LIMB Drofessional Findingers, Inc.

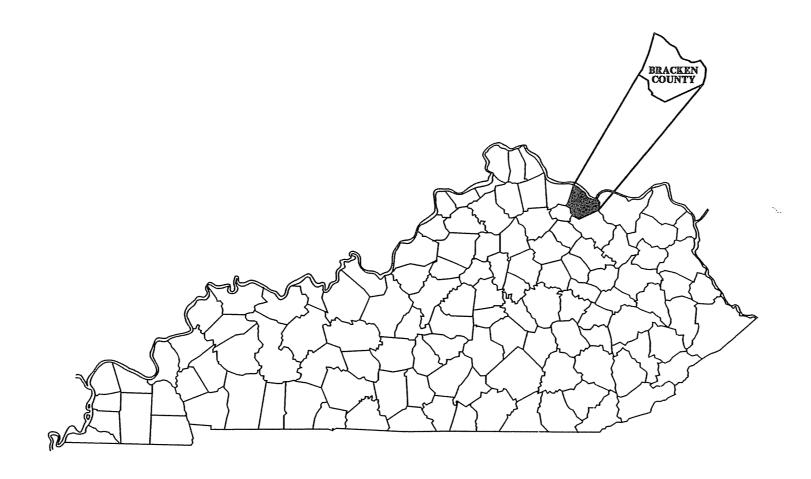
10/4	LIND LLO	iessionai Engineers, inc					
MO	3 HMB Circle, US 460						
	Frankfor	t, KY 40601					
7	Phone:	502/695-9800					
SSIONAL EERS, INC	Fax:	502/695-9810					
Public Se	rvice Commi	ssion					

DATE	0/44/0040		JOB NO.	4160
ATTENTION	9/11/2012			4162
ATTENTION				
RE:	Case No. 2	2011-00519))	
	Bracken C	ounty Wate	r District	
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PROFE ENGINE	EERS, INC	rax:	502/695	-9010		RE:	······································			
						(Case No. :	2011-00519		
)	Public Ser	vice Commi	ssion			E	Bracken C	ounty Water	District	
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	Frankfort,	KY 40602			w.,			·		
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VE ARE	SENDING	YOU 🗖	Attached			Under Separate (Cover Via			_the following items:
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OPIES	DATE	NO.				DE	SCRIPTI	NC		
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		tions, please				, and the second se				
OPY TO										
						SIGNED:	Jeff Reyn	olds, P.E.		

KY 1159 WATER LINE UPGRADE BRACKEN COUNTY WATER DISTRICT BRACKEN COUNTY, KENTUCKY





7/13/12

GISTRATION NO. 20.469

RECEIVED

SEP 1 1 2012

PUBLIC SERVICE COMMISSION

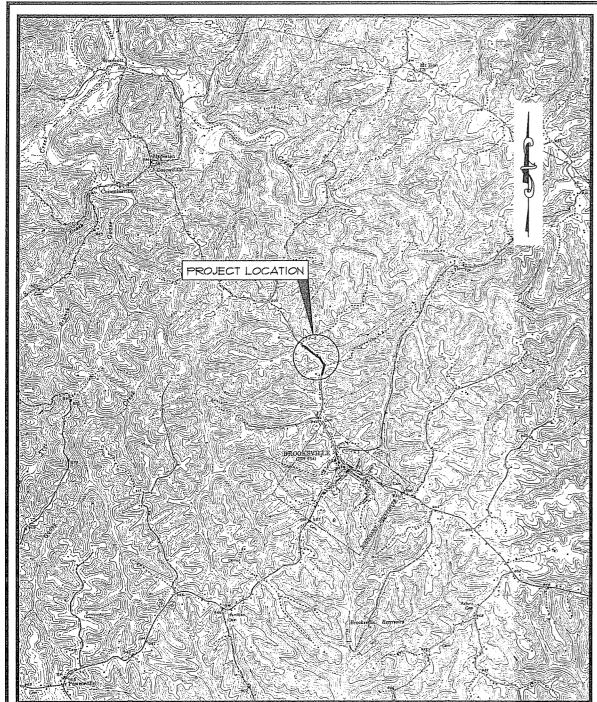
2011-00519

Plans Prepared By:



HMB Circle Frankfort, Kentucky (502)695—9800 Fax (502)695—9810

o upgraddrover ang, 77,17013 a sa 48 Am, Brv, 2854



SCALE : N.T.S.

