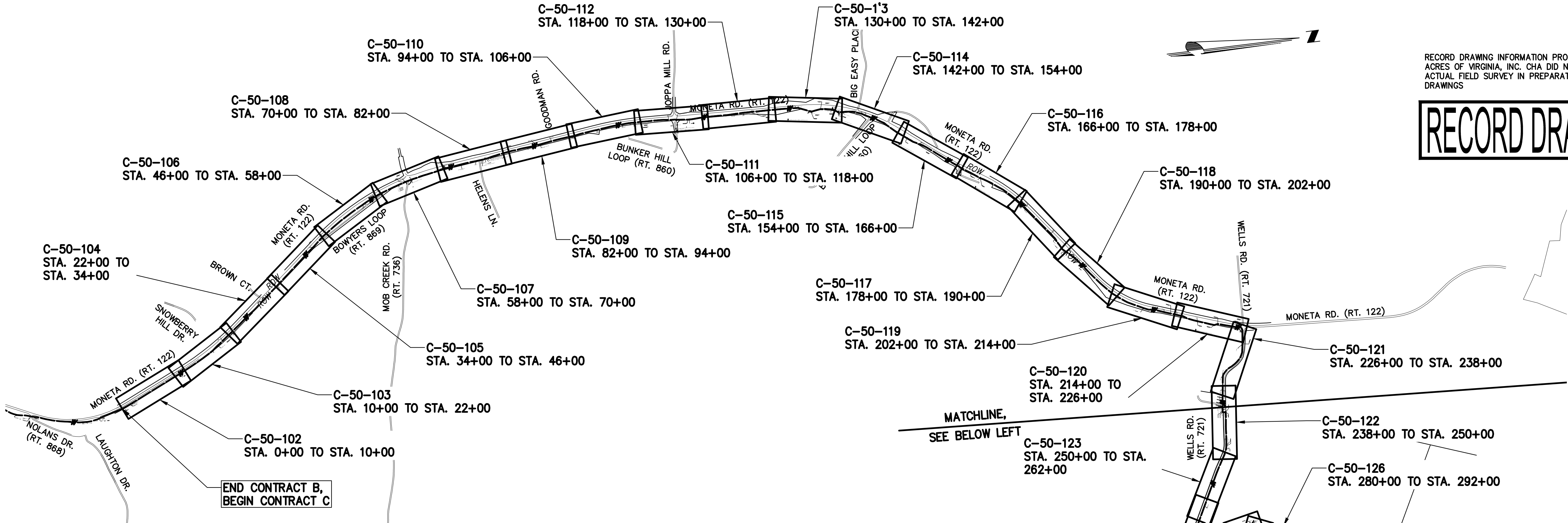
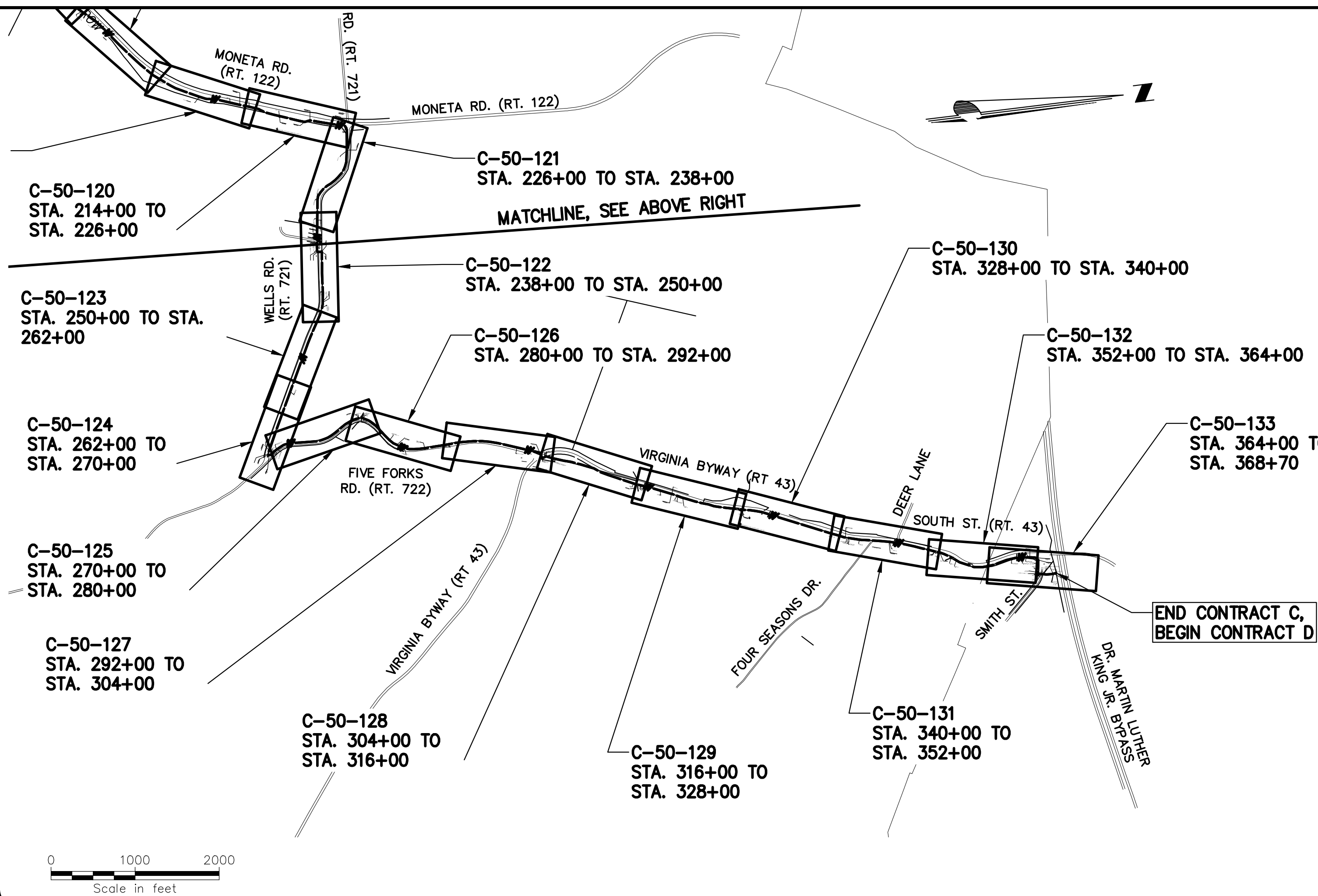


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RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

RECORD DRAWING 12-12-17



SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C-50C-101	CONTRACT C - WATER MAIN KEY PLAN & SHEET LIST TABLE
C-50C-102	CONTRACT C WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 0+00 TO STA. 10+00
C-50C-103	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 10+00 TO STA. 22+00
C-50C-104	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 22+00 TO STA. 34+00
C-50C-105	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 34+00 TO STA. 46+00
C-50C-106	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 46+00 TO STA. 58+00
C-50C-107	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 58+00 TO STA. 70+00
C-50C-108	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 70+00 TO STA. 82+00
C-50C-109	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 82+00 TO STA. 94+00
C-50C-110	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 94+00 TO STA. 106+00
C-50C-111	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 106+00 TO STA. 118+00
C-50C-112	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 118+00 TO STA. 130+00
C-50C-113	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 130+00 TO STA. 142+00
C-50C-114	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 142+00 TO STA. 154+00
C-50C-115	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 154+00 TO STA. 166+00
C-50C-116	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 166+00 TO STA. 178+00

C-50C-117	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 178+00 TO STA. 190+00
C-50C-118	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 190+00 TO STA. 202+00
C-50C-119	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) STA. 202+00 TO STA. 214+00
C-50C-120	ROUTE 122 WATER MAIN - PLAN AND PROFILE MONETA RD. (RT. 122) & WELLS RD (RT 721) STA. 214+00 TO STA. 226+00
C-50C-121	ROUTE 122 WATER MAIN - PLAN AND PROFILE WELLS RD. (RT. 721) STA. 226+00 TO STA. 238+00
C-50C-122	ROUTE 122 WATER MAIN - PLAN AND PROFILE WELLS RD. (RT. 721) STA. 238+00 TO STA. 250+00
C-50C-123	ROUTE 122 WATER MAIN - PLAN AND PROFILE WELLS RD. (RT. 721) STA/ 250+00 TO STA. 262+00
C-50C-124	ROUTE 122 WATER MAIN - PLAN AND PROFILE WELLS RD. (RT. 721) & FIVE FORKS RD (RT 722) STA. 262+00 TO STA. 270+00
C-50C-125	ROUTE 122 WATER MAIN - PLAN AND PROFILE FIVE FORKS RD. (RT. 722) STA. 270+00 TO STA. 280+00
C-50C-126	ROUTE 122 WATER MAIN - PLAN AND PROFILE FIVE FORKS RD. (RT. 722) STA. 280+00 TO STA. 292+00
C-50C-127	ROUTE 122 WATER MAIN - PLAN AND PROFILE FIVE FORKS RD. (RT. 722) & VIRGINIA BYWAY (43) STA. 292+00 TO STA. 304+00
C-50C-128	ROUTE 122 WATER MAIN - PLAN AND PROFILE VIRGINIA BYWAY (RT. 43) STA. 304+00 TO STA. 316+00
C-50C-129	ROUTE 122 WATER MAIN - PLAN AND PROFILE VIRGINIA BYWAY (RT. 43) STA. 316+00 TO STA. 328+00
C-50C-130	ROUTE 122 WATER MAIN - PLAN AND PROFILE VIRGINIA BYWAY (RT. 43) STA. 328+00 TO STA. 340+00
C-50C-131	ROUTE 122 WATER MAIN - PLAN AND PROFILE VIRGINIA BYWAY (RT. 43) STA. 340+00 TO STA. 352+00
C-50C-132	ROUTE 122 WATER MAIN - PLAN AND PROFILE VIRGINIA BYWAY (RT. 43) STA. 352+00 TO STA. 364+00
C-50C-133	ROUTE 122 WATER MAIN - PLAN AND PROFILE VIRGINIA BYWAY (RT. 43) STA. 364+00 TO STA. 368+70

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BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION

