

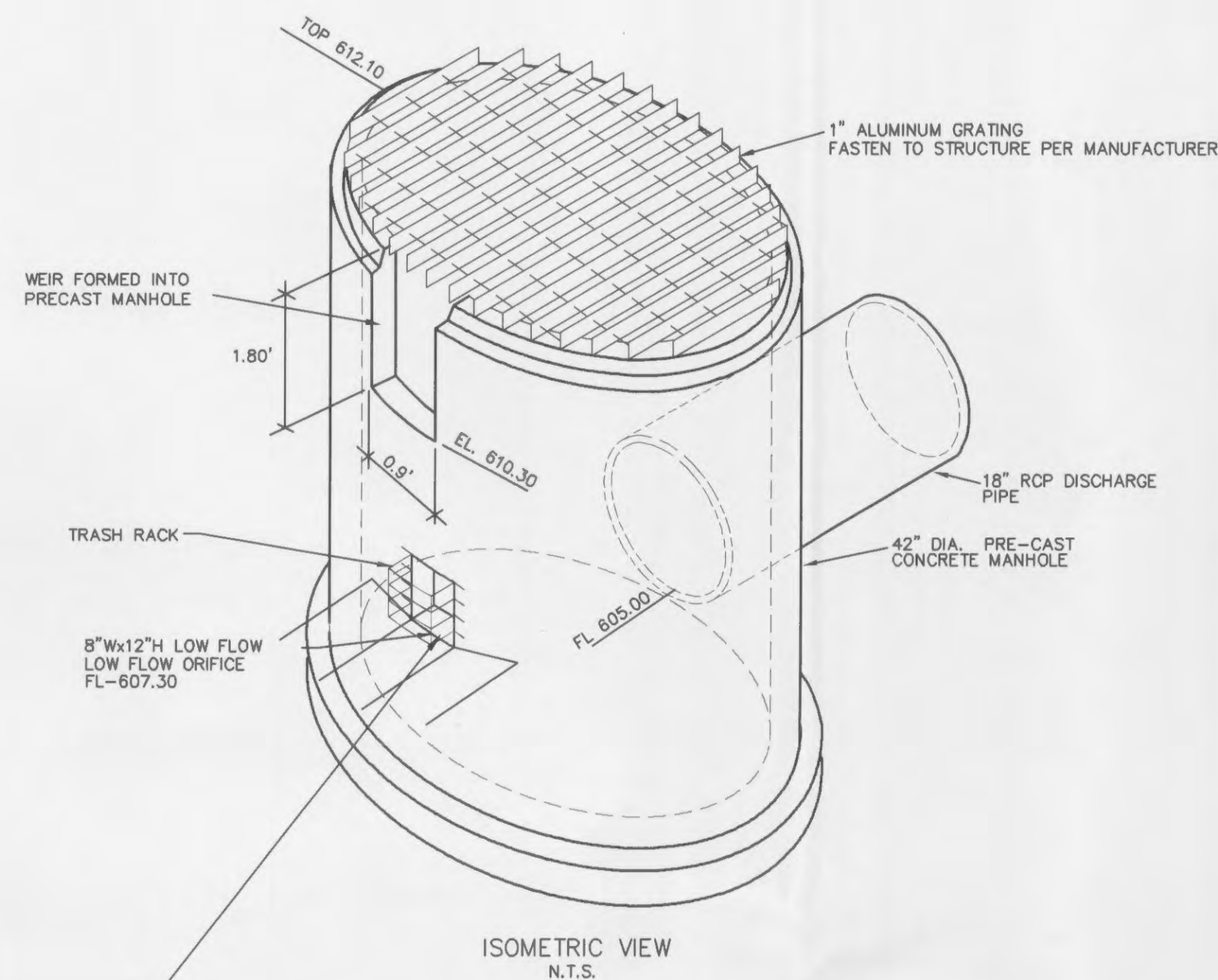
TRASH RACK DETAIL N.T.S.

