

HARRIMAN UTILITY BOARD

SWAN POND RD. WATERLINE REPLACEMENT

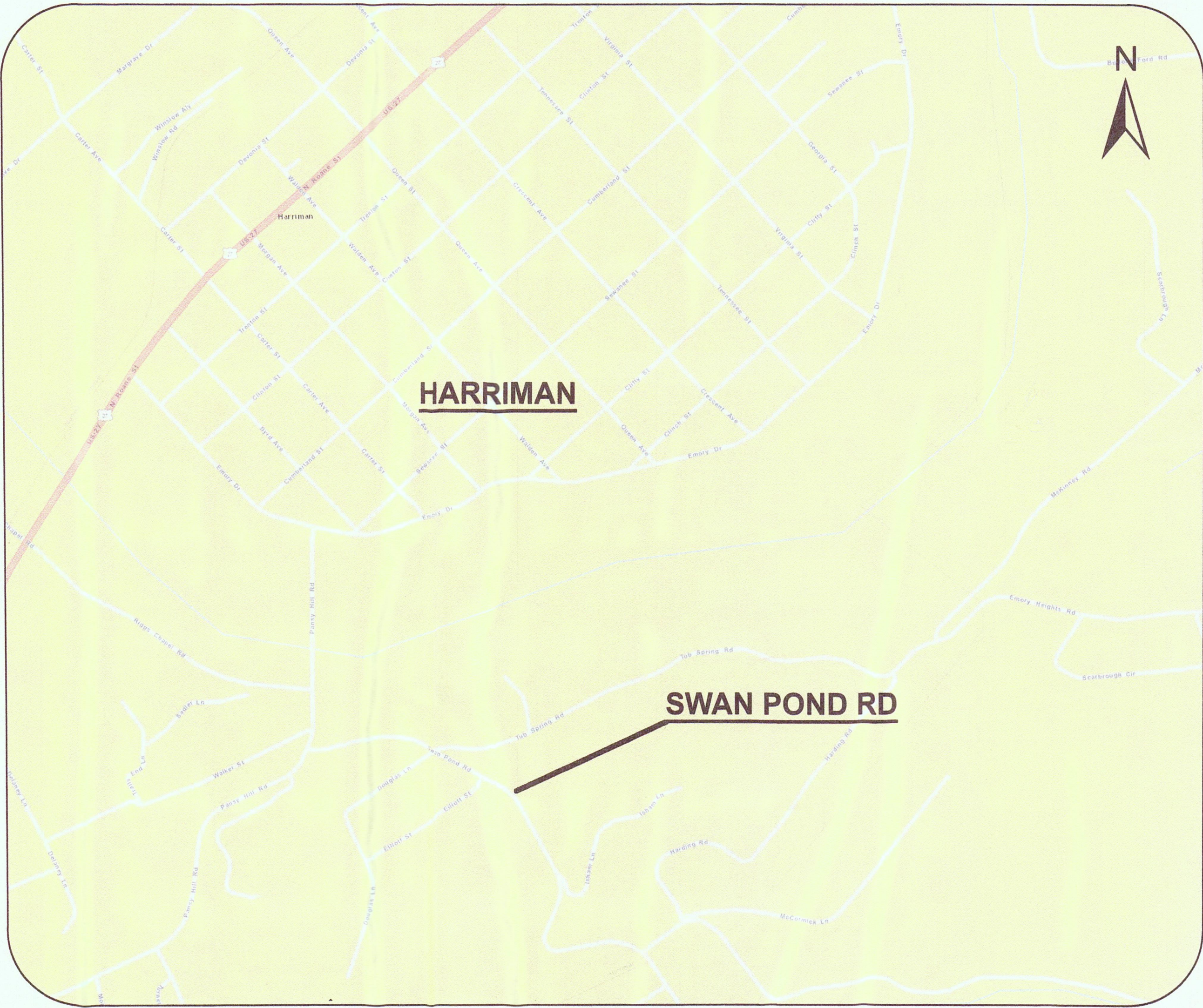
HARRIMAN, TENNESSEE

DRAWING INDEX

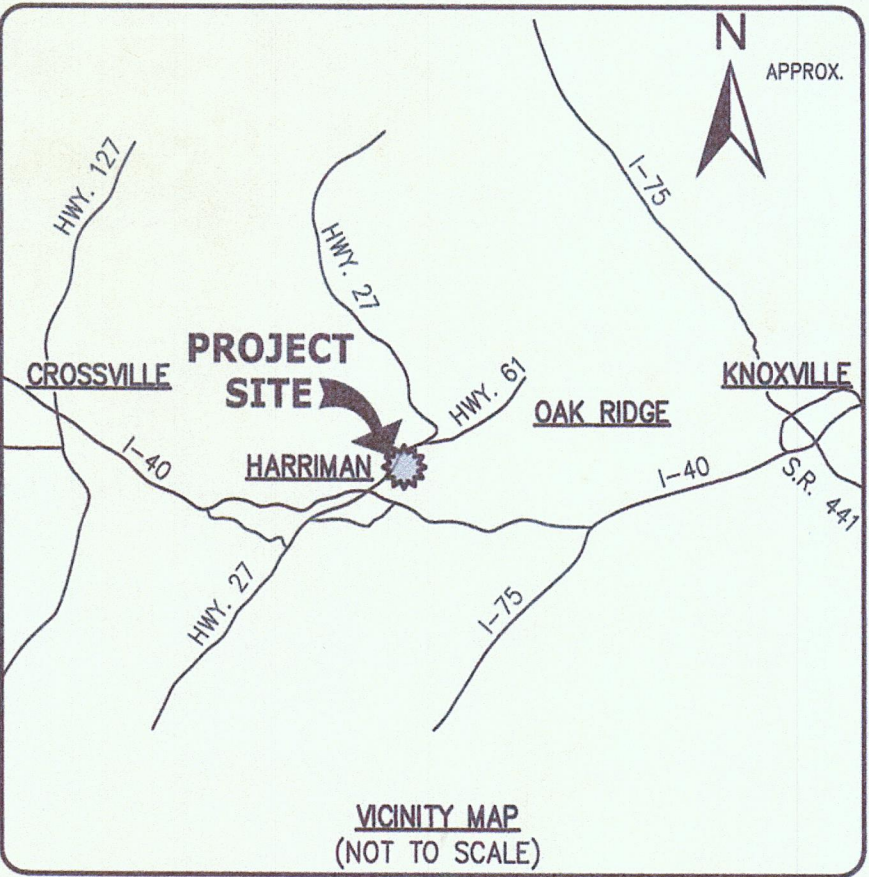
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| 1 | COVER SHEET |
| 2 | SWAN POND RD WATERLINE - STA. 0+00 TO STA. 20+15 (E.O.L) |
| 3 | TYPICAL DETAILS |

GENERAL NOTES:

