

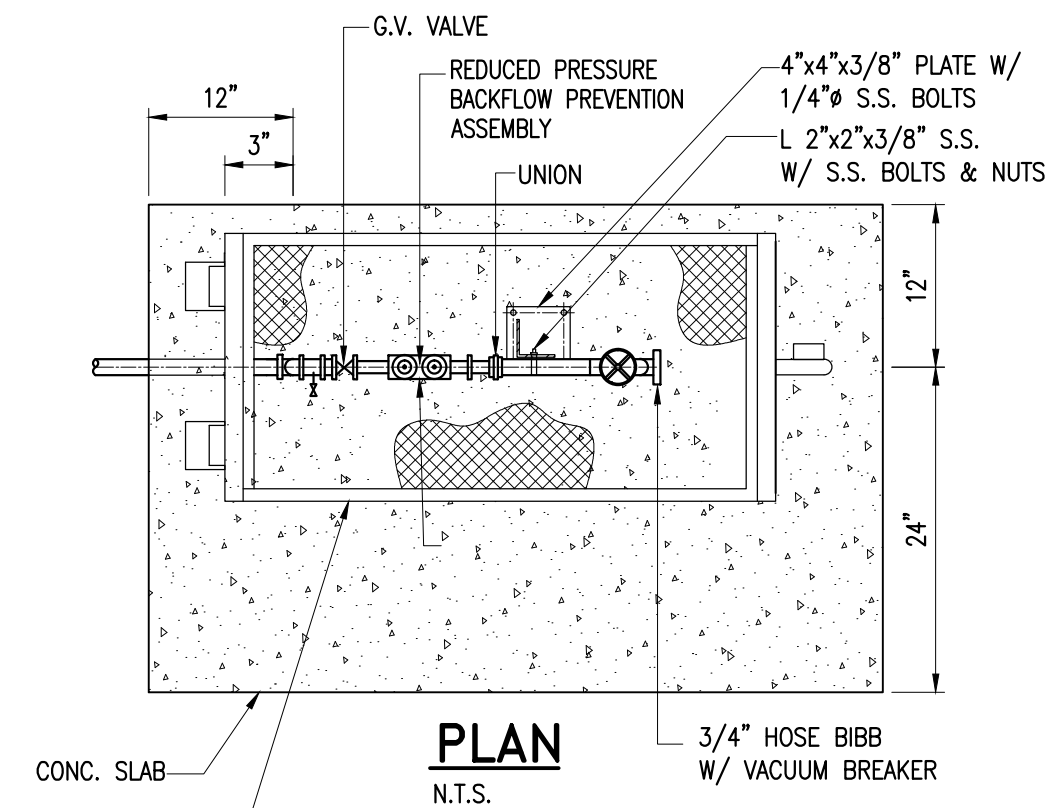
(THE FOLLOWING NOTES ARE REQUIRED AND PROVIDED BY D.E.R.M. AND SHALL APPEAR ON ALL WATER/SEWER INSTALLATION PLANS)

