



**LAKE HAVASU CITY
LAKE HAVASU AVENUE RECONSTRUCTION
MESQUITE AVENUE TO SWANSON AVENUE
CITY PROJECT NO. ST3270**

SCOPE OF SERVICES

July 8, 2016

The Project Scope of Work is generally described as follows:

This project consists of reconstruction of approximately 1,350 feet of Lake Havasu Avenue from just south of Swanson Avenue to just north of Mesquite Avenue. The proposed improvements will consist of:

- Full pavement replacement for the entire project limits, including the replacement of the concrete decorative intersections and crosswalks
- Roadway widening to accommodate a new raised median along Lake Havasu Avenue and evaluating modifications to existing driveways such as reducing driveway widths
 - A traffic analysis will be prepared analyzing current traffic data including traffic volumes, crash data, and turning movements
 - An alternative analysis will be prepared for potential varied raised median widths that provides the City with information to assist in the selection of a recommended alternative for final design
- Americans with Disabilities Act (ADA) improvements including sidewalk ramp replacements, driveway reconstruction, and replacement of the existing decorative sidewalk
- Traffic signal modifications at the Lake Havasu Avenue intersections at Swanson Avenue, McCulloch Boulevard, and Mesquite Avenue, including transition to cameras instead of traffic loops
- Signing and pavement marking
- Potentially replacing existing City water and sewer pending evaluation of these facilities

The design will be provided in two phases: **Phase 1 – Preliminary Design** and **Phase 2 – Final Construction Documents**:

- **Phase 1** will consist of performing data collection, control/topographic survey, determination of existing right-of-way, traffic analysis, geotechnical investigations, developing an existing utility base file, condition assessment of existing City-owned water and sewer infrastructure, initial utility coordination, and roadway/median alternatives evaluation including preliminary construction costs to recommend proposed improvements for final design.
- **Phase 2** will consist of developing final construction documents. Design submittals for final construction documents will consist of the 30%, (Grade & Alignment), 60%

(Preliminary), 90% (Pre-Final), and 100% (Final/Sealed). Each submittal will consist of electronic PDFs of the submittal documents, including half-size (11x17) and full-size (22x34) PDFs of the plan set.

- The 30% (Grade & Alignment) Submittal will consist of the following deliverables:
 - Grade & Alignment Plan Set
 - Grade & Alignment Quantities & Opinion of Probable Costs
- The 60% (Preliminary) Submittal will consists of the following deliverables:
 - Draft Drainage Design Memorandum
 - Preliminary Plan Set
 - Preliminary Quantities & Opinion of Probable Costs
- The 90% (Pre-Final) Submittal will consist of the following deliverables:
 - Final Drainage Design Memorandum
 - Pre-Final Plan Set
 - Pre-Final Quantities & Opinion of Probable Costs
 - Pre-Final Technical Specifications
- The 100% (Final) Submittal will consist of final versions of the documents listed for the Pre-Final Submittal.

In addition to design conformance to state, county and city standards, Downtown Standards developed as part of the PARA Implementation project will also be followed.

PHASE 1 - PRELIMINARY DESIGN

Task 1. – Data Collection

- a. The Consultant will research and evaluate existing City, County, and private utility information (e.g. as-builts, quarter section maps, GIS) regarding existing facilities such as roadway, drainage, traffic, and utilities. The City will provide available as-builts and other related existing data including right-of-way tract maps.
- b. The Consultant will request an Arizona Blue Stake ticket to identify existing utilities within the project limits and request existing utility information.

Task 2. – Coordinate Control, Topo Survey & Right-of-Way

- a. The Consultant will prepare a survey request and coordinate with the survey subconsultant for control and topographic survey services.
- b. The Consultant will review and update the CAD files for control and topographic survey data as well as right-of-way information provided by the survey subconsultant.

Task 3. – Traffic Analysis & Roadway/Median Alternatives Evaluation

- a. The Consultant will collect traffic volume data at each study intersection. Peak-hour turning movement counts will be collected. 24-Hour bi-directional daily traffic counts will be collected at 2 locations on Lake Havasu Avenue.
- b. The Consultant will analyze the traffic data to determine intersection lane requirements: turn lanes, through lanes, and turn lane storage. Intersection LOS will be calculated.
- c. The Consultant will collect and analyze available crash data. Crash data will be analyzed to determine number of crashes that could be mitigated through provision of a median island. Crash modification factors, crash reduction factors, and the anticipated benefits (in terms of economic benefit of crash reduction) to median island construction will be calculated. This will provide information to support construction of the raised median during discussions with the public and property owners.
- d. The Consultant will conduct a review of business access to ensure that each affected parcel within the project limits is provided adequate business access. This information will be used to facilitate discussions with adjacent property owners.
- e. The Consultant will document the above activities in a Traffic Memorandum.
- f. Upon completing the traffic analysis, the Consultant will prepare up to three new median width alternatives, including the impacts to the outside curb widening for the City's review and final recommendations for final design. Intersection improvements at McCulloch Boulevard, Swanson Avenue and Mesquite Avenue will be included in the alternative analysis. Alternatives will be presented in a pro/con matrix evaluating in terms of cost, safety and maintainability.

Task 4. – Coordinate Geotech Investigations

- a. The Consultant will coordinate with geotechnical subconsultant for the geotechnical investigations and utilize the data to develop preliminary construction costs for pavement rehabilitation alternatives.

Task 5. – Existing Utility Base File

- a. The Consultant will develop an existing utility base file in AutoCAD of City and private utilities located within the project limits based on a combination of existing utility as-builts, topo survey, and field investigations.