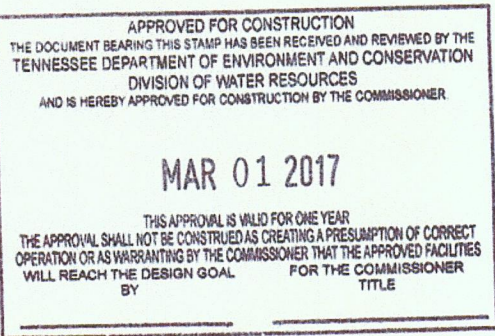
1. THE LOCATIONS OF THE EXISTING LINES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND INCOMPLETE. LINES SHALL BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM AT 811 AND POT-HOLING AS NECESSARY.
2. EXISTING WATER LINE DIAMETERS AND MATERIALS ARE FROM HISTORICAL RECORDS. INSTALLER SHALL VERIFY BY POT-HOLING PRIOR TO ORDERING MATERIAL FOR TIE-INS, CUT AND CAPS, AND BANDING.
3. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD THE EXISTING LINES FROM DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. FURNISH ANY SPECIAL EQUIPMENT REQUIRED TO WORK OVER AND AROUND THE LINES WITHOUT CAUSING THEM DAMAGE. IF DAMAGE DOES OCCUR, IMMEDIATELY NOTIFY UTILITY OWNER AND WORK TO RESTORE SERVICE. COST OF REPAIR OR REPLACEMENT OF DAMAGED LINES SHALL BE INSTALLER'S RESPONSIBILITY.
4. LINES SHALL BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM AT 811.
5. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE INSTALLER AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
6. STONE BEDDING AND BACKFILL SHALL BE INSTALLED IN STRICT COMPLIANCE WITH HUB STANDARD SPECIFICATIONS.
7. ALL WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH HUB STANDARD SPECIFICATIONS.
8. INSTALLER SHALL INSTALL WATER LINES AT A POSITIVE GRADE BETWEEN DESIGNATED HIGH AND LOW POINTS TO PREVENT TRAPPING OF AIR.
9. PROPOSED AIR RELEASE VALVES SHALL BE INSTALLED AT HIGH POINTS IN THE PROPOSED WATER LINE AND SHALL BE FIELD LOCATED BY THE ENGINEER.
10. INSTALLER TO COORDINATE FIELD LOCATIONS OF PROPOSED FIRE HYDRANTS, WATER SERVICES AND METERS WITH HUB LEAD GWS FOREMAN.
