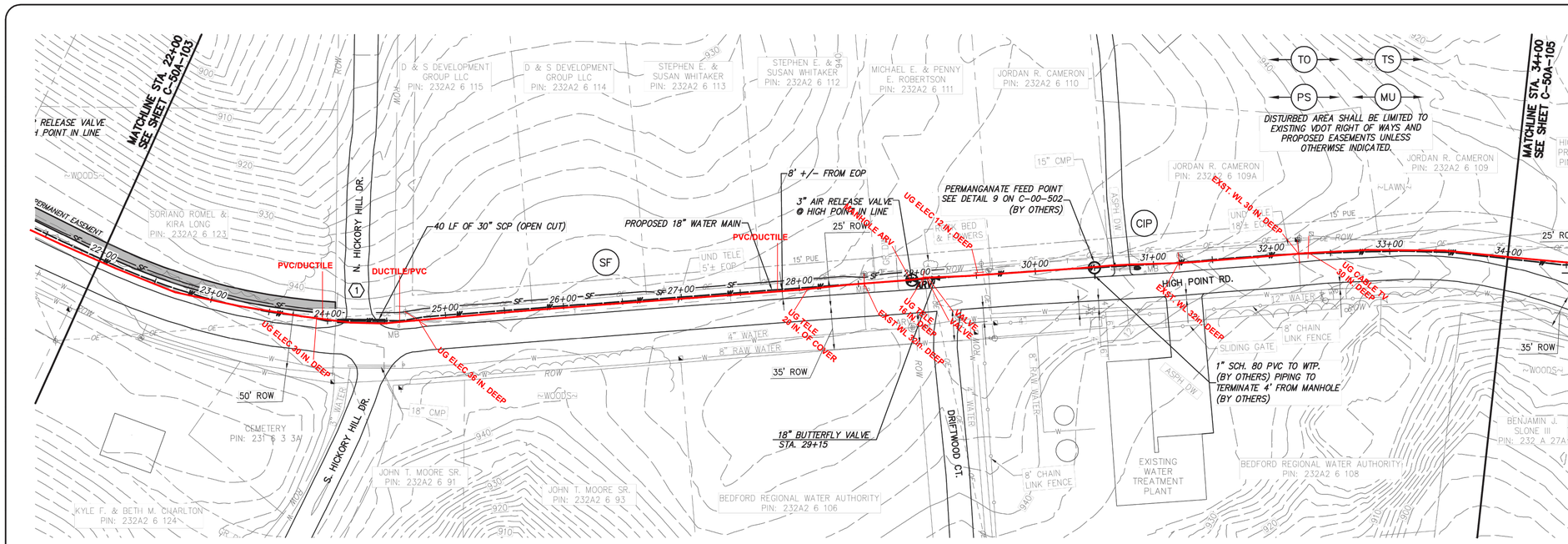
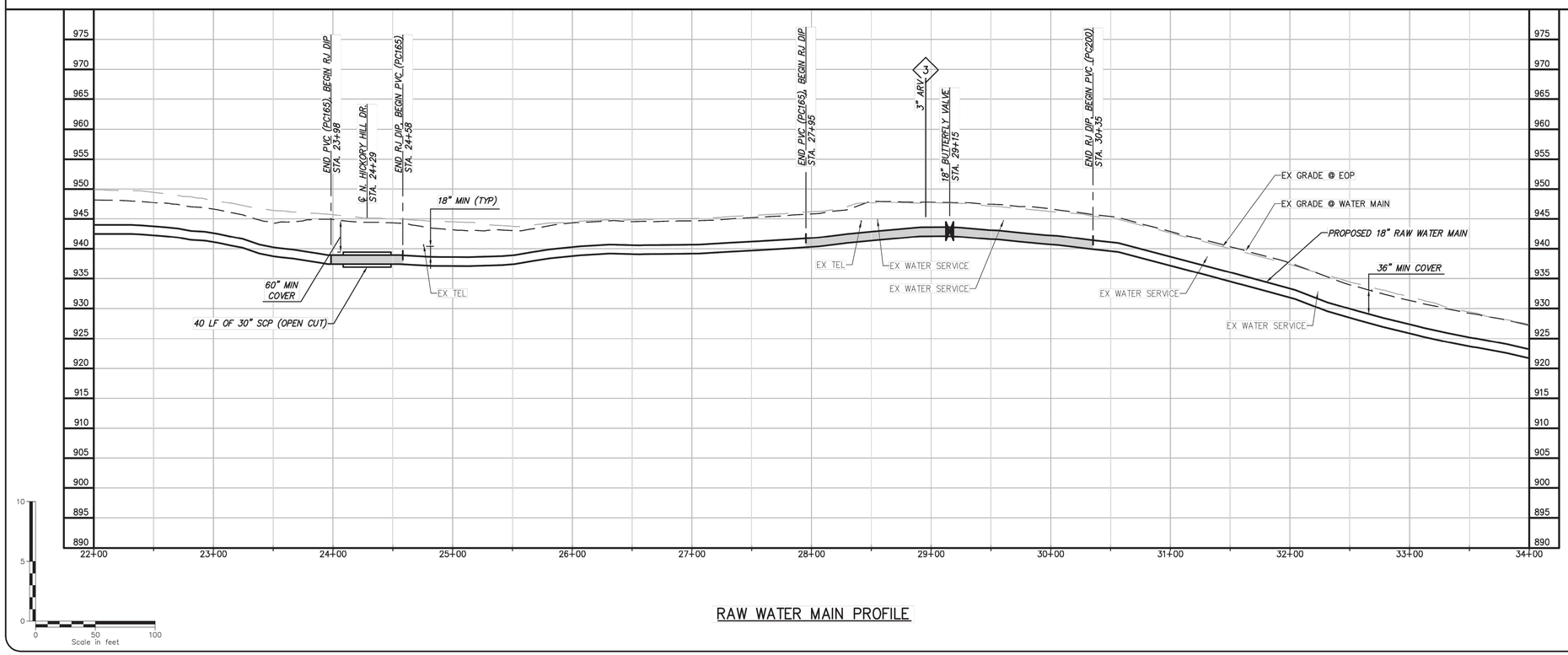


