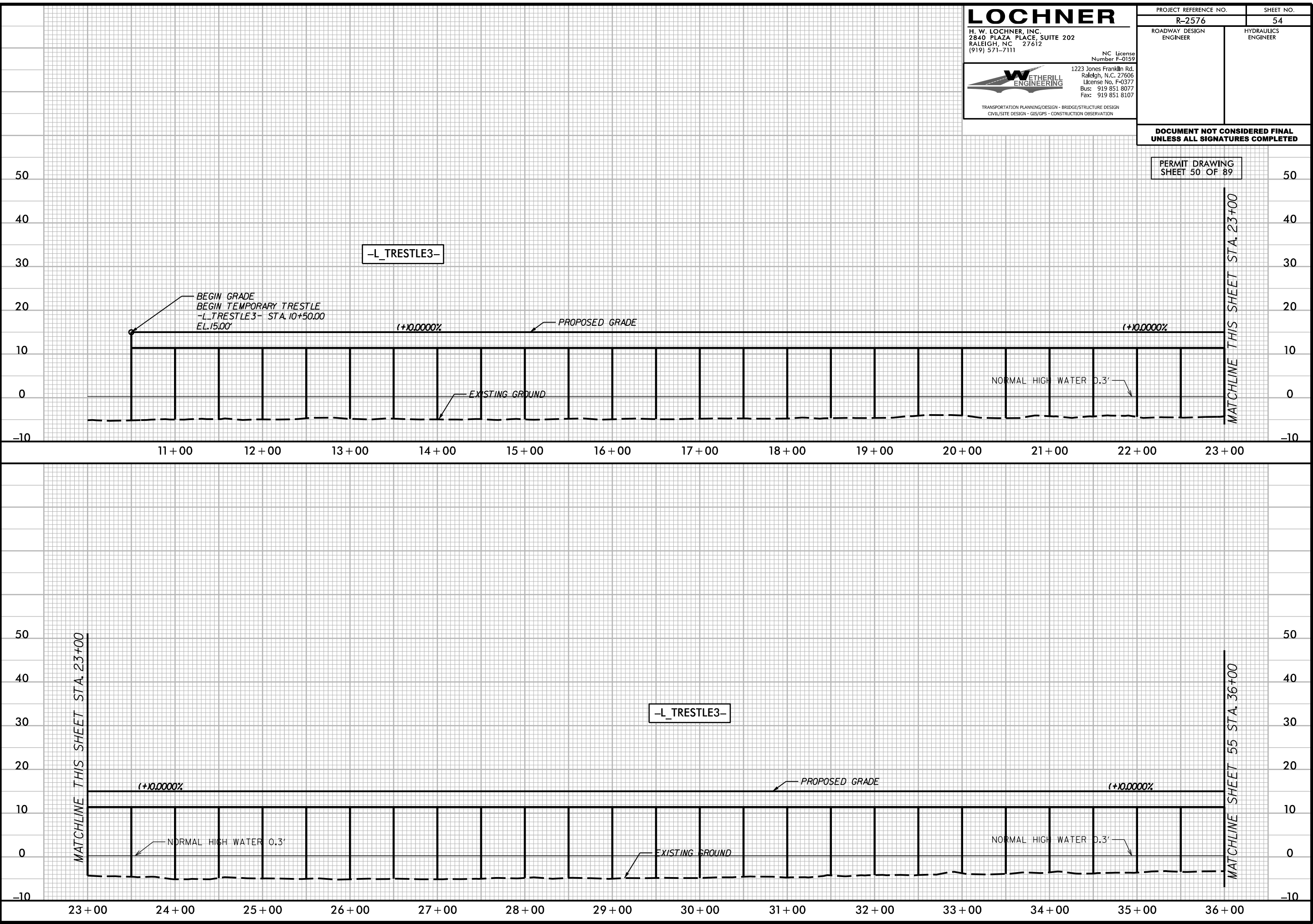
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ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

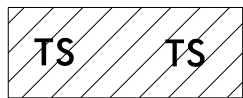
PERMIT DRAWING
SHEET 50 OF 89



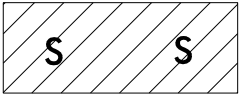
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6/2/2024

4/23/2024
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USER: mlovey



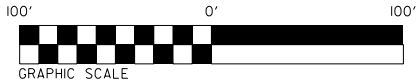
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN
SURFACE WATER

PERMIT DRAWING
SHEET 51 OF 89

6" SCUPPER ON 12' CENTERS
95' SPAN= 7 SCUPPERS LT. AND RT.
100' SPANS=8 SCUPPERS LT AND RT.
END DECK DRAINS STA. 358+45 RT.
END DECK DRAINS STA. 358+45 LT.



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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

17

ROADWAY DESIGN
ENGINEER

PAVEMENT DESIGN
ENGINEER

INCOMPLETE PLANS

DO NOT USE FOR R/W ACQUISITION

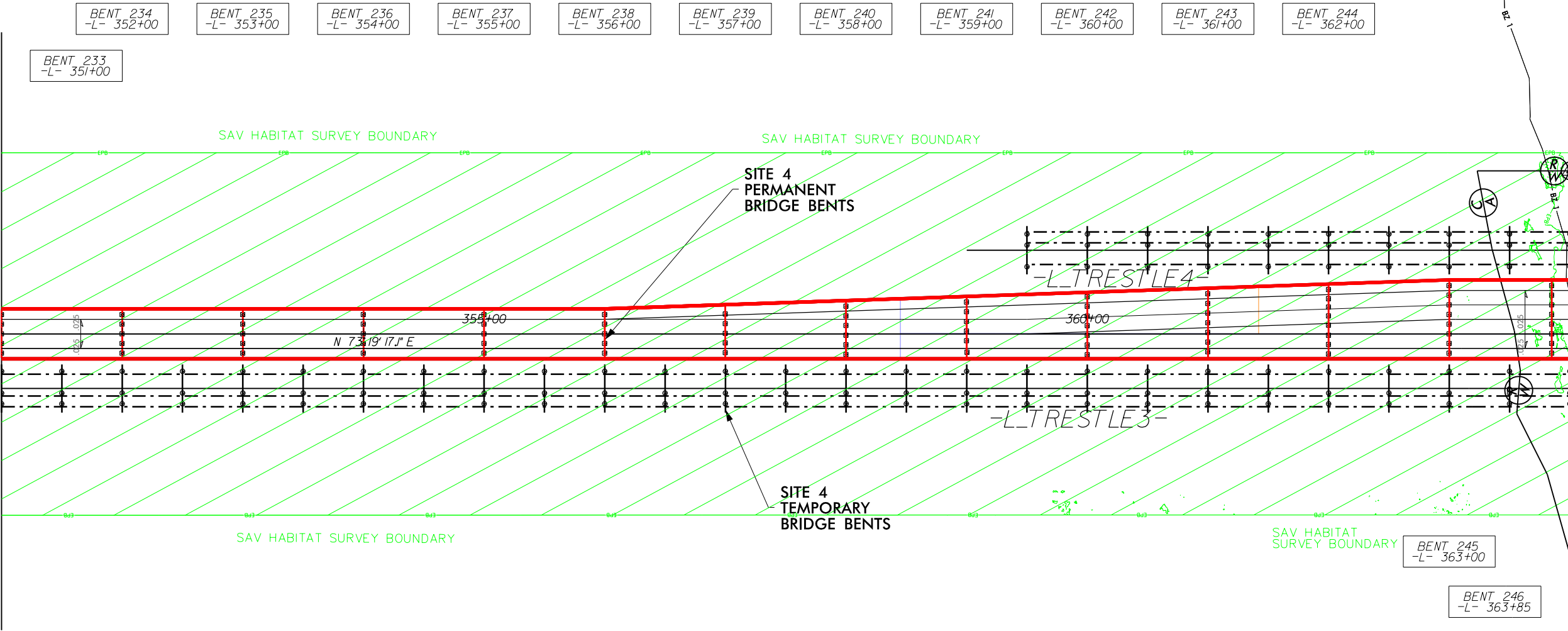
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



SAV HABITAT

PAVED SHOULDER

MATCHLINE SHEET 16E
-L- STA. 351+00



MATCHLINE SHEET 18
-L- STA. 364+00

SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 35 FOR -L- PROFILE

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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.

R-2576

SHEET NO.

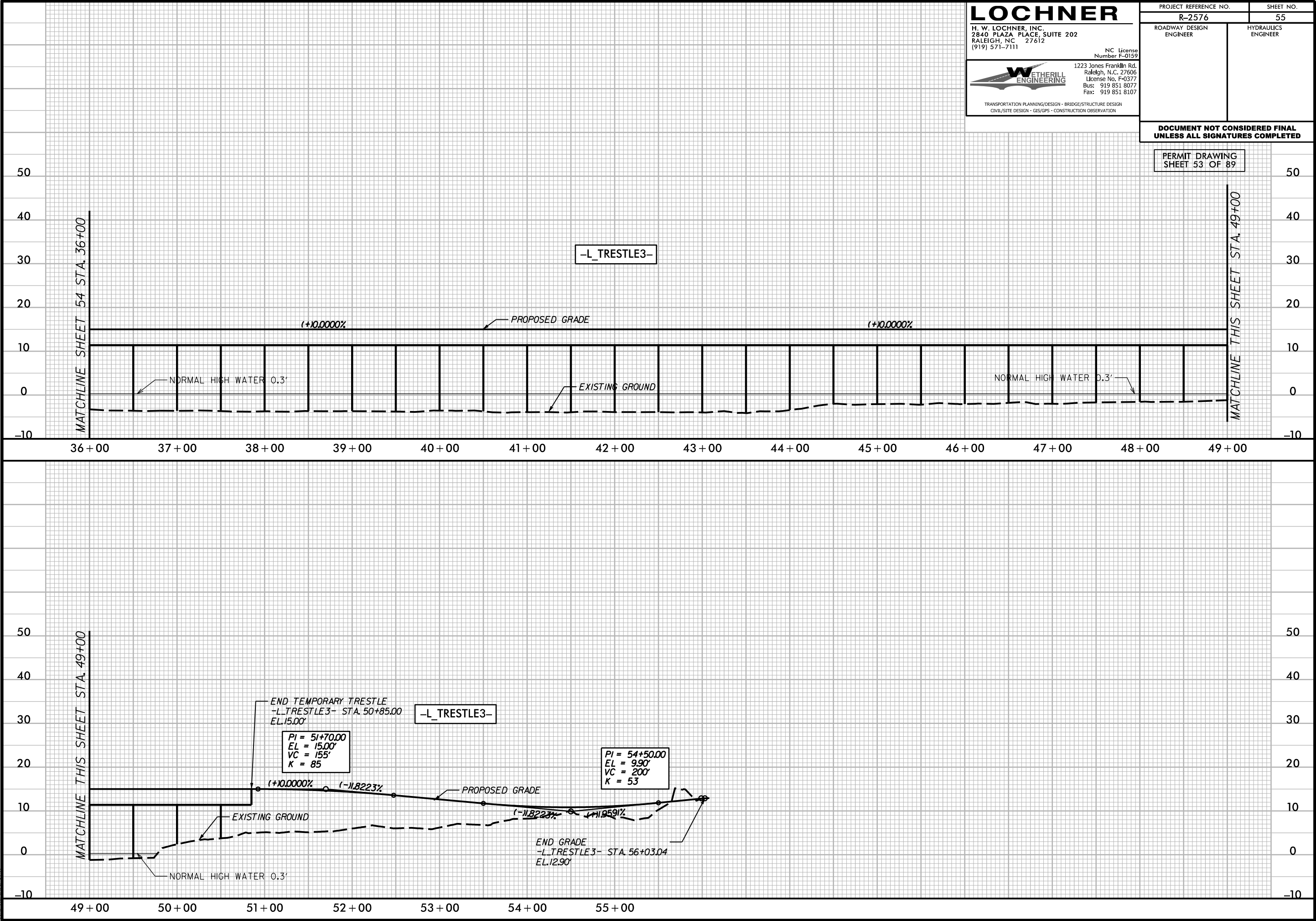
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ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

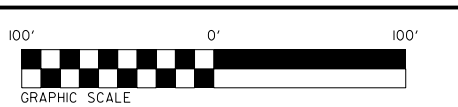
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UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 53 OF 89

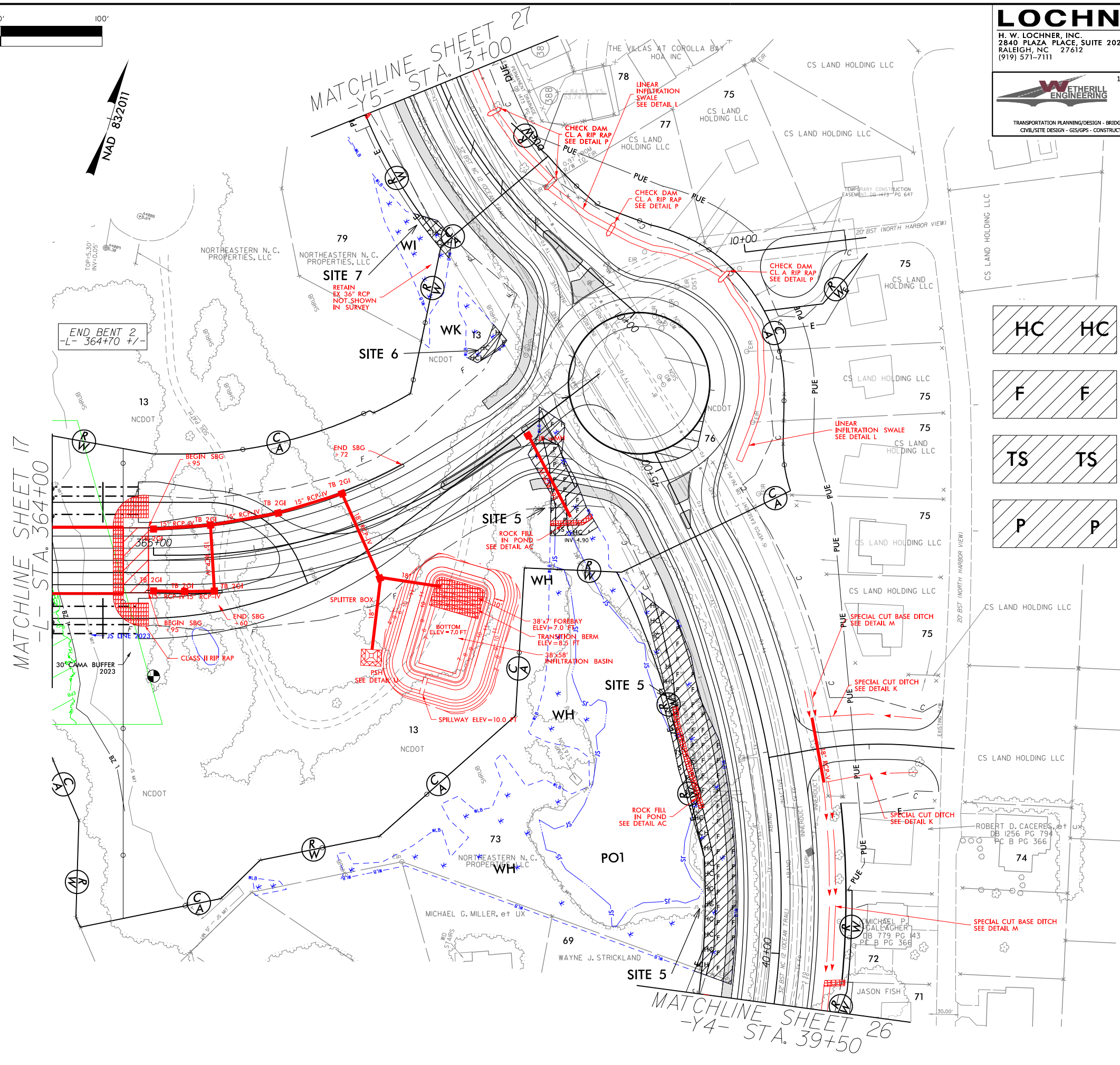


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6/22/99 4/23/2024 R:\11\100\100\PERMITS-Environmental\psh\R2576.HYD_psh18.dgn USER: mchavez



NAD 83 2011



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Raleigh, N.C. 27606
License No. F-0377
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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

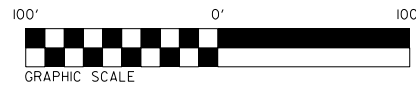
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R-2576		18	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

- PAVED SHOULDER
- EPB SAV HABITAT

PERMIT DRAWING
SHEET 54 OF 89

- HC HC DENOTES HAND CLEARING
- F F DENOTES FILL IN WETLAND
- TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- P P DENOTES IMPACTS IN SURFACE WATER (POND)

6/22/99



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

PROJECT REFERENCE NO. **R-2576** SHEET NO. **18**

ROADWAY DESIGN ENGINEER
PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
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DOCUMENT NOT CONSIDERED FINAL
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PAVED SHOULDER
 EPB SAV HABITAT

PERMIT DRAWING
SHEET 55 OF 89

HC HC

**DENOTES HAND
CLEARING**

F F

**DENOTES FILL IN
WETLAND**

TS TS

**DENOTES TEMPORARY
IMPACTS IN SURFACE
WATER**

P P

**DENOTES IMPACTS IN
SURFACE WATER
(POND)**

MATCHLINE SHEET 17
-L- STA. 364+00

MATCHLINE SHEET 27
-Y5- STA. 13+00

MATCHLINE SHEET 26
-Y4- STA. 39+50

4/23/2024
R:\11\1100\PERMITS-Environmental\psh\R2576.HYD_psh18.com.dgn
USER: mchavez

20' 0' 20'



GRAPHIC SCALE

SITE 5

PERMIT DRAWING
SHEET 56 OF 89

**ROCK FILL
IN POND
SEE DETAIL AC**

WH

**R
W**

**38'x7' FOREBAY
ELEV = 7.0 FT**

**TRANSITION BERM
ELEV = 8.5 FT**

38'x58'

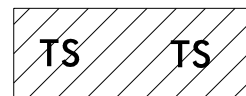
PO1

BASIN

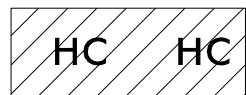
SITE 5



DENOTES IMPACTS IN
SURFACE WATER (POND)



