



*“Experience,*

*Innovation*

*and*

*Integrity”*

January 21, 2016

Jeremy T. Knapp, AICP  
Engineering Services Analyst  
Town of Paradise Valley  
6401 east Lincoln Drive  
Paradise Valley, Arizona 85253-4399  
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Re: Town of Paradise Valley  
52<sup>nd</sup> Street Improvements  
Tomahawk Road to Orchid Lane

Dear Jeremy,

We are pleased to submit the following cost for preconstruction and design services on the above referenced project. All work will be performed as a cooperative purchase agreement in conjunction with the City of Buckeye, JOC #2014-094 Article 23 Item 9.

1. Design per Hoskin Ryan. (See attached Schedule and Scope)	\$26,242.50
2. Markham Contracting Co., Inc. Consultation:	<u>\$ 2,600.00</u>
A. Six Design meetings with the Town of Paradise Valley	
B. Estimated Cost Proposal at various percent drawing stages	
C. Design Input	
	\$28,842.50
	Overhead 10% <u>\$ 2,884.25</u>
	Subtotal <u>\$31,726.75</u>
	Profit 5% <u>\$ 1,586.33</u>
*Excludes Sales Tax	Total \$33,313.08

Sincerely,

Tom Markham  
Estimator





Hoskin • Ryan Consultants, Inc.  
*creative engineering solutions*

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## **SCOPE OF WORK**

**Town of Paradise Valley  
52<sup>nd</sup> Street Improvements  
Tomahawk Road to Orchid Lane**

Prepared By:

Hoskin-Ryan Consultants, Inc.  
6245 N. 24<sup>th</sup> Parkway, Suite 100  
Phoenix, Arizona 85016

Prepared For:

Town of Paradise Valley  
Public Works Division  
6401 East Lincoln Drive  
Paradise Valley  
AZ 85253-4328

January 13, 2016

# SCOPE OF WORK

## Town of Paradise Valley 52<sup>nd</sup> Street Improvements Tomahawk Road to Orchid Lane

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Manhour Estimate – Attachment A

**Town of Paradise Valley  
52<sup>nd</sup> Street Improvements  
Tomahawk Road to Orchid Lane**

**Introduction**

This project includes the pavement and roadway alignment modification for approximately 770-feet of 52nd Street between Tomahawk Road and Orchid Lane, adding a pedestrian sidewalk on the west side of the street. According to the Mobility Element of the Town's Policy Statement, 52nd Street is classified as a Collector Street. The standard cross-section for this classification consists of 11-foot wide travel lanes, a 4-foot wide bicycle lane, and 2-foot of curb and gutter. Additionally, this cross-section includes a 6-foot wide detached sidewalk all inside a 60-foot right-of-way.

Bringing the roadway into strict conformance would result in significantly greater cost than matching to the existing cross-section to the north. Between Tomahawk Road and Doubletree Ranch Road, the existing roadway section consists of a 34 feet wide street with curb and gutter on both sides and a 6 feet wide sidewalk on the west side of the roadway; the center line of the roadway is offset from monument line of 52nd Street shifting the road easterly inside the total available right-of-way of 80-ft.

Alternative curb alignments will be explored, including matching existing curb returns at the north and south ends of the project, reconstruction of the curb return at the southwest corner of Tomahawk and 52<sup>nd</sup> Street, and an attached or detached sidewalk. Minor landscape modifications may be necessary either adjacent to existing landscape, or between the curb and sidewalk (in the detached sidewalk scenario). Consideration will be provided to street drainage patterns and maintaining storm drainage facilities in the roadway. Design of curb and gutter grades at each intersection will address potential sumps created at curb returns with roadway narrowing.

Four residences abut 52<sup>nd</sup> Street on the west side, and each may be impacted by the project as a result of access during construction, and landscape, driveway and mailbox disturbance. Each homeowner will be contacted by the Town and the project objectives discussed and feedback received. Hoskin Ryan's project manager will assist as needed.

We will obtain all necessary topographic surveys and prepare base maps for the final design. Data collection and public involvement will also be including at the beginning of the project and during the design stage. After the initial design phase (30%), we will prepare final construction documents (plans, technical specifications as needed, cost estimate and bid package).

