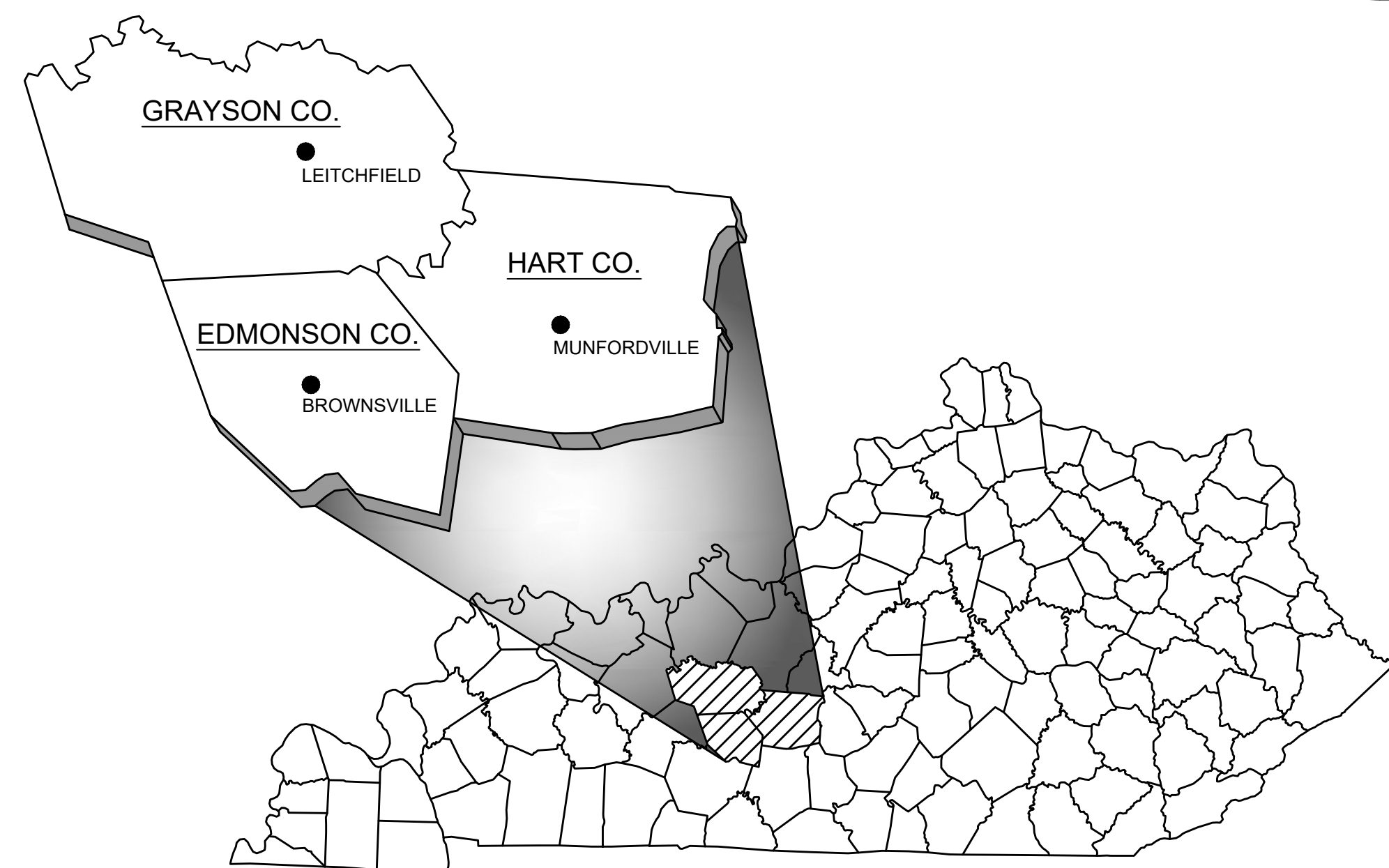


2017 EDMONSON/HART WATER LINE PROJECT

EDMONSON COUNTY WATER DISTRICT

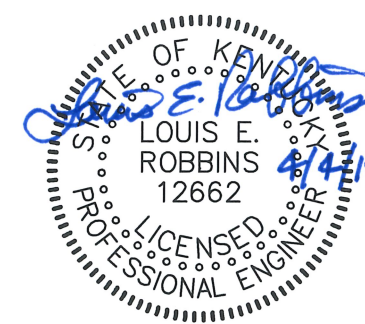


Edmonson County Water District



engineering | architecture | geospatial

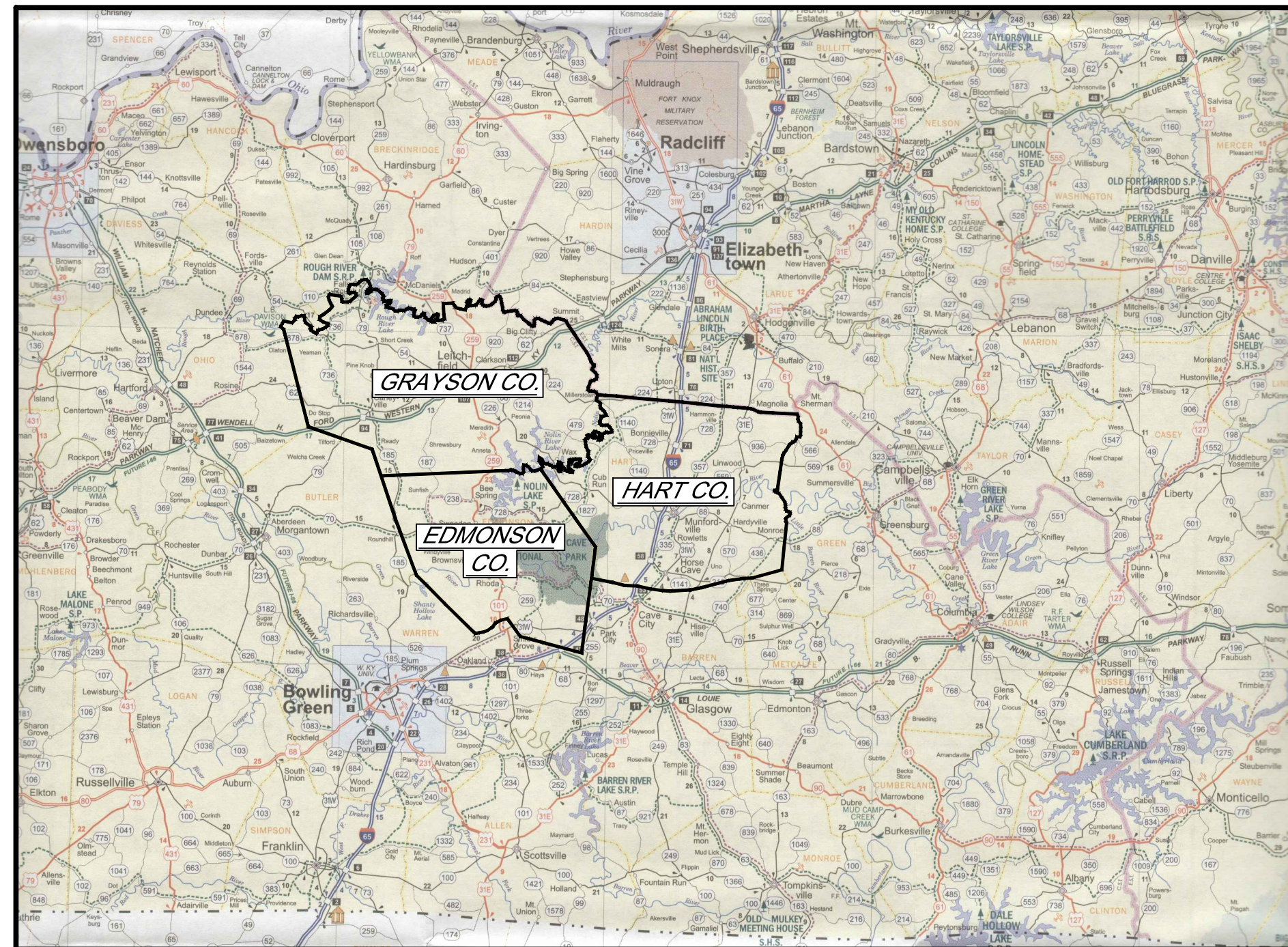
www.grwinc.com



APRIL 2019

DWG NO.	INDEX OF SHEETS
G-01	VICINITY MAP, LEGEND AND GENERAL NOTES
G-02	PROJECT KEY MAP
C-03	JIM THOMPSON RD. - STA. 0+00 TO STA. 36+40 E.O.L.
C-04	CEDAR LN. - STA. 0+00 TO STA. 20+00 E.O.L.
C-05	PRICEVILLE RD. - STA. 0+00 TO STA. 4+45 E.O.L. JOHNSON CEMETERY RD. - STA. 0+00 TO STA. 18+55 E.O.L.
C-06	CEDAR HILL CHURCH RD. - STA. 0+00 TO STA. 47+30 E.O.L.
C-07	NOAH STEVENSON RD. - STA. 0+00 TO STA. 34+85 E.O.L.
C-08	PATTON RD. - STA. 0+00 TO STA. 45+75 E.O.L.
C-09	CEDAR HILL BOOSTER PUMP STATION SITE PLAN & DETAILS
C-10	CEDAR HILL BOOSTER PUMP STATION PLAN, SECTIONS & DETAILS
C-11	LEAK DETECTOR METERS
C-12	HYDRANT LOCATIONS
C-13	HYDRANT LOCATIONS
C-14	HYDRANT LOCATIONS
WD-15	WATER LINE STANDARD DETAILS
WD-16	WATER LINE STANDARD DETAILS
WD-17	WATER LINE STANDARD DETAILS
EC-18	EROSION CONTROL STANDARD DETAILS

GRW PROJECT NO. 3621-08



VICINITY MAP

SCALE: NOT TO SCALE

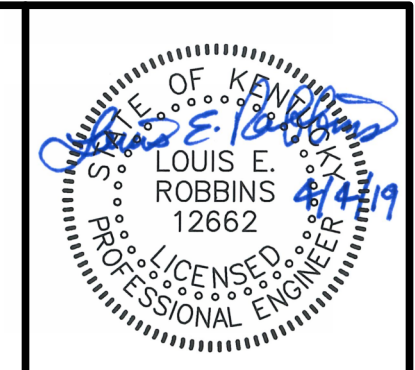
LEGEND

EXISTING	NEW	
---	---	WATER LINE
---	---	WATER SERVICE LINE
---	---	CASING PIPE
---	---	CONC. ENCASEMENT/CREEK CROSSING
---	---	VALVE
---	---	WATER METER
---	---	FIRE HYDRANT
---	---	BLOW OFF ASSEMBLY
---	---	MANUAL AIR BLEED VALVE
---	---	AIR RELEASE/AIR VACUUM VALVE
---	---	FLOW METER
---	---	PRESSURE REDUCING VALVE
---	---	TEST METER BY-PASS
---	---	REDUCER
---	---	CULVERT PIPE
---	---	EXIST. WATER LINE TO BE ABANDONED
---	---	CUT & CAP EXISTING LINE
---	---	CUT & PLUG EXISTING LINE
---	---	GAS LINE
---	---	GAS VALVE
---	---	UNDERGROUND TELEPHONE LINE
---	---	OVERHEAD TELEPHONE LINE
---	---	TELEPHONE PEDESTAL
---	---	UNDERGROUND ELECTRIC LINE
---	---	OVERHEAD ELECTRIC LINE
---	---	POWER POLE
---	---	GUY POLE
---	---	LIGHT POLE
---	---	MAIL BOX
---	---	SIGN
---	---	TREE
---	---	UNDERGROUND CABLE TV
---	---	STORM DRAIN LINE
---	---	STORM DRAIN DROP INLET
---	---	HEADWALL OR INLET WALL
---	---	CREEK OR DITCH
---	---	FENCE ROW
---	---	PROPERTY LINE/RIGHT OF WAY
---	---	PARCEL NUMBER
---	---	PROPERTY CORNER
---	---	IRON PIN

GENERAL NOTES

1. THE CONTRACTOR SHALL RESTORE ALL CULVERTS, FENCES, WALLS, SMALL ORNAMENTAL TREES, CULTIVATED SHRUBS, FLOWERS, SIGNS, LIGHTS/POWER POLES, STREET MARKERS, MAIL BOXES, WATER/GAS LINES, WATER/GAS METERS & BOXES INCLUDING SHUT-OFFS, AND LAWNS DISTURBED BY CONSTRUCTION OPERATIONS TO THEIR ORIGINAL CONDITIONS. THE COST OF THIS WORK SHALL BE MERGED IN THE UNIT BID AND CONTRACT PRICES FOR THE PROPOSED WORK.
- 1a. CONTRACTOR SHALL AVOID CUTTING NEW FENCES UNLESS APPROVED BY PROPERTY OWNER.
2. WHEN IN EASEMENTS THE CONTRACTOR SHALL PROTECT AND RESTORE SAID PROPERTY TO CONDITION SIMILAR OR EQUAL TO THAT EXISTING AT THE COMMENCEMENT OF CONSTRUCTION, EXCEPT AS NOTED.
3. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. BEFORE CONSTRUCTION, CONTRACTOR SHALL CONTACT :

KENTUCKY UNDERGROUND PROTECTION
1-800-752-6007
2 DAYS NOTICE
4. CONTRACTOR SHALL CUT & CAP EXISTING WATER LINES AT LOCATIONS NOTED ON PLANS OR AS DIRECTED BY ENGINEER AFTER NEW LINE IS IN OPERATION & THE EXISTING HOUSE SERVICES HAVE BEEN RECONNECTED.
5. CONTRACTOR SHALL NOT PLACE ANY VALVES OR OTHER ABOVE GRADE DEVICES IN ANY DITCH LINE ON STATE HIGHWAY RIGHT OF WAY.
6. CONTRACTOR SHALL RECONNECT ALL EXISTING WATER METERS & FIRE HYDRANTS SHOWN ON PLANS & NOTED BY ENGINEER AFTER NEW WATER LINE IS IN OPERATION.
7. IF ANY EXISTING STORM SEWERS ARE SUBSTANTIALLY DAMAGED AS DETERMINED BY THE AVE AND OR OWNER, THE REPAIR SHALL BE MADE WITH R.C. PIPE FROM STRUCTURE-TO- STRUCTURE. PIPE SIZE SHALL BE EQUAL TO EXISTING.
8. SUFFICIENT PRECAUTIONS SHALL BE TAKEN DURING CONSTRUCTION TO MINIMIZE THE RUN-OFF OF POLLUTING SUBSTANCES SUCH AS SILT, CLAY, FUELS, OILS, BITUMENS, CALCIUM CHLORIDE, OR OTHER POLLUTING MATERIALS HARMFUL TO HUMANS, FISH OR OTHER LIFE, INTO THE SUPPLIES AND SURFACE WATERS OF THE STATE. CONTROL MEASURES MUST BE ADEQUATE TO ASSURE THAT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS ARE MET. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE LAWS AND REGULATIONS ARE MET AND IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION DOES NOT HARM THE WATERS OF KENTUCKY. THE PROTECTION OF THE SITE SHALL CONTINUE THROUGHOUT THE CONSTRUCTION PERIOD. SPECIAL PRECAUTIONS SHALL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT OPERATIONS WHICH PROMOTE EROSION.
9. THE TEMPORARY POLLUTION CONTROL PROVISIONS SHALL BE COORDINATED WITH THE PERMANENT EROSION CONTROL MEASURES, TO INSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION CONTROL THROUGHOUT THE CONSTRUCTION AND POST-CONSTRUCTION PERIOD OF THE PROJECT. NATURAL COVER SHOULD BE MAINTAINED AS LONG AS POSSIBLE AND GRADED AREAS SHOULD BE STABILIZED AS SOON AS POSSIBLE.
10. THE CONTRACTOR SHALL OBTAIN ALL PERMITS FROM THE APPROPRIATE FEDERAL, STATE, COUNTY AND/OR LOCAL AGENCIES TO CROSS ALL HIGHWAYS, STREETS, STREAMS, EASEMENTS, ETC...
11. STATE HIGHWAY RIGHT-OF-WAY INFORMATION PROVIDED BY THE STATE OF KENTUCKY DEPARTMENT OF HIGHWAYS. IF THE R-O-W IS NOT ESTABLISHED BY DEED OR IF HIGHWAY PLANS ARE NOT AVAILABLE, THEN THE HIGHWAY IS CONSIDERED TO HAVE A STATUTORY RIGHT-OF-WAY. STATUTORY R-O-W'S ARE DETERMINED BY TOPO CHARACTERISTICS IN THE FIELD. SUCH R-O-W'S ARE USUALLY DESCRIBED AS EXTENDING FROM FENCELINE TO FENCELINE, DITCHLINE TO DITCHLINE, TO TOE OF SLOPE, TO TOP OF BANK, ETC... QUESTIONS CONCERNING R-O-W LOCATION ON ANY STATE HIGHWAY SHOULD BE REFERRED TO THE APPROPRIATE DISTRICT OFFICE OF THE STATE OF KENTUCKY DEPARTMENT OF HIGHWAYS.
12. PROPERTY OWNERS AND PARCEL INFORMATION PROVIDED BY THE COUNTY PROPERTY VALUATION AUTHORITY. WATER LINE INFORMATION PROVIDED BY THE WATER DISTRICT.
13. UNLESS OTHERWISE NOTED ON PLANS NEW WATER LINES SHALL BE PLACED ON PRIVATE PROPERTY 10 L.F. OUTSIDE ROADWAY RIGHT-OF-WAYS.



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INCORPORATED.

GRW
engineering | architecture | geospatial
www.grwinc.com

VICINITY MAP, LEGEND AND GENERAL NOTES
2017 EDMONSON/HART WATER LINE PROJECT
EDMONSON COUNTY WATER DISTRICT

REVISIONS	DATE	DESCRIPTION	DESIGNED BY	DRAWN BY	REVIEWED BY	APPROVED BY
NO			LER	DM	LER	LER

SCALE CHECK: _____ THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: APRIL 2019
SCALE: AS NOTED
SHEET NO. **G-01**

CALL BEFORE YOU DIG
IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSSIBLY INCOMPLETE. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.

Kentucky 811
IN KENTUCKY DIAL 811 OR 1-800-752-6007
TWO BUSINESS DAYS BEFORE YOU DIG

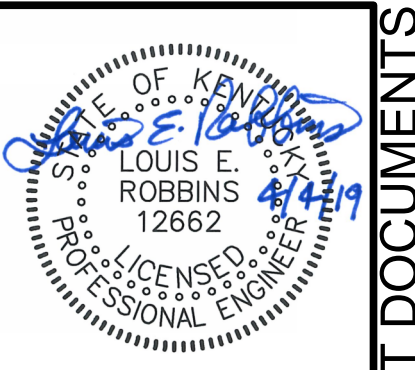
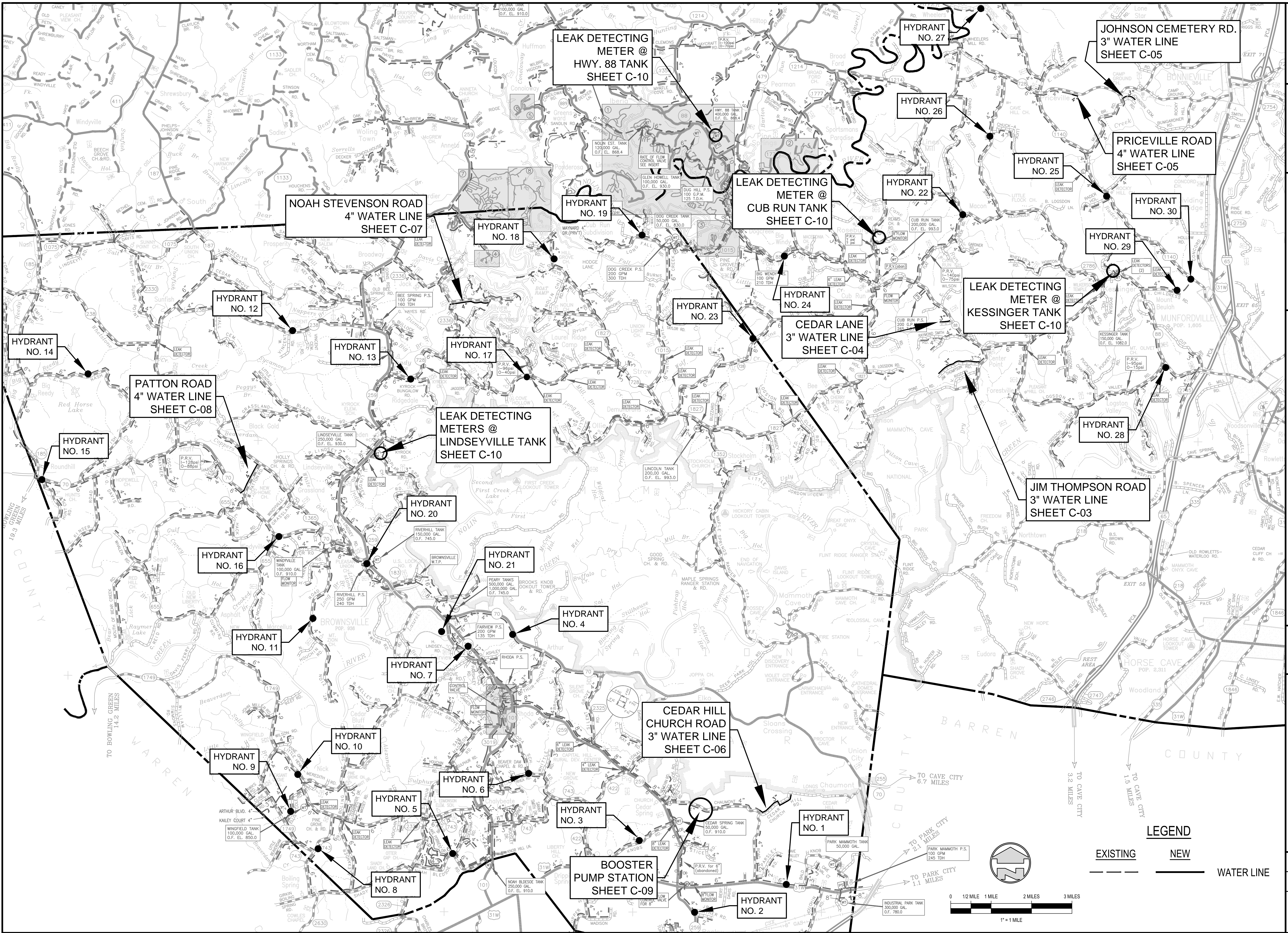
FILE NAME: G:\3621-Edmonson_C0108-2017 WL st\Working Drawings\AutCAD\3621-08-G-01.dwg
 PRINTED: 4/12/2019 @ 2:22PM
 PLOTTED BY: dwwmoris

CONTRACT DOCUMENTS

PLOTTED BY: dwwmms

PRINTED: 4/10/19 @ 2:22PM

FILE NAME: G:\3621-Edmonson Col08-2017 WL stWorking Drawings\AutoCAD\3621-08-G-02.dwg



GRW PROJECT NO. 3621-08

engineering | architecture | geospatial
www.grwinc.com

PROJECT KEY MAP

2017 EDMONSON/HART WATER LINE PROJECT
EDMONSON COUNTY WATER DISTRICT

REVISIONS	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED	APPROVED
			LER	DM	LER	LER

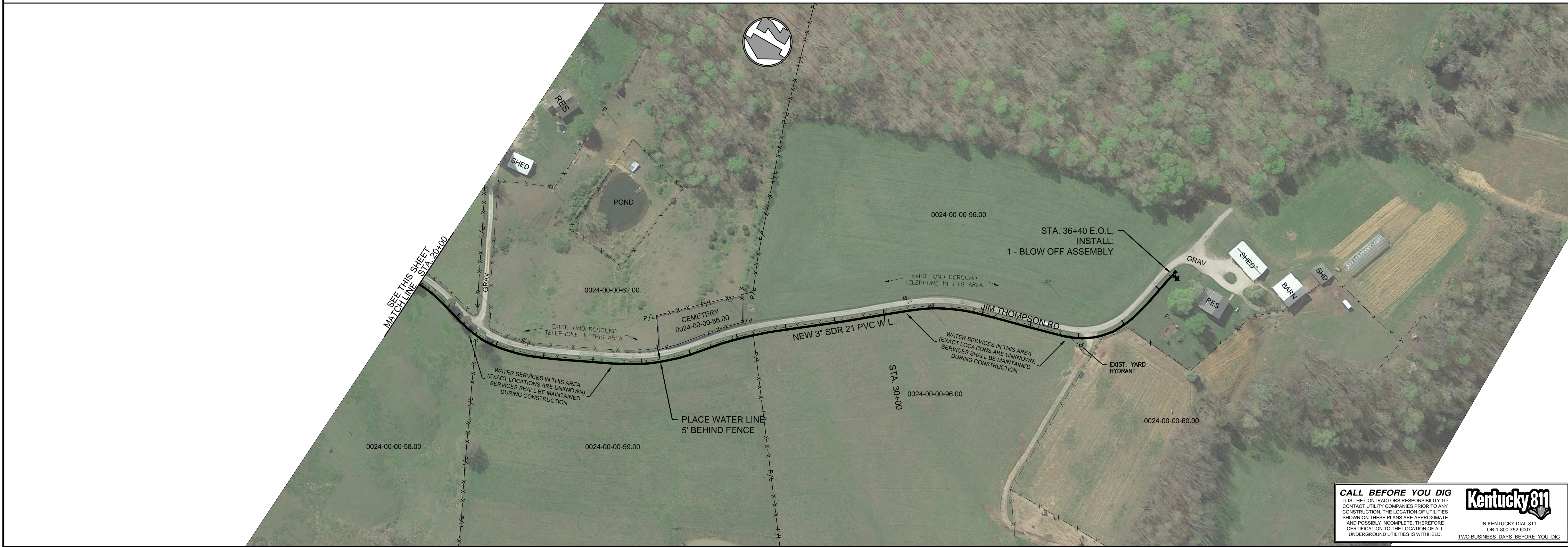
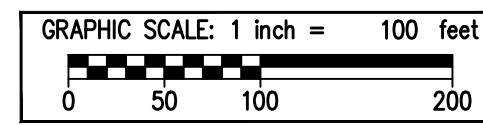
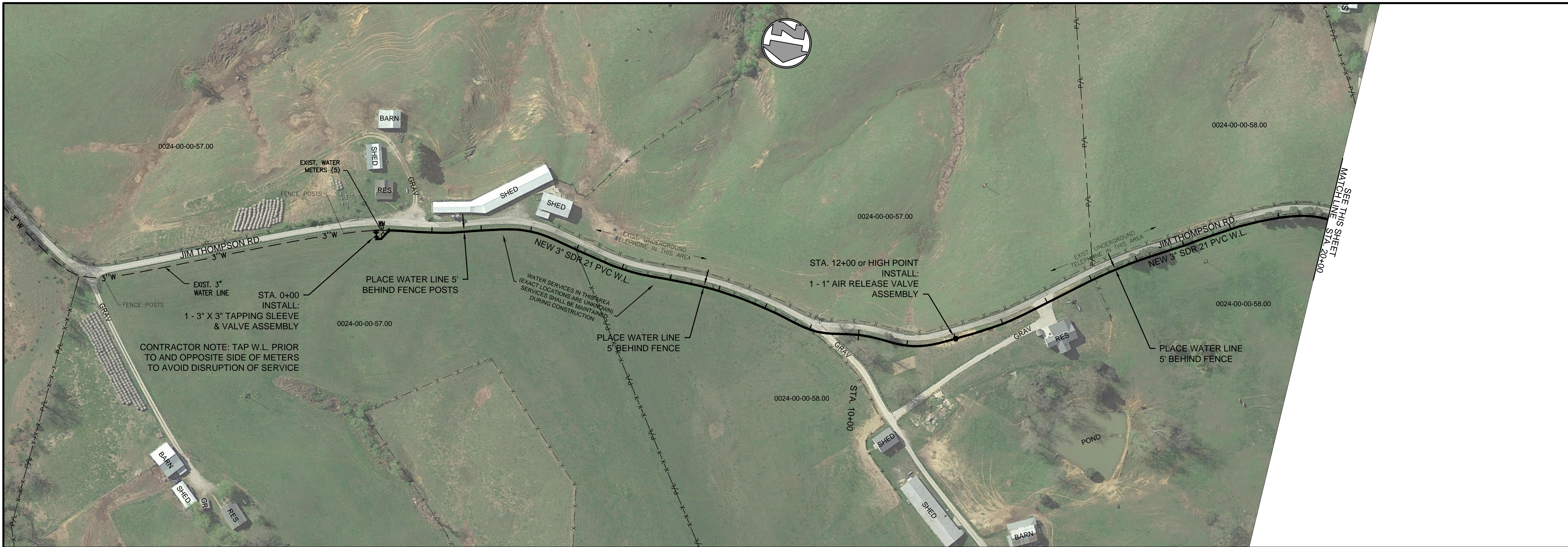
DATE: APRIL 2019
SCALE: 1" = 1 MILE
SHEET NO. G-02

CONTRACT DOCUMENTS

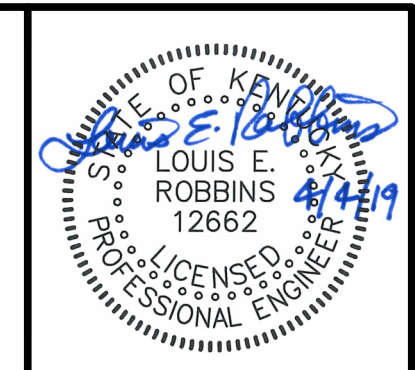
PLOTTED BY: dvmorris

PRINTED: 4/12/2019 @ 2:23PM

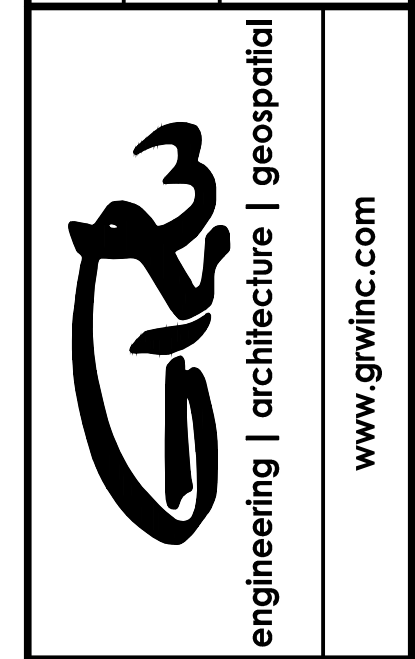
FILE NAME: C:\3621-Edmonson\Col08-2017 WL s\Working Drawings\Aub\A03621-08-C-03.dwg



CALL BEFORE YOU DIG
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSSIBLY INCOMPLETE. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.



GRW PROJECT NO. 3621-08
 ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INCORPORATED. ANY OTHER THAN THIS SPECIFIC PROJECT WITHOUT WRITTEN PERMISSION.



JIM THOMPSON RD. STA. - 0+00 TO STA. 36+40 E.O.L.
 2017 EDMONSON/HART WATER LINE PROJECT
 EDMONSON COUNTY WATER DISTRICT

NO.	REVISIONS DESCRIPTION	DATE	BY	DESIGNED	DRAWN	REVIEWED	APPROVED
				LER	DM	LER	LER

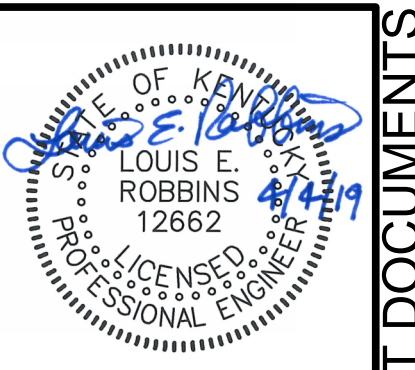
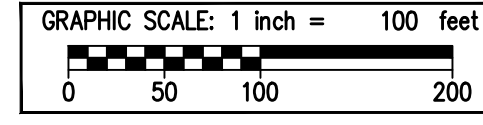
DATE: APRIL 2019
 SCALE: 1" = 100'
 SHEET NO. C-03

CONTRACT DOCUMENTS

PLOTTED BY: djm/mar

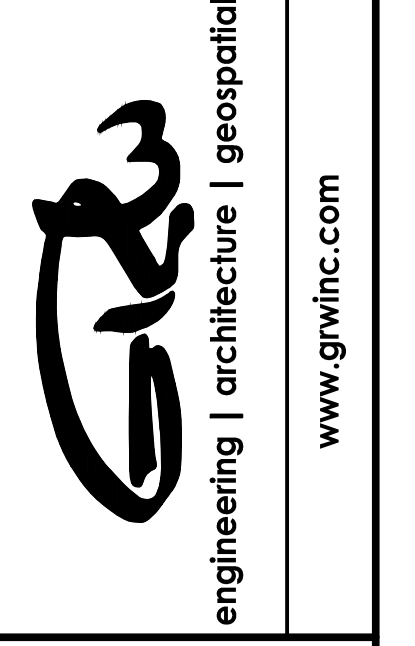
PRINTED: 4/12/2019 @ 2:23PM

FILE NAME: C:\3621-Edmonson_Col08-2017 WL.s\Working Drawings\AubCAD\3621-08-C-04.dwg



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC.



CEDAR LN. STA. - 0+00 TO STA. 20+00 E.O.L.

2017 EDMONSON/HART WATER LINE PROJECT
EDMONSON COUNTY WATER DISTRICT

NO.	REVISIONS DESCRIPTION	DESIGNED		DRAWN		REVIEWED		APPROVED	
		LER	DM	LER	DM	LER	DM	LER	DM

SCALE CHECK: _____ THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: APRIL 2019

SCALE: 1" = 100'

SHEET NO. **C-04**

CALL BEFORE YOU DIG

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSSIBLY INCOMPLETE. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.

Kentucky 811

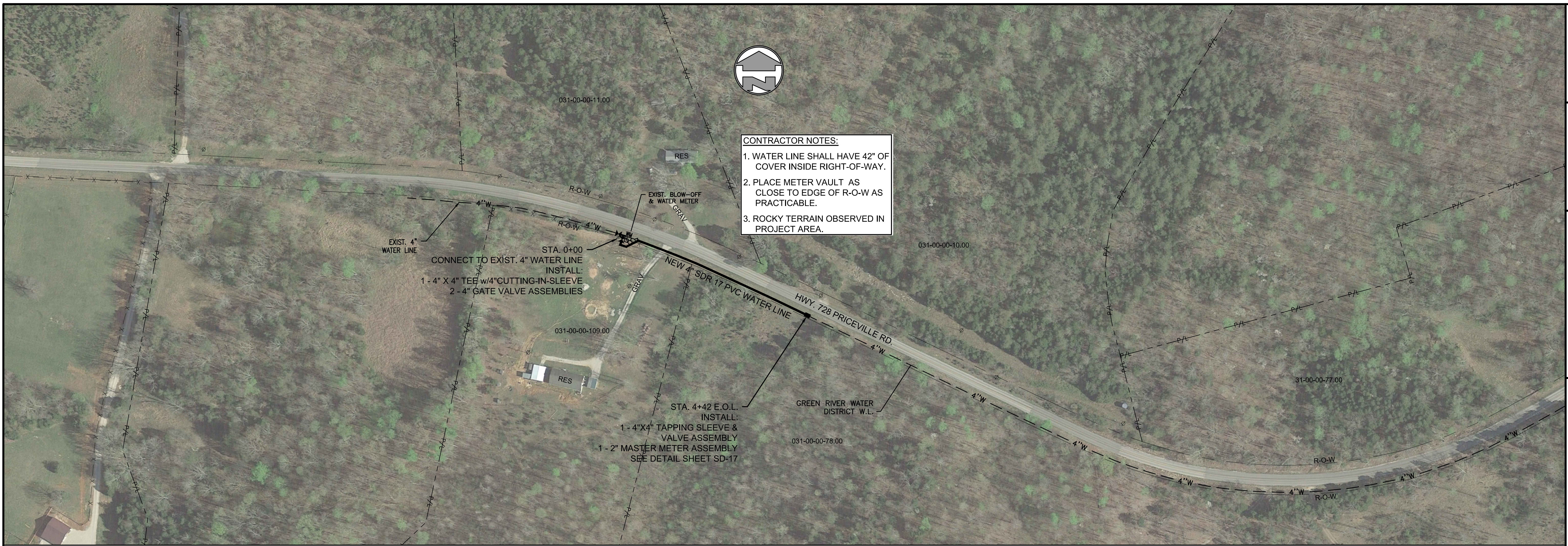
IN KENTUCKY DIAL 811 OR 1-800-752-6007
TWO BUSINESS DAYS BEFORE YOU DIG

CONTRACT DOCUMENTS

PLOTTED BY: dvmorris

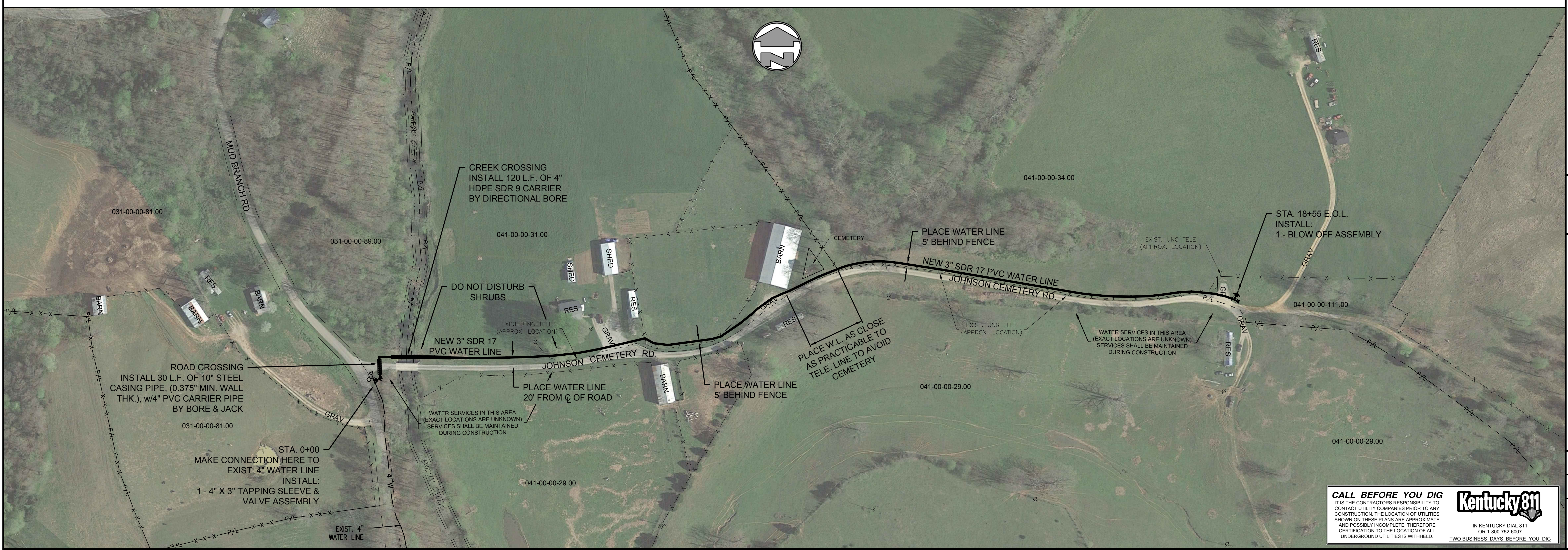
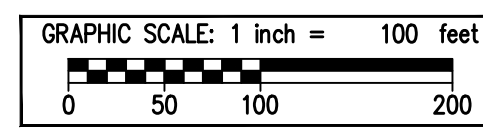
PRINTED: 4/18/2019 @ 9:04AM

FILE NAME: C:\3621-Edmonson_C-05.dwg

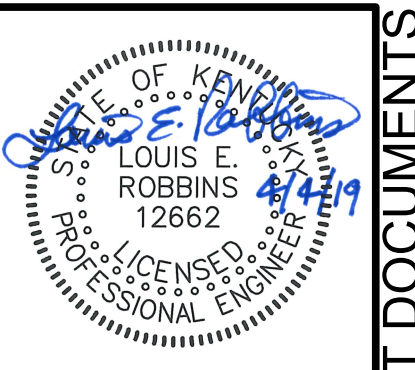


CONTRACTOR NOTES:

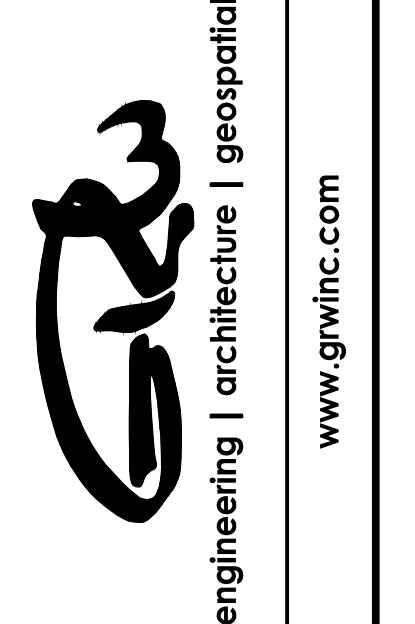
1. WATER LINE SHALL HAVE 42" OF COVER INSIDE RIGHT-OF-WAY.
2. PLACE METER VAULT AS CLOSE TO EDGE OF R-O-W AS PRACTICABLE.
3. ROCKY TERRAIN OBSERVED IN PROJECT AREA.