RAW WATER MAIN PLAN



RAW WATER MAIN PROFILE

ALL RED LINE ITEMS SHOWN REPRESENT UTILITIES EITHER INSTALLED OR FOUND EXISTING DURING THE COURSE OF CONSTRUCTION AND HAVE BEEN OVERLAID ON PLANS PREPARED BY CHA FOR BLACK & VEATCH WITH ALL PARTIES PERMISSION. THE PLANS AS ORIGINALLY DESIGNED FOR BLACK & VEATCH BY CHA ARE NOT MODIFIED OR CHANGED IN ANY CAPACITY BY THE RED LINE OVERLAY.

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Blacksburg, VA 24060
Main: (540) 552-0700 • www.chaenvironmental.com

0 50 100
Scale in feet

GENERAL NOTES:

A. 18-IN RAW WATER LINE:
1. PIPING:
a. PVC: PRESSURE CLASS 165-DR25 AND PRESSURE CLASS 200-DR21 AS NOTED.
b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250
2. VALVES: RATED FOR WORKING PRESSURE OF 250 PSI
3. TEST PRESSURE: 150 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.

D. CONTRACTOR SHALL ADHERE TO MINIMUM STANDARD NO. 16.

SPECIFIC NOTES

(1) ONE LANE TO REMAIN OPEN AT ALL TIMES.

NO.	BY	CK	APP	DATE	REVISIONS AND RECORD OF ISSUE
3	SNP	JRM	SMS	10/29/2015	ISSUED FOR CONSTRUCTION
D	SNP	JRM	SMS	9/28/2015	CONTRACT A REVISIONS AS PER BEDFORD COUNTY
C	SNP	JRM	SMS	8/24/2015	VDH SUBMITTAL NO. 2
B	SNP	JRM	SMS	7/31/2015	ISSUED FOR PERMITTING

XREF1:
XREF2:
XREF3:
XREF4:
SAVED:
PLOTTED:
USER:
DWG VER:

VIRGINIA PROFESSIONAL ENGINEER STEPHEN M. STEELE Lic. No. 41449 10/29/15

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Kansas City, Missouri

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

CONTRACT A RAW WATER MAIN - PLAN & PROFILE

DESIGNED: JRM
DETAILED: SNP
CHECKED: BSR
APPROVED: SMS
DATE: 10-2015

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

PROJECT NO. 27872

C-50A-104
SHEET
OF

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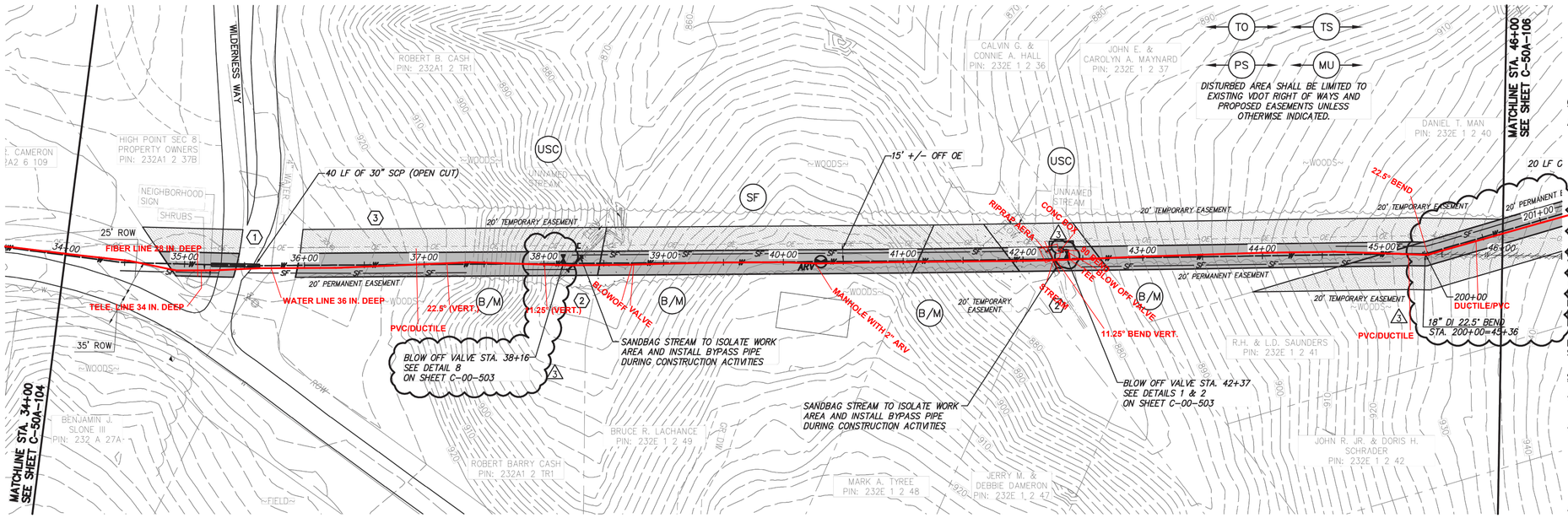