Task 6. – Evaluation of Existing City Owned Utilities

- a. The Consultant will review available record drawings for the existing City owned water and sewer facilities located within the project limits.
- b. The Consultant will provide sewer manhole, sewer pipeline and storm drain inspection services. There scope and fee for these services are located in Appendix F.
- c. The Consultant will evaluate the available as-builts and inspection data and assess the condition, age and material of existing City owned utilities (water and sanitary sewer) and provide recommendations.
- d. If determined that replacement of these City owned utilities are required, the Consultant will provide preliminary construction costs for the City.

PHASE 2 – FINAL CONSTRUCTION DOCUMENTS**Task 7. – Utility Coordination**

- a. The Consultant will be responsible for contacting and coordinating with utility companies in the area and informing them of the design plans for the project.
- b. The Consultant will prepare utility clearance letters to send to the utility companies in the area. Signed clearance letters will be obtained and provided to the City if requested.
- c. The Consultant will work with the utility companies to identify any potential utility conflicts and will communicate these conflicts with the City.
- d. Provide 60%, 90% and 100% plans to all local utility companies for review and concurrence.
- e. The Consultant will attend and lead three utility coordination meetings.

Task 8. – Roadway Design

- a. The Consultant will design approximately 1,350 feet of roadway improvements along Lake Havasu Avenue from just south of Swanson Avenue to just north of Mesquite Avenue. Roadway improvements include adding a new raised median, widening the outside curb along Lake Havasu Avenue, associated sidewalk and driveway improvements, constructing ADA improvements and demolition/removal throughout the project limits.
- b. The Consultant will establish a roadway construction centerline based on existing survey monuments.
- c. The Consultant will prepare driveway detail sheets in half plan/profile format with 2 driveways per sheet. The project limits currently have 14 existing driveways.
- d. The Consultant will prepare roadway plans at a 20-scale. The following sheet list is anticipated for the final construction documents:
 - Cover Sheet (1 Sheet)
 - Legend & Notes (1 Sheet)
 - Typical Sections (2 Sheets)
 - Miscellaneous Details Sheet (2 Sheets)
 - Geometric Control (1 Sheet)
 - Paving Plan & Profile (20 Scale) (4 Sheets)
 - Driveway Plan & Profile (2 Driveways per Sheet) (20 Scale) (7 Sheets)
- f. The Consultant will prepare a 3D proposed roadway surface in AutoCAD Civil 3D and develop cut and fill lines as well as earthwork quantities.

Task 9. – Drainage Design

- a. The Consultant will evaluate existing catch basins due to the roadway improvements. This may include the relocation and/or resizing of catch basins. There are approximately eight catch basins located in the project limits that will be relocated for the roadway widening. The evaluation will include a pavement spread analysis to meet the Mohave County drainage requirements.
- b. No offsite analysis will be completed with this project. No new storm drain trunk line will be constructed with this project.
- c. The Consultant will prepare a Drainage Design Memorandum to document the spread analysis for the roadway widening. A Draft Drainage Design Memorandum will be submitted with the 60% Submittal. The Consultant will respond to one round of comments for the memorandum. A Final Drainage Design Memorandum will be submitted with the 90% Submittal.
- d. Catch basin relocations will be shown on the Paving Plan and Profile Sheets. The Consultant will prepare one lateral profile sheet for the catch basin relocations (1 Sheet).

Task 10. – Signing/Pavement Marking Design and Construction Sequencing Plans

- a. The Consultant will prepare signing and pavement marking plans along Lake Havasu Avenue from just south of Swanson Avenue to just north of Mesquite Avenue. It is assumed the signing and pavement marking design will be in accordance with MUTCD and MAG standards.
- b. New Wayfinding signs to be installed by separate project will be incorporated into the overall signing/marketing plans.
- c. The Consultant will prepare signing and marking plans at a 40-scale. The following sheet list is anticipated for the final construction documents:
 - i. Signing and Marking General Notes Sheet (1 Sheet)
 - ii. Signing and Marking Plan Sheet (1 Sheet)
- d. The Consultant will prepare construction sequencing plans for the project.
- e. It is anticipated that this project would be constructed in several different phases.
- g. The Consultant will coordinate with City staff prior to preparing the construction sequencing plans for the project (5 Sheets).

Task 11. – Traffic Signal Design

- a. The Consultant will prepare traffic signal design plans at the Lake Havasu Avenue intersections at Swanson Avenue, McCulloch Boulevard, and Mesquite Avenue in accordance with the MUTCD.
- b. A site visit will be performed to document to the extent possible the equipment and conditions related to the existing traffic signals, traffic control equipment, existing underground conduit, etc.
- c. The Consultant will prepare the traffic signal plans at 20-scale for the three intersections described above. The Signal Design Plans will include the following sheets:
 - i. Removal sheet of existing traffic signal equipment (3 Sheets)
 - ii. General Signal Layout Sheet with pole locations, conduit runs, and pull boxes (3 Sheets)
 - iii. Pole schedule with pole type, mast arm length, signal heads, mounts pedestrian heads, luminaire type, and pedestrian push buttons (3 Sheets)
 - iv. Conductor Schedule with wire size, conduit size and phasing (3 Sheets)
 - v. Traffic Signal Quantity and Detail Sheet including Phasing Diagram, Cameras and Wiring Diagram (3 Sheets)

