- 1. ALL WORK TO BE INSPECTED BY M.S.U.D. AFTER WORK IS COMPLETE AND BEFORE BACKFILLING. TAPS WILL BE MADE WITHIN TWO WEEKS, WEATHER PERMITTING.
- 2. ALL WATER METERS SHALL BE PLACED OUTSIDE OF ANY PAVED AREA SUCH AS DRIVEWAYS, ROADS, ETC.

  METER BOX NEEDS TO BE 1" ABOVE FINISHED GRADE. PLACE METER IN GREEN SPACE.
- 3. CONNECTIONS:
  ALL COPPER CONNECTIONS AND FITTINGS WILL BE
  COMPRESSION. USE TEFLON TAPE OR JOINT
  COMPOUND ON ALL THREADED CONNECTIONS.
- 4. WASHERS WILL BE FIBER.
- COPPER FROM MAIN TO METER SHALL BE ONE CONTINUOUS PIECE OF K COPPER.
- 6. ALL BOLTS SHALL BE STAINLESS STEEL.

- 6 1) 3/4" CURB STOP

  MUELLER: B-25163-N 3/4"

  FORD: FB41-233W-Q-NL 3/4"
  - (2)  $^{3}/_{4}$ " x  $^{2}/_{2}$ " BRASS METER COUPLING (2)
  - (3) 5/8" x 3/4" METER NEPTUNE RADIO READ WITH ANTENNA.
  - (4) 3/4" BRASS COUPLING (OUTLET)
  - (5) C.I. METER BOX FRAME AND COVER WITH PRECUT HOLE AND CAP JOHN BOUCHARD #8110 NASHVILLE STANDARD OR APPROVED EQUAL WITH HOLE PRECUT INTO BOX AND PLASTIC CAP ON IT. ( SHALL NOT BE IMPRINTED WITH THE NAME "METRO")
  - 6 3/4" METER BOX, ONE PIECE PRE-CAST CONCRETE.

6 7 3/4" CORPORATION STOP MUELLER: H-15030-N 3/4" FORD: F600-3-LN-NL 3/4"

FORD: L04-33-Q-NL 3/4" 90° BEND

SERVICE MATERIAL (SHEPARD HOOK)

3/4" 'K' TYPE SOFT COPPER TUBING

(TAPPING SADDLE) C-900 MAIN CONNECTIONS ONLY. SMITH BLAIR #313 DOUBLE STRAP WITH <sup>3</sup>/<sub>4</sub>" 'CC' THREADS. (FOR P.V.C. ONLY)

△ (10) ALL BACKFILL SHALL BE #57 STONE.

# MADISON SUBURBAN UTILITY DISTRICT

5/8" - 3/4" METER INSTALLATION

# JVEZBWSC

Turner Professional Building 5100 Linbar Drive, Suite 106 Nashville, Tennessee 37211

SCALE: N.T.S.

SHEET NO.

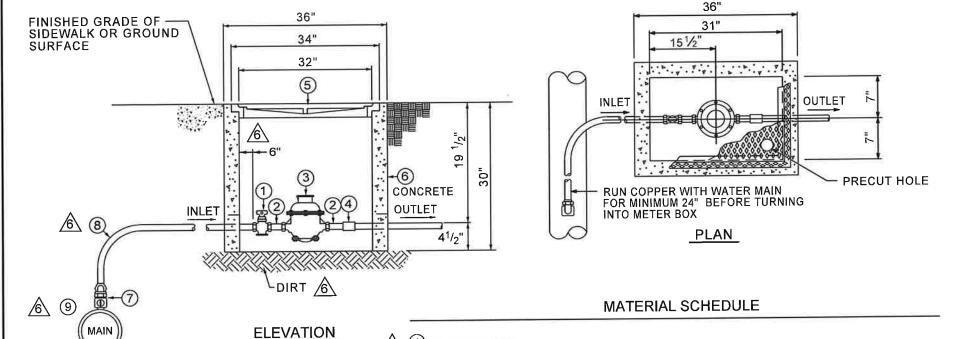
DATE: 12/20/02

1

REVISED: 9/1/21 PER M.S.U.D.



9



1. ALL WORK TO BE INSPECTED BY M.S.U.D. AFTER WORK IS COMPLETE AND BEFORE BACKFILLING. TAPS WILL BE MADE WITHIN TWO WEEKS, WEATHER PERMITTING.

2. ALL WATER METERS SHALL BE PLACED OUTSIDE OF ANY PAVED AREA SUCH AS DRIVEWAYS, ROADS, ETC. METER BOX NEEDS TO BE 1" ABOVE FINISHED GRADE. PLACE METER IN GREEN SPACE.