GENERAL NOTES

UNLESS OTHERWISE NOTED, A SEPARATE BID ITEM HAS NOT BEEN ESTABLISHED FOR FITTINGS. THE FITTINGS INVOLVED, BUT NOT LIMITED TO, TEES, BENDS, PLUGS, REDUCERS, SADDLES, CROSSES, COUPLINGS, ETC. CONTRACTOR SHALL INCLUDE THE COST OF THESE ITEMS IN THE UNIT PRICE FOR THE PIPE.

NO SEPARATE PAY ITEM HAS BEEN ESTABLISHED FOR CONNECTION TO EXISTING LINES. THE COST FOR CONNECTING TO EXISTING LINES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PIPE.

NO PAY ITEM FOR EXTRA TRENCH DEPTH HAS BEEN SET UP. CONTRACTOR SHALL INCLUDE THE COST OF THE ADDITIONAL DEPTH IN HIS UNIT PRICE WHEN THE WATER PIPE CROSSES UNDER AN EXISTING UTILITY, CULVERT OR DRAINAGE DITCH.

FINAL LOCATION OF SERVICES, GATE VALVES AND OTHER APPURTENANCES ARE TO BE FIELD LOCATED DURING CONSTRUCTION AND APPROVED BY THE ENGINEER.

EXISTING UTILITIES, ESPECIALLY GAS LINES AND OIL LINES, MAY BE CATHODICALLY PROTECTED, THEREFORE, DUCTILE IRON PIPE, FITTINGS GATE VALVES, AND/OR BOXES LAID WITHIN 100° OF THESE LINES WITH CATHODIC PROTECTION SHALL MEET THE REQUIREMENTS OF AWWA C-105, LATEST REVISION. A SEPARATE PAY ITEM HAS NOT BEEN ESTABLISHED. ALL COSTS FOR LABOR AND MATERIALS MUST BE INCLUDED IN THE INIT PRICE BIJD FOR PIPE

ALL DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.

THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION ACTIVITY TO THE AREA WITHIN THE EXISTING EASEMENTS AND CONSTRUCTION LIMITS, UNLESS OTHERWISE APPROVED IN WRITING BY THE OWNER.

THE CONTRACTOR WILL BE SOLELY LIABLE FOR ANY WORK HE PERFORMS OUTSIDE OF LEGAL EASEMENTS OR CONSTRUCTION LIMITS.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ASCERTAIN THE LOCATIONS OF ANY AND ALL UTILITIES ENCOUNTERED BY THE FINAL ALIGNMENT OF WATERLINE. THE CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING AND SHALL TAKE THE NECESSARY MEASURES TO PROTECT THE EXISTING UTILITIES TO KEEP THEM IN SERVICE. IF UTILITIES ARE SHOWN, THE INFORMATION IS GENERAL IN NATURE AND NOT TO BE TAKEN AS AS-BUILTS. CONTRACTOR SHALL CONTACT REPRESENTATIVES OF LOCAL UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING WORK ON THE PROJECT.

ALL WATER MAINS SHALL BE PVC CLASS 200 SDR 21 UNLESS OTHERWISE NOTED ON THE PLANS.

AT THE CONTRACTORS OPTION, CLASS 350 DUCTILE IRON PIPE MAY BE SUBSTITUTED FOR ANY PIPE PARTICULARLY SPECIFIED, BUT AT NO ADDITIONAL COST TO THE OWNER.

PROVIDE 40" MINIMUM COYER FOR ALL WATER MAINS PLACED WITHIN UNPAYED COUNTY ROADS OR IN DITCH LINES.

SHEET INDEX

GNI VICINITY MAP, GENERAL NOTES, SHEET INDEX AND LEGEND R3 KY II59 PLAN SHEET STA. I02400 - STA. II1400 R5 KY II59 PLAN SHEET STA. II1400 - STA. I32400 XI CROSS SECTION SHEET STA. I01411 - STA. I03400 X5 CROSS SECTION SHEET STA. I06450 - STA. I01450 XII CROSS SECTION SHEET STA. I12450 - STA. II3420 SD1 - SD3 STANDARD DETAILS

THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS PRIOR TO PERFORMING DRIVEWAY CUTS IN ORDER TO PROVIDE PROPERTY OWNER ACCESS TO THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL INSTALL THESE DRIVEWAY CROSSINGS WITH EXPEDIENCE AND SHALL RESTORE THE DRIVEWAY AS SOON AS POSSIBLE.

