



APPROVED
[Signature]
 The Town of Mount Airy, Maryland

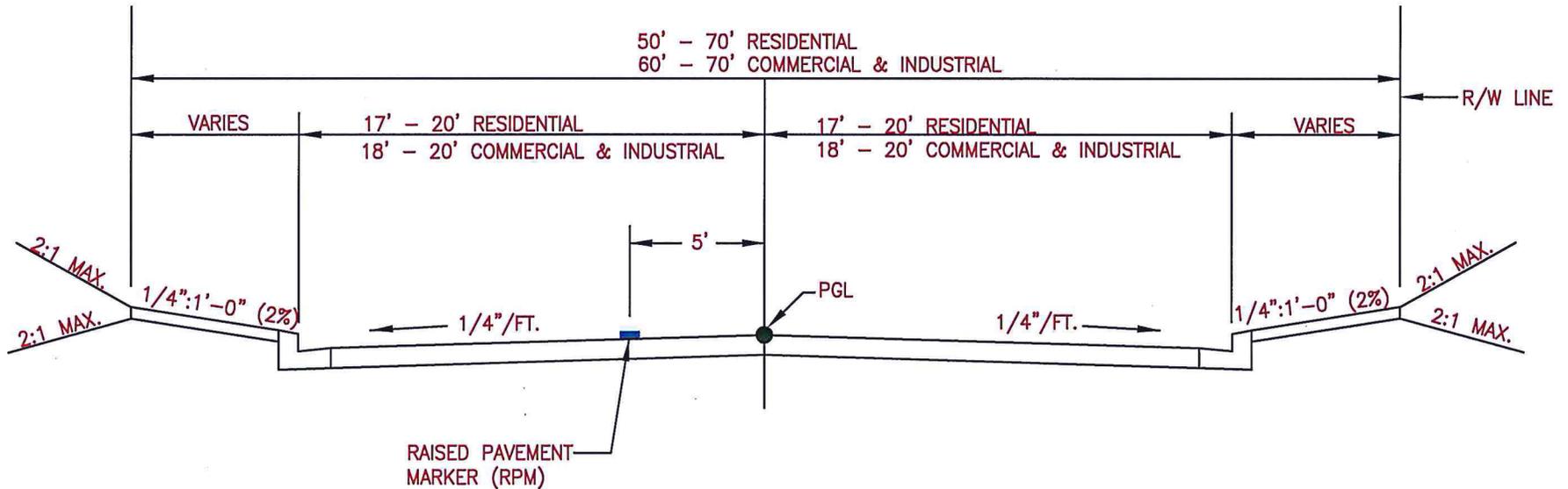
TOWN ROADS
 AND STREETS

By:
 MDH

Date:
 6/30/2011

Standard Detail No.

R-01

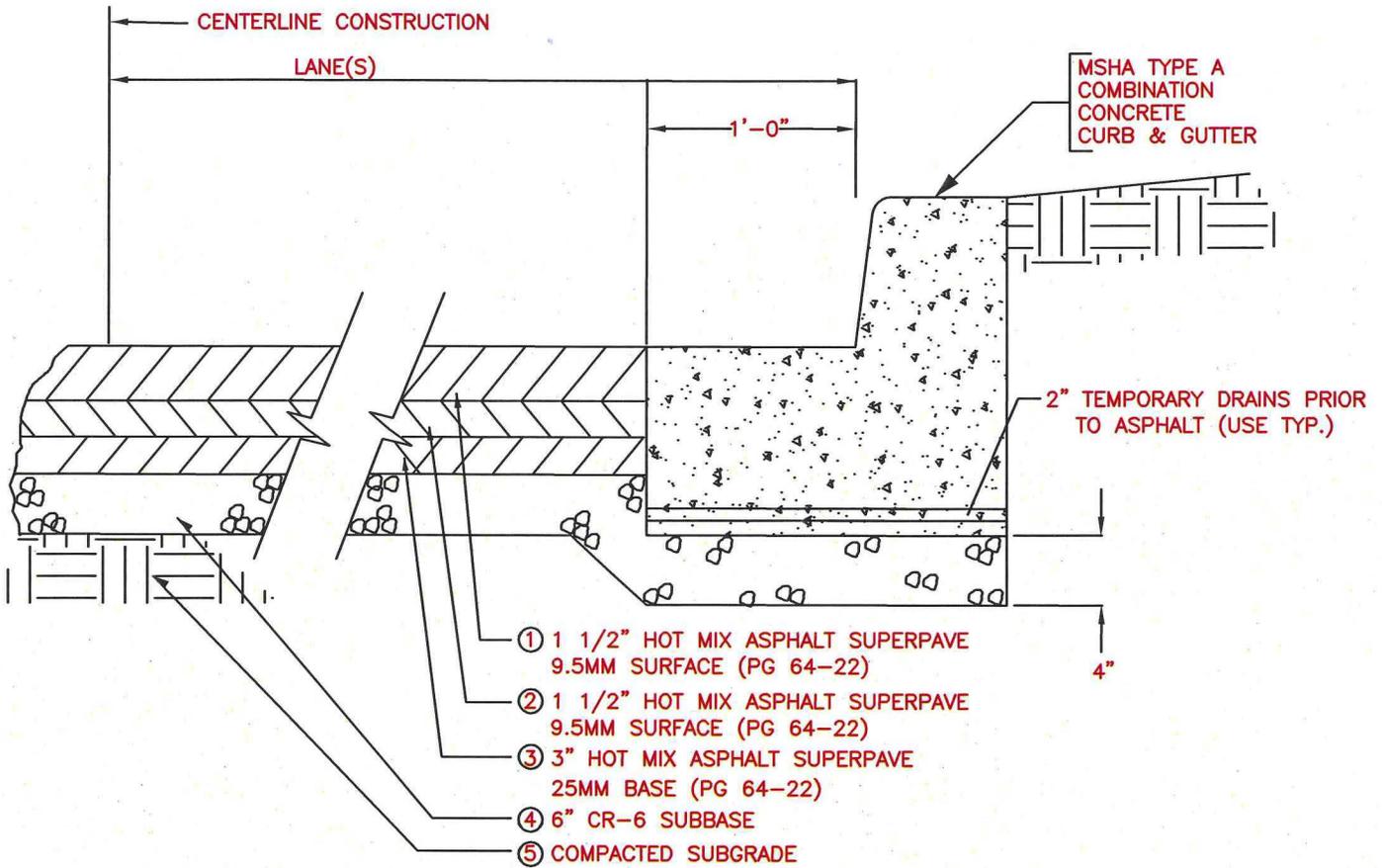


GENERAL NOTES:

1. STREET DESIGN STANDARDS SHALL BE COORDINATED WITH SECTION 98-16, CODE OF THE TOWN OF MOUNT AIRY, MARYLAND.
2. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH "THE TOWN OF MOUNT AIRY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION." FOR SPECIFICATIONS AND DETAILS NOT DEPICTED IN THE TOWN'S STANDARDS, THEN THE "SPECIFICATIONS FOR MATERIALS, HIGHWAYS, BRIDGES, AND INCIDENTAL STRUCTURES" OF THE MARYLAND STATE HIGHWAY ADMINISTRATION SHALL BE USED.
3. RAISED PAVEMENT MARKERS (RPMs) ARE TO BE INSTALLED WHEREVER A FIRE HYDRANT EXISTS IN TOWN. IF FIRE HYDRANT IS WITHIN 50' OF AN INTERSECTION, THEN AN RPM SHALL BE INSTALLED ON BOTH STREETS OF INTERSECTION.

TOWN ROADS AND STREETS

NTS



NOTES:

1. ALL HOT MIX ASPHALT BASE COURSES SHALL BE IMMEDIATELY COVERED WITH A HOT MIX ASPHALT SURFACE COURSE. ANY BASE COURSES LEFT UNCOVERED FOR MORE THAN 48 HOURS WILL NOT BE ACCEPTED.

2. COMPACTION TESTS REQUIRED:

- SUBGRADE: 95%
- FINAL SURFACE: 92%

RESIDENTIAL, LOCAL STREETS & PARKING LOTS

(MSHA TYPE A)

NTS



The Town of Mount Airy, Maryland

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[Signature]

RESIDENTIAL,
LOCAL STREETS
& PARKING LOTS

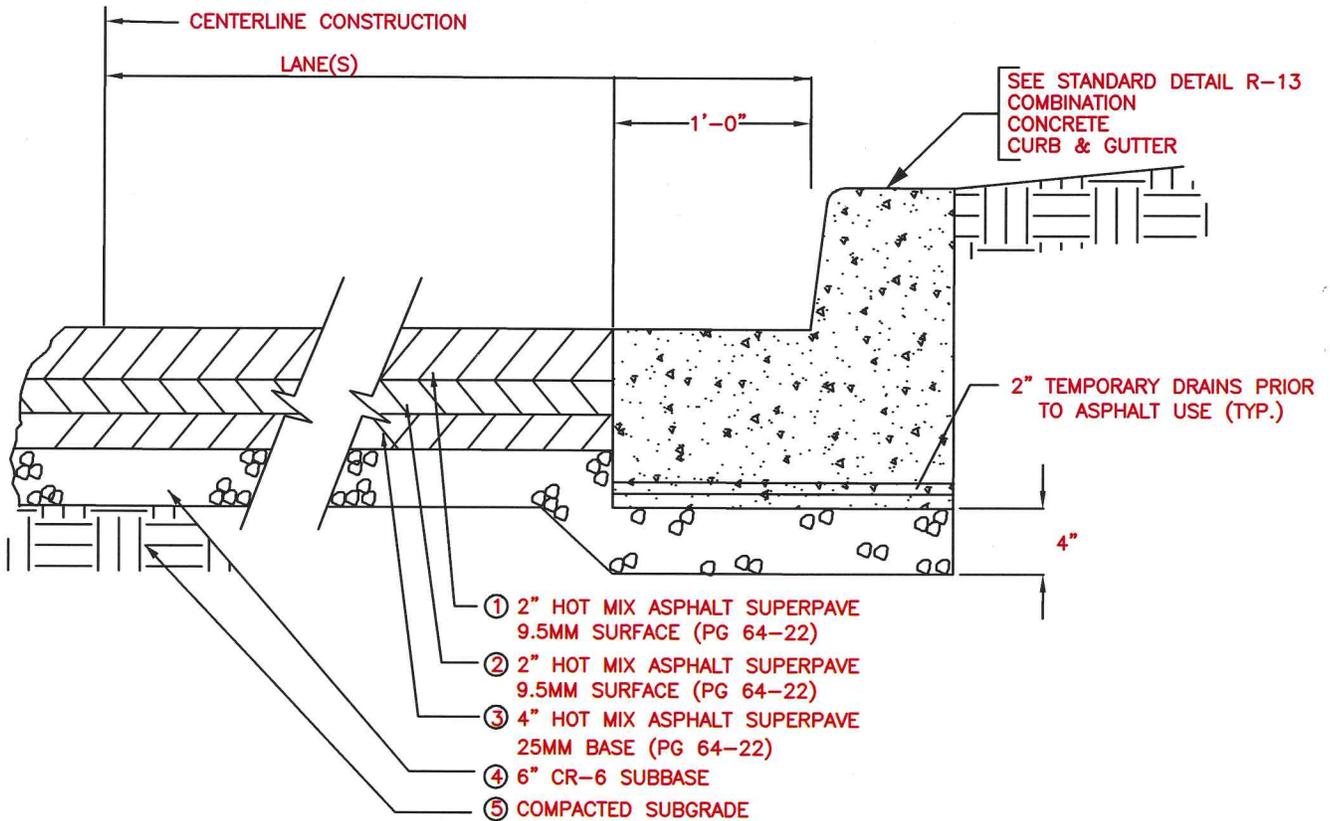
By:
MDH

Date

10/19/14

Standard Detail
No.

R-02



NOTES:

1. ALL HOT MIX ASPHALT BASE COURSES SHALL BE IMMEDIATELY COVERED WITH A HOT MIX ASPHALT SURFACE COURSE. ANY BASE COURSES LEFT UNCOVERED FOR MORE THAN 48 HOURS WILL NOT BE ACCEPTED.

2. COMPACTION TESTS REQUIRED:

- SUBGRADE: 95%
- FINAL SURFACE: 92%

COMMERCIAL & ALL OTHER STREETS

(MSHA TYPE A)

NTS



The Town of Mount Airy, Maryland

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COMMERCIAL AND
ALL OTHER
STREETS

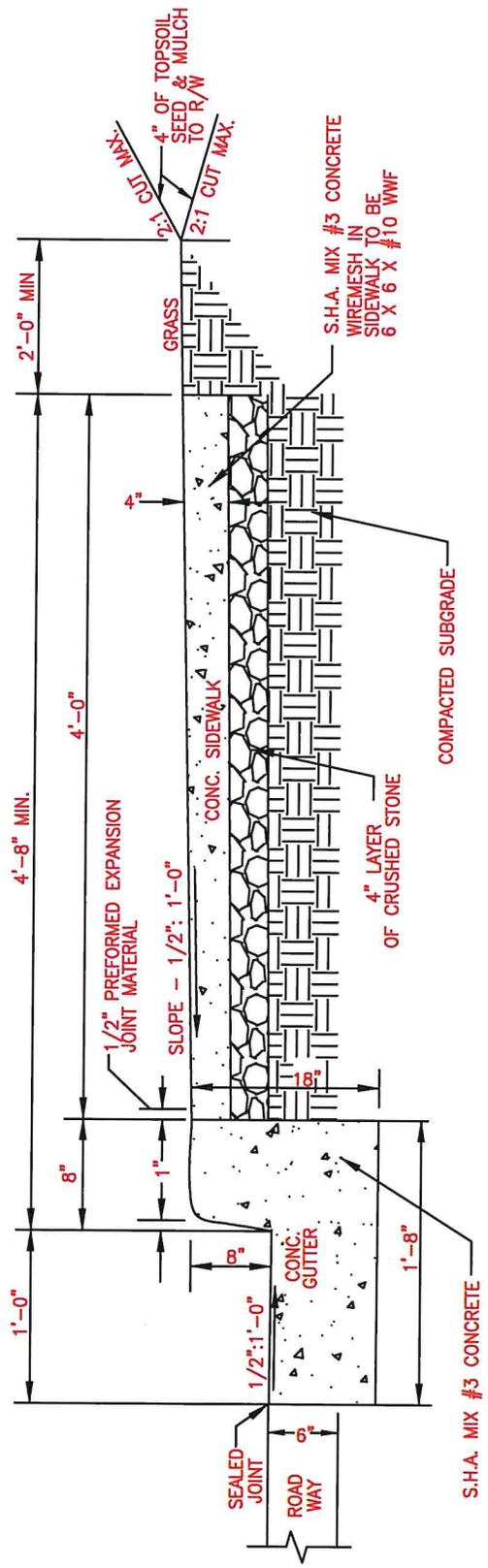
By:
MDH

Date

7/21/10

Standard Detail
No.

R-03



COMBINATION CURB, GUTTER AND SIDEWALK

NTS

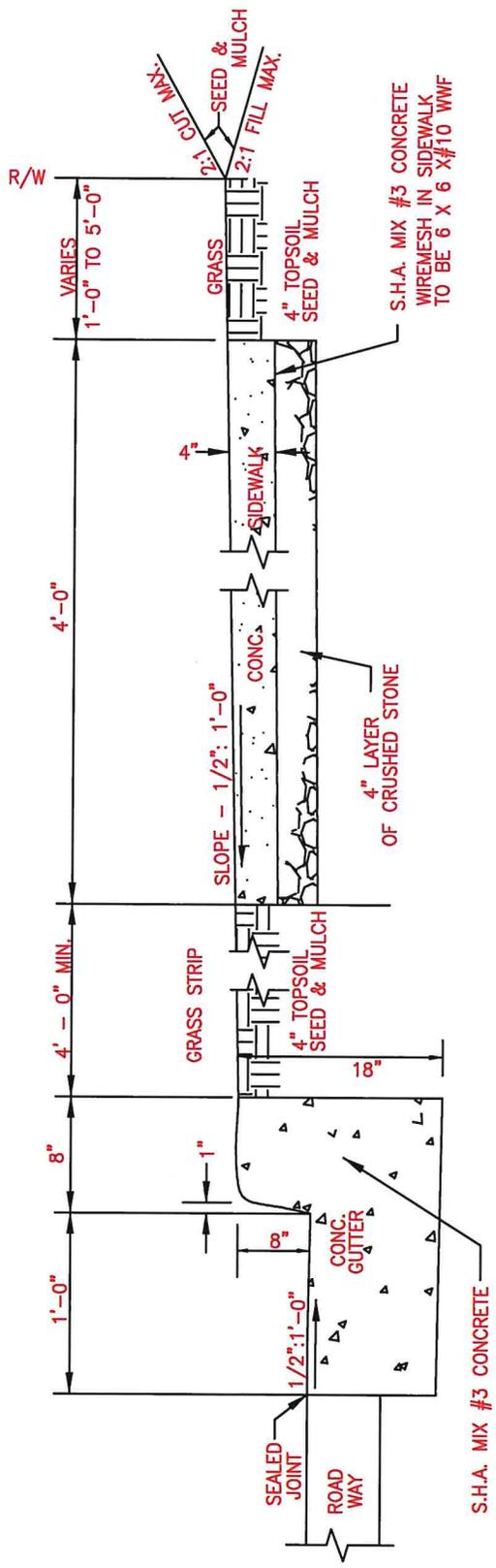


The Town of Mount Airy, Maryland
B. Owen
 APPROVED

COMBINATION CURB,
 GUTTER AND SIDEWALK

By: MDH	Date 12/26/21
Standard Detail No. R-04	





COMBINATION CURB, GUTTER GRASS STRIP,
AND SIDEWALK NORMAL CONSTRUCTION

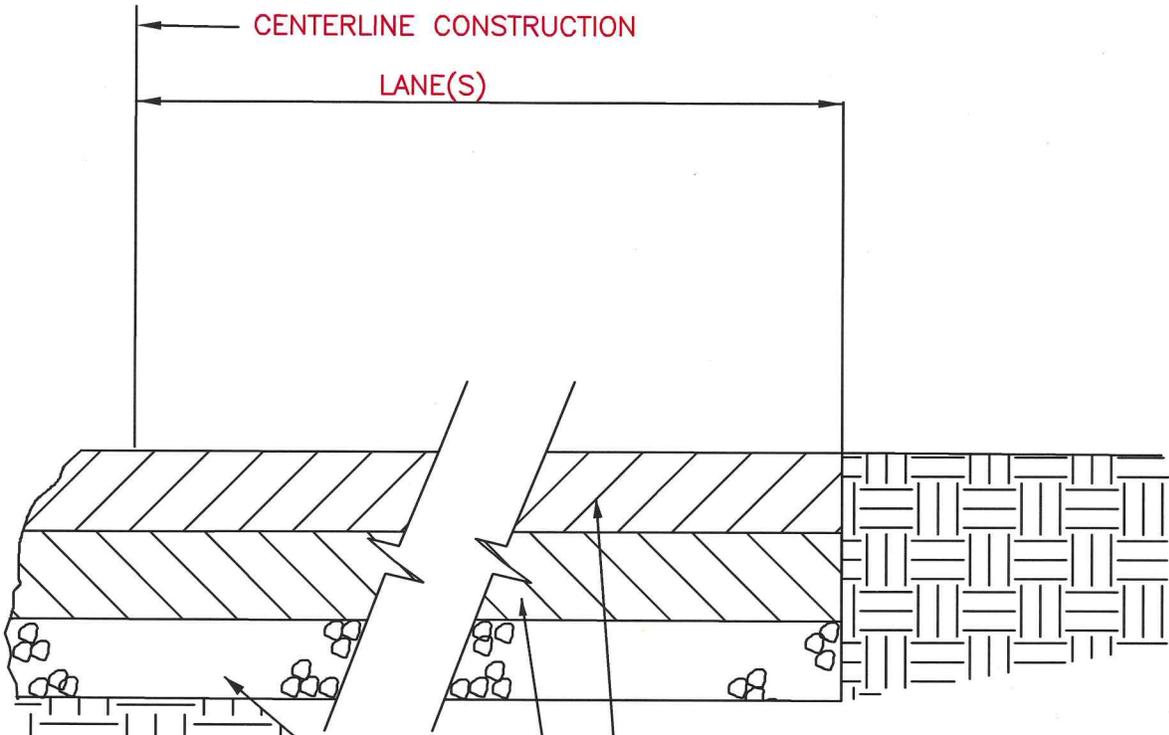
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COMBINATION CURB, GUTTER
 GRASS STRIP, AND SIDEWALK
 NORMAL CONSTRUCTION

By: MDH	Date 12/20/21
Standard Detail No. R-05	



- ① 1-1/2" HOT MIX ASPHALT SUPERPAVE
9.5MM SURFACE (PG 64-22)
- ② 3" HOT MIX ASPHALT SUPERPAVE
25MM BASE (PG 64-22)
- ③ 3" CR-6 SUBBASE
- ④ COMPACTED SUBGRADE

NOTES:

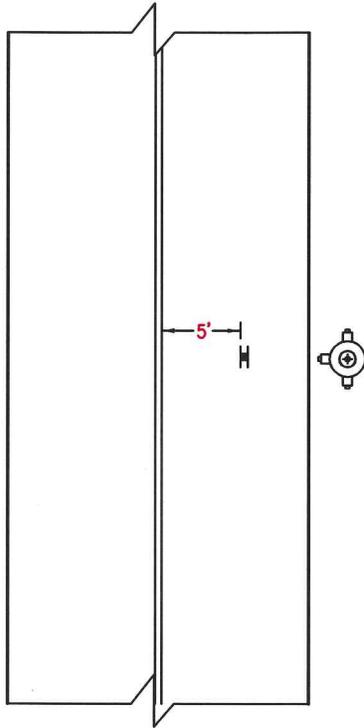
1. COMPACTION TESTS REQUIRED:

- SUBGRADE: 95%
- FINAL SURFACE: 92%

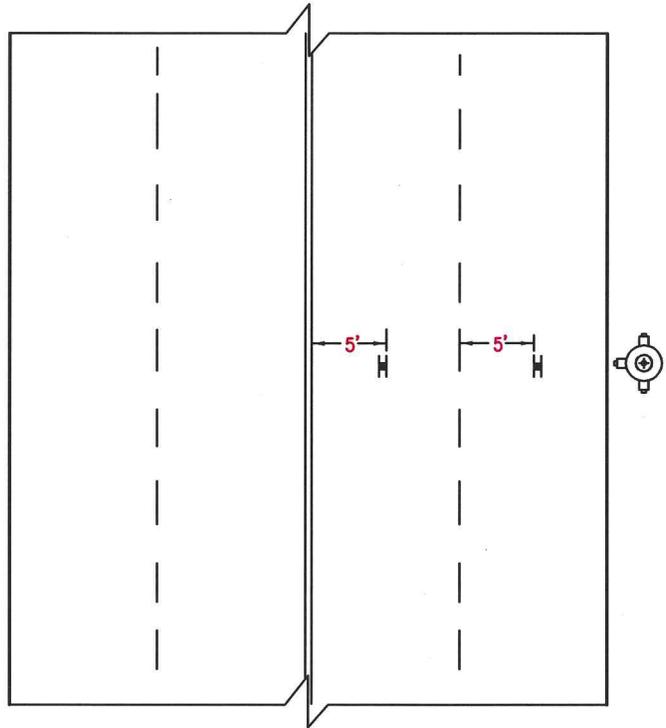
RESIDENTIAL DRIVEWAY
(MSHA TYPE A)
NTS

	The Town of Mount Airy, Maryland  _____ APPROVED	RESIDENTIAL DRIVEWAY	By: MDH	Date 7/21/10
				Standard Detail No. R-06

TWO-LANE HIGHWAY



FOUR-LANE HIGHWAY



KEY:



FIRE HYDRANT



RAISED PAVEMENT MARKER

NOTES:

1. INSTALL ONE RAISED PAVEMENT MARKER (RPM) IN CENTER OF EACH TRAVEL LANE ON SAME SIDE OF DOUBLE YELLOW AS FIRE HYDRANT.
2. RPMs SHALL BE SAFE FOR SNOW PLOWING.
3. RPMs SHALL BE DESIGNED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SECTIONS 3A.04 AND 3B.11.
3. RPMs SHALL HAVE BLUE REFLECTORS THAT ARE VISIBLE BY TRAFFIC IN BOTH DIRECTIONS.

