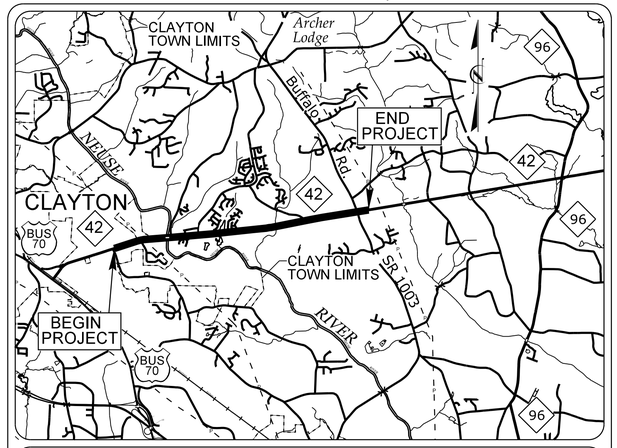
9/09/99

TIP PROJECT: R-3825B

CONTRACT:

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



VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

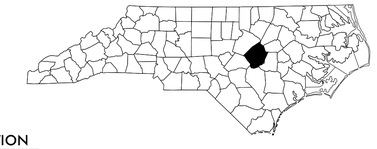
JOHNSTON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3825B	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
34552.1.FR3	STP-0042(58)	P.E.	

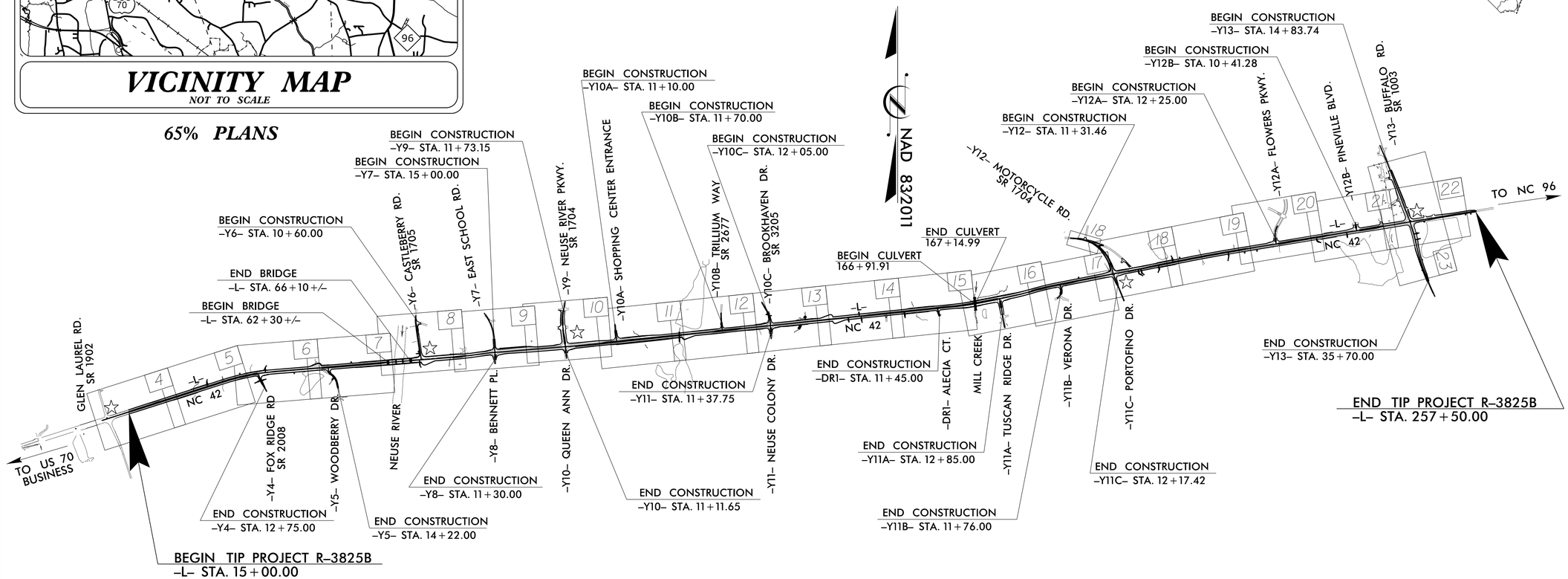
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LOCATION: NC 42 FROM SR 1902 (GLEN LAUREL RD) TO SR 1003 (BUFFALO RD)

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



65% PLANS



CLEARING ON THIS PROJECT WILL BE PERFORMED TO THE LIMITS ESTABLISHED BY NCDOT METHOD __.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2015 = 19,000
ADT 2040 = 37,400
K = 9%
D = 65%
T = 6% *
V = 60 MPH
* (TTST % + DUAL %)
FUNC. CLASS = RURAL MINOR ARTERIAL
REGIONAL TIER
DESIGN EXCEPTION (GRADE)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R–3825B = 4.517 MILES
LENGTH STRUCTURE TIP PROJECT R–3825B = 0.076 MILES
TOTAL LENGTH OF TIP PROJECT R–3825B = 4.593 MILES

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE • C-2243

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 17, 2016

LETTING DATE:
JUNE 19, 2018

ED EDENS, P.E.
PROJECT ENGINEER

KEVIN VAN METRE, P.E.
PROJECT DESIGN ENGINEER

GARY R. LOVERING, P.E.
PROJECT ENGINEER
NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

25-APR-2016 09:50
R:\Projects\R3825b_rdy_tsh.dgn
USER:tshaw
PWIDTH:1728
PDEPTH:1152

04/16/11

Note: Not to Scale

***S.U.E. = Subsurface Utility Engineering**

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	1B

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- 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 — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

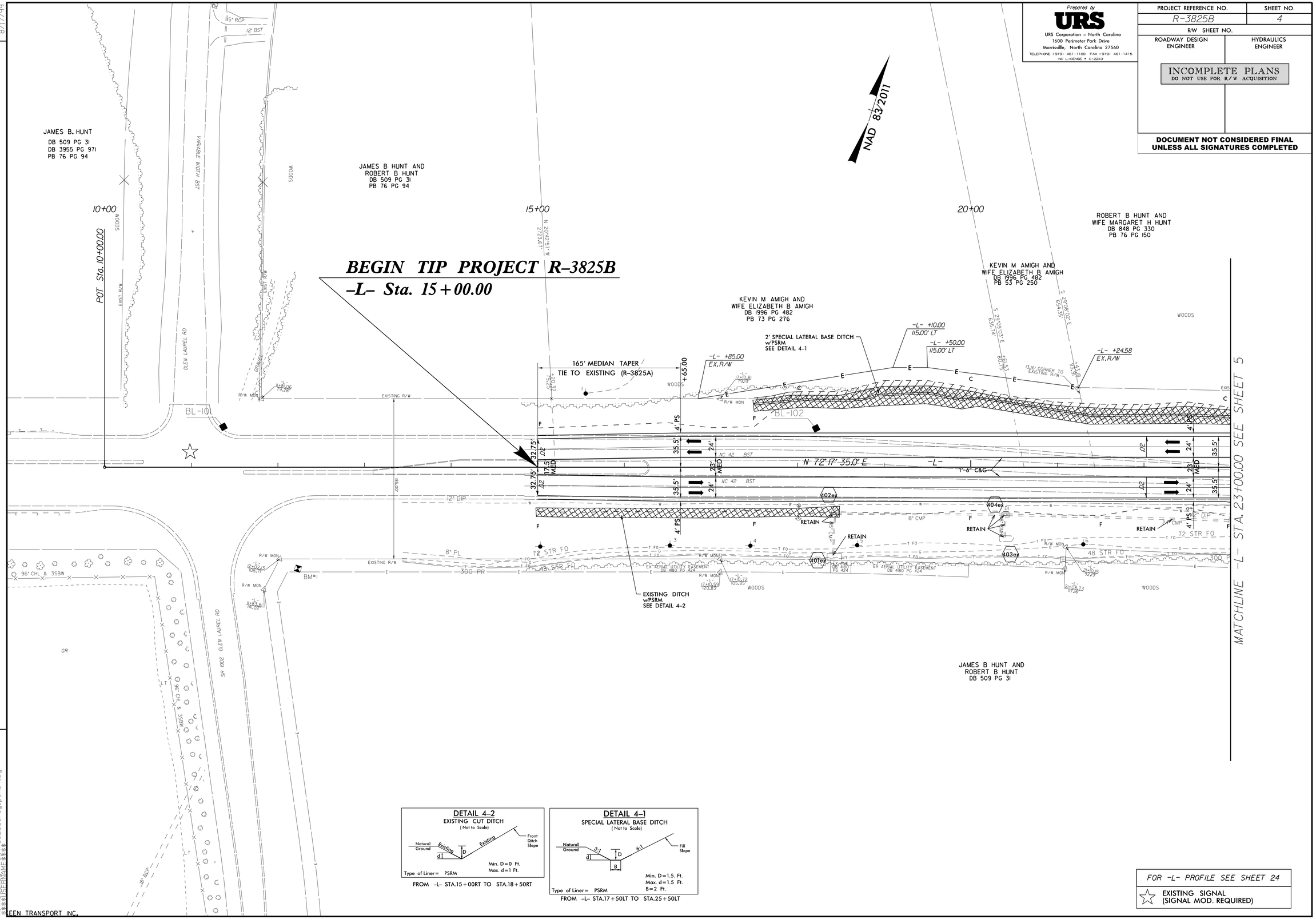
25-APR-2016 09:50
C:\Projects\R-3825B\r-3825b_rdy_tsh.dgn
$$$$USERNAME$$$$

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE • C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	4
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



FOR -L- PROFILE SEE SHEET 24

☆ EXISTING SIGNAL (SIGNAL MOD. REQUIRED)

REVISIONS

8/17/99

25-APR-2016 09:50
R:\Roadway\Proj\R3825b_rdy_psh04.dgn
$$$$USERNAME$$$$

EEN TRANSPORT INC.

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE: (919) 461-1100 FAX: (919) 461-1415
NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	5
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

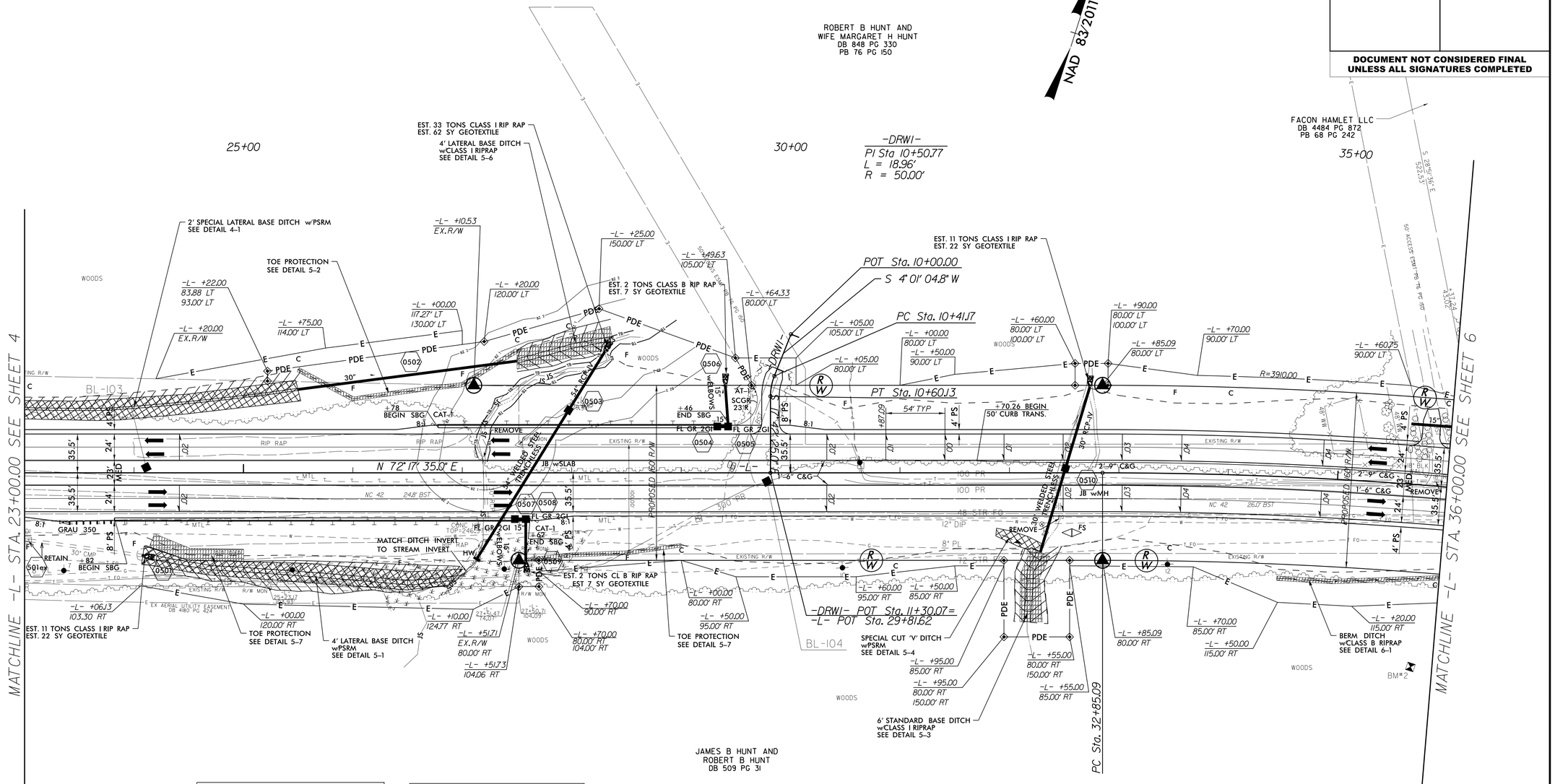
REVISIONS 8/17/99

NAD 83/2011

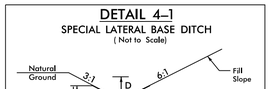
ROBERT B HUNT AND WIFE MARGARET H HUNT
DB 848 PG 330
PB 76 PG 150

FACON HAMLET LLC
DB 4484 PG 872
PB 68 PG 242

JAMES B HUNT AND ROBERT B HUNT
DB 509 PG 31



DETAIL 4-1
SPECIAL LATERAL BASE DITCH
(Not to Scale)

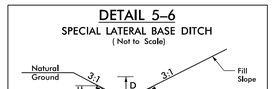


Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2 Ft.
Type of Liner= PSRM
FROM -L- STA.17+50LT TO STA.25+50LT

DETAIL 5-7
TOE PROTECTION
(Not to Scale)

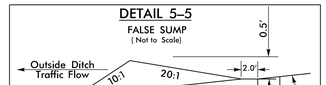
d=2 Ft.
b=5 Ft.
Type of Liner= Class B Rip-Rap
FROM -L- STA.27+60RT TO STA.29+00RT
FROM -L- STA.24+15RT TO STA.25+00RT

DETAIL 5-6
SPECIAL LATERAL BASE DITCH
(Not to Scale)



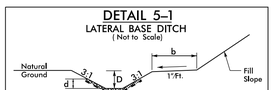
Min. D=2 Ft.
Max. d=2 Ft.
B=4 Ft.
Type of Liner= Class I Rip-Rap
FROM -L- STA. 27+50LT TO STA. 28+35LT

DETAIL 5-5
FALSE SUMP
(Not to Scale)



-L- STA.32+49RT, TOP ELEV.=252.85'

DETAIL 5-1
LATERAL BASE DITCH
(Not to Scale)

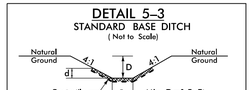


Min. D=2 Ft.
Max. d=2 Ft.
B=4 Ft.
b=5 Ft.
*When B is < 6.0'
Type of Liner= PSRM
FROM -L- STA. 24+10RT TO STA. 27+05RT

DETAIL 5-2
TOE PROTECTION
(Not to Scale)

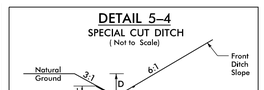
d= 1 Ft.
b = 6 Ft.
Type of Liner= Class B Rip-Rap
FROM -L- STA. 25+50LT TO STA. 27+50LT

DETAIL 5-3
STANDARD BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=6 Ft.
Type of Liner= Class I Rip-Rap
FROM -L- STA. 32+16RT TO STA. 32+28RT
EST. 80 TONS CLASS I RIPRAP, EST. DDE 101CY,
EST. 134SY GEOTEXTILE

DETAIL 5-4
SPECIAL CUT DITCH
(Not to Scale)



Min. D=1 Ft.
Max d=1 Ft.
Type of Liner= PSRM
FROM -L- STA. 31+90RT TO STA. 32+28RT

DETAIL 6-1
BERM DITCH
(Not to Scale)

Min. D=1.5 Ft.
Max. d=1.0 Ft.
Type of Liner= CLASS B RIPRAP
FROM -L- STA.34+50RT TO STA.38+00RT

FOR -L- PROFILE SEE SHEET 24

25-APR-2016 09:50
R3825b_rdy_psh05.dgn
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8/17/99

REVISIONS

-L- NC 42

PI Sta 37+23.14
△ = 13° 05' 00.0" (RT)
D = 1° 29' 59.6"
L = 872.29'
T = 438.05'
R = 3,820.00'
e = 4%
Runoff = 216'

-DRW2-

PI Sta 10+49.85
L = 31.97'
R = 50.00'

-Y4- FOX RIDGE RD

PI Sta 10+25.69
△ = 12° 41' 31.1" (LT)
D = 24° 48' 12.1"
L = 51.17'
T = 25.69'
R = 231.00'

PI Sta 11+42.18
△ = 3° 18' 13.3" (LT)
D = 5° 43' 46.5"
L = 57.66'
T = 28.84'
R = 1,000.00'

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT

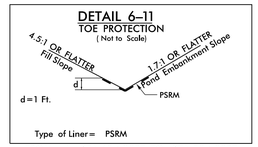
NC 42 — 190/374 — 2/3 — <1/<1 — 188/371 — NC 42

2/3

SR 2008

FOX RIDGE RD.