RAW WATER MAIN PLAN

GENERAL NOTES:

A. 18-IN RAW WATER LINE:
1. PIPING:
a. PVC: PRESSURE CLASS 165-DR25 AND PRESSURE CLASS 200-DR21 AS NOTED.
b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250
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3. TEST PRESSURE: 150 PSI UNLESS NOTED OTHERWISE

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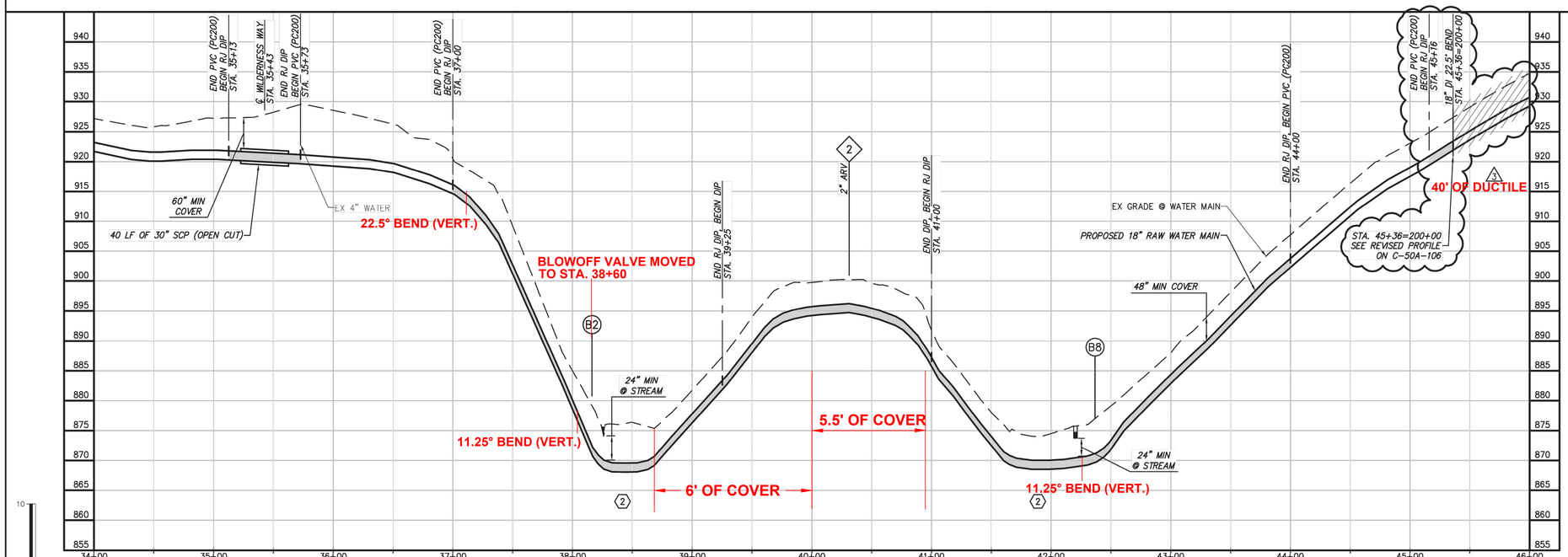
D. CONTRACTOR SHALL ADHERE TO MINIMUM STANDARD NO. 16.

SPECIFIC NOTES

1. ONE LANE TO REMAIN OPEN AT ALL TIMES.
2. STRUCTURAL COVER/SHEATHING TO BE PLACED ADJACENT TO TRENCH WITHIN MARSH AREA AS A CONSTRUCTION VEHICLE PATH. PRESERVE, STOCKPILE & REPLACE TOP 12" OF TOPSOIL EXCAVATED FOR INSTALLATION OF WATER MAIN.
3. PROVIDE WATER MARKER POSTS (SEE DETAIL 4, C-00-501) AT APPROX. 500 FOOT STATIONS AND AT BENDS BETWEEN STA. 36+00 AND STA. 77+00.