100 YEAR HIGH-WATER ELEVATION (ASSUMED LOW FLOW ORIFICE BLOCKED)

PROPOSED STRUCTURE:
EXIST. 42" DIA. PRE-CAST CONCRETE MANHOLE
TOP OF STRUCTURE-612.10
Q = 19.46 cfs

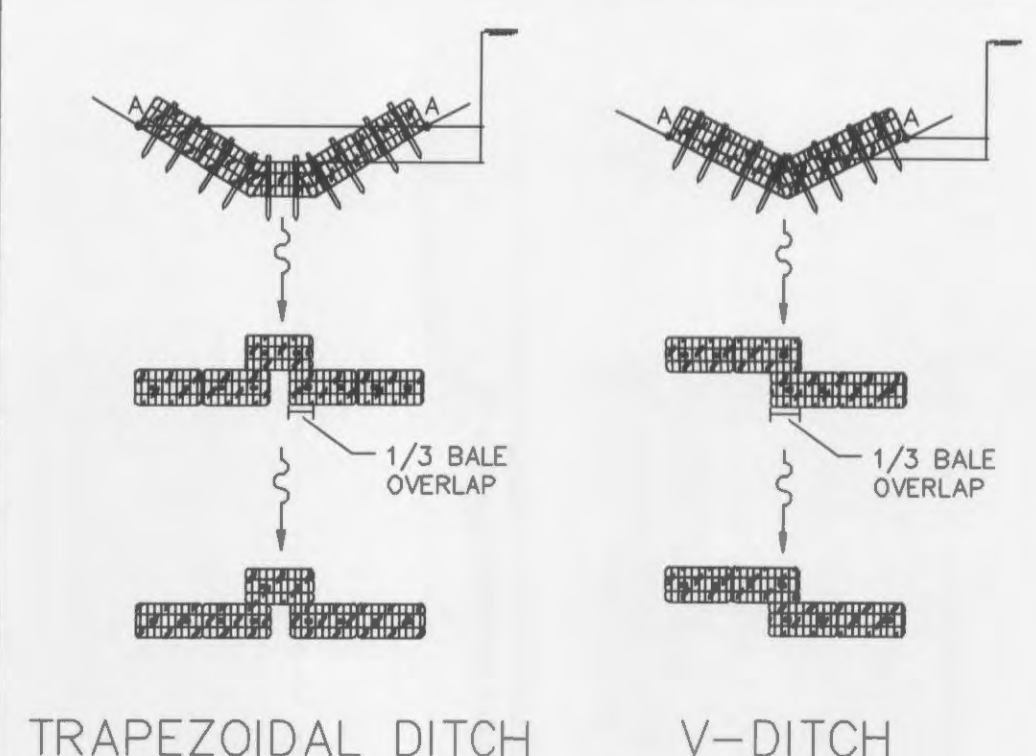
Low Flow Blocked
 $Q = CLH^{1.5}$
Q = 19.46
C = 3.33 & 2.60
L = 0.80' & 10.20'

$19.46 = (3.33 (0.80) H^{1.5}) + (2.60 (10.20) H^{1.5})$
 $2.33 = H$
100 Year H.W. = 610.30 + 2.33 = 612.63