**NOTES ON WATER-SEWER INSTALLATION**

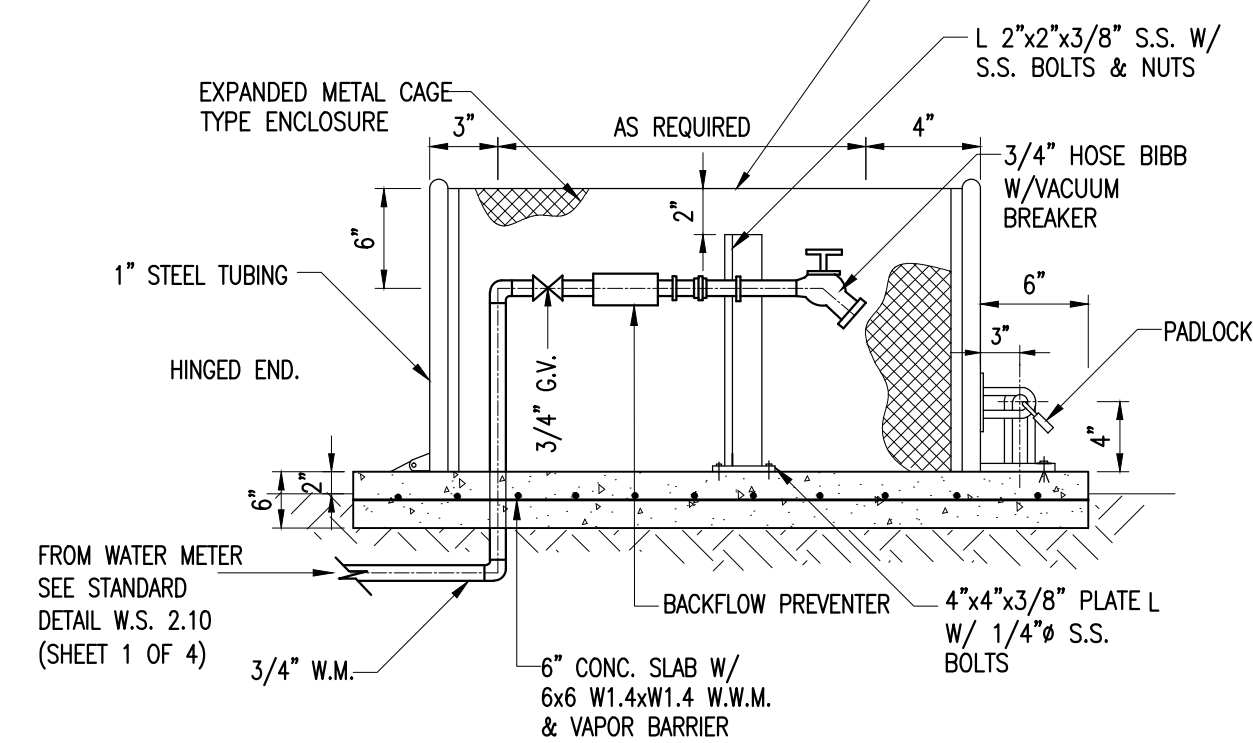
1. A HORIZONTAL DISTANCE OF 10 FT. SHALL BE MAINTAINED BETWEEN WATER AND SEWER MAINS. WHEN THE 10 FOOT HORIZONTAL DISTANCE CRITERIA CANNOT BE MET DUE TO AN EXISTING UNDERGROUND FACILITY CONFLICT, THE SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH MECHANICAL JOINTS.
2. A VERTICAL DISTANCE OF AT LEAST 18 INCHES SHALL BE MAINTAINED BETWEEN ANY WATER AND SEWER MAINS. THE SEWER SHALL BE DUCTILE IRON SINGLE 20 FOOT LENGTH CENTERED ON THE CROSSING IF THE MINIMUM VERTICAL DISTANCE IS LESS THAN 18 INCHES OR THE SEWER IS INSTALLED ABOVE THE WATER MAIN (REGARDLESS OF SEPARATION).
3. IN HIGHLY CONGESTED AREAS, WHERE EITHER WATER OR SEWER FACILITIES ARE EXISTING AND THE SEPARATION REQUIREMENTS CANNOT BE MET, SPECIAL CONSIDERATION MAY BE GIVEN SUBJECT TO A COMPLETE EVALUATION OF EXISTING AND PROPOSED CONDITIONS.
4. THE MAXIMUM ALLOWABLE EXFILTRATION RATE OF GRAVITY SANITARY SEWERS CONSTRUCTED IN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE FIFTY (50) GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR RESIDENTIAL LAND USE AND TWENTY (20) GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR NON-RESIDENTIAL LAND USE.  
THE REINFORCED CONCRETE PRESSURE SANITARY SEWER FORCE MAIN EXFILTRATION RATE SHALL NOT BE GREATER THAN ONE-HALF (1/2) THE ALLOWABLE LEAKAGE RATE SPECIFIED IN AWWA C600-82 AT A TEST PRESSURE OF 100 POUNDS PER SQUARE INCH.
5. FORCE MAIN SEWERS CONSTRUCTED IN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE EITHER DUCTILE IRON OR REINFORCED CONCRETE PRESSURE SEWER PIPE. THE DUCTILE IRON PIPE EXFILTRATION RATE SHALL NOT BE GREATER THAN THE ALLOWABLE LEAKAGE RATE SPECIFIED IN AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARD C600-82 AT A TEST PRESSURE OF 100 POUNDS PER SQUARE INCH.
6. THE CONTRACTOR SHALL VERIFY NATURE, DEPTH, CHARACTER OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
7. ALL OTHER PUBLIC OR PRIVATE UTILITY FACILITIES SHALL BE CONSTRUCTED AT LEAST 3 FEET FROM ANY WATER AND SEWER MAIN AS MEASURED FROM THE OUTSIDE BELL OF THE WATER AND SEWER PIPE TO THE OUTSIDE OF THE UTILITY PIPE.
8. WHEN THE 3 FOOT SEPARATION BETWEEN PROPOSED AND EXISTING LINE IS NOT POSSIBLE, THE CONTRACTOR SHALL HAND DIG TO EXPOSE THE WATER AND SEWER PIPES BEFORE PROCEEDING WITH POWER EQUIPMENT EXCAVATION.
9. IN NO CASE SHALL A CONTRACTOR INSTALL UTILITY PIPES, CONDUITS, CABLES, ETC. IN THE SAME TRENCH PARALLEL TO AND ABOVE EXISTING WATER AND SEWER PIPES EXCEPT WHERE THEY CROSS. ANY DEVIATION FROM NOTES 6, 7 AND 8 SHALL BE APPROVED IN WRITING BY THE RESPONSIBLE WATER AND SEWER UTILITY.
10. A NON-RESETTABLE ELAPSED TIME METER SHALL BE INSTALLED FOR EACH PUMP TO RECORD THE TOTAL OPERATING HOURS OF THE STATION.