CALL BEFORE YOU DIG
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSSIBLY INCOMPLETE. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.
Kentucky 811
 IN KENTUCKY DIAL 811 OR 1-800-752-6007
 TWO BUSINESS DAYS BEFORE YOU DIG



GRW PROJECT NO. 3621-08
 ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.
 www.grwinc.com



PRICEVILLE RD. STA. - 0+00 TO STA. 4+45 E.O.L.
 JOHNSON CEMETERY RD. STA. - 0+00 TO STA. 18+55 E.O.L.
 2017 EDMONSON/HART WATER LINE PROJECT
 EDMONSON COUNTY WATER DISTRICT

NO.	DATE	BY	DESCRIPTION

DESIGNED	LER	DATE

DRAWN	DM	DATE

REVIEWED	LER	DATE

APPROVED	LER	DATE

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

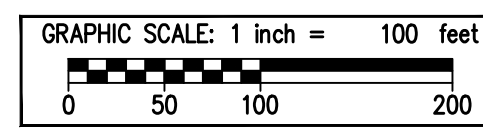
DATE: APRIL 2019
 SCALE: 1" = 100'
 SHEET NO. C-05

CONTRACT DOCUMENTS

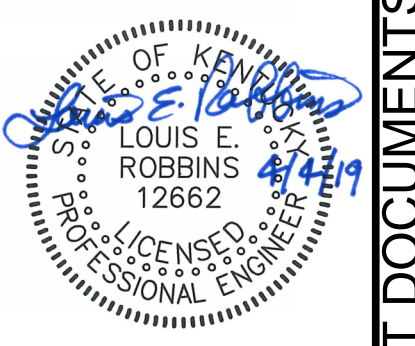
PLOTTED BY: jvmorris

PRINTED: 4/12/2019 @ 2:24PM

FILE NAME: C:\3621-Edmonson\Col08-2017 WL s\Working Drawings\AubAD\3621-08-C-06.dwg



CALL BEFORE YOU DIG
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSSIBLY INCOMPLETE. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.
Kentucky 811
 IN KENTUCKY DIAL 811 OR 1-800-752-6007
 TWO BUSINESS DAYS BEFORE YOU DIG



GRW PROJECT NO. 3621-08
 ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC. WITHOUT THE WRITTEN PERMISSION.

GRW
 engineering | architecture | geospatial
 www.grwinc.com

**CEDAR HILL CHURCH RD.
 STA. 0+00 TO STA. 47+30 E.O.L.
 2017 EDMONSON/HART WATER LINE PROJECT
 EDMONSON COUNTY WATER DISTRICT**

NO.	DATE	DESCRIPTION	DESIGNED	BY	LER	DRAWN	DM	REVIEWED	LER	APPROVED	LER

SCALE CHECK: _____ THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

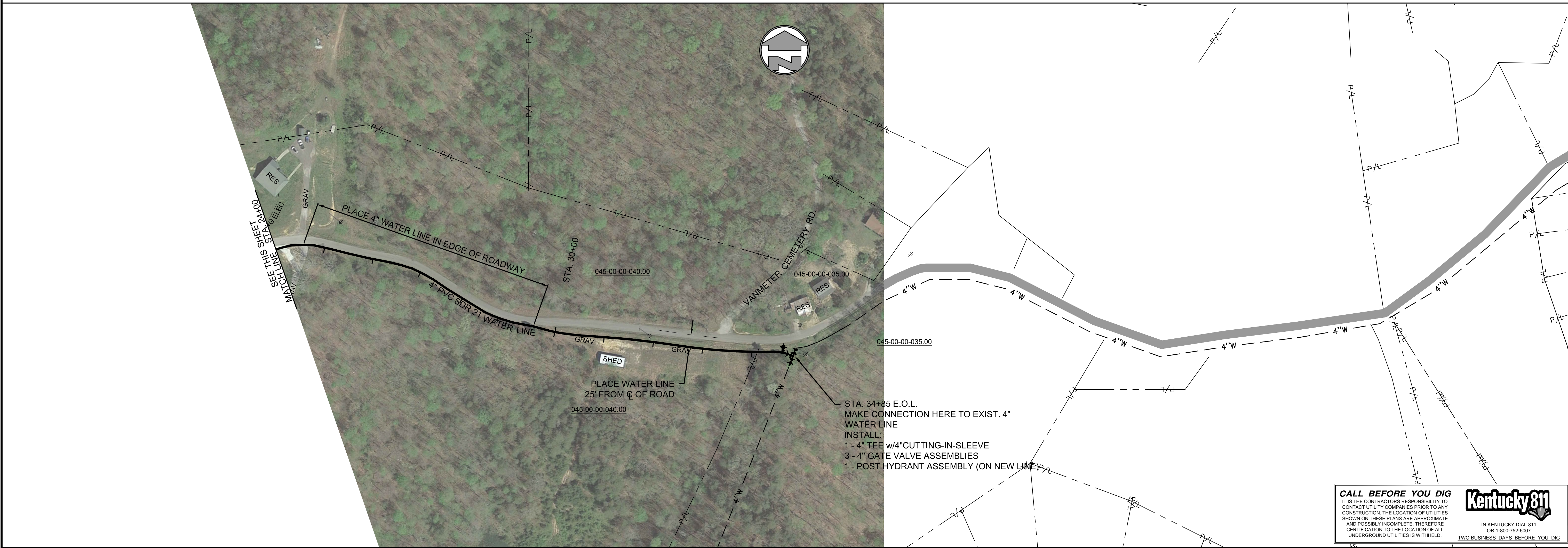
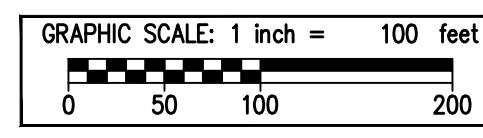
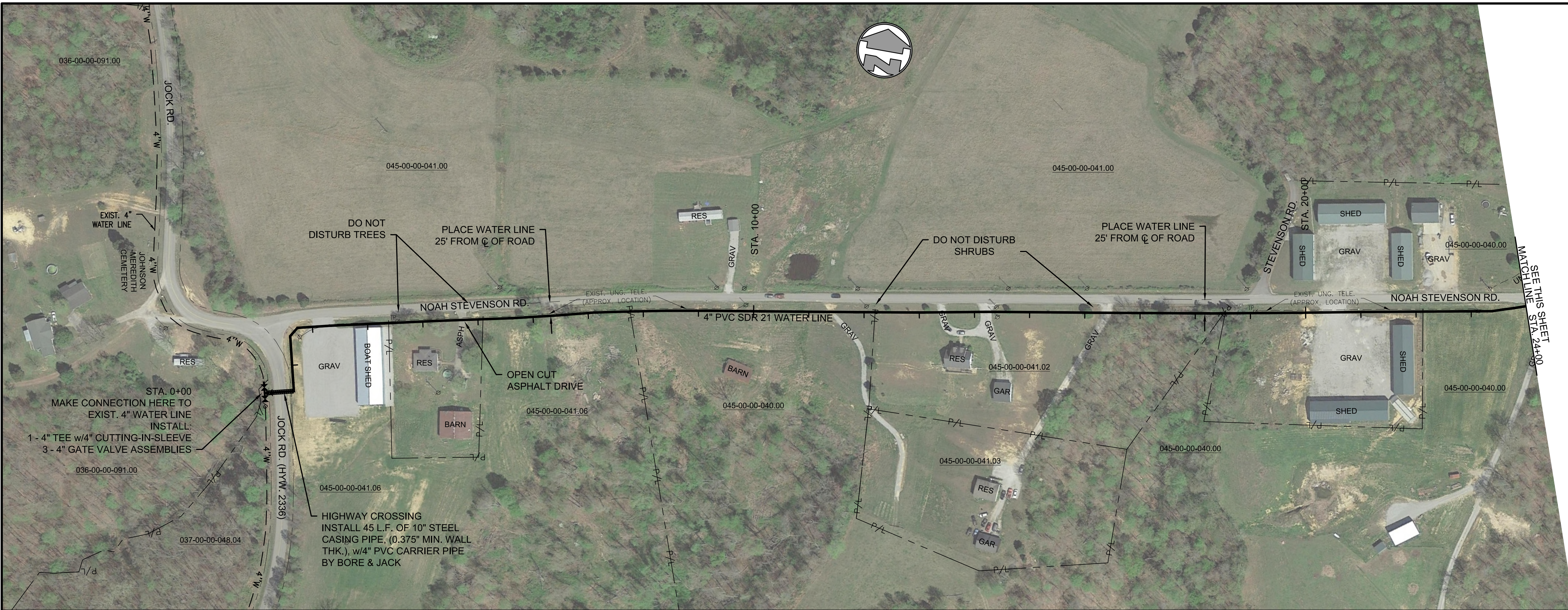
DATE: APRIL 2019
 SCALE: 1" = 100'
 SHEET NO. **C-06**

CONTRACT DOCUMENTS

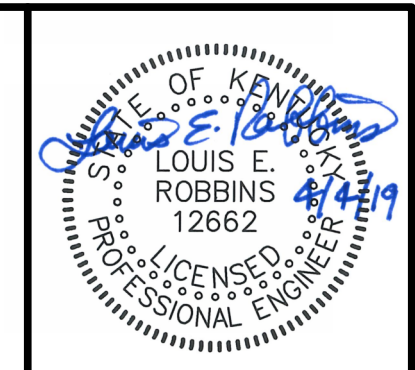
PLOTTED BY: dvmorris

PRINTED: 4/20/19 @ 3:17PM

FILE NAME: C:\3621-Edmonson\Col08-2017 WL s\Working Drawings\SubCAD\3621-08-C-07.dwg



CALL BEFORE YOU DIG
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSSIBLY INCOMPLETE. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.
Kentucky 811
 IN KENTUCKY DIAL 811 OR 1-800-752-6007
 TWO BUSINESS DAYS BEFORE YOU DIG



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC. ANY OTHER THAN THIS SPECIFIC PROJECT WITHOUT WRITTEN PERMISSION.

GRW
 engineering | architecture | geospatial
 www.grwinc.com

**NOAH STEVENSON RD.
 STA. 0+00 TO STA. 34+85 E.O.L.
 2017 EDMONSON/HART WATER LINE PROJECT
 EDMONSON COUNTY WATER DISTRICT**

NO.	REVISIONS DESCRIPTION	DESIGNED			
		LER	DM	LER	LER

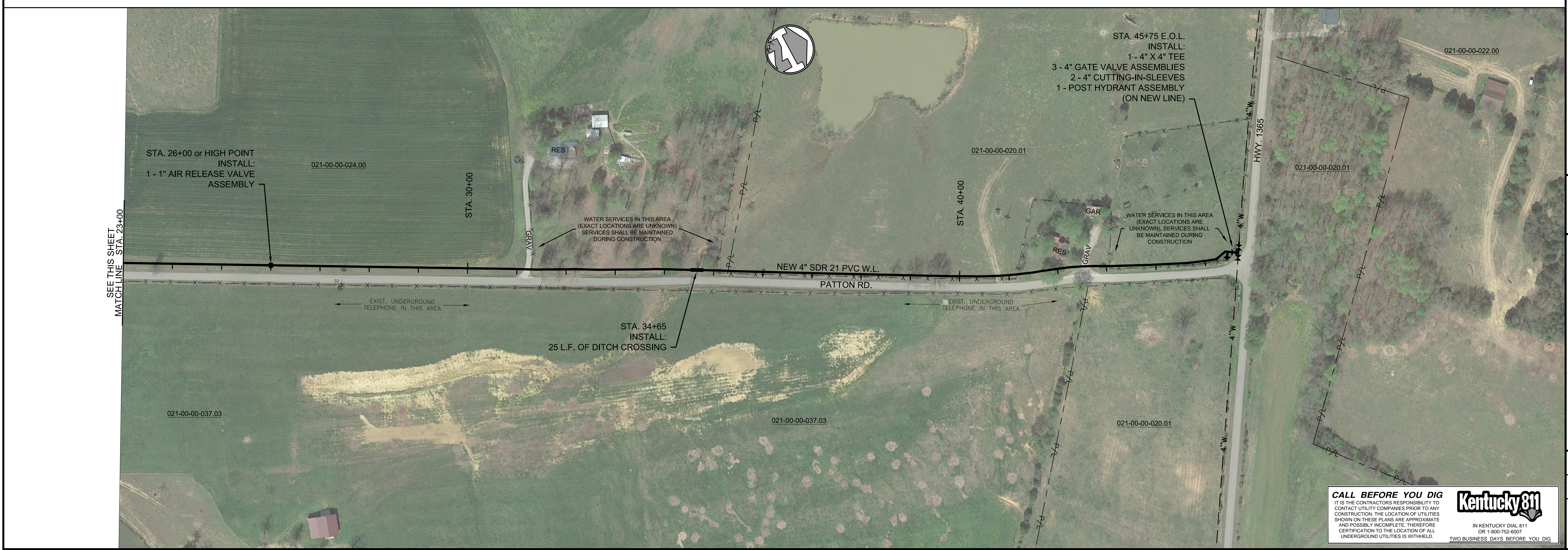
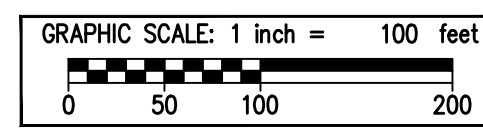
DATE: APRIL 2019
 SCALE: 1" = 100'
 SHEET NO. **C-07**

CONTRACT DOCUMENTS

PLOTTED BY: dvmorris

PRINTED: 4/12/2019 @ 2:25PM

FILE NAME: C:\3621-Edmonson_Col08-2017 WL s\Working Drawings\AubCAD\3621-08-C-08.dwg



CALL BEFORE YOU DIG
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSSIBLY INCOMPLETE. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.
Kentucky 811
 IN KENTUCKY DIAL 811 OR 1-800-752-6007
 TWO BUSINESS DAYS BEFORE YOU DIG



GRW PROJECT NO. 3621-08
 ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC.

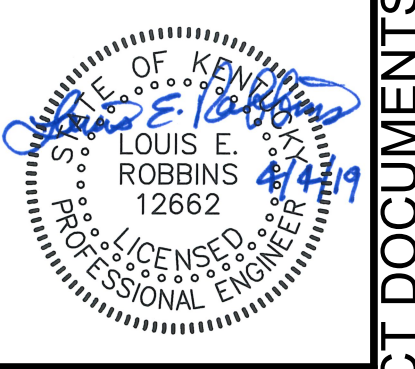
GRW
 engineering | architecture | geospatial
 www.grwinc.com

PATTON RD.
STA. 0+00 TO STA. 45+75 E.O.L.
2017 EDMONSON/HART WATER LINE PROJECT
EDMONSON COUNTY WATER DISTRICT

NO.	DATE	BY	DESIGNED	LER

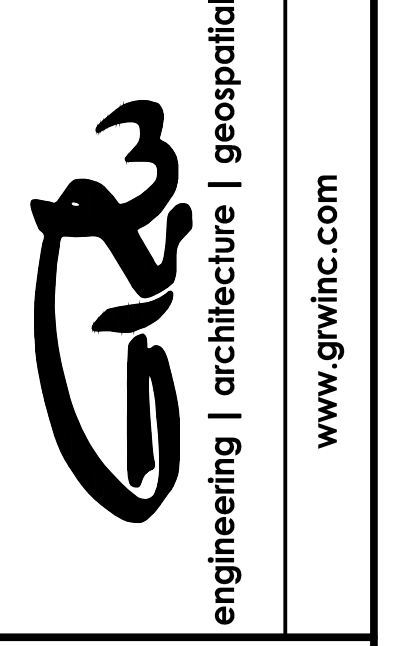
DATE: APRIL 2019
 SCALE: 1" = 100'
 SHEET NO. **C-08**

CONTRACT DOCUMENTS



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW ENGINEERS, INC. AND SHALL NOT BE USED FOR ANY OTHER PROJECT OTHER THAN THIS SPECIFIC PROJECT WITHOUT WRITTEN PERMISSION.



**CEDAR HILL BOOSTER PUMP STATION
SITE PLAN & DETAILS**
2017 EDMONSON/HART WATER LINE PROJECT
EDMONSON COUNTY WATER DISTRICT

DESIGNED	LER	DATE

DRAWN	DM	DATE

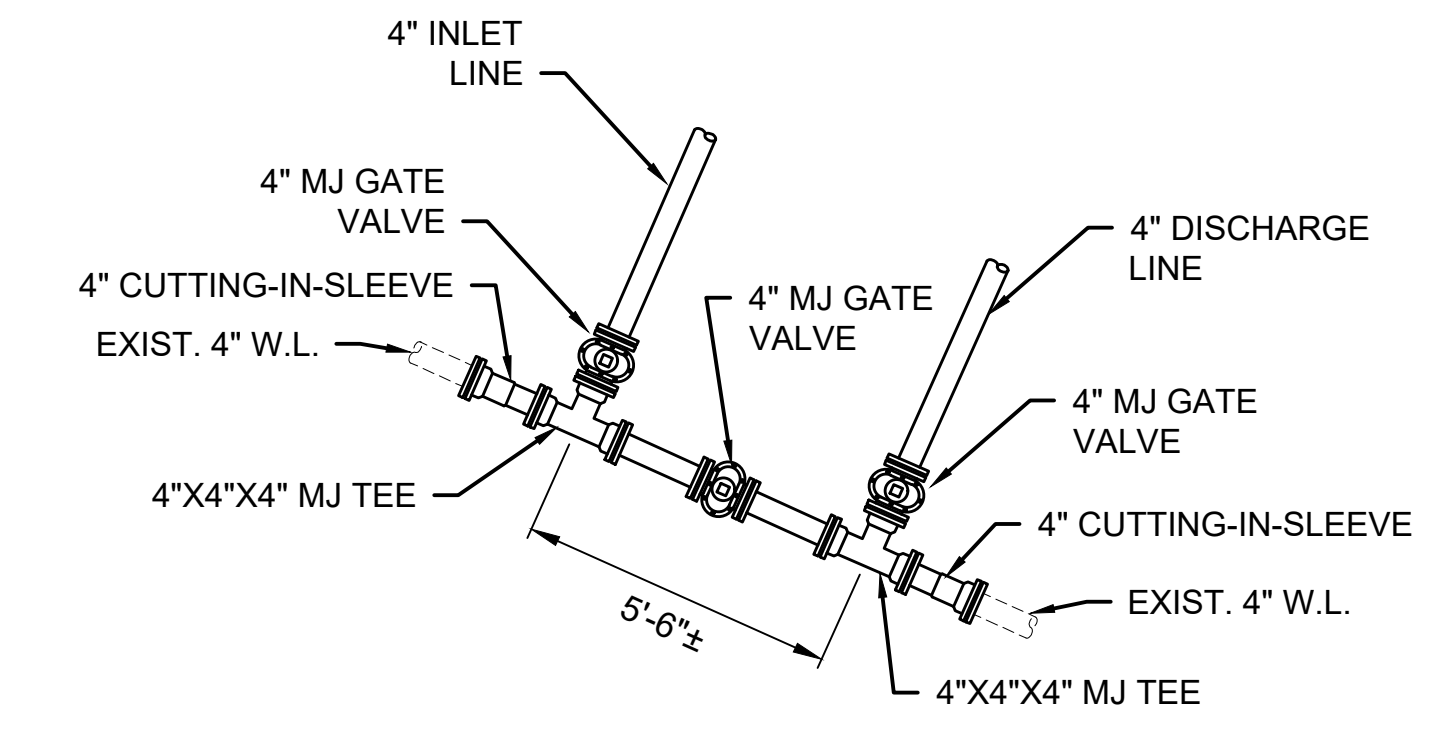
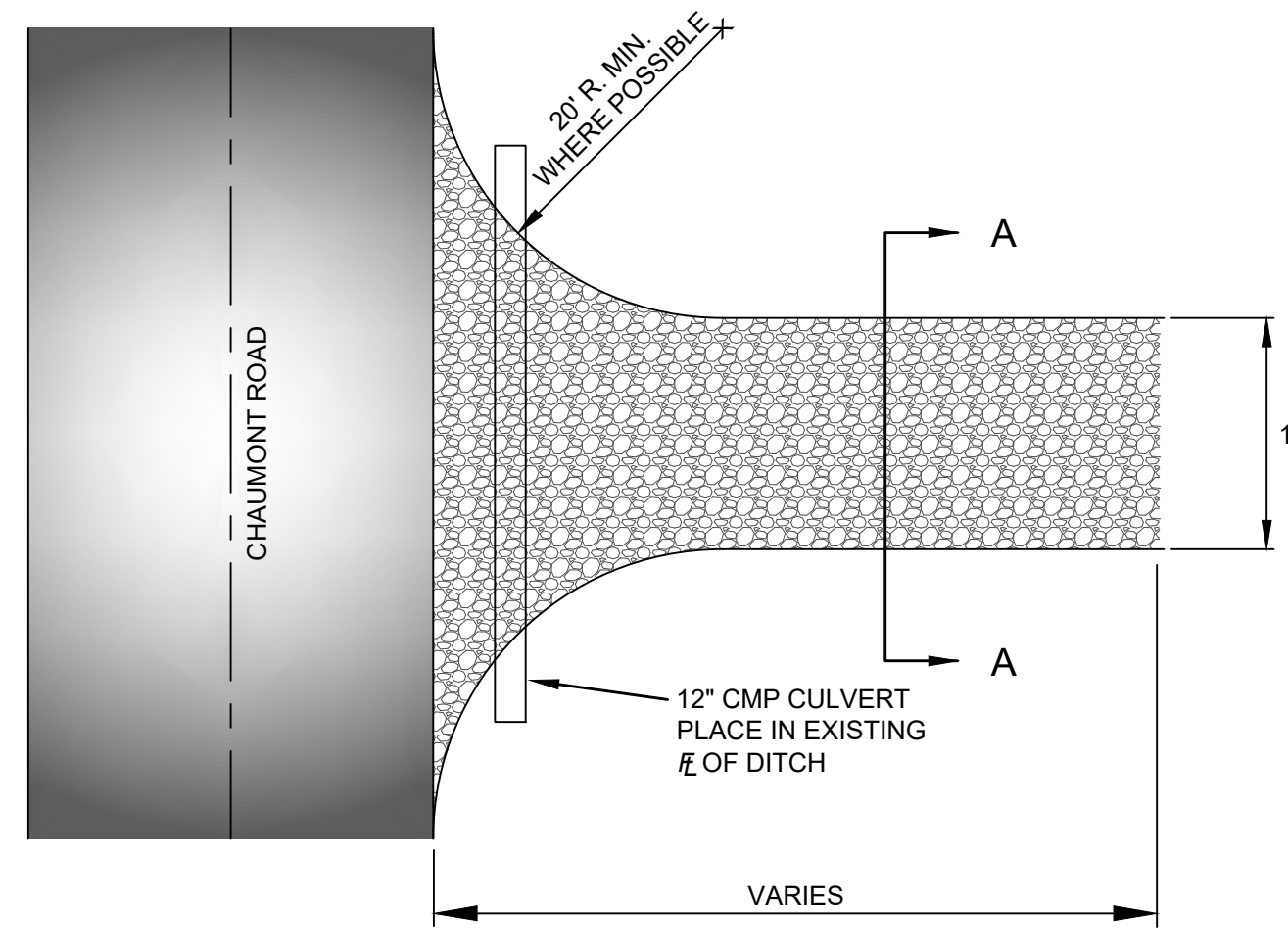
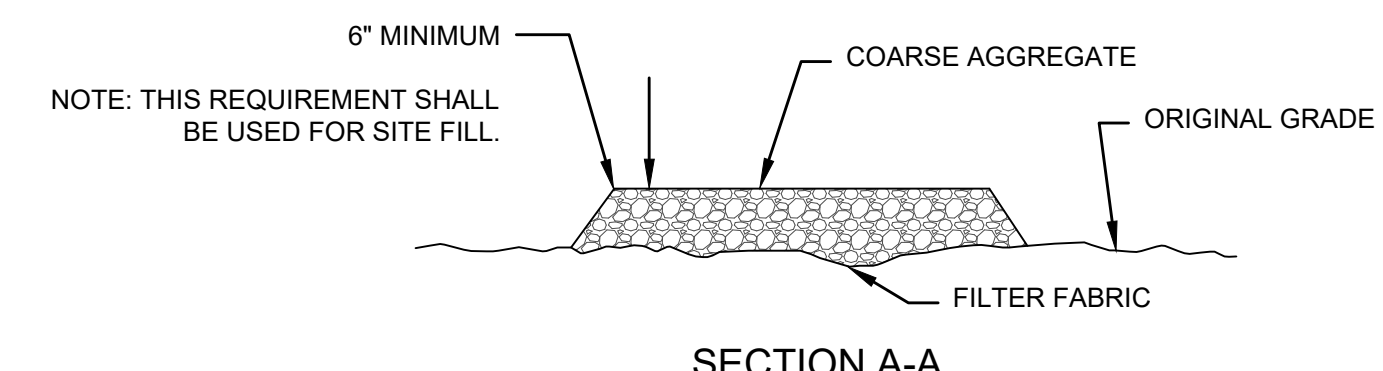
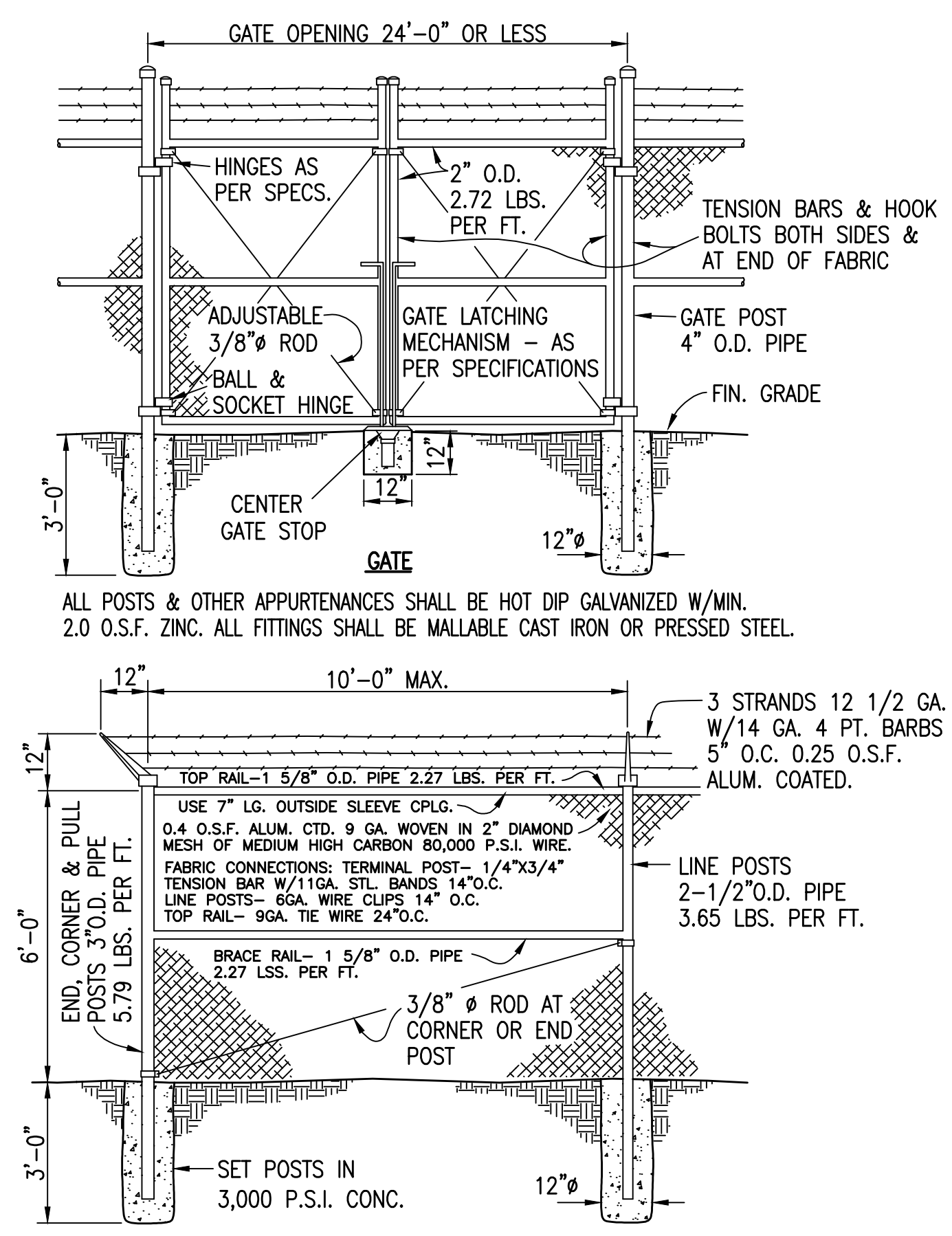
REVIEWED	LER	DATE

APPROVED	LER	DATE

DATE: APRIL 2019
SCALE: AS NOTED
SHEET NO.

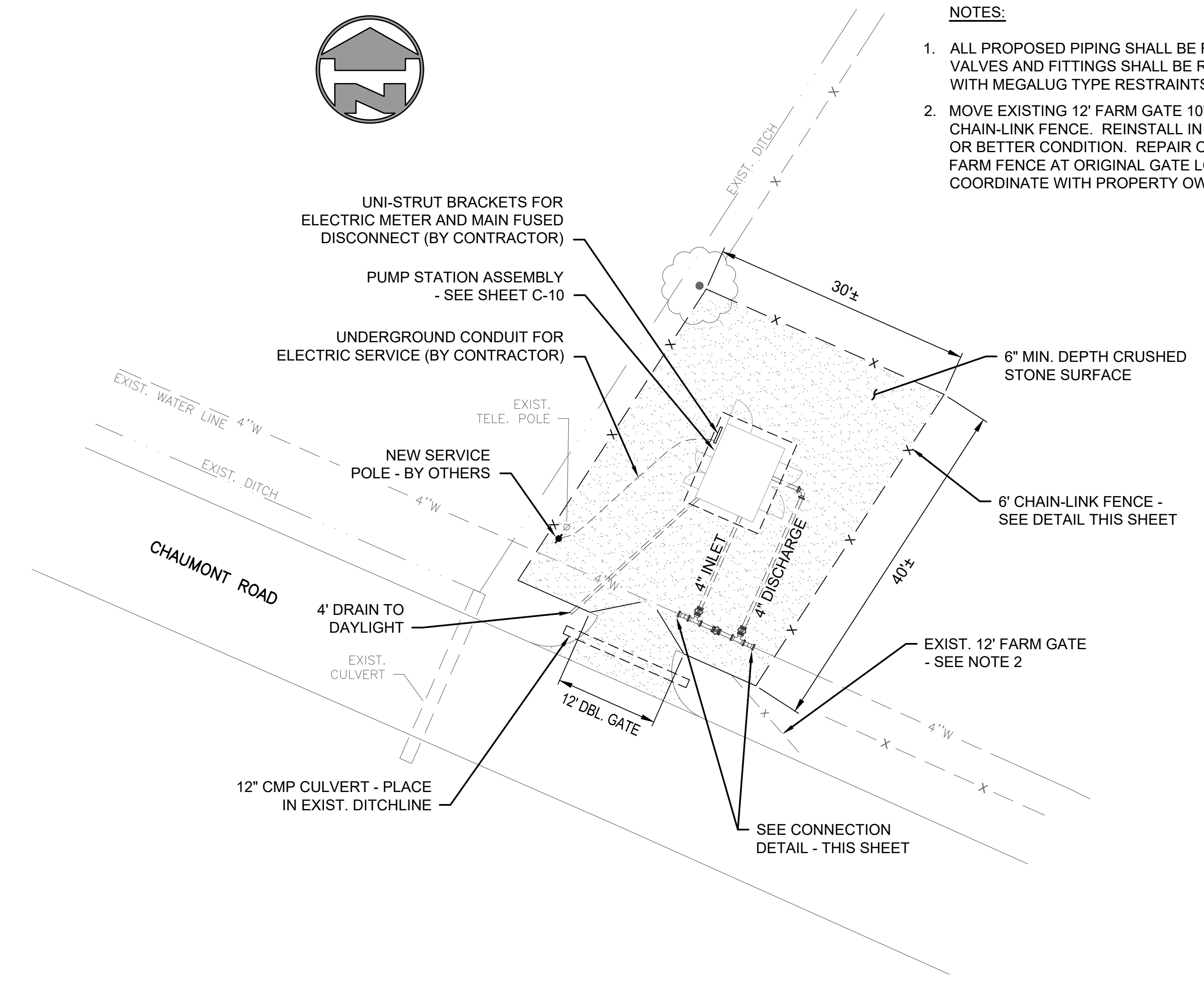
C-09

CONTRACT DOCUMENTS



CONNECTION DETAIL
NOT TO SCALE

- NOTES:**
- ALL PROPOSED PIPING SHALL BE RJ DIP. ALL VALVES AND FITTINGS SHALL BE RESTRAINED WITH MEGALUG TYPE RESTRAINTS.
 - MOVE EXISTING 12' FARM GATE 10' FROM NEW CHAIN-LINK FENCE. REINSTALL IN AN AS GOOD OR BETTER CONDITION. REPAIR OPENING IN FARM FENCE AT ORIGINAL GATE LOCATION. COORDINATE WITH PROPERTY OWNER.



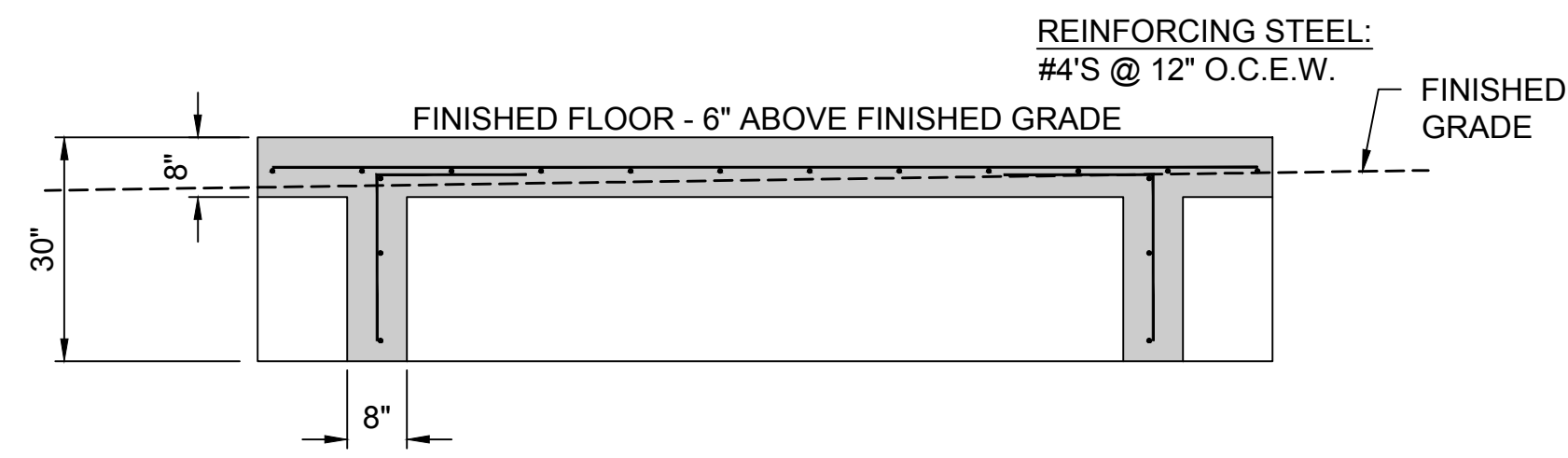
PLOTTED BY: DM/Morris
PRINTED: 9/23/2019 @ 8:31AM
FILE NAME: C:\3621-Edmonson\2017 WL sit\Working Drawings\AutoCAD\3621-08-C-09.dwg

KEYNOTES

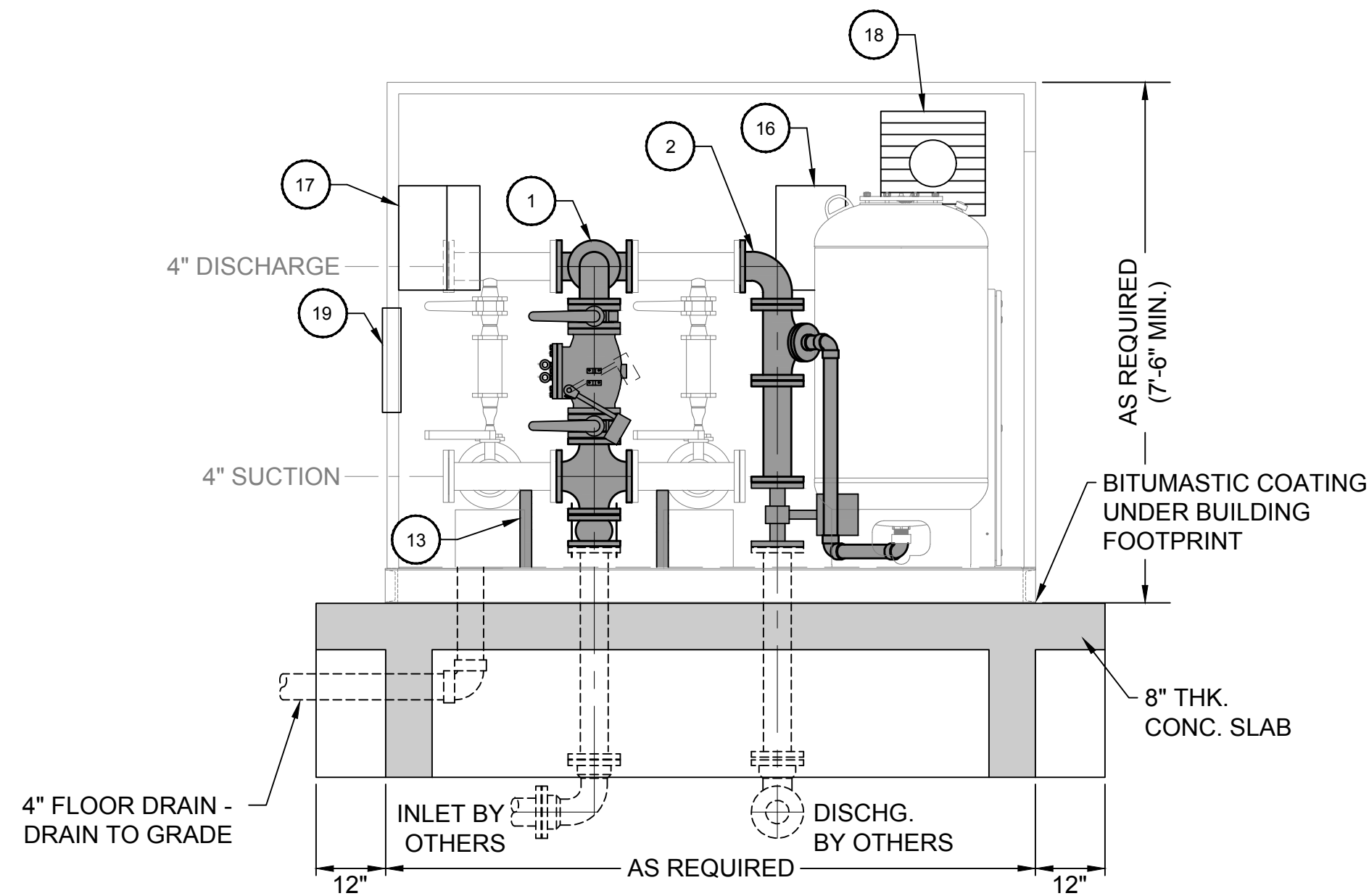
- ① SUCTION LINE BYPASS ASSEMBLY
- ② DISCHARGE LINE ASSEMBLY
- ③ 4" WAFER BUTTERFLY VALVE
- ④ 4" SWING CHECK VALVE
- ⑤ 4" FLANGED FLEXIBLE COUPLING w/RESTRAINING RODS
- ⑥ 4" X 4" CROSS FITTING
- ⑦ 4" 90° ELBOW
- ⑧ 4" SPOOL PIECE (FIELD VERIFY LENGTH)
- ⑨ 4" X 4" X 4" TEE
- ⑩ 2" PVC PIPING (ROUTE AS NECESSARY)
- ⑪ 4" MAGMETER
- ⑫ 2" VALVE
- ⑬ PIPE SUPPORTS AS REQUIRED TYP.)
- ⑭ PUMP
- ⑮ NEOPRENE FLOOR MATS
- ⑯ DEHUMIDIFIER
- ⑰ HEATER
- ⑱ LOUVERED VENT FAN

