



## APPENDIX B: STANDARD DETAILS

### INDEX OF DETAILS

(Page 1 of 2)

#### General Utilities

- UTIL-01 – Typical Trench Bedding
- UTIL-02 – Frame & Grate/Lid Standards

#### Watermain

- WM-01 – Valve Vault
- WM-02 – Pressure Connection & Vault
- WM-03 – Thrust Blocking
- WM-04 – Hydrant Assembly
- WM-05 – Valve Box
- WM-06 – Water Service
- WM-07 – Water Main Casing Pipe
- WM-08 – Water Main Polyethylene Encasement

#### Sanitary

- SAN-01 – Sanitary Manhole
- SAN-02 – Sanitary Manhole Drop Connection
- SAN-03 – Sanitary Service

#### Storm

- STM-01 – Storm Manhole Standards
- STM-02 – Catch Basin Standards
- STM-03 – Storm Inlet Standards
- STM-04 – Sump Pump Connection
- STM-05 – Residential Dry Well
- STM-06 – Rain Garden



## APPENDIX B: STANDARD DETAILS

### INDEX OF DETAILS

(Page 2 of 2)

#### Pavement

- PAV-01 – B6.12 Curb and Gutter
- PAV-02 – B6.18 Curb and Gutter
- PAV-03 – M3.12 Curb and Gutter
- PAV-04 – Type B Barrier Curb
- PAV-05 – P.C.C. Sidewalk
- PAV-06 – Sidewalk Curb Ramp Standards
- PAV-07 – Residential Driveway Apron
- PAV-08 – Commercial Driveway Apron
- PAV-09 – Accessible Parking & Signage
- PAV-10 – Sign Post
- PAV-11 – Utility Trench Pavement Patch
- PAV-12 – Typical Residential Roadway Section
- PAV-13 – Typical Non-Residential Roadway Section

#### Erosion Control

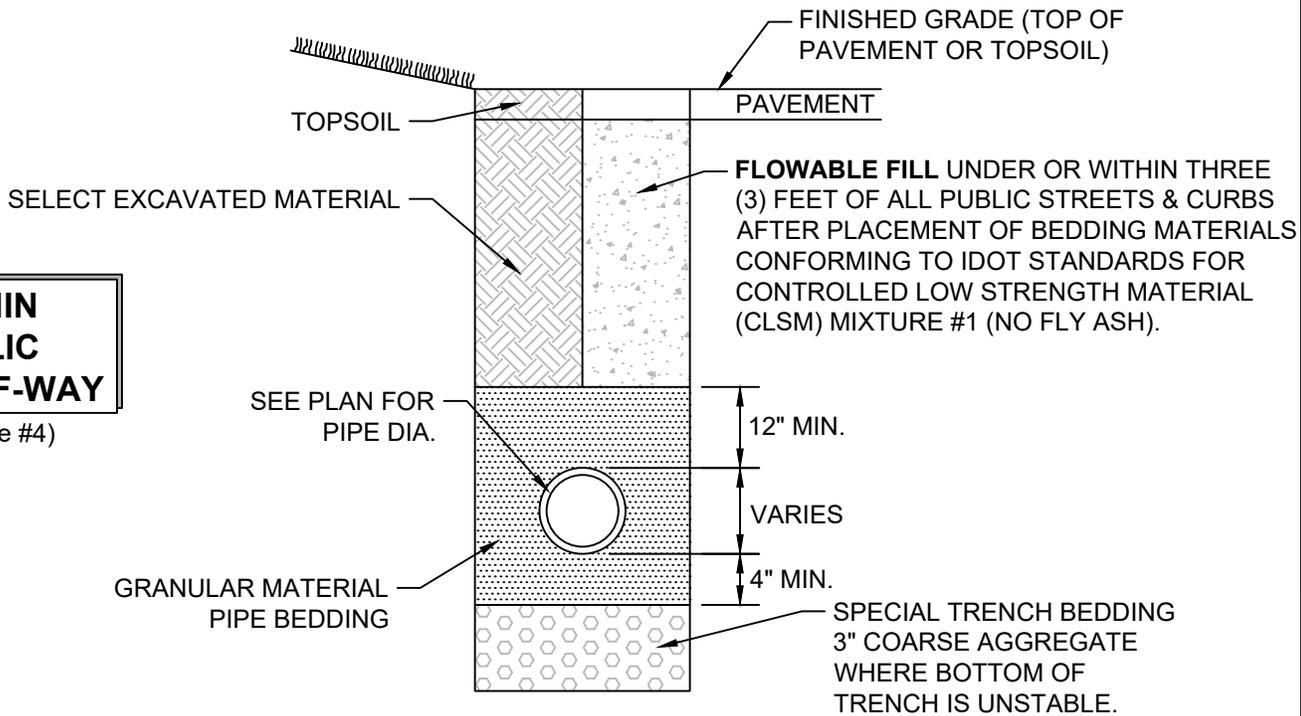
- EROS-01 – Erosion / Sediment Control Standards
- EROS-02 – Concrete Wash Out
- EROS-03 – Temporary Perforated Riser
- EROS-04 – Tree Protection Fencing
- EROS-05 – Tree Root Pruning

#### Street Lighting

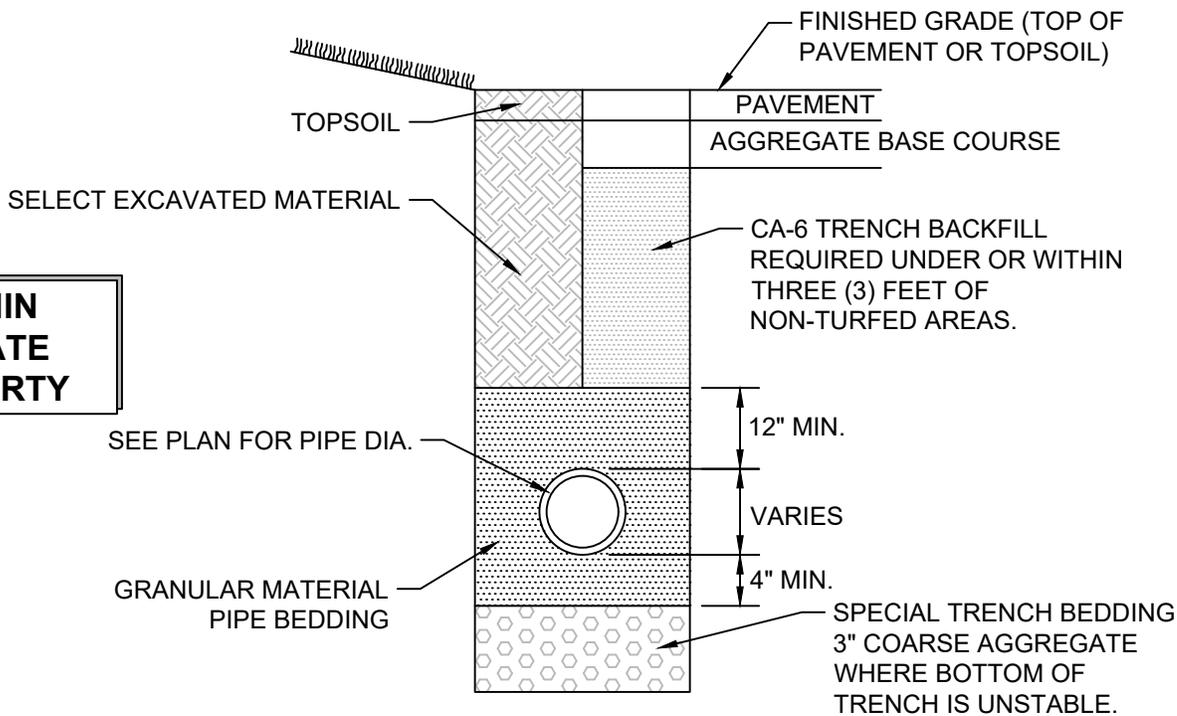
- SL-01 – Residential Street Light
- SL-02 – Primary Street Light
- SL-03 – Primary Street Light Pole Foundation
- SL-04 – Street Lighting Control Box

**WITHIN  
PUBLIC  
RIGHT-OF-WAY**

(See Note #4)



**WITHIN  
PRIVATE  
PROPERTY**



**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. SEE "UTILITY TRENCH PAVEMENT PATCH" DETAIL FOR FURTHER REQUIREMENTS ON PAVEMENT RESTORATION.
3. TRENCH WIDTH
  - a.) MAXIMUM WIDTH (TRENCH DEPTH ≤ 5 FT) = 9" + O.D. + 9"
  - b.) MAXIMUM WIDTH (TRENCH DEPTH > 5 FT) = 18" + O.D. + 18"
4. IF EXPRESSLY APPROVED BY THE VILLAGE ENGINEER, AND ON A CASE-BY-CASE BASIS, CA-6 MAY BE USED IN PLACE OF FLOWABLE FILL WITHIN THE PUBLIC RIGHT-OF-WAY

**TYPICAL TRENCH & BEDDING**



LAST  
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02/15/2023

STANDARD DETAIL #  
**UTIL - 01**

ITEM	FRAME & GRATE / LID (OR APPROVED EQUAL)	I.D.O.T. TYPE	DESCRIPTION	OPTIONS	APPLICABLE TO CURRENT PROJECT? "X"
<b>WATERMAIN</b>					
<b>VALVE VAULT</b> (MAINTAINED BY VILLAGE) FRAME & CLOSED LID	NEENAH R-1713	1	FLAT, ROUND, CLOSED LID	"VILLAGE OF LIBERTYVILLE" AND "WATER" IMPRINTED ON COVER. LID SHALL HAVE CONCEALED PICKHOLE.	
<b>VALVE VAULT</b> (PRIVATELY MAINTAINED) FRAME & CLOSED LID	NEENAH R-1713	1	FLAT, ROUND, CLOSED LID	ONLY "WATER" IMPRINTED ON COVER. LID SHALL HAVE CONCEALED PICKHOLE.	
<b>SANITARY SEWER</b>					
<b>SANITARY MANHOLE</b> (MAINTAINED BY VILLAGE) FRAME & CLOSED LID	NEENAH R-1713	1	FLAT, ROUND, CLOSED LID	"VILLAGE OF LIBERTYVILLE" AND "SANITARY" IMPRINTED ON COVER. LID SHALL HAVE CONCEALED PICKHOLE.	
<b>SANITARY MANHOLE</b> (PRIVATELY MAINTAINED) FRAME & CLOSED LID	NEENAH R-1713	1	FLAT, ROUND, CLOSED LID	ONLY "SANITARY" IMPRINTED ON COVER. LID SHALL HAVE CONCEALED PICKHOLE.	
<b>STORM SEWER</b>					
<b>STORM MANHOLE</b> (MAINTAINED BY VILLAGE) FRAME & CLOSED LID	NEENAH R-1713	1	FLAT, ROUND, CLOSED LID	"VILLAGE OF LIBERTYVILLE" AND "STORM" IMPRINTED ON COVER. LID SHALL HAVE CONCEALED PICKHOLE.	
<b>STORM MANHOLE</b> (PRIVATELY MAINTAINED) FRAME & CLOSED LID	NEENAH R-1713	1	FLAT, ROUND, CLOSED LID	ONLY "STORM" IMPRINTED ON COVER. LID SHALL HAVE CONCEALED PICKHOLE.	
<b>FLAT, ROUND, OPEN GRATE</b> *	NEENAH R-1713	1	FLAT, ROUND, OPEN TYPE D GRATE		
<b>CURB DRAINAGE STRUCTURE</b> (FOR BARRIER CURB)	NEENAH R-3278-A (IN ROADWAY SAGS)	3	INLET FRAME & CURB BOX FOR BARRIER CURB, RECTANGULAR	STANDARD GRATE	
	NEENAH R-3278-AL (DIRECTIONAL FLOW)	3V		TYPE L VANE GRATE	
<b>CURB DRAINAGE STRUCTURE</b> * (FOR ROLL-TYPE CURB)	NEENAH R-3501-P	N/A	INLET FRAME ROLL-TYPE CURB, RECTANGULAR, OPEN GRATE		
<b>BEEHIVE GRATE</b> *	NEENAH R-4340-B	8	BEEHIVE TYPE INLET, ROUND, OPEN GRATE	FOR LAWN AREAS ONLY	

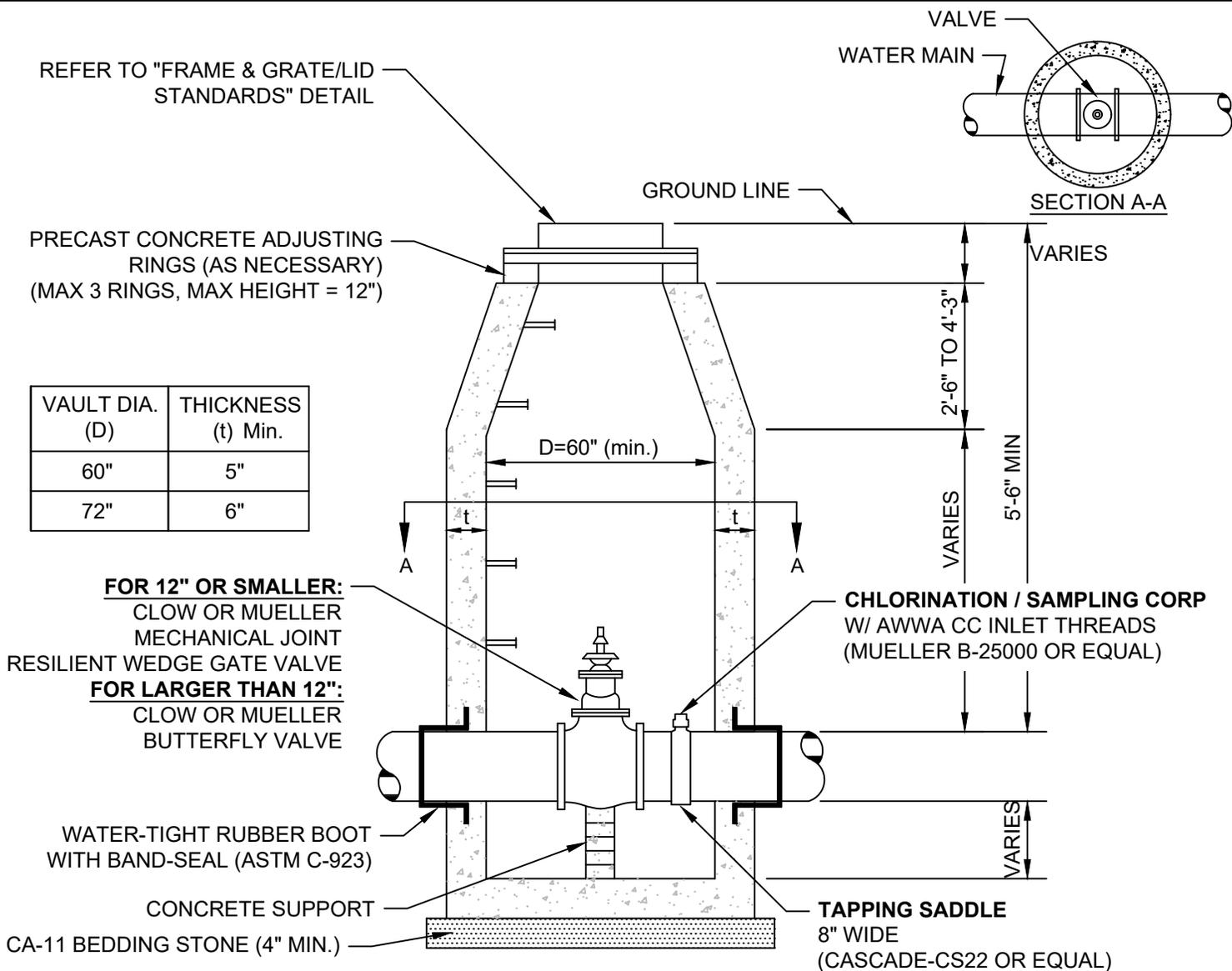
\* NOTE: DRAINAGE STRUCTURES SHALL HAVE "NO DUMPING - DRAINS TO RIVER" IMPRINTED ON FRAME/GRATE

# FRAME & GRATE / LID STANDARDS



LAST  
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STANDARD DETAIL #  
UTIL - 02



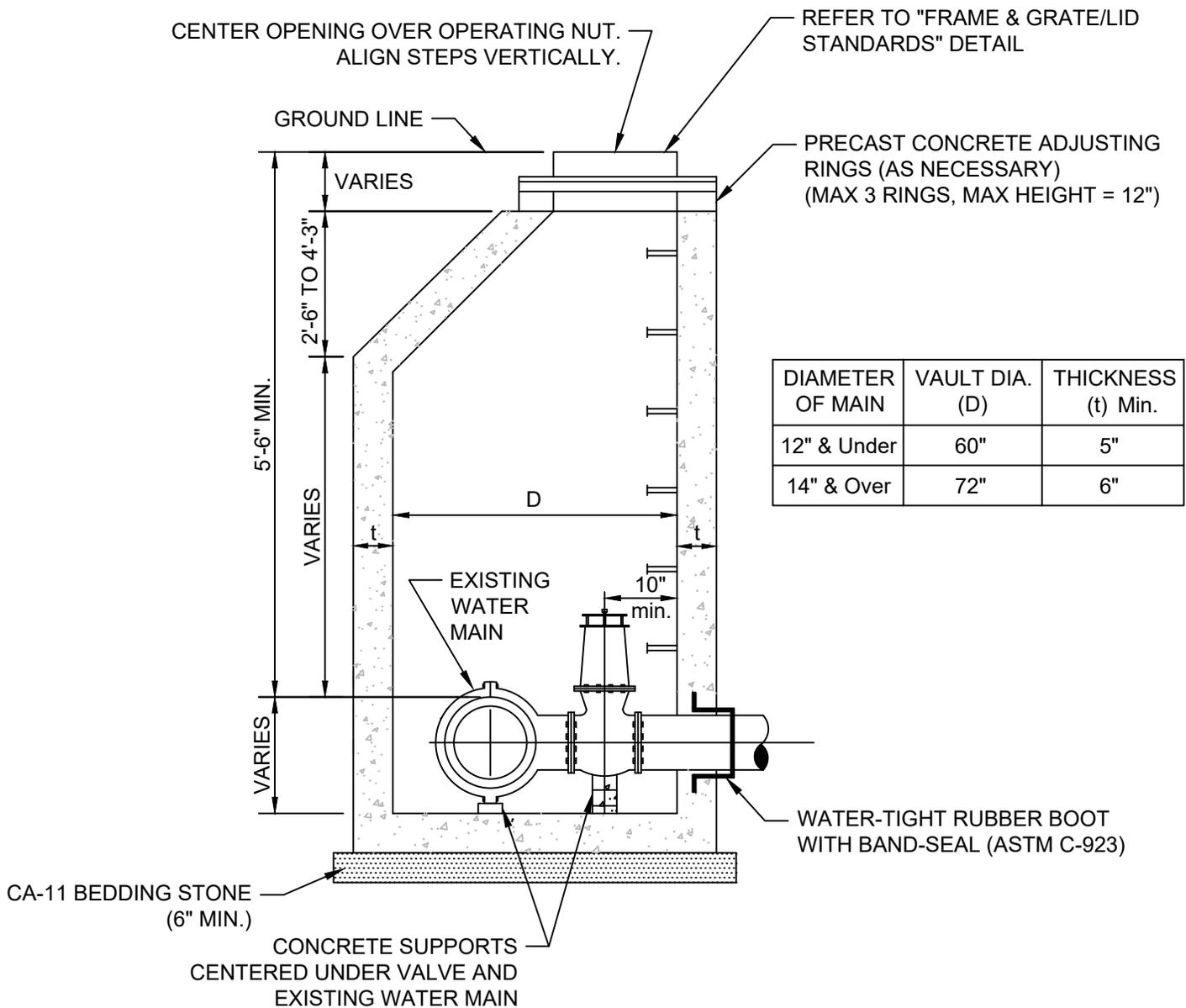
- NOTES:**
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
  2. DIMENSION "D" SHALL BE 60" MINIMUM FOR ALL VALVE VAULTS.
  3. PRECAST REINFORCED CONCRETE SECTIONS PER ASTM C-478 WITH INTEGRAL PRECAST BOTTOMS.
  4. ALL MANHOLE SECTIONS, ADJUSTING RINGS, AND FRAME SHALL BE SET IN FULL WITH PRE-FORMED BITUMINOUS GASKETS
  5. MASTIC SHALL BE APPLIED OVER EXTERIOR OF JOINTS BETWEEN SECTIONS AND LIFT HOLES.
  6. PIPE OPENINGS SHALL BE PRECAST INTO WALLS.
  7. I.D.O.T #602601 FOR FLAT TOPS.
  8. STEPS TO BE STEEL REINFORCED PLASTIC.
    - A. EMBEDDED 3" INTO STRUCTURE WALL.
    - B. SPACED AT 16" CENTER TO CENTER.
    - C. FIRST STEP LOCATED 8"-12" BELOW FRAME.
  7. ALL BELOW GRADE FASTENERS TO BE STAINLESS STEEL:
    - A. BOLTS & THREADED RODS - GRADE #304
    - B. NUTS & WASHERS - GRADE #316
  8. VALVES 12" OR LARGER MAY REQUIRE OFFSET CONES.
  9. IF VALVE VAULT IS TO BE PRIVATELY OWNED AND/OR MAINTAINED, LID SHALL ONLY READ "WATER" WITH NO REFERENCES TO THE VILLAGE. IF THE UTILITY IS TO BE MAINTAINED BY THE VILLAGE, THE COVER SHALL ALSO INCLUDE "VILLAGE OF LIBERTYVILLE" IMPRINTED AS WELL.

