TRANSMISSION REPORT

CITY-OF-FOREST-GROVE (JUN 19 '95 15:51)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	15:49	5032885989	G3ST	01'42"	OK	02	

JW Presley

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 15:49)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	15:47	503 357 3741	G3ST	01'54"	OK	02	

Grimrod

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 15:35)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	15:34	0625892110?0	G3ST	01'41"	OK	02	

Fuller

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 15:29)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	15:28	EMERY & SON CONST	G3EST	01'30"	OK	02	

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUN 19 '95 15:25)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	15:23	96422534	G3EST	01'23"	OK	02	

Baker Rock

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 15:23)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	15:21	503 254 1822	G3ST	01'41"	OK	02	

Werbin West

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 15:09)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	15:07	503 775 1069	G3ST	01'27"	OK	02	

W. G. Moe

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 14:54)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	14:53	503 689 5530	G3EST	01'32"	OK	02	

Specimen

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 14:49)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	14:48	503 626 8006	G3ST	01'26"	OK	02	

Rustan

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 14:47)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	14:45	5036391634	G3ST	01'35"	OK	02	

NW Earthmovers

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUN 19 '95 14:44)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	14:43	5034345710	G3EST	01'34"	OK	02	

Martin + Wright

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 14:41)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	14:39	96921351	G3EST	01'21"	OK	02	

Marshall Assoc

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUN 19 '95 14:38)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	14:36	503 222 6460	G3EST	01'49"	OK	02	

Lakeside

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUN 19 '95 14:35)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	14:34	6321854	G3EST	01'48"	OK	02	

Kerr Cont.

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 19 '95 14:33)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 19	14:32	96313610	G3EST	01'19"	OK	02	

John Arnold

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:55)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:53	1 472 8946	G3ST	01'59"	OK	02	

Kizer excav.

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:52)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:51	503 357 3649	G3ST	01'28"	OK	02	

Ken Leahy

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:50)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:49	+50323513S0	G3EST	01'17"	OK	02	

K.F. Jacobsen

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUN 15 '95 10:48)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:47	503-629 1138	G3EST	01'11"	OK	02	

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:47)

DATE	START TIME	REMO IDENT	TERMINAL LOCATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:45		503 625 0508	G3ST	01'36"	OK	02	

Dyer Corp.

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:45)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:43		G3ST	01'39"	OK	02	

Dan Bros.

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:43)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:41	503 669 1192	G3ST	01'31"	OK	02	

Dirt + Aggregate

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:40)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:39	CLEARWATER CONST CO	G3ST	01'35"	OK	02	

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUN 15 '95 10:38)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:36	5094668933	G3ST	01'47"	OK	02	

Casper + magera

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:36)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:34	266 2791	G3ST	01'39"	OK	02	

Canby Excav.

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUN 15 '95 10:34)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:32	503 650 9605	G3EST	01'20"	OK	02	

Bonstar Const.

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:31)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:30	503 682 3777	G3EST	01'25"	OK	02	

Berge

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUN 15 '95 10:29)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:28		G3EST	01'12"	OK	02	

Bones Const

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 15 '95 10:25)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 15	10:23	5032564211	G3ST	01'39"	OK	02	

alliance

Please File...

W.O. 8194

"Correspondence Out"

city of forest grove

PO Box 326
Forest Grove, OR 97116
(503) 359-3228

LETTER OF TRANSMITTAL

TO: Stan Thompson
Gulco Construction
PO Box 7716
Salem, OR 97303

Date: 8/28/97 | Job No.: 8194
Attention: Stan Thompson
Regarding:
Elm Street L.I.D.
Pay Estimate #7

WE ARE SENDING YOU: X Attached ___ Under separate cover via _____ the following items:

___ Shop Drawings ___ Prints ___ Plans ___ Specifications
___ Copy of Letter ___ Change Order ___ Samples X Other

Copies	Date	No.	Description
1			Pay Estimate #7

THESE ARE TRANSMITTED as checked below:

X For Approval + Signature
___ For Your Use
___ As Requested
___ For Review and Comment
___ Approved as Submitted
___ Approved as Noted
___ Returned for Corrections
___ Other: _____
___ Resubmit ___ Copies for Approval
___ Submit ___ Copies for Distribution
___ Return ___ Corrected Prints

REMARKS:

Please sign pay estimate and return to the City of Forest Grove at your convenience.

Thank You.

Signed: Kelly Strother for Steve Wood

Copy To: file

g:\groups\engineer\forms\transfrm.xls

BID BOND

BOND NO. 031002283-2

KNOW ALL MEN BY THESE PRESENTS, THAT HILLSBORO PUMP SERVICE, hereinafter called the Principal, and AMWEST SURETY INSURANCE COMPANY, a corporation duly organized under the laws of the State of CALIFORNIA, having its principal place of business at 1911 NE BROADWAY, PORTLAND, in the State of OREGON and authorized to do business in the State of Oregon, as Surety, are held and firmly bound unto the CITY OF FOREST GROVE, hereinafter called the Obligee in the penal sum of FIFTEEN THOUSAND FIVE HUNDRED AND 00/100---- Dollars. ($15,500.00), for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Bond is such that, whereas, the Principal herein is herewith submitting his or its Bid Proposal for ELM STREET LOCAL IMPROVEMENT DISTRICT, WORK ORDER NO. 8194 said Bid Proposal, by reference thereto, being hereby made a part hereof.

