



THE VILLAGE OF

Wilmette



EST. 1872

DEPARTMENT OF
ENGINEERING AND
PUBLIC WORKS
STANDARDS
HANDBOOK

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April 2, 2019

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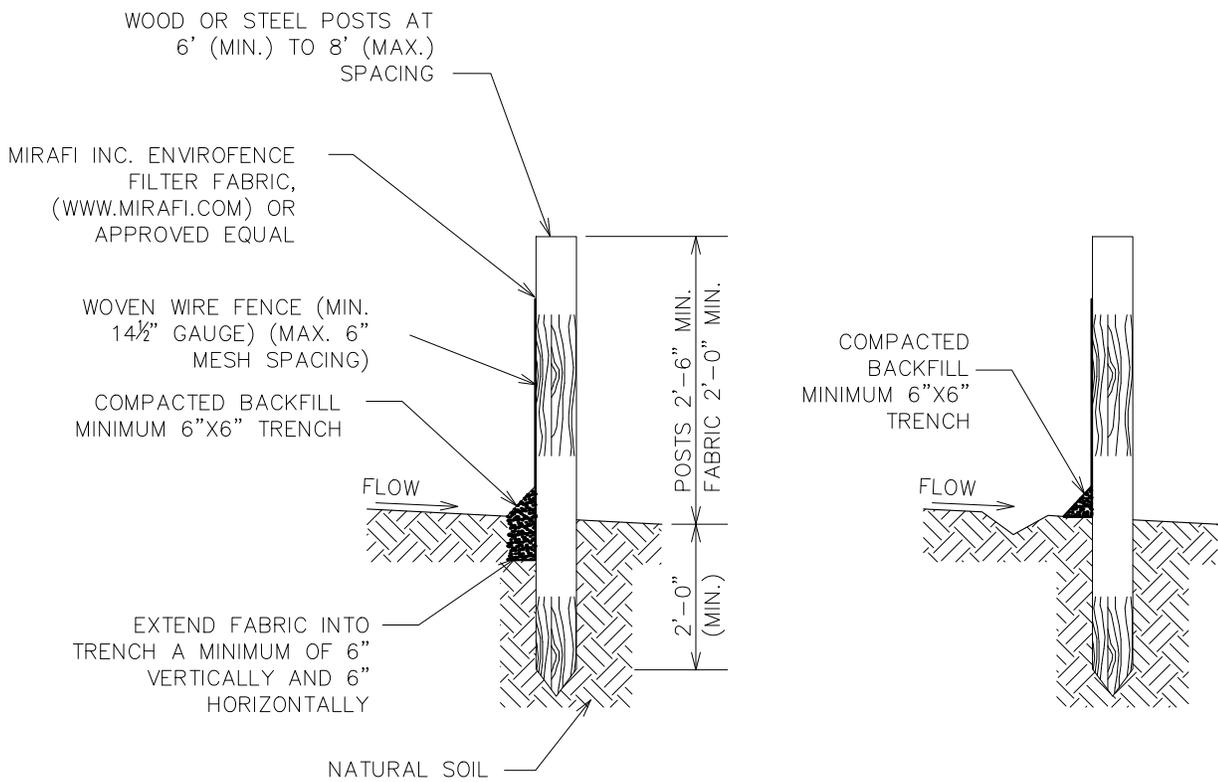
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WITH TRENCH

WITHOUT TRENCH

NOTES:

WITH TRENCH

1. FILTER BARRIERS SHALL BE PLACED AT THOSE LOCATIONS SHOWN ON THE PLANS INCLUDING STOCK PILE AREAS AND WHERE INDICATED BY THE VILLAGE ENGINEERING DEPARTMENT.
2. ATTACH FABRIC TO WIRE MESH WITH HOG RINGS, TO WOOD POSTS WITH NAILS, AND TO STEEL POSTS WITH TIE-WIRES AT TOP AND MID-SECTION.
3. OVERLAP FILTER FABRIC BY 6" AND FOLD AROUND EACH POST ONE FULL TURN WHERE 2 SECTIONS ADJOIN.
4. DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OF BUILT-UP SEDIMENT AT JOINT.
5. INSPECTION OF SILT FENCES SHALL BE AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF 1/2". REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SEDIMENT TRAPPED BY THE FENCE SHALL BE REMOVED (AND PROMPTLY DISPOSED OF) WHENEVER SIGNIFICANT ACCUMULATION OCCURS.
7. BARRIERS SHALL BE MAINTAINED IN PLACE UNTIL COMPLETION OF CONSTRUCTION AND THE UPSLOPE AREA HAS BEEN STABILIZED, AND SHALL BE REMOVED ONLY WHEN DIRECTED BY THE VILLAGE ENGINEERING DEPARTMENT.

WITHOUT TRENCH

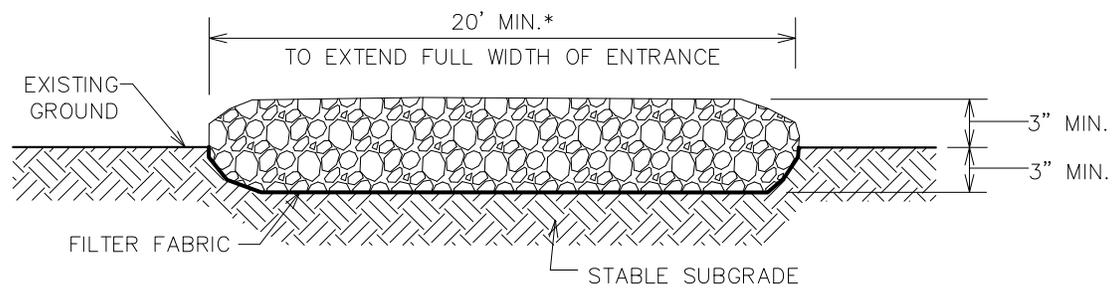
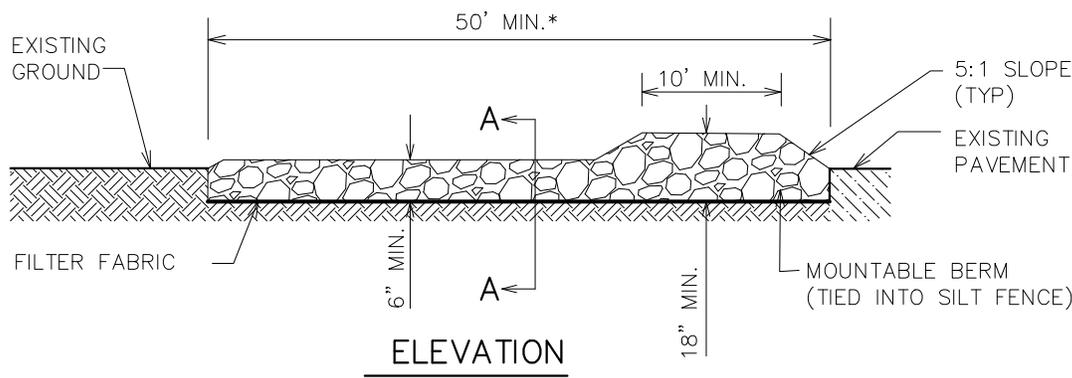
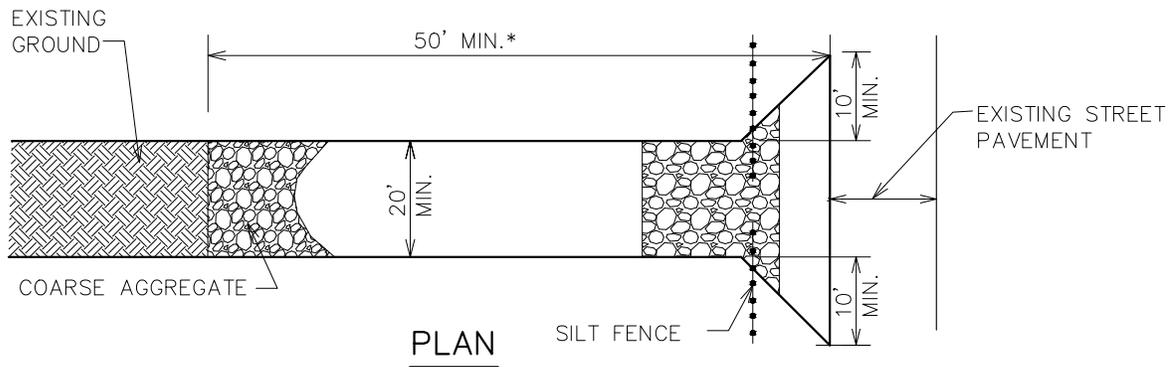
1. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING THE FABRIC FLAP ON UNTRENCHED GROUND AND PILING AND TAMPING SOIL OVER THE FLAP AT THE BASE OF STRUCTURE.

NOT TO SCALE

SILT FENCE

Village of Wilmette
 Engineering Department
 847.853.7660

REVISED: 01/19/10



SECTION A-A

NOTES:

1. GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE CLEARED AREA PRIOR TO PLACING COARSE AGGREGATE
2. COARSE AGGREGATE (OR CRUSHED CONCRETE) SHALL MEET IDOT GRADATION FOR CA-1 CRUSHED AGGREGATE.
3. STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED, PRIOR TO ONSET OF CONSTRUCTION OPERATIONS AND SHALL BE MAINTAINED THROUGHOUT THE PROJECT.
4. CONSTRUCTION ENTRANCE SHALL BE REMOVED UPON COMPLETION OF CONSTRUCTION AND ONLY WHEN DIRECTED BY VILLAGE ENGINEER.

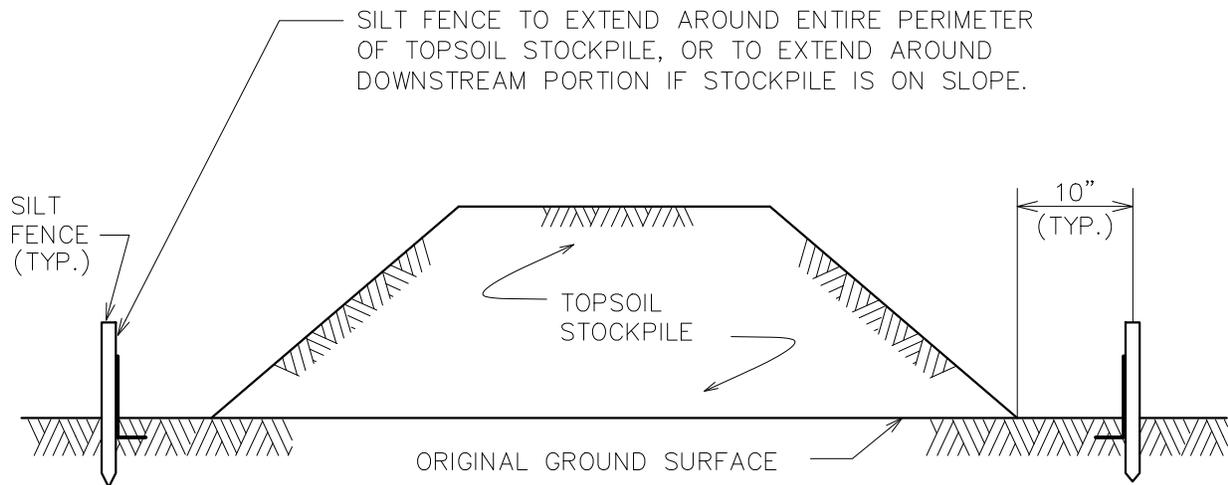
* OR TO BUILDING LINE

NOT TO SCALE

**CONSTRUCTION ENTRANCE
PRIVATE DEVELOPMENT**

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Engineering Department
847.853.7660

REVISED: 01/03/08



NOTES:

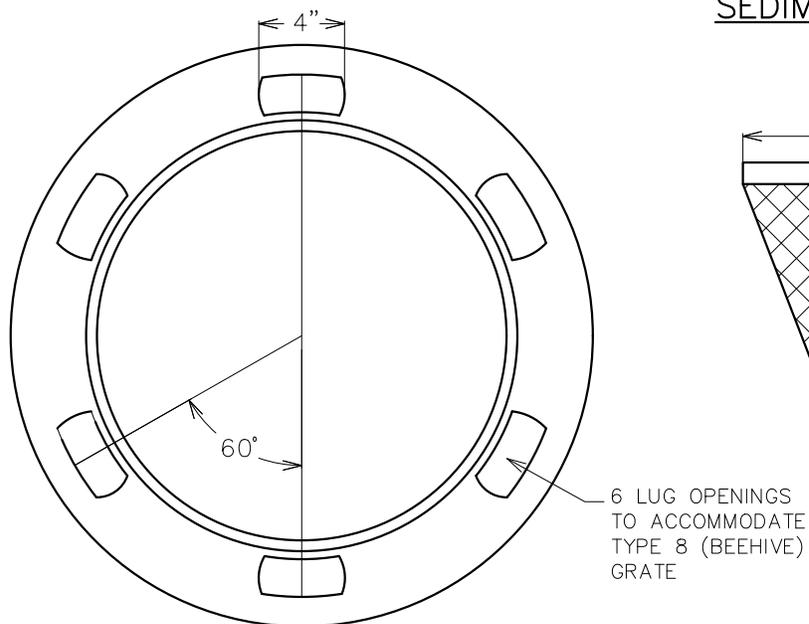
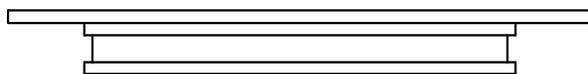
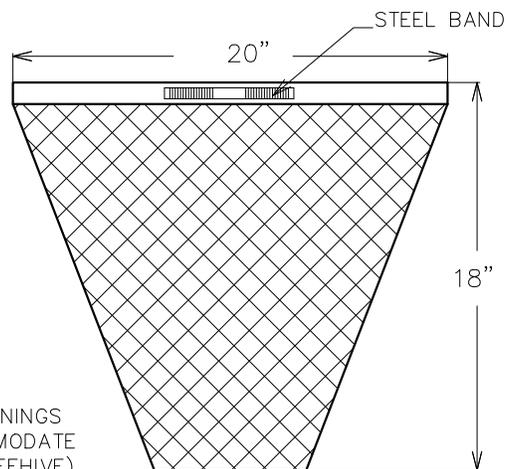
1. AN ON-SITE DRAINAGE SWALE SHALL BE LOCATED BETWEEN THE TOPSOIL STOCKPILE AND OFF-SITE PROPERTY.
2. REFERENCE IS MADE TO THE SILT FENCE DETAIL (SEE DETAIL 1) FOR MATERIALS AND INSTALLATION METHODS.
3. IF THE STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, IT SHALL BE STABILIZED WITH BURLAP MATTING OR SEEDING TO MINIMIZE EROSION.
4. INSPECTION OF SILT FENCES SHALL BE AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF $\frac{1}{2}$ ". REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. SEDIMENT TRAPPED BY THE FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.
6. THE SILT FENCE SHALL BE MAINTAINED IN PLACE UNTIL TOPSOIL STOCKPILE HAS BEEN ELIMINATED AND SHALL BE REMOVED ONLY WHEN DIRECTED BY VILLAGE ENGINEER.

NOT TO SCALE

TEMPORARY TOPSOIL STOCKPILE PROTECTION

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Engineering Department
847.853.7660

REVISED: 01/04/18

FRAME – PLAN VIEWSEDIMENT BAG – SECTIONFRAME – SECTIONGENERAL NOTES:

FRAME:

TOP FLANGE FABRICATED FROM $\frac{1}{8}$ " FLAT STOCK. BASE RIM FABRICATED FROM $1\frac{1}{2}$ "X $\frac{1}{2}$ "X $\frac{1}{8}$ " CHANNEL. ALL STEEL CONFORMING TO ASTM-A36.

SEDIMENT BAG:

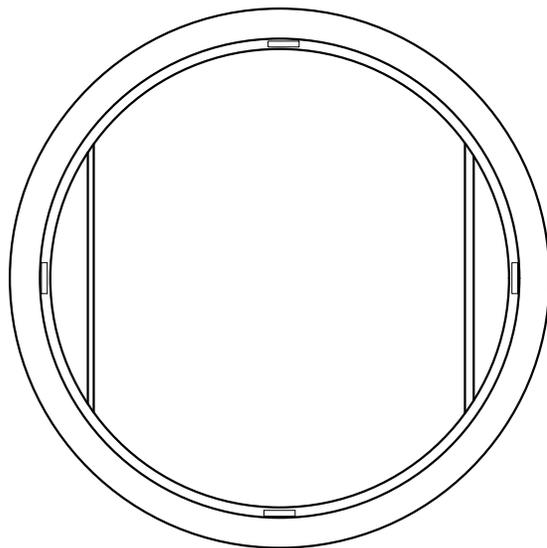
BAG FABRICATED FROM 4 OZ./ SQ.YD. NON-WOVEN POLYPROPYLENE GEOTEXTILE REINFORCED WITH POLYESTER MESH. BAG SECURED TO BASE RIM WITH A STAINLESS STEEL STRAP AND LOCK.

NOT TO SCALE

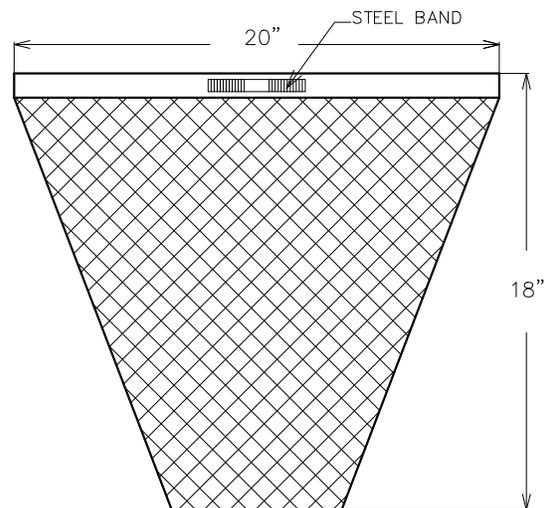
FILTER FOR BEEHIVE GRATE (TYPE 8)

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847.853.7660

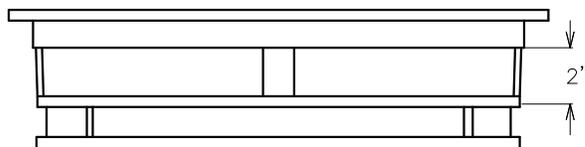
REVISED: 01/04/08



FRAME - PLAN VIEW



SEDIMENT BAG - SECTION



FRAME - SECTION

GENERAL NOTES:

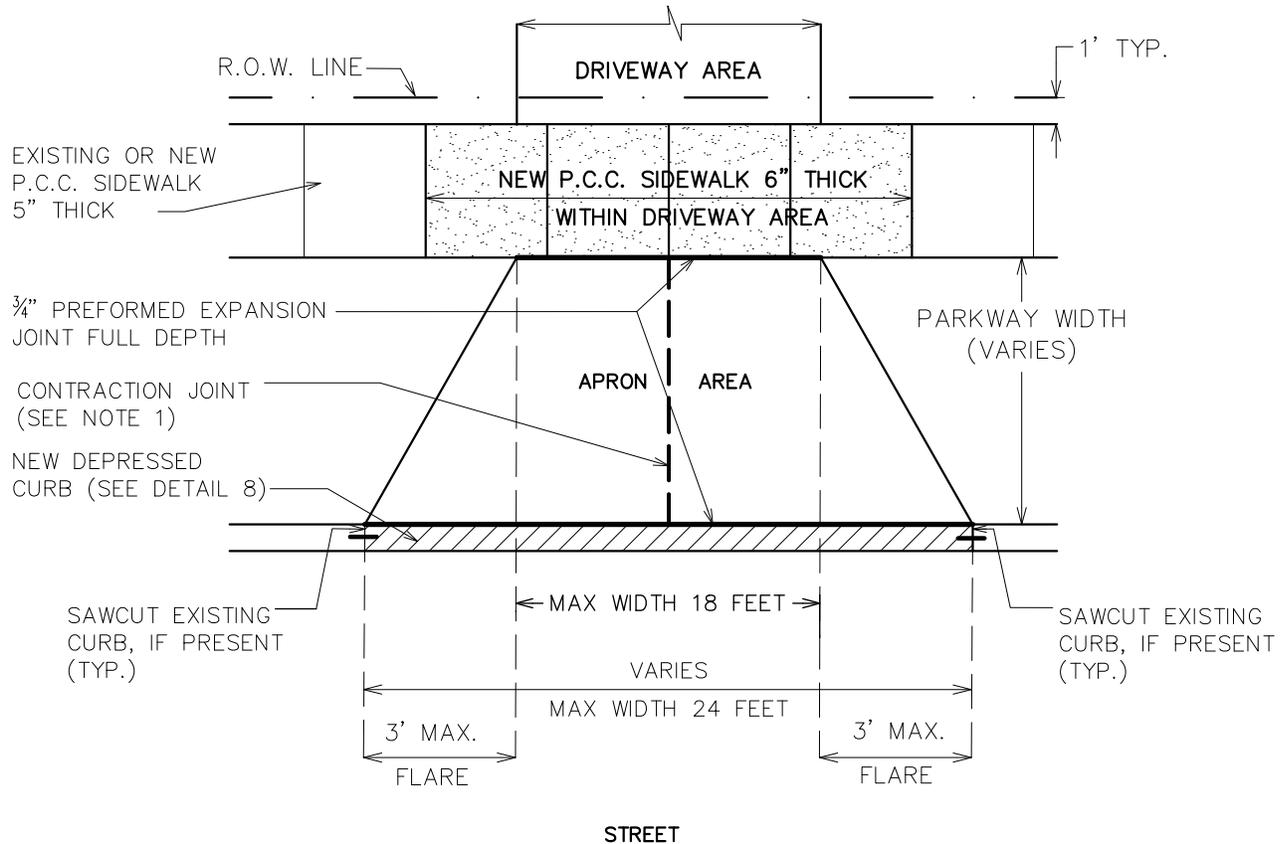
1. FRAME: TOP FLANGE FABRICATED FROM $1\frac{1}{4}'' \times 1\frac{1}{4}'' \times \frac{1}{8}''$ ANGLE. BASE RIM FABRICATED FROM $1\frac{1}{2}'' \times \frac{1}{2}'' \times \frac{1}{8}''$ CHANNEL. HANDLES AND SUSPENSION BRACKETS FABRICATED FROM $1\frac{1}{4}'' \times \frac{1}{4}''$ FLAT STOCK. ALL STEEL CONFORMING TO ASTM-A36.
2. SEDIMENT BAG: BAG FABRICATED FROM 4 OZ./ SQ.YD. NON-WOVEN POLYPROPYLENE GEOTEXTILE REINFORCED WITH POLYESTER MESH. BAG SECURED TO BASE RIM WITH A STAINLESS STEEL STRAP AND LOCK.
3. FILTER FOR OTHER SHAPE GRATES SHALL BE APPROVED IN ADVANCE OF PLACEMENT BY VILLAGE ENGINEER.

