

CITY OF OZARK STANDARD DRAWING DETAILS FOR PUBLIC IMPROVEMENTS



2021 EDITION
CITY OF OZARK, MISSOURI

STANDARD DRAWING DETAILS

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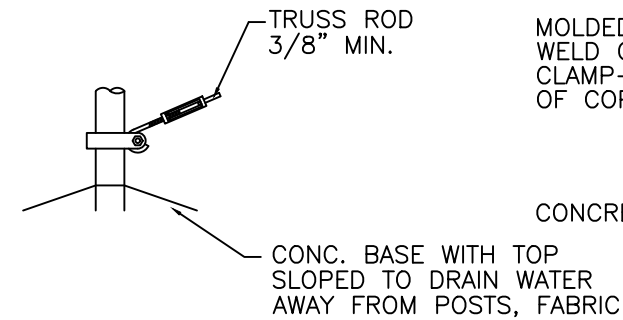
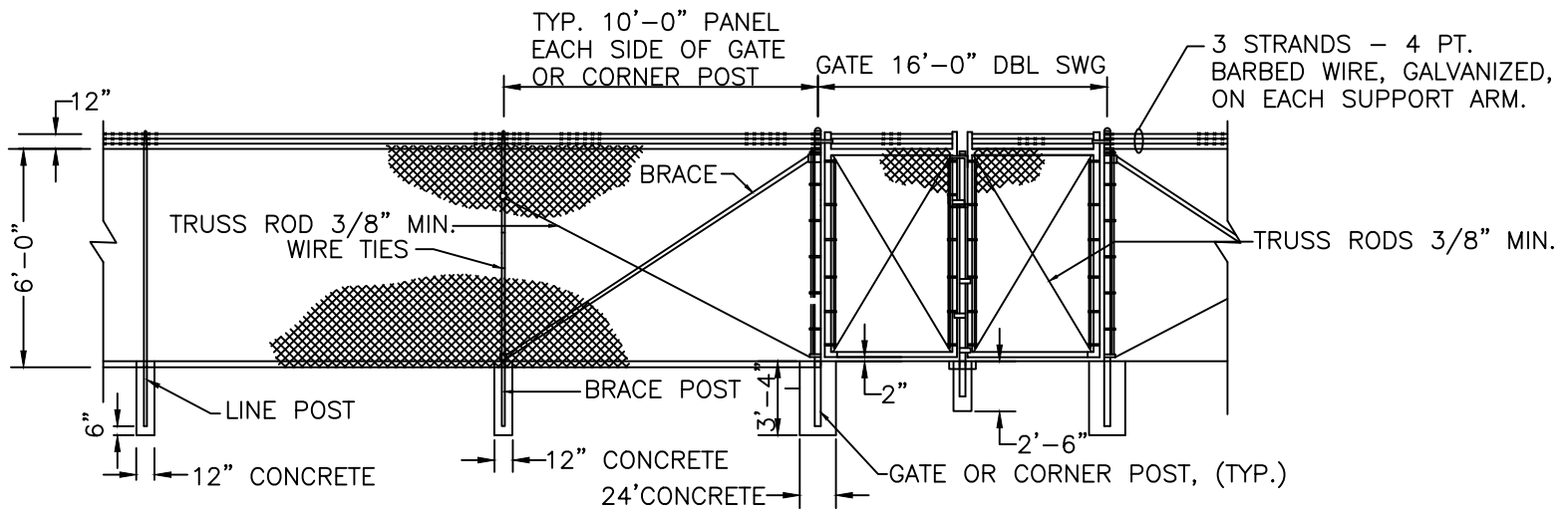
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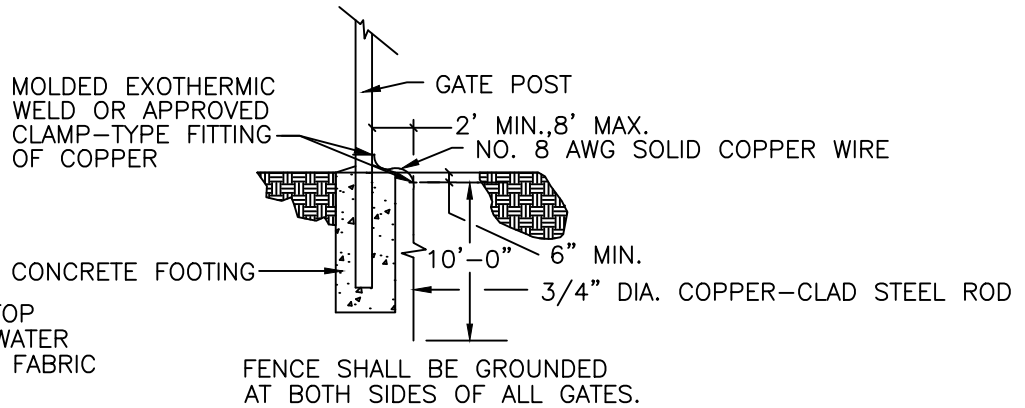
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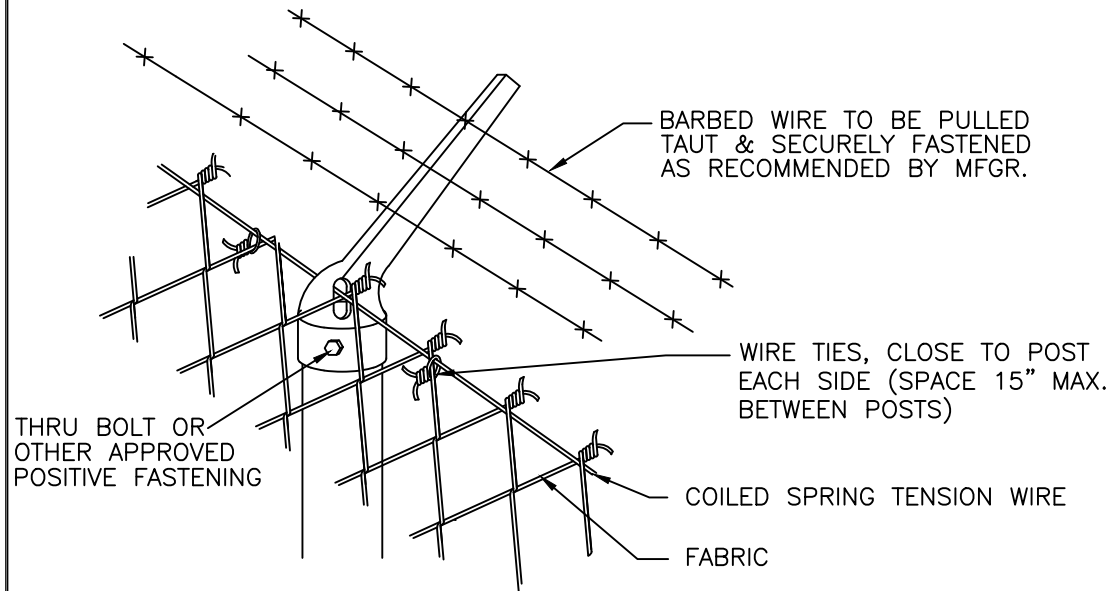


TRUSS ROD & BAND



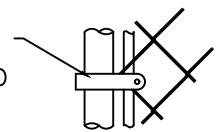
GROUNDING DETAIL

NOTE:
FABRIC TIES, CLAMPS OR BANDS SHALL COMPLETELY ENCIRCLE POST OR COLUMN AND ENDS SHALL BE SECURELY FASTENED TOGETHER.

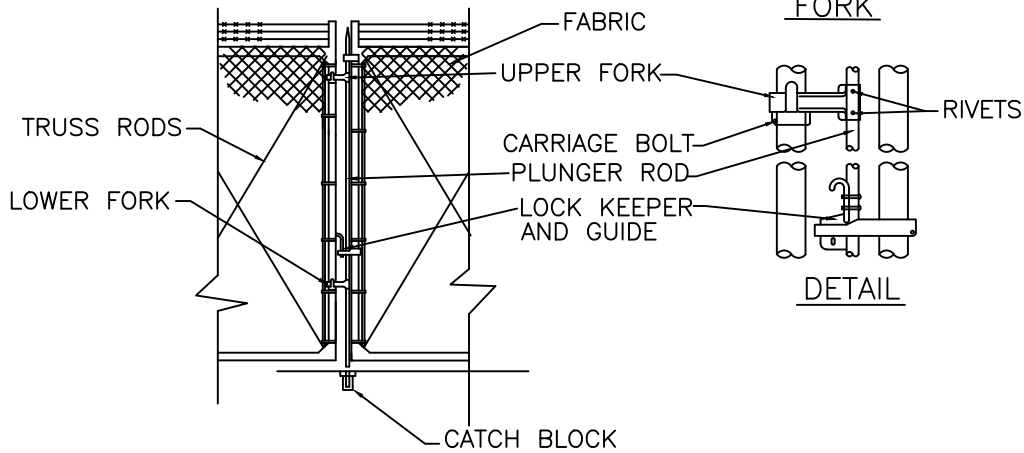


SUPPORTING ARM FOR BARBED WIRE

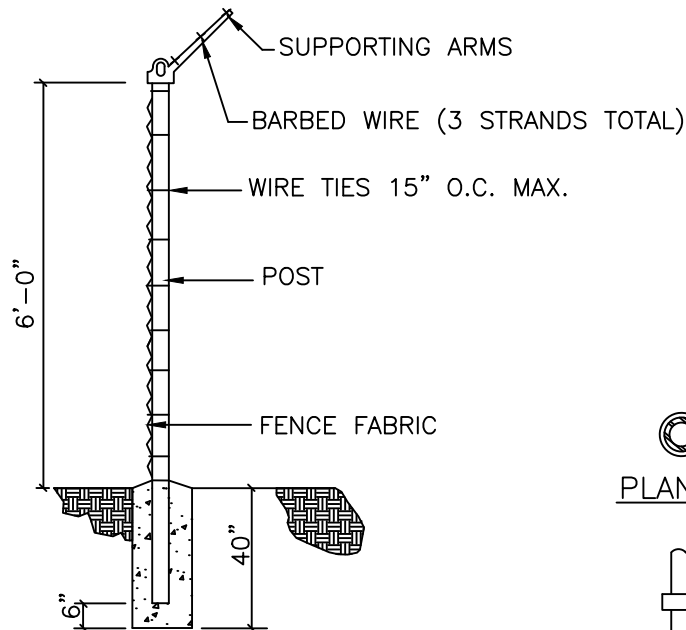
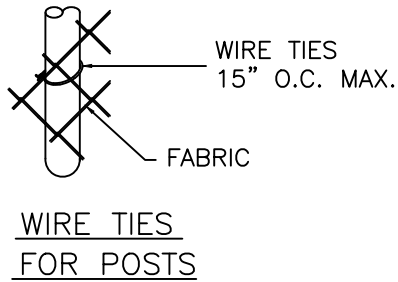
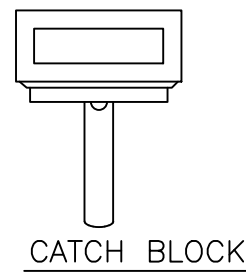
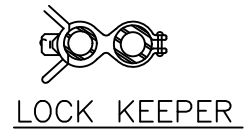
STRETCHER BAR BAND TO
BE 4" MAX. FROM TOP
AND BOTTOM AND SPACED
15" O.C. MAX.



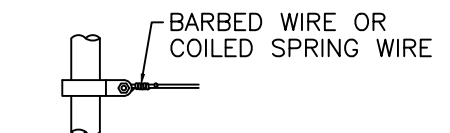
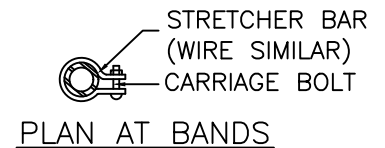
DETAIL OF END OR GATE POST



SWING GATE DETAILS

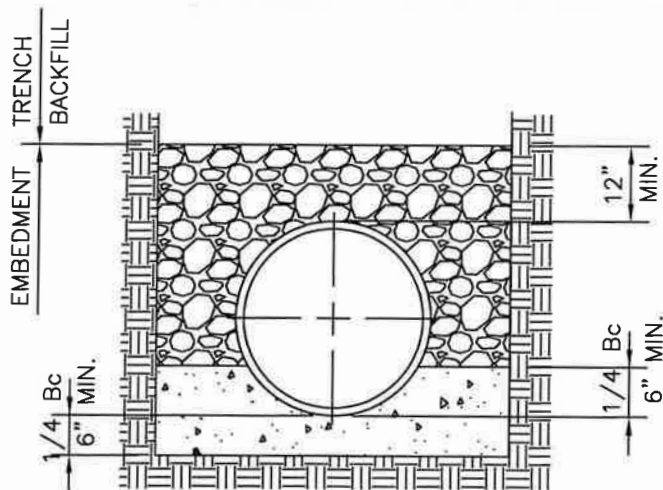


TYPICAL FENCE SECTION

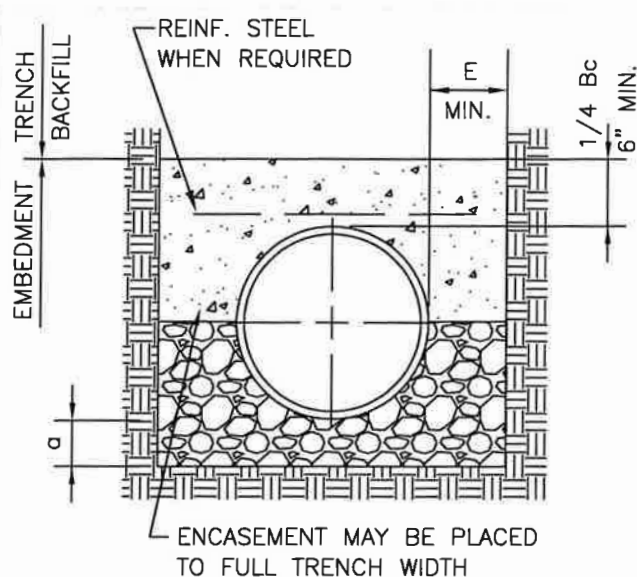


BAND FOR WIRE
STRETCHING

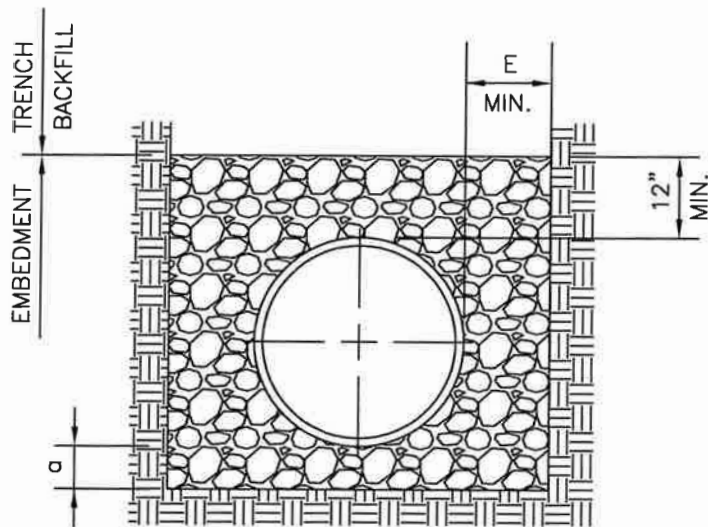
FASTENING DETAILS



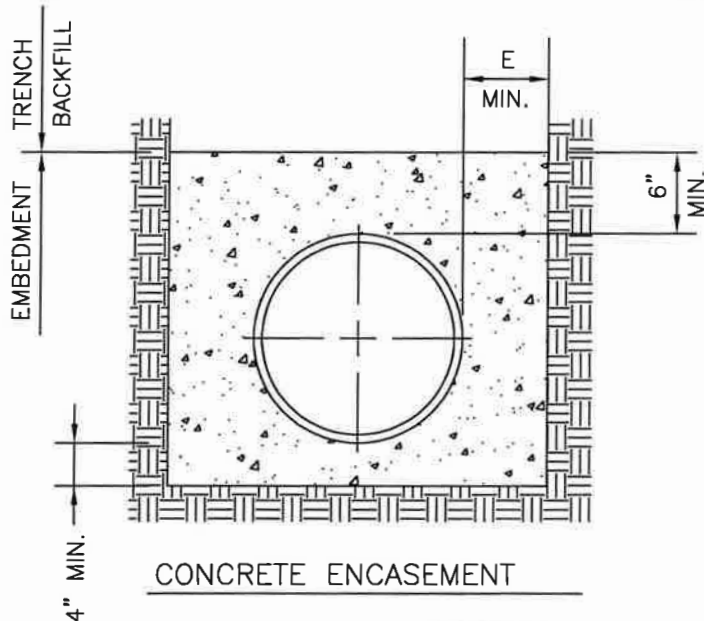
CLASS A
CONCRETE CRADLE



CLASS A
CONCRETE ARCH



CLASS B
FIRST CLASS BEDDING



CONCRETE ENCASEMENT

TABLE OF EMBEDMENT DEPTHS BELOW PIPE

SOIL TRENCH		
BEDDING CLASS	PIPE O.D.	a MIN.
A AND B	16" AND SMALLER	4"
A AND B	LARGER THAN 16"	1/4 O.D.

ROCK TRENCH		
BEDDING CLASS	PIPE O.D.	a MIN.
A AND B	24" AND SMALLER	6"
A AND B	LARGER THAN 24"	1/4 O.D.

E = 12" (LESS THAN 27" DIA. PIPE)

E = ID/2 (27" TO 60" PIPE)

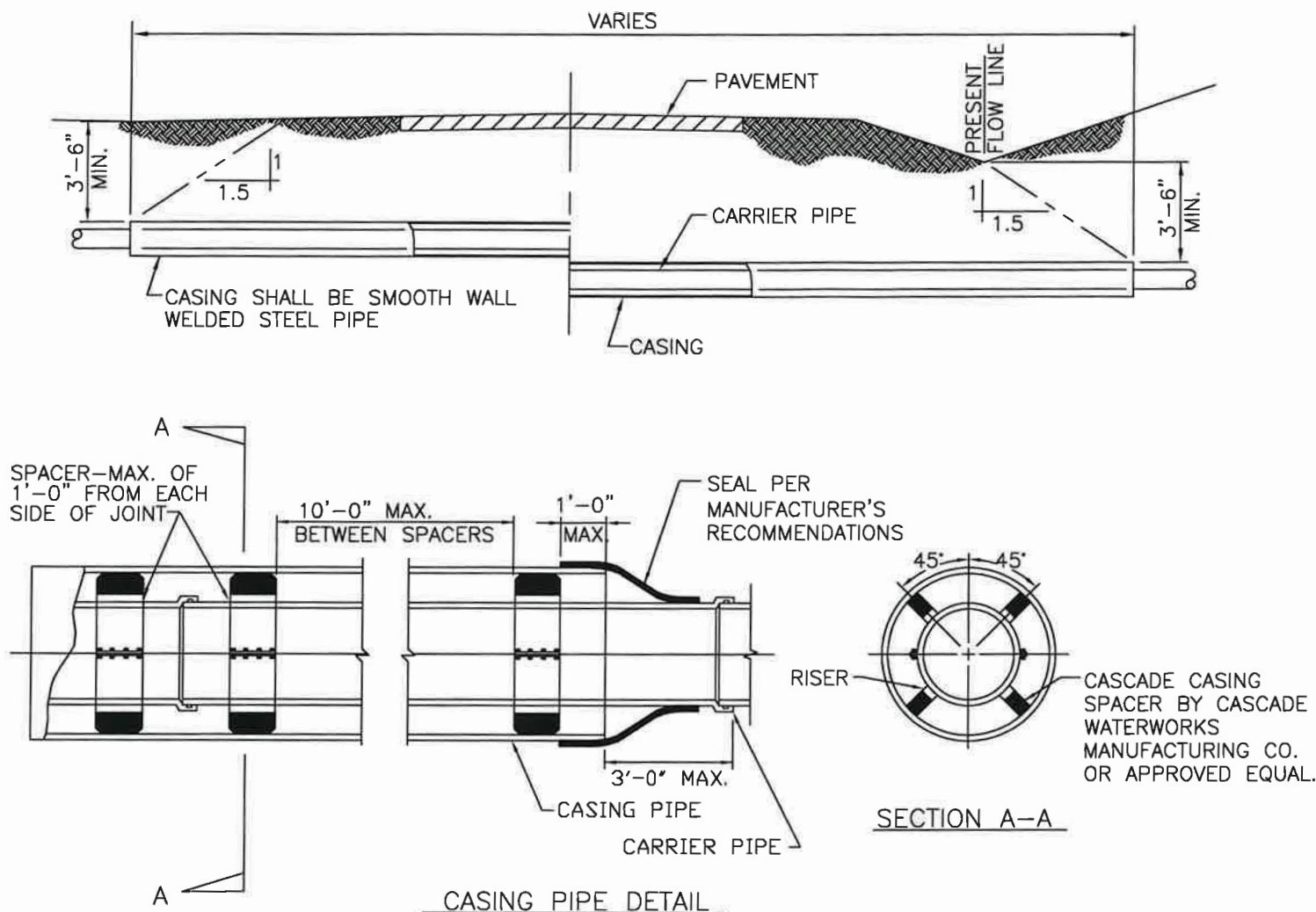
E = TO BE DETERMINED (LARGER THAN 60" PIPE)

LEGEND

Bc	OUTSIDE DIA. OF PIPE
a	EMBEDMENT BELOW PIPE
	GRANULAR EMBEDMENT
	CONCRETE
	UNDISTURBED EARTH

NOTE:

1. ALL UTILITIES SHALL BE INSPECTED AND APPROVED BY THE CITY OF OZARK PRIOR TO BACKFILLING.
2. EXTEND GRANULAR EMBEDMENT MATERIAL TO THE BASE MATERIAL UNDER IMPROVED SURFACES
3. COMPACT GRANULAR EMBEDMENT IN 6" MAX. LIFTS TO 95% STANDARD PROCTOR DENSITY.
4. COMPACT TRENCH BACKFILL IN 12" MAX. LIFTS TO 85% OF THE MAX. DENSITY FOR UNIMPROVED AREAS AND 95% OF THE MAX. DENSITY FOR IMPROVED AREAS.
5. PROVIDE TRACER WIRE UNDER ALL WATER MAINS AND SERVICES AND ALL SEWERS SERVICES AND FORCE MAINS.
6. PROVIDE APPROPRIATE WARNING TAPE 18" TO 24" BELOW FINISH GRADE AT ALL WATER MAINS AND SEWER MAINS AND ALL SERVICES.



DETAIL NOTES:

1. DEPTH OF BORING PIT SHALL BE AS REQUIRED.
2. THE DRILLED HOLE FOR THE CASING PIPE SHALL BE SLIGHTLY UNDERSIZED AND THE PIPE JACKED THROUGH TO ELIMINATE VOIDS BETWEEN PIPE AND HOLE.
3. BOTH ENDS OF CASING WILL BE SEALED AS PER MANUFACTURER'S RECOMMENDATION.
4. #12 AWG COPPER CLAD STEEL TRACER WIRE SHALL BE PROVIDED. THE TRACER WIRE SHALL BE TOTALLY ANNEALED 1055 STEEL, EXTRA HIGH STRENGTH WITH A BREAK LOAD OF 1150 LB AND A 45 MI MINIMUM HDPE COATING.
5. MATERIALS TO BE USED FOR THIS PURPOSE SHALL NOT BE LESS THAN TEN FOOT LENGTHS.
6. ALL JOINT ENDS SHALL BE CUT AT 90 DEGREES TO THE LONGITUDINAL AXIS OF THE PIPE.
7. EACH END SHALL BE BEVELED AND JOINTS SHALL BE BUTT WELDED AROUND THE ENTIRE PERIMETER OF THE PIPE.
8. TWO TRACER WIRES SHALL BE PROVIDED, INSTALLED ON OPPOSITE SIDES OF THE PIPE, WITH ONE WIRE AS BACKUP. TRACER WIRES SHALL BE PULLED THROUGH THE CASING PIPE IN CONJUNCTION WITH THE CARRIER PIPE. TRACER WIRE SPLICES ARE NOT PERMITTED WITHIN THE BORE SECTION.

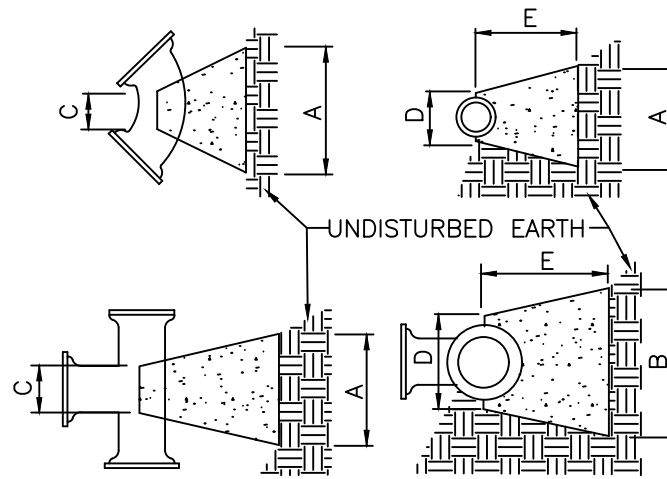
SMOOTH WALL, WELDED STEEL PIPE WITH A MINIMUM WALL THICKNESS AS FOLLOW WILL BE PERMITTED:

CASING DIAMETER (INCHES)	MINIMUM WALL THICKNESS
LESS THAN 6	0.250
6, 8, 10, 12, 14, 16	0.250
18, 20, 22	0.250
24, 26	0.281
28, 30, 32, 34	0.312
36, 38, 40, 48	0.344

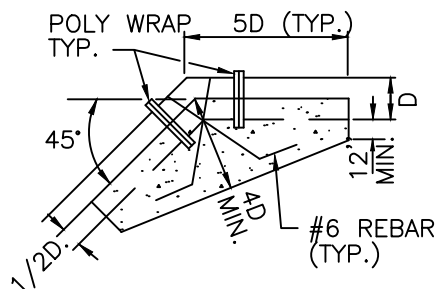
PIPE SIZE	FITTING	DISTANCE IN INCHES				
		A	B	C	D	E
4" AND SMALLER	11.25 & 22.5"	32	28	3	7	14
	45°	32	28	4	7	14
	90°	34	28	6	7	14
	TEE/PLUG	36	28	7	7	14
6"	11.25 & 22.5"	35	29	4	9	15
	45°	36	29	6	9	15
	90°	38	29	7	9	15
	TEE/PLUG	40	29	9	9	15
8"	11.25 & 22.5"	38	31	5	11	17
	45°	40	31	6	11	17
	90°	52	34	9	11	22
	TEE/PLUG	44	31	11	11	17
10" & 12"	11.25 & 22.5"	44	34	7	15	19
	45°	47/59	37	10	15	24
	90°	70/91	38/44	13	15	30/39
	TEE/PLUG	57/71	35/39	15	15	22/28
14" & 16"	11.25 & 22.5"	53	38	7	19	23
	45°	72/85	45	10	19	31/37
	90°	108/129	49/55	18	19	46/56
	TEE/PLUG	88/102	47	19	19	35/41
18"	11.25 & 22.5"	61	41	9	22	26
	45°	98	50	11	22	44
	90°	142	58	20	22	61
	TEE/PLUG	118	52	22	22	48

NOTES:

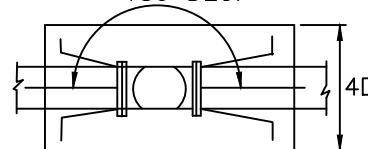
1. THRUST BLOCKS ARE BASED ON A WORKING PRESSURE OF 200 P.S.I., 36" COVER, & 2000 P.S.F. ALLOWABLE SOIL BEARING PRESSURE.
2. FOR PIPE SIZES NOT SHOWN USE DIMENSIONS FOR NEXT LARGER SIZE.
3. CONCRETE SHALL BE POURED AGAINST UNDISTURBED SOIL.
4. ALL THRUST BLOCKS TO BE INSPECTED BY CITY OF OZARK BEFORE BACKFILLING.



CONCRETE THRUST BLOCK DETAIL

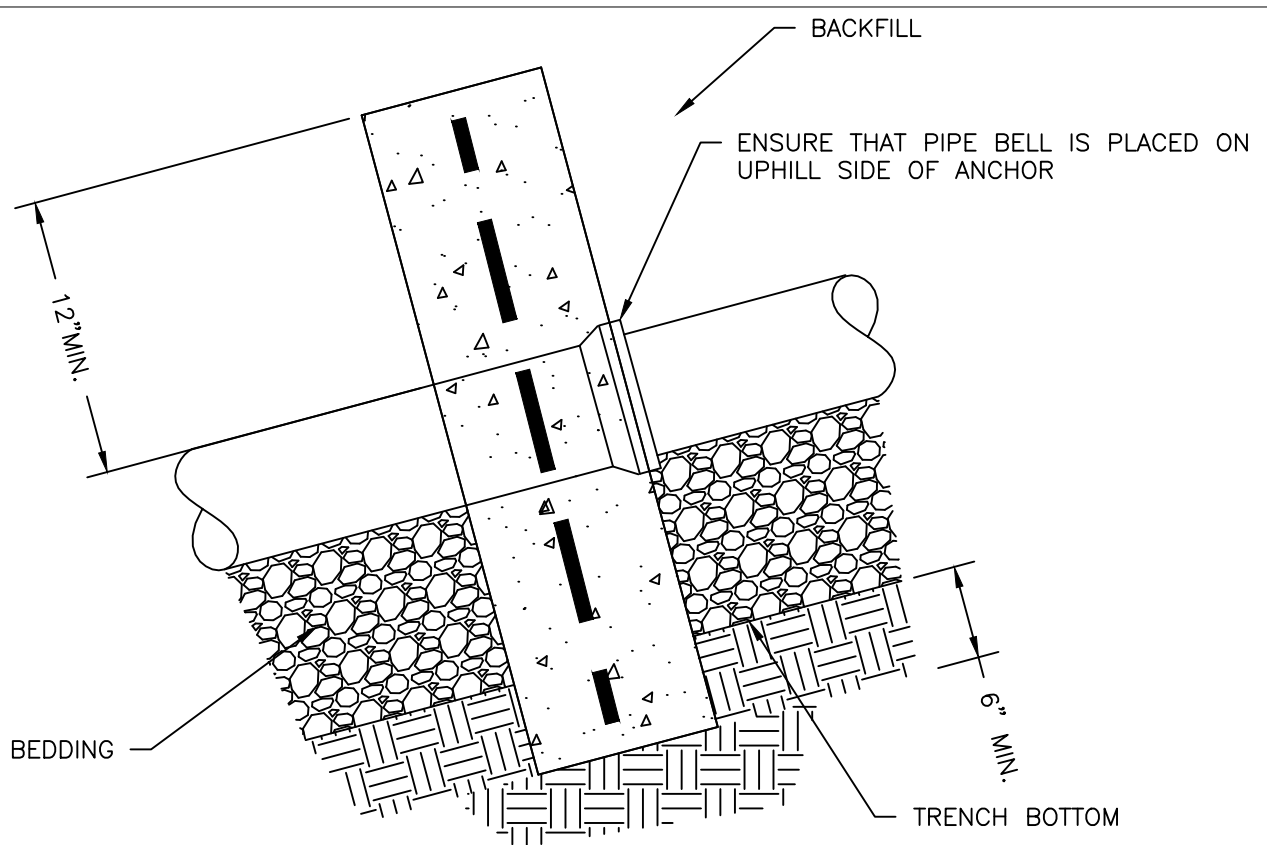


MJ FITTING WITH RETAINER GLANDS
REQUIRED FOR ALL VERTICAL BENDS
180 DEG.

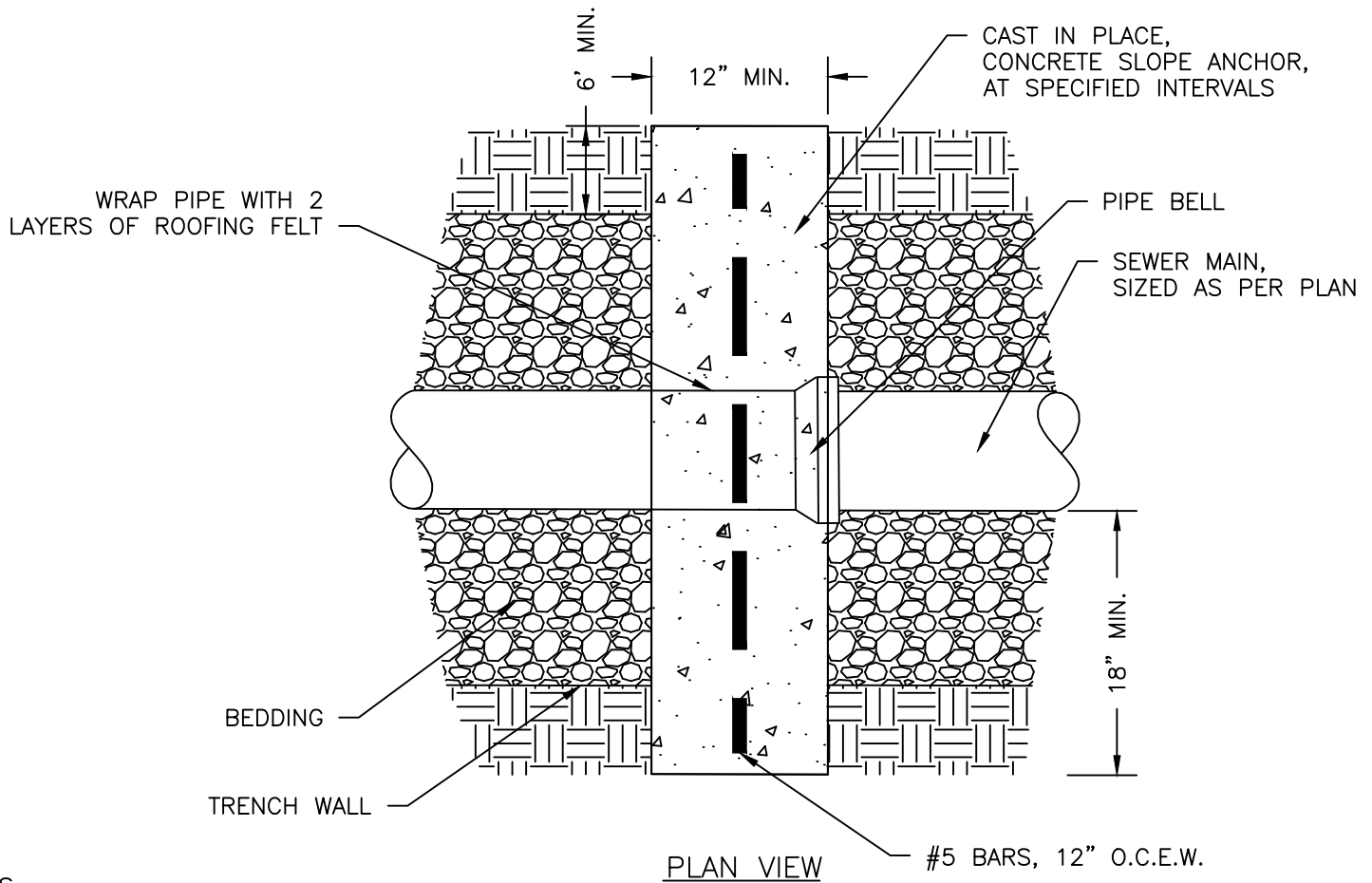


NOTE; ALSO PROVIDE MEGALUG RETAINED JOINTS ON BOTH SIDES OF VERTICAL THRUST BLOCK.

VERTICAL BEND THRUST BLOCK DETAIL



SECTION VIEW

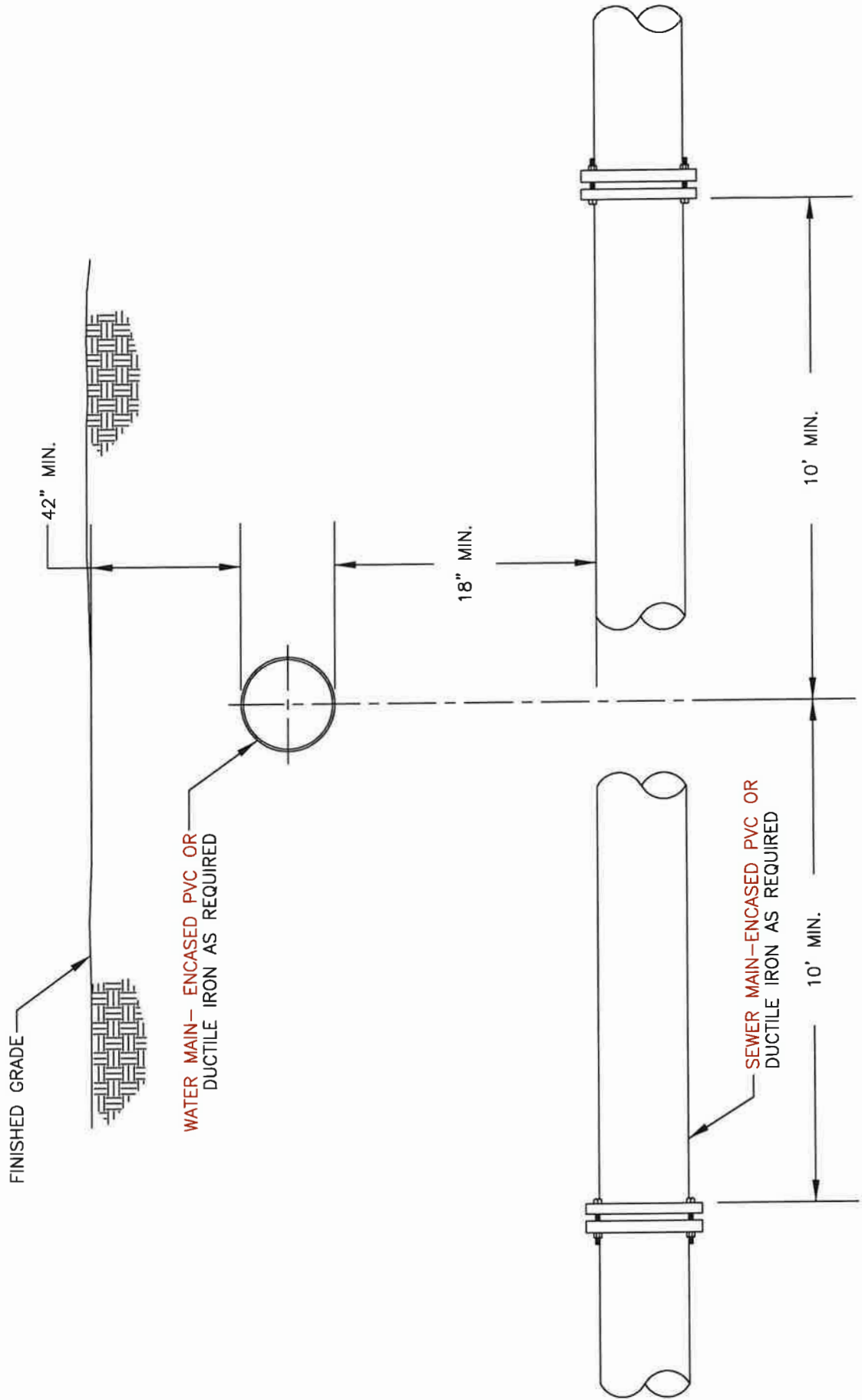


PLAN VIEW

NOTES:
 SANITARY SEWERS ON 20% SLOPE OR GREATER SHALL BE ANCHORED WITH CONCRETE SLOPE ANCHORS AS FOLLOWS;
 NOT OVER 36' CENTER-TO-CENTER ON GRADES FROM 20% AND UP TO 35%, AND
 NOT OVER 24' CENTER-TO-CENTER ON GRADES FROM 35% AND UP TO 50%.
 SLOPES SHALL NOT EXCEED 50%.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
2. IN AREAS WHERE THE RECOMMENDED SEPARATIONS CANNOT BE OBTAINED, EITHER THE WATER LINE OR THE SEWER LINE SHALL BE CONSTRUCTED OF MECHANICAL JOINT PIPE OR ENCASED IN A CONTINUOUS CASING.
3. ENCASEMENT MAY CONSIST OF A 4" MINIMUM THICKNESS OF CONCRETE AROUND THE ENTIRE CIRCUMFERENCE OF THE PIPE.
4. OTHER ENCASEMENT METHODS MAY BE SUBMITTED FOR EVALUATION AND POTENTIAL APPROVAL BY THE DIRECTOR OF PUBLIC WORKS.



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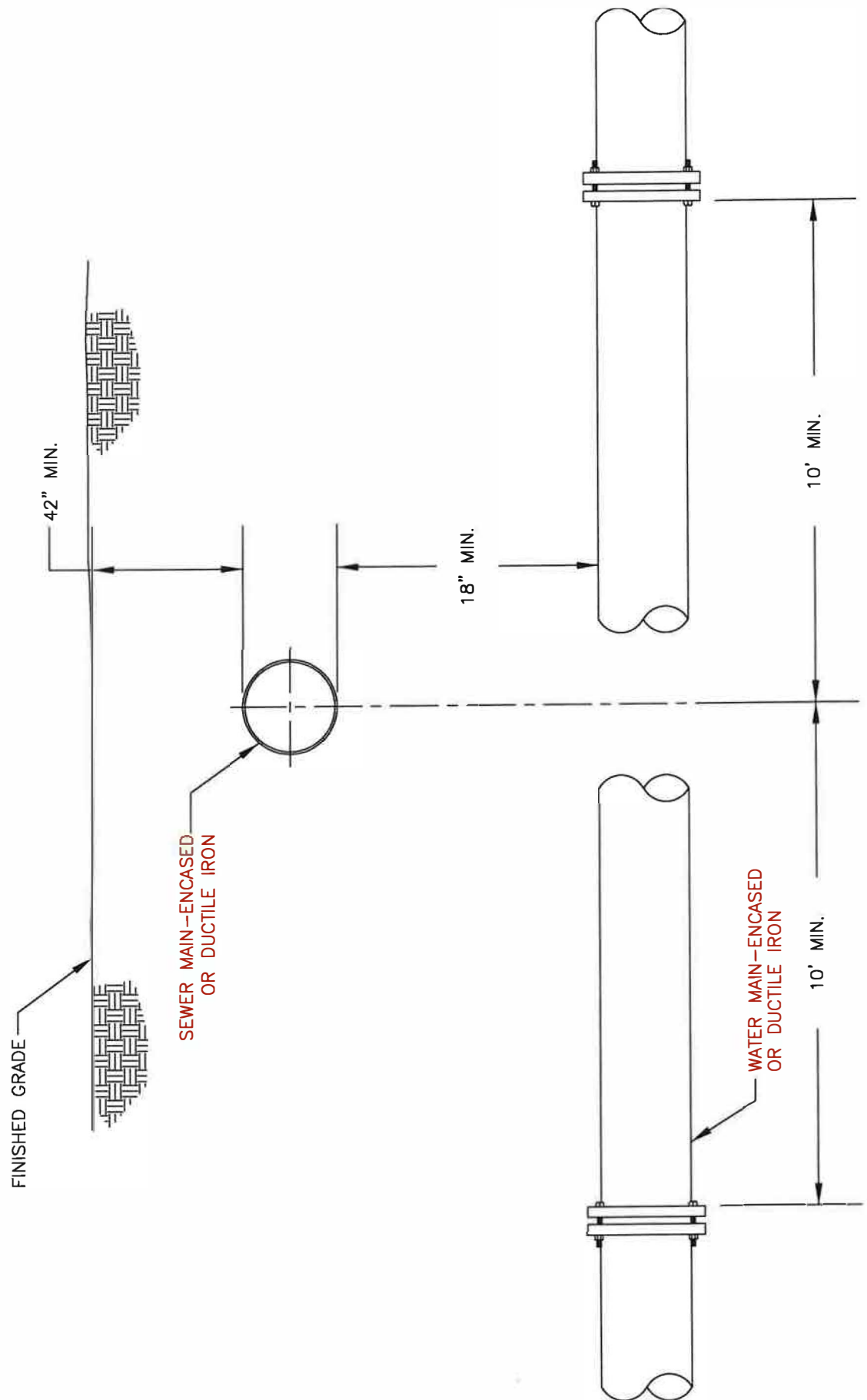
CROSSING DETAIL
WATER OVER SEWER

PIPE-5

NTS DATE 4-15-2020 REVISION 0

NOTES:

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3. ENCASEMENT MAY CONSIST OF A 4" MINIMUM THICKNESS OF CONCRETE AROUND THE ENTIRE CIRCUMFERENCE OF THE PIPE.
4. OTHER ENCASEMENT METHODS MAY BE SUBMITTED FOR EVALUATION AND POTENTIAL APPROVAL BY THE DIRECTOR OF PUBLIC WORKS.



