CITY OF WASHINGTON, ILLINOIS
City Council Agenda Communication

Meeting Date: January 4, 2021

Prepared By: Dennis Carr, P.E. – City Engineer

Agenda Item: Construction Standards Update

Explanation: Staff has been working on updating our construction standards for a couple months now. The standards were originally brought to Public Works Committee and City Council in November. We have finished updating each of the standards, added a few more utility repair standards, and added one for street signage. We changed the layout to be uniform and have made them look cleaner.

Fiscal Impact: The increase in pavement thickness will increase the construction price in the future, but it now follows the standards set by the Illinois Department of Transportation.

Recommendation Summary: Staff requests approval of the resolution.

Action Requested: Approval of the resolution.

RESOLUTION NO. _____

A RESOLUTION APPROVING AND ADOPTING THE CONSTRUCTION STANDARDS FOR THE CITY OF WASHINGTON, TAZEWELL COUNTY, ILLINOIS

WHEREAS, The City of Washington has adopted a Subdivision Code to ensure that the subdivision and development of land is accomplished in a timely manner, in conformance with all city and state regulations and standards, and in a manner which minimizes or eliminates adverse impacts and encourages and facilitates the orderly development of Washington; and

WHEREAS, the City wishes to assist private development by providing detailed information related to construction, repair and maintenance of public improvements and has updated and standardized the Construction Standards for the City of Washington.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF WASHINGTON, TAZEWELL COUNTY, ILLINOIS, finds, determines and resolves as follows:

(1) That the Construction Standards, a copy of which is attached hereto as Exhibit "A", and by reference expressly made a part hereof, be and the same is hereby approved.

(2) That the City Engineer is hereby authorized and directed to implement the Construction Standards upon approval.

(3) That this resolution shall be in full force and effect from and after its passage and approval.

PASSED AND APPROVED this _____ day of _____, 2021.

AYES _____

NAYS _____

_____
Mayor

ATTEST:

_____
City Clerk

CONSTRUCTION STANDARDS
FOR THE
CITY OF WASHINGTON, ILLINOIS

City Hall

301 Walnut Street
Washington, IL 61571
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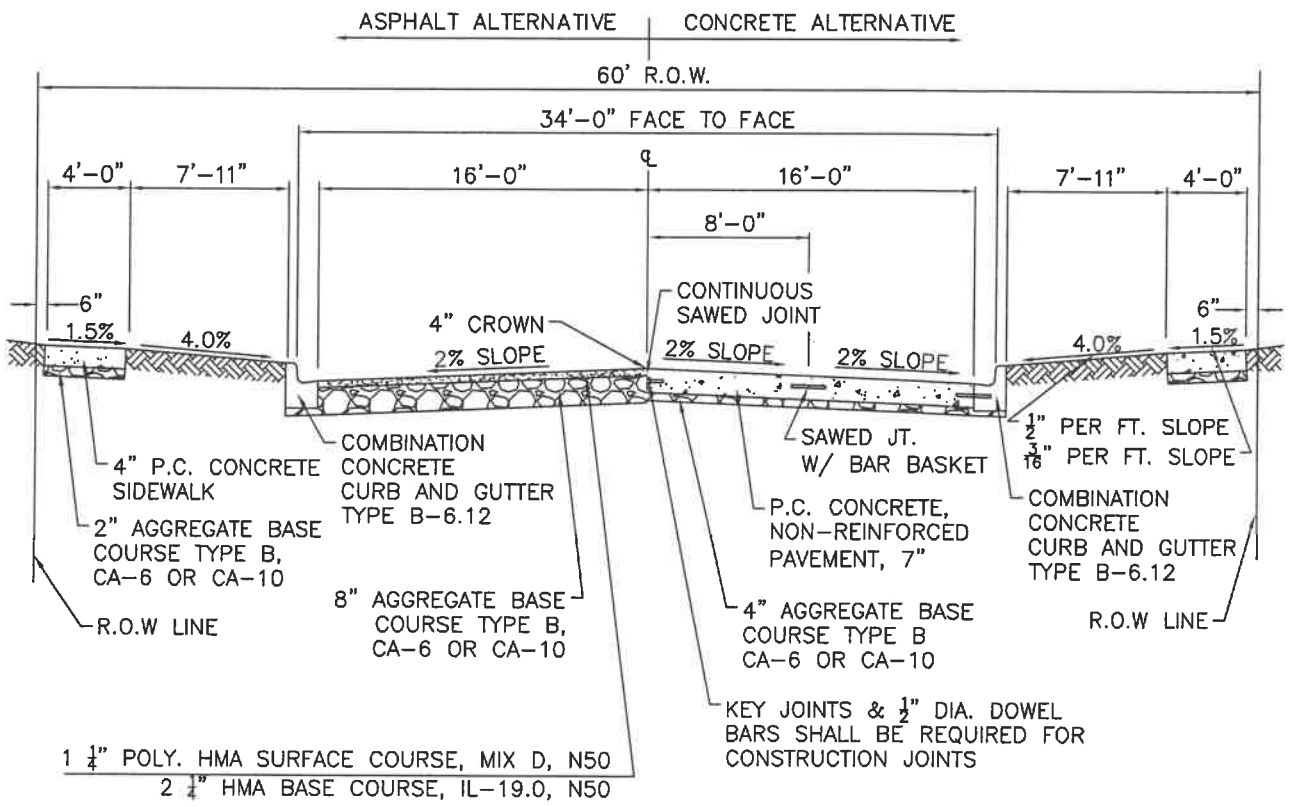
ROADWAY TYPICAL SECTION
RESIDENTIAL STREET (MINOR)



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. EXPANSION JOINTS SHALL BE INSTALLED IN SIDEWALKS AT ALL PROPERTY LINES.
3. PROOF-ROLL SUBGRADE AND AGGREGATE BASE COURSE IN THE PRESENCE OF THE CITY ENGINEER OR CITY ENGINEER'S DESIGNEE.
4. SIDEWALKS SHALL NOT EXCEED 2% CROSS SLOPE. ANY SIDEWALKS EXCEEDING SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
5. P.C. CONCRETE PAVEMENT JOINTS SHALL BE IN ACCORDANCE WITH IDOT STANDARD BLR 10-7.

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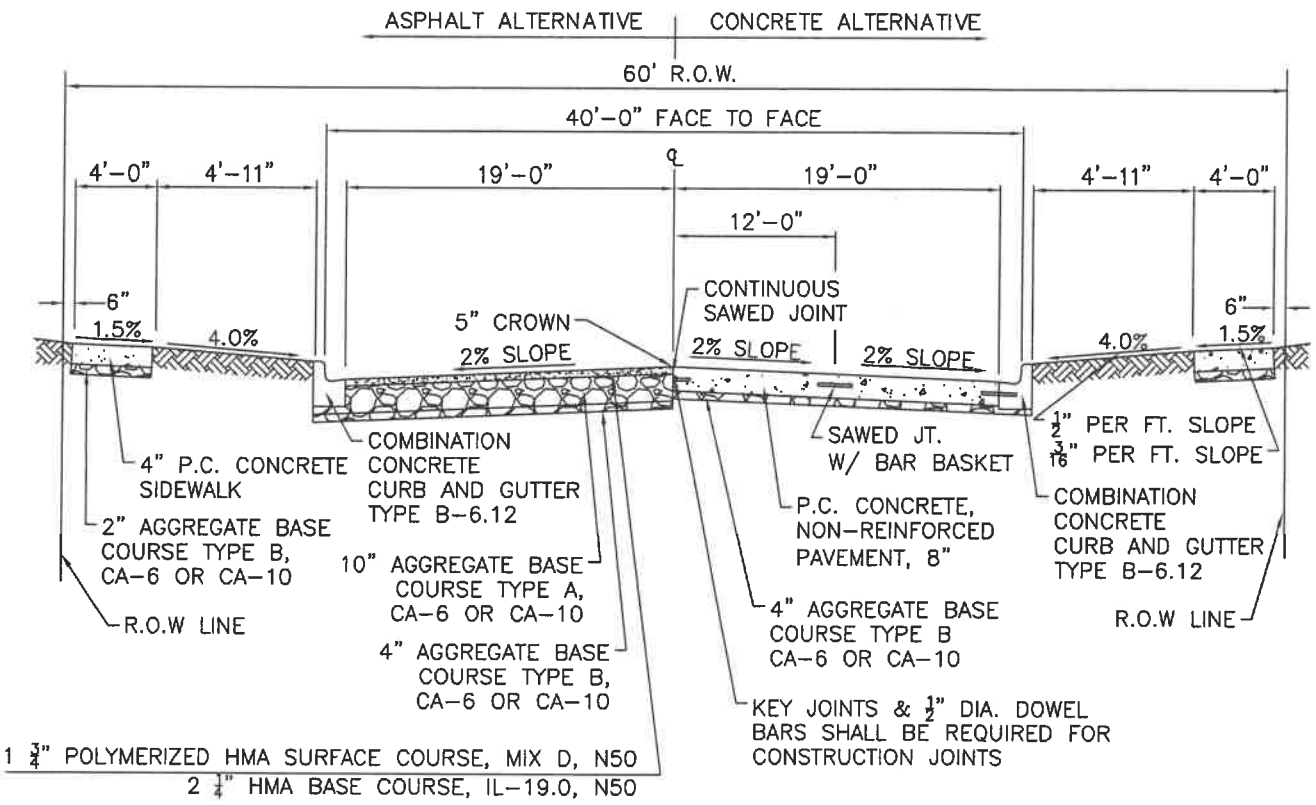
ROADWAY TYPICAL SECTION
RESIDENTIAL STREET (SECONDARY)



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. EXPANSION JOINTS SHALL BE INSTALLED IN SIDEWALKS AT ALL PROPERTY LINES.
3. PROOF-ROLL SUBGRADE AND AGGREGATE BASE COURSE IN THE PRESENCE OF THE CITY ENGINEER OR CITY ENGINEER'S DESIGNEE.
4. SIDEWALKS SHALL NOT EXCEED 2% CROSS SLOPE. ANY SIDEWALKS EXCEEDING SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
5. P.C. CONCRETE PAVEMENT JOINTS SHALL BE IN ACCORDANCE WITH IDOT STANDARD BLR 10-7.

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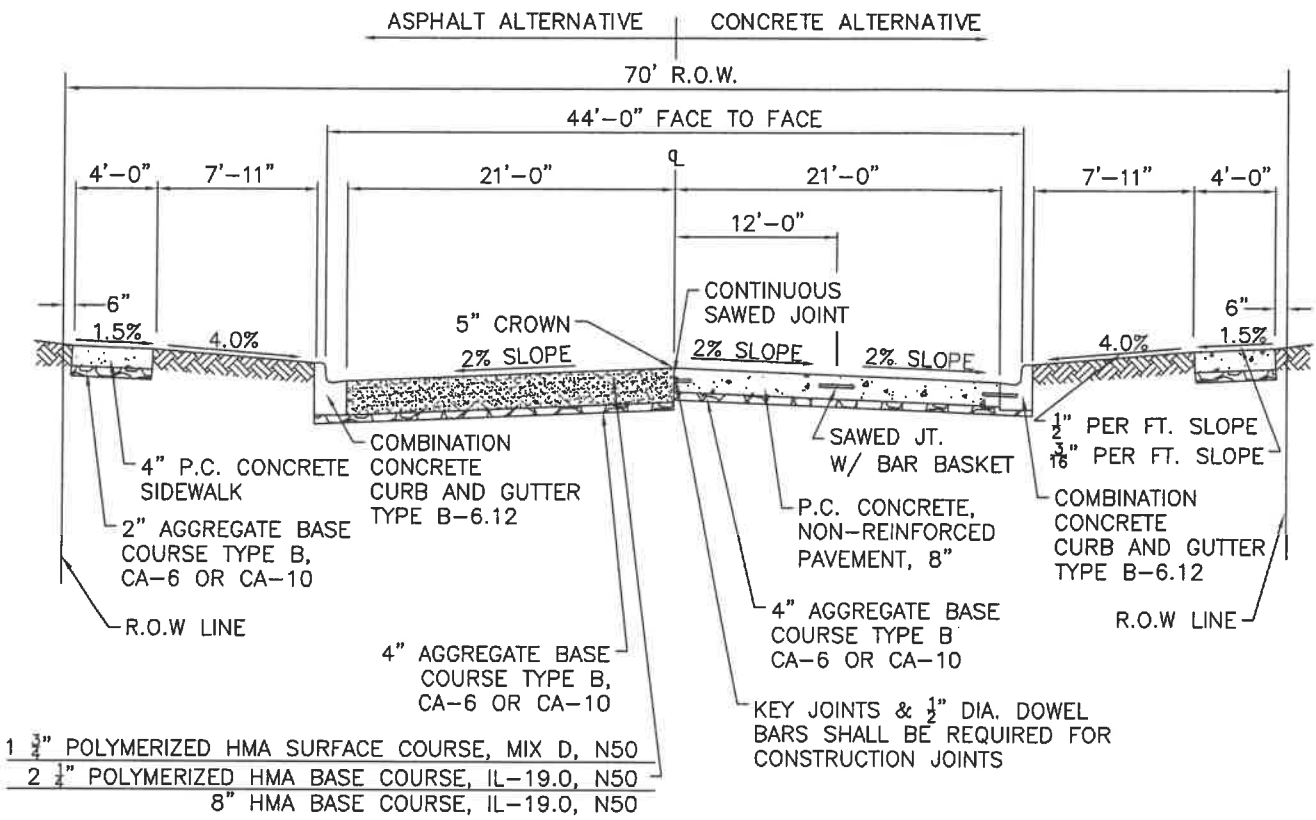
ROADWAY TYPICAL SECTION
COLLECTOR/DISTRIBUTOR STREET



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. EXPANSION JOINTS SHALL BE INSTALLED IN SIDEWALKS AT ALL PROPERTY LINES.
3. PROOF-ROLL SUBGRADE AND AGGREGATE BASE COURSE IN THE PRESENCE OF THE CITY ENGINEER OR CITY ENGINEER'S DESIGNEE.
4. SIDEWALKS SHALL NOT EXCEED 2% CROSS SLOPE. ANY SIDEWALKS EXCEEDING SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
5. P.C. CONCRETE PAVEMENT JOINTS SHALL BE IN ACCORDANCE WITH IDOT STANDARD BLR 10-7.