NOW, THEREFORE, if the said Bid Proposal submitted by the said Principal be accepted, and the Contract be awarded to said Principal, and if the said Principal shall execute the proposed Contract and shall furnish the Performance Bond as required by the Bidding and Contract Documents within the time fixed by said Documents, then this obligation shall be void, otherwise to remain in full force and effect.

By: _____
Principal

AMWEST SURETY INSURANCE COMPANY
Surety

Countersigned:

By: _____
Attorney-In-Fact

CATHERINE M. LOCKE

N/A
Resident Agent

LIMITED POWER OF ATTORNEY

Amwest Surety Insurance Company

NOT VALID FOR BONDS
EXECUTED ON OR AFTER
12-28-95

POWER NUMBER
0426924-61

READ CAREFULLY - To be used only in conjuction with the bond specified herein

This document is printed on multi-colored security paper with black and red ink, with border in blue ink and bears the raised seal of Amwest Surety Insurance Company (the "Company"). Only unaltered originals of this Power of Attorney are valid. This Power of Attorney is valid solely in connection with the execution and delivery of the bond noted below and may not be used in conjunction with any other power of attorney. No representations or warranties regarding this Power of Attorney may be made by any person. This Power of Attorney is governed by the laws of the State of California. Any power of attorney used in connection with any bond issued by the Company must be on this form and no other form shall have force or effect.

KNOW ALL MEN BY THESE PRESENTS, that Amwest Surety Insurance Company, a California corporation (the"Company"), does hereby make, constitute and appoint:

CATHERINE M. LOCKE
AS AN EMPLOYEE OF AMWEST SURETY INSURANCE COMPANY

its true and lawful Attorney-in-Fact, with limited power and authority for and on behalf of the Company as surety to execute, deliver and affix the seal of the Company thereto if a seal is required on bonds, undertakings, recognizances or other written obligations in the nature thereof as follows:

Bid Bonds up to $**1,000,000.00
Contract (Performance & Payment), Court, Subdivision $**1,000,000.00
License & Permit Bonds up to $**1,000,000.00
Miscellaneous Bonds up to $**1,000,000.00
Small Business Administration Guaranteed Bonds up to $**1,250,000.00

and to bind the Company thereby. This appointment is made under and by authority of the By-Laws of the Company, which are now in full force and effect.

CERTIFICATE

I, the undersigned secretary of Amwest Surety Insurance Company, a California corporation, DO HEREBY CERTIFY that this Power of Attorney remains in full force and effect and has not been revoked and furthermore, that the resolutions of the Board of Directors set forth on the reverse, and that the relevant provisions of the By-Laws of the Company, are now in full force and effect.

Bond number 031002293-2 .Signed and sealed this 6TH day of JULY 19 95

Karen G. Cohen

Karen G. Cohen, Secretary

0000426924 - 61
r

NOT VALID UNLESS SEAL IS AFFIXED

Amwest
6320 Canoga Avenue Post Office Box 4500 Woodland Hills, CA 91365-4500 TEL 818 704-1111

Resolutions of the Board of Directors

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the Board of Directors of Amwest Surety Insurance Company at a meeting duly held on December 15, 1975:

RESOLVED, that the President or any Vice President, in conjunction with the Secretary or any Assistant Secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the Company, to execute and deliver and affix the seal of the Company to bonds, undertakings, recognizances, and suretyship obligations of all kinds; and said officers may remove any such attorney-in-fact or agent and revoke any power of attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company:

(i) when signed by the President or any Vice President and attested and sealed (if a seal be required) by any Secretary or Assistant Secretary; or

(ii) when signed by the President or any Vice President or Secretary or Assistant Secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or

(iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the power of attorney issued by the Company to such person or persons.

RESOLVED FURTHER, that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any power of attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, Amwest Surety Insurance Company has caused these presents to be signed by its proper officers, and its corporate seal to be hereunto affixed this 1st day of January, 1993.

AMWEST SURETY INSURANCE COMPANY INCORPORATED MAY 1, 1975 CALIFORNIA

John E. Savage, President

Karen G. Cohen, Secretary

State of California
County of Los Angeles

On January 1, 1993 before me, Peggy B. Lofton Notary Public, personally appeared John E. Savage and Karen G. Cohen, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me all that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____ (Seal)
Peggy B. Lofton, Notary Public

OFFICIAL SEAL
PEGGY B. LOFTON
Notary Public-California
LOS ANGELES COUNTY
My Commission Expires
July 28, 1995

Restrictions and Endorsements

BID PROPOSAL

TO: Catherine L. Jansen, City Recorder
City of Forest Grove Administration Building
1924 Council Street (PO Box 326)
Forest Grove, Oregon 97116

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein; that this Proposal is, in all respects, fair and without fraud; that it is made without collusion with any official of the Owner; and that the Proposal is made without any connection or collusion with any person making another proposal on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents; that he has personally inspected the site; that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the same quantities with the detailed requirements of the Contract Documents; and that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

The Bidder further agrees that he has exercised his own judgement regarding the interpretation of surface and subsurface information and has utilized all data which he believes pertinent from the Engineer, Owner, and other sources in arriving at his conclusions.