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CROSSING DETAIL
SEWER OVER WATER

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PIPE-6

DATE

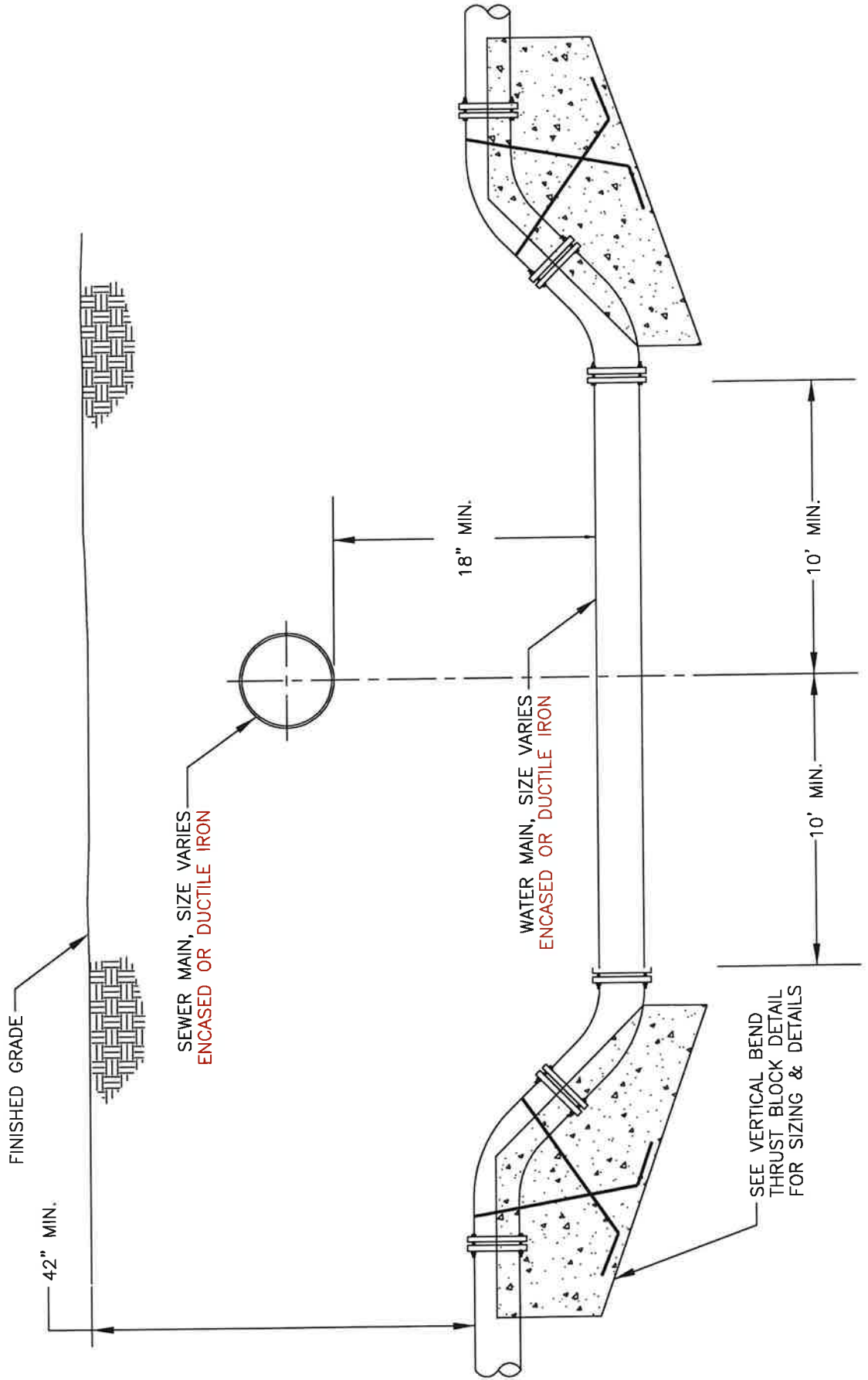
4-15-2020

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NOTES:

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3. ENCASEMENT MAY CONSIST OF A 4" MINIMUM THICKNESS OF CONCRETE AROUND THE ENTIRE CIRCUMFERENCE OF THE PIPE.
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CITY OF OZARK

LOOPING WATER MAIN
DETAIL

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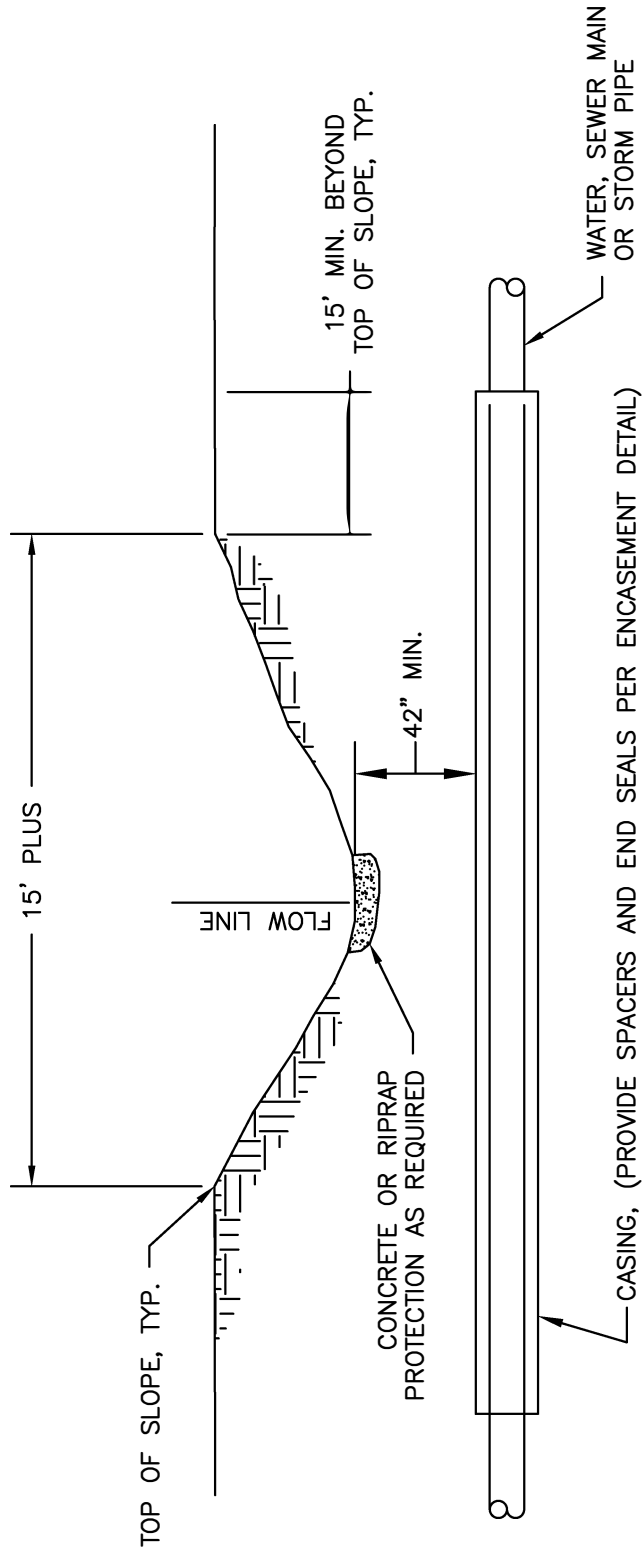
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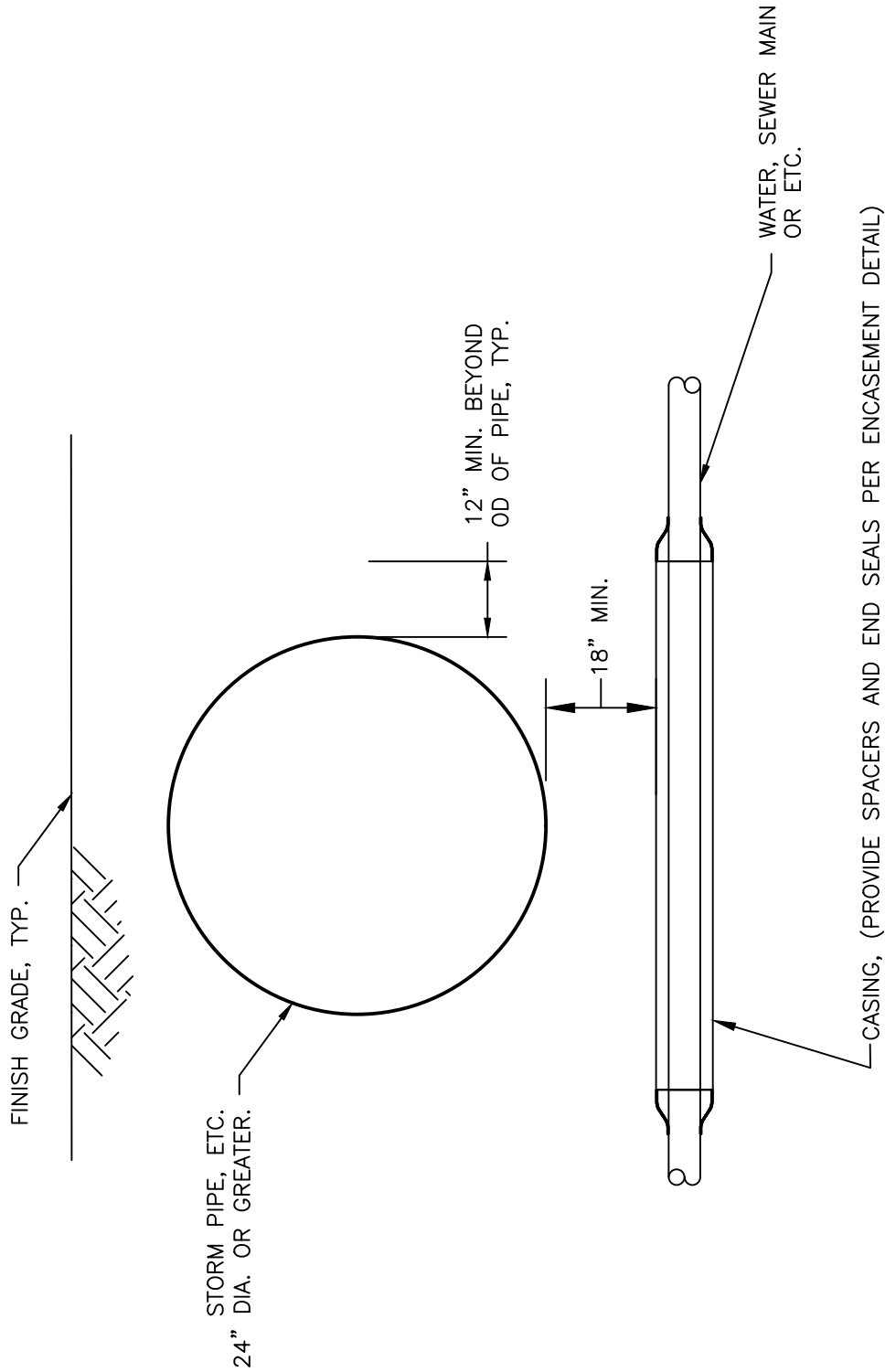
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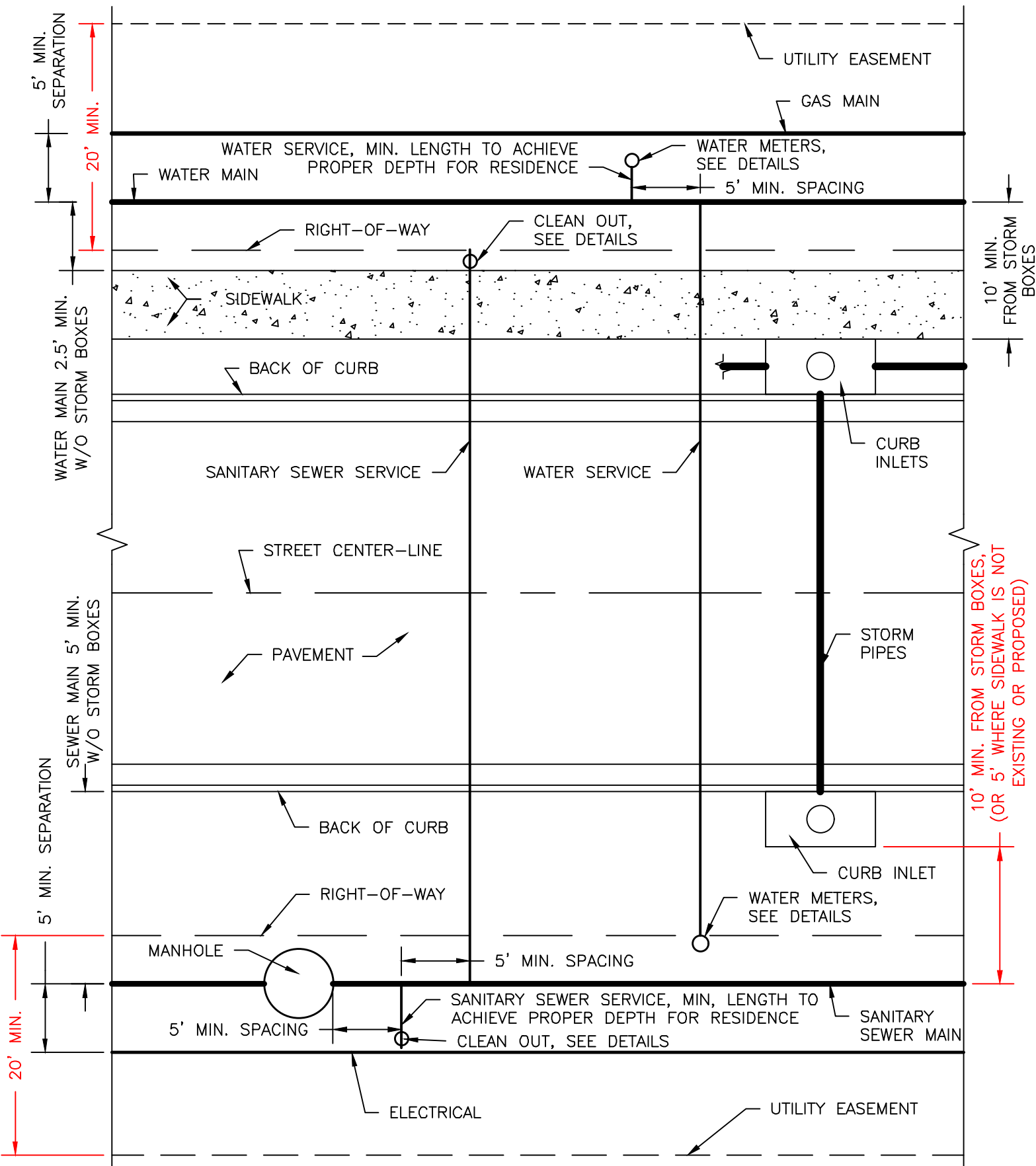
PIPE-7



NOTE;
 WHEN CROSSING WATERWAYS OR WET WEATHER STREAMS THAT EXCEED 15' WIDTH FROM TOP OF SLOPE TO TOP OF SLOPE, ALL WATER MAINS, SEWER MAINS OR STORM PIPES SHALL BE ENCASED IN AN APPROPRIATE SIZED CASING. THE STREAM CROSSING AT THE PIPE LOCATION SHALL BE HARDENED WITH CONCRETE OR RIPRAP PROTECTION AS REQUIRED.

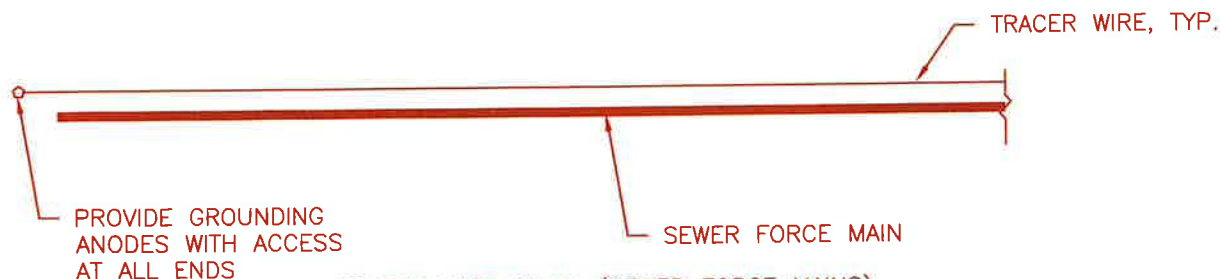


NOTE;
 WHEN CROSSING UNDER 24" OR LARGER PIPES, ALL WATER MAINS, SEWER MAINS OR ETC.
 SHALL BE ENCASED IN AN APPROPRIATE SIZED CASING. PROVIDE END SEALS AND SPACERS.



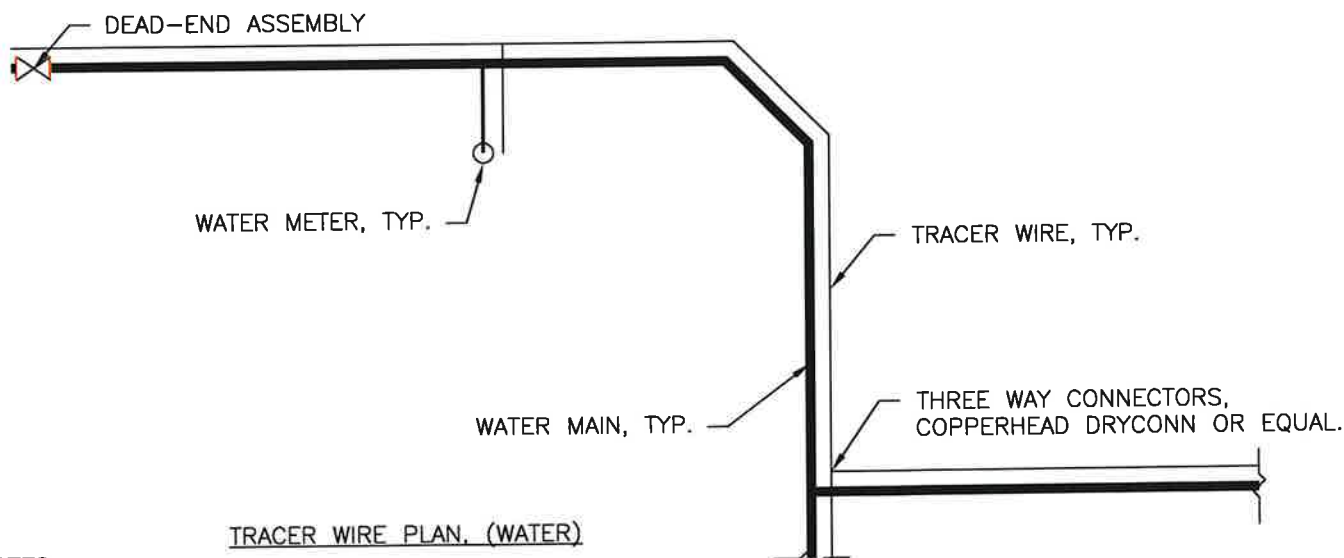
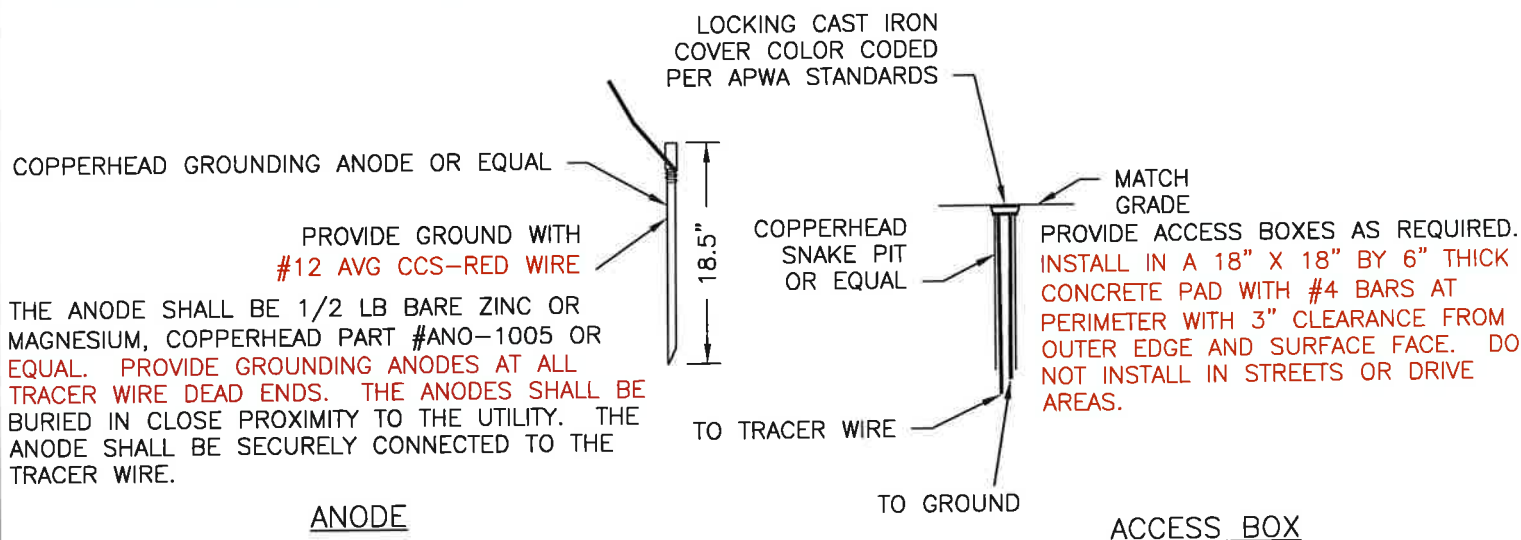
GENERAL RESIDENTIAL UTILITY LAYOUT

- NOTES;
1. THE ABOVE INDICATES A GENERAL LAYOUT FOR UTILITIES WITHIN RESIDENTIAL SUBDIVISIONS.
 2. SOME VARIATION MAY OCCUR, BUT THE MINIMUM SPACINGS, SEPARATIONS AND CLEARANCES SHALL APPLY.
 3. COMMUNICATION CABLES ARE NOT SHOWN BUT SHALL BE OFFSET FROM THE UTILITIES SHOWN BY A MINIMUM OF 2.5'



TRACER WIRE PLAN, (SEWER FORCE MAINS)

TRACE WIRE AND DETECTABLE MARKING TAPE. A TRACE WIRE AND DETECTABLE MARKING TAPE SHALL BE INSTALLED THE ENTIRE LENGTH OF ANY FORCE MAIN. TRACER WIRE SHALL BE ACCESSIBLE FROM THE SURFACE AT INTERVALS NOT TO EXCEED 1000-Feet OF DEVELOPED PIPE LENGTH APART, AND ADJACENT TO ALL AIR VALVE VAULTS. TERMINAL/ACCESS BOXES SHALL BE GRADE LEVEL, IN-GROUND TYPE SPECIFICALLY MANUFACTURED FOR SUCH APPLICATIONS. TERMINAL BOXES SHALL BE INSTALLED FLUSH WITH FINISHED GRADE AND CENTERED IN GRADE LEVEL REINFORCED CONCRETE PAD, MINIMUM 18" BY 18" BY 6" THICK, AT LOCATIONS APPROVED BY THE DIRECTOR OF PUBLIC WORKS OR HIS DESIGNEE. IN ADDITION TO TRACE WIRE, A DETECTABLE MARKING TAPE SPECIFICALLY MANUFACTURED FOR MARKING AND LOCATING UNDERGROUND UTILITIES SHALL BE INSTALLED THE ENTIRE LENGTH OF THE FORCE MAIN. MARKING TAPE SHALL BE INSTALLED DIRECTLY OVER FORCE MAIN AT A DEPTH OF 18- TO 24-INCHES BELOW FINISHED GRADE.



GENERAL NOTES;

1. TRACER WIRE SHOWN AWAY FROM MAINS ONLY FOR CLARITY.
2. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF ALL WATER AND FORCE MAINS AND WATER AND SEWER SERVICES BELOW THE SPRING LINE.
3. TRACER WIRE SHALL BE #12 AWG COPPER CLAD STEEL, HIGH STRENGTH, TOTALLY ANNEALED 1055 STEEL WITH A BREAK LOAD OF 452 LB AND A 30 MI MINIMUM THICKNESS HDPE COATING.
4. WIRE SHALL BE PROPERLY GROUNDED AT ALL DEAD ENDS/STUBS.
5. PROVIDE TRACER WIRE ACCESS AT ALL WATER VALVES AND METER PITS AND AIR RELIEF VALVES.

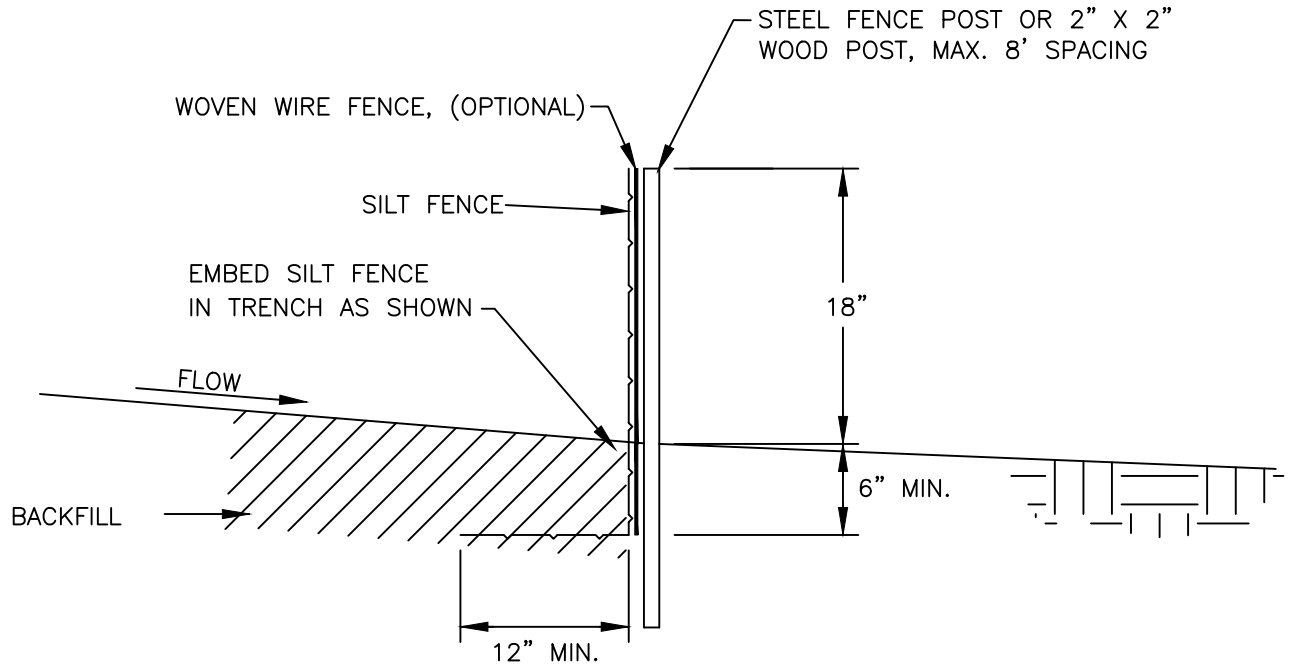
CITY OF OZARK

TRACER WIRE SCHEMATIC
DETAIL

PIPE-10

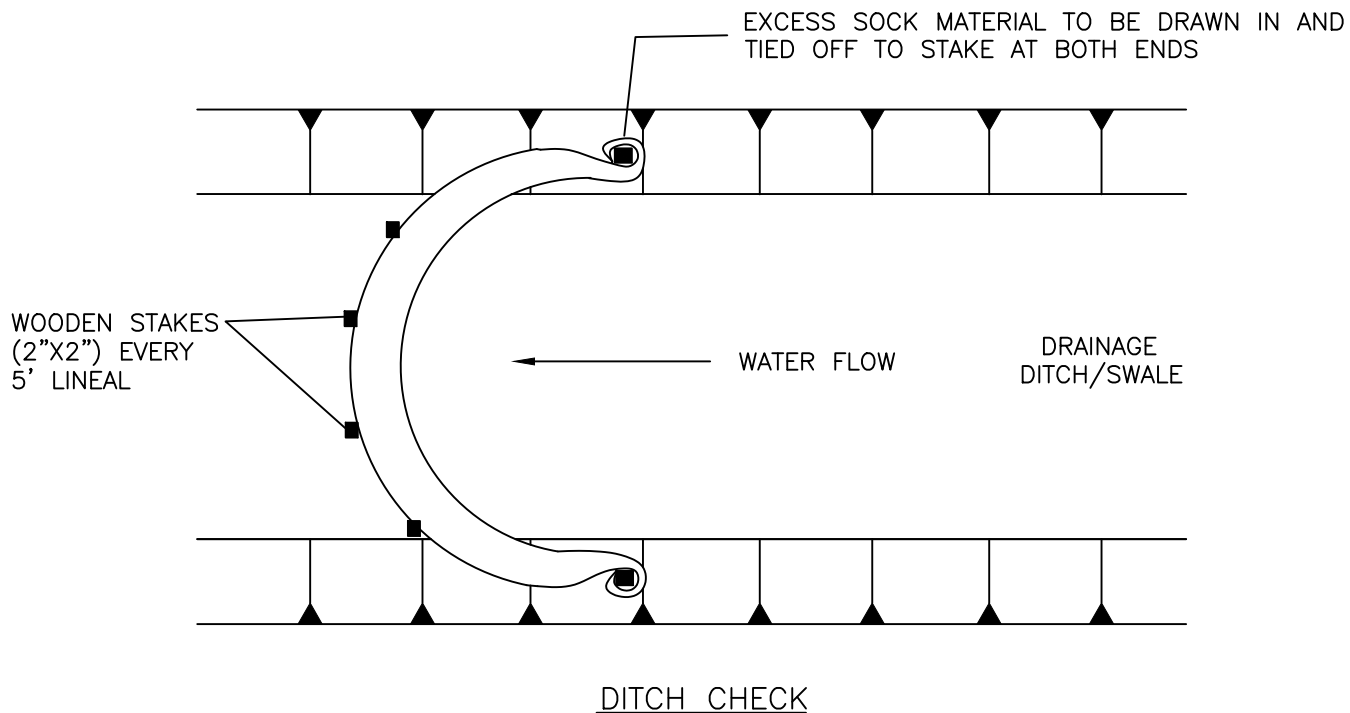
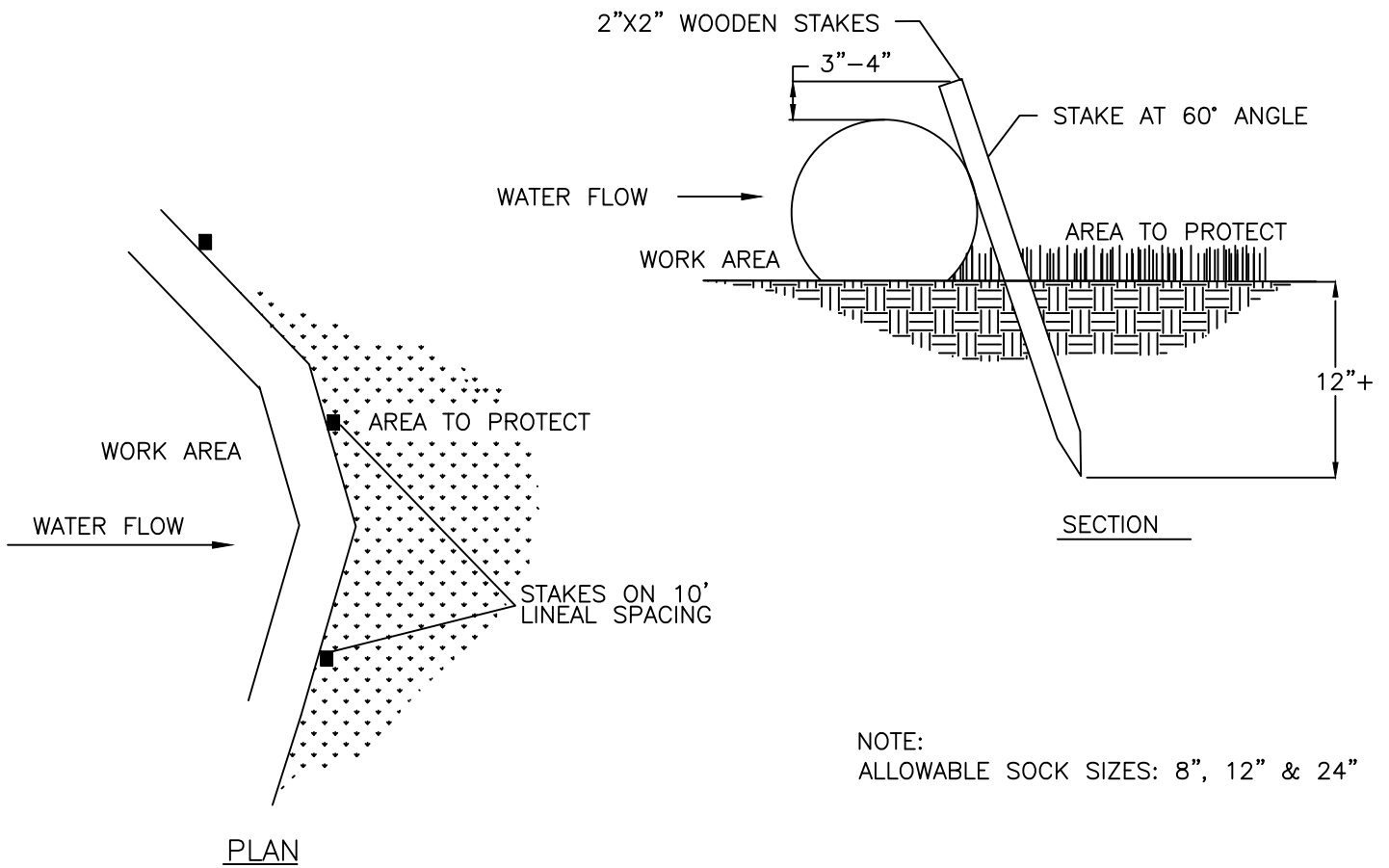
DATE 5-03-2021 REVISION 2

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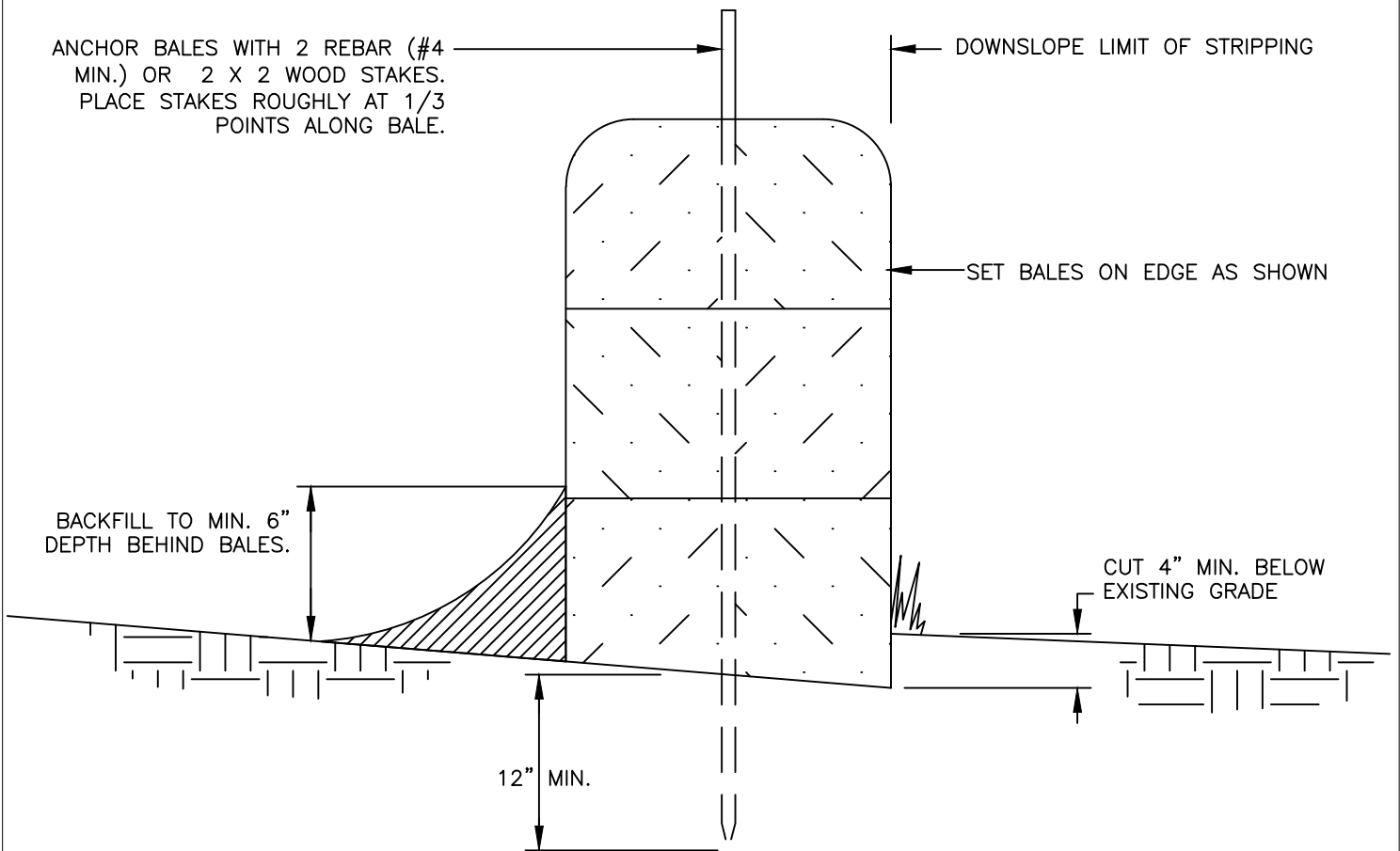
NOTES:

1. PLACE SILT FENCE AT DOWNSLOPE LIMIT OF AREA TO BE GRADED.
2. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE WHICH IS IN TURN ATTACHED TO THE SUPPORT POSTS.
3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS REQUIRED.
4. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
5. ACCUMULATED SILT/SEDIMENT SHALL BE REMOVE WHEN IT REACHES A DEPTH OF 6" AND DISPOSED OF IN AN APPROVED SPOIL SITE.
6. AT EACH END OF SILT FENCE, TURN FENCE UPSLOPE AND EXTEND UNTIL GROUND SURFACE RISES 18".
7. PRE-FABRICATED SILT FENCE PRODUCTS MAY BE SUBSTITUTED IF APPROVED BY THE CITY OF OZARK.
8. SILT-SOX IS AN APPROVED SUBSTITUTE.



NOTES;

1. FOLLOW THE MANUFACTURER'S SPECIFICATIONS.
2. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS REQUIRED.
3. SILT SOX MAY BE REMOVED WHEN IT HAS SERVED IT'S USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
4. ACCUMULATED SILT AND SEDIMENT SHALL BE REMOVE WHEN IT REACHES A DEPTH OF 6" AND DISPOSED OF IN AN APPROVED SPOIL SITE.



NOTES:

1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF FOUR INCHES, WHERE POSSIBLE.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS TO NOT BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6" AND DISPOSED OF IN AN APPROVED SITE.
7. AT EACH END OF DIKE, TURN DIKE UPSLOPE AND EXTEND UNTIL GROUND SURFACE RISES 18".

CITY OF OZARK

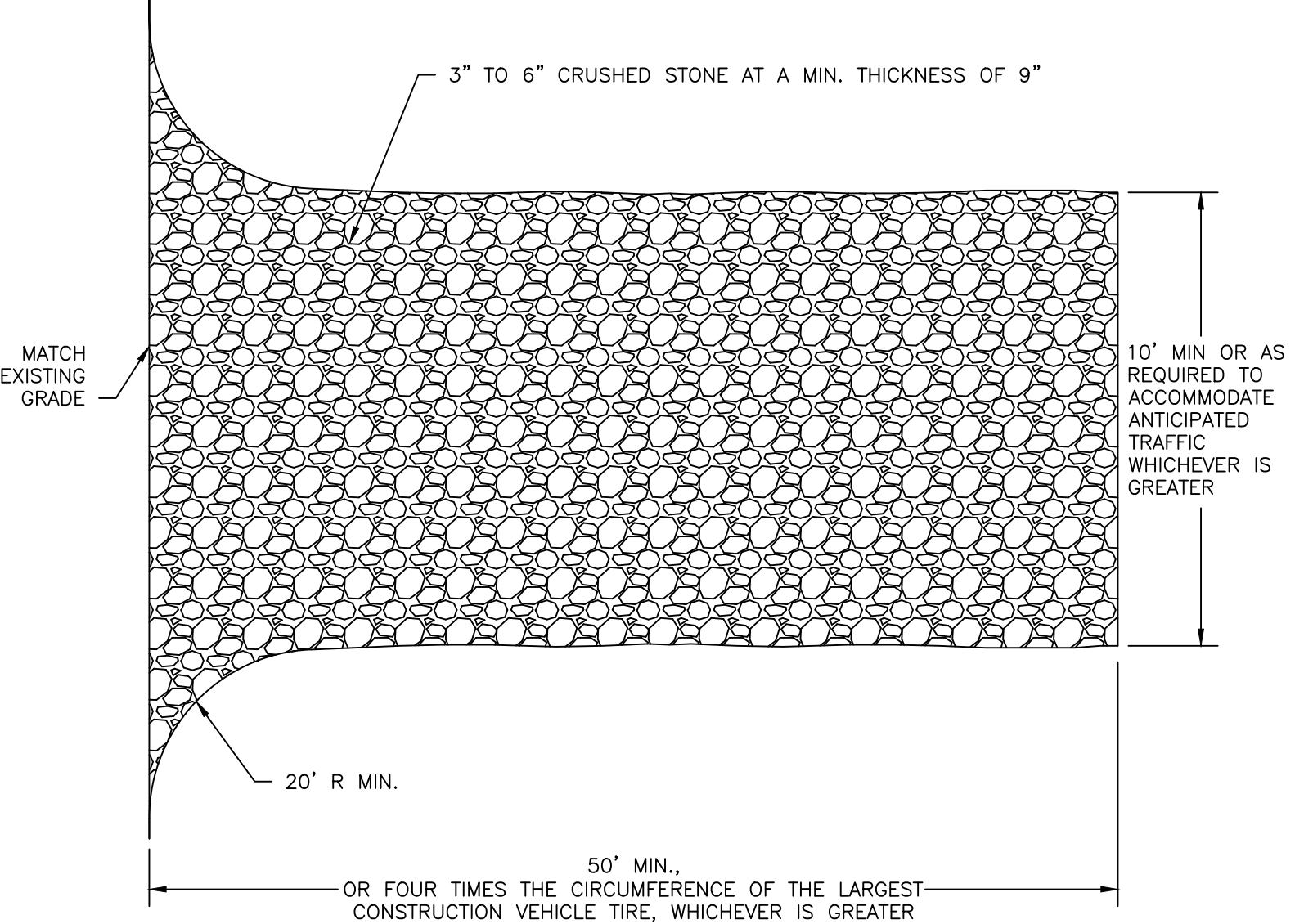
STRAW BALE DIKE
DETAIL

NTS

SEC-3

DATE
7-18-05

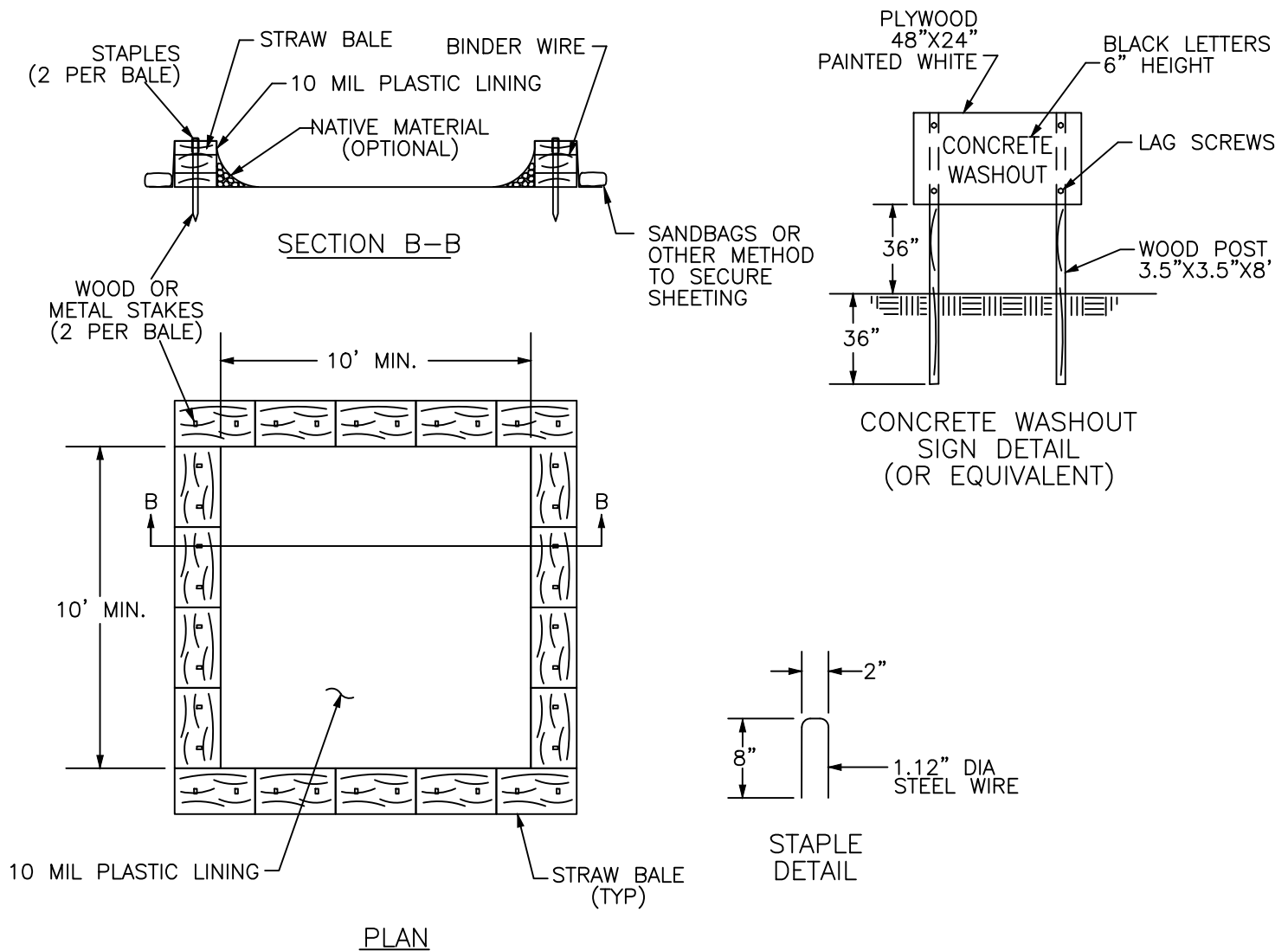
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PLAN

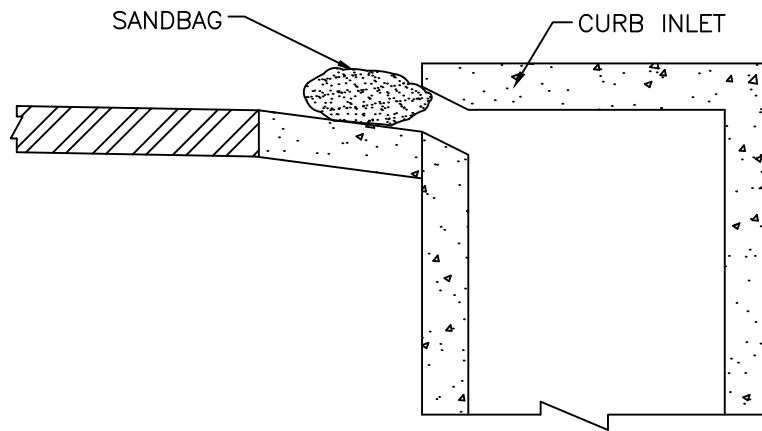
NOTES;

1. THE CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION WORK BEING ACCOMPLISHED. AVOID LOCATING ON STEEP SLOPES, AT CURVES ON PUBLIC ROADS OR DOWNHILL OF DISTURBED AREAS. REMOVE ALL VEGETATION AND UNSUITABLE MATERIAL FROM THE FOUNDATION AREA. A GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE FILL AND THE EARTH SURFACE..
2. PROPERLY GRADE EACH CONSTRUCTION ENTRANCE/EXIT TO PREVENT RUNOFF FROM LEAVING THE SITE. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO SEDIMENT CONTROL DEVICE. IF THE SLOPE TOWARD THE PUBLIC ROAD EXCEEDS 2%, CONSTRUCT A 6 TO 8 INCH HIGH RIDGE WITH 1/3 SIDE SLOPES TO DIVERT ANY RUNOFF AWAY FROM THE PUBLIC ROAD.
3. INSTALL CULVERT UNDER ENTRANCE IF REQUIRED TO MAINTAIN POSITIVE DRAINAGE.
4. ALL VEHICLES SHALL UTILIZE THE STABILIZED CONSTRUCTION ACCESS.
5. THE CONSTRUCTION ENTRANCE/EXIT SHALL BE INSPECTED WEEKLY AND AFTER 1/2" STORM EVENTS.
6. REPLACE ROCK, IF NECESSARY, TO MAINTAIN A CLEAN SURFACE AND REPAIR ANY AREAS THAT HAVE SETTLED.
7. IMMEDIATELY REMOVE ANY MUD OR DEBRIS TRACKED ONTO PAVED SURFACES.
8. REMOVE ALL CONSTRUCTION ENTRANCE/EXIT WHEN VEHICLES AND EQUIPMENT WILL NO LONGER ACCESS UNPAVED AREAS.

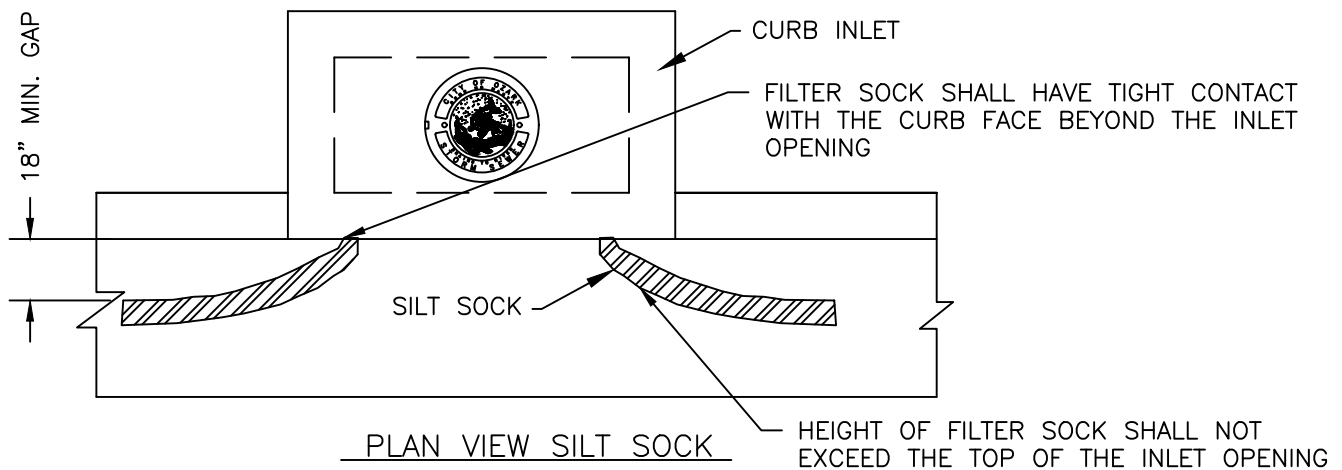


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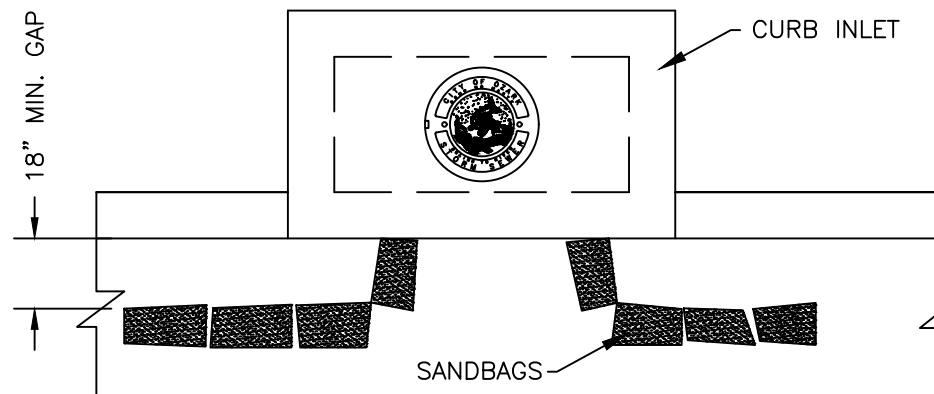
1. OTHER CONFIGURATIONS OF CONCRETE WASHOUTS MAY BE SUBMITTED FOR REVIEW AND POSSIBLE APPROVAL.
2. THE CONCRETE WASHOUT MAY BE CONSTRUCTED EITHER ABOVE OR BELOW GRADE.
3. THE LOCATION OF THE CONCRETE WASHOUT SHALL BE SHOWN ON THE EROSION AND CONTROL PLANS.
4. THE REQUIRED SIZE SHALL BE DETERMINED BY THE DESIGN ENGINEER AND INDICATED ON THE DRAWINGS.
5. THE CONCRETE WASHOUT SHALL HAVE SUFFICIENT VOLUME. DISCHARGE WILL NOT BE ACCEPTABLE.
6. THE CONCRETE WASHOUT SHALL BE INSTALLED PRIOR TO ANY CONCRETE DELIVERY TO THE SITE.
7. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE CONCRETE WASHOUT.
8. THE CONCRETE WASHOUT SHALL NOT BE INSTALLED WITHIN 50' OF ANY STREAM, WETLAND, STORM DRAINS OR OTHER SENSITIVE AREAS.
9. THE LINER SHALL BE ONE PIECE WITHOUT SEAMS.
10. THE CONCRETE WASHOUT SHALL BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY AND ADEQUATE HOLDING CAPACITY. THEY SHALL ALSO BE INSPECTED AFTER HEAVY RAINS.
11. ONLY CONCRETE WASHOUT SHALL BE PLACED INTO THE CONCRETE WASHOUTS.
12. THE HARDENED CONCRETE WASTE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO 75% OF THE WASHOUT'S CAPACITY.
13. AFTER COMPLETION OF ALL CONCRETE WORK, THE CONCRETE WASHOUT FACILITY SHALL BE REMOVED AND PROPERLY DISPOSED OF OFF SITE.