# VALVE VAULT



LAST  
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STANDARD DETAIL #  
WM - 01



**NOTES:**

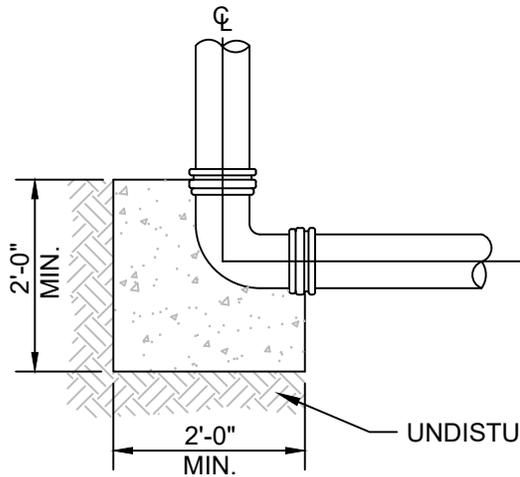
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. PRECAST REINFORCED CONCRETE SECTIONS PER ASTM C-478 WITH INTEGRAL PRECAST BOTTOMS.
3. ALL MANHOLE SECTIONS, ADJUSTING RINGS, AND FRAME SHALL BE SET IN FULL WITH PRE-FORMED BITUMINOUS GASKETS.
4. MASTIC SHALL BE APPLIED OVER EXTERIOR OF JOINTS BETWEEN SECTIONS AND LIFT HOLES. PIPE OPENINGS SHALL BE PRECAST INTO WALLS.
5. I.D.O.T #602601 FOR FLAT TOPS.
6. STEPS TO BE STEEL REINFORCED PLASTIC.
  - A. IMBEDDED 3" INTO STRUCTURE WALL.
  - B. SPACED AT 16" CENTER TO CENTER.
  - C. FIRST STEP LOCATED 8"-12" BELOW FRAME.
7. ALL BELOW GRADE FASTENERS TO BE STAINLESS STEEL:
  - A. BOLTS & THREADED RODS - GRADE #304
  - B. NUTS & WASHERS - GRADE #316

# PRESSURE CONNECTION & VAULT

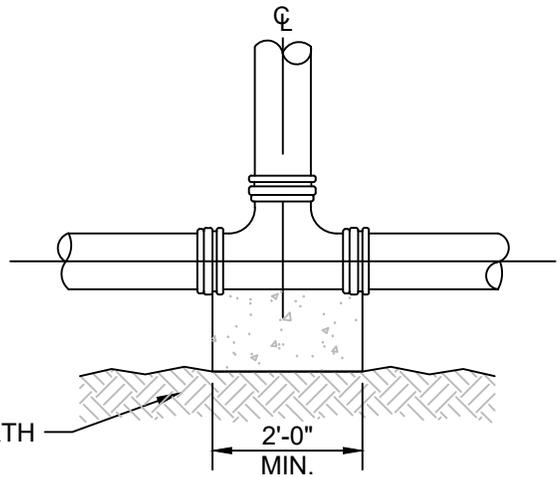


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REVISED:  
02/15/2023

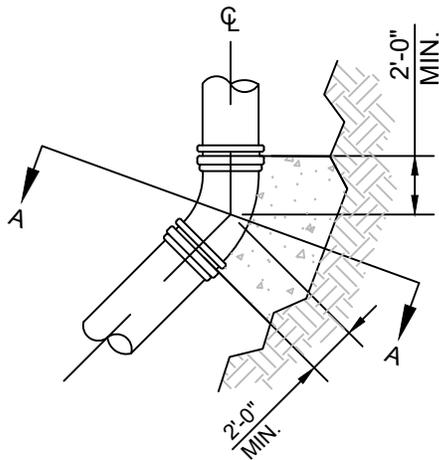
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WM - 02



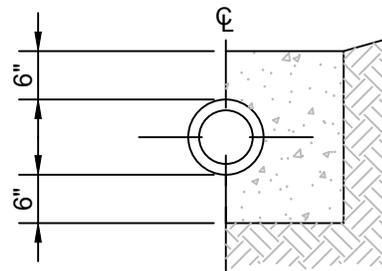
90° ELBOW - PLAN VIEW



TEE - PLAN VIEW



45°, 22.5°, 11.25° BEND - PLAN VIEW



SECTION A-A

**NOTES:**

1. CONTRACTOR'S DISCRETION TO INSTALL MONOLITHIC CONCRETE BLOCK OR POURED-IN-PLACE CONCRETE THRUST BLOCKS.
2. ALL THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.
3. ALL MONOLITHIC CONCRETE BLOCKS SHALL BE 3000 P.S.I. CONCRETE.
4. ALL POURED-IN-PLACE CONCRETE THRUST BLOCKS SHALL BE IDOT CLASS SI CONCRETE OR APPROVED EQUAL.

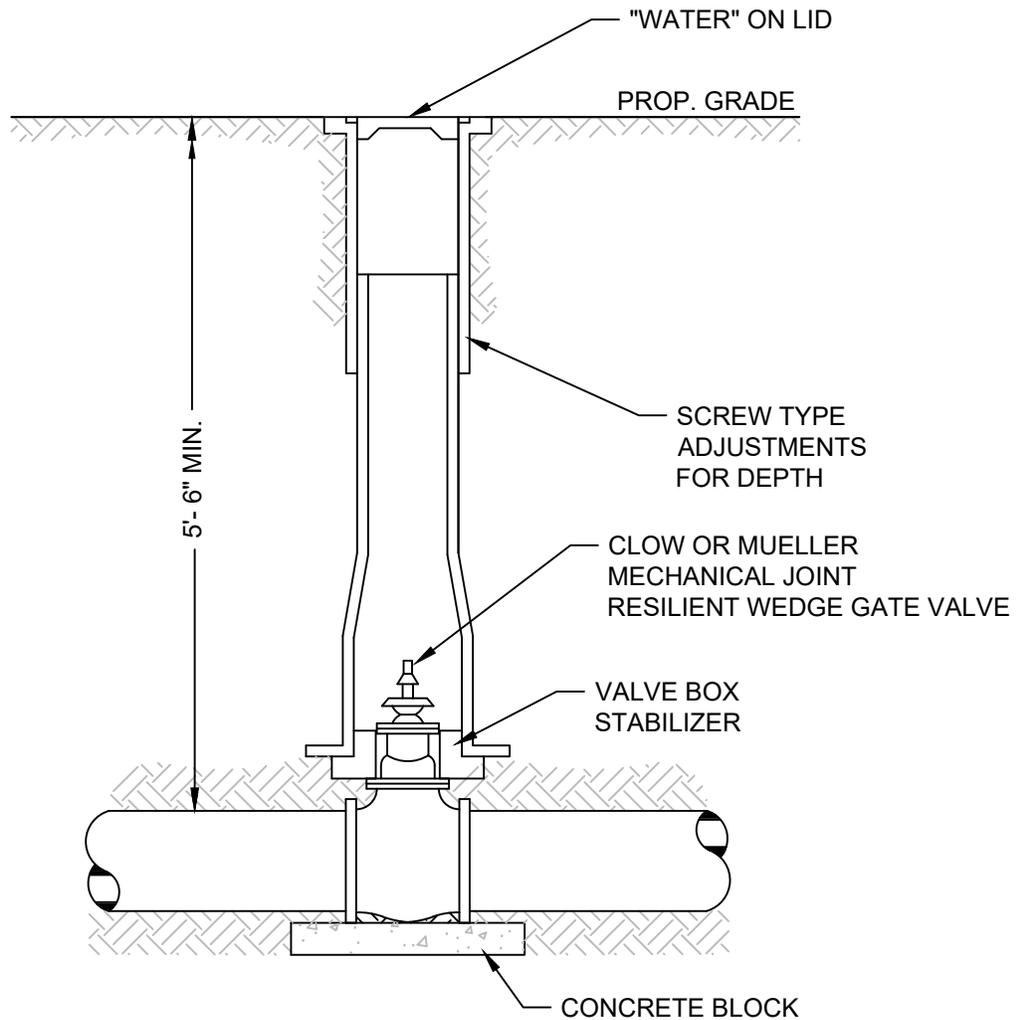
# THRUST BLOCKING



LAST  
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02/15/2023

STANDARD DETAIL #  
WM - 03





**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. VALVE BOXES SHALL BE TYLER #664, FOUR INCH (4") DIAMETER, SCREW TYPE, OR APPROVED EQUAL.
3. ALL BELOW GRADE FASTENERS TO BE STAINLESS STEEL:
  - A. BOLTS & THREADED RODS - GRADE #304
  - B. NUTS & WASHERS - GRADE #316

# VALVE BOX



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
WM - 05

TRACER WIRE ACCESS BOX  
(ONLY IF USING PLASTIC PIPE FOR  
PRIVATE WATER SERVICE ONLY)  
See Note #9

FINISHED GRADE  
VARIES  
(See Note #3)

TELESCOPING SERVICE BOX  
(A.Y. MCDONALD 5615WB CURB BOX)  
5 1/2 - 8 FT LENGTH

TRACER WIRE FROM MAIN TO ACCESS BOX,  
AND FROM ACCESS BOX TO STRUCTURE  
(ONLY IF USING PLASTIC PIPE FOR PRIVATE  
WATER SERVICE ONLY)  
See Note #9

TAPPING SADDLE  
8" WIDE  
(CASCADE-CS22  
OR EQUAL)

5'-6" MIN.

RIGHT OF WAY LINE

SERVICE PIPE  
COPPER, TYPE K  
1" MIN. DIAMETER

CURB STOP  
(A.Y. MCDONALD  
NL BALL STYLE - 76104)

(CONTINUES TO  
STRUCTURE)

CORPORATION STOP  
(A.Y. MCDONALD  
NL PLUG STYLE - 74701)

CONCRETE BLOCK

WATER MAIN WITH  
SERVICE SADDLE

**NOTES:**

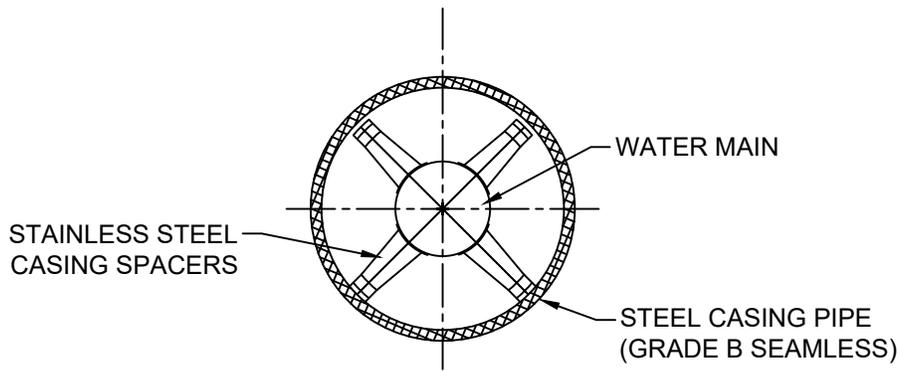
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. THIS DETAIL APPLIES TO WATER SERVICES 2" IN DIAMETER OR SMALLER. ANY WATER SERVICE WHICH IS 3" OR LARGER SHALL CONFIRM TO VILLAGE WATERMAIN STANDARDS.
3. B-BOX SHALL BE LOCATED IN THE GRASS PARKWAY WITHIN THE PUBLIC RIGHT-OF-WAY (WHENEVER POSSIBLE) AND A MINIMUM OF 4 FEET BEHIND THE BACK-OF-CURB.
4. SERVICE PIPE TO BE WEAVED IN TRENCH TO ALLOW AT LEAST ONE (1) FOOT EXTRA LENGTH IN ITS LENGTH.
5. UPON COMPLETION OF WATER SERVICE CONSTRUCTION, ALL BOXES ARE TO BE FULLY EXTENDED AND LEFT PROTRUDING ABOVE THE FINISHED GRADE. FINAL ADJUSTMENT TO BE MADE DURING FINISHED GRADING OF PARKWAY.
6. COMPACTED GRANULAR TRENCH BACKFILL IS REQUIRED WHERE ANY PORTION OF THE EXCAVATION ACTIVITY IS WITHIN THREE (3) FEET HORIZONTALLY OF EXISTING OR PROPOSED PAVEMENTS, DRIVEWAYS, OR SIDEWALKS.
7. TAPS SHALL BE AT THE 10 O'CLOCK POSITION ON THE WATER MAIN AT LEAST 18" FROM ANY EXISTING TAP AND AT LEAST 12" FROM ANY BELL.
8. IF A NEW SERVICE CONNECTION OF 2" OR SMALLER IS BEING MADE TO AN EXISTING WATER MAIN THAT IS OWNED AND MAINTAINED BY THE VILLAGE, THE SERVICE TAP SHALL BE PERFORMED BY THE VILLAGE'S PUBLIC WORKS DEPARTMENT. THE VILLAGE SHALL BE CONTACTED ACCORDINGLY TO SCHEDULE THE REQUIRED TAP (CALL UTILITIES DIVISION AT 847-362-3434).
9. IF PLASTIC PIPE IS PROPOSED FROM THE B-BOX TO THE METER (I.E. THE "PRIVATE SERVICE"), TRACER WIRE IS REQUIRED AND SHALL COMPLY WITH THIS DETAIL. PLEASE NOTE: FROM THE B-BOX TO THE MAIN, THE SERVICE MATERIAL SHALL BE TYPE K COPPER.

# WATER SERVICE



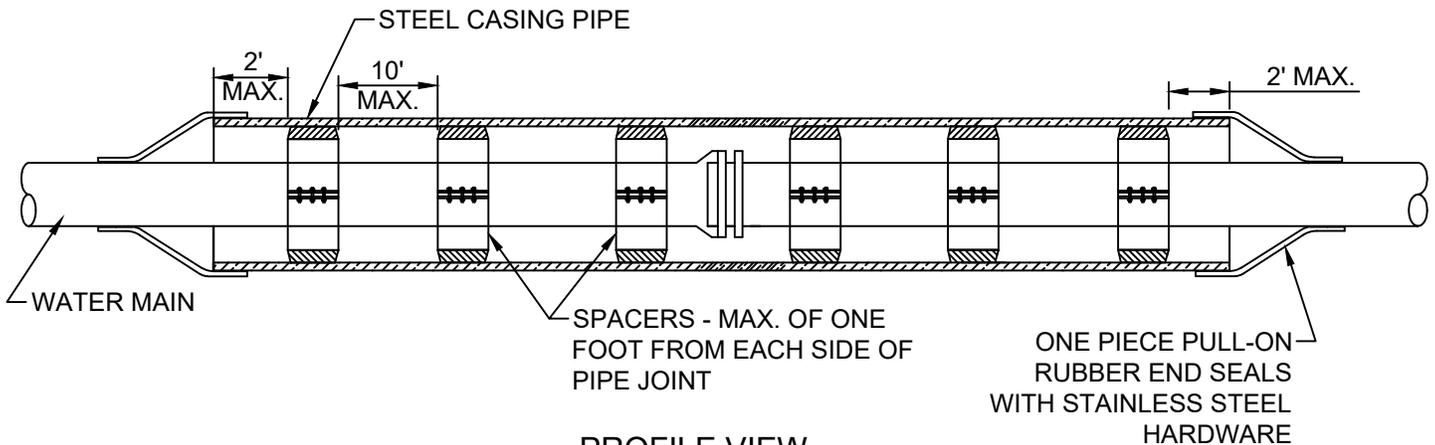
LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
WM - 06



CROSS-SECTION VIEW

WATERMAIN DIA.	MIN. CASING PIPE DIA.
6"	16"
8"	16"
10"	20"
12"	24"
16"	30"
24"	36"
30"	42"



PROFILE VIEW

**NOTES:**

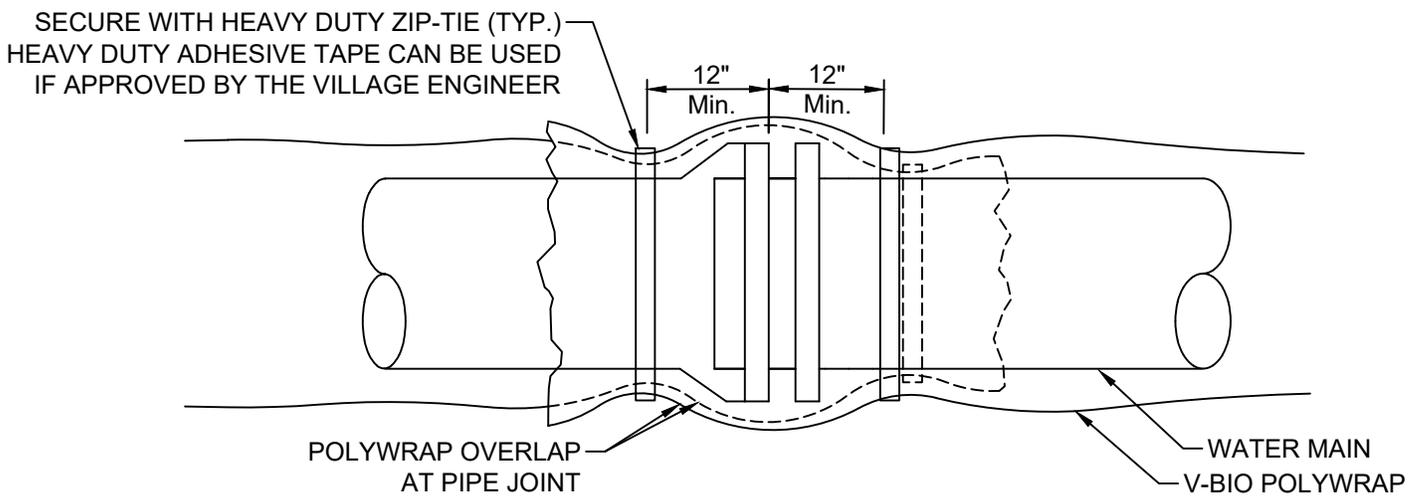
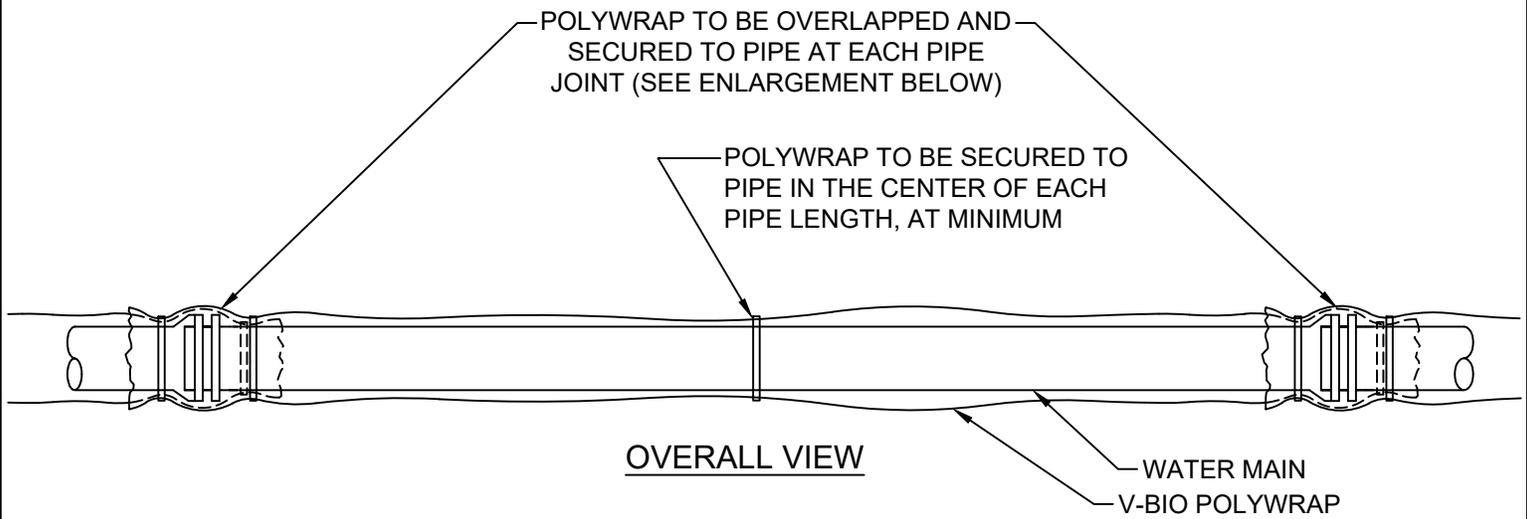
1. CASING PIPE TO BE BITUMINOUS COATED STEEL PER IDOT WALL THICKNESS GUIDE OR AS SPECIFIED ON THE PLANS.
2. CASING SPACERS SHALL BE STAINLESS STEEL BY CASCADE OR APPROVED EQUAL.
3. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CASING SPACERS MUST BE CENTERED AND RESTRAINED.
4. JOINTS LOCATED INSIDE OF CASING PIPE MUST BE RESTRAINED SO TAHT JOINT PRESSURE LIMIT IS NO LESS THAN 350 PSI FOR PIPE LESS THAN OR EQUAL TO 24" DIAMETER AND NO LESS THAN 250 PSI FOR PIPE LARGER THAN 24" DIAMETER. NO FIELD CUT JOINTS WILL BE ALLOWED WITHOUT CONSENT OF ENGINEER.
5. ALL DUCTILE IRON WATER MAIN LOCATED INSIDE OF CASING PIPE MUST BE POLYETHYLENE ENCASED IN ACCORDANCE WITH THE VILLAGE STANDARDS.
6. CASING ENDS TO BE SEALED WITH ONE PIECE PULL-ON RUBBER END SEALS WITH STAINLESS STEEL HARDWARE, MODEL ESC BY CCI PIPELINE SYSTEMS OR APPROVED EQUAL.