DETAIL 6–11
TOE PROTECTION
(Not to Scale)

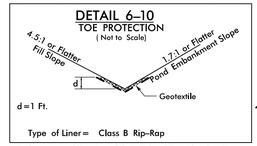


d=1 Ft.

Type of Liner= PSRM

FROM -L- STA.48+30RT TO STA.50+00RT

DETAIL 6–10
TOE PROTECTION
(Not to Scale)



d=1 Ft.

Type of Liner= Class B Rip-Rap

FROM -L- STA.47+36RT TO STA.48+30RT

NAD 83/2011

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE: (919) 461-1100 FAX: (919) 461-1415
NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	6
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

40+00

45+00

MATCHLINE -L- STA. 36+00.00 SEE SHEET 5

MATCHLINE -L- STA. 49+00.00 SEE SHEET 7

-L- POC Sta. 38+97.23 =
-Y4- POC Sta. 10+00.00

POT Sta. 10+00.00

PC Sta. 10+33.29

PT Sta. 10+65.26

-DRW2- POT Sta. 11+30.00 =
-L- POC Sta. 40+33.15

PI Sta. 10+51.37

PC Sta. 11+13.35

POT Sta. 10+00.00

-DRW15- POT Sta. 11+20.00 =
-Y4- POC Sta. 11+30.02

END CONSTRUCTION
-Y4- POT Sta. 12+75.00

POT Sta. 13+59.32

PI Sta. 10+52.88

PT Sta. 41+57.38

-DRW16- POT Sta. 10+00.00 =
-Y4- POC Sta. 11+46.81

PT Sta. 11+71.01

FACON HAMLET LLC
DB 4484 PG 872
PB 68 PG 242

EST. 26 TONS CLASS I RIP RAP
EST. 56 SY GEOTEXTILE

78 SY PSRM

TOE PROTECTION SEE DETAIL 6-6

5" MONOLITHIC ISLAND

100' MEDIAN TRANSITION

54" TYP.

+37.76 BEGIN 50' CURB TRANS.

+12.76 2' R

+55.76 2' R

100' TAPER

CUT DITCH wPSRM SEE DETAIL 6-2

EST. 2 TONS CLASS B RIP RAP
EST. 7 SY GEOTEXTILE

BERM DITCH wCLASS B RIPRAP SEE DETAIL 6-1

EST. 2 TONS CLASS B RIP RAP
EST. 7 SY GEOTEXTILE

STEVENSON E WILSON AND WIFE MAJORIE WILSON
DB 1002 PG 134
PB 26 PG 45

KEVIN T HAMILTON
DB 1221 PG 98
PB 26 PG 45

CHRISTY L HOBBY
DB 1255 PG 547
PB 26 PG 45

JASON A WILLIAMS AND JOSEPH T LORENZO
DB 3603 PG 722
PB 26 PG 45

ALVIN BROUGHTON JR AND WIFE CAROL BROUGHTON
DB 721 PG 127
PB 76 PG 52

TODD NARRON
DB 3949 PG 977
PB 76 PG 52

TOE PROTECTION SEE DETAIL 6-4

TOE PROTECTION SEE DETAIL 6-6

180' TRANSITION

+77 BEGIN SBG

TOE PROTECTION SEE DETAIL 6-10

TOE PROTECTION SEE DETAIL 6-11

RIP RAP RAP AT EMBANKMENT SEE DETAIL 6-9

6' STANDARD BASE DITCH wCLASS B RIPRAP SEE DETAIL 6-8

8' STANDARD BASE DITCH wCLASS II RIPRAP SEE DETAIL 6-7

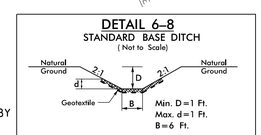
6" DIP RISER INV. INACCESSABLE DUE TO BLOCKAGE IN PIPE

54" RCP-IV

GRADE TO DRAIN

POND WE = 196.6

DETAIL 6–8
STANDARD BASE DITCH
(Not to Scale)

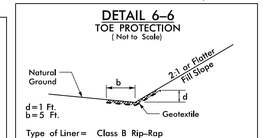


Min. D=1 Ft.
Max. d=1 Ft.
B=6 Ft.

Type of Liner= Class B Rip-Rap

FROM -L- STA.46+45RT TO STA.46+85RT
EST. 20TONS CLASS B RIPRAP, EST. DDE 26CY,
EST. 44SY GEOTEXTILE

DETAIL 6–6
TOE PROTECTION
(Not to Scale)

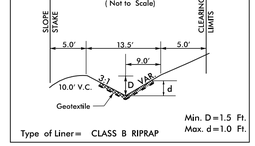


d=1 Ft.
b=5 Ft.

Type of Liner= Class B Rip-Rap

FROM -L- STA.36+65LT TO STA.37+75LT
FROM -L- STA.48+65LT TO STA.49+25LT

DETAIL 6–1
BERM DITCH
(Not to Scale)

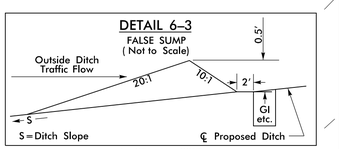


Min. D=1.5 Ft.
Max. d=1.0 Ft.

Type of Liner= CLASS B RIPRAP

FROM -L- STA.34+50RT TO STA.38+00RT

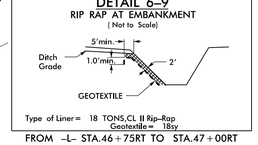
DETAIL 6–3
FALSE SUMP
(Not to Scale)



S=Ditch Slope

-L- STA. 46+92LT

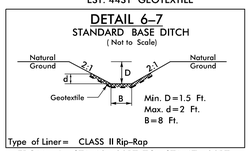
DETAIL 6–9
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 18 TONS,CL II Rip-Rap
Geotextile= 18sy

FROM -L- STA.46+75RT TO STA.47+00RT

DETAIL 6–7
STANDARD BASE DITCH
(Not to Scale)

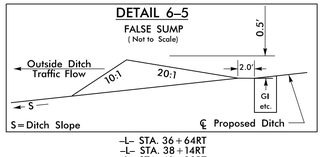


Min. D=1.5 Ft.
Max. d=2 Ft.
B=8 Ft.

Type of Liner= CLASS II Rip-Rap

FROM -L- STA.46+90RT TO STA.47+20RT
EST. 76TONS CLASS II RIPRAP, EST. DDE 113CY,
EST. 76SY GEOTEXTILE

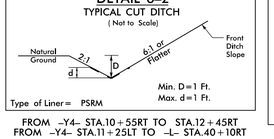
DETAIL 6–5
FALSE SUMP
(Not to Scale)



S=Ditch Slope

-L- STA. 36+64RT
-L- STA. 38+14RT
-L- STA. 40+23RT
-L- STA. 42+64RT
-L- STA. 47+36RT

DETAIL 6–2
TYPICAL CUT DITCH
(Not to Scale)

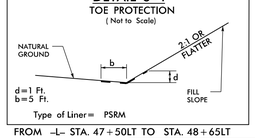


Min. D=1 Ft.
Max. d=1 Ft.

Type of Liner= PSRM

FROM -Y4- STA.10+55RT TO STA.12+45RT
FROM -Y4- STA.11+25LT TO -L- STA.40+10RT

DETAIL 6–4
TOE PROTECTION
(Not to Scale)



d=1 Ft.
b=5 Ft.

Type of Liner= PSRM

FROM -L- STA. 47+50LT TO STA. 48+65LT

FOR -L- PROFILE SEE SHEET 25
FOR -Y4- PROFILE SEE SHEET 33

25-APR-2016 09:51
R:\R3825b\Roadway\r3825b_rdy_psh06.dgn
$$$$USERNAME$$$$

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE • C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

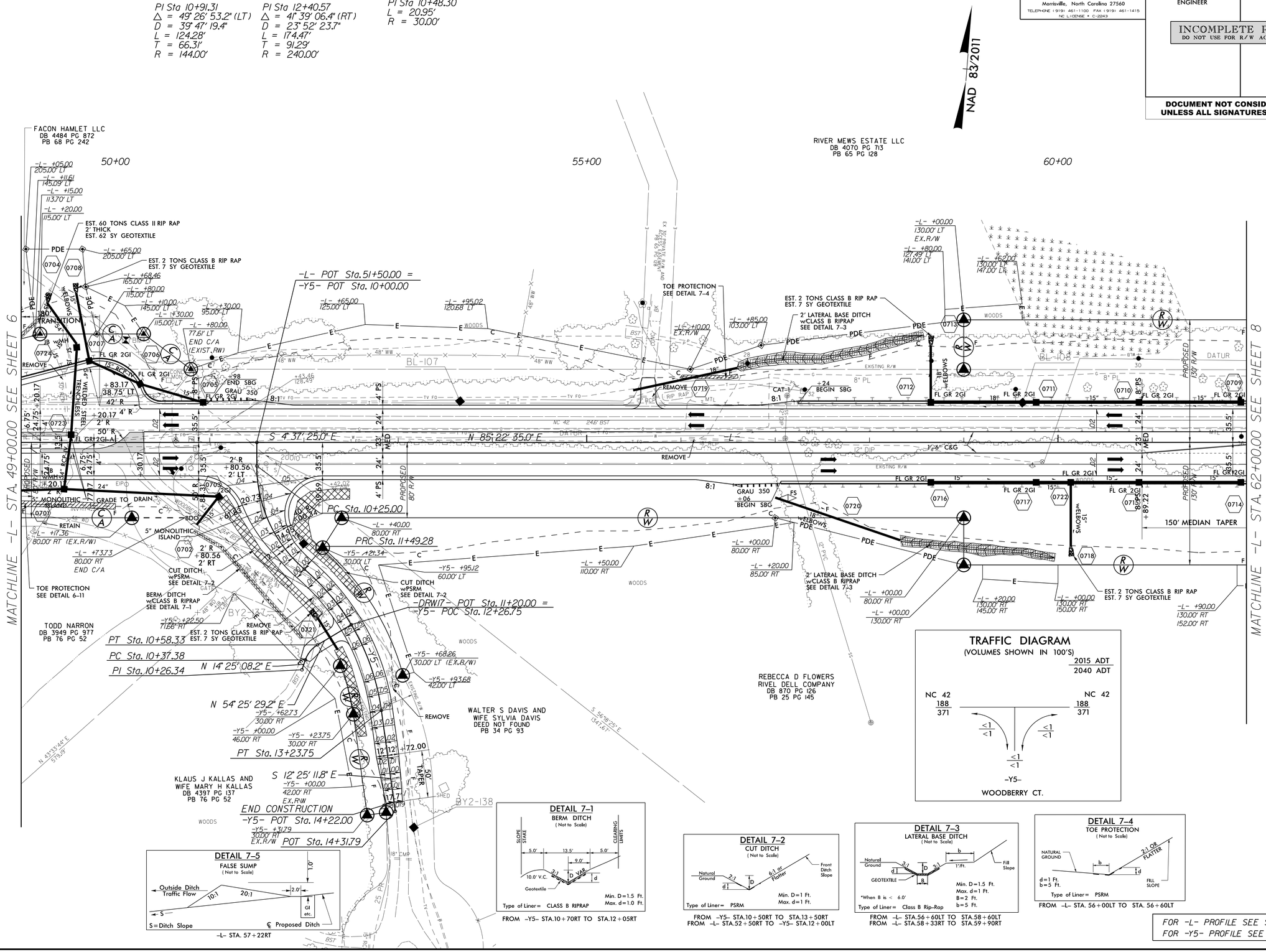
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-Y5- WOODBERRY CT

PI Sta 10+91.31	PI Sta 12+40.57
△ = 49° 26' 53.2" (LT)	△ = 41° 39' 06.4" (RT)
D = 39° 47' 19.4"	D = 23° 52' 23.7"
L = 124.28'	L = 174.47'
T = 66.31'	T = 91.29'
R = 144.00'	R = 240.00'

-DRW17-
PI Sta 10+48.30
L = 20.95'
R = 30.00'



FOR -L- PROFILE SEE SHEET 25
FOR -Y5- PROFILE SEE SHEET 33

REVISIONS

8/17/99

25-APR-2016 09:51
R:\Roadway\Proj\R3825b_rdy_psh07.dgn
$$$$USERNAME$$$$

8/17/99

REVISIONS

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NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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NAD 83/2011

SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

SCALE: 1"=50'

5" MONOLITHIC CONCRETE ISLAND
TYPE-III
BEGIN BRIDGE –L– POT STA 62+30+/–
BEGIN APPROACH SLAB –L– POT STA 62+05+/–
END BRIDGE –L– POT STA 66+10+/–
END APPROACH SLAB –L– POT STA 66+35+/–
87' CLEAR ROADWAY
VARIES

DETAIL 8–1
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, d, B, Geotextile
Min. D=1.0 Ft.
Max. d=1 Ft.
B=2 Ft.
*When B is < 6.0'
Type of Liner= Class B Rip–Rap

FROM –L– STA.68+54RT TO STA.69+20RT
EST. 31TONS CLASS B RIPRAP, EST. DDE 37CY,
EST. 69SY GEOTEXTILE

DETAIL 8–2
TOE PROTECTION
(Not to Scale)

NATURAL GROUND, b, 2:1 OR FLATTER, d, FILL SLOPE
d=1 Ft.
b=5 Ft.
Type of Liner= PSRM

FROM –Y6– STA. 11+00RT TO STA. 14+00RT

DETAIL 8–3
FALSE SUMP
(Not to Scale)

Outside Ditch Traffic Flow, 10:1, 20:1, 2.0', 1.75', S, GI etc.
S=Ditch Slope
℄ Proposed Ditch

–Y6– STA. 14+25LT

DETAIL 8–4
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, d, B, b, 1'Ft., Fill Slope, GEOTEXTILE
Min. D=2.5 Ft.
Max. d=2.5 Ft.
B=4 Ft.
b=5 Ft.
Type of Liner= Class I Rip–Rap

FROM –L– STA.73+03RT TO STA.75+91RT

DETAIL 8–5
RIP RAP AT EMBANKMENT
(Not to Scale)

Ditch Grade, 5'min., 1.0'min., 2 Ft., Match to top of slope (See Detail 8–4), GEOTEXTILE
Type of Liner= EST. 9 TONS, CL I Rip–Rap
Geotextile= 21 sy

FROM –L– STA. 73+45RT TO –L– STA. 73+60RT

DETAIL 8–6
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, d, B, b, 1'Ft., 3:1, Fill Slope
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=4 Ft.
b=5 Ft.
Type of Liner= PSRM

FROM –L– STA.73+10LT TO STA.75+00LT

DETAIL 8–7
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 2:1, D, d, 3:1 or Flatter (See Cross Sections), Front Ditch Slope
Min. D=1.5 Ft.
Max d=1.5 Ft.
Type of Liner= PSRM

FROM –Y6– STA.14+56LT TO STA.15+00LT

DETAIL 8–8
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, 2:1, D, 3:1 or Flatter (See Cross Sections), Front Ditch Slope
Min. D=1.5 Ft.

