"EXHIBIT C"

CITY OF HOUSTON

STANDARD DRAWINGS

02084-01

02084-02

02084-03

02084-04

02084-05

02084-06

02084-07

02084-08

02084-09

CITY OF HOUSTON

STANDARD DRAWINGS

02084-01

02084-02

02084-03

02084-04

02084-05

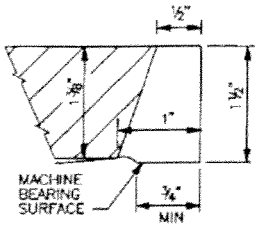
02084-06

02084-07

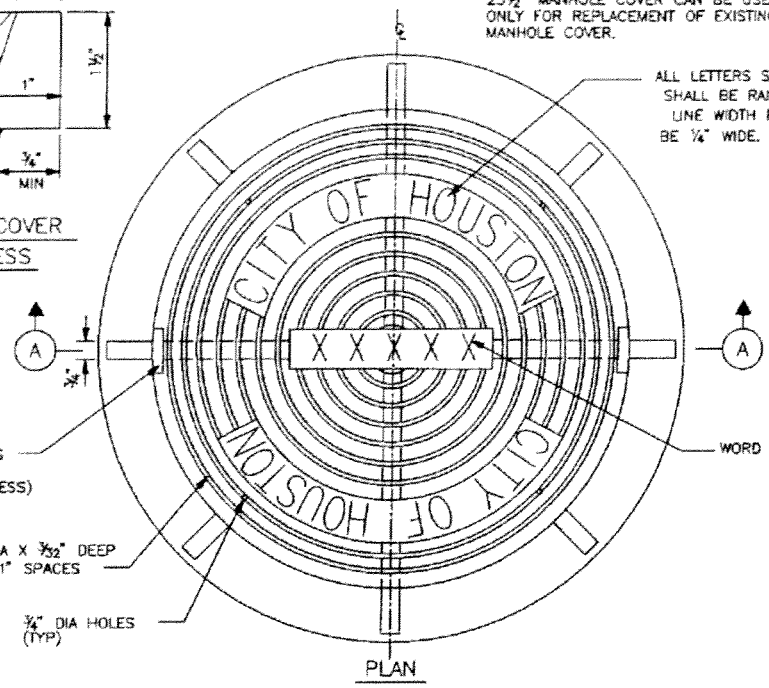
02084-08

02084-09

NOTE:
23½" MANHOLE COVER CAN BE USED ONLY FOR REPLACEMENT OF EXISTING MANHOLE COVER.

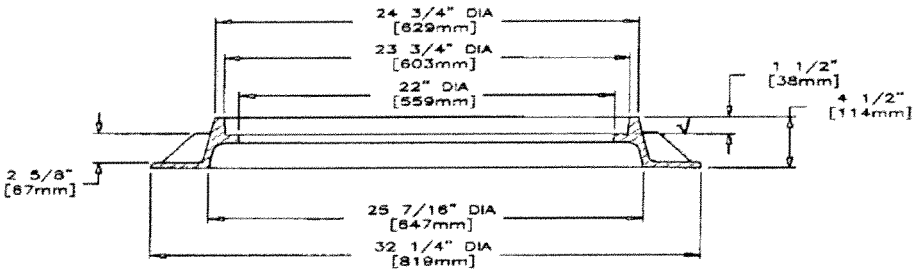


SECTION OF COVER THRU RECESS

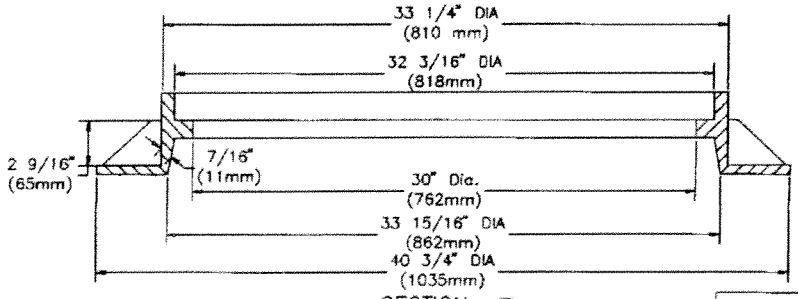


PLAN

23½" MANHOLE COVER WITH FRAME



FRAME SECTION



SECTION (A)