# WATER MAIN CASING PIPE



LAST  
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02/15/2023

STANDARD DETAIL #  
WM - 07



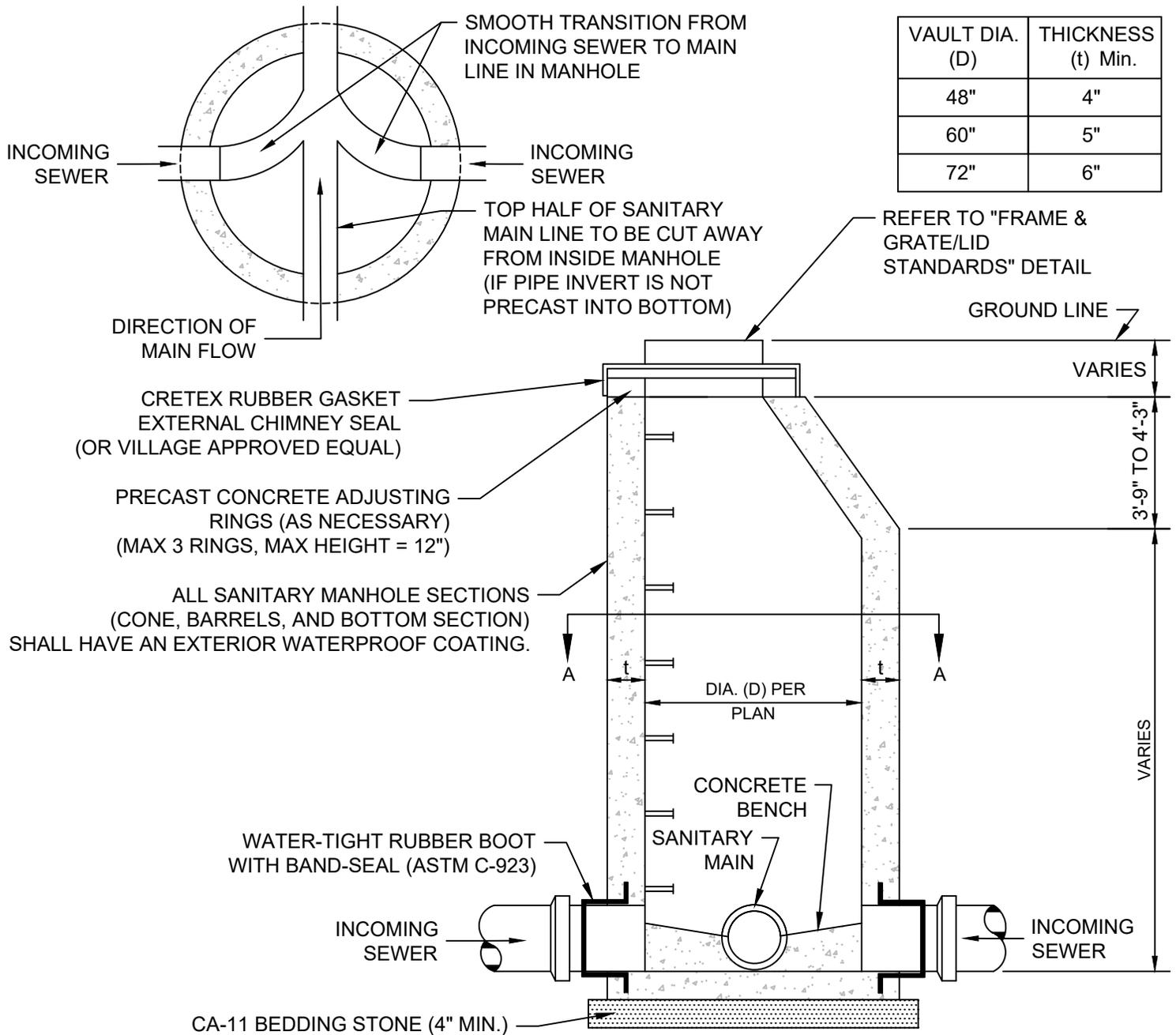
PIPE JOINT ENLARGEMENT VIEW

**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. ALL DIP WATER MAINS SHALL BE ENCASED IN AN 8-MIL V-BIO POLYWRAP, OR APPROVED EQUAL.
3. THE POLYWRAP IS TO BE SECURED TO THE PIPE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. MATERIAL AND INSTALLATION SHALL ADHERE TO APPLICABLE AWWA AND ANSI STANDARDS.
4. FOR INSTALLATION IN AREAS OF UNSUITABLE OR CORROSIVE SOILS, THE VILLAGE MAY REQUIRE WATER MAIN TO BE WRAPPED IN TWO LAYERS OF POLYETHYLENE ENCASEMENT (POLYWRAP).

# WATER MAIN POLYETHYLENE ENCASEMENT

	<b>Libertyville</b>
<small>LAST REVISED: 02/15/2023</small>	<b>STANDARD DETAIL # WM - 08</b>



**NOTES:**

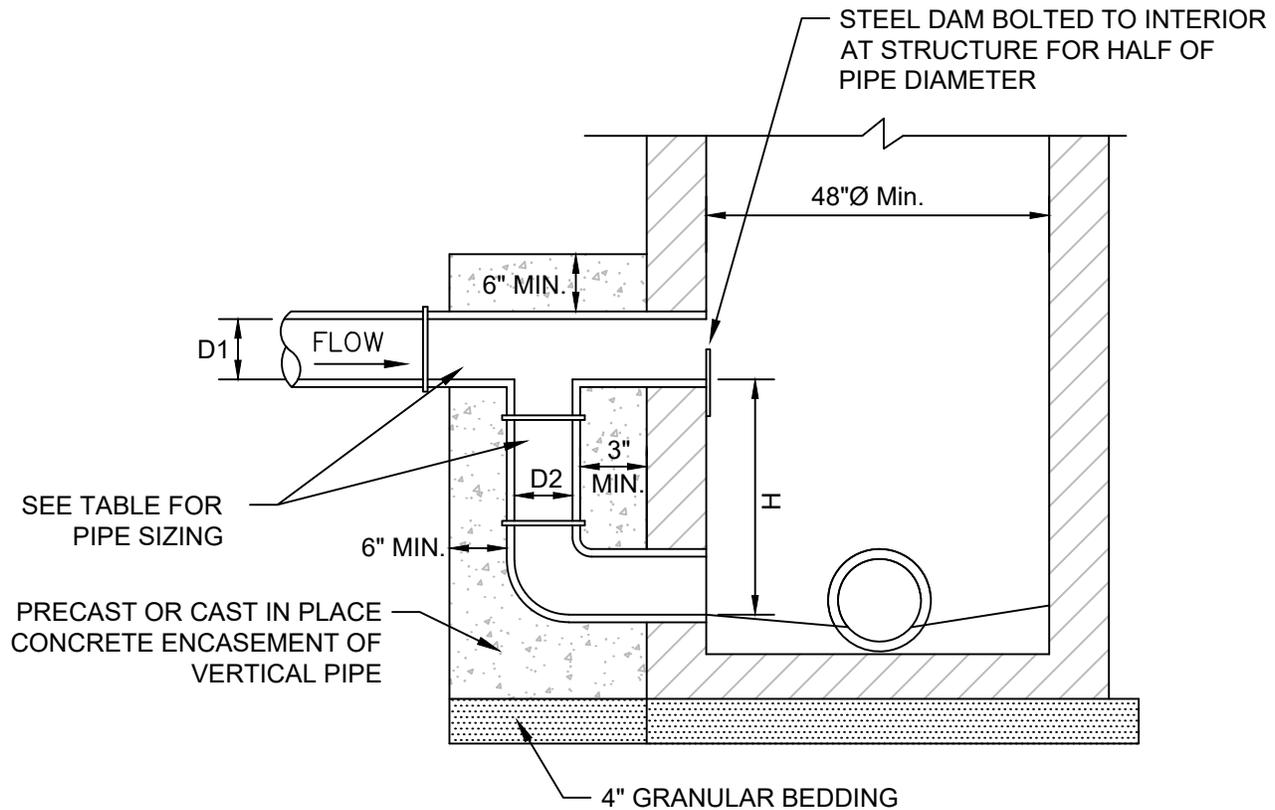
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. EXTERIOR NEOPRENE CHIMNEY SEAL STAINLESS STEEL TRIM PER ASTM C-923.
3. PIPE OPENINGS SHALL BE PRECAST INTO WALLS.
4. PRECAST REINFORCED CONCRETE SECTIONS PER ASTM C-478 WITH INTEGRAL PRECAST BOTTOMS.
5. ALL MANHOLE SECTIONS, ADJUSTING RINGS, AND FRAME SHALL BE SET IN FULL WITH PRE-FORMED BITUMINOUS GASKETS.
6. STEPS TO BE STEEL REINFORCED PLASTIC.
  - A. EMBEDDED 3" INTO STRUCTURE WALL.
  - B. SPACED AT 16" CENTER TO CENTER.
  - C. FIRST STEP LOCATED 8"-12" BELOW FRAME.
7. PRECAST PCC BENCH SHALL EXTEND TO CROWN AND SLOPE TO OUTSIDE WALL, SMOOTH FINISH.

# SANITARY MANHOLE



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
**SAN - 01**



INCOMING SEWER	DROP SEWER
D1	D2
6"	8"
8"	8"
10"	8"
12"	8"
15"	10"
18"	12"
21"	15"
24"	18"

**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. REFER TO 'SANITARY MANHOLE' DETAIL FOR MANHOLE SPECIFICATIONS.
3. IF H > 12 INCHES, A DROP PIPE TO SANITARY MAIN IS REQUIRED.
3. CONCRETE FOR ENCASEMENT SHALL BE 4,000 PSI @ 28 DAYS.
4. FORCEMAIN NOT ALLOWED AS INCOMING SEWER.
5. VILLAGE RESERVES THE RIGHT TO REQUIRE AN INTERNAL DROP CONNECTION BASED ON FIELD CONDITIONS OR OTHER CONSIDERATIONS.

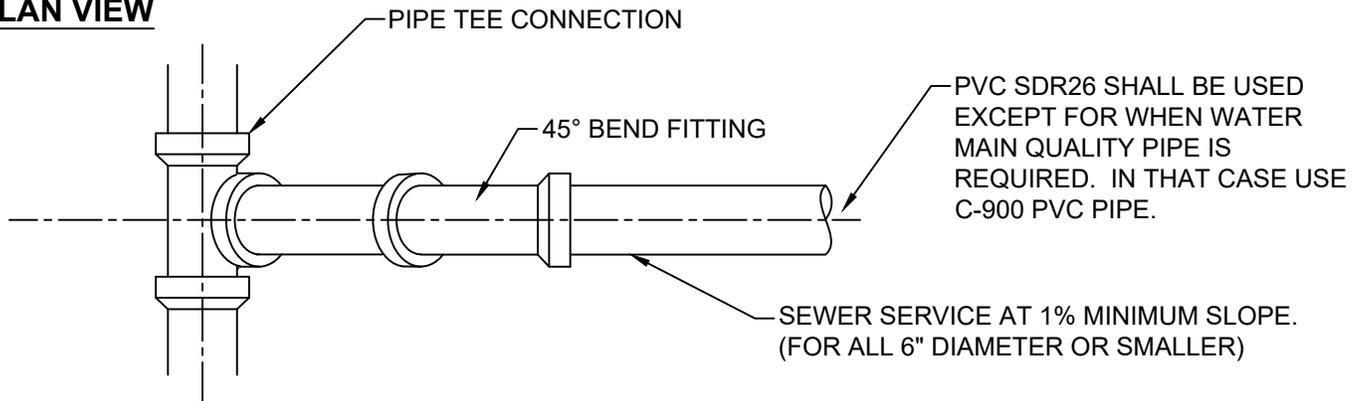
# SANITARY MANHOLE DROP CONNECTION



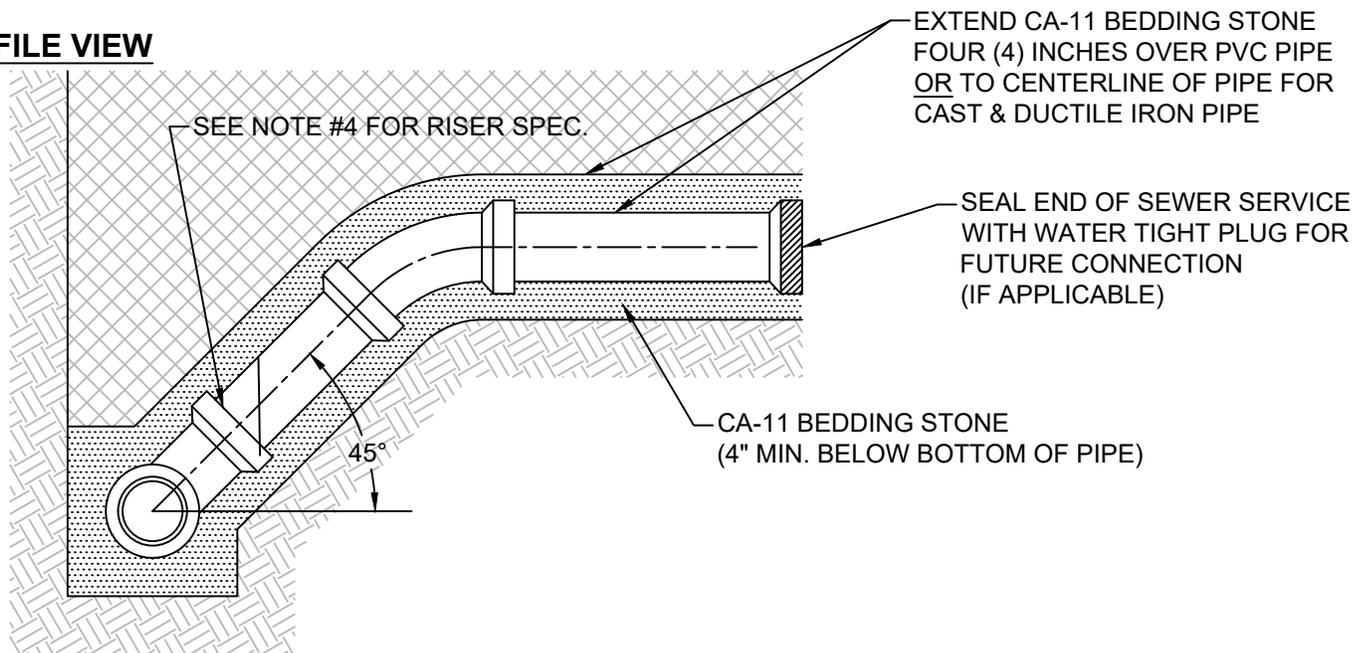
LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
SAN - 02

## PLAN VIEW



## PROFILE VIEW



### NOTES:

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. TRENCH BACKFILL FOR PAVED AREAS SHALL BE CA-6 CRUSHED LIMESTONE OR APPROVED EQUAL.
3. TRENCH BACKFILL FOR NON-PAVED AREAS SHALL BE FINELY DIVIDED EXCAVATED MATERIAL FREE OF ROCKS AND DEBRIS.
4. RISER REQUIRED WHEN SEWER DEPTH EXCEEDS NINE (9) FEET. MAXIMUM SLOPE OF 1:1 ON RISERS.
5. FOR DEVELOPMENTS WITH NEW MAIN CONSTRUCTION, A TEE OR WYE CONNECTION SHALL BE PROVIDED.
6. FOR PROPERTIES WITH NO EXISTING SERVICE LINE THAT ARE CONNECTING TO AN EXISTING MAIN, THE CONNECTION SHALL BE MADE VIA A ROMAC CB OR FORD FSS SEWER SADDLE.

### FOR PROPERTIES WITH AN EXISTING SERVICE:

1. IF EXISTING SERVICE IS CLAY, THE EXISTING WYE OR TEE CONNECTION AT THE MAIN MUST BE REMOVED AND REPLACED ENTIRELY.
2. IF EXISTING SERVICE IS PVC OR IRON, SEWER TELEVISIONING VIDEOS OF THE ENTIRE SERVICE CAN BE PROVIDED TO THE VILLAGE FOR REVIEW AND DETERMINATION OF POSSIBLE RE-USE.
3. IF NEW SERVICE IS PROPOSED, THE CONNECTION TO THE EXISTING MAIN SHALL BE ONE OF THE FOLLOWING:
  - 3.1. NEW PVC WYE OR TEE CONNECTION INSTALLED ALONG EXISTING MAIN; OR
  - 3.2. ROMAC CB OR FORD FSS SEWER SADDLE ON EXISTING MAIN (IF PROPOSED AT DIFFERENT LOCATION THAN EXISTING CONNECTION); OR
  - 3.3. LMT STYLE SADDLE SYSTEM INSTALLATION (OR APPROVED EQUAL) WHEN TAPPING A LINED SANITARY MAIN.

# SANITARY SERVICE



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
SAN - 03

**ILLINOIS DEPARTMENT OF TRANSPORTATION (I.D.O.T.) STANDARDS TO BE UTILIZED FOR ALL STORM MANHOLES.**

**PLEASE "X" ANY STANDARDS LISTED BELOW THAT ARE APPLICABLE TO THIS PROJECT, AND INCLUDE THE CORRESPONDING I.D.O.T. STANDARD DETAIL ON THE PLANS.**

STANDARD	DESCRIPTION	APPLICABLE TO CURRENT PROJECT? "X"
602401	MANHOLE TYPE A, 4' DIAMETER	
602402	MANHOLE TYPE A, 5' DIAMETER	
602406	MANHOLE TYPE A, 6' DIAMETER	
602411	MANHOLE TYPE A, 7' DIAMETER	
602416	MANHOLE TYPE A, 8' DIAMETER	
602421	MANHOLE TYPE A, 9' DIAMETER	
602426	MANHOLE TYPE A, 10' DIAMETER	
602601	PRECAST REINFORCED CONCRETE FLAT SLAB TOP	

**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. USE LATEST REVISION OF STANDARDS.

# STORM MANHOLE STANDARDS



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
STM - 01

**ILLINOIS DEPARTMENT OF TRANSPORTATION (I.D.O.T.) STANDARDS TO BE UTILIZED FOR ALL STORM CATCH BASINS.**

**PLEASE "X" ANY STANDARDS LISTED BELOW THAT ARE APPLICABLE TO THIS PROJECT, AND INCLUDE THE CORRESPONDING I.D.O.T. STANDARD DETAIL ON THE PLANS.**

STANDARD	DESCRIPTION	APPLICABLE TO CURRENT PROJECT? "X"
602001	CATCH BASIN, TYPE A	
602011	CATCH BASIN, TYPE C	
602601	PRECAST REINFORCED CONCRETE FLAT SLAB TOP	

**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. USE LATEST REVISION OF STANDARDS.

# CATCH BASIN STANDARDS



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
STM - 02

**ILLINOIS DEPARTMENT OF TRANSPORTATION (I.D.O.T.) STANDARDS TO BE UTILIZED FOR ALL STORM INLETS.**

**PLEASE "X" ANY STANDARDS LISTED BELOW THAT ARE APPLICABLE TO THIS PROJECT, AND INCLUDE THE CORRESPONDING I.D.O.T. STANDARD DETAIL ON THE PLANS.**

STANDARD	DESCRIPTION	APPLICABLE TO CURRENT PROJECT? "X"
602001	INLET, TYPE A	
602601	PRECAST REINFORCED CONCRETE FLAT SLAB TOP	

**NOTES:**

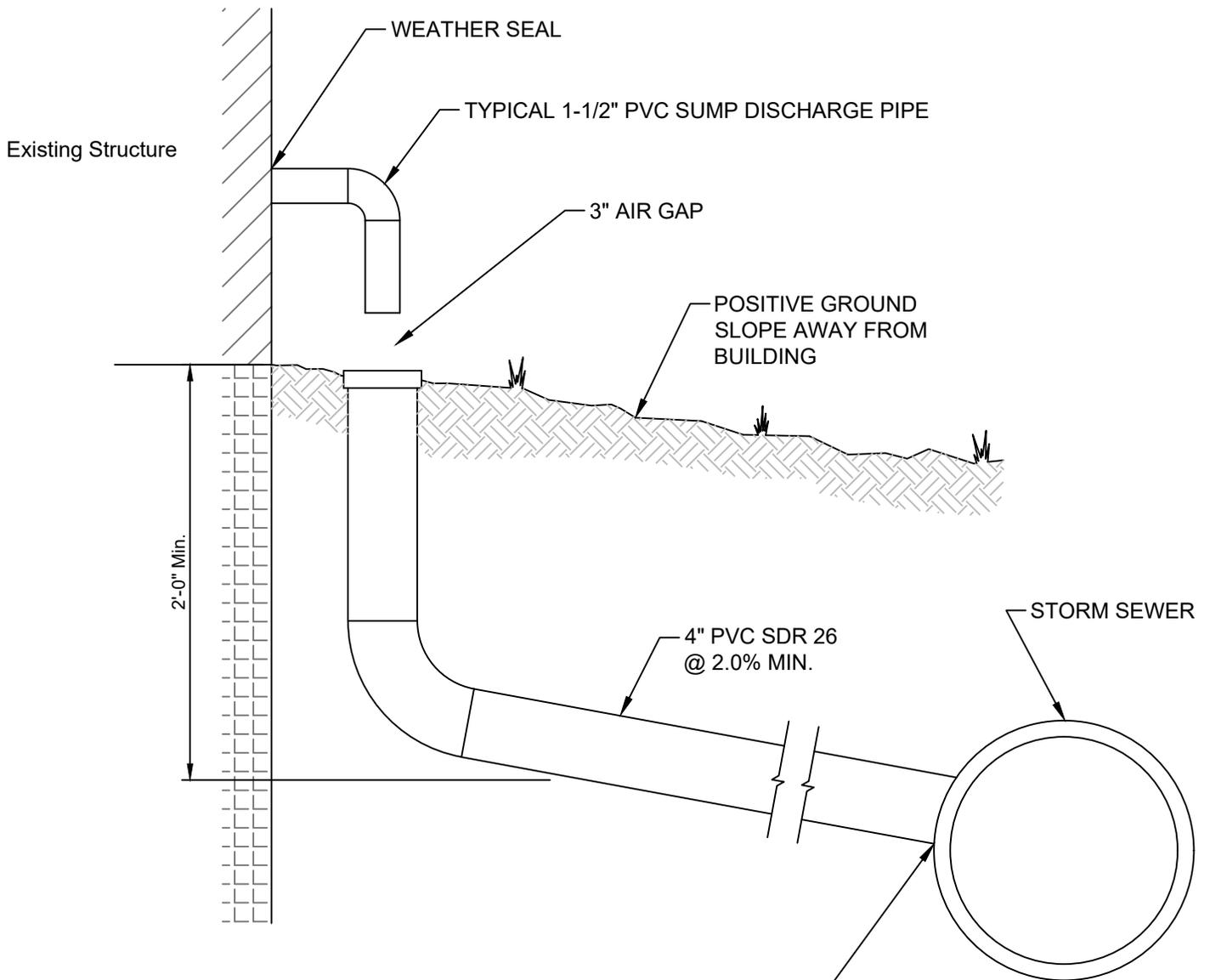
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. USE LATEST REVISION OF STANDARDS.