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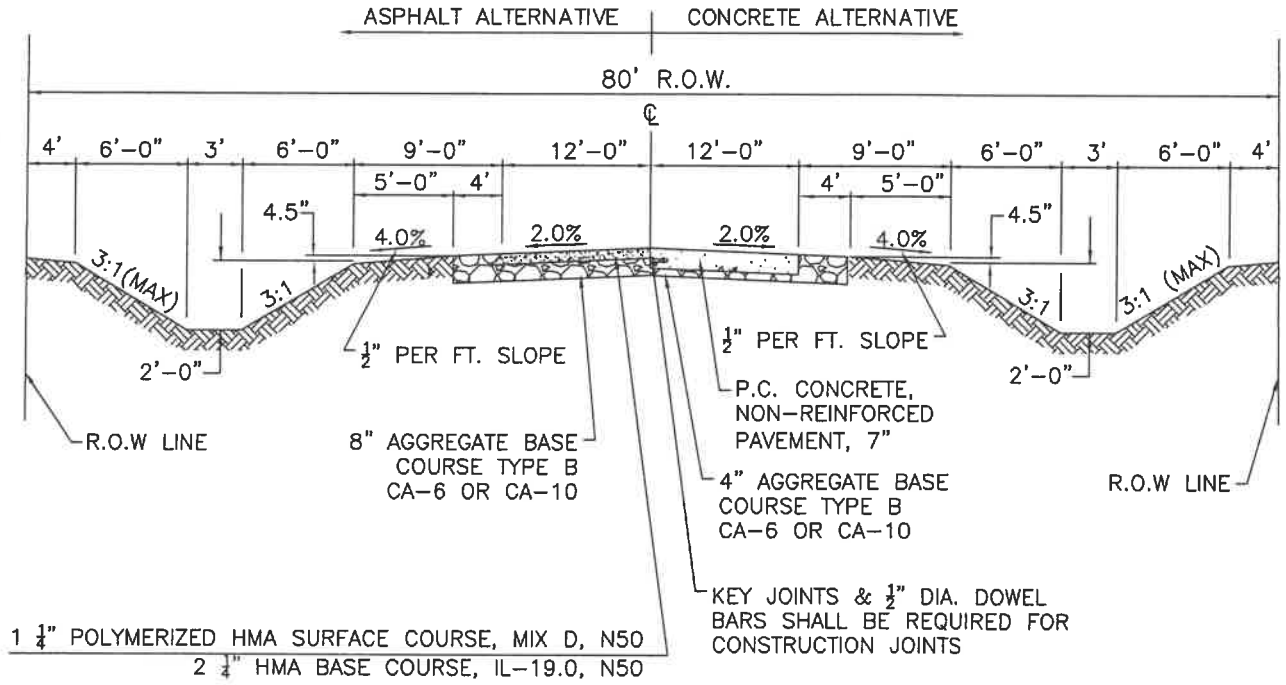
ROADWAY TYPICAL SECTION
COUNTRY ESTATES STREET



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. DITCH AND BACK SLOPES MAY VARY WITH APPROVAL OF THE CITY ENGINEER.
3. PROOF-ROLL SUBGRADE AND AGGREGATE BASE COURSE IN THE PRESENCE OF THE CITY ENGINEER OR CITY ENGINEER'S DESIGNEE.
4. SIDEWALKS SHALL NOT EXCEED 2% CROSS SLOPE. ANY SIDEWALKS EXCEEDING SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
5. P.C. CONCRETE PAVEMENT JOINTS SHALL BE IN ACCORDANCE WITH IDOT STANDARD BLR 10-7.
6. A SAWED LONGITUDINAL JOINT SHALL BE USED ONLY WHEN THE PAVEMENT IS POURED MONOLITHIC FULL WIDTH.
7. TRANSVERSE CONTRACTION JOINTS AND LONGITUDINAL CONSTRUCTION JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH IDOT STANDARD BLR 10-7.
8. SAWED JOINTS WILL BE SEALED WITH HOT-POURED MATERIAL MEETING THE REQUIREMENTS OF ARTICLE 750.02 OF THE STANDARD SPECIFICATIONS.

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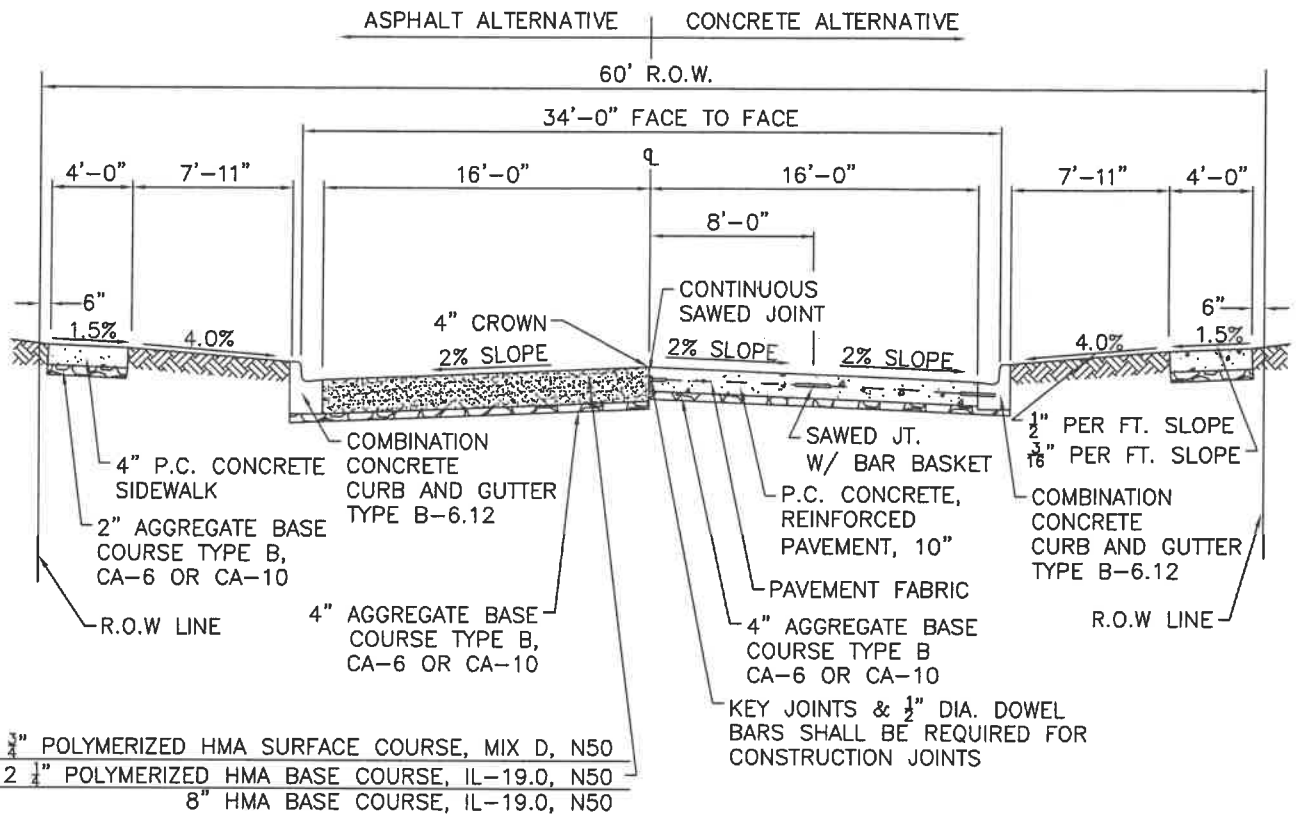
ROADWAY TYPICAL SECTION
INDUSTRIAL STREET I–1 & I–2



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. EXPANSION JOINTS SHALL BE INSTALLED IN SIDEWALKS AT ALL PROPERTY LINES.
3. PROOF–ROLL SUBGRADE AND AGGREGATE BASE COURSE IN THE PRESENCE OF THE CITY ENGINEER OR CITY ENGINEER'S DESIGNEE.
4. SIDEWALKS SHALL NOT EXCEED 2% CROSS SLOPE. ANY SIDEWALKS EXCEEDING SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.
5. P.C. CONCRETE PAVEMENT JOINTS SHALL BE IN ACCORDANCE WITH IDOT STANDARD BLR 10–7.

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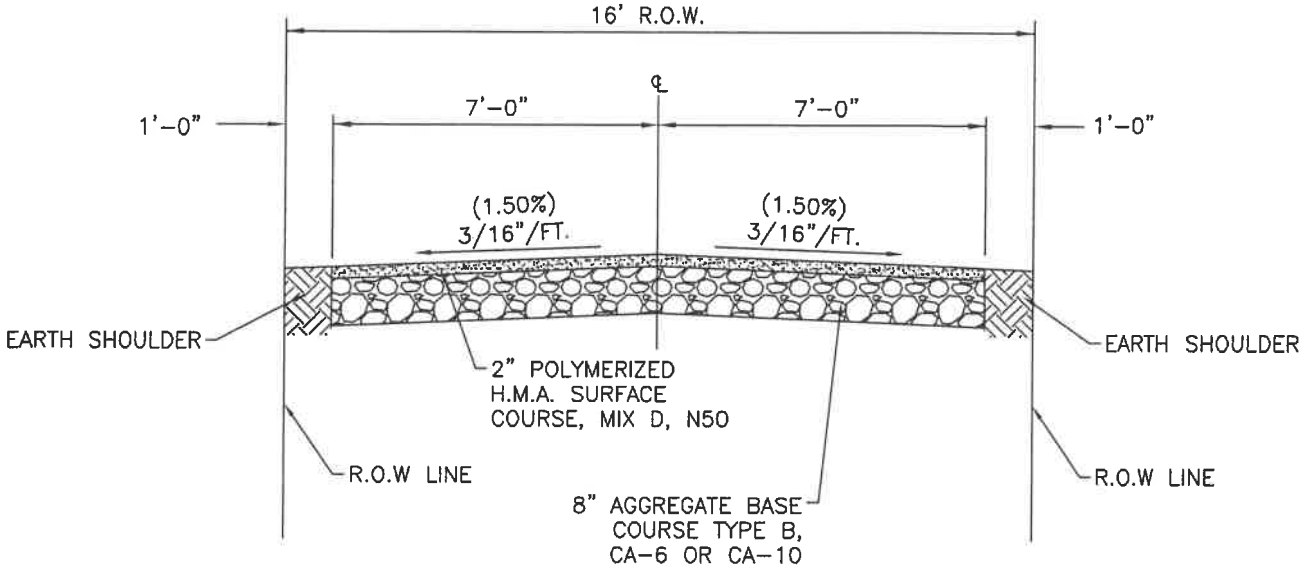
ALLEY TYPICAL SECTION



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

2. PROOF-ROLL SUBGRADE AND AGGREGATE BASE COURSE IN THE PRESENCE OF THE CITY ENGINEER OR CITY ENGINEER'S DESIGNEE.

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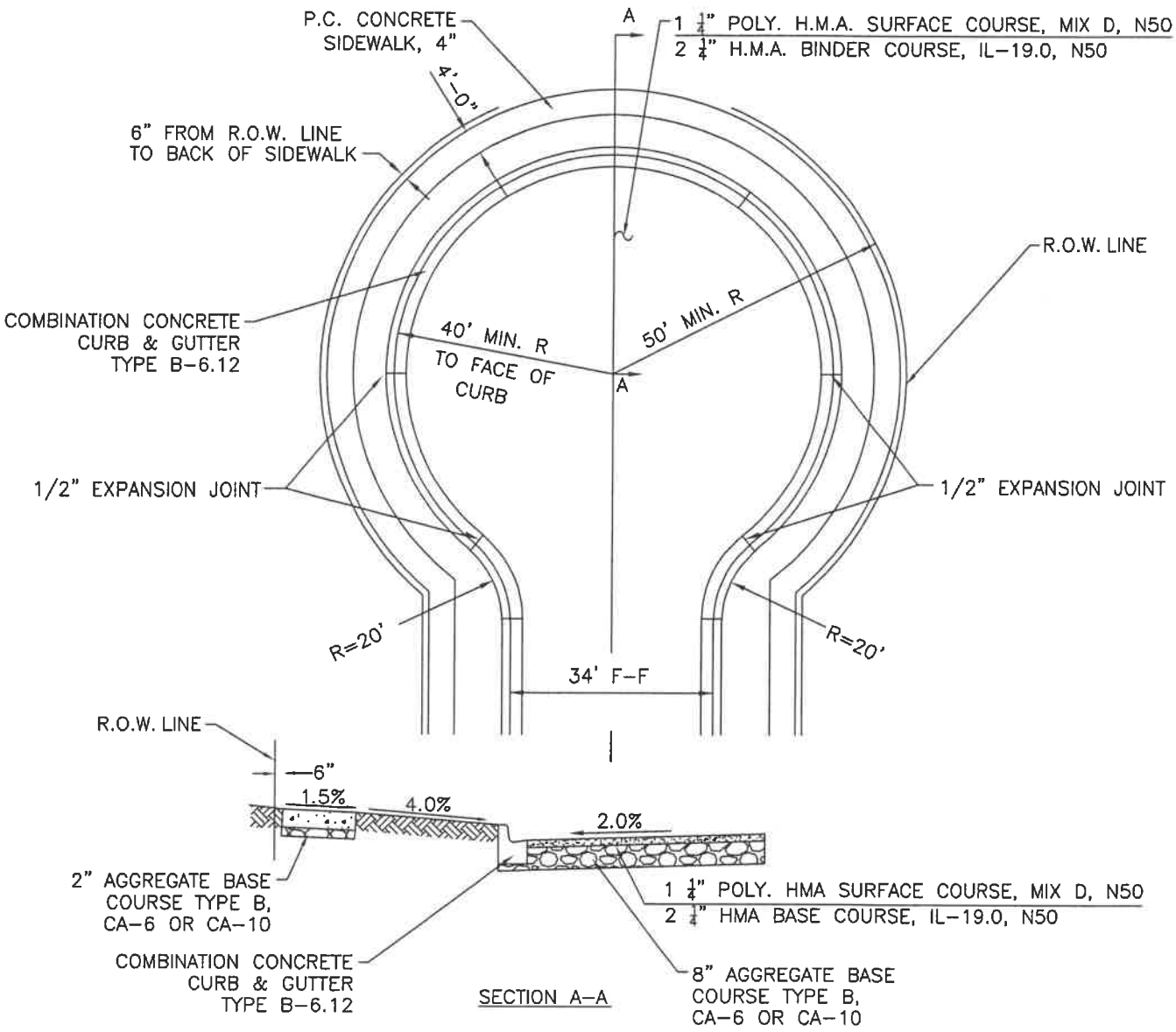
CUL-DE-SAC TYPICAL PLAN



SECTION A-A

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. PROOF-ROLL SUBGRADE AND AGGREGATE BASE COURSE IN THE PRESENCE OF THE CITY ENGINEER OR CITY ENGINEER'S DESIGNEE.
3. ALL RADII SHALL BE FORMED WITH FLEXIBLE FORMS.
4. EXPANSION JOINTS SHALL BE INSTALLED IN SIDEWALKS AT ALL PROPERTY LINES OR AT A MAXIMUM OF 40 FEET APART.
5. SIDEWALKS SHALL NOT EXCEED 2% CROSS SLOPE. ANY SIDEWALKS EXCEEDING SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.

