PROJECT REFERENCE NO.	SHEET NO.
R-0977A	UC-8
R/W SHEET NO.	

METRIC

5 0 10

CONST.REV.

R/W REV.

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 249 BOONE, N.C. 28607 (828) 262-1151
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NORTH CAROLINA PROFESSIONAL SEAL 9282 ENGINEER JIMMY D. WOODIE 12/01/2004

UTILITY CONSTRUCTION DRAWINGS
1. REVISED FORCE SEWER LABEL 12-6-04 LCH

NOTES

1. CONSTRUCT NEW LINE.
2. PRESSURE TEST.
3. BACTERIOLOGICAL TEST.
4. TIE NEW LINE TO EXISTING LINE.
5. DEWATER EXISTING WATER LINE AND DECHLORINATE. DEWATER EXISTING FORCE SEWER LINE AND DISPOSE OF AT TREATMENT FACILITY.

THE ABOVE PROCESS IS INCIDENTAL TO THE NEW 400mm WATER PIPE AND THE NEW 200mm FORCE SEWER PIPE.

LATERAL 'V' DITCH
Fill Slope, b = 1.5 m, 2:1, D, 2:1, Natural Ground, 0.08m/m, Min. D = 0.3 m, Min. d = 0.3 m, Filter Fabric
Type of Liner = CLASS 'I' RIP RAP
FROM -LREV- STA. 50+32 TO STA. 50+80 RT. (EST. D.D.E. = 77 cu.m, RIP RAP = 39 m.tons, FILTER FABRIC = 67 sm)
FROM -LREV- STA. 50+67 TO STA. 50+85 LT. (EST. D.D.E. = 45 cu.m, RIP RAP = 15 m.tons, FILTER FABRIC = 25 sm)

LATERAL 'V' DITCH
Fill Slope, b, 2:1, D, 2:1, Natural Ground, 0.08m/m, Min. D = 0.3 m, Min. d = 0.3 m, b = 1.5 m, Filter Fabric
Type of Liner = CLASS 'B' RIP RAP
FROM -LREV- STA. 49+90 TO STA. 50+20 LT. (EST. D.D.E. = 495 cu.m, RIP RAP = 22 m.tons, FILTER FABRIC = 42 sm)

SPECIAL DITCH
Natural Ground, 2:1, D, 2:1, Min. d = 0.3 m
Type of Liner = CLASS 'B' RIP RAP
FROM -Y4- STA. 12+11 TO STA. 12+50 LT. (EST. RIP RAP = 40 m.tons, FIL. FAB. = 80 sm)
FROM -Y4- STA. 12+35 TO STA. 12+40 RT. (EST. RIP RAP = 5 m.tons, FIL. FAB. = 10 sm)

SPECIAL 'V' DITCH VARIES
Natural Ground, 2:1, D, 2:1, S = 4d to 10d, Min. D = 0.3 m, Min. d = 0.3 m
Type of Liner = CLASS 'B' RIP RAP
FROM -Y4- STA. 12+50 TO STA. 12+63 LT. (EST. RIP RAP = 13 m.tons, FIL. FAB. = 26 sm)
FROM -Y4- STA. 12+40 TO STA. 12+53 RT. (EST. RIP RAP = 13 m.tons, FIL. FAB. = 26 sm)

SEE SHEET 26 (ROADWAY PLANS)
MATCH LINE -Y4- STA 12+28.533

MATCH LINE -LREV- STA 47+05.000
SEE SHEET UC-7

MATCH LINE -LREV- STA 50+85.000
SEE SHEET 15 (ROADWAY PLANS)

EXIST. R/W TO BE ABANDONED

BELL'S END WAR FENCE

+96.31 -Y4- 400.000 (1312.0 ft)

+25.000 -LREV- 37.707 (123.68 ft)

HUBERT WINSTON CRAIG DB 270 PG 189 (17)

CL 'B' RIP RAP (2 TONS) FIL.FAB. (6 SM)

TOE OF FILL PROTECT. (SEE DETAIL "B") (113)

