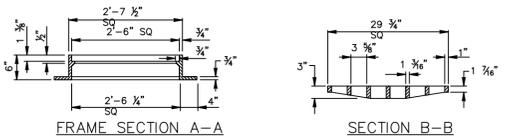


### URBAN BACKSLOPE INTERCEPTOR STRUCTURE

NOT TO SCALE

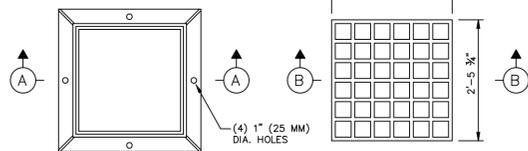
#### NOTES:

- LIFTING INSERTS AS REQUIRED.
- ALL JOINTS SHALL BE SEALED WITH RAM-NECK OR APPROVED EQUAL.
- MANHOLES TO BE PLACED ON 12" OF CEMENT-STABILIZED SAND.
- CONCRETE DESIGN STRENGTH SHALL BE 4000 PSI AT 28 DAYS, RATED FOR H-20 LOADING.
- FOR USE WITH PIPE 72" DIAMETER AND SMALLER ONLY.



FRAME SECTION A-A

SECTION B-B

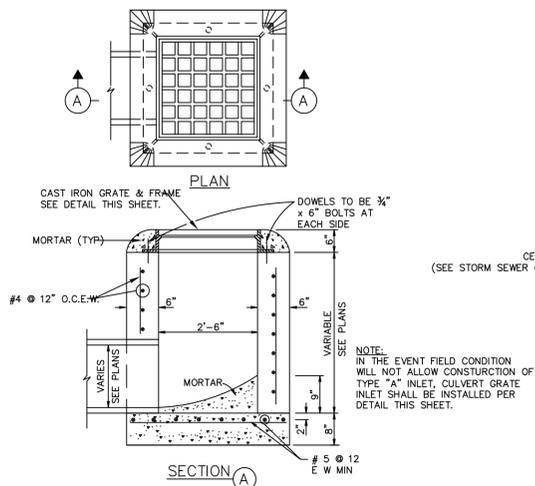


PLAN OF FRAME

PLAN OF GRATE

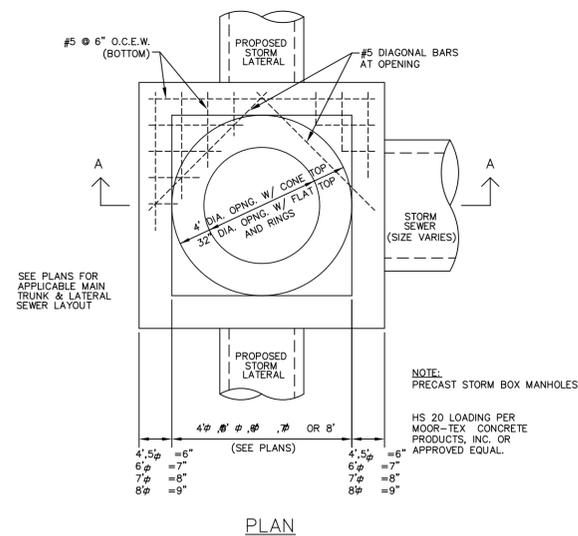
