

RGOB PLANS
PRODUCED FOR:



ENGINEER NAME
AT&T SOUTHEAST
MGR OPS PLNG & DESIGN
ENG PHONE #

PRODUCED BY:



ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
KCI TECHNOLOGIES INC
10401 HIGHLAND MANOR DRIVE
SUITE 120, TAMPA, FL
TECHNOLOGIES 33610 - 813-740-2300
www.kci.com

NOTE:

AT&T FACILITIES ARE SHOWN AT THEIR
DESIGNATED LOCATIONS. INFORMATION
WAS OBTAINED FROM LEVEL "B" LOCATES
ONLY FROM ELECTRONIC EQUIPMENT
MEASUREMENTS.

63001-2153-44
63030-2210-14

END PROJ. NO. NH/STP-1-24-9(76) R.O.W.
STA. 125+22.43

63001-2153-44
63030-2210-14

BEGIN PROJ. NO. NH/STP-1-24-9(76) R.O.W.
STA. 70+46.00

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

MONTGOMERY COUNTY
SIA IMPROVEMENTS SERVING HANKOOK TIRE
SR 237 (ROSSVIEW RD.) FROM WEST OF I-24 TO
EAST OF INTERNATIONAL BOULEVARD

RIGHT-OF-WAY

STATE HIGHWAY NO. 237 F.A.H.S. NO. 237

TENN.	YEAR	SHEET NO.
	2014	1
FED. AID PROJ. NO.	NH/STP-1-24-9(76)	
NH-STATE PROJ. NO.	63001-2153-44	
STP-STATE PROJ. NO.	63030-2210-14	



SCALE: 1" = 1 MILE

RIGHT-OF-WAY LENGTH 1.037 MILES

SURVEY DATE: NOVEMBER 25, 2013

TRAFFIC DATA	
ADT (2016)	8,410
ADT (2036)	21,530
DHV (2036)	2,793
D	55 - 45
T (ADT)	7 %
T (DHV)	5 %
V	40 MPH

Received

JUN 27 2014

APPROVED

JUN 27 2014

vcc Approved

Eric McElroy

SEALED BY



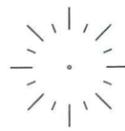
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

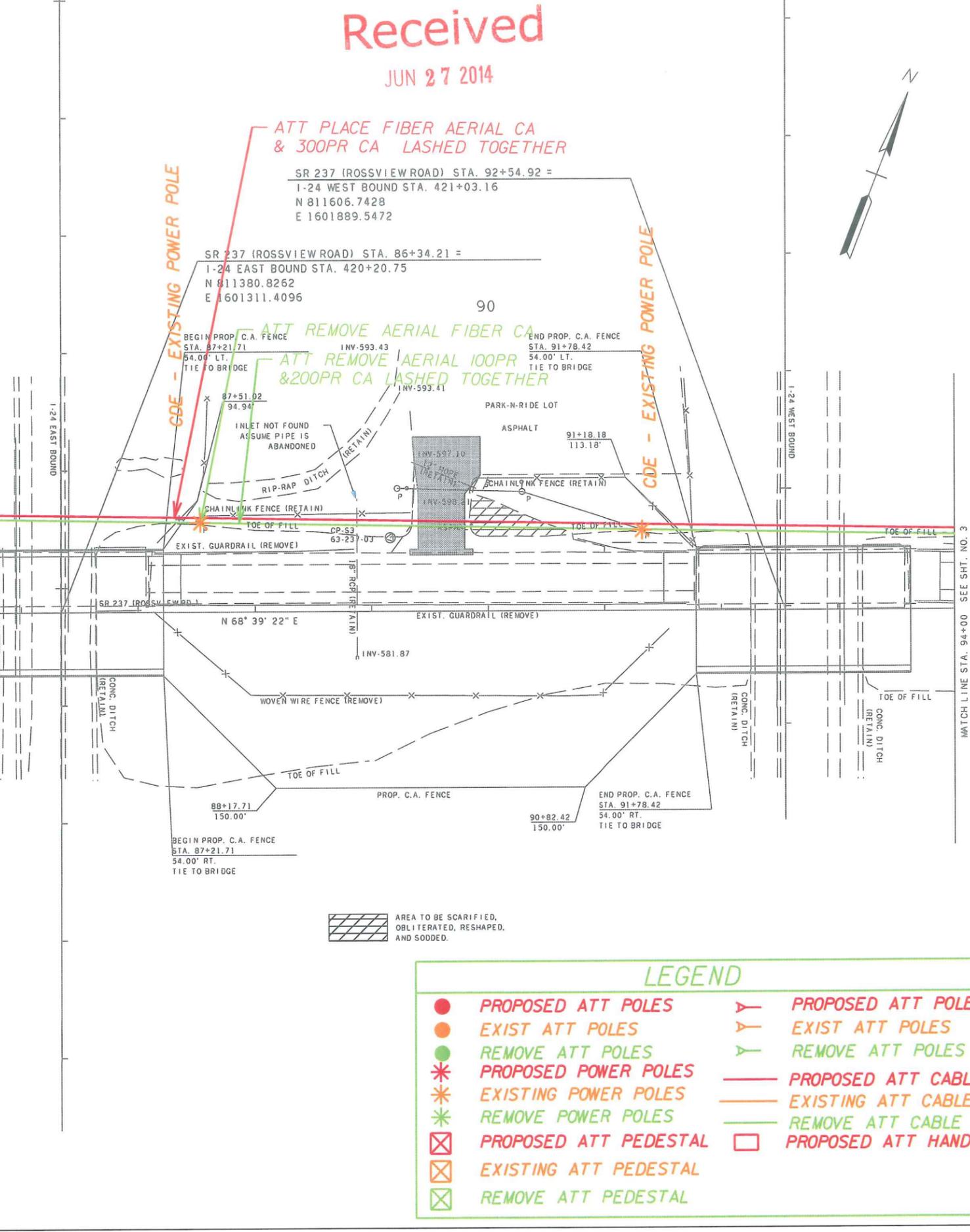
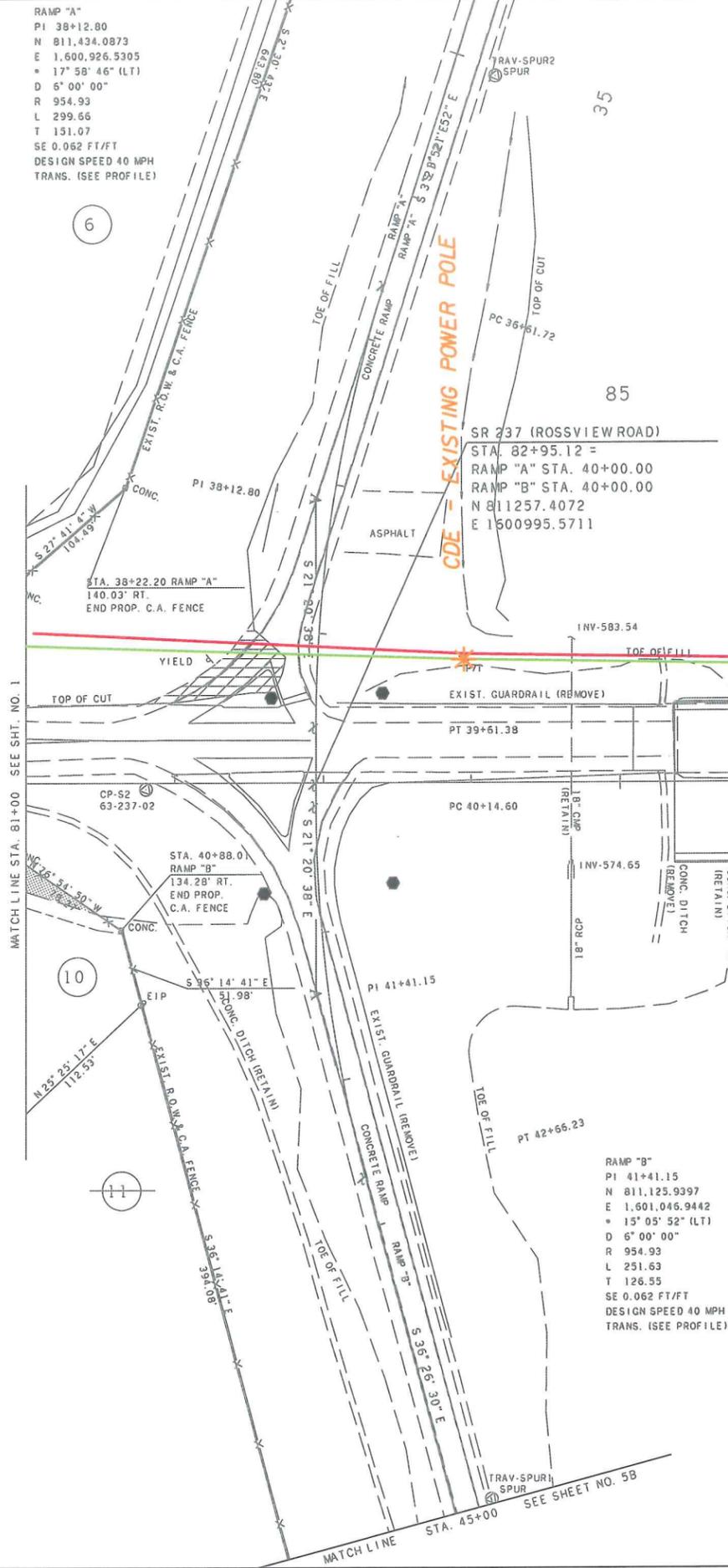
*****SYTIME*****
*****DGNSEPC*****

Received
JUN 27 2014

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH/STP-1-24-9(76)	
AT&T			
Construction Work Drawing			
PROPRIETARY INFORMATION Not for disclosure outside the AT&T family of companies except under written agreement.			
State: TENNESSEE District: Exchange: Wire Ctr:			
A.A./Taper: Tax District: RZ/CZ: Serv Unit Type: NONEW			
Designer: Phone: Records Ref:			

APPROVED

JUN 27 2014
 uccc Approved
 (Eric McHenry)



AREA TO BE SCARIFIED, OBLITERATED, RESHAPED, AND SODDED.

LEGEND			
●	PROPOSED ATT POLES	⤴	PROPOSED ATT POLES
○	EXIST ATT POLES	⤴	EXIST ATT POLES
●	REMOVE ATT POLES	⤴	REMOVE ATT POLES
*	PROPOSED POWER POLES	—	PROPOSED ATT CABLE
*	EXISTING POWER POLES	—	EXISTING ATT CABLE
*	REMOVE POWER POLES	—	REMOVE ATT CABLE
⊠	PROPOSED ATT PEDESTAL	⊠	PROPOSED ATT HANDHOLE
⊠	EXISTING ATT PEDESTAL		
⊠	REMOVE ATT PEDESTAL		

SEALED BY

COORDINATES ARE NAD/83(1995) ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

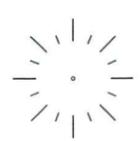
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT
 STA. 81+00 TO STA. 94+00
 SCALE: 1" = 50' SHEET 2 OF 6

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH/STP-1-24-9(76)	

AT&T

Construction Work Drawing



PROPRIETARY INFORMATION
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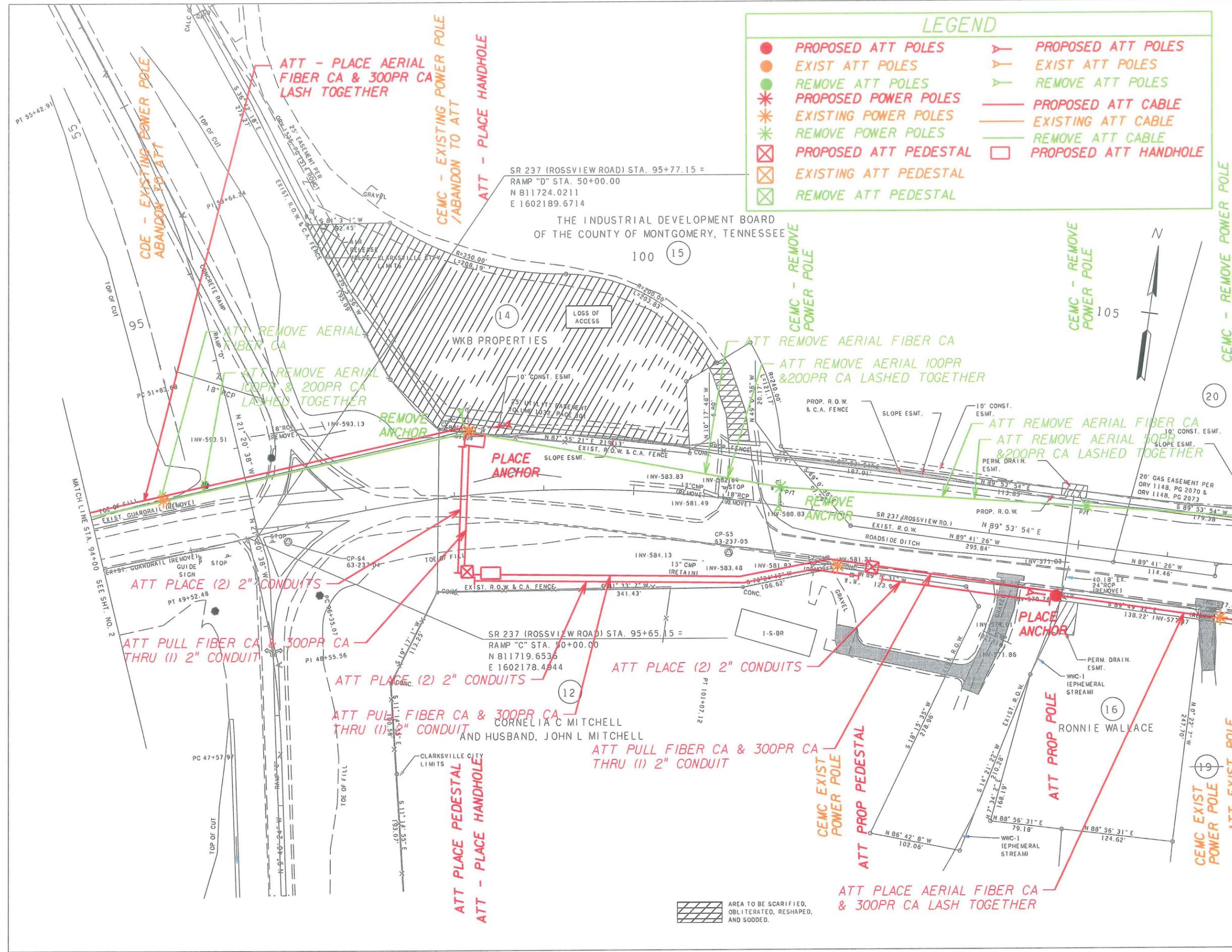
State: TENNESSEE
District:
Exchange:
Wire Ctr:

A.A./Taper:
Tax District:
RZ/CZ:
Serv Unit Type: NONEW

Designer:
Phone:
Records Ref:

LEGEND

● PROPOSED ATT POLES	↘ PROPOSED ATT POLES
○ EXIST ATT POLES	↘ EXIST ATT POLES
● REMOVE ATT POLES	↘ REMOVE ATT POLES
* PROPOSED POWER POLES	— PROPOSED ATT CABLE
* EXISTING POWER POLES	— EXISTING ATT CABLE
* REMOVE POWER POLES	— REMOVE ATT CABLE
⊠ PROPOSED ATT PEDESTAL	□ PROPOSED ATT HANDHOLE
⊠ EXISTING ATT PEDESTAL	
⊠ REMOVE ATT PEDESTAL	



Received
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JUN 27 2014
uccc approved
(Signature)

SEALED BY

COORDINATES ARE NAD/83(1995) ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TORN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 94+00 TO STA. 107+00

SCALE: 1"= 50' SHEET 3 OF 6

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH/STP-1-24-91761	

Received
JUN 27 2014

AT&T
Construction Work Drawing

PROPRIETARY INFORMATION
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State: TENNESSEE
District:
Exchange:
Wire Ctr:

A.A./Taper:
Tax District:
RZ/CZ:
Serv Unit Type: NONEW

Designer:
Phone:
Records Ref:

APPROVED
JUN 27 2014

vecc Approved
(Eric Melroy)

SEALED BY

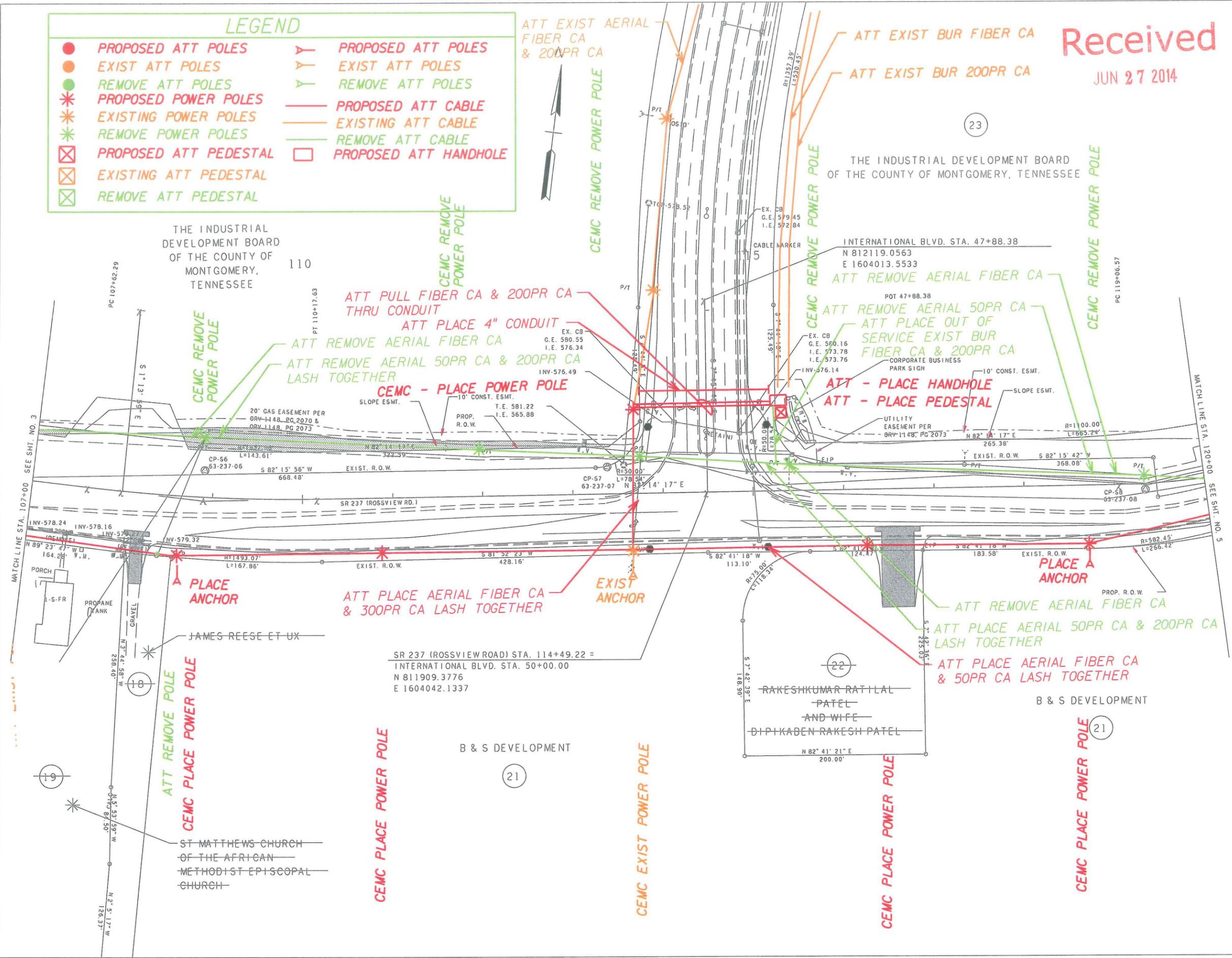
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT
STA. 107+00 TO STA. 120+00
SCALE: 1" = 50' SHEET 4 OF 6

LEGEND

- PROPOSED ATT POLES
- EXIST ATT POLES
- REMOVE ATT POLES
- * PROPOSED POWER POLES
- * EXISTING POWER POLES
- * REMOVE POWER POLES
- ⊠ PROPOSED ATT PEDESTAL
- ⊠ EXISTING ATT PEDESTAL
- ⊠ REMOVE ATT PEDESTAL
- ▶ PROPOSED ATT POLES
- ▶ EXIST ATT POLES
- ▶ REMOVE ATT POLES
- PROPOSED ATT CABLE
- EXISTING ATT CABLE
- REMOVE ATT CABLE
- PROPOSED ATT HANDHOLE



THE INDUSTRIAL DEVELOPMENT BOARD OF THE COUNTY OF MONTGOMERY, TENNESSEE

THE INDUSTRIAL DEVELOPMENT BOARD OF THE COUNTY OF MONTGOMERY, TENNESSEE

INTERNATIONAL BLVD. STA. 47+88.38
N 812119.0563
E 1604013.5533

SR 237 (ROSSVIEW ROAD) STA. 114+49.22 =
INTERNATIONAL BLVD. STA. 50+00.00
N 811909.3776
E 1604042.1337

B & S DEVELOPMENT

RAKESHKUMAR RATILAL PATEL AND WIFE
DIPKABEN RAKESH PATEL

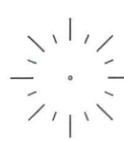
B & S DEVELOPMENT

ST MATTHEWS CHURCH OF THE AFRICAN METHODIST EPISCOPAL CHURCH

Received
JUN 27 2014

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH/STP-1-24-9(76)	

AT&T
Construction Work Drawing



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State: TENNESSEE
District:
Exchange:
Wire Ctr:

A.A./Taper:
Tax District:
RZ/CZ:
Serv Unit Type: NONEW

Designer:
Phone:
Records Ref:

APPROVED
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vcc Approved
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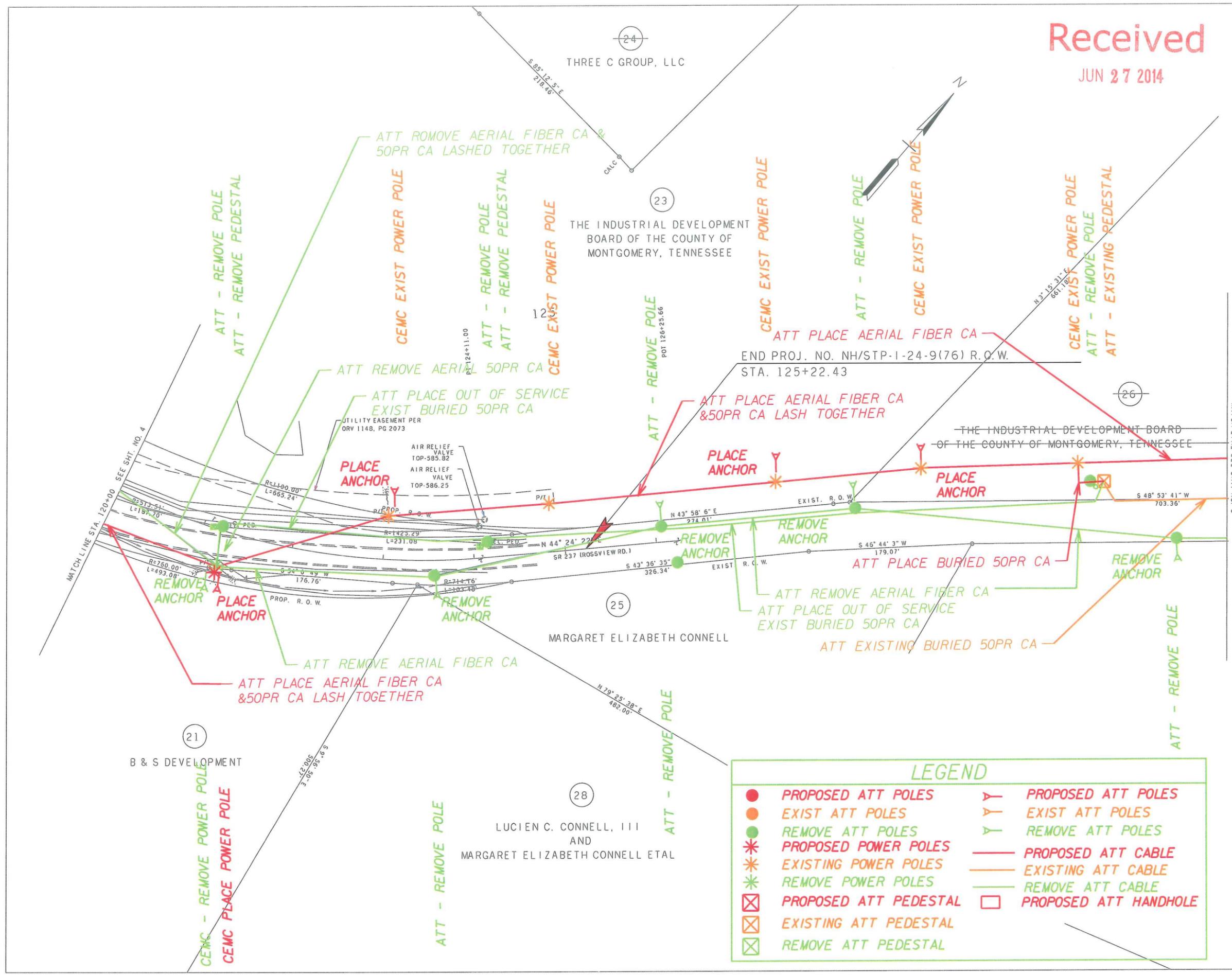
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

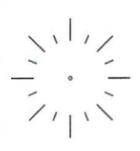
STA. 120+00 TO END. PROJ.
SCALE: 1"= 50' SHEET 5 OF 6



LEGEND

● PROPOSED ATT POLES	▽ PROPOSED ATT POLES
○ EXIST ATT POLES	▽ EXIST ATT POLES
● REMOVE ATT POLES	▽ REMOVE ATT POLES
* PROPOSED POWER POLES	— PROPOSED ATT CABLE
* EXISTING POWER POLES	— EXISTING ATT CABLE
* REMOVE POWER POLES	— REMOVE ATT CABLE
⊠ PROPOSED ATT PEDESTAL	⊠ PROPOSED ATT HANDHOLE
⊠ EXISTING ATT PEDESTAL	
⊠ REMOVE ATT PEDESTAL	

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH/STP-1-24-9(76)	

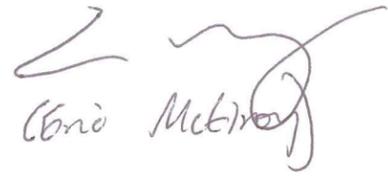
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Designer:	
Phone:	
Records Ref:	

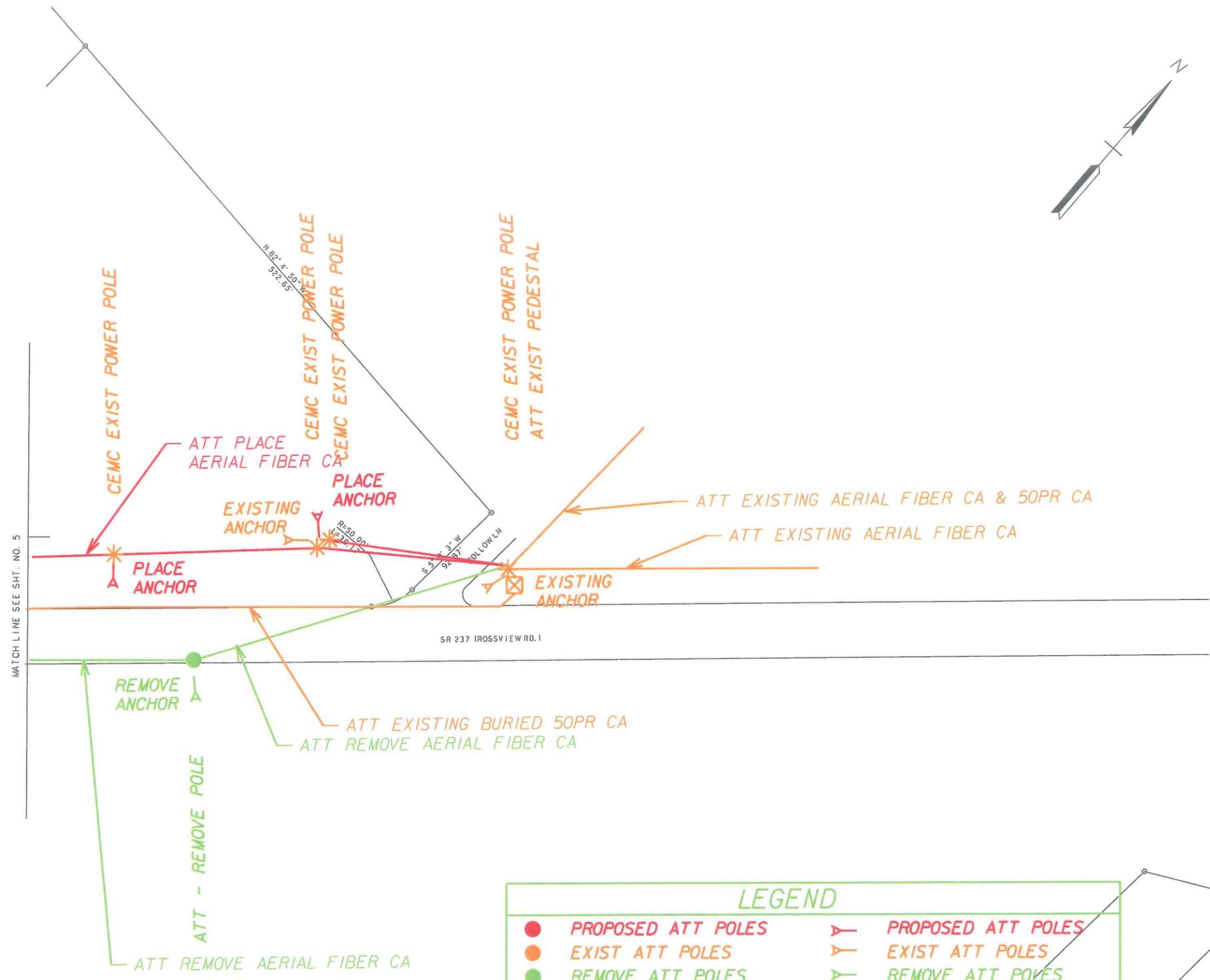
Received

JUN 27 2014

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JUN 27 2014

UCCA Approved




LEGEND			
●	PROPOSED ATT POLES	▽	PROPOSED ATT POLES
●	EXIST ATT POLES	▽	EXIST ATT POLES
●	REMOVE ATT POLES	▽	REMOVE ATT POLES
*	PROPOSED POWER POLES	—	PROPOSED ATT CABLE
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⊠	EXISTING ATT PEDESTAL		
⊠	REMOVE ATT PEDESTAL		

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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 120+00 TO END. PROJ.