32" MANHOLE COVER WITH FRAME

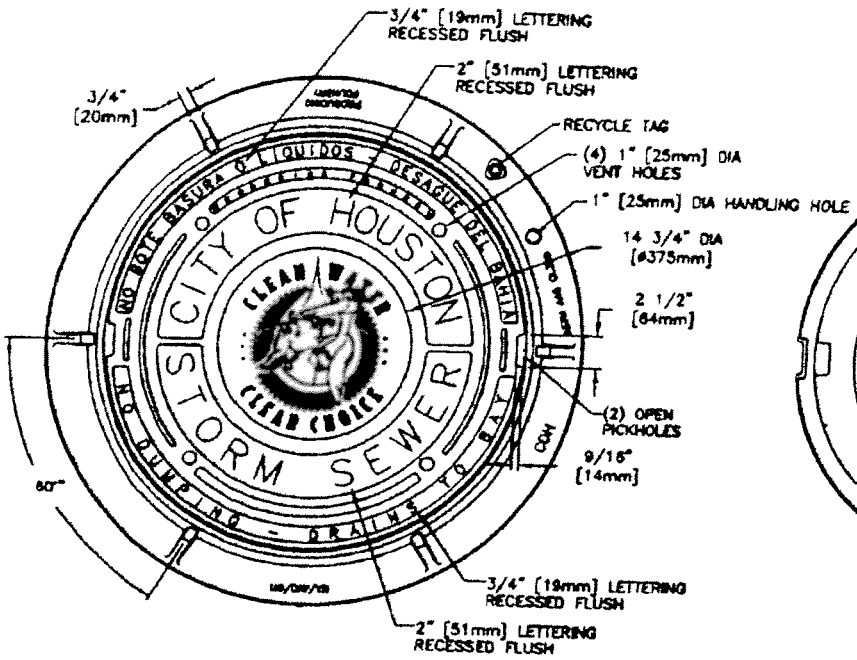
1) NOTE APPROXIMATE WEIGHTS.
   FRAME– 170 LBS 77KG
   COVER – 270 LBS 123 KG
   UNIT 440 LBS 200 KG
2) MATERIAL – GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION.
4) MODEL V–1420 ASY OR APPROVED EQUAL

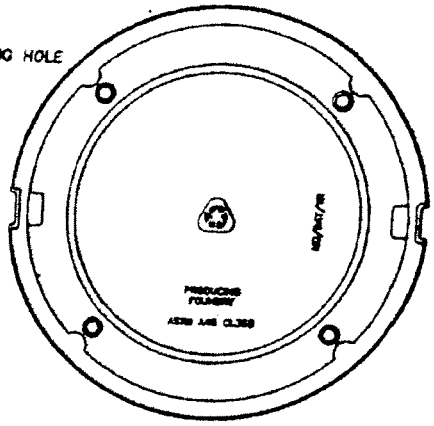
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER AND WATER
MANHOLE FRAME AND COVER
(NOT TO SCALE)

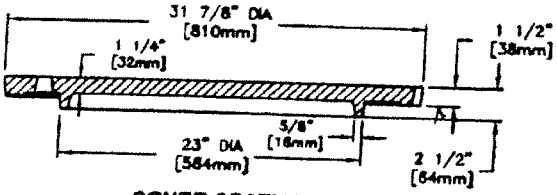
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT–01–2002	DWG NO: 02084–01