OBLITERATE

FILL OR REMOVE 440.6M OF ABANDONED 400mm PIPE

+86.000 -LREV- 35.386 (116.07 ft)

47+00

48+00

49+00

50+00

-LREV- Sta. 47+51.380

BOB HATCHETT DB 191 PG 165 (16)

(FUT.) FALSE SUMP

(FUTURE) SLOPE STAKES LINE

DEWATER, FILL OR REMOVE 370.2M OF ABANDONED 200mm PIPE

-Y4- POT STA.12+87.672 =
-L- POT STA.49+50.510
-LREV- POT STA.49+72.371

(FUTURE) SPECIAL DITCH GRADE

SPECIAL DITCH W/ CLASS "B" RIP RAP & FILTER FABRIC

CLASS "B" RIP RAP W/ FILTER FABRIC

SPECIAL 'V' DITCH W/ CLASS "B" RIP RAP & FILTER FABRIC

+90.000 -LREV- 50.000 (164.00 ft)

+40.292 -LREV- 50.921 (167.02 ft)

CL 'V' RIP RAP (13 TONS) FILTER FABRIC (16 SM)

ENDWALL

CHARLES H. WEST
WILLIAM J. WELLS
DB 438 PG 90
DB 320 PG 76
DB 559 PG 43 (21)

LAT 'V' DITCH W/ CL.B RIP RAP & FIL.FAB.

HDWL

600mm CSP W/ ELBOW

450mm CSP W/ ELBOW

LAT 'V' DITCH W/ CLASS 'I' RIP RAP W/ FILTER FABRIC

SLOPE STAKES LINE

(FUTURE) 400mm CSP & ELBOWS

(FUT.) 2-GI

(FUTURE) GUARDRAIL

(FUT.) SHLD. BERM GUTTER

(FUTURE) +00 BEGIN SHLD.BERM

(FUTURE) +85 END SHLD.BERM

FUTURE LANES

-LREV- -L- S 66°08'54.0" E

△ = 69°53'54.0"

90.0 UNIFORM RIGHT-TURN TAPER (0.0 TO 3.6)

90.0 UNIFORM TRANSITION (7.2 TO 10.8)

90.0 UNIFORM TRANSITION (7.2 TO 10.8)

PAVEMENT CROWN LINE

1.2 PAVED SHLD

8:1 TAPER

+60 END SHLD.BERM

+10 BEGIN SHLD.BERM

PROP. SHLD. BERM GUTTER

FALSE SUMP

GRAU-350

ABANDON

PROP. 1- 400mm D.I. 22 1/2° BEND

PROP. 336.7M OF 400mm D.I. WATER PIPE, PC 1.73MPa WP

PROP. 1- 50mm AIR RELEASE VALVE AND MANHOLE

PROP. 1- 400mm D.I. 45° BEND

RELOCATE EXIST. FIRE HYDRANT USING 1- 400mm x 150mm D.I. TEE AND 11.7M OF 150mm D.I. WATER PIPE, PC 2.41MPa WP AND 1- 150mm GATE VALVE AND VALVE BOX, 1.38MPa WP

TIE TO EXIST. 400mm WATER LINE USING 1- 400mm x 400mm TAPPINGSLEEVE VALVE AND VALVE BOX, 1.38MPa WP

PROP. 1- 400mm D.I. 45° BEND

TIE TO EXIST. 400mm WATER LINE USING 1- 400mm x 100mm TAPPING SLEEVE VALVE AND VALVE BOX 1.73MPa WP

LINE 3

PROP. 1- 200mm D.I. 22 1/2° BEND

-Y4- PC Sta.13+25.656

-Y4- PT Sta.13+76.105

TIE TO EXIST. 200mm FORCE SEWER PIPE USING 1- 200mm x 200mm TAPPING SLEEVE VALVE AND VALVE BOX, 1.73MPa WP

+76.105 -Y4- 30.000 (98.40 ft) END C/A END W/F FENCE

1-200mm D.I. 45° BEND

2.74M

200MM LINE STOP AND D.I. PLUG

SPECIAL DITCH GRADE

END CONSTRUCTION
-Y3- POT Sta.20+83.000
-Y3- POT Sta.20+20.862
-Y4- POT Sta.14+02.287

-Y3- POT Sta.20+91.548

+76.105 -Y4- 30.000 (98.40 ft) BEG.W/F FENCE END C/A

+90.000 -Y3- 3.963 (13.00 ft)