RAISED PAVEMENT MARKERS

NTS



The Town of Mount Airy, Maryland

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RAISED PAVEMENT MARKERS

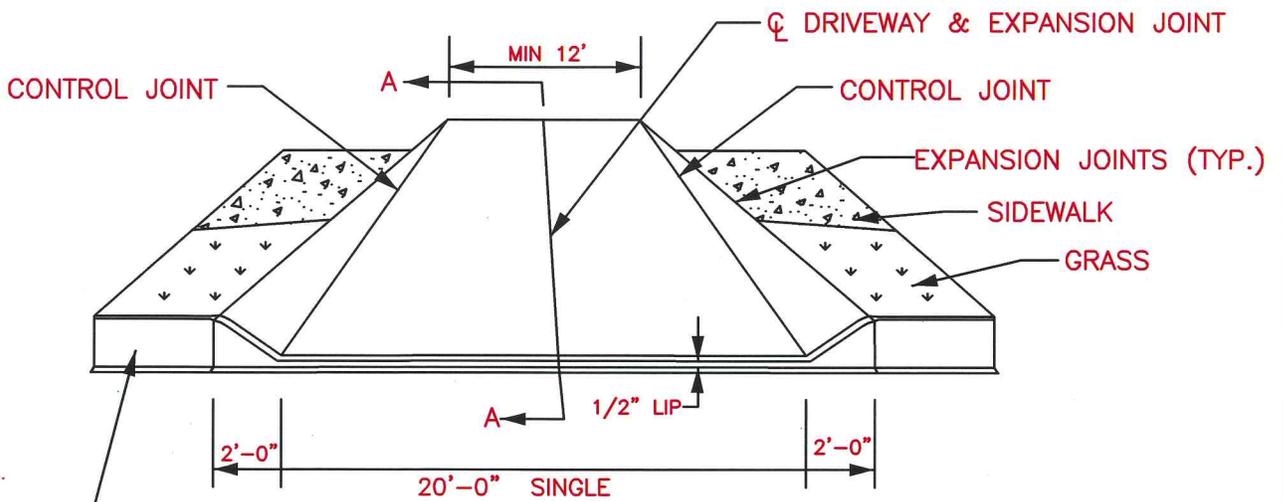
By:
MDH

Date

7/21/10

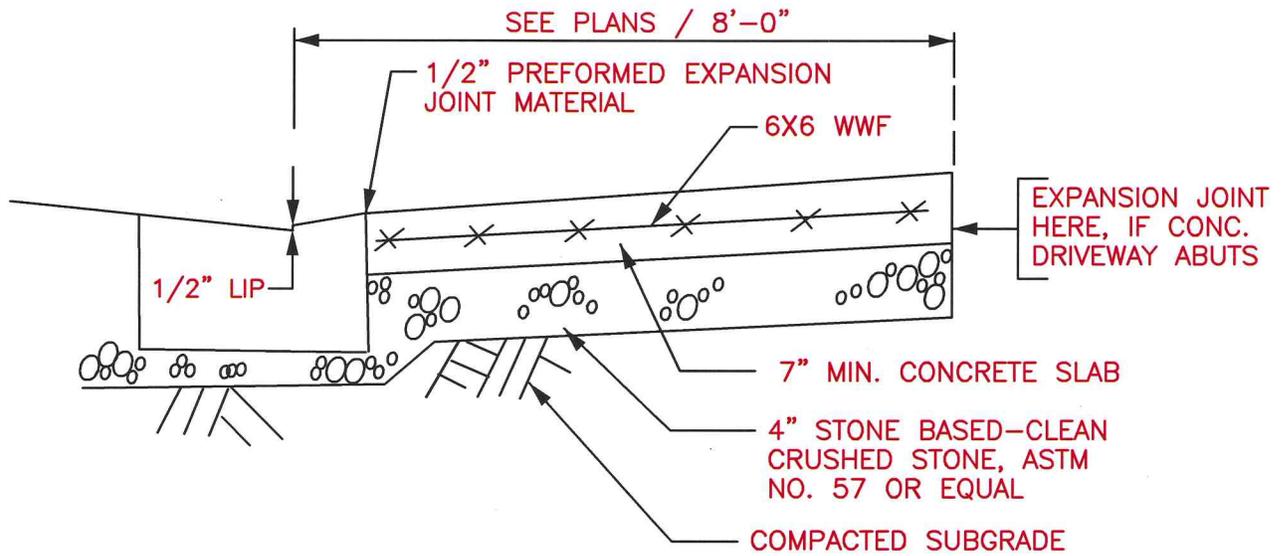
Standard Detail No.

R-07



COMB. CONC.
 CURB & GUTTER
 SHA MIX #2 CONCRETE

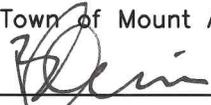
PERSPECTIVE VIEW

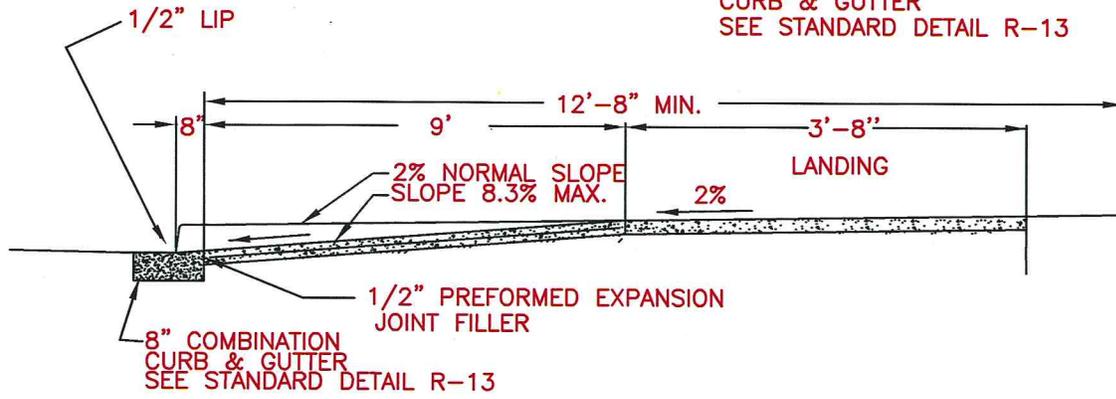
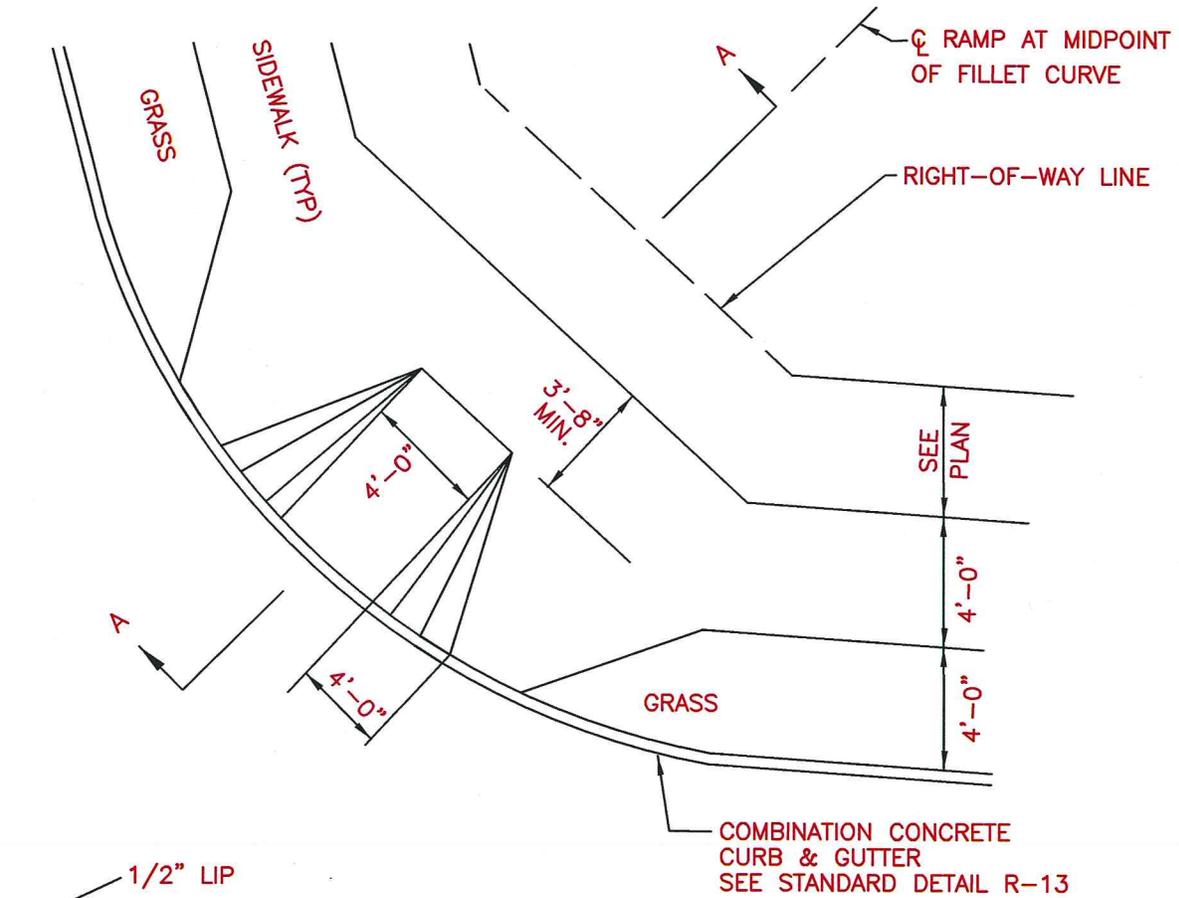


SECTION A-A

CONCRETE DRIVEWAY APRON

NTS

	The Town of Mount Airy, Maryland  APPROVED	CONCRETE DRIVEWAY APRON	By: MDH	Date: 7/21/10
				Standard Detail No. R-08



SECTION A-A
INTERSECTION (FILLET CURVE) LOCATION

HANDICAP RAMP AT INTERSECTION

NTS



The Town of Mount Airy, Maryland

[Signature]
APPROVED

HANDICAP RAMP AT
INTERSECTION

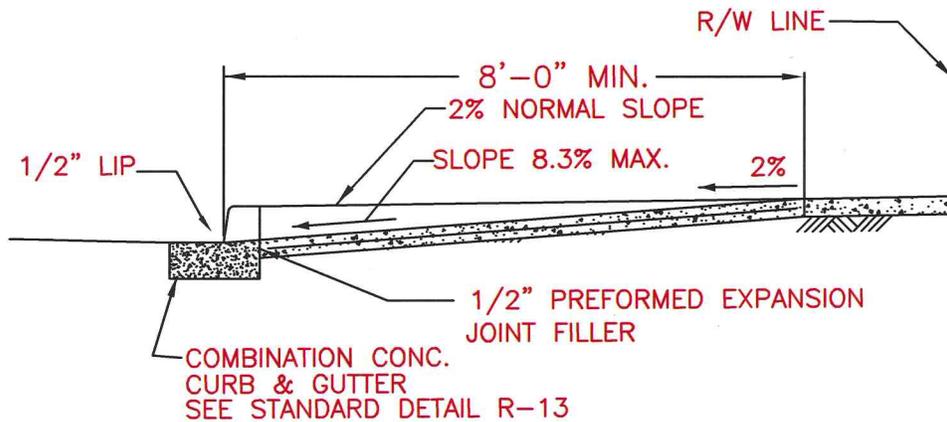
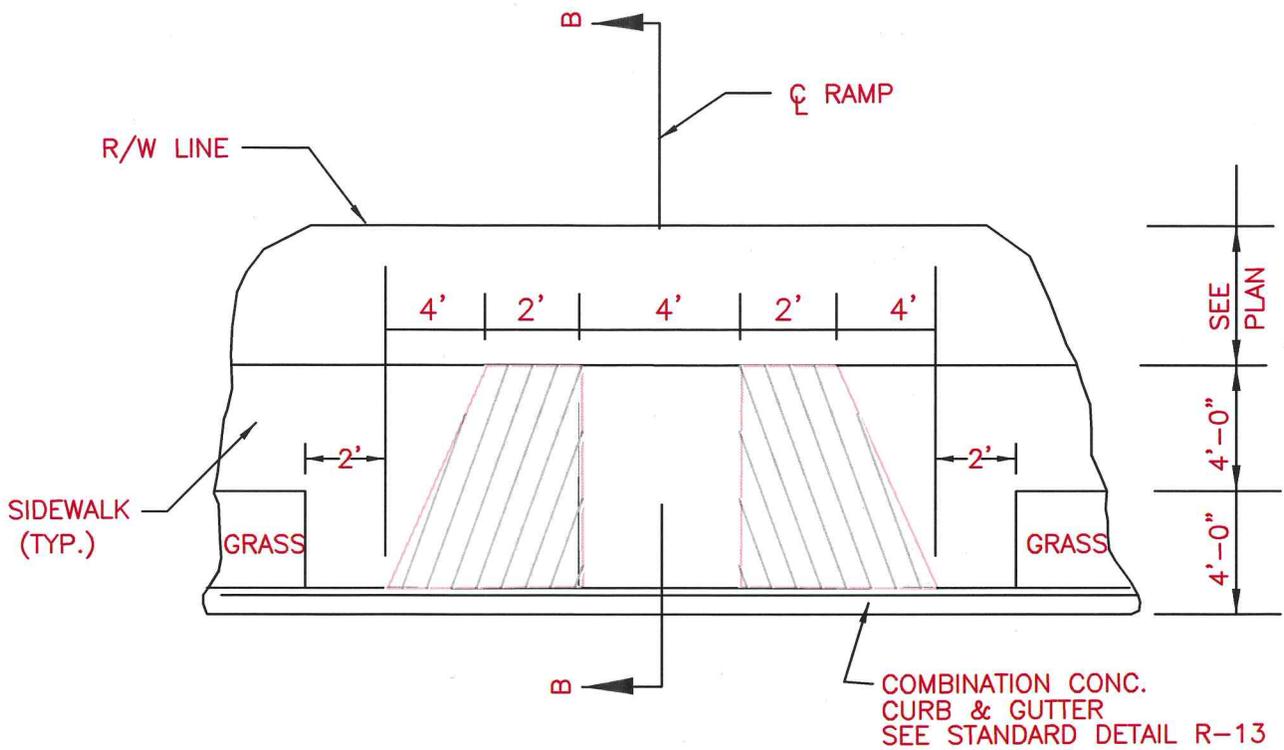
By:
MDH

Date

7/21/10

Standard Detail No.

R-09



SECTION B-B
TANGENT LOCATION

HANDICAP RAMP TANGENT LOCATION

NTS



The Town of Mount Airy, Maryland

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[Signature]

HANDICAP RAMP
TANGENT LOCATION

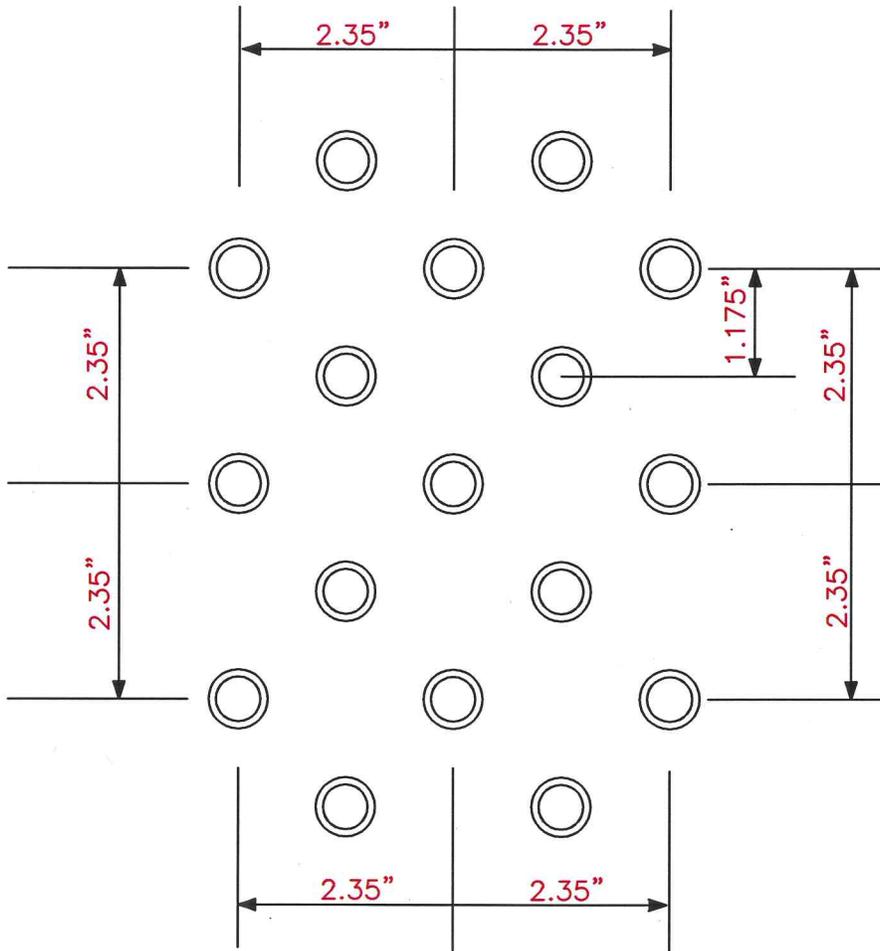
By:
MDH

Date

7/21/10

Standard Detail No.

R-10



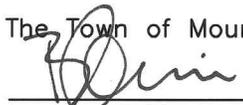
NOTES:

1. ARMOR-TILE, OR EQUIV., CAST IN PLACE TACTILE SYSTEM
(SURFACE APPLIED NOT ACCEPTABLE)
COLOR: FEDERAL YELLOW
MATERIAL: VITRIFIED POLYMER COMPOSITE
2. MUST MEET ADA STANDARDS.

ADA HANDICAP RAMP DETECTABLE WARNING SURFACE SYSTEM

NTS



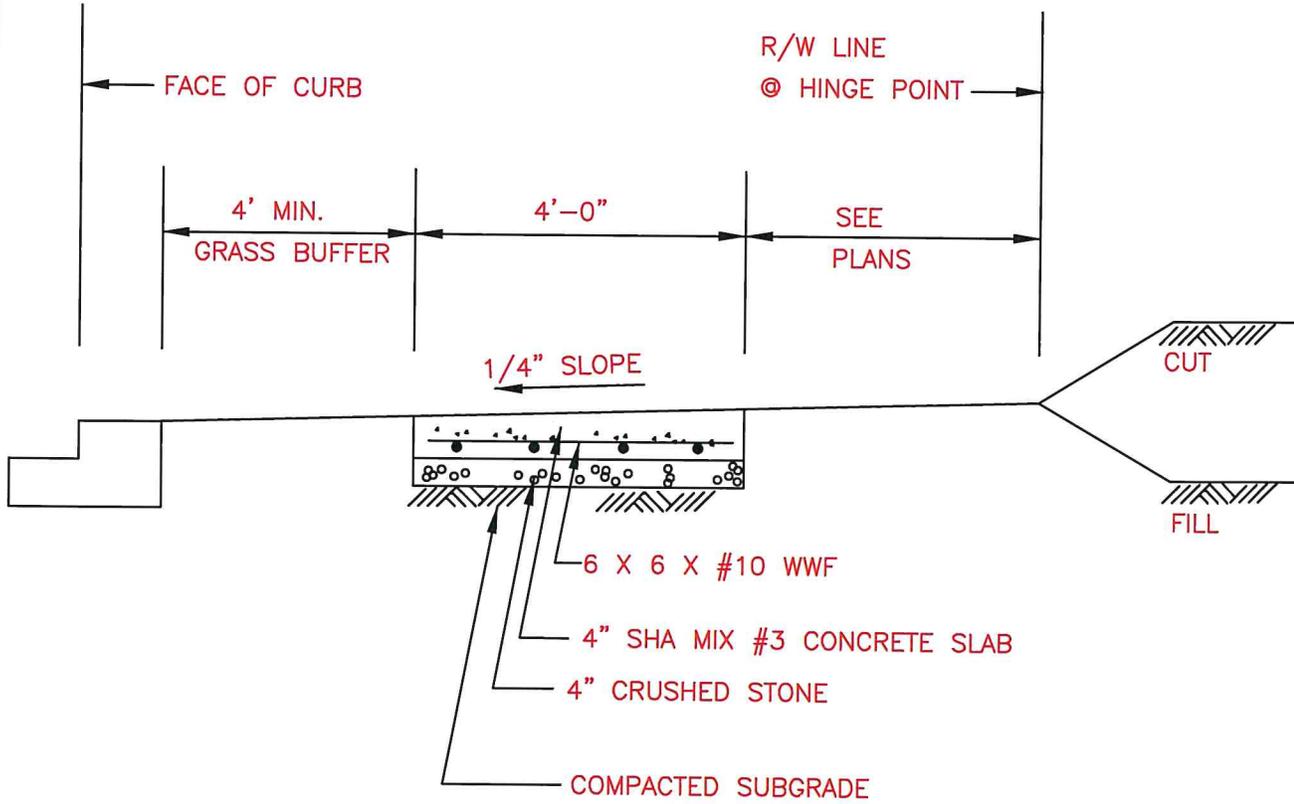
The Town of Mount Airy, Maryland

 APPROVED

ADA HANDICAP
 RAMP DETECTABLE
 WARNING SURFACE
 SYSTEM

By:
 MDH

Date
 7/21/10

Standard Detail
 No.
 R-11

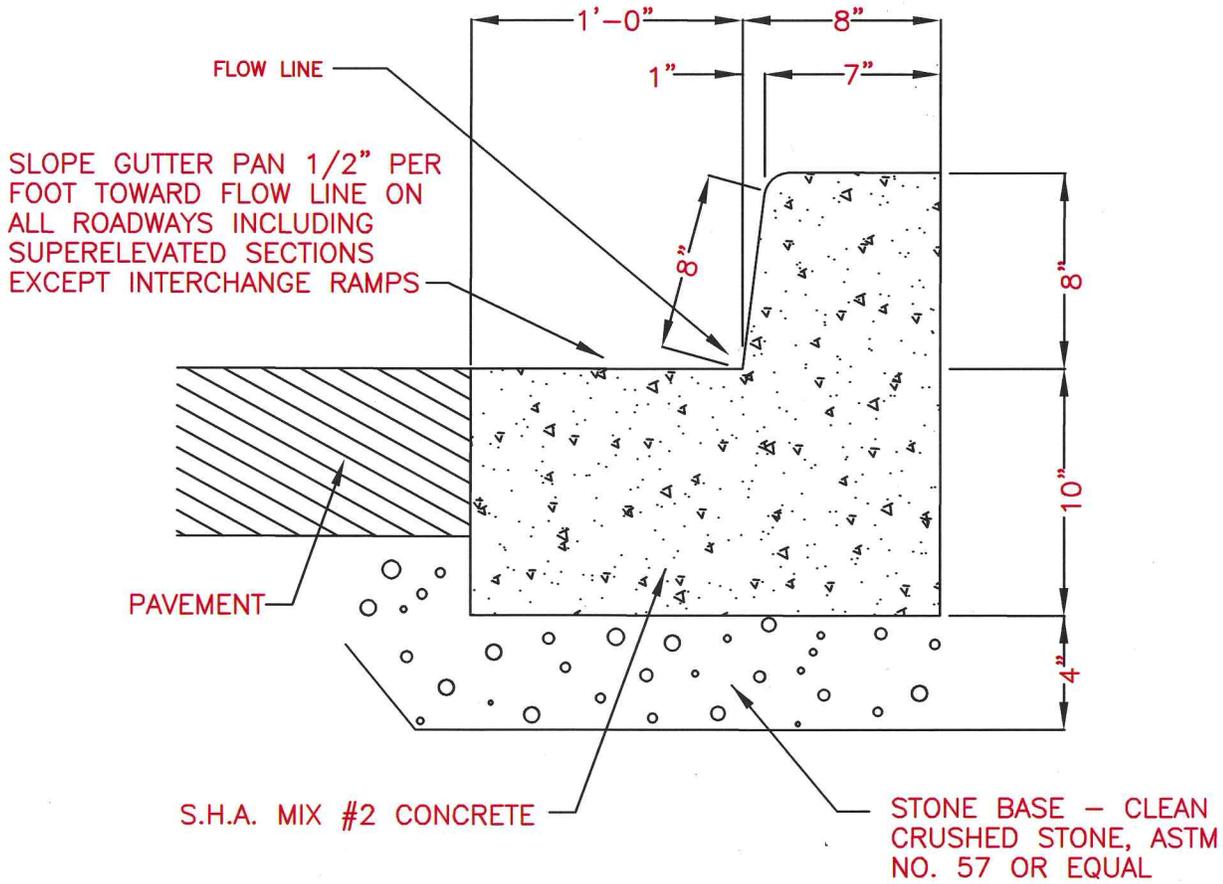


NOTES:

1. CONTRACTOR SHALL STRIKE CONTROL JOINTS EVERY 5'-0" AND PLACE EXPANSION JOINTS EVERY 20'-0"
2. CONTRACTOR TO INSTALL 1/2" PREFORMED EXPANSION JOINT MATERIAL AT ALL EXPANSION JOINTS AND WHERE SIDEWALK ABUTS CONCRETE CURB, FOUNDATIONS, APRONS, OR OTHER CONCRETE STRUCTURES.
3. USE APPROVED SEALANT OVER ALL SIDEWALK EXPANSION JOINTS.