- 3. CONNECTIONS: ALL COPPER CONNECTIONS AND FITTINGS WILL BE COMPRESSION, USE TEFLON TAPE OR JOINT COMPOUND ON ALL THREADED CONNECTIONS.
- 4. WASHERS WILL BE FIBER.
- 5. COPPER FROM MAIN TO METER SHALL BE ONE CONTINUOUS PIECE OF K COPPER.
- 6. ALL BOLTS SHALL BE STAINLESS STEEL.

(1) 1" CURB STOP MUELLER: B-25163-N 1" FORD: FB41-333W-Q-NL 1"

(2) 1"  $\times$  2<sup>1</sup>/<sub>2</sub>" BRASS METER COUPLING (2)

(3) 1" METER NEPTUNE RADIO READ WITH ANTENNA.

1" BRASS COUPLING (OUTLET)

- C.I. METER BOX FRAME AND COVER WITH PRECUT HOLE AND CAP JOHN BOUCHARD #8120 NASHVILLE STANDARD OR APPROVED EQUAL WITH HOLE PRECUT INTO BOX AND PLASTIC CAP ON IT. ( SHALL NOT BE IMPRINTED WITH THE NAME "METRO")
- (6) 1" METER BOX, ONE PIECE PRE-CAST

1' CORPORATION STOP MUELLER: H-15030-N 1" FORD: F600-3-LN-NL 1" FORD: L04-33-Q-NL 1" 90° BEND SERVICE MATERIAL (SHEPARDS HOOK) 1" 'K' TYPE SOFT COPPER TUBING

(9) (TAPPING SADDLE) C-900 MAIN CONNECTIONS ONLY. SMITH BLAIR #317 DOUBLE STRAP WITH 1" 'CC' THREADS. (FOR P.V.C. ONLY)

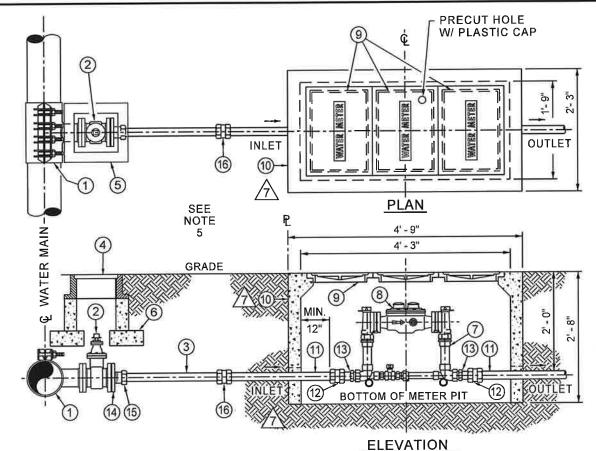
(10) ALL BACKFILL SHALL BE #57 STONE.

MADISON SUBURBAN UTILITY DISTRICT

1" METER INSTALLATION

SCALE: N.T.S.

DATE: 12/20/02



- 1. ALL WORK TO BE INSPECTED BY M.S.U.D. AFTER WORK IS COMPLETE AND BEFORE BACKFILLING.
- 2. ALL WATER METERS SHALL BE PLACED OUTSIDE OF ANY PAVED AREA SUCH AS DRIVEWAYS, ROADS, ETC. METER BOX NEEDS TO BE 1" ABOVE FINISHED GRADE. PLACE METER IN GREEN SPACE.
- 3. CONNECTIONS:
- ALL COPPER CONNECTIONS AND FITTINGS WILL BE COMPRESSION, USE TEFLON TAPE OR JOINT COMPOUND ON ALL THREADED CONNECTIONS.
- 4. WASHERS WILL BE FIBER OR RUBBER
- 5. THERE SHALL BE A MINIMUM DISTANCE OF 3'- 0" BETWEEN THE OUTER EDGE OF THE METER BOX AND ANY OTHER UTILITIES, OR ABOVE-GROUND OR BELOW-GROUND STRUCTURES.

- CONTACT M.S.U.D. FOR INFORMATION ON ITEM 8 IN THE MATERIAL SCHEDULE ABOVE. (2" NEPTUNE METER)
- 7. COPPER LINE SHALL BE ONE PIECE FROM VALVE TO FIRST COUPLING AND FROM COUPLING TO COPPER SETTER.
- 8. CROSS STREET WILL ADD 2" GATE VALVE ON M.S.U.D. SIDE OF BOX.