This Scope of Work will be completed within 90 calendar days from the date of Notice to Proceed.

Submittals to the Town will be made at 30%, 90% and 100%.



### **Design Standards**

Manual on Uniform Traffic Control Devices, Latest Edition

Pavement Marking Manual Maricopa County Department of Transportation, 2005

Maricopa County Roadway Design Manual, June 2015

Uniform Standard Specifications and Details for Public Works Construction, 2015 Edition

### **Scope of Services**

#### **Task 1: Meetings and Coordination**

- 1.1 Participate in meetings with the Town of Paradise Valley Project Manager and staff providing current status of the project. Meetings will include a kickoff meeting, 30% design review meeting, 90% design review meeting, and pre-final comment review meeting.
- 1.2 Prepare submittals to the Town of Paradise Valley. Processing of submittal through approval.
- 1.3 Prepare monthly progress reports and update project schedule on a monthly basis.

#### **Task 2: Data Collection**

- 2.1 Collect and review pertinent data from the Town of Paradise Valley and other outside sources. Data to be provided by the Town will include record drawings, roadway and utility as-built plans, utility maps, GIS data and other pertinent information.
- 2.2 Perform an initial site visit to collect site photographs.

#### **Task 3: Field Survey**

- 3.1 Perform a detailed topographic survey to identify the local features such as water valves, manholes, meters and electric cabinets. The limits of the survey will be within the right-of-way starting from 150-feet north of Tomahawk south to the north side of the round-about.
- 3.2 Field survey will be performed in accordance with the requirements outlined below:
  - a. Establish project control as necessary.
  - b. Horizontal control will be NAD 1983 (2011) Arizona State Plane Central Zone. Vertical control will be based on Town of Paradise Valley vertical datum (NAVD 88).

- c. The topographic design survey will include all surface evidence of underground utilities such as gas valves, water valves, utility boxes, manholes (sanitary sewer, storm drain, water, etc.) within the right-of-way.
- d. Provide topographic base maps of existing conditions and features with linework and symbols in AutoCAD electronic format in accordance with the Town of Paradise Valley standards.
- e. Topographic data in the street right-of-way will be collected at 50 foot intervals on roadway paving centerline, electronically in Point Number, northing, easting, elevation, and description (PNEZD) format.

3.5 Survey horizontal and vertical locations of potholes.

#### **Task 4: Base Map Preparation**

- 4.1 Base Map will be prepared at a scale of 1 inch = 20 feet. Base Map will include:
- a. Horizontal control.
  - b. Vertical control.
  - c. Existing curb, gutter, edge of pavement and driveways.
  - d. Property lines based on GIS mapping provided by the Town.
  - e. Adjacent parcel numbers, business names and addresses.
  - f. Intersecting streets.
  - g. Existing utilities derived from utility maps, GIS data and record drawings, provided by the Town of Paradise Valley. Prepare blue-stake design requests and obtain and incorporate all utilities from non-Town utility companies as part of the base mapping process.
  - h. Topographic information compiled from field survey and aerial mapping.
  - i. All visual improvements within the right-of-way.

#### **Task 5: Public Involvement**

- 5.1 Attend up to four (4) meetings with the Town and individual homeowners.

#### **Task 6: Roadway and Sidewalk Construction Plans**

- 6.1 Prepare design concept exhibit to establish design alternative at a scale of 1"=50 feet. Final design plans will be prepared at a scale of 1 inch = 20 feet. The plans will include the cover sheet, keymap and survey control sheet, general notes and legend sheet, roadway plan and profile sheets, striping plans, landscape remediation, and details sheets as estimated in Table 1. Plans will be submitted to the Town of Paradise Valley at 30%, 90% and 100% stages.
- 6.2 Prepare quantities and cost estimates for each submittal.

