



US Army Corps of Engineers  
Los Angeles District

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**Santa Cruz River, Paseo de las Iglesias  
Pima County, Arizona  
Final Feasibility Report  
and  
Environmental Impact Statement**

**APPENDIX J  
BASIS OF COST ESTIMATES**

July 2005

U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT  
P.O. BOX 532711  
LOS ANGELES, CALIFORNIA 90053-2325

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PLAN FORMULATION BASIS OF COST ESTIMATES  
PASEO DE LAS IGLESIAS  
FEASIBILITY REPORT

PIMA COUNTY  
TUCSON, ARIZONA

JULY 2004

The purpose of this Basis of Cost Estimate is to document the sources of data and assumptions used in developing the study cost estimates for the alternatives formulated in the Paseo de las Iglesias Feasibility Study.

Where possible, unit cost information was established from actual cost data provided by manufacturers. Additional historical data were derived from similar projects.

## A. CONSTRUCTION COSTS

The basis for each estimated quantity item and unit cost is as follows:

1. Site Preparation/Planting: All alternatives make use, to varying degrees, of the basic dry-land restoration practices of water harvesting, soil patterning, mulch and fertilizer amendment, surface grading. As alternative water budgets are increased, less use is made of these measures. All measures, however, are applied for xeroriparian plantings. Less effort is expended on modifying micro-topography for mesoriparian planting as the digging of planting pits and placement of coarse debris to facilitate capture and retention of precipitation is reduced. This trend is continued for hydroriparian plantings. Similarly, planting cost are higher for alternatives with smaller water budgets as more mature plants are used in drier planting schemes to enhance survival rates. The costs listed below include both site preparation and planting. Costs were not added for riverbottom planting on the expectation that seeding will occur naturally. Details supporting the costs identified below can be found in Attachment B.

### a. Xeroriparian Areas

- (1) Riverbottom - \$6,367/acre
- (2) Mesquite - \$18,364/acre
- (3) Shrubscrub - \$18,920/acre

### b. Mesoriparian Areas

- (1) Riverbottom - \$6,367/acre
- (2) Cottonwood-willow - \$14,750/acre
- (3) Mesquite - \$15,306/acre
- (4) Shrubscrub - \$18,403/acre

### c. Hydroriparian Areas

- (1) Riverbottom - \$6,367/acre
- (2) Cottonwood-willow - \$10,413
- (3) Mesquite - \$10,970
- (4) Shrubscrub - \$14,504

2. Subsurface Water Harvesting Basins: These features would involve excavating to a depth of approximately four feet, placing a liner membrane, and filling the excavated area with layers of appropriately sized gravel covered with granular fill.

a. Tributary Confluence – Two costs were developed for tributary basins. Deeper basins were envisioned for xeroriparian plans than for meso- and hydroriparian alternatives. Xeroriparian basin costs were increased by 40% to allow for the increase in size. In addition to components described above, tributary basins included costs for excavating and placing concrete on the downgrade side of the basin. Details supporting the costs identified below can be found in Attachment B.

(1) Xeroriparian Basin - \$140,000/acre

(2) Meso/Hydroriparian Basin - \$100,000/acre

b. Grade Control Basin – \$108,000/acre

3. Bank Treatments: Reaches of steep natural banks are modified by cutting back into the overbank to create more stable slopes. Three variations were applied as a function of the amount of land available in the overbank. Where available land is not a constraint, banks are graded to a 5-to-1 horizontal-to-vertical slope (5:1 H:V) and then vegetated. Where there is not enough land to create a 5:1 slope but sufficient space exists to create slopes between 5:1 and 2:1 the banks will be laid back to the minimum slope that can be fit into the available space. These slopes will also be vegetated however; a geotextile layer will be installed before planting to increase slope stability. In areas where insufficient space exists to accommodate 2:1 slopes, placement of rip rap or soil cement may be necessary for bank protection. Such applications will be decided on a case-by-case basis. The following unit costs were used for computing costs of vegetated banks:

a. Vegetated Bank Unit Costs –

(1) Excavation - \$3.75/cubic yard

(2) Geotextile - \$1.00/square yard

(3) Geogrid - \$3.50/square yard

(4) Labor - \$6,000/acre

(5) Haul Fill - \$9.00/cubic yard

(6) Finish Grading - \$0.10/square foot

b. Soil Cement – Stabilized non-vegetated banks were estimated at \$350.00/linear foot.

5. Perennial Flow Channel: The existing low flow channel would require grading to create a new low flow channel averaging six feet in width and one-half foot in depth. The soil comprising the bed of the new low flow channel would be amended to accelerate formation of a near surface aquitard below the streambed. This feature will help direct infiltration losses from the perennial flow laterally toward restored habitat areas to be created on either side of the channel. Grading would also create depressional areas on each side of the low flow channel approximately ten feet in width where soil saturation conditions resulting from lateral percolation would support emergent marsh communities. A cost of \$80.00 per linear foot was applied to a channel length of 39,500 feet and a lump sum of \$400,000 was added for hauling. This resulted in an estimated cost of \$3,560,000 for the perennial flow channel.

6. Irrigation: Irrigation system costs were projected by first estimating the cost of a main line running through the project, adding an estimate for feeder lines running off the main and then installing subsurface drip irrigation to planted areas. Temporary irrigation was estimated based on

either using center pivot system or gated pipe system, depending upon the site conditions. Details supporting the costs below can be found in Attachment B.

- a. Main Irrigation Line - \$4,000,000/L.S.
- b. Primary Distribution from Main - \$7,509,350/L.S.
- c. Secondary Distribution to plants - \$1,000/acre
- d. Temporary Irrigation - \$400/acre or \$50/acre

7. Diversion: The low flow diversion would be accomplished by placing a diversion structure in the New West Branch channel to pond low flows and placing culvert storm water pipes through the bank to the newly excavated reach of channel between the NWB bank and remaining OWB channel. The cost of this feature was estimated at \$158,000. Details supporting this cost can be found in Attachment B.

8. Contingency: A 25% contingency was added, in accordance with Corps of Engineers regulations for feasibility study construction cost estimates.

9. Planning, Engineering & Design (PED) and Engineering During Construction

(EDC): The PED and EDC were 10% and 1%, respectively.

10. Supervision & Administration (S&A): A 6.5% S&A cost was taken on the construction cost. This percentage is required by the Corps of Engineers regulations.

## B. OPERATION AND MAINTENANCE COSTS

The wetland areas will be designed to closely approximate a natural riparian ecosystem and should be self-sustaining as long as sufficient amounts of water are provided. However, as in any man-made controlled system, maintenance will be required. Over time, some restored vegetated areas will require periodic pruning to reduce impacts on channel flow conveyance. The assumed maintenance schedule for the various features is shown in the table below:

1. Invasive Control: \$59/acre as recommended by Parks & Recreation, Pima County.

2. Biological Survey/Vegetation Management:

- Qualitative Survey - Assume one biologist reviews site one day per month and writes report. Total cost = 16hr/month or 192hr/year at \$30/hr or \$5,760/year

- Quantitative Survey – Assume 2 biologists sample for 2 weeks, twice a year and writes report. Total cost = 320hr/year at \$30/hr or \$9,600/year

- Vegetation Management – Assume 2 labors for 1 day, twice a year and \$200 per day equipment. Total cost = \$360/acre/year

3. Irrigation System Regular Maintenance:

- Assumed 1% of system cost per year for irrigation main and primary distribution systems.

4. Paved Trail Maintenance: Approximately 1,000 tons every five years at @ 36.50/ton.

5. Comfrot Station Maintenance: Crew of 2 laborers @ \$160/day, 1.5 times/week, and \$75 materials.

4. Periodic O&M: Assumed that features in the active channel or on the terraces above the active channel but between the banks would be replaced at full cost in year 25 and 40.

Attachment A  
Alternative Cost Details



## ALTERNATIVE COST SUMMARY

		1A	1B	2	3A	3B	3C	3D	3E	4A	4B	4C	4D	4E	4F
Construction Costs		\$34,957,246	\$39,745,057	\$28,191,262	\$9,806,378	\$35,384,625	\$9,075,675	\$34,012,721	\$39,926,981	\$24,308,004	\$24,259,102	\$40,104,369	\$34,573,054	\$45,159,929	\$43,258,505
Real Estate Costs		\$14,740,828	\$14,740,828	\$14,687,660	\$2,379,268	\$14,687,660	\$2,432,436	\$14,740,828	\$14,740,828	\$2,286,224	\$4,785,120	\$14,873,748	\$4,638,908	\$14,342,068	\$14,342,068
Contingency	25%	\$12,424,518	\$13,621,471	\$10,719,731	\$3,046,412	\$12,518,071	\$2,877,028	\$12,188,387	\$13,666,952	\$6,648,557	\$7,261,056	\$13,744,529	\$9,802,990	\$14,875,499	\$14,400,143
Planning, Survey, Engineering and Design	10%	\$3,495,725	\$3,974,506	\$2,819,126	\$980,638	\$3,538,462	\$907,567	\$3,401,272	\$3,992,698	\$2,430,800	\$2,425,910	\$4,010,437	\$3,457,305	\$4,515,993	\$4,325,850
Engineering During Construction	1%	\$349,572	\$397,451	\$281,913	\$98,064	\$353,846	\$90,757	\$340,127	\$399,270	\$243,080	\$242,591	\$401,044	\$345,731	\$451,599	\$432,585
Supervision and Administration	6.5%	\$2,272,221	\$2,583,429	\$1,832,432	\$637,415	\$2,300,001	\$589,919	\$2,210,827	\$2,595,254	\$1,580,020	\$1,576,842	\$2,606,784	\$2,247,249	\$2,935,395	\$2,811,803
Adaptive Management	3%	\$1,048,717	\$1,192,352	\$845,738	\$294,191	\$1,061,539	\$272,270	\$1,020,382	\$1,197,809	\$729,240	\$727,773	\$1,203,131	\$1,037,192	\$1,354,798	\$1,297,755
<b>Total First Costs</b>		<b>\$69,288,827</b>	<b>\$76,255,092</b>	<b>\$59,377,862</b>	<b>\$17,242,365</b>	<b>\$69,844,204</b>	<b>\$16,245,652</b>	<b>\$67,914,545</b>	<b>\$76,519,793</b>	<b>\$38,225,926</b>	<b>\$41,278,394</b>	<b>\$76,944,042</b>	<b>\$56,102,428</b>	<b>\$83,635,282</b>	<b>\$80,868,710</b>
IDC		\$3,765,634	\$4,144,229	\$3,227,004	\$937,069	\$3,795,817	\$882,901	\$3,690,946	\$4,158,615	\$2,077,461	\$2,243,353	\$4,181,671	\$3,048,994	\$4,545,320	\$4,394,965
<b>Gross Investment</b>		<b>\$73,054,462</b>	<b>\$80,399,322</b>	<b>\$62,604,865</b>	<b>\$18,179,435</b>	<b>\$73,640,021</b>	<b>\$17,128,553</b>	<b>\$71,605,491</b>	<b>\$80,678,407</b>	<b>\$40,303,387</b>	<b>\$43,521,747</b>	<b>\$81,125,713</b>	<b>\$59,151,422</b>	<b>\$88,180,602</b>	<b>\$85,263,675</b>
<b>Average Annual Cost</b>		<b>\$4,394,110</b>	<b>\$4,835,892</b>	<b>\$3,765,583</b>	<b>\$1,093,464</b>	<b>\$4,429,331</b>	<b>\$1,030,255</b>	<b>\$4,306,957</b>	<b>\$4,852,678</b>	<b>\$2,424,185</b>	<b>\$2,617,764</b>	<b>\$4,879,583</b>	<b>\$3,557,864</b>	<b>\$5,303,923</b>	<b>\$5,128,475</b>
O&M															
Annual O&M (Including Water)		\$549,915	\$550,619	\$87,495	\$97,737	\$152,371	\$528,826	\$583,460	\$559,016	\$887,500	\$847,357	\$942,252	\$1,007,112	\$1,074,122	\$1,308,294
Periodic O&M		\$343,948	\$338,131	\$341,023	\$135,173	\$341,023	\$107,578	\$313,427	\$307,610	\$308,886	\$428,928	\$434,745	\$350,315	\$356,132	\$350,315
<b>Total O&amp;M</b>		<b>\$893,863</b>	<b>\$888,749</b>	<b>\$428,518</b>	<b>\$232,910</b>	<b>\$493,394</b>	<b>\$636,403</b>	<b>\$896,887</b>	<b>\$866,625</b>	<b>\$1,196,386</b>	<b>\$1,276,285</b>	<b>\$1,376,997</b>	<b>\$1,357,426</b>	<b>\$1,430,254</b>	<b>\$1,658,608</b>
<b>Total Average Annual Cost</b>		<b>\$5,287,973</b>	<b>\$5,724,641</b>	<b>\$4,194,101</b>	<b>\$1,326,375</b>	<b>\$4,922,724</b>	<b>\$1,666,659</b>	<b>\$5,203,844</b>	<b>\$5,719,304</b>	<b>\$3,620,570</b>	<b>\$3,894,049</b>	<b>\$6,256,580</b>	<b>\$4,915,291</b>	<b>\$6,734,177</b>	<b>\$6,787,083</b>

**PASEO DE LAS IGLESIAS FEASIBILITY STUDY MCACES SUMMARY TABLE**

CODE OF ACCT		QTY	UNIT	UNIT PRICE	COST WITHOUT CONTINGENCY	CONTINGENCY	COST WITH CONTINGENCY	CONTINGENCY PERCENTAGE Note (1)
01----	<b>Real Estate</b>	1	LS	\$26,242,106	26,242,106	0	26,242,106	0%
	<b>Construction</b>							
09----	Historic Floodplain	1	EA	12,429,160	12,429,160	1,864,374	14,293,533	15%
09----	Graded Slope	1	EA	11,449,481	11,449,481	1,717,422	13,166,903	15%
09----	Natural Slope	1	EA	1,027,626	1,027,626	154,144	1,181,770	15%
09----	Second Bench	1	EA	6,824,456	6,824,456	1,023,668	7,848,124	15%
09----	First Bench	1	EA	2,890,600	2,890,600	433,590	3,324,190	15%
09----	Tributary Basins	1	EA	534,132	534,132	80,120	614,252	15%
09----	Grade Control Basins	1	EA	167,217	167,217	25,083	192,300	15%
09----	Hardened Slopes	1	EA	3,306,717	3,306,717	496,008	3,802,725	15%
09----	Irrigation Piping	1	EA	4,591,880	4,591,880	688,782	5,280,662	15%
09----	Paved Maintenance Roads	1	EA	1,378,125	1,378,125	206,719	1,584,844	15%
09----	Gravel Maintenance Roads	1	LS	195,201	195,201	29,280	224,481	15%
09----	Compacted Earth Maintenance Roads	1	LS	24,319	24,319	3,648	27,967	15%
09----	Bridges	1	LS	1,485,733	1,485,733	222,860	1,708,593	15%
09----	Let Down Structures	1	LS	281,619	281,619	42,243	323,862	15%
14----	<b>Recreation</b>							
14----	Parking Areas	1	LS	218,932	218,932	32,840	251,772	15%
14----	DG Trails	1	LS	192,894	192,894	28,934	221,828	15%
14----	Comfort Stations	3	EA	130,000	390,000	58,500	448,500	15%
14----	Paved Trail amenities, curb splice, ADA ramps, signs, markings	1	LS	13,000	13,000	1,950	14,950	15%
14----	Signage	21	EA	40	840	126	966	15%
14----	Rest Stops	5	EA	4,000	20,000	3,000	23,000	15%
14----	Concrete Benches	21	EA	900	18,900	2,835	21,735	15%
	<b>SUBTOTAL</b>				73,682,937	7,116,125	80,799,062	
					47,440,831		54,556,956	
30----	<b>PE&amp;D - Note (2)</b>							
	Restoration	1	LS				4,658,627	10%
	Recreation	1	LS				85,457	10%
	<b>TOTAL PED</b>						4,744,083	
31----	<b>EDC - Note (3)</b>							
	Restoration	1	LS				465,863	1%
	Recreation	1	LS				9,828	1%
	<b>TOTAL EDC</b>						475,690	
32----	S&A - Note (4)	1	LS				3,546,202	6.5%
33----	Adaptive Management - Note (5)	1	LS				1,870,205	
34----	Monitoring - Note 6	1	LS				623,304	
	<b>TOTAL PROJECT COSTS(\$)</b> (Including contingency)						92,058,546	

NOTE (1) Total Contingency is 15%

(2) Total PE&amp;D at 10%

(3) Total EDC at 1%

(4) Six and five tenths percent ( 6.5%) for S&amp;A

(5) Three percent (3%) for Adaptive Management, (applied to total with contingency).

(6) One percent (1%) for monitoring, (applied to total with contingency)

**RESTORATION****First Costs**

Construction & Real Estate	\$72,828,371
Construction Costs	\$46,586,265
Real Estate Costs	\$26,242,106
Contingency	\$6,987,940
PED	\$4,658,627
Eng. During Construction	\$465,863
Construction Mgmt	\$3,482,323
Adaptive Mgmt	\$1,870,205
Monitoring	\$623,304

Paseo\_ MCACES Summary

Total First Costs	\$90,916,632	
Interest During Construction	\$4,941,039	
Gross Investment	\$95,857,671	
Average Annual Costs	\$5,765,687	
OMRRR	\$1,869,961	
Total Average Annual Costs	\$7,635,648	
	454	\$16,819

RECREATION

First Costs		
Construction & Real Estate	\$854,566	2013500
Construction Costs	\$854,566	
Real Estate Costs	\$0	
Contingency	\$128,185	
PED	\$85,457	
Eng. During Construction	\$9,828	
Construction Mgmt	\$63,879	
Total First Costs	\$1,141,914	
Interest During Construction	\$13,123	
Gross Investment	\$1,155,037	
Average Annual Costs	\$69,474	
OMRRR	\$36,260	
Total Average Annual Costs	\$105,734	
	\$92,058,546	

Paseo de las Iglesias Feas Study  
Los Reals Road to Congress Road  
Santa Cruz River, City of  
Tucson, Pima County, Arizona

Designed By: DMA, Inc.  
Estimated By: US Army Corps Of Engineers

Prepared By: Phillip Eng  
USACE, Los Angeles District

Preparation Date: 07/19/04  
Effective Date of Pricing: 07/19/04  
Est Construction Time: 360 Days

Sales Tax: 0.00%

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This project is located in eastern Pima County, Arizona. The study area extends along the Santa Cruz River between Congress Street downstream to Los Reals Road upstream for a total length of approximately 7.5 miles. The study area varies from 0.5 miles to 1.6 miles wide and encompasses approximately 5005 acres.

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See Paseo\_MCACES Summary.xls for the input amounts)

Escalation, (Inflation/Interest During Construction) = \$4,941,039  
Contingency, Restoration = \$6,987,940

		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
01. LANDS AND DAMAGES (REAL ESTATE)													
Lands and Damages = \$26,242,106 (See Paseo_MCACES Summary.xls)													
TOTAL LANDS AND DAMAGES (REAL ESTATE)		1.00	EA			0	0	0	0	26,200,000	26,200,000	26200000	
09. CONSTRUCTION (RESTORATION)													
09. 01. IRRIGATION PLANTING													
09. 01.001. Historic Floodplain													
Excavate furrows for flood irrigation, assume furrows on 8' centers, slope not greater than 0.5%, for max. 600 lf distance, 65 acres of existing mesquite will not be disturbed, 15 acres of road (9.5 paved, 4.4 compacted earth, 1.1 gravel) will not be planted. Furrows will be seeded but not subject to other planting activities.													
09. 01.001. 1. Fencing for Erosion Control													
656 acres = 28,575,360 sf													
Square root of 28,575,360 = 5346 lf													
5346 lf x 4 = 21,384 LF (perimeter)													
AF	GC <01534 0010 >	Fencing, 11 ga, chain link, 5' high	21384	LF	ALABCLAB2	12.50	3,421	75,723	0	76,555	0	152,278	7.12
TOTAL Fencing for Erosion Control		656.00	ACR				3,421	75,723	0	76,555	0	152,278	232.13
09. 01.001. 2. Clearing & Grubbing, Debris													
-- Removal, etc.													
AF	GC <02109 0420 >	Clear & grub, burning, incinerator, light	656.00	ACR	UOEHB40A	0.28	9,338	271,648	202,076	0	0	473,723	722.14
TOTAL Clearing & Grubbing, Debris		328.00	ACR				9,338	271,648	202,076	0	0	473,723	1444.28
09. 01.001. 3. Site Preparation													
09. 01.001. 3.01. Ripping, discing to prepare (cont'd) surface.													
RSM	GC <02238 0010 >	Ripping, trap rock, soft, 200 HP dozer, ideal conditions	5900.00	CY	CODTB10B	88.75	100	2,987	4,383	0	0	7,369	1.25
Assume 10 cy/acre													
TOTAL Ripping, discing to prepare		590.00	ACR				100	2,987	4,383	0	0	7,369	12.49

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09. 01.001. 3.02. Regrade to req'd slopes, flatten (cont'd) balance cut material onsite.													
MIL GC	<02224 7020 >	Excavating, bulk, dozer, 300 HP, large area, open site, rough grade	2950.00	CY	CODTB10M	300.00	0.01 15	0.15 442	0.33 980	0.00 0	0.00 0	0.48 1,421	0.48
Assume 10 cy/acre													
TOTAL Regrade to req'd slopes, flatten		295.00	ACR				15	442	980	0	0	1,421	4.82
09. 01.001. 3.03. Regrade Surface, scraper-grader (cont'd) balance, max depth 36"													
MIL GC	<02226 3110 >	Excavation, bulk, 9 cycle/hr, push loaded self prop scraper, 16 BCY	14455	CY	CODSB33D	112.50	0.02 231	0.49 7,077	1.18 17,083	0.00 0	0.00 0	1.67 24,160	1.67
TOTAL Regrade Surface, scraper-grader		1445500	CY				231	7,077	17,083	0	0	24,160	0.02
TOTAL Site Preparation		1.00	EA				346	10,505	22,445	0	0	32,950	32950.50
09. 01.001. 4. Excavation													
CIV GC	<02224 2500 >	Excavating, bulk, light matl, 150' push, dozer, open site, 90 HP	176990	CY	CODTB10W	38.75	0.04 6,850	1.16 205,185	0.77 136,229	0.00 0	0.00 0	1.93 341,414	1.93
TOTAL Excavation		176990	CY				6,850	205,185	136,229	0	0	341,414	1.93
09. 01.001. 5. Compaction (tractor wheel, one (COFCB10G) (cont'd) pass.													
Assume the roller speed is 7 mph.													
MIL GC	<02220 5900 >	Compaction of backfill, structural, SP roller, 6" lift	529173	CY	COFCB10F	117.50	0.01 6,773	0.38 202,303	0.40 209,553	0.00 0	0.00 0	0.78 411,855	0.78
656 acres = 28,575,360 sf x 6" = 529,173 cy													
MIL GC	<	> Equip. Operators, Medium	96.37	HR	B-EQOPRMED	1.00	1.00 96	33.86 3,263	0.00 0	0.00 0	0.00 0	33.86 3,263	33.86
MIL GC	<	> Laborers, (Semi-Skilled)	48.19	HR	B-LABORER	1.00	1.00 48	22.13 1,066	0.00 0	0.00 0	0.00 0	22.13 1,066	22.13



09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
GEN GC <	> ROLLER, VIB, SD, SP 13.0T (11.8MT), 84"(2.1M)W,SHEEPS FOOT	96.37	HR	R45Z5580	1.00	0	0	5,280	0	0	5,280	54.79
TOTAL Compaction (tractor wheel, one		3561940	LF			6,918	206,632	214,833	0	0	421,465	0.12
09. 01.001. 6. Trenching for Water Supply Pipes												
MIL GC <02228 0200 >	Excavate trench, light soil, 4'-6' D, 1 CY gradall	17050	CY	COFGB12K	96.00	355	11,265	11,159	0	0	22,424	1.32
TOTAL Trenching for Water Supply Pipes		17050	CY			355	11,265	11,159	0	0	22,424	1.32
09. 01.001. 7. Pipe bedding, crushed stone												
M MIL GC <02704 0300 >	Drainage, drainage matl, 3/4" gravel fill in trench	13110	CY	CODLB6	32.50	1,210	30,281	6,100	615,383	0	651,765	49.72
TOTAL Pipe bedding, crushed stone		13110	CY			1,210	30,281	6,100	615,383	0	651,765	49.72
09. 01.001. 8. Install gated 12" PVC pipe for (cont'd) furrow flooding												
B MIL GC <02667 4560 >	Piping, water dist, PVC, class 150, SDR 18, AWWA C900, 12"	114720	LF	ULABB20A	50.00	9,178	306,245	0	329,246	137,664	773,155	6.74
M=\$2.87/lf, Delivery = \$1.20/lf See Kim Gavigan's e-mail dated 07/20/04.												
TOTAL Install gated 12" PVC pipe for		114720	LF			9,178	306,245	0	329,246	137,664	773,155	6.74
09. 01.001. 9. Install "U" outlet tubes with (cont'd) fittings, one per furrow.												
M MIL GC <02667 4430 >	Piping, water dist, 3/4", PVC, press pipe, CL200, SDR 21 coupling	5940.00	EA	ULABB20A	14.25	1,667	55,638	0	832	0	56,469	9.51
This cost item is for "U" outlet tubes. To be used for furrows, and there are 5940 furrows, each furrow requires 600 lf of tubes, then, 5940 x 600 = 3,564,000 lf 3564000 / 50' per coil = 71,280 71,280 ea x \$4.50(*) = \$320,760												

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
\$320,760 / 5940 = \$54.00/ea  (* Ryan Herco Products, (800) 848-1141, www.tygon.com, Tygon UV Resistant Tubing Formulation R3400, AAE00046, ID = 5/8, OD=7/8)												
TOTAL Install "U" outlet tubes with		5940.00	EA			1,667	55,638	0	832	0	56,469	9.51
09. 01.001.!0. Backfill pipe trench, side cast (cont'd) surplus cut on site.												
MIL GC <02215 1215 >	Backfill, trench, dozer, no compaction, 200 HP	4590.00	CY	CODTB10B	284.38	0.01 24	0.16 725	0.23 1,064	0.00 0	0.00 0	0.39 1,789	0.39
TOTAL Backfill pipe trench, side cast		4590.00	CY			24	725	1,064	0	0	1,789	0.39
09. 01.001.!1. Planting & Seeding												
09. 01.001.!1.01. Mulching, hay, 1" deep, power (cont'd) mulcher, large												
Productivity is quoted from Means Crew B65. Material cost = \$19.15/MSF x 43.56 MSF/acr = \$834.17/acr (See Eldon Kraft's spreadsheet attachment e-mailed on 07/14/04)												
M MIL GC <	> Outside Laborer	367.11	HR	X-LABORER	1.00	1.00 367	20.47 7,515	0.00 0	0.09 33	0.00 0	20.56 7,548	20.56
MIL GC <	> Outside Truck Driver, Light	367.11	HR	X-TRKDVRLT	1.00	1.00 367	25.38 9,317	0.00 0	0.00 0	0.00 0	25.38 9,317	25.38
EP GC <	> TRK,HWY, 21,000 GVW, 4X2, 2 AXLE	367.11	HR	T50FO009	1.00	0.00 0	0.00 0	15.53 5,701	0.00 0	0.00 0	15.53 5,701	15.53
GEN GC <	> HYDROMULCHER, 3,000 GAL(11,356L) TRK MTD (W/ 56,000GVW TRK)	367.11	HR	L15Z3880	1.00	0.00 0	0.00 0	29.04 10,662	0.00 0	0.00 0	29.04 10,662	29.04
USR GC <	> Material cost	558.00	ACR	N/A	0.00	0.00 0	0.00 0	0.00 0	834.17 465,467	0.00 0	834.17 465,467	834.17
TOTAL Mulching, hay, 1" deep, power		558.00	ACR			734	16,833	16,363	465,500	0	498,695	893.72

09. 01. IRRIGATION PLANTING		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.001.!1.02. Crimping, Tilling topsoil, (cont'd) 20 HP tractor, disk harrow, 6" deep												
EP GC <	> ROTARY HOE, 80" WIDE ROTERRA (ADD 40 HP PTO TRACTOR)	2232.00	HR	T10LE001	1.00	0	0.00	1.29	0.00	0.00	1.29	1.29
MAP GC <	> TRACTOR,WH,FARM, 40- 59HP, 2X4	2232.00	HR	T25JD005	1.00	0	0.00	7.67	0.00	0.00	7.67	7.67
MIL GC <	> Outside Equip. Operator, Light	2232.00	HR	X-EQOPRLT	1.00	2,232	30.80	0.00	0.00	0.00	30.80	30.80
TOTAL Crimping, Tilling topsoil,		558.00	ACR			2,232	68,754	19,991	0	0	88,745	159.04
09. 01.001.!1.03. Seeding, athletic fld mix,												
M RSM GC <02932 0010 >	Seeding, athletic field mix, 8#/MSFpush spreader	27138	MSF	ALABCLAB1	1.00	27,138	22.13	0.00	47.42	0.00	69.55	69.55
623 acres = 27,137,880 sf = 27,138 MSF												
TOTAL Seeding, athletic fld mix,		623.00	ACR			27,138	600,618	0	1286884	0	1,887,502	3029.70
09. 01.001.!1.04. Place Coarse Woody debris/rocks												
M MIL GC <	> Outside Laborer (4)	17856	HR	X-LABORER	1.00	17,856	20.47	0.00	0.00	0.00	20.47	20.47
USR GC <	> Material and equipment	558.00	ACR	N/A	0.00	0	0.00	50.00	50.00	0.00	100.00	100.00
TOTAL Place Coarse Woody debris/rocks		558.00	ACR			17,856	365,541	27,900	27,900	0	421,341	755.09
09. 01.001.!1.05. Plant Mesquite/Shrub mix using (cont'd) 5 gallon plants.												
USR GC <	> Planting of 5-gallon plants See bid result of Rio Salado Ph 1A	250729	EA		0.00	0	0.00	0.00	0.00	15.00	15.00	15.00
TOTAL Plant Mesquite/Shrub mix using		250729	EA			0	0	0	0	3,760,935	3,760,935	15.00
TOTAL Planting & Seeding		558.00	ACR			47,960	1051746	64,254	1780284	3,760,935	6,657,218	11930.50
TOTAL Historic Floodplain		1.00	EA			87,267	2225592	658,160	2802300	3,898,599	9,584,651	9584651

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.005. Graded Slope Grade steep banks to 5:1 slope (20%), install 8" PVC leach field pipe for subsurface irrigation, pipes 10' c-c.												
09. 01.005. 1. Fencing for Erosion Control 102 acr = 4,443,120 sf Square root of 4,443,120 = 2108 lf 2108 lf x 4 = 8,432 lf (perimeter)												
AF	GC <01534 0010 >	Fencing, 11 ga, chain link, 5' high	8432.00	LF	ALABCLAB2	12.50	0.16 1,349	3.54 29,859	0.00 0	3.58 30,187	0.00 0	7.12 60,045
TOTAL Fencing for Erosion Control		102.00 ACR					1,349	29,859	0	30,187	0	588.68
09. 01.005. 2. Clearing & Grubbing, debris (cont'd) removal, etc.												
AF	GC <02109 0420 >	Clear & grub, burning, incinerator, light	51.00	ACR	UOEHB40A	0.28	14.23 726	414.10 21,119	308.04 15,710	0.00 0	0.00 0	722.14 36,829
TOTAL Clearing & Grubbing, debris		51.00 ACR					726	21,119	15,710	0	0	722.14
09. 01.005. 3. Excavation, str1, mach excav. (cont'd) sand/loam, 2 cy bkt												
MIL	GC <02228 0372 >	Excavate trench, mdm soil, 6'-10' D, 2 CY excavator	1213390	CY	CODEB12C	256.50	0.01 9,464	0.25 300,071	0.28 341,812	0.00 0	0.00 0	0.53 641,883
TOTAL Excavation, str1, mach excav.		1213390 CY					9,464	300,071	341,812	0	0	0.53
09. 01.005. 4. Excavation, steep slopes, 5:1												
09. 01.005. 4.01. Hauling, no loading, 16.5 cy (cont'd) dump trailer, 10 mile RT												
MIL	GC <02234 1115 >	Hauling, hwy haulers, 16.5 CY, 6 mi round trip @ 40 MPH (2.1 cyc/hr)	1213390	CY	CTDHB34C	35.00	0.03 34,703	0.77 937,101	1.44 1753227	0.00 0	0.00 0	2.22 2,690,328
TOTAL Hauling, no loading, 16.5 cy		1213390 CY					34,703	937,101	1753227	0	0	2.22
09. 01.005. 4.02. Fill, spread dumped material, (cont'd) by dozer, no compaction												
MIL	GC <02215 1215 >	Backfill, trench, dozer, no compaction, 200 HP	1213390	CY	CODTB10B	284.38	0.01 6,431	0.16 191,716	0.23 281,264	0.00 0	0.00 0	0.39 472,979

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Fill, spread dumped material,		1213390	CY			6,431	191,716	281,264	0	0	472,979	0.39
09. 01.005. 4.03. Compaction, sheepfoot/wobbly (cont'd) whl rlr, 12" lifts, 2 passes												
AF GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	1213390	CY	COFCB32F	600.00	6,067	167,933	189,046	0	0	356,979	0.29
TOTAL Compaction, sheepfoot/wobbly		1213390	CY			6,067	167,933	189,046	0	0	356,979	0.29
TOTAL Excavation, steep slopes, 5:1		1213390	CY			47,201	1296750	2223537	0	0	3,520,287	2.90
09. 01.005. 5. Fine grading to 20% slope, (cont'd) for irregular areas, adverse cond.												
MIL GC <02226 4100 >	Excavation, bulk, fine grade, 3 passes w/grader	5324.00	CSY	COFGB11L	2.00	5,324	149,044	93,995	0	0	243,040	45.65
110 acre = 5324 CSY												
TOTAL Fine grading to 20% slope,		110.00	ACR			5,324	149,044	93,995	0	0	243,040	2209.45
09. 01.005. 6. Header Pipe Laying												
09. 01.005. 6.01. Excavate header trench, 12" dep. (con't) by 18", 1-1/2 CY hoe												
MIL GC <02228 0340 >	Excavate trench, lt soil, 6'-10' D, 1.5 CY excavator	2540.00	CY	CODEB12B	242.50	21	664	615	0	0	1,279	0.50
TOTAL Excavate header trench, 12" dep.		2540.00	CY			21	664	615	0	0	1,279	0.50
09. 01.005. 6.02. Header Trench bedding, 3/4" (con't) gravel pipe support												
M MIL GC <02244 1510 >	Base course, crushed stone, 3/4" max size, compacted, 12"D, large areas	1020.00	CY	COFGB36C	54.38	94	2,846	3,850	16,320	0	23,017	22.57
TOTAL Header Trench bedding, 3/4"		1020.00	CY			94	2,846	3,850	16,320	0	23,017	22.57

09. 01. IRRIGATION PLANTING		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.005. 6.03. Install medium diam. PVC Header (cont'd) pipe (8")												
M MIL GC <02667 4060 >	Piping, water dist, 8", PVC, press pipe, class 200, SDR 21	7620.00	LF	ULABB20A	40.00	0.10 762	3.34 25,427	0.00 0	9.46 72,085	0.00 0	12.80 97,512	12.80
TOTAL Install medium diam. PVC Header		7620.00	LF			762	25,427	0	72,085	0	97,512	12.80
09. 01.005. 6.04. Backfill trench, FE loader, (cont') whl mtd., 1CY bkt, min haul												
MIL GC <02215 1220 >	Backfill, trench, front-end loader, 40 - 60 HP, no compaction	1020.00	CY	CODFB10N	50.00	0.03 31	0.90 916	0.74 759	0.00 0	0.00 0	1.64 1,675	1.64
TOTAL Backfill trench, FE loader,		1020.00	CY			31	916	759	0	0	1,675	1.64
09. 01.005. 6.05. Hauling, surplus cut mat'l, (con't) no loading, 10 mile RT												
AF GC <02234 0555 >	Hauling, hwy haulers, 12 CY, 12 mile round trip @ base wide rate	1530.00	CY	COEIB34B	20.00	0.05 77	1.35 2,068	2.40 3,666	0.00 0	0.00 0	3.75 5,734	3.75
TOTAL Hauling, surplus cut mat'l,		1530.00	CY			77	2,068	3,666	0	0	5,734	3.75
TOTAL Header Pipe Laying		7620.00	LF			984	31,922	8,890	88,405	0	129,218	16.96
09. 01.005. 7. 8" PVC Leach Pipe Laying												
09. 01.005. 7.01. Excavate trench, 12" depth by (cont'd) 36", 1-1/2" CY backhoe												
MIL GC <02228 0340 >	Excavate trench, 1t soil, 6'-10' D, 1.5 CY excavator	99020	CY	CODEB12B	242.50	0.01 812	0.26 25,894	0.24 23,973	0.00 0	0.00 0	0.50 49,866	0.50
TOTAL Excavate trench, 12" depth by		99020	CY			812	25,894	23,973	0	0	49,866	0.50
09. 01.005. 7.02. Install low perm geotextile in (cont'd) trench as pipe bedding												
M CIV GC <02250 2130 >	Geotextile fabric, 60 mil thick, non-woven polypropylene	148700	SY	ULABA2	187.50	0.02 2,379	0.38 56,179	0.10 14,662	0.61 90,707	0.00 0	1.09 161,548	1.09
TOTAL Install low perm geotextile in		148700	SY			2,379	56,179	14,662	90,707	0	161,548	1.09

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.005. 7.03. Install 8" PVC leach pipe for (cont'd) subsurface irrigation												
B MIL GC <02667 4060 >	Piping, water dist, 8", PVC, press pipe, class 200, SDR 21	445590	LF	ULABB20A	50.00	35,647	1189503	0	623,826	133,677	1,947,006	4.37
Productivity = 50lf/hr M=\$1.40/lf, Delivery = \$0.30/lf (See Gavigan's e-mail dated 07/20/04)												
TOTAL Install 8" PVC leach pipe for		445590	LF			35,647	1189503	0	623,826	133,677	1,947,006	4.37
09. 01.005. 7.04. Install leach pipe filter "sock"												
A call was made to Crumpler Plastic Pipe, Inc. www.cpp-pipe.com, (800) 334-5071 on 05/27/04 for a price quotation of "Silt Guard Filter Sock", part #0820020b, Farm Slots Sock, 20' lengths. "Emilee" quoted that the material cost is \$1.21/lf, and the freight is about \$1,770 to \$2,100. A truckload can be 5000'. From their plant in North Carolina to Phoenix, AZ is about 1,000 mile in distance.												
Assume a medium freight cost of \$2,000 per truckload, then, the cost per linear foot of the pipe filter sock is:												
$\$1.21 + (\$2,000 / 5000') = \$1.61/lf \text{ or transportation cost is } \$0.40/lf$												
USR GC <	> Leach Pipe Filter Sock	445590	LF		0.00	0	0	0	539,164	178,236	717,400	1.61
TOTAL Install leach pipe filter "sock"		445590	LF			0	0	0	539,164	178,236	717,400	1.61
09. 01.005. 7.05. Install pipe fittings as needed												
There is a total of 44560 pipe fittings for this cost item. Let's use Elbows = 50% x 44560 = 22,280 ea Tees = 30% x 44560 = 13,368 ea Couplings = 10% x 44560 = 4,456 ea Reducers = 10% x 44560 = 4,456 ea												
TOTAL Install pipe fittings as needed						0	12,000	0	15,000	0	27,000	
09. 01.005. 7.06. Backfill trench, FE loader, whl (cont'd) mtd, 1 CY bkt, min haul												
MIL GC <02215 1220 >	Backfill, trench, front-end loader, 40 - 60 HP, no compaction	93380	CY	CODFB10N	50.00	2,801	83,902	69,465	0	0	153,367	1.64
TOTAL Backfill trench, FE loader, whl		93380	CY			2,801	83,902	69,465	0	0	153,367	1.64

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST			
09. 01.005. 7.07. Hauling, surplus cut matl, no (cont'd) loading, 10 mile RT															
AF	GC	<02234	0555	> Hauling, hwy haulers, 12 CY, 12 mile round trip @ base wide rate	5790.00	CY	COEIB34B	20.00	0.05 290	1.35 7,826	2.40 13,875	0.00 0	0.00 0	3.75 21,701	3.75
TOTAL Hauling, surplus cut matl, no		5790.00		CY					290	7,826	13,875	0	0	21,701	3.75
TOTAL 8" PVC Leach Pipe Laying		445590		LF					41,929	1375303	121,975	1268697	311,913	3,077,888	6.91
09. 01.005. 8. Planting & Seeding															
09. 01.005. 8.01. Mulch, hay, 1" deep, power (cont'd) mulcher, large															
M	MIL	GC	<	> Outside Laborer	67.11	HR	X-LABORER	1.00	1.00 67	20.47 1,374	0.00 0	0.09 6	0.00 0	20.56 1,380	20.56
MIL	GC	<	> Outside Truck Driver, Light	67.11	HR	X-TRKDVRLT	1.00	1.00 67	25.38 1,703	0.00 0	0.00 0	0.00 0	0.00 0	25.38 1,703	25.38
EP	GC	<	> TRK,HWY, 21,000 GVW, 4X2, 2 AXLE	67.11	HR	T50FO009	1.00	0.00 0	0.00 0	15.53 1,042	0.00 0	0.00 0	0.00 0	15.53 1,042	15.53
GEN	GC	<	> HYDROMULCHER, 3,000 GAL(11,356L) TRK MTD (W/ 56,000GVW TRK)	67.11	HR	L15Z3880	1.00	0.00 0	0.00 0	29.04 1,949	0.00 0	0.00 0	0.00 0	29.04 1,949	29.04
USR	GC	<	> Material cost	102.00	ACR	N/A	0.00	0.00 0	0.00 0	0.00 0	834.17 85,085	0.00 0	0.00 0	834.17 85,085	834.17
TOTAL Mulch, hay, 1" deep, power		102.00		ACR					134	3,077	2,991	85,091	0	91,159	893.72
09. 01.005. 8.02. Crimping, tilling topsoil (cont'd) 20 HP tractor, disk harrow, 6" deep															
EP	GC	<	> ROTARY HOE, 80" WIDE ROTERRA (ADD 40 HP PTO TRACTOR)	408.00	HR	T10LE001	1.00	0.00 0	0.00 0	1.29 526	0.00 0	0.00 0	0.00 0	1.29 526	1.29
MAP	GC	<	> TRACTOR,WH,FARM, 40- 59HP, 2X4	408.00	HR	T25JD005	1.00	0.00 0	0.00 0	7.67 3,128	0.00 0	0.00 0	0.00 0	7.67 3,128	7.67
MIL	GC	<	> Outside Equip. Operator, Light	408.00	HR	X-EQOPRLT	1.00	1.00 408	30.80 12,568	0.00 0	0.00 0	0.00 0	0.00 0	30.80 12,568	30.80
TOTAL Crimping, tilling topsoil		102.00		ACR					408	12,568	3,654	0	0	16,222	159.04