The Bidder further agrees that all of the applicable provisions of Oregon Law relating to public contracts (ORS Chapter 279) are, by this reference, incorporated in and made a part of this proposal.

The Bidder further agrees that if this Proposal is accepted, he shall, if requested by the Engineer, submit a statement of qualifications in a form adopted by the State of Oregon Public Contract Review Board and/or a list of names of subcontractors he intends to utilize in the execution of the contract, within twenty-four (24) hours of the request.

The Bidder further agrees that if this Proposal is accepted, he will, within ten (10) calendar days after notification of acceptance, execute the Contract with the Owner on the form of Contract annexed hereto; and will, at the time of execution of the Contract, deliver to the Owner the Performance and Payment Bond and will, to the extent of his Proposal, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all materials necessary to complete the work in the manner, in the time, and according to the methods as specified in the Contract Documents and required by the Engineer thereunder.

The Bidder further agrees to furnish the Owner, before commencing the work under this contract, the certificate of insurance as specified in these documents.

The Bidder further agrees to commence work following the issuance of a "Notice to Proceed" by the Owner and fully complete the project within **100 calendar days**.

Once the Contractor has moved onto the project site, work shall commence and continue, uninterrupted, until fully complete and accepted by the City.

In the event the Bidder is awarded the contract and shall fail to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, the Bidder further agrees to pay liquidated damages, until the work is finished, as specified in these Documents.

The Bidder further proposes to accept as full payment for the work proposed herein the amount computed under the provisions of the Contract Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the quantities involved, that said unit prices represent a true measure of the labor and material required to perform the specified unit of work, including all allowance for overhead and profit for each type and unit of work called for in these Contract Documents.

The amounts shown shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
1.	Mobilization.	1	Lump Sum	29,581.13	TWENTY NINE THOUSAND FIVE HUNDRED EIGHTY ONE & 13/100 Unit Price in Writing	$ 29,581.13
2.	Temporary Traffic Control.	1	Lump Sum	5000.00	FIVE THOUSAND Unit Price in Writing	$ 5000.00
3.	Environmental Controls	1	Lump Sum	1500.00	FIFTEEN HUNDRED Unit Price in Writing	$ 1500.00
4.	Unclassified Excavation.	1	Lump Sum	10,000.00	TEN THOUSAND Unit Price in Writing	$ 10,000.00
5.	Trench Foundation	100	Cub. Yards	25.00	TWENTY FIVE Unit Price in Writing	$ 2500.00
6.	Dewatering.	1	Lump Sum	1500.00	FIFTEEN HUNDRED Unit Price in Writing	$ 1500.00
7.	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	233	Lin. Feet	19.00	NINTEEN Unit Price in Writing	$ 4427.00
8.	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	79	Lin. Feet	21.00	TWENTY ONE Unit Price in Writing	$ 1659.00
9.	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	229	Lin. Feet	25.00	TWENTY FIVE Unit Price in Writing	$ 5725.00
10.	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	76	Lin. Feet	30.00	THIRTY Unit Price in Writing	$ 2280.00

The amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	40.00	FORTY Unit Price in Writing	$ 11,760.00
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	45.00	FORTY FIVE Unit Price in Writing	$ 1170.00
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	35.00	THIRTY FIVE Unit Price in Writing	$ 13,790.00
14.	24-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	40.00	FORTY Unit Price in Writing	$ 3200.00
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	32.00	THIRTY TWO Unit Price in Writing	$ 3264.00
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	42.00	FORTY TWO Unit Price in Writing	$ 27,300.00
17.	48-inch sanitary manhole.	3	Each	2500.00	TWENTY FIVE HUNDRED Unit Price in Writing	$ 7500