SCALE: 1"= 50' SHEET 5 OF 6

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-I-24-9(76)	U3-3

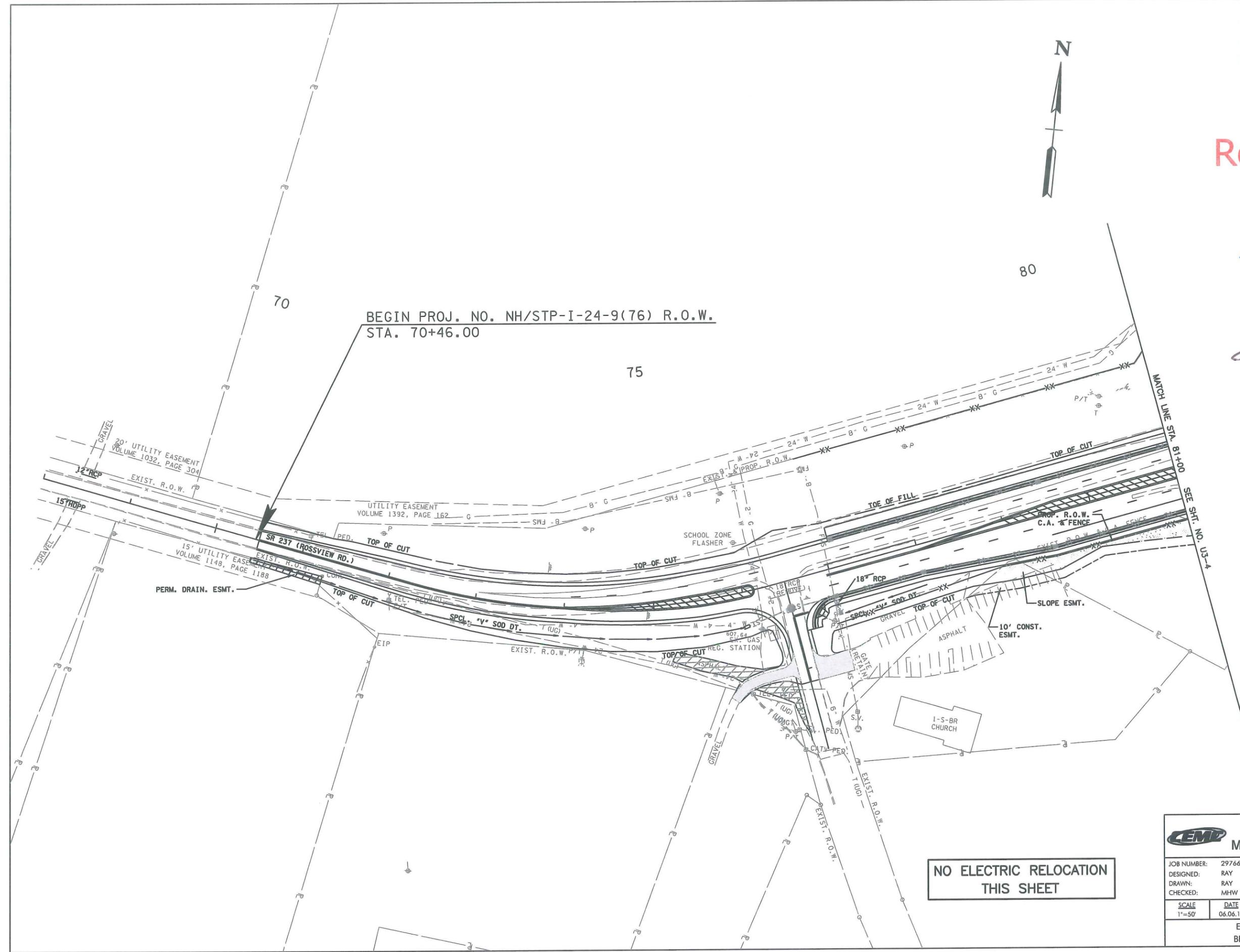
NH-STATE PROJ. #63001-3153-44
STP-STATE PROJ. #63030-3210-14 MONTGOMERY COUNTY



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JUN 27 2014

APPROVED
JUN 27 2014

UCCC Approved
(Eric McElroy)

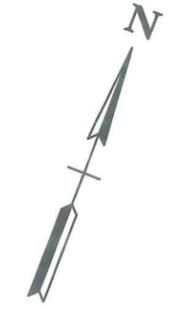


**NO ELECTRIC RELOCATION
THIS SHEET**

CUMBERLAND ELECTRIC MEMBERSHIP CORPORATION		GRESHAM, SMITH AND PARTNERS	
JOB NUMBER: 29766.07	DESIGNED: RAY	1111 N. NORTHSHORE DRIVE, SUITE 5-400 KNOXVILLE, TENNESSEE 37919 (865) 521-6777 (865) 539-7192	
DRAWN: RAY	CHECKED: MHW	G S & P	
SCALE: 1"=50'	DATE: 06.06.14	ELECTRIC UTILITY RELOCATION BEGIN PROJECT TO STA. 81+00	

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-I-24-9(76)	U3-4

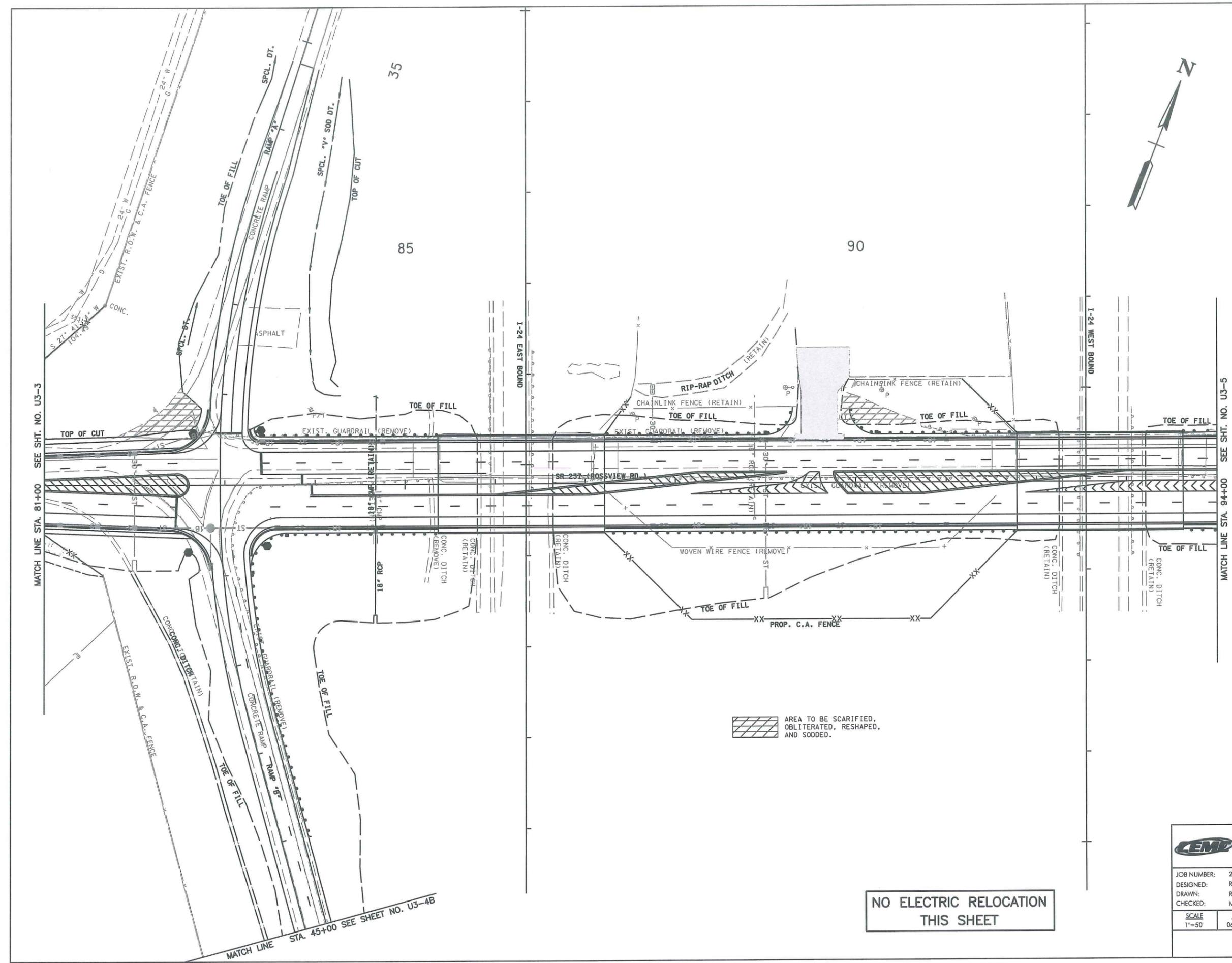
NH-STATE PROJ. #63001-3153-44
 STP-STATE PROJ. #63030-3210-14
 MONTGOMERY COUNTY



Received
 JUN 27 2014

APPROVED
 JUN 27 2014

UCC Approved
(Eric McKinley)



 AREA TO BE SCARIFIED, OBLITERATED, RESHAPED, AND SODDED.

**NO ELECTRIC RELOCATION
 THIS SHEET**

		CUMBERLAND ELECTRIC MEMBERSHIP CORPORATION	
JOB NUMBER:	29766.07		GRESHAM, SMITH AND PARTNERS
DESIGNED:	RAY		1111 N. NORTHSHORE DRIVE, SUITE 5-400
DRAWN:	RAY		KNOWVILLE, TENNESSEE 37919
CHECKED:	MHW	(865) 521-6777	(865) 539-7192
SCALE	DATE	ELECTRIC UTILITY RELOCATION	
1"=50'	06.06.14	STA. 81+00 TO STA. 94+00	

MATCH LINE STA. 81+00 SEE SHT. NO. U3-3

MATCH LINE STA. 94+00 SEE SHT. NO. U3-5

MATCH LINE STA. 45+00 SEE SHEET NO. U3-4B

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U3-4B

NH-STATE PROJ. #63001-3153-44
 STP-STATE PROJ. #63030-3210-14
 MONTGOMERY COUNTY

APPROVED

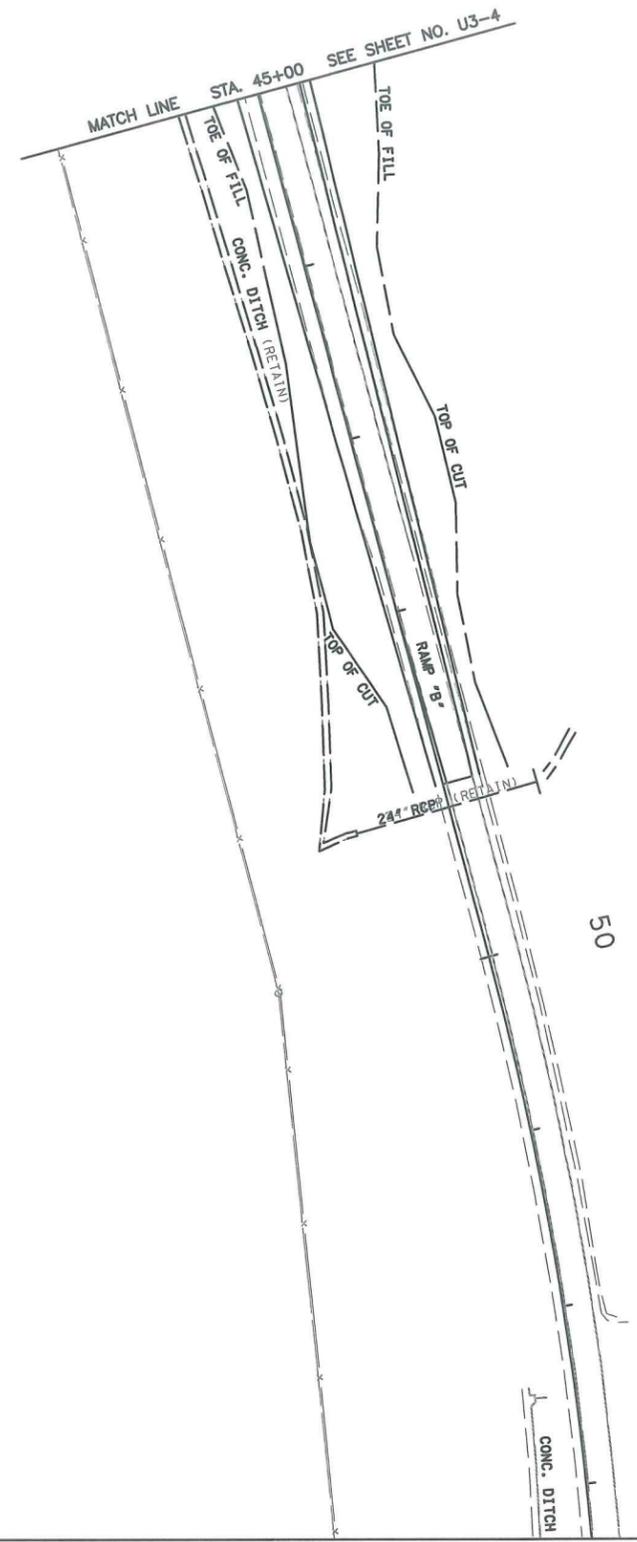
JUN 27 2014

UCCC Approved

(Eric Metropoulos)

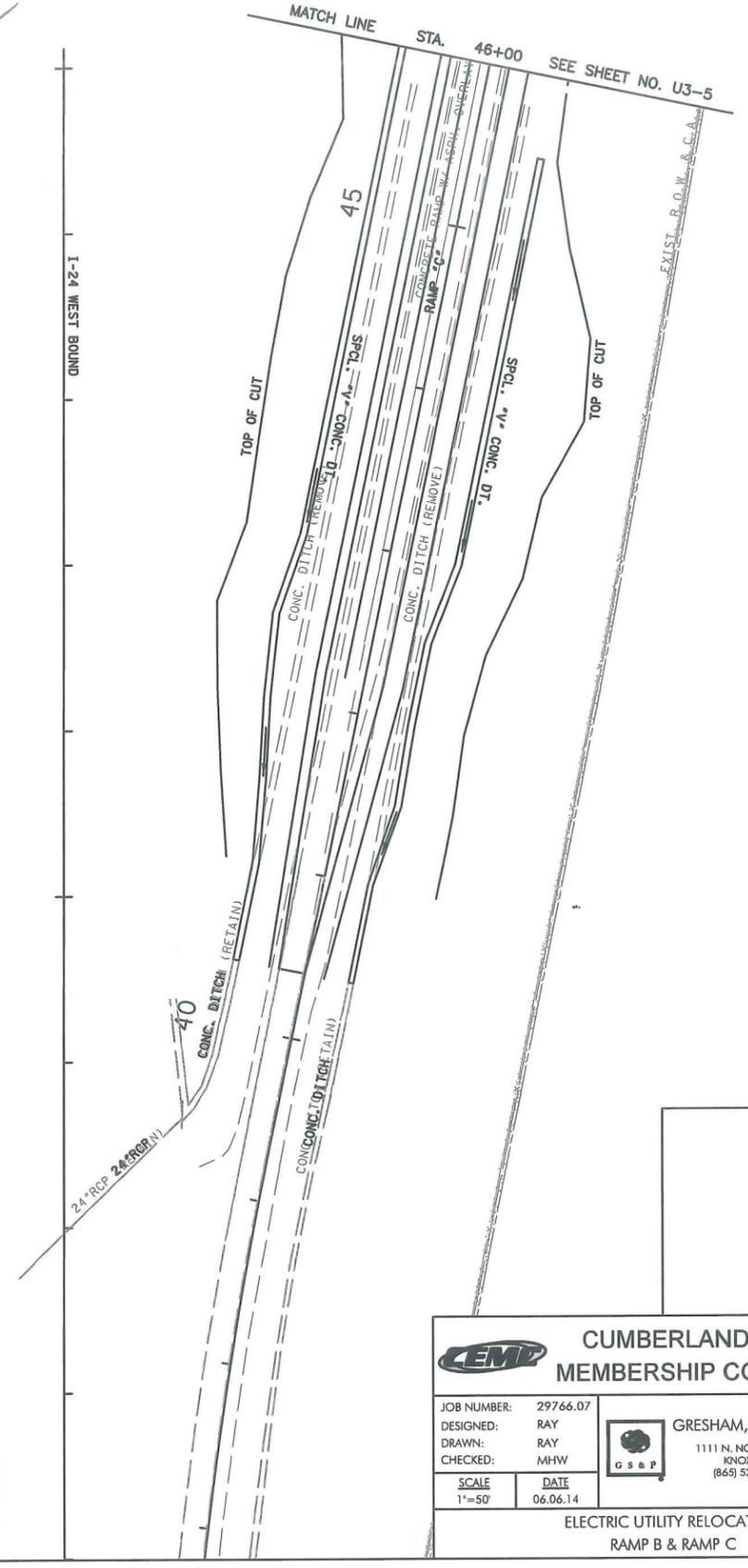
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JUN 27 2014



425

430



430

NO ELECTRIC RELOCATION
THIS SHEET

		CUMBERLAND ELECTRIC MEMBERSHIP CORPORATION	
JOB NUMBER:	29766.07		GRESHAM, SMITH AND PARTNERS 1111 N. NORTHSHORE DRIVE, SUITE 5-400 KNOXVILLE, TENNESSEE 37919 (865) 521-6777 (865) 539-7192
DESIGNED:	RAY		
DRAWN:	RAY		
CHECKED:	MHW	ELECTRIC UTILITY RELOCATION RAMP B & RAMP C	
SCALE:	1"=50'	DATE:	06.06.14

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U3-5

NH-STATE PROJ. #63001-3153-44
 STP-STATE PROJ. #63030-3210-14
 MONTGOMERY COUNTY

INSTALLATION POLE LOCATIONS

POLE NO.	STATION	OFFSET	NORTHING	EASTING
P1	103+97.72	59.65	811773.30	1602995.48
P2	106+30.11	60.06	811773.30	1603227.87
P3	108+67.38	63.02	811773.30	1603460.26
P4	110+21.81	64.46	811788.94	1603635.81
P5	112+20.31	62.85	811816.19	1603823.80
P6	113+65.65	61.65	811837.00	1603967.66
P7	113+76.38	-61.76	811960.74	1603961.62
P8	115+50.63	61.76	811861.88	1604150.95
P9	117+35.61	61.86	811886.76	1604334.25
P10	119+38.24	63.71	811916.11	1604552.43
P11	121+22.36	51.71	811989.10	1604737.35

CONDUCTOR NOTES

SHEET NUMBER(S)	POLE NUMBER	CONDUCTOR INFORMATION			
		TYPE	TO LENGTH(LF)	TOTAL COND. LENGTH(LF)	
U3-5 TO U3-7	P1	3 - 795 AAC PRIMARY	P11 1764	5292	
		1 - 336 AAC NEUTRAL	1764	1764	
U3-6	P2-1	1 - #2ACSR PRIMARY	P3 175	175	
		1 - #2ACSR NEUTRAL	175	175	
	P6	3 - 795 AAC PRIMARY	P7 124	372	
		1 - 336 AAC NEUTRAL	124	124	

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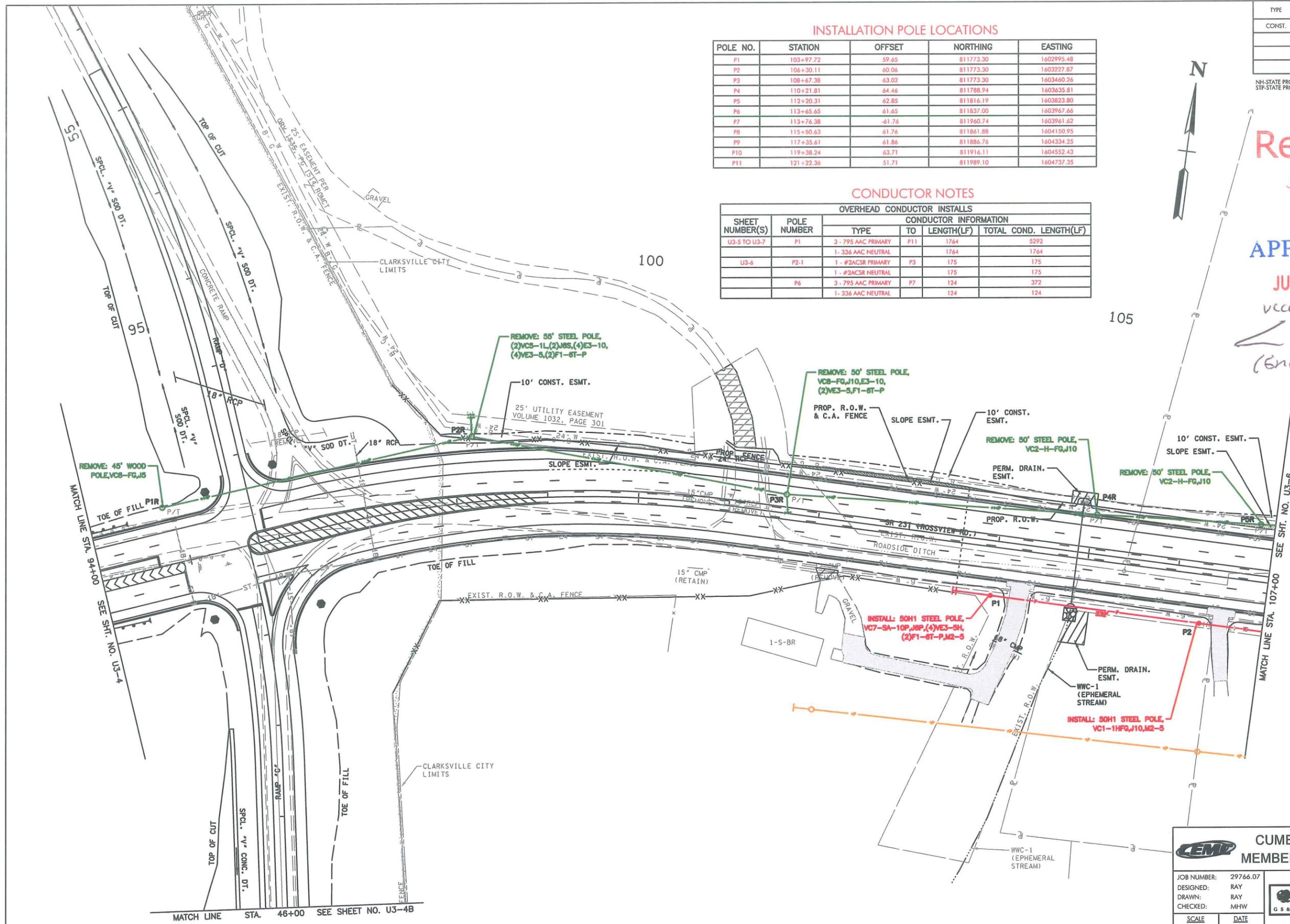
JUN 27 2014

APPROVED

JUN 27 2014

VCC Approved

(Eric McHenry)



CUMBERLAND ELECTRIC MEMBERSHIP CORPORATION

JOB NUMBER: 29766.07
 DESIGNED: RAY
 DRAWN: RAY
 CHECKED: MHW

SCALE: 1"=50'
 DATE: 06.06.14

GRESHAM, SMITH AND PARTNERS
 1111 N. NORTHSHORE DRIVE, SUITE 5-400
 KNOXVILLE, TENNESSEE 37919
 (865) 521-6777 (865) 539-7192

ELECTRIC UTILITY RELOCATION
 STA. 94+00 TO STA. 107+00

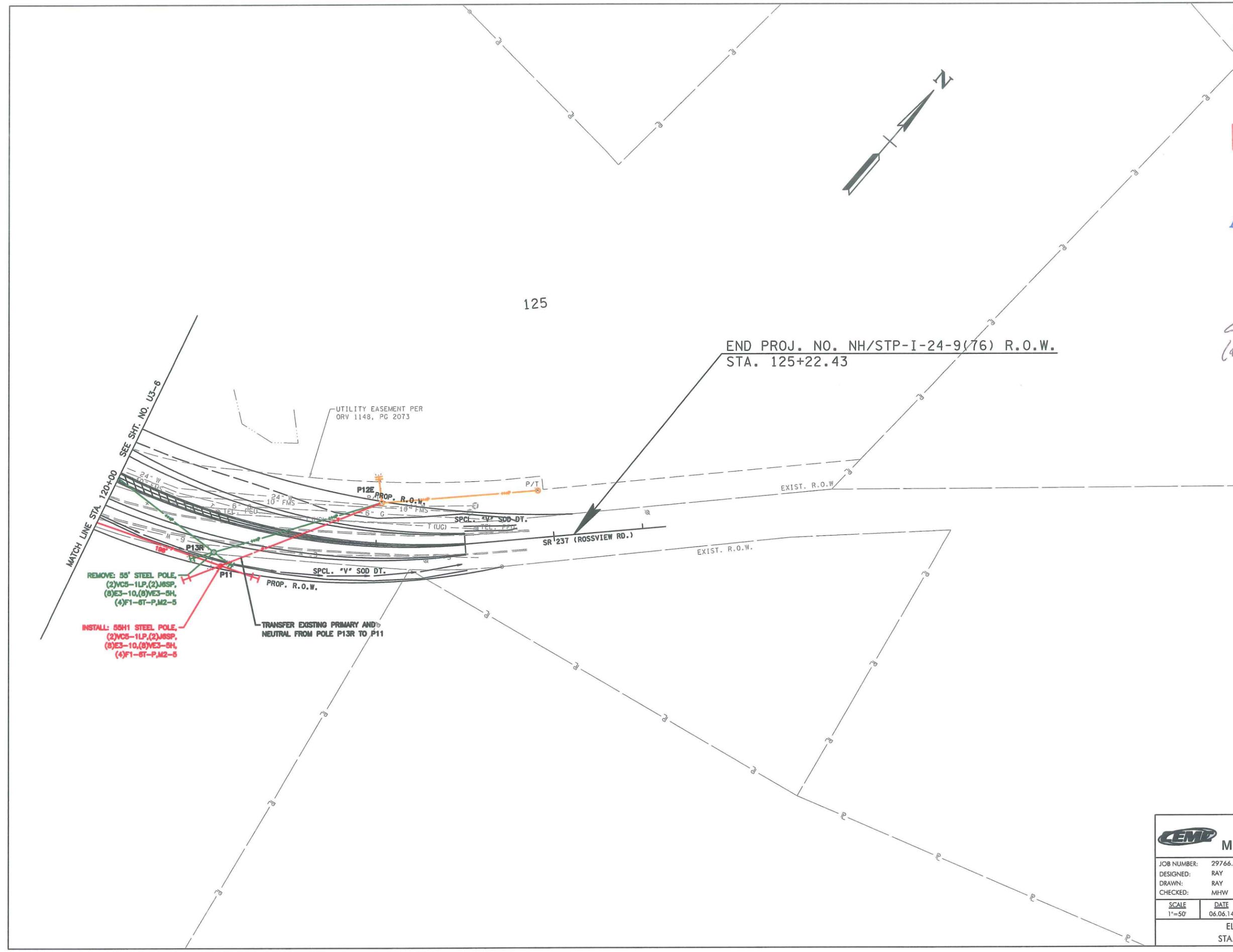
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CONST.	2014	NH/STP-I-24-9(76)	U3-7

NH-STATE PROJ. #63001-3153-44
 STP-STATE PROJ. #63030-3210-14
 MONTGOMERY COUNTY

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JUN 27 2014
VCCC Approved
(Eric Melroy)



**REMOVE: 55' STEEL POLE,
 (2)VC5-1LP,(2)J8SP,
 (8)E3-10,(8)VE3-5H,
 (4)F1-6T-P,M2-5**

**INSTALL: 55H1 STEEL POLE,
 (2)VC5-1LP,(2)J8SP,
 (8)E3-10,(8)VE3-5H,
 (4)F1-6T-P,M2-5**

TRANSFER EXISTING PRIMARY AND
 NEUTRAL FROM POLE P13R TO P11

END PROJ. NO. NH/STP-I-24-9(76) R.O.W.
 STA. 125+22.43

		CUMBERLAND ELECTRIC MEMBERSHIP CORPORATION	
JOB NUMBER:	29766.07		GRESHAM, SMITH AND PARTNERS 1111 N. NORTHSHORE DRIVE, SUITE 5-400 KNOXVILLE, TENNESSEE 37919 (865) 521-6777 (865) 539-7192
DESIGNED:	RAY		
DRAWN:	RAY		
CHECKED:	MHW	SCALE:	DATE:
		1"=50'	06.06.14
ELECTRIC UTILITY RELOCATION STA. 120+00 TO END OF PROJECT			

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U4-1

INDEX

SHEET NAME	SHEET NO.
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STA. 81+00 TO STA. 94+00 TDOT	U4-4
STA. 94+00 TO STA. 107+00 TDOT	U4-5
STA. 107+00 TO STA. 120+00 TDOT	U4-6
STA. 120+00 TO END PROJ. TDOT.	U4-7
WATER DETAILS	U4-8
WATER DETAILS	U4-9

LEGEND

	UTILITY TO BE RETIRED
	UTILITY TO REMAIN
	NEW PROPOSED UTILITY
	NEW PROPOSED EASEMENT
	WATER METER
	FIRE HYDRANT
	WATER VALVE
	AIR RELIEF VALVE
	MANHOLE

ABBREVIATIONS

CGW	CLARKSVILLE GAS & WATER
CMP	CORRUGATED METAL PIPE
DIP	DUCTILE IRON PIPE
EL	ELEVATION
EXIST	EXISTING
GH	FIRE HYDRANT
FMS	FORCE MAIN
FT	FOOT/FEET
G	GAS LINE
INV	INVERT
MH	MANHOLE
MJ	MECHANICAL JOINT
NO	NUMBER
PVC	POLYVINYL CHLORIDE
RCBC	REINFORCED CONCRETE BOX CULVERT
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT-OF-WAY
SA	SANITARY SEWER
SS	SANITARY SEWER
SMH	SEWER MANHOLE
SPEC	SPECIFICATION
STA	STATION
ST	STORM
SV	SEWER VALVE/AIR RELIEF VALVE
TE	TOP ELEVATION OR RIM ELEVATION
TDOT	TENNESSEE DEPARTMENT OF TRANSPORTATION
TYP	TYPICAL
W	WATER
WM	WATER METER
WV	WATER VALVE

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	% PROJECT	FOOTNOTE
795-01.01	4IN DIP RESTRAINED JOINT WATER LINE	LF	24	100	1
795-01.03	6IN DIP RESTRAINED JOINT WATER LINE	LF	1405	100	1
795-01.09	12IN DIP RESTRAINED JOINT WATER LINE	LF	60	100	1
795-01.13	16IN DIP RESTRAINED JOINT WATER LINE	LF	162	100	1
795-01.19	24IN DIP RESTRAINED JOINT WATER LINE	LF	3321	100	1
795-05.68	BORE/JACK 24IN STEEL CASING PIPE-UNCON	LF	94	100	6
795-05.70	BORE/JACK 36IN STEEL CASING PIPE-UNCON	LF	40	100	6
795-06.30	CUT/CAP EXISTING LINES (ALL SIZES)	EACH	11	100	
795-07.03	6IN x 6IN TAPPING SLEEVE AND VALVE	LF	4	100	2
795-07.15	12IN X 12IN TAPPING SLEEVE AND VALVE	EACH	1	100	2
795-07.61	24IN X 16IN TAPPING SLEEVE AND VALVE	EACH	2	100	2
795-08.04	6IN GATE VALVE ASSEMBLY	EACH	1	100	3
795-08.13	16IN BUTTERFLY VALVE ASSEMBLY	EACH	1	100	3
795-08.19	24IN BUTTERFLY VALVE ASSEMBLY	EACH	4	100	3
795-09.01	3/4IN WATER SERVICE METER ASSEMBLY	EACH	4	100	4
795-09.09	RELOCATE/RECONNECT SERVICE ASSEMBLY	EACH	3	100	8
795-09.10	SAMPLE TAP	EACH	3	100	9
795-09.28	3/4IN COPPER SERVICE PIPE	LF	170	100	5
795-11.02	FIRE HYDRANT ASSEMBLY	EACH	8	100	4
795-13.01	DI FITTINGS	LB	14007	100	10
795-14.08	RESTORE ASPHALT	SY	120	100	7
795-14.09	RESTORE CONCRETE	SY	50	100	7
795-14.10	RESTORE GRAVEL	SY	380	100	7

FOOTNOTES

- 1 INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, MATERIALS, EQUIPMENT, EXCAVATION IN BOTH UNCONSOLIDATED AND ROCK, REMOVAL AND REPLACEMENT OF UNSUITABLE SOIL, ENVELOP/BEDDING MATERIAL, BACKFILLING, FLOWABLE FILL, THRUST BLOCKING, CONCRETE DEADMAN, PIPE FUSION, TRACER WIRE, WARNING TAPE, APPURTENANCES, TEMPORARY/PERMANENT SURFACE RESTORATION, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS.
- 2 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO TAPPING SLEEVE, VALVE, VALVE BOX, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, BLOCKING AND RESTRAINT, TAP OF EXISTING LINE, AND TRAFFIC CONTROL.
- 3 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO FITTINGS, VALVE, VALVE STEM EXTENSIONS, VALVE BOX AND COVER, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, BLOCKING, AND TRAFFIC CONTROL.
- 4 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO MACHINERY, TOOLS OR APPARATUS NECESSARY FOR INSTALLATION OF ASSEMBLIES AS DESCRIBED IN THE PLANS AND SPECS EXCEPT FOR SERVICE LINE WHICH IS PAID SEPARATELY FOR EACH FOOT INSTALLED.
- 5 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION OF SERVICE LINE OR CASING FOR SERVICE LINE ON LONG SIDE AND SHORT SIDE OF MAIN.
- 6 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, FITTINGS, TRACER WIRE, WARNING TAPE, UTILITY LINE MARKERS AND TRAFFIC CONTROL. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.
- 7 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT, SETUP AND TRAFFIC CONTROL.
- 8 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER SERVICE METER ASSEMBLY AND INSTALLING AT NEWLY IDENTIFIED LOCATION.
- 9 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR INSTALLATION OF TAP ON WATER LINE FOR WATER SAMPLING PURPOSES. COST OF ACTUALLY SAMPLING IS INCLUDED IN COST OF PIPE.
- 10 INCLUDES FITTINGS, GLANDS AND RESTRAINT DEVICES DESCRIBED IN POUNDS.

