

CAST IRON SIDE INTAKE UNIT FOR GRATED INLETS
249 LBS.

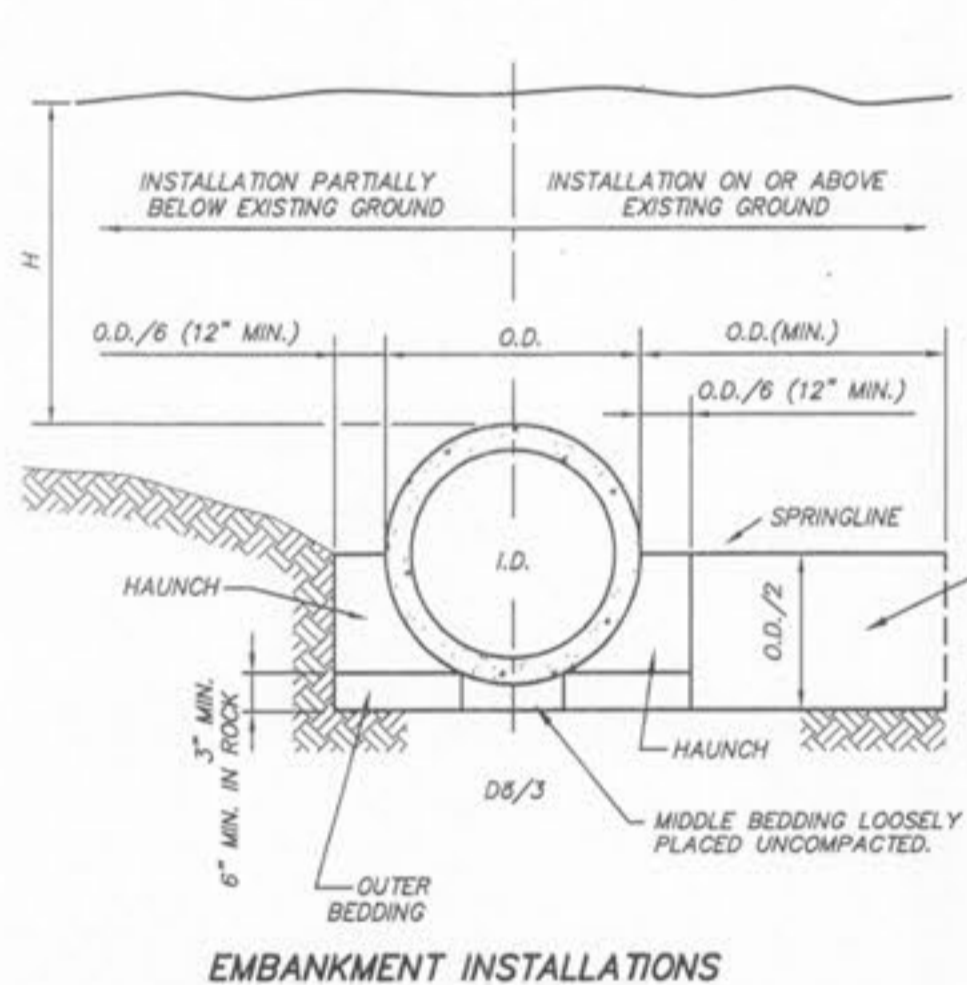
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

Dr. RGW/SAM
Ch. J.C.K.

