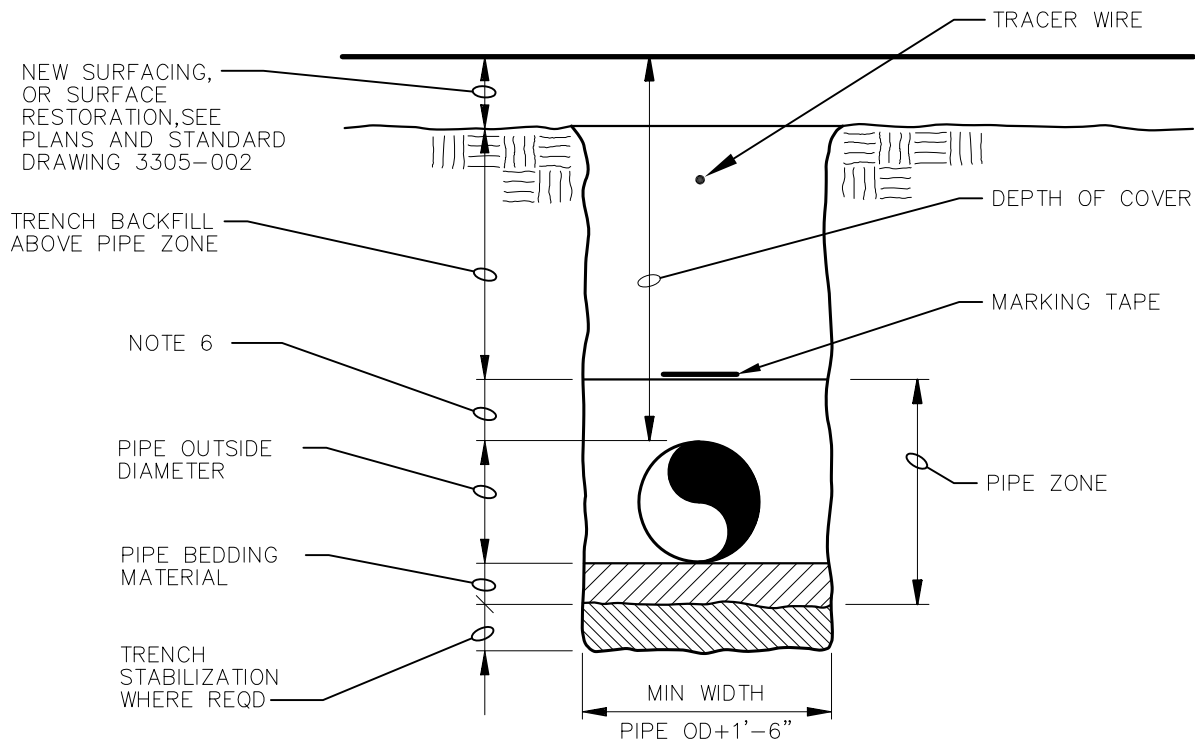


SECTION 6 STANDARD DRAWING INDEX

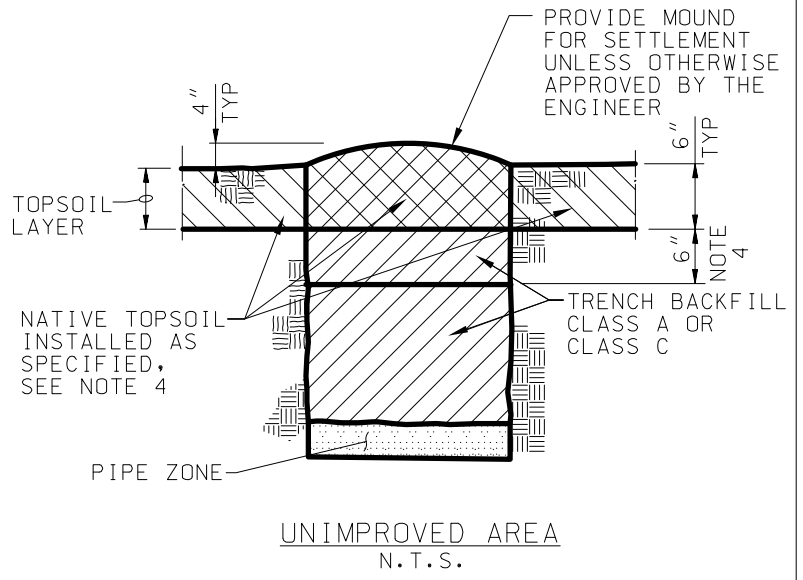
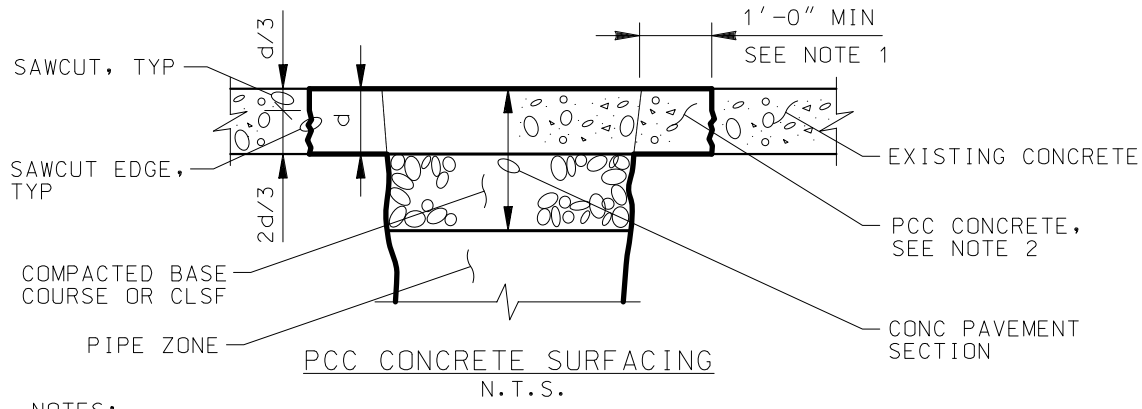
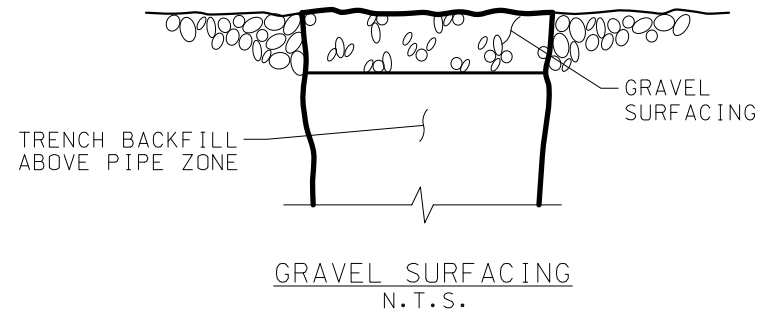
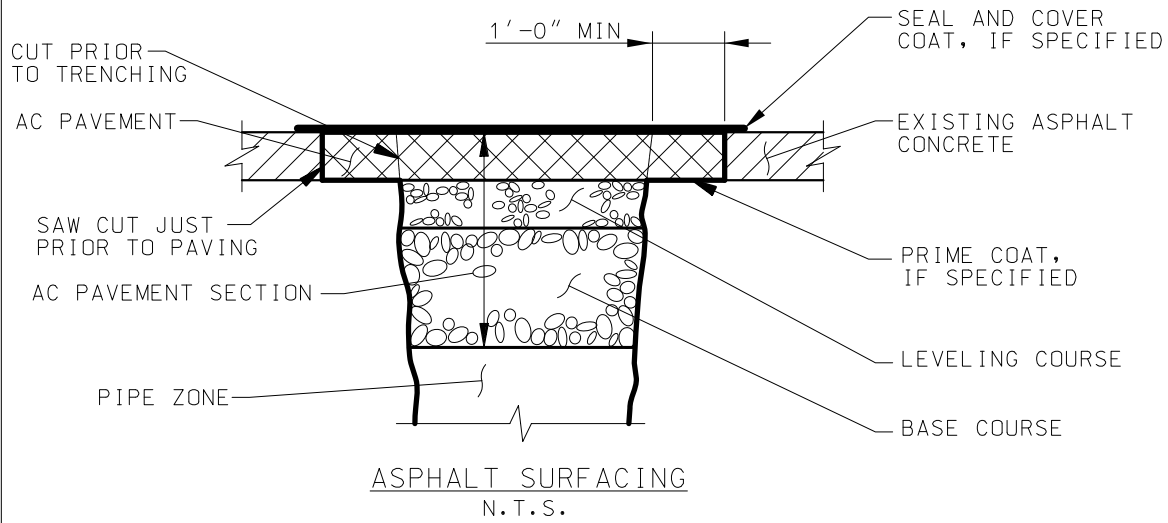
DWG NO.	TITLE
3305-001	TYPICAL TRENCH
3305-002	SURFACE RESTORATION
3305-600	MAIN SEWER PRECAST MANHOLE FOR PIPES 18" DIAMETER OR LESS
3305-605	MAIN SEWER PRECAST TERMINAL MANHOLE
3305-610	MAIN SEWER 48" ONE PIECE MANHOLE
3305-615	MAIN SEWER PRECAST MANHOLE JOINT DETAILS
3305-620	MAIN SEWER MINIMUM DEPTH MANHOLE
3305-625	MAIN SEWER STANDARD MANHOLE FRAME & COVER DETAILS
3305-630	MAIN SEWER BOLT DOWN MANHOLE FRAME & COVER DETAILS
3305-635	MAIN SEWER DROP MANHOLE (MEMPHIS TEE) DETAILS FOR PIPES 8" TO 18" DIAMETER
3305-640	MAIN SEWER DROP (INSIDE) DETAILS FOR PIPES 8" DIAMETER
3305-645	MAIN SEWER REINFORCED CONCRETE ENCASMENT
3305-650	MAIN SEWER CONNECTION OF COLLECTOR SEWER TO EXISTING LARGE DIAMETER MAIN SEWER
3305-655	MAIN SEWER CONNECTIONS 8" AND LARGER TO EXISTING MANHOLES
3305-660	MAIN SEWER DETAIL OF CLAY OR FLOWABLE FILL DITCH CHECK