Received

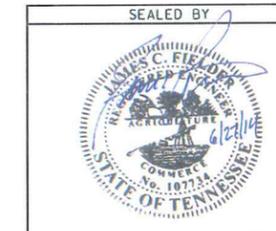
JUN 27 2014

APPROVED

JUN 27 2014

VCCC Approved

(Eric McIlroy)



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

WATER
INDEX AND
TABULATED
QUANTITIES

CITY OF CLARKSVILLE GAS AND WATER
2215 MADISON STREET
CLARKSVILLE, TN 37043
PAT HICKEY
931-645-1654
PAT.HICKEY@CITYOFCLARKSVILLE.COM

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U4-2

WATER LAYOUT NOTES

- (1) ALL EXISTING WATER SERVICES AFFECTED BY THIS WORK, INCLUDING THOSE NOT ON THESE DRAWINGS, SHALL BE RECONNECTED WITH NEW COPPER SERVICES OF THE SAME SIZE AS THE EXISTING SERVICE, FROM THE NEW MAIN THROUGH A NEW METER ASSEMBLY AND HOME SIDE SERVICE TIE-IN. PRIOR TO SWAPPING OVER SERVICES AND PULLING EXISTING METERS, COORDINATE WITH CGW SO THAT A FINAL READING CAN BE MADE BY CGW ON THE EXISTING METER. NEW METER ASSEMBLY AND METER BOXES WILL BE PROVIDED BY CGW TO CONTRACTOR AT NO FEE TO THE CONTRACTOR. OLD METER ASSEMBLIES SHALL BE RETURNED TO CGW. ALL SERVICE SHALL BE RECONNECTED IN A TIMELY FASHION TO ENSURE CONTINUAL SERVICE. ALL WORK NECESSARY FOR A FULLY RECONNECTED SYSTEM SHALL BE INCORPORATED IN THE APPROPRIATE PAY ITEM.
- (2) ALL EXISTING SEWER SERVICES AFFECTED BY THIS WORK, INCLUDING THOSE NOT SHOWN ON THESE DRAWINGS, SHALL BE RECONNECTED WITH NEW SERVICES OF THE SAME SIZE AS THE EXISTING SERVICE, FROM THE NEW MAIN THROUGH A NEW CLEANOUT ASSEMBLY IN A CLEANOUT BOX AND HOUSE SIDE TIE-IN. CONTRACTOR SHALL PROVIDE ALL MATERIALS. ALL EXISTING SERVICES SHALL BE RECONNECTED IN A TIMELY FASHION TO ENSURE CONTINUAL SERVICE. ALL WORK NECESSARY FOR A FULLY RECONNECTED SYSTEM SHALL BE INCORPORATED IN THE APPROPRIATE PAY ITEM.
- (3) MAINTAIN MINIMUM 3' OF COVER OVER NEW WATER LINES (24" FOR WATER SERVICES LINES)
- (4) MAINTAIN MINIMUM OF 10' HORIZONTAL AND 18" VERTICAL SEPARATION BETWEEN ALL NEW WATER AND FORCE MAIN AND/ OR SANITARY SEWER LINES.
- (5) MAINTAIN MINIMUM 18" OF CLEARANCE BETWEEN EXISTING UTILITIES AND NEW UTILITIES.
- (6) A MINIMUM HORIZONTAL OR VERTICAL CLEARANCE OF 18" BETWEEN ALL PROPOSED STRUCTURES SHALL BE MAINTAINED AT ALL LOCATIONS. CONTRACTOR TO ENSURE ADEQUATE CLEARANCE FROM PROPOSED STORM WATER PIPING, DRIVEWAYS AND ROADWAY CUTS.
- (7) CONTRACTOR IS TO GIVE CGW 48 HOURS NOTICE PRIOR TO MAKING LIVE CONNECTIONS.
- (8) A MINIMUM OF ONE HALF THE TRAVELED PORTION OF ALL PUBLIC AND PRIVATE ROADWAYS MUST REMAIN OPEN TO TRAFFIC AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF WORK WITH THE CITY OF CLARKSVILLE STREET DEPARTMENT AND /OR TDOT AS APPROPRIATE.
- (9) ALL PAVED DRIVEWAYS, PARKING LOTS AND SIDE STREETS MAY BE OPEN CUT WITHOUT CASING PIPE UNLESS OTHERWISE SHOWN ON THE DRAWINGS. BACKFILL ENTIRE TRENCH WITH STONE. PROVIDE TEMPORARY PAVEMENT 4" MINIMUM UNLESS OTHERWISE DIRECTED (COLD MIX) PER SECTION 02575. MAINTAIN TEMPORARY PATCH UNTIL PERMANENT PAVEMENT REPAIR CAN BE MADE. CONCRETE PAVEMENT SHALL BE REPAIRED WITH NEW CONCRETE.
- (10) ALL WATER CROSSINGS OF S.R. 237 SHALL BE BORED AS SHOWN ON THE DRAWINGS AND AS DIRECTED IN SPECIFICATION SECTION 02725 WITH APPROPRIATE CASING PIPE UNLESS OTHER METHODS OR OPEN CUT INSTALLATION ARE ALLOWED BY TDOT.
- (11) EXISTING PAVEMENTS, CURBS, AND GUTTERS, AND SIDEWALKS TO REMAIN, SHALL BE CUT AND BROUGHT TO A NEAT LINE BY MECHANICALLY SAWING.
- (12) BACKFILL FOR TRENCHES WITHIN PAVEMENTS SHALL BE PLACED IN SIX INCH LAYERS AND EACH LAYER SHALL BE THOROUGHLY COMPACTED BY MEANS OF A MECHANICAL TAMP.
- (13) MATERIALS AND WORKMANSHIP SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR "ROAD AND BRIDGE CONSTRUCTION" ISSUED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) . LATEST EDITION OF ALL WORK IS SUBJECT TO INSPECTION AND APPROVAL BY THE DEPARTMENT OF TRANSPORTATION.
- (14) TRENCHES WITHIN PAVEMENTS SHALL BE BACKFILLED TO A MINIMUM OF 4 INCHES BELOW FINISHED GRADE WITH CRUSHED STONE. PAVEMENT SHALL BE REMOVED FOR A MINIMUM OF TWO FEET ON EACH SIDE OF THE TRENCH. THE DEPTH OF THE TEMPORARY PATCH (SECTION 02575) SHALL BE 4 INCHES. PAVEMENT SHALL BE REPLACED IN KIND AS SHOWN IN DETAILS. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY REPAIR AND MAINTENANCE OF PAVEMENTS UNTIL THE ROAD EXPANSION IS COMPLETED BY TDOT. ALL WORK MUST BE COORDINATED WITH THE TDOT GENERAL CONTRACTOR.
- (15) THE CONTRACT DRAWINGS ARE BASED ON SURVEY INFORMATION PROVIDED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION. THE INFORMATION SHOWN (UTILITY AND STRUCTURE LOCATIONS, ELEVATIONS, PARCELS, ETC .) SHALL BE USED FOR REFERENCE ONLY AS EXISTING FEATURES MAY HAVE CHANGED SINCE THE MAP WAS DEVELOPED.
- (16) SIZE AND LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR ANY UTILITY DAMAGE. THE CONTRACTOR SHALL CONTACT THE TENNESSEE ONE-CALL CENTER. (1-800-351-1111) TO LOCATE UTILITIES IN THE AREA AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF CLARKSVILLE AND CLARKSVILLE GAS AND WATER AT LEAST 72 HOURS PRIOR TO EXCAVATION.
- (17) THE CONTRACTOR SHALL RESTORE ALL CULVERTS, LAWNS, FENCES, WALLS, LANDSCAPING, IRRIGATION SYSTEMS, SIGNS, LIGHT AND POWER POLES, STREET MARKERS, MAIL BOXES, UTILITY LINES AND SERVICES, AND ALL OTHER ITEMS DISTURBED BY CONSTRUCTION ACTIVITIES TO THEIR ORIGINAL CONDITIONS UNLESS DIRECTED OTHERWISE.
- (18) PROPER EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO PERFORMING ANY EXCAVATION IN ANY AREA AND SHALL BE MAINTAINED DURING WORK AND REMOVED WHEN WORK IS COMPLETED IN ACCORDANCE WITH ALL CONTRACTOR-OBTAINED PERMITS AND APPLICABLE REGULATIONS.
- (19) THE CONTRACTOR SHALL OBTAIN ALL PERMITS/PERMISSION FROM THE STATE (INCLUDING TDOT) AND/OR THE CITY OF CLARKSVILLE STREET DEPARTMENT TO DO WORK THAT IS WITHIN OR CROSSES ALL HIGHWAYS AND STREETS.
- (20) CONTRACTOR SHALL PROVIDE ALL PIPING, SLUICING, PUMPING AND OTHER TEMPORARY PROVISIONS TO MAINTAIN SEWER FLOW THROUGHOUT CONSTRUCTION. THERE SHALL BE NO INTERRUPTION OF SEWER SERVICES ALLOWED UNLESS AUTHORIZED IN WRITING.
- (21) OVERHEAD POWER LINES ARE PRESENT IN THE PROJECTED AREA, HOWEVER, NOT ALL ARE SHOWN ON DRAWINGS. EXTREME CARE SHOULD BE TAKEN WHEN WORKING UNDER OR NEAR POWER LINES.
- (22) ALL CONSTRUCTION WORK SHALL BE PERFORMED WITHIN THE RIGHT OF WAY, PERMANENT EASEMENT AND TEMPORARY CONSTRUCTION EASEMENT INDICATED ON THE PLANS. IF A CONFLICT EXIST THE CONTRACTOR SHALL COORDINATE WITH CGW.
- (23) ALL CONSTRUCTION MUST CONFORM TO THE PROJECT PLANS AND SPECIFICATIONS AS WELL AS ALL REQUIREMENTS OF TDOT, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC), CGW, THE CLARKSVILLE STREET DEPARTMENT, AND ALL OTHER RELATED GOVERNMENT AGENCIES.
- (24) THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES TO ENSURE SAFETY AT ALL TIMES FOR EMPLOYEES, RESIDENTS, AND MOTORIST. ALL TRAFFIC CONTROL PLANS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF TDOT AND MUTCD.
- (25) ALL CONSTRUCTION ACTIVITIES AND MATERIALS INSTALLED IN TDOT RIGHT-OF-WAY SHALL COMPLY WITH ALL APPLICABLE TDOT REQUIREMENTS.
- (26) ALL FITTINGS SHALL BE RESTRAINED AND RESTRAINED LENGTH SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER. IN ADDITION, THRUST BLOCKS SHALL BE PROVIDED AT ALL SEWER FORCE MAIN AND WATER LINE FITTINGS. SEE DETAILS.
- (27) TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED DAILY IF POSSIBLE, BUT NO LATER THAN 14 DAYS AFTER TRENCHING. ANY TEMPORARY SPOIL PILE OF EXCAVATED EARTH SHALL RECEIVE EROSION CONTROL MEASURES.
- (28) THE WATER/SEWER CONTRACTOR SHALL COORDINATE ALL OF THEIR WORK WITH THE GAS CONTRACTOR, STORM SEWER CONTRACTOR AND UTILITY POLE CONTRACTOR TO AVOID CONFLICTS WITH ALL OTHER UTILITIES.
- (29) CUSTOMERS SHALL NOT BE WITHOUT WATER SERVICES FOR GREATER THAN FOUR HOURS. NIGHT WORK MAY BE REQUIRED AT THE DISCRETION OF CGW TO MINIMIZE DISTURBANCE TO RESIDENTS AND BUSINESS OWNERS DURING TIE-INS.
- (30) THE CONTRACTOR SHALL COORDINATE WITH CGW IN MAKING FIELD ADJUSTMENTS IN THE ROUTING OF UTILITIES AROUND SIGNS, MONUMENTS, ETC.
- (31) ALL WATER MAINS 4" DIAMETER AND GREATER SHALL BE DUCTILE IRON UNLESS OTHERWISE SHOWN ON PLANS.
- (32) ALL EXISTING FIRE HYDRANTS TO BE RETIRED SHALL BE REMOVED AND RETURNED TO CGW.
- (33) REMOVE ALL RETIRED WATER AND SEWER VALVE BOXES ONCE NEW MAIN IS IN SERVICE AND RETURN TO CGW.
- (34) NEW GAS MAIN SHOWN FOR REFERENCE ONLY. COORDINATE WITH GAS CONTRACTOR AS REQUIRED.
- (35) TRACKING WIRE AND WARNING TAPE SHALL BE INSTALLED ON ALL WATER AND FORCE MAINS.
- (36) ALL BLASTING ON HIGHWAY RIGHT-OF-WAY AND NEAR STRUCTURES SHALL COMPLY WITH "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ISSUED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT), LATEST EDITION. ALL WORK IS SUBJECT TO INSPECTION AND APPROVAL BY THE DEPARTMENT OF TRANSPORTATION.
- (37) SPECIFICATIONS ARE INCLUDED WITH BID DOCUMENTS: HOWEVER, CGW'S STANDARD SPECIFICATION AND DETAIL SHALL SUPPLEMENT AND GOVERN ALL UTILITY WORK FOR THE PROJECT.
- (38) DURING CONSTRUCTION, LINES MAY REQUIRE TEMPORARY RESTRAINT FOR INSTALLATION AND TESTING OF THE LINES PRIOR TO MAKING TIE-INS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL JOB AND INCLUDED IN OTHER MAJOR ITEMS OF CONSTRUCTION.
- (39) ALL 90° BEND FITTINGS SHALL BE TEE FITTINGS WITH MECHANICALLY RESTRAINED MJ CAP ON THE BLIND END.

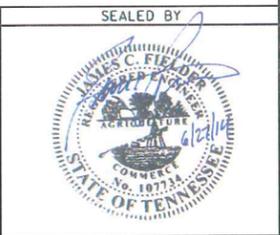
Received

JUN 27 2014

APPROVED

JUN 27 2014

vccc Approved

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

WATER
 NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-I-24-9(76)	U4-3

Received

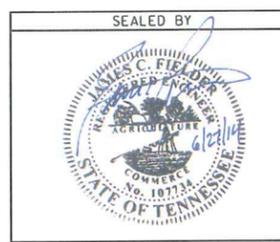
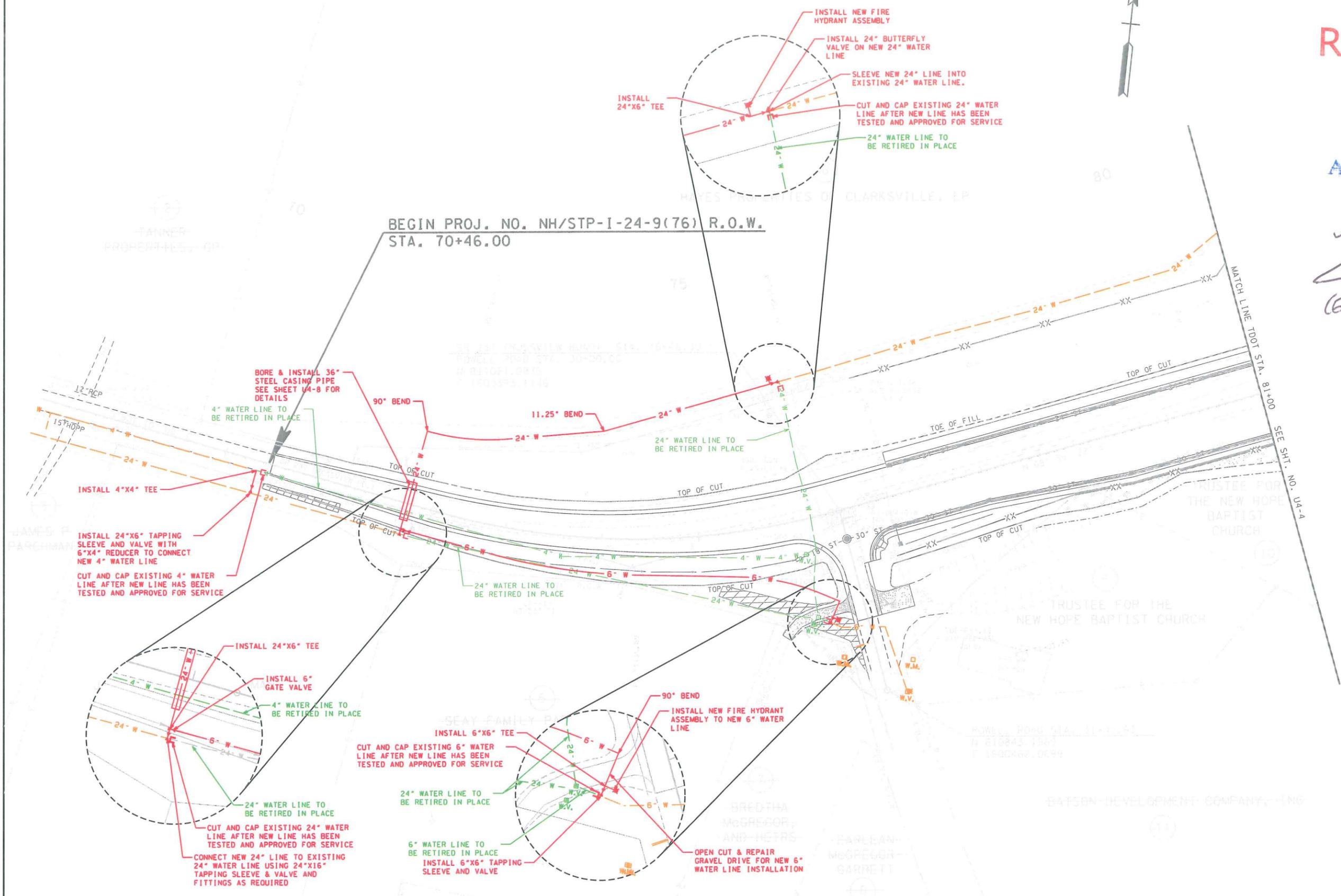
JUN 27 2014

APPROVED

JUN 27 2014

UCCC Approved

Eric McHenry



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

WATER LAYOUT
BEGIN PROJ. TO STA. 81+00
TDOT
SCALE: 1" = 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U4-4



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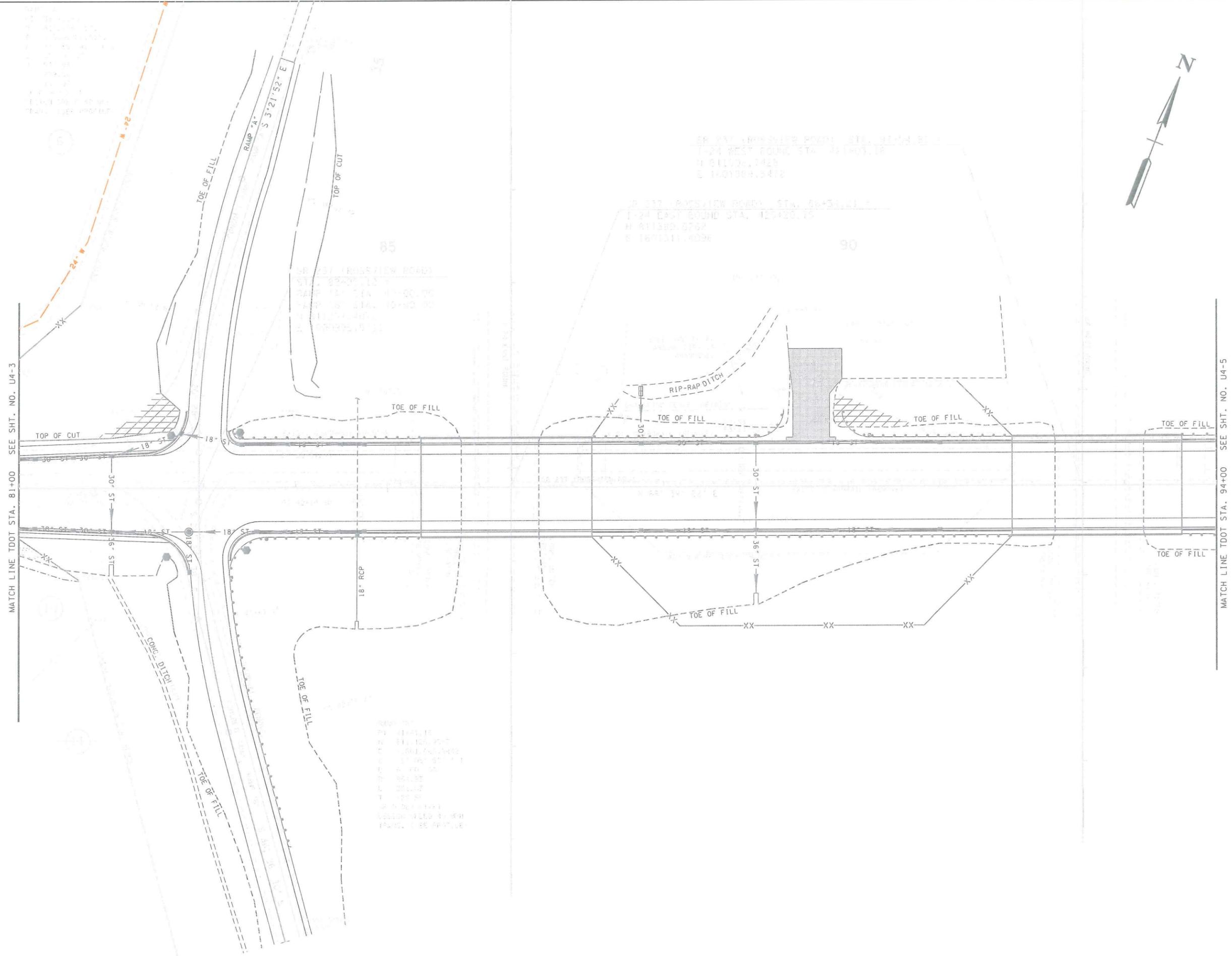
JUN 27 2014

APPROVED

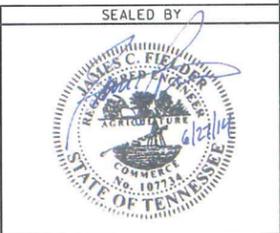
JUN 27 2014

well approved

Eric Mcbray



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COORDINATES ARE NAD/83(1995),
 ARE DATUM ADJUSTED BY THE
 FACTOR OF 0.99999 AND TIED TO
 THE TGRN. ALL ELEVATIONS ARE
 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**WATER
 LAYOUT**

STA. 81+00 TO STA. 94+00
 TDOT

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U4-5

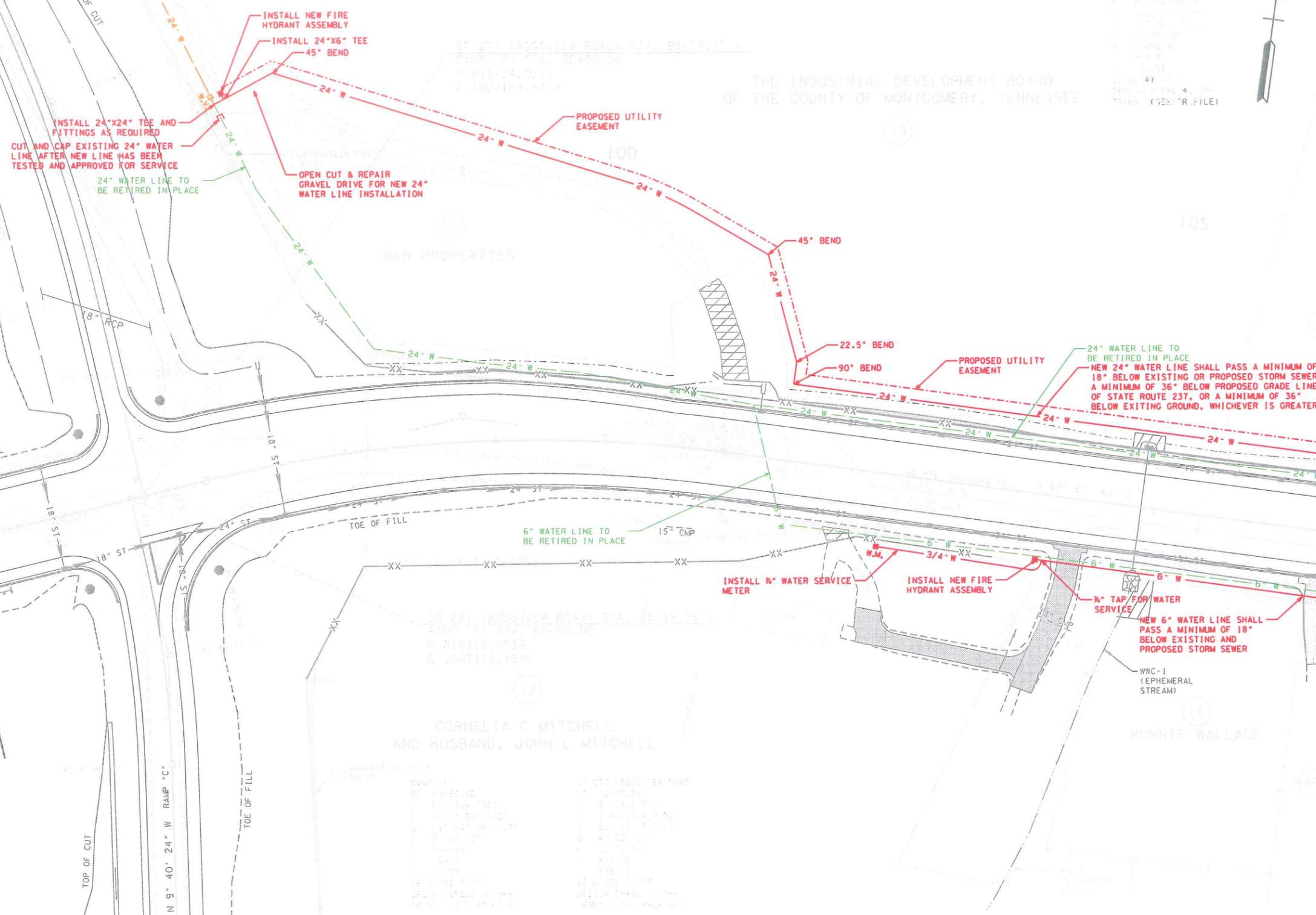
Received
JUN 27 2014

APPROVED
JUN 27 2014
Eric Mubray



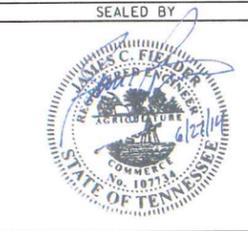
PLANS FOR
CONSTRUCTION OF
NEW 24" WATER MAIN
AND 6" WATER MAIN
ALONG ROUTE 237
FROM STA. 94+00 TO STA.
107+00
MONTGOMERY COUNTY, TENNESSEE
DATE: 06/27/14
DRAWN BY: [Name]
CHECKED BY: [Name]

THE INDUSTRIAL DEVELOPMENT BOARD
OF THE COUNTY OF MONTGOMERY, TENNESSEE



MATCH LINE TDOT STA. 94+00
SEE SHT. NO. U4-4

MATCH LINE TDOT STA. 107+00
SEE SHT. NO. U4-6



COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF 0.99999 AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

WATER LAYOUT
STA. 94+00 TO STA. 107+00
TDOT
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U4-6