### MATERIAL SCHEDULE

- TAPPING SLEEVE PIPE SIZE BY 4" STAINLESS STEEL WRAP AROUND SLEEVE. (fordmeterbox.com)
- 4" GATE VALVE FLG. x M.J. ( TO BE BOLTED TO TAPPING SLEEVE) OPEN LEFT, RESILENT WEDGE, 2" SQUARE OPERATIONG NUT.
- 2" 'K' TYPE COPPPER
- C.I. VALVE BOX FRAME AND COVER (1) JOHN **BOUCHARD #8006 NASHVILLE STANDARD OR** APPROVED EQUAL
- (5) VALVE BOX, PRE-CAST CONCRETE (1)
- 12"x 12"x 4" CONCRETE VALVE BOX FOOTING (4)
- 2" COPPER SETTER FORD VV77-12B-11-77 WITH BY-PASS, FEMALE IRON PIPE INLET AND **OUTLET SERVICE CONNECTIONS ANGLE METER** VALVES INLET AND OUTLET 12" HEIGHT.
- 2" NEPTUNE RADIO READ WITH ANTENNA. ( CUSTOMER SHALL PICK UP FROM M.S.U.D.). CUSTOMER IS RESPONSIBLE FOR METER DELIVERY
- (9) C.I. METER BOX FRAME AND COVER (3) ONE (1) WITH PRECUT HOLE. JOHN BOUCHARD #8110 NASHVILLE STANDARD OR APPROVED EQUAL (CANNOT SAY "METRO").
- (10) 2" METER BOX ( NO BASE ), PRE-CAST CONCRETE JARRET CONCRETE - 2012 TN12, ASHLAND CITY, TN, 37015- PHONE 615,792,9332
  - (11) 2" X 20" BRASS NIPPLE
  - (12) 2" BRASS UNION
  - CONNECTIONS TO COPPERSETTER: USE SMALL **BRASS NIPPLE**
  - 4" PLUG M.J. WITH 2" THREAD HOLE
  - 2" MALE THREADED BY 2" COMPRESSION FITTING (15)
  - 2" FEMALE X FEMALE THREADED COUPLING
  - ALL BACKFILL SHALL BE #57 STONE.



2" METER INSTALLATION

3414 Old Franklin Road Antioch, Tennessee 37013

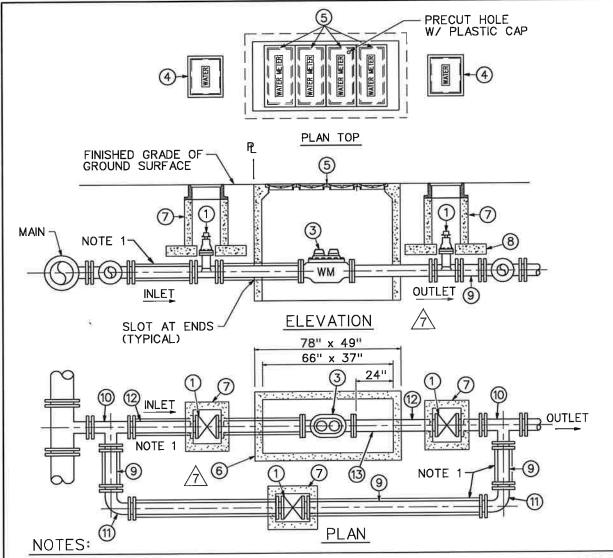
SCALE: N.T.S.

SHEET NO.

DATE: 12/20/02

REVISED: 5/13/24 PER M.S.U.D.

2" TAP & METER SAME SIDE AS MAIN



- 4" GATE VALVE (4) OPEN LEFT, RESILIENT WEDGE 2" SQUARE OPERATING NUT
- (2) ITEM WAS DELETED BY M.S.U.D.
- (3) 4" METER NEPTUNE RADIO READ WITH ANTENNA. INDICATING IN CUBIC FEET - DUAL REGISTERS.
- C.I. VALVE BOX FRAME AND COVER (3) JOHN BOUCHARD \*8006 NASHVILLE STANDARD OR APPROVED EQUAL
- (5) C.I. METER BOX FRAME AND COVER (4) ONE (1) COVER WITH PRECUT HOLE. JOHN BOUCHARD #8110 NASHVILLE STANDARD OR APPROVED EQUAL
- /7\ (6) 4" METER BOX (NO BASE ), PRE-CAST CONCRETE
  - (7) VALVE BOX, PRE-CAST CONCRETE (3)
  - (8) 12"x12"x4" CONCRETE VALVE BOX FOOTING (12)
  - (9) PIPE MATERIAL 4" CLASS 52 DUCTILE IRON PIPE
  - (10) 4" x 4" x 4" M.J. TEE (2)
  - (11) 4" 90° M.J. BEND (2)
  - (12) 4" F.E.P.E. DUCTILE IRON PIPE (2)
  - (13) 24" OF UNINTERRUPTED PIPE FOR TESTING
  - (14) ITEM WAS DELETED BY M.S.U.D.

1. JOINT RESTRAINT:

ALL FITTINGS WILL BE RODDED OR MEGALUG FROM MAIN TO METER AND ALONG THE COMPLETE BY-PASS LINE FROM TEE. TO TEE. RODS WILL BE 34" DIAMETER FULLY THREADED STAINLESS STEEL RODS W/ STAINLESS STEEL NUTS.

2. FITTINGS:

ALL FITTINGS INSIDE VAULT WILL BE FLANGED FITTINGS. ALL FITTINGS OUTSIDE VAULT WILL BE MECHANICAL JOINT FITTINGS.