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
18.	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	1	Each	2250.00	TWO THOUSAND TWO HUNDRED FIFTY Unit Price in Writing	$ 2250.00
19.	48-inch storm manhole complete	5	Each	1500.00	FIFTEEN HUNDRED Unit Price in Writing	$ 7500.00
20.	Curb inlet.	6	Each	1000.00	ONE THOUSAND Unit Price in Writing	$ 6000.00
21.	Monolithic curb and gutter.	1203	Lin. Feet	10.00	TEN Unit Price in Writing	$ 12030.00
22.	Sidewalk.	5869	Sq. Feet	3.50	THREE DOLLARS FIFTY CENTS Unit Price in Writing	$ 20,541.50
23.	Driveway (8-inch thick P.C.C.)	2348	Sq. Feet	5.00	FIVE Unit Price in Writing	$ 11,740.00
24.	Aggregate Base (2"-0) (8" depth).	2825	Sq. Yards	6.00	SIX Unit Price in Writing	$ 16,950.00
25.	Aggregate Base (3/4"-0) (2" depth).	3750	Sq. Yards	2.50	TWO DOLLARS FIFTY CENTS Unit Price in Writing	$ 9375.00
26.	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	2950	Sq. Yards	9.00	NINE Unit Price in Writing	$ 26,550.00
27.	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	360	Sq. Yards	12.50	TWELVE DOLLARS FIFTY CENTS Unit Price in Writing	$ 4500.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
28.	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	5	Each	200.00	TWO HUNDRED Unit Price in Writing	$ 1000.00
29.	Type I-L Barricade.	1	Each	500.00	FIVE HUNDRED Unit Price in Writing	$ 500.00
30.	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	1	Lump Sum	1,000.00	ONE THOUSAND Unit Price in Writing	$ 1000.00
31.	10" tapping sleeve, 10' NRS Gat Valve Box, 10 x 12 reducer installed complete.	1	Lump Sum	2000.00	TWO THOUSAND Unit Price in Writing	$ 2000.00
32.	6" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	35	Lin. Feet	20.00	TWENTY Unit Price in Writing	$ 700.00
33.	8" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	50	Lin. Feet	30.00	THIRTY Unit Price in Writing	$ 1500.00
34.	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	567	Lin. Feet	32.00	THIRTY TWO Unit Price in Writing	$ 18,144.00
35.	12" NRS gate valve with valve box, complete.	1	Each	1000.00	ONE THOUSAND Unit Price in Writing	$ 1000.00
36.	8" NRS gate valve with valve box, complete.	1	Each	500.00	FIVE HUNDRED Unit Price in Writing	$ 500.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	250.00	TWO HUNDRED FIFTY Unit Price in Writing	$ 250.00
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	250.00	TWO HUNDRED FIFTY Unit Price in Writing	$ 250.00
39.	22-½° + 11-¼° Elbow Assembly	1	Each	500.00	FIVE HUNDRED Unit Price in Writing	$ 500.00
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	300.00	THREE HUNDRED Unit Price in Writing	$ 300.00
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	3500.00	THREE THOUSAND FIVE HUNDRED Unit Price in Writing	$ 3500.00
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	350.00	THREE HUNDRED FIFTY Unit Price in Writing	$ 700.00
43.	2" water service taps with corp stop.	2	Each	400.00	FOUR HUNDRED Unit Price in Writing	$ 800.00
44.	1" Polyethylene water service.	275	Lin. Feet	5.00	FIVE Unit Price in Writing	$ 1375.00
45.	2" Polyethylene water service.	50	Lin. Feet	10.00	TEN Unit Price in Writing	$ 500.00
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	5000.00	FIVE THOUSAND Unit Price in Writing	$ 5000.00
47.	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height.	5	Each	500.00	FIVE HUNDRED Unit Price in Writing	$ 2500.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
48.	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2' caliper, 6 ft branch height.	4	Each	500.00	FIVE HUNDRED Unit Price in Writing	$ 2000.00
49.	Furnish & plant: Acer Rubrum A.Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	8	Each	500.00	FIVE HUNDRED Unit Price in Writing	$ 4000.00
50.	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	4	Each	500.00	FIVE HUNDRED Unit Price in Writing	$ 2000.00
51.	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6 ft branch height.	8	Each	500.00	FIVE HUNDRED Unit Price in Writing	$ 4000.00
52.	Seeded Lawn construction (in parkway area).	620	Sq. Yards	2.00	TWO Unit Price in Writing	$ 1240.00
53.	Furnish and place topsoil 6 inch in-place depth in parkway area. (Approximately 620 SY)	1	Lump Sum	2500.00	TWENTY FIVE HUNDRED Unit Price in Writing	2500.00
54.	2" gray PVC conduit (for underground sleeving)	490	Lin. Feet	4.00	FOUR Unit Price in Writing	$ 1960.00

TOTAL BID PRICE THREE HUNDRED NINE THOUSAND THREE HUNDRED ELEVEN AND 63/00 CENTS
IN WRITING

TOTAL BID PRICE $ 309,311.63

It is agreed that if the Bidder is awarded the Contract for the work herein proposed and shall fail or refuse to execute the Contract and furnish the specified Performance Bond and the Labor and Material Payment Bond within ten (10) calendar days after receipt of notification of acceptance of his Proposal, then, in that event, the Proposal Guaranty deposited herewith according to the conditions of the Invitation for bids and General Conditions shall be retained by the Owner as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the Owner will sustain in case the Bidder shall fail or refuse to enter into the Contract for the said work and to furnish the Performance Bond and the Labor and Material Payment Bond as specified in the Contract Documents. Proposal Guaranty in the form of a certified check shall be subject to the same requirements as a bid bond.

If the Bidder is awarded a construction Contract on this Proposal, the Surety who will provide the Performance Bond and the Labor and Material Payment Bond will be Cnwest ___ whose address is:

1911 NE Broadway Portland, OR 97232
(City) (State) (Street)

The name of the Bidder who is submitting this Proposal is Hillsboro Pump Service ___ doing business at:

598 Baseline Cornelius, OR 97113
(City) (State) (Street)

which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

Jim R. Loofener

Deborah J. Loofener

(If Corporation)

In Witness whereof the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers that _____ day of _____, 19___.

_____
Name of Corporation

By _____

_____
Title

Attest _____

(If Sole Proprietor or Partnership)

In Witness hereto the undersigned has set his (its) hand this 6th day of July, 19___.