NOTES:

1. CONTRACTOR SHALL SLOPE TRENCH WALLS OR SHORE EXCAVATIONS FOR CONSTRUCTION AND SAFETY AND IN ACCORDANCE WITH CURRENT OSHA REQUIREMENTS.
2. FOUNDATION STABILIZATION MATERIAL SHALL BE INSTALLED ONLY AS APPROVED AND DIRECTED BY THE ENGINEER AND IN ACCORDANCE WITH THE SPECIFICATION.
3. SEE SPECIFICATION SECTION 31 23 16 EXCAVATION AND 31 23 23 TRENCH BACKFILL.
4. COORDINATE LOCATION OF MARKING TAPE WITH SPECIFICATIONS. PROVIDE NEW SURFACING AS SHOWN ON THE DRAWINGS.
5. WHERE TRENCHES ARE IN AREAS NOT DESIGNATED TO RECEIVE NEW ASPHALT, GRAVEL OR PCC CONCRETE SURFACING, RESTORE EXISTING SURFACE USING SEED OR SOD AS DIRECTED.
6. MINIMUM DEPTH OVER PIPE IS BY SIZE AND SERVICE AS FOLLOWS:
 - a. 4" AND 6" GRAVITY SERVICE: 6" MIN.
 - b. 8" GRAVITY SERVICE AND LARGER AND ALL FORCE MAINS: 12" MIN.
7. PROVIDE TRACER WIRE PER SPECIFICATION FOR ALL FORCE MAINS.

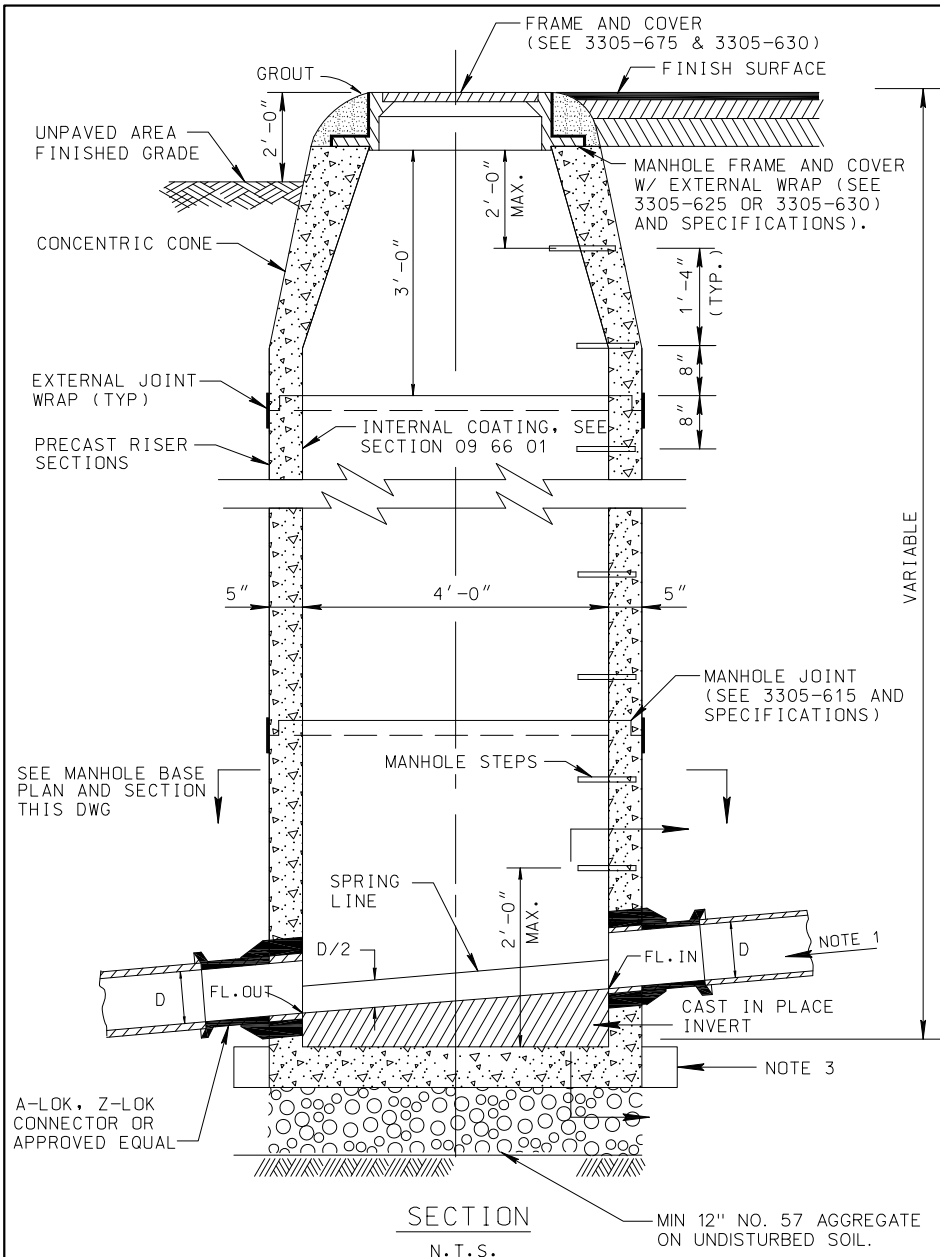
DATE		REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
01/15		TEXT UPDATE	
MAY 2015			TYPICAL TRENCH
APPROVED: _____		STANDARD DRAWING NO. <u>3305-001</u>	



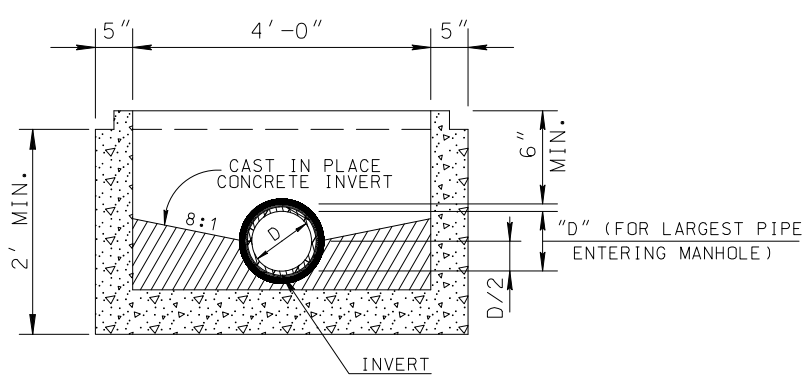
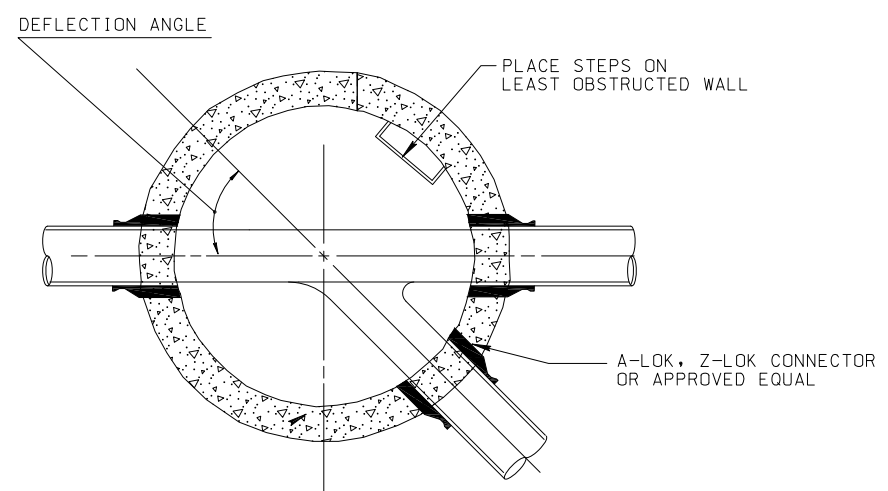
NOTES:

1. IF LOCATION OF TRENCH SAW CUT IS WITHIN 2 FEET OF AN EXISTING JOINT OR EDGE OF CONCRETE, REPLACE ENTIRE CONCRETE SECTION TO THE JOINT OR EDGE.
2. CONSTRUCT JOINTS ACROSS NEW CONCRETE TO MATCH EXISTING JOINT TYPES AND LOCATIONS.
3. SURFACE RESTORATION MUST BE COMPATIBLE WITH TYPE OF BACKFILL USED. COMPACTED CRUSHED ROCK AND LEVELING COURSE BASE SHOULD NOT BE PLACED ON NATIVE MATERIAL.
4. THE TOP 6" OF TRENCH BACKFILL, BENEATH THE TOPSOIL LAYER, SHOULD BE INSTALLED, SMOOTHED, BUT LEFT UN-COMPACTED.
5. TOPSOIL SHALL EXTEND BEYOND TOP OF TRENCH A MINIMUM OF 12".
6. SOD OR SEED AS DIRECTED.

