

CONTRACT DOCUMENTS

<u>City of Kingman Project Number</u> <u>ENG21-0001</u>

CITY OF KINGMAN EASTERN STREET IMPROVEMENTS PHASE 1

FEBRUARY 2023

KEN WATKINS Mayor

CHERISH SAMMELI Vice Mayor

CAMERON PATT

KEITH WALKER

SHAWN SAVAGE

SMILEY WARD

JAMIE SCOTT STEHLY

Council Members

RON FOGGIN City Manager

ROB OWEN Public Works Director

PHILLIP ALLRED, P.E. City Engineer

ANNIE MEREDITH City Clerk



City of Kingman, Engineering Division 310 North Fourth Street, Kingman, Arizona 86401 (928) 753-8122, Fax (928) 753-8118 www.cityofkingman.gov

TABLE OF CONTENTS

	TABLE OF CONTENTS2		
	SPECIAL NOTICE TO BIDDERS 4		
	ADVERTISEMENT TO BID 5		
	INVITATION TO BID 6		
INS	STRUCTIONS TO BIDDERS	8	
	INFORMATION FOR BIDDERS		
	CONTRACT DOCUMENTS	12	
	STANDARD SPECIFICATIONS AND STANDARD DETAILS	12	
	WORK UNDER THIS CONTRACT	12	
	LOCATION OF PROJECT	13	
	PROPOSAL PAMPHLET	13	
	CONTRACT AND BONDS	13	
	INTERPRETATION OF PLANS AND DOCUMENTS	14	
	ADDENDA	14	
	AWARD OR REJECTION OF BIDS	14	
	SPECIAL NOTICE	14	
	QUESTIONS ON PLANS AND SPECIFICATIONS	14	
	LISTING OF SUBCONTRACTORS	14	
	CITY BUSINESS LICENSE	15	
14.	RELOCATION AND/OR ADJUSTMENT OF EXISTING FACILITIES, SERVICES, AND	1.7	
1 7	ACCESS	15	
	INDEMNIFICATION	15	
	INSURANCE REQUIREMENTS	15	
	CONTRACTORS AFFIDAVIT REGARDING SETTLEMENT OF CLAIMS	18	
	SPECIAL NOTICE TO WATER LINE CONTRACTORS	18	
	NONPERFORMANCE OF WORK TASKS BY THE CONTRACTOR	19	
	CONSTRUCTION WATER	19	
	IMMIGRATION CONTROL ACT	19	
	COMPLIANCE WITH FEDERAL AND STATE LAWS	19	
	WORK SCHEDULE	20	
	UTILITIES	21	
	PERMITS	21	
	LIQUIDATED DAMAGES	21	
	PROJECT SCHEDULE	21	
	TRAFFIC CONTROL	21	
29.	FINAL INSPECTION AND ACCEPTANCE OF PROJECT	21	

GENERAL CONDITIONS SUPPLEMENT

1.	GENERAL	23
2.	SUBCONTRACTS	23
3.	PRECONSTRUCTION CONFERENCE	23
4.	PROJECT MEETINGS	24
5.	CONTRACTOR'S RESPONSIBILITY AND LIABILITY FOR SUBMITTALS	24
6.	CONSTRUCTION SCHEDULE	25
7.	SHOP DRAWINGS, SCHEDULES, AND SAMPLES	25
8.	MATERIALS LIST	26
9.	SUBMITTALS	26

10. MATERIAL AND EQUIPMENT SCHEDULES	27
11. MILL AND FACTORY TESTS	27
12. REINFORCING STEEL	27
13. QUALITY CONTROL	27
14. TRAFFIC CONTROL	27
15. TEMPORARY FACILITIES	29
16. TEMPORARY UTILITIES	29
17. STOCKPILE OF MATERIALS	31
18. EXCESS MATERIAL	31
19. SPECIAL CONTROLS	31
20. PROJECT CLOSEOUT	32
21. PROTECTION OF EXISTING UTILITIES	33
22. SURVEY CONTROL, POINTS AND MONUMENTS	33
23. PAYMENTS TO THE CONTRACTOR	33
24. SUSPENSION OF WORK	34
25. CONSTRUCTION SURVEYING, AND LAYOUT	34
26. STORM WATER CONSTRUCTION PERMIT	34
27. CHARACTER AND STATUS OF WORKMEN AND WORKMANSHIP	34

	SPECIAL PROVISIONS			
PART 000	INFORMATION	37		
PART 100	GENERAL CONDITIONS	38		
PART 200	EARTHWORK	41		
PART 300	STREETS AND RELATED WORK	42		
PART 400	RIGHT OF WAY AND TRAFFIC CONTROL	46		
PART 500	STRUCTURES	47		
PART 600	WATER, SEWER, STORM DRAIN AND IRRIGATION	49		
PART 900	TRAFFIC SIGNING, STRIPING, MARKING AND SIGNAL	51		
PROPOSAL AND FORMS 58				
BID BOND 7				
SUBCONTRACTORS AND MATERIALS SUPPLIERS LIST 7.				
NON-COLLUSION AFFIDAVIT 7				
CONTRACT AGREEMENT AND FORMS 75				
PAYMENT BOND 87				
PERFORMANCE BOND 88				
CONTRACTORS AFFIDAVIT REGARDING SETTLEMENT OF CLAIMS 89				
ASBESTOS-FREE FACILITY MATERIAL CERTIFICATION 9				
GEOTECHNICAL REPORT 92				

SPECIAL NOTICE TO BIDDERS

Bids must be submitted on the Proposal Form provided and be accompanied by an Unconditional Certified Check, Cashier's Check, or Bid Bond for not less than Ten Percent of the total bid, payable to the City of Kingman, Arizona.

The successful bidder will be required to execute the Standard Form of Contract for Construction within Ten calendar days after formal Award of Contract.

The successful bidder, simultaneously with the execution of the Contract, will be required to furnish a Payment Bond in an amount equal to One Hundred Percent of the Contract Price, a Performance Bond in an amount equal to One Hundred Percent of the Contract Price, and Certificates of Insurance.

Work shall be completed within <u>two hundred and eighty (280)</u> calendar days, beginning with the day following the starting date specified in the Notice to Proceed.

The right is hereby reserved to accept or reject any or all bids or parts thereto, to waive any informality in any proposal and reject the bids of any persons who have been delinquent or unfaithful to any contract with the City of Kingman.

ADVERTISEMENT FOR BIDS

ISSUED BY: THE CITY OF KINGMAN, 310 N. FOURTH ST., KINGMAN, ARIZONA ISSUE DATE: February 23, 2023

PUBLISH DATE: March 1, 2023

2ND PUBLISH DATE: March 5, 2023

TO: POTENTIAL BIDDERS

The City of Kingman will accept sealed Bids from qualified firms at the office of the City Clerk at 310 North Fourth Street, Kingman, AZ 86401, until 3:00 PM Local Time on **March 23, 2023** (**Thursday**). Bids will be opened and read aloud. Bids received after the deadline will be returned unopened.

Project Description: The project consists of reconstructing Eastern Street from Calumet Avenue to Clark Street, the construction of a new section of Eastern Street from Clark Street to a new direct connection to Airway Avenue and the relocation of the existing traffic signal at the intersection of Airway Avenue and Yavapai Street to the new intersection of Eastern Street and Airway Avenue. The work generally consists of roadway, drainage and traffic signal improvements including removal of existing pavement, earthwork, new pavement section, constructing curbing, sidewalks, catch basins, a five-barrel box culvert, headwalls, concrete drainage pipes and relocating the existing traffic signal along with other associated improvements.

Work shall be completed within 280 calendar days, beginning with the day following the starting date specified in the Notice to Proceed.

For additional information on plan and specification review locations and how to obtain plans and specifications, as well as additional bidding procedures contact:

The Assistant City Engineer, (928) 753-8134 or obtain bid documents at 220 N. Fourth Street, City of Kingman Engineering Department Office, Kingman, AZ 86401 or www.cityofkingman.gov.

Bids must be submitted on the Proposal Form provided and be accompanied by an Unconditional Certified Check, Cashier's Check or Bid Bond for not less than Ten Percent of the total bid, payable to the City of Kingman, Arizona.

The right is hereby reserved to accept or reject any or all bids or parts thereto, to waive any informality in any proposal and reject the bids of any persons who have been delinquent or unfaithful to any contract with the City of Kingman.

The City will conduct a non-mandatory Pre-Bid Conference via virtual means ("Zoom" link or similar) on **Thursday, March 9, 2023** beginning at 1:30 p.m. local time. Interested parties shall contact Phone: (928) 753-8122 or by e-mail at <u>afeskanich@cityofkingman.gov</u> to request a meeting link.

END OF ADVERTISEMENT FOR BIDS

INVITATION TO BID

The City of Kingman will accept sealed Bids from qualified firms at the office of the City Clerk at 310 North Fourth Street, Kingman, AZ 86401, until 3:00 PM Local Time on **March 23, 2023** (**Thursday**). Bids will be opened and read aloud. Bids received after the deadline will be returned unopened.

Project Description:

This project is located in Sections 8 of Township 21N, Range 16W of the Gila and Salt River Base and Meridian, Mohave County, Arizona. It is located along Eastern Street between Calumat Avenue and Airway Avenue within the City of Kingman, Arizona.

Project scope of work includes roadway, utility, drainage, removals and storm drain installations, as well as utility and municipal coordination. The proposed project will construct a direct connection between Eastern Street and Airway Avenue, reconstruct and widen the existing pavement, add vertical curb and sidewalk, improve drainage, and other related improvements. Drainage improvements will include new catch basins, storm drains, and new culverts.

Work shall be completed within 280 calendar days, beginning with the day following the starting date specified in the Notice to Proceed.

This project is funded entirely by HURF Exchange and City funding. No federal funding has been provided for this work. Davis-Bacon Wages and MBE participation requirements will not be in effect for the construction of this project. The successful proposer should be prepared to comply with all local, state and federal safety and environmental requirements.

Bid Documents may be obtained beginning February 27, 2023 from the following: City of Kingman Engineering Department, 220 N. 4th Street, Kingman, AZ 86401, Phone: (928) 753-8122 or by e-mail at <u>afeskanich@cityofkingman.gov</u>. The Bid Documents may also be obtained on the City's website at https://www.cityofkingman.gov/government/advanced-components/list-detail-pages/rfp-posts-list

Copies of the Bid Documents may be obtained upon receipt of a non-refundable fee in the amount of \$200.00 per set; limit two sets. There will be no charge for electronic copies of the bid documents. It is the prospective bidder's full responsibility to check the City's website at https://www.cityofkingman.gov/government/advanced-components/list-detail-pages/rfp-posts-list for addenda related to this procurement. The City will not be maintaining a plan holders list.

Refer to other bidding requirements described in the Instructions to Bidders Section of the Contract Documents.

Submit your offer on the Proposal form provided. Bidders may supplement this form as appropriate.

A bid security in the form of a certified check, cashier's check or bid bond in the amount of 10% of the total bid payable to the City Of Kingman shall accompany each proposal.

Your offer will be required to be submitted under a condition of irrevocability for a period of 30 days after submission.

The successful bidder will be required to execute the Standard Form of Contract for Construction within Ten calendar days after formal Award of Contract.

The successful bidder, simultaneously with the execution of the Contract, will be required to furnish a Payment Bond in an amount equal to One Hundred Percent of the Contract Price, a Performance Bond in an amount equal to One Hundred Percent of the Contract Price, and Certificates of Insurance.

The City will conduct a non-mandatory Pre-Bid Conference via virtual means ("Zoom" link or similar) on **Thursday, March 9, 2023** beginning at 1:30 p.m. local time. Interested parties shall contact Phone: (928) 753-8122 or by e-mail at <u>afeskanich@cityofkingman.gov</u> to request a meeting link.

The right is hereby reserved to accept or reject any or all bids or parts thereto, to waive any informality in any proposal and reject the bids of any persons who have been delinquent or unfaithful to any contract with the City of Kingman.

END OF INVITATION TO BID

INSTRUCTIONS TO BIDDERS

BID SUBMISSION

Sealed bids complete with all required documents will be accepted at the office of the City Clerk at 310 North Fourth Street, Kingman, AZ 86401 until 3:00 PM local time on the **23rd** day of **March**, 2023 for the construction of this project.

The following documents need to be submitted as part of the bid:

- 1. Contractor's Qualification Statement
- 2. Proposal Form Acknowledge all addendums or write "NONE" if no addendums. Confirm all math calculations and the total bid amount.
- 3. Bid Security in the form of bid bond, unconditional certified check or cashier's check payable to the City of Kingman for 10% of the bid amount.
- 4. Subcontractors and Material Suppliers List
- 5. Non-Collusion Affidavit

Offer submitted after the above listed due time shall be returned to the bidder unopened. Alternative proposals will not be considered unless specifically called for. Oral, telephonic, faxed, emailed or modified proposals will not be considered.

Bids will be opened publicly immediately after the bid acceptance time at the 310 North Fourth Street address.

PROJECT DETAILS

The intent of this Bid request is to obtain an offer to furnish any and all required labor, material, construction equipment, transportation and services to construct public roadway, traffic signal and drainage improvements for a stipulated price contract, in strict conformity with the construction plans, specifications and contract documents.

Work for this project must be completed within <u>two hundred and eighty (280)</u> calendar days, beginning with the day following the starting date specified in the Notice to Proceed.

Bid documents are on display at the office of the City Engineer, 220 North Fourth Street, Kingman, AZ 86401 or <u>www.cityofkingman.gov</u>

Bid documents should be verified for completeness. If bid documents are found to be incomplete or contain discrepancies or omissions, the City of Kingman should be notified immediately.

INQUIRIES/PLAN ADDENDA

Questions concerning the project requirements need to be directed to Eric Sparkman, P.E., Assistant City Engineer, telephone (928) 753-8134, fax (928) 753-8118, or email esparkman@cityofkingman.gov

Addenda may be issued during the bidding period. All addenda will become part of the contract documents. It is the prospective proposer's sole responsibility to check the City's website for updates and addenda prior to submitting the Bid.

Verbal answers are not binding on any party. All clarification requested by bidders must be in writing not less than 5 working days before the bid due date. The reply will be in the form of an Addendum, posted on the City's website.

SITE ASSESSMENT/SUBSURFACE EXAMINATION

It is recommended that potential bidders examine the project site before submitting a bid.

A Geotechnical report was prepared for this project by Speedie and Associates in 2015. The report has been included with these Contract Documents for reference. If bidders desire to make their own soils investigations, they shall obtain the necessary permits from the City of Kingman as appropriate. It is the responsibility of the bidder to determine the type of material that will be encountered on the project. The City of Kingman will not be responsible for any additional costs associated with the materials encountered. Investigation of subsurface conditions prior to submitting bid is encouraged.

NON-MANDATORY PRE-BID CONFERENCE

The City will conduct a non-mandatory Pre-Bid Conference via virtual means ("Zoom" link or similar) on **Thursday, March 9, 2023** beginning at 1:30 p.m. local time. Interested parties shall contact Phone: (928) 753-8122 or by e-mail at <u>afeskanich@cityofkingman.gov</u> to request a meeting link.

All general contract bidders and subcontract bidders are encouraged to attend this meeting.

QUALIFICATIONS

Bidders must have or be able to obtain the necessary Arizona Registrar of Contractors license to complete the work as listed on the construction plans and contract documents prior to bid submission. Failure to do so will be cause to invalidate the bid. The Arizona Registrar of Contractors will be contacted to obtain license and complaint information about the bidders.

Contractors are advised that they are also required to have a City Business License prior to commencing work on this project. The City Business License can be obtained from the City of Kingman Finance Department at 310 N. 4th Street, Kingman, AZ 86401, phone (928) 753-5561, fax (928) 753-6867.

BID SUBMISSION

Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.

Prior to bid submission, bidders shall carefully examine the Plans, read the Specifications, Special Provisions and these Contract Documents, visit the site of the work, fully inform themselves as to all existing conditions and limitations, and shall consider those conditions and limitations in the preparation of their bid.

Bids shall be properly executed on the Proposal and forms provided. Numbers shall be stated in figures where so required. The completed forms shall be without interlineations, alterations or erasures. Bids shall not contain any recapitulations of the work to be done.

Bidders will be responsible for all applicable sales and use taxes. No separate payment will be made to the Contractor by the City for these taxes. Improperly completed information, irregularities in the bid bond, may be cause to declare the bid invalid or informal.

Each bidder shall submit one copy of the executed bid documents on the Proposal and forms provided, signed and sealed with the required security, clearly identified with the bidder's name, address, and phone numbers; project name and project number (ENG21-0001); and City of Kingman's name on the outside. The Specification Booklet does not need to be turned in with the bid.

A tabulation of all submitted bids will be available for review following bid opening.

BID INELIGIBILITY

Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the City of Kingman, be declared unacceptable.

Bid forms, Appendices and enclosures which are improperly prepared may, at the discretion of the City of Kingman, be declared unacceptable.

Failure to provide security deposit, bonding or the proper forms will, at the discretion of the City of Kingman, invalidate the bid.

PROPOSAL GUARANTEE

Bids shall be accompanied by a proposal guarantee in the form of a certified check, cashier's check or bid bond for an amount not less than ten percent (10%) of the total bid. The proposal guarantee if done through a bid bond needs to name the City of Kingman as oblige, signed and sealed by the contractor and surety company. The proposal guarantee will be returned after delivery to the City of Kingman of the required performance and payment bonds by the accepted bidder. If no contract is awarded, all proposal guarantees will be returned.

OFFER ACCEPTANCE

Bids shall remain open to acceptance and shall be irrevocable for a period of thirty (30) days after the bid closing date. The contract will be awarded to the lowest responsive, responsible bidder as determined by the lowest Total Bid, who also complies with these instructions. The

City of Kingman reserves the right to accept or reject any or all offers if it may deem it best for the public good or to reject the offers of any persons who have been unfaithful or delinquent to any contract with the City. The City reserves the right to waive any informality in the offers received.

After acceptance, the City will issue to the successful bidder, a written letter of Contract Award within 30 days after the opening of bids. The successful bidder will be required to execute the Contract, Contractor's Performance Bond, Payment Bond and Certificates of Insurance within ten (10) calendar days after formal Contract Award. The contractor will be responsible for the costs to secure the Performance and Payment Bonds. No separate payment will be made to the contractor by the City for these items.

INFORMATION FOR BIDDERS

1. CONTRACT DOCUMENTS

The Contract Documents for this Project consist of the following:

Volume 1

Advertisement for Bids Invitation to Bid Instructions to Bidders Information for Bidders **General Conditions Supplement Special Provisions** Contractor's Qualification Statement Proposal **Bid Security** Subcontractors and Material Suppliers List Non-Collusion Affidavit Contract Certificate of Insurance Payment Bond Performance Bond Contractor's Affidavit

Volume 2

Plans

Any Addenda issued by the City of Kingman during the time of bidding shall be attached to and become a part of the Contract Documents.

2. STANDARD SPECIFICATIONS AND STANDARD DETAILS

Attention is called to the fact that the City of Kingman is operating under the 2020 edition of the Uniform Standard Specifications and Details for Public Works construction published by the Maricopa Association of Governments (MAG), as amended by the City of Kingman, which is herewith incorporated by reference and made a part hereof. The MAG Specifications, MAG Standard Details, the City of Kingman addendums to MAG Specifications and the City of Kingman Standard Details may be downloaded on the City's website at

https://www.cityofkingman.gov/government/departments/engineering/standard-specification-and-details.

3. WORK UNDER THIS CONTRACT

The work to be done under this Contract shall include the furnishing of all labor, material, and equipment necessary for or incidental to the construction and completion of all work indicated in the

Contract Documents. This consists of, but is not necessarily limited to reconstructing Eastern Street from Calumet Avenue to Clark Street (+/- 1700 feet), the construction of a new section of Eastern Street from Clark Street to a new direct connection to Airway Avenue (+/- 550 feet) and the relocation of the existing traffic signal at the intersection of Airway Avenue and Yavapai Street to the new intersection of Eastern Street and Airway Avenue. The work generally consists of roadway, drainage and traffic signal improvements including removal of existing pavement, earthwork, new pavement section, constructing curbing, sidewalks, catch basins, a five-barrel box culvert, headwalls, concrete drainage pipes and relocating the existing traffic signal along with other associated improvements.

4. **LOCATION OF PROJECT**

This project is generally located east of State Route 66 and north of Interstate 40 centered approximately at the intersection of Eastern Avenue and Central Street. The project limits are within Section 8, T21N, R16W with the approximate project center at LAT 35°13'16" N, LONG 114°00'10" W

5. **PROPOSAL PAMPHLET**

Bids shall be made in accordance with the following instructions: Prior to bid submission, bidders shall carefully examine the Plans, read the Specifications, Special Provisions and these Contract Documents, visit the site of the work, fully inform themselves as to all existing conditions and limitations, and shall consider those conditions and limitations in the preparation of their bid.

Bids shall be properly executed on the Proposal and forms provided with the Contract Documents. Numbers shall be stated in figures where so required. The completed forms shall be without interlineations, alterations, or erasures. The Bidder shall sign his proposal and complete all required forms and information. The Specifications Booklet does not need to be turned in with the bid.

Attention is called to the fact that bidders will be responsible for all applicable City and State sales taxes. No separate payment will be made to the Contractor by the City for these taxes.

Bids shall not contain any recapitulations of the work to be done. Alternative proposals will not be considered unless called for. No oral, telegraphic, telephonic, or modified proposals will be considered.

Each bidder shall submit one copy of the executed bid documents on the Proposal and forms provided, signed and sealed with the required security, envelope shall be clearly identified with the bidder's name, address, and phone numbers; project name and project number (ENG21-0001); and City of Kingman's name on the outside.

6. **CONTRACT AND BONDS**

The form of Contract, which the successful bidder as Contractor will be required to execute, and the forms of Performance Bond and Payment Bond which will be required to be furnished are included in the Contract Documents and should be carefully examined by the bidder.

7. INTERPRETATION OF PLANS AND DOCUMENTS

If any person contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the Plans, Specifications, or other proposed Contract Documents, or finds discrepancies in or omissions from the Plans or Specifications, he may submit to the Engineer a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Questions received less than five working days prior to bid opening time shall not be answered. Any interpretation or correction of the proposed documents will be made only by Addendum duly issued and a copy of such Addendum will be posted on the City's website. The City will not be responsible for any other explanations or interpretations of the proposed documents.

8. <u>ADDENDA</u>

Any Addenda issued during the time of bidding, forming a part of the documents obtained by the bidder for the preparation of his bid, shall be covered in the bid and shall be made a part of the Contract, and placed within the pages of the Contract Documents, Volume 1. All addenda shall be acknowledged on the Proposal Form at the time of bid submittal.

9. AWARD OR REJECTION OF BIDS

The Contract will be awarded to the lowest responsive, responsible bidder as determined by the lowest Total Bid, who also complies with these instructions and with the Advertisement for Bids. The City however, reserves the right to accept or reject any or all bids if it may deem it best for the public good or to reject the bids of any persons who have been unfaithful or delinquent to any contract with the City of Kingman, and to waive any informality in the bids received. The award, if made, will be within 30 days after the opening of bids.

10. SPECIAL NOTICE

Bidders are required to inform themselves fully of the conditions relating to construction and labor under which the work will be or is now being performed, and the Contractor must employ, as far as possible, such methods and means in carrying out his work as will not cause any interruption or interference to any other contractor or City operations.

11. **QUESTIONS ON PLANS AND SPECIFICATIONS**

Questions concerning the project requirements need to be directed to Eric Sparkman, P.E., Assistant City Engineer, telephone (928) 753-8134, fax (928) 753-8118, or email <u>esparkman@cityofkingman.gov</u>

The City of Kingman shall not be held responsible for any oral instructions. Any changes to the Plans and Specifications will be in the form of an Addendum which will be posted on the City's website.

12. LISTING OF SUBCONTRACTORS

A final list of sub-contractors and material suppliers including addresses, phone numbers, & contact names shall be submitted at the Pre-Construction Conference.

13. <u>CITY BUSINESS LICENSE</u>

Contractors are advised that they are also required to have a City Business License prior to commencing work on this project. The City Business License can be obtained from the City of Kingman Finance Department at 310 N. 4th Street, Kingman, AZ 86401, phone (928) 753-5561, fax (928) 753-6867.

14. <u>RELOCATION AND/OR ADJUSTMENT OF EXISTING FACILITIES, SERVICES,</u> <u>AND ACCESS</u>

If relocation or adjustment of existing facilities is noted on the Plans, this is intended to include the relocation or adjustment of items appurtenant to the noted piece of work, just as if they were specifically called out. If these appurtenant items are damaged, broken, or lost during construction, they shall be replaced by the Contractor with items of equal or better quality.

If it becomes necessary to relocate any existing utility lines in order to construct the proposed improvements, these relocations will be done in accordance with MAG Standard Specification 105.6.

15. **INDEMNIFICATION**

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the City, its agents, officials and employees from and against all tortuous claims, damages, losses and expenses (including but not limited to attorney fees, court costs, and the cost of appellate proceedings), relating to, arising out of, or alleged to have resulted from the acts, errors, mistakes, omissions, work or services of the Contractor, its agents, employees or any tier of Contractor's subcontractors in the performance of this Contract. Contractor's duty to hold harmless and indemnify the City, its agents, officers, officials and employees shall arise in connection with any tortuous claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death, or injury to, impairment, or destruction of property including loss or use resulting there from, caused by Contractor's acts, errors, mistakes, omissions, work or services in the performance of this Contractor's subcontractors or any other person for whose acts, errors, mistakes, omissions, work or services the Contractor may be legally liable. This obligation shall survive termination or expiration of this Contract. The obligation under this section shall not extend to the negligence of the City, its agents, officials, and employees.

The amount and type of insurance coverage as required herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

16. **INSURANCE REQUIREMENTS**

CONTRACTOR and Subcontractors shall procure and maintain until all of their obligations have been discharged, including any warranty periods under the terms of the Contract are satisfied, insurance against claims for injury to persons or damage to property which may arise from or in connection with

the performance of the Work hereunder by the Contractor, his agents, representatives, employees or Subcontractors.

The insurance requirements herein are minimum requirements for and in no way limit the indemnity covenants contained in the Contract.

