

TRENCH / BACKFILL NOTES A. BEDDING THICKNESS UNDER PIPE BARREL b, SHALL BE 1/8 OF Bc; 6" MIN. Bc IS OUTSIDE

- DIAMETER OF PIPE AT BELL. B. THE HAUNCH AREA OF THE PIPE MUST BE FULLY SUPPORTED; THEREFORE THE BEDDING MATERIAL SHALL BE HAND PLACED AND COMPACTED UNDER THE PIPE HAUNCH.
- C. IF UNPAVED AREA IS WITHIN 10' OF PAVEMENT OR STRUCTURE THEN FOLLOW TRENCH
- GUIDELINES FOR PAVED AREA.
- D. PIPE DIAMETER OF 4" OR SMALLER SHALL HAVE A MAXIMUM TRENCH WIDTH OF 12". E. BEDDING AND INITIAL BACKFILL SHALL BE SAND FOR ALL UTILITY CONDUIT CARRYING WATER, ELECTRIC, GAS, AND TELEPHONE.

- GRATE. ALL

RADII

EDGES TO BE ROUNDED TO 1/4"

- REINFORCING

WATER-

CEMENT RATIO

(MAX)

0.5

0.5

0.5

CONSTRUCTION -JOINT (TYP.)

2' CONCRETE COLLAR

PLAN

GRATE. ALL EDGES

TO BE ROUNDED

REINFORCING

CONSTRUCTION

OPTIONAL PRECAST

JOINT

JOINT

STEP (TYP)

FLOW LINE

JOINT

**PERMISSIBLE** 

CONSTRUCTION

**SECTION B-B** 

1-0000000

VARIES - SEE

BASIN SIZING

**SECTION A-A** 

TO 1/4" RADII

A TRENCH BACKFILL DETAIL

VARIES

BASIN SIZING

CONCRETE TABLE

WALLS: CAST-IN-PLACE WALLS SHALL HAVE A NOMINAL THICKNESS OF 8". PRECAST

SHIPPING AND HANDLING WITHOUT DAMAGE. PRECAST TOPS SHALL BE 8" THICK.

PLANS. PRECAST GRADE RINGS MAY BE USED TO ADJUST THE TOP ELEVATION.

WALLS SHALL HAVE A MINIMUM THICKNESS OF 6" AND BE REINFORCED SUFFICIENTLY TO

STEPS: STEPS SHALL BE PROVIDED WHERE THE DEPTH OF THE STRUCTURE EXCEEDS 6' CONCRETE: CAST-IN-PLACE CONCRETE TO MEET THE COMPOSITION SPECIFIED IN THE

CONCRETE TABLE. ALL PRECAST CONCRETE SHALL MEET THE REQUIREMENTS OF ASTM C478. B. INLETS OVER 12' IN DEPTH SHALL BE PRECAST OR CAST-IN-PLACE CONCRETE; REINFORCED

PRECAST BASE: IF A PRECAST BASE IS USED, IT SHALL BE SET DEEP ENOUGH SO THAT THE  $_{50}$  lies

WITH #4 BARS ON 12" CENTERS BOTH VERTICALLY AND HORIZONTALLY WITH 2" CLEARANCE

TOP CAN BE PLACED ON THE BASE TO PROVIDE THE GRATE ELEVATION SPECIFIED IN THE

LOCATION AND ELEVATION: WHEN GIVEN ON THE PLANS, THE LOCATION AND THE ELEVATION

OPENINGS: PIPE OPENINGS SHALL BE THE O.D. OF THE PIPE BEING SUPPLIED PLUS 2" WHEN

PREFABRICATED OR FIELD CUT. THE INTERSTITIAL SPACE SHALL BE FILLED WITH GROUT.

MINIMUM OF TWO COURSES OF BRICK SHALL BE USED TO ADJUST THE TOP ELEVATION.

MINIMUM DEPTH: THE MINIMUM DEPTH SHALL BE THE OUTSIDE DIAMETER (O.D.) OF THE

2895

2915

2710

12" TO 33"

DRY AGGREGATES (LB/C.Y.)

FINE | COARSE | TOTAL

1735

1630

1360

DIMENSION

3'-0" x 3'-0"

1160

1285

1350

A. GRATE: EJ NO. 5115M2, 5115Z OR APPROVED EQUAL NEENAH NO. 4852, 1893-0018 OR APPROVED EQUAL.

ARE AT THE TOP CENTER OF THE GRATE.

AGGREGATE

GRAVEL

LIMESTONE

SLAG

FROM INSIDE WALL FACE.