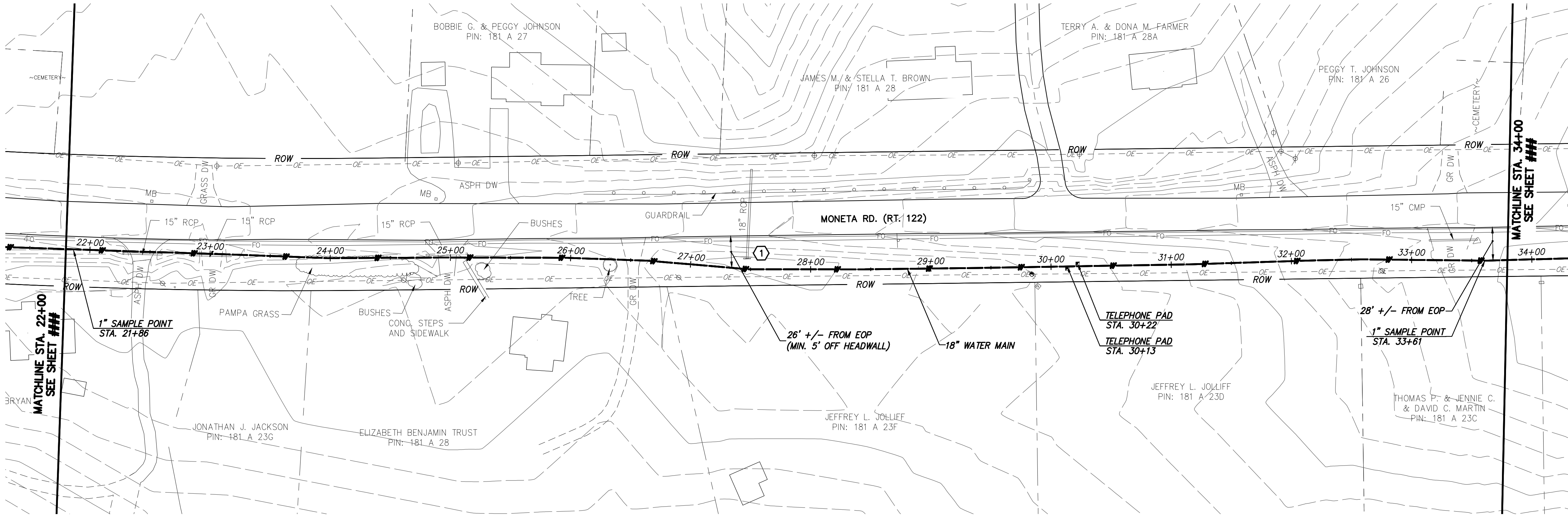
CONTRACT C - WATER MAIN KEY PLAN
& SHEET LIST TABLE

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015

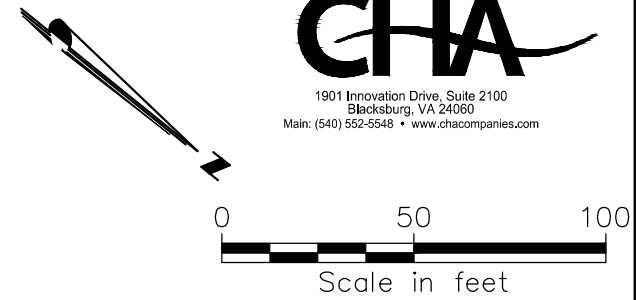
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MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

PROJECT NO.
27872

C-50C-101
SHEET
OF



WATER MAIN PLAN



GENERAL NOTES:

- A. 18-IN WATER MAIN:
1. PIPING:
 - a. PVC: PRESSURE CLASS 165-DR25, 200-DR21, AND 235-DR18 AS NOTED.
 - b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250 AND 350 AS NOTED
 2. VALVES: RATED FOR WORKING PRESSURE OF 250 PSI
 3. TEST PRESSURES WILL VARY BASED ON OPERATING CONDITIONS, ELEVATIONS CHANGES, AND PIPE PRESSURE CLASSES. PC165 WILL BE TESTED AT 150 PSI, PC200 AT 200 PSI, PC235 AT 225 PSI, AND DIP AT RIVER CROSSINGS WILL BE TESTED AT MIN. 250 PSI UNLESS NOTED OTHERWISE.

B. VALVES, BLOW-OFFS AND AIR RELEASE VALVES LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE FIELD DETERMINED.

C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.

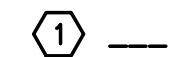
SPECIFIC NOTES

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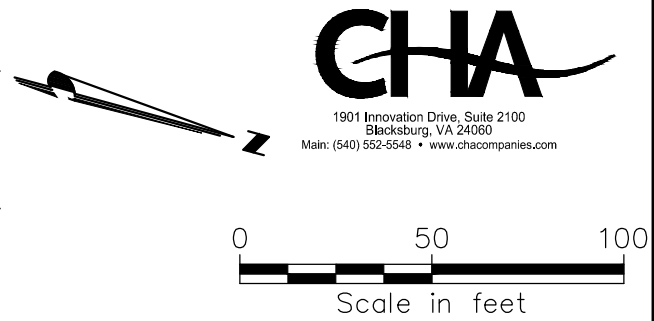
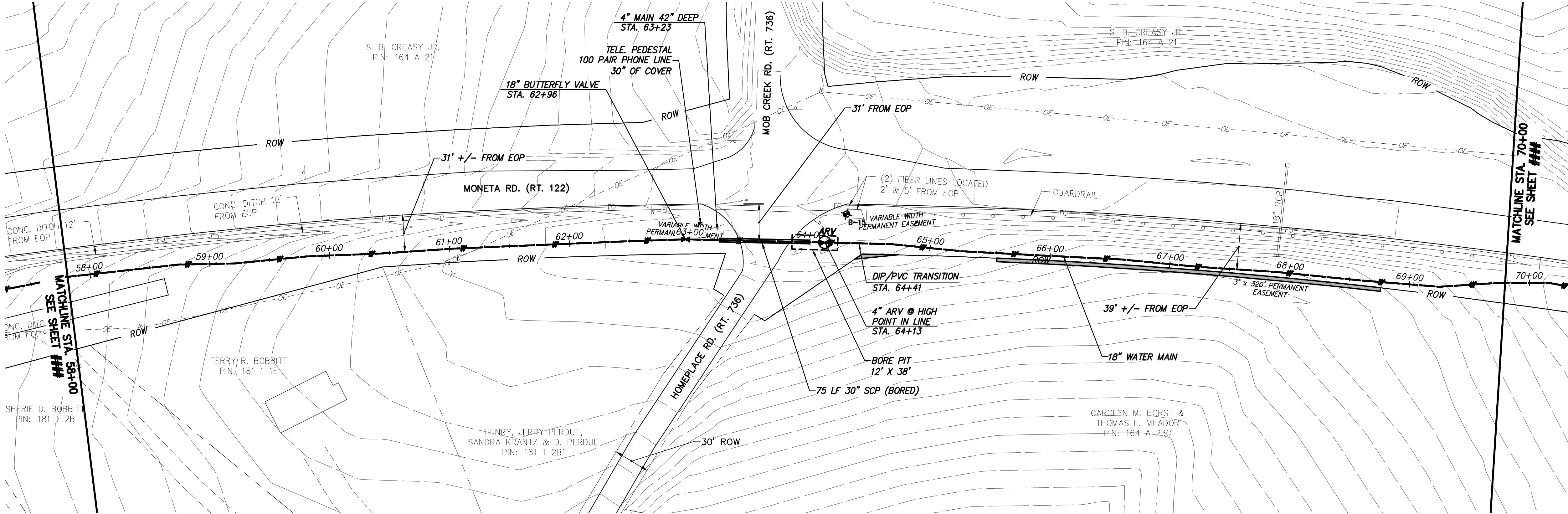
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		ISSUED FOR CONSTRUCTION		-	GLM	JRM	SMS	SMS
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		LEVEL 2 DESIGN DOCUMENTS		A	GLM	JRM	SMS	SMS
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RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

RECORD DRAWING 12-15-17



RECORD DRAWING



- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
1. PIPING:
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- B. VALVES, BLOW-OFFS AND AIR RELEASE**
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- C. CONTRACTOR MAY PROVIDE TEMPORARY**
BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.
- SPECIFIC NOTES**
- ① —

WATER MAIN PLAN

CHA

19411 Westfield Drive, Suite 2100
Blackburg, VA 26055
Phone: (940) 522-0400 • www.chaengineering.com

RECORD DRAWINGS

12/15/2017

11/20/2015

6/4/2015

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LEVEL 3 DESIGN DOCUMENTS

LEVEL 2 DESIGN DOCUMENTS

DATE

REVISIONS AND RECORD OF ISSUE

NO.

BY

CHK

APP

DESIGNED: JRM

DETAILED: GLM

CHECKED: BSR

APPROVED: SMS

DATE: 11-20-2015

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PROJECT NO.
27872

C-50C-107
SHEET
OF

RV

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Kansas City, Missouri

DESIGNED: JRM

DETAILED: GLM

CHECKED: BSR

APPROVED: SMS

DATE: 11-20-2015

RECORD DRAWING 12-15-17

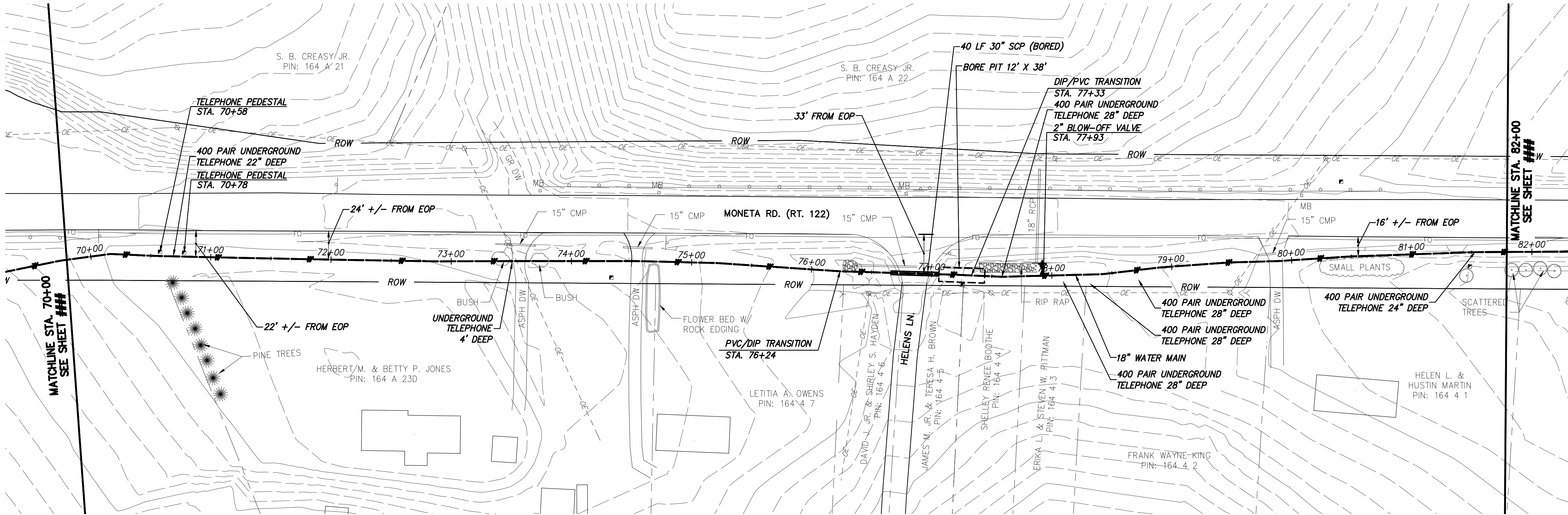
BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP &
LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE
MONETA RD (RT 122)
STA. 58+00 TO STA. 70+00