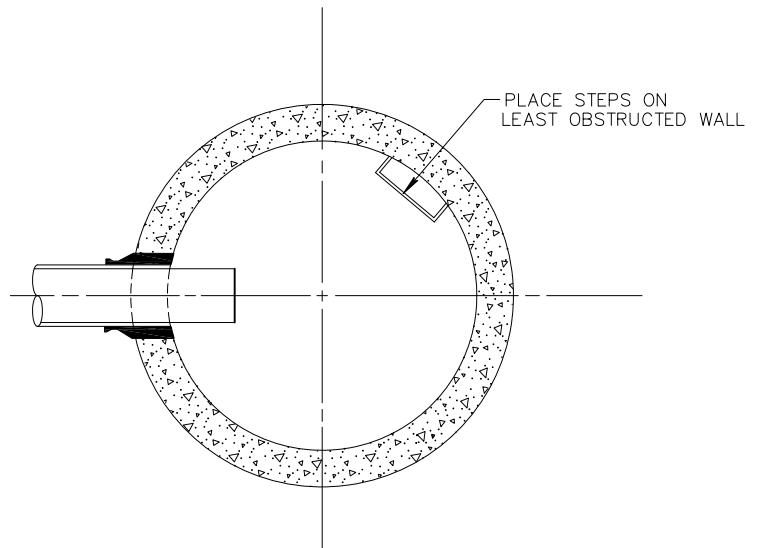
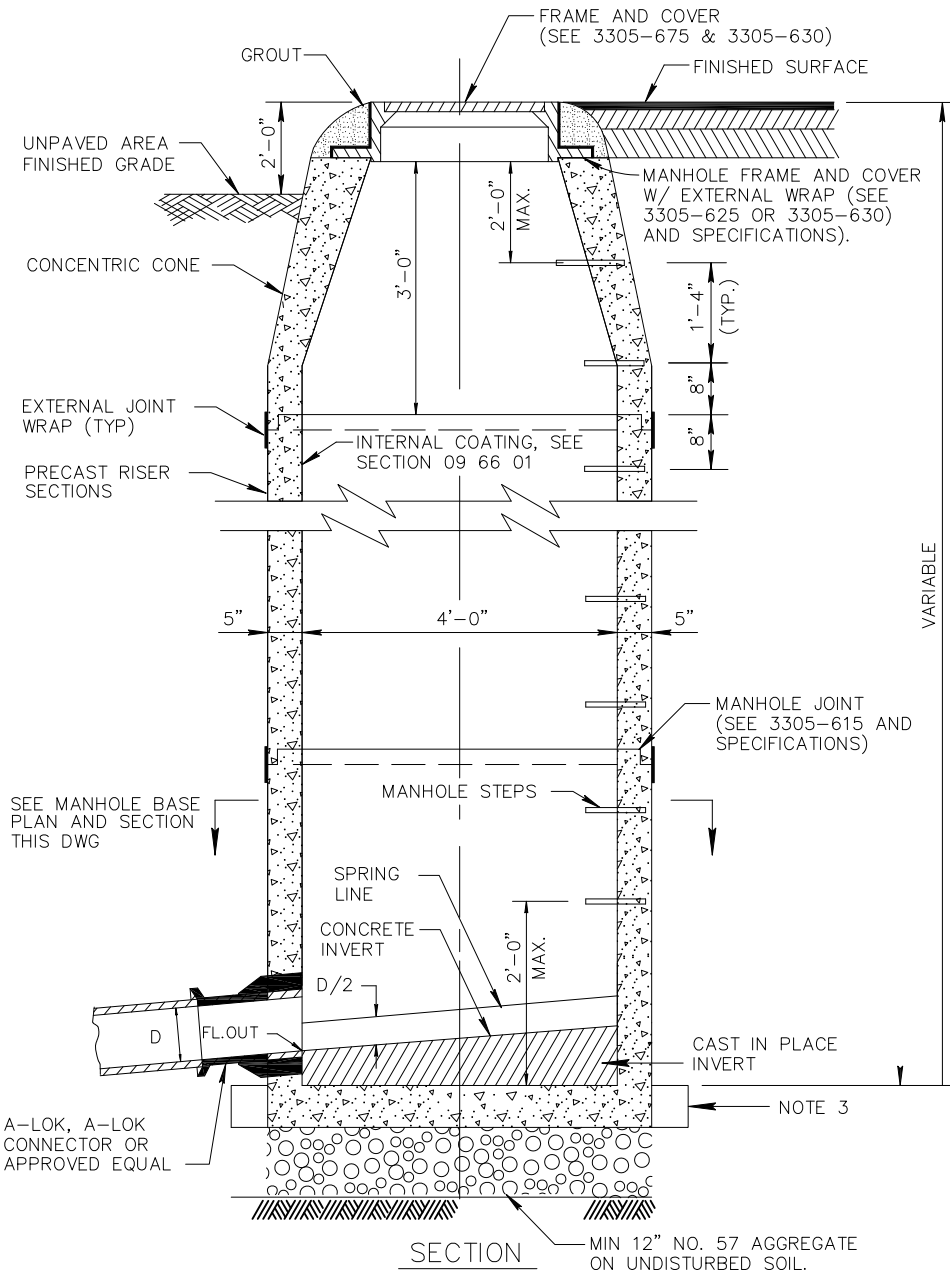
DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
01/15	TEXT UPDATE	SURFACE RESTORATION
MAY 2015		
APPROVED: _____		STANDARD DRAWING NO. <u>3305-002</u>



- NOTES:
1. WHERE INSTALLED IN ROADWAY OR IN AREA BELOW 100' FLOOD ELEVATION WATERTIGHT MANHOLE FRAME AND COVER SHALL BE INSTALLED.
 2. SLOPE OF PIPE SHALL EXTEND THROUGH MANHOLE.
 3. PROVIDE EXTENDED BASE IN AREAS WITH GROUNDWATER.
 4. SEE SPECIFICATION SECTION 33 05 13 MANHOLES.



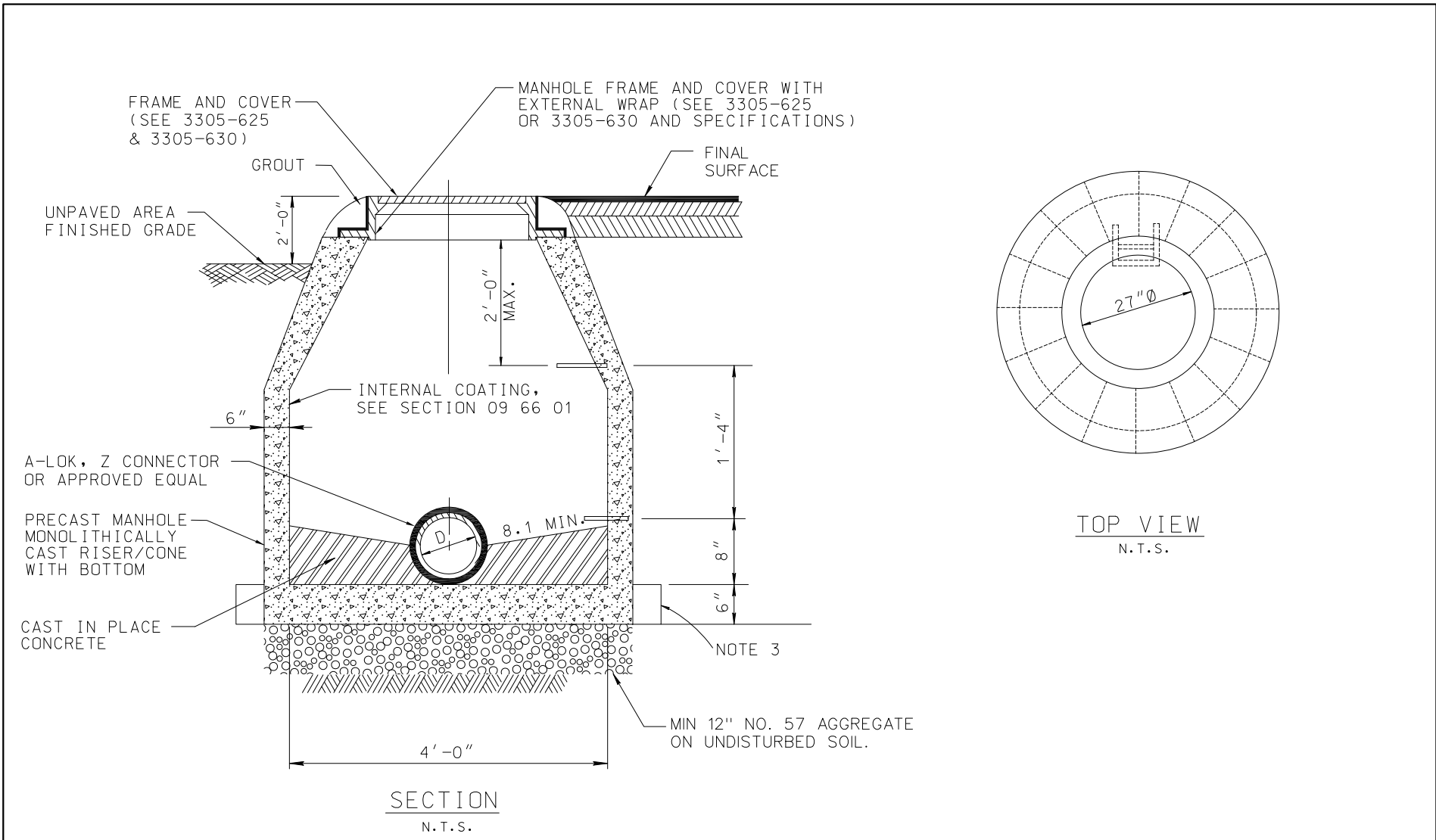
DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
04/14	UPDATED TO MATCH MANUAL AND NEW MATERIALS	MAIN SEWER PRECAST MANHOLE FOR PIPES 18" DIAMETER OR LESS
MAY 2015		
APPROVED: _____		STANDARD DRAWING NO. 3305-600



MANHOLE BASE PLAN
N.T.S.