09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
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09. 01.005. 8.03. Seeding, athletic fld mix,												
M RSM GC <02932 0010 >	Seeding, athletic field mix, 8#/MSFpush spreader	4443.12	MSF	ALABCLAB1	1.00	4,443	98,335	0	210,693	0	309,028	69.55
102 acres = 4,443.12 msf												
TOTAL Seeding, athletic fld mix,		102.00	ACR			4,443	98,335	0	210,693	0	309,028	3029.69
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09. 01.005. 8.04. Place Coarse Woody debris/rocks												
M MIL GC <	> Outside Laborer (4)	3264.00	HR	X-LABORER	1.00	3,264	66,819	0	0	0	66,819	20.47
USR GC <	> Material and equipment	102.00	ACR	N/A	0.00	0	0	5,100	5,100	0	10,200	100.00
TOTAL Place Coarse Woody debris/rocks		102.00	ACR			3,264	66,819	5,100	5,100	0	77,019	755.09
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09. 01.005. 8.05. Plant Mesquite/Shrub mix using (cont'd) 5 gallon plants												
USR GC <	> Planting of 5-gallon plants See bid result of Rio Salado Ph 1A	45675	EA		0.00	0	0	0	0	685,125	685,125	15.00
TOTAL Plant Mesquite/Shrub mix using		45675	EA			0	0	0	0	685,125	685,125	15.00
TOTAL Planting & Seeding		102.00	ACR			8,249	180,799	11,745	300,884	685,125	1,178,554	11554.45
TOTAL Graded Slope		1.00	EA			115,227	3384867	2817665	1688173	997,038	8,887,743	8887743
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09. 01.010. Natural Slope Install 8" PVC leach field pipe for subsurface irrigation on natural slopes, pipes set at 10' c-c												
09. 01.010. 1. Fencing for Erosion Control												
AF GC <01534 0010 >	Fencing, 11 ga, chain link, 5' high	3542.00	LF	ALABCLAB2	12.50	567	12,543	0	12,680	0	25,223	7.12
18 acres = 784,080 sf Perimeter = 3542 lf												
TOTAL Fencing for Erosion Control		18.00	ACR			567	12,543	0	12,680	0	25,223	1401.27
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09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09. 01.010. 2. Clearing and Grubbing, debris (cont'd) removal, etc.													
AF	GC <02109 0420 >	Clear & grub, burning, incinerator, light	13.00	ACR	UOEHB40A	0.28	14.23 185	414.10 5,383	308.04 4,005	0.00 0	0.00 0	722.14 9,388	722.14
TOTAL Clearing and Grubbing, debris		13.00	ACR			185	5,383	4,005	0	0	9,388	722.14	
09. 01.010. 3. Header Trenching													
09. 01.010. 3.01. Excavate header trench, 12" dep. (cont'd) by 18", 1-1/2 CY hoe													
MIL	GC <02228 0340 >	Excavate trench, lt soil, 6'-10' D, 1.5 CY excavator	86.00	CY	CODEB12B	242.50	0.01 1	0.26 22	0.24 21	0.00 0	0.00 0	0.50 43	0.50
TOTAL Excavate header trench, 12" dep.		86.00	CY			1	22	21	0	0	43	0.50	
09. 01.010. 3.02. Header Trench bedding, 3/4" (cont'd) gravel pipe support													
M	MIL GC <02244 1510 >	Base course, crushed stone, 3/4" max size, compacted, 12"D, large areas	35.00	CY	COFGB36C	54.38	0.09 3	2.79 98	3.77 132	16.00 560	0.00 0	22.57 790	22.57
TOTAL Header Trench bedding, 3/4"		35.00	CY			3	98	132	560	0	790	22.57	
09. 01.010. 3.03. Install med. diam. PVC Header (cont'd) pipe (8" ?)													
M	MIL GC <02667 4060 >	Piping, water dist, 8", PVC, press pipe, class 200, SDR 21	1520.00	LF	ULABB20A	40.00	0.10 152	3.34 5,072	0.00 0	9.46 14,379	0.00 0	12.80 19,451	12.80
TOTAL Install med. diam. PVC Header		1520.00	LF			152	5,072	0	14,379	0	19,451	12.80	
09. 01.010. 3.04. Backfill trench, FE loader, (cont'd) whl mtd. lcy bkt, min haul													
MIL	GC <02215 1220 >	Backfill, trench, front-end loader, 40 - 60 HP, no compaction	35.00	CY	CODFB10N	50.00	0.03 1	0.90 31	0.74 26	0.00 0	0.00 0	1.64 57	1.64
TOTAL Backfill trench, FE loader,		35.00	CY			1	31	26	0	0	57	1.64	

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.010. 3.05. Hauling, surplus cut matl, no (cont'd) loading, 10 mile RT												
AF	GC <02234 0555 > Hauling, hwy haulers, 12 CY, 12 mile round trip @ base wide rate	52.00	CY	COEIB34B	20.00	0.05 3	1.35 70	2.40 125	0.00 0	0.00 0	3.75 195	3.75
TOTAL Hauling, surplus cut matl, no		52.00	CY			3	70	125	0	0	195	3.75
TOTAL Header Trenching		1520.00	LF			160	5,294	304	14,939	0	20,537	13.51
09. 01.010. 4. 8" PVC Leach Pipe Laying												
09. 01.010. 4.01. Excavate trench, 12" depth by (cont'd) 36", 1-1/2" CY backhoe												
MIL	GC <02228 0340 > Excavate trench, lt soil, 6'-10' D, 1.5 CY excavator	16780	CY	CODEB12B	242.50	0.01 138	0.26 4,388	0.24 4,062	0.00 0	0.00 0	0.50 8,450	0.50
TOTAL Excavate trench, 12" depth by		16780	CY			138	4,388	4,062	0	0	8,450	0.50
09. 01.010. 4.02. Install low perm geotextile in (cont'd) trench as pipe bedding												
M	CIV GC <02250 2130 > Geotextile fabric, 60 mil thick, non-woven polypropylene	25200	SY	ULABA2	187.50	0.02 403	0.38 9,521	0.10 2,485	0.61 15,372	0.00 0	1.09 27,377	1.09
TOTAL Install low perm geotextile in		25200	SY			403	9,521	2,485	15,372	0	27,377	1.09
09. 01.010. 4.03. Install 8" PVC leach pipe for (cont'd) subsurface irrigation												
B	MIL GC <02667 4060 > Piping, water dist, 8", PVC, press pipe, class 200, SDR 21	75510	LF	ULABB20A	50.00	0.08 6,041	2.67 201,574	0.00 0	1.40 105,714	0.30 22,653	4.37 329,941	4.37
TOTAL Install 8" PVC leach pipe for		75510	LF			6,041	201,574	0	105,714	22,653	329,941	4.37
09. 01.010. 4.04. Install leach pipe filter "sock"												
USR	GC < > Leach Pipe Filter Sock	75510	LF		0.00	0.00 0	0.00 0	0.00 0	1.21 91,367	0.40 30,204	1.61 121,571	1.61
TOTAL Install leach pipe filter "sock"		75510	LF			0	0	0	91,367	30,204	121,571	1.61

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.010. 4.05. Install pipe fittings as needed Total count = 7,560 ea TOTAL Install pipe fittings as needed						0	12,000	0	8,000	0	20,000	
09. 01.010. 4.06. Backfill trench, FE loader, whl (cont'd) mtd, 1 CY bkt, min haul												
MIL GC <02215 1220 >	Backfill, trench, front-end loader, 40 - 60 HP, no compaction	15830	CY	CODFB10N	50.00	475	14,223	11,776	0	0	25,999	1.64
TOTAL Backfill trench, FE loader, whl		15830	CY			475	14,223	11,776	0	0	25,999	1.64
09. 01.010. 4.07. Hauling, surplus cut matl, no (cont'd) loading, 10 mile RT												
AF GC <02234 0555 >	Hauling, hwy haulers, 12 CY, 12 mile round trip @ base wide rate	990.00	CY	COEIB34B	20.00	50	1,338	2,372	0	0	3,711	3.75
TOTAL Hauling, surplus cut matl, no		990.00	CY			50	1,338	2,372	0	0	3,711	3.75
TOTAL 8" PVC Leach Pipe Laying		75510	LF			7,106	243,044	20,696	220,453	52,857	537,049	7.11
09. 01.010. 5. Planting & Seeding												
09. 01.010. 5.01. Mulch, hay, 1" deep, power (cont'd) mulcher, large												
M MIL GC <	> Outside Laborer	11.84	HR	X-LABORER	1.00	12	242	0	1	0	243	20.56
MIL GC <	> Outside Truck Driver, Light	11.84	HR	X-TRKDVRLT	1.00	12	301	0	0	0	301	25.38
EP GC <	> TRK,HWY, 21,000 GVW, 4X2, 2 AXLE	11.84	HR	T50F0009	1.00	0	0	15.53	0	0	15.53	15.53
GEN GC <	> HYDROMULCHER, 3,000 GAL(11,356L) TRK MTD (W/ 56,000GVW TRK)	11.84	HR	L15Z3880	1.00	0	0	29.04	0	0	29.04	29.04
USR GC <	> Material cost	18.00	ACR	N/A	0.00	0	0	0	834.17	0	834.17	834.17
TOTAL Mulch, hay, 1" deep, power		18.00	ACR			24	543	528	15,016	0	16,087	893.72

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.010. 5.02. Crimping, tilling topsoil (cont'd) 20 HP tractor, disk harrow, 6" deep												
EP GC <	> ROTARY HOE, 80" WIDE ROTERRA (ADD 40 HP PTO TRACTOR)	72.00	HR	T10LE001	1.00	0	0.00	1.29	0.00	0.00	1.29	1.29
MAP GC <	> TRACTOR,WH,FARM, 40- 59HP, 2X4	72.00	HR	T25JD005	1.00	0	0.00	7.67	0.00	0.00	7.67	7.67
MIL GC <	> Outside Equip. Operator, Light	72.00	HR	X-EQOPRLT	1.00	72	30.80	0.00	0.00	0.00	30.80	30.80
TOTAL Crimping, tilling topsoil		18.00	ACR			72	2,218	645	0	0	2,863	159.04
09. 01.010. 5.03. Seeding, athletic fld mix,												
M RSM GC <02932 0010 >	Seeding, athletic field mix, 8#/MSFpush spreader	784.08	MSF	ALABCLAB1	1.00	784	1.00	22.13	47.42	0.00	69.55	69.55
18 acres = 784.08 msf												
TOTAL Seeding, athletic fld mix,		18.00	ACR			784	17,353	0	37,181	0	54,534	3029.69
09. 01.010. 5.04. Place Coarse Woody debris/rocks												
M MIL GC <	> Outside Laborer (4)	576.00	HR	X-LABORER	1.00	576	1.00	20.47	0.00	0.00	20.47	20.47
USR GC <	> Material and equipment	18.00	ACR	N/A	0.00	0	0.00	50.00	50.00	0.00	100.00	100.00
TOTAL Place Coarse Woody debris/rocks		18.00	ACR			576	11,792	900	900	0	13,592	755.09
09. 01.010. 5.05. Plant Mesquite/Shrub mix using (cont'd) 5 gallon plants												
USR GC <	> Planting of 5-gallon plants See bid result of Rio Salado Ph 1A	7740.00	EA		0.00	0	0.00	0.00	0.00	15.00	15.00	15.00
TOTAL Plant Mesquite/Shrub mix using		7740.00	EA			0	0	0	0	116,100	116,100	15.00
TOTAL Planting & Seeding		18.00	ACR			1,456	31,906	2,073	53,097	116,100	203,176	11287.54
TOTAL Natural Slope		1.00	EA			9,473	298,169	27,076	301,170	168,957	795,373	795372.60

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09. 01.015. Second Bench Install 8"PVC leach field pipe for subsurface irrigation on the second bench riparian features; pipes set at 10' c-c													
09. 01.015. 1. Fencing for Erosion Control													
AF	GC <01534 0010 >	Fencing, 11 ga, chain link, 5' high	9296.00	LF	ALABCLAB2	12.50	1,487	32,918	0	33,280	0	66,198	7.12
		124 acres = 5,401,440 sf Perimeter = 9296 lf											
		TOTAL Fencing for Erosion Control	124.00	ACR			1,487	32,918	0	33,280	0	66,198	533.85
09. 01.015. 2. Clearing and Grubbing, debris (con't) removal, etc.													
AF	GC <02109 0420 >	Clear & grub, burning, incinerator, light	93.00	ACR	UOEHB40A	0.28	1,324	38,511	28,648	0	0	67,159	722.14
		TOTAL Clearing and Grubbing, debris	93.00	ACR			1,324	38,511	28,648	0	0	67,159	722.14
09. 01.015. 3. Header Trenching													
09. 01.015. 3.01. Excavate header trench, 12" dep. (cont'd) by 18", 1-1/2 CY hoe													
MIL	GC <02228 0340 >	Excavate trench, lt soil, 6'-10' D, 1.5 CY excavator	500.00	CY	CODEB12B	242.50	4	131	121	0	0	252	0.50
		TOTAL Excavate header trench, 12" dep.	500.00	CY			4	131	121	0	0	252	0.50
09. 01.015. 3.02. Header Trench bedding, 3/4" (cont'd) gravel pipe support													
M	MIL GC <02244 1510 >	Base course, crushed stone, 3/4" max size, compacted, 12"D, large areas	200.00	CY	COFGB36C	54.38	18	558	755	3,200	0	4,513	22.57
		TOTAL Header Trench bedding, 3/4"	200.00	CY			18	558	755	3,200	0	4,513	22.57
09. 01.015. 3.03. Install med. diam. PVC Header (cont'd) pipe													
M	MIL GC <02667 4060 >	Piping, water dist, 8", PVC, press pipe, class 200, SDR 21	8080.00	LF	ULABB20A	40.00	808	26,962	0	76,437	0	103,399	12.80

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Install med. diam. PVC Header		8080.00	LF			808	26,962	0	76,437	0	103,399	12.80
09. 01.015. 3.04. Backfill trench, FE loader, (cont'd) whl mtd. 1cy bkt, min haul												
MIL GC <02215 1220 >	Backfill, trench, front-end loader, 40 - 60 HP, no compaction	200.00	CY	CODFB10N	50.00	0.03 6	0.90 180	0.74 149	0.00 0	0.00 0	1.64 328	1.64
TOTAL Backfill trench, FE loader,		200.00	CY			6	180	149	0	0	328	1.64
09. 01.015. 3.05. Hauling, surplus cut matl, no (cont'd) loading, 10 mile RT												
AF GC <02234 0555 >	Hauling, hwy haulers, 12 CY, 12 mile round trip @ base wide rate	300.00	CY	COEIB34B	20.00	0.05 15	1.35 405	2.40 719	0.00 0	0.00 0	3.75 1,124	3.75
TOTAL Hauling, surplus cut matl, no		300.00	CY			15	405	719	0	0	1,124	3.75
TOTAL Header Trenching		8080.00	LF			852	28,236	1,744	79,637	0	109,617	13.57
09. 01.015. 4. 8" PVC Leach Pipe Laying												
09. 01.015. 4.01. Excavate trench, 12" depth by (cont'd) 36", 1-1/2" CY backhoe												
MIL GC <02228 0340 >	Excavate trench, lt soil, 6'-10' D, 1.5 CY excavator	121260	CY	CODEB12B	242.50	0.01 994	0.26 31,709	0.24 29,357	0.00 0	0.00 0	0.50 61,067	0.50
TOTAL Excavate trench, 12" depth by		121260	CY			994	31,709	29,357	0	0	61,067	0.50
09. 01.015. 4.03. Install 8" PVC leach pipe for (cont'd) subsurface irrigation												
B MIL GC <02667 4060 >	Piping, water dist, 8", PVC, press pipe, class 200, SDR 21	545686	LF	ULABB20A	50.00	0.08 43,655	2.67 1456709	0.00 0	1.40 763,960	0.30 163,706	4.37 2,384,375	4.37
TOTAL Install 8" PVC leach pipe for		545686	LF			43,655	1456709	0	763,960	163,706	2,384,375	4.37
09. 01.015. 4.04. Install leach pipe filter "sock"												
USR GC <	> Leach Pipe Filter Sock	545680	LF		0.00	0.00 0	0.00 0	0.00 0	1.21 660,273	0.40 218,272	1.61 878,545	1.61

09. 01. IRRIGATION PLANTING		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Install leach pipe filter "sock"		545680	LF			0	0	0	660,273	218,272	878,545	1.61
09. 01.015. 4.05. Install pipe fittings as needed Total count = 54,570 ea TOTAL Install pipe fittings as needed						0	15,000	0	10,000	0	25,000	
09. 01.015. 4.06. Backfill trench, FE loader, whl (cont'd) mtd, 1 CY bkt, min haul												
MIL GC <02215 1220 >	Backfill, trench, front-end loader, 40 - 60 HP, no compaction	114360	CY	CODFB10N	50.00	3,431	102,752	85,072	0.00	0.00	187,825	1.64
TOTAL Backfill trench, FE loader, whl		114360	CY			3,431	102,752	85,072	0	0	187,825	1.64
09. 01.015. 4.07. Hauling, surplus cut matl, no (cont'd) loading, 10 mile RT												
AF GC <02234 0555 >	Hauling, hwy haulers, 12 CY, 12 mile round trip @ base wide rate	7090.00	CY	COEIB34B	20.00	355	9,583	16,990	0.00	0.00	26,573	3.75
TOTAL Hauling, surplus cut matl, no		7090.00	CY			355	9,583	16,990	0	0	26,573	3.75
TOTAL 8" PVC Leach Pipe Laying		545686	LF			48,435	1615754	131,420	1434233	381,978	3,563,384	6.53
09. 01.015. 5. Planting & Seeding												
09. 01.015. 5.01. Mulch, hay, 1" deep, power (cont'd) mulcher, large												
M MIL GC <	> Outside Laborer	82.24	HR	X-LABORER	1.00	82	1,684	0	0.09	0.00	1,691	20.56
MIL GC <	> Outside Truck Driver, Light	82.24	HR	X-TRKDVRLT	1.00	82	2,087	0	0.00	0.00	2,087	25.38
EP GC <	> TRK,HWY, 21,000 GVW, 4X2, 2 AXLE	82.24	HR	T50F0009	1.00	0	0	15.53	0.00	0.00	1,277	15.53
GEN GC <	> HYDROMULCHER, 3,000 GAL(11,356L) TRK MTD (W/ 56,000GVW TRK)	82.24	HR	L15Z3880	1.00	0	0	29.04	0.00	0.00	2,388	29.04
USR GC <	> Material cost	125.00	ACR	N/A	0.00	0	0	0.00	834.17	0.00	104,271	834.17



09. 01. IRRIGATION PLANTING		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Mulch, hay, 1" deep, power		125.00	ACR			164	3,771	3,666	104,279	0	111,715	893.72
09. 01.015. 5.02. Crimping, tilling topsoil (cont'd) 20 HP tractor, disk harrow, 6" deep												
EP GC <	> ROTARY HOE, 80" WIDE ROTERRA (ADD 40 HP PTO TRACTOR)	500.00	HR	T10LE001	1.00	0	0	645	0	0	645	1.29
MAP GC <	> TRACTOR,WH,FARM, 40- 59HP, 2X4	500.00	HR	T25JD005	1.00	0	0	3,833	0	0	3,833	7.67
MIL GC <	> Outside Equip. Operator, Light	500.00	HR	X-EQOPRLT	1.00	500	15,402	0	0	0	15,402	30.80
TOTAL Crimping, tilling topsoil		125.00	ACR			500	15,402	4,478	0	0	19,880	159.04
09. 01.015. 5.03. Seeding, athletic fld mix,												
M RSM GC <02932 0010 >	Seeding, athletic field mix, 8#/MSFpush spreader	5445.00	MSF	ALABCLAB1	1.00	5,445	120,509	0	258,202	0	378,711	69.55
125 acres = 5,445 msf												
TOTAL Seeding, athletic fld mix,		125.00	ACR			5,445	120,509	0	258,202	0	378,711	3029.69
09. 01.015. 5.04. Place Coarse Woody debris/rocks												
M MIL GC <	> Outside Laborer (4)	4000.00	HR	X-LABORER	1.00	4,000	81,886	0	840	0	82,726	20.68
USR GC <	> Material and equipment	125.00	ACR	N/A	0.00	0	0	6,250	6,250	0	12,500	100.00
TOTAL Place Coarse Woody debris/rocks		125.00	ACR			4,000	81,886	6,250	7,090	0	95,226	761.81
09. 01.015. 5.05. Plant Mesquite/Shrub mix using (cont'd) 5 gallon plants												
USR GC <	> Planting of 5-gallon plants See bid result of Rio Salado Ph 1A	55935	EA		0.00	0	0	0	0	839,025	839,025	15.00
TOTAL Plant Mesquite/Shrub mix using		55935	EA			0	0	0	0	839,025	839,025	15.00

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
TOTAL Planting & Seeding		125.00	ACR			10,109	221,568	14,394	369,571	839,025	1,444,557	11556.46	
TOTAL Second Bench		1.00	EA			62,207	1936987	176,205	1916720	1,221,003	5,250,915	5250915	
09. 01.020. First Bench Install long reach (150') sprinkler heads at elevation above 25-year flood, connect to header main via small diam. pipes													
09. 01.020. 1. Excavate pipe trench, 18" depth (cont'd) ditch-witch w/ backhoe													
AF	GC <02230 0450 >	Excavate utility trench, 36" deep, 6" wide, 12HP, chain trencher	1.00	LF	CODBB53	56.25	0.02 0	0.55 1	0.10 0	0.00 0	0.00 0	0.65 1	0.65
TOTAL Excavate pipe trench, 18" depth		1.00	LF			0	1	0	0	0	1	0.65	
09. 01.020. 2. Pipe Laying													
09. 01.020. 2.01. Install small diam pressure pipe (cont'd) for sprinkler irrigation													
M	MIL GC <02667 4030 >	Piping, water dist, 3", PVC, press pipe, class 200, SDR 21	31000	LF	ULABB20A	65.00	0.06 1,907	2.05 63,655	0.00 0	1.72 53,320	0.00 0	3.77 116,975	3.77
TOTAL Install small diam pressure pipe		31000	LF			1,907	63,655	0	53,320	0	116,975	3.77	
09. 01.020. 2.02. Install small diam pipe fittings (cont'd) as needed													
M	MIL GC <02667 4210 >	Piping, water dist, 90 deg, 3", PVC, press pipe, CL200, SDR 21 elbow	500.00	EA	ULABB20A	5.75	0.70 348	23.21 11,606	0.00 0	11.87 5,935	0.00 0	35.08 17,541	35.08
Quantity assumed.													
M	MIL GC <02667 4390 >	Piping, water dist, 3", PVC, press pipe, CL200, SDR 21 tee	1500.00	EA	ULABB20A	3.75	1.07 1,600	35.59 53,390	0.00 0	16.25 24,375	0.00 0	51.84 77,765	51.84
Quantity assumed													
M	MIL GC <02667 4480 >	Piping, water dist, 3", PVC, press pipe, CL200, SDR 21 coupling	1100.00	EA	ULABB20A	5.75	0.70 765	23.21 25,534	0.00 0	6.48 7,128	0.00 0	29.69 32,662	29.69
Quantity assumed													

09. 01. IRRIGATION PLANTING	QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Install small diam pipe fittings	3100.00	EA			2,713	90,530	0	37,438	0	127,968	41.28
09. 01.020. 2.03. Install long reach (150') sprin- (cont'd) kler heads											
Should the UOM be "EA" ?											
M MIL GC <02810 1284 > Sprinkler,39'-99',30-100 PSI, pop-up full cir,w/plstc cs,met cov, coml	190.00	EA	USKCSKW2	3.13	122	2,839	0	19,481	0	22,320	117.47
TOTAL Install long reach (150') sprin-	190.00	LF			122	2,839	0	19,481	0	22,320	117.47
09. 01.020. 2.04. Install pipe thrust blocks at (con't) fittings and bends											
TOTAL Install pipe thrust blocks at	238.00	EA			0	0	0	0	11,900	11,900	50.00
TOTAL Pipe Laying	31000	LF			4,741	157,025	0	110,239	11,900	279,163	9.01
09. 01.020. 3. Backfill pipe trench, compact											
MIL GC <02215 1220 > Backfill, trench, front-end loader, 40 - 60 HP, no compaction	31000	CY	CODFB10N	50.00	930	27,854	23,061	0	0	50,914	1.64
TOTAL Backfill pipe trench, compact	31000	LF			930	27,854	23,061	0	0	50,914	1.64
09. 01.020. 4. Install control valves for sprin (cont'd) kler groups or individuals											
M MIL GC <02810 1310 > Sprinkler irr sys, plstc, 1", 5-30 GPM, 15-125 PSI, elec rmt cntrl v	90.00	EA	USKCSKW2	2.25	80	1,868	0	2,093	0	3,960	44.00
TOTAL Install control valves for sprin	90.00	EA			80	1,868	0	2,093	0	3,960	44.00
09. 01.020. 5. Install Programmable Logic (cont'd) Controllers, remote access, etc.											
TOTAL Install Programmable Logic	1.00	EA			0	0	0	0	500,000	500,000	500000.00

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 09. 01. IRRIGATION PLANTING QUANTITY UOM CREW ID OUTPUT MANHRS LABOR EQUIPMNT MATERIAL OTHER TOTAL COST UNIT COST  
 -----

09. 01.020. 6. Rough grade & scarify subsoil  
 (cont'd) to receive topsoil, common earth, 200HP dozer

New quantity = 89 acres = 3,876,840 sf = 4,308 CSY (07/20/04)  
 125 acres = 5,445,000 sf = 6,050 CSY

Code	Description	Quantity	UOM	Crew ID	Output	Manhrs	Labor	Equipmnt	Material	Other	Total Cost	Unit Cost
MIL GC <02224 7000 >	Excavating, bulk, dozer, open site, rough grade	4307.60	CSY	CODTB11R	3.00	2,154	64,504	94,663	0	0	159,167	36.95
TOTAL Rough grade & scarify subsoil		89.00	ACR			2,154	64,504	94,663	0	0	159,167	1788.39

09. 01.020. 7. Planting & seeding

09. 01.020. 7.01. Mulch, hay, 1" deep, power  
 (cont'd) mulcher, large

M MIL GC <	> Outside Laborer	58.55	HR	X-LABORER	1.00	59	1,199	0	5	0	1,204	20.56
MIL GC <	> Outside Truck Driver, Light	58.55	HR	X-TRKDVRTLT	1.00	59	1,486	0	0	0	1,486	25.38
EP GC <	> TRK,HWY, 21,000 GVW, 4X2, 2 AXLE	58.55	HR	T50FO009	1.00	0	0	909	0	0	909	15.53
GEN GC <	> HYDROMULCHER, 3,000 GAL(11,356L) TRK MTD (W/ 56,000GVW TRK)	58.55	HR	L15Z3880	1.00	0	0	1,701	0	0	1,701	29.04
USR GC <	> Material cost	89.00	ACR	N/A	0.00	0	0	0	834.17	0	834.17	834.17
TOTAL Mulch, hay, 1" deep, power		89.00	ACR			117	2,685	2,610	74,246	0	79,541	893.72

09. 01.020. 7.02. Crimping, tilling topsoil  
 (cont'd) 20 HP tractor, disk harrow, 6" deep

EP GC <	> ROTARY HOE, 80" WIDE ROTERRA (ADD 40 HP PTO TRACTOR)	356.00	HR	T10LE001	1.00	0	0	459	0	0	459	1.29
MAP GC <	> TRACTOR,WH,FARM, 40- 59HP, 2X4	356.00	HR	T25JD005	1.00	0	0	2,729	0	0	2,729	7.67
MIL GC <	> Outside Equip. Operator, Light	356.00	HR	X-EQOPRLT	1.00	356	10,966	0	0	0	10,966	30.80
TOTAL Crimping, tilling topsoil		89.00	ACR			356	10,966	3,189	0	0	14,155	159.04

09. 01. IRRIGATION PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
-----												
09. 01.020. 7.03. Seeding, athletic fld mix,												
M RSM GC <02932 0010 >	Seeding, athletic field mix, 8#/MSFpush spreader	3876.84	MSF	ALABCLAB1	1.00	3,877	85,802	0	183,840	0	269,642	69.55
125 acres = 5,445 msf												
TOTAL Seeding, athletic fld mix,		89.00	ACR			3,877	85,802	0	183,840	0	269,642	3029.69
-----												
09. 01.020. 7.04. Place Coarse Woody debris/rocks												
M MIL GC <	> Outside Laborer (4)	712.00	HR	X-LABORER	1.00	712	14,576	0	150	0	14,725	20.68
USR GC <	> Material and equipment	89.00	ACR	N/A	0.00	0	0	4,450	4,450	0	8,900	100.00
TOTAL Place Coarse Woody debris/rocks		89.00	ACR			712	14,576	4,450	4,600	0	23,625	265.45
-----												
09. 01.020. 7.05. Plant Mesquite/Shrub mix using (cont'd) 5 gallon plants												
USR GC <	> Planting of 5-gallon plants See bid result of Rio Salado Ph 1A	55935	EA		0.00	0	0	0	0	839,025	839,025	15.00
TOTAL Plant Mesquite/Shrub mix using		55935	EA			0	0	0	0	839,025	839,025	15.00
TOTAL Planting & seeding		89.00	ACR			5,062	114,029	10,248	262,686	839,025	1,225,988	13775.15
TOTAL First Bench		1.00	EA			12,967	365,280	127,972	375,017	1,350,925	2,219,194	2219194
TOTAL IRRIGATION PLANTING		1.00	EA			287,141	8210895	3807079	7083380	7,636,522	26,737,876	26737876
-----												

09. 05. BASINS PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST			
09. 05. BASINS PLANTING															
09. 05.001. Tributary Infiltration Basins															
Construct infiltration basins at tributary (wash) outlets into SCR															
total basins = 8, depth = 4', side slopes at 4%															
09. 05.001. 1. Fencing for Erosion Control															
18 acres = 784,080 sf															
Square root of 784,080 sf = 885.5 lf															
885.5 x 4 = 3542 lf (perimeter)															
AF	GC	<01534	0010	> Fencing, 11 ga, chain link, 5' high	3542.00	LF	ALABCLAB2	12.50	0.16 567	3.54 12,543	0.00 0	3.58 12,680	0.00 0	7.12 25,223	7.12
		TOTAL Fencing for Erosion Control		18.00	ACR				567	12,543	0	12,680	0	25,223	1401.27
09. 05.001. 2. Clearing and Grubbing, debris (con't) removal, etc.															
AF	GC	<02109	0420	> Clear & grub, burning, incinerator, light	13.00	ACR	UOEHB40A	0.28	14.23 185	414.10 5,383	308.04 4,005	0.00 0	0.00 0	722.14 9,388	722.14
		TOTAL Clearing and Grubbing, debris		13.00	ACR				185	5,383	4,005	0	0	9,388	722.14
09. 05.001. 3. Excavate, mach exc., sand & grav (cont'd) 2CY bkt															
09. 05.001. 3.01. Stockpile useable cut matl, (cont'd) assume 25% total cut															
MIL	GC	<02241	0020	> Loam or topsoil, 200' haul, 6" deep, 200 HP dozer, remove/pile on site	830.00	CY	CODTB10B	108.13	0.01 12	0.42 345	0.61 506	0.00 0	0.00 0	1.03 851	1.03
		TOTAL Stockpile useable cut matl,		830.00	CY				12	345	506	0	0	851	1.03
09. 05.001. 3.02. Hauling, surplus cut matl, no (cont'd) loading, 10 mile RT															
AF	GC	<02234	0555	> Hauling, hwy haulers, 12 CY, 12 mile round trip @ base wide rate	2490.00	CY	COEIB34B	20.00	0.05 125	1.35 3,365	2.40 5,967	0.00 0	0.00 0	3.75 9,333	3.75
		TOTAL Hauling, surplus cut matl, no		2490.00	CY				125	3,365	5,967	0	0	9,333	3.75

09. 05. BASINS PLANTING		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09. 05.001. 3.03. Fill, spread cut matl at dump (cont'd) site, no compaction													
AF	GC <02240 0030 >	Fill, spread cut mat'l w/dozer at dump site, no compaction	2490.00	CY	CODTB10B	125.00	0.01 30	0.36 895	0.53 1,313	0.00 0	0.00 0	0.89 2,208	0.89
TOTAL Fill, spread cut matl at dump		2490.00	CY			30	895	1,313	0	0	2,208	0.89	
09. 05.001. 3.04. Compaction at dump site, hl rlr, (cont'd) 12" lifts, 2 passes													
AF	GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	2490.00	CY	COFCB32F	600.00	0.01 12	0.14 345	0.16 388	0.00 0	0.00 0	0.29 733	0.29
TOTAL Compaction at dump site, hl rlr,		2490.00	CY			12	345	388	0	0	733	0.29	
09. 05.001. 3.05. Compact Basin subgrade, existing (cont'd) earth, 2 passes 90%													
MIL	GC <02239 0230 >	Spread & compact, slope > 1 in 4, shape embankment, by hand	86160	SY	ULABB2	50.00	0.10 8,616	2.23 192,413	0.00 0	0.00 0	0.00 0	2.23 192,413	2.23
TOTAL Compact Basin subgrade, existing		86160	SY			8,616	192,413	0	0	0	192,413	2.23	
TOTAL Excavate, mach exc., sand & grav		8300.00	CY			8,794	197,362	8,174	0	0	205,537	24.76	
09. 05.001. 4. Backfilling 840 cy x 4 (different layers) = 3,360 cy													
09. 05.001. 4.01. Fill, bottom layer, clean sand, 12" depth													
M	USR GC <	> Clean Sand See Means Construction Cost Data 2004, 04060-750-0200,  Total Unit Cost is about \$17.75/cy	840.00	CY	N/A	0.00	0.00 0	0.00 0	0.00 0	0.00 0	17.75 14,910	17.75 14,910	17.75
TOTAL Fill, bottom layer, clean sand,		840.00	CY			0	0	0	0	14,910	14,910	17.75	

09. 05. BASINS PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
-----												
09. 05.001. 4.02. Fill, middle layer, No. 57 blue-stone (or equiv)												
USR GC <	> Bluestone					0.00	0.00	0.00	0.00	1.00	1.00	
	See Means Construction Cost	840.00	CY		0.00	0	0	0	0	840	840	1.00
	Data 2004, 04850-100-0500											
	Total Unit Cost is about											
	\$1.00/cy											
	TOTAL Fill, middle layer, No. 57 blue-	840.00	CY			0	0	0	0	840	840	1.00
-----												
09. 05.001. 4.03. Fill, middle layer, No. 2 gravel												
USR GC <	> Bank-run Gravel					0.00	0.00	0.00	0.00	25.00	25.00	
	See Means Construction Cost	840.00	CY		0.00	0	0	0	0	21,000	21,000	25.00
	Data 2004, 02060-150-0100 and											
	0900, including 5 mile haul											
	TOTAL Fill, middle layer, No. 2 gravel	840.00	CY			0	0	0	0	21,000	21,000	25.00
-----												
09. 05.001. 4.04. Fill, top layer, mix of native topsoil plus amendments												
USR GC <	> Native Topsoil, weed free					0.00	0.00	0.00	0.00	30.00	30.00	
	See Means Construction Cost	840.00	CY		0.00	0	0	0	0	25,200	25,200	30.00
	Data 2004, 02055-150-0800											
	and-0900, including 5 mile haul											
	TOTAL Fill, top layer, mix of native	840.00	CY			0	0	0	0	25,200	25,200	30.00
-----												
	TOTAL Backfilling	3360.00	CY			0	0	0	0	61,950	61,950	18.44
-----												
09. 05.001. 5. Planting & Seeding												
09. 05.001. 5.01. Mulch, hay, 1" deep, power (cont'd) mulcher, large												
M MIL GC <	> Outside Laborer					1.00	20.47	0.00	0.09	0.00	20.56	
		11.84	HR	X-LABORER	1.00	12	242	0	1	0	243	20.56
MIL GC <	> Outside Truck Driver, Light					1.00	25.38	0.00	0.00	0.00	25.38	
		11.84	HR	X-TRKDVRLT	1.00	12	301	0	0	0	301	25.38
EP GC <	> TRK,HWY, 21,000 GVW, 4X2, 2 AXLE					0.00	0.00	15.53	0.00	0.00	15.53	
		11.84	HR	T50FO009	1.00	0	0	184	0	0	184	15.53



09. 05. BASINS PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
GEN GC <	> HYDROMULCHER, 3,000 GAL(11,356L) TRK MTD (W/ 56,000GVW TRK)	11.84	HR	L15Z3880	1.00	0	0	29.04	0.00	0.00	29.04	29.04
USR GC <	> Material cost	18.00	ACR	N/A	0.00	0	0	0.00	834.17	0.00	834.17	834.17
	TOTAL Mulch, hay, 1" deep, power	18.00	ACR			24	543	528	15,016	0	16,087	893.72
09. 05.001. 5.02. Crimping, tilling topsoil (cont'd) 20 HP tractor, disk harrow, 6" deep												
EP GC <	> ROTARY HOE, 80" WIDE ROTERRA (ADD 40 HP PTO TRACTOR)	72.00	HR	T10LE001	1.00	0	0	1.29	0.00	0.00	1.29	1.29
MAP GC <	> TRACTOR,WH,FARM, 40- 59HP, 2X4	72.00	HR	T25JD005	1.00	0	0	7.67	0.00	0.00	7.67	7.67
MIL GC <	> Outside Equip. Operator, Light	72.00	HR	X-EQOPRLT	1.00	72	2,218	0.00	0.00	0.00	2,218	30.80
	TOTAL Crimping, tilling topsoil	18.00	ACR			72	2,218	645	0	0	2,863	159.04
09. 05.001. 5.03. Seeding, athletic fld mix,												
M RSM GC <02932 0010 >	Seeding, athletic field mix, 8#/MSFpush spreader	784.08	MSF	ALABCLAB1	1.00	784	17,353	0.00	47.42	0.00	54,534	69.55
	125 acres = 5,445 msf											
	TOTAL Seeding, athletic fld mix,	18.00	ACR			784	17,353	0	37,181	0	54,534	3029.69
09. 05.001. 5.04. Plant Mesquite/Shrub mix using (cont'd) 5 gallon plants												
USR GC <	> Planting of 5-gallon plants See bid result of Rio Salado Ph 1A	3204.00	EA		0.00	0	0	0.00	0.00	15.00	48,060	15.00
	TOTAL Plant Mesquite/Shrub mix using	3204.00	EA			0	0	0	0	48,060	48,060	15.00
	TOTAL Planting & Seeding	18.00	ACR			880	20,114	1,173	52,197	48,060	121,544	6752.45
	TOTAL Tributary Infiltration Basins	1.00	EA			10,426	235,402	13,352	64,878	110,010	423,641	423641.40

09. 05. BASINS PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09. 05.005. Grade Control Infiltration Basin Construct infiltration basins immediately upstream of existing grade control structure, total basins = 6, depth = 4', side slopes at 4%													
09. 05.005. 1. Fencing for Erosion Control 6 acres = 261,360 sf Square root of 261,360 = 511 lf 511 lf x 4 = 2,044 lf (perimeter)													
AF	GC <01534 0010 >	Fencing, 11 ga, chain link, 5' high	2044.00	LF	ALABCLAB2	12.50	0.16 327	3.54 7,238	0.00 0	3.58 7,318	0.00 0	7.12 14,556	7.12
TOTAL Fencing for Erosion Control		6.00	ACR				327	7,238	0	7,318	0	14,556	2425.92
09. 05.005. 2. Clearing and Grubbing, debris removal, etc.													
AF	GC <02109 0420 >	Clear & grub, burning, incinerator, light	5.00	ACR	UOEHB40A	0.28	14.23 71	414.10 2,070	308.04 1,540	0.00 0	0.00 0	722.14 3,611	722.14
TOTAL Clearing and Grubbing, debris		5.00	ACR				71	2,070	1,540	0	0	3,611	722.14
09. 05.005. 3. Excavating, mach exc, sand & gr 2 cy bkt													
09. 05.005. 3.01. Stockpile useable cut mat'l assume 25% total cut													
MIL	GC <02241 0020 >	Loam or topsoil, 200' haul, 6" deep, 200 HP dozer, remove/pile on site	280.00	CY	CODTB10B	108.13	0.01 4	0.42 116	0.61 171	0.00 0	0.00 0	1.03 287	1.03
TOTAL Stockpile useable cut mat'l		280.00	CY				4	116	171	0	0	287	1.03
09. 05.005. 3.02. Hauling, surplus cut mat'l, no loading, 10 mile RT													
AF	GC <02234 0555 >	Hauling, hwy haulers, 12 CY, 12 mile round trip @ base wide rate	840.00	CY	COEIB34B	20.00	0.05 42	1.35 1,135	2.40 2,013	0.00 0	0.00 0	3.75 3,148	3.75
TOTAL Hauling, surplus cut mat'l, no		840.00	CY				42	1,135	2,013	0	0	3,148	3.75

09. 05. BASINS PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09. 05.005. 3.03. Fill, spread cut mat'l at dump site, no compaction													
AF	GC <02240 0030 >	Fill, spread cut mat'l w/dozer at dump site, no compaction	840.00	CY	CODTB10B	125.00	0.01 10	0.36 302	0.53 443	0.00 0	0.00 0	0.89 745	0.89
TOTAL Fill, spread cut mat'l at dump		840.00	CY			10	302	443	0	0	745	0.89	
TOTAL Excavating, mach exc, sand & gr		1120.00	CY			56	1,554	2,627	0	0	4,180	3.73	
09. 05.005. 4. Compaction at dump site, hl rlr 12" lifts, 2 passes													
AF	GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	840.00	CY	COFCB32F	600.00	0.01 4	0.14 116	0.16 131	0.00 0	0.00 0	0.29 247	0.29
TOTAL Compaction at dump site, hl rlr		840.00	CY			4	116	131	0	0	247	0.29	
09. 05.005. 5. Compact basin subgrade, existing earth, 2 passes 90%													
MIL	GC <02239 0230 >	Spread & compact, slope > 1 in 4, shape embankment, by hand	29040	SY	ULABB2	50.00	0.10 2,904	2.23 64,852	0.00 0	0.00 0	0.00 0	2.23 64,852	2.23
TOTAL Compact basin subgrade, existing		29040	CY			2,904	64,852	0	0	0	64,852	2.23	
09. 05.005. 6. Backfilling See unit cost development at "Tributary Infiltration Basins"													
290 cy x 4 (different layers) = 1,160 cy													
TOTAL Backfilling		1160.00	CY				0	0	0	0	21,390	18.44	
09. 05.005. 7. Planting & Seeding													
09. 05.005. 7.01. Mulch, hay, 1" deep, power (cont'd) mulcher, large													
M	MIL	GC <	>	Outside Laborer			1.00 4	20.47 81	0.00 0	0.09 0	0.00 0	20.56 81	20.56
MIL GC <		>	Outside Truck Driver, Light			1.00 4	25.38 100	0.00 0	0.00 0	0.00 0	25.38 100	25.38	
EP	GC <	>	TRK,HWY, 21,000 GVW, 4X2, 2 AXLE			1.00 0	0.00 0	15.53 61	0.00 0	0.00 0	15.53 61	15.53	

09. 05. BASINS PLANTING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
GEN GC <	> HYDROMULCHER, 3,000 GAL(11,356L) TRK MTD (W/ 56,000GVW TRK)	3.95	HR	L15Z3880	1.00	0	0	29.04	0.00	0.00	29.04	29.04
USR GC <	> Material cost	6.00	ACR	N/A	0.00	0	0	0.00	834.17	0.00	834.17	834.17
	TOTAL Mulch, hay, 1" deep, power	6.00	ACR			8	181	176	5,005	0	5,362	893.72
09. 05.005. 7.02. Crimping, tilling topsoil (cont'd) 20 HP tractor, disk harrow, 6" deep												
EP GC <	> ROTARY HOE, 80" WIDE ROTERRA (ADD 40 HP PTO TRACTOR)	24.00	HR	T10LE001	1.00	0	0	1.29	0.00	0.00	1.29	1.29
MAP GC <	> TRACTOR,WH,FARM, 40- 59HP, 2X4	24.00	HR	T25JD005	1.00	0	0	7.67	0.00	0.00	7.67	7.67
MIL GC <	> Outside Equip. Operator, Light	24.00	HR	X-EQOPRLT	1.00	24	739	0.00	0.00	0.00	30.80	30.80
	TOTAL Crimping, tilling topsoil	6.00	ACR			24	739	215	0	0	954	159.04
09. 05.005. 7.03. Seeding, athletic fld mix,												
M RSM GC <02932 0010 >	Seeding, athletic field mix, 8#/MSFpush spreader	261.36	MSF	ALABCLAB1	1.00	261	5,784	0.00	47.42	0.00	69.55	69.55
	125 acres = 5,445 msf											
	TOTAL Seeding, athletic fld mix,	6.00	ACR			261	5,784	0	12,394	0	18,178	3029.69
	TOTAL Planting & Seeding	6.00	ACR			293	6,705	391	17,399	0	24,495	4082.45
	TOTAL Grade Control Infiltration Basin	1.00	EA			3,656	82,535	4,689	24,717	21,390	133,331	133330.84
	TOTAL BASINS PLANTING	1.00	EA			14,082	317,937	18,040	89,594	131,400	556,972	556972.24