CE-0323

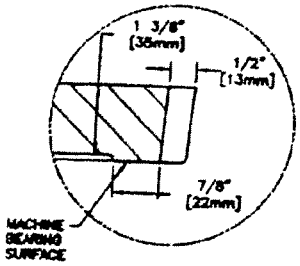




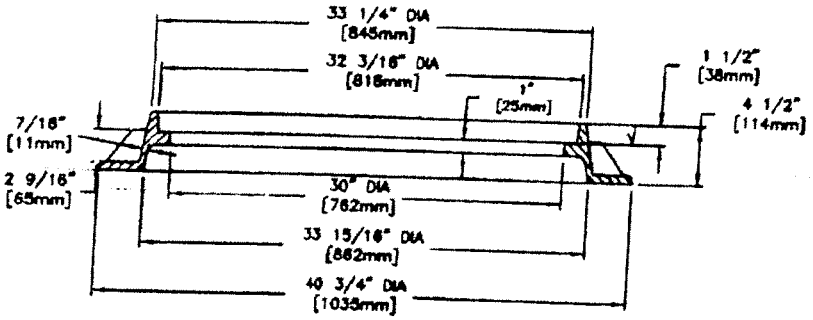
BOTTOM VIEW OF COVER



COVER SECTION



OPEN PICKHOLE DETAIL

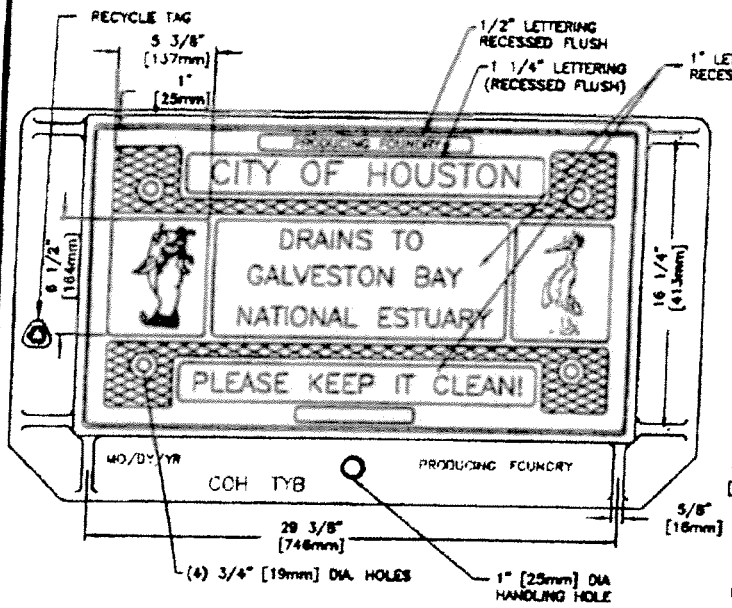


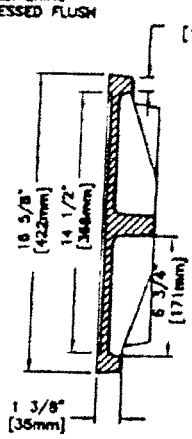
FRAME SECTION

√ MACHINED SURFACE

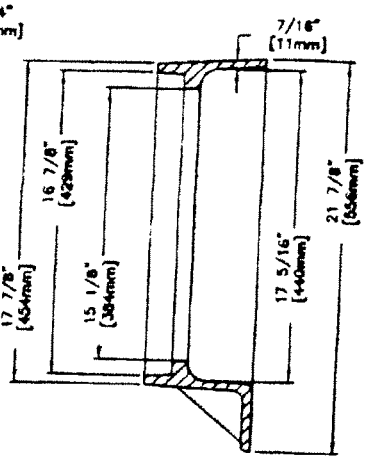
1) NOTE: APPROXIMATE WEIGHTS.
   FRAME– 170 LBS 77kg
   COVER– 270 LBS 123kg
   UNIT– 440 LBS 200kg
2) MATERIAL– GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) EJIW V–1420 ASY OR APPROVED EQUAL

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP	
STORM SEWER MANHOLE FRAME AND COVER (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: 04–01–07	DWG. NO: 02084–02