# STORM INLET STANDARDS



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
STM - 03



- CONNECTION TO STORM SEWER AS FOLLOWS:**
1. EXISTING "WYE" FITTING
  2. PRE-CORED HOLE & SADDLE DEVICE
  3. MACHINE CORE HOLE & SADDLE DEVICE
  4. DIRECT TAP TO STORM STRUCTURE IS PREFERRED

**NOTES:**

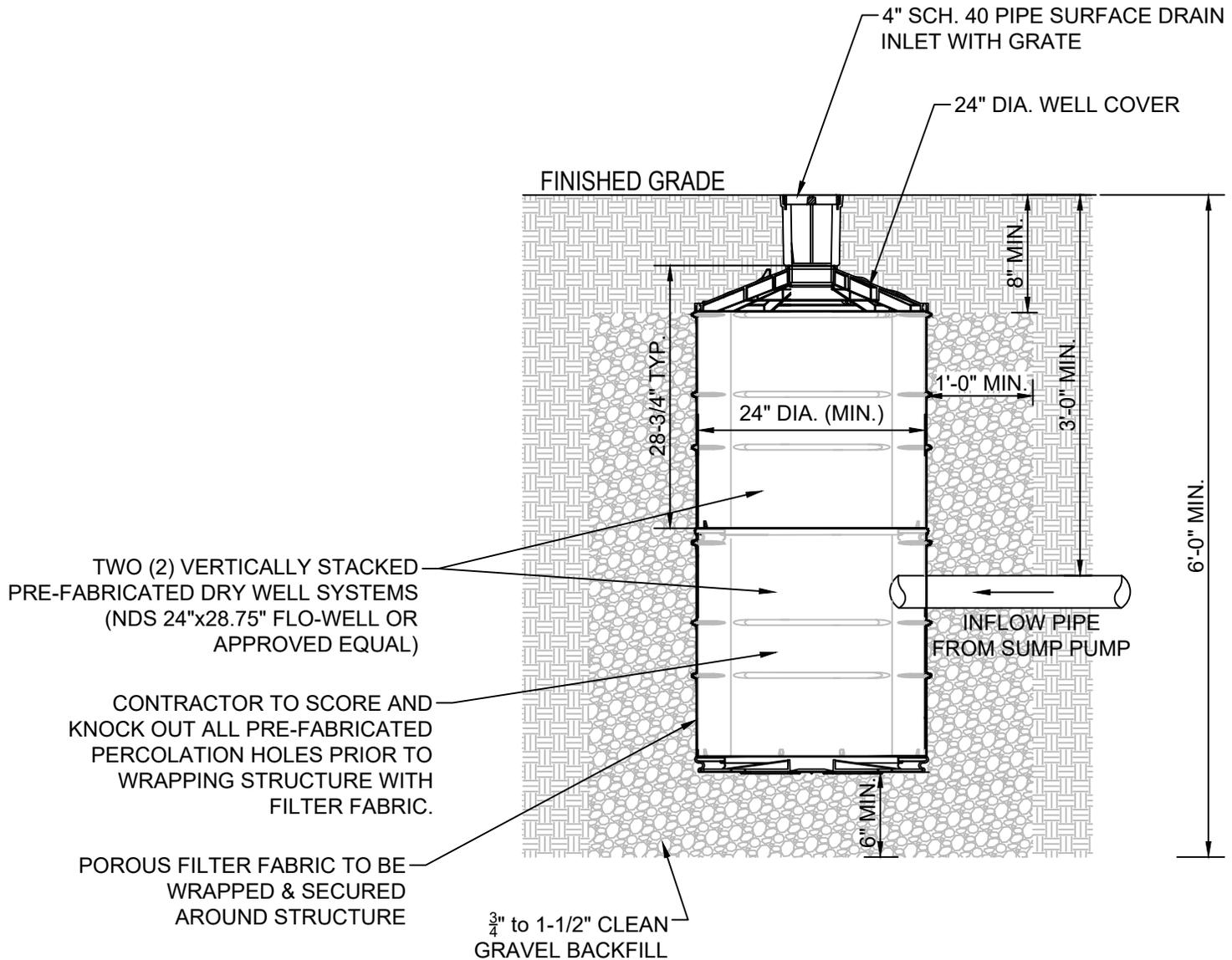
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS
2. CONTRACTOR ASSUMES FULL RESPONSIBILITY AND LIABILITY FOR ANY DAMAGE TO UTILITIES.
3. IN NO EVENT SHALL THE SUMP PUMP DISCHARGE INTO THE SANITARY SEWER SYSTEM.

# SUMP PUMP CONNECTION



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
STM - 04



**FOR PROPERTIES WITH AN EXISTING SERVICE:**

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR SELECTED PRODUCT.
2. VILLAGE INSPECTION REQUIRED BY THE ENGINEERING DIVISION UPON EXCAVATION OF HOLE AND PRIOR TO INSTALLATION OF DRY WELL STRUCTURES AND STONE IN ORDER TO VERIFY SIZE AND DEPTH OF EXCAVATION. PLEASE CALL (847) 918-2020 TO SCHEDULE INSPECTIONS ACCORDINGLY.

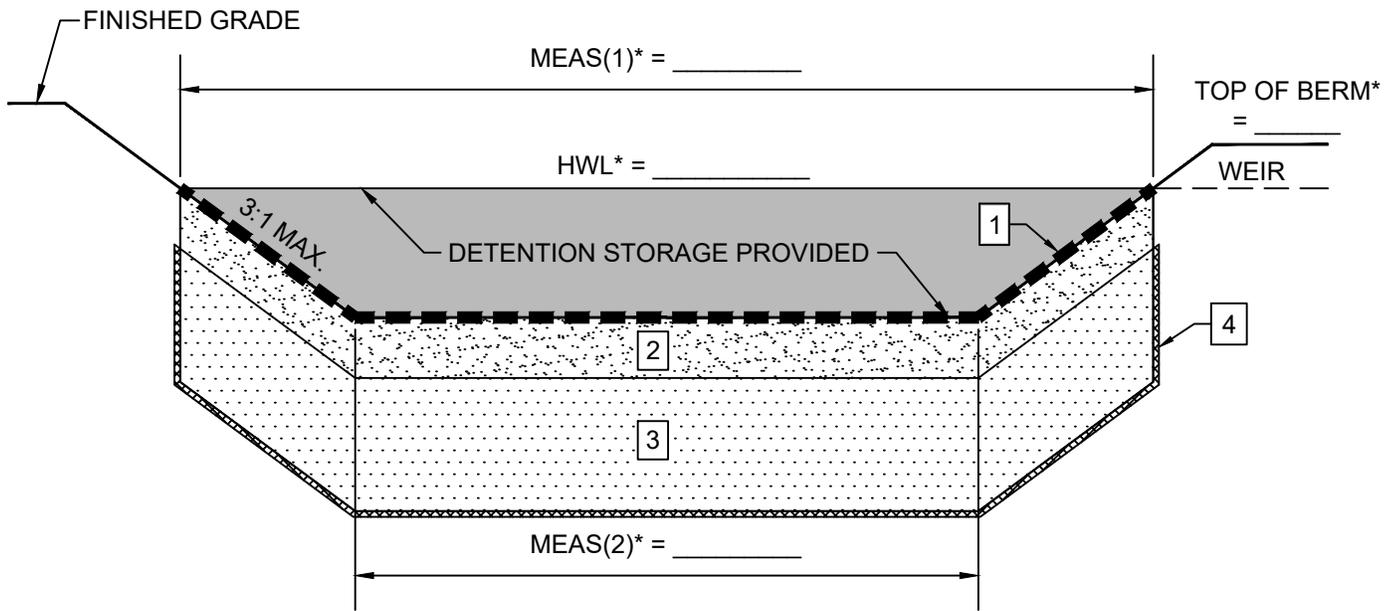
# RESIDENTIAL DRY WELL



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
STM - 05

**\* INFORMATION TO BE PROVIDED BY DESIGN ENGINEER**



- 1 NATIVE PLANTINGS - INSTALLED AT 1 PLANT PER SQUARE FOOT (MIN.)
  - PLANTINGS TO BE INSTALLED ALONG ENTIRE BOTTOM OF RAIN GARDEN AND EXTENDING UP TO DESIGN HWL.
  - PLANTING TYPES TO BE IDENTIFIED BY DESIGN ENGINEER IN TABLE BELOW.
- 2 3" TOPSOIL WITH POWDERED GYPSUM (2000 LBS/AC)
- 3 9" PEAT FILTER - 50% SPHAGNUM PEAT & 50% SAND
- 4 GEOTEXTILE FABRIC TO BE EXTENDED ALONG SIDES AND BOTTOM OF PEAT FILTER LAYER.

RAIN GARDEN SPECIES PLANTS TO BE USED\*:

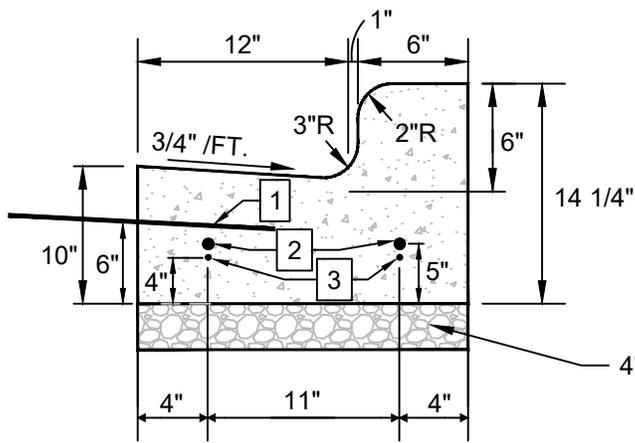
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

- NOTES:**
1. VILLAGE INSPECTION REQUIRED BY THE ENGINEERING DIVISION UPON EXCAVATION OF RAIN GARDEN, PRIOR TO INSTALLATION OF PEAT FILTER LAYER AFTER PLACEMENT OF GEOTEXTILE FABRIC. PLEASE CALL (847) 918-2020 TO SCHEDULE INSPECTIONS ACCORDINGLY.
  2. A FINAL AS-BUILT SURVEY WILL BE REQUIRED TO VERIFY PROVIDED DETENTION VOLUME (SURFACE ONLY).
  3. CONFIRMATION OF INSTALLED PLANTING TYPES (I.E. SEED MIX, PLANT TYPE, ETC.) WILL BE REQUIRED BY CONTRACTOR UPON COMPLETION AND PRIOR TO PERMIT CLOSE-OUT.

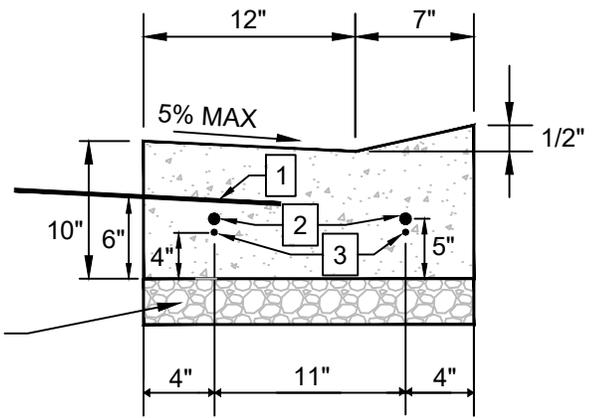
# RAIN GARDEN



LAST REVISED: 02/15/2023 | STANDARD DETAIL # STM - 06

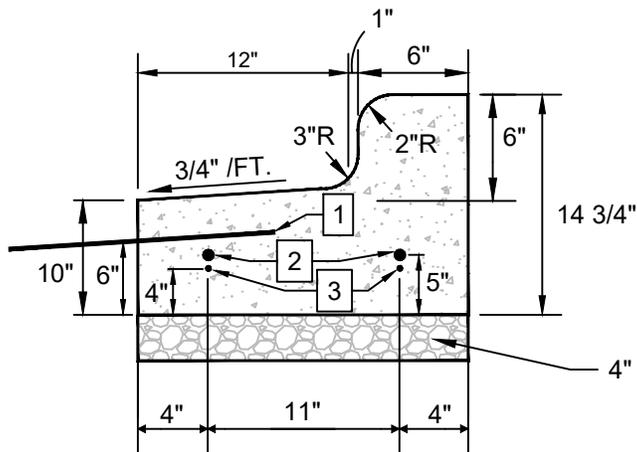


**REGULAR SECTION**

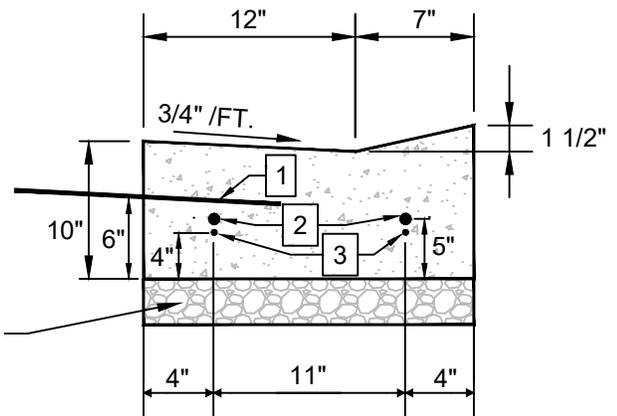


**ADA DEPRESSED SECTION**

- 1 24" LONG #6 ( $\frac{3}{8}$ ") EPOXY-COATED, DEFORMED TIE BARS, GRADE 60 INSTALLED 24" ON-CENTER, EMBEDDED 8" AND EPOXIED IN PLACE (FOR P.C.C. PAVEMENT ONLY).
- 2 TWO (2) - #8 EPOXY COATED SMOOTH DOWEL BARS WITH GREASED CAPS TO BE INSTALLED AT ALL EXPANSION JOINTS
- 3 TWO (2) - #4 ( $\frac{1}{2}$ ") EPOXY COATED DEFORMED CONTINUOUS STEEL REINFORCEMENT BARS ARE TO BE INSTALLED ALONG THE ENTIRE LENGTH OF THE CURB ONLY TO BE INTERRUPTED AT EXPANSION JOINTS. SUPPORT BARS WITH CHAIRS EVERY FIVE (5) FEET, MINIMUM OF TWO (2) CHAIRS.



**REVERSE PITCH SECTION**



**REGULAR DEPRESSED SECTION**

**NOTES:**

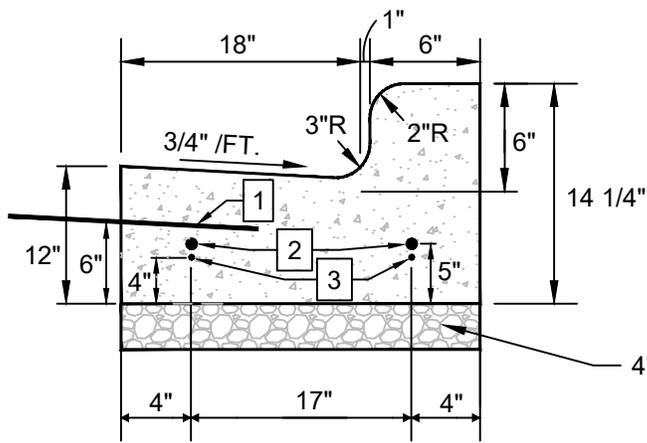
1. EXPANSION JOINTS TO BE SET AT ALL PC'S, PT'S, FIVE (5) FEET ON EITHER SIDE OF ANY FRAMES, AND AT 45' MAX. INTERVALS. ADDITIONAL LOCATIONS MAY BE SPECIFIED BY THE ENGINEER.
2. CONTRACTION JOINTS ARE TO BE CONSTRUCTED AT 15' MAX. INTERVALS AND AT ADDITIONAL LOCATIONS AS MAY BE SPECIFIED BY ENGINEER.
3. ANY CONTINUOUS CURB REMOVALS OF TEN (10) FEET OR GREATER IN LENGTH SHALL HAVE CONTINUOUS STEEL REINFORCEMENT BARS PER [3] ABOVE. REMOVALS LESS THAN TEN (10) FEET IN LENGTH SHALL ONLY HAVE DOWEL BARS INSTALLED AT ENDS PER [2] ABOVE.

# B6.12 CURB & GUTTER

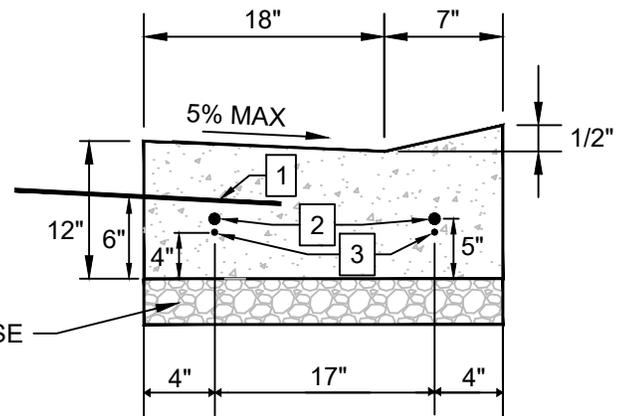


LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 01

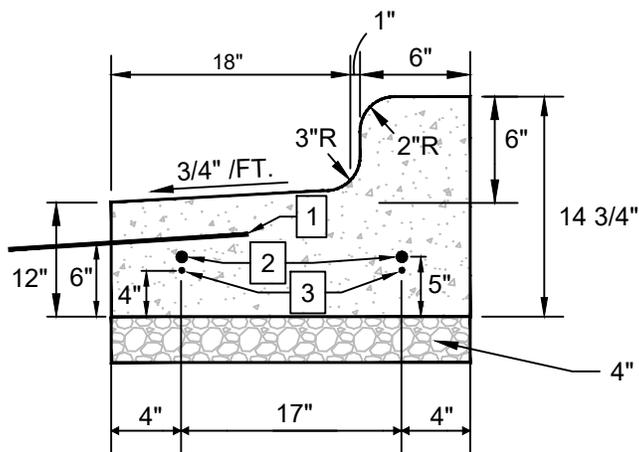


**REGULAR SECTION**

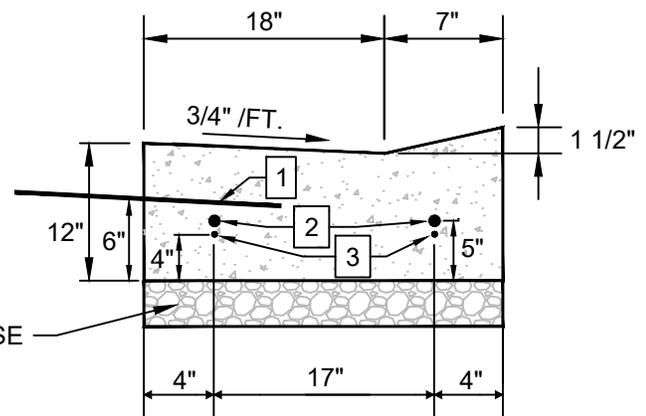


**ADA DEPRESSED SECTION**

- 1 24" LONG #6 (3/8") EPOXY-COATED, DEFORMED TIE BARS, GRADE 60 INSTALLED 24" ON-CENTER, EMBEDDED 8" AND EPOXIED IN PLACE (FOR P.C.C. PAVEMENT ONLY).
- 2 TWO (2) - #8 EPOXY COATED SMOOTH DOWEL BARS WITH GREASED CAPS TO BE INSTALLED AT ALL EXPANSION JOINTS
- 3 TWO (2) - #4 (1/2") EPOXY COATED DEFORMED CONTINUOUS STEEL REINFORCEMENT BARS ARE TO BE INSTALLED ALONG THE ENTIRE LENGTH OF THE CURB ONLY TO BE INTERRUPTED AT EXPANSION JOINTS. SUPPORT BARS WITH CHAIRS EVERY FIVE (5) FEET, MINIMUM OF TWO (2) CHAIRS.



**REVERSE PITCH SECTION**



**REGULAR DEPRESSED SECTION**

**NOTES:**

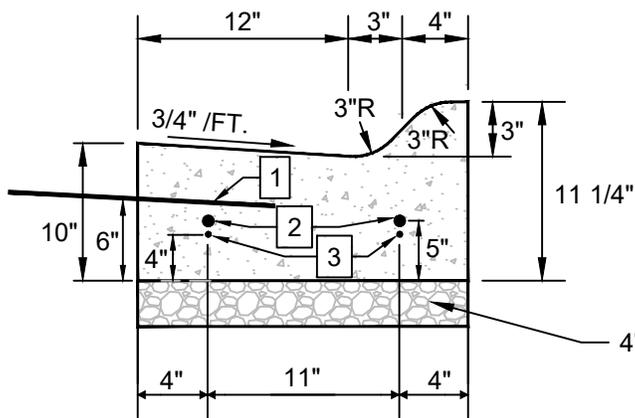
1. EXPANSION JOINTS TO BE SET AT ALL PC'S, PT'S, FIVE (5) FEET ON EITHER SIDE OF ANY FRAMES, AND AT 45' MAX. INTERVALS. ADDITIONAL LOCATIONS MAY BE SPECIFIED BY THE ENGINEER.
2. CONTRACTION JOINTS ARE TO BE CONSTRUCTED AT 15' MAX. INTERVALS AND AT ADDITIONAL LOCATIONS AS MAY BE SPECIFIED BY ENGINEER.
3. ANY CONTINUOUS CURB REMOVALS OF TEN (10) FEET OR GREATER IN LENGTH SHALL HAVE CONTINUOUS STEEL REINFORCEMENT BARS PER [3] ABOVE. REMOVALS LESS THAN TEN (10) FEET IN LENGTH SHALL ONLY HAVE DOWEL BARS INSTALLED AT ENDS PER [2] ABOVE.
4. CURB THICKNESS CAN BE MODIFIED TO MATCH PAVEMENT SECTION IF APPROVED BY VILLAGE ENGINEER

# B6.18 CURB & GUTTER

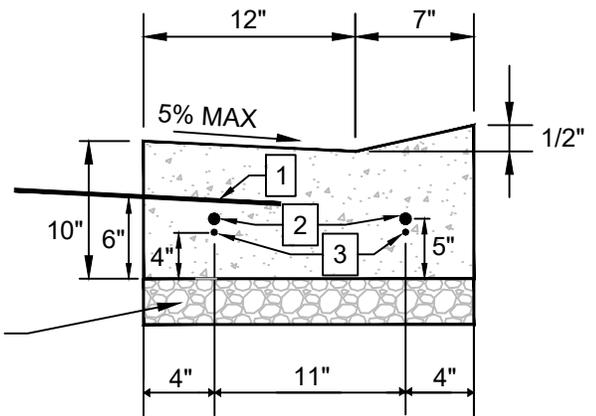


LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 02

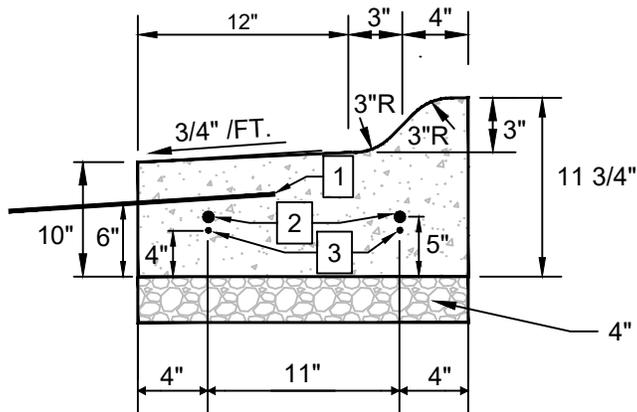


REGULAR SECTION

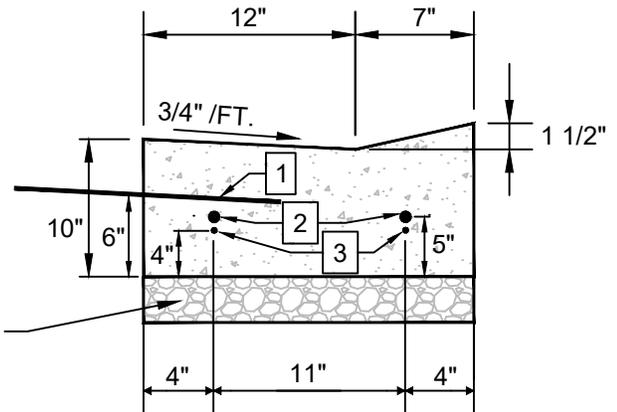


ADA DEPRESSED SECTION

- |   |  |
|---|--|
| 1 | 24" LONG #6 ( $\frac{3}{8}$ ") EPOXY-COATED, DEFORMED TIE BARS, GRADE 60 INSTALLED 24" ON-CENTER, EMBEDDED 8" AND EPOXIED IN PLACE (FOR P.C.C. PAVEMENT ONLY).   |
| 2 | TWO (2) - #8 EPOXY COATED SMOOTH DOWEL BARS WITH GREASED CAPS TO BE INSTALLED AT ALL EXPANSION JOINTS  |
| 3 | TWO (2) - #4 ( $\frac{1}{2}$ ") EPOXY COATED DEFORMED CONTINUOUS STEEL REINFORCEMENT BARS ARE TO BE INSTALLED ALONG THE ENTIRE LENGTH OF THE CURB ONLY TO BE INTERRUPTED AT EXPANSION JOINTS. SUPPORT BARS WITH CHAIRS EVERY FIVE (5) FEET, MINIMUM OF TWO (2) CHAIRS. |



REVERSE PITCH SECTION



REGULAR DEPRESSED SECTION

**NOTES:**

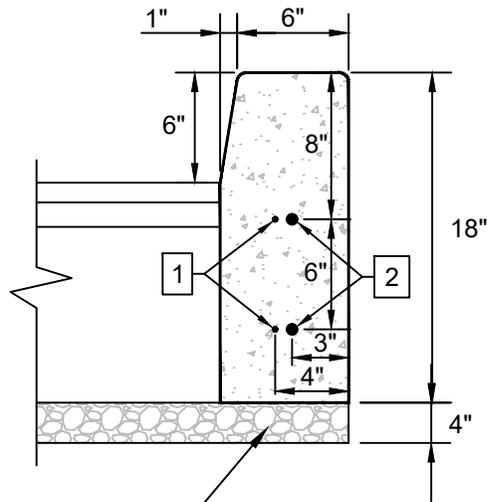
- EXPANSION JOINTS TO BE SET AT ALL PC'S, PT'S, FIVE (5) FEET ON EITHER SIDE OF ANY FRAMES, AND AT 45' MAX. INTERVALS. ADDITIONAL LOCATIONS MAY BE SPECIFIED BY THE ENGINEER.
- CONTRACTION JOINTS ARE TO BE CONSTRUCTED AT 15' MAX. INTERVALS AND AT ADDITIONAL LOCATIONS AS MAY BE SPECIFIED BY ENGINEER.
- ANY CONTINUOUS CURB REMOVALS OF TEN (10) FEET OR GREATER IN LENGTH SHALL HAVE CONTINUOUS STEEL REINFORCEMENT BARS PER [3] ABOVE. REMOVALS LESS THAN TEN (10) FEET IN LENGTH SHALL ONLY HAVE DOWEL BARS INSTALLED AT ENDS PER [2] ABOVE.