- 3. ALL WORK TO BE INSPECTED BY M.S.U.D. AFTER WORK IS COMPLETE AND BEFORE BACKFILLING.
- 4. CONTRACTOR IS REQUIRED TO INSTALL A PRESSURE REDUCING VALVE (PRV) ON THE WATER USER'S SIDE OF THE METER OUTSIDE THE METER BOX FOR INSTALLATIONS WHICH HAVE A STATIC PRESSURE (NO WATER FLOW) OF 100 POUNDS PER SQUARE INCH (PSI) OR GREATER. THE WATER USER SHALL BE RESPONSIBLE FOR MAINTAINING THE PRV IN A GOOD WORKING CONDITION. M.S.U.D. IS NOT RESPONSIBLE FOR REPLACING ANY PORTION OF THE PRV.
- 5. ALL WATER METERS SHALL BE PLACED OUTSIDE OF ANY PAVED AREA SUCH AS DRIVEWAYS, ROADS, ETC.

MADISON SUBURBAN UTILITY DISTRICT

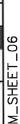
4" METER INSTALLATION

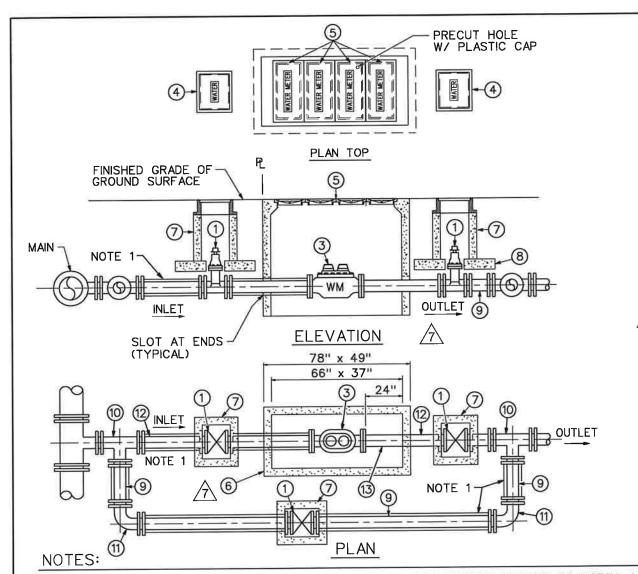
3414 Old Franklin Road Antioch, Tennessee 37013

SCALE: N.T.S. DATE: 12/20/02 SHEET NO.

REVISED: 5/13/24 PER M.S.U.D.







- 1 6" GATE VALVE (4) OPEN LEFT, RESILIENT WEDGE 2" SQUARE OPERATING NUT
- (2) ITEM WAS DELETED BY M.S.U.D.
- (3) 6" METER NEPTUNE RADIO READ WITH ANTENNA. INDICATING IN CUBIC FEET DUAL REGISTERS.
- (4) C.I. VALVE BOX FRAME AND COVER (3)
  JOHN BOUCHARD \*8006 NASHVILLE
  STANDARD OR APPROVED EQUAL
- (5) C.I. METER BOX FRAME AND COVER (4)
  ONE (1) COVER WITH PRECUT HOLE.
  JOHN BOUCHARD \*8110 NASHVILLE
  STANDARD OR APPROVED EQUAL
- ♠ 6 4" METER BOX ( NO BASE ), PRE-CAST CONCRETE
  - 7 VALVE BOX, PRE-CAST CONCRETE (3)
  - (8) 12"x12"x4" CONCRETE VALVE BOX FOOTING (12)
  - 9 PIPE MATERIAL 6" CLASS 52 DUCTILE IRON PIPE
  - (10) 6" x 6" x 6" M.J. TEE (2)
  - (11) 6" 90° M.J. BEND (2)
  - (12) 6" F.E.P.E. DUCTILE IRON PIPE (2)
  - (3) 24" OF UNINTERRUPTED PIPE FOR TESTING
  - (14) ITEM WAS DELETED BY M.S.U.D.

1. JOINT RESTRAINT:

ALL FITTINGS WILL BE RODDED OR MEGALUG FROM MAIN TO METER AND ALONG THE COMPLETE BY-PASS LINE FROM TEE. TO TEE. RODS WILL BE 3/4" DIAMETER FULLY THREADED STAINLESS STEEL RODS W/ STAINLESS STEEL NUTS.