09. 10. HARDENED BANKS		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST			
09. 10. HARDENED BANKS Construct Soil Cement slopes on vertical sections of SCR banks. Typ application = 8' wide, 30' height (19' +10')															
09. 10.001. Hardened Slopes															
09. 10.001. 1. Fencing for Erosion Control 3.5 acres = 152,460 sf Square root of 152,460 sf = 390 lf 390 lf x 4 = 1,560 lf (perimeter)															
AF	GC	<01534	0010	> Fencing, 11 ga, chain link, 5' high	1560.00	LF	ALABCLAB2	12.50	0.16 250	3.54 5,524	0.00 0	3.58 5,585	0.00 0	7.12 11,109	7.12
		TOTAL Fencing for Erosion Control		3.50 ACR					250	5,524	0	5,585	0	11,109	3173.98
09. 10.001. 2. Clearing and Grubbing, debris removal															
AF	GC	<02109	0420	> Clear & grub, burning, incinerator, light	0.90	ACR	UOEHB40A	0.28	14.23 13	414.10 373	308.04 277	0.00 0	0.00 0	722.14 650	722.14
		TOTAL Clearing and Grubbing, debris		0.90 ACR					13	373	277	0	0	650	722.14
09. 10.001. 3. Excavating, prepare slope & subgrade, 1:1 slope															
09. 10.001. 3.01. Stockpile subgrade cut matl for backfill															
MIL	GC	<02241	0020	> Loam or topsoil, 200' haul, 6" deep, 200 HP dozer, remove/pile on site	28200	CY	CODTB10B	108.13	0.01 392	0.42 11,717	0.61 17,194	0.00 0	0.00 0	1.03 28,911	1.03
		TOTAL Stockpile subgrade cut matl for		28200 CY					392	11,717	17,194	0	0	28,911	1.03
09. 10.001. 3.02. Hauling, no loading, 16.5 cy dump trailer, 10 mile RT															
MIL	GC	<02234	1115	> Hauling, hwy haulers, 16.5 CY, 6 mi round trip @ 40 MPH (2.1 cyc/hr)	18800	CY	CTDHB34C	35.00	0.03 538	0.77 14,519	1.44 27,164	0.00 0	0.00 0	2.22 41,683	2.22
		TOTAL Hauling, no loading, 16.5 cy		18800 CY					538	14,519	27,164	0	0	41,683	2.22
		TOTAL Excavating, prepare slope &		47000 CY					930	26,236	44,358	0	0	70,594	1.50

09. 10. HARDENED BANKS		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09. 10.001. 4. Fill, spread dumped mat'l, by dozer, no compaction													
09. 10.001. 4.01. Compaction, sheepfoot/wobbly whl rlr, 12" lifts, 2 passes													
AF	GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	18800	CY	COFCB32F	600.00	0.01 94	0.14 2,602	0.16 2,929	0.00 0	0.00 0	0.29 5,531	0.29
TOTAL Compaction, sheepfoot/wobbly		18800	CY				94	2,602	2,929	0	0	5,531	0.29
09. 10.001. 4.02. Fine grade to 1:1 slope, for irregular areas, adverse cond.													
MIL	GC <02226 4100 >	Excavation, bulk, fine grade, 3 passes w/grader	149.00	CSY	COFGB11L	2.00	1.00 149	27.99 4,171	17.66 2,631	0.00 0	0.00 0	45.65 6,802	45.65
TOTAL Fine grade to 1:1 slope, for		14900	SY				149	4,171	2,631	0	0	6,802	0.46
TOTAL Fill, spread dumped mat'l, by		18800	CY				243	6,773	5,560	0	0	12,333	0.66
09. 10.001. 5. Soil Cement application, 8" lifts at 8' width, 750 PSI													
TOTAL Soil Cement application,		61100	CY				0	733,200	611,000	1038700	0	2,382,900	39.00
09. 10.001. 6. Backfill and Compaction													
09. 10.001. 6.01. Backfill subgrade with cut matl													
MIL	GC <02215 1220 >	Backfill, trench, front-end loader, 40 - 60 HP, no compaction	28200	CY	CODFB10N	50.00	0.03 846	0.90 25,338	0.74 20,978	0.00 0	0.00 0	1.64 46,316	1.64
TOTAL Backfill subgrade with cut matl		28200	CY				846	25,338	20,978	0	0	46,316	1.64
09. 10.001. 6.02. Compaction, sheepfoot/wobbly whl rlr, 12" lifts, 2 passes													
AF	GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	28200	CY	COFCB32F	600.00	0.01 141	0.14 3,903	0.16 4,394	0.00 0	0.00 0	0.29 8,296	0.29
TOTAL Compaction, sheepfoot/wobbly whl		28200	CY				141	3,903	4,394	0	0	8,296	0.29

09. 10. HARDENED BANKS	QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Backfill and Compaction	28200	CY			987	29,241	25,372	0	0	54,612	1.94
TOTAL Hardened Slopes	1.00	EA			2,422	801,347	686,566	1044285	0	2,532,198	2532198
TOTAL HARDENED BANKS	1.00	EA			2,422	801,347	686,566	1044285	0	2,532,198	2532198

09. 15. PIPING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 15. PIPING Install various sized piping for irrigation distribution throughout project area. Install fording culverts in historic floodplain												
09. 15.001. Irrigation Piping												
09. 15.001. 1. Trenching for Delivery Pipe												
09. 15.001. 1.01. Delivery pipe trench bedding, 3/4" gravel pipe support												
M MIL GC <02704 0300 >	Drainage, drainage matl, 3/4" gravel fill in trench	1260.00	CY	CODLB6	32.50	116	2,910	586	59,144	0	62,641	49.72
TOTAL Delivery pipe trench bedding,		1260.00	CY			116	2,910	586	59,144	0	62,641	49.72
09. 15.001. 1.02. Delivery piping, large dia. say 12" PVC												
M MIL GC <02667 4560 >	Piping, water dist, PVC, class 150, SDR 18, AWWA C900, 12"	10440	LF	ULABB20A	23.25	1,796	59,934	0	146,682	0	206,616	19.79
TOTAL Delivery piping, large dia. say		10440	LF			1,796	59,934	0	146,682	0	206,616	19.79
09. 15.001. 1.03. Backfill delivery pipe trench, FE loader, whl mtd 1 CY bkt												
M MIL GC <02215 2460 >	Backfill, sand bedding trenches, front-end loader, 1.5 CY	1260.00	CY	CODFB10N	47.50	40	1,192	987	19,480	0	21,658	17.19
TOTAL Backfill delivery pipe trench,		1260.00	CY			40	1,192	987	19,480	0	21,658	17.19
09. 15.001. 1.04. Hauling, Delivery pipe surplus cut matl, no loading, 10 mile RT												
MIL GC <02234 1115 >	Hauling, hwy haulers, 16.5 CY, 6 mi round trip @ 40 MPH (2.1 cyc/hr)	1880.00	CY	CTDHB34C	35.00	54	1,452	2,716	0	0	4,168	2.22
TOTAL Hauling, Delivery pipe surplus		1880.00	CY			54	1,452	2,716	0	0	4,168	2.22
TOTAL Trenching for Delivery Pipe		3130.00	CY			2,006	65,488	4,289	225,306	0	295,083	94.28



09. 15. PIPING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 15.001. 2. Trenching for Main Pipe												
09. 15.001. 2.01. Main pipe trench bedding, 3/4" gravel pipe support												
M MIL GC <02704 0300 >	Drainage, drainage matl, 3/4" gravel fill in trench	8400.00	CY	CODLB6	32.50	775	19,402	3,909	394,296	0	417,607	49.72
TOTAL Main pipe trench bedding,		8400.00	CY			775	19,402	3,909	394,296	0	417,607	49.72
09. 15.001. 2.02. Main piping, large dia. say 12" PVC												
M MIL GC <02667 4560 >	Piping, water dist, PVC, class 150, SDR 18, AWWA C900, 12"	69970	LF	ULABB20A	23.25	12,035	401,684	0	983,079	0	1,384,762	19.79
TOTAL Main piping, large dia. say		69970	LF			12,035	401,684	0	983,079	0	1,384,762	19.79
09. 15.001. 2.03. Backfill Main pipe trench, FE loader, whl mtd 1 CY bkt												
M MIL GC <02215 2460 >	Backfill, sand bedding trenches, front-end loader, 1.5 CY	8400.00	CY	CODFB10N	47.50	265	7,945	6,577	129,864	0	144,386	17.19
TOTAL Backfill Main pipe trench,		8400.00	CY			265	7,945	6,577	129,864	0	144,386	17.19
09. 15.001. 2.04. Hauling, Main pipe surplus cut matl, no loading, 10 mile RT												
MIL GC <02234 1115 >	Hauling, hwy haulers, 16.5 CY, 6 mi round trip @ 40 MPH (2.1 cyc/hr)	12600	CY	CTDHB34C	35.00	360	9,731	18,206	0	0	27,937	2.22
TOTAL Hauling, Main pipe surplus		12600	CY			360	9,731	18,206	0	0	27,937	2.22
TOTAL Trenching for Main Pipe		21000	CY			13,436	438,762	28,691	1507239	0	1,974,692	94.03
09. 15.001. 3. Trenching for Sub-main Pipe												
09. 15.001. 3.01. Sub-main pipe trench bedding, 3/4" gravel pipe support												
M MIL GC <02704 0300 >	Drainage, drainage matl, 3/4" gravel fill in trench	3370.00	CY	CODLB6	32.50	311	7,784	1,568	158,188	0	167,540	49.72
TOTAL Sub-main pipe trench bedding,		3370.00	CY			311	7,784	1,568	158,188	0	167,540	49.72

09. 15. PIPING		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 15.001. 3.02. Sub-main piping, large dia. say 8" PVC												
M MIL GC <02667 4540 >	Piping, water dist, PVC, class 150, SDR 18, AWWA C900, 8"	28010	LF	ULABB20A	33.00	3,395	113,292	0	174,782	0	288,074	10.28
TOTAL Sub-main piping, large dia. say		28010	LF			3,395	113,292	0	174,782	0	288,074	10.28
09. 15.001. 3.03. Backfill Sub-main pipe trench, FE loader, whl mtd 1 CY bkt												
M MIL GC <02215 2460 >	Backfill, sand bedding trenches, front-end loader, 1.5 CY	3370.00	CY	CODFB10N	47.50	106	3,187	2,639	52,100	0	57,926	17.19
TOTAL Backfill Sub-main pipe trench,		3370.00	CY			106	3,187	2,639	52,100	0	57,926	17.19
09. 15.001. 3.04. Hauling, Sub-main pipe surplus cut matl, no loading, 10 mile RT												
MIL GC <02234 1115 >	Hauling, hwy haulers, 16.5 CY, 6 mi round trip @ 40 MPH (2.1 cyc/hr)	5050.00	CY	CTDHB34C	35.00	144	3,900	7,297	0	0	11,197	2.22
TOTAL Hauling, Sub-main pipe surplus		5050.00	CY			144	3,900	7,297	0	0	11,197	2.22
TOTAL Trenching for Sub-main Pipe		8420.00	CY			3,957	128,164	11,504	385,070	0	524,737	62.32
09. 15.001. 4. Trenching for Culvert CMP												
09. 15.001. 4.01. Culvert trench bedding, 3/4" gravel pipe support												
M MIL GC <02704 0300 >	Drainage, drainage matl, 3/4" gravel fill in trench	4200.00	CY	CODLB6	32.50	388	9,701	1,954	197,148	0	208,803	49.72
TOTAL Culvert trench bedding,		4200.00	CY			388	9,701	1,954	197,148	0	208,803	49.72
09. 15.001. 4.02. Install 24" dia. CMP Culvert for truck traffic												
M MIL GC <02764 3200 >	Piping, corr stl, 18" equiv, 21" x 15",16 ga, plain oval arch culv	23600	LF	CLABB14	21.88	6,473	153,697	16,317	279,424	0	449,438	19.04
TOTAL Install 24" dia. CMP Culvert for		23600	LF			6,473	153,697	16,317	279,424	0	449,438	19.04

09. 15. PIPING		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 15.001. 4.03. Backfill trench, FE Loader, whl mtd 1 CY bkt												
M MIL GC <02215 2460 >	Backfill, sand bedding trenches, front-end loader, 1.5 CY	4200.00	CY	CODFB10N	47.50	0.03 133	0.95 3,972	0.78 3,289	15.46 64,932	0.00 0	17.19 72,193	17.19
TOTAL Backfill trench, FE Loader,		4200.00	CY			133	3,972	3,289	64,932	0	72,193	17.19
09. 15.001. 4.04. Hauling, Sub-main pipe surplus cut matl, no loading, 10 mile RT												
MIL GC <02234 1115 >	Hauling, hwy haulers, 16.5 CY, 6 mi round trip @ 40 MPH (2.1 cyc/hr)	6300.00	CY	CTDHB34C	35.00	0.03 180	0.77 4,865	1.44 9,103	0.00 0	0.00 0	2.22 13,968	2.22
TOTAL Hauling, Sub-main pipe surplus		6300.00	CY			180	4,865	9,103	0	0	13,968	2.22
TOTAL Trenching for Culvert CMP		10500	CY			7,174	172,236	30,663	541,504	0	744,403	70.90
TOTAL Irrigation Piping		1.00	EA			26,572	804,650	75,147	2659119	0	3,538,916	3538916
TOTAL PIPING		1.00	EA			26,572	804,650	75,147	2659119	0	3,538,916	3538916

09. 20. ROADS & BRIDGES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09. 20. ROADS & BRIDGES													
09. 20.001. Compacted Earth Maintenance Road Construct gravel trails at various locations throughout project area, 10 foot width													
09. 20.001. 1. Clearing & Grubbing, debris removal, etc.													
AF	GC <02109 0420 >	Clear & grub, burning, incinerator, light	8.30	ACR	UOEHB40A	0.28	14.23 118	414.10 3,437	308.04 2,557	0.00 0	0.00 0	722.14 5,994	722.14
TOTAL Clearing & Grubbing, debris		8.30	ACR				118	3,437	2,557	0	0	5,994	722.14
09. 20.001. 2. Site Preparation													
09. 20.001. 2.01. Ripping, discing to prepare surface													
RSM	GC <02238 0010 >	Ripping, trap rock, soft, 200 HP dozer, ideal conditions	83.00	CY	CODTB10B	88.75	0.02 1	0.51 42	0.74 62	0.00 0	0.00 0	1.25 104	1.25
Assume 10 cy/acre													
TOTAL Ripping, discing to prepare		8.30	ACR				1	42	62	0	0	104	12.49
09. 20.001. 2.02. Regrade, flatten, balance cut matl. Onsite, 50% of area													
MIL	GC <02224 7020 >	Excavating, bulk, dozer, 300 HP, large area, open site, rough grade	2020.00	CY	CODTB10M	300.00	0.01 10	0.15 302	0.33 671	0.00 0	0.00 0	0.48 973	0.48
TOTAL Regrade, flatten, balance cut		2020.00	CY				10	302	671	0	0	973	0.48
09. 20.001. 2.03. Compaction, riding, sheepfoot/wobbly whl, 2 passes													
AF	GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	40260	CY	COFCB32F	600.00	0.01 201	0.14 5,572	0.16 6,273	0.00 0	0.00 0	0.29 11,844	0.29
TOTAL Compaction, riding, sheepfoot/		40260	SY				201	5,572	6,273	0	0	11,844	0.29
TOTAL Site Preparation		8.30	ACR				213	5,916	7,005	0	0	12,921	1556.79

09. 20. ROADS & BRIDGES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
TOTAL Compacted Earth Maintenance Road		8.30	ACR			331	9,353	9,562	0	0	18,915	2278.93	
09. 20.002. Paved Maintenance Roads													
Construct paved trails at various locations throughout project area, 15 ft width, 52,087 lf, 781,305 sf, 18 acres.													
09. 20.002. 1. Clearing & Grubbing, debris removal, etc.													
AF	GC <02109 0420 >	Clear & grub, burning, incinerator, light	9.00	ACR	UOEHB40A	0.28	14.23 128	414.10 3,727	308.04 2,772	0.00 0	0.00 0	722.14 6,499	722.14
TOTAL Clearing & Grubbing, debris		9.00	ACR			128	3,727	2,772	0	0	6,499	722.14	
09. 20.002. 2. Site Preparation													
09. 20.002. 2.01. Ripping, discing to prepare surface													
RSM	GC <02238 0010 >	Ripping, trap rock, soft, 200 HP dozer, ideal conditions	180.00	CY	CODTB10B	88.75	0.02 3	0.51 91	0.74 134	0.00 0	0.00 0	1.25 225	1.25
Assume 10 cy/acre													
TOTAL Ripping, discing to prepare		18.00	ACR			3	91	134	0	0	225	12.49	
09. 20.002. 2.02. Regrade, flatten, balance cut matl. Onsite, 25% of area													
MIL	GC <02224 7020 >	Excavating, bulk, dozer, 300 HP, large area, open site, rough grade	21880	CY	CODTB10M	300.00	0.01 109	0.15 3,275	0.33 7,266	0.00 0	0.00 0	0.48 10,542	0.48
TOTAL Regrade, flatten, balance cut		21880	CY			109	3,275	7,266	0	0	10,542	0.48	
09. 20.002. 2.03. Compaction, riding, sheepfoot/wobbly whl, 2 passes													
AF	GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	86820	CY	COFCB32F	600.00	0.01 434	0.14 12,016	0.16 13,527	0.00 0	0.00 0	0.29 25,542	0.29
TOTAL Compaction, riding, sheepfoot/wobbly whl, 2 passes		86820	SY			434	12,016	13,527	0	0	25,542	0.29	

09. 20. ROADS & BRIDGES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 20.002. 2.04. Asphalt Concrete Paving, (cont'd.) Base course, 4" thick, and 2" topping												
M MIL GC <02505 0813 >	Asphaltic conc pavement, highway, binder course, 4" thick	17363	TON	COKCB25	106.25	1,797	45,696	23,029	467,759	0.00	536,484	30.90
Assume 45 sf/ton (See Means Construction Cost Data, 2004, 02740-310-0200, and -0813)												
781,310 sf / 45 sf/ton = 17,363 tons												
M MIL GC <02505 0854 >	Asphaltic conc pavement, highway, wearing course, 2" thick	9528.00	TON	COKCB25B	100.00	1,143	29,869	17,860	283,267	0.00	330,997	34.74
Assume 82 sf/ton (See Means Construction Cost Data, 2004, 02740-310-0380 and -0852)												
Then, 781,310 sf / 82 sf/ton = 9,528 ton												
USR GC <	> Seal Oil (or Sealcoating) 781,310 sf = 86,812 sy	86812	SY	N/A	0.00	0	8,681	9,549	38,197	0.00	56,428	0.65
See Means Construction Cost Data, 2004: 02785-250-0012 for pricing.												
M=\$0.44/sy, L=\$0.10/sy, E=\$0.11/sy												
USR GC <	> Asphalt Surface Treatment See Means Construction Cost Data, 2004: 02785-250-1910 for pricing.	86812	SY	N/A	0.00	0	16,494	12,154	59,900	0.00	88,548	1.02
M=\$0.69/sy, L=\$0.19/sy, E=\$0.14/sy												
TOTAL Asphalt Concrete Paving,		781310	SF			2,940	100,741	62,592	849,124	0	1,012,457	1.30
TOTAL Site Preparation		18.00	ACR			3,487	116,123	83,518	849,124	0	1,048,766	58264.77
TOTAL Paved Maintenance Roads		18.00	ACR			3,615	119,850	86,291	849,124	0	1,055,265	58625.84

09. 20. ROADS & BRIDGES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST			
09. 20.003. Gravel Maintenance Road Construct gravel trails at various locations throughout project area, 10 ft width, 3" thickness, 35,575 lf, 355,750 sf, 8.2 acres.															
09. 20.003. 1. Clearing & Grubbing, debris removal, etc.															
AF	GC	<02109	0420	> Clear & grub, burning, incinerator, light	4.10	ACR	UOEHB40A	0.28	14.23 58	414.10 1,698	308.04 1,263	0.00 0	0.00 0	722.14 2,961	722.14
		TOTAL Clearing & Grubbing, debris		4.10	ACR				58	1,698	1,263	0	0	2,961	722.14
09. 20.003. 2. Site Preparation															
09. 20.003. 2.01. Ripping, discing to prepare surface															
RSM	GC	<02238	0010	> Ripping, trap rock, soft, 200 HP dozer, ideal conditions	82.00	CY	CODTB10B	88.75	0.02 1	0.51 42	0.74 61	0.00 0	0.00 0	1.25 102	1.25
		TOTAL Ripping, discing to prepare		8.20	ACR				1	42	61	0	0	102	12.49
09. 20.003. 2.02. Regrade, flatten, balance cut matl. Onsite, 25% of area															
MIL	GC	<02224	7020	> Excavating, bulk, dozer, 300 HP, large area, open site, rough grade	1980.00	CY	CODTB10M	300.00	0.01 10	0.15 296	0.33 658	0.00 0	0.00 0	0.48 954	0.48
		TOTAL Regrade, flatten, balance cut		1980.00	CY				10	296	658	0	0	954	0.48
09. 20.003. 2.03. Compaction, riding, sheepfoot/wobbly whl, 2 passes															
AF	GC	<02220	5660	> Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	39530	CY	COFCB32F	600.00	0.01 198	0.14 5,471	0.16 6,159	0.00 0	0.00 0	0.29 11,630	0.29
		TOTAL Compaction, riding, sheepfoot/		39530	SY				198	5,471	6,159	0	0	11,630	0.29

09. 20. ROADS & BRIDGES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 20.003. 2.04. Gravel course, crushed 3/4" stone, compacted, 3" deep												
B RSM GC <02244 0050 >	Base course, crushed 3/4" stone, compacted, 3"D, large areas	39530	SY	COFGB36C	452.17	439	13,266	17,943	102,778	0.00	133,987	3.39
For material and equipment cost, see Means Construction Cost Data, 2004: 02720-200-0050												
TOTAL Gravel course, crushed 3/4"		39530	SY			439	13,266	17,943	102,778	0	133,987	3.39
TOTAL Site Preparation		8.20	ACR			648	19,075	24,820	102,778	0	146,673	17886.96
TOTAL Gravel Maintenance Road		8.20	ACR			706	20,773	26,083	102,778	0	149,634	18248.03
09. 20.005. Bridges												
Pedestrian and maintenance bridges as site amenities, abutments to be CIP reinforced concrete												
09. 20.005. 1. Fencing for Erosion Control												
9 acres = 392,040 sf												
Square root of 392,040 sf = 626 lf												
626 lf x 4 = 2,504 lf (perimeter)												
AF GC <01534 0010 >	Fencing, 11 ga, chain link, 5' high	2504.00	LF	ALABCLAB2	12.50	401	8,867	0	8,964	0.00	17,831	7.12
TOTAL Fencing for Erosion Control		9.00	ACR			401	8,867	0	8,964	0	17,831	1981.25
09. 20.005. 2. Clearing and Grubbing, debris removal, etc.												
AF GC <02109 0420 >	Clear & grub, burning, incinerator, light	7.00	ACR	UOEHB40A	0.28	100	2,899	2,156	0	0.00	5,055	722.14
TOTAL Clearing and Grubbing, debris		7.00	ACR			100	2,899	2,156	0	0	5,055	722.14
09. 20.005. 3. Excavating, structural, sand/loam, 2CY bkt												
09. 20.005. 3.01. Hauling, no loading, 16.5 cy dump trailer, 10 mile RT												
MIL GC <02234 1115 >	Hauling, hwy haulers, 16.5 CY, 6 mi round trip @ 40 MPH (2.1 cyc/hr)	3366.00	CY	CTDHB34C	35.00	96	2,600	4,864	0	0.00	7,463	2.22



09. 20. ROADS & BRIDGES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Hauling, no loading, 16.5 cy		3366.00	CY			96	2,600	4,864	0	0	7,463	2.22
09. 20.005. 3.02. Fill, spread dumped matl, by dozer, no compaction												
RSM GC <02216 2000 >	Backfill, str1, sand & gravel, no cmpct, 75 HP dozer, 50' haul	3366.00	CY	CODTB10L	137.50	0.01 37	0.33 1,100	0.20 674	0.00 0	0.00 0	0.53 1,774	0.53
TOTAL Fill, spread dumped matl, by		3366.00	CY			37	1,100	674	0	0	1,774	0.53
09. 20.005. 3.03. Compaction, sheepfoot/wobbly whl rlr, 12" lifts, 2 passes												
AF GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	3060.00	CY	COFCB32F	600.00	0.01 15	0.14 424	0.16 477	0.00 0	0.00 0	0.29 900	0.29
TOTAL Compaction, sheepfoot/wobbly		3060.00	CY			15	424	477	0	0	900	0.29
TOTAL Excavating, structural, sand/		3060.00	CY			148	4,123	6,014	0	0	10,137	3.31
09. 20.005. 4. Cast in Place reinforced concret This is for bridge abutment construction.												
There are 18 abutments, and the dimensions of the abutment are: 25' (L) x 12' (W) x 15' (H)												
Assume 105 lb/cy for reinforcing steel quantity calculation. Then, 3060 cy x 105 lb/cy = 321,300 lbs.												
M MIL GC <03330 3600 >	Concrete in place,dir chute, 500psi, incl forms,reinf, flexural on grade	3060.00	CY	ULABC8A	18.75	0.32 979	8.14 24,922	0.00 0	52.20 159,732	0.00 0	60.34 184,654	60.34
M MIL GC <03217 0700 >	Reinforcing in place, walls, #3 to #7	161.00	TON	SIWRRODM4	0.38	10.67 1,717	424.44 68,335	0.00 0	580.01 93,382	0.00 0	1004.45 161,717	1004.45
321,300 lbs = 161 tons												
M CIV GC <03138 2100 >	Forms in place, 12" w, plywood, 3 use, interior beam, beams & girders	6750.00	SF	ACARC2	45.50	0.13 890	4.14 27,965	0.00 0	1.36 9,180	0.00 0	5.50 37,145	5.50
18 abutments x 25' (L) x 15' (H) = 6,750 SF												

09. 20. ROADS & BRIDGES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
TOTAL Cast in Place reinforced concret						3,587	121,222	0	262,294	0	383,516	125.33	
09. 20.005. 5. Finished grading, tie in, stabl.													
MIL GC <02512 1100 >	Fine grade, for slab on grade, machine	43560	SY	COFGB11L	130.00	671	18,761	11,831	0	0	30,592	0.70	
TOTAL Finished grading, tie in, stabl.						9.00	ACR	671	18,761	11,831	0	30,592	3399.13
09. 20.005. 6. Prefab Bridges													
09. 20.005. 6.01. Prefab Bridges (9 ea)													
(07/23/04)													
Quote of delivered price is obtained from Steadfast Bridges Company in Alabama.													
Width = 10' (wide enough for a service truck to pass by)													
Spans = 48' (\$25,345), 56' (\$29,857), 74' (\$41,373), 68' (\$38,610), 101' (\$77,759), 104' (\$78,235), 136' (\$127,242), 148' (\$142,795), 74' (\$41,373)													
Total delivered cost = \$602,589 (to Phoenix, AZ area)													
Assume 10% as delivery, then, M=\$542,330, O=\$60,259													
Total square foot of all the bridges = 8,090 SF													
*****													
(07/27/04)													
Another quote from Excel Bridge Co. (www.excelbridge.com, Kenneth Longino, (562) 944-0701, 12001 Shoemaker Avenue, Santa Fe Springs, CA):													
All widths = 12'													
Spans = 48' (\$40,320), 74' (2 ea) (\$62,160/ea), 68' (\$57,120), 101' (\$100,600), 136' (\$153,500), 56' (\$47,040), 104' (\$101,107), 79' (\$66,360), 148' (\$173,300)													
Plus taxes, and F.O.B. Phoenix, AZ.													
TOTAL Prefab Bridges (9 ea)						0	0	0	542,330	60,259	602,589		
09. 20.005. 6.02. Unloading and Erection													
MIL GC <	> Outside Steel Worker	161.80	HR	X-STRSTEEL	1.00	162	7,108	0	0	0	7,108	43.93	
MIL GC <	> Outside Steel Worker (4)	647.20	HR	X-STRSTEEL	1.00	647	27,783	0	0	0	27,783	42.93	

09. 20. ROADS & BRIDGES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
MIL GC <	> Outside Equip. Operator, Heavy (for the crane)	161.80	HR	X-EQOPRHVY	1.00	162	5,425	0	0	0	5,425	33.53
MIL GC <	> Outside Equip. Oiler	161.80	HR	X-EQOPROIL	1.00	162	4,300	0	0	0	4,300	26.58
EP GC <	> CRANE, HYD, S/P, RT, 4WD, 100T/88'BM, W/HOOK & BALL	161.80	HR	C75GV016	1.00	0	0	25,379	0	0	25,379	156.85
MIL GC <	> Outside Laborer (2 for loading)	323.60	HR	X-LABORER	1.00	324	6,948	0	0	0	6,948	21.47
MIL GC <	> Outside Equip. Operator, Medium (for loader)	161.80	HR	X-EQOPRMED	1.00	162	5,372	0	0	0	5,372	33.20
EP GC <	> LDR, BH, WH, 1.25CY FE BKT, 24" DIP, EXTENDAHOE	161.80	HR	L50CS006	1.00	0	0	3,738	0	0	3,738	23.10
TOTAL Unloading and Erection		8090.00	SF			1,618	56,936	29,117	0	0	86,053	10.64
TOTAL Prefab Bridges		9.00	EA			1,618	56,936	29,117	542,330	60,259	688,642	76515.81
TOTAL Bridges		1.00	EA			6,524	212,807	49,119	813,588	60,259	1,135,773	1135773
TOTAL ROADS & BRIDGES		1.00	EA			11,176	362,784	171,054	1765490	60,259	2,359,587	2359587

09. 25. LET DOWN STRUCTURES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST			
09. 25. LET DOWN STRUCTURES															
Construct let down pipes to stabilize gullies in historic floodplain. Use 30" dia CMP with wingwalls, backfill gully															
09. 25.001. Let Down Structures															
09. 25.001. 1. Fencing for Erosion Control															
2.5 acres = 108,900 sf															
Square root of 108,900 sf = 330 lf															
330 lf x 4 = 1,320 lf (perimeter)															
AF	GC	<01534	0010	> Fencing, 11 ga, chain link, 5' high	1320.00	LF	ALABCLAB2	12.50	0.16	3.54	0.00	3.58	0.00	7.12	7.12
									211	4,674	0	4,726	0	9,400	
				TOTAL Fencing for Erosion Control	2.50	ACR			211	4,674	0	4,726	0	9,400	3759.94
09. 25.001. 2. Clearing & Grubbing, debris removal, etc.															
AF	GC	<02109	0420	> Clear & grub, burning, incinerator, light	1.90	ACR	UOEHB40A	0.28	14.23	414.10	308.04	0.00	0.00	722.14	722.14
									27	787	585	0	0	1,372	
				TOTAL Clearing & Grubbing, debris	1.90	ACR			27	787	585	0	0	1,372	722.14
09. 25.001. 3. Prep (excav) slope to receive let down pipe, assume 100 cy per acre.															
See "Hardened Slopes" for unit cost quote.															
				TOTAL Prep (excav) slope to receive	500.00	CY			0	0	0	0	750	750	1.50
09. 25.001. 4. 30" Pipe Laying															
09. 25.001. 4.01. Install pipe bedding, gravel, 24" by 24"															
M	MIL	GC	<02704	0300 > Drainage, drainage matl, 3/4" gravel fill in trench	150.00	CY	CODLB6	32.50	0.09	2.31	0.47	46.94	0.00	49.72	49.72
									14	346	70	7,041	0	7,457	
				TOTAL Install pipe bedding, gravel,	150.00	CY			14	346	70	7,041	0	7,457	49.72
09. 25.001. 4.02. Install 30" dia CMP, 200 lf per location															
M	MIL	GC	<02764	2160 > Piping, storm drain, 30" dia, 20'L, 14ga, CMP, bitum ctd w/paved invert	1000.00	LF	CLABB13	15.00	0.47	11.67	6.31	22.11	0.00	40.09	40.09
									467	11,672	6,312	22,110	0	40,094	

09. 25. LET DOWN STRUCTURES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Install 30" dia CMP, 200 lf per		1000.00	LF			467	11,672	6,312	22,110	0	40,094	40.09
09. 25.001. 4.03. Install wingwall deflectors on mitred pipe ends, 2 per pipe												
Cost assumed. See Eldon Kraft's e-mail dated 05/21/04												
TOTAL Install wingwall deflectors on		10.00	EA			0	0	0	0	30,000	30,000	3000.00
TOTAL 30" Pipe Laying		1000.00	LF			481	12,019	6,381	29,151	30,000	77,551	77.55
09. 25.001. 5. Backfilling & Compaction												
09. 25.001. 5.01. Hauling, no loading, 16.5 cy dump trailer, 10 mile RT												
MIL GC <02234 1115 >	Hauling, hwy haulers, 16.5 CY, 6 mi round trip @ 40 MPH (2.1 cyc/hr)	30000	CY	CTDHB34C	35.00	0.03 858	0.77 23,169	1.44 43,347	0.00 0	0.00 0	2.22 66,516	2.22
TOTAL Hauling, no loading, 16.5 cy		30000	CY			858	23,169	43,347	0	0	66,516	2.22
09. 25.001. 5.02. Fill, spread dumped matl, by dozer, no compaction												
See "Hardened Slope" for cost quote.												
TOTAL Fill, spread dumped matl, by		30000	CY			0	0	0	0	19,500	19,500	0.65
09. 25.001. 5.03. Compaction, sheepfoot/wobbly whl rlr, 12" lifts, 2 passes												
AF GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	30000	CY	COFCB32F	600.00	0.01 150	0.14 4,152	0.16 4,674	0.00 0	0.00 0	0.29 8,826	0.29
TOTAL Compaction, sheepfoot/wobbly		30000	CY			150	4,152	4,674	0	0	8,826	0.29
09. 25.001. 5.04. Fine grade filled area, for irregular areas, adverse cond.												
See "Hardened Slope" for cost quote.												
TOTAL Fine grade filled area, for		2.50	ACR			0	0	0	0	5,445	5,445	2178.00
TOTAL Backfilling & Compaction		30000	CY			1,008	27,321	48,021	0	24,945	100,287	3.34

09. 25. LET DOWN STRUCTURES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 25.001. 6. Planting and Seeding												
09. 25.001. 6.01. Mulching, hay, 1" deep, power (cont'd) mulcher, large												
Productivity is quoted from Means Crew B65. Material cost = \$19.15/MSF x 43.56 MSF/acr = \$834.17/acr												
M MIL GC <	> Outside Laborer	1.38	HR	X-LABORER	1.00	1	20.47	0.00	0.09	0.00	20.56	20.56
						1	28	0	0	0	28	
MIL GC <	> Outside Truck Driver, Light	1.38	HR	X-TRKDVRLT	1.00	1	25.38	0.00	0.00	0.00	25.38	25.38
						1	35	0	0	0	35	
EP GC <	> TRK,HWY, 21,000 GVW, 4X2, 2 AXLE	1.38	HR	T50FO009	1.00	0	0.00	15.53	0.00	0.00	15.53	15.53
						0	0	21	0	0	21	
GEN GC <	> HYDROMULCHER, 3,000 GAL(11,356L) TRK MTD (W/ 56,000GVW TRK)	1.38	HR	L15Z3880	1.00	0	0.00	29.04	0.00	0.00	29.04	29.04
						0	0	40	0	0	40	
USR GC <	> Material cost	2.10	ACR	N/A	0.00	0	0.00	0.00	834.17	0.00	834.17	834.17
						0	0	0	1,752	0	1,752	
	TOTAL Mulching, hay, 1" deep, power	2.10	ACR			3	63	62	1,752	0	1,877	893.72
09. 25.001. 6.02. Crimping, tilling topsoil (cont'd) 20 HP tractor, disk harrow, 6" deep												
EP GC <	> ROTARY HOE, 80" WIDE ROTERRA (ADD 40 HP PTO TRACTOR)	8.40	HR	T10LE001	1.00	0	0.00	1.29	0.00	0.00	1.29	1.29
						0	0	11	0	0	11	
MAP GC <	> TRACTOR,WH,FARM, 40- 59HP, 2X4	8.40	HR	T25JD005	1.00	0	0.00	7.67	0.00	0.00	7.67	7.67
						0	0	64	0	0	64	
MIL GC <	> Outside Equip. Operator, Light	8.40	HR	X-EQOPRLT	1.00	8	30.80	0.00	0.00	0.00	30.80	30.80
						8	259	0	0	0	259	
	TOTAL Crimping, tilling topsoil	2.10	ACR			8	259	75	0	0	334	159.04
09. 25.001. 6.03. Seeding, athletic fld mix,												
M RSM GC <02932 0010 >	Seeding, athletic field mix, 8#/MSFpush spreader	104.54	MSF	ALABCLAB1	1.00	105	22.13	0.00	47.42	0.00	69.55	69.55
						105	2,314	0	4,957	0	7,271	
	125 acres = 5,445 msf											
	TOTAL Seeding, athletic fld mix,	2.40	ACR			105	2,314	0	4,957	0	7,271	3029.69

09. 25. LET DOWN STRUCTURES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 25.001. 6.04. Place Coarse Woody debris/rocks												
M MIL GC <	> Outside Laborer (4)					1.00	20.47	0.00	0.00	0.00	20.47	
		67.20	HR	X-LABORER	1.00	67	1,376	0	0	0	1,376	20.47
USR GC <	> Material and equipment					0.00	0.00	50.00	50.00	0.00	100.00	
		2.10	ACR	N/A	0.00	0	0	105	105	0	210	100.00
TOTAL Place Coarse Woody debris/rocks		2.10	ACR			67	1,376	105	105	0	1,586	755.09
09. 25.001. 6.05. Plant Mesquite/Shrub mix using (cont'd) 5 gallon plants												
USR GC <	> Planting of 5-gallon plants See bid result of Rio Salado Ph 1A	1125.00	EA		0.00	0	0	0	0	16,875	16,875	15.00
TOTAL Plant Mesquite/Shrub mix using		1125.00	EA			0	0	0	0	16,875	16,875	15.00
TOTAL Planting and Seeding		2.10	ACR			183	4,012	242	6,814	16,875	27,943	13306.06
TOTAL Let Down Structures		1.00	EA			1,910	48,812	55,230	40,691	72,570	217,303	217303.02
TOTAL LET DOWN STRUCTURES		1.00	EA			1,910	48,812	55,230	40,691	72,570	217,303	217303.02
TOTAL CONSTRUCTION (RESTORATION)		1.00	EA			343,303	10546426	4813116	12682559	7,900,751	35,942,852	35942852

14. 30. RECREATION FEATURES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST			
14. RECREATION															
14. 30. RECREATION FEATURES															
14. 30.001. Parking Areas															
Construct parking areas at various locations throughout project area with a total capacity of 60-80 spaces															
14. 30.001. 1. Fencing for Erosion Control															
1.8 acres = 78,408 sf															
Square root of 78,408 sf = 280 lf															
280 x 4 = 1,120 lf (perimeter)															
AF	GC	<01534	0010	> Fencing, 11 ga, chain link, 5' high	1120.00	LF	ALABCLAB2	12.50	0.16	3.54	0.00	3.58	0.00	7.12	7.12
									179	3,966	0	4,010	0	7,976	
				TOTAL Fencing for Erosion Control	1.80	ACR			179	3,966	0	4,010	0	7,976	4430.91
14. 30.001. 2. Clearing & Grubbing, debris removal, etc.															
AF	GC	<02109	0420	> Clear & grub, burning, incinerator, light	1.90	ACR	UOEHB40A	0.28	14.23	414.10	308.04	0.00	0.00	722.14	722.14
									27	787	585	0	0	1,372	
				TOTAL Clearing & Grubbing, debris	1.80	ACR			27	787	585	0	0	1,372	762.26
14. 30.001. 3. Site Preparation															
14. 30.001. 3.01. Ripping, discing to prepare surface															
RSM	GC	<02238	0010	> Ripping, trap rock, soft, 200 HP dozer, ideal conditions	18.00	CY	CODTB10B	88.75	0.02	0.51	0.74	0.00	0.00	1.25	1.25
									0	9	13	0	0	22	
				Assume 10 cy/acre											
				TOTAL Ripping, discing to prepare	1.80	ACR			0	9	13	0	0	22	12.49
14. 30.001. 3.02. Regrade to req'd slopes, flatten balance cut matl onsite															
MIL	GC	<02224	7020	> Excavating, bulk, dozer, 300 HP, large area, open site, rough grade	18.00	CY	CODTB10M	300.00	0.01	0.15	0.33	0.00	0.00	0.48	0.48
									0	3	6	0	0	9	
				Assume 10 cy/acre											
				TOTAL Regrade to req'd slopes, flatten	1.80	ACR			0	3	6	0	0	9	4.82



14. 30. RECREATION FEATURES	QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
-----											
14. 30.001. 3.03. Regrade surface, scraper-grader, balance, max depth 36"											
MIL GC <02226 3100 > Excavation, bulk, 9 cycle/hr, push loaded self prop scraper, 9 BCY	4410.00	CY	CODSB33F	66.25	120	3,666	5,920	0.00	0.00	9,587	2.17
TOTAL Regrade surface, scraper-grader,	4410.00	CY			120	3,666	5,920	0	0	9,587	2.17
-----											
14. 30.001. 3.04. Compaction, riding, sheepfoot or wobbly whl, 2 passes											
AF GC <02220 5660 > Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	8810.00	CY	COFCB32F	600.00	44	1,219	1,373	0.00	0.00	2,592	0.29
TOTAL Compaction, riding, sheepfoot	8810.00	SY			44	1,219	1,373	0	0	2,592	0.29
-----											
14. 30.001. 3.05. Fine grade, grade subgrade for base course, roadways											
MIL GC <02512 0020 > Fine grade, for roadway, base or leveling course	8.81	MSY	COFGB11L	0.17	104	2,902	1,830	0.00	0.00	4,731	537.06
TOTAL Fine grade, grade subgrade for	8810.00	SY			104	2,902	1,830	0	0	4,731	0.54
TOTAL Site Preparation	1.80	ACR			268	7,799	9,142	0	0	16,941	9411.90
-----											
14. 30.001. 4. Asphalt Paving, 6" stone base, 2" base course, 1" topping											
See Means Construction Cost Data 2004, 02740-315-0020 for cost quote.											
TOTAL Asphalt Paving, 6" stone base,	79280	SF			0	11,892	14,270	103,064	0	129,226	1.63
-----											
14. 30.001. 5. Lines on pavement, parking stall paint, white, 4" wide											
TOTAL Lines on pavement, parking stall					0	0	0	0	1,500	1,500	
-----											
14. 30.001. 6. Parking Lot Amenities, lighting, curbs, drainage, etc.											
TOTAL Parking Lot Amenities, lighting,					0	0	0	0	10,000	10,000	
TOTAL Parking Areas	1.80	ACR			474	24,444	23,998	107,074	11,500	167,016	92786.39
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14. 30. RECREATION FEATURES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
14. 30.005. Decomposed Granite Trails Construct DG trail at various locations throughout project area, 10 foot width													
14. 30.005. 1. Clearing & Grubbing, debris removal, etc.													
AF	GC <02109 0420 >	Clear & grub, burning, incinerator, light	2.00	ACR	UOEHB40A	0.28	14.23 28	414.10 828	308.04 616	0.00 0	0.00 0	722.14 1,444	722.14
TOTAL Clearing & Grubbing, debris		2.00	ACR			28	828	616	0	0	1,444	722.14	
14. 30.005. 2. Site Preparation													
14. 30.005. 2.01. Ripping, discing to prepare surface													
RSM	GC <02238 0010 >	Ripping, trap rock, soft, 200 HP dozer, ideal conditions	20.00	CY	CODTB10B	88.75	0.02 0	0.51 10	0.74 15	0.00 0	0.00 0	1.25 25	1.25
Assume 10 cy/acre													
TOTAL Ripping, discing to prepare		2.00	ACR			0	10	15	0	0	25	12.49	
14. 30.005. 2.02. Regrade, flatten, balance cut matl. Onsite, 50% of area													
MIL	GC <02224 7020 >	Excavating, bulk, dozer, 300 HP, large area, open site, rough grade	1540.00	CY	CODTB10M	300.00	0.01 8	0.15 231	0.33 511	0.00 0	0.00 0	0.48 742	0.48
TOTAL Regrade, flatten, balance cut		1540.00	CY			8	231	511	0	0	742	0.48	
14. 30.005. 2.03. Compaction, riding, sheepfoot/wobbly whl, 2 passes													
AF	GC <02220 5660 >	Compaction, riding, 8" lifts, 2 passes, sheepsfoot/wobbly wheel roller	30640	CY	COFCB32F	600.00	0.01 153	0.14 4,241	0.16 4,774	0.00 0	0.00 0	0.29 9,014	0.29
TOTAL Compaction, riding, sheepfoot/wobbly whl, 2 passes		30640	SY			153	4,241	4,774	0	0	9,014	0.29	
TOTAL Site Preparation		2.00	ACR			161	4,481	5,300	0	0	9,781	4890.62	