ALL PAVED AND CONCRETE SURFACES, INCLUDING DRIVEWAYS, CROSSED BY THE PROPOSED WATER MAINS SHALL BE BORED AND JACKED (UNCASED).

ALL TEES AND BENDS SHALL BE THRUST BLOCKED AS DETAILED ON THE THRUST BLOCK DETAIL SHEET. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR PIPE.

ALL EXISTING WATER LINES THAT ARE TO BE ABANDONED SHALL BE PLUGGED WITH CONCRETE. ALL COSTS INCLUDING LABOR AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE FOR PLUGGING EXISTING WATER LINES.

SEPTIC SYSTEMS NOTED WHERE PROPERTY OWNER NOTIFIED US. ALL MAY NOT BE SHOWN. CONTRACTOR TO USE CAUTION IN THESE AREAS. WATER MAIN TO BE ENCASED IN CONCRETE WHEN LAID WITHIN IO' OF DRAIN LINES OR FIELD. SEE DETAIL AND NOTE ON STANDARD DETAIL SHEET.

UNLESS OTHERWISE NOTED, A SEPARATE BID ITEM HAS NOT BEEN ESTABLISHED FOR CONNECTIONS TO EXISTING SYSTEM. CONTRACTOR SHALL INCLUDE COST OF CONNECTIONS TO EXISTING SYSTEM IN THE UNIT PRICE FOR THE PIPE.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN IMMEDIATELY AFTER INSTALLING WATER LINE WHERE MAIN IS TO BE LAID ON STATE RIGHT-OF-WAY.

THE FOLLOWING GENERAL NOTES ARE REQUIREMENTS OF THE COMMONWEALTH OF KENTUCKY TRANSPORTATION CABINET PERMIT ENGINEERS. THESE NOTES APPLY WHEN LAYING WATER LINE IN STATE RIGHT-OF-WAY:

ALL WATER LINES BEING PLACED ABOVE CROSS DRAINS NEED TO HAVE AT LEAST ONE (1) FOOT OF SOIL MATERIAL AS A CUSHION BETWEEN LINE AND THE CROSS DRAIN CULVERT. SEE UTILITY CROSSING DETAIL.

ALL PROPOSED WATER LINES TO BE PLACED BEHIND ALL PRIVATE AND COMMERCIAL ENTRANCE CULVERTS.

ALL PROPOSED WATER LINES TO BE PLACED AT BACK OF DITCH LINE IN TIGHT AREAS.

LEGEND

PROPOSED WATERLINE	
EXISTING WATERLINE	-
PROPOSED BUTTERFLY VALVE	<u> </u>
EXISTING GATE OR BUTTERFLY VALVE	
AUTOMATIC AIR RELEASE VALVE	
FIRE HYDRANT	
PROPERTY LINE	
BLOWOFF ASSEMBLY	
STREAM	
EXISTING SANITARY SEWER	S
EXISTING GAS LINE	G
PLUG	
FENCE	XX
PVA MAP - PARCEL NUMBER	XX - XX
POWER POLE	s la

PROJECT: 4162.00 DATE: APRIL 2011
9CALE: NT.5.

NAME DATE
DESIGNED BY JDR
DRAWN BY SAB
CHECKED BY JDR
CHECKED BY JDR
NO. DATE REVISIONS

CHK'D APPR'D DATE RECORD DIUSS.