Deborah J. Lodge
Signature of Bidder

Owner
Title

Oregon Construction Contractors Board Registration No. 43358
and/or
Oregon Landscape Contractors Board Registration No. _____

CITY OF FOREST GROVE
Engineering Department

Contract Documents

for

ELM STREET LOCAL IMPROVEMENT DISTRICT

W.O. #8194

ADDENDUM NO. 1

Opens: July 6, 1995 **Time:** 2:00 p.m. Local Time

Location: Administrative Offices
City of Forest Grove
1924 Council Street
Forest Grove, OR

TO ALL PLAN HOLDERS:

Ladies and Gentlemen:

This, ADDENDUM No. 1 to the plans and specifications for the Elm Street Local Improvement District, W.O. #8194, for the City of Forest Grove, Oregon, is a part of the Contract Documents and as such, supersedes anything within the applicable portions of the Contract Documents with which it may conflict.

ADDENDUM NO. 1 JUNE 28, 1995

ELM STREET LOCAL IMPROVEMENT DISTRICT
W.O. #8194

REVISION TO THE INVITATION TO BID

Add:	Append to Page 1: 3. Prevailing Wage Rates for Public Works Contracts in Oregon, effective January 1, 1995.

REVISION TO THE BID PROPOSAL

Delete:	Page 4 and 7 of the Bid Proposal.
Add;	Page 4 and 7 of the Bid Proposal (attached).
Page 4:	Bid Item 14 revised to read: "Class 'A' Backfill".
Page 7:	Bid Item 39 revised to read: "22-½° + 11-¼° Elbow Assembly".

REVISION TO THE DRAWINGS

Drawing C5 Profile	21" Storm Sewer: Add: "Class 'B' Bedding required between Sta. 15 + 13 to 15 + 39.

BID PROPOSAL

TO: Catherine L. Jansen, City Recorder
City of Forest Grove Administration Building
1924 Council Street (PO Box 326)
Forest Grove, Oregon 97116

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein; that this Proposal is, in all respects, fair and without fraud; that it is made without collusion with any official of the Owner; and that the Proposal is made without any connection or collusion with any person making another proposal on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents; that he has personally inspected the site; that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the same quantities with the detailed requirements of the Contract Documents; and that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

The Bidder further agrees that he has exercised his own judgement regarding the interpretation of surface and subsurface information and has utilized all data which he believes pertinent from the Engineer, Owner, and other sources in arriving at his conclusions.

The Bidder further agrees that all of the applicable provisions of Oregon Law relating to public contracts (ORS Chapter 279) are, by this reference, incorporated in and made a part of this proposal.

The Bidder further agrees that if this Proposal is accepted, he shall, if requested by the Engineer, submit a statement of qualifications in a form adopted by the State of Oregon Public Contract Review Board and/or a list of names of subcontractors he intends to utilize in the execution of the contract, within twenty-four (24) hours of the request.

The Bidder further agrees that if this Proposal is accepted, he will, within ten (10) calendar days after notification of acceptance, execute the Contract with the Owner on the form of Contract annexed hereto; and will, at the time of execution of the Contract, deliver to the Owner the Performance and Payment Bond and will, to the extent of his Proposal, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all materials necessary to complete the work in the manner, in the time, and according to the methods as specified in the Contract Documents and required by the Engineer thereunder.

The Bidder further agrees to furnish the Owner, before commencing the work under this contract, the certificate of insurance as specified in these documents.

The Bidder further agrees to commence work following the issuance of a "Notice to Proceed" by the Owner and fully complete the project within **100 calendar days**.

Once the Contractor has moved onto the project site, work shall commence and continue, uninterrupted, until fully complete and accepted by the City.

In the event the Bidder is awarded the contract and shall fail to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, the Bidder further agrees to pay liquidated damages, until the work is finished, as specified in these Documents.

The Bidder further proposes to accept as full payment for the work proposed herein the amount computed under the provisions of the Contract Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the quantities involved, that said unit prices represent a true measure of the labor and material required to perform the specified unit of work, including all allowance for overhead and profit for each type and unit of work called for in these Contract Documents.

The amounts shown shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
1.	Mobilization.	1	Lump Sum	20,000	Twenty Thousand Unit Price in Writing	$ 20,000
2.	Temporary Traffic Control.	1	Lump Sum	1500	Fifteen Hundred Unit Price in Writing	$ 1500
3.	Environmental Controls	1	Lump Sum	1500	Fifteen Hundred Unit Price in Writing	$ 1500
4.	Unclassified Excavation.	1	Lump Sum	20,000	Twenty Thousand Unit Price in Writing	$ 20000
5.	Trench Foundation	100	Cub. Yards	10	Ten Unit Price in Writing	$ 1000
6.	Dewatering.	1	Lump Sum	500	Five Hundred Unit Price in Writing	$ 500
7.	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	233	Lin. Feet	20 00	Twenty Unit Price in Writing	$ 4660
8.	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	79	Lin. Feet	22 34	Twenty Two ~~Thirty Four~~ Unit Price in Writing	$ 1738 RGT ~~7786~~ RGT
9.	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	229	Lin. Feet	34	Thirty Four Unit Price in Writing	$ 7786
10.	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	76	Lin. Feet	44	Forty Four Unit Price in Writing	$ 3344