- NOTES:
1. WHERE INSTALLED IN ROADWAY OR IN AREA BELOW 100' FLOOD ELEVATION WATERTIGHT MANHOLE FRAME AND COVER SHALL BE INSTALLED.
 2. SLOPE OF PIPE SHALL EXTEND THROUGH MANHOLE.
 3. PROVIDE EXTENDED BASE IN AREAS WITH GROUNDWATER.
 4. SEE SPECIFICATION SECTION 33 05 13 MANHOLES.

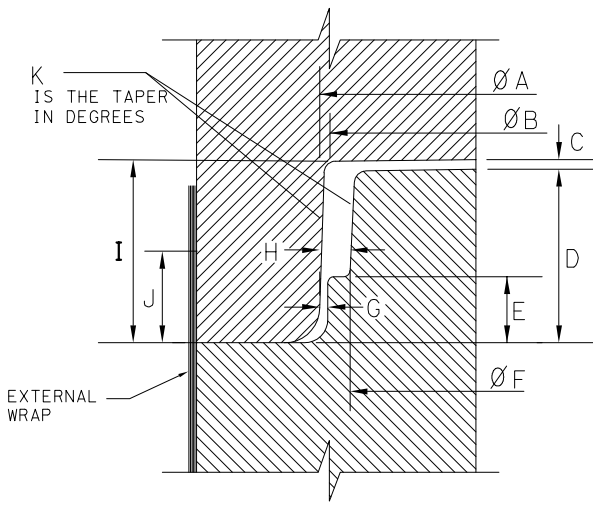
DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
04/14	UPDATED TO MATCH MANUAL AND NEW MATERIALS	
MAY 2015		MAIN SEWER PRECAST TERMINAL MANHOLE
APPROVED: _____		



NOTES:

1. WHERE INSTALLED IN ROADWAY OR IN AREA BELOW 100' FLOOD ELEVATION WATERTIGHT MANHOLE FRAME AND COVER SHALL BE INSTALLED.
2. SLOPE OF PIPE SHALL EXTEND THROUGH MANHOLE.
3. PROVIDE EXTENDED BASE IN AREAS WITH GROUNDWATER.
4. SEE SPECIFICATION SECTION 33 05 13 MANHOLES.

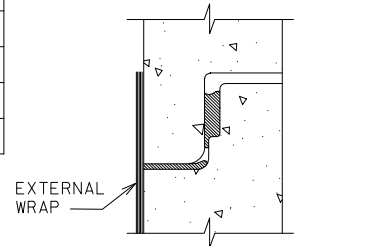
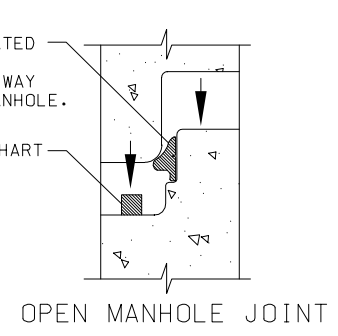
DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
05/14	UPDATED TO MATCH MANUAL AND NEW MATERIALS	<p>MAIN SEWER 48" ONE PIECE MANHOLE</p>
MAY 2015		
APPROVED: _____		STANDARD DRAWING NO. <u>3305-610</u>



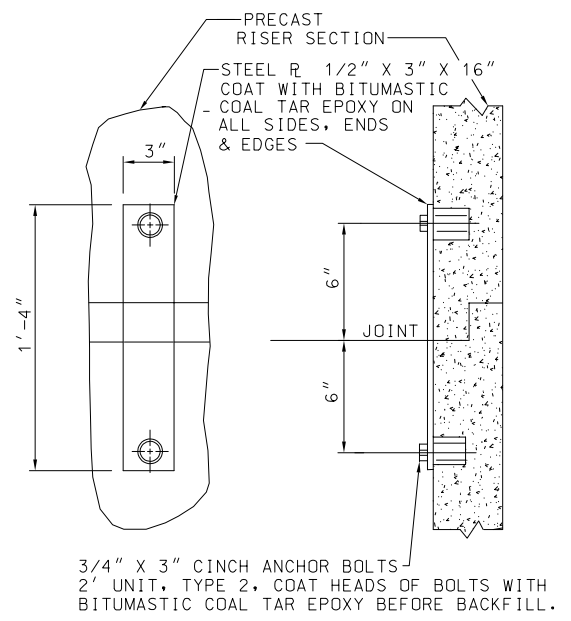
TYLOX-SUPER SEAL PRELUBRICATED GASKET TO BE PLACED FIRMLY AGAINST THE OFFSET ALL THE WAY AROUND THE SPIGOT OF THE MANHOLE.

SEE REQUIRED SIZE CHART FOR CONSEAL CS-231

CONSEAL CS-231 REQ'D SIZE CHART	
48" O.D.	3/8"
60" I.D.	3/8"
72" I.D.	3/8"
84" I.D.	3/4"
96" I.D.	3/4"

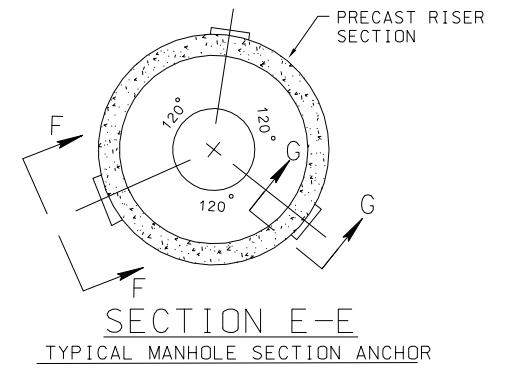


N.T.S.



3/4" X 3" CINCH ANCHOR BOLTS 2" UNIT, TYPE 2, COAT HEADS OF BOLTS WITH BITUMASTIC COAL TAR EPOXY BEFORE BACKFILL.

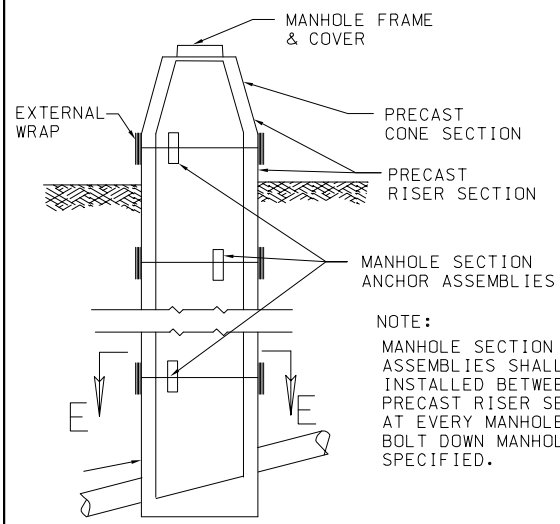
3 ANCHOR ASSEMBLIES REQUIRED PER JOINT 120° APART.



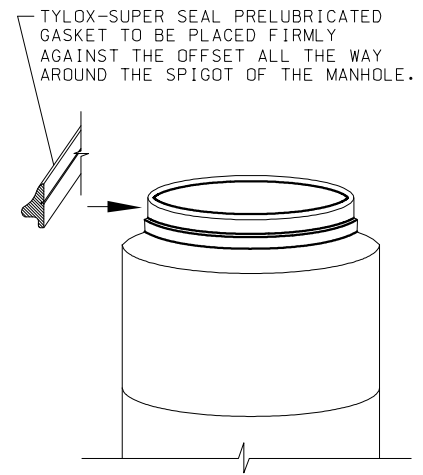
Di.	ØA	ØB	C	D	E	ØF	G	H	I	J	K
48	53.121	52.966	0.125	4.125	1.600	52.217	0.146	0.452	4.250	2.033	2°
60	67.512	67.315	0.160	5.24	2.68	66.450	0.150	0.500	5.394	3.268	1.8°
72	79.362	79.105	0.160	5.24	2.68	78.233	0.150	0.500	5.400	3.400	1.8°

PRECAST MANHOLE JOINT

N.T.S.

