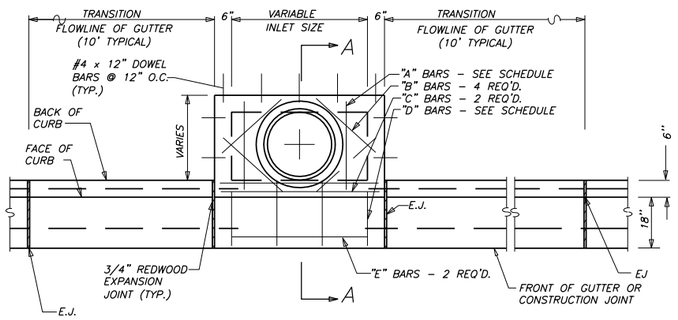
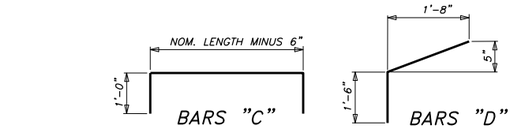


PLAN OF 5' STANDARD INLET

NOT TO SCALE

SPECIAL NOTE:

1. CONTRACTOR TO PROVIDE #4 x 12" DOWELS @ 12" O.C. WHERE PROP. SIDEWALK ABUTS INLET. (NO SEPARATE PAYMENT)
2. FOR CURB INLET THROAT EXTENSION DETAILS REFER TO STORM WATER STANDARD DETAIL SHEET 3 OF 3.

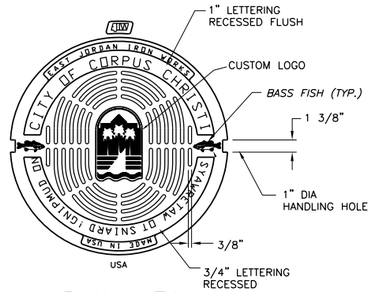


** THROAT OPENINGS SHALL HAVE A 6" X 6" CONCRETE SUPPORT PLACED AT MID-THROAT

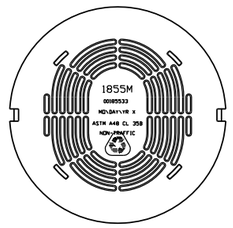
* NOMINAL LENGTH OF INLET SHALL BE DESIGNATED AS THE CLEAR WIDTH OPENING.

STANDARD CURB INLET STEEL SCHEDULE					
ALL BARS No. 4 PREFORMED					
INLET SIZE (Nom. Length)	NO. REQ'D./LENGTH				
	"A" BARS	"B" BARS	"C" BARS	"D" BARS	"E" BARS
4'	2/a	4/1'-10"	2/5'-6"	4/3'-2"	2/4'-6"
5'	2/a	4/3'-2"	2/6'-6"	4/3'-2"	2/5'-6"
6'	4/a	4/4'-0"	2/7'-6"	6/3'-2"	2/6'-6"
* * 8'	4/a	4/4'-0"	2/9'-6"	6/3'-2"	2/8'-6"
* * 10'	6/a	4/4'-0"	2/11'-6"	7/3'-2"	2/10'-6"
BENDING	STRAIGHT	STRAIGHT	SEE DET.	SEE DET.	STRAIGHT

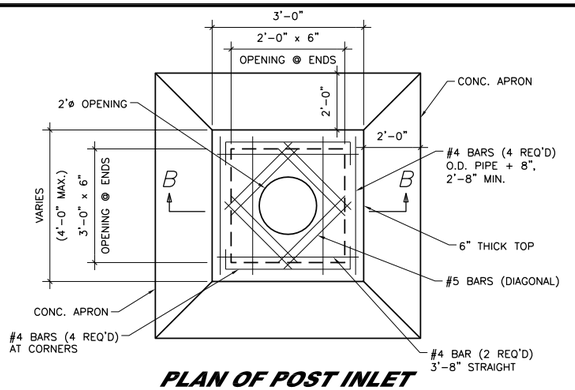
a = O.D. + 8", 2'-8" MIN. MAX. PIPE I.D. = 48 INCHES