FROM –Y6– STA.14+00LT TO STA.14+56LT

DETAIL 8–9
SPECIAL CUT BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, d, B, 3:1 or Flatter (See Cross Sections), Front Slope Ditch, Geotextile
Min. D=2 Ft.
Max. d=1.5 Ft.
B=2 Ft.
Type of Liner= Class B Rip–Rap

FROM –Y6– STA.11+78LT TO STA.12+50LT

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT

CASTLEBERRY RD.
SR 1705

NC 42 188 371
31/57
27/51
4/6
NC 42 165 326

–Y6– CASTLEBERRY RD

PI Sta 10+43.21
△ = 7°10'46.1" (LT)
D = 8°19'04.8"
L = 86.31'
T = 43.21'
R = 688.82'

PI Sta 12+10.38
△ = 3°19'36.0" (LT)
D = 1°20'27.8"
L = 248.06'
T = 124.07'
R = 4,272.42'

–L– NC 42

PI Sta 76+02.21
△ = 3°53'59.4" (LT)
D = 1°00'00.4"
L = 389.95'
T = 195.05'
R = 5,729.00'
e = 3%
Runoff = 162'

–DRW3–

PI Sta 10+98.02
L = 23.31'
R = 50.00'

PC Sta. 10+00.00
BEGIN CONSTRUCTION
–Y6– POC Sta. 10+60.00
PCC Sta. 10+86.31
PT Sta. 13+34.37
–Y6– POT Sta. 10+75.00 = –Y6– POT Sta. 16+71.62
POT Sta. 10+00.00
PC Sta. 10+86.15
PT Sta. 11+09.46
S 31°20'12.8" E
POT Sta. 11+41.10
–L– POT Sta. 67+78.51
–L– POT Sta.68+11.45 = –Y6– POT Sta. 17+91.45
PC Sta. 74+07.16
+64.22 BEGIN 50' CURB TRANS.
150' TRANSITION
100' MEDIAN TRANSITION
180' TRANSITION
100' TAPER
50' TAPER
380' PROPOSED BRIDGE
BEGIN BRIDGE
BEGIN APPROACH SLAB
END BRIDGE
END APPROACH SLAB
BRIDGE SEAT ELEVATIONS
BS1 = 154.33'
BS2 = 154.32'
BS3 = 154.47'
BS4 = 154.18'
5" MONOLITHIC ISLAND
4' PS
4' LATERAL BASE DITCH w/PSRM SEE DETAIL 8–6
4' LATERAL BASE DITCH w/CLASS I RIPRAP SEE DETAIL 8–4
2' STANDARD BASE DITCH w/CLASS B RIPRAP SEE DETAIL 8–1
2' SPECIAL CUT BASE DITCH w/CLASS B RIPRAP SEE DETAIL 8–9
SPECIAL CUT 'V' DITCH w/GRASS SEE DETAIL 8–8
SPECIAL CUT 'V' DITCH w/PSRM SEE DETAIL 8–7
TOE PROTECTION SEE DETAIL 8–2 FOR INCIDENTAL LOW AREAS AGAINST FILL SLOPE
93 SY PSRM
71 SY PSRM
EST. 11 TONS CLASS B RIP RAP EST. 28 SY GEOTEXTILE
EST. 5 TONS CLASS B RIP RAP EST. 14 SY GEOTEXTILE
EST. 2 TONS CLASS B RIP RAP EST. 7 SY GEOTEXTILE
EST. 20 TONS CL I RIP RAP EST. 39 SY GEOTEXTILE
EST. 3 TONS CLASS B RIP RAP EST. 10 SY GEOTEXTILE
MATCH DITCH INVERT TO STREAM INVERT
OUTFALL ANALYSIS D
RIP RAP RAP AT EMBANKMENT SEE DETAIL 8–5
REMOVE
RETAIN
FUTURE SIGNAL
FOR –L– PROFILE SEE SHEET 26
FOR –Y6– PROFILE SEE SHEET 34

JOHNSTON COUNTY BOARD OF EDUCATION
DB 1316 PG 52
PB 43 PG 31

COUNTY OF JOHNSTON
DB 1391 PG 727
PB 43 PG 31

RIVER MEWS ESTATE LLC
DB 4070 PG 713
PB 65 PG 128

REBECCA FLOWERS FINCH
DB 1398 PG 773
DB 1445 PG 236
PB 54 PG 144

REBECCA FLOWERS FINCH
DB 1398 PG 773
DB 1445 PG 236
PB 53 PG 385

MICHELLE STRICKLAND
DB 3486 PG 299
PB 53 PG 385

MATCHLINE –L– STA. 62+00.00 SEE SHEET 7

MATCHLINE –L– STA. 75+00.00 SEE SHEET 9

65+00 70+00 75+00

BY3-139 BY3-140 BL-109

WOODS DATUR NEUSE RIVER

25-APR-2016 09:51
R:\projects\R3825b_rdy_psh08.dgn
$$$$USERNAME$$$$

8/17/99

REVISIONS

Prepared by

URS

URS Corporation – North Carolina
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Morrisville, North Carolina 27560
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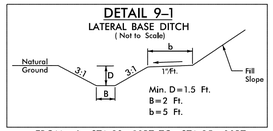
NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	9
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

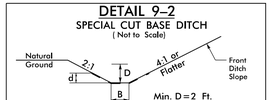
DETAIL 9–1
LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=2 Ft.
b=5 Ft.

FROM –L– STA.82+10RT TO STA.85+00RT
FROM –L– STA.86+00RT TO STA.90+50RT
FROM –L– STA.92+00RT TO STA.93+24RT

DETAIL 9–2
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D=2 Ft.
Max. d=2 Ft.
B=2 Ft.

Type of Liner= PSRM

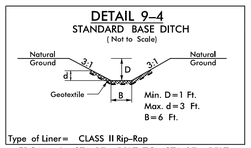
FROM –L– STA.81+80LT TO STA.83+00LT
FROM –Y7– STA.15+67LT TO STA.16+54LT

DETAIL 9–3
SPECIAL CUT DITCH
(Not to Scale)

Min. D=1.5 Ft.

FROM –Y7– STA.15+67RT TO –L– STA.80+28LT

DETAIL 9–4
STANDARD BASE DITCH
(Not to Scale)

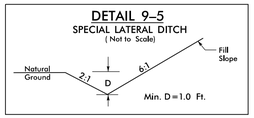


Min. D=1 Ft.
Max. d=3 Ft.
B=6 Ft.

Type of Liner= CLASS II Rip-Rap

FROM –L– STA.87+50LT TO STA.87+55LT
EST. 78 TONS CLASS II RIPRAP, EST. DDE 79CY,
EST. 78SY GEOTEXTILE

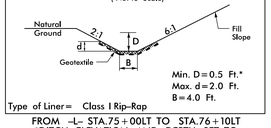
DETAIL 9–5
SPECIAL LATERAL DITCH
(Not to Scale)



Min. D=1.0 Ft.

FROM –L– STA.76+10LT TO STA.79+00LT

DETAIL 9–6
SPECIAL LATERAL BASE DITCH
(Not to Scale)

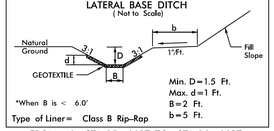


Min. D=0.5 Ft.*
Max. d=2.0 Ft.
B=4.0 Ft.

Type of Liner= Class I Rip-Rap

FROM –L– STA.75+00LT TO STA.76+10LT
*DITCH ELEVATION AND DEPTH SET TO
INTERCEPT STREAM FROM POND

DETAIL 9–10
LATERAL BASE DITCH
(Not to Scale)



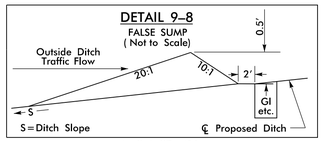
Min. D=1.5 Ft.
Max. d=1 Ft.
B=2 Ft.
b=5 Ft.

*When B is < 6.0'

Type of Liner= Class B Rip-Rap

FROM –L– STA.85+00RT TO STA.86+00RT
FROM –L– STA.90+50RT TO STA.92+00RT

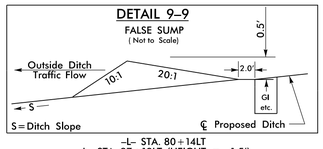
DETAIL 9–8
FALSE SUMP
(Not to Scale)



S=Ditch Slope ℄ Proposed Ditch

–L– STA. 87+41RT
–L– STA. 84+91RT
–L– STA. 78+41RT

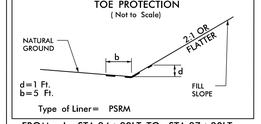
DETAIL 9–9
FALSE SUMP
(Not to Scale)



S=Ditch Slope ℄ Proposed Ditch

–L– STA. 80+14LT
–L– STA. 87+19LT (HEIGHT = 1.5')

DETAIL 9–7
TOE PROTECTION
(Not to Scale)



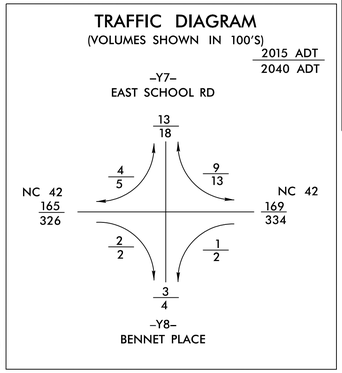
d=1 Ft.
b=5 Ft.

Type of Liner= PSRM

FROM –L– STA.84+80LT TO STA.87+30LT

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT



NAD 83/2011

–L– NC 42	–Y7– EAST SCHOOL RD	–Y8– BENNETT PL
PI Sta 76+02.21	PI Sta 12+47.04	PI Sta 11+77.40
△ = 3° 53' 59.4" (LT)	△ = 35° 17' 22.8" (RT)	△ = 13° 43' 20.5" (LT)
D = 1° 00' 00.4"	D = 7° 22' 38.3"	D = 23° 38' 08.6"
L = 389.95'	L = 478.36'	L = 58.06'
T = 195.05'	T = 247.04'	T = 29.17'
R = 5,729.00'	R = 776.65'	R = 242.41'
e = 3%		
Runoff = 162'		
PI Sta 79+93.48		
△ = 3° 55' 35.2" (RT)		
D = 1° 00' 00.4"		
L = 392.61'		
T = 196.38'		
R = 5,729.00'		
e = 3%		
Runoff = 162'		

MATCHLINE –L– STA. 75+00.00 SEE SHEET 8

MATCHLINE –L– STA. 88+00.00 SEE SHEET 10

FOR –L– PROFILE SEE SHEET 26
FOR –Y7– PROFILE SEE SHEET 34
FOR –Y8– PROFILE SEE SHEET 34

25-APR-2016 10:48
C:\pwworking\dot\jmcbryde\d0825b_rdy_psht09.dgn
$$$$USERNAME$$$$

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8/17/99

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NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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FOR -L- PROFILE SEE SHEET 27
FOR -Y9- PROFILE SEE SHEET 34
FOR -Y10- PROFILE SEE SHEET 35

☆ PROPOSED SIGNAL

NAD 83/2011

DETAIL 10-1
FALSE SUMP
(Not to Scale)

Outside Ditch Traffic Flow 10:1 20:1 0.5' 2.0' GI etc. S

S=Ditch Slope ℄ Proposed Ditch

-L- STA. 89+36LT

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT / 2040 ADT

NEUSE RIVER PARKWAY
SR 1704

NC 42 — 169/334 — 49/102 — 58/121 — 8/18 — 126/249 — NC 42
3/3 — 1/2
5/6
QUEEN ANNE DR.

-Y9- NEUSE RIVER PKWY
PI Sta 13+32.23
△ = 16° 45' 29.9" (LT)
D = 7° 00' 00.3"
L = 239.40'
T = 120.56'
R = 818.50'

-L- NC 42
PI Sta 96+75.15
△ = 1° 23' 04.6" (LT)
D = 0° 08' 44.9"
L = 949.63'
T = 474.84'
R = 39,296.24'
e = NC

DETAIL 10-3
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground, 3:1, d, D, 4:1 or Flatter, Fill Slope, Geotextile
Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
Type of Liner= Class B Rip-Rap
FROM -L- STA. 100+00 LT TO STA. 102+40 LT

DETAIL 10-4
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 3:1, d, D, 3:1, Natural Ground, Geotextile, B
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
*When B is < 6.0'
Type of Liner= Class I Rip-Rap
FROM -L- STA. 100+95 RT TO STA. 101+30 RT

DETAIL 10-5
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, d, D, 3:1, b, 1':Ft., Fill Slope, GEOTEXTILE, B
Min. D=1.0 Ft.
Max. d=1.0 Ft.
B=2.0 Ft.
b=5.0 Ft.
*When B is < 6.0'
Type of Liner= CL B Rip-Rap
FROM -L- STA. 98+70 RT TO STA. 101+08 RT

DETAIL 10-2
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1, D, 3:1, b, 1':Ft., Fill Slope, B
Min. D= 1.0 Ft.
B= 2.0 Ft.
b= 5.0 Ft.
FROM -L- STA. 98+00 RT TO STA. 98+70 RT

BEGIN CONSTRUCTION
-Y9- POT Sta. 11+73.15

POT Sta. 10+00.00

PT Sta. 14+51.07

PC Sta. 12+11.66

-L- POC Sta.93+82.88 =
-Y9- POT Sta. 18+12.48

-L- POC Sta.93+82.00 =
-Y10- POT Sta. 10+00.00

END CONSTRUCTION
-Y10- POT Sta. 11+11.65

POT Sta. 12+12.08

MATCHLINE -L- STA. 88+00.00 SEE SHEET 9

MATCHLINE -L- STA. 101+00.00 SEE SHEET 11

DB 2891 PG 105
PB 60 PG 201

PB 61 PG 253
DB 2106 PG 62
PB 58 PG 430

JERAULD G. THELIN AND WIFE SANDRA M. THELIN
DB 3019 PG 858
PB 62 PG 243

CLAYTON 99, LLC
DB 1859 PG 846
PB 60 PG 217 OUT PARCEL 1
SEE DB 3166 PG 542

CLAYTON 99, LLC
DB 1859 PG 846
PB 60 PG 217 OUT PARCEL 2
SEE DB 3166 PG 542

RCC FLOWERS PLANTION, LLC
DB 3166 PG 542
PB 60 PG 217
PB 58 PG 218

PRAZE PROPERTIES, LLC
DB 3146 PG 401
PB 67 PG 425

BHH, LLC
DB 2179 PG 728
PB 68 PG 46

GEORGE EDWARD NICHOALDS
DB 1662 PG 343
PB 31 PG 85

RICHARD ALLEN LEE AND WIFE LISA JEANINE BOYKIN
DB 1308 PG 483
PB 31 PG 85

JAMES A. JOY II AND WIFE CHRISTINE C. JOY
DB 2135 PG 486
PB 44 PG 367
PB 31 PG 85

AQUA NORTH CAROLINA, INC FORMALLY
DB 1829 PG 500
PB 31 PG 85

CAROLINA TELEPHONE AND TELEGRAPH CO.
DB 1174 PG 378
PB 31 PG 85

ALBERT HARVEY WALSTON AND JEAN TURNER MURRAY
DB 3055 PG 618
PB 31 PG 85

RETAIN EXISTING CURB & GUTTER RESURFACE AND WIDEN EXISTING PAVEMENT

RETAIN EXISTING CURB & GUTTER AND RESURFACE EXISTING PAVEMENT

CREST IS BOUNDARY OF SHEETS 4-10 SUBMITTAL

GRADE CUT DITCH TO DRAIN -L- STA. 94+50+/- RT TO 95+50 RT

2' LATERAL BASE DITCH SEE DETAIL 9-1

2' LATERAL BASE DITCH SEE DETAIL 9-10

2' LATERAL BASE DITCH SEE DETAIL 10-2

2' STANDARD BASE DITCH W/CL I RIP RAP SEE DETAIL 10-4

2' BASE LATERAL DITCH W/CL B RIP RAP SEE DETAIL 10-5

SPECIAL LATERAL V DITCH W/CL B RIP RAP, SEE DETAIL 10-3

150' MEDIAN & EOP TRANSITION

100' TRANSITION

50' TRANSITION

400' TRANSITION

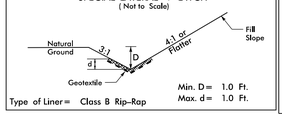
150' TAPER

25-APR-2016 15:26
C:\projects\R3825b_rdy_psh10.dgn
$$USERNAME$$

8/17/99

REVISIONS

DETAIL 10–3
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

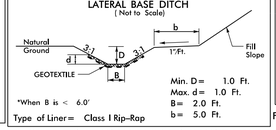


Min. D= 1.0 Ft.
Max. d= 1.0 Ft.