11. VALVES, HYDRANTS AND METER ASSEMBLIES SHALL BE ORIENTED SO AS TO ASSURE WATER LINE APPURTENANCES ARE NOT LOCATED WITHIN SIDEWALK AND/OR CURB/CURB & GUTTER AREAS.
12. INSTALLER SHALL USE RESTRAINED JOINT FITTINGS FOR ALL WATER PIPE FITTINGS, EXCEPT FOR FITTINGS AT TIE-IN CONNECTIONS WHICH SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS.
13. INSTALLER SHALL INSTALL DETECTION WIRE AND WARNING TAPE PER HUB STANDARD SPECIFICATIONS.
14. WATER MAIN MIN. COVER SHALL BE 30" AND MAX COVER SHALL BE 54", UNLESS OTHERWISE APPROVED BY HUB LEAD GWS FOREMAN.
15. PAVEMENT SHALL BE SAW CUT IN RECTANGULAR SECTIONS WITH NEAT SQUARED EDGES.
16. BACKFILL IN PAVED AREAS SHALL BE COMPACTED IN MAXIMUM 6" LIFTS USING "JUMPING JACK" STYLE COMPACTOR.
17. ALL 1/2" WATER METERS AND 1/2" WATER SERVICE PIPE SHALL BE REPLACED WITH 3/4" WATER METERS AND 3/4" WATER SERVICE PIPE.
18. WATER TAPS MUST BE PERFORMED WITH "HOT" LINES. TEMPORARY SHUT-DOWNS ARE NOT ALLOWED.
19. METER CONNECTIONS TO EXISTING METERS SHALL INCLUDE NEW CURB STOP AND SPUD TO METER AND NEW RUBBER GASKET ON METER.
20. WATER LINES SHALL BE INSTALLED WITH A MINIMUM OF 10' HORIZONTAL SEPARATION FROM EXISTING SANITARY SEWER. WHERE 10' SEPARATION CANNOT BE ACHIEVED, WATER LINE SHALL BE MINIMUM 18" ABOVE SANITARY SEWER.
21. PRESSURE TESTING AND DISINFECTION PROCEDURES SHALL BE IN ACCORDANCE WITH HUB STANDARD SPECIFICATIONS.



LOCATION MAP
SCALE: 1"=500'



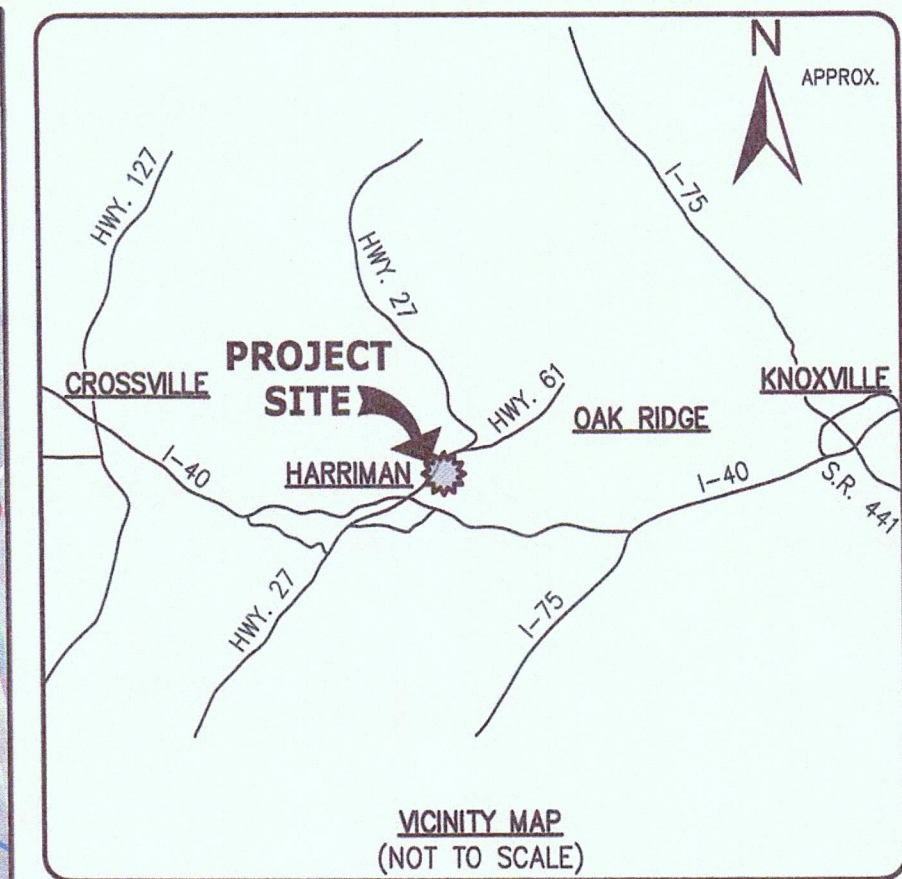
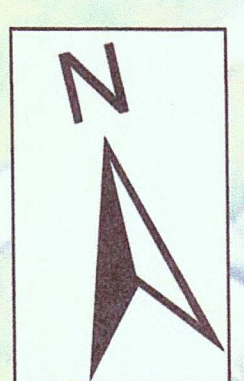
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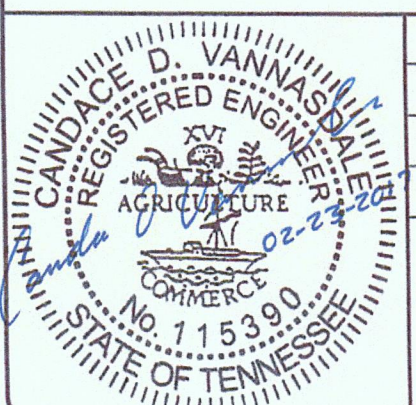