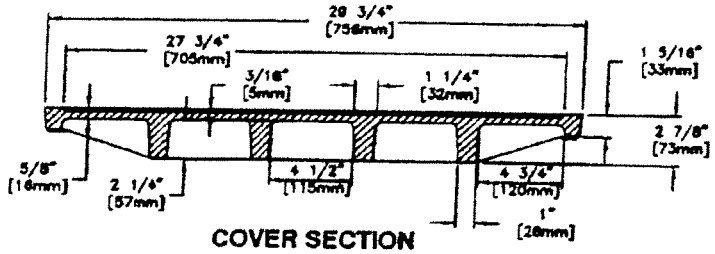




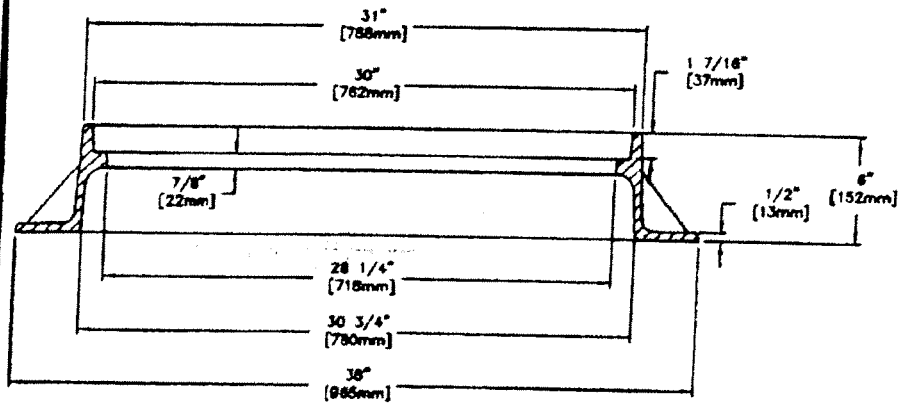
COVER SECTION



FRAME SECTION



COVER SECTION



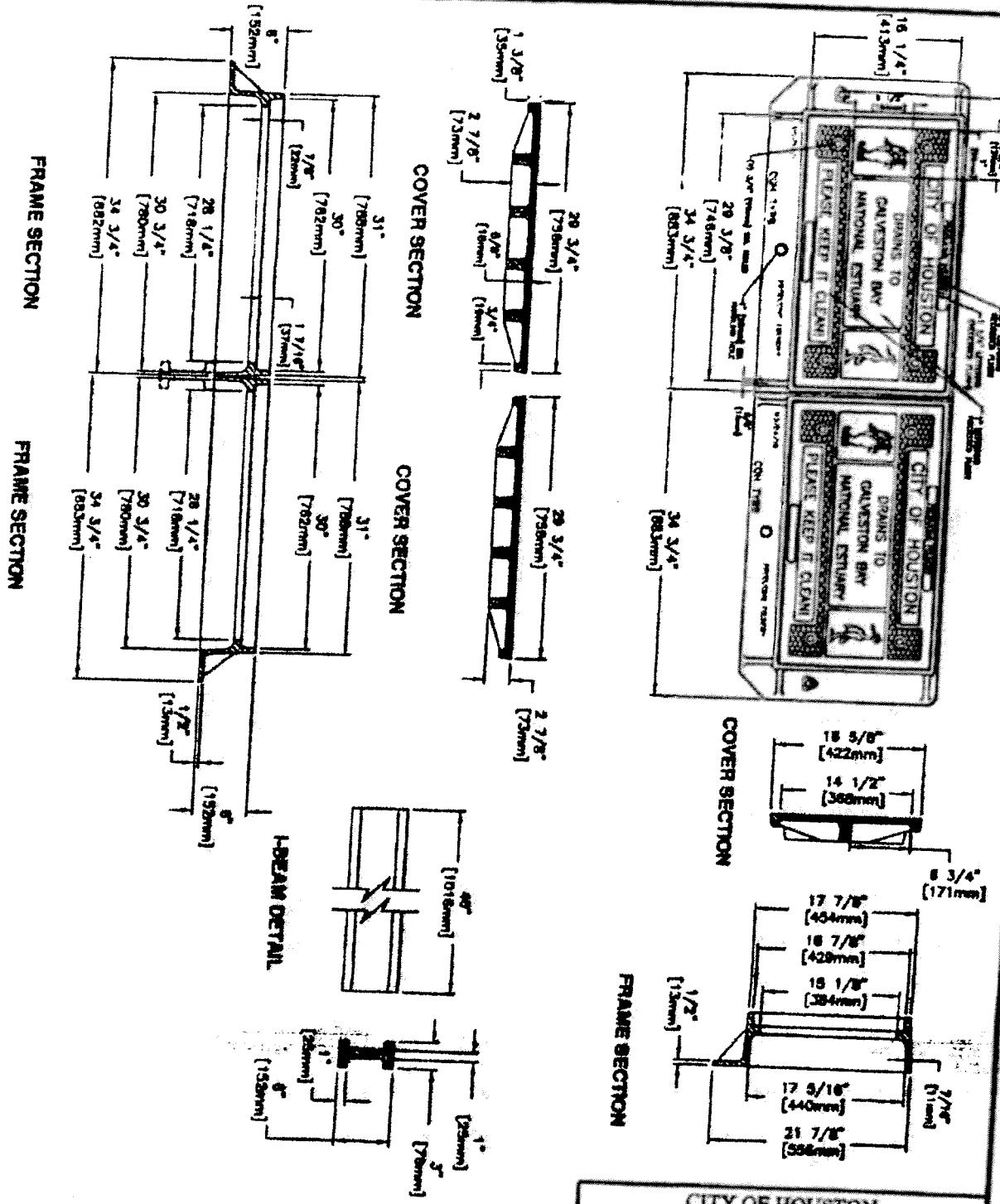
FRAME SECTION

1) NOTE: APPROXIMATE WEIGHTS.
   COVER– 125 LBS 57kg
   FRAME– 130 LBS 59kg
   UNIT– 255 LBS 116kg
2) MATERIAL– GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) EJIW V–4241 ASY OR APPROVED EQUAL