NOT TO SCALE

**FILTER FOR ROUND OPEN
(TYPE 1) GRATE & FRAME**

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REVISED: 01/04/08



NOTES:

1. FOR CONCRETE APRONS WIDER THAN 16', A CONTRACTION JOINT SHALL BE LOCATED ALONG THE CENTERLINE.
2. P.C.C. CONCRETE DRIVEWAYS:
 - a. APRON – 6" (SIX INCH) MINIMUM PORTLAND CEMENT CONCRETE AND 4" (FOUR INCH) MINIMUM IDOT CA-6 CRUSHED STONE
 - b. DRIVEWAY – 4" (FOUR INCH) MINIMUM PORTLAND CEMENT CONCRETE AND 4" (FOUR INCH) MINIMUM IDOT CA-6 CRUSHED STONE
3. BITUMINOUS DRIVEWAYS:
 - a. APRON – 3" (THREE INCH) MINIMUM BITUMINOUS CONCRETE SURFACE COURSE AND 6" (SIX INCH) MINIMUM IDOT CA-6 CRUSHED STONE
 - b. DRIVEWAY – 3" (THREE INCH) MINIMUM BITUMINOUS CONCRETE SURFACE COURSE AND 4" (FOUR INCH) MINIMUM IDOT CA-6 CRUSHED STONE
4. BRICK PAVERS AND OTHER ARCHITECTURAL PAVING MATERIALS ARE NOT ALLOWED IN A DRIVEWAY APRON AREA WITHOUT A BUILDING PERMIT AND WRITTEN PERMISSION – INCLUDING A HOLD HARMLESS AGREEMENT (APPROVED BY VILLAGE ENGINEER).
5. MAINTAIN FULL SIDEWALK WIDTH THROUGH DRIVEWAYS UNLESS DIRECTED OTHERWISE BY VILLAGE ENGINEER. CURBING SHALL NOT RUN THROUGH SIDEWALK AREAS IN DRIVEWAYS.
6. CURB CUTS/SHAVING ARE NOT PERMITTED.

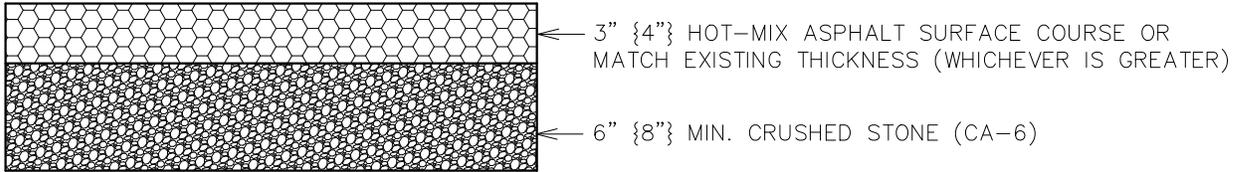
NOT TO SCALE

RESIDENTIAL DRIVEWAY

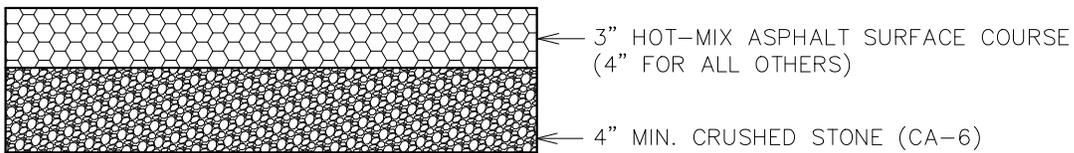
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 847.853.7660

REVISED: 01/09/18

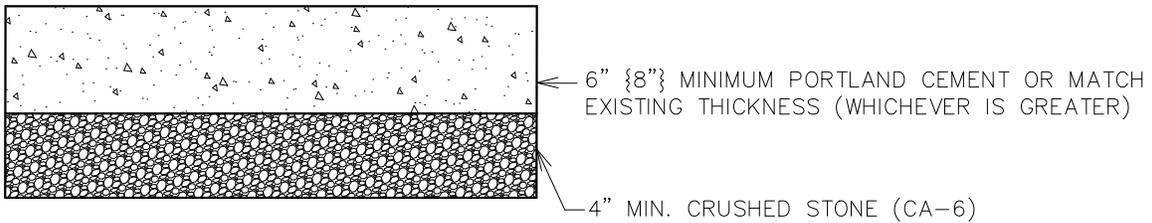
A. ASPHALT APRON – RESIDENTIAL {COMMERCIAL}



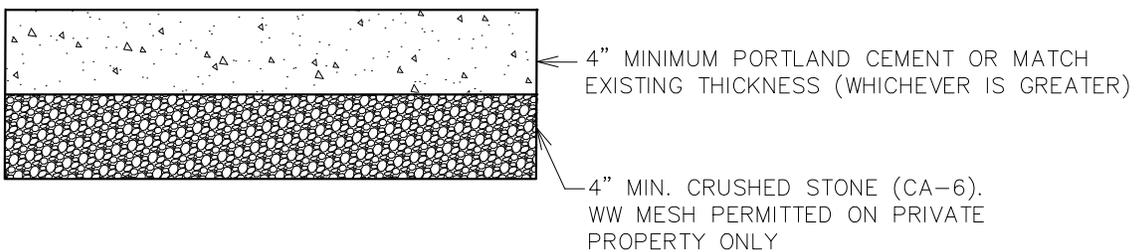
B. ASPHALT DRIVEWAY – 1 & 2 FAMILY DWELLING



D. CONCRETE APRON – RESIDENTIAL {COMMERCIAL}



D. CONCRETE DRIVEWAY – 1 & 2 FAMILY DWELLING



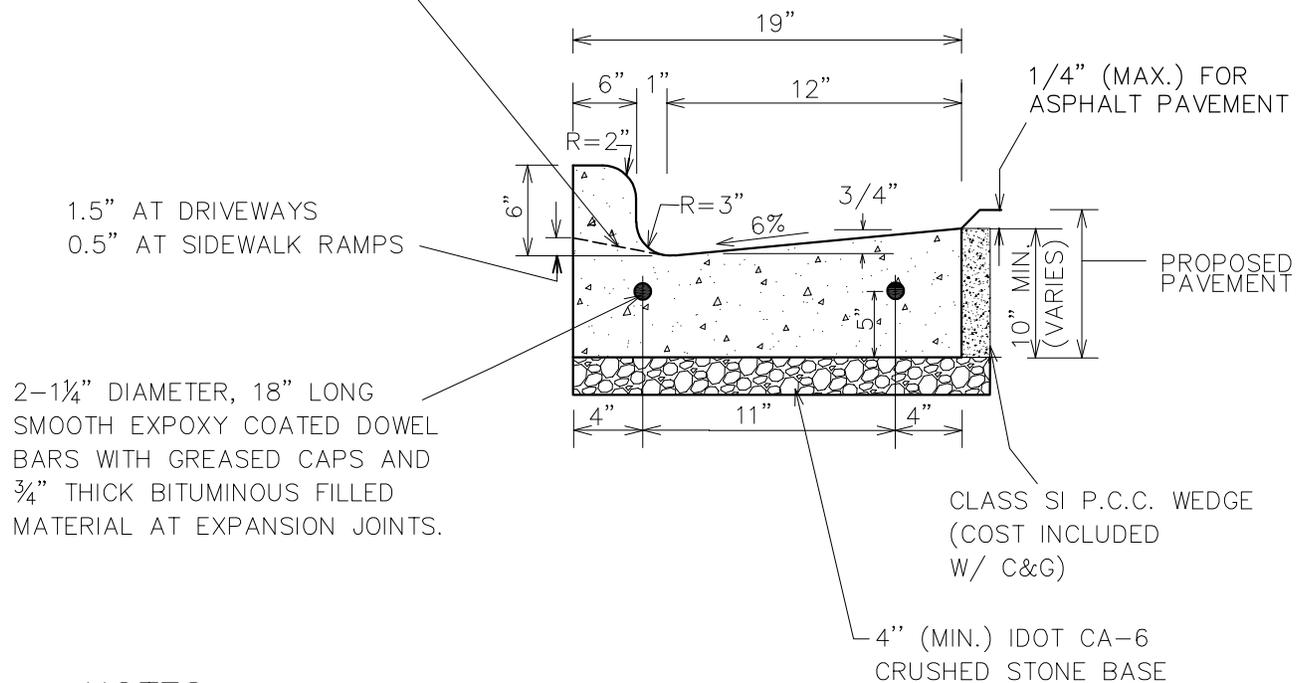
NOT TO SCALE

DRIVEWAY REPLACEMENT

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Engineering Department
847.853.7660

REVISED: 01/10/18

CURB SHALL BE DEPRESSED AT DRIVEWAYS, SIDEWALK RAMPS AS INDICATED ON THE PLANS



NOTES:

- 2" DEEP CONTRACTION JOINTS SHALL BE PLACED AT 15' INTERVALS, AND SHALL BE GROOVED WITH AN EDGING TOOL, AND IN ACCORDANCE WITH ARTICLES 420.05 AND 606 OF IDOT STANDARD SPECIFICATIONS.
- 3/4" EXPANSION JOINTS SHALL BE PLACED AT 60' (MAX.) INTERVALS, AT ALL P.C.'S AND P.T.'S, CURB RETURNS, AT 5' FROM EITHER SIDE OF DRAINAGE STRUCTURES, AND AT THE END OF EACH POUR.
- PORTLAND CEMENT CONCRETE (P.C.C.) SHALL CONFORM TO IDOT CLASS SI (6.1 BAG) CONCRETE MIX, WITH 5% TO 8% AIR ENTRAINMENT, AND A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 14 DAYS.
- PROVIDE 2-1/4" DIAMETER, 18" LONG EPOXY COATED DOWEL BARS AT CONNECTIONS BETWEEN EXISTING AND NEW CURB & GUTTER. BARS SHALL BE DRILLED AND EMBEDDED 9" INTO EXISTING CURB.
- CURB SLOPE SHALL NOT EXCEED 5% AT SIDEWALK RAMPS.
- CONCRETE SHALL BE THOROUGHLY TAMPED AND SPADED OR MECHANICALLY VIBRATED AND FINISHED SMOOTH, EVEN, AND MATCH FLUSH WITH EXISTING ADJACENT CURB AND GUTTER.
- ANY IRREGULARITIES OF 1/4" OR GREATER SHALL BE DEEMED UNACCEPTABLE AND SHALL NEED TO BE CORRECTED.
- NEW CURB SHALL MATCH EXISTING ADJACENT CURB TYPE.

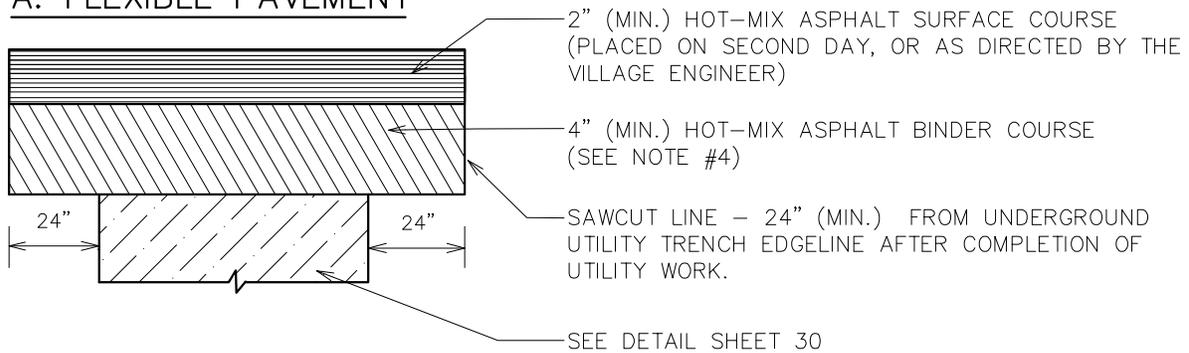
NOT TO SCALE

B-6.12 CURB & GUTTER DETAIL

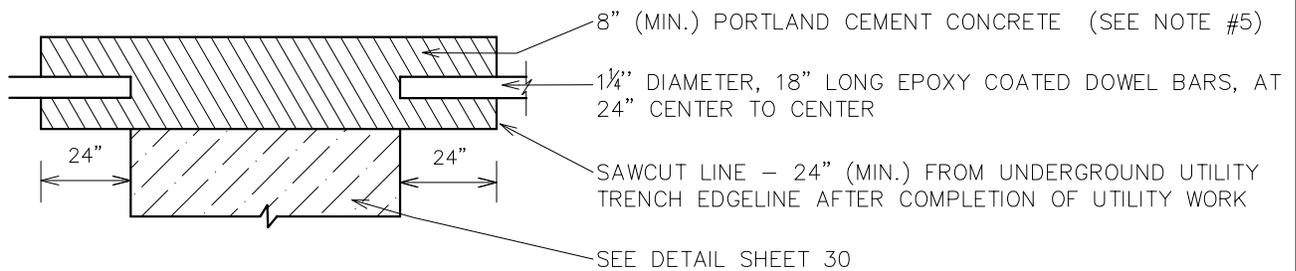
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REVISED: 12/06/19

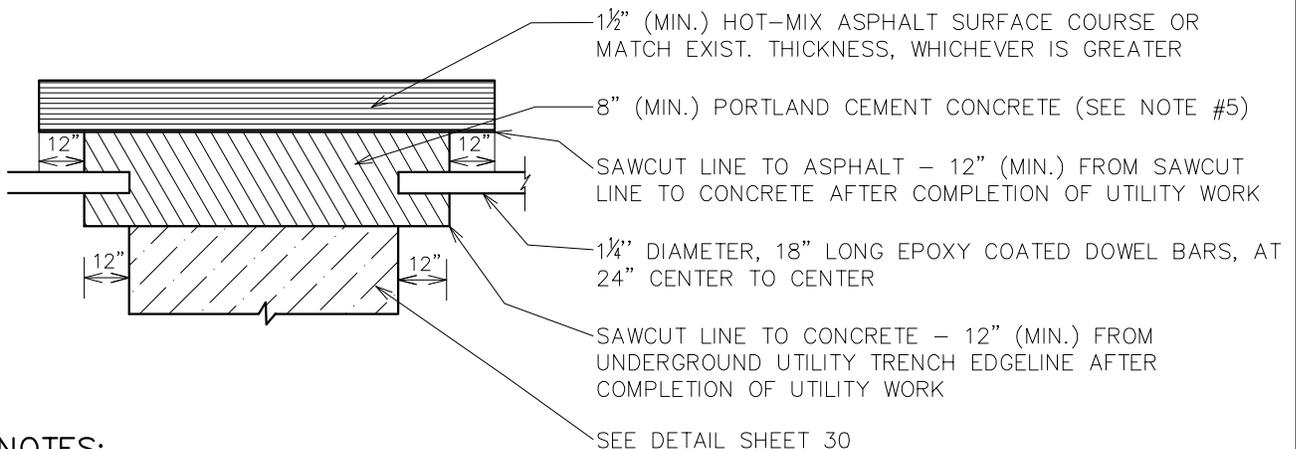
A. FLEXIBLE PAVEMENT



B. RIGID PAVEMENT



C. COMPOSITE PAVEMENT



NOTES:

1. PAVEMENT PATCHES SHALL BE SAWCUT FULL-DEPTH A MINIMUM WIDTH OF 24" IN ALL DIRECTIONS BEYOND THE LIMITS OF THE UTILITY TRENCH.
2. ALL PAVEMENT PATCHES SHALL BE SQUARED AND PARALLEL TO THE EDGE OF PAVEMENT OR CURB.
3. PORTLAND CEMENT CONCRETE SHALL CONFORM TO IDOT CLASS PP MIN. 3,200 PSI (7 BAG MIX HIGH EARLY STRENGTH) AT 48 HOURS, WITH 5 % TO 7 % AIR ENTRAINMENT.
4. HOT MIX ASPHALT BINDER COURSE SHALL HAVE A MINIMUM DEPTH OF 4" OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER. MAXIMUM LIFT THICKNESS IS 4".
5. PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM DEPTH OF 8" OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.

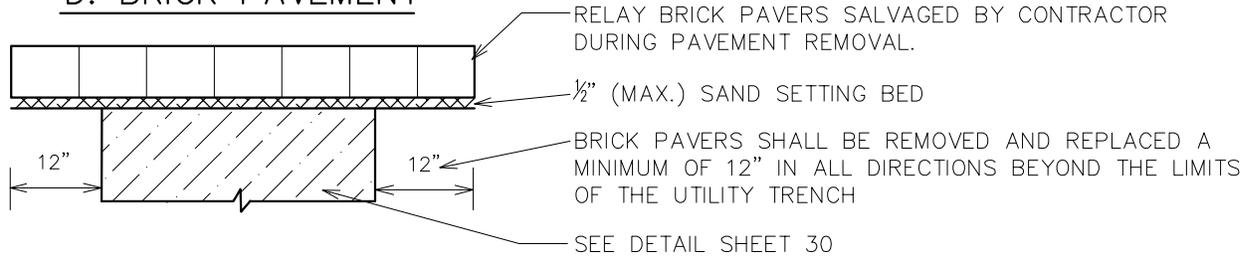
REVISED: 09/13/19

NOT TO SCALE

**PAVEMENT PATCH
DETAIL**

PAGE 1 OF 2

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847.853.7660

D. BRICK PAVEMENT**NOTES:**

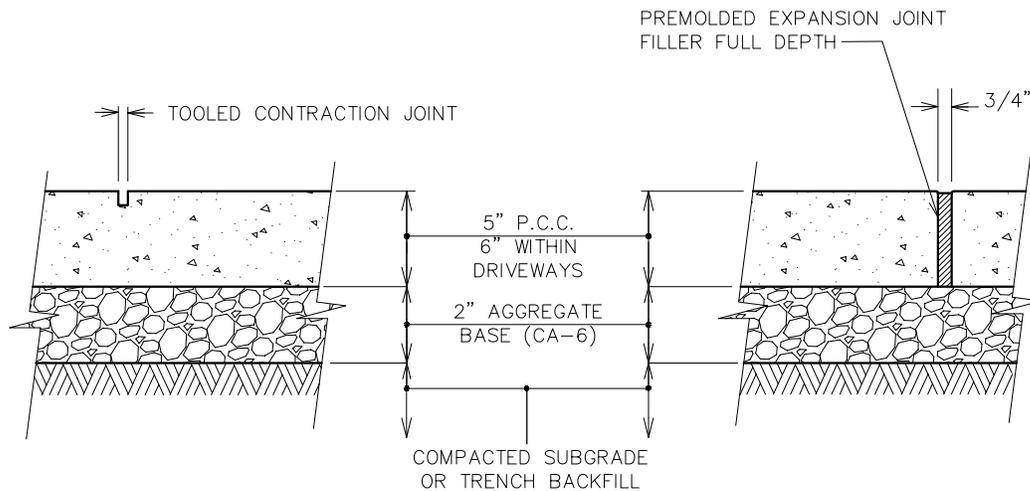
1. ADDITIONAL BRICK PAVERS MAY BE PURCHASED FROM THE VILLAGE WITH APPROVAL FROM THE VILLAGE ENGINEER.
2. SAND SETTING BED SHALL BE SMOOTHED AND PROPERLY COMPACTED BEFORE PLACEMENT OF BRICKS.
3. SAW-CUTTING AND/OR BREAKING OF BRICKS LENGTHWISE SHALL NOT BE PERMITTED. ONLY FULL BRICKS SHALL BE USED.
4. BRICKS SHALL BE LAID WITH LETTERING TO THE SIDE.
5. BRICKS SHALL BE LAID SMOOTH AND FLUSH WITH SURROUNDING BRICK STREET
6. BRICK JOINTS SHALL BE FILLED WITH SAND.