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SPECIFICATIONS FOR HOT-MIX ASPHALT MIXTURES

POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50

LOCATION(S) AND MIXTURE USE(S)	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE MAINLINE, INCIDENTAL, DRIVEWAYS
AC/PG:	SBS 64-28
RAP%:	0%
DESIGN AIR VOIDS:	4.2% AT Ndes = 50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5
FRICTION AGGREGATE	MIX D

HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50

LOCATION(S) AND MIXTURE USE(S)	HOT-MIX BINDER COURSE MAINLINE, INCIDENTAL, BASE COURSE
AC/PG:	SBS 64-22
RAP%:	0% (20-25% FOR BINDER BASE COURSE)
DESIGN AIR VOIDS:	4.2% AT Ndes = 50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0
FRICTION AGGREGATE	N/A

MINIMUM COMPACTED LIFT THICKNESS - SURFACE AND BINDER	
MIXTURE	THICKNESS, INCHES
IL-9.5	1 1/4"
IL-12.5	1 1/2"
IL-19.0	2 1/4" *
IL-25.0	3"

* IF LESS THAN 2 1/4", COMPACT TO THE SATISFACTION OF THE CITY ENGINEER OR CITY ENGINEER'S REPRESENTATIVE

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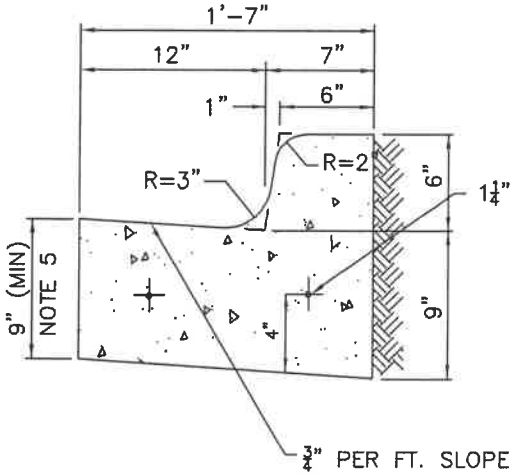
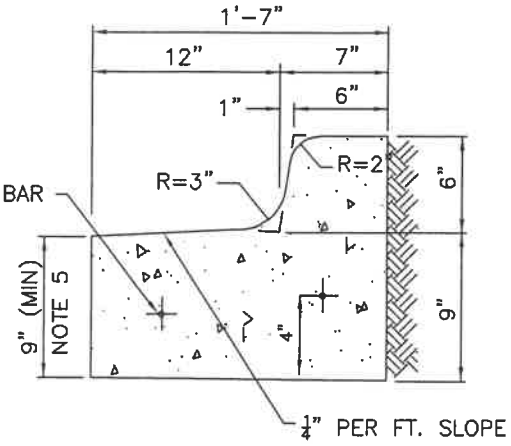
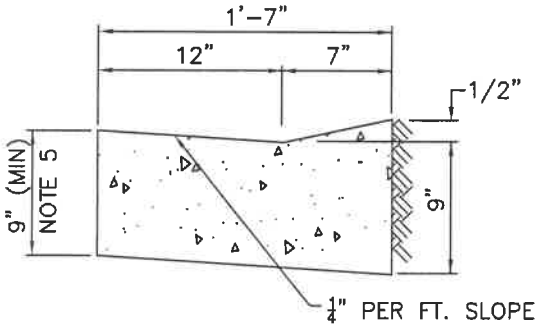
COMBINATION CONCRETE CURB & GUTTER
CITY STANDARD TYPE B-6.12



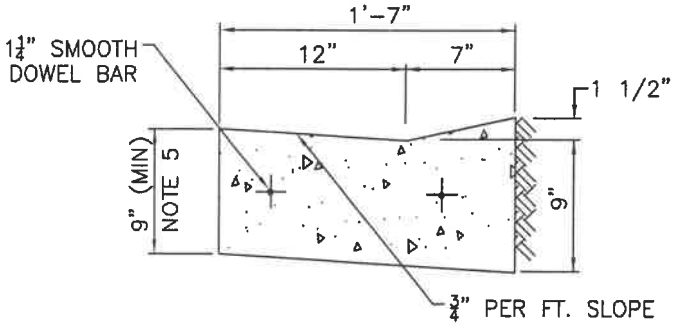
BARRIER CURB (WET)



BARRIER CURB (DRY)



ADA RAMP CURB



DEPRESSED CURB

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. PROVIDE EXPANSION JOINTS AT INTERSECTION RETURNS, INLET BOXOUTS, WORK STOPPAGE POINTS AND AT A MAXIMUM OF 200' O.C., USE 1 ¼" DIA. SMOOTH DOWEL BAR, 18" LONG WITH A METALLIC EXPANSION SLEEVE ON ONE END. GREASE ENTIRE BAR, PROVIDE SAWED CONTRACTION JOINTS AT 15' O,C, FILL EXPANSION & CONTRACTION JOINTS WITH APPROVED JOINT SEALER.
3. FOR CURB & GUTTER ADJACENT TO P.C. CONCRETE PAVEMENT, PROVIDE #4 TIE BARS 24" LONG AT 24" O.C.
4. TOP OF CURB TO BE BRANDED WITH A "W" OR "S" AT LOCATIONS OF WATER AND SEWER TAPS AND A "D" FOR A SUMP DRAIN.
5. CURB THICKNESS SHALL MATCH THE ADJACENT PAVEMENT THICKNESS IF GREATER THAN 9 INCHES.

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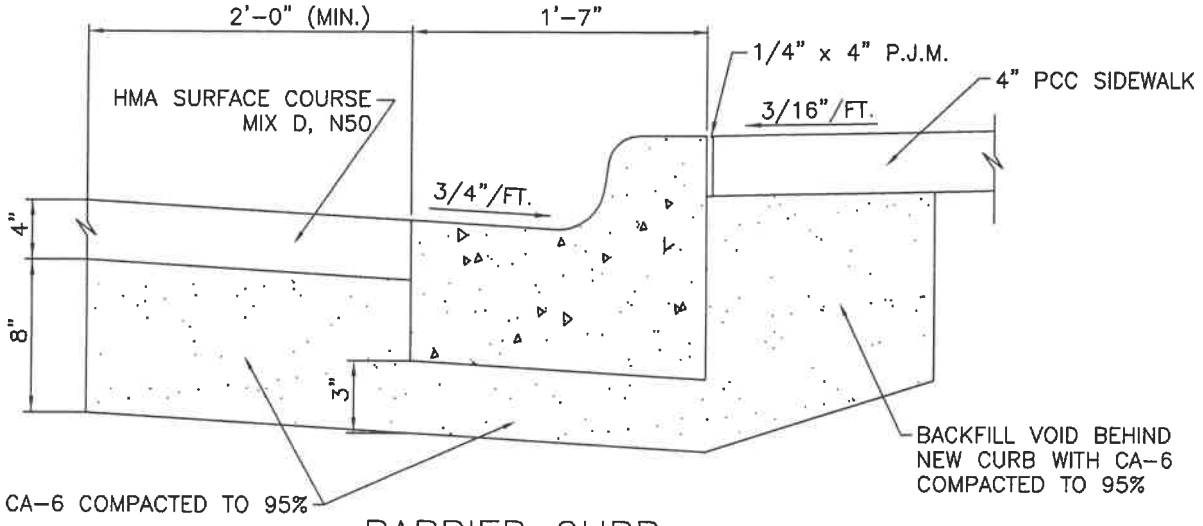
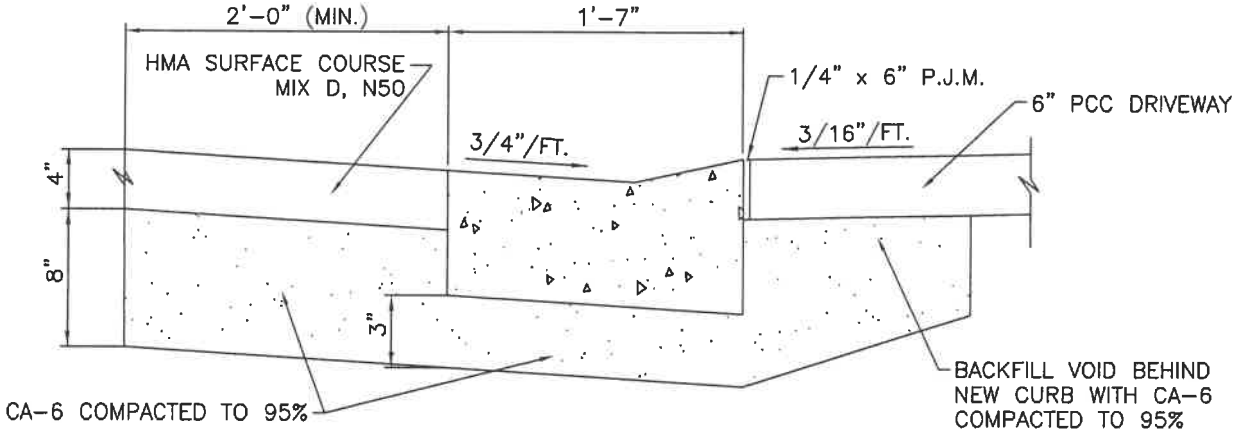
COMBINATION CONCRETE CURB & GUTTER REPLACEMENT WITH CURBLINE SIDEWALK



BARRIER CURB



DEPRESSED CURB

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. ALL DISTURBED SUBGRADE SHALL BE MECHANICALLY COMPACTED TO 95% PRIOR TO PLACEMENT OF CONCRETE. IF FILL IS REQUIRED, USE COMPACTED CA-6.
3. HAND PLACED CURB & GUTTER SHALL BE FORM ON FRONT AND BACK.
4. CONCRETE SHALL BE PLACED IN A MANNER TO AVOID EXCESSIVE HONEY COMBING.
5. P.J.M. SHALL BE REFLEX RUBBER EXPANSION MATERIAL AS MANUFACTURED BY THE J.D. RUSSELL COMPANY OR APPROVED EQUAL.

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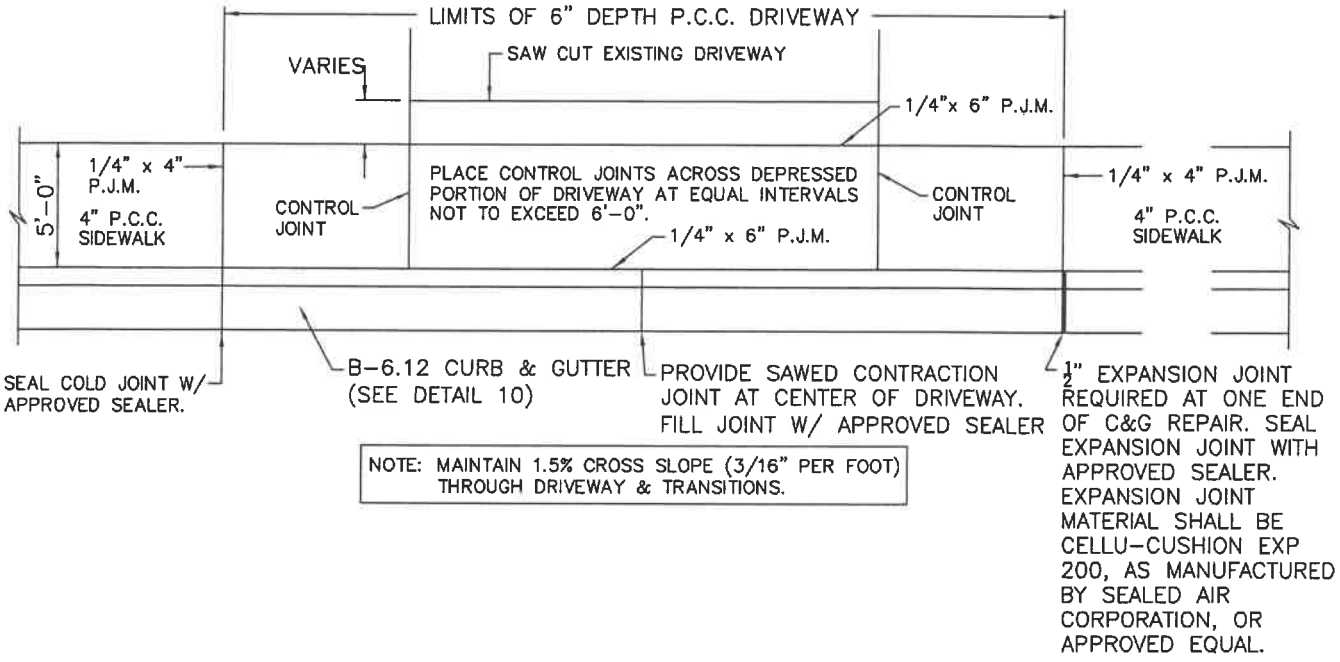
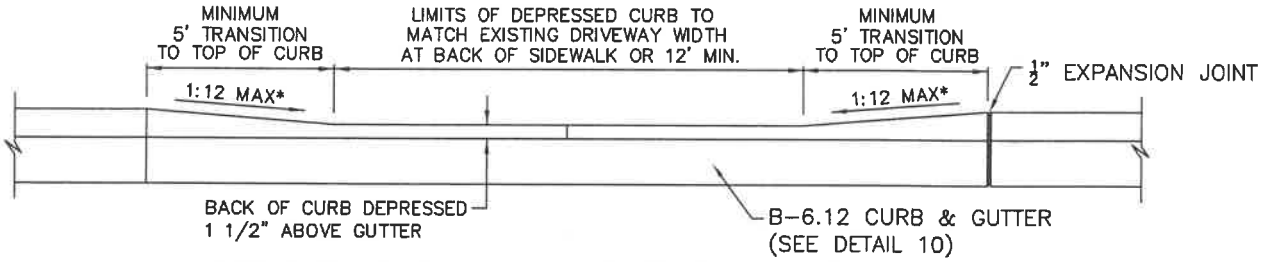
DRIVEWAY ENTRANCE REPLACEMENT WITH CURBLINE SIDEWALK



NOTE: MAINTAIN 1.5% CROSS SLOPE (3/16" PER FOOT) THROUGH DRIVEWAY & TRANSITIONS.