NOTES:

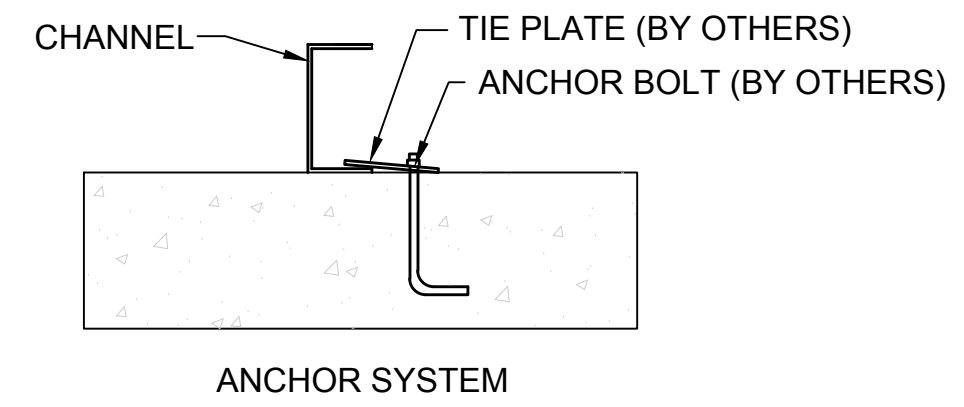
1. 2 - 12" SQ. OPENINGS IN CONCRETE SLAB CENTERED ON SUCTION AND DISCHARGE THROUGH-SLAB LINES. SEE SHOP DRAWINGS TO CONFIRM LINE LOCATIONS BEFORE CONSTRUCTION. SEAL OPENINGS WITH GROUT AFTER CONSTRUCTION.
2. VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION



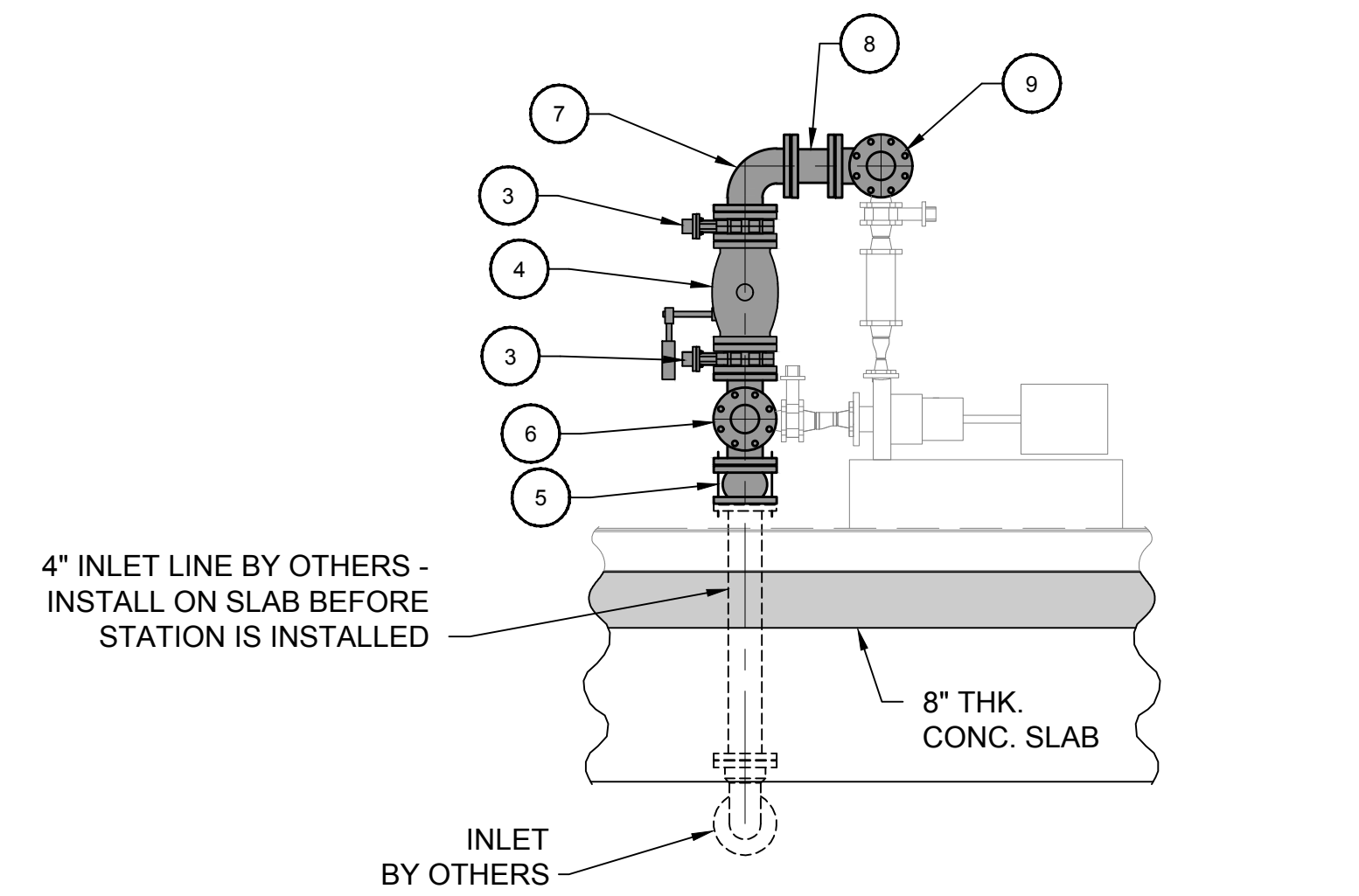
4 SECTION
SCALE: 1/2"=1'-0"



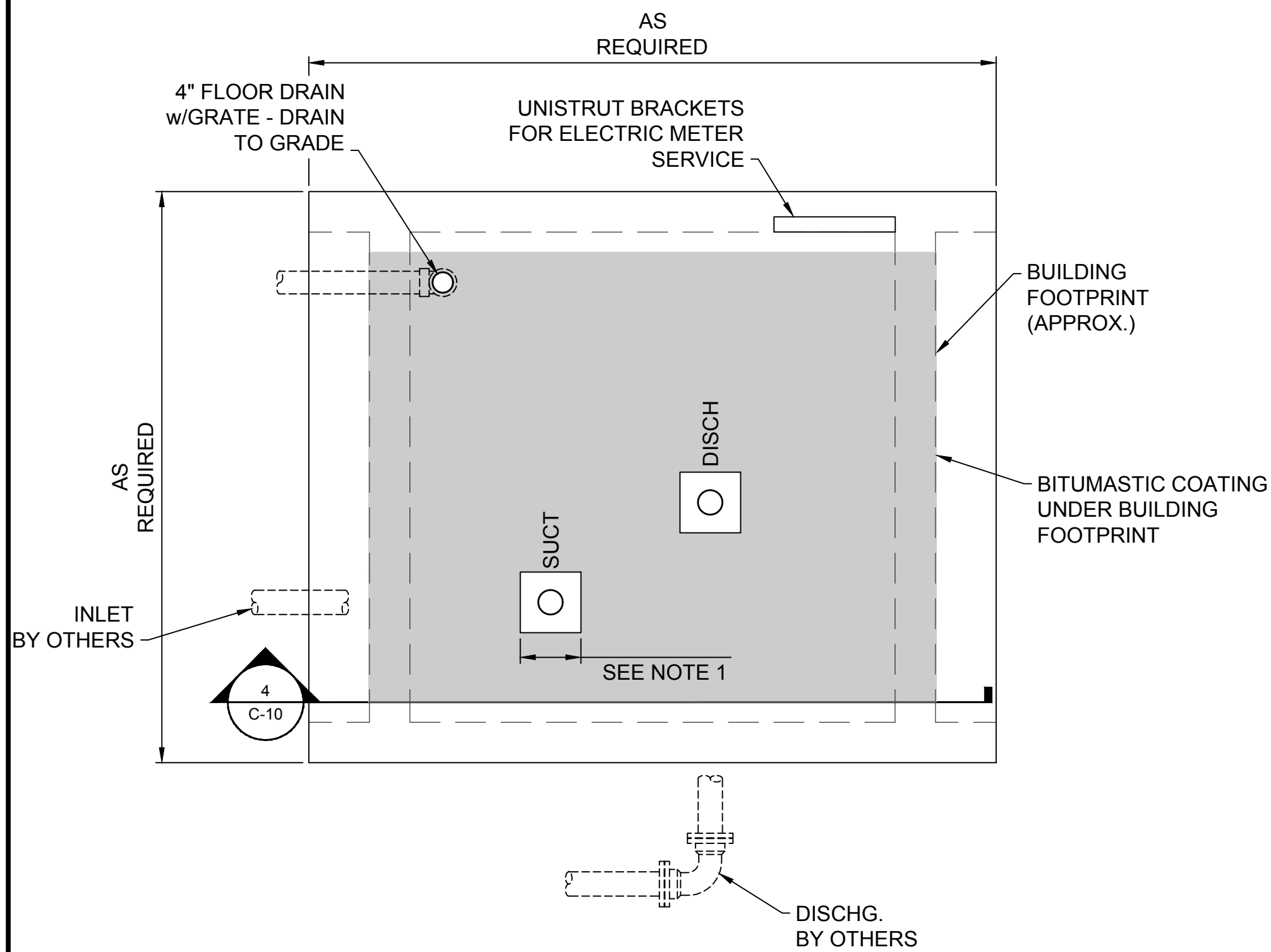
1 SECTION (FRONT VIEW)
SCALE: 1/2"=1'-0"



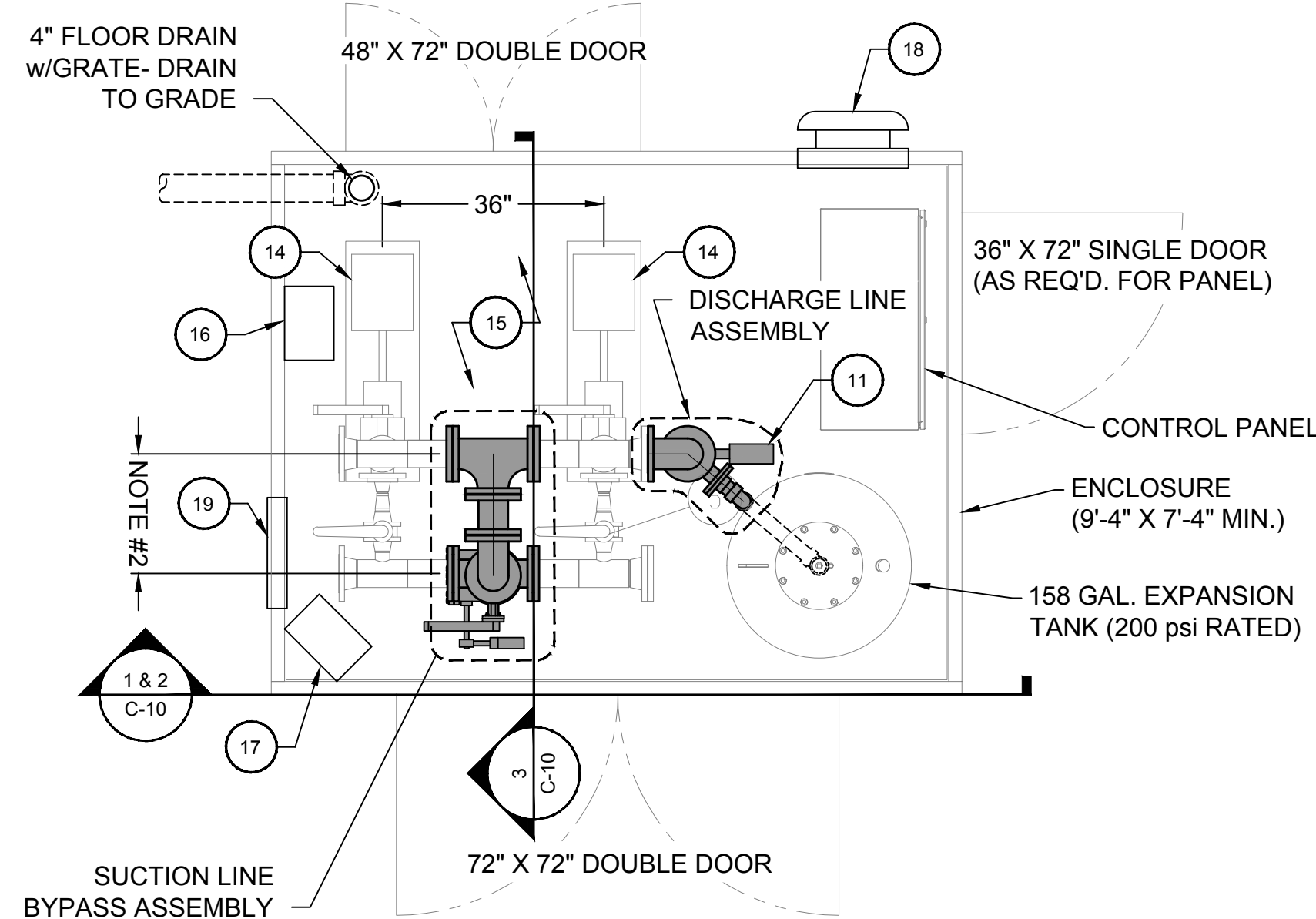
FOUNDATION DETAILS
SCALE: 1/2"=1'-0"



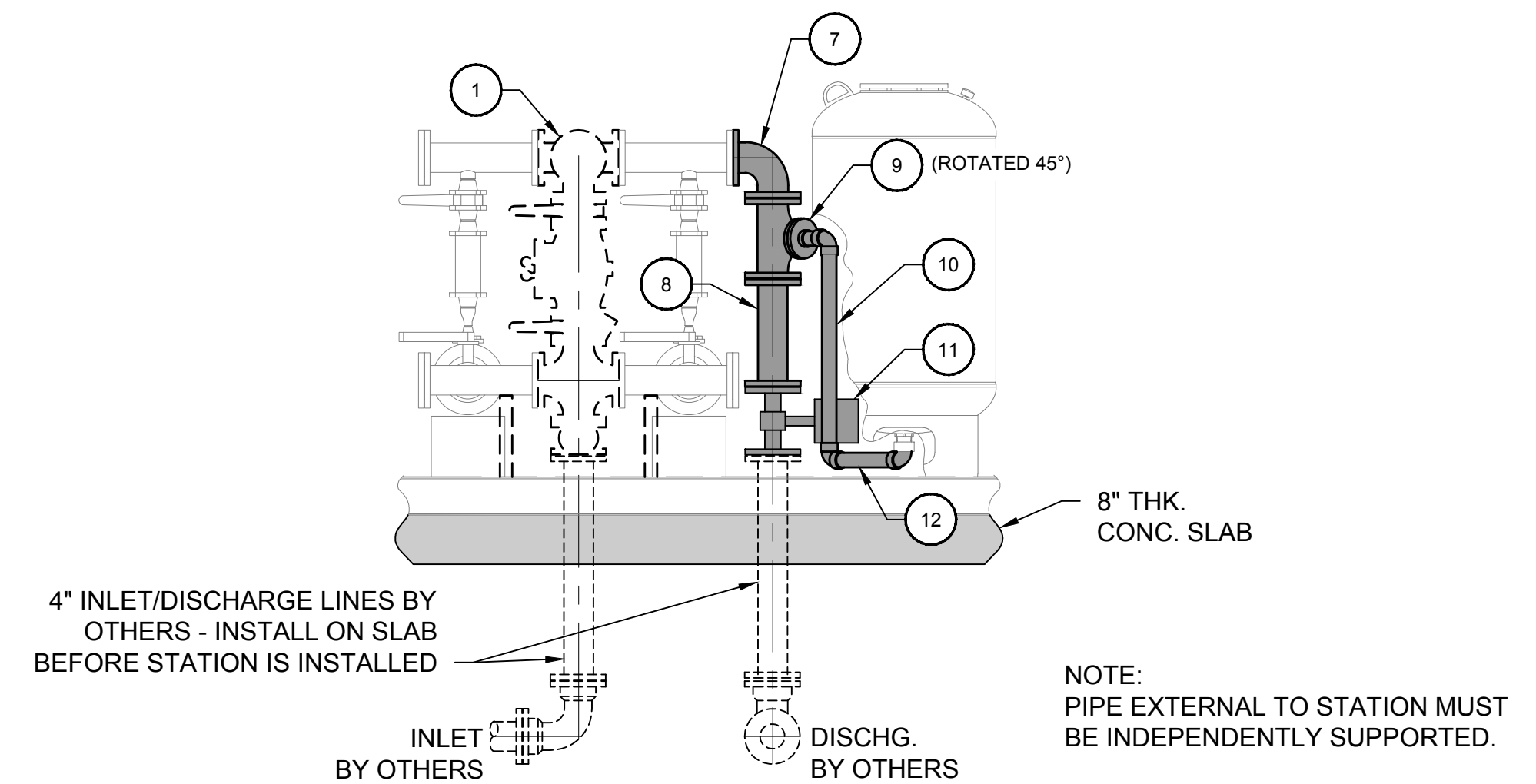
3 SUCTION BYPASS ASSEMBLY DETAIL (SIDE VIEW)
SCALE: 1/2"=1'-0"



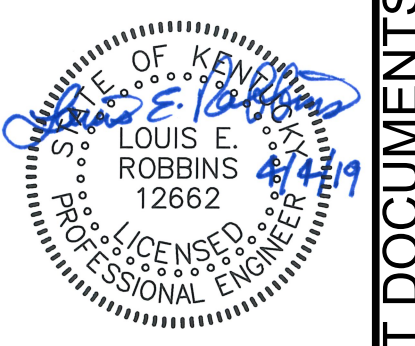
PUMP STATION FOUNDATION - PLAN
SCALE: 1/2"=1'-0"



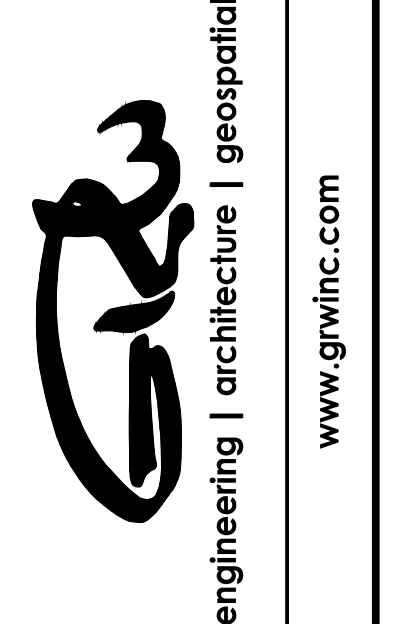
CEDAR HILL BOOSTER PUMP STATION - PLAN
SCALE: 1/2"=1'-0"



2 DISCHARGE ASSEMBLY DETAIL (FRONT VIEW)
SCALE: 1/2"=1'-0"



GRW PROJECT NO. 3821-08
ALL RIGHTS RESERVED. NO PART OF THIS DRAWING IS TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC. THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED.



CEDAR HILL BOOSTER PUMP STATION PLAN, SECTIONS & DETAILS
2017 EDMONSON/HART WATER LINE PROJECT
EDMONSON COUNTY WATER DISTRICT

DESIGNED	LER	DATE	BY	REVIEWED	DM	DATE	BY	APPROVED	LER

DATE: APRIL 2019
SCALE: AS NOTED
SHEET NO.

FILE NAME: C:\3821-Edmonson\2017 WL\Working Drawings\SubCAD\3821-08-C-10.dwg PRINTED: 5/13/2019 @ 4:28PM PLOTTED BY: dvmorris CONTRACT DOCUMENTS

PLOTTED BY: dvmorris

PRINTED: 4/12/2019 @ 2:29PM

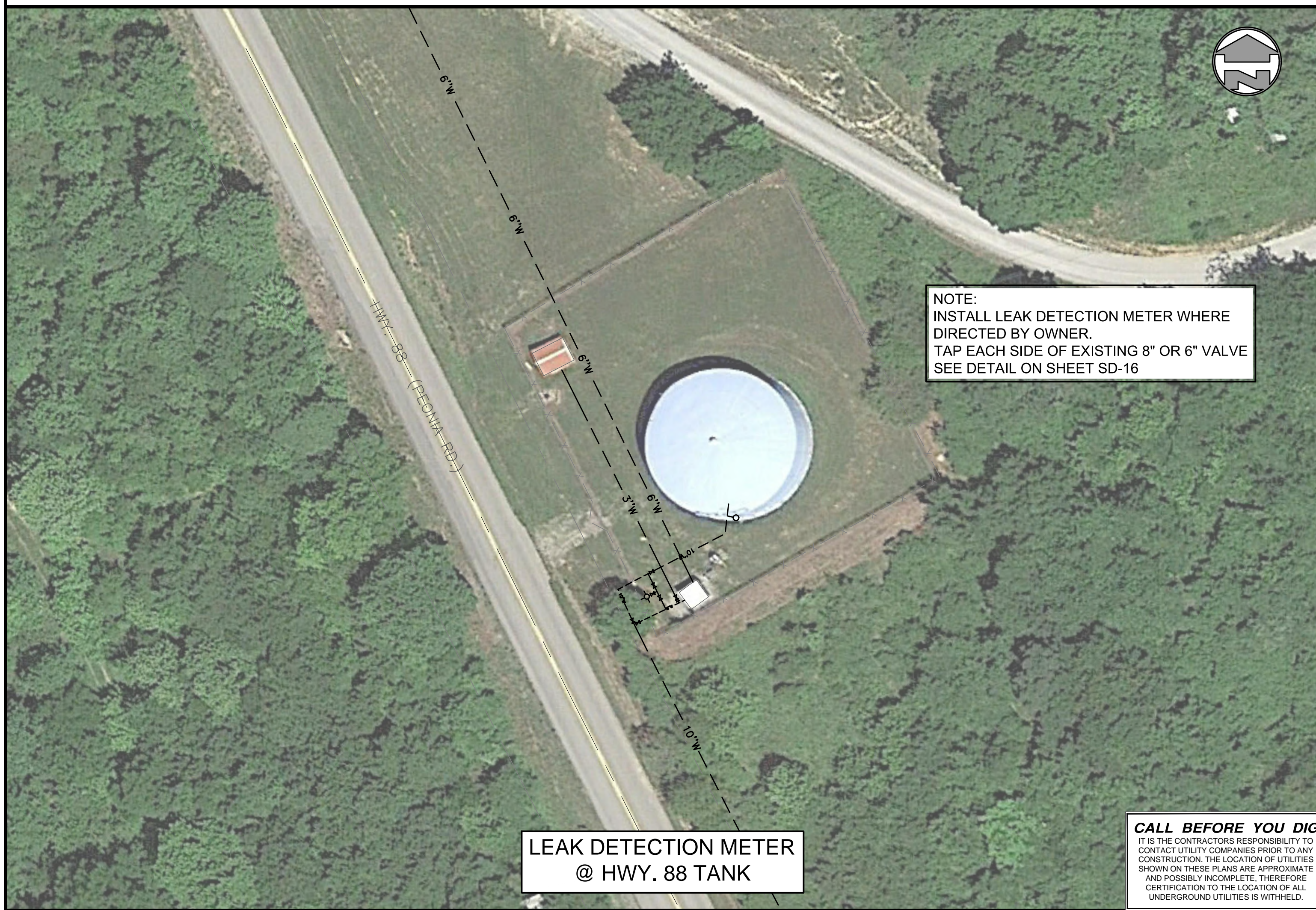
FILE NAME: C:\3621-Edmonson_Col08-2017 WL sit\Working Drawings\AutoCAD\3621-08-C-11.dwg



LEAK DETECTION METER @ LINDSEYVILLE TANK



LEAK DETECTION METER @ CUB RUN TANK



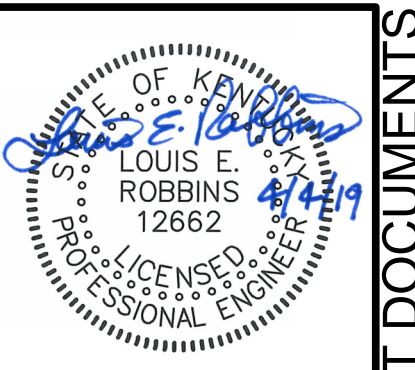
LEAK DETECTION METER @ HWY. 88 TANK



LEAK DETECTION METER @ KESSINGER TANK

CALL BEFORE YOU DIG
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSSIBLY INCOMPLETE. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.

Kentucky 811
 IN KENTUCKY DIAL 811 OR 1-800-752-6007
 TWO BUSINESS DAYS BEFORE YOU DIG



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW ENGINEERING, INC. ANY OTHER THAN THIS SPECIFIC PROJECT WITHOUT WRITTEN PERMISSION.