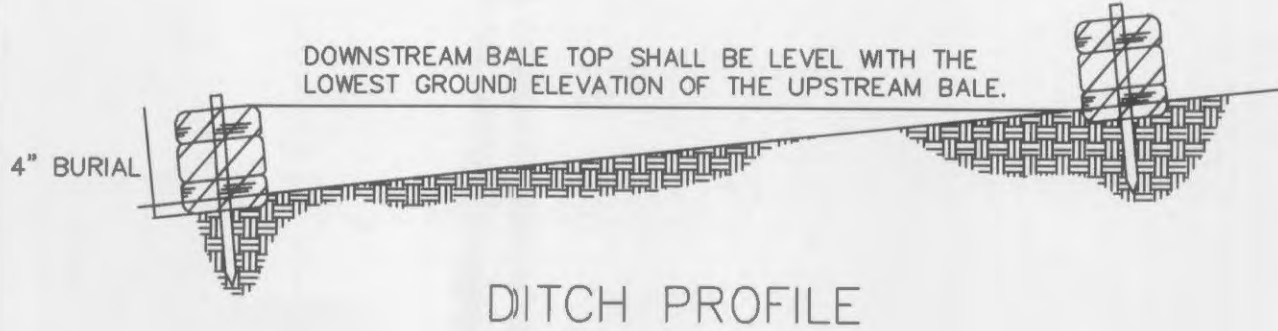


DETENTION STRUCTURE DETAIL

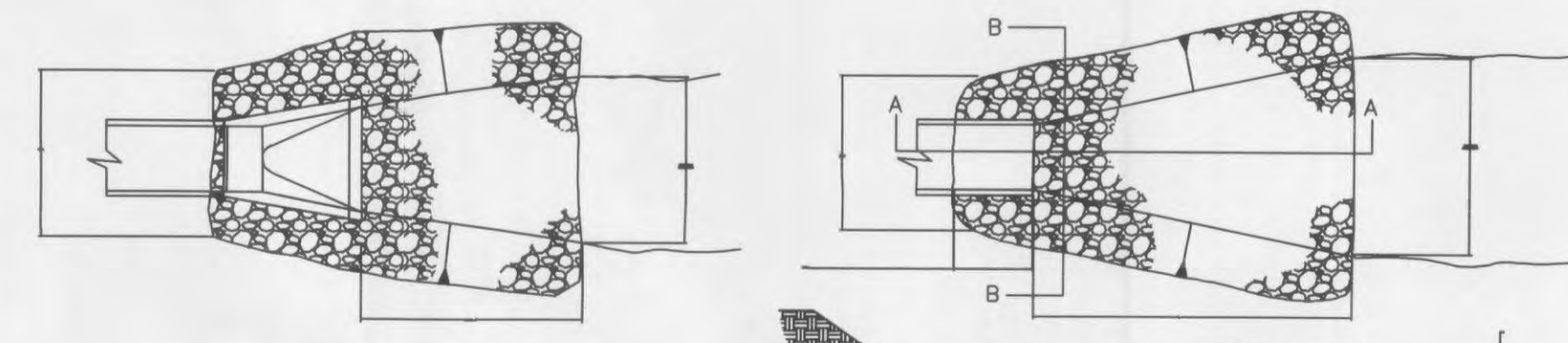
NOTE: FILTER FABRIC TO BE WRAPPED AROUND THE STRUCTURE COVERING THE LOW FLOW OPENING AND CHECKED PERIODICALLY TO MAKE SURE IT IS FUNCTIONING PROPERLY. REMOVE AND REPLACE IF NECESSARY. LEAVE IN PLACE UNTIL VEGETATION IS ESTABLISHED.



TRAPEZOIDAL DITCH V-DITCH



DITCH PROFILE



PLAN VIEW W/FLARED END SECTION

| PIPE SIZE | RIPRAP SIZE & APRON DIMENSION | | | | VELOCITY < 5 FPS | | | | VELOCITY < 10 FPS | | | |
|-----------|-------------------------------|------------------|----|----|------------------|------------------|----|----|-------------------|------------------|---|----|
| | d ₅₀ | d _{max} | T | L | d ₅₀ | d _{max} | T | L | d ₅₀ | d _{max} | T | L |
| 12 | 5 | 9 | 15 | 12 | 5 | 9 | 15 | 16 | 12 | 5 | 9 | 15 |
| 15 | 5 | 9 | 15 | 14 | 5 | 9 | 15 | 18 | 15 | 5 | 9 | 15 |
| 18-24 | 5 | 9 | 15 | 16 | 9 | 14 | 24 | 20 | 18 | 5 | 9 | 15 |
| 27-30 | 5 | 9 | 15 | 18 | 9 | 14 | 24 | 22 | 27 | 5 | 9 | 15 |
| 36-42 | 9 | 14 | 24 | 22 | 12 | 18 | 27 | 26 | 36 | 5 | 9 | 15 |
| 48-54 | 9 | 14 | 24 | 26 | 12 | 18 | 27 | 30 | 48 | 5 | 9 | 15 |
| 60-66 | 12 | 18 | 27 | 34 | 15 | 24 | 30 | 38 | 60 | 5 | 9 | 15 |
| 72-84 | 15 | 24 | 30 | 42 | 15 | 24 | 30 | 46 | 72 | 5 | 9 | 15 |
| 96 | 18 | 27 | 30 | 50 | 18 | 27 | 30 | 54 | 96 | 5 | 9 | 15 |

d₅₀ - NOMINAL DIAMETER
d_{max} - MAXIMUM DIAMETER
T - THICKNESS
L - LENGTH

- DESIGN CRITERIA
- FROUDE NUMBER MUST BE ≤ 2.50.
 - USE 3 TIMES PIPE DIAMETER FOR DOWNSTREAM CHANNEL WIDTH IF THERE IS NO DEFINED CHANNEL.
 - BANK PROTECTION HEIGHT TO BE 2/3 TIMES PIPE DIAMETER.
 - ROCK SLOPES SHALL BE NO STEEPER THAN 3:1.