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

STORM SEWER
TYPE "B" INLET
ASSEMBLY
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: 04–01–07	DWG. NO: 02084–03



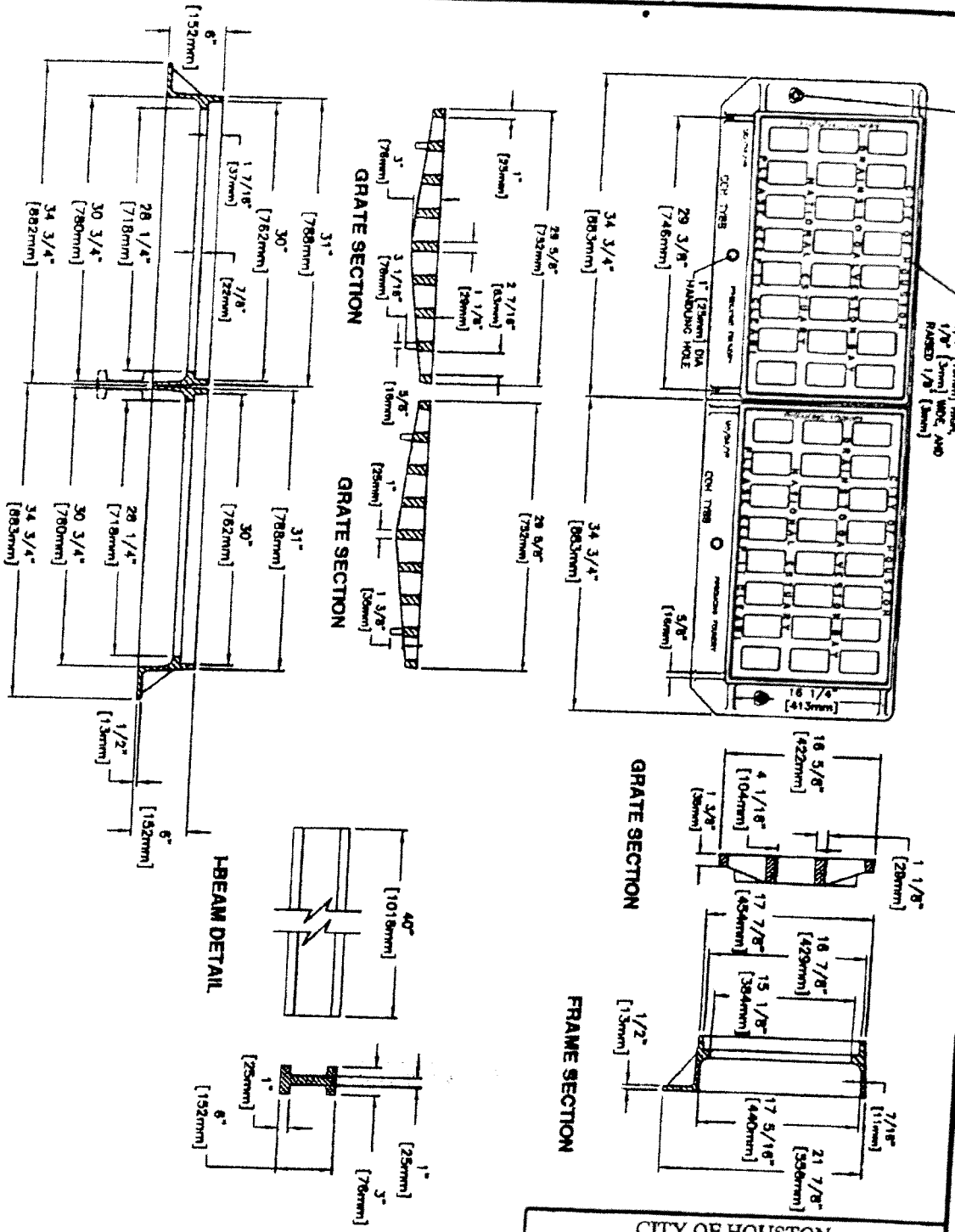
1) NOTE: APPROXIMATE WEIGHTS.
   COVER– 125 LBS 57kg
   FRAME– 120 LBS 55kg
   I BEAM– 107 LBS 49 kg
   UNIT– 597 LBS 271kg
2) MATERIAL– GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) EJIW V–4243 ASY OR APPROVED EQUAL

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

STORM SEWER
TYPE "BB" INLET
DOUBLE ASSEMBLY
(NOT TO SCALE)

PREPARED BY: APPROVED BY:
CITY ENGINEER DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: 04-01-07 DWG. NO: 02084-04



1) NOTE: APPROXIMATE WEIGHTS.