RECORD DRAWING INFORMATION PROVIDED TO CHA BY
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DRAWINGS

RECORD DRAWING 12-15-17

FD7000



WATER MAIN PLAN



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Bedford, VA 24609
Phone: (540) 552-0040 • www.cha-engineers.com



0 50 100
Scale in feet

- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
1. PIPING:
 - a. PVC: PRESSURE CLASS 165--DR25, 200--DR21, AND 235--DR18 AS NOTED.
 - b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250 AND 350 AS NOTED
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- C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.**
- SPECIFIC NOTES**
- 1

RECORD DRAWINGS		REVISIONS AND RECORD OF ISSUE		XREF1:	
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6/4/2015	LEVEL 2 DESIGN DOCUMENTS				
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USER:		XREF4:			



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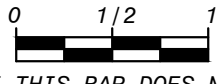
Black & Veatch Corporation
Kansas City, Missouri

BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE
MONETA RD (RT 122)
STA. 70+00 TO STA. 82+00

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015
PROJECT NO. 27872
C-50C-108 SHEET OF

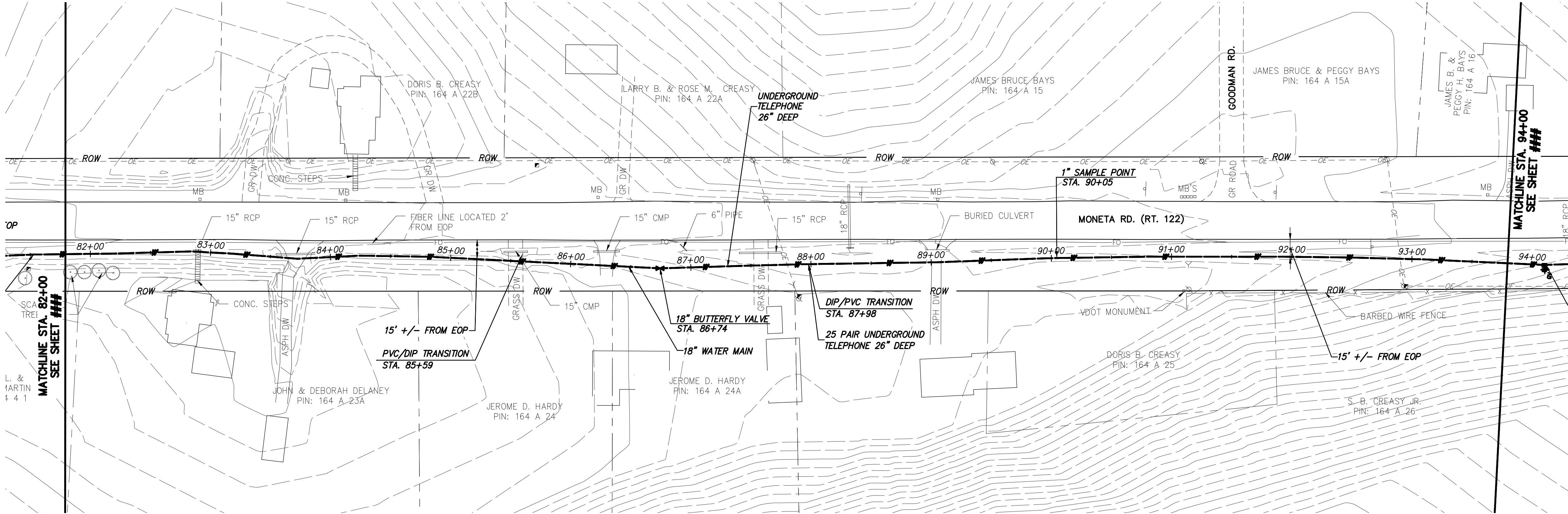
RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS



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12-15-17



WATER MAIN PLAN



1981 Incorporated, Office Suite 2100
Blacksburg, VA 24050
Phone (540) 552-0242 • www.chaengineering.com



0 50 100
Scale in feet

- GENERAL NOTES:**
- A. 18-IN WATER MAIN:
1. PIPING:
 - a. PVC: PRESSURE CLASS 165--DR25, 200--DR21, AND 235--DR18 AS NOTED.
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SPECIFIC NOTES

① —

RECORD DRAWINGS	SMP		BSR		SMS	
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12/15/2017	ISSUED FOR CONSTRUCTION	11/20/2015	LEVEL 3 DESIGN DOCUMENTS	6/4/2015	LEVEL 2 DESIGN DOCUMENTS	DATE
REVISIONS AND RECORD OF ISSUE						NO. BY CK APP
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XREF2:						XREF2:
XREF3:						XREF3:
XREF4:						XREF4:



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Kansas City, Missouri

BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION

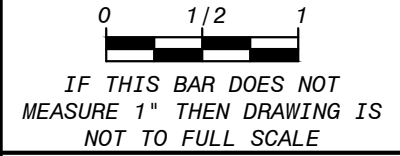
CONTRACT C WATER MAIN - PLAN & PROFILE
MONETA RD (RT 122)
STA. 82+00 TO STA. 94+00

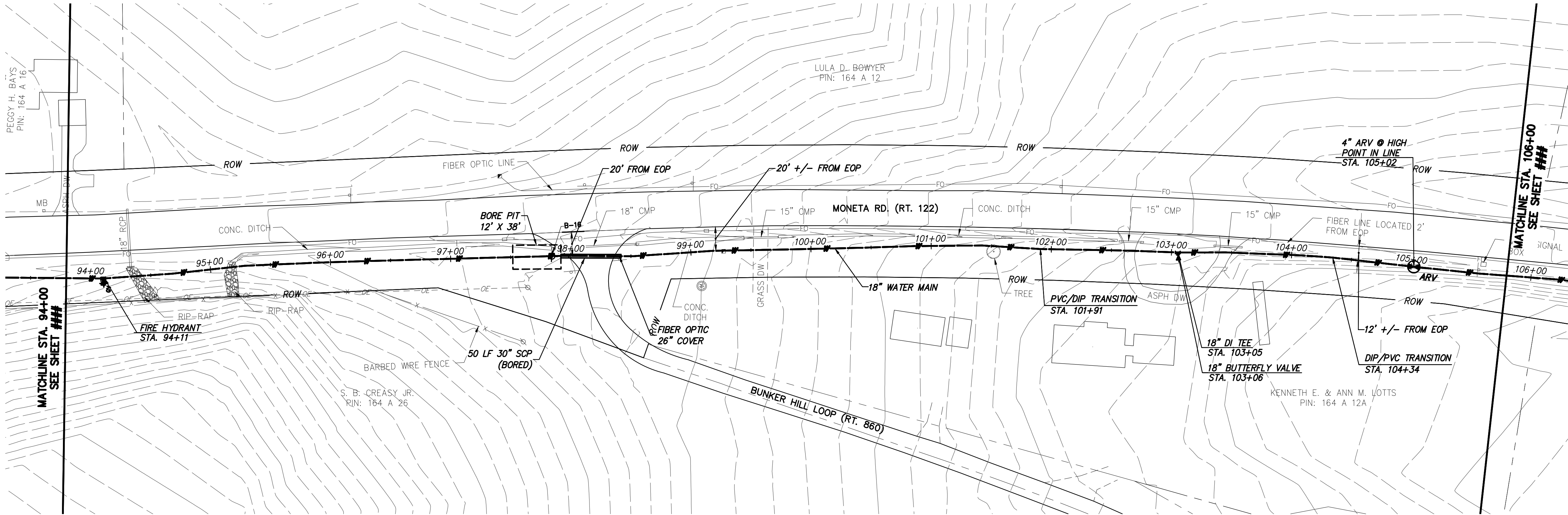
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CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015
PROJECT NO. 27872
C-50C-109 SHEET OF

RECORD DRAWING

12-15-17

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WATER MAIN PLAN



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Blacksburg, VA 24060
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0 50 100
Scale in feet

- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
1. PIPING:
 - a. PVC: PRESSURE CLASS 165-DR25, 200-DR21, AND 235-DR18 AS NOTED.
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- C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.**
- SPECIFIC NOTES**
- ① —

12/15/2017 RECORD DRAWINGS	SMP BSR SMS	11/20/2015 ISSUED FOR CONSTRUCTION	GLM JRM SMS	6/4/2015 LEVEL 3 DESIGN DOCUMENTS	GLM JRM SMS	6/4/2015 LEVEL 2 DESIGN DOCUMENTS	GLM JRM SMS	DATE	REVISIONS AND RECORD OF ISSUE	NO.	BY	CHK	APP
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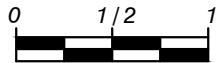
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Kansas City, Missouri

BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE
MONETA RD (RT 122)
STA. 94+00 TO STA. 106+00

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015

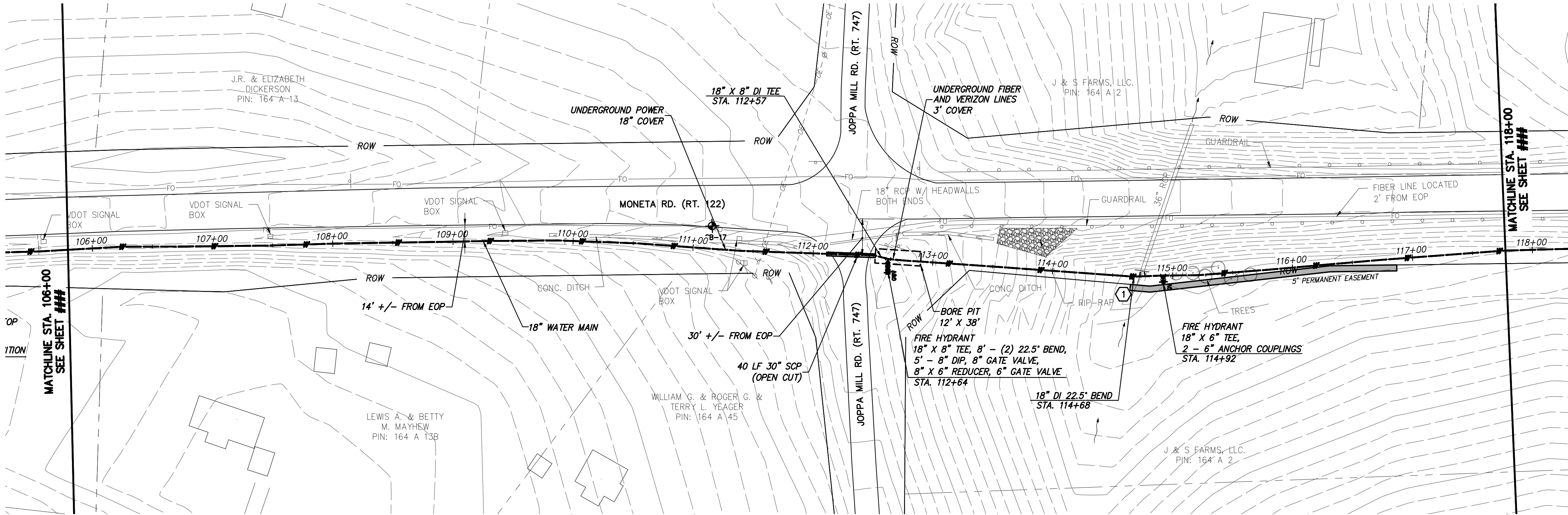


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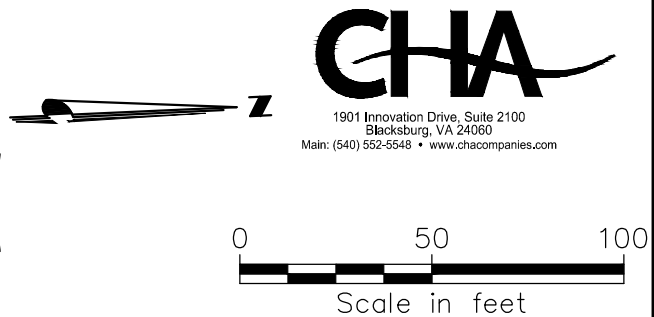
PROJECT NO. 27872
C-50C-110 SHEET OF

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RECORD DRAWING 12-15-17



WATER MAIN PLAN



- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
1. PIPING:
 - a. PVC: PRESSURE CLASS 165--DR25, 200--DR21, AND 235--DR18 AS NOTED.
 - b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250 AND 350 AS NOTED
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- B. VALVES, BLOW-OFFS AND AIR RELEASE**
VALVES LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE FIELD DETERMINED.
- C. CONTRACTOR MAY PROVIDE TEMPORARY**
BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.
- SPECIFIC NOTES**
- 1 RIP RAP TO CULVERT INLET.

RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

RECORD DRAWING 12-15-17

CHA

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Blacksburg, VA 24060
Phone: (540) 552-0040 • www.chacorp.com

12/15/2017
11/20/2015
6/4/2015

RECORD DRAWINGS
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LEVEL 2 DESIGN DOCUMENTS

SMP BSR SMS
GLM JRM SMS
GLM JRM SMS
GLM JRM SMS

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DATE

REVISIONS AND RECORD OF ISSUE

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BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP &
LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE
MONETA RD (RT 122)
STA. 106+00 TO STA. 118+00

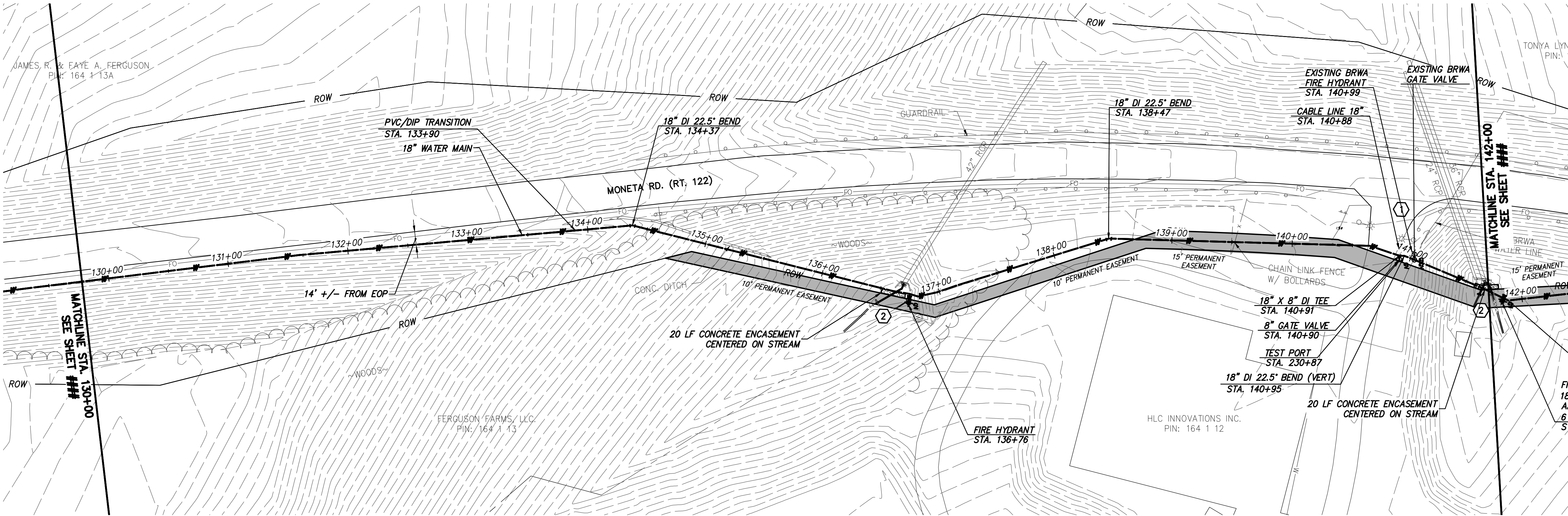
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CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

PROJECT NO.
27872

C-50C-111
SHEET
OF



WATER MAIN PLAN



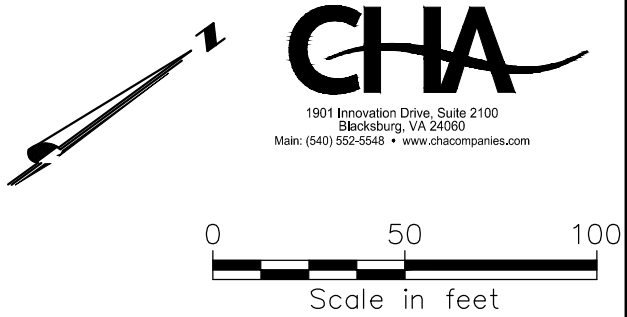
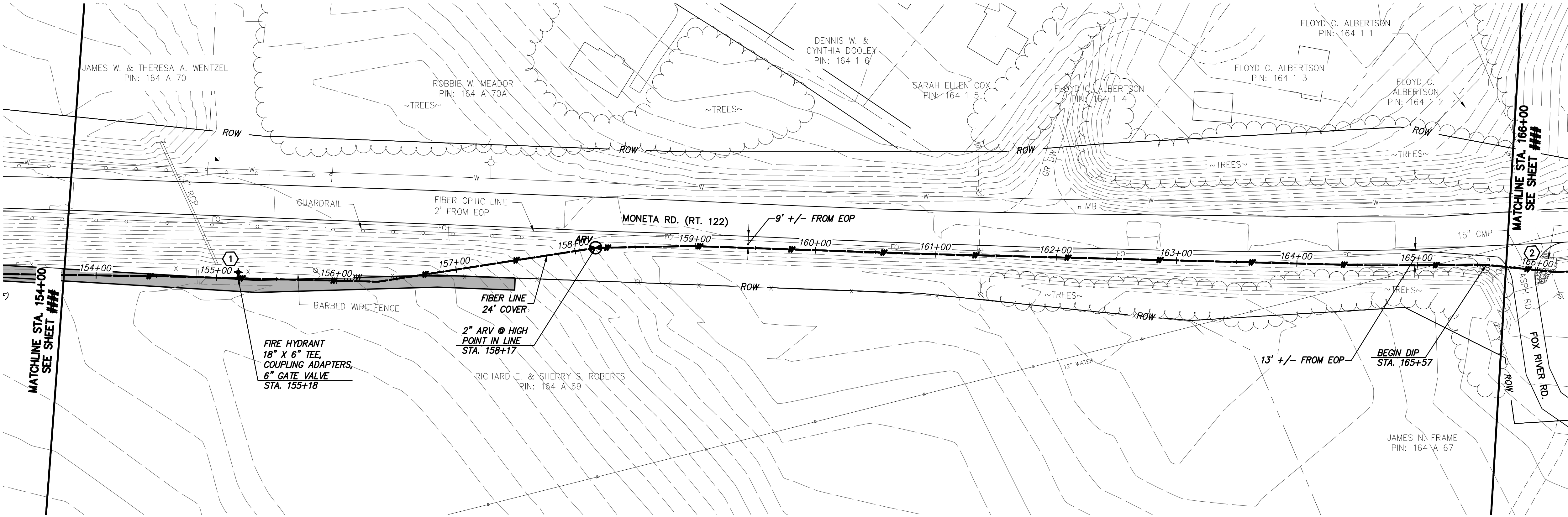
19811 Highland Drive, Suite 2100
Baltimore, VA 20603
Phone (410) 522-0242 • www.chacorp.com



0 50 100
Scale in feet

- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
1. PIPING:
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- C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.**
- A. SPECIFIC NOTES**
- 1 CONTRACTOR SHALL MAINTAIN VEHICLE INGRESS AND EGRESS AT ALL TIMES.
 - 2 RIP RAP TO CULVERT INLET.

RECORD DRAWINGS		REVISIONS AND RECORD OF ISSUE		XREF1:		XREF2:		XREF3:		XREF4:	
12/15/2017	BSR	11/20/2015	GLM	6/4/2015	GLM						
ISSUED FOR CONSTRUCTION		LEVEL 3 DESIGN DOCUMENTS		LEVEL 2 DESIGN DOCUMENTS		DATE		NO.		BY	
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- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
1. PIPING:
 - a. PVC: PRESSURE CLASS 165--DR25, 200--DR21, AND 235--DR18 AS NOTED.
 - b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250 AND 350 AS NOTED
 2. VALVES: RATED FOR WORKING PRESSURE OF 250 PSI
 3. TEST PRESSURES WILL VARY BASED ON OPERATING CONDITIONS, ELEVATIONS CHANGES, AND PIPE PRESSURE CLASSES. PC165 WILL BE TESTED AT 150 PSI, PC200 AT 200 PSI, PC235 AT 225 PSI, AND DIP AT RIVER CROSSINGS WILL BE TESTED AT MIN. 250 PSI UNLESS NOTED OTHERWISE.
- B. VALVES, BLOW-OFFS AND AIR RELEASE VALVES LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE FIELD DETERMINED.**
- C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.**
- SPECIFIC NOTES**
- ① RIP RAP CULVERT DISCHARGE.

