

MEETING DATE: February 05, 2007

AGENDA ITEM: Authorization to Release a Request for Proposals for the Rehabilitation of Sewer Manholes throughout Culver City.

ATTACHMENTS

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REQUEST FOR PROPOSALS

SEWER MANHOLE REHABILITATION

GENERAL INFORMATION

Project Summary

The City of Culver City is soliciting proposals from qualified firms to provide the rehabilitation of approximately 125 existing concrete or brick sanitary sewer manholes to rebuild strength and eliminate possible infiltration, outflow, root intrusion and future deterioration of the concrete due to the sewer environment. It is the intent of this Request for Proposal (RFP) to cover all aspects of rehabilitation of these manholes including types of repair, methods of repair, materials and equipment. The average diameter on these manholes is approximately 5 feet and the depth ranges between 5 feet to 20 feet.

Scope of Work

The scope of work shall include the lining and rehabilitation of sanitary sewer manholes at various locations as directed by the Public Works Director or his designee with the use of a cured-in-place laminated composite comprised of five layers of an epoxy-fiberglass with an impervious PVC inner membrane combination. The liner system shall be a Poly-Triplex liner system or a pre-approved equivalent substitute. Work may also involve the rehabilitation of the channels directing the flow of the sewer main, as well as, the replacement of certain manhole lids/seals.

Work Summary

1. It shall be the responsibility of the Contractor to make sure that the Cured In Place Manhole (CIPM) liner completely seals the manhole, shelf, pipe inlet and outlets, and the lid ring frame in a monolithic method, as required, and that no holes, cracks, or seams in the liner are left unsealed, which would allow gases or fluids to flow behind the CIPM liner,
2. Furnish all labor, materials, equipment, and incidentals required to supply and install a protective CIPM liner as required.
3. The CIPM liner shall be designed and installed to protect concrete, brick, and other manhole surfaces from corrosion. The CIPM liner product shall be designed to stop infiltration, root intrusion, and further deterioration in the manhole. The interior surfaces to be protected shall include the walls, shelves, pipe junctions and the lid ring frame.
4. Omission of a specific item or component obviously necessary for the proper installation and functioning of the system shall not relieve the Contractor from the responsibility of supplying that specific item or component at no additional expense to the City.

References

The CIPM liner system shall be manufactured and installed as to be in compliance with the minimum value recommended by the manufacturer's standards and or applicable ASTM testing requirements.

ASTM D-638	Tensile Strength and Tensile Modulus
ASTM D-695	Compressive Strength
ASTM D-790	Flexural Strength and Flexural Modulus
ASTM D-2240	Hardness

TERMS AND PRICING

The term of the agreement shall be a total of five years, with an average of approximately 25 manholes rehabilitated each year. The actual number of manholes to be rehabilitated will be determined ahead of time by City Staff and given to the selected Contractor for completion each year. Either party may terminate the agreement without cause with a thirty-day (30-day) written notification.

The attached sewer manhole locations and dimensions are approximations and are to be used as a guide in preparing a cost estimate to complete the entire project, though the work will be completed over a multi-year term in accordance with annual budgetary constraints.

The contract unit prices shall be paid for as stated in the proposal and shall include furnishing all traffic control, tools, materials and equipment necessary for a complete rehabilitation of each manhole per the specifications, and no additional compensation will be allowed therefore.

PROPOSAL SUBMITTAL TIMELINE

1. Pre-proposal Meeting

Interested proposers must attend a **mandatory** pre-proposal meeting. The meeting is scheduled for **February 22, 2007 at 9:00 am**. The location of the meeting will be at the Public Works Maintenance Yard, 9505 W. Jefferson Blvd., Culver City, CA 90232.

2. Proposal Due Date

Proposals shall be delivered in one (1) original and two (2) photocopies in an envelope marked "Sewer Manhole Rehabilitation" to the contact person indicated below **by no later than 2:00 pm March 15, 2007.**

3. The City of Culver City reserves the right to reject any and all proposals, to waive any informality or technical defects in any proposal, to award all or any individual part/item of the proposal and to make an award in the best interest of the City.