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES HAND
CLEARING



DENOTES FILL IN
WETLAND



6/23/16

SITE 6

SITE 5

WETLANDS

WETLANDS

369+00.00

368+50.00

368+00.00

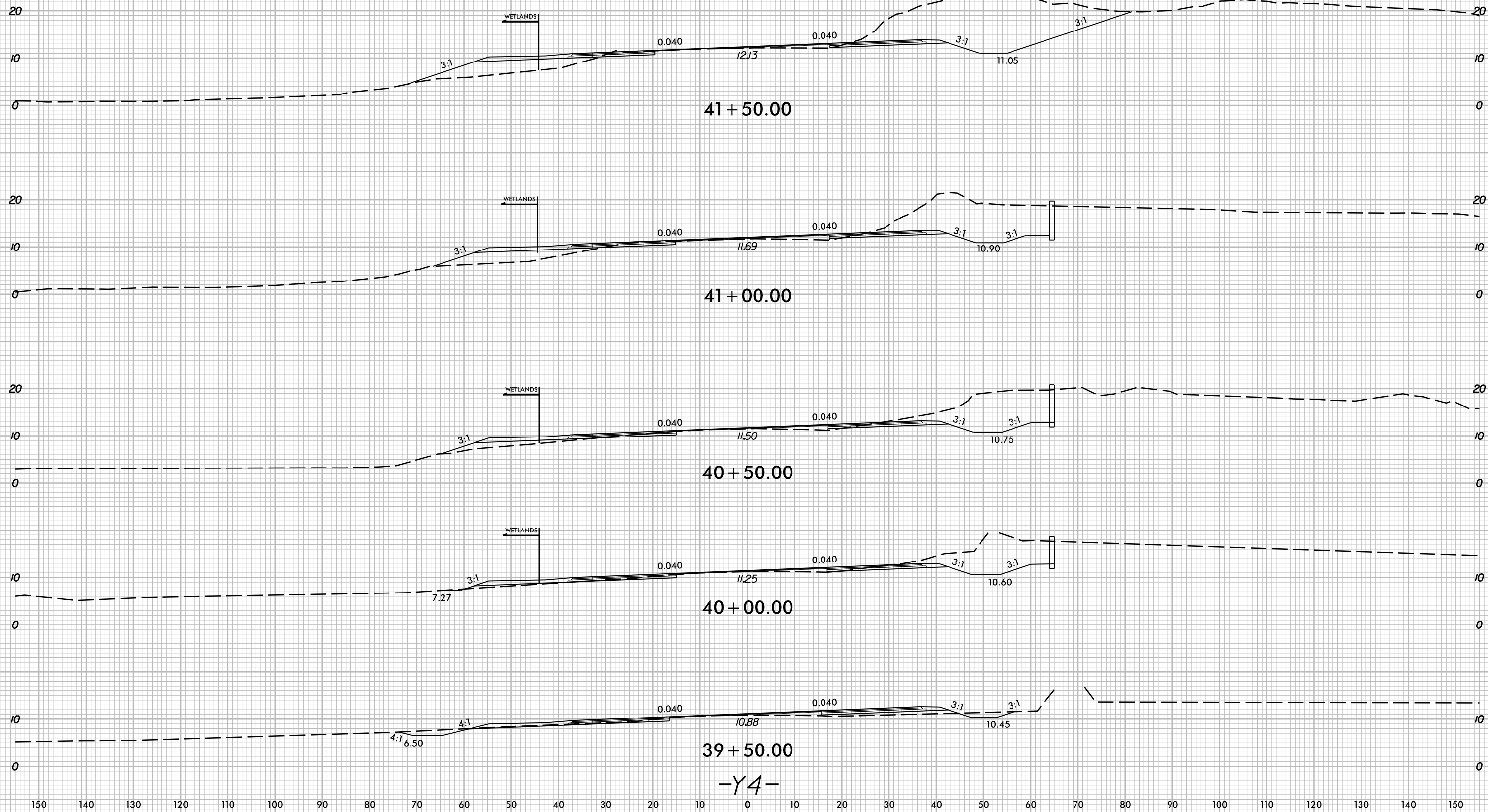
367+50.00

-L2-

EST. SURFACE ELEV. (11.75')

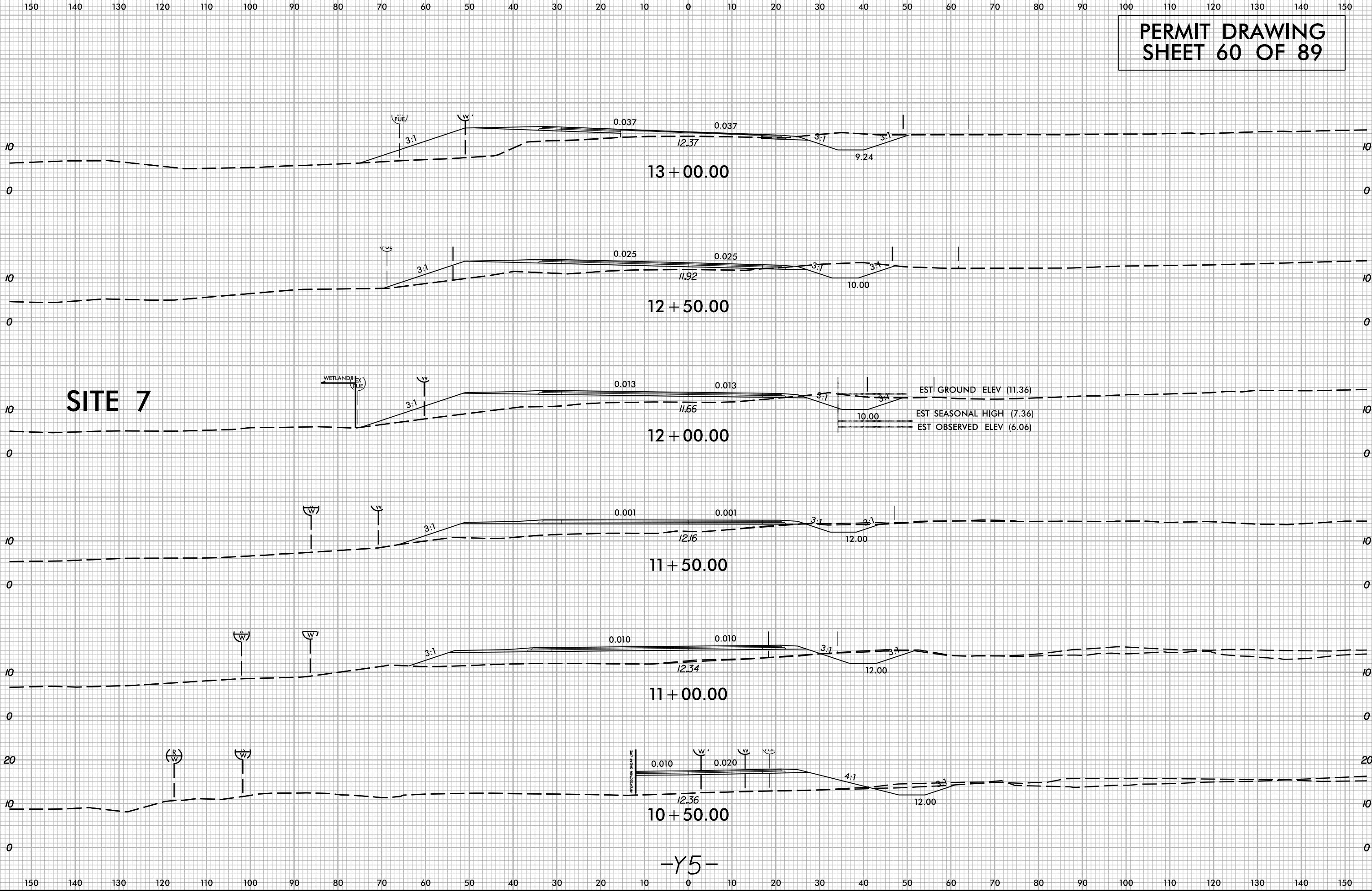
EST. SEASONAL HIGH. (4.75')

SITE 5



6/23/16

PERMIT DRAWING
SHEET 60 OF 89

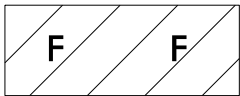


SDATES
3 (USER NAME)
SHEETS

6/22/99
4/23/2024
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USER: jwright



DENOTES HAND
CLEARING



DENOTES FILL IN
WETLAND

PERMIT DRAWING
SHEET 61 OF 89

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Fax: 919 851 8107

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

PROJECT REFERENCE NO.
R-2576

SHEET NO.
19

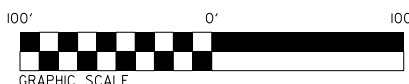
ROADWAY DESIGN
ENGINEER

PAVEMENT DESIGN
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

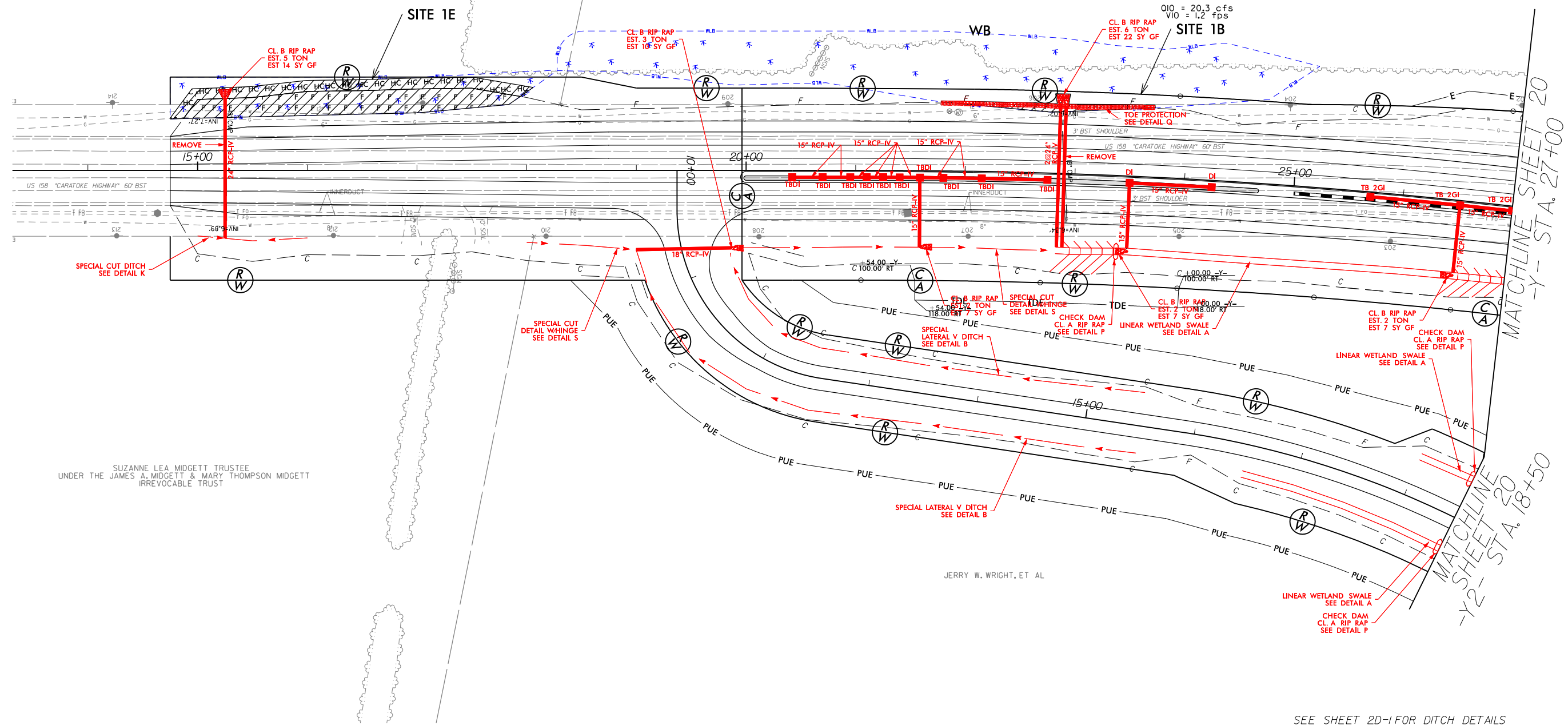
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER



SUZANNE LEA MIDGETT TRUSTEE
UNDER THE JAMES A. MIDGETT & MARY THOMPSON MIDGETT
IRREVOCABLE TRUST

JERRY W. WRIGHT, ET AL



SEE SHEET 20-1 FOR DITCH DETAILS
SEE SHEET 36 FOR -Y- PROFILE
SEE SHEET 45 FOR -Y2- PROFILE

6/22/99

4/23/2024
R:\11\11\11\PERMITS-Environmental\psh\R2576.HYD_psh19_con.dgn
USER: m19

HC HC

DENOTES HAND
CLEARING

F F

DENOTES FILL IN
WETLAND

PERMIT DRAWING
SHEET 62 OF 89

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ENGINEERING**

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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.
R-2576

SHEET NO.
19

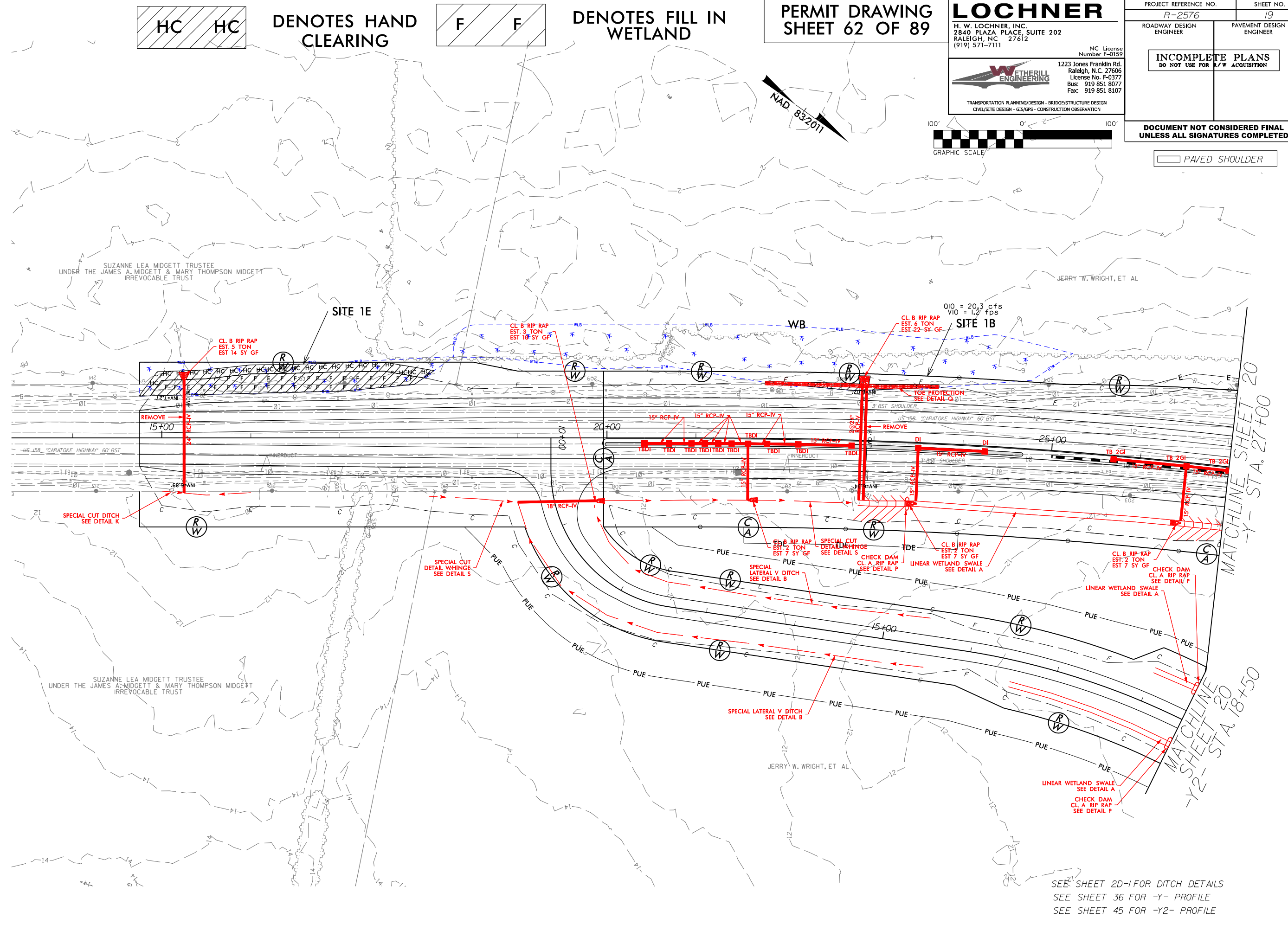
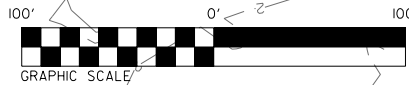
ROADWAY DESIGN
ENGINEER

PAVEMENT DESIGN
ENGINEER

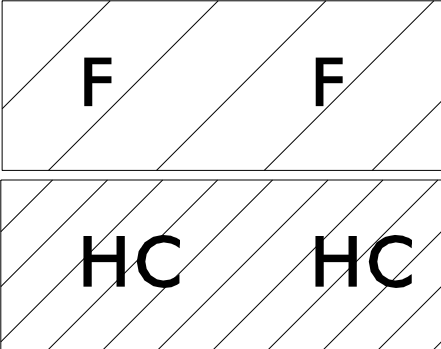
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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

PAVED SHOULDER

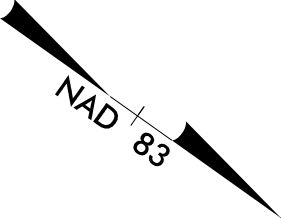
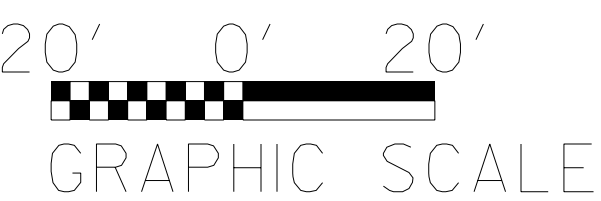


