

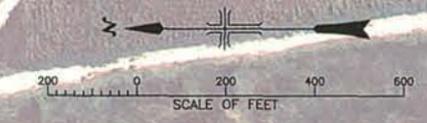
EARTHWORK VOLUME REPORT

EXISTING SURFACE	DESIGN SURFACE	CUT (YD ³)	FILL (YD ³)	NET - CUT (YD ³)
EXISTING GROUND	POND 1	70,350	16,124	54,229
EXISTING GROUND	POND 2	118,711	18,912	99,799
EXISTING GROUND	POND 3	109,758	32,565	77,194
EXISTING GROUND	POND 4	120,729	19,871	100,858
EXISTING GROUND	POND 5	188,212	34,061	154,151
EXISTING GROUND	POND 6	75,357	16,894	58,463
EXISTING GROUND	ALL PONDS & ROADS	693,829	204,447	489,381

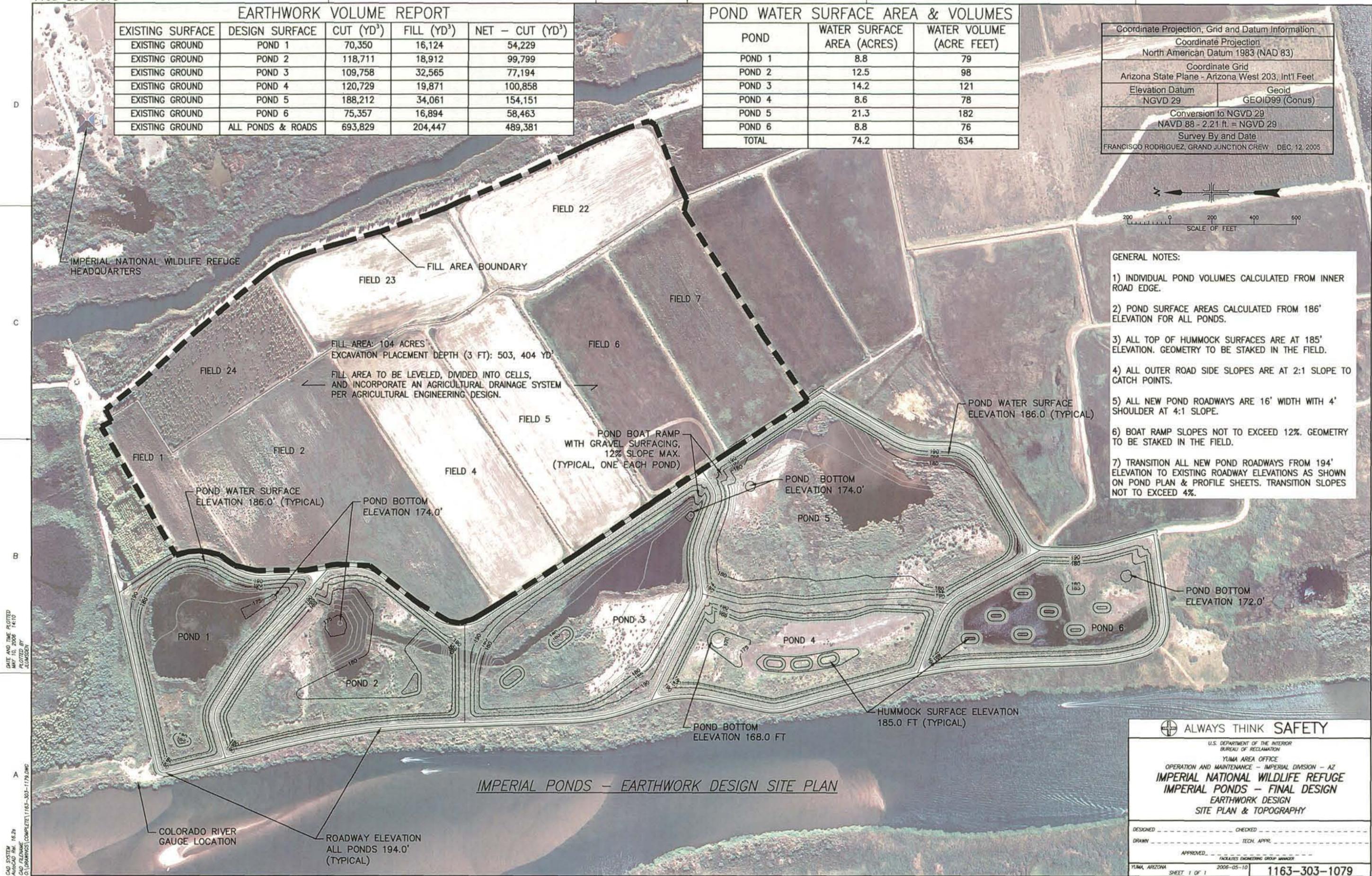
POND WATER SURFACE AREA & VOLUMES

POND	WATER SURFACE AREA (ACRES)	WATER VOLUME (ACRE FEET)
POND 1	8.8	79
POND 2	12.5	98
POND 3	14.2	121
POND 4	8.6	78
POND 5	21.3	182
POND 6	8.8	76
TOTAL	74.2	634

Coordinate Projection, Grid and Datum Information	
Coordinate Projection North American Datum 1983 (NAD 83)	
Coordinate Grid Arizona State Plane - Arizona West 203, Int'l Feet	
Elevation Datum NGVD 29	Geoid GEOID99 (Conus)
Conversion to NGVD 29 NAVD 88 - 2.21 ft. = NGVD 29	
Survey By and Date FRANCISCO RODRIGUEZ, GRAND JUNCTION CREW DEC. 12, 2005	



- GENERAL NOTES:**
- 1) INDIVIDUAL POND VOLUMES CALCULATED FROM INNER ROAD EDGE.
 - 2) POND SURFACE AREAS CALCULATED FROM 186' ELEVATION FOR ALL PONDS.
 - 3) ALL TOP OF HUMMOCK SURFACES ARE AT 185' ELEVATION. GEOMETRY TO BE STAKED IN THE FIELD.
 - 4) ALL OUTER ROAD SIDE SLOPES ARE AT 2:1 SLOPE TO CATCH POINTS.
 - 5) ALL NEW POND ROADWAYS ARE 16' WIDTH WITH 4' SHOULDER AT 4:1 SLOPE.
 - 6) BOAT RAMP SLOPES NOT TO EXCEED 12%. GEOMETRY TO BE STAKED IN THE FIELD.
 - 7) TRANSITION ALL NEW POND ROADWAYS FROM 194' ELEVATION TO EXISTING ROADWAY ELEVATIONS AS SHOWN ON POND PLAN & PROFILE SHEETS. TRANSITION SLOPES NOT TO EXCEED 4%.



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IMPERIAL PONDS - EARTHWORK DESIGN SITE PLAN

ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YUMA AREA OFFICE
OPERATION AND MAINTENANCE - IMPERIAL DIVISION - AZ
IMPERIAL NATIONAL WILDLIFE REFUGE
IMPERIAL PONDS - FINAL DESIGN
EARTHWORK DESIGN
SITE PLAN & TOPOGRAPHY

DESIGNED: _____ CHECKED: _____
 DRAWN: _____ TECH. APPR.: _____
 APPROVED: _____ FACILITIES ENGINEERING GROUP MANAGER

YUMA, ARIZONA 2006-05-10
 SHEET 1 OF 1 **1163-303-1079**