Proposals will not be accepted after the proposal due date and time stated above. Incomplete proposals that do not conform to the requirements specified herein may not be considered.

4. Contact Person

Eric Mirzaian
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Culver City, CA 90232
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SCOPE OF WORK

All work shall comply with Section 500-2 (Manhole and Structure Rehabilitation) of the 2006 edition of the Standard Specifications for Public Works Construction (SSPWC) "GREENBOOK".

Work will involve the rehabilitation of existing concrete or brick sanitary sewer manholes to rebuild strength and eliminate possible infiltration, outflow, , root intrusion, and future deterioration of the concrete due to the sewer environment.

A. Traffic Control

Contractor must follow Work Area Traffic Control Handbook (WATCH) manual procedures to ensure safe traffic control practices are followed during the performance of their work. Selected Contractor will be required to submit a traffic control plan for approval during the contract certification process of the project.

B. Field Measurement and Inspection of Manholes

The Contractor shall field measure and inspect manholes before ordering materials. The Contractor shall submit a copy of the written measurements to the Public Works Director or his designee. If the Contractor notices any unusual conditions that would require a heavier weight liner material than specified in the table below (Section F-Liner Bag), this shall be indicated to the Public Works Director or his designee for approval. A change order will be initiated before the ordering of materials with each change order form including the physical street address of each manhole.

C. Surface Preparation

Contractor shall remove all manhole maintenance steps flush with the structure wall before lining.

Contractor shall clean manhole walls and base with high pressure water prior to the installation of the liner.

Contractor shall engage in the mechanical removal (pneumatic chisels, jack hammers or other approved mechanical means) of hard calcium deposits that cannot be removed with high pressure water blasting.

All active structure infiltration must be eliminated completely prior to liner application. All grouting shall be completed in accordance with current applicable National Association of Sewer Service Companies (NASSCO) specifications.

Contractor shall be responsible for removal and disposal of all debris removed during the rehabilitation process. The Contractor shall comply with all Federal, State, and Local regulations regarding disposal of debris.

D. Flow Control

Any flow control or bypass pumping necessary to perform manhole rehabilitation shall be the responsibility of the Contractor.

E. Concrete Mortar Replacement

Concrete replacement to build the wall up to within one inch of the nominal inside diameter of the structure shall be air or manual placed concrete per "GREENBOOK" Section 500-2.4.3, 500-2.4.4 & 500-2.4.5.

F. Liner Bag

The liner bag shall be composed of five layers composed of E glass fiberglass, polyester felt, and a flexible non-porous PVC water and gas shield membrane. The flexible non-

porous PVC water and gas shield shall be embedded between the structural layers of epoxy-fiberglass to guard against nicks, tears and damage to the gas protection membrane.

The pre-saturated weight of the liner bag materials shall conform to the table below:

MH Depth in Feet	Outside Fiberglass Weight	Inside Felt	PVC Inner Barrier	Inside Felt	Inside Fiberglass Weight	Min. Total Composite Weight
> 10	12 oz.		20 oz.		12 oz.	44 oz.
> 15	18 oz.		20 oz.		18 oz.	56 oz.
> 20	24 oz.		20 oz.		24 oz.	68 oz.
> 35	48 oz.		20 oz.		48 oz.	116 oz.

The design table above is intended as a general manhole guide for the minimum weights of the liner bag materials at various depths. This is not intended to limit the liner manufacturer's and authorized installer's judgment to recommend the use of a heavier weight fiberglass liner material for unusual conditions identified in the structure during the pre-manufacturing measurement and inspection. Any recommended increase in the liner thickness approved by the Public Works Director or his designee will not affect the warranty requirement. The increased cost for the thicker liner shall be paid for by a change order.

The angle point between the manhole wall and base shall be reinforced with extra layers of fiberglass and shall have a minimum completed composite thickness of six layers of fiberglass each with a minimum weight as specified in the table above.