SEE SHEET 20-1 FOR DITCH DETAILS
SEE SHEET 36 FOR -Y- PROFILE
SEE SHEET 45 FOR -Y2- PROFILE



DENOTES FILL IN
WETLAND

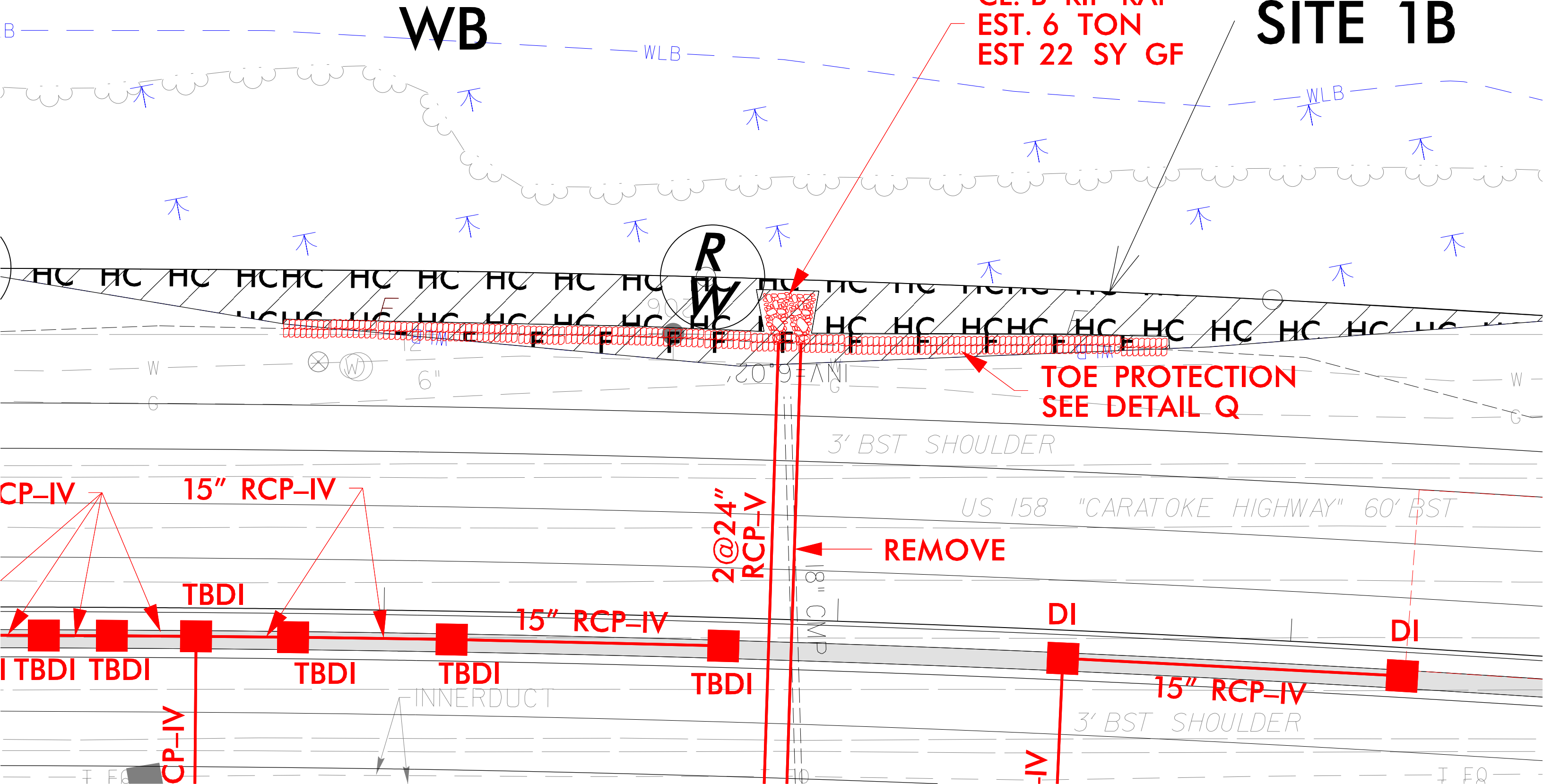
DENOTES HAND
CLEARING



PERMIT DRAWING
SHEET 63 OF 89

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 $V_{10} = 1.2 \text{ fps}$

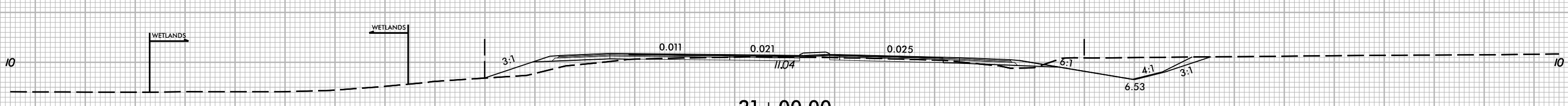
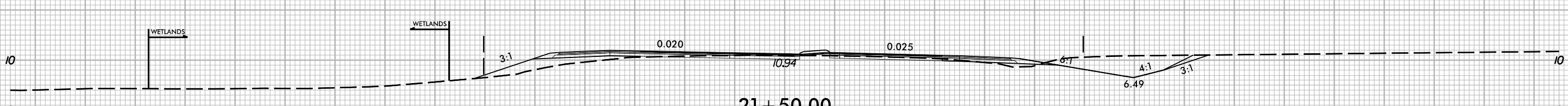
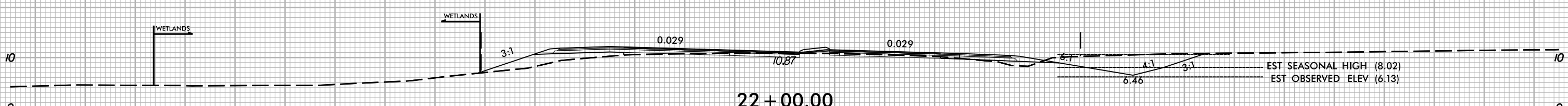
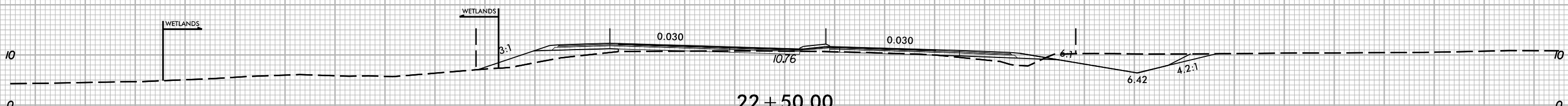
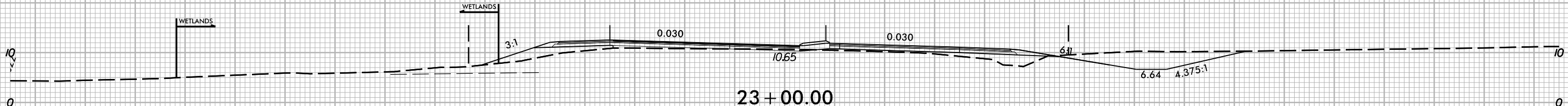
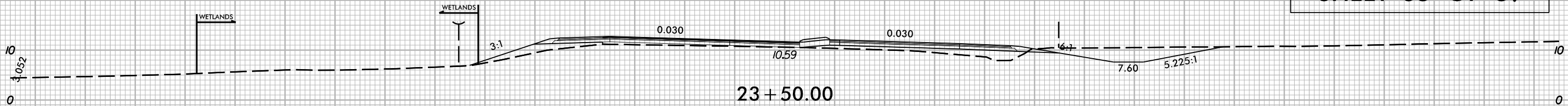
SITE 1B



6/23/16

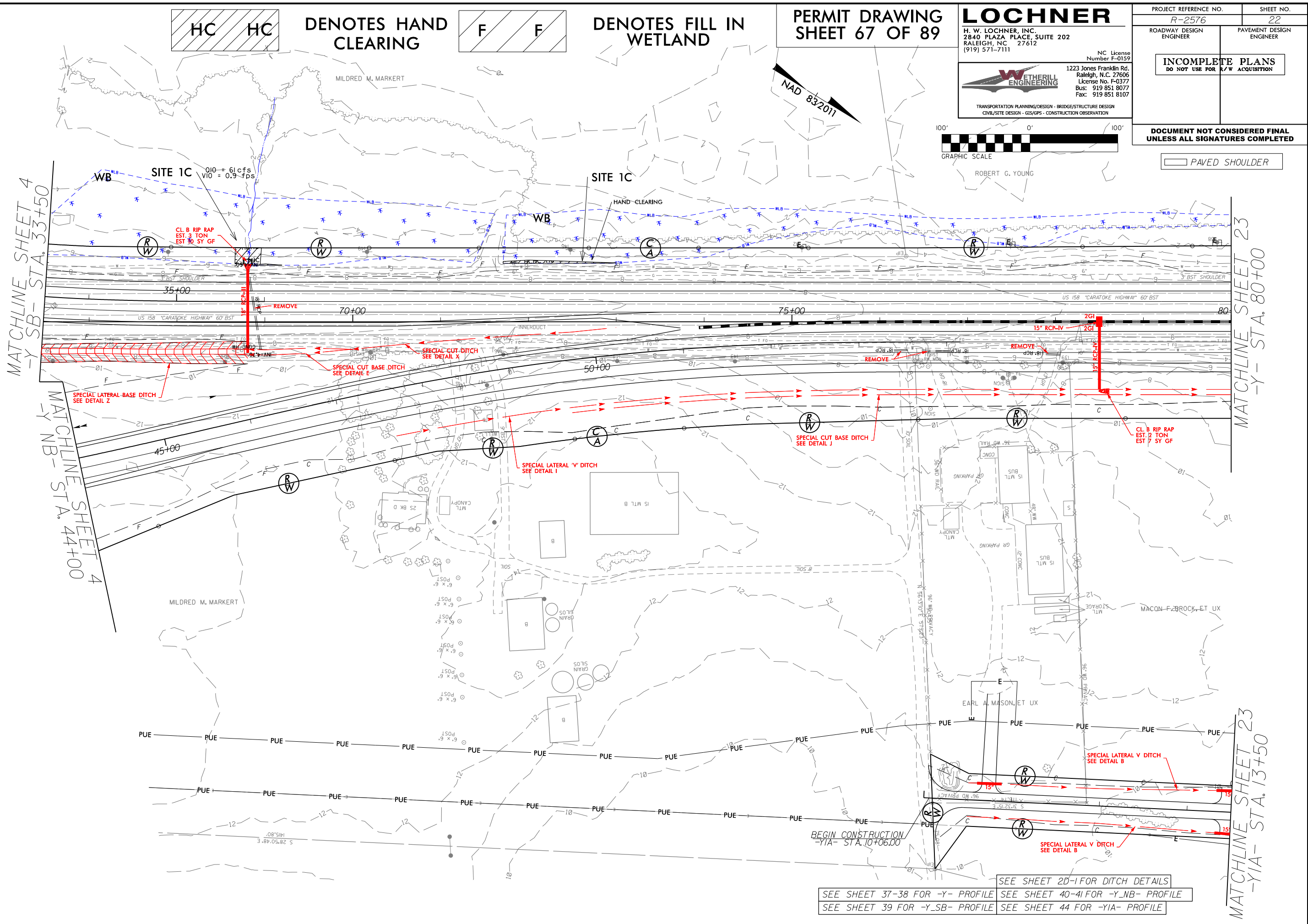
SITE 1B

PERMIT DRAWING
SHEET 65 OF 89



-Y-

6/2/2009 4/23/2024 R:\11\100\PERMITS-Environmental\psh\R2576.HYD_psh22.con.dgn USER: mlovey



HC HC DENOTES HAND CLEARING F F DENOTES FILL IN WETLAND

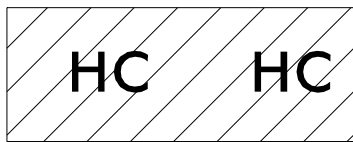
PERMIT DRAWING SHEET 67 OF 89

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H. W. LOCHNER, INC.
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(919) 371-7111
NC License Number F-0159

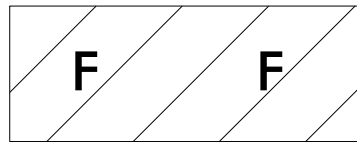
WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>R-2576</i>		SHEET NO. <i>22</i>	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PAVED SHOULDER			

SEE SHEET 37-38 FOR -Y- PROFILE
SEE SHEET 39 FOR -Y_SB- PROFILE
SEE SHEET 20-1 FOR DITCH DETAILS
SEE SHEET 40-41 FOR -Y_NB- PROFILE
SEE SHEET 44 FOR -YIA- PROFILE

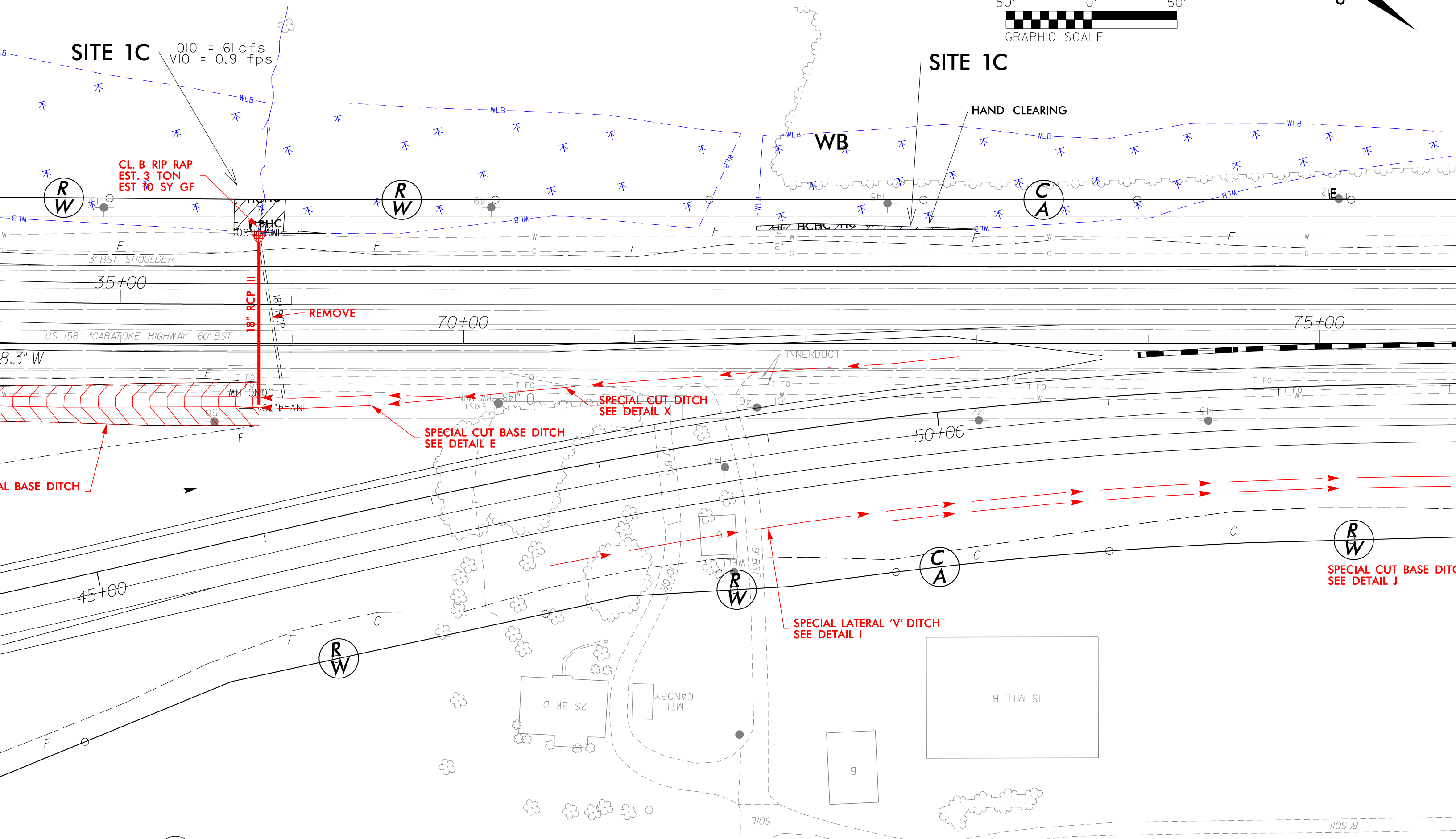
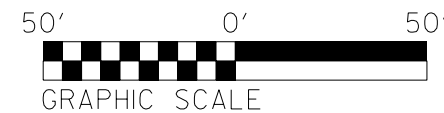
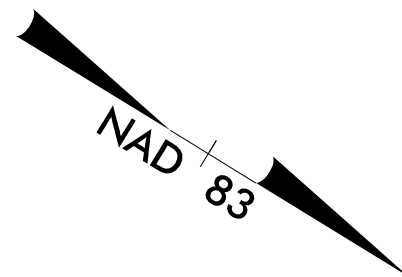