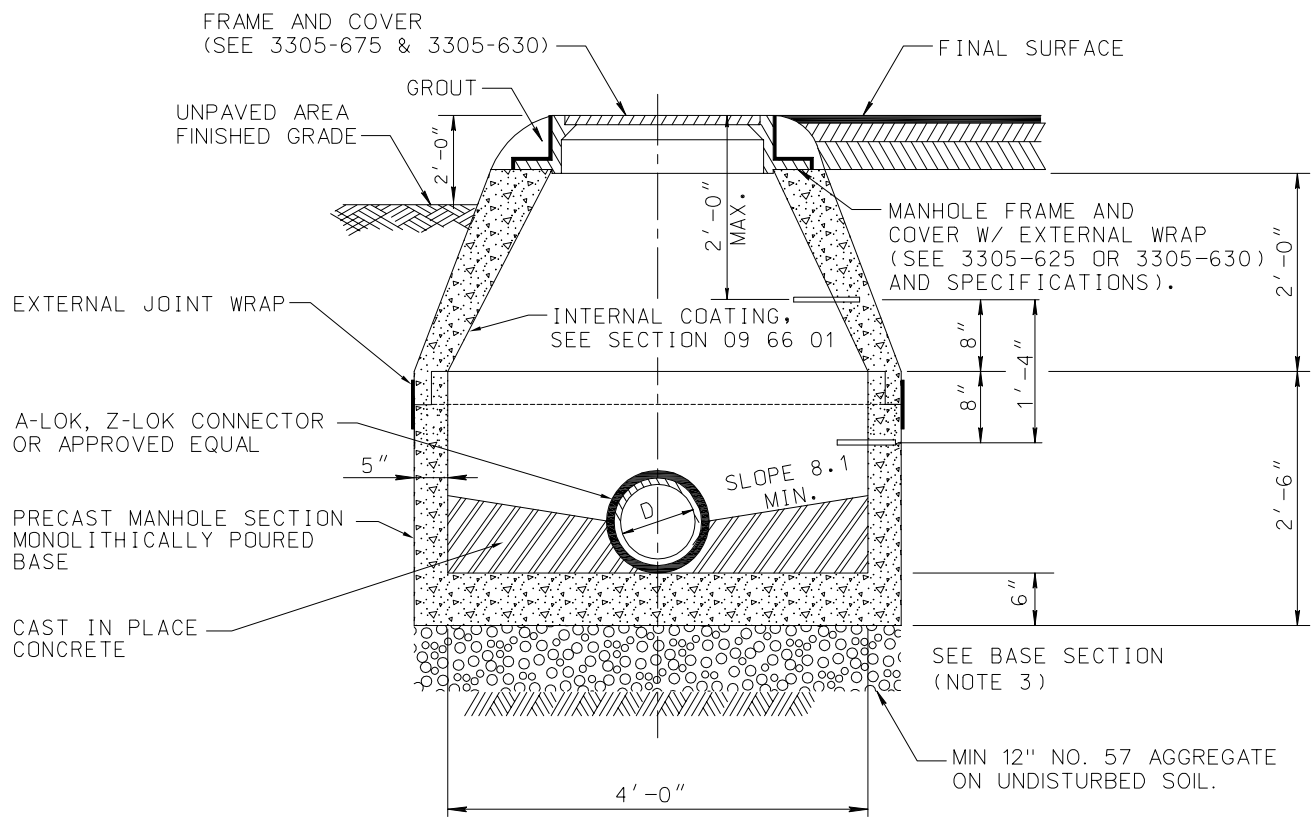


N.T.S.



N.T.S.

DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
05/14	UPDATED TO MATCH MANUAL	
MAY 2015		MAIN SEWER PRECAST MANHOLE JOINT DETAILS
APPROVED: _____		STANDARD DRAWING NO. 3305-615

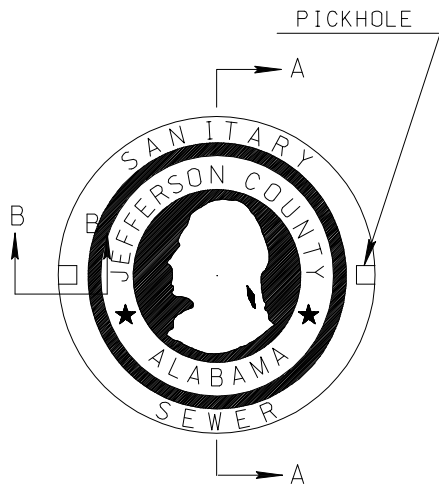


SECTION
N.T.S.

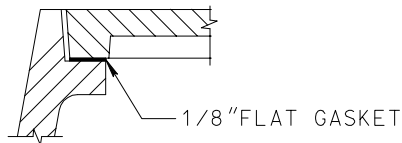
NOTES:

1. WHERE INSTALLED IN ROADWAY OR IN AREA BELOW 100' FLOOD ELEVATION WATERTIGHT MANHOLE FRAME AND COVER SHALL BE INSTALLED.
2. SLOPE OF PIPE SHALL EXTEND THROUGH MANHOLE.
3. PROVIDE EXTENDED BASE IN AREAS WITH GROUNDWATER.
4. SEE SPECIFICATION SECTION 33 05 13 MANHOLES.

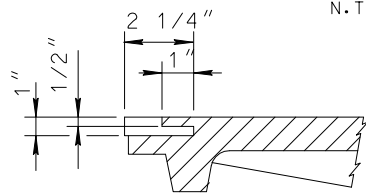
DATE		REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
05/14		UPDATED TO MATCH MANUAL AND NEW MATERIALS	
MAY 2015			MAIN SEWER MINIMUM DEPTH MANHOLE
APPROVED: _____			
			STANDARD DRAWING NO. <u>3305-620</u>



COVER
N.T.S.



GASKET DETAIL
N.T.S.



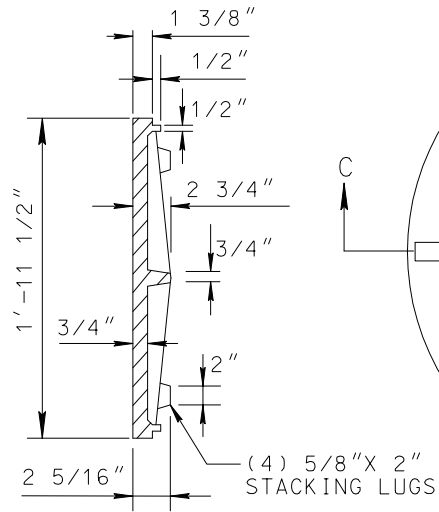
(2) TYPE TWO NON-PENETRATING PICKHOLES

SECTION B-B
PICKHOLE DETAIL

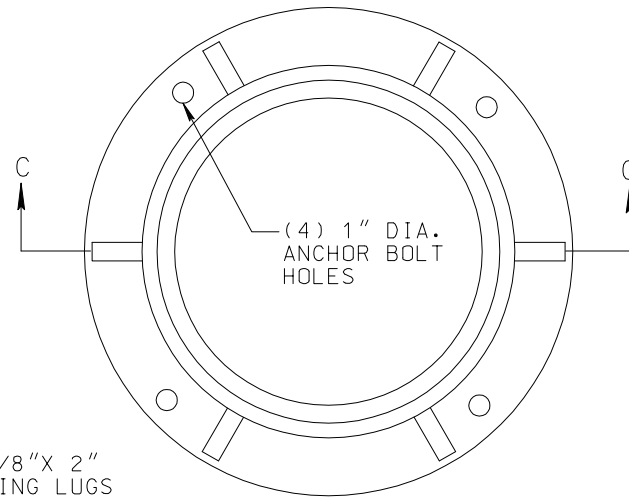
N.T.S.

NOTES:

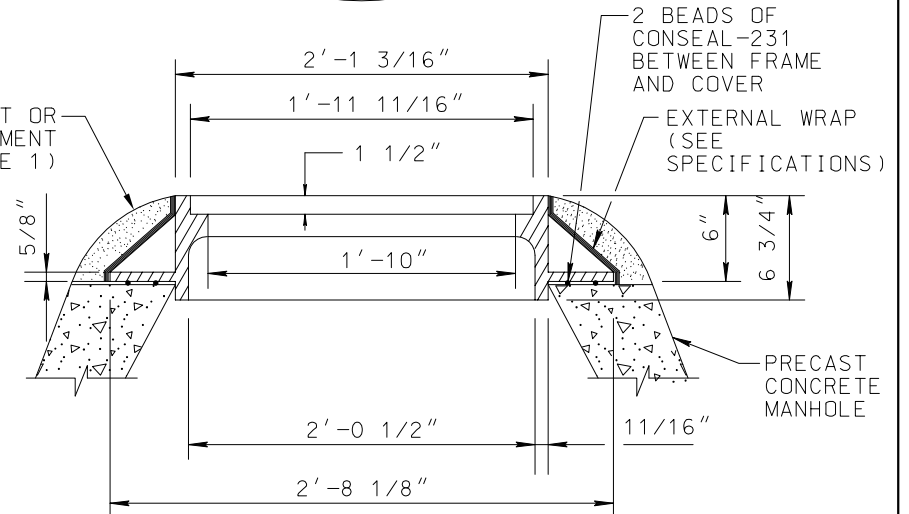
1. WHERE INSTALLED IN ROADWAY, NO GROUT IS REQUIRED. PAVE UP TO AND AROUND FRAME. OTHERWISE GROUT AROUND FRAME TO PROTECT EXTERNAL WRAP.
2. NO REVERSIBLE FRAMES WILL BE ALLOWED.
3. SEE SPECIFICATION SECTION 33 05 13 MANHOLES.



SECTION A-A

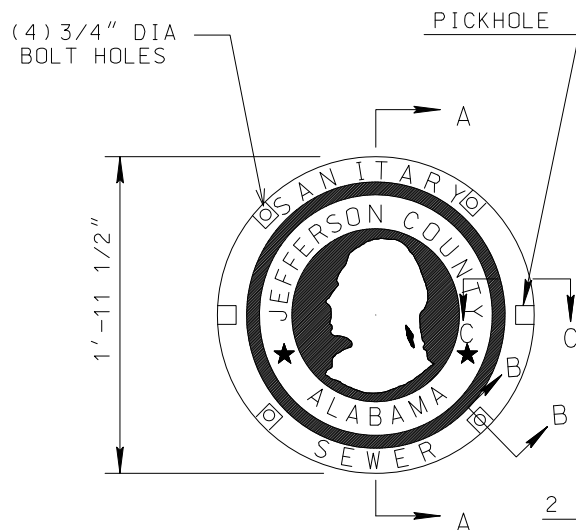


GROUT OR PAVEMENT (NOTE 1)

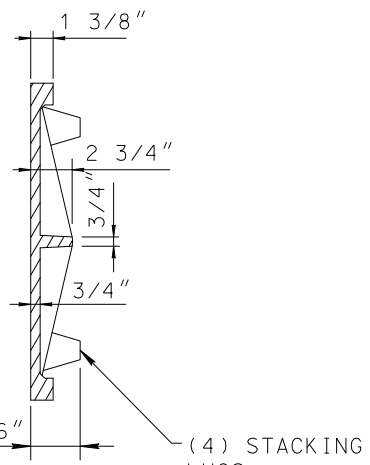


SECTION C-C
FRAME
N.T.S.