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	44⁻	Forty Four (Unit Price in Writing)	$ 12,936⁻
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	57⁻	Fifty Seven (Unit Price in Writing)	$ 1482⁻
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	47⁻	Forty Seven (Unit Price in Writing)	$ 18518⁻
14.	24-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	58⁻	Fifty Eight (Unit Price in Writing)	$ 4640⁻
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	35⁻	Thirty Five (Unit Price in Writing)	$ 3570⁻
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	60	Sixty (Unit Price in Writing)	$ 39000⁻
17.	48-inch sanitary manhole.	3	Each	2500⁻	Twenty Five Hundred (Unit Price in Writing)	$ 7500⁻

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The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
18.	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	1	Each	10,000-	TEN THOUSAND Unit Price in Writing	$ 10,000-
19.	48-inch storm manhole complete	5	Each	1200-	TWELVE HUNDRED Unit Price in Writing	$ 6000-
20.	Curb inlet.	6	Each	880-	EIGHT HUNDRED EIGHTY Unit Price in Writing	$ 5280-
21.	Monolithic curb and gutter.	1203	Lin. Feet	8-	EIGHT Unit Price in Writing	$ 9624-
22.	Sidewalk.	5869	Sq. Feet	1 75/100	ONE DOLLAR SEVENTY Unit Price in Writing	$ 10270 75/100
23.	Driveway (8-inch thick P.C.C.)	2348	Sq. Feet	2 50/100	TWO DOLLARS AND FIFTY CENTS Unit Price in Writing	$ 5870-
24.	Aggregate Base (2"-0) (8" depth).	2825	Sq. Yards	5 50/100	FIVE & FIFTY/100 Unit Price in Writing	$ 15537 50/100
25.	Aggregate Base (3/4"-0) (2" depth).	3750	Sq. Yards	2 50/100	TWO & FIFTY/100 Unit Price in Writing	$ 9375-
26.	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	2950	Sq. Yards	9 00/100	NINE Unit Price in Writing	$ 26550-
27.	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	360	Sq. Yards	15-	FIFTEEN Unit Price in Writing	$ 5400-

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
28.	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	5	Each	100-	ONE HUNDRED Unit Price in Writing	$ 500-
29.	Type I-L Barricade.	1	Each	500-	FIVE HUNDRED Unit Price in Writing	$ 500-
30.	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	1	Lump Sum	1200-	TWELVE HUNDRED Unit Price in Writing	$ 1200-
31.	10" tapping sleeve, 10' NRS Gat Valve Box, 10 x 12 reducer installed complete.	1	Lump Sum	2500-	TWENTY FIVE HUNDRED Unit Price in Writing	$ 2500-
32.	6" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	35	Lin. Feet	35-	THIRTY FIVE Unit Price in Writing	$ 1225-
33.	8" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	50	Lin. Feet	36-	THIRTY SIX Unit Price in Writing	$ 1800-
34.	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	567	Lin. Feet	31	THIRTY ONE Unit Price in Writing	$ 17577-
35.	12" NRS gate valve with valve box, complete.	1	Each	1100-	ELEVEN HUNDRED Unit Price in Writing	$ 1100-
36.	8" NRS gate valve with valve box, complete.	1	Each	600	SIX HUNDRED Unit Price in Writing	$ 600-

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	200⁻	TWO HUNDRED Unit Price in Writing	$ 200⁻
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	1500⁻	FIFTEEN HUNDRED Unit Price in Writing	$ 1500⁻
39.	12" x 22.5 Deg. Elbow complete.	1	Each	600	SIX HUNDRED Unit Price in Writing	$ 600⁻
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	500	FIVE HUNDRED Unit Price in Writing	$ 500⁻
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	11000⁻	ELEVEN THOUSAND Unit Price in Writing	$ 11000⁻
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	700	SEVEN HUNDRED Unit Price in Writing	$ 1400⁻
43.	2" water service taps with corp stop.	2	Each	500	FIVE HUNDRED Unit Price in Writing	$ 1000⁻
44.	1" Polyethylene water service.	275	Lin. Feet	300 RLT	THREE DOLLARS RLT Unit Price in Writing	$ 825⁻
45.	2" Polyethylene water service.	50	Lin. Feet	10⁻	TEN Unit Price in Writing	$ 500⁻
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	1000⁻	ONE THOUSAND Unit Price in Writing	$ 1000⁻
47.	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height.	5	Each	100⁻	ONE HUNDRED Unit Price in Writing	$ 500⁻

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
48.	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2' caliper, 6 ft branch height.	4	Each	50	Fifty Dollars Unit Price in Writing	$ 200 -
49.	Furnish & plant: Acer Rubrum A.Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	8	Each	50	Fifty Unit Price in Writing	$ 400 -
50.	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	4	Each	50	Fifty Unit Price in Writing	$ 200 -
51.	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6 ft branch height.	8	Each	50	Fifty Unit Price in Writing	$ 400 -
52.	Seeded Lawn construction (in parkway area).	620	Sq. Yards	1 -	One Dollar Unit Price in Writing	$ 620 -
53.	Furnish and place topsoil 6 inch in-place depth in parkway area. (Approximately 620 SY)	1	Lump Sum	2500 -	Twenty Five Hundred Unit Price in Writing	$ 2500 -
54.	2" gray PVC conduit (for underground sleeving)	490	Lin. Feet	5 -	Five Dollars Unit Price in Writing	$ 2450 -