Table 1. Sheet Types and Numbers

Cover Sheet	1
Key Map and Survey Control	2
General Notes and Legend	3
Roadway Plan and Profile	4-5
Storm Drain & Roadway Details	6
Striping Plans	7
Landscape and Details	8
<b>Total</b>	<b>8</b>

- 6.3 Prepare engineering costs estimates at each submittal stage and a final Engineer's Estimate of Probable cost for the 100% approved set of Plans.
- 6.4 Final Deliverables to include:
- a. Final Plans on 3-mil to 5-mil mylar with original seal and signature
  - b. Final Specifications with original seal and signature
  - c. Electronic files of final plans in AutoCAD 2007
  - d. Final construction cost estimate

**Task 7: Construction Staking and As-Built Plans**

- 7.1 Provide construction staking and layout services to support Markham Contracting in locating new curb & gutter, sidewalk, driveways, and catch basins, valley gutters, and pavement removals. Layout will include sidewalk edges staked with grade and alignment at 50-feet on center; and, curb & gutter alignment with "blue top" grade stakes at 25-feet on center. Staking will include concrete aprons, and paving swales as provided in the final design.
- 7.2 Provide "As-Built" surveys and plans in accordance with the Town of Paradise Valley standards and criteria for project acceptance.

**Task 8: Post-Design Services**

- 8.1 Bid and Construction Phase Services as requested by the Town that may include RFI review, shop drawing review, plan addendums, construction observation, meetings and coordination, review of as-built plans, review of testing results or other items requested by the Town.

**The Town will provide the following:**

1. GIS data.
2. Record drawings of the area.



Town of Paradise Valley  
52nd Street Improvements - Tomahawk Road to Orchid Lane

	Principal	Project Manager	Project Engineer	Project Designer	Survey Manager	Survey Tech.	2 Person Field Crew	TOTAL	LABOR COST
	\$175	\$125.00	\$110.00	\$75.00	\$125.00	\$100.00	\$125.00		
<b>FIELD SURVEY</b>									
<b>Data Gathering and Research</b>									
Data Collection of Survey Control						1		1	\$100.00
Utility Research & Blue Stake Coordination			2	1				3	\$295.00
Sub-Total =	0	0	2	1	0	1	0	4	\$395.00
<b>Field Survey</b>									
Establish Control					1	1	2	4	\$475.00
Ground Survey of 52nd Street & Four Side Streets (1500' + 400')					1	1	16	18	\$2,225.00
Develop & Compile Planimetrics in Base Map @ 1"=20'		1			1	6		8	\$850.00
Sub-Total =	0	1	0	0	3	8	18	22	\$3,550.00
SUBTOTAL	0	1	2	1	3	9	18	26	\$3,945.00
	\$0	\$125	\$220	\$75	\$375	\$900	\$2,250	\$3,945	
<b>30% PLANS</b>									
<b>30% Roadway Plans</b>									
Develop Utility Coverages In Base File			3					3	\$330.00
30% Design of Sidewalk, C & G (2 sheets P & P)	1	1	12	8				22	\$2,220.00
Quantity "Take-Off" & Cost Estimate (Coordinate w/ Markham)		1	1						\$235.00
Sub-Total =	1	2	16	8	0	0	0	22	\$2,785.00
<b>Meetings and Coordination</b>									
Kick-off Meeting (1 Meeting @ TPV)	2	2						4	\$600.00
30% Design Review Meeting With TPV (1 Meeting)	2	2						4	\$600.00
Primary Stake Holder Meeting (4 individual Meetings)			8					8	\$1,000.00
Sub-Total =	4	12	0	0	0	0	0	12	\$2,200.00
SUBTOTAL	5	14	16	8	0	0	0	34	\$4,985.00
	\$875	\$1,750	\$1,760	\$600	\$0	\$0	\$0	\$4,985	
<b>90% PLANS</b>									
<b>90% Roadway Plans</b>									
90% Design of Sidewalk, C & G with Landscaping (2 sheets P & P)		1	10	4				15	\$1,525.00
Detail Sheet (Typical Section, Storm Drain Lateral, Drainage)	1	2	4	2					\$1,015.00
Quantity "Take-Off" & Cost Estimate (Coordinate w/ Markham)		1	1						\$235.00
Striping Plan		1	8						\$1,005.00
Quality Control/Quality Assurance			4					4	\$440.00
Sub-Total =	1	5	27	6	0	0	0	19	\$4,220.00
<b>90% Landscaping Plans</b>									
90% Design Landscaping (1 sheet double) + Standard Details Sheet	0.5	1	2	2				5.5	\$582.50
Subconsultant - Landscape Architect			10						\$1,100.00
Sub-Total =	0.5	1	12	2	0	0	0	5.5	\$1,682.50
<b>Meetings and Coordination</b>									
90% Review Meeting With TPV (1 Meeting)	2	2						4	\$600.00
Sub-Total =	2	2	0	0	0	0	0	4	\$600.00
SUBTOTAL	3.5	8	39	8	0	0	0	28.5	\$6,502.50
	\$612.5	\$1,000	\$4,290	\$600	\$0	\$0	\$0	\$6,502.5	
<b>FINAL CONSTRUCTION PLANS</b>									
<b>Final Roadway Plans</b>									
Final Design of Sidewalk, C & G with Landscaping (2 sheets P & P)	1	1	6	4				12	\$1,260.00
Detail Sheet (Typical Section, Storm Drain Lateral, Drainage)			2					2	\$220.00
Quantity "Take-Off" & Cost Estimate (Coordinate w/ Markham)	1		1					2	\$285.00
Striping Plans			0.5					0.5	\$55.00
Quality Control/Quality Assurance		1	1					2	\$235.00
Sub-Total =	2	2	10.5	4	0	0	0	18.5	\$2,055.00
<b>Final Landscaping Plans</b>									
Final Design Landscaping (1 sheet double) + Standard Details Sheet	1	1	1					3	\$410.00
Subconsultant - Landscape Architect			2					2	\$220.00
Sub-Total =	1	1	3	0	0	0	0	3	\$630.00
SUBTOTAL	3	3	13.5	4	0	0	0	21.5	\$2,685.00
	\$525.0	\$375	\$1,485	\$300	\$0	\$0	\$0	\$2,685.0	