Task 12. – Pedestrian Lighting Design

- a. The Consultant will develop pedestrian lighting plans for Lake Havasu Avenue from Swanson to Mesquite.
- b. A site visit will be performed to document to the extent possible the existing equipment and conditions related to the pedestrian lighting poles, existing electrical point of service, existing underground conduit, etc.
- c. The Consultant will prepare pedestrian lighting plans at 40-scale and include the following sheets:
 - Lighting general notes sheet with legend and abbreviations list. (1 sheet)
 - Lighting plan sheets with light pole locations, conduit, conductors, pull box system. (2 sheets)
 - Lighting detail sheets will include a new metered service, conduit and conductor schedule, trench and pull box details, one-line diagram, lighting control, and panel schedule. (2 sheets)
- d. The Consultant will perform load calculations, identify proposed service address to be used, and prepare draft service request letter for Lake Havasu City to send to Utility Company.
- e. It is assumed that the City will provide the Consultant with the desired pedestrian lighting pole and light fixture to be utilized.
- f. It is assumed that pole locations will be based on a combination of standard spacing per City Standards and spacing based on the PARA Implementation Study. No photometric calculations will be required.
- g. The Consultant will work with the City to determine the details of the existing poles for the Consultant to include in the lighting plans. It is understood that the City may not have this information which would require the Consultant to contact suppliers or utilize a detail similar to existing.
- h. It is assumed that street lighting is not required and any street lighting design is not included in this scope of work.

Task 13. – Landscape and Landscape Irrigation Restoration

- a. The Consultant will visit the site to inventory and locate existing conditions including:
 - Plant material
 - Site furnishings
 - Irrigation equipment

We will gather information at all tie in points where this project meets existing conditions. We will meet with City staff including maintenance department to understand current standards, goals, and desired equipment.

- b. The Consultant will prepare landscape and irrigation technical specifications detailing the restoration of landscape materials and landscape irrigation facilities. Landscape and irrigation construction plans are not included in this proposal.

Task 14. – Project Estimate and Specifications

- a. A list of anticipated quantities will be prepared and submitted at each design stage.
 - Quantities will be presented on the plan sheets and also in a separate quantities spreadsheet using custom bid items based on City item descriptions.
 - An opinion of probable cost will be provided for these quantities.
- a. Technical special provisions will be prepared for the 60%, 90%, and Final submittals. The specifications will be prepared utilizing City format.

Task 15. – Project Management

- a. Project management includes contract management, invoicing, project schedule development, internal meetings with staff, Quality Control/Quality Assurance, and CADD maintenance.

Task 16. - Meetings

- a. The Consultant will attend the following meetings as a part of this project:
 - Kickoff Design Meeting
 - Traffic/Alternative Analysis/Utility Assessment Meeting (1 total)
 - Plan Review Meetings (3 meetings) (one meeting per plan submittal (3 total))
 - Stakeholder Meetings (2 total)
 - Public Meeting (1 total)
- b. Design progress meetings (excludes stakeholder and public meeting) are assumed to be attended by the Project Manager in the City's office and any technical support will participate by teleconference.
- c. The Consultant will be responsible for preparing meeting agendas, exhibits, and notes.
- d. Field reviews are assumed to be conducted on the same days as meetings described above.
- e. Any meetings beyond those listed above will be considered additional services.
- f. The Consultant will prepare a summary of comments received following each submittal. These comments will be addressed and responses will be provided

Appendix A includes the detailed fee breakdown for all tasks.

Appendix B is the proposed project schedule based on a contract notice-to-proceed date of July 26, 2016.

SUBCONSULTANT TASKS

Task 17. – Topo Survey & Right-of-Way

- a. A survey subconsultant will be utilized for control, topographic survey and right-of-way services. Their scope and fee for these services are located in **Appendix C**.

Task 18. – Traffic Counts

- a. A traffic subconsultant will provide the traffic data counts. Their scope and fee for these services are located in **Appendix D**.

Task 19. – Geotechnical Services

- a. A geotechnical subconsultant will provide geotechnical investigations services. Their scope and fee for these services are located in **Appendix E**.

Task 20. - Sewer and Storm Drain Inspection Services

- a. A CCTV subconsultant will provide CCTV inspection of the existing sewer within the project limits. Their scope and fee for these services are located in **Appendix F**.

Task 21. – Public Involvement Services

- a. A public involvement subconsultant will provide public involvement assistance services. Their scope and fee for these services are located in **Appendix G**.

Task 22. – City Owned Water & Sewer Design (Allowance)

- a. An allowance has been included in the event that as a recommendation of the City owned water and sewer condition assessment (Task 6) that there are existing water and sewer lines that require replacement or sewer manhole rehabilitation.
- b. This allowance includes the design of both water and sewer facilities located within the project limits.

Task 23. – Utility Potholing (Allowance)

- a. An allowance of \$16,000 is included to address potential utility potholes required for final design. This allowance will generally cover anywhere from 20 to 25 potholes, depending on the location of the utility pothole (within travel lanes of Lake Havasu Avenue or outside pavement) and the amount of traffic control

Exclusions

The following items/services are not included in this scope of work and fee proposal. If these items/services are determined to be required, a separate agreement by contract amendment or new contract shall be coordinated between Lake Havasu City and the Consultant.

- Construction phase services are not included.
- Street light design is not included.
- Landscape and irrigation construction plans are not included.