NOT TO SCALE

**PAVEMENT PATCH
DETAIL****PAGE 2 OF 2**

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847.853.7660

REVISED: 12/06/19

CONTRACTION JOINT DETAILEXPANSION JOINT DETAILNOTES:

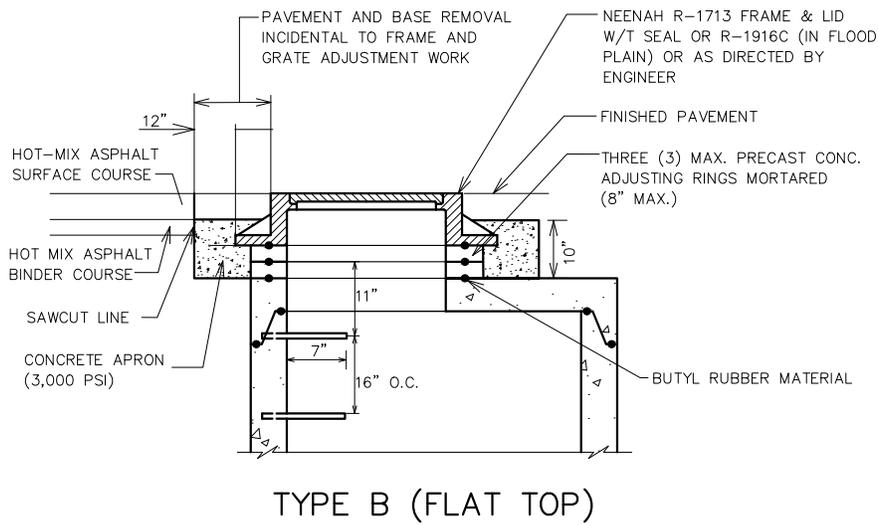
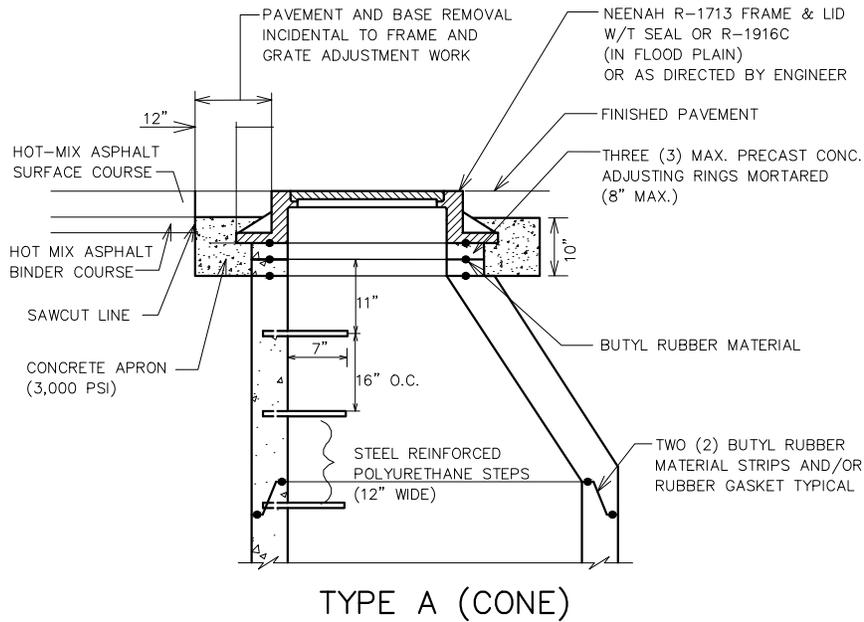
1. UNLESS OTHERWISE NOTED ON PLANS, TOOLED CONTRACTION JOINTS TO BE AT 5'-0" O.C.
2. EXPANSION JOINTS TO BE 50'-0" O.C. MAX. OR AT BACK OF CURB, CHANGE OF DIRECTION, UTILITY APPURTENANCE BOX-OUT, FACE OF STRUCTURE, AND WHERE ABUTTING EXISTING WALKS.
3. PORTLAND CEMENT CONCRETE (P.C.C) SHALL CONFORM TO IDOT CLASS SI (6.1 BAG MIX) CONCRETE MIX, WITH 5% TO 8% AIR ENTRAINMENT, AND A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 14 DAYS.
4. A PROTECTIVE COAT OR CONCRETE SEALER WILL BE APPLIED TO ALL NEW CONCRETE SIDEWALKS AND CURB AND GUTTERS IN ACCORDANCE WITH SECTION 420 OF THE IDOT STANDARD SPECIFICATIONS.
5. SIDEWALKS SHALL FOLLOW CURRENT ADA REQUIREMENTS
6. MINIMUM CROSS-SLOPE SHALL BE 1.0% (1:100).
MAXIMUM CROSS-SLOPE SHALL BE 2.0% (1:50)
7. MAXIMUM LONGITUDINAL SLOPE SHALL NOT EXCEED 5% (20:1)

NOT TO SCALE

**CONCRETE WALK
JOINT DETAIL**

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847.853.7660

REVISED: 12/06/19



NOTE:

THE REQUIRED MANHOLE FRAME AND GRATE ADJUSTMENTS, INCLUDING POURING OF CONCRETE APRON, SHALL BE PERFORMED BEFORE PLACING HOT-MIX ASPHALT SURFACE COURSE.

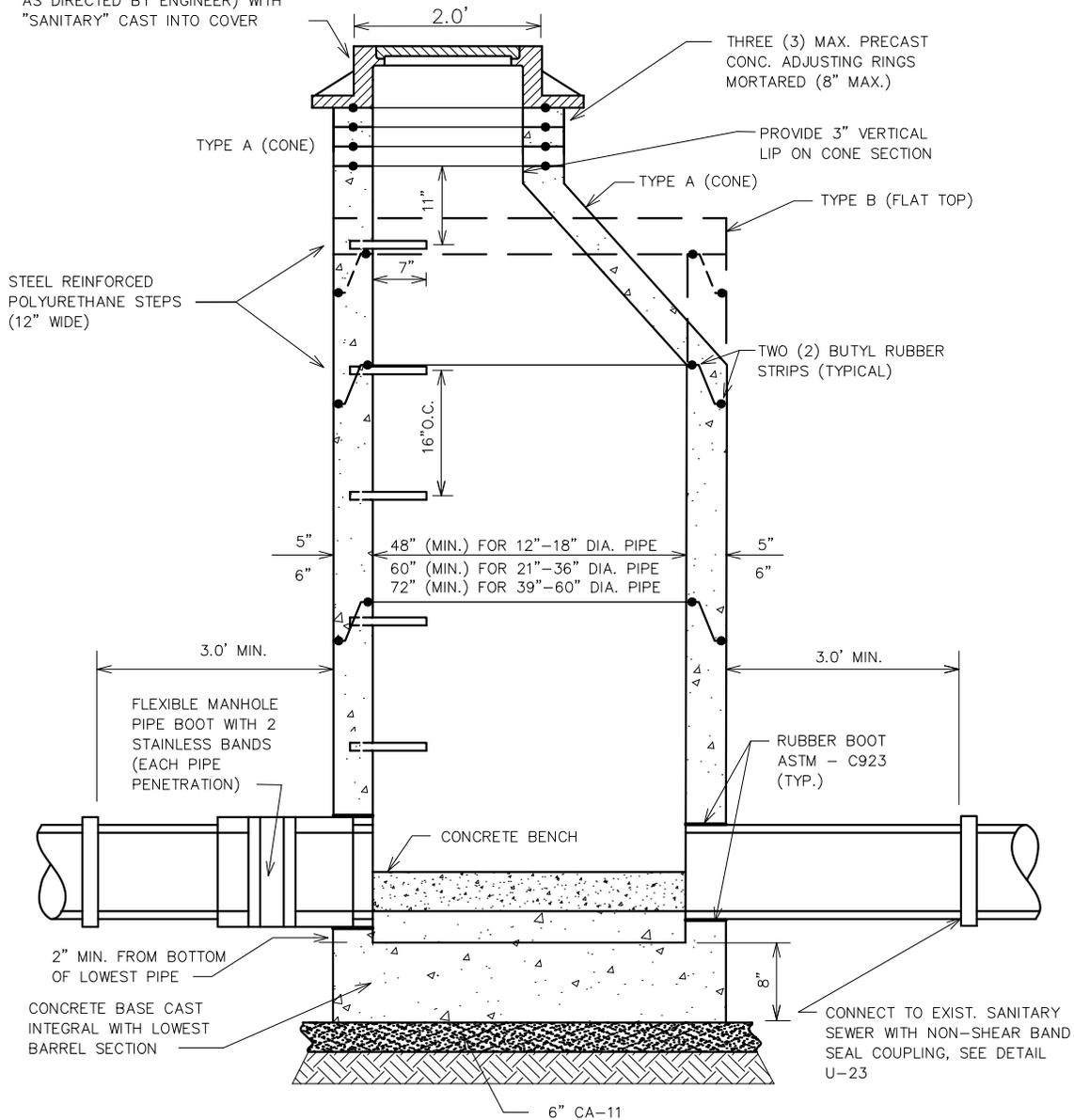
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STRUCTURE FRAME & GRATE ADJUSTMENT

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847.853.7660

REVISED: 01/04/18

NEENAH R-1713 FRAME & LID
 W/T-SEAL (OR R-1916C IN FLOOD
 PLAIN OR OVERLAND FLOOD ROUTES
 AS DIRECTED BY ENGINEER) WITH
 "SANITARY" CAST INTO COVER



NOTES:

1. MANHOLES MUST CONFORM TO ASTM C-478.
2. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
3. BENCHES MUST BE PROVIDED IN ALL SANITARY SEWER MANHOLES
4. USE EXTERNAL LIFTING "HOLES" ONLY, BUT NOT FULL PENETRATION.
5. ALL PIPE PENETRATIONS AND ALL NON-PRECAST OPENINGS SHALL BE CORED, RUBBER BOOTED AND INTERIOR MORTARED AROUND PIPE AND CONFORM TO ASTM C-923.*
6. USE ECCENTRIC CONE ONLY.

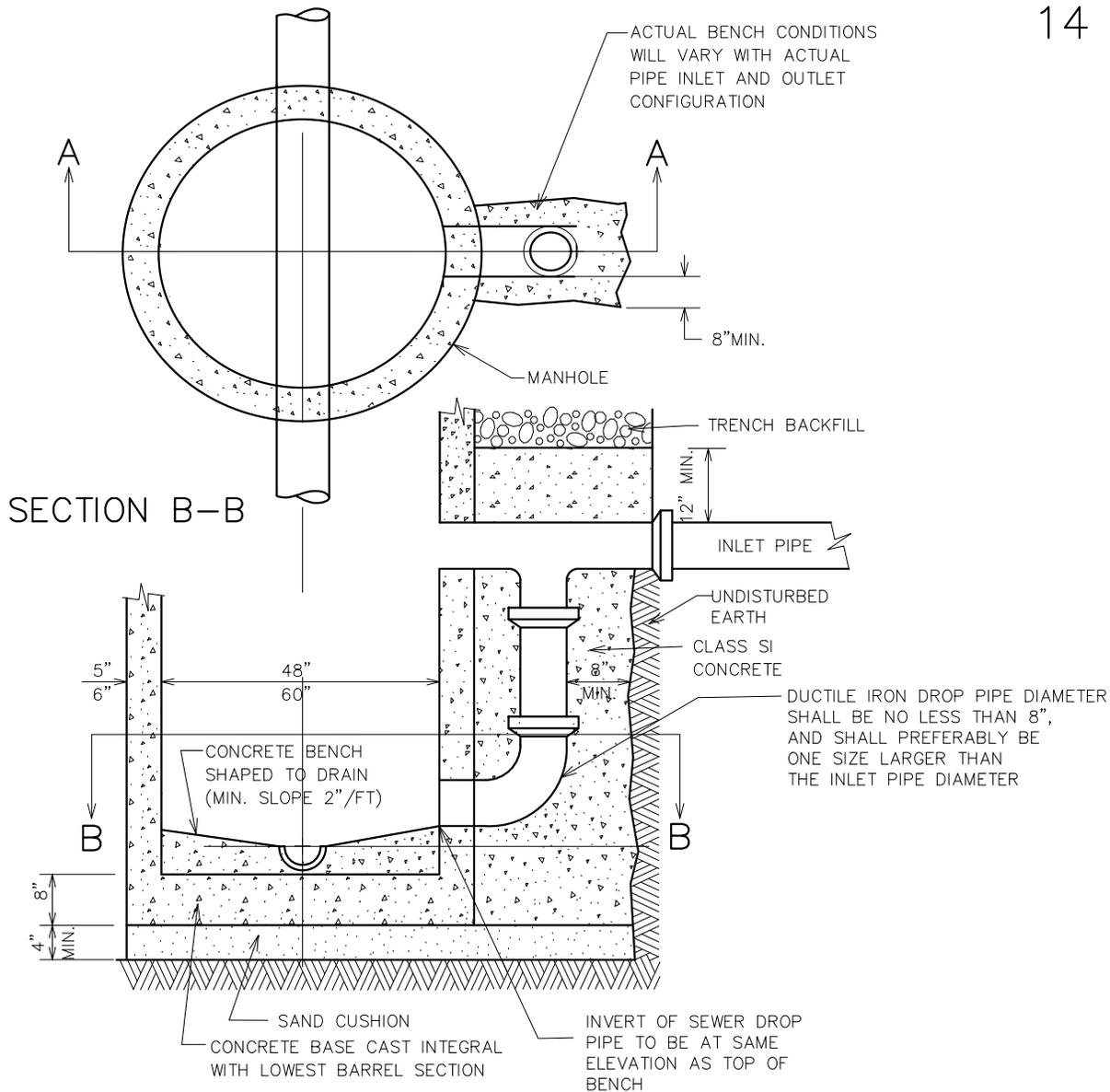
* SEE PIPE CONNECTION TO STRUCTURE DETAIL SHEET 15.

REVISED:01/09/08

Not To Scale

SANITARY MANHOLE

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 Engineering Department
 847.853.7660



SECTION A-A

NOTE:

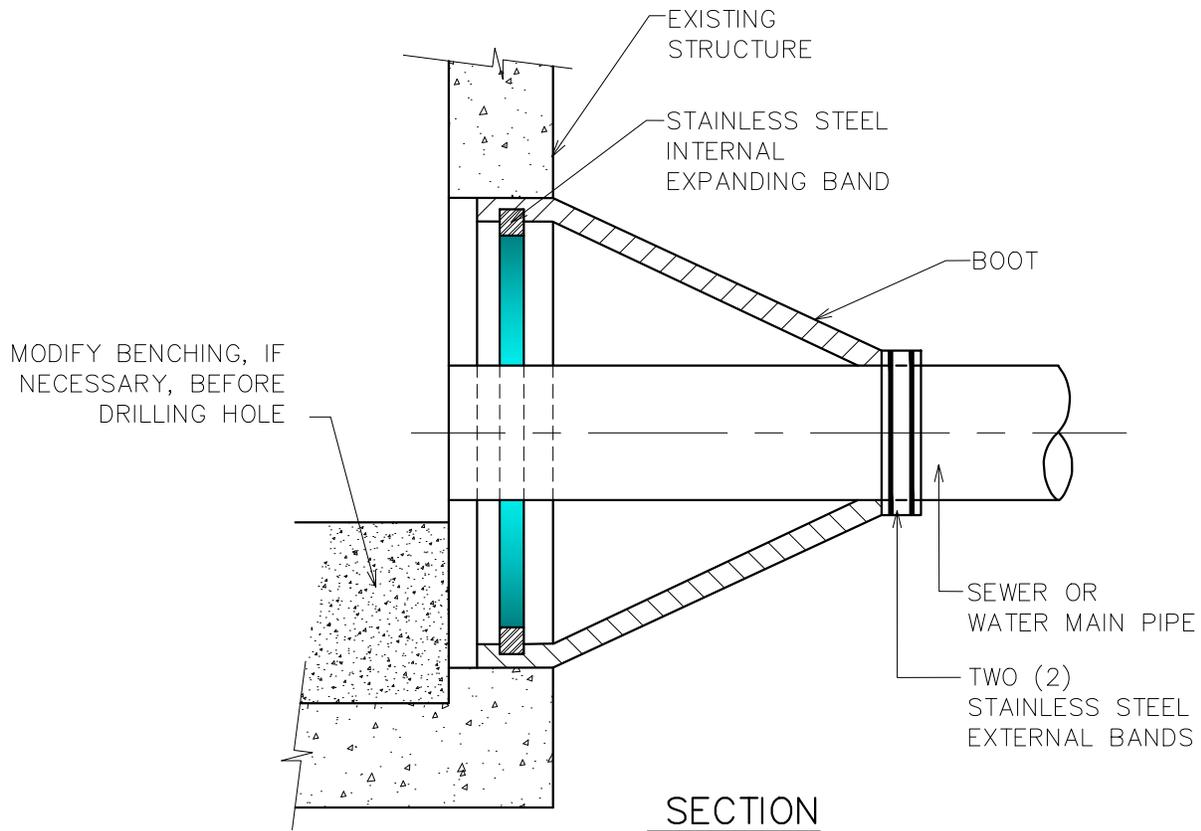
1. DROP MANHOLE WILL BE REQUIRED WHERE DIFFERENCE BETWEEN INVERT ELEVATION OF INLET AND DOWNSTREAM PIPE IS GREATER THAN 12".
2. NON-PRECAST OPENINGS SHALL BE CORED, RUBBER BOOTED AND INTERIOR MORTARED AROUND PIPE.*

* SEE PIPE CONNECTION TO STRUCTURE DETAIL SHEET 15

NOT TO SCALE

DROP MANHOLE

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 Engineering Department
 847.853.7660



NOTES:

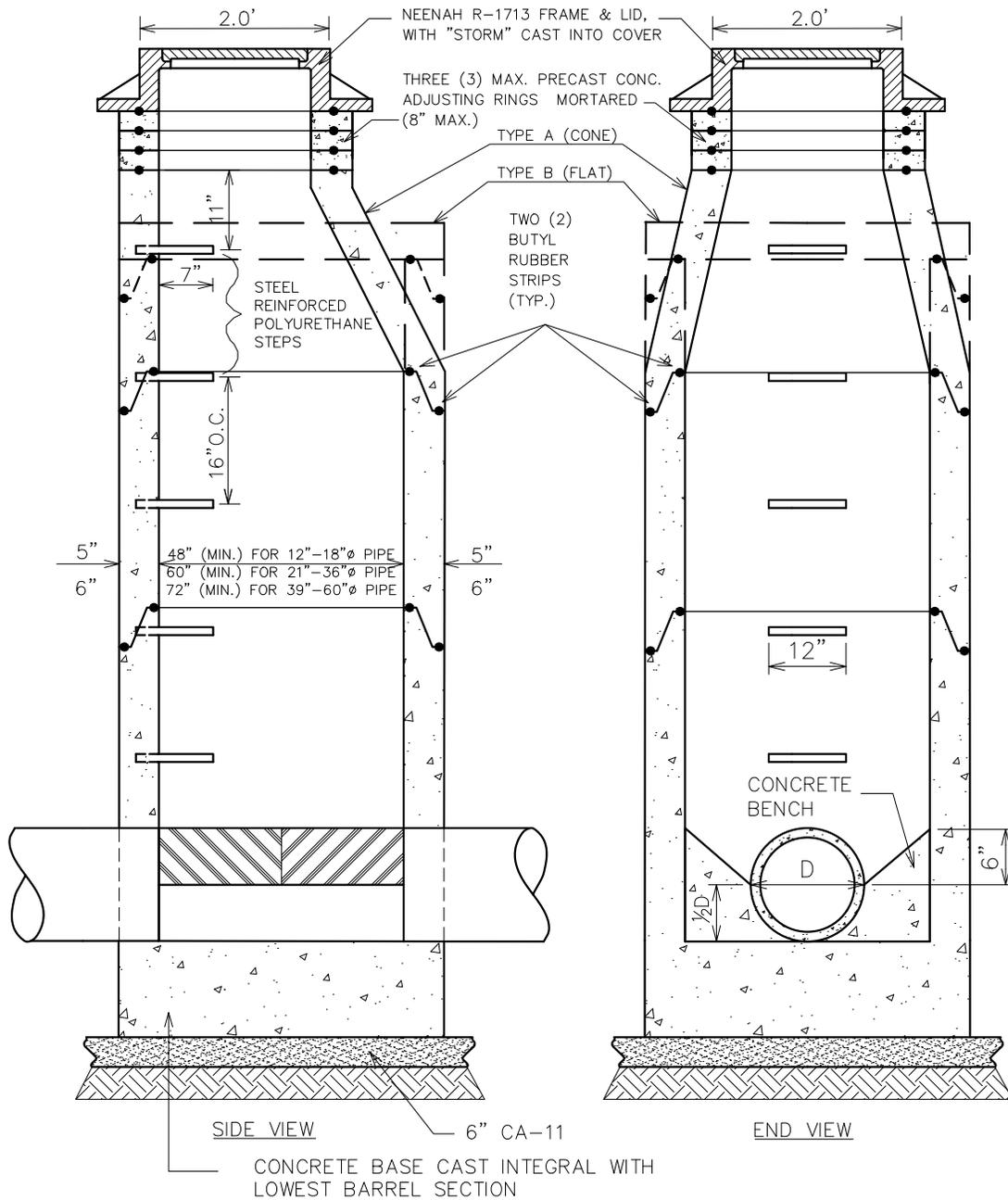
1. CORE-DRILL CIRCULAR OPENING IN STRUCTURE WALL OF DIAMETER TO FIT THE REQUIRED BOOT SIZE.
2. KOR-N SEAL FLEXIBLE RUBBER BOOT (MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC. OR AS APPROVED BY VILLAGE ENGINEERING SHALL BE USED FOR WATERTIGHT CONNECTION CONFORMING TO ASTM C-923.
3. CUT, SHAPE AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW FROM NEW CONNECTION.
4. CLEAN EXISTING STRUCTURE AND SEWER PIPE OF ANY DIRT, CONCRETE OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.