1/13/2016

Town of Paradise Valley  
52nd Street Improvements - Tomahawk Road to Orchid Lane

	Principal	Project Manager	Project Engineer	Project Designer	Survey Manager	Survey Tech.	2 Person Field Crew	TOTAL	LABOR COST
<b>DESIGN FEE TOTAL</b>	\$175	\$125.00	\$110.00	\$75.00	\$125.00	\$100.00	\$125.00		\$18,117.50
<b>CONSTRUCTION STAKING &amp; AS-BUILTS</b>									
<b>Construction Staking</b>									
Stake Curb & Gutter + Sidewalk (2-trips)		0.5		4	1	1	12	18.5	\$2,087.50
Stake Driveway Entrances (1-trip)		0.5		1	1		6	8.5	\$1,012.50
Sub-Total =	0	1	0	5	2	1	18	27	\$3,100.00
<b>As-Builts</b>									
As-Built Roadway		1	1	4	1	8	6	21	\$2,210.00
Sub-Total =	0	1	1	4	1	8	6	21	\$2,210.00
SUBTOTAL	0	2	1	9	3	9	24	48	\$5,310.00
	\$0	\$250	\$110	\$675	\$375	\$900	\$3,000	\$5,310	
<b>POST DESIGN SERVICES</b>									
<b>Construction Administration &amp; Post Design Services</b>									
RFI Allowance	1	12	4	4				21	\$2,415.00
Sub-Total =	1	12	4	4	0	0	0	21	\$2,415.00
SUBTOTAL	1	12	4	4	0	0	0	21	\$2,415.00
	\$175	\$1,500	\$440	\$300	\$0	\$0	\$0	\$2,415	
<b>POST-DESIGN FEE TOTAL</b>									\$7,725.00
<b>TOTAL ENGINEERING, SURVEY &amp; CONSTRUCTION STAKING FEES</b>									\$25,842.50
<b>REIMBURSABLES</b>									\$400.00
<b>TOTAL FEE INCLUDING REIMBURSIBLES</b>									\$26,242.50