The City in no way warrants that the minimum limits contained herein are sufficient to protect the CONTRACTOR from liabilities that might arise out of the performance of the work under the Contract by the CONTRACTOR, his agents, representatives, employees, or subcontractors, or otherwise limit the City's recourse to any remedy available at law or in equity. CONTRACTOR is free to purchase such additional insurance as may be determined necessary.

Minimum Scope And Limits Of Insurance. CONTRACTOR shall provide coverage with limits of liability not less than those shown below:

REQUIRED COVERAGE

Commercial General Liability

Commercial general liability shall be written on an occurrence basis and covering liabilities arising out of construction of the project herein. The policy shall include coverage for bodily injury, broad form property damage, personal injury, products/completed operations and blanket contractual coverage including, but not limited to, the liability assumed under the indemnification provisions of this Contract. Policy shall not exclude explosion, collapse, underground (XCU) hazards, nor the products and completed operations hazards, or inadvertent construction defects, and shall include coverage for bodily injury, broad form property damage, personal injury, products/completed operations and blanket contractual coverage, but not limited to, the liability assumed under the indemnification provisions of the Contract. Products and completed operations liability coverage shall be maintained throughout the Contract and shall extend for a period not less than five years following acceptance of the project. Contractual liability applies to the hold-harmless provisions of the contract between the named insured and agreements the insured makes in connection with insured operations. Minimum coverage limit shall be no less than \$1,000,000 CSL. If the policy has an aggregate limit, that limit shall not be less than \$2,000,000.

Automobile Liability

Commercial auto liability includes auto hazards for the owned, non-owned and hired, leased rented, borrowed or otherwise, assigned to or used in connection with the construction of the project. Minimum coverage limit shall be no less than \$1,000,000 CSL.

Worker's Compensation and Employers' Liability

CONTRACTOR shall maintain Worker's Compensation insurance at the statutory level.

Employer's Liability shall be at a minimum of \$1,000,000 each accident, \$500,000 disease policy limits, \$100,000 each employee.

Excess Liability

When excess liability insurance is used to supplement the required insurance limits below, the excess liability insurance must be "follow form" equal or broader in coverage scope as the underlying insurance.

Construction projects up to five million (\$5,000,000) require limits of not less than five million (\$5,000,000) in Commercial General Liability coverage limits. Where the commercial general liability per occurrence policy is less than \$5,000,000, excess liability limits must be purchased so that the total combined policy limits meet or exceed \$5,000,000.

Additional Insurance Requirements

The policies shall include, or be endorsed to include, the following provisions:

All policies, except for the Workers' Compensation and Employers' Liability policies shall contain endorsements naming the City of Kingman and its officers, employees, agents and volunteers as additional insureds with respect to liabilities arising out of the performance of services herein. On insurance policies where the City of Kingman is named as an additional insured, the City of Kingman shall be an additional insured to the full limits of liability purchased by the CONTRACTOR even if those limits of liability are in excess of those required by the Contract.

The CONTRACTOR's insurance coverage except for workers compensation and employer's liability shall be primary insurance and non-contributory with respect to all other available sources maintained by the City.

The insurance Coverage provided by the CONTRACTOR shall not be limited to the liability assumed under the indemnification provisions of the Contract.

Notice Of Cancellation. Each insurance policy required under the Contract shall provide the required coverage and shall not be suspended, voided, canceled, reduced in coverage or endorsed to lower limits. Should limits or coverage change, thirty (30) days prior written notice shall be provided to the City. Such notice shall be sent directly to the City Senior Representative and shall be sent by certified mail, return receipt requested.

Acceptability Of Insurers. Insurance is to be placed with insurers duly licensed or approved unlicensed companies in the state of Arizona and with a 2004 "A.M. Best" rating of not less than A-. The City in no way warrants that the above-required minimum insurer rating is sufficient to protect the CONTRACTOR from potential insurer insolvency.

CERTIFICATES OF INSURANCE

Any failure, actual or alleged, on the part of the City to monitor or enforce compliance with any of the insurance and indemnification requirements will not be deemed as a waiver of any rights on the part of the City.

All certificates of insurance and policy endorsements are to be received and approved by the City before work commences. Each insurance policy required by the Contract must be in effect at or prior to commencement of work under the terms of the Contract and remain in effect for the duration of the project and/or beyond project acceptance as required herein. Failure to maintain the insurance policies as required by the Contract or to provide evidence of renewal is a material breach of the Contract.

The City project/contract number and project description shall be noted on the certificate of insurance. The City reserves the right to require complete, certified copies of all insurance policies required by the Contract at any time. If a policy does expire during the life of the project, a renewal certificate of insurance and policy endorsements will be sent to the City of Kingman not less than five (5) days prior to the expiration date. If a policy is to be cancelled, changed or not renewed, a proper notice of such action will be sent to the City not less than thirty (30) days prior to any such action by the insurance company.

Certificate of Insurance, Endorsements, and Notice(s) shall be sent to:

City of Kingman Engineering Department 310 N. 4th Street (mail) 220 N. 4th Street (physical) Kingman, Arizona 86401

Subcontractors. CONTRACTOR shall ensure all Subcontractors performing work under the terms of the Contract secure and maintain all insurance coverages (including worker's compensation) and other financial sureties required by the laws of this state and within the scope of their services in connection with their presence and the performance of their duties pursuant to the Contract. CONTRACTOR shall be responsible for ensuring that all Subcontractors endorse CONTRACTOR and the City of Kingman as additional insured and that all Subcontractors shall maintain products and completed operations liability insurance for not less than one (1) year following the acceptance date.

17. CONTRACTOR'S AFFIDAVIT REGARDING SETTLEMENT OF CLAIMS

Prior to final payment, the Contractor shall submit an executed copy of the Contractor's Affidavit Regarding Settlement of Claims and Asbestos-Free Facility Material Certification, using the forms provided herein.

18. SPECIAL NOTICE TO WATER LINE CONTRACTORS

The Contractor is advised that the City of Kingman requires two working days advance notice to coordinate the necessary exercising and checking of valves prior to shutting off any water valves for any tie-ins, extensions or fire hydrant relocations. The Contractor shall coordinate with the Inspector any valves that need to be exercised prior to any valves being closed.

19. NONPERFORMANCE OF WORK TASKS BY THE CONTRACTOR

If the Contractor fails, neglects, or refuses to perform work tasks necessary for the completion of the total job; to replace defective work; or to repair or resurface, in an acceptable manner public right-of-ways and/or private properties disturbed by his work which are a nuisance, a hazard, or which impedes or endangers vehicular traffic and the public, the City may serve written notice upon the Contractor of its intention to have the work performed by others. Unless within three days after the service of such notice, the Contractor has made such arrangement and scheduled the accomplishment of said work tasks to the satisfaction of the City Engineer, the City will proceed to have the work accomplished by others and deduct the costs thereof from amounts due the Contractor.

20. CONSTRUCTION WATER

A hydrant meter is available from the City at no cost to the contractor. The Contractor must request the hydrant meter and complete the necessary paperwork with the Finance Department prior to obtaining it from the Public Works Department. A deposit of \$1,740.00 will be required for the meter. The deposit will be refunded at project completion. Water used for tests and construction purposes will also be provided by the City at no cost, except that if a repeat leakage test is required due to failure of any pipe installation to meet specifications, the Contractor shall pay the City for the water used, at the City's currently prevailing rates.

21. IMMIGRATION CONTROL ACT

The Contractor shall comply with the provisions of the Immigration Reform and Control Act of 1986, Pub. L.99-603 and the Rules and Regulations issued by the Department of Justice, effective May 1, 1987, 8 CFR Part 274a, published in the Federal Register at pages 16221 to 16228.

22. COMPLIANCE WITH FEDERAL AND STATE LAWS

The Contractor understands and acknowledges the applicability to it of the American with Disabilities Act, the Immigration Reform and Control Act of 1986 and the Drug Free Workplace Act of 1989. The following is only applicable to construction contracts: The Contractor must also comply with A.R.S. § 34-301, "Employment of Aliens on Public Works Prohibited", and A.R.S. § 34-302, as amended, "Residence Requirements for Employees".

Under the provisions of A.R.S. §41-4401, Contractor hereby warrants to the City that the Contractor and each of its subcontractors ("Subcontractors") will comply with, and are contractually obligated to comply with, all Federal Immigration laws and regulations that relate to their employees and A.R.S. §23-214(A) (hereinafter "Contractor Immigration Warranty").

A breach of the Contractor Immigration Warranty shall constitute a material breach of this Contract and shall subject the Contractor to penalties up to and including termination of this Contract at the sole discretion of the City.

The City retains the legal right to inspect the papers of any Contractor or Subcontractor's employee who works on this Contract to ensure that the Contractor or Subcontractor is complying with the Contractor Immigration Warranty. The City may, at its sole discretion, conduct random verification of

the employment records of the Contractor and any of subcontractors to ensure compliance with Contractor's Immigration Warranty. Contractor agrees to assist the City in regard to any such inspections. The Contractor and its subcontractors warrant keeping the papers and records open for random inspection during normal business hours by the City. The contractor and its subcontractors shall cooperate with the City's random inspections including granting the City entry rights onto its property to perform the random inspections and waiving their respective rights to keep such papers and records confidential.

Neither the Contractor nor any of Subcontractor shall be deemed to have materially breached the Contractor Immigration Warranty if the Contractor or Subcontractor establishes that it has complied with the employment verification provisions prescribed by sections 274A and 274B of the Federal Immigration and Nationality Act and the E-Verify requirements prescribed by A.R.S. §23-214, Subsection A.

CONTRACTOR hereby certifies that is it not currently engaged in, and agrees for the duration of this Contract that it will not engage in, a boycott of Israel, as that term is defined in A.R.S. §35-393.

In accordance with A.R.S. §35-394, CONTRACTOR hereby certifies that it currently does not use, and agrees for the duration of this Contract that it will not use:

- The forced labor of ethnic Uyghurs in the People's Republic of China;
- Any services or goods produced by the forced labor of ethnic Uyghurs in the People's Republic of China; and
- Any suppliers, contractors or subcontractors that use the forced labor or any services or goods produced by the forced labor of ethnic Uyghurs in the People's Republic of China.

CONTRACTOR further agrees that it will notify the City within 5 business days after becoming aware of any noncompliance of A.R.S. §35-394 during the term of this Contract. This Contract shall terminate if the CONTRACTOR does not provide the City a written certification that the noncompliance has been remedied within 180 days after the initial notification of noncompliance. If the Contract has a termination date prior to end of the remedy period, the Contract will terminate on the original Contract termination date.

23. WORK SCHEDULE

It is expected work will be conducted following a normal 8 hours per day, 40 hours per week work schedule. Night time work may be allowed at the City's discretion (Refer to Special Provisions Section 108.5.1). The Contractor shall submit a written request and obtain prior written approval before deviating from such a schedule (Refer to MAG Standard Specifications 108.5).

The Contractor shall conduct the work at all times in such a manner and sequence that will assure the least interference with traffic and inconvenience to the public. The Engineer may require the contractor to finish a section on which work is in progress before work is started on any additional sections, if the opening of such section is essential to the public convenience.

Except in emergencies endangering life or property, permission shall be obtained from the Engineer to perform any work after regular working hours, on weekends, or legal holidays. Prior to the start of such work, the contractor shall arrange with the engineer for the continuous or periodical inspection of the work and tests of materials as necessary.

24. **UTILITIES**

Contractors shall protect all existing underground structures and utilities and cooperate with the Utility Companies in protecting all services. At least two working days (48 hours) prior to commencement of construction, the Contractor shall notify:

Blue Stake 8-1-1 or 1-800-STAKE-IT

25. **PERMITS**

The Contractor will obtain a no-fee right of way permit from the City Engineering Department prior to the commencement of construction for this project.

26. LIQUIDATED DAMAGES

Liquidated damages for the overall project shall be in accordance with MAG Standard Specification 108.9.

27. **PROJECT SCHEDULE**

Prior to commencing construction, the Contractor shall submit a project schedule that identifies major work elements and the approximate time of completion for each. The Engineer shall approve the project schedule before the Contractor proceeds with any work under this contract. See MAG Standard Specification 108.4.

28. TRAFFIC CONTROL

The Contractor shall develop a traffic control plan. The traffic control plan shall be submitted to, and approved by the City Engineer prior to the start of work.

All traffic influenced by the construction will be regulated in accordance with M.A.G. Uniform Standard Specifications for Public Works Construction, Part 400, Right-of-Way and Traffic Control, and Section 401, Traffic Control. It shall be the Contractor's responsibility to provide the required traffic control devices in order to comply with the latest edition of the Manual on Uniform Traffic Control Devices.

29. FINAL INSPECTION AND ACCEPTANCE OF PROJECT

When all work comprised in the Contract has been completed, including clean-up and restoration, the Contractor shall so notify the Engineer in writing, and the Engineer and owner will then make a final inspection. When defects, errors and omissions disclosed by the final inspection have been corrected,

acceptance will be given in writing; but until such acceptance, the Contractor will be responsible for the work covered by this Contract.

No partial inspections or acceptance of the work under this contract shall be allowed. M.A.G. Specifications, Sect. 105.15(B) Final Acceptance section shall govern.

GENERAL CONDITIONS SUPPLEMENT

1. **GENERAL**

The City of Kingman has adopted the 2020 Edition of the "Uniform Standard Specifications for Public Works and Construction" and the 2020 Edition of the "Uniform Standard Details for Public Works Construction", sponsored and distributed by the Maricopa Association of Governments. These documents, with City amendments, are incorporated into these Contract Documents by reference.

In the event there is a conflict between one Contract Document and any of the other Contract Documents, the Document highest in precedence shall control and supersede the Document which is contrary to it. The order of precedence of the Contract Documents is as follows:

First:	Supplemental Agreements, the last in time being the first in precedence
Second:	The formal Contract
Third:	Advertisement for Bids
Fourth:	Information for Bidders
Fifth:	Plans
Sixth:	General Conditions Supplement
Seventh:	Special Provisions
Eighth:	MAG General Conditions and Standard Specifications (2020 edition) Parts 100 through 700, inclusive, and Details (2020 edition), with City Addendums plus ADOT Standard Specifications for Road and Bridge Construction (current edition) and ADOT Standard Drawings (current edition)
Ninth:	Contractor Proposal

2. <u>SUBCONTRACTS</u>

Subcontracts shall be in accordance with MAG Standard Specification 108.2.

3. **PRECONSTRUCTION CONFERENCE**

Upon receipt of the Notice to Proceed, or at an earlier time if mutually agreeable, the City shall arrange for a preconstruction conference to be attended by the Contractor's superintendent, the City, and representatives of utilities, major subcontractors, and others whose input may be desired.

The purpose of this conference shall be to establish a working understanding between the parties and to discuss the construction schedule, survey schedule, shop drawings, submittals, reviews, cost breakdown of major lump sum items, applications for payment and their processing, and such other subjects as may be pertinent to the contract.

The Contractor will be required to provide the following information:

- 1. Names and emergency telephone numbers of key personnel involved in the project.
- 2. Names and contact information of all subcontractors proposed for use on the project.
- 3. Proposed construction schedule, indicating the time of starting and completion of each major item or phase of the project per the General Conditions Supplement.
- 4. Proposed payment schedule showing the estimated dollar volume of work for each calendar month during the life of the project.
- 5. Construction staking schedule outlining the frequency and offset of alignment and elevation stakes, to be mutually agreed upon.
- 6. Traffic Control plans.

No work shall begin until the Contractor's construction schedule and traffic control plans have been reviewed and approved by the City and all required permits and licenses have been obtained.

4. **PROJECT MEETINGS**

Progress meetings will be held weekly from the commencement of construction until final acceptance of the project is granted. The meetings will be attended by the Contractor, subcontractors, Engineer, Inspector, utilities and other interested parties. The meetings will typical be held on-site with the time and dates established, by mutual agreement, prior to the beginning of construction. The purpose of these meetings are to establish and maintain lines of communication, report on progress, discuss and resolve problem areas and such other matters as related to the project.

5. CONTRACTOR'S RESPONSIBILITY AND LIABILITY FOR SUBMITTALS

It shall be the Contractor's responsibility to assure himself that equipment, systems, or materials submitted for use in the work under this Contract are in accordance with the intent of these Contract Documents.

The intent of these Contract Documents is that manufacturers or suppliers of equipment, systems, or materials that are named in the text for the item specified and as altered, adjusted, or revised by the manufacturer or supplier to conform to the specific requirements of the Contract Documents will require a certain amount of review to determine compliance and acceptability. The foregoing shall not be interpreted to exclude the equipment, systems, or materials of manufacturers or suppliers who are not named but have a product that is equal to the item as specified. It shall be the responsibility of the

Contractor to ascertain that the unnamed product is equal to the item specified. The Contractor shall include with his submittal all information as required by these Contract Documents for the Substitution of Material or Equipment.

The above type of submittal and the subsequent review to determine compliance and acceptability will be taken as normal and the Contractor shall not be liable for the costs involved for this type of engineering review.

Should the Contractor submit equipment, systems, or materials from any manufacturer or suppliers, named or unnamed in the Contract Documents, that deviates from the intent or is non-responsive to the specific requirements of these Contract Documents, then he shall have deducted from periodic payments the costs of evaluating the equipment, system, or material as to its acceptability, and the Contractor shall be liable for said cost whether the items submitted are acceptable or not. Any delay, cost to the Contractor, or rescheduling caused by the evaluation of this equipment, system or material shall be at the Contractor's expense and will not be a reason for an extension of time for Contract completion. Deviations from the intent or non-responsiveness to the specific requirements of the Contract Documents shall include, but not be limited to; equipment, systems, or materials that are new on the market, or that have little or no operational experience; equipment, systems, or materials that are untried in the application for which they are intended to be used; equipment, systems, or materials that will require a process change, or that would cause a process to change; equipment, systems, or materials that will require changes or alterations to operational, structural, architectural, mechanical, electrical, or instrumental features.

6. **<u>CONSTRUCTION SCHEDULE</u>**

The Contractor shall submit a proposed construction schedule at the time of the preconstruction conference, for review and acceptance by the City. The construction schedule shall indicate the time of starting and completion of each major structure or phase of the project and such intermediate phases as will serve for well-defined control points. It shall also indicate the anticipated date of receipt of major items of equipment, and all items of equipment receipt and installation of which is critical to the scheduled progress of the project.

The Contractor shall notify the Engineering Department of the City of Kingman at least two (2) working days before the following events:

- a. Start of construction in order to arrange for inspections to be provided by City Inspection Department.
- b. Construction staking to be provided by the City Surveyor or his authorized representative.
- c. Shutdown of City water or sewer facilities for tie-ins and/or operation of existing water valves.
- d. Commencement of any new phase of construction.

7. SHOP DRAWINGS, SCHEDULES, AND SAMPLES

Shop drawings, layout diagrams, catalog data, test reports, and information in sufficient detail to show complete compliance with all specified requirements shall be furnished to the Engineer covering but not limited to the items under MATERIAL LIST.

The Contractor, at his own expense, shall make such changes in the required drawings as may be necessary to conform to the Contract Documents. After completion of such checking, verification, and revising, the Contractor shall stamp and sign the drawings indicating his approval and submit the shop drawings and pertinent data for review. Prior to the approval of such drawings, any work which the Contractor may do on the fabrications covered by the same shall be at his own risk, as the City will not be responsible for any expense or delays incurred by the Contractor for changes to make the same conform to the Contract Documents.

AC Mix Design	Aggregate Base Mix	Bollards		
Fencing	Concrete Mix Design	Reinforcing Steel		
Catch Basins/Grates	Channel Lining	Rebar		
Riprap	Safety Handrail	Sign Post Base		
Manholes	Traffic Sign Panel	Locator Wire		
Traffic Signal/Video Detection/ITS Components				
Pull Boxes/Electrical Components/Wiring				
Sewer Pipe/Cleanouts				
Pipe/Conduit/Storm Drain Bedding Materials				
Rubber Gasket Reinforced Concrete Pipe				
Sidewalk Detectable Warning Panel				
Waterline Fittings/Pipe/Valves/Boxes/Fire Hydrants				

8. MATERIALS LIST

9. <u>SUBMITTALS</u>

In time for each to serve its proper purpose and function, the Contractor shall submit such schedules, reports, drawings, list, literature, samples, operation and maintenance instructions, directions, certificates of compliance, and guarantees as are specified or reasonably required for construction, operation, and maintenance of the facilities to be built and/or furnished under this Contract and for items called out above under item 8. MATERIALS LIST.

Shop drawings and data shall be submitted to the Engineer in such number of copies as will allow him to retain four copies of each submittal. The submittal shall clearly indicate the specific area of the Contract Documents for which the submittal is made. The additional copies received by him will be returned to the Contractor's representative at the job site. Notations of the action which has been taken will be placed on one of these returned copies.

The above drawings, lists, prints, samples, and other data shall become a part of the Contract and a copy of the same shall be kept with the job site Contract Documents, and the fabrications furnished, shall be in conformance with the same. However, the Engineer's review of the above drawings, lists, prints, specifications, samples, or other data shall in no way release the Contractor from his responsibility for the proper fulfillment of the requirements of this Contract nor for fulfilling the

purpose of the installation nor from his liability to replace the same, should it prove defective or fail to meet the specified requirements.

10. MATERIAL AND EQUIPMENT SCHEDULES

Drawings of minor or incidental fabricated materials and/or equipment may not be required. The Contractor shall furnish the Engineer tabulated lists of such fabrications, showing the names of the manufacturers and catalog numbers, together with samples or general data as may be required to permit determination by the Engineer as to their acceptability for incorporation in the work.

11. MILL AND FACTORY TESTS

The Contractor shall furnish the Engineer in triplicate, certified copies of all required factory and mill test reports to verify material quality and composition. Any materials shipped by the Contractor from a factory or mill prior to having satisfactorily passed such testing and inspection shall not be incorporated in the work, unless the Engineer shall have notified the Contractor in writing that such testing and inspection will not be required. The cost of performing all mill and factory tests shall be paid by the Contractor.

12. **REINFORCING STEEL**

The Contractor shall supply the City with a copy of all reinforcing steel detail drawings. Any change from the Contract Documents that is made by the Contractor in reinforcing steel shop drawings, as well as in any other shop drawings, shall be called to the Engineer's attention and specific acceptance, in writing, shall be secured on each such change. Review and acceptance of shop drawings is required on reinforcing steel that is detailed by the Contractor in accordance with the Contract Documents.

13. **QUALITY CONTROL**

All material shall be new and of the specified quality and equal to the approved submittals and samples. All work shall be done and completed in a thorough, workmanlike manner. It shall be the duty of the Contractor to advise the City of apparent errors or omissions and request instructions before proceeding with the work. The Engineer may, by appropriate instructions, correct errors and address omissions, which instructions shall be as binding upon the Contractor as though contained in the original Contract Documents.

At the option of the City, materials to be supplied under this Contract may be tested and/or inspected either at their place of origin or at the site of the work. The Contractor shall give the City written notification well in advance of actual readiness of materials to be tested and/or inspected at point of origin. Satisfactory tests and inspections at the point of origin shall not be construed as a final acceptance of the material nor shall it preclude retesting or re-inspection at the site of the work.

Materials which require testing and inspection at the place of origin shall not be shipped prior to such testing and inspection has been completed and evidence of such testing forwarded to the Engineer.

14. **TRAFFIC CONTROL**

All traffic affected by this construction shall be regulated in accordance with MAG Uniform Standard Specifications for Public Works Construction, Part 400-Right of Way and Traffic Control, Section 401, Traffic Control and the latest Edition of the Manual on Uniform Traffic Control Devices.

At the time of the pre-construction conference, the Contractor shall designate an employee who is well qualified and experienced in construction traffic control and safety to be responsible for implementing, monitoring and altering traffic control measures, as necessary. At the same time, the City will designate a representative who will be responsible to see that all traffic control and any alternates are implemented and monitored to the extent that traffic is carried through the work area in an effective manner in order to protect motorists, pedestrians, bicyclists and workers from hazard and accidents.

The following traffic regulations listed below and those shown on the plans are a minimum requirement throughout the project duration:

- A. Permission to restrict or close Public Streets shall be in accordance with MAG Uniform Standard Specifications for Public Works Construction.
- B. All traffic control devices required for this project shall be the responsibility of the Contractor. The Contractor shall place advance warnings, speed reduction, loose gravel, do not pass signs, business access, etc. in accordance with the above reference manuals.
- C. When construction activities or traffic hazards at the construction site require the use of flagman, it shall be the Contractor's responsibility to provide adequate personnel including flagmen to direct traffic safely.
- D. When traffic hazards at construction sites warrant the use of certified police personnel to direct traffic, arrangements should be made with the Kingman Police Department at telephone number (928) 753-2191 at the expense of the Contractor.
- E. Equipment used and/or directed by the Contractor shall travel with traffic at all times. Supply trucks shall travel with traffic except when being spotted. Provide a flagman or officer to assist with this operation.
- F. During construction, it may be necessary to alter traffic control. Alterations shall be in accordance with the above referenced manuals upon prior notification of the Engineer.
- G. The Contractor shall minimize disruption to adjacent business and residential access. Where two or more driveways exist for one parcel, the contractor shall leave one access open and clearly delineated. Business access points shall be clearly marked or signed and the access free from dips or bumps greater than 2 inches.
- H. During inclement weather or when the unpaved roadway is wet, the contractor shall furnish and install aggregate base course 3-inches in depth or greater as needed to provide a smooth, passable surface for the roadway and driveway accesses within the project limits.

The Contractor shall submit a written proposal at the preconstruction conference outlining plans for traffic control including phasing of traffic control and maintaining continuous access to residences and businesses affected by the traffic control of this project.

Any changes to the traffic control plan during construction shall be submitted to the Engineer for approval at least seventy-two (72) hours before implementation.

The Contractor shall provide, erect and maintain all necessary flashing arrow boards, barricades, suitable and sufficient lights, warning and danger signals and signs and take all necessary precautions for the protection of the work and safety of the public. The Contractor shall provide, erect and maintain acceptable and adequate detour signs at all closures and along detour routes. The Contractor shall maintain all existing traffic signs erect, clean and in full view of the intended traffic at all times. Street name signs at major street intersections shall be maintained erect at all times. If these signs interfere with construction, the Contractor shall temporarily relocate said signs under the direction of the Inspector. The Contract will re-set all traffic and street signs relocated by the project to permanent locations when the construction is complete.

