

Ft Sam Houston, Water Main Upgrade Road S-22

## **01 00 10 - SCOPE OF WORK**

**AM #0001 AND #0002**

**PROJECT NUMBER AND TITLE:** Water Main Upgrade Road S-22, Fort Sam Houston, Texas.

### **2. GENERAL INFORMATION:**

Please NOTE: All questions, comments or inquiries prior to bid shall be provided in writing directly through the U.S. Army Corps of Engineers, Fort Worth District Contracting. POC is Mr. Richard Feller, Contract Specialist. Email address; [Richard.Feller@swf02.usace.army.mil](mailto:Richard.Feller@swf02.usace.army.mil),

#### **Local Point of Contacts:**

U.S. Army Corps of Engineers, Central Texas Area Office  
Tom Webb  
210-386-6630 (mobile)  
Tom.R.Webb@swf02.usace.army.mil

**The site visit will be held on (AM #1) June 28th at 9:00 am**, meet at the corner of S-22 (alley located between Patch and Chaffee) and Wilson Road. Scope of work includes Everyone attending the site visit shall meet at the intersection of Road S-22 and Wilson Road, parking is available in nearby parking lots. Please Note: The work site is located in an alley-way in an occupied housing community between two main roads (Chaffee Road and Patch Road). Everyone will be expected to stay with the group to view all areas during the site visit. The site visit includes walking the entire stretch of S-22 which is approximately 0.8 miles in length. Please wear proper footwear appropriate for this site visit. Sign in and the opening meeting will be held at the Job-Site Location prior to walking the work area, a closing meeting will be held to go over the general requirements and then we will adjourn. No additional formal site visits will be held.

The original contract award documents along with any amendments, etc including Divisions 00 and 01 of the basic contract are incorporated by reference.

### **DESCRIPTION OF WORK:**

- a.** THE CONTRACTOR shall provide all plant, supervision, labor, materials, equipment, supplies and transportation necessary to complete this scope of work. All work shall comply with all State, local and Federal laws and regulations, industry and construction codes and standards, manufacturer's specifications and recommendations, and all contract special provisions, terms and conditions. The Contractor shall be responsible for obtaining all required licenses and permits to perform construction work on a Federal installation, be properly bonded and insured in accordance with FAR. The contractor shall perform all work in accordance with applicable design criteria, laws, codes, regulations, contract specifications and Fort Sam Houston requirements. All removed and demolished

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materials and equipment remain the property of the contractor and shall be disposed of in accordance with all applicable laws and regulations.

Work consist of replacement of an existing 6" and 4" water-main loop located on road S-22 from Wilson Road to Watson Road. The existing water-main shall be abandoned in place and the new 6" C-900 water-main loop shall be placed adjacent to the existing water-main loop along the roadway to a minimum depth to provide 30 inch cover over new pipe. The existing water-main shall remain in service until all new work is complete and is ready for service tie-ins. After utility excavation for the new pipe, the new water-main shall be placed on a bed of initial backfill and backfilled as specified with bedding 12" above top of pipe and re-use of existing backfill to the fullest extent possible. The existing base materials and asphalt shall be stockpiled separately and reused for base, to the fullest extent possible. Tie-ins for existing services shall be performed in a logical order. New hot mix asphalt surfacing shall be placed in accordance with specifications requirements and extend **(AM#2) curb to curb. 6" each side of the width of the utility trench.**

**(AM#2) NOTE: Patching over the utility ditch alone is not acceptable. Due to the narrowness of the alley-way, the asphalt surfacing (curb to curb) shall be recycled and blended into the existing base course. base shall be scarified and blended with the crushed asphalt. Sub-base shall be excavated enough to allow for new base course mix and new 2" asphalt surface. NOTE finish of asphalt shall be held down 1/2" lower than concrete driveway entrances. Existing asphalt driveways shall be replaced.**

b. Permits:

The contractor is responsible for obtaining digging and utility outage permits through the DPW service desk. Prior to starting work (AFTER THE DIGGING PERMIT IS APPROVED), the contractor shall install orange snow fencing along each side of the road with minimum 48" metal "T" poles to be installed at maximum 10' intervals. Fencing shall be tie-strapped at each pole at top, middle and 4" from the ground, this fence shall be installed approximately 10 feet from the curb on both sides and provide a 40 foot wide pathway in the park area. Fencing shall be accomplished along with the phased work.

c. NOTE: Taylor Road, **(AM#2) Lawton Road**, Schofield Road **(AM#2), Crockett Road** and Harney Road shall remain open at all times to allow for cross traffic. These Roads shall be bored and cased as specified in the contract specifications, casing shall allow 2" minimum space for spacers and pipe joints. A sand slurry shall be installed from one end of the casing until the slurry runs full (or near full), on the opposite end after the new pipe is installed. Both ends shall be temporarily closed off to prevent run off of slurry. Prior to or during backfilling, the device used to close off each end shall be removed. **(AM#2) Crockett and Lawton Roads may be performed with open cut**

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**method, however at least one road shall remain open at all times for traffic detour around the park area.**

d. Asphalt Road and Asphalt Driveways:

Work includes re-cycling to the fullest extent the existing asphalt and base material moving and placing new HMAC at all existing asphalt surfaces on road S-22 where work is performed, including all asphalt ~~(AM#2) and concrete~~ driveways. ~~(AM#2) If total replacement of asphalt is necessary to perform this work the~~ road surfaces from Wilson to Harney shall be crowned smooth with a 2% crown, the road between Harney Road and Watson Street shall be graded concaved (reverse crown) with a 4% crown to allow drainage to collect at the center of the road and flow downstream **(AM#2) toward Harney Road or Watson Street.** ~~(AM#2) Otherwise HMAC replacement is only required over the trench as indicated.~~

e. Concrete Driveways:

Where necessary concrete driveways shall be removed to the first joint into the driveway. New concrete work shall be in accordance with concrete specifications and shall be reinforced as required with a minimum for #4 reinforcement and doweled into the existing driveway ½ depth at 24” intervals. Dowels shall be ½” diameter x 12’ long slick dowels greased on one end Rebar shall be set 6” into existing driveways. **(AM#2) No concrete driveway replacement is anticipated for this work.**

f. NOTE: Lowering or raising of manholes or handholds may be necessary to provide a drainable and smooth transition along the new work, in addition where valve boxes or other items embedded in the road are encountered they shall be brought flush to the new finish grade.

g. Road Re-Grading

~~(AM#2) If contractor elects to replace all asphalt,~~ roads shall be re-graded smooth before ~~black~~ re-cycled base is installed. All roads shall drain and be constructed with a 2% vertical cross sectional crown except where reverse crown is required between Harney Road and Watson Road, this stretch of road requires a 4% reverse crown.

h. Curb & Gutter

Where curb and gutter is replaced, this area shall be re-graded to allow for drainage without ponding of water along the road, curbs or adjacent driveways and car-ports/garages.

i. Sidewalks:

In areas where curbs and gutters are removed or disturbed, sidewalks shall be removed to two joints back or 8 feet which ever is more economical to the contractor. New sidewalks shall comply with concrete requirements. New sidewalks shall be placed so that they slope from existing sidewalk to new curb elevations.

j. Unsatisfactory Materials

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The contractor should anticipate running across some materials that are saturated or otherwise objectionable due to unstable soil conditions. (Except as otherwise stated) Additional work and cost associated with this work shall be determined mutually between the contractor and the Government's appropriate representatives. No compensation shall be considered for work left open for a period of time that would allow wet conditions to make the area unstable.

k. Special Excavation Requirements:

The procedures required for this work shall require cut & cover procedures. No excavation shall be made that cannot be backfilled and complete by the end of the days work, exception is where the next days work will continue, this area shall be shored and covered with the excavator bucket laying on wood or steel cover plate to prevent children from attempting to play in these areas when work is not on-going, as an additional safety measure, while work is unattended and at the end of each days work, ends of pipe shall be capped to prevent animals or pets from entering pipe.

l. Please note that flyers will be passed out by the Gov't approximately two weeks in advance to all occupants in the surrounding community to inform them of the pending forthcoming work, work shall not start until the date indicated on the notice.

m. Work shall proceed in several phases – The contractor shall attend a coordination meeting to establish the feasibility of proceeding with the work in a logical order. The following is only a guide for bid purposes, the actual schedule will be similar but may contain a different sequence of work.

n. New Phases or any part thereof shall not start unless specifically requested and approved in writing at no additional cost to either party and no additional time.