CONCRETE SIDEWALK
NTS

	The Town of Mount Airy, Maryland  APPROVED	CONCRETE SIDEWALK	By: MDH	Date 12/20/21
				Standard Detail No. R-12



NOTES:

1. MAXIMUM JOINT SPACING = 10'- 0"

COMBINATION CONCRETE CURB & GUTTER
(MSHA TYPE A)

NTS



The Town of Mount Airy, Maryland
[Signature]
 APPROVED

8" COMBINATION
 CONCRETE CURB &
 GUTTER

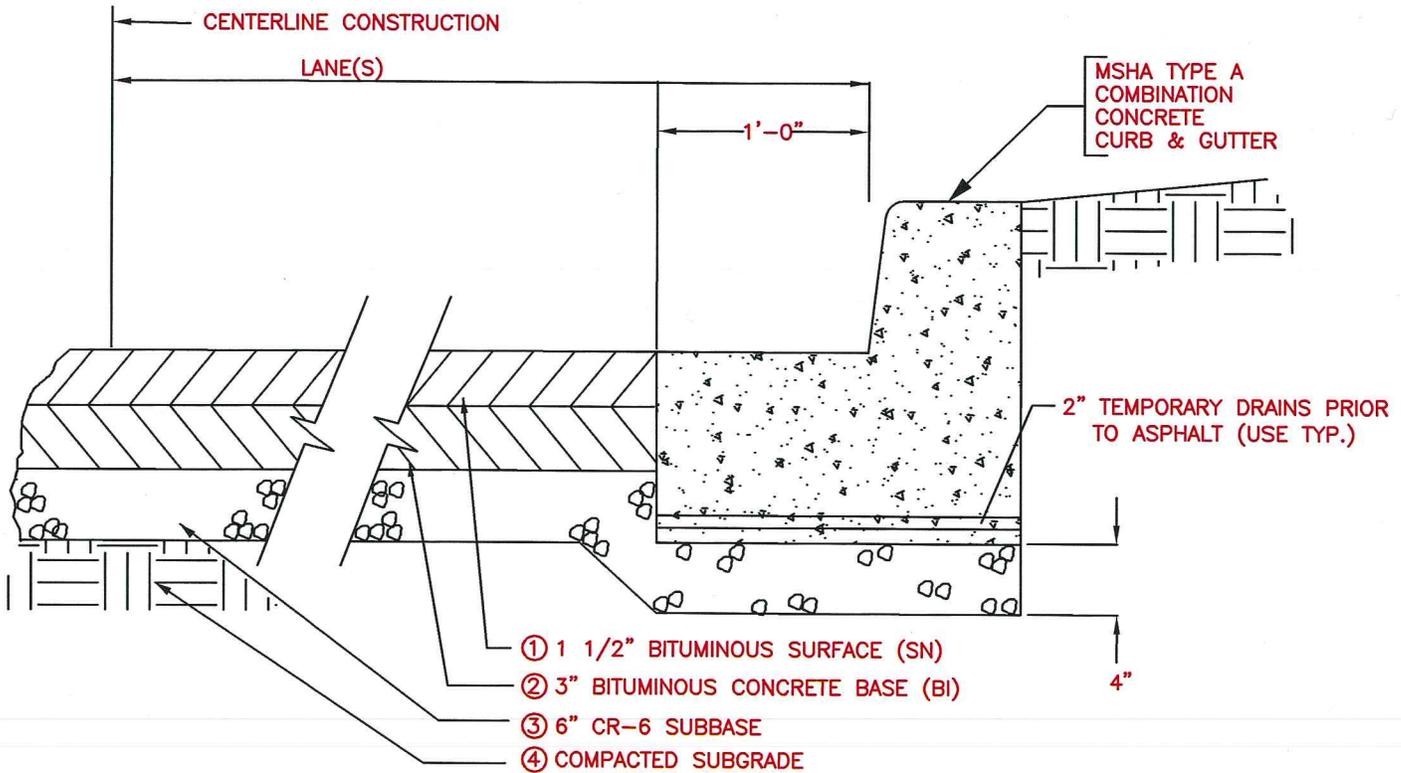
By:
 MDH

Date

7/21/10

Standard Detail
 No.

R-13



NOTES:

1. THE LOW USE PARKING STANDARD APPLIES ONLY TO USES NOT EXCEEDING 50 VEHICLE TRIPS PER DAY WITH AN EXCEPTION OF ONE DAY PER WEEK NOT EXCEEDING 300 VEHICLE TRIPS. THIS STANDARD SHALL NOT APPLY IN ANY COMMERCIAL OR INDUSTRIAL ZONES AND IT SHALL NOT APPLY TO ANY COMMERCIAL USE WITHIN A RESIDENTIAL ZONE. ANY CHANGE AFTER SITE PLAN APPROVAL THAT CAUSES THE USE TO NO LONGER COMPLY WITH THIS STANDARD SHALL REQUIRE AN AMENDED SITE PLAN WITH THE APPROPRIATE PAVING STANDARD.

2. COMPACTION TESTS REQUIRED:

- SUBGRADE: 95%
- FINAL SURFACE: 92%

LOW USE NON-COMMERCIAL PARKING LOT
 (MSHA TYPE A)

NTS



The Town of Mount Airy, Maryland

APPROVED

Belvin

LOW USE
 NON-COMMERCIAL
 PARKING LOT

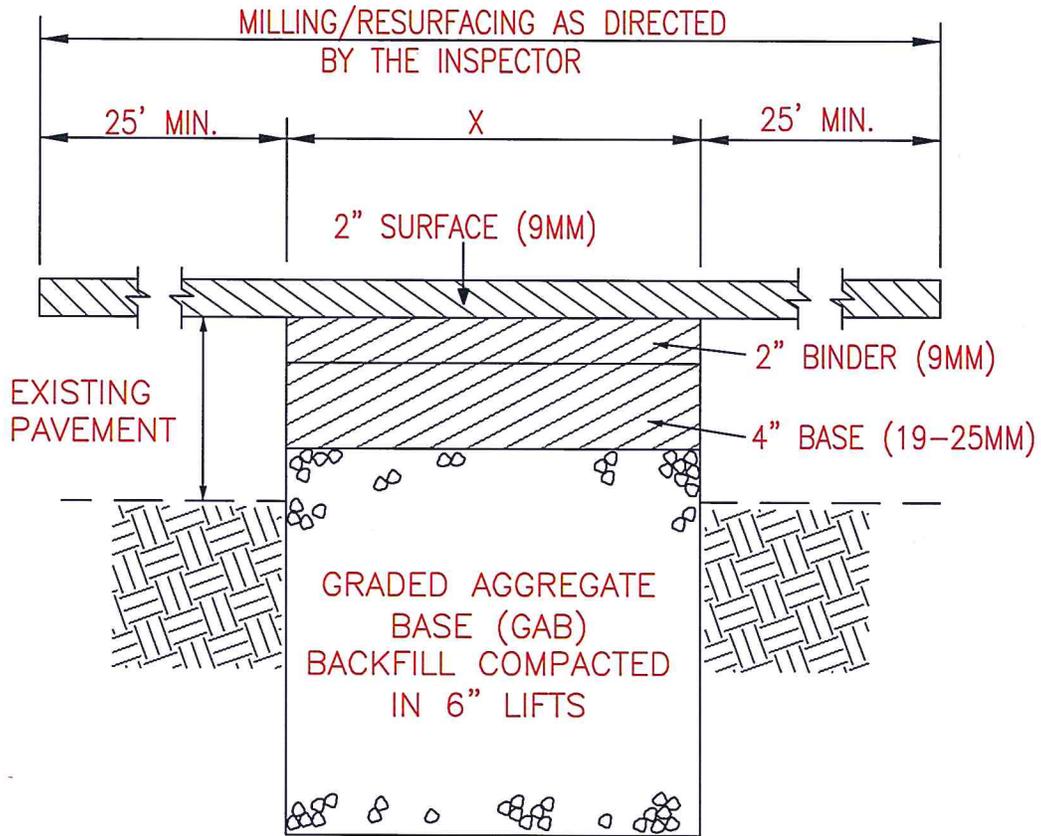
By:
 MDH

Date

9/18/11

Standard Detail
 No.

R-14



NOTES:

1. MILL 2" AND RESURFACE FULL WIDTH OF ANY TRAVEL LANE AND/OR SHOULDER THAT HAS ANY PART OF THE CUT; LENGTH OF MILLING/RESURFACING SHALL BE LENGTH OF CUT (X) PLUS 25' EACH WAY.
2. $L_{cut} = X + 25' + 25'$

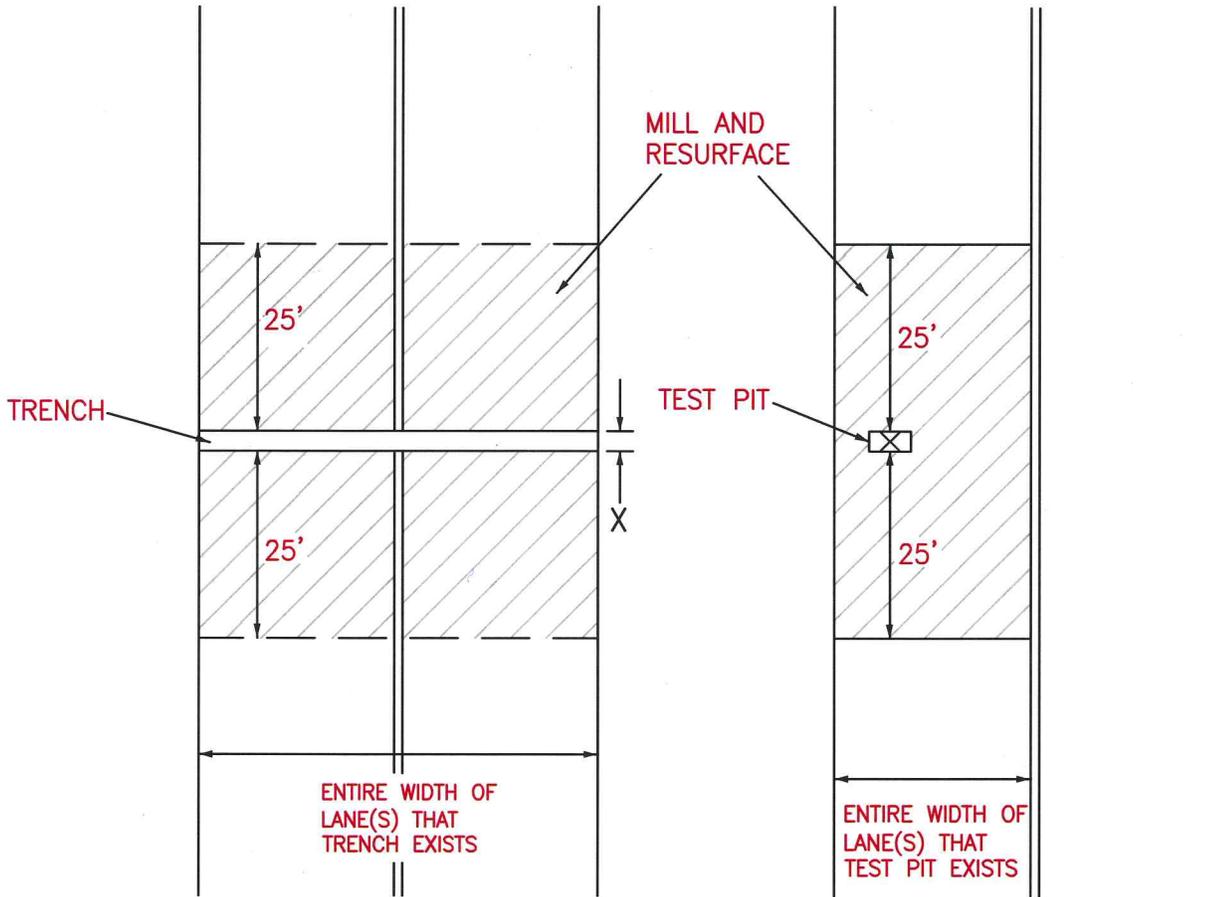
PAVEMENT PATCH

NTS

	The Town of Mount Airy, Maryland  _____ APPROVED	PAVEMENT PATCH	By: MDH	Date: 11 / 30 / 18
				Standard Detail No. R-15

TRENCH

TEST PIT

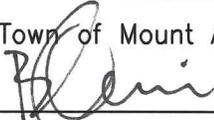


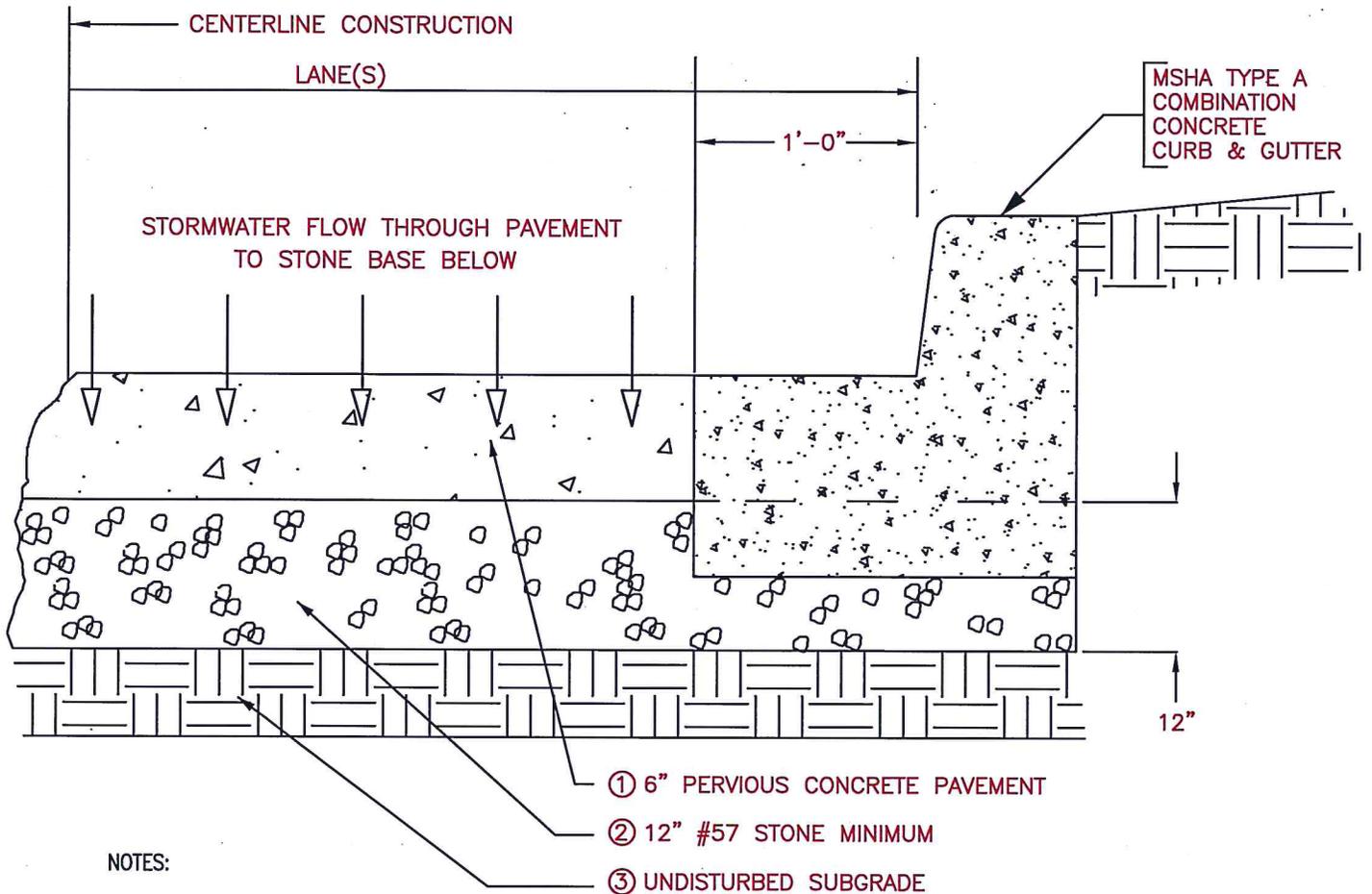
NOTES:

1. ALL HOLES IN STREET MUST BE FILLED WITH #57 STONE TO TOWN STANDARD EQUIVALENT ASPHALT DEPTH (8") AND ROLLED/TAMPED IN 6" LIFTS.
2. PATCH ALL HOLES AND/OR TRENCHES WITH 4" BASE (19-25MM), 2" BINDER (9MM), AND 2" SURFACE (9MM)
3. MILL 2" AND RESURFACE FULL WIDTH OF ANY TRAVEL LANE AND/OR SHOULDER THAT HAS ANY PART OF THE CUT; LENGTH OF MILLING/RESURFACING SHALL BE LENGTH OF CUT (X) PLUS 25' EACH WAY.
4. $L_{cut} = X + 25' + 25'$

PATCHING & RESURFACING REQUIREMENT

NTS

	The Town of Mount Airy, Maryland  APPROVED	PATCHING & RESURFACING REQUIREMENT	By: MDH	Date 7/21/10
			Standard Detail No. R-16	



NOTES:

1. PERVIOUS CONCRETE:

- A) WATER TO CEMENTITIOUS MATERIALS RATIO (W/CM) OF 0.28 TO 0.40 BY WEIGHT
- B) VOID CONTENT OF 15 TO 25 PERCENT
- C) MINIMUM CEMENT CONTENT OF 530LBS/CU.YD.
- D) APPROXIMATE COMPRESSIVE STRENGTH OF 1500 PSI OR GREATER

2. COMPACTION TESTS REQUIRED:

-SUBGRADE: 95%

3. DENSITY/VOID CONTENT SHALL BE TESTED PER ASTM C1688.

4. PERVIOUS CONCRETE MAY BE APPLIED TO DRIVEWAYS AND PORTIONS OF PARKING LOTS NOT TO INCLUDE MAIN DRIVE AREAS. PERVIOUS CONCRETE IS NOT ACCEPTABLE FOR ROADWAYS.

PERVIOUS CONCRETE PAVEMENT
FOR PARKING LOTS

NTS



The Town of Mount Airy, Maryland

[Signature]
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PERVIOUS CONCRETE
PAVEMENT PARKING
LOT OR DRIVEWAY

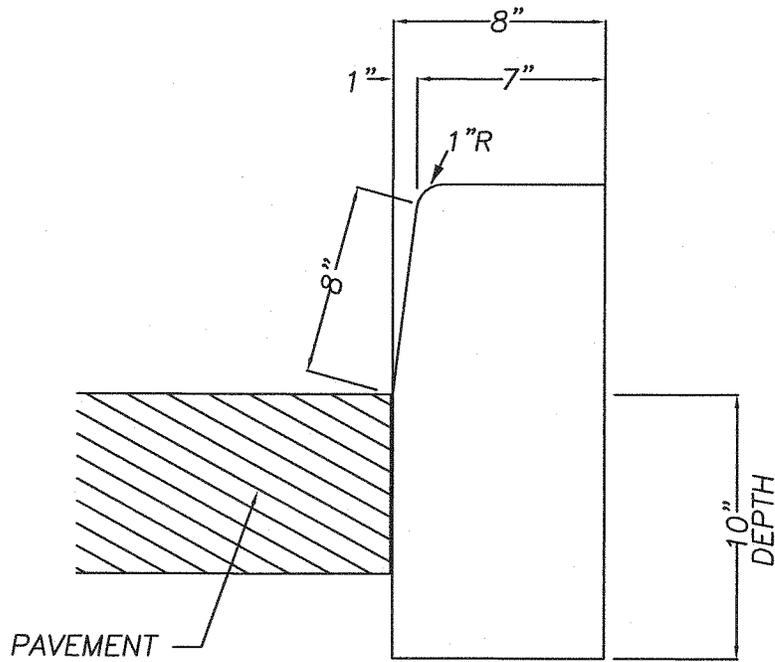
By:
MDH

Date

6/30/16

Standard Detail No.

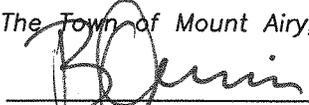
R-17

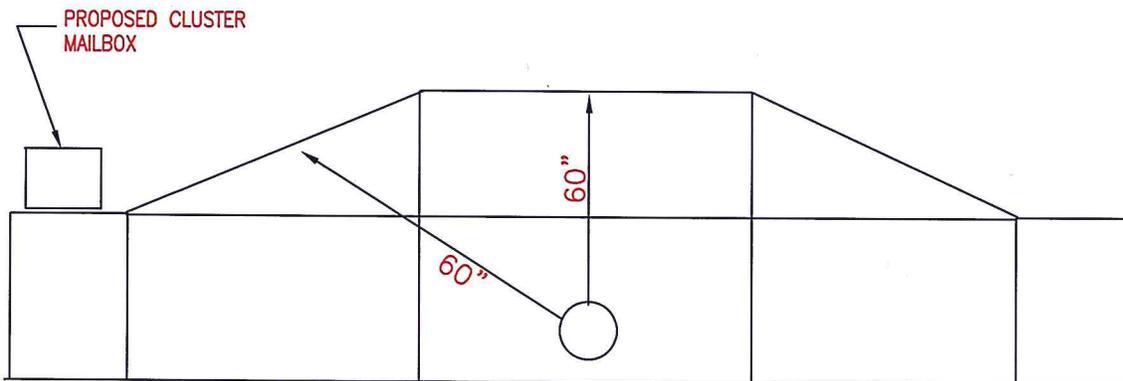


8" CONCRETE CURB

N.T.S.

NOTE:
 JOINT SPACING FOR CONCRETE CURBS
 = 10 FEET

	The Town of Mount Airy, Maryland  APPROVED	8" CONCRETE CURB	By: RMG	Date: 8/8/11
			Standard Detail No. R-18	



NOTES:

1. CONTRACTOR SHALL STRIKE CONTROL JOINTS EVERY 5'-0" AND PLACE EXPANSION JOINTS EVERY 20'-0".
2. CONTRACTOR TO INSTALL 1/2" PREFORMED EXPANSION JOINT MATERIAL AT ALL EXPANSION JOINTS AND WHERE SIDEWALK ABUTS CONCRETE CURB, FOUNDATIONS, APRONS, OR OTHER CONCRETE STRUCTURES.
3. USE APPROPRIATELY SIZED BACKER ROD AND SELF-LEVELING CONCRETE SEALANT, COLOR: GRAY, OVER ALL SIDEWALK EXPANSION JOINTS.
4. WHERE SIDEWALKS ABUT CURB WITH NO GRASS STRIP, CLUSTER MAILBOXES SHALL BE CONSIDERED IN GRASS AREA BEHIND SIDEWALKS.