- 2. FITTINGS:
  - ALL FITTINGS INSIDE VAULT WILL BE FLANGED FITTINGS. ALL FITTINGS OUTSIDE VAULT WILL BE MECHANICAL JOINT FITTINGS.
- ALL WORK TO BE INSPECTED BY M.S.U.D. AFTER WORK IS COMPLETE AND BEFORE BACKFILLING.
- 4. CONTRACTOR IS REQUIRED TO INSTALL A PRESSURE REDUCING VALVE (PRV) ON THE WATER USER'S SIDE OF THE METER OUTSIDE THE METER BOX FOR INSTALLATIONS WHICH HAVE A STATIC PRESSURE (NO WATER FLOW) OF 100 POUNDS PER SQUARE INCH (PSI) OR GREATER. THE WATER USER SHALL BE RESPONSIBLE FOR MAINTAINING THE PRV IN A GOOD WORKING CONDITION. M.S.U.D. IS NOT RESPONSIBLE FOR REPLACING ANY PORTION OF THE PRV.
- 5. ALL WATER METERS SHALL BE PLACED OUTSIDE OF ANY PAVED AREA SUCH AS DRIVEWAYS, ROADS, ETC.

MADISON SUBURBAN UTILITY DISTRICT

6" METER INSTALLATION

# JWE//BWSC

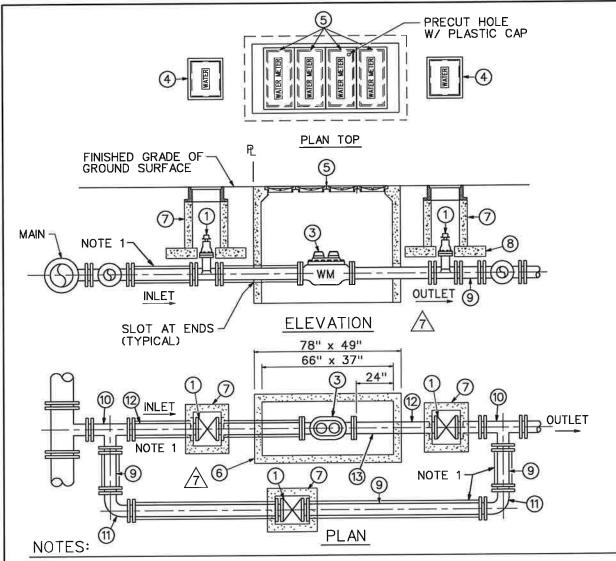
3414 Old Franklin Road Antioch, Tennessee 37013

SCALE: N.T.S.
DATE: 12/20/02

SHEET NO.

(

REVISED: 5/13/24 PER M.S.U.D.



- 1 8" GATE VALVE (4)
  OPEN LEFT, RESILIENT WEDGE
  2" SQUARE OPERATING NUT
- (2) ITEM WAS DELETED BY M.S.U.D.
- 3 8" METER NEPTUNE RADIO READ WITH ANTENNA. INDICATING IN CUBIC FEET DUAL REGISTERS.
- (4) C.I. VALVE BOX FRAME AND COVER (3) JOHN BOUCHARD \*8006 NASHVILLE STANDARD OR APPROVED EQUAL
- (5) C.I. METER BOX FRAME AND COVER (4)
  ONE (1) COVER WITH PRECUT HOLE.
  JOHN BOUCHARD \*8110 NASHVILLE
  STANDARD OR APPROVED EQUAL
- (6) 4" METER BOX ( NO BASE ), PRE-CAST CONCRETE
  - 7) VALVE BOX, PRE-CAST CONCRETE (3)
  - (8) 12"x12"x4" CONCRETE VALVE BOX FOOTING (12)
  - 9 PIPE MATERIAL 8" CLASS 52 DUCTILE IRON PIPE
  - (10) 8" x 8" x 8" M.J. TEE (2)
  - (11) 8" 90° M.J. BEND (2)
  - (12) 8" F.E.P.E. DUCTILE IRON PIPE (2)
  - (13) 24" OF UNINTERRUPTED PIPE FOR TESTING
  - (14) ITEM WAS DELETED BY M.S.U.D.

1. JOINT RESTRAINT:

ALL FITTINGS WILL BE RODDED OR MEGALUG FROM MAIN TO METER AND ALONG THE COMPLETE BY-PASS LINE FROM TEE. TO TEE. RODS WILL BE 3/4" DIAMETER FULLY THREADED STAINLESS STEEL RODS W/ STAINLESS STEEL NUTS.

2. FITTINGS:

ALL FITTINGS INSIDE VAULT WILL BE FLANGED FITTINGS. ALL FITTINGS OUTSIDE VAULT WILL BE MECHANICAL JOINT FITTINGS.

- ALL WORK TO BE INSPECTED BY M.S.U.D. AFTER WORK IS COMPLETE AND BEFORE BACKFILLING.
- 4. CONTRACTOR IS REQUIRED TO INSTALL A PRESSURE REDUCING VALVE (PRV) ON THE WATER USER'S SIDE OF THE METER OUTSIDE THE METER BOX FOR INSTALLATIONS WHICH HAVE A STATIC PRESSURE (NO WATER FLOW) OF 100 POUNDS PER SQUARE INCH (PSI) OR GREATER. THE WATER USER SHALL BE RESPONSIBLE FOR MAINTAINING THE PRV IN A GOOD WORKING CONDITION. M.S.U.D. IS NOT RESPONSIBLE FOR REPLACING ANY PORTION OF THE PRV.
- 5. ALL WATER METERS SHALL BE PLACED OUTSIDE OF ANY PAVED AREA SUCH AS DRIVEWAYS, ROADS, ETC.