3 HMB CIRCLE FRANKFORT, KENTUCKY (502) 695-9800 (502) 695-9810 FAX

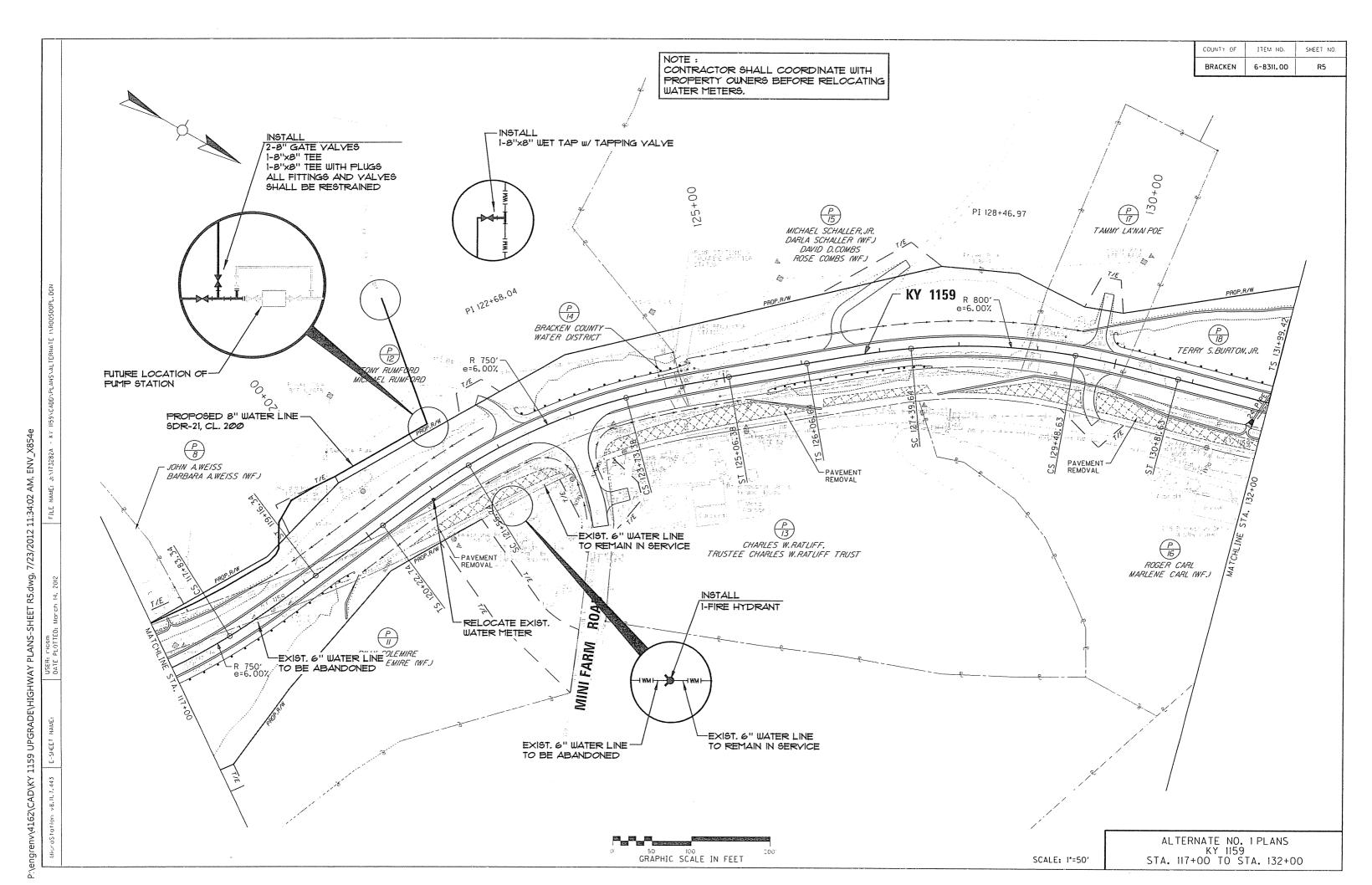


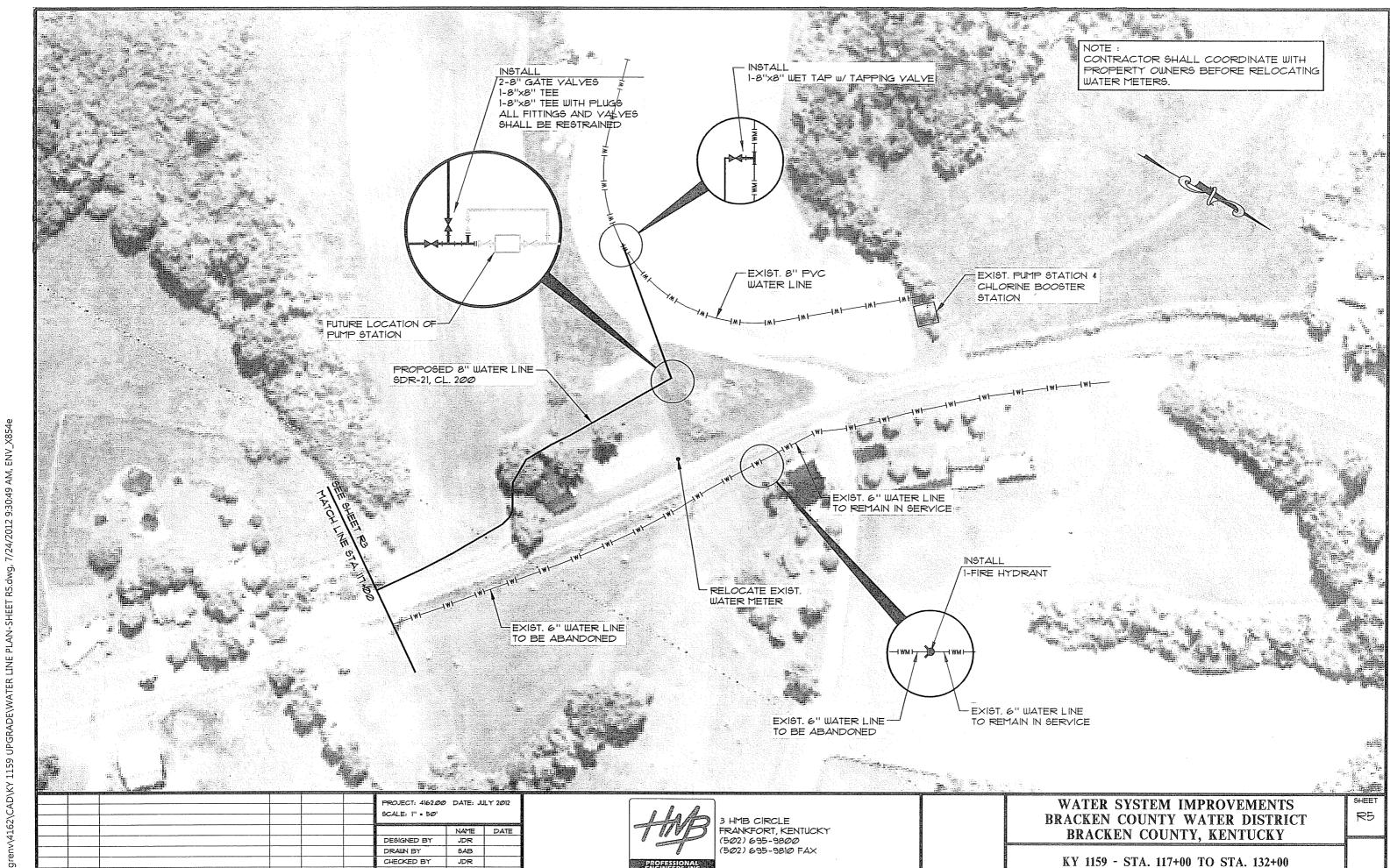
WATER SYSTEM IMPROVEMENTS BRACKEN COUNTY WATER DISTRICT BRACKEN COUNTY, KENTUCKY

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VICINITY MAP, GENERAL NOTES, SHEET INDEX & LEGEND

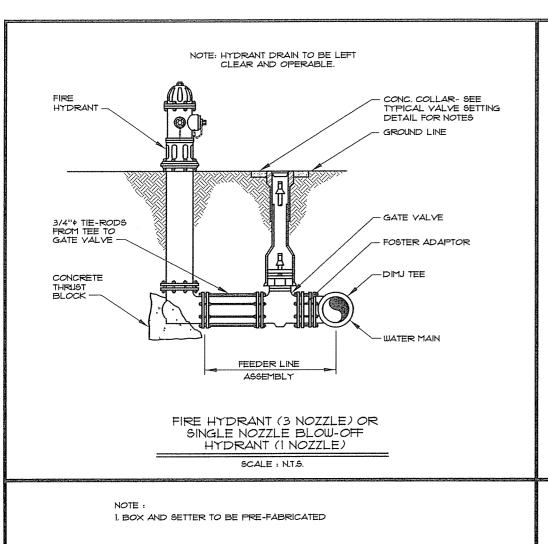




NO. DATE REVISIONS

RECORD DUGS.