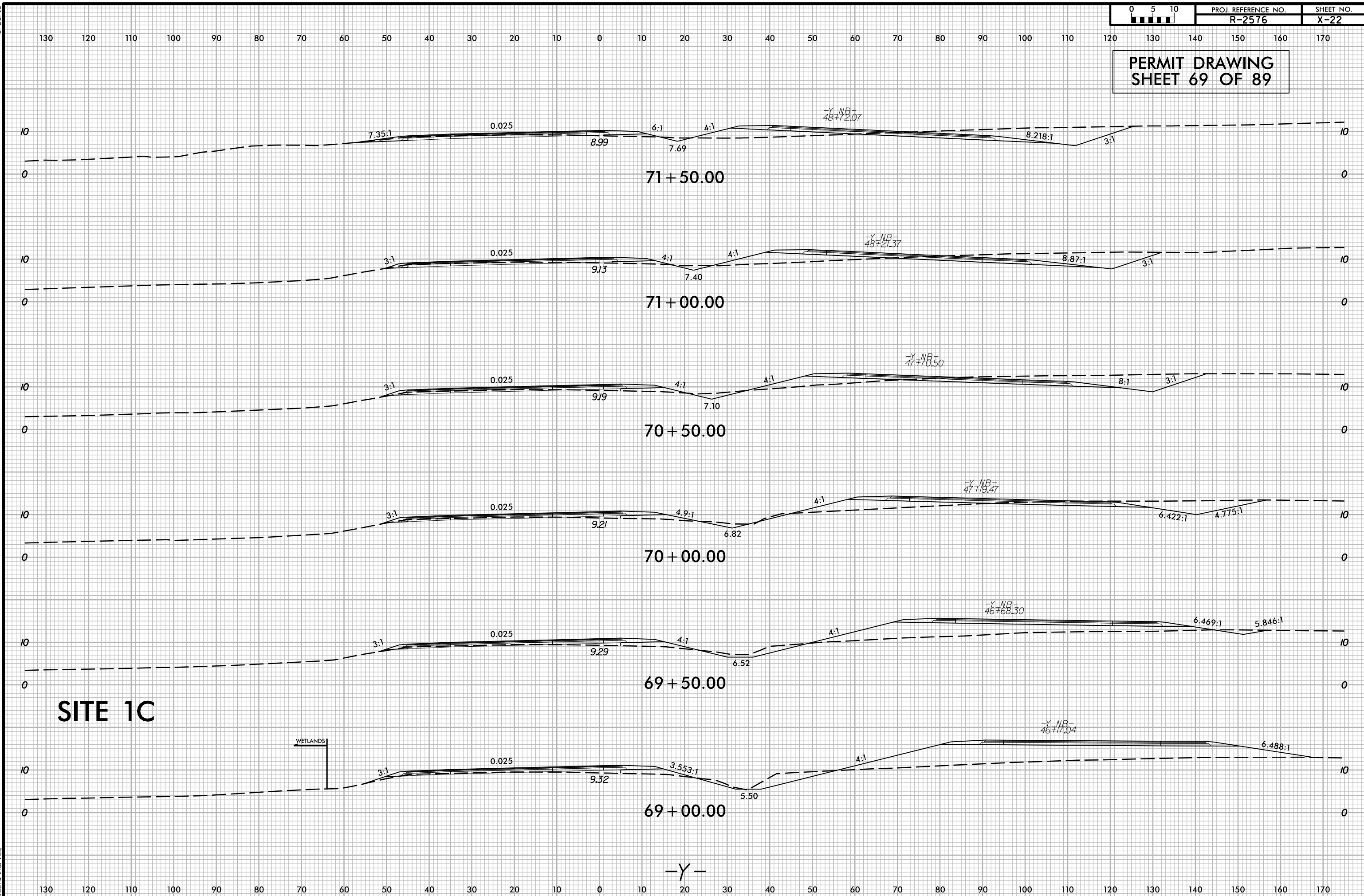
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CLEARING



DENOTES FILL IN
WETLAND

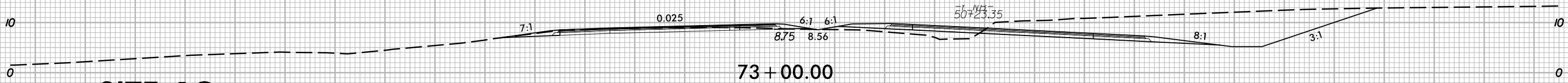
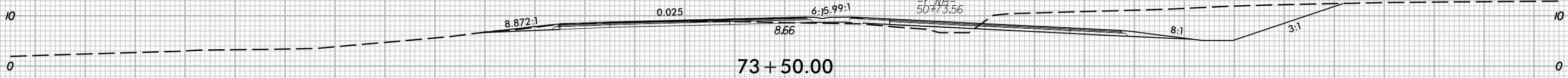
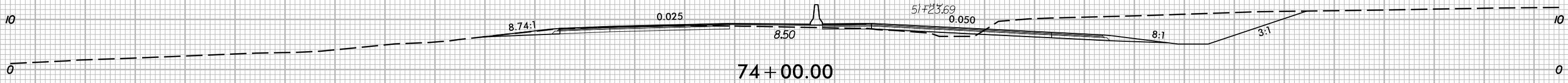
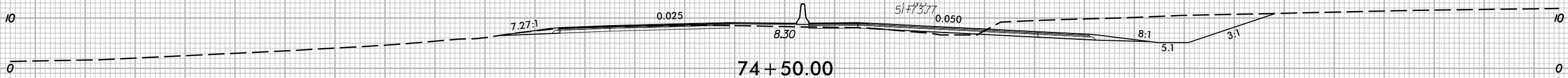
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SHEET 68 OF 89



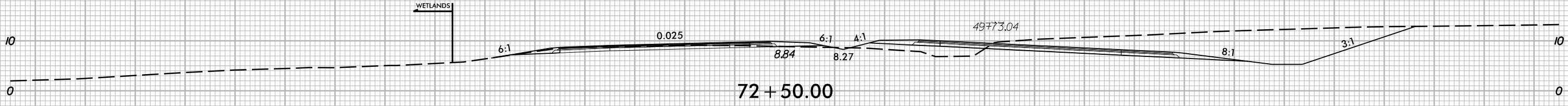


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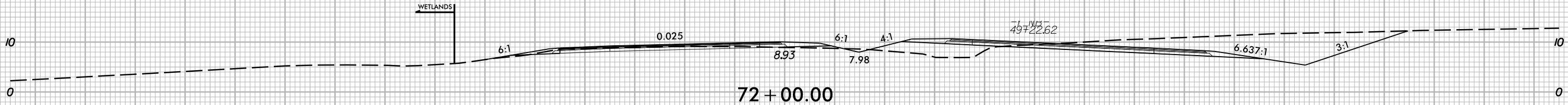
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SHEET 70 OF 89



SITE 1C



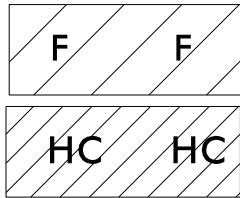
WETLANDS



WETLANDS

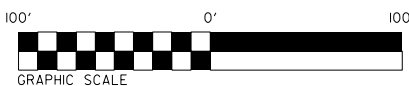
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6/2/2009
4/23/2024
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USER: mshaver



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SHEET 71 OF 89



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WETHERILL ENGINEERING
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

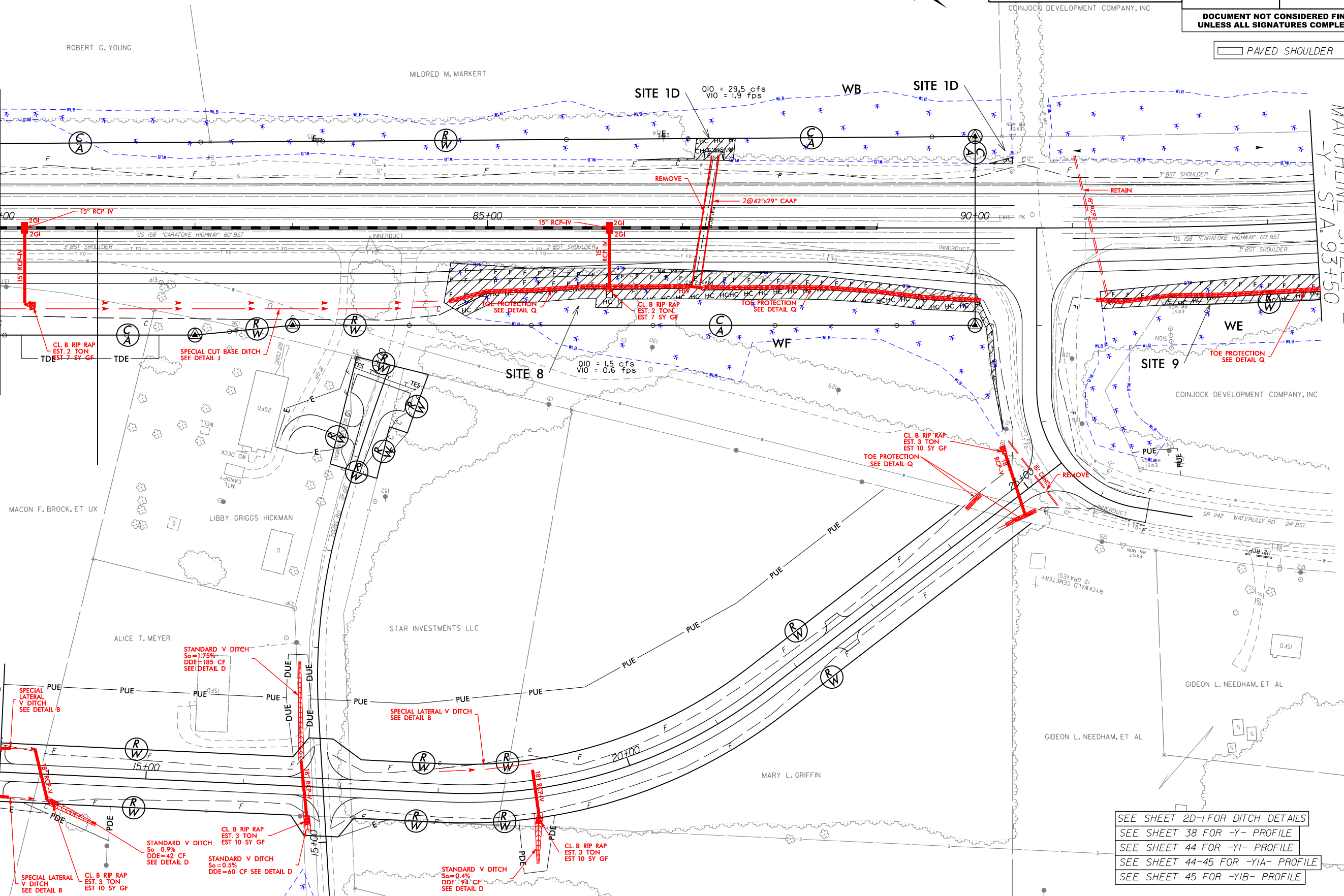
COINJOCK DEVELOPMENT COMPANY, INC

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

MATCHLINE SHEET 22
-Y- STA. 80+00

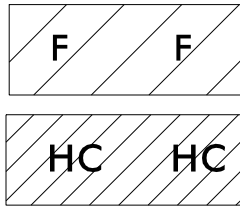
MATCHLINE SHEET 24
-Y- STA. 93+50

MATCHLINE SHEET 22
-YIA- STA. 13+50



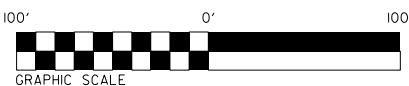
SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 38 FOR -Y- PROFILE
SEE SHEET 44 FOR -YI- PROFILE
SEE SHEET 44-45 FOR -YIA- PROFILE
SEE SHEET 45 FOR -YIB- PROFILE

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SHEET 72 OF 89

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

COINJOCK DEVELOPMENT COMPANY, INC.

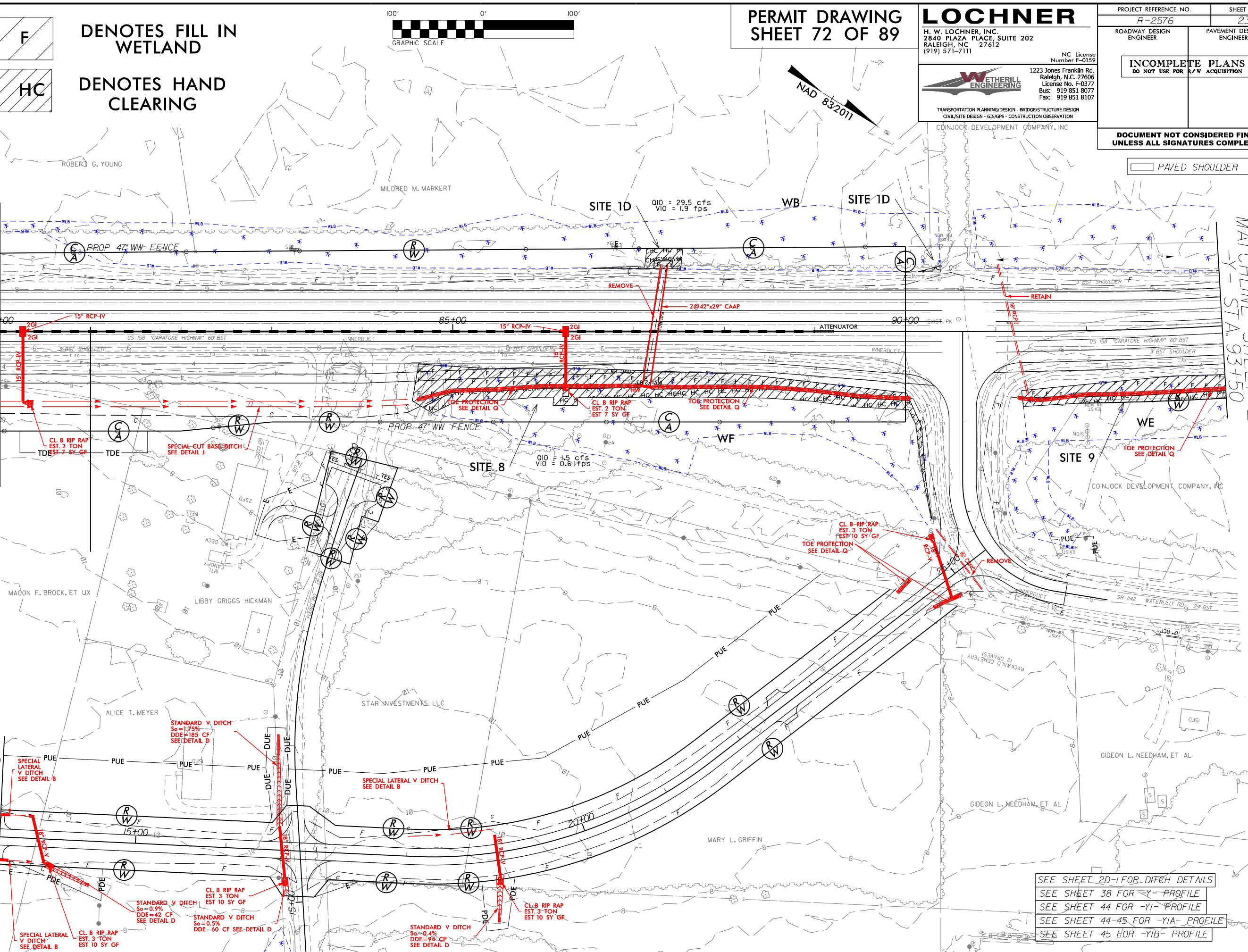
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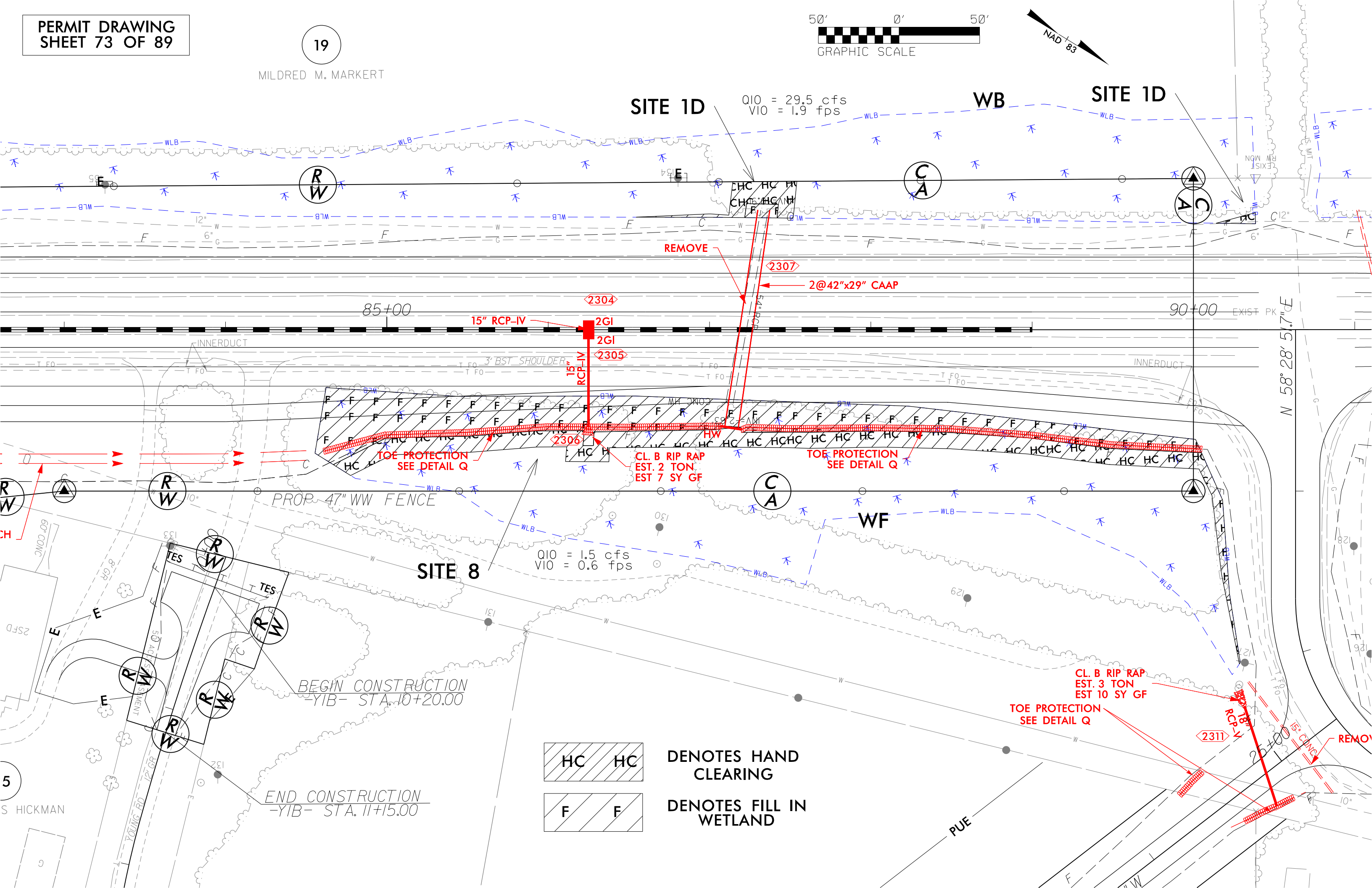
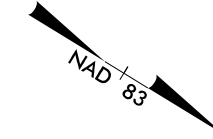
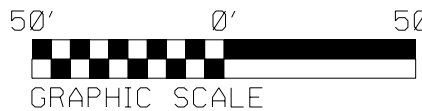
MATCHLINE SHEET 22
-Y- STA. 80+00