TEMPORARY OUTLET PIPE DISCHARGE PROTECTION

ENVRO-SAFE HIGH CAPACITY GRATE INLET SKIMMER
CALIFORNIA CURB SHELF BASKET WATER CLEANSING SYSTEM
SAN DIEGO REGIONAL CONTINUOUS CURB INLET

| COND. | Q (cfs) | Q (MGD) |
|--------------|---------|---------|
| TOP FRONT | 85.1 | 7.9 |
| BOTTOM FRONT | 88.1 | 8.2 |
| BOTTOM REAR | 165.9 | 15.0 |
| TOTAL | 241.1 | 22.6 |

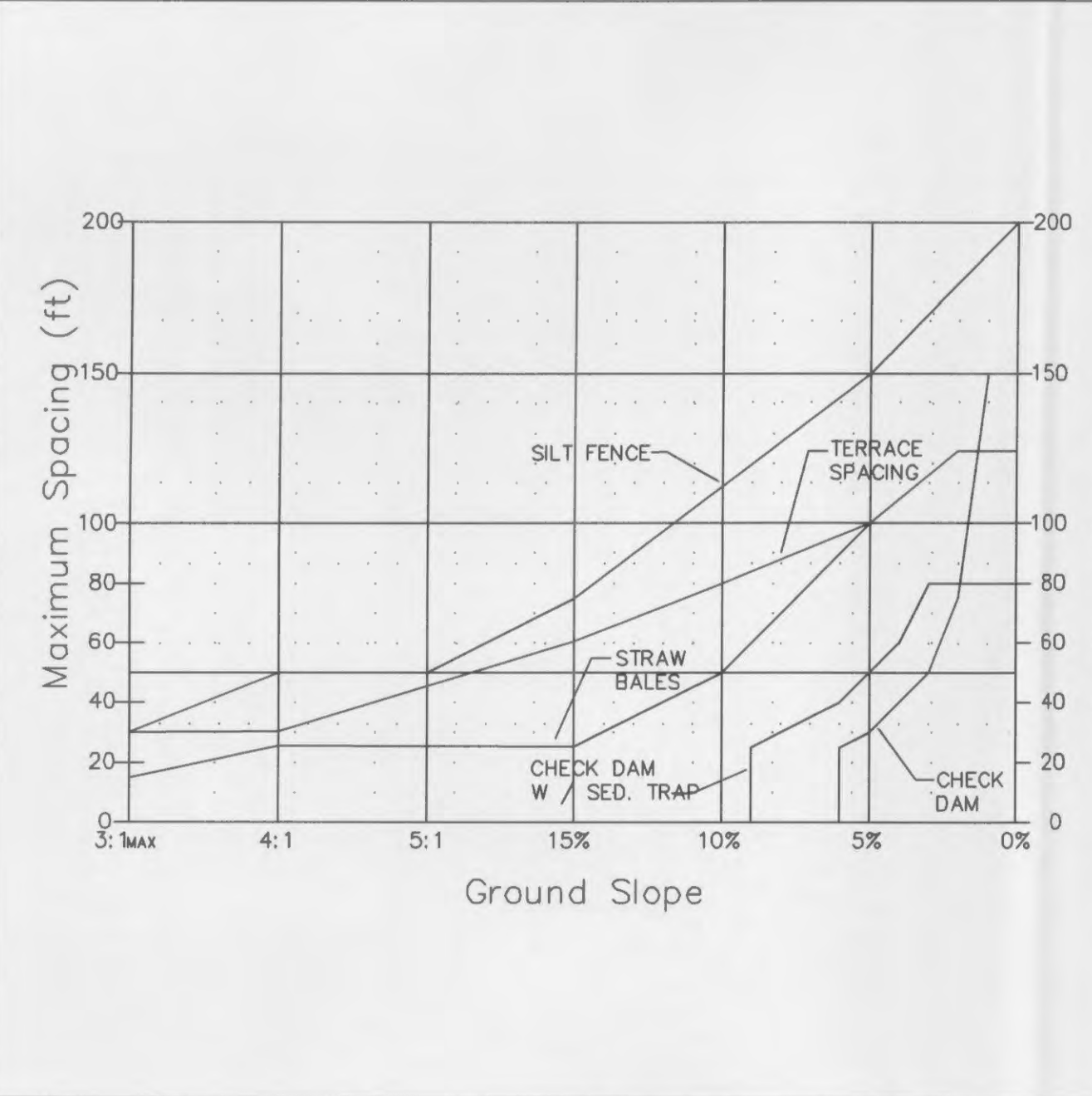
NOTE: 1. SHELF SYSTEM PROVIDES FOR ENTIRE COVERAGE OF INLET OPENING SO TO DERT ALL FLOW TO BASKET. 2. SHELF SYSTEM MANUFACTURED FROM MARINE GRADE FIBERGLASS COATED FOR UV PROTECTION. 3. SHELF SYSTEM ATTACHED TO THE CATCH BASIN WITH NON-CORROSIVE HARDWARE. 4. FILTRATION BASKET STRUCTURE MANUFACTURED FROM MARINE GRADE FIBERGLASS COATED FOR UV PROTECTION. 5. FILTRATION BASKET FINE SCREEN AND COARSE SCREENS MANUFACTURED FROM STAINLESS STEEL. 6. FILTRATION BASKET HOLDS BOOM OF ABSORBENT BOOM TO CAPTURE HYDROCARBONS. BOOM IS EASILY REPLACED WITHOUT REMOVING MOUNTING HARDWARE. 7. FILTRATION BASKET LOCATION IS DIRECTLY UNDER MANHOLE FOR EASY MAINTENANCE.

