

**Summary of Streetlighting Practices
November 21, 2005**

Scottsdale

Four lighting zones as listed in table below.

Was based on policy decision to maintain appearance and character of low light areas.

Safety study/justification not done.

Have not compared crash rates in low light vs. fully lighted areas.

No claims/judgments based on lack of lighting.

Lighting Zone	Land Use Characteristics	Lighting Criteria
No Street Lights	Large expanses of open space or low residential densities And few other pedestrian generating uses	Streetlights at signalized intersections only
Partial Lighting	Significant natural areas, land slopes 3% or greater, or one acre parcels pocketed into suburban areas	Lights at intersections on collector & larger streets where density is less than 1.5 units per acre. Lights at all intersection where density is greater than 1.5 units per acre.
Suburban Street Lighting	Medium density residential, commercial and employment areas	Illuminating Engineering Society Recommended Practice for Roadway Lighting (IES RP-8) for intermediate land use
Pedestrian Activity Area	Relatively high density uses, higher transit service and mix of uses that generate strong pedestrian activity	IES RP-8 for commercial land use

Tucson and Surrounding Area

Numerous lighting zones to minimize interference with astronomical observatories.

Total amount of light per acre limited in each type of zone; light fixtures must be full cutoff.

Residents/developers determine if local streets are lighted.

Most new subdivisions in area are not lighted.

Arterial and collector streets are lighted to IES standard.

Have had some claims but they were not successful.

Fountain Hills

Only lights at signalized intersections.

Policy—no safety study/justification done.

No claims/judgments.

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Cave Creek

No lighting.
Policy—no safety study/justification done.
No claims/judgments.

Carefree

No lighting.
Policy—no safety study/justification done.
No claims/judgments.

AASHTO Warrants (American Association of State, Highway and Transportation Officials)

Warrant would not be met for local streets in Desert Uplands area under consideration.

NCHRP Report 152 (National Cooperative Highway Research Program)

Applies to existing facilities, not to determining appropriate light level for new facilities.
Warrant would not be met for local streets in Desert Uplands area under consideration.
Project is underway to develop easily applied guidelines based on safety benefits and total costs (completion date July 2008).

City of Mesa

MCDOT reports only one crash over the last three years in the area under consideration.
Streetlighting is not required in R1-43 to R1-90 districts in the Desert Uplands with suburban ranch type streets.

City of Mesa
 Council Auditor Future Planning
 Proposed Staffing and Funds for Future Scenarios
 Fiscal Years 2006-2007 and Later

<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Present Audit Office	New Council Auditor's Office (Separate)	Present Audit Office + 3 Program Auditors	Present Audit Office + 7 Program Auditors
Compliance, Performance Auditing	Program Auditing Only	Compliance, Performance, Program Auditing	Compliance, Performance, Program Auditing
1 City Auditor	1 Council Auditor	1 City/Council Auditor	1 City/Council Auditor
1 Deputy City Auditor (not filled)		1 Deputy City/Council Auditor	2 Deputy City/Council Auditors
2 Senior Internal Auditors		2 Senior Internal Auditors	2 Senior Internal Auditors
1 Internal Auditor II		1 Internal Auditor II	1 Internal Auditor II
	1 Senior Program Auditor	2 Senior Program Auditors	2 Senior Program Auditors
	1 Program Auditor II	1 Program Auditor II	4 Program Auditor II
	1 Administrative Support & Webmaster	1 Administrative Support & Webmaster	1 Administrative Support & Webmaster
Other Operating Expenses 6%	Other Operating Expenses 6%	Other Operating Expenses 6%	Other Operating Expenses 6%
Total Staff	Total Staff Required	Total Staff Required	Total Staff Required
5 FTE	4 FTE	9 FTE	13 FTE
Cost	Cost	Cost	Cost
542,720	\$373,120	\$876,620	\$1,225,360

18 - 20 Compliance/Performance Audits
 4 Program Audits

18 - 20 Compliance/Performance Audits
 6 Program Audits

18 - 20 Compliance/Performance Audits
 10 Program Audits

Attachment 2

Optional Funding Scenario

1. All future General Obligation (GO) bonds questions submitted to Mesa voters will include, as required by ARS 35-454(C), the statement; "the issuance of these bonds will result in an annual level of property taxes sufficient to pay the debt on the bonds."

Mesa has previously issued GO Bonds for capital equipment and construction projects related to activities such as Streets, Police, Fire, Parks, Recreation and Cultural, Library, etc.

2. Mesa should proceed with a deliberate, multi-year program, to sell portions of the land that the City currently owns in Pinal County. By priority, the proceeds from the sales of the land would be used to:
 - a. Retire the remaining debt that the City incurred to purchase the land. Estimated to be \$10M in FY 2006/07.
 - b. Dedicate an estimated \$190M to \$200M toward retiring existing GO bond debt and any remaining GO bond debt that will be sold from the currently remaining (voter) authorization.
 - c. Apply excess resources to appropriate capital projects or initiatives, including those identified in #5 below, as deemed necessary by the City Council.
3. A sales tax increase, to a rate of 1.80%, would be placed before voters in May 2006 with a portion of the increase designated to fund street maintenance and some street capital requirements with the balance used to fund general government operations.
4. Future elections GO Street Bonds may be used to provide a portion of the 30% local funding match required by the Maricopa County voter's approval of Proposition 400 to construct the designated Mesa arterial street projects.
5. Transfers of utility revenues to the City General Fund would be reduced when the General Fund's ending fund balance are forecast to equal or exceed 10% thus allowing the utilities to retain more of their revenue moving each operation towards functioning as "true" utility enterprises.

Notes:

If in any year, the proceeds available from the sale of the land that the City owns in Pinal County is not adequate to cover the debt service requirements identified in #3b above, the City Council shall reduce expenditures or utilize their secondary property tax option for existing GO debt to meet the City's required financial obligations.

Impact fee revenues will be utilized to GO debt incurred from bond authorizations received prior to 2006 first, where applicable.