The CIPM liner shall be constructed in such way the non-porous inner flexible PVC membrane is protected from damage by the use of an epoxy-fiberglass layer. This inside surface protective layer is to protect the CIPM liner from impact damage (nicks from rodders and root cutters, hydro-vac nozzles, inspection cameras, survey equipment and construction techniques used in pipeline rehabilitation). The importance of this protection layer cannot be over-emphasized to protect the manhole from sulfides and other gases penetrating through nicks and cuts in an unprotected membrane. This CIPM liner must be impervious and without holes that will allow hidden corrosion on the concrete behind the liner, which can cause the eventual failure of the liner and the manhole. This inner liner may be installed with multiple installations.

G. Epoxy Resin

The modified epoxy resin shall be a two component 100% solid, non-VOC style resin. The resin shall bond to the existing manhole brick or concrete substrate and each layer of the fiberglass, polyester felt, and flexible PVC inner liner.

H. Repair of Installed Liner

The finished lining must be repairable at any time during the life of the structure. The lining shall be flexible, and have an elongation sufficient to bridge up to a 1/4-inch settling crack, without damage to the lining. The liner shall be able to bridge expansion cracks that may occur.

I. Safety

The Contractor shall comply with all Federal, State, Local and CAL/OSHA safety regulations. The Contractor's personnel shall be certified for confined space entry.

J. Installation and Field Inspection

Plywood and protective plastic shall be used around the maintenance hole to isolate the street surface from the resin. Good housekeeping measures shall be employed and any spilled resin shall be cleaned up at the Contractor's expense.

A flow control device shall be installed to maintain the normal flow and isolate the bottom of the liner from the flow during installation of the liner.

The Public Works Director or his designee shall inspect each dry liner bag before installation to verify that the inspection tag, installation address, and the liner materials comply with the table in Section F.

Both the inside and outside layers of the dry fiberglass liner shall be wet out separately with a 100% solid, non-VOC modified epoxy. There shall be no dry spots in either of the fiberglass liners.

The wet out liner, bottom, and six layer reinforced angle section shall be installed per the manufacturer's standards.

The wet out liner shall be inflated, heat cured with steam, and cooled with air per the manufacturer's standards.

The cured liner shall be cut out over the pipe channel leaving a slight flared edge. The top of the liner shall be cut off even with the top of the riser ring. Any fins in the liner at the top of the rings shall be cut in a tapered fashion to allow a full 24-inch access to the manhole.

The top and bottom of the cuts shall be sealed.

A cured flat sample of the liner to be installed and six layer reinforced angle section shall be provided to the Public Works Director or his designee prior to each installation for testing.

K. Testing and Quality Control

A spark test shall be performed on each installed liner at a minimum of 15,000 volts per "GREENBOOK" section 500-2.4.8.

A chemical resistance test ("Pickle Jar Test") shall be performed per "GREENBOOK" section 210-2.3.3.

The cured sample shall be visually inspected by the Public Works Director or his designee to confirm that the PVC barrier was installed between the layers of fiberglass and that a minimum of six layers of fiberglass was installed and cured at the bottom of the manhole.

The Public Works Director or his designee may elect to have the City's Public Works Inspector involved in all inspection phases throughout the duration of the project.

WARRANTY

The manufacturer of the CIPM lining material shall furnish an affidavit attesting to a minimum period of 10 years successful use of its materials as a lining for concrete and brick structures in wastewater conditions recognized as corrosive or otherwise detrimental to concrete.

Manufacturer shall warrant the performance of the CIPM liner for 10 years.

The installation Contractor shall include a 5-year warranty for materials and labor to repair or replace any failing conditions of the liner in the structure.