WATER MAIN PLAN

RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

RECORD DRAWING 12-15-17

12/15/2017
11/20/2015
6/4/2015

RECORD DRAWINGS
ISSUED FOR CONSTRUCTION
LEVEL 3 DESIGN DOCUMENTS
LEVEL 2 DESIGN DOCUMENTS

DATE

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GLM
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SMS

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USER:

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DWG VER:

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Black & Veatch Corporation
Kansas City, Missouri

BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP &
LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE
MONETA RD (RT 122)
STA. 154+00 TO STA. 166+00

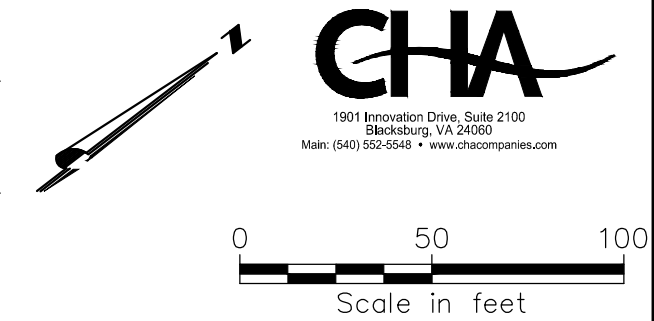
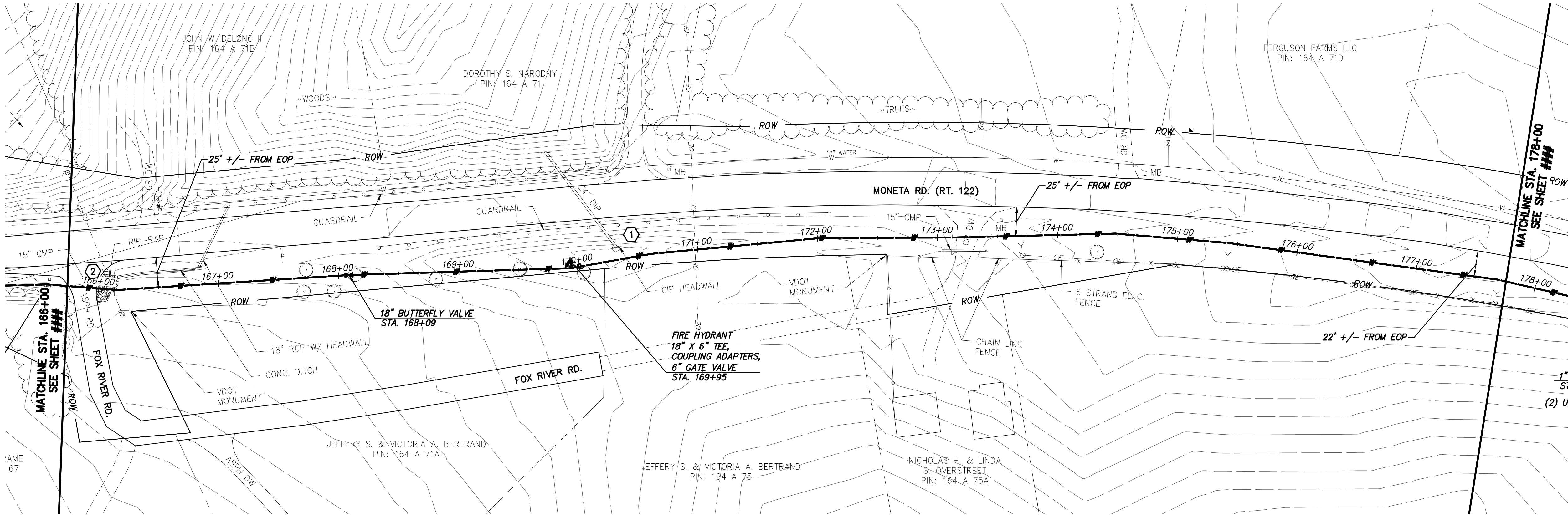
DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

PROJECT NO.
27872

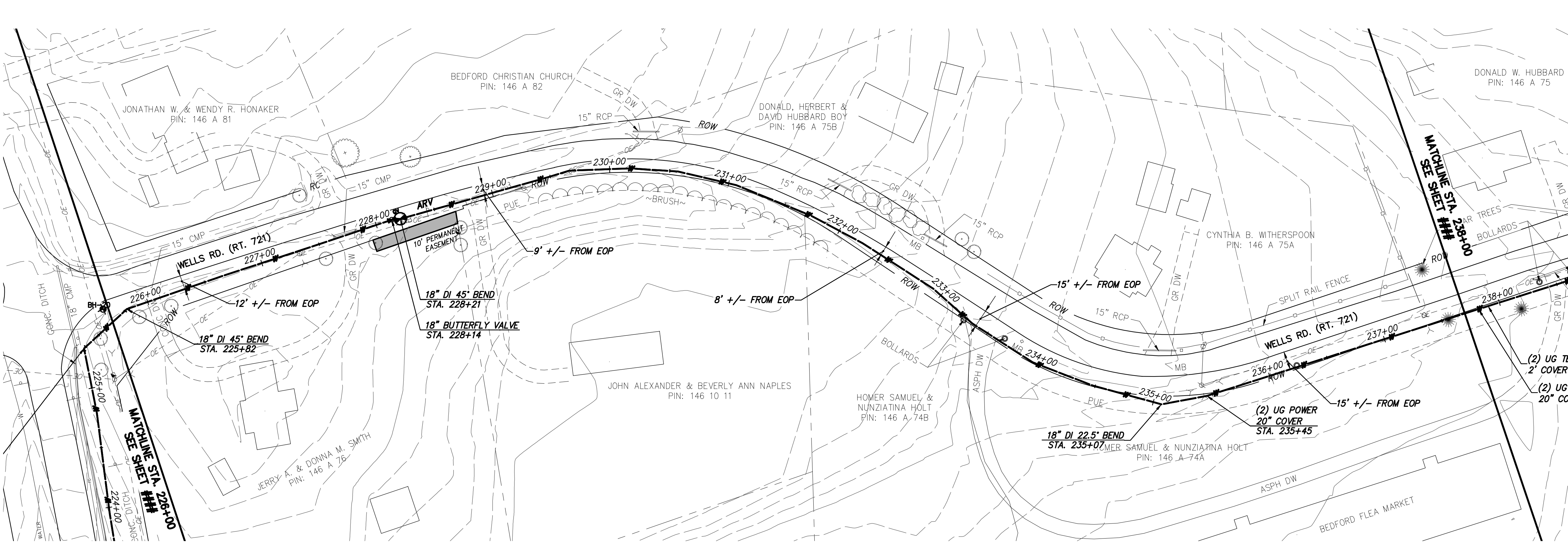
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- GENERAL NOTES:**
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WATER MAIN PLAN

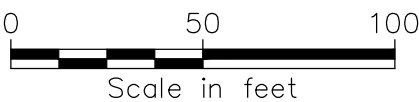
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12/15/2017		11/20/2015		11/20/2015	
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LEVEL 3 DESIGN DOCUMENTS		B GLM JRM SMS		B GLM JRM SMS	
LEVEL 2 DESIGN DOCUMENTS		A GLM JRM SMS		A GLM JRM SMS	
DATE		NO.		BY	
REVISIONS AND RECORD OF ISSUE		NO.		BY	
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WATER MAIN PLAN



19811 E. Highway 2100
Blacksburg, VA 24060
(540) 526-0040 • www.cha-engineers.com



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 - a. PVC: PRESSURE CLASS 165-DR25, 200-DR21, AND 235-DR18 AS NOTED.
 - b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250 AND 350 AS NOTED
 2. VALVES: RATED FOR WORKING PRESSURE OF 250 PSI
 3. TEST PRESSURES WILL VARY BASED ON OPERATING CONDITIONS, ELEVATIONS CHANGES, AND PIPE PRESSURE CLASSES. PC165 WILL BE TESTED AT 150 PSI, PC200 AT 200 PSI, PC235 AT 225 PSI, AND DIP AT RIVER CROSSINGS WILL BE TESTED AT MIN. 250 PSI UNLESS NOTED OTHERWISE.

B. VALVES, BLOW-OFFS AND AIR RELEASE VALVES LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE FIELD DETERMINED.

C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.

SPECIFIC NOTES

1

RECORD DRAWINGS	DATE	NO.	BY	CHK	APP
12/15/2017	ISSUED FOR CONSTRUCTION	1	JRM		
11/20/2015	LEVEL 3 DESIGN DOCUMENTS	2	GLM	JRM	SMS
6/4/2015	LEVEL 2 DESIGN DOCUMENTS	3	GLM	JRM	SMS
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		6	GLM	JRM	SMS
		7	GLM	JRM	SMS
		8	GLM	JRM	SMS
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		97	GLM	JRM	SMS
		98	GLM	JRM	SMS
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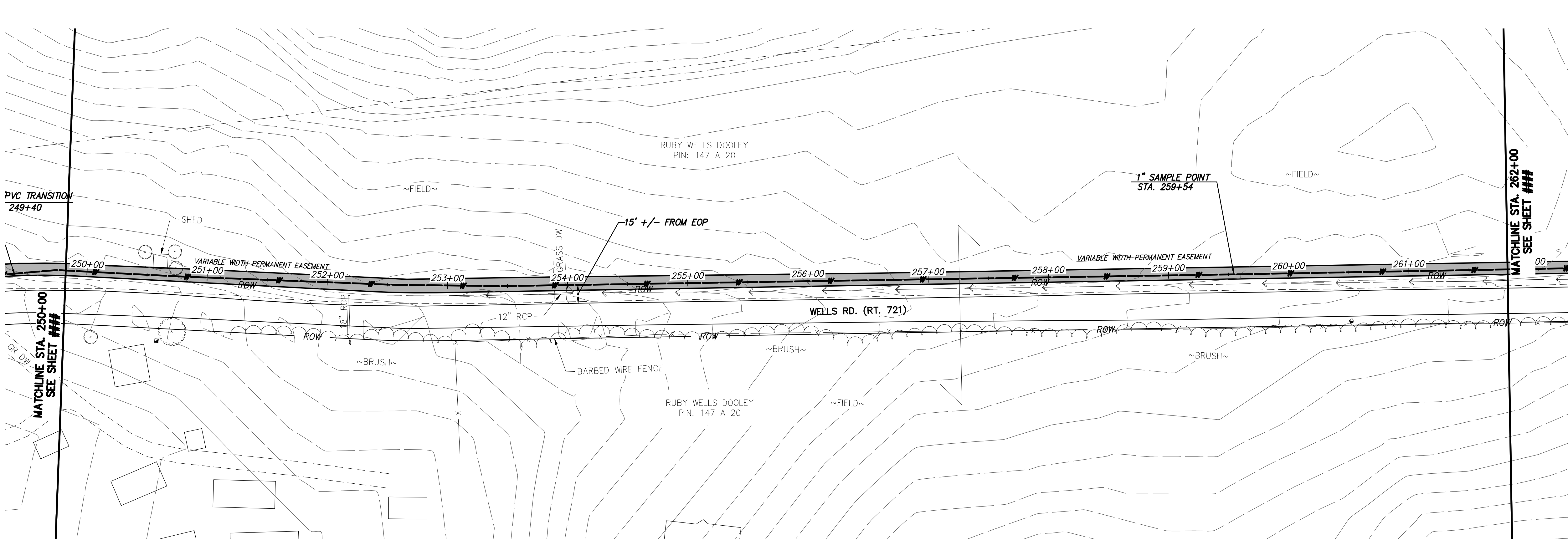
BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE
WELLS RD (RT 721)
STA. 226+00 TO STA. 238+00

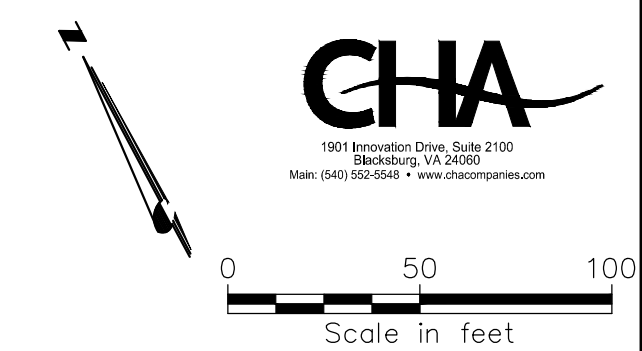
DESIGNED: JRM	PROJECT NO.
DETAILED: GLM	27872
CHECKED: BSR	C-50C-121
APPROVED: SMS	SHEET
DATE: 11-20-2015	OF

RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

RECORD DRAWING 12-15-17



WATER MAIN PLAN



GENERAL NOTES:

- A. 18-IN WATER MAIN:
1. PIPING:
 - a. PVC: PRESSURE CLASS 165--DR25, 200--DR21, AND 235--DR18 AS NOTED.
 - b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250 AND 350 AS NOTED
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SPECIFIC NOTES

① —



RECORD DRAWINGS	SNP	BSR	SMS
12/15/2017	-	-	-
11/20/2015	ISSUED FOR CONSTRUCTION	GLM	JRM
6/4/2015	LEVEL 3 DESIGN DOCUMENTS	B	GLM
	LEVEL 2 DESIGN DOCUMENTS	A	GLM
	DATE	NO.	BY
	REVISIONS AND RECORD OF ISSUE	NO.	BY
	SAVED:	XREF1:	
	PLOTTED:	XREF2:	
	USER:	XREF3:	
		XREF4:	

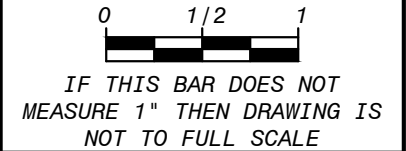
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**BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP &
LAKES TO FOREST WATER LINE EXTENSION**

**CONTRACT C WATER MAIN - PLAN & PROFILE
WELLS RD (RT 721)
STA. 250+00 TO STA. 262+00**

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015

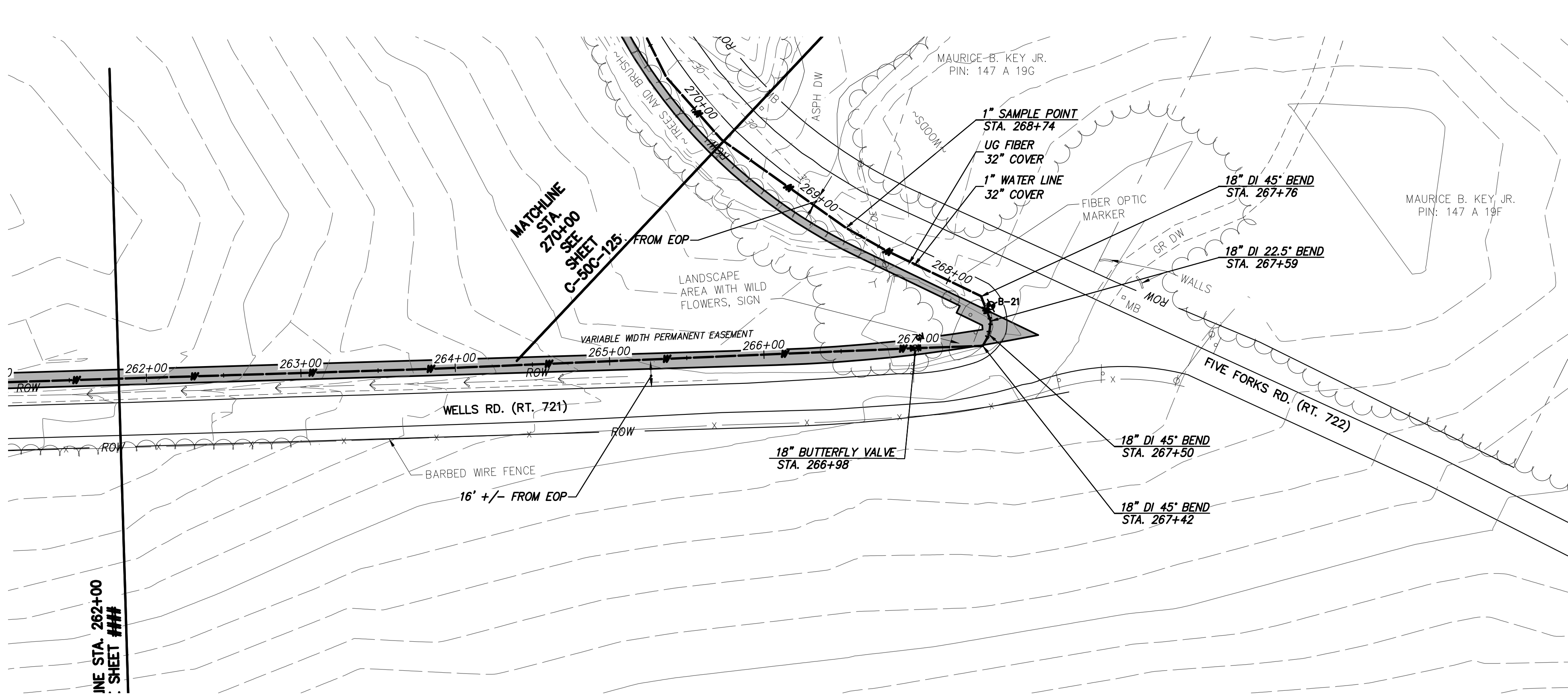


PROJECT NO.
27872

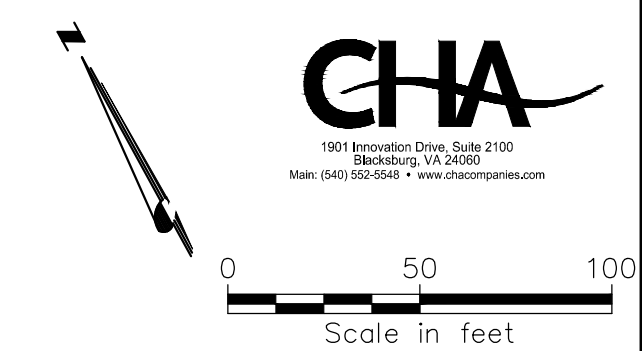
C-50C-123
SHEET
OF

RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

RECORD DRAWING 12-15-17



WATER MAIN PLAN



GENERAL NOTES:

- A. 18-IN WATER MAIN:
1. PIPING:
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- C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.

SPECIFIC NOTES

① —

RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

RECORD DRAWING 12-15-17

CHA

1981 Incorporated, Suite 2100
Blacksburg, VA 24050
Phone: (540) 552-0400 • www.chacongress.com

RECORD DRAWINGS

12/15/2017

ISSUED FOR CONSTRUCTION

11/20/2015

LEVEL 3 DESIGN DOCUMENTS

6/4/2015

LEVEL 2 DESIGN DOCUMENTS

DATE

REVISIONS AND RECORD OF ISSUE

NO.

BY

CHK

APP

SMP

BSR

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GLM

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JRM

SMS

NO.

BY

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APP

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YREF2:

YREF3:

YREF4:

USER:

DWG VER:

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Kansas City, Missouri

BEDFORD REGIONAL WATER AUTHORITY

SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE

WELLS RD (RT 721) & FIVE FORKS RD (RT 722)

STA. 262+00 TO STA. 270+00

DESIGNED: JRM

DETAILED: GLM

CHECKED: BSR

APPROVED: SMS

DATE: 11-20-2015

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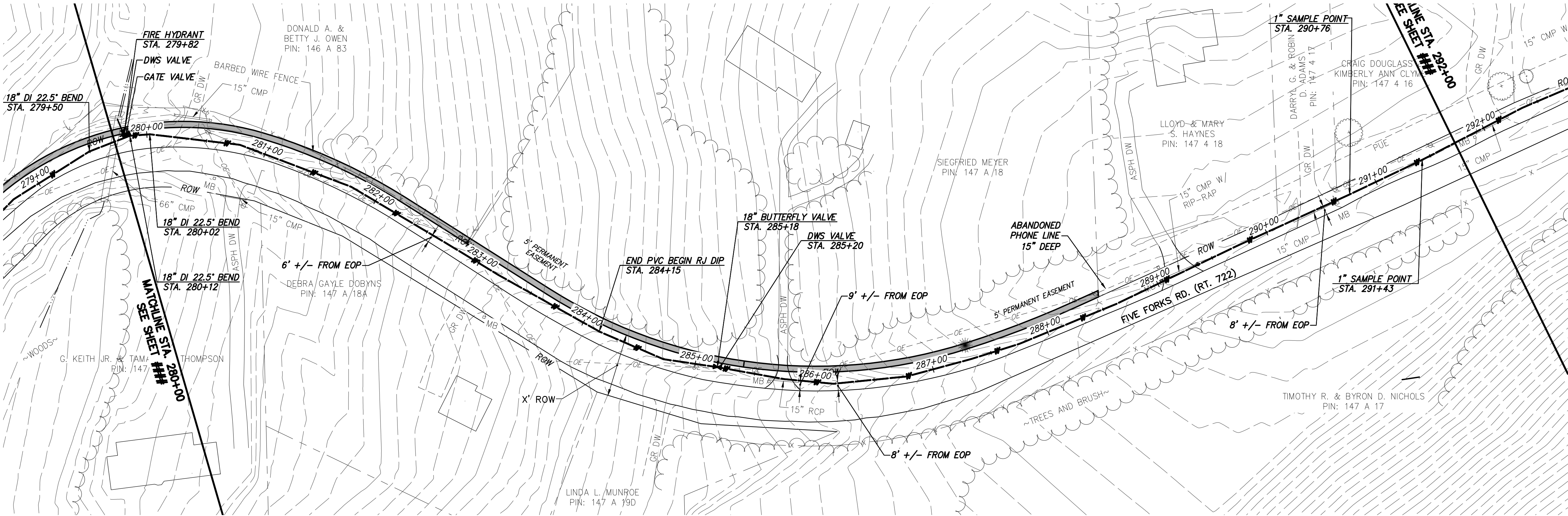
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

PROJECT NO.
27872

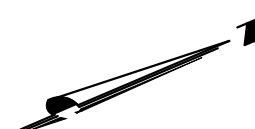
C-50C-124
SHEET
OF



WATER MAIN PLAN



1981 Established Office, Suite 2100
Bloomington, VA 22005
Phone (541) 522-0042 • www.cha-engineers.com



0 50 100
Scale in feet

- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
1. PIPING:
 - a. PVC: PRESSURE CLASS 165--DR25, 200--DR21, AND 235--DR18 AS NOTED.
 - b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250 AND 350 AS NOTED
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- C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.**

SPECIFIC NOTES

① —

RECORD DRAWINGS		REVISIONS AND RECORD OF ISSUE		XREFS:	
12/15/2017	ISSUED FOR CONSTRUCTION	NO.	BY	CK	APP
11/20/2015	LEVEL 3 DESIGN DOCUMENTS				
6/4/2015	LEVEL 2 DESIGN DOCUMENTS				
DATE		DATE		SAVED:	XREF1:
				PLOTTED:	XREF2:
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Kansas City, Missouri