GRW
 engineering | architecture | geospatial
 www.grwinc.com

LEAK DETECTOR METERS
 2017 EDMONSON/HART WATER LINE PROJECT
 EDMONSON COUNTY WATER DISTRICT

DESIGNED	LER
BY	
DATE	
DESCRIPTION	
NO.	
SCALE CHECK	THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

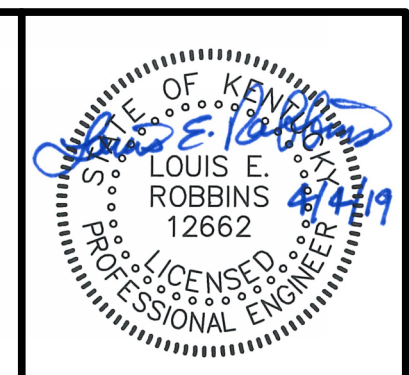
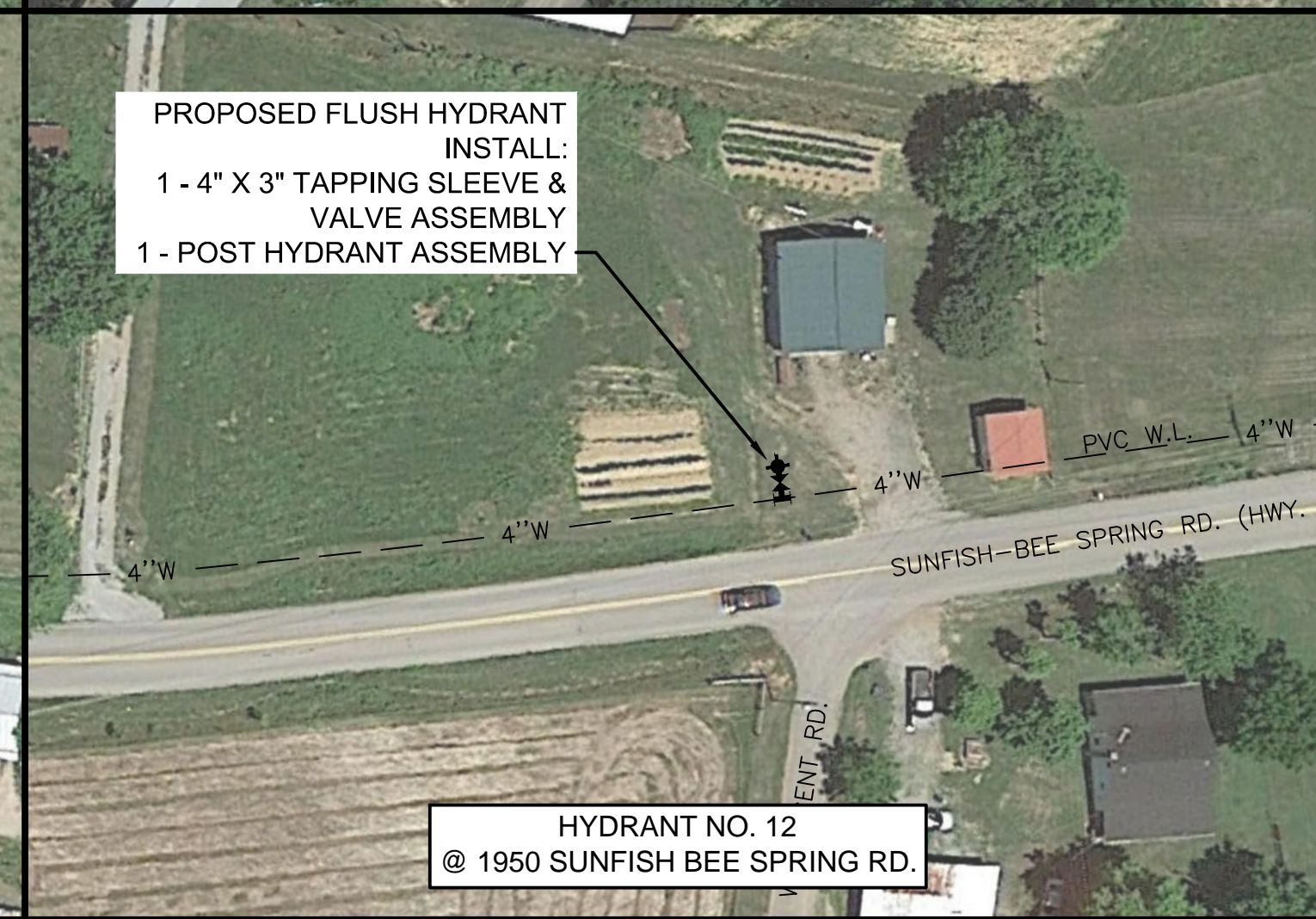
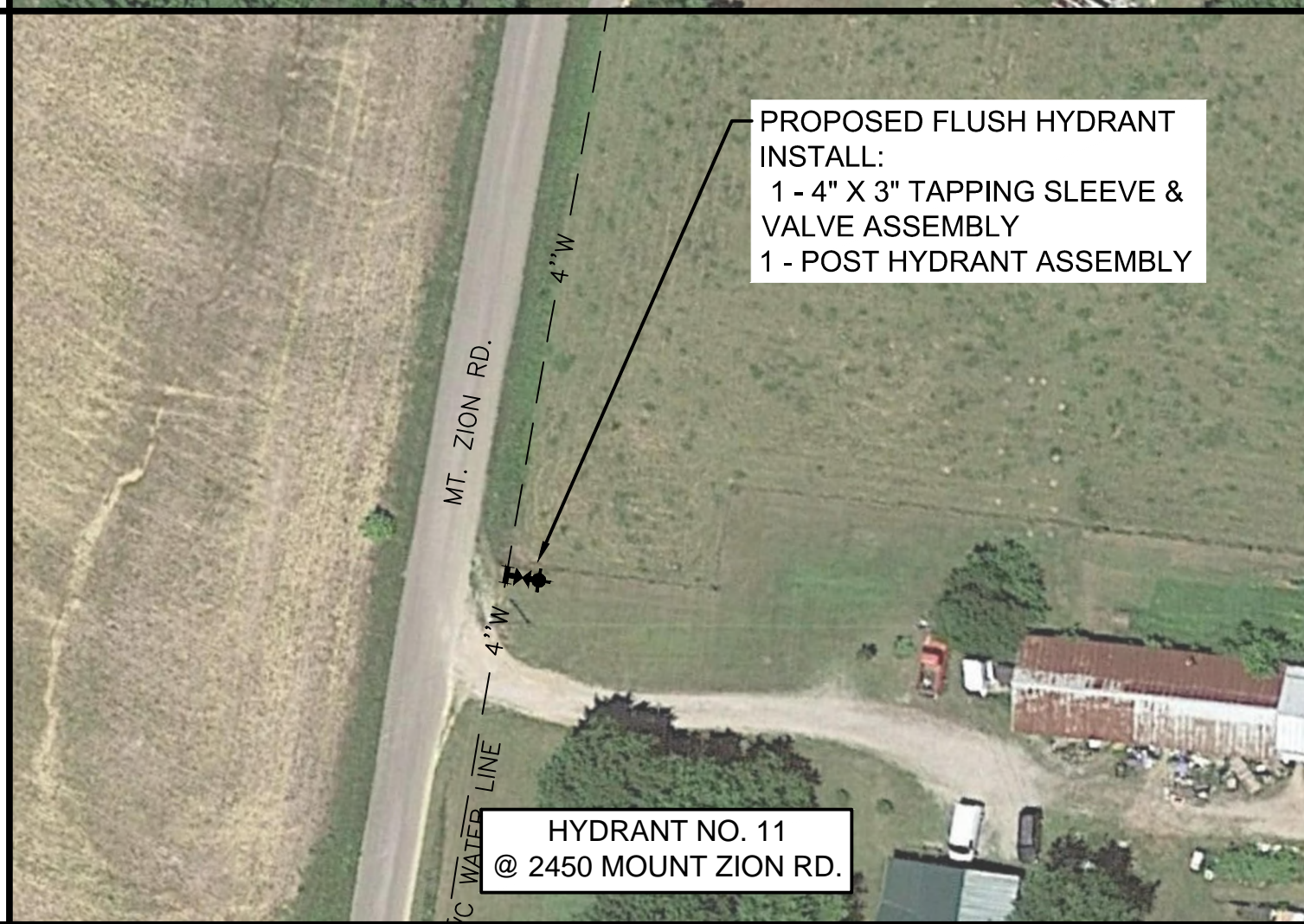
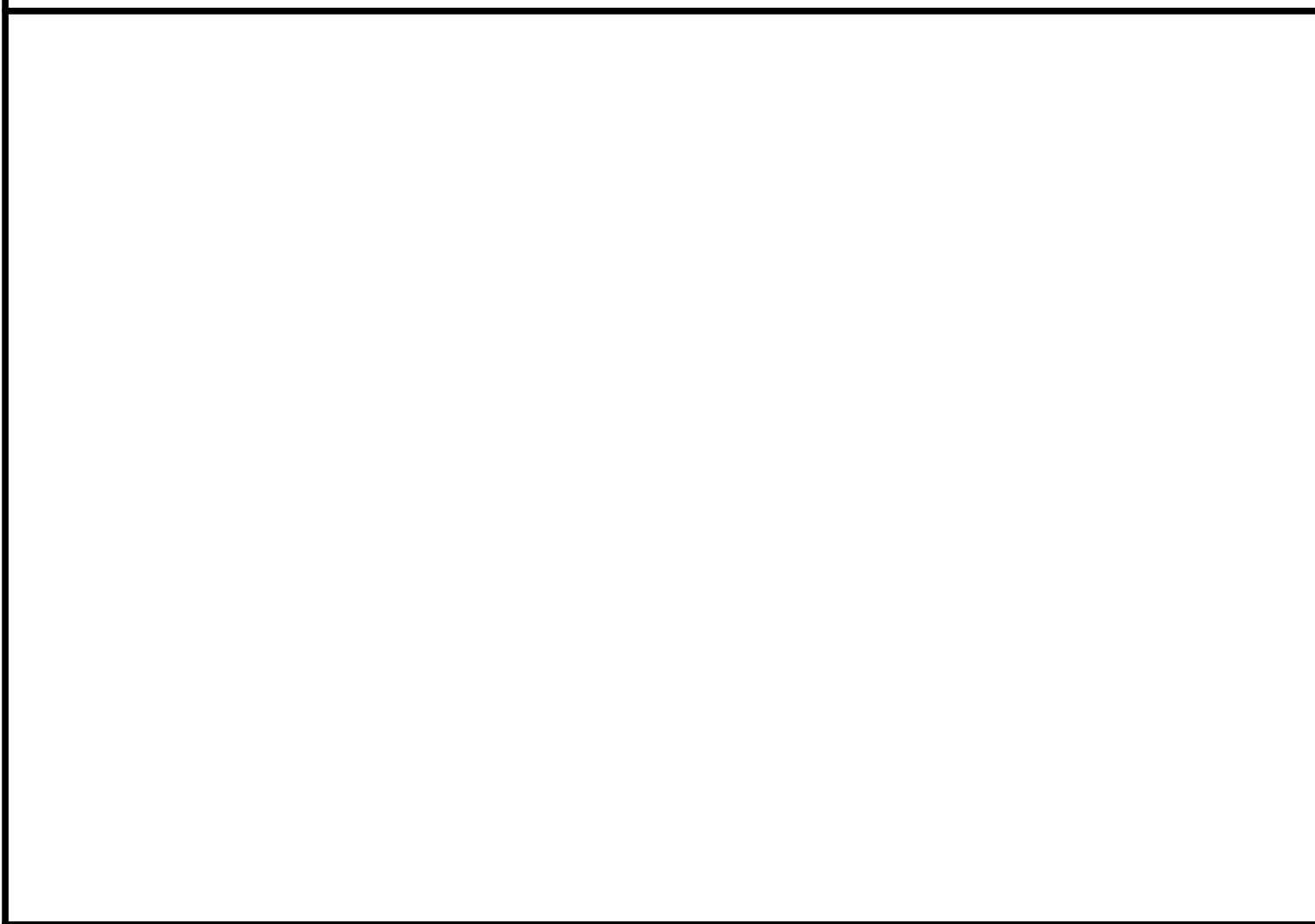
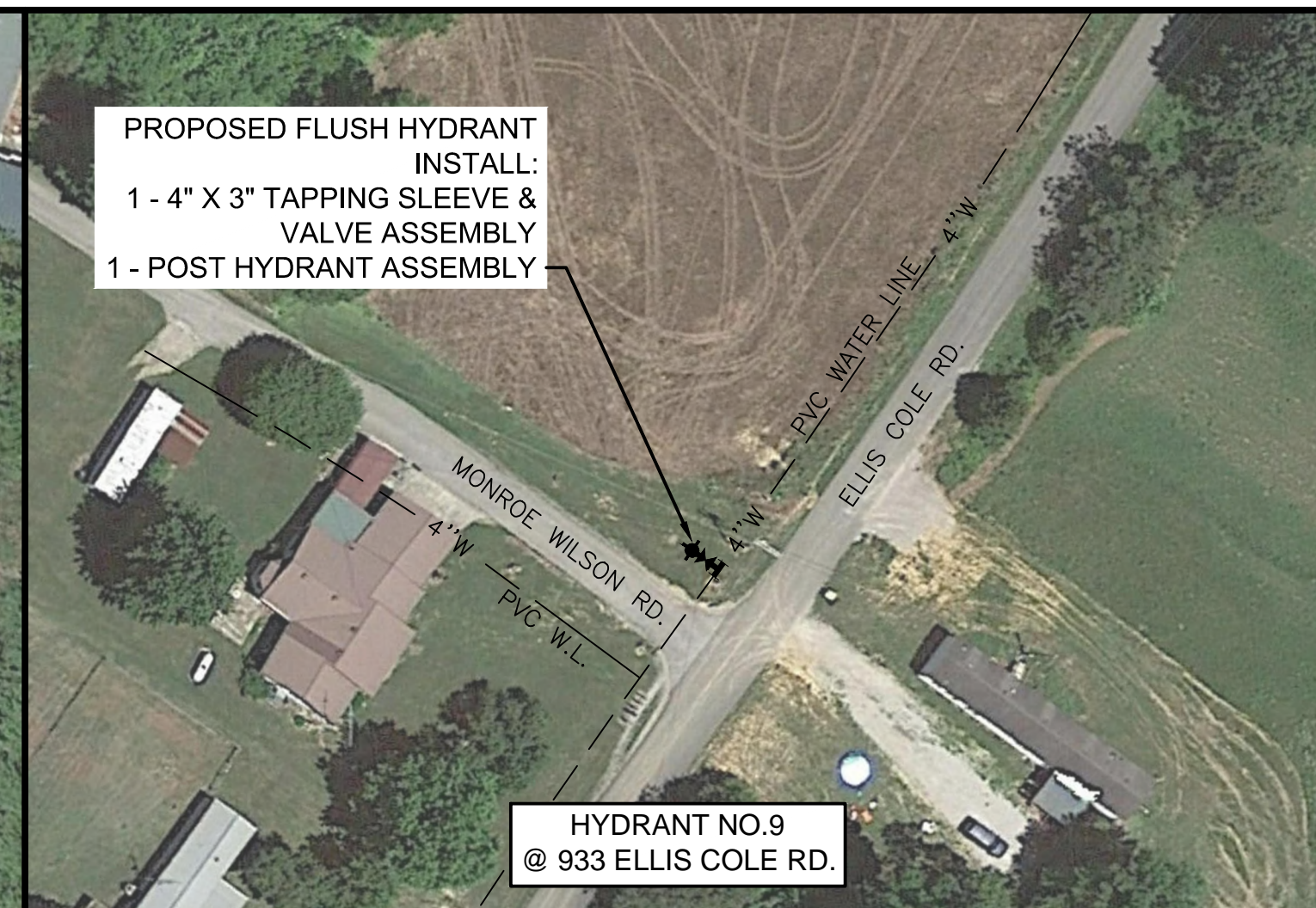
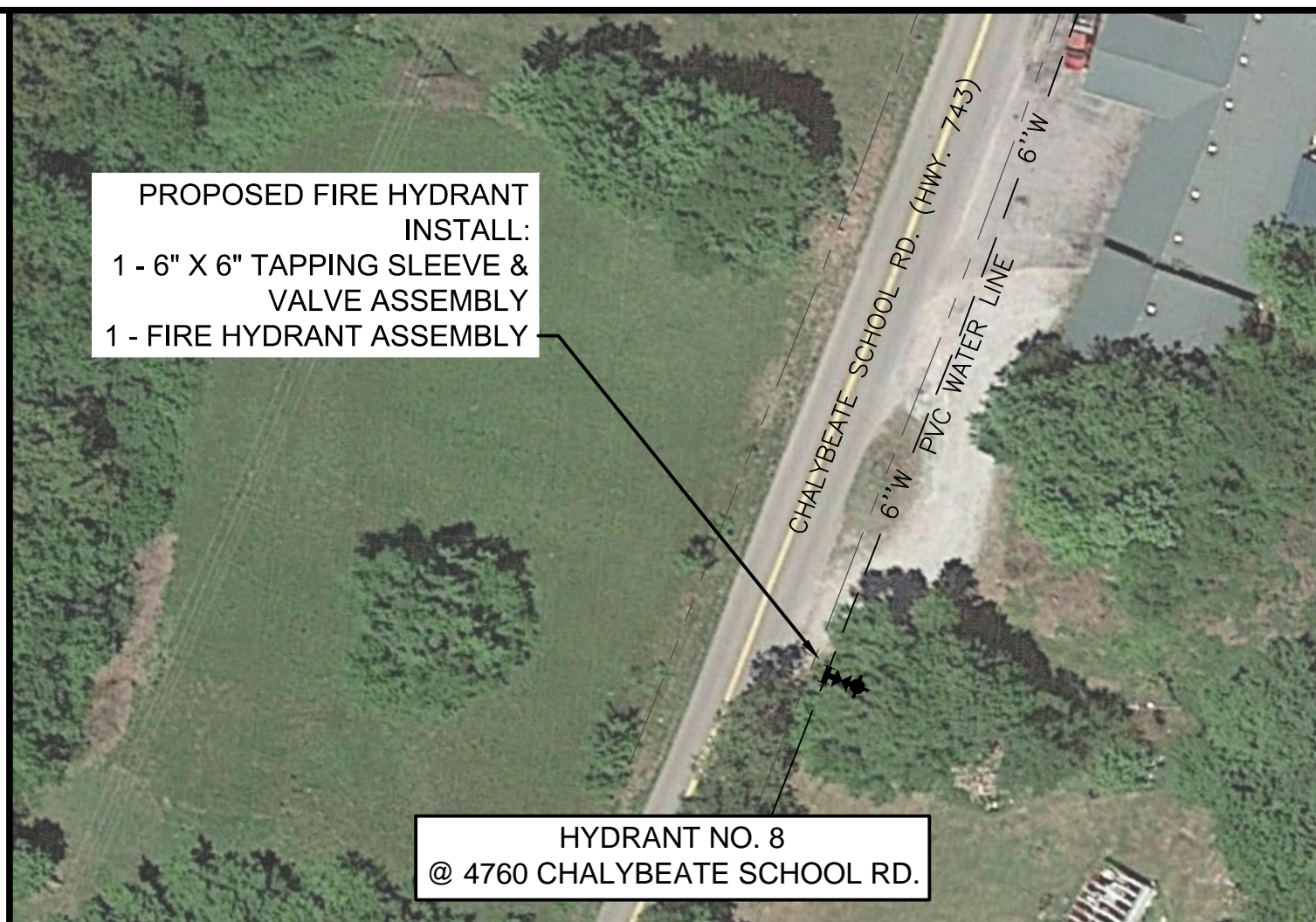
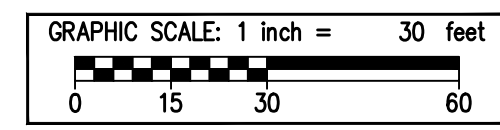
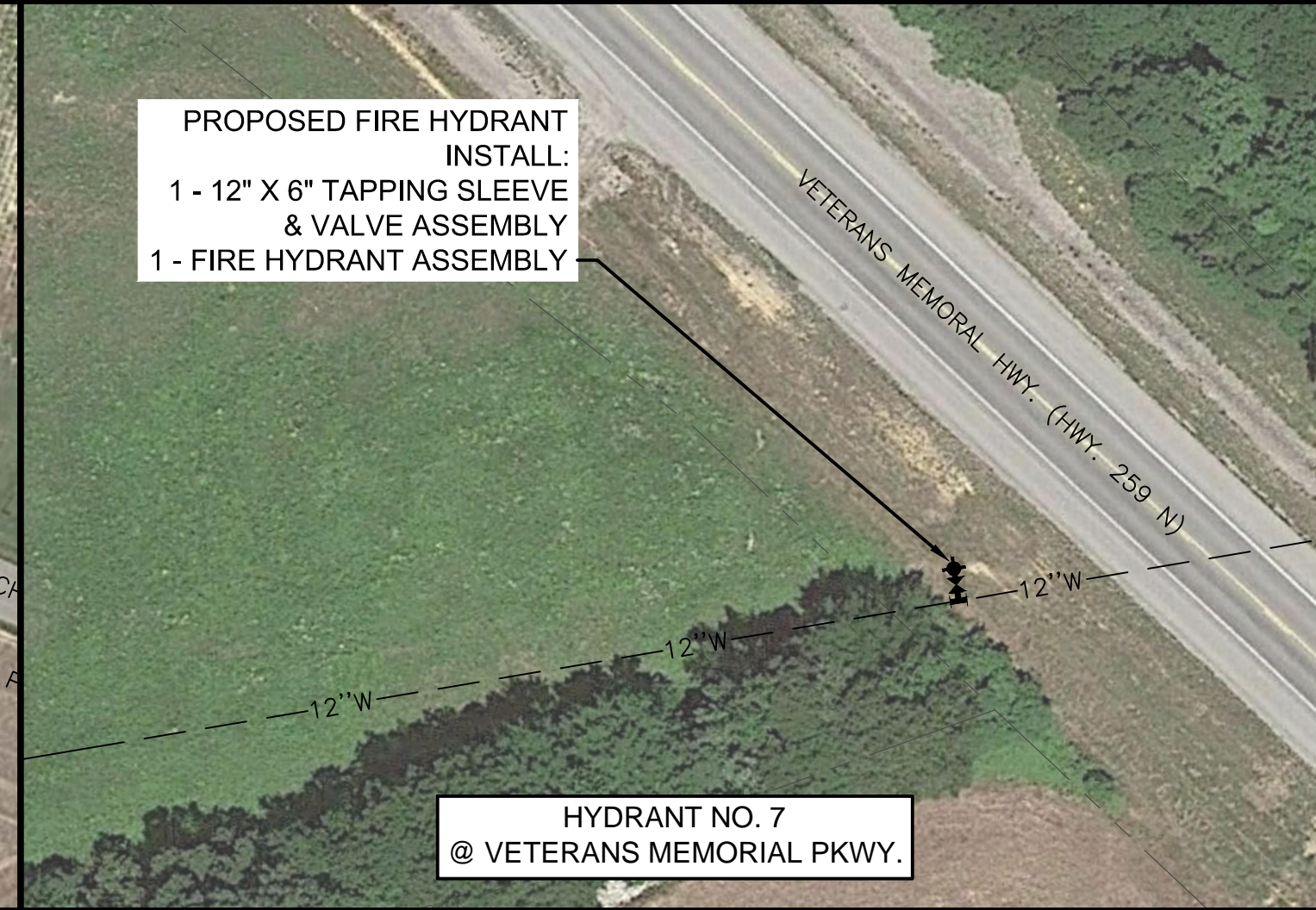
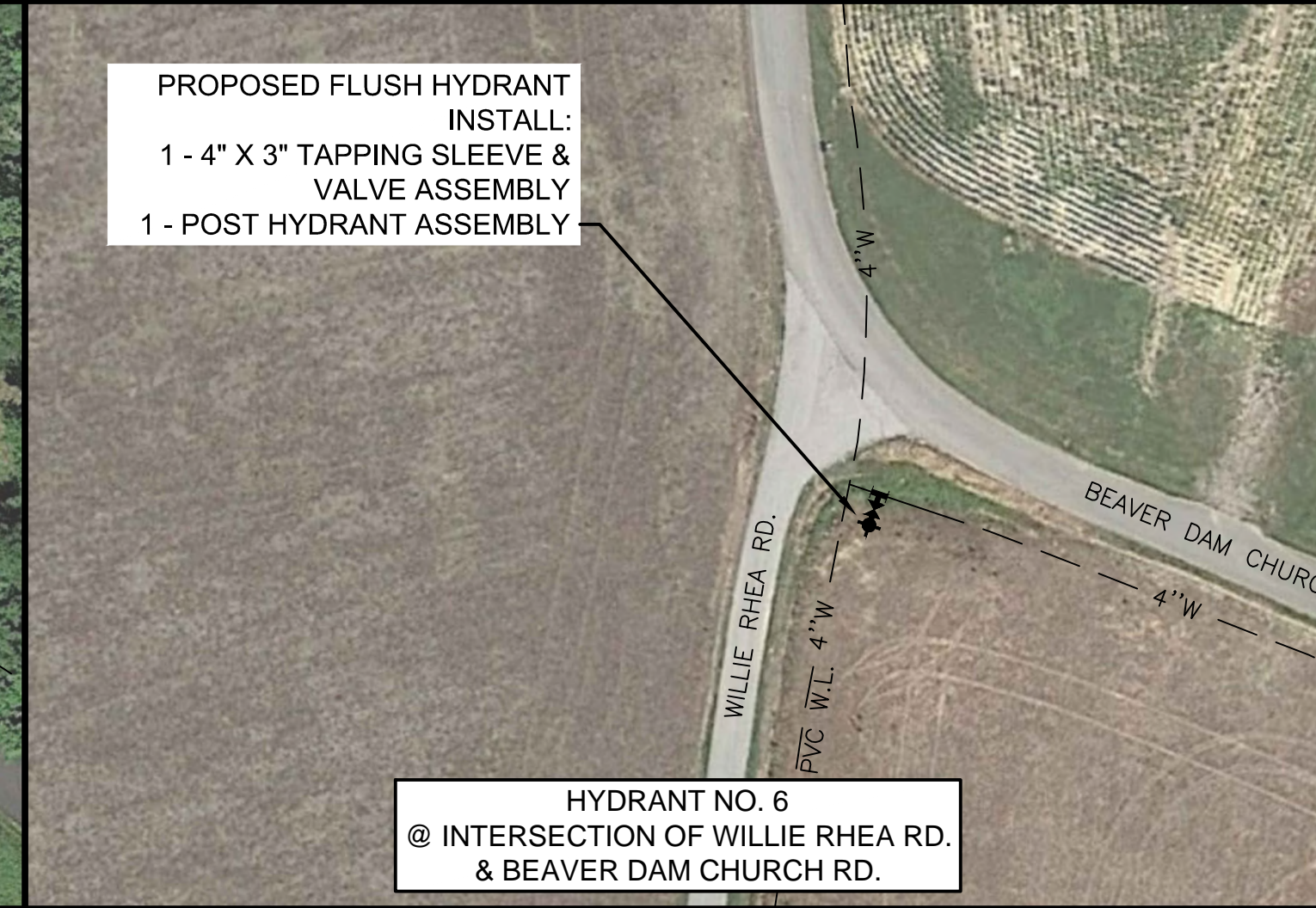
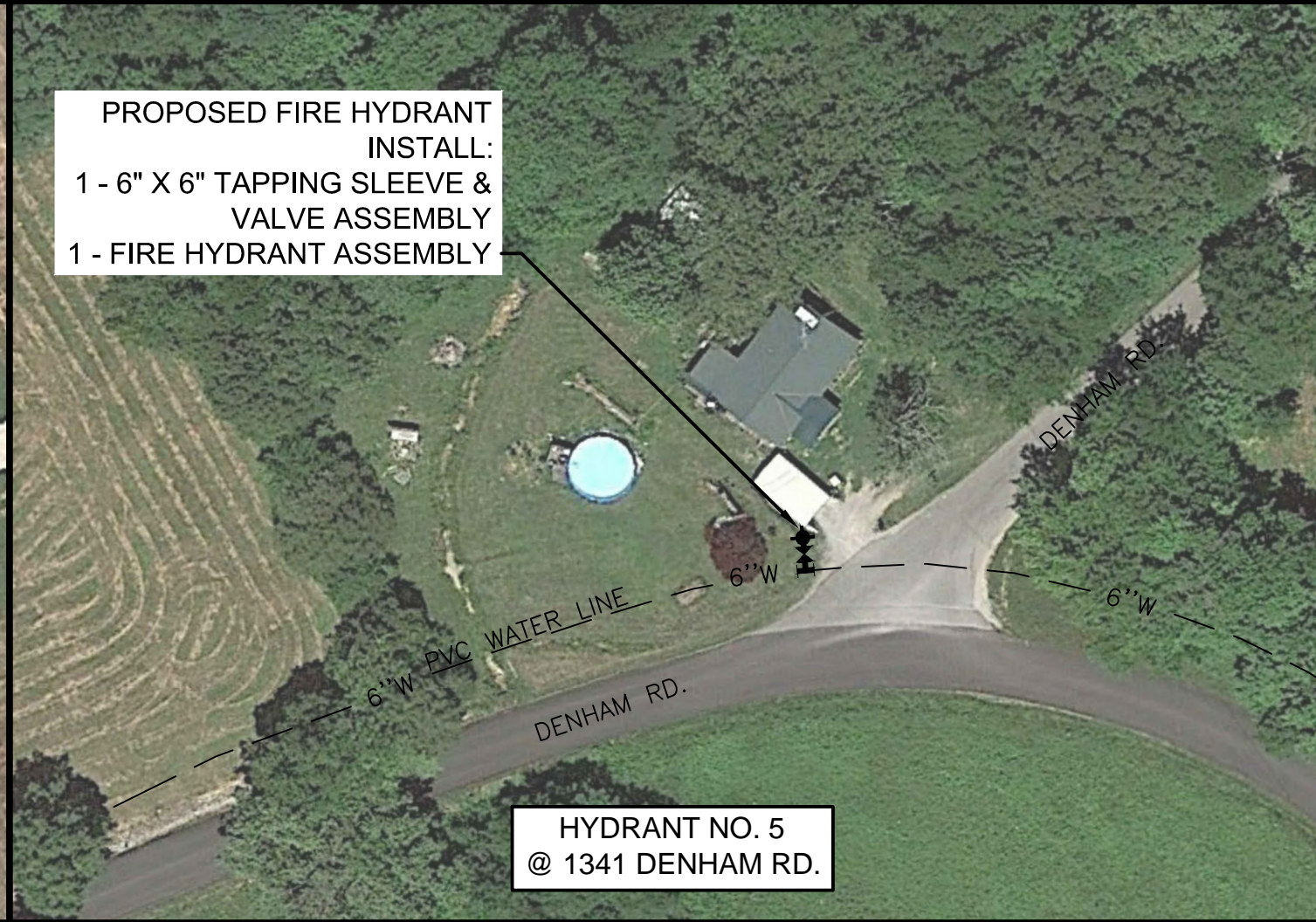
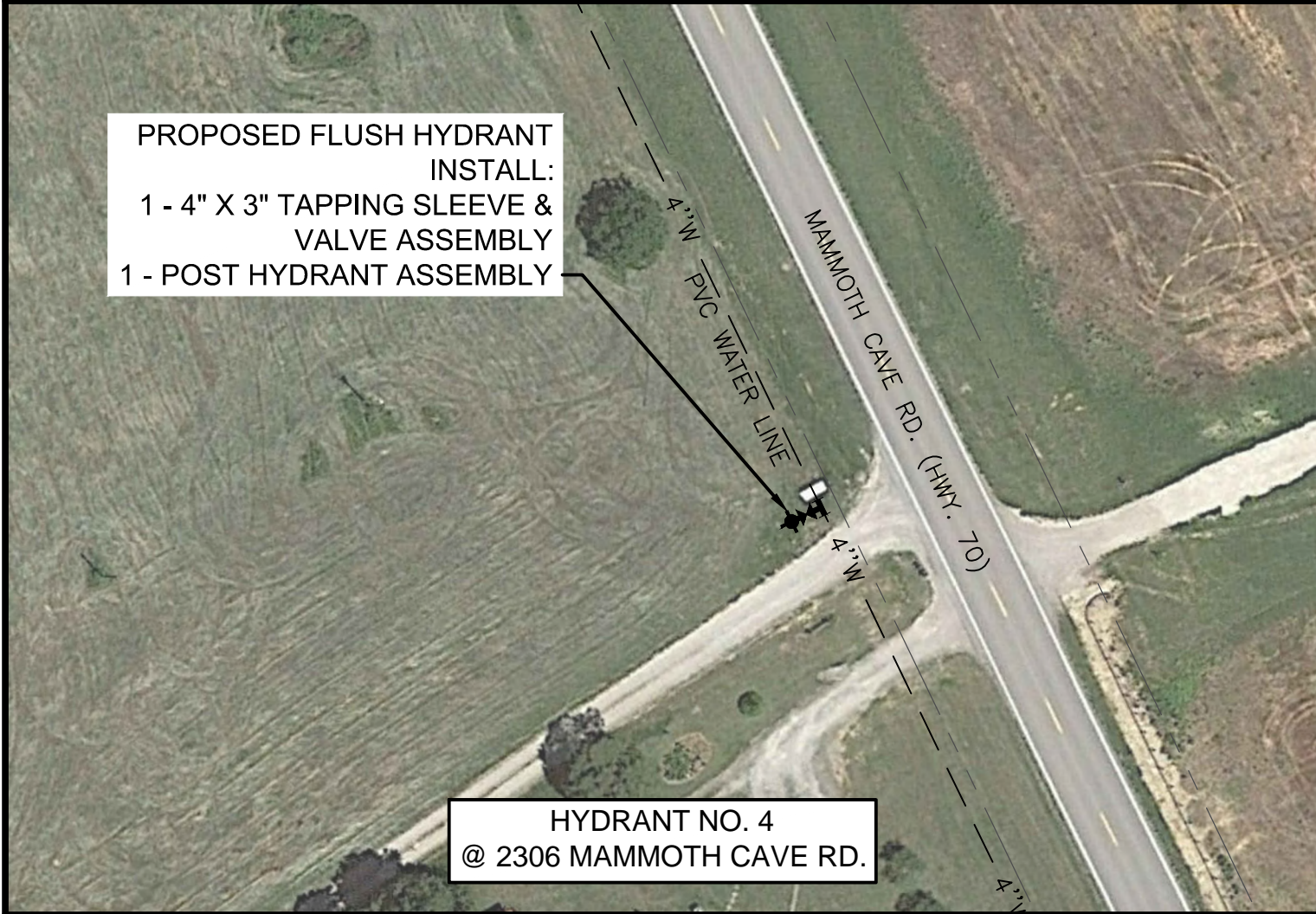
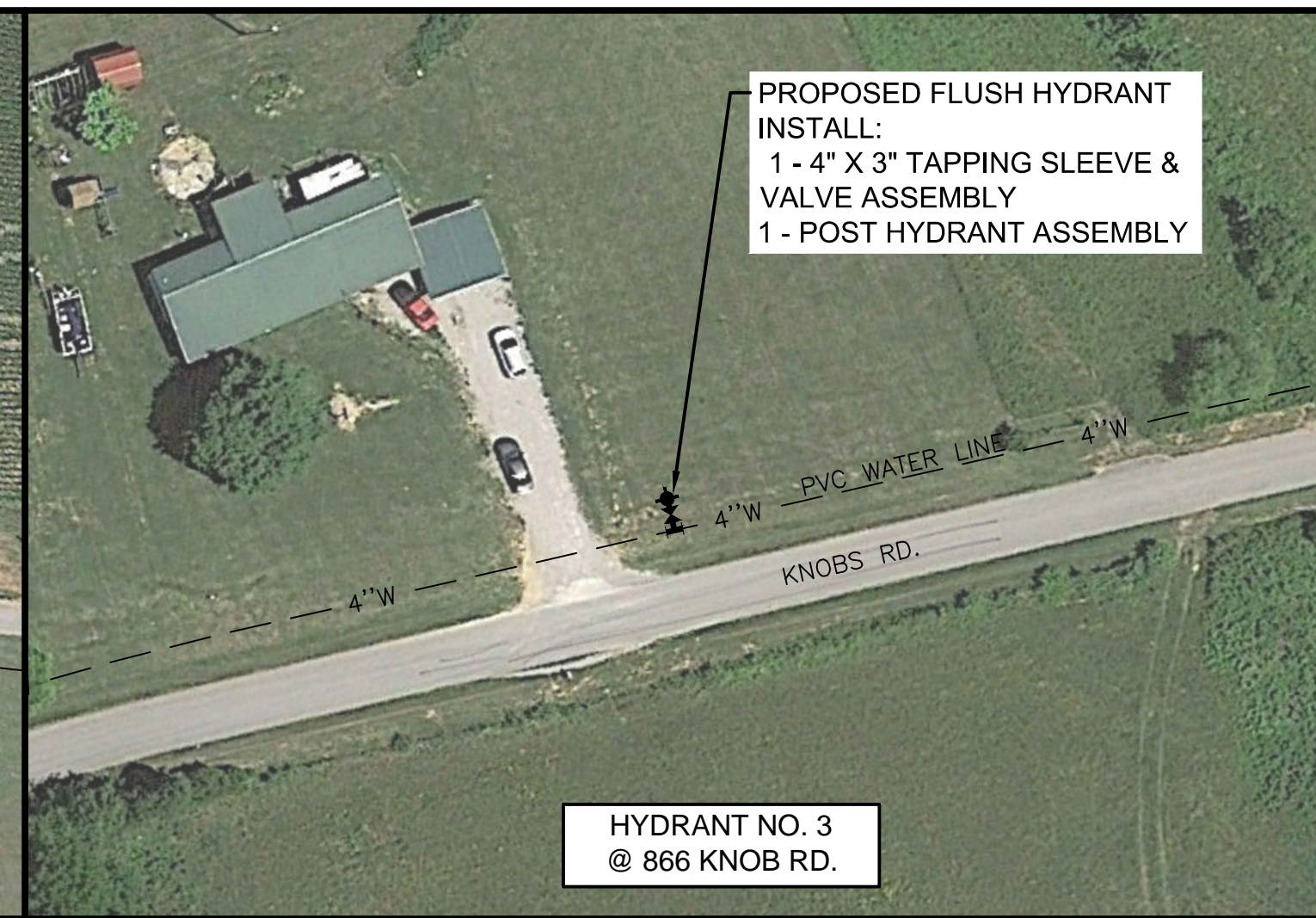
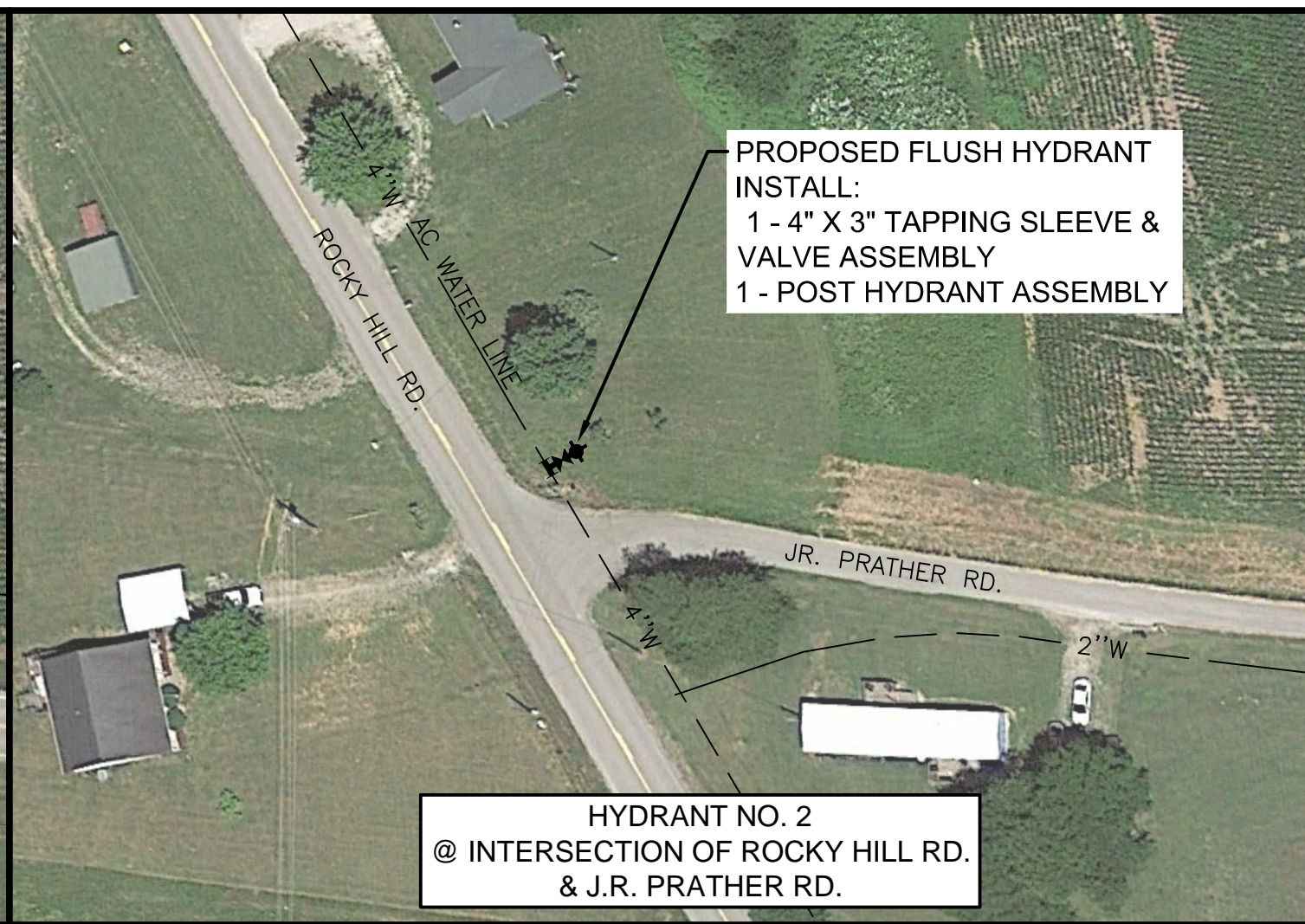
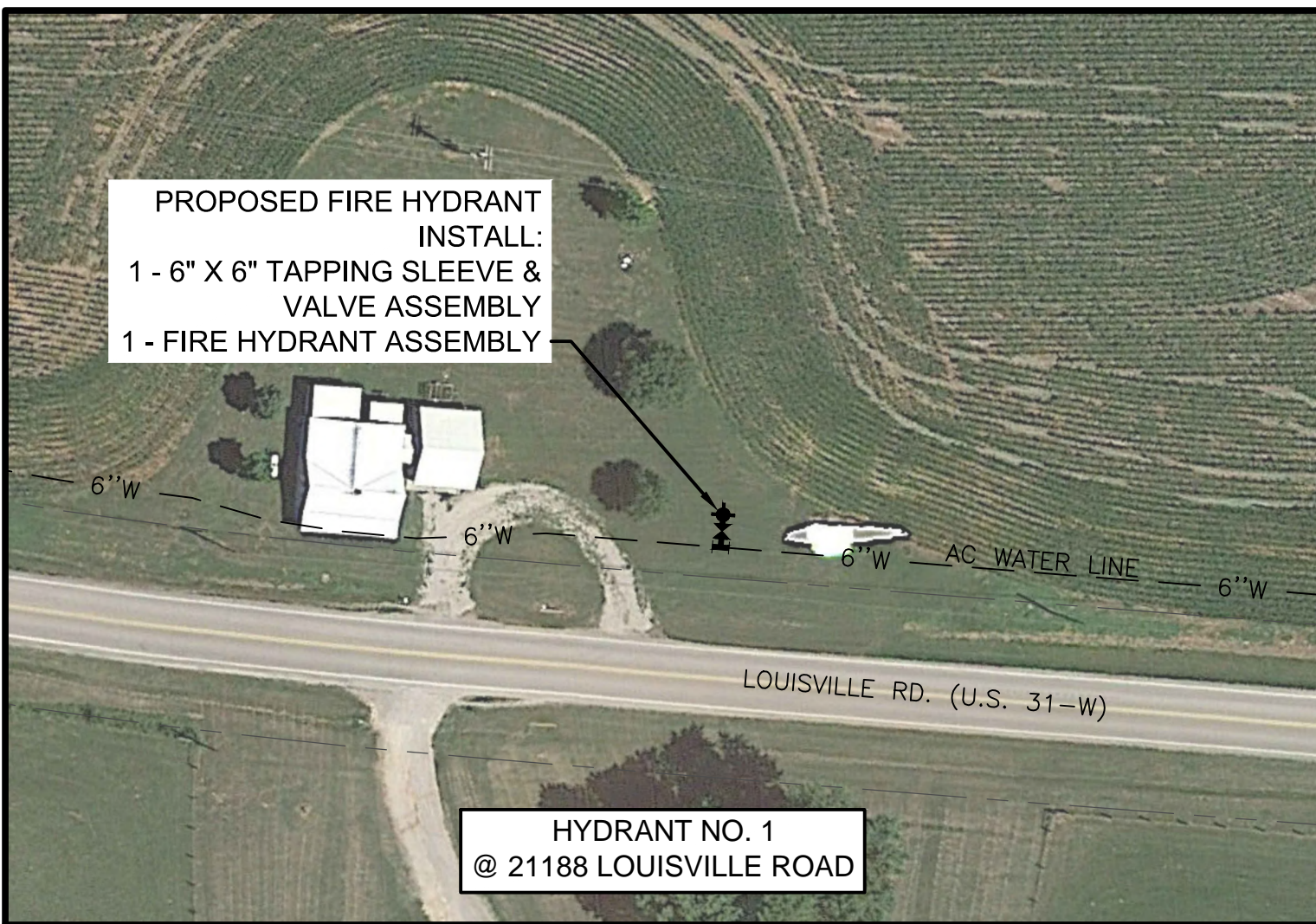
DATE: APRIL 2019
 SCALE: 1" = 30'
 SHEET NO. C-11

CONTRACT DOCUMENTS

PLOTTED BY: dvmorris

PRINTED: 4/12/2019 @ 2:28PM

FILE NAME: C:\3621-Edmonson_Col08-2017 WL sit\Working Drawings\AutoCAD\3621-08-C-12.dwg



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.