# M3.12 CURB & GUTTER



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 03



4" CA-6 STONE BASE  
MECHANICALLY  
COMPACTED

- 1 TWO (2) - #4 ( $\frac{1}{2}$ " ) EPOXY COATED DEFORMED CONTINUOUS STEEL REINFORCEMENT BARS ARE TO BE INSTALLED ALONG THE ENTIRE LENGTH OF THE CURB ONLY TO BE INTERRUPTED AT EXPANSION JOINTS. SUPPORT BARS WITH CHAIRS EVERY FIVE (5) FEET, MINIMUM OF TWO (2) CHAIRS.
- 2 TWO (2) - #8 EPOXY COATED SMOOTH DOWEL BARS WITH GREASED CAPS TO BE INSTALLED AT ALL EXPANSION JOINTS

**NOTES:**

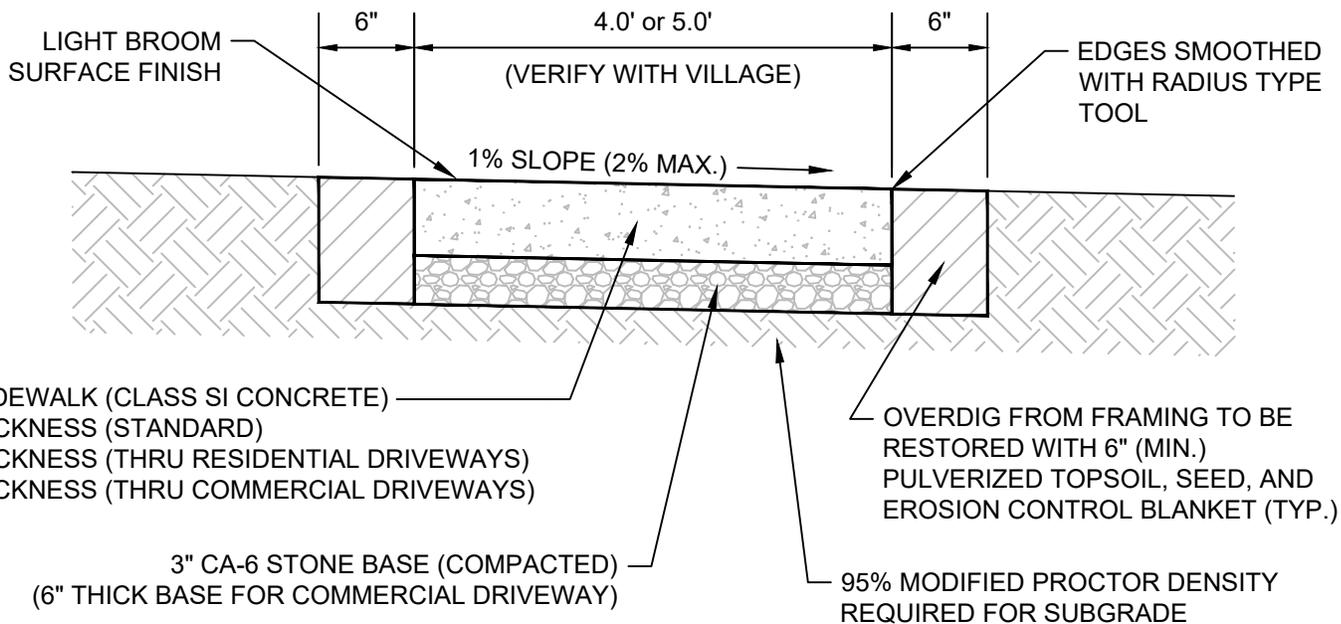
1. EXPANSION JOINTS TO BE SET AT ALL PC'S, PT'S, FIVE (5) FEET ON EITHER SIDE OF ANY FRAMES, AND AT 45' MAX. INTERVALS. ADDITIONAL LOCATIONS MAY BE SPECIFIED BY THE ENGINEER.
2. CONTRACTION JOINTS ARE TO BE CONSTRUCTED AT 15' MAX. INTERVALS AND AT ADDITIONAL LOCATIONS AS MAY BE SPECIFIED BY ENGINEER.
3. ANY CONTINUOUS CURB REMOVALS OF TEN (10) FEET OR GREATER IN LENGTH SHALL HAVE CONTINUOUS STEEL REINFORCEMENT BARS PER [1] ABOVE. REMOVALS LESS THAN TEN (10) FEET IN LENGTH SHALL ONLY HAVE DOWEL BARS INSTALLED AT ENDS PER [2] ABOVE.

# TYPE B BARRIER CURB



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 04



- P.C.C. SIDEWALK (CLASS SI CONCRETE)
- 5" THICKNESS (STANDARD)
  - 6" THICKNESS (THRU RESIDENTIAL DRIVEWAYS)
  - 8" THICKNESS (THRU COMMERCIAL DRIVEWAYS)

3" CA-6 STONE BASE (COMPACTED)  
(6" THICK BASE FOR COMMERCIAL DRIVEWAY)

OVERDIG FROM FRAMING TO BE RESTORED WITH 6" (MIN.) PULVERIZED TOPSOIL, SEED, AND EROSION CONTROL BLANKET (TYP.)

95% MODIFIED PROCTOR DENSITY REQUIRED FOR SUBGRADE

**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. PROVIDE  $\frac{1}{2}$ " THICK FIBER EXPANSION JOINTS AT POINTS ABUTTING CURB OR PAVEMENT AND AT 50-FOOT MAXIMUM INTERVALS.
3. CONTROL JOINTS SHALL BE  $\frac{1}{8}$ " TO  $\frac{1}{4}$ " WIDE AND 1/4 OF THE SIDEWALK THICKNESS DEEP. THE EDGE OF THE CONTROL JOINTS SHALL BE GIVEN A  $\frac{1}{4}$ " RADIUS.
4. CONTROL JOINTS TO BE PROVIDED AT 5' ON-CENTER SPACING. SPACING CAN BE INCREASED FOR SIDEWALKS IN EXCESS OF 5-FOOT IN WIDTH AS DIRECTED BY THE ENGINEER.
5. PLACING, FINISHING, AND CURING OF P.C.C. SIDEWALK SHALL MEET THE REQUIREMENTS OF SECTION 424 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

# P.C.C. SIDEWALK



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 05

**ILLINOIS DEPARTMENT OF TRANSPORTATION (I.D.O.T.) STANDARDS TO BE UTILIZED FOR ALL CURB RAMPS.**

**PLEASE "X" ANY STANDARDS LISTED BELOW THAT ARE APPLICABLE TO THIS PROJECT, AND INCLUDE THE CORRESPONDING I.D.O.T. STANDARD DETAIL ON THE PLANS.**

STANDARD	DESCRIPTION	APPLICABLE TO CURRENT PROJECT? "X"
424001	PERPENDICULAR RAMPS FOR SIDEWALKS	
424006	DIAGONAL CURB RAMPS FOR SIDEWALKS	
424011	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS	
424016	MID-BLOCK CURB RAMPS FOR SIDEWALKS	
424021	DEPRESSED CORNER FOR SIDEWALKS	
424026	ENTRANCE / ALLEY PEDESTRIAN CROSSINGS	
424031	MEDIAN PEDESTRIAN CROSSINGS	

**NOTES:**

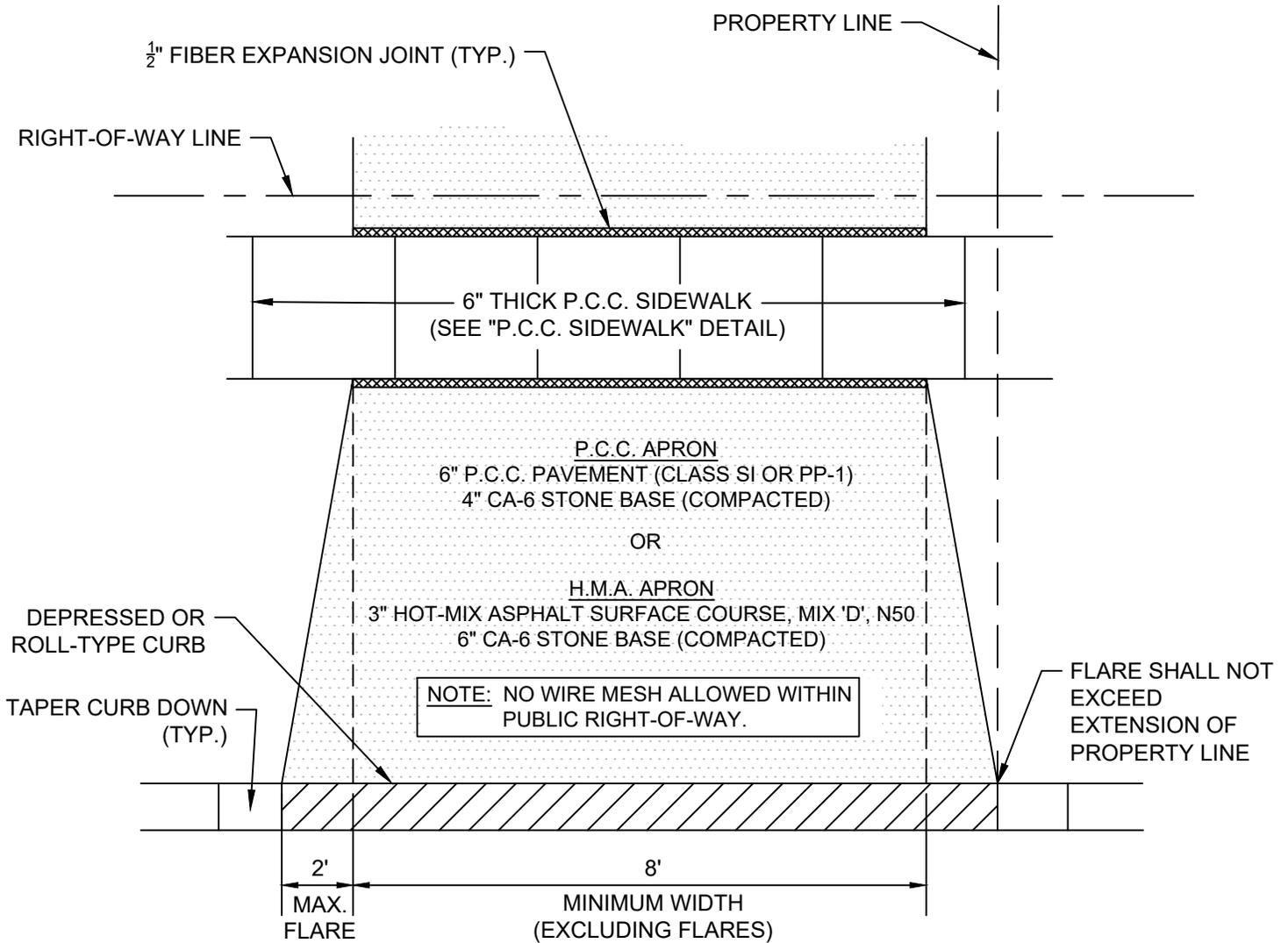
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. ALL DETECTABLE WARNINGS ON PUBLIC SIDEWALK SHALL BE ARMOR TILE "CAST IN PLACE" POLYMER COMPOSITE, "BRICK RED" COLOR, OR APPROVED EQUAL
3. USE LATEST REVISION OF STANDARDS.

# SIDEWALK CURB RAMP STANDARDS



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 06



**NOTES:**

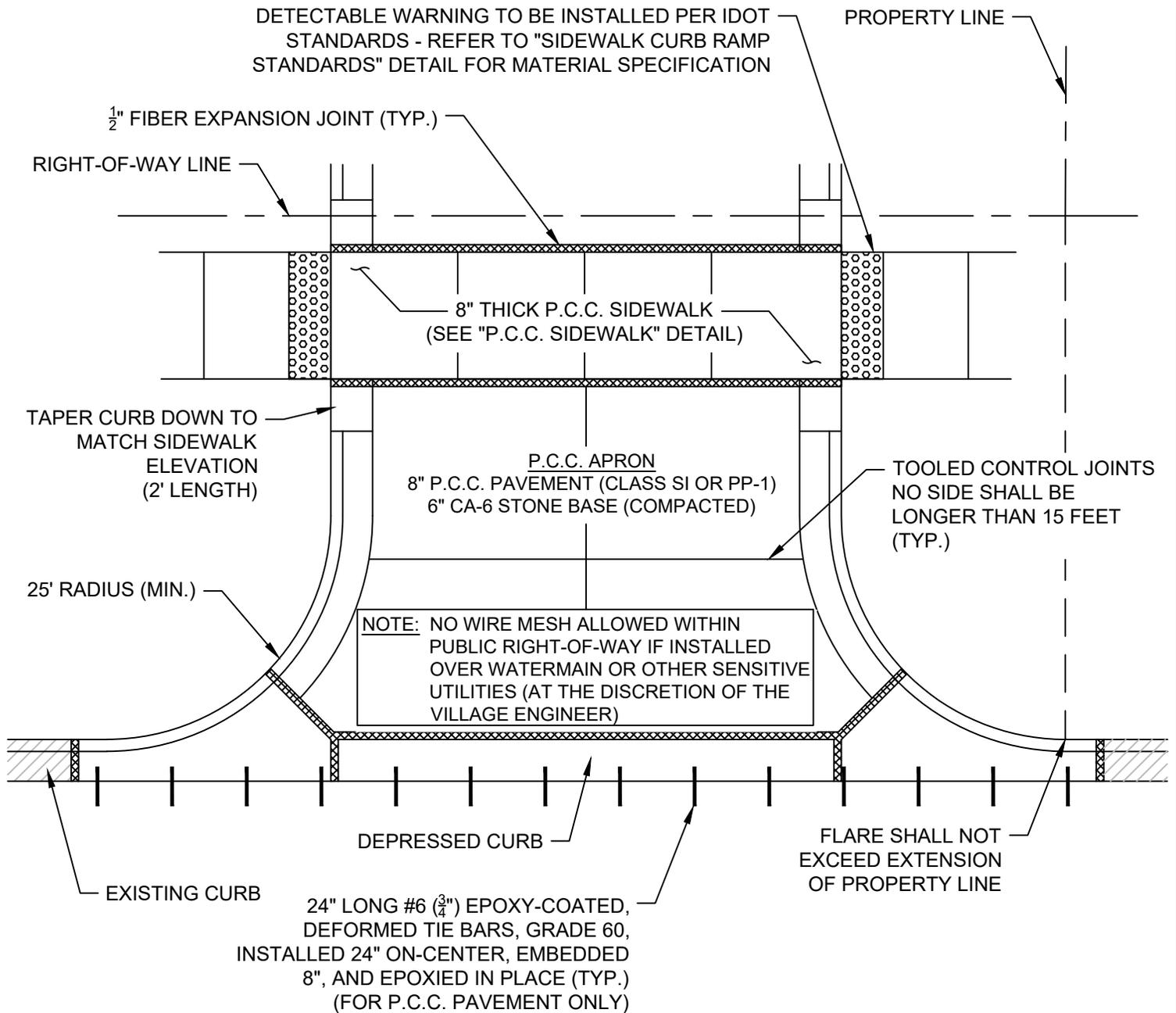
1. ALL EXISTING ABUTTING EXPANSION JOINT MATERIAL SHALL BE REMOVED AND REPLACED.
2. WHITE CURING COMPOUND, PER IDOT SECTION 1022.01(C), SHALL BE APPLIED TO THE CONCRETE IMMEDIATELY AFTER IT HAS BEEN FINISHED OR PER MANUFACTURER'S RECOMMENDATION.
3. DRIVEWAY FLARE SHALL BE A MAXIMUM OF 2-FEET WIDE AS MEASURED FROM THE SIDEWALK TO THE BACK-OF-CURB. IF NO SIDEWALK EXISTS, THE WIDTH OF THE FLARE SHALL BE MEASURED FROM A POINT 6-FEET BEHIND THE BACK-OF-CURB TO THE BACK-OF-CURB.
4. PRE-POUR INSPECTION REQUIRED BY THE ENGINEERING DIVISION PRIOR TO PLACEMENT OF PAVEMENT AFTER FORMING IS IN PLACE. PLEASE CALL (847) 918-2020 TO SCHEDULE INSPECTIONS.