NOT TO SCALE

PIPE CONNECTION TO STRUCTURE

Village of Wilmette
Engineering Department
847.853.7660

REVISED: 02/03/10



NOTES:

1. MANHOLES MUST CONFORM TO ASTM C-478.
2. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
3. BENCHES MUST BE PROVIDED IN ALL STORM SEWER MANHOLES.
4. ALL PIPE PENETRATIONS OCCURING WITHIN (OR BELOW) GROUNDWATER TABLE AND ALL NON-PRECAST OPENINGS SHALL BE CORED, RUBBER BOOTED AND INTERIOR MORTARED AROUND PIPE.*
5. USE ECCENTRIC CONE ONLY.

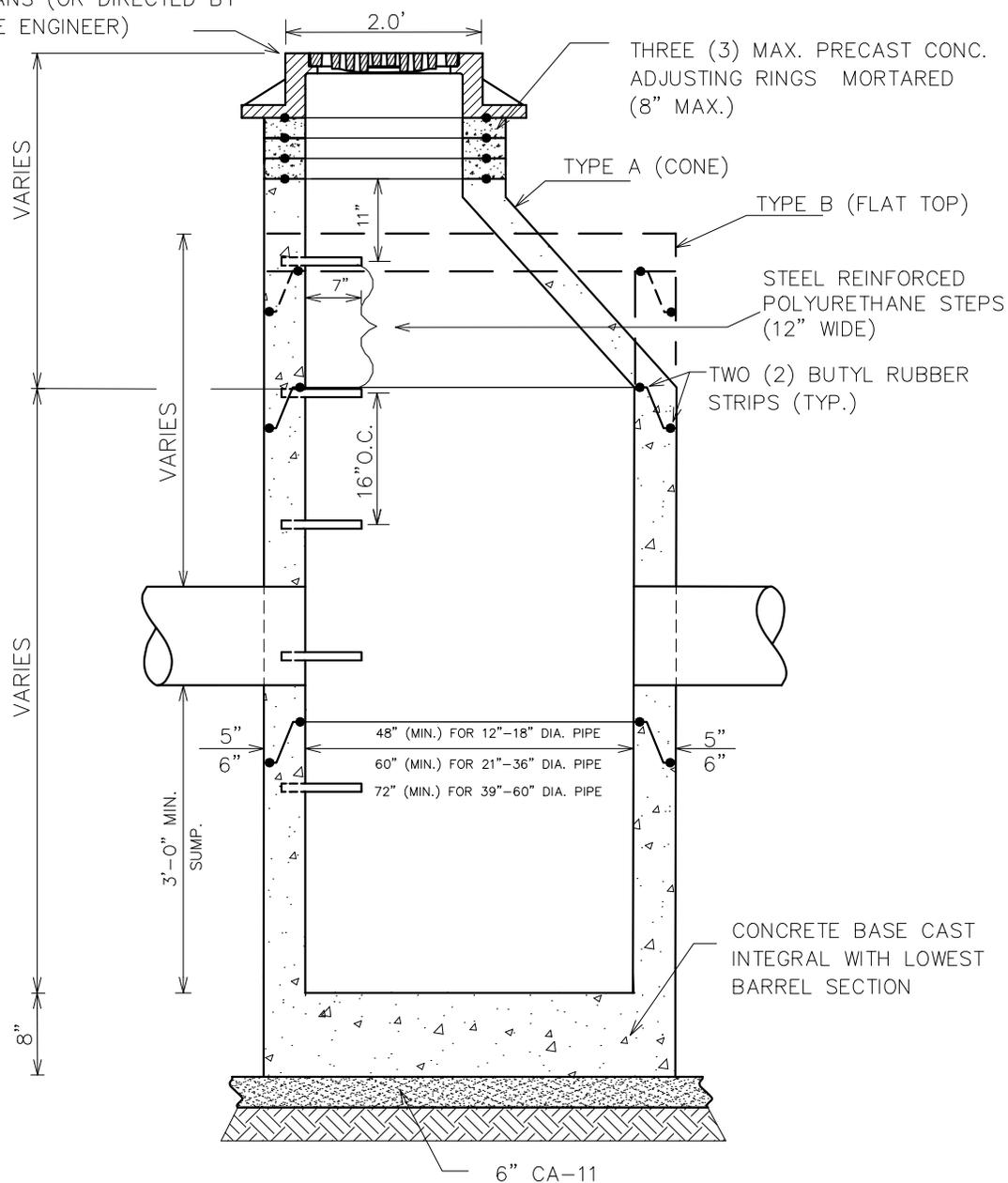
* SEE PIPE CONNECTION TO STRUCTURE DETAIL SHEET 15

NOT TO SCALE

**STORM
MANHOLE**

Village of Wilmette
Engineering Department
847.853.7660

NEENAH R-1713 FRAME & LID
WITH TYPE D GRATE AS INDICATED
ON PLANS (OR DIRECTED BY
VILLAGE ENGINEER)



NOTES:

1. MANHOLES MUST CONFORM TO ASTM C-478.
2. PROVIDE A WATERTIGHT CONNECTION BETWEEN THE CATCH BASIN AND PIPE CONFORMING TO ASTM C-923.
3. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
4. NON-PRECAST OPENINGS SHALL BE CORED, RUBBER BOOTED AND INTERIOR MORTARED AROUND PIPE.*
5. USE ECCENTRIC CONE ONLY.

* SEE PIPE CONNECTION TO STRUCTURE DETAIL SHEET 15

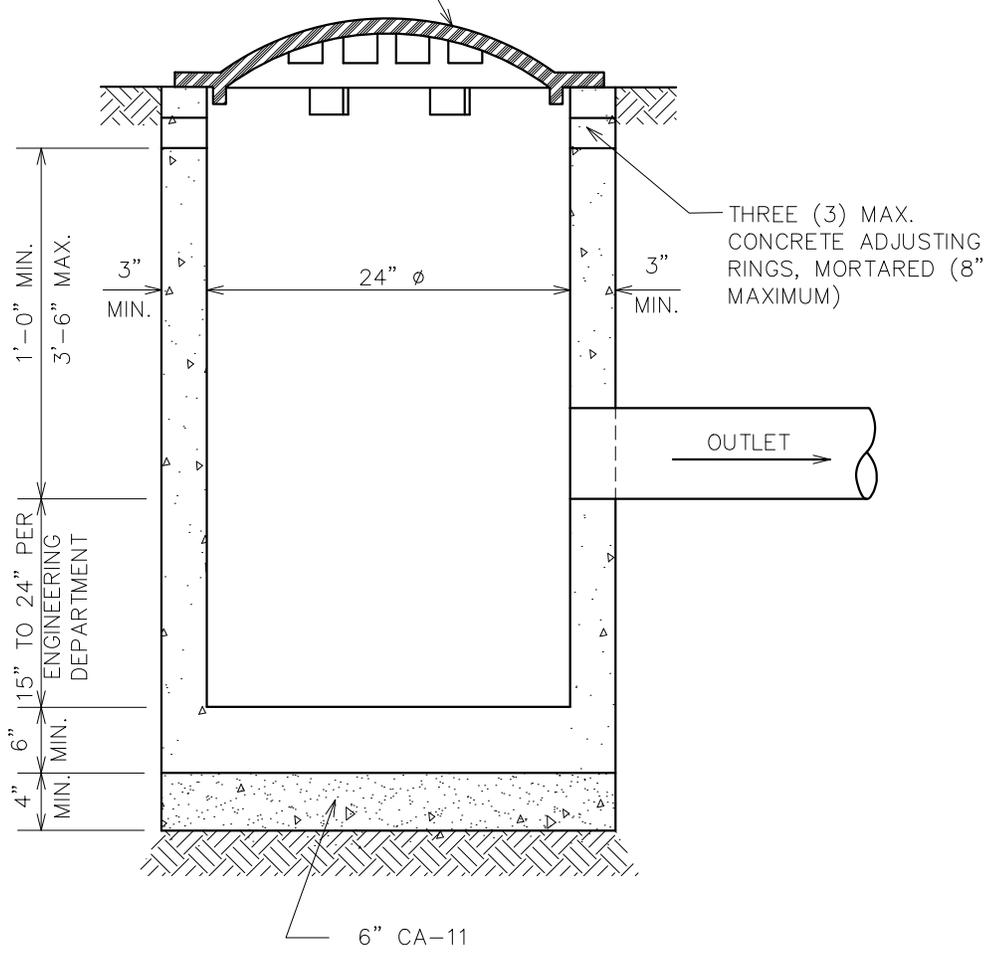
REVISED: 02/12/10

NOT TO SCALE

CATCH BASIN

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Engineering Department
847.853.7660

USE NEENAH R-4340-B IN GRASSED AREAS. IN PAVED AREAS USE NEENAH R-1713 FRAME & LID WITH TYPE D GRATE.



NOTE:

1. CATCH BASIN TO BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE.
2. CATCH BASIN MUST CONFORM TO ASTM C-478.
3. NON-PRECAST OPENINGS SHALL BE CORED, RUBBER BOOTED AND INTERIOR MORTARED AROUND PIPE.*
4. MAXIMUM DEPTH FROM INVERT OF OUTLET PIPE TO TOP OF FRAME SHALL NOT EXCEED 42 INCHES. IF DESIGN OR CONSTRUCTION REQUIRES DEPTH BEYOND 42 INCHES, STRUCTURE SHALL BE REVISED TO A 48 INCH DIAMETER CATCH BASIN.

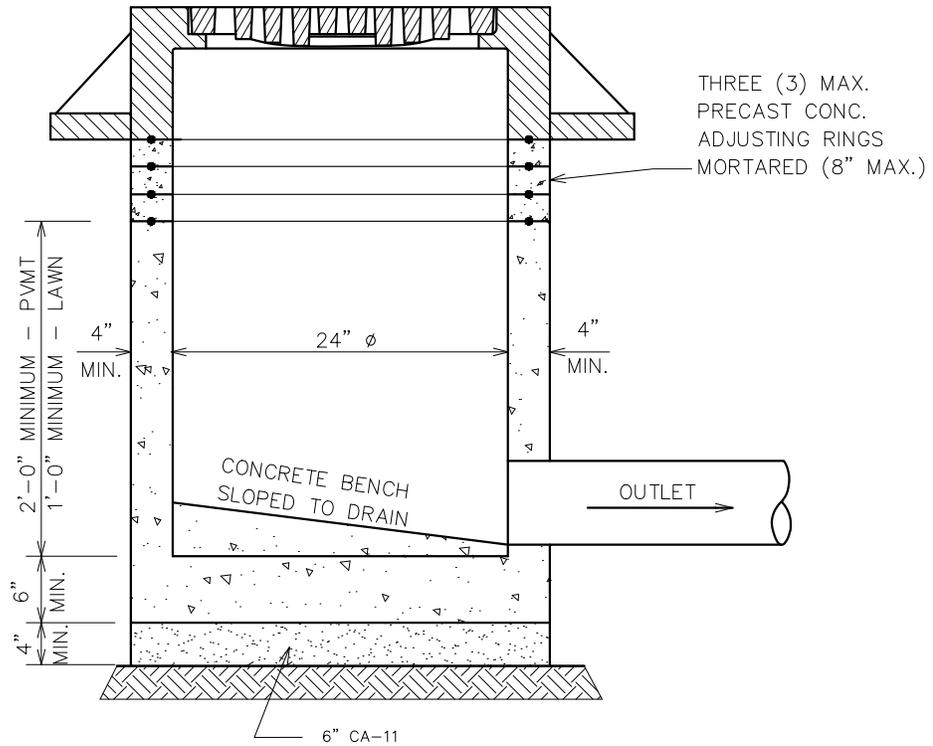
* SEE PIPE CONNECTION TO STRUCTURE DETAIL SHEET 15

NOT TO SCALE

**TYPE C
CATCH BASIN**

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Engineering Department
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NEENAH R-1713 FRAME & LID
WITH TYPE D GRATE AS INDICATED
ON PLANS (OR DIRECTED BY
VILLAGE ENGINEER)



NOTES:

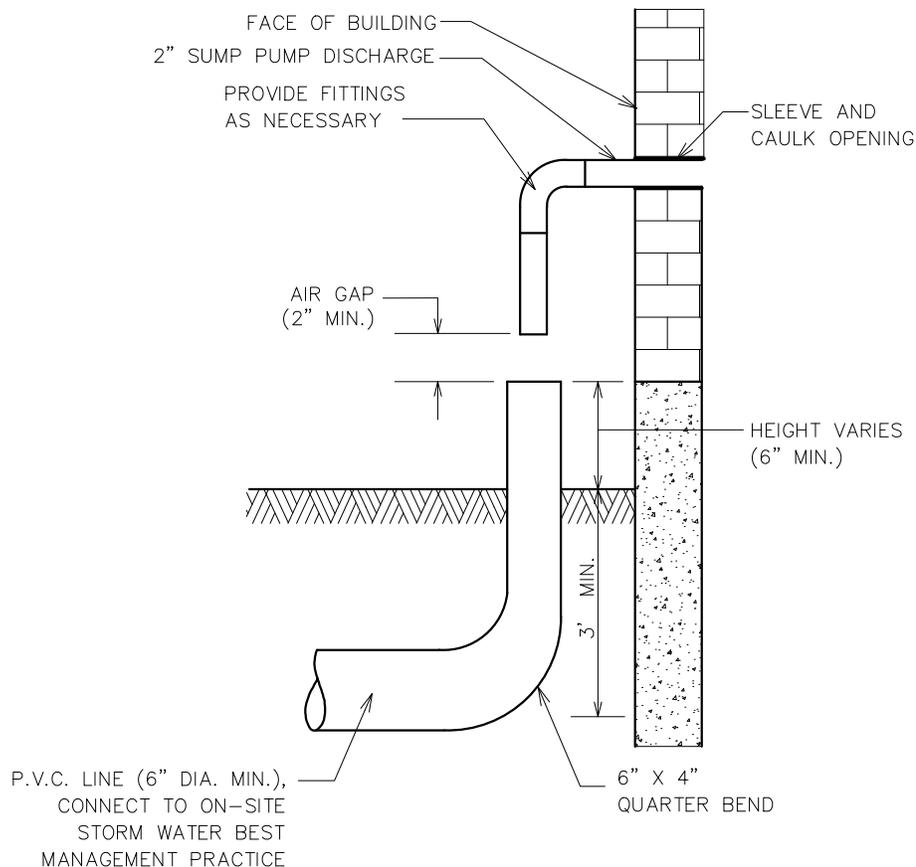
1. INLET MUST CONFORM TO ASTM C-478.
2. NON-PRECAST OPENINGS SHALL BE CORED RUBBER BOOTED, AND INTERIOR MORTARED AROUND PIPE.*
3. PROVIDE A WATERTIGHT CONNECTION BETWEEN THE INLET AND PIPE CONFORMING TO ASTM C-923.
4. MAXIMUM DEPTH FROM INVERT OF OUTLET PIPE TO TOP OF FRAME SHALL NOT EXCEED 42 INCHES. IF DESIGN OR CONSTRUCTION REQUIRES DEPTH BEYOND 42 INCHES, STRUCTURE SHALL BE REVISED TO A 48 INCH DIAMETER MANHOLE.
5. BENCHES MUST BE PROVIDED IN ALL INLETS.

* SEE PIPE CONNECTION TO STRUCTURE DETAIL SHEET 15.

NOT TO SCALE

INLET TYPE "C"

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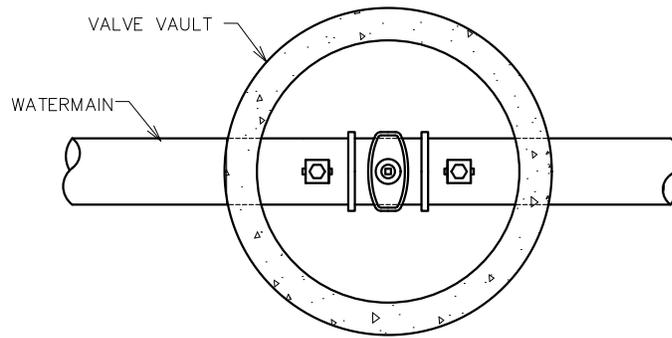
NOTES:

1. SUMP PUMP DISCHARGES SHALL SPLASH ON-GRADE AND FLOW OVERLAND TOWARD A STREET OR ALLEY, OR BE BURIED AND CONNECTED TO A STORM WATER BEST MANAGEMENT PRACTICE.
2. SUMP PUMP DISCHARGES SHALL NOT BE CONNECTED TO VILLAGE SEWER SYSTEMS.
3. THE SUMP PUMP DISCHARGE POINT SHALL BE NO GREATER THAN 10- FEET FROM THE BUILDING FOUNDATION, UNLESS CONNECTED TO A BEST MANAGEMENT PRACTICE. THE BEST MANAGEMENT PRACTICE SHALL BE LOCATED ON THE PROPERTY AT LEAST 10- FEET AWAY FROM THE PUBLIC RIGHT-OF-WAY.
4. OVERLAND DRAINAGE FLOW SHALL BE DIRECTED AWAY FROM THE BUILDING FOUNDATION AND FROM ADJACENT PROPERTIES.
5. A PERMIT IS REQUIRED PRIOR TO CONSTRUCTING ANY MODIFICATIONS TO, OR NEW INSTALLATIONS FOR, FOUNDATION DRAINAGE.

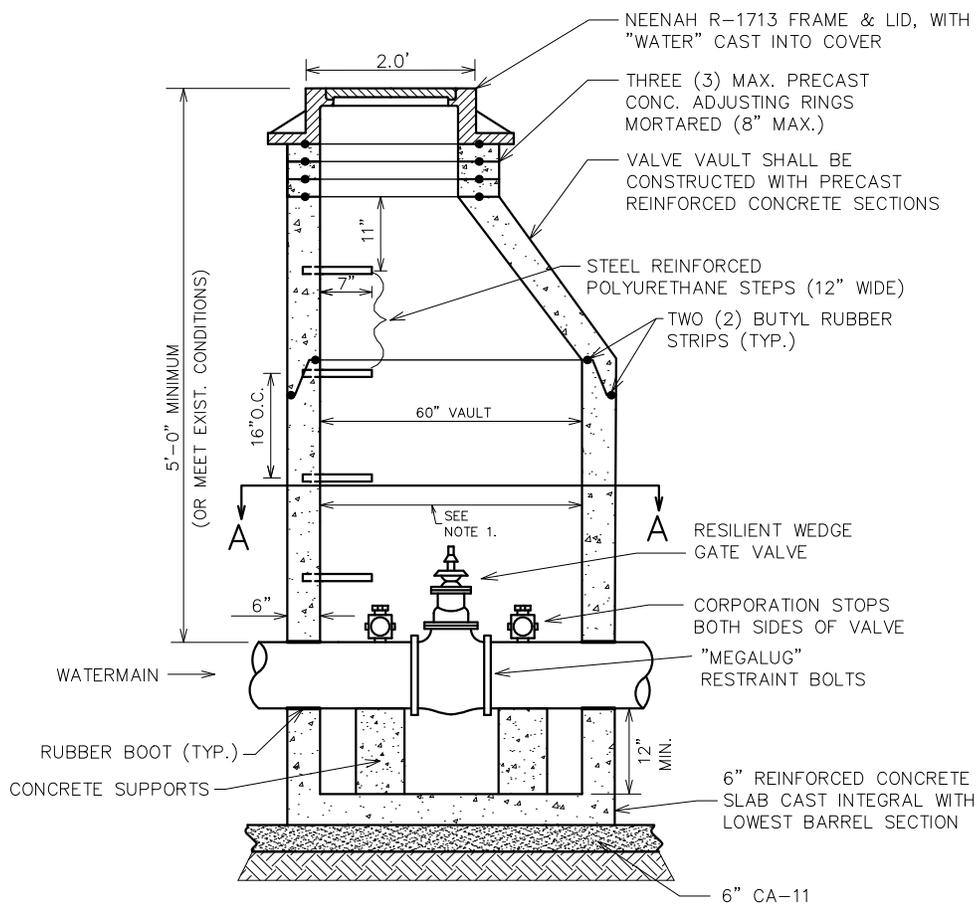
NOT TO SCALE

SUMP PUMP DISCHARGE CONNECTION

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 Engineering Department
 847.853.7660



SECTION A-A



NOTES:

1. 60" (MIN.) INSIDE DIA. FOR ALL VALVE VAULTS.
2. VALVE VAULT MUST CONFORM TO ASTM C-478.
3. USE ECCENTRIC CONE ONLY.
4. VAULT SECTIONS TO BE TONGUE AND GROOVED.
5. NON-PRECAST OPENINGS SHALL BE CORED AND RUBBER BOOTED.*
6. BACKFILL MATERIAL SHALL BE IDOT CA-7 STONE.
7. BOLTS AND NUTS
 - a. MECHANICAL JOINT BOLTS & NUTS SHALL BE COMPOSED OF "COR-TEN"
 - b. ALL OTHER HEXAGONAL BOLTS & NUTS SHALL BE COMPOSED OF STAINLESS STEEL.
8. GATE VALVES SHALL HAVE REPLACEABLE RESILIENT SEATS OR WEDGES MANUFACTURED BY WATEROUS OR AMERICAN FLOW CONTROL.