**GENERAL NOTE**

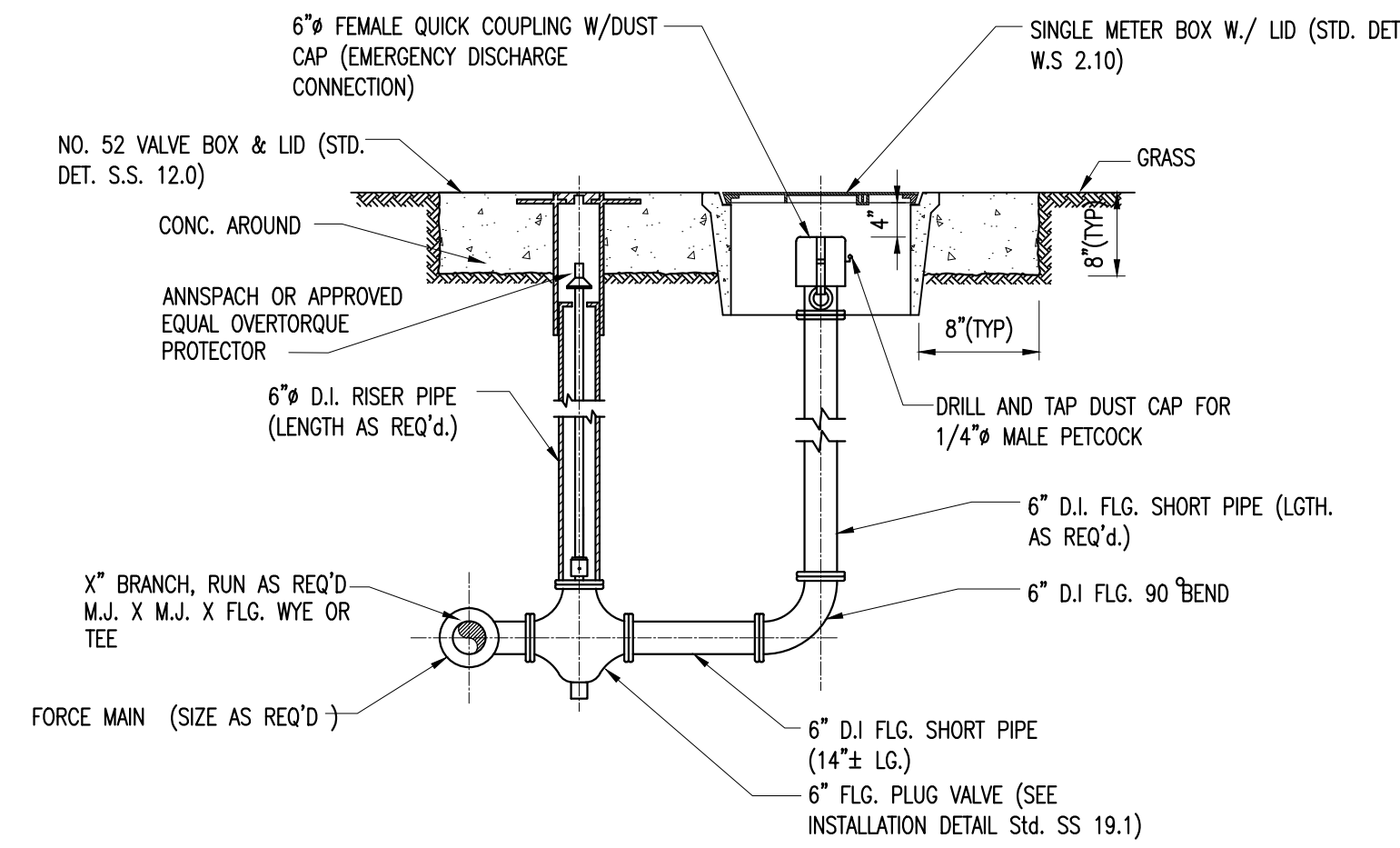
THESE ARE NOT CONSTRUCTION DRAWINGS, BUT ARE GUIDELINES FOR MINIMUM DESIGN REQUIREMENTS. THE USER SHALL VERIFY AND MODIFY INFORMATION SHOWN HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS, TO COMPLY WITH THE REQUIREMENTS OF THEIR DESIGN AND MD-WASD REQUIREMENTS.