14. 30. RECREATION FEATURES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
14. 30.005. 3. Decomposed Granite course, crushed 3/4" stone, compacted, 3" deep  In one sq ft, the volume is about 0.25 cf. Then, we need 275740 sf x 0.25 cf = 68,935 cf = 2,553 cy. Using the conversion factor of 1.50 ton/cy for the DG, then we get 3,830 tons.  Per material cost quotation from Flamingo Sand and Gravel, (800) 777-6299, the total cost including tax and delivery is about \$30/ton for Az area. TOTAL Material and Delivery 3830.00 TON 0 0 0 0 114,900 114,900 30.00												
14. 30.005. 3.02. Spread and Compaction												
EP	GC <	>	GRADER,MOTOR, ARTIC, CAT 12-H			0.00	0.00	38.17	0.00	0.00	38.17	
				38.30	HR	G15CA003	1.00	0	1,462	0	1,462	38.17
EP	GC <	>	ROLLER,STATIC,DD,S/P,10T, 50"W			0.00	0.00	19.08	0.00	0.00	19.08	
				38.30	HR	R30HY005	1.00	0	731	0	731	19.08
EP	GC <	>	TRK,HWY, 8,600GVW,4X2, 3/4T-PKUP			0.00	0.00	10.23	0.00	0.00	10.23	
				38.30	HR	T50GM006	1.00	0	392	0	392	10.23
MIL	GC <	>	Outside Equip. Operator, Medium (grader)			1.00	32.20	0.00	0.00	0.00	32.20	
				38.30	HR	X-EQOPRMED	1.00	38	1,233	0	1,233	32.20
MIL	GC <	>	Outside Equip. Operator, Medium (roller)			1.00	32.20	0.00	0.00	0.00	32.20	
				38.30	HR	X-EQOPRMED	1.00	38	1,233	0	1,233	32.20
MIL	GC <	>	Outside Laborer			1.00	20.47	0.00	0.00	0.00	20.47	
				38.30	HR	X-LABORER	1.00	38	784	0	784	20.47
MIL	GC <	>	Outside Equip. Operator, Medium			1.00	33.20	0.00	0.00	0.00	33.20	
				38.30	HR	X-EQOPRMED	1.00	38	1,272	0	1,272	33.20
TOTAL Spread and Compaction				3830.00	TON			153	4,522	2,584	0	7,106 1.86
TOTAL Decomposed Granite course,				275740	SF			153	4,522	2,584	0	114,900 122,006 0.44
14. 30.005. 4. Trail amenities, ADA ramps, sign markings, etc.												
TOTAL Trail amenities, ADA ramps, sign								0	0	0	0	10,000 10,000
TOTAL Decomposed Granite Trails				1.00	EA			343	9,831	8,501	0	124,900 143,232 143231.98

14. 30. RECREATION FEATURES		QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
14. 30.010. Other Recreation Features												
Additions to Paved Maintenance Road/DG Trail alignment to facilitate recreation use.												
14. 30.010. 1. Paved Trail amenities, curb splice, ADA ramps, signs, markings												
	TOTAL Paved Trail amenities, curb	1.00	EA			0	0	0	0	10,000	10,000	10000.00
	TOTAL Comfort Stations	3.00	EA			0	0	0	0	300,000	300,000	100000.00
	TOTAL Rest Stops	5.00	EA			0	0	0	0	15,000	15,000	3000.00
14. 30.010. 4. Concrete Benches												
	M MIL GC <02871 0100 > Benches, park, precast conc, w/back, wood rails, 8' long	21.00	EA	ALABCLAB2	0.50	4.00 84	88.53 1,859	0.00 0	621.41 13,050	0.00 0	709.94 14,909	709.94
	TOTAL Concrete Benches	21.00	EA			84	1,859	0	13,050	0	14,909	709.94
14. 30.010. 5. Signage												
	M MIL GC <02842 0590 > Signs, reflectorized w/post, 12" x 18", guide & directional signs	21.00	EA	ALABCLAB1	2.00	0.50 11	11.07 232	0.00 0	16.80 353	0.00 0	27.87 585	27.87
	TOTAL Signage	21.00	EA			11	232	0	353	0	585	27.87
	TOTAL Other Recreation Features	1.00	EA			95	2,091	0	13,402	325,000	340,494	340493.88
	TOTAL RECREATION FEATURES	1.00	EA			912	36,367	32,498	120,476	461,400	650,741	650741.37
	TOTAL RECREATION	1.00	EA			912	36,367	32,498	120,476	461,400	650,741	650741.37

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30.009. Construction	QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
-----											
30. PLANNING, ENGINEERING, DESIGN and Engineering During Construction 30.009. Construction											
$\$4,658,626 + \$465,863 = \$5,124,490$											
TOTAL Construction											
	1.00	EA			0	0	0	0	5,120,000	5,120,000	5120000

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30.014. Recreation	QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
30.014. Recreation											
\$85,457 + \$9,828 = \$95,285											
TOTAL Recreation	1.00	EA			0	0	0	0	95,285	95,285	95285.00
TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA			0	0	0	0	5,215,285	5,215,285	5215285

-----  
31.009. Construction (Restoration) QUANTITY UOM CREW ID OUTPUT MANHRS LABOR EQUIPMNT MATERIAL OTHER TOTAL COST UNIT COST  
-----

31. CONSTRUCTION MANAGEMENT  
(Supervision and Administration/Adaptive Management/Monitoring)  
31.009. Construction (Restoration)

\$3,482,323 + \$1,870,205 + \$623,304 = \$5,975,832 (See Paseo\_MCACES  
Summary.xls)

TOTAL Construction (Restoration) 1.00 EA 0 0 0 0 5,980,000 5,980,000 5980000

31.014. Recreation	QUANTITY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Recreation	1.00	EA			0	0	0	0	63,879	63,879	63879.00
TOTAL CONSTRUCTION MANAGEMENT	1.00	EA			0	0	0	0	6,043,879	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study	1.00	EA			344,214	10582793	4845615	12803035	45,821,315	74,052,757	74052757



	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
01 LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	26,200,000	0	0	26,200,000	26200000	
09 CONSTRUCTION (RESTORATION)	1.00	EA	47,203,570	4,940,000	6,990,000	59,133,570	59133570	
14 RECREATION	1.00	EA	854,615	13,123	128,185	995,923	995923.43	
30 PLANNING, ENGINEERING, DESIGN	1.00	EA	5,215,285	0	0	5,215,285	5215285	
31 CONSTRUCTION MANAGEMENT	1.00	EA	6,043,879	0	0	6,043,879	6043879	
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	85,517,349	4,953,123	7,118,185	97,588,657	97588657	

		QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
01	LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	26,200,000	0	0	26,200,000	26200000	
09	CONSTRUCTION (RESTORATION)								
09.01	IRRIGATION PLANTING	1.00	EA	35,114,721	3,674,864	5,199,859	43,989,444	43989444	
09.05	BASINS PLANTING	1.00	EA	731,469	76,550	108,317	916,337	916336.78	
09.10	HARDENED BANKS	1.00	EA	3,325,523	348,026	492,450	4,165,999	4165999	
09.15	PIPING	1.00	EA	4,647,640	486,390	688,232	5,822,262	5822262	
09.20	ROADS & BRIDGES	1.00	EA	3,098,834	324,303	458,882	3,882,018	3882018	
09.25	LET DOWN STRUCTURES	1.00	EA	285,383	29,866	42,260	357,509	357509.28	
	TOTAL CONSTRUCTION (RESTORATION)	1.00	EA	47,203,570	4,940,000	6,990,000	59,133,570	59133570	
14	RECREATION								
14.30	RECREATION FEATURES	1.00	EA	854,615	13,123	128,185	995,923	995923.43	
	TOTAL RECREATION	1.00	EA	854,615	13,123	128,185	995,923	995923.43	
30	PLANNING, ENGINEERING, DESIGN								
30.009	Construction	1.00	EA	5,120,000	0	0	5,120,000	5120000	
30.014	Recreation	1.00	EA	95,285	0	0	95,285	95285.00	
	TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	5,215,285	0	0	5,215,285	5215285	
31	CONSTRUCTION MANAGEMENT								
31.009	Construction (Restoration)	1.00	EA	5,980,000	0	0	5,980,000	5980000	
31.014	Recreation	1.00	EA	63,879	0	0	63,879	63879.00	
	TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	6,043,879	0	0	6,043,879	6043879	
	TOTAL Paseo de las Iglesias Feas Study	1.00	EA	85,517,349	4,953,123	7,118,185	97,588,657	97588657	

		QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
01	LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	26,200,000	0	0	26,200,000	26200000	
09	CONSTRUCTION (RESTORATION)								
09.01	IRRIGATION PLANTING								
09.01.001	Historic Floodplain	1.00	EA	12,587,475	1,317,318	1,863,979	15,768,772	15768772	
09.01.005	Graded Slope	1.00	EA	11,672,230	1,221,535	1,728,447	14,622,212	14622212	
09.01.010	Natural Slope	1.00	EA	1,044,559	109,316	154,680	1,308,556	1308556	
09.01.015	Second Bench	1.00	EA	6,896,001	721,688	1,021,174	8,638,862	8638862	
09.01.020	First Bench	1.00	EA	2,914,456	305,007	431,579	3,651,042	3651042	
	TOTAL IRRIGATION PLANTING	1.00	EA	35,114,721	3,674,864	5,199,859	43,989,444	43989444	
09.05	BASINS PLANTING								
09.05.001	Tributary Infiltration Basins	1.00	EA	556,366	58,225	82,388	696,979	696979.43	
09.05.005	Grade Control Infiltration Basin	1.00	EA	175,103	18,325	25,930	219,357	219357.35	
	TOTAL BASINS PLANTING	1.00	EA	731,469	76,550	108,317	916,337	916336.78	
09.10	HARDENED BANKS								
09.10.001	Hardened Slopes	1.00	EA	3,325,523	348,026	492,450	4,165,999	4165999	
	TOTAL HARDENED BANKS	1.00	EA	3,325,523	348,026	492,450	4,165,999	4165999	
09.15	PIPING								
09.15.001	Irrigation Piping	1.00	EA	4,647,640	486,390	688,232	5,822,262	5822262	
	TOTAL PIPING	1.00	EA	4,647,640	486,390	688,232	5,822,262	5822262	
09.20	ROADS & BRIDGES								
09.20.001	Compacted Earth Maintenance Road	8.30	ACR	24,841	2,600	3,679	31,119	3749.33	
09.20.002	Paved Maintenance Roads	18.00	ACR	1,385,874	145,036	205,223	1,736,134	96451.86	
09.20.003	Gravel Maintenance Road	8.20	ACR	196,513	20,566	29,100	246,179	30021.85	
09.20.005	Bridges	1.00	EA	1,491,605	156,101	220,880	1,868,586	1868586	
	TOTAL ROADS & BRIDGES	1.00	EA	3,098,834	324,303	458,882	3,882,018	3882018	
09.25	LET DOWN STRUCTURES								
09.25.001	Let Down Structures	1.00	EA	285,383	29,866	42,260	357,509	357509.28	

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
TOTAL LET DOWN STRUCTURES	1.00	EA	285,383	29,866	42,260	357,509	357509.28	
TOTAL CONSTRUCTION (RESTORATION)	1.00	EA	47,203,570	4,940,000	6,990,000	59,133,570	59133570	
14 RECREATION								
14. 30 RECREATION FEATURES								
14. 30.001 Parking Areas	1.80	ACR	219,341	3,368	32,899	255,608	142004.41	
14. 30.005 Decomposed Granite Trails	1.00	EA	188,106	2,888	28,214	219,209	219208.56	
14. 30.010 Other Recreation Features	1.00	EA	447,169	6,866	67,072	521,107	521106.93	
TOTAL RECREATION FEATURES	1.00	EA	854,615	13,123	128,185	995,923	995923.43	
TOTAL RECREATION	1.00	EA	854,615	13,123	128,185	995,923	995923.43	
30 PLANNING, ENGINEERING, DESIGN								
30.009 Construction	1.00	EA	5,120,000	0	0	5,120,000	5120000	
30.014 Recreation	1.00	EA	95,285	0	0	95,285	95285.00	
TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	5,215,285	0	0	5,215,285	5215285	
31 CONSTRUCTION MANAGEMENT								
31.009 Construction (Restoration)	1.00	EA	5,980,000	0	0	5,980,000	5980000	
31.014 Recreation	1.00	EA	63,879	0	0	63,879	63879.00	
TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	6,043,879	0	0	6,043,879	6043879	
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	85,517,349	4,953,123	7,118,185	97,588,657	97588657	

		QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
01	LANDS AND DAMAGES (REAL ESTATE)	1.00 EA	26,200,000	0	0	26,200,000	26200000	
09	CONSTRUCTION (RESTORATION)							
09.01	IRRIGATION PLANTING							
09.01.001	Historic Floodplain							
09.01.001.1	Fencing for Erosion Control	656.00 ACR	199,985	20,929	29,614	250,529	381.90	
09.01.001.2	Clearing & Grubbing, Debris	328.00 ACR	622,138	65,109	92,128	779,375	2376.14	
09.01.001.3	Site Preparation	1.00 EA	43,274	4,529	6,408	54,211	54210.52	
09.01.001.4	Excavation	176990.00 CY	448,377	46,924	66,397	561,698	3.17	
09.01.001.5	Compaction (tractor wheel, one	3561940 LF	553,508	57,926	81,965	693,399	0.19	
09.01.001.6	Trenching for Water Supply Pipes	17050.00 CY	29,450	3,082	4,361	36,892	2.16	
09.01.001.7	Pipe bedding, crushed stone	13110.00 CY	855,960	89,579	126,752	1,072,291	81.79	
09.01.001.8	Install gated 12" PVC pipe for	114720.00 LF	1,015,381	106,263	150,360	1,272,004	11.09	
09.01.001.9	Install "U" outlet tubes with	5940.00 EA	74,161	7,761	10,982	92,904	15.64	
09.01.001.10	Backfill pipe trench, side cast	4590.00 CY	2,350	246	348	2,944	0.64	
09.01.001.11	Planting & Seeding	558.00 ACR	8,742,892	914,971	1,294,665	10,952,528	19628.19	
	TOTAL Historic Floodplain	1.00 EA	12,587,475	1,317,318	1,863,979	15,768,772	15768772	
09.01.005	Graded Slope							
09.01.005.1	Fencing for Erosion Control	102.00 ACR	78,857	8,253	11,677	98,787	968.50	
09.01.005.2	Clearing & Grubbing, debris	51.00 ACR	48,367	5,062	7,162	60,592	1188.07	
09.01.005.3	Excavation, strl, mach excav.	1213390 CY	842,982	88,221	124,831	1,056,033	0.87	
09.01.005.4	Excavation, steep slopes, 5:1	1213390 CY	4,623,176	483,830	684,609	5,791,615	4.77	
09.01.005.5	Fine grading to 20% slope,	110.00 ACR	319,183	33,403	47,265	399,851	3635.01	
09.01.005.6	Header Pipe Laying	7620.00 LF	169,701	17,760	25,130	212,590	27.90	
09.01.005.7	8" PVC Leach Pipe Laying	445590.00 LF	4,042,175	423,026	598,573	5,063,774	11.36	
09.01.005.8	Planting & Seeding	102.00 ACR	1,547,789	161,981	229,200	1,938,969	19009.50	
	TOTAL Graded Slope	1.00 EA	11,672,230	1,221,535	1,728,447	14,622,212	14622212	
09.01.010	Natural Slope							
09.01.010.1	Fencing for Erosion Control	18.00 ACR	33,125	3,467	4,905	41,497	2305.39	
09.01.010.2	Clearing and Grubbing, debris	13.00 ACR	12,329	1,290	1,826	15,445	1188.07	
09.01.010.3	Header Trenching	1520.00 LF	26,971	2,823	3,994	33,787	22.23	
09.01.010.4	8" PVC Leach Pipe Laying	75510.00 LF	705,304	73,812	104,443	883,560	11.70	
09.01.010.5	Planting & Seeding	18.00 ACR	266,830	27,925	39,513	334,267	18570.38	
	TOTAL Natural Slope	1.00 EA	1,044,559	109,316	154,680	1,308,556	1308556	
09.01.015	Second Bench							
09.01.015.1	Fencing for Erosion Control	124.00 ACR	86,937	9,098	12,874	108,909	878.30	

		QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09. 01.015. 2	Clearing and Grubbing, debris	93.00 ACR	88,200	9,230	13,061	110,491	1188.07	
09. 01.015. 3	Header Trenching	8080.00 LF	143,959	15,066	21,318	180,343	22.32	
09. 01.015. 4	8" PVC Leach Pipe Laying	545686.00 LF	4,679,775	489,753	692,991	5,862,519	10.74	
09. 01.015. 5	Planting & Seeding	125.00 ACR	1,897,130	198,541	280,931	2,376,601	19012.81	
TOTAL Second Bench		1.00 EA	6,896,001	721,688	1,021,174	8,638,862	8638862	
09. 01.020 First Bench								
09. 01.020. 1	Excavate pipe trench, 18" depth	1.00 LF	1	0	0	1	1.07	
09. 01.020. 2	Pipe Laying	31000.00 LF	366,624	38,368	54,290	459,283	14.82	
09. 01.020. 3	Backfill pipe trench, compact	31000.00 LF	66,866	6,998	9,902	83,765	2.70	
09. 01.020. 4	Install control valves for sprin	90.00 EA	5,201	544	770	6,516	72.39	
09. 01.020. 5	Install Programmable Logic	1.00 EA	656,648	68,720	97,238	822,605	822605.43	
09. 01.020. 6	Rough grade & scarify subsoil	89.00 ACR	209,033	21,876	30,954	261,863	2942.29	
09. 01.020. 7	Planting & seeding	89.00 ACR	1,610,084	168,500	238,424	2,017,009	22663.02	
TOTAL First Bench		1.00 EA	2,914,456	305,007	431,579	3,651,042	3651042	
TOTAL IRRIGATION PLANTING		1.00 EA	35,114,721	3,674,864	5,199,859	43,989,444	43989444	
09. 05 BASINS PLANTING								
09. 05.001 Tributary Infiltration Basins								
09. 05.001. 1	Fencing for Erosion Control	18.00 ACR	33,125	3,467	4,905	41,497	2305.39	
09. 05.001. 2	Clearing and Grubbing, debris	13.00 ACR	12,329	1,290	1,826	15,445	1188.07	
09. 05.001. 3	Excavate, mach exc., sand & grav	8300.00 CY	269,930	28,249	39,972	338,151	40.74	
09. 05.001. 4	Backfilling	3360.00 CY	81,359	8,514	12,048	101,921	30.33	
09. 05.001. 5	Planting & Seeding	18.00 ACR	159,623	16,705	23,637	199,966	11109.20	
TOTAL Tributary Infiltration Basins		1.00 EA	556,366	58,225	82,388	696,979	696979.43	
09. 05.005 Grade Control Infiltration Basin								
09. 05.005. 1	Fencing for Erosion Control	6.00 ACR	19,116	2,001	2,831	23,947	3991.15	
09. 05.005. 2	Clearing and Grubbing, debris	5.00 ACR	4,742	496	702	5,940	1188.07	
09. 05.005. 3	Excavating, mach exc, sand & gr	1120.00 CY	5,490	575	813	6,877	6.14	
09. 05.005. 4	Compaction at dump site, hl rlr	840.00 CY	325	34	48	407	0.48	
09. 05.005. 5	Compact basin subgrade, existing	29040.00 CY	85,170	8,913	12,612	106,695	3.67	
09. 05.005. 6	Backfilling	1160.00 CY	28,092	2,940	4,160	35,192	30.34	
09. 05.005. 7	Planting & Seeding	6.00 ACR	32,169	3,367	4,764	40,299	6716.48	
TOTAL Grade Control Infiltration Basin		1.00 EA	175,103	18,325	25,930	219,357	219357.35	
TOTAL BASINS PLANTING		1.00 EA	731,469	76,550	108,317	916,337	916336.78	

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES	
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09. 10	HARDENED BANKS								
09. 10.001	Hardened Slopes								
09. 10.001. 1	3.50	ACR	14,589	1,527	2,160	18,277	5221.86		
09. 10.001. 2	0.90	ACR	854	89	126	1,069	1188.07		
09. 10.001. 3	47000.00	CY	92,711	9,702	13,729	116,142	2.47		
09. 10.001. 4	18800.00	CY	16,197	1,695	2,398	20,290	1.08		
09. 10.001. 5	61100.00	CY	3,129,451	327,507	463,415	3,920,373	64.16		
09. 10.001. 6	28200.00	CY	71,722	7,506	10,621	89,848	3.19		
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	TOTAL	Hardened Slopes	1.00	EA	3,325,523	348,026	492,450	4,165,999	4165999
			-----						
	TOTAL	HARDENED BANKS	1.00	EA	3,325,523	348,026	492,450	4,165,999	4165999
09. 15	PIPING								
09. 15.001	Irrigation Piping								
09. 15.001. 1	3130.00	CY	387,531	40,556	57,386	485,474	155.10		
09. 15.001. 2	21000.00	CY	2,593,353	271,402	384,029	3,248,784	154.70		
09. 15.001. 3	8420.00	CY	689,135	72,120	102,049	863,304	102.53		
09. 15.001. 4	10500.00	CY	977,621	102,311	144,768	1,224,700	116.64		
			-----						
	TOTAL	Irrigation Piping	1.00	EA	4,647,640	486,390	688,232	5,822,262	5822262
			-----						
	TOTAL	PIPING	1.00	EA	4,647,640	486,390	688,232	5,822,262	5822262
09. 20	ROADS & BRIDGES								
09. 20.001	Compacted Earth Maintenance Road								
09. 20.001. 1	8.30	ACR	7,872	824	1,166	9,861	1188.07		
09. 20.001. 2	8.30	ACR	16,970	1,776	2,513	21,258	2561.26		
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	TOTAL	Compacted Earth Maintenance Road	8.30	ACR	24,841	2,600	3,679	31,119	3749.33
09. 20.002	Paved Maintenance Roads								
09. 20.002. 1	9.00	ACR	8,535	893	1,264	10,693	1188.07		
09. 20.002. 2	18.00	ACR	1,377,339	144,143	203,959	1,725,441	95857.83		
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	TOTAL	Paved Maintenance Roads	18.00	ACR	1,385,874	145,036	205,223	1,736,134	96451.86
09. 20.003	Gravel Maintenance Road								
09. 20.003. 1	4.10	ACR	3,888	407	576	4,871	1188.07		

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09. 20.003. 2 Site Preparation	8.20 ACR	192,625	20,159	28,524	241,308	29427.82	
TOTAL Gravel Maintenance Road	8.20 ACR	196,513	20,566	29,100	246,179	30021.85	
09. 20.005 Bridges							
09. 20.005. 1 Fencing for Erosion Control	9.00 ACR	23,418	2,451	3,468	29,336	3259.57	
09. 20.005. 2 Clearing and Grubbing, debris	7.00 ACR	6,639	695	983	8,316	1188.07	
09. 20.005. 3 Excavating, structural, sand/	3060.00 CY	13,313	1,393	1,971	16,677	5.45	
09. 20.005. 4 Cast in Place reinforced concret	3060.00 CY	503,669	52,711	74,584	630,964	206.20	
09. 20.005. 5 Finished grading, tie in, stabl.	9.00 ACR	40,177	4,205	5,949	50,331	5592.29	
09. 20.005. 6 Prefab Bridges	9.00 EA	904,390	94,647	133,924	1,132,962	125884.63	
TOTAL Bridges	1.00 EA	1,491,605	156,101	220,880	1,868,586	1868586	
TOTAL ROADS & BRIDGES	1.00 EA	3,098,834	324,303	458,882	3,882,018	3882018	
09. 25 LET DOWN STRUCTURES							
09. 25.001 Let Down Structures							
09. 25.001. 1 Fencing for Erosion Control	2.50 ACR	12,345	1,292	1,828	15,465	6185.90	
09. 25.001. 2 Clearing & Grubbing, debris	1.90 ACR	1,802	189	267	2,257	1188.07	
09. 25.001. 3 Prep (excav) slope to receive	500.00 CY	985	103	146	1,234	2.47	
09. 25.001. 4 30" Pipe Laying	1000.00 LF	101,848	10,659	15,082	127,588	127.59	
09. 25.001. 5 Backfilling & Compaction	30000.00 CY	131,706	13,783	19,503	164,993	5.50	
09. 25.001. 6 Planting and Seeding	2.10 ACR	36,697	3,840	5,434	45,972	21891.28	
TOTAL Let Down Structures	1.00 EA	285,383	29,866	42,260	357,509	357509.28	
TOTAL LET DOWN STRUCTURES	1.00 EA	285,383	29,866	42,260	357,509	357509.28	
TOTAL CONSTRUCTION (RESTORATION)	1.00 EA	47,203,570	4,940,000	6,990,000	59,133,570	59133570	
14 RECREATION							
14. 30 RECREATION FEATURES							
14. 30.001 Parking Areas							
14. 30.001. 1 Fencing for Erosion Control	1.80 ACR	10,474	161	1,571	12,206	6781.26	
14. 30.001. 2 Clearing & Grubbing, debris	1.80 ACR	1,802	28	270	2,100	1166.59	
14. 30.001. 3 Site Preparation	1.80 ACR	22,249	342	3,337	25,928	14404.38	
14. 30.001. 4 Asphalt Paving, 6" stone base,	79280.00 SF	169,712	2,606	25,455	197,774	2.49	
14. 30.001. 5 Lines on pavement, parking stall		1,970	30	295	2,296		
14. 30.001. 6 Parking Lot Amenities, lighting,		13,133	202	1,970	15,304		
TOTAL Parking Areas	1.80 ACR	219,341	3,368	32,899	255,608	142004.41	



		QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES	
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14.	30.005	Decomposed Granite Trails								
14.	30.005. 1	2.00	ACR	1,897	29	284	2,210	1105.19		
14.	30.005. 2	2.00	ACR	12,846	197	1,927	14,970	7484.82		
14.	30.005. 3	275740.00	SF	160,230	2,460	24,033	186,724	0.68		
14.	30.005. 4			13,133	202	1,970	15,304			
TOTAL Decomposed Granite Trails				1.00	EA	188,106	2,888	28,214	219,209	219208.56
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14.	30.010	Other Recreation Features								
14.	30.010. 1	1.00	EA	13,133	202	1,970	15,304	15304.44		
14.	30.010. 2	3.00	EA	393,989	6,050	59,095	459,133	153044.43		
14.	30.010. 3	5.00	EA	19,699	302	2,955	22,957	4591.33		
14.	30.010. 4	21.00	EA	19,580	301	2,937	22,817	1086.52		
14.	30.010. 5	21.00	EA	769	12	115	896	42.65		
TOTAL Other Recreation Features				1.00	EA	447,169	6,866	67,072	521,107	521106.93
TOTAL RECREATION FEATURES				1.00	EA	854,615	13,123	128,185	995,923	995923.43
TOTAL RECREATION				1.00	EA	854,615	13,123	128,185	995,923	995923.43
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30	PLANNING, ENGINEERING, DESIGN									
30.009	Construction	1.00	EA	5,120,000	0	0	5,120,000	5120000		
30.014	Recreation	1.00	EA	95,285	0	0	95,285	95285.00		
TOTAL PLANNING, ENGINEERING, DESIGN				1.00	EA	5,215,285	0	0	5,215,285	5215285
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31	CONSTRUCTION MANAGEMENT									
31.009	Construction (Restoration)	1.00	EA	5,980,000	0	0	5,980,000	5980000		
31.014	Recreation	1.00	EA	63,879	0	0	63,879	63879.00		
TOTAL CONSTRUCTION MANAGEMENT				1.00	EA	6,043,879	0	0	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study				1.00	EA	85,517,349	4,953,123	7,118,185	97,588,657	97588657

		QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
01	LANDS AND DAMAGES (REAL ESTATE)	1.00 EA	26,200,000	0	0	26,200,000	26200000	
09	CONSTRUCTION (RESTORATION)							
09.01	IRRIGATION PLANTING							
09.01.001	Historic Floodplain							
09.01.001.1	Fencing for Erosion Control	656.00 ACR	199,985	20,929	29,614	250,529	381.90	
09.01.001.2	Clearing & Grubbing, Debris	328.00 ACR	622,138	65,109	92,128	779,375	2376.14	
09.01.001.3	Site Preparation							
09.01.001.3.01	Ripping, discing to prepare	590.00 ACR	9,678	1,013	1,433	12,124	20.55	
09.01.001.3.02	Regrade to req'd slopes, flatten	295.00 ACR	1,867	195	276	2,338	7.93	
09.01.001.3.03	Regrade Surface, scraper-grader	1445500 CY	31,729	3,321	4,699	39,748	0.03	
	TOTAL Site Preparation	1.00 EA	43,274	4,529	6,408	54,211	54210.52	
09.01.001.4	Excavation	176990.00 CY	448,377	46,924	66,397	561,698	3.17	
09.01.001.5	Compaction (tractor wheel, one	3561940 LF	553,508	57,926	81,965	693,399	0.19	
09.01.001.6	Trenching for Water Supply Pipes	17050.00 CY	29,450	3,082	4,361	36,892	2.16	
09.01.001.7	Pipe bedding, crushed stone	13110.00 CY	855,960	89,579	126,752	1,072,291	81.79	
09.01.001.8	Install gated 12" PVC pipe for	114720.00 LF	1,015,381	106,263	150,360	1,272,004	11.09	
09.01.001.9	Install "U" outlet tubes with	5940.00 EA	74,161	7,761	10,982	92,904	15.64	
09.01.001.10	Backfill pipe trench, side cast	4590.00 CY	2,350	246	348	2,944	0.64	
09.01.001.11	Planting & Seeding							
09.01.001.11.01	Mulching, hay, 1" deep, power	558.00 ACR	654,934	68,541	96,984	820,459	1470.36	
09.01.001.11.02	Crimping, Tilling topsoil,	558.00 ACR	116,548	12,197	17,259	146,004	261.66	
09.01.001.11.03	Seeding, athletic fld mix,	623.00 ACR	2,478,847	259,419	367,073	3,105,339	4984.49	
09.01.001.11.04	Place Coarse Woody debris/rocks	558.00 ACR	553,345	57,909	81,940	693,195	1242.28	
09.01.001.11.05	Plant Mesquite/Shrub mix using	250729.00 EA	4,939,217	516,904	731,409	6,187,531	24.68	
	TOTAL Planting & Seeding	558.00 ACR	8,742,892	914,971	1,294,665	10,952,528	19628.19	
	TOTAL Historic Floodplain	1.00 EA	12,587,475	1,317,318	1,863,979	15,768,772	15768772	
09.01.005	Graded Slope							
09.01.005.1	Fencing for Erosion Control	102.00 ACR	78,857	8,253	11,677	98,787	968.50	
09.01.005.2	Clearing & Grubbing, debris	51.00 ACR	48,367	5,062	7,162	60,592	1188.07	
09.01.005.3	Excavation, str1, mach excav.	1213390 CY	842,982	88,221	124,831	1,056,033	0.87	
09.01.005.4	Excavation, steep slopes, 5:1							
09.01.005.4.01	Hauling, no loading, 16.5 cy	1213390 CY	3,533,195	369,760	523,203	4,426,157	3.65	
09.01.005.4.02	Fill, spread dumped material,	1213390 CY	621,162	65,006	91,983	778,151	0.64	

			QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09. 01.005. 4.03	Compaction, sheepfoot/wobbly		1213390 CY	468,819	49,063	69,424	587,306	0.48	
	TOTAL Excavation, steep slopes, 5:1		1213390 CY	4,623,176	483,830	684,609	5,791,615	4.77	
09. 01.005. 5	Fine grading to 20% slope,		110.00 ACR	319,183	33,403	47,265	399,851	3635.01	
09. 01.005. 6	Header Pipe Laying								
09. 01.005. 6.01	Excavate header trench, 12" dep.		2540.00 CY	1,680	176	249	2,104	0.83	
09. 01.005. 6.02	Header Trench bedding, 3/4"		1020.00 CY	30,227	3,163	4,476	37,867	37.12	
09. 01.005. 6.03	Install medium diam. PVC Header		7620.00 LF	128,063	13,402	18,964	160,428	21.05	
09. 01.005. 6.04	Backfill trench, FE loader,		1020.00 CY	2,200	230	326	2,756	2.70	
09. 01.005. 6.05	Hauling, surplus cut mat'l,		1530.00 CY	7,531	788	1,115	9,434	6.17	
	TOTAL Header Pipe Laying		7620.00 LF	169,701	17,760	25,130	212,590	27.90	
09. 01.005. 7	8" PVC Leach Pipe Laying								
09. 01.005. 7.01	Excavate trench, 12" depth by		99020.00 CY	65,489	6,854	9,698	82,041	0.83	
09. 01.005. 7.02	Install low perm geotextile in		148700.00 SY	212,160	22,203	31,417	265,780	1.79	
09. 01.005. 7.03	Install 8" PVC leach pipe for		445590.00 LF	2,556,993	267,597	378,645	3,203,235	7.19	
09. 01.005. 7.04	Install leach pipe filter "sock"		445590.00 LF	942,158	98,600	139,517	1,180,274	2.65	
09. 01.005. 7.05	Install pipe fittings as needed			35,459	3,711	5,251	44,421		
09. 01.005. 7.06	Backfill trench, FE loader, whl		93380.00 CY	201,417	21,079	29,826	252,322	2.70	
09. 01.005. 7.07	Hauling, surplus cut mat'l, no		5790.00 CY	28,500	2,983	4,220	35,703	6.17	
	TOTAL 8" PVC Leach Pipe Laying		445590.00 LF	4,042,175	423,026	598,573	5,063,774	11.36	
09. 01.005. 8	Planting & Seeding								
09. 01.005. 8.01	Mulch, hay, 1" deep, power		102.00 ACR	119,719	12,529	17,728	149,976	1470.36	
09. 01.005. 8.02	Crimping, tilling topsoil		102.00 ACR	21,304	2,230	3,155	26,689	261.66	
09. 01.005. 8.03	Seeding, athletic fld mix,		102.00 ACR	405,845	42,473	60,098	508,416	4984.47	
09. 01.005. 8.04	Place Coarse Woody debris/rocks		102.00 ACR	101,149	10,586	14,978	126,713	1242.28	
09. 01.005. 8.05	Plant Mesquite/Shrub mix using		45675.00 EA	899,771	94,164	133,240	1,127,175	24.68	
	TOTAL Planting & Seeding		102.00 ACR	1,547,789	161,981	229,200	1,938,969	19009.50	
	TOTAL Graded Slope		1.00 EA	11,672,230	1,221,535	1,728,447	14,622,212	14622212	
09. 01.010	Natural Slope								
09. 01.010. 1	Fencing for Erosion Control		18.00 ACR	33,125	3,467	4,905	41,497	2305.39	
09. 01.010. 2	Clearing and Grubbing, debris		13.00 ACR	12,329	1,290	1,826	15,445	1188.07	
09. 01.010. 3	Header Trenching								
09. 01.010. 3.01	Excavate header trench, 12" dep.		86.00 CY	57	6	8	71	0.83	

				QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09.01.010.3.02	Header Trench bedding, 3/4"	35.00	CY	1,037		109	154	1,299	37.12		
09.01.010.3.03	Install med. diam. PVC Header	1520.00	LF	25,545		2,673	3,783	32,001	21.05		
09.01.010.3.04	Backfill trench, FE loader,	35.00	CY	75		8	11	95	2.70		
09.01.010.3.05	Hauling, surplus cut matl, no	52.00	CY	256		27	38	321	6.17		
TOTAL Header Trenching				1520.00	LF	26,971	2,823	3,994	33,787	22.23	
09.01.010.4	8" PVC Leach Pipe Laying										
09.01.010.4.01	Excavate trench, 12" depth by	16780.00	CY	11,098		1,161	1,643	13,903	0.83		
09.01.010.4.02	Install low perm geotextile in	25200.00	SY	35,954		3,763	5,324	45,041	1.79		
09.01.010.4.03	Install 8" PVC leach pipe for	75510.00	LF	433,310		45,347	64,165	542,822	7.19		
09.01.010.4.04	Install leach pipe filter "sock"	75510.00	LF	159,659		16,709	23,643	200,010	2.65		
09.01.010.4.05	Install pipe fittings as needed			26,266		2,749	3,890	32,904			
09.01.010.4.06	Backfill trench, FE loader, whl	15830.00	CY	34,145		3,573	5,056	42,774	2.70		
09.01.010.4.07	Hauling, surplus cut matl, no	990.00	CY	4,873		510	722	6,105	6.17		
TOTAL 8" PVC Leach Pipe Laying				75510.00	LF	705,304	73,812	104,443	883,560	11.70	
09.01.010.5	Planting & Seeding										
09.01.010.5.01	Mulch, hay, 1" deep, power	18.00	ACR	21,127		2,211	3,129	26,466	1470.36		
09.01.010.5.02	Crimping, tilling topsoil	18.00	ACR	3,760		393	557	4,710	261.66		
09.01.010.5.03	Seeding, athletic fld mix,	18.00	ACR	71,620		7,495	10,606	89,720	4984.47		
09.01.010.5.04	Place Coarse Woody debris/rocks	18.00	ACR	17,850		1,868	2,643	22,361	1242.28		
09.01.010.5.05	Plant Mesquite/Shrub mix using	7740.00	EA	152,474		15,957	22,579	191,009	24.68		
TOTAL Planting & Seeding				18.00	ACR	266,830	27,925	39,513	334,267	18570.38	
TOTAL Natural Slope				1.00	EA	1,044,559	109,316	154,680	1,308,556	1308556	
09.01.015	Second Bench										
09.01.015.1	Fencing for Erosion Control	124.00	ACR	86,937		9,098	12,874	108,909	878.30		
09.01.015.2	Clearing and Grubbing, debris	93.00	ACR	88,200		9,230	13,061	110,491	1188.07		
09.01.015.3	Header Trenching										
09.01.015.3.01	Excavate header trench, 12" dep.	500.00	CY	331		35	49	414	0.83		
09.01.015.3.02	Header Trench bedding, 3/4"	200.00	CY	5,927		620	878	7,425	37.12		
09.01.015.3.03	Install med. diam. PVC Header	8080.00	LF	135,793		14,211	20,109	170,113	21.05		
09.01.015.3.04	Backfill trench, FE loader,	200.00	CY	431		45	64	540	2.70		
09.01.015.3.05	Hauling, surplus cut matl, no	300.00	CY	1,477		155	219	1,850	6.17		
TOTAL Header Trenching				8080.00	LF	143,959	15,066	21,318	180,343	22.32	
09.01.015.4	8" PVC Leach Pipe Laying										

				QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09.01.015.4.01	Excavate trench, 12" depth by	121260.00	CY	80,198	8,393	11,876	100,467	0.83		
09.01.015.4.03	Install 8" PVC leach pipe for	545686.00	LF	3,131,388	327,709	463,702	3,922,800	7.19		
09.01.015.4.04	Install leach pipe filter "sock"	545680.00	LF	1,153,789	120,748	170,855	1,445,391	2.65		
09.01.015.4.05	Install pipe fittings as needed			32,832	3,436	4,862	41,130			
09.01.015.4.06	Backfill trench, FE loader, whl	114360.00	CY	246,669	25,815	36,527	309,012	2.70		
09.01.015.4.07	Hauling, surplus cut matl, no	7090.00	CY	34,899	3,652	5,168	43,719	6.17		
	TOTAL 8" PVC Leach Pipe Laying	545686.00	LF	4,679,775	489,753	692,991	5,862,519	10.74		
09.01.015.5	Planting & Seeding									
09.01.015.5.01	Mulch, hay, 1" deep, power	125.00	ACR	146,715	15,354	21,726	183,795	1470.36		
09.01.015.5.02	Crimping, tilling topsoil	125.00	ACR	26,108	2,732	3,866	32,707	261.66		
09.01.015.5.03	Seeding, athletic fld mix,	125.00	ACR	497,359	52,050	73,650	623,059	4984.47		
09.01.015.5.04	Place Coarse Woody debris/rocks	125.00	ACR	125,060	13,088	18,519	156,668	1253.34		
09.01.015.5.05	Plant Mesquite/Shrub mix using	55935.00	EA	1,101,887	115,316	163,170	1,380,373	24.68		
	TOTAL Planting & Seeding	125.00	ACR	1,897,130	198,541	280,931	2,376,601	19012.81		
	TOTAL Second Bench	1.00	EA	6,896,001	721,688	1,021,174	8,638,862	8638862		
09.01.020	First Bench									
09.01.020.1	Excavate pipe trench, 18" depth	1.00	LF	1	0	0	1	1.07		
	TOTAL Excavate pipe trench, 18" depth	1.00	LF	1	0	0	1	1.07		
09.01.020.2	Pipe Laying									
09.01.020.2.01	Install small diam pressure pipe	31000.00	LF	153,623	16,077	22,749	192,449	6.21		
09.01.020.2.02	Install small diam pipe fittings	3100.00	EA	168,060	17,588	24,887	210,535	67.91		
09.01.020.2.03	Install long reach (150') sprin-	190.00	LF	29,312	3,068	4,341	36,721	193.27		
09.01.020.2.04	Install pipe thrust blocks at	238.00	EA	15,628	1,636	2,314	19,578	82.26		
	TOTAL Pipe Laying	31000.00	LF	366,624	38,368	54,290	459,283	14.82		
09.01.020.3	Backfill pipe trench, compact	31000.00	LF	66,866	6,998	9,902	83,765	2.70		
09.01.020.4	Install control valves for sprin	90.00	EA	5,201	544	770	6,516	72.39		
09.01.020.5	Install Programmable Logic	1.00	EA	656,648	68,720	97,238	822,605	822605.43		
09.01.020.6	Rough grade & scarify subsoil	89.00	ACR	209,033	21,876	30,954	261,863	2942.29		
09.01.020.7	Planting & seeding									
09.01.020.7.01	Mulch, hay, 1" deep, power	89.00	ACR	104,461	10,932	15,469	130,862	1470.36		
09.01.020.7.02	Crimping, tilling topsoil	89.00	ACR	18,589	1,945	2,753	23,287	261.66		
09.01.020.7.03	Seeding, athletic fld mix,	89.00	ACR	354,119	37,060	52,439	443,618	4984.47		
09.01.020.7.04	Place Coarse Woody debris/rocks	89.00	ACR	31,027	3,247	4,595	38,869	436.73		

			QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09. 01.020. 7.05	Plant Mesquite/Shrub mix using		55935.00 EA	1,101,887	115,316	163,170	1,380,373	24.68	
	TOTAL Planting & seeding		89.00 ACR	1,610,084	168,500	238,424	2,017,009	22663.02	
	TOTAL First Bench		1.00 EA	2,914,456	305,007	431,579	3,651,042	3651042	
	TOTAL IRRIGATION PLANTING		1.00 EA	35,114,721	3,674,864	5,199,859	43,989,444	43989444	
09. 05 BASINS PLANTING									
09. 05.001 Tributary Infiltration Basins									
09. 05.001. 1	Fencing for Erosion Control		18.00 ACR	33,125	3,467	4,905	41,497	2305.39	
09. 05.001. 2	Clearing and Grubbing, debris		13.00 ACR	12,329	1,290	1,826	15,445	1188.07	
09. 05.001. 3	Excavate, mach exc., sand & grav								
09. 05.001. 3.01	Stockpile useable cut matl,		830.00 CY	1,118	117	165	1,400	1.69	
09. 05.001. 3.02	Hauling, surplus cut matl, no		2490.00 CY	12,256	1,283	1,815	15,354	6.17	
09. 05.001. 3.03	Fill, spread cut matl at dump		2490.00 CY	2,900	303	429	3,633	1.46	
09. 05.001. 3.04	Compaction at dump site, hl rlr,		2490.00 CY	962	101	142	1,205	0.48	
09. 05.001. 3.05	Compact Basin subgrade, existing		86160.00 SY	252,694	26,445	37,419	316,559	3.67	
	TOTAL Excavate, mach exc., sand & grav		8300.00 CY	269,930	28,249	39,972	338,151	40.74	
09. 05.001. 4	Backfilling								
09. 05.001. 4.01	Fill, bottom layer, clean sand,		840.00 CY	19,581	2,049	2,900	24,530	29.20	
09. 05.001. 4.02	Fill, middle layer, No. 57 blue-		840.00 CY	1,103	115	163	1,382	1.65	
09. 05.001. 4.03	Fill, middle layer, No. 2 gravel		840.00 CY	27,579	2,886	4,084	34,549	41.13	
09. 05.001. 4.04	Fill, top layer, mix of native		840.00 CY	33,095	3,463	4,901	41,459	49.36	
	TOTAL Backfilling		3360.00 CY	81,359	8,514	12,048	101,921	30.33	
09. 05.001. 5	Planting & Seeding								
09. 05.001. 5.01	Mulch, hay, 1" deep, power		18.00 ACR	21,127	2,211	3,129	26,466	1470.36	
09. 05.001. 5.02	Crimping, tilling topsoil		18.00 ACR	3,760	393	557	4,710	261.66	
09. 05.001. 5.03	Seeding, athletic fld mix,		18.00 ACR	71,620	7,495	10,606	89,720	4984.47	
09. 05.001. 5.04	Plant Mesquite/Shrub mix using		3204.00 EA	63,117	6,605	9,346	79,069	24.68	
	TOTAL Planting & Seeding		18.00 ACR	159,623	16,705	23,637	199,966	11109.20	
	TOTAL Tributary Infiltration Basins		1.00 EA	556,366	58,225	82,388	696,979	696979.43	
09. 05.005	Grade Control Infiltration Basin								