PLAN VIEW

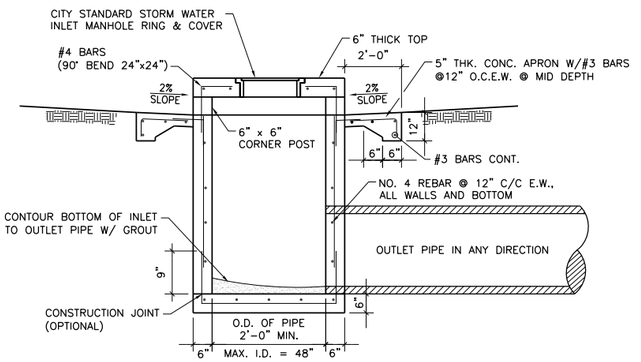


GRATE BLOCK



PLAN OF POST INLET

NOT TO SCALE

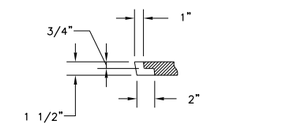


SECTION B-B

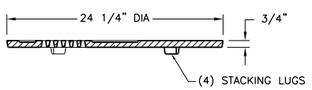
NOT TO SCALE

SECTION A-A

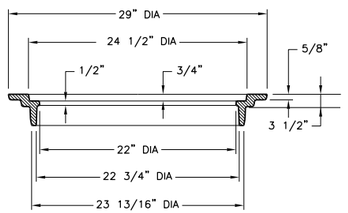
NOT TO SCALE



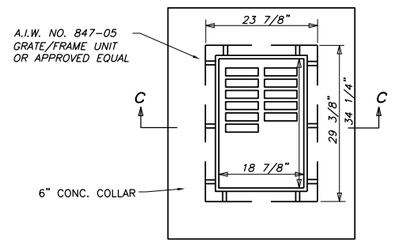
PICKSLOT DETAIL



GRATE SECTION

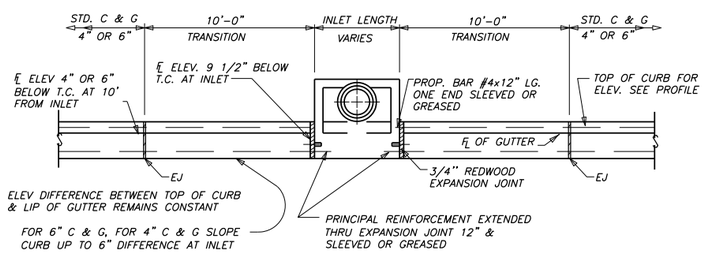


RING SECTION



PLAN OF STANDARD GRATE INLET

NOT TO SCALE



FLOWLINE TRANSITION AT INLET FOR 4" OR 6" STD. CURB AND GUTTER

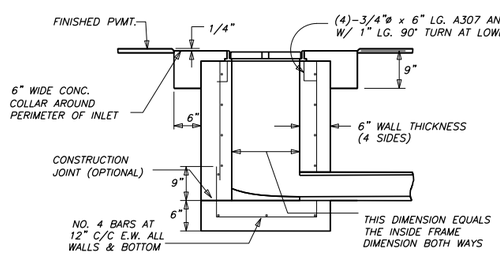
NOT TO SCALE

CITY STANDARD INLET AND SIDWALK MANHOLE RING & COVER CASTING DETAILS

NOT TO SCALE

INLET AND SIDEWALK MANHOLE RING & COVER NOTES

1. MANHOLE RING & COVER SHALL BE EAST JORDAN MANHOLE ASSEMBLY FOR LOAD RATING NON-TRAFFIC.
2. THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
3. CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
4. MACHINE SURFACES TO YIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD.
5. TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 36 HOURS AFTER PLACEMENT OF RING.
6. RING AND COVER SHALL BE DIPPED IN COAL TAR OR ASPHALT.
7. OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.
8. MINIMUM WEIGHTS OF FINISHED CASTINGS: THE COVER = 60 POUNDS, THE RING = 135 POUNDS.