CONTRACTOR RESPONSIBILITIES

1. Should the Contractor or its employees cause any damage to public or private property, the Contractor will be required to make repairs immediately. The City may however, elect to make repairs or replacements of damaged property and deduct the cost of such from payments due to the Contractor under the contract. The Contractor shall not be responsible for any damages caused by sewer stoppages unless caused by their gross negligence. The Contractor is responsible for any damages caused by sewer stoppages if they are caused by their gross negligence.
2. Contractors must follow Work Area Traffic Control Handbook (WATCH) manual procedures to ensure safe traffic control practices are followed during the performance of their work.
3. The Contractor shall adhere to all the City's National Elimination Pollution Discharge Elimination System (NPDES) Permit requirements.
4. The Contractor shall comply with all Federal, State, and Local laws, with special attention to those laws that pertain to the handling, transportation, and use of any hazardous materials and pertaining to the type of work specified herein.
5. The Contractor shall clean all job sites when work is completed, including the removal of all tools and materials used during work. Each day's scheduled work shall be completed and cleaned up and under no circumstance shall any manhole equipment, contractor's tools/equipment and trucks be left on the street overnight. The Contractor shall be responsible for the protection of all improvements adjacent to the work areas, including but not limited to, curbs, gutters, street paving, sidewalks, traffic control signage/equipment, etc. located on either public or private property.

SCHEDULING

1. The Contractor will be required to commence work after a "Notice to Proceed" has been issued by the City. The Contractor shall, prior to commencing, submit and gain approval of a weekly work schedule indicating the order and location of work.
2. The general hours of operation shall be 8:00 AM to 5:00 PM. The days of operations shall be Monday through Friday. No work shall be performed on Saturday or Sunday.

PROPOSAL REQUIREMENT & FORMAT

1. **Company Profile:** Identify the legal name, address, telephone and fax number of your firm.
2. **Qualifications:** At a minimum, eligible proposers will have qualifications in the rehabilitation of sewer manholes and knowledge of applying Cured In Place Manhole (CIPM) rehabilitation. Proposers must hold an active State of California Contractor's License at time of proposal submittal. Proposers must submit current OSHA and other applicable certifications relevant to this project.
3. **Scope of Services:** Describe the recommended scope of service to be performed by your firm that clearly displays an understanding of the project as described in the "Scope of Work" section of this RFP. Additionally, specific items that will not be maintained by proposers shall be clearly indicated in the proposal.
4. **References:** Provide a minimum of five (5) references the City may contact concerning your performance on other similar sewer manhole rehabilitation contracts, preferably in the Southern California area.
5. **Claim History:** Provide information on any legal judgments or claim settlements your firm and any individual has had in the past five years against any public or private entity for whom it provides service, with an explanation of their disposition.
6. **Schedule of Fees:** The measurement and payment for cured-in-place manhole liner sewer manhole rehabilitation as described in this RFP shall be made at the contract unit price per each manhole.

The above contract price and payment shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation and incidentals and for doing all the work involved and necessary to repair existing sanitary sewer manholes and shall include lining, manhole rehabilitation, manhole sealing and water tightness, complete in place, including field measurements of all manholes, protection and restoration of existing public and private facilities, control of surface and subsurface water, disposal of concrete and extraneous and surplus excavated materials, and all other features as necessary to complete this work as specified in the Standard Specifications for Public Works Construction "GREENBOOK" 2006 edition, these special provisions, and as directed by the Public Works Director or his designee.

7. **Proof of the Following Insurance Coverage:**
 - General Liability including coverage of premises, products and complete operations, independent contractors/vendors, personal injury and contractual obligations with combined single limits of coverage of at least \$1,000,000 per occurrence.
 - Automobile Liability, including owned, non-owned and hired vehicle of at least the following limits:
 - a. Primary bodily injury with limits of at least \$500,000 per person; \$500,000 per occurrence; and
 - b. Primary property damage of at least \$500,000 per occurrence; or

- c. Combined single limits of \$500,000 per occurrence.
- Worker's Compensation insurance as required by the Labor Code of the State of California.
- Proof that if selected, your insurance carrier will execute the attached City of Culver City Special Endorsement. If an additional fee will be charged by your insurance carrier, then you must include that in your fee based proposal.