OUTLET PIPE PLUS 7".

NOTES

4'-0" x 4'-0" | 36" TO 42"

TOP SLAB

REINFORCING

AT 6" O.C.

(8) #4 BARS

(12) #4 BARS

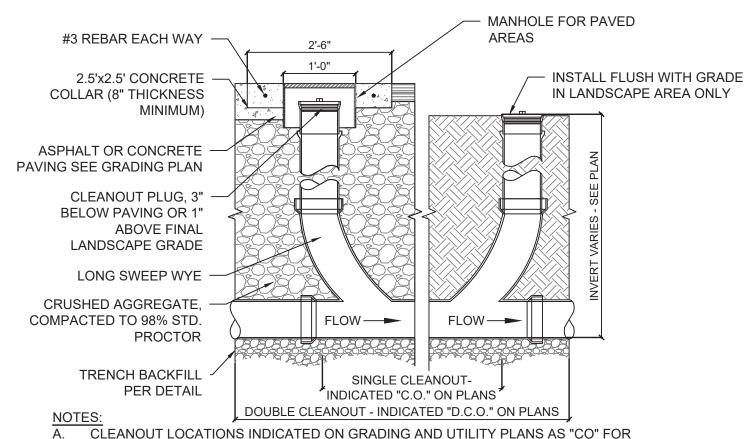
CONTENT

(LB/C.Y.)

600

600

600



CLEANOUT LOCATIONS INDICATED ON GRADING AND UTILITY PLANS AS "CO" FOR SINGLE CLEANOUT AND "DCO" FOR DOUBLE CLEAN OUT.

PROVIDE CLEANOUTS AS SPECIFIED:

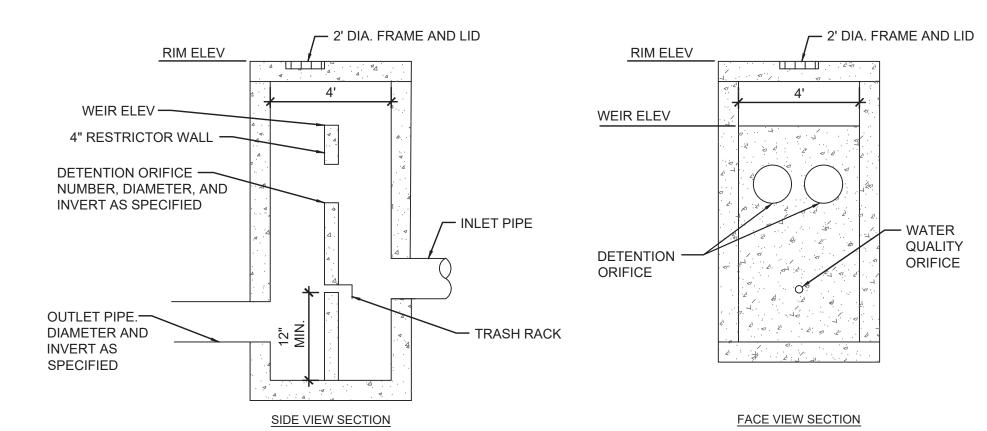
AROUND

GRATE

ZURN Z-1400 CLEANOUTS IN NON-TRAFFIC AREAS AND SIDEWALKS ZURN-1449 CLEANOUTS IN LANDSCAPED AREAS ZURN Z-1400 HD CLEANOUTS IN TRAFFIC AREAS WITH A "SERVICE STATION" TYPE

MANHOLE, OPW #104 A12 - DOVER CORP./OPW DIV.