RAW WATER MAIN PROFILE

ALL RED LINE ITEMS SHOWN REPRESENT UTILITIES EITHER INSTALLED OR FOUND EXISTING DURING THE COURSE OF CONSTRUCTION AND HAVE BEEN OVERLAID ON PLANS PREPARED BY CHA FOR BLACK & VEATCH WITH ALL PARTIES PERMISSION. THE PLANS AS ORIGINALLY DESIGNED FOR BLACK & VEATCH BY CHA ARE NOT MODIFIED OR CHANGED IN ANY CAPACITY BY THE RED LINE OVERLAY.

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DATE	REVISIONS AND RECORD OF ISSUE	NO.	BY	CK	APP
10/29/2015	ISSUED FOR CONSTRUCTION	3	SNP	JRM	SMS
9/28/2015	CONTRACT A REVISIONS AS PER BEDFORD COUNTY	D	SNP	JRM	SMS
8/24/2015	VDH SUBMITTAL NO. 2	C	SNP	JRM	SMS
7/31/2015	ISSUED FOR PERMITTING	C	SNP	JRM	SMS

SAVED: XREF1:
PLOTTED: XREF2:
USER: XREF3:
DWG VER: XREF4:

VIRGINIA PROFESSIONAL ENGINEER STEPHEN M. STEELE Lic. No. 41449 10/29/15

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Kansas City, Missouri

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

CONTRACT A RAW WATER MAIN - PLAN & PROFILE

DESIGNED: JRM
DETAILED: SNP
CHECKED: BSR
APPROVED: SMS
DATE: 10-2015

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

PROJECT NO. 27872

C-50A-105
SHEET
OF

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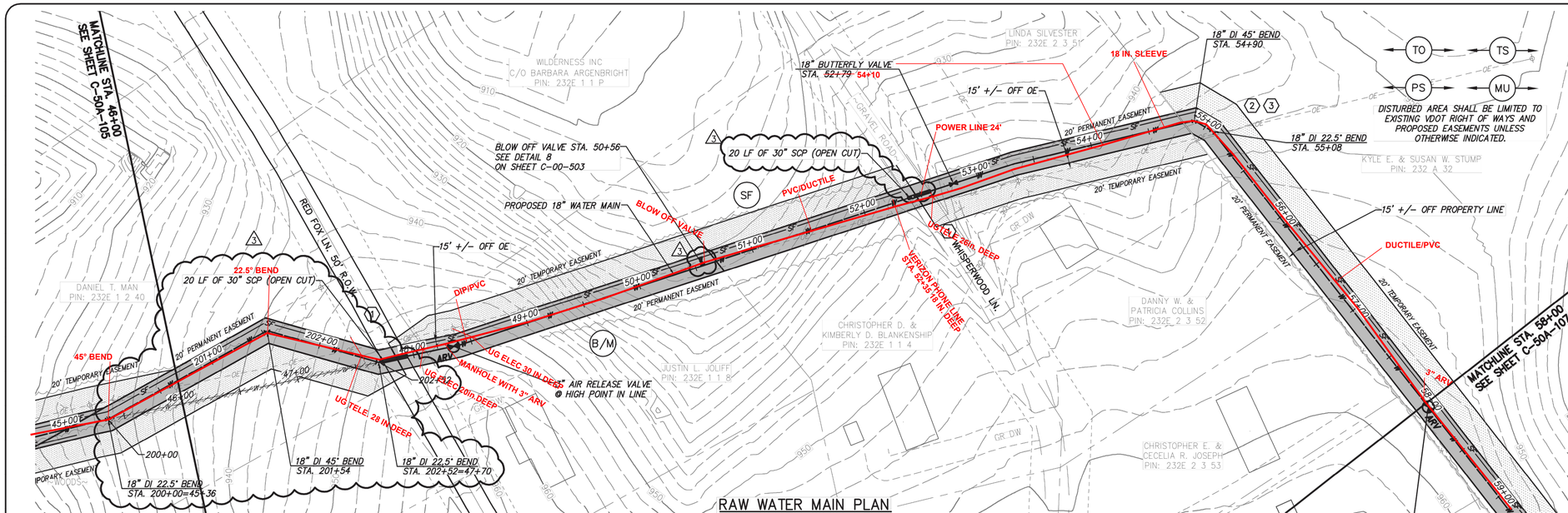
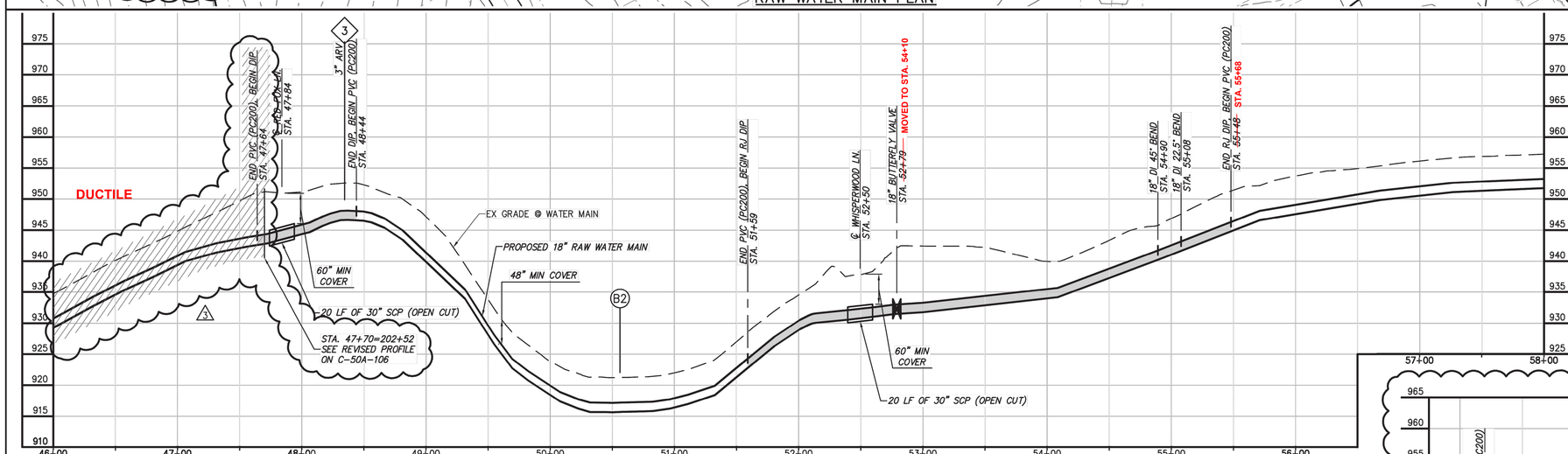
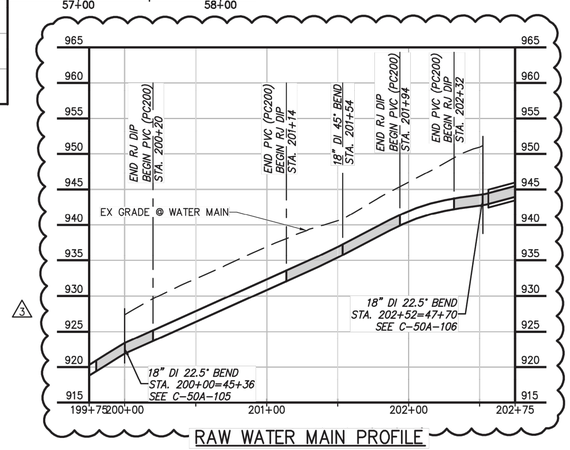