Type of Liner= Class B Rip–Rap

FROM –L– STA. 100+00 LT TO STA. 102+40 LT

DETAIL 11–2
LATERAL BASE DITCH
(Not to Scale)



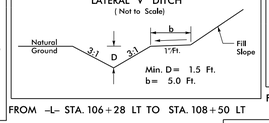
*When B is < 6.0'

Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.
b= 5.0 Ft.

Type of Liner= Class I Rip–Rap

FROM –L– STA. 106+00 LT TO STA. 106+25 LT

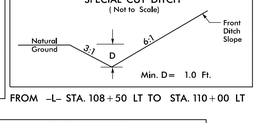
DETAIL 11–3
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.5 Ft.
b= 5.0 Ft.

FROM –L– STA. 106+28 LT TO STA. 108+50 LT

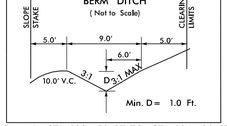
DETAIL 11–4
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.

FROM –L– STA. 108+50 LT TO STA. 110+00 LT

DETAIL 11–6
BERM DITCH
(Not to Scale)



Min. D= 1.0 Ft.

FROM –L– STA. 103+50 RT TO STA. 104+20 RT

NAD 83/2011

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE: (919) 461-1100 FAX: (919) 461-1415
NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

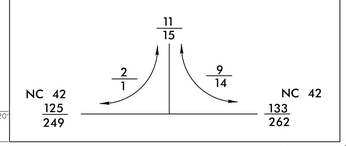
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

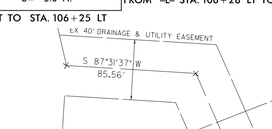
TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT

–Y10A–



DETAIL 11–7
BERM DITCH
(Not to Scale)

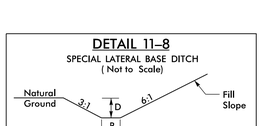


Min. D=1.0 Ft.
Max. d=1.0 Ft.

Type of Liner= CL B Rip Rap

FROM –L– STA. 104+20 LT TO STA. 104+50 LT
FROM –L– STA. 105+50 RT TO STA. 106+00 RT

DETAIL 11–8
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 2.0 Ft.

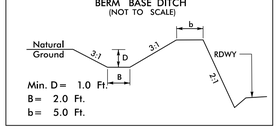
FROM –L– STA. 113+50 LT TO STA. 114+30 LT

DETAIL 11–9
SPECIAL CUT V–DITCH
(Not to Scale)

Min. D= 1.5 Ft.

FROM –L– STA. 111+50 LT TO STA. 113+50 LT
FROM –L– STA. 111+50 RT TO STA. 112+25 RT

DETAIL 11–10
BERM BASE DITCH
(NOT TO SCALE)



Min. D= 1.0 Ft.
B= 2.0 Ft.
b= 5.0 Ft.

FROM –L– STA. 110+00 LT TO STA. 114+00 LT

RCC FLOWERS PLANTION, LLC
DB 3166 PG 542
PB 60 PG 217

EX 40' DRAINAGE & UTILITY EASEMENT

S 87°31'37" W
85.56'

N 29°48'29" W
105.40'

N 5°09'26" W
80.09'

20' SEWER EASEMENT

PC Sta. 10+00.00
PT Sta. 10+17.55

CLAYTON 99, LLC
DB 1859 PG 846
PB 60 PG 217 OUT PARCEL 3
SEE DB 3166 PG 542 –Y10A– +85.00

N 84°17'16" E 134.16'

30.00' RT
EX.R/W

–Y10A– +00.00
30.00' RT
50.00' RT
REMOVE EXIST. CB
–Y10A– +85.00
30.00' RT

PT Sta. 10+49.95

–Y10A– +85.91
30.00' RT
50.00' RT
INSTALL DI ON EXISTING 30" RCP
–L– +34.47
110.00' LT
–L– +20.00
80.00' LT
95.00' LT
–L– +20.00
80.00' LT
–L– +49.95
80.00' LT
–L– +60.00
100.00' LT
30" RCP

150' MEDIAN & EOP TRANSITION

RETAIN 50' TAPER

SPECIAL LATERAL V DITCH W/CL B RIP RAP, SEE DETAIL

PROPOSED L (80' R/W)

MED 24'

4' PS

4' PS

2'-6" C&G

1'-6" C&G

REMOVE

CLAYTON 99, LLC
DB 1859 PG 846
PB 60 PG 217
OUT PARCEL 4
SEE DB 3166 PG 542

N 84°18'44" E
114.91'

N 05°42'44" W
267.24'

105+00

PC Sta. 10+84.58
–Y10A– +85.00
30.00' LT
EX.R/W
BEGIN CONSTRUCTION
–Y10A– POC Sta. 11+10.00

PT Sta. 11+32.94

S 4°46'20.7" E
29.83'

RETAIN

–Y10A– +00.00
70.00' LT
30.00' LT

S 10°18'51.1" E
PC Sta. 11+39.13

BY6-144

INSTALL CB ON EXISTING 30" RCP

S 5°31'34.5" E
56.13'

REMOVE 47 LF
–Y10A– +85.00
30.00' LT
–Y10A– +00.00
70.00' LT

96.13'

65' R
CB
COLLAR

REMOVE EXIST. CB

RETAIN

BEGIN SBG

CAT-1

18" RCP

FL. GR. 2GI

BL

1'–6" C&G

CONC. BARRIER

GRAU 350 0.78 TYPE B-77

2GI-A

2GI

FS

15" W/L-ELBOW

BDO

PDE

BEGIN NOISE WALL
STA. 102+88.25 47.5' RT

–L– +49.95
80.00' RT
–L– +95.00
80.00' RT

WELL HOUSE & TANK

2' BASE LATERAL DITCH W/CL I RIP RAP
SEE DETAIL 11–17

–L– +80.00
80.00' RT
106.00' RT

–L– POT Sta. 103+00.25 =
–Y10A– POT Sta. 13+13.31

2' STANDARD BASE DITCH W/CL I RIP RAP
SEE DETAIL 10–4

CHARLES RAY WILLIAMS AND WIFE
CLARA LEE WILLIAMS
DB 3007 PG 135
PB 49 PG 382

AQUA NORTH CAROLINA, INC
FORMALLY
(HEATER UTILITIES, INC)
DB 1829 PG 500 TRACT TWO
PB 48 PG 175

N 76°28'18" E
125.38'

S 51°54'04" E
142.01'

EXISTING R/W

BERM DITCH
SEE DETAIL 11–6

–L– +30.00
95.00' RT
–L– +35.00
80.00' RT
95.00' LT
–L– +65.00
80.00' RT
95.00' RT
–L– +55.00
125.00' RT

BERM DITCH W/CL B RIP RAP
SEE DETAIL 11–12

BERM DITCH W/CL B RIP RAP
SEE DETAIL 11–7

INSPIRED, LLC
DB 3928 PG 274
PB 49 PG 382

S 24°45'50" E
189.19'

S 38°22'14" E
150.84'

BERM DITCH W/CL B RIP RAP
SEE DETAIL 11–12

–L– +85.00
80.00' RT
95.00' RT
–L– +25.00
135.00' RT
80.00' RT
95.00' RT
–L– +15.00
80.00' RT
95.00' RT
–L– +40.00
80.00' RT
95.00' RT

CL B RIP RAP TOE PROTECTION
SEE DETAIL 11–15

RONALD M. FORQUER AND IRENE V. FORQUER
DB 3012 PG 820
PB 49 PG 382

STANDARD 3' BASE DITCH W/CL I RIP RAP
SEE DETAIL 11–16

EST. 48 TONS CLASS I RIP RAP
EST. 89 SY GEOTEXTILE

–Y10A– SHOPPING CENTER ENTRANCE

PI Sta 10+08.85
Δ = 17° 53' 06.1" (RT)
D = 10° 53' 40.5"
L = 17.55'
T = 8.85'
R = 56.23'

PI Sta 11+08.78
Δ = 5° 32' 30.4" (LT)
D = 11° 27' 33.0"
L = 48.36'
T = 24.20'
R = 500.00'

PI Sta 11+60.04
Δ = 4° 47' 16.6" (RT)
D = 11° 27' 33.0"
L = 41.78'
T = 20.90'
R = 500.00'

110+00

–L– NC 42

PI Sta 96+75.15
Δ = 1° 23' 04.6" (LT)
D = 0° 08' 44.9"
L = 949.63'
T = 474.84'
R = 39,296.24'
e = NC

LATERAL V-DITCH
SEE DETAIL 11–3

72" WD FENCE

N 84°17'17" E
267.27'

EST. 2 TONS CLASS B RIP RAP
EST. 7 SY GEOTEXTILE

SPECIAL CUT DITCH
SEE DETAIL 11–4

–L– +30.00
125.00' LT

THE GARDENS AT FLOWERS PLANTATION ASSOCIATION
DB 3369 PG 477 (SEE PG 479 – TRACT 2)
PB 55 PG 88

2' BASE BERM DITCH
SEE DETAIL 11–10

–L– +00.00
95.00' LT

SPECIAL CUT V-DITCH
SEE DETAIL 11–9

TIE BERM DITCH TO SPECIAL LATERAL DITCH

SPECIAL LATERAL BASE DITCH
SEE DETAIL 11–8

–L– +70.00
100.00' LT
–L– +65.00
125.00' LT

–L– +00.00
100.00' LT
115.00' LT

CULVERT #1
ONE BARREL

	NORTH	EAST	ELEV.
CUL1	691368.27	2180894.22	154.92
CUL2	691368.67	2180897.33	154.89
CE1	691368.88	2180896.02	158.91
HW1	691368.89	2180895.73	167.04
CUL3	691431.34	2180849.44	155.69
CUL 4	691431.63	2180852.47	155.67
CE2	691431.32	2180851.33	159.68
HW2	691431.29	2180851.12	161.33

N 67°54'56" E
125.10'

N 67°53'19" E
93.05'

N 67°47'17" E
89.95'

EIP

EX 20' UTILITY & SEWER EASEMENT

12" PVC

EXISTING R/W

8" DIP

8" VINYL

48" VINYL

BL–L6

NC 42 250' BST

1'–6" C&G

CONC. BARRIER

FL. GR. 2GI

15" RCP–IV

BEGIN SBG

TYPE B-77

2GI

FS

15" W/L-ELBOW

PDE

BDO

WOODS

REMOVE

PLUG

PLUG AND FILL

N 84°01'06.2" E

DATUM

INSTALL 66' WELDED STEEL INVERTS BURIED 1.0'

TRENCHLESS

CAT-1

18" RCP

BEGIN SBG

+85 END SBG

GRAU 350

8:1

FL. GR. 2GI

12" PVC

PLUG

1'–6" C&G

CONC. BARRIER

FL. GR. 2GI

15" RCP–IV

BEGIN SBG

TYPE B-77

2GI

FS

15" W/L-ELBOW

PDE

BDO

WOODS

REMOVE

NOISE WALL
+68.25 47.5' RT
BEGIN 50:1 TAPER

2SFD

2SBKD

WD DECK

PUMP STA

SPECIAL CUT V-DITCH
SEE DETAIL 11–9

END NOISE WALL
STA. 112+78.25 44.92' RT

–L– +00.00
80.00' RT
90.00' RT
–L– +50.00
95.00' RT
–L– +00.00
90.00' RT
–L– +95.00
140.00' RT

BRADLEY SCOTT SIMMONS AND WIFE
JILL DAVIS SIMMONS
DB 2150 PG 567
PB 49 PG 382

EST. 2 TONS CLASS B RIP RAP
EST. 7 SY GEOTEXTILE

RICHARD TODD STUTTS
DB 3791 PG 792
PB 49 PG 382

PETER JOSEPH BIGNESS AND CINDY JOHNSON BROWN
DB 3701 PG 332
PB 49 PG 382

AQUA NORTH CAROLINA, INC
DB 1857 PG 123
PB 49 PG 382

EX 20' SEWER EASEMENT

EX 20' DRAINAGE EASEMENT PER PB 55 PG 423

POND

S 82°48'34" W
309.42'

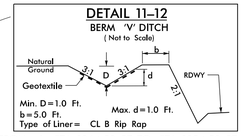
S 03°43'43" W
250.10'

S 03°43'43" W
250.10'

STA. 101+00.00 SEE SHEET 10

MATCHLINE –L– STA. 114+00.00 SEE SHEET 12

DETAIL 11–12
BERM 'V' DITCH
(Not to Scale)

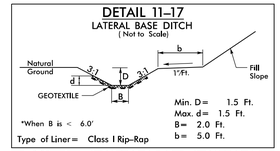


Min. D=1.0 Ft.
Max. d=1.0 Ft.
b=5.0 Ft.

Type of Liner= CL B Rip Rap

FROM –L– STA. 104+50 RT TO STA. 105+50 RT
BERM DITCH GRADE

DETAIL 11–17
LATERAL BASE DITCH
(Not to Scale)



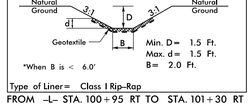
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
b= 5.0 Ft.

*When B is < 6.0'

Type of Liner= Class I Rip–Rap

FROM –L– STA. 101+08 RT TO STA. 101+50 RT

DETAIL 10–4
STANDARD BASE DITCH
(Not to Scale)



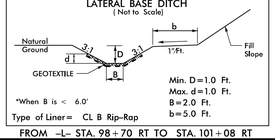
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.

*When B is < 6.0'

Type of Liner= Class I Rip–Rap

FROM –L– STA. 100+95 RT TO STA. 101+30 RT

DETAIL 10–5
LATERAL BASE DITCH
(Not to Scale)



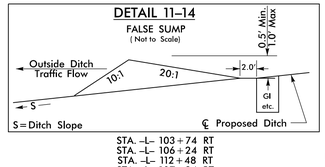
*When B is < 6.0'

Min. D=1.0 Ft.
Max. d=1.0 Ft.
B=2.0 Ft.
b=5.0 Ft.

Type of Liner= CL B Rip–Rap

FROM –L– STA. 98+70 RT TO STA. 101+08 RT

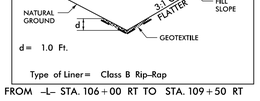
DETAIL 11–14
FALSE SUMP
(Not to Scale)



S=Ditch Slope

STA. –L– 103+74 RT
STA. –L– 106+24 RT
STA. –L– 112+48 RT
STA. –L– 107+24 RT

DETAIL 11–15
TOE PROTECTION
(Not to Scale)

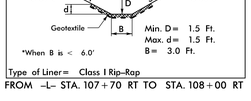


d= 1.0 Ft.