Appendix A
Detailed Fee Summary

DERIVATION OF COST PROPOSAL SUMMARY

(Figures Rounded To The Nearest \$1)

KIMLEY-HORN DESIGN BASE FEE

CLASSIFICATION	PERSON HOURS	BILLING RATE/HOUR	TOTAL
Senior Project Manager	-	\$ 220.00	\$ -
Project Manager	161	\$ 195.00	\$ 31,395
Sr. Project Engr	200	\$ 179.00	\$ 35,800
Project Engr	364	\$ 144.00	\$ 52,416
Engr/Designer	419	\$ 106.00	\$ 44,414
Technician/Drafter	383	\$ 91.00	\$ 34,853
Administrative	34	\$ 73.00	\$ 2,482
	1,561	Hours	

Subtotal Kimley-Horn Design Base Fee

\$ 201,360

ESTIMATED OUTSIDE SERVICES AND CONSULTANTS

Firm	Cost	Compensation Method
Survey & Right-of-Way	\$ 21,340	
Traffic Counts	\$ 3,490	
Geotechnical	\$ 7,500	
Sewer/Storm Investigation	\$ 9,660	
Public Involvement	\$ 19,010	

Subtotal Estimated Outside Services

\$ 61,000

ESTIMATED DIRECT EXPENSES

Miscellaneous Expenses	\$ 2,165
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Subtotal Estimated Expenses

\$ 2,165

ALLOWANCES

Water and Sewer Design	\$ 18,560
Potholing	\$ 16,000

Subtotal Allowances

\$ 34,560

TOTAL PROJECT COST

\$ 299,085


 Consultant Firm Signature

7/8/16
 Date

Lake Havasu City
Lake Havasu Avenue Reconstruction:
Mesquite Avenue to Swanson Avenue
Fee Proposal

		PM	Sr. Engr.	PE/Prof	Engr/Design	Tech	Admin	Totals
TASK DESCRIPTION	SUBTOTAL	\$ 195.00	\$ 179.00	\$ 144.00	\$ 106.00	\$ 91.00	\$ 73.00	
1. Data Collection	1,352.00	0	0	0	10	0	4	14
As-Built Research	782.00				6		2	8
AZ Blue Stake Request & Request Utility Mapping	570.00				4		2	6
2. Coordinate Control, Survey & R/W	2,350.00	-	0	10	0	10	-	20
Coordinate with Survey Subconsultant	576.00			4				4
Review Topo/Control Base File	1,122.00			4		6		10
Review Right-of-Way Base File	652.00			2		4		6
3. Traffic Analysis & Roadway/Median Alternatives Evaluation	14,412.00	12	8	52	16	16	-	104
Data Collection	627.00	1		3				4
Traffic and Crash Analysis	3,609.00	3		21				24
Business Access Review	966.00	2		4				6
Traffic Memorandum	2,118.00	2		12				14
Evaluate Roadway/Median Alternatives	7,092.00	4	8	12	16	16		56
4. Coordinate Geotechnical Investigations	576.00	0	0	4	0	0	-	4
Coordinate with Geotech Subconsultant	576.00			4				4
5. Existing Utility Base File	2,168.00	0	0	10	-	8	-	18
Create Existing Utility Base File	1,592.00			6		8		14
Field Verification of Existing Utilities	576.00			4				4
6. Evaluation of Existing City Owned Utilities	6,383.00	-	25	0	18	-	-	43
Review As-Built	782.00		2		4			6
Field Review	1,790.00		10					10
Inspection Coordination & Evaluation	2,671.00		9		10			19
Cost Evaluation & Recommendations	1,140.00		4		4			8
7. Utility Coordination	10,340.00	14	0	36	16	-	10	76
Develop Pothole List & Coordination	864.00			6				6
Utility Conflict Review, Coordination & Clearance Letters	7,442.00	8		24	16		10	58
Utility Coordination Meetings (3 Meetings)	2,034.00	6		6				12
8. Roadway Design	49,569.00	19	42	92	108	150	-	411
Cover Sheet	834.00			2		6		8
Legend & Notes Sheet	834.00			2		6		8
Typical Sections Sheets	3,698.00	2	4	6	6	12		30
Miscellaneous Details Sheets	4,986.00	2	4	8	12	16		42
Geometric Control Sheet	1,695.00		1	4	2	8		15
Paving Plan & Profile Sheets	21,618.00	9	18	36	54	63		180
Driveway Plan & Profile Sheets	13,460.00	6	11	22	34	39		112
3D Model & Earthwork	2,444.00		4	12				16
9. Drainage Design	13,982.00	-	-	36	83	-	-	119
Catch Basin Evaluation (Hydrology & Hydraulics)	3,272.00			8	20			28
Draft Drainage Design Memorandum	4,696.00			12	28			40
Final Drainage Design Memorandum	1,424.00			4	8			12
Catch Basin Relocations Design (Roadway Plans)	2,136.00			6	12			18
Lateral Profile Sheet	2,454.00			6	15			21

Lake Havasu City
Lake Havasu Avenue Reconstruction:
Mesquite Avenue to Swanson Avenue
Fee Proposal