### CAST IRON GRATE & FRAME DETAIL

NOT TO SCALE

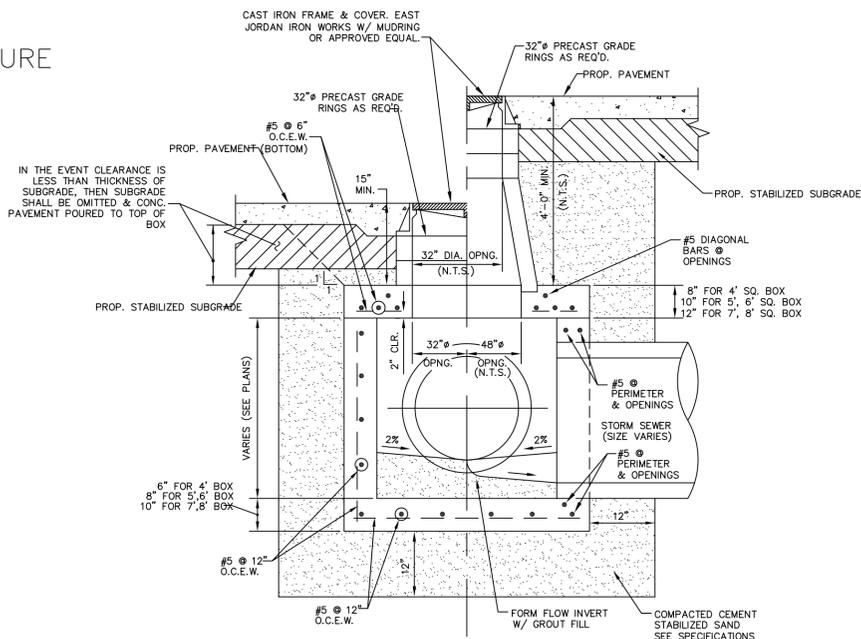


### TYPE "A" INLET DETAIL

NOT TO SCALE



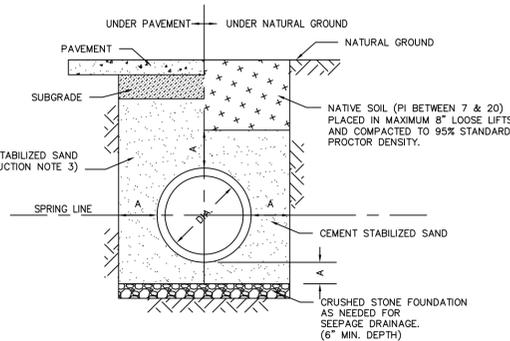
PLAN



SECTION A

### PRECAST STORM SEWER BOX MANHOLE

NOT TO SCALE

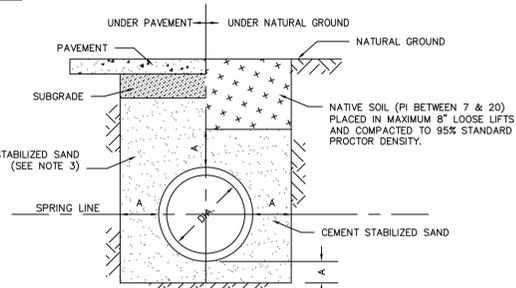


UNSATISFACTORY SOIL CONDITIONS

A	STORM SEWER DIAMETER
6"	36" OR LESS
12"	42" OR GREATER

### BEDDING AND BACKFILL

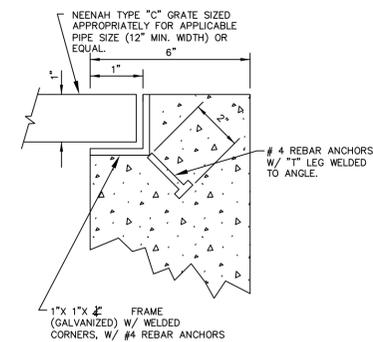
NOT TO SCALE



SATISFACTORY SOIL CONDITIONS

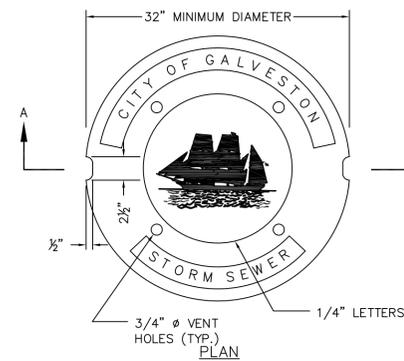
#### NOTES:

- THE SATISFACTORY SOIL CONDITIONS METHOD SHALL BE USED FOR STORM SEWER PIPE WHERE THE SOIL CONDITIONS ARE AS FOLLOWS:
  - STRATA FROM THE SPRING LINE TO 3 FT BELOW THE FLOWLINE OF THE PIPE CONSIST OF NON-WATERBEARING COHESIVE SOILS HAVING A SHEAR STRENGTH OF 1000 PSF OR GREATER.
  - NO WET SAND STRATA EXIST IN AREA FROM 1 FT ABOVE THE TOP OF THE PIPE TO 3 FT BELOW THE FLOWLINE.
- FOR ALL OTHER SOIL CONDITIONS USE THE DETAIL FOR UNSATISFACTORY CONDITIONS SHOWN ABOVE.

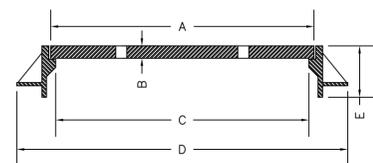


### LID FRAME DETAIL

NOT TO SCALE



PLAN



SECTION A-A

TYPE	A	B	C	D	E
H-2 INLET	23 3/4"	1 1/2"	22"	32 1/4"	6"
ALL OTHERS	32"	1 1/2"	30 3/4"	40"	6 1/2"