Type of Liner= Class B Rip–Rap

FROM –L– STA. 106+00 RT TO STA. 109+50 RT

DETAIL 11–16
STANDARD BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 3.0 Ft.

*When B is < 6.0'

Type of Liner= Class I Rip–Rap

FROM –L– STA. 107+70 RT TO STA. 108+00 RT

FOR –L– PROFILE SEE SHEET 27
FOR –Y10A – PROFILE SEE SHEET 35

25-APR-2016_09:55
R3825b_rdy_psh11.dgn
$$$$USERNAME$$$$

8/17/99

REVISIONS

Prepared by
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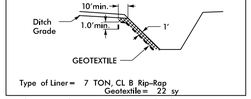
NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	12
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

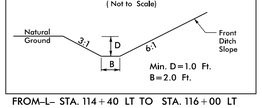
DETAIL 12-1
RIP RAP BANK STABILIZATION
(Not to Scale)



Type of Liner= 7 TON, CL B Rip-Rap
Geotextile = 22 sy

FROM -L- STA. 114+28 LT TO STA. 114+51 LT
FROM -L- STA. 114+10 LT TO STA. 114+30 LT

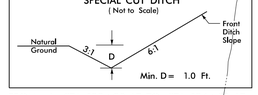
DETAIL 12-2
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D=1.0 Ft.
B=2.0 Ft.

FROM -L- STA. 114+40 LT TO STA. 116+00 LT

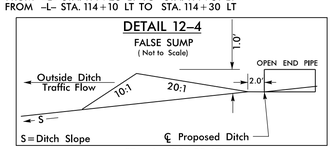
DETAIL 12-3
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.

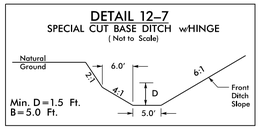
FROM -L- STA. 123+20 LT TO STA. 124+00 LT

DETAIL 12-4
FALSE SUMP
(Not to Scale)



STA. -L- 123+00 LT

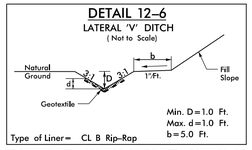
DETAIL 12-7
SPECIAL CUT BASE DITCH wHINGE
(Not to Scale)



Min. D=1.5 Ft.
B=5.0 Ft.

FROM -L- STA. 116+00 RT TO STA. 119+00 RT

DETAIL 12-6
LATERAL 'V' DITCH
(Not to Scale)



Min. D=1.0 Ft.
Max. d=1.0 Ft.
b=5.0 Ft.
Type of Liner= CL B Rip-Rap

FROM -L- STA. 122+55 RT TO STA. 124+50 RT

-Y10B- TRILLIUM WAY
PI Sta 10+90.16
△ = 7° 10' 11.1" (LT)
D = 3° 58' 52.9"
L = 180.08'
T = 90.16'
R = 1,439.10'

NAD 83/2011

DENNIS R. BAKAYSA AND WIFE, DEBORAH A. BAKAYSA
DB 3724 PG 408
PB 60 PG 441

TIMOTHY DWANE MARTIN AND WIFE, WENDY NELSON MARTIN
DB 3080 PG 264
PB 60 PG 441

JENNA A. EGGLESTON AND SPOUSE, JOHNATHAN D. EGGLESTON
DB 4485 PG 397
PB 60 PG 441

GUSTAVO A. MENJIVAR-RODRIGUEZ AND WIFE, AILEEN MENJIVAR
DB 4543 PG 235
PB 60 PG 441

JOSEPH MARK AND SPOUSE, MARKETA MARK
DB 2836 PG 884
PB 60 PG 441

BRIAN M. HENDERSON AND WIFE, STACEY S. HENDERSON
DB 3585 PG 548
PB 60 PG 441

GEORGE W. BROCK AND WIFE, SHIRLEY BROCK
DB 2987 PG 525
PB 60 PG 441

THE GARDENS AT FLOWERS PLANTATION ASSOCIATION
DB 3369 PG 477 (SEE PG 480 - TRACT 2)
PB 60 PG 441

NEUSE PARK DEVELOPMENT CO., LLC
DB 1659 PG 531
PB 60 PG 441
PB 51 PG 152

CENTEX HOMES
DB 2947 PG 185
PB 66 PG 446

PETER JOSEPH BIGNESS AND CINDY JOHNSON BROWN
DB 3701 PG 332
PB 49 PG 382

M. ANDREW JONES, JR. AND WIFE NANCY S. JONES
DB 1409 PG 893
PB 29 PG 297
PB 41 PG 465

MARSHALL H. MALPASS AND WIFE ROBIN M. MALPASS
DB 3761 PG 492
PB 29 PG 297

CHRISTOPHER V. CIPRIANI AND WIFE PATRICIA S. CIPRIANI
DB 1213 PG 696
PB 29 PG 297

RODNEY GEOHAGAN, JR.
DB 1213 PG 696
PB 29 PG 297

115+00 | 120+00 | 125+00

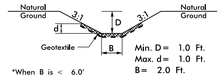
PC Sta. 10+00.00
PT Sta. 11+80.08
BEGIN CONSTRUCTION -Y10B- POC Sta. 11+70.00
-L- POT Sta. 121+86.16= -Y10B- POT Sta. 13+15.47

MATCHLINE -L- STA. 114+00.00 SEE SHEET 11

MATCHLINE -L- STA. 127+00.00 SEE SHEET 13

-L- +00.00 105.00' LT RETAIN
-L- +20.00 80.00' LT BEGIN C/A
-L- +60.00 80.00' LT END C\A
BANK STABILIZATION SEE DETAIL 12-1
2' BASE SPECIAL CUT DITCH SEE DETAIL 12-2
EST. 3 TONS CLASS B RIP RAP
EST. 10 SY GEOTEXTILE
+45 BEGIN EXPRESSWAY GUTTER
+08.21 END EXPRESSWAY GUTTER
+50 BEGIN EXPRESSWAY GUTTER
+50 END EXPRESSWAY GUTTER
HW W/ TRASH RACK
5' MONOLITHIC ISLAND
100' MEDIAN TAPER
50' TAPER
GRADE TO DRAIN
SPECIAL CUT DITCH SEE DETAIL 12-3
SPECIAL LATERAL V-DITCH W/CL B RIP RAP SEE DETAIL 12-6
2' STANDARD BASE DITCH w/CLASS I RIP RAP SEE DETAIL 12-9
EST. 2 TONS CLASS I RIP RAP
EST. 7 SY GEOTEXTILE
180° TRANSITION
SPECIAL CUT BASE DITCH SEE DETAIL 12-7
EST. 3 TONS CLASS B RIP RAP
EST. 10 SY GEOTEXTILE

DETAIL 12-9
STANDARD BASE DITCH
(Not to Scale)



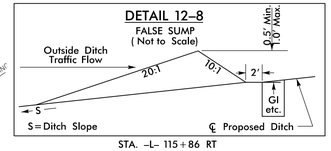
Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.
*When B is < 6.0'

Type of Liner= Class I Rip-Rap
FROM -L- STA. 114+17 RT TO STA. 114+35 RT

CULVERT #2
ONE BARREL
(DOWNSTREAM END)

	NORTH	EAST	ELEV.
CUL1	691426.69	2181535.07	146.40
CUL2	691427.07	2181539.77	146.43
CE1	691427.33	2181537.45	150.41
HW1	691426.90	2181537.65	152.13

DETAIL 12-8
FALSE SUMP
(Not to Scale)

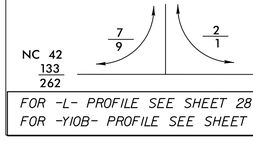


STA. -L- 115+86 RT

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT

TRILLIUM WAY
SR 2677



FOR -L- PROFILE SEE SHEET 28
FOR -Y10B- PROFILE SEE SHEET 35

25-APR-2016 09:51
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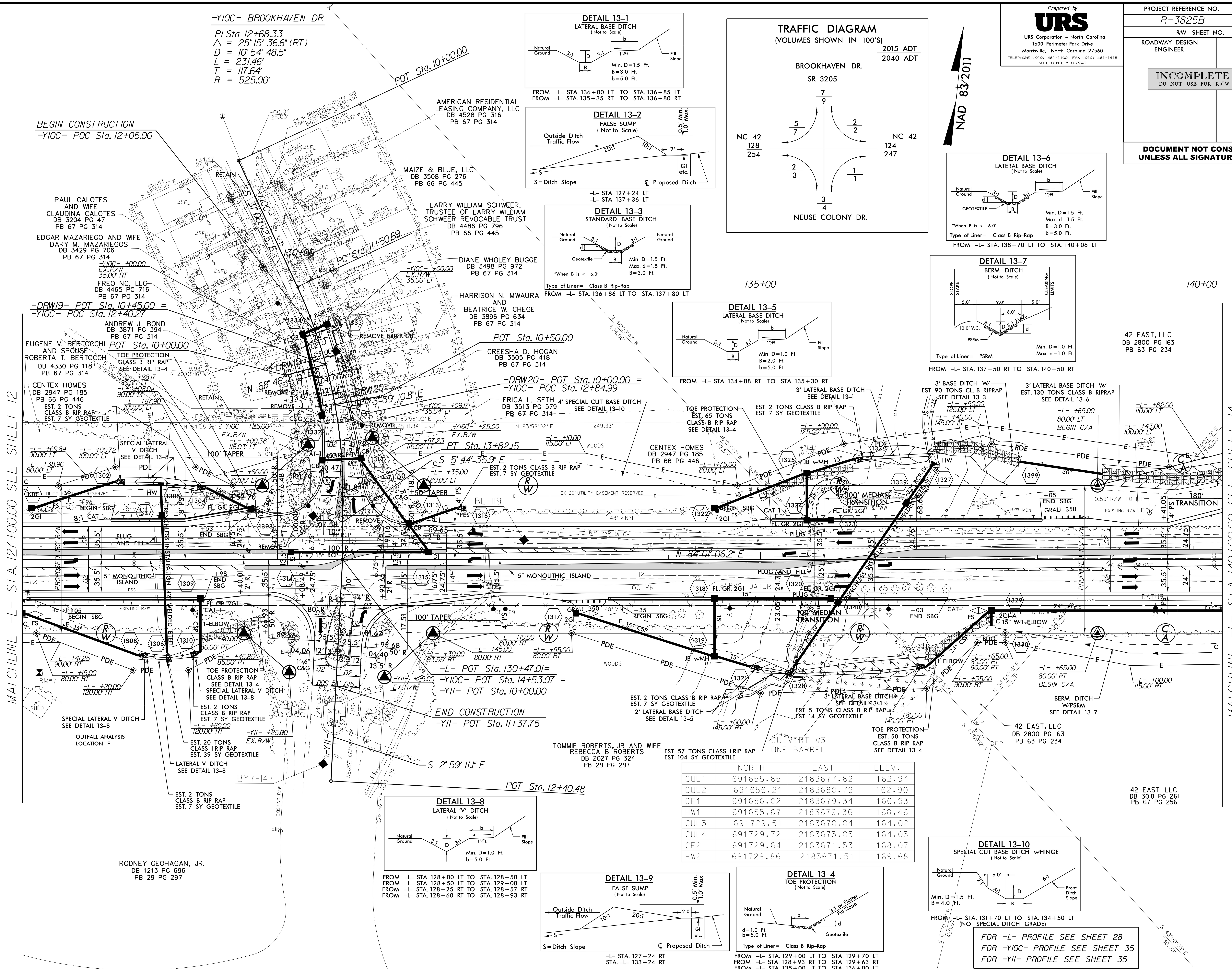
PROJECT REFERENCE NO.	SHEET NO.
R-3825B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Prepared by URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE # C-2243

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



	NORTH	EAST	ELEV.
CUL1	691655.85	2183677.82	162.94
CUL2	691656.21	2183680.79	162.90
CE1	691656.02	2183679.34	166.93
HW1	691655.87	2183679.36	168.46
CUL3	691729.51	2183670.04	164.02
CUL4	691729.72	2183673.05	164.05
CE2	691729.64	2183671.53	168.07
HW2	691729.86	2183671.51	169.68

FOR -L- PROFILE SEE SHEET 28
FOR -Y10C- PROFILE SEE SHEET 35
FOR -YII- PROFILE SEE SHEET 35

REVISIONS

8/17/99

25-APR-2016 09:51
R:\Roadway\Proj\R3825b_rdy_psh13.dgn
$$$$USERNAME$$$$

8/17/99

REVISIONS

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE # C-2243

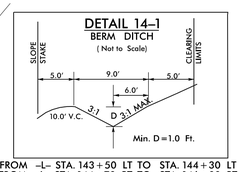
PROJECT REFERENCE NO.	SHEET NO.
R-3825B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

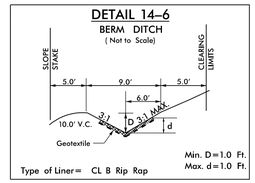
NAD 83/2011

DETAIL 14–1
BERM DITCH
(Not to Scale)



FROM –L– STA. 143+50 LT TO STA. 144+30 LT
FROM –L– STA. 144+70 RT TO STA. 146+00 RT
FROM –L– STA. 146+70 LT TO STA. 147+50 LT
FROM –L– STA. 149+00 LT TO STA. 152+00 LT

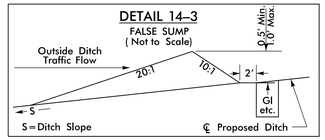
DETAIL 14–6
BERM DITCH
(Not to Scale)



Type of Liner= CL B Rip Rap

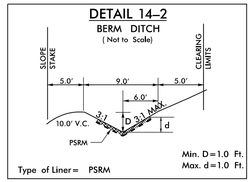
FROM –L– STA. 141+60 LT TO STA. 143+50 LT
FROM –L– STA. 142+00 RT TO STA. 143+25 RT
FROM –L– STA. 143+25 RT TO STA. 144+20 RT
FROM –L– STA. 144+30 LT TO STA. 146+12 LT
FROM –L– STA. 144+70 RT TO STA. 146+00 RT
FROM –L– STA. 146+70 LT TO STA. 147+50 LT

DETAIL 14–3
FALSE SUMP
(Not to Scale)



–L– STA. 141+14 RT
–L– STA. 143+06 RT
–L– STA. 152+14 LT

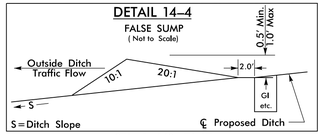
DETAIL 14–2
BERM DITCH
(Not to Scale)



Type of Liner= PSRM

FROM –L– STA. 140+50 RT TO STA. 142+00 RT

DETAIL 14–4
FALSE SUMP
(Not to Scale)



STA. –L– 140+76 LT
STA. –L– 141+62 LT
STA. –L– 144+06 LT

42 EAST, LLC
DB 2800 PG 163
PB 63 PG 234

42 EAST, LLC
DB 2800 PG 163
PB 31PG 297

140+00 145+00 150+00

MATCHLINE –L– STA. 140+00.00 SEE SHEET 13

MATCHLINE –L– STA. 153+00.00 SEE SHEET 15

PI Sta. 10+41.55
–DRW5– POT Sta. 11+20.00 = –L– POT Sta. 146+33.96
–DRW4– POT Sta. 10+00.00 = –L– POT Sta. 144+37.22
PC Sta. 10+61.96
PI Sta. 10+83.52
POT Sta. 11+21.95
–DRW6– POT Sta. 10+00.00 = –L– POT Sta. 146+68.24
PT Sta. 10+76.69
S 22°51' 25.6" E
POT Sta. 10+91.15

–DRW4–
PI Sta 10+69.38
L = 14.73'
R = 50.00'