*FLARE SLOPE SHALL NOT EXCEED 1:12 (8.33%) UNLESS APPROVED BY CITY ENGINEER.

GENERAL NOTES:

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2. CURB & GUTTER AND SIDEWALK SHALL BE SAWED TO FULL DEPTH AT BEGINNING AND END OF ANY REMOVAL SECTION.
3. LIMITS OF DRIVEWAY REMOVAL BEYOND SIDEWALK WILL VARY DEPENDING ON GRADE AND EXISTING JOINTS.
4. P.J.M. SHALL BE REFLEX RUBBER EXPANSION MATERIAL AS MANUFACTURED BY THE J.D. RUSSELL COMPANY OR APPROVED EQUAL.
5. JOINT SEALANT SHALL BE SONOLASTIC POLYURETHANE SEALANT OR APPROVED EQUAL.

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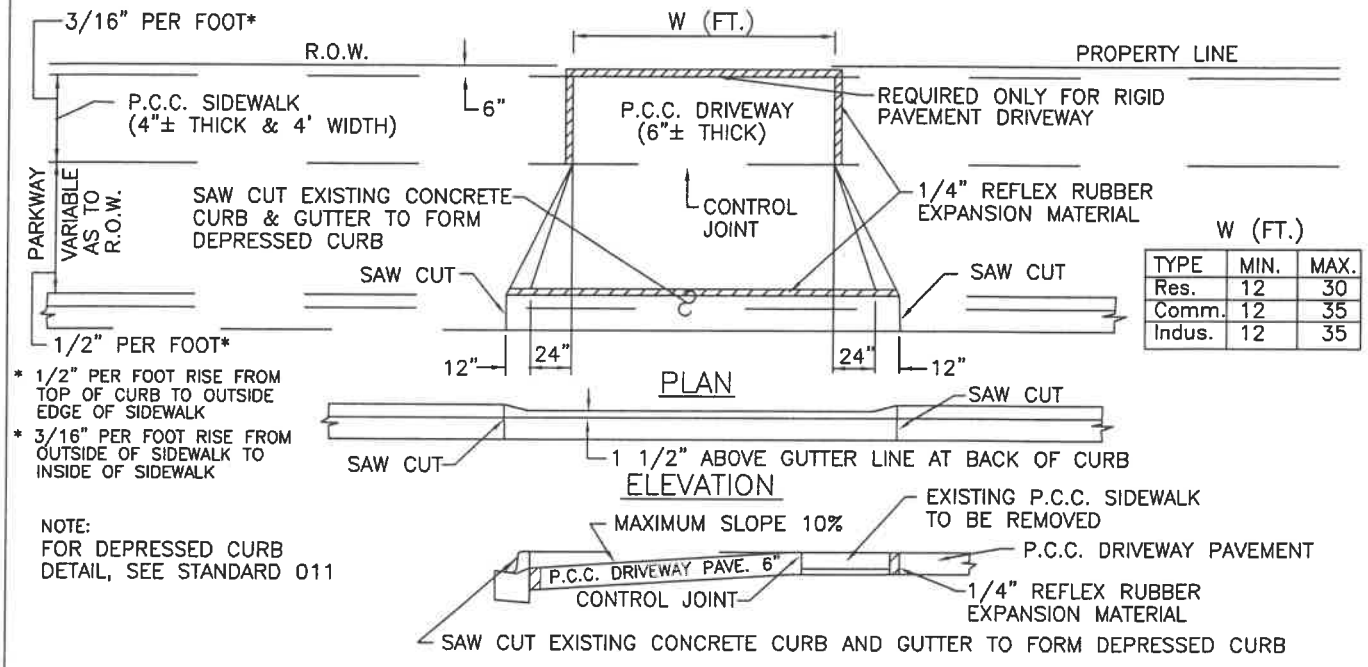
DRIVEWAY ENTRANCE DETAIL FOR CURB OPENINGS WITH SIDEWALK/PARKWAY



W (FT.)		
TYPE	MIN.	MAX.
Res.	12	30
Comm.	12	35
Indus.	12	35

* 1/2" PER FOOT RISE FROM TOP OF CURB TO OUTSIDE EDGE OF SIDEWALK

* 3/16" PER FOOT RISE FROM OUTSIDE OF SIDEWALK TO INSIDE OF SIDEWALK

NOTE:
FOR DEPRESSED CURB DETAIL, SEE STANDARD 011

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. CURB & GUTTER AND SIDEWALK SHALL BE SAWED TO FULL DEPTH AT BEGINNING AND END OF ANY REMOVAL SECTION.
3. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH SIDEWALK PORTION OF DRIVEWAY.
4. LIMITS OF DRIVEWAY REMOVAL BEYOND SIDEWALK WILL VARY DEPENDING ON GRADE AND EXISTING JOINTS.
5. WHERE NO SIDEWALK EXISTS, THE DRIVE SHALL BE CONSTRUCTED AS SHOWN TO ACCOMMODATE FUTURE SIDEWALK.
6. WHEN DRIVEWAY OPENING IS PROVIDED AT THE TIME OF CURB CONSTRUCTION, CONTRACTION JOINTS SHALL BE PLACED AT THE LOCATION OF THE SAW CUTS AS SHOWN.
7. ALL SAW CUTS MUST BE A MINIMUM OF 1" DEEP.
8. IN NO CASE SHALL CURB OPENING BE CONSTRUCTED BEYOND EXTENDED PROPERTY LINE OF ADJOINING PROPERTY.

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DATE:	STANDARD NO.
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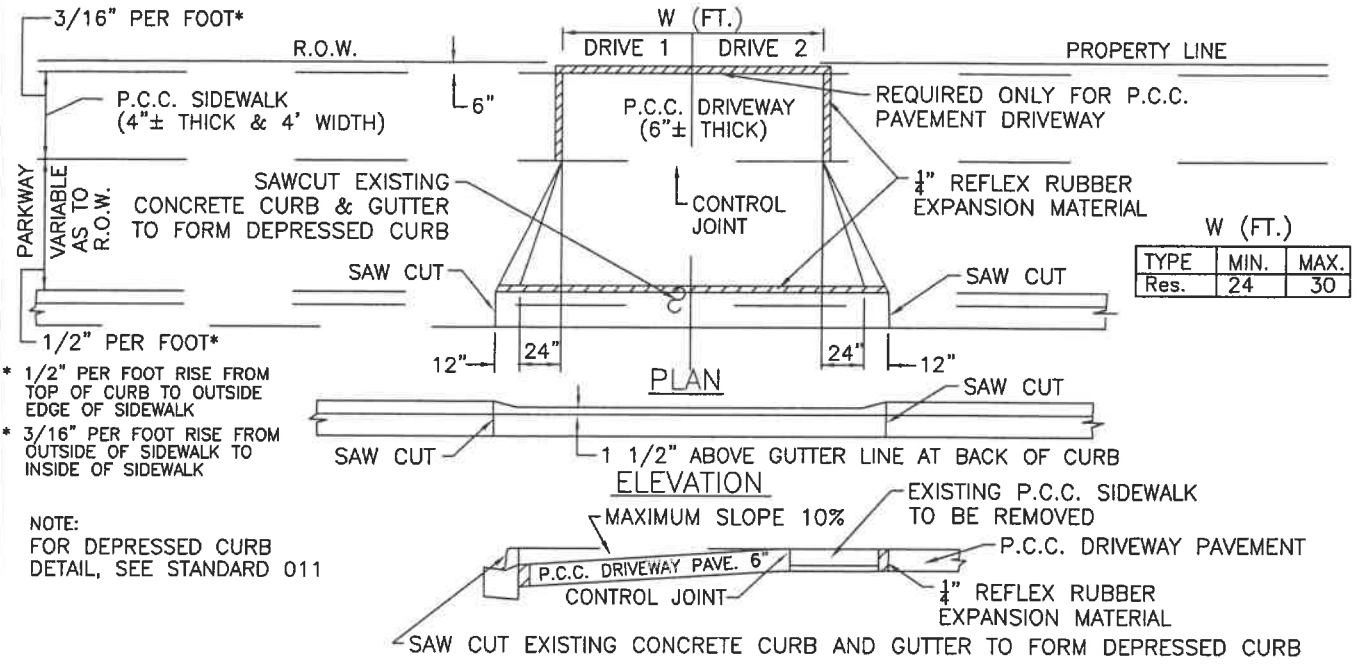
DRIVEWAY ENTRANCE DETAIL FOR SHARED DRIVEWAYS – RETROFIT ONLY



W (FT.)		
TYPE	MIN.	MAX.
Res.	24	30

* 1/2" PER FOOT RISE FROM TOP OF CURB TO OUTSIDE EDGE OF SIDEWALK

* 3/16" PER FOOT RISE FROM OUTSIDE OF SIDEWALK TO INSIDE OF SIDEWALK

NOTE:
FOR DEPRESSED CURB DETAIL, SEE STANDARD 011

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. CURB & GUTTER AND SIDEWALK SHALL BE SAWED TO FULL DEPTH AT BEGINNING AND END OF ANY REMOVAL SECTION.
3. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH SIDEWALK PORTION OF DRIVEWAY.
4. LIMITS OF DRIVEWAY REMOVAL BEYOND SIDEWALK WILL VARY DEPENDING ON GRADE AND EXISTING JOINTS.
5. WHERE NO SIDEWALK EXISTS, THE DRIVE SHALL BE CONSTRUCTED AS SHOWN TO ACCOMMODATE FUTURE SIDEWALK.
6. WHEN DRIVEWAY OPENING IS PROVIDED AT THE TIME OF CURB CONSTRUCTION, CONTRACTION JOINTS SHALL BE PLACED AT THE LOCATION OF THE SAW CUTS AS SHOWN.
7. ALL SAW CUTS MUST BE A MINIMUM OF 1" DEEP.
8. IN NO CASE SHALL CURB OPENING BE CONSTRUCTED BEYOND EXTENDED PROPERTY LINE OF ADJOINING PROPERTY.
9. THIS DETAIL SHALL ONLY BE ALLOWED WHERE AN EXISTING SHARED DRIVEWAY EXISTS. THIS SHALL NOT BE USED FOR NEW CONSTRUCTION

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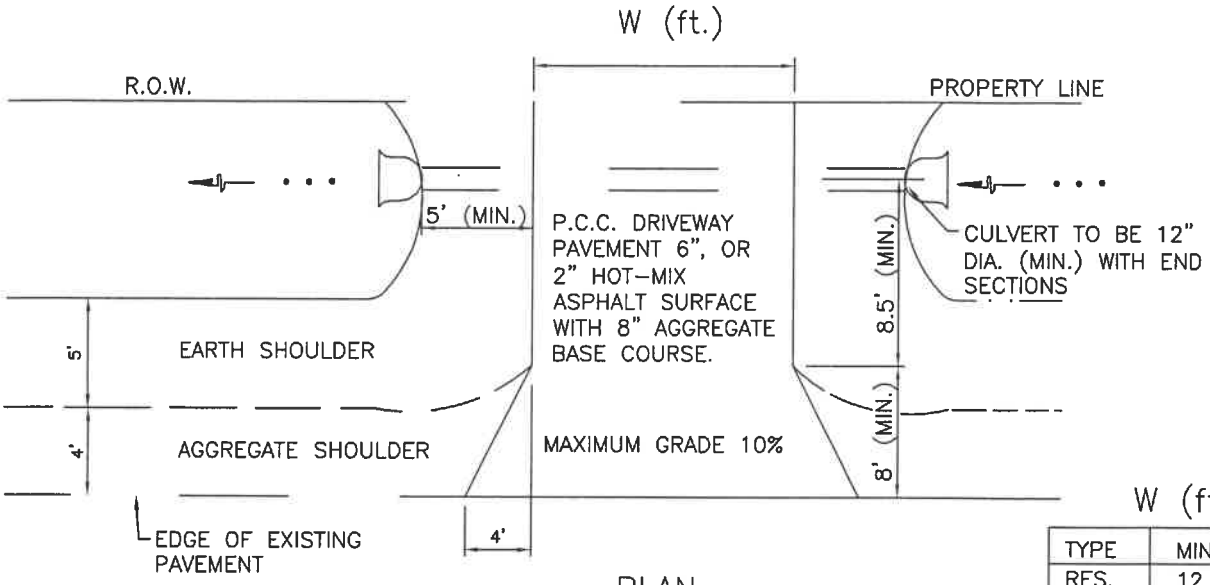
DRIVEWAY ENTRANCE DETAIL FOR WITHOUT CURB AND GUTTER (DITCH SECTION)



PLAN

W (ft.)

TYPE	MIN.	MAX.
RES.	12	30
COMM.	12	35
INDUS.	12	35

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. IN NO CASE SHALL CURB OPENING BE CONSTRUCTED BEYOND EXTENDED PROPERTY LINE OF ADJOINING PROPERTY.
3. THE CULVERT SHALL BE CONSTRUCTED TO MATCH EXISTING DITCH GRADES.
4. THE SHOULDER AND DITCH LINES SHOWN ARE BASED ON THE CITY SUBDIVISION STANDARD FOR COUNTRY ESTATES. OTHER SECTIONS SHOULD MATCH THE INDICATED ALIGNMENT.
5. CULVERT PIPE SHALL BE EITHER BITUMINOUS COATED CORRUGATED STEEL PIPE OR SMOOTH WALL CORRUGATED POLYETHYLENE PIPE WITH APPROPRIATE STEEL OR POLYETHYLENE END SECTIONS.