CONCRETE SIDEWALK AROUND OBSTRUCTION

NTS



The Town of Mount Airy, Maryland

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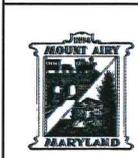
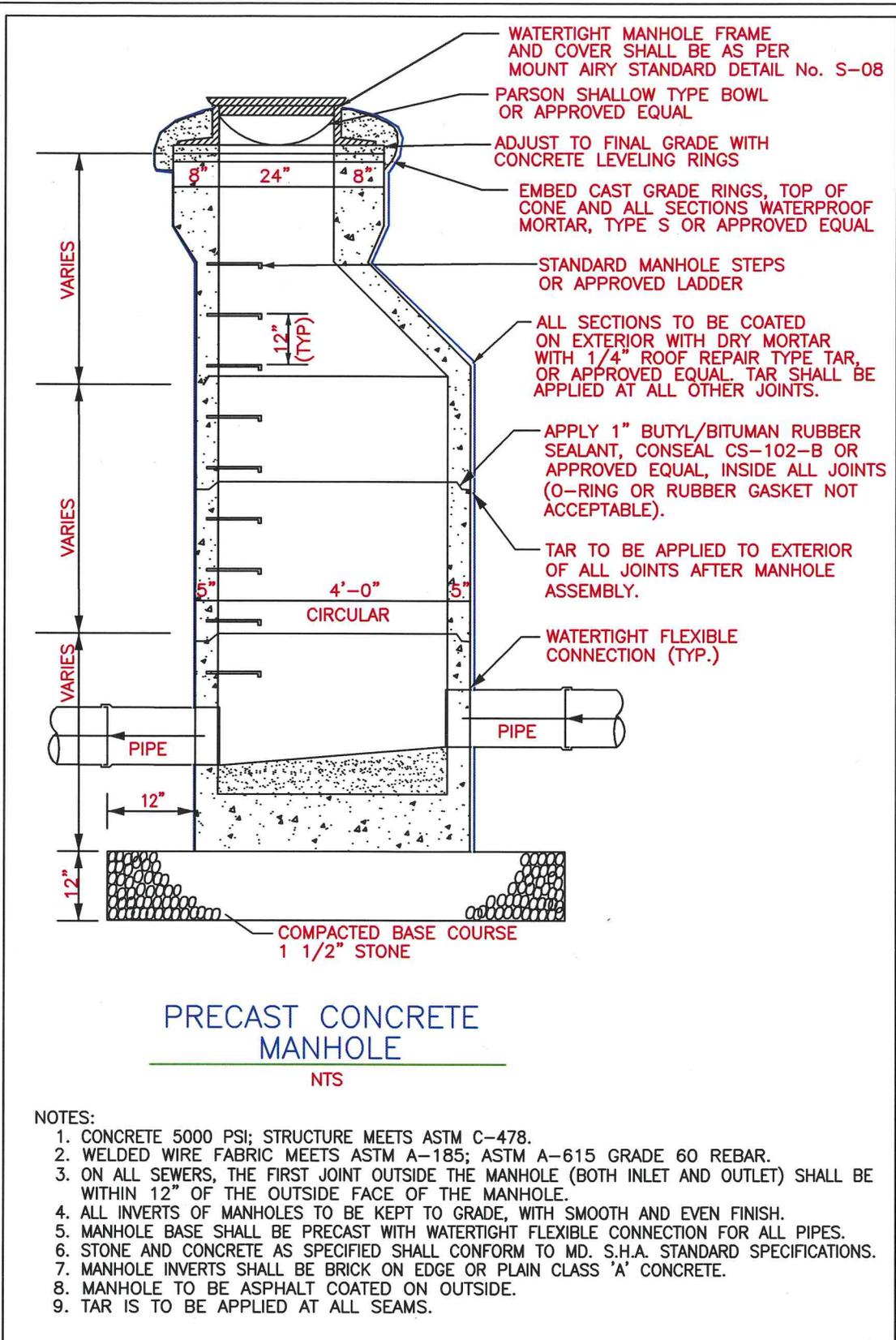
CONCRETE SIDEWALK
AROUND OBSTRUCTION

By:
KMM

Date
11/30/18

Standard Detail No.

R-19



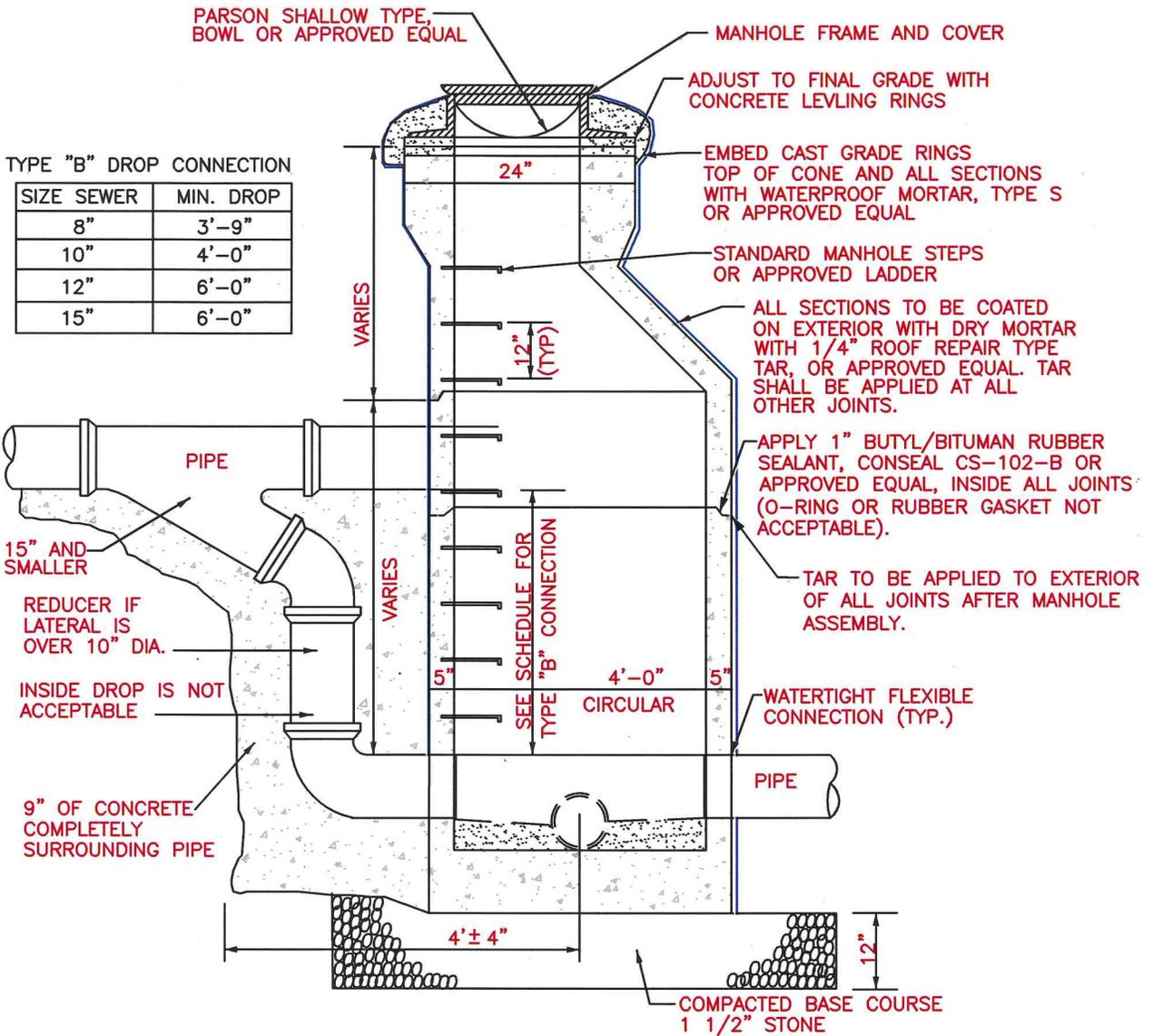
The Town of Mount Airy, Maryland

[Signature]

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PRECAST CONCRETE MANHOLE
with "A" Connection

By: MDH	Date: 8/8/11
Standard Detail No. S-01	



TYPE "B" DROP CONNECTION

SIZE SEWER	MIN. DROP
8"	3'-9"
10"	4'-0"
12"	6'-0"
15"	6'-0"

NOTES:

1. CONCRETE 5000 PSI; STRUCTURE MEETS ASTM C-478
2. WELDED WIRE FABRIC MEETS ASTM A-185; ASTM A-615 GRADE 60 REBAR.
3. ON ALL SEWERS, THE FIRST JOINT OUTSIDE THE MANHOLE (BOTH INLET AND OUTLET) SHALL BE WITHIN 12" OF THE OUTSIDE FACE OF THE MANHOLE.
4. ALL INVERTS OF MANHOLES TO BE KEPT TO GRADE, WITH SMOOTH AND EVEN FINISH.
5. MANHOLE BASE SHALL BE PRECAST WITH WATERTIGHT FLEXIBLE CONNECTION FOR ALL PIPES.
6. STONE AND CONCRETE AS SPECIFIED SHALL CONFORM TO MD. S.H.A. STANDARD SPECIFICATIONS.

PRECAST CONCRETE DROP MANHOLE WITH "B" CONNECTION

NTS



The Town of Mount Airy, Maryland

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PRECAST CONCRETE DROP MANHOLE with "B" Connection

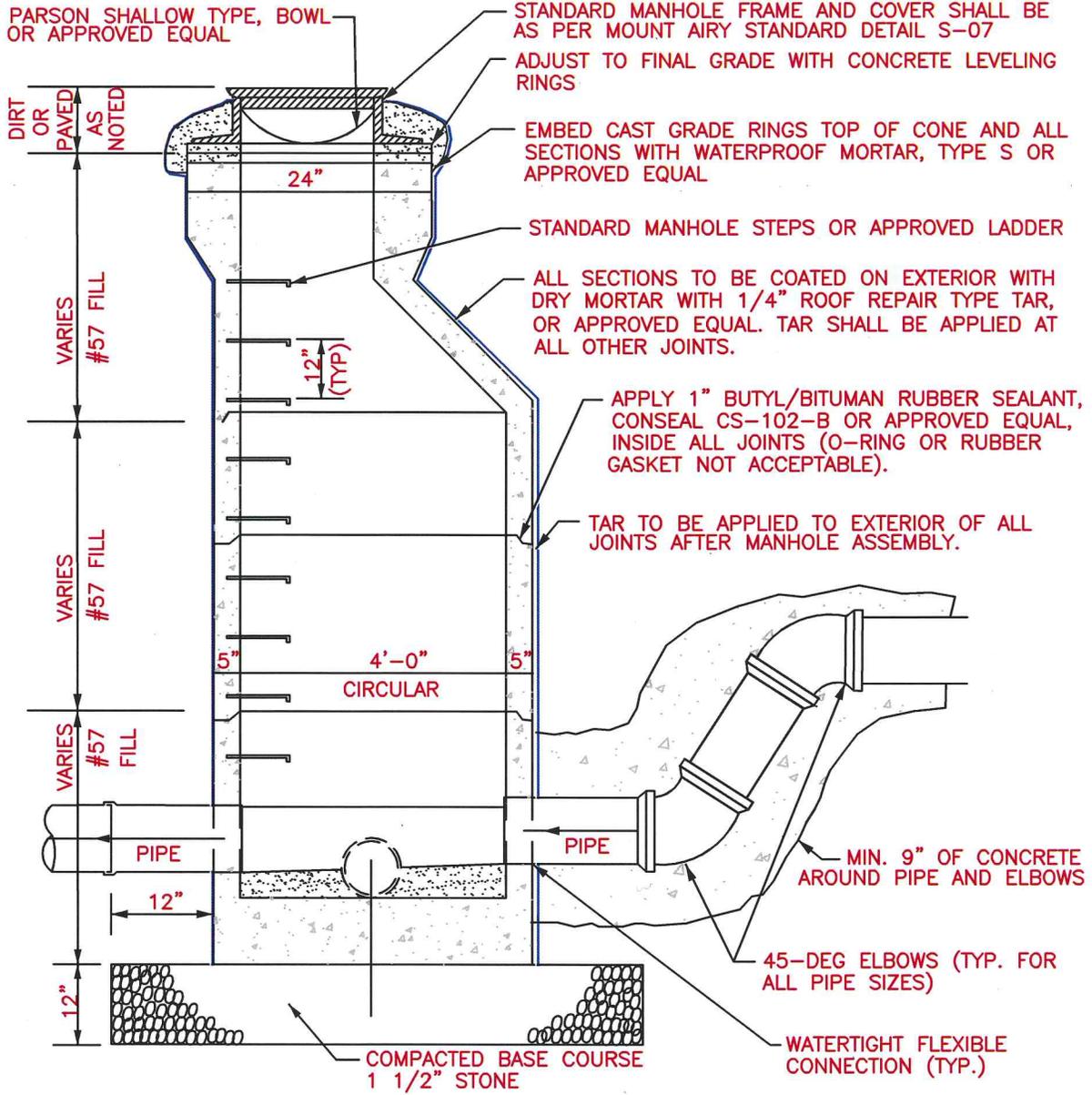
By: MDH

Date

8/8/11

Standard Detail No.

S-02



PRECAST CONCRETE DROP MANHOLE WITH "C" CONNECTION

NTS

TYPE "C" DROP CONNECTION

SIZE SEWER	MAX. DROP	MIN. DROP
8"	3' - 9"	1' - 9"
10"	4' - 0"	2' - 0"
12"	6' - 0"	2' - 6"
15"	6' - 0"	2' - 6"

NOTES:

1. CONCRETE 5000 PSI; STRUCTURE MEETS ASTM C-478.
2. WELDED WIRE FABRIC MEETS ASTM A-185; ASTM A-615 GRADE 60 REBAR.
3. ON ALL SEWERS, THE FIRST JOINT OUTSIDE THE MANHOLE (BOTH INLET AND OUTLET) SHALL BE WITHIN 12" OF THE OUTSIDE FACE OF THE MANHOLE.
4. ALL INVERTS OF MANHOLES TO BE KEPT TO GRADE, WITH SMOOTH AND EVEN FINISH.
5. MANHOLE BASE SHALL BE PRECAST WITH WATERTIGHT FLEXIBLE CONNECTION FOR ALL PIPES.
6. STONE AND CONCRETE AS SPECIFIED SHALL CONFORM TO MD. S.H.A. STANDARD SPECIFICATIONS.
7. MANHOLE INVERTS SHALL BE BRICK ON EDGE OR PLAIN CLASS 'A' CONCRETE.
8. MANHOLE TO BE ASPHALT COATED ON OUTSIDE.



The Town of Mount Airy, Maryland

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PRECAST CONCRETE
DROP MANHOLE
with "C" CONNECTION

By:
MDH

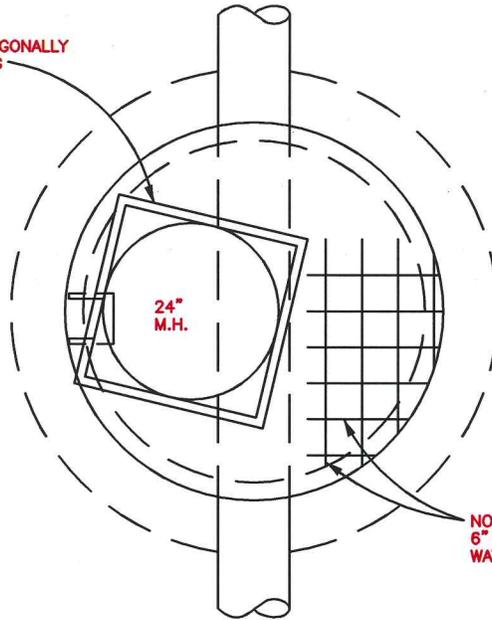
Date

8/8/11

Standard Detail No.

S-03

NO. 4 BARS, DIAGONALLY
AROUND OPENING



NO. 4 BARS AT
6" O.C. BOTH
WAYS

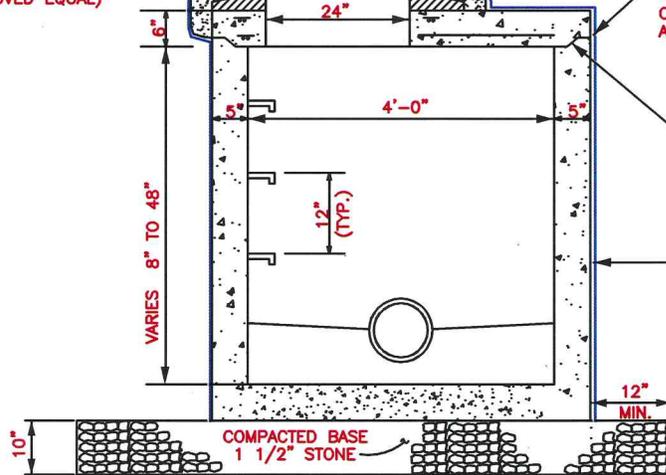
PARSON SHALLOW TYPE BOWL
OR APPROVED EQUAL

MANHOLE FRAME AND COVER SHALL
BE MIN. 420 TRAFFIC TYPE, AND
THE COVERS SHALL HAVE WATERTIGHT
PICK HOLES

EMBED CASTING WITH
WATERPROOF MORTAR
(TYPE S OR
APPROVED EQUAL)

EMBED CASTING
WITH WATERPROOF
MORTAR

TAR TO BE APPLIED TO EXTERIOR
OF ALL JOINTS AFTER MANHOLE
ASSEMBLY.



APPLY 1" BUTYL/BITUMAN RUBBER
SEALANT, CONSEAL CS-102-B OR
APPROVED EQUAL, INSIDE ALL JOINTS
(O-RING OR RUBBER GASKET NOT
ACCEPTABLE).

COAT DRY MORTAR ON GRADE
RINGS, TOP OF CONE AND
ALL SECTIONS WITH 1/4"
ROOF REPAIR TYPE TAR, OR
APPROVED EQUAL.

NOTES:

1. CONCRETE 5000 PSI; STRUCTURE MEETS ASTM C-478; WELDED WIRE FABRIC MEETS ASTM A-185; ASTM A-615 GRADE 60 REBAR.
2. ON ALL SEWERS, THE FIRST JOINT OUTSIDE THE MANHOLE (BOTH INLET AND OUTLET) SHALL BE WITHIN 12" OF THE OUTSIDE FACE OF THE MANHOLE.
3. ALL INVERTS OF MANHOLES TO BE KEPT TO GRADE, WITH SMOOTH AND EVEN FINISH.
4. MANHOLE BASE SHALL BE PRECAST WITH WATERTIGHT FLEXIBLE CONNECTION FOR ALL PIPES. INVERTS SHALL BE CAST IN PLACE.
5. STONE AND CONCRETE AS SPECIFIED SHALL CONFORM TO MD. S.H.A. STANDARD SPECIFICATIONS.

PRECAST MANHOLE TYPE 2

NTS



The Town of Mount Airy, Maryland

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PRECAST MANHOLE
TYPE TWO

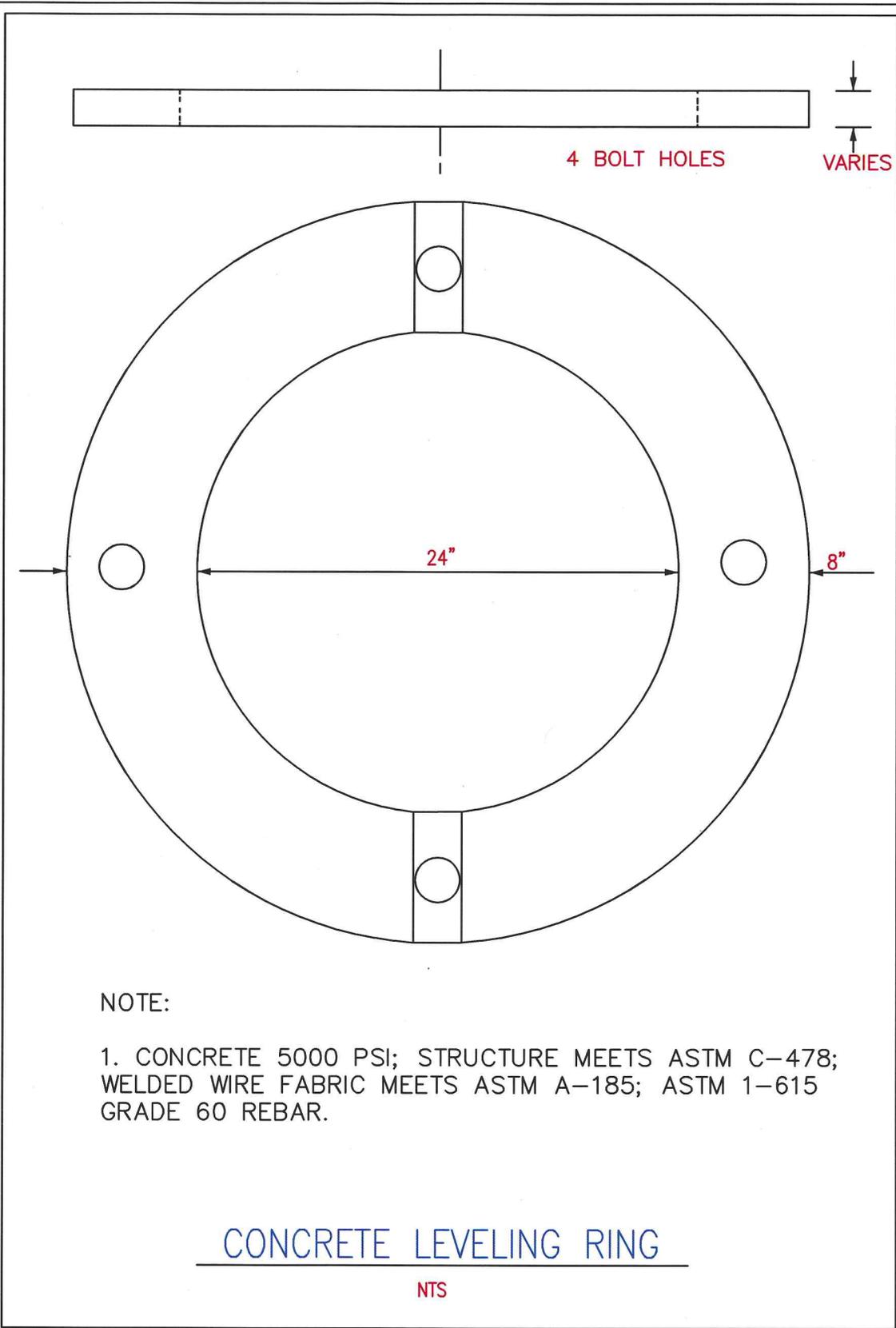
By:
MDH

Date

8/8/11

Standard Detail
No.