BERM DITCH W/PSRM SEE DETAIL 13–7
BERM DITCH W/PSRM SEE DETAIL 14–2
BERM DITCH W/CL B RIP RAP SEE DETAIL 14–6
BERM DITCH SEE DETAIL 14–1
BERM V-DITCH SEE DETAIL 14–5
180' TRANSITION
100' MEDIAN TAPER
5" MONOLITHIC ISLAND
15" W/1-ELBOW
18" W/1-ELBOW
24" RCP-IV
18" RCP-IV
12" PVC
12" RCP
72" CMP
100 PR
25 PR
REMOVE
PDE
BDO
PPES
FLAG POLE
BM#8
WOODS
GATE
SOIL & BANDER BST
NC 42 25' BST
1'-6" C&G
EXISTING R/W
PROPOSED R/W
0.49' R/W
EIP
BL-120
BL-121
N 84°01' 06.2" E
S 14°07'19" W 336.00'
S 13°36'36.2" E 301.23'
N 40°39'05" W 220.75'
N 37°08'07" W 84.56'
S 76°30'51" W 44.04'
N 40°32'08" W 186.5'
S 49°27'52" W 100.00'
N 40°32'34" W 192.17'
N 05°52'01" W 178.51'
S 13°36'36.2" E 27.73'
50.00'

42 EAST LLC
DB 3018 PG 261
PB 67 PG 256

42 EAST LLC
DB 3018 PG 257
PB 67 PG 256

WILLIAM R. JAMESON
DB 3514 PG 417
PB 56 PG 469

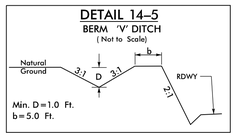
SHANNON L. HILL AND WIFE REGINA HILL
DB 4455 PG 21
PB 54 PG 419

42 EAST, LLC
DB 3418 PG 969
PB 71PG 24

42 EAST, LLC
DB 3418 PG 969
PB 71PG 24

Ex 60' ACCESS EASEMENT PB 71PG 24

DETAIL 14–5
BERM 'V' DITCH
(Not to Scale)



FROM –L– STA. 147+50 LT TO STA. 149+00 LT

FOR –L– PROFILE SEE SHEET 29

25-APR-2016 09:51
R3825b_rdg_psh14.dgn
$$$$USERNAME$$$$

8/17/99

REVISIONS

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE: (919) 461-1100 FAX: (919) 461-1415
NC LICENSE # C-2243

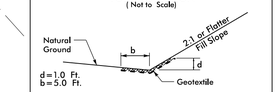
PROJECT REFERENCE NO.	SHEET NO.
R-3825B	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/2011

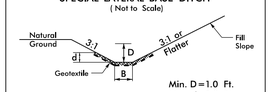
DETAIL 15–1
TOE PROTECTION
(Not to Scale)



Type of Liner= Class B Rip–Rap

FROM –L– STA. 155+00 LT TO STA. 155+80 LT
FROM –L– STA. 154+60 RT TO STA. 157+24 RT
FROM –L– STA. 155+90 LT TO STA. 158+18 LT

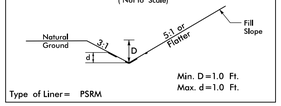
DETAIL 15–2
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Type of Liner= Class B Rip–Rap

FROM –L– STA. 158+17 LT TO STA. 159+00 LT

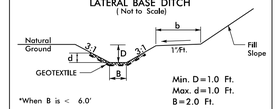
DETAIL 15–3
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= PSRM

FROM –L– STA. 153+50 RT TO STA. 154+15 RT

DETAIL 15–4
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= Class B Rip–Rap

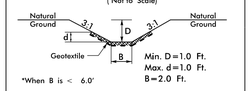
FROM –L– STA. 155+70 LT TO STA. 155+83 LT
FROM –L– STA. 155+88 LT TO STA. 156+00 LT
FROM –L– STA. 157+10 RT TO STA. 157+42 RT

DETAIL 15–5
BERM DITCH
(Not to Scale)

Type of Liner= Class B RIP RAP

FROM –L– STA. 159+00 LT TO STA. 161+80 LT

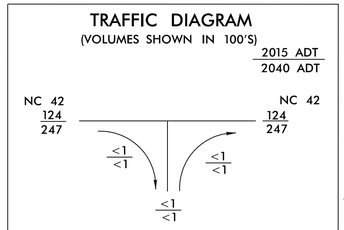
DETAIL 15–6
STANDARD BASE DITCH
(Not to Scale)



Type of Liner= Class B Rip Rap
Est. 2 Tons Class B Rip Rap
Est. 4 SY Geotextile

FROM –L– STA. 157+55 RT TO STA. 157+58 RT

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)



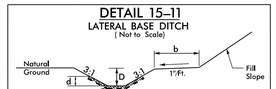
–L– NC 42	–DRI– ALECIA CT
PI Sta 165+42.54	PI Sta 10+88.76
Δ = 4° 51' 12.9" (LT)	Δ = 16° 21' 02.1" (LT)
D = 1° 08' 45.3"	D = 12° 03' 58.8"
L = 423.56'	L = 135.51'
T = 211.90'	T = 68.22'
R = 5,000.00'	R = 474.84'
e = 3%	
Runoff = 162'	

42 EAST, LLC
DB 2800 PG 163
PB 31PG 297

42 EAST, LLC
DB 2800 PG 163
PB 71PG 121

GERRY LYNCH
DB 3547 PG 358
PB 71PG 201

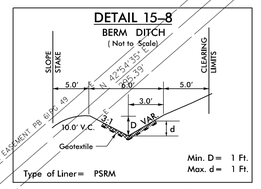
DETAIL 15–11
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CI–B Rip–Rap

FROM –L– STA. 165+18 LT TO –L– STA. 166+50 LT

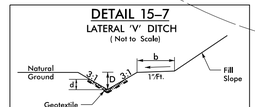
DETAIL 15–8
BERM DITCH
(Not to Scale)



Type of Liner= PSRM

FROM –L– STA. 161+80 LT TO –L– STA. 164+00 LT

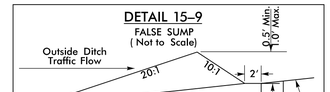
DETAIL 15–7
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= Class B Rip–Rap

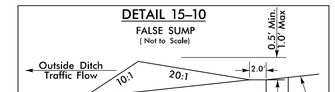
FROM –L– STA. 165+25 RT TO –L– STA. 165+93 RT

DETAIL 15–9
FALSE SUMP
(Not to Scale)



–L– STA. 164+64 LT

DETAIL 15–10
FALSE SUMP
(Not to Scale)



FOR –L– PROFILE SEE SHEET 25
FOR –DRI– PROFILE SEE SHEET 37
–L– STA. 164+64 RT

	NORTH	EAST	ELEV.
CUL1	691837.99	2185764.34	158.62
CUL2	691837.99	2185764.34	158.62
CE1	691838.36	2185764.11	161.72
HW1	691838.31	2185764.05	163.53
CUL3	691972.51	2185710.94	162.64
CUL4	691972.86	2185713.93	162.68
CE2	691972.54	2185712.48	165.76
HW2	691972.59	2185712.48	167.28

42 EAST, LLC
DB 3418 PG 969
PB 71PG 24

MATTHEW TERRELL MINGA AND CHRISTIE TRIPP MINGA
DB 2810 PG 121
PB 61PG 162

42 EAST, LLC
DB 3442 PG 17
PB 61PG 49

JOYCE I. ARMSTRONG
DB 3001PG 811
PB 61PG 49

GREG R. DUNSTON AND WIFE, TAKICEY M. DUNSTON
DB 3019 PG 140
PB 61PG 49

GEORGE P. MEREWETHER AND WIFE, MARIAN L. MEREWETHER
DB 3297 PG 447
PB 61PG 49
EST 2 TONS CLASS B RIP RAP
EST 7 SY GEOTEXTILE

MATCHLINE –L– STA. 153+00.00 SEE SHEET 14

MATCHLINE –L– STA. 166+00.00 SEE SHEET 16

155+00 160+00 165+00

–DRW7– POT Sta. 10+00.00 = –L– POT Sta. 154+39.44

–L– POT Sta. 160+31.76= –DRI– POT Sta. 10+00.00

PC Sta. 163+30.63

PC Sta. 10+20.54

PI Sta. 10+83.60

POT Sta. 11+18.21

END CONSTRUCTION
–DRI– POC Sta. 11+45.00
PT Sta. 11+56.05

R-3825B-3

25-APR-2016 09:51
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$$$$USERNAME$$$$

8/17/99

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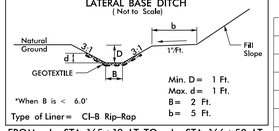
25-APR-2016 09:45
C:\Projects\R3825b\rdy_pshl6.dgn
$$$$USERNAME$$$$

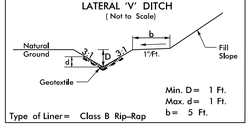
DETAIL 15–11
LATERAL BASE DITCH
(Not to Scale)



Type of Liner = CI-B Rip-Rap

FROM –L– STA. 165+18 LT TO –L– STA. 166+50 LT

DETAIL 15–7
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner = Class B Rip-Rap

FROM –L– STA. 165+26 RT TO –L– STA. 165+93 RT

CULVERT #5
TWO BARRELS

	NORTH	EAST	ELEV.
CUL1	692040.93	2186798.96	148.58
CUL2	692042.61	2186806.72	148.67
CUL3	692042.69	2186807.43	148.64
CUL4	692044.17	2186815.15	148.67
CE1	692042.51	2186806.29	158.57
HW1	692042.42	2186807.15	160.38
CUL5	692099.17	2186787.61	148.70
CUL6	692100.59	2186795.36	148.76
CUL7	692100.78	2186796.06	148.77
CUL8	692102.39	2186803.83	148.67
CE2	692100.78	2186796.06	158.67
HW2	692101.09	2186795.51	160.49

–L– NC 42
PI Sta 165+42.54
Δ = 4° 51' 12.9" (LT)
D = 1° 08' 45.3"
L = 423.56'
T = 211.90'
R = 5,000.00'
e = 3%
Runoff = 162'

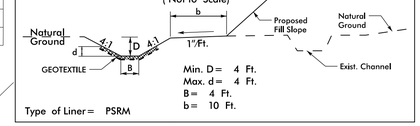
PI Sta 174+88.36
Δ = 5° 31' 16.7" (LT)
D = 1° 08' 53.6"
L = 480.86'
T = 240.62'
R = 4,990.00'
e = 3%
Runoff = 162'

–YIIA– TUSCAN RIDGE DR
PI Sta 14+87.31
Δ = 5° 12' 15.1" (LT)
D = 5° 42' 49.2"
L = 91.08'
T = 45.57'
R = 1,002.78'

NAD 83/2011

GREG C. JONES AND WIFE,
ANGELA V. JONES
DB 3948 PG 257
PB 66 PG 9

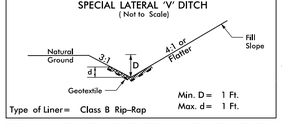
DETAIL 16–1
CHANNEL RELOCATION
(Not to Scale)



Type of Liner = PSRM

FROM –L– STA. 167+20 LT TO –L– STA. 171+75 LT

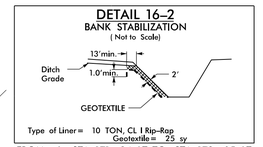
DETAIL 16–3
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Type of Liner = Class B Rip-Rap

FROM –L– STA. 176+74 LT TO –L– STA. 178+00 LT

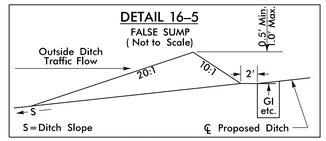
DETAIL 16–2
BANK STABILIZATION
(Not to Scale)



Type of Liner = 10 TON, CL I Rip-Rap
Geotextile = 25 sy

FROM –L– STA. 171+94 LT TO STA. 172+05 LT

DETAIL 16–5
FALSE SUMP
(Not to Scale)



PEGGY ANNE FLOWERS
DB 2836 PG 5
PB 57 PG 310

JOHN T. SHULER AND WIFE,
CATHIE G. SHUKER
DB 4061 PG 191
PB 71 PG 201

GERRY LYNCH
DB 3547 PG 358
PB 71 PG 201

42 EAST LLC
DB 3018 PG 255
PB 64 PG 294

42 EAST LLC
DB 3018 PG 255
PB 77 PG 338

MATCHLINE –L– STA. 166+00.00 SEE SHEET 15

MATCHLINE –L– STA. 178+00.00 SEE SHEET 17

170+00

175+00

-L- POT Sta. 171+51.31=
-YIIA- POT Sta. 10+00.00

PT Sta. 167+54.19

PC Sta. 172+47.75

PRC Sta. 177+28.61

PC Sta. 14+41.74

PT Sta. 15+32.82

END CONSTRUCTION
-YIIA- POT Sta. 12+85.00

NOTE:
CONSTANT SLOPE FROM STREAM TIE IN TO STREAM TIE IN POINTS. NEW CHANNEL SHOULD MIMIC THE MEANDER OF EXISTING CHANNEL

20LF OF OUTLET CHANNEL IMPROVEMENT w/FLOOD BENCH

CHANNEL RELOCATION
SEE DETAIL 16–1

BANK STABILIZATION
SEE DETAIL 16–2

EST 3 TONS CLASS B RIP RAP
EST 11 SY GEOTEXTILE

EST 5 TONS CLASS B RIP RAP
EST 14 SY GEOTEXTILE

2' LATERAL BASE DITCH
W/CLASS B RIP RAP
SEE DETAIL 15–11

3' SILL IN LT. BARREL
1' SILL IN RT. BARREL
INSET 1' FROM CULV. FACE

2@ 11x12 RCBC

BEGIN SBG

END SBG

TYPE A

TIE TO EXISTING SWALE

100' MEDIAN TRANSITION

SPECIAL LATERAL V-DITCH W/ CLASS B RIP RAP
SEE DETAIL 16–3

–L– STA. 169+36 RT
–L– STA. 175+66 RT
–L– STA. 177+55 RT

REMOVE

RETAIN

50' TAPER

100' TAPER

187.69' TAPER

74' TAPER

117.59' TAPER

42" RCP

24" RCP-IV

24" RCP-III

15" RCP-IV

18" RCP

24" CSP

12" PVC

5" MONOLITHIC ISLAND

GRAU 350

2 @ 11' X 12' RCBC

EXISTING GROUND

EXCAVATION

CLASS 1 RIP RAP FLOOD BENCH BORDER KEY-IN 2'

1' SILL INSET 1' FROM END. BACKFILL WITH NATIVE MATERIAL PER SPEC.

0'–11' WIDE FLOOD BENCH, UPSTREAM AND DOWNSTREAM

INLET CHANNEL FACING DOWNSTREAM (NTS)

FLOOD BENCH NOTE:
FOR CUT CONDITION, USE CLASS I RIP RAP FLOOD BENCH BORDER WITH NATURAL GROUND COVER WITH COIR FIBER MAT INSIDE BORDER. IN FILL CONDITION, USE CLASS 1 RIPRAP FILL THROUGHOUT, WITH NATIVE BED MATERIAL FILLING THE VOIDS ON TOP.

CHANNEL EXCAVATION:
=35 CY UPSTREAM
=25 CY DOWNSTREAM

CLASS I RIP RAP 2' THICK w/ GEOTEXTILE UNDERNEATH KEY-IN 2' (TYP.)

3' SILL INSET 1' FROM END. BACKFILL WITH NATIVE MATERIAL PER SPEC.