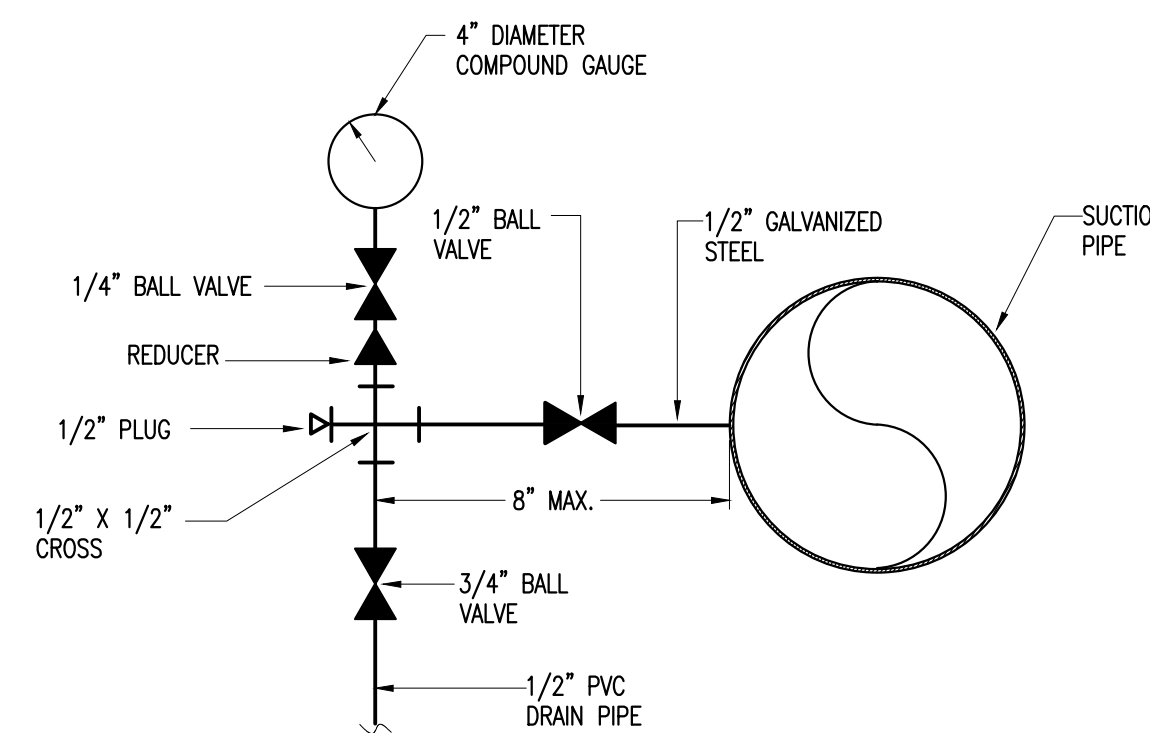
PROP. ECONOCAGE PER GUARDSHACK FABRICATION OR APPROVED EQUAL. CONTRACTOR TO ADJUST SLAB SIZES TO SELECTED ENCLOSURE DIMENSIONS