		PM	Sr. Engr.	PE/Prof	Engr/Design	Tech	Admin	Totals
TASK DESCRIPTION	SUBTOTAL	\$ 195.00	\$ 179.00	\$ 144.00	\$ 106.00	\$ 91.00	\$ 73.00	
10. Signing/Pavement Marking & Construction Sequencing	13,080.00	5	7	20	34	48	-	114
Signing and Marking Sheets	6,340.00	1	3	12	16	24		56
Construction Sequencing Sheets	6,740.00	4	4	8	18	24		58
11. Traffic Signal Design	29,883.00	3	27	48	60	123	-	261
LHA/Swanson Ave Removal Sheet	922.00		1	2		5		8
LHA/Swanson Ave Signal Layout Sheet	5,807.00	1	4	10	12	24		51
LHA/Swanson Ave Pole Schedule/Conductor Schedule Sheet	3,232.00		4	4	8	12		28
LHA/McCulloch Blvd Removal Sheet	922.00		1	2		5		8
LHA/McCulloch Blvd Signal Layout Sheet	5,807.00	1	4	10	12	24		51
LHA/McCulloch Blvd Pole Schedule/Conductor Schedule Sheet	3,232.00		4	4	8	12		28
LHA/Mesquite Ave Removal Sheet	922.00		1	2		5		8
LHA/Mesquite Ave Signal Layout Sheet	5,807.00	1	4	10	12	24		51
LHA/Mesquite Ave Pole Schedule/Conductor Schedule Sheet	3,232.00		4	4	8	12		28
12. Pedestrian Lighting Design	7,427.00	4	17	-	34	-	-	55
Lighting Plans	5,277.00	3	12		24			39
Utility Coordination	944.00	1	3		2			6
Lighting Details	1,206.00		2		8			10
13. Landscape and Landscape Irrigation Restoration	4,572.00	-	12	8	12	-	-	32
Landscape, Irrigation and Site Furnishing Inventory	1,152.00			8				8
Landscape & Irrigation Technical Specifications	3,420.00		12		12			24
14. Project Estimate and Specifications	13,496.00	4	16	36	20	28	-	104
Quantities/Estimate	7,688.00		4	16	20	28		68
Specifications	5,808.00	4	12	20				36
15. Project Management	13,414.00	36	18	6	8	-	20	88
Contract Management	2,144.00	8					8	16
Invoicing	876.00						12	12
Project Schedule	780.00	4						4
Internal Coordination	2,034.00	6		6				12
QA/QC	6,732.00	18	18					36
CADD Maintenance	848.00				8			8
16. Meetings	18,356.00	64	28	6	-	-	-	98
Kickoff Design Meeting	1,560.00	8						8
Traffic/Alternative Analysis/Utility Assessment Meeting	2,276.00	8	4					12
Plan Review Meetings (3 Mtgs)	5,544.00	24		6				30
Stakeholder Meetings (2 Mtgs)	5,984.00	16	16					32
Public Meeting	2,992.00	8	8					16
SUBTOTAL DIRECT LABOR	201,360.00	161	200	364	419	383	34	1561

Lake Havasu City
Lake Havasu Avenue Reconstruction:
Mesquite Avenue to Swanson Avenue
Fee Proposal

		PM	Sr. Engr.	PE/Prof	Engr/Design	Tech	Admin	Totals
TASK DESCRIPTION	SUBTOTAL	\$ 195.00	\$ 179.00	\$ 144.00	\$ 106.00	\$ 91.00	\$ 73.00	
SUBCONSULTANTS TASKS								
17. Topo Survey and Right-of-Way (APL)	21,340.00							
Control, Topo Survey, & Existing Right-of-Way	15,600.00							
Legal Descriptions & Exhibits	2,500.00							
Supplemental Survey	3,240.00							
18. Traffic Counts (Field Data Services)	3,490.00							
Traffic Counts	3,490.00							
19. Geotechnical Services (Ninyo & Moore)	7,500.00							
Geotechnical Services	7,500.00							
20. Sewer Inspection Services (ProPipe)	9,660.00							
Sewer Inspection Services	9,660.00							
21. Public Information Services (MakPro)	19,010.00							
Public Information Services	19,010.00							
SUBTOTAL SUBCONSULTANT TASKS	61,000.00							
ALLOWANCES								
22. City Owned Water & Sewer Design (Allowance)	18,560.00							
Waterline Notes Sheet	810.00		3			3		
Waterline Detail Sheet	2,156.00		4	2	4	8		
Waterline Plan & Profile	6,314.00	2	6	10	15	20		
Sewer Notes Sheet	810.00		3			3		
Sewer Detail Sheet	2,156.00		4	2	4	8		
Sewer Plan & Profile	6,314.00	2	6	10	15	20		
23. Utility Potholing (Allowance)	16,000.00							
Utility Potholes	16,000.00							
SUBTOTAL ALLOWANCES TOTAL	34,560.00							
CONTRACT TOTAL	296,920.00							

Kimley»Horn

Contract No. TBD

Plotting

Miscellaneous Expenses

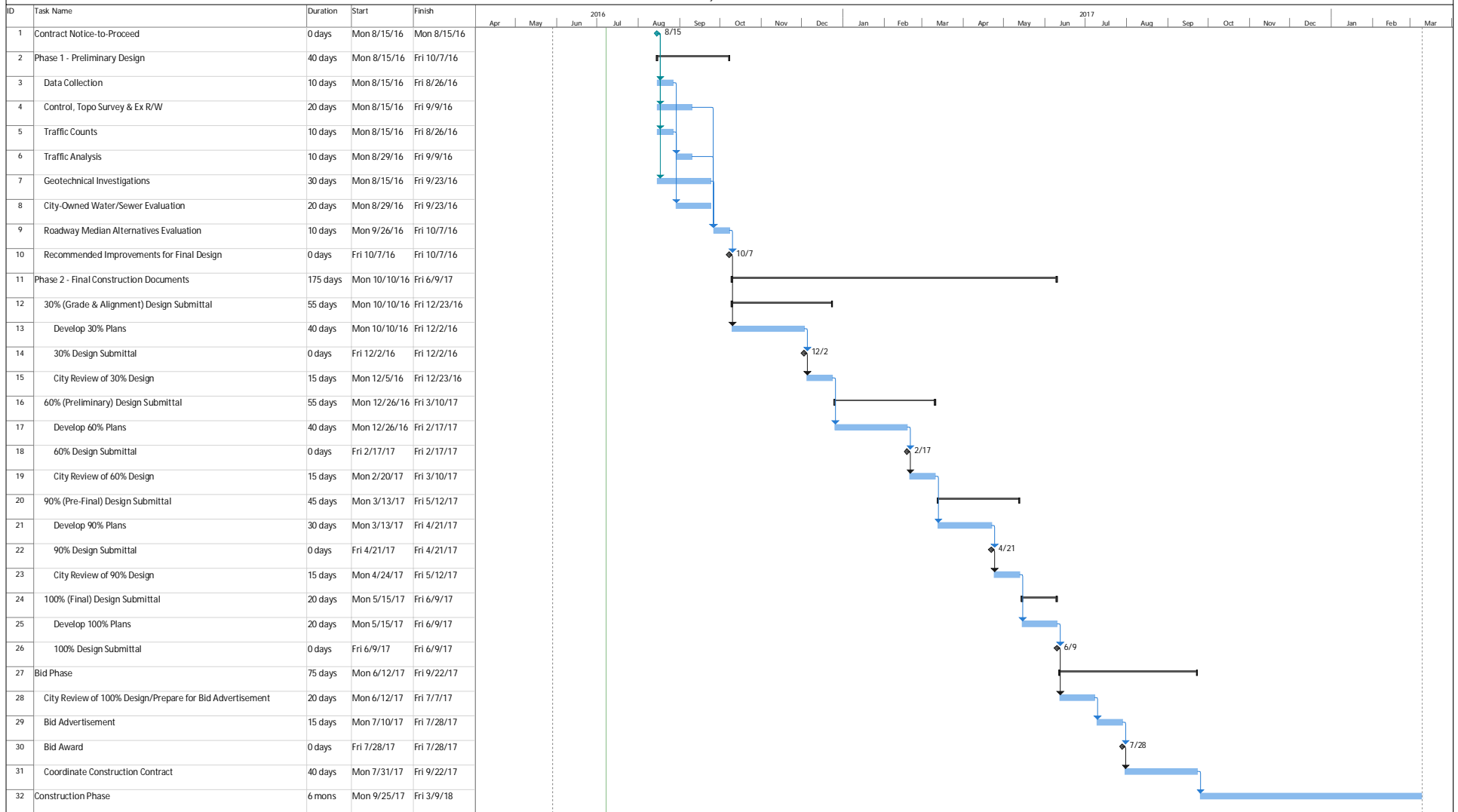
ESTIMATED OUTSIDE SERVICES & CONSULTANTS