SECTION C-C

NOT TO SCALE

REVISION NO.	DATE	BY	DESCRIPTION

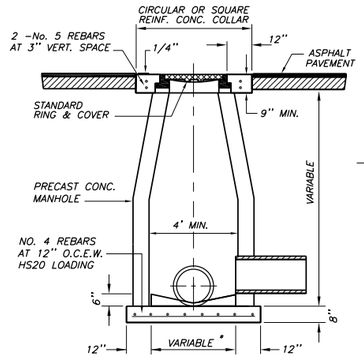
CONSULTANT'S SHEET No.

CITY of CORPUS CHRISTI
TEXAS
Department of Engineering Services

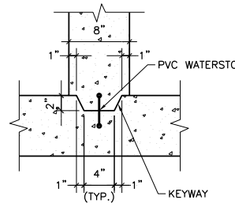
CITY OF CORPUS CHRISTI
STORM WATER STANDARD DETAILS
1 OF 3

SHEET ____ of ____
RECORD DRAWING NO.

CITY PROJECT #



* 1 1/2 TIMES NOMINAL DIA. OF PIPE (MIN. 4'-0")



PRE-CAST CONC. MANHOLE NOTES:

HS20 LOADING

CONCRETE 28 DAY COMPRESSIVE STRENGTH - 5000 PSI

REINFORCEMENT STEEL - 60,000 PSI

REBAR MIN. SPLICE LENGTHS: #4-22" #5-28" #6-33"

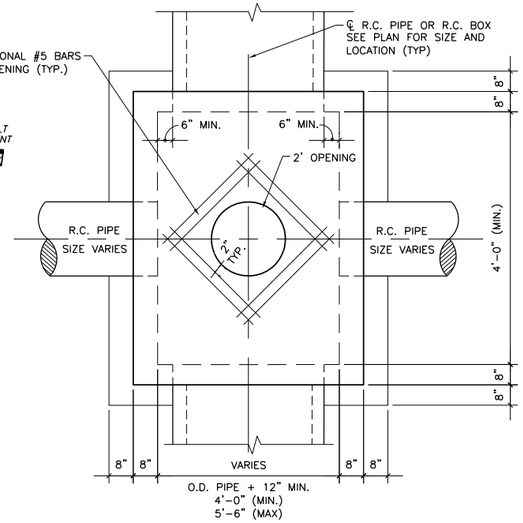
MANHOLE WALL/RISER REINFORCED PER ASTM C-478

KEYWAY DETAIL

NOT TO SCALE

TYPE "A" MANHOLE

NOT TO SCALE



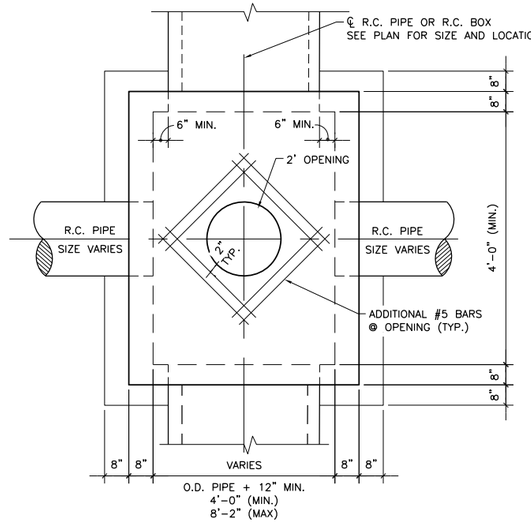
NOTE:

FOR R.C. PIPE SIZES, DIRECTION, AND FLOWLINES, REFER TO STREET AND STORM WATER PLAN AND PROFILES

PLAN

TYPE 'B' MANHOLE

NOT TO SCALE



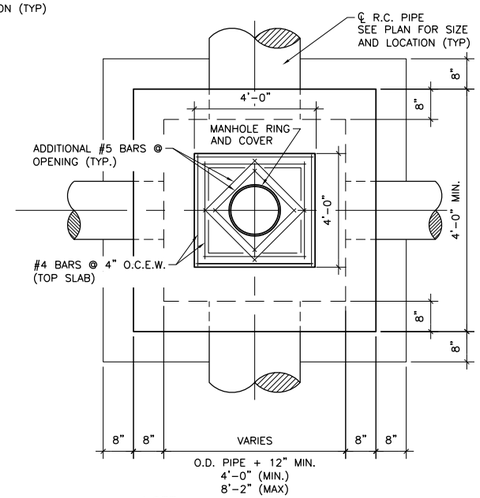
NOTE:

FOR R.C. PIPE SIZES, DIRECTION, AND FLOWLINES, REFER TO STREET AND STORM WATER PLAN AND PROFILES

PLAN

TYPE 'C' MANHOLE

NOT TO SCALE



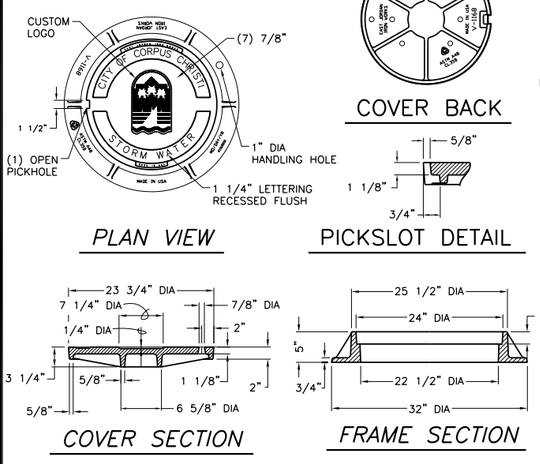
NOTE:

FOR R.C. PIPE SIZES, DIRECTION, AND FLOWLINES, REFER TO STREET AND STORM WATER PLAN AND PROFILES

PLAN

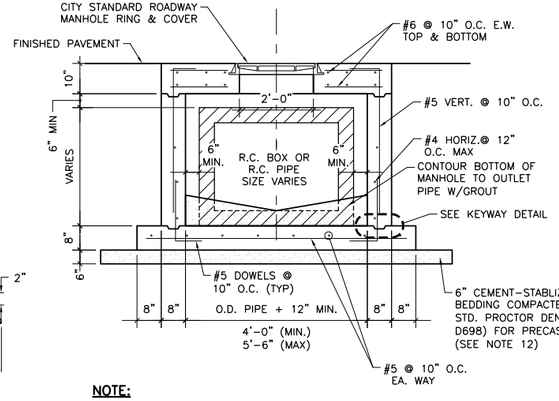
TYPE 'D' MANHOLE

NOT TO SCALE



CITY STANDARD ROADWAY MANHOLE RING & COVER CASTING DETAIL

NOT TO SCALE



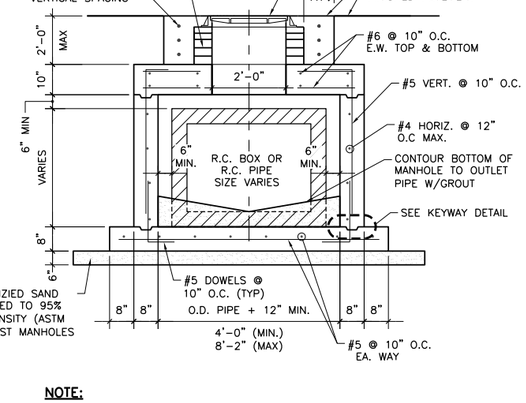
NOTE:

LATERAL PIPES NOT SHOWN FOR CLARITY

SECTION

TYPE 'B' MANHOLE

NOT TO SCALE



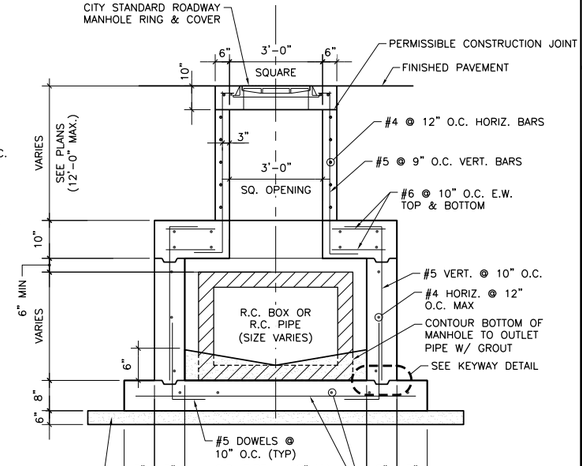
NOTE:

LATERAL PIPES NOT SHOWN FOR CLARITY

SECTION

TYPE 'C' MANHOLE

NOT TO SCALE



6" CEMENT-STABLIZIED SAND BEDDING COMPACTED TO 95% STD. PROCTOR DENSITY (ASTM D698) FOR PRECAST MANHOLES (SEE NOTE 12)

SECTION

TYPE 'D' MANHOLE

NOT TO SCALE

NOTE:

LATERAL PIPES NOT SHOWN FOR CLARITY

ROADWAY MANHOLE RING & COVER NOTES

1. MANHOLE RING & COVER SHALL BE EAST JORDAN V 1168 ASSEMBLY AND FOR SCHOOL ZONE SHALL BE EAST JORDAN BOLTED-IN 1168 ASSEMBLY LOAD RATING HEAVY DUTY.
2. THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
3. CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
4. MACHINE SURFACES TO YIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD.
5. TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 36 HOURS AFTER PLACEMENT OF RING.
6. RING AND COVER SHALL BE DIPPED IN COAL TAR OR ASPHALT.
7. OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.
8. MINIMUM WEIGHTS OF FINISHED CASTINGS : THE COVER = 160 POUNDS, THE RING = 180 POUNDS.
9. POLYETHYLENE MANHOLE ADJUSTMENT RINGS SHALL BE DESIGNED TO SUPPORT HS 20 TRAFFIC LOADING.

GENERAL NOTES FOR CONCRETE DRAINAGE STRUCTURES:

1. ALL CONCRETE SHALL BE CLASS "C" (3600 PSI) EXCEPT CITY STANDARD CURB INLETS AND CONCRETE COLLARS MAY BE CLASS "A".
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.
5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. CHAMFER ALL EXPOSED EDGES 3/4".
7. PROVIDE CITY STANDARD SIDEWALK MANHOLE RING AND COVER FOR CITY STANDARD CURB INLET. PROVIDE CITY STANDARD ROADWAY STORM WATER MANHOLE RING AND COVER FOR SPECIAL CURB INLET.
8. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS AND MANHOLES, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION. PRECAST MANHOLE WITHIN THE ROADWAY SHAL BE DESIGNED TO SUPPORT HS 20 TRAFFIC LOADING AND SEALED BY A LICENSED ENGINEER.
9. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
10. INVERT OF INLET SHALL BE SLOPED 1:20 WITH GROUT.
11. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED EXCEPT WHERE OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.
12. IN DEEP EXCAVATIONS (> 20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.

CONSULTANT'S SHEET No.

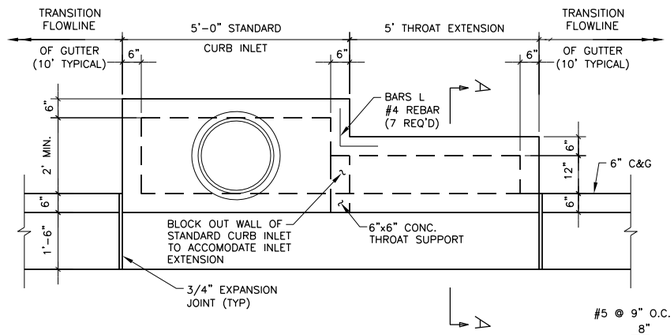
REVISION NO.	DATE	BY	DESCRIPTION

CITY of CORPUS CHRISTI
TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI
STORM WATER STANDARD DETAILS
2 OF 3

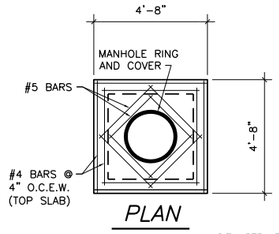
SHEET _____ of _____
RECORD DRAWING NO.