CROSS SECTION



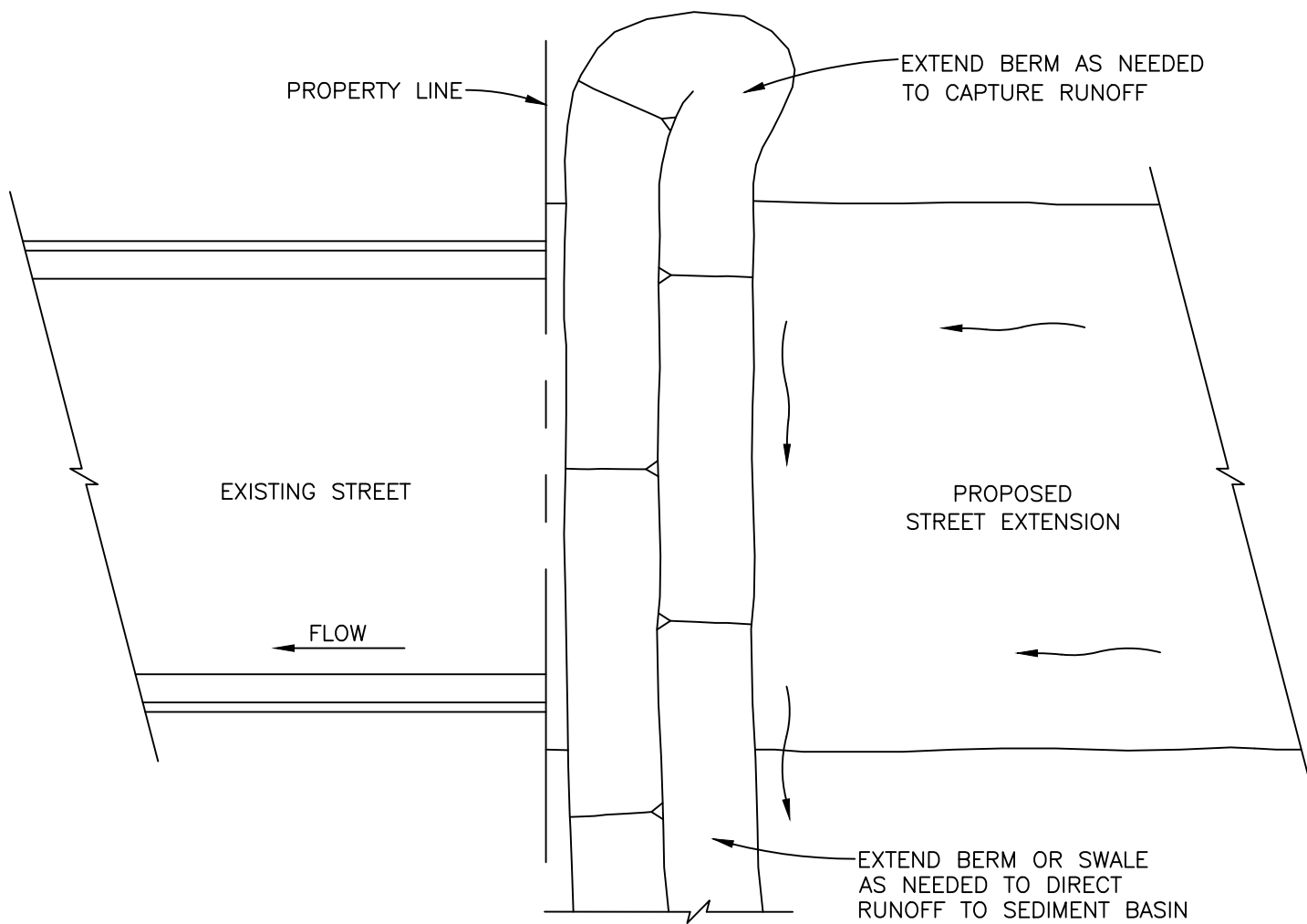
PLAN VIEW SILT SOCK



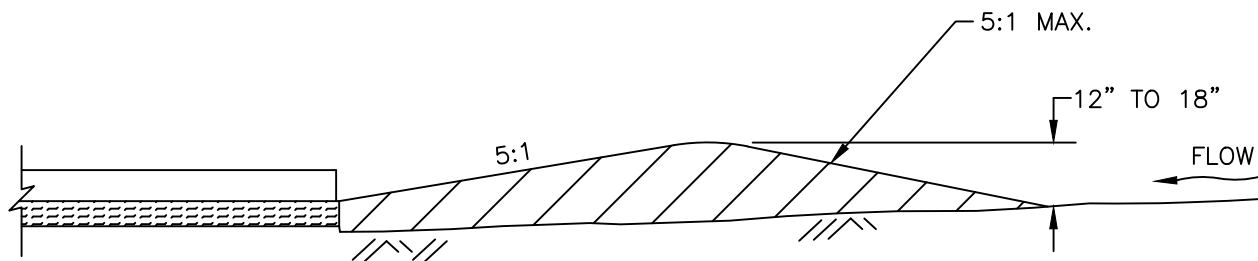
PLAN VIEW SAND BAGS

NOTES;

1. SANDBAGS FILLED WITH CHAT OR LIMESTONE SAND MAY BE USED IN THE CONFIGURATION SHOWN AS A MEASURE TO CONTROL SILT AND SEDIMENT.
2. THE NUMBER OF SANDBAGS SHALL BE ADJUSTED AS NECESSARY FOR THE EXISTING FLOW/CONDITIONS.
3. THE TOP IF THE SANDBAGS SHALL BE LOWER THAN THE TOP OF CURB.
4. THE SANDBAGS SHALL HAVE TIGHT CONTACT WITH THE CURB FACE.
5. CLEAN UP AND ADEQUATE MAINTENANCE OF SILT/SEDIMENT DEPOSIT SHALL BE PROVIDED DURING THIS PERIOD.
6. SANDBAGS SHALL BE REMOVED AFTER ADJACENT EARTHWORK OPERATION IS COMPLETED AND IT HAS SERVED IT'S USEFULNESS, SO AS NOT TO IMPEDE STORM FLOW OR DRAINAGE.
7. FILTER SOCK MAY ALSO BE PLACED ACROSS THE OPENING OF THE CURB INLET AS A SOLUTION.
8. STRAW BALES ARE NOT PERMITTED.
9. ALL INLETS AND STORM PIPES SHALL BE CLEANED OF SILT AND SEDIMENT PRIOR TO FINAL APPROVAL.

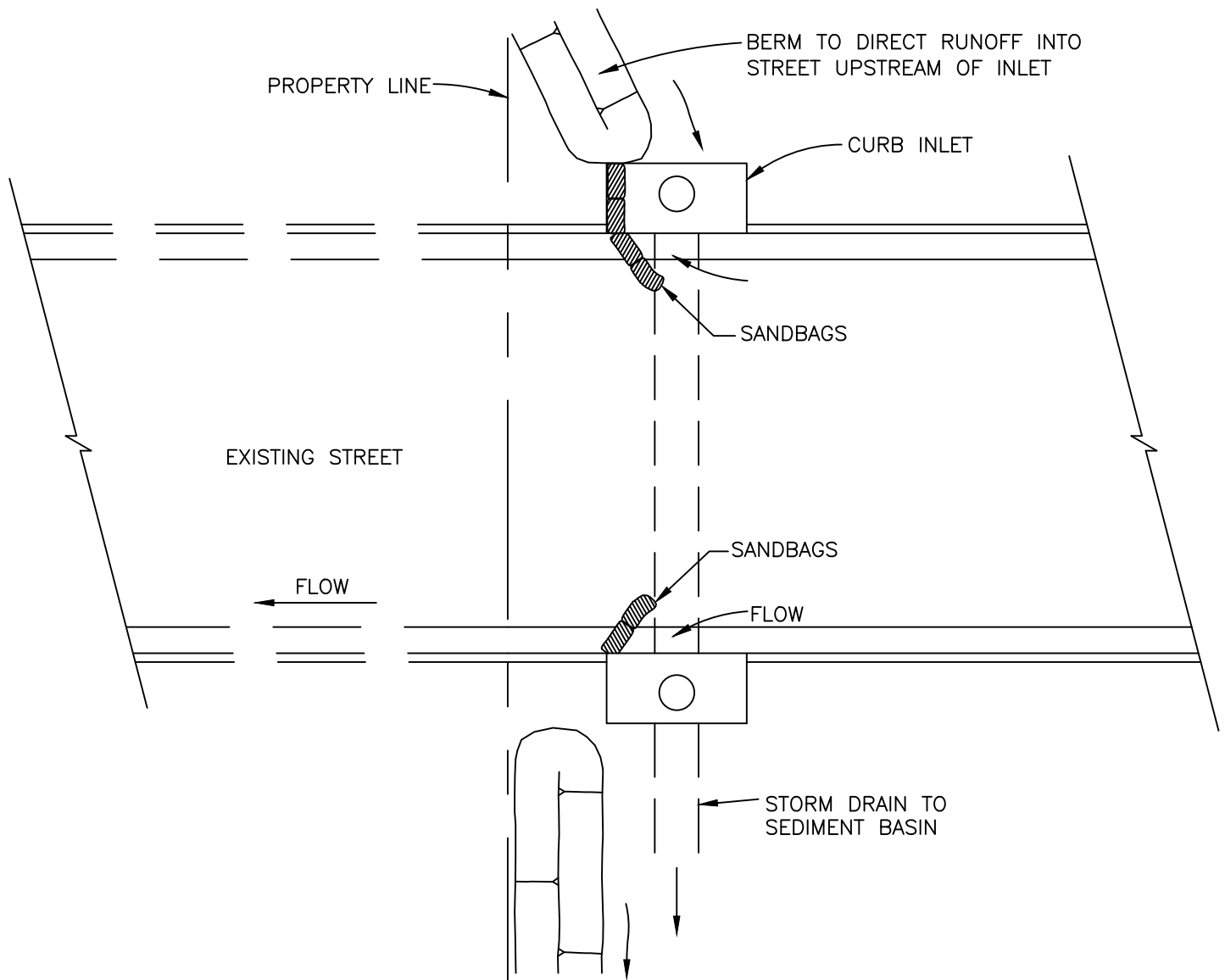


PLAN



CROSS-SECTION

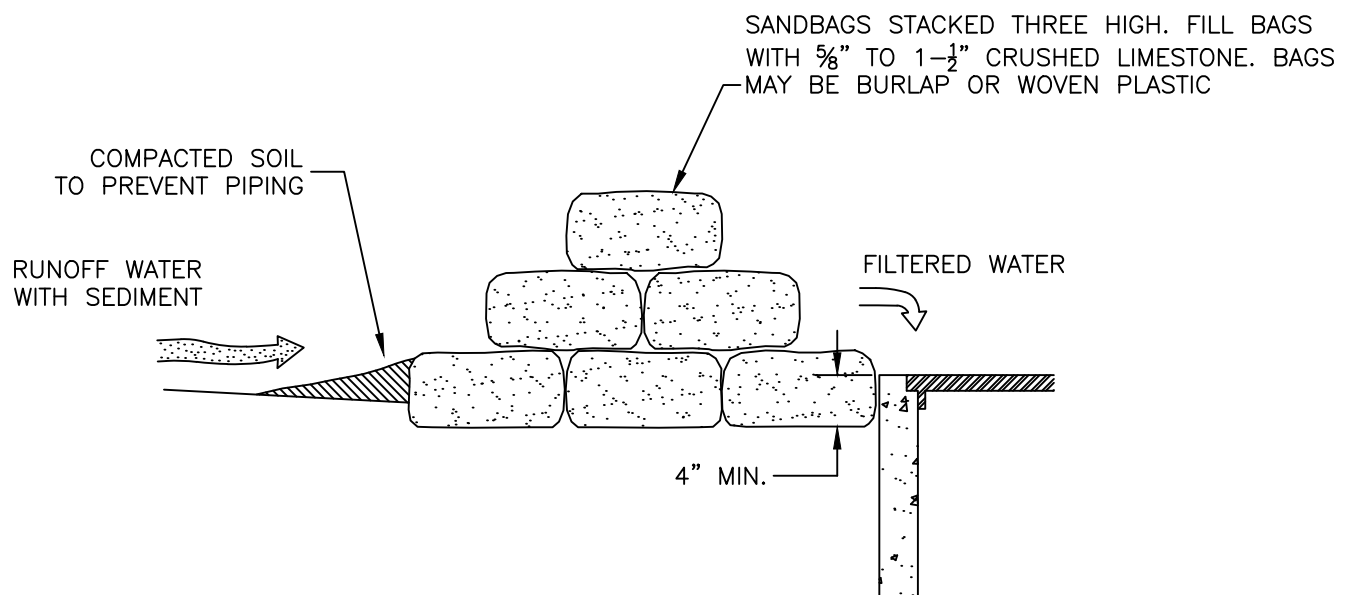
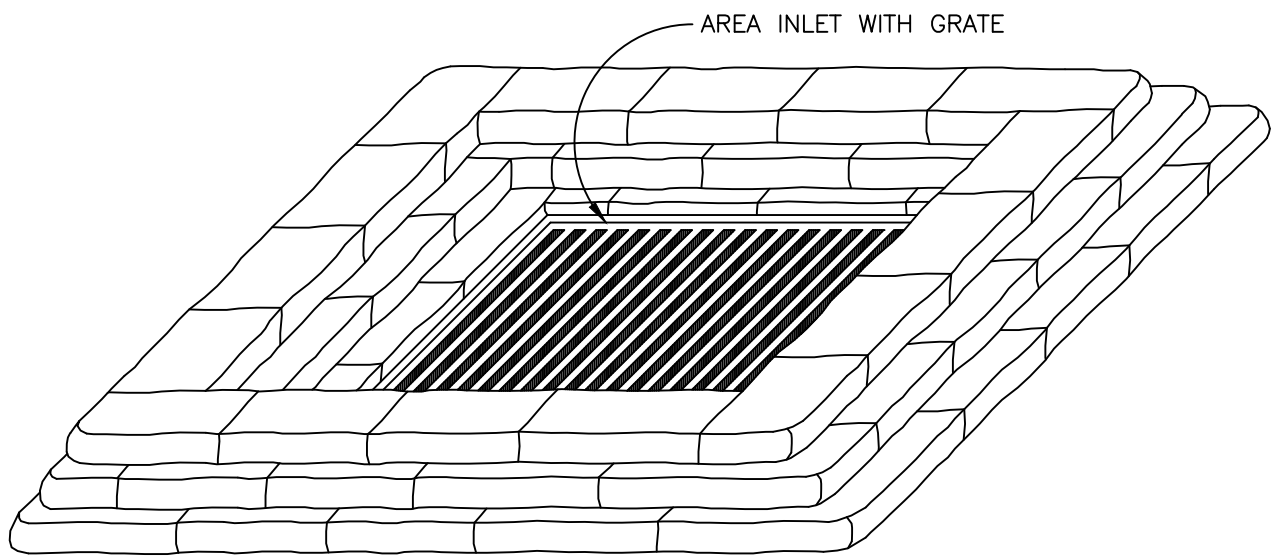
CASE 1 – AFTER INITIAL EXCAVATION OF SUBGRADE.



PLAN

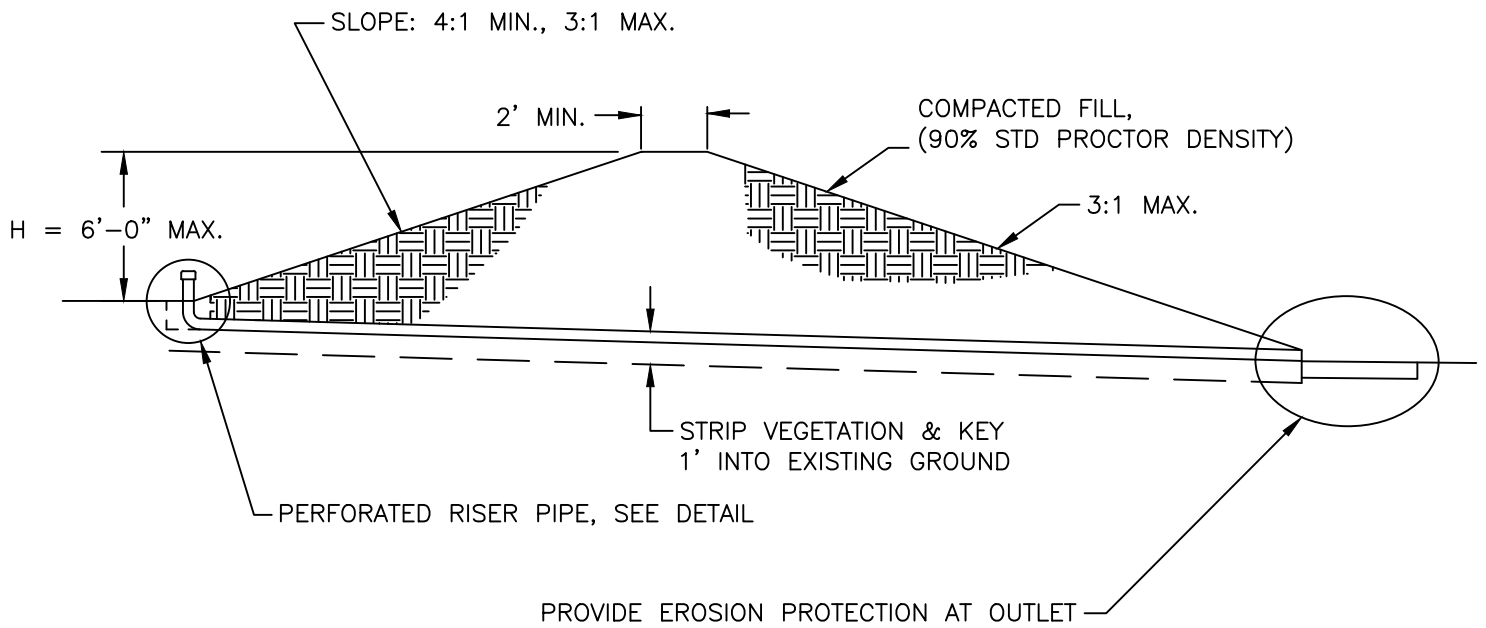
NOTE: FILL SANDBAGS WITH CHAT OR LIMESTONE SAND

CASE 2 – AFTER PAVEMENT AND INLETS COMPLETED.



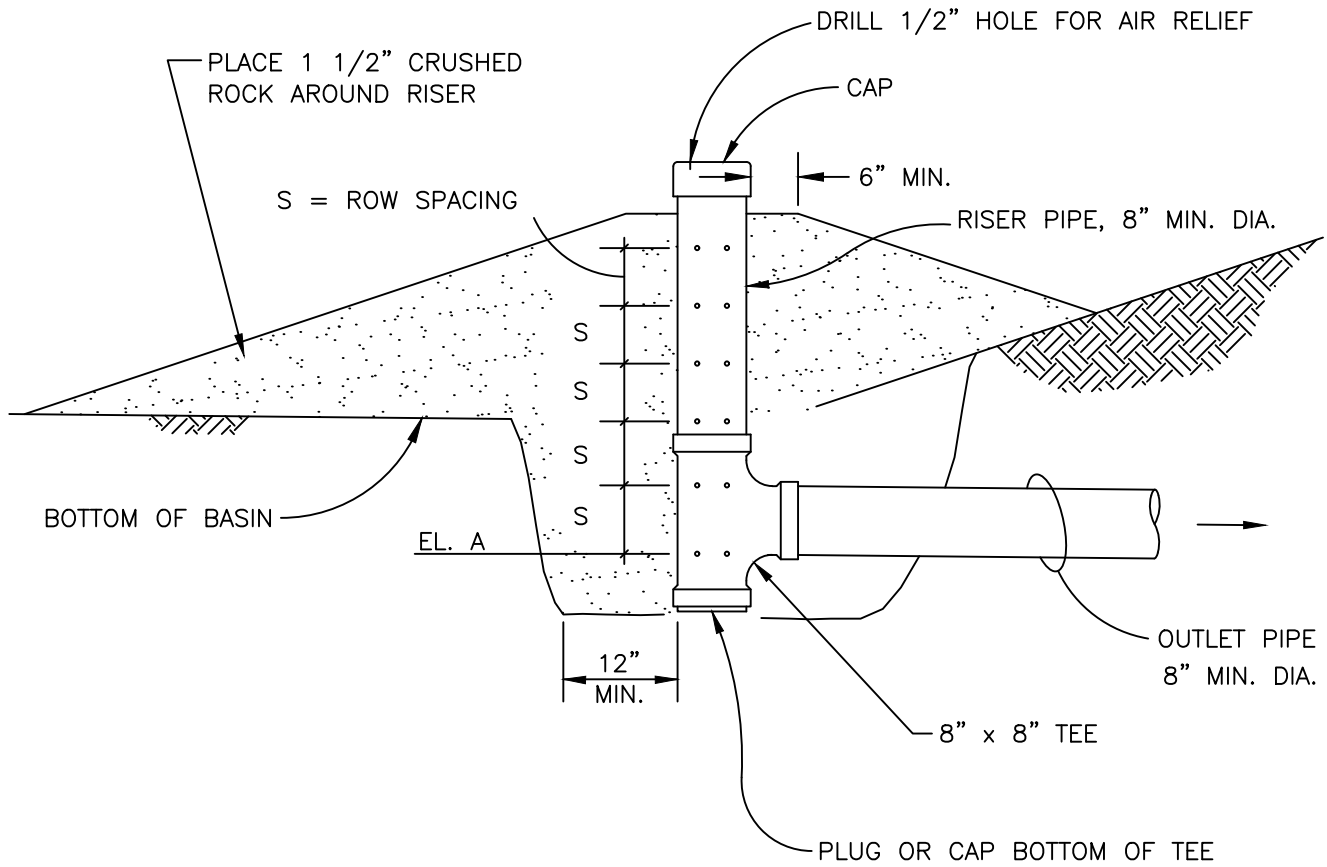
NOTES:

1. STACKED SANDBAGS MAY BE USED IN PAVED AREAS.
2. OUTSIDE OF PAVED AREAS OR BEFORE PAVEMENT IS PLACED, AREA INLETS CAN BE PROTECTED BY INSTALLING A SUITABLE SEDIMENT CONTROL DEVICE BUT STRAW BALES ARE NOT PERMITTED.
3. ACCUMULATED SEDIMENT MUST BE REMOVED FROM STORM SYSTEM PRIOR TO FINAL APPROVAL.



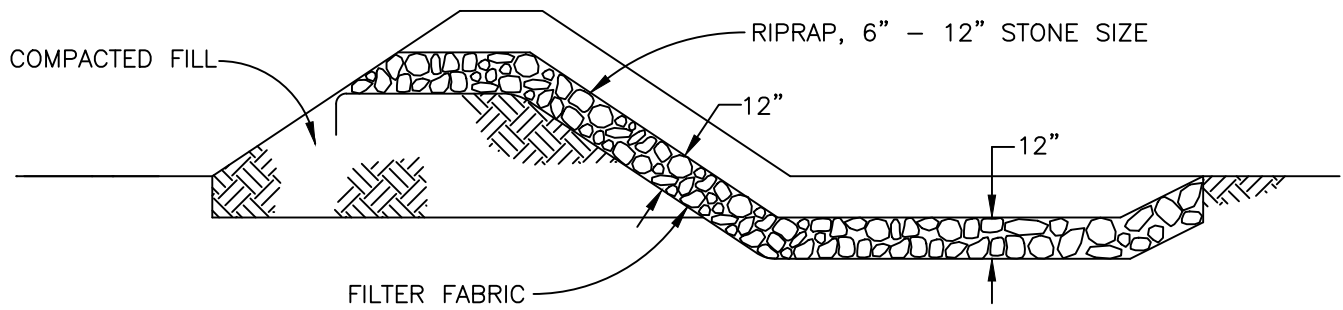
SECTION A - A

n = NUMBER OF HOLES PER ROW
d = HOLE DIAMETER

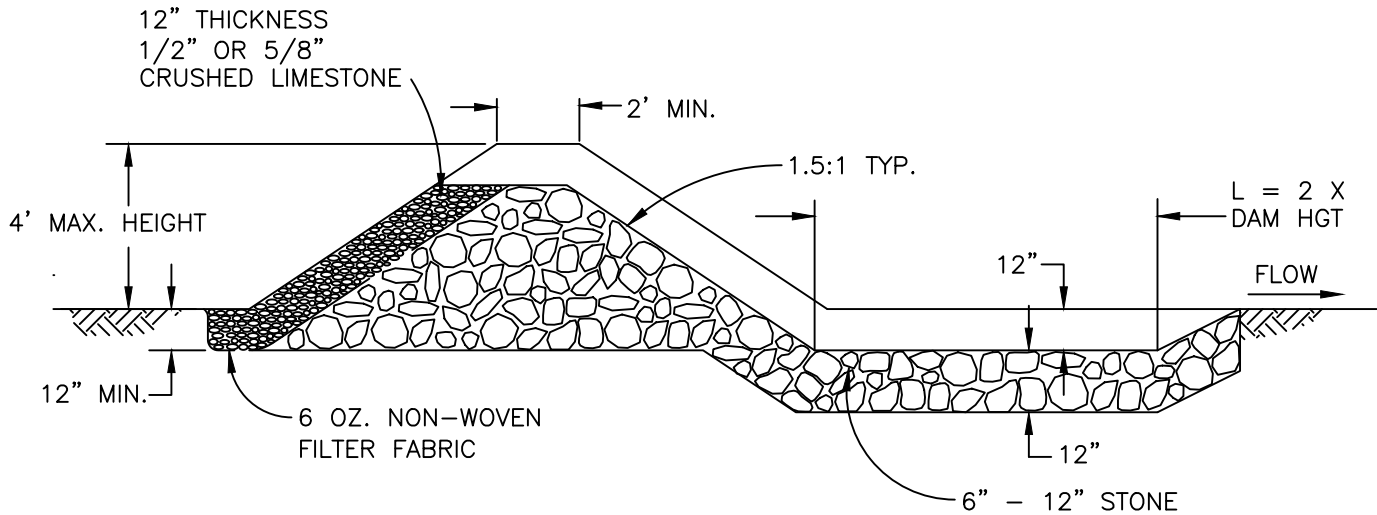


NOTES:

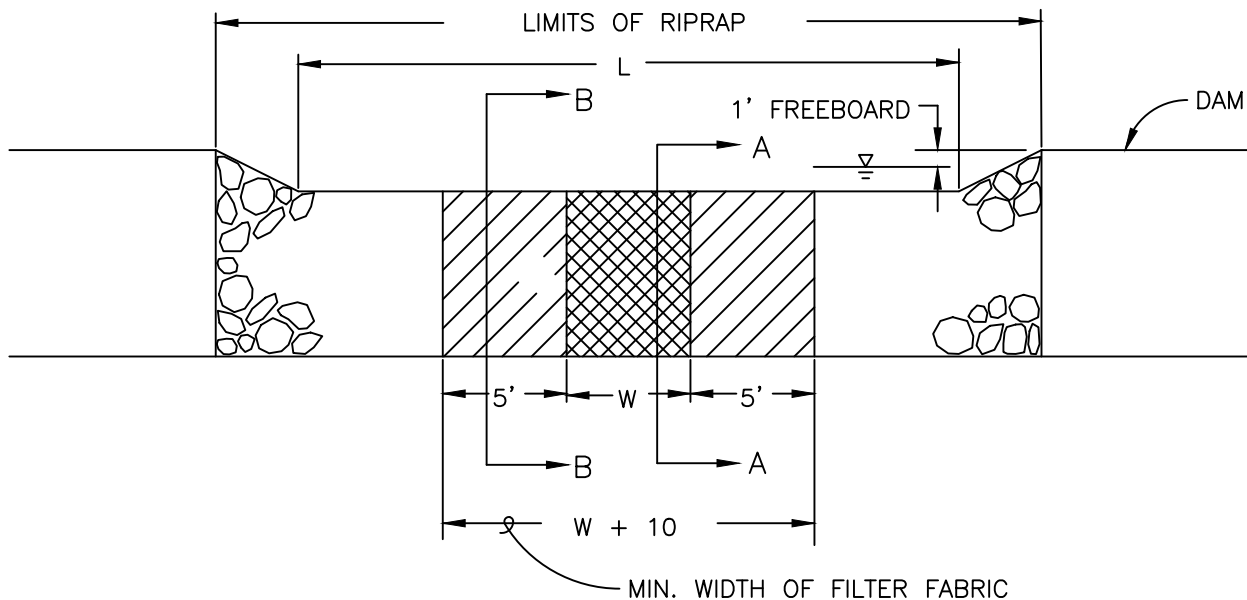
- 1. BOTTOM ROW OF HOLES SHALL BE SET NO HIGHER THAN BOTTOM OF BASIN.
- 2. ELEVATION OF BOTTOM ROW OF HOLES SHALL BE SET EQUAL TO INVERT ELEVATION OF OUTLET PIPE, (EL. A).
- 3. THIS ELEVATION SHALL BE SPECIFIED ON THE DRAWINGS.



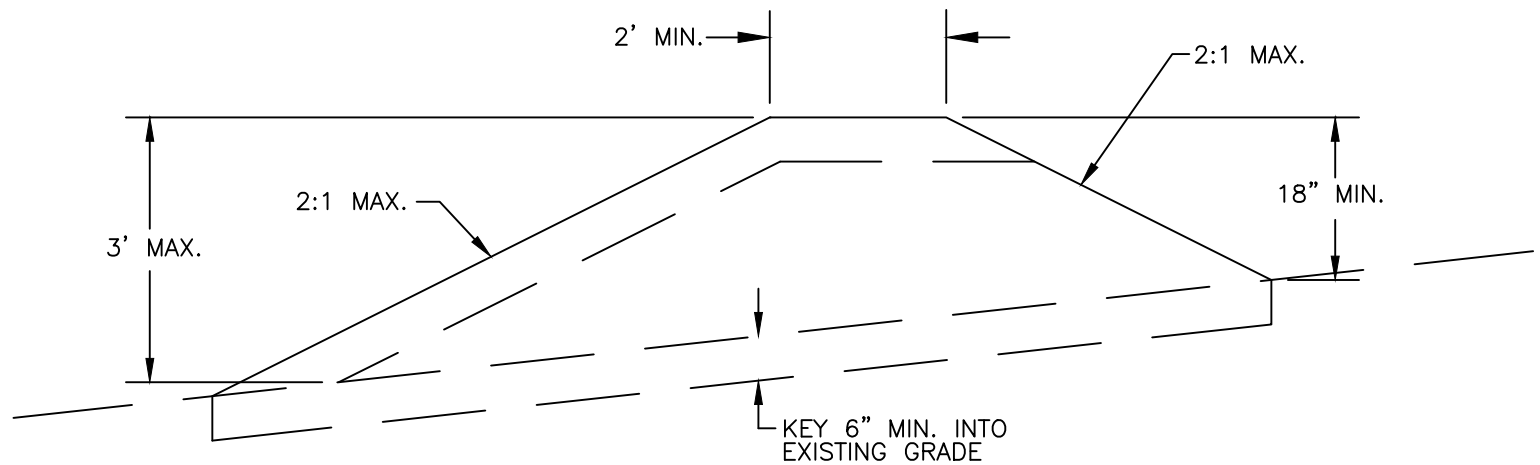
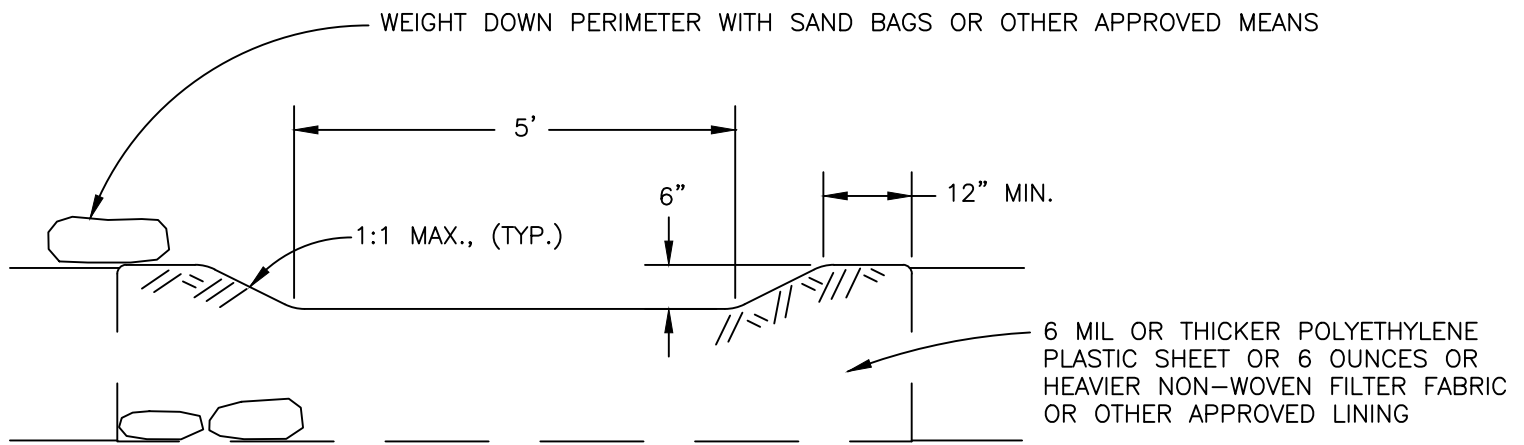
SECTION B - B



SECTION A - A (THRU GRAVEL FILTER)



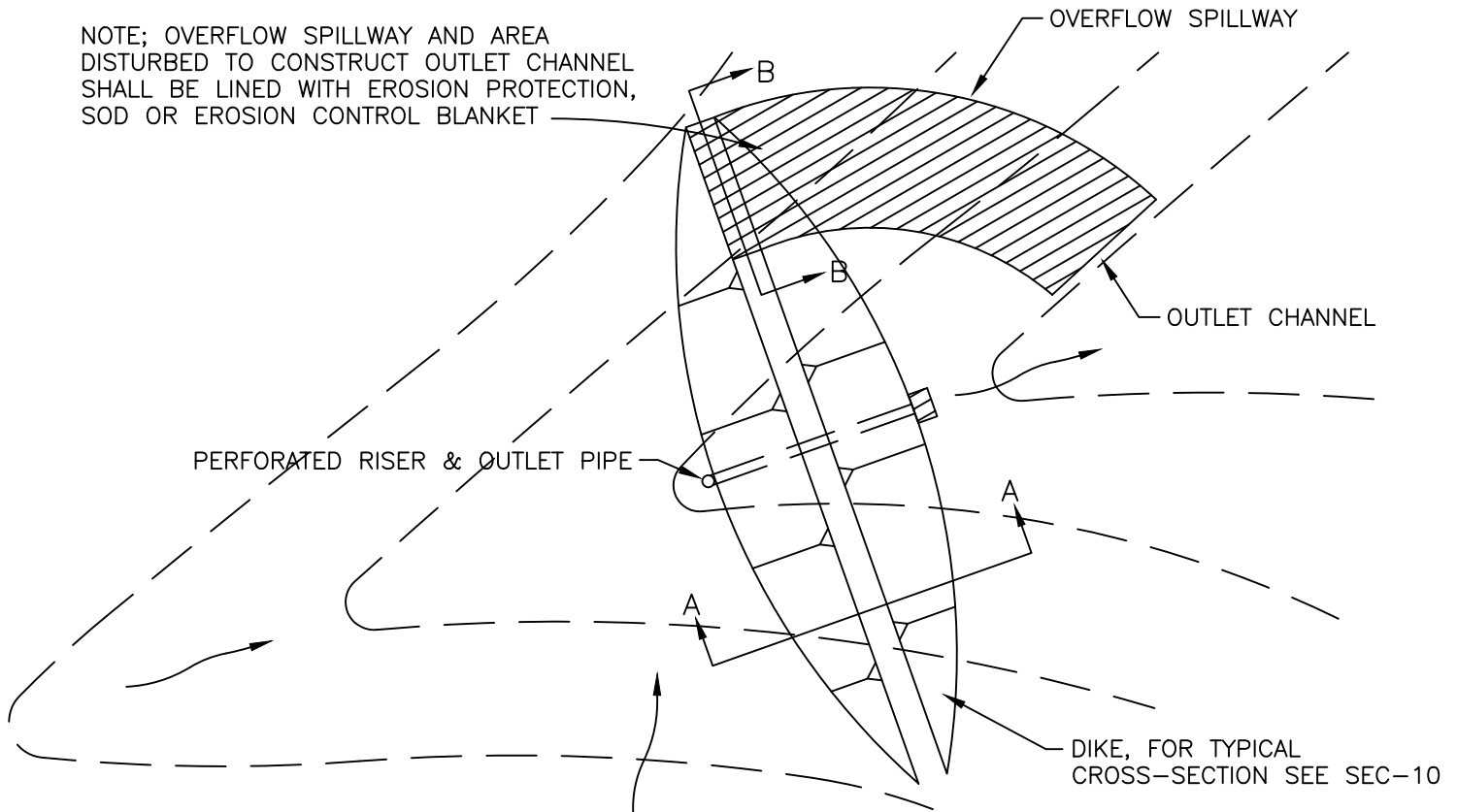
L = LENGTH REQUIRED TO PASS Q WHILE MAINTAINING 1 FOOT OF FREEBOARD.
WIDTH OF ROCK FILTER AREA W =



NOTES:

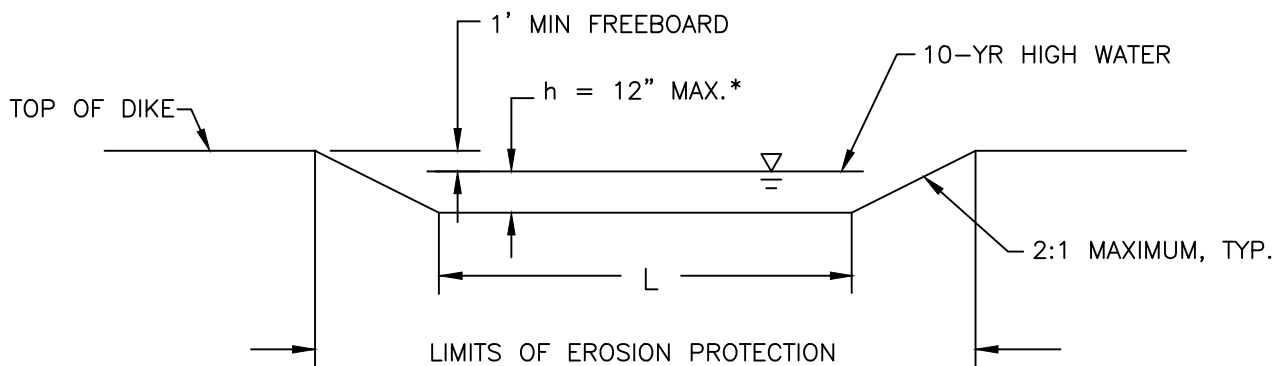
1. SOIL IN BERM SHALL BE FIRMLY COMPACTED.
2. AT EACH END OF BERM, TURN BERM UPSLOPE AND EXTEND UNTIL GROUND SURFACE RISES TO THE TOP OF BERM ELEVATION.
3. PROVIDE OVERFLOW AREAS AT 200 FT. MAX. INTERVALS.

NOTE; OVERFLOW SPILLWAY AND AREA
DISTURBED TO CONSTRUCT OUTLET CHANNEL
SHALL BE LINED WITH EROSION PROTECTION,
SOD OR EROSION CONTROL BLANKET



TYPICAL COMPONENTS OF TEMPORARY SEDIMENT BASIN PLAN

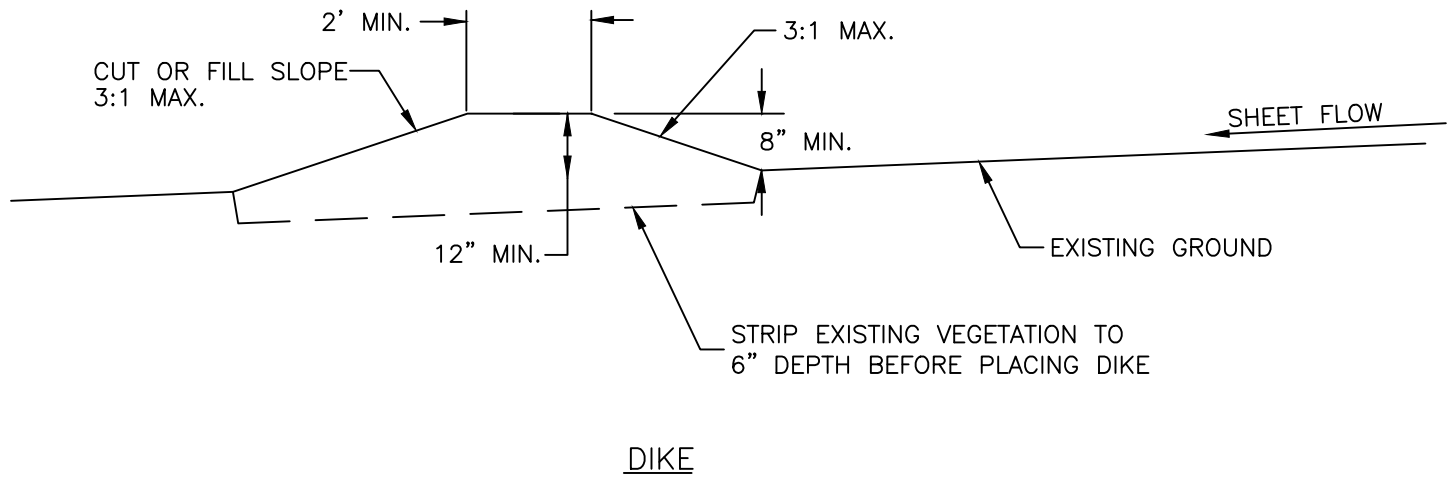
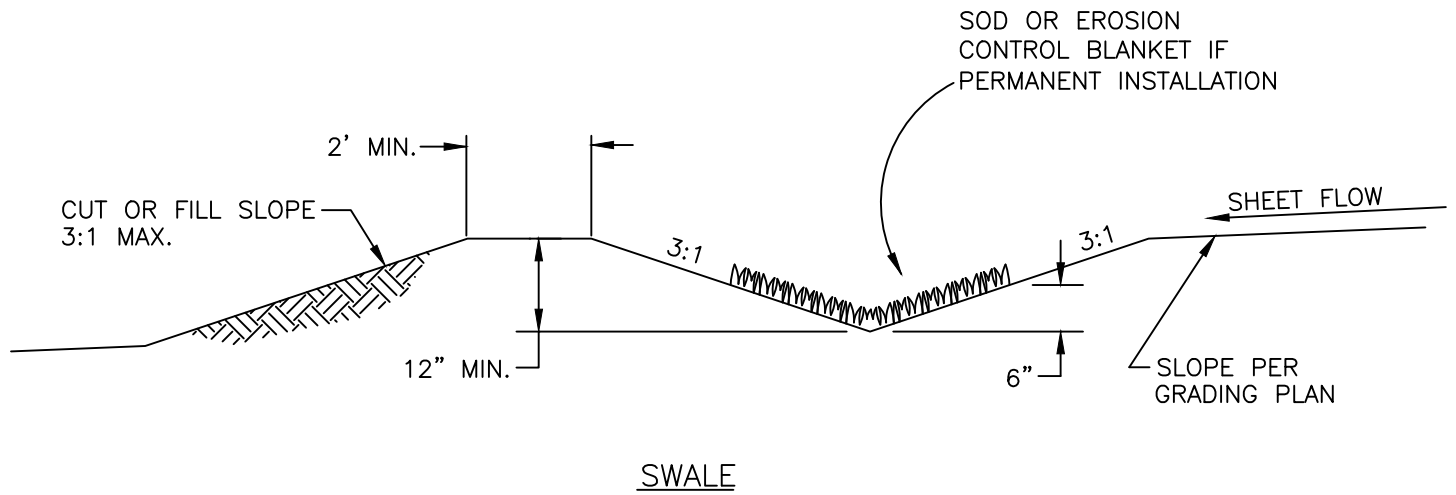
(PERFORATED RISER PIPE AND OVERFLOW SPILLWAY SHOWN.
GRAVEL FILTER DAM AND EROSION PROTECT OVERFLOW SPILLWAY MAY ALSO BE USED.)



* $h = 6''$ MAX. IF SOD LINING USED

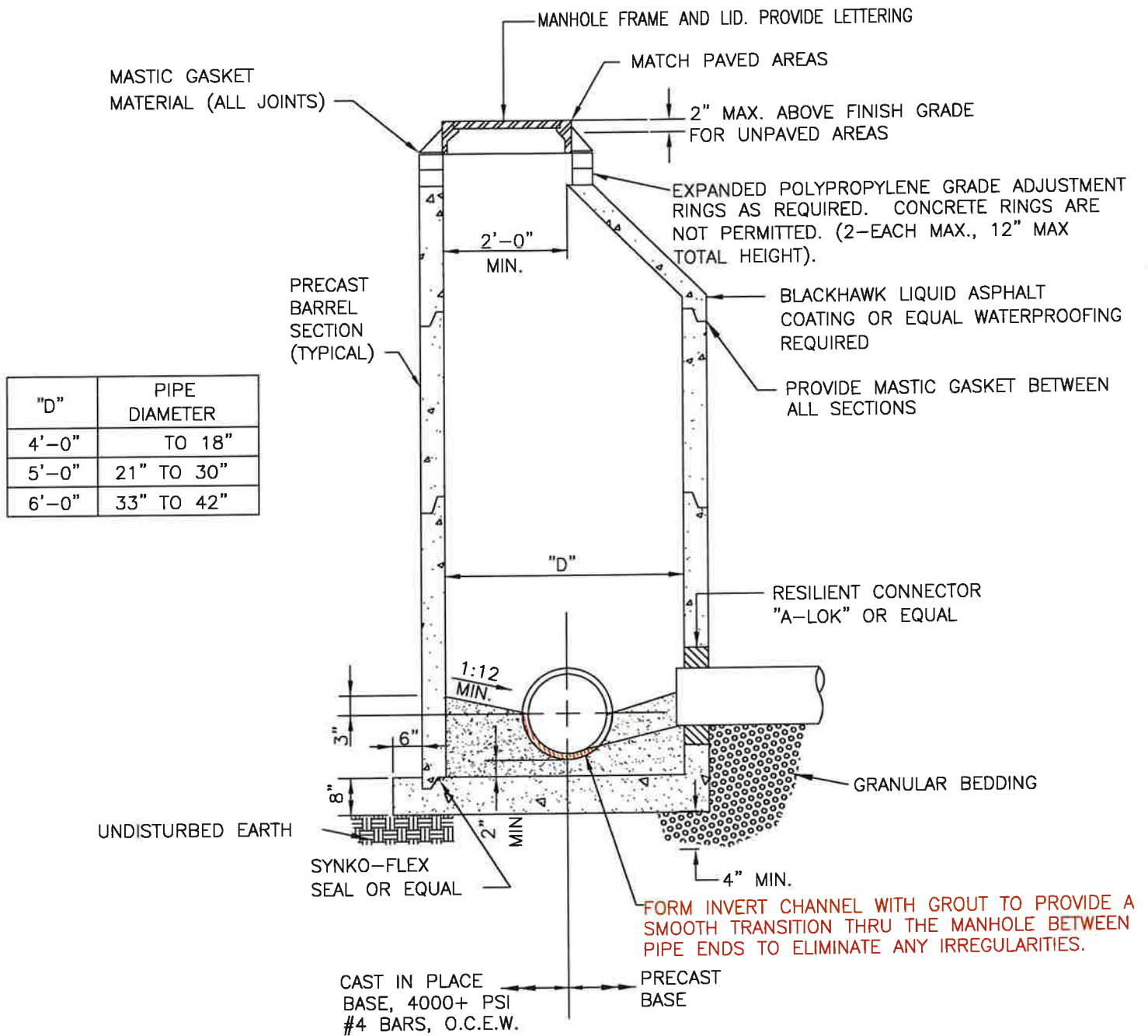
SECTION B -B

TYPICAL OVERFLOW SPILLWAY CROSS-SECTION



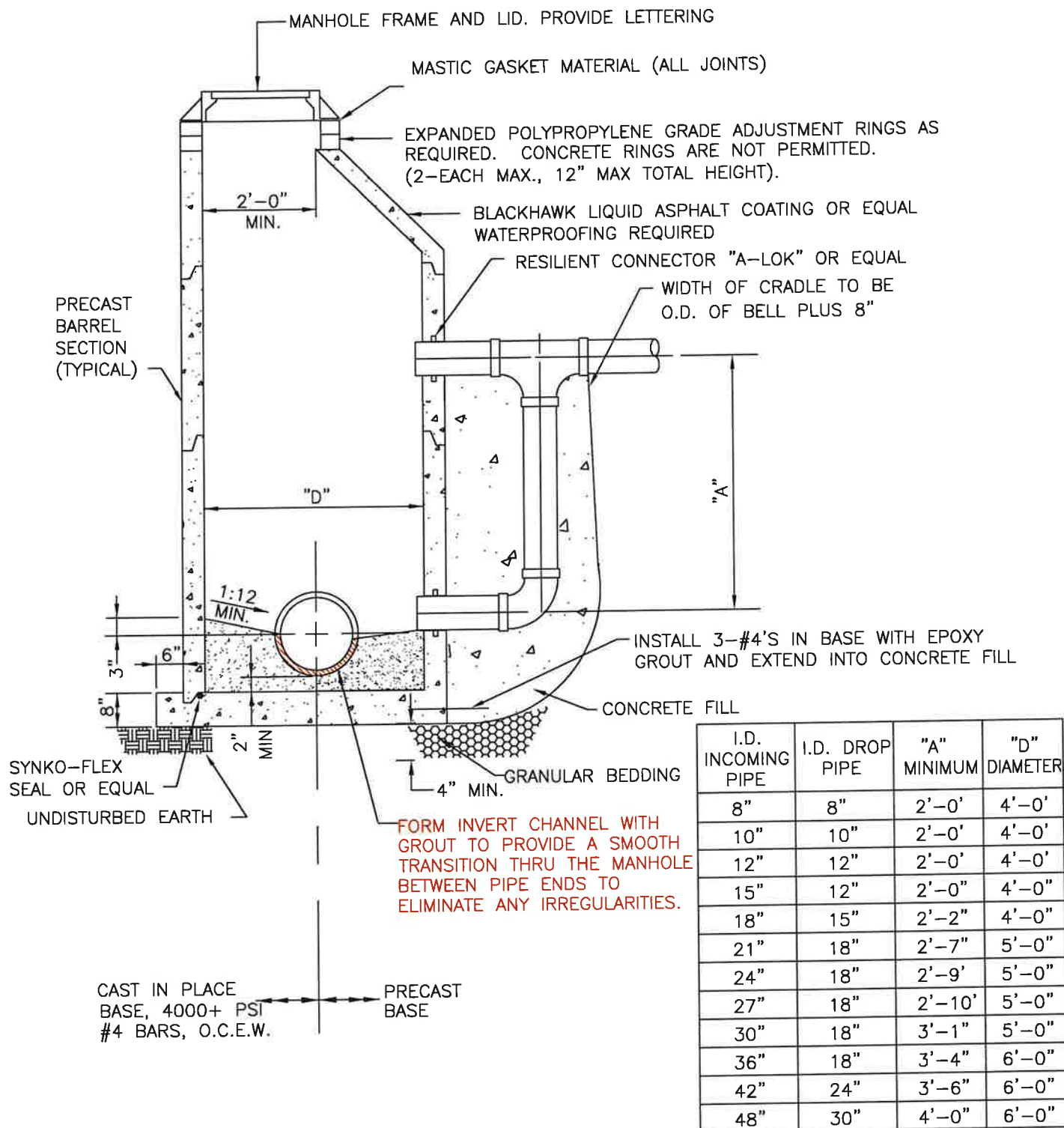
NOTES;

1. DIKE SHALL BE COMPACTED TO DENSITY EQUAL TO THAT SPECIFIED FOR ADJOINING AREA, (90% STD. PROCTOR DENSITY, MIN.)
2. MIN. 1% GRADE MUST BE PROVIDED FOR SWALE OR ALONG UPSLOPE SIDE OF DIKE FOR PROPER CLEARANCE.



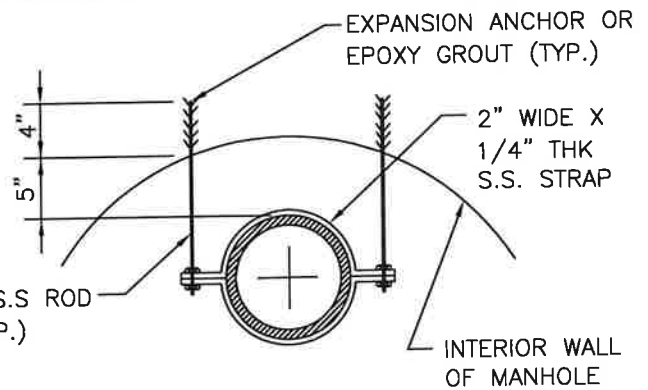
NOTES:

1. ONLY ECCENTRIC MANHOLE CONES ARE PERMITTED UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.
2. PROVIDE BLACKHAWK LIQUID ASPHALT COATING OR EQUAL ON ENTIRE EXTERIOR OF MANHOLE.
3. CIRCULAR PRECAST MANHOLE SECTIONS SHALL BE SEALED WITH MASTIC GASKETS.
4. MANHOLE WALL THICKNESS SHALL BE 1/12 OF THE INSIDE DIAMETER PLUS ONE INCH.
5. PRECAST MANHOLE SECTIONS AND STEEL REINFORCEMENT SHALL CONFORM TO ASTM C 478, EXCEPT AS MODIFIED.
6. DO NOT PROVIDE MANHOLE STEPS.
7. NO GROUTING SHALL BE PERMITTED ON MANHOLES AND RINGS, EXCEPT THE LIFT HOLES MAY BE GROUTED.
8. THE MINIMUM DROP BETWEEN INLET AND OUTLET INVERTS SHALL BE 0.2'.
9. THE MAXIMUM DROP BETWEEN INLET AND OUTLET INVERTS SHALL BE 24".
10. THE MINIMUM ANGLE FOR FLOWLINES WITHIN THE MANHOLE SHALL BE 90 DEGREES



NOTES:

1. ONLY ECCENTRIC MANHOLE CONES ARE PERMITTED UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.
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5. PRECAST MANHOLE SECTIONS AND STEEL REINFORCEMENT SHALL CONFORM TO ASTM C 478, EXCEPT AS MODIFIED.
6. DO NOT PROVIDE MANHOLE STEPS.
7. NO GROUTING SHALL BE PERMITTED ON MANHOLES AND RINGS, EXCEPT THE LIFT HOLES MAY BE GROUTED.
8. DROP CONNECTIONS SHALL NOT ENTER THE MANHOLE AT A SECTION JOINT.
9. THE VERTICAL PIPE AND REQUIRED FITTINGS SHALL BE THE SAME SIZE AS THE INCOMING SEWER PIPE.
10. THE MINIMUM ANGLE FOR FLOWLINES WITHIN THE MANHOLE SHALL BE 90 DEGREES



PIPE SUPPORT DETAIL*

* OR EQUIVALENT DESIGN

MANHOLE FRAME AND LID
PROVIDE LETTERING

MASTIC GASKET MATERIAL
(ALL JOINTS)

EXPANDED POLYPROPYLENE GRADE ADJUSTMENT RINGS AS
REQUIRED. CONCRETE RINGS ARE NOT PERMITTED.
(2-EACH MAX., 12" MAX TOTAL HEIGHT).

