DocuSign Envelope ID: 5FD5527F-98AA-4906-A440-C58C2F1988F3

NOTES

1. SEE SHEET UC-39 & UC-56 FOR PROFILES OF NEW MAINS ALONG HIGHWAY 211. SEE SHEET UC-53 FOR PROFILE OF NEW FORCE MAIN ALONG -YB-.
2. WELD THE CASING PIPES TOGETHER. TYPICAL FOR BOTH FORCE MAIN AND RECLAIMED WATER MAIN.
3. LOWER EXISTING 16" DI POTABLE WATER MAIN TO AVOID CONFLICT WITH FUTURE STORM DRAIN PIPING. INSTALL NEW RESTRAINED JOINT WATER MAINS AND FITTINGS IN ORDER TO LOWER EXISTING PIPE.
4. KEEP INTERIORS OF NEW POTABLE WATER PIPES AND FITTINGS CLEAN OF DIRT. SWAB INTERIORS OF PIPES AND FITTINGS WITH 200 PARTS PER MILLION OF CHLORINE SOLUTION.
5. FIELD LOCATE EXISTING CUT-OFF VALVES AND SHUT OFF WATER. SAW CUT EXISTING PIPE AND INSTALL RESTRAINED PIPE AND FITTINGS, AND CONCRETE BLOCKING. RESTORE WATER SERVICE AS SOON AS POSSIBLE.

Prepared In the Office of:

AECOM

AECOM TECHNICAL SERVICES OF NORTH CAROLINA, INC.
701 CORPORATE CENTER DRIVE, SUITE 475, RALEIGH, NC 27607
919-854-6200 919-854-6259 (fax)
F-0342

PROJECT REFERENCE NO.	SHEET NO.
R-5021	UC-6

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE:(919)707-6690
FAX:(919)250-4151

10/29/2021
NORTH CAROLINA PROFESSIONAL SEAL 10666 ENGINEER D. STEPHEN SCRUGGS
DocuSigned by: D. Stephen Scruggs
D. Stephen Scruggs

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

NAD 83/NSRS 2007

MATCH LINE -YREV- STA 28+50 SEE SHEET UC-33

MATCH LINE -YB- STA 20+50.00 SEE SHEET UC-33

MATCH LINE -L- STA 73+00 SEE SHEET UC-5

MATCH LINE -L- STA 87+00 SEE SHEET UC-7

595' - 24" FORCE MAIN (C-905 PVC) LINE FM1, SEE SHEET UC-39 FOR PROFILE

215' - 48"x 0.500" ENCASEMENT PIPE
65' - BORE AND JACK OF 48"
235' - 24' FORCE MAIN SEWER
RJ, C-905 PVC CARRIER PIPE CENTER JACK AND BORE ON EXISTING ROAD. INSTALL ADDITIONAL ENCASEMENT PIPE 10' WEST AND 140' EAST SEE NOTE 2.

60' - 48"x 0.500" ENCASEMENT PIPE
70' - 24" FORCE MAIN SEWER
RJ, C-905 PVC CARRIER PIPE OPEN CUT

1 - 24" SEWER VALVE
24" PLUG VALVE, RJ W/BOX 60 FEET FROM HDD

24"X 24" TEE, RJ W/BLOCK START 24" RJ, PVC PIPE

24" X 22.5° ELL, RJ 20' OF RJ 24" PVC PIPE EACH SIDE OF ELL

560'- 24" FORCE MAIN SEWER
560' - DIRECTIONAL DRILLING OF 24"
FPVC PIPE SEE DETAILS SHEET UC-3G LINE FM1, SEE SHEET UC-39 FOR PROFILE