HYDRANT LOCATIONS

2017 EDMONSON/HART WATER LINE PROJECT
EDMONSON COUNTY WATER DISTRICT

DESIGNED	LER
BY	
DATE	
DRAWN	DM
REVIEWED	LER
APPROVED	LER

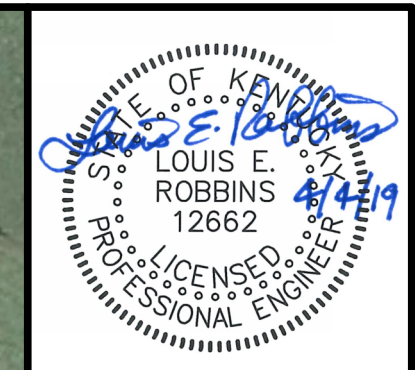
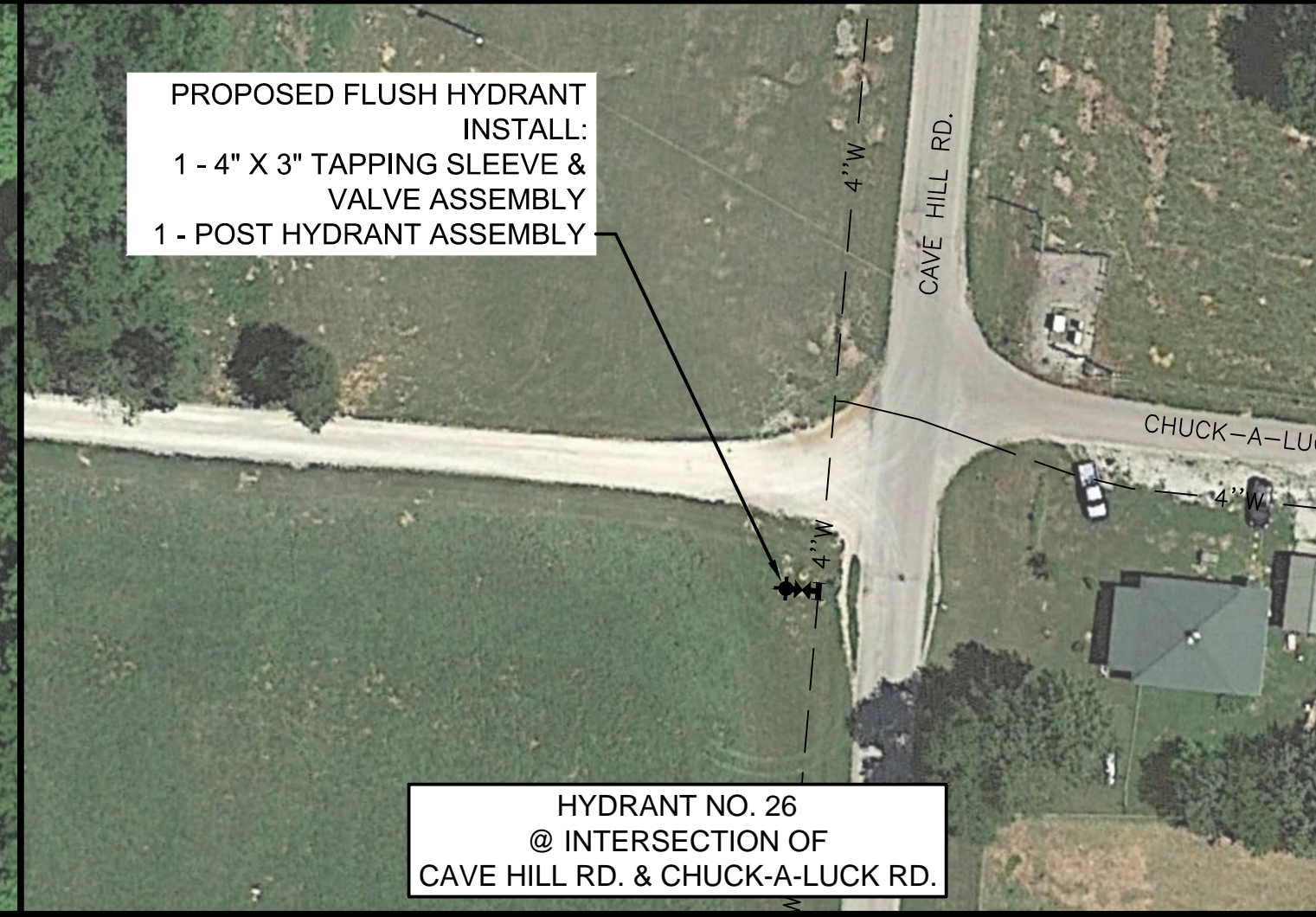
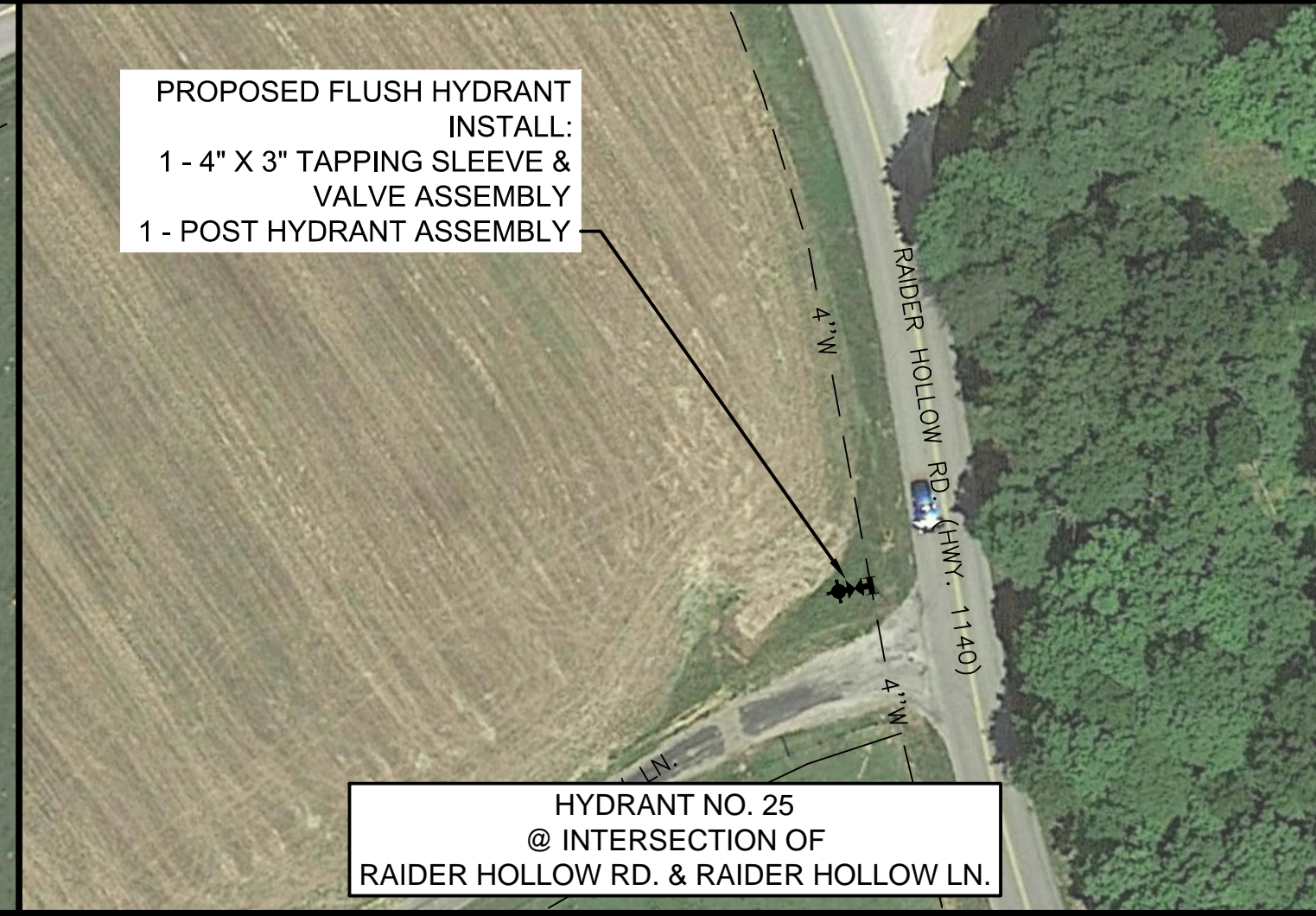
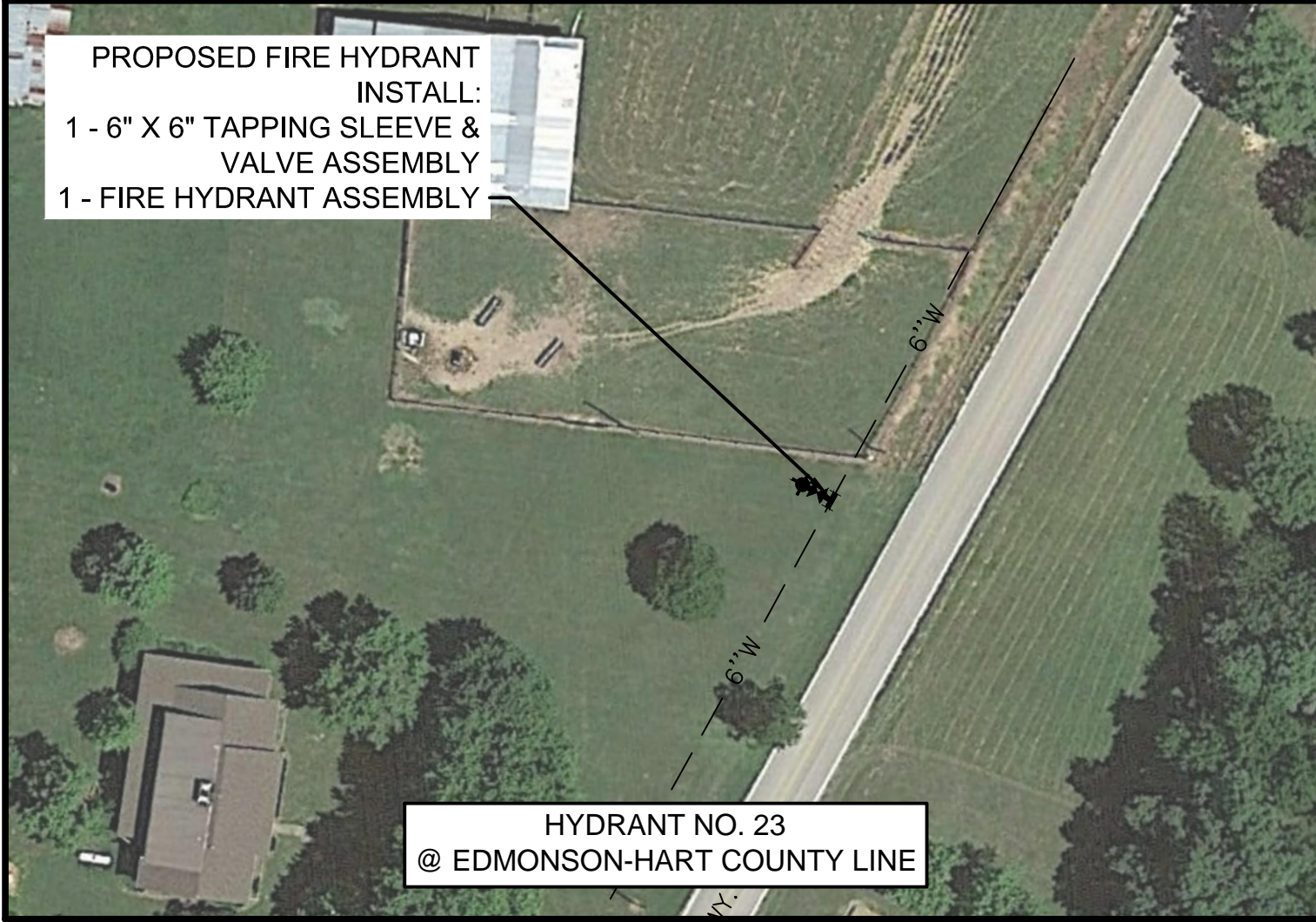
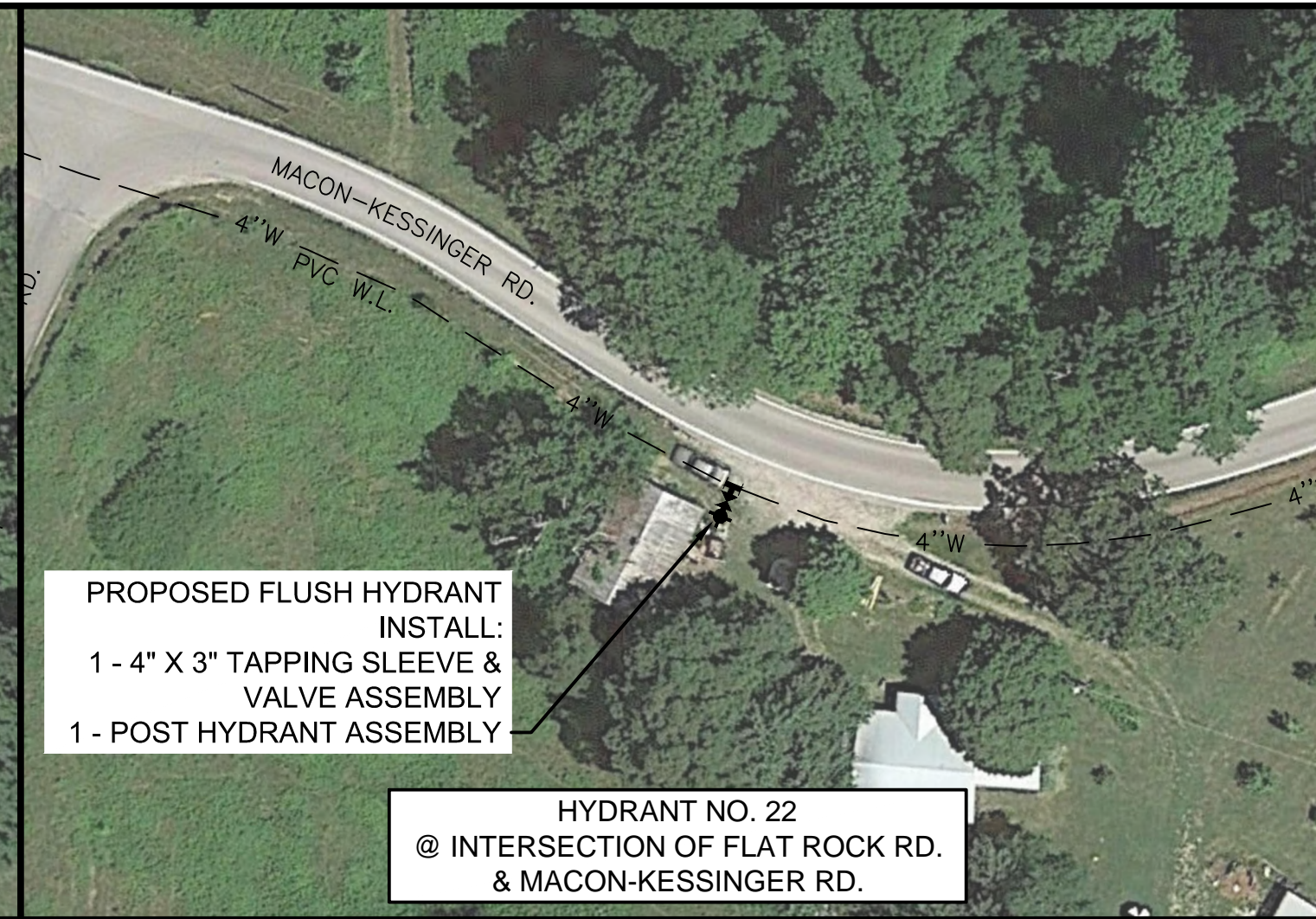
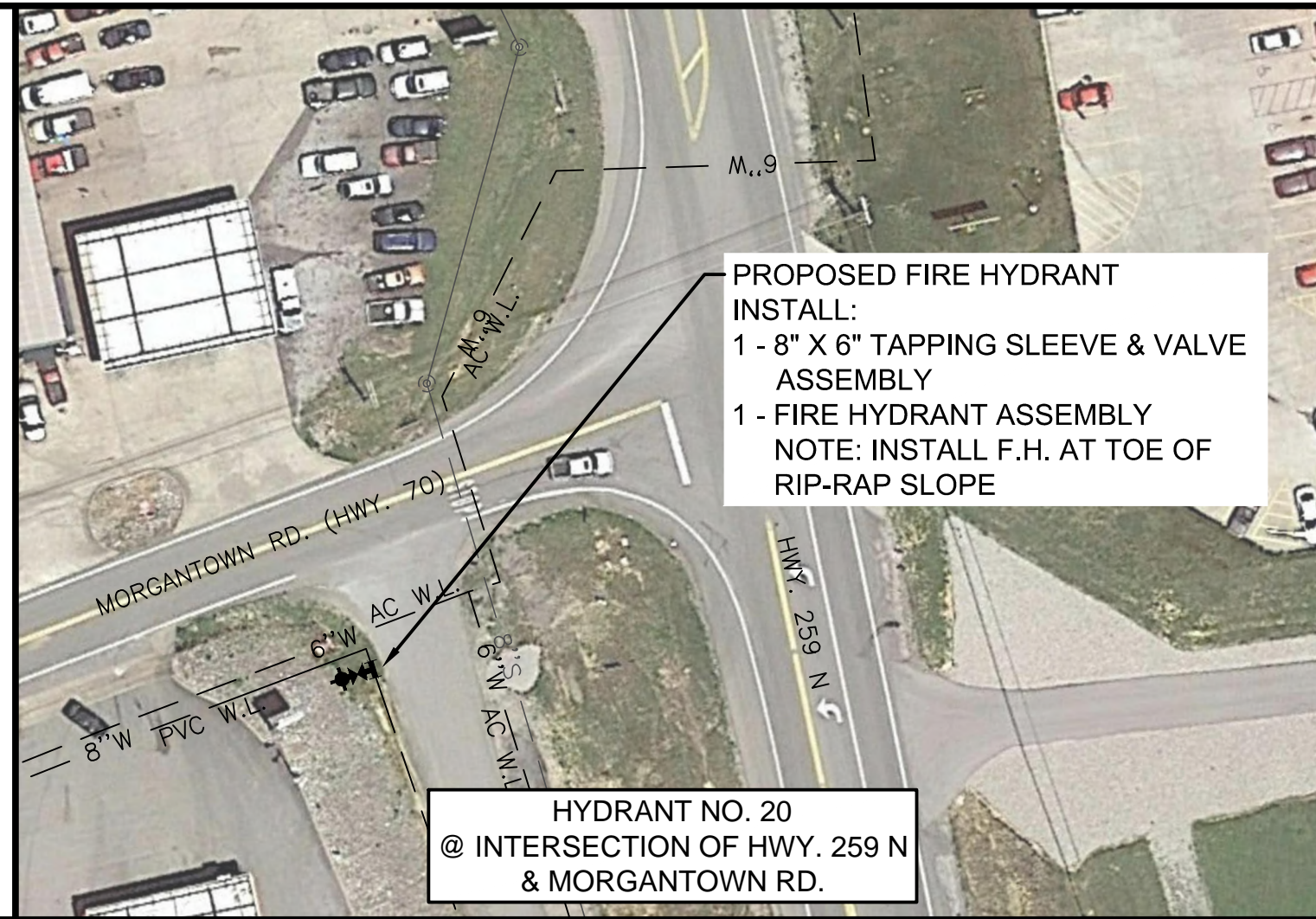
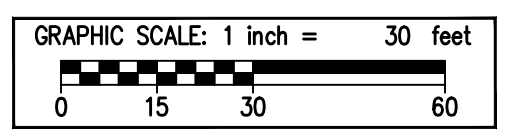
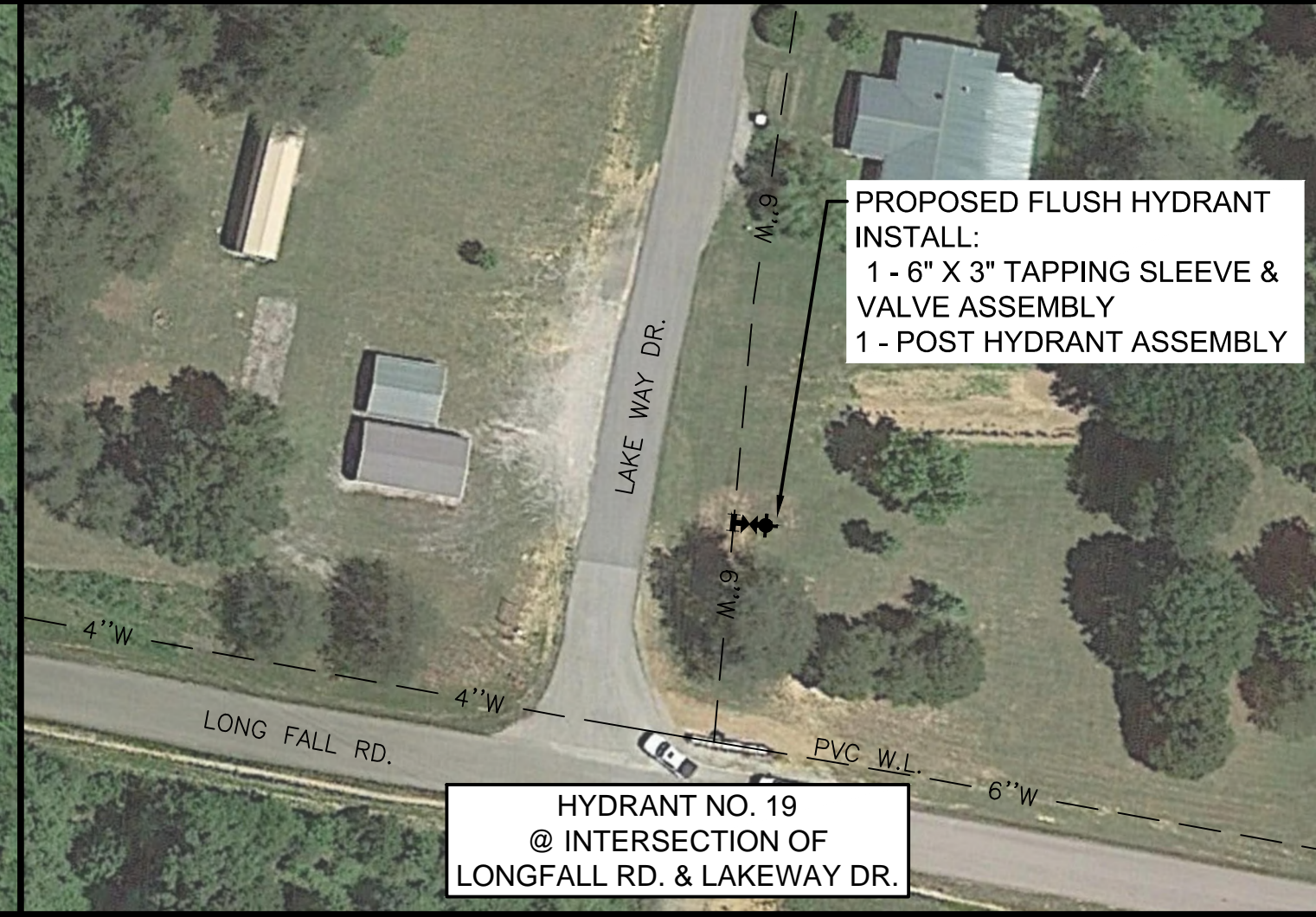
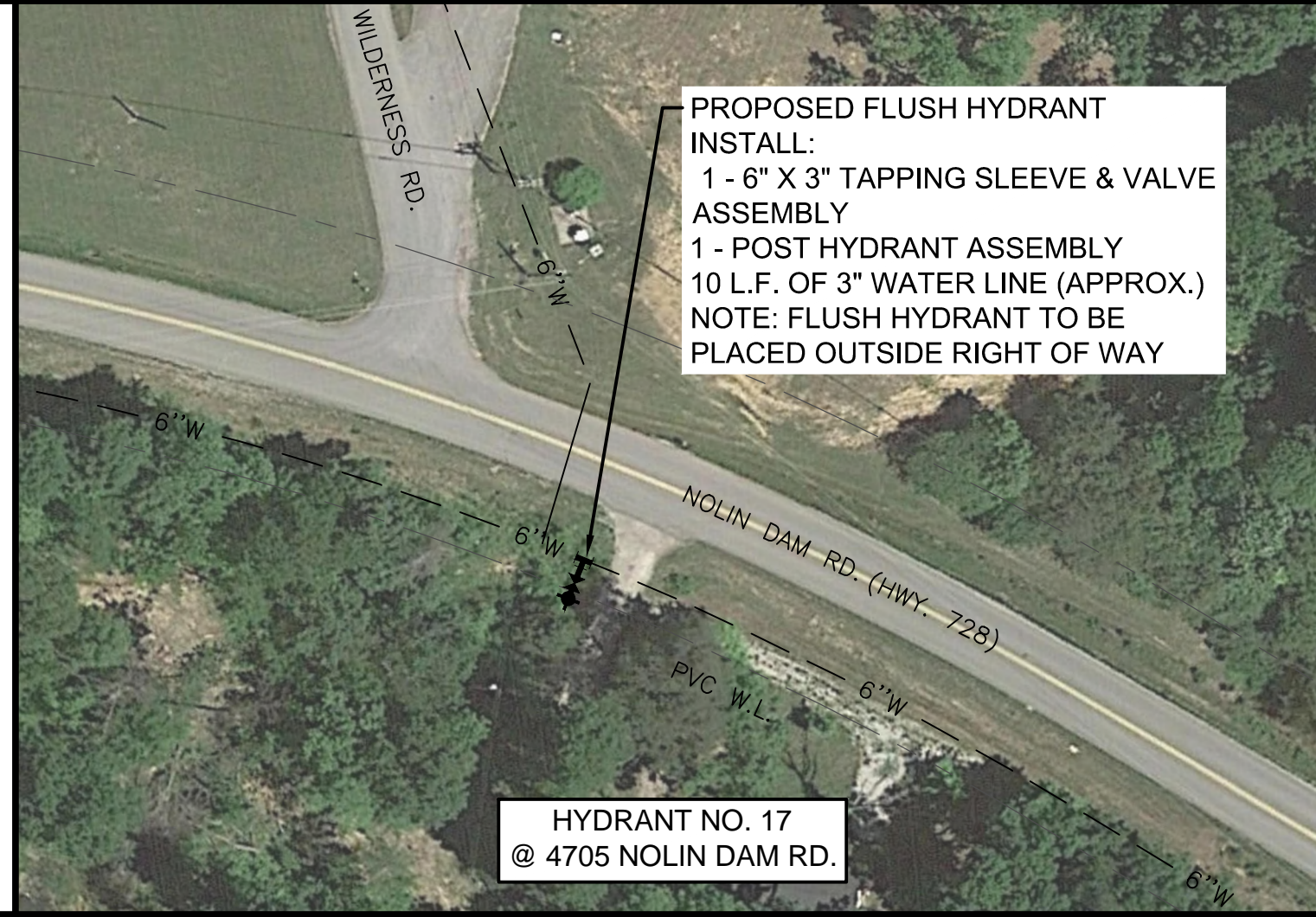
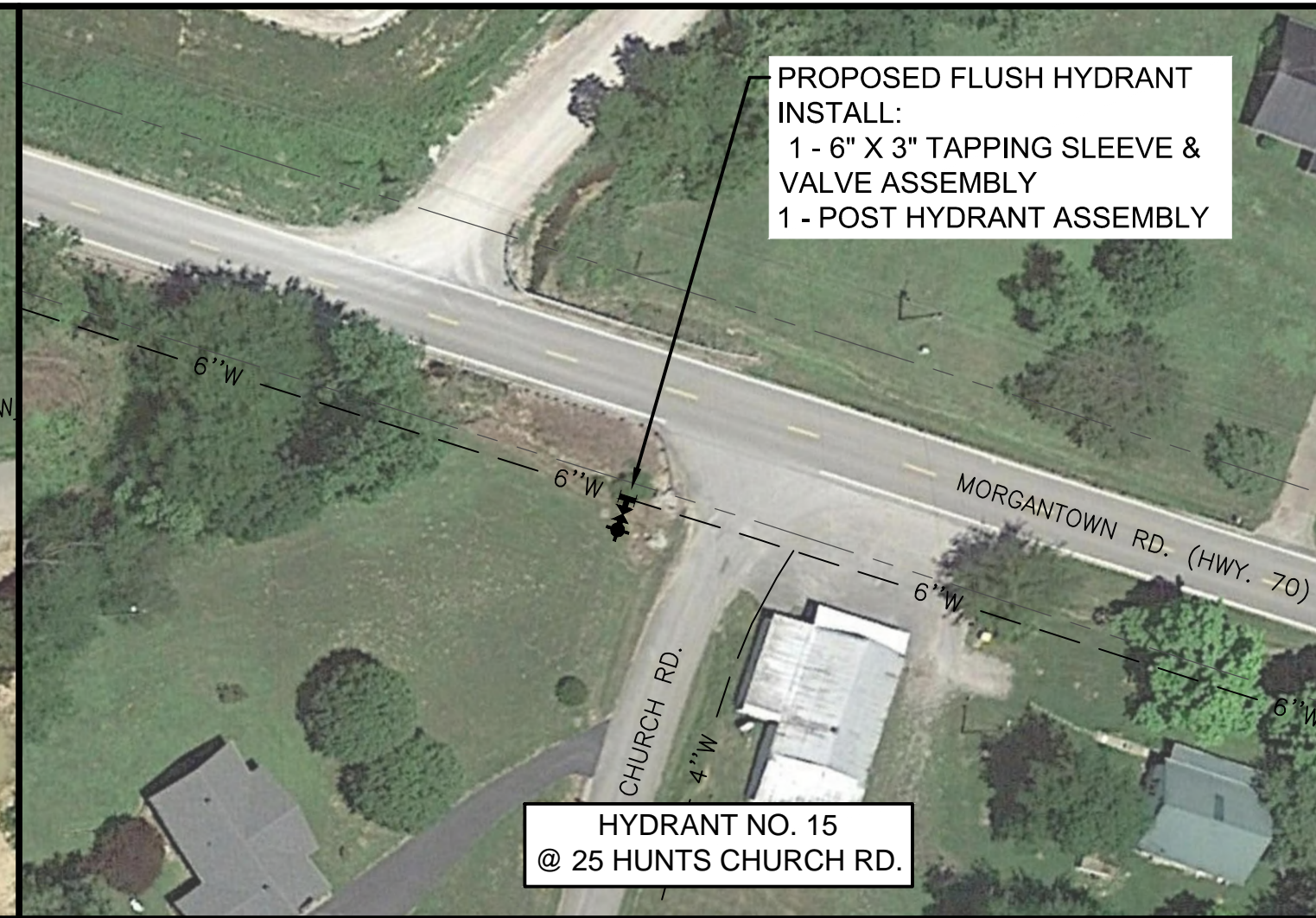
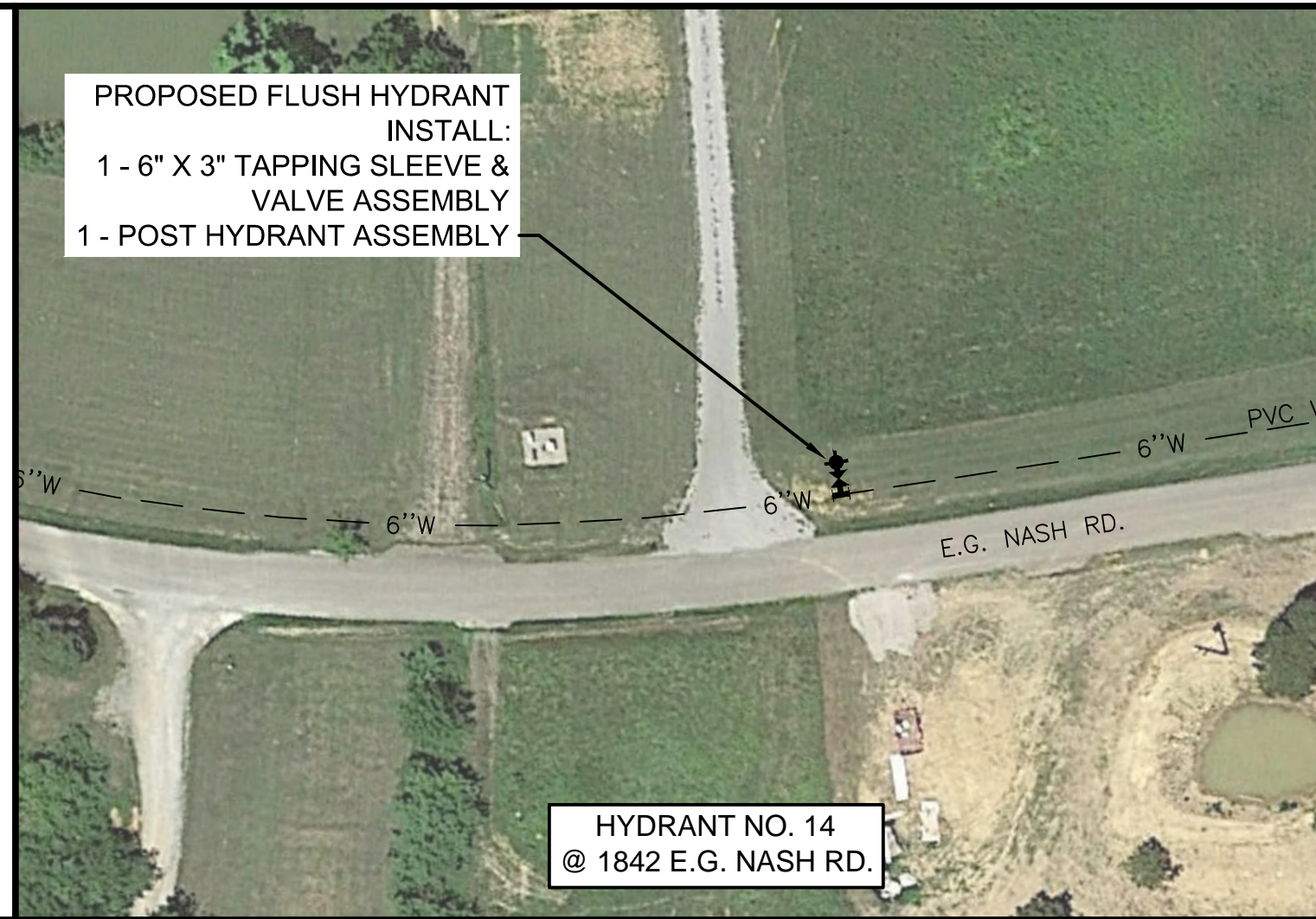
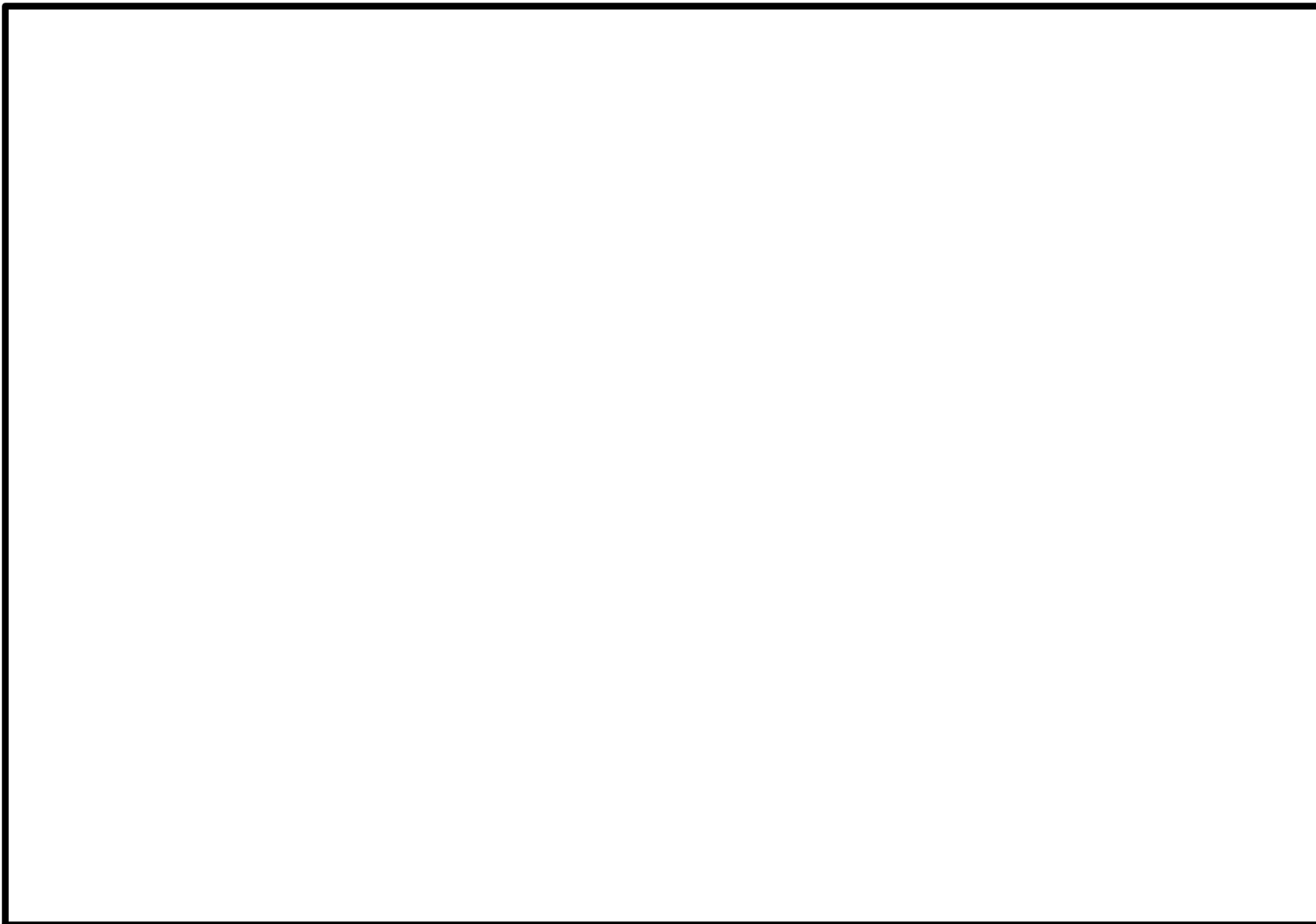
NO.	REVISIONS	DESCRIPTION

DATE: APRIL 2019
SCALE: 1" = 50'
SHEET NO.

PLOTTED BY: dvmorris

PRINTED: 4/12/2019 @ 2:28PM

FILE NAME: C:\3621-Edmonson\2017 WL\Working Drawings\AutoCAD\3621-08-C-13.dwg



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT OR ANY PART THEREOF MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.



HYDRANT LOCATIONS

2017 EDMONSON/HART WATER LINE PROJECT

EDMONSON COUNTY WATER DISTRICT

NO.	DATE	DESCRIPTION	DESIGNED	BY	DATE	DRAWN	DM	REVIEWED	LER	APPROVED	LER

SCALE CHECK: _____ THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: APRIL 2019

SCALE: NOT TO SCALE

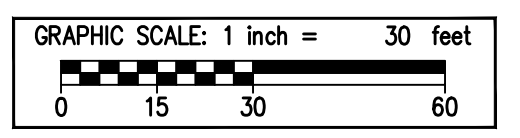
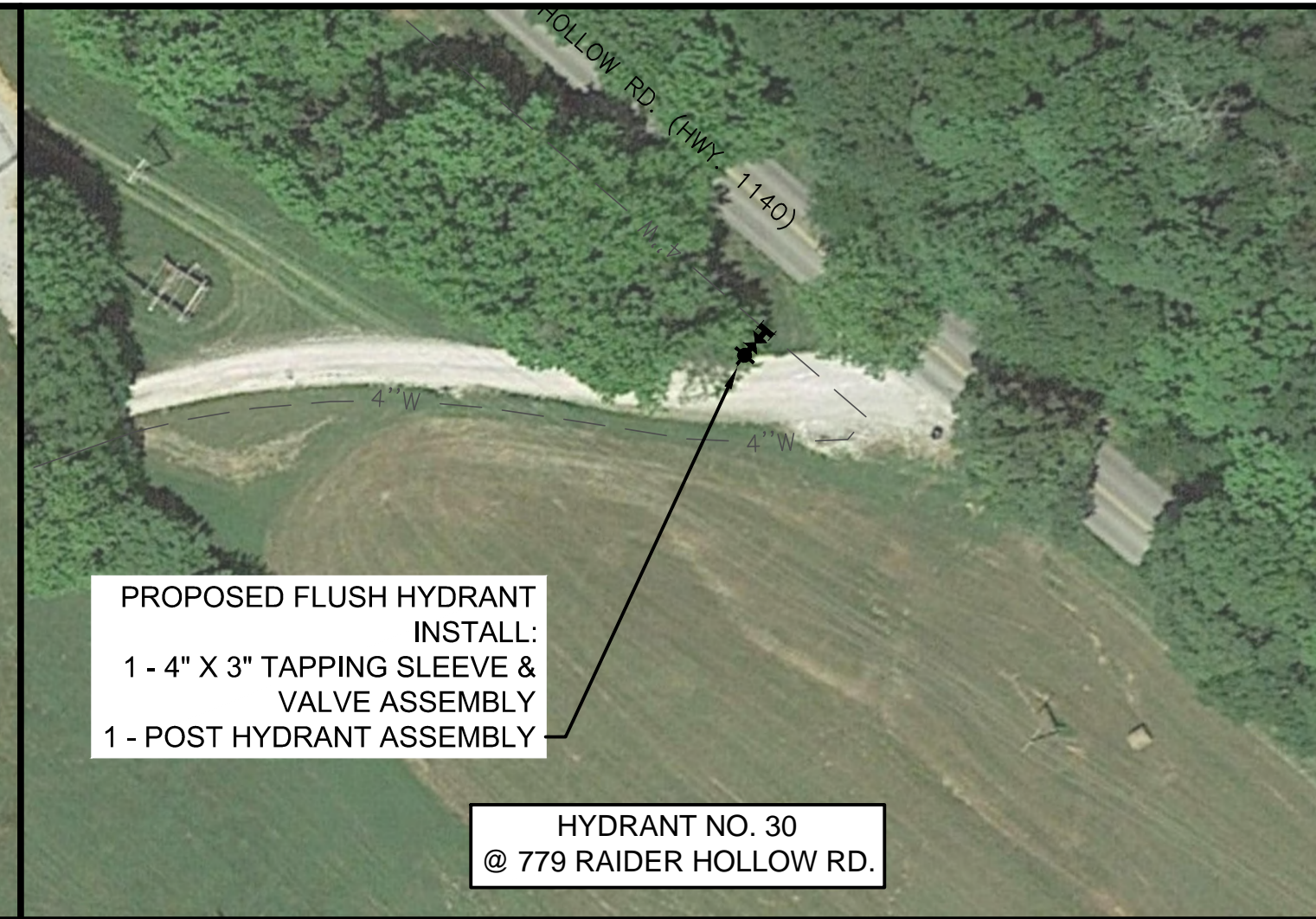
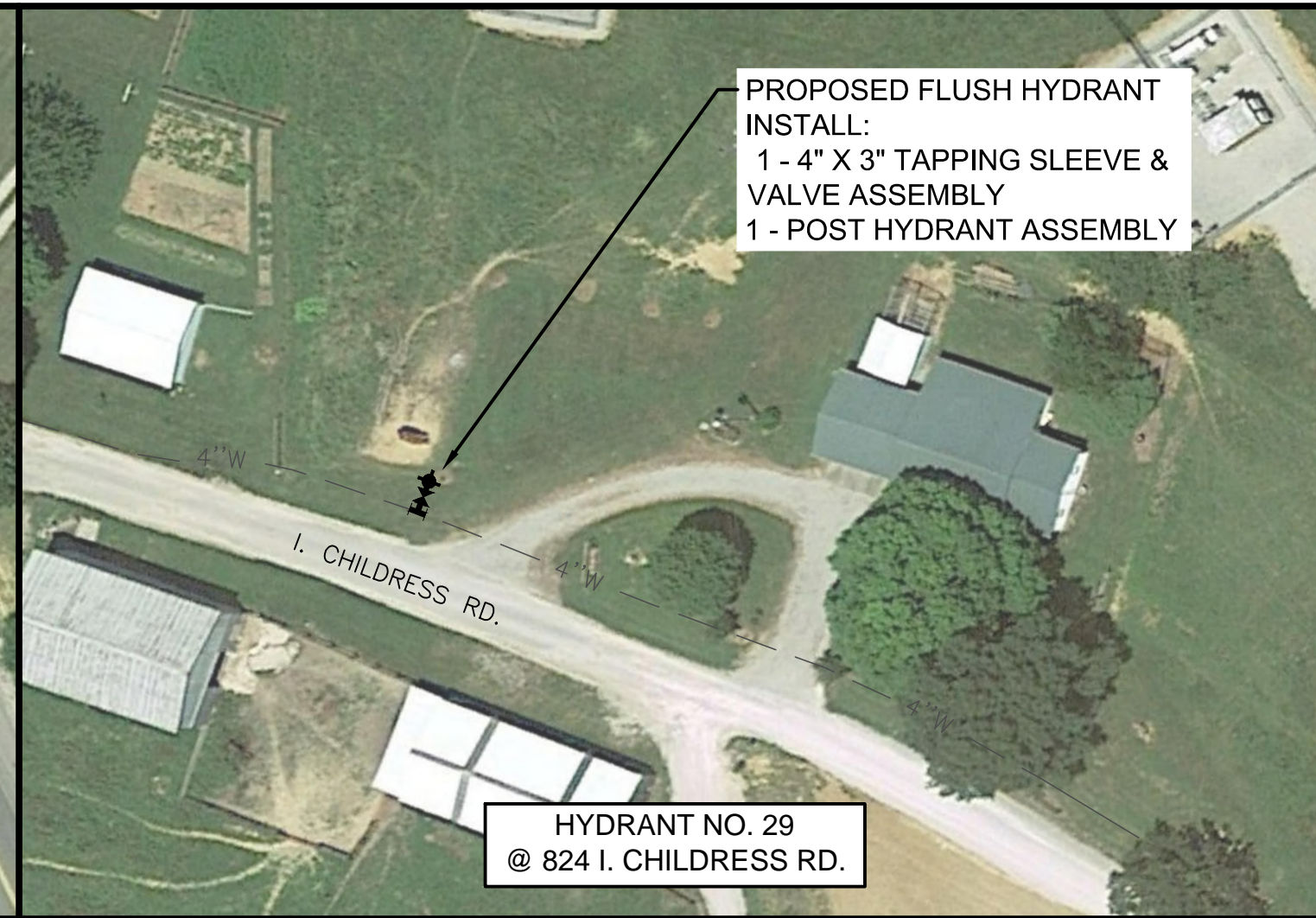
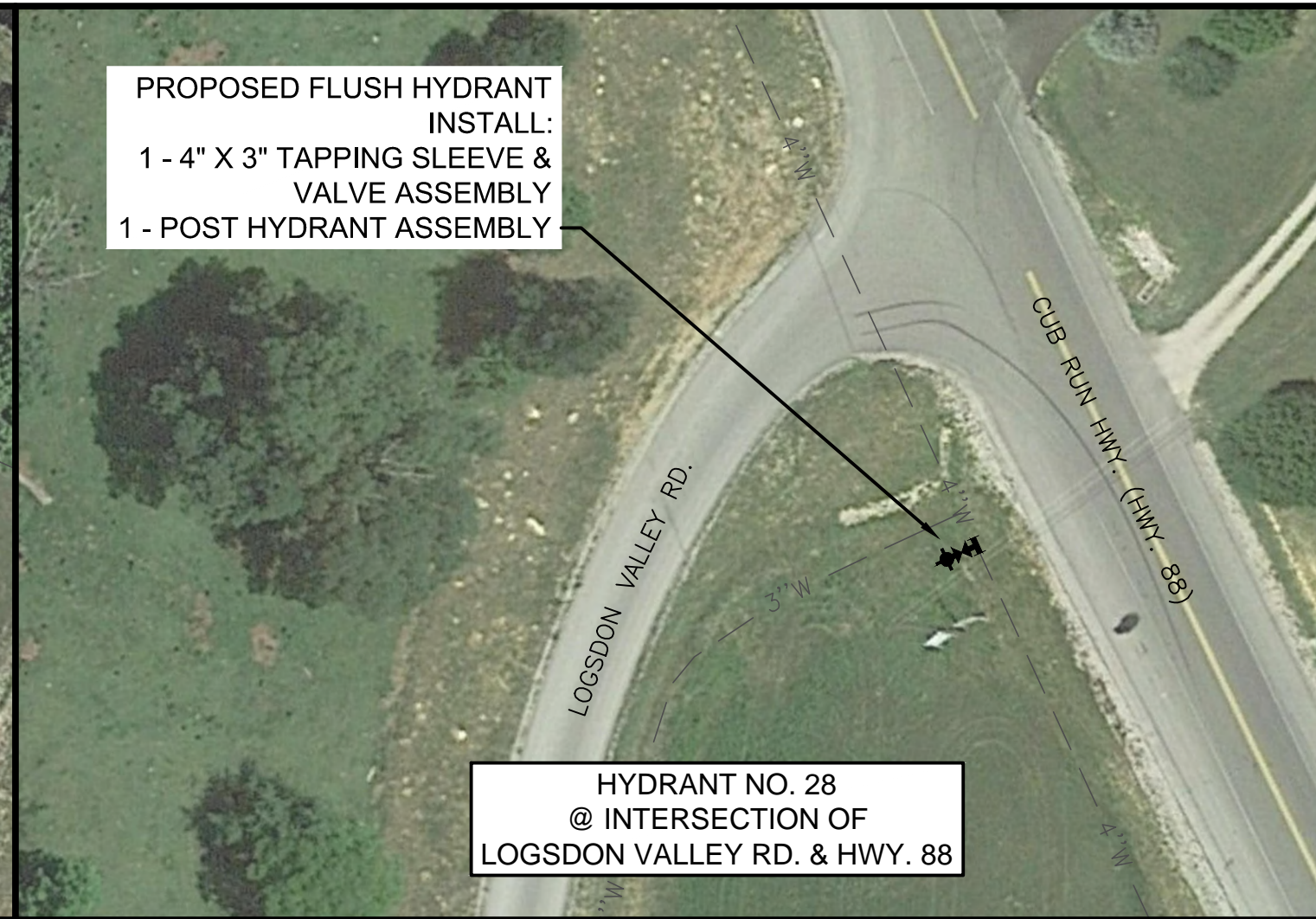
SHEET NO. C-13