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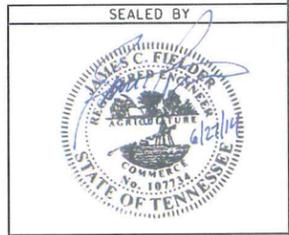
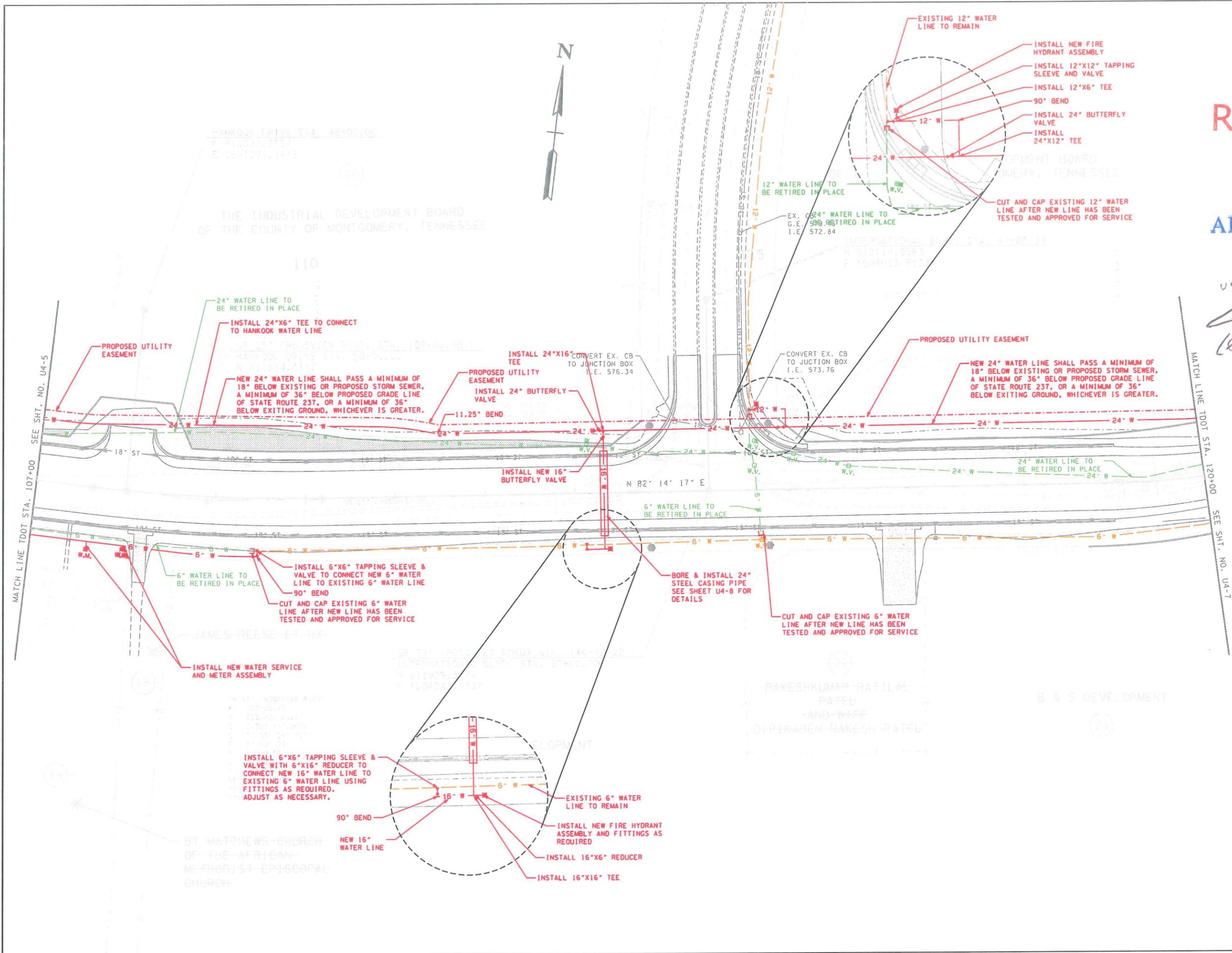
JUN 27 2014

APPROVED

JUN 27 2014

UCC Approved

Coni Melroy



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

WATER LAYOUT
STA. 107+00 TO STA. 120+00
TDOT
SCALE: 1" = 50'

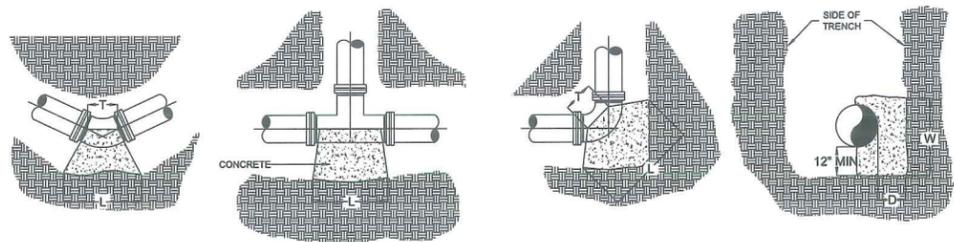
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U4-8

Received
JUN 27 2014

APPROVED

JUN 27 2014

UCC Approved
(Signature)

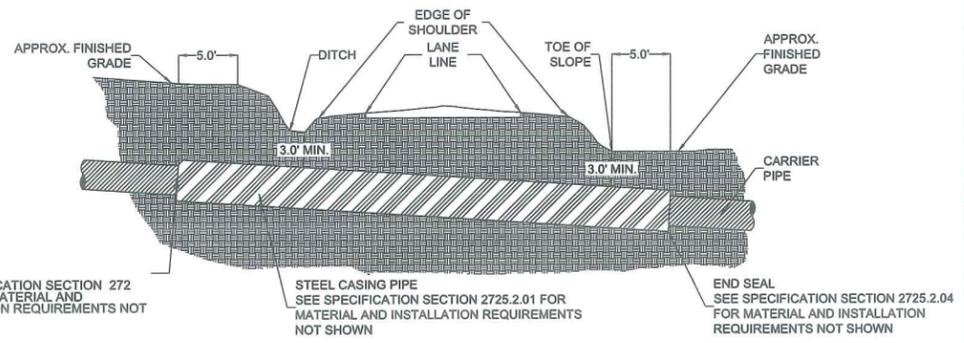


FITTING	T				L				W				D (MIN)			
	6'-8"	12"	18"	24"	6'-8"	12"	18"	24"	6'-8"	12"	18"	24"	6'-8"	12"	18"	24"
90°	9"	1'-0"	1'-8"	2'	2'-0"	3'-6"	7'-0"	12'	3'-0"	3'-0"	3'-6"	4'-6"	1'-6"	1'-8"	2'-0"	5'
45°	7"	11"	1'-0"	1'-6"	2'-0"	2'-0"	4'-6"	7'	3'-0"	3'-0"	3'-0"	4'-3"	1'-6"	1'-6"	1'-6"	2'-9"
22 1/2°	6"	8"	9"	1'	2'-0"	2'-0"	2'-6"	5'	3'-0"	3'-0"	3'-0"	3'	1'-0"	1'-0"	1'-0"	2'
11 1/4°	5"	6"	6"	9"	2'-0"	2'-0"	2'-0"	2'	3'-0"	3'-0"	3'-0"	2'-6"	1'-0"	1'-0"	1'-0"	1'-6"
PLUG/TEE	1'-0"	1'-6"	2'-0"	2'	1'-6"	2'-9"	4'-0"	7'	1'-6"	2'-9"	4'-0"	5'-6"	1'-6"	1'-6"	1'-6"	2'-6"

NOTE:
SEE SPECIFICATION SECTION 03300 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

DESIGN BASIS:
WORKING PRESSURE @ 125 PSI DESIGN PRESSURE @ 250 PSI ALLOWABLE SOIL PRESSURE @ 3000 PSF

THRUST BLOCK (a)
NTS



END SEAL
SEE SPECIFICATION SECTION 272.5.3.04 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

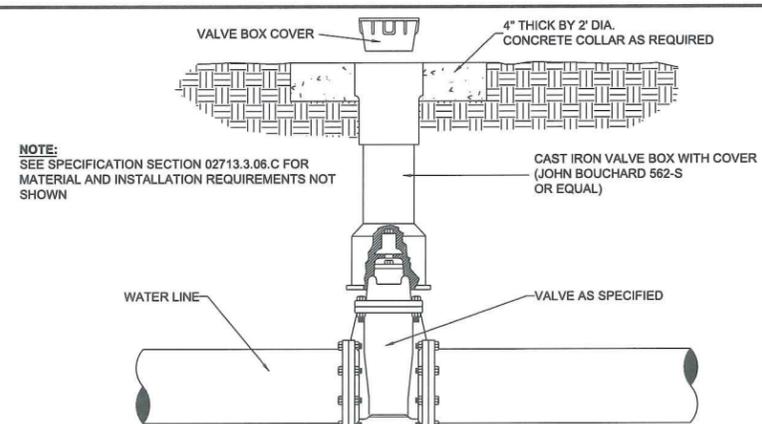
STEEL CASING PIPE
SEE SPECIFICATION SECTION 2725.2.01 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

END SEAL
SEE SPECIFICATION SECTION 2725.2.04 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

- NOTES:
- SEE SPECIFICATION SECTION 02725 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN.
 - CASING SHALL EXTEND TO THE FOLLOWING DISTANCES:
5.0' BEYOND TOE OF SLOPE
5.0' BEYOND BACK OF SLOPE
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TENNESSEE DEPARTMENT OF TRANSPORTATION RULES AND REGULATIONS FOR ACCOMMODATING UTILITIES WITHIN HIGHWAY RIGHT OF WAY LATEST REVISIONS.
 - THE MINIMUM YIELD STRENGTH OF STEEL CASING SHALL BE 35,000 PSI.

CARRIER PIPE NOMINAL DIAMETER (INCHES)	MINIMUM STEEL CASING PIPE (INCHES)	MINIMUM WALL THICKNESS (INCHES)	
		HIGHWAY CROSSING	RAILROAD CROSSING
4	12	.188	.12
6	14	.250	.12
8	16	.250	.12
8 MJ	18	.250	.12
10	18	.250	.12
10 MJ	20	.250	.281
12	20	.250	.281
12 MJ	24	.250	.312
14 - 16	24	.250	.312
16 MJ	30	.312	.406
18 - 21	30	.312	.406
24-27	36	.375	.469
30	42	.500	.562
36	48	.500	.594
36 MJ	54	.500	.719

BORING AND JACKING (b)
NTS

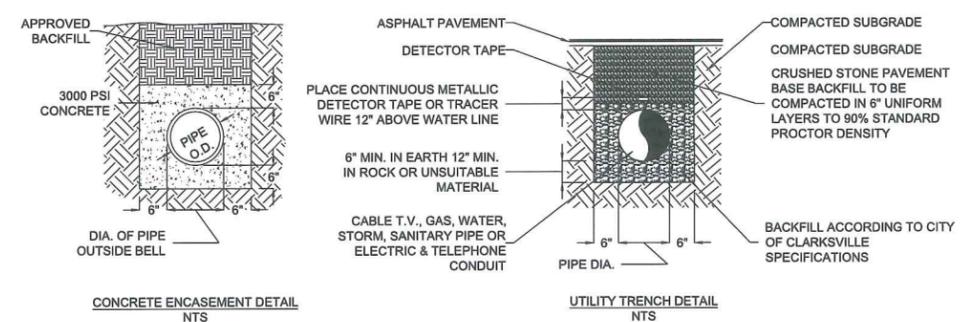


NOTE:
SEE SPECIFICATION SECTION 02713.3.06.C FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

4" THICK BY 2" DIA. CONCRETE COLLAR AS REQUIRED

CAST IRON VALVE BOX WITH COVER (JOHN BOUCHARD 562-S OR EQUAL)

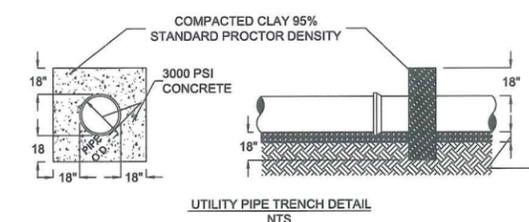
VALVE BOX AND COVER (c)
NTS



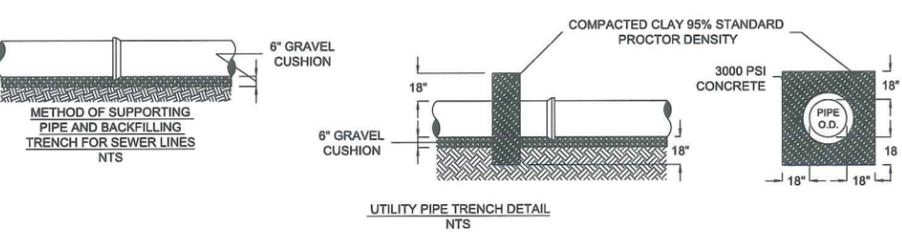
CONCRETE ENCASEMENT DETAIL (NTS)

UTILITY TRENCH DETAIL (NTS)

- NOTE:
- SEE SPECIFICATION SECTION 02221 FOR MATERIAL AND INSTALLATION REQUIREMENTS.
 - WHERE TRENCH HAS ROCK BOTTOM, DEPTH OF TRENCH MUST BE ENOUGH TO ALLOW FOR 6" CRUSHED STONE BELOW BOTTOM OF PIPE.
 - THIS DETAIL IS APPLICABLE TO NEW PAVEMENT AND "SAW-CUT" EXISTING PAVEMENT



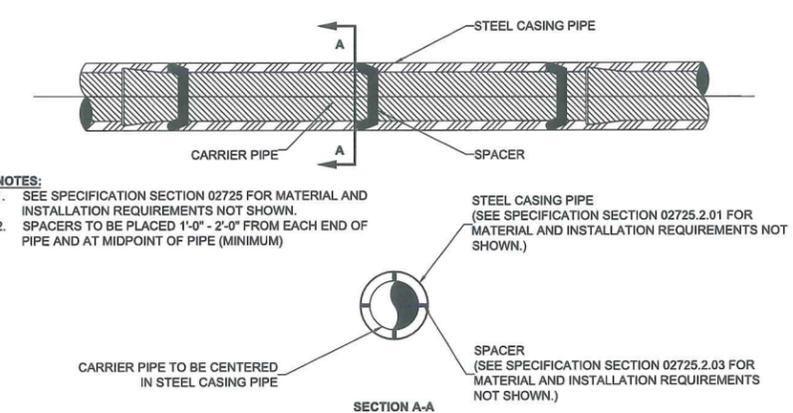
UTILITY PIPE TRENCH DETAIL (NTS)



METHOD OF SUPPORTING PIPE AND BACKFILLING TRENCH FOR SEWER LINES (NTS)

UTILITY PIPE TRENCH DETAIL (NTS)

TRENCHING DETAILS (e)
NTS



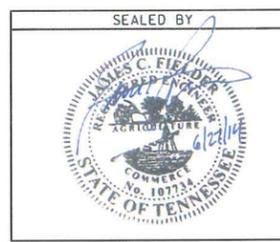
- NOTES:
- SEE SPECIFICATION SECTION 02725 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN.
 - SPACERS TO BE PLACED 1'-0" - 2'-0" FROM EACH END OF PIPE AND AT MIDPOINT OF PIPE (MINIMUM)

STEEL CASING PIPE (SEE SPECIFICATION SECTION 02725.2.01 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN.)

SPACER (SEE SPECIFICATION SECTION 02725.2.03 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN.)

CARRIER PIPE TO BE CENTERED IN STEEL CASING PIPE

CASING SPACER INSTALLATION (d)
NTS



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

WATER
DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-I-24-9(76)	U4-9

Received

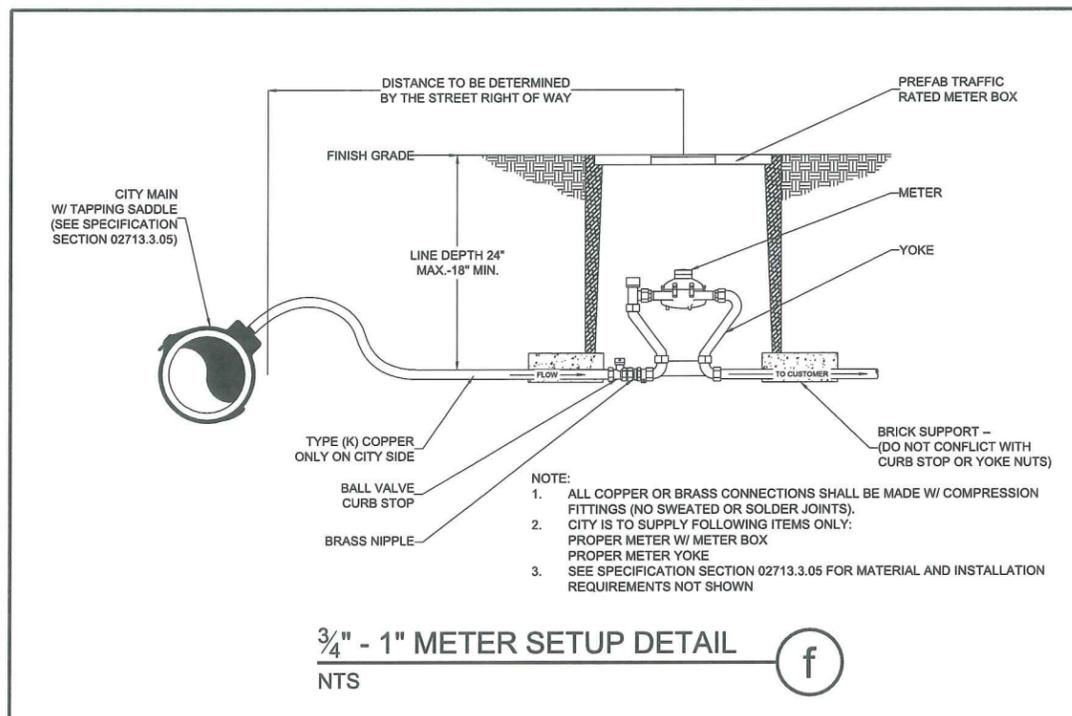
JUN 27 2014

APPROVED

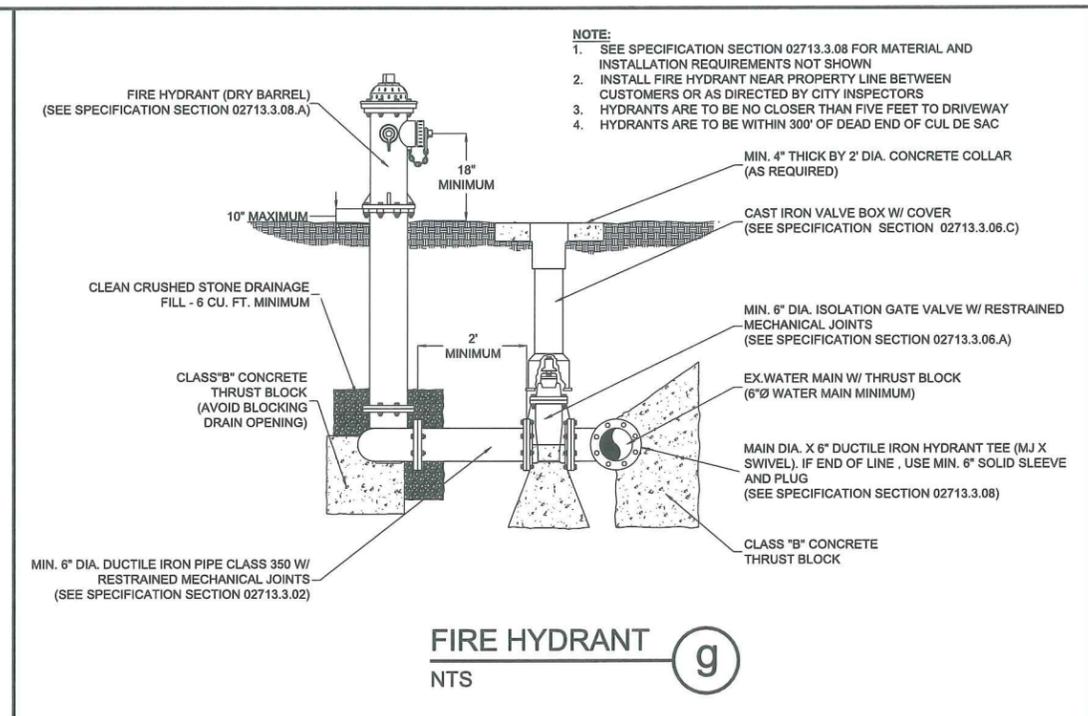
JUN 27 2014

vccc approved

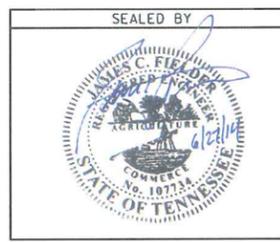
Eric McHenry



3/4" - 1" METER SETUP DETAIL
NTS (f)



FIRE HYDRANT
NTS (g)



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**WATER
DETAILS**

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U5-1

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LEGEND

	UTILITY TO BE RETIRED
	UTILITY TO REMAIN
	NEW PROPOSED UTILITY
	NEW PROPOSED EASEMENT
	WATER METER
	FIRE HYDRANT
	WATER VALVE
	AIR RELIEF VALVE
	MANHOLE

ABBREVIATIONS

CGW	CLARKSVILLE GAS & WATER
CMP	CORRUGATED METAL PIPE
DIP	DUCTILE IRON PIPE
EL	ELEVATION
EXIST	EXISTING
GH	FIRE HYDRANT
FMS	FORCE MAIN
FT	FOOT/FEET
G	GAS LINE
INV	INVERT
MH	MANHOLE
MJ	MECHANICAL JOINT
NO	NUMBER
PVC	POLYVINYL CHLORIDE
RCBC	REINFORCED CONCRETE BOX CULVERT
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT-OF-WAY
SA	SANITARY SEWER
SS	SANITARY SEWER
SMH	SEWER MANHOLE
SPEC	SPECIFICATION
STA	STATION
ST	STORM
SV	SEWER VALVE/AIR RELIEF VALVE
TE	TOP ELEVATION OR RIM ELEVATION
TDOT	TENNESSEE DEPARTMENT OF TRANSPORTATION
TYP	TYPICAL
W	WATER
WM	WATER METER
WV	WATER VALVE

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	% PROJECT	FOOTNOTE
797-03.07	8IN PVC FORCE MAIN	LF	285	100	1
797-03.09	10IN PVC FORCE MAIN	LF	967	100	1
797-05.57	10IN PVC GRAVITY SEWER 12FT-18FT DEPTH	LF	330	100	1
797-06.64	BORE/JACK 16IN STEEL CASING PIPE UNCON.	LF	128	100	5
797-06.65	BORE/JACK 18IN STEEL CASING PIPE UNCON.	LF	187	100	5
797-07.03	48IN MANHOLE 6FT-8FT DEPTH	EACH	1	100	2
797-07.07	48IN MANHOLE 14FT-16FT DEPTH	EACH	3	100	2
797-08.01	DI FITTINGS	LB	464	100	7
797-09.08	8IN PLUG VALVE ASSEMBLY	EACH	2	100	3
797-09.26	2IN AIR /VAC VALVE ASSEMBLY	EACH	1	100	3
797-09.40	CUT AND CAP (ALL SIZES)	EACH	4	100	
797-11.25	RETIRE IN PLACE 48IN MANHOLE	EACH	1	100	8
797-11.38	BY-PASS PUMPING	LS	1	100	4
797-11.39	TV INSPECTION	LF	1582	100	9
797-11.40	RESTORE ASPHALT	SY	100	100	6
797-11.41	RESTORE CONCRETE	SY	50	100	6
797-11.42	RESTORE GRAVEL	SY	200	100	6

FOOTNOTES

- 1 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE EXCAVATION INCLUDING BUT NOT LIMITED TO BEDDING, BACKFILLING, THRUST BLOCKING, PIPE FUSION, APPURTENANCES, FLOWABLE FILL, MAINTAINING THE TRENCH, TESTING, CHECK DAMS, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE FOR GRAVITY SEWER LINES OR FORCE MAINS AS SPECIFIED ON THE PLANS. DUCTILE IRON PIPE GRAVITY SEWER LINES SHALL BE EPOXY LINED.
- 2 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY FOR INSTALLATION OF PRECAST MANHOLE BOTH PREFORMED BASE OR OPEN BOTTOM (DOGHOUSE), INCLUDING BUT NOT LIMITED TO VENT ASSEMBLY (WHERE REQUIRED), CRUSHED STONE, PIPE TO MANHOLE CONNECTORS, EXCAVATION, BACKFILL, BUTYL RESIN GASKET, MANHOLE STEPS, ASPHALTIC WATERPROOFING, FRAME AND COVER, AND TRAFFIC CONTROL.
- 3 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT, INCLUDING BUT NOT LIMITED TO MACHINERY, TOOLS, OR APPARATUS NECESSARY FOR INSTALLATION OF ASSEMBLIES AS DESCRIBED AND DETAILED IN THE PLANS AND SPECS.
- 4 INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR INTERNAL OR EXTERNAL POINT REPAIRS AS SPECIFIED ON THE BID FORM.
- 5 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, ANY OTHER APPURTENANCE TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS, AND TRAFFIC CONTROL. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.
- 6 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT, SETUP AND TRAFFIC CONTROL.
- 7 INCLUDES FITTINGS, GLANDS AND RESTRAINT DEVICES DESCRIBED IN POUNDS.
- 8 INCLUDES ALL LABOR, EQUIPMENT, DISPOSAL OF WASTE MATERIAL, DRILLING HOLES IN BASE FOR PROPER DRAINAGE, REMOVAL OF NECESSARY BARREL SECTIONS FOR PROPER GRADE AND STONE BACKFILL.
- 9 INCLUDES ALL MATERIALS, LABOR, EQUIPMENT, CLEANING OF SEWER LINE ROOT REMOVAL IF REQUIRED, SEWER FLOW CONTROL, TELEVISION INSPECTION, WRITTEN LOG, COPY OF INSPECTION DVD, AND ALL APPURTENANCES COMPLETE IN PLACE.

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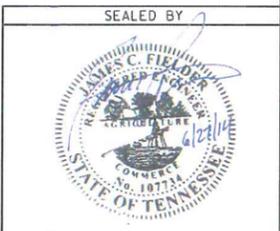
JUN 27 2014

APPROVED

JUN 27 2014

UCCC Approved

(Eric McElroy)



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEWER
INDEX AND
TABULATED
QUANTITIES

CITY OF CLARKSVILLE GAS AND WATER
2215 MADISON STREET
CLARKSVILLE, TN 37043
PAT HICKEY
931-645-1654
PAT.HICKEY@CITYOFCLARKSVILLE.COM