MATCHLINE SHEET 24
-Y- STA. 93+50

MATCHLINE SHEET 22
-YIA- STA. 13+50



SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 38 FOR -Y- PROFILE
SEE SHEET 44 FOR -YI- PROFILE
SEE SHEET 44-45 FOR -YIA- PROFILE
SEE SHEET 45 FOR -YIB- PROFILE



6/23/16



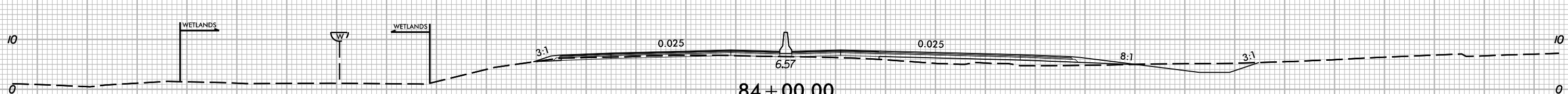
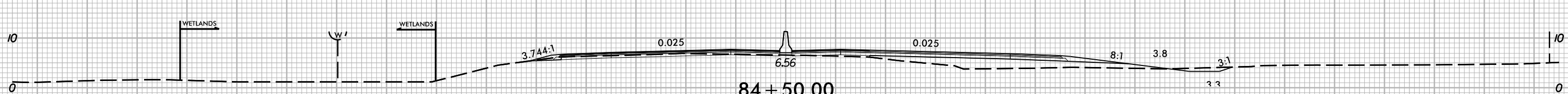
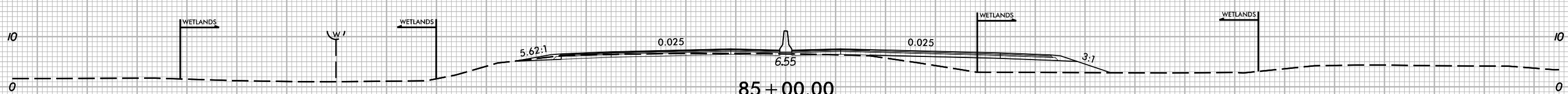
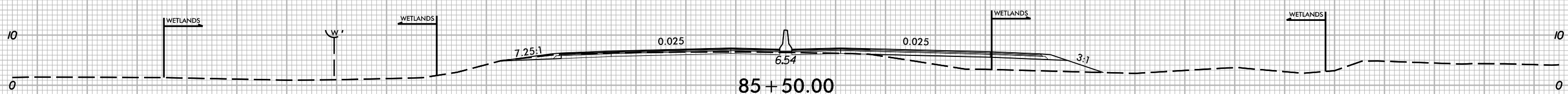
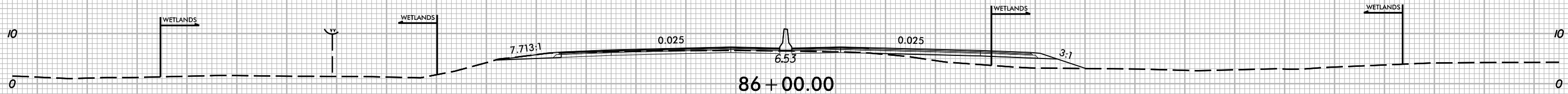
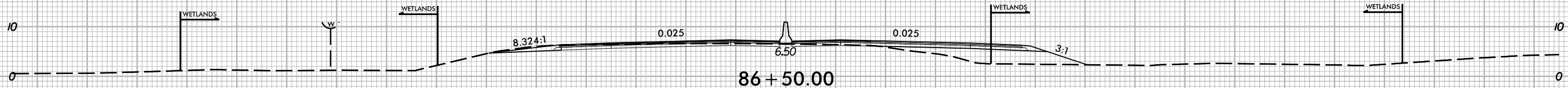
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R-2576

SHEET NO.
X-27

SITE 1D

SITE 8

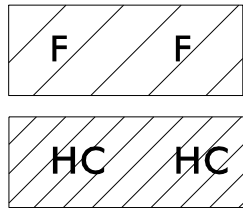
PERMIT DRAWING
SHEET 74 OF 89



-Y-

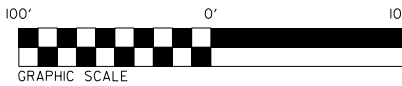
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SHEET 75 OF 89

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

PROJECT REFERENCE NO. SHEET NO.

R-2576

24

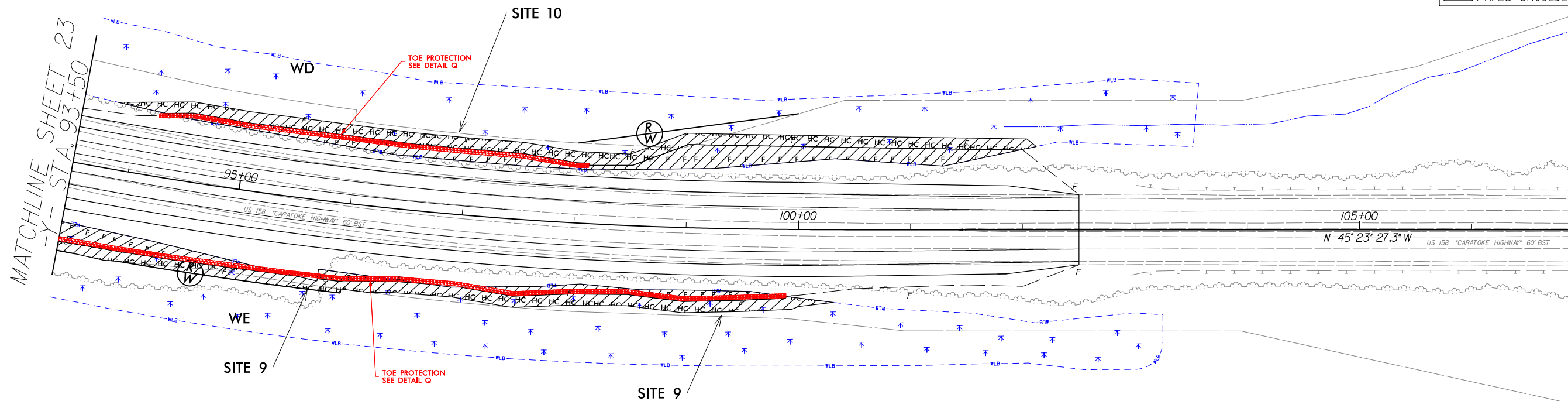
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ENGINEER

PAVEMENT DESIGN
ENGINEER

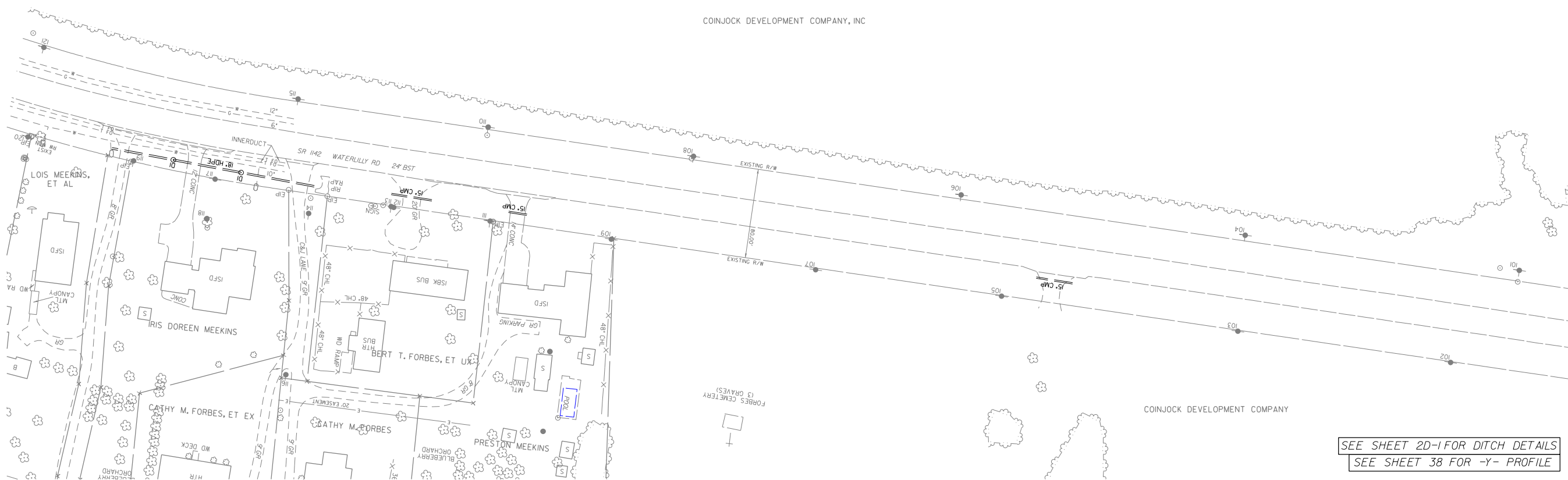
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

**DOCUMENT NOT CONSIDERED FINAL
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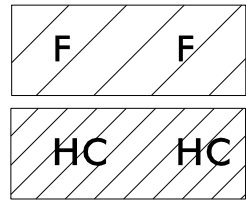


COINJOCK DEVELOPMENT COMPANY, INC



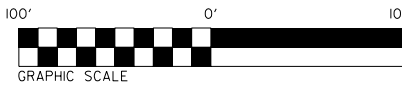
SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 38 FOR -Y- PROFILE

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SHEET 76 OF 89

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RALEIGH, NC 27612
(919) 371-7111

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Number F-0159



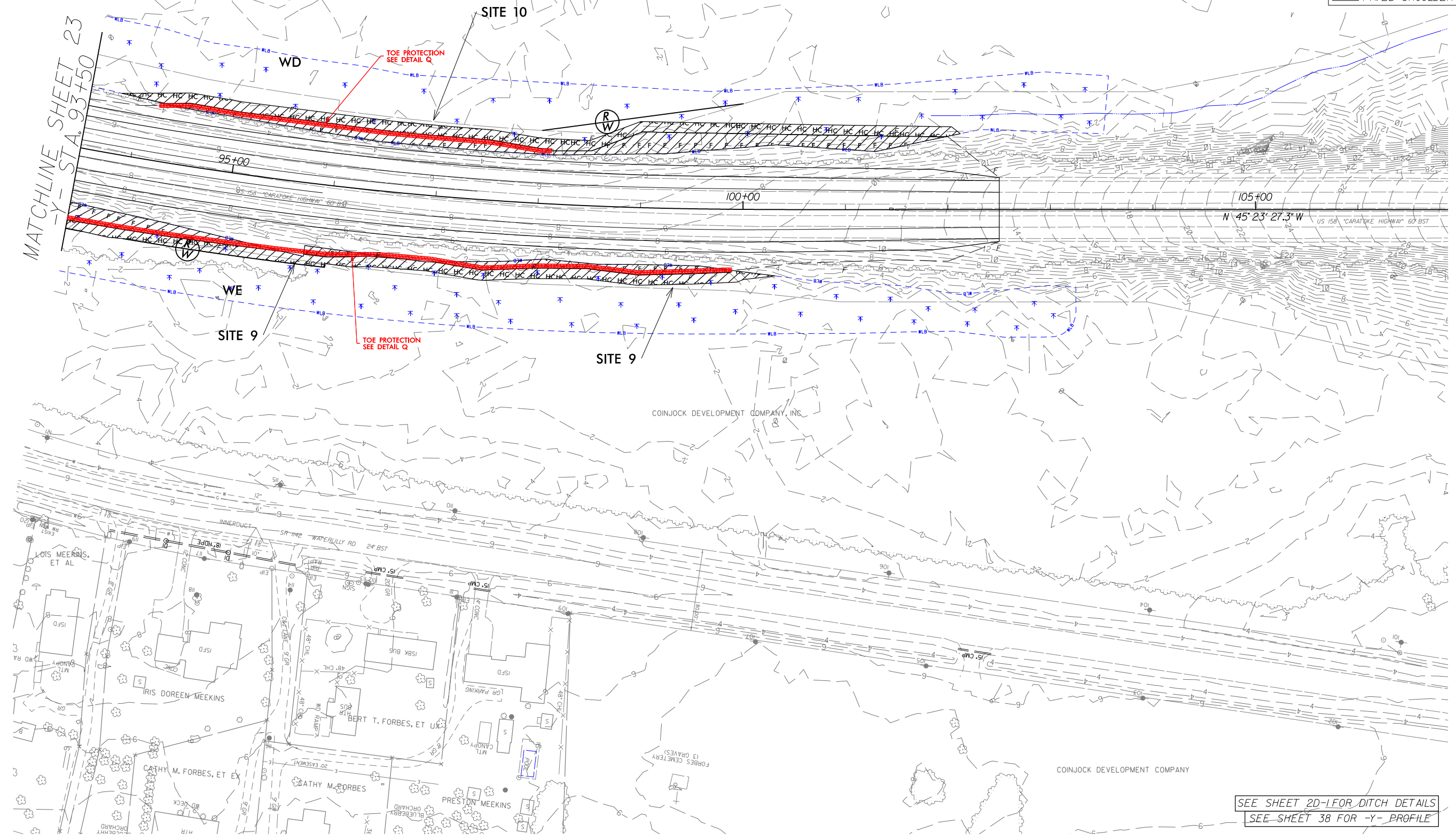
1223 Jones Franklin Rd.
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Fax: 919 851 8107

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

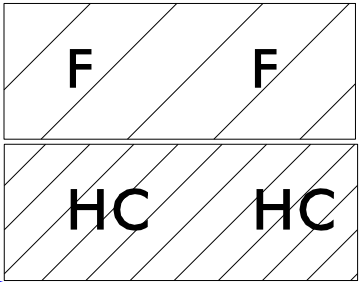
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R-2576		24	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

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PAVED SHOULDER

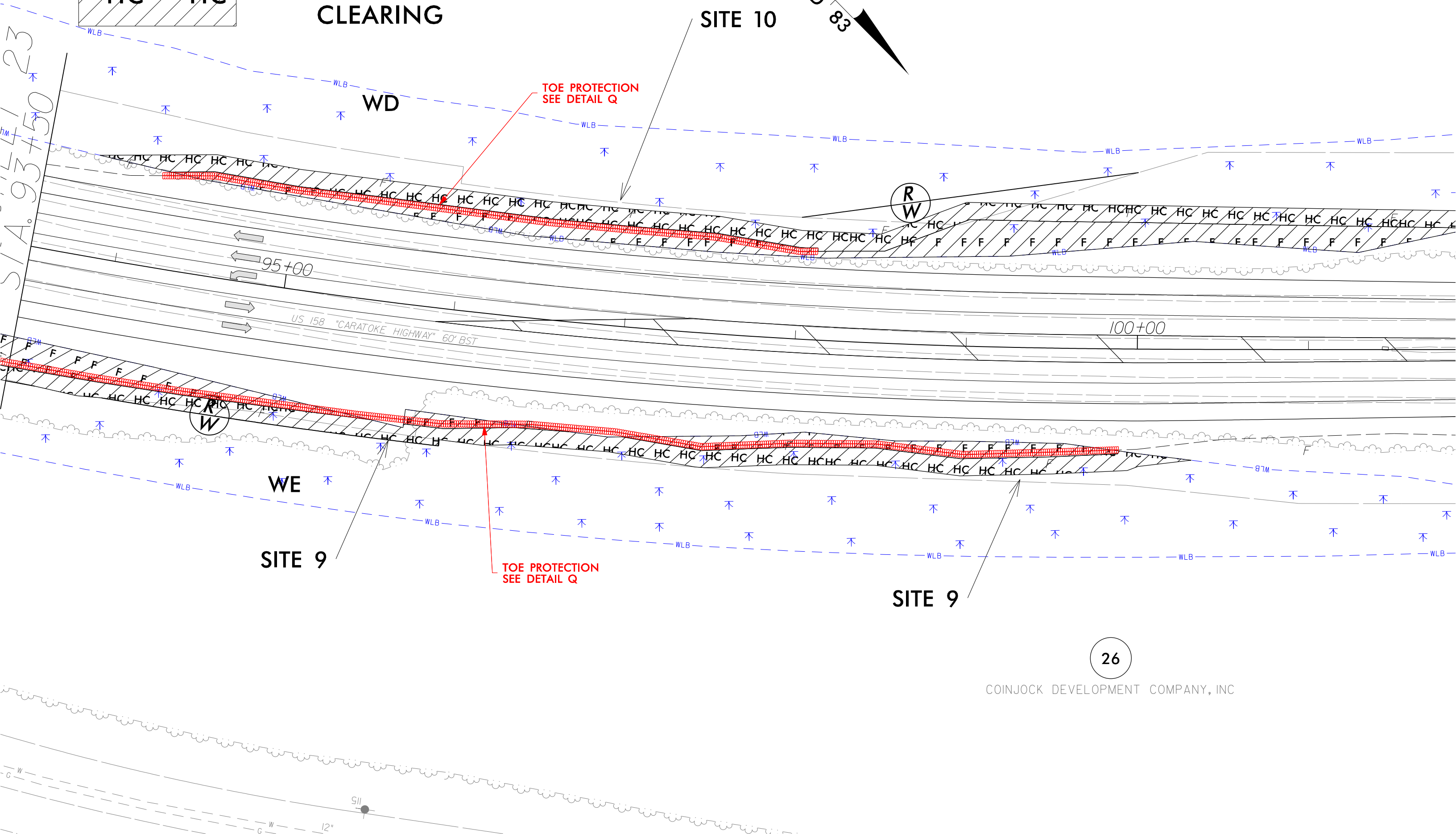
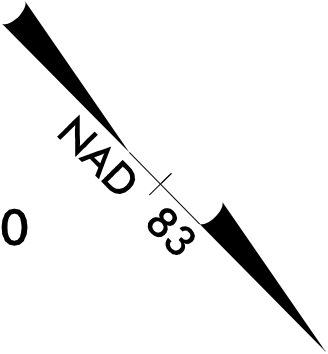
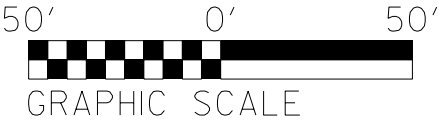