BLACKHAWK LIQUID ASPHALT COATING OR EQUAL
WATERPROOFING REQUIRED

8" & 10" ONLY

RESILIENT CONNECTOR "A-LOK" OR EQUAL

PIPE SUPPORT W/ANCHOR @ 2'-0" MAX. O/C
(SEE DETAIL THIS SHEET)

GRANULAR BEDDING

UNDISTURBED
EARTH

SYNKO-FLEX
SEAL OR EQUAL

CAST IN PLACE
BASE, 4000+ PSI
#4 BARS, O.C.E.W.

PRECAST
BASE

FORM INVERT CHANNEL WITH GROUT TO PROVIDE A
SMOOTH TRANSITION THRU THE MANHOLE BETWEEN
PIPE ENDS TO ELIMINATE ANY IRREGULARITIES.

NOTES:

1. ONLY ECCENTRIC MANHOLE CONES ARE PERMITTED UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.
2. PROVIDE BLACKHAWK LIQUID ASPHALT COATING OR EQUAL ON ENTIRE EXTERIOR OF MANHOLE.
3. CIRCULAR PRECAST MANHOLE SECTIONS SHALL BE SEALED WITH MASTIC GASKETS.
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5. PRECAST MANHOLE SECTIONS AND STEEL REINFORCEMENT SHALL CONFORM TO ASTM C 478, EXCEPT AS MODIFIED.
6. DO NOT PROVIDE MANHOLE STEPS.
7. NO GROUTING SHALL BE PERMITTED ON MANHOLES AND RINGS, EXCEPT THE LIFT HOLES MAY BE GROUTED.
8. SEWER PIPES SHALL NOT ENTER THE MANHOLE AT A SECTION JOINT.
9. THE VERTICAL PIPE AND REQUIRED FITTINGS SHALL BE THE SAME SIZE AS THE INCOMING SEWER PIPE.
10. THE MINIMUM ANGLE FOR FLOWLINES WITHIN THE MANHOLE SHALL BE 90 DEGREES

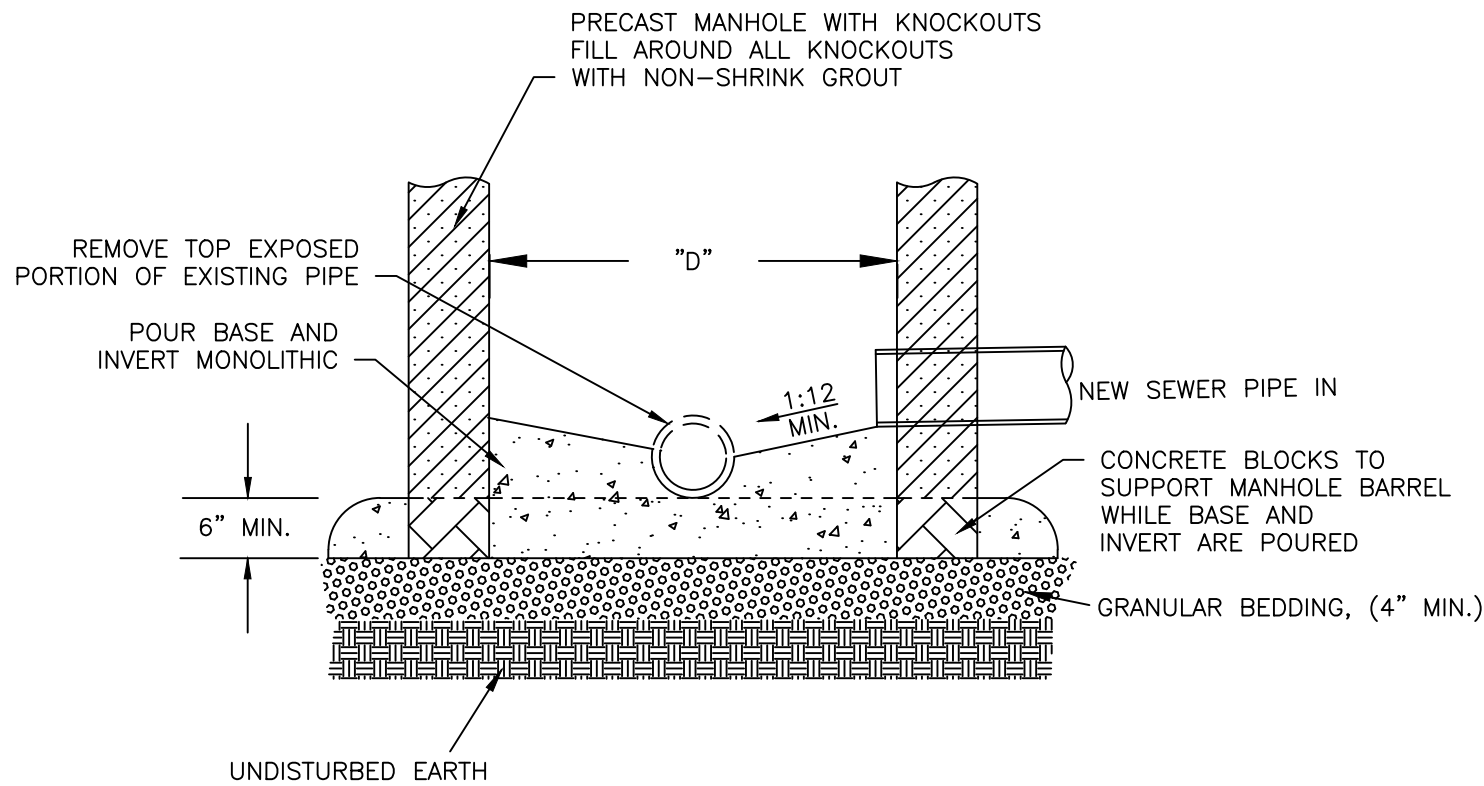
CITY OF OZARK

STANDARD INSIDE DROP
MANHOLE DETAIL

SEW-3

DATE
4-27-2021
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REVISION
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"D"	PIPE DIAMETER
4'-0"	TO 18"
5'-0"	21" TO 30"
6'-0"	33" TO 42"



NOTES:
1. MANHOLES SHALL BE TESTED IN ACCORDANCE WITH THE CITY OF OZARK CONSTRUCTION SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.

CENTERING IN GASKET
IS VERY IMPORTANT

CORE HOLE IN
EXISTING MANHOLE

SEE BELOW

INSERTA-LOK AS MANUFACTURED BY
A-LOK OR APPROVED EQUAL

NOMINAL PIPE O.D.

EXAMPLES:

8"Ø PVC = 10"Ø HOLE
10"Ø PVC = 12"Ø HOLE
12"Ø PVC = 14"Ø HOLE

1. BEVEL PIPE WITH GRINDER
2. THEN LUBE PIPE
3. THEN LUBE INSERTA-LOK
4. THEN CENTER IN GASKET

CITY OF OZARK

CONNECTION TO EXIST MH
DETAIL

NTS

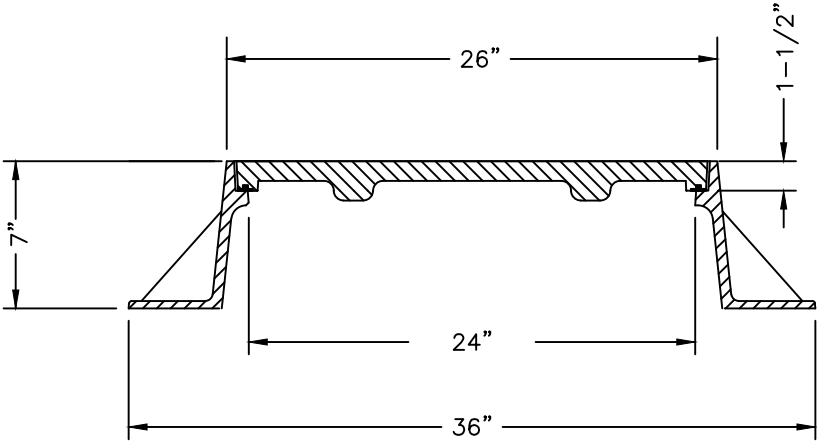
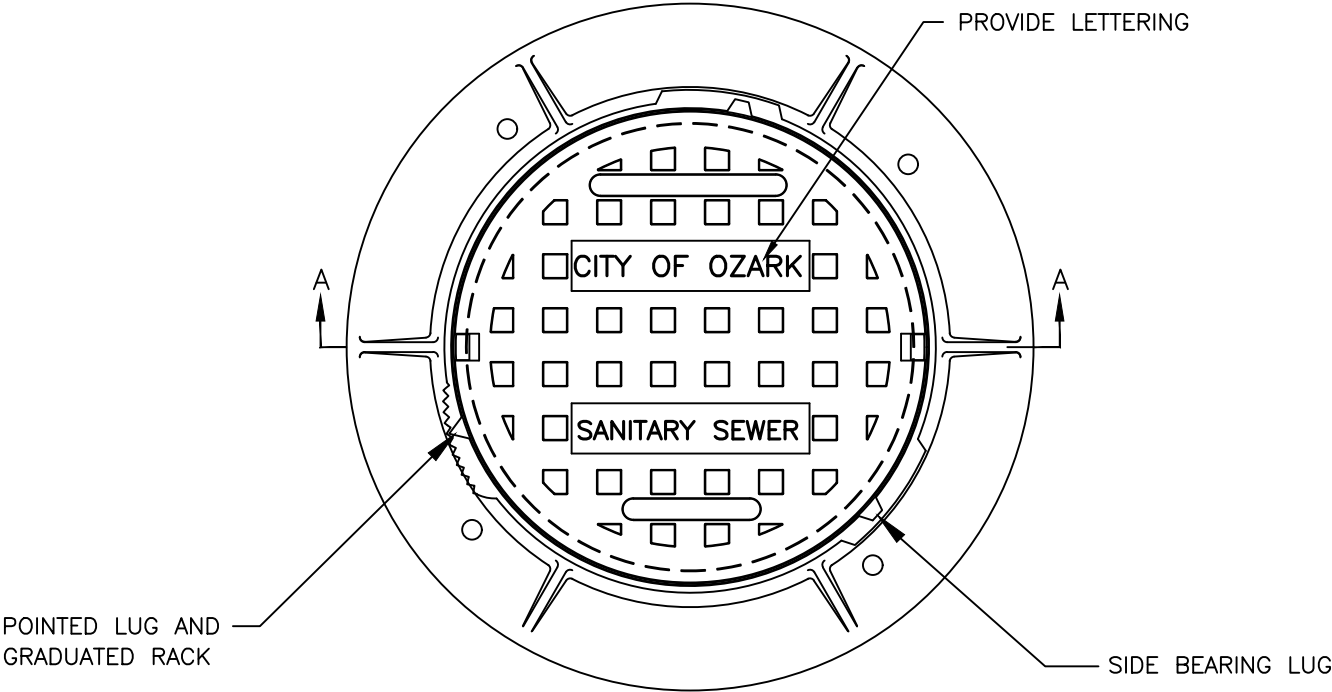
SEW-6

DATE
7-18-05

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NOTES:

- 1. TYPE A MANHOLE FRAME AND LID IS FOR USE IN TRAFFIC AREAS.
- 2. PROVIDE NON-ROCKING SELF-SEALING CONCEALED PICKHOLE TYPE LID.
- 3. PROVIDE DEETER 1247-A OR APPROVAL EQUAL.
- 4. ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.

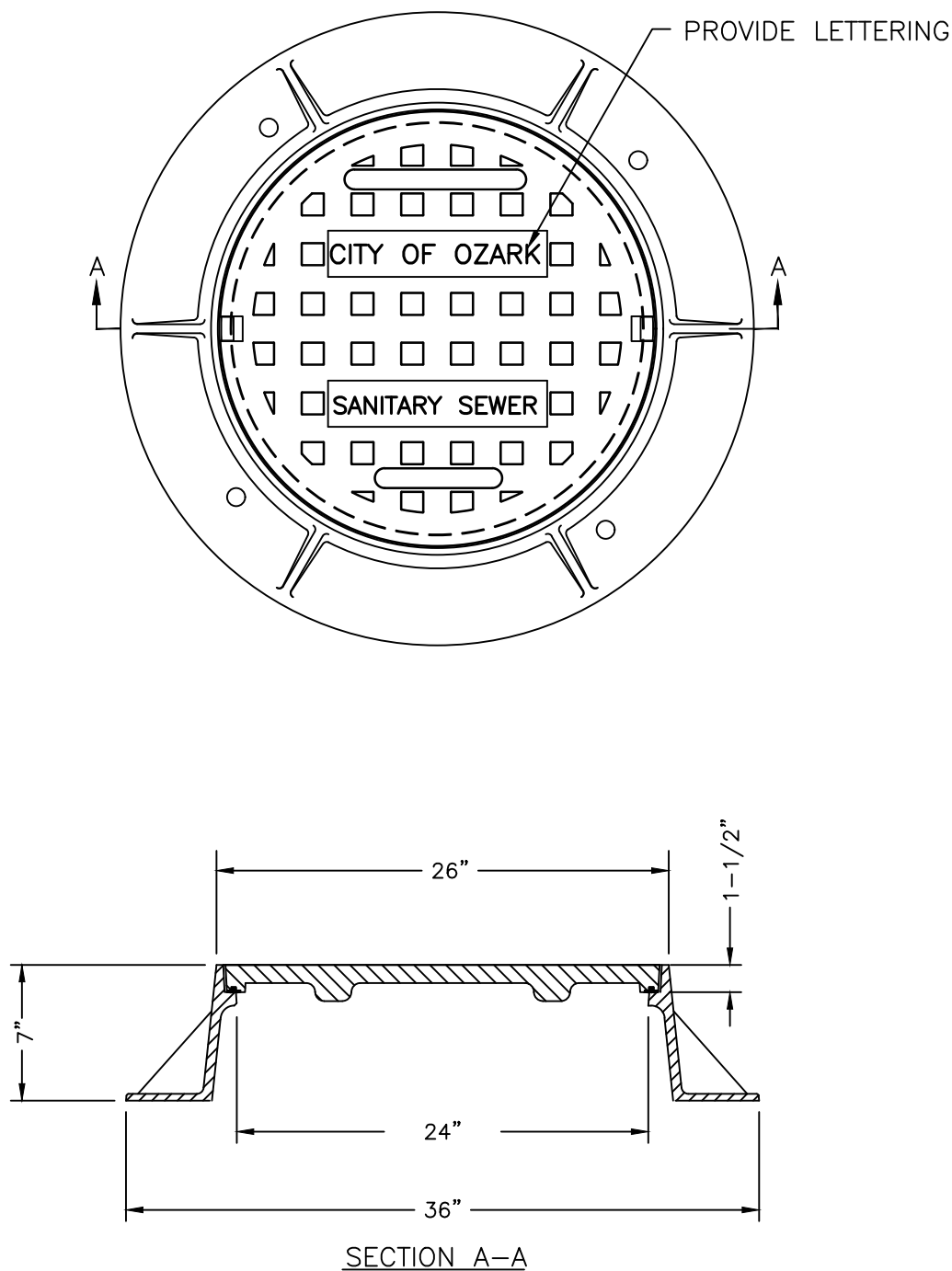


SECTION A-A

NOTES:

- 1. COVER AND FRAME SHALL BE CAST GRAY IRON CONFORMING TO THE REQUIREMENTS OF ASTM A 48, CLASS 35B WITH NO PAINT.
- 2. COVER AND FRAME SHALL CONFORM TO H20/HS20 WHEEL LOAD RATING.
- 3. CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN AND COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
- 4. FRAMES AND COVERS SHALL BE FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES.
- 5. FRAMES SHALL BE CIRCULAR, AND THE FLANGE SHALL INCORPORATE 4 EACH 1" DIAMETER BOLT HOLES.

- NOTES:
- 1. TYPE B MANHOLE FRAME AND COVER FOR USE OUTSIDE OF DRIVING SURFACES.
 - 2. PROVIDE SELF-SEALING CONCEALED PICKHOLE TYPE LID, DEETER 1247 OR APPROVED EQUAL.
 - 3. ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.



- NOTES;
- 1. COVER AND FRAME SHALL BE CAST GRAY IRON CONFORMING TO THE REQUIREMENTS OF ASTM A 48, CLASS 35B WITH NO PAINT.
 - 2. CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN AND COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
 - 3. FRAMES AND COVERS SHALL BE FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES.
 - 4. FRAMES SHALL BE CIRCULAR, AND THE FLANGE SHALL INCORPORATE 4 EACH 1" DIAMETER BOLT HOLES.

CITY OF OZARK

TYPE B MANHOLE
FRAME AND LID

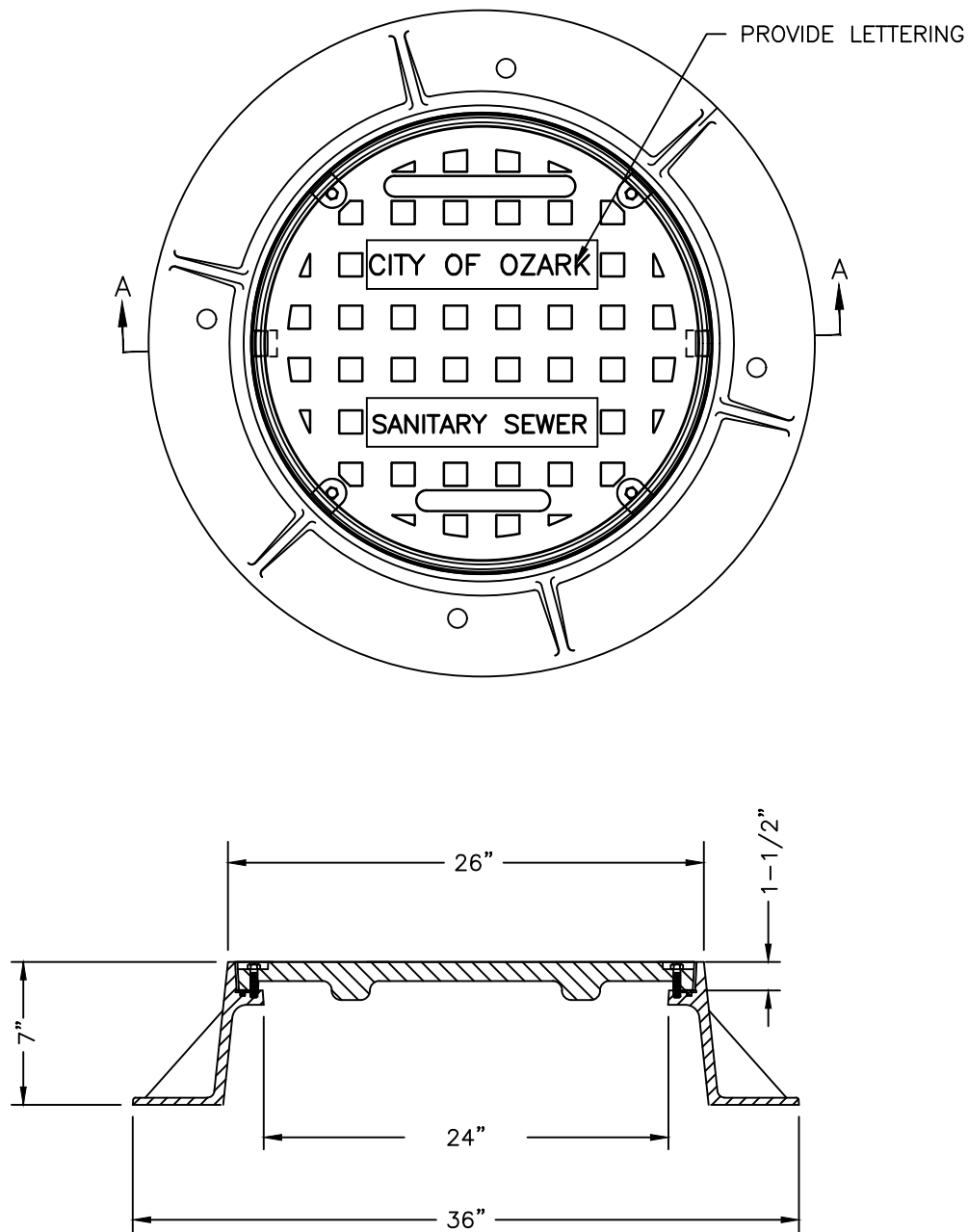
NTS

DATE
9-01-2017

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SEW-8

MANHOLE COVER AND FRAME
BOLT-DOWN TYPE
DEETER 1247-B OR APPROVED EQUAL



SECTION A-A

NOTES;

- COVER AND FRAME SHALL BE CAST GRAY IRON CONFORMING TO THE REQUIREMENTS OF ASTM A 48, CLASS 35B WITH NO PAINT.
- COVER AND FRAME SHALL CONFORM TO, H20/HS20 WHEEL LOAD RATING. ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.
- CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN AND COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER.
- FRAMES AND COVERS SHALL BE FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES.
- COVERS SHALL HAVE A SELF SEALING GASKET AND SHALL BE FASTENED TO THE FRAME BY A MINIMUM OF FOUR STAINLESS STEEL BOLTS.
- FRAMES SHALL BE CIRCULAR, AND THE FLANGE SHALL INCORPORATE 4-EACH 1" DIAMETER BOLT HOLES.

CITY OF OZARK

TYPE C MANHOLE
FRAME AND LID

NTS

DATE
9-01-2017

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SEW-9

NOTES:

1. STANDARD "Y" OR "T" CONNECTIONS SHALL BE PLACED AT 45 DEGREE ANGLE.
2. SDR-26 HEAVY WALL TEES SHALL BE USED FOR SDR-35 MAINS AND SDR-21 TEES SHALL BE USED FOR SDR-21 MAINS.
3. WHEN A "T" SADDLE IS USED, IT SHALL BE INSTALLED AT A 45 DEGREE ANGLE.
4. SEWER SERVICE CONNECTIONS INSTALLED SUB-SEQUENTIALLY TO THE MAIN SHALL BE ACCOMPLISHED BY SADDLE TYPE FITTINGS. THE FITTINGS SHALL BE SUPPORTED BY FLOWABLE FILL. COMPLETELY ENCASE THE FITTING TO A MINIMUM OF 1' ABOVE THE POINT OF CONNECTION TO THE MAIN.
5. WHEN TAPPING THE MAIN, DO NOT ALLOW BEDDING MATERIAL OR BORED PLUGS TO FALL INTO MAIN.
6. SERVICE LINES SHALL BE SCHEDULE 40 PVC. JOINTS SHALL BE GLUED WITH AN APPROVED ADHESIVE.
7. COORDINATE DEPTH OF SERVICE LINES AS REQUIRED TO SERVICE THE FACILITY AND TO AVOID OTHER UTILITIES.
8. SEWER SERVICES SHALL NOT BE INSTALLED WITHIN 5' OF A MANHOLE EXTERIOR WALL AND SHALL BE SEPARATED BY A 5' MINIMUM SPACING..
9. SEWER SERVICE SHALL BE PROVIDED TO EVERY BUILDABLE PLATED LOT WITHIN A SUBDIVISION.
10. THE MAXIMUM NUMBER OF UNITS TO BE CONNECTED ON A 4" SEWER SERVICE SHALL BE ONE FOR EACH DUPLEX OR SINGLE FAMILY STRUCTURE.
11. SEWER LATERAL SHALL EXTEND TO PROPERTY LINE AS A MINIMUM.
12. THE CLEAN OUT AS SHOWN WILL NOT BE MAINTAINED BY THE CITY OF OZARK.
13. PROVIDE APPROPRIATE WARNING TAPE 18" TO 24" BELOW FINISHED GRADE AT THE SERVICE LINE FROM THE MAIN TO THE CLEAN OUT.
14. TRACER WIRE SHALL BE PROVIDED FOR EVERY SEWER LATERAL AND SHALL BE #12 AWG COPPER CLAD STEEL, (CCS). CORROSION PROOF/FILLED WIRE CONNECTORS SHALL BE USED AT SPLICE LOCATIONS.
15. THE TRACER WIRE SHALL BE TESTED PRIOR TO ACCEPTANCE

CLEANOUT CASTING DEETER 1813 OR APPROVED EQUAL

THREADED PLUG

FINISHED GRADE

SEE UTILITY LAYOUT, PLACE
OUTSIDE OF SIDEWALKS
@ ROW WHERE FEASIBLE

COIL A MINIMUM OF 12" OF EXCESS TRACER WIRE AROUND
RISER ABOVE GRANULAR FILL IN CLEAN OUT & TERMINATE.

ADS N-12, A-2000, OR APPROVED EQUAL

1/2" TO 5/8" CRUSHED STONE

SCHEDULE 40 PVC RISER

11.7" I.D.
1/2" DIA. PVC AT
END OF LATERAL

STANDARD 1/8 BEND
SERVICE LINE

1/4"/FT.
MIN. SLOPE

TWO-WAY CLEANOUT

MIN. 1 L.F. OF SCHEDULE 40 PVC

SCHEDULE 40 PVC CAP AT END OF LATERAL

BEDDING MATERIAL FULL LENGTH OF SERVICE LINE

COPPERHEAD GROUNDING ANODE OR EQUAL

PROVIDE GROUND WITH
#12 AVG CCS-RED WIRE

THE ANODE SHALL BE 1/2 LB BARE ZINC OR
MAGNESIUM, COPPERHEAD PART #ANO-1005 OR
EQUAL. THE ANODES SHALL BE BURIED IN CLOSE
PROXIMITY TO THE UTILITY. THE ANODE SHALL BE
SECURELY CONNECTED TO THE TRACER WIRE.

CONNECT TO TRACER WIRE AT GROUNDING ANODE

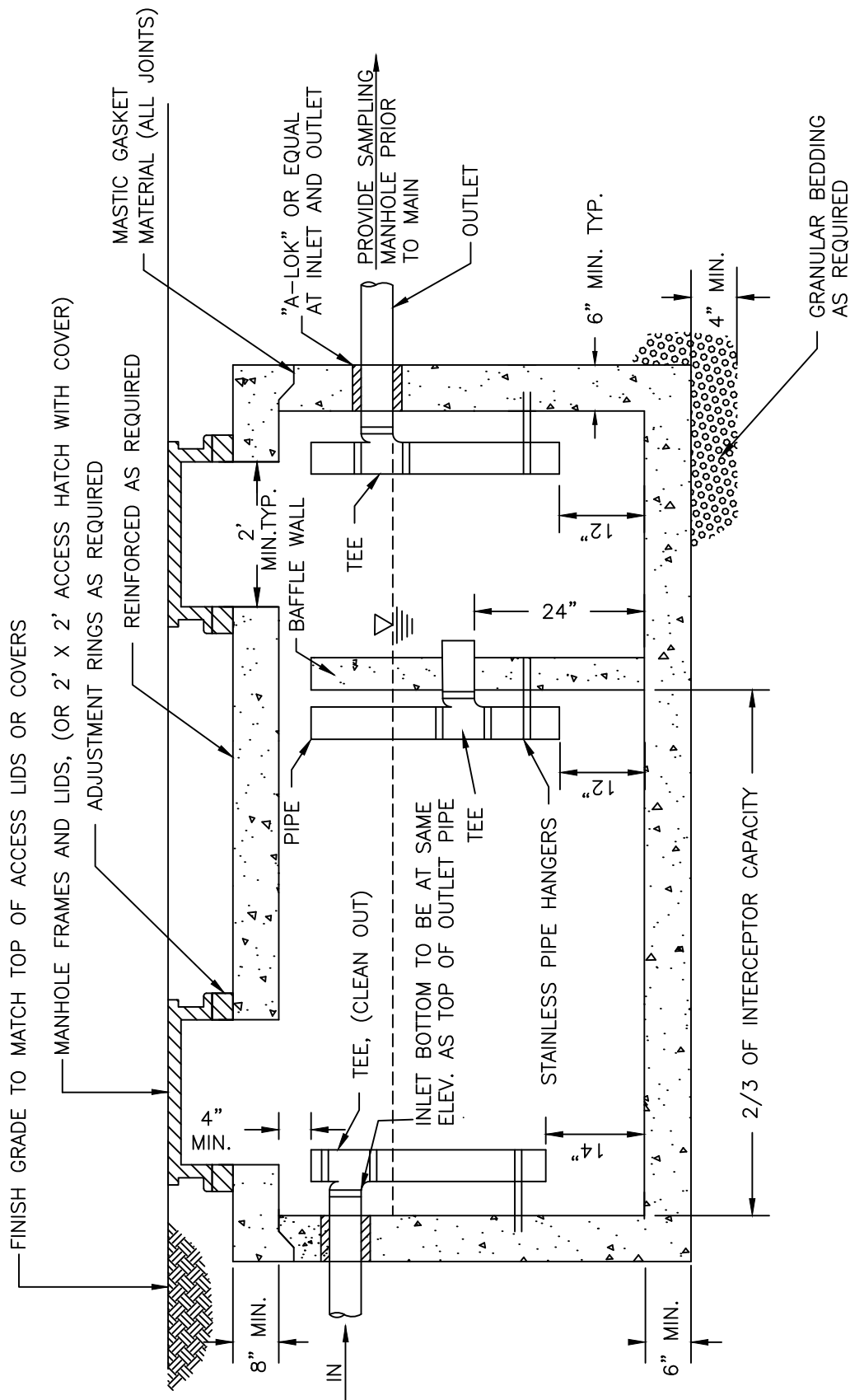
CITY OF OZARK

STANDARD SEWER SERVICE
DETAIL ANODE

SEW-10

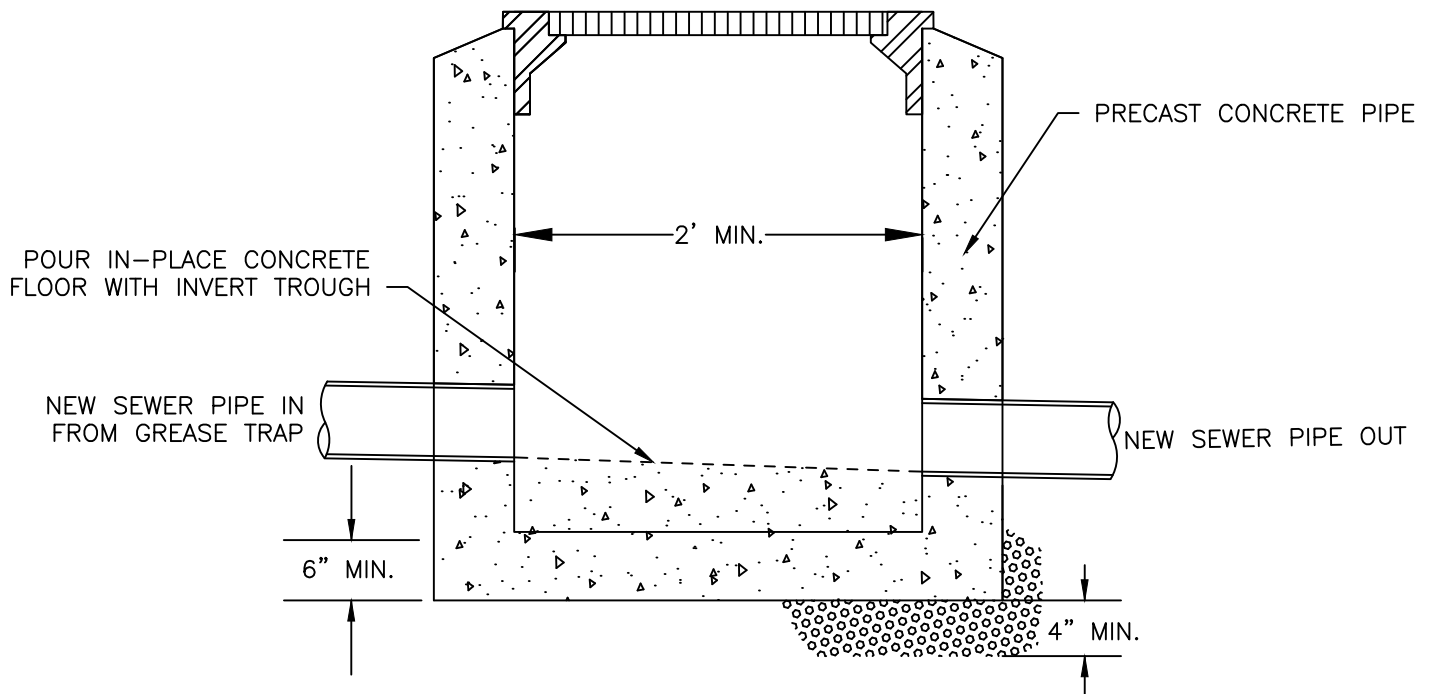
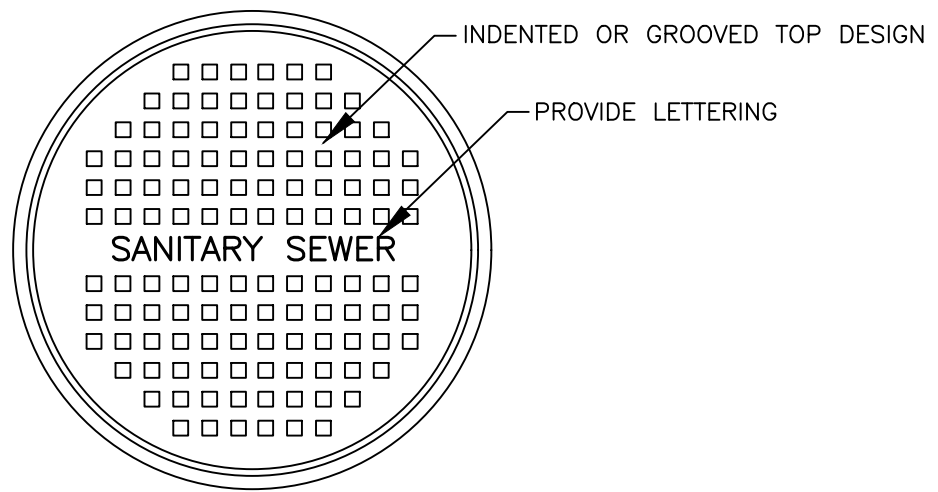
DATE
4-15-2020

REVISION
5



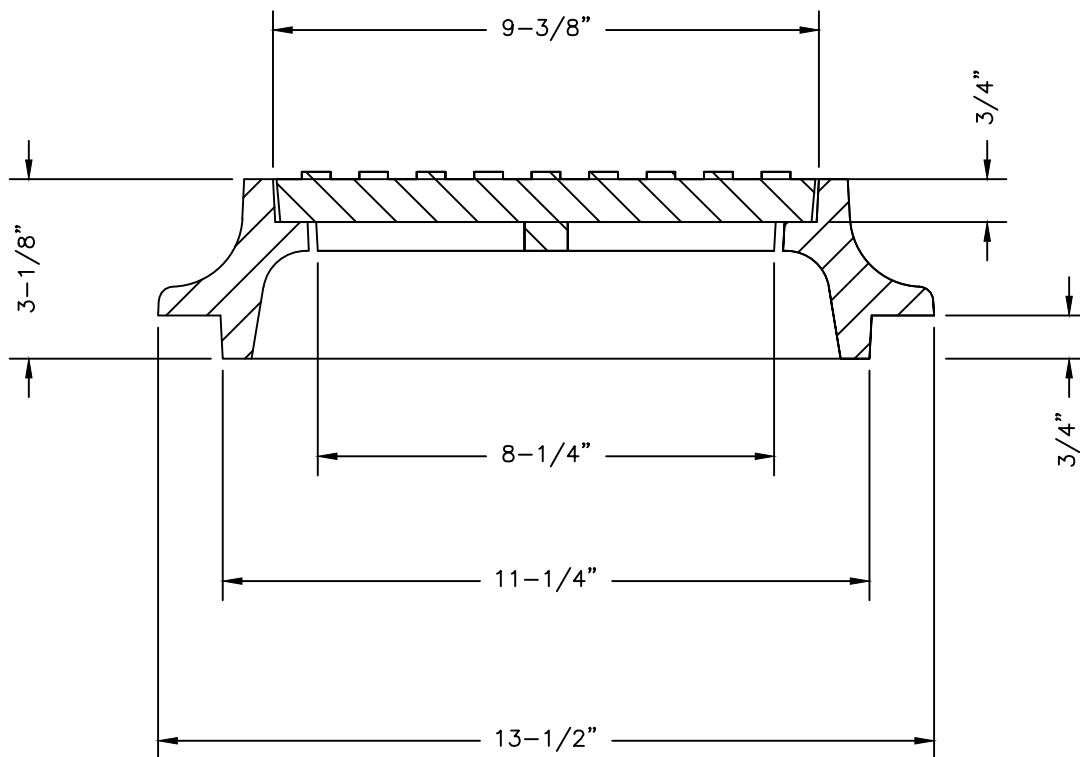
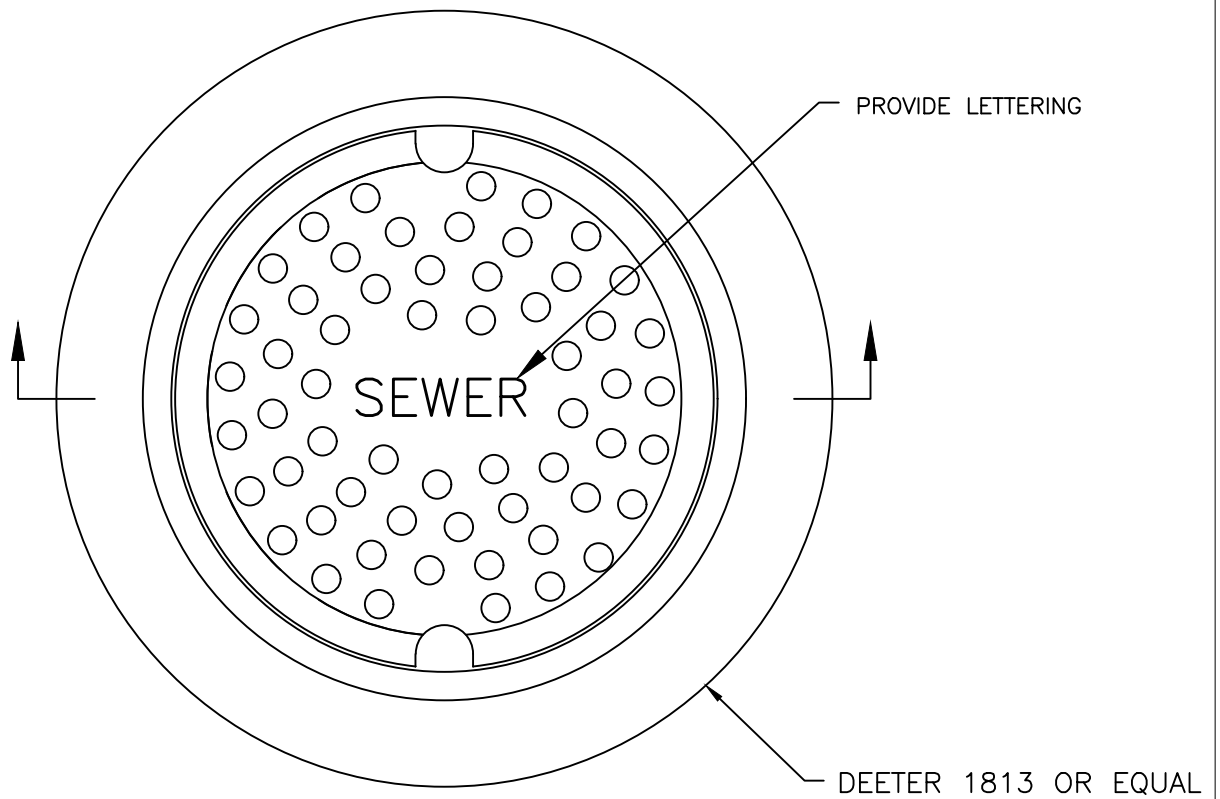
NOTES:

1. ALTERNATIVE CONFIGURATIONS OF GREASE INTERCEPTOR MAY BE SUBMITTED TO THE CITY FOR CONSIDERATION.
2. THE GREASE INTERCEPTOR SHALL BE ADEQUATELY SIZED TO ALLOW SUFFICIENT RETENTION TIME FOR SEPARATION AND SETTLING AS WELL AS SUFFICIENT STORAGE CAPACITY.
3. PROVIDE APPROPRIATE LIFT ANCHORS.
4. IF THE INLET AND OUTLET CLEAN OUT TEES ARE NOT READILY ACCESSIBLE FROM THE HATCHES, THEN CLEAN OUTS SHALL BE PROVIDED ON THE INLET AND OUTLET PIPES OUTSIDE OF THE INTERCEPTOR.
5. THE LIQUID DEPTH SHALL BE 72 INCHES MAXIMUM.
6. THE TANK LENGTH SHALL BE GREATER THAN THE TANK WIDTH.
7. REFER TO ASTM C 1613, STANDARD SPECIFICATIONS FOR PRECAST CONCRETE GREASE INTERCEPTOR TANKS.
8. TANKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C890, STANDARD PRACTICE FOR MINIMUM STRUCTURAL DESIGN LOADING.
9. TANK AND ALL APPURTENANCES TO BE FABRICATED AND ASSEMBLED AT MANUFACTURING PLANT.
10. PROVIDE SHERWIN-WILLIAMS TANK CLAD HS CORROSION RESISTANT EPOXY COATING OR APPROVED EQUAL FOR ALL INTERIOR SURFACES.



NOTES:

1. MANHOLES SHALL BE STANDARD REINFORCED CONCRETE PIPE SECTION, 2' MIN. DIA. X 3' MIN. DEPTH.
2. MANHOLE FLOOR SHALL BE POURED IN PLACE CONCRETE.
3. FRAME AND LID SHALL BE NEENAH SLAB TYPE R-5900-E OR APPROVED EQUAL AND SHALL BE TRAFFIC RATED WHEN APPLICABLE.
4. SEALANT SHALL BE APPLIED UNDER ENTIRE PORTION OF THE FRAME AND AT ALL CONCRETE PIPE JOINTS.
5. OPENINGS FOR INFLUENT AND EFFLUENT PIPES TO BE CORED WITHOUT BREAKING.
6. USE "INSERTA-LOK" OR APPROVED EQUAL FOR PIPE CONNECTIONS TO MANHOLE.



CITY OF OZARK

CLEANOUT RING & COVER
DETAIL

NTS

SEW-13
DATE 12-20-2016

REVISION
0

MANHOLE RING AND SOLID LID WITH LETTERING
TYPE AS REQUIRED

STD. 48" DIA. PRECAST
CONCRETE MANHOLE

BACK FLUSHING HOSE
W/1/2" SHUT-OFF
VALVE AND QUICK
DISCONNECT (TYP)

AIR RELIEF/AIR VACUUM VALVE
1" S.S. STRAP (2 LOC.)
ANCHOR TO WALL

1" BLOW-OFF VALVE

2" SHUT-OFF VALVE

TAP CAP

1" BRASS NIPPLE

5'-0" DIP FORCEMAIN
TYP EACH SIDE

SEWER MAIN

4" MIN. COMPACTED
GRANULAR MATERIAL

DIP A-LOK

GASKET (TYP)

TEE W/ 4" CAP
(4" MIN OUT)

12"
SQ. OPEN

NOTES:

1. PROVIDE CL 50 DUCTILE IRON PIPE TO A POINT 5' OUTSIDE OF MANHOLE BOTH SIDES.
2. SEWAGE COMBINATION AIR & VACUUM VALVE COMPLETE W/ACCESSORIES FOR FLUSHING SHALL BE A 2" VALMATIC MODEL 801A, OR APPROVED EQUAL.
3. PROVIDE TRACER WIRE UNDER SEWER MAIN AND ACCESS BOXES AT 1000' MAXIMUM SPACING.
4. VAULT SHALL BE STANDARD PRECAST SHALLOW TYPE MANHOLE. SEE SHALLOW MANHOLE DETAILS.