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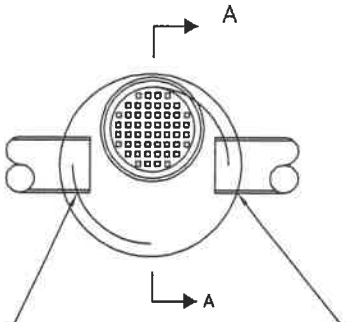
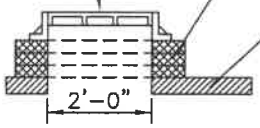
SANITARY SEWER MANHOLE



RUBBER GASKET COUPLINGS FOR SANITARY MANHOLES PER ASTM C-923

PLAN VIEW



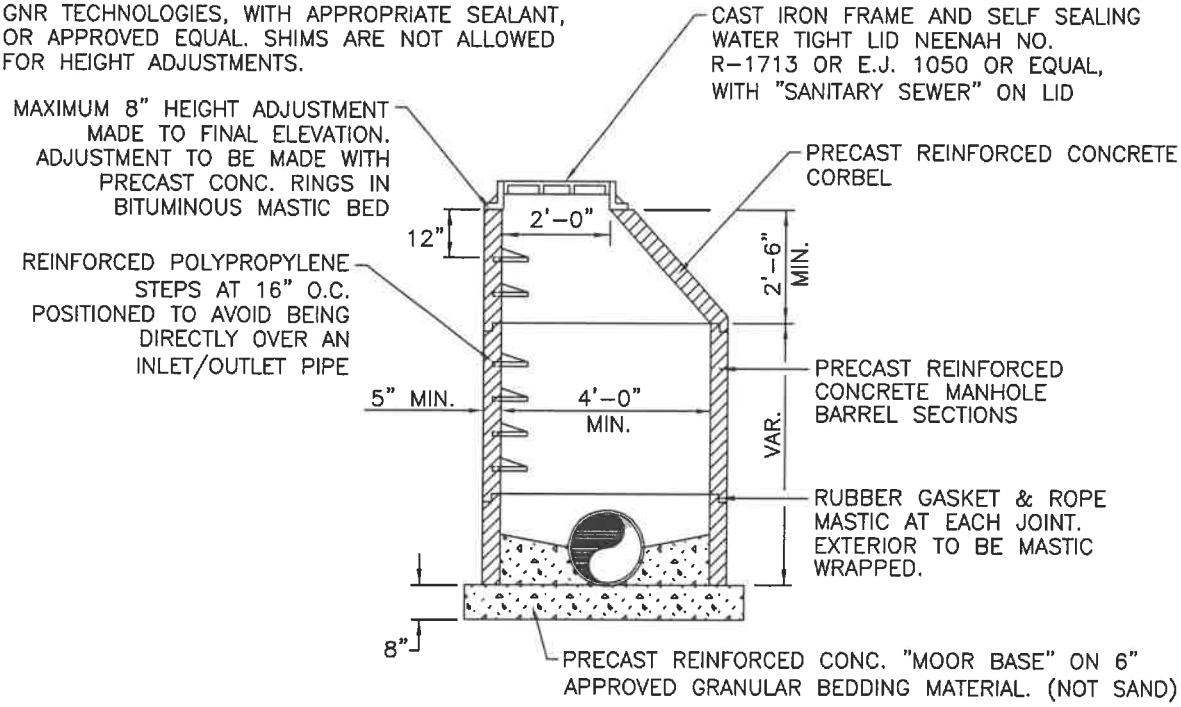
CAST IRON FRAME AND SELF SEALING WATER TIGHT LID NEENAH NO. R-1713 OR E.J. 1050 OR EQUAL, WITH "SANITARY SEWER" ON LID

PRECAST CONCRETE RINGS FOR ADJUSTMENT IN MASTIC BED (MAXIMUM 8" IN TOTAL)

PRECAST REINFORCED CONCRETE SLAB TOP WITH 24" DIA. ACCESS HOLE OVER STEPS.

FLAT TOP SECTION

HEIGHT ADJUSTMENTS MADE TO FINAL GRADE THAT ARE <2" SHALL BE MADE WITH "INFRA-RISER" RUBBER ADJUSTMENT RINGS, BY GNR TECHNOLOGIES, WITH APPROPRIATE SEALANT, OR APPROVED EQUAL. SHIMS ARE NOT ALLOWED FOR HEIGHT ADJUSTMENTS.



SECTION A-A

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. CASTING SHALL BE SET IN APPROVED MASTIC.
3. CONNECTION OF PIPE TO MANHOLE SHALL BE BY APPROVED METHOD.
4. FLAT TOP MANHOLE SHALL BE USED ONLY WHEN CORBEL TOP CANNOT BE USED. TOP OF FLAT TOP SLAB TO BE BELOW BOTTOM OF P.C.C. PAVEMENT, H.M.A. BINDER BASE COURSE, OR AGGREGATE BASE COURSE.
5. FOR SANITARY SEWERS GREATER THAN 12", A DIFFERENT MANHOLE BASE WILL BE REQUIRED AND MUST BE APPROVED BY THE CITY ENGINEER.

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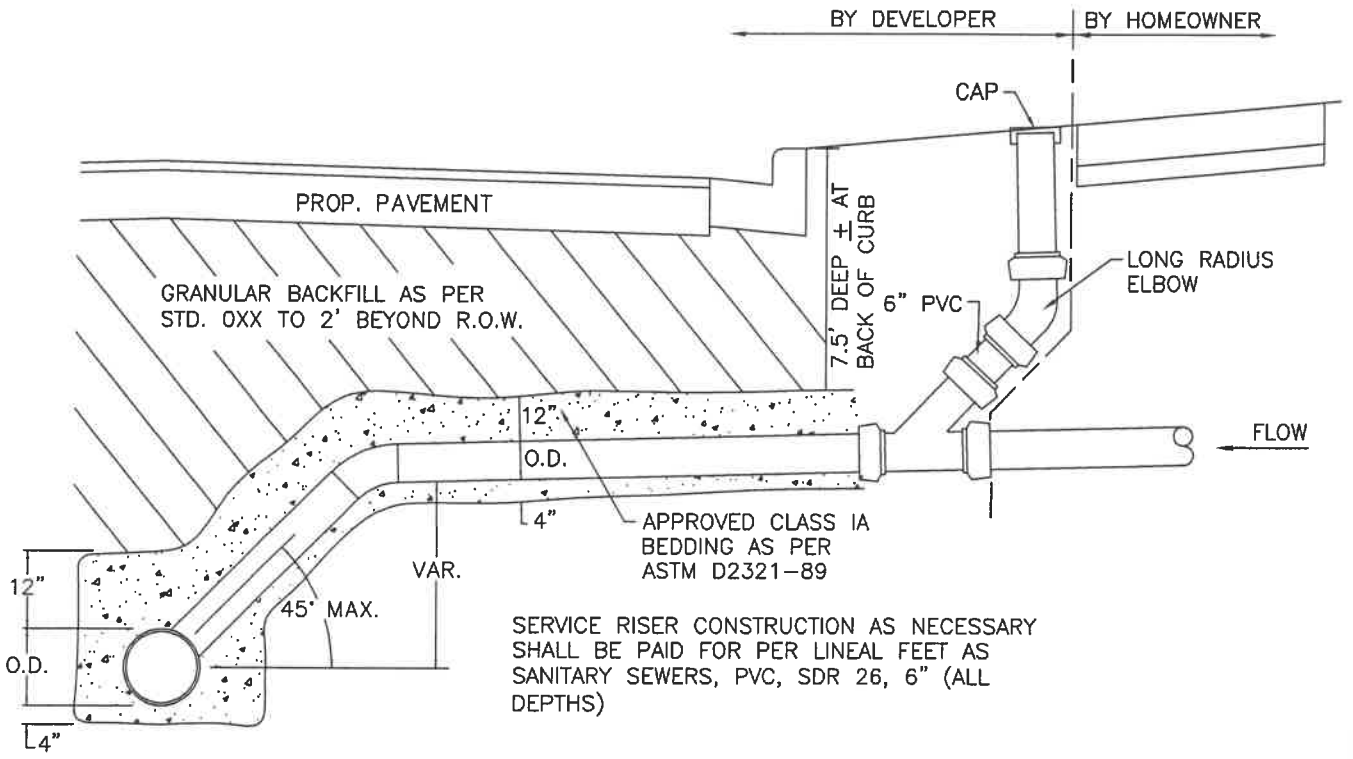
SANITARY SEWER LATERAL
RISER AND CLEANOUT



SERVICE RISER CONSTRUCTION AS NECESSARY SHALL BE PAID FOR PER LINEAL FEET AS SANITARY SEWERS, PVC, SDR 26, 6" (ALL DEPTHS)

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. SANITARY LATERAL CLEAN OUT SHALL BE LOCATED BETWEEN THE SIDEWALK AND BACK OF CURB. IN LOCATIONS WHERE THE SIDEWALK IS ADJACENT TO THE BACK OF CURB, THE CLEAN OUT SHALL BE PLACED BETWEEN THE BACK OF SIDEWALK AND THE R.O.W. LINE.
3. LATERAL CONNECTIONS TO THE MAIN SHALL BE MADE WITH APPROVED FACTORY FITTINGS.

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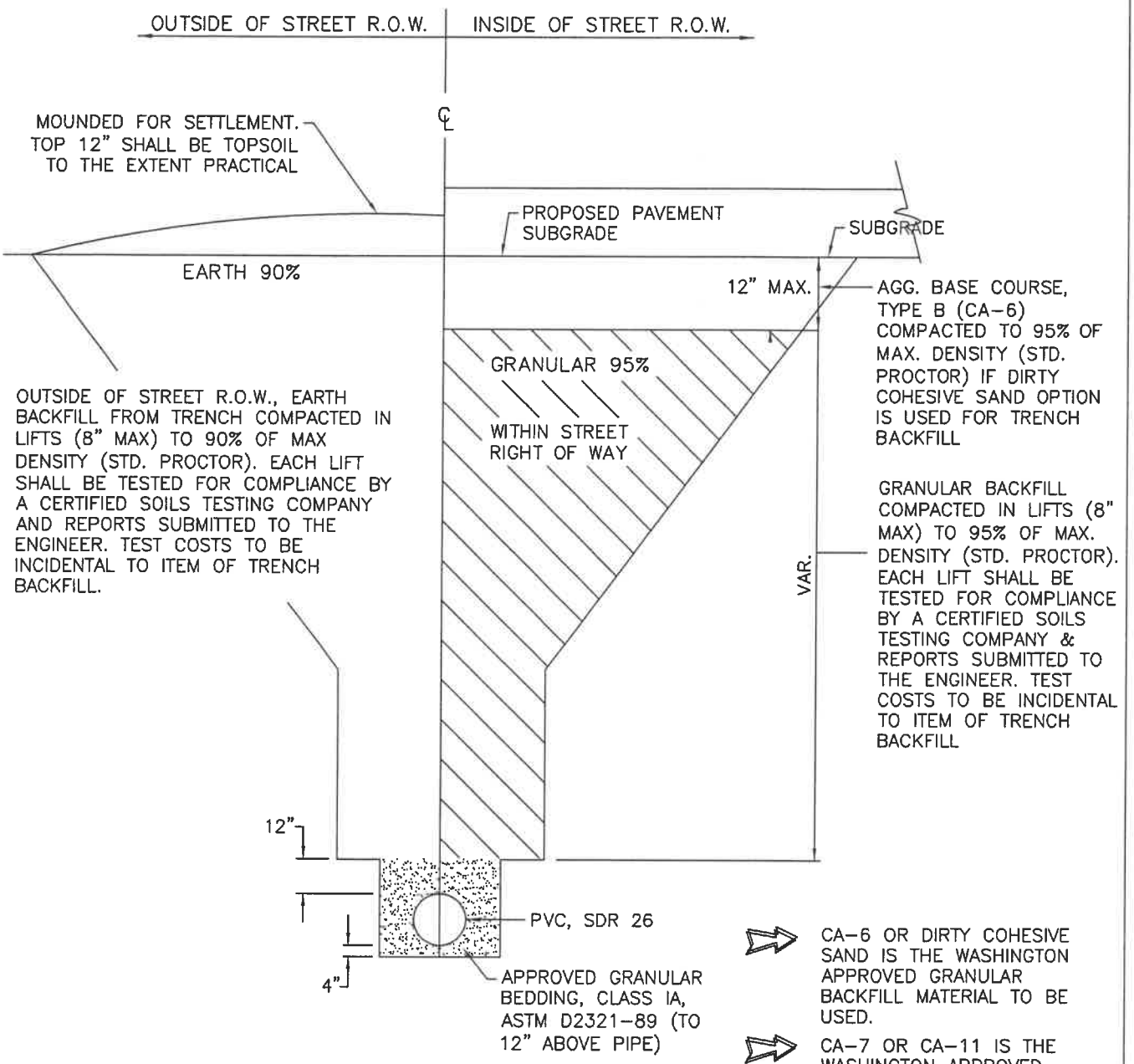
TYPICAL SANITARY SEWER TRENCH BACKFILL
EARTH – 90% AND GRANULAR – 95%



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

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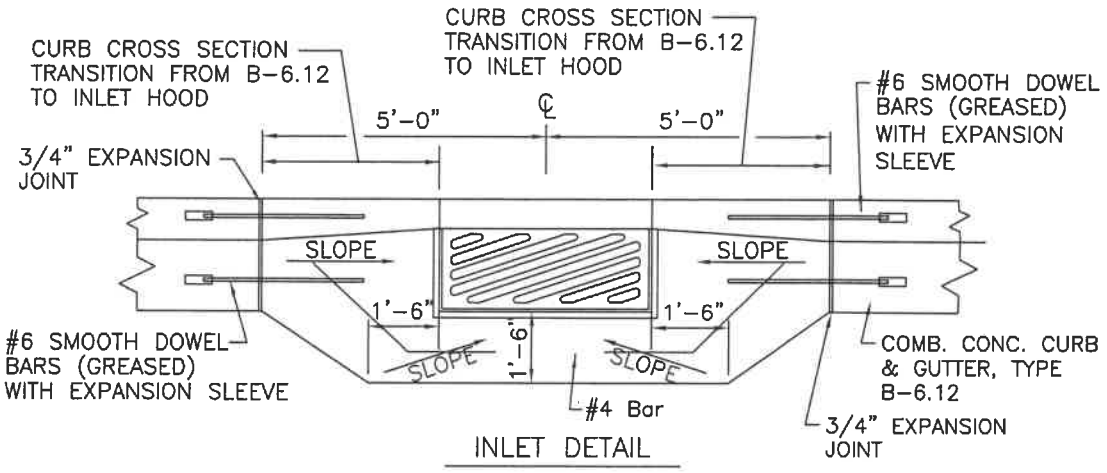
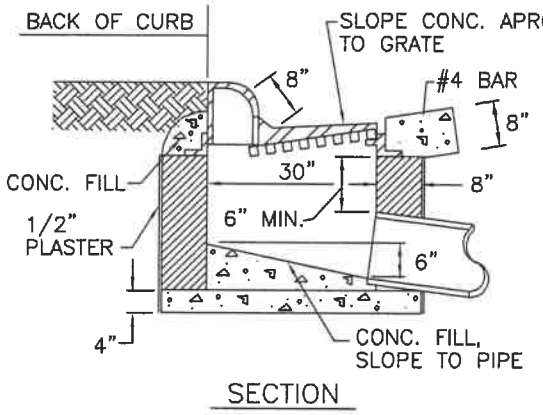
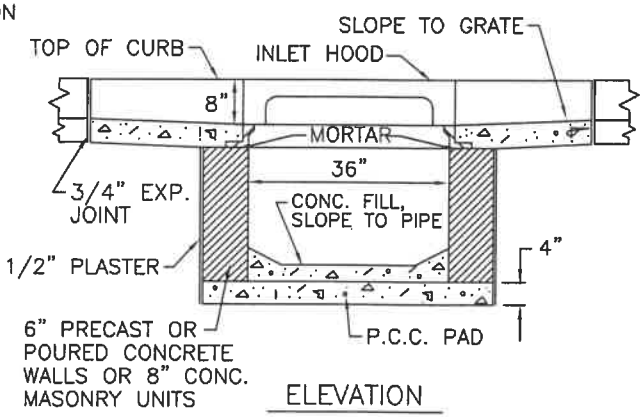
INLET TYPE G-1
WASHINGTON STANDARD



INLET DETAIL



SECTION



ELEVATION

GENERAL NOTES:

1. THE CURB INLET FRAME, HOOD & GRATE SHALL BE EQUAL TO EAST JORDAN IRONWORKS #7510 OR NEENAH FOUNDRY R-3246-A, HEAVY DUTY CURB INLET WITH DIAGONAL BAR GRATE. TYPE T1 BACK TO BE CAST W/ A "FISH EMBLEM" AND MARKED "DUMP NO WASTE – DRAINS TO WATERWAY". CASTING AND GRATE TO BE COATED WITH A WATER BASE ASPHALT PAINT.

