

Special
CC/RDA ACTION 4A MTG. DATE: 3-3-11
APPROVED DENIED REC/FILE CONT.
OTHER _____
VOTE: YES _____ NO _____ ABSTAIN _____

STAFF REPORT

DATE: March 3, 2011

TO: Honorable Mayor and Members of the City Council

FROM: Paul Goble, P.E., T.E.
Public Works Director

SUBJECT: Highway 111 Median Landscaping and Median Nose Design

Summary

City Council is requested, in this Staff Report, to approve specific Highway 111 median landscaping and median design aspects. The landscaping theme and median nose treatments are key components of the upcoming Phase 2, Highway 111 median and pavement improvements. Council approval of these critical design elements is requested to expedite median installation and landscaping this calendar year. A drought tolerant, Palm influenced median landscaping theme is recommended by Staff and has been recommended by the Highway 111 Widening Committee. Additionally, a painted left turn pocket nose design is recommended over an alternative design using curbed median turn pocket nose treatments. Painted left turn nose delineation will provide for improved motor officer and fire department emergency access, improved motor vehicle safety and reduced installation and maintenance costs.

Median Landscaping Analysis

Staff has spent extensive time to prepare two primary landscaping options for the Highway 111 median landscaping within the CVAG approved phasing of the project. The primary options include use of either drought tolerant Palm or drought tolerant Tree based themes. Both themes, as currently proposed, will be unique to the City of Indian Wells. The Palm theme, as recommended by the Highway 111 Widening Committee utilizes approximately 1,000 additional plants as compared to the Tree based theme and has an advantage of both reduced water and maintenance costs. A Palm based landscaping theme for Highway 111 medians was previously reviewed and approved by the Architecture and Landscape Committee and the Planning Commission. The median design recommendation within this Staff Report further defines and clarifies this theme concept.

A Palm based median landscaping theme also provides the best connection to the Palm cultivation legacy of Indian Wells. Caleb Cook, one of the City's first settlers, moved to the Indian Wells area in 1916 and became a pioneer in the date industry, establishing a Date Palm farm at Highway 111 and Cook.

Additionally, Palm based median landscaping provides a connection to a City General Plan Value Statement excerpt, "We expect excellence by placing a premium value on QUALITY, as expressed accordingly (by providing) ... esthetically pleasing and healthy environment with expansive landscaped open spaces and flourishing date groves reflecting the City's heritage."

Photos and renderings in Attachment 1 to this report reflect a comparison of the existing and proposed Indian Wells median landscaping and adjacent prototypical median landscaping found in the Coachella Valley. The comparison is striking and provides differentiation by the plant density and lush palette of the Indian Wells design.

Tables found in Attachment 2 to this report document approximate plant palette, quantity and cost differences found in the two primary options submitted for consideration for Highway 111 median landscaping. Tree landscaping requires significant additional water and ongoing maintenance costs to maintain the unique expansive landscaping. Extensive pruning control required for tree varieties suitable for the desert climate generate additional legacy costs for Tree landscaping of the Highway 111 medians. Palm landscaping requires reduced water and maintenance costs and is recommended for approval.

Staff proposes use of Date Palms exclusively adjacent to the 15 separate maintenance vehicle parking locations in the proposed Highway 111 median configuration. This placement will allow for 6 Date Palms to be planted and maintained by boom truck adjacent to each maintenance vehicle parking pad as required without a necessity for a lane closure on Highway 111.

Median Turn Pocket Nose Analysis

The median turn pocket nose is an important design element in the upcoming Phase 2, Highway 111 improvements. Traditionally, median turn pocket noses consist of either curbed raised medians or painted medians. Photos and renderings in Attachment 1 to this report reflects a comparison of the proposed Indian Wells median turn pocket nose treatment and adjacent prototypical turn pocket curbed median noses found in the Coachella Valley. Use of raised curb median noses, typical of many desert installations are problematic for the following reasons:

- Curbed median noses provide restricted emergency access by police and fire departments. City of Indian Wells Motor Officers do not endorse use of long, curbed median noses for the Highway 111 project.
- Curbed median noses are costly to install, are frequently hit, creating vehicle wheel and tire damage and require ongoing maintenance.
- Curbed median noses are more difficult to implement effectively on Highway 111 given that existing speed limits and storage requirements necessitate median noses of up to 800 feet in length (420 feet, typical). This boundary condition

creates unacceptable design lengths of the 3 to 4 ft wide curbed median nose and an unsightly installation.

- Curbed median noses are not supported by the traffic engineering design literature as having higher safety than painted median noses. The separation or offset from the opposing traffic direction is the protection element, not the median curb itself.
- Curbed noses cannot be landscaped with the maximum available width of 4 feet for the Highway 111 median nose. Painted median noses for left turn lane were utilized on the recent Fred Waring widening project as a result of similar right of way restrictions.