S-04



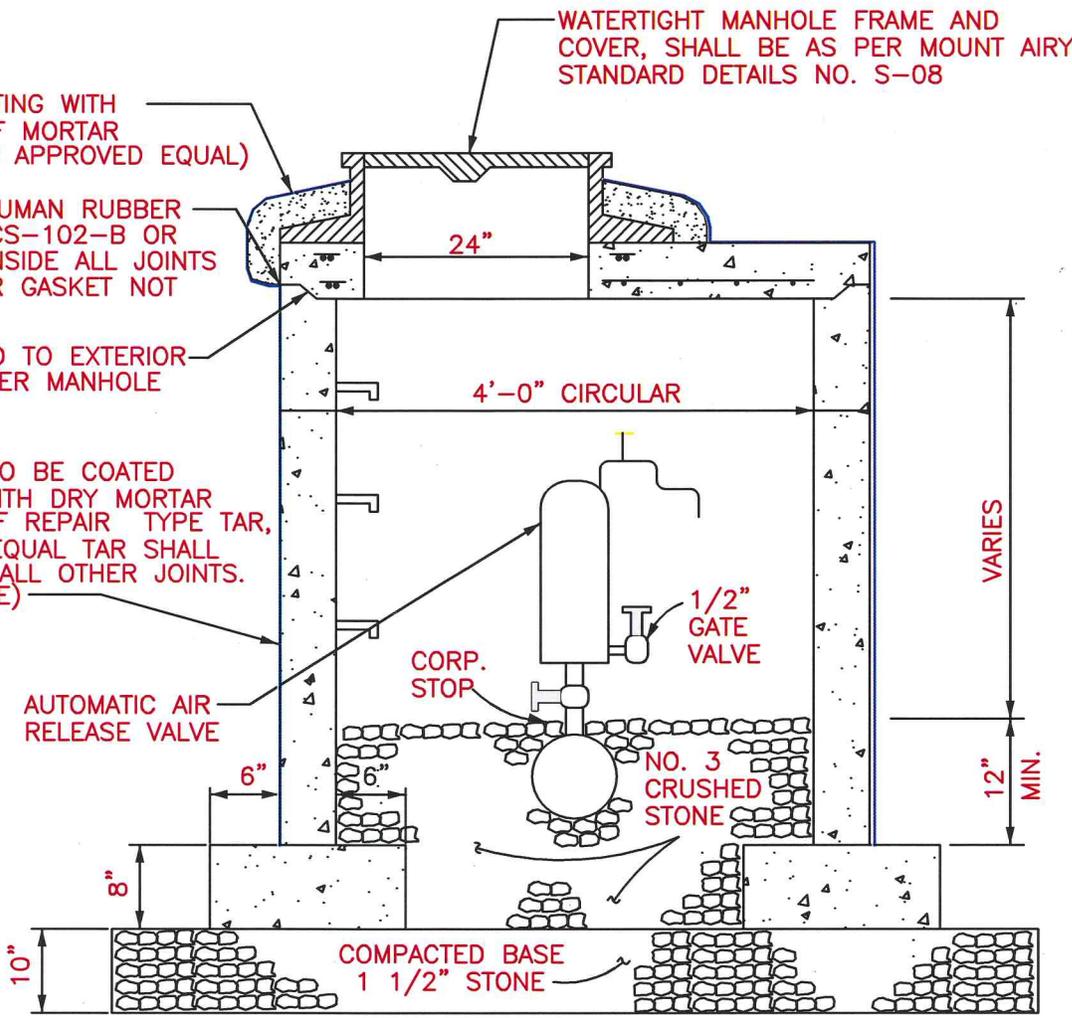
The Town of Mount Airy, Maryland

[Signature]

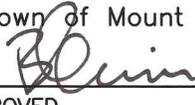
APPROVED

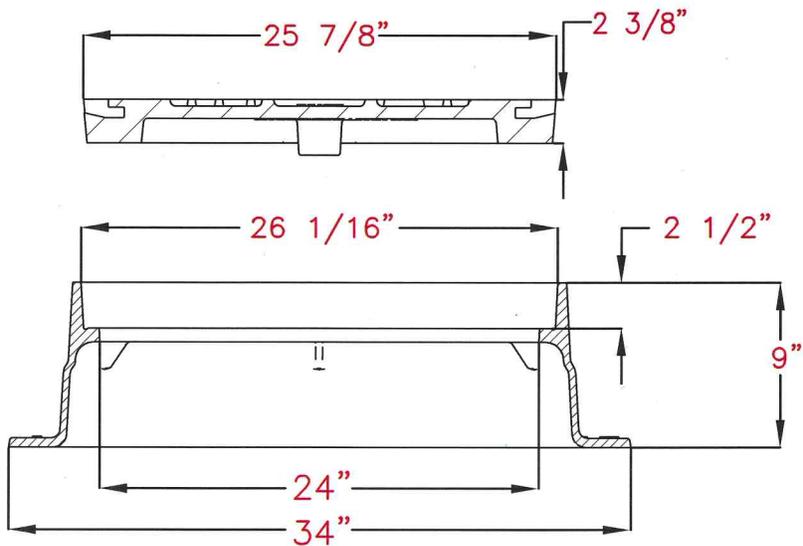
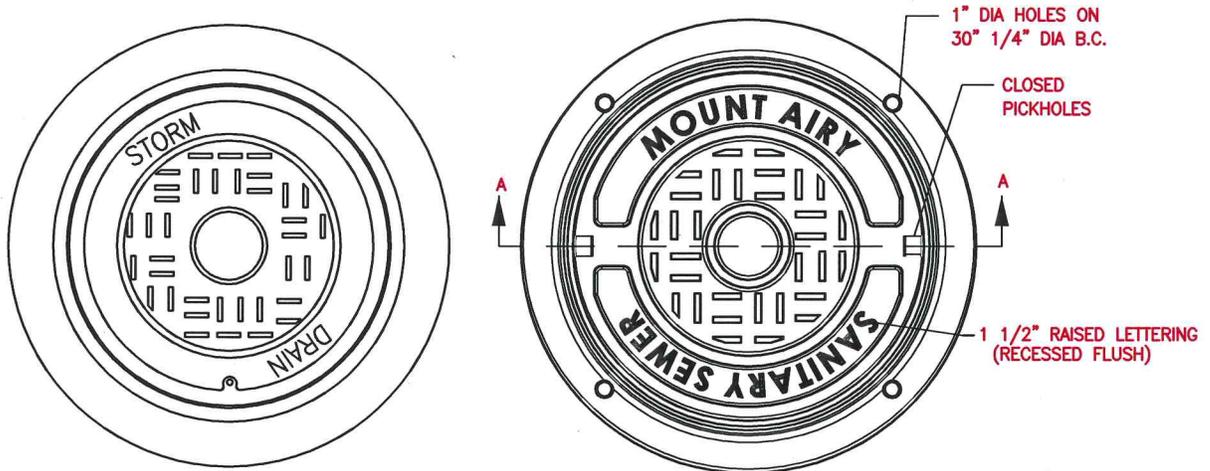
CONCRETE LEVELING RING

By: MDH	Date 7/21/10
Standard Detail No. S-05	



PRECAST CONCRETE MANHOLE WITH AIR RELEASE VALVE
 NTS

	The Town of Mount Airy, Maryland  APPROVED	PRECAST CONCRETE MANHOLE WITH AIR RELEASE VALVE	By: MDH	Date: 8/8/11
			Standard Detail No. S-06	



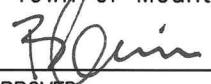
SECTION A-A

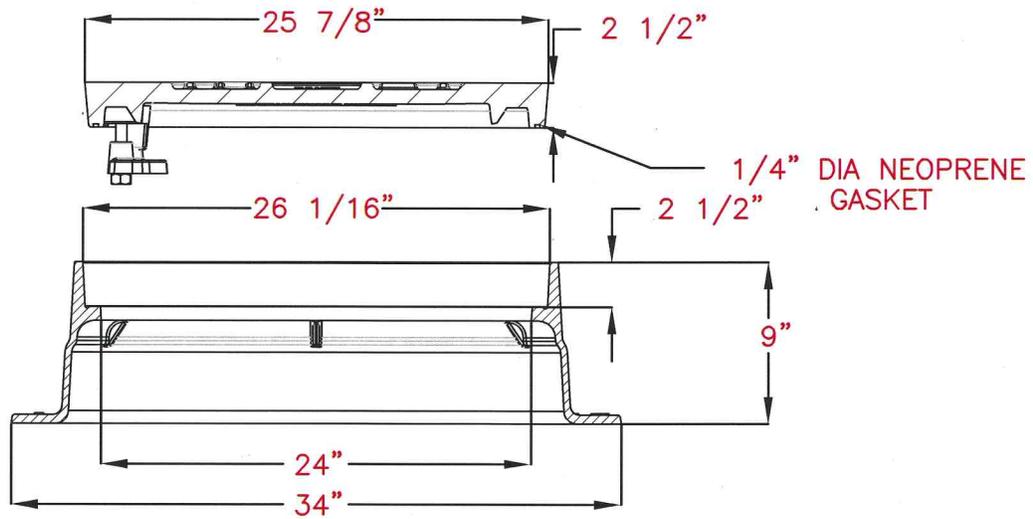
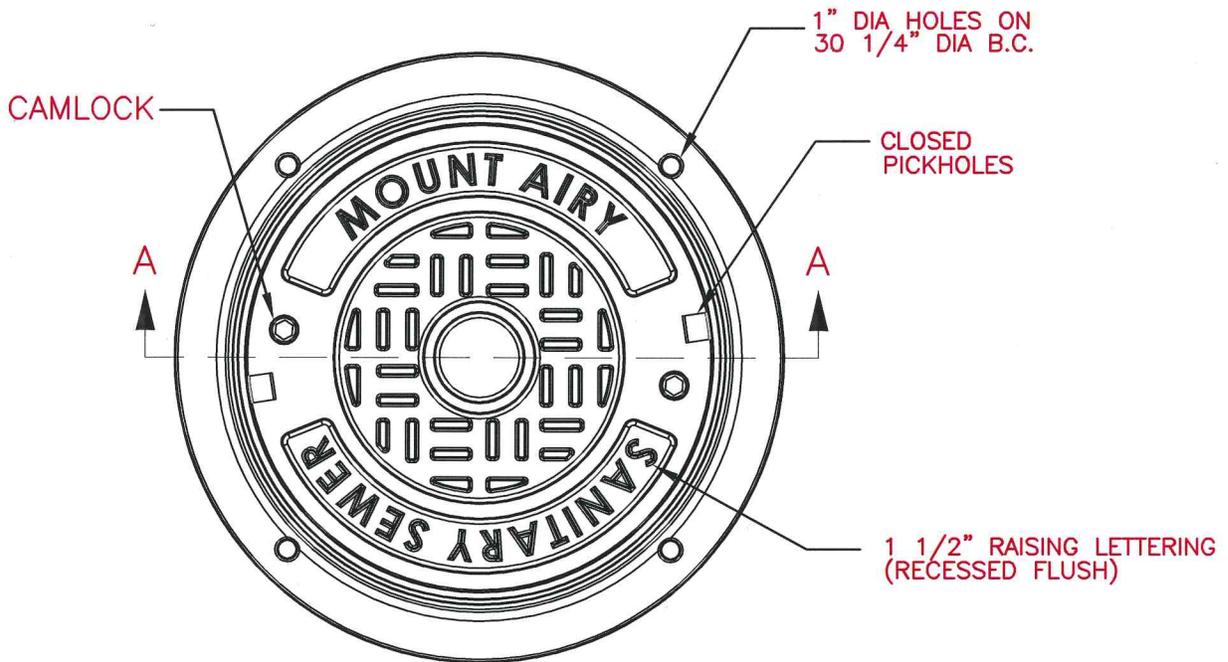
NOTES:

- 1. SANITARY SEWER COVER IS USED WITH PARSONS INSERT

SEWER MANHOLE FRAME AND COVER FOR PAVED AREA

NTS

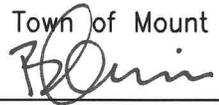
	The Town of Mount Airy, Maryland  APPROVED	SEWER MANHOLE FRAME AND COVER FOR PAVED AREA	By: MDH	Date: 7/21/10
			Standard Detail No. S-07	

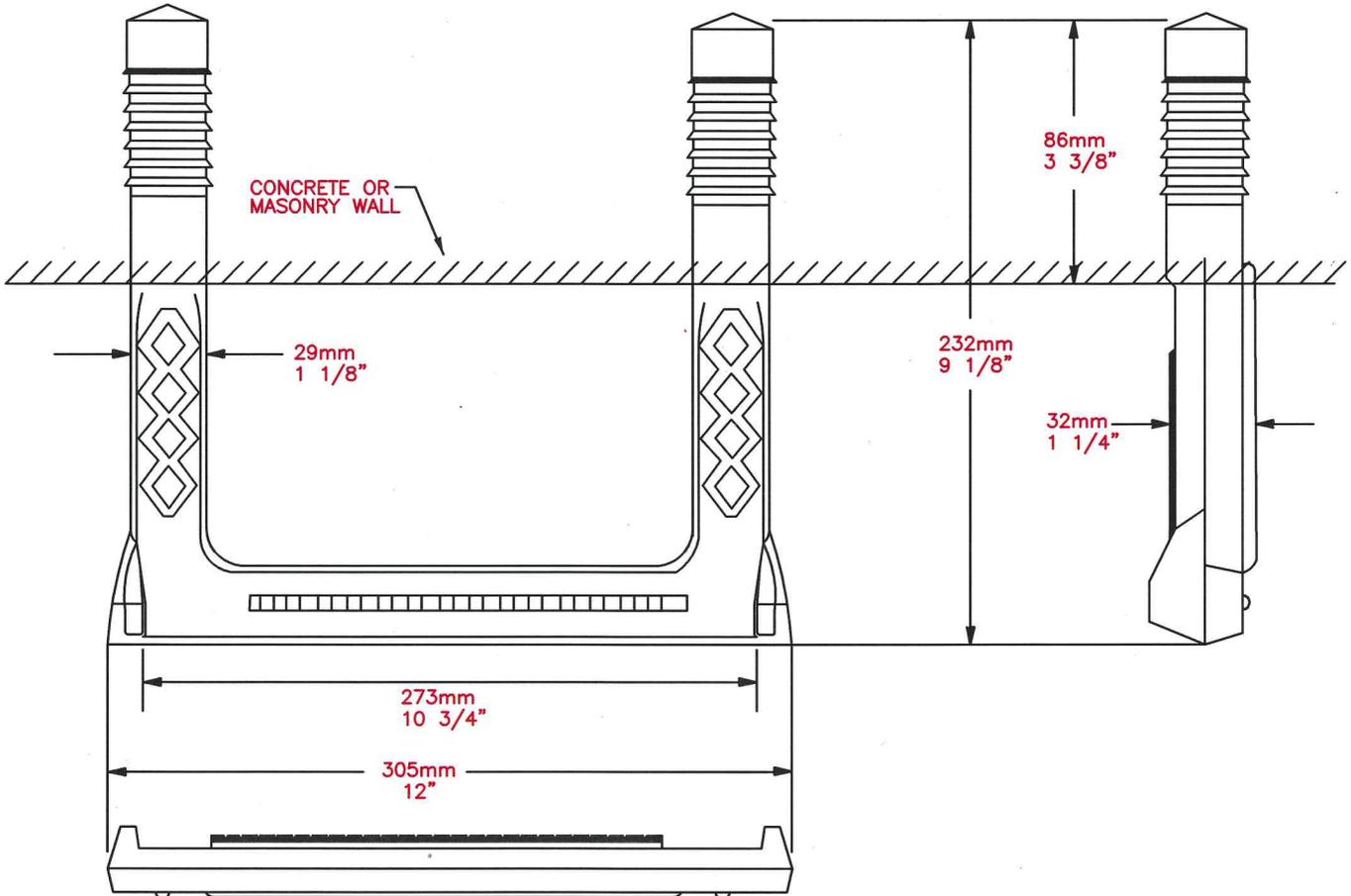


SECTION A-A

WATERTIGHT MANHOLE FRAME AND COVER

NTS

	The Town of Mount Airy, Maryland  APPROVED	WATERTIGHT MANHOLE FRAME AND COVER	By: MDH	Date 7/21/10
			Standard Detail No. S-08	



NOTES:

1. USE 13mm 1/2" GRADE 60 STEEL REINFORCEMENT
2. TO BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS
3. THE CENTER WIDTH SIZE MAY VARY FROM 10"-14"

COPOLYMER POLYPROPYLENE PLASTIC
MANHOLE STEP

NTS



The Town of Mount Airy, Maryland

[Signature]
APPROVED

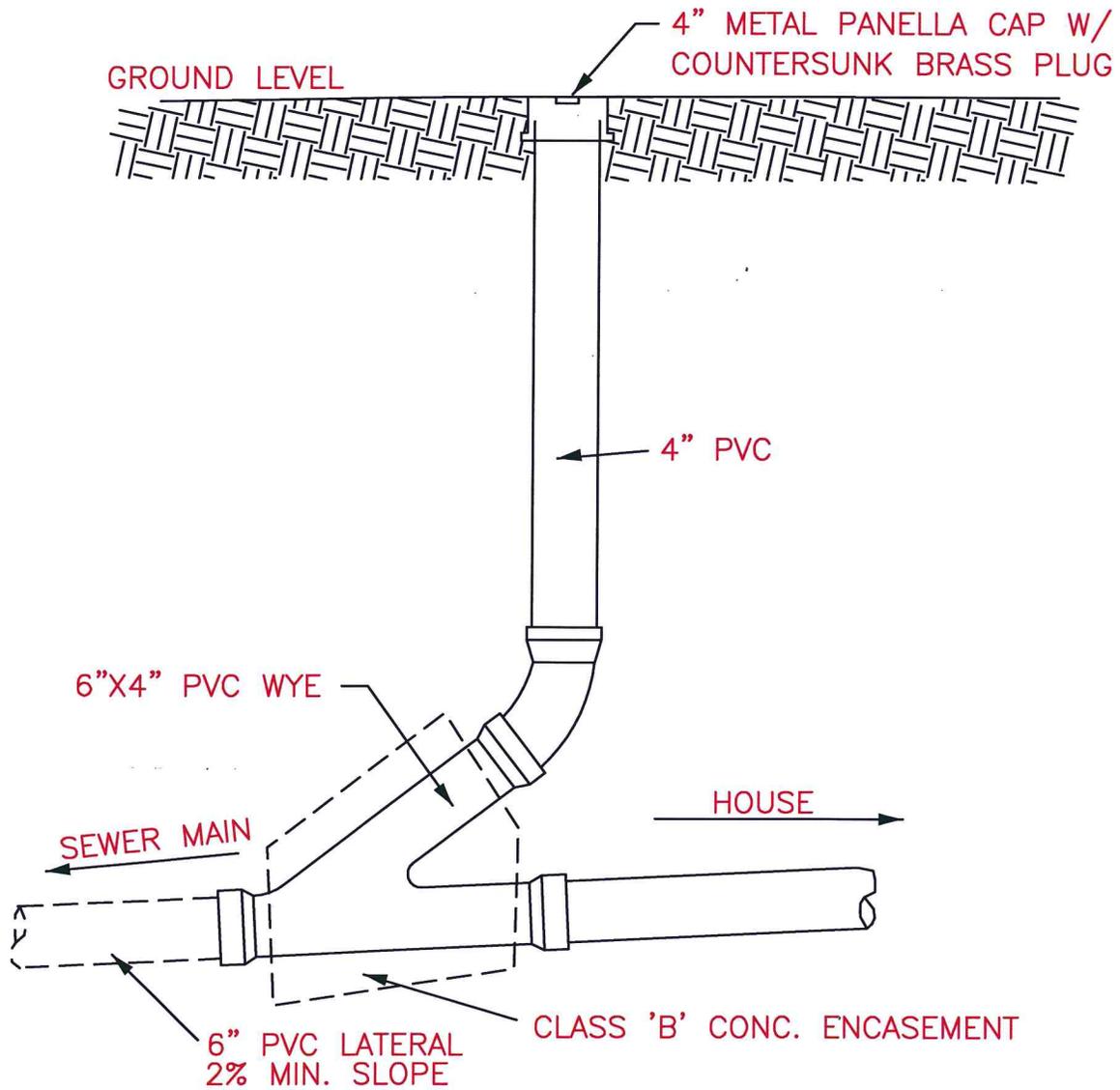
COPOLYMER
POLYPROPYLENE
PLASTIC
MANHOLE STEP

By:
MDH

Date
7/21/10

Standard Detail No.

S-09



SEWER HOUSE CONNECTION
CLEAN OUT DETAIL

NTS



The Town of Mount Airy, Maryland

APPROVED

[Signature]

SEWER HOUSE
CONNECTION CLEAN
OUT DETAIL

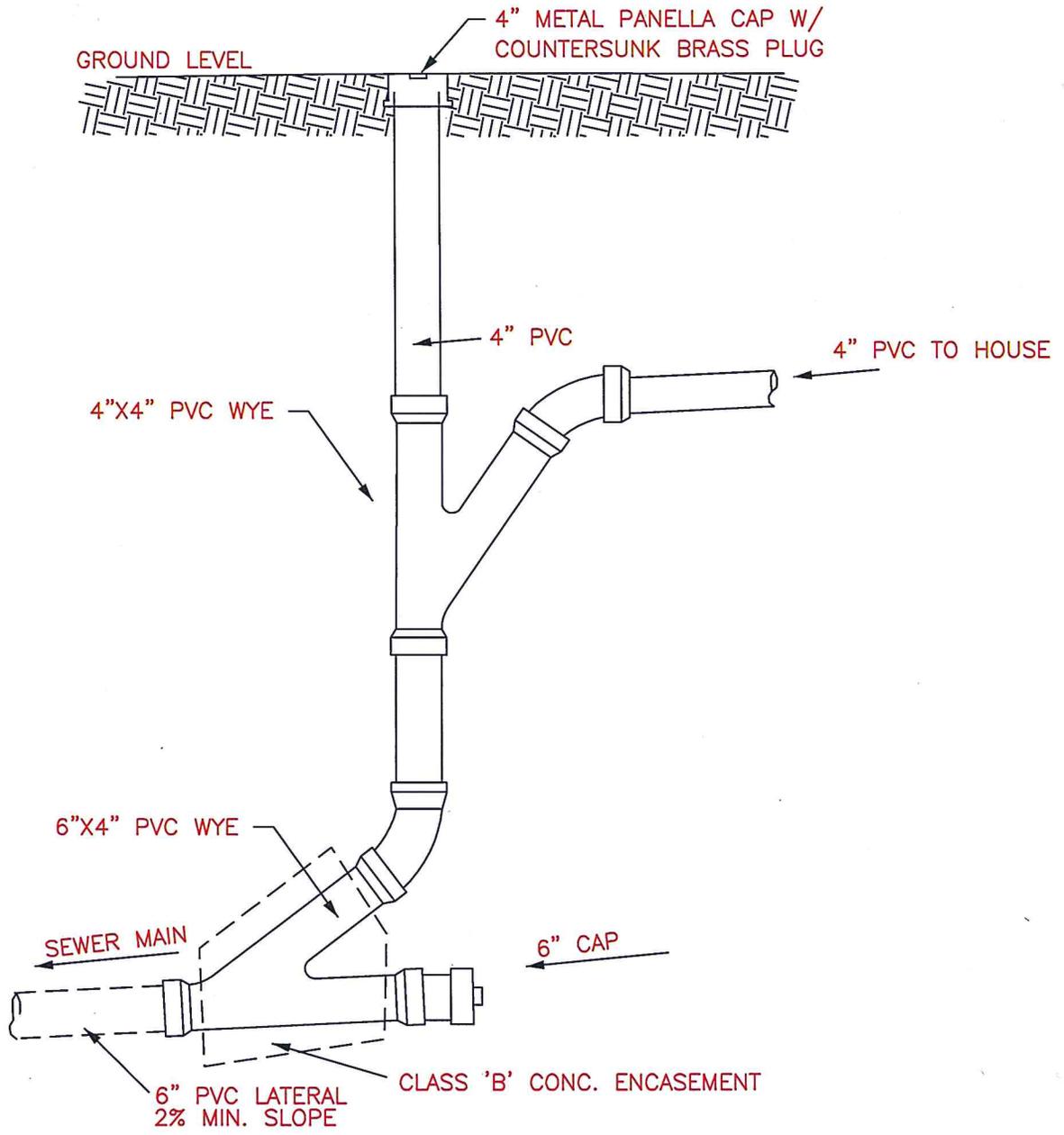
By:
MDH

Date

9/29/2016

Standard Detail No.