2. INLET BOXES SHALL BE PRECAST BOXES WITH 6" WALLS. THE INLET BOXES SHALL BE CONSTRUCTED SO THE MAXIMUM ADJUSTMENT HEIGHT SHALL NOT EXCEED 3". PRECAST ADJUSTING RINGS SET IN ROPE MASTIC ARE ALLOWED. FOR ADJUSTMENTS <2", USE INFRA-RISER" RUBBER ADJUSTMENT RINGS, BY GNR TECHNOLOGIES, OR APPROVED EQUAL, WITH APPROPRIATE SEALANT.

3. INLET BOXES SHALL BE PLACED ACCURATELY. THE INSIDE BACK OF THE INLET BOX IS TO BE IN LINE WITH THE BACK OF THE PROPOSED OR EXISTING CURB & GUTTER. INLET BOXES THAT ARE MORE THAN 2" OUT OF ALIGNMENT, SHALL BE REMOVED AND RESET AT THE CONTRACTOR'S EXPENSE.

4. BOLTS FOR THE HOOD SHALL BE PROVIDED WITH PROPER NUTS, WASHERS AND 1/4" MIN. STEEL PLATES TO COVER SLOTTED OPENINGS.

5. THE 3/4" EXPANSION JOINT MATERIAL SHALL BE CELLU-CUSHION EXP 200, AS MANUFACTURED BY THE SEALED AIR CORPORATION, OR APPROVED EQUAL.

6. GROUT INLET BOTTOMS TO DRAIN TO OUTLET PIPE.

7. IN THE ABSENCE OF RUBBER ADJUSTING RINGS, THE CASTING SHALL BE SET IN A FULL BED OF MORTAR.

8. CUT ALL SEWER PIPES FLUSH WITH INTERIOR WALL OF INLET.

9. MAINTAIN 8" MAXIMUM HOOD OPENING.

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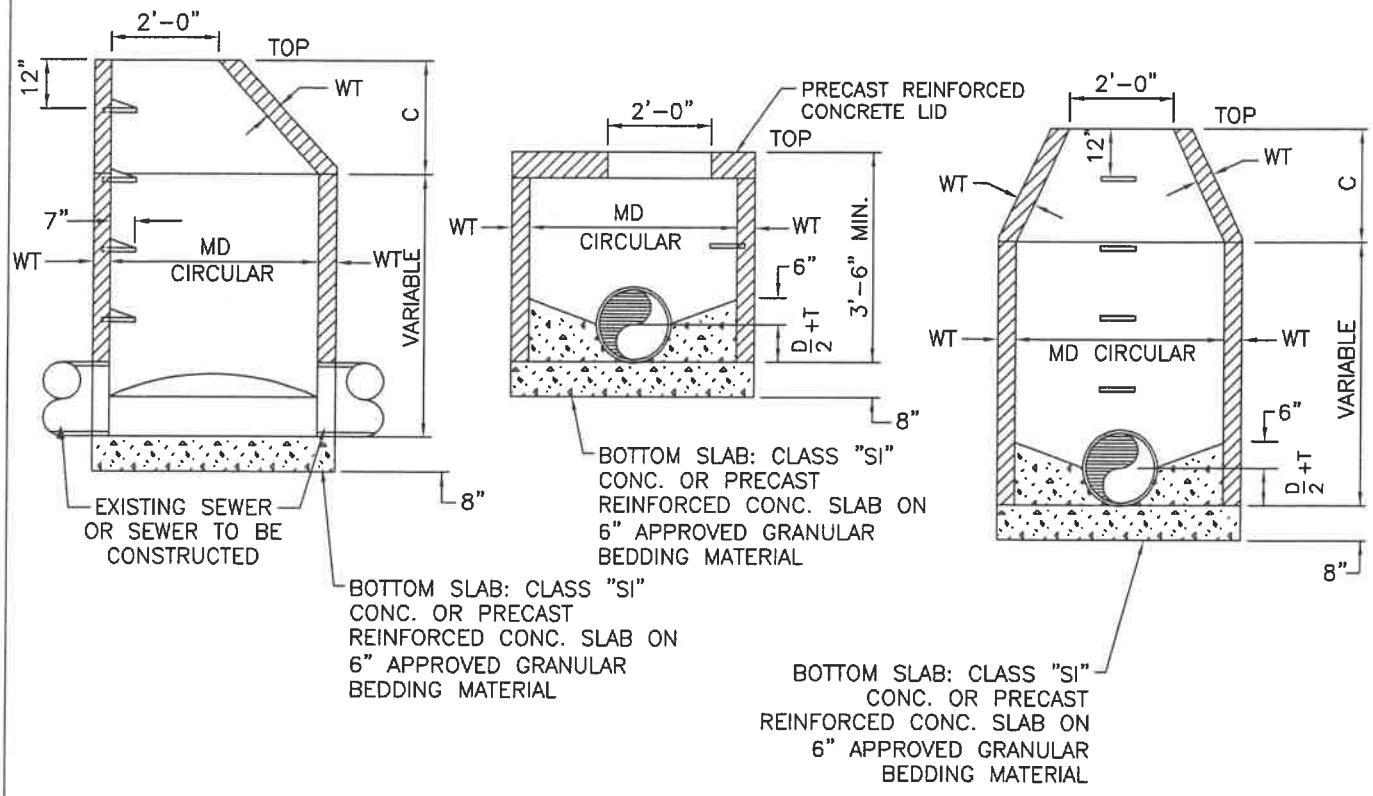
MANHOLE TYPE 1
STORM SEWER



ALTERNATE MATERIALS FOR WALLS	MD	C	WT
CONCRETE MASONRY UNITS	4'-0"	2'-6"	5"
	5'-0"	3'-9"	5"
PRECAST REINFORCED CONCRETE RISERS	4'-0"	2'-6"	4"
	5'-0"	3'-9"	5"
MONOLITHIC CONCRETE	4'-0"	2'-6"	6"
	5'-0"	3'-9"	6"

DIAMETER OF MAIN SEWER	MD
18" AND UNDER	4'-0"
21" TO 42" INCLUSIVE	5'-0"

MD=INSIDE DIA. MANHOLE
WT=WALL THICKNESS (MIN.)
D=DIAMETER OF PIPE
T=THICKNESS OF PIPE

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. DIMENSION "C" FOR PRECAST REINFORCED CONCRETE RISERS MAY VARY FROM THE DIMENSION GIVEN TO PLUS 6".
3. MANHOLE TYPE I FOR STORM SEWERS SHALL HAVE A NEENAH NO. R-1713 FRAME WITH A TYPE D LID, E.J. 1050 WITH A TYPE MI LID OR EQUAL, "DUMP NO WASTE" SHALL BE ON LID.
4. PIPES INSIDE MANHOLE MUST BE CUT FLUSH WITH INTERIOR WALLS AFTER MANHOLE IS COMPLETE.
5. REINFORCED POLYPROPYLENE STEPS SHALL BE INSTALLED AT 16" O.C.

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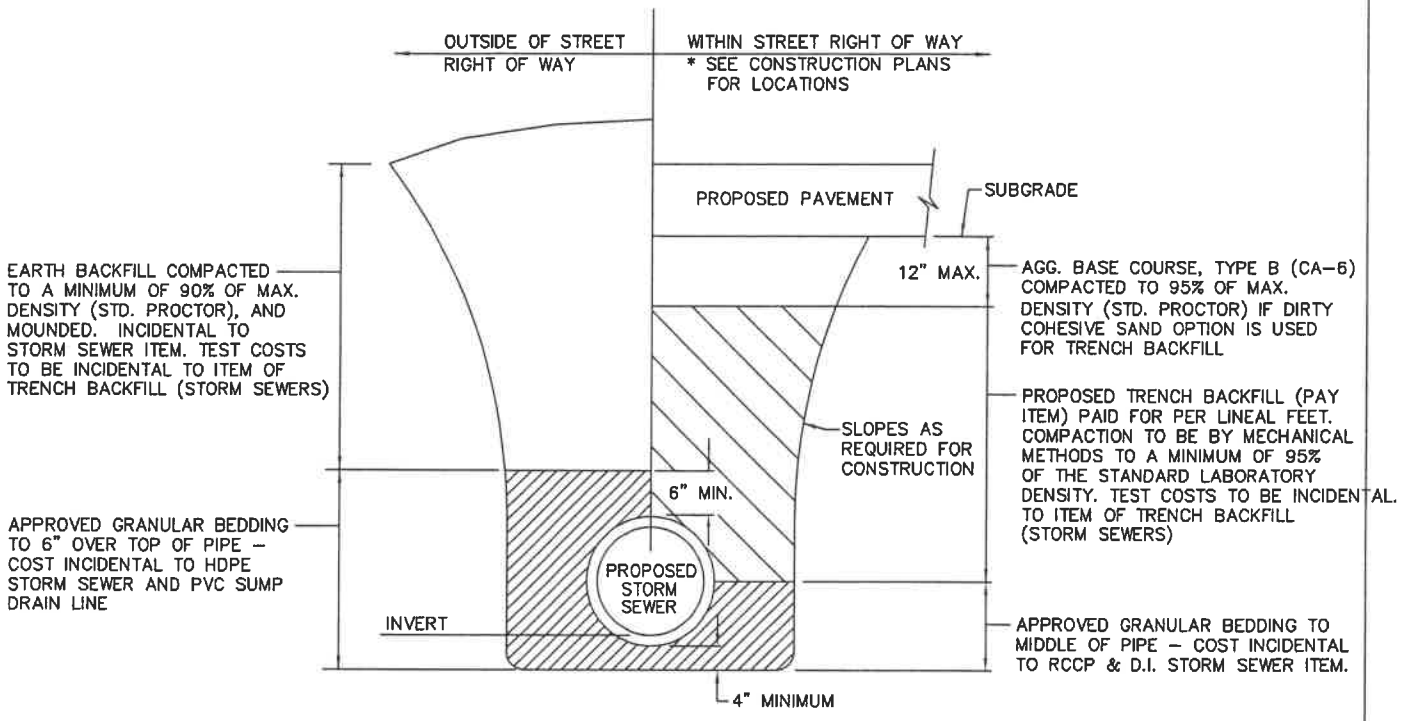
STORM SEWER & SUMP DRAIN LINE
TRENCH DETAILS



⇨ CA-6 OR DIRTY COHESIVE SAND IS THE WASHINGTON APPROVED GRANULAR BACKFILL MATERIAL TO BE USED.

⇨ CA-7 OR CA-11 IS THE WASHINGTON APPROVED GRANULAR PIPE BEDDING MATERIAL; HOWEVER, WHITE FRACTURED CA-11 SHALL BE USED TO BED HDPE STORM SEWER PIPE.

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. EARTH BACKFILL AND TRENCH BACKFILL SHALL BE PLACED AND COMPACTED IN 8" LIFTS.