CITY PROJECT # _____

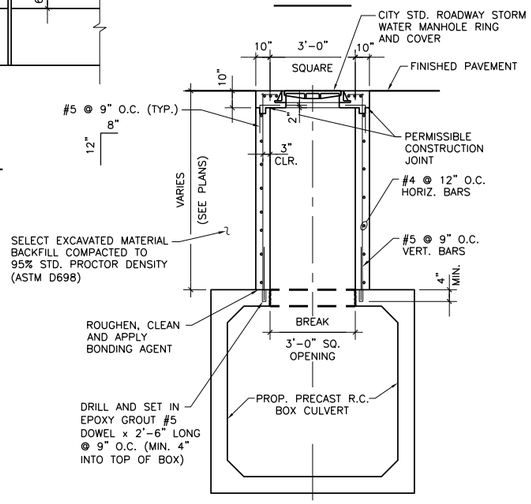


CURB INLET THROAT EXTENSION PLAN

NOT TO SCALE



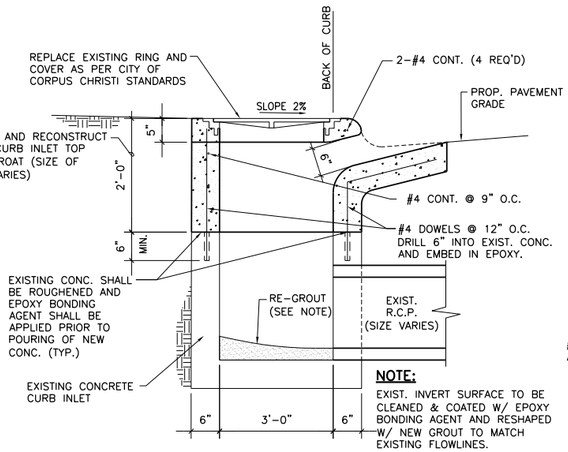
PLAN



SECTION

MANHOLE RISER DETAIL

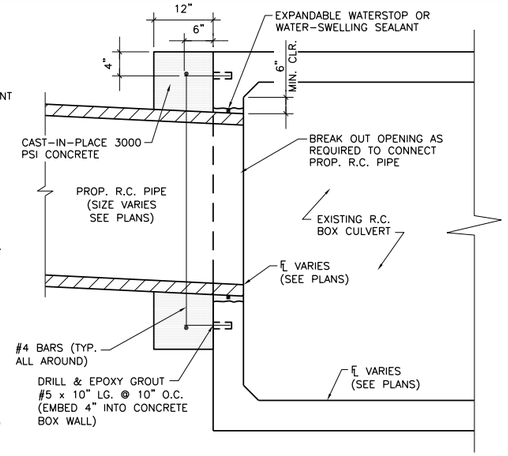
NOT TO SCALE



NOTE:
EXIST. INVERT SURFACE TO BE CLEANED & COATED W/ EPOXY BONDING AGENT AND RESHAPED W/ NEW GROUT TO MATCH EXISTING FLOWLINES.

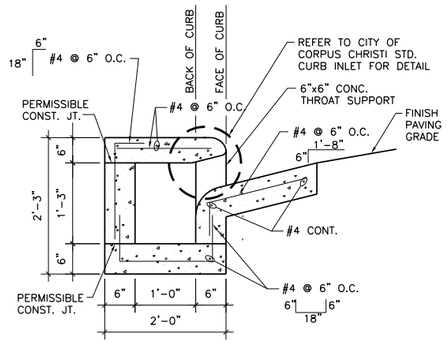
REMOVE AND REPLACE TOP OF EXISTING CURB INLET DETAIL

NOT TO SCALE



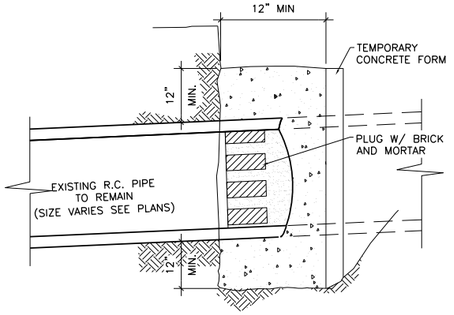
PROP. PIPE TO EXISTING R.C. BOX CONNECTION DETAIL