SEE SHEET 2D-L FOR DITCH DETAILS
SEE SHEET 38 FOR -Y- PROFILE



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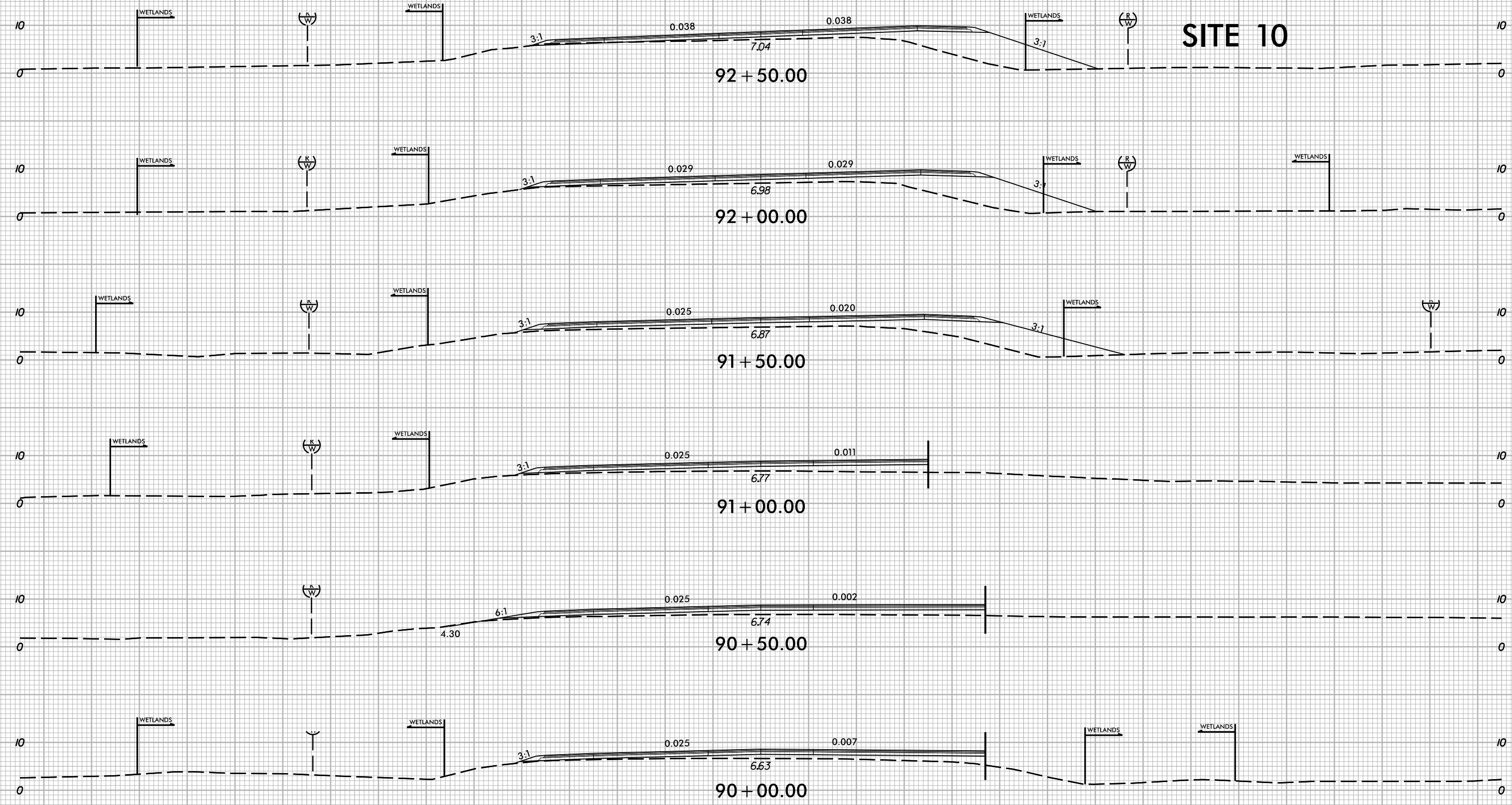
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PERMIT DRAWING
SHEET 78 OF 89

SITE 10



-Y-

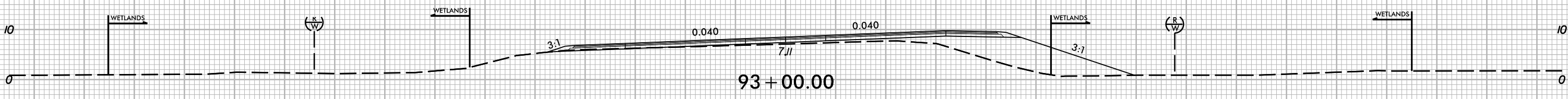
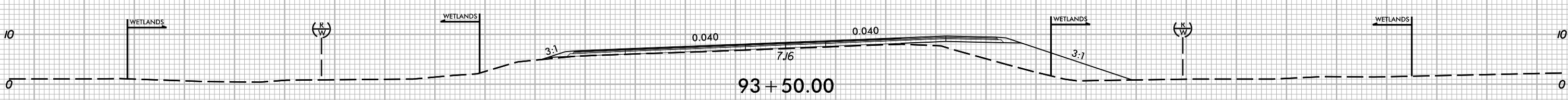
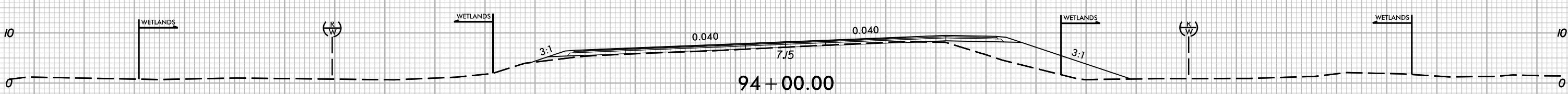
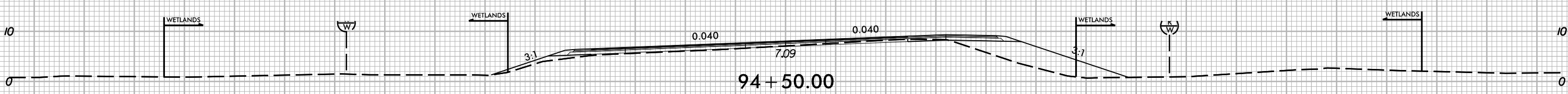
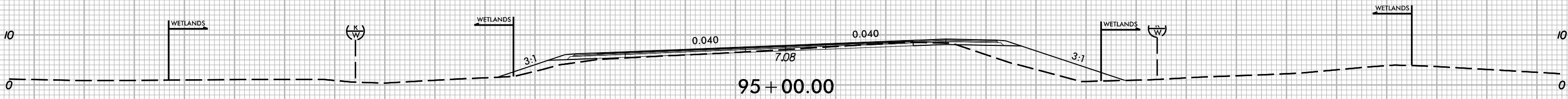
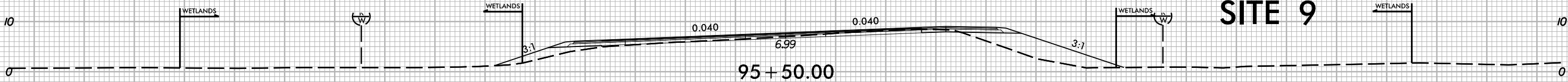
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6/23/16

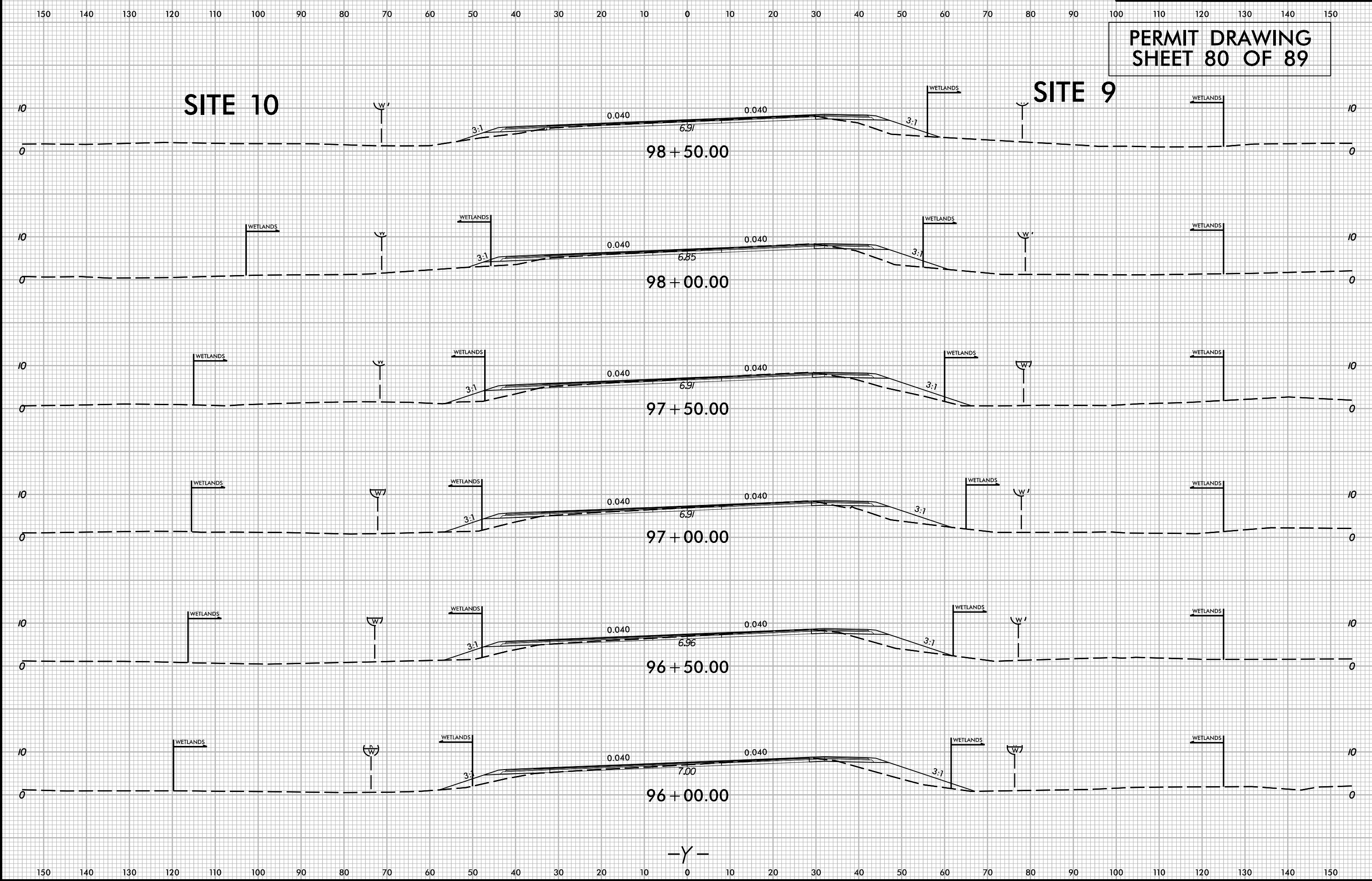
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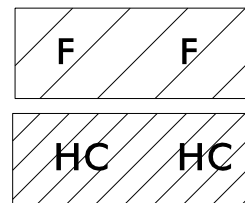
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PERMIT DRAWING
SHEET 79 OF 89



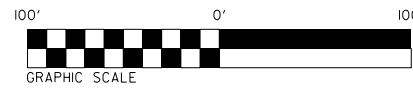
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SHEET 81 OF 89

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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

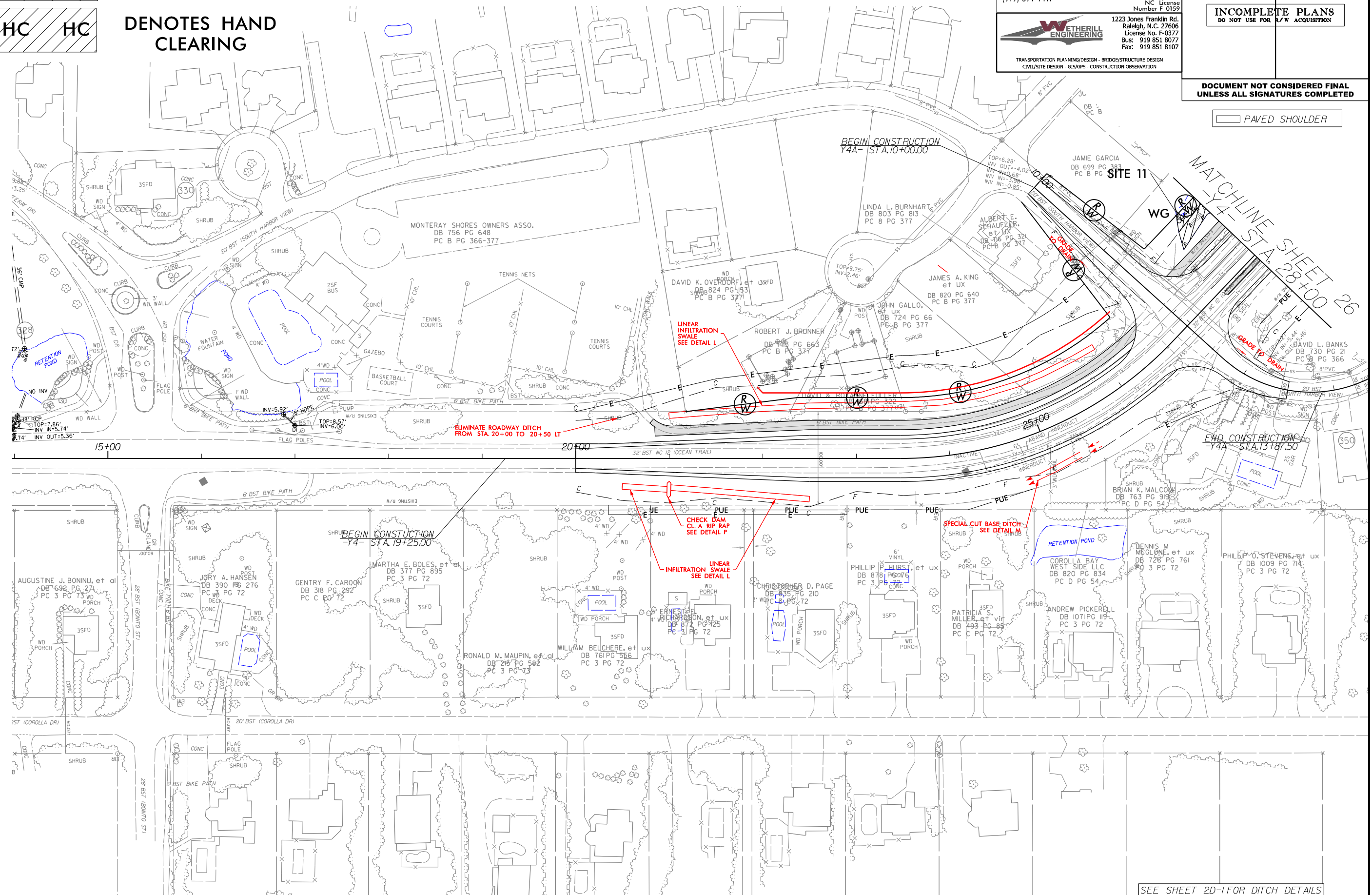
PROJECT REFERENCE NO.	SHEET NO.
R-2576	25

ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 48 FOR -Y4- PROFILE
SEE SHEET 49 FOR -Y4A- PROFILE

6/2/2024

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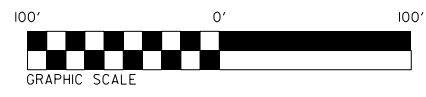
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HC

