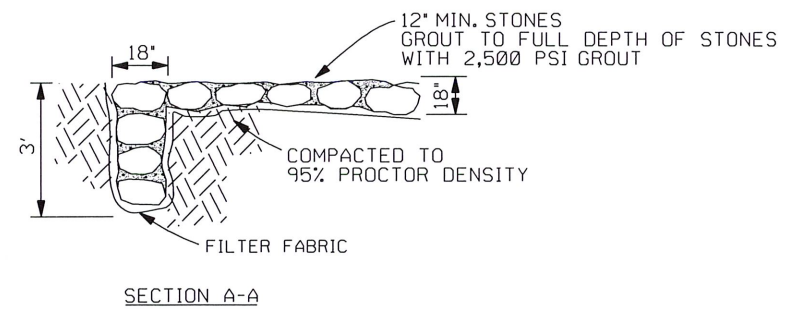
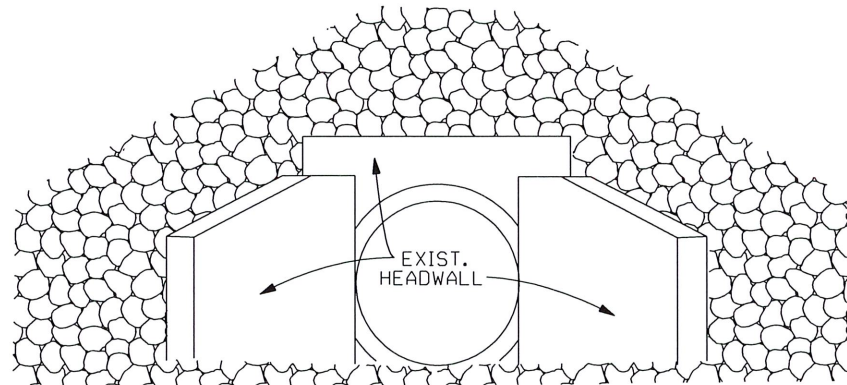


**NOTE:**

1. GROUTED RIPRAP DETAIL TO BE USED ONLY UPON APPROVAL FROM CITY OF TULSA STORMWATER DESIGN DEPARTMENT.
2. RIPRAP TO BE TOED IN 3' MINIMUM AROUND PERIMETER WITH FILTER FABRIC.
3. RIPRAP SIZE TO BE DETERMINED BY ENGINEER. FILTER FABRIC SHALL BE PLACED BETWEEN RIPRAP AND SOIL. RIPRAP TO BE PLACED SO AS NOT TO DAMAGE FILTER FABRIC.



**NOTE:**  
TURN DOWN RIPRAP ALL AROUND  
OUTSIDE PERIMETER OF RIPRAP



• FOR REFERENCE ONLY  
NEW HEADWALLS MUST BE BUILT  
TO NEW STANDARDS.

REVISION	BY	DATE

*[Signature]*  
CITY ENGINEER

*[Signature]*  
DESIGN MANAGER

CITY OF TULSA, OKLAHOMA  
ENGINEERING SERVICES DEPARTMENT

GROUTED RIPRAP PROTECTION  
FOR EXISTING HEADWALL  
(FOR REFERENCE ONLY)

DATE: MARCH 2022

STD. 778