**(AM#2) o. NOTE: New Playground equipment will be installed by others at the playground located between Lawton and Crockett, The playground equipment is scheduled to be installed in the path of the new water-main. The contractor shall coordinate activities with that work. It may be necessary to place a section of water-main across this playground area prior to starting work on the alley-ways so that this work and work performed by others is not impacted.**

**BASE BID**

**BASE BID 0001 ITEM 0001:**

**Phase 1: S-22 Upgrade Watermain - Wilson Road to Lawton Road**

Work for this phase includes closing road S-22 in accordance with all federal, state and local regulations between Wilson and Lawton Roads. Work included in this phase includes installing new snow fencing to block off resident access, installing new water-main loop and **(AM#2) jacking & boring for new steel casing** Taylor Road **(AM#2) and Lawton Road**. All work shall be performed to demolish and salvage existing asphalt

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and base materials for re-use to the fullest extent possible. Work includes abandoning existing ACM pipe in place except as required to install new tie-ins.

The contractor shall excavate a utility trench the entire length of the road deep enough to provide a minimum of 30" cover over new C-900 water-main to be installed, all materials shall be hauled off and disposed of except as required for fill between initial backfill and new asphalt surfacing. Trench shall be excavated adjacent to but not closure than 4 feet from the existing ACM waterline to prevent potential blow-outs. In the event of a blow-out(s) the contractor shall repair the effected areas immediately at no additional cost. Leaks of the existing pipe is possible, the contractor shall be responsible for assuring that the trench is kept pumped out and dry for the new work, This may require providing sumps and pumping operations at various areas. New C-900 PVC Pipe or equal shall be installed as provided in the manufactures recommended procedures, no deviation is expected to be approved for this work.

Initial backfill shall meet manufactures recommendations and be installed below and above the pipe as required. Initial backfill shall be compacted to 90% in paved areas and 85% in grassed areas. All initial backfill shall be maximum ¾" gravel or sand. Initial backfill shall be installed to 12" above pipe.

Backfill above the initial backfill to the asphalt shall be compacted in 6" lifts to 90% modified proctor meeting requirements of ASTM 1557, grassed areas shall be compacted in 12" lifts to 85% density using modified proctor in accordance with ASTM 1556. Frequency of testing is 1 proctor and classification for each type of soil encountered and 1 density test for each lift at 100 feet intervals for the length of the trench.

Recycled base shall be lab compacted to meet 96% of lab compacted density. Existing material shall be used to the fullest extent possible.

After all road base is graded smooth within ¼" tolerance using a 12' straightedge. The contractor shall pave the trench with Type D asphalt in accordance with TXDOT item 340. Asphalt shall be compacted to 98% density. **(AM#2) Work includes all flareouts at intersections and asphalt driveways. Prime Coat shall be MC30 applied at a rate of .2 gal per SY (average range .15 - .25 SY). Tack Coat shall be MC70 applied at a rate of .05 per SY.**

Where entire asphalt surface is replaced no joints will be permitted in this narrow road. Extenders shall be provided with spreaders that have compaction capability. Where machine laying cannot be accomplished on small areas, the contractor may lay the asphalt by hand spreading and rolling smooth. Broadcasting shall not be allowed, since this tends to segregate the road from the mix. All gravel segregations shall be removed to assure raveling does not occur. Where asphalt appears to be coarse or may cause raveling, the area shall be raked in with fines and repaired. That area shall be tested to meet quality test, if the raveled areas can be kicked up or fail quality test, the area shall be replaced.