Painted delineation, as such the painted turn pocket lanes currently in use on Highway 111 has provided acceptable performance. Given the listed limitations of curbed median noses, Staff recommends approval of the painted turn pocket delineation for the Highway 111 project.

Project Background

Phase 2 of the Highway 111 widening project will rehabilitate asphalt surfaces and install landscaped medians in preparation of future phased Highway 111 widening from the existing 4 lane roadway to a 6 lane roadway. Phase 2 will resurface approximately 1.8 million square feet of deteriorating roadway from Cook Street to the Deep Canyon Bridge at the Indian Wells/La Quinta City Limit and install approximately 9,800 ft linear feet of new median (with small height adjustments to set ultimate street grades) over the 18,500 linear feet of Highway 111, Indian Wells roadway. The Phase 2 project requires limited right of way adjustments at Miles Avenue, but does not construct sound walls or additional through lanes. Phase 2 also does not relocate any utilities. The Phase 2 improvements are proposed for installation during 2011.

Phase 3 of the Highway 111 Widening/Beautification project is scheduled for installation in 2012, conditional on major utility relocations and will widen Highway 111 to 6 lanes from Cook Street to the western City limit. The Phase 3, Cook to Hospitality Row segment improvements was delayed as a result of a right of way acquisition dispute. The dispute was resolved and right of way acquired in February 2011. The proposed Phase 3 improvement segment between Cook Street and Hospitality Row is of highest congestion and accident frequency and is a high priority.

Budgets/CVAG Contribution to Widening/Grant Funding

CVAG has implemented additional budgetary controls on the Highway 111 project to reduce total budget encumbrances relative to the project. A revised reimbursement agreement with CVAG has been approved effective December 16, 2010. This agreement provides an approved defined project cost through Phase 3 completion of \$16.0 million and synchronizes with the currently available CVAG funding capability. All Highway 111 widening costs, except new or enhanced landscaping, are subject to

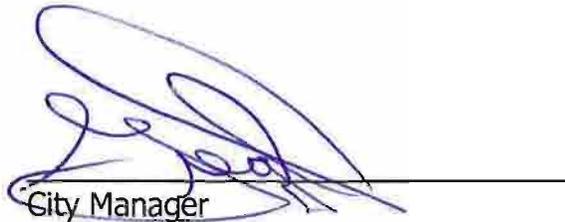
75% reimbursement by CVAG. The total billed project costs to date are \$6.4 million with an estimated cost for Phases 2 and Phase 3 of \$6.9 million. Therefore, total costs of currently defined Highway 111 phases equal \$13.3 million or \$16.0 million with an overall 20% contingency factor.

Fiscal Impact

The proposed Phase 2, Highway 111 project is included in the 2010/2011 Fiscal Year Capital Project Schedule at an estimated total cost of \$3,894,500, subject to reimbursement by CVAG of \$2,367,500 with a net cost to Indian Wells of \$1,527,000. Upcoming project bidding will define these estimated costs more precisely.

Recommendation

Approve drought tolerant, Palm theme influenced Highway 111 median landscaping and the related median design aspects. Approve painted left turn pocket nose designs for the Phase 2 of the Highway 111 widening project to provide for optimum emergency access, improved motor vehicle safety and reduced installation costs and maintenance.



City Manager

- Attachments:
1. Example Photos & Renderings – Median Landscaping and Curbed Median Noses
 2. Example Plant Palettes – Palm Median Landscaping & Tree Median Landscaping

ATTACHMENT 1 - Example Photos & Renderings – Median Landscaping and Curbed
Median Noses



Prototypical Desert Tree based median landscaping
– note tree overgrowth and adjacent sparse landscaping



Prototypical Desert Palm based median landscaping
– note sparse adjacent landscaping



Prototypical desert Palm based median landscaping
– note sparse adjacent landscaping



Example Indian Wells Palm Median Landscaping



Recommended Indian Wells Palm Median Maintenance Parking



Recommended Indian Wells Highway 111 Palm Median Landscaping



Recommended Indian Wells Highway 111 Palm Median Landscaping



Recommended Indian Wells Highway 111 Palm Median Landscaping



Alternative Indian Wells Highway 111 Tree Median Landscaping



Alternative Indian Wells Highway 111 Tree Median Landscaping



Example damage to MUTCD required signage at a narrow median nose



Example tire contact for narrow curbed median nose



Example tire contact and damage at a channelizing median



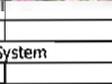
Example unsightly curbed median nose
with staining & efflorescence



Recommended Indian Wells Highway 111 Median Nose Treatment

ATTACHMENT 2 - Example Plant Palettes
Palm Median Landscaping & Tree Median Landscaping