S-10



SEWER HOUSE CONNECTION
CLEAN OUT DETAIL

NTS



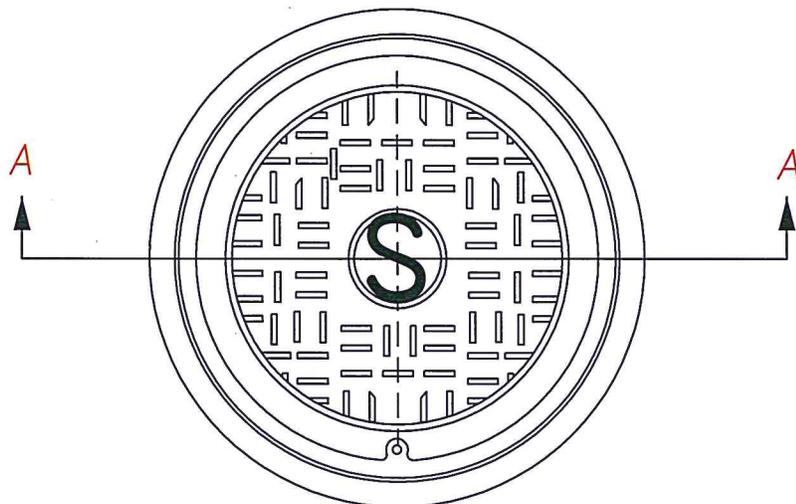
The Town of Mount Airy, Maryland

Boerin

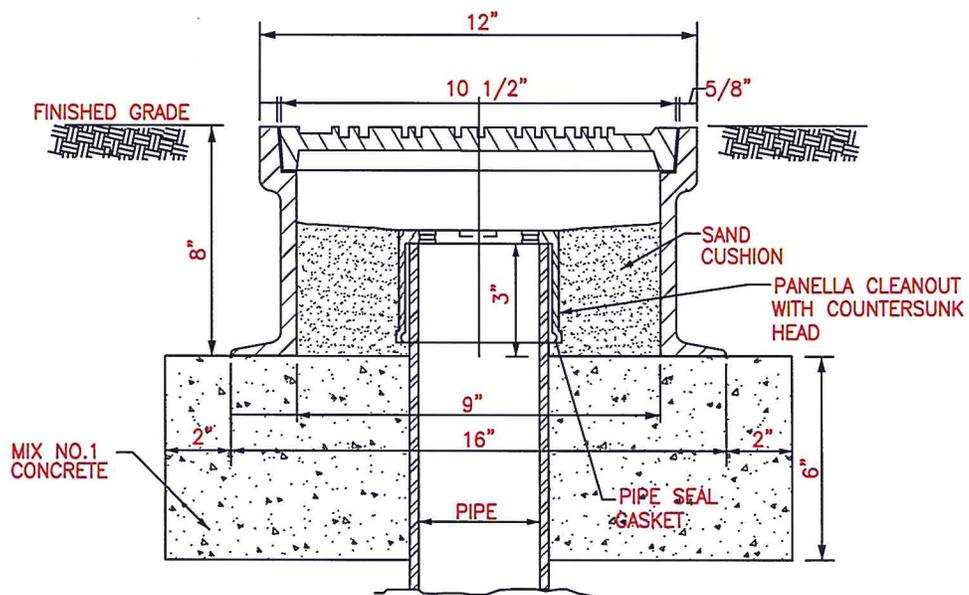
APPROVED

ALTERNATE SEWER
HOUSE
CONNECTION CLEAN
OUT DETAIL

By: CPD	Date 11/6/2018
Standard Detail No. S-11	



PLAN



SEWER CLEANOUT FRAME AND COVER
FOR PAVED AREA

NTS



The Town of Mount Airy, Maryland

APPROVED

SEWER CLEANOUT
FRAME AND COVER
FOR PAVED AREA

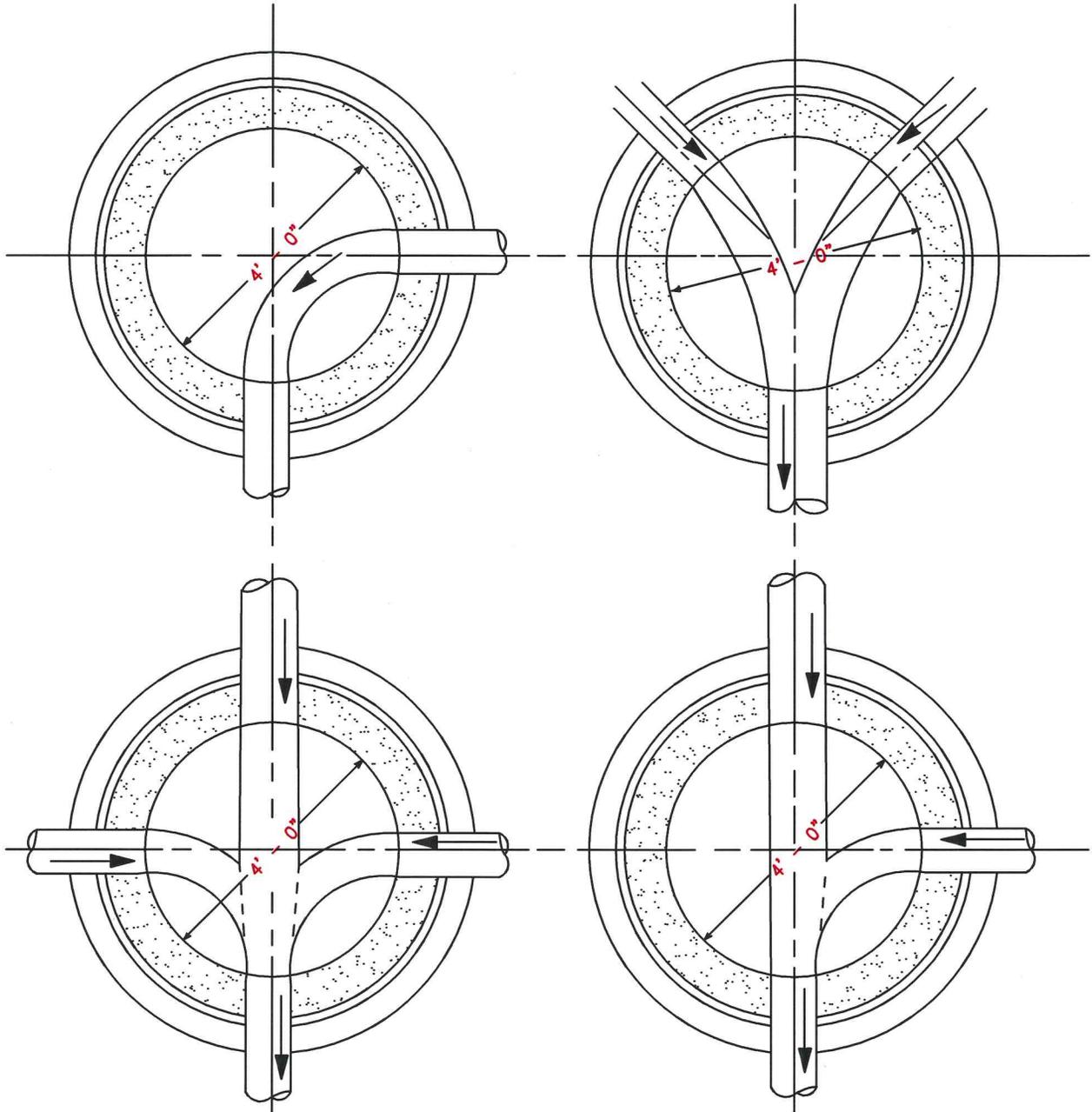
By:
MDH

Date

11/6/2018

Standard Detail No.

S-12



PLANS OF MANHOLES TYPICAL

NTS



The Town of Mount Airy, Maryland

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APPROVED

PLANS OF
MANHOLES TYPICAL

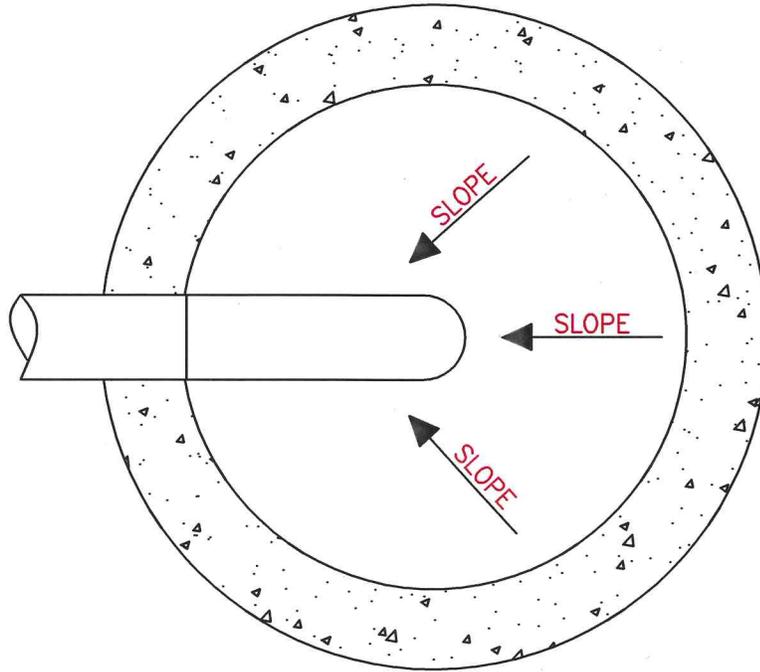
By:
MDH

Date

7/21/10

Standard Detail No.

S-13



INVERT AT TERMINAL MANHOLE

NTS



The Town of Mount Airy, Maryland

[Signature]

 APPROVED

INVERT AT
 TERMINAL MANHOLE

By:
 MDH

Date

7/21/10

Standard Detail No.

S-14

PURPOSELY LEFT BLANK



The Town of Mount Airy, Maryland

[Handwritten Signature]

APPROVED

By:
MDH

Date

7/21/10

Standard Detail No.

S-15

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The Town of Mount Airy, Maryland

[Handwritten Signature]

APPROVED

By:
MDH

Date

7/21/10

Standard Detail No.

S-16

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The Town of Mount Airy, Maryland

[Handwritten Signature]

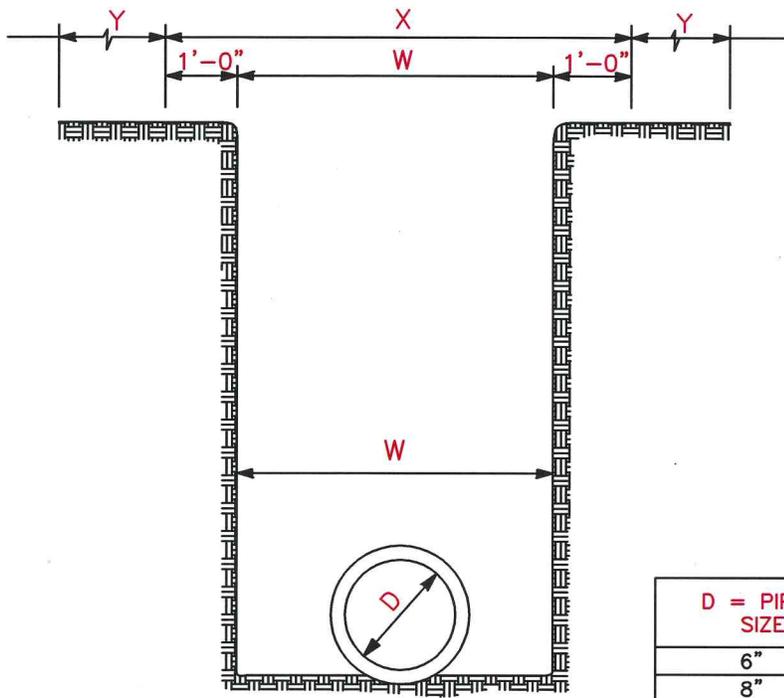
APPROVED

By:
MDH

Date
7/21/10

Standard Detail No.

S-17



X = MAXIMUM WIDTH OF PAVEMENT RESTORATION

Y = CONTRACTOR IS RESPONSIBLE FOR PAVEMENT RESTORATION IN THIS AREA ALSO (SEE NOTES)

NOTES:

1. ALL SEWER MAINS AND LATERALS SHALL HAVE A MINIMUM COVER OF 4'-0".
2. SEE STANDARD DETAIL S-18 FOR TRENCH WIDTH PER PIPE SIZES.
3. SEE STANDARD DETAIL S-19 AND S-20 FOR PIPE INSTALLATION.
4. WHERE TRENCHING IS DONE IN EXISTING ROADWAYS SEE STANDARD DETAIL R-15 AND R-16 FOR PAVEMENT PATCHING AND RESURFACING.

D = PIPE SIZE	W=MAX. TRENCH WIDTH	X = MAX. PAVEMENT WIDTH
6"	24"	48"
8"	24"	48"
10"	30"	54"
12"	30"	54"
15"	36"	60"
18"	42"	66"
21"	42"	66"
24"	48"	72"
27"	54"	78"
30"	60"	84"
33"	66"	90"
36"	66"	90"
42"	72"	96"
48"	84"	102"

TRENCH WIDTH PER PIPE SIZES

NTS



The Town of Mount Airy, Maryland
[Signature]
 APPROVED

TRENCH WIDTH PER PIPE SIZES

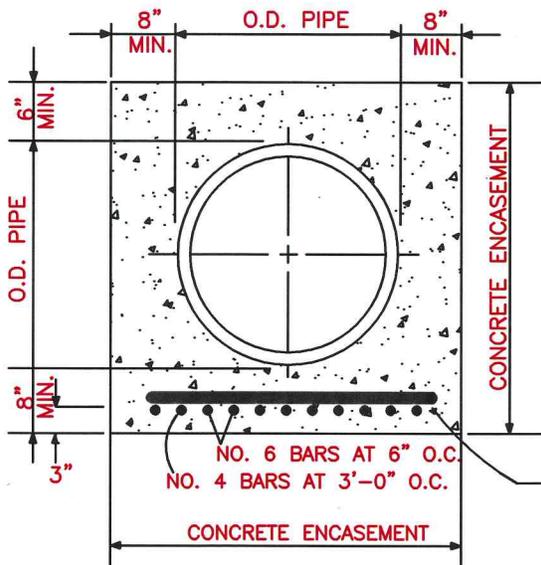
By: MDH

Date

7/21/10

Standard Detail No.

S-18



NOTE:

1. CONCRETE SHALL CONFORM TO MD S.H.A. STANDARD SPECIFICATIONS.

BOTTOM OF TRENCH

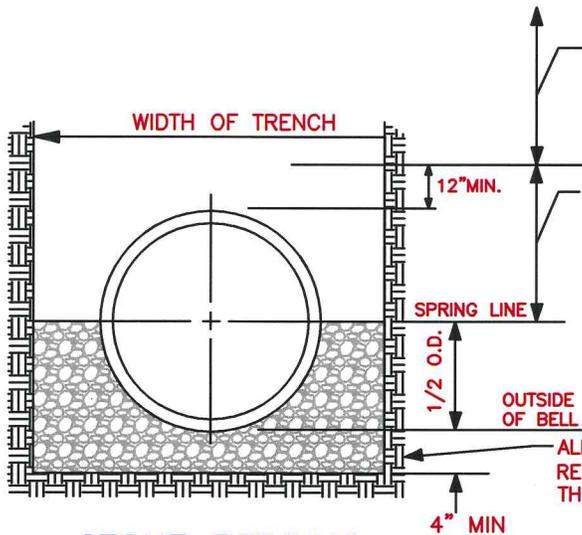
REINFORCING REQUIRED ONLY IF SOIL IS UNSTABLE OR UNDERCUTTING IS REQUIRED.

CONCRETE ENCASEMENT

NTS

NOTE:

1. STONE SHALL CONFORM TO MD S.H.A. STANDARD SPECIFICATIONS FOR GRADATION NO. 4
2. #57 STONE BEDDING SHALL BE PROVIDED UNDER ALL PIPE EXCEPT CIP AND DIP



PLACE BACKFILL AND COMPACT TO DENSITY REQUIRED WITH MECHANICAL TAMPER.

SELECT BACKFILL SHALL BE PLACED WITH HAND SHOVEL IN 6" LAYERS AND COMPACTED WITH A HAND TAMPER TO THE DENSITY AS REQUIRED BY THE SPECIFICATIONS.

ALL SOLID ROCK SHALL BE REMOVED WITHIN THE 4" BELOW THE PIPE INCLUDING THE BELLS.

STONE BEDDING STANDARD INSTALLATION

NTS



The Town of Mount Airy, Maryland

APPROVED

PIPE INSTALLATION

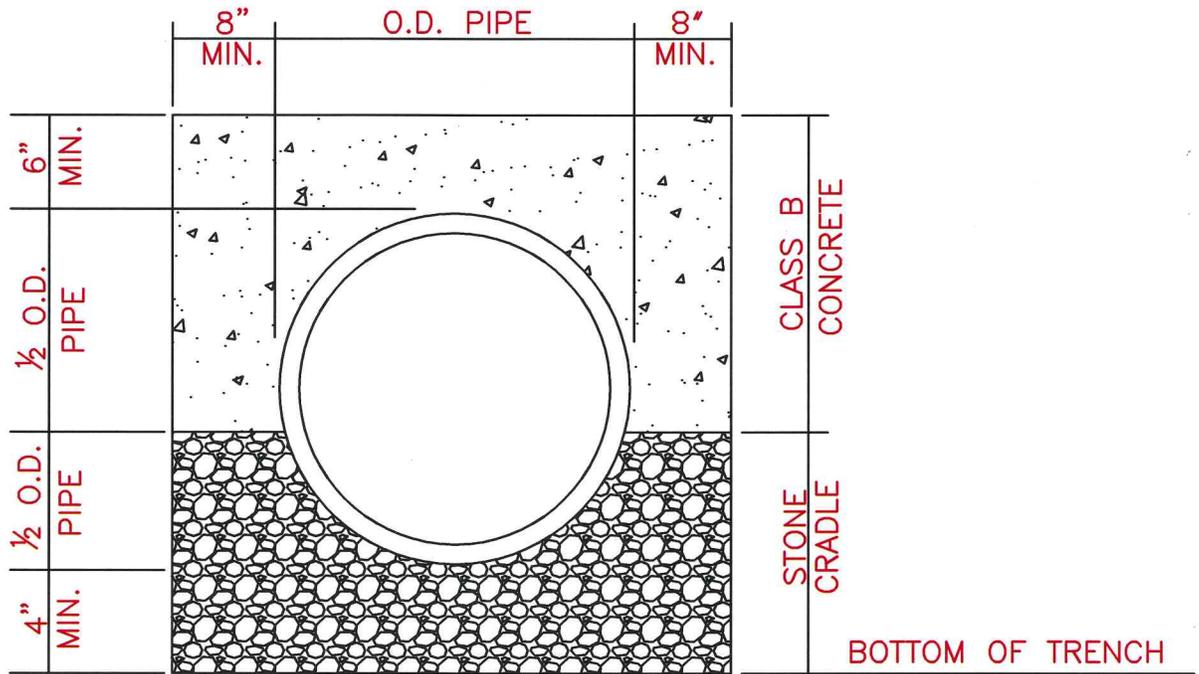
By: MDH

Date

7/21/10

Standard Detail No.

S-19



NOTE:

1. STONE AND CONCRETE AS SPECIFIED SHALL CONFORM TO MD. S.H.A. STANDARD SPECIFICATIONS.

CONCRETE ARCH PROTECTION

NTS



The Town of Mount Airy, Maryland

[Signature]

APPROVED

CONCRETE ARCH
PROTECTION

By:
MDH

Date

7/21/10

Standard Detail No.

S-20

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The Town of Mount Airy, Maryland

[Handwritten Signature]

APPROVED

By:
MDH

Date

7/21/10

Standard Detail No.

S-21

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The Town of Mount Airy, Maryland

[Handwritten Signature]

APPROVED

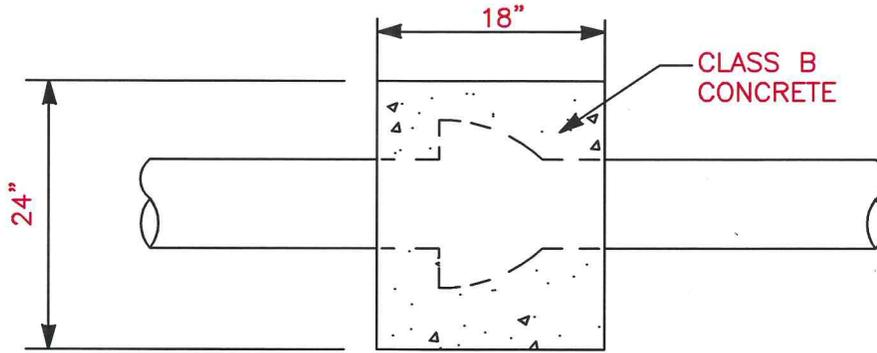
By:
MDH

Date

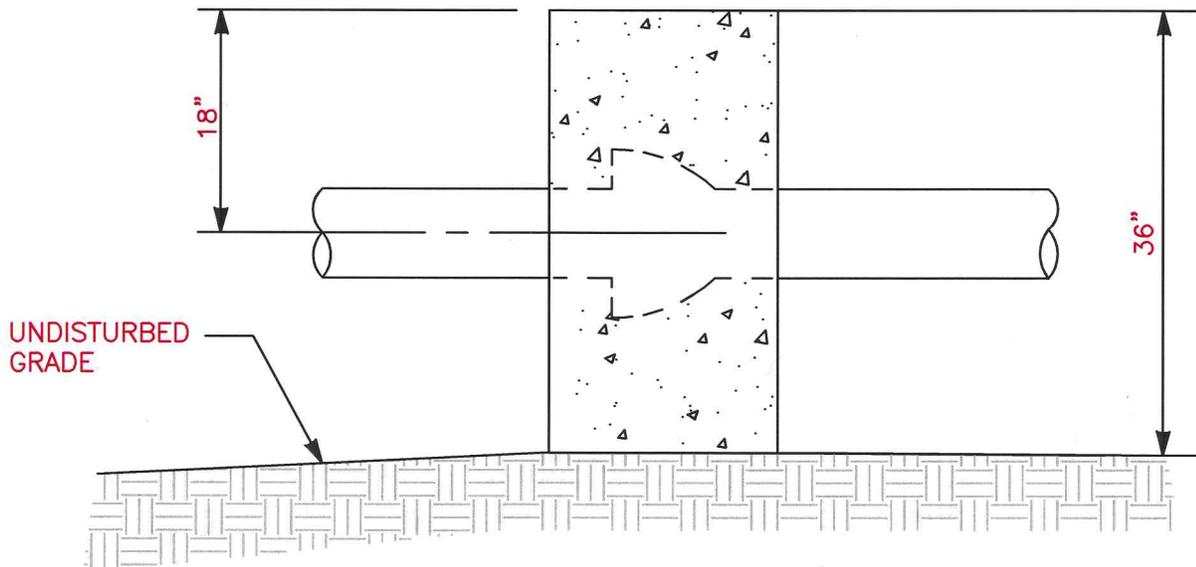
7/21/10

Standard Detail No.

S-22



TOP VIEW
NTS



SIDE VIEW
NTS

NOTES:

USE ANCHORS WHEN GRADE EXCEEDS 20%. SEWERS SHALL BE LAID WITH A UNIFORM SLOPE BETWEEN MANHOLES. SEWERS ON 20 PERCENT SLOPE OR GREATER SHALL BE ANCHORED SECURELY WITH CONCRETE ANCHORS OR EQUAL. SPACED AS FOLLOWS:

1. NOT OVER 36 FEET CENTER TO CENTER ON GRADES 20 PERCENT AND UP TO 35 PERCENT.
2. NOT OVER 24 FEET CENTER TO CENTER ON GRADES 35 PERCENT AND UP TO 50 PERCENT.

TYPICAL CONCRETE ANCHOR
NTS



The Town of Mount Airy, Maryland

[Signature]
APPROVED

TYPICAL CONCRETE ANCHOR

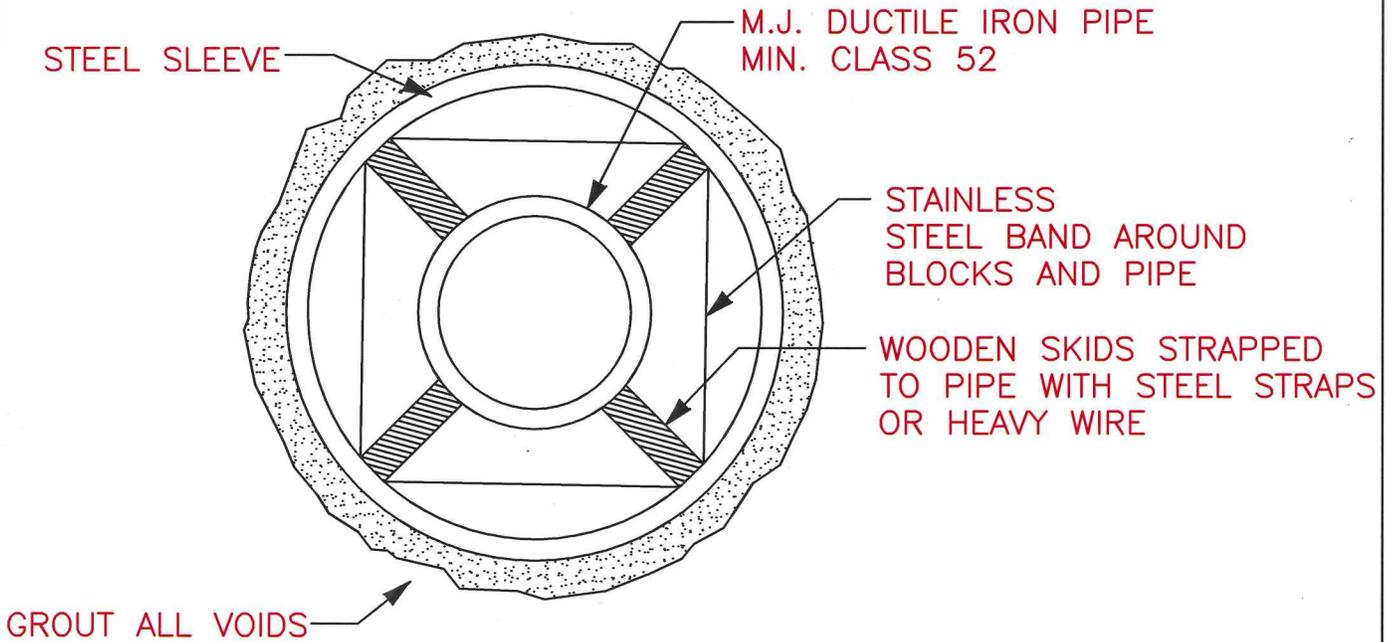
By:
MDH

Date

7/21/10

Standard Detail No.