Any changes in the scope of work resulting in a contract increase or decrease in fee shall be approved by the Public Works Director in writing prior to commencement of actual change in work. No fee adjustment will be allowed unless said prior approval is authorized exclusively in writing by the City, without explanation.

ATTACHMENT-Sewer Manhole Dimensions

	LOCATION	LOCATION NOTES	LENGTH (ft)	WIDTH (ft)	LID/COVERS
1	5933 Slauson Ave		10	4	
2	5933 Slauson Ave		8	6	
3	5933 Slauson Ave		6	6	
4	10733 Ranch Rd		5	4	
5	10733 Ranch Rd		5	4	
6	10803 Stever St		10	4	
7	10889 Stever St		7	4	
8	10954 Stever St		9	4	
9	10954 Stever St	side driveway	7	4	
10	5710 Sawtelle Blvd		8	4	
11	5680 Sawtelle Blvd		11	4	
12	5327 Kinston		6	4	
13	5451-57 Kinston		5	4	
14	5539-45 Kinston		4	4	
15	5551-57 Kinston		4	4	
16	10890 Whitburn		4	4	
17	Mesmer Pump Station	driveway apron	14	5	
18	Mesmer Pump Station	middle manhole	13	4	
19	Mesmer Pump Station	adjacent to fence	13	4	
20	Slauson b/w Segrell & Culver Pk Dr		13	4	
21	Slauson at Segrell		13	4	
22	Slauson at Jefferson Alley	b/w Buffalo & Firestone	12	4	
23	Jefferson Alley	north of slauson	11	4	
24	Jefferson Alley	further north	11	4	
25	Jefferson Alley	further north	11	4	
26	Jefferson Alley	further north	11	4	
27	Jefferson Alley	further north	11	4	
28	Berryman Ave (north of Sepulveda)	behind FS#3	10	4	
29	Alley b/w Berryman & Sawtelle	behind Batteries Plus	11	4	
30	Alley b/w Berryman & Sawtelle	next King's Café	11	4	
31	Alley b/w Janison & Sawtelle	next to PetCo	11	4	
32	Alley b/w Janison & Sawtelle	behind US Bank	11	4	
33	Alley b/w Janison & Sawtelle	behind motel	11	4	
34	5433 Janison		9	4	
35	5387 Cota		4	4	
36	Cota & Pickford		4	4	
37	Cota b/w Fairbanks & Pickford		6	4	
38	Cota & Fairbanks		6	4	

39	Cota b/w Fairbanks & Westwood		7	4	
40	Cota & Westwood		7	5	
41	Cota b/w Westwood & Rhoda		7	4	
42	Cota & Rhoda		7	4	
43	Cota & Ocean	near driveway	7	4	
44	Cota & Ocean	middle of street	6	4	
45	Cota & Ocean	near house	7	4	
46	Cota & Ocean		8	4	New ring
47	11063 Ocean	1st mh east of Cota	7	4	
48	11023 Ocean		6	4	
49	10943 Ocean		7	4	
50	10821 Ocean		7	4	New lid
51	Ocean & Westwood		6	4	
52	Ocean & Fairbanks		5	4	
53	Ocean & Pickford		5	4	
54	Ocean & Overland Alley		8	4	
55	4520 Sepulveda	next to Pep Boys	11	4	
56	4460 Sepulveda	next to YMCA	13	4	
57	4436 Sepulveda	at Braddock	15	4	
58	4406 Sepulveda	at Barman	15	4	New lid
59	4338 Sepulveda	at Lindblade	13	4	New lid
60	4300 Sepulveda	south of Culver	15	3	
61	4246 Sepulveda	north of Culver	13	3	
62	4204 Sepulveda		13	3	New lid
63	Sepulveda (south of Wash Blvd)	next to Chevy dealer	13	3	
64	Sepulveda (north of Wash Blvd)	next to Arco	15	3	
65	Sepulveda (south of Wash Pl)	next to Anderson	15	3	
66	Sepulveda (north of Wash Pl)	next to Chevron	16	3	
67	3940 Sepulveda	Sea Aisle Apartments	16	3	
68	Reid St. (dead end)	driveway	5	4	
69	Reid St. (dead end)	street	5	3	
70	Mesmer b/w Beatrice & Jefferson	north of wash	15	4	
71	4311 Jackson	private property			
72	4315 Jackson	private property			
73	National bike trail	manhole at driveway	19	3	
74	Syd Kroenthal Park	west of baseball field	7	5	New lid
75	Syd Kroenthal Park	behind 2nd ball field	7	4	New lid
76	Syd Kroenthal Park	Fay & National	12	4	New lid
77	Syd Kroenthal Park	Fay & National (next to fence)	11	4	New lid
78	Syd Kroenthal Park	Fay Ave cul-de-sac (behind bushes)	10	3	New lid
79	5880 Adams Blvd	Hajoca Plumbing Supplies	9	3	New ring