TOTAL BID PRICE — Three Hundred Six Thousand Three Hundred Seventy Eight & Twenty Five Cents — IN WRITING

TOTAL BID PRICE $ 306,378.25

It is agreed that if the Bidder is awarded the Contract for the work herein proposed and shall fail or refuse to execute the Contract and furnish the specified Performance Bond and the Labor and Material Payment Bond within ten (10) calendar days after receipt of notification of acceptance of his Proposal, then, in that event, the Proposal Guaranty deposited herewith according to the conditions of the Invitation for bids and General Conditions shall be retained by the Owner as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the Owner will sustain in case the Bidder shall fail or refuse to enter into the Contract for the said work and to furnish the Performance Bond and the Labor and Material Payment Bond as specified in the Contract Documents. Proposal Guaranty in the form of a certified check shall be subject to the same requirements as a bid bond.

If the Bidder is awarded a construction Contract on this Proposal, the Surety who will provide the Performance Bond and the Labor and Material Payment Bond will be INSCODICO ___ whose address is:

17780 FITCH IRVINE CAL. (Street)
(City) (State)

The name of the Bidder who is submitting this Proposal is MICHAEL-MARK LTD. ___ doing business at:

15100 SW 158TH TIGARD OR. (Street)
(City) (State)

which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

JL THOMAS PRES.
RG THOMAS VICE PRES.

(If Corporation)

In Witness whereof the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers that _____ day of _____, 19 95.

MICHAEL-MARK LTD
Name of Corporation

By _____

VICE PRES.
Title

Attest _____

(If Sole Proprietor or Partnership)

In Witness hereto the undersigned has set his (its) hand this _____ day of _____, 19 __.

_____
Signature of Bidder

_____
Title

Oregon Construction Contractors Board Registration No. 53826
and/or
Oregon Landscape Contractors Board Registration No. _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT MICHAEL-MARK LIMITED, hereinafter called the Principal, and DEVELOPERS INSURANCE COMPANY, a corporation duly organized under the laws of the State of California, having its principal place of business at Irvine, in the State of California and authorized to do business in the State of Oregon, as Surety, are held and firmly bound unto the CITY OF FOREST GROVE, hereinafter called the Obligee in the penal sum of FIVE PERCENT OF THE TOTAL BID----- Dollars. ($5%), for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Bond is such that, whereas, the Principal herein is herewith submitting his or its Bid Proposal for ELM STREET LOCAL IMPROVEMENT DISTRICT, WORK ORDER NO. 8194 said Bid Proposal, by reference thereto, being hereby made a part hereof.

NOW, THEREFORE, if the said Bid Proposal submitted by the said Principal be accepted, and the Contract be awarded to said Principal, and if the said Principal shall execute the proposed Contract and shall furnish the Performance Bond as required by the Bidding and Contract Documents within the time fixed by said Documents, then this obligation shall be void, otherwise to remain in full force and effect.

6 July, 1995
MICHAEL-MARK LIMITED

By: _____ V.P.
Principal

DEVELOPERS INSURANCE COMPANY
Surety

By: Lynette S Harris
Attorney-In-Fact

Lynette G. Harris

Countersigned:

(NOT REQUIRED)

Resident Agent

POWER OF ATTORNEY OF INDEMNITY COMPANY OF CALIFORNIA AND DEVELOPERS INSURANCE COMPANY

№ 140120

P.O. BOX 19725, IRVINE, CA 92713 • (714) 263-3300

NOTICE: 1. All power and authority herein granted shall in any event terminate on the 31st day of March, 1996.

2. This Power of Attorney is void if altered or if any portion is erased.

3. This Power of Attorney is void unless the seal is readable, the text is in brown ink, the signatures are in blue ink and this notice is in red ink.

4. This Power of Attorney should not be returned to the Attorney(s)-In-Fact, but should remain a permanent part of the obligee's records.

KNOW ALL MEN BY THESE PRESENTS, that, except as expressly limited, **INDEMNITY COMPANY OF CALIFORNIA** and **DEVELOPERS INSURANCE COMPANY,** do each severally, but not jointly, hereby make, constitute and appoint

LYNETTE G. HARRIS, KATHLEEN J. LAATZ, PHILIP FORKER, JOINTLY OR SEVERALLY

the true and lawful Attorney(s)-In-Fact, to make, execute, deliver and acknowledge, for and on behalf of each of said corporations as sureties, bonds, undertakings and contracts of suretyship in an amount not exceeding Two Million Five Hundred Thousand Dollars ($2,500,000) in any single undertaking; giving and granting unto said Attorney(s)-In-Fact full power and authority to do and to perform every act necessary, requisite or proper to be done in connection therewith as each of said corporations could do, but reserving to each of said corporations full power of substitution and revocation; and all of the acts of said Attorney(s)-In-Fact, pursuant to these presents, are hereby ratified and confirmed.

The authority and powers conferred by this Power of Attorney do not extend to any of the following bonds, undertakings or contracts of suretyship:

Bank depository bonds, mortgage deficiency bonds, mortgage guarantee bonds, guarantees of installment paper, note guarantee bonds, bonds on financial institutions, lease bonds, insurance company qualifying bonds, self-insurer's bonds, fidelity bonds or bail bonds.