# RESIDENTIAL DRIVEWAY APRON



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 07



**NOTES:**

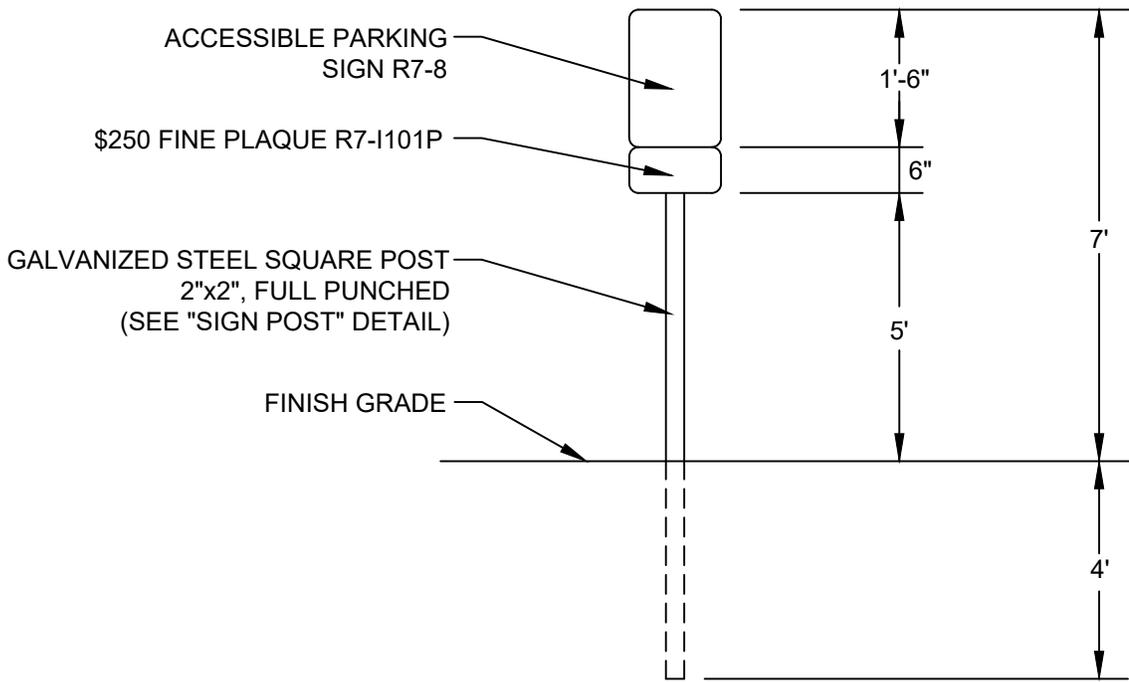
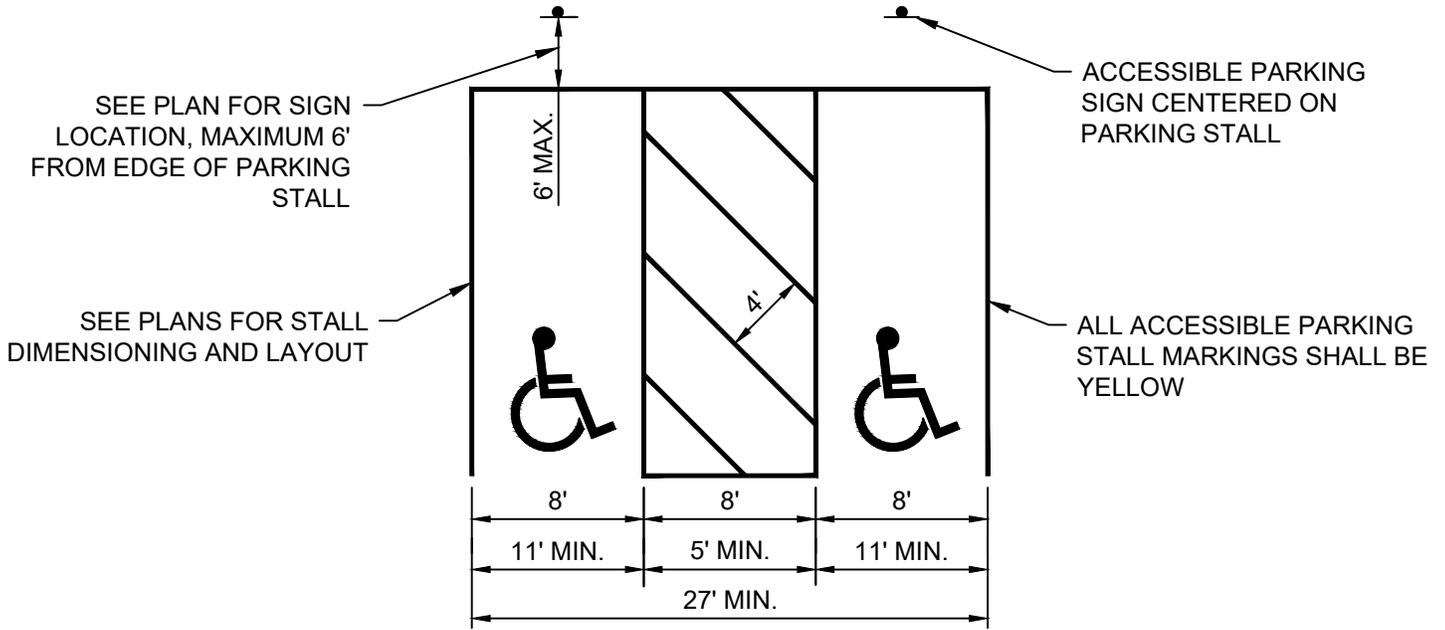
1. ALL EXISTING ABUTTING EXPANSION JOINT MATERIAL SHALL BE REMOVED AND REPLACED.
2. WHITE CURING COMPOUND, PER IDOT SECTION 1022.01(C), SHALL BE APPLIED TO THE CONCRETE IMMEDIATELY AFTER IT HAS BEEN FINISHED OR PER MANUFACTURER'S RECOMMENDATION.
3. DRIVEWAY FLARE SHALL BE A MAXIMUM OF 2-FEET WIDE AS MEASURED FROM THE SIDEWALK TO THE BACK-OF-CURB. IF NO SIDEWALK EXISTS, THE WIDTH OF THE FLARE SHALL BE MEASURED FROM A POINT 6-FEET BEHIND THE BACK-OF-CURB TO THE BACK-OF-CURB.
4. PRE-POUR INSPECTION REQUIRED BY THE ENGINEERING DIVISION PRIOR TO PLACEMENT OF PAVEMENT AFTER FORMING IS IN PLACE. PLEASE CALL (847) 918-2020 TO SCHEDULE INSPECTIONS.

# COMMERCIAL DRIVEWAY APRON



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 08



**NOTES:**

1. ALL ACCESSIBLE PARKING PAVEMENT MARKINGS TO BE 'YELLOW' IN COLOR.
2. THE SIGN MUST BE SUPPLEMENTED WITH A "VAN ACCESSIBLE" SIGN AS APPLICABLE.
3. THE ACCESS AISLE MAY BE ON EITHER SIDE OF THE PARKING STALL, EXCEPT FOR ANGLED PARKING SPACES WHICH SHALL HAVE THE ACCESS AISLE LOCATED ON THE PASSENGER SIDE OF THE PARKING STALL.

# ACCESSIBLE PARKING & SIGNAGE

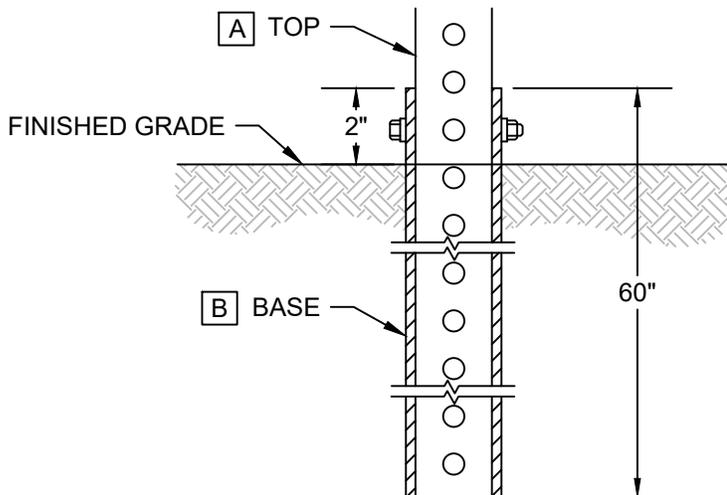


LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 09

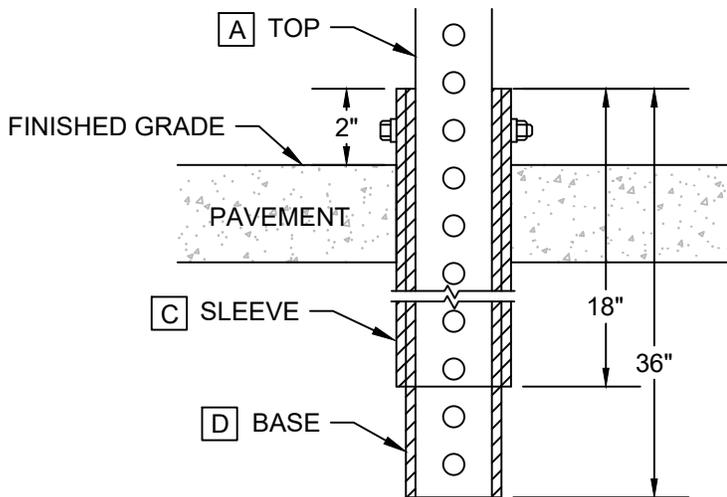
**ALL SIGN POSTS TO BE GALVANIZED STEEL SQUARE POSTS, 2"x2", FULL PUNCHED.**

**GROUND MOUNT DETAIL**



- A** TOP - 2" x 2" x VARIABLE LENGTH
- B** BASE FOR GROUND MOUNT - 2" x 2" x 60"
- C** SLEEVE FOR PAVEMENT MOUNT - 2-1/2" x 2-1/2" x 18"
- D** BASE FOR PAVEMENT MOUNT - 2-1/4" x 2-1/4" x 36"

**PAVEMENT MOUNT DETAIL**



**NOTES:**

1. INSTALLATION HEIGHTS OF ALL SIGNAGE SHALL BE IN ACCORDANCE STATE OR OTHER APPLICABLE REGULATIONS.
2. ALL BOLTS AND OTHER ASSEMBLY MATERIAL SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. IF A SURFACE ANCHOR BOLT MOUNT IS REQUIRED, INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

**SIGN POST**

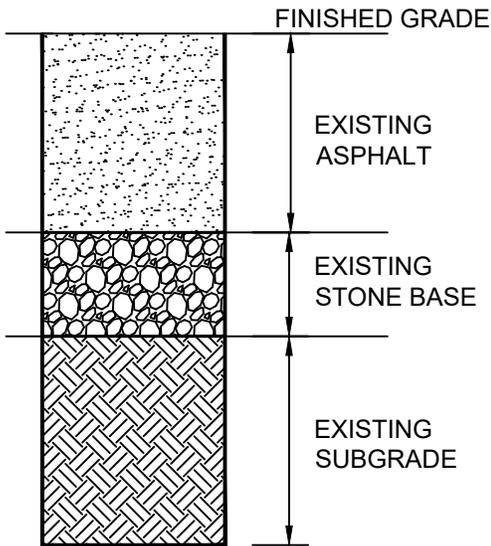


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REVISED:  
02/15/2023

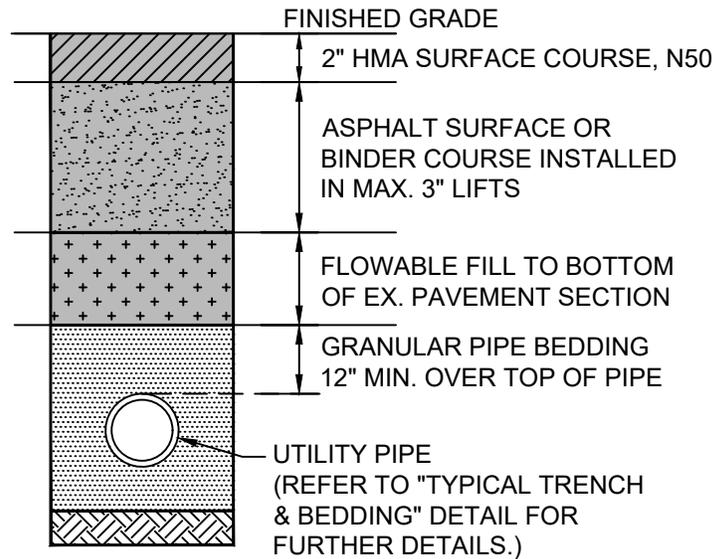
STANDARD DETAIL #  
PAV - 10

## ROADWAYS WITH FULL-DEPTH ASPHALT

### EXISTING

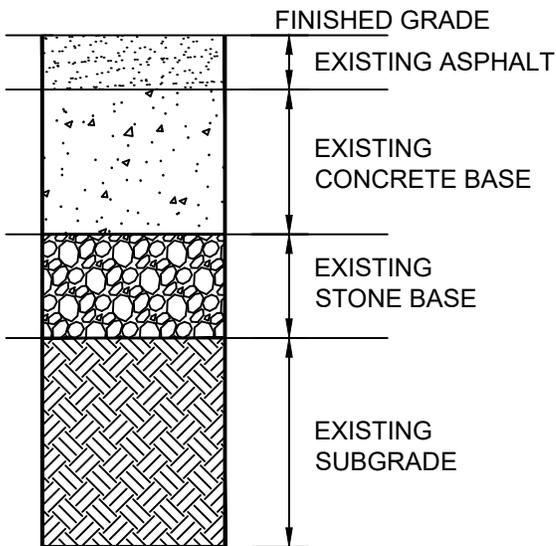


### PROPOSED

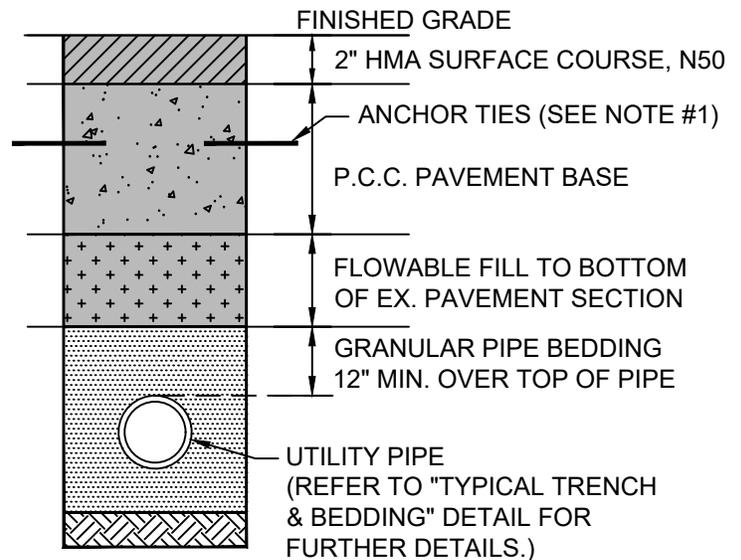


## ROADWAYS WITH CONCRETE BASE

### EXISTING



### PROPOSED



**NOTES:**

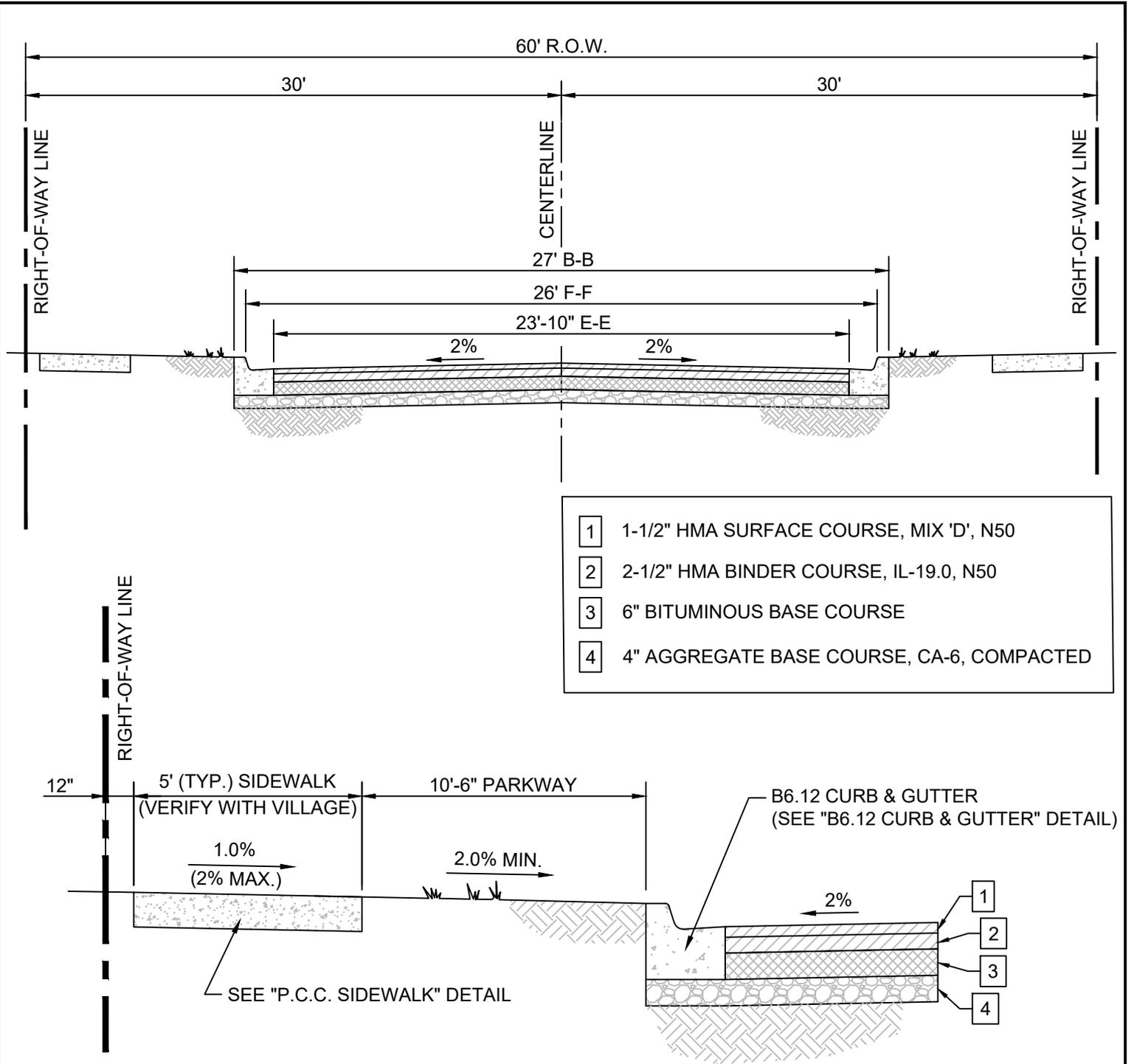
1. 1/2" EPOXY-COATED THREADED BARS TO BE EMBEDDED 12" AND SPACED AT 36" MAX. ON-CENTER TO BE PROVIDED BETWEEN NEW CONCRETE AND EXISTING CONCRETE BASES (FOR CONCRETE BASE ROADS ONLY).
2. INSPECTIONS ARE REQUIRED BY THE ENGINEERING DIVISION FOR EACH LAYER OF PAVEMENT RESTORATION. PLEASE CONTACT (847) 918-2020 TO SCHEDULE INSPECTIONS ACCORDINGLY.
3. REFER TO "TYPICAL TRENCH & BEDDING" DETAIL FOR FURTHER INFORMATION ON SEWER INSTALLATIONS.

# UTILITY TRENCH PAVEMENT PATCH



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 11



**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. SIDEWALK WIDTHS & CURB TYPES SHALL BE CONSISTENT WITH ADJACENT AREAS AND MUST BE COORDINATED WITH THE VILLAGE OF LIBERTYVILLE DURING INITIAL DESIGN STAGES.

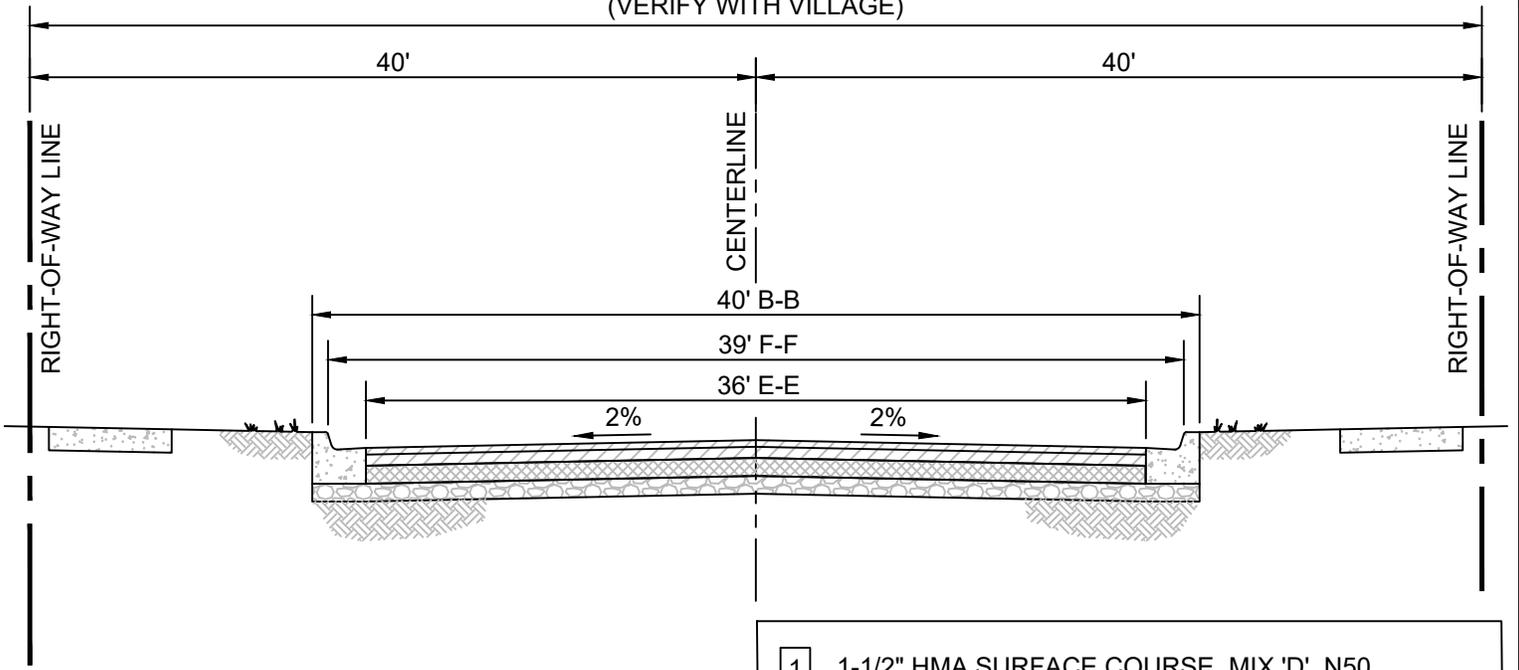
# TYPICAL RESIDENTIAL ROADWAY SECTION



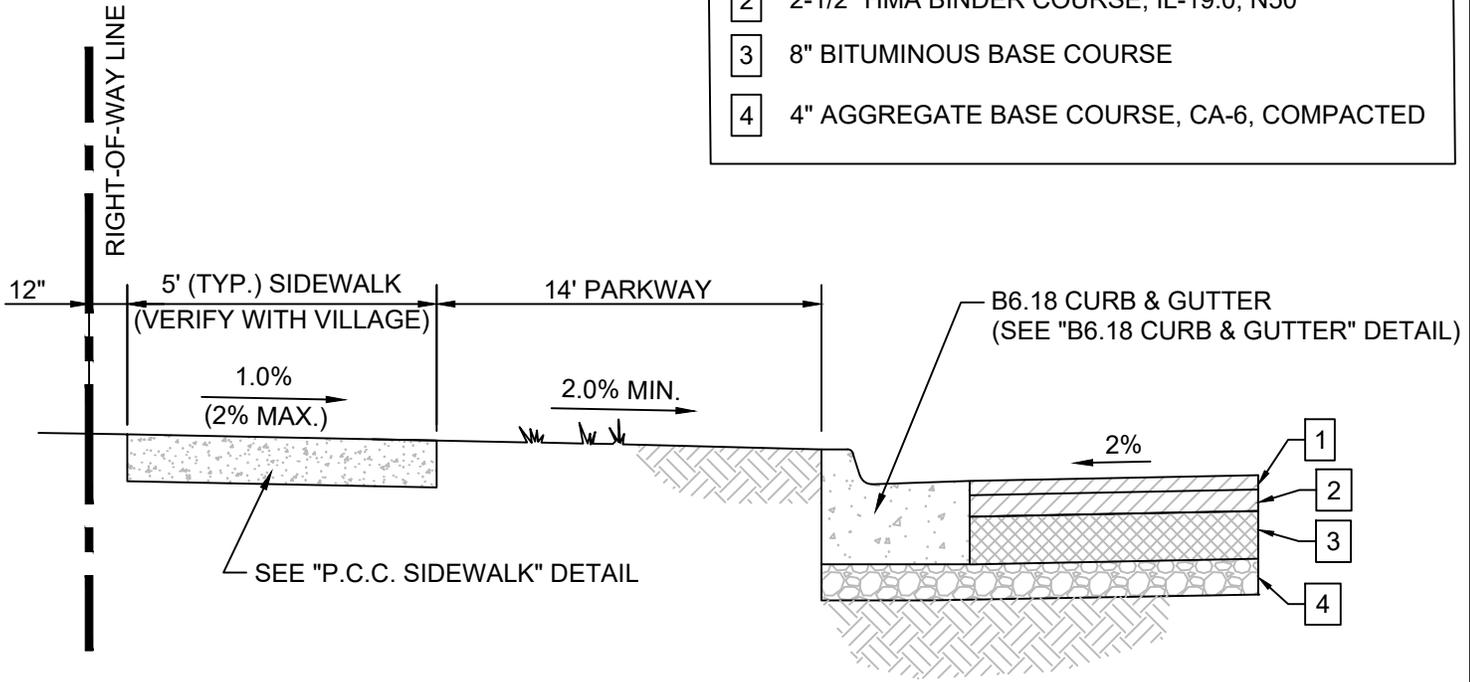
LAST REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 12

80' (TYP.) R.O.W.  
(VERIFY WITH VILLAGE)



- 1 1-1/2" HMA SURFACE COURSE, MIX 'D', N50
- 2 2-1/2" HMA BINDER COURSE, IL-19.0, N50
- 3 8" BITUMINOUS BASE COURSE
- 4 4" AGGREGATE BASE COURSE, CA-6, COMPACTED



**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. SIDEWALK WIDTHS & CURB TYPES SHALL BE CONSISTENT WITH ADJACENT AREAS AND MUST BE COORDINATED WITH THE VILLAGE OF LIBERTYVILLE DURING INITIAL DESIGN STAGES.