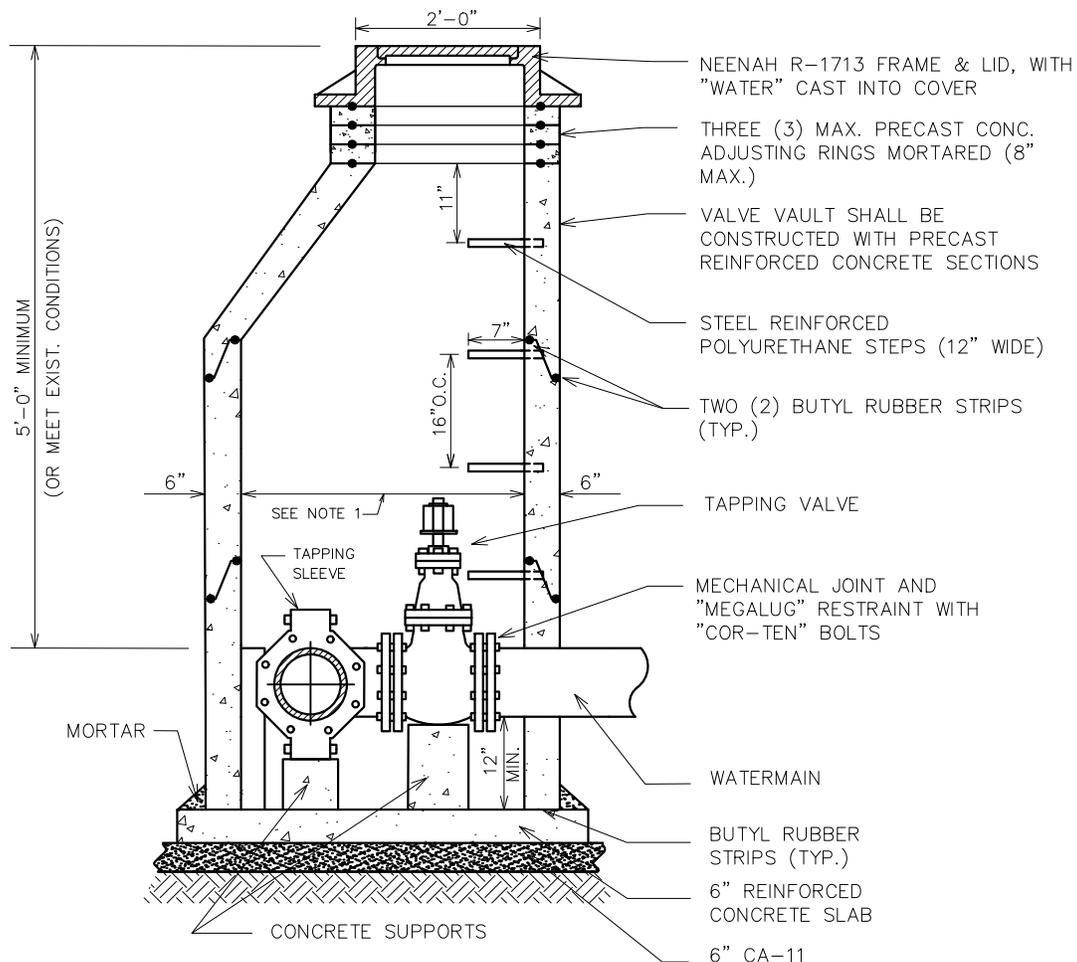
* SEE PIPE CONNECTION TO STRUCTURE DETAIL SHEET 15.

NOT TO SCALE

VALVE VAULT

Village of Wilmette
Engineering Department
847.853.7660

REVISED: 02/12/10



NOTES:

1. 60" (MIN.) INSIDE DIA. FOR ALL PRESSURE CONNECTION VAULTS.
2. BACKFILL MATERIAL SHALL BE IDOT CA-7 STONE.
3. TAPPING SLEEVE SHALL BE MUELLER STAINLESS STEEL H-304.
4. BOLTS FOR FITTINGS
 - a. MECHANICAL JOINT BOLTS & NUTS SHALL BE COMPOSED OF "COR-TEN".
 - b. ALL OTHER HEXAGONAL BOLTS & NUTS SHALL BE COMPOSED OF STAINLESS STEEL.
4. VALVE VAULT MUST CONFORM TO ASTM C-478.
5. ALL SECTIONS TO BE TONGUE AND GROOVED.
6. NON-PRECAST OPENINGS SHALL BE CORED AND RUBBER BOOTED.*

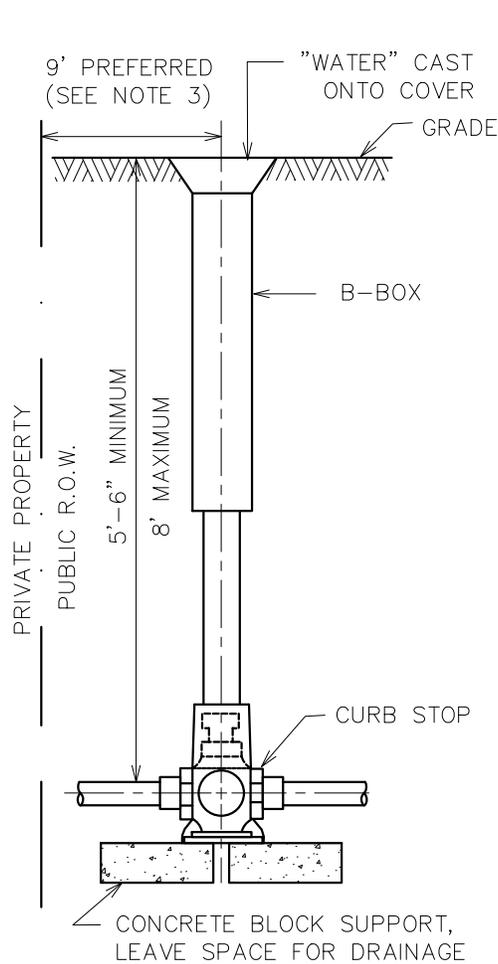
* SEE PIPE CONNECTIONS TO STRUCTURE DETAIL SHEET 15.

NOT TO SCALE

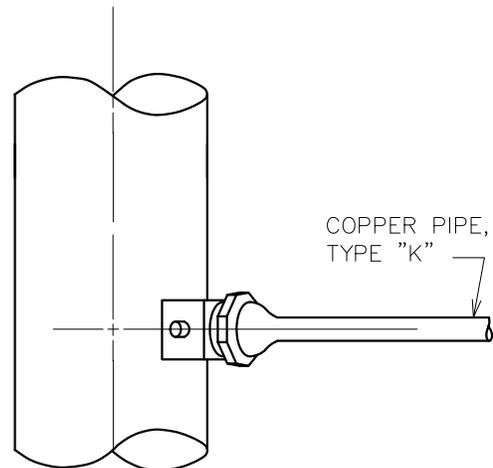
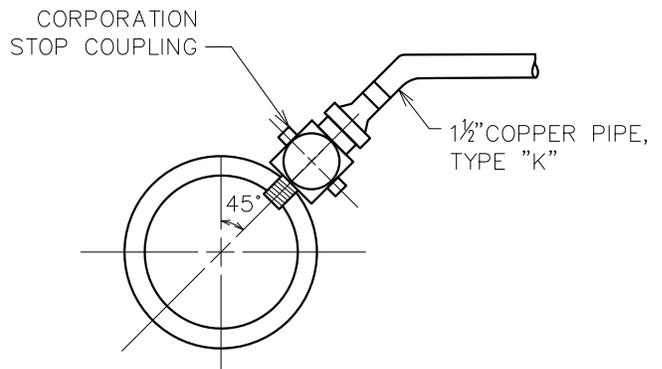
PRESSURE CONNECTION

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Engineering Department
847.853.7660

REVISED: 01/09/08



B-BOX DETAIL



SERVICE TAP ON NEW MAIN

NOTES:

- A. B-BOX: FOR 1", 1½", 2" WATER SERVICES:
 - 1. MUELLER H-10302 OR H-10386 WITH 1½" I.D. UPPER SECTION AND A 2" MINNEAPOLIS TAPPED BASE.
- B. CURB STOP:
 - 1. MUELLER B-25204 OR H-15204 (1", 1½", 2")
- C. CORPORATION STOP:
 - 1. MUELLER B25000 PLUS H-15068 QUARTER BEND FLARED COUPLING
 - 2. WHERE 1½" TO 2" TAPS ARE REQUIRED, A DOUBLE-STRAP BRONZE SADDLE MUST BE USED FOR THE TAP, MUELLER H16126-H16137, FORD 202B-540 OR A.Y. McDONALD No. 3825 TAP SIZE.

NOTES:

- 1. PIPE SIZE CAN VARY, BUT 1½" MINIMUM. OTHER APPURTENANCES SHALL REFLECT SAME.
- 2. COPPER PIPE SHALL BE ONE PIECE BETWEEN TAP AND CURB BOX.
- 3. CURB BOX SHALL BE 3' FROM PROPERTY LINE WITHIN CUL-DE-SACS.
- 4. MINIMUM OF 3' BETWEEN TAPS AND 3' TO NEAREST JOINT.

NOT TO SCALE

**NEW WATERMAIN AND SERVICE;
NEW B-BOX**

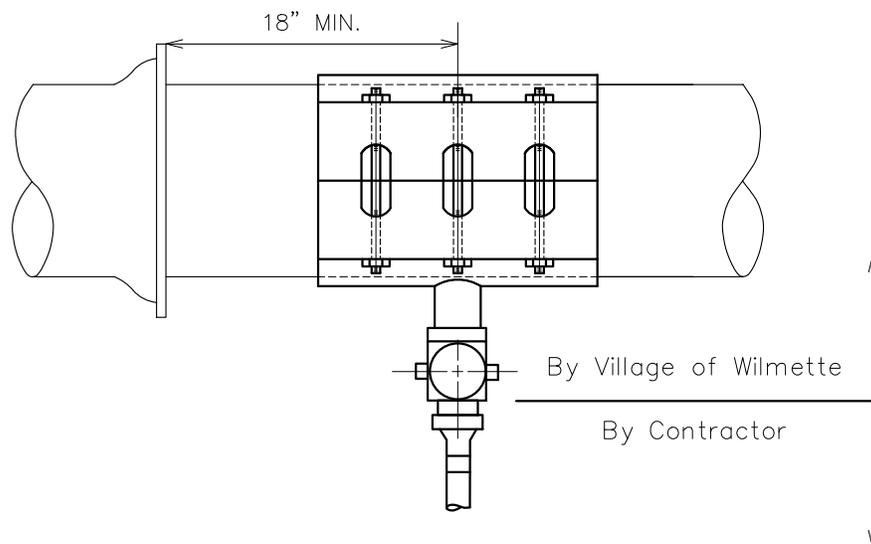
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REVISED: 01/04/18

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Engineering Department
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Contractor Requirements for Indirect Taps for Water Service Connections

1½" services

1. A 1½" tap through a 12" x (pipe diameter) stainless steel sleeve with a 1 ½" outlet is required. The stainless steel sleeve shall be fitted with copper conductivity strips to provide continuity between the water service and the water main.

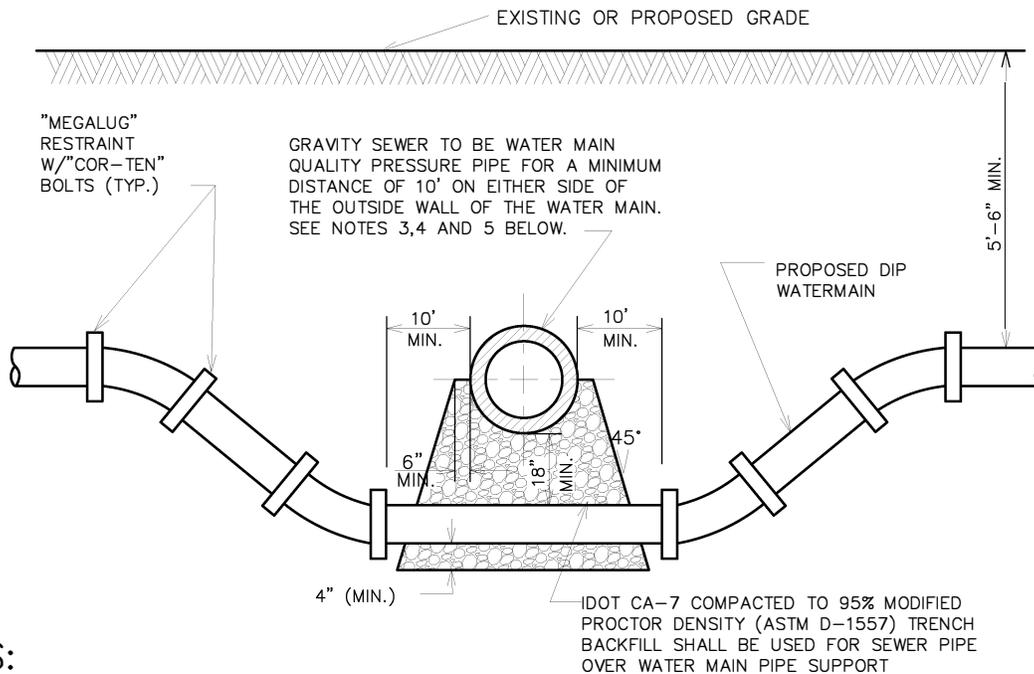
2" services

1. A 2" tap through a 12" x (pipe diameter) stainless steel sleeve with a 2" outlet is required. The stainless steel sleeve shall be fitted with copper conductivity strips to provide continuity between the water service and the water main.
2. Taps shall be 18" from any pipe flaws, joints or other taps.
3. The excavation shall be a minimum of 60"x60" from the face of the tapped main.
4. The main is tapped at the 3:00 position.
5. Shoring conforming to OSHA standards is required for excavations deeper than 47".
6. Village of Wilmette tapping crews will not work in an undermined excavation. Tapping crews will not work under curbs and the curb must be removed from excavation area.
7. There shall be no water in the excavated area where the Village will perform the tap.
8. The water main will be exposed for the width of the excavation. The entire circumference of the main shall be cleaned for the tapping sleeve for a width of 15".
9. Contractor will be charged the hourly rate for delays or cancellations due to non-compliance with these requirements.

NOT TO SCALE

WATER SERVICE INDIRECT TAP
(PREFERRED)
RESIDENTIAL WORK
Village of Wilmette
Engineering Department
847.853.7660

REVISED: 10/10/18



NOTES:

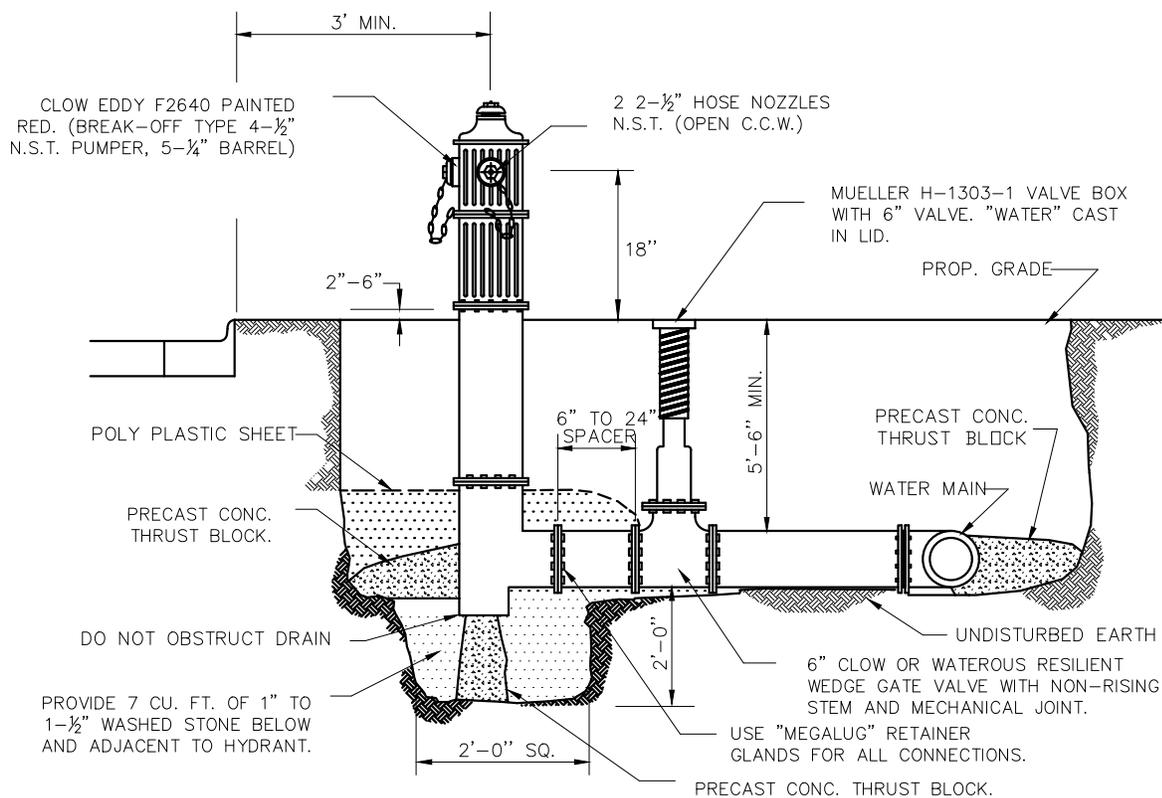
1. HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATERMAINS AND SEWERS SHALL COMPLY WITH VILLAGE ENGINEERING STANDARDS MANUAL OR IEPA REQUIREMENTS, WHICHEVER IS MORE STRINGENT.
2. CONTRACTOR MAY BEND WATER MAIN PIPE UNIFORMLY UNDER SEWERS WITHOUT USING FITTINGS, PROVIDED THAT JOINT DEFLECTION DOES NOT EXCEED 5 DEGREES PER JOINT FOR PIPE UNDER 14" IN DIAMETER AND 3 DEGREES PER JOINT FOR PIPE 14" AND OVER IN DIAMETER. IF FITTINGS ARE USED, CONTINUOUS STRAPPING WITH RODS, STRAPS, NUTS AND BOLTS BELOW NORMAL WATERMAIN DEPTH ARE REQUIRED, OR RETAINER GLANDS MAY BE USED IN LIEU OF STRAPPING. RETAINER GLANDS TO BE "MEGALUG" RESTRAINT, SERIES 1100 OR APPROVED EQUAL WITH "COR TEN" BOLTS.
3. ALL SANITARY SEWER (INCLUDING SERVICE) CROSSINGS WHERE THE WATER MAINS OR WATER SERVICES ARE LESS THAN 18" VERTICALLY ABOVE THE SEWER SHALL BE POLYVINYL CHLORIDE PRESSURE PIPE (SDR 26-160 PSI) AND SHALL CONFORM WITH THE LATEST REVISION OF ASTM D- 2241. JOINTS SHALL CONFORM TO ASTM D-3139 AND ELASTOMERIC GASKETS SHALL CONFORM TO ASTM F-477. THE SAME PIPE AND JOINT MATERIALS SHALL BE USED WHENEVER WATER MAIN CROSSES BELOW THE SEWER.
4. ALL STORM SEWER (INCLUDING SERVICE) CROSSINGS WHERE THE WATER MAINS ARE LESS THAN 18" VERTICALLY ABOVE THE SEWER SHALL BE REINFORCED CONCRETE PIPE, ASTM C-361, CLASS D-25, WITH BELL AND SPIGOT JOINTS AND RUBBER GASKETS, OR PVC SDR 26 AS SPECIFIED IN NOTE 3 ABOVE. THE SAME PIPE AND JOINT MATERIAL SHALL BE USED WHENEVER WATER MAIN CROSSES BELOW THE SEWER.
5. FOR NEW SEWER INSTALLATIONS CROSSING OVER WATER MAINS, THE ENTIRE RUN OF NEW SEWER SHALL BE WATER MAIN QUALITY PIPE, EXTENDING FROM STRUCTURE TO STRUCTURE ON EACH SIDE OF THE CROSSING.