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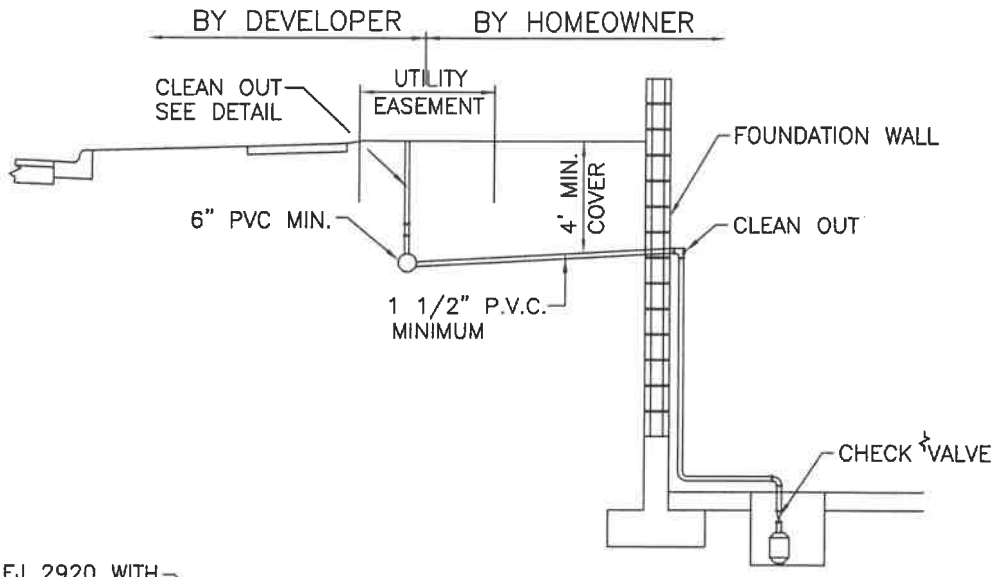
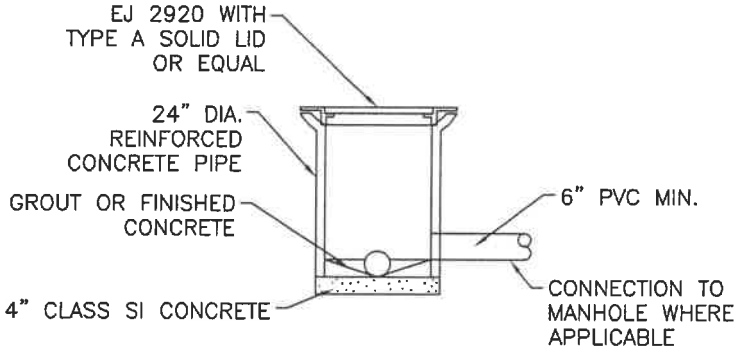
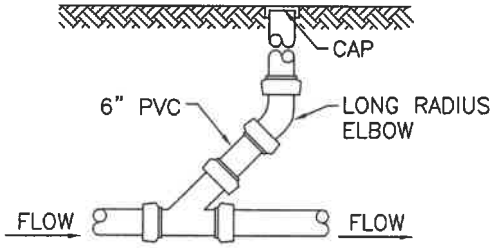
SUMP DRAIN LINE DETAIL





SUMP DRAIN LINE MANHOLE



CLEAN OUT DETAIL

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. SUMP DRAIN LINES SHALL BE DRAINED TO STORM SEWER INLETS, MANHOLES OR DRAINAGE DITCHES.
3. P.V.C. PIPE SHALL MEET THE REQUIREMENTS OF A.S.T.M. D-2241, SDR 26.
4. MANHOLES OR CLEAN OUTS SHALL BE PROVIDED AT A MAXIMUM SPACING OF 400' AND AT ALL CHANGES IN THE DIRECTION OF THE MAIN. MANHOLES SHALL BE PROVIDED AT THE END OF ALL MAIN LINES.
5. LATERAL CONNECTIONS TO THE MAIN LINE SHALL BE MADE WITH APPROVED FACTORY FITTINGS

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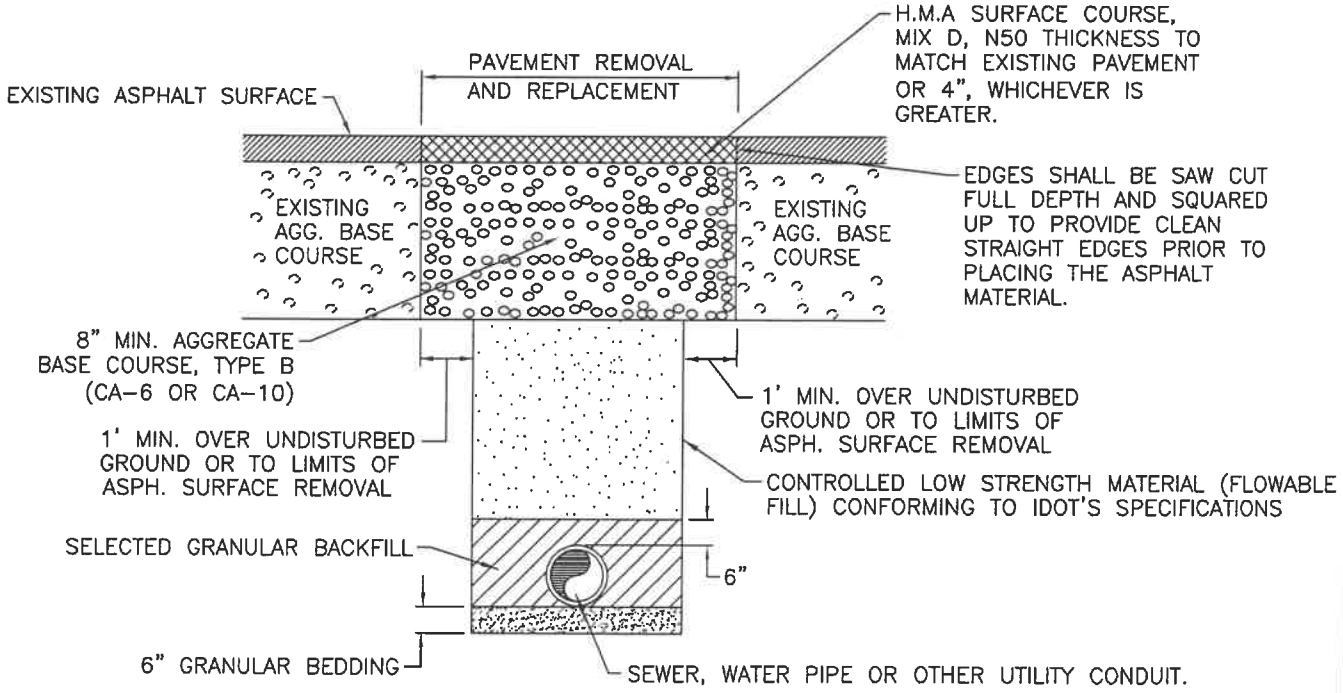
TYPICAL STREET REPAIR FOR UNDERGROUND UTILITY INSTALLATION
ASPHALT/CHIP SEAL SURFACE



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

2. PRIOR TO PLACING THE H.M.A. SURFACE COURSE, THE BASE COURSE SHALL BE INSPECTED BY THE CITY ENGINEER OR DESIGNEE. THE FLOWABLE FILL AND BASE COURSE SHALL BE ALLOWED TO SET IN PLACE A MINIMUM OF 24 HOURS PRIOR TO PLACING THE PAVEMENT SURFACE.

3. IF THE H.M.A SURFACE COURSE MATERIAL IS NOT AVAILABLE DUE TO SEASONAL CLOSING OF THE BATCH PLANTS, THEN A TEMPORARY SURFACE CONSISTING OF COLD MIX ASPHALT SHALL BE APPLIED UNTIL THE H.M.A SURFACE COURSE MATERIAL IS AVAILABLE

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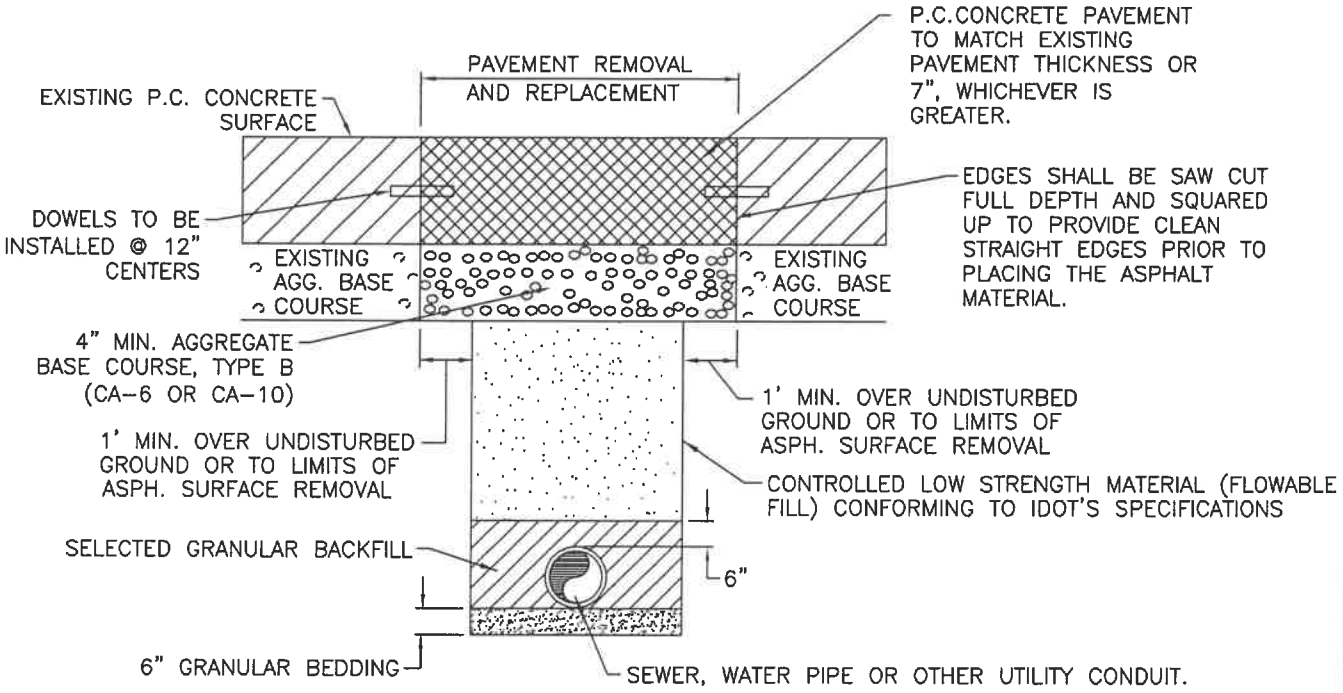
TYPICAL STREET REPAIR FOR UNDERGROUND UTILITY INSTALLATION
P.C. CONCRETE SURFACE



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

2. PRIOR TO PLACING THE P.C. CONCRETE PATCH, THE BASE COURSE SHALL BE INSPECTED BY THE CITY ENGINEER OR DESIGNEE. THE FLOWABLE FILL AND BASE COURSE SHALL BE ALLOWED TO SET IN PLACE A MINIMUM OF 24 HOURS PRIOR TO PLACING THE P.C. CONCRETE.

3. CONCRETE PATCH SHALL BE CONSTRUCTED AS SHOWN ON IDOT STANDARD 442101-09.

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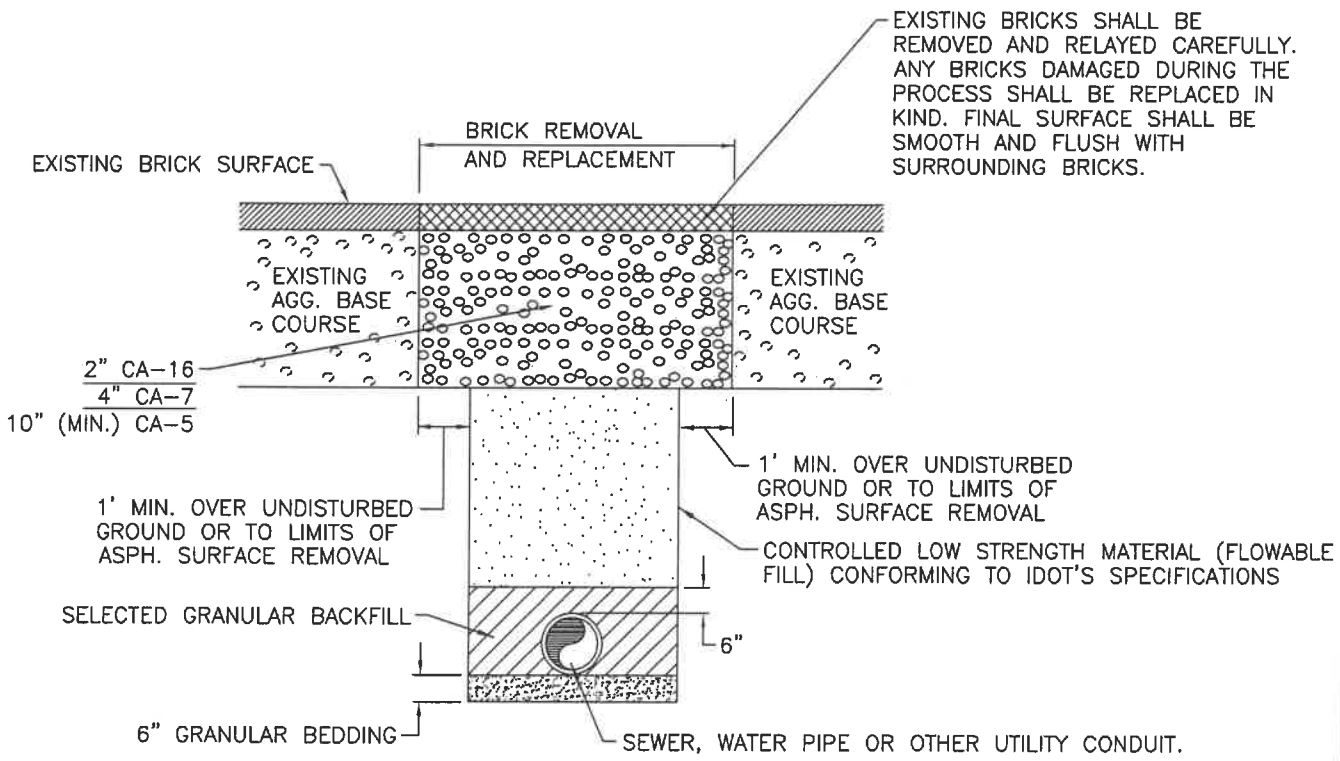
TYPICAL STREET REPAIR FOR UNDERGROUND UTILITY INSTALLATION
BRICK SURFACE



GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. DURING THE REMOVAL PROCESS, CONTRACTOR SHALL CAREFULLY REMOVE ANY ROCK REINFORCED GRID IN A MANNER THAT DOES NOT DISTURB THE SURROUNDING AREAS.
3. FINAL BRICK SURFACE JOINTS SHALL BE SANDED WITH A

