

CONTRACTOR SHALL PREVENT CONCRETE FROM COVERING THE MECHANICAL JOINTS AND MEGA-LUGS BY WRAPPING WITH POLYETHYLENE PLASTIC.

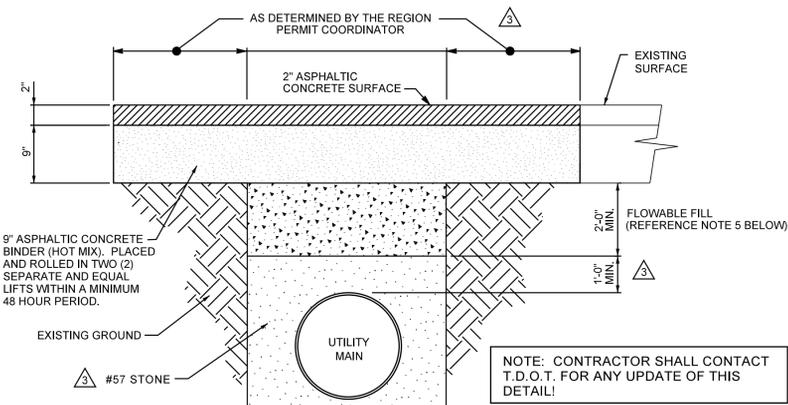
SEE NOTE 3

NOTE:

1. SEE M.S.U.D. DETAIL FOR VALVE SPACING. MEGA-LUG ALL VALVES AND FITTINGS.
2. NEW WATER MAIN CAN EITHER BE CUT INTO EXISTING MAIN WITH NEW TEE (DRY TAP) OR CONNECTED USING TAPPING SLEEVE AND VALVE ASSEMBLY (WET TAP) PER M.S.U.D. DIRECTION.
3. CONCRETE KICKER SHALL BE THE EQUIVALENT OF 3 TIMES THE MASS OF KICKER FOR 90° ELBOW AND PLACED AGAINST UNDISTURBED SOIL OR ROCK.

### REVERSE TIE-IN

N.T.S.



NOTE: CONTRACTOR SHALL CONTACT T.D.O.T. FOR ANY UPDATE OF THIS DETAIL!

### STREET REPAIR DETAIL FOR PLACING PIPE WITHIN THE RIGHT-OF-WAY OR CROSSING STATE AND /OR U.S. HIGHWAYS.

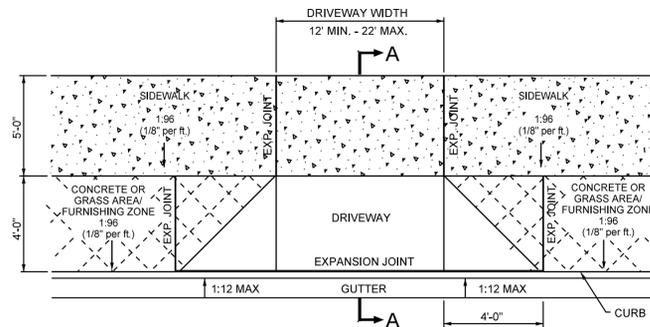
N.T.S.

1. ALL TRENCH EXCAVATION WITHIN 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. 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.
3. 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.
4. CONTRACTOR MUST HAVE ACQUIRED TENNESSEE DEPARTMENT OF TRANSPORTATION PERMIT FOR TRENCH EXCAVATION PRIOR TO OPENING TRENCH.
5. WHEN REQUIRED BY THE PLANS, BACKFILL MATERIAL (FLOWABLE FILL) WILL BE PLACED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. MATERIALS USED IN THE PLACEMENT OF FLOWABLE FILL SHALL MEET THE FOLLOWING T.D.O.T. SPECIFICATION REQUIREMENTS:

MATERIAL	SUBSECTION
PORTLAND CEMENT, TYPE I	901.01
FLY ASH, CLASS C OR CLASS F	AASHTO M 295
WATER	918.01
CHEMICAL ADDITIVES	918.09
AIR ENTRAINING ADMIXTURES	918.09

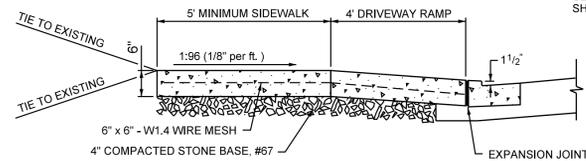
THE FINE AGGREGATE OF THE FLOWABLE FILL SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 903.01-FINE AGGREGATE FOR CONCRETE. FLOWABLE FILL SHALL BE PROPORTIONED AS FOLLOWS:

MATERIAL	PER CUBIC METER (CUBIC YARD)
PORTLAND CEMENT, TYPE I	60 kg (100 lbs)
FLY ASH, CLASS C OR CLASS F	150 kg (MINIMUM) (250 lbs)
FINE AGGREGATE	1660 kg (2800 lbs)
WATER	300 liters (APPROX.) (60 gal.)

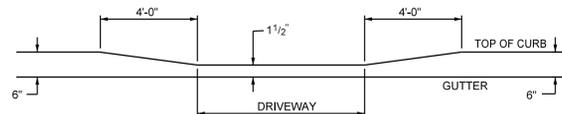


### PLAN VIEW

SEE NOTE 15 ON SHEET MSUDET1



### SECTION A-A

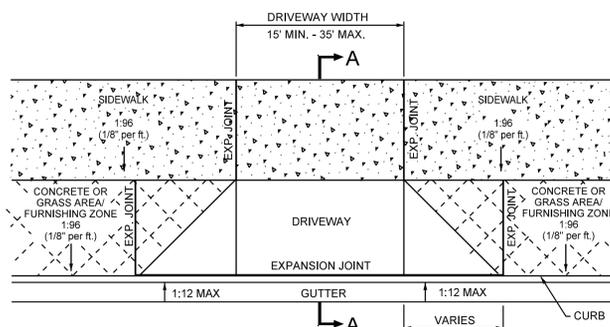


### CURB TAPER FOR DRIVEWAY RAMP

NOTE: CROSS-SLOPE OF SIDEWALK SHALL NOT EXCEED 1:48 (VERTICAL:HORIZONTAL)

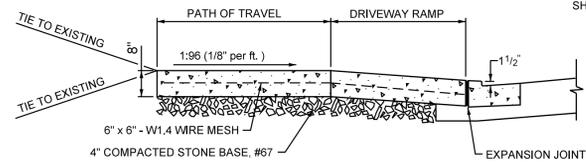
### RESIDENTIAL CONCRETE DRIVEWAY RAMP (ST-313)