S-23



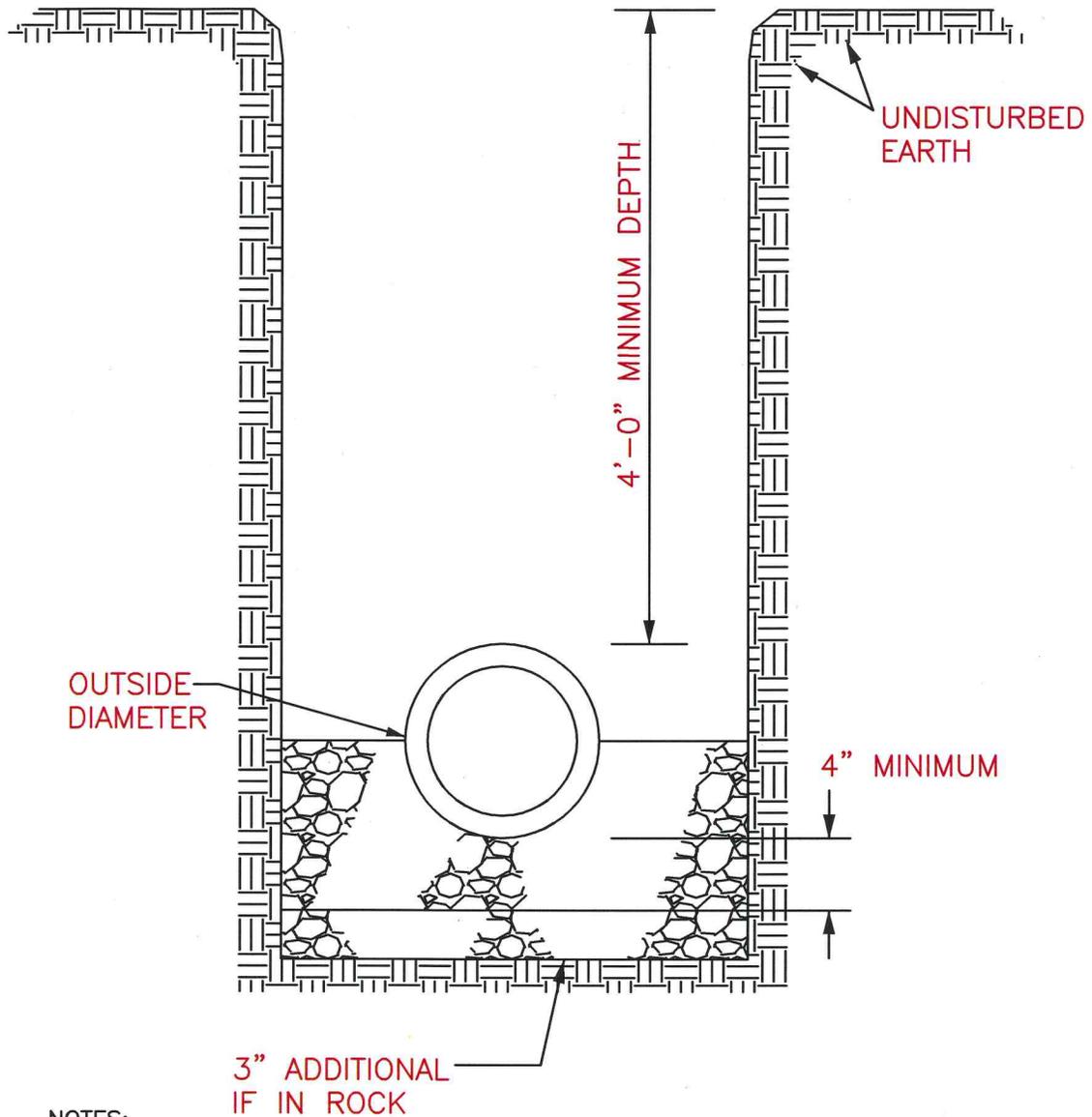
NOTES:

CARRIER PIPE DIAMETER, SLEEVE DIAMETER AND SLEEVE THICKNESS TO BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH GOVERNING STANDARDS FOR EACH INSTALLATION.

SLEEVE & CARRIER PIPE INSTALLATION

NTS

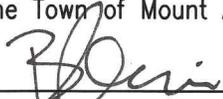
	The Town of Mount Airy, Maryland  APPROVED	SLEEVE & CARRIER PIPE INSTALLATION	By: MDH	Date 7/21/10
			Standard Detail No. S-24	

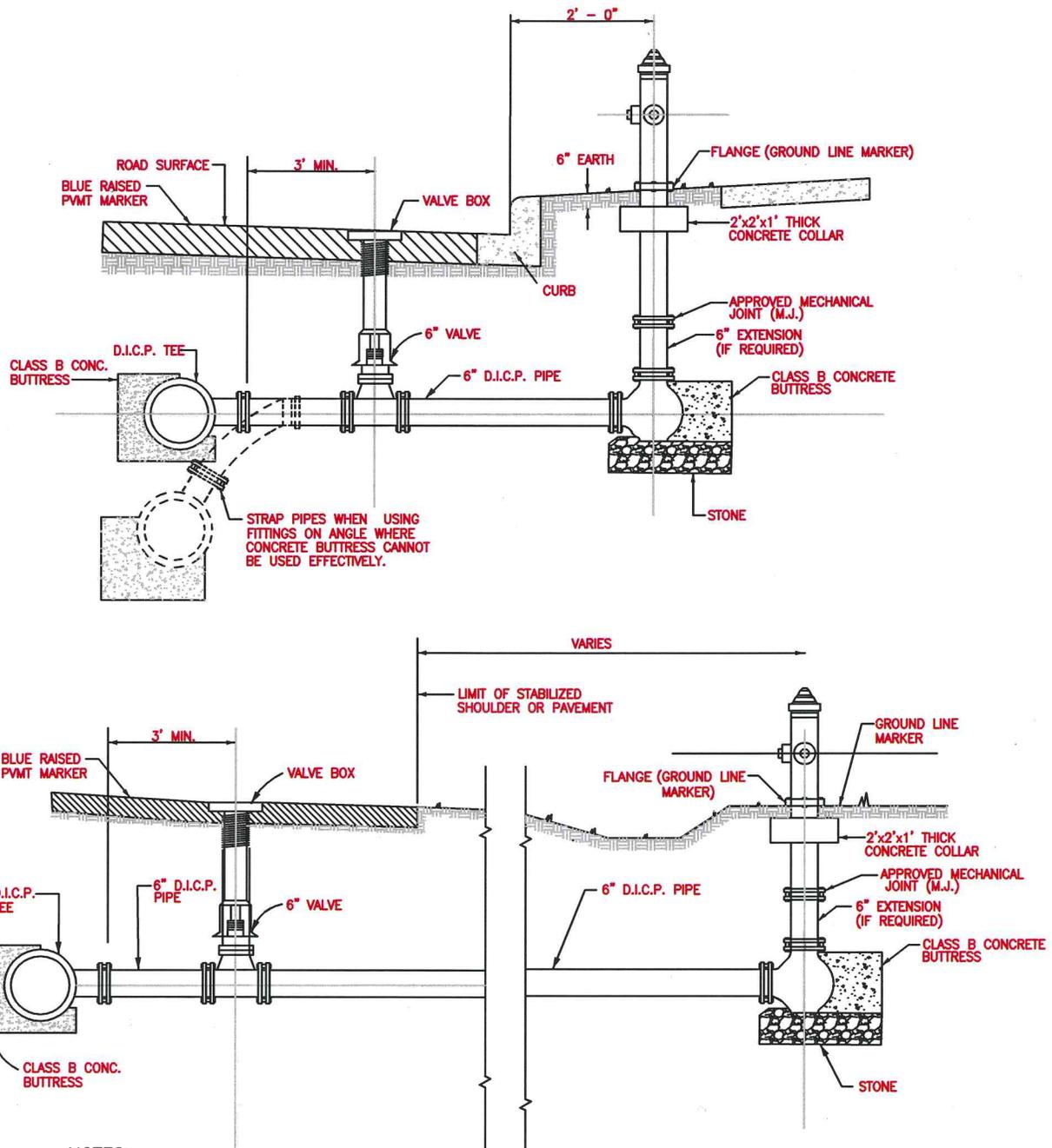


NOTES:

1. ALL WATER MAINS AND LATERALS SHALL HAVE A MINIMUM COVER OF 4'-0".
2. SEE STANDARD DETAIL S-18 FOR TRENCH WIDTH PER PIPE SIZES.
3. SEE STANDARD DETAIL S-19 AND S-20 FOR PIPE INSTALLATION.

PIPE AND TRENCH DETAIL
NTS

	The Town of Mount Airy, Maryland  _____ APPROVED	PIPE AND TRENCH DETAIL	By: MDH	Date: 7/21/16
				Standard Detail No. W-01



NOTES:

1. A CLASS B CONCRETE BUTTRESS MUST BE ALONG WITH THE USE OF APPROVED MECHANICAL JOINT RESTRAINTS AT ALL JOINTS
2. THE BLUE RAISED PAVEMENT MARKER IS TO BE 5' FROM THE CENTER LINE OF THE ROAD.

FIRE HYDRANT SETTINGS

NTS



The Town of Mount Airy, Maryland

[Signature]
APPROVED

FIRE HYDRANT
SETTINGS

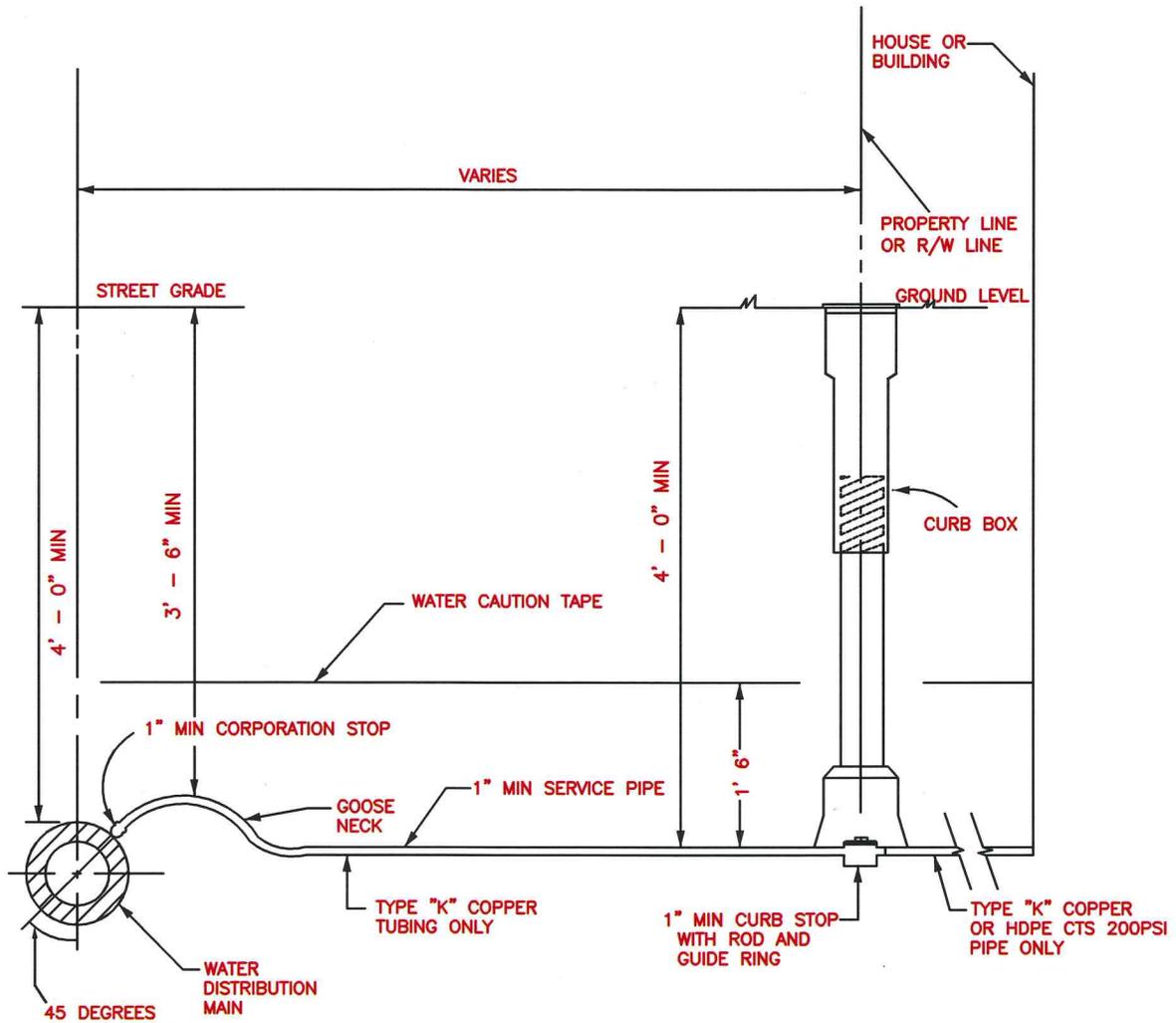
By:
MDH

Date

8-8-11

Standard Detail No.

W-02

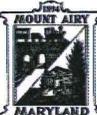


NOTES:

1. COPPER PIPE FOR WATER SERVICES SHALL BE SEAMLESS COPPER SERVICE PIPE SUITABLE FOR USE AS UNDERGROUND SERVICE CONNECTIONS AND GENERAL PLUMBING IN ACCORDANCE WITH ASTM B68-56, CLASS "K" SPECIFICATIONS, U.S. GOVERNMENT TYPE "K" SPECIFICATIONS WW-T-799
2. NO CURB INSTALLATIONS IN SIDEWALK
3. ALLOWANCE FOR HIGH-DENSITY POLYETHYLENE (H.D.P.E.) PIPE FOR WATER HOUSE CONNECTION (RESIDENTIAL, COMMERCIAL, OR INDUSTRIAL) MAY BE PERMITTED FROM THE CURB STOP TO THE BUILDING/HOUSE. ALL H.D.P.E SHALL BE COPPER TUBE SIZE (C.T.S.) MEETING ASTM D2737 STANDARD ONLY. POLYETHYLENE PIPE MEETING ASTM D2239 STANDARD FOR IRON PIPE SIZE (I.P.S.) OR "WELL PIPE" WILL NOT BE ACCEPTED.
4. COMMERCIAL BUILDINGS: WATER METERS SHALL BE INSTALLED IN A ROOM WHERE W.H.C. ENTERS HOUSE/BUILDING. WHERE MULTIPLE METERS ARE INSTALLED WITHIN SAME BUILDING ALL METERS MUST BE LOCATED IN SAME ROOM WHERE W.H.C. ENTERS BUILDING. THIS ROOM SHALL BE ACCESSIBLE TO TOWN'S WATER MAINTENANCE EMPLOYEES FOR PERIODIC AND EMERGENCY MAINTENANCE.
5. 18" ABOVE WATER LINE USE TAPE. IF H.D.P.E. PIPE USE METALLIC TAPE OTHERWISE USE BLUE PLASTIC TAPE OVER COPPER.

HOUSE SERVICE CONNECTION

NTS

	The Town of Mount Airy, Maryland  APPROVED	HOUSE SERVICE CONNECTION	By: MDH	Date 7/21/10
				Standard Detail No. W-03

APPROVED MECHANICAL JOINT (TYP.)

UNDISTURBED EARTH

UNDISTURBED EARTH

APPROVED MECHANICAL JOINT (TYP.)

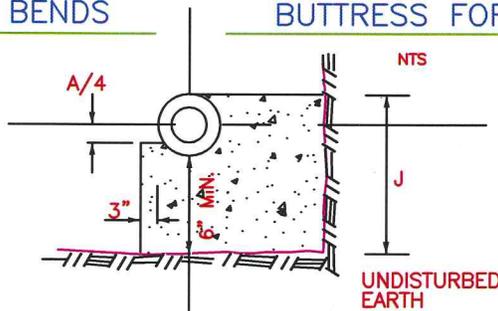
APPROVED MECHANICAL JOINT (TYP.)

BUTTRESS FOR TEES AND 45° AND 90° BENDS

BUTTRESS FOR CAPS

NTS

NTS



UNDISTURBED EARTH

FOR ALL BENDS 45° OR LESS

BUTTRESS FOR HORIZONTAL AND VERTICAL BENDS

NTS

GENERAL NOTES:

1. ALL CONCRETE TO BE CLASS "B"
2. CARRY CONCRETE BUTTRESS TO UNDISTURBED EARTH.
3. BUTTRESS DIMENSIONS SHOWN ARE MINIMUM. DIMENSIONS ARE BASED UPON SOIL BEARING PRESSURE OF 3000 P.S.F. AND STATIC WATER PRESSURE OF 150 P.S.I. WHERE WATER PRESSURE EXCEEDS 150 P.S.I. AND/OR WHERE SOIL BEARING PRESSURE IS LESS THAN 3000 P.S.F. SPECIAL BUTTRESS DESIGN IS REQUIRED.

MINIMUM BUTTRESS DIMENSIONS						
A	PIPE SIZE	6"	8"	10"	12"	16"
C		7"	9"	13"	15"	25"
D		10"	10"	10"	12"	14"
E		1.5"	2.0"	2.5"	3.0"	4.0"
F		15"	21"	30"	36"	54"
H		16"	18"	20"	22"	26"
J		10"	12"	14"	16"	20"



The Town of Mount Airy, Maryland

APPROVED

BUTTRESS
DETAILS

By:
MDH

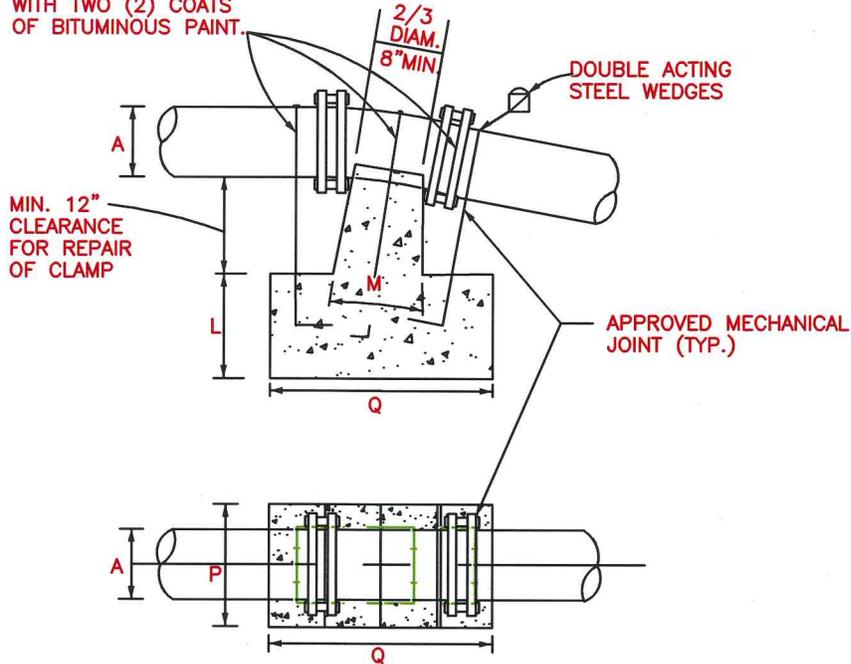
Date

7/21/10

Standard Detail
No.

W-04

3-NO. 6 BARS BENT AND EMBEDDED AS SHOWN. PAINT EXPOSED SURFACE WITH TWO (2) COATS OF BITUMINOUS PAINT.



ANCHORAGE FOR VERTICAL BENDS

NTS

MINIMUM BUTTRESS DIMENSIONS						
A	PIPE SIZE	6"	8"	10"	12"	16"
L	11 1/4"	18"	24"	24"	30"	36"
	22 1/2"	24"	24"	30"	30"	42"
	45"	24"	30"	42"	46"	54"
M		20"	24"	30"	30"	36"
P	11 1/4"	18"	24"	30"	30"	36"
	22 1/2"	24"	30"	36"	42"	48"
	45"	30"	36"	42"	48"	60"
Q	11 1/4"	24"	24"	30"	36"	42"
	22 1/2"	30"	36"	42"	48"	54"
	45"	42"	48"	54"	60"	72"

NOTES:

1. ALL CONCRETE TO BE CLASS "B."
2. CARRY CONCRETE BUTTRESS TO UNDISTURBED EARTH.
3. BUTTRESS DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS ARE BASED UPON SOIL BEARING PRESSURE OF 3000 P.S.F. AND STATIC WATER PRESSURE OF 150 P.S.I.
4. WHERE WATER PRESSURE EXCEEDS 150 P.S.I AND/OR WHERE SOIL BEARING PRESSURE IS LESS THAN 5000 P.S.F SPECIAL BUTTRESS DESIGN IS REQUIRED.



The Town of Mount Airy, Maryland

APPROVED

ANCHORAGE FOR VERTICAL BENDS

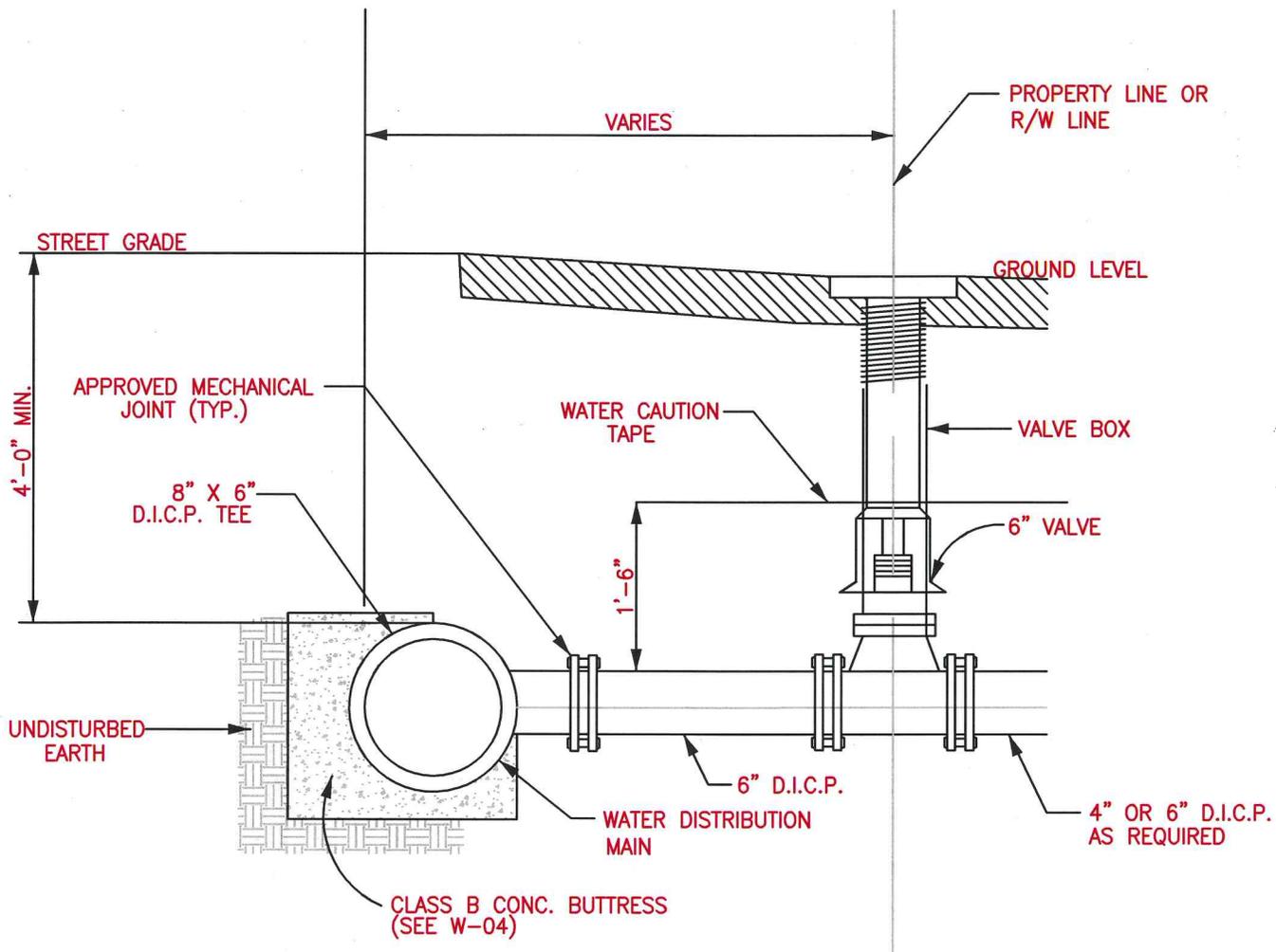
By:
MDH

Date

7/21/10

Standard Detail
No.

W-05



NOTES:

1. NO VALVE BOXES IN SIDEWALK.
2. COMMERCIAL BUILDINGS: WATER METERS SHALL BE INSTALLED IN A ROOM WHERE W.H.C. ENTERS HOUSE/BUILDING. WHERE MULTIPLE METERS ARE INSTALLED WITHIN SAME BUILDING ALL METERS MUST BE LOCATED IN SAME ROOM WHERE W.H.C. ENTERS BUILDING. THIS ROOM SHALL BE ACCESSIBLE TO TOWN'S WATER MAINTENANCE EMPLOYEES FOR PERIODIC AND EMERGENCY MAINTENANCE.
3. 18" ABOVE WATER LINE USE TAPE.