2009 SHEET 51

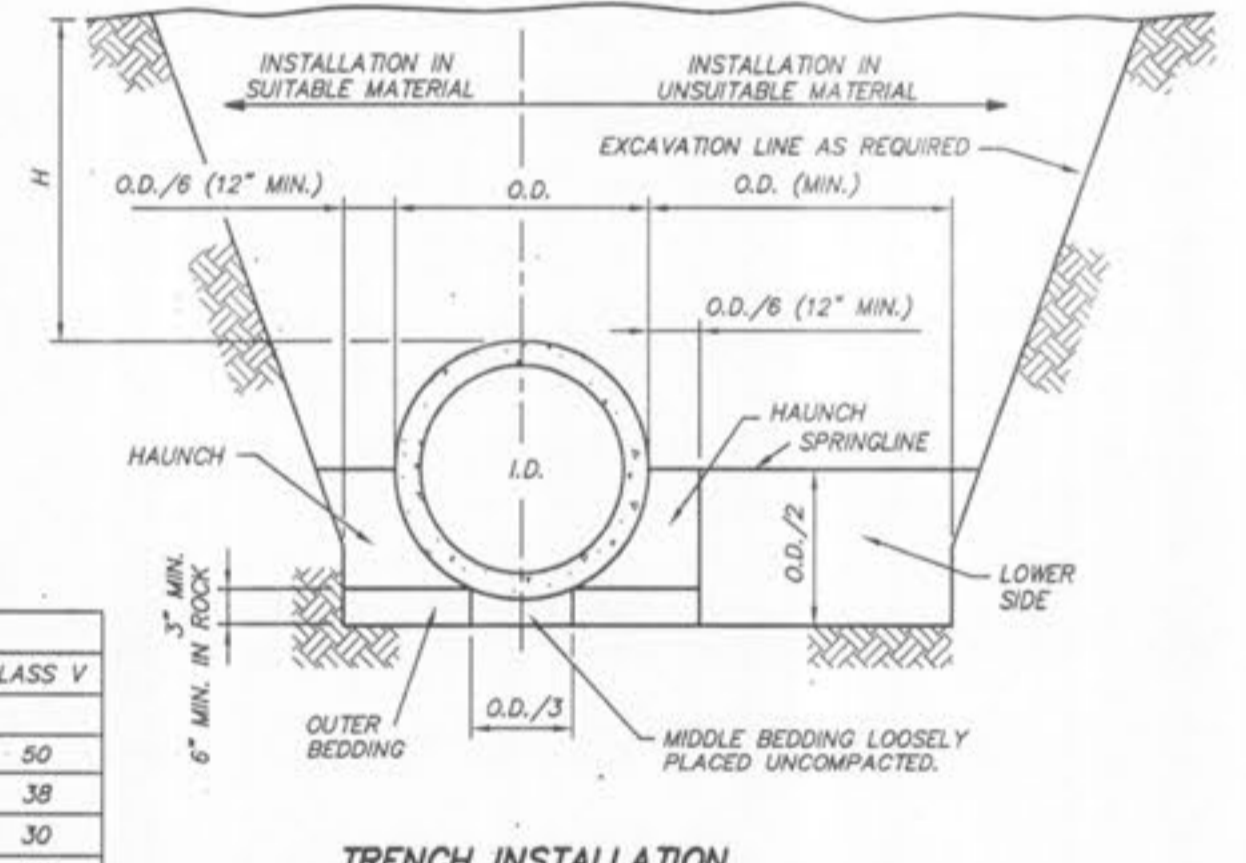
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CONSTRUCTION SEQUENCE

1. PLACE BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE SPRINGLINE.
5. COMPLETE BACKFILL ACCORDING TO SPECIFICATIONS.



MAXIMUM HEIGHT OF FILL OVER RCP CULVERTS

INSTALLATION TYPE	CLASS OF PIPE				
	CLASS I	CLASS II	CLASS III	CLASS IV	CLASS V
TYPE 1	14	18	21	33	50
TYPE 2	9	12	16	25	38
TYPE 3	7	10	12	19	30
TYPE 4	5	7	8	13	19

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

BEDDING AND COMPACTION REQUIREMENTS

INSTALLATION TYPE	BEDDING THICKNESS	COMPACTION REQUIREMENTS (% MAX. DRY DENSITY PER ASTM D698)					
		HAUNCH AND OUTER BEDDING			LOWER SIDE BEDDING		
		CATEGORY SOIL 1 (A)	CATEGORY SOIL 2 (B)	CATEGORY SOIL 3 (C)	CATEGORY SOIL 1 (A)	CATEGORY SOIL 2 (B)	CATEGORY SOIL 3 (C)
1	O.D./24 MINIMUM, NOT LESS THAN 3\"/>	95	N/A	N/A	90	95	100
2	O.D./24 MINIMUM, NOT LESS THAN 3\"/>	90	95	N/A	85	90	95
3	O.D./24 MINIMUM, NOT LESS THAN 3\"/>	85	90	95	85	90	95
4	O.D./24 MINIMUM, NOT LESS THAN 3\"/>	NO COMPACTION REQUIRED	NO COMPACTION REQUIRED	85	NO COMPACTION REQUIRED	NO COMPACTION REQUIRED	85

- (A) WELL GRADED MIXTURE OF STONE FRAGMENTS, GRAVEL AND SAND IN ACCORDANCE W/ AASHTO M 145 GROUP A-1 OR A-3
 (B) LOW PLASTIC GRANULAR MATERIAL IN ACCORDANCE W/ AASHTO M145 GROUP A-2 OR A-4
 (C) SILTY CLAYS IN ACCORDANCE W/ AASHTO M145 GROUP A-5, A-6, OR A-7