NOT TO SCALE

WATER MAIN CROSSING

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Engineering Department
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REVISED: 02/28/07



NOTES:

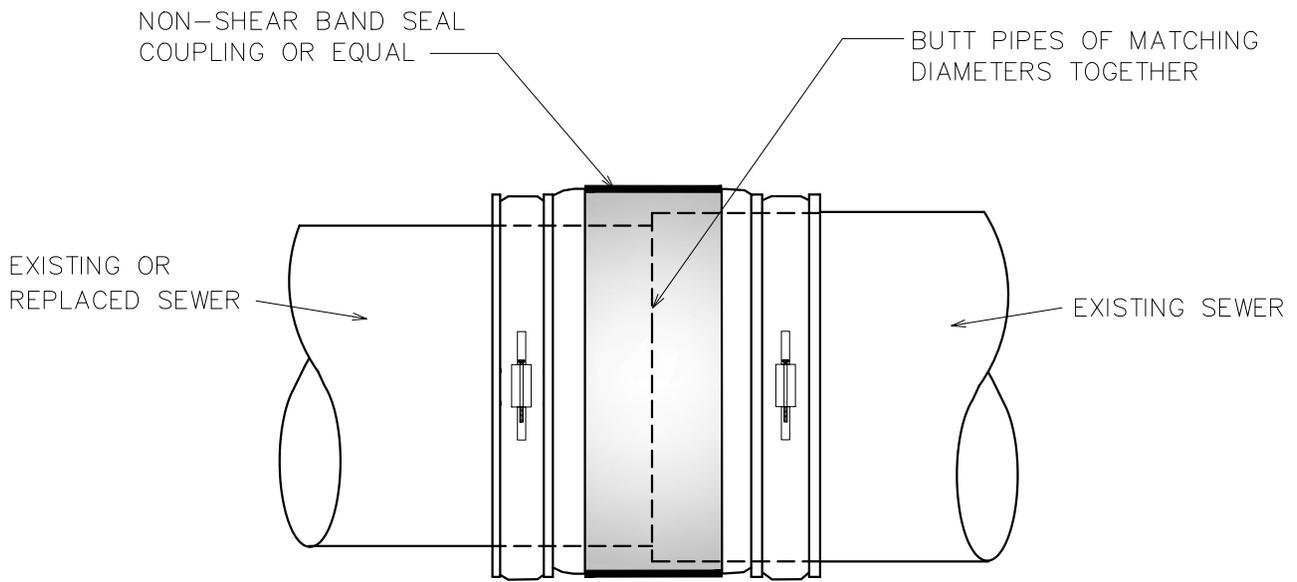
1. ALL MAINS TO HAVE A MINIMUM OF 5'-6" OF COVER
2. ALL HYDRANTS TO FACE STREET AND TO BE LOCATED A MINIMUM OF 3'-0" FROM THE BACK OF CURB TO THE CL OF HYDRANT.

NOT TO SCALE

HYDRANT DETAIL

Village of Wilmette
Engineering Department
847.853.7660

REVISED: 01/09/08

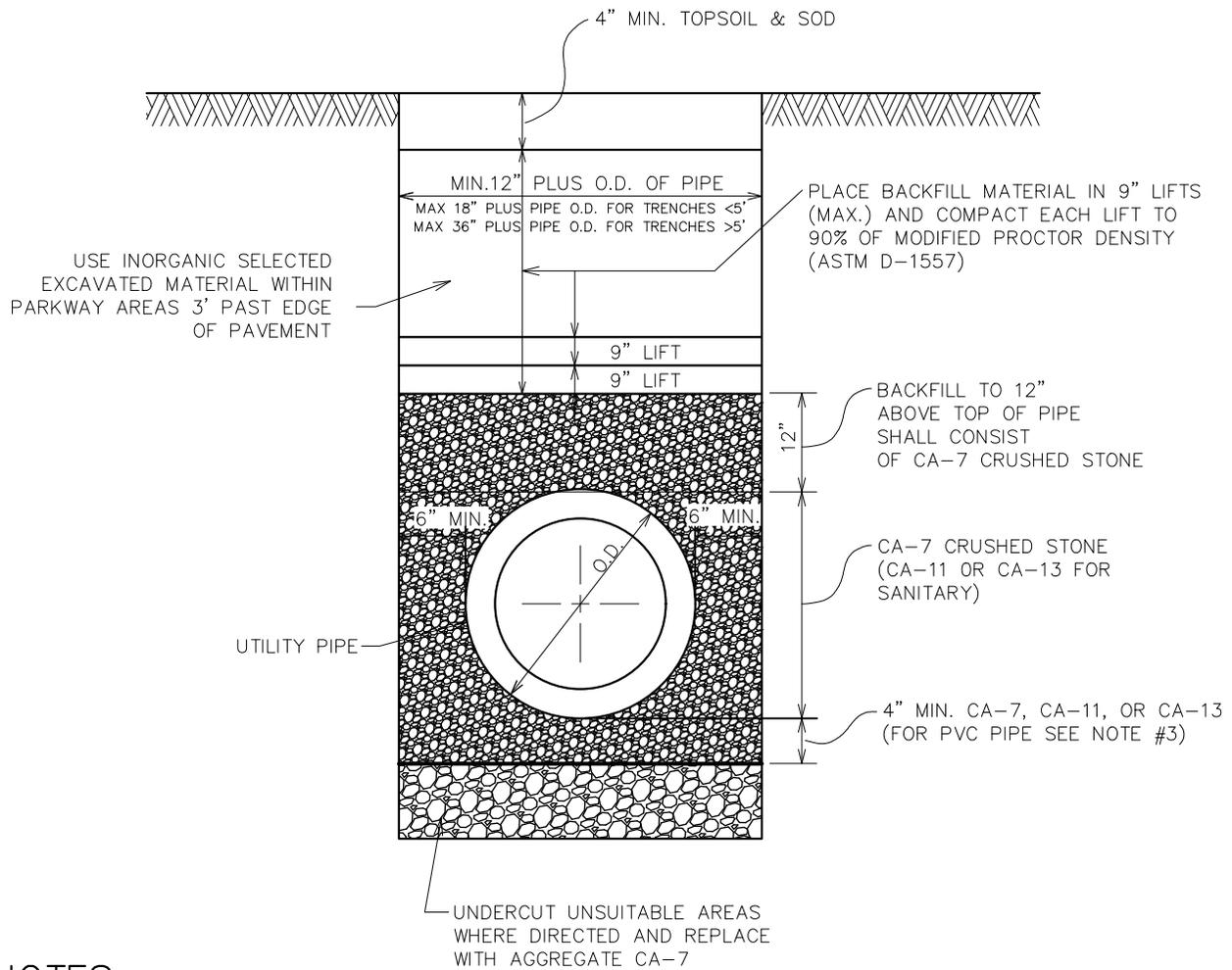


NOT TO SCALE

PIPE COUPLING

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847.853.7660

REVISED: 01/09/08



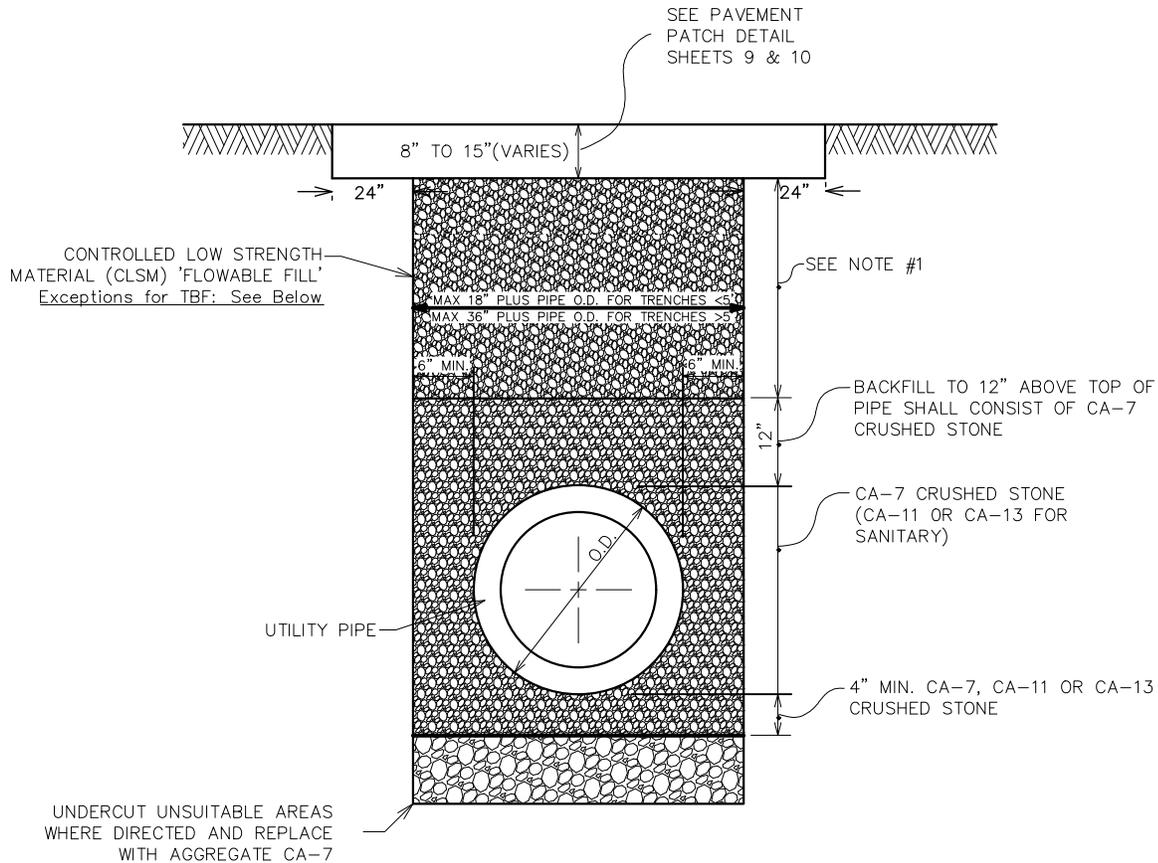
NOTES:

1. ALL BACKFILL MATERIALS SHALL BE PROPERLY COMPACTED (INUNDATION OR WATER JETTING NOT ALLOWED)
2. ALL TRENCH EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.
3. BEDDING MATERIAL FOR PVC PIPE INSTALLATION SHALL COMPLY WITH ASTM D-2321 – STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS.

NOT TO SCALE

**UTILITY TRENCH IN
 NON-PAVED AREAS**

Village of Wilmette
 Engineering Department
 847.853.7660



NOTES:

1. TRENCH BACKFILL UNDER A PAVED SURFACE OR WITHIN THE ZONE OF INFLUENCE (3' FROM EDGE OF PAVEMENT) SHALL CONSIST OF:
 - a. CONTROLLED LOW STRENGTH MATERIAL (CLSM) MIX 1. DELIVERY TICKET SHOWING CONCRETE MIX AND DELIVERY LOCATION MUST BE SUBMITTED TO THE ENGINEERING DEPARTMENT.
2. ALL TRENCH EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.
3. BEDDING MATERIAL FOR PVC PIPE INSTALLATION SHALL COMPLY WITH ASTM D-2321.
4. IF REQUIRED BY VILLAGE ENGINEERING, A ONE (1) INCH THICK STEEL PLATE SHALL BE PROVIDED AND MAINTAINED BY CONTRACTOR UNTIL THE SURFACE RESTORATION IS COMPLETE. THE PLATE SHALL BE PROTECTED FROM SLIDING AND PROVIDED WITH BITUMINOUS RAMPS IF REQUIRED BY VILLAGE ENGINEER.
5. PRIOR TO PLACEMENT OF PAVEMENT MATERIALS, THE EXISTING EXPOSED EDGES SHALL BE SAWCUT TO PROVIDE A SMOOTH CLEAN EDGE, FREE OF LOOSE MATERIAL.
6. THE PLACEMENT OF PAVEMENTS SHALL NOT BE ALLOWED WITHOUT PRIOR INSPECTION BY VILLAGE ENGINEER.

EXCEPTIONS:

FLOWABLE FILL SHALL NOT BE PERMITTED OUTSIDE OF ROADWAY

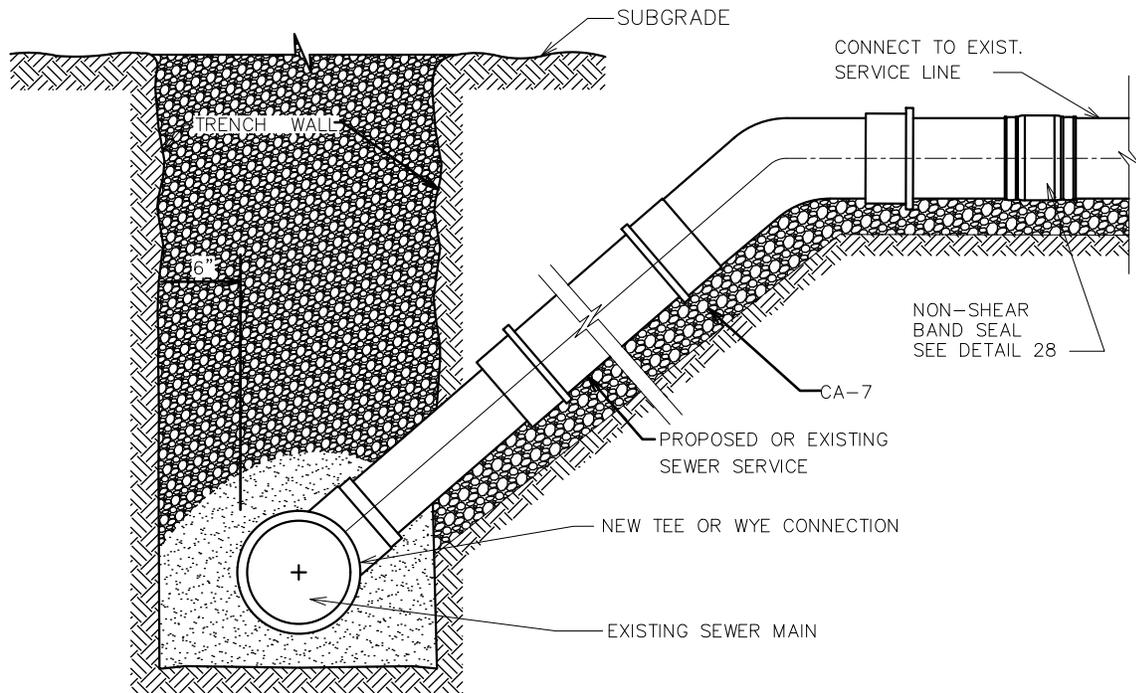
APPROVED BACKFILL WITHIN THIS AREA SHALL BE CA-11 AND CA-6. CA-11 SHALL BE USED FOR PIPE BEDDING AND MUST ALSO BE PLACED AND COMPACTED ONE FOOT ABOVE THE NEW PIPE. THE REMAINDER OF THE TRENCH SHALL USE PROPERLY COMPACTED CA-6 GRANULAR MATERIAL OR SUCH OTHER MATERIAL AS MAY BE REQUIRED BY THE ENGINEER.

QUESTIONS REGARDING THIS CHANGE CAN BE DIRECTED TO THE ENGINEERING DEPARTMENT AT 847-853-7660.

NOT TO SCALE

UTILITY TRENCH IN PAVEMENT AREAS

Village of Wilmette
Engineering Department
847.853.7660



NOTES:

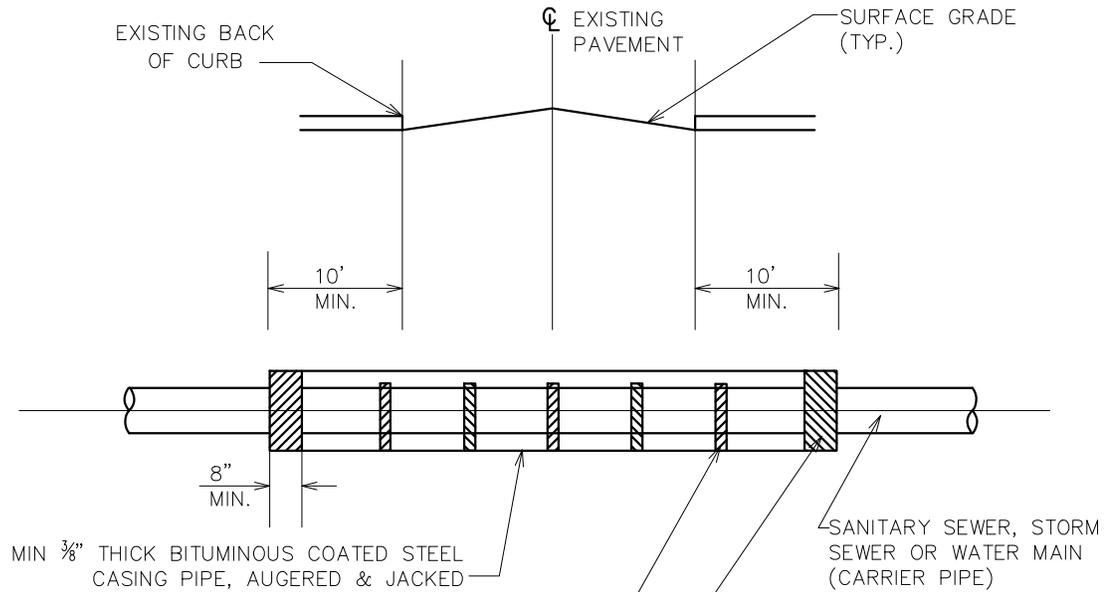
1. FOR PROPOSED SEWER SERVICE CONNECTIONS, REMOVE A SECTION OF PIPE AND INSTALL A TEE OR WYE CONNECTION WITH APPROPRIATE PIPE COUPLING, (SEE DETAIL 28).
2. BREAK-IN CONNECTIONS ARE NOT PERMITTED.
3. FOR TRENCHES WITHIN AN EXISTING PAVED SURFACE AREA SEE DETAIL 30.
4. FOR TRENCHES WITHIN NON-PAVED AREAS SEE DETAIL 29.
5. ALL TRENCH EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.

NOT TO SCALE

SEWER SERVICE CONNECTION

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Engineering Department
847.853.7660

REVISED: 01/09/18



MIN 3/8" THICK BITUMINOUS COATED STEEL CASING PIPE, AUGERED & JACKED

INSTALL ALL STAINLESS STEEL CASING SPACERS (BY CASCADE OR APPROVED EQUAL) FOR EACH PIPE LENGTH ON 6' CENTERS, OR AS RECOMMENDED BY THE MANUFACTURER

BRICK AND MORTAR BULKHEADS (BOTH ENDS). APPROVAL IS NEEDED FROM VILLAGE ENGINEER, PRIOR TO BACKFILLING.

WATERMAIN SIZE	CASING SIZE
16"	24"
14"	24"
12"	20"
10"	20"
8"	16"
6"	12"
4"	10"

NOTES:

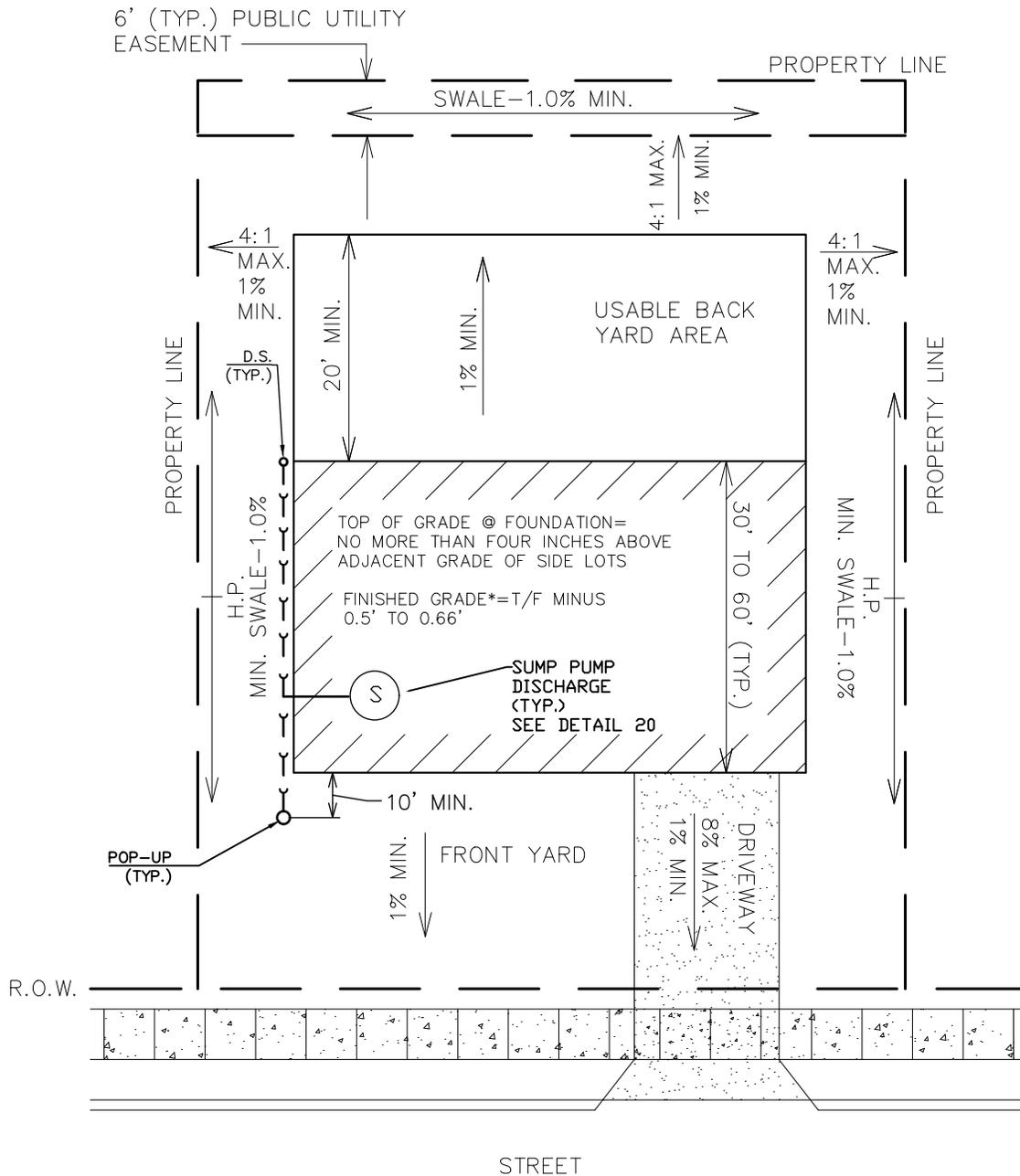
1. CASING PIPE IS REQUIRED UNDER ALL EXISTING ROADWAYS, OR AS OTHERWISE DIRECTED BY VILLAGE ENGINEER WHERE OPEN CUTS ARE NOT PERMITTED, EXCEPT FOR WATER SERVICE LINES UP TO 2" IN DIAMETER.
2. WATER MAIN CASING SPACERS SHALL BE RESTRAINED IN POSITION.
3. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE DETERMINED BY CONTRACTOR BUT IN NO CASE SHALL IT BE LESS THAN 8" LARGER THAN THE DIAMETER OF THE CARRIER PIPE TO ALLOW AMPLE SPACE FOR BELLS, AND CARRIER PIPE SLOPE (FOR GRAVITY PIPE).
4. ALL AUGER PITS TO BE BACKFILLED WITH IDOT CA-7 (CRUSHED) AGGREGATE MATERIAL.