NOT TO SCALE



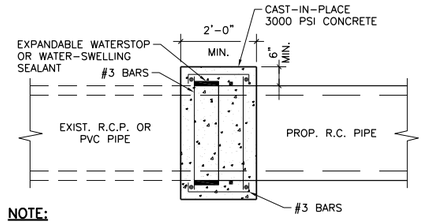
SECTION A-A

NOT TO SCALE



EXISTING R.C. PIPE PLUG

NOT TO SCALE

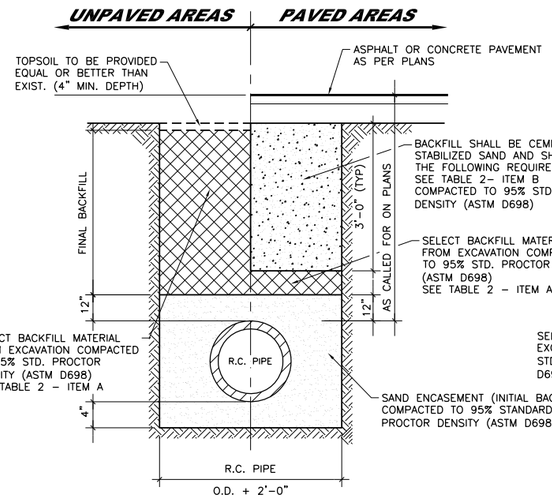


NOTE:
PIPE COLLAR SHALL BE USED WHERE A TIGHT JOINT CANNOT BE PLACED, SUCH AS A BREAK IN ALIGNMENT, DAMAGED PIPE ENDS OR TIE-IN TO EXISTING PIPE OR STRUCTURES.

2" x 2" x 20"

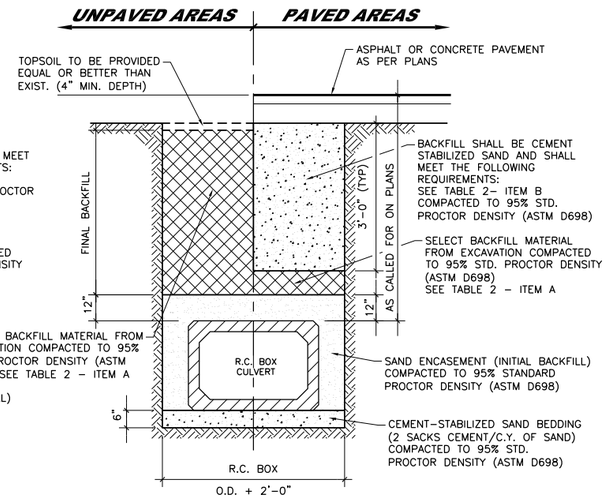
CONCRETE COLLAR DETAIL

NOT TO SCALE



TRENCH BACKFILL FOR STORM WATER PIPES

NOT TO SCALE



NOTE: (CONCRETE PAVEMENT ONLY)
CONTRACTOR HAS OPTION TO USE CEMENT STABILIZED SAND OR BACKFILL WITH SELECT BACKFILL MATERIAL.