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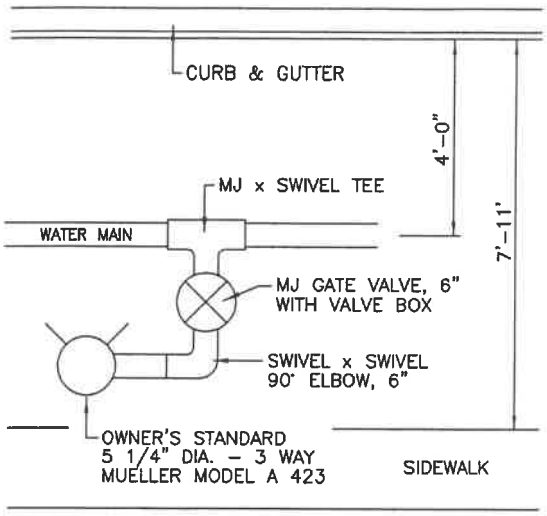
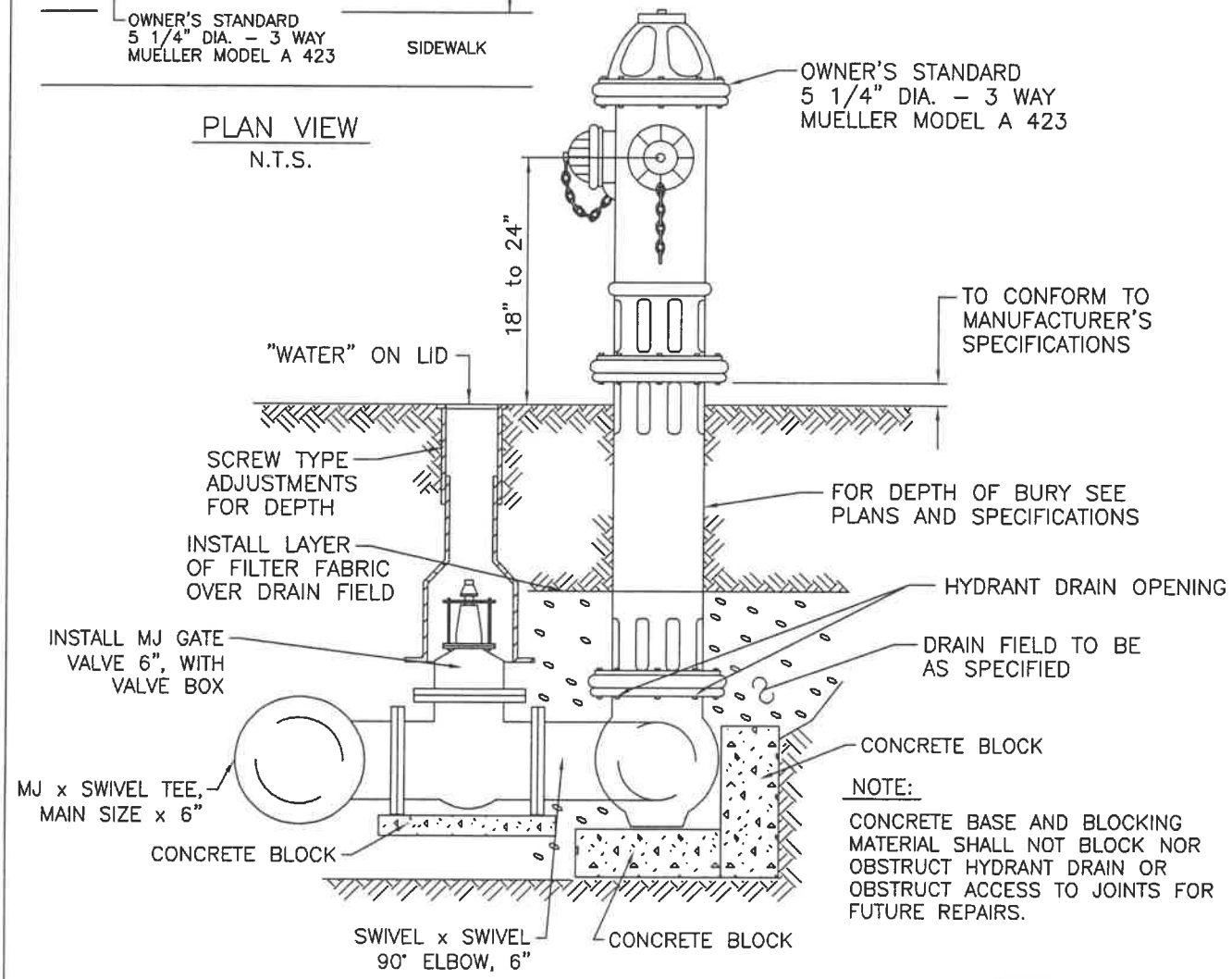
TYPICAL HYDRANT INSTALLATION



PLAN VIEW
N.T.S.



NOTE:

CONCRETE BASE AND BLOCKING MATERIAL SHALL NOT BLOCK NOR OBSTRUCT HYDRANT DRAIN OR OBSTRUCT ACCESS TO JOINTS FOR FUTURE REPAIRS.

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

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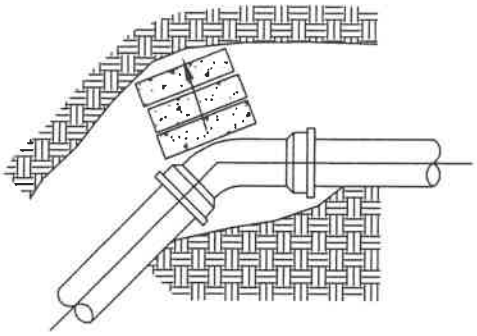
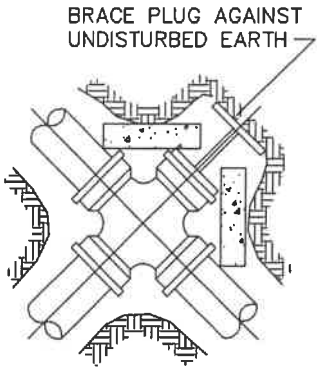
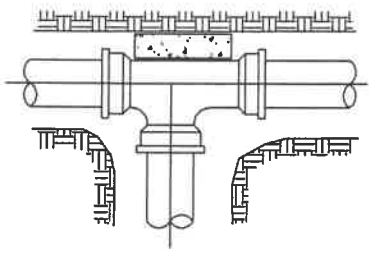
TYPICAL THRUST BLOCK INSTALLATIONS



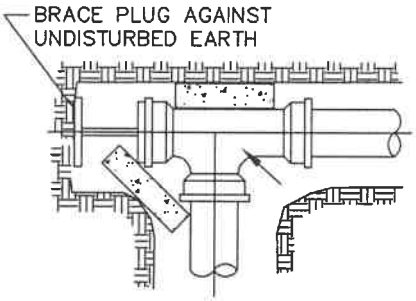
VERTICAL BEND



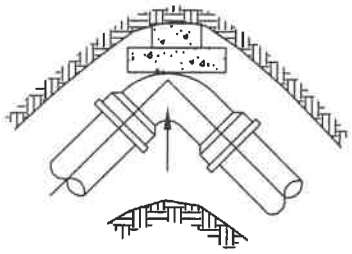
PLUGGED CROSS



TEE



PLUGGED TEE



90° ELBOW

NOTES:

CONTRACTOR SHALL INSTALL SOLID CONCRETE BLOCKS AGAINST UNDISTURBED EARTH FOR THRUST BLOCKS.

ARROWS INDICATE DIRECTION OF THRUST.

ALL BLOCKS TO BE 3000 P.S.I. CONCRETE.

ALL FITTINGS SHOWN IN PLAN EXCEPT VERTICAL BEND.

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

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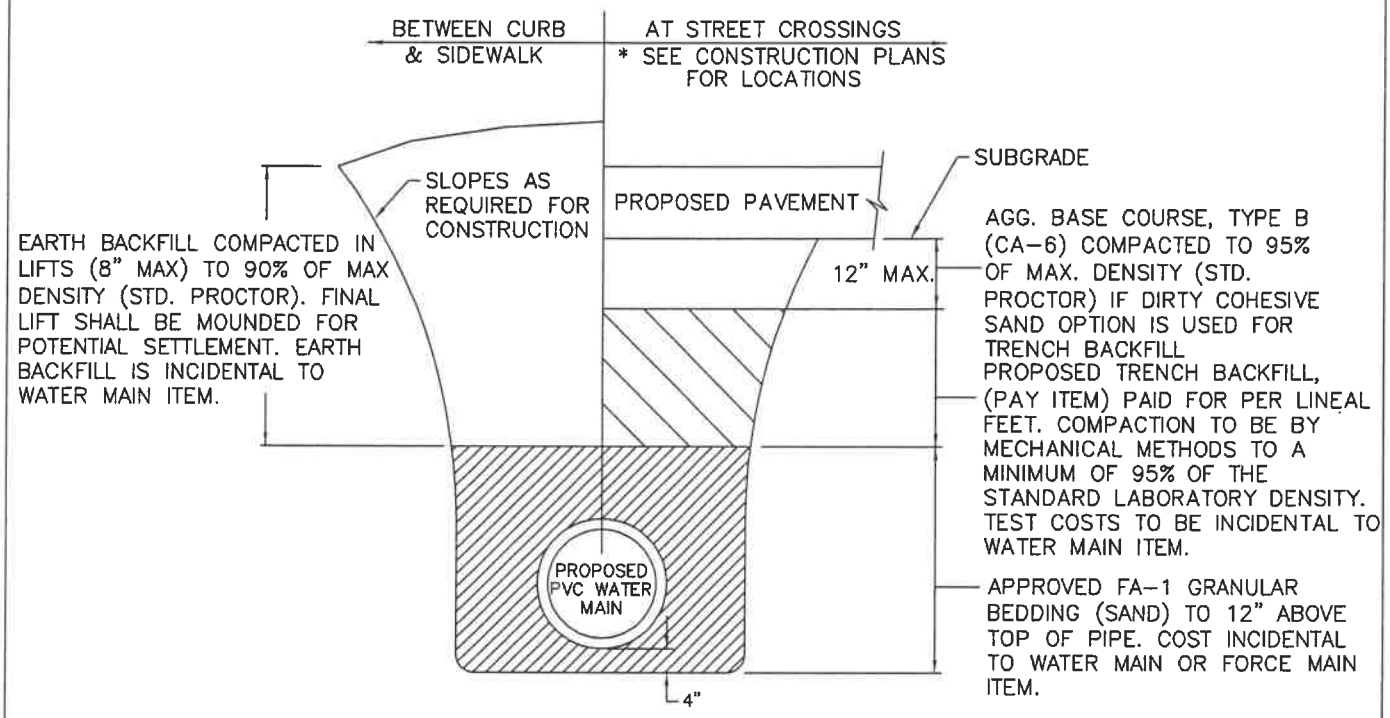
WATER MAIN TRENCH DETAILS



CA-6 OR DIRTY COHESIVE SAND IS THE WASHINGTON APPROVED GRANULAR BACKFILL MATERIAL TO BE USED.

GENERAL NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION AND SUPPLEMENTAL SPECIFICATIONS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

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JOINT RESTRAINT

THE CITY OF WASHINGTON REQUIRES THAT ALL MECHANICAL FITTINGS (VALVES, HYDRANTS, TEES, BENDS, ETC.) MUST BE INSTALLED USING APPROVED RETAINER FITTINGS.

IN ADDITION, THE CITY OF WASHINGTON REQUIRES THAT AN ADDITIONAL LENGTH OF PIPE MUST BE RESTRAINED ON EACH SIDE OF BENDS OR VERTICAL OFFSETS, BRANCH OUTLETS OF TEES, BEFORE REDUCERS, AND BEFORE DEAD-ENDS (VALVES OR HYDRANTS). IN ADDITION TO RETAINING THE FITTINGS THEMSELVES, ANY PIPE THAT CONTAINS JOINTS (BELL AND SPIGOT, BOLTED COUPLINGS) THAT FALL WITHIN THESE LENGTHS MUST BE RESTRAINED.

THESE RESTRAINED LENGTHS OF PIPE VARY ACCORDING TO THE PARAMETERS OF THE JOB PIPE SIZE AND TYPE, TEST PRESSURES, DEPTH OF BURY, SOIL CONDITIONS, AND TRENCH PREPARATION. FOLLOWING IS A THRUST RESTRAINT CHART THAT SHOWS THESE RECOMMENDED RESTRAINT LENGTHS BASED UPON PARAMETERS THAT ARE MOST COMMON IN THE CITY OF WASHINGTON:

THRUST RESTRAINT CHART

RECOMMENDED RESTRAINED LENGTHS

NOMINAL PIPE SIZE (IN.)	90° ELBOW	45° ELBOW	22.5° ELBOW	11.25° ELBOW	SIZE x SIZE TEE	VALVE HYDRANT OR DEAD-END
4 in.	9 ft.	4 ft.	2 ft.	1 ft.	7 ft.	13 ft.
6 in.	13 ft.	6 ft.	3 ft.	2 ft.	12 ft.	18 ft.
8 in.	16 ft.	7 ft.	4 ft.	2 ft.	18 ft.	24 ft.
10 in.	20 ft.	9 ft.	4 ft.	2 ft.	23 ft.	28 ft.
12 in.	23 ft.	10 ft.	5 ft.	3 ft.	28 ft.	34 ft.

RECOMMENDED RESTRAINED LENGTH FOR TEES ARE FOR THE BRANCH OUTLET AND ASSUME A MINIMUM ATTACHED LENGTH OF PIPE OF 10 FT. ON EACH SIDE OF THE RUN.

THRUST RESTRAINT CHART BASED UPON PARAMETERS SHOWN BELOW AND BY USE OF UNI-FLANGE THRUST RESTRAINT SOFTWARE. OTHER PARAMETERS CAN BE RUN ON THIS PROGRAM.

PIPE	PVC, CLASS 150, (AWWA C900)
SOIL	CL (NORMAL)
AVG. DEPTH OF BURY	4.5. FT.
TRENCH TYPE	TYPE 3
TEST PRESSURE	100 PSI
SAFETY FACTOR	2 :1

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STREET SIGNAGE SPECIFICATIONS

STREET NAME SIGN

BLANKS:	9" BLANKS, 0.08" ALUMINUM THICKNESS, (4) $\frac{3}{8}$" HOLES 1" IN ON EACH SIDE FOR BOLTS/RIVETS.
SHEETING:	SINGLE-SIDED, HIGH-INTENSITY, GREEN BACKGROUND WITH WHITE LETTERING, NO BORDER.
LETTERING:	6" UPPERCASE/LOWERCASE STREET NAMES, 4.5" FOR DIRECTIONAL DESIGNATION, 3" FOR STREET TYPE. FHWA STANDARD ALPHABET LETTER STYLE "C" WITH 100% SPACING.
HARDWARE:	STAINLESS STEEL WASHER/NUT/BOLT

TWO (2) SIGNS MOUNTED PER STREET.

SIGN POST

TYPE:	2" X 2" X 10'/12', 14 GAUGE GALVANIZED WITH $\frac{7}{16}$" DIA. HOLES AT 1" CTRS.
ANCHOR:	2 $\frac{1}{4}$" X 2 $\frac{1}{4}$" X 3'
HARDWARE:	CORNER BOLTS

GENERAL NOTES

ALL SIGNS TO BE MOUNTED IN ACCORDANCE TO THE MANUAL ON UNIFRM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.

ALL SIGNS SHALL BE HIGH INTENSITY SHEETING.

City of Washington Est. 1825

DATE:	STANDARD NO.
DEC. 2020	029