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09. 05.005. 1	Fencing for Erosion Control	6.00	ACR	19,116	2,001	2,831	23,947	3991.15
09. 05.005. 2	Clearing and Grubbing, debris	5.00	ACR	4,742	496	702	5,940	1188.07
09. 05.005. 3	Excavating, mach exc, sand & gr							
09. 05.005. 3.01	Stockpile useable cut mat'l	280.00	CY	377	39	56	472	1.69
09. 05.005. 3.02	Hauling, surplus cut mat'l, no	840.00	CY	4,135	433	612	5,180	6.17
09. 05.005. 3.03	Fill, spread cut mat'l at dump	840.00	CY	978	102	145	1,226	1.46
	TOTAL Excavating, mach exc, sand & gr	1120.00	CY	5,490	575	813	6,877	6.14
09. 05.005. 4	Compaction at dump site, hl rlr	840.00	CY	325	34	48	407	0.48
09. 05.005. 5	Compact basin subgrade, existing	29040.00	CY	85,170	8,913	12,612	106,695	3.67
09. 05.005. 6	Backfilling	1160.00	CY	28,092	2,940	4,160	35,192	30.34
09. 05.005. 7	Planting & Seeding							
09. 05.005. 7.01	Mulch, hay, 1" deep, power	6.00	ACR	7,042	737	1,043	8,822	1470.36
09. 05.005. 7.02	Crimping, tilling topsoil	6.00	ACR	1,253	131	186	1,570	261.66
09. 05.005. 7.03	Seeding, athletic fld mix,	6.00	ACR	23,873	2,498	3,535	29,907	4984.47
	TOTAL Planting & Seeding	6.00	ACR	32,169	3,367	4,764	40,299	6716.48
	TOTAL Grade Control Infiltration Basin	1.00	EA	175,103	18,325	25,930	219,357	219357.35
	TOTAL BASINS PLANTING	1.00	EA	731,469	76,550	108,317	916,337	916336.78
09. 10	HARDENED BANKS							
09. 10.001	Hardened Slopes							
09. 10.001. 1	Fencing for Erosion Control	3.50	ACR	14,589	1,527	2,160	18,277	5221.86
09. 10.001. 2	Clearing and Grubbing, debris	0.90	ACR	854	89	126	1,069	1188.07
09. 10.001. 3	Excavating, prepare slope &							
09. 10.001. 3.01	Stockpile subgrade cut matl for	28200.00	CY	37,968	3,973	5,622	47,564	1.69
09. 10.001. 3.02	Hauling, no loading, 16.5 cy	18800.00	CY	54,743	5,729	8,106	68,578	3.65
	TOTAL Excavating, prepare slope &	47000.00	CY	92,711	9,702	13,729	116,142	2.47
09. 10.001. 4	Fill, spread dumped mat'l, by							
09. 10.001. 4.01	Compaction, sheepfoot/wobbly	18800.00	CY	7,264	760	1,076	9,100	0.48
09. 10.001. 4.02	Fine grade to 1:1 slope, for	14900.00	SY	8,933	935	1,323	11,190	0.75
	TOTAL Fill, spread dumped mat'l, by	18800.00	CY	16,197	1,695	2,398	20,290	1.08
09. 10.001. 5	Soil Cement application,	61100.00	CY	3,129,451	327,507	463,415	3,920,373	64.16

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES	
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09. 10.001. 6	Backfill and Compaction								
09. 10.001. 6.01	28200.00	CY	60,826	6,366	9,007	76,199	2.70		
09. 10.001. 6.02	28200.00	CY	10,896	1,140	1,613	13,649	0.48		
	TOTAL	Backfill and Compaction	28200.00	CY	71,722	7,506	10,621	89,848	3.19
	TOTAL	Hardened Slopes	1.00	EA	3,325,523	348,026	492,450	4,165,999	4165999
	TOTAL	HARDENED BANKS	1.00	EA	3,325,523	348,026	492,450	4,165,999	4165999
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09. 15	PIPING								
09. 15.001	Irrigation Piping								
09. 15.001. 1	Trenching for Delivery Pipe								
09. 15.001. 1.01	1260.00	CY	82,266	8,609	12,182	103,058	81.79		
09. 15.001. 1.02	10440.00	LF	271,348	28,397	40,182	339,927	32.56		
09. 15.001. 1.03	1260.00	CY	28,443	2,977	4,212	35,632	28.28		
09. 15.001. 1.04	1880.00	CY	5,474	573	811	6,858	3.65		
	TOTAL	Trenching for Delivery Pipe	3130.00	CY	387,531	40,556	57,386	485,474	155.10
09. 15.001. 2	Trenching for Main Pipe								
09. 15.001. 2.01	8400.00	CY	548,441	57,396	81,214	687,051	81.79		
09. 15.001. 2.02	69970.00	LF	1,818,601	190,322	269,302	2,278,226	32.56		
09. 15.001. 2.03	8400.00	CY	189,621	19,844	28,080	237,545	28.28		
09. 15.001. 2.04	12600.00	CY	36,689	3,840	5,433	45,962	3.65		
	TOTAL	Trenching for Main Pipe	21000.00	CY	2,593,353	271,402	384,029	3,248,784	154.70
09. 15.001. 3	Trenching for Sub-main Pipe								
09. 15.001. 3.01	3370.00	CY	220,029	23,027	32,582	275,638	81.79		
09. 15.001. 3.02	28010.00	LF	378,327	39,593	56,023	473,943	16.92		
09. 15.001. 3.03	3370.00	CY	76,074	7,961	11,265	95,301	28.28		
09. 15.001. 3.04	5050.00	CY	14,705	1,539	2,178	18,421	3.65		
	TOTAL	Trenching for Sub-main Pipe	8420.00	CY	689,135	72,120	102,049	863,304	102.53
09. 15.001. 4	Trenching for Culvert CMP								
09. 15.001. 4.01	4200.00	CY	274,221	28,698	40,607	343,526	81.79		
09. 15.001. 4.02	23600.00	LF	590,245	61,771	87,405	739,421	31.33		
09. 15.001. 4.03	4200.00	CY	94,811	9,922	14,040	118,773	28.28		



			QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09. 15.001. 4.04	Hauling, Sub-main pipe surplus		6300.00 CY	18,345	1,920	2,717	22,981	3.65	
	TOTAL Trenching for Culvert CMP		10500.00 CY	977,621	102,311	144,768	1,224,700	116.64	
	TOTAL Irrigation Piping		1.00 EA	4,647,640	486,390	688,232	5,822,262	5822262	
	TOTAL PIPING		1.00 EA	4,647,640	486,390	688,232	5,822,262	5822262	
09. 20 ROADS & BRIDGES									
09. 20.001 Compacted Earth Maintenance Road									
09. 20.001. 1	Clearing & Grubbing, debris		8.30 ACR	7,872	824	1,166	9,861	1188.07	
	TOTAL Clearing & Grubbing, debris		8.30 ACR	7,872	824	1,166	9,861	1188.07	
09. 20.001. 2 Site Preparation									
09. 20.001. 2.01	Ripping, discing to prepare		8.30 ACR	136	14	20	171	20.55	
09. 20.001. 2.02	Regrade, flatten, balance cut		2020.00 CY	1,278	134	189	1,601	0.79	
09. 20.001. 2.03	Compaction, riding, sheepfoot/		40260.00 SY	15,555	1,628	2,303	19,487	0.48	
	TOTAL Site Preparation		8.30 ACR	16,970	1,776	2,513	21,258	2561.26	
	TOTAL Compacted Earth Maintenance Road		8.30 ACR	24,841	2,600	3,679	31,119	3749.33	
09. 20.002 Paved Maintenance Roads									
09. 20.002. 1	Clearing & Grubbing, debris		9.00 ACR	8,535	893	1,264	10,693	1188.07	
	TOTAL Clearing & Grubbing, debris		9.00 ACR	8,535	893	1,264	10,693	1188.07	
09. 20.002. 2 Site Preparation									
09. 20.002. 2.01	Ripping, discing to prepare		18.00 ACR	295	31	44	370	20.55	
09. 20.002. 2.02	Regrade, flatten, balance cut		21880.00 CY	13,844	1,449	2,050	17,343	0.79	
09. 20.002. 2.03	Compaction, riding, sheepfoot/		86820.00 SY	33,545	3,511	4,967	42,023	0.48	
09. 20.002. 2.04	Asphalt Concrete Paving,		781310.00 SF	1,329,654	139,152	196,898	1,665,705	2.13	
	TOTAL Site Preparation		18.00 ACR	1,377,339	144,143	203,959	1,725,441	95857.83	
	TOTAL Paved Maintenance Roads		18.00 ACR	1,385,874	145,036	205,223	1,736,134	96451.86	
09. 20.003 Gravel Maintenance Road									

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09. 20.003. 1 Clearing & Grubbing, debris	4.10 ACR	3,888	407	576	4,871	1188.07	
TOTAL Clearing & Grubbing, debris	4.10 ACR	3,888	407	576	4,871	1188.07	
09. 20.003. 2 Site Preparation							
09. 20.003. 2.01 Ripping, discing to prepare	8.20 ACR	135	14	20	168	20.55	
09. 20.003. 2.02 Regrade, flatten, balance cut	1980.00 CY	1,253	131	186	1,569	0.79	
09. 20.003. 2.03 Compaction, riding, sheepfoot/	39530.00 SY	15,273	1,598	2,262	19,133	0.48	
09. 20.003. 2.04 Gravel course, crushed 3/4"	39530.00 SY	175,964	18,415	26,057	220,437	5.58	
TOTAL Site Preparation	8.20 ACR	192,625	20,159	28,524	241,308	29427.82	
TOTAL Gravel Maintenance Road	8.20 ACR	196,513	20,566	29,100	246,179	30021.85	
09. 20.005 Bridges							
09. 20.005. 1 Fencing for Erosion Control	9.00 ACR	23,418	2,451	3,468	29,336	3259.57	
09. 20.005. 2 Clearing and Grubbing, debris	7.00 ACR	6,639	695	983	8,316	1188.07	
09. 20.005. 3 Excavating, structural, sand/							
09. 20.005. 3.01 Hauling, no loading, 16.5 cy	3366.00 CY	9,801	1,026	1,451	12,278	3.65	
09. 20.005. 3.02 Fill, spread dumped matl, by	3366.00 CY	2,329	244	345	2,918	0.87	
09. 20.005. 3.03 Compaction, sheepfoot/wobbly	3060.00 CY	1,182	124	175	1,481	0.48	
TOTAL Excavating, structural, sand/	3060.00 CY	13,313	1,393	1,971	16,677	5.45	
09. 20.005. 4 Cast in Place reinforced concret	3060.00 CY	503,669	52,711	74,584	630,964	206.20	
09. 20.005. 5 Finished grading, tie in, stabl.	9.00 ACR	40,177	4,205	5,949	50,331	5592.29	
09. 20.005. 6 Prefab Bridges							
09. 20.005. 6.01 Prefab Bridges (9 ea)		791,377	82,820	117,189	991,386		
09. 20.005. 6.02 Unloading and Erection	8090.00 SF	113,013	11,827	16,735	141,576	17.50	
TOTAL Prefab Bridges	9.00 EA	904,390	94,647	133,924	1,132,962	125884.63	
TOTAL Bridges	1.00 EA	1,491,605	156,101	220,880	1,868,586	1868586	
TOTAL ROADS & BRIDGES	1.00 EA	3,098,834	324,303	458,882	3,882,018	3882018	
09. 25 LET DOWN STRUCTURES							
09. 25.001 Let Down Structures							
09. 25.001. 1 Fencing for Erosion Control	2.50 ACR	12,345	1,292	1,828	15,465	6185.90	
09. 25.001. 2 Clearing & Grubbing, debris	1.90 ACR	1,802	189	267	2,257	1188.07	

		QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
09. 25.001. 3	Prep (excav) slope to receive	500.00 CY	985	103	146	1,234	2.47	
09. 25.001. 4	30" Pipe Laying							
09. 25.001. 4.01	Install pipe bedding, gravel,	150.00 CY	9,794	1,025	1,450	12,269	81.79	
09. 25.001. 4.02	Install 30" dia CMP, 200 lf per	1000.00 LF	52,655	5,511	7,797	65,963	65.96	
09. 25.001. 4.03	Install wingwall deflectors on	10.00 EA	39,399	4,123	5,834	49,356	4935.63	
	TOTAL 30" Pipe Laying	1000.00 LF	101,848	10,659	15,082	127,588	127.59	
09. 25.001. 5	Backfilling & Compaction							
09. 25.001. 5.01	Hauling, no loading, 16.5 cy	30000.00 CY	87,355	9,142	12,936	109,433	3.65	
09. 25.001. 5.02	Fill, spread dumped matl, by	30000.00 CY	25,609	2,680	3,792	32,082	1.07	
09. 25.001. 5.03	Compaction, sheepfoot/wobbly	30000.00 CY	11,591	1,213	1,716	14,521	0.48	
09. 25.001. 5.04	Fine grade filled area, for	2.50 ACR	7,151	748	1,059	8,958	3583.27	
	TOTAL Backfilling & Compaction	30000.00 CY	131,706	13,783	19,503	164,993	5.50	
09. 25.001. 6	Planting and Seeding							
09. 25.001. 6.01	Mulching, hay, 1" deep, power	2.10 ACR	2,465	258	365	3,088	1470.36	
09. 25.001. 6.02	Crimping, tilling topsoil	2.10 ACR	439	46	65	549	261.66	
09. 25.001. 6.03	Seeding, athletic fld mix,	2.40 ACR	9,549	999	1,414	11,963	4984.47	
09. 25.001. 6.04	Place Coarse Woody debris/rocks	2.10 ACR	2,082	218	308	2,609	1242.28	
09. 25.001. 6.05	Plant Mesquite/Shrub mix using	1125.00 EA	22,162	2,319	3,282	27,763	24.68	
	TOTAL Planting and Seeding	2.10 ACR	36,697	3,840	5,434	45,972	21891.28	
	TOTAL Let Down Structures	1.00 EA	285,383	29,866	42,260	357,509	357509.28	
	TOTAL LET DOWN STRUCTURES	1.00 EA	285,383	29,866	42,260	357,509	357509.28	
	TOTAL CONSTRUCTION (RESTORATION)	1.00 EA	47,203,570	4,940,000	6,990,000	59,133,570	59133570	
14	RECREATION							
14. 30	RECREATION FEATURES							
14. 30.001	Parking Areas							
14. 30.001. 1	Fencing for Erosion Control	1.80 ACR	10,474	161	1,571	12,206	6781.26	
14. 30.001. 2	Clearing & Grubbing, debris	1.80 ACR	1,802	28	270	2,100	1166.59	
14. 30.001. 3	Site Preparation							
14. 30.001. 3.01	Ripping, discing to prepare	1.80 ACR	30	0	4	34	19.12	
14. 30.001. 3.02	Regrade to req'd slopes, flatten	1.80 ACR	11	0	2	13	7.37	

			QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
14. 30.001. 3.03	Regrade surface, scraper-grader,		4410.00 CY	12,590	193	1,888	14,672	3.33	
14. 30.001. 3.04	Compaction, riding, sheepfoot		8810.00 SY	3,404	52	511	3,967	0.45	
14. 30.001. 3.05	Fine grade, grade subgrade for		8810.00 SY	6,214	95	932	7,241	0.82	
TOTAL Site Preparation			1.80 ACR	22,249	342	3,337	25,928	14404.38	
14. 30.001. 4	Asphalt Paving, 6" stone base,		79280.00 SF	169,712	2,606	25,455	197,774	2.49	
14. 30.001. 5	Lines on pavement, parking stall			1,970	30	295	2,296		
14. 30.001. 6	Parking Lot Amenities, lighting,			13,133	202	1,970	15,304		
TOTAL Parking Areas			1.80 ACR	219,341	3,368	32,899	255,608	142004.41	
14. 30.005	Decomposed Granite Trails								
14. 30.005. 1	Clearing & Grubbing, debris		2.00 ACR	1,897	29	284	2,210	1105.19	
TOTAL Clearing & Grubbing, debris			2.00 ACR	1,897	29	284	2,210	1105.19	
14. 30.005. 2	Site Preparation								
14. 30.005. 2.01	Ripping, discing to prepare		2.00 ACR	33	1	5	38	19.12	
14. 30.005. 2.02	Regrade, flatten, balance cut		1540.00 CY	974	15	146	1,136	0.74	
14. 30.005. 2.03	Compaction, riding, sheepfoot/		30640.00 SY	11,838	182	1,776	13,796	0.45	
TOTAL Site Preparation			2.00 ACR	12,846	197	1,927	14,970	7484.82	
14. 30.005. 3	Decomposed Granite course,								
14. 30.005. 3.01	Material and Delivery		3830.00 TON	150,898	2,317	22,633	175,848	45.91	
14. 30.005. 3.02	Spread and Compaction		3830.00 TON	9,333	143	1,400	10,876	2.84	
TOTAL Decomposed Granite course,			275740.00 SF	160,230	2,460	24,033	186,724	0.68	
14. 30.005. 4	Trail amenities, ADA ramps, sign			13,133	202	1,970	15,304		
TOTAL Decomposed Granite Trails			1.00 EA	188,106	2,888	28,214	219,209	219208.56	
14. 30.010	Other Recreation Features								
14. 30.010. 1	Paved Trail amenities, curb		1.00 EA	13,133	202	1,970	15,304	15304.44	
14. 30.010. 2	Comfort Stations		3.00 EA	393,989	6,050	59,095	459,133	153044.43	
14. 30.010. 3	Rest Stops		5.00 EA	19,699	302	2,955	22,957	4591.33	
14. 30.010. 4	Concrete Benches		21.00 EA	19,580	301	2,937	22,817	1086.52	
14. 30.010. 5	Signage		21.00 EA	769	12	115	896	42.65	
TOTAL Other Recreation Features			1.00 EA	447,169	6,866	67,072	521,107	521106.93	

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST	NOTES
TOTAL RECREATION FEATURES	1.00	EA	854,615	13,123	128,185	995,923	995923.43	
TOTAL RECREATION	1.00	EA	854,615	13,123	128,185	995,923	995923.43	
30 PLANNING, ENGINEERING, DESIGN								
30.009 Construction	1.00	EA	5,120,000	0	0	5,120,000	5120000	
30.014 Recreation	1.00	EA	95,285	0	0	95,285	95285.00	
TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	5,215,285	0	0	5,215,285	5215285	
31 CONSTRUCTION MANAGEMENT								
31.009 Construction (Restoration)	1.00	EA	5,980,000	0	0	5,980,000	5980000	
31.014 Recreation	1.00	EA	63,879	0	0	63,879	63879.00	
TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	6,043,879	0	0	6,043,879	6043879	
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	85,517,349	4,953,123	7,118,185	97,588,657	97588657	

	QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
01 LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	26,200,000	0	0	0	0	26,200,000	26200000
09 CONSTRUCTION (RESTORATION)	1.00	EA	35,942,852	3,594,285	3,162,971	4,270,011	233,451	47,203,570	47203570
14 RECREATION	1.00	EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
30 PLANNING, ENGINEERING, DESIGN	1.00	EA	5,215,285	0	0	0	0	5,215,285	5215285
31 CONSTRUCTION MANAGEMENT	1.00	EA	6,043,879	0	0	0	0	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	74,052,757	3,659,359	3,220,236	4,347,319	237,678	85,517,349	85517349
ESCALATION								4,953,123	
SUBTOTAL								90,470,472	
CONTINGENCY								7,118,185	
TOTAL INCL OWNER COSTS								97,588,657	

		QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
01	LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	26,200,000	0	0	0	0	26,200,000	26200000
09	CONSTRUCTION (RESTORATION)									
09.01	IRRIGATION PLANTING	1.00	EA	26,737,876	2,673,788	2,352,933	3,176,460	173,664	35,114,721	35114721
09.05	BASINS PLANTING	1.00	EA	556,972	55,697	49,014	66,168	3,618	731,469	731468.90
09.10	HARDENED BANKS	1.00	EA	2,532,198	253,220	222,833	300,825	16,447	3,325,523	3325523
09.15	PIPING	1.00	EA	3,538,916	353,892	311,425	420,423	22,986	4,647,640	4647640
09.20	ROADS & BRIDGES	1.00	EA	2,359,587	235,959	207,644	280,319	15,326	3,098,834	3098834
09.25	LET DOWN STRUCTURES	1.00	EA	217,303	21,730	19,123	25,816	1,411	285,383	285382.98
	TOTAL CONSTRUCTION (RESTORATION)	1.00	EA	35,942,852	3,594,285	3,162,971	4,270,011	233,451	47,203,570	47203570
14	RECREATION									
14.30	RECREATION FEATURES	1.00	EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
	TOTAL RECREATION	1.00	EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
30	PLANNING, ENGINEERING, DESIGN									
30.009	Construction	1.00	EA	5,120,000	0	0	0	0	5,120,000	5120000
30.014	Recreation	1.00	EA	95,285	0	0	0	0	95,285	95285.00
	TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	5,215,285	0	0	0	0	5,215,285	5215285
31	CONSTRUCTION MANAGEMENT									
31.009	Construction (Restoration)	1.00	EA	5,980,000	0	0	0	0	5,980,000	5980000
31.014	Recreation	1.00	EA	63,879	0	0	0	0	63,879	63879.00
	TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	6,043,879	0	0	0	0	6,043,879	6043879
	TOTAL Paseo de las Iglesias Feas Study	1.00	EA	74,052,757	3,659,359	3,220,236	4,347,319	237,678	85,517,349	85517349
	ESCALATION								4,953,123	
	SUBTOTAL								90,470,472	
	CONTINGENCY								7,118,185	
	TOTAL INCL OWNER COSTS								97,588,657	

		QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
01	LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	26,200,000	0	0	0	0	26,200,000	26200000
09	CONSTRUCTION (RESTORATION)									
09.01	IRRIGATION PLANTING									
09.01.001	Historic Floodplain	1.00	EA	9,584,651	958,465	843,449	1,138,657	62,253	12,587,475	12587475
09.01.005	Graded Slope	1.00	EA	8,887,743	888,774	782,121	1,055,864	57,727	11,672,230	11672230
09.01.010	Natural Slope	1.00	EA	795,373	79,537	69,993	94,490	5,166	1,044,559	1044559
09.01.015	Second Bench	1.00	EA	5,250,915	525,091	462,081	623,809	34,105	6,896,001	6896001
09.01.020	First Bench	1.00	EA	2,219,194	221,919	195,289	263,640	14,414	2,914,456	2914456
	TOTAL IRRIGATION PLANTING	1.00	EA	26,737,876	2,673,788	2,352,933	3,176,460	173,664	35,114,721	35114721
09.05	BASINS PLANTING									
09.05.001	Tributary Infiltration Basins	1.00	EA	423,641	42,364	37,280	50,329	2,752	556,366	556366.16
09.05.005	Grade Control Infiltration Basin	1.00	EA	133,331	13,333	11,733	15,840	866	175,103	175102.74
	TOTAL BASINS PLANTING	1.00	EA	556,972	55,697	49,014	66,168	3,618	731,469	731468.90
09.10	HARDENED BANKS									
09.10.001	Hardened Slopes	1.00	EA	2,532,198	253,220	222,833	300,825	16,447	3,325,523	3325523
	TOTAL HARDENED BANKS	1.00	EA	2,532,198	253,220	222,833	300,825	16,447	3,325,523	3325523
09.15	PIPING									
09.15.001	Irrigation Piping	1.00	EA	3,538,916	353,892	311,425	420,423	22,986	4,647,640	4647640
	TOTAL PIPING	1.00	EA	3,538,916	353,892	311,425	420,423	22,986	4,647,640	4647640
09.20	ROADS & BRIDGES									
09.20.001	Compacted Earth Maintenance Road	8.30	ACR	18,915	1,892	1,665	2,247	123	24,841	2992.91
09.20.002	Paved Maintenance Roads	18.00	ACR	1,055,265	105,527	92,863	125,365	6,854	1,385,874	76993.02
09.20.003	Gravel Maintenance Road	8.20	ACR	149,634	14,963	13,168	17,776	972	196,513	23965.04
09.20.005	Bridges	1.00	EA	1,135,773	113,577	99,948	134,930	7,377	1,491,605	1491605
	TOTAL ROADS & BRIDGES	1.00	EA	2,359,587	235,959	207,644	280,319	15,326	3,098,834	3098834
09.25	LET DOWN STRUCTURES									
09.25.001	Let Down Structures	1.00	EA	217,303	21,730	19,123	25,816	1,411	285,383	285382.98



	QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
TOTAL LET DOWN STRUCTURES	1.00	EA	217,303	21,730	19,123	25,816	1,411	285,383	285382.98
TOTAL CONSTRUCTION (RESTORATION)	1.00	EA	35,942,852	3,594,285	3,162,971	4,270,011	233,451	47,203,570	47203570
14 RECREATION									
14. 30 RECREATION FEATURES									
14. 30.001 Parking Areas	1.80	ACR	167,016	16,702	14,697	19,841	1,085	219,341	121855.91
14. 30.005 Decomposed Granite Trails	1.00	EA	143,232	14,323	12,604	17,016	930	188,106	188105.85
14. 30.010 Other Recreation Features	1.00	EA	340,494	34,049	29,963	40,451	2,212	447,169	447168.94
TOTAL RECREATION FEATURES	1.00	EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
TOTAL RECREATION	1.00	EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
30 PLANNING, ENGINEERING, DESIGN									
30.009 Construction	1.00	EA	5,120,000	0	0	0	0	5,120,000	5120000
30.014 Recreation	1.00	EA	95,285	0	0	0	0	95,285	95285.00
TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	5,215,285	0	0	0	0	5,215,285	5215285
31 CONSTRUCTION MANAGEMENT									
31.009 Construction (Restoration)	1.00	EA	5,980,000	0	0	0	0	5,980,000	5980000
31.014 Recreation	1.00	EA	63,879	0	0	0	0	63,879	63879.00
TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	6,043,879	0	0	0	0	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	74,052,757	3,659,359	3,220,236	4,347,319	237,678	85,517,349	85517349
ESCALATION								4,953,123	
SUBTOTAL								90,470,472	
CONTINGENCY								7,118,185	
TOTAL INCL OWNER COSTS								97,588,657	

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
01	LANDS AND DAMAGES (REAL ESTATE)	1.00 EA	26,200,000	0	0	0	0	26,200,000	26200000
09	CONSTRUCTION (RESTORATION)								
09.01	IRRIGATION PLANTING								
09.01.001	Historic Floodplain								
09.01.001.1	Fencing for Erosion Control	656.00 ACR	152,278	15,228	13,400	18,091	989	199,985	304.86
09.01.001.2	Clearing & Grubbing, Debris	328.00 ACR	473,723	47,372	41,688	56,278	3,077	622,138	1896.76
09.01.001.3	Site Preparation	1.00 EA	32,950	3,295	2,900	3,915	214	43,274	43273.73
09.01.001.4	Excavation	176990.00 CY	341,414	34,141	30,044	40,560	2,218	448,377	2.53
09.01.001.5	Compaction (tractor wheel, one	3561940 LF	421,465	42,146	37,089	50,070	2,737	553,508	0.16
09.01.001.6	Trenching for Water Supply Pipes	17050.00 CY	22,424	2,242	1,973	2,664	146	29,450	1.73
09.01.001.7	Pipe bedding, crushed stone	13110.00 CY	651,765	65,176	57,355	77,430	4,233	855,960	65.29
09.01.001.8	Install gated 12" PVC pipe for	114720.00 LF	773,155	77,316	68,038	91,851	5,022	1,015,381	8.85
09.01.001.9	Install "U" outlet tubes with	5940.00 EA	56,469	5,647	4,969	6,709	367	74,161	12.48
09.01.001.10	Backfill pipe trench, side cast	4590.00 CY	1,789	179	157	213	12	2,350	0.51
09.01.001.11	Planting & Seeding	558.00 ACR	6,657,218	665,722	585,835	790,878	43,239	8,742,892	15668.27
	TOTAL Historic Floodplain	1.00 EA	9,584,651	958,465	843,449	1,138,657	62,253	12,587,475	12587475
09.01.005	Graded Slope								
09.01.005.1	Fencing for Erosion Control	102.00 ACR	60,045	6,005	5,284	7,133	390	78,857	773.11
09.01.005.2	Clearing & Grubbing, debris	51.00 ACR	36,829	3,683	3,241	4,375	239	48,367	948.38
09.01.005.3	Excavation, str1, mach excav.	1213390 CY	641,883	64,188	56,486	76,256	4,169	842,982	0.69
09.01.005.4	Excavation, steep slopes, 5:1	1213390 CY	3,520,287	352,029	309,785	418,210	22,865	4,623,176	3.81
09.01.005.5	Fine grading to 20% slope,	110.00 ACR	243,040	24,304	21,387	28,873	1,579	319,183	2901.66
09.01.005.6	Header Pipe Laying	7620.00 LF	129,218	12,922	11,371	15,351	839	169,701	22.27
09.01.005.7	8" PVC Leach Pipe Laying	445590.00 LF	3,077,888	307,789	270,854	365,653	19,991	4,042,175	9.07
09.01.005.8	Planting & Seeding	102.00 ACR	1,178,554	117,855	103,713	140,012	7,655	1,547,789	15174.40
	TOTAL Graded Slope	1.00 EA	8,887,743	888,774	782,121	1,055,864	57,727	11,672,230	11672230
09.01.010	Natural Slope								
09.01.010.1	Fencing for Erosion Control	18.00 ACR	25,223	2,522	2,220	2,996	164	33,125	1840.29
09.01.010.2	Clearing and Grubbing, debris	13.00 ACR	9,388	939	826	1,115	61	12,329	948.38
09.01.010.3	Header Trenching	1520.00 LF	20,537	2,054	1,807	2,440	133	26,971	17.74
09.01.010.4	8" PVC Leach Pipe Laying	75510.00 LF	537,049	53,705	47,260	63,801	3,488	705,304	9.34
09.01.010.5	Planting & Seeding	18.00 ACR	203,176	20,318	17,879	24,137	1,320	266,830	14823.87
	TOTAL Natural Slope	1.00 EA	795,373	79,537	69,993	94,490	5,166	1,044,559	1044559
09.01.015	Second Bench								
09.01.015.1	Fencing for Erosion Control	124.00 ACR	66,198	6,620	5,825	7,864	430	86,937	701.11

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09. 01.015. 2	Clearing and Grubbing, debris	93.00 ACR	67,159	6,716	5,910	7,978	436	88,200	948.38
09. 01.015. 3	Header Trenching	8080.00 LF	109,617	10,962	9,646	13,022	712	143,959	17.82
09. 01.015. 4	8" PVC Leach Pipe Laying	545686.00 LF	3,563,384	356,338	313,578	423,330	23,144	4,679,775	8.58
09. 01.015. 5	Planting & Seeding	125.00 ACR	1,444,557	144,456	127,121	171,613	9,383	1,897,130	15177.04
TOTAL Second Bench		1.00 EA	5,250,915	525,091	462,081	623,809	34,105	6,896,001	6896001
09. 01.020 First Bench									
09. 01.020. 1	Excavate pipe trench, 18" depth	1.00 LF	1	0	0	0	0	1	0.85
09. 01.020. 2	Pipe Laying	31000.00 LF	279,163	27,916	24,566	33,165	1,813	366,624	11.83
09. 01.020. 3	Backfill pipe trench, compact	31000.00 LF	50,914	5,091	4,480	6,049	331	66,866	2.16
09. 01.020. 4	Install control valves for sprin	90.00 EA	3,960	396	349	470	26	5,201	57.79
09. 01.020. 5	Install Programmable Logic	1.00 EA	500,000	50,000	44,000	59,400	3,248	656,648	656647.54
09. 01.020. 6	Rough grade & scarify subsoil	89.00 ACR	159,167	15,917	14,007	18,909	1,034	209,033	2348.69
09. 01.020. 7	Planting & seeding	89.00 ACR	1,225,988	122,599	107,887	145,647	7,963	1,610,084	18090.83
TOTAL First Bench		1.00 EA	2,219,194	221,919	195,289	263,640	14,414	2,914,456	2914456
TOTAL IRRIGATION PLANTING		1.00 EA	26,737,876	2,673,788	2,352,933	3,176,460	173,664	35,114,721	35114721
09. 05 BASINS PLANTING									
09. 05.001 Tributary Infiltration Basins									
09. 05.001. 1	Fencing for Erosion Control	18.00 ACR	25,223	2,522	2,220	2,996	164	33,125	1840.29
09. 05.001. 2	Clearing and Grubbing, debris	13.00 ACR	9,388	939	826	1,115	61	12,329	948.38
09. 05.001. 3	Excavate, mach exc., sand & grav	8300.00 CY	205,537	20,554	18,087	24,418	1,335	269,930	32.52
09. 05.001. 4	Backfilling	3360.00 CY	61,950	6,195	5,452	7,360	402	81,359	24.21
09. 05.001. 5	Planting & Seeding	18.00 ACR	121,544	12,154	10,696	14,439	789	159,623	8867.95
TOTAL Tributary Infiltration Basins		1.00 EA	423,641	42,364	37,280	50,329	2,752	556,366	556366.16
09. 05.005 Grade Control Infiltration Basin									
09. 05.005. 1	Fencing for Erosion Control	6.00 ACR	14,556	1,456	1,281	1,729	95	19,116	3185.95
09. 05.005. 2	Clearing and Grubbing, debris	5.00 ACR	3,611	361	318	429	23	4,742	948.38
09. 05.005. 3	Excavating, mach exc, sand & gr	1120.00 CY	4,180	418	368	497	27	5,490	4.90
09. 05.005. 4	Compaction at dump site, hl rlr	840.00 CY	247	25	22	29	2	325	0.39
09. 05.005. 5	Compact basin subgrade, existing	29040.00 CY	64,852	6,485	5,707	7,704	421	85,170	2.93
09. 05.005. 6	Backfilling	1160.00 CY	21,390	2,139	1,882	2,541	139	28,092	24.22
09. 05.005. 7	Planting & Seeding	6.00 ACR	24,495	2,449	2,156	2,910	159	32,169	5361.46
TOTAL Grade Control Infiltration Basin		1.00 EA	133,331	13,333	11,733	15,840	866	175,103	175102.74
TOTAL BASINS PLANTING		1.00 EA	556,972	55,697	49,014	66,168	3,618	731,469	731468.90

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
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09. 10 HARDENED BANKS									
09. 10.001 Hardened Slopes									
09. 10.001. 1	Fencing for Erosion Control	3.50 ACR	11,109	1,111	978	1,320	72	14,589	4168.37
09. 10.001. 2	Clearing and Grubbing, debris	0.90 ACR	650	65	57	77	4	854	948.38
09. 10.001. 3	Excavating, prepare slope &	47000.00 CY	70,594	7,059	6,212	8,387	459	92,711	1.97
09. 10.001. 4	Fill, spread dumped mat'l, by	18800.00 CY	12,333	1,233	1,085	1,465	80	16,197	0.86
09. 10.001. 5	Soil Cement application,	61100.00 CY	2,382,900	238,290	209,695	283,089	15,477	3,129,451	51.22
09. 10.001. 6	Backfill and Compaction	28200.00 CY	54,612	5,461	4,806	6,488	355	71,722	2.54
TOTAL Hardened Slopes		1.00 EA	2,532,198	253,220	222,833	300,825	16,447	3,325,523	3325523
TOTAL HARDENED BANKS		1.00 EA	2,532,198	253,220	222,833	300,825	16,447	3,325,523	3325523
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09. 15 PIPING									
09. 15.001 Irrigation Piping									
09. 15.001. 1	Trenching for Delivery Pipe	3130.00 CY	295,083	29,508	25,967	35,056	1,917	387,531	123.81
09. 15.001. 2	Trenching for Main Pipe	21000.00 CY	1,974,692	197,469	173,773	234,593	12,826	2,593,353	123.49
09. 15.001. 3	Trenching for Sub-main Pipe	8420.00 CY	524,737	52,474	46,177	62,339	3,408	689,135	81.85
09. 15.001. 4	Trenching for Culvert CMP	10500.00 CY	744,403	74,440	65,507	88,435	4,835	977,621	93.11
TOTAL Irrigation Piping		1.00 EA	3,538,916	353,892	311,425	420,423	22,986	4,647,640	4647640
TOTAL PIPING		1.00 EA	3,538,916	353,892	311,425	420,423	22,986	4,647,640	4647640
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09. 20 ROADS & BRIDGES									
09. 20.001 Compacted Earth Maintenance Road									
09. 20.001. 1	Clearing & Grubbing, debris	8.30 ACR	5,994	599	527	712	39	7,872	948.38
09. 20.001. 2	Site Preparation	8.30 ACR	12,921	1,292	1,137	1,535	84	16,970	2044.53
TOTAL Compacted Earth Maintenance Road		8.30 ACR	18,915	1,892	1,665	2,247	123	24,841	2992.91
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09. 20.002 Paved Maintenance Roads									
09. 20.002. 1	Clearing & Grubbing, debris	9.00 ACR	6,499	650	572	772	42	8,535	948.38
09. 20.002. 2	Site Preparation	18.00 ACR	1,048,766	104,877	92,291	124,593	6,812	1,377,339	76518.83
TOTAL Paved Maintenance Roads		18.00 ACR	1,055,265	105,527	92,863	125,365	6,854	1,385,874	76993.02
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09. 20.003 Gravel Maintenance Road									
09. 20.003. 1	Clearing & Grubbing, debris	4.10 ACR	2,961	296	261	352	19	3,888	948.38

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09. 20.003. 2	Site Preparation	8.20 ACR	146,673	14,667	12,907	17,425	953	192,625	23490.85
	TOTAL Gravel Maintenance Road	8.20 ACR	149,634	14,963	13,168	17,776	972	196,513	23965.04
09. 20.005 Bridges									
09. 20.005. 1	Fencing for Erosion Control	9.00 ACR	17,831	1,783	1,569	2,118	116	23,418	2601.96
09. 20.005. 2	Clearing and Grubbing, debris	7.00 ACR	5,055	505	445	601	33	6,639	948.38
09. 20.005. 3	Excavating, structural, sand/	3060.00 CY	10,137	1,014	892	1,204	66	13,313	4.35
09. 20.005. 4	Cast in Place reinforced concret	3060.00 CY	383,516	38,352	33,749	45,562	2,491	503,669	164.60
09. 20.005. 5	Finished grading, tie in, stabl.	9.00 ACR	30,592	3,059	2,692	3,634	199	40,177	4464.06
09. 20.005. 6	Prefab Bridges	9.00 EA	688,642	68,864	60,601	81,811	4,473	904,390	100487.83
	TOTAL Bridges	1.00 EA	1,135,773	113,577	99,948	134,930	7,377	1,491,605	1491605
	TOTAL ROADS & BRIDGES	1.00 EA	2,359,587	235,959	207,644	280,319	15,326	3,098,834	3098834
09. 25 LET DOWN STRUCTURES									
09. 25.001 Let Down Structures									
09. 25.001. 1	Fencing for Erosion Control	2.50 ACR	9,400	940	827	1,117	61	12,345	4937.91
09. 25.001. 2	Clearing & Grubbing, debris	1.90 ACR	1,372	137	121	163	9	1,802	948.38
09. 25.001. 3	Prep (excav) slope to receive	500.00 CY	750	75	66	89	5	985	1.97
09. 25.001. 4	30" Pipe Laying	1000.00 LF	77,551	7,755	6,825	9,213	504	101,848	101.85
09. 25.001. 5	Backfilling & Compaction	30000.00 CY	100,287	10,029	8,825	11,914	651	131,706	4.39
09. 25.001. 6	Planting and Seeding	2.10 ACR	27,943	2,794	2,459	3,320	181	36,697	17474.79
	TOTAL Let Down Structures	1.00 EA	217,303	21,730	19,123	25,816	1,411	285,383	285382.98
	TOTAL LET DOWN STRUCTURES	1.00 EA	217,303	21,730	19,123	25,816	1,411	285,383	285382.98
	TOTAL CONSTRUCTION (RESTORATION)	1.00 EA	35,942,852	3,594,285	3,162,971	4,270,011	233,451	47,203,570	47203570
14 RECREATION									
14. 30 RECREATION FEATURES									
14. 30.001 Parking Areas									
14. 30.001. 1	Fencing for Erosion Control	1.80 ACR	7,976	798	702	948	52	10,474	5819.09
14. 30.001. 2	Clearing & Grubbing, debris	1.80 ACR	1,372	137	121	163	9	1,802	1001.07
14. 30.001. 3	Site Preparation	1.80 ACR	16,941	1,694	1,491	2,013	110	22,249	12360.60
14. 30.001. 4	Asphalt Paving, 6" stone base,	79280.00 SF	129,226	12,923	11,372	15,352	839	169,712	2.14
14. 30.001. 5	Lines on pavement, parking stall		1,500	150	132	178	10	1,970	
14. 30.001. 6	Parking Lot Amenities, lighting,		10,000	1,000	880	1,188	65	13,133	
	TOTAL Parking Areas	1.80 ACR	167,016	16,702	14,697	19,841	1,085	219,341	121855.91

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
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14. 30.005	Decomposed Granite Trails								
14. 30.005. 1	Clearing & Grubbing, debris	2.00 ACR	1,444	144	127	172	9	1,897	948.38
14. 30.005. 2	Site Preparation	2.00 ACR	9,781	978	861	1,162	64	12,846	6422.83
14. 30.005. 3	Decomposed Granite course,	275740.00 SF	122,006	12,201	10,737	14,494	792	160,230	0.58
14. 30.005. 4	Trail amenities, ADA ramps, sign		10,000	1,000	880	1,188	65	13,133	
	TOTAL Decomposed Granite Trails	1.00 EA	143,232	14,323	12,604	17,016	930	188,106	188105.85
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14. 30.010	Other Recreation Features								
14. 30.010. 1	Paved Trail amenities, curb	1.00 EA	10,000	1,000	880	1,188	65	13,133	13132.95
14. 30.010. 2	Comfort Stations	3.00 EA	300,000	30,000	26,400	35,640	1,949	393,989	131329.51
14. 30.010. 3	Rest Stops	5.00 EA	15,000	1,500	1,320	1,782	97	19,699	3939.89
14. 30.010. 4	Concrete Benches	21.00 EA	14,909	1,491	1,312	1,771	97	19,580	932.36
14. 30.010. 5	Signage	21.00 EA	585	59	51	70	4	769	36.60
	TOTAL Other Recreation Features	1.00 EA	340,494	34,049	29,963	40,451	2,212	447,169	447168.94
	TOTAL RECREATION FEATURES	1.00 EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
	TOTAL RECREATION	1.00 EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
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30	PLANNING, ENGINEERING, DESIGN								
30.009	Construction	1.00 EA	5,120,000	0	0	0	0	5,120,000	5120000
30.014	Recreation	1.00 EA	95,285	0	0	0	0	95,285	95285.00
	TOTAL PLANNING, ENGINEERING, DESIGN	1.00 EA	5,215,285	0	0	0	0	5,215,285	5215285
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31	CONSTRUCTION MANAGEMENT								
31.009	Construction (Restoration)	1.00 EA	5,980,000	0	0	0	0	5,980,000	5980000
31.014	Recreation	1.00 EA	63,879	0	0	0	0	63,879	63879.00
	TOTAL CONSTRUCTION MANAGEMENT	1.00 EA	6,043,879	0	0	0	0	6,043,879	6043879
	TOTAL Paseo de las Iglesias Feas Study	1.00 EA	74,052,757	3,659,359	3,220,236	4,347,319	237,678	85,517,349	85517349
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	ESCALATION							4,953,123	
	SUBTOTAL							90,470,472	
	CONTINGENCY							7,118,185	
	TOTAL INCL OWNER COSTS							97,588,657	