GRATE– 115 LBS 52kg
FRAME– 120 LBS 55kg
I BEAM– 107 LBS 49kg
UNIT– 577 LBS 262kg

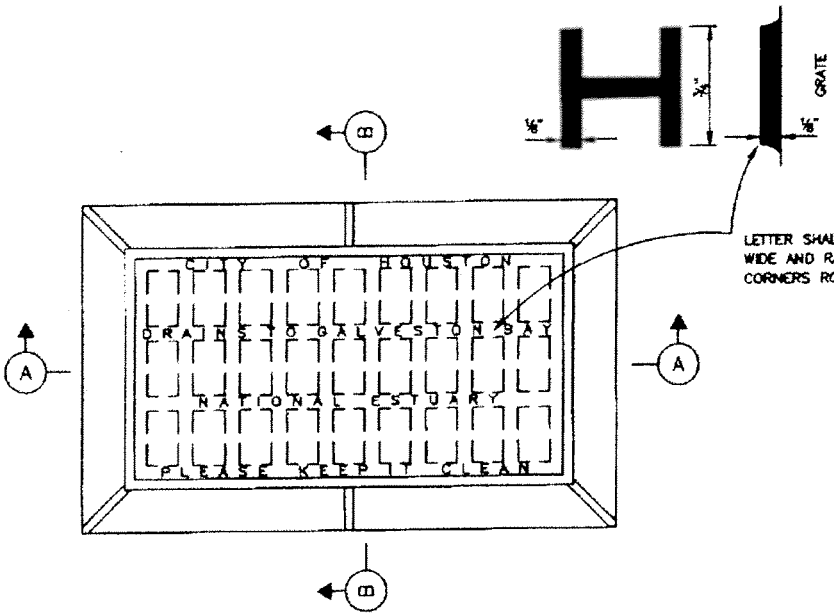
2) MATERIAL– GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) EJIW V-4243 ASY OR APPROVED EQUAL

OPEN AREA OF GRATE:
240 SQ. IN.
1548 SQ. cm.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

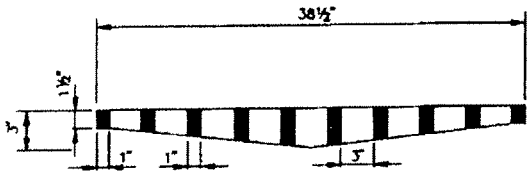
STORM SEWER FRAME AND GRATE
FOR TYPE "BB" INLET
DOUBLE ASSEMBLY
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: 04-01-07	DWG. NO:02084-05