HC

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SHEET 82 OF 89

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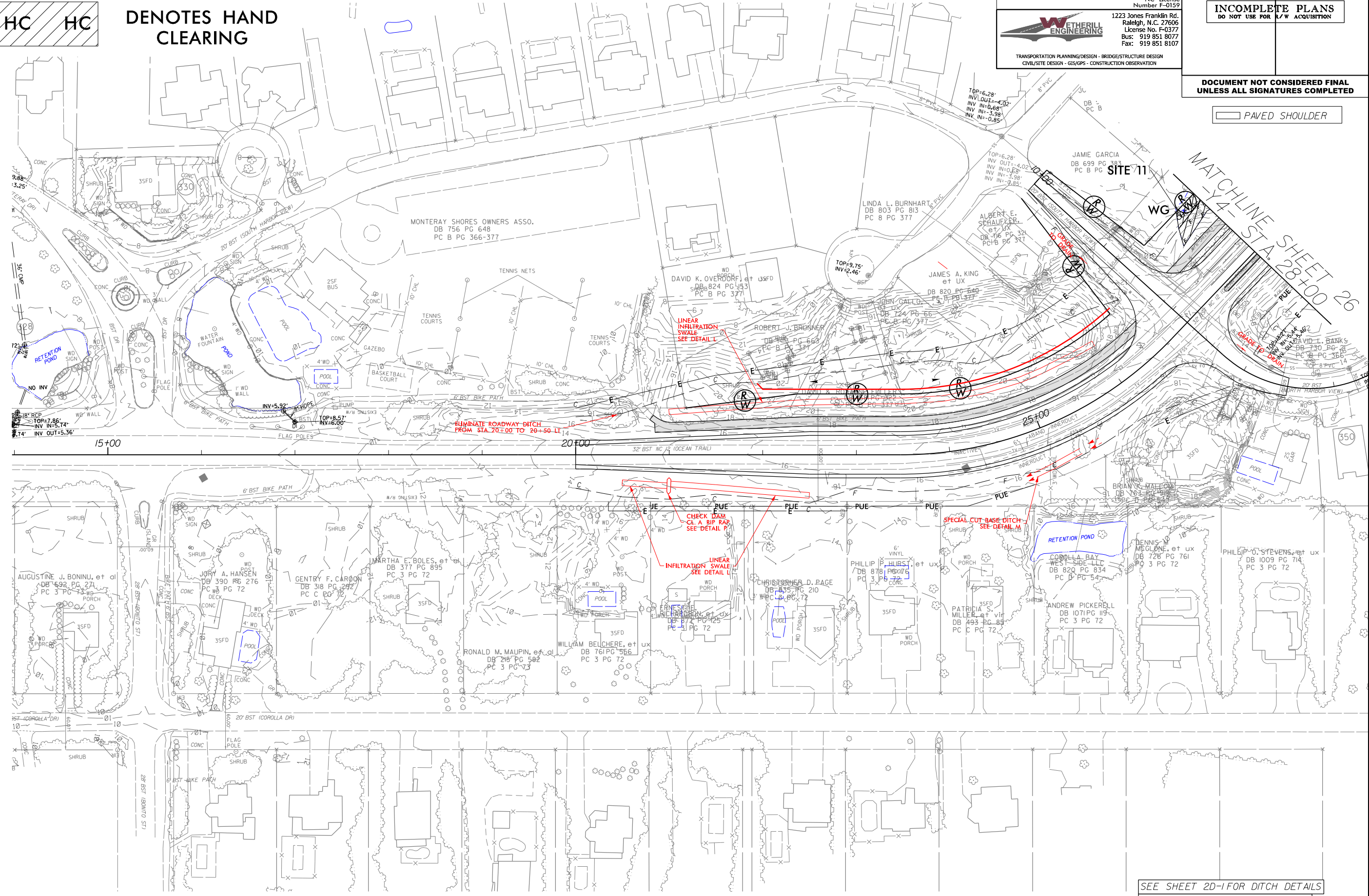
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
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ENGINEERING**

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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>R-2576</i>		SHEET NO. <i>25</i>	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PAVED SHOULDER

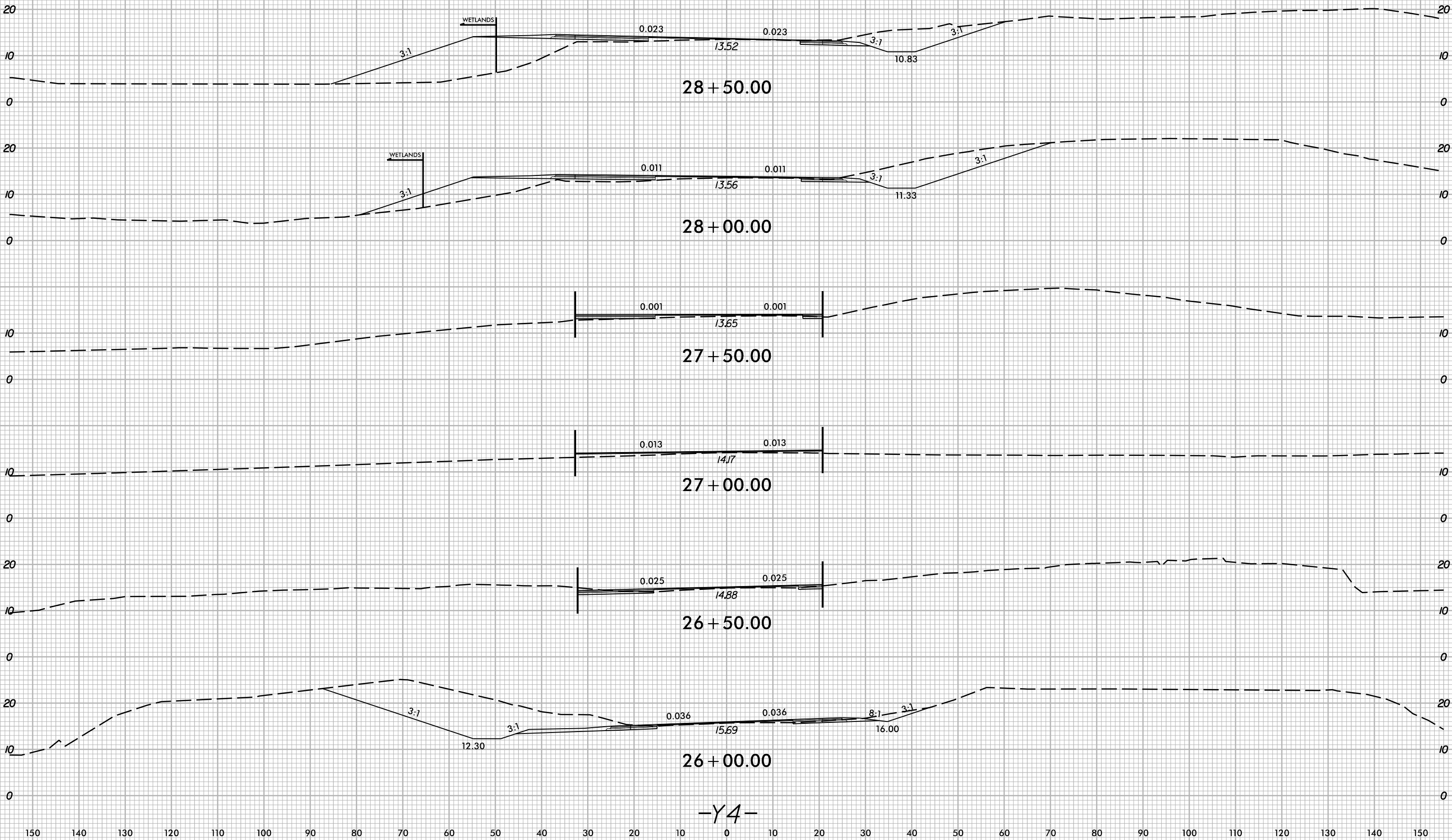


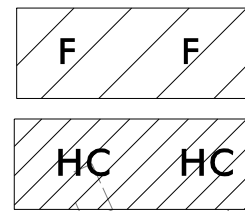
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SEE SHEET 48 FOR -Y4- PROFILE
SEE SHEET 49 FOR -Y4A- PROFILE

6/23/16

SITE 11

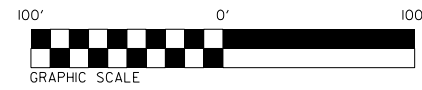
PERMIT DRAWING
SHEET 83 OF 89





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

PROJECT REFERENCE NO.

R-2576

SHEET NO.

6ROADWAY DESIGN
ENGINEER

PAVEMENT DESIGN ENGINEER

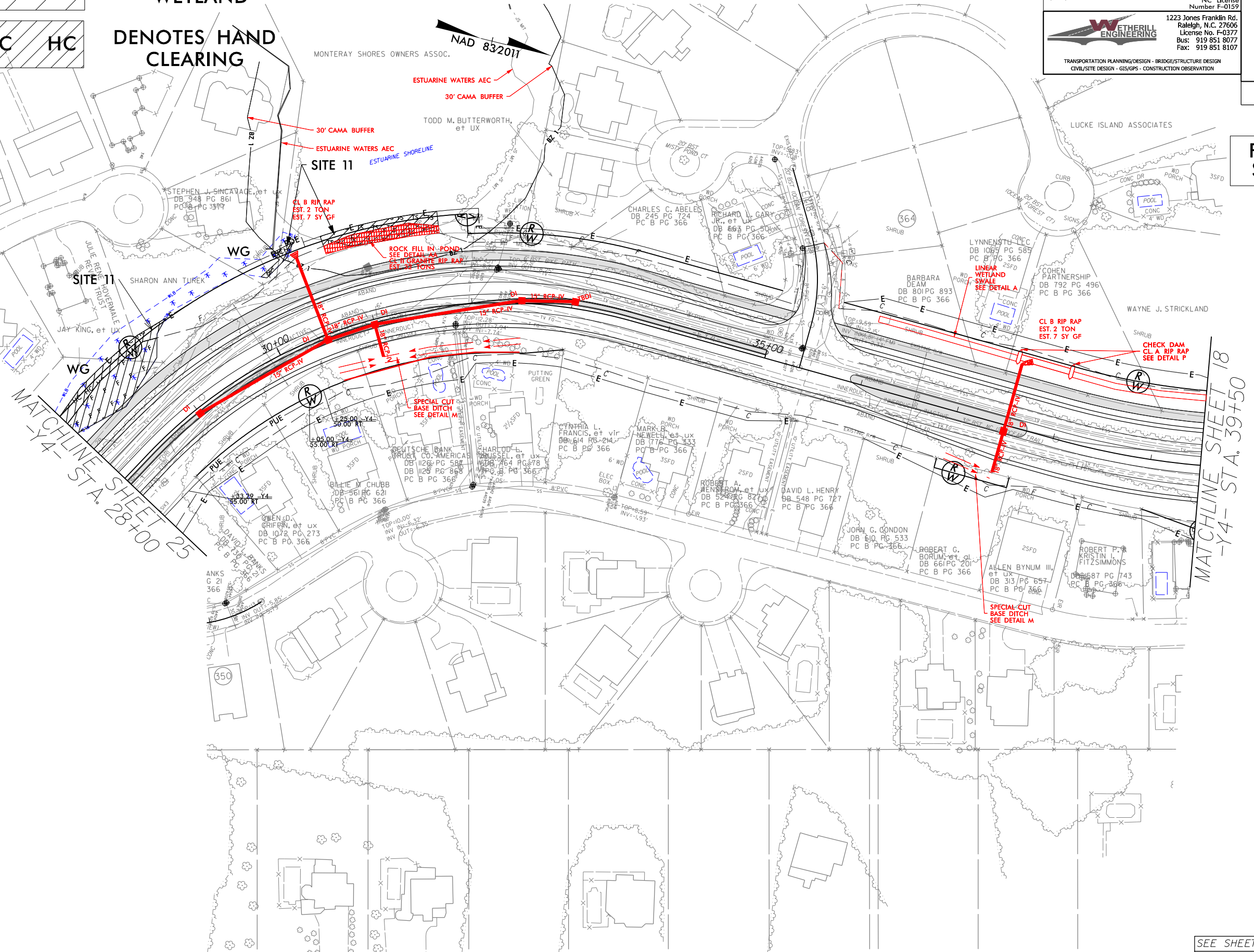
INCOMPLETE PLANS
DO NOT USE FOR A/C COMBUSTION

DO NOT USE FOR R/W ACQUISITION	
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PAVED SHOULDER

PERMIT DRAWING
SHEET 84 OF 89



MATCHLINE SHEET 18
-Y4- STA. 39+50

ATCHLINE SHEET
-Y4- STA. 39+50

MATCH - YZ

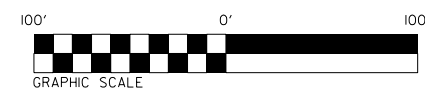
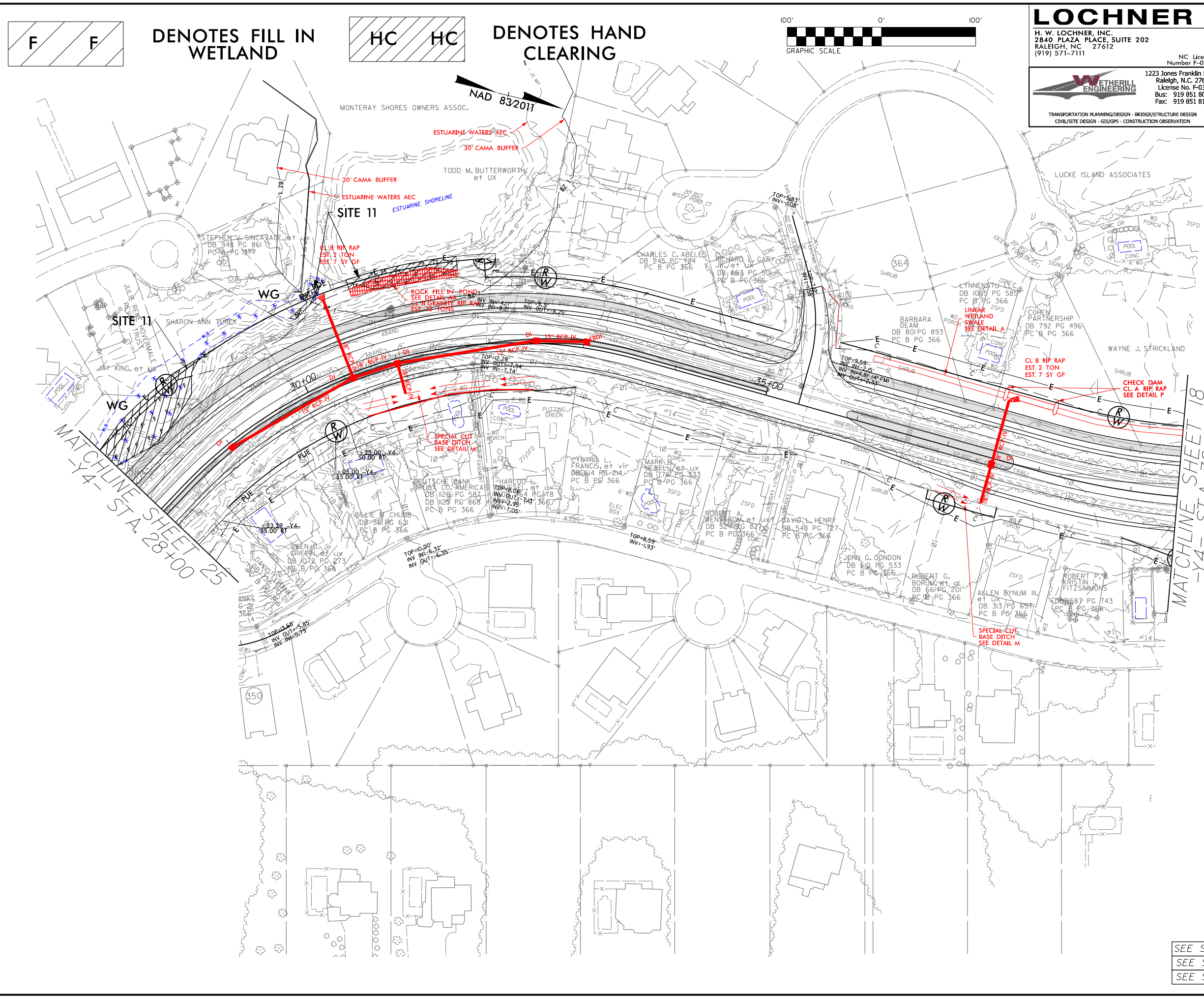
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SEE SHEET 2D-1 FOR DITCH DETAILS

SEE SHEET 48 FOR -Y4- PROFILE

SEE SHEET 49 FOR -Y4B- PROFILE

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USER: jcalford



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576	SHEET NO. 26
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PAVED SHOULDER

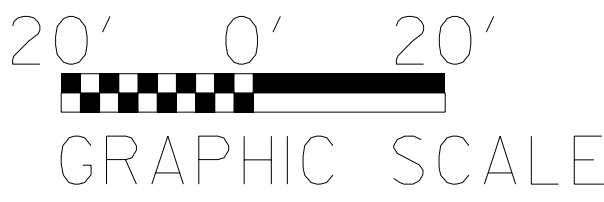
PERMIT DRAWING
SHEET 85 OF 89

MATCHLINE SHEET 18
-Y4- STA. 39+50

MATCHLINE SHEET 25
-Y4- STA. 28+00

SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 48 FOR -Y4- PROFILE
SEE SHEET 49 FOR -Y4B- PROFILE