RAW WATER MAIN PLAN



RAW WATER MAIN PROFILE

ALL RED LINE ITEMS SHOWN REPRESENT UTILITIES EITHER INSTALLED OR FOUND EXISTING DURING THE COURSE OF CONSTRUCTION AND HAVE BEEN OVERLAID ON PLANS PREPARED BY CHA FOR BLACK & VEATCH WITH ALL PARTIES PERMISSION. THE PLANS AS ORIGINALLY DESIGNED FOR BLACK & VEATCH BY CHA ARE NOT MODIFIED OR CHANGED IN ANY CAPACITY BY THE RED LINE OVERLAY.



RAW WATER MAIN PROFILE

GENERAL NOTES:

A. 18-IN RAW WATER LINE:
1. PIPING:
a. PVC: PRESSURE CLASS 165-DR25 AND PRESSURE CLASS 200-DR21 AS NOTED.
b. DIP (INCLUDES ALL RJ): PRESSURE CLASS 250
2. VALVES: RATED FOR WORKING PRESSURE OF 250 PSI
3. TEST PRESSURE: 150 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.

D. CONTRACTOR SHALL ADHERE TO MINIMUM STANDARD NO. 16.

SPECIFIC NOTES

1. ONE LANE TO REMAIN OPEN AT ALL TIMES. REPAIR GRAVEL ROAD WITH COMPACTED SUBBASE AND A MIN 8" NO. 21A OR NO. 22 STONE.
2. REMOVE AND REPLACE EXISTING FENCING WITH SIMILAR MATERIALS. MAINTAIN SECURITY OF PROPERTY AT ALL TIMES. INSTALL 12' FARM GATE AT ALL FENCE CROSSINGS. SEE DETAIL 7 ON SHEET C-00-505.
3. PROVIDE WATER MARKER POSTS (SEE DETAIL 4, C-00-501) AT APPROX. 500 FOOT STATIONS AND AT BENDS BETWEEN STA. 36+00 AND STA. 77+00.