NOT TO SCALE

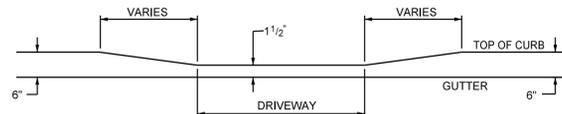


### PLAN VIEW

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### SECTION A-A

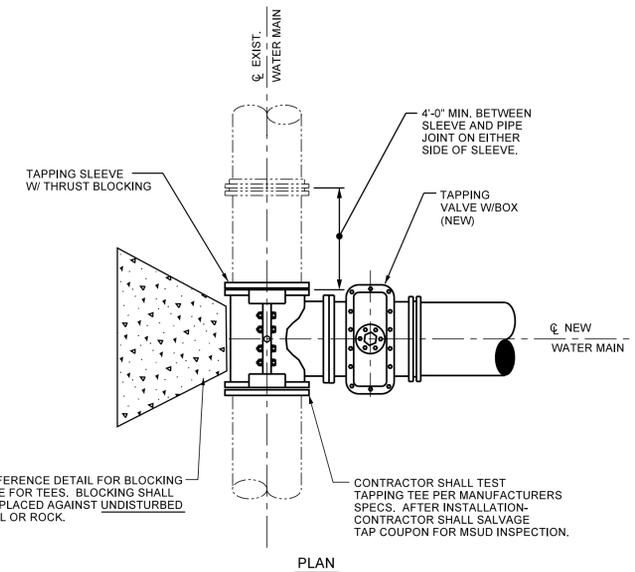


### CURB TAPER FOR DRIVEWAY RAMP

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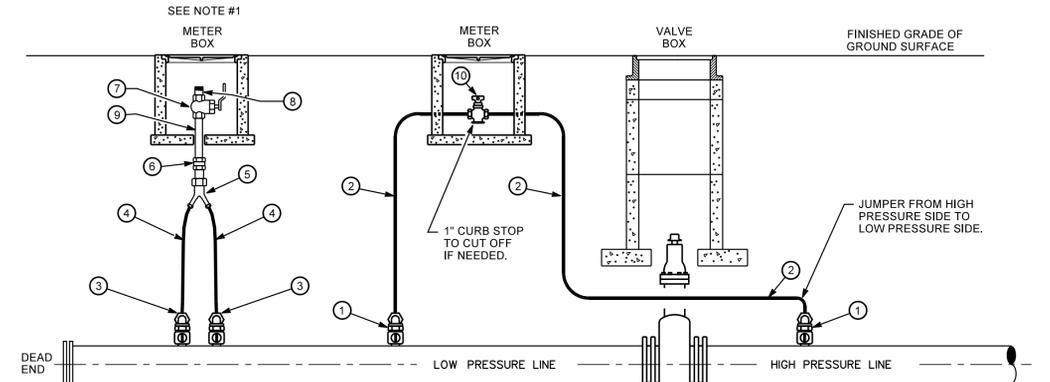
### COMMERCIAL CONCRETE DRIVEWAY RAMP (ST-314)

NOT TO SCALE



### TAPPING SLEEVE & VALVE

N.T.S.



1. 2 - 1" CORPORATION STOPS. McDONALD 4701 WITH 4776S 90° BEND MUELLER H-15020
2. 1" 'K' TYPE SOFT COPPER TUBING JUMPED FROM HIGH PRESSURE SIDE TO LOW PRESSURE SIDE
3. 2 - 1" CORPORATION STOPS. (MINIMUM 16" APART) McDONALD 4701 WITH 4776S 90° BEND MUELLER H-15020

4. SERVICE MATERIAL 1" 'K' TYPE SOFT COPPER TUBING
5. TWO BRANCH HOOK-UP MUELLER H-15341 INLETS: 1" COPPER FLARE OUTLETS: 2" MIP THREAD
6. 2" BRASS THREADED COUPLING, FEMALE x FEMALE.
7. 2" BALL VALVE

8. 2" THREADED NIPPLE FOR CONNECTING FIRE HOSE.
9. 2" BRASS
10. 1" CURB STOP MUELLER CO. H-15175 OR FORD CAT. No. Z21-444 OR McDONALD 4711

NOTES:  
1. BLOW OFF ASSEMBLY MAY BE PLACED ON EITHER THE LOW PRESSURE LINE OR THE HIGH PRESSURE LINE.

### 2" BLOW-OFF WITH 1" JUMPER LINE

N.T.S.

NOT USED — THRU   
 REVISED 09/29/17   
 REVISED 10/29/09 REVISED 05/18/20   
 REVISED 08/17/06 SEE DWG. MSUDET1

MADISON SUBURBAN UTILITY DISTRICT  
MADISON, TENNESSEE

### GENERAL DETAILS

**JVE / BWSC**

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5100 Linbar Drive, Suite 106  
Nashville, Tennessee 37211  
Phone: (615) 781-8725

DRAWN:

CHECKED:

DATE: DECEMBER 2, 2002

DRAWING NO.: MSUDET3