CAST IRON COVER WITH LOCKING NUT COVER MARKED "WATER" KING TECHNOLOGY, INC. SILICONE FILLED WIRE CONNECTORS, TYPICAL TAR PAPER WRAP BETWEEN 24" SQ. CONC ALL LOCATIONS YALVE BOX AND CONCRETE 5" THICK COLLAR FINISHED GRADE 5" SHAFT LOCATION FOR PLUG VALVES WITH DIAL -4"x4" - WI.4xWI.4 WWF. REQ. FOR GRASS OR INDICATOR (OPEN-SHUT) GRAYEL AREAS -SCREW TYPE VALVE BOX NO CONC. REQ. FOR PAVED AREAS TRACER WIRE SHAFT LOCATION FOR GATE VALVES D.IMJ. VALVE SOLID MASONRY BLOCK - UNDISTURBED FARTH YALVE & YALVE BOX SCALE : N.T.S.

NOTES:

*METER BASE, DISCONNECT, CONDUIT AND WEATHER-HEAD BY CONTRACTOR PER UTILITY REQUIREMENTS AND NATIONAL ELECTRIC CODE.

**OUNER TO PROVIDE ELECTRICAL SERVICE TO PUMP STATION SITE

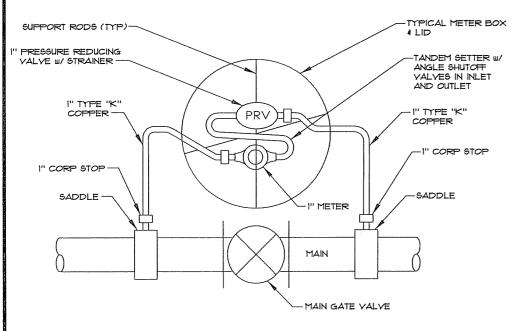
PROVIDE LIGHTNING ARRESTOR ON POLE

SERVICE POLE (BY LINE CONTRACTOR)

UNDERSROUND SERVICE TO TANK PUMP STATION OR YALLT

CADDUIT FOR TELEFRING CABLE ANTENNA TO PUMP STATION

POWER POLE



TEST METER AT GATE VALVE

SCALE : N.T.S.

-METALLIC TAPE PIPE O.D. + 18" MIN. NO ROCK GREATER EXIST. GROUND-LONGEST DIM. EARTH AND ROCK BACK FILL, NO ROCKS LARGER THAN 4" IN LONGEST DIM. ALLOWED IF HAND PLACED AND NOT DIRECTLY OVER THE PIPE, ROCKS BETWEEN 4" 4 8" IN LONGEST DIM, MAY BE INCLUDED IN THIS PORTION OF BACKFILL. EARTH BACKFILL ONLY TO 1'-0"
(MIN.) ABOVE TOP OF PIPE. 6" (MIN) TRENCH BOTTO ROCK OR EARTH -No. 14 AUG COPPER THAN INSULATED TYPICAL

GROUND

GROUND

GROUND

LINE

S'

24" ID. MIN

BRASS
NIPPLES

STONE

BRASS AND
REMOVEABLE
HANDLE

TEE OR
SADDLE

CAST IRON, MEDIUM DUTY
SOLID COVER

CONCRETE RING WITH
4"X4" - WI.4 X WI.4 WUF

BRASS
NIPPLES

BALL YALVE
W/ OUTLET
W/ OUTLET
HANDLE

TEE OR
SADDLE

CORP. STOP

BEDDING / BACKFILL SCALE : NTS.

HB PROFESSIONAL ENGINEERS AND A

3 HMB CIRCLE FRANKFORT, KENTUCKY (502) 695-9800 (502) 695-9810 FAX

Censo!

STONAL

AUTOMATIC AIR RELEASE VALVE

SCALE : NTS.