CITY OF OZARK

AIR RELIEF
AIR VACUUM VALVE

NTS

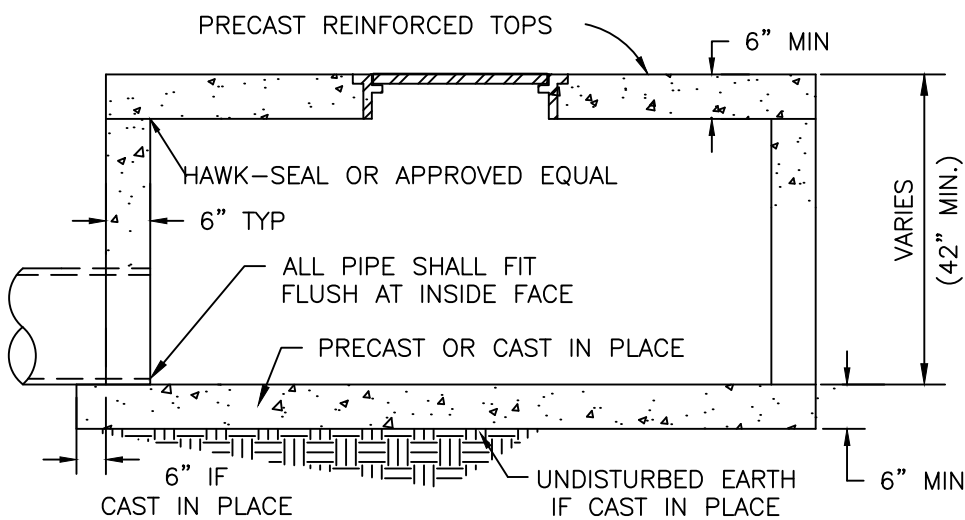
SEW-14

DATE

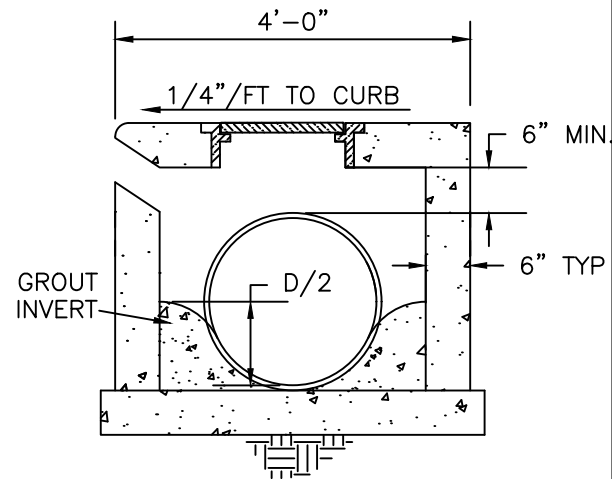
5-03-2021

REVISION

2

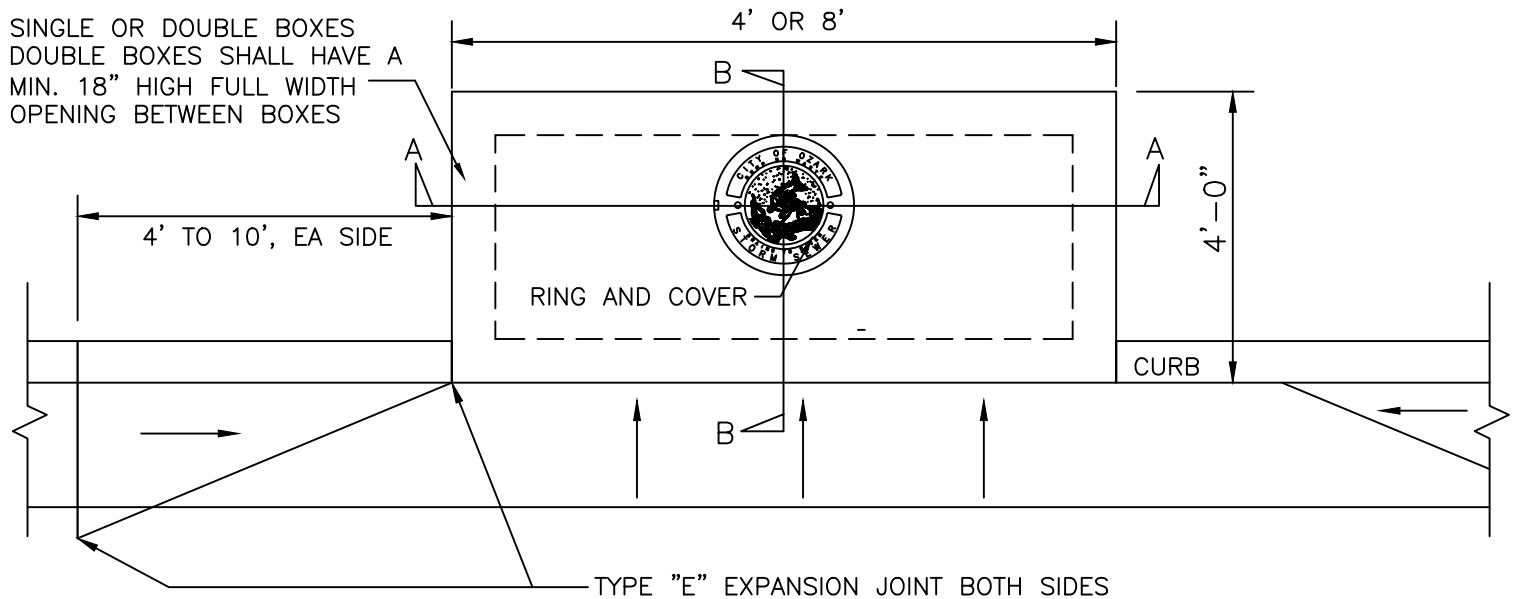


SECTION A-A

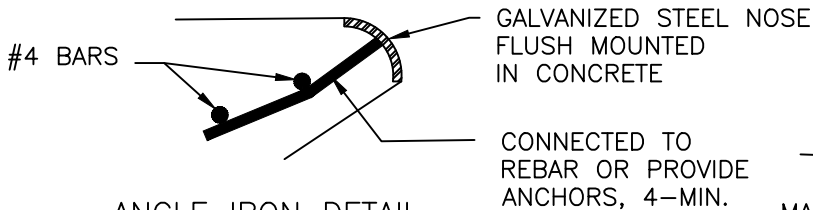


SECTION B-B

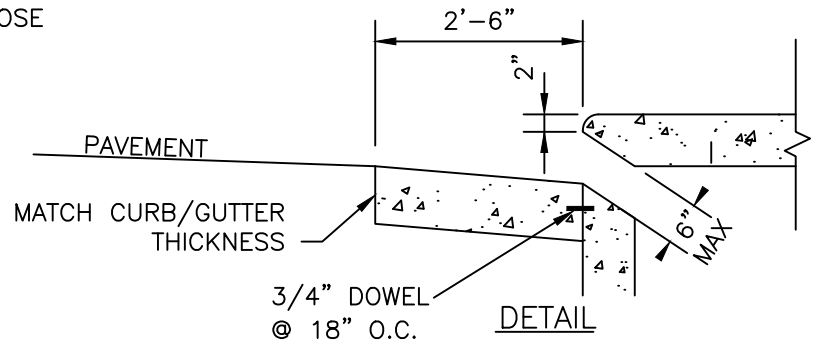
SINGLE OR DOUBLE BOXES
DOUBLE BOXES SHALL HAVE A
MIN. 18" HIGH FULL WIDTH
OPENING BETWEEN BOXES



PLAN



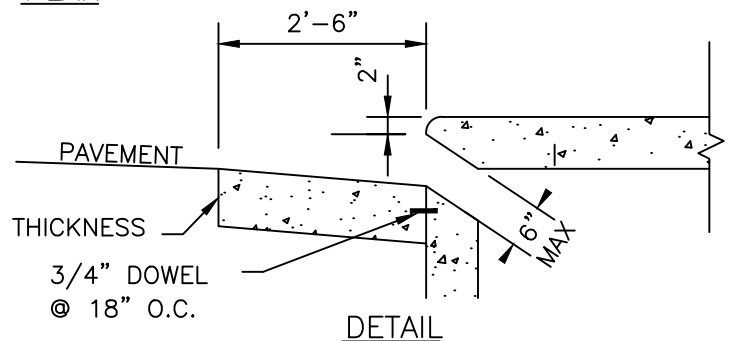
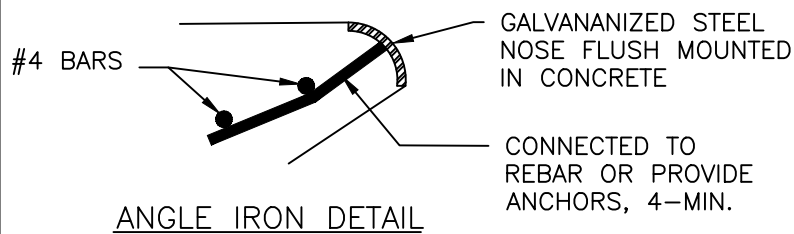
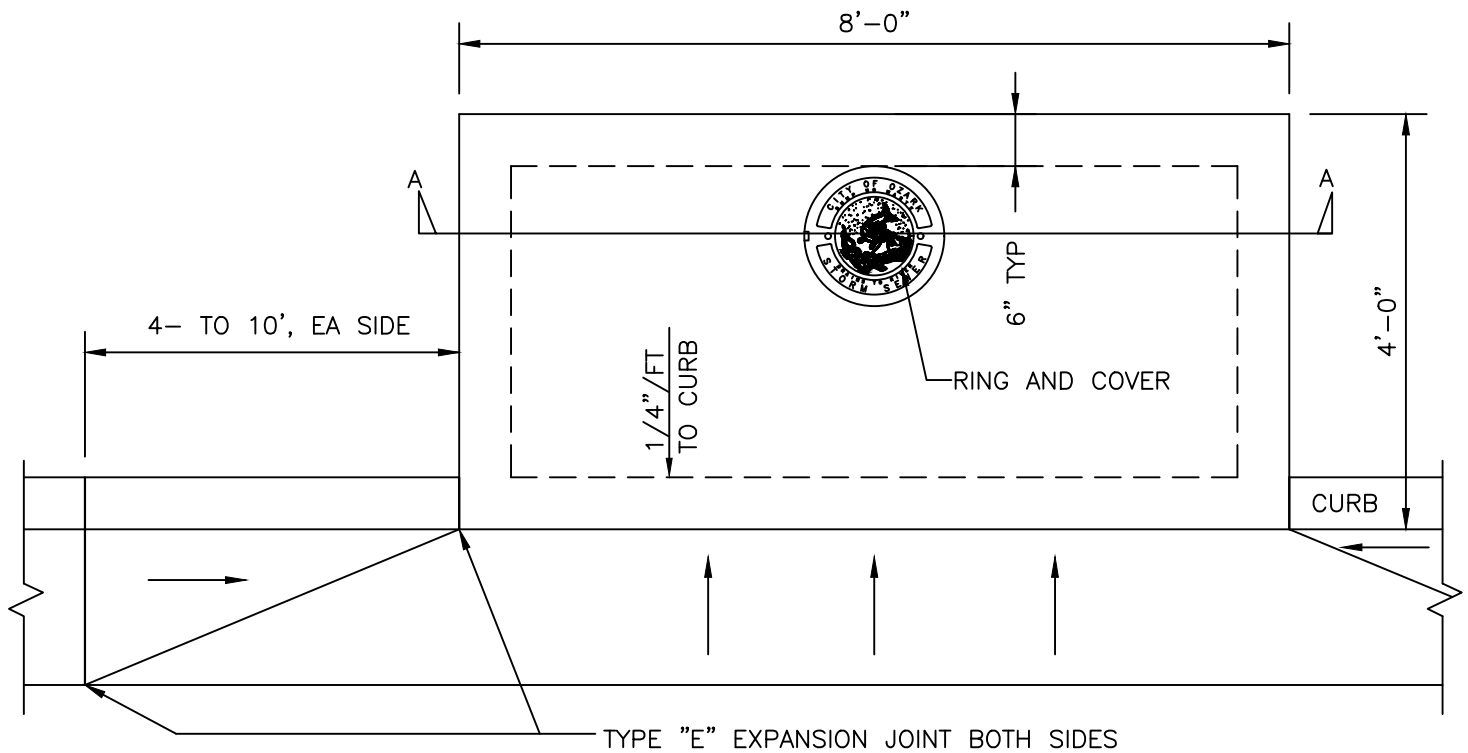
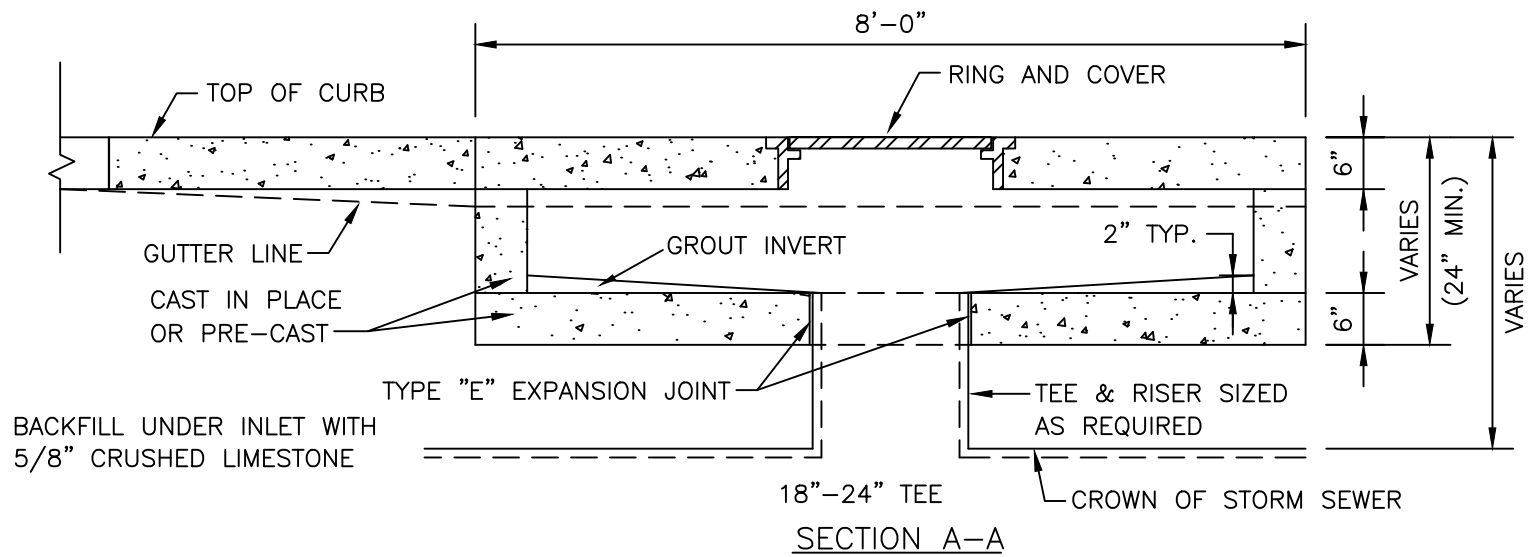
ANGLE IRON DETAIL



DETAIL

NOTES:

1. THE BOTTOM SLAB SHALL BE CAST IN PLACE CONCRETE ON UNDISTURBED EARTH OR PRECAST CONCRETE ON 4" MINIMUM THICKNESS OF GRANULAR BEDDING.
2. PROVIDE APPROPRIATE FLOW PROFILE THRU BOX INVERT.
3. ALL PIPES SHALL FIT FLUSH AT INSIDE FACE OF INLET.
4. FORM INVERT CHANNEL WITH 4000 PSI, TYPE II PORTLAND CEMENT CONCRETE.
5. PROVIDE #4 BARS @ 10" O.C.E.W. FOR ALL WALLS, (VERT., HORIZ. AND SLAB). SEE TOP SLAB REINFORCEMENT DETAIL.
6. CONCRETE TOP SLAB SHALL BE PINNED TO THE STRUCTURE AT EACH CORNER WITH ONE #4 DEFORMED BAR EXTENDED A MINIMUM OF 6" INTO RISER BELOW.
7. THE TOP AND OPENING SHALL MATCH PROFILE OF ADJACENT CURB LINE.
8. PROVIDE MASTIC GASKET FOR ALL JOINTS.
9. THE MAXIMUM PIPE SIZE FOR THE 4' WALL LENGTH SHALL BE 24".
10. PROVIDE MANHOLE FRAME AND LID WITH SYMBOL AND LETTERING.
11. IF INLET IS NOT RECESSED THEN A PROTECTIVE GALVANIZED STEEL NOSE IS REQUIRED AS SHOWN.



NOTES;

1. CONCRETE TOP SLAB SHALL BE PINNED TO THE STRUCTURE AT EACH CORNER WITH ONE #4 DEFORMED BAR EXTENDED A MINIMUM OF 6" INTO RISER BELOW.
2. PROVIDE #4 BARS @ 10" O.C.E.W.. FOR ALL WALLS. SEE TOP SLAB REINFORCEMENT DETAILS.
3. THE TOP AND OPENING SHALL MATCH PROFILE OF ADJACENT CURB LINE.
4. PROVIDE MASTIC GASKET FOR ALL JOINTS.
5. PROVIDE MANHOLE FRAME AND LID WITH SYMBOL AND LETTERING.
6. IF INLET IS NOT RECESSED THEN A PROTECTIVE GALVANIZED STEEL NOSE IS REQUIRED AS SHOWN.

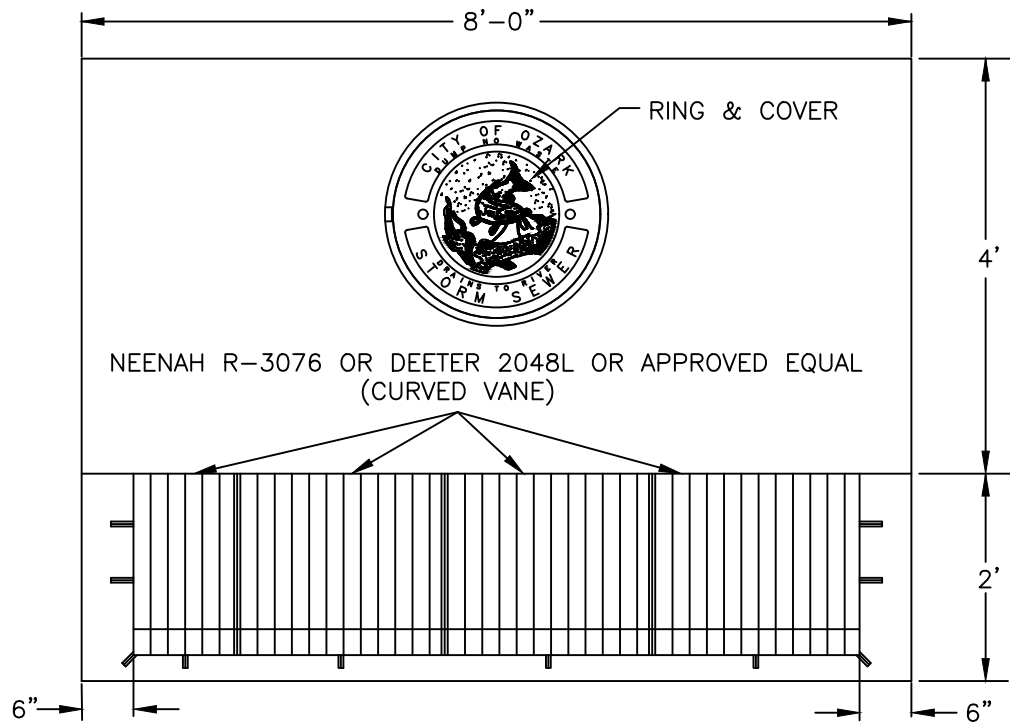
CITY OF OZARK

CURB INLET OVER PIPE
DETAIL

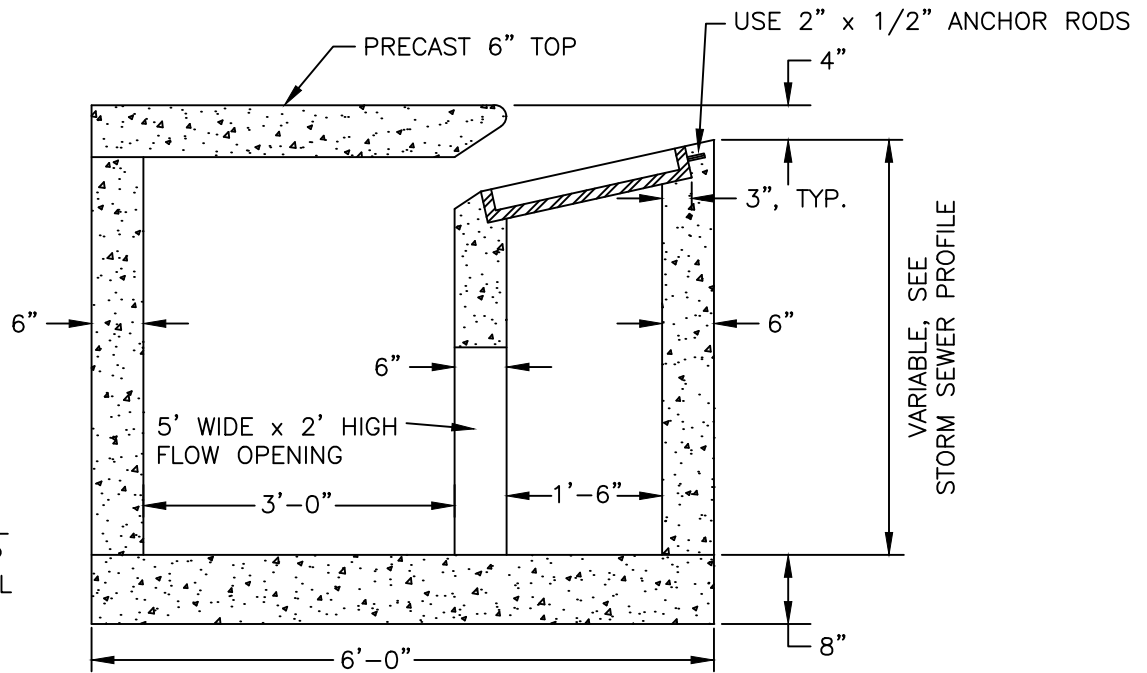
STM-2

DATE
9-01-2017

REVISION
3



PLAN VIEW

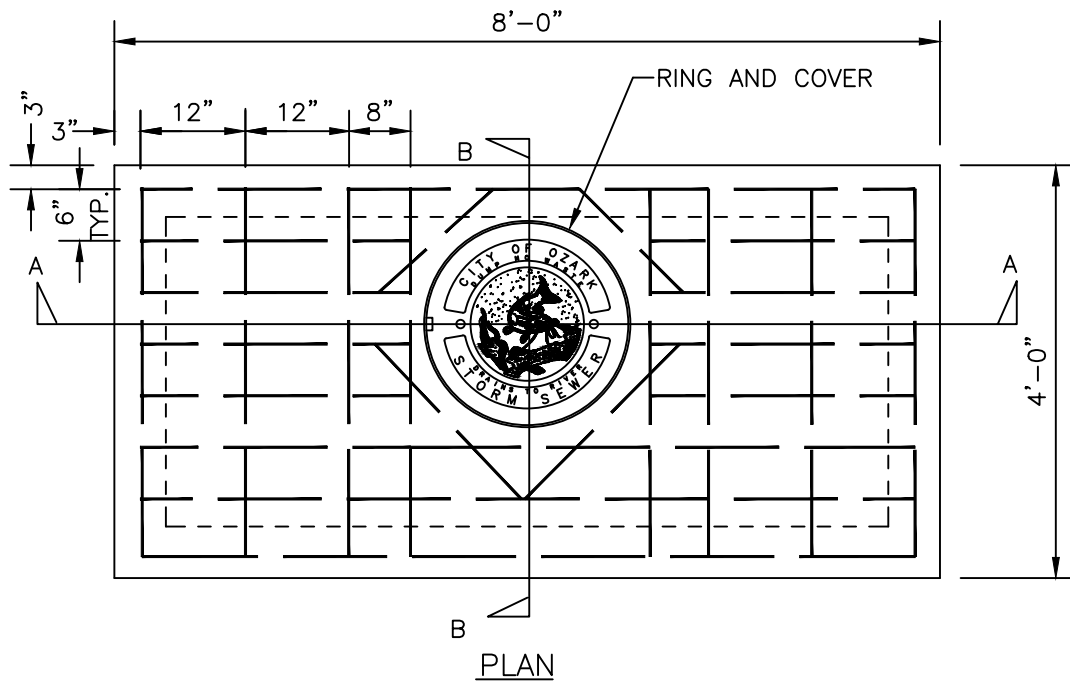


SECTION VIEW

REINFORCE ALL WALLS WITH #4 @ 10" O.C.E.W. INSTALL (2) #6 BARS 3" ABOVE TOP OF OPENING IN MIDDLE WALL

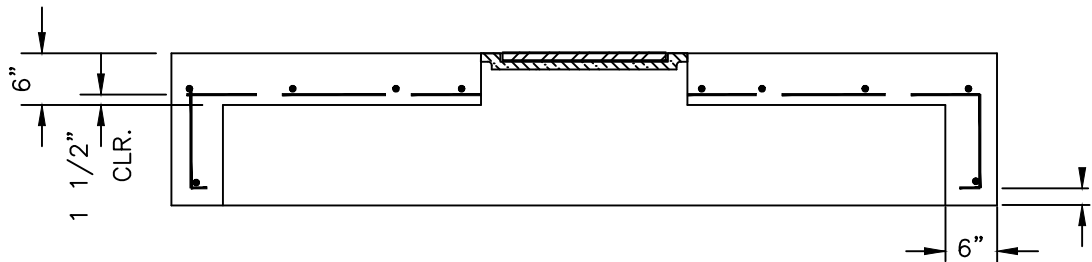
NOTES;

1. THE BOTTOM SLAB SHALL BE CAST IN PLACE CONCRETE ON UNDISTURBED EARTH OR PRECAST CONCRETE ON 4" MINIMUM THICKNESS OF GRANULAR BEDDING.
2. ALL PIPES SHALL FIT FLUSH WITH INSIDE FACE OF INLET.
3. PROVIDE GROUTED INVERT WITH APPROPRIATE FLOW PROFILE THRU BOX INVERT.
4. THE TOP AND OPENING SHALL MATCH PROFILE OF ADJACENT CURB LINE.
5. PROVIDE MASTIC GASKET FOR ALL JOINTS.
6. WHEN USED WITH NON-GRATE INLETS, PLATE THE GRATE INLET DOWNSTREAM.
7. PLACE GRATES SUCH THAT VANES CURVE DOWNWARD IN DIRECTION OF FLOW.
8. PROVIDE MANHOLE FRAME AND LID WITH FISH SYMBOL AND LETTERING.

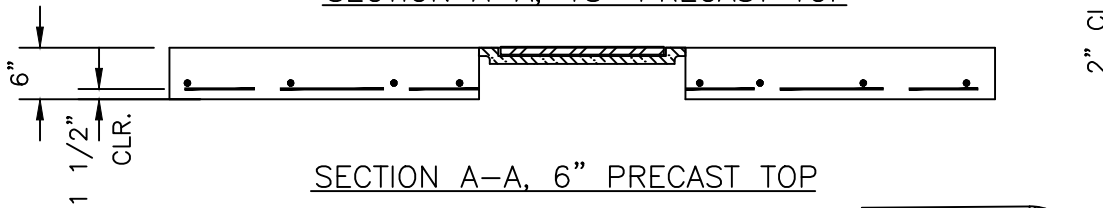


NOTES;

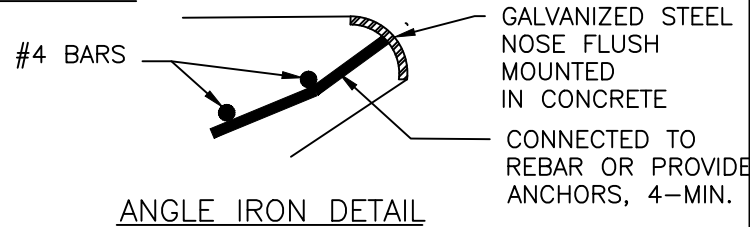
1. USE NO. 4 BARS THROUGHOUT.
2. REINFORCEMENT IS THE SAME IN THE TOP SLAB OF THE 6" AND THE 18" PRECAST TOP.
3. ALL 6" PRECAST TOPS SHALL BE PINNED AT ALL 4 CORNERS WITH #4 DOWELS EXTENDED A MINIMUM OF 6" INTO RISER BELOW..
4. IF INLET IS NOT RECESSED THEN A PROTECTIVE GALVANIZED STEEL NOSE IS REQUIRED AS SHOWN



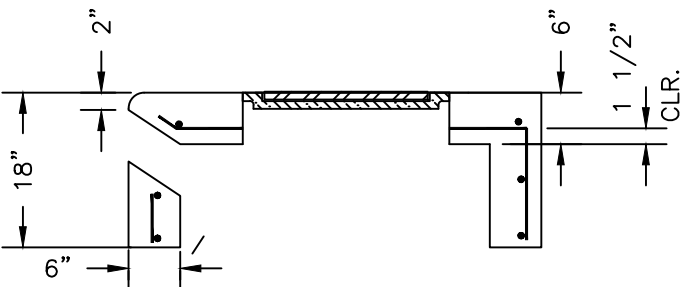
SECTION A-A, 18" PRECAST TOP



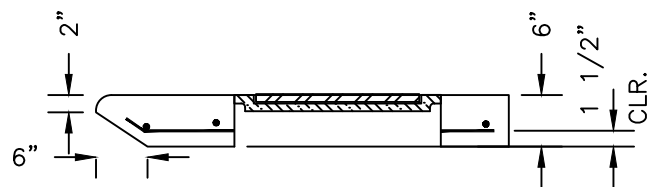
SECTION A-A, 6" PRECAST TOP



ANGLE IRON DETAIL



SECTION B-B 18" PRECAST TOP



SECTION B-B 6" PRECAST TOP

REINFORCE WITH #4 BARS @ 12" EACH WAY
(REINFORCEMENT NOT SHOWN)

PLACE 4 - #4 BARS
AROUND FRAME AS SHOWN.

PLACE 3/4" EXPANSION
MATERIAL WHERE ADJACENT
TO CONCRETE PAVEMENT.

NOTE:
ROUND INLET SHOWN FOR
ILLUSTRATION ONLY. TYPE
OF INLET GRATE TO BE
SPECIFIED BY ENGINEER.

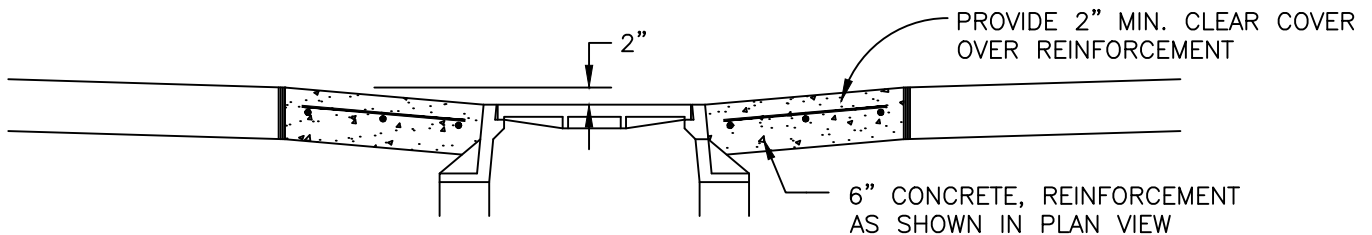
PRECAST CONCRETE
MANHOLE SECTION
BELOW. LOCATE IN
DIRECTION SHOWN ON
DRAWINGS.

MATCH ADJACENT GRADES
TYPICAL, ALL SIDES

2'± TYP. ALL SIDES

INLET O.D. + 4' ROUNDED UP TO NEAREST 6"

PLAN VIEW



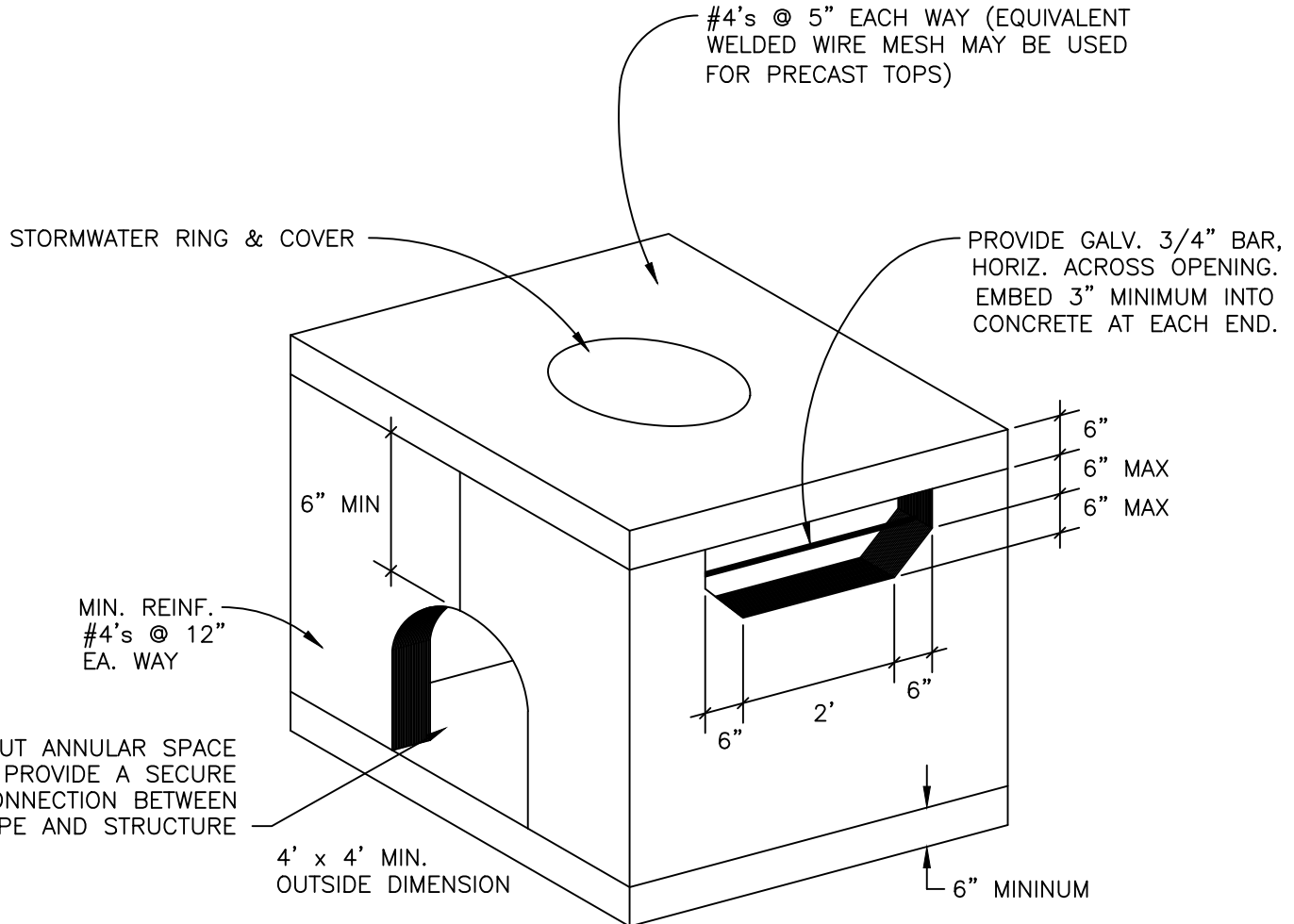
SECTION VIEW

NOTES:

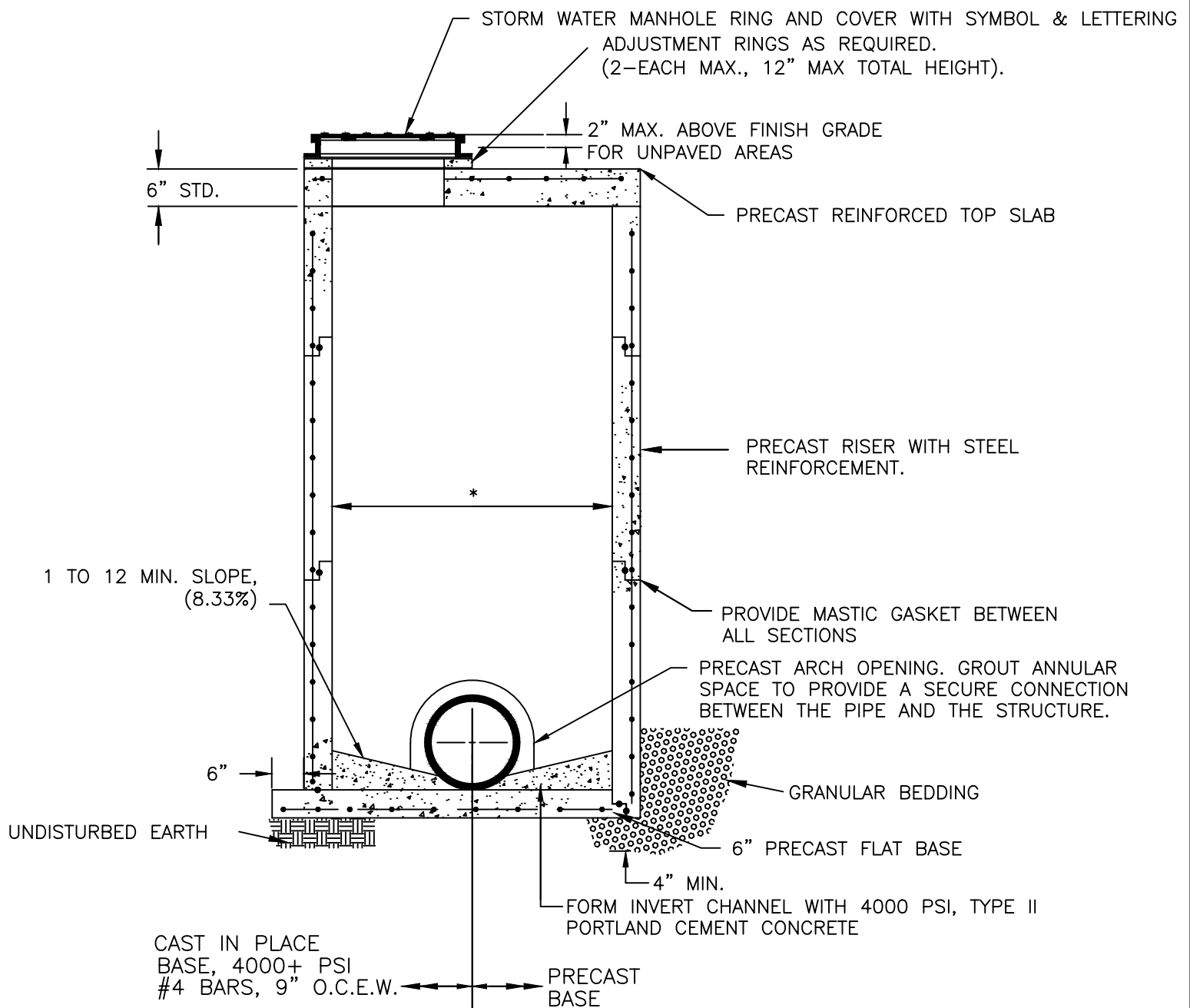
1. THIS AREA INLET WILL NOT BE PERMITTED IN PUBLIC STREETS.
2. GRATING SHOULD BE BICYCLE SAFE FROM ALL DIRECTIONS.
3. DIMENSIONS SHALL BE AS SHOWN ON PLANS.

PIPE DIAMETER
15"–24"
27"–42"
48"
54"–66"
>66"

MINIMUM INSIDE DIMENSION OF STRUCTURE
FOUR FEET (4')
FIVE FEET (5')
SIX FEET (6')
EIGHT FEET (8')
SPECIAL JUNCTION STRUCTURE



- NOTES;
1. THE BOTTOM SLAB SHALL BE CAST IN PLACE CONCRETE ON UNDISTURBED EARTH OR PRECAST CONCRETE ON 4" MINIMUM THICKNESS OF GRANULAR BEDDING.
 2. PROVIDE APPROPRIATE FLOW PROFILE THRU BOX INVERT.
 3. PROVIDE INVERT CHANNEL WITH 4000 PSI, TYPE PORTLAND CEMENT CONCRETE.
 4. ALL PIPES SHALL FIT FLUSH WITH INSIDE FACE OF INLET.
 5. PROVIDE #4 BARS @ 10" O.C.E.W. FOR ALL WALLS, (VERT., HORIZ. AND SLAB). SEE TOP SLAB REINFORCEMENT DETAIL.
 6. CONCRETE TOP SLAB SHALL BE PINNED TO THE STRUCTURE AT EACH CORNER WITH ONE #4 DEFORMED BAR EXTENDED A MINIMUM OF 6" INTO RISER BELOW.
 7. PROVIDE MASTIC GASKET FOR ALL JOINTS.
 8. PROVIDE MANHOLE FRAME AND LID WITH FISH SYMBOL AND LETTERING.



NOTES;

1. THE BOTTOM SLAB SHALL BE CAST IN PLACE CONCRETE ON UNDISTURBED EARTH OR PRECAST CONCRETE ON 4" MINIMUM THICKNESS OF GRANULAR BEDDING.
2. MANHOLE SHALL BE DESIGNED TO WITHSTAND DEAD LOADS AND TRAFFIC LOADS IN ACCORDANCE WITH ASTM C890.
3. PROVIDE APPROPRIATE FLOW PROFILE THRU INVERT.
4. THE MANHOLE WALL THICKNESS SHALL BE 1/12 OF INSIDE DIAMETER PLUS ONE INCH.
5. DO NOT PROVIDE STEPS
6. THE MANHOLE SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ASTM C478.
7. ALL PIPES SHALL FIT FLUSH AT INSIDE FACE OF MANHOLE.
8. PROVIDE MANHOLE FRAME AND LID WITH SYMBOL AND LETTERING.

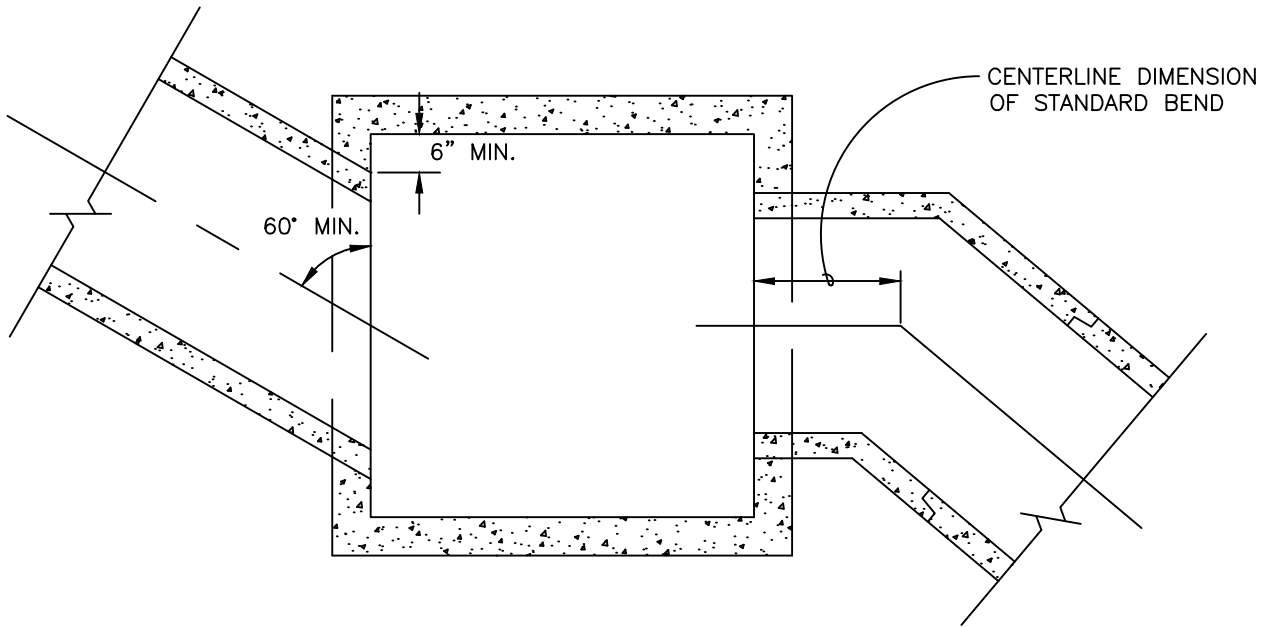
PIPE DIAMETER
15"-24"
27"-42"
48"
54"-66"
>66"

*MINIMUM INSIDE DIAMETER OF MANHOLE
FOUR FEET (4')
FIVE FEET (5')
SIX FEET (6')
EIGHT FEET (8')
SPECIAL MANHOLE STRUCTURE

EACH MAX., 12" MAX TOTAL HEIGHT).
 PRECAST REINFORCED FLAT TOP
 6" STD.
 STORM SEWER MANHOLE RING AND COVER WITH SYMBOL & LETTERING
 2" MAX. ABOVE FINISH GRADE FOR UNPAVED AREAS
 CONCRETE RISER WITH STEEL REINFORCEMENT.
 1 TO 12 MIN. SLOPE, (8.33%)
 6"
 UNDISTURBED EARTH
 PRECAST ARCH OPENING. GROUT ANNULAR SPACE TO PROVIDE A SECURE CONNECTION BETWEEN THE PIPE AND THE STRUCTURE.
 GRANULAR BEDDING
 6" PRECAST FLAT BASE
 4" MIN.
 FORM INVERT CHANNEL WITH 4000 PSI, TYPE II PORTLAND CEMENT CONCRETE
 CAST IN PLACE BASE, 4000+ PSI #4 BARS, 9" O.C.E.W.
 PRECAST BASE

1. THE BOTTOM SLAB SHALL BE CAST IN PLACE CONCRETE ON UNDISTURBED EARTH OR PRECAST CONCRETE ON 4" MINIMUM THICKNESS OF COMPACTED GRANULAR BEDDING.
2. JUNCTION BOX SHALL BE DESIGNED TO WITHSTAND DEAD LOADS AND TRAFFIC LOADS IN ACCORDANCE WITH ASTM C890.
3. CONCRETE TOP SLAB SHALL BE PINNED TO THE STRUCTURE AT EACH CORNER WITH ONE #4 DEFORMED BAR EXTENDED A MINIMUM OF 6" INTO RISER BELOW.
4. PROVIDE APPROPRIATE FLOW PROFILE THRU INVERT.
5. ALL PIPES SHALL FIT FLUSH WITH INSIDE FACE OF JUNCTION BOX.
6. DO NOT PROVIDE STEPS.
7. THE CIRCULAR PRECAST SECTIONS AND STEEL REINFORCEMENT SHALL BE IN ACCORDANCE WITH ASTM C478.
10. PROVIDE MANHOLE FRAME AND LID WITH SYMBOL AND LETTERING.

PIPE DIAMETER	*MINIMUM INSIDE DIMENSION OF STRUCTURE
15"–24"	FOUR FEET (4')
27"–42"	FIVE FEET (5')
48"–54"	SIX FEET (6')
54"–66"	EIGHT FEET (8')
>66"	SPECIAL JUNCTION STRUCTURE



CITY OF OZARK

TYPICAL PIPE CONNECTIONS
AT JUNCTION STRUCTURE

NTS

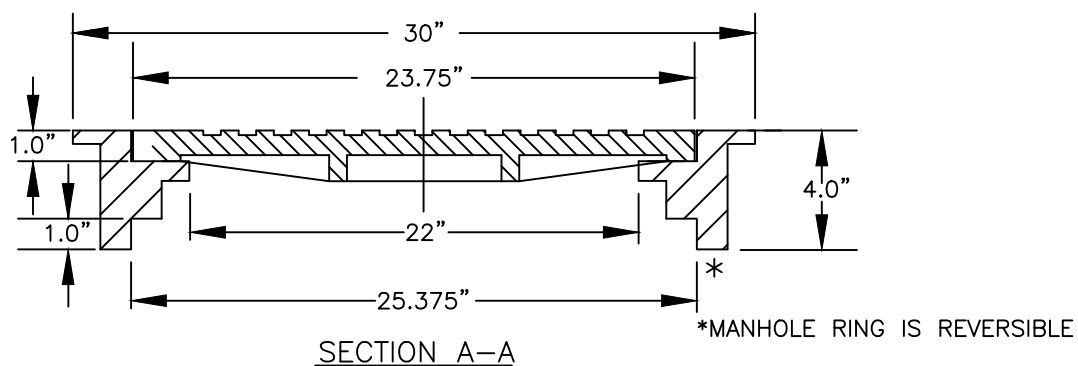
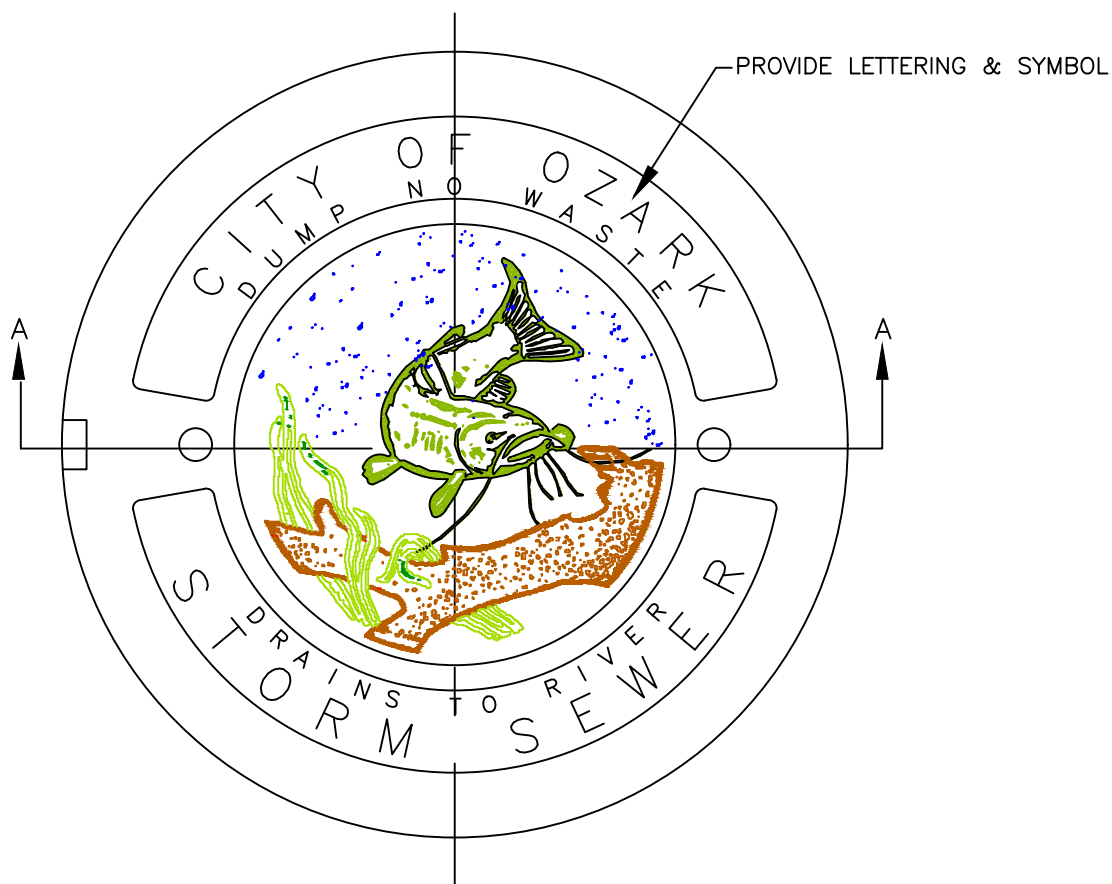
STM-9

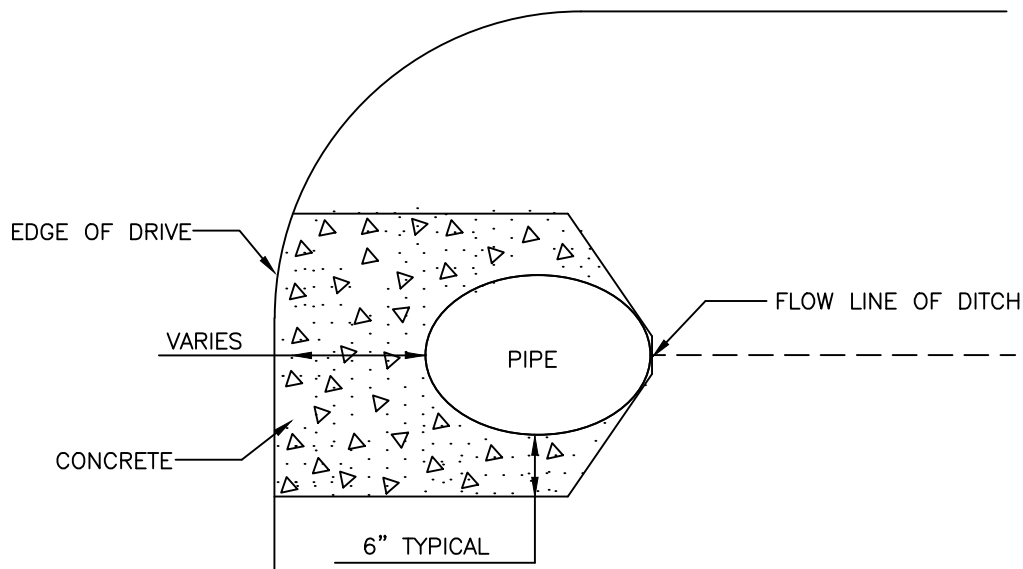
DATE
4-21-06

REVISION
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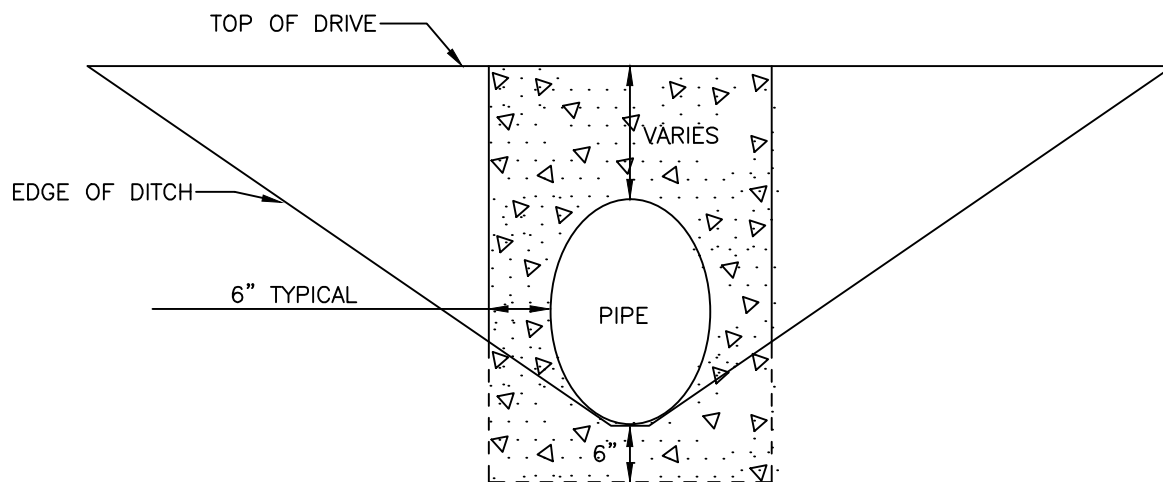
NOTES:

1. DEETER 1157 MANHOLE RING AND SOLID COVER OR APPROVED EQUAL.
2. COVERS WITH A SIMILIAR SYMBOL MAY BE SUBMITTED FOR APPROVAL
3. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED .

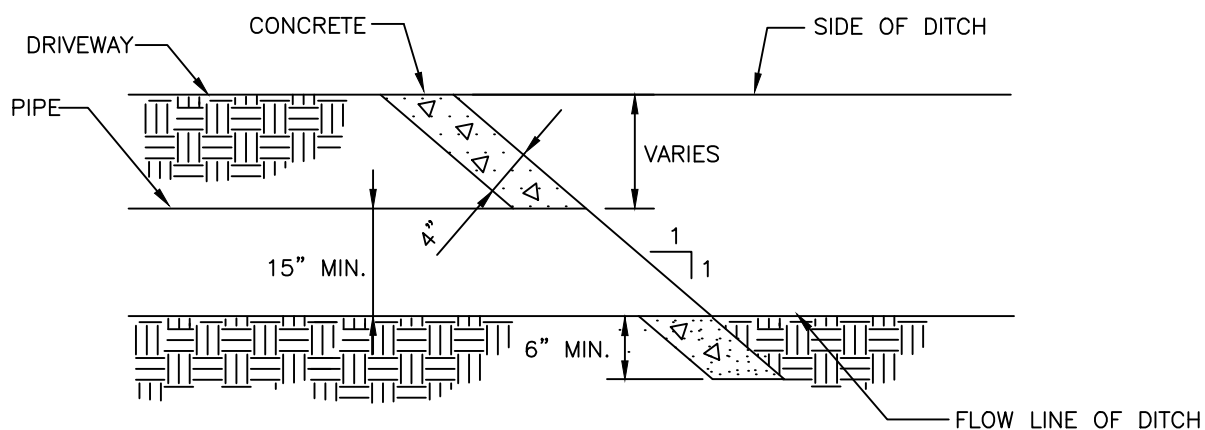




PLAN



ELEVATION



SECTION

FOR DRIVEWAY CROSSINGS AT UNIMPROVED STREETS WITH CORRUGATED OR CONCRETE PIPE.
CUT PIPE AT A BEVEL AND POUR CONCRETE AROUND END TO MEASUREMENTS INDICATED.