All barricades and obstructions shall be illuminated at night, and all safety lights shall be kept burning sunset until sunrise. All barricades and signs used by the Contractor shall conform to the standard design, generally accepted for such purposes, and payment for all such services and materials shall be considered as included in the other related pay items of the Contract.

No open trenches shall be permitted overnight where they cross existing pavement. Temporary patches shall be allowed in locations of new pavement placement. These trenches must be patched the same day with either hot mix asphalt, cold mix asphalt, concrete slurry, or plated for nighttime travel.

15. **<u>TEMPORARY FACILITIES</u>**

The Contractor shall provide all temporary facilities and utilities required for prosecution of the work, protection of employees and the public, protection of the work from damage by fire, weather or vandalism, and such other facilities as may be specified or required by any legally applicable law, ordinance, rule, or regulation.

The Contractor shall locate his office and shops, storage areas, employee parking, and other support activities in the Contractor's yard area as accepted by the Engineer.

16. **TEMPORARY UTILITIES**

ELECTRICAL SERVICE: The Contractor shall arrange with the local utility to provide adequate temporary electrical service at a mutually agreeable location. The contractor shall then provide adequate job site distribution facilities conforming to applicable codes and safety regulations. The Contractor shall provide, at this own cost, all electric power required for construction, testing, general and security lighting, and all other purposes whether supplied through temporary or permanent facilities.

WATER: Water used for construction purposes will be provided by the City at no cost. Water used for human consumption shall be kept free from contamination and shall conform to the requirements of the State and local authorities for potable water. Water for construction purposes must be free of impurities that would be detrimental in the construction process.

TEMPORARY LIGHTING: The Contractor shall provide temporary lighting in all work areas sufficient to maintain a lighting level during working hours not less than the lighting level required by OSHA standards.

HEATING AND VENTILATION: The Contractor shall provide means for heating and ventilating all work areas as may be required to protect work from damage by freezing, high temperatures, weather, or to provide a safe environment for workers. Heating may be by steam coils, vented or unvented direct fired heaters, or remote heating facilities except that unvented direct fired heaters shall not be used in any area where freshly placed concrete will be exposed to the combustion gasses, until at least two hours after it has attained its initial set.

SANITARY FACILITIES: The Contractor shall provide suitable chemical toilets or water closets for use of employees on this work. At the end of the job, such toilets shall be removed completely.

ACCIDENT PREVENTION: The Contractor shall comply with all applicable provisions of MAG Section 107, with the following changes: In Paragraph 107.5, SAFETY, HEALTH AND SANITATION PROVISIONS, the words "Maricopa County" shall be deleted, and the words "Mohave County" substituted. In the second paragraph, the words "or as the Engineer may determine" shall be deleted.

CONSTRUCTION FACILITIES: All construction hoists, elevators, scaffolds, stages, sheeting, shoring, and similar temporary facilities shall be of ample size and capacity to adequately support and/or move the loads to which they will be subjected. All railings, enclosures, safety devices, and controls required by law or for adequate protection of life and property shall be provided.

TEMPORARY ENCLOSURES: When sandblasting, spray painting, spraying of insulation, or other similar activities are in progress the work area shall be enclosed adequately to contain the dust, overspray, or other potential hazard.

WARNING DEVICES AND BARRICADES: The Contractor shall adequately identify and guard all hazardous areas and conditions by visual warning devices and, where necessary, physical barriers. Such devices shall, as a minimum, conform to the requirements of the Occupational Safety and Health Administration and the Manual on Uniform Traffic Control Devices.

PROTECTION OF EXISTING ITEMS: The Contractor shall protect all existing structures, trees, shrubs, and other items on the project site that are to be preserved, by substantial barricades or other devices commensurate with the hazard, from injury or destruction by vehicles, equipment, workmen, or other agencies.

PROJECT SECURITY: The Contractor shall make adequate provision to protect the project and Contractor's facilities from fire, theft, and vandalism, and the public from unnecessary exposure to injury.

17. STOCKPILE OF MATERIALS

The Contractor may, if approved by the City, place or stockpile materials in the public right-of-way provided they <u>do not</u> prevent access to adjacent properties or prevent compliance with traffic regulations. Traffic shall not be required to travel over stockpiled materials, and proper dust control shall be maintained. No material, when stockpiled shall alter in anyway the existing drainage pattern.

18. EXCESS MATERIAL

When excavations are made, resultant loose earth shall be utilized for filling by compacting in place or disposed of off the site.

Waste material shall not be placed on private property without express written permission of the property owner. A grading permit may be required for the placement of this material.

The Contractor at all times shall keep the premises free from accumulations of waste materials or rubbish caused by his operations. At the completion of the work, he shall remove all equipment, tools and surplus materials, and shall completely clean the premises, removing and disposing of all debris, rubbish, loose concrete, lumber, wire reinforcing and other materials not incorporated in the work. The Contractor shall provide for the legal disposal of all waster products, debris, etc., and shall make necessary arrangements for such disposal as stated above.

19. SPECIAL CONTROLS

The Contractor shall take all reasonable means to minimize inconvenience and injury to the public by dust, noise, diversion of storm water, or other agencies under his control.

DUST CONTROL: The Contractor shall take whatever steps, procedures, or means as are required to prevent abnormal dust conditions being caused by his operations in connection with this Contract; and on any unpaved road which the Contractor or any of his subcontractors are using, excavation or fill areas, demolition operations, or other activities. Control shall be by sprinkling, use of dust palliatives, modification of operations, or any other means acceptable to the Health or Environmental Control Agency having jurisdiction.

NOISE ABATEMENT: In inhabited areas, particularly residential, operations shall be performed in a manner to minimize unnecessary noise generation. In residential areas particular consideration shall be given to noise generated by construction activities during the night hours. City code (7-208(d)) allows for construction activity between the hours of 6:00 am and sunset. Any deviation from a normal 8 hours per day, 40 hours per week work schedule will require a written request from the Contractor (Refer to MAG Standard Specification 108.5).

DRAINAGE CONTROL: Excavation, fill, and grading operations shall be performed so as to disturb the pre-existing drainage patterns as little as possible. Drainage water shall not be diverted onto private property or into streets or drainage ways inadequate for the increased flow.

20. **PROJECT CLOSEOUT**

It is the intent of these Contract Documents that the Contractor shall deliver a complete and operable facility capable of performing its intended functions and ready for use.

CLEANUP: Throughout the period of construction the Contractor shall keep the work site clean and free of all rubbish and debris, and shall promptly remove from any portion of the site, or from property adjacent to the site of the work, all unused materials, surplus earth and debris. Upon completion of the work and prior to final acceptance the Contractor shall remove from the vicinity of the completed work all plant, surplus material, and equipment belonging to him or used under his direction during construction.

WASTE DISPOSAL: The Contractor shall provide for the disposal of all surplus materials, waste products, debris, etc., and shall make necessary arrangements for such disposal. The Contractor shall obtain written permission from property owner(s) prior to disposing of any surplus materials, waste products, or debris on private property. Copies of such written permission shall be furnished to the City prior to disposing of any materials on private property.

The City Engineer will not authorize the filling of ditches, washes, drainage ways, etc., which may in his opinion create drainage problems.

The Contractor shall maintain the disposal site(s) in a reasonable condition of appearance and safety during the construction period.

PROJECT RECORD DOCUMENTS: The Contractor shall maintain at the site, available to the City and County representative, one copy of all Drawings, Specifications, Addenda, accepted Shop Drawings, Change Orders and other modifications in good order and marked to record all changes made during construction. Record drawings shall be kept legible and current and shall show all changes in a contrasting, reproducible color. When the project is substantially complete, the Contractor shall submit these plans to the Engineer for acceptance. The Engineer shall be the sole judge as to the acceptability of the record plans. Receipt of an acceptable set is a prerequisite for final payment.

TOUCH-UP AND REPAIR: The Contractor shall touch up or repair all finished surfaces on structures, equipment, fixtures, or whatever, that have been damaged prior to final acceptance. Surfaces on which such touch-up or repair cannot be successfully accomplished shall be completely refinished or in the case of hardware and similar small items, the item shall be replaced.

GUARANTEE: The Contractor shall guarantee the work done on this project for one (1) year after project acceptance against faulty materials, faulty workmanship and failure to meet the requirements of the Specifications. Said guarantee by the Contractor shall not apply to damage caused by earthquakes or other acts of God, land subsidence, faulty operations or any abuse on the project by

others. Project acceptance is performed by City of Kingman whereby all remaining retentions are released to the Contractor and the City officially approves the project and takes over maintenance responsibility.

21. **PROTECTION OF EXISTING UTILITIES**

Contractors shall protect all existing underground structures and utilities and cooperate with the Utility Companies in protecting all service lines. Forty-eight (48) hours prior to commencement of construction, the Contractor shall notify: Blue Stake (8-1-1) or (1-800-STAKE-IT). Notification is required per 26. UTILITIES: in the "INFORMATION FOR BIDDERS" section of this document.

A reasonable attempt has been made to locate existing utility mains as shown on the construction plans. The Contractor shall make his own investigations, including exploratory excavations, to determine the actual locations and type of existing service laterals or appurtenances when their presence can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes on or adjacent to the site of work.

For the purpose of this section, "Utilities" are defined as including water, sewer, gas, electric, telephone, fiber optic, cable television, signalization conduit/cables, coal slurry, storm drain, and irrigation lines.

In most cases, existing individual or building service utility lines are not shown on the Plans. It shall be the Contractor's responsibility to locate and protect these individual or building services. If, due to the Contractor's operations, any of these lines are damaged, he shall repair or replace these lines in a manner satisfactory to the owner of the utility at no extra cost to the City. The cost of location, protection, and working around these individual or house service utility lines shall be included in the Contractor's bid for the work under this Contract.

If the locations of any underground utilities not shown on the plans cause changes to be made in the plans and specifications resulting in extra expense to the Contractor, adjustment in payment may be negotiated with the Contracting Officer. However, no payment shall be made unless significant changes in the plans or specifications are required.

22. SURVEY CONTROL POINTS AND MONUMENTS

Existing survey monuments indicated on the Plans or found during construction shall be protected by the Contractor. In the event removal of monuments is necessary, removal and replacement shall be performed by permission of the City Surveyor, under direct supervision of the City Engineer or his authorized representative. Survey monuments shall be constructed to conform to the requirements of City of Kingman Standard Specification Sections 400 and applicable Standard Details. As indicated in the Special Provisions (Section 400.4) the existing bench marks and intersection monuments removed by construction of this project will be replaced by the City of Kingman at no cost to the contractor. Any new monuments will be installed by the City of Kingman as required.

23. PAYMENTS TO CONTRACTOR

Payments will be made on the basis of itemized statements provided by the Contractor and shall be submitted with an updated progress schedule in accordance with the Contract Agreement, the Standard Specifications and these General Conditions.

Three copies of itemized statements for completed work items must be submitted to the City of Kingman who will review the statements and determine the acceptability of the payment request. The City will process partial payments once a month and payment will be made within 30 days of invoice receipt.

The City will retain a percentage of the amount of each estimate until final approval of improvements and final payment, in accordance with MAG Standard Specification 109.7.

24. <u>SUSPENSION OF WORK</u>

The City reserves the right to suspend the work wholly or in part if deemed necessary for the best interest of the City. This suspension will be without compensation to the Contractor, other than to adjust the Contract time in accordance with MAG Standard Specification 108.7.

25. CONSTRUCTION SURVEYING AND LAYOUT

The City Surveyor will provide Construction Surveying and layout in accordance with City of Kingman Standard Specification Section 400. The Contractor shall give the City a minimum of two (2) working days prior notice when he expects to require field staking.

26. STORM WATER CONSTRUCTION PERMIT

This project is subject to the terms and conditions of the Arizona Pollutant Discharge Elimination System (AZPDES) General Permit No. AZG2013-001 for storm water discharge from construction activities as administered by the Arizona Department of Environmental Quality (ADEQ). Under the conditions of this permit, the Contractor shall be responsible for providing necessary materials; taking appropriate measure to ensure removal of additional sediment generated in storm water runoff from the project (relative to pre-project sediment levels) and completing the Notice of Intent (NOI) to be covered under AZPDES at the beginning of the project and the Notice of Termination (NOT) of coverage under AZPDES at the completion of the project. All Subcontractors must comply with AZPDES requirements under the supervision of the Contractor.

Details and applications for this coverage under the AZPDES can be obtained from http://www.azdeq.gov/node/524

No separate measurement or payment will be made for all work associated with obtaining, implementing, monitoring and closing out said permit the cost of which is considered included in other bid items of work.

27. CHARACTER AND STATUS OF WORKMEN AND WORKMANSHIP

None but skilled foremen and workmen shall be employed on work requiring special qualifications. The Contractor shall be responsible for assuring the legal working status of its employee and its subcontractor's and shall be employ only such superintendents, foremen and workmen as are careful, competent and skilled.

The methods, equipment and appliances used on the work shall be such as will produce a satisfactory quality of work, and shall be adequate to complete the contract within the time limit specified. Except as is otherwise specified, the Contractor's procedure and methods of construction may, in general, be of his own choosing, provided they follow best general practice and are calculated to secure results which will satisfy the requirements of the plans and specifications.

The work covered by this Contract shall be carefully laid out in advance and preform in a manner to minimize interference with normal operation and utilization of the roads. The Contractor shall exercise caution during the course of this construction work to avoid damage to all existing or possible unknown existing underground utilities. He shall conduct his construction operations in such a manner as to avoid injury to his personnel and to avoid damage to all utilities. Any damage done will be repaired without delay and at the expense of the Contractor.

SPECIAL PROVISIONS





SECTION 000 INFORMATION

1.0 CONTRACT STANDARD SPECIFICATIONS AND DRAWINGS

The following Standard Specifications and Standard Drawings referenced in the project contract documents are required for construction of this project:

- 1. City of Kingman 2020 Addendum to the MAG Uniform Standard Specifications and Details for Public Works Construction.
- 2. City of Kingman Streets and Sidewalks Development Rules and Regulations, May 17, 2016.
- 3. City of Kingman Utility Regulations, October 18, 2016 Edition.
- 4. Maricopa Association of Government (MAG) Uniform Standard Specifications and Details for Public Works Construction, 2020 Edition.
- 5. Arizona Department of Transportation, Standard Specifications for Road and Bridge Construction current edition.
- 6. Arizona Department of Transportation, Intermodal Transportation Division, Standard Drawings, listed in the project plans and defined hereinafter (current).
- 7. Arizona Department of Transportation, Traffic Group, Manual of Approved Signs, available on the Department's website, through the Traffic Group,
- 8. Arizona Department of Transportation, Traffic Group, Traffic Control Design Guidelines, Edition of 2019, available on the Department's website, through the Traffic Group,
- 9. Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 edition and Arizona Supplement to the 2009 edition, dated January, 2012.
- 10. City of Phoenix Supplemental Standard Details for Public Works Construction, 2015

The following items are non-payment items being considered incidental to the project, the costs of which are to be included in project overhead or within a specific bid item.

- Utility locating (or pothole);
- Construction staking (City will provide this service);
- Construction office or yard;
- Roadway sweeping;
- Any and all permit preparation costs and fees;
- Clearing and Grubbing
- Protective fencing; and
- As-Builts

SECTION 100 GENERAL CONDITIONS

SECTION 105.6 COOPERATION WITH UTILITIES

Section 105.6 of MAG Standard Specifications is modified as follows:

The contractor shall closely coordinate the construction activities related to this project with the private utility companies to prevent damage to existing facilities and ensure continued utility service throughout the construction period. Utility Company Contacts are as follows:

UNISOURCE ENERGY ELECTRIC 2498 Airway Ave., Kingman AZ P.O. Box 3099, Kingman, AZ 86402 Mr. Marvin Yarbrough: 928-681-8928

FRONTIER COMMUNICATIONS 3405 Northern Ave., Kingman, AZ P.O. Box 3609, Kingman, AZ 86402 Mr. Chad Nichi: 928-681-2349

UNISOURCE ENERGY GAS 3436 N. Evans St., Kingman AZ Mr. William Van Oosting: 928-243-6788

SUDDENLINK CABLE (OPTIMUM) 2900 Airway Ave., Kingman, AZ Mr. Jay Rodriquez: 928-201-7227

KINGMAN MUNICIPAL WATER & SEWER SYSTEM 3700 E. Andy Devine Ave., Kingman, AZ Mr. Keelan Yarbrough, Assistant Director of Public Works: 928-692-3125

The locations of existing underground utilities are shown on the plans to the best of the Design Engineer's knowledge from information provided by respective utilities or discovered in the field; however, it shall be the Contractor's responsibility to field verify all utility locations and to coordinate in a timely manner with the pertinent utility companies so that any obstructing utility installation shall be protected, not damaged or dislocated and may be adjusted with prior utility agency approval; without delay to the Contractor's project schedule.

The City will not consider additional compensation requests from the Contractor to perform any potholing, utility company coordination, etc. needed to locate/verify utility location, to adjust contract work items as necessary to avoid utility line conflict, to cooperate with utilities in adjusting schedule as needed to allow for utility company work, relocations, etc. The Contractor's bid shall allow for/include the above coordination/work/adjustments based on the best available information known/provided in bid documents.

The Contractor shall coordinate unresolved conflicts with the owning utility and the City's Construction Coordinator prior to the construction of the proposed improvements.

The Contractor will investigate as necessary to verify the location of underground utility facilities. Locations of utility facilities shown on drawings furnished by the City are to be regarded as preliminary information only, subject to further investigation by the Contractor. The City does not warrant the accuracy of these locations, and the Contractor, by entering into this Contract, expressly waives and disclaims any claim or action against the City under any theory for damage resulting from location of utility facilities.

The Contractor shall be responsible for obtaining all Blue Stake utility location information, and for performing all requirements as prescribed in A.R.S. 40-360.21 through A.R.S. 40-360.29, for all underground facilities, including those that have been installed on the current project, until the project is accepted by the City.

At least two (2) working days prior to commencing any excavation, the Contractor shall call the Blue Stake Center, between the hours of 7:00 a.m. and 4:30 p.m., Monday through Friday, for information relative to the location of buried utilities.

Failure to contact the Blue Stake Center may result in violations of A.R.S. SS 40-360.21 and A.R.S. SS 40-360.22A.

SECTION 105.8 CONSTRUCTION STAKES AND GRADES

MAG Section 105.8, Construction Stakes, Lines and Grades is deleted and replaced by the following:

Description: *Add the following:*

City surveyor will provide all of the construction staking, lines and grades required for this project.

SECTION 106.2 QUALITY CONTROL AND MATERIAL TESTING

MAG Section 106.2, add the following:

The Contractor shall employ an pay for an independent testing laboratory acceptable to the Engineer to provide all materials testing for the project. It shall be the responsibility of the Contractor to control his operations by confirmation tests to verify and confirm that he has complied and is complying at all times, with the requirements of these Specifications concerning control of materials and testing. Copies of the test reports shall be submitted promptly to the Engineer.

The required testing shall address all elements which affect the quality of any material or aspect of the project, and includes but is not limited to the quality of the subgrade, backfill materials, aggregate base, chips, oil, concrete, and asphaltic concrete, and shall include, but not limited to the following:

- A. Mix designs
- B. Aggregate production
- C. Quality components
- D. Stockpile Management
- E. Proportioning

- F. Mixing, including addition of mineral admixtures, if required
- G. Placing and finishing
- H. Compaction

The City may provide quality acceptance sampling and testing. The number of tests and location of each shall be determined by the Engineer. The expense of quality acceptance sampling and testing shall be paid for by the City. Additional sampling and testing required due to failure of the initial test(s) shall be accomplished as provided by the City and these additional expenses shall be deducted from moneys due to the Contractor. Construction quality acceptance testing performed by the City of Kingman does not relieve the Contractor or the manufacturer of materials produced for the Contractor, of the obligation to perform and documents quality control testing of materials and workmanship.

Measurement and payment for quality control will be made at the lump sum (LS) contract unit price, which price shall be full compensation for completion of compliance testing and provision of copies of all test results, and performing all work as specified herein.

SECTION 107.5 SAFETY FENCING REQUIREMENT FOR TRENCHES AND EXCAVATIONS

Contractor shall provide safety construction fencing around all open trenches and excavations during all non-working hours.

Contractor shall provide for the safety and welfare of the general public by adequately fencing all excavations and trenches that are permitted by the Engineer to remain open when construction is not in progress.

Fencing shall be securely anchored to approved steel posts located six feet on center, having a minimum height of six feet, and shall consist of wire mesh fabric of sufficient weight and rigidity to adequately span a maximum supporting post separation of six feet.

The fencing, when installed about the periphery of excavations and trenches, shall form an effective barrier against intrusion by the general public into areas of construction. Contractor, at all times when construction is not in progress, shall be responsible for maintaining the fencing in good repair, and upon notification by the Engineer, shall take immediate action to rectify any deficiency. Prior to the start of any excavation or trenching required for the execution of the proposed work, Contractor shall submit to the Engineer for approval, detailed plans showing types of materials and methods of fabrication for the protective fencing.

There will be no separate measurement or payment for furnishing, installing, or maintaining protective fencing. The cost shall be considered incidental to the cost of the pipe and any other structures.

SECTION 108.5 COMMENCEMENT, PROSECUTION AND PROGRESS

MAG Section 108.5, Add the following: Add new sub-section as following: SUBSECTION 108.5 – WORK HOURS To minimize the inconvenience to local businesses, residents, the traveling public and special events, the work may be allowed, at the City's discretion, to be performed at night time between the hours of 6:00 PM and 5:00 AM on week nights, starting on Sunday night and ending on Friday morning.

No extra payment shall be made for meeting the above stated requirements. The City shall have the right to make modifications to these requirements in the best interest of the community.

SECTION 109.10 MOBILIZATION

MAG Section 109.10, Add the following:

Changes in the scope of work and/or contract payments must be authorized by the Owner's approval of a Contract Change Order prior to the completion of such work. Work completed without the authorization of the Owner will not be eligible for measurement or payment.

Description: Add the following:

This work shall consist of mobilization / demobilization of Contractor's personnel, equipment, supplies and incidentals, including establishment of offices, buildings and other facilities required for the performance of the work on the project, as well as preparatory work and operations prior to the commencement of the work on the project site.

Measurement and Payment:

Mobilization will be measured as a single complete item of work and paid at the contact lump sum price, which price shall be full compensation for the work, complete in place.

SECTION 200 EARTHWORK

SECTION 205 ROADWAY EXCAVATION

Replace Section 205.1 Description with the following:

Roadway excavation shall consist of excavation or fill construction required or part of the grading and construction of roadways, sidewalks, ramps, medians, scuppers, spillways, driveways, driveway tie-ins, private drives, matching existing behind back of walks or at edges of pavement (except for retention basins), & restoring landscape areas. Contractor is responsible for utilizing material from other excavations (from or for roadway & drainage) in the construction of roadway subbase in fill construction situations. Roadway excavation includes finished grading against all Hardscape items, such as curb, sidewalk, edge of pavement, headwalls, ramps, driveways, pull boxes, equipment, equipment pads, pole foundations, utility vaults/manholes/valves, and shall extend to any tie-in or match existing grades/locations. Work under this item shall include construction of finished grade behind back of curb (median or lane curb) and sections within landscape buffers to 2" below top of curb or sidewalk. Areas behind sidewalk shall be level with back of walk grade.

SECTION 210 BORROW EXCAVATION

210.4 MEASUREMENT, is revised to read:

Quantities of borrow excavation will NOT be measured.

210.5 PAYMENT, is revised to read:

No separate payment will be made for Borrow Excavation. Any work required under this, or any related, item shall be included in the cost of adjacent work items.

SECTION 211 FILL CONSTRUCTION

211.5 MEASUREMENT, add the following:

Quantities of fill construction will NOT be measured.

211.6 PAYMENT, add the following:

No payment will be made for Fill Construction. Any work required under this, or any related, item shall be included in the cost of adjacent work items.

SECTION 215 EARTHWORK FOR OPEN CHANNEL

Description: Add the following:

The work under this item shall consist of excavation and/or backfill (grading) required for drainage channel and/or storage basin, existing dikes, berms and median slopes, including furnishing, placing and compacting embankment material, as required, at the locations and in accordance with the details as shown on the plans.

215.8 PAYMENT, add the following:

No payment will be made for earthwork for open channels. Any work required under this, or any related, item shall be included in the cost of channel lining and/or box culvert construction bid items.

SECTION 300 STREET AND RELATED WORK

SECTION 301 SUBGRADE PREPARATION MAG Section 301.7 is revised to read:

Measurement for grading under pavement will not be measured separately.

MAG Section 301.8 is replaced with.

Payment for subgrade preparation shall be included in the cost of the items of ABC or asphalt pavement (refer to plans and these special provisions).

There will be no separate measurement and payment for grading and surface preparation of areas outside of roadway pavement, the work being included in the cost of adjacent work items.

SECTION 310 PLACEMENT AND CONSTRUCTION OF AGGREGATE BASE COURSE

Description: *Add the following:*

The work under this item shall include the furnishing of all materials, personnel, and equipment necessary for the placement and construction of aggregate base course as shown on the project plans and in accordance with the requirements of the Geotechnical Investigation Report.

Construction Requirements:

Comply with MAG Uniform Standard Specifications and Details for Public Works Construction Section 310 in its entirety, including all City of Kingman supplements except as modified herein.

SECTION 321 PLACEMENT AND CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT

Description: Add the following:

The work under these items shall consist of furnishing all materials, mixing at a plant, hauling, and placing a mixture of aggregate materials, mineral admixture and asphalt binder to form a pavement course upon a previously prepared base or sub base at all locations indicated on the project plans and in accordance with the requirements of the Geotechnical Investigation Report.

Construction Requirements:

Pavement installation should be carried out under MAG Uniform Standard Specifications and Details for Public Works Construction Section 321 in its entirety, including all City of Kingman supplements except as modified herein.

The base prepared by the Contractor, on which the asphalt concrete is to be placed, shall be smooth, firm, and true to grade and cross-section as shown on the plans, and shall be so maintained throughout the period of placing asphalt concrete. All irregularities such as humps or high spots shall be removed in order to provide a smooth base of uniform grade and cross-section, so that subsequent surfacing will be of uniform thickness. No additional compensation will be allowed for furnishing and placing these materials, and full compensation for all materials and for all work incidental to the correcting of irregularities will be considered as included in the contract price for asphalt concrete.