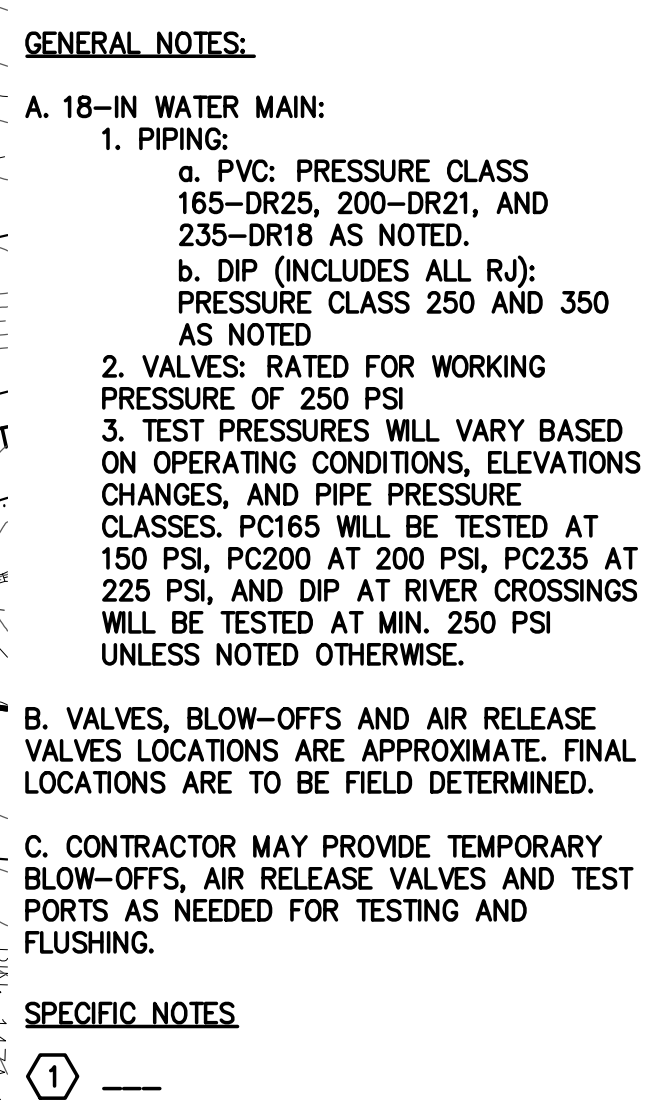
**BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP &
LAKES TO FOREST WATER LINE EXTENSION**

**CONTRACT C WATER MAIN - PLAN & PROFILE
FIVE FORKS RD (RT 722)
STA. 280+00 TO STA. 292+00**

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015
PROJECT NO. 27872
C-50C-126 SHEET OF

RECORD DRAWING 12-15-17

RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

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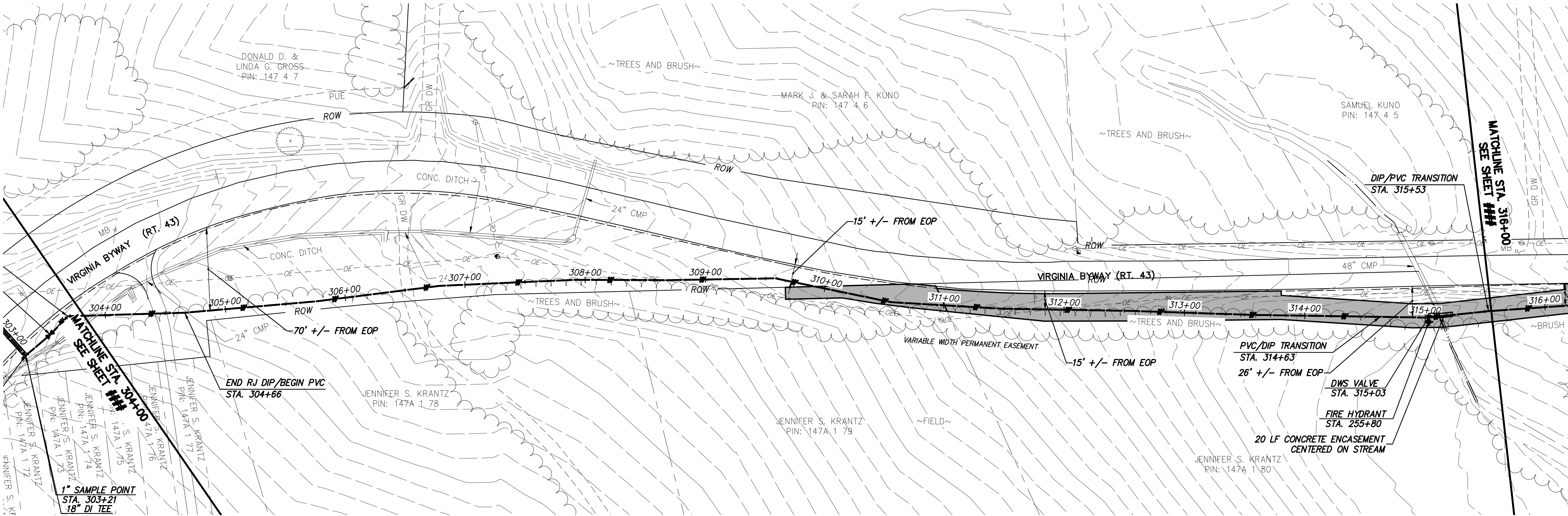
BEDFORD REGIONAL WATER AUTHORITY
 SMITH MOUNTAIN LAKE WTP &
 LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE
 FIVE FORKS RD (RT 722) VIRGINIA BYWAY (RT 43)
 STA. 292+00 TO STA. 304+00

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
PROJECT NO. 27872
C-50C-127 SHEET OF

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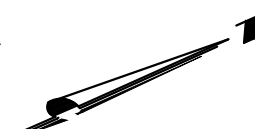
RECORD DRAWING 12-15-17



WATER MAIN PLAN



19411 Woodloch Drive, Suite 2100
Blacksburg, VA 26055
Phone: (940) 532-0442 • www.chaengineering.com



0 50 100
Scale in feet

- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
1. PIPING:
 - a. PVC: PRESSURE CLASS 165--DR25, 200--DR21, AND 235--DR18 AS NOTED.
 - b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250 AND 350 AS NOTED
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- SPECIFIC NOTES**
- 1 —

RECORD DRAWINGS		REVISIONS AND RECORD OF ISSUE		XREF1:		XREF2:		XREF3:		XREF4:	
12/15/2017	ISSUED FOR CONSTRUCTION	DATE	NO.	BY	CHK	APP	SAVED:	PLOTTED:	USER:	DWG VER:	
11/20/2015	LEVEL 3 DESIGN DOCUMENTS										
6/4/2015	LEVEL 2 DESIGN DOCUMENTS										



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**BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP &
LAKES TO FOREST WATER LINE EXTENSION**

**CONTRACT C WATER MAIN - PLAN & PROFILE
VIRGINIA BYWAY (RT 43)
STA. 304+00 TO STA. 316+00**

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015
PROJECT NO. 27872
C-50C-128 SHEET OF

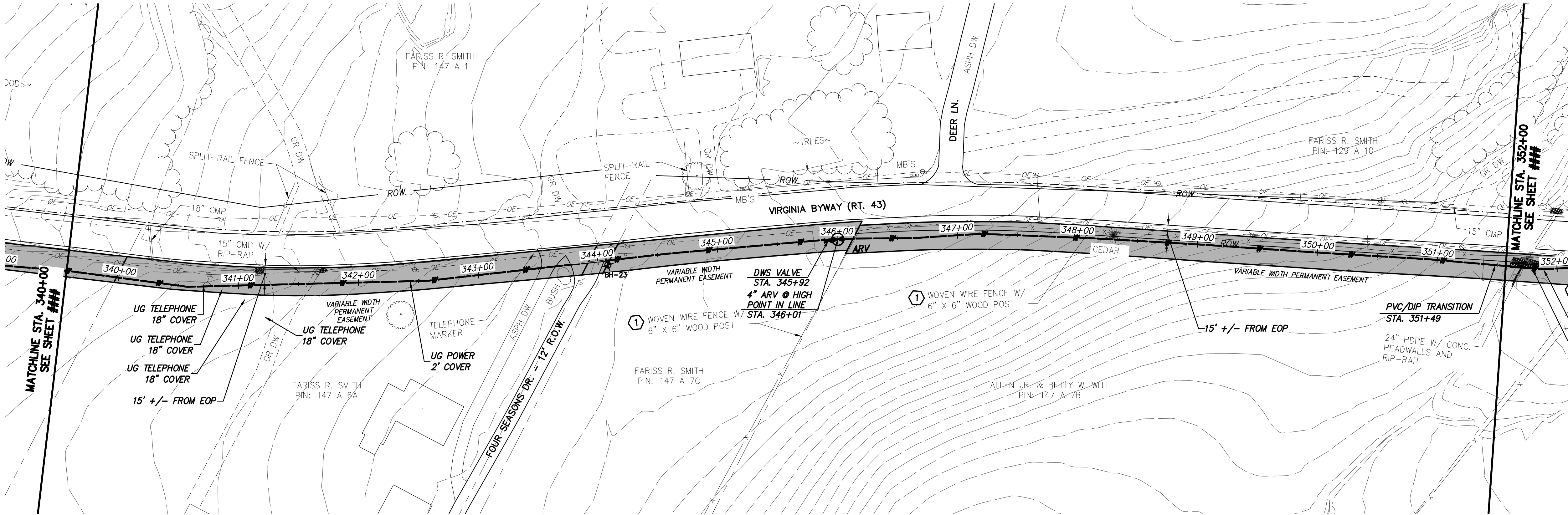
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ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN
ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD
DRAWINGS



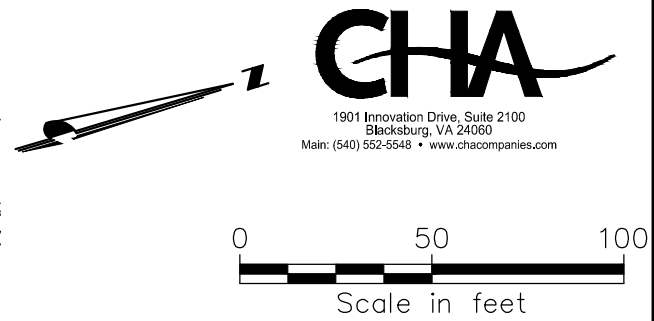
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE



12-15-17



WATER MAIN PLAN



- GENERAL NOTES:**
- A. 18-IN WATER MAIN:**
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- C. CONTRACTOR MAY PROVIDE TEMPORARY BLOW-OFFS, AIR RELEASE VALVES AND TEST PORTS AS NEEDED FOR TESTING AND FLUSHING.**
- SPECIFIC NOTES**
- 1 CONTRACTOR SHALL RELOCATE/REPLACE FENCE FROM APPROXIMATE STATION 346+50 TO STATION 356+00 TO BACK OF PERMANENT EASEMENT. PROPERTY SHALL REMAIN SECURE AT ALL TIMES.