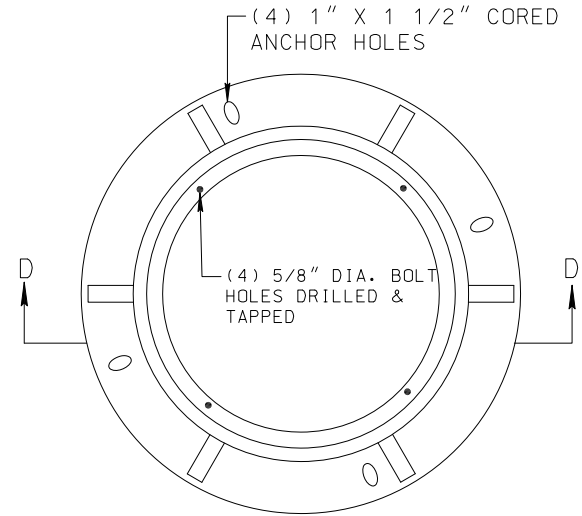
DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
05/14	UPDATED TO MATCH MANUAL AND NEW MATERIALS	MAIN SEWER STANDARD MANHOLE FRAME & COVER DETAILS
MAY 2015		
APPROVED: _____		
		STANDARD DRAWING NO. 3305-625



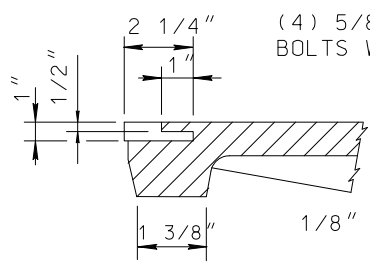
COVER
N.T.S.



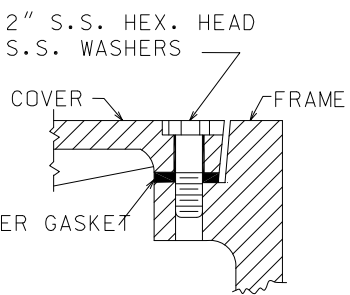
SECTION A-A



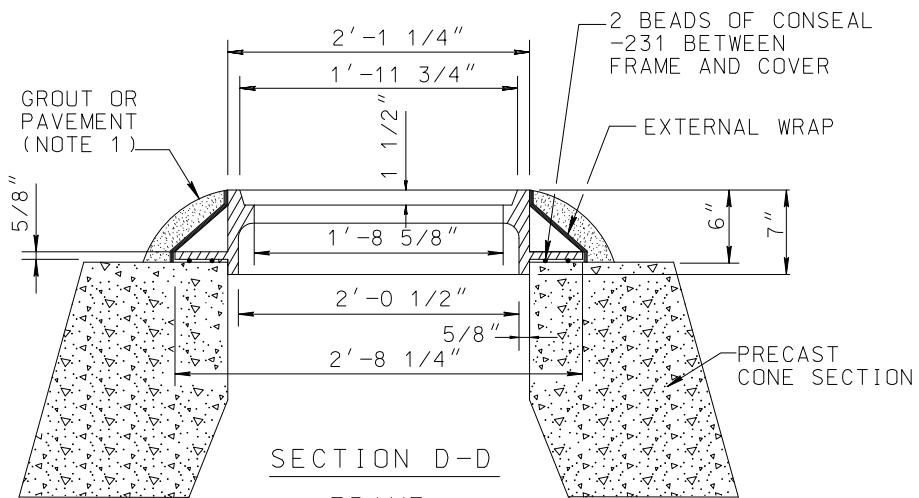
FRAME
N.T.S.



SECTION C-C
PICKHOLE DETAIL
N.T.S.



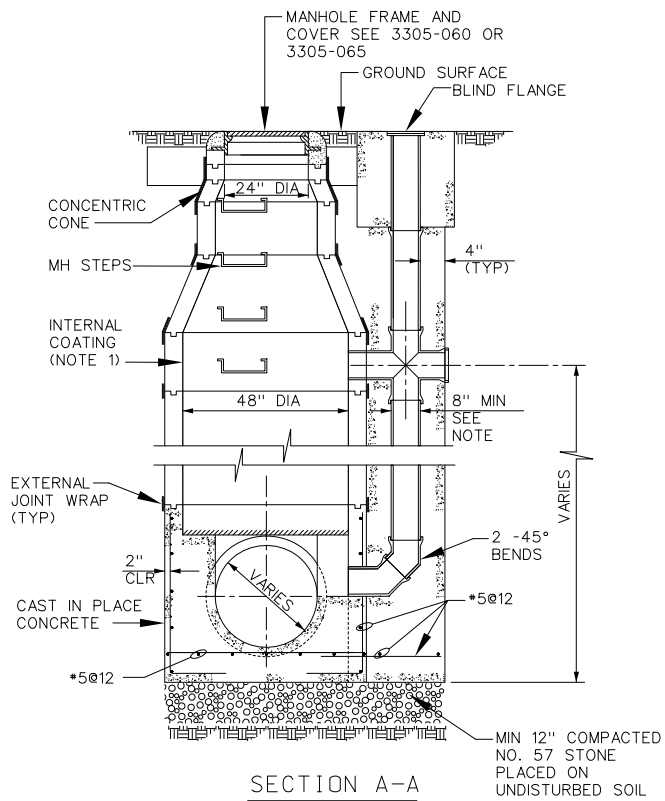
SECTION B-B
WATERTIGHT DETAIL
N.T.S.



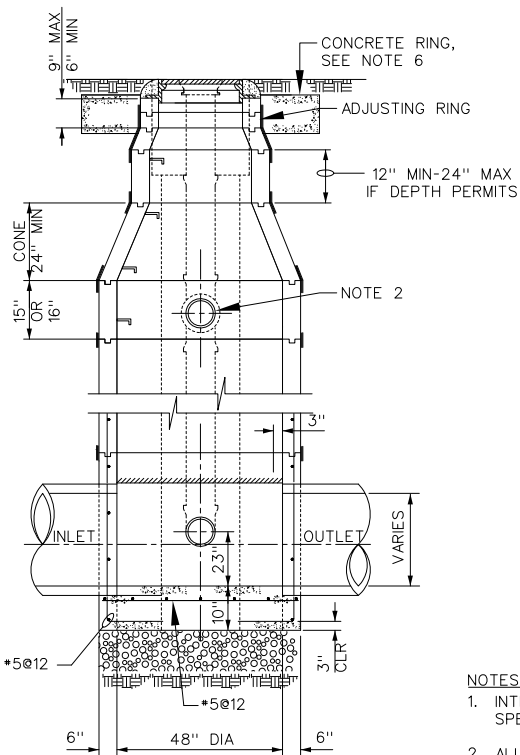
NOTES:

- WHERE INSTALLED IN ROADWAY, NO GROUT IS REQUIRED. PAVE UP TO AND AROUND FRAME. OTHERWISE GROUT AROUND FRAME TO PROTECT EXTERNAL WRAP.

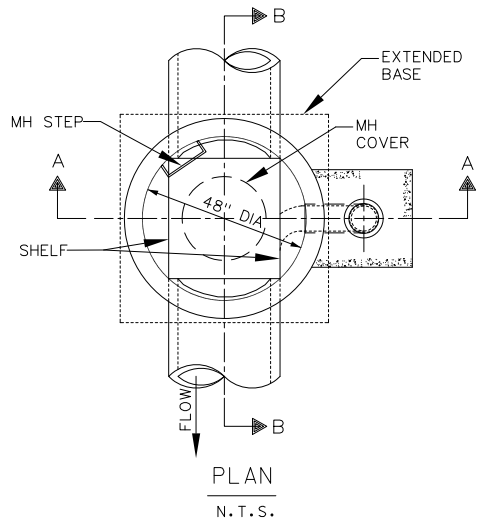
DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
05/14	UPDATED TO MATCH MANUAL AND NEW MATERIALS	
MAY 2015		MAIN SEWER BOLT DOWN MANHOLE FRAME & COVER DETAILS
APPROVED: _____		STANDARD DRAWING NO. <u>3305-630</u>



SECTION A-A
N. T. S.



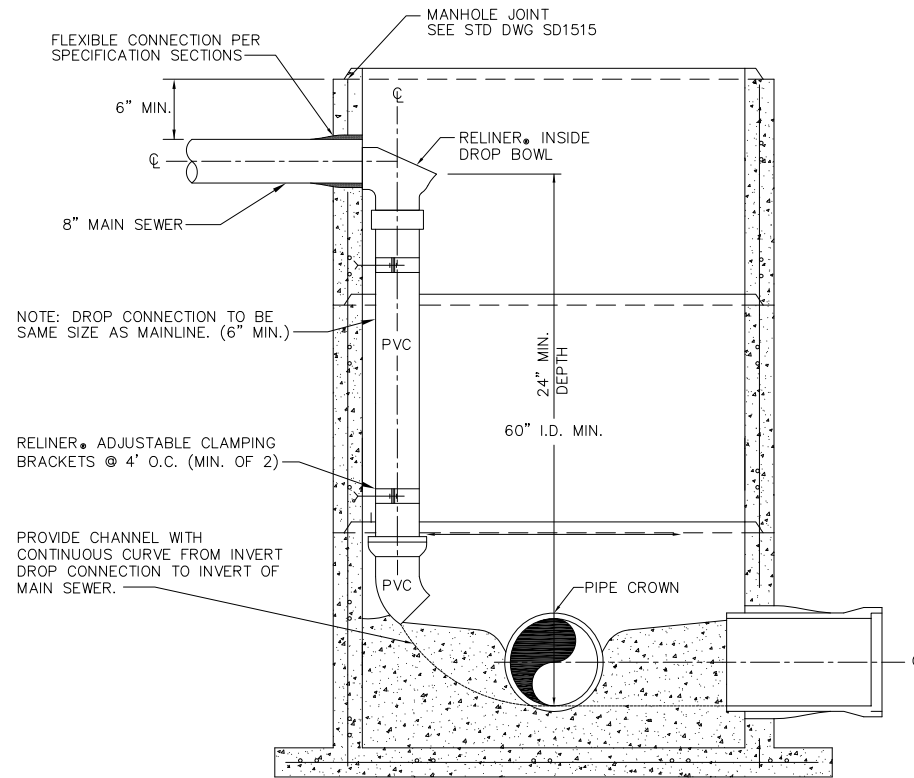
SECTION B-B
N. T. S.