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U5-2

SEWER LAYOUT NOTES

- (1) ALL EXISTING SEWER SERVICES AFFECTED BY THIS WORK, INCLUDING THOSE NOT SHOWN ON THESE DRAWINGS, SHALL BE RECONNECTED WITH NEW SERVICES OF THE SAME SIZE AS THE EXISTING SERVICE, FROM THE NEW MAIN THROUGH A NEW CLEANOUT ASSEMBLY IN A CLEANOUT BOX AND HOUSE SIDE TIE-IN. CONTRACTOR SHALL PROVIDE ALL MATERIALS. ALL EXISTING SERVICES SHALL BE RECONNECTED IN A TIMELY FASHION TO ENSURE CONTINUAL SERVICE. ALL WORK NECESSARY FOR A FULLY RECONNECTED SYSTEM SHALL BE INCORPORATED IN THE APPROPRIATE PAY ITEM.
- (2) MAINTAIN MINIMUM OF 10' HORIZONTAL AND 18" VERTICAL SEPARATION BETWEEN ALL NEW WATER AND FORCE MAIN AND/OR SANITARY SEWER LINES.
- (3) MAINTAIN MINIMUM 18" OF CLEARANCE BETWEEN EXISTING UTILITIES AND NEW UTILITIES.
- (4) A MINIMUM HORIZONTAL OR VERTICAL CLEARANCE OF 18" BETWEEN ALL PROPOSED STRUCTURES SHALL BE MAINTAINED AT ALL LOCATIONS. CONTRACTOR TO ENSURE ADEQUATE CLEARANCE FROM PROPOSED STORM WATER PIPING, DRIVEWAYS AND ROADWAY CUTS.
- (5) CONTRACTOR IS TO GIVE CGW 48 HOURS NOTICE PRIOR TO MAKING LIVE CONNECTIONS.
- (6) A MINIMUM OF ONE HALF THE TRAVELED PORTION OF ALL PUBLIC AND PRIVATE ROADWAYS MUST REMAIN OPEN TO TRAFFIC AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF WORK WITH THE CITY OF CLARKSVILLE STREET DEPARTMENT AND /OR TDOT AS APPROPRIATE.
- (7) ALL PAVED DRIVEWAYS, PARKING LOTS AND SIDE STREETS MAY BE OPEN CUT WITHOUT CASING PIPE UNLESS OTHERWISE SHOWN ON THE DRAWINGS. BACKFILL ENTIRE TRENCH WITH STONE. PROVIDE TEMPORARY PAVEMENT 4" MINIMUM UNLESS OTHERWISE DIRECTED (COLD MIX) PER SECTION 02575. MAINTAIN TEMPORARY PATCH UNTIL PERMANENT PAVEMENT REPAIR CAN BE MADE. CONCRETE PAVEMENT SHALL BE REPAIRED WITH NEW CONCRETE.
- (8) ALL SEWER MAIN AND SEWER SERVICE CROSSINGS OF S.R. 237 SHALL BE BORED AS SHOWN ON THE DRAWINGS AND AS DIRECTED IN SPECIFICATION SECTION 02725 WITH APPROPRIATE CASING PIPE UNLESS OTHER METHODS OR OPEN CUT INSTALLATION ARE ALLOWED BY TDOT.
- (9) EXISTING PAVEMENTS, CURBS, AND GUTTERS, AND SIDEWALKS TO REMAIN, SHALL BE CUT AND BROUGHT TO A NEAT LINE BY MECHANICALLY SAWING.
- (10) BACKFILL FOR TRENCHES WITHIN PAVEMENTS SHALL BE PLACED IN SIX INCH LAYERS AND EACH LAYER SHALL BE THOROUGHLY COMPACTED BY MEANS OF A MECHANICAL TAMP.
- (11) MATERIALS AND WORKMANSHIP SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR "ROAD AND BRIDGE CONSTRUCTION" ISSUED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) . LATEST EDITION OF ALL WORK IS SUBJECT TO INSPECTION AND APPROVAL BY THE DEPARTMENT OF TRANSPORTATION.
- (12) TRENCHES WITHIN PAVEMENTS SHALL BE BACKFILLED TO A MINIMUM OF 4 INCHES BELOW FINISHED GRADE WITH CRUSHED STONE. PAVEMENT SHALL BE REMOVED FOR A MINIMUM OF TWO FEET ON EACH SIDE OF THE TRENCH. THE DEPTH OF THE TEMPORARY PATCH (SECTION 02575) SHALL BE 4 INCHES. PAVEMENT SHALL BE REPLACED IN KIND AS SHOWN IN DETAILS. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY REPAIR AND MAINTENANCE OF PAVEMENTS UNTIL THE ROAD EXPANSION IS COMPLETED BY TDOT. ALL WORK MUST BE COORDINATED WITH THE TDOT GENERAL CONTRACTOR.
- (13) THE CONTRACT DRAWINGS ARE BASED ON SURVEY INFORMATION PROVIDED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION. THE INFORMATION SHOWN (UTILITY AND STRUCTURE LOCATIONS, ELEVATIONS, PARCELS, ETC .) SHALL BE USED FOR REFERENCE ONLY AS EXISTING FEATURES MAY HAVE CHANGED SINCE THE MAP WAS DEVELOPED.
- (14) SIZE AND LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR ANY UTILITY DAMAGE. THE CONTRACTOR SHALL CONTACT THE TENNESSEE ONE-CALL CENTER. (1-800-351-1111) TO LOCATE UTILITIES IN THE AREA AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF CLARKSVILLE AND CLARKSVILLE GAS AND WATER AT LEAST 72 HOURS PRIOR TO EXCAVATION.
- (15) THE CONTRACTOR SHALL RESTORE ALL CULVERTS, LAWNS, FENCES, WALLS, LANDSCAPING, IRRIGATION SYSTEMS, SIGNS, LIGHT AND POWER POLES, STREET MARKERS, MAIL BOXES, UTILITY LINES AND SERVICES, AND ALL OTHER ITEMS DISTURBED BY CONSTRUCTION ACTIVITIES TO THEIR ORIGINAL CONDITIONS UNLESS DIRECTED OTHERWISE.
- (16) PROPER EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO PERFORMING ANY EXCAVATION IN ANY AREA AND SHALL BE MAINTAINED DURING WORK AND REMOVED WHEN WORK IS COMPLETED IN ACCORDANCE WITH ALL CONTRACTOR-OBTAINED PERMITS AND APPLICABLE REGULATIONS.
- (17) THE CONTRACTOR SHALL OBTAIN ALL PERMITS/PERMISSION FROM THE STATE (INCLUDING TDOT) AND/OR THE CITY OF CLARKSVILLE STREET DEPARTMENT TO DO WORK THAT IS WITHIN OR CROSSES ALL HIGHWAYS AND STREETS.
- (18) CONTRACTOR SHALL PROVIDE ALL PIPING, SLUICING, PUMPING AND OTHER TEMPORARY PROVISIONS TO MAINTAIN SEWER FLOW THROUGHOUT CONSTRUCTION. THERE SHALL BE NO INTERRUPTION OF SEWER SERVICES ALLOWED UNLESS AUTHORIZED IN WRITING. (SEE NOTE 40)
- (19) OVERHEAD POWER LINES ARE PRESENT IN THE PROJECTED AREA, HOWEVER, NOT ALL ARE SHOWN ON DRAWINGS. EXTREME CARE SHOULD BE TAKEN WHEN WORKING UNDER OR NEAR POWER LINES.
- (20) ALL CONSTRUCTION WORK SHALL BE PERFORMED WITHIN THE RIGHT OF WAY, PERMANENT EASEMENT AND TEMPORARY CONSTRUCTION EASEMENT INDICATED ON THE PLANS. IF A CONFLICT EXIST THE CONTRACTOR SHALL COORDINATE WITH CGW.
- (21) ALL CONSTRUCTION MUST CONFORM TO THE PROJECT PLANS AND SPECIFICATIONS AS WELL AS ALL REQUIREMENTS OF TDOT, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC), CGW, THE CLARKSVILLE STREET DEPARTMENT, AND ALL OTHER RELATED GOVERNMENT AGENCIES.
- (22) THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES TO ENSURE SAFETY AT ALL TIMES FOR EMPLOYEES, RESIDENTS, AND MOTORIST. ALL TRAFFIC CONTROL PLANS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF TDOT AND MUTCD.
- (23) ALL CONSTRUCTION ACTIVITIES AND MATERIALS INSTALLED IN TDOT RIGHT-OF-WAY SHALL COMPLY WITH ALL APPLICABLE TDOT REQUIREMENTS.
- (24) ALL FITTINGS SHALL BE RESTRAINED AND RESTRAINED LENGTH SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER. IN ADDITION, THRUST BLOCKS SHALL BE PROVIDED AT ALL SEWER FORCE MAIN AND WATER LINE FITTINGS. SEE DETAILS.
- (25) TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED DAILY IF POSSIBLE, BUT NO LATER THAN 14 DAYS AFTER TRENCHING. ANY TEMPORARY SPOIL PILE OF EXCAVATED EARTH SHALL RECEIVE EROSION CONTROL MEASURES.
- (26) THE WATER/SEWER CONTRACTOR SHALL COORDINATE ALL OF THEIR WORK WITH THE GAS CONTRACTOR, STORM SEWER CONTRACTOR AND UTILITY POLE CONTRACTOR TO AVOID CONFLICTS WITH ALL OTHER UTILITIES.
- (27) CUSTOMERS SHALL NOT BE WITHOUT WATER SERVICES FOR GREATER THAN FOUR HOURS. NIGHT WORK MAY BE REQUIRED AT THE DISCRETION OF CGW TO MINIMIZE DISTURBANCE TO RESIDENTS AND BUSINESS OWNERS DURING TIE-INS.
- (28) AT ALL NEW SEWER SERVICE CONNECTIONS AND EXISTING SERVICE RECONNECTIONS, INSTALL NEW SEWER CLEAN OUTS AT THE EDGE OF EACH UTILITY EASEMENT.
- (29) THE CONTRACTOR SHALL COORDINATE WITH CGW IN MAKING FIELD ADJUSTMENTS IN THE ROUTING OF UTILITIES AROUND SIGNS, MONUMENTS, ETC.
- (30) ALL GRAVITY SEWER PIPES SHALL BE ASTM D3034 SDR 26 PVC UNLESS OTHERWISE NOTED ON PLANS. PIPE SHALL BE GREEN IN COLOR.
- (31) ALL SANITARY SEWER FORCE MAIN SHALL BE ASTM D2241 SDR 21 PVC UNLESS OTHERWISE NOTED ON PLANS. PIPE SHALL BE GREEN IN COLOR. SANITARY SEWER FITTINGS SHALL BE SPECIALLY LINED MECHANICAL JOINT DUCTILE IRON PIPE.
- (32) REMOVE ALL RETIRED WATER AND SEWER VALVE BOXES ONCE NEW MAIN IS IN SERVICE AND RETURN TO CGW.
- (33) REMOVE RETIRED (GRAVITY SEWER MANHOLE AND AIR RELEASE VALVE MANHOLES) MANHOLE CASTING AND TOP SECTION IF NECESSARY. PLUG TO 6" ABOVE CROWN OF PIPE WITH CONCRETE AND BACKFILL WITH CRUSHED STONE OR FLOW ABLE FILL. PATCH PAVEMENT.
- (34) REMOVAL OF VALVE BOXES, GRINDER PUMPS AND OTHER UNDEFINED SYSTEMS APPURTENANCES ARE NOT SHOWN AS PAY ITEMS, BUT INSTEAD SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL JOB AND INCLUDED IN OTHER MAJOR ITEMS OF CONSTRUCTION.
- (35) NEW GAS MAIN SHOWN FOR REFERENCE ONLY. COORDINATE WITH GAS CONTRACTOR AS REQUIRED.
- (36) TRACKING WIRE AND WARNING TAPE SHALL BE INSTALLED ON ALL WATER AND FORCE MAINS.
- (37) ALL BLASTING ON HIGHWAY RIGHT-OF-WAY AND NEAR STRUCTURES SHALL COMPLY WITH "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ISSUED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT), LATEST EDITION. ALL WORK IS SUBJECT TO INSPECTION AND APPROVAL BY THE DEPARTMENT OF TRANSPORTATION.
- (38) SPECIFICATIONS ARE INCLUDED WITH BID DOCUMENTS: HOWEVER, CGW'S STANDARD SPECIFICATION AND DETAIL SHALL SUPPLEMENT AND GOVERN ALL UTILITY WORK FOR THE PROJECT.
- (39) DURING CONSTRUCTION, LINES MAY REQUIRE TEMPORARY RESTRAINT FOR INSTALLATION AND TESTING OF THE LINES PRIOR TO MAKING TIE-INS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL JOB AND INCLUDED IN OTHER MAJOR ITEMS OF CONSTRUCTION.
- (40) FORCE MAIN TIE-INS SHALL BE COORDINATED WITH CGW. TIE-INS SHALL OCCUR AT NIGHT DURING LOW-FLOW. CGW WILL SHUT AFFECTED LIFT STATIONS DOWN PRIOR TO COMMENCING TIE-INS AND WILL TURN LIFT STATIONS BACK ON ONCE WORK IS COMPLETE. THE CONTRACTOR SHALL REMAIN ON-SITE WITH PUMPER TRUCKS UNTIL THE LIFT STATIONS ARE BACK ON LINE AND FULLY FUNCTIONAL. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PUMPING AND HAULING AT THE AFFECTED LIFT STATION SITES, AND WHERE THE EXISTING FORCE MAIN IS CUT.

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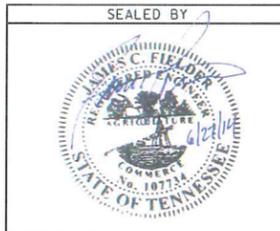
JUN 27 2014

APPROVED

JUN 27 2014

UCC Approved

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 (Eric McInroy)



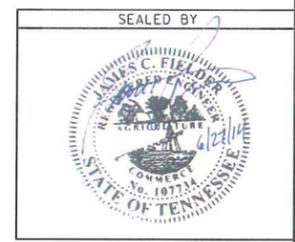
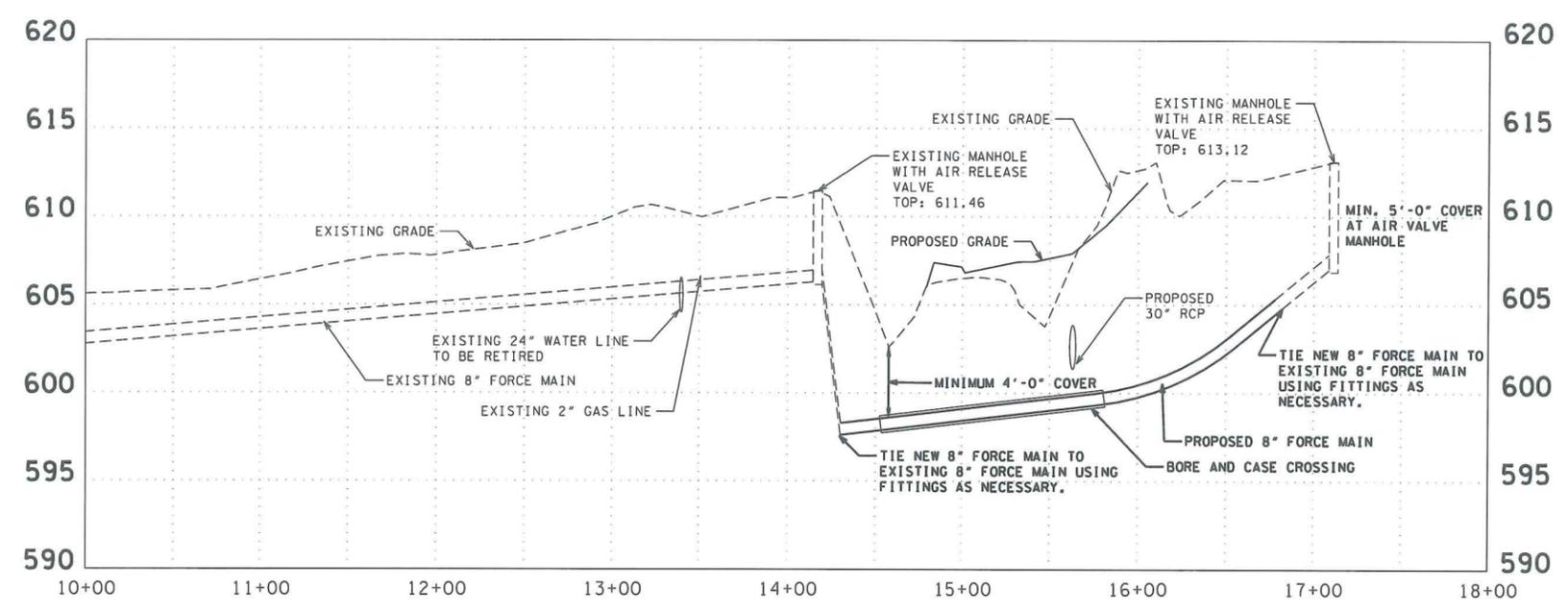
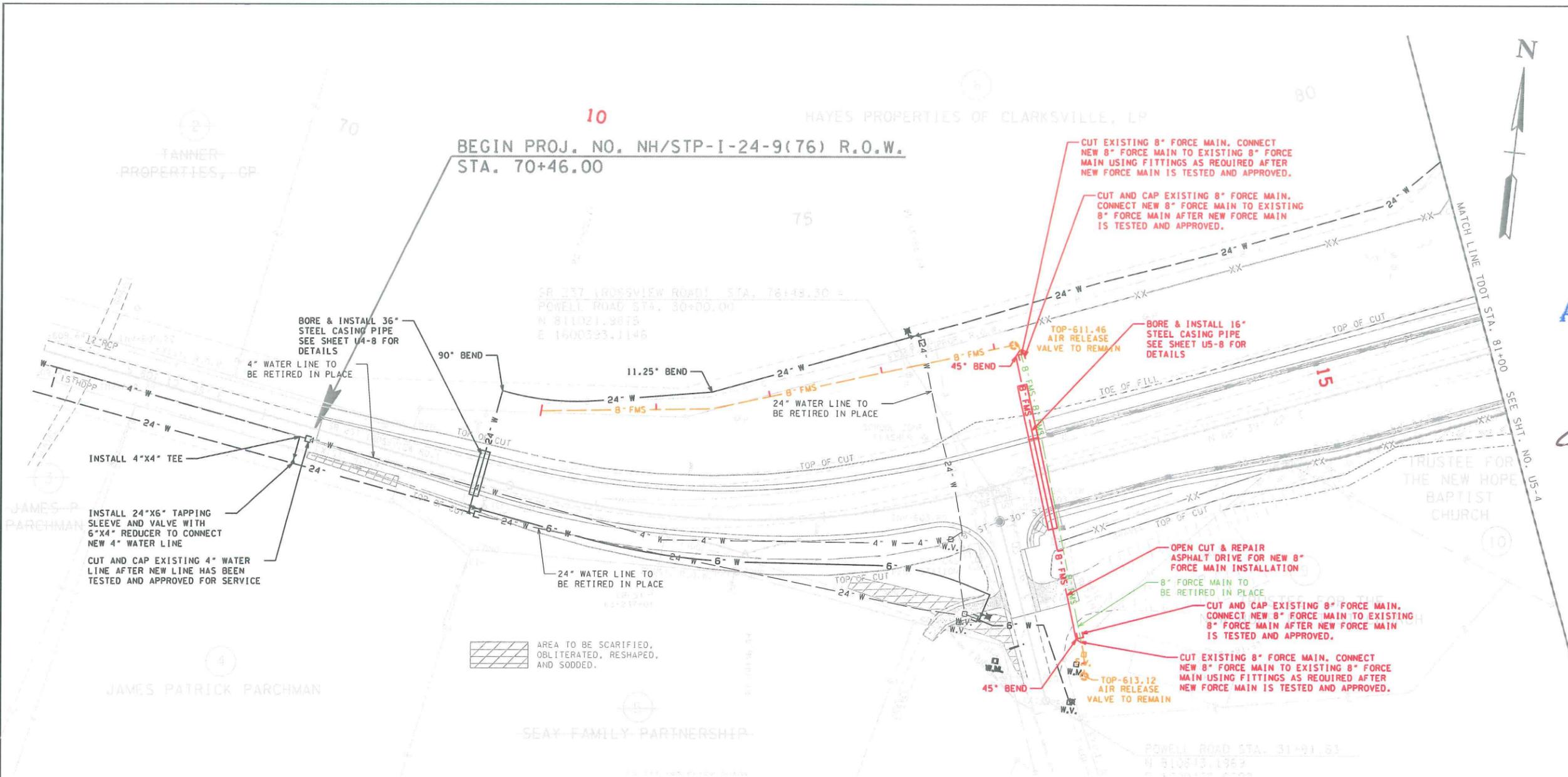
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

SEWER
 NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-I-24-9(76)	U5-3

Received
JUN 27 2014

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JUN 27 2014
vecc Approved
(Eric McHenry)



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.999999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEWER LAYOUT
BEGIN PROJ. TO STA. 81+00
DOT
SCALE: 1"=50' HORIZ.
1"=5' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U5-4



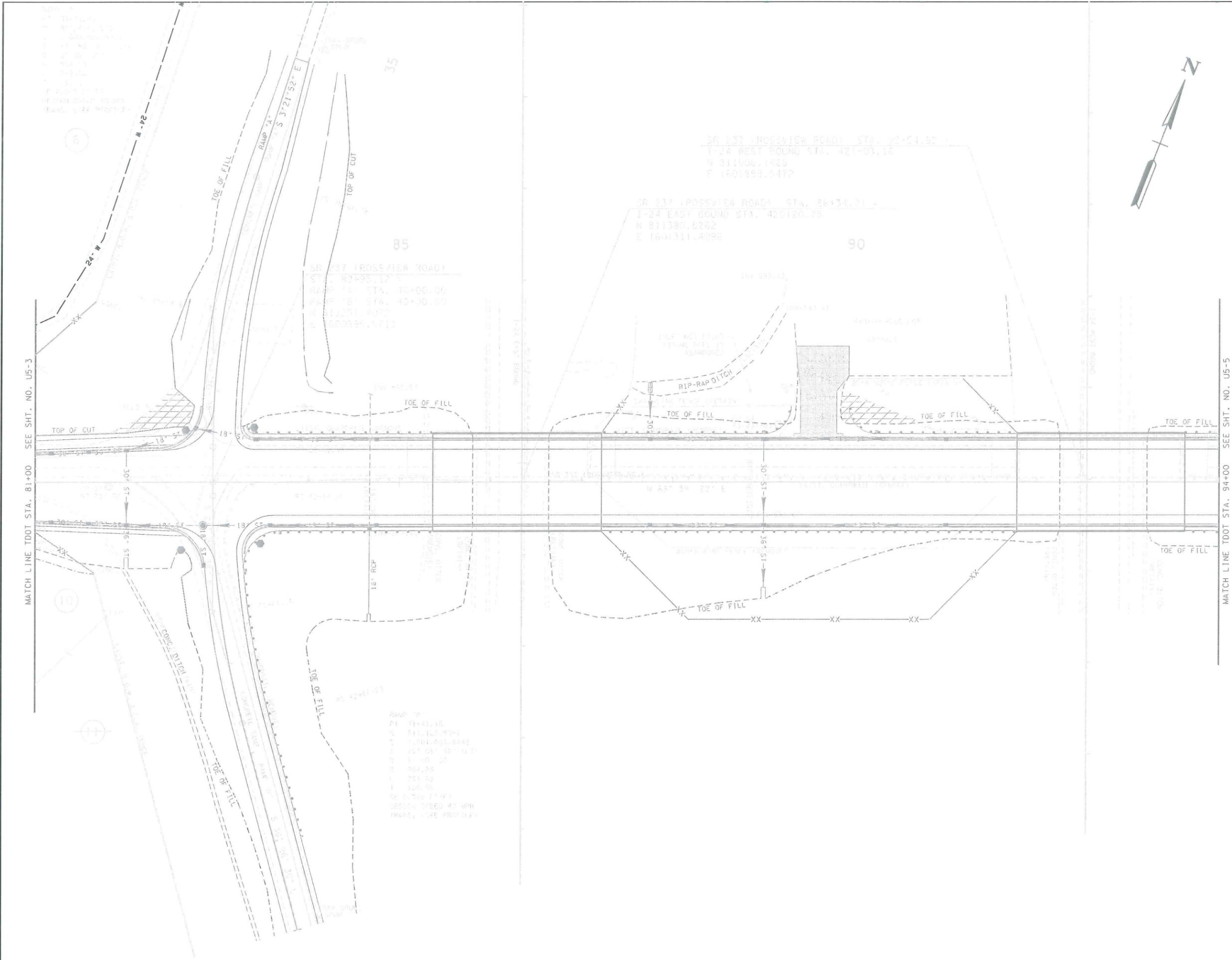
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JUN 27 2014

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JUN 27 2014

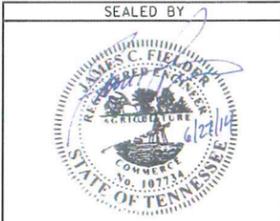
VCCA Approved
(Eric McHenry)



MATCH LINE TDOT STA. 81+00 SEE SHT. NO. U5-3

MATCH LINE TDOT STA. 94+00 SEE SHT. NO. U5-5

RAMP "B"
 STA. 81+41.15
 N 811380.8262
 E 1601311.4096
 15° 05' 52" N.T.
 R 45.20
 852.88
 351.53
 128.78
 66 2.56 17.41
 DESIGN SPEED 40 MPH
 FRANKLIN COUNTY



COORDINATES ARE NAD/83(1995),
 ARE DATUM ADJUSTED BY THE
 FACTOR OF 0.99999 AND TIED TO
 THE TGRN. ALL ELEVATIONS ARE
 REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

SEWER LAYOUT
 STA. 81+00 TO STA. 94+00
 TDOT
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U5-5

Received

JUN 27 2014

APPROVED

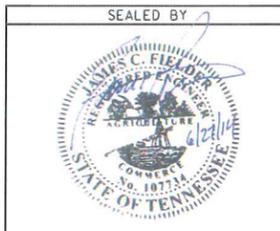
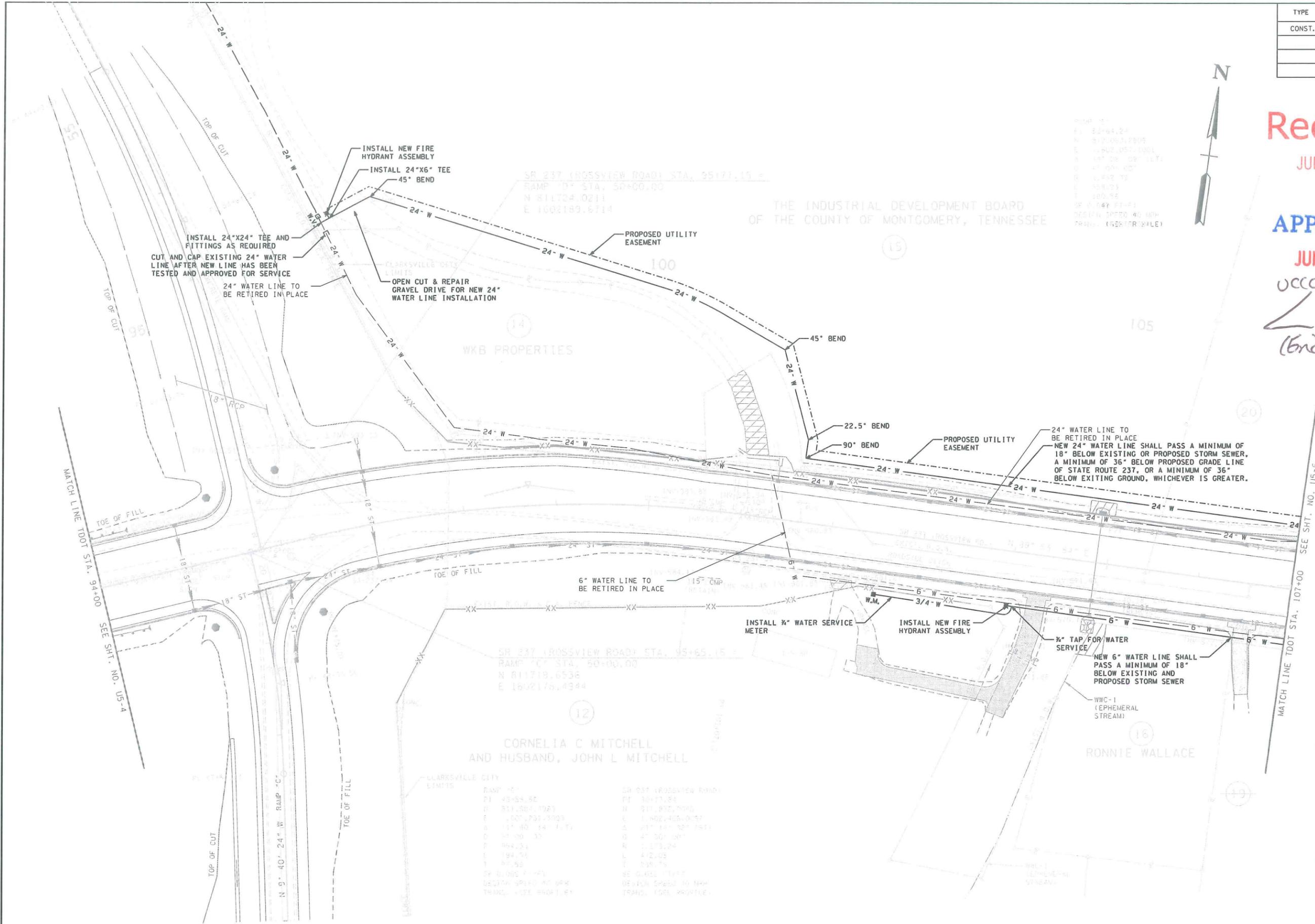
JUN 27 2014

UCC Approved
(Eric McElroy)



PROJ. NO. 15-1
 P1 2014.24
 N 811724.0211
 E 1602189.6714
 SR 237 (ROSSVIEW ROAD) STA. 95+77.15 =
 RAMP "D" STA. 50+00.00
 N 811724.0211
 E 1602189.6714

THE INDUSTRIAL DEVELOPMENT BOARD
 OF THE COUNTY OF MONTGOMERY, TENNESSEE

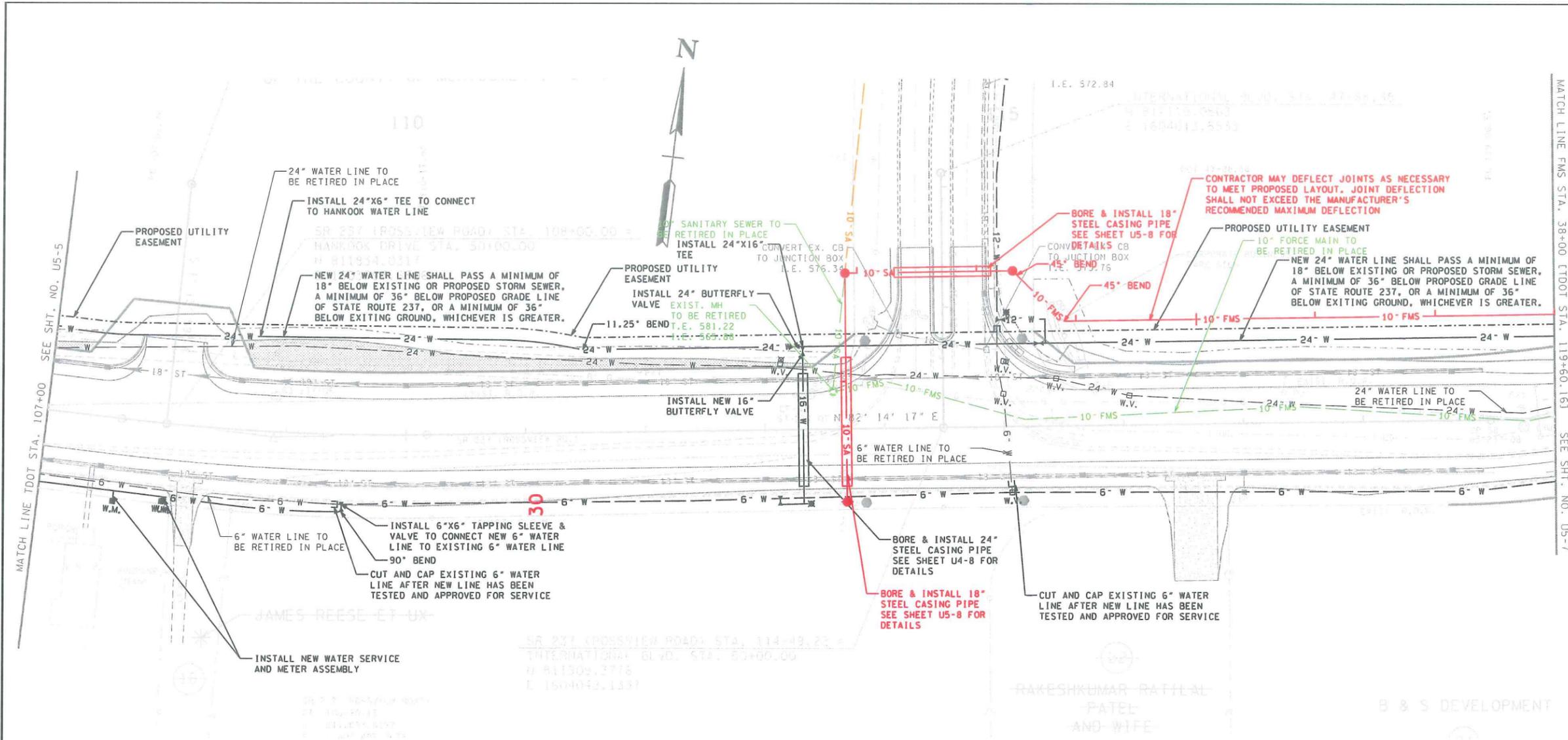


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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

SEWER LAYOUT
 STA. 94+00 TO STA. 107+00
 TDOT
 SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U5-6