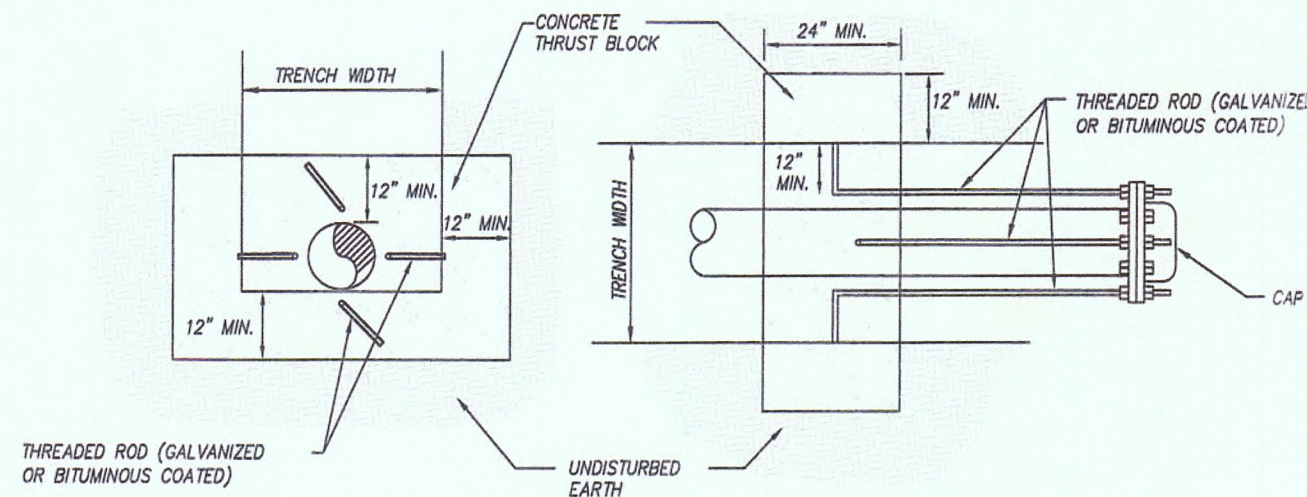
REVISIONS	DATE								
CLIENT:	HARRIMAN UTILITY BOARD 300 NORTH ROANE STREET HARRIMAN, TN 37748 (865) 882-3242								
PROJECT:	SWAN POND RD WATERLINE REPLACEMENT HARRIMAN, TENNESSEE								
COVER SHEET									
	<table><tbody><tr><td>PROJECT NO.</td><td>HUB No. 3-107.415</td></tr><tr><td>DRAWING DATE</td><td>FEBRUARY 21, 2017</td></tr><tr><td>PM</td><td>CV</td></tr><tr><td>DRAWN</td><td>MB</td></tr></tbody></table>	PROJECT NO.	HUB No. 3-107.415	DRAWING DATE	FEBRUARY 21, 2017	PM	CV	DRAWN	MB
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All Locations Approximate
Contact TN One Call
Before Excavating