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80	Alexander Machinery		9	3	New ring & channel
81	5830 Washington Blvd	Culver City Animal Hospital	8	3	New ring
82	Wash Blvd & Hines Ave		9	3	New ring
83	Adams Blvd & Hines Ave		9	3	New ring & channel
84	5811 David Ave		4	3	
85	5819 Ernest Ave		5	3	New ring & channel
86	5865 Dauphin Ave		5	3	New channel
87	5919 Comey Ave		6	3	
88	S/W corner of Wash & La Cienega	Pizza Hut (sidewalk)	7	3	New ring & channel
89	N/E corner Culver & Madison	sidewalk	6	4	
90	Washington Blvd & Madison Ave		5	3	New ring
91	Washington Blvd & Duquesne Ave		6	3	New ring
92	9727 Washington Blvd	S&W Diner	5	3	
93	Culver Blvd & Lafayette PL			27"	Ring only
94	9546 Washington Blvd	Santa Maria BBQ	4	3	
95	9516 Washington Blvd	Daphne's Greek Cuisine		27"	Ring only
96	9400 Washington Blvd	Culver Hotel		27"	Ring only
97	3859 Cardiff Ave		5	3	
98	Cardiff Alley	Tokyo 77	5	3	
99	9543 Watseka Ave	Watseka Parking Structure	5	3	
100	Madison Ave & Culver Blvd	north of Culver	6	4	
101	Madison Ave & Culver Blvd	south of Culver	6	3	New ring
102	3815 Culver Center	CPK ASAP	14	3	
103	3851 Culver Center	Cingular	13	3	
104	3864 Culver Center	Kragen Auto Parts	10	2	
105	3880 Culver Center	Best Buy	8	2	
106	10885 Washington Blvd	at Elenda	13	3	
107	10915 Washington Blvd	La Ballona Elementary School	12	3	
108	4064 Colonial Ave		11	3	
109	Alley b/w Colonial & Wasatch	north of Washington Blvd	12	3	
110	4048 Wasatch Ave		12	3	
111	4034 Boise Ave		12	3	
112	4034 Boise Ave		7	3	
113	12565 Washington Blvd		13	3	
114	3989 Meier St		12	3	
115	3988 Moore St		13	3	
116	Alley b/w Beethoven & Lyceum	north of Washington Blvd	14	3	
117	Alley b/w Lyceum & Alla	north of Washington Blvd	13	3	
118	Alley b/w Alla & Michael	north of Washington Blvd	13	3	
119	Alley b/w Michael & Tivoli	north of Washington Blvd	13	3	
120	3964 Redwood Ave	north of Washington Blvd	11	3	

121	Alley b/w Redwood & Walgrove	north of Washington Blvd	11	3	New channel
122	Alley b/w Walgrove & Glencoe	north of Washington Blvd	10	3	
123	4019 Michael Ave	south of Washington Blvd	12	3	
124	4015 Alla Rd	south of Washington Blvd	11	3	
125	4011 Lyceum Ave	south of Washington Blvd	11	3	