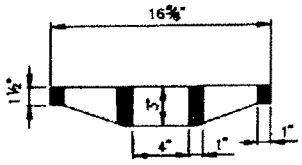


LETTER SHALL BE ¾" HIGH, ⅛" WIDE AND RAISED ⅛" WITH CORNERS ROUNDED AS SHOWN

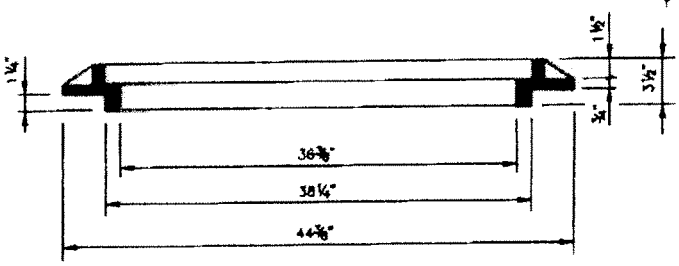
PLAN OF GRATE AND FRAME



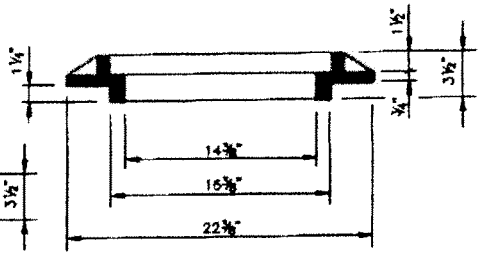
SECTION A GRATE



SECTION B GRATE



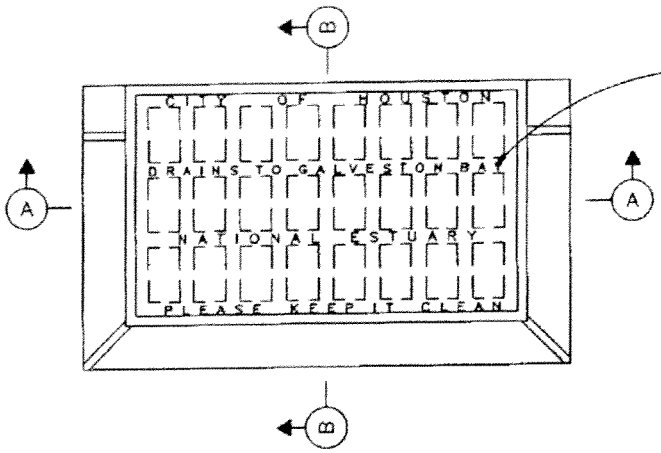
SECTION A FRAME



SECTION B FRAME

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
STORM SEWER TYPE "D" INLET GRATE AND FRAME (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02084-06

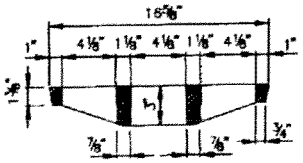
LETTER SHALL BE ¾" HIGH, ⅛" WIDE AND RAISED ⅛" WITH CORNERS ROUNDED AS SHOWN



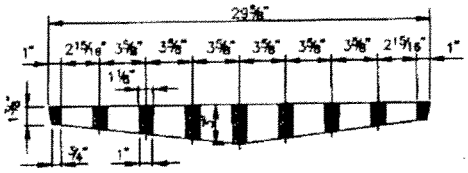
PLAN OF GRATE AND FRAME

NOTE:

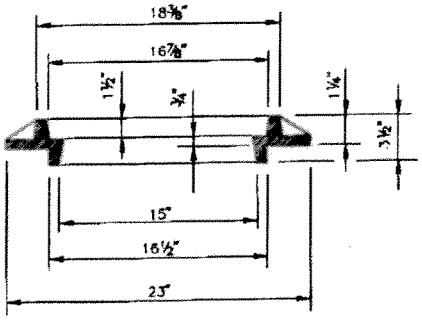
1. THE TYPE "D-1" GRATE WILL FIT FRAME FOR TYPE "B" INLETS AND TYPE "BB" INLETS.