CONTRACT DOCUMENTS

PLOTTED BY: jvmorris

PRINTED: 4/12/2019 @ 2:28PM

FILE NAME: C:\3621-Edmonson_Col08-2017 WL\st\Working Drawings\AutoCAD\3621-08-C-14.dwg



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT OR ANY PART THEREOF MAY BE REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF GRW INC. THIS DRAWING IS THE PROPERTY OF GRW INC. AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC.

engineering | architecture | geospatial
www.grwinc.com

HYDRANT LOCATIONS

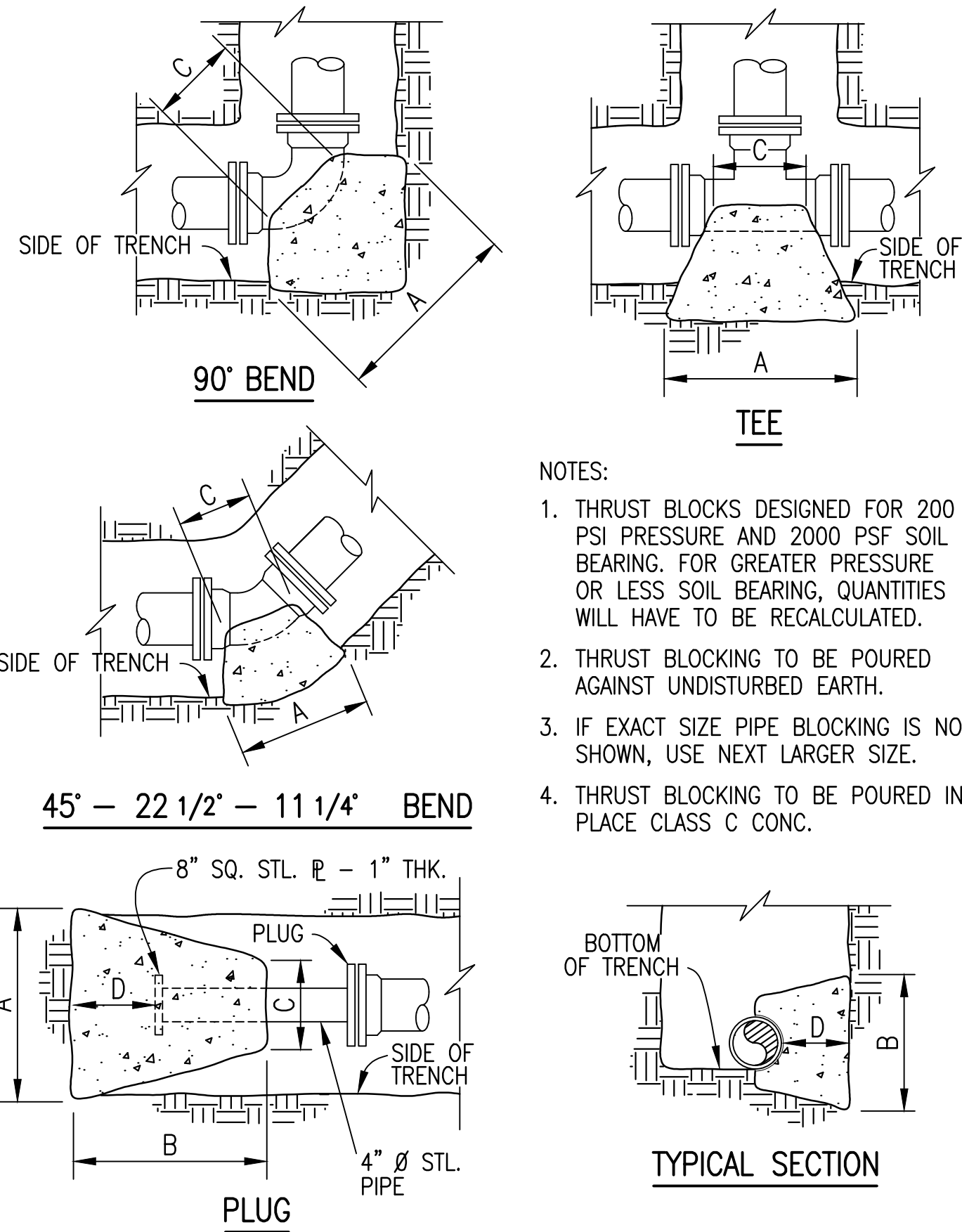
2017 EDMONSON/HART WATER LINE PROJECT
EDMONSON COUNTY WATER DISTRICT

NO.	REVISIONS DESCRIPTION	DATE	BY	DESIGNED	DRAWN	REVIEWED	APPROVED
				LER	DM	LER	LER

DATE: APRIL 2019
SCALE: 1" = 50'
SHEET NO. C-14

SCALE CHECK: _____ THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

CONTRACT DOCUMENTS



NOTES:

1. THRUST BLOCKS DESIGNED FOR 200 PSI PRESSURE AND 2000 PSF SOIL BEARING. FOR GREATER PRESSURE OR LESS SOIL BEARING, QUANTITIES WILL HAVE TO BE RECALCULATED.
2. THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
3. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
4. THRUST BLOCKING TO BE POURED IN PLACE CLASS C CONC.

THRUST BLOCKING DETAIL

NOT TO SCALE

90° BEND							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	84	60	51	42	32	24	18
B	72	60	51	42	32	24	18
C	30	18	16	12	12	9	9
D	34	30	24	17	13	9	9

45° BEND							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	58	43	38	32	24	18	12
B	58	43	38	32	24	18	12
C	24	16	14	12	12	8	8
D	24	18	15	12	9	6	6

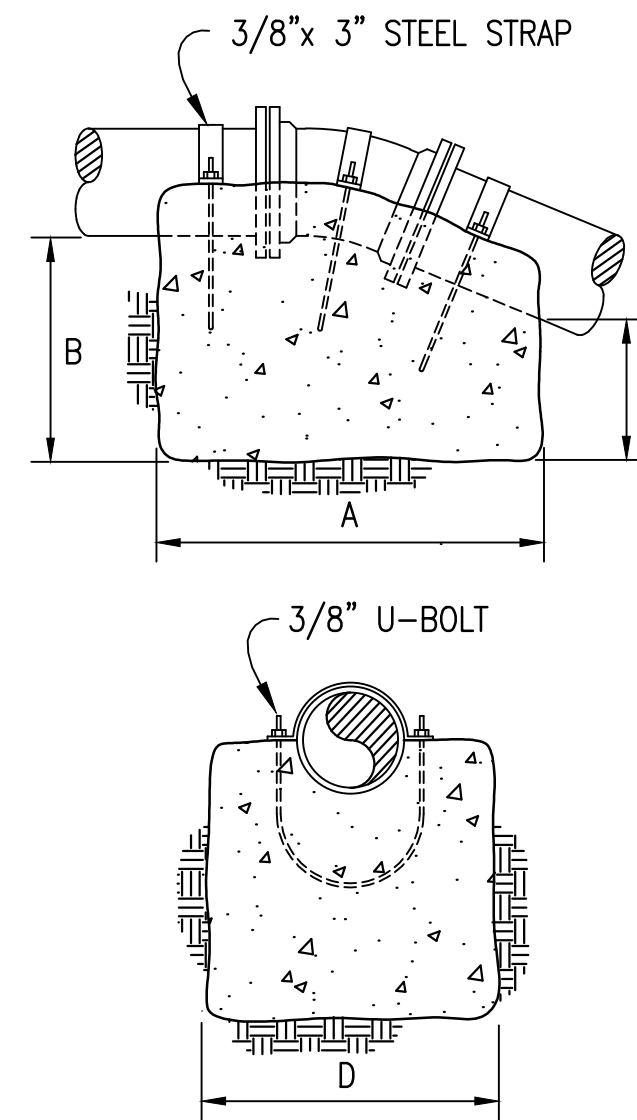
22 1/2° BEND							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	42	32	27	24	18	12	9
B	42	32	27	24	18	12	9
C	18	16	14	12	10	8	8
D	18	13	11	9	6	4	4

11 1/4° BEND							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	30	24	21	17	12	9	9
B	30	24	21	17	12	9	9
C	18	16	14	12	10	8	8
D	12	9	8	6	5	4	4

PLUG							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	66	52	43	34	27	20	18
B	66	52	43	34	27	20	18
C	12	12	12	12	12	12	12
D	44	32	22	15	11	11	11

TEE							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	66	52	43	34	27	20	18
B	66	52	43	34	27	20	18
C	30	12	12	12	12	12	12
D	30	26	21	14	21	13	13

DIMENSIONS ARE IN INCHES



NOTES:

1. THRUST BLOCKS DESIGNED FOR 150 PSI PRESSURE. FOR GREATER PRESSURE QUANTITIES WILL HAVE TO BE RECALCULATED.
2. THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
3. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
4. THRUST BLOCKING TO BE POURED IN PLACE - CLASS "C" CONCRETE.

VERTICAL CONCRETE ANCHOR

NOT TO SCALE

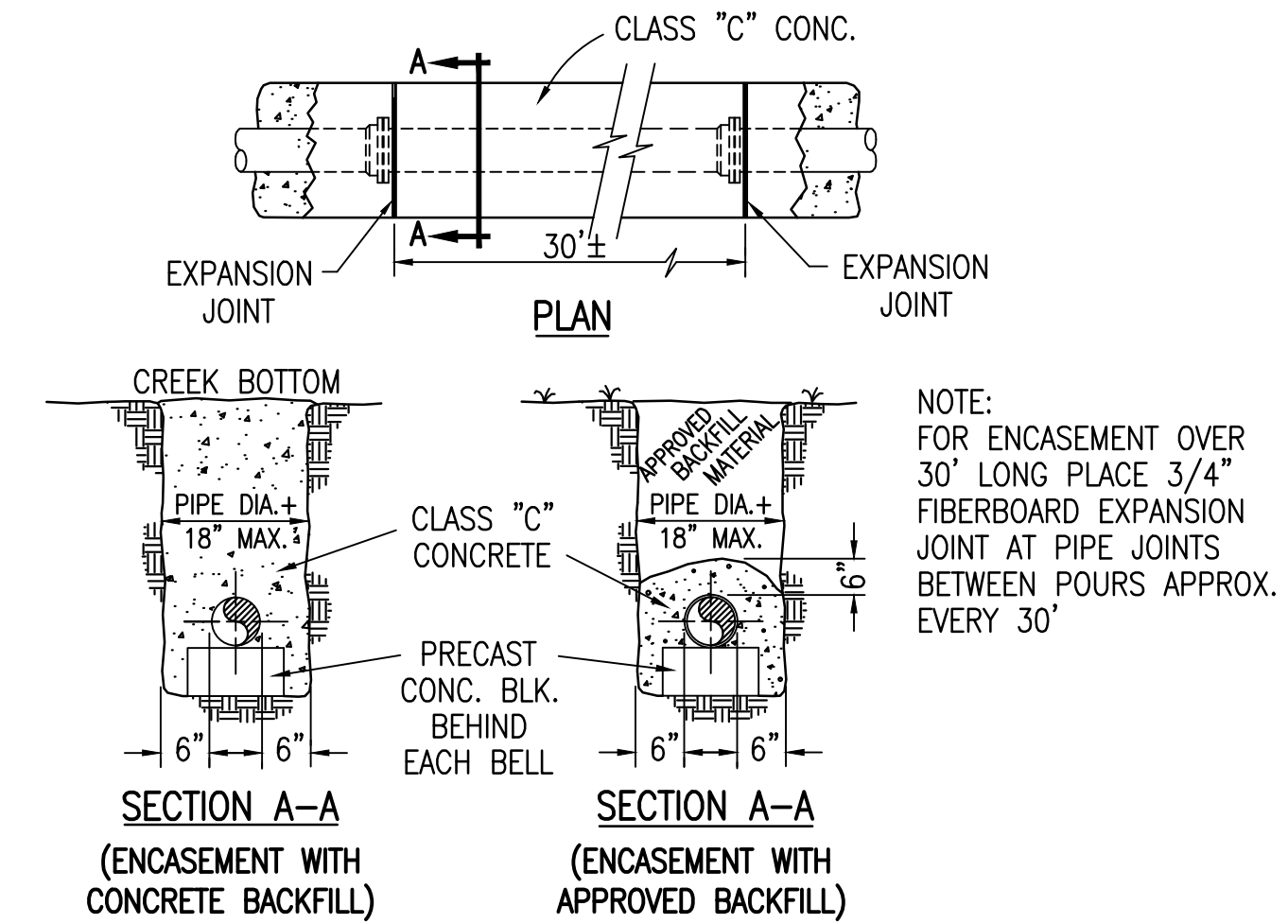
90° BEND							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	85	67	60	54	42	34	30
B	85	67	60	54	42	34	18
C	80	63	56	50	38	30	16
D	76	66	60	48	48	36	24

45° BEND							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	72	60	50	46	35	30	24
B	72	60	50	46	35	28	24
C	68	56	46	42	30	24	18
D	72	60	60	48	48	36	24

22 1/2° BEND							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	58	50	42	38	30	24	18
B	58	48	42	38	30	24	18
C	54	44	38	34	26	20	14
D	60	48	48	36	36	30	24

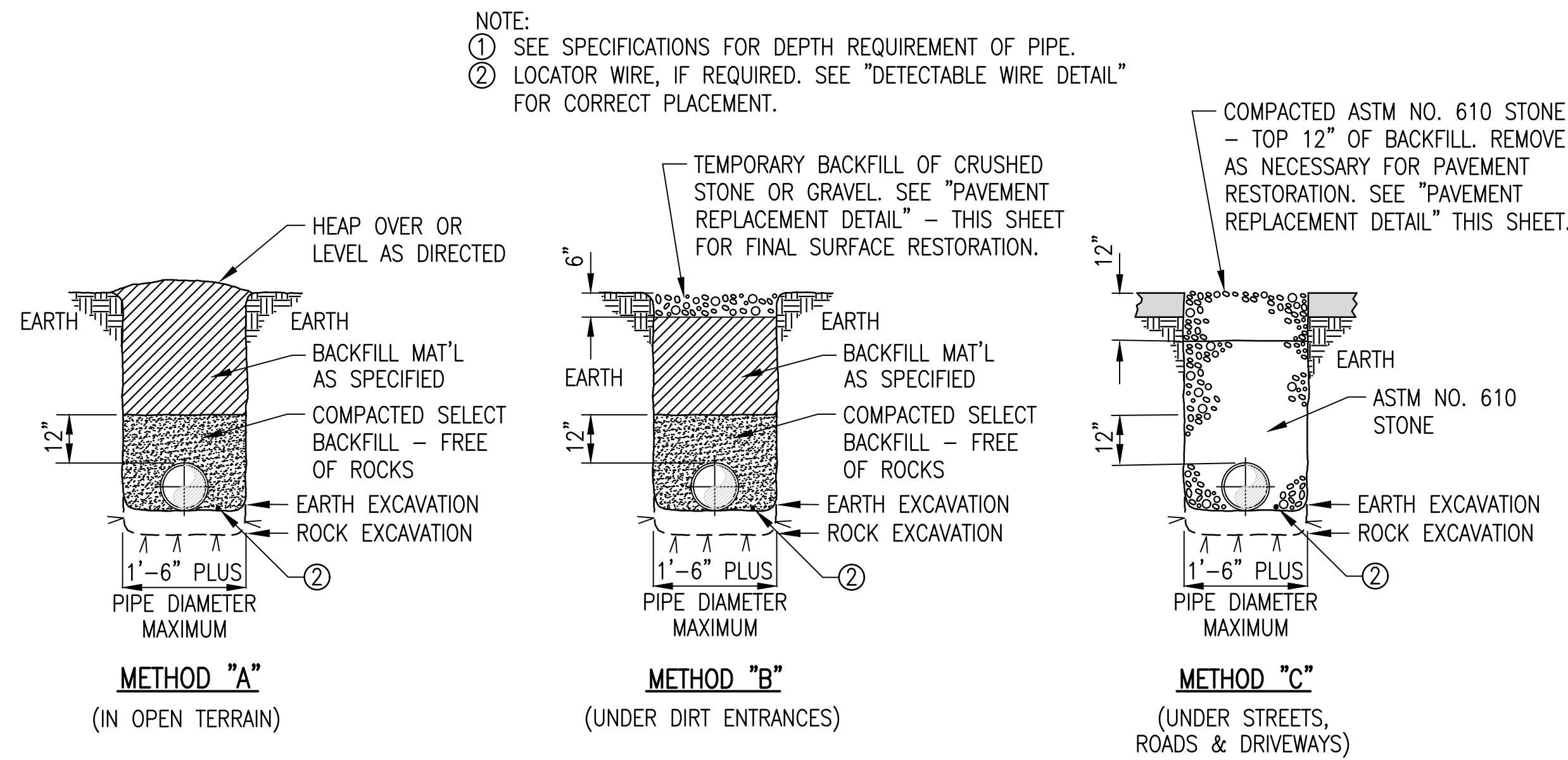
11 1/4° BEND							
SIZE	16"	12"	10"	8"	6"	4"	2"
A	42	36	30	29	24	20	18
B	42	36	30	29	24	20	18
C	38	32	26	24	20	16	14
D	60	48	48	36	30	24	24

DIMENSIONS ARE IN INCHES



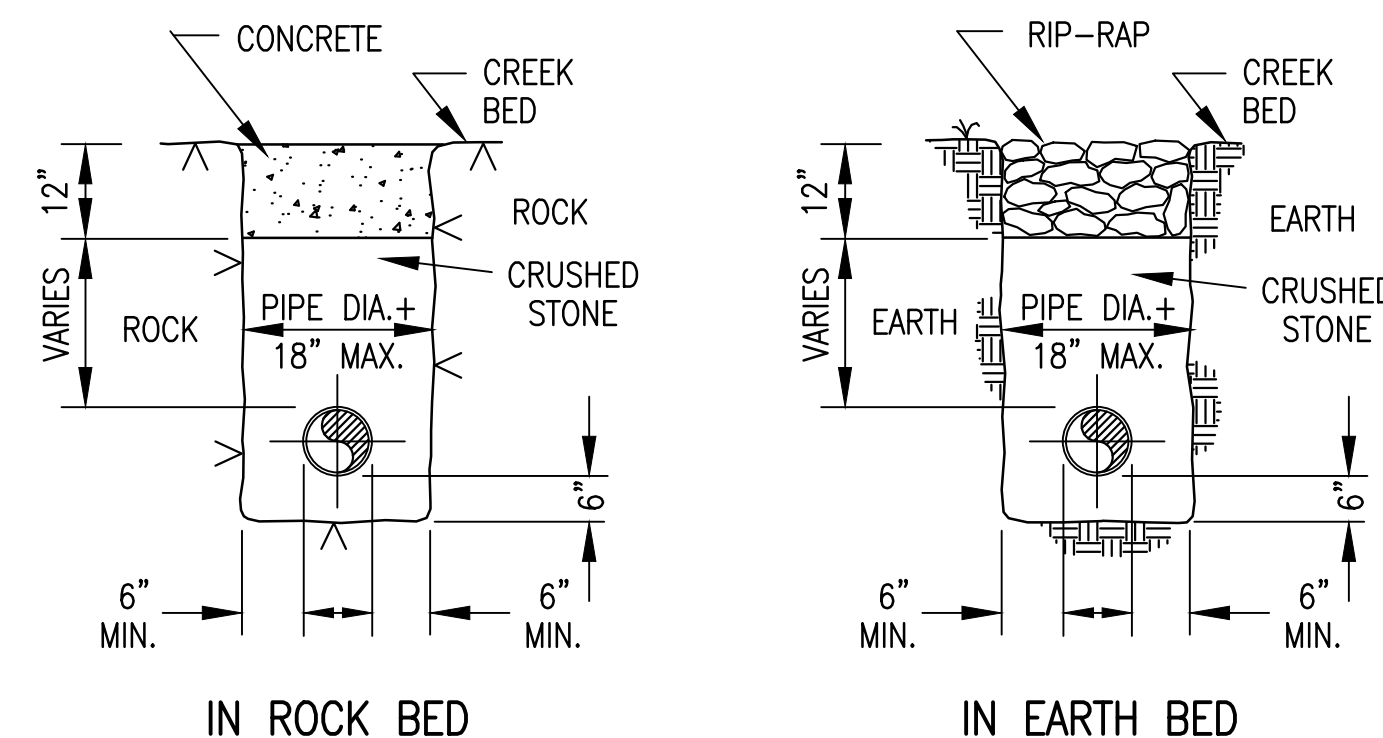
STANDARD CONCRETE ENCASEMENT

NOT TO SCALE



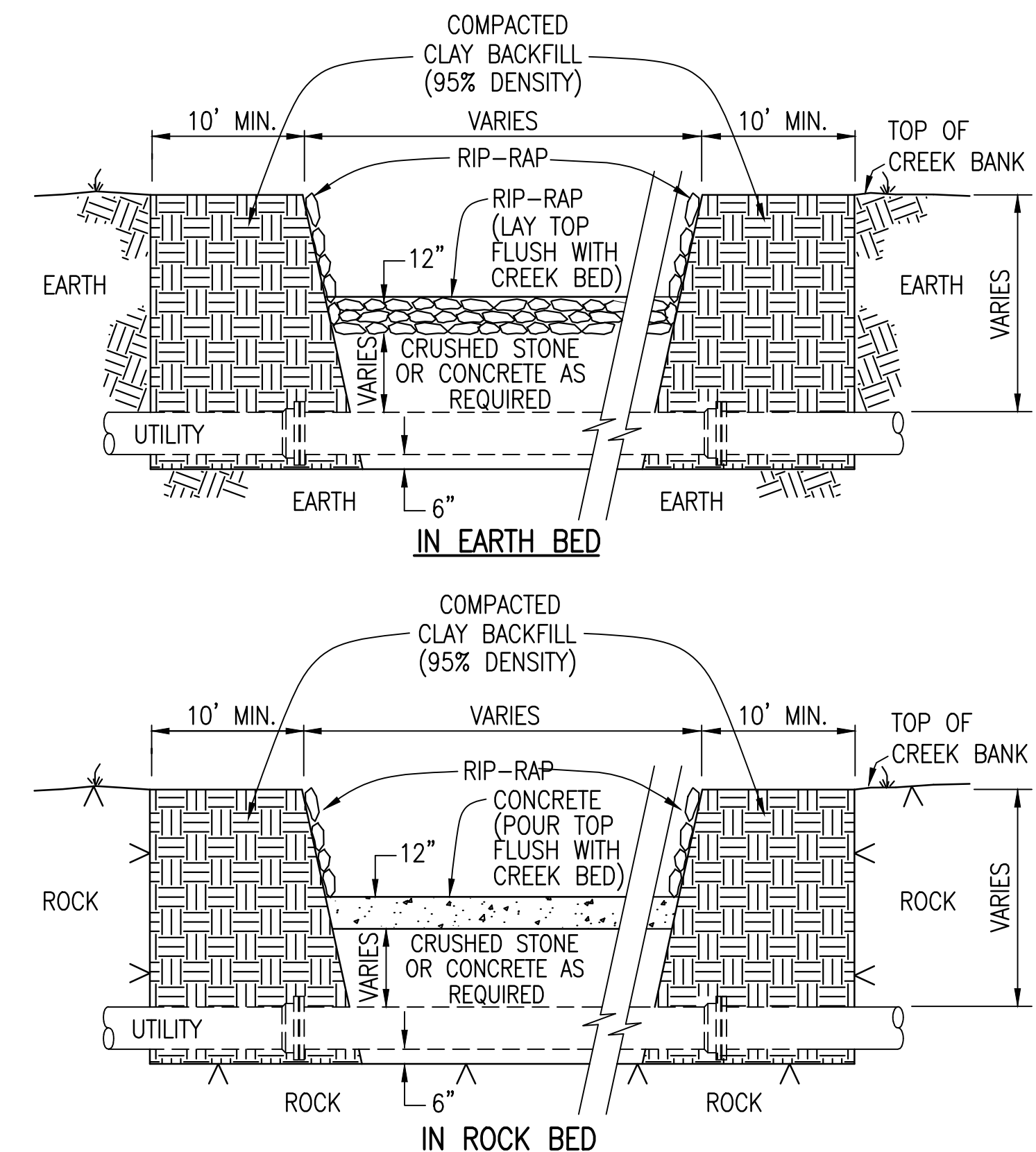
PRESSURE PIPE BEDDING & BACKFILLING DETAILS

NOT TO SCALE



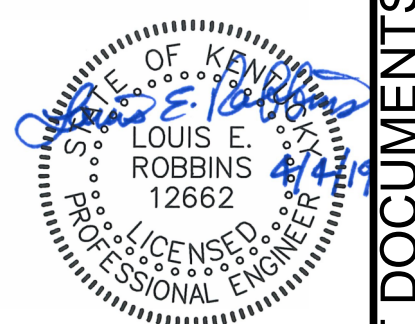
DITCH CROSSING DETAIL

NOT TO SCALE



CREEK CROSSING EMBANKMENT DETAIL

NOT TO SCALE



GRW PROJECT NO. 3621-08



WATER LINE STANDARD DETAILS
 2017 EDMONSON/HART WATER LINE PROJECT
 EDMONSON COUNTY WATER DISTRICT

REVISIONS	DATE	DESCRIPTION	DESIGNED	BY	DATE	DRAWN	DM	REVIEWED	LER	APPROVED	LER
NO											

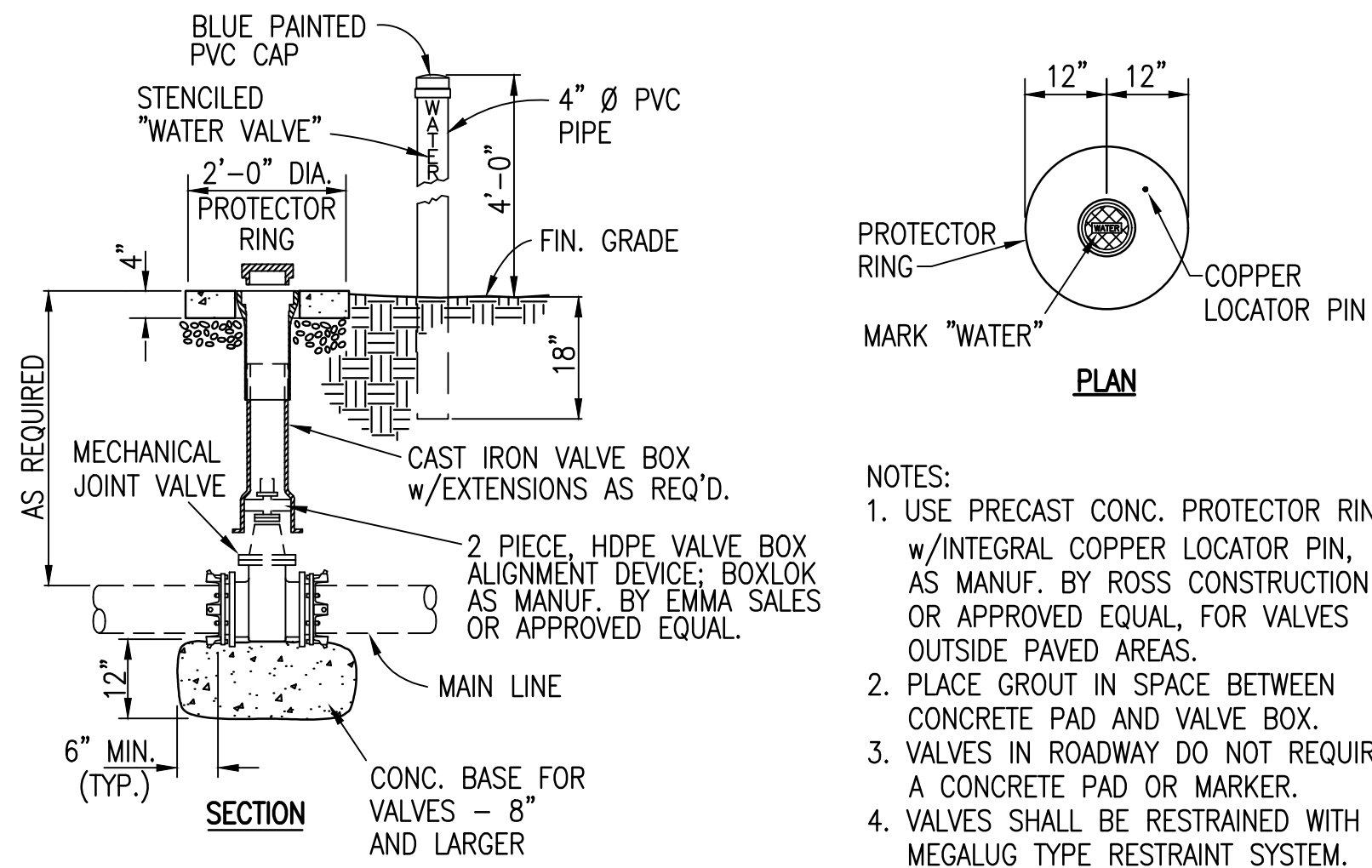
SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: APRIL 2019
 SCALE: NONE
 SHEET NO.

PLOTTED BY: dwwmains

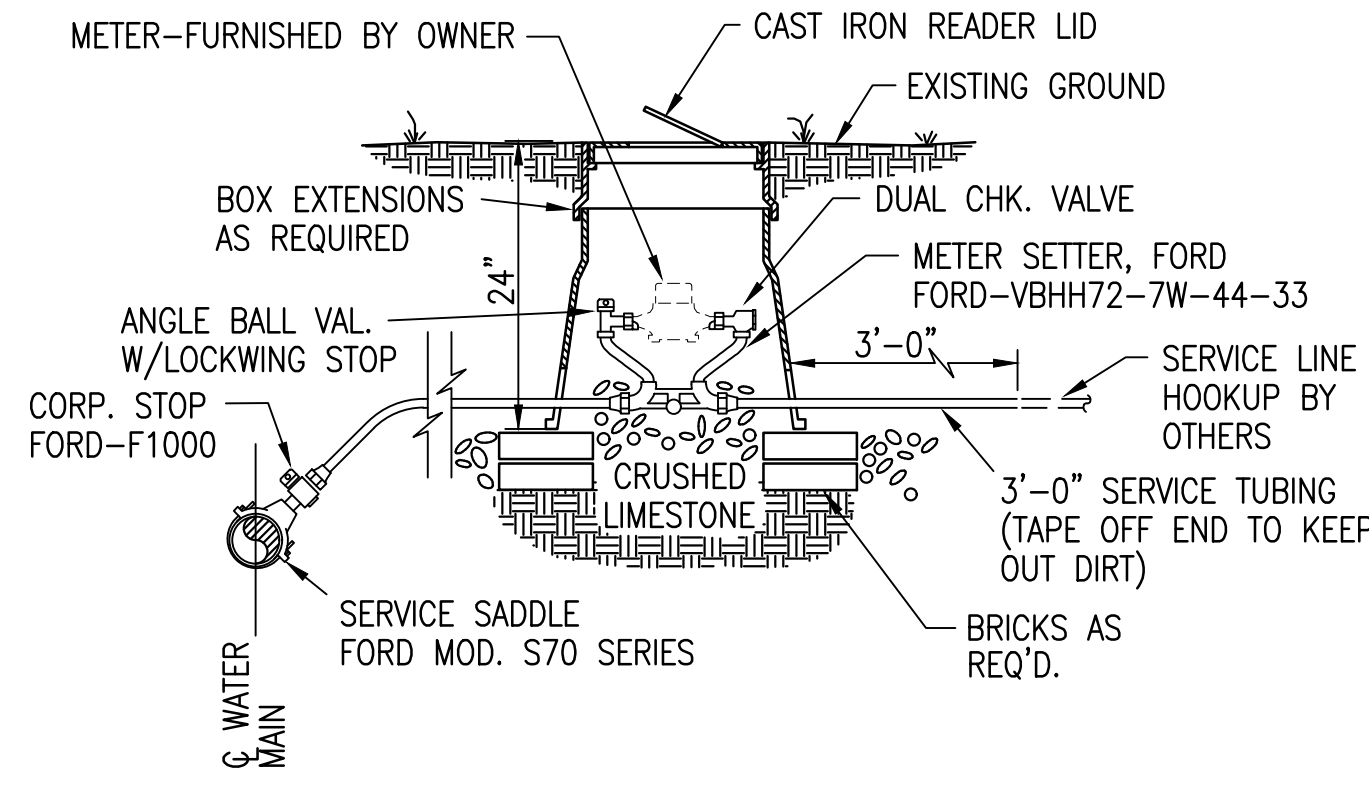
PRINTED: 4/14/2019 @ 2:27PM

FILE NAME: G:\3621-Edmonson_Col08-2017 WL s\Working Drawings\AutoCAD\3621-08-SD-16.dwg

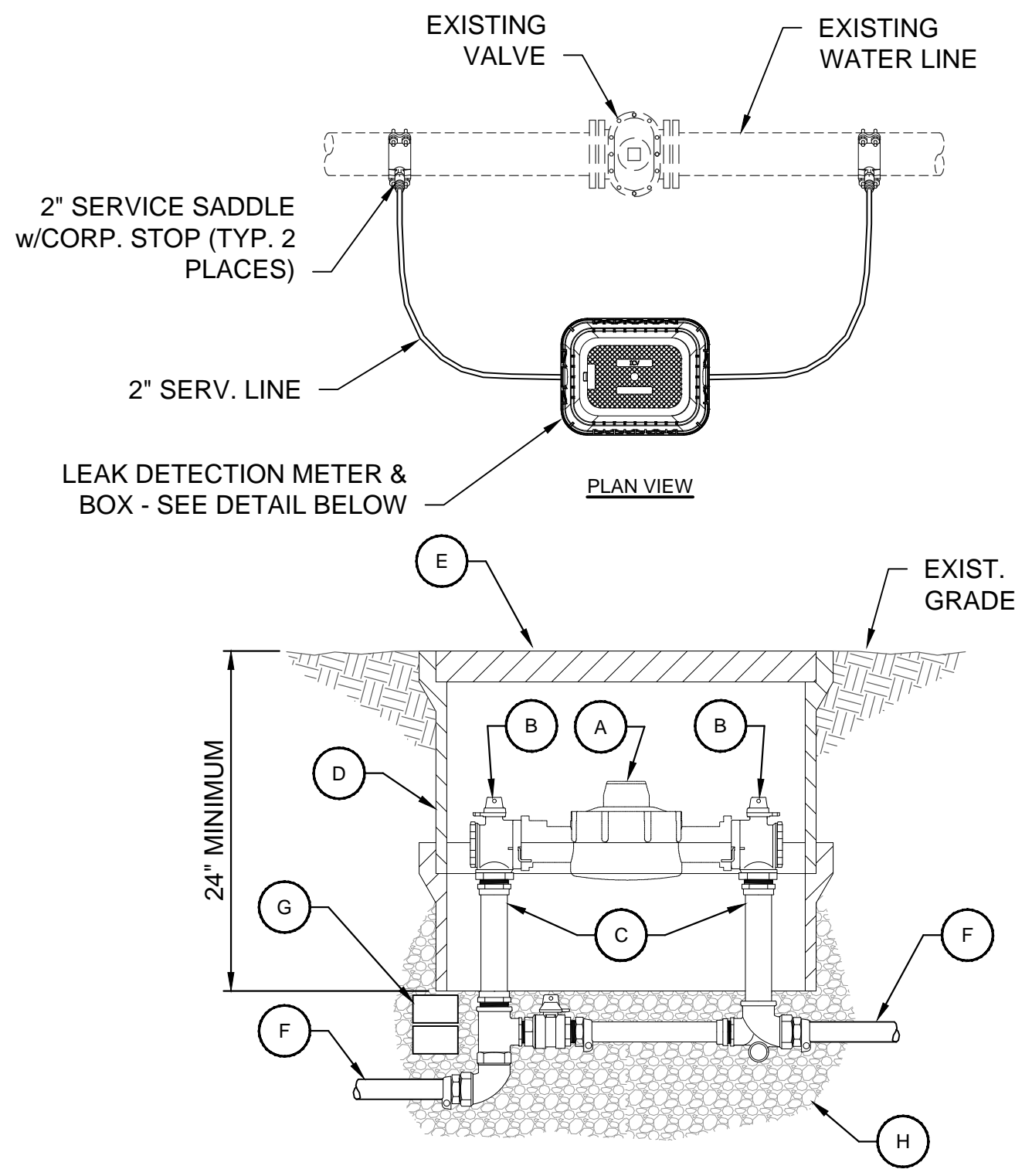


EDMONSON COUNTY WATER DISTRICT
VALVE SETTING DETAIL
 NOT TO SCALE

- NOTES:
1. STANDARD RECTANGULAR PLASTIC METER BOX - AS MANUF. BY POLY PLASTIC WATER METER BOXES - OR APPROVED EQUAL.
 2. METER BOX SHALL BE 24" MINIMUM DEPTH.
 3. WHERE PRESSURE REGULATOR IS REQUIRED USE FORD TANDEM SETTER WITH METER BOX SIZED TO FIT. AS MANUF. BY POLY PLASTIC WATER METER BOX CO. - OR APPROVED EQUAL.