CITY OF OZARK

CONCRETE CULVERT CAP FOR DRIVEWAYS

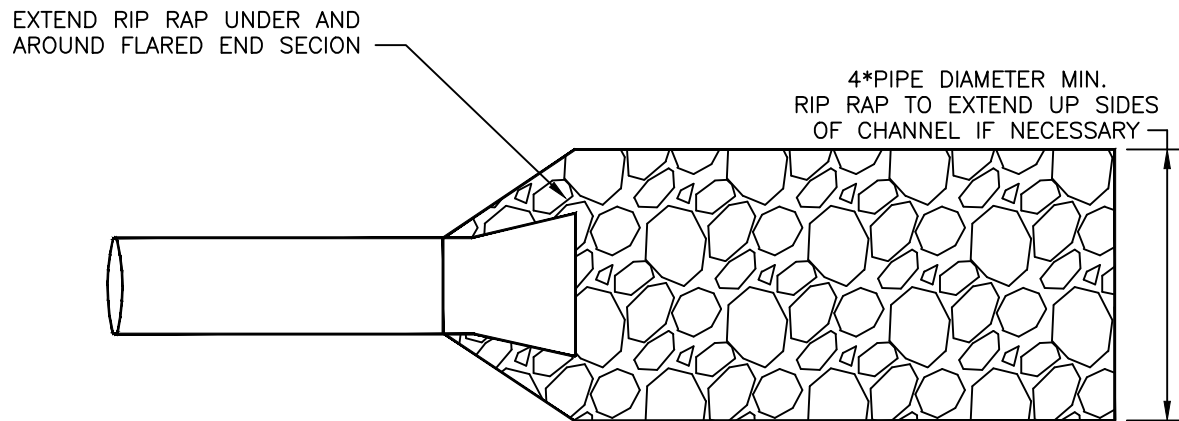
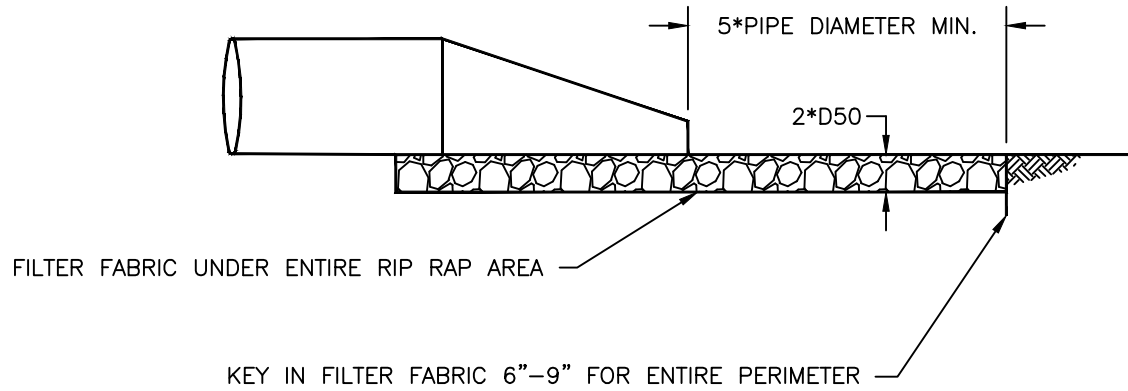
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STM-11

DATE
12-19-2016

REVISION

1



VELOCITY (FPS)	RIP RAP D50 MIN DIAMETER (INCHES)
$V < 8$	12
$8 < V < 12$	24
$V > 12$	NOT PERMITTED

D50 OF LESS THAN 12 INCHES IS NOT PERMITTED

NOTES;

1. FOR PIPES WITH HEADWALLS, BEGIN RIP RAP AT TOE OF HEADWALL. RIP RAP MINIMUM WIDTH TO BE WIDTH OF HEADWALL PLUS ONE FOOT BOTH SIDES.
2. FOR MULTIPLE PIPES AND ARCHED PIPES, RIP RAP TO BE AT A MINIMUM OF THE TOTAL WIDTH OF THE OPENING PLUS ONE FOOT ON BOTH SIDES.
3. D50 IS THE ROCK SIZE THAT CORRESPONDS TO 50 PERCENT OF THE ROCKS BEING SMALLER AND 50 PERCENT OF THE ROCKS BEING LARGER.

CITY OF OZARK

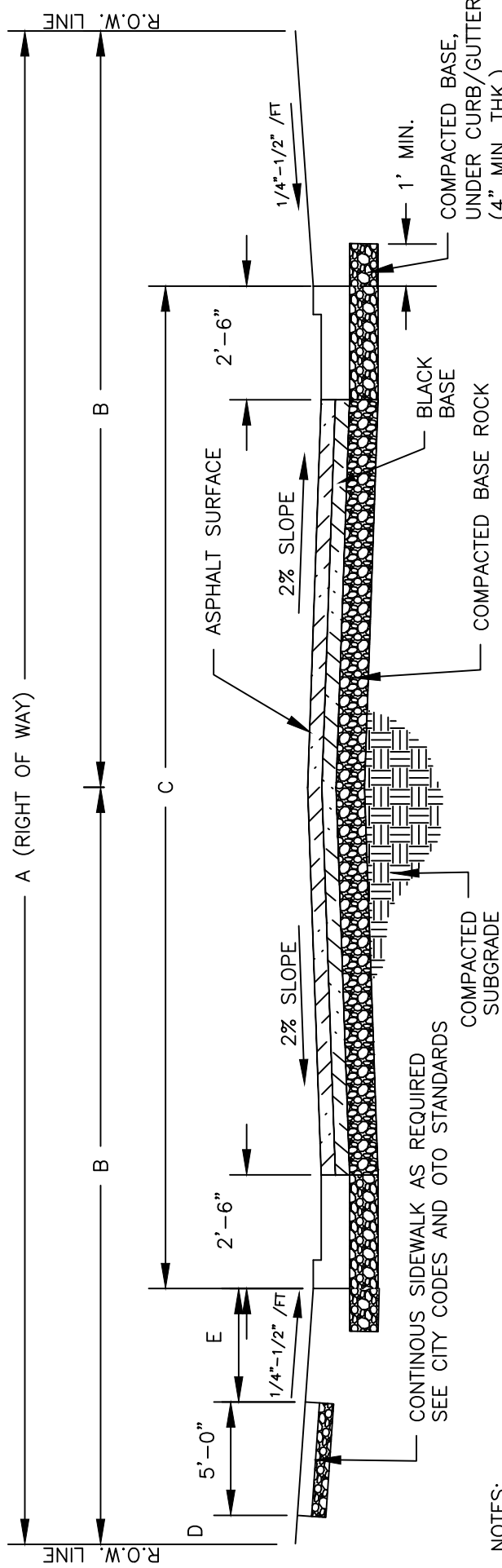
RIPRAP
DETAIL

NTS

STM-12

DATE
4-21-10

REVISION
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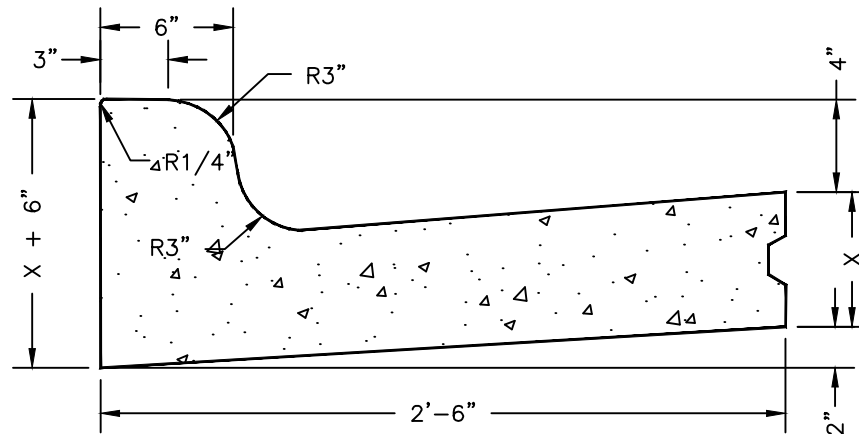


NOTES:

1. THE EARTH SUBGRADE SHALL BE SCARIFY TO A DEPTH OF 8" FOR BOTH CUT AND FILL AREAS, HAVE THE MOISTURE CONTENT ADJUSTED TO A RANGE OF +/- 2% FROM OPTIMUM MOISTURE CONTENT FOR STABILITY AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY PER ASTM D-698.
2. THE AGGREGATE BASE MATERIAL SHALL BE SPREAD IN 6" MAXIMUM LIFTS WITH MOISTURE APPLIED AS NECESSARY TO OBTAIN A DENSITY OF NOT LESS THAN 95% OF STANDARD MAXIMUM DENSITY AS DETERMINED BY ASTM D-698.
3. BITUMINOUS BASE AND SURFACE SHALL BOTH BE COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THAT OBTAINED BY THE LABORATORY COMPACTION OF A SPECIMEN OF THE APPROVED MIXTURE.
4. TWO INCHES OF COMPACTED BASE ROCK MAY BE SUBSTITUTED FOR ONE INCH OF BLACK BASE THICKNESS.

STREET CLASSIFICATION	A (R.O.W.)	B	C. P.V.M.T. W BOC TO BOC	D	E	BASEROCK (MIN. DEPTH)	BITUMINOUS ASPHALT, (MIN. THK.) BLACK BASE SURFACE	CONCRETE EQUIVALENT
RESIDENTIAL STREETS	50'	25'	29'	VARIES	4' MIN.	4"	5.5"	6"
RESIDENTIAL COLLECTOR	50' OR 60'*	25' OR 30'*	29' OR 35'*	VARIES	4' MIN.	4"	7"	7"
PRIMARY COLLECTOR	65'	32.5'	29' OR 35'*	VARIES	4' MIN.	4"	7"	7"
SECONDARY ARTERIAL	80'	40'	41' OR 46'*	VARIES	4' MIN.	*	*	*
PRIMARY ARTERIAL	110'	55'	29' EA SIDE	VARIES	4' MIN.	*	*	*

*TO BE INDIVIDUALLY DESIGNED.
** WITH BICYCLE ROUTE



NOTE;

1. X DENOTES THE THICKNESS OF THE PAVEMENT, (ASPHALT OR CONCRETE).
2. PROVIDE THE KEYWAY OR #5 REBAR AT 2'-6" O.C. FOR ALL CONCRETE PAVEMENT. KEYWAY OR REBAR SHALL BE OMITTED FOR ASPHALT PAVEMENT.
3. EXPANSION JOINTS SHALL BE CONSTRUCTED AS PER THE CONCRETE JOINT DETAIL. EXPANSION JOINTS SHALL BE PLACED AS PER THE JOINT LAYOUT DETAIL AND AT ALL STRUCTURES SUCH AS BOX CULVERTS, JUNCTION BOXES, INLETS AND ETC.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED AS PER THE CONCRETE JOINT DETAIL. CONTRACTION JOINTS SHALL BE PLACED AS PER THE JOINT LAYOUT DETAIL AND AT INTERVALS OF NOT MORE THAN 25' NOR MORE THAN 25' FROM ANY EXPANSION JOINT.

CITY OF OZARK

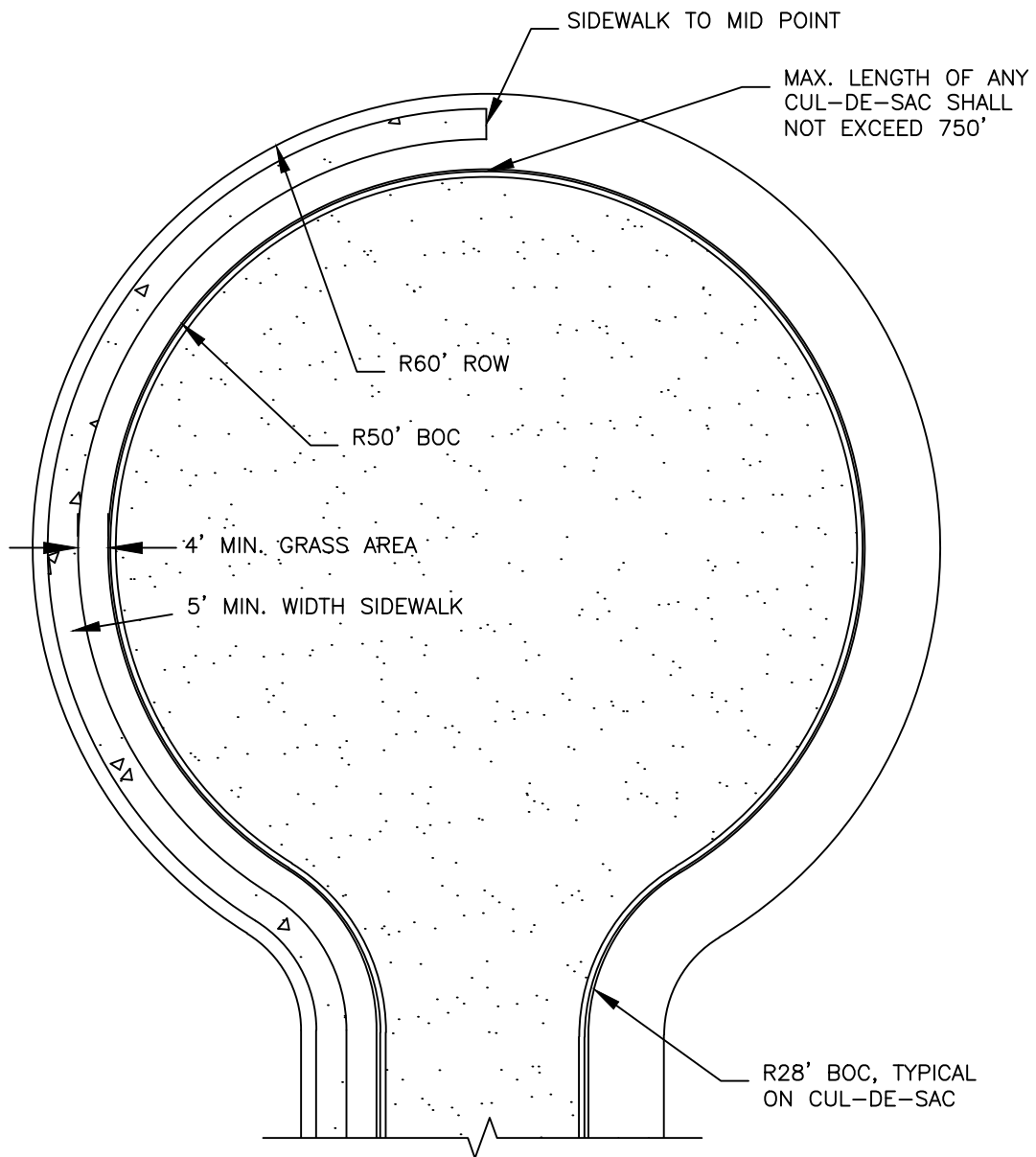
STANDARD CURB
DETAILS

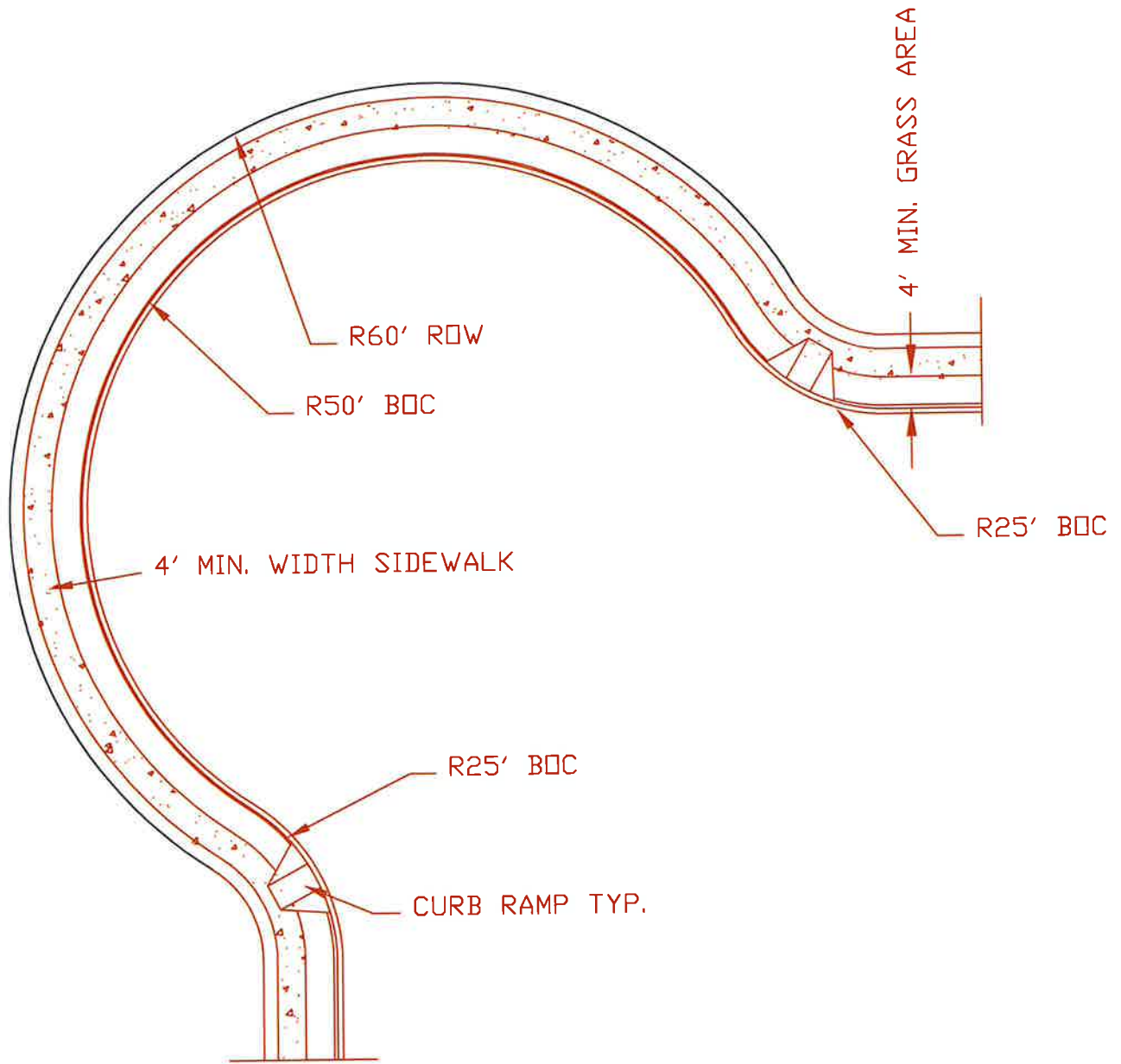
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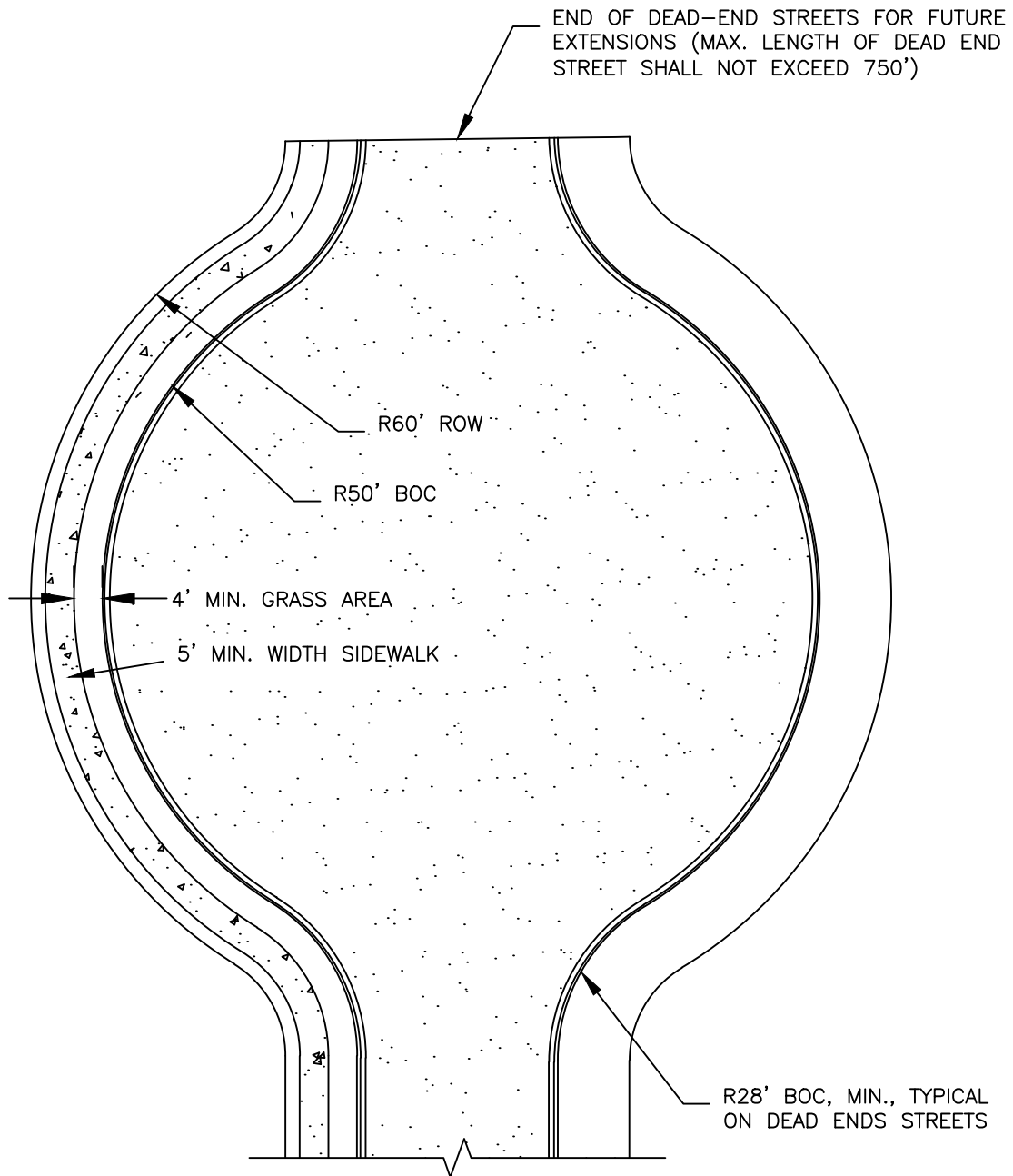
STR-2

DATE
4-20-10

REVISION
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NOTE:

1. AN APPROPRIATE SIZED AND DESIGNED "T" TYPE MAY BE APPROVED ON A CASE BY CASE REQUEST.

CITY OF OZARK

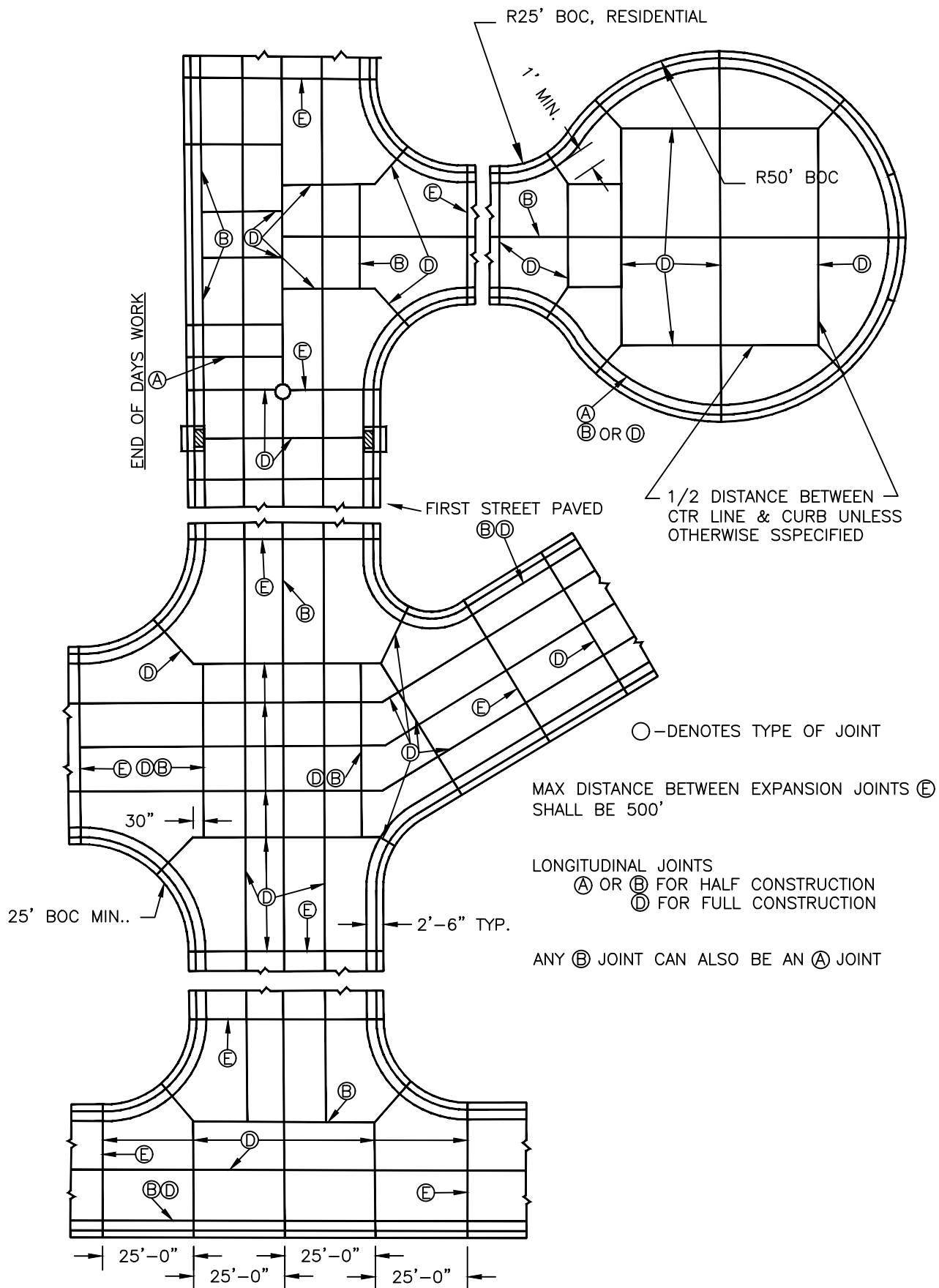
TEMPORARY DEAD ENDS
MINIMUM STANDARDS

NTS

DATE
11-28-2016

STR-4

REVISION
3



CITY OF OZARK

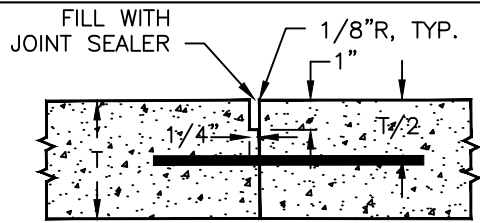
JOINT LAYOUT, CONCRETE
DETAILS

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STR-6

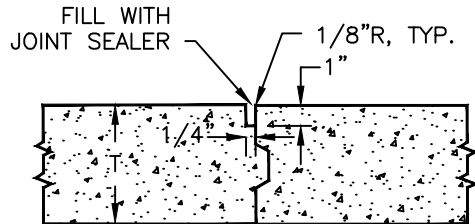
DATE
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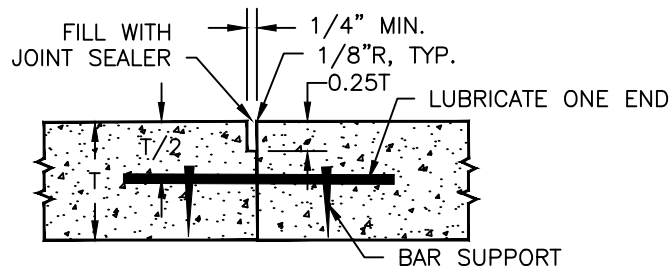
DOWELED LONGITUDINAL JOINT
WITH 24" NO. 6 DEFORMED BAR AT 24" O.C.

TYPE "A"



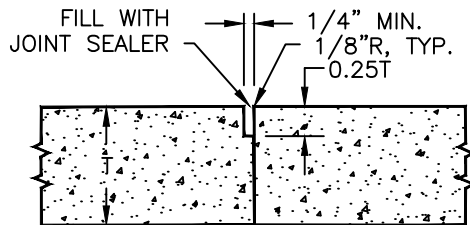
KEYED LONGITUDINAL JOINT

TYPE "B"



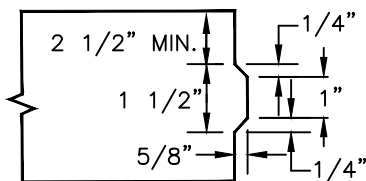
SAWED CONTRACTION JOINT WITH
1" X 18" DOWEL BAR AT 24" O.C.

TYPE "C"

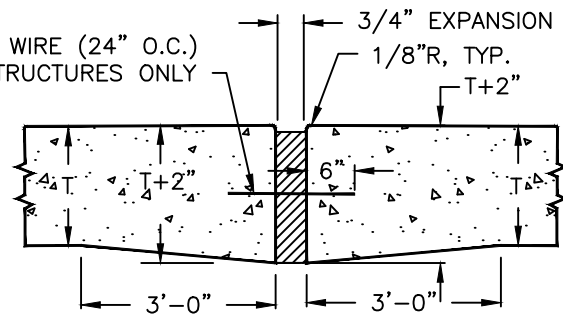


SAWED CONTRACTION JOINT

TYPE "D"

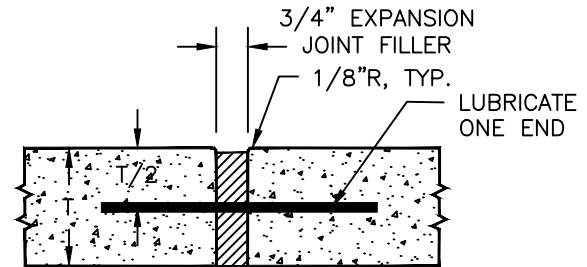


DETAIL KEY
KEYWAY FORMED BY FASTENING KEY TO FORM



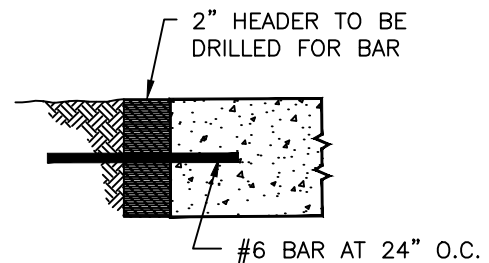
EXPANSION JOINT

TYPE "E"



DOWELED EXPANSION JOINT
3/4" X 15" DOWEL BAR AT 24" O.C.

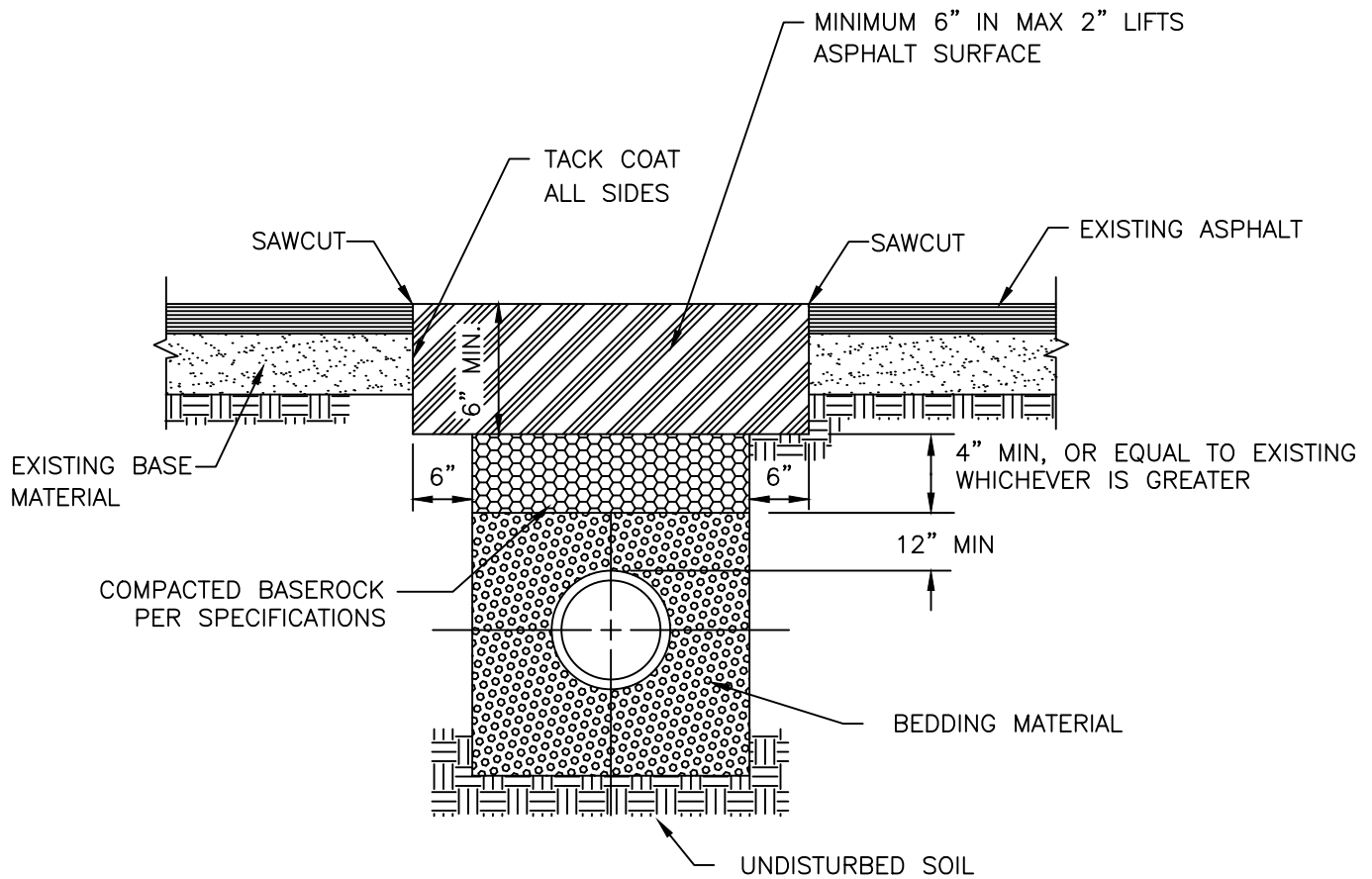
TYPE "F"



CONSTRUCTION HEADER CONCRETE

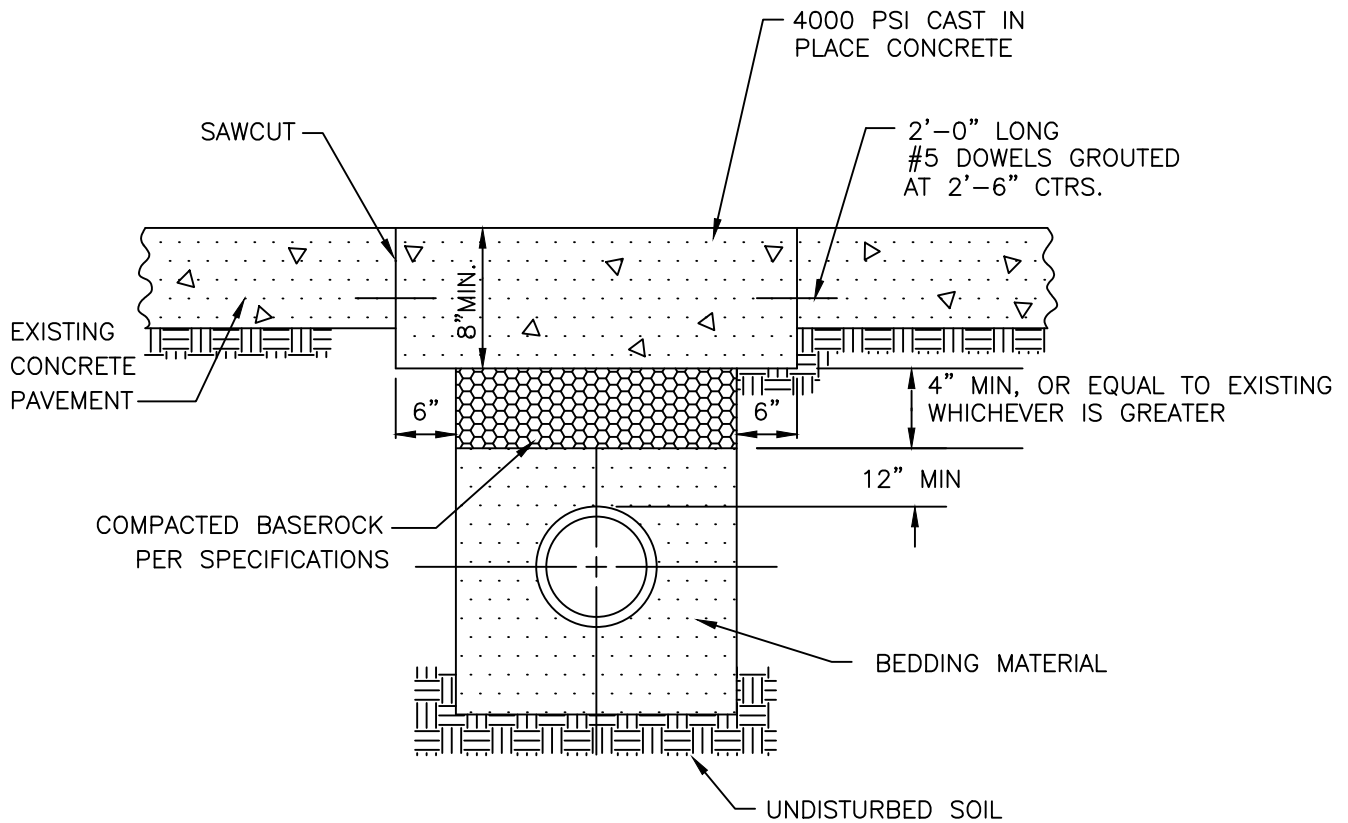
DEPTH OF SAW JOINT

6" PAV. = 1-1/2"
7" PAV. = 1-3/4"
8" PAV. = 2"



NOTES:

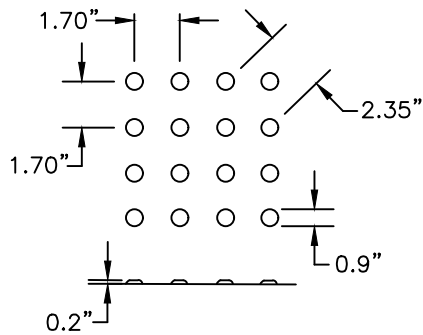
1. PROVIDE FLOWABLE FILL MIX TO TOP OF EXISTING ASPHALT FOR TEMPORARY DRIVING SURFACES.
2. COMPACTED BASE MUST HAVE OPTIMAL MOISTURE CONTENT AND BE COMPACTED TO 95% DENSITY EVERY LIFT FOOT.
3. PROVIDE TRACER WIRES AND WARNING TAPES AS SPECIFIED.
4. THE PUBLIC WORKS DIRECTOR MAY APPROVE A CONCRETE PATCH IN LIEU OF ASPHALT.



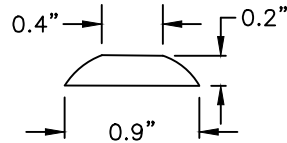
NOTES:

1. PROVIDE FLOWABLE FILL MIX TO TOP OF PATCH FOR TEMPORARY DRIVING SURFACE.
2. COMPACTED BASE MUST HAVE OPTIMAL MOISTURE CONTENT AND BE COMPACTED TO 95% DENSITY EVERY LIFT FOOT.
3. TEMPORARY 3" COLD MIX ASPHALT OR UPM PATCH MAY BE REQUIRED.
4. PROVIDE TRACER WIRES AND WARNING TAPE AS SPECIFIED.

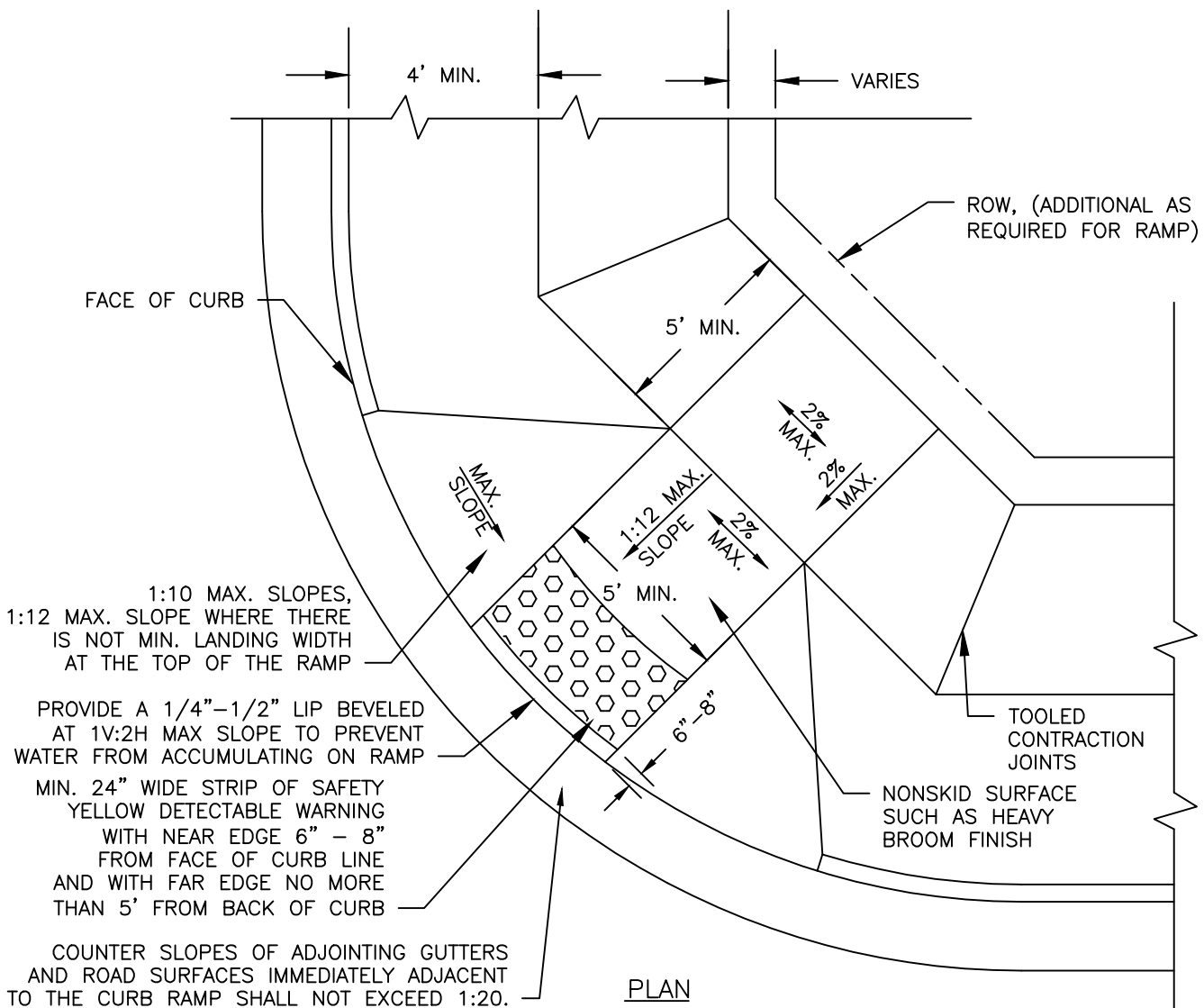
NOTE:
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.



DOMES SPACING



DOMES SECTION



NOTE: THE DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP.

CITY OF OZARK

CURB RAMP TYPE I

STR-10

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DATE
12-07-2016

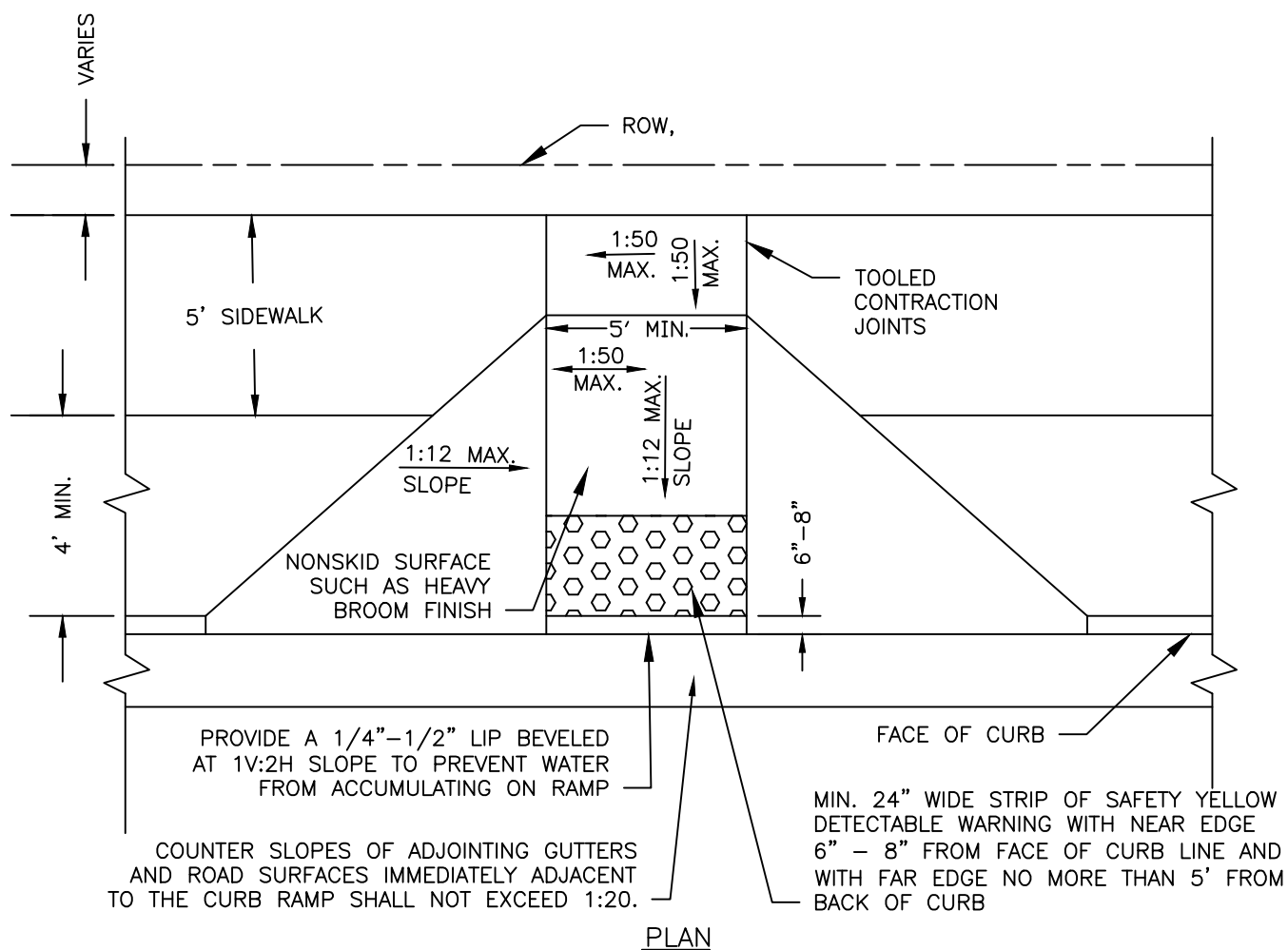
REVISION

4

Figure 1 is a plan view of the test specimen, showing a 4x4 grid of circular reinforcement bars. The dimensions are as follows: the overall width is 1.70 inches, the overall depth is 2.35 inches, the spacing between the bottom reinforcement bars is 0.9 inches, and the diameter of the bottom reinforcement bars is 0.2 inches. Arrows indicate the direction of the reinforcement bars.

Diagram of a hemispherical dome on a rectangular base. The base has a width of 0.9 inches and a height of 0.2 inches. The dome has a radius of 0.4 inches.

DOME SECTION



CITY OF OZARK

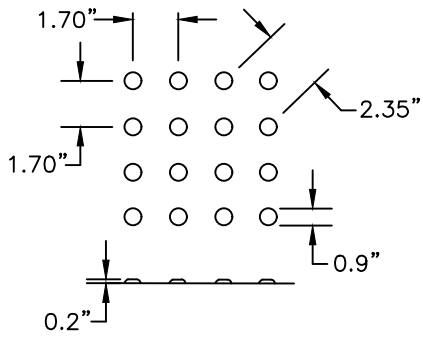
CURB RAMP TYPE II

STR-11

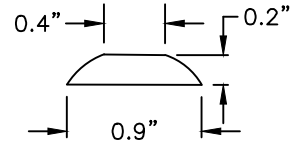
NTS	DATE 12-07-2016
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REVISION	4
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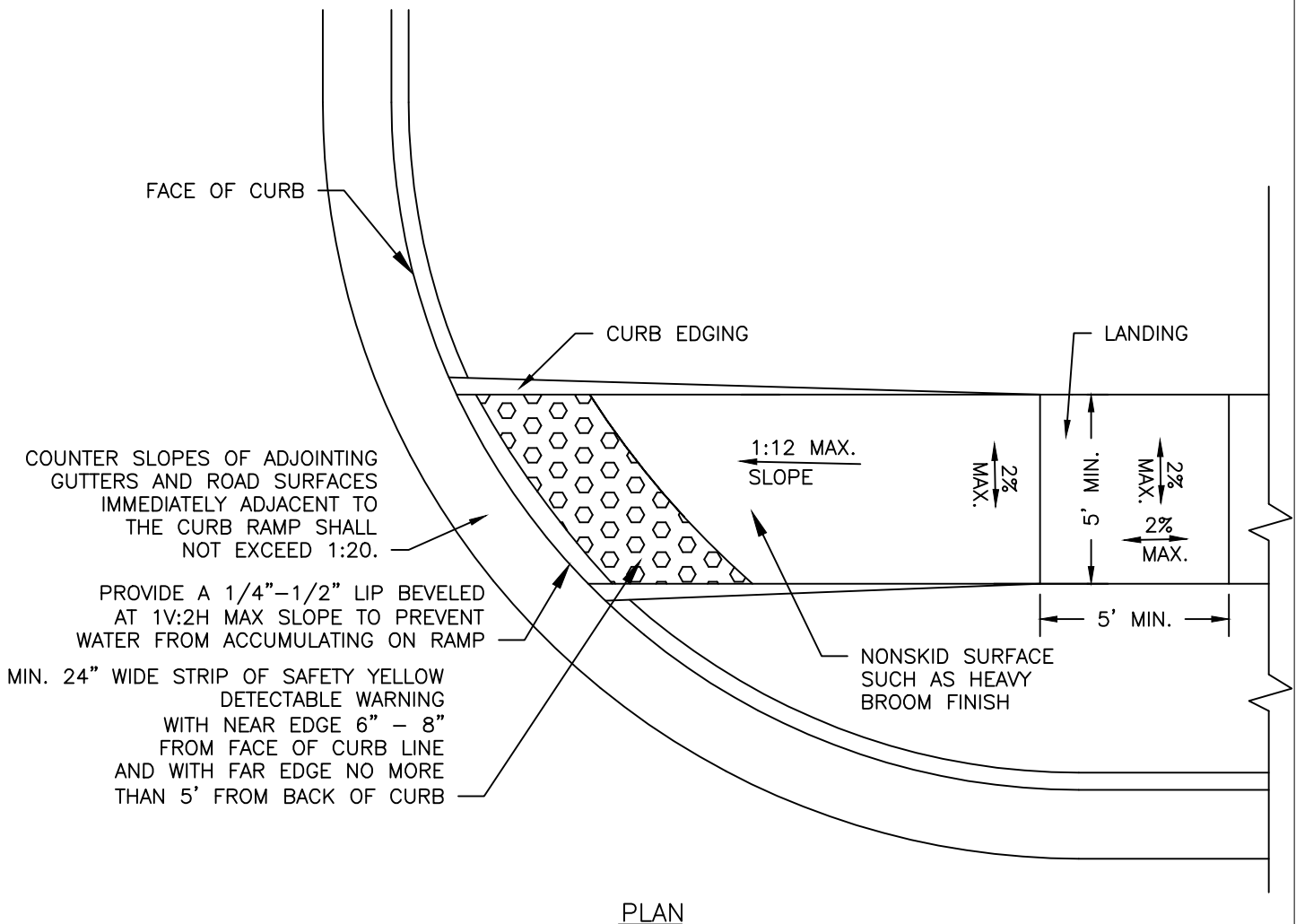
NOTE:
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.