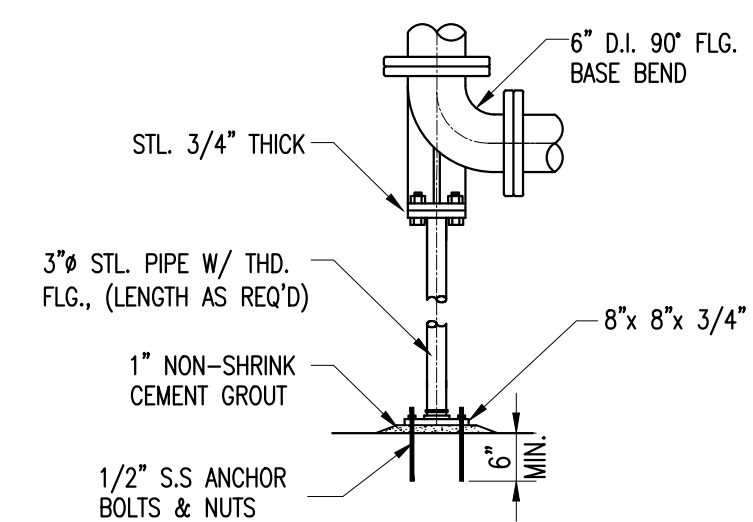
**BACKFLOW PREVENTER WITH HOSE BIBB**  
N.T.S.



**EMERGENCY DISCHARGE CONNECTION DETAIL**  
N.T.S.



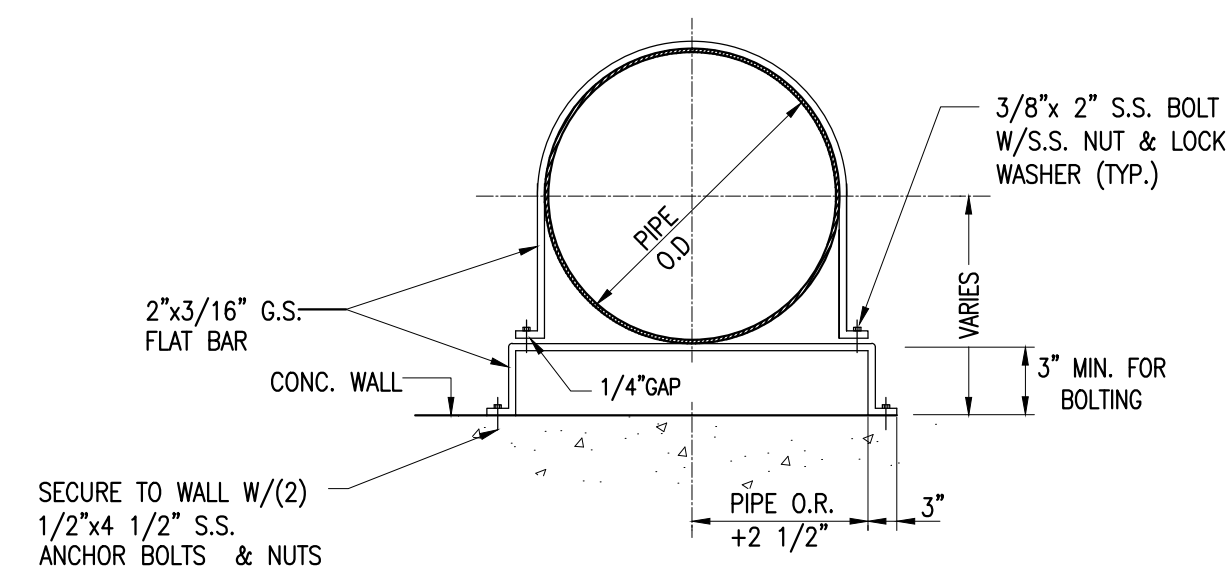
**COMPOUND GAUGE DETAIL**  
N.T.S.