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**BASE BID 0002 ITEM 0002:**

**Phase 2: S-22 Upgrade Watermain - Lawton Road to Schofield Road**

Phase two includes closing off by fencing with snow fence as specified previously and a portion of the park located between Lawton and Crockett laterally to allow for construction to continue through the park. Work included in this phase includes **(AM#2) jacking & boring for new steel casing for ~~Crockett and~~ Schofield Road.** Road Closures on S-22 shall be accordance with all federal, state and local regulations. All work shall be performed to demolish and salvage existing asphalt and base materials for re-use to the fullest extent possible. Work includes abandoning existing ACM pipe in place except as required to install new tie-ins.

The contractor shall excavate a utility trench the entire length of the road deep enough to provide a minimum of 30" cover over new C-900 water-main to be installed, all materials shall be hauled off and disposed of except as required for fill between initial backfill and new asphalt surfacing. Trench shall be excavated adjacent to but not closure than 4 feet from the existing ACM waterline to prevent potential blow-outs. In the event of a blow-out(s) the contractor shall repair the effected areas immediately at no additional cost. Leaks of the existing pipe is possible, the contractor shall be responsible for assuring that the trench is kept pumped out and dry for the new work, This may require providing sumps and pumping operations at various areas. New C-900 PVC Pipe or equal shall be installed as provided in the manufactures recommended procedures, no deviation is expected to be approved for this work.

Initial backfill shall meet manufactures recommendations and be installed below and above the pipe as required. Initial backfill shall be compacted to 90% in paved areas and 85% in grassed areas. All initial backfill shall be maximum ¾" gravel or sand. Initial backfill shall be installed to 12" above pipe.

Backfill above the initial backfill to the asphalt shall be compacted in 6" lifts to 90% modified proctor meeting requirements of ASTM 1557, grassed areas shall be compacted in 12" lifts to 85% density using modified proctor in accordance with ASTM 1556. Frequency of testing is 1 proctor and classification for each type of soil encountered and 1 density test for each lift at 100 feet intervals for the length of the trench.

Recycled base shall be lab compacted to meet 96% of lab compacted density. Existing material shall be used to the fullest extent possible.

After all road base is graded smooth within ¼" tolerance using a 12' straightedge. The contractor shall pave the trench with Type D asphalt in accordance with TXDOT item 340. Asphalt shall be compacted to 98% density. **(AM#2) Work includes all flareouts at intersections and asphalt driveways. Prime Coat shall be MC30 applied at a rate of .2 gal per SY (average range .15 - .25 SY). Tack Coat shall be MC70 applied at a rate of .05 per SY.**

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Where entire asphalt surface is replaced no joints will be permitted in this narrow road. Extenders shall be provided with spreaders that have compaction capability. Where machine laying cannot be accomplished on small areas, the contractor may lay the asphalt by hand spreading and rolling smooth. Broadcasting shall not be allowed, since this tends to segregate the road from the mix. All gravel segregations shall be removed to assure raveling does not occur. Where asphalt appears to be coarse or may cause raveling, the area shall be raked in with fines and repaired. That area shall be tested to meet quality test, if the raveled areas can be kicked up or fail quality test, the area shall be replaced.

**BASE BID 0003 ITEM 0003:**

**Phase 3: S-22 Upgrade Watermain - Schofield Road to Watson Road**

Work for this phase includes closing road S-22 in accordance with all federal, state and local regulations between Schofield and Hardy Roads. Road Closures on S-22 shall be accordance with all federal, state and local regulations. Work included in this phase includes **(AM #2) jacking & boring for new steel casing** across Harney Road. All work shall be performed to demolish and salvage existing asphalt and base materials for re-use to the fullest extent possible. Work includes abandoning existing ACM pipe in place except as required to install new tie-ins.

The contractor shall excavate a utility trench the entire length of the road deep enough to provide a minimum of 30" cover over new C-900 water-main to be installed, all materials shall be hauled off and disposed of except as required for fill between initial backfill and new asphalt surfacing. Trench shall be excavated adjacent to but not closure than 4 feet from the existing ACM waterline to prevent potential blow-outs. In the event of a blow-out(s) the contractor shall repair the effected areas immediately at no additional cost. Leaks of the existing pipe is possible, the contractor shall be responsible for assuring that the trench is kept pumped out and dry for the new work, This may require providing sumps and pumping operations at various areas. New C-900 PVC Pipe or equal shall be installed as provided in the manufactures recommended procedures, no deviation is expected to be approved for this work.