TOTAL ESTIMATED EXPENSES

\$ 63,165

Appendix B
Project Schedule

Lake Havasu City
Lake Havasu Avenue Reconstruction
Mesquite Avenue to Swanson Avenue
City Project No. ST3270
Project Schedule



Appendix C
Topo Survey & Right-of-Way



500 Lake Havasu Ave. North, Suite C-100
Lake Havasu City, AZ 86403
(928) 505-2570
(928) 505-2599 fax

May 12, 2016

Kimley-Horn and Associates, Inc.
Chris Woolery
7740 N 16th Street, Suite 300
Phoenix, AZ 85020

Re: Lake Havasu Avenue Survey

Mr. Wooley,

With the project consisting of surveying the improvements on Lake Havasu Avenue between Mesquite Avenue and Swanson Avenue. We will extend the Survey up Mesquite Avenue, McCulloch Boulevard and Swanson Avenue 150 feet each direction.

Task 1

Project Control:

We will establish control along Lake Havasu Avenue that will aid in the construction phase.

Centerline Monumentation:

Locate and Control all the existing centerline Monuments in the project area. This will ensure that they can be re-established after the project is complete.

Right of Way Establishment:

Locate and Establish the Street Right of Way

Task 2

Field Survey of Improvements:

- A: As-built all improvements within the Public Right of Way and 10 foot minimum beyond.
- B: Locate all surface Utilities and dip Sewer Manholes, Water Valve Nuts and Storm Drains.
- C: Traffic Control and Flagmen will be used for all aspects of this Job. These are the busiest Intersections in Lake Havasu City.

Task 3

Mapping

- A: Research for recorded maps to establish Monument Line and Right of Way line.
- B: Drafting of field points to create an AutoCAD Improvement Plan.

Project Estimate: \$15,600

Supplemental Project Related Cost:

Legal Descriptions and Exhibits for Easement creation for possible additional Right of Way and Temporary Construction Easements.

Estimate roughly 10 legals and exhibits. \$2,500

Additional Survey needs that might rise during the design process.
Estimate 3 additional days. \$3,240

All data will be provided in Autocad 2014 in Arizona West State Plane coordinates and NAVD 88 elevations.

Thank you

Lee W. Johnson, L.S.
Accurate Professional Land Surveying, Inc.

Appendix D

Traffic Counts

Appendix E
Geotechnical Services

May 13, 2016
Proposal No. 12-00077

Mr. Chris Woolery
Kimley Horn & Associates, Inc.
425 Soledad, 4th Floor
San Antonio, Texas 78205

Subject: Proposal to Conduct Geotechnical Evaluation
Lake Havasu Avenue Improvements
Mesquite Avenue to Swanson Avenue
Lake Havasu City, Arizona

Dear Mr. Woolery:

Ninyo & Moore is pleased to submit this proposal to conduct a Geotechnical Evaluation for the above-mentioned project, in Lake Havasu City, Arizona (site). Ninyo & Moore has prepared the following scope of services and fee quotation based on your request and information provided by you.

SITE/PROJECT DESCRIPTION

The project site is located along Lake Havasu Avenue from Mesquite Avenue to Swanson Avenue, in Lake Havasu, Arizona a distance of about 1,200 linear feet. The site currently consists of a five-lane asphalt paved roadway, with concrete curbing. The project includes the removal of the existing pavement and replacement with either asphalt concrete or Portland cement concrete. In addition, new underground water/sewer lines may be incorporated into the design and construction of the project. These new water/sewer lines (if included) will extend less than 15 feet deep.

SCOPE OF SERVICES

The geotechnical scope of services we will perform for of the project is outlined below:

- Review available published and in-house geotechnical reports, topographic information, soil surveys, geologic literature, and aerial photographs of the project area.
- Obtain right of entry permission from the local agency located within the site alignment.
- Conduct a field trip to the site for geologic reconnaissance.
- Conduct a site visit to select and mark out the proposed boring locations.
- Contact Arizona811 to evaluate utility locations prior to drilling.
- Arrange for appropriate traffic control services to be used during the drilling activities.