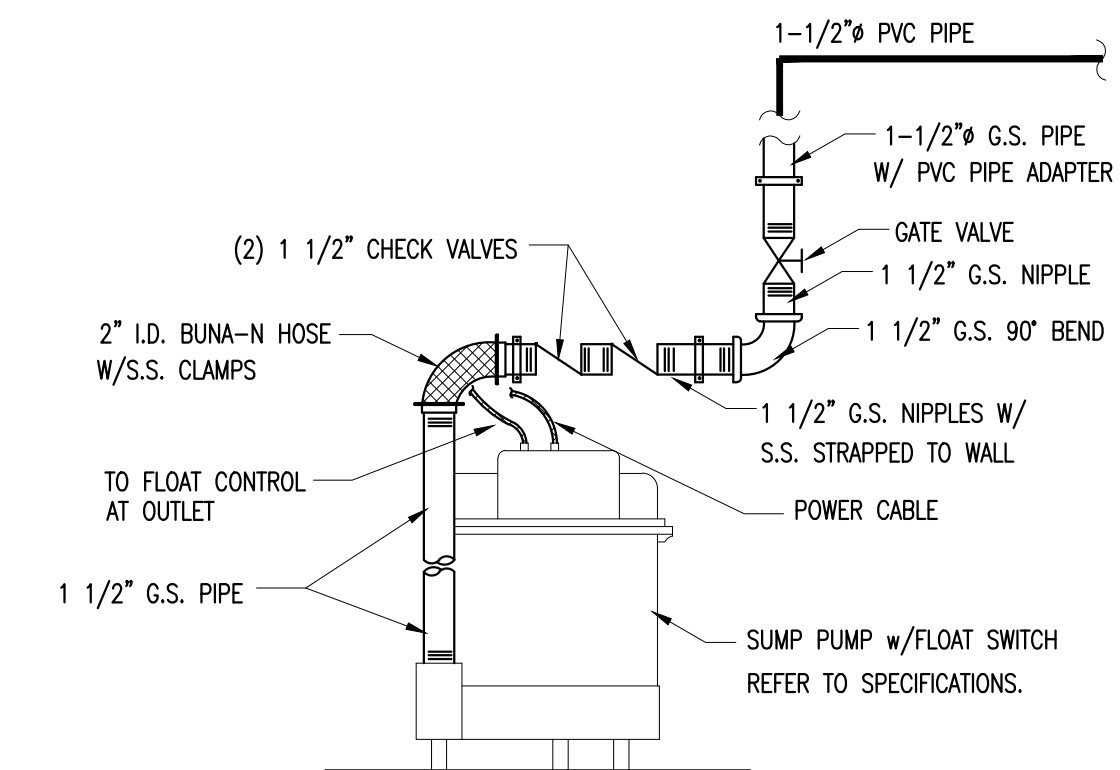
**GALVANIZED PIPE SUPPORT**  
N.T.S.



NOTE:  
PIPE SUPPORTS, HANGERS AND BRACKETS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.



**PIPE BRACKET DETAIL**  
N.T.S.



**SUMP PUMP AND PIPING DETAIL**  
N.T.S.

**DRAWING HISTORY**

RELEASED FOR	DATE	BY
REVIEW 30%		
REVIEW 70%		
REVIEW 100%		
PERMIT		

**REVISIONS**

No.	DESCRIPTION	DATE	BY

**APPROVALS**

CHIEF ENGINEER:

SECTION HEAD:

PROJECT MGR.:

DESIGNED: CHECKED:

DRAWN: FINAL CHECK:

Date: \_\_\_\_\_

ER No. : S000000 PCTS No. : 00000

FILE NAME:

DATE: AUG. 28, 2012 SCALE:

SHEET **M-2**

DWG. No.