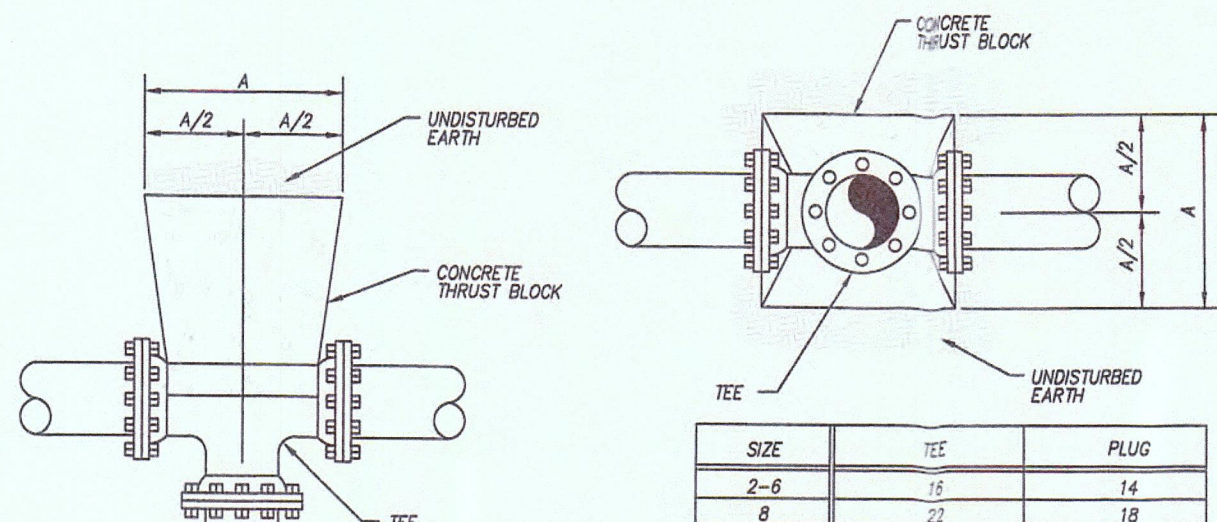


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- NOTES:
1. HUB WILL ASSIST WITH THROTTLING DOWN WATER PRESSURE FOR CUT & CAPS AND BANDING. WATER WILL NOT BE COMPLETELY SHUT OFF. ALL CUT AND CAPS AND BANDING SHALL BE PERFORMED WET.
 2. INSTALLER SHALL PROVIDE CAP WITH 2" OUTLET TO RELIEVE PRESSURE, AND 2" GATE VALVE (PER SPECIFICATIONS) TO CAP LINES UNDER POSITIVE WATER PRESSURE. VALVES SHALL BE PAID AS 2" GATE VALVE WITHOUT BOX FOR CUT AND CAP. WATER ABANDONMENT LUMP SUM PRICES SHALL BE COMPENSATION FOR EXCAVATION, THRUST BLOCK, MECHANICAL RESTRAINTS, UNSCREWING EXISTING WATERLINE, BANDING, BACKFILL, SITE RESTORATION AND ANY OTHER LABOR AND MATERIALS REQUIRED TO ABANDON WATERLINES AND INFRASTRUCTURE AT EACH PROJECT SITE.

TYPICAL CUT AND CAP DETAIL/ THRUST BLOCKS FOR CAPS.



- NOTES:
1. FITTING JOINTS SHALL NOT BE POURED IN CONCRETE OR HAVE CONCRETE SPILLED ON THE BOLTS OR NUTS. THE FITTING SHALL BE WRAPPED IN A LAYER OF POLYETHYLENE PLASTIC PRIOR TO POURING THE THRUST BLOCK.
 2. ROD AND EYE BOLT DIAMETER SHALL BE A MINIMUM OF 3/4" AND SHALL MATCH THE SIZE OF THE BOLT PROVIDED WITH THE FITTING.
 3. CONTRACTOR SHALL REPLACE FITTING BOLTS WITH THREADED ROD FOR 1/2 OF THE BOLTS SUPPLIED WITH EACH FITTING. RODS SHALL BE EQUALLY SPACED.

