











NW SHORELINE ARMORING  
 DETAIL A - 1 TON/FT  
 CLASS E REVETMENT - 312 TONS

NE SHORELINE ARMORING  
 DETAIL A - 1.5 TON/FT  
 CLASS E REVETMENT - 1,461 TONS

WEST BOAT RAMP SHORELINE ARMORING  
 DETAIL A - 1 TON/FT  
 CLASS E REVETMENT - 310 TONS

FILL PROPWASH HOLE  
 CLASS E REVETMENT - 8 TONS

SW SHORELINE ARMORING  
 DETAIL C - 1.75 TON/FT  
 CLASS E REVETMENT - 2,554 TONS  
 ENGINEERING FABRIC - 2,481 SY

REMOVE ALL DEBRIS FROM  
 THE DRAWDOWN INTAKE  
 DEBRIS MAY BE LEFT IN  
 THE LAKE BOTTOM AS  
 APPROVED BY THE ENGINEER

JETTY SHORELINE ARMORING  
 DETAIL A - 1.5 TON/FT  
 CLASS E REVETMENT - 113 TONS

JETTY SHORELINE ARMORING  
 DETAIL A - 1.5 TON/FT  
 CLASS E REVETMENT - 113 TONS

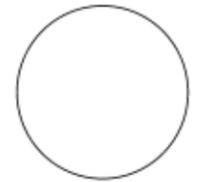
SW SHORELINE ARMORING  
 DETAIL B - 1.75 TON/FT  
 CLASS E REVETMENT - 272 TONS  
 ENGINEERING FABRIC - 264 SY

DAM SHORELINE ARMORING  
 DETAIL A - 1.5 TON/FT  
 CLASS E REVETMENT - 1,911 TONS  
 DO NOT PLACE RIPRAP WITHIN 15  
 FEET OF VALVE TOWER

SW SHORELINE ARMORING  
 DETAIL C - 1.75 TON/FT  
 CLASS E REVETMENT - 1,430 TONS  
 ENGINEERING FABRIC - 1,389 SY



CONSULTANT:



IOWA DEPARTMENT OF  
 NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING  
 502 E. 9TH ST., DES MOINES, IA 50319-0034



SITE PLAN

SHORELINE STABILIZATION FOR:

UNION GROVE STATE PARK

TAMA COUNTY

NO.	DATE	REVISION

DRAWN BY: PROJECT NUMBER:  
 14-05-86-04

CHKD BY: DATE:

SHEET NO:

D.01