Palm Median Landscaping Plant Palette & Estimated Costs

Name	Photo	Quantity	Cost (Ea)	Total Cost
Arabian Jasmine Jasminum sambac 'Grand Duke'		200	\$ 9.00	\$ 1,800
Bird of Paradise Strelitzia Reginae		200	\$ 10.00	\$ 2,000
Blue Daze Evolvulus Evolvulus Glomerata 'Blue Daze' Hawaiian Blue Eye		600	\$ 8.00	\$ 4,800
Brilliant Hibiscus Hibiscus rosa-sinensis 'Brilliant'		150	\$ 22.00	\$ 3,300
Canary Island Date Palm Phoenix canariensis		40	\$ 625.00	\$ 25,000
Cassa Blue Flax Lily Dianella Caerulea		1000	\$ 9.13	\$ 9,130
Double Knock Out Rose Rosa x 'Radtko'		250	\$ 18.00	\$ 4,500
Euphoria Millii Crown-of-thorns		1500	\$ 9.00	\$ 13,500
Hidcote Blue Lavender Lavandula angustifolia 'Hidcote Blue'		200	\$ 9.00	\$ 1,800
Ixora Coccinea Orange or Yellow Ixora Coccinea		1200	\$ 37.00	\$ 44,400
Mediterranean Fan Palm Chamaerops humilis		60	\$ 475.00	\$ 28,500
Mexican Blue Palm Brahea armata		20	\$ 450.00	\$ 9,000
Natal Plum Carissa Macrocarpa		450	\$ 9.00	\$ 4,050
Oo-La-La Bougainvillea Bougainvillea 'Monka'		600	\$ 31.29	\$ 18,774
Date Palm Phoenix Dactylifera		90	\$ 3,000.00	\$ 270,000
Pinto Palm Butia Capitata		60	\$ 450.00	\$ 27,000
Pygmy Date Palm Phoenix roebelenii		500	\$ 125.00	\$ 62,500
Sago Palm Cycas revoluta		400	\$ 30.00	\$ 12,000
Twin Flowered Agave Agave Geminiflora		900	\$ 8.00	\$ 7,200
Vinca, Periwinkle Catharanthus roseus		400	\$ 16.00	\$ 6,400
Est. Total Plants		8820		\$ 555,654
Est. Installation Costs - Labor & Irrigation System				\$ 500,000
Est. Annual Maintenance Costs				\$ 70,000
Est. Annual Water Costs				\$ 15,000
Est. First Year Total Cost				\$ 1,140,654
Ongoing Annual Water and Maint Cost				\$ 85,000

Tree Median Landscaping Plant Palette & Estimated Costs

Name	Photo	Quantity	Cost (Ea)	Total Cost
Arabian Jasmine Jasminum sambac 'Grand Duke'		500	\$ 9.00	\$ 4,500
Bird of Paradise Strelitzia Reginae		100	\$ 10.00	\$ 1,000
Double Knock Out Rose Rosa x 'Radtko'		1000	\$ 18.00	\$ 18,000
Dwarf Bottlebrush Callistemon Viminalis 'Little John'		300	\$ 9.00	\$ 2,700
Hidcote Blue Lavender Lavandula angustifolia 'Hidcote Blue'		500	\$ 9.00	\$ 4,500
Ixora Coccinea Orange or Yellow Ixora Coccinea		200	\$ 37.00	\$ 7,400
Moraea Moraea Viscaria		500	\$ 9.00	\$ 4,500
Myrtus C. Compacta or Crepe Myrtle Lagerstroemia Indica x Fauiei 'Natchez'		500	\$ 16.00	\$ 8,000
Oo-La-La Bougainvillea Bougainvillea 'Monka'		1000	\$ 31.29	\$ 31,290
Ornamental Plum Tree Prunus Cerasifera		100	\$ 150.00	\$ 15,000
Date Palm Phoenix Dactylifera		90	\$ 3,000.00	\$ 270,000
Purple Fountain Grass Pennisetum setaceum 'Rubrum'		200	\$ 10.00	\$ 2,000
Sherwood Gladiator Daylily Hemerocallis x 'Sherwood Gladiator'		200	\$ 9.00	\$ 1,800
Shiny Xylosma Xylosma congestum		200	\$ 9.00	\$ 1,800
Tasred Flax Lily Dianella tasmanica		200	\$ 10.00	\$ 2,000
Teenie Genie Compact Lantana Lantana camara 'Monike'		1000	\$ 9.00	\$ 9,000
Tipu Tipuana Tipu		70	\$ 325.00	\$ 22,750
Vinca, Periwinkle Catharanthus roseus		800	\$ 16.00	\$ 12,800
Annual Flowers		323	\$ 36.00	\$ 11,628
Est. Total Plants		7783		\$430,668
Est. Installation Costs - Labor & Irrigation System				\$ 600,000
Est. Annual Maintenance Costs				\$ 90,000
Est. Annual Water Costs				\$ 25,000
Est. First Year Total Cost				\$ 1,145,668
Ongoing Annual Water and Maint Cost				\$ 115,000