CHARLES H. WEST
WILLIAM J. WELLS
DB 438 PG 90
DB 320 PG 76
DB 559 PG 43

GRADE TO DRAIN

90.0 UNIFORM TRANSITION (7.2 TO 5.4)

S 37°45'22.0" W

△ = 92°45'22.0"

400mm LINE STOP AND D.I. PLUG

+98.000 -Y3- 18.000 (59.05 ft)

+45.000 -Y3- 18.000 (59.05 ft)

GILES C. & PAMELA A. ENNIS DB 536 PG 26 (22)

PROP. 1- 100mm D.I. 90° BEND

PROPOSED 60M OF 100mm PVC WATER PIPE, SDR 21 1.38MPa WP

+85.000 -Y3- 3.963 (13.0

S 55°00'00.0" E

-Y3-

ABANDON

3.0R

3.7 ASPHALT DRIVE

200 PVC 900 U/G

50 PVC 600 U/G

4.5M

2M

+91.000 -Y3- 21.000 (68.90 ft)

PROP. 259.16M OF 200mm D.I. FORCE SEWER PIPE, PC 2.41MPa WP

PROP. 2- 200mm D.I. 22 1/2° BENDS

SPECIAL DITCH

SLOPE STAKES LINE

SPECIAL 'V' DITCH

SIDNEY & MARIE ALLEN DB 696 PG 57 (19)

PROPOSED 91.1M OF 50mm PVC WATER PIPE, SDR 21 1.38MPa WP

5.5 CONC. DRIVE

RECONNECT EXIST. WATER METERS USING 2-50mm x 20mm TAPPING SADDLE, 2- 20mm CORPORATION STOPS WITH 2M OF 20mm PE WATER TUBING, SDR 9 1.38MPa WP

TIE TO EXIST. 100mm WATER LINE USING 1- 100mm D.I. 90° BEND AND NECESSARY FITTINGS (20)

-Y4-
PI Sta 13+51.648
△ = 34°00'22.0" (RT)
L = 50.449
T = 25.992

+56.309 -Y3- 20.000 (65.60 ft)

Sta.17+56.309

Std. SPRING BOX W/ PERF. 150mm CSP STUB (110)

TOE OF FILL PROTECTION (SEE DETAIL "A")

+5.380 -LREV- 40.000 (131.20 ft)

TOE OF FILL PROTECT. (SEE DETAIL "B")

LINE 3

8.0

FALSE CUT

1.0m, 1.8m, 4.5m, Natural Ground, 4d Max, 6d, 6d, DITCH SLOPE

FROM -LREV- STA. 47+80 TO STA. 47+91 LT.

HUBERT WINSTON CRAIG DB 270 PG 189 (17)

TOE OF FILL PROTECTION "A"
Fill Slope, Natural Ground, w, d, Filter Fabric
Max. w = 2.0 m
Min. d = 0.3 m
Type of Liner = CLASS 'B' RIP RAP
FROM -Y3- STA. 17+43 TO STA. 18+14 RT. (EST. RIP RAP = 60 m.tons, FIL. FAB. = 120 sm)

TOE OF FILL PROTECTION "B"
Natural Ground, Fill Slope, w, Filter Fabric
Max. w = 2.0 m
Min. d = 0.3 m
Type of Liner = CLASS 'I' RIP RAP
FROM -LREV- STA. 47+05 TO STA. 47+17 LT. (EST. RIP RAP = 15 m.tons, FIL. FAB. = 19 sm)
FROM -Y3- STA. 17+69 TO STA. 18+17 LT. (EST. RIP RAP = 58 m.tons, FIL. FAB. = 77 sm)

DENOTES PAVEMENT TO BE REMOVED

SYS/UNIT
DESIGN
DRAWN
CHECKED
USERNAME