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NO.	BY	CK	APP	DATE	REVISIONS AND RECORD OF ISSUE
3	SNP	JRM	SMS	10/29/2015	ISSUED FOR CONSTRUCTION
D	SNP	JRM	SMS	9/28/2015	CONTRACT A REVISIONS AS PER BEDFORD COUNTY
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B	SNP	JRM	SMS	7/31/2015	ISSUED FOR PERMITTING

XREF1:
XREF2:
XREF3:
XREF4:
SAVED:
PLOTTED:
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DWG VER:

COMMONWEALTH OF VIRGINIA
STEPHEN M. STEELE
Lic. No. 41449
10/29/15
PROFESSIONAL ENGINEER

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Kansas City, Missouri

BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP & LAKES TO FOREST WATER LINE EXTENSION
CONTRACT A RAW WATER MAIN - PLAN & PROFILE

DESIGNED: JRM
DETAILED: SNP
CHECKED: BSR
APPROVED: SMS
DATE: 10-2015

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

PROJECT NO.
27872

C-50A-106
SHEET
OF

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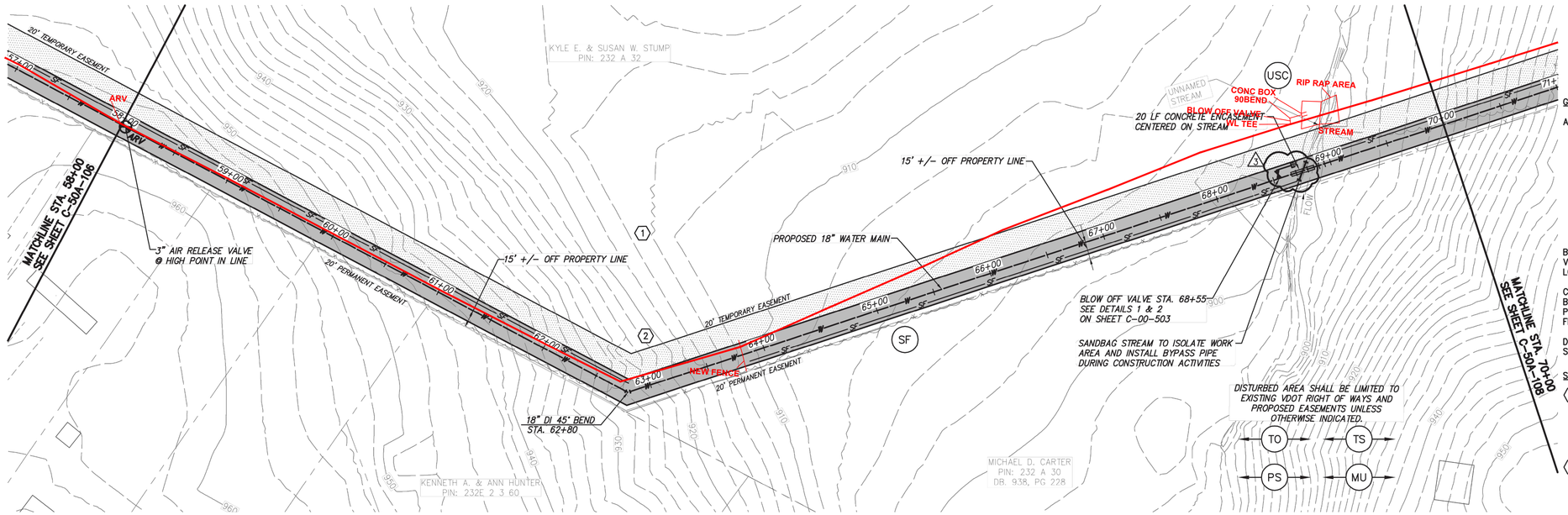

RAW WATER MAIN PLAN

CHA
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Blacksburg, VA 24060
Main: (540) 552-0200 - www.chaincorporate.com

0 50 100
Scale in feet

GENERAL NOTES:

A. 18-IN RAW WATER LINE:
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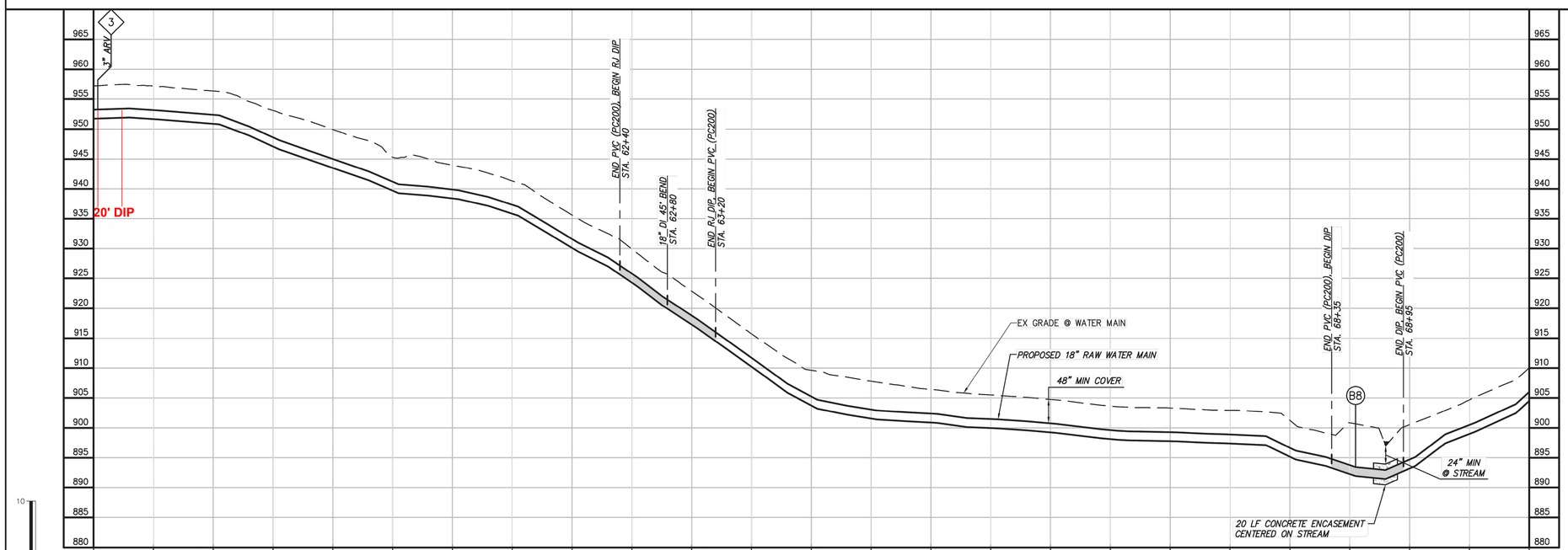
SPECIFIC NOTES

1. REMOVE AND REPLACE EXISTING FENCING WITH SIMILAR MATERIALS. MAINTAIN SECURITY OF PROPERTY AT ALL TIMES. INSTALL 12' FARM GATE AT ALL FENCE CROSSINGS. SEE DETAIL 7 ON SHEET C-00-505.

2. PROVIDE WATER MARKER POSTS (SEE DETAIL 4, C-00-501) AT APPROX. 500 FOOT STATIONS AND AT BENDS BETWEEN STA. 36+00 AND STA. 77+00.



RAW WATER MAIN PROFILE

ALL RED LINE ITEMS SHOWN REPRESENT UTILITIES EITHER INSTALLED OR FOUND EXISTING DURING THE COURSE OF CONSTRUCTION AND HAVE BEEN OVERLAID ON PLANS PREPARED BY CHA FOR BLACK & VEATCH WITH ALL PARTIES PERMISSION. THE PLANS AS ORIGINALLY DESIGNED FOR BLACK & VEATCH BY CHA ARE NOT MODIFIED OR CHANGED IN ANY CAPACITY BY THE RED LINE OVERLAY.

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3	SNP	JRM	SMS	10/29/2015	ISSUED FOR CONSTRUCTION
D	SNP	JRM	SMS	9/28/2016	CONTRACT A REVISIONS AS PER BEDFORD COUNTY
D	SNP	JRM	SMS	8/24/2016	VDH SUBMITTAL NO. 2
C	SNP	JRM	SMS	7/31/2015	ISSUED FOR PERMITTING

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XREF2:
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USER:
DWG VER:

VIRGINIA PROFESSIONAL ENGINEER STEPHEN M. STEELE Lic. No. 41440 10/29/15

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

CONTRACT A RAW WATER MAIN - PLAN & PROFILE

DESIGNED: JRM
DETAILED: SNP
CHECKED: BSR
APPROVED: SMS
DATE: 10-2015

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

PROJECT NO.
27872

C-50A-107
SHEET
OF

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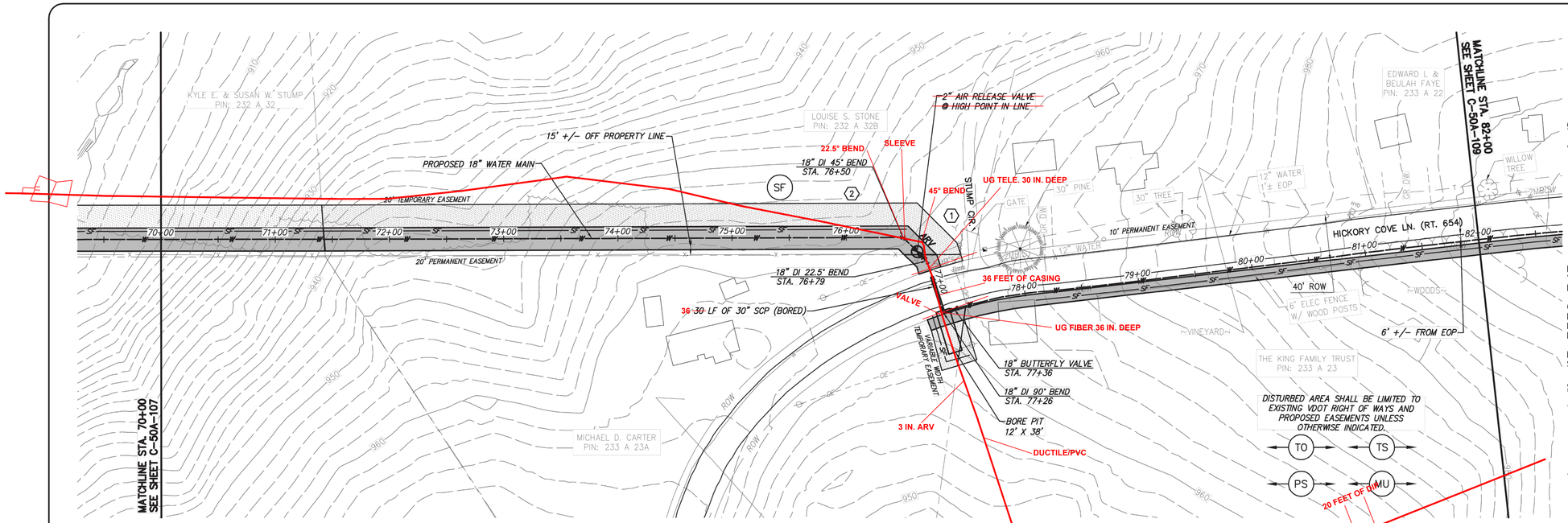
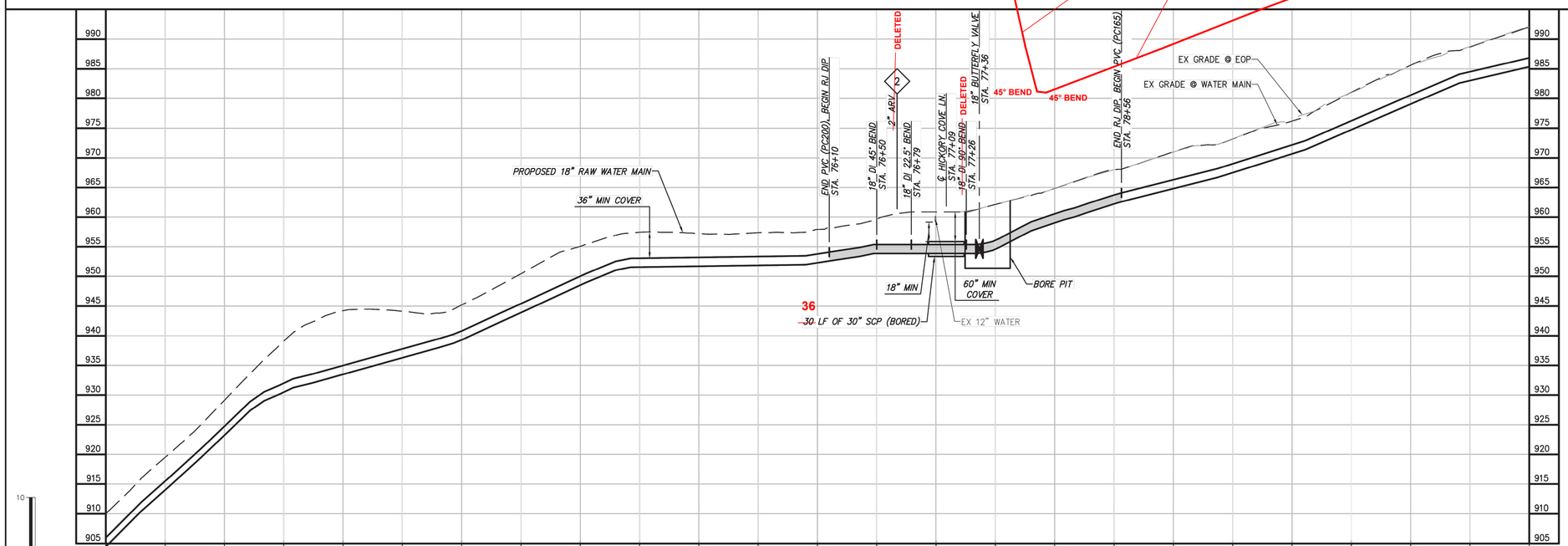


RAW WATER MAIN PLAN



RAW WATER MAIN PROFILE

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CHA
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Blacksburg, VA 24060
Main: (540) 552-0700 • www.chacompanies.com

0 50 100
Scale in feet

GENERAL NOTES:

A. 18-IN RAW WATER LINE:
1. PIPING:
a. PVC: PRESSURE CLASS 165-DR25 AND PRESSURE CLASS 200-DR21 AS NOTED.
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COMMONWEALTH OF VIRGINIA
STEPHEN M. STEELE
Lic. No. 41449
10/29/15
PROFESSIONAL ENGINEER

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BEDFORD REGIONAL WATER AUTHORITY
SMITH MOUNTAIN LAKE WTP &
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CONTRACT A RAW WATER MAIN - PLAN & PROFILE

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DATE: 10-2015

0 1/2 1
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PROJECT NO.
27872

C-50A-108
SHEET
OF

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