MADISON SUBURBAN UTILITY DISTRICT

8" METER INSTALLATION

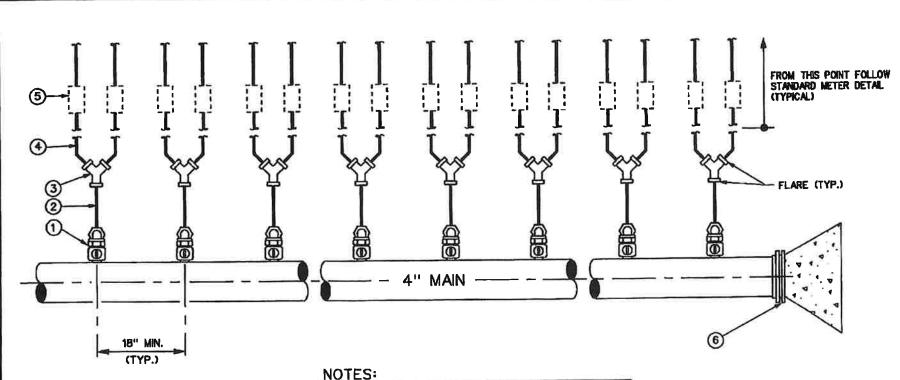
# JVE/BWSC

3414 Old Franklin Road Antioch, Tennessee 37013

SCALE: N.T.S.

SHEET NO.

DATE: 12/20/02



- MULTI 1" CORPORATION STOPS. McDONALD 4701 WITH 4776S 90° BEND MUELLER H-15020
- (2) SERVICE MATERIAL I" 'K' TYPE SOFT COPPER TUBING
- (3) 8 1" x 34" WYES (FLARE)
- 兆" 'K' TYPE SOFT COPPER TUBING
- (5) MULTI-¾" METERS
- (6) 4" CAP W/KICKER

- 1. JOINT RESTRAINT: ALL FITTINGS WILL BE RODDED OR MEGALUG FROM MAIN TO METER. RODS WILL BE 34" DIAMETER FULLY THREADED STAINLESS STEEL RODS.
- ALL FITTINGS INSIDE VAULT WILL BE FLANGED FITTINGS. ALL FITTINGS OUTSIDE VAULT WILL BE MECHANICAL JOINT FITTINGS.
- 3. ALL WORK TO BE INSPECTED BY M.S.U.D. AFTER WORK IS COMPLETE AND BEFORE BACKFILLING.
- 4. CONTRACTOR IS REQUIRED TO INSTALL A PRESSURE REDUCING VALVE (PRV) ON THE WATER USER'S SIDE OF THE METER OUTSIDE THE METER BOX FOR INSTALLATIONS WHICH HAVE A STATIC PRESSURE (NO WATER FLOW) OF 100 POUNDS PER SQUARE INCH (PSI) OR GREATER. THE WATER USER SHALL BE RESPONSIBLE FOR MAINTAINING THE PRV IN A GOOD WORKING CONDITION. M.S.U.D. IS NOT RESPONSIBLE FOR REPLACING ANY PORTION OF THE PRV.
- 5. ALL WATER METERS SHALL BE PLACED OUTSIDE OF ANY PAVED AREA SUCH AS DRIVEWAYS, ROADS, ETC.

### MADISON SUBURBAN UTILITY DISTRICT

MANIFOLD SYSTEM FOR 3/4" WATER SERVICE

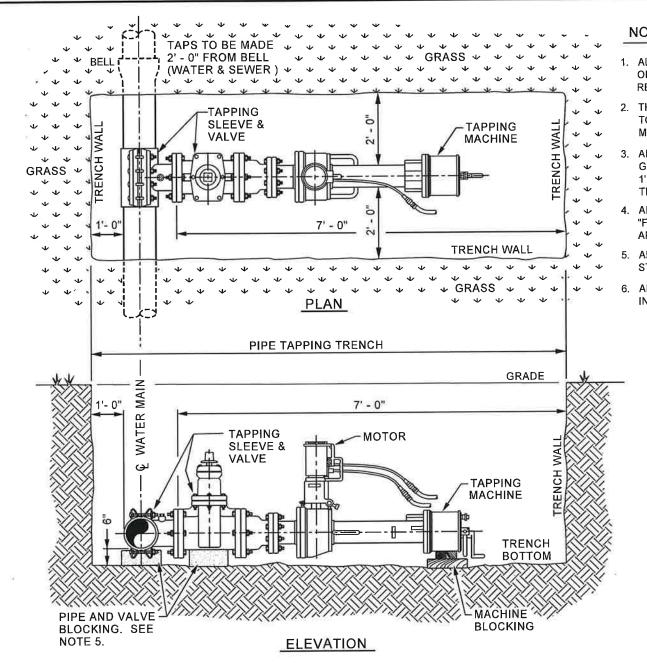
Turner Professional Building 5100 Linbar Drive, Suite 106 Nashvillo, Tennessee 37211

SCALE: N.T.S. DATE: 08/05/02 SHEET NO.