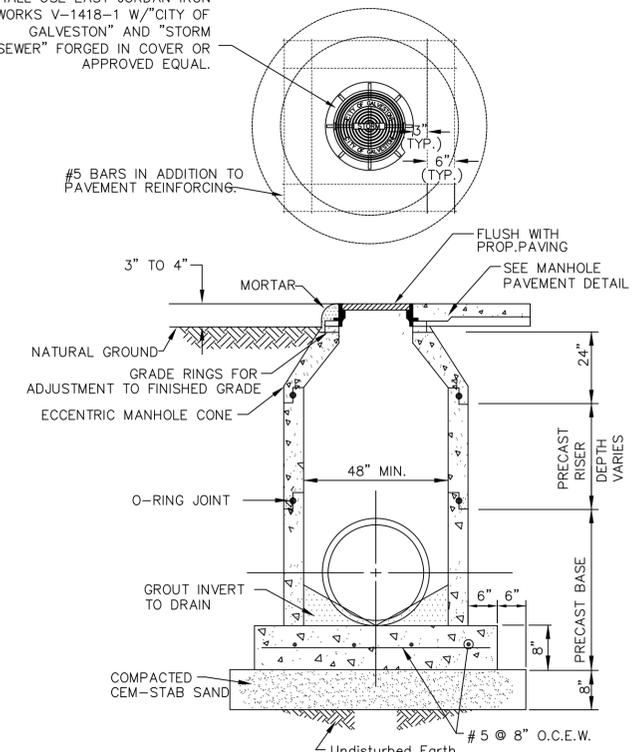
### MANHOLE FRAME AND COVER

NOT TO SCALE

#### STORM SEWER CONSTRUCTION NOTES:

- STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF GALVESTON TECHNICAL SPECIFICATIONS AND STANDARD DETAILS, LATEST REVISIONS.
- ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP), ASTM C-76, CLASS III, TONGUE AND GROOVE, UNLESS OTHERWISE NOTED AND APPROVED BY THE CITY.
- REINFORCED CONCRETE STORM SEWER (PIPE, BOX, ETC.) SHALL BE INSTALLED, BEDDED AND BACKFILLED IN CONFORMANCE WITH THE CITY OF GALVESTON TECHNICAL SPECIFICATIONS AND STANDARD DETAILS. STORM SEWER INSTALLED UNDER PROPOSED PAVEMENT SHALL BE BACKFILLED WITH CEMENT-STABILIZED SAND (1.1 SACKS OF CEMENT PER TON OF SAND, TO THE BOTTOM OF THE SUBGRADE, STORM SEWER INSTALLED UNDER EXISTING PAVEMENT SHALL BE BACKFILLED WITH CEMENT-STABILIZED SAND TO THE BOTTOM OF THE PAVEMENT).
- CONCRETE FOR INLETS AND MANHOLES SHALL BE CLASS A AND SHALL HAVE A MINIMUM STRENGTH OF 4000 PSI AT 28 DAYS AND HAVE REINFORCING BARS TO MEET AASHTO H20-44 LOADING REQUIREMENTS.
- ALL MANHOLES SHALL BE ADJUSTED TO FINISHED GRADE.
- MINIMUM STORM SEWER SIZE IS TWENTY-FOUR (24) INCH INSIDE DIAMETER. MINIMUM ROADSIDE DITCH CULVERT IS EIGHTEEN (18) INCH INSIDE DIAMETER OR APPROVED EQUAL. MIN. SIZE FOR INLET LEADS SHALL BE 18"
- ALL STORM SEWER MANHOLES SHALL INCLUDE THE WORDS "STORM SEWER" AND "CITY OF GALVESTON." MANHOLE COVERS SHALL CONFORM TO THE STANDARD DETAILS SHOWN ON THIS SHEET.
- CONTRACTOR SHALL PROVIDE A MINIMUM OF SIX (6) INCHES OF CLEARANCE AT ALL UTILITY CROSSINGS WITH STORM SEWER.
- ALL INLETS, AT ROADWAY PAVEMENT IN RESIDENTIAL DEVELOPMENTS, SHALL BE TYPE "B-B" OR "H-2". ALL INLETS IN COMMERCIAL DEVELOPMENTS, AND/OR ON MAJOR THOROUGHFARES SHALL BE TYPE "H-2" ONLY, UNLESS OTHERWISE APPROVED BY THE CITY OF GALVESTON.
- ALL DISTURBED AREAS IN DRAINAGE EASEMENTS OR DETENTION PONDS, SHALL BE HYDRO-MULCHED OR SODDED AS PER TECHNICAL SPECIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR OTHER CONSTRUCTION, THE CONTRACTOR SHALL ENSURE THAT STORM DRAINAGE PATHWAYS REMAIN OPEN AND ARE MAINTAINED TO ENSURE POSITIVE DRAINAGE. CONVEYANCES ARE NOT TO BE IMPEDED OR BLOCKED IN ANY WAY. STORM SEWER INLETS SHALL BE PROTECTED FROM ENTRY OF SILT, TRASH, DEBRIS AND ANY OTHER SUBSTANCES THAT MAY DAMAGE THE STORM SEWER SYSTEM AND/OR WATERWAYS RECEIVING STORM WATER RUNOFF. AT COMPLETION OF WORK, THE CONTRACTOR SHALL FILL ALL LOW SPOTS, GRADE ALL RIGHTS-OF-WAY, AND UTILITY EASEMENTS, AND REGRADE/RESTORE DITCHES AS NECESSARY TO MAINTAIN AND/OR ESTABLISH POSITIVE DRAINAGE.

MANHOLE FRAME AND COVER SHALL USE EAST JORDAN IRON WORKS V-1418-1 W/CITY OF GALVESTON AND "STORM SEWER" FORGED IN COVER OR APPROVED EQUAL.



PRECAST "MOOREBASE" W/ INVERTS  
MFG. BY MOORE-TEX CONCRETE PRODUCTS.

#### NOTES:

- DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
- PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
- MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 8".
- MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8 EW.

### PRECAST CONCRETE MANHOLE

(UP TO 30")  
N.T.S.

MK.	DESCRIPTION	DATE	DWN.	CHK.



**CITY OF GALVESTON**  
1839

City of Galveston, Texas

Department of Public Works

Storm Sewer Details I

SHEET NO.:	SCALE:	SHEET
DATE: MAY, 2012	N.T.S.	
DWN BY:	ONE INCH	
CHKD BY:	IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE	OF