Cold joints between pavement sections shall be saw cut.

Contractor Quality Control (QC) testing requirements for asphaltic concrete shall be per MAG section 321.10 and each sublot shall be tested for acceptance of gradation, binder content, air voids, pavement thickness, and compaction of base and surface courses.

Materials:

Asphalt concrete materials and mix design should conform to MAG 710 (and any City of Kingman modifications) using the Marshall Mix design criteria and PG 70-22 for the asphalt grade. Pavement base course material should be aggregate base per MAG Section 702, including all City of Kingman supplements except as modified herein.

Measurement:

Asphalt Concrete Pavement will be measured by square yard, which shall include the required quantities of mineral aggregates, asphalt binder and mineral admixtures.

Payment:

The accepted quantities of asphalt concrete pavement, measured as provided above, will be paid for at the contract unit price per square yard, which price shall be full compensation for the work, complete in place.

SECTION 340 CONCRETE CURB, GUTTER, SIDEWALK, CURB RAMPS, DRIVEWAY AND ALLEY ENTRANCE

Description:

Curb Termination shall be constructed in accordance with MAG Section 340. Construction shall also comply with MAG Std Detail 222, as applicable, and per the appropriate details of the construction plans.

Prior to pouring any concrete the contractor shall contact the City of Kingman Engineering Department 48 hours in advance for an inspection.

Construction Methods:

Add the following paragraph to MAG Section 340.3:

Ramp control point is located at back of curb in the center of the landing, as shown on the construction drawings.

Ramp curb is shown on plans for reference only, and shall not be installed per plan. Contractor shall set forms so that back of landing is level with sidewalk that is to be installed adjacent to curb location. Contractor shall ensure no portion of landing, including section with detectable warnings installed, will exceed 2% slope in any direction, and the wings do not exceed 10:1 (longitudinally) or 1.5% (cross slope).

Payment:

Price bid shall include all labor, material, and equipment necessary to install the Curb Transition and Terminations complete in accordance with the plans, details, and these Special Provisions.

Sidewalk will be paid by price bid per square foot, sidewalk ramp will be paid by price bid per each ramp per detail shown on the plans and driveways will be paid by units specified in the Bid Schedule for each item (EACH and SF).

Price bid shall include all labor, material, and equipment necessary to install sidewalks complete in place in accordance with the plans, details, and these Special Provisions'

Concrete driveway will be paid by price bid as per bid proposal (EACH, SF) as shown on the plans and MAG Standard detail.

Valley gutter will be paid by price bid per square feet as shown on the plans and MAG Standard detail.

Payment for the installation of new concrete will be made in accordance with the contract unit price as set forth in the bid proposal. Such payment shall constitute full compensation for furnishing all material, labor, tools, and equipment and accomplishing all work associated with installing the concrete apron and courtesy pad as described in the special provisions and on the construction plans.

SECTION 345 ADJUST FRAMES, COVERS AND VALVE BOXES

Description: Add the following:

The work under this item shall consist of furnishing all labor, materials, and equipment necessary to adjust water valves frame and cover to grade, at all locations indicated on the project plans.

Construction Requirements:

Comply with MAG Uniform Standard Specifications and Details for Public Works Construction Section 345 & 630 and detail 270 in their entirety, including all City of Kingman supplements except as modified herein.

Existing concrete and pipe facilities within the manhole structure will need to be removed to a depth necessary to accommodate adjustment of the top of the manhole structure to finished grade. Contractor shall review as built data and review field conditions to become familiar with the actual condition prior to bid or start of construction. Contractor shall ensure any specific method, materials, equipment, etc. necessary to perform work under this item will be provided at the time of construction.

Measurement:

Adjust Water Valve boxes, and manholes, will be measured as a unit for each.

Payment:

The accepted quantities of adjust water valve and manholes, measured as provided above, will be paid for at the contract unit price per each which price shall be full compensation for the work, complete in place.

SECTION 350 REMOVAL OF EXISTING IMPROVEMENTS

General:

Removal of existing improvements shall generally comply with MAG Section 350. Contractor shall remove and dispose of, offsite, all material, including any unsuitable subgrade or native backfill. No recycled material shall be used on this project without the written approval of the City.

Measurement and payment for removals shall be made as indicated on the bid tab, and shall include all labor, material, and equipment necessary to complete removals and dispose of all material.

Construction Requirements:

Comply with MAG Uniform Standard Specifications and Details for Public Works Construction Section 350 in its entirety, including all City of Kingman supplements except as modified herein.

Measurement:

Removal of channel lining will be measured per square foot.

Removal of concrete headwall will be measured per each.

Removal of concrete curb and gutter will be measured per linear feet.

Removal of concrete sidewalk will be measured per square feet.

Removal of existing concrete will be measured per square feet.

Removal and sawcut of existing asphalt will be measured per square yard.

Payment:

Payment for removal of channel lining will be measured per square foot. Payment for removal of concrete headwall will be measured per each. Payment for removal of concrete curb and gutter will be measured per linear feet. Payment for removal of concrete sidewalk will be measured per square feet. Payment for removal of existing concrete will be measured per square feet. Payment for removal and sawcut of existing asphalt will be measured per square yard.

SECTION 400 RIGHT OF WAY AND TRAFFIC CONTROL

SECTION 401 TRAFFIC CONTROL:

401.5 General Traffic Regulations:

Contractor will be required to provide permanent and temporary traffic control to accommodate project schedule, phasing, the general public, etc. throughout the length of this project, and as indicated in the Contract Documents. Contractor shall coordinate, and receive written approval of, all traffic control layouts and equipment prior to start of construction or prior to making any changes. Contractor shall modify traffic control, at any time, when requested by the City, and without any additional compensation.

There will be no full street, intersection, or driveway closures allowed at any time during the course of construction activities. Contractor must maintain one lane of traffic in each direction at all times. Contractor must also maintain access to all properties within the limits of construction activities at all times. Any full or partial restrictions or diversions shall be coordinated and approved by the City and property owner a minimum of 5 working days prior to the implementation date(s).

The Contractor shall notify the Inspector seven days in advance of the time work will be started in areas requiring the rerouting of traffic, traffic lane striping or removal of street signs. The foregoing shall apply to progressive modifications of traffic routing within an area in which work is in progress.

401.5.3 Temporary Lane Diversions, add the following:

Traffic shall be maintained on paved surfaces. All temporary lane diversions shall be paved and shall be delineated with vertical flashing panels.

Temporary traffic signal will be required at Yavapai during construction at all time.

401.7 Payment, add the following:

Payment will be made at the lump sum contract unit price. No additional payment will be made to for any other traffic control items. This payment shall include all traffic control related activities such as labor, materials, message boards, temporary paved surfaces, temporary traffic signals, traffic control set up and take downs and other activities related to temporary traffic control.

SECTION 405 SURVEY MONUMENTS

General:

Adjustments shall be made at locations as shown on the construction plans and in accordance with MAG Std. Detail 120-1 Type A, at locations indicated in the construction plans. Where indicated on the

plans, new survey markers shall be installed using geometric data indicated in the Geometric Control Sheets. All new marker locations shall be recorded. All new markers shall also be adjusted to finish grade.

Location points indicated in the construction plans are based on locations shown on drawings provided by the City of Kingman. Verify exact location prior construction.

Measurement and Payment:

City of Kingman will be providing the survey and construction staking. Contractor shall coordinate with City Surveyor to install and reset existing survey markers.

SECTION 430 LANDSCAPING AND PLANTING

General:

The task under this bid item shall include preserving existing landscaping along the north side of property located at the southeast corner of Kenwood Ave and Eagle Rock Road. There are several small boulders, rock border wall and shrubs along the sidewalk.

Measurement and Payment:

Measurement and payment shall be made on the basis of the contract unit price bid per lump sum basis for complete removal and restoration of all of the landscaping in the area.

Price bid shall include all labor, material, and equipment necessary to preserve, remove and replace landscaping. Any drip irrigation pipes, and/or other component damaged or broken within the project area will be replaced and/or repaired by the Contractor.

SECTION 500 CONCRETE STRUCTURES

SECTION 505 CONCRETE STRUCTURES

Description: Add the following:

The work under this item shall consist of construction of channel lining near Airway Ave and Eastern Street intersection. The existing concrete channel lining will be removed and replaced with the box culvert and channel lining will be matched upstream and downstream of the Sbox culvert.

Box culverts shall be constructed in accordance with ADOT Construction Standard Details current edition, ADOT Standard Specifications for Road and Bridge Construction, current edition, Section 601, except as specified herein, and the plans.

Catch Basins shall be constructed in accordance with MAG (2020 Edition), City of Phoenix Standard Specifications and Details for Public Works Construction, current editions, except as specified herein, and the plans.

Work under this bid item shall consist of furnishing all the necessary personnel, materials, labor, tools, and equipment to install catch basins of the type called out and at the locations shown on the project plans.

The work under this item shall include the furnishing of all materials, personnel, and equipment necessary to construct headwalls of the type called out and at the locations shown on the project plans. Comply with MAG Uniform Standard Specifications and Details for Public Works Construction section 505 in its entirety, including all City of Kingman supplements except as modified herein.

Comply with MAG Standard Detail 501-1 and 501-2 in their entirety.

The work under this bid item shall be constructed in accordance with ADOT Construction Standard Details current edition, ADOT Standard Specifications for Road and Bridge Construction - Section 601, current edition, except as specified herein, and the plans.

Work under this bid item shall consist of furnishing all the necessary personnel, materials, labor, tools, and equipment to install concrete encasement for supporting crossing waterlines, shoring, sheeting, bracing and trench box.

Construction Requirements:

Concrete channel shall be constructed per detail shown on the plans and concrete and rebar shall follow the MAG Specification Section 505.

Measurement:

Concrete channel lining will be measured horizontally at the centerline to the nearest square yard constructed per typical section shown on the plans.

Catch basins and trench drain will be measured per each.

Five barrel 10'X6' Box culvert will be measured by linear feet along its centerline.

Concrete headwall will be measured by each complete in place.

Measurement of encasement of existing and proposed pipes shall be per each encasement installed.

Payment:

The concrete channel will be paid for at the contract unit price per square yard which shall be full compensation for the work, including excavation, backfill, labor, equipment, concrete, rebar, and associated grading, complete in place per typical section as shown on the plans.

Five Barrel 10'X6' Box Culvert will be paid for at the contact unit price bid per each linear feet along the centerline of the box culvert. Price bid shall include all labor, material, and equipment necessary to install the Box Culverts complete in place in accordance with the plans, details, and these Special Provisions.

The accepted quantities of catch basin, measured as provided above, will be paid for at the contract unit price per each which price shall be full compensation for the work, complete in place.

The accepted quantities of catch basin, measured as provided above, will be paid for at the contract unit price per each which price shall be full compensation for the work, complete in place.

The accepted quantities of headwall, measured as provided above, will be paid for at the contract unit price per each which price shall be full compensation for the work, complete in place.

Payment for ADOT Standard headwalls will be made per each.

The accepted quantities, measured as provided above, will be paid for at the contract unit price per each which price shall be full compensation for the work, complete in place.

SECTION 520 STEEL AND ALUMINUM HANDRAILS

General:

Steel handrail construction shall conform to Section 520 of the MAG Uniform Standard Specifications except as modified herein. Contractor shall install handrail on each headwall per MAG Standard Detail 145, type 1.

Steel handrail shall be installed along the top of all of the concrete inlet and outlet headwalls and wing walls and at locations shown on the plans. The standard handrails are 3.5 feet tall as shown on the civil plans.

Handrail required to be hot dipped galvanized (not painted).

Bollard construction shall conform to Section 520 of the MAG Uniform Standard Specifications except as modified herein.

Measurement and Payment:

Handrail shall be measured by the linear foot from end to end along the face of the railing including terminal section.

Payment for hand railing shall be made on the basis of the price bid per linear foot from end to end along the face of the railing including the terminal section. Such payment shall include furnishing all labor, materials and equipment, installation, mock-ups, painting, fabricating, welding, and performing all work involved in constructing handrail.

Bollard shall be measured by each.

Payment for bollard shall be made on the basis of the price bid per each. Such payment shall include furnishing all labor, materials and equipment, installation, excavation, backfill, fabricating, welding, and performing all work involved in constructing bollard.

SECTION 600 WATER, SEWER AND STORM DRAIN

SECTION 610 WATERLINE CONSTRUCTION

General:

All pipe shall be manufactured, handled, loaded, shipped, unloaded and stored at the job site in such a manner as to prevent any damage to the pipe. Any pipe section that becomes damaged shall be repaired as directed by the Engineer, if in his opinion a satisfactory repair can be made. If the Engineer

determines repairs cannot be made, the material shall be replaced with undamaged materials at the Contractor's expense. No handling method will be permitted involving lifting from the inside of the pipe.

The work under this item shall consist of furnishing all labor, materials, and equipment necessary to remove and relocate existing fire hydrants at all locations indicated on the project plans.

Construction Methods:

Trenching shall comply with MAG Section 601 and adhere to maximum trench widths as defined in Table 601-1 and COK Std Det. 392.

Comply with MAG Uniform Standard Specifications and Details for Public Works Construction Section 350 in its entirety, including all City of Kingman supplements except as modified herein.

All waterline relocations shall confirm to MAG Standard Section 610 and City of Kingman details.

Measurement:

Waterline will be measured per linear foot along the centerline of the pipe.

Remove and relocate fire hydrant will be measured per each.

Payment:

The accepted quantities of waterline relocations, measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for the work, complete in place. All joints, fittings, thrust blocks, retrained fittings and valves, unless otherwise shown on the bid items, shall be incidental to the cost of the waterline construction.

The accepted quantities of remove and relocate fire hydrant, measured as provided above, will be paid for at the contract unit price per each which price shall be full compensation for the work, complete in place.

SECTION 615 SANITARY SEWER LINE CONSTRUCTION

General:

Adjustments shall be made at locations as shown on the construction plans and in accordance with COK Standard Detail 441. Adjustments to sewer cleanout shall generally be made per MAG Section 615.

Existing concrete and/or pipe facilities within the sewer cleanout will need to be removed to a depth necessary to accommodate adjustment of the top of the sewer cleanout to finished grade. Contractor shall review as built data and review field conditions to become familiar with the actual condition prior to bid or start of construction. Contractor shall ensure any specific method, materials, equipment, etc necessary to perform work under this item will be provided at the time of construction.

Measurement and Payment:

Measurement and payment shall be made on the basis of the contract unit price bid per each basis for complete adjustments.

Price bid shall include all labor, material, and equipment necessary to complete final adjustments complete in place in accordance with the plans, details, and these Special Provisions.

SECTION 618 STORM DRAIN CONSTRUCTION

Description:

The work under this item shall include the furnishing of all materials, personnel, and equipment necessary to construct reinforced concrete pipe at the locations shown on the project plans.

Materials:

All pipe materials shall be Rubber Gasket Reinforced Concrete Pipe (RGRCP) Class III & IV conforming to MAG Uniform Standard Specifications and Details for Public Works Construction Section 735 in its entirety, including all City of Kingman supplements except as modified herein.

Construction Requirements:

Comply with MAG Uniform Standard Specifications and Details for Public Works Construction Section 618 in its entirety, including all City of Kingman supplements except as modified herein.

Backfill under street pavement shall be half-sack CLSM per MAG Uniform Standard Specifications and Details for Public Works Construction Section 728 and be constructed per MAG Standard Detail 200 with 16" minimum depth of ABC shelf, 'T-Top' pavement replacement in all areas not having full depth pavement replacement.

Contractor shall provide safety construction fencing around all open trenches and excavations during all non-working hours. The Contractor shall provide for the safety and welfare of the general public by adequately fencing all excavations and trenches.

Measurement:

RGRCP will be measured per linear foot, including excavation, backfill, bedding, and safety fencing.

Payment:

The accepted quantities of RGRCP, measured as provided above, will be paid for at the contract unit price per linear foot which price shall be full compensation for the work, complete in place.

SECTION 625 MANHOLE CONSTRUCTION AND DROP SEWER CONNECTIONS Description:

The work under this item shall include the furnishing of all materials, personnel, and equipment necessary to construct storm drain manholes of the type called out and at the locations shown on the project plans.

Materials:

Comply with MAG Uniform Standard Specifications and Details for Public Works Construction section 625 in its entirety, including all City of Kingman supplements except as modified herein.

SECTION 900 TRAFFIC SIGNING, STRIPING, MARKING AND SIGNAL

REMOVE EXISTING PAVEMENT MARKINGS

Pavement markings shall be removed as directed by the Engineer.

Measurement for remove pavement markings shall be made on the basis of the contract unit price bid per linear foot.

Price bid shall include all labor, material, and equipment necessary to remove pavement markings, in accordance with the plans, details, and these Special Provisions.

REMOVE SYMBOLS, ARROWS

Pavement symbols and arrows shall be removed as directed by the Engineer.

Measurement for remove pavement symbols and arrows shall be made on the basis of the contract unit price bid per each.

Price bid shall include all labor, material, and equipment necessary to remove pavement symbols and arrows, in accordance with the plans, details, and these Special Provisions.

WHITE PAVEMENT MARKING, PAINT (6" EQUIV) YELLOW PAVEMENT MARKING, PAINT (6" EQUIV) PAVEMENT SYMBOLS PAINT

All paint pavement markings (stipes and symbols) shall be installed per ADOT standard specification 708 and any updated stored specifications.

Measurement

Pavement marking will be measured by the 4" equivalent linear foot installed as calculated per the ADOT standard specification 708. Symbols shall be measured by the each turn arrow installed.

Payment

The accepted quantities of pavement marking and symbols installed as described above will be paid for at the contract unit price for each linear foot of marking and each turn arrow, which shall be full compensation for the work described and specified herein and on the project plans, including all incidentals necessary to complete the work.

WHITE PAVEMENT MARKING, THERMOPLASTIC (6" EQUIV) YELLOW PAVEMENT MARKING, THERMOPLASTIC (6" EQUIV) PAVEMENT LEGEND THERMO PAVEMENT SYMBOLS THERMO BIKE LANE SYMBOL THERMO BIKE LANE ARROW THERMO

All paint pavement markings (stipes and symbols) shall be installed per ADOT standard specification 704 and any updated stored specifications.

Measurement

Pavement marking will be measured by the 4" equivalent linear foot installed as calculated per the ADOT standard specification 704. Symbols, legends and arrows shall be measured by the each installed.

Payment

The accepted quantities of pavement marking, symbols, legends and arrows installed as described above will be paid for at the contract unit price for each linear foot of marking and each arrow, legend and symbol, which shall be full compensation for the work described and specified herein and on the project plans, including all incidentals necessary to complete the work.

MAG TYPE B BARRICADE

The MAG Type B Barricades shall be installed at the locations shown on the plans per MAG Standard Detail 130.

Measurement for MAG Type B Barricade shall be made on the basis of the contract unit price bid per linear foot.

Price bid shall include all labor, material, and equipment necessary to install MAG Type B Barricade, in accordance with the plans, details, and these Special Provisions.

REMOVE SIGN, POST AND POST BASE REMOVE SIGN

Sign, post, post base and associated appurtenances shall be removed and salvage to the City of Kingman as directed by the construction administrator.

Measurement for remove and salvage shall be made on the basis of the contract unit price bid per each basis.

Price bid shall include all labor, material, and equipment necessary to remove, salvage and deliver sign, post, post base and associated appurtenances to the City, in accordance with the plans, details, and these Special Provisions.

REFLECTIVE TRAFFIC SIGN PANEL

All sign panels shall be fabricated of flat sheet aluminum per ADOT Specification 608 and any updated stored specifications. The reflectorized sheet shall be ADOT specification 1007 and any updated stored specifications.

Measurement for remove and salvage shall be made on the basis of the contract unit price bid per each basis.

Price bid shall include all labor, material, and equipment necessary to remove, salvage and deliver sign, post, post base and associated appurtenances to the City, in accordance with the plans, details, and these Special Provisions.

TELESPAR SIGN POST BASE ASSEMBLY

The telespar sign post assembly shall include the appropriate type and length of square tube post for each sign ADOT standard details.

Measurement for telespar sign post base assembly shall be made on the basis of the contract unit price bid per each basis.

Price bid shall include all labor, material, and equipment necessary to install telespar sign post base assembly in accordance with the plans, details, and these Special Provisions.

RELOCATE SIGN W/ NEW POST AND POST BASE

Sign to be relocated as shown on the construction plans. Contractor to provide new hardware and associated appurtenances as necessary to mount existing sign to new street sign post. Contractor to salvage items not re-used to the City of Kingman as directed by the construction administrator.

Measurement for relocate sign shall be made on the basis of the contract unit price bid per each basis.

Price bid shall include all labor, material, and equipment necessary to relocate in accordance with the plans, details, and these Special Provisions.

RELOCATE SIGN TO STREETLIGHT POLE

Sign to be relocated as shown on the construction plans. Contractor to provide new hardware and associated appurtenances as necessary to mount existing sign to streetlight pole. Contractor to salvage items not re-used to the City of Kingman as directed by the construction administrator.

Measurement for relocate sign shall be made on the basis of the contract unit price bid per each basis.

Price bid shall include all labor, material, and equipment necessary to relocate in accordance with the plans, details, and these Special Provisions.

REMOVE EXISTING PULL BOXES REMOVE EXISTING SIGNAL POLE FOUNDATIONS REMOVE EXISTING SIGNAL CABINET FOUNDATIONS

Pull boxes and foundations shall be removed as indicated on the project plans and as directed by the Engineer. Foundations shall be removed per ADOT standard specifications 202 and any updated stored specifications.

Measurement for each item removed shall be made on the basis of the contract unit price bid per each basis.

Price bid shall include all labor, material, and equipment necessary to relocate in accordance with the plans, details, and these Special Provisions.

2" ELECTRICAL CONDUIT, TRENCH 2.5" ELECTRICAL CONDUIT, TRENCH 3" ELECTRICAL CONDUIT, TRENCH 2-3" ELECTRICAL CONDUIT, TRENCH

The Contractor shall furnish and install electrical conduit via trench at the locations called for on the plans.

The electrical conduit shall be per the requirements of ADOT standard specification 732 and any updated stored specifications.

The Contractor shall be responsible for restoring the surrounding surface conditions back to their original state, including concrete and decorative areas.

Electrical Conduit shall be measured by the linear foot, for each type of conduit, from center to center of pull boxes and center of pull box to center of foundation.

The accepted quantity of conduit, measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for furnishing and installing the conduit, complete in place, including any incidentals necessary to complete the work.

2-3" ELECTRICAL CONDUIT, DIRECTIONAL BORE

The Contractor shall furnish and install electrical conduit via directional bore at the locations called for on the plans.

The electrical conduit shall be per the requirements of ADOT standard specification 732 and any updated stored specifications.

The Contractor shall be responsible for restoring the surrounding surface conditions back to their original state, including concrete and decorative areas.

Electrical Conduit shall be measured by the linear foot, for each type of conduit, from center to center of pull boxes.

The accepted quantity of conduit, measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for furnishing and installing the conduit, complete in place, including any incidentals necessary to complete the work.

ELECTICAL SERVICE CABINET FOUNDATION

A new electrical service cabinet foundation that is compatible with the existing electrical service cabinet shall be constructed at the location identified on the plans. The required conduits per the plans shall be stubbed up through the foundation.

The foundation shall be per the manufacture of the existing cabinet and ADOT standard specifications 734 and any updated stored specifications.

Measurement for the foundation shall be made on the basis of the contract unit price bid per each basis.

CONTORL CABINET FOUNDATION

A new control cabinet foundation that is compatible with the existing control cabinet shall be constructed at the location identified on the plans. The required conduits per the plans shall be stubbed up through the foundation.

The foundation shall be per the manufacture of the existing cabinet and ADOT standard specifications 734 and any updated stored specifications.

Measurement for the foundation shall be made on the basis of the contract unit price bid per each basis.

UNINTERRUPTIBLE POWER SUPPLY FOUNDATION

A new uninterruptible power supply foundation that is compatible with the existing uninterruptable power supply cabinet shall be constructed at the location identified on the plans. The required conduits per the plans shall be stubbed up through the foundation.

The foundation shall be per the manufacture of the existing cabinet and ADOT standard specifications 734 and any updated stored specifications.

Measurement for the foundation shall be made on the basis of the contract unit price bid per each basis.

RELOCATE ELECTRICAL SERVICE CABINET RELOCATE CONTROL CABINET RELOCATE UNINTERRUPTIBLE POWER SUPPLY CABINET RELOCATE TRAFFIC SIGNAL POLE, (TYPE A)

RELCOATE TRAFFIC SIGNAL POLE, (TYPE Q POLE W/MAST ARMS)

Traffic signal cabinets and signal poles shall be relocated to new foundations per the project plans. Contractor to provide new hardware and associated appurtenances necessary to install existing cabinets and signal poles on new foundations.

The contractor shall protect the cabinets and signal poles during the removal and reinstallation. If the cabinets or signal poles are damaged, the contractor shall repair the cabinets or signal poles to the City's satisfaction at the contractor's expense.

Measurement for each item relocated shall be made on the basis of the contract unit price bid per each basis.

POLE FOUNDATION (TYPE A) POLE FOUNDATION (TYPE Q)

The traffic signal pole foundations shall be per ADOT standard specifications 731 and any updated stored specifications and installed at the location per the project plans.

Measurement for each foundation shall be made on the basis of the contract unit price bid per each basis.

TRAFFIC SIGNAL HEAD (FYA)

A flashing yellow arrow (FYA) traffic signal head shall be installed at the locations identified on the plans. The FYA shall meet the requirements of ADOT standard specification 733 and any updated stored specifications.

Measurement for each FYA signal head shall be made on the basis of the contract unit price bid per each basis.

TYPE II MOUNTING ASSEMBLY TYPE IV MOUNTING ASSEMBLY

The traffic signal mounting assemblies shall be per ADOT standard specifications 733 and any updated stored specifications and installed at the location per the project plans.

Measurement for each mounting assembly shall be made on the basis of the contract unit price bid per each basis.