TRENCH BACKFILL FOR STORM WATER R.C. BOX CULVERTS

NOT TO SCALE

GENERAL NOTES FOR BACKFILL

TABLE 1
BEDDING AND INITIAL BACKFILL
(BELOW PIPE TO 12" ABOVE PIPE)

ALL BEDDING AND INITIAL BACKFILL SHALL CONSIST OF GRANULAR MATERIAL CONSISTING OF EITHER NATURAL SAND OR SANDY GRAVEL, OR MATERIAL PRODUCED BY CRUSHING OF NATURAL STONE OR GRAVEL. SEWER LINES:

1. *EXCAVATIONS <20FT. DEEP AND ABOVE WATER TABLE, USE MATERIAL MEETING THE FOLLOWING CRITERIA.*

   MEETING REQUIREMENTS OF ASTM D2487 FOR:
   SP GP
   SW GW
   SP-SM GP-GM
   SW-SM GW-GM

   AND IN ADDITION:
   PASSING 1/2" SIEVE - 100%
   PASSING #4 SIEVE - 30% MINIMUM
   PLASTICITY INDEX (PI) - NP TO 10 MAX.

2. *IN DEEP EXCAVATIONS (>20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF:*

   A. *CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.*

FOR ALL UTILITIES:

1. *FOR PIPE DIAMETER EQUAL TO OR SMALLER THAN 16", USE 4" MINIMUM BEDDING UNDER PIPE.*
2. *FOR PIPE DIAMETER GREATER THAN 16", USE 6" MINIMUM BEDDING UNDER PIPE.*

TABLE 2
FINAL BACKFILL
(GREATER THAN 12" ABOVE PIPE)

UNPAVED AREAS	PAVED AREAS
A. FOR 12" ABOVE PIPE TO BOTTOM OF TOPSOIL BACKFILL SHALL BE APPROVED SELECT MATERIAL FROM THE EXCAVATION; OR IMPORTED MATERIAL; ALL TO BE FREE OF ROCKS, DEBRIS, OR ANY CLUMPS GREATER THAN 2" IN DIAMETER; LOOSE LIFTS TO BE PLACED 10" MAX. *COMPACT MATERIAL TO 95% STD. PROCTOR (D698).* *MOISTURE TO BE ADJUSTED TO ± 3% OF OPTIMUM.*	*A. FOR 12" ABOVE PIPE TO 3' BELOW BOTTOM OF ROAD BASE: BACKFILL SHALL BE SELECT MATERIAL FROM EXCAVATION OR TO BE IMPORTED MATERIAL AND SHALL MEET THE FOLLOWING:* *LL<35* *PI 8-20* *NO CLUMPS > 2" DIA.* *MOISTURE 0 TO +3%* *COMPACT 95% D698 STD PROCTOR* *LOOSE LIFTS OF 10" MAX OR IF SELECT MATERIAL FROM EXCAVATION DOES NOT MEET REQUIREMENTS, THEN USE CEMENT STABILIZED SAND SEE TABLE 2-ITEM B*
B. TOPSOIL TO BE PROVIDED EQUAL OR BETTER THAN EXISTING; AND MATCH EXISTING TOPSOIL DEPTH. (4" MIN.) COMPACT TO FIX CONFLICT TO EXISTING ADJACENT TOPSOIL. (CONSTRUCTION TO BE PERFORMED BY "DOUBLE DITCH" METHOD TOP SOIL SALVAGED TO BE PLACED ON TOP)	*B. FOR 3' BELOW BOTTOM OF ROAD BASE TO BOTTOM OF ROAD BASE:* *BACKFILL SHALL BE CEMENT STABILIZED SAND AND SHALL MEET THE FOLLOWING REQUIREMENTS:* *SAND GRADATION:* *% PASSING* *1/2" 100%* *#4 55-100* *#10 40-100* *#40 25-100* *#200 10-20* *PI NP-10* *2 SACKS CEMENT/C.Y. OF SAND.* *COMPACT TO 95% OF D698. MOISTURE TO BE ADJUSTED TO (+/-2%) OF OPTIMUM.*

CONSULTANT'S SHEET No.

REVISION NO.	DATE	BY	DESCRIPTION

CITY of CORPUS CHRISTI
TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI
STORM WATER STANDARD DETAILS
3 OF 3

SHEET ____ of ____
RECORD DRAWING NO.

CITY PROJECT # ____