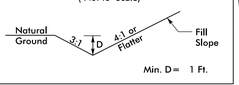
OUTLET CHANNEL FACING DOWNSTREAM (NTS)

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT

NC 42: 124 / 247
NC 42: 119 / 236
12 / 27
7 / 16
19 / 43
–Y11A–
TUSCAN RIDGE DRIVE

DETAIL 16–4
SPECIAL LATERAL GRASSED DITCH
(Not to Scale)



FROM –L– STA. 175+80 RT TO –L– STA. 177+30 RT

SPECIAL LATERAL GRASS DITCH
SEE DETAIL 16–4

42 EAST LLC
DB 3018 PG 255
PB 77 PG 338

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE: (919) 461-1100 FAX: (919) 461-1415
NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

FOR –L– PROFILE SEE SHEET 30
FOR –YIIA– PROFILE SEE SHEET 35

-L- NC 42	-Y11B- VERONA DR
PI Sta 179+59.06	PI Sta 12+01.17
Δ = 5° 17' 17.9" (RT)	Δ = 72° 15' 26.8" (RT)
D = 1° 08' 53.6"	D = 37° 53' 05.4"
L = 460.57'	L = 190.73'
T = 230.45'	T = 110.40'
R = 4,990.00'	R = 151.24'
e = 3%	
Runoff = 162'	

Prepared by
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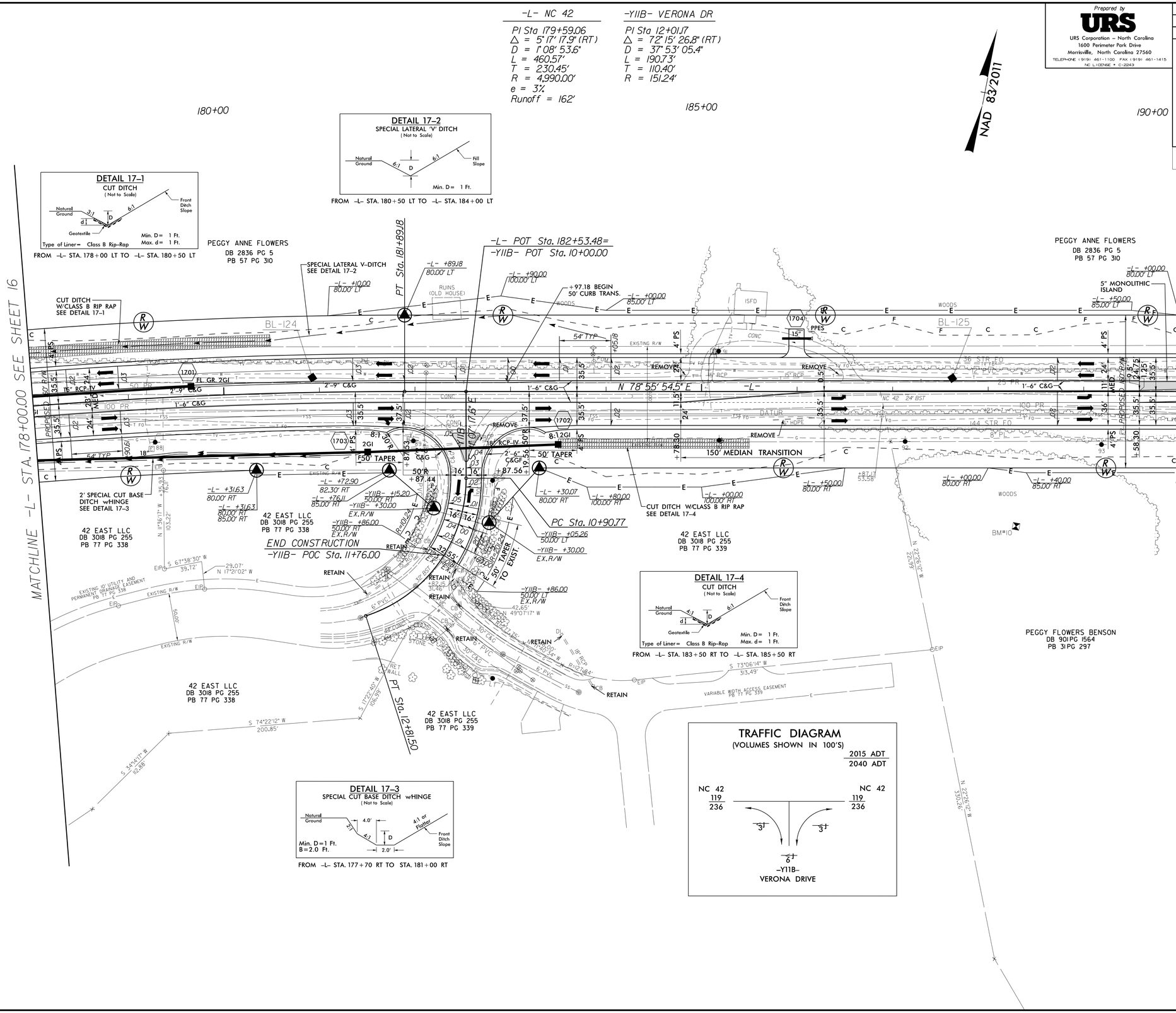
NC LICENSE • C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	17
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



FOR -L- PROFILE SEE SHEET 30
FOR -Y11B- PROFILE SEE SHEET 35

REVISIONS

8/17/99

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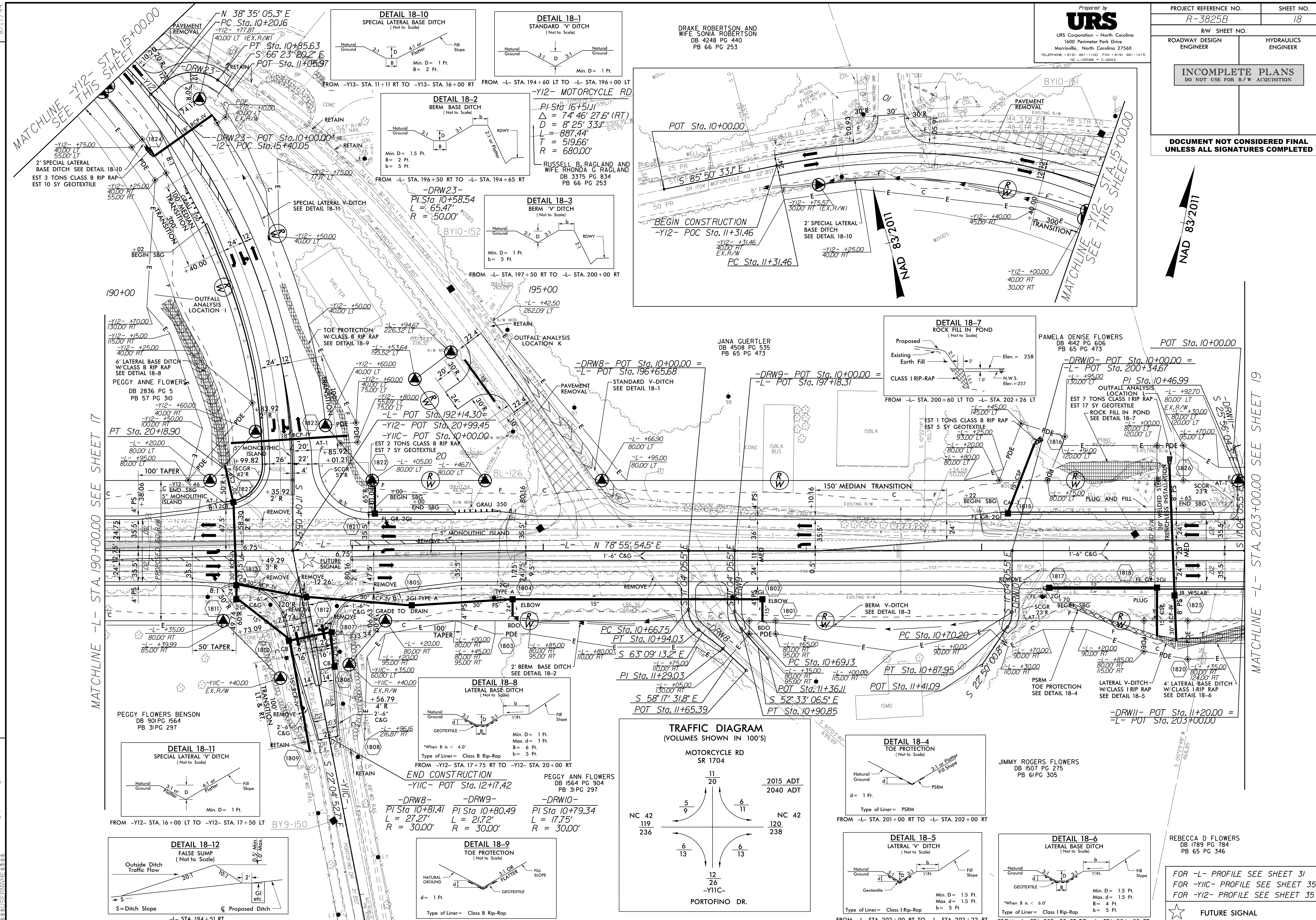

REVISIONS

8/17/99

25-APR-2016 15:26
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NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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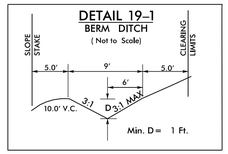
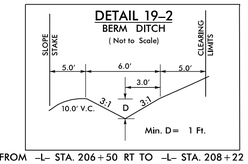
NAD 83/2011

DETAIL 19–1
BERM DITCH
(Not to Scale)



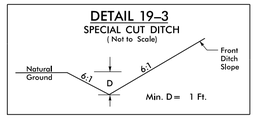
FROM –L– STA. 210+70 RT TO –L– STA. 212+50 RT

DETAIL 19–2
BERM DITCH
(Not to Scale)



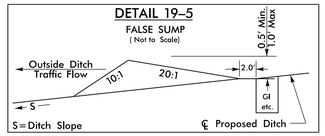
FROM –L– STA. 206+50 RT TO –L– STA. 208+22 RT

DETAIL 19–3
SPECIAL CUT DITCH
(Not to Scale)



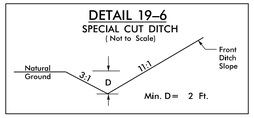
FROM –L– STA. 208+07 LT TO –L– STA. 208+50 LT
FROM –L– STA. 214+00 RT TO –L– STA. 215+00 RT

DETAIL 19–5
FALSE SUMP
(Not to Scale)



–L– STA. 203+84 LT

DETAIL 19–6
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 204+05 LT TO –L– STA. 204+50 LT
FROM –L– STA. 215+50 RT TO –L– STA. 216+00, RT (NO GRADE)

–L– NC 42

PI Sta 210+10.60
△ = 1° 40' 46.0" (RT)
D = 0° 14' 38.4"
L = 688.32'
T = 344.18'
R = 23,482.50'
e = NC

MATCHLINE –L– STA. 203+00.00 SEE SHEET 18

MATCHLINE –L– STA. 216+00.00 SEE SHEET 20

PAMELA DENISE FLOWERS
DB 4142 PG 606
PB 65 PG 473

LARRY B SWANEY AND WIFE LYNN R SWANEY
DB 4273 PG 520
PB 77 PG 402

CHRISTOPHER M FORD AND WIFE MELANIE P FORD
DB 4048 PG 246
PB 69 PG 222

THOMAS M PROPPS AND WIFE CYNTHIA J PROPPS
DB 4456 PG 675
PB 69 PG 222

JAMES M WILCOX AND WIFE ELAINE B WILCOX
DB 3662 PG 406
PB 69 PG 222

RAYMOND B WORTHINGTON AND WIFE PEBBLES L WORTHINGTON
DB 4150 PG 945
PB 69 PG 222

WILLIAM B GATEWOOD, JR
DB 4548 PG 827
PB 69 PG 222

RICHARD M PREUSS AND WIFE LOUISE F MAISENHALDER
DB 3862 PG 861
PB 69 PG 221

DWF DEVELOPMENT INC
DB 3166 PG 692
PB 79 PG 472

COUNTY OF JOHNSTON
DB 3961 PG 875
PB 69 PG 307

REBECCA D FLOWERS
DB 1789 PG 784
PB 65 PG 346

PEGGY ANN FLOWERS
DB 3081 PG 221
PB 65 PG 346

205+00 210+00 215+00

EXISTING R/W

EX 70' BUFFER EASEMENT PB 69 PG 220

EX 20' ACCESS EASEMENT

-DRW12- POT Sta. 10+00.00 = -L- POC Sta. 212+94.21

POT Sta. 11+63.35

PI Sta. 10+74.48

PC Sta. 206+66.42

PT Sta. 213+54.74

N 78° 55' 54.5" E -L-

N 80° 36' 40.5" E

S 10° 04' 18" W 67.11'

N 58°01'11" E 57.05'

S 58°16'21" E 366.42'

N 61°00'21" E 131.50'

N 51°53'32" E 290.16'

BL-128

R=23567.50

DATUM

BM#11

SPECIAL CUT DITCH SEE DETAIL 19-6

SPECIAL CUT DITCH SEE DETAIL 19-3

SPECIAL CUT DITCH SEE DETAIL 19-4

SPECIAL CUT DITCH SEE DETAIL 19-7

EST 5 TONS CLASS B RIP RAP
EST 14 SY GEOTEXTILE

OUTFALL ANALYSIS LOCATION J

OUTFALL ANALYSIS LOCATION M

BERM V-DITCH W/CLASS B RIP RAP SEE DETAIL 19-2

BERM V-DITCH SEE DETAIL 19-1

4' LATERAL BASE DITCH W/CLASS I RIP RAP SEE DETAIL 18-6

100' MEDIAN LANE TRANSITION

24" WELDED STEEL TRENCHLESS INSTALLATION

24" RCP

REMOVE

1'-6" C&G

2GI TYPE D

REMOVE ELBOW

ELBOW

END SBG

CAT-1

8" PS

8" PL

4' PS

12" PVC

36" STR FO

48" STR FO

24" MED

28' MED

35.5'

80' R/W PROPOSED

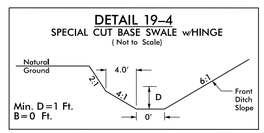
EXISTING R/W

CONC HW & WW TOP=294.35

CONC TOP=307.13

FOR –L– PROFILE SEE SHEET 31

DETAIL 19–4
SPECIAL CUT BASE SWALE wHINGE
(Not to Scale)



FROM –L– STA. 213+07 RT TO –L– STA. 214+00 RT

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$$$$USERNAME$$$$

8/17/99

REVISIONS

Prepared by
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Morrisville, North Carolina 27560
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NC LICENSE # C-2243

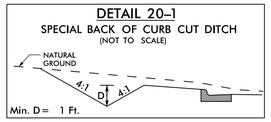
PROJECT REFERENCE NO.	SHEET NO.
R-3825B	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

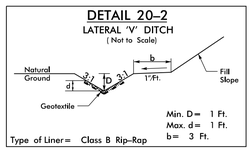
NAD 83/2011

DETAIL 20–1
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)



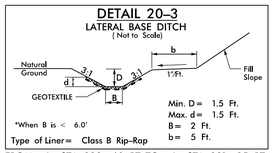
FROM –L– STA. 222+27 LT TO –L– STA. 228+00 LT

DETAIL 20–2
LATERAL 'V' DITCH
(Not to Scale)



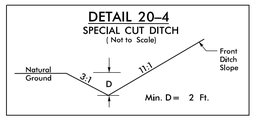
FROM –L– STA. 228+00 LT TO –L– STA. 229+72

DETAIL 20–3
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 228+60 RT TO –L– STA. 231+95 RT

DETAIL 20–4
SPECIAL CUT DITCH
(Not to Scale)

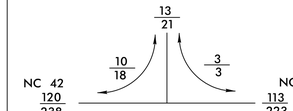


FROM –L– STA. 217+85 LT TO –L– STA. 218+26 LT
(NO GRADE)

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT

–Y12A–
FLOWERS PKWY



–Y12A– FLOWERS PKWY
PI Sta 11+21.34
Δ = 38° 28' 14.5" (LT)
D = 16° 28' 36.2"
L = 233.49'
T = 121.34'
R = 347.74'