CONDUCTORS (TRAFFIC SIGNAL)

Electrical conductors as indicated on the plans and as required to provide a fully functioning traffic signal shall be furnished and installed by the contractor.

Conductors shall be measured on a lump sum basis furnished and installed.

Conductors, measured as provided above, will be paid for at the contract lump sum price, which price shall be full compensation for the work related to wiring as specified in the plans and for ancillary cabinet items, such as additional load switches, flashers, etc., complete in place, to provide a complete, functioning cabinet assembly for control of the traffic signals as shown on the plans.

VIDEO DETECTION

Video detection will be installed on all 3 approaches as indicated on the plans. Video detection shall be Econolite Vision or approved equal.

Measurement for video detector shall be made on the basis of the contract unit price bid per lump sum price.

NO. 7 PULL BOX, ADOT NO. 7 PULL BOX WITH EXTENSION, ADOT

The No. 7 pull boxes shall be per ADOT standard specifications 732 and any updated stored specifications and installed per ADOT Standard Details at the location per the project plans.

Measurement for each pull box shall be made on the basis of the contract unit price bid per each basis.

SALVAGE EXISTING SIGNAL EQUIPMENT

The contractor shall remove the existing traffic signal poles as indicated on the plans and salvage to the City of Kingman.

The contractor shall coordinate with the City of Kingman Police Department to have a uniformed officer on duty to control traffic during the conversion of the traffic signal operation from the existing traffic signal to the new traffic signal.

Salvage existing signal equipment will be measured on a complete basis and includes salvaging all equipment to the City as indicated on the plans. No measurement will be made for the uniformed officer.

The accepted quantities for salvage existing signal equipment, measured as provided above, will be paid for at the contract lump sum price, which price shall be full compensation for the work, complete in place, as specified and described herein.

PROPOSAL AND FORMS

Contractor's may use AIA Document A305 - Contractor's Qualification Statement or this form to fulfill the qualification requirements of the bid.

CONTRACTOR'S QUALIFICATION STATEMENT

The undersigned certifies under oath to the truth and correctness of all statements and of all answer to questions made hereinafter.

SUBMITTED TO: City of Kingman

ADDRESS: 310 N. 4th St., Kingman AZ 86401

SUBMITTED BY:

NAME:

ADDRESS:

ARIZONA CONTRACTOR'S LICENSE #

FEDERAL ID

PRINCIPAL OFFICE:

Corporation
Partnership
Individual

Joint Venture
Other

1. How many years has your organization been in business as a general contractor?

- 2. How many years has your organization been in business under its present business name?
 - a. Under what other or former names has your organization operated?
- 3. If a corporation, answer the following:
 - a. Date of incorporation:
 - b. State of incorporation:
 - c. President's name:
 - d. Vice-president's name(s):
 - e. Secretary's name:

- f. Treasurer's name:
- 4. If an individual or a partnership, answer the following:
 - a. Date of organization:
 - b. Name and address of all partners (state whether general or limited partnership):

5. If other than a corporation or partnership, describe organization and name principals:

6. List states and categories in which your organization is legally qualified to do business. Indicate registration or license numbers. List states in which partnership or trade name is filed.

7. We normally perform the following work with our own forces:

8. Have you ever failed to complete any work awarded to you? If so, note when, where, and why:

- 9. Within the last five years, has any officer or partner of your organization ever been an officer or partner of another organization when it failed to complete a construction contract? If so, attach a separate sheet of explanation.
- 10. On a separate sheet, list major construction projects your organization has in process, giving the name of project, owner, architect, contract amount, percent complete, and scheduled completion date.
- 11. On a separate sheet, list the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion, and percentage of the cost of the work performed with your own forces.
- 12. On a separate sheet, list the construction experience of the key individuals of your organization.
- 13. Trade references:

14. Bank references:

- 15. Name of bonding company and name and address of agent:
- 16. Attach a financial statement, audited if available, including Contractor's latest balance sheet and income statement showing the following items:
 - a. Current assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses):
 - b. Net fixed assets:
 - c. Other assets:
 - d. Current liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries, and accrued payroll taxes):
 - e. Other liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus, and retained earnings):
 - f. Name of firm preparing financial statement and date thereof:

- g. Is this financial statement for the identical organization named on page one?
- h. If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsidiary):

i. Will this organization act as guarantor of the contract for construction?

17. Dated at

18.

day of	this
Name of organization:	
By:	
Title:	
	being duly sworn deposes and
says that he/she is the	
that answers to the foregoing questions and all stateme	
correct.	ints therein contained are true and
Subscribed and sworn before me this day of	, 20
Notary Public	

My commission expires:

General and Supplementary Conditions are provided by the project ENGINEER/engineer as part of the specifications. Insert the correct paragraph numbers where indicated.

CITY OF KINGMAN EASTERN STREET IMPROVEMENTS, PHASE 1 PROPOSAL FORM

PROJECT IDENTIFICATION: ENG21-0001 EASTERN STREET IMPROVEMENTS, PHASE 1

THIS BID IS SUBMITTED TO:

The City of Kingman 310 N. Fourth Street Kingman, AZ 86401

- 1. The undersigned bidder proposes and agrees, if this bid is accepted, to enter into an Agreement with the *City of Kingman* in the form included in the contract documents to perform and furnish all work as specified or indicated in the contract documents for the contract price and within the contract time indicated in this bid and in accordance with the other terms and conditions of the contract documents.
- 2. Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to bidders, including without limitation, those dealing with the disposition of bid security. This bid will remain subject to acceptance for *30* days after the day of bid opening. Bidder will sign and submit the Contract with the bonds and other documents required by the bidding requirements within 10 days after the date of Notice of Award.
- 3. In submitting this bid, bidder represents, as more fully set forth in the Contract, that:
 - a. Bidder has examined copies of all of the bidding documents and of the following Addenda (receipt of which is hereby acknowledged):

Date

Addendum Number

- b. Bidder has familiarized himself/herself with the nature and extent of the contract documents, work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance, or furnishing of the work.
- c. Bidder has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site which have been identified in the Supplementary Conditions as provided in the General Conditions, and accepts the determination set forth in the General Conditions of the extent of the technical data contained in such reports and drawings upon which bidder is entitled to rely. Bidder acknowledges that the *City and ENGINEER* do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the bidding documents with respect to underground facilities at or contiguous to the site. Bidder has obtained and carefully studied (or assumes responsibility for having done

so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this bid for performance and furnishing of the work in accordance with the times, price and other terms and conditions of the contract documents.

- d. Bidder has correlated the information known to the bidder, information and observations obtained from visits to the site, reports and drawings identified in the contract documents and all additional examinations, investigations, explorations, tests, studies and data with the contract documents.
- e. Bidder has provided the *City/ENGINEER* written notice of all conflicts, errors, ambiguities or discrepancies that bidder has discovered in the contract documents and the written resolution thereof by *City/ENGINEER* is acceptable to bidder, and the contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the work for which this bid is submitted.
- f. This bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; bidder has not directly or indirectly induced or solicited any other bidder to submit a false or sham bid; bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and bidder has not sought by collusion to obtain for himself/herself any advantage over any other bidder or over the *City*.
- 4. Bidder will complete the work in accordance with the contract documents for the following total bid price:

\$

CITY OF KINGMAN ENG21-0001, EASTERN STREET IMPROVEMENTS, PHASE 1

`

TO: THE HONORABLE MAYOR AND CITY COUNCIL, CITY OF KINGMAN, ARIZONA

The Undersigned proposes and agrees to furnish any and all required labor, material, construction equipment, transportation and services for the construction of Roadway and Drainage Improvements for Eastern Street, Phase 1 in strict conformity with the Plans, Specifications, and Special Provisions, for the following unit prices:

ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	EXTENDED COST
1	MOBOLIZATION	1	LS		
2	ROADWAY EXCAVATION	5,147	CY		
3	GROUTED RIPRAP PER MAG SECTION 220, D50=6", T=12"	48	CY		
4	GROUTED RIPRAP PER MAG SECTION 220, D50=12", T=24"	13	CY		
5	AGGREGATE BASE COURSE, 8" THICK	13,536	SY		
6	ASPHALT CONCRETE PAVEMENT, 4" THICK, (MARSHALL 3/4" MIX)	13,536	SY		
7	BITUMINOUS TACK COAT	14	TON		
8	CURB & GUTTER PER MAG STD DET 220-1, TYPE A	3,858	LF		
9	SINGLE CURB PER MAG STD DET 222 TYPE A	340	LF		
10	CURB TRANSITION TYPE A TO TYPE C PER MAG STD DET 221	9	EA		
11	CURB TERMINATION TYPE A TO TYPE C PER MAG STD DET 222	8	EA		
12	CURB TRANSITION TYPE A TO TYPE E PER MAG STD DET 220-2	2	EA		
13	SIDEWALK PER COK STD DET 230	10,334	SY		
14	SIDEWALK RAMP PER COK STD DET 233	7	EA		
15	SIDEWALK RAMP PER COK STD DET 233 AND DETAIL G, SHEET DT02	1	EA		
16	SIDEWALK RAMP PER MAG STD DET 238-2	1	EA		
17	SIDEWALK RAMP PER MAG STD DET 237-1	2	EA		
18	SIDEWALK RAMP PER COK STD DET 236	1	EA		
19	CONCRETE DRIVEWAY PER MAG STD DET 250-2 MATCH EXST WIDTH, MIN 16'	1	EA		
20	CONCRETE DRIVEWAY PER DETAIL SHEET DT02	168	SF		
21	CONCRETE DRIVEWAY PER DETAIL SHEET DT01	100	SF		
22	VALLEY GUTTER PER MAG STD DET 240	470	SY		
23	RESET FRAME & COVER FOR WATER VALVE PER COK STD DET 391.1	9	EA		
24	RESET FRAME AND COVER FOR MANHOLE PER COK STD DET 422	3	EA		
25	REMOVE CONCRETE CHANNEL LINING	2,063	SF		
26	REMOVE EXISTING CONCRETE WINGWALL/HEADWALL	1	EA		
27	RELOCATE EXISTING UTILITY BOX	3	EA		
28	RELOCATE EXISTING WATER METER	1	EA		
29	RELOCATE EXISITING WATER VALVE	4	EA		
30	REMOVE EXISTING ACCESS GATE	1	EA		
31	REMOVE CONCRETE CURB AND GUTTER	1,710	LF		
32	REMOVE CONCRETE SIDEWALK	5,170	LF		

ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	EXTENDED COST
33	REMOVE EXISTING CONCRETE	283	SF		
34	REMOVE, SALVAGE EXIST SIGN TO CITY AND REINSTALL NEW SIGN/POST PROVIDED BY CITY	8	EA		
35	SAWCUT & REMOVE EXISTING PAVEMENT	7,960	SY		
36	TRAFFIC CONTROL	1	LS		
37	NEW FENCE TO TIE INTO EXISTING FENCE	2	EA		
38	INSTALL FENCE PER COK STD DET 160 WITHOUT BARBED WIRE	170	LF		
39	PRESERVE EXISTING LANDSCAPING	1	LS		
40	CHANNEL LINING, CONCRETE OR PNEUMATICALLY PLACED MORTAR, 6" THICK	1,206	SY		
41	FIVE BARREL 10' X 6' BOX CULVERT PER ADOT STD DET SD 6.05, SEE SHEET DT07	139	LF		
42	CATCH BASIN PER MAG STD DET 530, L=3.5'	3	EA		
43	CATCH BASIN PER MAG STD DET 531, L=5.5'	5	EA		
44	CATCH BASIN PER MAG STD DET 532, L=8.0'	1	EA		
45	CATCH BASIN COP STD P-1569-1, TYPE M-1, L=17'	5	EA		
46	CATCH BASIN AND TRENCH DRAIN PER DETAIL SHEET DT14	1	EA		
47	HEADWALL PER MAG STD DET 501, "U TYPE"	1	EA		
48	INLET WING PER ADOT STD DET SD 6.10, LENGTH PER PLAN, SEE SHEET DT09 & DT10	2	EA		
49	OUTLET WING PER ADOT STD DET SD 6.10, LENGTH PER PLAN, SEE SHEET DT09 & DT10	2	EA		
50	CONCRETE ENCASEMENT PER MAG STD DET. 404	4	EA		
51	SAFETY HANDRAIL PER MAG STD DET 145, TYPE 1	242	LF		
52	6" REMOVABLE BOLLARDS, TYPE 2, PER MAG STD DET 140	4	EA		
53	12" WATERLINE PVC C-900, CLASS 235, THRUST BLOCKS PER MAG STD DET 381, TRENCH PER COK DET 391	342	LF		
54	6" WATERLINE PVC C-900, CLASS 235, THRUST BLOCKS PER MAG STD DET 381, TRENCH PER COK DET 391	325	LF		
55	8" WATERLINE PVC C-900, CLASS 235, THRUST BLOCKS PER MAG STD DET 381, TRENCH PER COK DET 391	86	LF		
56	REMOVE & RELOCATE EXST FIRE HYDRANT PER COK STD DET 360	1	EA		
57	CONNECT TO EXIST 12" LINE WITH 12"x12" TAPPING SLEEVE AND VALVE PER MAG STD DET 340	3	EA		
58	FLUSHING PIPE ASSEMBLY PER COK STD DET 390	2	EA		
59	CONNECT TO EXISTING 6" LINE WITH 6"x6" TAPPING SLEEVE AND VALVE PER MAG STD DET 340	2	EA		
60	6" GATE VALVE PER MAG STD DET.613-1	6	EA		
61	6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303-1 & 303-2	2	EA		
62	SEWER CLEANOUT PER COK STD DTL 441	2	EA		
63	8" SDR-35 SEWER PIPE	57	LF		

•

ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	EXTENDED COST
64	CONCRETE PIPE COLLAR PER MAG STD DET 505	2	EA		
65	18" RGRCP, CLASS III	114	LF		
66	24" RGRCP, CLASS III	155	LF		
67	18" RGRCP, CLASS IV	390	LF		
68	36" RGRCP, CLASS IV	299	LF		
69	MANHOLE PER MAG STD DET 520 & 522	8	EA		
70	REMOVE EXISTING PAVEMENT MARKINGS	1,742	LF		
71	REMOVE SYMBOLS, ARROWS	6	EA		
72	WHITE PAVEMENT MARKING, PAINT (6" EQUIV)	3,835	LF		
73	YELLOW PAVEMENT MARKING, PAINT (6" EQUIV)	3,505	LF		
74	WHITE PAVEMENT MARKING, THERMOPLASTIC (6" EQUIV)	5,752	LF		
75	YELLOW PAVEMENT MARKING, THERMOPLASTIC (6" EQUIV)	5,258	LF		
76	PAVEMENT SYMBOLS THERMO	8	EA		
77	BIKE LANE SYMBOL THERMO	9	EA		
78	REMOVE SIGN, POST AND POST BASE	16	EA		
79	TELESPAR SIGN POST BASE ASSEMBLY (Sleeve & Anchor)	14	EA		
80	REFLECTIVE TRAFFIC SIGN PANEL	95	SF		
81	TELESPAR SIGN POST BASE ASSEMBLY	39	EA		
82	RELOCATE SIGN W/ NEW POST AND POST BASE	19	EA		
83	RELOCATE SIGN TO STREETLIGHT POLE	2	EA		
84	REMOVE EXISTING SIGNAL POLE FOUNDATIONS	4	EA		
85	REMOVE EXISTING SIGNAL CABINET FOUNDATIONS	3	EA		
86	2.5" ELECTRICAL CONDUIT, TRENCH	15	LF		
87	2-2" ELECTRICAL CONDUIT, TRENCH	375	LF		
88	3" ELECTRICAL CONDUIT, TRENCH	40	LF		
89	2-3" ELECTRICAL CONDUIT, TRENCH	70	LF		
90	2-3" ELECTRICAL CONDUIT, DIRECTIONAL BORE	270	LF		
91	ELECTRICAL SERVICE CABINET FOUNDATION	1	EA		
92	RELOCATE ELECTRICAL SERVICE CABINET	1	EA		
93	CONTROL CABINET FOUNDATION	1	EA		
94	RELOCATE CONTROL CABINET	1	EA		
95	UNINTERRUPTIBLE POWER SUPPLY FOUNDATION	1	EA		
96	RELOCATE UNINTERRUPTIBLE POWER SUPPLY CABINET	1	EA		
97	RELOCATE TRAFFIC SIGNAL POLE, (TYPE A)	1	EA		
98	RELOCATE TRAFFIC SIGNAL POLE, (TYPE Q POLE W/MAST ARMS)	3	EA		
99	POLE FOUNDATION (TYPE A)	1	EA		
100	POLE FOUNDATION (TYPE Q)	3	EA		
101	TRAFFIC SIGNAL HEAD (F)	2	EA		
102	CONDUCTORS (TRAFFIC SIGNAL)	1	LS		

•

ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	EXTENDED COST
103	VIDEO DETECTION	1	LS		
104	NO. 7 PULL BOX, ADOT	3	EA		
105	NO. 7 PULL BOX WITH EXTENSION, ADOT	1	EA		
106	QUALITY CONTROL & TESTING	1	LS		
	TOTAL BID FOR ENG21-0001				\$

.

TOTAL BID

Total Bid (Numbers) \$_____

Total Bid (Words)

5. Bidder agrees that the work (all or any combination of Activities) will be fully completed and ready for final payment within *280 calendar days* after the date when the contract times commences to run as provided in the General Conditions.

`

- 6. Bidder accepts the provisions of the Contract as to liquidated damages (**Per MAG Sec 108**) for each consecutive calendar day in the event of failure to complete the work (all or any combination of Activities) within the times specified in the Contract.
- 7. The following documents are attached to and made a condition of this bid:
 - a. Signed and completed Contractor's Qualification Statement and supporting data.
 - b. Proposal Form Acknowledge all addendums or write "NONE" if no addendums. Confirm all math calculations and the total bid amount.
 - c. Bid Security in the form of Bid Bond, unconditional certified check or cashier's check payable to the City of Kingman for 10% of the bid amount.
 - d. Subcontractors and Material Suppliers List
 - e. Non-Collusion Affidavit
- 8. Communications concerning this bid shall be addressed to:

Name		 	
Address		 	
Phone		 	
Submitted on			20
	(insert date)		
State Contracto	r License No.:	 	

If bidder is:

An Individual

By (Signature of Individual):

Typed or Printed Name of Individual:

doing business as:

Business Address:

Phone Number:

A Partnership

By (Firm's Name):

Signature of General Partner:

Typed or Printed Name of General Partner:

Business Address:

Phone Number:

A Corporation

By (Corporation's Name):

(Affix Seal)

State of Incorporation:

Signature of Authorized Signer:

Typed or Printed Name of Authorized Signer:

Business Address:

Phone Number:

ARIZONA STATUTORY BID BOND PURSUANT TO TITLES 28, 34 AND 41, ARIZONA REVISED STATUTES (Penalty of this bond must not be less than 10% of the bid amount)

KNOW ALL MEN BY THESE PRESENTS:

That______, (hereinafter "Principal"), as Principal, and ______, (hereafter "Surety"), a corporation organized and existing under the laws of the State of ______, with its principal offices in the City of _______ holding a certificate of authority to transact surety business in Arizona issued by the Director of the Department of Insurance pursuant to Title 20, Chapter 2, Article 1, as Surety, are held and firmly bound unto the City of Kingman, Arizona (hereinafter "Obligee"), as Obligee, in the amount of Ten Percent (10%) of the amount of the bid of Principal, submitted by Principal to the Obligee for the work described below, for the payment of which sum, the Principal and Surety bind themselves, and their heirs, executors, administrators, successors and assigns, jointly, and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for ______

NOW, THEREFORE, if the Obligee shall accept the proposal of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such proposal and give the bonds and certificates of insurance as specified in the standard specifications with good and sufficient surety for the faithful performance of the Contract and for the prompt payment of labor and materials furnished in the prosecution of the contact, or in the event of the failure of the Principal to enter into the contract and give the bonds and certificates of insurance, if the Principal pays to the Obligee the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by the proposal then this obligation is void. Otherwise it remains in full force and effect provided, however, that this bond is executed pursuant to the provisions of Section 34-201, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of that section to the extent as if it were copied at length herein.

Witness our hands thisd	lay of	, 20	
Principal	Seal	Surety	Seal
By:		By: Attorney-in-Fact	
It's:			
AGENCY OF RECORD		AGENCY ADDRESS	

SUBCONTRACTORS & MATERIAL SUPPLIERS LIST

•

This attachment to the proposal form shall be submitted along with the proposal form, each of which shall be placed in separate sealed envelopes.

Each envelope shall bear the name of the Contractor making the submittal with the contents clearly identified.

The Contractor shall list below all qualified subcontractors or material suppliers he will employ for the various portions of the work indicated. Failure on the part of the Contractor to complete or improperly complete this list will constitute sufficient grounds to reject his/her bid.

The Contractor may list himself/herself to perform one or more of the listed categories of work for which he/she has any requisite state licenses when required. In this case, all personnel performing such work at the site shall be carried on his/her own payroll.

List only a single name for each listing. License numbers will be required of the apparent low bidder only.

Specialty	Subcontractor/Material Supplier Name	License #

Non-Collusion Affidavit

State of Arizona)	
County of) SS.	
	(Name of Person Authorized to Sign Offer)	, affiant,
the		
	(Title)	
of		
	(Contractor/Offeror)	

the persons, corporation, or company who makes the accompanying Proposal, having first been duly sworn, deposes and says:

That such Proposal is genuine and not sham or collusive, nor made in the interest of, or behalf of, any persons not herein named, and that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a sham Proposal, or any other person, firm or corporation to refrain from submitting a Proposal, and that the Bidder has not in any manner sought by collusion to secure for itself an advantage over any other Bidder.

(Signature of Person Authorized to Sign Offer)	
(Title)	
Subscribed and sworn to before me	
This day of	, 20
Signature of Notary Public in and for the	
State of	
County of	

CONTRACT AGREEMENT AND FORMS

CONTRACT AGREEMENT

THIS	AGREEN	/IENT	, entere	d into th	is	day of	2	2023, by	and between the	he City
of Ki	ngman, Co	ounty o	of Moh	<i>ave</i> , Stat	e of A	arizona (herei	nafter called	the " <i>CI</i> 7	TY") acting her	rein by
the	Mayor	of	the	City	of	Kingman,	hereunto	duly	authorized,	and
						(hereinaft	ter called the	e "CON	TRACTOR")	acting
herei	n by					hereunto	authorized.			

WITNESSETH THAT:

The *CITY* desires to implement construction of public roadway and drainage improvements for Eastern Street funded with the State of Arizona, Department of Transportation (ADOT) as an HURF Exchange Project and the *CITY* desires to engage the CONTRACTOR, who is licensed by the State of Arizona Registrar of Contractors, to render certain services in connection with its Project.

NOW, THEREFORE the parties do mutually agree as follows:

1. WORK

CONTRACTOR shall complete all work as specified or indicated in the contract documents. The work to be done under this Contract shall include the furnishing of all labor, material, and equipment necessary for or incidental to the construction and completion of all work indicated in the Contract Documents. This consists of, but is not necessarily limited to reconstructing Eastern Street from Calumet Avenue to Clark Street (+/- 1700 feet), the construction of a new section of Eastern Street from Clark Street to a new direct connection to Airway Avenue (+/- 550 feet) and the relocation of the existing traffic signal at the intersection of Airway Avenue and Yavapai Street to the new intersection of Eastern Street and Airway Avenue. The work generally consists of roadway, drainage and signal improvements including removal of existing pavement, earthwork, new pavement section, constructing curbing, sidewalks, catch basins, a five-barrel box culvert, concrete drainage pipes and relocating the existing traffic signal along with other associated improvements.

2. ACCESS TO INFORMATION

It is agreed that all information, data reports, records and plans are existing, available and necessary for carrying out of the work outlined above have been furnished to the CONTRACTOR by the *CITY* and its agencies. CONTRACTOR hereby acknowledges receipt of same. No charge will be made to the CONTRACTOR for such information and the *CITY* and its agencies will cooperate with the CONTRACTOR in every way possible to facilitate the performance of the work described in the Contract and this addendum.

3. PROJECT MANAGER - ADMINISTRATION

The *CITY* will manage the project. The project manager shall be empowered to perform all administrative functions as required for management of the project and all other administrative requirements.

4. ENGINEER

The Project has been designed by *the City of Kingman* who is hereinafter called ENGINEER and who is to act as the *CITY's* representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the contract documents in connection with completion of the work in accordance with the contract documents.

5. CONTRACT TIMES

The work will be completed and ready for final payment within **280 calendar days** in accordance with the General Conditions. Time commences to run as provided in *the General Conditions, beginning one day after issuance of the Notice to Proceed.*

6. LIQUIDATED DAMAGES

CITY and CONTRACTOR recognize that time is of the essence of this Agreement and that the *CITY* will suffer financial loss if the work is not completed within the times specified in paragraph 5 above, plus any extensions thereof allowed in accordance with the General Conditions. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by the *CITY* if the work is not completed on time. Accordingly, instead of requiring any such proof, the *CITY* and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty and as allowable by MAG Sec. 108) CONTRACTOR shall pay the *CITY* the daily charges as shown in Table 108-1 for each day that expires after the time specified in paragraph 5. above for final completion until the work is complete and ready for final payment.

7. COMPENSATION AND METHOD OF PAYMENT

The maximum amount of compensation and reimbursement to be paid hereunder shall not exceed: . Originals of the

Applications for Payment are to be submitted, no later than the first day of the month to:

The City of Kingman-Attention: Eric Sparkman, Assistant City Engineer 220 N. Fourth St., Kingman, AZ 86401

The ENGINEER/*CITY* shall review and verify the percentage, progress and quality of work completed. The *CITY* shall verify compliant completion of all necessary documentation.

The *CITY* and CONTRACTOR mutually agree that the *CITY* will make a progress payment based on a duly certified (by ENGINEER and PROJECT MANAGER) and approved (by a duly authorized representative of the *CITY*) estimate of the work covered by the corresponding Application for Payment, subject to those conditions stipulated below, in the General Conditions and in other parts of the contract documents.

Until the aggregate value of the duly certified and approved Applications for Payment equals fifty percent (50%) of the contract price (i.e. 50% completion), the *CITY* will make payments in the amount equal to 90% of work completed (i.e. *City* will retain 10% of each estimate as additional guarantee for complete performance of the work), less the aggregate of payments previously made and less such deductions as ENGINEER or *CITY* determines are appropriate to cover claims requiring a greater sum to be retained.