# TYPICAL NON-RESIDENTIAL ROADWAY SECTION



LAST REVISED:  
02/15/2023

STANDARD DETAIL #  
PAV - 13

**LAKE COUNTY STORMWATER MANAGEMENT COMMISSION (LCSMC), NATIONAL RESOURCES CONSERVATION SERVICE (NRCS) & ILLINOIS URBAN MANUAL (IUM) STANDARDS TO BE UTILIZED FOR EROSION & SEDIMENT CONTROL MEASURES.**

**PLEASE "X" ANY STANDARDS LISTED BELOW THAT ARE APPLICABLE TO THIS PROJECT, AND INCLUDE THE CORRESPONDING STANDARD DETAIL ON THE PLANS.**

DESCRIPTION	PROVIDED BY:	DETAIL #	APPLICABLE TO CURRENT PROJECT? "X"
LCSMC SOIL EROSION AND SEDIMENT CONTROL CONSTRUCTION NOTES	LCSMC	N/A	
SILT FENCE DETAIL	LCSMC	N/A	
DITCH CHECK (MANUFACTURED) - ROLLED	IUM	IUM-514	
EROSION CONTROL BLANKET	IUM	IUM-530	
INLET PROTECTION - PAVED AREAS DROP-IN PROTECTION	IUM	IUM-561D	
ROCK CHECK DAM - RIPRAP	NRCS / IUM	IL-605R	
SEDIMENT BASIN DEWATERING DEVICE	NRCS / IUM	IL-615	
SOIL STOCKPILE	IUM	IL-627	
STABILIZED CONSTRUCTION ENTRANCE PLAN (2 PAGES)	NRCS / IUM	IL-630	
TEMPORARY CONCRETE WASHOUT FACILITY - BARRIER WALL	IUM	IL-654BW	

**NOTES:**

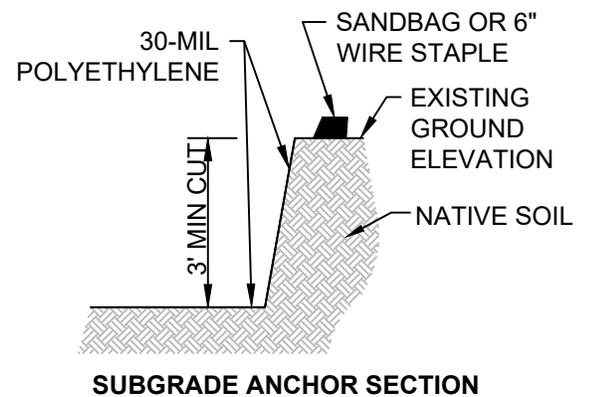
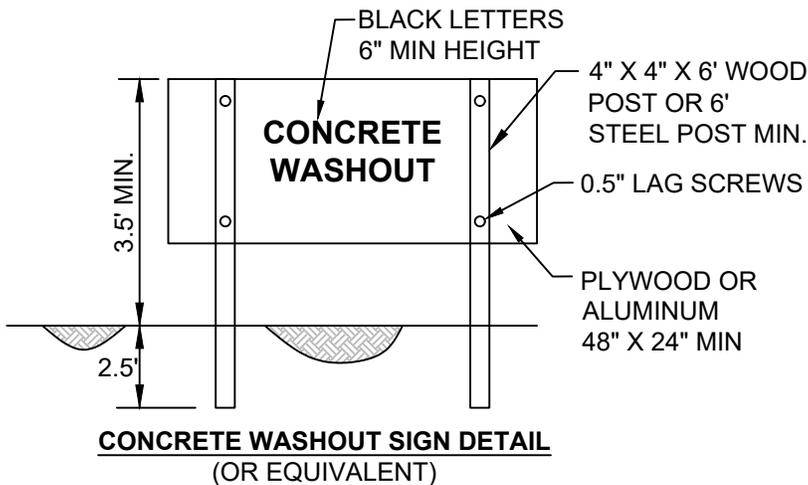
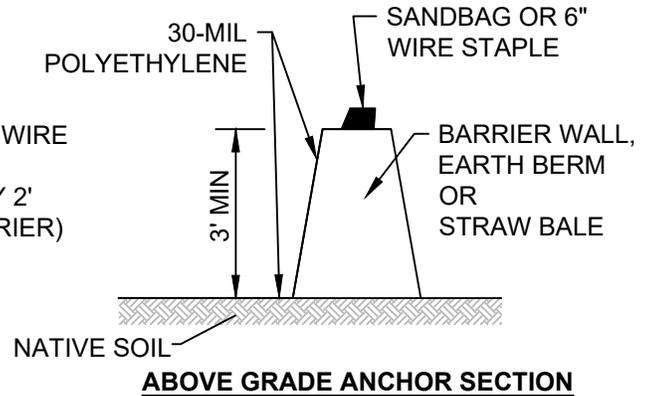
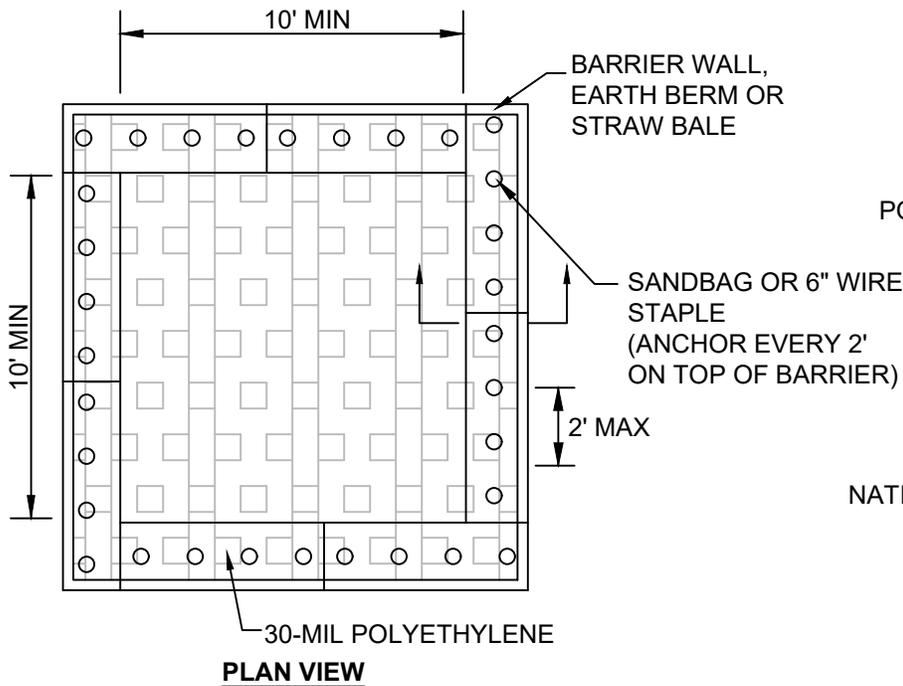
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. ADDITIONAL MEASURES MAY BE REQUIRED BEYOND THOSE LISTED ABOVE. DESIGN ENGINEER SHALL IDENTIFY AND INCORPORATE ANY ADDITIONAL MEASURES AND STANDARD DETAILS AS REQUIRED FOR THE PROJECT.
3. USE LATEST REVISION OF STANDARDS.

# EROSION / SEDIMENT CONTROL STANDARDS



LAST REVISED:  
02/15/2023

STANDARD DETAIL #  
EROS - 01



**MAINTENANCE:**

1. DRIED CONCRETE WASTE SHALL BE PICKED UP AND DISPOSED OF PROPERLY WHEN 75% OF CAPACITY IS REACHED.
2. HARDENED CONCRETE CAN BE PROPERLY RECYCLED AND REUSED ONSITE OR HAULED OFF-SITE TO AN APPROPRIATE FACILITY.

**NOTES:**

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. CONCRETE WASHOUT SHOULD NOT BE ALLOWED IN STREET OR TO REACH A STORM WATER DRAINAGE SYSTEM OR WATERCOURSE.
4. CONCRETE WASHOUT AREA TO BE LOCATED AT LEAST 10' BEHIND CURB IF ADJACENT TO A PAVED ROAD.
5. IF USING STRAW BALES, STAKE IN PLACE USING (2) 2"X2"X4' WOODEN STAKES.
6. STRAW BALES SHALL BE TRENCHED IN 3".
7. CONCRETE WASHOUT DUMPSTER MAY BE USED IN LIEU OF CONSTRUCTION ONE AS DETAILED.

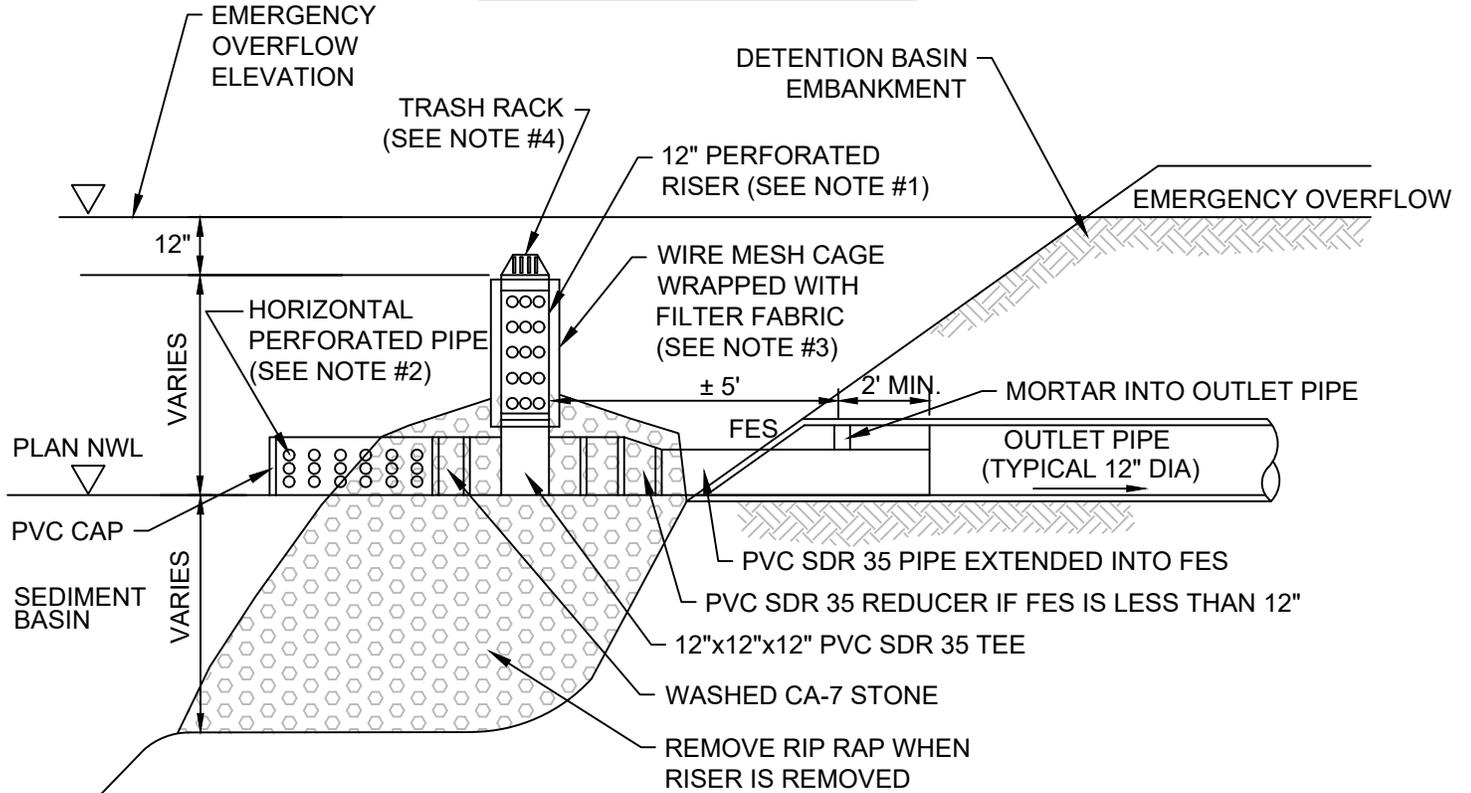
**CONCRETE WASHOUT**



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
EROS - 02

**SECTION ON CENTERLINE OF PIPE**



**MAINTENANCE:**

1. REPLACE FILTER FABRIC.
2. CLEAN OR REPLACE STONE.
3. REMOVE TRASH.
4. CLEAN OUTFALL.

**NOTES:**

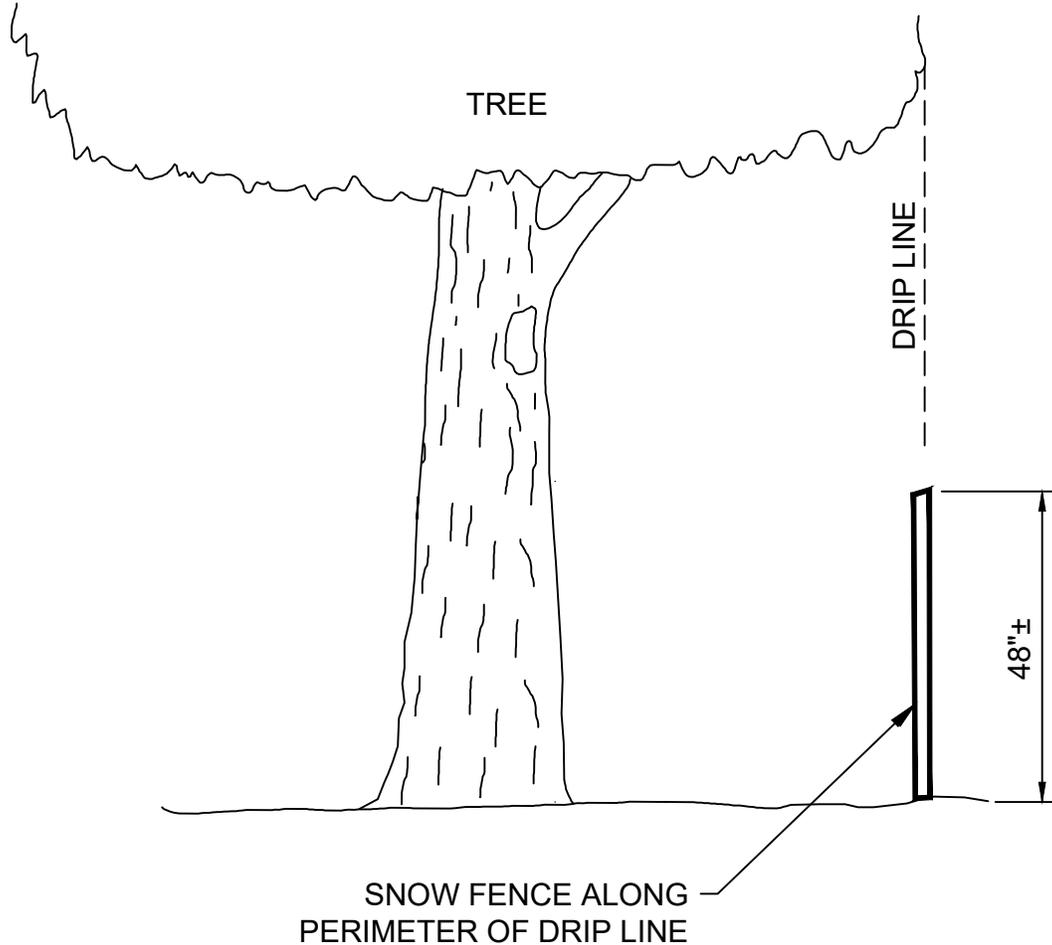
1. 12" DIAMETER PERFORATED RISER SHALL CONSIST OF THIRTY 1" DIAMETER HOLES ( $\pm$  24 SQ INCHES) PER LINEAR FOOT OF PIPE. USE OF 1"x4" SLOTS ARE PERMITTED. TOP OF PERFORATED RISER TO BE SET 12" BELOW EMERGENCY OVERFLOW ELEVATION. (ADS HICKENBOTTOM 1"/SLOTTED HOLE MODEL OR APPROVED EQUAL)
2. PROVIDE 4 LINEAR FEET OF HORIZONTAL PERFORATED PIPE. CHICKEN COOP WIRE SHALL BE WRAPPED DIRECTLY AROUND HORIZONTAL PERFORATED PIPE A MINIMUM OF THREE TIMES AND FASTENED WITH WIRE OR PLASTIC TIES. THEN CHICKEN COOP WIRE SHALL BE WRAPPED A MINIMUM OF TWO TIMES WITH WEVTEX 403 FABRIC OR APPROVED EQUAL. FABRIC SHALL BE FASTENED TO EACH END OF PVC PIPE AND AT 12" SPACING USING PLASTIC TIES.
3. 15"-18" DIAMETER WIRE MESH CAGE WRAPPED A MINIMUM OF TWO TIMES WITH WEVTEX 403 WOVEN FABRIC OR APPROVED EQUAL. FABRIC SHALL BE FASTENED TO WIRE MESH CAGE ONLY WITH WIRE OR PLASTIC TIES. WIRE CAGE TO BE SET INTO WASHED CA-7 STONE AND SIZED TO MATCH TOP OF PERFORATED RISER. WIRE CAGE MAY BE CONSTRUCTED USING FOUR LAYERS OF CHICKEN COOP WIRE FASTENED TO ITSELF OR AN 18" DIAMETER REBAR LIGHT STANDARD CAGE WRAPPED TWICE WITH CHICKEN COOP WIRE.
4. METAL TRASH RACK SHALL FIT FIRMLY AND CONSIST OF 12" ADS BAR GUARD. (NEENAH R-4351-B OR APPROVED EQUAL)
5. ALL PIPE AND FITTINGS MAY BE CONSTRUCTED OF STANDARD PVC SDR 35 PIPE. LOCAL SUPPLIERS ARE ADVANCED DRAINAGE SYSTEMS, INC (ADS) AND ERO-TEX.
6. CONTRACTOR TO MAINTAIN RISER SUCH THAT THE POND CAN RETURN TO NWL.

# TEMPORARY PERFORATED RISER



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
EROS - 03



**NOTES:**

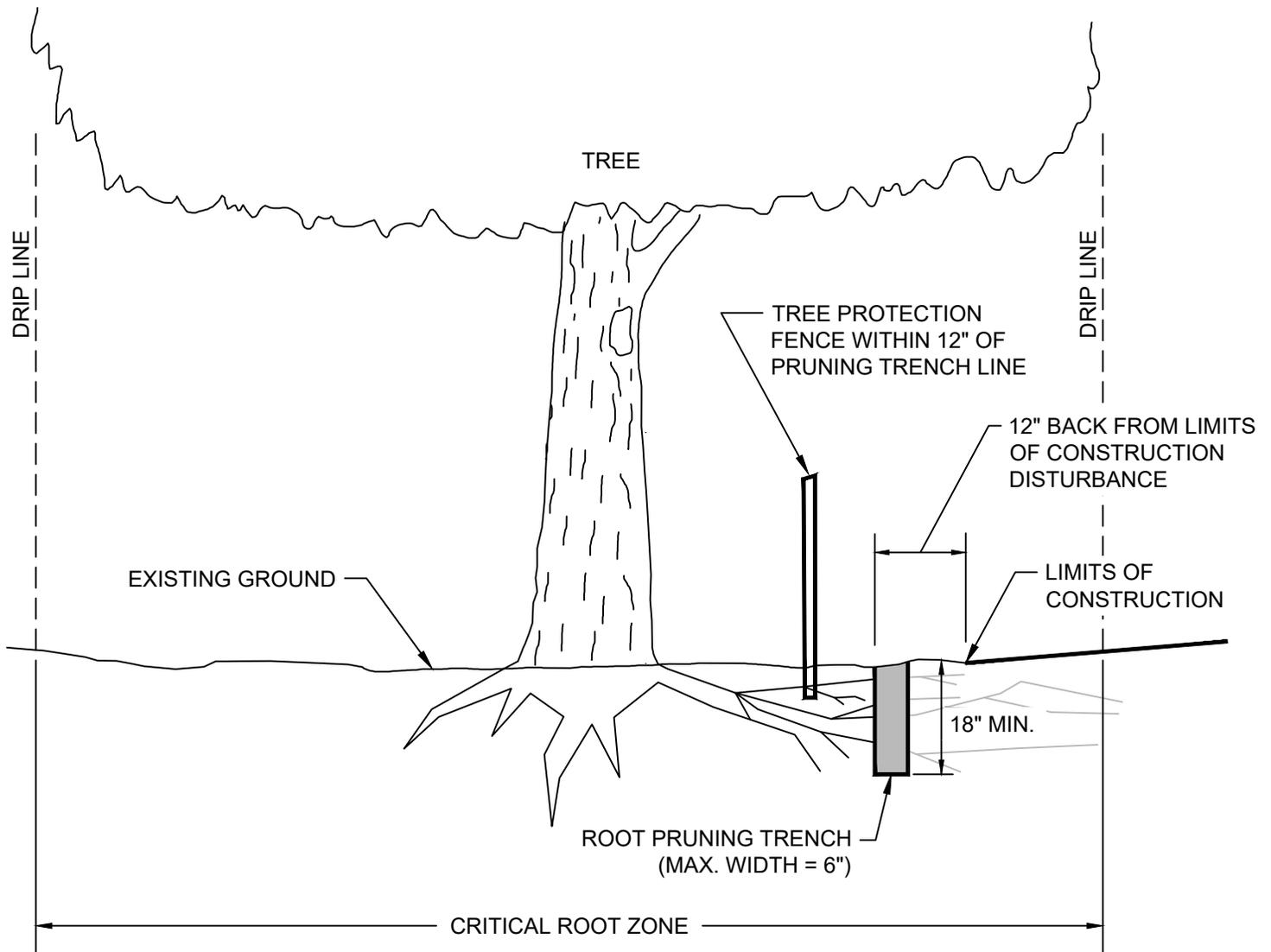
1. EXISTING TREES TO BE PROTECTED SHALL HAVE SNOW FENCE INSTALLED AT THE DRIP LINE OF THE TREE TO PREVENT THE STOCKPILING OF EXCAVATED OR CONSTRUCTION MATERIALS UNDER THE TREE, AND PROHIBIT VEHICULAR TRAFFIC OR EXCESSIVE FOOT TRAFFIC WITHIN THE DRIP LINE.
2. SNOW FENCE SHALL BE WEBBED HDPE CONSTRUCTION FENCING, COLORED ORANGE AND SUPPORTED WITH STEEL "TEE" POSTS SET AT MAX. 15' INTERVALS, OR AS REQUIRED TO MAINTAIN THE FENCE IN AN UPRIGHT POSITION THROUGHOUT THE TERM OF CONSTRUCTION.
3. TREES THAT MAY BE DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED IN A MANNER ACCEPTABLE TO THE VILLAGE.