GREGORY D THURMOND AND WIFE TERRI DAWN MCCORD
DB 3859 PG 572
PB 69 PG 220

SHAUN AMATA AND WIFE JILL AMATO
DB 4144 PG 492
PB 69 PG 220

KEVIS S O'HARE AND WIFE GIULIANA M O'HARE
DB 4498 PG 684
PB 69 PG 220

MARK DAVEY AND WIFE MITZI DAVEY
DB 3882 PG 689
PB 69 PG 220

DWF DEVELOPMENT INC
DB 3166 PG 692
PB 79 PG 472

MICHAEL A FORD
DB 4376 PG 567
PB 69 PG 220

PEGGY ANN FLOWERS
DB 3081 PG 221
PB 65 PG 346

KIRKWOOD BUILDERS INC
DB 3847 PG 657
PB 81 PG 132

DWF DEVELOPMENT INC
DB 3556 PG 162
PB 81 PG 132

DWF DEVELOPMENT INC
PB 81 PG 132

REBECCA D FLOWERS
DB 1789 PG 784
PB 81 PG 35

REBECCA D FLOWERS
DB 1789 PG 784

REBECCA D FLOWERS
DB 1001 PG 389

BEGIN CONSTRUCTION
–Y12A– POC Sta. 12+25.00

PC Sta. 10+00.00

PT Sta. 12+33.49

–L– POT Sta. 221+60.97=
–Y12A– POT Sta. 13+31.89

–DRW13– POT Sta. 10+00.00 =
–L– POT Sta. 228+86.87

PC Sta. 10+52.82

–DRW13–
PI Sta 10+70.41
L = 31.82'
R = 30.00'

100' MEDIAN LANE TRANSITION

SPECIAL CUT DITCH SEE DETAIL 20–4

END PAVED SHOULDER BEGIN CURB & GUTTER +02.92

EST. 3 TONS CLASS B RIP RAP
EST. 10 SY GEOTEXTILE

OUTFALL ANALYSIS LOCATION N

SPECIAL BACK OF CURB CUT V-DITCH SEE DETAIL 20–1

LATERAL V-DITCH W/CLASS B RIP RAP SEE DETAIL 20–2

2' LATERAL BASE DITCH W/CLASS B RIP RAP SEE DETAIL 20–3

MATCHLINE –L– STA. 216+00.00 SEE SHEET 19

MATCHLINE –L– STA. 229+00.00 SEE SHEET 21

FOR –L– PROFILE SEE SHEET 32
FOR –Y12A– PROFILE SEE SHEET 35

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8/17/99

REVISIONS

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NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	21
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

DETAIL 20–2
LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1 Ft.
Max. d= 1 Ft.
b= 3 Ft.
Type of Liner= Class B Rip–Rap

FROM –L– STA. 228+00 LT TO –L– STA. 229+72

DETAIL 20–3
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1 Ft.
Max. d= 1 Ft.
B= 2 Ft.
b= 5 Ft.
*When B is < 6.0'
Type of Liner= Class B Rip–Rap

FROM –L– STA. 228+60 RT TO –L– STA. 231+95 RT

DETAIL 21–1
TOE PROTECTION
(Not to Scale)

d= 1 Ft.
Type of Liner= Class B Rip–Rap

FROM –L– STA. 229+70 LT TO –L– STA. 229+81 LT
FROM –L– STA. 231+75 LT TO –L– STA. 233+03 LT

DETAIL 21–2
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)

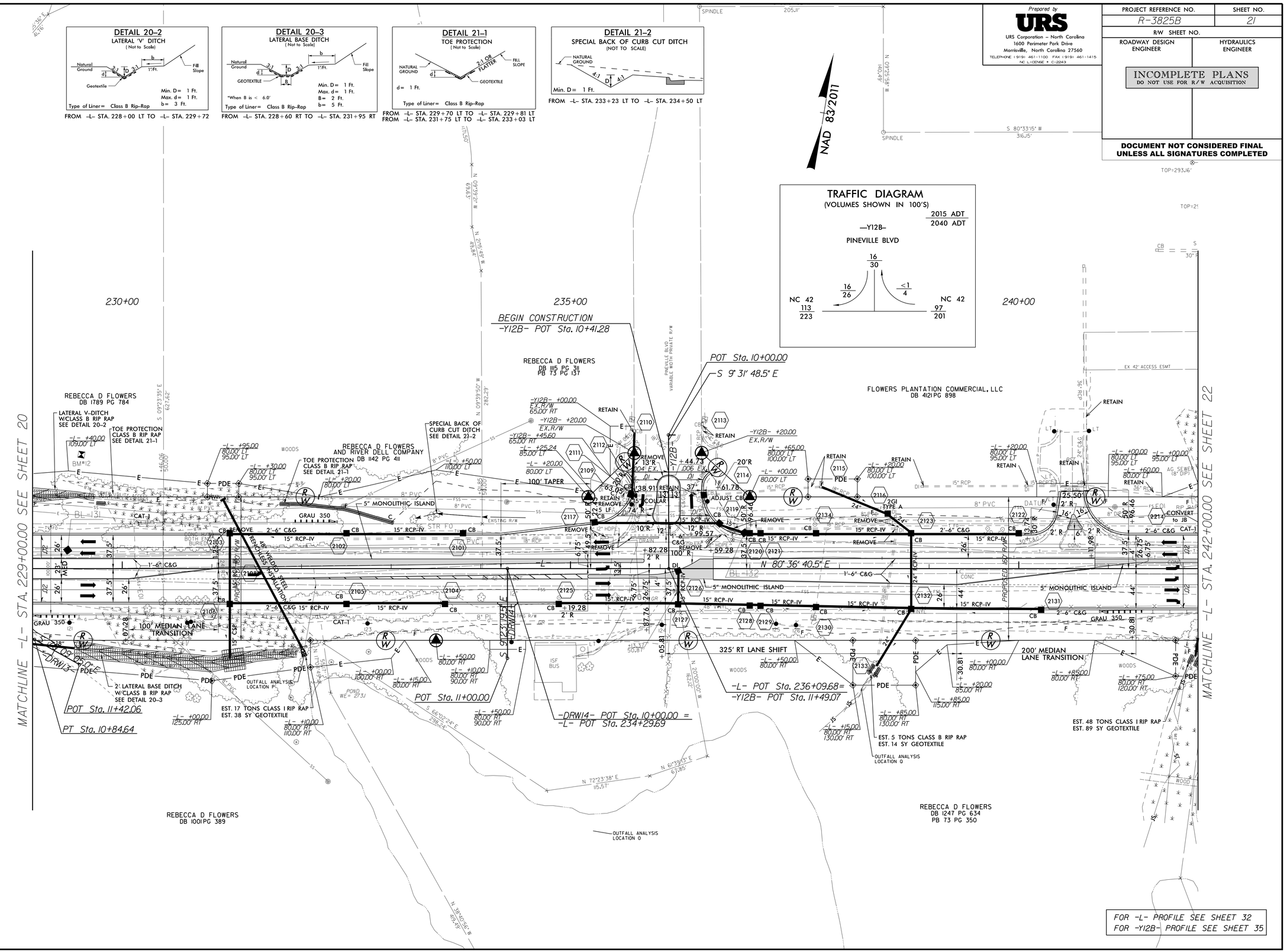
Min. D= 1 Ft.

FROM –L– STA. 233+23 LT TO –L– STA. 234+50 LT

NAD 83/2011

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT



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8/17/99

REVISIONS

MATCHLINE -L- STA. 19+00.00 SEE SHEET 23

MATCHLINE -L- STA. 242+00.00 SEE SHEET 21

MATCHLINE -L- STA. 255+00.00 SEE THIS SHEET

MATCHLINE -L- STA. 255+00.00 SEE THIS SHEET

MATCHLINE -L- STA. 28+00.00 SEE SHEET 23

NAD 83/2011

FPC MENAGERIE OUTLOT, LLC
DB 4607 PG 449
PB 81 PG 36

FLOWERS PLANTATION COMMERCIAL, LLC
DB 4121 PG 898
PB 79 PG 130

FPC DRUGSTORE OUTPARCEL LLC
DB 4476 PG 245
PB 79 PG 130

PERCY FLOWERS STORE LLC
DB 3486 PG 39
PB 71 PG 452

REBECCA FLOWERS FINCH
DB 1368 PG 792

REBECCA FLOWERS FINCH
DB 1420 PG 262

REBECCA FLOWERS FINCH
DB 1158 PG 421

REBECCA FLOWERS FINCH
DB 1306 PG 428

REBECCA D FLOWERS
DB 1247 PG 634

REBECCA D FLOWERS
DB 1235 PG 444

REBECCA D FLOWERS
DB 1789 PG 784

REBECCA FLOWERS FINCH
DB 1235 PG 444

-L- POT Sta. 245+70.36=
-Y13- POC Sta. 24+61.09

-DRW21- POT Sta. 10+00.00 =
-Y13- POC Sta. 26+89.48

-DRW22- POT Sta. 10+00.00 =
-Y13- POC Sta. 27+92.31

PCC Sta. 23+13.33

POT Sta. 11+02.51

PI Sta. 10+46.97

POT Sta. 11+00.00

-L- POT Sta. 257+50.00

POT Sta. 257+70.28

END CONSTRUCTION

END TIP PROJECT R-3825B
-L- Sta. 257+50.00

-Y13- BUFFALO RD

POND
WE=286.0

100' RIGHT LANE TRANSITION

600' LANE DROP

5" MONOLITHIC ISLAND

SPECIAL BACK OF CURB CUT DITCH SEE DETAIL 22-8

SPECIAL CUT DITCH SEE DETAIL 22-7

100' MEDIAN TRANSITION

250' MEDIAN TRANSITION

300' TRANSITION LANE SHIFT LT

450' TAPER LANE SHIFT RT

50' TAPER

150' TAPER LT TURN

SPECIAL LATERAL V-DITCH SEE DETAIL 22-4

2' SPECIAL CUT BASE DITCH SEE DETAIL 22-5

SPECIAL CUT DITCH SEE DETAIL 22-6

CLASS B RIP RAP TOE PROTECTION SEE DETAIL 22-2

EST. 5 TONS CLASS B RIP RAP
EST. 16 SY GEOTEXTILE

EST. 3 TONS CLASS B RIP RAP
EST. 10 SY GEOTEXTILE

EST. 1 TONS CLASS B RIP RAP
EST. 5 SY GEOTEXTILE

EST. 3 TONS CLASS B RIP RAP
EST. 11 SY GEOTEXTILE

EST. 7 TONS CLASS B RIP RAP
EST. 22 SY GEOTEXTILE

EST. 1 TONS CLASS B RIP RAP
EST. 5 SY GEOTEXTILE

OUTFALL ANALYSIS LOCATION R

PI Sta 18+39.59
△ = 0° 04' 19.2" (RT)
D = 0° 00' 27.4"
L = 947.47'
T = 473.74'
R = 753,976.63'
e = NC

PI Sta 25+88.52
△ = 9° 02' 35.1" (RT)
D = 1° 38' 47.1"
L = 549.25'
T = 275.20'
R = 3,480.00'
e = 3%
Runoff = 138'

PI Sta 31+24.97
△ = 8° 37' 25.4" (LT)
D = 1° 38' 47.1"
L = 523.78'
T = 262.39'
R = 3,480.00'
e = 3%
Runoff = PC 138'
Runoff = PT 108'

N 74° 55' 00.4" E

N 78° 45' 13.7" E

N 76° 36' 35.1" E

N 80° 36' 40.5" E

S 80° 19' 53" W

S 81° 28' 31" E 465.92'

N 58° 00' 00" E 580.00'

S 36° 28' 37" E 906.28'

N 53° 33' 20" E 563.04'

N 15° 53' 29" W 251.15'

N 45° 11' 14" W 506.73'

DETAIL 22-1
TOE PROTECTION
(Not to Scale)

NATURAL GROUND
3:1 OR FLATTER
FILL SLOPE
GEOTEXTILE
d= 1 Ft.
Type of Liner= Class B Rip-Rap

FROM -L- STA. 242+23 LT TO -L- STA. 242+50 LT

DETAIL 22-2
TOE PROTECTION
(Not to Scale)

Natural Ground
3:1 or Flatter
Fill Slope
b
d
Geotextile
d= 1 Ft.
b= 1 Ft.
Type of Liner= Class B Rip-Rap

FROM -L- STA. 242+00 RT TO -L- STA. 242+63 RT

DETAIL 22-3
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)

NATURAL GROUND
3:1
D
D = 1 FT.

FROM -Y12- STA. 25+67 LT TO -L- STA. 248+00 LT

DETAIL 22-4
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground
3:1
D
4:1 or Flatter
Fill Slope
Min. D= 1 Ft.

FROM -L- STA. 250+40 LT TO -L- STA. 251+00 LT

DETAIL 22-5
SPECIAL CUT BASE DITCH
(Not to Scale)

Natural Ground
2:1
D
4:1 or Flatter
Front Ditch Slope
B
Min. D= 2.5 Ft.
B= 2 Ft.

FROM -L- STA. 251+07 LT TO -L- STA. 252+50 LT

DETAIL 22-6
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground
3:1
D
4:1 or Flatter
Front Ditch Slope
Min. D= 2 Ft.

FROM -L- STA. 252+50 LT TO -L- STA. 257+50 LT

DETAIL 22-7
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground
3:1
D
4:1 or Flatter
Front Ditch Slope
Min. D= 1 Ft.

FROM -L- STA. 254+25 RT TO -L- STA. 255+50 RT

DETAIL 22-8
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)

NATURAL GROUND
2:1
6:1

FROM -Y12- STA. 21+00 LT TO -Y12- STA. 21+50 LT

DETAIL 22-9
FALSE SUMP
(Not to Scale)

0.5' Min.
1.0' Max.
Outside Ditch Traffic Flow
20:1
10:1
2'
GI etc.
S=Ditch Slope
℄ Proposed Ditch

FROM -Y12- STA. 21+52 LT TO -Y12- STA. 21+82 LT

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

SR 1003
2015 ADT
2040 ADT
NC 42
NC 42
SR 1003

87/206		
27/66	14/33	
97/201		69/152
23/31	8/15	
77/153		

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	22
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

FOR -L- PROFILE SEE SHEET 33
FOR -Y13- PROFILE SEE SHEET 36

☆ EXISTING SIGNAL (SIGNAL MOD. REQUIRED)

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8/17/99

REVISIONS

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NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	23
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

-Y13- BUFFALO RD

PI Sta 11+82.97
△ = 3° 02' 15.7" (RT)
D = 0° 49' 49.1"
L = 365.85'
T = 182.97'
R = 6,900.57'

PI Sta 18+39.59
△ = 0° 04' 19.2" (RT)
D = 0° 00' 27.4"
L = 947.47'
T = 473.74'
R = 753,976.63'
e = NC

NAD 83/2011

BEGIN CONSTRUCTION
-Y13- POC Sta. 14+83.74

END CONSTRUCTION
-Y13- POC Sta. 35+70.00

MATCHLINE -Y13- STA. 19+00.00 SEE SHEET 22

MATCHLINE -Y13- STA. 28+00.00 SEE SHEET 22

REBECCA D FLOWERS
DB 1247 PG 634

REBECCA D FLOWERS
DB 1235 PG 444

REBECCA D FLOWERS
DB 1789 PG 784

FPC MENAGERIE OUTLOT LLC
DB 4607 PG 449
PB 81 PG 36

FPC PHASE I LLC
DB 4377 PG 511
PB 79 PG 130

POND
WE=286.0

DETAIL 22-3
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)

NATURAL GROUND
3:1
D
3:1
D = 1 FT.

FROM -Y12- STA. 30+00 LT TO -Y12- STA. 31+50

DETAIL 23-1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground
3:1
D
4:1 or Flatter
Fill Slope
Min. D= 1 Ft.

FROM -Y12- STA. 29+00 RT TO -Y12- STA. 36+96 RT
FROM -Y12- STA. 27+07 LT TO -Y12- STA. 30+00 LT
FROM -Y12- STA. 31+00 LT TO -Y12- STA. 33+16 LT

-Y13- BUFFALO RD

PI Sta 31+24.97
△ = 8° 37' 25.4" (LT)
D = 1° 38' 47.1"
L = 523.78'
T = 262.39'
R = 3,480.00'
e = 3%
Runoff = PC 138'
Runoff = PT 108'

PI Sta 36+48.41
△ = 4° 54' 58.8" (LT)
D = 1° 43' 03.0"
L = 286.25'
T = 143.21'
R = 3,336.00'
e = 3% / MATCH EXIST.
Runoff = 108'

FOR -Y13- PROFILE SEE SHEET 37

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