Upon fifty percent (50%) completion, one-half of the amount retained under the 10% retainage provision shall be paid to CONTRACTOR, provided CONTRACTOR is making satisfactory progress on the work and there is no specific cause or claim requiring a greater amount to be retained. After fifty percent (50%) completion, the *CITY* will retain five percent (5%) providing

CONTRACTOR is making satisfactory progress, coupled with such deductions as ENGINEER or *CITY* determines are appropriate to cover claims requiring a greater sum to be retained. If at any time, the *CITY*, with the advice of the ENGINEER, determines satisfactory progress is not being made, ten percent (10%) retainage shall be reinstated for all subsequent payments in accordance with ARS §34-221.

Except as qualified above, upon final completion and acceptance of the work, or designated part of the work on which separate final completion and acceptance and contract price are specified and upon compliance with other terms and conditions of the contract documents, payment may be made in full, including retainage withheld, less such deductions as ENGINEER may recommend or the *CITY* may withhold to cover claims requiring a greater sum to be retained and liquidated damages. In lieu of retention, the *CITY* will, at the option of CONTRACTOR, accept security, as provided in ARS §34-221.

The *CITY* may deduct from each progress payment and final payment an amount equal to the *CITY's* estimate of the liquidated damages then due or that would become due based on the *CITY's* estimate of late completion of the work, if CONTRACTOR fails to submit and implement a written schedule recovery plan describing the cause of schedule slippage or delayed progress and the actions proposed to recover schedule. All moneys not paid when due as provided in the General Conditions shall bear interest in accordance with ARS §34-221(G).

8. INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the City of Kingman, its agents, its officers and employees, from liabilities, damages, losses and costs, including reasonable attorney fees and court costs relating to or arising out of this agreement, but only to the extent caused by the negligence, recklessness or intentional wrongful conduct of the Contractor or any such subcontractor or design professional or other persons employed or used by the Contractor or any such subcontractor or design professional in the performance of the contract or subcontract.

In any and all claims against the indemnified parties by any employee of the Contractor, any subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation in this article on INDEMNITY shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor, or any subcontractor, or any supplier or other person under workmen's compensation acts, disability benefit acts, or other employee acts.

The Contractor shall also indemnify and hold harmless the City of Kingman, the Design Professional, the Owner's representative, any jurisdiction or agency issuing permits for any work involved in the project, and their consultants, and each of their directors, officers, employees and agents from and against all losses, expenses, damages (including damages to the work itself), attorney's fees and other costs, including costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the work and all of the work and all of the Contractor's obligations under the contract. Such costs, expenses, and damages shall include all costs, including attorney's fees, incurred by the indemnified parties in any lawsuit to which they are a party.

The indemnification, hold harmless provisions and City's Liability Insurance set forth herein shall survive any termination of this Agreement.

The Contractor shall have no obligation to indemnify under this contract to the extent such claims, damages, losses and expenses are caused by the sole negligence of a party indemnified hereunder.

9. MISCELLANEOUS PROVISIONS

- a. This Agreement shall be construed under and in accordance with the laws of the State of Arizona, and all obligations of the parties created hereunder are performable in *Mohave County*, Arizona.
- b. This Agreement shall be binding upon and ensure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representatives, successors and assigns where permitted by this Agreement.
- c. In any case one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal or unenforceable said holding shall not affect any other provision thereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.
- d. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled.
- e. This Agreement may be amended only by mutual agreement of the parties hereto in writing to be attached to and incorporated into this Agreement.

10. PROJECT FAMILIARITY AND IDENTIFICATION OF CONFLICTS

In order to induce the *CITY* to enter into this Agreement, CONTRACTOR makes the following representation:

- a. CONTRACTOR has familiarized himself/herself with the nature and extent of the contract documents, work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance, or furnishing of the work.
- b. CONTRACTOR has given the ENGINEER a written notice of all conflicts, errors, or discrepancies that he has discovered in the contract documents and the written resolution thereof by the ENGINEER is acceptable to the CONTRACTOR.
- c. CONTRACTOR has examined and carefully studied the contract documents and other related data identified in the bidding documents including "technical data."
- d. CONTRACTOR is familiar with and satisfied as to all federal, state and local laws and regulations that may affect cost, progress, performance and furnishing of the work.

11. INSURANCE

CONTRACTOR and Subcontractors shall procure and maintain until all of their obligations have been discharged, including any warranty periods under the terms of this Contract are satisfied, insurance against claims for injury to persons or damage to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, his agents, representatives, employees or Subcontractors.

The insurance requirements herein are minimum requirements for and in no way limit the indemnity covenants contained in this Contract.

The City in no way warrants that the minimum limits contained herein are sufficient to protect the CONTRACTOR from liabilities that might arise out of the performance of the work under this Contract by the CONTRACTOR, his agents, representatives, employees, or subcontractors, or otherwise limit the City's recourse to any remedy available at law or in equity. CONTRACTOR is free to purchase such additional insurance as may be determined necessary.

Minimum Scope And Limits Of Insurance. CONTRACTOR shall provide coverage with limits of liability not less than those shown below:

REQUIRED COVERAGE

Commercial General Liability

Commercial general liability shall be written on an occurrence basis and covering liabilities arising out of construction of the project herein. The policy shall include coverage for bodily injury, broad form property damage, personal injury, products/completed operations and blanket contractual coverage including, but not limited to, the liability assumed under the indemnification provisions of this Contract. Policy shall not exclude explosion, collapse, underground (XCU) hazards, nor the products and completed operations hazards, or inadvertent construction defects, and shall include coverage for bodily injury, broad form property damage, personal injury, products/completed operations and blanket contractual coverage, but not limited to, the liability assumed under the indemnification provisions of this Contract. Products and completed operate, but not limited to, the liability assumed under the indemnification provisions of this Contract. Products and completed operations liability coverage shall be maintained throughout this Contract and shall extend for a period not less than five years following acceptance of the project. Contractual liability applies to the hold-harmless provisions of the contract between the named insured and agreements the insured makes in connection with insured operations. Minimum coverage limit shall be no less than \$1,000,000 CSL. If the policy has an aggregate limit, that limit shall not be less than \$2,000,000.

Automobile Liability

Commercial auto liability includes auto hazards for the owned, non-owned and hired, leased rented, borrowed or otherwise, assigned to or used in connection with the construction of the project. Minimum coverage limit shall be no less than \$1,000,000 CSL.

Worker's Compensation and Employers' Liability

CONTRACTOR shall maintain Worker's Compensation insurance at the statutory level.

Employer's Liability shall be at a minimum of \$1,000,000 each accident, \$500,000 disease policy limits, \$100,000 each employee.

Excess Liability

When excess liability insurance is used to supplement the required insurance limits below, the excess liability insurance must be "follow form" equal or broader in coverage scope as the underlying insurance.

Construction projects up to five million (\$5,000,000) require limits of not less than five million (\$5,000,000) in Commercial General Liability coverage limits. Where the commercial general liability per occurrence policy is less than \$5,000,000, excess liability limits must be purchased so that the total combined policy limits meet or exceed \$5,000,000.

Additional Insurance Requirements

The policies shall include, or be endorsed to include, the following provisions:

All policies, except for the Workers' Compensation and Employers' Liability policies shall contain endorsements naming the City of Kingman and its officers, employees, agents and volunteers as additional insureds with respect to liabilities arising out of the performance of services herein. On insurance policies where the City of Kingman is named as an additional insured, the City of Kingman shall be an additional insured to the full limits of liability purchased by the CONTRACTOR even if those limits of liability are in excess of those required by this Contract.

The CONTRACTOR's insurance coverage except for workers compensation and employers liability shall be primary insurance and non-contributory with respect to all other available sources maintained by the City.

The insurance Coverage provided by the CONTRACTOR shall not be limited to the liability assumed under the indemnification provisions of this Contract.

Notice Of Cancellation. Each insurance policy required under this Contract shall provide the required coverage and shall not be suspended, voided, canceled, reduced in coverage or endorsed to lower limits. Should limits or coverage change, thirty (30) days prior written notice shall be provided to the City. Such notice shall be sent directly to the City Senior Representative and shall be sent by certified mail, return receipt requested.

Acceptability Of Insurers. Insurance is to be placed with insurers duly licensed or approved unlicensed companies in the state of Arizona and with a 2004 "A.M. Best" rating of not less than A-. The City in no way warrants that the above-required minimum insurer rating is sufficient to protect the CONTRACTOR from potential insurer insolvency.

CERTIFICATES OF INSURANCE

Any failure, actual or alleged, on the part of the City to monitor or enforce compliance with any of the insurance and indemnification requirements will not be deemed as a waiver of any rights on the part of the City.

All certificates of insurance and policy endorsements are to be received and approved by the City before work commences. Each insurance policy required by this Contract must be in effect at or

prior to commencement of work under the terms of this Contract and remain in effect for the duration of the project and/or beyond project acceptance as required herein. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of this Contract.

The City project/contract number and project description shall be noted on the certificate of insurance. The City reserves the right to require complete, certified copies of all insurance policies required by this Contract at any time. If a policy does expire during the life of the project, a renewal certificate of insurance and policy endorsements will be sent to the City of Kingman not less than five (5) days prior to the expiration date. If a policy is to be cancelled, changed or not renewed, a proper notice of such action will be sent to the City not less than thirty (30) days prior to any such action by the insurance company.

Certificate of Insurance, Endorsements, and Notice(s) shall be sent to:

City of Kingman Engineering Department 310 N. 4th Street (mail) 220 N. 4th Street (physical) Kingman, Arizona 86401

Subcontractors. CONTRACTOR shall ensure all Subcontractors performing work under the terms of this Contract secure and maintain all insurance coverages (including worker's compensation) and other financial sureties required by the laws of this state and within the scope of their services in connection with their presence and the performance of their duties pursuant to this Contract. CONTRACTOR shall be responsible for ensuring that all Subcontractors endorse CONTRACTOR and the City of Kingman as additional insured and that all Subcontractors shall maintain products and completed operations liability insurance for not less than one (1) year following the acceptance date.

12. CONTRACT DOCUMENTS

The contract documents which comprise the entire agreement between the CITY and the CONTRACTOR concerning the work consist of the following.

- a. Signed and completed Contractor's Qualification Statement and supporting data.
- b. Proposal Form Acknowledge all addendums or write "NONE" if no addendums. Confirm all math calculations and the total bid amount.
- c. Bid Security in the form of Bid Bond, unconditional certified check or cashier's check payable to the City of Kingman for 10% of the bid amount.
- d. Subcontractors and Material Suppliers List
- e. Non-Collusion Affidavit

13. TERMS AND CONDITIONS

This Agreement is subject to the provisions entitled, "Terms and Conditions" attached hereto and incorporated by reference herein as Exhibit "A."

IN WITNESSETH HEREOF, the parties have hereunto set their hands and seals.

•

Approved as to Form:

CITY OF KINGMAN:

Mayor

City Attorney

CONTRACTOR:

President

Attest:

City Clerk

EXHIBIT "A"

TERMS AND CONDITIONS

1. TERMINATION OF CONTRACT

a. If, for any reason, the CONTRACTOR shall fail to fulfill in a timely and proper manner his/her obligations under this Contract, or if the CONTRACTOR shall violate any of the covenants, agreements, or stipulations of this Contract, the *CITY* shall thereupon have the right to terminate the Contract by giving written notice to the CONTRACTOR of such termination and specifying the effective date thereof. In such event, all finished or unfinished site or structural improvements as well as all materials or equipment acquired or stored by the CONTRACTOR under this Contract shall, at the option of the *CITY*, become *CITY'S* property and the CONTRACTOR shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

Notwithstanding the above, the CONTRACTOR shall not be relieved of liability to the *CITY* for damages sustained by the *CITY* by virtue of any breach of the Contract by the CONTRACTOR, and the *CITY* may withhold any payments to the CONTRACTOR for the purpose of set-off until such time as the exact amount of damages due the *CITY* from the CONTRACTOR is determined.

b. The *CITY* may terminate this Contract at any time by giving at least ten (10) days notice in writing to the CONTRACTOR. If the Contract is terminated by the *CITY* as provided herein, the CONTRACTOR will be paid as provided in this Addendum for the time expended and expenses incurred up to the termination date. If this Contract is terminated due to the fault of the CONTRACTOR, Paragraph 1 hereof relative to termination shall apply.

c. This Contract may be terminated per A.R.S. §38-511, Conflict of Interest.

2. SANCTION, PENALTIES AND DEBARMENT

A breach of the contract provisions concerning violations of federal labor standards if applicable may be grounds for termination of the contract and result in sanctions, penalties including liquidated damages, and/or debarment of the contractor.

3. CHANGES

The *CITY* may request changes in the scope of the services of the CONTRACTOR to be performed hereunder. Such changes, including any increase or decrease in the amount of the CONTRACTOR's compensation, which are mutually agreed upon by and between the *CITY* and the CONTRACTOR, shall be incorporated in written amendments to this Contract.

4. **PERSONNEL**

a. The CONTRACTOR represents that he/she has, or will secure at his own expense, all personnel required in performing the services under this Contract. Such personnel shall not be employees of or have any contractual relationship with the *CITY*.

- b. All of the services required hereunder will be performed by the CONTRACTOR or under his/her supervision and all personnel engaged in the work shall be fully qualified, authorized and permitted for such work under state and local law to perform such services.
- c. None of the work or services covered by this Contract shall be subcontracted without the prior written approval of the *CITY*. Any work or services subcontracted hereunder shall be specified by written contract or agreement and shall be subject to each provision of this Contract.

5. ASSIGNABILITY

The CONTRACTOR shall not assign any interest on this Contract, and shall not transfer any interest in the same (whether by assignment or novation), without the prior written consent of the *CITY* thereto: Provided, however, that claims for money by the CONTRACTOR from the *CITY* under this Contract may be assigned to a bank, trust company, or other financial institution without such approval. Written notice of any such assignment or transfer shall be furnished promptly to the *CITY*.

6. **REPORTS AND INFORMATION**

The CONTRACTOR, at such times and in such forms as the *CITY* may require, shall furnish the *CITY* such periodic reports as it may request pertaining to the work or services undertaken pursuant to this Contract, the costs and obligations incurred or to be incurred in connection therewith, and any other matters covered by this Contract.

7. RECORDS AND AUDITS (MAINTENANCE AND RETENTION)

The CONTRACTOR shall maintain accounts and records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the Contract and such other records as may be deemed necessary by the *CITY* to assure proper accounting for all project funds. These records will be retained for five years after the expiration of this contract unless permission to destroy them is granted in writing by the *CITY*.

8. FINDINGS CONFIDENTIAL

All of the reports, information, data, etc., prepared or assembled by the CONTRACTOR under this contract are confidential and the CONTRACTOR agrees that they shall not be made available to any individual or organization without the prior written approval of the *CITY*.

9. COPYRIGHT

No report, plan, drawing or other documents produced in whole or in part under this Contract shall be the subject of an application for copyright by or on behalf of the CONTRACTOR

10. COMPLIANCE WITH LOCAL LAWS

The CONTRACTOR shall comply with all applicable laws, ordinances and codes of the State and local governments, and the CONTRACTOR shall save the *CITY* harmless with respect to any damages arising from any tort done by the CONTRACTOR or his representatives in performing any of the work embraced by this Contract.

11. CONTRACTOR will comply with the requirements of the American with Disabilities Act (ADA).

12. INTEREST OF MEMBERS OF A *CITY* GOVERNING BODY

No member of the Governing body of the *CITY* and no other officer, employee, or agent of the *CITY*, who exercises any functions or responsibilities in connection with the planning and carrying out of the program, shall have any personal financial interest, direct, or indirect, in this Contract; and the CONTRACTOR shall take appropriate steps to assure compliance.

13. INTEREST OF OTHER LOCAL PUBLIC OFFICIALS

No member of the governing body of the locality and no other public official of such locality, who exercises any functions or responsibilities in connection with the planning and carrying out of the program, shall have any personal financial interest, direct or indirect, in this Contract; and the CONTRACTOR shall take appropriate steps to assure compliance.

14. INTEREST OF CONTRACTOR AND EMPLOYEES

The CONTRACTOR covenants that he/she presently has no interest and shall not acquire interest, direct or indirect, in the study area or any parcels therein or any other interest which would conflict in any manner or degree with the performance of his/her services hereunder. The CONTRACTOR further covenants that no person having any such interest shall be employed in the performance of this Contract.

15. HANDICAPPED ACCESS

In performing all construction CONTRACTOR agrees to comply with "The American Standard Specifications for Making Buildings and Facilities Accessible to, and Usable By, the Physically Handicapped." CONTRACTOR represents that he understands said standard specifications and same are incorporated herein by this reference.

16. CLEAN AIR ACT, CLEAN WATER ACT

The CONTRACTOR shall comply with all provisions requiring compliance with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857(h), Section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738 and EPA regulations, 40 CFR Part 15 which prohibit the use of non-exempt Federal contracts, grants or loans of facilities included on the EPA List of Violating Facilities. The provision requires reporting of violations to the USFPA Assistant Administrator for Enforcement.

ARIZONA STATUTORY PAYMENT BOND PURSUANT TO TITLES 28, 34, AND 41, ARIZONA REVISED STATUTES

•

(Penalty of this bond must be	100% of the Contract amount)
-------------------------------	------------------------------

KNOW ALL MEN BY THESE PRESENTS: That,
(hereinafter "Principal"), as Principal, and, (hereafter
"Surety"), a corporation organized and existing under the laws of the State of, with
its principal office in the City of, holding a certificate of authority to transact surety business in Arizona
issued by the Director of the Department of Insurance pursuant to Title 20, Chapter 2, Article 1, as Surety, are held and firmly
bound unto the <u>City of Kingman, Arizona</u> (hereinafter "Obligee"), in the amount
ofDollars
(\$), for the payment whereof, Principal and Surety bind themselves, and their heirs,
administrators, executors, successors and assigns, jointly and severally, firmly by these presents.
WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the
day of, 20, to construct
which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.
NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal promptly pays all monies
due to all persons supplying labor or materials to the Principal or the Principal's subcontractors in the prosecution of the work
provided for in the Contract, this obligation is void. Otherwise to remain in full force and effect.
PROVIDED, HOWEVER, that this bond is executed pursuant to provisions of Title 34, Chapter 2, Article 2, Arizona Revised
Statutes, and all liabilities on this bond shall be determined in accordance with the provisions, conditions, and limitations of said
Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if they were copied at length in this agreement.
The prevailing party in a suit on this bond shall recover as part of the judgement reasonable attorney's fees that may be
fixed by the judge of the court.
Witness our hands thisday of, 20
PRINCIPAL SEAL BY:
SURETY BY:
AGENCY OF RECORD AGENCY ADDRESS

ARIZONA STATUTORY PERFORMANCE BOND PURSUANT TO TITLES 28, 34, AND 41, ARIZONA REVISED STATUTES (Penalty of this bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS THAT:

(hereinafter "Principal"), as Principal, and	, (hereafter "Surety"), a corporation
organized and existing under the laws of the State of	,
with its principal office in the City of	, holding a certificate of authority to
transact surety business in Arizona issued by the Director of Insurance pursuant to Title 2	20, Chapter 2, Article 1, as Surety, are
held and firmly bound unto the City of Kingman, Arizona (hereinafter "Obligee"), in the	ne amount of:

Dollars (\$_____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs,

administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the ______day

of _____, 20___, to construct _____

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal faithfully

performs and fulfills all the undertakings, covenants, terms, conditions and agreements of the Contract during the original term of said Contract and any extension of the contract, with or without notice to the Surety, and during the life of any guaranty required under the Contract, and also performs and fulfills all the undertakings, covenants, terms, conditions, and agreements of all duly authorized modification of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived; the above obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2,

Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of Title 34,

Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if it were copied at length in this agreement.

The prevailing party in a suit on this bond shall recover as part of the judgement reasonable attorney fees as may be

fixed by a judge of the court.

Witness our hands this ______ day of ______, 20___.

PRINCIPAL

SEAL

BY: _____

SURETY

BY: _____

CITY OF KINGMAN, ARIZONA ENGINEERING DEPARTMENT

CONTRACTOR'S AFFIDAVIT REGARDING SETTLEMENT OF CLAIMS

PROJECT

which Contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

To the City of Kingman, Arizona

Gentlemen:

This is to certify that all lawful claims for materials, rental of equipment and labor used in connection with the construction of the above project, whether by subcontractor or claimant in person, have been duly discharged.

The undersigned, for the consideration of \$______, as set out in the final pay estimated, as full and complete payment under the terms of the Contract, hereby waives and relinquishes any and all further claims or right of lien under, in connection with, or as a result of the above described project. The undersigned further agrees to indemnify and save harmless the City of Kingman against any and all liens, claims of liens, suits, actions, damages, charges and expenses whatsoever, which said City may suffer arising out of the failure of the undersigned to pay for all labor, performance and materials furnished for the performance of said installation.

Signed and dated at	,	, this	day of	 , 20	

CONTRACTOR

By:_____

STATE OF ARIZONA))ss. COUNTY OF)

The foregoing instrument was subscribed and sworn to before me this _____ day of _____, 20

Notary Public

My Commission Expires:

ASBESTOS-FREE FACILITY MATERIAL CERTIFICATION

•

CITY OF KINGMAN, ARIZONA PROJECT NO. ENG21-0001

I ______, AS THE DULY AUTHORIZED REPRESENTATIVE FOR ______ CERTIFY THAT ALL MATERIALS INSTALLED AND USED BY THE UNDERSIGNED IN THE KINGMAN FACILITY PURSUANT TO THIS CITY OF KINGMAN PROJECT ARE FREE OF ANY LABORATORY DETECTABLE AMOUNTS OF ASBESTOS CONTAINING MATERIAL USING THE METHOD SPECIFIED IN APPENDIX A, SUBPART F OF 40 CFR PART 763 SECTION 1, POLARIZED LIGHT MICROSCOPY. THIS CERTIFICATION INCLUDES ALL MATERIALS* INSTALLED AND USED BY THE CONTRACTOR, ALL SUB-CONTRACTORS AND ALL OTHERS PERFORMING WORK IN CITY OF KINGMAN FACILITIES, FOR WORK COMPLETED AS DESCRIBED BELOW:

THIS CERTIFICATION INCLUDES ALL WORK THAT WAS COMPLETED BY THE CONTRACTOR AND HIS SUBCONTRACTORS CONDUCTED BEGINNING ON _____ AND COMPLETED ON _____ UNDER CITY OF KINGMAN PROJECT NUMBER ENG21-0001.

Title

Signature

Date

Name of CONTRACTOR

Incorporation Status

Arizona Contractor License Number

STATE OF ARIZONA))ss County of)

The foregoing instrument was subscribed and sworn to before me this ______ day of _____, 20____, by_____.

•

Notary Public

My Commission Expires:

GEOTECHNICAL REPORT



REPORT ON GEOTECHNICAL INVESTIGATION Eastern Street Design **DESIGNATION:** LOCATION: Eastern Street 14388 GREGG ALAN Kingman, Arizona CREASER **CLIENT:** Ritoch-Powell & Associates 06 es 30 **PROJECT NO:** 151408SF DATE: December 29, 2015



TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	GENERAL SITE AND SOIL CONDITIONS	1
2.1 2.2	Site Conditions General Subsurface Conditions	
3.0	ANALYSIS AND RECOMMENDATIONS	3
3.1	Analysis	3
3.2	Site Preparation	3
3.3	Fill and Backfill	4
3.4	Utilities Installation	5
3.5	New/Completely Reconstructed Asphalt Pavement	6
4.0	GENERAL	8

APPENDIX



1.0 INTRODUCTION

This report presents the results of a subsoil investigation carried out at the site of a proposed partial realignment and reconstruction of approximately 1.5 miles of Eastern Street, in Kingman, Arizona.

Preliminary information calls for the realignment of Eastern Street/Kenwood Avenue near Airway Avenue and repaving of Eastern Street for approximately 1.5 miles from Pasadena Avenue north to Airway Avenue. It is assumed that the entire roadway surface will be reconstructed as part of this project. Traffic volumes are based on an existing (2015) one-way ADT of 3454 vehicles per day projected over 20 years with a 4% growth rate and a 2% Truck factor. For design purposes, each truck is assumed to impart 1.5 ESALs. The total expected ESAL's over a 20 year lifespan is approximately 1.2 million. Eastern Street is classified by the City of Kingman as a "minor arterial". The purpose of this investigation was to determine the existing asphalt sections, subsurface conditions, and to provide pavement replacement design information. Borings were conducted at the start and end of the project and each quarter mile in between. Two borings were located at possible box culvert locations. If lower quality soils are encountered during construction in this area, this office should be contacted to ensure the pavement design will provide satisfactory service.

If any significant changes are made in the scope of work or type of construction that was assumed in this report, we must review such revised conditions to confirm our findings if the conclusions and recommendations presented hereafter are to apply.

2.0 GENERAL SITE AND SOIL CONDITIONS

2.1 Site Conditions

The proposed improvement area includes Eastern Street and Kenwood Avenue extending from the intersection with Pasadena Avenue at the south to Airway Avenue on the North. These roadways service both residential and commercial properties. Water, sanitary sewer, storm drain, and natural gas utilities run within the roadway alignment. The site passes beneath Interstate 40 and runs parallel to the BNSF Railway for a portion of the project. The realignment portion of the project at the northern end, near Airway Avenue, will involve new roadway construction in an undeveloped lot. This undeveloped lot is currently lightly vegetated and has considerable surficial trash and litter present. However, there was no indication of buried trash on this site.



2.2 General Subsurface Conditions

The existing asphalt section ranges from 2.5 to 4 inches in thickness. The asphalt was observed to be in moderate to poor condition with block and alligator cracking throughout. Based on the borings, it appears that the asphalt was placed directly on the native soils, with no aggregate base observed at any of the boring locations. The upper subgrade soils typically consist of silty sand and clayey sand with subordinate amounts of gravel. Standard Penetration Resistance Tests (SPT) values range from 2 to 39 blows per foot (bpf) in the upper soils. Based on visual and tactile observation, the upper soils were generally in a dry to moist state at the time of investigation, typically below the plastic limit of the soil.