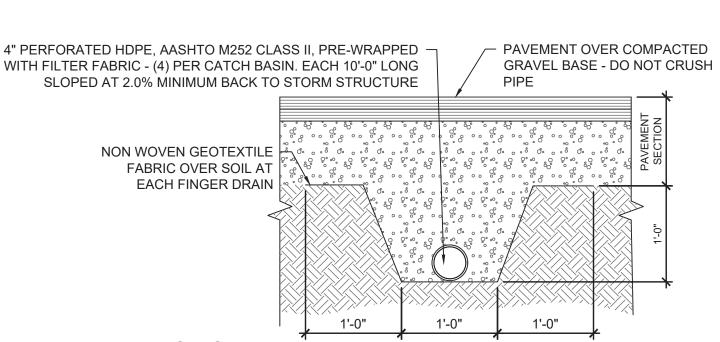




1. CONTROL STRUCTURE SHALL BE A STANDARD MODOT MANHOLE PER STANDARD DRAWING 731.00U, MODIFIED AS SHOWN.

2. PROVIDE MANHOLE STEPS ON ACCESS SIDE OF WEIR WALL.													
				OUTLET PIPE		WATER QUALITY ORIFICE		DETENTION ORIFICE(S)			WEIR		
STRUCTURE	TC/RIM ELEVATION	UGS	WATER QUALITY VOL ELEV	DIA.	INV.	DIA.	INV.	NO.	DIA.	INV.	WIDTH	ELEV	100-YR WSE
6	<del>-1014.50 -</del>	1	1008.14	12"	<del>1005.75</del>	<del>1.4"</del>	<del>1000.75</del>	2	10"	1009.00	4'	<del>1013.00</del>	1012.97
As-Built Elev 1014.47					1005.67	4"	1006.57			1008.82		1012.92	

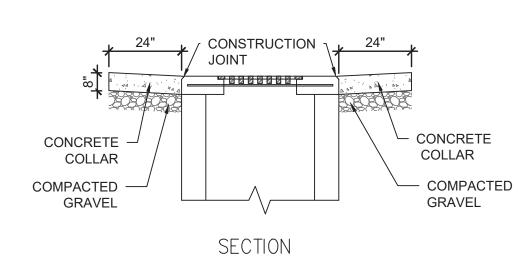
**OUTLET CONTROL STRUCTURE** 



**NOTES** A. THE INTENTION OF THE FINGER DRAIN SYSTEM IS TO PREVENT EXCESS WATER ACCUMULATION AT THE LOW POINTS IN THE GRAVEL BASE AT DRAINAGE STRUCTURES.

SYSTEM TO BE INSTALLED TO ASSURE ADEQUATE DRAINAGE OF PAVEMENT BASE.

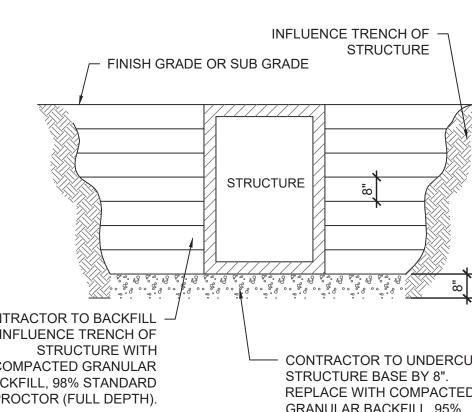




## NOTES

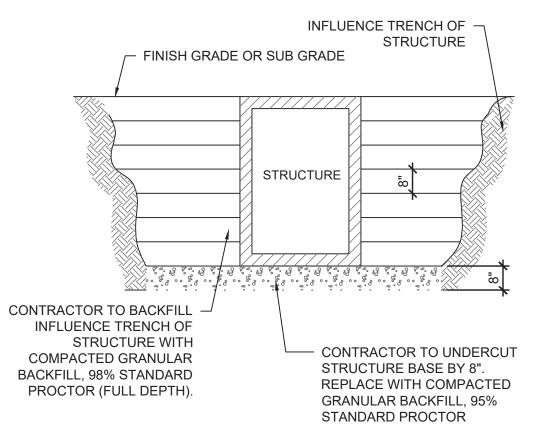
A. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI B. CONCRETE COLLAR SHALL SLOPE TO GRATE AT 5.0%





B. NO ON SITE FILL WILL BE ALLOWED FOR UTILITY STRUCTURES.





STRUCTURE BACKFILL NOTES A. BACKFILL TO BE PLACED IN 8" LIFTS



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1-800-DIG-RITE or 811

MAKE THE CALL...IT'S THE LAW

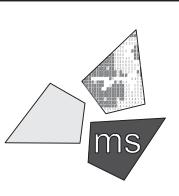
10/20/20 11/17/20

60% Plan Set 90% Plan Set 12/16/20 100% Plan Set/Bid Set 04/26/21 Issue for Construction

REVISION/DATE/DESCRIPTION

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PROJECT

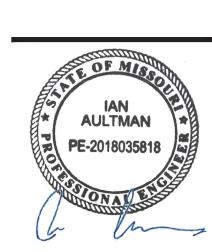
**WHATABURGER** PT20M BUILDING

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1460 NE DOUGLAS ST. LEE'S SUMMIT, MO 64086

SHEET TITLE

SITE **DETAILS** 



LLK/AMA DRAWN BY: KEA CHECKED BY: 40497-01 PROJECT NO:

DRAWING