EMBEDMENT OF RCP STORM SEWER PIPE

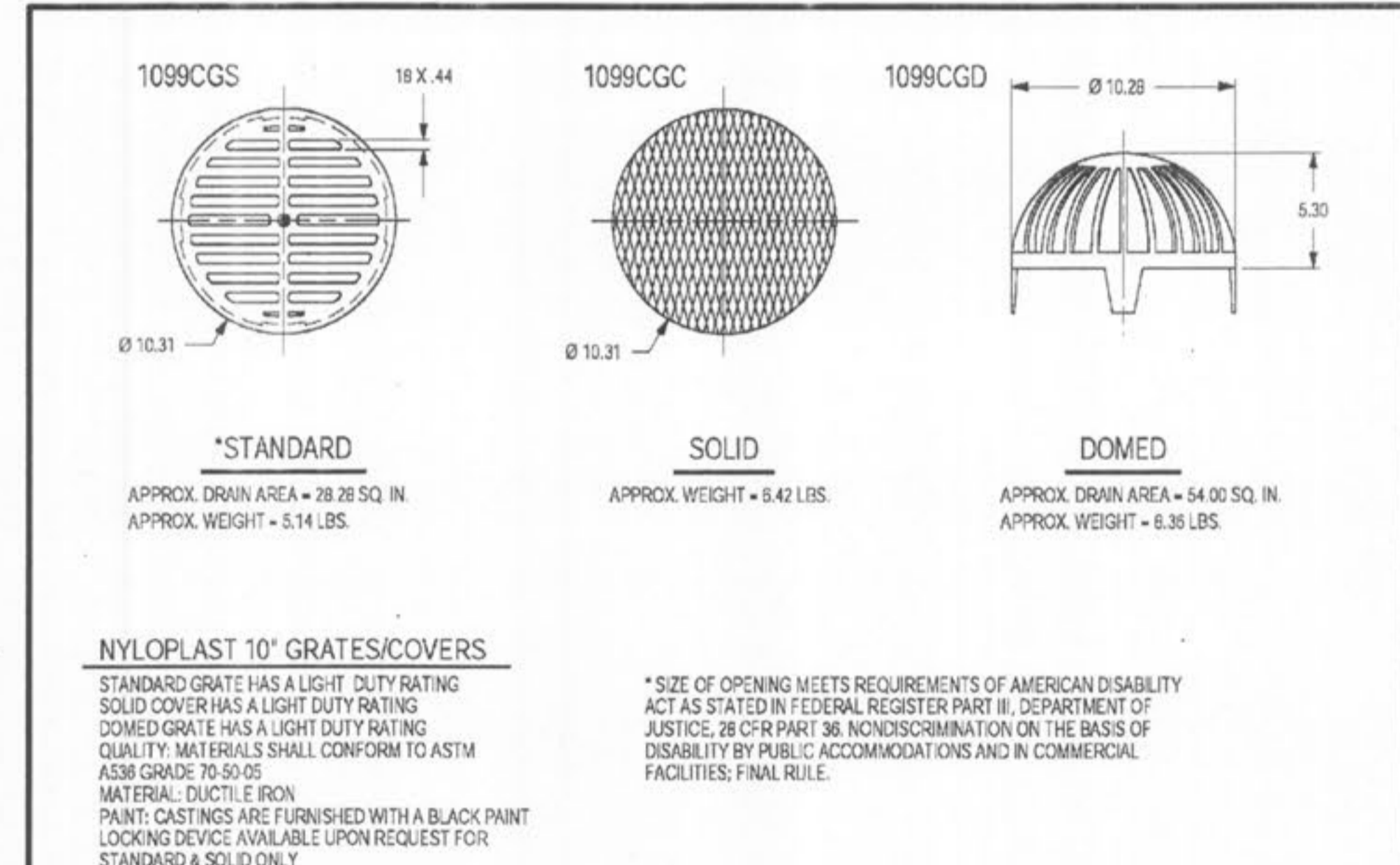
NOT TO SCALE

LEGEND

- I.D. = NORMAL INSIDE DIAMETER OF PIPE
 O.D. = OUTSIDE DIAMETER OF PIPE
 H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
 UNDISTURBED SOIL

GENERAL NOTES:

- MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE BETWEEN PIPES OF 1/2 O.D. OR 12\", WHICHEVER IS GREATER, BUT NOT TO EXCEED 36\"/>
- USE MIN. CLASS III PIPE UNLESS NOTED OTHERWISE. CLASS IV & V SHALL BE USED AS REQUIRED BY BACKFILL DEPTH. CLASS I AND CLASS II REINFORCED CONCRETE PIPE SHALL ONLY BE USED FOR SEWERS IN TRENCHES OUTSIDE ROADBEDS, STREET LIMITS, PARKING LOTS AND INFLUENCE OF ANY STRUCTURE.



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PLANNING & DEVELOPMENT #1709.03 APPROVED JANUARY 7, 2010

STORM SEWER DETAILS

HILLMAN PLACE

ST. CHARLES COUNTY, OTTALON, MISSOURI

Engineering Surveys & Services

1113 Fay Street
Columbia, Missouri
573-449-2646
Missouri Engineering Corporation # 2004005018

Surveyed: -
 Drawn: BR
 Checked: MK

Scale: AS SHOWN
 Date: JUNE 4, 2010
 Job: 11481
 Sheet: C123

MATTHEW A. KRISTE
PROFESSIONAL ENGINEER
PE-2007002811