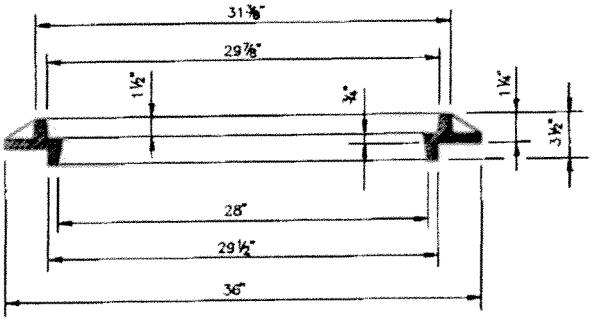
SECTION B GRATE



SECTION A GRATE

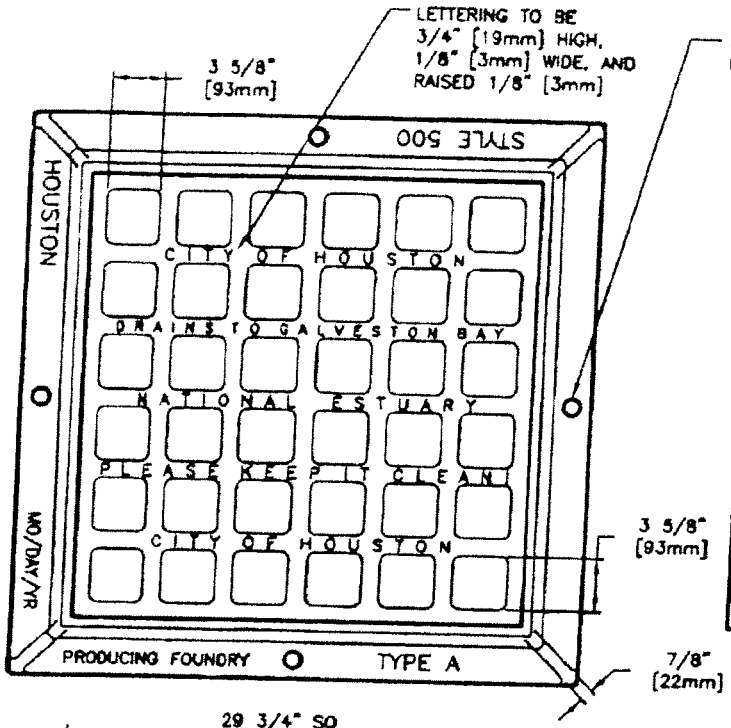


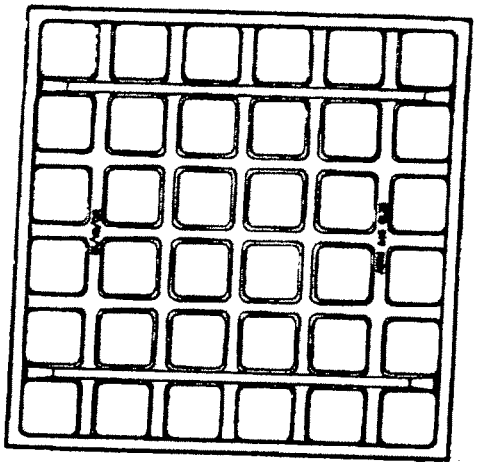
SECTION B FRAME



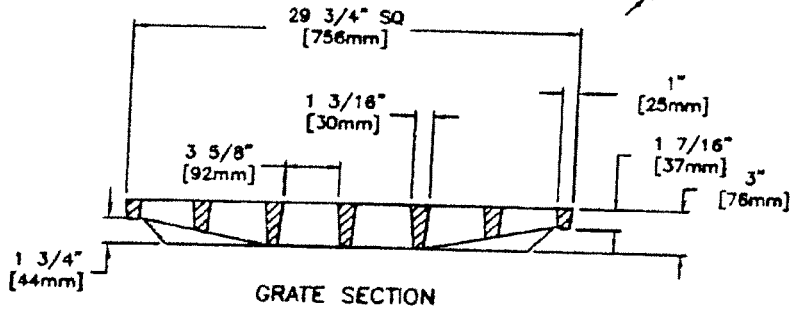
SECTION A FRAME

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
STORM SEWER TYPE "D-1" INLET GRATE AND FRAME (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02084-07

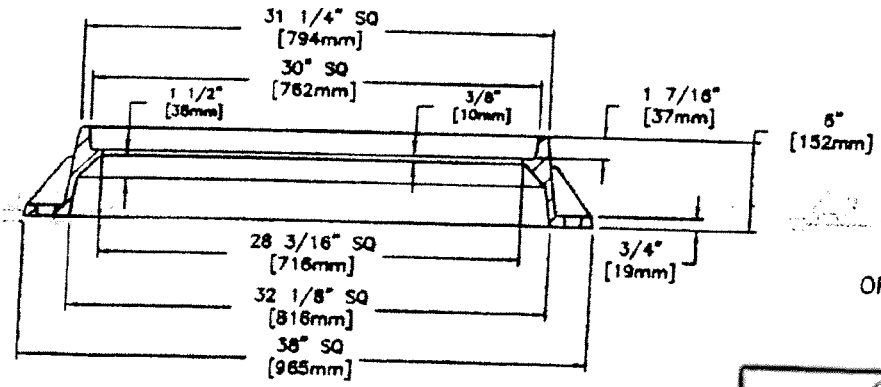




BOTTOM VIEW OF GRATE



GRATE SECTION



FRAME SECTION

OPEN AREA OF GRATE
473 SQ. IN.
[3051 SQ. cm.]

1) NOTE: APPROXIMATE WEIGHTS.
   GRATE- 190 LBS 86kg
   FRAME- 235 LBS 107kg
   UNIT- 425 LBS 193kg
2) MATERIAL- GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) EJIW V-4880 ASY OR APPROVED EQUAL

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

STORM SEWER TYPE
"A" INLET GRATE AND FRAME

(NOT TO SCALE)

PREPARED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: 04-01-07	DWG. NO: 02084-08