5 YEAR MANUFACTURERS WARRANTY
PATENTED
ALL FILTER SCREENS ARE STAINLESS STEEL

Curb Inlet Baskets are to be used in CI 103, DCI 104, and DCI 105

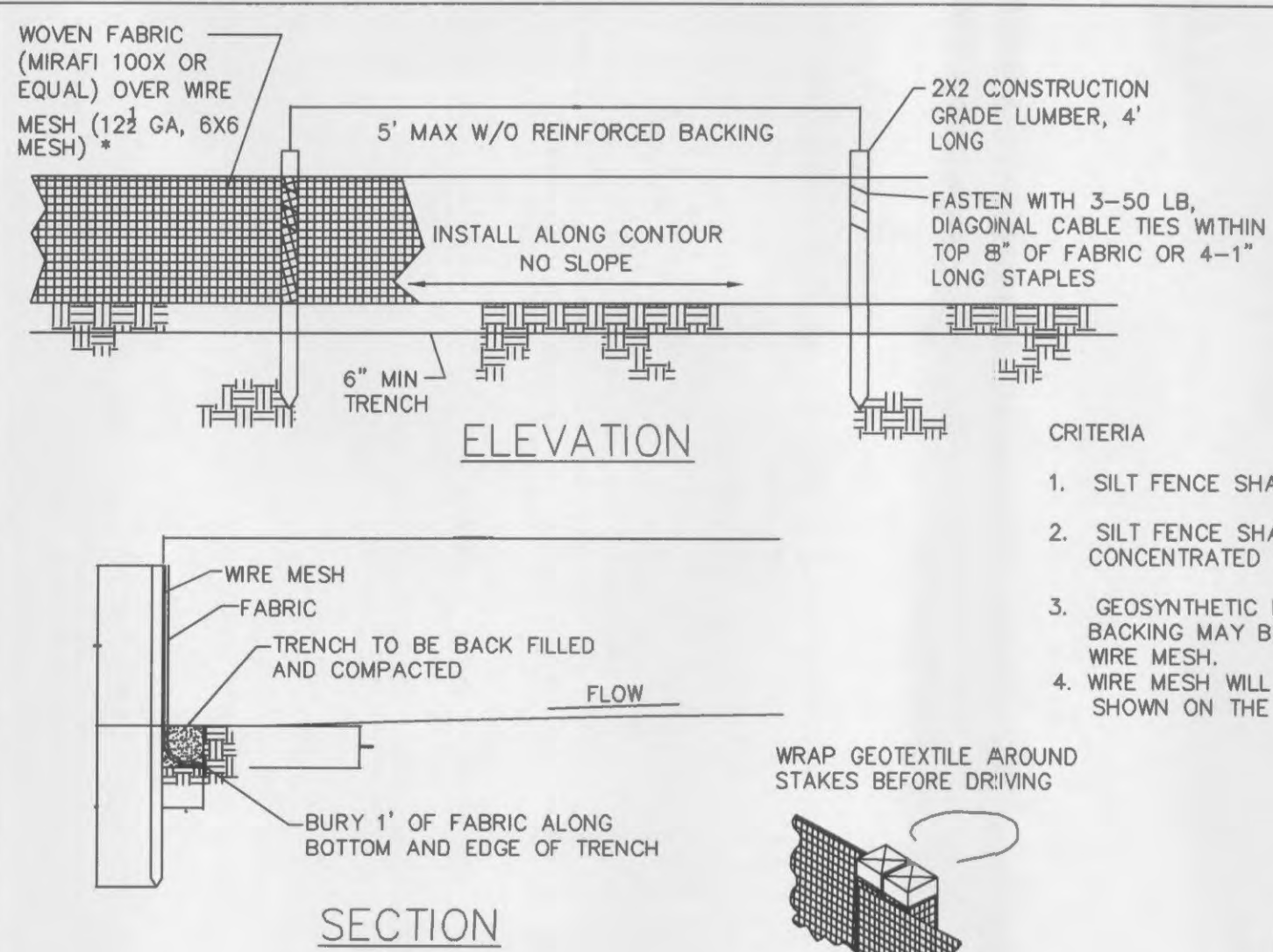
MAINTENANCE NOTES:

- Curb Inlet Baskets shall be cleaned and debris removed a minimum of four times per year, and replacement of hydrocarbon booms a minimum of twice per year.
- Following maintenance and/or inspection, the maintenance operator shall prepare a maintenance/inspection record. The record shall include any maintenance activities performed, amount and description of debris collected, and condition of filter.
- The owner shall retain the maintenance/inspection record for a minimum of five years from the date of maintenance. These records shall be made available to the governing municipality for inspection upon request at any time.
- Any person performing maintenance activities must have completed a minimum of OSHA 24-hour hazardous waste worker (hazwoper) training.
- For curb inlet units: remove manhole lid to gain access to inlet filter insert. Where possible maintenance should be performed from the ground surface.
- Remove all trash, debris, organics, and sediments collected by the inlet filter insert.
- Evaluation of the hydrocarbon boom shall be performed at each cleaning. If the boom filled with hydrocarbons and oils it should be replaced. Attach new boom to basket with plastic ties through pre-drilled holes in the basket.
- Transport all debris, trash, organics and sediments to approved facility for disposal in accordance with local and state requirements.
- The hydrocarbon boom is classified as hazardous waste material and will have to be picked up and disposed of as hazardous waste.



- DESIGN CRITERIA
- SILT FENCE FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
 - STRAW BALE BARRIERS FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
 - REFER TO INDIVIDUAL ESC FIGURE FOR INSTALLATION.
 - TERRACING INCLUDES LOGS, WATTLES & FILTER SOCKS.