**REVISED: 02/03/03** 

SHEET





- 1. ALL TRENCHES 5' 0" DEEP OR MORE SHALL HAVE SHORING OR TRENCH BOX TO FOLLOW ALL O.S.H.A. AND T.O.S.H.A. REGULATIONS.
- 2. THE CONTRACTOR SHALL PROVIDE LADDER FOR ACCESS TO THE EXCAVATED PIPE AND GRAVEL IF THE TRENCH IS MUDDY WHILE THE M.S.U.D. CREW IS ON SITE.
- 3. ALL TRENCHES FOR TAPPING SHALL BE 4' 0" WIDE OR GREATER. 4' - 0 " OF PIPE IS TO BE EXPOSED WITH 1' - 0" CLEARANCE BEHIND THE PIPE AND 6" UNDER THE PIPE.
- 4. ALL TAPPING SLEEVES SHALL BE FORD STAINLESS STEEL "FAST" ( DIAMETER ) - ( TAP SIZE ) M.J. OR EQUIVALENT APPROVED BY M.S.U.D.
- 5. ALL BLOCKS UNDER THE TAPPING VALVE SHALL BE STANDARD CONCRETE FOOTING BLOCKS.
- 6. ALL WATER SERVICE LINES AND VALVE BOXES SHALL BE IN GRASSY AREA ( NOT IN DRIVEWAY OR SIDEWALK ).





## MADISON SUBURBAN UTILITY DISTRICT

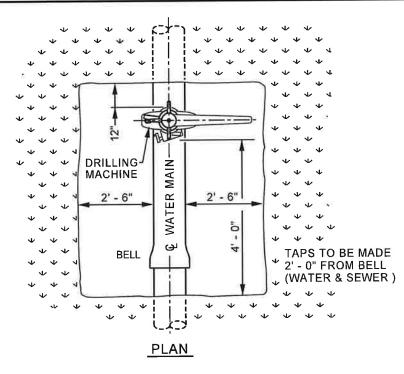
TAPPING MACHINE TRENCH DIMENSIONS

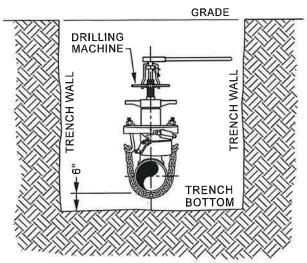
Turner Professional Building 5100 Linbar Drive, Suite 106 Nashville, Tennessee 37211

SCALE: N.T.S.

SHEET NO.

DATE: 4/14/22





# ELEVATION

### NOTES:

- ALL TRENCHES 5' 0" DEEP OR GREATER SHALL HAVE SHORING OR TRENCH BOXES SET TO FOLLOW ALL O.S.H.A. AND T.O.S.H.A. REGULATIONS.
- 2. ALL TRENCHES FOR TAPPING SHALL BE 4' 0" WIDE OR GREATER.
- 3. THE PLUMBER / CONTRACTOR SHALL PROVIDE APPROPRIATE SIZED SUMP PUMPS FOR EXCAVATED TRENCH DURING M.S.U.D. TAPPING PROCESS IF WATER IS PRESENT IN THE TRENCH.
- 4. THE PLUMBER / CONTRACTOR SHALL PROVIDE LADDER FOR ACCESS TO THE EXCAVATED PIPE AND GRAVEL IF THE TRENCH IS MUDDY WHILE THE M.S.U.D. CREW IS ON SITE.
- ALL TAPS REQUIRE MINIMUM 6 INCH CLEARANCE UNDER MAIN FOR 4 FEET OF THE EXPOSED LINE.
- ALL PUBLICLY OWNED WATER SERVICE LINES AND METER BOXES SHALL BE PLACED IN GRASSY AREA ( NOT UNDER DRIVEWAYS ).



## MADISON SUBURBAN UTILITY DISTRICT

B101 DRILLING MACHINE TRENCH DIMENSIONS

Turner Professional Building 5100 Linbar Drive, Suite 106 Nashville, Tennessee 37211

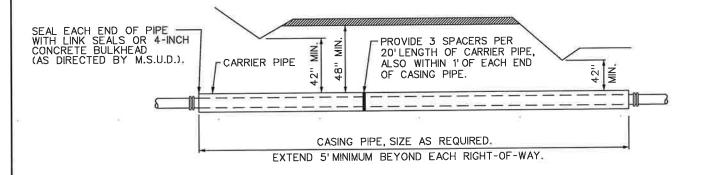
SCALE: N.T.S.