Laboratory testing indicates liquid limits in the range of 22 to 35 percent with plasticity indices ranging from 1 to 14 percent. Percent passing the #200 sieve ranged from 17 to 52 percent. In-place densities of the upper soils is on the order of 99.6 to 112.4 pcf with moisture contents ranging from 10.4 to 10.7 percent. Volume increase due to wetting of the upper soils is on the order of 2.0 percent when recompacted to moistures and densities normally expected during construction and confined to 100 psf. A selected undisturbed sample of the upper soils displayed a moderate volume decrease on the order of 3.3 percent when subjected to 3,200 psf. An additional 6.1 percent consolidation was observed due to inundation under the same load for a total of 9.4 percent.

The existing pavement conditions are presented in the table below:

Boring	Asphalt Thickness	Aggregate Base Thickness	Sub Grade Soil Type	
B-1	0.0"	0.0"	Clayey Sand	
B-2	2.75"	0.0"	Silty/Clayey Sand	
B-3	2.5"	0.0"	Silty Sand	
B-4	3.0"	0.0"	Silty Sand	
B-5	2.5"	0.0"	Clayey Sand	
B-6	4.0"	0.0"	Clayey Sand	
B-7	4.0"	0.0"	Sandy Lean Clay	
B-8	4.0"	0.0"	Clayey Sand	
Sub-grade soils contain subordinate amounts of gravel. Please refer to boring logs.				

TABLE 2.2.1

No groundwater was encountered at the time of our investigation to the depths investigated of 5 feet. However, it is not uncommon to have seasonally perched water that may be encountered at the soil/bedrock interface. Dry to moist soils were encountered in the borings.



3.0 ANALYSIS AND RECOMMENDATIONS

3.1 Analysis

Analysis of the field and laboratory data indicates that subsoils at the site are suitable for support of the proposed paving. Some special site preparation will be required with respect to the existing pavement, related elements, and underground utilities. Depending on final grades and the pavement section selected, it may be possible to salvage the existing pavement by cold-milling and blending to create a subbase for a new layer of asphalt and aggregate base. The millings should be mixed with the existing base (if any) in a gradation similar to that of ABC in accordance with MAG 702 specifications for aggregate base course.

Laboratory and field testing indicate that some of the upper soils are dry to moist and relatively soft. As noted, blow counts as low as 2 bpf were encountered with most locations in the range of 15 to 35 bpf. Based on the blow counts obtained within the subgrade soils and the clayey/silty nature of soils, it is possible that soft, wet soils will be encountered at some locations and subgrade stabilization will be an issue. Successful performance of the new pavement is dependent on a stable subgrade.

The clayey and silty soils may be sensitive to excessive moisture content and may become unstable at elevated moisture contents. Accordingly, it may be necessary to compact soils on the dry side of optimum. The reduced moisture content under pavements should only be used upon approval of the engineer in the field.

Based on the current conditions of the pavement, our primary recommendations are to remove and replace the asphalt surface. A complete removal and replacement will provide the longest life and present the opportunity to improve any poor drainage or subgrade issues. Section 3.5 presents several structural sections with associated capacities for consideration depending on anticipated traffic volumes. These sections assume using new imported aggregate base meeting the MAG/City of Kingman Standard Specifications. When transitioning from existing roadways to new roadways, all new pavement sections should meet or exceed the thickness of the existing pavement or be graded accordingly to maintain drainage within the aggregate base.

3.2 Site Preparation

The area for new pavement reconstruction will require the complete removal of the existing asphalt surface to be replaced with a new structural section of asphalt surface on new aggregate base. This process will likely disturb the underlying subgrade. After removal of the existing asphalt the subgrade will require fine grading and compaction prior to the placement of new ABC and asphalt. Prior to placing new base course, the exposed grade should be scarified to a depth of 12 inches, moisture conditioned to optimum (± 2 percent) and compacted to at least 95 percent of maximum dry density as determined by ASTM D-698.



The subgrade should be proof rolled with a heavy rubber tired vehicle, such as a loaded water truck, to locate unstable areas per MAG 301. Anytime existing subgrade that has been covered with asphalt is opened up, it is not uncommon to find soft or loose, wet subgrade that will not stabilize or achieve the compaction required. Therefore, if the option to completely remove the existing pavement section is selected, there is a possibility to uncover soft, moist, unstable zones. These areas may need some remediation or additional time to dry prior to placing any new aggregate base or asphalt pavement.

An option to possibly reduce costs by minimizing the amount of export or import, would be to consider full depth reclamation (FDR) if grades allow. This process consists of pulverizing the existing roadway pavement section (asphalt) in place. The resulting material is a mixture of pulverized asphalt and subgrade mixed together. This material can then be graded as necessary to improve drainage or the crown of the road. Once the material has been graded it is mixed with Portland cement to create a cement treated base (CTB). Typically about 3 to 5 percent cement is added to the material. A CTB mix design would be required if this option is selected. Once the material has been mixed with cement and compacted a new asphalt surface can be placed. This option would eliminate the need to stabilize the subgrade and/or import new ABC. Typically at least 4 inches of asphalt concrete would be placed on top. The primary concerns with this option are reflective cracking from the more rigid CTB. Additional recommendations for this option can be provided if the design team would like to explore this option further. The city should determine which option best meets their desires and budget.

3.3 Fill and Backfill

Native soils and milled asphalt are suitable for use in roadway subgrade. Oversized material (> 3 inches) should be removed or reduced in size. Imported fill, if required, shall meet the following requirements:

Specification	Common	Pavement			
Passing 3"/75mm	100%	100%			
Passing #200/.075mm	≤60%	15-60%			
Liquid Limit	<30%	<30%			
Plasticity Index	<10%	<10%			
Swell ¹	<1.5	<1.5			
Notes:					
1. Swell potential when compacted to 95 percent of maximum dry density (ASTM D-698) at a moisture					
content of 2 percent below optimum, confined under a 100 psf surcharge, and inundated.					



Imported common fill for use in site grading should be examined by a Soils Engineer to ensure that it is of low swell potential and free of organic or otherwise deleterious material.

Fill should be placed on subgrade which has been properly prepared and approved by a Soils Engineer. Fill must be wetted and thoroughly mixed to achieve optimum moisture content, ± 2 percent. Granular fill (ASTM Classification GW, GP, SW, SP) can be placed on the dry side of optimum at the discretion of the geotechnical engineer on record.

Fill should be placed in horizontal lifts of 8-inch thickness (or as dictated by compaction equipment) and compacted to the percent of maximum dry density per ASTM D-698 as set forth below. **Frozen material shall not be placed, nor shall fill be placed upon frozen grade.**

A.	Sidewalk Subgrade or Fill	95						
B.	Pavement Subgrade or Fill	95						
C.	Utility Trench Backfill							
	1. More than 2.0' below finish subgrade	95						
	2. Within 2.0' of finish subgrade (non-granular)	95						
	3. Within 2.0' of finish subgrade (granular)	100						
D.	Aggregate Base Course							
	1. Below concrete slabs	95						
	2. Below asphalt paving	100						
E.	Landscape Areas							
	1. Miscellaneous fill	90						
	2. Utility trench - more than 1.0' below finish grade	85						
	3. Utility trench - within 1.0' of finish grade	90						

3.4 Utilities Installation

In general, trench excavations for shallow utilities (3 to 4 feet) should be accomplished by conventional trenching equipment. It is possible that shallow basalt or volcanic tuff bedrock or large boulders may be present throughout the roadway. For deeper utility trenches (greater than 4 feet), it is possible that basalt or volcanic tuff boulders and bedrock may impede progress and require rock removal techniques such as pneumatic hammering, although no rock was encountered in the 5 foot borings conducted for this investigation. Due to the clayey nature and moisture content of the soils, it is anticipated that trench walls will stand near-vertically for the short periods of time required to install utilities. Trench walls may experience some premature sloughing due to the relatively low density and moisture conditions. As the trench walls dry out, additional sloughing should be anticipated. Appropriate lay back or shoring of the trenches should be provided to protect workers entering the trenches.



Backfill of trenches above the bedding/shading zone may be carried out with native excavated material provided material greater than 8 inches is broken down or removed. Material used for backfill of trenches should be moisture-conditioned, placed in 8 inch lifts and mechanically compacted. Water settling is not recommended. Compaction requirements are summarized in the "Fill and Backfill" section of this report.

3.5 New/Completely Reconstructed Asphalt Pavement

It must be noted that all new asphalt pavements will eventually crack. Cracking in asphalt pavement is typical and should be expected over the life of the pavement. In fact, it has been our experience that we are seeing the onset of earlier aging and block shrinkage cracking in the new asphalt binders that are available. These require routine maintenance to prevent accelerated deterioration. Accordingly, it is highly recommended to establish a maintenance program where the cracks are routinely filled as they appear beginning at about the second year of life. It is also recommended that surface fog seal coats be considered beginning at year 5 and every 5 years after. This will help preserve the pavement and extend the service life.

If earthwork in paved areas is carried out to finish subgrade elevations as set forth herein, the subgrade will provide adequate support for pavements. The section capacity is reported as daily ESALs, Equivalent 18 kip Single Axle Loads. Typical heavy trucks impart 1.0 to 2.5 ESALs per truck depending on load. It takes approximately 1200 passenger cars to impart 1 ESAL. In residential subdivisions, the worst offender, construction traffic, is often overlooked. Eastern Street is classified by the City of Kingman as a "minor arterial". Option A presents the results of the originally anticipated structural section prior to this investigation. The traffic capacity for this section greatly exceeds the estimated 1.2 million need as discussed above. For economic reasons, the other Options B through D should be considered. The designer/owner is ultimately responsible for choosing the appropriate section to meet the anticipated traffic volume and life expectancy.

|--|

Options	Daily/Total 18 kip	Flexible	Pavement			
	ESALs	AC	AB			
А	410 / 2,992,500	5.0"	8.0"			
В	160 / 1,173,500	4.0"	8.0"			
С	212 / 1,553,000	4.0"	9.0"			
D	243 / 1,779,500	5.0"	6.0"			

Notes: Per Frank Marbury's email received 12/23/15, Section B should be used to minimize cost. "P:\Projects\2015\215053 - Eastern Street Design\Project Files\Geotechnical\Speedie Geotechnical Report.pdf"



1. Designs are based on AASHTO design equations and Arizona Department of Transportation (ADOT) correlated R-values.

Pavement Design Parameters:							
Assume:	1.5 18 kip Equivalent Single Axle Load (ESAL)/Truck						
Life:	20 years						
Subgrade Soil Profile:							
% Passing No. 200 Sieve:	41% (avg)						
Plasticity Index:	10 (avg)						
R-value:	38.7 (per ADOT Tables)						
M_R :	17,100 (per AASHTO formula)						
Serviceability							
Initial	4.5						
Final	2.5						
Reliability:	95%						
Structural Coefficients:							
Asphalt <4":	0.39						
Asphalt >4":	0.42						
Aggregate Base:	0.12						

These structural sections assume that all subgrades are prepared in accordance with the recommendations contained in the "Site Preparation" and "Fill and Backfill" sections of this report, and paving operations are carried out in a proper manner. If pavement subgrade preparation is not carried out immediately prior to paving, the entire area should be proof-rolled at that time with a heavy pneumatic-tired roller to identify locally unstable areas for repair. Site drainage should be designed to ensure positive drainage of the base and sub base materials. Improper grading of sub base materials will drastically reduce the overall life of the pavement.

Pavement base course material should be aggregate base per M.A.G. Section 702 Specifications. Asphalt concrete materials and mix design should conform to M.A.G. 710 (and any City of Kingman/Mohave County modifications) using the Marshall mix design criteria for low volume traffic and PG 70-10 for the asphalt grade. **Reducing the air void content to 3 percent** will aid in reducing thermal cracking typical in the area. It is recommended that a 12.5mm or 19.0mm mix designation be used for the pavements. While a 19.0mm mix may have a somewhat rougher texture, it offers more stability and resistance to scuffing, particularly in truck turning areas. Pavement installation should be carried out under applicable portions of M.A.G. Section 321 and municipality standards. The asphalt supplier should be informed of the pavement use and required to provide a mix that will provide stability and be aesthetically acceptable. Some of the newer



M.A.G. mixes are very coarse and could cause placing and finish problems. A mix design should be submitted for review to determine if it will be acceptable for the intended use.

As noted the subgrade soils were dry to moist and relatively soft. It is possible that some areas of existing roadway subgrade will require stabilization during construction. Traditional stabilization methods (i.e. aeration/recompaction) of the subgrade may not be successful due to depth of unstable soils, perched water and/or shallow utility interference. Additional means of stabilizing the subgrade may be necessary.

For driveways supporting only passenger vehicle traffic, a minimum section of 5.0 inches of PCCP over 4 inches of aggregate subbase is recommended. Portland Cement Concrete Pavement must have a minimum 28-day flexural strength 550 psi (compressive strength of approximately 3,700 psi). No reinforcing is necessary. Joint design and spacing should be in accordance with ACI recommendations. Construction joints should contain dowels or be tongue and grooved to provide load transfer. Tie bars are recommended on the joints adjacent to unsupported edges. Maximum joint spacing in feet should not exceed 2 to 3 times the thickness in inches. Joint sealing with a quality silicone sealer is recommended to prevent water from entering the subgrade allowing pumping and loss of support.

Proper subgrade preparation and joint sealing will reduce (but not eliminate) the potential for slab movements (thus cracking) on expansive native soils. Frequent jointing will reduce uncontrolled cracking and increase the efficiency of aggregate interlock joint transfer.

4.0 GENERAL

The scope of this investigation and report does not include regional considerations such as seismic activity and ground fissures resulting from subsidence due to groundwater withdrawal, nor any considerations of hazardous releases or toxic contamination of any type.

Our analysis of data and the recommendations presented herein are based on the assumption that soil conditions do not vary significantly from those found at specific sample locations. Our work has been performed in accordance with generally accepted engineering principles and practice; this warranty is in lieu of all other warranties expressed or implied.



We recommend that a representative of the Geotechnical Engineer observe and test the earthwork and grading portions of this project to ensure compliance to project specifications and the field applicability of subsurface conditions which are the basis of the recommendations presented in this report. If any significant changes are made in the scope of work or type of construction that was assumed in this report, we must review such revised conditions to confirm our findings if the conclusions and recommendations presented herein are to apply.

Respectfully submitted, SPEEDIE & ASSOCIATES, INC.

577.5



Gregg A. Creaser, P.E.





APPENDIX

FIELD AND LABORATORY INVESTIGATION

SOIL BORING LOCATION PLAN

SOIL LEGEND

LOG OF TEST BORINGS

TABULATION OF TEST DATA

CONSOLIDATION TESTS

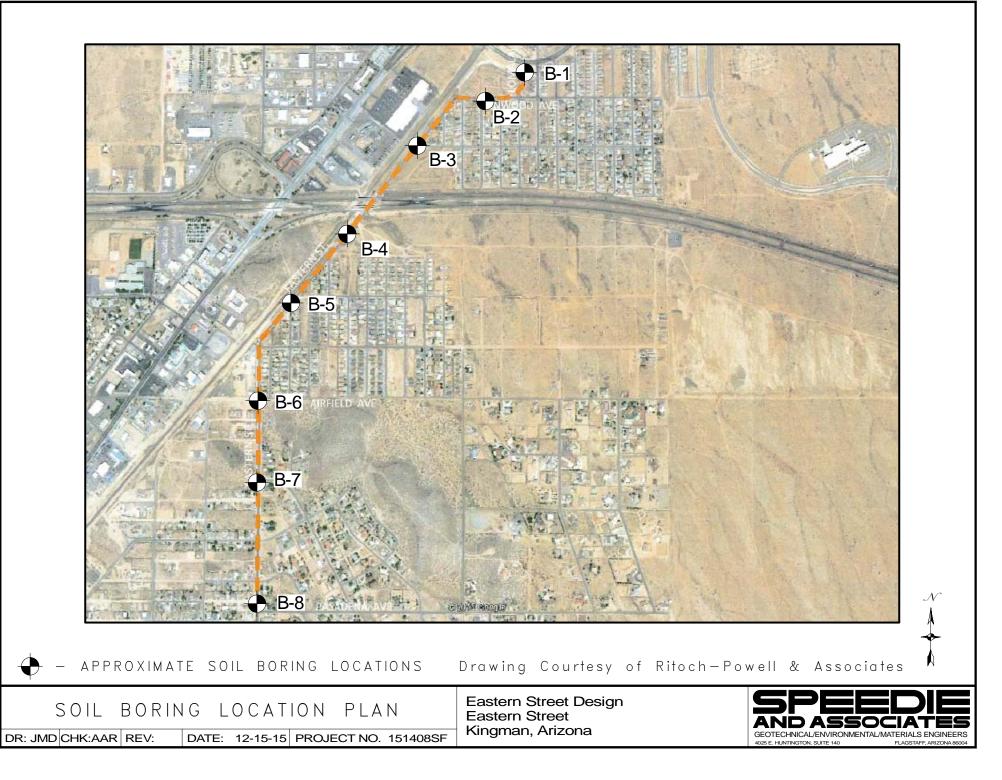
MOISTURE-DENSITY RELATIONS

SWELL TEST DATA

FIELD AND LABORATORY INVESTIGATION

On November 13, 2015, eight structural soil borings were excavated at the approximate locations shown on the attached Soil Boring Location Plan. All exploration work was carried out under the full-time supervision of our staff engineer, who recorded subsurface conditions and obtained samples for laboratory testing. The borings were excavated with a CME-75 drill rig utilizing 8-inch diameter hollow stem augers. Detailed information regarding the soil borings and samples obtained can be found on an individual Log of Test Boring prepared for each location.

Laboratory testing consisted of moisture content, dry density, grain-size distribution and plasticity (Atterberg Limits) tests for classification and pavement design parameters. Remolded swell tests were performed on samples compacted to densities and moisture contents expected during construction. Compression tests were performed on a selected ring samples in order to estimate settlements and determine effects of inundation. All field and laboratory data are presented in this appendix.

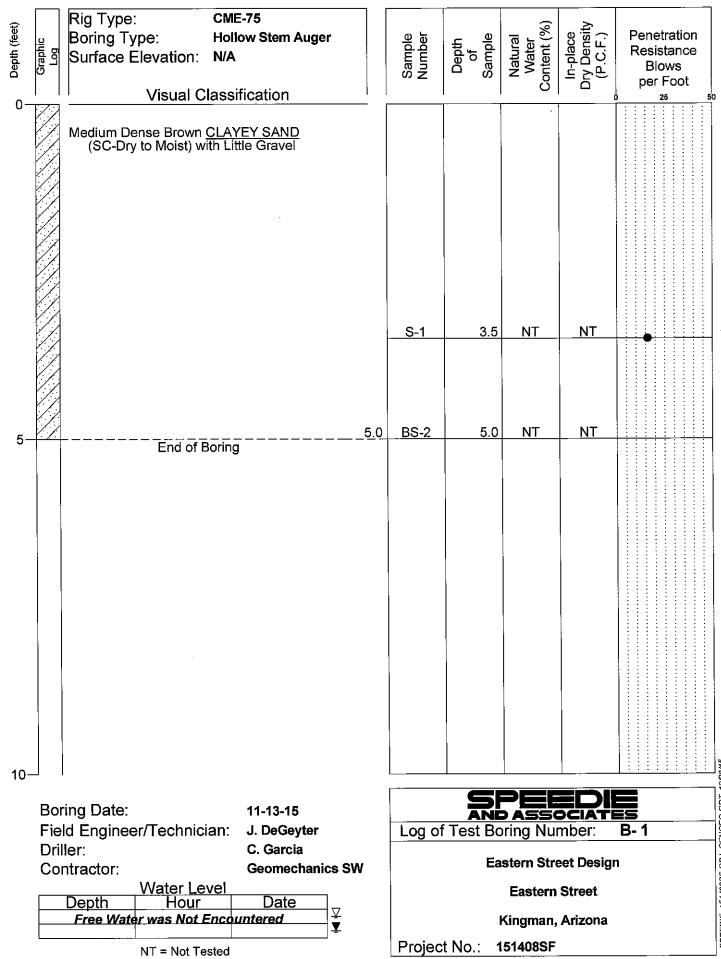


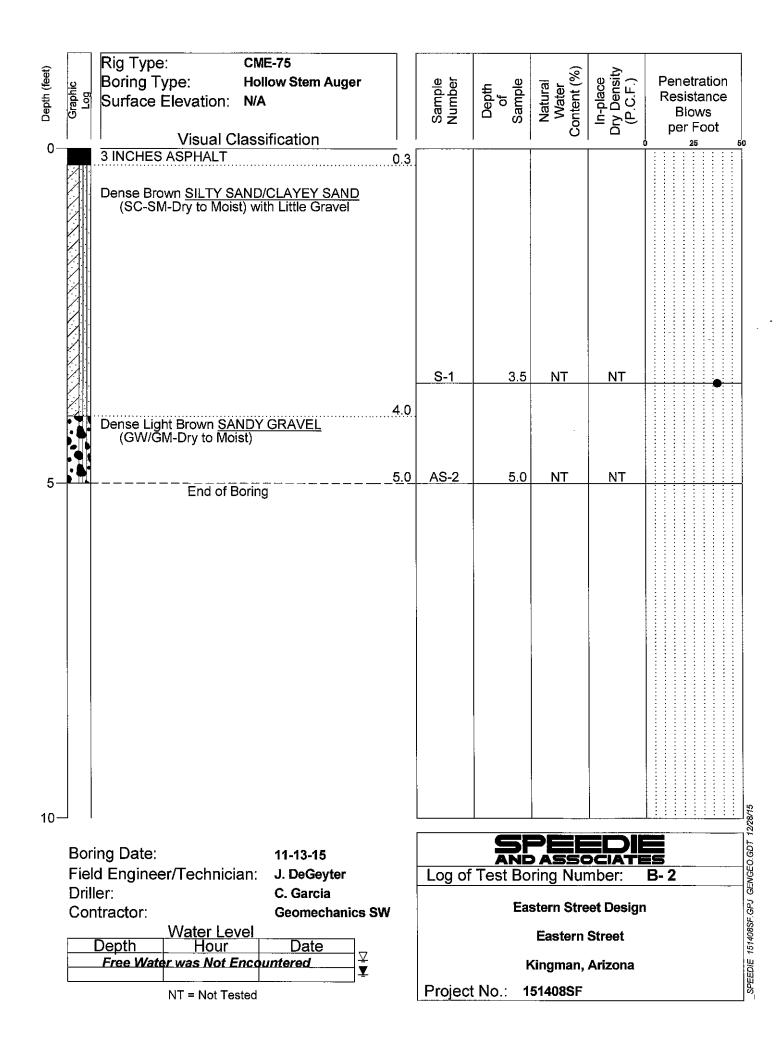
SOIL LEGEND

D	SAMPLE ESIGNATION		DESCRIPTION
$\left\{ \right\}$	AS	Auger Sample	A grab sample taken directly from auger flights.
P	BS	Large Bulk Sample	A grab sample taken from auger spoils or from bucket of backhoe.
	S	Spoon Sample	Standard Penetration Test (ASTM D-1586) Driving a 2.0 inch outside diameter split spoon sampler into undisturbed soil for three successive 6-inch increments by means of a 140 lb. weight free falling through a distance of 30 inches. The cumulative number of blows for the final 12 inches of penetration is the Standard Penetration Resistance.
	RS	Ring Sample	Driving a 3.0 inch outside diameter spoon equipped with a series of 2.42-inch inside diameter, 1-inch long brass rings, into undisturbed soil for one 12-inch increment by the same means of the Spoon Sample. The blows required for the 12 inches of penetration are recorded.
	LS	Liner Sample	Standard Penetration Test driving a 2.0-inch outside diameter split spoon equipped with two 3-inch long, 3/8-inch inside diameter brass liners, separated by a 1-inch long spacer, into undisturbed soil by the same means of the Spoon Sample.
H	ST	Shelby Tube	A 3.0-inch outside diameter thin-walled tube continuously pushed into the undisturbed soil by a rapid motion, without impact or twisting (ASTM D-1587).
		Continuous Penetration Resistance	Driving a 2.0-inch outside diameter "Bullnose Penetrometer" continuously into undisturbed soil by the same means of the spoon sample. The blows for each successive 12-inch increment are recorded.