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- Perform a geotechnical exploration, which will include the drilling of three soil borings using a truck-mounted drill rig equipped with hollow-stem augers. The borings will be spaced about 600 feet apart and will extend up to 15 feet deep. A Ninyo & Moore employee will collect ring samples and bulk samples for laboratory testing, and will be responsible for preparation of field boring logs.
 - Collect bulk and relatively-undisturbed soils samples in the borings for laboratory testing and analysis. Ninyo & Moore personnel will log the borings in general accordance with the Unified Soil Classification System (USCS) and American Society for Testing and Materials (ASTM) D 2488 by observing cuttings and samples. The relatively-undisturbed samples will be trimmed in the field, wrapped in plastic bags, and placed in moisture-tight cylindrical plastic containers. Bulk samples will also be placed in large plastic bags. The soil samples will be transported to a Ninyo & Moore laboratory for testing.
 - Backfill the boreholes with drilling spoils and patch the surface with asphalt cold patch material.
 - Perform laboratory testing that will evaluate the on-site soils characteristics for representative soil samples. The proposed laboratory tests will generally include in-situ density and moisture content, gradation, Atterberg limits, electrical resistivity, pH, and soluble sulfates and chlorides contents.
 - Prepare a geotechnical evaluation report to include logs of the exploratory borings and results of the laboratory testing. The report will include a cover letter sealed by a Professional Engineer licensed in the State of Arizona. The report will include the following:
 - Site vicinity map and boring plan map;
 - Description of work scope, laboratory, and field procedures;
 - Encountered subsurface soil and groundwater conditions;
 - General seismic characteristics in accordance with IBC (current edition);
 - Geologic hazards;
 - Excavation characteristics of on-site soils;
 - Earthwork factors;
 - Potential for re-use of on-site soils;
 - Bedding and backfill of utilities;
 - Recommendations for special soil conditions such as expansive, collapsible, or highly compressible soils;
 - Subgrade preparation measures;
 - Asphalt concrete pavement;
 - Portland cement concrete pavement;
 - Recommendations relative to site drainage; and
 - Discussion of soil corrosivity to steel and concrete.

ASSUMPTIONS

We have made the following assumptions in the preparation of this proposal:

- ADOT design standards do not need to be followed.
- The site is accessible and site access will be granted.
- The work can be accomplished using hollow-stem auger equipment operating at a normal rate of penetration.
- If refusal or groundwater is encountered we will terminate the drilling and notify your office.
- Some disturbance should be expected as a result of our field work.
- Ninyo & Moore will not need to obtain any permits or environmental clearance as a part of this project.

COMPENSATION

We propose to perform the geotechnical work scope described above for a lump sum fee of \$7,500 (Seven Thousand Five Hundred Dollars). Any additional services, not included in the aforementioned scope, will be charged on a time-and-materials basis in accordance with our current Schedule of Fees.

SCHEDULE

We are prepared to initiate this project immediately upon receiving your authorization to proceed. We anticipate issuing our geotechnical report within about five to six weeks from the date of authorization. Preliminary recommendations can be provided about one week after the fieldwork is done.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project.

Sincerely,
NINYO MOORE



Steven D. Nowaczyk, PE
Managing Principal Engineer

SDN/hmf

Distribution: (1) Addressee (Electronic Copy)

Appendix F

Sewer and Storm Drain Inspection Services

AZ Lic. ROC # 175953 (A-12)



Hoffman Southwest Corp. dba Professional
Pipe Services
4940 W Watkins St, Phoenix AZ 85040
O: 602 861 3944 | F: 602 861 1423
Kathy Hanson | khanson@hswcorp.com

Quote # AZ : 05312016-2

Page 1 of 1

PROPOSAL SUBMITTED TO: Kimley Horn	DATE 5/31/2016	PHONE 602-678-3440
STREET (Business address) 7740 N 16th St Suite 300	JOB / PROJECT NAME Panoramo	
CITY, STATE AND ZIP CODE Phoenix, AZ 85020	LOCATION Lake Havasu, AZ	
CONTACT NAME Robert Lyons	EMAIL robert.lyons@kimley-horn.com	

Item	DESCRIPTION	QTY	UNIT	PRICE	TOTAL
1	Pano 1300' of pipe & 2 manholes	1	LS	\$1,830.00	\$1,830.00
2	Pano 1300' of SD pipe	1	LS	\$1,830.00	\$1,830.00
3	Pano Mob (per trip)	1	LS	\$1,800.00	\$1,800.00
4	Cleaning (optional)	1	LS	\$2,100.00	\$2,100.00
5	Cleaning Mob (per trip)	1	LS	\$2,100.00	\$2,100.00
	If cleaning is requested, Kimley Horn would be				
	responsible for water access and disposal site.				
	If scope of work increases, daily rate could change				

GRAND TOTAL:

\$9,660.00

EXCLUSIONS (any qualifications to exclusions are in parenthesis)

1	Bypass pumping and operating pump stations
2	Environmental/ erosion control/ swppp
3	Permits, licenses and performance bonds
4	Excavation of any kind
5	Access- (Owner shall provide adequate access)
6	Additional mobilizations- (proposal is based upon 1 instance of mobilization for the above services)
7	Mechanical Cleaning or Cleaning beyond normal conditions- (Any cleaning services are for 2 to 3 passes with a jetter only)
8	Major Traffic Control
9	Disposal
10	Water (Owner or General Contractor shall supply onsite water)

WE PROPOSE hereby to furnish material and labor -- complete in accordance with above specifications, for the sum of:

Payment terms:

30 Days of Invoice

Dollars:

\$9,660.00

This proposal shall be incorporated into the service contract when

Pro Pipe is listed as a subcontractor.