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
01	LANDS AND DAMAGES (REAL ESTATE)	1.00 EA	26,200,000	0	0	0	0	26,200,000	26200000
09	CONSTRUCTION (RESTORATION)								
09.01	IRRIGATION PLANTING								
09.01.001	Historic Floodplain								
09.01.001.1	Fencing for Erosion Control	656.00 ACR	152,278	15,228	13,400	18,091	989	199,985	304.86
09.01.001.2	Clearing & Grubbing, Debris	328.00 ACR	473,723	47,372	41,688	56,278	3,077	622,138	1896.76
09.01.001.3	Site Preparation								
09.01.001.3.01	Ripping, discing to prepare	590.00 ACR	7,369	737	648	875	48	9,678	16.40
09.01.001.3.02	Regrade to req'd slopes, flatten	295.00 ACR	1,421	142	125	169	9	1,867	6.33
09.01.001.3.03	Regrade Surface, scraper-grader	1445500 CY	24,160	2,416	2,126	2,870	157	31,729	0.02
	TOTAL Site Preparation	1.00 EA	32,950	3,295	2,900	3,915	214	43,274	43273.73
09.01.001.4	Excavation	176990.00 CY	341,414	34,141	30,044	40,560	2,218	448,377	2.53
09.01.001.5	Compaction (tractor wheel, one	3561940 LF	421,465	42,146	37,089	50,070	2,737	553,508	0.16
09.01.001.6	Trenching for Water Supply Pipes	17050.00 CY	22,424	2,242	1,973	2,664	146	29,450	1.73
09.01.001.7	Pipe bedding, crushed stone	13110.00 CY	651,765	65,176	57,355	77,430	4,233	855,960	65.29
09.01.001.8	Install gated 12" PVC pipe for	114720.00 LF	773,155	77,316	68,038	91,851	5,022	1,015,381	8.85
09.01.001.9	Install "U" outlet tubes with	5940.00 EA	56,469	5,647	4,969	6,709	367	74,161	12.48
09.01.001.10	Backfill pipe trench, side cast	4590.00 CY	1,789	179	157	213	12	2,350	0.51
09.01.001.11	Planting & Seeding								
09.01.001.11.01	Mulching, hay, 1" deep, power	558.00 ACR	498,695	49,870	43,885	59,245	3,239	654,934	1173.72
09.01.001.11.02	Crimping, Tilling topsoil,	558.00 ACR	88,745	8,874	7,810	10,543	576	116,548	208.87
09.01.001.11.03	Seeding, athletic fld mix,	623.00 ACR	1,887,502	188,750	166,100	224,235	12,259	2,478,847	3978.89
09.01.001.11.04	Place Coarse Woody debris/rocks	558.00 ACR	421,341	42,134	37,078	50,055	2,737	553,345	991.66
09.01.001.11.05	Plant Mesquite/Shrub mix using	250729.00 EA	3,760,935	376,094	330,962	446,799	24,428	4,939,217	19.70
	TOTAL Planting & Seeding	558.00 ACR	6,657,218	665,722	585,835	790,878	43,239	8,742,892	15668.27
	TOTAL Historic Floodplain	1.00 EA	9,584,651	958,465	843,449	1,138,657	62,253	12,587,475	12587475
09.01.005	Graded Slope								
09.01.005.1	Fencing for Erosion Control	102.00 ACR	60,045	6,005	5,284	7,133	390	78,857	773.11
09.01.005.2	Clearing & Grubbing, debris	51.00 ACR	36,829	3,683	3,241	4,375	239	48,367	948.38
09.01.005.3	Excavation, str1, mach excav.	1213390 CY	641,883	64,188	56,486	76,256	4,169	842,982	0.69
09.01.005.4	Excavation, steep slopes, 5:1								
09.01.005.4.01	Hauling, no loading, 16.5 cy	1213390 CY	2,690,328	269,033	236,749	319,611	17,474	3,533,195	2.91
09.01.005.4.02	Fill, spread dumped material,	1213390 CY	472,979	47,298	41,622	56,190	3,072	621,162	0.51

			QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09. 01.005. 4.03	Compaction, sheepfoot/wobbly		1213390 CY	356,979	35,698	31,414	42,409	2,319	468,819	0.39
TOTAL Excavation, steep slopes, 5:1			1213390 CY	3,520,287	352,029	309,785	418,210	22,865	4,623,176	3.81
09. 01.005. 5	Fine grading to 20% slope,		110.00 ACR	243,040	24,304	21,387	28,873	1,579	319,183	2901.66
09. 01.005. 6	Header Pipe Laying									
09. 01.005. 6.01	Excavate header trench, 12" dep.		2540.00 CY	1,279	128	113	152	8	1,680	0.66
09. 01.005. 6.02	Header Trench bedding, 3/4"		1020.00 CY	23,017	2,302	2,025	2,734	149	30,227	29.63
09. 01.005. 6.03	Install medium diam. PVC Header		7620.00 LF	97,512	9,751	8,581	11,584	633	128,063	16.81
09. 01.005. 6.04	Backfill trench, FE loader,		1020.00 CY	1,675	168	147	199	11	2,200	2.16
09. 01.005. 6.05	Hauling, surplus cut mat'l,		1530.00 CY	5,734	573	505	681	37	7,531	4.92
TOTAL Header Pipe Laying			7620.00 LF	129,218	12,922	11,371	15,351	839	169,701	22.27
09. 01.005. 7	8" PVC Leach Pipe Laying									
09. 01.005. 7.01	Excavate trench, 12" depth by		99020.00 CY	49,866	4,987	4,388	5,924	324	65,489	0.66
09. 01.005. 7.02	Install low perm geotextile in		148700.00 SY	161,548	16,155	14,216	19,192	1,049	212,160	1.43
09. 01.005. 7.03	Install 8" PVC leach pipe for		445590.00 LF	1,947,006	194,701	171,336	231,304	12,646	2,556,993	5.74
09. 01.005. 7.04	Install leach pipe filter "sock"		445590.00 LF	717,400	71,740	63,131	85,227	4,660	942,158	2.11
09. 01.005. 7.05	Install pipe fittings as needed			27,000	2,700	2,376	3,208	175	35,459	
09. 01.005. 7.06	Backfill trench, FE loader, whl		93380.00 CY	153,367	15,337	13,496	18,220	996	201,417	2.16
09. 01.005. 7.07	Hauling, surplus cut mat'l, no		5790.00 CY	21,701	2,170	1,910	2,578	141	28,500	4.92
TOTAL 8" PVC Leach Pipe Laying			445590.00 LF	3,077,888	307,789	270,854	365,653	19,991	4,042,175	9.07
09. 01.005. 8	Planting & Seeding									
09. 01.005. 8.01	Mulch, hay, 1" deep, power		102.00 ACR	91,159	9,116	8,022	10,830	592	119,719	1173.72
09. 01.005. 8.02	Crimping, tilling topsoil		102.00 ACR	16,222	1,622	1,428	1,927	105	21,304	208.87
09. 01.005. 8.03	Seeding, athletic fld mix,		102.00 ACR	309,028	30,903	27,194	36,713	2,007	405,845	3978.87
09. 01.005. 8.04	Place Coarse Woody debris/rocks		102.00 ACR	77,019	7,702	6,778	9,150	500	101,149	991.66
09. 01.005. 8.05	Plant Mesquite/Shrub mix using		45675.00 EA	685,125	68,513	60,291	81,393	4,450	899,771	19.70
TOTAL Planting & Seeding			102.00 ACR	1,178,554	117,855	103,713	140,012	7,655	1,547,789	15174.40
TOTAL Graded Slope			1.00 EA	8,887,743	888,774	782,121	1,055,864	57,727	11,672,230	11672230
09. 01.010	Natural Slope									
09. 01.010. 1	Fencing for Erosion Control		18.00 ACR	25,223	2,522	2,220	2,996	164	33,125	1840.29
09. 01.010. 2	Clearing and Grubbing, debris		13.00 ACR	9,388	939	826	1,115	61	12,329	948.38
09. 01.010. 3	Header Trenching									
09. 01.010. 3.01	Excavate header trench, 12" dep.		86.00 CY	43	4	4	5	0	57	0.66



			QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09.01.010.3.02	Header Trench bedding, 3/4"	35.00 CY	790	79	70	94	5	1,037	29.63	
09.01.010.3.03	Install med. diam. PVC Header	1520.00 LF	19,451	1,945	1,712	2,311	126	25,545	16.81	
09.01.010.3.04	Backfill trench, FE loader,	35.00 CY	57	6	5	7	0	75	2.16	
09.01.010.3.05	Hauling, surplus cut matl, no	52.00 CY	195	19	17	23	1	256	4.92	
TOTAL Header Trenching			1520.00 LF	20,537	2,054	1,807	2,440	133	26,971	17.74
09.01.010.4 8" PVC Leach Pipe Laying										
09.01.010.4.01	Excavate trench, 12" depth by	16780.00 CY	8,450	845	744	1,004	55	11,098	0.66	
09.01.010.4.02	Install low perm geotextile in	25200.00 SY	27,377	2,738	2,409	3,252	178	35,954	1.43	
09.01.010.4.03	Install 8" PVC leach pipe for	75510.00 LF	329,941	32,994	29,035	39,197	2,143	433,310	5.74	
09.01.010.4.04	Install leach pipe filter "sock"	75510.00 LF	121,571	12,157	10,698	14,443	790	159,659	2.11	
09.01.010.4.05	Install pipe fittings as needed		20,000	2,000	1,760	2,376	130	26,266		
09.01.010.4.06	Backfill trench, FE loader, whl	15830.00 CY	25,999	2,600	2,288	3,089	169	34,145	2.16	
09.01.010.4.07	Hauling, surplus cut matl, no	990.00 CY	3,711	371	327	441	24	4,873	4.92	
TOTAL 8" PVC Leach Pipe Laying			75510.00 LF	537,049	53,705	47,260	63,801	3,488	705,304	9.34
09.01.010.5 Planting & Seeding										
09.01.010.5.01	Mulch, hay, 1" deep, power	18.00 ACR	16,087	1,609	1,416	1,911	104	21,127	1173.72	
09.01.010.5.02	Crimping, tilling topsoil	18.00 ACR	2,863	286	252	340	19	3,760	208.87	
09.01.010.5.03	Seeding, athletic fld mix,	18.00 ACR	54,534	5,453	4,799	6,479	354	71,620	3978.87	
09.01.010.5.04	Place Coarse Woody debris/rocks	18.00 ACR	13,592	1,359	1,196	1,615	88	17,850	991.66	
09.01.010.5.05	Plant Mesquite/Shrub mix using	7740.00 EA	116,100	11,610	10,217	13,793	754	152,474	19.70	
TOTAL Planting & Seeding			18.00 ACR	203,176	20,318	17,879	24,137	1,320	266,830	14823.87
TOTAL Natural Slope			1.00 EA	795,373	79,537	69,993	94,490	5,166	1,044,559	1044559
09.01.015 Second Bench										
09.01.015.1	Fencing for Erosion Control	124.00 ACR	66,198	6,620	5,825	7,864	430	86,937	701.11	
09.01.015.2	Clearing and Grubbing, debris	93.00 ACR	67,159	6,716	5,910	7,978	436	88,200	948.38	
09.01.015.3 Header Trenching										
09.01.015.3.01	Excavate header trench, 12" dep.	500.00 CY	252	25	22	30	2	331	0.66	
09.01.015.3.02	Header Trench bedding, 3/4"	200.00 CY	4,513	451	397	536	29	5,927	29.63	
09.01.015.3.03	Install med. diam. PVC Header	8080.00 LF	103,399	10,340	9,099	12,284	672	135,793	16.81	
09.01.015.3.04	Backfill trench, FE loader,	200.00 CY	328	33	29	39	2	431	2.16	
09.01.015.3.05	Hauling, surplus cut matl, no	300.00 CY	1,124	112	99	134	7	1,477	4.92	
TOTAL Header Trenching			8080.00 LF	109,617	10,962	9,646	13,022	712	143,959	17.82
09.01.015.4 8" PVC Leach Pipe Laying										

			QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST	
09.01.015.4.01	Excavate trench, 12" depth by	121260.00	CY	61,067	6,107	5,374	7,255	397	80,198	0.66	
09.01.015.4.03	Install 8" PVC leach pipe for	545686.00	LF	2,384,375	238,437	209,825	283,264	15,487	3,131,388	5.74	
09.01.015.4.04	Install leach pipe filter "sock"	545680.00	LF	878,545	87,854	77,312	104,371	5,706	1,153,789	2.11	
09.01.015.4.05	Install pipe fittings as needed			25,000	2,500	2,200	2,970	162	32,832		
09.01.015.4.06	Backfill trench, FE loader, whl	114360.00	CY	187,825	18,782	16,529	22,314	1,220	246,669	2.16	
09.01.015.4.07	Hauling, surplus cut matl, no	7090.00	CY	26,573	2,657	2,338	3,157	173	34,899	4.92	
TOTAL 8" PVC Leach Pipe Laying			545686.00	LF	3,563,384	356,338	313,578	423,330	23,144	4,679,775	8.58
09.01.015.5 Planting & Seeding											
09.01.015.5.01	Mulch, hay, 1" deep, power	125.00	ACR	111,715	11,171	9,831	13,272	726	146,715	1173.72	
09.01.015.5.02	Crimping, tilling topsoil	125.00	ACR	19,880	1,988	1,749	2,362	129	26,108	208.87	
09.01.015.5.03	Seeding, athletic fld mix,	125.00	ACR	378,711	37,871	33,327	44,991	2,460	497,359	3978.87	
09.01.015.5.04	Place Coarse Woody debris/rocks	125.00	ACR	95,226	9,523	8,380	11,313	619	125,060	1000.48	
09.01.015.5.05	Plant Mesquite/Shrub mix using	55935.00	EA	839,025	83,903	73,834	99,676	5,450	1,101,887	19.70	
TOTAL Planting & Seeding			125.00	ACR	1,444,557	144,456	127,121	171,613	9,383	1,897,130	15177.04
TOTAL Second Bench			1.00	EA	5,250,915	525,091	462,081	623,809	34,105	6,896,001	6896001
09.01.020 First Bench											
09.01.020.1	Excavate pipe trench, 18" depth	1.00	LF	1	0	0	0	0	1	0.85	
TOTAL Excavate pipe trench, 18" depth			1.00	LF	1	0	0	0	0	1	0.85
09.01.020.2 Pipe Laying											
09.01.020.2.01	Install small diam pressure pipe	31000.00	LF	116,975	11,698	10,294	13,897	760	153,623	4.96	
09.01.020.2.02	Install small diam pipe fittings	3100.00	EA	127,968	12,797	11,261	15,203	831	168,060	54.21	
09.01.020.2.03	Install long reach (150') sprin-	190.00	LF	22,320	2,232	1,964	2,652	145	29,312	154.28	
09.01.020.2.04	Install pipe thrust blocks at	238.00	EA	11,900	1,190	1,047	1,414	77	15,628	65.66	
TOTAL Pipe Laying			31000.00	LF	279,163	27,916	24,566	33,165	1,813	366,624	11.83
09.01.020.3	Backfill pipe trench, compact	31000.00	LF	50,914	5,091	4,480	6,049	331	66,866	2.16	
09.01.020.4	Install control valves for sprin	90.00	EA	3,960	396	349	470	26	5,201	57.79	
09.01.020.5	Install Programmable Logic	1.00	EA	500,000	50,000	44,000	59,400	3,248	656,648	656647.54	
09.01.020.6	Rough grade & scarify subsoil	89.00	ACR	159,167	15,917	14,007	18,909	1,034	209,033	2348.69	
09.01.020.7 Planting & seeding											
09.01.020.7.01	Mulch, hay, 1" deep, power	89.00	ACR	79,541	7,954	7,000	9,449	517	104,461	1173.72	
09.01.020.7.02	Crimping, tilling topsoil	89.00	ACR	14,155	1,415	1,246	1,682	92	18,589	208.87	
09.01.020.7.03	Seeding, athletic fld mix,	89.00	ACR	269,642	26,964	23,728	32,033	1,751	354,119	3978.87	
09.01.020.7.04	Place Coarse Woody debris/rocks	89.00	ACR	23,625	2,363	2,079	2,807	153	31,027	348.62	

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09. 01.020. 7.05	Plant Mesquite/Shrub mix using	55935.00 EA	839,025	83,903	73,834	99,676	5,450	1,101,887	19.70
	TOTAL Planting & seeding	89.00 ACR	1,225,988	122,599	107,887	145,647	7,963	1,610,084	18090.83
	TOTAL First Bench	1.00 EA	2,219,194	221,919	195,289	263,640	14,414	2,914,456	2914456
	TOTAL IRRIGATION PLANTING	1.00 EA	26,737,876	2,673,788	2,352,933	3,176,460	173,664	35,114,721	35114721
09. 05 BASINS PLANTING									
09. 05.001 Tributary Infiltration Basins									
09. 05.001. 1	Fencing for Erosion Control	18.00 ACR	25,223	2,522	2,220	2,996	164	33,125	1840.29
09. 05.001. 2	Clearing and Grubbing, debris	13.00 ACR	9,388	939	826	1,115	61	12,329	948.38
09. 05.001. 3	Excavate, mach exc., sand & grav								
09. 05.001. 3.01	Stockpile useable cut matl,	830.00 CY	851	85	75	101	6	1,118	1.35
09. 05.001. 3.02	Hauling, surplus cut matl, no	2490.00 CY	9,333	933	821	1,109	61	12,256	4.92
09. 05.001. 3.03	Fill, spread cut matl at dump	2490.00 CY	2,208	221	194	262	14	2,900	1.16
09. 05.001. 3.04	Compaction at dump site, hl rlr,	2490.00 CY	733	73	64	87	5	962	0.39
09. 05.001. 3.05	Compact Basin subgrade, existing	86160.00 SY	192,413	19,241	16,932	22,859	1,250	252,694	2.93
	TOTAL Excavate, mach exc., sand & grav	8300.00 CY	205,537	20,554	18,087	24,418	1,335	269,930	32.52
09. 05.001. 4	Backfilling								
09. 05.001. 4.01	Fill, bottom layer, clean sand,	840.00 CY	14,910	1,491	1,312	1,771	97	19,581	23.31
09. 05.001. 4.02	Fill, middle layer, No. 57 blue-	840.00 CY	840	84	74	100	5	1,103	1.31
09. 05.001. 4.03	Fill, middle layer, No. 2 gravel	840.00 CY	21,000	2,100	1,848	2,495	136	27,579	32.83
09. 05.001. 4.04	Fill, top layer, mix of native	840.00 CY	25,200	2,520	2,218	2,994	164	33,095	39.40
	TOTAL Backfilling	3360.00 CY	61,950	6,195	5,452	7,360	402	81,359	24.21
09. 05.001. 5	Planting & Seeding								
09. 05.001. 5.01	Mulch, hay, 1" deep, power	18.00 ACR	16,087	1,609	1,416	1,911	104	21,127	1173.72
09. 05.001. 5.02	Crimping, tilling topsoil	18.00 ACR	2,863	286	252	340	19	3,760	208.87
09. 05.001. 5.03	Seeding, athletic fld mix,	18.00 ACR	54,534	5,453	4,799	6,479	354	71,620	3978.87
09. 05.001. 5.04	Plant Mesquite/Shrub mix using	3204.00 EA	48,060	4,806	4,229	5,710	312	63,117	19.70
	TOTAL Planting & Seeding	18.00 ACR	121,544	12,154	10,696	14,439	789	159,623	8867.95
	TOTAL Tributary Infiltration Basins	1.00 EA	423,641	42,364	37,280	50,329	2,752	556,366	556366.16
09. 05.005	Grade Control Infiltration Basin								

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09.05.005.1	Fencing for Erosion Control	6.00 ACR	14,556	1,456	1,281	1,729	95	19,116	3185.95
09.05.005.2	Clearing and Grubbing, debris	5.00 ACR	3,611	361	318	429	23	4,742	948.38
09.05.005.3	Excavating, mach exc, sand & gr								
09.05.005.3.01	Stockpile useable cut mat'l	280.00 CY	287	29	25	34	2	377	1.35
09.05.005.3.02	Hauling, surplus cut mat'l, no	840.00 CY	3,148	315	277	374	20	4,135	4.92
09.05.005.3.03	Fill, spread cut mat'l at dump	840.00 CY	745	74	66	88	5	978	1.16
	TOTAL Excavating, mach exc, sand & gr	1120.00 CY	4,180	418	368	497	27	5,490	4.90
09.05.005.4	Compaction at dump site, hl rlr	840.00 CY	247	25	22	29	2	325	0.39
09.05.005.5	Compact basin subgrade, existing	29040.00 CY	64,852	6,485	5,707	7,704	421	85,170	2.93
09.05.005.6	Backfilling	1160.00 CY	21,390	2,139	1,882	2,541	139	28,092	24.22
09.05.005.7	Planting & Seeding								
09.05.005.7.01	Mulch, hay, 1" deep, power	6.00 ACR	5,362	536	472	637	35	7,042	1173.72
09.05.005.7.02	Crimping, tilling topsoil	6.00 ACR	954	95	84	113	6	1,253	208.87
09.05.005.7.03	Seeding, athletic fld mix,	6.00 ACR	18,178	1,818	1,600	2,160	118	23,873	3978.87
	TOTAL Planting & Seeding	6.00 ACR	24,495	2,449	2,156	2,910	159	32,169	5361.46
	TOTAL Grade Control Infiltration Basin	1.00 EA	133,331	13,333	11,733	15,840	866	175,103	175102.74
	TOTAL BASINS PLANTING	1.00 EA	556,972	55,697	49,014	66,168	3,618	731,469	731468.90
09.10	HARDENED BANKS								
09.10.001	Hardened Slopes								
09.10.001.1	Fencing for Erosion Control	3.50 ACR	11,109	1,111	978	1,320	72	14,589	4168.37
09.10.001.2	Clearing and Grubbing, debris	0.90 ACR	650	65	57	77	4	854	948.38
09.10.001.3	Excavating, prepare slope &								
09.10.001.3.01	Stockpile subgrade cut matl for	28200.00 CY	28,911	2,891	2,544	3,435	188	37,968	1.35
09.10.001.3.02	Hauling, no loading, 16.5 cy	18800.00 CY	41,683	4,168	3,668	4,952	271	54,743	2.91
	TOTAL Excavating, prepare slope &	47000.00 CY	70,594	7,059	6,212	8,387	459	92,711	1.97
09.10.001.4	Fill, spread dumped mat'l, by								
09.10.001.4.01	Compaction, sheepfoot/wobbly	18800.00 CY	5,531	553	487	657	36	7,264	0.39
09.10.001.4.02	Fine grade to 1:1 slope, for	14900.00 SY	6,802	680	599	808	44	8,933	0.60
	TOTAL Fill, spread dumped mat'l, by	18800.00 CY	12,333	1,233	1,085	1,465	80	16,197	0.86
09.10.001.5	Soil Cement application,	61100.00 CY	2,382,900	238,290	209,695	283,089	15,477	3,129,451	51.22

			QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST	
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09. 10.001. 6 Backfill and Compaction											
09. 10.001. 6.01	Backfill subgrade with cut matl	28200.00	CY	46,316	4,632	4,076	5,502	301	60,826	2.16	
09. 10.001. 6.02	Compaction, sheepfoot/wobbly whl	28200.00	CY	8,296	830	730	986	54	10,896	0.39	
TOTAL Backfill and Compaction			28200.00	CY	54,612	5,461	4,806	6,488	355	71,722	2.54
TOTAL Hardened Slopes			1.00	EA	2,532,198	253,220	222,833	300,825	16,447	3,325,523	3325523
TOTAL HARDENED BANKS			1.00	EA	2,532,198	253,220	222,833	300,825	16,447	3,325,523	3325523
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09. 15 PIPING											
09. 15.001 Irrigation Piping											
09. 15.001. 1 Trenching for Delivery Pipe											
09. 15.001. 1.01	Delivery pipe trench bedding,	1260.00	CY	62,641	6,264	5,512	7,442	407	82,266	65.29	
09. 15.001. 1.02	Delivery piping, large dia. say	10440.00	LF	206,616	20,662	18,182	24,546	1,342	271,348	25.99	
09. 15.001. 1.03	Backfill delivery pipe trench,	1260.00	CY	21,658	2,166	1,906	2,573	141	28,443	22.57	
09. 15.001. 1.04	Hauling, Delivery pipe surplus	1880.00	CY	4,168	417	367	495	27	5,474	2.91	
TOTAL Trenching for Delivery Pipe			3130.00	CY	295,083	29,508	25,967	35,056	1,917	387,531	123.81
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09. 15.001. 2 Trenching for Main Pipe											
09. 15.001. 2.01	Main pipe trench bedding,	8400.00	CY	417,607	41,761	36,749	49,612	2,712	548,441	65.29	
09. 15.001. 2.02	Main piping, large dia. say	69970.00	LF	1,384,762	138,476	121,859	164,510	8,994	1,818,601	25.99	
09. 15.001. 2.03	Backfill Main pipe trench,	8400.00	CY	144,386	14,439	12,706	17,153	938	189,621	22.57	
09. 15.001. 2.04	Hauling, Main pipe surplus	12600.00	CY	27,937	2,794	2,458	3,319	181	36,689	2.91	
TOTAL Trenching for Main Pipe			21000.00	CY	1,974,692	197,469	173,773	234,593	12,826	2,593,353	123.49
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09. 15.001. 3 Trenching for Sub-main Pipe											
09. 15.001. 3.01	Sub-main pipe trench bedding,	3370.00	CY	167,540	16,754	14,744	19,904	1,088	220,029	65.29	
09. 15.001. 3.02	Sub-main piping, large dia. say	28010.00	LF	288,074	28,807	25,351	34,223	1,871	378,327	13.51	
09. 15.001. 3.03	Backfill Sub-main pipe trench,	3370.00	CY	57,926	5,793	5,098	6,882	376	76,074	22.57	
09. 15.001. 3.04	Hauling, Sub-main pipe surplus	5050.00	CY	11,197	1,120	985	1,330	73	14,705	2.91	
TOTAL Trenching for Sub-main Pipe			8420.00	CY	524,737	52,474	46,177	62,339	3,408	689,135	81.85
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09. 15.001. 4 Trenching for Culvert CMP											
09. 15.001. 4.01	Culvert trench bedding,	4200.00	CY	208,803	20,880	18,375	24,806	1,356	274,221	65.29	
09. 15.001. 4.02	Install 24" dia. CMP Culvert for	23600.00	LF	449,438	44,944	39,551	53,393	2,919	590,245	25.01	
09. 15.001. 4.03	Backfill trench, FE Loader,	4200.00	CY	72,193	7,219	6,353	8,577	469	94,811	22.57	

			QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09. 15.001. 4.04	Hauling, Sub-main pipe surplus		6300.00 CY	13,968	1,397	1,229	1,659	91	18,345	2.91
	TOTAL Trenching for Culvert CMP		10500.00 CY	744,403	74,440	65,507	88,435	4,835	977,621	93.11
	TOTAL Irrigation Piping		1.00 EA	3,538,916	353,892	311,425	420,423	22,986	4,647,640	4647640
	TOTAL PIPING		1.00 EA	3,538,916	353,892	311,425	420,423	22,986	4,647,640	4647640
09. 20 ROADS & BRIDGES										
09. 20.001 Compacted Earth Maintenance Road										
09. 20.001. 1	Clearing & Grubbing, debris		8.30 ACR	5,994	599	527	712	39	7,872	948.38
	TOTAL Clearing & Grubbing, debris		8.30 ACR	5,994	599	527	712	39	7,872	948.38
09. 20.001. 2 Site Preparation										
09. 20.001. 2.01	Ripping, discing to prepare		8.30 ACR	104	10	9	12	1	136	16.40
09. 20.001. 2.02	Regrade, flatten, balance cut		2020.00 CY	973	97	86	116	6	1,278	0.63
09. 20.001. 2.03	Compaction, riding, sheepfoot/		40260.00 SY	11,844	1,184	1,042	1,407	77	15,555	0.39
	TOTAL Site Preparation		8.30 ACR	12,921	1,292	1,137	1,535	84	16,970	2044.53
	TOTAL Compacted Earth Maintenance Road		8.30 ACR	18,915	1,892	1,665	2,247	123	24,841	2992.91
09. 20.002 Paved Maintenance Roads										
09. 20.002. 1	Clearing & Grubbing, debris		9.00 ACR	6,499	650	572	772	42	8,535	948.38
	TOTAL Clearing & Grubbing, debris		9.00 ACR	6,499	650	572	772	42	8,535	948.38
09. 20.002. 2 Site Preparation										
09. 20.002. 2.01	Ripping, discing to prepare		18.00 ACR	225	22	20	27	1	295	16.40
09. 20.002. 2.02	Regrade, flatten, balance cut		21880.00 CY	10,542	1,054	928	1,252	68	13,844	0.63
09. 20.002. 2.03	Compaction, riding, sheepfoot/		86820.00 SY	25,542	2,554	2,248	3,034	166	33,545	0.39
09. 20.002. 2.04	Asphalt Concrete Paving,		781310.00 SF	1,012,457	101,246	89,096	120,280	6,576	1,329,654	1.70
	TOTAL Site Preparation		18.00 ACR	1,048,766	104,877	92,291	124,593	6,812	1,377,339	76518.83
	TOTAL Paved Maintenance Roads		18.00 ACR	1,055,265	105,527	92,863	125,365	6,854	1,385,874	76993.02
09. 20.003 Gravel Maintenance Road										

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09. 20.003. 1	Clearing & Grubbing, debris	4.10 ACR	2,961	296	261	352	19	3,888	948.38
	TOTAL Clearing & Grubbing, debris	4.10 ACR	2,961	296	261	352	19	3,888	948.38
09. 20.003. 2	Site Preparation								
09. 20.003. 2.01	Ripping, discing to prepare	8.20 ACR	102	10	9	12	1	135	16.40
09. 20.003. 2.02	Regrade, flatten, balance cut	1980.00 CY	954	95	84	113	6	1,253	0.63
09. 20.003. 2.03	Compaction, riding, sheepfoot/	39530.00 SY	11,630	1,163	1,023	1,382	76	15,273	0.39
09. 20.003. 2.04	Gravel course, crushed 3/4"	39530.00 SY	133,987	13,399	11,791	15,918	870	175,964	4.45
	TOTAL Site Preparation	8.20 ACR	146,673	14,667	12,907	17,425	953	192,625	23490.85
	TOTAL Gravel Maintenance Road	8.20 ACR	149,634	14,963	13,168	17,776	972	196,513	23965.04
09. 20.005	Bridges								
09. 20.005. 1	Fencing for Erosion Control	9.00 ACR	17,831	1,783	1,569	2,118	116	23,418	2601.96
09. 20.005. 2	Clearing and Grubbing, debris	7.00 ACR	5,055	505	445	601	33	6,639	948.38
09. 20.005. 3	Excavating, structural, sand/								
09. 20.005. 3.01	Hauling, no loading, 16.5 cy	3366.00 CY	7,463	746	657	887	48	9,801	2.91
09. 20.005. 3.02	Fill, spread dumped matl, by	3366.00 CY	1,774	177	156	211	12	2,329	0.69
09. 20.005. 3.03	Compaction, sheepfoot/wobbly	3060.00 CY	900	90	79	107	6	1,182	0.39
	TOTAL Excavating, structural, sand/	3060.00 CY	10,137	1,014	892	1,204	66	13,313	4.35
09. 20.005. 4	Cast in Place reinforced concret	3060.00 CY	383,516	38,352	33,749	45,562	2,491	503,669	164.60
09. 20.005. 5	Finished grading, tie in, stabl.	9.00 ACR	30,592	3,059	2,692	3,634	199	40,177	4464.06
09. 20.005. 6	Prefab Bridges								
09. 20.005. 6.01	Prefab Bridges (9 ea)		602,589	60,259	53,028	71,588	3,914	791,377	
09. 20.005. 6.02	Unloading and Erection	8090.00 SF	86,053	8,605	7,573	10,223	559	113,013	13.97
	TOTAL Prefab Bridges	9.00 EA	688,642	68,864	60,601	81,811	4,473	904,390	100487.83
	TOTAL Bridges	1.00 EA	1,135,773	113,577	99,948	134,930	7,377	1,491,605	1491605
	TOTAL ROADS & BRIDGES	1.00 EA	2,359,587	235,959	207,644	280,319	15,326	3,098,834	3098834
09. 25	LET DOWN STRUCTURES								
09. 25.001	Let Down Structures								
09. 25.001. 1	Fencing for Erosion Control	2.50 ACR	9,400	940	827	1,117	61	12,345	4937.91
09. 25.001. 2	Clearing & Grubbing, debris	1.90 ACR	1,372	137	121	163	9	1,802	948.38

		QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
09. 25.001. 3	Prep (excav) slope to receive	500.00 CY	750	75	66	89	5	985	1.97
09. 25.001. 4	30" Pipe Laying								
09. 25.001. 4.01	Install pipe bedding, gravel,	150.00 CY	7,457	746	656	886	48	9,794	65.29
09. 25.001. 4.02	Install 30" dia CMP, 200 lf per	1000.00 LF	40,094	4,009	3,528	4,763	260	52,655	52.66
09. 25.001. 4.03	Install wingwall deflectors on	10.00 EA	30,000	3,000	2,640	3,564	195	39,399	3939.89
	TOTAL 30" Pipe Laying	1000.00 LF	77,551	7,755	6,825	9,213	504	101,848	101.85
09. 25.001. 5	Backfilling & Compaction								
09. 25.001. 5.01	Hauling, no loading, 16.5 cy	30000.00 CY	66,516	6,652	5,853	7,902	432	87,355	2.91
09. 25.001. 5.02	Fill, spread dumped matl, by	30000.00 CY	19,500	1,950	1,716	2,317	127	25,609	0.85
09. 25.001. 5.03	Compaction, sheepfoot/wobbly	30000.00 CY	8,826	883	777	1,049	57	11,591	0.39
09. 25.001. 5.04	Fine grade filled area, for	2.50 ACR	5,445	545	479	647	35	7,151	2860.36
	TOTAL Backfilling & Compaction	30000.00 CY	100,287	10,029	8,825	11,914	651	131,706	4.39
09. 25.001. 6	Planting and Seeding								
09. 25.001. 6.01	Mulching, hay, 1" deep, power	2.10 ACR	1,877	188	165	223	12	2,465	1173.72
09. 25.001. 6.02	Crimping, tilling topsoil	2.10 ACR	334	33	29	40	2	439	208.87
09. 25.001. 6.03	Seeding, athletic fld mix,	2.40 ACR	7,271	727	640	864	47	9,549	3978.87
09. 25.001. 6.04	Place Coarse Woody debris/rocks	2.10 ACR	1,586	159	140	188	10	2,082	991.66
09. 25.001. 6.05	Plant Mesquite/Shrub mix using	1125.00 EA	16,875	1,688	1,485	2,005	110	22,162	19.70
	TOTAL Planting and Seeding	2.10 ACR	27,943	2,794	2,459	3,320	181	36,697	17474.79
	TOTAL Let Down Structures	1.00 EA	217,303	21,730	19,123	25,816	1,411	285,383	285382.98
	TOTAL LET DOWN STRUCTURES	1.00 EA	217,303	21,730	19,123	25,816	1,411	285,383	285382.98
	TOTAL CONSTRUCTION (RESTORATION)	1.00 EA	35,942,852	3,594,285	3,162,971	4,270,011	233,451	47,203,570	47203570
14	RECREATION								
14. 30	RECREATION FEATURES								
14. 30.001	Parking Areas								
14. 30.001. 1	Fencing for Erosion Control	1.80 ACR	7,976	798	702	948	52	10,474	5819.09
14. 30.001. 2	Clearing & Grubbing, debris	1.80 ACR	1,372	137	121	163	9	1,802	1001.07
14. 30.001. 3	Site Preparation								
14. 30.001. 3.01	Ripping, discing to prepare	1.80 ACR	22	2	2	3	0	30	16.40
14. 30.001. 3.02	Regrade to req'd slopes, flatten	1.80 ACR	9	1	1	1	0	11	6.33



			QUANTITY UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST	
14. 30.001. 3.03	Regrade surface, scraper-grader,	4410.00	CY	9,587	959	844	1,139	62	12,590	2.85	
14. 30.001. 3.04	Compaction, riding, sheepfoot	8810.00	SY	2,592	259	228	308	17	3,404	0.39	
14. 30.001. 3.05	Fine grade, grade subgrade for	8810.00	SY	4,731	473	416	562	31	6,214	0.71	
TOTAL Site Preparation			1.80	16,941	1,694	1,491	2,013	110	22,249	12360.60	
14. 30.001. 4	Asphalt Paving, 6" stone base,	79280.00	SF	129,226	12,923	11,372	15,352	839	169,712	2.14	
14. 30.001. 5	Lines on pavement, parking stall			1,500	150	132	178	10	1,970		
14. 30.001. 6	Parking Lot Amenities, lighting,			10,000	1,000	880	1,188	65	13,133		
TOTAL Parking Areas			1.80	167,016	16,702	14,697	19,841	1,085	219,341	121855.91	
14. 30.005 Decomposed Granite Trails											
14. 30.005. 1	Clearing & Grubbing, debris	2.00	ACR	1,444	144	127	172	9	1,897	948.38	
TOTAL Clearing & Grubbing, debris			2.00	1,444	144	127	172	9	1,897	948.38	
14. 30.005. 2 Site Preparation											
14. 30.005. 2.01	Ripping, discing to prepare	2.00	ACR	25	2	2	3	0	33	16.40	
14. 30.005. 2.02	Regrade, flatten, balance cut	1540.00	CY	742	74	65	88	5	974	0.63	
14. 30.005. 2.03	Compaction, riding, sheepfoot/	30640.00	SY	9,014	901	793	1,071	59	11,838	0.39	
TOTAL Site Preparation			2.00	9,781	978	861	1,162	64	12,846	6422.83	
14. 30.005. 3 Decomposed Granite course,											
14. 30.005. 3.01	Material and Delivery	3830.00	TON	114,900	11,490	10,111	13,650	746	150,898	39.40	
14. 30.005. 3.02	Spread and Compaction	3830.00	TON	7,106	711	625	844	46	9,333	2.44	
TOTAL Decomposed Granite course,			275740.00	SF	122,006	12,201	10,737	14,494	792	160,230	0.58
14. 30.005. 4	Trail amenities, ADA ramps, sign			10,000	1,000	880	1,188	65	13,133		
TOTAL Decomposed Granite Trails			1.00	143,232	14,323	12,604	17,016	930	188,106	188105.85	
14. 30.010 Other Recreation Features											
14. 30.010. 1	Paved Trail amenities, curb	1.00	EA	10,000	1,000	880	1,188	65	13,133	13132.95	
14. 30.010. 2	Comfort Stations	3.00	EA	300,000	30,000	26,400	35,640	1,949	393,989	131329.51	
14. 30.010. 3	Rest Stops	5.00	EA	15,000	1,500	1,320	1,782	97	19,699	3939.89	
14. 30.010. 4	Concrete Benches	21.00	EA	14,909	1,491	1,312	1,771	97	19,580	932.36	
14. 30.010. 5	Signage	21.00	EA	585	59	51	70	4	769	36.60	
TOTAL Other Recreation Features			1.00	340,494	34,049	29,963	40,451	2,212	447,169	447168.94	

	QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
TOTAL RECREATION FEATURES	1.00	EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
TOTAL RECREATION	1.00	EA	650,741	65,074	57,265	77,308	4,227	854,615	854615.43
30 PLANNING, ENGINEERING, DESIGN									
30.009 Construction	1.00	EA	5,120,000	0	0	0	0	5,120,000	5120000
30.014 Recreation	1.00	EA	95,285	0	0	0	0	95,285	95285.00
TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	5,215,285	0	0	0	0	5,215,285	5215285
31 CONSTRUCTION MANAGEMENT									
31.009 Construction (Restoration)	1.00	EA	5,980,000	0	0	0	0	5,980,000	5980000
31.014 Recreation	1.00	EA	63,879	0	0	0	0	63,879	63879.00
TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	6,043,879	0	0	0	0	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	74,052,757	3,659,359	3,220,236	4,347,319	237,678	85,517,349	85517349
ESCALATION								4,953,123	
SUBTOTAL								90,470,472	
CONTINGENCY								7,118,185	
TOTAL INCL OWNER COSTS								97,588,657	

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01 LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	0	0	0	0	26,200,000	26,200,000	26200000
09 CONSTRUCTION (RESTORATION)	1.00	EA	343,303	10546426	4813116	12682559	7,900,751	35,942,852	35942852
14 RECREATION	1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
30 PLANNING, ENGINEERING, DESIGN	1.00	EA	0	0	0	0	5,215,285	5,215,285	5215285
31 CONSTRUCTION MANAGEMENT	1.00	EA	0	0	0	0	6,043,879	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	344,214	10582793	4845615	12803035	45,821,315	74,052,757	74052757
OVERHEAD								3,659,359	
SUBTOTAL HOME OFC								77,712,116	
SUBTOTAL PROFIT								3,220,236	
SUBTOTAL BOND								80,932,352	
TOTAL INCL INDIRECTS ESCALATION								4,347,319	
SUBTOTAL CONTINGENCY								85,279,671	
TOTAL INCL OWNER COSTS								237,678	
								85,517,349	
								4,953,123	
								90,470,472	
								7,118,185	
								97,588,657	

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01 LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	0	0	0	0	26,200,000	26,200,000	26200000
09 CONSTRUCTION (RESTORATION)									
09. 01 IRRIGATION PLANTING	1.00	EA	287,141	8210895	3807079	7083380	7,636,522	26,737,876	26737876
09. 05 BASINS PLANTING	1.00	EA	14,082	317,937	18,040	89,594	131,400	556,972	556972.24
09. 10 HARDENED BANKS	1.00	EA	2,422	801,347	686,566	1044285	0	2,532,198	2532198
09. 15 PIPING	1.00	EA	26,572	804,650	75,147	2659119	0	3,538,916	3538916
09. 20 ROADS & BRIDGES	1.00	EA	11,176	362,784	171,054	1765490	60,259	2,359,587	2359587
09. 25 LET DOWN STRUCTURES	1.00	EA	1,910	48,812	55,230	40,691	72,570	217,303	217303.02
TOTAL CONSTRUCTION (RESTORATION)	1.00	EA	343,303	10546426	4813116	12682559	7,900,751	35,942,852	35942852
14 RECREATION									
14. 30 RECREATION FEATURES	1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
TOTAL RECREATION	1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
30 PLANNING, ENGINEERING, DESIGN									
30.009 Construction	1.00	EA	0	0	0	0	5,120,000	5,120,000	5120000
30.014 Recreation	1.00	EA	0	0	0	0	95,285	95,285	95285.00
TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	0	0	0	0	5,215,285	5,215,285	5215285
31 CONSTRUCTION MANAGEMENT									
31.009 Construction (Restoration)	1.00	EA	0	0	0	0	5,980,000	5,980,000	5980000
31.014 Recreation	1.00	EA	0	0	0	0	63,879	63,879	63879.00
TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	0	0	0	0	6,043,879	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	344,214	10582793	4845615	12803035	45,821,315	74,052,757	74052757
OVERHEAD								3,659,359	
SUBTOTAL								77,712,116	
HOME OFC								3,220,236	
SUBTOTAL								80,932,352	
PROFIT								4,347,319	
SUBTOTAL								85,279,671	
BOND								237,678	
TOTAL INCL INDIRECTS								85,517,349	
ESCALATION								4,953,123	

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	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
SUBTOTAL								90,470,472	
CONTINGENCY								7,118,185	
TOTAL INCL OWNER COSTS								97,588,657	