WATER SYSTEM IMPROVEMENTS
BRACKEN COUNTY WATER DISTRICT
BRACKEN COUNTY, KENTUCKY

STANDARD DETAILS

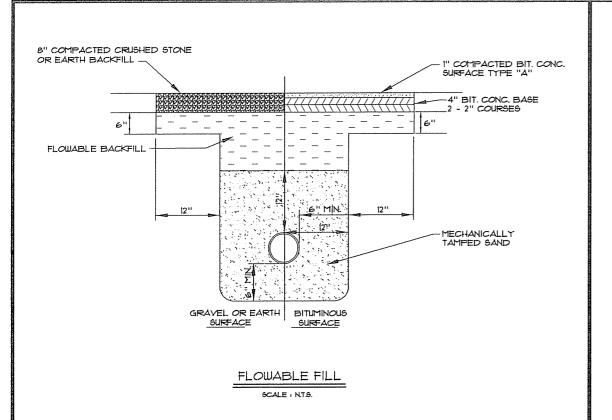
DETAILS SD3

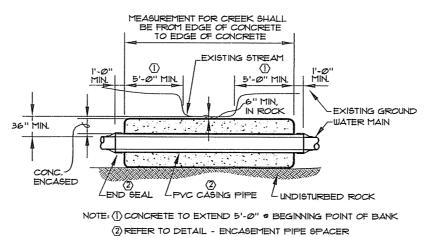
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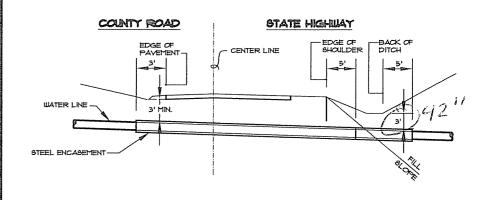
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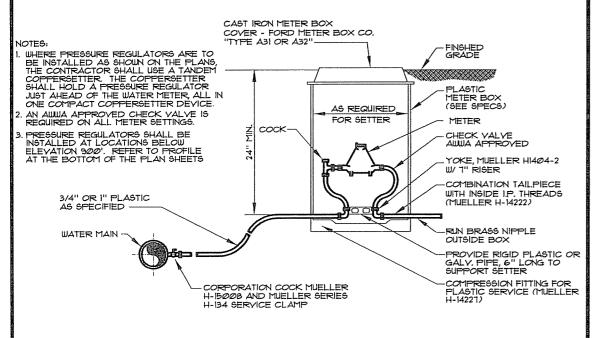


TYPE "B" STREAM CROSSING SOLID ROCK BOTTOM WITH CONG. CAP



TYPICAL ROAD CROSSING

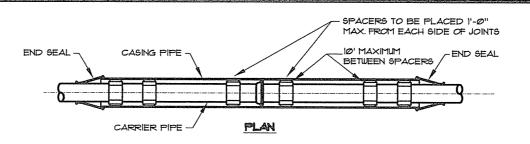
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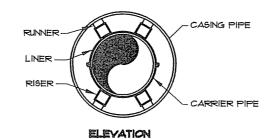


TYPICAL METER SETTING

SCALE : NTS.

%"x34" 4 1" SERVICES





ENCASEMENT PIPE SPACER SCALE : NTS

TYPICAL ROAD CROSSING NOTES:

- 1. ALL JOINTS SHALL BE SOLIDLY WELDED. END OF CASING SHALL BE SEALED AFTER LINE HAS BEEN INSTALLED AND TESTED.
- 2. MINIMUM DEPTHS MAY INCREASE IN AREAS WHICH REQUIRE MINIMUM SEPARATION WITH OTHER FACILITIES.
- 3. OPEN TRENCH NO CLOSER THAN THE DITCH LINE OR TOE OF FILL FROM THE EDGE OF THE PAYEMENT OR AS DIRECTED BY STATE, COUNTY OR MUNICIPAL SPECIFICATIONS.
- 4. HIGHWAY CROSSINGS SHALL UTILIZE STEEL CASING PIPE, STEEL CASING PIPES 4" AND LESS SHALL BE NEW SCHEDULE 40, STEEL CASING PIPES LARGER THAN 4" SHALL HAVE MINIMUM WALL THICKNESS OF 025". ALL BORED AND JACKED ENCASEMENT PIPE SHALL BE INSTALLED IN BORE HOLES NO LARGER THAN THE OUTSIDE DIAMETER OF THE ENCASEMENT PIPE.
- SDR-2I SHALL BE USED FOR PVC CASING FOR COUNTY ROADS, WHERE PVC CASING PIPE IS REQUIRED.

TYPICAL STREAM CROSSING NOTES:

- 1. END CASING SHALL BE SEALED AFTER LINE HAS BEEN INSTALLED AND TESTED.
- 2. CONCRETE CAP SHALL END A MINIMUM OF ONE FOOT FROM EDGE OF CASING PIPE.
- 3. STREAM CROSSINGS SHALL UTILIZE PVC SDR 35 CASING PIPE.