NOT TO SCALE

CASING PIPE

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REVISED: 01/09/08



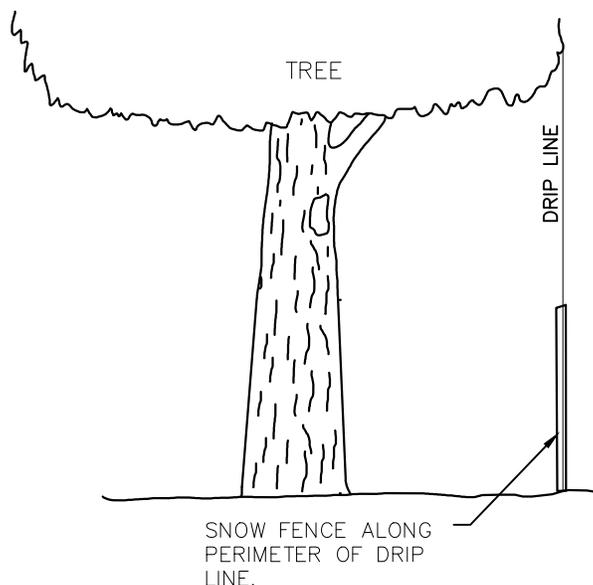
* IF THE BUILDING IS MULTI-LEVEL OR HAS A STEP FOUNDATION, SHOW PROPOSED TOP OF FOUNDATION AND FINISHED GRADE AT ALL LEVELS.

NOT TO SCALE

LOT GRADING

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Engineering Department
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REVISED: 01/09/18



NOTES:

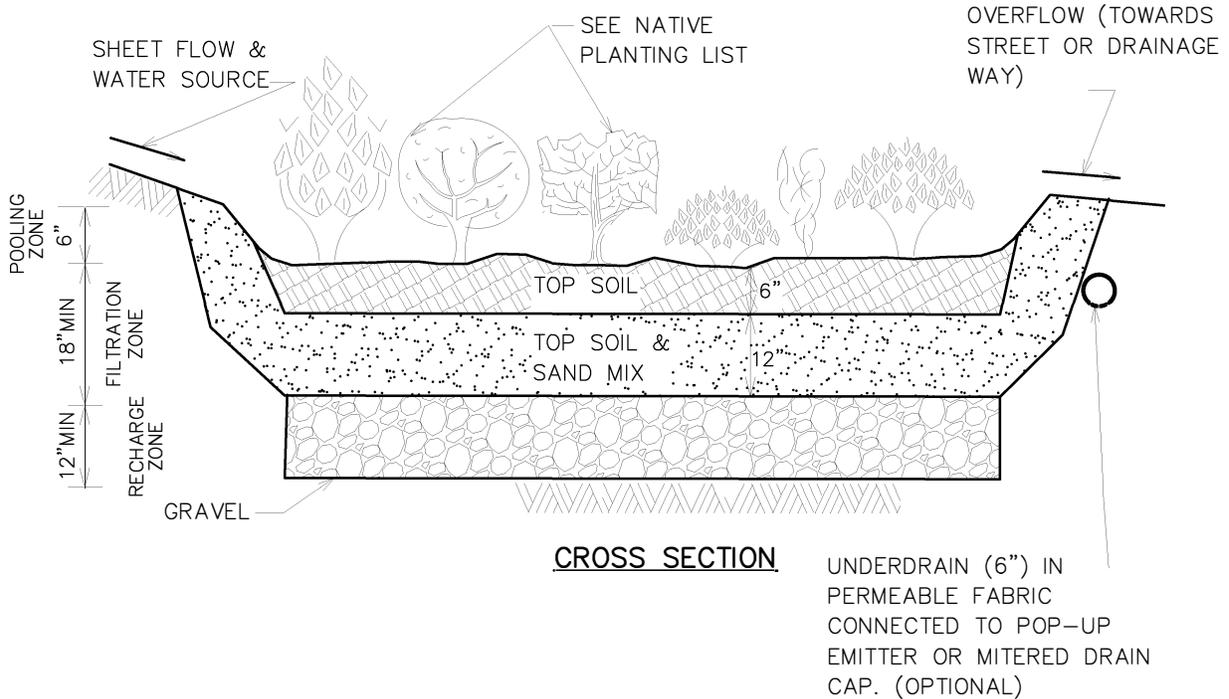
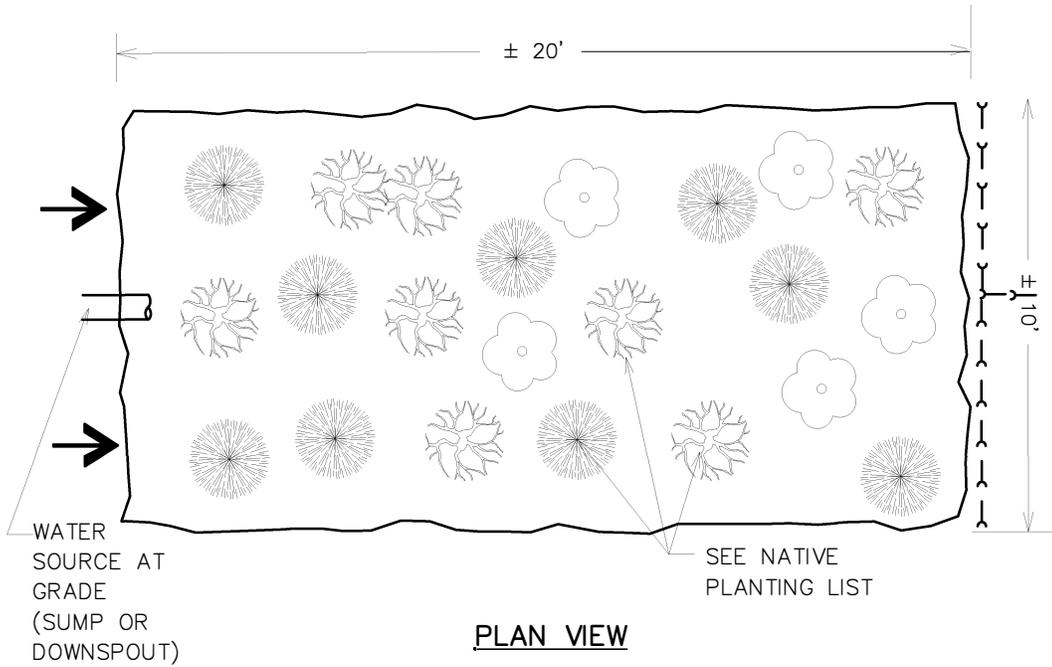
1. EXISTING VEGETATION WHICH IS TO REMAIN IN PLACE SHALL BE PROTECTED AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING AND BRUISING OF BARK, SMOTHERING BY STOCKPILING OF CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN THE DRIP LINE OF THE EXISTING VEGETATION CANOPY, EXCESS FOOT OR VEHICULAR TRAFFIC OR PARKING OF VEHICLES WITHIN THE DRIP LINE OF THE VEGETATION.
2. ALL TREES TO REMAIN SHALL BE PROTECTED WITH A SNOW FENCE INSTALLED AROUND THE PERIMETER OF THE TREES DRIP LINE, WITH STURDY STEEL POLES SET 3' ON CENTER ALONG THE FENCE. ANY CONSTRUCTION INSIDE THE DRIP LINE OF THE TREE REQUIRES INSPECTION FOR POSSIBLE ROOT PRUNING PRIOR TO THE EXCAVATION. ROOT PRUNING MAY BE NECESSARY IN ORDER TO LESSEN THE IMPACT OF DAMAGE TO THE VEGETATION'S ROOT SYSTEM.
3. EXISTING VEGETATION WHICH IS TO REMAIN IN PLACE SHALL BE WATERED A MINIMUM OF 1" OF WATER PER WEEK. WATERING SHALL COVER THE ENTIRE ROOT SYSTEM WITHIN THE TREE'S DRIPLINE EXTENDING OUT TO ITS DRIPLINE. WATERING IS REQUIRED AS TO HELP MAINTAIN ITS HEALTH DURING THE COURSE OF CONSTRUCTION OPERATIONS.
4. PROTECTION SHALL BE PROVIDED FOR ROOTS OVER 1-1/2" WHICH ARE CUT DURING CONSTRUCTION OPERATIONS. WHENEVER SUCH A ROOT IS CUT, THE CUT FACES SHALL BE COATED WITH A PRUNE WOOD DRESSING OR OTHER ACCEPTABLE COATING SPECIALLY FORMULATED FOR HORTICULTURAL USE ON DAMAGED OR CUT PLANT TISSUES. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH WET BURLAP TO PREVENT THE ROOTS FROM DRYING OUT. EXPOSED ROOTS SHALL BE PROVIDED WITH SOIL COVER AS SOON AS POSSIBLE.
5. VEGETATION THAT BECOMES DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED IN A MANNER ACCEPTABLE TO THE VILLAGE.
6. DAMAGED TREES SHALL BE REPAIRED BY AN ISA CERTIFIED ARBORIST. DAMAGED TREES WHICH CANNOT BE REPAIRED AND RESTORED TO FULL GROWTH STATUS, AS DETERMINED BY THE VILLAGE AND/OR THE CERTIFIED ARBORIST, SHALL BE REPLACED WITHIN A TIME PERIOD STATED BY THE VILLAGE.

NOT TO SCALE

TREE PROTECTION DETAIL

Village of Wilmette
Engineering Department
847.853.7660

REVISED: 01/25/10



NOT TO SCALE

**RAIN GARDEN
DETAIL**

Village of Wilmette
Engineering Department
847.853.7660

Village of Wilmette Suggested Plant List for Rain Gardens

Light Preference: Shade

Botanical Name	Common Name	Bloom Time	Bloom Color	Height
<i>Aquilegia canadensis</i>	Columbine	Spring to Summer	Scarlet, Yellow	1-2'
<i>Onoclea sensibilis</i>	Sensitive Fern	Non-flowering	Non-flowering	1-2'
<i>Osmunda cinnamomea</i>	Cinnamon Fern	Non-flowering	Non-flowering	2-5'
<i>Osmunda regalis</i>	Royal Fern	Non-flowering	Non-flowering	1-3'

Light Preference: Partial Shade and Sun

Botanical Name	Common Name	Bloom Time	Bloom Color	Height
<i>Baptisia australis</i>	Blue False Indigo	May-July	Blue	2-4'
<i>Echinacea purpurea*</i>	Purple Coneflower	July-Sept.	Purple	3-4'
<i>Lobelia cardinalis</i>	Cardinal Flower	July-Sept.	Red	2-5'
<i>Lobelia siphilitica</i>	Great Blue Lobelia	July-Sept.	Blue	1-4'
<i>Monarda fistulosa*</i>	Wild Bergamot	July-Sept.	Lavender	2-5'
<i>Polemonium reptans</i>	Jacob's ladder	Spring to Summer	Blue	12-15"
<i>Potentilla norvegica</i>	Rough Cinquefoil	Late Spring to Fall	Yellow	4-36"
<i>Rudbeckia subtomentosa*</i>	Branching Coneflower	July-Sept.	Yellow	2-4'
<i>Sagittaria latifolia*</i>	Arrowhead	Summer	White	1-5'
<i>Silphium perfoliatum*</i>	Cup Plant	Summer	Yellow	3-10'
<i>Stylophorum diphyllum</i>	Celandine Poppy	May-July	Yellow	12-18"
<i>Veronicastrum virginicum</i>	Culver's Root	July-Aug.	White	3-6'
<i>Carex muskingumensis</i>	Palm Sedge	Spring	Red-brown	2-3'
<i>Cinna arundinacea</i>	Common Wood Reed (grass)			
<i>Elymus virginicus</i>	Virginia Wild Rye (grass)			
<i>Carex grayi</i>	Gray's Sedge	Summer	Green	1-2'
<i>Zizia aurea*</i>	Golden Alexanders	May-June	Yellow	2-4'

Light Preference: Sun

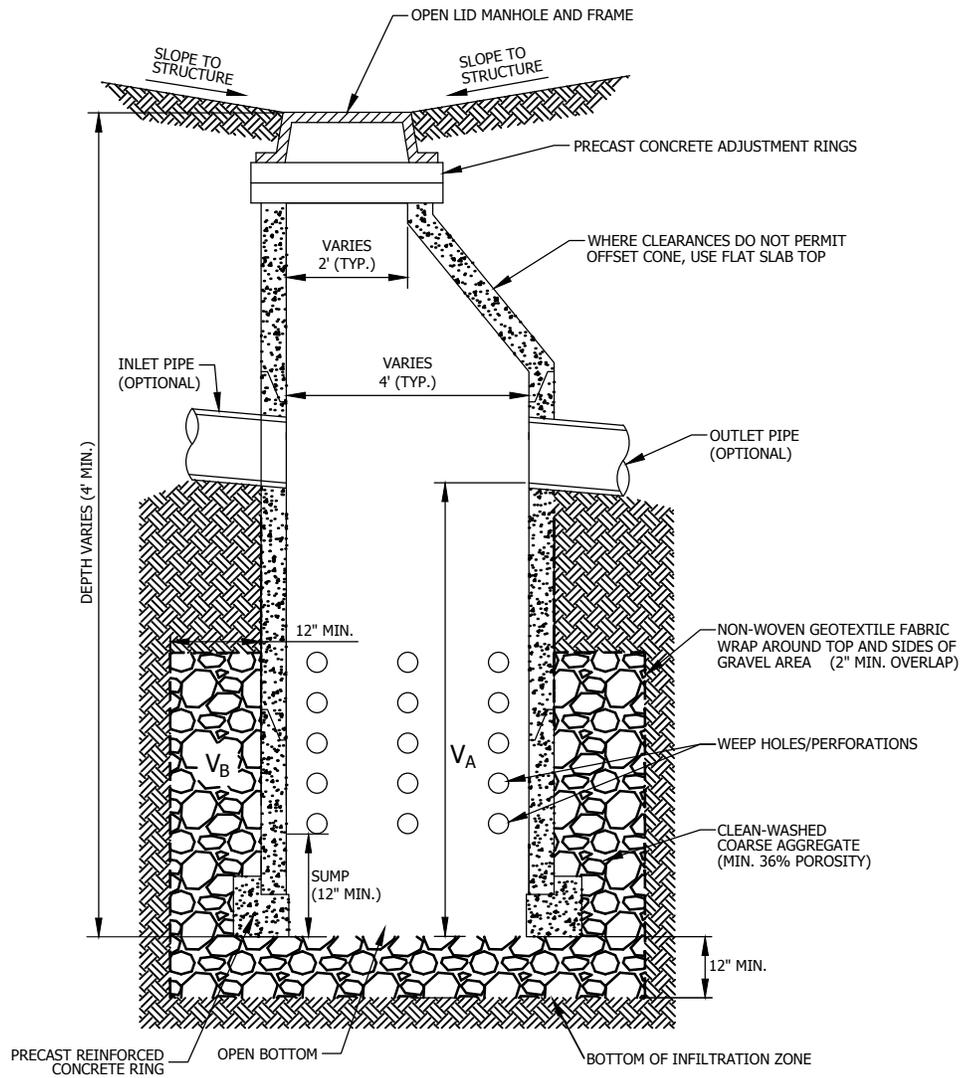
Botanical Name	Common Name	Bloom Time	Bloom Color	Height
<i>Asclepias incarnata</i>	Swamp Milkweed	June-July	Red, Pink	3-5'
<i>Aster laevis</i>	Smooth Aster	Aug.-Oct.	Blue	1-4'
<i>Aster nova-angliae</i>	New England Aster	Aug.-Oct.	Pink, Purple	3-6'
<i>Caltha palustris</i>	Marsh Marigold	April-May	Yellow	1-2'
<i>Chelone glabra</i>	White Turtlehead	July-Oct.	White, Purple	1-3'
<i>Eupatorium purpureum</i>	Joe-Pye Weed	July-Sept.	Pink	3-5'
<i>Iris virginica shrevei</i>	Blue Flag Iris	June-July	Blue	2-3'
<i>Liatris spicata</i>	Marsh Blazing Star	July-Aug.	Purple, Pink	3-5'
<i>Monarda didyma</i>	Bee Balm	Summer	Red	2-5'
<i>Penstemon digitalis</i>	Smooth Penstemon J	June-July	White	2-3'
<i>Solidago ohioensis</i>	Ohio Goldenrod	Aug.-Sept.	Yellow	3-4'
<i>Vernonia fasciculata</i>	Ironweed	July-Sept.	Red, Pink	4-6'
<i>Andropogon gerardii</i>	Big Bluestem	Sept.-Oct.	Gold, Blue	4-8'
<i>Carex vulpinoidea</i>	Fox Sedge	May-June	Green	1-3'
<i>Panicum virgatum</i>	Switch Grass	Aug.-Sept.	Green, Gold	3-6'
<i>Spartina pectinata</i>	Prairie Cord Grass	Aug.-Sept.	Green, Gold	3-7'
<i>Helenium autumnale</i>	Sneezeweed	July-Sept.	Yellow	1-3'
<i>Physostegia virginiana</i>	Obedient Plant	July-Aug.	Pink	3-4'
<i>Solidago ridellii</i>	Riddell's Goldenrod	Aug.-Sept.	Yellow	3-4'
<i>Silphium terebinthinaceu</i>	Prairie Dock	July-Sept.	Yellow	2-10'
<i>Tradescantia ohiensis</i>	Spiderwort	May-June	Blue	1-3'

* Indicates partial shade and sun plants which could also function well in full sun areas.

Planting tips:

1. Space plants at least 12-18" apart as most native plants mature to a large size within 1-2 years after planting.
2. Include at least 25-30% grasses or sedges interspersed throughout the garden. They provide structure and support for some of the larger forbs which need the support.
3. Generally, place the taller plants towards the back of the rain garden and shorter plants towards the front. If there's no clear front and back then place the taller plants towards the center and the shorter plants towards the periphery.
4. During routine weeding and maintenance, be particularly attentive to removing invasive species of plants like Canada Thistle, Teasel, and Red Canary Grass - they can quickly take over new plantings if not controlled.