380' - 24" FORCE MAIN SEWER
C-905 PVC (3' BURY) LINE FM2, SEE SHEET UC-53 FOR PROFILE

1 - 24" SEWER VALVE
PLUG VALVE, RJ W/BOX

24"X90° ELL, RJ
BEGIN 24" FPVC HDD STA. 33+78

CLASS 'B' RIP-RAP EST. 1 TONS EST. 5 SYGF

END 24" RJ, PVC PIPE 100' FROM 90° ELL

START 24" RJ PVC 175 FEET FROM VALVE

30'X40' HDD RECEIVING AREA LOCATE MINIMUM 20 FEET FROM WETLANDS

24"X90° ELL, RJ

45' - ABANDON 16" UTILITY PIPE

CLASS 'B' RIP-RAP EST. 2 TONS EST. 7 SYGF

15" CSP W/ ELBOWS

20'X10' RECEIVING PIT

20'X40' BORE PIT

PREFORMED SCOUR HOLE SEE DETAIL SHEET 2D-4

CLASS 'B' RIP-RAP EST. 5 TONS EST. 12 SYGF

CLASS 'B' RIP-RAP EST. 5 TONS EST. 15 SYGF

1 - 16" SEWER VALVE
PLUG VALVE, RJ W/BOX 60 FEET FROM HDD START 16" RJ, PVC

50'X100' STAGING AREA

573' - 16" FORCE MAIN SEWER
C-905 PVC RECLAIMED WATER LINE WL1, SEE UC-39 FOR PROFILE

865' - ABANDON 12" UTILITY PIPE

2-16" X 45 DEGREE ELLS, RJ WITH BLOCK

END 12" RJ DI PIPE 10 FEET FROM ENCASEMENT PIPE

108' - 12" WATER MAIN
RJ, DIP LINE WL3, SEE UC-56 FOR PROFILE

500'- 16" FORCE MAIN SEWER
500' - DIRECTIONAL DRILLING OF 16"
FPVC PIPE, RECLAIMED WATER SEE DETAILS SHEET UC-3G

BEGIN HDD BEGIN 12" RJ, DIP STA. 8+40

15" CURB DITCH W/ELBOWS

SPECIAL CUT BASE DITCH SEE DETAIL MMMM

CLASS 'B' RIP-RAP EST. 2 TONS EST. 7 SYGF

60' - 16" WATER LINE
DIP, RJ
FIELD LOCATE AND LOWER EXISTING 16" DI WATER MAIN TO GO UNDER FUTURE DRAIN PIPE. CONNECT TO EXISTING 16" WATER MAIN WITH 16" X 45° ELLS, RJ, W/BLOCK EACH SIDE. SEE NOTES 5, 6 AND 7
REQUIRED TOP OF NEW 16" WATER MAIN IS 41.95' (INV OF 15" RCP DRAIN PIPE 44.2')

1 - 12" VALVE
12" GV, RJ, W/BOX 60 FEET FROM HDD START 12" RJ, DIP

SPECIAL LATERAL 'V' DITCH SEE DETAIL KKK

BEGIN HDD END 16" RJ, PVC PIPE STA. 33+80

END HDD END 12" RJ, DIP STA. 2+87

30'X40' HDD RECEIVING AREA LOCATE A MINIMUM OF 20' FROM WETLANDS

550'- 12" WATER LINE
550' - DIRECTIONAL DRILLING OF 12"
12" DIP, RJ. SEE DETAILS SHEET UC-3G LINE WL3, SEE UC-56 FOR PROFILE

SPECIAL CUT BASE DITCH SEE DETAIL MMMM

SPECIAL CUT BASE DITCH SEE DETAIL MMMM

1 - REMOVE FIRE HYDRANT

END 16" HDD STA. 38+80 START 16" RJ PVC PIPE

37' - 16" FORCE MAIN SEWER
C-905 PVC RECLAIMED WATER LINE WL1, SEE UC-39 FOR PROFILE

25' - 16" WATER MAIN
DIP,RJ

15' - ABANDON 16" UTILITY PIPE

FIELD LOCATE AND CONNECT TO EXISTING 16" WATER MAIN WITH RESTRAINT CONNECTION
END NEW 16" RJ, DIP

1400' - ABANDON 16" UTILITY PIPE

1400' - ABANDON 16" UTILITY PIPE

15"CSP W/ 2 ELBOWS

STANDARD 'V' DITCH SEE DETAIL XXX S=6.2% ODE=35 CY

CLASS 'B' RIP-RAP EST. 2 TONS EST. 7 SYGF

EXISTING 16" DI WATER MAIN TO REMAIN IN SERVICE

FIELD LOCATE EXISTING ENCASEMENT PIPE UNDER HIGHWAY INTERSECTION. REMOVE CARRIER PIPE AND FILL ENCASEMENT PIPE WITH FLOWABLE FILL. TYPICAL FOR BOTH 16" FORCE MAIN AND RECLAIMED WATER MAIN

FIELD LOCATE AND CONNECT TO EXISTING 12" WATER MAIN WITH 12" X 90° ELL, RJ, AND BLOCK START 12" RJ DIP

12" X 90°ELL, RJ, W/BLOCK

260' - 32"x 0.500" ENCASEMENT PIPE
65' - BORE AND JACK OF 32"
280' - 16" FORCE MAIN SEWER
RJ, C-905 PVC CARRIER PIPE CENTER BORE AND JACK ON ROAD INSTALL ADDITIONAL ENCASEMENT PIPE 15' WEST AND 180' EAST. SEE NOTE 2.

100' - 24"x 0.375" ENCASEMENT PIPE
177' - 12" WATER MAIN
RJ, DI CARRIER PIPE OPEN CUT

2 - REMOVE UTILITY MANHOLE

NO UTILITY RELOCATIONS

The estimated quantity of Ductile Iron Sewer Pipe Fittings on this plan sheet is 6,125 pounds. The actual quantity and type of fittings will vary based on field conditions.

The estimated quantity of Ductile Iron Water Pipe Fittings on this plan sheet is 2,945 pounds. The actual quantity and type of fittings will vary based on field conditions.

⚠1 16" WATER MAIN RELOCATED AND EXTENDED PER ADDENDUM NO. 1. REMOVED NOTE BELOW PAY ITEM FOR ABANDON UTILITY PIPE PER ADDENDUM NO. 1

DATE: 10/29/2021
TIME: 3:07:16 PM
DGN: Z:\Raleigh-USRAL1\LegacyPro\Jects\60482803\900_Work\95_Utility Construction\2021_REVISIONS\R-5021_UC_PS16_Rev.dgn