DOMES SPACING



DOMES SECTION



NOTE: THE DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP.

CITY OF OZARK

CURB RAMP TYPE III

STR-12

DATE
12-07-2016

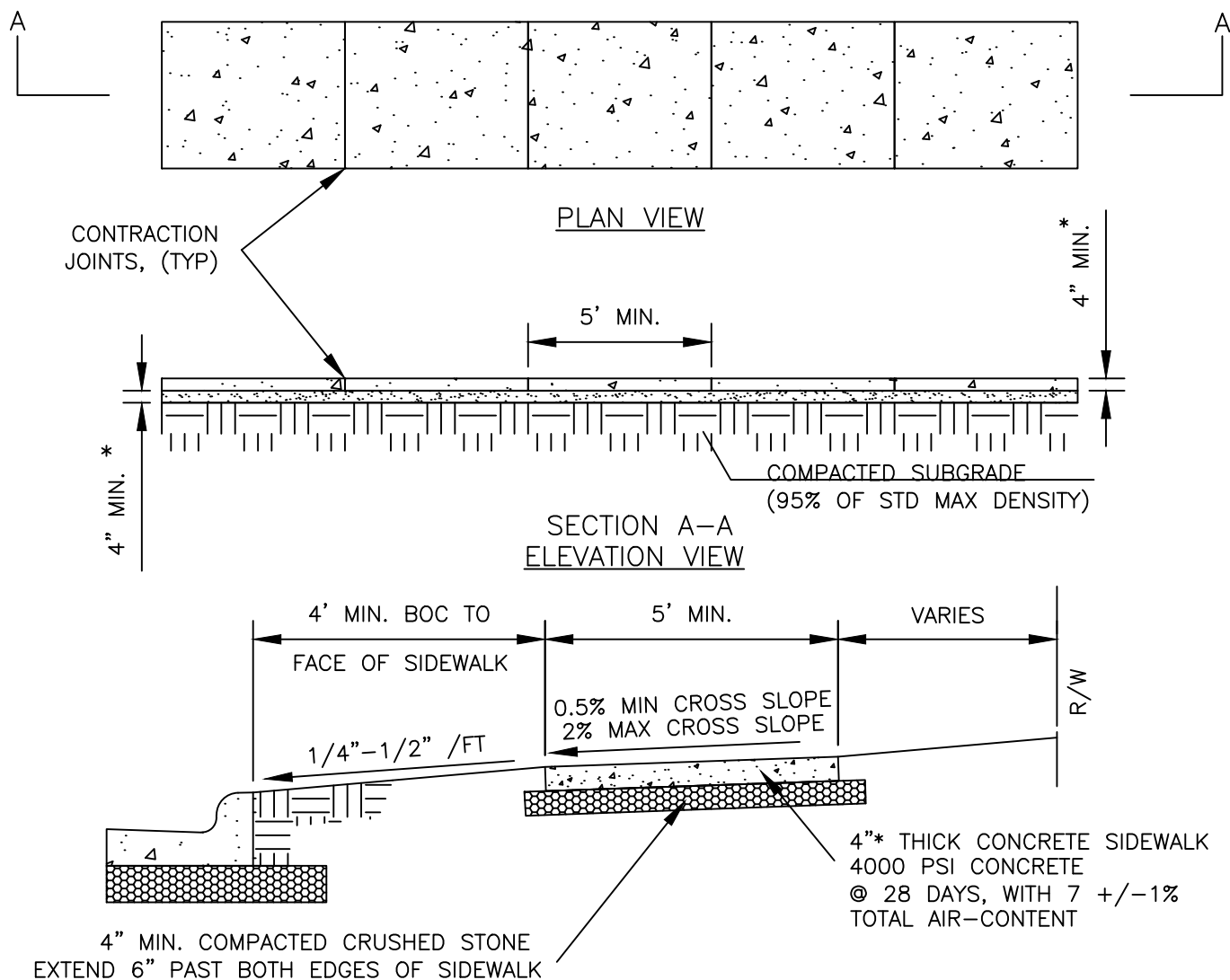
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Diagram of a hemispherical dome on a rectangular base. The base has a width of 0.9 inches and a height of 0.2 inches. The dome has a radius of 0.4 inches.

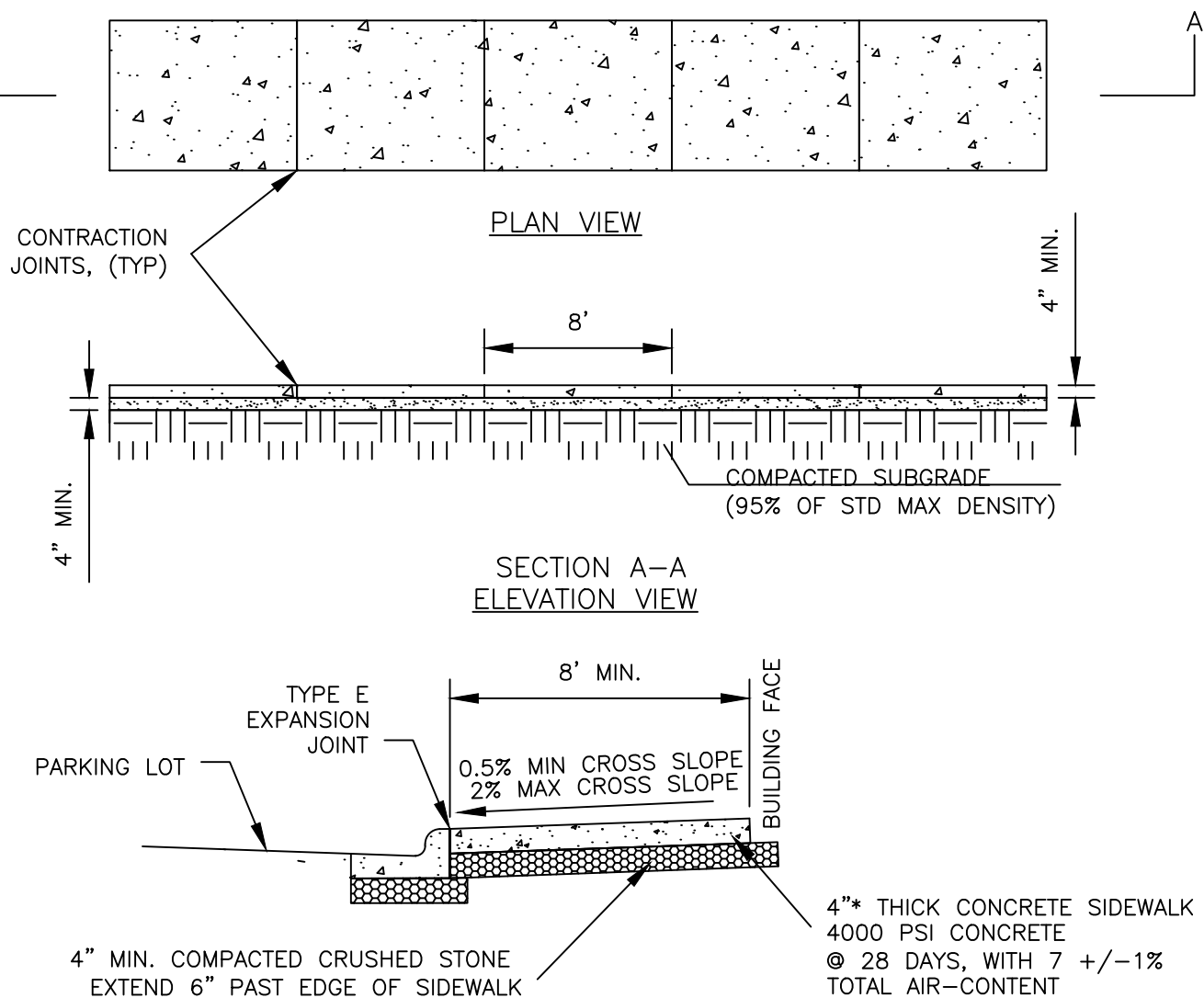
DOME SECTION



5' ** CONCRETE SIDEWALK DETAIL

NOTES:

1. JOINTS SHALL BE FORMED AT RIGHT ANGLES TO THE ALIGNMENT OF THE SIDEWALK AND TO THE DEPTHS INDICATED BELOW.
2. THE SIDEWALK SHALL BE MARKED OFF INTO SQUARE STONES BY CONTRACTION JOINTS. CONTRACTION JOINTS SHALL BE ONE EIGHTH (1/8) INCH WIDE BY ONE FOURTH (1/4) OF SECTION THICKNESS AND SHALL BE FORMED BY TOOLING.
3. EXPANSION JOINTS SHALL BE PLACED WHERE SIDEWALK ABUTS OTHER STRUCTURES AND SHALL NOT BE SPACED MORE THAN 50 FEET APART ON STRAIGHT RUNS FOR HAND LAID SIDEWALK AND NOT MORE THAN 100 FEET APART ON STRAIGHT RUNS FOR MACHINE LAID SIDEWALKS. EXPANSION JOINTS SHALL BE FORMED BY A THREE-FOURTH, (3/4) INCH THICK PREFORMED JOINT FILLER, EXTENDING THE FULL DEPTH OF THE SLAB, AND SECURED SO THAT THEY ARE NOT MOVED BY DEPOSITING AND COMPACTING THE CONCRETE AT THESE JOINTS.
4. ANY PART OF AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 1:20 SHALL BE CONSIDERED A RAMP AND SHALL COMPLY WITH THOSE REGULATIONS.
5. **ANY SIDEWALK LOCATED ADJACENT TO THE BACK OF CURB SHALL BE HAVE A MINIMUM WIDTH OF 6'.

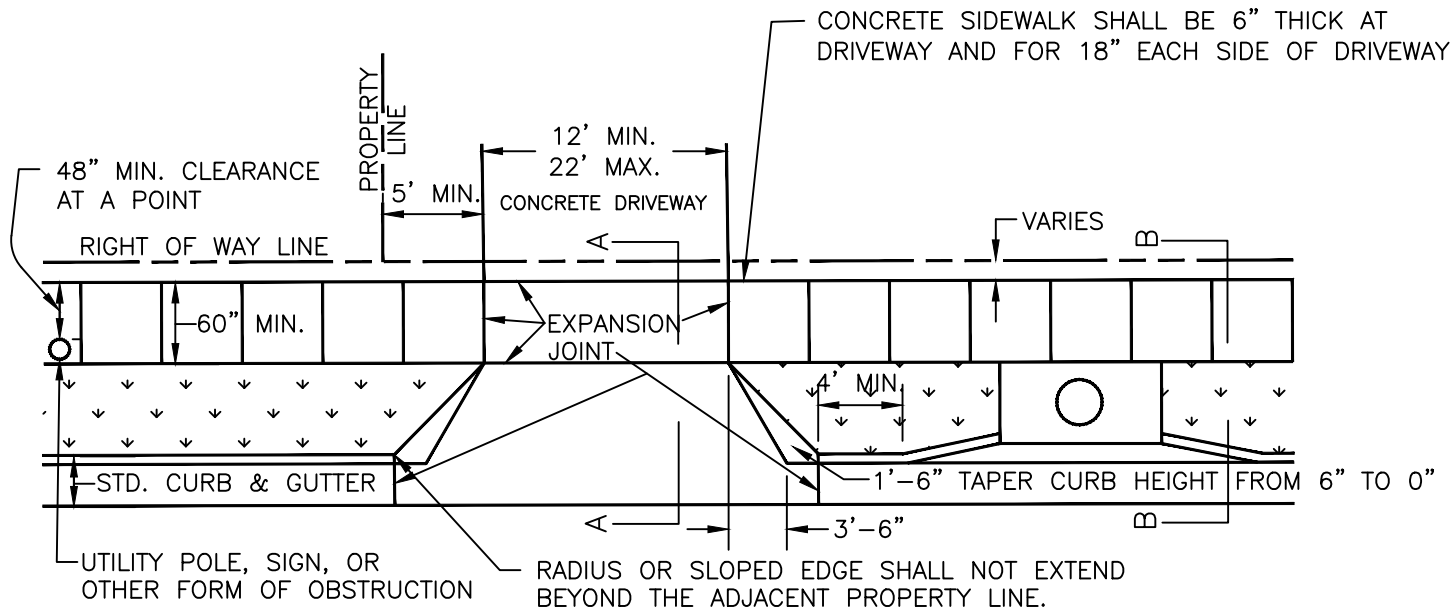


* 4" THICKNESS SHALL BE CHANGED TO 6" AT DRIVEWAYS

8'*** CONCRETE SIDEWALK DETAIL

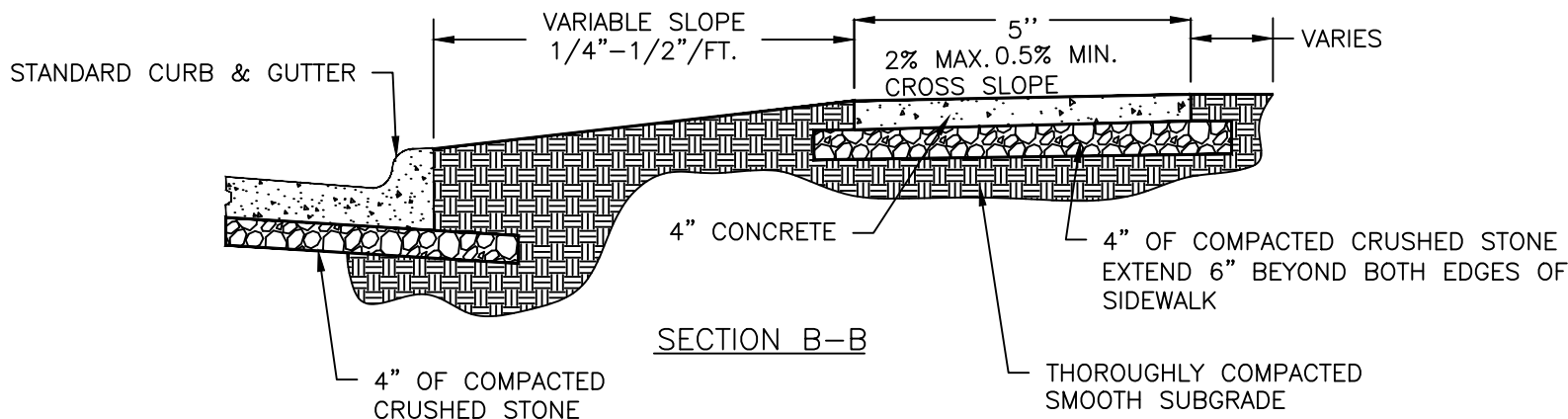
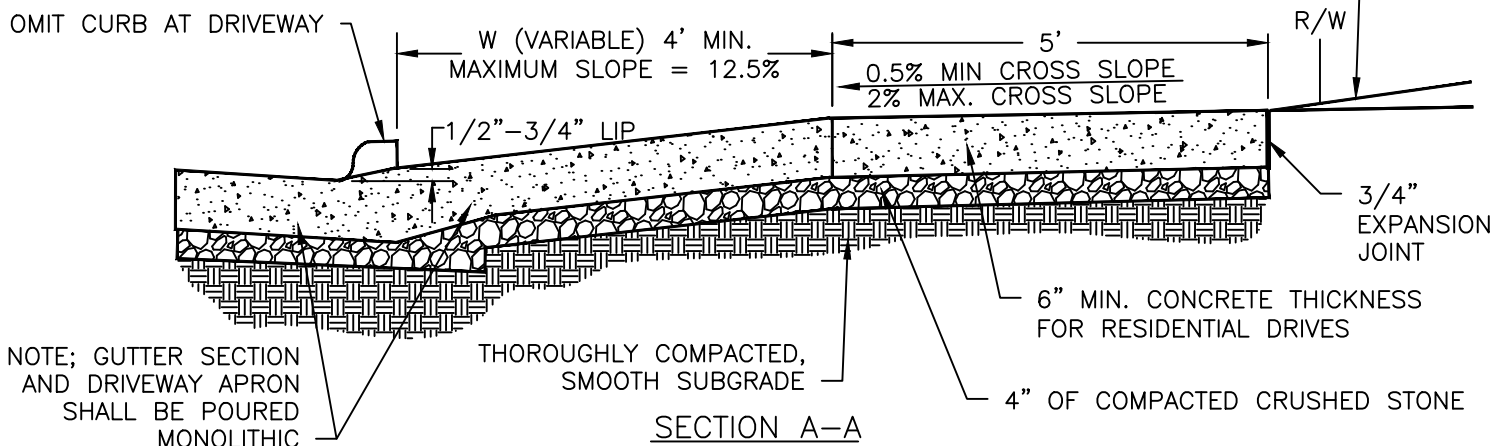
NOTES:

1. JOINTS SHALL BE FORMED AT RIGHT ANGLES TO THE ALIGNMENT OF THE SIDEWALK AND TO THE DEPTHS INDICATED BELOW.
2. THE SIDEWALK SHALL BE MARKED OFF INTO SQUARE STONES BY CONTRACTION JOINTS AT 8' INTERVALS. CONTRACTION JOINTS SHALL BE ONE EIGHTH (1/8) INCH WIDE BY ONE FOURTH (1/4) OF SECTION THICKNESS AND SHALL BE FORMED BY TOOLING.
3. EXPANSION JOINTS SHALL BE PLACED WHERE SIDEWALK ABUTS OTHER STRUCTURES AND SHALL NOT BE SPACED MORE THAN 50 FEET APART ON STRAIGHT RUNS FOR HAND LAID SIDEWALK AND NOT MORE THAN 100 FEET APART ON STRAIGHT RUNS FOR MACHINE LAID SIDEWALKS. EXPANSION JOINTS SHALL BE FORMED BY A THREE-FOURTH (3/4) INCH THICK PREFORMED JOINT FILLER, EXTENDING THE FULL DEPTH OF THE SLAB, AND SECURED SO THAT THEY ARE NOT MOVED BY DEPOSITING AND COMPACTING THE CONCRETE AT THESE JOINTS.
4. ***PUBLIC SIDEWALKS LOCATED ADJACENT TO MULTI-STORE FRONT COMMERCIAL BUILDINGS SHALL BE A MINIMUM OF 8' WIDTH.



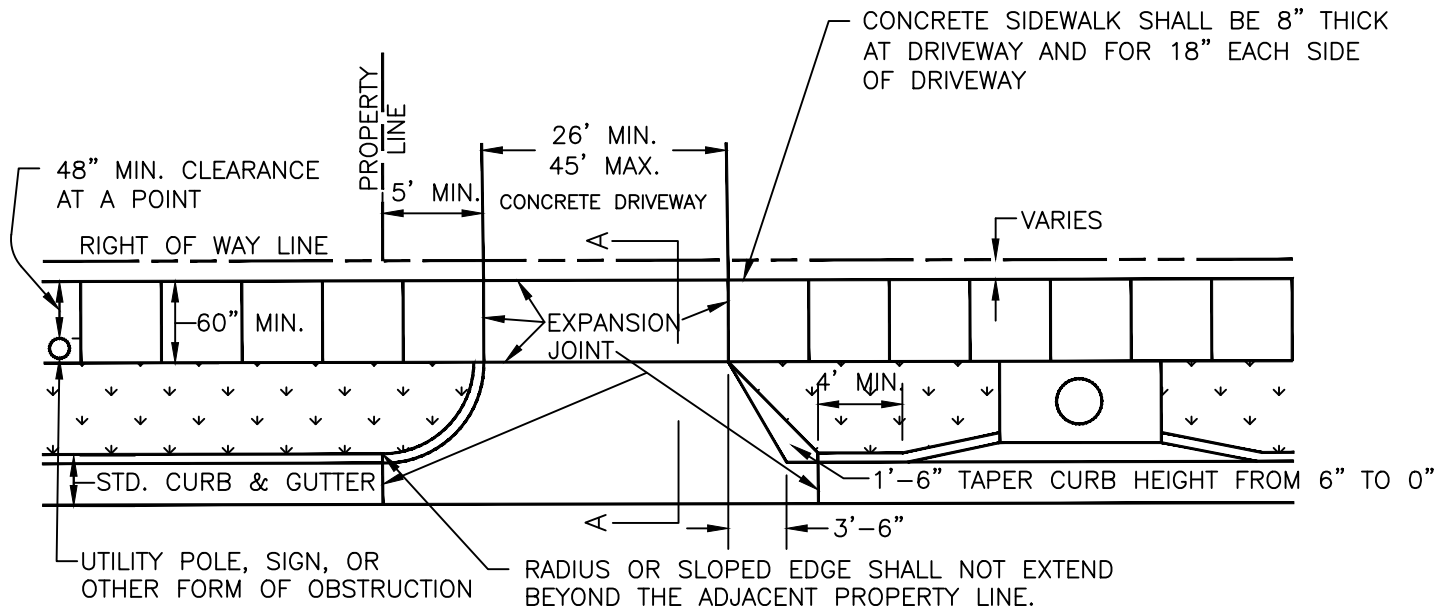
TYPICAL DRIVEWAY PLAN VIEW

SLOPE VARIES -3% TO 12% WITHIN 10' OF RIGHT OF WAY
THE ELEVATION AT THE RIGHT-OF-WAY LINE SHALL BE A
MINIMUM OF 6" ABOVE THE FLOWLINE OF THE GUTTER



NOTES:

1. POSITIVE GUTTER FLOW SHALL BE MAINTAINED ACROSS ALL DRIVEWAYS.
2. REMOVAL OF EXISTING CURB/GUTTERS FOR DRIVEWAYS SHALL BE ACCOMPLISHED AT THE NEXT EXISTING JOINT.
3. DRIVEWAYS SHALL NOT BE LOCATED WITHIN 15' OF FIRE HYDRANTS. THEY SHALL ALSO NOT BE LOCATED OVER METER BOXES, VALVE BOXES OR MANHOLES. LOCATIONS OF DRIVEWAYS SHALL NOT INTERFERE WITH ANY OTHER UTILITY.

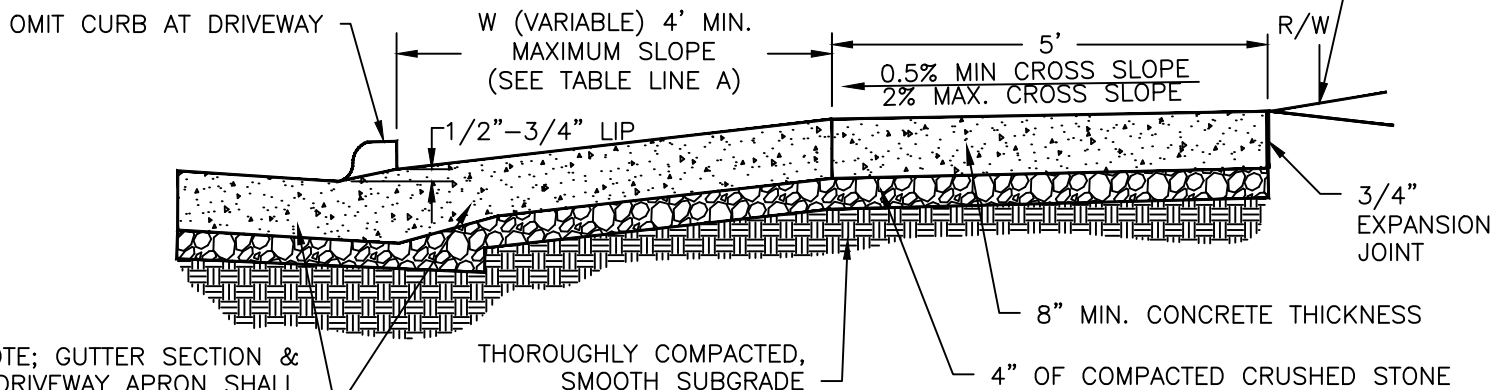


TYPICAL DRIVEWAY PLAN VIEW

REQUIRED DRIVEWAY GRADES

	MAJOR ARTERIAL	SECONDARY ARTERIAL	COLLECTOR	RESIDENTIAL-COLLECTOR
A. DRIVEWAY APPROACH GRADE	1/4"/FT TO 1/2"/FT	1/4"/FT TO 5/8"/FT	1/4"/FT TO 3/4"/FT	1/4"/FT TO 1"/FT
B. MAXIMUM CHANGE OF GRADE AT BACK OF SIDEWALK	4%	5%	6%	8%
C. SLOPE WITHIN 10 FEET OF RIGHT-OF-WAY LINE	-2% TO 6% 1/4"/FT TO 3/4"/FT	-3% TO 7% -3/8"/FT TO 7/8"/FT	-4% TO 8% -1/2"/FT TO 1"/FT	-6% TO 10% -3/4"/FT TO 1-1/4"/FT

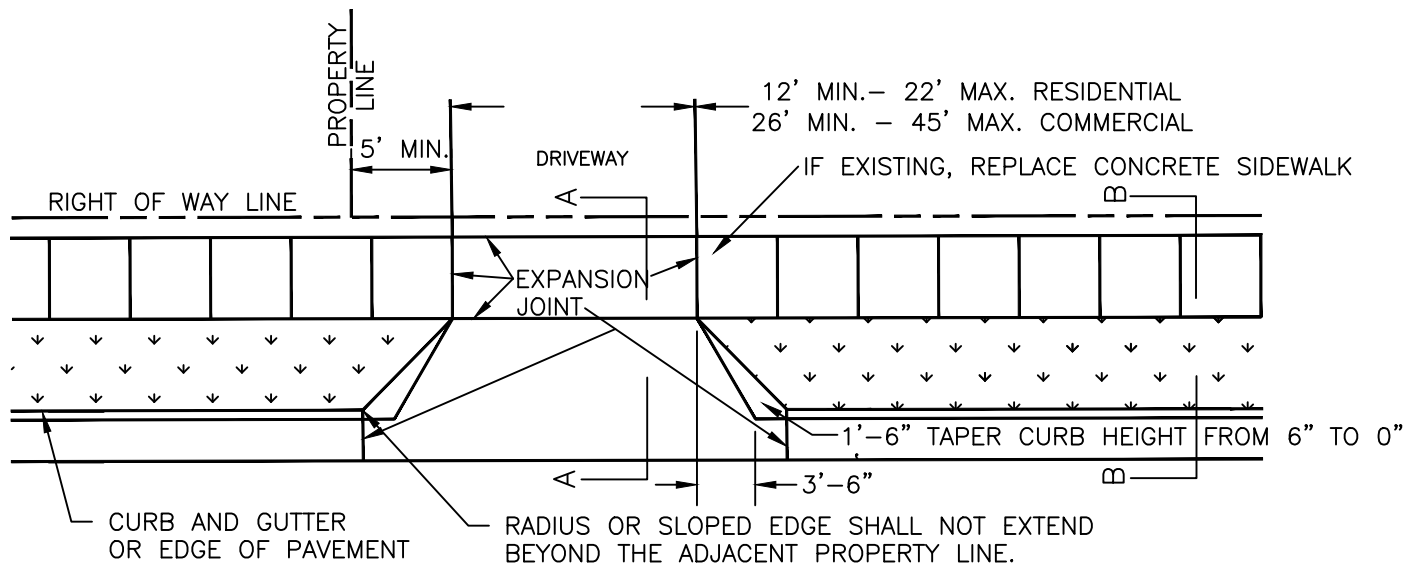
SLOPE VARIES WITHIN 10' OF RIGHT OF WAY
THE ELEVATION AT THE RIGHT-OF-WAY LINE SHALL BE A
MINIMUM OF 6" ABOVE THE FLOWLINE OF THE GUTTER



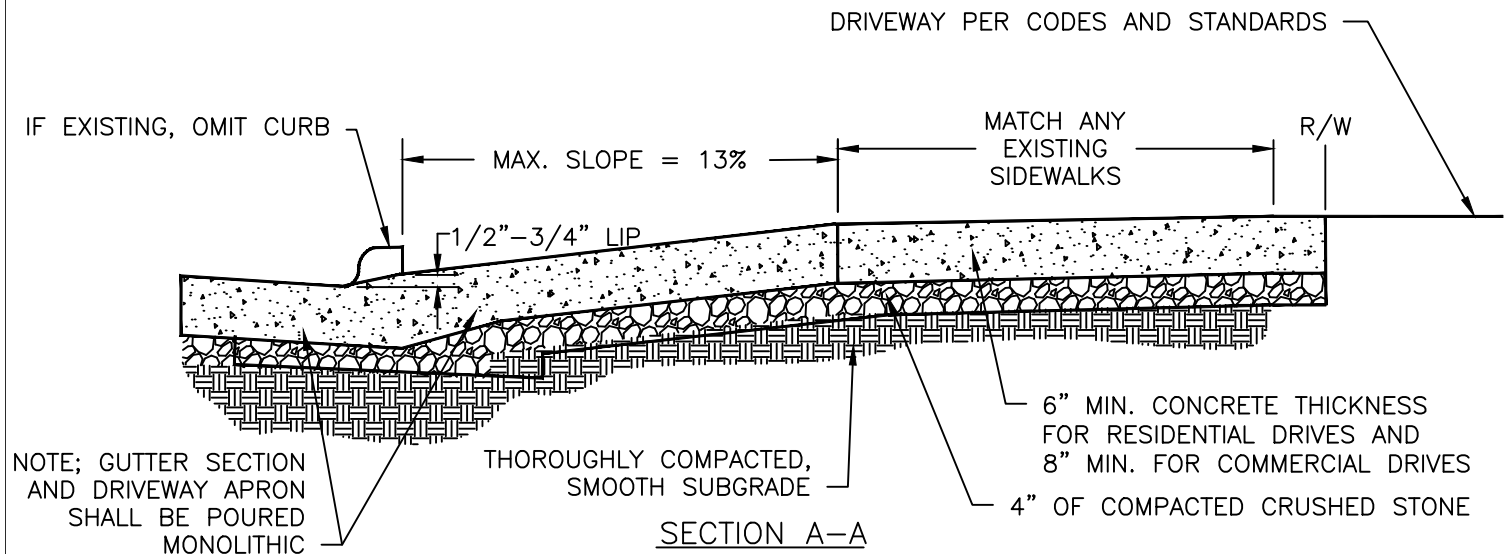
SECTION A-A

NOTES:

1. POSITIVE GUTTER FLOW SHALL BE MAINTAINED ACROSS ALL DRIVEWAYS.
2. REMOVAL OF EXISTING CURB/GUTTERS FOR DRIVEWAYS SHALL BE ACCOMPLISHED AT THE NEXT EXISTING JOINT.
3. DRIVEWAYS SHALL NOT BE LOCATED WITHIN 15' OF FIRE HYDRANTS. THEY SHALL ALSO NOT BE LOCATED OVER METER BOXES, VALVE BOXES OR MANHOLES. LOCATIONS OF DRIVEWAYS SHALL NOT INTERFERE WITH ANY OTHER UTILITY.



TYPICAL DRIVEWAY ADDITION PLAN VIEW

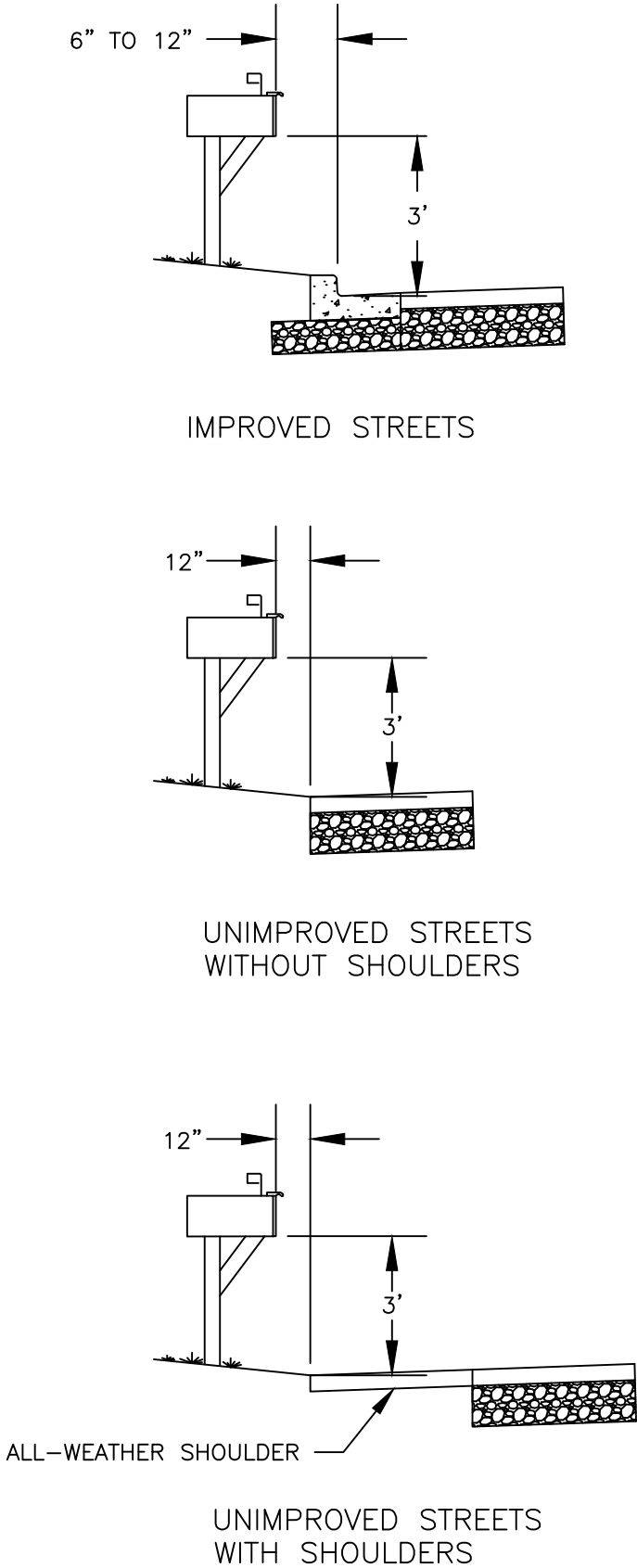


NOTES;

1. THE PURPOSE OF THIS DETAIL IS TO PROVIDE GUIDANCE FOR INSTALLATION OF A DRIVEWAY AT A LOCATION WHERE NO DRIVEWAY EXISTS OR FOR REPLACEMENT OF AN EXISTING DRIVEWAY. SEE OTHER STANDARD DETAILS FOR DRIVEWAYS IN NEW SUBDIVISIONS.
2. DRIVEWAYS SHALL NOT BE LOCATED WITHIN 15' OF FIRE HYDRANTS. THEY SHALL ALSO NOT BE LOCATED OVER METER BOXES, VALVE BOXES NOR MANHOLES. LOCATIONS OF DRIVEWAYS SHALL NOT INTERFERE WITH ANY OTHER UTILITY SUCH AS UTILITY POLES, STORM BOXES AND ETC.
3. REMOVAL OF ANY EXISTING CURB/GUTTER SHALL BE ACCOMPLISHED AT THE NEXT EXISTING JOINT.
4. POSITIVE GUTTER FLOW SHALL BE MAINTAINED ACROSS ALL DRIVEWAY OPENINGS.
5. THE CONCRETE APPROACH SHALL EXTEND TO THE RIGHT-OF-WAY, (PROPERTY LINE).
6. ENSURE THAT THE APPROACH SLOPE IS OF SUFFICIENT HEIGHT TO DETER THE ENTRANCE OF STORM-WATER FROM THE GUTTER.
7. ANY SIDEWALK REMOVED FOR A DRIVEWAY INSTALLATION SHALL BE REINSTALLED TO EXISTING WIDTH AND MATERIAL
8. DRIVEWAY SURFACING SHALL COMPLY WITH APPROPRIATE CODES AND STANDARDS FOR THE SITE..

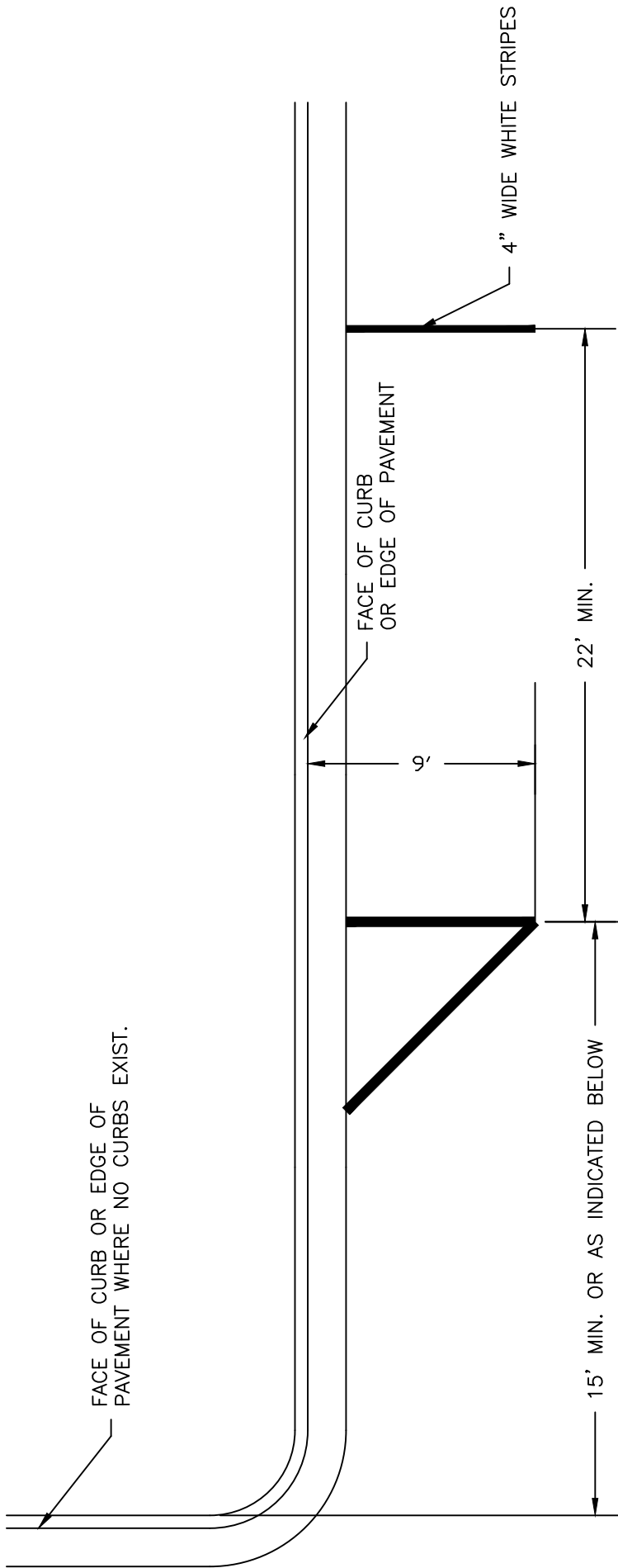
STRUCTURE NOTES:

1. MAILBOXES SHALL BE OF LIGHT SHEET METAL OR PLASTIC CONSTRUCTION CONFORMING TO THE REQUIREMENTS OF THE U.S. POSTAL SERVICE. NEWSPAPER DELIVERY BOXES SHALL BE OF LIGHT SHEET METAL OR PLASTIC CONSTRUCTION OF MINIMUM DIMENSIONS SUITABLE FOR HOLDING A NEWSPAPER.
2. NO MORE THAN TWO (2) MAILBOXES MAY BE MOUNTED ON A SUPPORT STRUCTURE UNLESS THE SUPPORT STRUCTURE AND MAILBOX ARRANGEMENT HAVE BEEN SHOWN TO BE SAFE BY CRASH TESTING. HOWEVER, LIGHTWEIGHT NEWSPAPER BOXES MAY BE MOUNTED BELOW THE MAILBOX.
3. MAILBOX SUPPORTS SHALL NOT BE SET IN CONCRETE UNLESS THE SUPPORT DESIGN HAS BEEN SHOWN TO BE SAFE BY CRASH TESTS WHEN SO INSTALLED.
4. A SINGLE FOUR (4) INCH OR FOUR AND ONE-HALF (4 1/2) INCH DIAMETER WOODEN POST OR A METAL POST WITH A STRENGTH NO GREATER THAN A TWO (2) INCH DIAMETER STANDARD STRENGTH STEEL PIPE AND EMBEDDED NO MORE THAN TWENTY-FOUR (24) INCHES INTO THE GROUND WILL BE ACCEPTABLE AS A MAILBOX SUPPORT. A METAL POST SHALL NOT BE FITTED WITH AN ANCHOR PLATE, BUT IT MAY HAVE AN ANTI-TWIST DEVICE THAT EXTENDS NO MORE THAN TEN (10) INCHES BELOW THE GROUND SURFACE.
5. THE BOX TO POST ATTACHMENT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT THE BOX FROM SEPARATING FROM THE POST IF THE INSTALLATION IS STRUCK BY A VEHICLE.
6. THE MINIMUM SPACING BETWEEN THE CENTERS OF SUPPORT POSTS SHALL BE THREE-FOURTHS (3/4) THE HEIGHT OF THE POSTS ABOVE THE GROUNDLINE.
7. OTHER MAILBOX SUPPORT DESIGNS MAY BE SUBMITTED FOR REVIEW.



LOCATION NOTES:

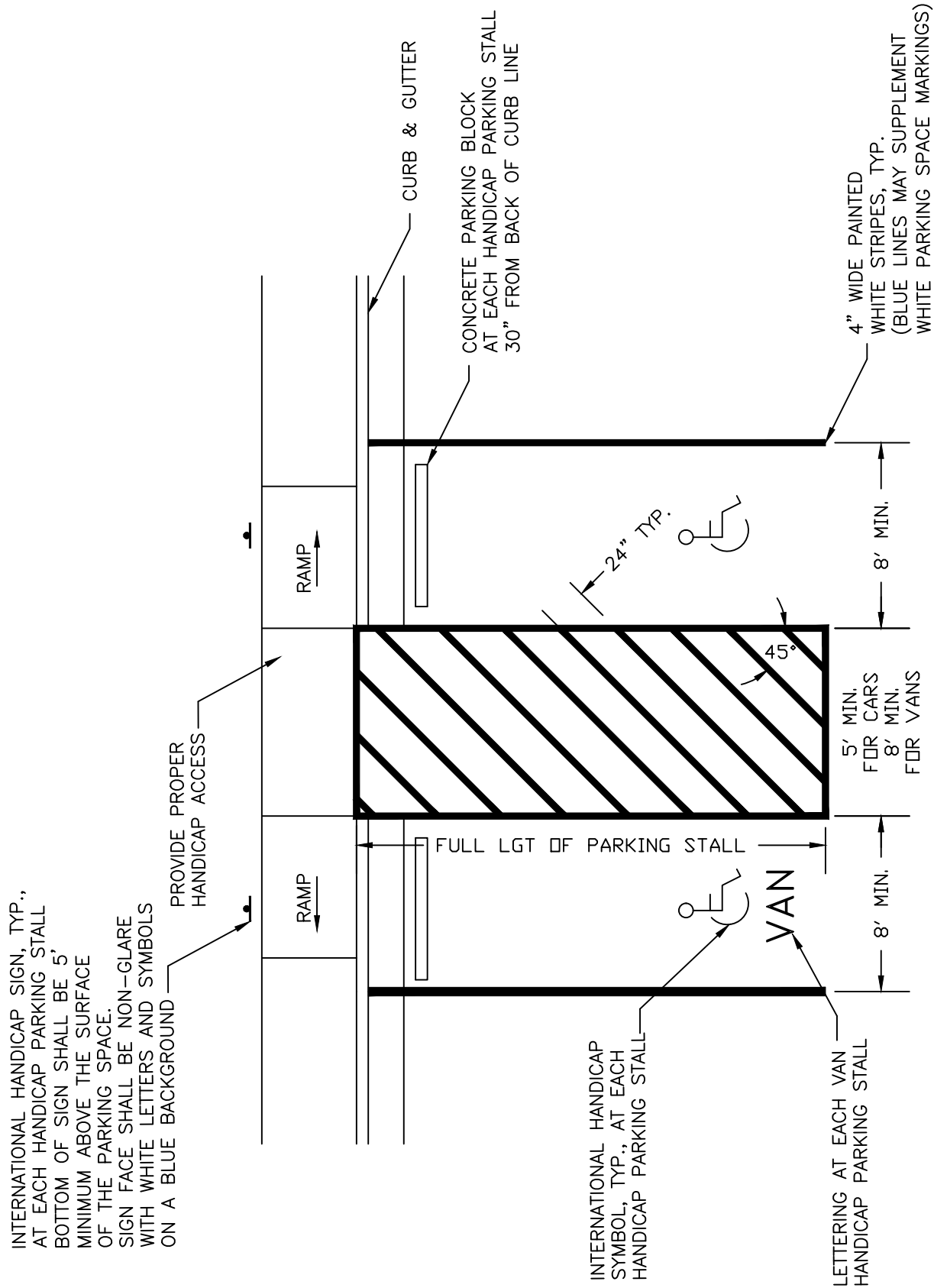
1. NO MAILBOX WILL BE PERMITTED WHERE ACCESS IS OBTAINED FROM THE LANES OF A FREEWAY OR WHERE ACCESS IS OTHERWISE PROHIBITED BY LAW OR REGULATION.
2. WHERE A MAILBOX IS LOCATED AT A DRIVEWAY ENTRANCE, IT SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY IN THE DIRECTION OF THE DELIVERY ROUTE.
3. WHERE A MAILBOX IS LOCATED AT AN INTERSECTING ROAD, IT SHALL BE LOCATED A MINIMUM OF FIFTY (50) FEET BEYOND THE CENTER OF THE INTERSECTING ROAD IN THE DIRECTION OF THE DELIVERY ROUTE. THE DISTANCE SHALL BE INCREASED TO ONE HUNDRED (100) FEET WHEN THE AVERAGE DAILY TRAFFIC ON THE INTERSECTING ROAD EXCEEDS FOUR HUNDRED (400) VEHICLES PER DAY.
4. ALL MAILBOX LOCATIONS SHALL BE COORDINATED WITH THE OZARK POST OFFICE TO ENSURE PLACEMENT ON CORRECT SIDE OF STREET.



CURB SIDE PARALLEL STALL STRIPING

NOTES;

1. PARKING STALLS SHALL NOT ENCROACH INTO ANY PART OF HANDICAP RAMPS, SIDEWALKS, OR DRIVEWAYS.
2. PARKING STALLS SHALL BE A MINIMUM OF 20' FROM ANY CROSSWALKS AT A INTERSECTION.
3. PARKING STALLS SHALL NOT BE LOCATED WITHIN 30' UPON THE APPROACH TO ANY FLASHING SIGNAL, STOP SIGN OR TRAFFIC CONTROL SIGNAL LOCATED AT THE SIDE OF A ROADWAY.
4. PARKING STALLS SHALL BE A MINIMUM OF 15 FEET FROM ANY FIRE HYDRANTS AND 20' FROM ANY FIRE STATION ENTRANCE AND WITHIN 75' OF SAID ENTRANCE ON THE OPPOSITE SIDE OF THE ENTRANCE.
5. PARKING STALLS SHALL BE A MINIMUM OF 10' FROM ANY MAILBOX.



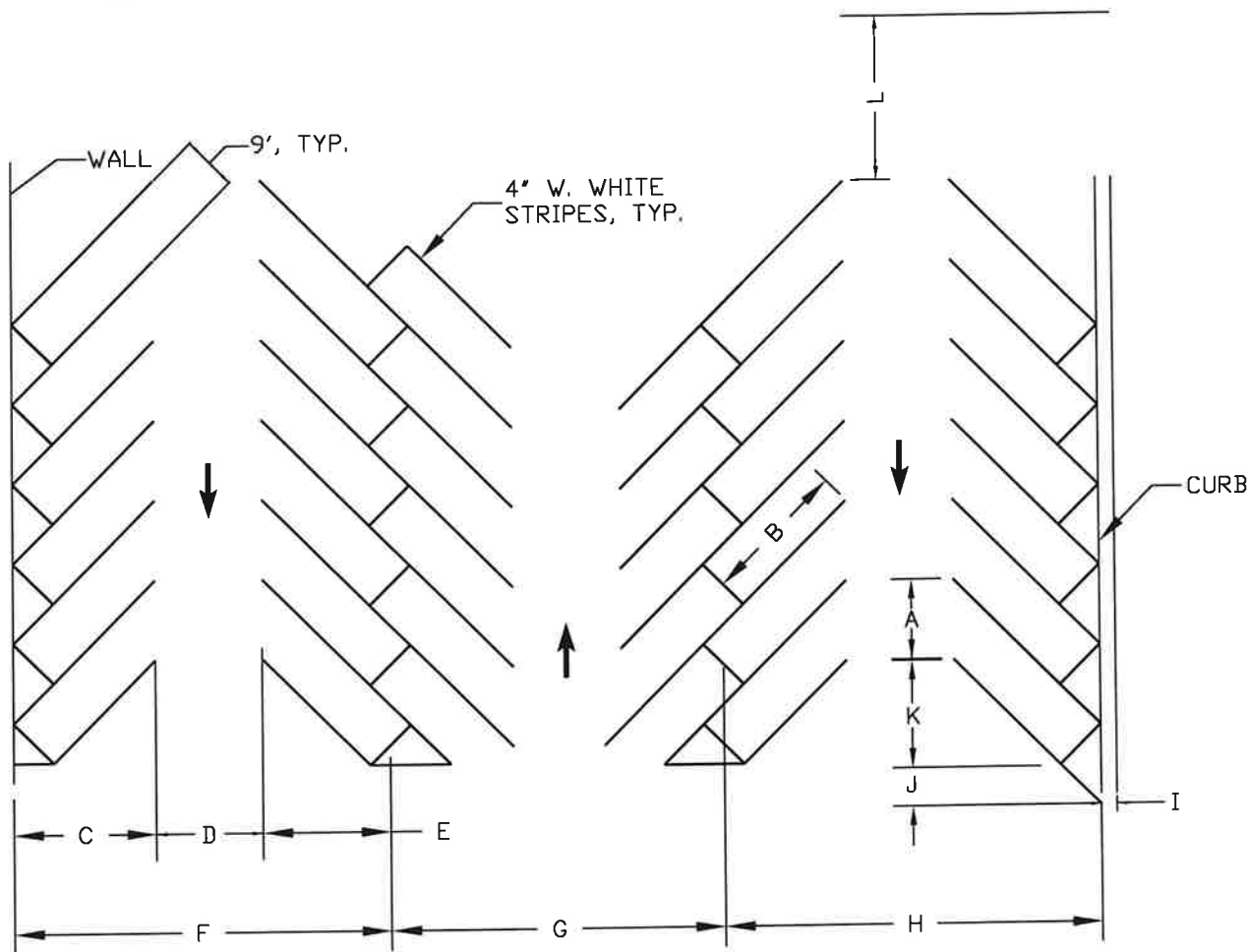
HANDICAP ZONE STRIPING

NOTES; ALL VEHICLE STANDING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SLOPES NOT EXCEEDING 2% IN ALL DIRECTIONS. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE.