# TREE PROTECTION FENCING



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
EROS - 04



**NOTES:**

1. EXACT LOCATION OF ROOT PRUNING TO BE AS SPECIFIED BY ENGINEER OR APPOINTED REPRESENTATIVE OF THE VILLAGE OF LIBERTYVILLE PARKS DIVISION.
2. ROOT PRUNING TRENCH SHALL BE BACKFILLED IMMEDIATELY FOLLOWING COMPLETION OF PRUNING ACTIVITIES. TRENCH SHALL BE COVERED WITH A MINIMUM OF 3" MULCH.
3. ROOT PRUNING ACTIVITIES AND THE PLACEMENT OF PROTECTIVE FENCING SHALL BE COORDINATED SO THAT BOTH SHALL BE COMPLETED AT EACH LOCATION WITHIN A 48-HOUR PERIOD.
4. UNDER NO CIRCUMSTANCES SHALL CONSTRUCTION PROCEED PRIOR TO THE COMPLETION OF ROOT PRUNING AND THE PLACEMENT OF PROTECTIVE FENCING, NOR SHALL FENCING BE REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER OR PARKS DIVISION REPRESENTATIVE.

# TREE ROOT PRUNING



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
EROS - 05

PHOTOCELL (G.E. OR APPROVED EQUAL) ON FIRST POLE (SERVICE POLE ONLY) OF EACH CIRCUIT. INSTALL SHORTING CAPS ON REMAINING LUMINARIES.

**TRADITIONAL-STYLE POST TOP**

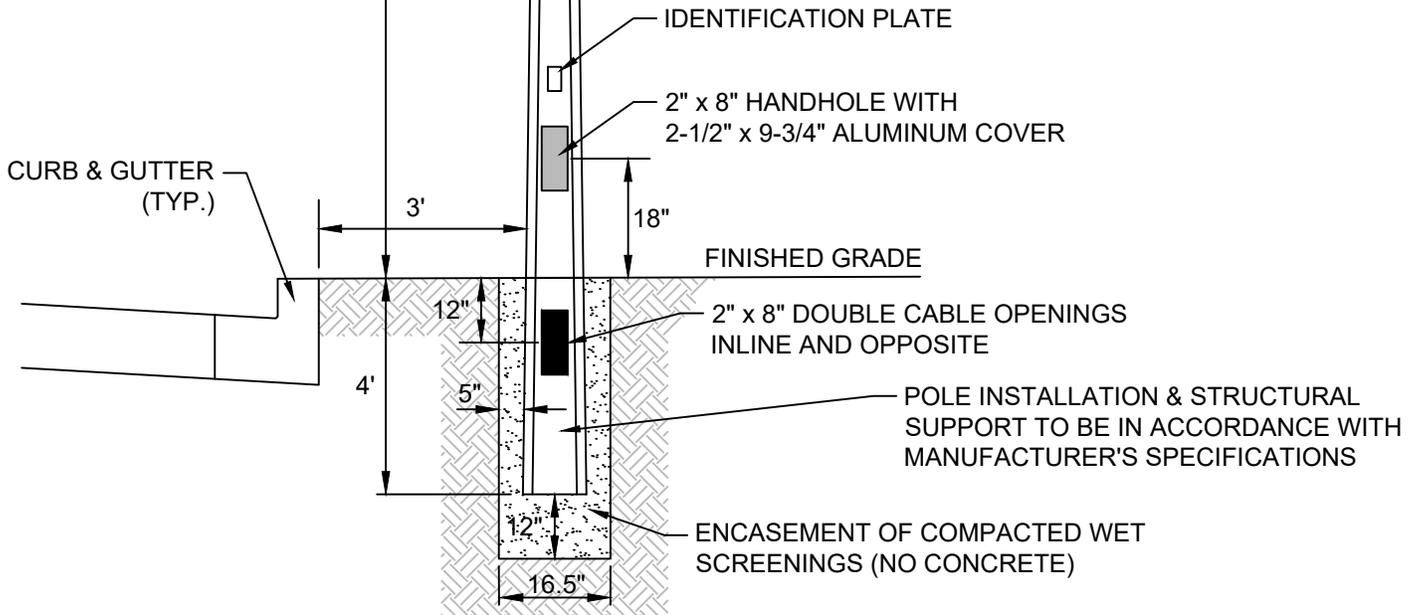
GE EVOLVE LED TOWN & COUNTRY TRADITIONAL POST TOP (OR APPROVED EQUAL) PER THE FOLLOWING:

- TYPE = "EPTT" (EVOLVE, POST TOP, TOWN & COUNTY)
- GENERATION = "01"
- VOLTAGE = "0" (120 - 277V)
- LUMEN OUTPUT = "03"
- REFRACTOR = "A" (ACRYLIC)
- LED COLOR TEMP = "27" (2700K)
- DISTRIBUTION CODE = "D" (ASYMMETRIC HO)
- CONTROLS = "A" (ANSIC136.41 7-PIN DIMMING PE SOCKET)
- MOUNTING ARM = "P" (POLE MOUNTED)
- COLOR = "BLK" (BLACK)

CODE = "EPTT01\_03DA27\_120-277V.ies"

**PRESTRESSED, SPUN CONCRETE OCTAGONAL POLE**

- TRADITIONAL CONCRETE, INC. 400 SERIES (OR APPROVED EQUAL)
- 12' ABOVE-GROUND HEIGHT
- 'SKY GRAY' COLOR



**NOTES:**

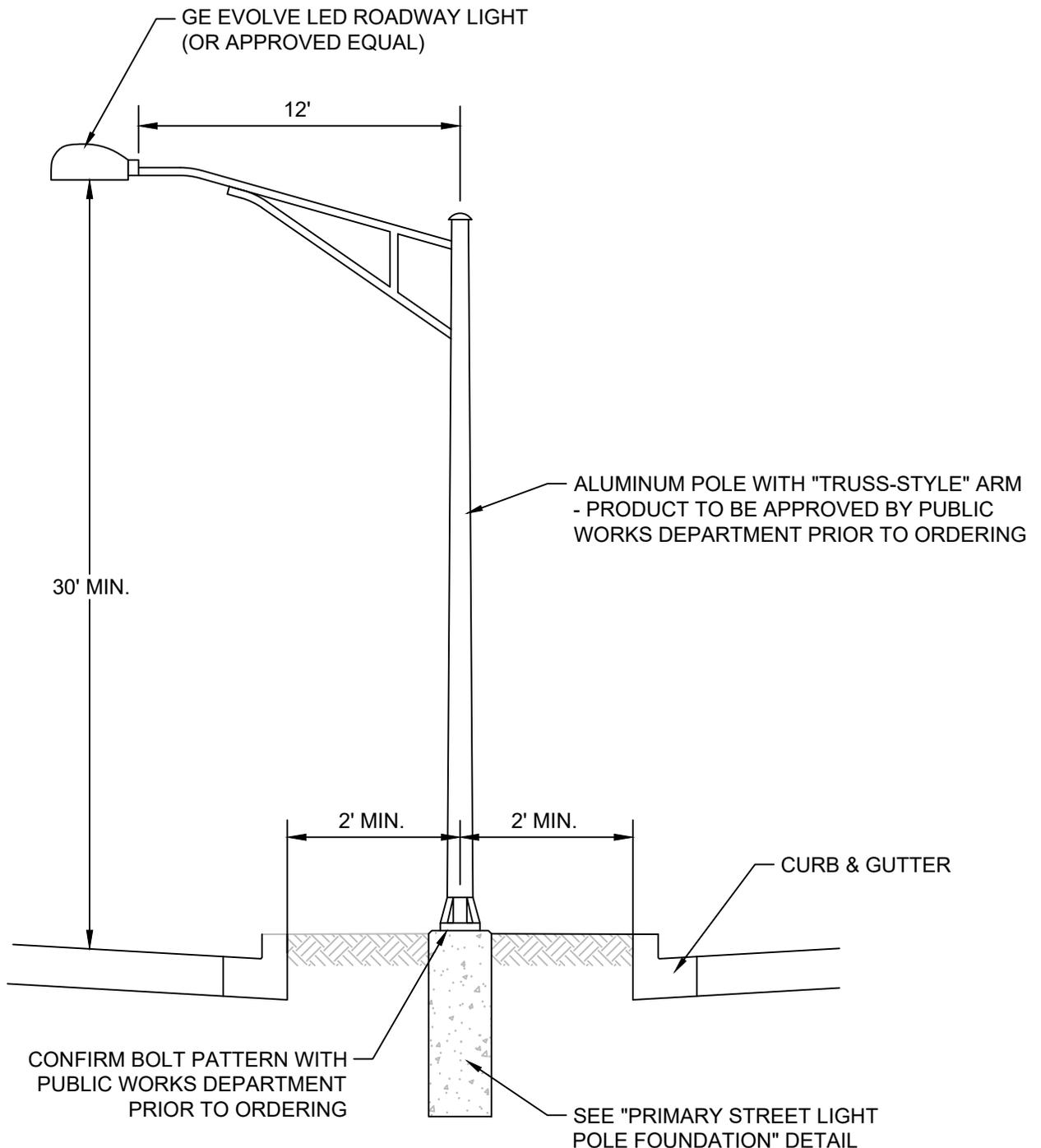
1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. 1" DIAMETER UNIDUCT TO BE INSTALLED PARALLEL TO CURB LINE WITH TWO NO. 6 AWG STANDARD CONDUCTOR COPPER CABLES, NEOPRENE JACKETED U.S.E. TYPE HAZARD STYLE RR HAZASHEATH, 600 VOLT CABLE IN 1-1/4" I.D. UNIDUCT BURIED 4' BEHIND CURB, 24" DEEP.
3. 2" DIA. GALVANIZED RIGID STEEL CONDUIT SLEEVE SHALL BE PLACED 30" DEEP UNDER PAVEMENT AND EXTENDED 18" PAST LIMITS OF DRIVEWAYS, PAVEMENT, SIDEWALKS, ETC.
4. VERIFY FIXTURE AND POLE SPECIFICATIONS WITH THE VILLAGE PRIOR TO ORDERING.
5. SETBACK SHALL BE 3' FROM BACK-OF-CURB IF CURB IS PRESENT. SETBACK SHALL BE 4' FROM EDGE-OF-PAVEMENT IF THERE IS NO CURB.
6. EACH POLE SHALL HAVE INDIVIDUAL FUSE PROTECTION, SIZED APPROPRIATELY FOR THE FIXTURE
7. EACH STREETLIGHT CIRCUIT MUST HAVE A STREET LIGHT CONTROL BOX BEFORE IT CONNECTS TO THE COMED POWER SOURCE. REFER TO THE VILLAGE'S "STREET LIGHTING CONTROL BOX" DETAIL.

# RESIDENTIAL STREET LIGHT



LAST REVISED: 02/15/2023

STANDARD DETAIL # SL - 01



**NOTES:**

1. VERIFY FIXTURE & POLE SPECIFICATION WITH THE VILLAGE PRIOR TO ORDERING.
2. SETBACK SHALL BE 2' FROM BACK-OF-CURB IF CURB IS PRESENT OR 4' FROM EDGE-OF-PAVEMENT IF NO CURB IS PRESENT.
3. AT ROADWAY INTERSECTIONS WITH SIGNS, LIGHT POLES SHALL BE SET BACK AS TO NOT OBSTRUCT STOP SIGNS, ETC.
4. EACH POLE SHALL HAVE INDIVIDUAL FUSE PROTECTION, SIZED APPROPRIATELY FOR THE FIXTURE
5. EACH STREETLIGHT CIRCUIT MUST HAVE A STREET LIGHT CONTROL BOX BEFORE IT CONNECTS TO THE COMED POWER SOURCE. REFER TO THE VILLAGE'S "STREET LIGHTING CONTROL BOX" DETAIL.

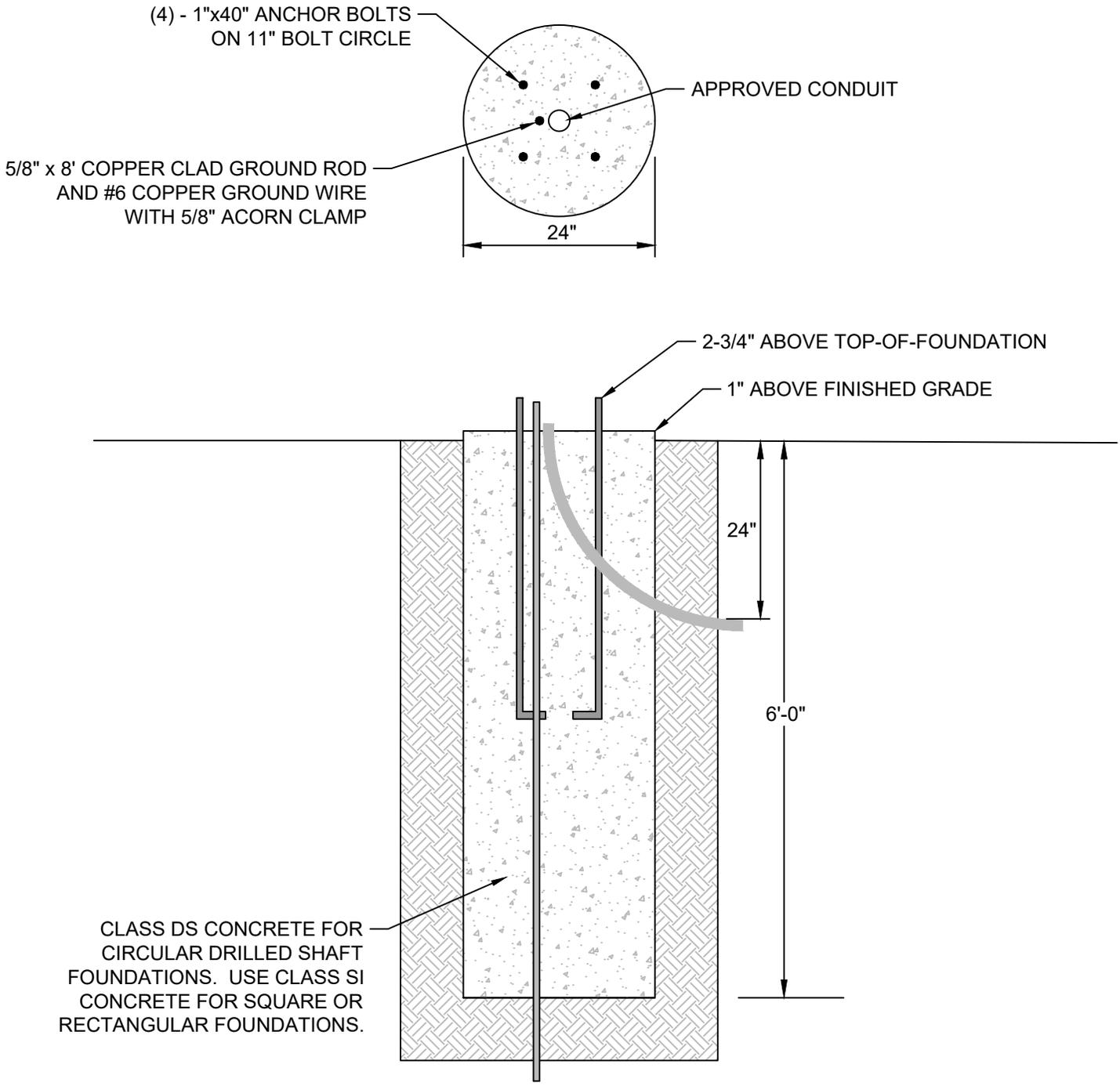
# PRIMARY STREET LIGHT



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #

SL - 02



**NOTE:**

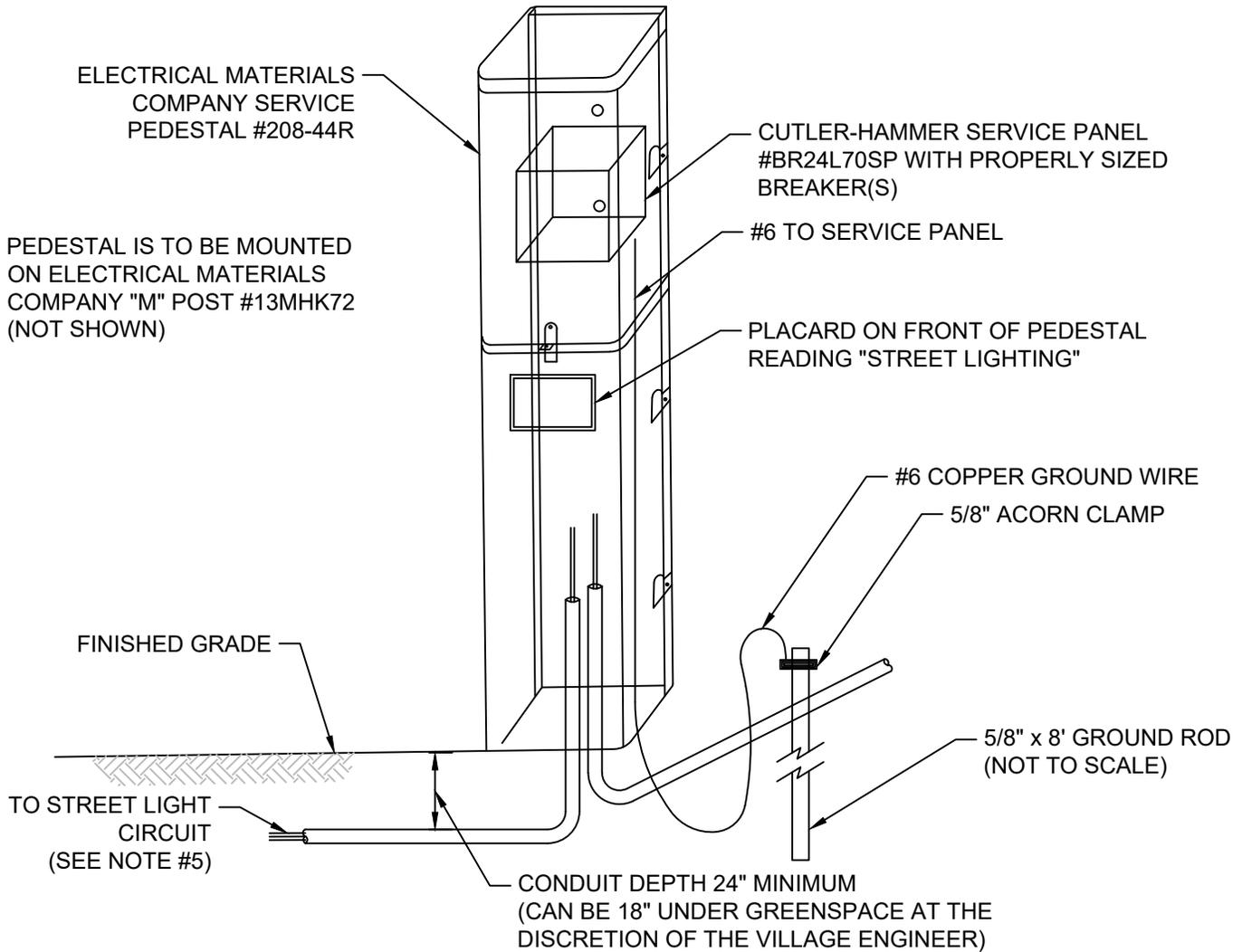
1. REFER TO "PRIMARY STREET LIGHT" DETAIL FOR FURTHER INFORMATION ON POLE AND LIGHT FIXTURE.

# PRIMARY STREET LIGHT POLE FOUNDATION



LAST  
REVISED:  
02/15/2023

STANDARD DETAIL #  
SL - 03



**NOTES:**

1. REFER TO THE VILLAGE "ENGINEERING DESIGN & CONSTRUCTION STANDARDS" FOR FURTHER REQUIREMENTS.
2. NO DIRECT CONNECTION OF PUBLIC STREET LIGHT CABLING TO A COMED POWER SOURCE SHALL BE PERMITTED
3. A FULLY RATED SERVICE PANEL WITH 70 AMP BUS AND MAIN BONDING JUMPER SHALL BE PROVIDED WITHIN THE ELECTRICAL MATERIALS CO. SERVICE PEDESTAL. AN "M" POST SHALL BE PROVIDED FOR MOUNTING THE PEDESTAL. ANY OF THE PRODUCTS LISTED ABOVE MAY BE SUBSTITUTED WITH APPROVED EQUALS AT THE DISCRETION OF THE VILLAGE ENGINEER
4. THE PEDESTAL SHALL BE GROUNDED WITH A 5/8" x 8' COPPER CLAD GROUND ROD AND #6 COPPER GROUND WIRE WITH 5/8" ACORN CLAMP.
5. STREET LIGHTING CIRCUIT MUST BE RUN IN AN APPROVED CONDUIT, INCLUDING A PROPER EQUIPMENT GROUNDING CONDUCTOR.

# STREET LIGHTING CONTROL BOX

<span style="font-size: 1.2em; font-weight: bold; vertical-align: middle;">Libertyville</span>	
LAST REVISED: 02/15/2023	STANDARD DETAIL # <span style="font-size: 1.2em; font-weight: bold;">SL - 04</span>