SPACING CHART FOR ESC DEVICES

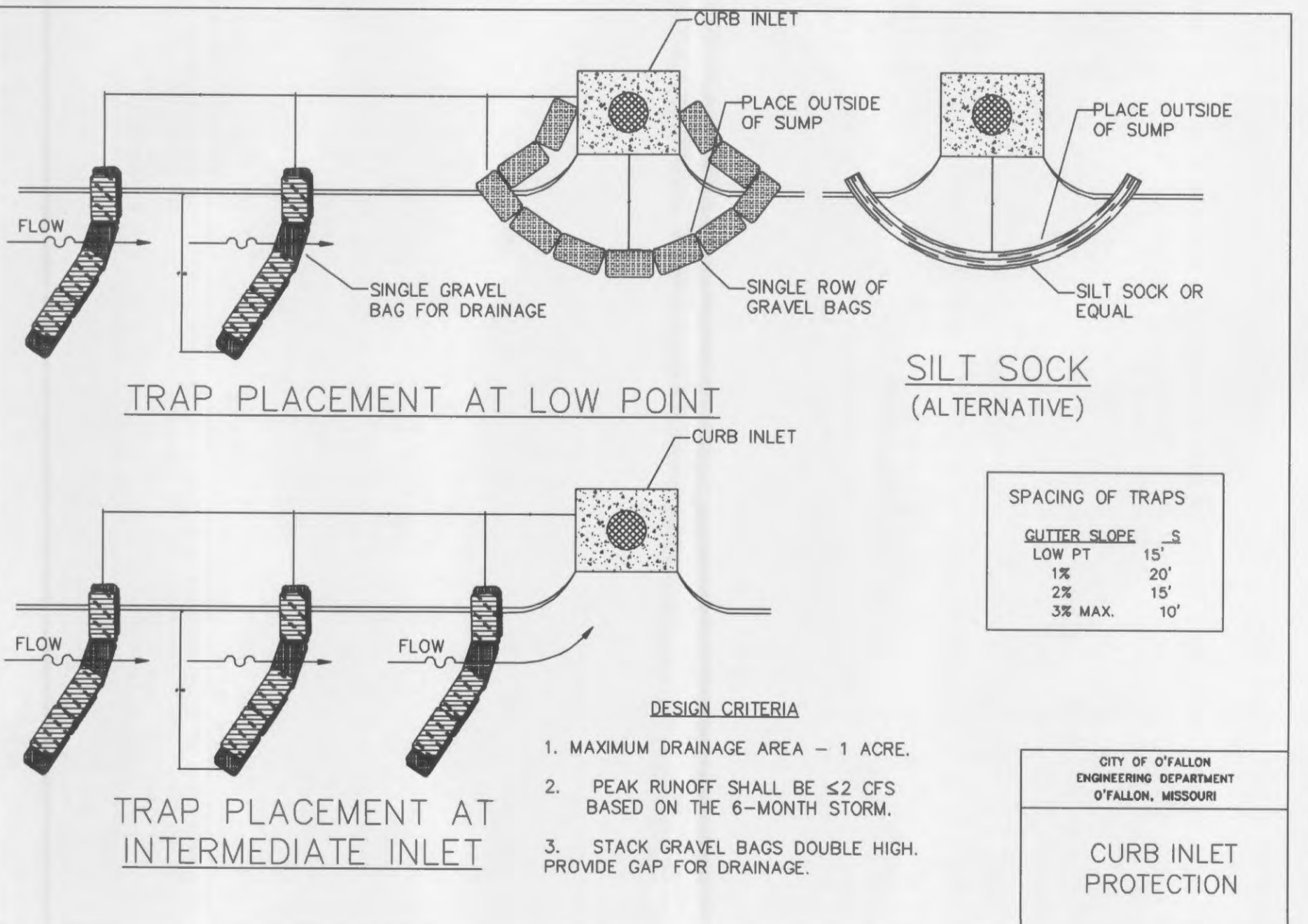


NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT REQ'D.

JOINING SECTIONS OF SILT FENCE

- CRITERIA
- SILT FENCE SHALL BE 24 INCHES HIGH.
 - SILT FENCE SHALL NOT BE USED FOR CONCENTRATED FLOWS.
 - GEOSYNTHETIC REINFORCED SILT FENCE BACKING MAY BE USED IN LIEU OF WIRE MESH.
 - WIRE MESH WILL BE USED AT LOCATIONS SHOWN ON THE APPROVED SWPPP.

SILT FENCE INSTALLATION SHEET FLOW (ONLY)



DESIGN CRITERIA

- MAXIMUM DRAINAGE AREA - 1 ACRE.
- PEAK RUNOFF SHALL BE ≤ 2 CFS BASED ON THE 6-MONTH STORM.
- STACK GRAVEL BAGS DOUBLE HIGH. PROVIDE GAP FOR DRAINAGE.

CURB INLET PROTECTION

ST. LOUIS RV SALES

DETAILS

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448

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07/25/12