MINIMUM REQUIREMENTS FOR LAYOUT ELEMENTS

NOTES;

- ON STREET ANGLE PARKING SHALL ALSO COMPLY WITH THE LAYOUT BELOW. PARALLEL PARKING STALLS SHALL PROVIDE A MINIMUM STALL WIDTH OF 9' AND LENGTH OF 22'.
- FOR COMMERCIAL AND INDUSTRIAL USES, 10' WIDE STALLS MAY BE SUBSTITUTED FOR 9' WIDE STALLS AT THE RATE OF 1.11 PER 1. THEREFORE, FOR EVERY 10 TOTAL 9' WIDE STALLS REQUIRED, THE PROPERTY OWNER/DEVELOPER MAY SUBSTITUTE 9 TOTAL 10' WIDE STALLS AND STILL MAINTAIN COMPLIANCE WITH THE CITY OF OZARK CODE FOR OFF-STREET REQUIRED MINIMUM PARKING SPACES,



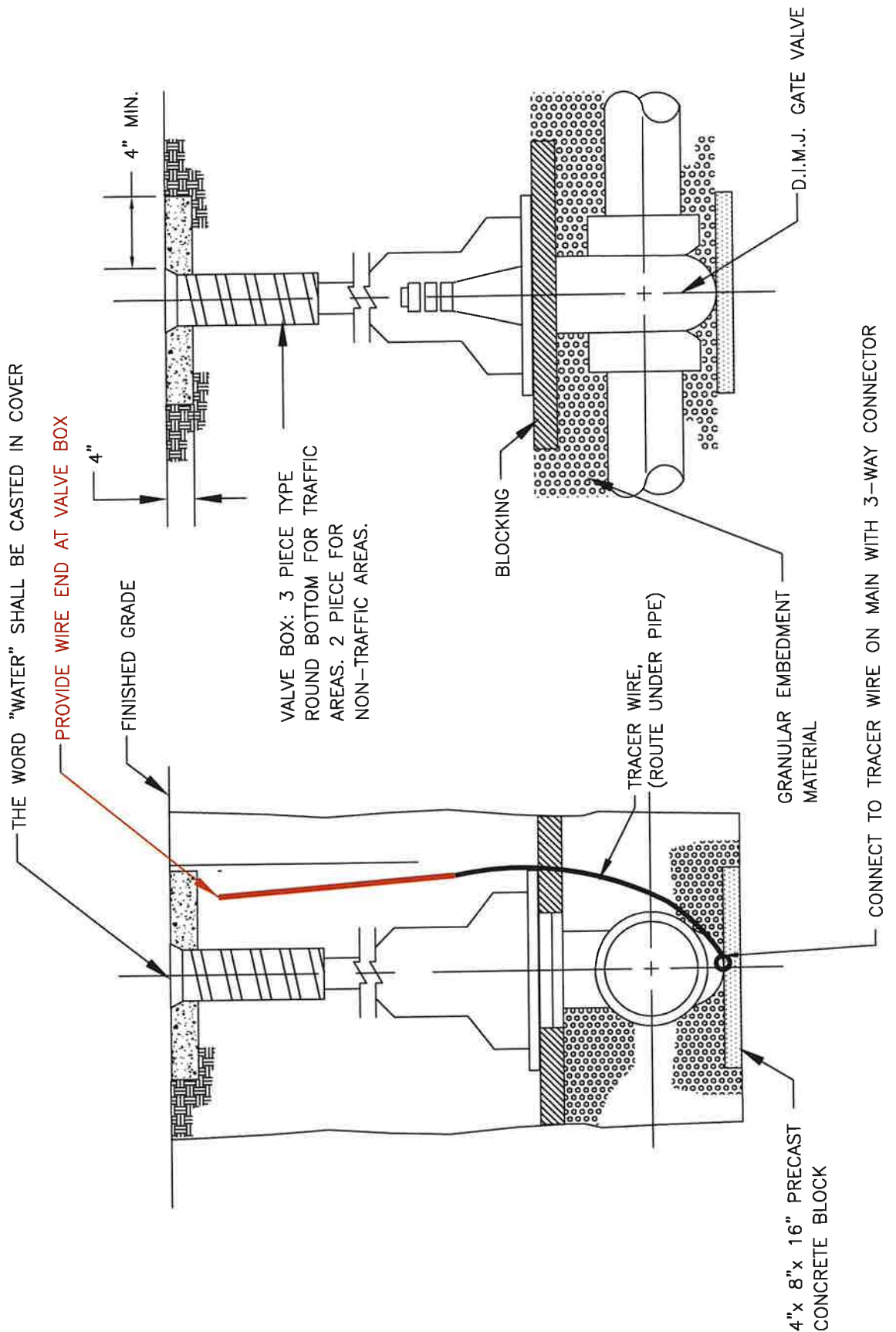
PARKING LAYOUT DIMENSIONS (IN FEET) FOR 9' WIDE STALLS AT VARIOUS ANGLES

DIMENSIONS	SYMBOL	90	75	60	45	30
STALL WIDTH, PARALLEL TO AISLE	A	9.0	9.3	10.4	12.7	18.0
STALL LENGTH OF LINE	B	18.5	20.0	22.0	25.0	34.1
STALL DEPTH TO WALL	C	18.5	19.5	19.0	17.5	17.1
AISLE WIDTH BETWEEN STALL LINES	D	26.0	23.0	16.0	12.0	10.0
STALL DEPTH, INTERLOCK	E	18.5	18.8	17.5	15.3	13.2
MODULE, WALL TO INTERLOCK	F	63.0	61.3	52.5	44.8	40.3
MODULE, INTERLOCKING	G	63.0	61.0	51.0	42.6	36.4
MODULE, INTERLOCK TO CURB FACE	H	60.5	58.8	50.2	42.8	38.8
BUMPER OVERHANG (TYPICAL)	I	2.5	2.5	2.3	2.0	1.5
OFFSET	J	0.0	0.5	2.7	6.3	13.5
SETBACK	K	0.0	5.0	8.3	11.0	16.0
CROSS AISLE, ONE-WAY	L	14.0	14.0	14.0	14.0	14.0
CROSS AISLE, TWO-WAY	L	24.0	24.0	24.0	24.0	24.0

NOTE;
ANY DESIRED VARIATION TO THE LAYOUT SHOWN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE PUBLIC WORKS DIRECTOR OR HIS DESIGNEE.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
2. WATER VALVES LOCATED IN TRAFFICWAYS SHALL BE ENCASED IN 4" MINIMUM THICKNESS CONCRETE.
3. ALL VALVE BOXES SHALL BE CAST IRON.
4. EXTENSION STEMS SHALL BE PROVIDED FOR BURIED VALVES WHEN THE OPERATING NUT IS MORE THAN THREE FEET BELOW FINISHED GRADE.
5. EACH EXTENSION STEM FOR A BURIED VALVE SHALL EXTEND TO WITHIN THREE FEET OF THE GROUND SURFACE, SHALL BE PROVIDED WITH SPACERS WHICH WILL CENTER THE STEM IN THE VALVE BOX, AND SHALL BE EQUIPPED WITH A WRENCH NUT.



CITY OF OZARK

VALVE
DETAILS

WAT-1

NTS

DATE

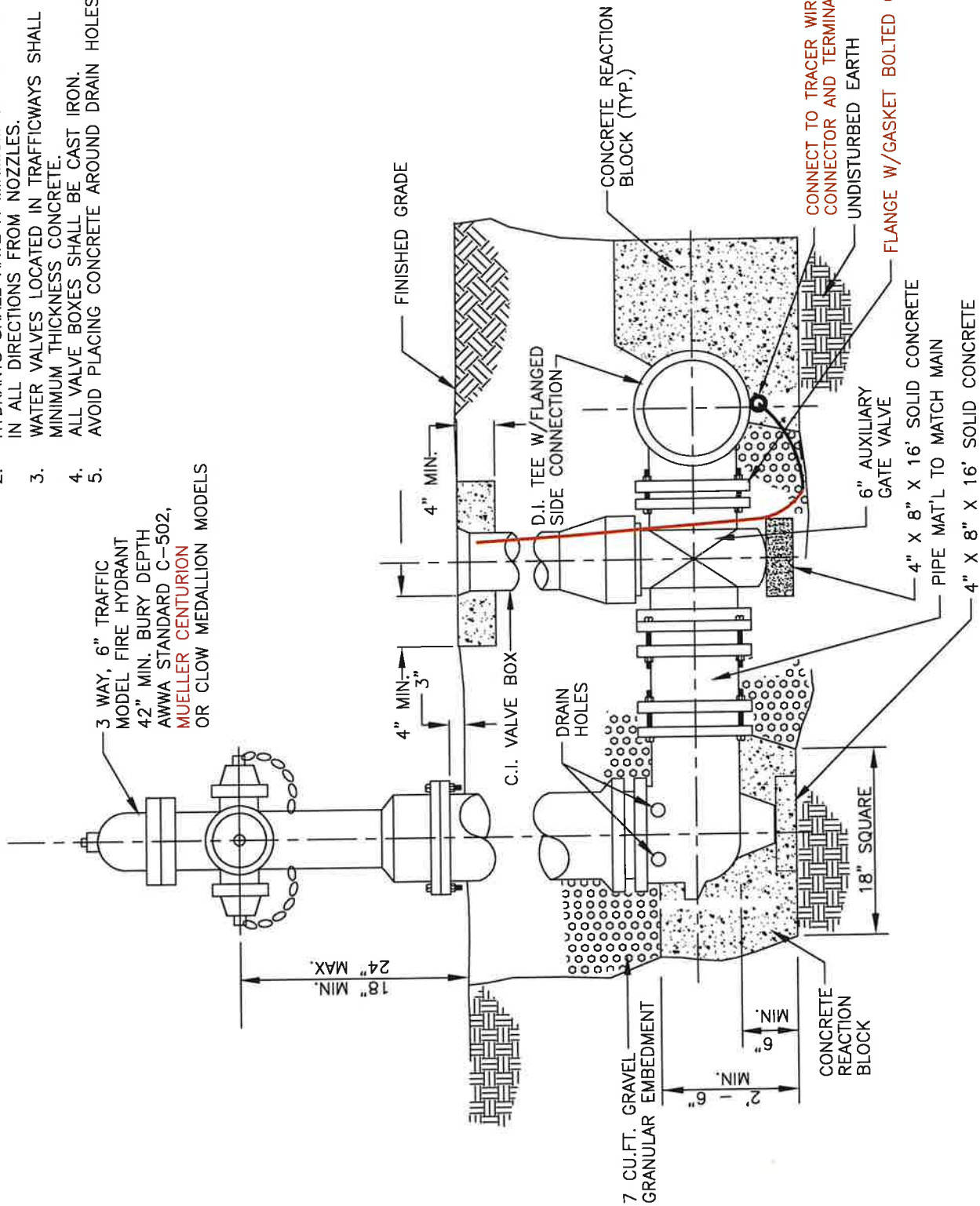
4-15-2020

REVISION

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NOTES:

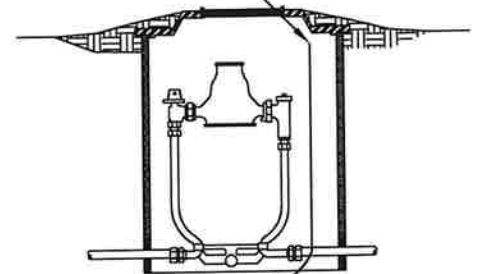
1. HYDRANTS SHALL BE TRAFFIC MODELS WITH BREAKAWAY FLANGES AND SHALL HAVE ONE 4-1/2" PUMPER NOZZLE AND TWO 2-1/2" NOZZLES. THE PUMPER NOZZLE SHOULD NORMALLY BE ORIENTED PERPENDICULAR TO THE STREET CURB.
2. HYDRANTS SHALL HAVE A MINIMUM 36 INCH WORKING CLEARANCE IN ALL DIRECTIONS FROM NOZZLES.
3. WATER VALVES LOCATED IN TRAFFICWAYS SHALL BE ENCASED IN 4" MINIMUM THICKNESS CONCRETE.
4. ALL VALVE BOXES SHALL BE CAST IRON.
5. AVOID PLACING CONCRETE AROUND DRAIN HOLES.



NOTES;

1. PROVIDE APPROPRIATE WARNING TAPE LOCATED 18" TO 24" BELOW FINISH GRADE AT THE SERVICE LINE AND TRACER WIRE UNDER THE SERVICE LINE FROM THE MAIN TO WITHIN THE WATER METER PIT.
2. TRACER WIRE SHALL BE PROVIDED FOR EVERY WATER SERVICE AND SHALL BE #12 AWG COPPER CLAD STEEL, (CCS). CORROSION PROOF/FILLED WIRE CONNECTIONS SHALL BE USED AT SPICE LOCATIONS.
3. THE TRACER WIRE CONDUCTIVITY SHALL BE TESTED PRIOR TO ACCEPTANCE.
4. WATER SERVICE SHALL BE PROVIDED TO EVERY BUILDABLE PLATTED LOT WITHIN A SUBDIVISION.
5. TAPPING SLEEVES AND VALVES SHALL BE USED WHERE REQUIRED TO CONNECT TO EXISTING IN-SERVICE MAINS.
6. THE MAXIMUM NUMBER OF UNITS TO BE CONNECTED ON A 1" WATER SERVICE SHALL BE ONE EACH DUPLEX.

WIRE END SHALL BE READILY ACCESSIBLE



TRACER WIRE

METER, TYP.

2", (1" FOR SGL SETTER), 200 PSI SDR-9 ASTM-D-2737 CTS-OD-PIPE
NO PVC PIPE SHALL BE USED BETWEEN MAIN AND METER

SADDLE BY A.Y. McDONALD
3892, OR APPROVED
EQUAL, (BRASS ONLY)

TO METER

PROVIDE
SUFFICIENT
LENGTH OF
WIRE WITHIN
THE PIT FOR
CONNECTION

TRACER WIRE

BEDDING MATERIAL FULL
LENGTH OF SERVICE LINE

CORPORATION STOP BY
A.Y. McDONALD 76101 OR APPROVED EQUAL

COPPERHEAD GROUNDING
ANODE OR EQUAL

PROVIDE GROUND WITH
#12 AVG CCS-RED WIRE

THE ANODE SHALL BE 1/2 LB BARE ZINC OR
MAGNESIUM, COPPERHEAD PART #ANO-1005 OR
EQUAL. THE ANODES SHALL BE BURIED IN CLOSE
PROXIMITY TO THE UTILITY. THE ANODE SHALL BE
SECURELY CONNECTED TO THE TRACER WIRE.

CONNECT TO TRACER
WIRE AT MAIN WITH 3-WAY CONNECTOR OR GROUND
ROD AS SHOWN WHERE NO TRACER WIRE EXIST.

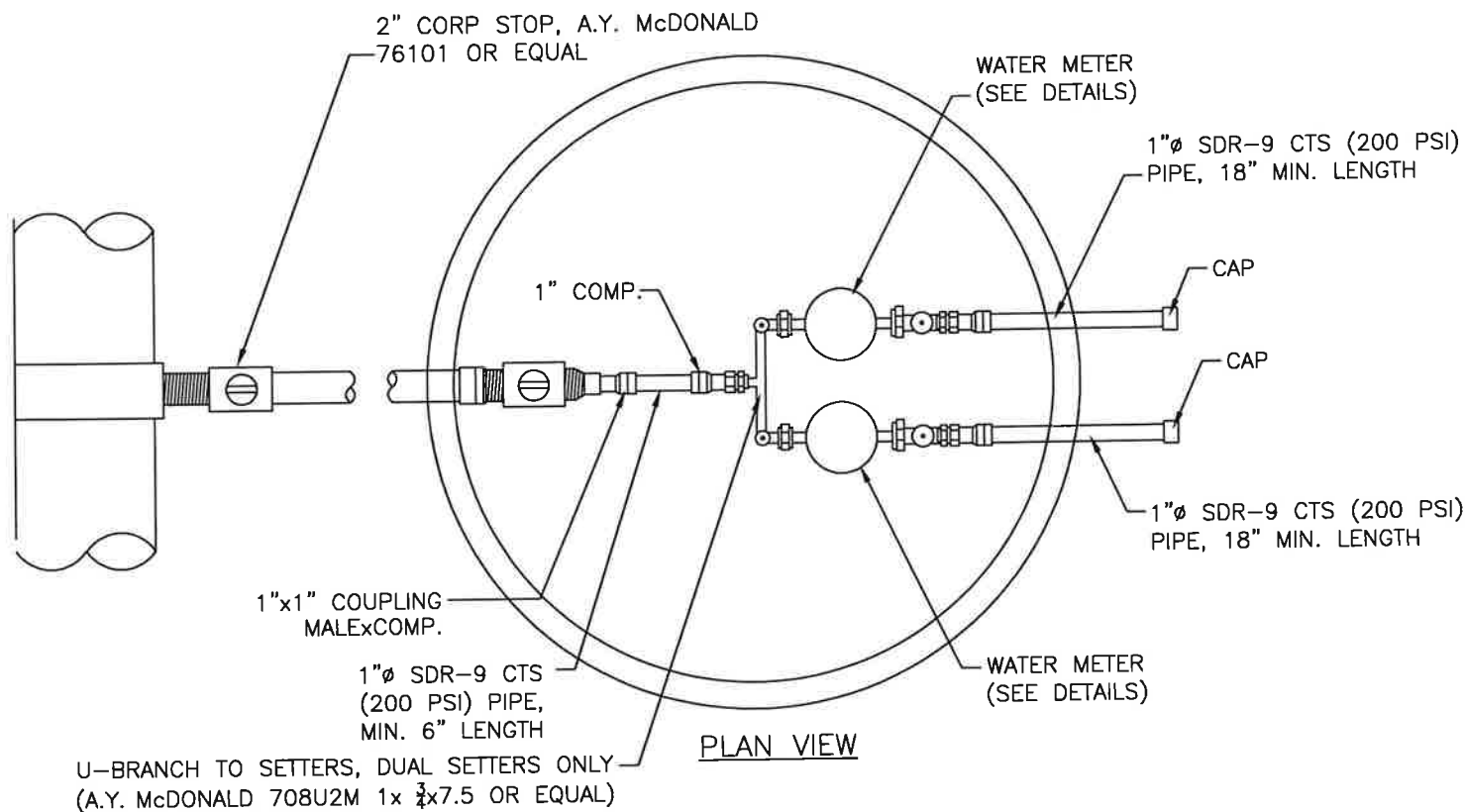
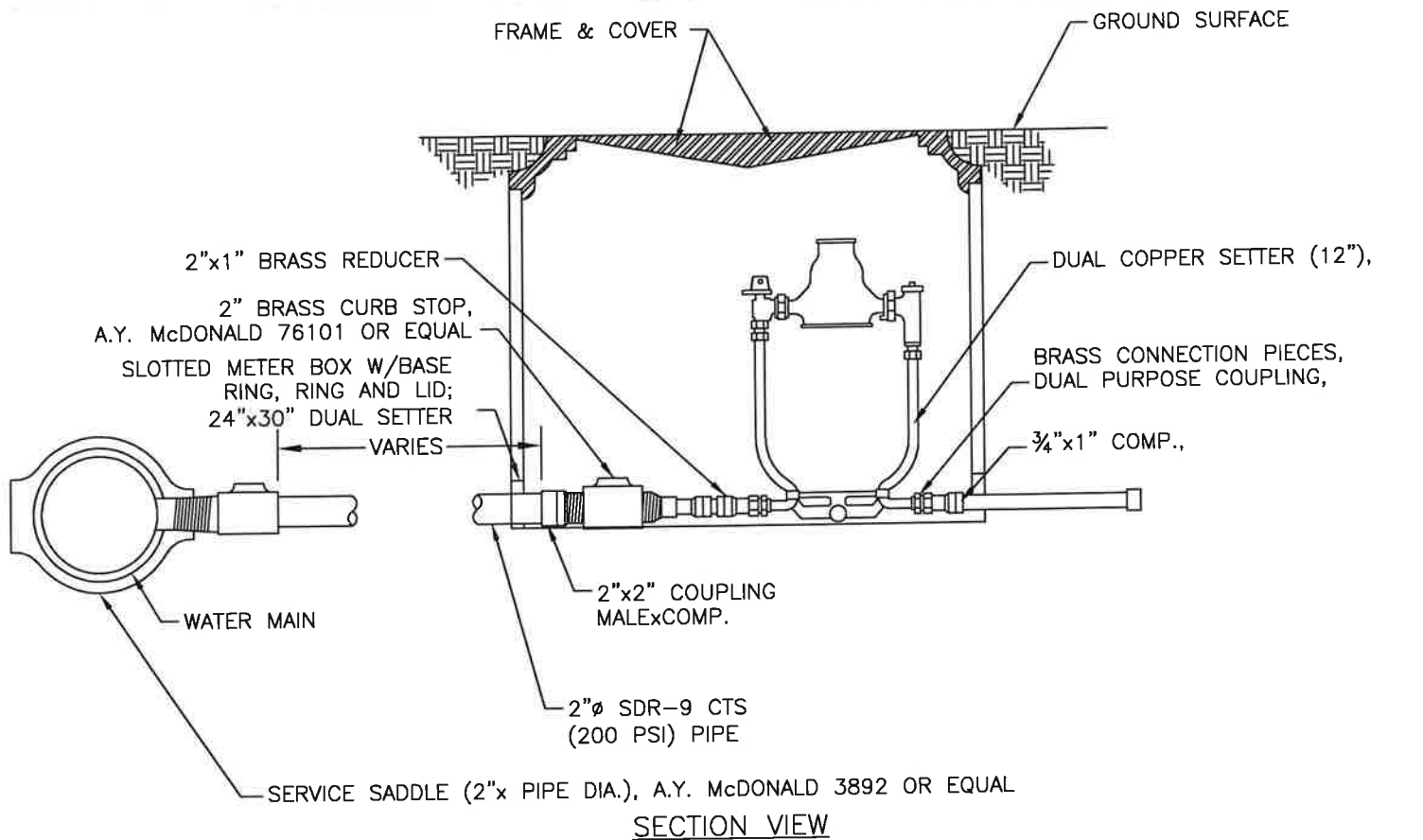
18.5"

CITY OF OZARK

CORPORATION STOP
DETAIL

WAT-3

DATE 4-27-2021
NTS
REVISION 3



NOTE:

1. PROVIDE #12 TRACER WIRE UNDER ALL SERVICES AND INDICATOR TAPE ABOVE ALL SERVICES.
2. THE EXTRA CURB STOP WITHIN THE METER PIT MAY BE ELIMINATED WHERE THE METER PIT IS LOCATED WITHIN CLOSE PROXIMITY, (10'), OF THE WATER MAIN.

CITY OF OZARK

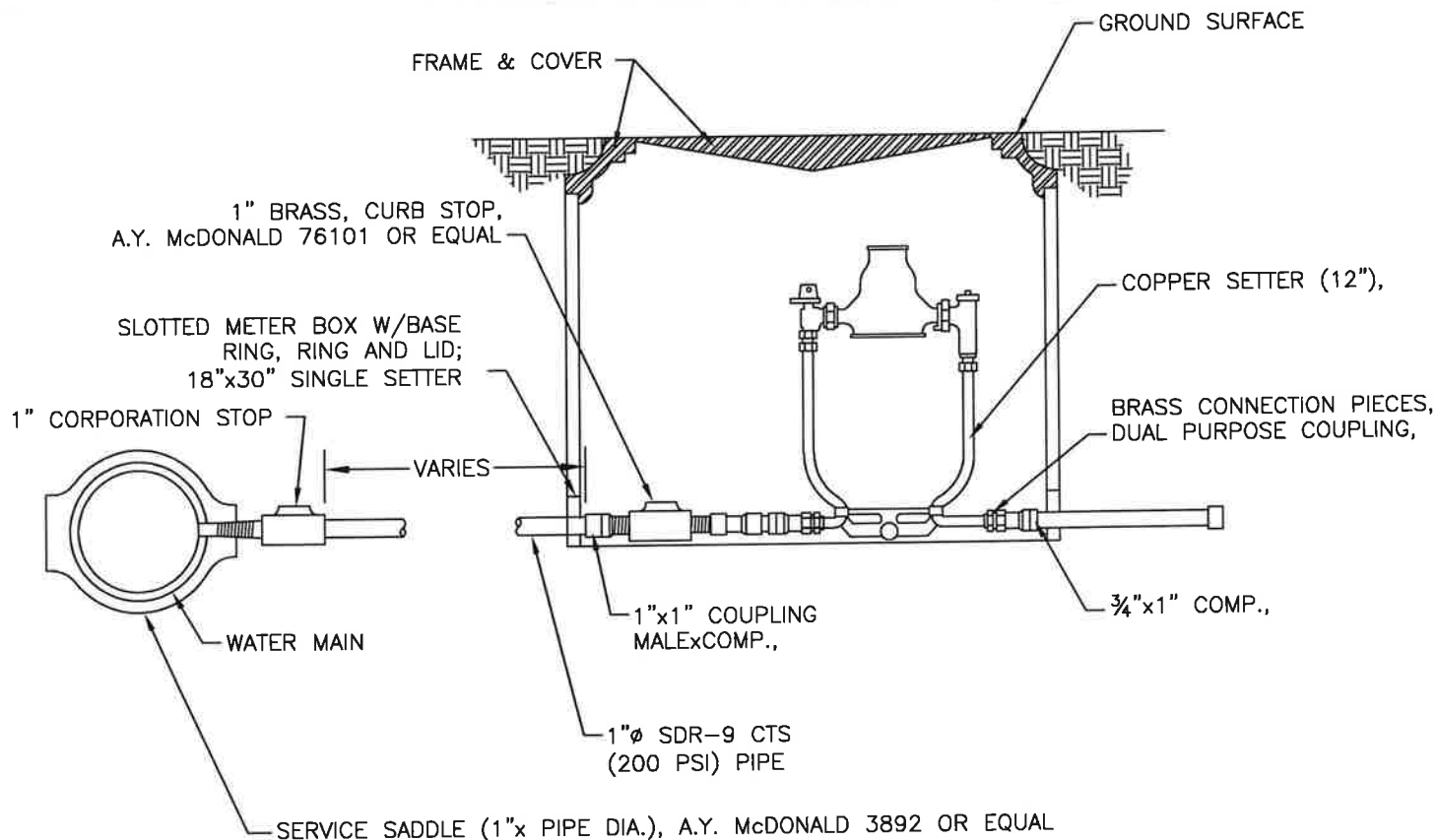
DUAL SETTER WATER SERVICE
DETAIL

WAT-4

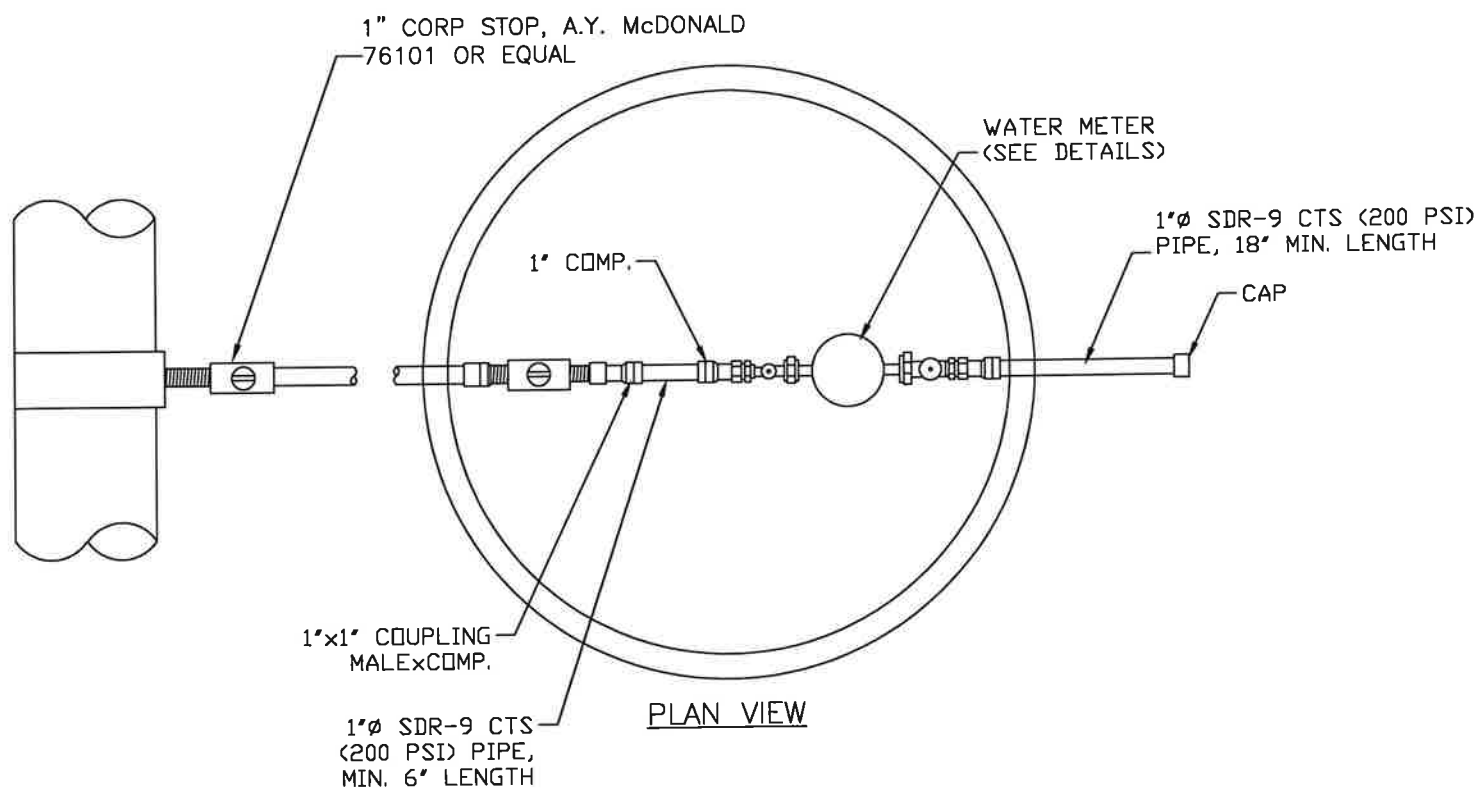
DATE
4-27-2020

REVISION
2

NTS



SECTION VIEW



PLAN VIEW

NOTE:

1. PROVIDE #12 TRACER WIRE UNDER ALL SERVICES AND INDICATOR TAPE ABOVE ALL SERVICES.
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CITY OF OZARK

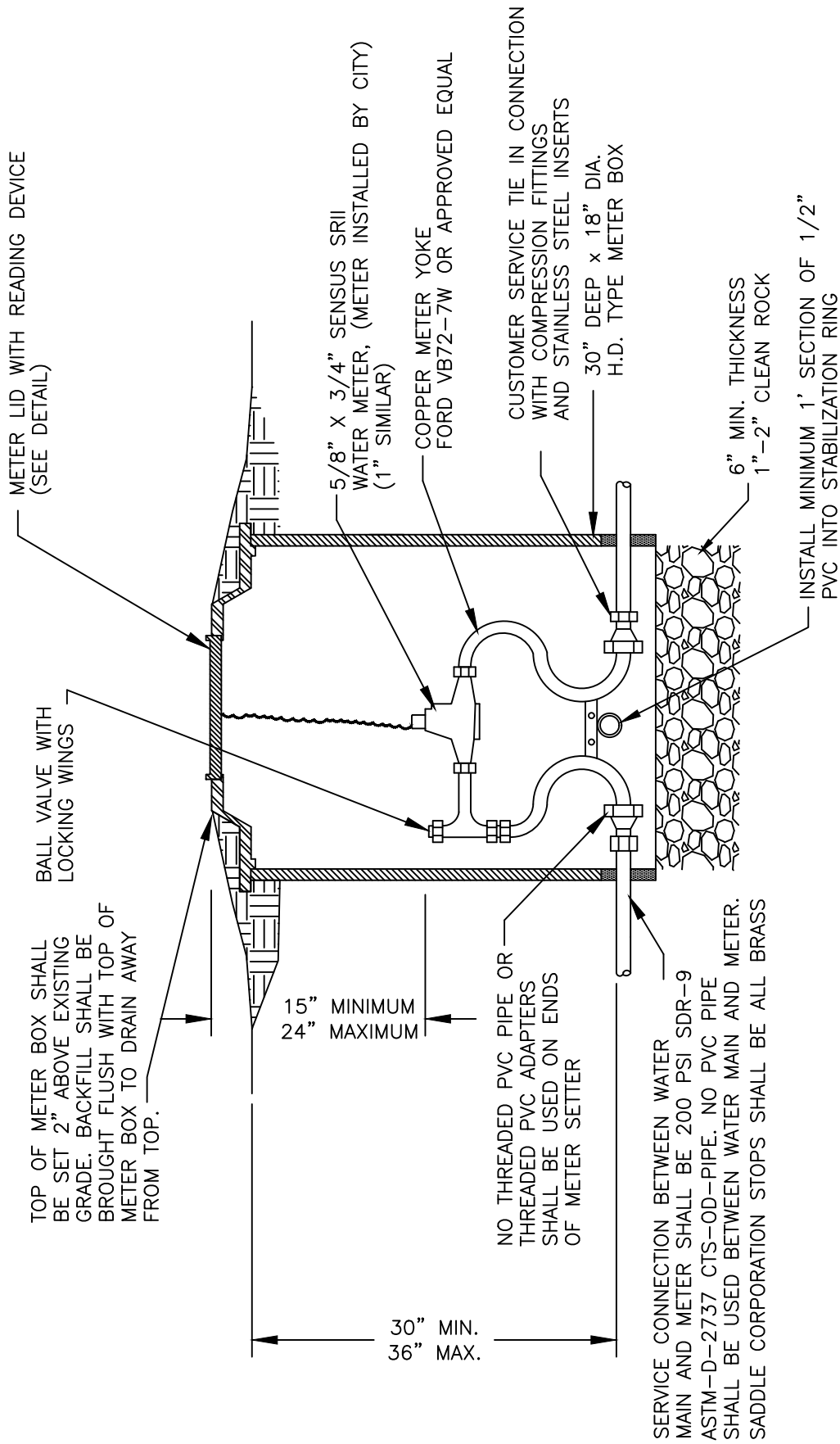
SGL SETTER WATER SERVICE
DETAIL

WAT-5

DATE
4-27-2020

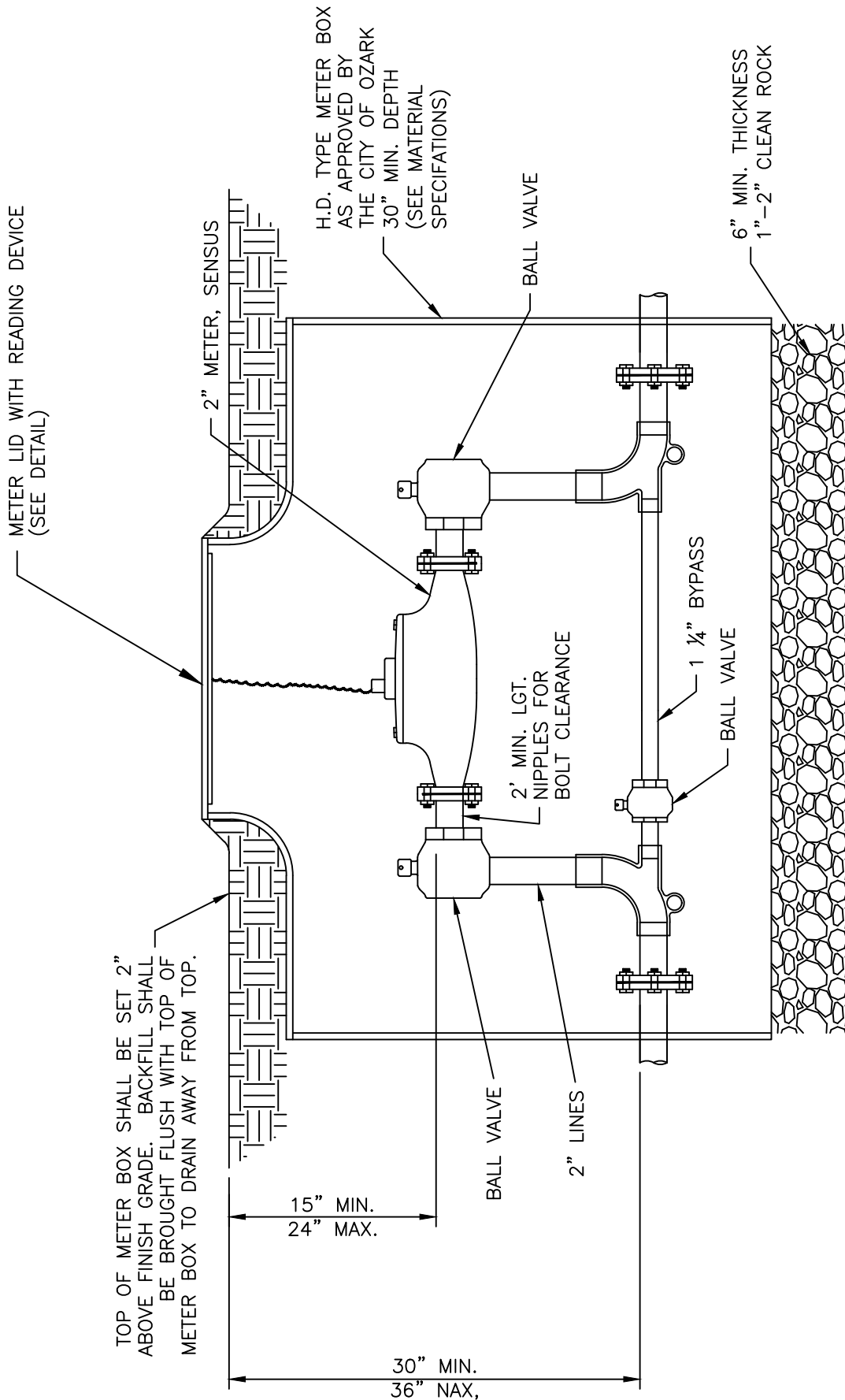
REVISION
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NTS



NOTES:

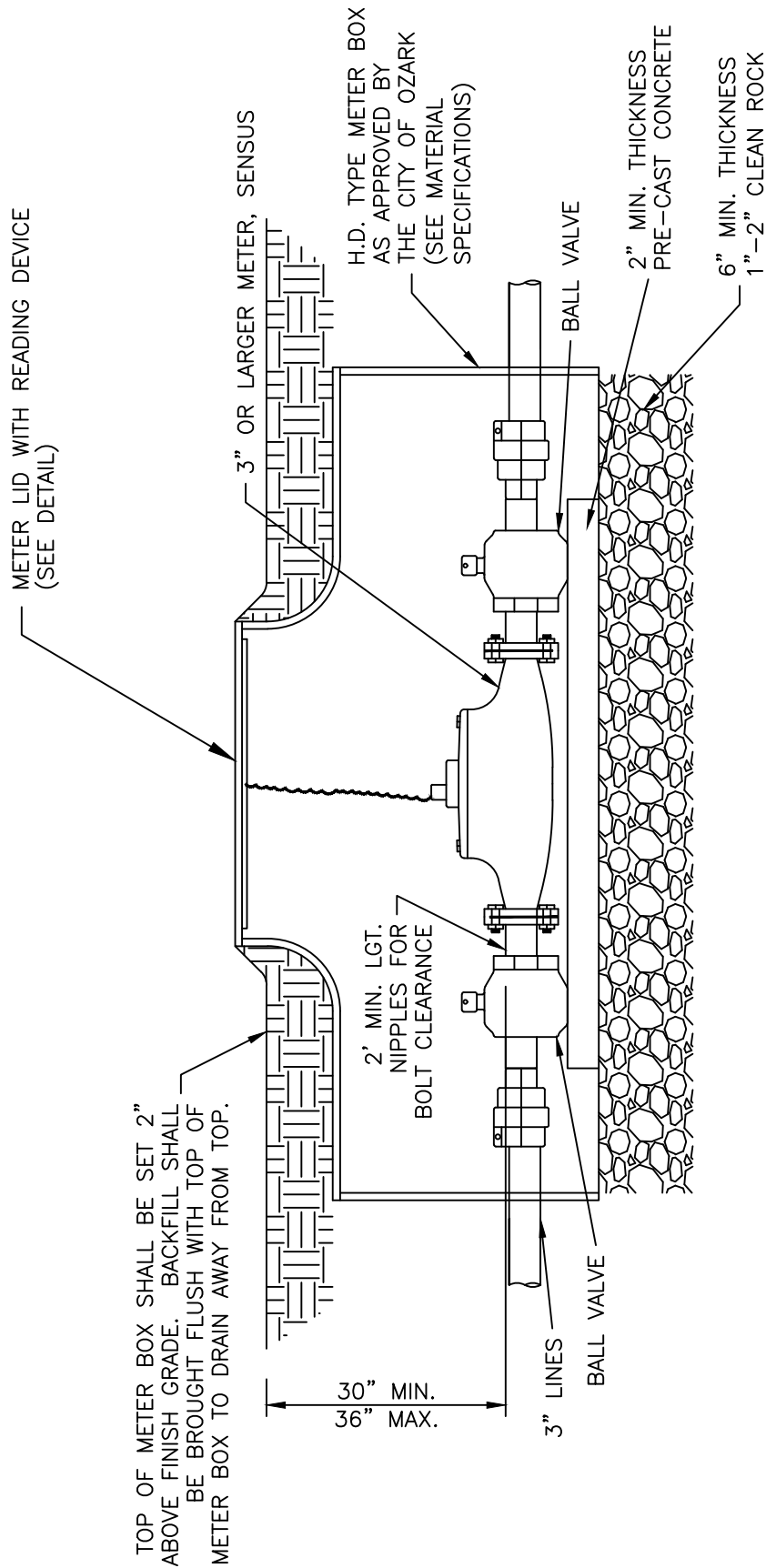
1. ALL SERVICE LINES REQUIRE TRACER WIRE BETWEEN THE WATER MAIN AND THE WATER METER.
2. SINGLE FAMILY UNITS, EACH UNIT OF A TOWNHOME, DUPLEX, TRIPLEX AND FOUR-PLEX SHALL NORMALLY BE PROVIDED WITH SEPARATE WATER METERS FOR EACH LIVING UNIT UNLESS OTHERWISE APPROVED BY THE CITY.
3. MULTI-FAMILY APARTMENT UNITS SHALL BE PROVIDED WITH ONE WATER METER FOR THE ENTIRE FACILITY.
4. IRRIGATION SYSTEMS MAY BE PROVIDED WITH SEPARATE WATER METERS.
5. METER LIDS AND METER BOXES LOCATED IN TRAFFICWAYS SHALL BE TRAFFIC RATED.



* 1-1/2" METER SIMILIAR

NOTES:

1. ALL BALL VALVES SHALL BE "LOCKABLE" TYPE.
2. MULTI-FAMILY APARTMENT UNITS SHALL BE PROVIDED WITH ONE WATER METER FOR THE ENTIRE FACILITY.
3. A SEPARATE COMMERCIAL WATER METER SHALL BE PROVIDED FOR EACH SEPARATE COMMERCIAL UNIT UNLESS OTHERWISE APPROVED BY THE CITY.
4. IRRIGATION SYSTEMS MAY BE PROVIDED WITH SEPARATE WATER METERS.
5. METER LIDS AND METER BOXES LOCATED IN TRAFFICWAYS SHALL BE TRAFFIC RATED.
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5. METER LIDS AND METER BOXES LOCATED IN TRAFFICWAYS SHALL BE TRAFFIC RATED.
6. ALL SERVICE LINES REQUIRES TRACER WIRE BETWEEN THE WATER MAIN AND THE WATER METER.

1. ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.

1" MINIMUM HEIGHT, RAISED OR STAMPED LETTERS

POLYPROPYLENE LID WITH 10,000 LBS MINIMUM LOAD CAPACITY, WITH UNDERSIDE MOUNT FOR AMR SENDING UNIT. MID-STATES MSPF18RE OR EQUIVALENT

LOCKING FIXED TAB, UNDER THIS SIDE

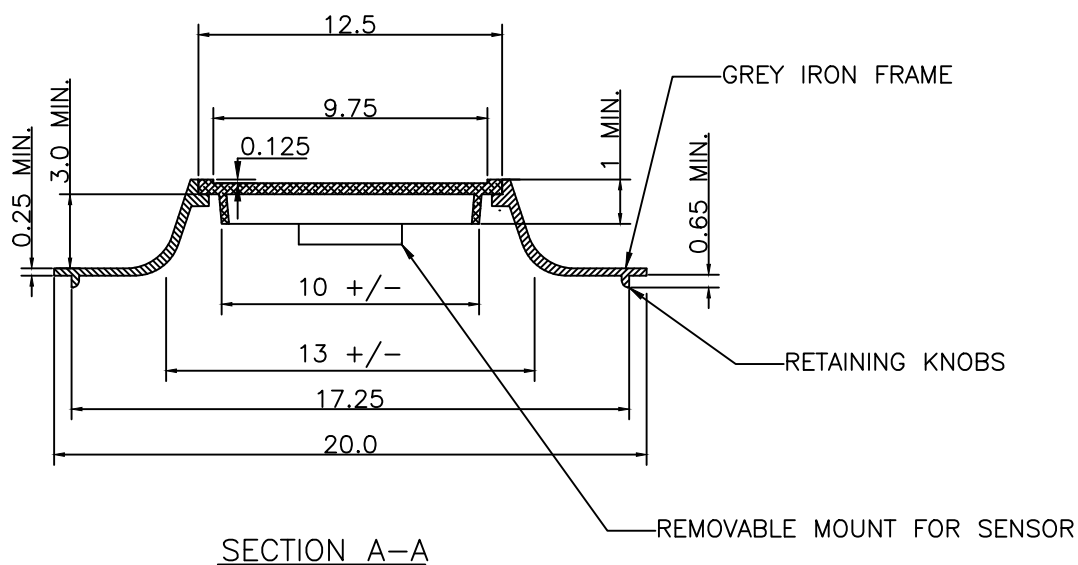
WATER

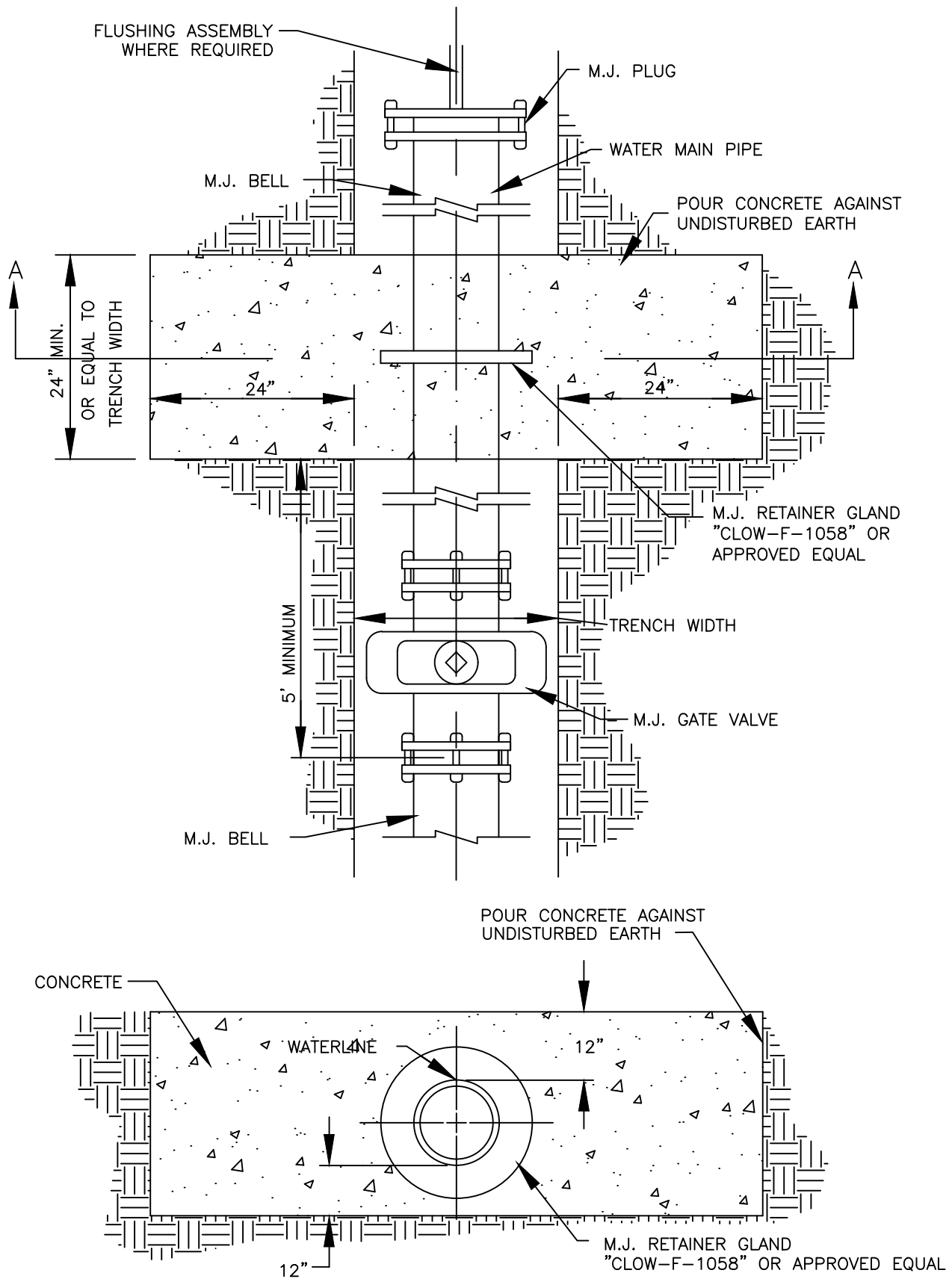
METER

BOLT DOWN MECHANISM

A

A





SECTION A-A

NOTE; IF LOCATED ADJACENT TO A TEE, THEN PROVIDE A FOSTER ADAPTER TO THE TEE.

CITY OF OZARK

DEAD END ASSEMBLY
DETAILS

WAT-10

DATE
12-27-2016

REVISION
2