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		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01	LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	0	0	0	0	26,200,000	26,200,000	26200000
09	CONSTRUCTION (RESTORATION)									
09.01	IRRIGATION PLANTING									
09.01.001	Historic Floodplain	1.00	EA	87,267	2225592	658,160	2802300	3,898,599	9,584,651	9584651
09.01.005	Graded Slope	1.00	EA	115,227	3384867	2817665	1688173	997,038	8,887,743	8887743
09.01.010	Natural Slope	1.00	EA	9,473	298,169	27,076	301,170	168,957	795,373	795372.60
09.01.015	Second Bench	1.00	EA	62,207	1936987	176,205	1916720	1,221,003	5,250,915	5250915
09.01.020	First Bench	1.00	EA	12,967	365,280	127,972	375,017	1,350,925	2,219,194	2219194
	TOTAL IRRIGATION PLANTING	1.00	EA	287,141	8210895	3807079	7083380	7,636,522	26,737,876	26737876
09.05	BASINS PLANTING									
09.05.001	Tributary Infiltration Basins	1.00	EA	10,426	235,402	13,352	64,878	110,010	423,641	423641.40
09.05.005	Grade Control Infiltration Basin	1.00	EA	3,656	82,535	4,689	24,717	21,390	133,331	133330.84
	TOTAL BASINS PLANTING	1.00	EA	14,082	317,937	18,040	89,594	131,400	556,972	556972.24
09.10	HARDENED BANKS									
09.10.001	Hardened Slopes	1.00	EA	2,422	801,347	686,566	1044285	0	2,532,198	2532198
	TOTAL HARDENED BANKS	1.00	EA	2,422	801,347	686,566	1044285	0	2,532,198	2532198
09.15	PIPING									
09.15.001	Irrigation Piping	1.00	EA	26,572	804,650	75,147	2659119	0	3,538,916	3538916
	TOTAL PIPING	1.00	EA	26,572	804,650	75,147	2659119	0	3,538,916	3538916
09.20	ROADS & BRIDGES									
09.20.001	Compacted Earth Maintenance Road	8.30	ACR	331	9,353	9,562	0	0	18,915	2278.93
09.20.002	Paved Maintenance Roads	18.00	ACR	3,615	119,850	86,291	849,124	0	1,055,265	58625.84
09.20.003	Gravel Maintenance Road	8.20	ACR	706	20,773	26,083	102,778	0	149,634	18248.03
09.20.005	Bridges	1.00	EA	6,524	212,807	49,119	813,588	60,259	1,135,773	1135773
	TOTAL ROADS & BRIDGES	1.00	EA	11,176	362,784	171,054	1765490	60,259	2,359,587	2359587
09.25	LET DOWN STRUCTURES									
09.25.001	Let Down Structures	1.00	EA	1,910	48,812	55,230	40,691	72,570	217,303	217303.02

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL LET DOWN STRUCTURES	1.00	EA	1,910	48,812	55,230	40,691	72,570	217,303	217303.02
TOTAL CONSTRUCTION (RESTORATION)	1.00	EA	343,303	10546426	4813116	12682559	7,900,751	35,942,852	35942852
14 RECREATION									
14. 30 RECREATION FEATURES									
14. 30.001 Parking Areas	1.80	ACR	474	24,444	23,998	107,074	11,500	167,016	92786.39
14. 30.005 Decomposed Granite Trails	1.00	EA	343	9,831	8,501	0	124,900	143,232	143231.98
14. 30.010 Other Recreation Features	1.00	EA	95	2,091	0	13,402	325,000	340,494	340493.88
TOTAL RECREATION FEATURES	1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
TOTAL RECREATION	1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
30 PLANNING, ENGINEERING, DESIGN									
30.009 Construction	1.00	EA	0	0	0	0	5,120,000	5,120,000	5120000
30.014 Recreation	1.00	EA	0	0	0	0	95,285	95,285	95285.00
TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	0	0	0	0	5,215,285	5,215,285	5215285
31 CONSTRUCTION MANAGEMENT									
31.009 Construction (Restoration)	1.00	EA	0	0	0	0	5,980,000	5,980,000	5980000
31.014 Recreation	1.00	EA	0	0	0	0	63,879	63,879	63879.00
TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	0	0	0	0	6,043,879	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	344,214	10582793	4845615	12803035	45,821,315	74,052,757	74052757
OVERHEAD								3,659,359	
SUBTOTAL								77,712,116	
HOME OFC								3,220,236	
SUBTOTAL								80,932,352	
PROFIT								4,347,319	
SUBTOTAL								85,279,671	
BOND								237,678	
TOTAL INCL INDIRECTS								85,517,349	
ESCALATION								4,953,123	
SUBTOTAL								90,470,472	
CONTINGENCY								7,118,185	

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	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
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TOTAL INCL OWNER COSTS								97,588,657	
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		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01	LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	0	0	0	0	26,200,000	26,200,000	26200000
09	CONSTRUCTION (RESTORATION)									
09.01	IRRIGATION PLANTING									
09.01.001	Historic Floodplain									
09.01.001.1	Fencing for Erosion Control	656.00	ACR	3,421	75,723	0	76,555	0	152,278	232.13
09.01.001.2	Clearing & Grubbing, Debris	328.00	ACR	9,338	271,648	202,076	0	0	473,723	1444.28
09.01.001.3	Site Preparation	1.00	EA	346	10,505	22,445	0	0	32,950	32950.50
09.01.001.4	Excavation	176990.00	CY	6,850	205,185	136,229	0	0	341,414	1.93
09.01.001.5	Compaction (tractor wheel, one	3561940	LF	6,918	206,632	214,833	0	0	421,465	0.12
09.01.001.6	Trenching for Water Supply Pipes	17050.00	CY	355	11,265	11,159	0	0	22,424	1.32
09.01.001.7	Pipe bedding, crushed stone	13110.00	CY	1,210	30,281	6,100	615,383	0	651,765	49.72
09.01.001.8	Install gated 12" PVC pipe for	114720.00	LF	9,178	306,245	0	329,246	137,664	773,155	6.74
09.01.001.9	Install "U" outlet tubes with	5940.00	EA	1,667	55,638	0	832	0	56,469	9.51
09.01.001.10	Backfill pipe trench, side cast	4590.00	CY	24	725	1,064	0	0	1,789	0.39
09.01.001.11	Planting & Seeding	558.00	ACR	47,960	1051746	64,254	1780284	3,760,935	6,657,218	11930.50
	TOTAL Historic Floodplain	1.00	EA	87,267	2225592	658,160	2802300	3,898,599	9,584,651	9584651
09.01.005	Graded Slope									
09.01.005.1	Fencing for Erosion Control	102.00	ACR	1,349	29,859	0	30,187	0	60,045	588.68
09.01.005.2	Clearing & Grubbing, debris	51.00	ACR	726	21,119	15,710	0	0	36,829	722.14
09.01.005.3	Excavation, str1, mach excav.	1213390	CY	9,464	300,071	341,812	0	0	641,883	0.53
09.01.005.4	Excavation, steep slopes, 5:1	1213390	CY	47,201	1296750	2223537	0	0	3,520,287	2.90
09.01.005.5	Fine grading to 20% slope,	110.00	ACR	5,324	149,044	93,995	0	0	243,040	2209.45
09.01.005.6	Header Pipe Laying	7620.00	LF	984	31,922	8,890	88,405	0	129,218	16.96
09.01.005.7	8" PVC Leach Pipe Laying	445590.00	LF	41,929	1375303	121,975	1268697	311,913	3,077,888	6.91
09.01.005.8	Planting & Seeding	102.00	ACR	8,249	180,799	11,745	300,884	685,125	1,178,554	11554.45
	TOTAL Graded Slope	1.00	EA	115,227	3384867	2817665	1688173	997,038	8,887,743	8887743
09.01.010	Natural Slope									
09.01.010.1	Fencing for Erosion Control	18.00	ACR	567	12,543	0	12,680	0	25,223	1401.27
09.01.010.2	Clearing and Grubbing, debris	13.00	ACR	185	5,383	4,005	0	0	9,388	722.14
09.01.010.3	Header Trenching	1520.00	LF	160	5,294	304	14,939	0	20,537	13.51
09.01.010.4	8" PVC Leach Pipe Laying	75510.00	LF	7,106	243,044	20,696	220,453	52,857	537,049	7.11
09.01.010.5	Planting & Seeding	18.00	ACR	1,456	31,906	2,073	53,097	116,100	203,176	11287.54
	TOTAL Natural Slope	1.00	EA	9,473	298,169	27,076	301,170	168,957	795,373	795372.60
09.01.015	Second Bench									
09.01.015.1	Fencing for Erosion Control	124.00	ACR	1,487	32,918	0	33,280	0	66,198	533.85

			QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.015. 2	Clearing and Grubbing, debris		93.00	ACR	1,324	38,511	28,648	0	0	67,159	722.14
09. 01.015. 3	Header Trenching		8080.00	LF	852	28,236	1,744	79,637	0	109,617	13.57
09. 01.015. 4	8" PVC Leach Pipe Laying		545686.00	LF	48,435	1615754	131,420	1434233	381,978	3,563,384	6.53
09. 01.015. 5	Planting & Seeding		125.00	ACR	10,109	221,568	14,394	369,571	839,025	1,444,557	11556.46
TOTAL Second Bench			1.00	EA	62,207	1936987	176,205	1916720	1,221,003	5,250,915	5250915
09. 01.020 First Bench											
09. 01.020. 1	Excavate pipe trench, 18" depth		1.00	LF	0	1	0	0	0	1	0.65
09. 01.020. 2	Pipe Laying		31000.00	LF	4,741	157,025	0	110,239	11,900	279,163	9.01
09. 01.020. 3	Backfill pipe trench, compact		31000.00	LF	930	27,854	23,061	0	0	50,914	1.64
09. 01.020. 4	Install control valves for sprin		90.00	EA	80	1,868	0	2,093	0	3,960	44.00
09. 01.020. 5	Install Programmable Logic		1.00	EA	0	0	0	0	500,000	500,000	500000.00
09. 01.020. 6	Rough grade & scarify subsoil		89.00	ACR	2,154	64,504	94,663	0	0	159,167	1788.39
09. 01.020. 7	Planting & seeding		89.00	ACR	5,062	114,029	10,248	262,686	839,025	1,225,988	13775.15
TOTAL First Bench			1.00	EA	12,967	365,280	127,972	375,017	1,350,925	2,219,194	2219194
TOTAL IRRIGATION PLANTING			1.00	EA	287,141	8210895	3807079	7083380	7,636,522	26,737,876	26737876
09. 05 BASINS PLANTING											
09. 05.001 Tributary Infiltration Basins											
09. 05.001. 1	Fencing for Erosion Control		18.00	ACR	567	12,543	0	12,680	0	25,223	1401.27
09. 05.001. 2	Clearing and Grubbing, debris		13.00	ACR	185	5,383	4,005	0	0	9,388	722.14
09. 05.001. 3	Excavate, mach exc., sand & grav		8300.00	CY	8,794	197,362	8,174	0	0	205,537	24.76
09. 05.001. 4	Backfilling		3360.00	CY	0	0	0	0	61,950	61,950	18.44
09. 05.001. 5	Planting & Seeding		18.00	ACR	880	20,114	1,173	52,197	48,060	121,544	6752.45
TOTAL Tributary Infiltration Basins			1.00	EA	10,426	235,402	13,352	64,878	110,010	423,641	423641.40
09. 05.005 Grade Control Infiltration Basin											
09. 05.005. 1	Fencing for Erosion Control		6.00	ACR	327	7,238	0	7,318	0	14,556	2425.92
09. 05.005. 2	Clearing and Grubbing, debris		5.00	ACR	71	2,070	1,540	0	0	3,611	722.14
09. 05.005. 3	Excavating, mach exc, sand & gr		1120.00	CY	56	1,554	2,627	0	0	4,180	3.73
09. 05.005. 4	Compaction at dump site, hl rlr		840.00	CY	4	116	131	0	0	247	0.29
09. 05.005. 5	Compact basin subgrade, existing		29040.00	CY	2,904	64,852	0	0	0	64,852	2.23
09. 05.005. 6	Backfilling		1160.00	CY	0	0	0	0	21,390	21,390	18.44
09. 05.005. 7	Planting & Seeding		6.00	ACR	293	6,705	391	17,399	0	24,495	4082.45
TOTAL Grade Control Infiltration Basin			1.00	EA	3,656	82,535	4,689	24,717	21,390	133,331	133330.84
TOTAL BASINS PLANTING			1.00	EA	14,082	317,937	18,040	89,594	131,400	556,972	556972.24

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
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09. 10 HARDENED BANKS										
09. 10.001 Hardened Slopes										
09. 10.001. 1	Fencing for Erosion Control	3.50	ACR	250	5,524	0	5,585	0	11,109	3173.98
09. 10.001. 2	Clearing and Grubbing, debris	0.90	ACR	13	373	277	0	0	650	722.14
09. 10.001. 3	Excavating, prepare slope &	47000.00	CY	930	26,236	44,358	0	0	70,594	1.50
09. 10.001. 4	Fill, spread dumped mat'l, by	18800.00	CY	243	6,773	5,560	0	0	12,333	0.66
09. 10.001. 5	Soil Cement application,	61100.00	CY	0	733,200	611,000	1038700	0	2,382,900	39.00
09. 10.001. 6	Backfill and Compaction	28200.00	CY	987	29,241	25,372	0	0	54,612	1.94
TOTAL Hardened Slopes		1.00	EA	2,422	801,347	686,566	1044285	0	2,532,198	2532198
TOTAL HARDENED BANKS		1.00	EA	2,422	801,347	686,566	1044285	0	2,532,198	2532198
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09. 15 PIPING										
09. 15.001 Irrigation Piping										
09. 15.001. 1	Trenching for Delivery Pipe	3130.00	CY	2,006	65,488	4,289	225,306	0	295,083	94.28
09. 15.001. 2	Trenching for Main Pipe	21000.00	CY	13,436	438,762	28,691	1507239	0	1,974,692	94.03
09. 15.001. 3	Trenching for Sub-main Pipe	8420.00	CY	3,957	128,164	11,504	385,070	0	524,737	62.32
09. 15.001. 4	Trenching for Culvert CMP	10500.00	CY	7,174	172,236	30,663	541,504	0	744,403	70.90
TOTAL Irrigation Piping		1.00	EA	26,572	804,650	75,147	2659119	0	3,538,916	3538916
TOTAL PIPING		1.00	EA	26,572	804,650	75,147	2659119	0	3,538,916	3538916
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09. 20 ROADS & BRIDGES										
09. 20.001 Compacted Earth Maintenance Road										
09. 20.001. 1	Clearing & Grubbing, debris	8.30	ACR	118	3,437	2,557	0	0	5,994	722.14
09. 20.001. 2	Site Preparation	8.30	ACR	213	5,916	7,005	0	0	12,921	1556.79
TOTAL Compacted Earth Maintenance Road		8.30	ACR	331	9,353	9,562	0	0	18,915	2278.93
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09. 20.002 Paved Maintenance Roads										
09. 20.002. 1	Clearing & Grubbing, debris	9.00	ACR	128	3,727	2,772	0	0	6,499	722.14
09. 20.002. 2	Site Preparation	18.00	ACR	3,487	116,123	83,518	849,124	0	1,048,766	58264.77
TOTAL Paved Maintenance Roads		18.00	ACR	3,615	119,850	86,291	849,124	0	1,055,265	58625.84
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09. 20.003 Gravel Maintenance Road										
09. 20.003. 1	Clearing & Grubbing, debris	4.10	ACR	58	1,698	1,263	0	0	2,961	722.14

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 20.003. 2 Site Preparation	8.20	ACR	648	19,075	24,820	102,778	0	146,673	17886.96
TOTAL Gravel Maintenance Road	8.20	ACR	706	20,773	26,083	102,778	0	149,634	18248.03
09. 20.005 Bridges									
09. 20.005. 1 Fencing for Erosion Control	9.00	ACR	401	8,867	0	8,964	0	17,831	1981.25
09. 20.005. 2 Clearing and Grubbing, debris	7.00	ACR	100	2,899	2,156	0	0	5,055	722.14
09. 20.005. 3 Excavating, structural, sand/	3060.00	CY	148	4,123	6,014	0	0	10,137	3.31
09. 20.005. 4 Cast in Place reinforced concret	3060.00	CY	3,587	121,222	0	262,294	0	383,516	125.33
09. 20.005. 5 Finished grading, tie in, stabl.	9.00	ACR	671	18,761	11,831	0	0	30,592	3399.13
09. 20.005. 6 Prefab Bridges	9.00	EA	1,618	56,936	29,117	542,330	60,259	688,642	76515.81
TOTAL Bridges	1.00	EA	6,524	212,807	49,119	813,588	60,259	1,135,773	1135773
TOTAL ROADS & BRIDGES	1.00	EA	11,176	362,784	171,054	1765490	60,259	2,359,587	2359587
09. 25 LET DOWN STRUCTURES									
09. 25.001 Let Down Structures									
09. 25.001. 1 Fencing for Erosion Control	2.50	ACR	211	4,674	0	4,726	0	9,400	3759.94
09. 25.001. 2 Clearing & Grubbing, debris	1.90	ACR	27	787	585	0	0	1,372	722.14
09. 25.001. 3 Prep (excav) slope to receive	500.00	CY	0	0	0	0	750	750	1.50
09. 25.001. 4 30" Pipe Laying	1000.00	LF	481	12,019	6,381	29,151	30,000	77,551	77.55
09. 25.001. 5 Backfilling & Compaction	30000.00	CY	1,008	27,321	48,021	0	24,945	100,287	3.34
09. 25.001. 6 Planting and Seeding	2.10	ACR	183	4,012	242	6,814	16,875	27,943	13306.06
TOTAL Let Down Structures	1.00	EA	1,910	48,812	55,230	40,691	72,570	217,303	217303.02
TOTAL LET DOWN STRUCTURES	1.00	EA	1,910	48,812	55,230	40,691	72,570	217,303	217303.02
TOTAL CONSTRUCTION (RESTORATION)	1.00	EA	343,303	10546426	4813116	12682559	7,900,751	35,942,852	35942852
14 RECREATION									
14. 30 RECREATION FEATURES									
14. 30.001 Parking Areas									
14. 30.001. 1 Fencing for Erosion Control	1.80	ACR	179	3,966	0	4,010	0	7,976	4430.91
14. 30.001. 2 Clearing & Grubbing, debris	1.80	ACR	27	787	585	0	0	1,372	762.26
14. 30.001. 3 Site Preparation	1.80	ACR	268	7,799	9,142	0	0	16,941	9411.90
14. 30.001. 4 Asphalt Paving, 6" stone base,	79280.00	SF	0	11,892	14,270	103,064	0	129,226	1.63
14. 30.001. 5 Lines on pavement, parking stall			0	0	0	0	1,500	1,500	
14. 30.001. 6 Parking Lot Amenities, lighting,			0	0	0	0	10,000	10,000	
TOTAL Parking Areas	1.80	ACR	474	24,444	23,998	107,074	11,500	167,016	92786.39

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
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14. 30.005 Decomposed Granite Trails										
14. 30.005. 1	Clearing & Grubbing, debris	2.00	ACR	28	828	616	0	0	1,444	722.14
14. 30.005. 2	Site Preparation	2.00	ACR	161	4,481	5,300	0	0	9,781	4890.62
14. 30.005. 3	Decomposed Granite course,	275740.00	SF	153	4,522	2,584	0	114,900	122,006	0.44
14. 30.005. 4	Trail amenities, ADA ramps, sign			0	0	0	0	10,000	10,000	
TOTAL Decomposed Granite Trails		1.00	EA	343	9,831	8,501	0	124,900	143,232	143231.98
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14. 30.010 Other Recreation Features										
14. 30.010. 1	Paved Trail amenities, curb	1.00	EA	0	0	0	0	10,000	10,000	10000.00
14. 30.010. 2	Comfort Stations	3.00	EA	0	0	0	0	300,000	300,000	100000.00
14. 30.010. 3	Rest Stops	5.00	EA	0	0	0	0	15,000	15,000	3000.00
14. 30.010. 4	Concrete Benches	21.00	EA	84	1,859	0	13,050	0	14,909	709.94
14. 30.010. 5	Signage	21.00	EA	11	232	0	353	0	585	27.87
TOTAL Other Recreation Features		1.00	EA	95	2,091	0	13,402	325,000	340,494	340493.88
TOTAL RECREATION FEATURES		1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
TOTAL RECREATION		1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
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30 PLANNING, ENGINEERING, DESIGN										
30.009	Construction	1.00	EA	0	0	0	0	5,120,000	5,120,000	5120000
30.014	Recreation	1.00	EA	0	0	0	0	95,285	95,285	95285.00
TOTAL PLANNING, ENGINEERING, DESIGN		1.00	EA	0	0	0	0	5,215,285	5,215,285	5215285
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31 CONSTRUCTION MANAGEMENT										
31.009	Construction (Restoration)	1.00	EA	0	0	0	0	5,980,000	5,980,000	5980000
31.014	Recreation	1.00	EA	0	0	0	0	63,879	63,879	63879.00
TOTAL CONSTRUCTION MANAGEMENT		1.00	EA	0	0	0	0	6,043,879	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study		1.00	EA	344,214	10582793	4845615	12803035	45,821,315	74,052,757	74052757
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OVERHEAD									3,659,359	
SUBTOTAL									77,712,116	
HOME OFC									3,220,236	
SUBTOTAL									80,932,352	
PROFIT									4,347,319	
SUBTOTAL									85,279,671	

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	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
BOND								237,678	
TOTAL INCL INDIRECTS								85,517,349	
ESCALATION								4,953,123	
SUBTOTAL								90,470,472	
CONTINGENCY								7,118,185	
TOTAL INCL OWNER COSTS								97,588,657	

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		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01	LANDS AND DAMAGES (REAL ESTATE)	1.00	EA	0	0	0	0	26,200,000	26,200,000	26200000
09	CONSTRUCTION (RESTORATION)									
09.01	IRRIGATION PLANTING									
09.01.001	Historic Floodplain									
09.01.001.1	Fencing for Erosion Control	656.00	ACR	3,421	75,723	0	76,555	0	152,278	232.13
09.01.001.2	Clearing & Grubbing, Debris	328.00	ACR	9,338	271,648	202,076	0	0	473,723	1444.28
09.01.001.3	Site Preparation									
09.01.001.3.01	Ripping, discing to prepare	590.00	ACR	100	2,987	4,383	0	0	7,369	12.49
09.01.001.3.02	Regrade to req'd slopes, flatten	295.00	ACR	15	442	980	0	0	1,421	4.82
09.01.001.3.03	Regrade Surface, scraper-grader	1445500	CY	231	7,077	17,083	0	0	24,160	0.02
	TOTAL Site Preparation	1.00	EA	346	10,505	22,445	0	0	32,950	32950.50
09.01.001.4	Excavation	176990.00	CY	6,850	205,185	136,229	0	0	341,414	1.93
09.01.001.5	Compaction (tractor wheel, one	3561940	LF	6,918	206,632	214,833	0	0	421,465	0.12
09.01.001.6	Trenching for Water Supply Pipes	17050.00	CY	355	11,265	11,159	0	0	22,424	1.32
09.01.001.7	Pipe bedding, crushed stone	13110.00	CY	1,210	30,281	6,100	615,383	0	651,765	49.72
09.01.001.8	Install gated 12" PVC pipe for	114720.00	LF	9,178	306,245	0	329,246	137,664	773,155	6.74
09.01.001.9	Install "U" outlet tubes with	5940.00	EA	1,667	55,638	0	832	0	56,469	9.51
09.01.001.10	Backfill pipe trench, side cast	4590.00	CY	24	725	1,064	0	0	1,789	0.39
09.01.001.11	Planting & Seeding									
09.01.001.11.01	Mulching, hay, 1" deep, power	558.00	ACR	734	16,833	16,363	465,500	0	498,695	893.72
09.01.001.11.02	Crimping, Tilling topsoil,	558.00	ACR	2,232	68,754	19,991	0	0	88,745	159.04
09.01.001.11.03	Seeding, athletic fld mix,	623.00	ACR	27,138	600,618	0	1286884	0	1,887,502	3029.70
09.01.001.11.04	Place Coarse Woody debris/rocks	558.00	ACR	17,856	365,541	27,900	27,900	0	421,341	755.09
09.01.001.11.05	Plant Mesquite/Shrub mix using	250729.00	EA	0	0	0	0	3,760,935	3,760,935	15.00
	TOTAL Planting & Seeding	558.00	ACR	47,960	1051746	64,254	1780284	3,760,935	6,657,218	11930.50
	TOTAL Historic Floodplain	1.00	EA	87,267	2225592	658,160	2802300	3,898,599	9,584,651	9584651
09.01.005	Graded Slope									
09.01.005.1	Fencing for Erosion Control	102.00	ACR	1,349	29,859	0	30,187	0	60,045	588.68
09.01.005.2	Clearing & Grubbing, debris	51.00	ACR	726	21,119	15,710	0	0	36,829	722.14
09.01.005.3	Excavation, str1, mach excav.	1213390	CY	9,464	300,071	341,812	0	0	641,883	0.53
09.01.005.4	Excavation, steep slopes, 5:1									
09.01.005.4.01	Hauling, no loading, 16.5 cy	1213390	CY	34,703	937,101	1753227	0	0	2,690,328	2.22
09.01.005.4.02	Fill, spread dumped material,	1213390	CY	6,431	191,716	281,264	0	0	472,979	0.39

			QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09.01.005.4.03	Compaction, sheepfoot/wobbly	1213390	CY	6,067	167,933	189,046	0	0	0	356,979	0.29
TOTAL Excavation, steep slopes, 5:1			1213390	CY	47,201	1296750	2223537	0	0	3,520,287	2.90
09.01.005.5	Fine grading to 20% slope,	110.00	ACR	5,324	149,044	93,995	0	0	0	243,040	2209.45
09.01.005.6	Header Pipe Laying										
09.01.005.6.01	Excavate header trench, 12" dep.	2540.00	CY	21	664	615	0	0	0	1,279	0.50
09.01.005.6.02	Header Trench bedding, 3/4"	1020.00	CY	94	2,846	3,850	16,320	0	0	23,017	22.57
09.01.005.6.03	Install medium diam. PVC Header	7620.00	LF	762	25,427	0	72,085	0	0	97,512	12.80
09.01.005.6.04	Backfill trench, FE loader,	1020.00	CY	31	916	759	0	0	0	1,675	1.64
09.01.005.6.05	Hauling, surplus cut mat'l,	1530.00	CY	77	2,068	3,666	0	0	0	5,734	3.75
TOTAL Header Pipe Laying			7620.00	LF	984	31,922	8,890	88,405	0	129,218	16.96
09.01.005.7	8" PVC Leach Pipe Laying										
09.01.005.7.01	Excavate trench, 12" depth by	99020.00	CY	812	25,894	23,973	0	0	0	49,866	0.50
09.01.005.7.02	Install low perm geotextile in	148700.00	SY	2,379	56,179	14,662	90,707	0	0	161,548	1.09
09.01.005.7.03	Install 8" PVC leach pipe for	445590.00	LF	35,647	1189503	0	623,826	133,677	0	1,947,006	4.37
09.01.005.7.04	Install leach pipe filter "sock"	445590.00	LF	0	0	0	539,164	178,236	0	717,400	1.61
09.01.005.7.05	Install pipe fittings as needed			0	12,000	0	15,000	0	0	27,000	
09.01.005.7.06	Backfill trench, FE loader, whl	93380.00	CY	2,801	83,902	69,465	0	0	0	153,367	1.64
09.01.005.7.07	Hauling, surplus cut matl, no	5790.00	CY	290	7,826	13,875	0	0	0	21,701	3.75
TOTAL 8" PVC Leach Pipe Laying			445590.00	LF	41,929	1375303	121,975	1268697	311,913	3,077,888	6.91
09.01.005.8	Planting & Seeding										
09.01.005.8.01	Mulch, hay, 1" deep, power	102.00	ACR	134	3,077	2,991	85,091	0	0	91,159	893.72
09.01.005.8.02	Crimping, tilling topsoil	102.00	ACR	408	12,568	3,654	0	0	0	16,222	159.04
09.01.005.8.03	Seeding, athletic fld mix,	102.00	ACR	4,443	98,335	0	210,693	0	0	309,028	3029.69
09.01.005.8.04	Place Coarse Woody debris/rocks	102.00	ACR	3,264	66,819	5,100	5,100	0	0	77,019	755.09
09.01.005.8.05	Plant Mesquite/Shrub mix using	45675.00	EA	0	0	0	0	685,125	0	685,125	15.00
TOTAL Planting & Seeding			102.00	ACR	8,249	180,799	11,745	300,884	685,125	1,178,554	11554.45
TOTAL Graded Slope			1.00	EA	115,227	3384867	2817665	1688173	997,038	8,887,743	8887743
09.01.010	Natural Slope										
09.01.010.1	Fencing for Erosion Control	18.00	ACR	567	12,543	0	12,680	0	0	25,223	1401.27
09.01.010.2	Clearing and Grubbing, debris	13.00	ACR	185	5,383	4,005	0	0	0	9,388	722.14
09.01.010.3	Header Trenching										
09.01.010.3.01	Excavate header trench, 12" dep.	86.00	CY	1	22	21	0	0	0	43	0.50



				QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09.01.010.3.02	Header Trench bedding, 3/4"	35.00	CY	3	98	132	560	0	790	22.57			
09.01.010.3.03	Install med. diam. PVC Header	1520.00	LF	152	5,072	0	14,379	0	19,451	12.80			
09.01.010.3.04	Backfill trench, FE loader,	35.00	CY	1	31	26	0	0	57	1.64			
09.01.010.3.05	Hauling, surplus cut matl, no	52.00	CY	3	70	125	0	0	195	3.75			
TOTAL Header Trenching				1520.00	LF	160	5,294	304	14,939	0	20,537	13.51	
09.01.010.4	8" PVC Leach Pipe Laying												
09.01.010.4.01	Excavate trench, 12" depth by	16780.00	CY	138	4,388	4,062	0	0	8,450	0.50			
09.01.010.4.02	Install low perm geotextile in	25200.00	SY	403	9,521	2,485	15,372	0	27,377	1.09			
09.01.010.4.03	Install 8" PVC leach pipe for	75510.00	LF	6,041	201,574	0	105,714	22,653	329,941	4.37			
09.01.010.4.04	Install leach pipe filter "sock"	75510.00	LF	0	0	0	91,367	30,204	121,571	1.61			
09.01.010.4.05	Install pipe fittings as needed			0	12,000	0	8,000	0	20,000				
09.01.010.4.06	Backfill trench, FE loader, whl	15830.00	CY	475	14,223	11,776	0	0	25,999	1.64			
09.01.010.4.07	Hauling, surplus cut matl, no	990.00	CY	50	1,338	2,372	0	0	3,711	3.75			
TOTAL 8" PVC Leach Pipe Laying				75510.00	LF	7,106	243,044	20,696	220,453	52,857	537,049	7.11	
09.01.010.5	Planting & Seeding												
09.01.010.5.01	Mulch, hay, 1" deep, power	18.00	ACR	24	543	528	15,016	0	16,087	893.72			
09.01.010.5.02	Crimping, tilling topsoil	18.00	ACR	72	2,218	645	0	0	2,863	159.04			
09.01.010.5.03	Seeding, athletic fld mix,	18.00	ACR	784	17,353	0	37,181	0	54,534	3029.69			
09.01.010.5.04	Place Coarse Woody debris/rocks	18.00	ACR	576	11,792	900	900	0	13,592	755.09			
09.01.010.5.05	Plant Mesquite/Shrub mix using	7740.00	EA	0	0	0	0	116,100	116,100	15.00			
TOTAL Planting & Seeding				18.00	ACR	1,456	31,906	2,073	53,097	116,100	203,176	11287.54	
TOTAL Natural Slope				1.00	EA	9,473	298,169	27,076	301,170	168,957	795,373	795372.60	
09.01.015	Second Bench												
09.01.015.1	Fencing for Erosion Control	124.00	ACR	1,487	32,918	0	33,280	0	66,198	533.85			
09.01.015.2	Clearing and Grubbing, debris	93.00	ACR	1,324	38,511	28,648	0	0	67,159	722.14			
09.01.015.3	Header Trenching												
09.01.015.3.01	Excavate header trench, 12" dep.	500.00	CY	4	131	121	0	0	252	0.50			
09.01.015.3.02	Header Trench bedding, 3/4"	200.00	CY	18	558	755	3,200	0	4,513	22.57			
09.01.015.3.03	Install med. diam. PVC Header	8080.00	LF	808	26,962	0	76,437	0	103,399	12.80			
09.01.015.3.04	Backfill trench, FE loader,	200.00	CY	6	180	149	0	0	328	1.64			
09.01.015.3.05	Hauling, surplus cut matl, no	300.00	CY	15	405	719	0	0	1,124	3.75			
TOTAL Header Trenching				8080.00	LF	852	28,236	1,744	79,637	0	109,617	13.57	
09.01.015.4	8" PVC Leach Pipe Laying												

				QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
09.01.015.4.01	Excavate trench, 12" depth by	121260.00	CY	994	31,709	29,357	0	0	61,067	0.50			
09.01.015.4.03	Install 8" PVC leach pipe for	545686.00	LF	43,655	1456709	0	763,960	163,706	2,384,375	4.37			
09.01.015.4.04	Install leach pipe filter "sock"	545680.00	LF	0	0	0	660,273	218,272	878,545	1.61			
09.01.015.4.05	Install pipe fittings as needed			0	15,000	0	10,000	0	25,000				
09.01.015.4.06	Backfill trench, FE loader, whl	114360.00	CY	3,431	102,752	85,072	0	0	187,825	1.64			
09.01.015.4.07	Hauling, surplus cut matl, no	7090.00	CY	355	9,583	16,990	0	0	26,573	3.75			
TOTAL 8" PVC Leach Pipe Laying				545686.00	LF	48,435	1615754	131,420	1434233	381,978	3,563,384	6.53	
09.01.015.5 Planting & Seeding													
09.01.015.5.01	Mulch, hay, 1" deep, power	125.00	ACR	164	3,771	3,666	104,279	0	111,715	893.72			
09.01.015.5.02	Crimping, tilling topsoil	125.00	ACR	500	15,402	4,478	0	0	19,880	159.04			
09.01.015.5.03	Seeding, athletic fld mix,	125.00	ACR	5,445	120,509	0	258,202	0	378,711	3029.69			
09.01.015.5.04	Place Coarse Woody debris/rocks	125.00	ACR	4,000	81,886	6,250	7,090	0	95,226	761.81			
09.01.015.5.05	Plant Mesquite/Shrub mix using	55935.00	EA	0	0	0	0	839,025	839,025	15.00			
TOTAL Planting & Seeding				125.00	ACR	10,109	221,568	14,394	369,571	839,025	1,444,557	11556.46	
TOTAL Second Bench				1.00	EA	62,207	1936987	176,205	1916720	1,221,003	5,250,915	5250915	
09.01.020 First Bench													
09.01.020.1	Excavate pipe trench, 18" depth	1.00	LF	0	1	0	0	0	1	0.65			
TOTAL Excavate pipe trench, 18" depth				1.00	LF	0	1	0	0	0	1	0.65	
09.01.020.2 Pipe Laying													
09.01.020.2.01	Install small diam pressure pipe	31000.00	LF	1,907	63,655	0	53,320	0	116,975	3.77			
09.01.020.2.02	Install small diam pipe fittings	3100.00	EA	2,713	90,530	0	37,438	0	127,968	41.28			
09.01.020.2.03	Install long reach (150') sprin-	190.00	LF	122	2,839	0	19,481	0	22,320	117.47			
09.01.020.2.04	Install pipe thrust blocks at	238.00	EA	0	0	0	0	11,900	11,900	50.00			
TOTAL Pipe Laying				31000.00	LF	4,741	157,025	0	110,239	11,900	279,163	9.01	
09.01.020.3	Backfill pipe trench, compact	31000.00	LF	930	27,854	23,061	0	0	50,914	1.64			
09.01.020.4	Install control valves for sprin	90.00	EA	80	1,868	0	2,093	0	3,960	44.00			
09.01.020.5	Install Programmable Logic	1.00	EA	0	0	0	0	500,000	500,000	500000.00			
09.01.020.6	Rough grade & scarify subsoil	89.00	ACR	2,154	64,504	94,663	0	0	159,167	1788.39			
09.01.020.7 Planting & seeding													
09.01.020.7.01	Mulch, hay, 1" deep, power	89.00	ACR	117	2,685	2,610	74,246	0	79,541	893.72			
09.01.020.7.02	Crimping, tilling topsoil	89.00	ACR	356	10,966	3,189	0	0	14,155	159.04			
09.01.020.7.03	Seeding, athletic fld mix,	89.00	ACR	3,877	85,802	0	183,840	0	269,642	3029.69			
09.01.020.7.04	Place Coarse Woody debris/rocks	89.00	ACR	712	14,576	4,450	4,600	0	23,625	265.45			

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 01.020.	7.05 Plant Mesquite/Shrub mix using	55935.00	EA	0	0	0	0	839,025	839,025	15.00
	TOTAL Planting & seeding	89.00	ACR	5,062	114,029	10,248	262,686	839,025	1,225,988	13775.15
	TOTAL First Bench	1.00	EA	12,967	365,280	127,972	375,017	1,350,925	2,219,194	2219194
	TOTAL IRRIGATION PLANTING	1.00	EA	287,141	8210895	3807079	7083380	7,636,522	26,737,876	26737876
09. 05 BASINS PLANTING										
09. 05.001 Tributary Infiltration Basins										
09. 05.001.	1 Fencing for Erosion Control	18.00	ACR	567	12,543	0	12,680	0	25,223	1401.27
09. 05.001.	2 Clearing and Grubbing, debris	13.00	ACR	185	5,383	4,005	0	0	9,388	722.14
09. 05.001.	3 Excavate, mach exc., sand & grav									
09. 05.001.	3.01 Stockpile useable cut matl,	830.00	CY	12	345	506	0	0	851	1.03
09. 05.001.	3.02 Hauling, surplus cut matl, no	2490.00	CY	125	3,365	5,967	0	0	9,333	3.75
09. 05.001.	3.03 Fill, spread cut matl at dump	2490.00	CY	30	895	1,313	0	0	2,208	0.89
09. 05.001.	3.04 Compaction at dump site, hl rlr,	2490.00	CY	12	345	388	0	0	733	0.29
09. 05.001.	3.05 Compact Basin subgrade, existing	86160.00	SY	8,616	192,413	0	0	0	192,413	2.23
	TOTAL Excavate, mach exc., sand & grav	8300.00	CY	8,794	197,362	8,174	0	0	205,537	24.76
09. 05.001.	4 Backfilling									
09. 05.001.	4.01 Fill, bottom layer, clean sand,	840.00	CY	0	0	0	0	14,910	14,910	17.75
09. 05.001.	4.02 Fill, middle layer, No. 57 blue-	840.00	CY	0	0	0	0	840	840	1.00
09. 05.001.	4.03 Fill, middle layer, No. 2 gravel	840.00	CY	0	0	0	0	21,000	21,000	25.00
09. 05.001.	4.04 Fill, top layer, mix of native	840.00	CY	0	0	0	0	25,200	25,200	30.00
	TOTAL Backfilling	3360.00	CY	0	0	0	0	61,950	61,950	18.44
09. 05.001.	5 Planting & Seeding									
09. 05.001.	5.01 Mulch, hay, 1" deep, power	18.00	ACR	24	543	528	15,016	0	16,087	893.72
09. 05.001.	5.02 Crimping, tilling topsoil	18.00	ACR	72	2,218	645	0	0	2,863	159.04
09. 05.001.	5.03 Seeding, athletic fld mix,	18.00	ACR	784	17,353	0	37,181	0	54,534	3029.69
09. 05.001.	5.04 Plant Mesquite/Shrub mix using	3204.00	EA	0	0	0	0	48,060	48,060	15.00
	TOTAL Planting & Seeding	18.00	ACR	880	20,114	1,173	52,197	48,060	121,544	6752.45
	TOTAL Tributary Infiltration Basins	1.00	EA	10,426	235,402	13,352	64,878	110,010	423,641	423641.40
09. 05.005	Grade Control Infiltration Basin									

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09.05.005.1	Fencing for Erosion Control	6.00	ACR	327	7,238	0	7,318	0	14,556	2425.92
09.05.005.2	Clearing and Grubbing, debris	5.00	ACR	71	2,070	1,540	0	0	3,611	722.14
09.05.005.3	Excavating, mach exc, sand & gr									
09.05.005.3.01	Stockpile useable cut mat'l	280.00	CY	4	116	171	0	0	287	1.03
09.05.005.3.02	Hauling, surplus cut mat'l, no	840.00	CY	42	1,135	2,013	0	0	3,148	3.75
09.05.005.3.03	Fill, spread cut mat'l at dump	840.00	CY	10	302	443	0	0	745	0.89
	TOTAL Excavating, mach exc, sand & gr	1120.00	CY	56	1,554	2,627	0	0	4,180	3.73
09.05.005.4	Compaction at dump site, hl rlr	840.00	CY	4	116	131	0	0	247	0.29
09.05.005.5	Compact basin subgrade, existing	29040.00	CY	2,904	64,852	0	0	0	64,852	2.23
09.05.005.6	Backfilling	1160.00	CY	0	0	0	0	21,390	21,390	18.44
09.05.005.7	Planting & Seeding									
09.05.005.7.01	Mulch, hay, 1" deep, power	6.00	ACR	8	181	176	5,005	0	5,362	893.72
09.05.005.7.02	Crimping, tilling topsoil	6.00	ACR	24	739	215	0	0	954	159.04
09.05.005.7.03	Seeding, athletic fld mix,	6.00	ACR	261	5,784	0	12,394	0	18,178	3029.69
	TOTAL Planting & Seeding	6.00	ACR	293	6,705	391	17,399	0	24,495	4082.45
	TOTAL Grade Control Infiltration Basin	1.00	EA	3,656	82,535	4,689	24,717	21,390	133,331	133330.84
	TOTAL BASINS PLANTING	1.00	EA	14,082	317,937	18,040	89,594	131,400	556,972	556972.24
09.10	HARDENED BANKS									
09.10.001	Hardened Slopes									
09.10.001.1	Fencing for Erosion Control	3.50	ACR	250	5,524	0	5,585	0	11,109	3173.98
09.10.001.2	Clearing and Grubbing, debris	0.90	ACR	13	373	277	0	0	650	722.14
09.10.001.3	Excavating, prepare slope &									
09.10.001.3.01	Stockpile subgrade cut matl for	28200.00	CY	392	11,717	17,194	0	0	28,911	1.03
09.10.001.3.02	Hauling, no loading, 16.5 cy	18800.00	CY	538	14,519	27,164	0	0	41,683	2.22
	TOTAL Excavating, prepare slope &	47000.00	CY	930	26,236	44,358	0	0	70,594	1.50
09.10.001.4	Fill, spread dumped mat'l, by									
09.10.001.4.01	Compaction, sheepfoot/wobbly	18800.00	CY	94	2,602	2,929	0	0	5,531	0.29
09.10.001.4.02	Fine grade to 1:1 slope, for	14900.00	SY	149	4,171	2,631	0	0	6,802	0.46
	TOTAL Fill, spread dumped mat'l, by	18800.00	CY	243	6,773	5,560	0	0	12,333	0.66
09.10.001.5	Soil Cement application,	61100.00	CY	0	733,200	611,000	1038700	0	2,382,900	39.00

			QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
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09. 10.001. 6	Backfill and Compaction										
09. 10.001. 6.01	Backfill subgrade with cut matl	28200.00	CY	846	25,338	20,978	0	0	46,316	1.64	
09. 10.001. 6.02	Compaction, sheepfoot/wobbly whl	28200.00	CY	141	3,903	4,394	0	0	8,296	0.29	
	TOTAL Backfill and Compaction	28200.00	CY	987	29,241	25,372	0	0	54,612	1.94	
	TOTAL Hardened Slopes	1.00	EA	2,422	801,347	686,566	1044285	0	2,532,198	2532198	
	TOTAL HARDENED BANKS	1.00	EA	2,422	801,347	686,566	1044285	0	2,532,198	2532198	
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09. 15	PIPING										
09. 15.001	Irrigation Piping										
09. 15.001. 1	Trenching for Delivery Pipe										
09. 15.001. 1.01	Delivery pipe trench bedding,	1260.00	CY	116	2,910	586	59,144	0	62,641	49.72	
09. 15.001. 1.02	Delivery piping, large dia. say	10440.00	LF	1,796	59,934	0	146,682	0	206,616	19.79	
09. 15.001. 1.03	Backfill delivery pipe trench,	1260.00	CY	40	1,192	987	19,480	0	21,658	17.19	
09. 15.001. 1.04	Hauling, Delivery pipe surplus	1880.00	CY	54	1,452	2,716	0	0	4,168	2.22	
	TOTAL Trenching for Delivery Pipe	3130.00	CY	2,006	65,488	4,289	225,306	0	295,083	94.28	
09. 15.001. 2	Trenching for Main Pipe										
09. 15.001. 2.01	Main pipe trench bedding,	8400.00	CY	775	19,402	3,909	394,296	0	417,607	49.72	
09. 15.001. 2.02	Main piping, large dia. say	69970.00	LF	12,035	401,684	0	983,079	0	1,384,762	19.79	
09. 15.001. 2.03	Backfill Main pipe trench,	8400.00	CY	265	7,945	6,577	129,864	0	144,386	17.19	
09. 15.001. 2.04	Hauling, Main pipe surplus	12600.00	CY	360	9,731	18,206	0	0	27,937	2.22	
	TOTAL Trenching for Main Pipe	21000.00	CY	13,436	438,762	28,691	1507239	0	1,974,692	94.03	
09. 15.001. 3	Trenching for Sub-main Pipe										
09. 15.001. 3.01	Sub-main pipe trench bedding,	3370.00	CY	311	7,784	1,568	158,188	0	167,540	49.72	
09. 15.001. 3.02	Sub-main piping, large dia. say	28010.00	LF	3,395	113,292	0	174,782	0	288,074	10.28	
09. 15.001. 3.03	Backfill Sub-main pipe trench,	3370.00	CY	106	3,187	2,639	52,100	0	57,926	17.19	
09. 15.001. 3.04	Hauling, Sub-main pipe surplus	5050.00	CY	144	3,900	7,297	0	0	11,197	2.22	
	TOTAL Trenching for Sub-main Pipe	8420.00	CY	3,957	128,164	11,504	385,070	0	524,737	62.32	
09. 15.001. 4	Trenching for Culvert CMP										
09. 15.001. 4.01	Culvert trench bedding,	4200.00	CY	388	9,701	1,954	197,148	0	208,803	49.72	
09. 15.001. 4.02	Install 24" dia. CMP Culvert for	23600.00	LF	6,473	153,697	16,317	279,424	0	449,438	19.04	
09. 15.001. 4.03	Backfill trench, FE Loader,	4200.00	CY	133	3,972	3,289	64,932	0	72,193	17.19	

			QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 15.001. 4.04	Hauling, Sub-main pipe surplus		6300.00	CY	180	4,865	9,103	0	0	13,968	2.22
	TOTAL Trenching for Culvert CMP		10500.00	CY	7,174	172,236	30,663	541,504	0	744,403	70.90
	TOTAL Irrigation Piping		1.00	EA	26,572	804,650	75,147	2659119	0	3,538,916	3538916
	TOTAL PIPING		1.00	EA	26,572	804,650	75,147	2659119	0	3,538,916	3538916
09. 20 ROADS & BRIDGES											
09. 20.001 Compacted Earth Maintenance Road											
09. 20.001. 1	Clearing & Grubbing, debris		8.30	ACR	118	3,437	2,557	0	0	5,994	722.14
	TOTAL Clearing & Grubbing, debris		8.30	ACR	118	3,437	2,557	0	0	5,994	722.14
09. 20.001. 2 Site Preparation											
09. 20.001. 2.01	Ripping, discing to prepare		8.30	ACR	1	42	62	0	0	104	12.49
09. 20.001. 2.02	Regrade, flatten, balance cut		2020.00	CY	10	302	671	0	0	973	0.48
09. 20.001. 2.03	Compaction, riding, sheepfoot/		40260.00	SY	201	5,572	6,273	0	0	11,844	0.29
	TOTAL Site Preparation		8.30	ACR	213	5,916	7,005	0	0	12,921	1556.79
	TOTAL Compacted Earth Maintenance Road		8.30	ACR	331	9,353	9,562	0	0	18,915	2278.93
09. 20.002 Paved Maintenance Roads											
09. 20.002. 1	Clearing & Grubbing, debris		9.00	ACR	128	3,727	2,772	0	0	6,499	722.14
	TOTAL Clearing & Grubbing, debris		9.00	ACR	128	3,727	2,772	0	0	6,499	722.14
09. 20.002. 2 Site Preparation											
09. 20.002. 2.01	Ripping, discing to prepare		18.00	ACR	3	91	134	0	0	225	12.49
09. 20.002. 2.02	Regrade, flatten, balance cut		21880.00	CY	109	3,275	7,266	0	0	10,542	0.48
09. 20.002. 2.03	Compaction, riding, sheepfoot/		86820.00	SY	434	12,016	13,527	0	0	25,542	0.29
09. 20.002. 2.04	Asphalt Concrete Paving,		781310.00	SF	2,940	100,741	62,592	849,124	0	1,012,457	1.30
	TOTAL Site Preparation		18.00	ACR	3,487	116,123	83,518	849,124	0	1,048,766	58264.77
	TOTAL Paved Maintenance Roads		18.00	ACR	3,615	119,850	86,291	849,124	0	1,055,265	58625.84
09. 20.003 Gravel Maintenance Road											

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 20.003. 1	Clearing & Grubbing, debris	4.10	ACR	58	1,698	1,263	0	0	2,961	722.14
	TOTAL Clearing & Grubbing, debris	4.10	ACR	58	1,698	1,263	0	0	2,961	722.14
09. 20.003. 2	Site Preparation									
09. 20.003. 2.01	Ripping, discing to prepare	8.20	ACR	1	42	61	0	0	102	12.49
09. 20.003. 2.02	Regrade, flatten, balance cut	1980.00	CY	10	296	658	0	0	954	0.48
09. 20.003. 2.03	Compaction, riding, sheepfoot/	39530.00	SY	198	5,471	6,159	0	0	11,630	0.29
09. 20.003. 2.04	Gravel course, crushed 3/4"	39530.00	SY	439	13,266	17,943	102,778	0	133,987	3.39
	TOTAL Site Preparation	8.20	ACR	648	19,075	24,820	102,778	0	146,673	17886.96
	TOTAL Gravel Maintenance Road	8.20	ACR	706	20,773	26,083	102,778	0	149,634	18248.03
09. 20.005	Bridges									
09. 20.005. 1	Fencing for Erosion Control	9.00	ACR	401	8,867	0	8,964	0	17,831	1981.25
09. 20.005. 2	Clearing and Grubbing, debris	7.00	ACR	100	2,899	2,156	0	0	5,055	722.14
09. 20.005. 3	Excavating, structural, sand/									
09. 20.005. 3.01	Hauling, no loading, 16.5 cy	3366.00	CY	96	2,600	4,864	0	0	7,463	2.22
09. 20.005. 3.02	Fill, spread dumped matl, by	3366.00	CY	37	1,100	674	0	0	1,774	0.53
09. 20.005. 3.03	Compaction, sheepfoot/wobbly	3060.00	CY	15	424	477	0	0	900	0.29
	TOTAL Excavating, structural, sand/	3060.00	CY	148	4,123	6,014	0	0	10,137	3.31
09. 20.005. 4	Cast in Place reinforced concret	3060.00	CY	3,587	121,222	0	262,294	0	383,516	125.33
09. 20.005. 5	Finished grading, tie in, stabl.	9.00	ACR	671	18,761	11,831	0	0	30,592	3399.13
09. 20.005. 6	Prefab Bridges									
09. 20.005. 6.01	Prefab Bridges (9 ea)			0	0	0	542,330	60,259	602,589	
09. 20.005. 6.02	Unloading and Erection	8090.00	SF	1,618	56,936	29,117	0	0	86,053	10.64
	TOTAL Prefab Bridges	9.00	EA	1,618	56,936	29,117	542,330	60,259	688,642	76515.81
	TOTAL Bridges	1.00	EA	6,524	212,807	49,119	813,588	60,259	1,135,773	1135773
	TOTAL ROADS & BRIDGES	1.00	EA	11,176	362,784	171,054	1765490	60,259	2,359,587	2359587
09. 25	LET DOWN STRUCTURES									
09. 25.001	Let Down Structures									
09. 25.001. 1	Fencing for Erosion Control	2.50	ACR	211	4,674	0	4,726	0	9,400	3759.94
09. 25.001. 2	Clearing & Grubbing, debris	1.90	ACR	27	787	585	0	0	1,372	722.14

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. 25.001. 3	Prep (excav) slope to receive	500.00	CY	0	0	0	0	750	750	1.50
09. 25.001. 4	30" Pipe Laying									
09. 25.001. 4.01	Install pipe bedding, gravel,	150.00	CY	14	346	70	7,041	0	7,457	49.72
09. 25.001. 4.02	Install 30" dia CMP, 200 lf per	1000.00	LF	467	11,672	6,312	22,110	0	40,094	40.09
09. 25.001. 4.03	Install wingwall deflectors on	10.00	EA	0	0	0	0	30,000	30,000	3000.00
	TOTAL 30" Pipe Laying	1000.00	LF	481	12,019	6,381	29,151	30,000	77,551	77.55
09. 25.001. 5	Backfilling & Compaction									
09. 25.001. 5.01	Hauling, no loading, 16.5 cy	30000.00	CY	858	23,169	43,347	0	0	66,516	2.22
09. 25.001. 5.02	Fill, spread dumped matl, by	30000.00	CY	0	0	0	0	19,500	19,500	0.65
09. 25.001. 5.03	Compaction, sheepfoot/wobbly	30000.00	CY	150	4,152	4,674	0	0	8,826	0.29
09. 25.001. 5.04	Fine grade filled area, for	2.50	ACR	0	0	0	0	5,445	5,445	2178.00
	TOTAL Backfilling & Compaction	30000.00	CY	1,008	27,321	48,021	0	24,945	100,287	3.34
09. 25.001. 6	Planting and Seeding									
09. 25.001. 6.01	Mulching, hay, 1" deep, power	2.10	ACR	3	63	62	1,752	0	1,877	893.72
09. 25.001. 6.02	Crimping, tilling topsoil	2.10	ACR	8	259	75	0	0	334	159.04
09. 25.001. 6.03	Seeding, athletic fld mix,	2.40	ACR	105	2,314	0	4,957	0	7,271	3029.69
09. 25.001. 6.04	Place Coarse Woody debris/rocks	2.10	ACR	67	1,376	105	105	0	1,586	755.09
09. 25.001. 6.05	Plant Mesquite/Shrub mix using	1125.00	EA	0	0	0	0	16,875	16,875	15.00
	TOTAL Planting and Seeding	2.10	ACR	183	4,012	242	6,814	16,875	27,943	13306.06
	TOTAL Let Down Structures	1.00	EA	1,910	48,812	55,230	40,691	72,570	217,303	217303.02
	TOTAL LET DOWN STRUCTURES	1.00	EA	1,910	48,812	55,230	40,691	72,570	217,303	217303.02
	TOTAL CONSTRUCTION (RESTORATION)	1.00	EA	343,303	10546426	4813116	12682559	7,900,751	35,942,852	35942852
14	RECREATION									
14. 30	RECREATION FEATURES									
14. 30.001	Parking Areas									
14. 30.001. 1	Fencing for Erosion Control	1.80	ACR	179	3,966	0	4,010	0	7,976	4430.91
14. 30.001. 2	Clearing & Grubbing, debris	1.80	ACR	27	787	585	0	0	1,372	762.26
14. 30.001. 3	Site Preparation									
14. 30.001. 3.01	Ripping, discing to prepare	1.80	ACR	0	9	13	0	0	22	12.49
14. 30.001. 3.02	Regrade to req'd slopes, flatten	1.80	ACR	0	3	6	0	0	9	4.82



			QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
14. 30.001. 3.03	Regrade surface, scraper-grader,	4410.00	CY	120	3,666	5,920	0	0	9,587	2.17	
14. 30.001. 3.04	Compaction, riding, sheepfoot	8810.00	SY	44	1,219	1,373	0	0	2,592	0.29	
14. 30.001. 3.05	Fine grade, grade subgrade for	8810.00	SY	104	2,902	1,830	0	0	4,731	0.54	
TOTAL Site Preparation			1.80	ACR	268	7,799	9,142	0	16,941	9411.90	
14. 30.001. 4	Asphalt Paving, 6" stone base,	79280.00	SF	0	11,892	14,270	103,064	0	129,226	1.63	
14. 30.001. 5	Lines on pavement, parking stall			0	0	0	0	1,500	1,500		
14. 30.001. 6	Parking Lot Amenities, lighting,			0	0	0	0	10,000	10,000		
TOTAL Parking Areas			1.80	ACR	474	24,444	23,998	107,074	11,500	167,016	92786.39
14. 30.005 Decomposed Granite Trails											
14. 30.005. 1	Clearing & Grubbing, debris	2.00	ACR	28	828	616	0	0	1,444	722.14	
TOTAL Clearing & Grubbing, debris			2.00	ACR	28	828	616	0	1,444	722.14	
14. 30.005. 2 Site Preparation											
14. 30.005. 2.01	Ripping, discing to prepare	2.00	ACR	0	10	15	0	0	25	12.49	
14. 30.005. 2.02	Regrade, flatten, balance cut	1540.00	CY	8	231	511	0	0	742	0.48	
14. 30.005. 2.03	Compaction, riding, sheepfoot/	30640.00	SY	153	4,241	4,774	0	0	9,014	0.29	
TOTAL Site Preparation			2.00	ACR	161	4,481	5,300	0	9,781	4890.62	
14. 30.005. 3 Decomposed Granite course,											
14. 30.005. 3.01	Material and Delivery	3830.00	TON	0	0	0	0	114,900	114,900	30.00	
14. 30.005. 3.02	Spread and Compaction	3830.00	TON	153	4,522	2,584	0	0	7,106	1.86	
TOTAL Decomposed Granite course,			275740.00	SF	153	4,522	2,584	0	114,900	122,006	0.44
14. 30.005. 4	Trail amenities, ADA ramps, sign			0	0	0	0	10,000	10,000		
TOTAL Decomposed Granite Trails			1.00	EA	343	9,831	8,501	0	124,900	143,232	143231.98
14. 30.010 Other Recreation Features											
14. 30.010. 1	Paved Trail amenities, curb	1.00	EA	0	0	0	0	10,000	10,000	10000.00	
14. 30.010. 2	Comfort Stations	3.00	EA	0	0	0	0	300,000	300,000	100000.00	
14. 30.010. 3	Rest Stops	5.00	EA	0	0	0	0	15,000	15,000	3000.00	
14. 30.010. 4	Concrete Benches	21.00	EA	84	1,859	0	13,050	0	14,909	709.94	
14. 30.010. 5	Signage	21.00	EA	11	232	0	353	0	585	27.87	
TOTAL Other Recreation Features			1.00	EA	95	2,091	0	13,402	325,000	340,494	340493.88

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL RECREATION FEATURES	1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
TOTAL RECREATION	1.00	EA	912	36,367	32,498	120,476	461,400	650,741	650741.37
30 PLANNING, ENGINEERING, DESIGN									
30.009 Construction	1.00	EA	0	0	0	0	5,120,000	5,120,000	5120000
30.014 Recreation	1.00	EA	0	0	0	0	95,285	95,285	95285.00
TOTAL PLANNING, ENGINEERING, DESIGN	1.00	EA	0	0	0	0	5,215,285	5,215,285	5215285
31 CONSTRUCTION MANAGEMENT									
31.009 Construction (Restoration)	1.00	EA	0	0	0	0	5,980,000	5,980,000	5980000
31.014 Recreation	1.00	EA	0	0	0	0	63,879	63,879	63879.00
TOTAL CONSTRUCTION MANAGEMENT	1.00	EA	0	0	0	0	6,043,879	6,043,879	6043879
TOTAL Paseo de las Iglesias Feas Study	1.00	EA	344,214	10582793	4845615	12803035	45,821,315	74,052,757	74052757
OVERHEAD								3,659,359	
SUBTOTAL HOME OFC								77,712,116	
SUBTOTAL PROFIT								3,220,236	
SUBTOTAL BOND								80,932,352	
TOTAL INCL INDIRECTS ESCALATION								4,347,319	
SUBTOTAL CONTINGENCY								85,279,671	
TOTAL INCL OWNER COSTS								237,678	
								85,517,349	
								4,953,123	
								90,470,472	
								7,118,185	
								97,588,657	

SRC	ITEM ID	DESCRIPTION	NO.	UOM	RATE	HOURS	COST	HOURS	COST	TOTAL COST
	ACARC2	5 carpnters				PROD = 100%		CREW HOURS = 148		
MIL	B-CARPNTERF	Carpenters	1.00	HR	34.07	1.00	34.07			34.07
MIL	B-CARPNTERL	Carpenters	4.00	HR	33.07	4.00	132.30			132.30
MIL	B-LABORER L	Laborers, (Semi-Skilled)	1.00	HR	22.13	1.00	22.13			22.13
	TOTAL					6.00	188.50	0.00	0.00	188.50
	ALABCLAB1	1 laborer				PROD = 100%		CREW HOURS = 42848		
MIL	B-LABORER L	Laborers, (Semi-Skilled)	1.00	HR	22.13	1.00	22.13			22.13
	TOTAL					1.00	22.13	0.00	0.00	22.13
	ALABCLAB2	2 laborers				PROD = 100%		CREW HOURS = 4422		
MIL	B-LABORER L	Laborers, (Semi-Skilled)	2.00	HR	22.13	2.00	44.26			44.26
	TOTAL					2.00	44.26	0.00	0.00	44.26
	CLABB13	5 laborers + 1 crane, hydr, trk mtd, 60 ton				PROD = 100%		CREW HOURS = 67		
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00	HR	23.13	1.00	23.13			23.13
MIL	B-LABORER L	Laborers, (Semi-Skilled)	4.00	HR	22.13	4.00	88.53			88.53
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00	HR	35.19	1.00	35.19			35.19
MIL	B-EQOPROILL	Equip. Operators, Oilers	1.00	HR	28.24	1.00	28.24			28.24
GEN	C80Z2280 E	CRANE, HYD, TRUCK MTD, 65T	1.00	HR	94.68			1.00	94.68	94.68
	TOTAL					7.00	175.09	1.00	94.68	269.76
	CLABB14	5 laborers + 1 loader, BH, wheel, 0.80 CY FE bkt				PROD = 100%		CREW HOURS = 1079		
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00	HR	23.13	1.00	23.13			23.13
MIL	B-LABORER L	Laborers, (Semi-Skilled)	4.00	HR	22.13	4.00	88.53			88.53
MIL	B-EQOPRLT L	Equip. Operators, Light	1.00	HR	30.80	1.00	30.80			30.80
GEN	L50Z4640 E	LOADER/BCK-HOE,WH, 0.80CY(0.6M3	1.00	HR	15.12			1.00	15.12	15.12
	TOTAL					6.00	142.46	1.00	15.12	157.59
	CODBB53	1 eqoprnt + 1 trencher, chain, 35" D, 8" W				PROD = 100%		CREW HOURS = 0		
MIL	B-EQOPRLT L	Equip. Operators, Light	1.00	HR	30.80	1.00	30.80			30.80
GEN	T30Z6720 E	TRENCHER, CHAIN, 16"W, 48"DP	1.00	HR	5.73			1.00	5.73	5.73
	TOTAL					1.00	30.80	1.00	5.73	36.54
	CODEB12B	1 eqoprcrn + 1 hydr excavator, crawler, 1.50 CY				PROD = 100%		CREW HOURS = 990		
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00	HR	35.19	1.00	35.19			35.19
MIL	B-EQOPROILL	Equip. Operators, Oilers	1.00	HR	28.24	1.00	28.24			28.24
GEN	H25Z3185 E	HYD EXCV, CRAWLER, 55,000LBS,	1.00	HR	58.72			1.00	58.72	58.72
	TOTAL					2.00	63.43	1.00	58.72	122.14

SRC	ITEM ID	DESCRIPTION	NO.	UOM	RATE	HOURS	COST	HOURS	COST	TOTAL COST
	CODEB12C	1 eqopr crn + 1 hydr excavator, crawler, 2.00 CY				PROD = 100%			CREW HOURS =	4731
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00	HR	35.19	1.00	35.19			35.19
MIL	B-EQOPROILL	Equip. Operators, Oilers	1.00	HR	28.24	1.00	28.24			28.24
GEN	H25Z3190	E HYD EXCV, CRAWLER, 70,000LBS,	1.00	HR	72.24			1.00	72.24	72.24
TOTAL						2.00	63.43	1.00	72.24	135.67
	CODFB10N	1 eqoprmed + 1 loader, F/E, crawler, 1.50 CY				PROD = 100%			CREW HOURS =	6043
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00	HR	33.86	1.00	33.86			33.86
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50	HR	22.13	0.50	11.07			11.07
GEN	L35Z4240	E LOADER, F/E, CRWLR, 1.50CY	1.00	HR	37.19			1.00	37.19	37.19
TOTAL						1.50	44.92	1.00	37.19	82.12
	CODLB6	1 eqopr lrt + 1 loader, BH, wheel, 0.80 CY F/E bkt				PROD = 100%			CREW HOURS =	938
MIL	B-LABORER L	Laborers, (Semi-Skilled)	2.00	HR	22.13	2.00	44.26			44.26
MIL	B-EQOPRLT L	Equip. Operators, Light	1.00	HR	30.80	1.00	30.80			30.80
GEN	L50Z4640	E LOADER/BCK-HOE,WH, 0.80CY(0.6M3)	1.00	HR	15.12			1.00	15.12	15.12
TOTAL						3.00	75.07	1.00	15.12	90.19
	CODSB33D	1 eqoprmed + 1 scraper, self propelled, 14-20 CY				PROD = 100%			CREW HOURS =	128
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.30	HR	33.86	1.30	44.01			44.01
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50	HR	22.13	0.50	11.07			11.07
GEN	S20Z5970	E SCRAPER, SP, 14-20CY (11-15M3)	1.00	HR	103.06			1.00	103.06	103.06
GEN	T15Z6600	E DOZER, CRAWLER, 341-440HP	0.30	HR	99.64			0.30	29.89	29.89
TOTAL						1.80	55.08	1.30	132.96	188.04
	CODSB33F	1 eqoprmed + 1 scraper, elev, 11 CY				PROD = 100%			CREW HOURS =	67
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.30	HR	33.86	1.30	44.01			44.01
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50	HR	22.13	0.50	11.07			11.07
GEN	S10Z5920	E SCRAPER, SP,ELEV, 11CY (8.4M3)	1.00	HR	59.05			1.00	59.05	59.05
GEN	T15Z6600	E DOZER, CRAWLER, 341-440HP	0.30	HR	99.64			0.30	29.89	29.89
TOTAL						1.80	55.08	1.30	88.94	144.02
	CODTB10B	1 eqoprmed + 1 dozer, crawler, 181-250 HP				PROD = 100%			CREW HOURS =	4652
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00	HR	33.86	1.00	33.86			33.86
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50	HR	22.13	0.50	11.07			11.07
GEN	T15Z6520	E DOZER, CRAWLER, 181-250HP	1.00	HR	65.93			1.00	65.93	65.93
TOTAL						1.50	44.92	1.00	65.93	110.85
	CODTB10L	1 eqoprmed + 1 dozer, crawler, 76-100 HP				PROD = 100%			CREW HOURS =	24
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00	HR	33.86	1.00	33.86			33.86
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50	HR	22.13	0.50	11.07			11.07
GEN	T15Z6440	E DOZER, CRAWLER, 76-100HP	1.00	HR	27.53			1.00	27.53	27.53
TOTAL						1.50	44.92	1.00	27.53	72.45

SRC	ITEM ID	DESCRIPTION	NO. UOM	RATE	**** LABOR **** HOURS	COST	**** EQUIP **** HOURS	COST	TOTAL COST
	CODTB10M	1 eqoprmed + 1 dozer, crawler, 341-440 HP			PROD = 100%		CREW HOURS = 101		
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00 HR	33.86	1.00	33.86			33.86
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50 HR	22.13	0.50	11.07			11.07
GEN	T15Z6600 E	DOZER, CRAWLER, 341-440HP	1.00 HR	99.64			1.00	99.64	99.64
TOTAL					1.50	44.92	1.00	99.64	144.57
	CODTB10W	1 eqoprmed + 1 dozer, crawler, 101-135 HP			PROD = 100%		CREW HOURS = 4567		
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00 HR	33.86	1.00	33.86			33.86
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50 HR	22.13	0.50	11.07			11.07
GEN	T15Z6480 E	DOZER, CRAWLER, 101-135HP	1.00 HR	29.83			1.00	29.83	29.83
TOTAL					1.50	44.92	1.00	29.83	74.75
	CODTB11R	1 eqoprmed + 1 dozer, crawler, 181-250 HP			PROD = 100%		CREW HOURS = 1436		
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00 HR	33.86	1.00	33.86			33.86
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50 HR	22.13	0.50	11.07			11.07
GEN	T15Z6520 E	DOZER, CRAWLER, 181-250HP	1.00 HR	65.93			1.00	65.93	65.93
TOTAL					1.50	44.92	1.00	65.93	110.85
	COEIB34B	1 trkdvrhv + 1 truck, dump, 16-23.5 CY			PROD = 100%		CREW HOURS = 954		
MIL	B-TRKDVRHVL	Truck Drivers, Heavy	1.00 HR	27.03	1.00	27.03			27.03
GEN	T50Z7420 E	TRUCK, HWY 45,000 (20,412KG)GVW	1.00 HR	45.79			1.00	45.79	45.79
GEN	T40Z6860 E	REAR DUMP BODY, 16-23.5CY (12.2	1.00 HR	2.14			1.00	2.14	2.14
TOTAL					1.00	27.03	2.00	47.93	74.96
	COFCB10F	1 eqoprmed + 1 roller, vib, tandem, S/P, 12 ton			PROD = 100%		CREW HOURS = 4504		
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00 HR	33.86	1.00	33.86			33.86
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50 HR	22.13	0.50	11.07			11.07
GEN	R45Z5690 E	ROLLER, VIB, DD, SP 12.0T	1.00 HR	46.53			1.00	46.53	46.53
TOTAL					1.50	44.92	1.00	46.53	91.46
	COFCB32F	1 eqoprmed + 1 truck, water, off-hwg, 6,000 gal			PROD = 100%		CREW HOURS = 2505		
MIL	B-LABORER L	Laborers, (Semi-Skilled)	1.00 HR	22.13	1.00	22.13			22.13
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00 HR	33.86	1.00	33.86			33.86
MIL	B-TRKDVRHVL	Truck Drivers, Heavy	1.00 HR	27.03	1.00	27.03			27.03
GEN	R30Z5645 E	ROLLER, STATIC, 9 TIRES, SP,14T	1.00 HR	19.65			1.00	19.65	19.65
GEN	T60Z7920 E	TRUCK, OFF-HWY, WATER, 6000GAL	1.00 HR	73.85			1.00	73.85	73.85
TOTAL					3.00	83.02	2.00	93.49	176.51
	COFGB11L	1 eqoprmed + 1 grader, motor, artic, 28,770 lbs			PROD = 100%		CREW HOURS = 3123		
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00 HR	33.86	1.00	33.86			33.86
MIL	B-LABORER L	Laborers, (Semi-Skilled)	1.00 HR	22.13	1.00	22.13			22.13
GEN	G15Z3080 E	GRADER, MOTOR, 135 HP (101KW)	1.00 HR	35.31			1.00	35.31	35.31
TOTAL					2.00	55.99	1.00	35.31	91.30

SRC	ITEM ID	DESCRIPTION	NO. UOM	RATE	**** LABOR **** HOURS	COST	**** EQUIP **** HOURS	COST	TOTAL COST
	COFGB12K	1 eqopr crn + 1 hydr excav, trk mtd, 6x4, .75 CY			PROD = 100%		CREW HOURS =	178	
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00 HR	35.19	1.00	35.19			35.19
MIL	B-EQOPROILL	Equip. Operators, Oilers	1.00 HR	28.24	1.00	28.24			28.24
GEN	H30Z3760	E HYD EXCAV, TRUCK MTD, 0.750CY	1.00 HR	62.84			1.00	62.84	62.84
TOTAL					2.00	63.43	1.00	62.84	126.26
	COFGB36C	3 eqoprmed + 1 dozer, crawler, 251-340 HP			PROD = 100%		CREW HOURS =	111	
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00 HR	23.13	1.00	23.13			23.13
MIL	B-EQOPRMEDL	Equip. Operators, Medium	3.00 HR	33.86	3.00	101.57			101.57
MIL	B-TRKDVRHVL	Truck Drivers, Heavy	1.00 HR	27.03	1.00	27.03			27.03
GEN	G15Z3080	E GRADER, MOTOR, 135 HP (101KW)	1.00 HR	35.31			1.00	35.31	35.31
GEN	T15Z6570	E DOZER, CRAWLER, 300-340HP	1.00 HR	83.26			1.00	83.26	83.26
GEN	R45Z5690	E ROLLER, VIB, DD, SP 12.0T	1.00 HR	46.53			1.00	46.53	46.53
GEN	T60Z7910	E TRUCK, OFF-HWY, WATER, 5000GAL	1.00 HR	40.14			1.00	40.14	40.14
TOTAL					5.00	151.74	4.00	205.24	356.98
	COKCB25	8 laborers + 1 asph finisher, w/screed, 10' wide			PROD = 100%		CREW HOURS =	163	
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00 HR	23.13	1.00	23.13			23.13
MIL	B-LABORER L	Laborers, (Semi-Skilled)	7.00 HR	22.13	7.00	154.92			154.92
MIL	B-EQOPRMEDL	Equip. Operators, Medium	3.00 HR	33.86	3.00	101.57			101.57
GEN	A30Z0640	E ASPHALT PAVER, 10.0' (3.1M)W,SP	1.00 HR	74.74			1.00	74.74	74.74
GEN	R45Z5690	E ROLLER, VIB, DD, SP 12.0T	1.00 HR	46.53			1.00	46.53	46.53
GEN	R30Z5645	E ROLLER, STATIC, 9 TIRES, SP,14T	1.00 HR	19.65			1.00	19.65	19.65
TOTAL					11.00	279.63	3.00	140.92	420.54
	COKCB25B	8 laborers + 1 roller,vib,tandem,S/P,12Ton,84"w			PROD = 100%		CREW HOURS =	95	
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00 HR	23.13	1.00	23.13			23.13
MIL	B-LABORER L	Laborers, (Semi-Skilled)	7.00 HR	22.13	7.00	154.92			154.92
MIL	B-EQOPRMEDL	Equip. Operators, Medium	4.00 HR	33.86	4.00	135.43			135.43
GEN	A30Z0640	E ASPHALT PAVER, 10.0' (3.1M)W,SP	1.00 HR	74.74			1.00	74.74	74.74
GEN	R45Z5690	E ROLLER, VIB, DD, SP 12.0T	2.00 HR	46.53			2.00	93.07	93.07
GEN	R30Z5645	E ROLLER, STATIC, 9 TIRES, SP,14T	1.00 HR	19.65			1.00	19.65	19.65
TOTAL					12.00	313.49	4.00	187.45	500.93
	CTDHB34C	1 trkdvrhv + 1 trailer, dump, 17 CY			PROD = 100%		CREW HOURS =	36897	
MIL	B-TRKDVRHVL	Truck Drivers, Heavy	1.00 HR	27.03	1.00	27.03			27.03
GEN	T50Z7420	E TRUCK, HWY 45,000 (20,412KG)GVW	1.00 HR	45.79			1.00	45.79	45.79
GEN	T45Z7080	E TRAILER, END DUMP, 17CY, 22T	1.00 HR	4.79			1.00	4.79	4.79
TOTAL					1.00	27.03	2.00	50.57	77.60
	SIWRRODM4	4 rodmen			PROD = 100%		CREW HOURS =	429	
MIL	B-RODMAN L	Rodmen, (Reinforcing)	4.00 HR	39.79	4.00	159.17			159.17
TOTAL					4.00	159.17	0.00	0.00	159.17

SRC	ITEM ID	DESCRIPTION	NO. UOM	RATE	**** LABOR **** HOURS	COST	**** EQUIP **** HOURS	COST	TOTAL COST
	ULABA2	2 laborers + 1 truck, flatbed, 20,000-25,000 GVW			PROD = 100%		CREW HOURS =	927	
MIL	B-LABORER L	Laborers, (Semi-Skilled)	2.00 HR	22.13	2.00	44.26			44.26
MIL	B-TRKDVRLTL	Truck Drivers, Light	1.00 HR	26.57	1.00	26.57			26.57
GEN	T40Z6960 E	TRK FLATBED, 8'X 12'(2.4MX 3.7M)	1.00 HR	0.72			1.00	0.72	0.72
GEN	T50Z7400 E	TRUCK, HWY 25,000 (11,340KG)GVW	1.00 HR	17.77			1.00	17.77	17.77
TOTAL					3.00	70.84	2.00	18.50	89.33
	ULABB2	5 laborers			PROD = 100%		CREW HOURS =	2304	
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00 HR	23.13	1.00	23.13			23.13
MIL	B-LABORER L	Laborers, (Semi-Skilled)	4.00 HR	22.13	4.00	88.53			88.53
TOTAL					5.00	111.66	0.00	0.00	111.66
	ULABB20A	2 laborers			PROD = 100%		CREW HOURS =	29940	
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00 HR	23.13	1.00	23.13			23.13
MIL	B-LABORER L	Laborers, (Semi-Skilled)	1.00 HR	22.13	1.00	22.13			22.13
MIL	B-PLUMBER L	Plumbers	1.00 HR	47.90	1.00	47.90			47.90
MIL	B-PLUMBER A	Plumbers	1.00 HR	40.31	1.00	40.31			40.31
TOTAL					4.00	133.47	0.00	0.00	133.47
	ULABC8A	4 laborers			PROD = 100%		CREW HOURS =	163	
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00 HR	23.13	1.00	23.13			23.13
MIL	B-LABORER L	Laborers, (Semi-Skilled)	3.00 HR	22.13	3.00	66.40			66.40
MIL	B-CEMTFINRL	Cement Finishers	2.00 HR	31.59	2.00	63.18			63.18
TOTAL					6.00	152.71	0.00	0.00	152.71
	UOEHB40A	1 eqopr crn + 1 crane, mech, crawler, 25 ton			PROD = 100%		CREW HOURS =	3082	
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00 HR	35.19	1.00	35.19			35.19
MIL	B-EQOPRLT L	Equip. Operators, Light	1.00 HR	30.80	1.00	30.80			30.80
MIL	B-EQOPROILL	Equip. Operators, Oilers	1.00 HR	28.24	1.00	28.24			28.24
MIL	B-LABORER L	Laborers, (Semi-Skilled)	1.00 HR	22.13	1.00	22.13			22.13
GEN	C85Z2550 E	CRANE, MECH, CRWLR, LIFTING, 25	1.00 HR	53.86			1.00	53.86	53.86
GEN	A15Z0160 E	AIR COMPRESSOR, 600CFM, 100 PS	1.00 HR	32.17			1.00	32.17	32.17
GEN	A20Z0480 E	AIR HOSE, 1.5"X 100'L (38MMX 31M)	1.00 HR	0.53			1.00	0.53	0.53
TOTAL					4.00	116.36	3.00	86.56	202.92
	USKCSKWK2	2 skillwkr			PROD = 100%		CREW HOURS =	101	
MIL	B-SKILLWKRL	Skilled Workers	2.00 HR	23.35	2.00	46.69			46.69
TOTAL					2.00	46.69	0.00	0.00	46.69

SRC LABOR ID	DESCRIPTION	BASE	OVERTM	TXS/INS	FRNG	TRVL	RATE	UOM	UPDATE	**** TOTAL ****	
										DEFAULT	HOURS
MIL B-CARPNTER	Carpenter	20.25	0.0%	37.8%	5.17	0.00	33.07	HR	05/19/05	31.68	742
MIL B-CEMTFINR	Cement Finisher	20.00	0.0%	27.9%	6.01	0.00	31.59	HR	02/06/04	28.47	326
MIL B-EQOPRCRN	Equip. Operator, Crane/Shovel	22.22	0.0%	29.2%	6.48	0.00	35.19	HR	05/19/05	32.62	9048
MIL B-EQOPRLT	Equip. Operator, Light	19.91	0.0%	29.2%	5.08	0.00	30.80	HR	02/06/04	28.51	5099
MIL B-EQOPRMED	Equip. Operator, Medium	21.19	0.0%	29.2%	6.48	0.00	33.86	HR	05/19/05	30.27	28508
MIL B-EQOPROIL	Equip. Operator, Oiler	16.84	0.0%	29.2%	6.48	0.00	28.24	HR	05/19/05	24.69	9048
MIL B-LABORER	Laborer (Semi-Skilled)	13.07	0.0%	37.2%	4.20	0.00	22.13	HR	05/19/05	23.81	155050
MIL B-PLUMBER	Plumber	28.75	0.0%	32.0%	9.95	0.00	47.90	HR	05/19/05	34.82	59880
MIL B-RODMAN	Rodman (Reinforcing)	20.91	0.0%	40.8%	10.35	0.00	39.79	HR	02/06/04	36.56	1717
MIL B-SKILLWKR	Skilled Worker	14.68	0.0%	35.2%	3.50	0.00	23.35	HR	02/06/04	25.96	202
MIL B-TRKDVRHV	Truck Driver, Heavy	16.33	0.0%	35.1%	4.97	0.00	27.03	HR	05/19/05	24.66	40466
MIL B-TRKDVRLT	Truck Driver, Light	15.99	0.0%	35.1%	4.97	0.00	26.57	HR	05/19/05	23.25	927
MIL X-EQOPRHVY	Outside Equip. Operator, Heavy	22.02	0.0%	29.2%	5.08	0.00	33.53	HR	02/06/04	31.93	162
MIL X-EQOPRLT	Outside Equip. Operator, Light	19.91	0.0%	29.2%	5.08	0.00	30.80	HR	02/06/04	28.22	3672
MIL X-EQOPRMED	Outside Equip. Operator, Medium	20.99	0.0%	29.2%	5.08	0.00	32.20	HR	02/06/04	30.68	277
MIL X-EQOPROIL	Outside Equip. Oiler	16.64	0.0%	29.2%	5.08	0.00	26.58	HR	02/06/04	24.82	162
MIL X-LABORER	Outside Laborer	12.37	0.0%	37.2%	3.50	0.00	20.47	HR	02/06/04	24.50	27441
MIL X-STRSTEEL	Outside Steel Worker	20.91	0.0%	55.8%	10.35	0.00	42.93	HR	02/06/04	39.01	809
MIL X-TRKDVRLT	Outside Truck Driver, Light	15.33	0.0%	35.1%	4.67	0.00	25.38	HR	02/06/04	23.49	604



											** TOTAL **
SRC	ID.NO.	EQUIPMENT DESCRIPTION	DEPR	FCCM	FUEL	FOG	TR WR	TR REP	EQ REP	TOTAL RATE	HOURS
GEN	A15Z0160	AIR COMPRESSOR, 600CFM, 100 PSI	5.36	1.56	13.86	4.87	0.15	0.03	6.35	32.17 HR	3082
GEN	A20Z0480	AIR HOSE,1.5"X 100'L (38MMX 31M)	0.17	0.02					0.34	0.53 HR	3082
GEN	A30Z0640	ASPHALT PAVER, 10.0' (3.1M)W,SP	21.05	5.68	8.08	4.34	1.69	0.30	33.60	74.74 HR	259
EP	C75GV016	CRANE,HYD,S/P,RT,4WD,100T/88'BM,	51.99	17.18	15.41	5.77	4.45	0.78	61.27	156.85 HR	162
GEN	C80Z2280	CRANE, HYD, TRUCK MTD, 65T	28.95	10.65	18.25	5.98	0.92	0.16	29.77	94.68 HR	67
GEN	C85Z2550	CRANE, MECH, CRWLR, LIFTING, 25T	18.83	6.46	6.30	1.55			20.72	53.86 HR	3082
EP	G15CA003	GRADER,MOTOR, ARTIC, CAT 12-H	10.84	4.29	6.86	2.89	0.47	0.08	12.74	38.17 HR	38
GEN	G15Z3080	GRADER, MOTOR, 135 HP (101KW)	9.86	3.91	6.61	2.79	0.47	0.08	11.59	35.31 HR	3234
GEN	H25Z3185	HYD EXCV, CRAWLER, 55,000LBS,	17.96	5.51	8.76	4.10			22.39	58.72 HR	990
GEN	H25Z3190	HYD EXCV, CRAWLER, 70,000LBS,	21.63	6.64	11.58	5.42			26.98	72.24 HR	4731
GEN	H30Z3760	HYD EXCAV, TRUCK MTD, 0.750CY	24.35	5.28	9.29	4.13	0.64	0.11	19.04	62.84 HR	178
GEN	L15Z3880	HYDROMULCHER, 3,000 GAL(11,356L)	9.43	1.04	7.06	2.07			9.45	29.04 HR	604
GEN	L35Z4240	LOADER, F/E, CRWLR, 1.50CY	9.00	1.92	5.12	2.40			18.76	37.19 HR	6043
EP	L50CS006	LDR,BH,WH, 1.25CY FE BKT,	6.04	1.81	4.48	1.78	0.85	0.15	7.99	23.10 HR	162
GEN	L50Z4640	LOADER/BCK-HOE,WH, 0.80CY(0.6M3)	3.76	1.14	3.13	1.24	0.72	0.13	5.00	15.12 HR	2017
EP	R30HY005	ROLLER,STATIC,DD,S/P,10T, 50"W	5.65	1.47	3.91	1.14			6.90	19.08 HR	38
GEN	R30Z5645	ROLLER, STATIC, 9 TIRES, SP,14T	6.05	1.32	4.17	1.22	0.34	0.06	6.49	19.65 HR	2763
GEN	R45Z5580	ROLLER, VIB, SD, SP 13.0T	13.61	2.95	10.54	4.19	0.48	0.08	22.93	54.79 HR	96
GEN	R45Z5690	ROLLER, VIB, DD, SP 12.0T	12.58	2.68	7.27	2.89			21.12	46.53 HR	4968
GEN	S10Z5920	SCRAPER, SP,ELEV, 11CY (8.4M3)	17.33	4.69	9.12	4.48	2.46	0.43	20.54	59.05 HR	67
GEN	S20Z5970	SCRAPER, SP, 14-20CY (11-15M3)	23.87	9.56	28.06	9.19	7.94	1.39	23.04	103.06 HR	128
EP	T10LE001	ROTARY HOE, 80" WIDE ROTERRA	0.52	0.13					0.64	1.29 HR	3672
GEN	T15Z6440	DOZER, CRAWLER, 76-100HP	6.42	1.84	4.55	2.02			12.69	27.53 HR	24
GEN	T15Z6480	DOZER, CRAWLER, 101-135HP	6.88	1.97	5.12	2.28			13.59	29.83 HR	4567
GEN	T15Z6520	DOZER, CRAWLER, 181-250HP	15.87	7.11	13.65	4.79			24.50	65.93 HR	6087
GEN	T15Z6570	DOZER, CRAWLER, 300-340HP	19.61	8.78	18.20	6.39			30.28	83.26 HR	111
GEN	T15Z6600	DOZER, CRAWLER, 341-440HP	22.90	10.26	23.04	8.09			35.36	99.64 HR	160
MAP	T25JD005	TRACTOR,WH,FARM, 40- 59HP, 2X4	2.04	0.42	2.09	0.73	0.27	0.05	2.07	7.67 HR	3672
GEN	T30Z6720	TRENCHER, CHAIN, 16"W, 48"DP	1.13	0.25	1.98	0.69	0.07	0.01	1.60	5.73 HR	0
GEN	T40Z6860	REAR DUMP BODY, 16-23.5CY (12.2-	0.93	0.20					1.01	2.14 HR	954
GEN	T40Z6960	TRK FLATBED, 8'X 12'(2.4MX 3.7M)	0.34	0.07					0.31	0.72 HR	927
GEN	T45Z7080	TRAILER, END DUMP, 17CY, 22T	1.87	0.49			0.52	0.09	1.80	4.79 HR	36897
EP	T50FO009	TRK,HWY, 21,000 GVW, 4X2, 2 AXLE	2.57	0.63	7.08	2.32	0.34	0.06	2.55	15.53 HR	604
EP	T50GM006	TRK,HWY, 8,600GVW,4X2, 3/4T-PKUP	1.83	0.40	4.18	1.47	0.32	0.06	1.96	10.23 HR	38
GEN	T50Z7400	TRUCK, HWY 25,000 (11,340KG)GVW	3.48	0.87	6.88	2.25	0.70	0.12	3.47	17.77 HR	927
GEN	T50Z7420	TRUCK, HWY 45,000 (20,412KG)GVW	10.97	2.40	15.62	5.48	0.97	0.17	10.16	45.79 HR	37851
GEN	T60Z7910	TRUCK, OFF-HWY, WATER, 5000GAL	10.38	3.38	9.12	3.63	1.82	0.32	11.48	40.14 HR	111
GEN	T60Z7920	TRUCK, OFF-HWY, WATER, 6000GAL	18.80	6.13	17.21	6.84	3.45	0.61	20.80	73.85 HR	2505

Wed 12 Oct 2005  
Eff. Date 07/19/04  
ERROR REPORT

Tri-Service Automated Cost Engineering System (TRACES)  
PROJECT PASE01: Paseo de las Iglesias Feas Study - Los Reals Road to Congress Road  
PASEO DE LAS IGLESIAS Feasibility Study Estimate

TIME 14:36:09

ERROR PAGE 1

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No errors detected...

\* \* \* END OF ERROR REPORT \* \* \*

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