Initial backfill shall meet manufactures recommendations and be installed below and above the pipe as required. Initial backfill shall be compacted to 90% in paved areas and 85% in grassed areas. All initial backfill shall be maximum ¾" gravel or sand. Initial backfill shall be installed to 12" above pipe.

Backfill above the initial backfill to the asphalt shall be compacted in 6" lifts to 90% modified proctor meeting requirements of ASTM 1557, grassed areas shall be compacted in 12" lifts to 85% density using modified proctor in accordance with ASTM 1556. Frequency of testing is 1 proctor and classification for each type of soil encountered and 1 density test for each lift at 100 feet intervals for the length of the trench.

Recycled base shall be lab compacted to meet 96% of lab compacted density. Existing material shall be used to the fullest extent possible.

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After all road base is graded smooth within ¼” tolerance using a 12’ straightedge. The contractor shall pave the trench with Type D asphalt in accordance with TXDOT item 340. Asphalt shall be compacted to 98% density. **(AM#2) Work includes all flareouts at intersections and asphalt driveways. Prime Coat shall be MC30 applied at a rate of .2 gal per SY (average range .15 - .25 SY). Tack Coat shall be MC70 applied at a rate of .05 per SY.**

Where entire asphalt surface is replaced no joints will be permitted in this narrow road. Extenders shall be provided with spreaders that have compaction capability. Where machine laying cannot be accomplished on small areas, the contractor may lay the asphalt by hand spreading and rolling smooth. Broadcasting shall not be allowed, since this tends to segregate the **(AM#2) aggregate road** from the mix. All gravel segregations shall be removed to assure raveling does not occur. Where asphalt appears to be coarse or may cause raveling, the area shall be raked in with fines and repaired. That area shall be tested to meet quality test, if the raveled areas can be kicked up or fail quality test, the area shall be **(AM#2) repaired or** replaced.

**Drawings:**

The attached and following described drawings (survey data) provided for this work are provided “FOR INFORMATION ONLY”. It is the contractor’s responsibility to determine existing previously as-built conditions during the site visit and work activity and to determine the extent of work required for each phase for this task order.

Drawings will be provided at the site visit.

**Traffic Control:**

The contractor shall be responsible for assuring that only employees and Government personal are in the vicinity of the work site.

NOTE: This is a neighborhood community area and children may be near. If any pedestrian traffic is noticed, the contractor shall try to determine where the pedestrian crossed and report this to the Gov’t as soon as possible. Children playing in the work area shall be informed to leave the area immediately due to safety concerns. Please note on Fort Sam Houston, pedestrians have the right of way, however after construction starts this will be a restricted area.

**Coordination:**

All efforts shall be coordinated between the Contractor and the Government Representative. Normal work hours shall be between 0730 – 1700 hours, Monday through Friday. The contractor may request to work extended hour’s, weekends and holidays at no additional cost to either party – however accessibility will only be approved by local jurisdiction on a case by case basis.

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Please note that the request may also be disapproved. In these cases extensions for disapproved weekends and holidays may be allowed only if proper notification is made 72 hours in advance to allow for coordination of proper notification to occupants.

Additional time will be allowed for disapprovals once the contractor has established a normal frequency of work if delayed by the Government more than ½ the shift at no additional cost to either party.

No work shall be performed, and no person shall be allowed to enter the area without specific approval and/or knowledge of the Government Representative for each days activities. Notification to work other than the hours indicated shall be submitted for approval. Any violation of this requirement will be construed as an unauthorized entry.

**RMS/QCS:**

QCS shall be utilized for submittals, schedules and payment request. It is the contractors responsibility to appoint a person knowledgeable and qualified to meet this requirement.

**Quality Control, Safety and Environmental Protection Plans:**

Prior to starting work the contractor shall provide an approved Quality Control Plan, Safety Plan, Environmental Protection Plan specifically for this Task Order. All Plans are regarded as “living documents” in that they may require updated language / requirements as required to provide for safe and quality work.