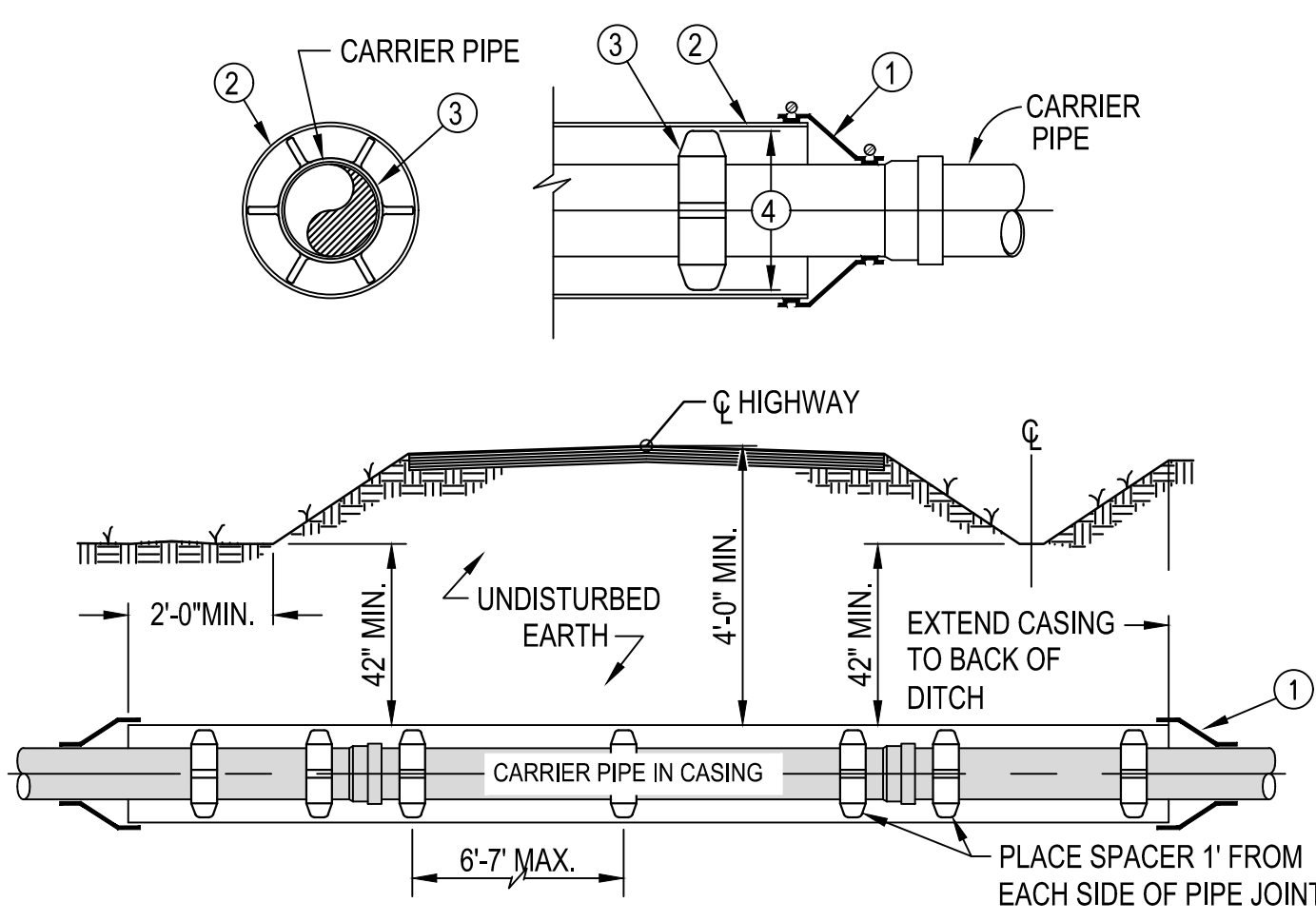


EDMONSON CO. WATER DIST.
WATER METER INSTALLATION AND SERVICE LINE CONNECTION
 NOT TO SCALE



EDMONSON CO. WATER DISTRICT
2" LEAK DETECTION METER ASSEMBLY DETAIL
 NOT TO SCALE

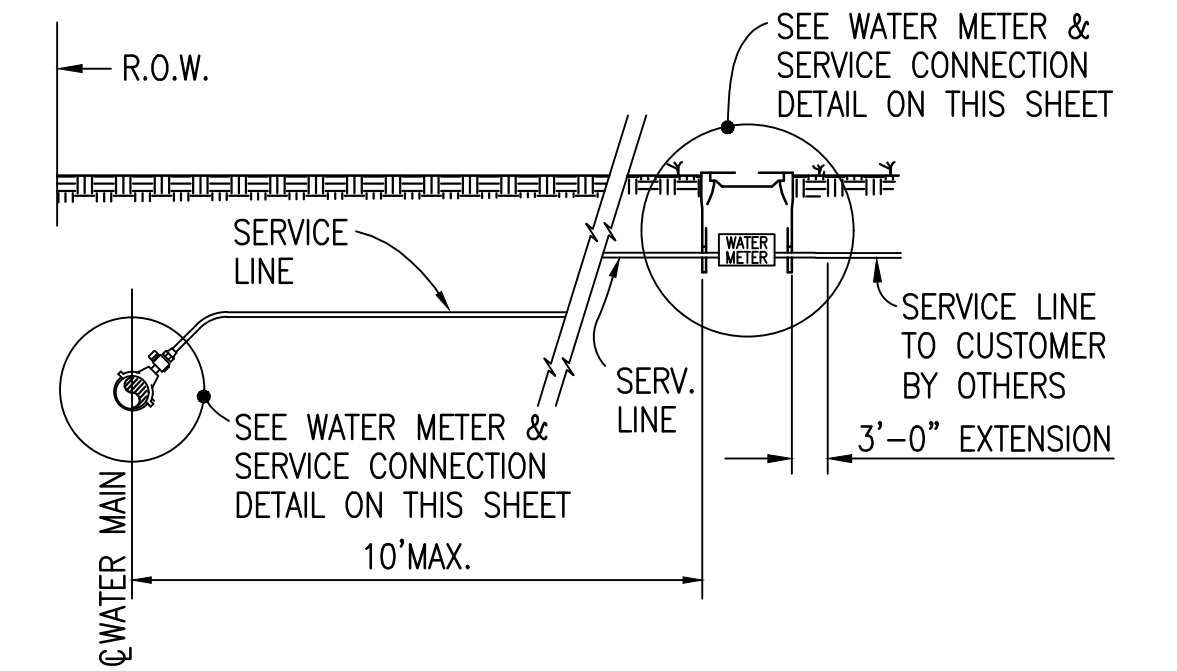
- LEAK DETECTION METER ASSEMBLY**
- A. 2" WATER METER - TO BE FURNISHED BY OWNER.
 - B. ANGLE BALL VALVE W/LOCKWING STOP.
 - C. 2" COPPERSETTER - FORD VBB77-15B-44-77-NL
 - D. 17" X 30" POLY METER BOX - MODEL 1730 AS MANUF. BY CARSON PRODUCTS OR APPROVED EQUAL. USE METER BOX EXTENSIONS AS REQUIRED
 - E. METER BOX LID w/CAST IRON READER DOOR.
 - F. 2" COPPER SERVICE LINE. END CONNECTION TO MATCH COPPERSETTER CONNECTION.
 - G. BRICKS AS REQUIRED TO LEVEL AND SUPPORT BOX.
 - H. CRUSHED STONE BACKFILL.



1. USE WATERTIGHT WRAP AROUND END SEALS WITH STAINLESS STEEL BANDS.
 2. SMOOTH WALL STEEL CASING PIPE WITH BITUMINOUS COATING OUTSIDE.
 3. CASING SPACERS SHALL BE INSTALLED IN A CENTERED/RESTRAINED CONFIGURATION. CASING SPACER MODELS AS PER SPECIFICATIONS.
 4. SPACER RISERS/RUNNERS SHALL BE SIZED AND TRIMMED TO MAINTAIN 1/2" MAXIMUM CLEARANCE BETWEEN RUNNER AND CASING PIPE.
- NOTE: CARRIER PIPE IN ALL CASING OVER 60 FEET IN LENGTH SHALL BE DUCTILE IRON WITH LOCKING GASKETS.

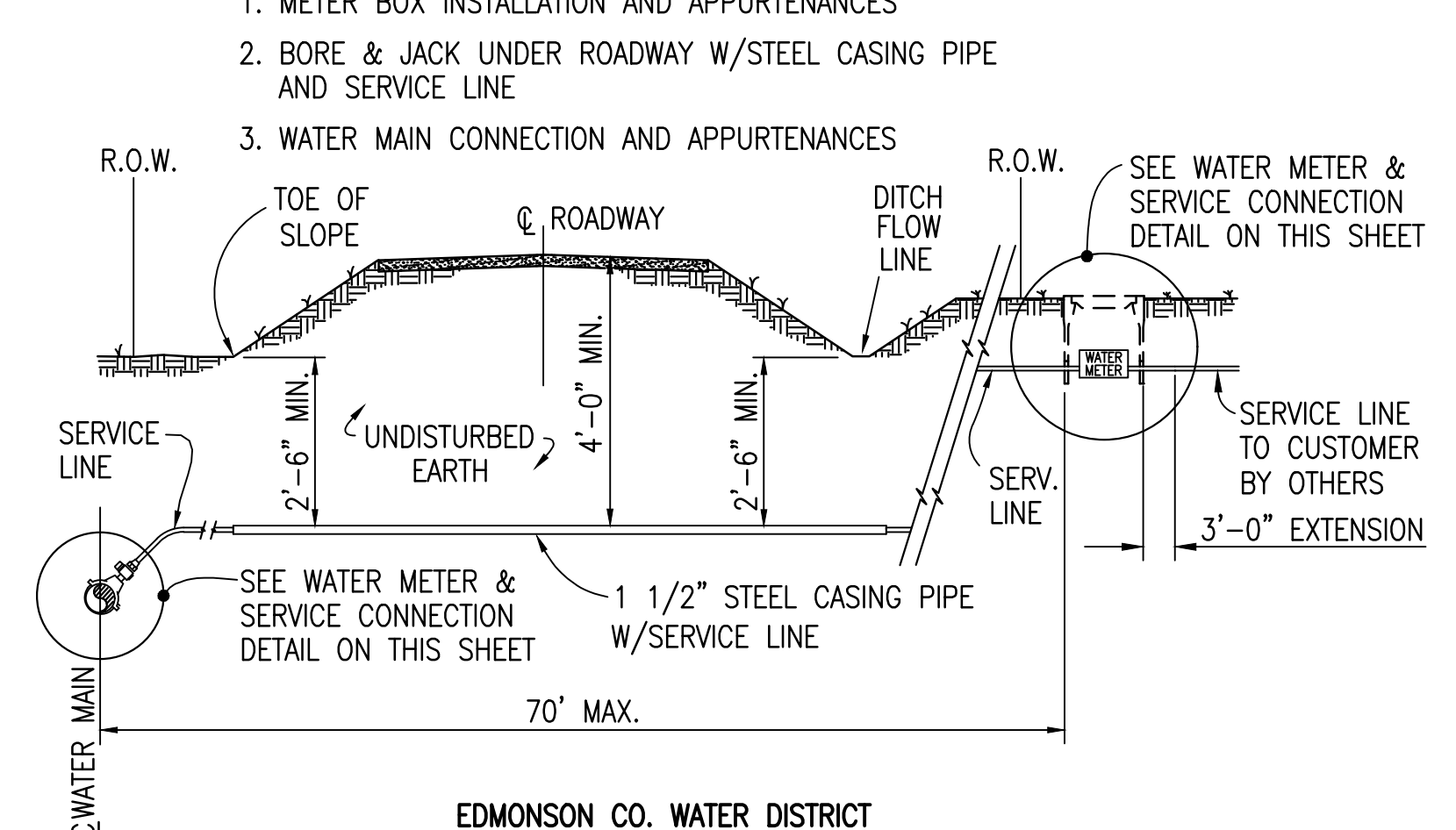
EDMONSON CO. WATER DISTRICT
ROADWAY CROSSING INSTALLATION
 NOT TO SCALE
 (STEEL CASING w/D.I. OR PVC CARRIER PIPE)

- SERVICE CONNECTION NOT UNDER ROADWAY LUMP SUM BID ITEM INCLUDES:
1. METER BOX INSTALLATION AND APPURTENANCES
 2. WATER MAIN CONNECTION AND APPURTENANCES



EDMONSON CO. WATER DISTRICT
TYPE "A" SERVICE CONNECTION NOT UNDER ROADWAY
 NOT TO SCALE

- SERVICE CONNECTION UNDER ROADWAY LUMP SUM BID ITEM INCLUDES:
1. METER BOX INSTALLATION AND APPURTENANCES
 2. BORE & JACK UNDER ROADWAY w/STEEL CASING PIPE AND SERVICE LINE
 3. WATER MAIN CONNECTION AND APPURTENANCES



EDMONSON CO. WATER DISTRICT
TYPE "B" SERVICE CONNECTION UNDER ROADWAY
 NOT TO SCALE



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. THE QUALITY OF ANY INFORMATION AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC.

GRW
 engineering | architecture | geospatial
 www.grwinc.com

WATER LINE STANDARD DETAILS

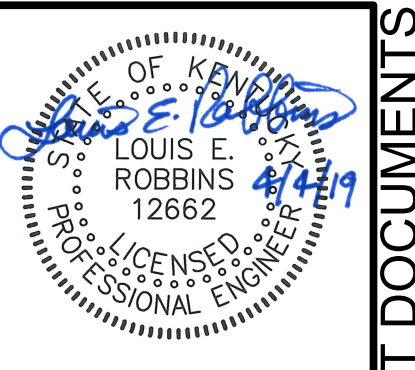
2017 EDMONSON/HART WATER LINE PROJECT
 EDMONSON COUNTY WATER DISTRICT

REVISIONS	DATE	DESCRIPTION	DESIGNED	LER	DRAWN	DM	REVIEWED	LER	APPROVED	LER
NO										

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: APRIL 2019
 SCALE: NONE
 SHEET NO. SD-16

CONTRACT DOCUMENTS



GRW PROJECT NO. 3621-08

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW INC.



WATER LINE STANDARD DETAILS

2017 EDMONSON/HART WATER LINE PROJECT

EDMONSON COUNTY WATER DISTRICT

REVISIONS	DESCRIPTION	DATE	BY	LER	DM	LER	LER
NO							

THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: APRIL 2019

SCALE: NONE

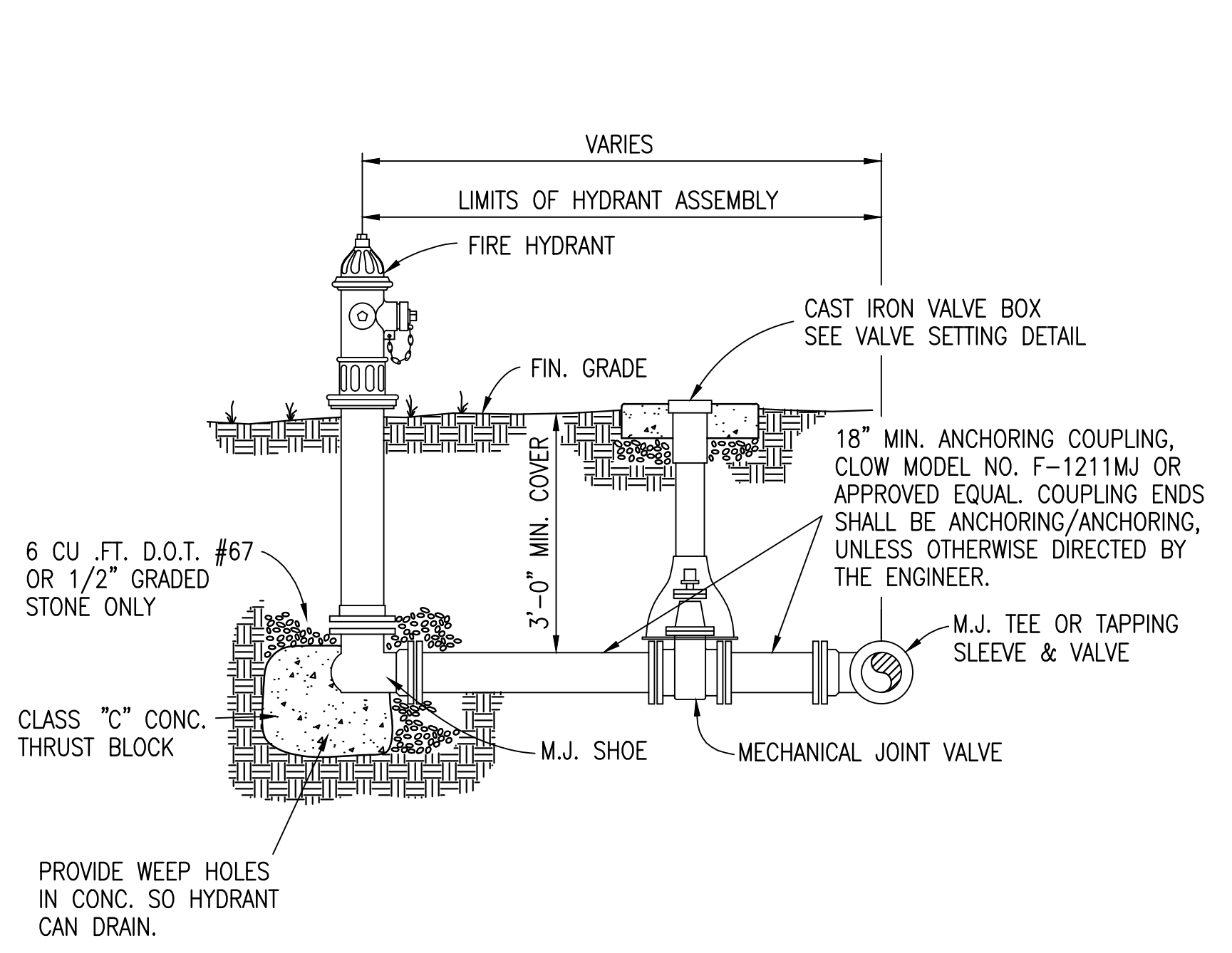
SHEET NO. SD-17

CONTRACT DOCUMENTS

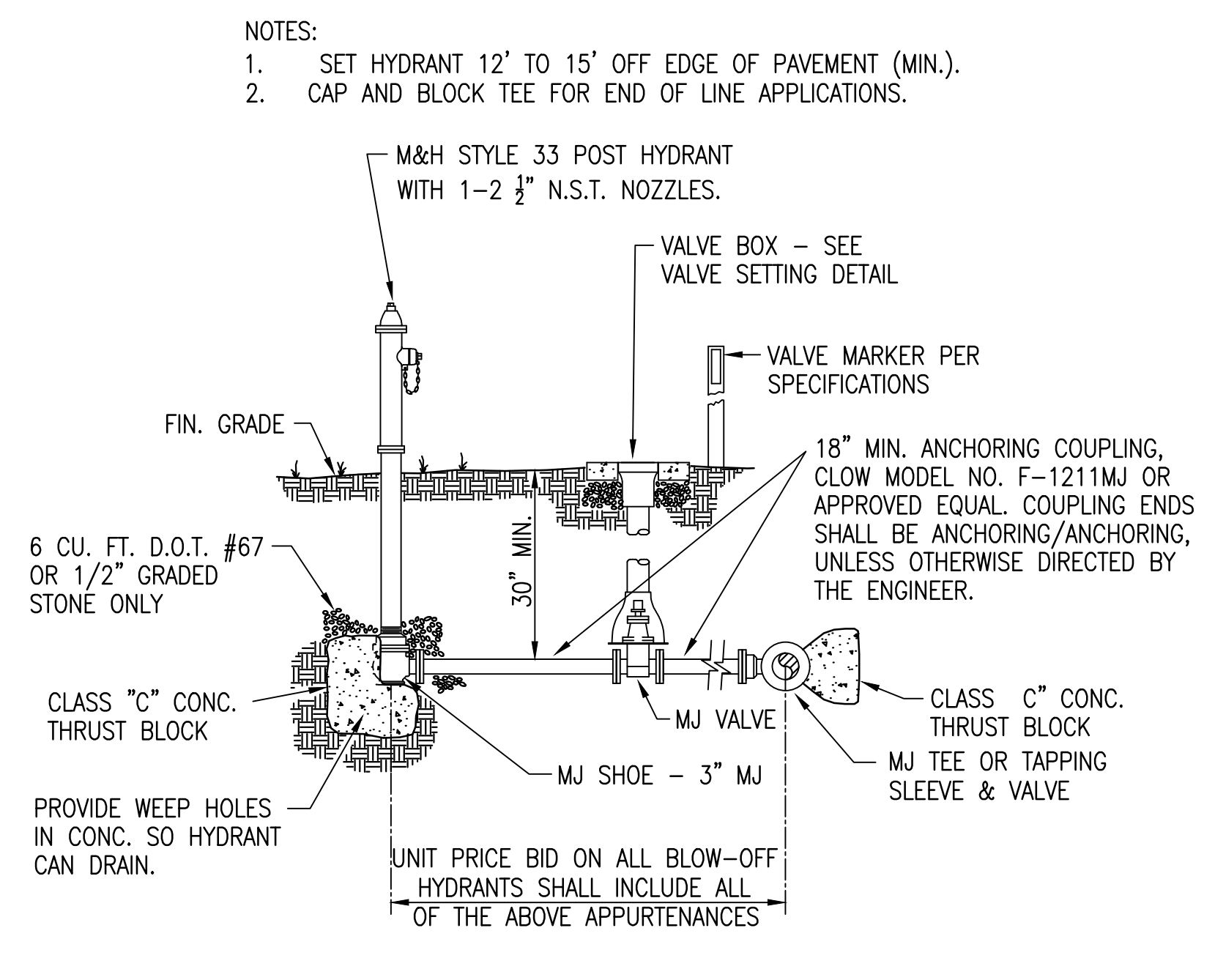
PLOTTED BY: adwinans

PRINTED: 4/17/2019 @ 11:58AM

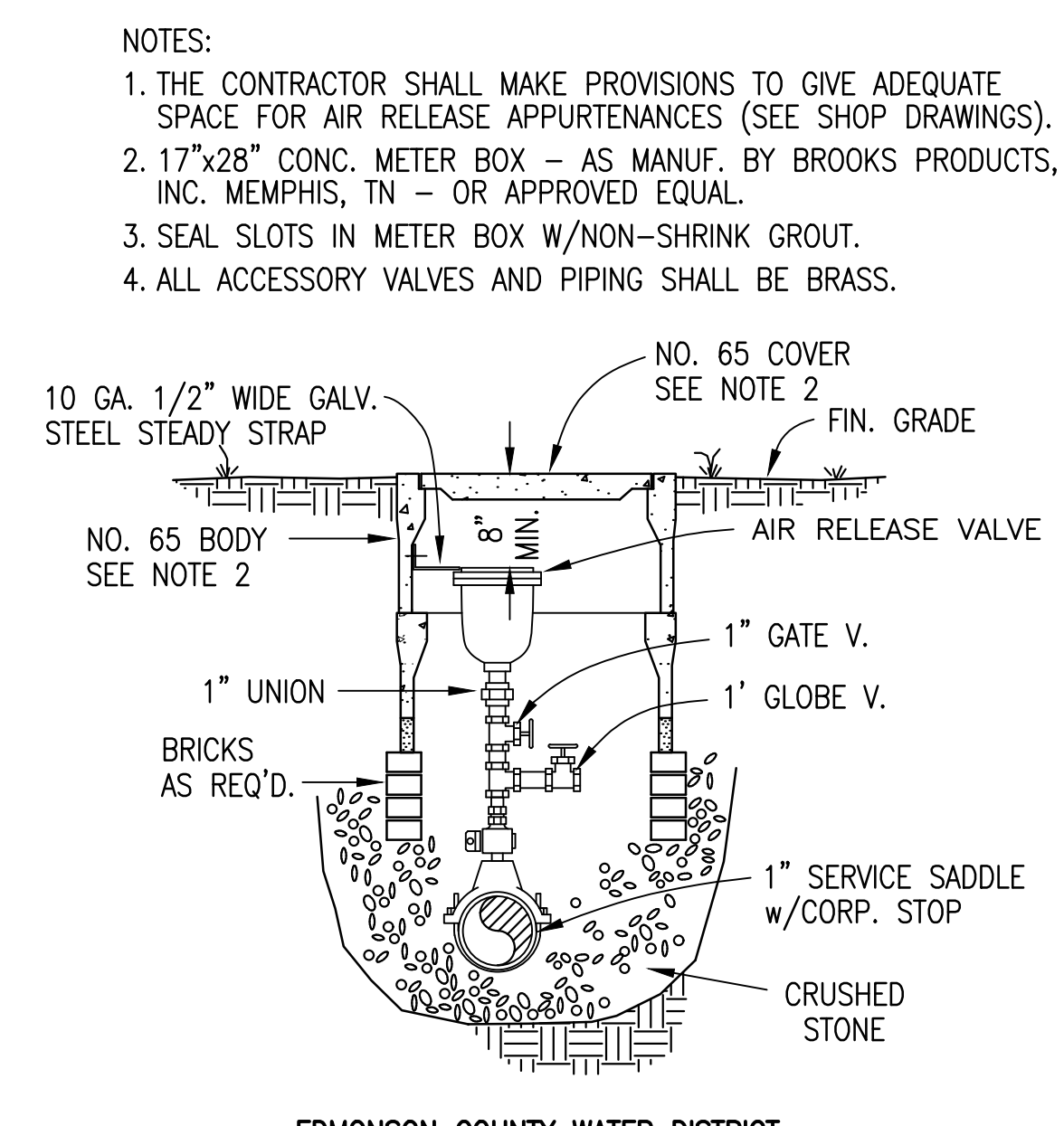
FILE NAME: G:\3621-Edmonson Co\08-2017 WL s\Working Drawings\AutoCAD\3621-08-SD-17.dwg



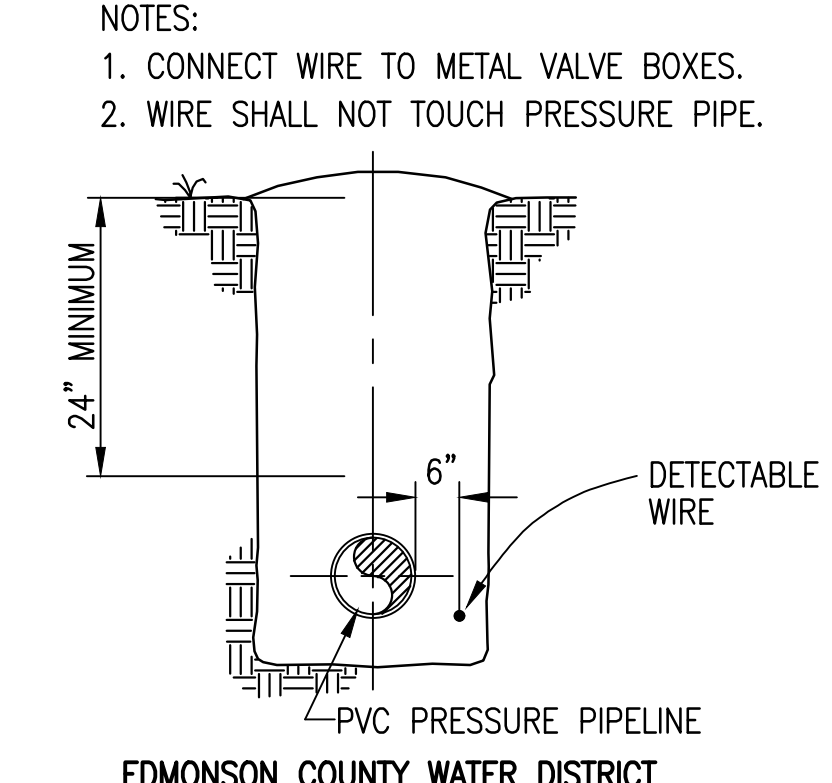
EDMONSON COUNTY WATER DISTRICT
FIRE HYDRANT ASSEMBLY DETAIL
NOT TO SCALE



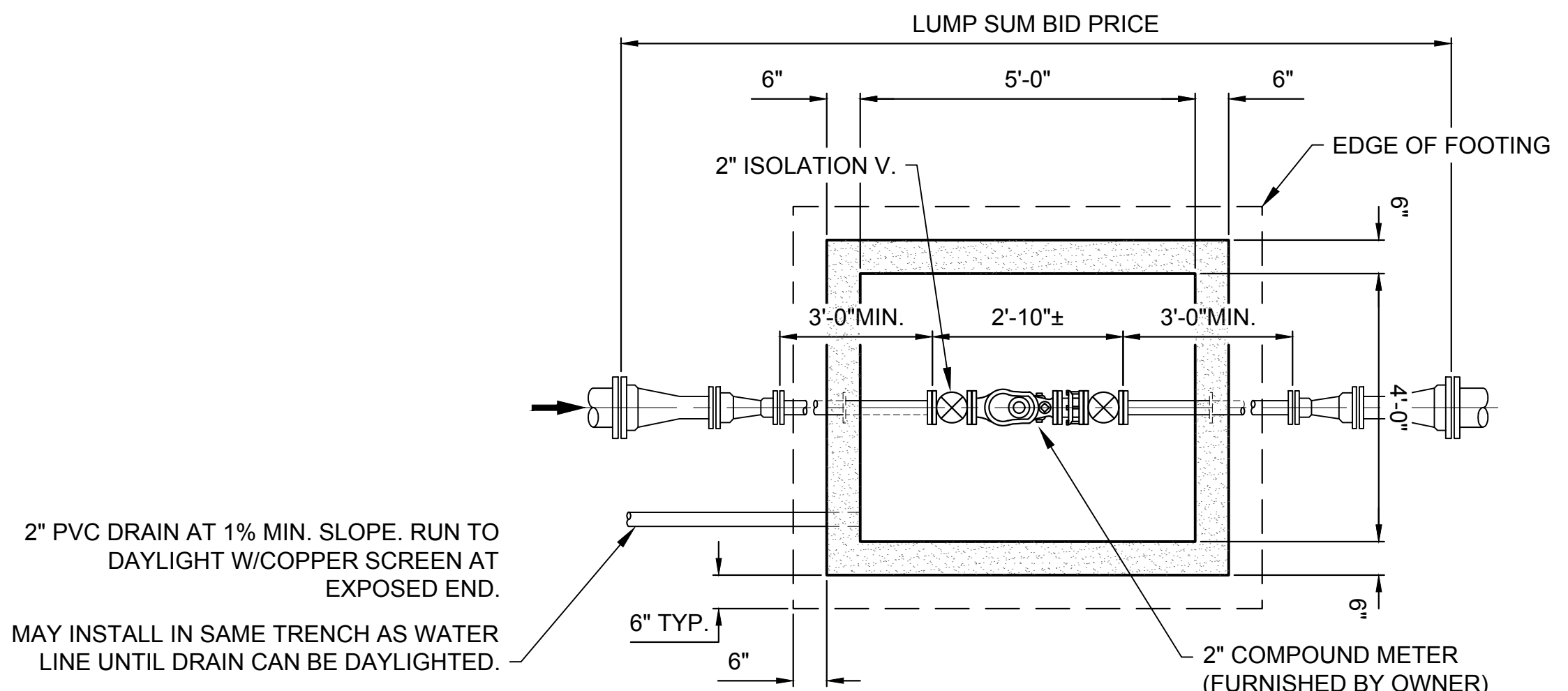
EDMONSON COUNTY WATER DISTRICT
POST HYDRANT DETAIL
NOT TO SCALE



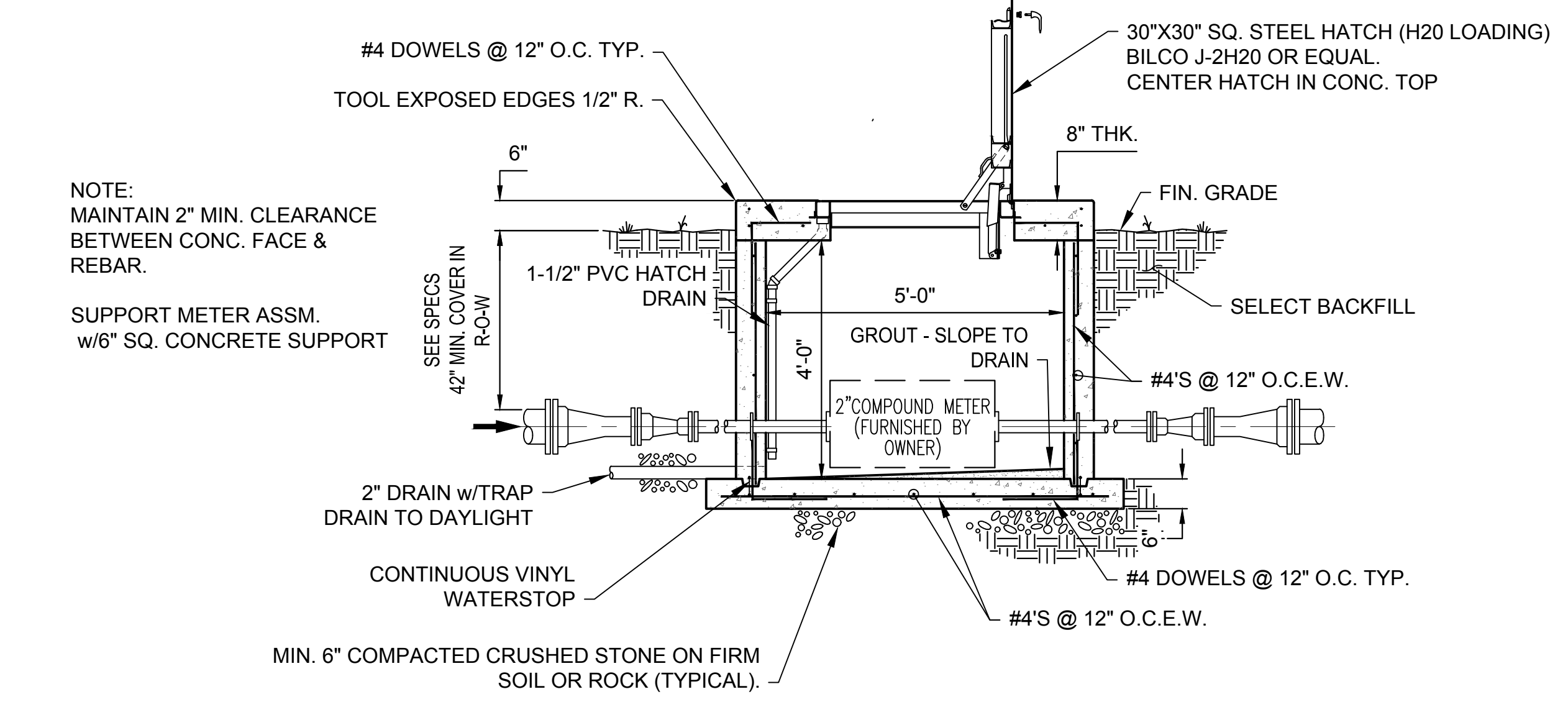
EDMONSON COUNTY WATER DISTRICT
AIR RELEASE VALVE
NOT TO SCALE



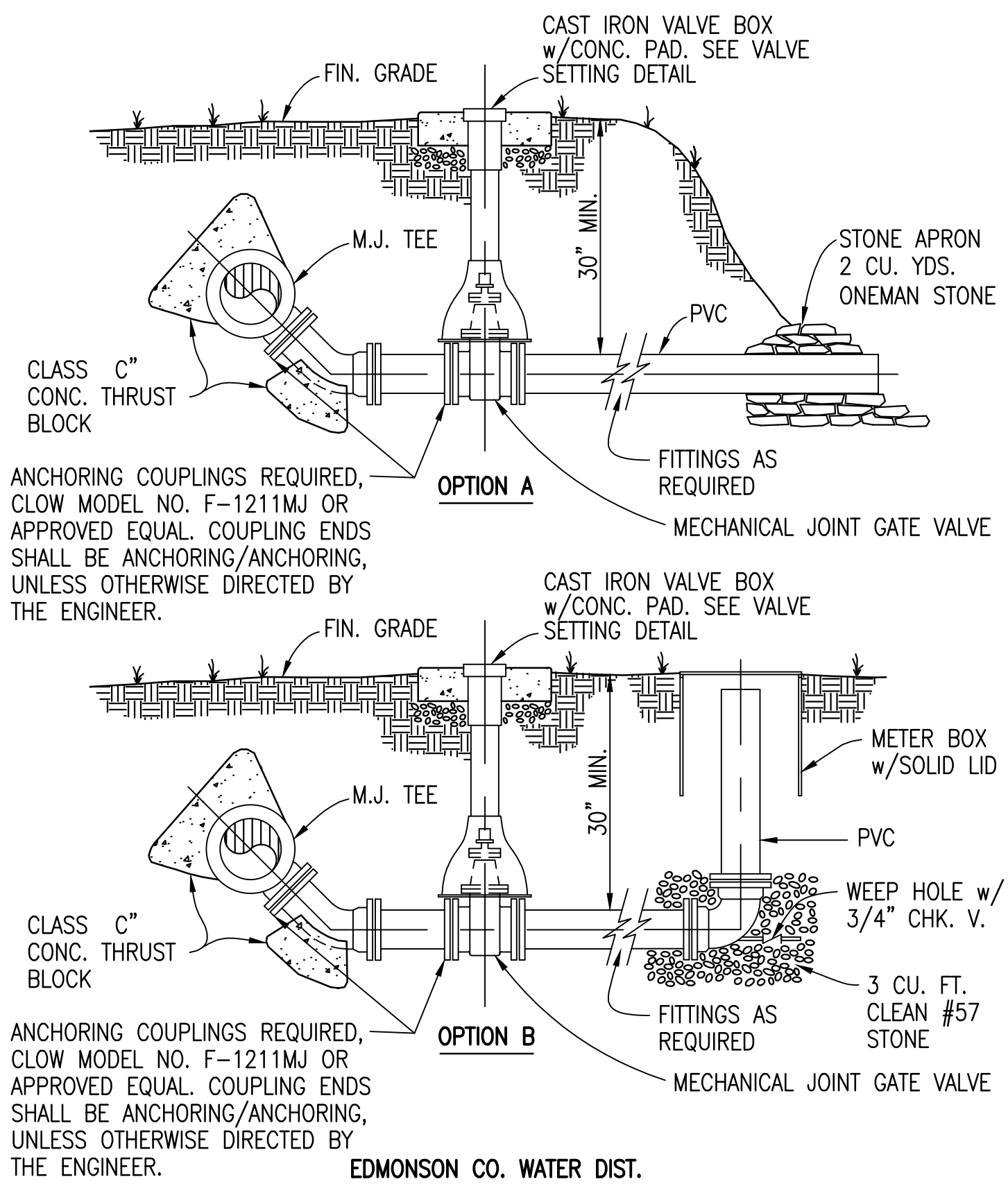
EDMONSON COUNTY WATER DISTRICT
DETECABLE WIRE DETAIL
NOT TO SCALE



PLAN (TOP REMOVED)



2" MASTER METER VAULT
SCALE: 1/4"=1'-0"