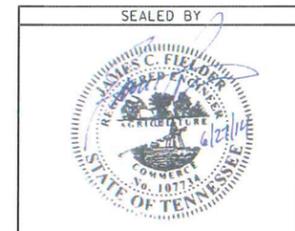
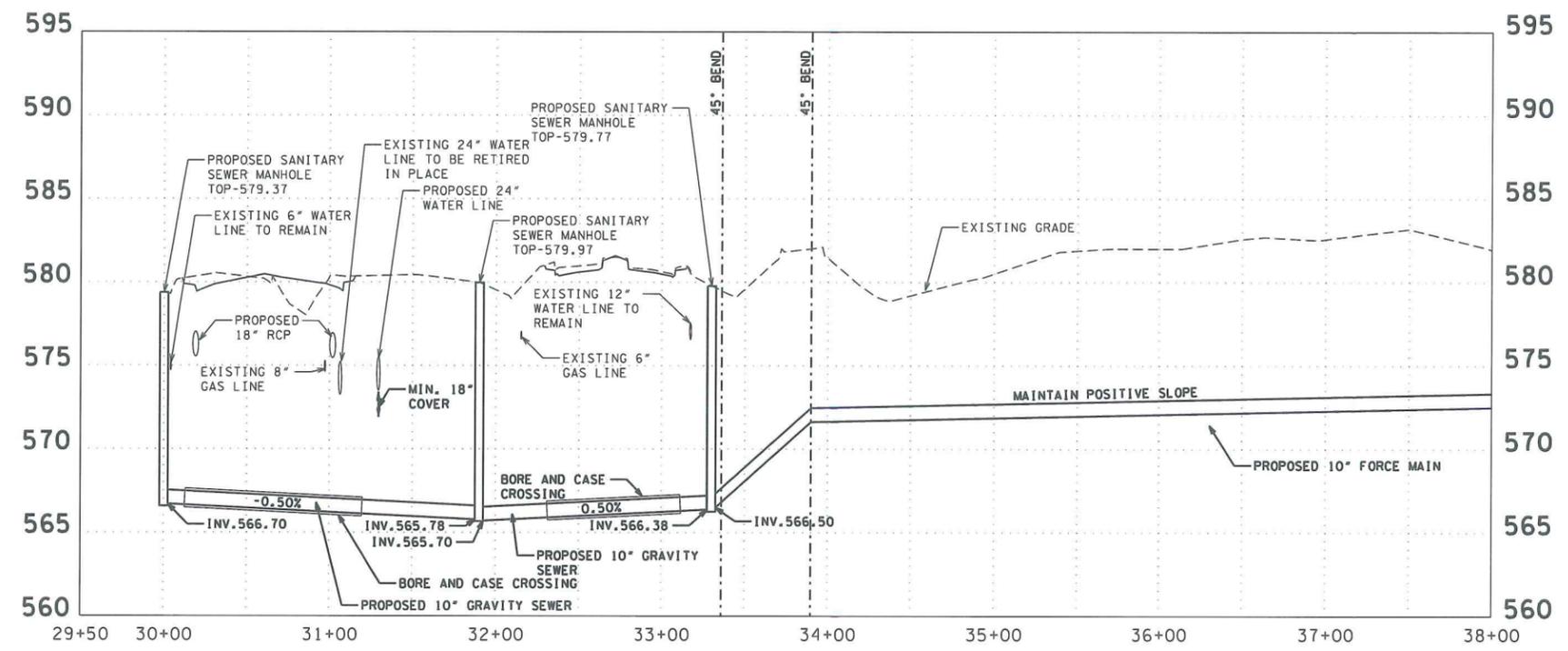
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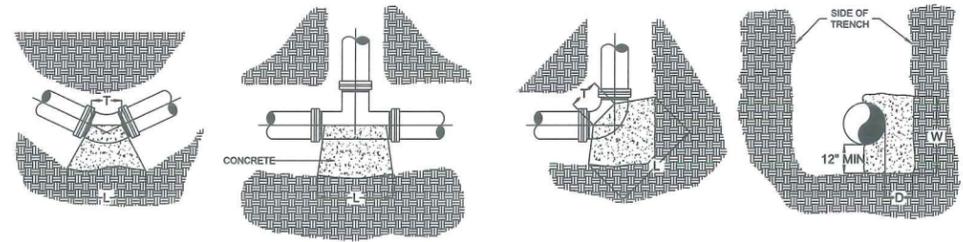


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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEWER LAYOUT
STA. 107+00 TO STA. 119+60.16 TDOT
SCALE: 1"=50' HORIZ.
1"=5' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U5-8

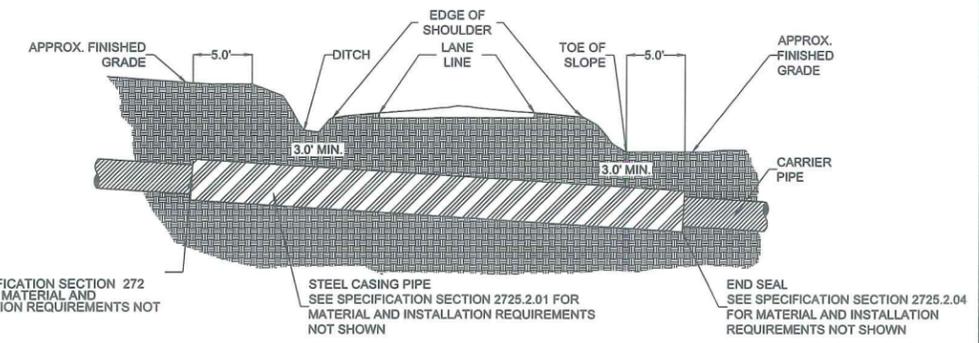


FITTING	T				L				W				D (MIN)			
	6"-8"	12"	18"	24"	6"-8"	12"	18"	24"	6"-8"	12"	18"	24"	6"-8"	12"	18"	24"
90°	9"	1'-0"	1'-8"	2'	2'-0"	3'-6"	7'-0"	12'	3'-0"	3'-0"	3'-6"	4'-6"	1'-6"	1'-8"	2'-0"	5'
45°	7"	11"	1'-0"	1'-6"	2'-0"	2'-0"	4'-6"	7'	3'-0"	3'-0"	3'-0"	4'-3"	1'-6"	1'-6"	1'-6"	2'-9"
22 1/2°	6"	8"	9"	1'	2'-0"	2'-0"	2'-6"	5'	3'-0"	3'-0"	3'-0"	3'	1'-0"	1'-0"	1'-0"	2'
11 1/4°	5"	6"	6"	9"	2'-0"	2'-0"	2'-0"	2'	3'-0"	3'-0"	3'-0"	2'-6"	1'-0"	1'-0"	1'-0"	1'-6"
PLUG/TEE	1'-0"	1'-6"	2'-0"	2'	1'-6"	2'-9"	4'-0"	7'	1'-6"	2'-9"	4'-0"	5'-6"	1'-6"	1'-6"	1'-6"	2'-6"

NOTE:
SEE SPECIFICATION SECTION 03300 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

DESIGN BASIS:
WORKING PRESSURE @ 125 PSI DESIGN PRESSURE @ 250 PSI ALLOWABLE SOIL PRESSURE @ 3000 PSF

THRUST BLOCK (a)
NTS



END SEAL
SEE SPECIFICATION SECTION 272.5.3.04 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

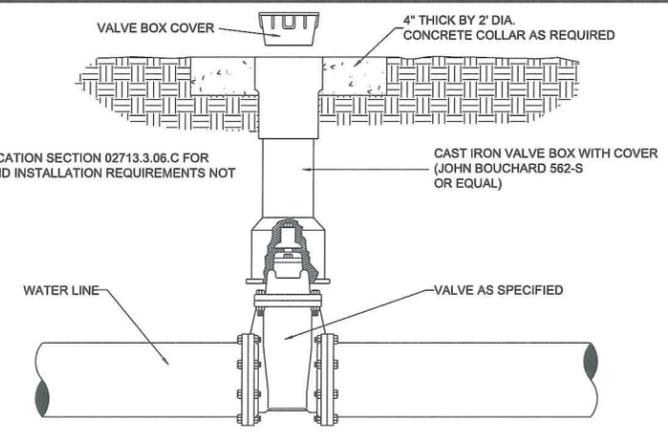
STEEL CASING PIPE
SEE SPECIFICATION SECTION 2725.2.01 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

END SEAL
SEE SPECIFICATION SECTION 2725.2.04 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

- NOTES:
- SEE SPECIFICATION SECTION 02725 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN. CASING SHALL EXTEND TO THE FOLLOWING DISTANCES:
5.0' BEYOND TOE OF SLOPE
5.0' BEYOND BACK OF SLOPE
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TENNESSEE DEPARTMENT OF TRANSPORTATION RULES AND REGULATIONS FOR ACCOMMODATING UTILITIES WITHIN HIGHWAY RIGHT OF WAY LATEST REVISIONS.
 - THE MINIMUM YIELD STRENGTH OF STEEL CASING SHALL BE 35,000 PSI.

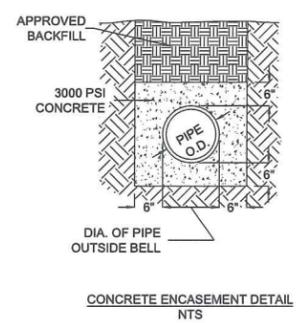
CARRIER PIPE NOMINAL DIAMETER (INCHES)	MINIMUM STEEL CASING PIPE (INCHES)	MINIMUM WALL THICKNESS (INCHES)	
		HIGHWAY CROSSING	RAILROAD CROSSING
4	12	.188	.12
6	14	.250	.12
8	16	.250	.12
8 MJ	18	.250	.12
10	18	.250	.12
10 MJ	20	.250	.281
12	20	.250	.281
12 MJ	24	.250	.312
14 - 16	24	.250	.312
16 MJ	30	.312	.406
18 - 21	30	.312	.406
24-27	36	.375	.469
30	42	.500	.562
36	48	.500	.594
36 MJ	54	.500	.719

BORING AND JACKING (b)
NTS

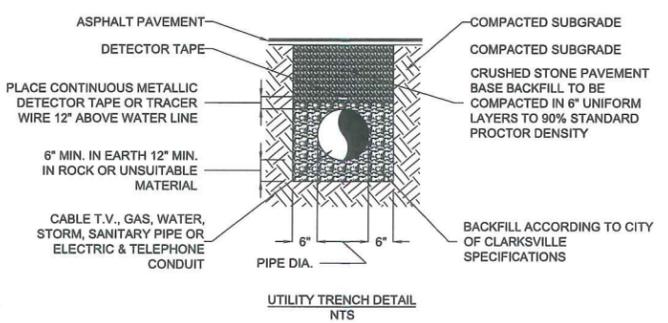


NOTE:
SEE SPECIFICATION SECTION 02713.3.06.C FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN

VALVE BOX AND COVER (c)
NTS

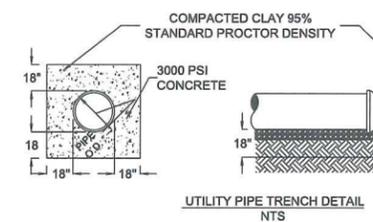


CONCRETE ENCASEMENT DETAIL
NTS

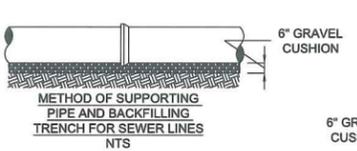


UTILITY TRENCH DETAIL
NTS

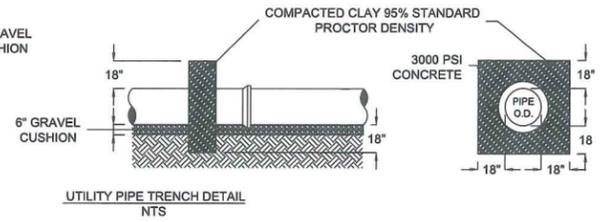
- NOTE:
- SEE SPECIFICATION SECTION 02221 FOR MATERIAL AND INSTALLATION REQUIREMENTS.
 - WHERE TRENCH HAS ROCK BOTTOM, DEPTH OF TRENCH MUST BE ENOUGH TO ALLOW FOR 6" CRUSHED STONE BELOW BOTTOM OF PIPE.
 - THIS DETAIL IS APPLICABLE TO NEW PAVEMENT AND "SAW-CUT" EXISTING PAVEMENT



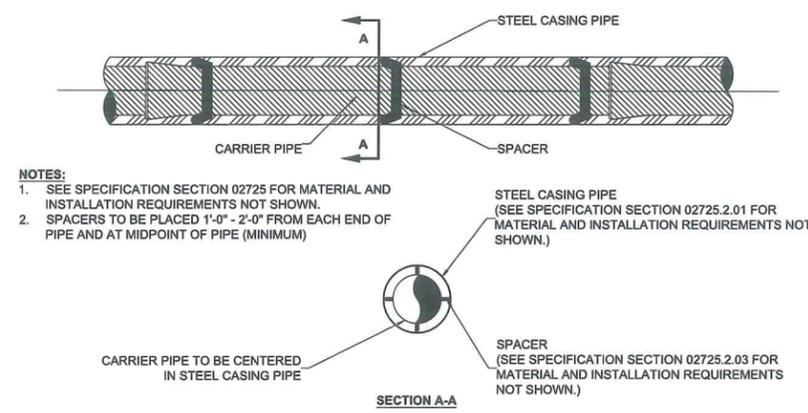
UTILITY PIPE TRENCH DETAIL
NTS



METHOD OF SUPPORTING PIPE AND BACKFILLING TRENCH FOR SEWER LINES
NTS



UTILITY PIPE TRENCH DETAIL
NTS



- NOTES:
- SEE SPECIFICATION SECTION 02725 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN.
 - SPACERS TO BE PLACED 1'-0" - 2'-0" FROM EACH END OF PIPE AND AT MIDPOINT OF PIPE (MINIMUM)

STEEL CASING PIPE
(SEE SPECIFICATION SECTION 02725.2.01 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN.)

SPACER
(SEE SPECIFICATION SECTION 02725.2.03 FOR MATERIAL AND INSTALLATION REQUIREMENTS NOT SHOWN.)

CARRIER PIPE TO BE CENTERED IN STEEL CASING PIPE

CASING SPACER INSTALLATION (d)
NTS

TRENCHING DETAILS (e)
NTS

Received
JUN 27 2014

APPROVED

JUN 27 2014

UCC Approved
[Signature]
Conic McElroy



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

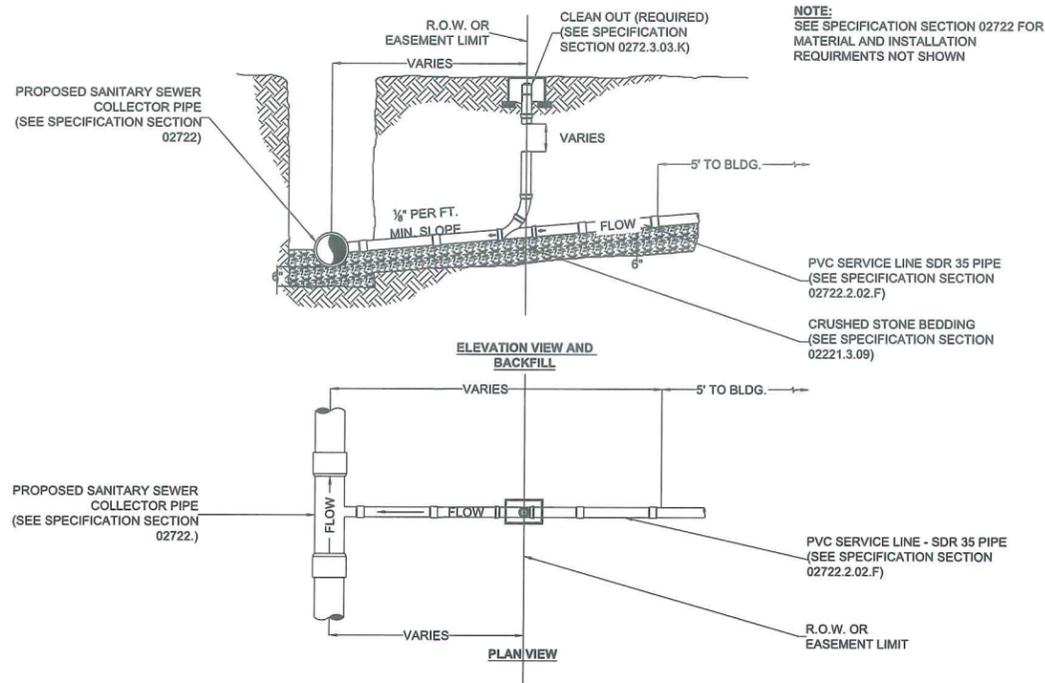
SEWER
DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	NH/STP-1-24-9(76)	U5-9

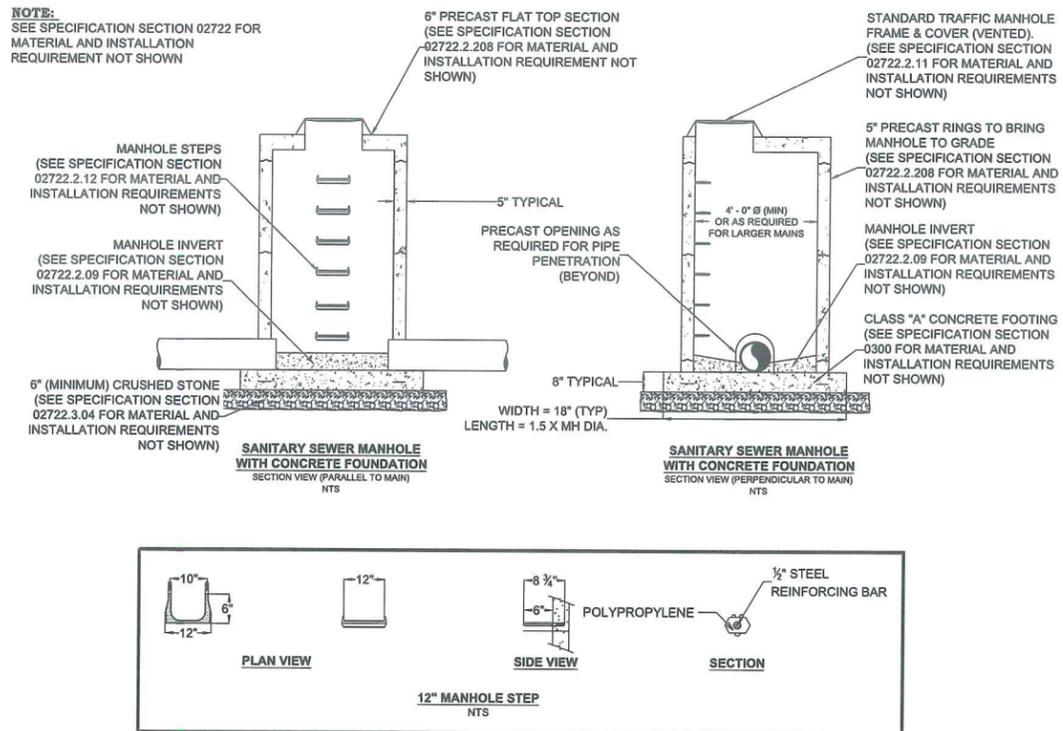
Received
JUN 27 2014

APPROVED
JUN 27 2014

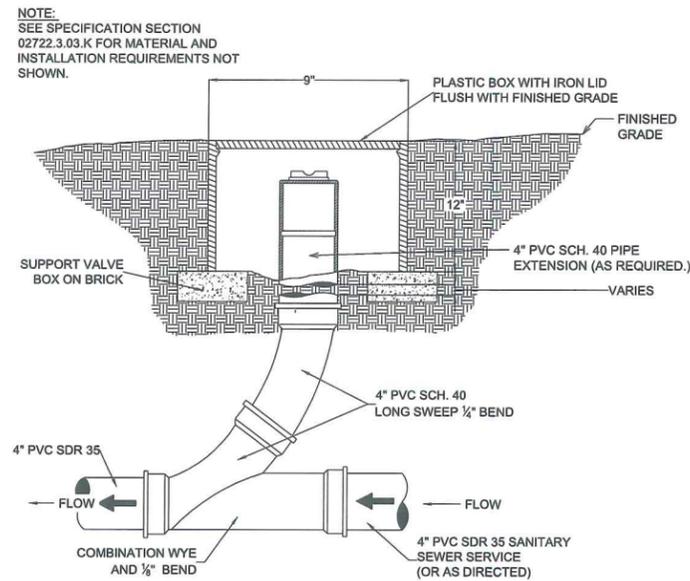
UCC Approved
(Eric McHenry)



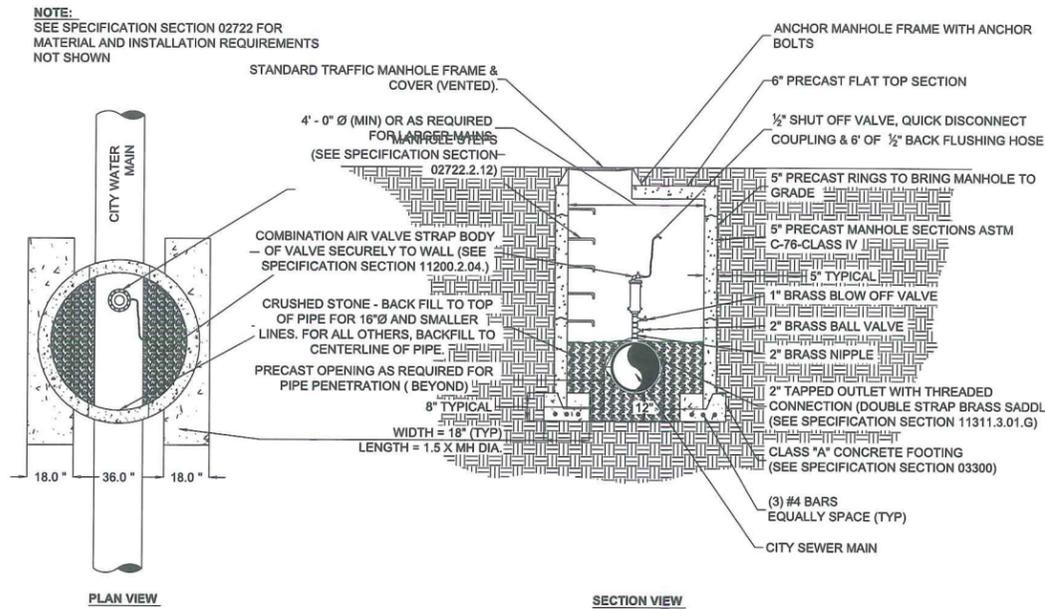
SANITARY SEWER CONNECTION
NTS (f)



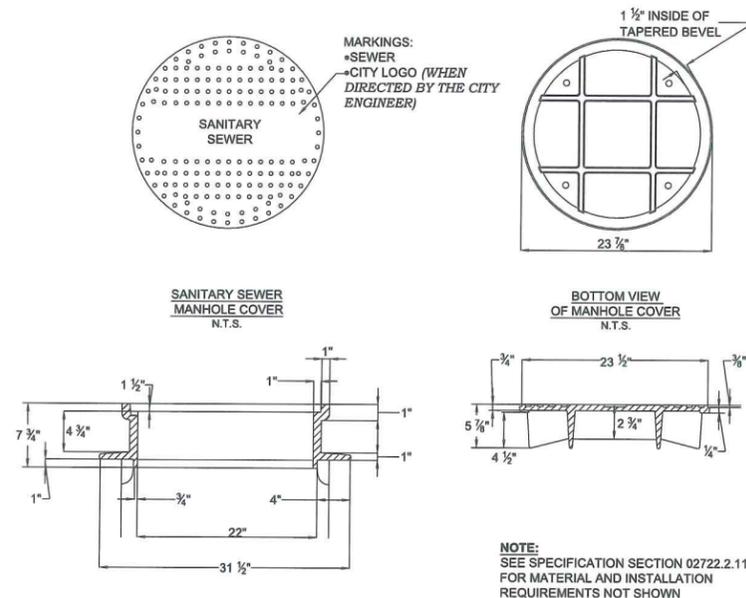
SANITARY SEWER MANHOLES
NTS (g)



SANITARY SEWER SERVICE CLEANOUT
NTS (h)

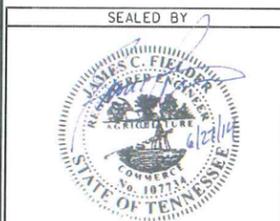


SANITARY SEWER AIR RELEASE VALVE
NTS (i)



MANHOLE FRAME AND COVER
NTS (j)

6/27/2014 3:42:53 PM
P:\98200 CC (Rossview Rd Utility Relocates)\TechProd\Plan\U5-8.sht



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**SEWER
DETAILS**

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	63030-2210-14	U6-1

APPROVED

JUN 27 2014

UCCC Approved

Eric Melton

Received

JUN 27 2014

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	FOOTNOTE	% UTILITY	% PROJECT
791-01.06	8IN STEEL GAS MAIN	L.F.	1,600 ✓	1	-	-
791-01.05	6IN STEEL GAS MAIN	L.F.	1,050 ✓	1	-	-
791-01.02	2IN STEEL GAS MAIN	L.F.	75 ✓	1	-	-
791-03.02	2IN HDPE GAS MAIN	L.F.	130 ✓	1	-	-
791-04.23	HDD 6IN PE PIPE - UNCONSOLIDATED	L.F.	150 ✓	2	-	-
791-04.20	HDD 2IN STEEL PIPE - UNCONSOLIDATED	L.F.	100 ✓	2	-	-
791-07.12	8IN STEEL GAS VALVE ASSEMBLY	EACH	1 ✓	5	-	-
791-07.11	6IN STEEL GAS VALVE ASSEMBLY	EACH	1 ✓	5	-	-
791-07.09	2IN STEEL GAS VALVE ASSEMBLY	EACH	1 ✓	5	-	-
791-07.01	2IN PE GAS VALVE ASSEMBLY	EACH	1 ✓	5	-	-
791-09.04	REGULATOR STATION	EACH	1 ✓	7	-	-
791-06.34	CONNECT TO 8IN EX. STL MAIN W/ STOPPLE	EACH	1 ✓	4	-	-
791-06.33	CONNECT TO 6IN EX. STL MAIN W/ STOPPLE	EACH	2 ✓	4	-	-
791-06.31	CONNECT TO 2IN EX. STL MAIN W/ STOPPLE	EACH	1 ✓	4	-	-
791-06.02	CONNECT TO 2IN EX. PE MAIN	EACH	1 ✓	4	-	-

UTILITIES INDEX

SHEET NAME

SHEET NUMBER

ESTIMATED QUANTITIES
 FROM BEGINNING OF PROJECT TO STATION 81+00
 FROM STATION 81+00 TO STATION 94+00
 FROM STATION 94+00 TO STATION 107+00
 FROM STATION 107+00 TO STATION 120+00
 FROM STATION 120+00 TO STATION END OF PROJECT
 CONSTRUCTION DETAILS
 REGULATOR STATION
 EROSION DETAILS

U6-1
 U6-2
 U6-3
 U6-4
 U6-5
 U6-6
 U6-7
 U6-8
 U6-9

FOOTNOTE 1:
 INCLUDES ALL MATERIALS INCLUDING SAND/STONE BEDDING, FLOWABLE FILL, TEMPORARY PAVEMENT IN OR OUT OF ROW, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, EXCAVATION INCLUDING DIRT/ROCK, BACKFILLING, CREEK CROSSINGS PER SWPPP, COUPLINGS, FITTINGS, PIPE FUSION, APPURTENANCES, MAINTAINING THE TRENCH, PURGE POINT INSTALLATION, TESTING BY UTILITY SPECIFICATIONS TO INCLUDE BUT NOT LIMITED TO AIR, NITROGEN, HYDROSTATIC OR X-RAY, DEW POINT OR DRYING, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS.

FOOTNOTE 2:
 INCLUDES ALL MATERIALS, LABOR, EQUIPMENT, AND TRAFFIC CONTROL, INCLUDING BUT NOT LIMITED TO FLUID CONTAINMENT FOR COMPLETE HORIZONTAL DIRECTIONAL DRILLING INSTALLATION OF CASING PIPE OR UNCASSED CARRIER PIPE IN BOTH UNCONSOLIDATED SOIL OR ROCK. STEEL PIPE INCLUDES SPECIAL COATING AS SPECIFIED ON PLANS AND SPECS. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM PRICE.

FOOTNOTE 3:
 INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT, NECESSARY FOR BORE & JACK OF GAS LINE CASING PIPE INCLUDING BUT NOT LIMITED TO ENTRY AND EXIT PITS, B&J EQUIPMENT AND TRAFFIC CONTROL. CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM PRICE.

FOOTNOTE 4:
 INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT, NECESSARY FOR CONNECTING TO EXISTING GAS LINE INCLUDING TRAFFIC CONTROL.

FOOTNOTE 5:
 INCLUDES TRANSITION FITTINGS, VALVES, VALVE BOX, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, COUPLINGS, FUSION TEES, TAP OF EXISTING LINE, AND ALL OTHER NECESSARY MATERIALS AND LABOR FOR COMPLETE INSTALLATION OF ASSEMBLY INCLUDING TRAFFIC CONTROL.

FOOTNOTE 6:
 INCLUDES ALL MATERIALS, PARTS, LABOR, EQUIPMENT, MACHINERY, TOOLS, OR APPARATUS NECESSARY FOR INSTALLATION OF GAS SERVICE ASSEMBLIES AS DESCRIBED IN THE PLANS AND SPECS. INSTALLATION FOR LONG SIDE AND SHORT SIDE APPLICATIONS. SERVICE PIPE SHALL BE PAID PER LINEAR FOOT INSTALLED.

FOOTNOTE 7:
 INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR COMPLETE INSTALLATION OF INDIVIDUAL ITEM AS SPECIFIED ON BID FORM AND UTILITY SPECIFICATIONS

FOOTNOTE 8:
 INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR REMOVAL OF ITEM.

FOOTNOTE 9:
 INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR RETIREMENT OF ITEM INCLUDING STABILIZING THE ITEM OF PLANT PER UTILITY SPECIFICATIONS.

CITY OF CLARKSVILLE GAS AND WATER
 2215 MADISON STREET
 CLARKSVILLE, TN 37043
 PAT HICKEY
 931-645-1654
 PAT.HICKEY@CITYOFCLARKSVILLE.COM



**CLARKSVILLE
 GAS & WATER**
**NAT. GAS
 RELOCATION
 QUANTITIES**

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	63030-2210-14	U6-2

- NOTES:
1. A MINIMUM DEPTH OF 36" AND A MAXIMUM DEPTH OF 72" OF COVER FROM THE TOP OF PIPE TO PROPOSED FINISH GRADE TO BE MAINTAINED AT ALL TIMES.
 2. A MINIMUM HORIZONTAL OR VERTICAL CLEARANCE OF 30" BETWEEN ALL PROPOSED STRUCTURES TO BE MAINTAINED AT ALL TIMES. CONTRACTOR TO ENSURE ADEQUATE CLEARANCE FROM PROPOSED STORM WATER PIPING, DRIVEWAY AND ROADWAY CUTS.
 3. CONTRACTOR RESPONSIBLE FOR LOCATING EXISTING UTILITIES. UTILITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT INCLUDE ALL UTILITIES WITHIN THE CONSTRUCTION AREA.
 4. ASPHALT, CONCRETE AND GRAVEL DRIVES & SIDE ROADS, INSIDE LIMITS OF CONSTRUCTION, TO BE OPEN CUT, S.R. 237 TO BE BORED UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED FROM TDOT.
 5. CONTRACTOR IS TO GIVE CGW 48 HOURS NOTICE PRIOR TO MAKING HOT TAP CONNECTIONS AND TIE-INS.
 6. ALL PIPE "TO BE RETIRED" SHALL BE PURGED UNTIL 0% GAS IN-AIR IS PRESENT AND CAPPED.
 7. RETURN ALL REGULATORS AND FARM TAP ASSEMBLIES TO CGW AND DISPOSE OF ANY EXCESS VALVE BOXES.
 8. ALL STEEL TEE, ELL AND REDUCER FITTINGS TO MATCH ADJACENT STEEL PIPE WALL THICKNESS.
 9. CONTRACTOR SHALL STAGE CONSTRUCTION IN AREAS WHERE PUBLIC PARKING AND/OR ACCESS DRIVES ARE TO BE DISTURBED TO MINIMIZE THE INTERRUPTION TO PUBLIC ACCESS.
 10. ALL LINES TO BE TRANSFERRED HOT. PIPELINES CANNOT BE SHUT IN DURING CONSTRUCTION.