**NATIVE
PLANTING LIST**
Village of Wilmette
Engineering Department
847.853.7660



STORAGE VOLUME CALCULATION	POROSITY	MEDIA VOLUME	STORAGE VOLUME	VOLUME PROVIDED
MANHOLE VOLUME BELOW INVERT OUT	1.00	V_A	$1.00 \times V_A$	
COARSE AGGREGATE VOLUME	0.36	V_B	$0.36 \times V_B$	
			TOTAL	

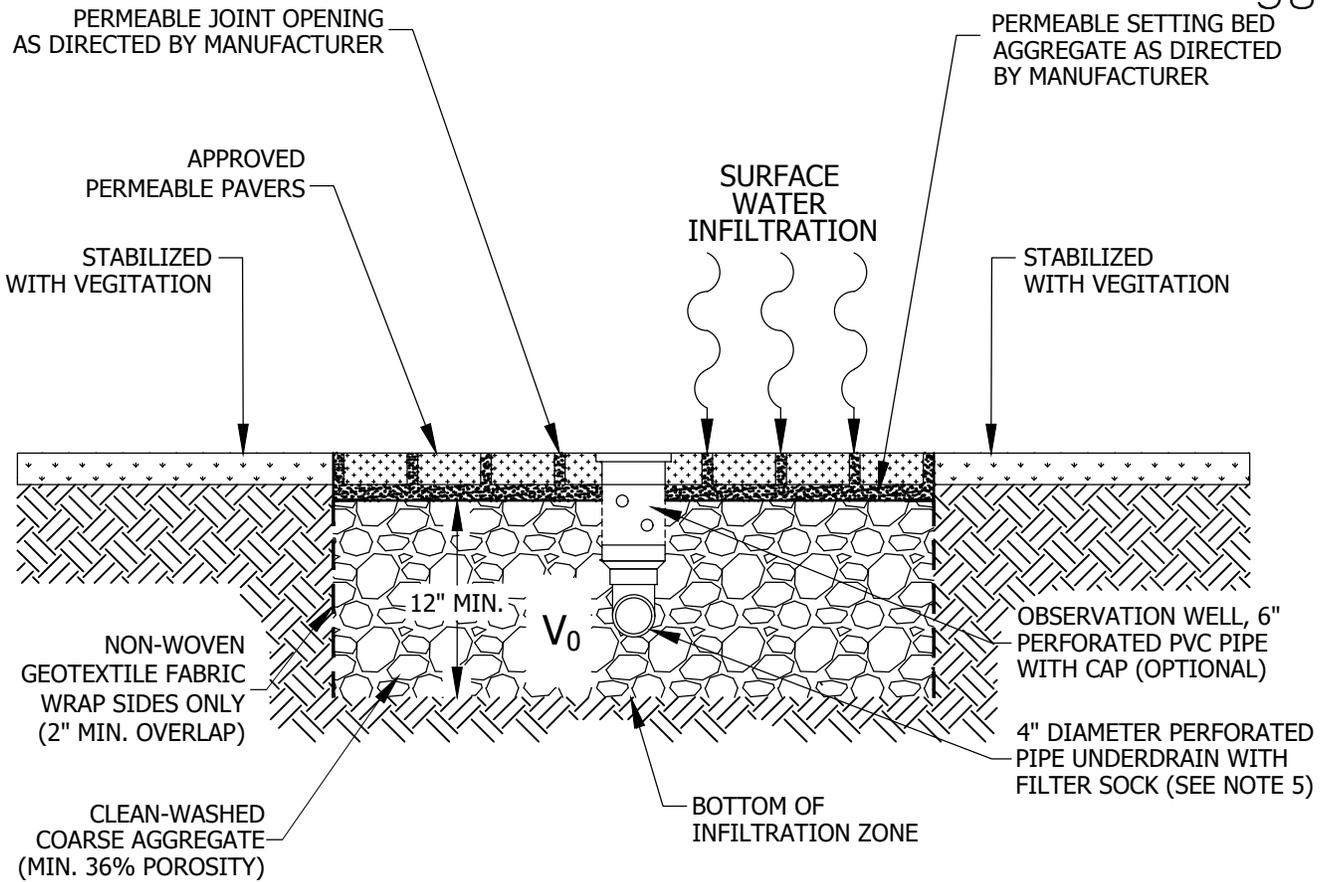
NOTES:

1. ALL BACKFILL MATERIALS SHALL BE PROPERLY COMPACTED.
2. ALL TRENCH EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.
3. THE PERIMETER OF THE INFILTRATION ZONE SHOULD MAINTAIN A MINIMUM HORIZONTAL SEPARATION DISTANCE OF 10 FEET FROM BUILDING FOUNDATIONS, PROPERTY LINES, AND SANITARY OR COMBINED SEWERS.
4. SANITARY OR COMBINED SEWERS SHOULD NOT BE LOCATED BELOW THE FOOTPRINT OF THE INFILTRATION ZONE.
5. DRYWELLS SHALL NOT BE LOCATED WITHIN EASEMENTS.
6. MINIMUM DISTANCE OF 2 FEET SHOULD EXIST BETWEEN BOTTOM OF INFILTRATION ZONE AND SEASONALLY HIGH GROUNDWATER LEVEL.
7. MAINTENANCE REQUIREMENTS INCLUDE ANNUAL REMOVAL OF DEBRIS COLLECTED IN THE SUMP.

NOT TO SCALE

**REINFORCED
CONCRETE
DRYWELL**

Village of Wilmette
Engineering Department
847.853.7660



STORAGE VOLUME CALCULATION	POROSITY	MEDIA VOLUME	STORAGE VOLUME	VOLUME PROVIDED
COARSE AGGREGATE VOLUME	0.36	V_0	$1.00 \times V_0$	
TOTAL				

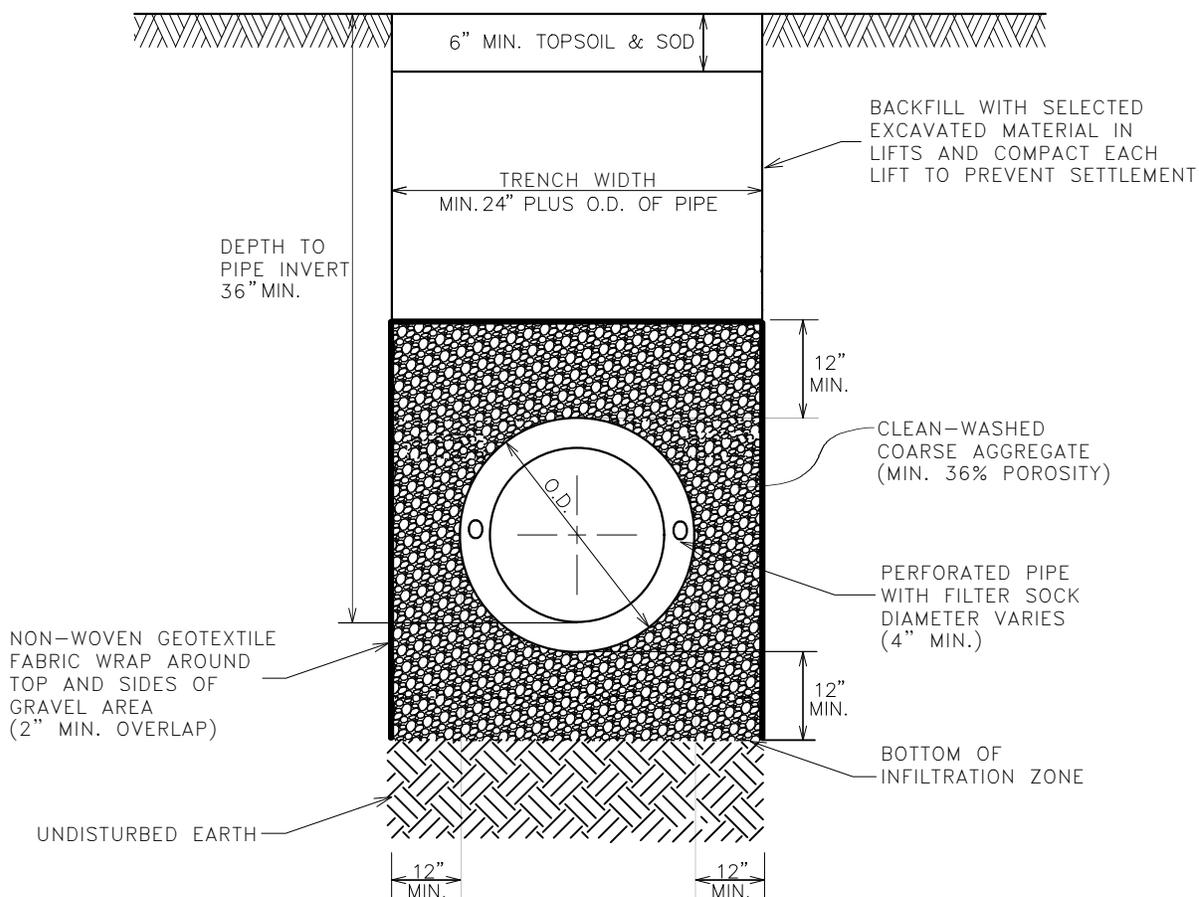
NOTES:

1. THE PERIMETER OF THE INFILTRATION ZONE SHOULD MAINTAIN A MINIMUM HORIZONTAL SEPARATION DISTANCE OF 10 FEET FROM BUILDING FOUNDATIONS, PROPERTY LINES, AND SANITARY OR COMBINED SEWERS.
2. SANITARY OR COMBINED SEWERS SHOULD NOT BE LOCATED BELOW THE FOOTPRINT OF THE INFILTRATION ZONE.
3. MINIMUM DISTANCE OF 2 FEET SHOULD EXIST BETWEEN BOTTOM OF INFILTRATION ZONE AND SEASONALLY HIGH GROUNDWATER LEVEL.
4. AVOID INSTALLATION ON SLOPES GREATER THAN 3%. AVOID COMPACTING NATIVE SOILS.
5. UNDERDRAINS SHOULD BE INSTALLED IN CASES WHERE CLAYEY SOILS AND INFILTRATION RATES OF LESS THAN 0.5 INCH/HOUR EXIST. MINIMUM UNDERDRAIN BEDDING OF 2", MAXIMUM OF 12". UNDERDRAINS SHOULD HAVE A MINIMUM 1% SLOPE THROUGHOUT.
6. MAINTENANCE REQUIREMENTS INCLUDE ANNUAL VACUUMING AND LOW-PRESSURE POWER WASHING OF PAVEMENT SURFACE. DO NOT APPLY SEALCOAT OR DE-ICING SAND/GRAVEL/SALT.

NOT TO SCALE

**PERMEABLE
PAVERS**

Village of Wilmette
Engineering Department
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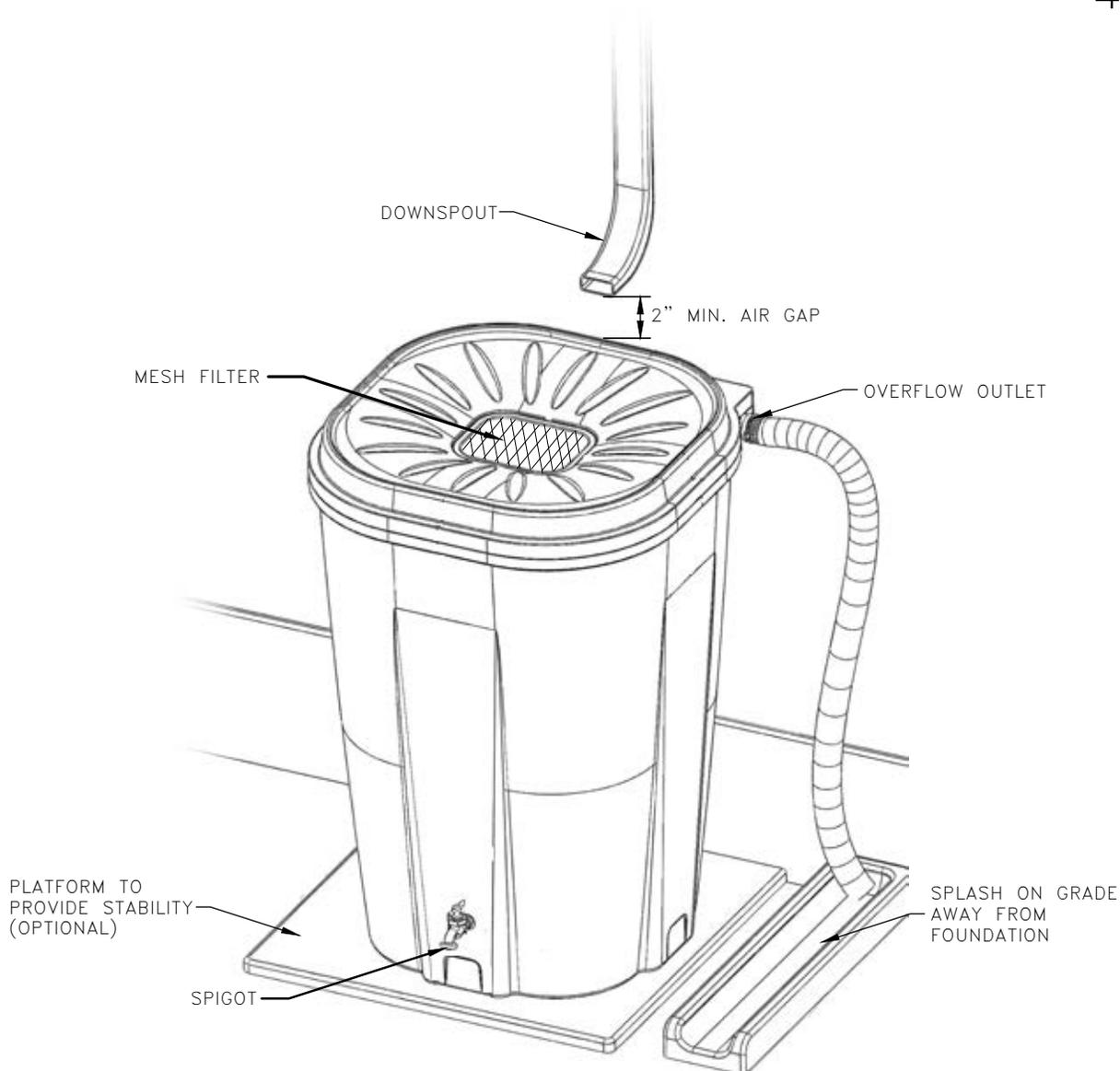
NOTES:

1. ALL BACKFILL MATERIALS SHALL BE PROPERLY COMPACTED.
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4. SANITARY OR COMBINED SEWERS SHOULD NOT BE LOCATED BELOW THE FOOTPRINT OF THE INFILTRATION ZONE.
5. MINIMUM DISTANCE OF 2 FEET SHOULD EXIST BETWEEN BOTTOM OF INFILTRATION ZONE AND SEASONALLY HIGH GROUNDWATER LEVEL.
6. CLEANOUTS SHALL BE PLACED AT ALL BENDS AND INTERSECTIONS IN BURIED DRAIN LINES.
7. ALL PIPES SHALL HAVE A MINIMUM 1% SLOPE.

NOT TO SCALE

PERFORATED DRAIN LINE WITH INFILTRATION ZONE

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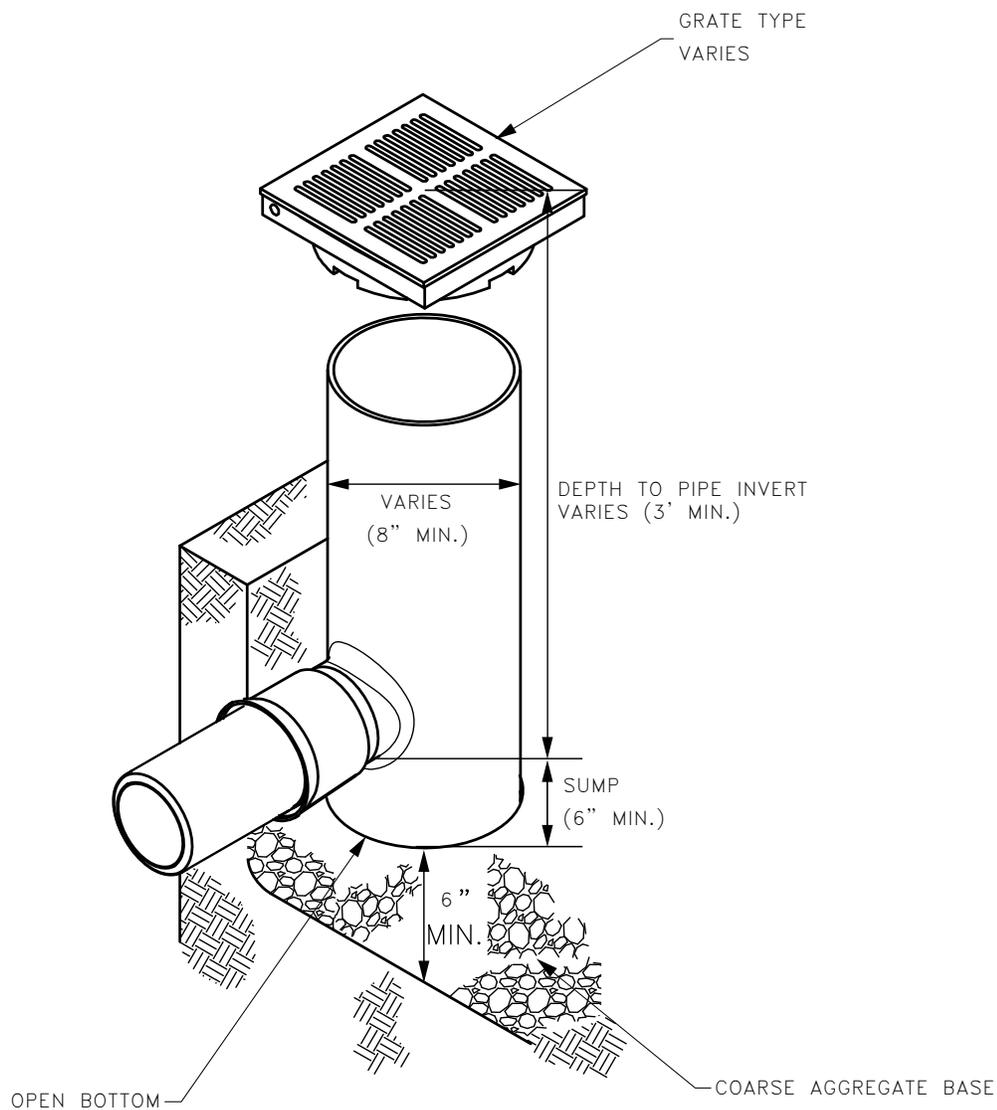
NOTES:

1. FILTER MESH SHOULD BE CLEANED REGULARLY TO PREVENT CLOGGING.
2. GROUND AROUND AND UNDER RAIN BARREL SHOULD BE STABLE AT ALL TIMES.
3. RAIN BARREL SHOULD BE EMPTIED REGULARLY BETWEEN RAIN EVENTS FOR USES INCLUDING BUT NOT LIMITED TO WASHING CARS, PATIOS AND OUTDOOR FURNITURE, AND WATERING LAWNS, GARDENS AND POTTED PLANTS.
4. FOR THE WINTER SEASON, RAIN BARREL MUST BE DISCONNECTED, COMPLETELY EMPTIED, AND PROPERLY STORED AWAY OR COVERED. RAIN BARRELS MUST BE PROPERLY REINSTALLED IN THE SPRING AFTER THE LAST FROST.
5. RAIN BARREL OVERFLOW SHOULD SPLASH ON- GRADE DRAINING AWAY FROM FOUNDATIONS AND ADJACENT PROPERTIES.

NOT TO SCALE

RAIN BARREL

Village of Wilmette
Engineering Department
847.853.7660



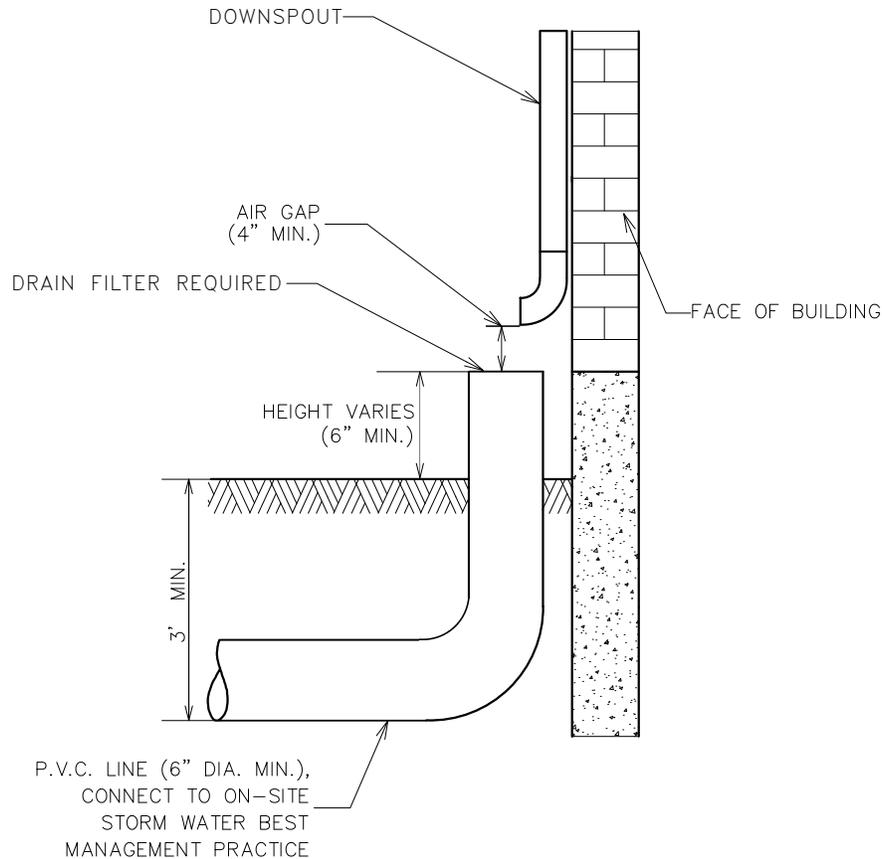
NOTES:

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2. ALL TRENCH EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.
3. MAINTENANCE REQUIREMENTS INCLUDE ANNUAL REMOVAL OF DEBRIS COLLECTED IN THE SUMP.

NOT TO SCALE

YARD INLET/OUTLET

Village of Wilmette
Engineering Department
847.853.7660



NOTES:

1. DOWNSPOUT DISCHARGES SHALL SPLASH ON-GRADE AND FLOW OVERLAND TOWARD A STREET OR ALLEY, OR BE BURIED AND CONNECTED TO A STORM WATER BEST MANAGEMENT PRACTICE.
2. DOWNSPOUT DISCHARGES SHALL NOT BE CONNECTED TO VILLAGE SEWER SYSTEMS.
3. THE DOWNSPOUT DISCHARGE POINT SHALL BE NO GREATER THAN 10- FEET FROM THE BUILDING FOUNDATION, UNLESS CONNECTED TO A BEST MANAGEMENT PRACTICE. THE BEST MANAGEMENT PRACTICE SHALL BE LOCATED ON THE PROPERTY AT LEAST 10- FEET AWAY FROM THE PUBLIC RIGHT-OF-WAY.
4. OVERLAND DRAINAGE FLOW SHALL BE DIRECTED AWAY FROM THE BUILDING FOUNDATION AND FROM ADJACENT PROPERTIES.
5. A PERMIT IS REQUIRED PRIOR TO CONSTRUCTING ANY MODIFICATIONS TO, OR NEW INSTALLATIONS FOR, FOUNDATION DRAINAGE.

NOT TO SCALE

BURIED DOWNSPOUT DISCHARGE

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REVISED: 02/19/20