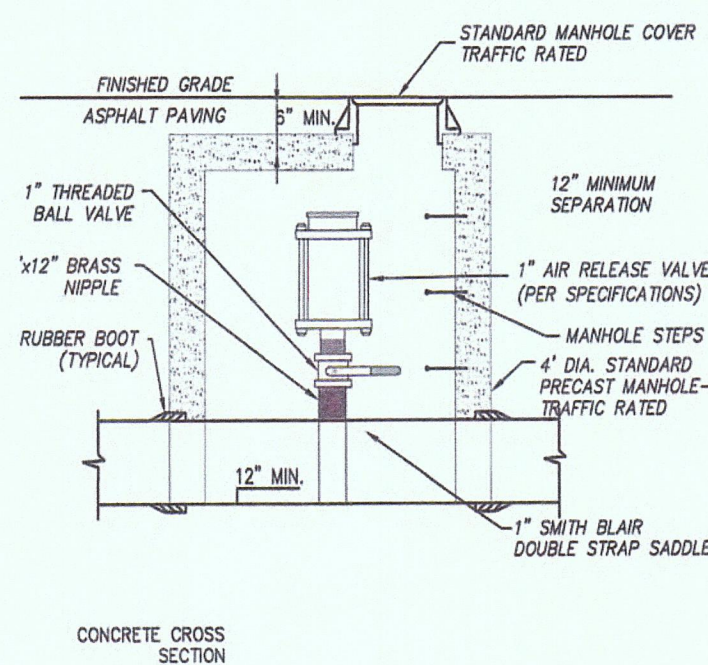
THRUST BLOCK DIMENSION "A"
NOT TO SCALE

TYPICAL THRUST BLOCKS FOR TEES

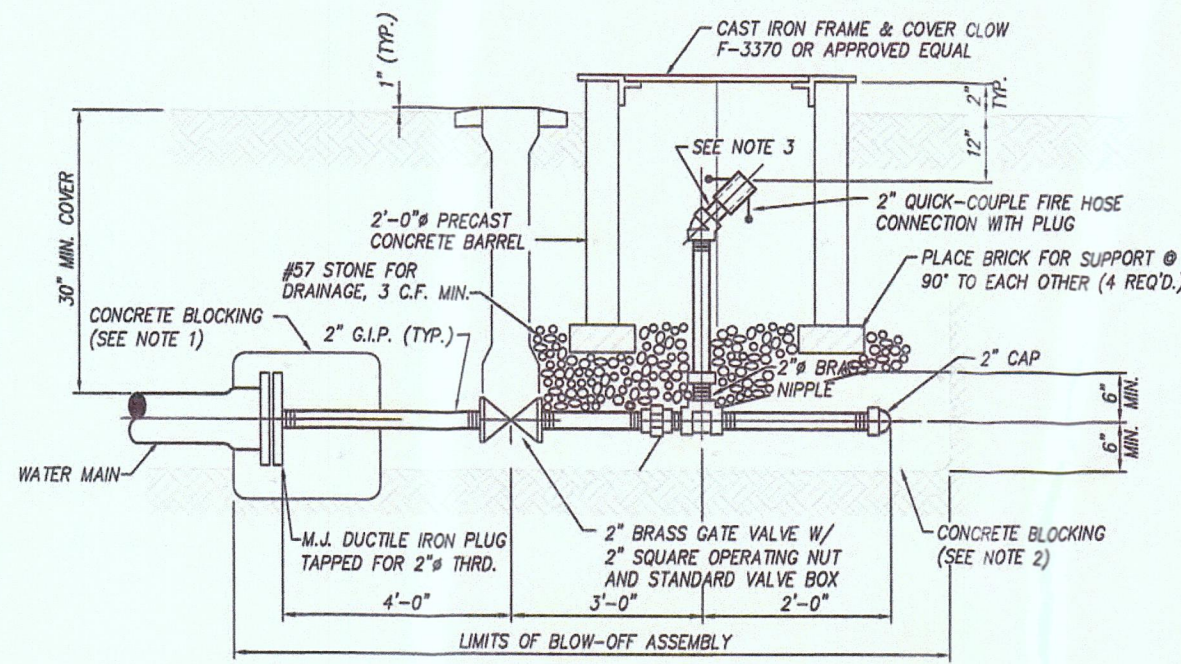
Fitting/Valve Type	Pipe Size (inches)			
	2	4	6	8
Plug	40	40	60	80
Inline Valve	40	40	60	80
Tee	40	40	60	80
90° Bend	20	40	40	40
45° Bend	20	20	20	20
225° Bend	20	20	20	20
1125° Bend	20	20	20	20
5° Bend	20	20	20	20