SHEET NO.

DATE: 5/3/22

SPECIFICATIONS FOR PLACING PIPE WITHIN THE RIGHT-OF-WAY OR CROSSING STATE AND / OR U.S. HIGHWAYS.

- 1. ALL TRENCH EXCAVATION WITH-IN THE RIGHT-OF-WAY AND NOT UNDER PAVEMENT SHALL BE BACKFILLED BY TAMPING IN 6" LAYERS. ALL SURPLUS MATERIAL SHALL BE REMOVED FROM THE RIGHT-OF-WAY AND THE EXCAVATION FINISHED FLUSH WITH THE SURROUNDING GROUND.
- 2. HIGHWAY CROSSING UNDER PAVED ROADS AND PAVED CROSSROADS WITHIN THE STATE AND U.S. HIGHWAY RIGHT-OF-WAY SHALL BE ENCASED AND PLACED BY SLOPE TO TOE BORING OR JACKING. BORING OR JACKING SHALL EXTEND FROM THE TOE OF SHOULDER SLOPE TO TOE OF SHOULDER SLOPE. ON LINES CROSSING THE ENTIRE WIDTH OF RIGHT-OF-WAY, THE LENGTH OF CASING SHALL BE DETERMINED BY THE DIVISION ENGINEER, TENNESSEE HIGHWAY DEPARTMENT, ALL BORING AND JACKING SHALL BE DONE AS SHOWN ON THIS DRAWING.
- 3. WHERE IT IS EVIDENT THAT BORING IS IMPRACTICAL DUE TO ROCK OR OTHER OBSTRUCTION THE DIVISION ENGINEER MAY GRANT PERMISSION TO OPEN CUT THE PAVING. WHERE OPEN CUT IS ALLOWED THE FOLLOWING CONDITIONS WILL BE MET:
  - (A) ALL BACKFILL MATERIAL WILL BE STABILIZED WITH PORTLAND CEMENT AND MIXED IN A CONCRETE MIXER. IF SOIL IS USED, IT SHALL BE A SANDY MATERIAL FREE FROM LUMPS OR CLODS, AND SHALL BE STABILIZED WITH TWO (2) SACKS OF CEMENT PER CUBIC YARD OF SOIL. IF SAND AND GRAVEL ARE USED, PIT RUN MATERIAL MAY BE USED AND IT SHALL BE STABILIZED WITH ONE (1) SACK OF CEMENT PER CUBIC YARD. BACKFILL MUST BE TAMPED IN A MOIST CONDITION.
  - (B) ONE HALF OF THE TRAVELED PORTION OF PAVING MUST BE OPEN TO TRAFFIC AT ALL TIMES.
  - (C) OPEN CUTTING OF PAVEMENT SHALL BE DONE IN THE MANNER AND SEQUENCE AS PER TYPICAL HIGHWAY CROSSING OPEN CUT DETAIL.
- 4. CASING PIPE SHALL BE SPIRAL WELDED STEEL PIPE APPLICABLE AND SUITABLE TO METHOD OF INSTALLATION EMPLOYED, WITH A MINIMUM STRENGTH OF 35,000 PSI.
- 5. WHERE SODDING IS DISTURBED BY EXCAVATION OR BACKFILL OPERATION, SUCH AREAS SHALL BE RESEDED IN ACCORDANCE WITH SECTION 801 OF THE TENNESSEE DEPT. OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD CONSTRUCTION (LATEST EDITION). A SEPARATE PAYMENT SHALL BE MADE FOR SEEDING.
- 6. CARRIER PIPE FOR ALL LINES SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINT FITTINGS AS SPECIFIED ON THE PLANS.
- 7. ALL CARRIER PIPE THRU CASING PIPE SHALL BE DUCTILE IRON PIPE WITH RESTRAINED ( PER M.S.U.D. ) MECHANICAL JOINTS.



PROFILE BORING OR JACKING

N.T.S.

CARRIER	STEEL CASING PIPE	
PIPE	DIA. (INCHES)	WALL THICKNESS
16"	30"	.4375"
14"&12"	24"	.375"
10''	20"	.3125"
8"	16"	.250"
6"	12"	.250"
4"	8"	.250"
21/4" C.I.	8"	.250"
2"	3"	.216"
11/2"	21/2"	.203"
11/4"	21/2"	
1"	2"	
3/4"	11/4"	

MADISON SUBURBAN UTILITY DISTRICT

PROFILE BORING OR JACKING

JVE/BWSC

Turner Professional Building 5100 Linbar Drive, Suite 106 Nashville, Tennessee 37211

SCALE: NONE

SHEET NO.

DATE: 03/30/04