	CONSISTENCY	RELATIVE DENSITY				
Clays & Silts	Blows/Foot	Strength (tons/sq ft)	Sands & Gravels	Blows/Foot		
Very Soft Soft Firm Stiff Very Stiff Hard	0 - 2 2 - 4 5 - 8 9 - 15 16 - 30 > 30	0 - 0.25 0.25 - 0.5 0.5 - 1.0 1 - 2 2 - 4 > 4	Very Loose Loose Medium Dense Dense Very Dense	0 - 4 5 - 10 11 - 30 31 - 50 > 50		

GRAVEL AND GRAVELLY SOILS RE THAN 50% OF MARSE FRACTION TAINED ON NO. 4 VE SAND SAND SAND SOILS	CLEAN GRAVELS (LITTLE OR NO FINES) GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES) CLEAN SANDS (LITTLE OR NO FINES)		GP GM GC SW	DESCRIPTIONS WELL-GRADED GRAVELS, GRAVEL- SAND MIXTURES, LITTLE OR NO FINES POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES CLAYEY GRAVELS, GRAVEL - SAND - CLAYEY GRAVELS, GRAVEL - SAND - CLAYEY GRAVELS, GRAVEL - SAND - CLAYES		MATERIAL SIZE SANDS Fine Medium Coarse	Lo mm 0.075 0.420 2.000	PARTICI wer Limit Sieve Size ◆ #200 #40 #10		pper Limir Sieve Siz #40 #10 #4					
AND GRAVELLY SOILS DRE THAN 50% OF AARSE FRACTION TAINED ON NO. 4 VE SAND AND SANDY	GRAVELS (LITTLE OR NO FINES) GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES) CLEAN SANDS		GP GM GC	SAND MIXTURES, LITTLE OR NO FINES POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES CLAYEY GRAVELS, GRAVEL - SAND -		SIZE SANDS Fine Medium	mm 0.075 0.420	Sieve Size ◆ #200 #40	mm 0.42 2.00	Sieve Siz #40 #10					
GRAVELLY SOILS DRE THAN 50% OF MARSE FRACTION TAINED ON NO. 4 VE SAND SAND SAND	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES) CLEAN SANDS		GM GC	- SAND MIXTURES, LITTLE OR NO FINES SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES CLAYEY GRAVELS, GRAVEL - SAND -		Fine Medium	0.420	#200 #40	2.00	#40 #10					
ARSE FRACTION TAINED ON NO. 4 VE SAND AND SANDY	FINES (APPRECIABLE AMOUNT OF FINES) CLEAN SANDS		GC	SILT MIXTURES CLAYEY GRAVELS, GRAVEL - SAND -		Medium	0.420	#40	2.00	#10					
SAND AND SANDY	OF FINES)					000100									
AND SANDY		.0 09	SW			GRAVELS									
SANDY	(LITTLE OR NO FINES)		311	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES		Fine Coarse	4.75 19	#4 0.75" ×	19 75	0.75" 3"					
			SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES		COBBLES	75	3" x	300	12"					
ORE THAN 50% OF DARSE FRACTION	SANDS WITH FINES		SM	SILTY SANDS, SAND - SILT MIXTURES		BOULDERS	300	12" x	900	36"					
SSING ON NO. 4 EVE	(APPRECIABLE AMOUNT OF FINES)		sc	CLAYEY SANDS, SAND - CLAY MIXTURES		◆U.S. Standard		×Clear \$	Square	Opening					
			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY		60									
SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	-	50									
							LESS THAN 50		OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	olast	40		n i	
			мн	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS	icity	30		Aline							
SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		СН	INORGANIC CLAYS OF HIGH PLASTICITY	Inde	20			MH & C	н					
OLATS			он	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	×	10		8.01							
LY ORGANIC S	OILS		РТ	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS					80) 10					
	SILTS AND CLAYS Y ORGANIC S ADDIFIED S	SILTS AND CLAYS SILTS AND CLAYS UOUD LIMIT AND CLAYS SILTS AND CLAYS UOUD LIMIT GREATER THAN 50 CLAYS Y ORGANIC SOILS MODIFIED SYMBOLS MAY E	SILTS AND CLAYS SILTS AND CLAYS UOUD LIMIT AND CLAYS SILTS AND CLAYS SILTS AND CLAYS CLOUD LIMIT GREATER THAN 50 CLAYS CORGANIC SOILS	SILTS AND CLAYS LIQUID LIMIT AND CLAYS LIQUID LIMIT AND CLAYS LIQUID LIMIT AND CLAYS LIQUID LIMIT GREATER THAN 50 UM CH CH CH CH CH CH CH CH CH CH CH CH CH	SEE FRACTION INFORMULT FINES SING ON NO.4 E FINES SING ON NO.4 E APPRECIABLE AMOUNT OF FINES) SC SILTS AND CLAYEY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH AND CLAYS INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY RAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS SILTS AND CLAYS LIOUID LIMIT LESS THAN 50 CL SILTS AND CLAYS OL ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY SILTS AND CLAYS MH INORGANIC SILTS, MCACEOUS OR DDATOMACEOUS FINE SAND OR SILTY SOILS SILTS AND CLAYS LIOUID LIMIT GREATER THAN 50 CH INORGANIC CLAYS OF HIGH PLASTICITY Y ORGANIC SOILS 11/1 MH ORGANIC CLAYS OF HIGH PLASTICITY, ORGANIC SILTS Y ORGANIC SOILS 11/1 MH PT Y ORGANIC SOILS 11/1 PT PEAT, HUNUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS MDDIFIED SYMBOLS MAY BE USED TO INDICATE BORDERLINE SOIL SOILS INDICATE BORDERLINE SOIL	Set FRACTION INCOMPACT FINES Sing ON NO.4 E FINES Sing ON NO.4 E FINES Sing ON NO.4 E (APPRECIABLE AMOUNT) OF FINES SC SILTS AND CLAYEY FINES ML SILTS AND CLAYS LOUID LIMIT LESS THAN 50 ML OL ORGANIC SLITS AND VERY FINE SANDS OR CLAYS OL OW TO MEDIUM PASTICITY (SWAPELLY CLAYS OF LOW PLASTICITY MEDIUM PASTICITY, CARVELLY CLAYS OF LOW PLASTICITY SILTS AND CLAYS LIOUID LIMIT AND CLAYS OL ORGANIC SLITS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY SILTS AND CLAYS LIOUID LIMIT AND CLAYS MH INORGANIC SLITS AND ORGANIC SILTY SOLS SILTS AND CLAYS LIOUID LIMIT AND CLAYS MH INORGANIC SLAYS OF HIGH PLASTICITY, ORGANIC SILTS Y ORGANIC SOILS ML V ML V PT PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	Sile TS AND CLAYS FINES SILTS AND CLAYS ML SILTS AND CLAYS ML SILTS AND CLAYS CLAYS OF LOUR SILTS AND VERY FINE SANDS OR CLAYEY SILTS AND LESS THAN 50 CLAYS OL ORGANIC SLTS AND ORGANIC SILTS AND ORGANIC SILTY OL ORGANIC SILTS AND ORGANIC SILTY OL ORGANIC SILTS AND ORGANIC SILTY SILTS AND CLAYS OL ORGANIC SILTS AND ORGANIC SILTY OL ORGANIC SILTS AND ORGANIC SILTY OL OL ORGANIC SILTS AND ORGANIC SILTY SILTS AND GREATER THAN 50 CLH ILOUID LIMIT AND GREATER THAN 50 CH OH ORGANIC CLAYS OF HIGH PLASTICTY ORGANIC SILTY Y ORGANIC SOILS V/1 Y Y ORGANIC SOILS V/1 Y Y ORGANIC SOILS V/1 Y Y ORGANIC SOILS MAY BE USED TO INDICATE BORDERLINE SOIL	E HAR 30% OB SING ON NO.4 OTM OTM OTM OTM OTM SING ON NO.4 E (APPRECIABLE AMOUNT OF FINES) SC CLAYEY SANDS, SAND - CLAY SILTS AND CLAYS ML INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR SILTS WITH SIGHT PLASTICITY OF LAYS, SANDY CLAYS OF LOW TO MEDIUM PLASTICITY, SANDY CLAYS, LEAN CLAYS ML INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, SANDY CLAYS, LEAN CLAYS OL ORGANIC SILTS AND ORGANIC SILTY OF LAYS SANDY CLAYS, SILTY CLAYS, LEAN CLAYS SILTS AND CLAYS MH INORGANIC SLITS, MICACEOUS OR DATOMACEOUS FINE SAND OR SILTY SOLS OL ORGANIC SLITS, MICACEOUS OR DATOMACEOUS FINE SAND OR SILTY SOLS OL ORGANIC SLITS, MICACEOUS OR SILTY SOLS SILTS AND CLAYS LIQUID LIMIT AND GREATER THAN 50 CH INORGANIC CLAYS OF HIGH PLASTICITY, ORGANIC SLITS OF HIGH PLASTICITY, ORGANIC SLITS OH ORGANIC SLITS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SULTS Y ORGANIC SOILS MY PT PEAT, HUMUS, SWAMP SOLS WITH HIGH ORGANIC CONTENTS OH ORGANIC SULS ML	ETRABOR ON OTH OTH	FIRES CLAYEY SANDS, SAND - CLAY MAGGANICAL SC CLAYEY SANDS, SAND - CLAY MIL NORGANIC CLIYS AND VERY FIRE SILTS NORGANIC CLIYS WITH SLICHT PLASTICITY SILTS I.GUID LIMIT CLAYS CL OL ORGANIC SILTS AND ORGANIC CLIYS OF INCLAYS OL ORGANIC SILTS AND ORGANIC CLIYS OF INCLAYS MH INORGANIC CLIYS OF INCLAYS OL ORGANIC SULTS AND ORGANIC CLIYS OF INCLAYS OL ORGANIC CLAYS OF INCLAYS OL ORGANIC SULTS AND ORGANIC SULTY ILOUID LIMIT OL OL ORGANIC CLAYS OF INCLAYS OL ORGANIC CLAYS OF INCLAYS SILTS ILOUID LIMIT AND CLAYS OH ORGANIC CLAYS OF INGH Y ORGANIC SOILS V.Y. Y ORGANIC SOILS					



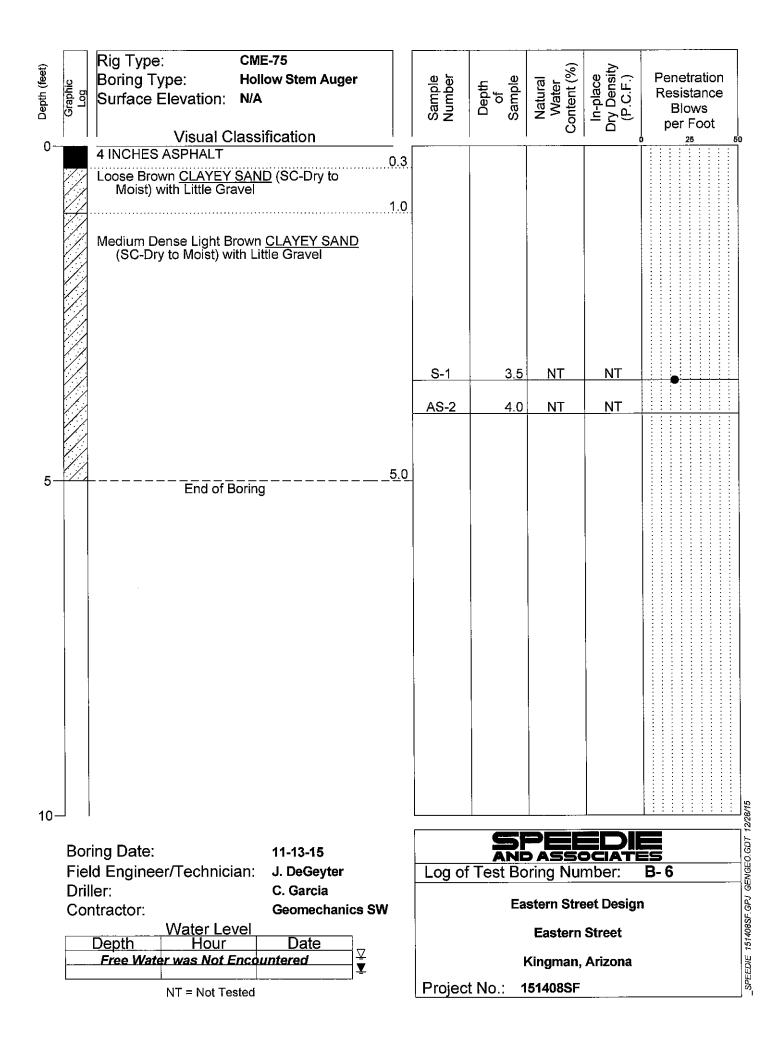


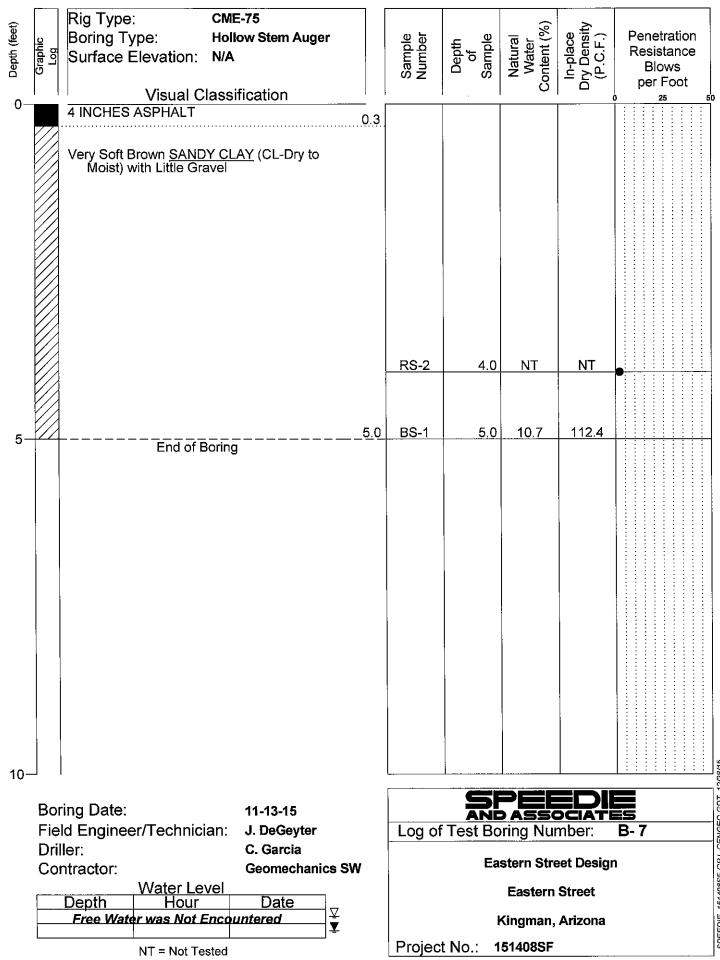
Depth (feet)	Graphic Log	Rig Type: Boring Type: Surface Elevation: Visual C	CME-75 Hollow Stem Auger N/A lassification		Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot	
0-		Medium Dense Brown (SC-Dry to Moist) w	•	.0.2) 25 50	
				3.0	AS-2	2.0	NT	NT		
		Medium Dense Brown (SM-Dry to Moist) w Gravel	<u>SILTY SAND</u> ith Some Coarse		<u>S-1</u>	3.5	NT	NT		
5—		End of E	3oring	5.0	<u>AS-3</u>	5.0	NT	<u>NT</u>		
10—	Bor	ing Date:	11-13-15		L	Si				
	Fiel	ing Date: ld Engineer/Technici		AND ASSOCIATES Log of Test Boring Number: B- 3						
	Drill Cor	ntractor:	N	Eastern Street Design						
		Water Le Depth Hour Free Water was Not E	Eastern Street Kingman, Arizona							
	L	NT = Not Te	sted		Projec	t No.: 1	51408SF			

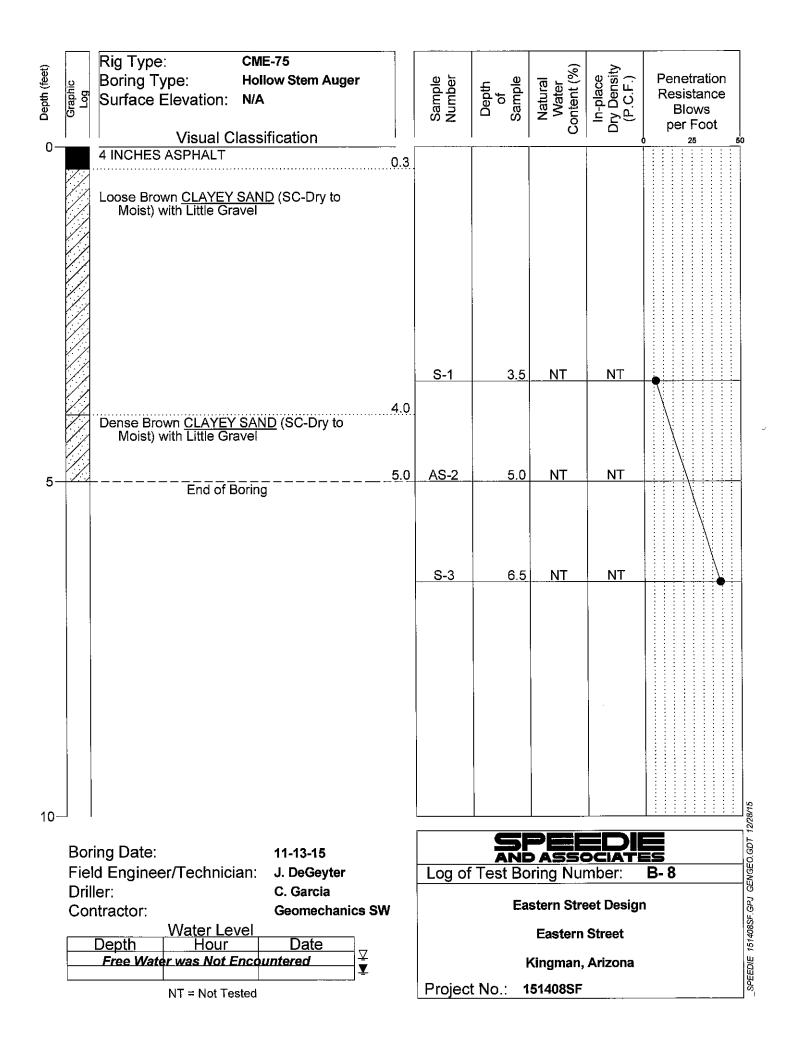
Depth (feet)	Graphic Log	Rig Type: Boring Type: Surface Elevation: Visual (CME-75 Hollow Stem Auger N/A Classification		Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0-		3 INCHES ASPHALT	Jidoomication	0.3				() <u>25</u> 50
		Loose Brown <u>CLAYEY</u> Moist) with Little G	<u>′ SAND</u> (SC-Dry to ravel						
		Madium Danas Liebt I		4.0	RS-2	4.0	10.4	99.6	
		Medium Dense Light I <u>GRAVEL</u> (GW/GM	-Dry to Moist)				:		
					/			-	
5—		End of	Boring	<u>5.0</u>	BS-1	5.0	NT	NT	
10—									
	Bor	ing Date:	11-13-15	{		Ş		ÊDI	
	Fiel	d Engineer/Technic	an: J. DeGeyter		Log of	Test Bo			B- 4
	Drill Cor	er: itractor:	C. Garcia Geomechanics	s SW		Eas	stern Stre	et Design	
		Water Le					Eastern	Street	
		Depth Hour Free Water was Not	Date Encountered	<u>Z</u>		٢	Kingman,	Arizona	
	L	 NT = Not ⊺e		<u>.</u>	Project		51408SF		

SPEEDIE 151408SF.GPJ GENGEO.GDT 12/28/15

Depth (feet)	Graphic Log	Rig Type: Boring Type: Surface Elevation: Visual C	CME-75 Hollow Stem Auger N/A lassification		Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Res	etrat sistar Blows er Foc	
0—		Medium Dense Brown ((SC-Dry to Moist) wi	CLAYEY SAND	0.2							
				<u>3.0</u>	AS-2	3.0	NT	NT			
		Medium Dense Light Bi <u>GRAVEL</u> (GW/GM-I	rown <u>SANDY</u> Dry to Moist)		<u>S-1</u>	3.5	NT	NT		•	
5—		End of B	Boring	5.0							
	Bor	ing Date:	11-13-15			S					
	Field Engineer/Technician: J. DeGeyter					AND ASSOCIATES Log of Test Boring Number: B- 5					
	Drill	ler: htractor:	r	Eastern Street Design Eastern Street							
		Water Lev									
	Depth Hour Date Free Water was Not Encountered					Kingman, Arizona					
			¥.		Drojaci			AIIZOIIa			
		NT = Not Te	sted		Project	LINO.: 1	51408SF				



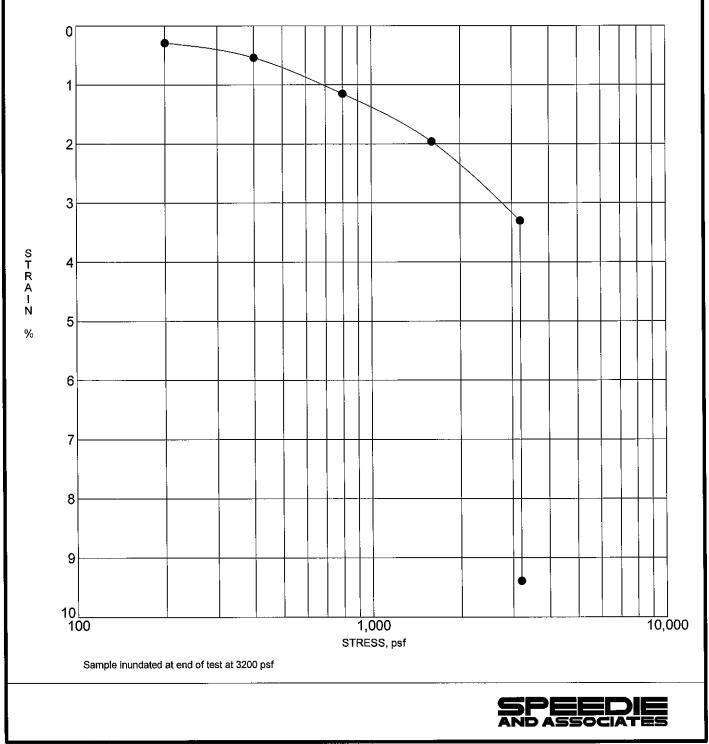




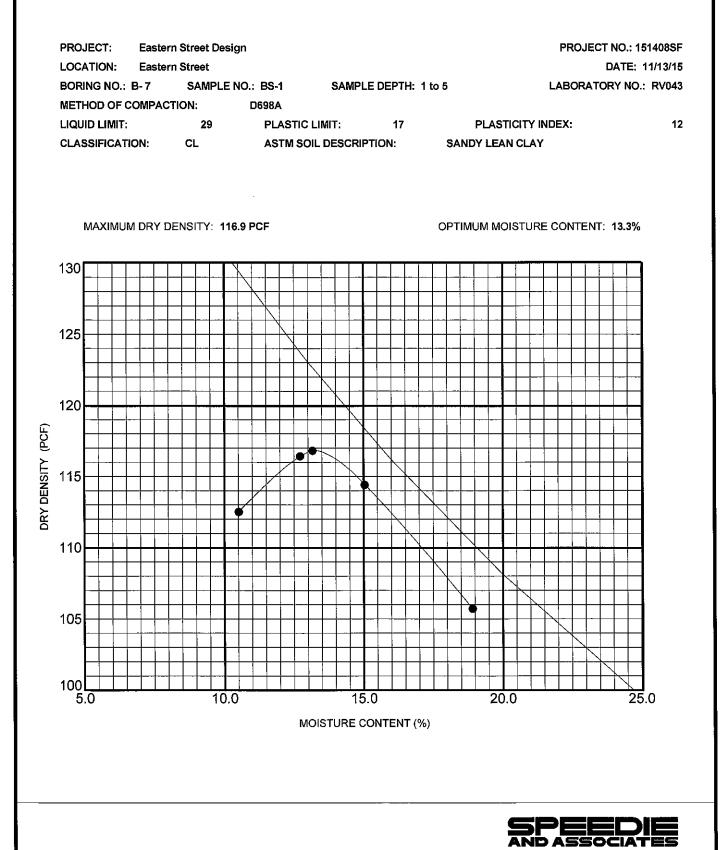
	TABULATION OF TEST DATA PARTICLE SIZE DISTRIBUTION ATTERBERG LIMITS LIMITS																	
				ITENT	>		(Pe	rcent Fir	ner)			LIMITS	; 					
SOIL BORING or TEST PIT NUMBER	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE INTERVAL (ft)	NATURAL WATER CONTENT (Percent of Dry Weight)	IN-PLACE DRY DENSITY (Pounds Per Cubic Foot)	#200 SIEVE	#40 SIEVE	#10 SIEVE	#4 SIEVE	3" SIEVE	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	UNIFIED SOIL CLASSIFICATION	SPECIMEN DESCRIPTION			
B- 1	BS-2	BULK	0.0 - 5.0	NT	NT	33	50	70	88	100	26	17	9	SC	CLAYEY SAND			
B- 2	S-1	SPT	2.0 - 3.5	NT	NT	44	62	80	94	100	24	18	6	SC-SM	SILTY, CLAYEY SAND			
В- 3	AS-3	AUGER	3.0 - 5.0	NT	NT	17	27	48	69	100	22	21	1	SM	SILTY SAND with GRAVEL			
B- 4	BS-1	BULK	1.0 - 5.0	NT	NT	33	49	69	88	100	27	22	5	SM	SILTY SAND			
B- 4	RS-2	RING	3.0 - 4.0	10.4	99.6	42	58	75	90	100	31	17	14	SC	CLAYEY SAND			
B- 5	AS-2	AUGER	1.0 - 3.0	NT	NT	° 40	58	75	90	100	32	23	9	SC	CLAYEY SAND			
B- 6	S-1	SPT	2.0 - 3.5	NT	NT	36	50	67	86	100	35	21	14	SC	CLAYEY SAND			
B- 7	BS-1	BULK	1.0 - 5.0	10.7	112.4	52	66	80	90	100	29	17	12	CL	SANDY LEAN CLAY			
B- 8	AS-2	AUGER	3.0 - 5.0	NT	ΝΤ	45	58	76	92	100	32	18	14	SC	CLAYEY SAND			
Sieve an actual be NT=Not Sheet 1	Tested	ults do no s for the p	t include n ossibility o	naterial g of cobble a	reater tha and bould	in 3". 1 er size	Refer 1 d mate	to the rials.	Ea Ki	astern : astern : ngman roject N	Street ı, Arizo	na			SPEEDIE AND ASSOCIATES			

CONSOLIDATION TEST

PROJECT:	Eastern	Street Design					PRO	JECT NO.: 151408SF
LOCATION:	Eastern	Street						DATE: 11/13/15
BORING NO .:	B- 4	SAMPLE NO	.: RS-2	SAMPL	E DEPTH: 3	to 4	LABOF	RATORY NO .: RV042
LIQUID LIMIT:		31	PLASTIC	LIMIT:	17		PLASTICITY INDEX:	14
CLASSIFICATI	ON:	SC	ASTM SO	IL DESCRIF	PTION:	CLA	YEY SAND	



MOISTURE-DENSITY RELATIONS



BORING or EST PIT No.	SAMPLE DEPTH, ft	MAXIMUM DRY DENSITY (pcf)	OPTIMUM MOISTURE CONTENT (%)	REMOLDED DRY DENSITY (pcf)	INITIAL MOISTURE CONTENT (%)	PERCENT COMPACTION	FINAL MOISTURE CONTENT (%)	CONFINING LOAD (psf)	TOTAL SWELL (%
B- 7, BS-1	5.0	116.9	13.3	112.4	10.7	96.2	17.1	100	2.0
neet 1 of 1					Eastern Street Eastern Street Kingman, Arizo Project No. 15	ona	S A		