NATURAL GAS UTILITIES
 NEW PIPELINE ————
 EXISTING TO REMAIN - - - -
 RETIRED PIPELINE - - - -

Received

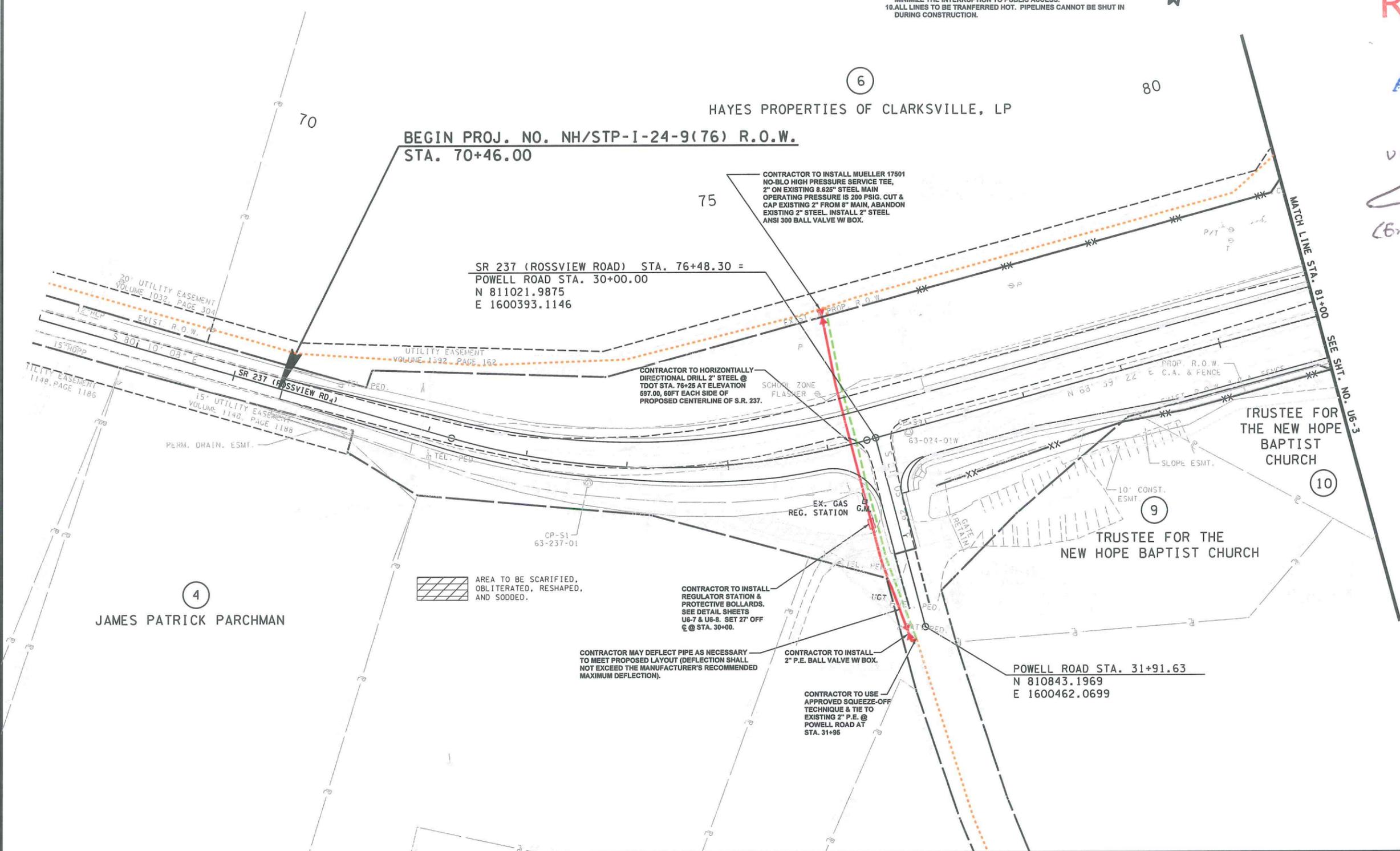
JUN 27 2014

APPROVED

JUN 27 2014

vecc Approved

Coni McIlroy



4
JAMES PATRICK PARCHMAN

AREA TO BE SCARIFIED, OBLITERATED, RESHAPED, AND SODDED.

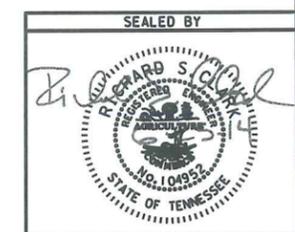
CONTRACTOR TO INSTALL REGULATOR STATION & PROTECTIVE BOLLARDS. SEE DETAIL SHEETS U6-7 & U6-8. SET 27" OFF @ STA. 30+00.

CONTRACTOR MAY DEFLECT PIPE AS NECESSARY TO MEET PROPOSED LAYOUT (DEFLECTION SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION).

CONTRACTOR TO INSTALL 2" P.E. BALL VALVE W/ BOX.

CONTRACTOR TO USE APPROVED SQUEEZE-OFF TECHNIQUE & TIE TO EXISTING 2" P.E. @ POWELL ROAD AT STA. 31+95

POWELL ROAD STA. 31+91.63
N 810843.1969
E 1600462.0699



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

CLARKVILLE GAS & WATER

NAT. GAS LAYOUT

BEGIN PROJ. TO STA. 81+00

SCALE: 1" = 50'

*****SYTIME*****
*****DCNSPEC*****

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

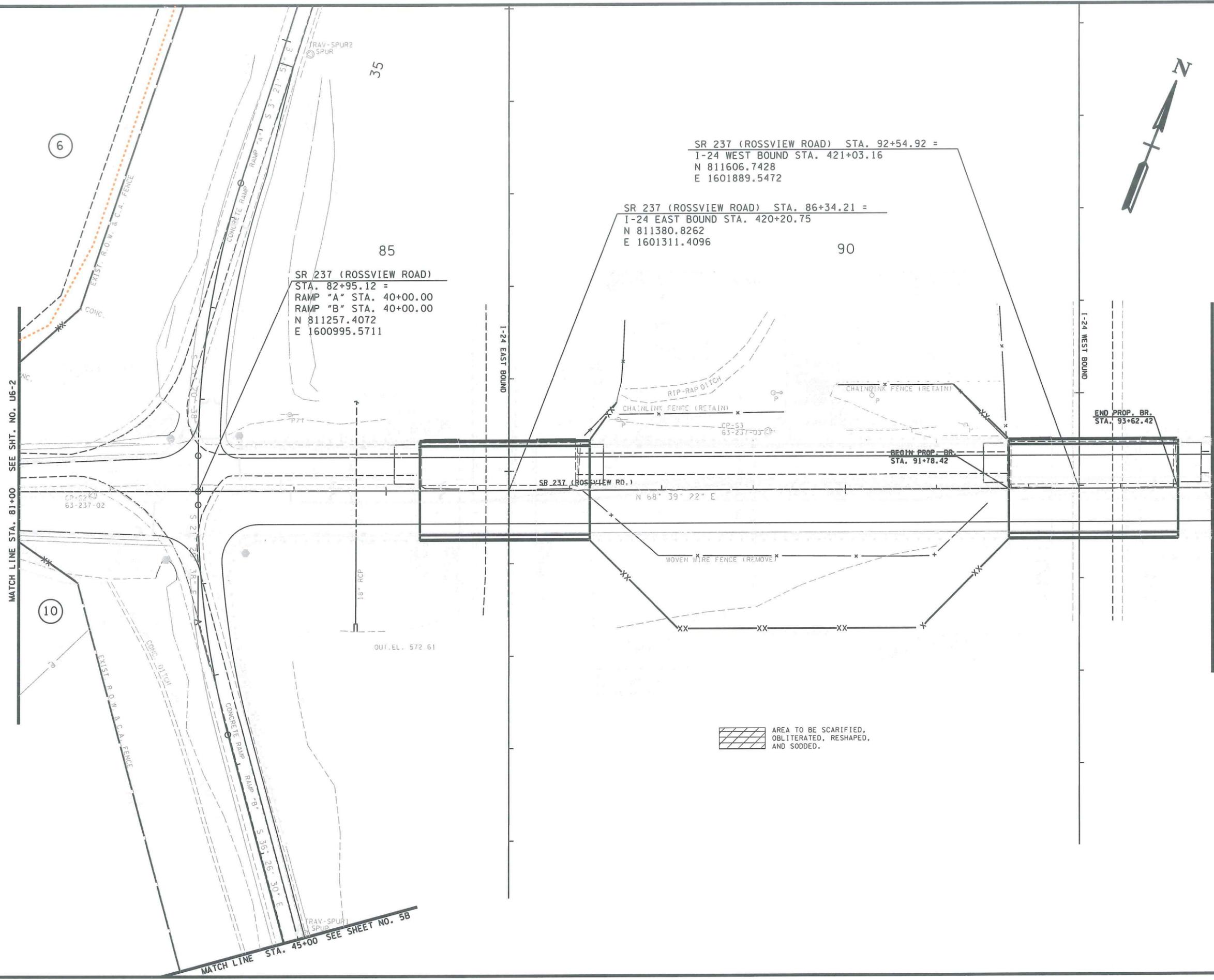
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	63030-2210-14	U6-3

NATURAL GAS UTILITIES
 NEW PIPELINE ———
 EXISTING TO REMAIN - - - - -
 RETIRED PIPELINE - - - - -

Received
JUN 27 2014

APPROVED
JUN 27 2014

UCC Approved
(Eric Medina)



AREA TO BE SCARIFIED, OBLITERATED, RESHAPED, AND SODDED.

MATCH LINE STA. 81+00 SEE SHT. NO. U6-2

MATCH LINE STA. 94+00 SEE SHT. NO. U6-4

MATCH LINE STA. 45+00 SEE SHEET NO. 5B

SYTIME
DONSPEC



COORDINATES ARE NAD(83)(995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TORN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

CLARKSVILLE GAS & WATER
NAT. GAS LAYOUT
STA. 81+00 TO STA. 94+00
SCALE: 1" = 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	63030-2210-14	U6-4

THE INDUSTRIAL DEVELOPMENT BOARD
OF THE COUNTY OF MONTGOMERY, TENNESSEE

APPROVED

JUN 27 2014

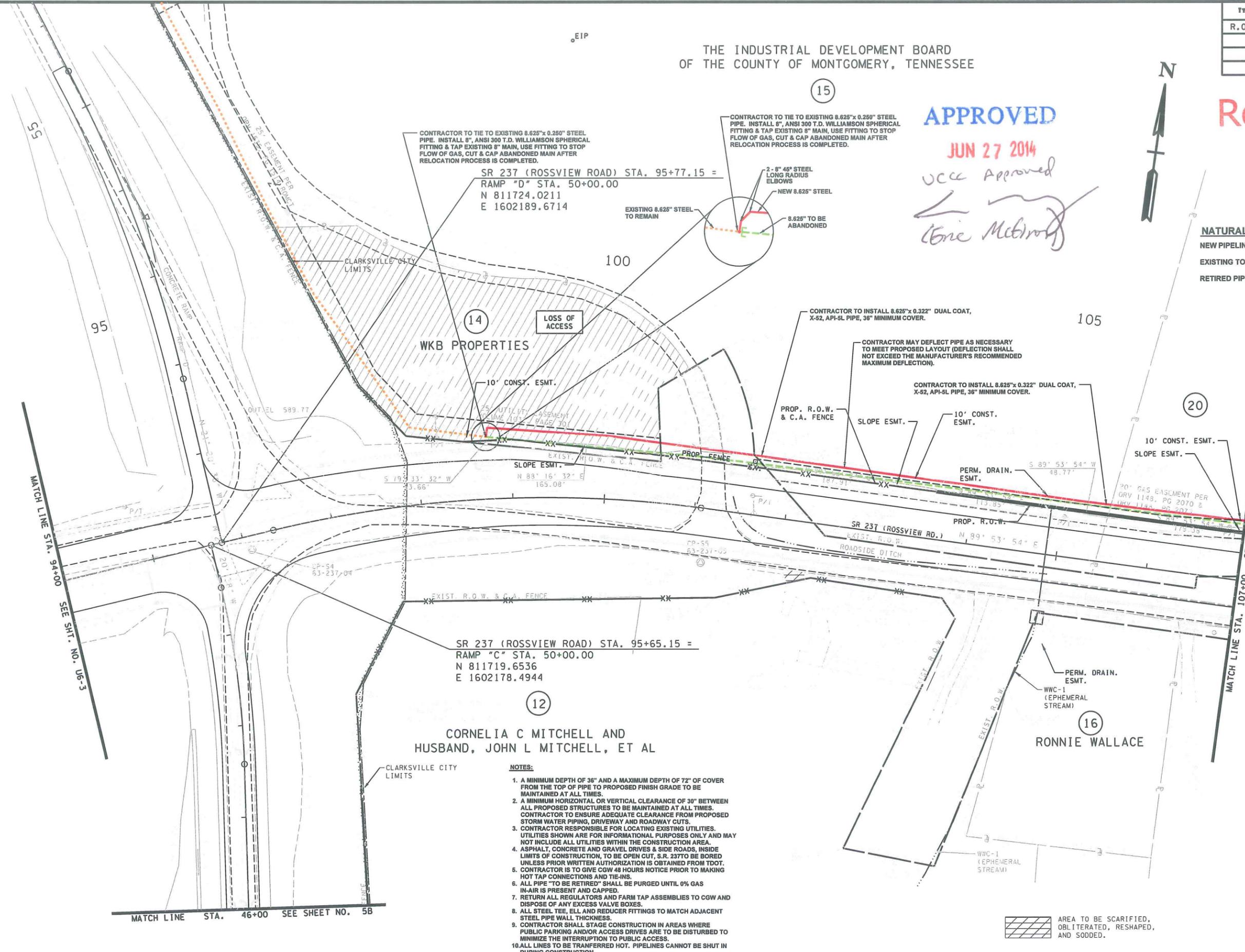
UCC Approved
(Signature)

Received

JUN 27 2014

NATURAL GAS UTILITIES

NEW PIPELINE ———
EXISTING TO REMAIN - - - - -
RETIRED PIPELINE - - - - -



NOTES:

1. A MINIMUM DEPTH OF 36" AND A MAXIMUM DEPTH OF 72" OF COVER FROM THE TOP OF PIPE TO PROPOSED FINISH GRADE TO BE MAINTAINED AT ALL TIMES.
2. A MINIMUM HORIZONTAL OR VERTICAL CLEARANCE OF 30" BETWEEN ALL PROPOSED STRUCTURES TO BE MAINTAINED AT ALL TIMES. CONTRACTOR TO ENSURE ADEQUATE CLEARANCE FROM PROPOSED STORM WATER PIPING, DRIVEWAY AND ROADWAY CUTS.
3. CONTRACTOR RESPONSIBLE FOR LOCATING EXISTING UTILITIES. UTILITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT INCLUDE ALL UTILITIES WITHIN THE CONSTRUCTION AREA.
4. ASPHALT, CONCRETE AND GRAVEL DRIVES & SIDE ROADS, INSIDE LIMITS OF CONSTRUCTION, TO BE OPEN CUT, S.R. 237 TO BE BORED UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED FROM TDOT.
5. CONTRACTOR IS TO GIVE CGW 48 HOURS NOTICE PRIOR TO MAKING HOT TAP CONNECTIONS AND TIE-INS.
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COORDINATES ARE NAD/83(995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

CLARKSVILLE GAS & WATER
NAT. GAS LAYOUT
STA. 94+00 TO STA. 107+00
SCALE: 1" = 50'

*****SYTIME*****
*****DGN SPEC*****

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	63030-2210-14	U6-5



THE INDUSTRIAL DEVELOPMENT BOARD
OF THE COUNTY OF MONTGOMERY, TENNESSEE

(20)

HANKOOK DRIVE STA. 48+00.00
N 812033.9854
E 1603393.3472

SR 237 (ROSSVIEW ROAD) STA. 108+00.00 =
HANKOOK DRIVE STA. 50+00.00
N 811834.0317
E 1603397.6506
110

CONTRACTOR TO TIE TO EXISTING 6.625"x 0.280" STEEL PIPE. INSTALL 6", ANSI 300 T.D. WILLIAMSON SPHERICAL FITTING & TAP EXISTING 6" STEEL MAIN. INSTALL 1- 8" ANSI 300, FULL PORT, WxW BALL VALVE, 1- 6" ANSI 300 FULL PORT BALL VALVE W/ BOX.

CONTRACTOR MAY DEFLECT PIPE AS NECESSARY TO MEET PROPOSED LAYOUT (DEFLECTION SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION).

SLOPE ESMT.

10' CONST. ESMT.

PROP. R.O.W.

S 44° 56' 45" W

SR 237 (ROSSVIEW RD.)

SR 237 (ROSSVIEW ROAD) STA. 114+49.22 =
INTERNATIONAL BLVD. STA. 50+00.00
N 811909.3776
E 1604042.1337

B & S DEVELOPMENT

(21)

(23)

THE INDUSTRIAL DEVELOPMENT BOARD
OF THE COUNTY OF MONTGOMERY, TENNESSEE

INTERNATIONAL BLVD. STA. 47+88.38
N 812119.0563
E 1604013.5533

CONTRACTOR TO HORIZONTALLY DIRECTIONAL BORE INTERNATIONAL BLVD. @ STA. 48+50.

CONTRACTOR TO INSTALL 6.625"x 0.280" DUAL COAT, X-52, API-5L PIPE, 36" MINIMUM COVER.

CORPORATE BUSINESS PARK SIGN
S 58° 16' 29" E
42.31'

UTILITY EASEMENT PER
DRY. 1149, PG. 2073

10' CONST. ESMT.

SLOPE ESMT.

NATURAL GAS UTILITIES
NEW PIPELINE ———
EXISTING TO REMAIN - - -
RETIRED PIPELINE - - -

Received

JUN 27 2014

APPROVED

JUN 27 2014

UCC Approved
(Signature)
(Signature)

B & S DEVELOPMENT

(21)

NOTES:

1. A MINIMUM DEPTH OF 36" AND A MAXIMUM DEPTH OF 72" OF COVER FROM THE TOP OF PIPE TO PROPOSED FINISH GRADE TO BE MAINTAINED AT ALL TIMES.
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4. ASPHALT, CONCRETE AND GRAVEL DRIVES & SIDE ROADS, INSIDE LIMITS OF CONSTRUCTION, TO BE OPEN CUT, S.R. 237 TO BE BORED UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED FROM TDOT.
5. CONTRACTOR IS TO GIVE CGW 48 HOURS NOTICE PRIOR TO MAKING HOT TAP CONNECTIONS AND TIE-INS.
6. ALL PIPE "TO BE RETIRED" SHALL BE PURGED UNTIL 0% GAS IN-AIR IS PRESENT AND CAPPED.
7. RETURN ALL REGULATORS AND FARM TAP ASSEMBLIES TO CGW AND DISPOSE OF ANY EXCESS VALVE BOXES.
8. ALL STEEL TEE, ELL AND REDUCER FITTINGS TO MATCH ADJACENT STEEL PIPE WALL THICKNESS.
9. CONTRACTOR SHALL STAGE CONSTRUCTION IN AREAS WHERE PUBLIC PARKING AND/OR ACCESS DRIVES ARE TO BE DISTURBED TO MINIMIZE THE INTERRUPTION TO PUBLIC ACCESS.
10. ALL LINES TO BE TRANSFERRED HOT. PIPELINES CANNOT BE SHUT IN DURING CONSTRUCTION.



COORDINATES ARE NAD/83(995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99999 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

CLARKSVILLE GAS & WATER

NAT. GAS LAYOUT

STA. 107+00 TO STA. 120+00

SCALE: 1" = 50'

SYTIME

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	63030-2210-14	U6-6

24
THREE C GROUP, LLC

23
THE INDUSTRIAL DEVELOPMENT BOARD
OF THE COUNTY OF MONTGOMERY, TENNESSEE
125

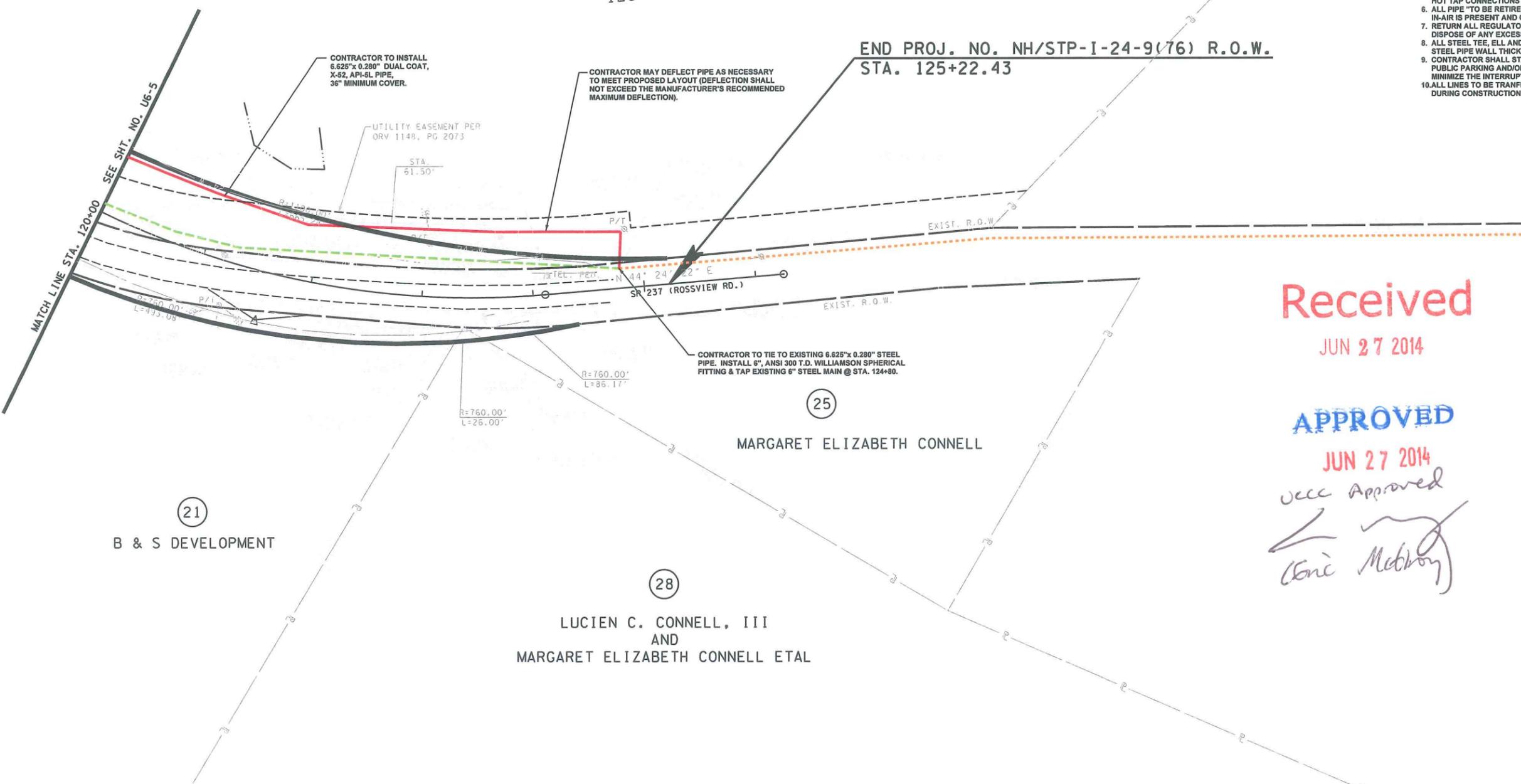
END PROJ. NO. NH/STP-I-24-9(76) R.O.W.
STA. 125+22.43

NATURAL GAS UTILITIES

- NEW PIPELINE ———
- EXISTING TO REMAIN - - - - -
- RETIRED PIPELINE - - - - -

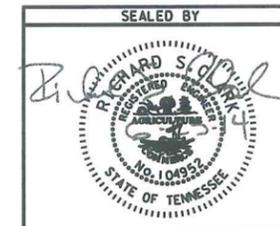
NOTES:

1. A MINIMUM DEPTH OF 36" AND A MAXIMUM DEPTH OF 72" OF COVER FROM THE TOP OF PIPE TO PROPOSED FINISH GRADE TO BE MAINTAINED AT ALL TIMES.
2. A MINIMUM HORIZONTAL OR VERTICAL CLEARANCE OF 30" BETWEEN ALL PROPOSED STRUCTURES TO BE MAINTAINED AT ALL TIMES. CONTRACTOR TO ENSURE ADEQUATE CLEARANCE FROM PROPOSED STORM WATER PIPING, DRIVEWAY AND ROADWAY CUTS.
3. CONTRACTOR RESPONSIBLE FOR LOCATING EXISTING UTILITIES. UTILITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT INCLUDE ALL UTILITIES WITHIN THE CONSTRUCTION AREA.
4. ASPHALT, CONCRETE AND GRAVEL DRIVES & SIDE ROADS, INSIDE LIMITS OF CONSTRUCTION, TO BE OPEN CUT, S.R. 237 TO BE BORED UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED FROM TDOT.
5. CONTRACTOR IS TO GIVE CGW 48 HOURS NOTICE PRIOR TO MAKING HOT TAP CONNECTIONS AND TIE-INS.
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8. ALL STEEL TEE, ELL AND REDUCER FITTINGS TO MATCH ADJACENT STEEL PIPE WALL THICKNESS.
9. CONTRACTOR SHALL STAGE CONSTRUCTION IN AREAS WHERE PUBLIC PARKING AND/OR ACCESS DRIVES ARE TO BE DISTURBED TO MINIMIZE THE INTERRUPTION TO PUBLIC ACCESS.
10. ALL LINES TO BE TRANSFERRED HOT. PIPELINES CANNOT BE SHUT IN DURING CONSTRUCTION.



Received
JUN 27 2014

APPROVED
JUN 27 2014
JCC Approved
(Signature)



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CLARKSVILLE GAS & WATER
NAT. GAS LAYOUT
STA. 120+00 TO END. PROJ.
SCALE: 1" = 50'

21
B & S DEVELOPMENT

25
MARGARET ELIZABETH CONNELL

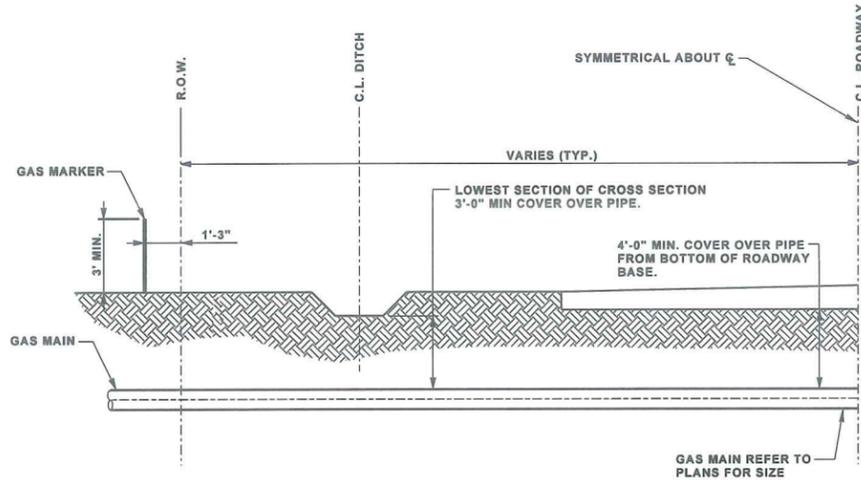
28
LUCIEN C. CONNELL, III
AND
MARGARET ELIZABETH CONNELL ETAL

*****SYTIME*****
*****DGN SPEC*****

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	63030-2210-14	U6-7

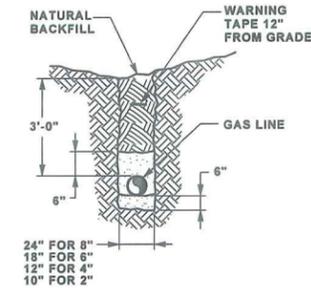
GENERAL NOTES

- UNIT PRICES: THE UNIT PRICES SHALL INCLUDE ALL MATERIAL, LABOR, EQUIPMENT, INSURANCE, OVERHEAD AND PROFIT FOR THE COMPLETE INSTALLATION OF THE ITEM. THE UNIT PRICES SHALL NOT BE INCREASED OR DECREASED SHOULD A SIGNIFICANT VARIATION IN QUANTITIES OCCUR.
- NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE BID AS PAY ITEMS WILL BE PAID FOR COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE BID FOR PAY ITEMS.
- NO ITEM QUANTITIES IN BIDDERS PROPOSAL WILL BE ADJUSTED AFTER RECEIPT OF BIDS, UNLESS CONCURRED BY OWNER. CONTRACTOR IS ENCOURAGED TO CHECK QUANTITIES IN BIDDERS PROPOSAL PRIOR TO SUBMITTING BID. ANY DISCREPANCIES FOUND BY THE CONTRACTOR SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AS SOON AS POSSIBLE AND IN ALL CASES PRIOR TO THE OPENING BIDS.
- NOTHING IN THE GENERAL NOTES OR SPECIFICATIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.
- ANY DAMAGE TO PROPERTY, INCLUDING FENCES, WILL BE CORRECTED TO THE SATISFACTION OF THE PROPERTY OWNERS BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.
- UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO CO-OPERATE WITH EACH OTHER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT.
- THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING ALL AFFECTED UTILITIES PRIOR TO SUBMITTING HIS BID. IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. SOME UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS, WHILE SOME WORK MAY BE REQUIRED "AROUND" UTILITY FACILITIES THAT WILL REMAIN IN PLACE. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR WILL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS OR INCONVENIENCE CAUSED BY THE UTILITY ADJUSTMENTS.
- THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
- LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY AND IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF CONTACTING ANY AND ALL UTILITIES LOCATED NEAR THE PROJECT PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS TWO WEEKS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS IN THE AREAS OF CONSTRUCTION.
- TRAFFIC CONTROL: THE CONTRACTOR SHALL PROVIDE ADEQUATE SIGNS AND/OR BARRICADES REQUIRED TO PROVIDE FOR THE TRAVELING PUBLIC. TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)" ALL COST IS TO BE INCLUDED IN OTHER ITEMS OF WORK.
- THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL AFFECTED LOCAL AGENCIES CONCERNED, INCLUDED BUT NOT LIMITED TO THE FOLLOWING: ELECTRIC DEPARTMENT, GAS DEPARTMENT AND WATER DEPARTMENT THAT HAVE FACILITIES ON THE SITE.
- SEEDING AND SODDING: ALL AREAS DISTURBED BY THE CONTRACTOR, INCLUDING LAWN AREAS, ARE TO BE SEEDED AND MULCHED IN ACCORDANCE WITH THE TENNESSEE DEPARTMENT OF TRANSPORTATION AND SPECIFICATIONS.
- OSHA RULES SHALL BE ABIDED BY.
- CONTRACTOR SHALL SHORE AND BRACE ALL OPEN CUT TRENCHES AS REQUIRED BY STATE AND FEDERAL LAWS AND LOCAL ORDINANCES: TO CONFORM WITH RECOMMENDATIONS SET FORTH IN AGC MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION; TO PROTECT LIFE, PROPERTY, OR WORK; TO AVOID EXCESSIVELY WIDE CUTS IN UNSTABLE MATERIAL.