						PROJECT: 4162 <i>00</i> DATE: APRIL 2 <i>0</i> 11 SCALE: N.T.S.			
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3 HMB CIRCLE FRANKFORT, KENTUCKY (502) 695-9800 (5*0*2) 695-9810 FAX



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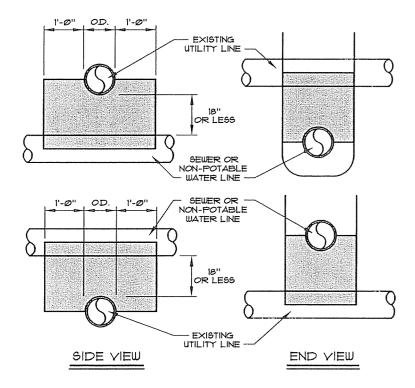
WATER SYSTEM IMPROVEMENTS 17/12 BRACKEN COUNTY WATER DISTRICT BRACKEN COUNTY, KENTUCKY

STANDARD DETAILS

SHEE. SD2 Œ

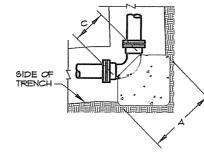
SD3

- 1. CONCRETE ENCASEMENT SHALL BE USED WHEN CLEARANCE BETWEEN SEWER OR NON-POTABLE WATER LINE AND UTILITY
- 2. WHEN ENCOUNTERING UTILITY LINE WITH SEPARATION LESS THAN 18" VERTICAL OR 10'-0" HORIZONTAL, CONCRETE ENCASEMENT SHALL BE USED. FULL SECTION OF SEWER OR NON-POTABLE WATER LINE SHALL BE CENTERED UNDER UTILITY LINE TO ACHIEVE MAXIMUM JOINT DISPLACEMENT.
- 3. CONCRETE ENCASEMENT IS NOT A SEPARATE PAY ITEM.

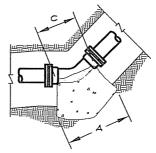


UTILITY CROSSING / ENCASEMENT

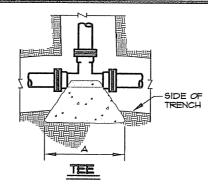
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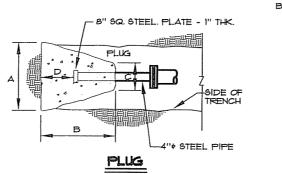


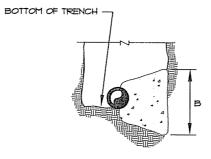
45°-22 1/2°-11 1/4° BEND



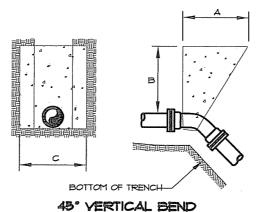
NOTES:

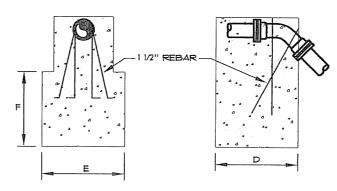
- 1. THRUST BLOCKS DESIGNED FOR 100 PSI PRESSURE AND 1000 PSF SOIL BEARING. FOR GREATER PRESSURE OR LESS SOIL BEARING, QUANTITIES WILL HAVE TO BE RECALCULATED.
- THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
- 3. IF EXACT SIZE PIPE BLOCKING IS NOT SHOUN, USE NEXT LARGER SIZE.
- 4. THRUST BLOCKING TO BE POURED IN PLACE CLASS B CONC.





TYPICAL SECTION





45° YERTICAL BEND

THRUST BLOCKING

SCALE : NTS

						PROJECT: 4162 <i>00</i> DATE: APRIL 26 9CALE: N.T.9.		
							NAME	DATE
						DESIGNED BY	JDR	J. San and J.
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3 HMB CIRCLE FRANKFORT, KENTUCKY (502) 695-9800 (502) 695-9810 FAX



WATER SYSTEM IMPROV つれけん BRACKEN COUNTY WATER BRACKEN COUNTY, KEN

STANDARD DETAIL

90° BEND

45° BEND

16"

45° YERTICAL BEND

16"

72 60

72 72 60 48

22 1/2° BEND

18" 16" 12"

11 1/4° BEND

16"

PLUG

16"

TEE SIZE MAN 24" 20" IB" I6" 12" 12" 12" 8"-10" 8"-12" 2"-6" 8RANCH 24" 20" IB" I6" 12" 8"-10" 2"-8" 8"-10" 2"-6" 2"-6"

16" | 12" | 10" | 8" | 6"

10"

10"

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