PERMIT DRAWING
SHEET 86 OF 89



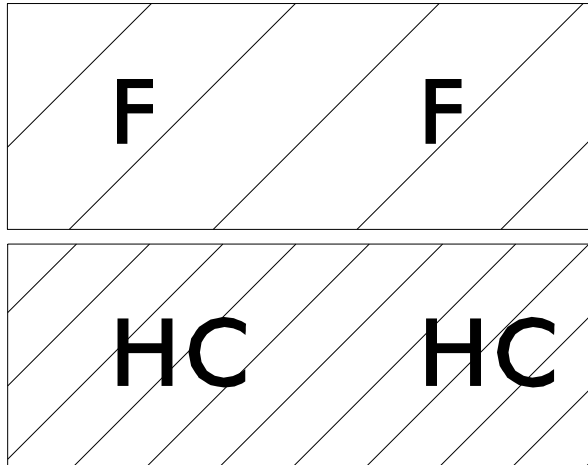
SITE 11

NAD 83

SITE 11

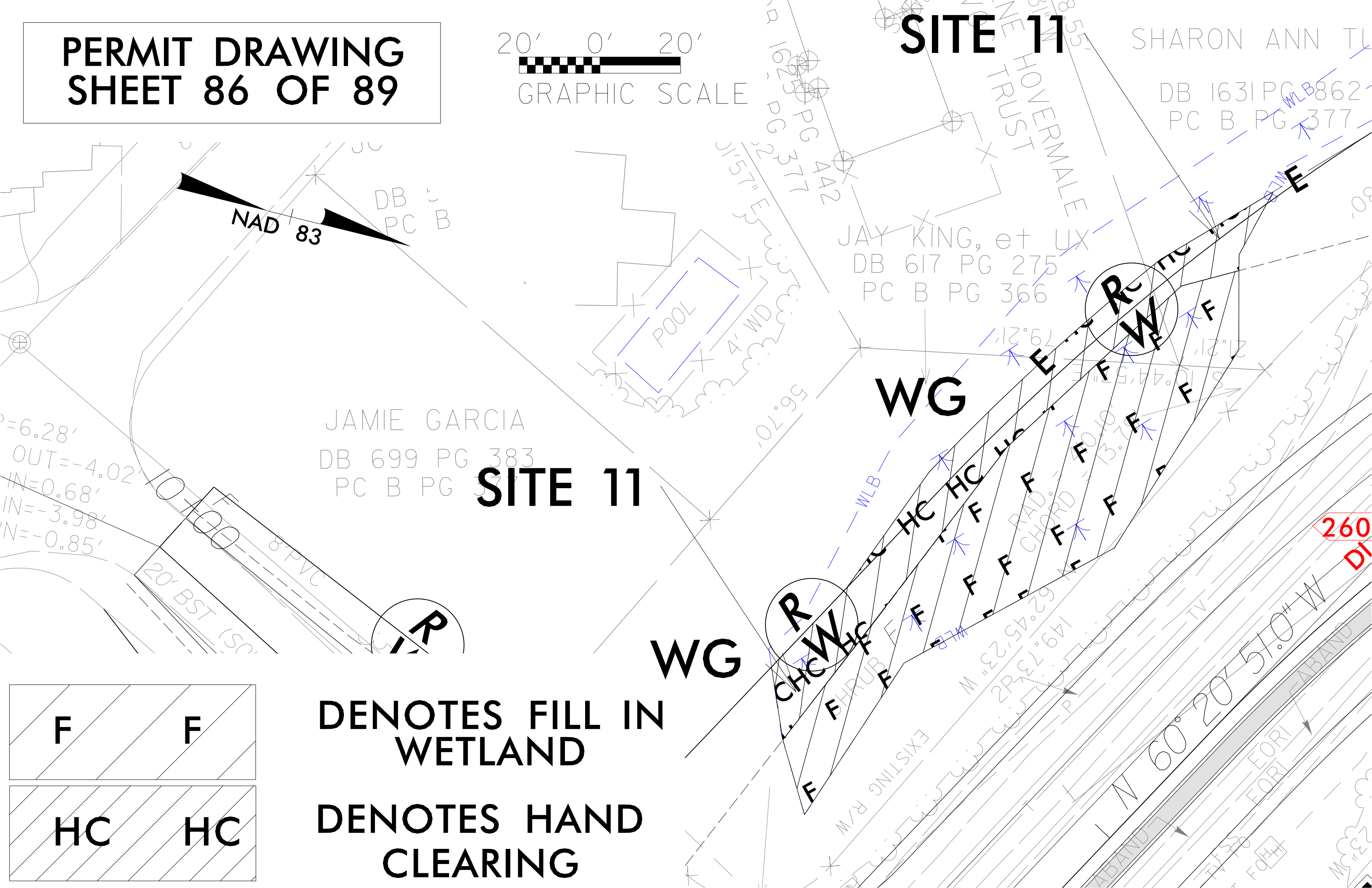
WG

WG

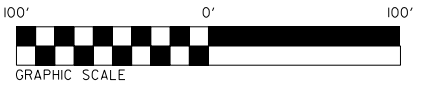


DENOTES FILL IN
WETLAND

DENOTES HAND
CLEARING



6/2/99 4/30/2024 R:\10\100\PERMITS-Environmental\psh\R2576.hyd.psh29.dgn USER: jhewer



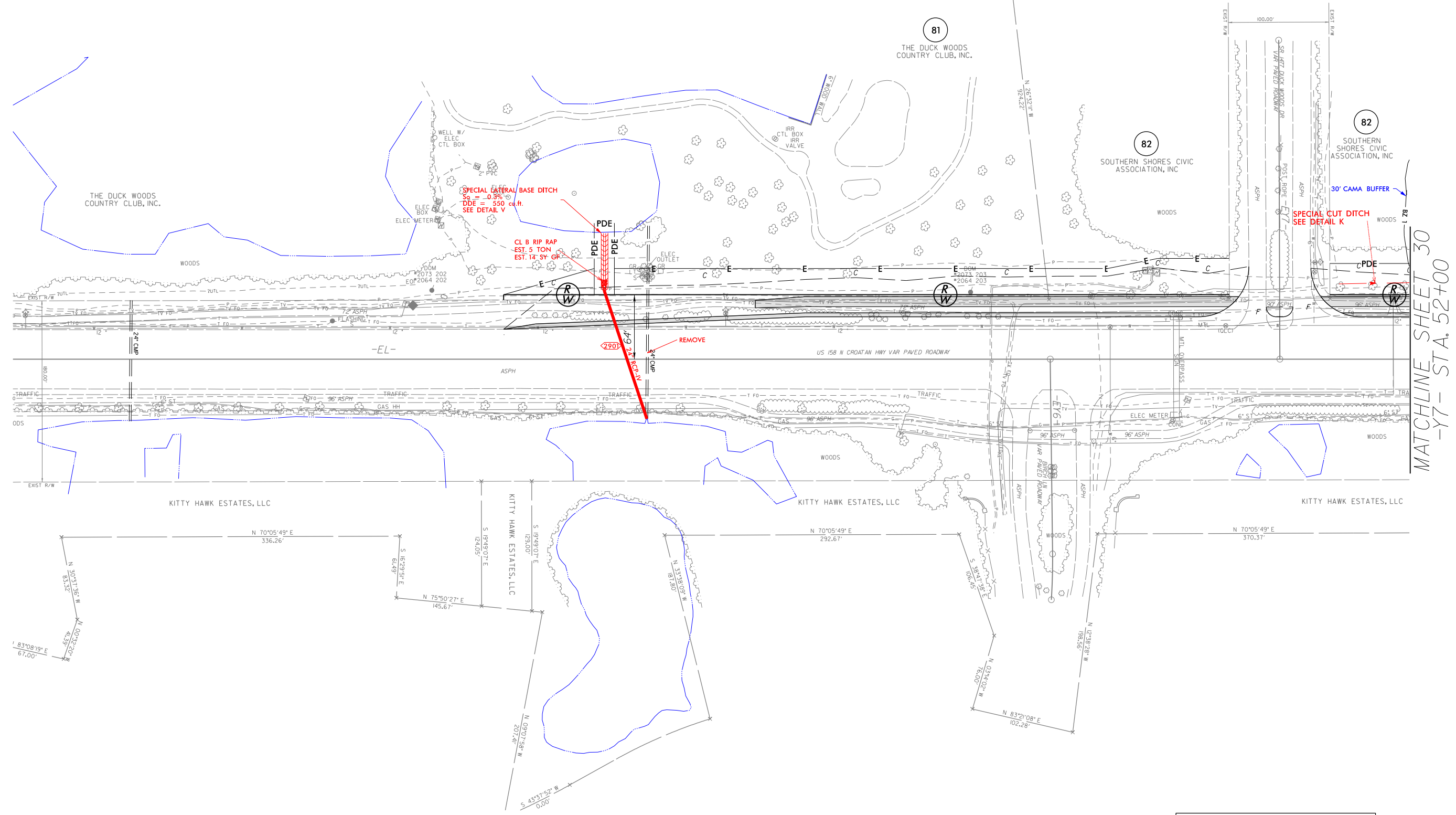
PERMIT DRAWING
SHEET 87 OF 89

NAD 83 2011

LOCHNER
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Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>R-2576</i>		SHEET NO. <i>29</i>	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PAVED SHOULDER			



MATCHLINE SHEET 30
-Y7- STA. 52+00

SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 50 FOR -Y7- PROFILE



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Number F-0159

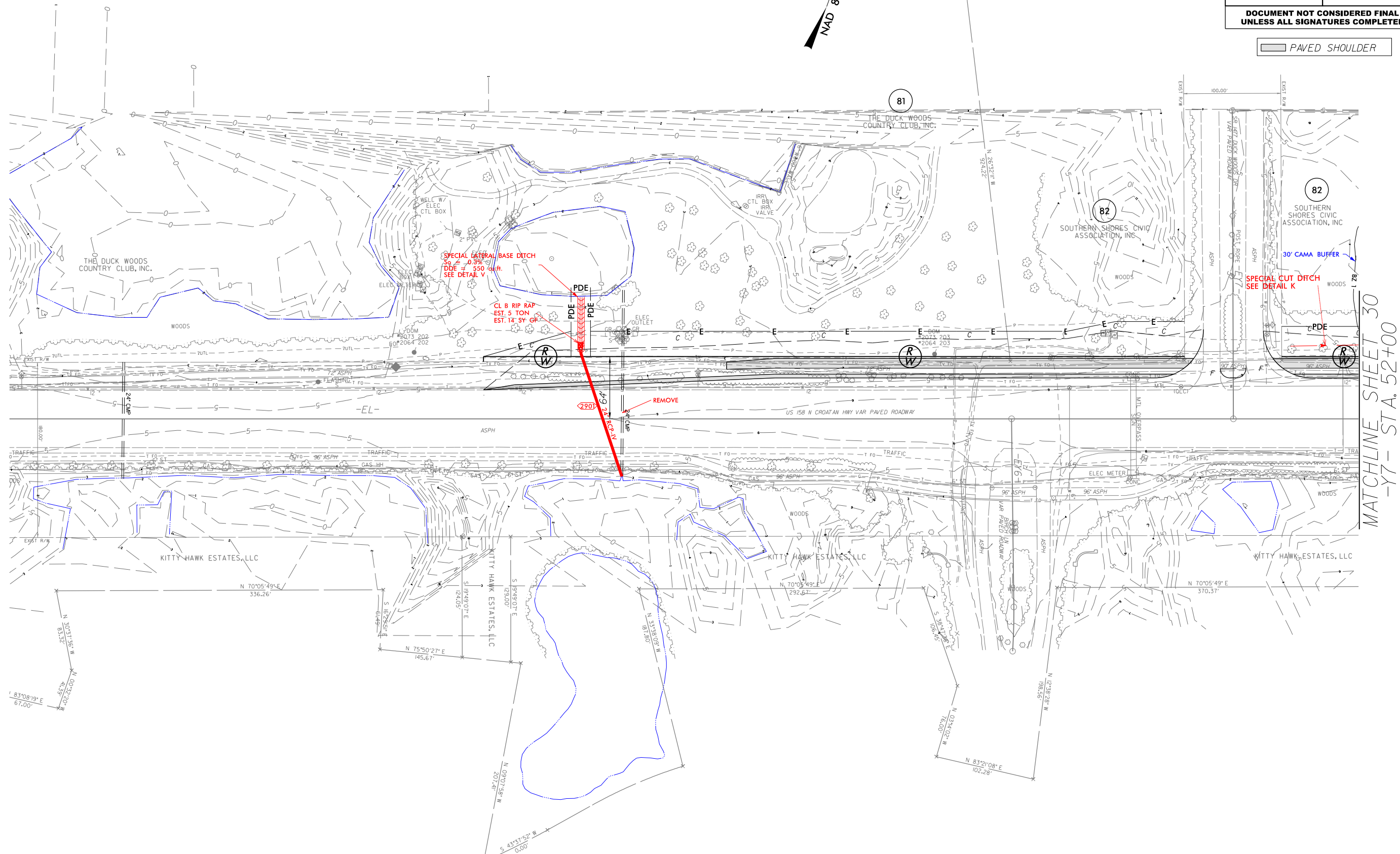
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Fax: 919 851 8077
Bus: 919 851 8107

 WETHERILL
ENGINEERING

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

PROJECT REFERENCE NO.	SHEET NO.
R-2576	29
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

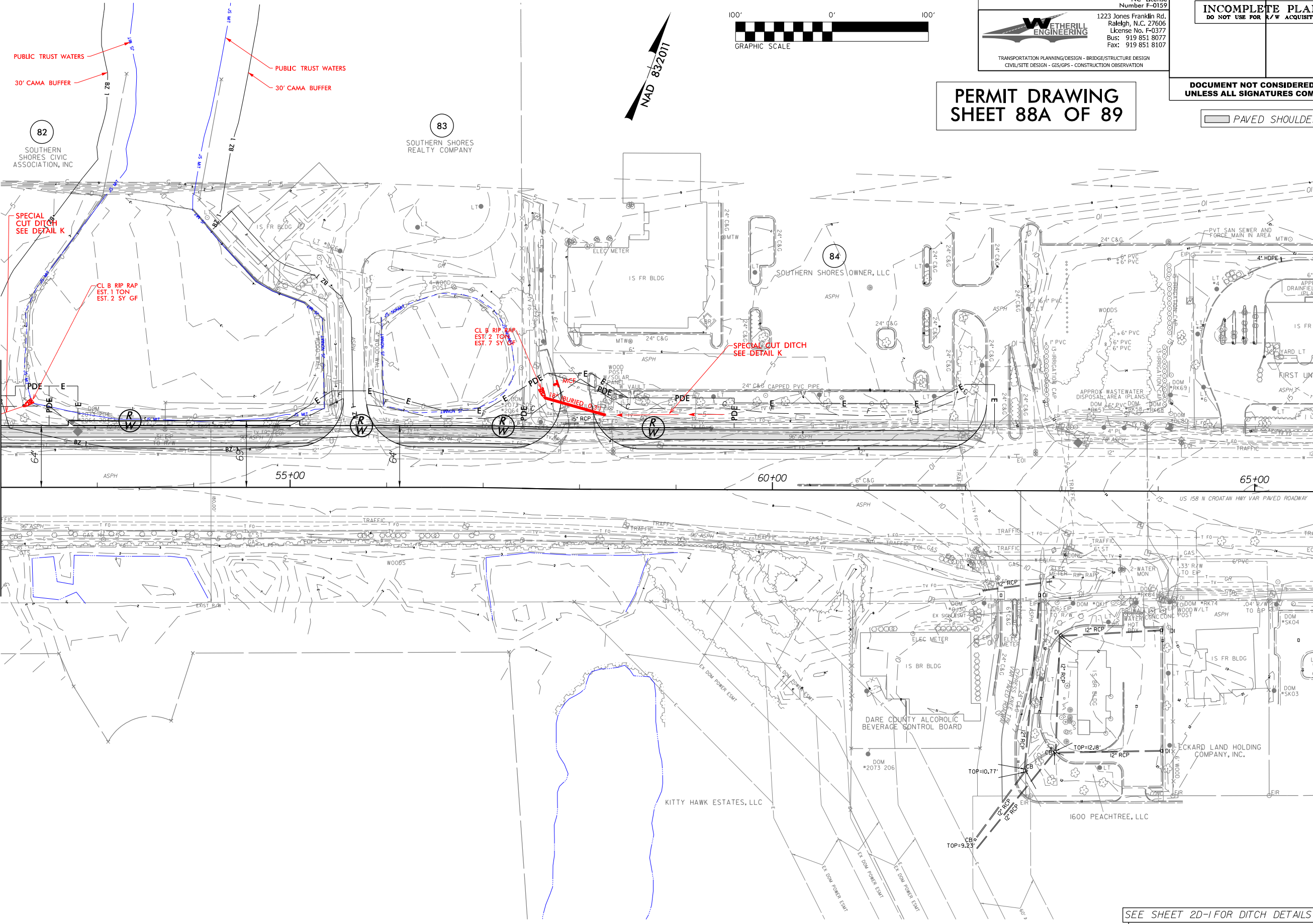
PAVED SHOULDER



SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 50 FOR -Y7- PROFILE

6/2/99 4/30/2024 R:\10\100\PERMITS-Environmental\psh\R2576_hyd.psh30.com.dgn USER: m...
4/30/2024 R:\10\100\PERMITS-Environmental\psh\R2576_hyd.psh30.com.dgn USER: m...

MATCHLINE SHEET 29
-Y7- STA. 52+00



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

**PERMIT DRAWING
SHEET 88A OF 89**

PROJECT REFERENCE NO. R-2576		SHEET NO. 30	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
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PAVED SHOULDER			

SEE SHEET 2D-1 FOR DITCH DETAILS
SEE SHEET 51 FOR -Y7- PROFILE

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1A	-Y- 40+26 to 42+66 LT	Fill with Toe Protection	0.02				0.05					
1B	-Y- 21+00 to 24+60 LT	Fill with Toe Protection	0.02				0.07					
1C	-Y- 68+65 to 73+00 LT	RipRap outlet/Proximity to Fill	< 0.01				0.02					
1D	-Y- 86+54 to 90+39 LT	2@42"x29" CAAP outlet	< 0.01				0.02					
1E	-Y- 14+74 to 18+10 LT	Fill slope	0.13				0.07					
2	-Y- 55+45	42" RCP-IV						0.04	< 0.01	228	9	
		Bank Stabilization						< 0.01		10		
3	-L- 23+00 to 100+60	Bridge	0.04	4.72		0.03	11.47					
4	-L- 119+00 to 364+00	Bridge										
		Shoreline Stabilization						0.13		229		
5	-Y4- 39+64 to -Y5R- 14+38 LT	Fill in Pond	0.26				0.08	0.04	0.02			
6	-Y5- 10+76 to 10+97 LT	Fill slope	< 0.01				< 0.01					
7	-Y5- 11+74 to 12+01 LT	Fill	< 0.01				0.01					
8	-Y- 84+55 to 90+18 RT	Fill with Toe Protection	0.24				0.14					
9	-Y- 91+28 to 100+32 RT	Fill with Toe Protection	0.19				0.19					
10	-Y- 93+80 to 102+12 LT	Fill with Toe Protection	0.18				0.18					
11	-Y4- 27+50 to 29+13 LT	Fill slope	0.09				0.05	0.02	0.03	105	118	
TOTALS*:			1.18	4.72		0.03	12.36	0.23	0.04	572	127	0

*Rounded totals are sum of actual impacts

NOTES:

Site 1 includes the entire wetland along the Y line (except near end of construction, North side of project)

Site 3 takes into account 1000' of 80' wide temp impacts due to matting at the beginning of the bridge, and 760' at the end.

Site 4 includes 2 temporary bridges for 2007' at the start of the bridge and 2 temporary bridges at the end (4035' and 535' for these two temporary bridges).

Site 4 includes 0.349 acres of Surface Water Impacts from bents and 0.108 acres of Temporary Surface Impacts.

0.13 Ac. of Temporary Fill will be provided for Hand Clearing areas for Erosion Control Devices.

All Wetlands are 404 (No CAMA Wetlands are Impacted)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
6/13/2024
Currituck Co.
R-2576