PLAN
N. T. S.

- NOTES:
1. INTERIOR OF MANHOLE SHALL BE LINED WITH A PROTECTIVE COATING. SEE SPECIFICATION 09 66 01.
 2. ALL PIPES SHALL BE SEALED IN MANHOLE USING A LOK, INSERTA-LOK, G3 BOOT OR APPROVED EQUAL.
 3. SEE SECTION 03 30 00 FOR CONCRETE AND STEEL REINFORCEMENT REQUIREMENTS.
 4. DROP PIPE CAST IN CONCRETE SHALL BE DUCTILE IRON WITH RESTRAINED JOINTS. PER SECTION 33 05 01.
 5. WHERE UPSTREAM SECTION OF PIPE IS NOT DUCTILE IRON USE TRANSITION FITTING. FITTING SHALL BE A ROMAC 501 OR EQUAL.
 6. A 12" WIDE BY 12" HIGH CONCRETE RING SHALL BE PROVIDED AROUND THE MANHOLE FRAME. IN UNPAVED AREAS, THE CONCRETE RINGS SHALL BE PROVIDED WITH #3 REBAR, 30" DIAMETER LAP.
 7. SEE SECTION 33 05 13 FOR MANHOLE REQUIREMENTS.

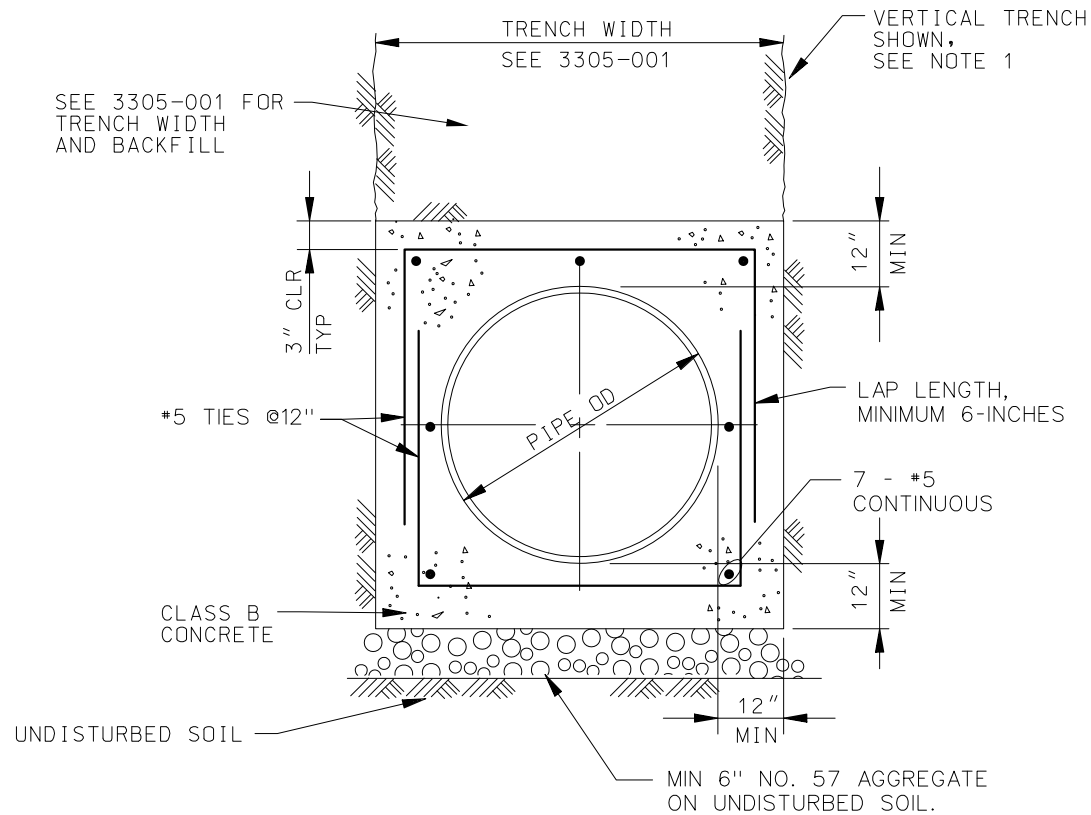
DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
		MAIN SEWER DROP MANHOLE (MEMPHIS TEE) DETAILS FOR PIPES 8" TO 18" DIAMETER
	MAY 2015	
	APPROVED: _____	STANDARD DRAWING NO. 3305-635



NOTES:

1. INTERIOR DROP TO BE USED IN NEW MANHOLES WHERE SHOWN.
2. PVC SHALL BE SCHEDULE 40.
3. SOLVENT WELD JOINTS ON ALL INSIDE PIPING AND FITTINGS.
4. CONNECTION FROM RELINER INSIDE DROP BOWL TO DROP PIPE PER MANUFACTURER'S RECOMMENDATION.
5. BOTTOM 45 DEGREE BEND TO BE AT 45 DEGREES WITH RESPECT TO THE DOWNSTREAM FLOW.
6. PRECAST CONCRETE MANHOLE TO BE IN COMPLIANCE WITH SD1500.
7. RISER HEIGHT SHALL BE ADJUSTED TO AVOID CORING (PRECASTING) PIPE OPENINGS WITHIN 6" OF RISER JOINT.
8. NO CORING SHALL BE ALLOWED WITHIN 6" OF A MANHOLE JOINT.
9. RELINER, INSIDE ALLOWED ONLY FOR 8" AND SMALLER MAIN SEWER UNLESS OTHERWISE APPROVED BY THE ENVIRONMENTAL SERVICES DEPARTMENT.

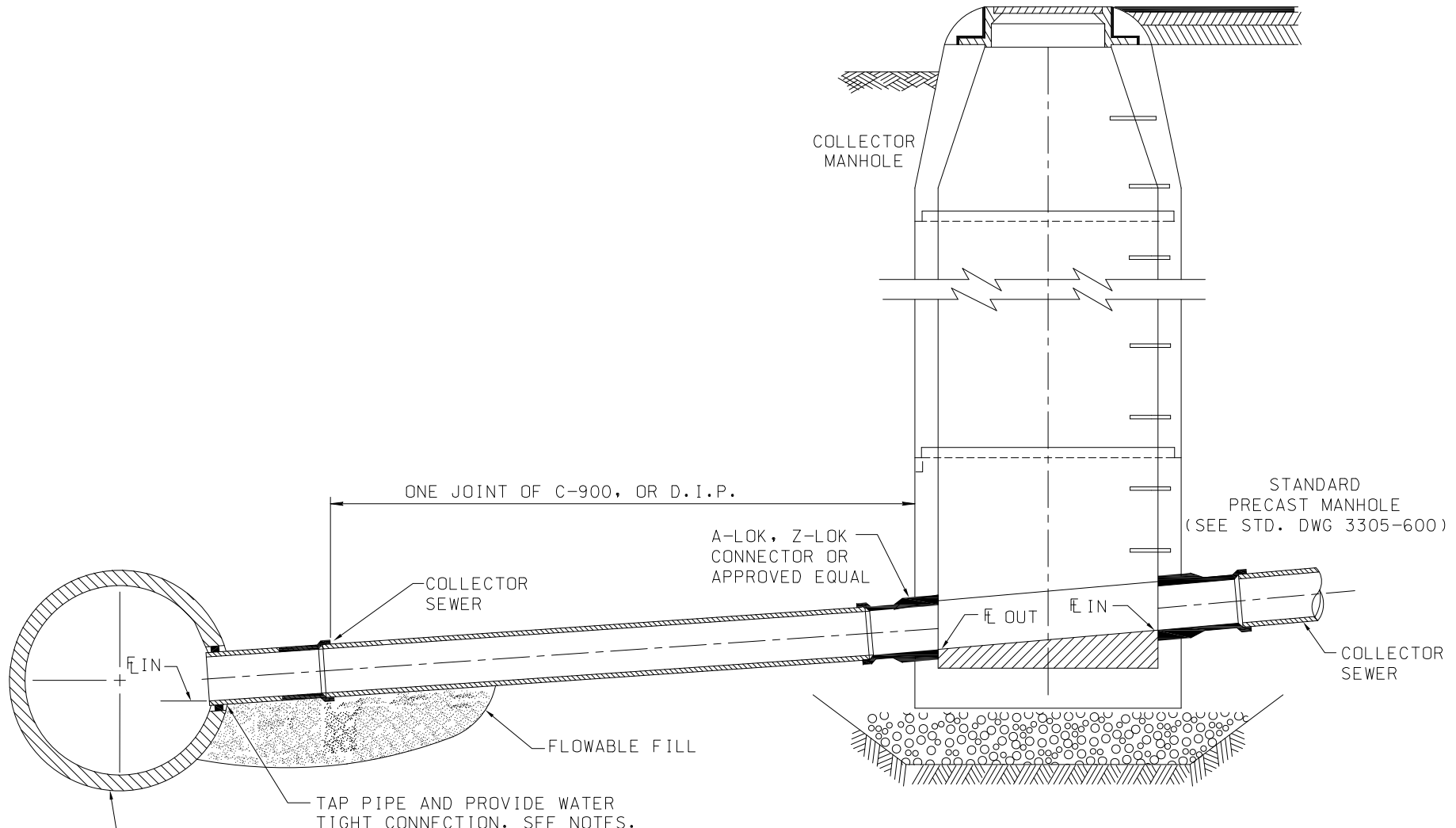
DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
NOV 2015		
APPROVED: _____		STANDARD DRAWING NO. 3305-640



NOTES:

1. VERTICAL TRENCH WALLS SHOWN. CONTRACTOR SHALL SLOPE TRENCH WALLS OR SHORE EXCAVATIONS FOR CONSTRUCTION AND SAFETY IN ACCORDANCE WITH CURRENT OSHA REQUIREMENTS.
2. PEA GRAVEL BAGS, SANDBAGS, OR PRECAST SHAPED CONCRETE BLOCKS (12" MIN WIDTH) DESIGNED TO HANDLE THE INTENDED LOADS, MAY BE USED TO SUPPORT PIPE WHEN PLACING CONCRETE.

DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
		MAIN SEWER REINFORCED CONCRETE ENCASEMENT
MAY 2015		
APPROVED: _____		STANDARD DRAWING NO. <u>3305-645</u>

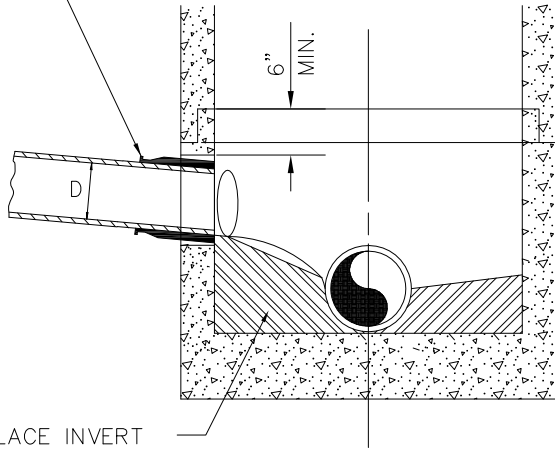


NOTES:

1. BACKFILL UNDER TAP WITH FLOWABLE FILL. DO NOT ENCASE INSERTA TEE IN FLOWABLE FILL.
2. BACKFILL AROUND INSERTA TEE WITH CLEAN SAND.

DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
05/14	UPDATED TO MATCH MANUAL	MAIN SEWER CONNECTION OF COLLECTOR SEWER TO EXISTING LARGE DIAMETER MAIN SEWER
MAY 2015		
APPROVED: _____		STANDARD DRAWING NO. 3305-650

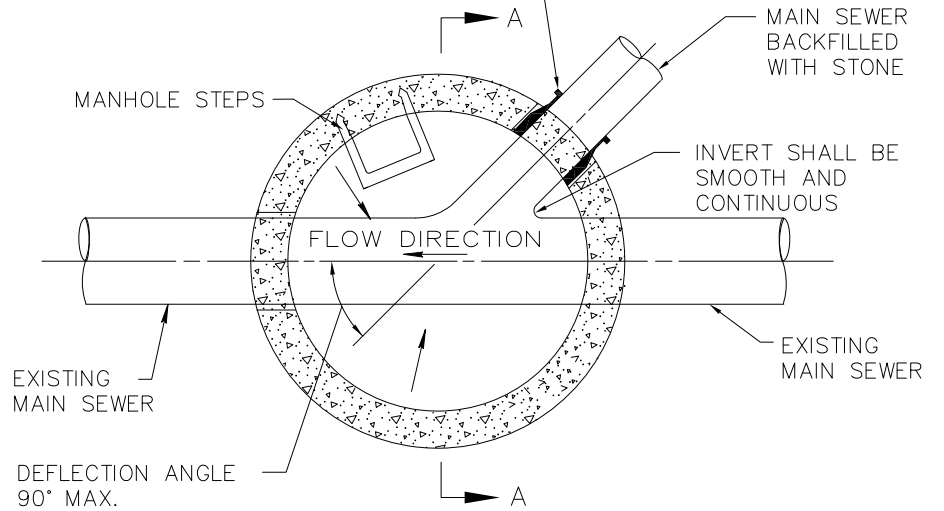
CORE MANHOLE WALL AND INSTALL THE FOLLOWING PRODUCTS BY A-LOK: INSERTA LOK G3 BOOT OR APPROVAL EQUAL



CAST IN PLACE INVERT

A-A SECTION
N.T.S.

CORE MANHOLE WALL AND INSTALL THE FOLLOWING PRODUCTS A-LOK: INSERTA LOK, G3 BOOT OR APPROVAL EQUAL

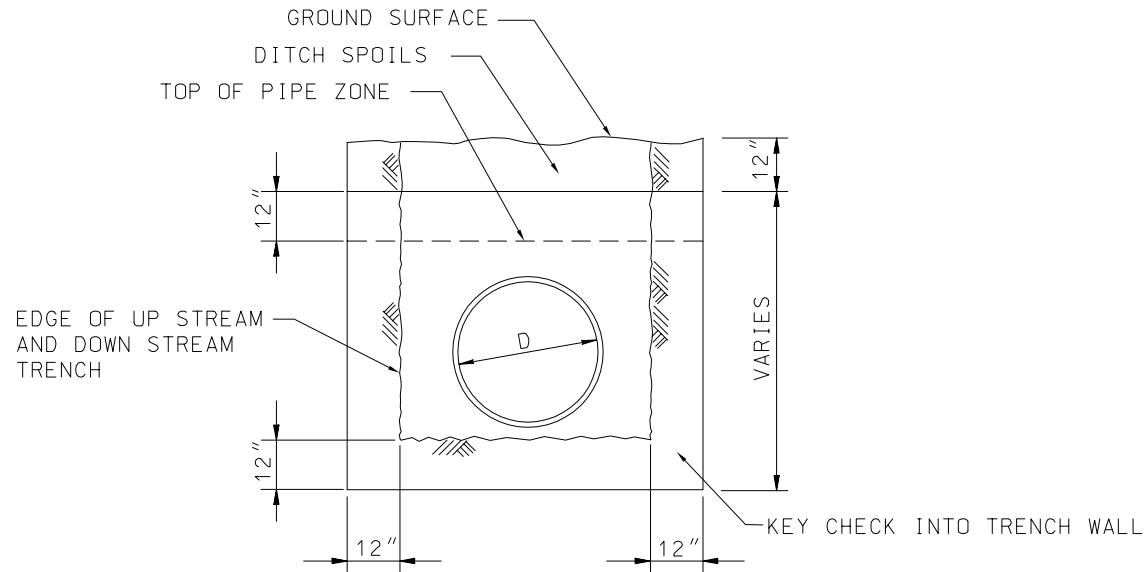


MANHOLE BASE PLAN
N.T.S.

NOTE:

1. IF INVERTS OF THE INFLUENT AND EFFLUENT SEWER PIPES EXCEED 2 FT. OF DIFFERENCE, A MEMPHIS TEE MANHOLE MUST BE CONSTRUCTED IN ACCORDANCE WITH DRAWING NO. DETAIL 3305-635.

DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
		MAIN SEWER CONNECTIONS 8" AND LARGER, TO EXISTING MANHOLES
MAY 2015		
APPROVED: _____		STANDARD DRAWING NO. <u>3305-655</u>



TYPICAL CLAY OR FLOWABLE FILL DITCH CHECK DETAIL

N.T.S.

NOTES:

1. AN IMPERVIOUS CLAY OR FLOWABLE FILL DITCH CHECK SHALL BE REQUIRED ON THE DOWNSTREAM SIDE OF ALL STREAM CROSSINGS. THIS DITCH CHECK SHALL BE CONSTRUCTED FOR A LENGTH OF 2' (MIN) AS MEASURED ALONG THE CENTERLINE OF THE PIPE. CHECK SHALL BE "KEYED" INTO THE WALLS OF THE TRENCH A MINIMUM OF 12" TO PREVENT THE AGGREGATE FROM BECOMING A CONDUIT FOR WATER.
2. THE BACKFILL SHOWN SHALL EXHIBIT THE CHARACTERISTICS OF A "GC" SOIL RATING AS CLASSIFIED BY THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D-2487) AND SHALL HAVE A COEFFICIENT OF PERMEABILITY NO GREATER THAN 0.001 CM/SEC. AS DETERMINED BY (ASTM D-2434). THE MATERIAL UTILIZED MAY VARY FROM THE ABOVE REQUIREMENTS IF APPROVED BY THE ENGINEER; HOWEVER, IN ANY CASE, THE CONTRACTOR SHALL FURNISH TESTS INDICATING ACTUAL MATERIAL CHARACTERISTICS. TESTS ARE TO BE PERFORMED BY AN APPROVED INDEPENDENT TESTING FACILITY UTILIZING THE ABOVE METHODS. THE MINIMUM PERCENTAGE OF COMPACTION FOR THE BACKFILL SHALL BE 95% PROCTOR DENSITY (ASTM D-1557).
3. FLOWABLE FILL SHALL BE CLASS C IN ACCORDANCE WITH THE SECTION 03 30 00.

DATE	REVISIONS	JEFFERSON COUNTY ALABAMA ENVIRONMENTAL SERVICES DEPARTMENT
05/14	NOTE UPDATE	
MAY 2015		
APPROVED: _____		STANDARD DRAWING NO. 3305-660