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements are contingent upon strikes, accidents, or delays beyond our control. Owner to carry general liability, workman's compensation fund and other necessary insurance. Maximum allowable interest charge on overdue invoices.

Pro Pipe Authorized Signature:

This proposal may be withdrawn by us if not accepted within 30 days.

ACCEPTANCE OF PROPOSAL : The above prices, specifications and conditions are satisfactory and are hereby accepted.

You are authorized to do the work as specified. Requests for additional services beyond the above outlined scope will be submitted by written change order and payment thereof made accordingly.

Date

Customer Signature

Print name/Title

Appendix G
Public Involvement Services



MakPro Services, LLC
2036 N. Gentry • Mesa, AZ 85213

Office: 480-890-1927
Fax: 480-964-7555
Email: teresa@makprosvc.com

May 19, 2016

Mr. Chris Woolery
Kimley-Horn & Associates, Inc.
2266 S. Dobson Road, #200
Mesa, AZ 85202

Dear Chris:

MakPro Services, LLC (MakPro) is pleased to provide the following proposal for public involvement services for Lake Havasu City's Lake Havasu Avenue Project. Public involvement and outreach is an important element in large capital projects, and provides a link between the project and the community it impacts. In addition, it provides the effected community an opportunity to learn about and perhaps even understand the need for what will be occurring around them, and offers them avenues for further information and comments regarding the project. Many times this small link is all that is needed to help a project run more smoothly.

To restate my understanding, this proposal includes public involvement during the design phase only for the project and is based upon the information you provided from your discussions with Lake Havasu. Based on our discussion and the information you provided, the effort will include:

- Conduct site research to understand project stakeholders and compile key community contact information.
- Participate in a planning meeting (via teleconference) for the public meeting and stakeholder meetings to discuss meeting objectives, materials, logistics, invitation information and distribution boundaries.
- Preparation and planning for, participation in and documentation of one public meeting.
- Respond to inquiries and coordinate discussions with community, property owners, businesses or residents to provide information related to the project.
- Schedule, coordinate and attend up to two stakeholder meetings to discuss the project, and identify issues to be able to resolve those early on during the project.

I've detailed in the attached proposed cost estimate, the hours I believe are necessary to fulfill the tasks identified above; however, if I've missed or misunderstood any of the project scope, or if you'd like to customize this proposal in some other way, please let me know.

The total cost for the public involvement services for the tasks identified in this proposal and the attached proposed cost estimate **should not exceed \$19,010.00 total**. This proposed cost estimate assumes an hourly labor rate of \$120 per hour for principal and \$90 per hour for associate, and includes incidental local telephone calls, process design, meeting preparation and facilitation, and meeting materials and equipment. This estimate further includes costs related to travel and expenses (lodging and meals) for up to three trips to Lake Havasu with the thought that meetings or discussions other than the one public meeting, two stakeholder meetings (to be scheduled to take place in the same trip), and business visits for the public meeting can be accomplished via conference call. Also included in this estimate are reimbursable expenses related to printing and postage which include a 10% mark-up. Excluded from this estimate are formal written research reports except as specifically noted, mass document reproduction, meeting facilities, and any unusual out-of-pocket expenses requested by the sponsor.

This proposal assumes any displays, exhibits, engineering designs or details, required for public meetings or open houses will be provided by Lake Havasu City or Kimley-Horn. MakPro is not responsible for project signage or traffic signage. In addition, the estimate incorporates efficiencies from one task/activity to another, so removal of an activity may require an adjustment of hours in other activities. Changes of substance to this proposal during the project may affect the final cost.

Thank you for the opportunity to work with Kimley-Horn and Lake Havasu City. Should you have questions or need additional information regarding this proposal, please feel free to contact me at (480) 890-1927.

Sincerely,

Teresa Makinen

Proposed Cost Estimate

Public Involvement Services	Principal Hrs (\$120/hr)	Associate Hrs (\$90/hr)	Expenses	Total Fees
<u>Site & Stakeholder Orientation:</u> - Community and site research to identify key organizations/ stakeholders, contact info	2 hrs			\$240.00
<u>Public Meetings (1):</u> - Participate in planning meeting for the public meetings - Draft meeting invite, compile mailing list, prep for printing and distribution - Business visits to distribute meeting invites - Development of handout materials - Prep for meeting (materials/equip) - Conduct public meeting - Documentation for public meeting - Travel to/from project area (2 trips)	2 hrs 2 hrs 4 hrs 3 hrs 2 hrs 4 hrs 1 hrs 20 hrs	 4 hrs 4 hrs 1 hrs 2 hrs 4 hrs 2 hrs 20 hrs	 \$600 \$100 \$1,200	\$9,790
<u>Stakeholder Meetings (up to 2 / to be scheduled in one trip):</u> - Participate in advance discussion of stakeholder meetings - Draft meeting invite, compile mailing list, prep for printing and distribution - Personal contact with targeted meeting individuals to invite - Development of any meeting info - Prep for meeting (materials/equip) - Participate in stakeholder meetings - Travel to/from project area (1 trip)	1 hr 2 hrs 2 hrs 1 hr 2 hr 9 hrs 10 hrs	 4 hrs 1 hrs 2 hr 9 hrs 10 hrs	 \$300 \$100 \$600	\$6,580
<u>Community Contact:</u> - Contact with businesses, residents or property owners related to project. - Identification of community issues and resolution related to project.	20 hrs			\$2,400.00
Grand Total:	87 hrs	63 hrs	\$2,900.00	\$19,010.00