ROADWAY CROSSING DETAIL

N.T.S.

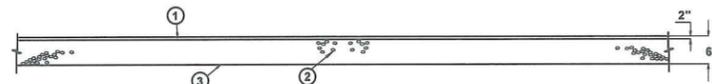


PIPE TRENCH DETAIL

N.T.S.

NOTES:

- MINIMUM COVER SHALL BE 36".
- IN CONSOLIDATED ROCK THE MINIMUM COVER SHALL BE 24".
- 6" OF DEBRIS-FREE DIRT, LIMESTONE DUST OR SAND SHALL BE PLACED IN THE TRENCH AND COMPACTED PRIOR TO LOWERING IN THE PIPE.
- AFTER THE PIPE HAS BEEN LOWERED IN THE TRENCH AND INSPECTED, CONTRACTOR SHALL PROVIDE COMPACTED DIRT, LIMESTONE DUST OR SAND AROUND THE PIPE AND 8" OVER THE PIPE BEFORE BACKFILLING THE TRENCH.



① SURFACE @ 2" ± THICK (APPROX. 159.0 LBS.S.Y.) CRUSHED AND WASHED LIMESTONE 0.5" TO 1.0" MINERAL AGGREGATE.

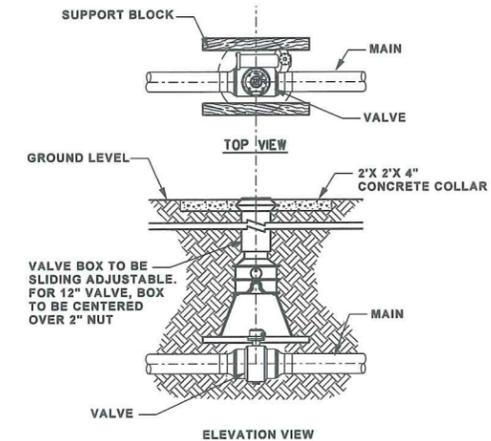
② MINERAL AGGREGATE BASE 6" THICK, 1.5" TO 3.5" SIZE AGGREGATE ROLLED TO ACHIEVE COMPACTION.

③ 5" MIL. BLACK

NOTE: HERBICIDE, TRIFLAN OR APPROVED EQUAL, TO BE APPLIED TO COMPACTED SUBGRADE INSIDE FENCED AREA, PRIOR TO PLACING CRUSHED STONE. APPLY PER MANUFACTURER'S RECOMMENDATIONS.

STATION GRADE DETAIL

N.T.S.

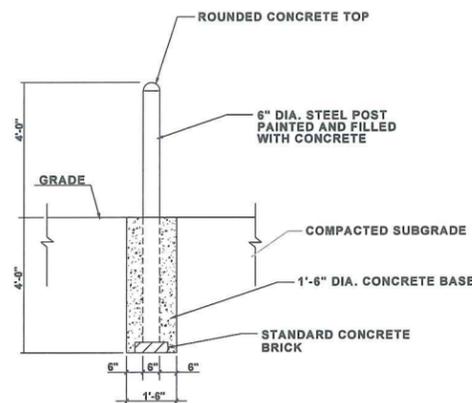


NOTES:

- COMPACT FILL
- LAY BRICKS OR CREOSOTE WOODEN SUPPORT BLOCKS ASTRIDE VALVE, TAMP INTO PLACE.
- PLACE VALVE BOX BASE ON SUPPORT BLOCKS TAKING CARE NOT TO CONTACT MAIN OR VALVE. ENSURE THAT THE ENTIRE WEIGHT OF BOX IS BORN BY SUPPORT BLOCKS. VALVE BOX TO BE CENTERED 2" OFF NUT.
- SPRAY INSIDE OF VALVE BOX COVER AND TOP SECTION WITH WHITE PAINT FOR IDENTIFICATION. TOP TO BE MARKED "GAS".
- 2' X 2' X 4" CONCRETE COLLAR AROUND TOP OF BOX.

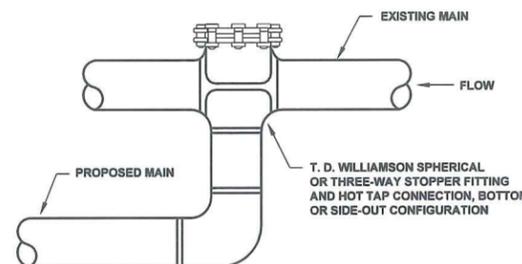
VALVE BOX DETAIL

N.T.S.



BOLLARD DETAIL

N.T.S.



TYPICAL HOT TAP CONNECTION

N.T.S.

Received

JUN 27 2014

APPROVED

JUN 27 2014

VCC Approved

Eric Meiburn



CLARKVILLE GAS & WATER

NAT. GAS CONST. DETAILS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

INSTALLATION MATERIAL

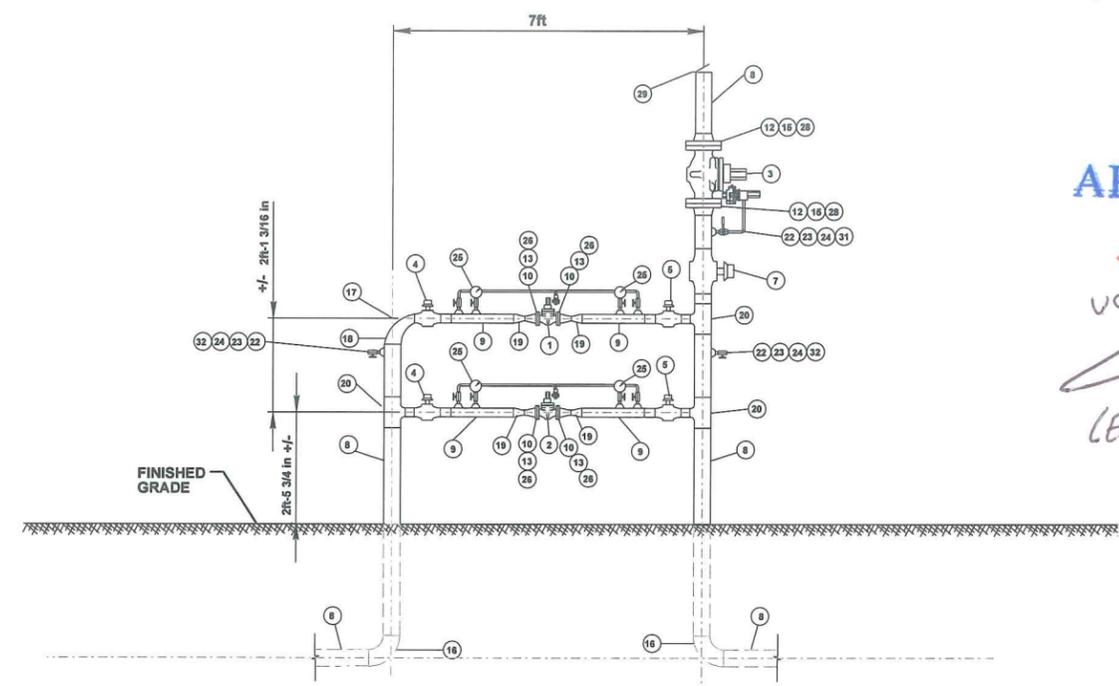
CONTRACTOR RESPONSIBLE FOR VERIFICATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	63030-2210-14	UG-8

NO.	QTY.	DESCRIPTION
1	1 EA	REGULATOR, 1" FISHER, TYPE EZR, TYPE 161EB PILOT, 200 PSI INLET, 40 PSI OUTLET, SPRING 30 TO 75 PSIG, (BLACK SPRING), ANSI 300 RF FLANGES, STL. BODY, W/ INLET STRAINER.
2	1 EA	REGULATOR, 1" FISHER, TYPE EZR, TYPE 161EB PILOT, 200 PSI INLET, 40 PSI OUTLET, SPRING 30 TO 75 PSIG, (BLACK SPRING), ANSI 300 RF FLANGES, STL. BODY, W/ INLET STRAINER.
3	1 EA	RELIEF VALVE, 4" TYPE EZR (8359 WINLET STRAINER PILOT) 35 TO 125 PSIG SET RELIEF RANGE, (RED SPRING), ANSI 150 RF FLANGES, STL BODY, (RELIEF SET 60 PSIG)
4	2 EA	VALVE, 2", BALL VALVE, STD PORT, WxW, CLASS 300, STL BODY, ANSI-B16.25, ASTM A53, LOCKING DEVICE, BALLOMAX
5	2 EA	VALVE, 2", BALL VALVE, STD PORT, WxW, CLASS 150, STL BODY, ANSI-B16.25, ASTM A53, LOCKING DEVICE, BALLOMAX
7	1 EA	VALVE, 4", BALL VALVE, STD PORT, WxW, CLASS 150, STL BODY, ANSI-B16.25, ASTM A53, LOCKING DEVICE, BALLOMAX
8	30 LF	PIPE, 4.5" O.D. x 0.188" W.T., X-42, API-5L (1988)
9	16 LF	PIPE, 2.375" O.D. x 0.154" W.T., X-42, API-5L (1988)
10	4 EA	FLANGE, 1", WRNF, ANSI 300, B.T.M., 0.133" W.T., ANSI-B165, ASTM A105.
12	2 EA	FLANGE, 4", WRNF, ANSI 150, B.T.M., 0.188" W.T., ANSI-B165, ASTM A105.
13	4 EA	GASKET, 1", FLAT RING, 1/8" THICK NON-ASBESTOS, FOR ANSI 300 RF FLANGES.
15	2 EA	GASKET, 4", FLAT RING, 1/8" THICK NON-ASBESTOS, FOR ANSI 150 RF FLANGES.
16	2 EA	ELBOW, 4", 90°, L.R., 0.188" W.T., ASTM-A234, ANSI-B16.5, WELD.
18	1 EA	REDUCING ELBOW, 4"x 2", 0.237" W.T. x 0.154" W.T.
19	4 EA	REDUCER, 2"x 1", CONCENTRIC, 0.154" W.T. x 0.133" W.T., B.L.E. x B.L.E., ASTM-A234, ANSI 16.5, WELD.
20	3 EA	TEE, 4"x 2", 0.188" W.T. x 0.154" W.T., ASTM-A234, WELD
21	8 EA	THREADOLET, 1/2" ON 2" PIPE, 3000#, ANSI-B16.9, ASTM-A105.
22	3 EA	THREADOLET, 1/2" ON 4" PIPE, 3000#, ANSI-B16.9, ASTM-A105.
23	11 EA	NIPPLE, 1/2" x 2" LONG, (SCHEDULE 80), SMLS, ASTM-A108, T.B.E.
24	11 EA	VALVE, 1/2" KEROTEST INSTRUMENT VALVE, 3000# MIN. THREADED, (OR EQUAL)
25	2 EA	PRESSURE GAUGE, 6" ROUND FACE, 0-250 PSI RANGE, LIQUID FILLED, STAINLESS STL.
26	16 EA	BOLT 1/2" O.D. x 3 1/4" LONG, STUD, ALLOY STEEL, CADMIUM PLATED, ASTM-A193, GRADE B-7
28	16 EA	BOLT 3/8" O.D. x 4 1/2" LONG, STUD, ALLOY STEEL, CADMIUM PLATED, ASTM-A193, GRADE B-7
29	1 EA	RAIN CAP, 4"
31	1 LOT	MINOR LOT, NECESSARY BUSHINGS, FITTINGS AND APPURTENANCES FOR COMPLETE INSTALLATION OF REGULATOR INSTRUMENT PIPING, INCLUDING 1/2" STAINLESS STEEL INSTRUMENT TUBING.
32	4 EA	PLUG, 1/2" BULL, EXTRA HEAVY, ANSI-B16.11, ASTM-A106, THREADED

Received
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APPROVED
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vccc Approved
Eric Matlock



STATION PARAMETERS

INLET PRESSURE (NORMAL) 200 PSIG
 OUTLET PRESSURE 40 PSIG
 MAOP STATION PIPING 500 PSIG

REGULATOR CAPACITIES - CAGE RANGES

USE	REGULATING	WIDE OPEN
1" FISHER EZR W/ TYPE 161 EB PILOT 200 PSIG INLET, 40 PSIG OUTLET 100% TRIM	133.2	137.1
1" FISHER EZR W/ TYPE 161 EB PILOT 200 PSIG INLET, 40 PSIG OUTLET 60 % TRIM	79.2	81.7
1" FISHER EZR W/ TYPE 161 EB PILOT 200 PSIG INLET, 40 PSIG OUTLET 30 % TRIM	39.9	41.0

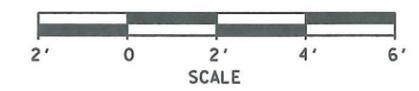
RELIEF CAPACITY
 4" FISHER EZR PILOT 512 MSCFH
 OPERATE RELIEF VALVE SET
 AT 55 PSIG. LISTED CAPACITY
 SHALL ALLOW FAILURE OF THE
 LARGEST REGULATOR RUN
 WITH 100% CAGE TRIM.

TESTING
 TEST PRESSURE TO 750
 NOTE: TEST ALL PIPING AND APPURTENANCES
 EXCEPT REGULATORS AND GAUGES, AND ANSI
 150 VALVE FOR A MINIMUM OF 8 CONTINUOUS
 HOURS.

POWELL ROAD REGULATOR STATION

4" RISER W/ 1" EZR FISHER (PRIMARY)
 1" FISHER EZR (SECONDARY)
 200 PSIG IN - 40 PSIG OUT

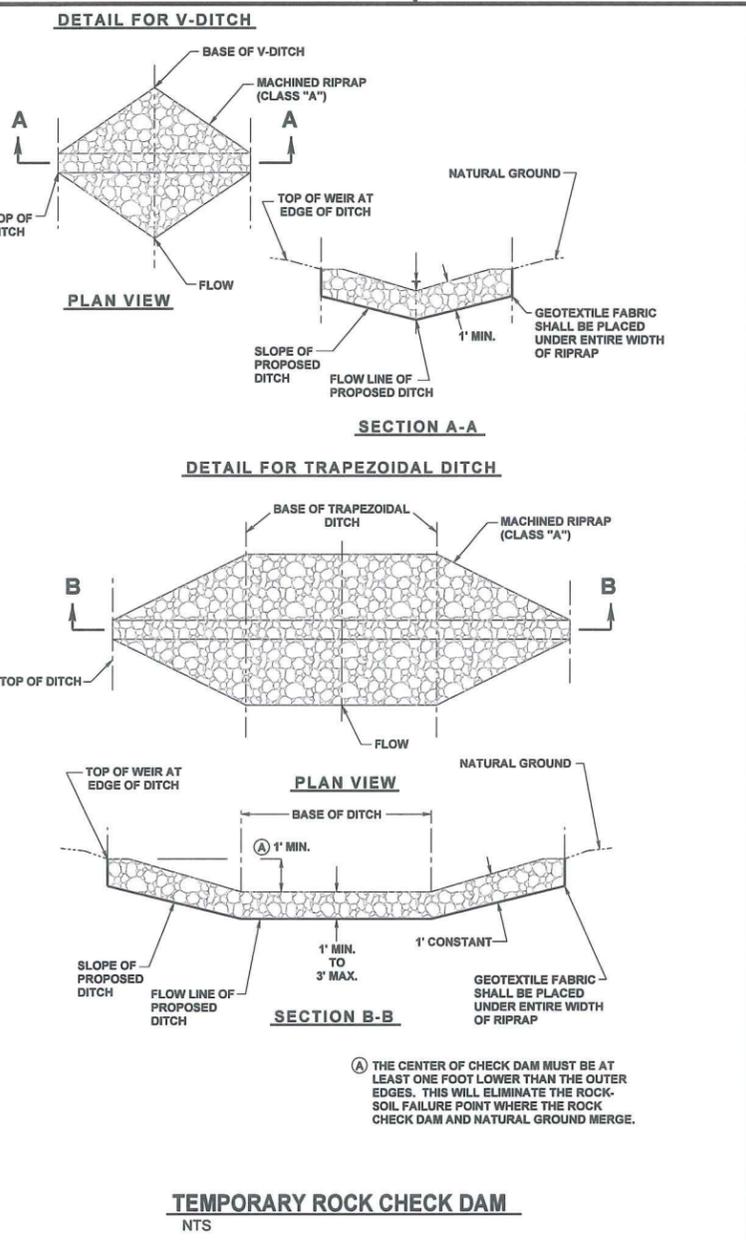
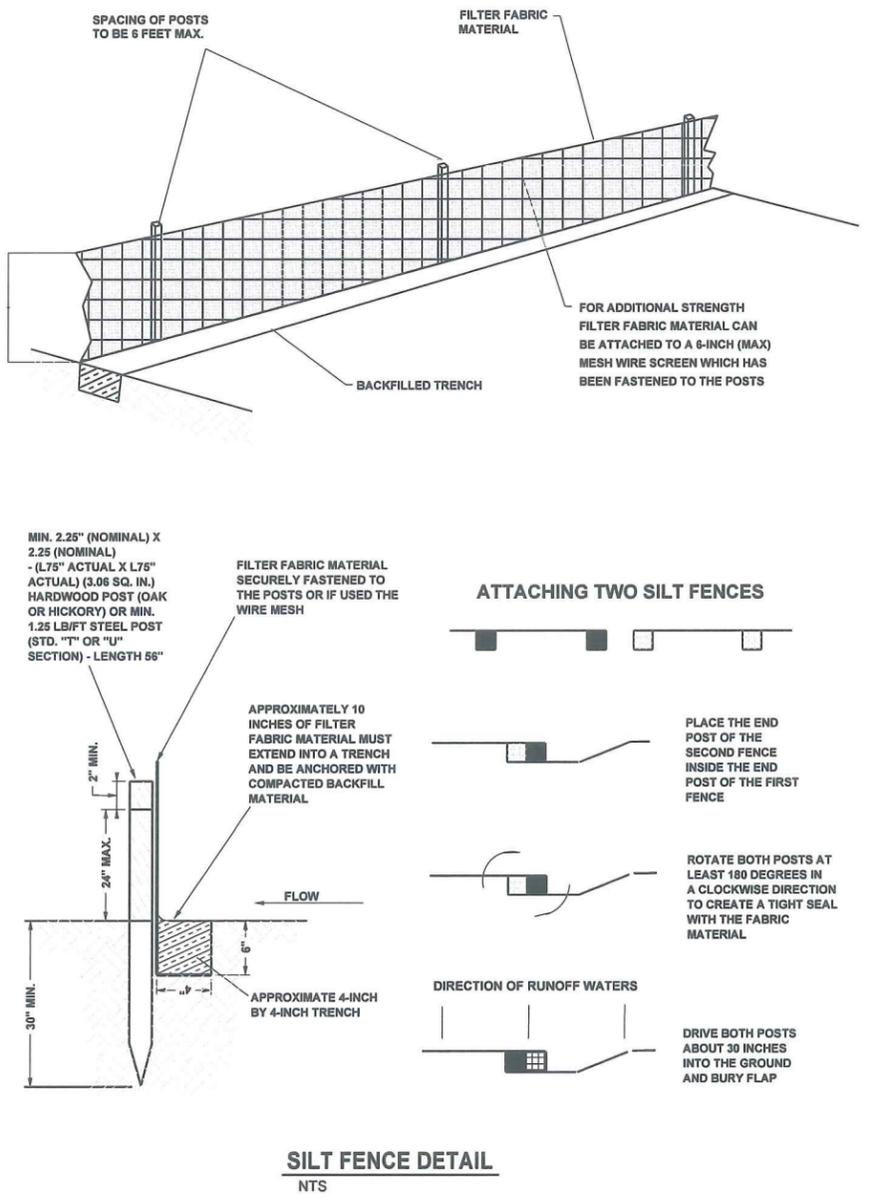
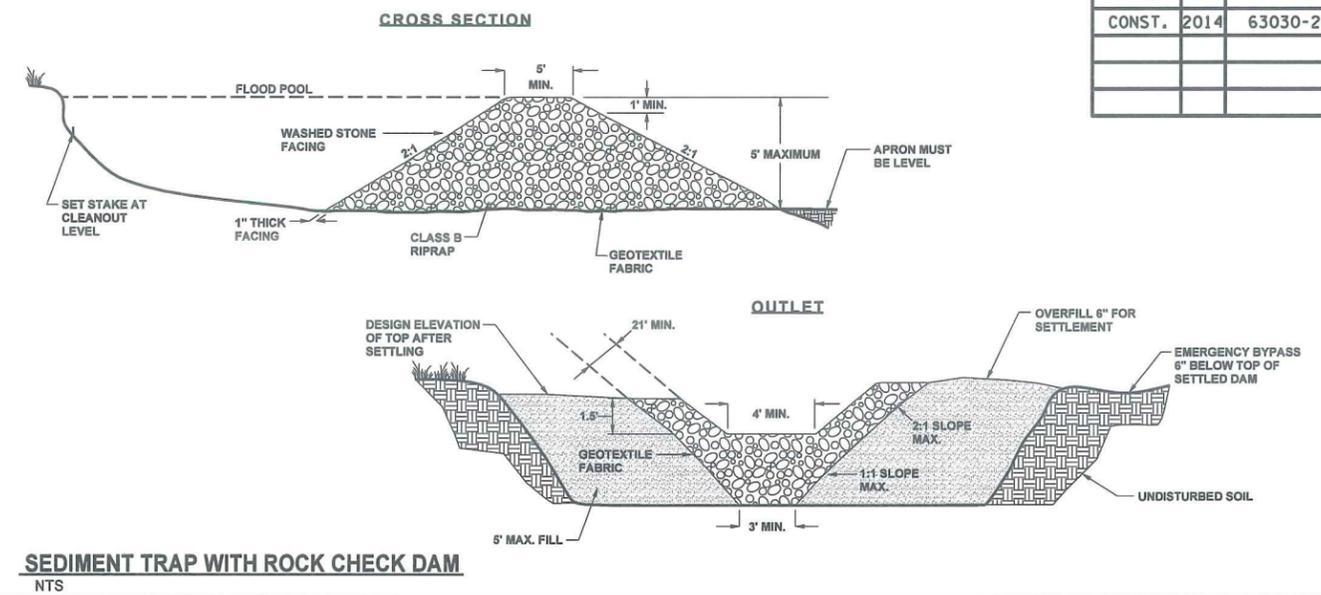
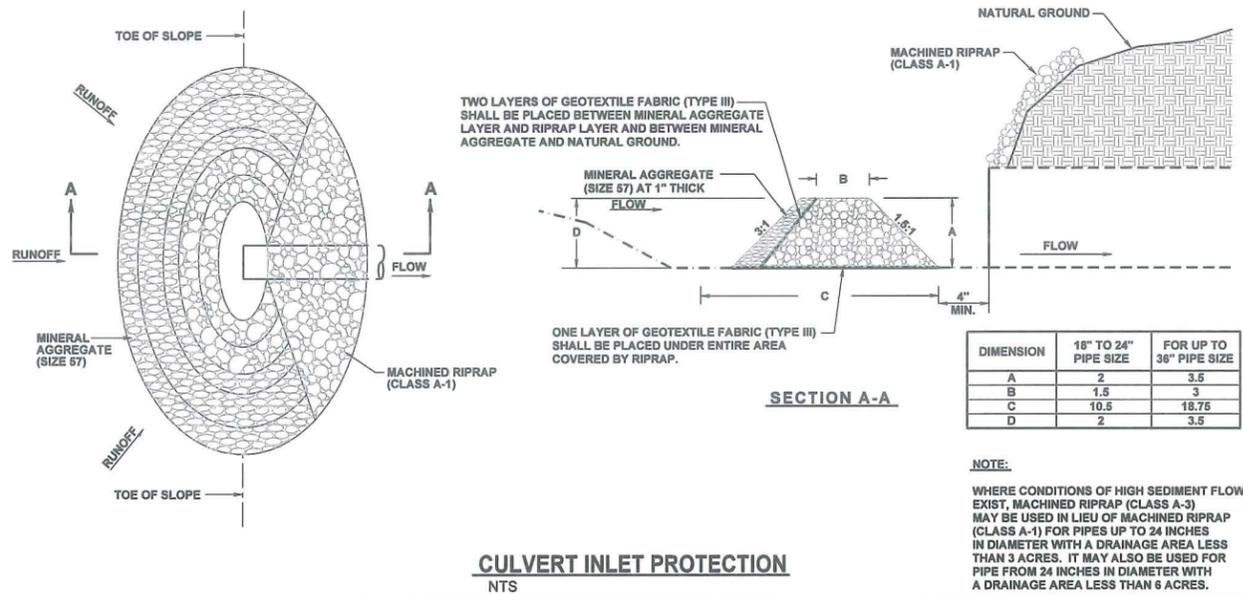
USE SCHEDULE 40 PIPE IN STATION
 1" DIAM. = 0.133" WALL THICKNESS
 2" DIAM. = 0.154" WALL THICKNESS
 4" DIAM. = 0.188" WALL THICKNESS



**CLARKVILLE
 GAS & WATER**

**NAT. GAS
 REGULATOR
 STATION**

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	63030-2210-14	U6-9



- EROSION CONTROL GENERAL NOTES**
1. TO REDUCE SEDIMENT IN RUN-OFF, EROSION CONTROL STRUCTURES SHALL BE INSTALLED PROMPTLY DURING ALL CONSTRUCTION PHASES.
 2. SEDIMENT TRAPS SHALL BE LOCATED WITHIN THE RIGHT-OF-WAY AND/OR CONSTRUCTION LIMITS BUT OUTSIDE OF THE SLOPE STAKES.
 3. TO INSURE EROSION CONTROL STRUCTURES WORK PROPERLY, IT IS IMPERATIVE THE SEDIMENT BE REMOVED. THEREFORE "INSPECTION AND MAINTENANCE" OF STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS.
 4. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO INSURE STRUCTURAL COMPONENTS OF EROSION CONTROL STRUCTURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
 5. SEDIMENT REMOVED FROM THE SEDIMENT CONTROL STRUCTURE IS TO BE PLACED AT A SITE APPROVED BY OWNER IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT DURING RUNOFF. COST FOR THIS TREATMENT IS TO BE INCLUDED IN COST OF OTHER ITEMS OF CONSTRUCTION.
 6. UPON COMPLETE REMOVAL OF SEDIMENT TRAPS, SPECIAL DITCHES, ETC., THE AREA WHERE THEY WERE CONSTRUCTED IS TO BE TOP SOILED, SEEDED AND MULCHED.
 7. STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS
 8. WATER FROM COFFERDAMS IS NOT TO BE PUMPED DIRECTLY INTO STREAMS, BUT IS TO BE PUMPED INTO SEDIMENT POND.
 9. CLEARING AND GRUBBING IS TO BE HELD TO THE MINIMUM WIDTH NECESSARY TO ACCOMMODATE SLOPES. UNNECESSARY CANOPY REMOVAL (TREES, SHRUBS, ETC.) IS PROHIBITED.
 10. SHOULDERS AND EXCAVATED AREAS SHALL BE PROMPTLY STABILIZED AGAINST EROSION. SILTATION MEASURES SHALL BE IMPLEMENTED PROMPTLY TO REDUCE SEDIMENT IN RUNOFF FROM CONSTRUCTION IN WETLANDS, BY THE USE OF SILT FENCES (FABRIC AND STRAW OR HAY BALES).
 11. BORROW AND DISPOSAL AREAS SHALL BE LOCATED IN NON-WETLAND AREAS.
 12. EQUIPMENT STAGING AND MAINTENANCE AREAS SHALL BE DEVELOPED AT A DISTANCE FROM THE CREEK TO INSURE THAT OIL, GASOLINE, AND OTHER PETROLEUM POLLUTANTS DO NOT ENTER THE CREEK.
 13. LIMITS OF HAY BALES AND SILT FENCE MAY BE ENLARGED AT THE CONTRACTOR'S EXPENSE IN ORDER TO PROVIDE ROOM NECESSARY FOR STAGING AREAS AND WORK AREAS.
 14. ALL WATER DISTURBED BY THE CONSTRUCTION SHALL BE PROTECTED BY HAY BALES AND SILT FENCE AS DIRECTED BY THE OWNER.
 15. WATER FROM EXCAVATION IS NOT TO BE PUMPED DIRECTLY INTO STREAMS.
 16. RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A TEMPORARY DEWATERING STRUCTURE OR FILTER BAG.
 17. SILT FENCE TO BE INSTALLED ON THE DOWNSTREAM SIDE OF ALL STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES TO BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.
 18. UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS, AND NO WORK SHALL BE CONDUCTED IN THE DRY SEPARATED FROM FLOWING WATERS. MISSISSIPPI DEPARTMENT OF ENVIRONMENT AND CONSERVATION (DEC) REGULATIONS APPLY TO THE UTILITIES IN THIS PROJECT IN REGARDS TO EROSION CONTROL AS WELL AS ALL WATER QUALITY PERMITS RECEIVED. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE WATER QUALITY PERMITS.
 19. IT IS THE RESPONSIBILITY OF THE UTILITIES INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM HIS OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM HIS WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF HIS WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM HIS OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND BECOMING WATERS OF THE STATE.
 20. FOR THE INSTALLATION OF BURIED UTILITIES, TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE BUT NO LATER THAN 7 DAYS AFTER BACKFILLED. ANY TEMPORARY SPOIL PILE OF EXCAVATED EARTH SHALL BE LOCATED WITHIN THE INSTALLED TDOT RIGHT-OF-WAY EROSION CONTROL MEASURES OR RECEIVE SEPARATE EROSION CONTROL MEASURES FROM THE APPROVED TDOT STANDARD DRAWINGS. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EROSION CONTROL MEASURES WILL BE INSTALLED BY THE UTILITIES UNTIL SUCH TIME THE TRENCH IS BACKFILLED.
 21. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCHLINE. IF THIS IS ANTICIPATED ADDITIONAL EROSION CONTROL MEASURES (SUCH AS CHECK DAMS, HAY BALES, EC BLANKETS) SHALL BE INSTALLED FROM THIS SHEET.
 22. FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE RIGHT-OF-WAY, ADDITIONAL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.
 23. THE CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO EXISTING TOPOGRAPHIC CONDITIONS (AS REQUIRED BY ENGINEER).
 24. CONTRACTOR SHALL DISTURB AN AREA NO MORE THAN 25 FEET WIDE FOR UTILITY INSTALLATIONS.
 25. WHERE INSTALLATION OF UTILITIES CONFLICTS WITH EROSION CONTROL MEASURES ON THE GROUND, THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE RELOCATION OR REMOVAL OF THE EROSION CONTROL MEASURES BY OTHERS BEFORE COMMENCING WITH THE WORK. ANY EXISTING EROSION CONTROL MEASURES REMOVED BY THE UTILITY CONTRACTOR SHALL BE REPLACED BY THE UTILITY CONTRACTOR AT THE END OF EACH DAY.

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(Eric Meblong)



CLARKSVILLE GAS & WATER
EROSION CONTROL