- NOTES:
1. CONTRACTOR SHALL USE RESTRAINED JOINT FITTINGS FOR EVERY FITTING INSTALLED ON THE PROJECT. REACTION BLOCKING SHALL ONLY BE USED AT TIE-IN CONNECTIONS TO SECURE NEW PIPE TO EXISTING PIPE.
 2. WHERE RESTRAINED JOINT FITTINGS ARE REQUIRED BY THE PLANS OR SPECIFICATIONS, RESTRAINED JOINT FITTINGS MUST BE INSTALLED AS REQUIRED BY THE TABLE AND NOTES FOUND WITHIN THE PLANS AND SPECIFICATIONS.
 3. MECHANICAL RESTRAINED JOINT FITTINGS SHALL BE "MEGALUG" AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL AND SHALL BE INSTALLED ON EVERY FITTING.
 4. CONTRACTOR SHALL INSTALL BELL RESTRAINTS FOR PUSH-ON JOINT PIPE A MINIMUM DISTANCE FROM EACH VALVE OR FITTING AS REQUIRED IN THE ABOVE TABLE.

THRUST RESTRAINT JOINT TABLE

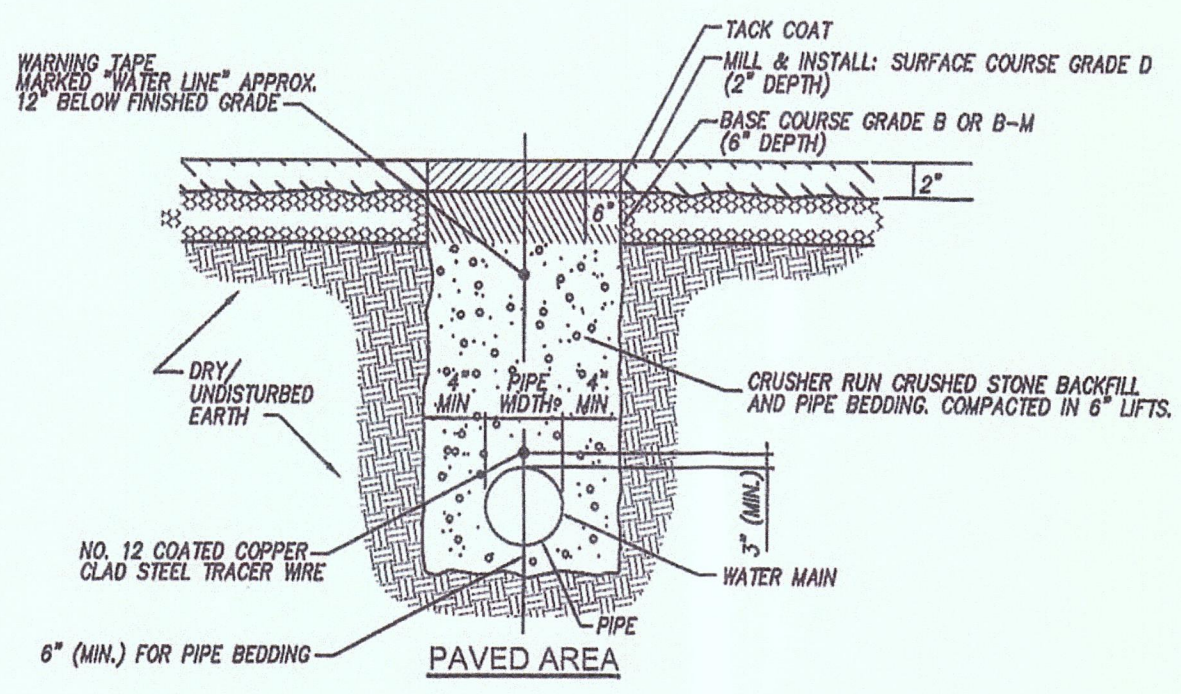


STANDARD AIR RELEASE VALVE

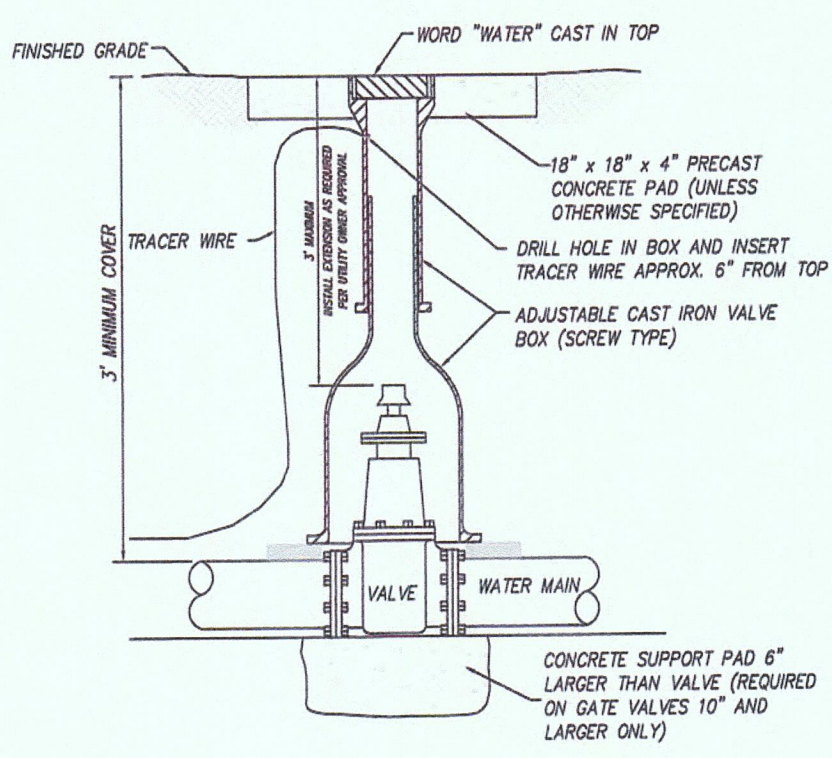


- NOTES:
1. CONCRETE BLOCKING AT WATER MAIN PLUG FOR BLOW-OFF PIPE CONNECTION SHALL BE A MINIMUM OF 1'-6" THICK AND BE CUT A MINIMUM OF 1'-0" INTO UNDISTURBED SOIL ON EACH SIDE AND BELOW THE PIPE TRENCH.
 2. CONCRETE BLOCKING BELOW "TEE" AND BEHIND PIPE CAP SHALL BE THE WIDTH OF THE TRENCH ON 1'-0" WHICH EVER IS GREATER, AND SHALL BEAR AGAINST UNDISTURBED SOIL.
 3. ALL THREADED PIPE SHALL BE JOINTED USING HEAVY DUTY TYPON JOINT TAPE. ALL EXPOSED THREADS AND ALL GALVANIZED IRON PIPE SHALL BE CLEANED OF ALL GREASE, OIL, DEBRIS & OTHER SOLIDS AND SHALL RECEIVE A HEAVY COAT OF COAL-TAR EPOXY COATING PRIOR TO BACKFILLING.

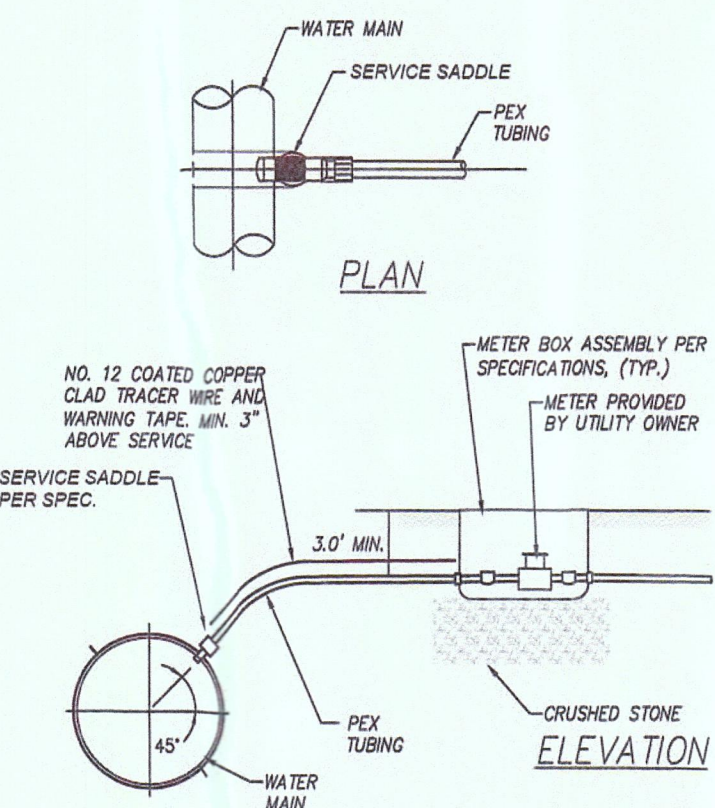
TYPICAL BLOW-OFF ASSEMBLY
N.T.S.



TYPICAL BACKFILL & BEDDING METHOD



TYPICAL VERTICAL GATE VALVE ASSEMBLY
N.T.S.



WATER SERVICE DETAIL
N.T.S.

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