The contractor shall obtain all local, state and federal approvals and permits required for this work to include local coordination for disposal hazardous materials.

**Drawings and Final As-Built Drawings:**

Contractor shall provide completed final as-built drawings for all work, this may require the contractor to provide new drawings not currently on file at Fort Hood. All Drawings shall be provided as follows:

- 1 Redline drawing to verify changes prior to submission of Final As-Built
- 1 Final as built drawing - full size paper hard copy (with all corrections)
- 1 Final as-built drawing on CD – Microstation

**O&M Manuals:** – Not Required

**O&M Training:** - Not Required

**Progress Schedule:**

A preliminary schedule of work is required within 14 days of contractors receipt of notice to proceed.

No payments shall be made without an approved progress chart (in bar chart format) showing the progress of work in 1 week increments. The contractor shall prepare a bar-chart in accordance with contract section 1321F (04 MATOC contracts) and shall show

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each element of work defined by division in the Task Order. The contractor shall be required to submit monthly updated progress schedule along with his pay request showing as a minimum each element of work involved in the progress of work. This progress schedule shall be utilized for payment purposes and to determine if the work is proceeding on schedule. Prior to submission of a request for payment, the contractor shall schedule a meeting with the Government's representative to determine the percentage of satisfactory completed work. After the initial schedule, the contractor shall submit all payment request with an electronic schedule utilizing RMS.

**Payment Request:**

Payment request shall be submitted on an approved format and contain contract line item numbers as required.

**Quality Control System:**

The Contractors Quality Control System shall be enforced in accordance with contract section 01454 (04 MATOC contracts) "Contractor Quality Control" of the contract documents. The contractor shall develop a site specific Quality Control and Safety Plan to ensure that work complies with applicable work standards established by this task order. These plans shall be submitted prior to the start of work and a mutual understanding meeting shall be held between the Contractors Quality Control and the Governments Representative prior to the start of work. The three-phase inspection system shall be in full force at all times during construction. The Contractor's Quality Control daily site visits and Inspections shall be documented on daily reports. The daily reports shall be turned in no later than noon the following work day. The CQC system may be supplemented to accommodate additional reporting attachments by qualified area of expertise supervisors for the type of work being performed.

**Digging Permits:** Are required. See page 2, paragraph "Permits" for additional information.

**Utility Outages:**

Utility outage permits are required. The contractor is responsible for coordination and submitting all forms and sketches required for any outage. Government approval is required. Outages may only occur on weekends.

**Restoration:**

The contractor shall replace in kind all existing, trees, shrubs, bush, grass, concrete, asphalt etc. to existing conditions. Grassed areas shall be seeded with similar existing grass and graded smooth to match the surrounding terrain. The contractor is encouraged to take photos and document existing condition prior to the start of work.

**General Requirements:**

Work shall be accomplished in accordance with all applicable contract documents, state, federal, and local codes, rules and regulations. All areas are classified construction areas. Hardhats, Safety Shoes and other required safety apparel are required.

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**Performance:**

Work shall start NLT 10 calendar days after award of task order, all work shall be performed as stated in paragraph "Performance Period" below.

**Note: The Government will not allow the contractor to work on the project unless the bond documents and insurance certificate have been accepted by the Contracting Officer and a signed Notice to Proceed has been issued to the contractor. Be further advised that the contract completion date established in the SOW will remain unchanged if issuance of the Notice to Proceed is delayed due to the contractor's failure to provide these documents within the required 10 day period.**

**PERFORMANCE PERIOD:**

All work shall be complete within (AM#2) ~~180~~ 210 calendar days from Award of Task Order (AM#2) or Issuance of Notice to Proceed which ever is later.

**WAGE DETERMINATIONS:**

As Provided for this Task Order

**LIQUIDATED DAMAGES:**

The contractor shall be assessed the amount of \$386.00 per calendar day for failure to complete the prescribed work within the period of performance stated.

\*\*\*\*\* END OF SCOPE OF WORK \*\*\*\*\*