**COMMERCIAL/INDUSTRIAL WATER
SERVICE CONNECTION**

NTS



The Town of Mount Airy, Maryland

[Signature]
APPROVED

COMMERCIAL/INDUSTRIAL
WATER SERVICE
CONNECTION

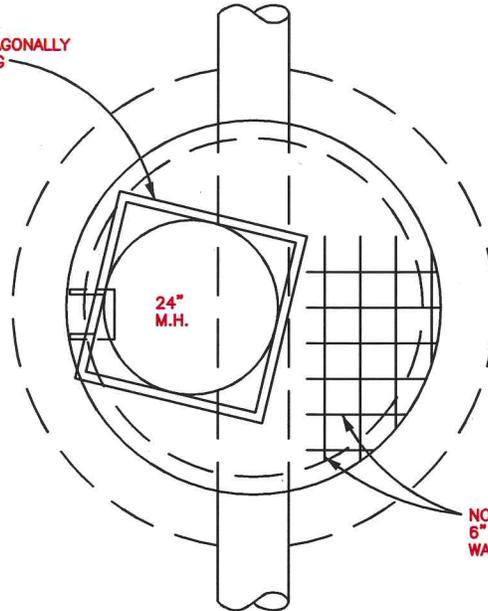
By:
MDH

Date
7/21/10

Standard Detail
No.

W-06

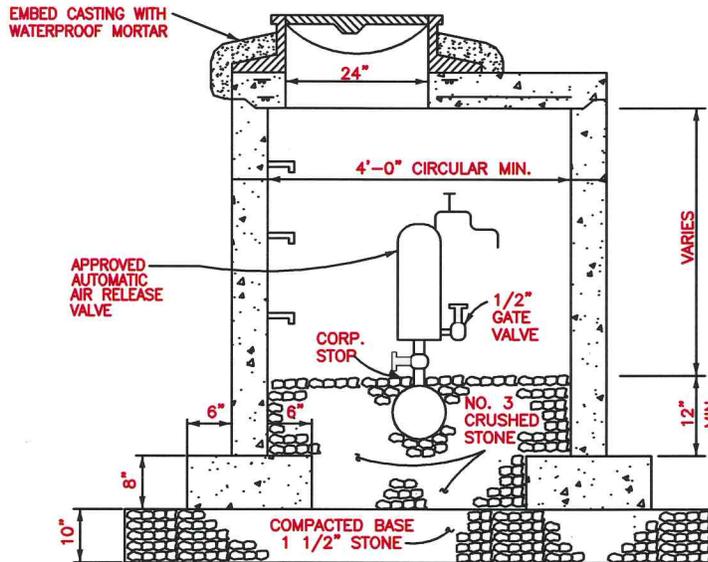
NO. 4 BARS, DIAGONALLY
AROUND OPENING



NO. 4 BARS AT
6" O.C. BOTH
WAYS

MANHOLE FRAME AND COVER SHALL
BE MIN. 420 TRAFFIC TYPE, AND
THE COVERS SHALL HAVE WATERTIGHT
PICK HOLES

EMBED CASTING WITH
WATERPROOF MORTAR



NOTES:

1. CONCRETE 5000 PSI; STRUCTURE MEETS ASTM C-478; WELDED WIRE FABRIC MEETS ASTM A-185; ASTM A-615 GRADE 60 REBAR.
2. THE FIRST JOINT OUTSIDE THE MANHOLE (BOTH INLET AND OUTLET) SHALL BE WITHIN 12" OF THE OUTSIDE FACE OF THE MANHOLE.
3. ALL INVERTS OF MANHOLES TO BE KEPT TO GRADE, WITH SMOOTH AND EVEN FINISH.
4. MANHOLE BASE SHALL BE PRECAST WITH WATERTIGHT FLEXIBLE CONNECTION FOR ALL PIPES. INVERTS SHALL BE CAST IN PLACE.
5. STONE AND CONCRETE AS SPECIFIED SHALL CONFORM TO MD. S.H.A. STANDARD SPECIFICATIONS.

AIR RELEASE VALVE IN MANHOLE

NTS



The Town of Mount Airy, Maryland
B. Blinn
APPROVED

AIR RELEASE VALVE
IN MANHOLE

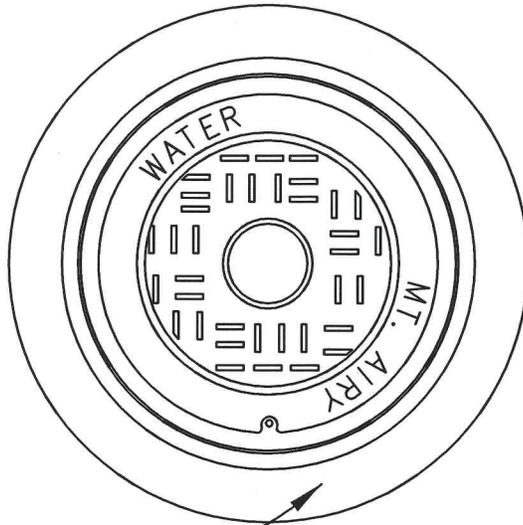
By:
MDH

Date

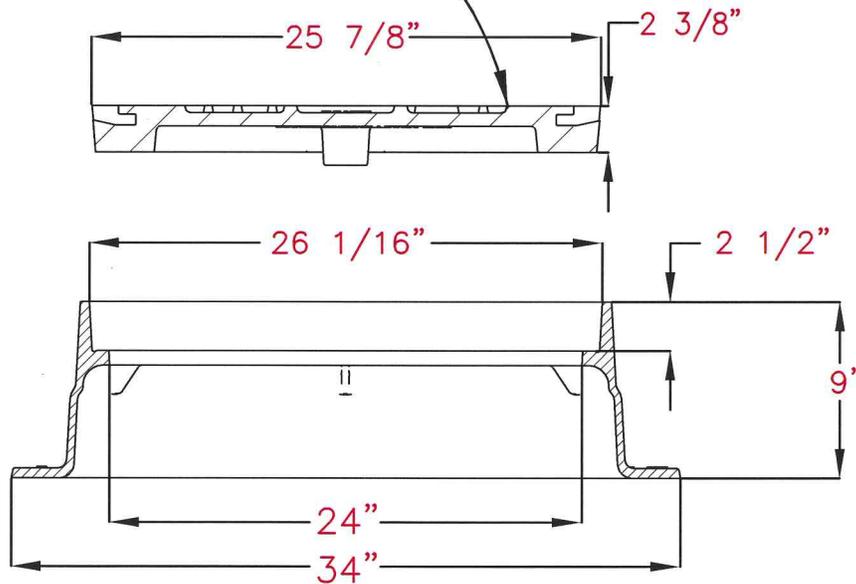
8/9/11

Standard Detail
No.

W-07



THE FRAME AND COVERS SHALL ALL BE MIN. 420 TRAFFIC TYPE, AND THE COVER SHALL HAVE THE WORDING AS SHOWN. PICK HOLES SHALL BE WATERTIGHT.



SECTION A-A

MANHOLE FRAME AND COVER

NTS



The Town of Mount Airy, Maryland

[Handwritten Signature]

APPROVED

MANHOLE FRAME AND COVER

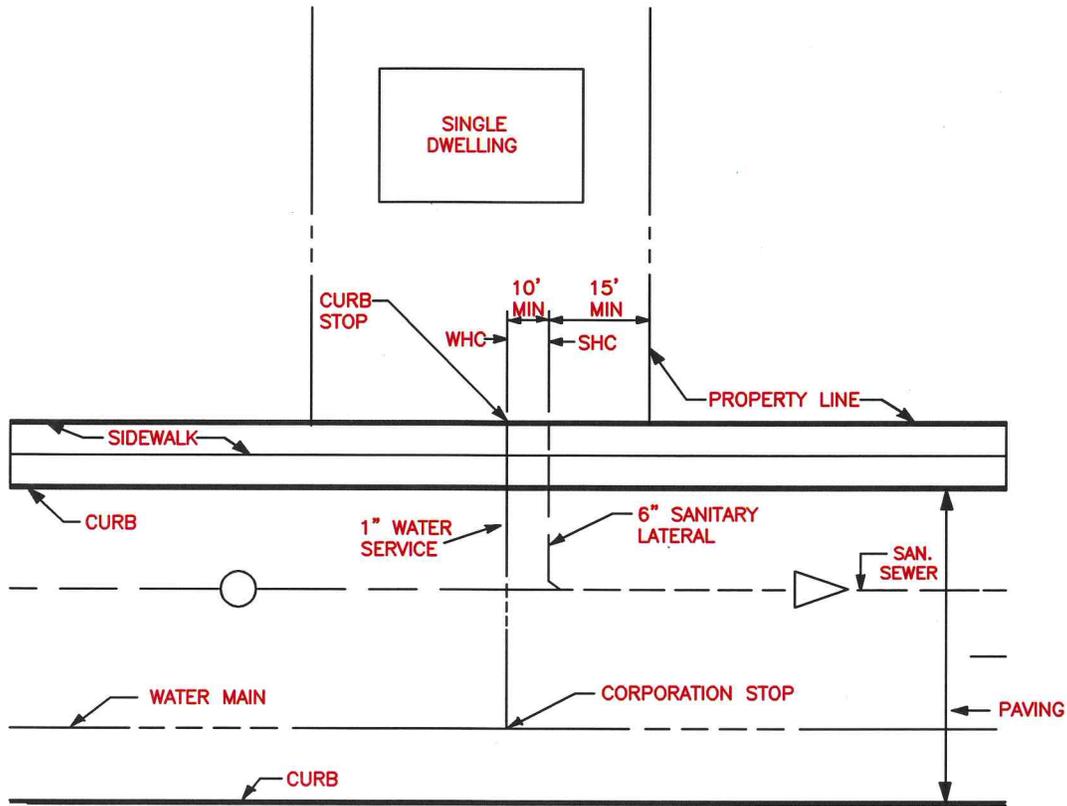
By: MDH

Date

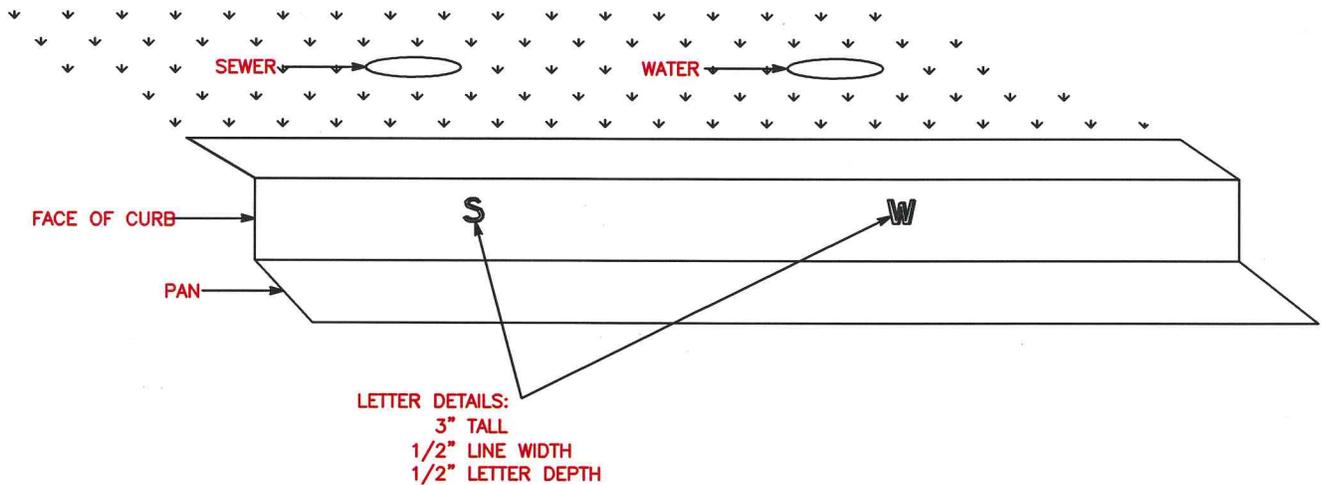
7/21/10

Standard Detail No.

W-08



TYPICAL SINGLE DWELLING SERVICE
NTS



HOUSE CONNECTION IDENTIFICATION
NTS



The Town of Mount Airy, Maryland

[Signature]
APPROVED

TYPICAL SINGLE DWELLING SERVICE

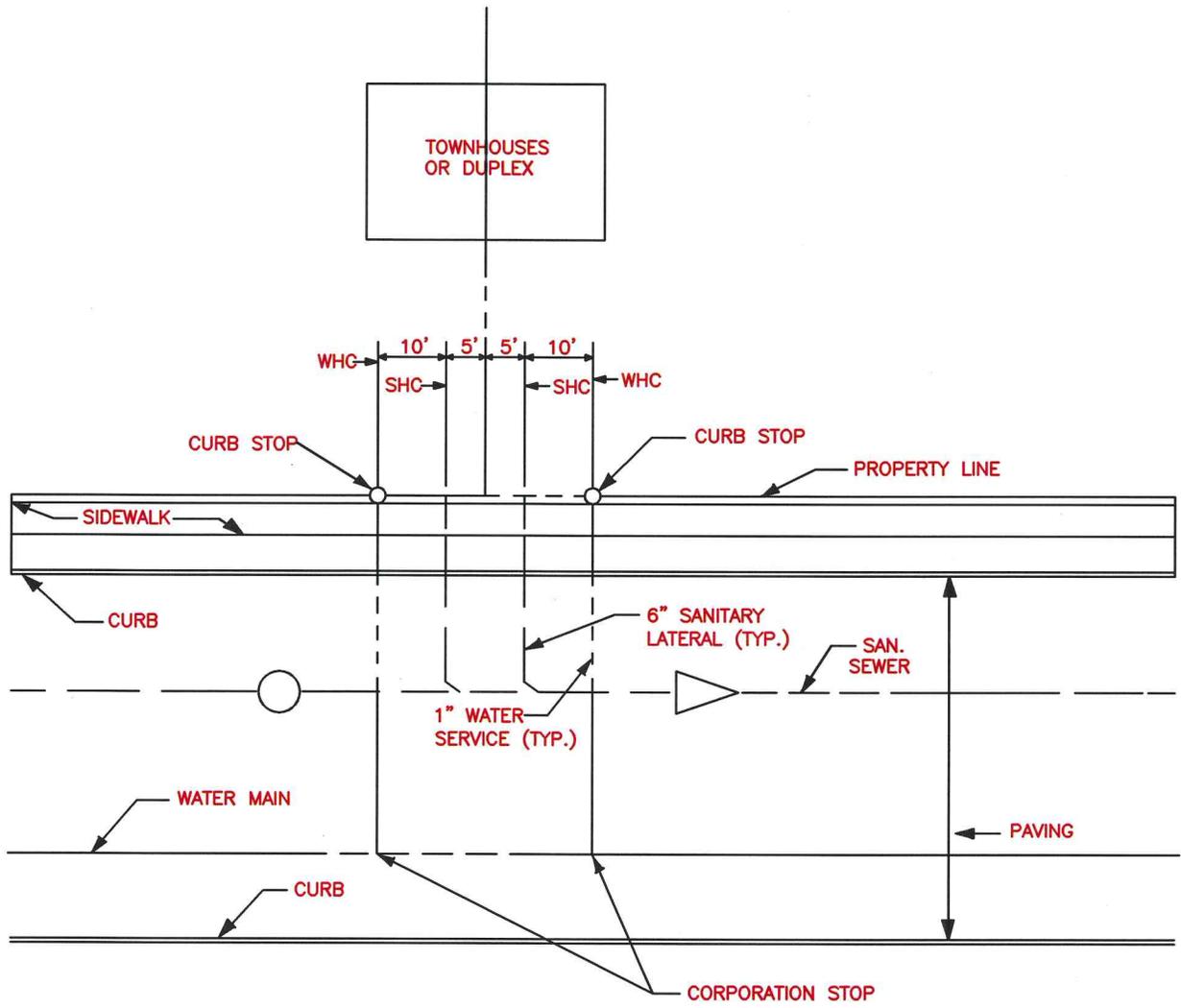
By:
MDH

Date

7/21/10

Standard Detail No.

W-09



TYPICAL TOWNHOUSE AND DUPLEX SERVICE
NTS



The Town of Mount Airy, Maryland

[Signature]

APPROVED

TYPICAL
TOWNHOUSE AND
DUPLEX SERVICE

By:
MDH

Date

7/21/10

Standard Detail
No.

W-10

PURPOSELY LEFT BLANK



The Town of Mount Airy, Maryland

APPROVED

Blair

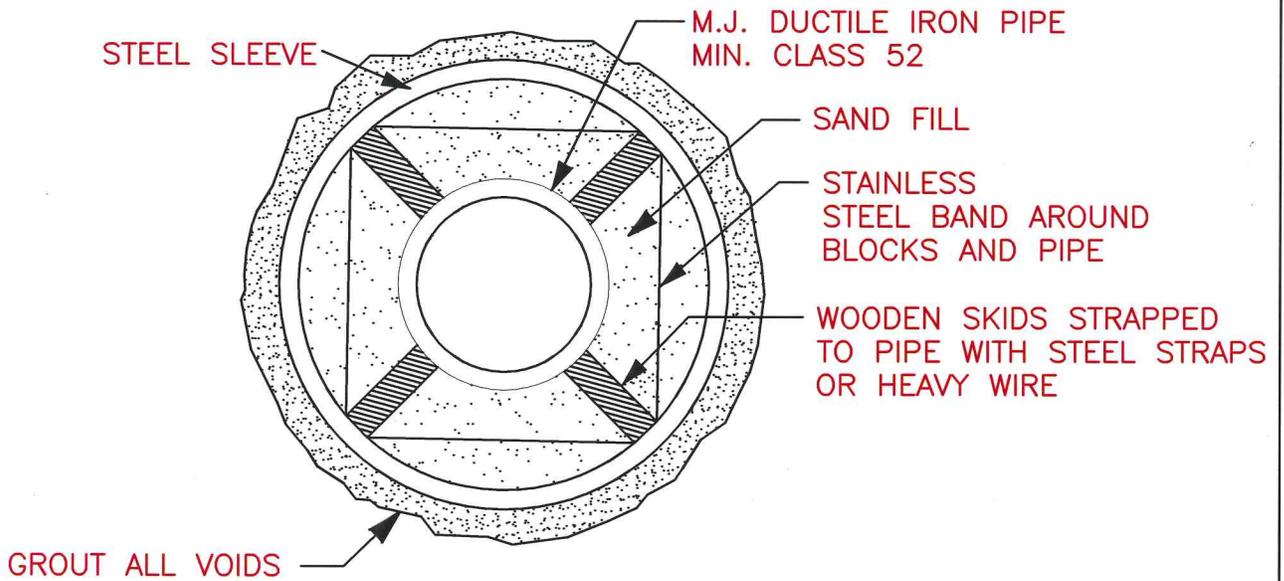
By:
MDH

Date

7/21/10

Standard Detail No.

W-11



NOTES:

CARRIER PIPE DIAMETER, SLEEVE DIAMETER AND SLEEVE THICKNESS TO BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH GOVERNING STANDARDS FOR EACH INSTALLATION.

SLEEVE & CARRIER PIPE INSTALLATION

NTS



The Town of Mount Airy, Maryland

APPROVED

[Signature]

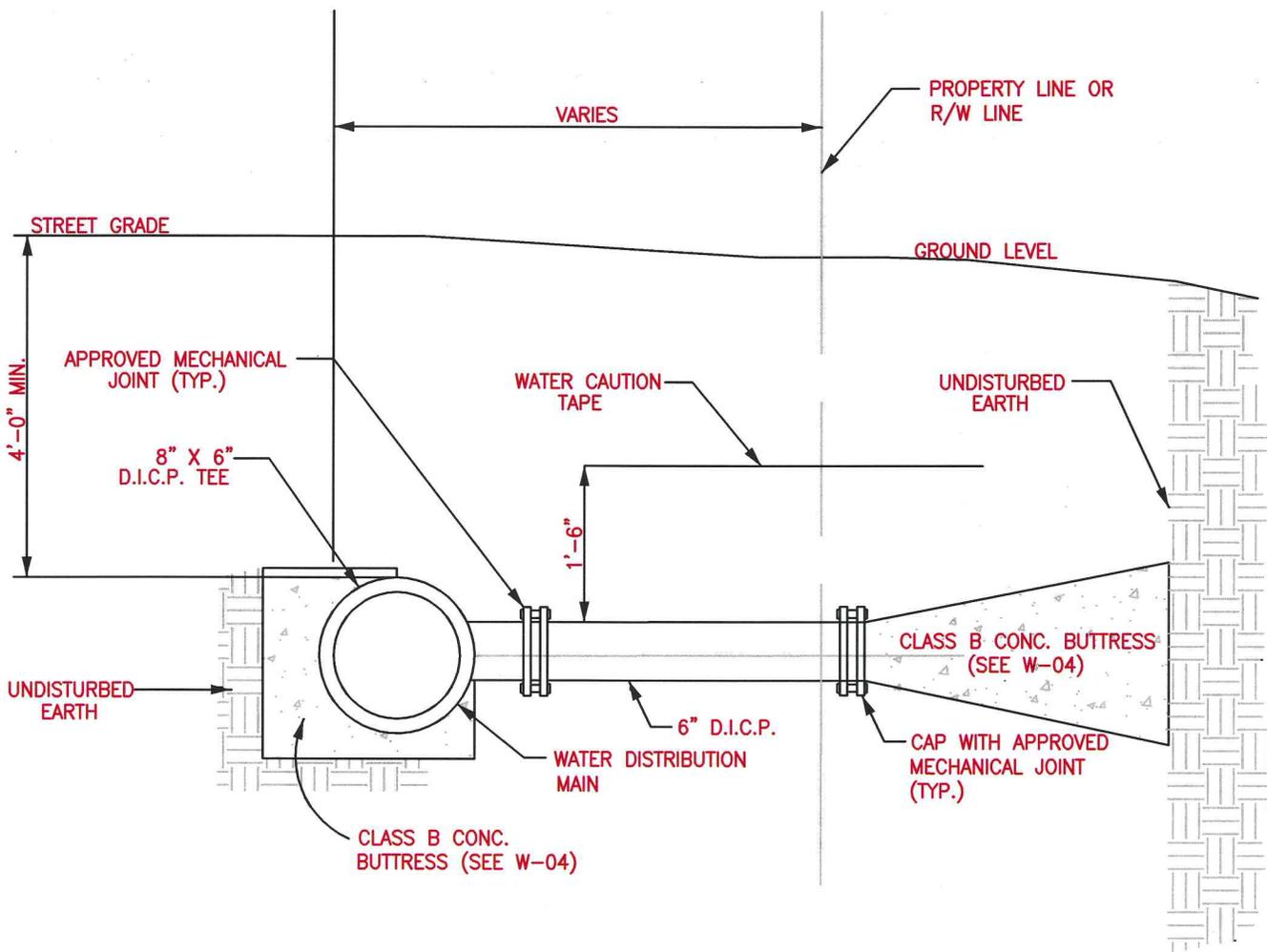
SLEEVE &
CARRIER PIPE
INSTALLATION

By:
MDH

Date
7/21/10

Standard Detail
No.

W-12

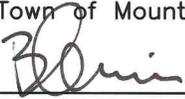


NOTES:

1. COMMERCIAL BUILDINGS: WATER METERS SHALL BE INSTALLED IN A ROOM WHERE W.H.C. ENTERS HOUSE/BUILDING. WHERE MULTIPLE METERS ARE INSTALLED WITHIN SAME BUILDING ALL METERS MUST BE LOCATED IN SAME ROOM WHERE W.H.C. ENTERS BUILDING. THIS ROOM SHALL BE ACCESSIBLE TO TOWN'S WATER MAINTENANCE EMPLOYEES FOR PERIODIC AND EMERGENCY MAINTENANCE.
2. 18" ABOVE WATER LINE USE TAPE.
3. ALL CONNECTION CAPS SHALL BE INSTALLED WITH SINGLE PIPE ONLY AND WITH MECHANICALLY RESTRAINED JOINTS FROM WATER MAIN TO CAP. WHERE LONGER LENGTH OF PIPE IS REQUIRED TO EXTEND OUTSIDE OF ROAD RIGHT OF WAY OR AS APPROVED BY THE TOWN, THEN MECHANICAL RESTRAINTS OR FIELD LOCK GASKETS SHALL BE REQUIRED AT EVERY JOINT BETWEEN THE WATER MAIN AND CAP.

WATER SERVICE CONNECTION CAP

NTS

	The Town of Mount Airy, Maryland  <hr style="width: 80%; margin: 0 auto;"/> APPROVED	WATER SERVICE CONNECTION CAP	By: MDH	Date 8/8/11
				Standard Detail No. W-13