EDMONSON CO. WATER DIST.
BLOW-OFF DETAIL
NOT TO SCALE

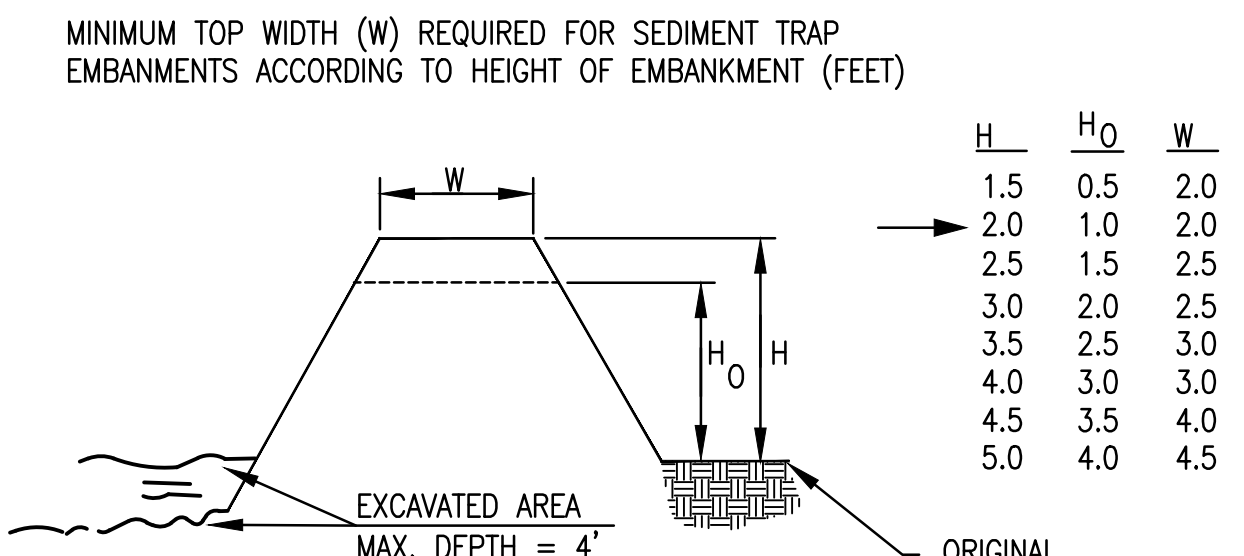
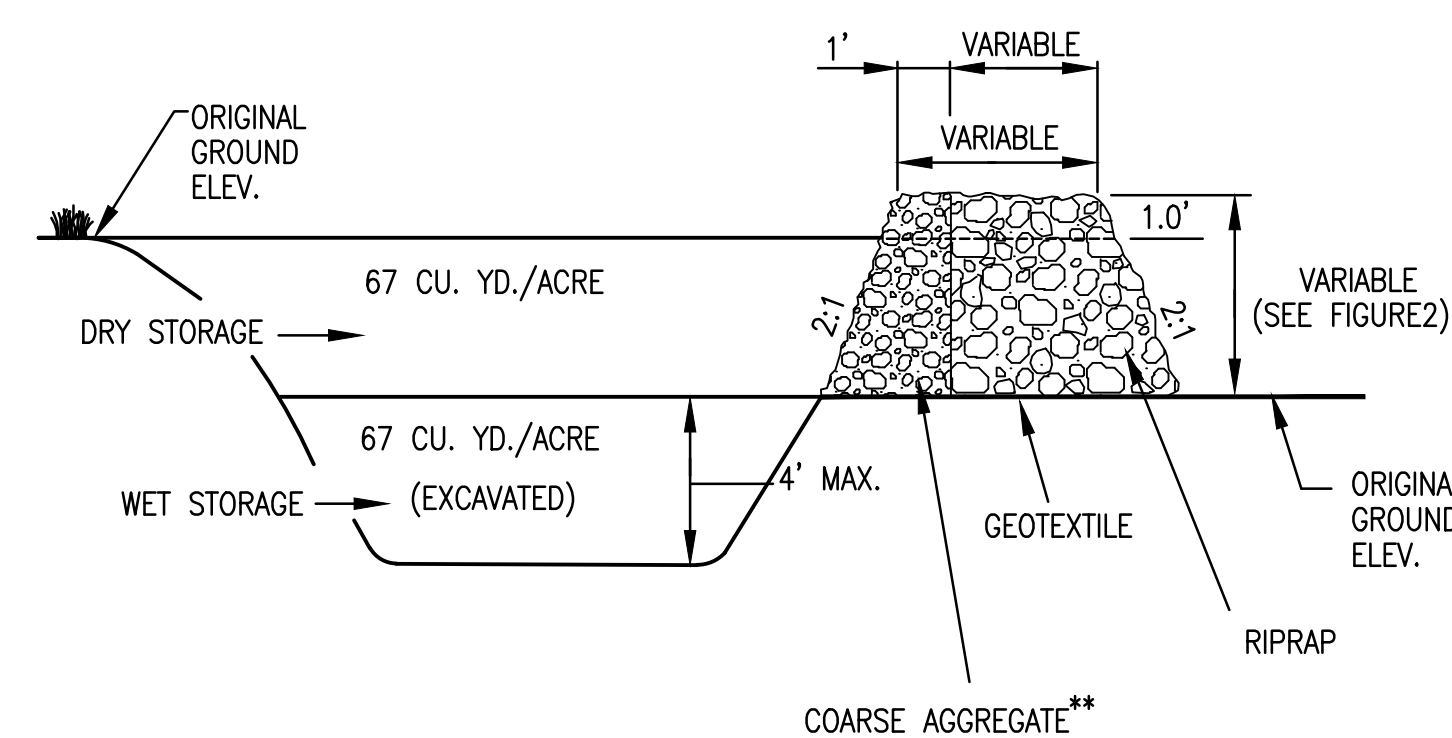
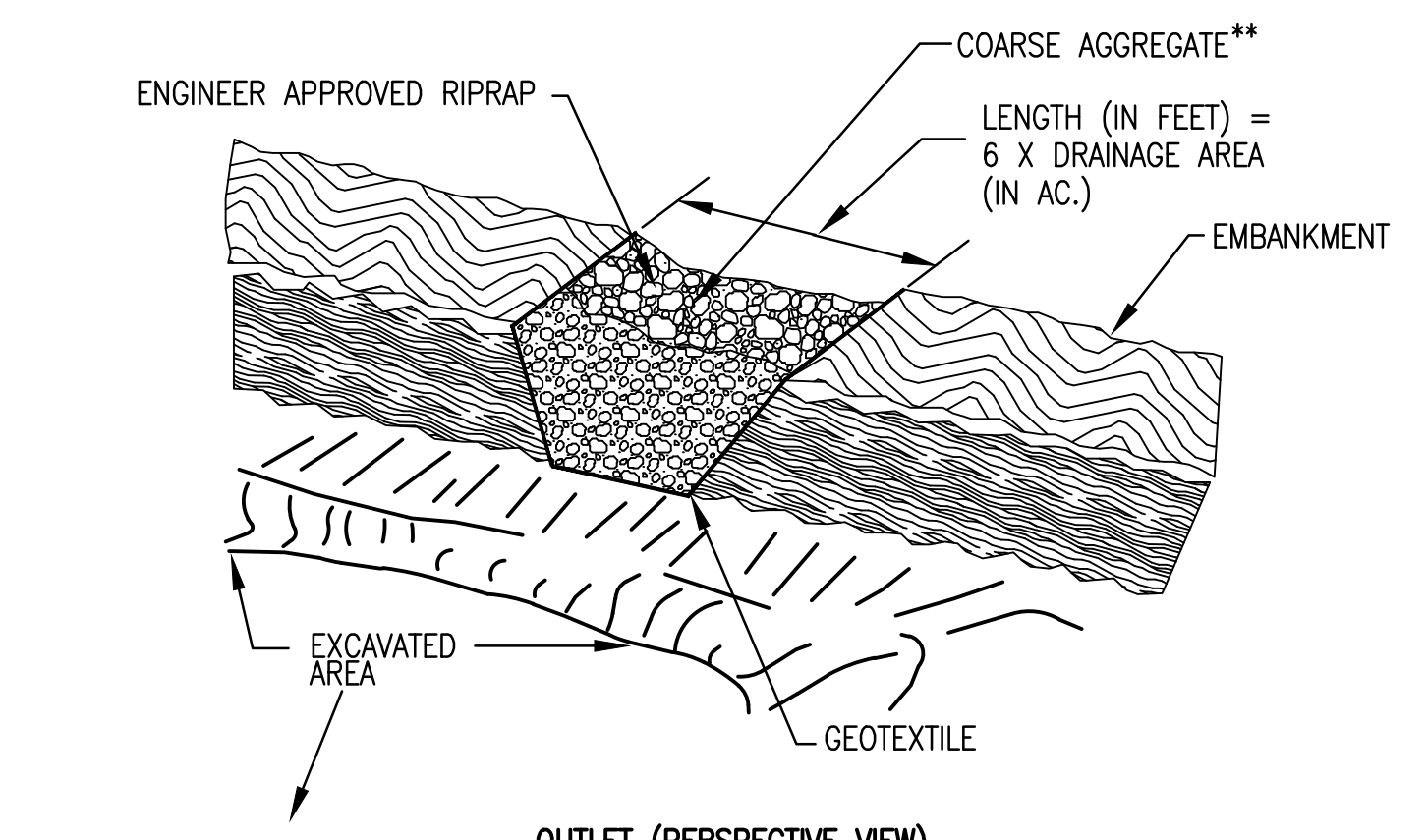


FIGURE 2



CROSS SECTION OF OUTLET



OUTLET (PERSPECTIVE VIEW)
 SEDIMENT TRAP DETAIL

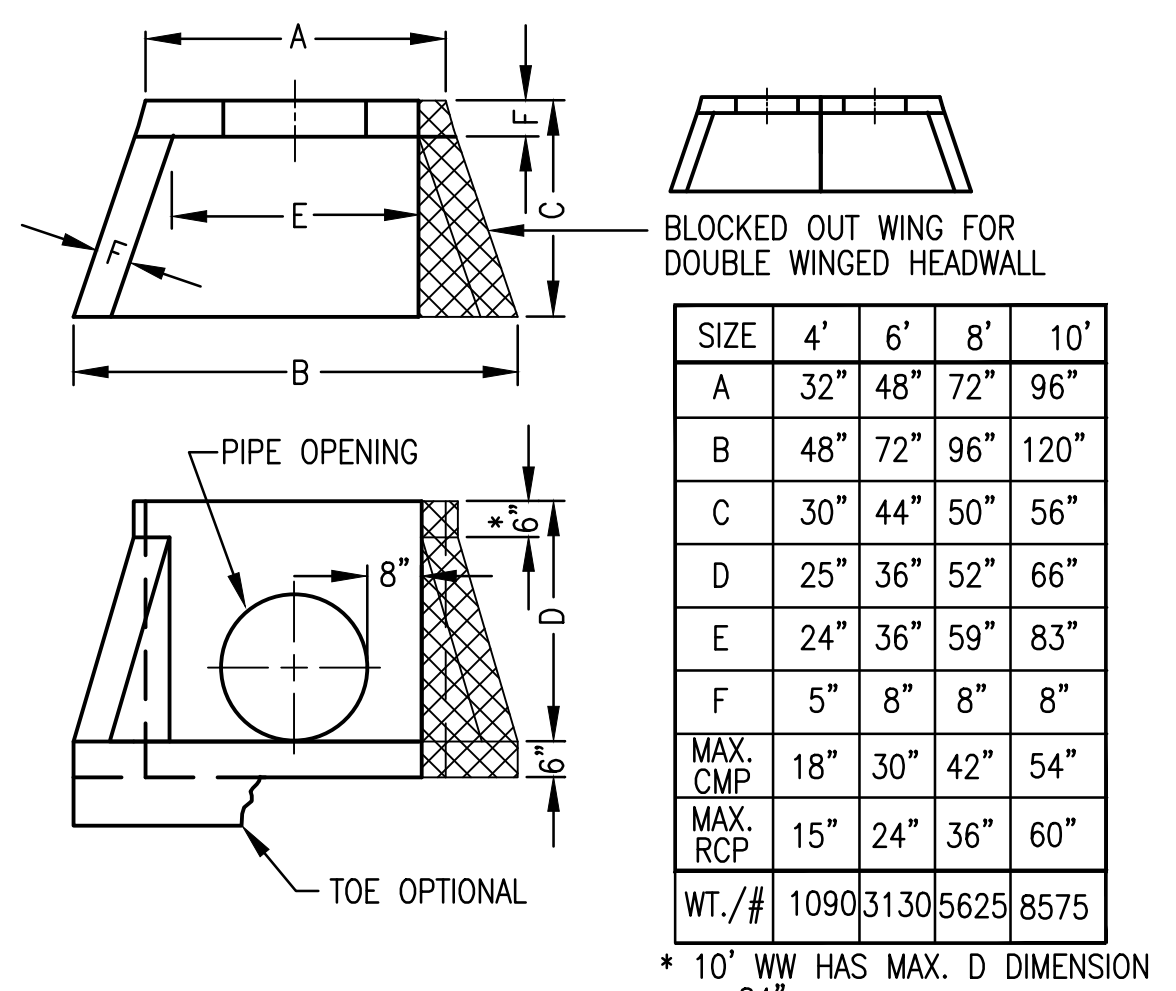
SCALE: NTS

- NOTES:
1. MAXIMUM SLOPE HEIGHT BETWEEN TERRACES SHALL BE 30 FEET FOR CUT SLOPES AND 25 FEET FILL SLOPES.
 2. TERRACE WIDTH(S) SHOULD BE AT LEAST 6 FEET WIDE. DESIGN TERRACE DITCHES TO DRAIN AT NON-EROSIVE VELOCITIES.
 3. TERRACED SLOPES SHOULD BE DESIGNED BY A PROFESSIONAL, BASED UPON ACTUAL SITE CONDITIONS.

TERRACED SLOPE DETAIL

SCALE: NTS

ONCE THE WALLS ARE INSTALLED IN THE FIELD THEY ARE ATTACHED WITH 2 - 1/2" THICK BOLT PLATES (20"x6") IN THE BACK W/HILTI WEDGE BOLTS

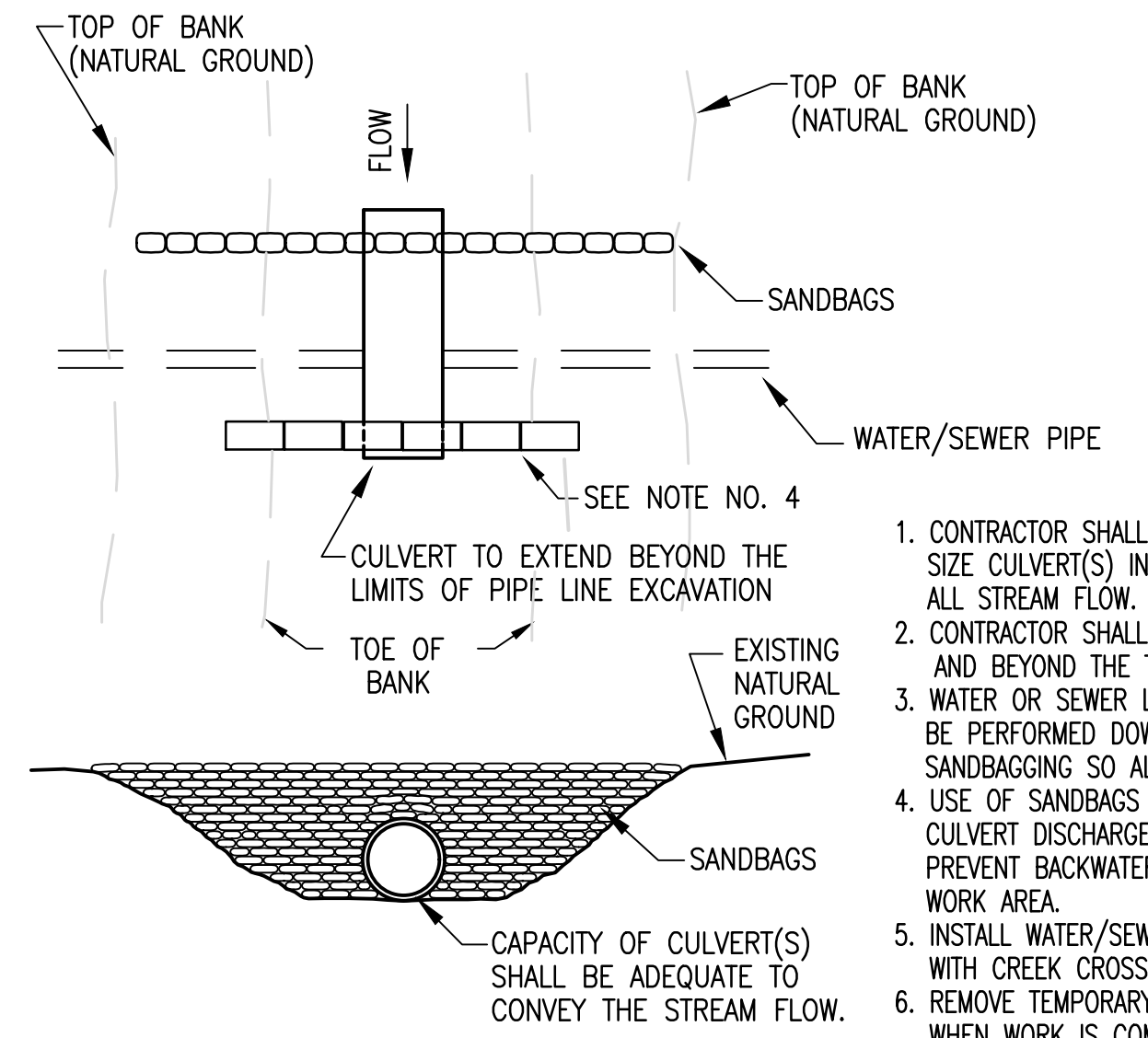


WINGED HEADWALL DETAIL

SCALE: NTS

SIZE	4'	6'	8'	10'
A	32"	48"	72"	96"
B	48"	72"	96"	120"
C	30"	44"	50"	56"
D	25"	36"	52"	66"
E	24"	36"	59"	83"
F	5"	8"	8"	8"
MAX. CMP	18"	30"	42"	54"
MAX. RCP	15"	24"	36"	60"
WT./#	1090	3130	5625	8575

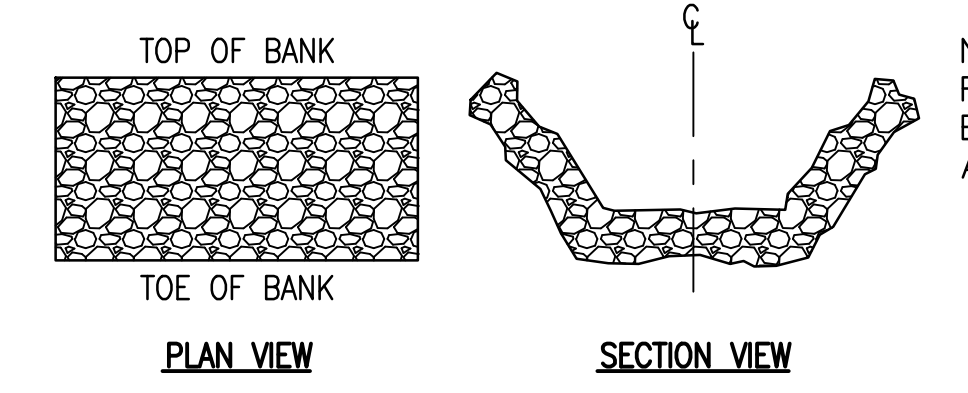
* 10' WW HAS MAX. D DIMENSION = 84"



TEMPORARY STREAM DIVERSION
 WATER/SEWER LINE CONSTRUCTION

NOT TO SCALE

1. CONTRACTOR SHALL INSTALL APPROPRIATE SIZE CULVERT(S) IN THE STREAM TO CARRY ALL STREAM FLOW.
2. CONTRACTOR SHALL SANDBAG AROUND CULVERTS AND BEYOND THE TOP OF STREAM BANKS.
3. WATER OR SEWER LINE CONSTRUCTION SHALL BE PERFORMED DOWNSTREAM OF TEMPORARY SANDBAGGING SO ALL WORK IS IN A DRY AREA.
4. USE OF SANDBAGS OR STRAW BALES AT THE CULVERT DISCHARGE MAY BE NECESSARY TO PREVENT BACKWATER FROM COMING INTO THE WORK AREA.
5. INSTALL WATER/SEWER LINE IN ACCORDANCE WITH CREEK CROSSING DETAIL.
6. REMOVE TEMPORARY CULVERT AND SANDBAGS WHEN WORK IS COMPLETE.



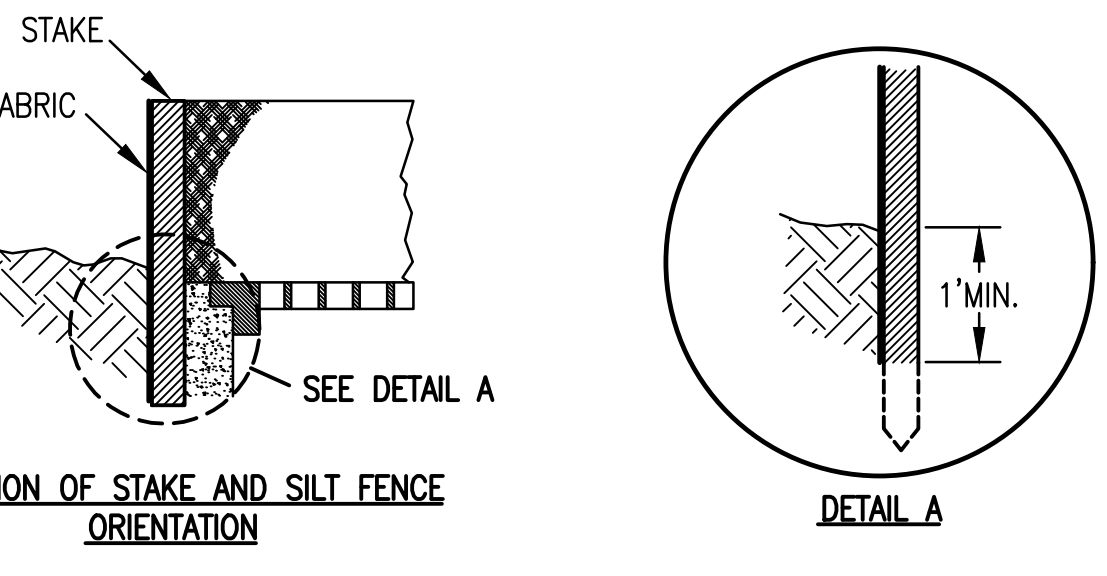
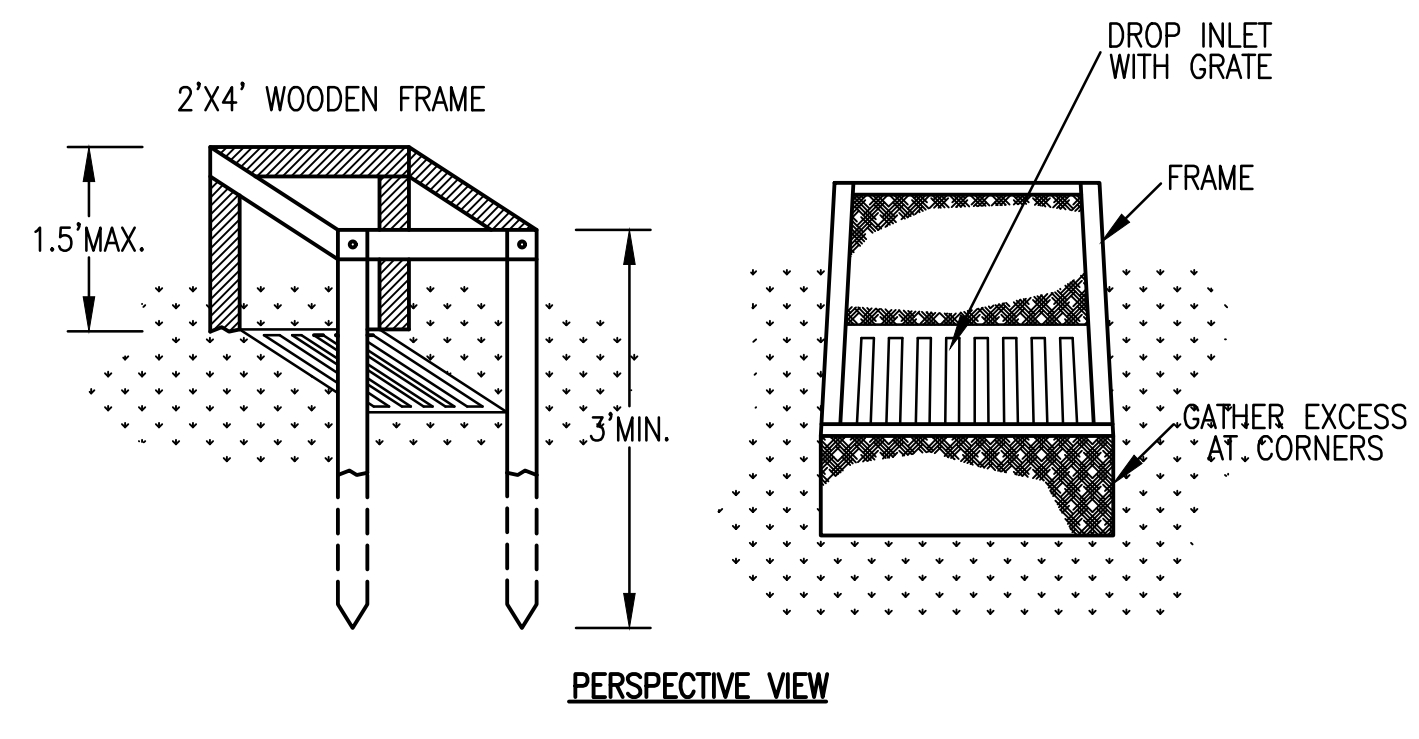
NOTE: FACE OF RIP-RAP IS TO BE FLUSH WITH SIDES AND BOTTOM OF DRAIN

RIP-RAP STABILIZATION WHERE NOTED WILL CONSIST OF HAND-PLACED NATIVE LIMESTONE, HAVING A MAXIMUM LENGTH/WIDTH DIMENSION OF 12" IN EITHER DIRECTION AND A MAXIMUM THICKNESS OF 6". TREATMENT WILL BE PLACED IN TWO INTERLOCKING (NESTING) LAYERS. RIP-RAP SHALL BE PLACED FOR THE FULL WIDTH OF AREA DISTURBED BY PIPE LAYING OPERATIONS. LIMIT OF WIDTH FOR PAYMENT OF RIP-RAP SHALL BE AS FOLLOWS:

PIPE DIAMETER	RIP-RAP WIDTH
8"	5'
10"	5.5'
12"	6'
15-16"	8'
18"	8.5'
21"	9'
24"	10'

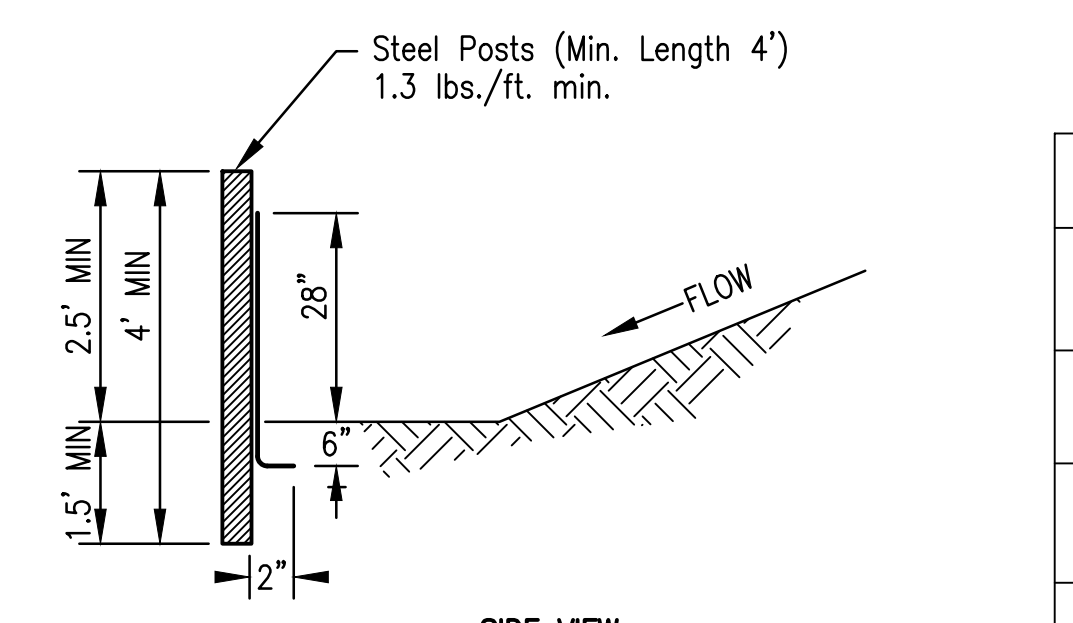
RIP-RAP DETAIL

SCALE: NTS

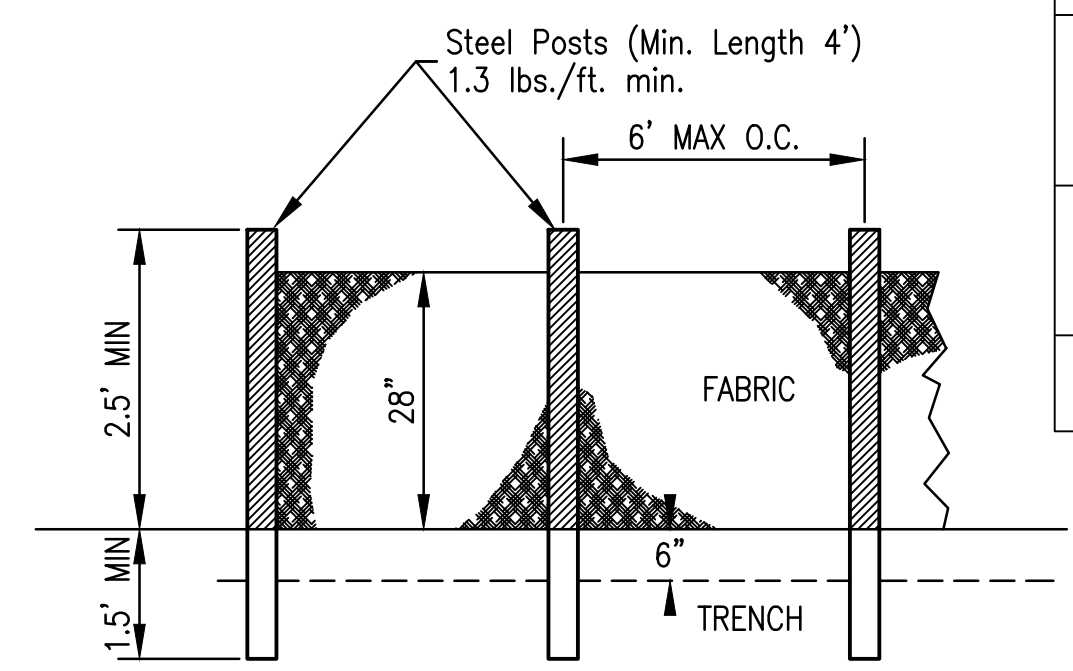


SILT FENCE INLET PROTECTION IP-SF

SCALE: NTS

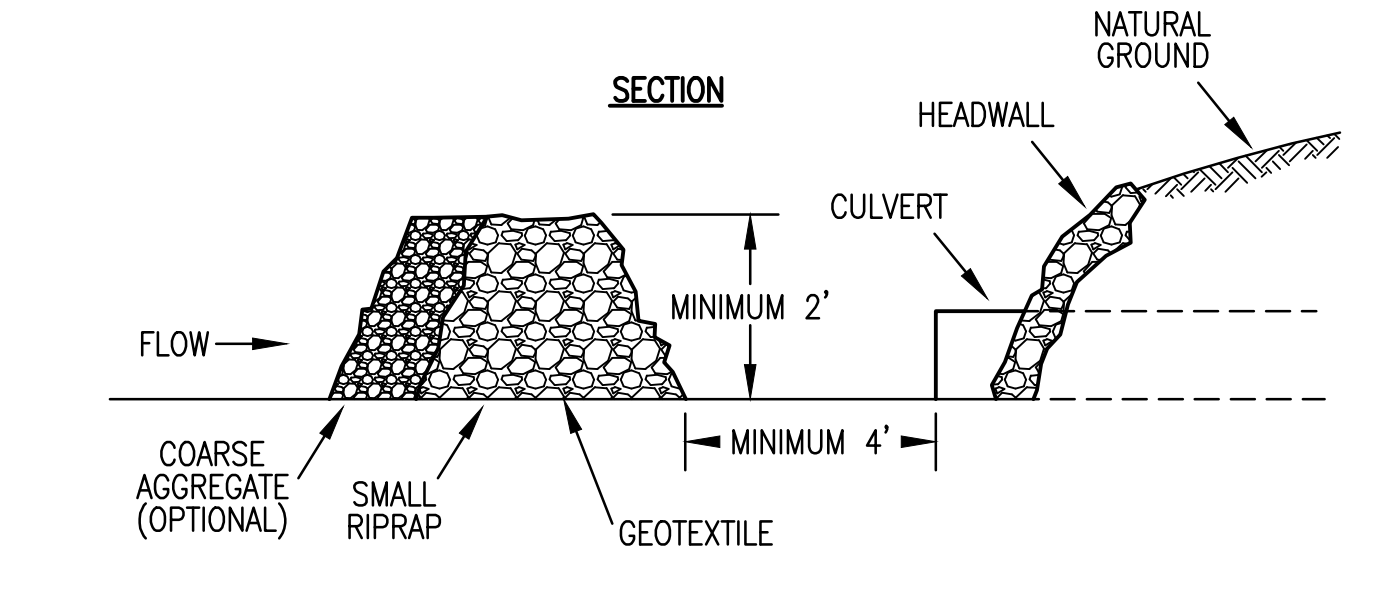


SIDE VIEW

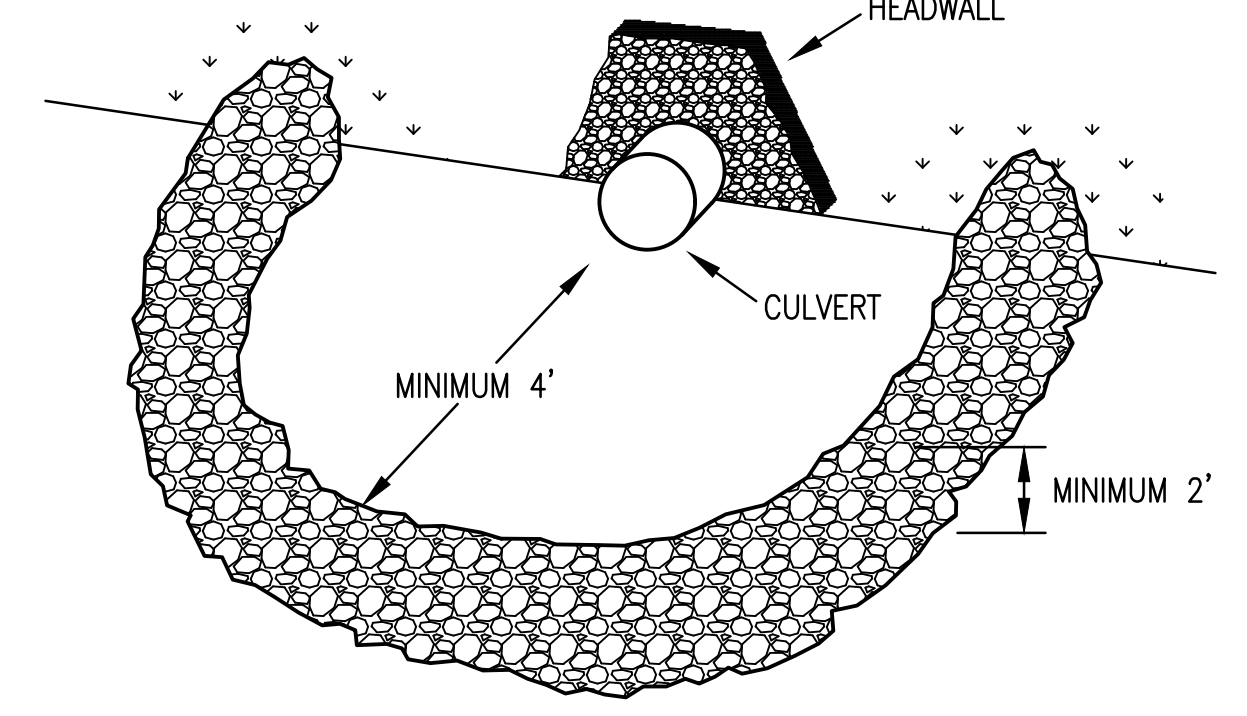


SILT FENCE - TYPE A

SCALE: NTS



SECTION

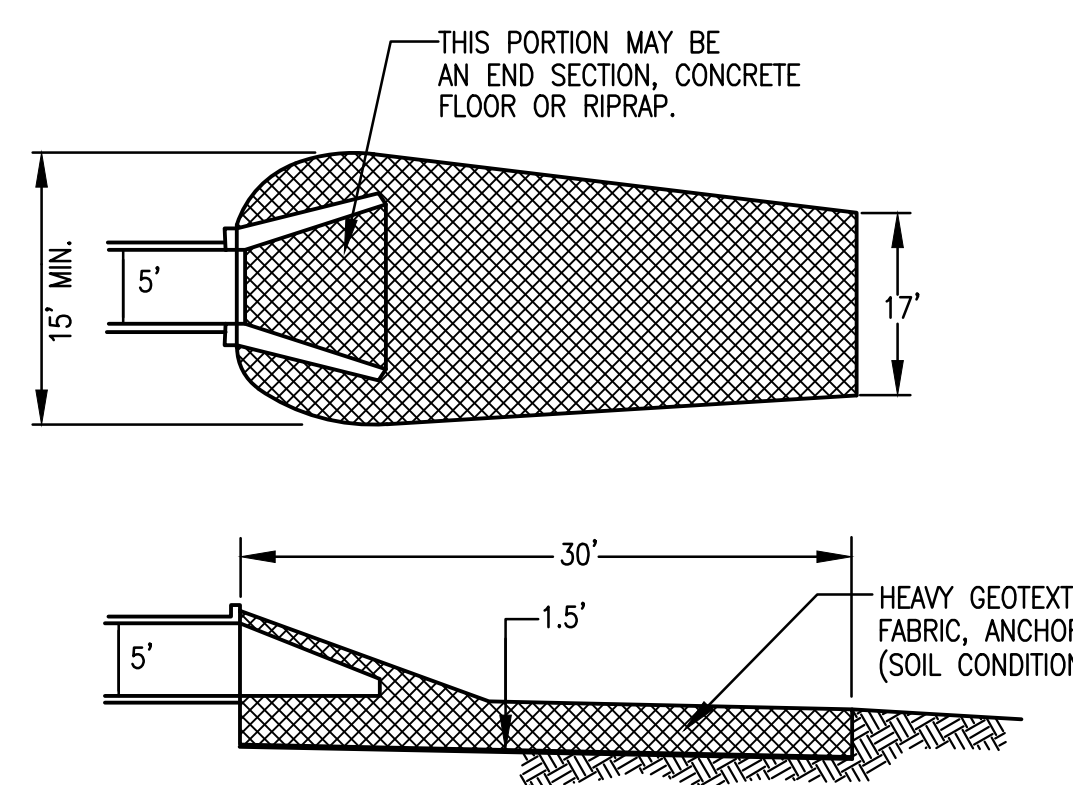


STONE FILTER RING

SCALE: NTS

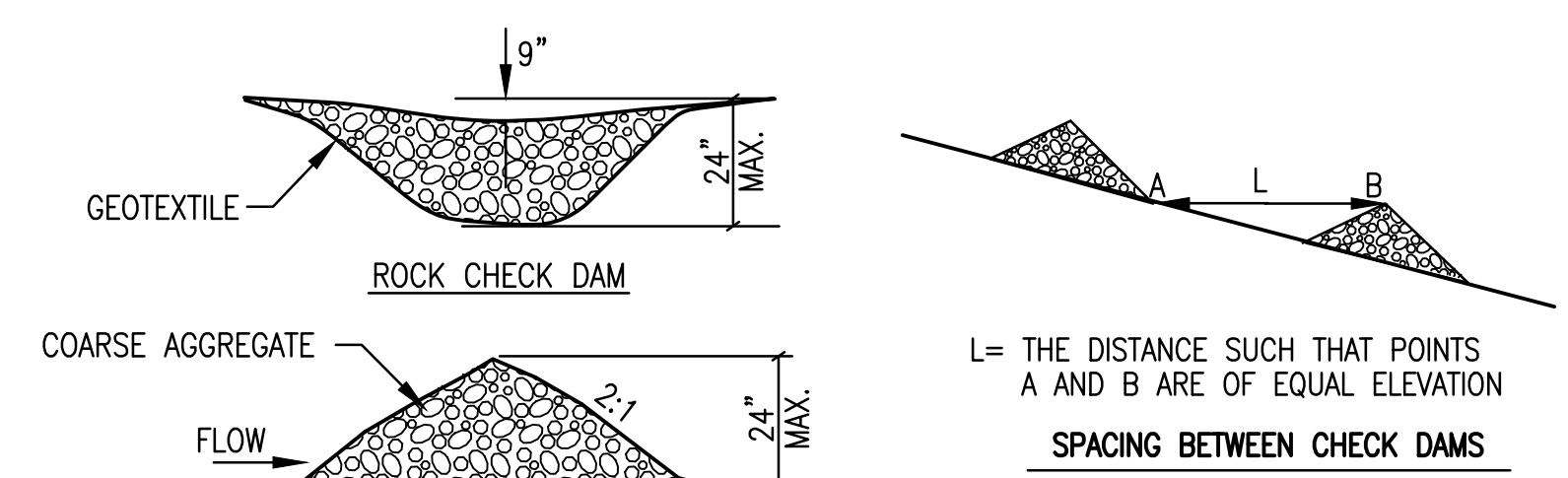
SILT FENCE SPECIFICATIONS

TYPE FENCE	A	B	C
Tensile Strength (Lbs. Min.)(1) (ASTM D-4632)	Warp - 120 Fill - 100	Warp - 120 Fill - 100	Warp - 260 Fill - 180
Elongation (% Max.) (ASTM D-4632)	40	40	40
AOS (Apparent Opening Size) (Max. Sieve Size)(ASTM D-4751)	#30	#30	#30
Flow Rate (Gal/Min/Sq.Ft.) (GDT-87)	25	25	70
Ultraviolet Stability (2) (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80	80	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphragm Bursting Strength Tester)	175	175	175
Minimum Fabric Width (Inches)	36	22	36



RIPRAP OUTLET PROTECTION DETAIL

SCALE: NTS



CHECK DAM DETAILS

SCALE: NTS