12/15/2017	RECORD DRAWINGS	SMP	BSR	SMS
11/20/2015	ISSUED FOR CONSTRUCTION	-	GLM	JRM
6/4/2015	LEVEL 3 DESIGN DOCUMENTS	B	GLM	JRM
	LEVEL 2 DESIGN DOCUMENTS	A	GLM	JRM
	DATE			NO. BY CK APP
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				DWG VER:

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Kansas City, Missouri

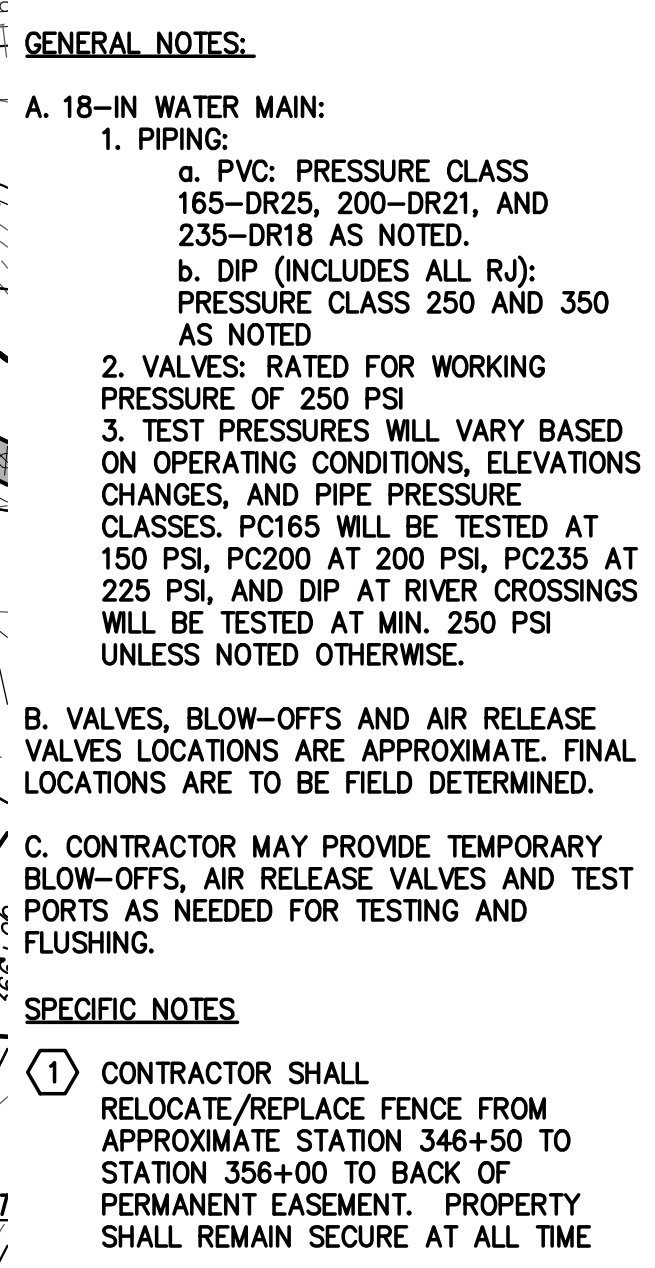
BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION

CONTRACT C WATER MAIN - PLAN & PROFILE
VIRGINIA BYWAY (RT 43)
STA. 340+00 TO STA. 352+00

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015
PROJECT NO. 27872
C-50C-131 SHEET OF

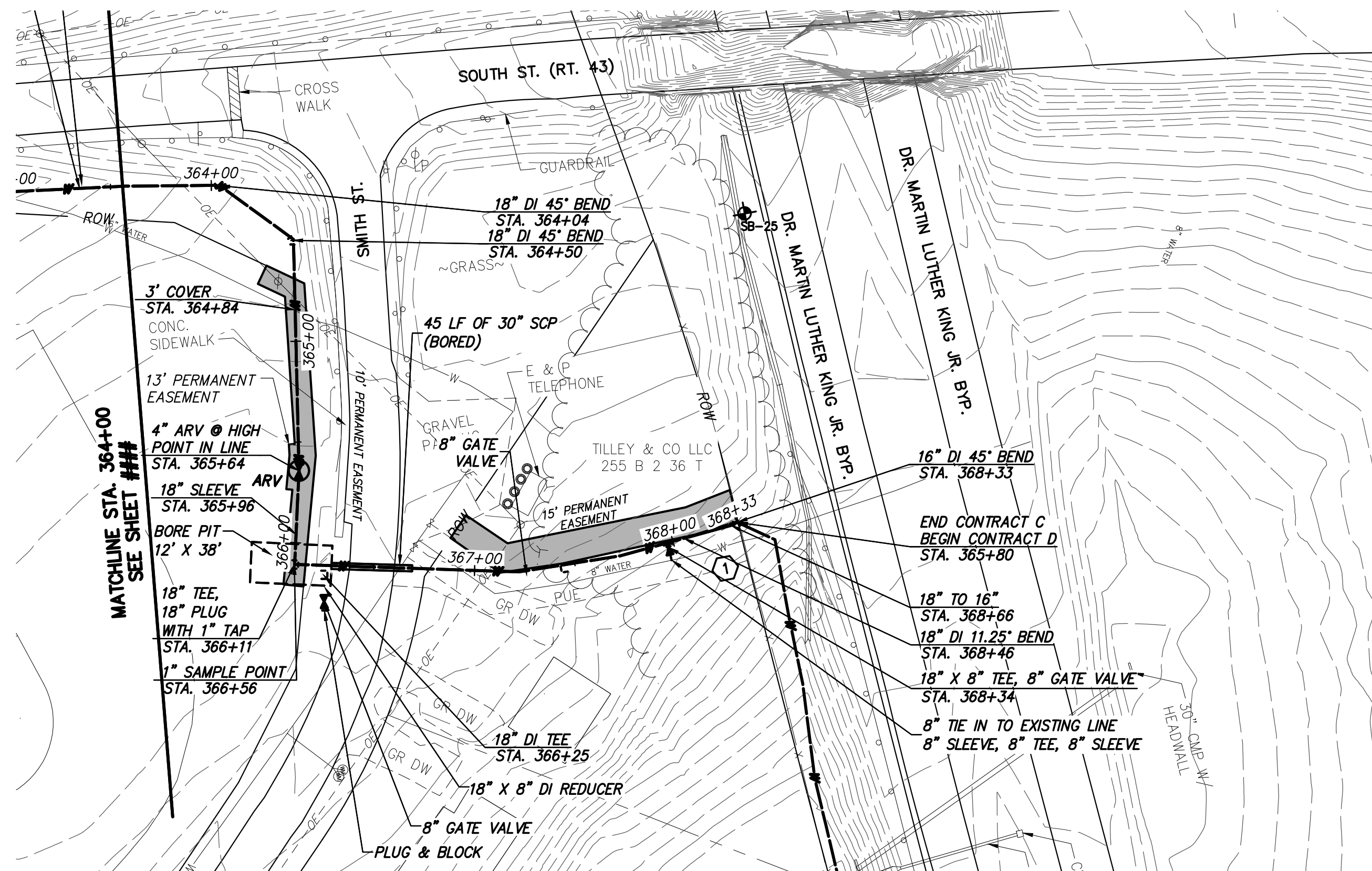
RECORD DRAWING INFORMATION PROVIDED TO CHA BY ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD DRAWINGS

RECORD DRAWING 12-15-17

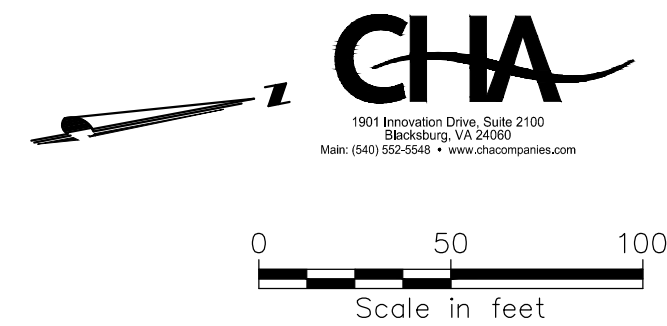


RECORD DRAWING INFORMATION PROVIDED TO CHA BY
ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN
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DRAWINGS

 BLACK & VEATCH Building a world of difference.	Black & Veatch Corporation Kansas City, Missouri	BEDFORD REGIONAL WATER AUTHORITY SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION CONTRACT C WATER MAIN - PLAN & PROFILE VIRGINIA BYWAY (RT 43) STA. 352+00 TO STA. 364+00	DESIGNED: JRM DETAILED: GLM CHECKED: BSR APPROVED: SMS DATE: 11-20-2015	12/15/2017 RECORD DRAWINGS 11/20/2015 ISSUED FOR CONSTRUCTION 6/14/2015 LEVEL 3 DESIGN DOCUMENTS LEVEL 2 DESIGN DOCUMENTS DATE	- SWP BSR SMS - GLM JRM SMS B GLM JRM SMS A GLM JRM SMS NO. BY CK APPR
			XREF1: XREF2: XREF3: XREF4:		
			SAVED: PLOTTED: USER:		
			DWG VER:		
			REVISIONS AND RECORD OF ISSUE		



WATER MAIN PLAN



GENERAL NOTES:

- A. 18-IN WATER MAIN:
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SPECIFIC NOTES

- 1 COORDINATE TIE-IN AND TESTING WITH CONTRACTOR FOR CONTRACT D.

12/15/2017	RECORD DRAWINGS	-	SMP	BSR	SNS
	ISSUED FOR CONSTRUCTION	-	GLJL	JRM	SNS
11/20/2015	LEVEL 3 DESIGN DOCUMENTS	B	GLJL	JRM	SNS
6/4/2015	LEVEL 2 DESIGN DOCUMENTS	A	GLJL	JRM	SNS
DATE	REVISONS AND RECORD OF ISSUE	NO.	BY	CK	APP
XREF1: XREF2: XREF3: XREF4: SAVED: PLOTTED: USER: DWG VER:					

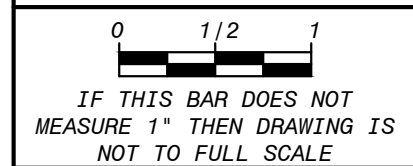
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Kansas City, Missouri

**BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP &
LAKES TO FOREST WATER LINE EXTENSION**

CONTRACT C WATER MAIN - PLAN & PROFILE
VIRGINIA BYWAY (RT 43)
STA. 364+00 TO STA. 368+80

DESIGNED: JRM
DETAILED: GLM
CHECKED: BSR
APPROVED: SMS
DATE: 11-20-2015



PROJECT NO.
27872

C-50C-133
SHEET
OF

RECORD DRAWING INFORMATION PROVIDED TO CHA BY
ACRES OF VIRGINIA, INC. CHA DID NOT PERFORM AN
ACTUAL FIELD SURVEY IN PREPARATION OF THESE RECORD
DRAWINGS

RECORD DRAWING