This Power of Attorney is granted and is signed by facsimile under and by authority of the following resolutions adopted by the respective Boards of Directors of **INDEMNITY COMPANY OF CALIFORNIA** and **DEVELOPERS INSURANCE COMPANY,** effective as of September 24, 1986:

RESOLVED, that the Chairman of the Board, the President and any Vice President of the corporation be, and that each of them hereby is, authorized to execute Powers of Attorney, qualifying the attorney(s) named in the Powers of Attorney to execute, on behalf of the corporation, bonds, undertakings and contracts of suretyship; and that the Secretary or any Assistant Secretary of the corporation be, and each of them hereby is, authorized to attest the execution of any such Power of Attorney;

RESOLVED, FURTHER, that the signatures of such officers may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures shall be valid and binding upon the corporation when so affixed and in the future with respect to any bond, undertaking or contract of suretyship to which it is attached.

IN WITNESS WHEREOF, **INDEMNITY COMPANY OF CALIFORNIA** and **DEVELOPERS INSURANCE COMPANY** have severally caused these presents to be signed by their respective Presidents and attested by their respective Secretaries this 1st day of April, 1993.

INDEMNITY COMPANY OF CALIFORNIA

By Dante F. Vincenti, Jr.
Dante F. Vincenti, Jr.
President

ATTEST

By Walter Crowell
Walter Crowell
Secretary

INDEMNITY COMPANY OF CALIFORNIA INCORPORATED OCT. 5, 1967 CALIFORNIA

DEVELOPERS INSURANCE COMPANY

By Dante F. Vincenti, Jr.
Dante F. Vincenti, Jr.
President

ATTEST

By Walter Crowell
Walter Crowell
Secretary

DEVELOPERS INSURANCE COMPANY INCORPORATED MAR. 27, 1979 CALIFORNIA

STATE OF CALIFORNIA)
) SS.
COUNTY OF ORANGE)

On April 1, 1993, before me, Tiresa Taafua, personally appeared Dante F. Vincenti, Jr. and Walter Crowell, personally known to me (or provided to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Tiresa Taafua

OFFICIAL SEAL
TIRESA TAAFUA
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
ORANGE COUNTY
My Commission Exp. Aug. 4, 1995

CERTIFICATE

The undersigned, as Senior Vice President of **INDEMNITY COMPANY OF CALIFORNIA,** and Senior Vice President of **DEVELOPERS INSURANCE COMPANY,** does hereby certify that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the provisions of the resolutions of the respective Boards of Directors of said corporations set forth in the Power of Attorney, are in force as of the date of this Certificate.

This Certificate is executed in the City of Irvine, California, this 6th day of July, 1995.

INDEMNITY COMPANY OF CALIFORNIA

By L.C. Fiebiger
L.C. Fiebiger
Senior Vice President

INDEMNITY COMPANY OF CALIFORNIA INCORPORATED OCT. 5, 1967 CALIFORNIA

DEVELOPERS INSURANCE COMPANY

By L.C. Fiebiger
L.C. Fiebiger
Senior Vice President

DEVELOPERS INSURANCE COMPANY INCORPORATED MAR. 27, 1979 CALIFORNIA

ID-310 REV. 4/93

ADDENDUM NO. 1 JUNE 28, 1995

ELM STREET LOCAL IMPROVEMENT DISTRICT
W.O. #8194

REVISION TO THE INVITATION TO BID

Add: Append to Page 1:

3. Prevailing Wage Rates for Public Works Contracts in Oregon, effective January 1, 1995.

REVISION TO THE BID PROPOSAL

Delete: Page 4 and 7 of the Bid Proposal.

Add: Page 4 and 7 of the Bid Proposal (attached).

Page 4: Bid Item 14 revised to read: "Class 'A' Backfill".

Page 7: Bid Item 39 revised to read: "22-½° + 11-¼° Elbow Assembly".

REVISION TO THE DRAWINGS

Drawing C5 Profile: 21" Storm Sewer: Add: "Class 'B' Bedding required between Sta. 15 + 13 to 15 + 39.

RECIEVED :
MICHAEL - MACKEY

BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT Coffman Excavation, Inc. _____, hereinafter called the Principal, and Fidelity and Deposit Company of Maryland _____, a corporation duly organized under the laws of the State of Maryland, having its principal place of business at Baltimore, in the State of Maryland and authorized to do business in the State of Oregon, as Surety, are held and firmly bound unto the CITY OF FOREST GROVE, hereinafter called the Obligee in the penal sum of Five Percent of the Total Bid- Dollars. ($5%----------), for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Bond is such that, whereas, the Principal herein is herewith submitting his or its Bid Proposal for ELM STREET LOCAL IMPROVEMENT DISTRICT, WORK ORDER NO. 8194 said Bid Proposal, by reference thereto, being hereby made a part hereof.

NOW, THEREFORE, if the said Bid Proposal submitted by the said Principal be accepted, and the Contract be awarded to said Principal, and if the said Principal shall execute the proposed Contract and shall furnish the Performance Bond as required by the Bidding and Contract Documents within the time fixed by said Documents, then this obligation shall be void, otherwise to remain in full force and effect.

SIGNED, SEALED AND DATED this 20th day of June, 1995.

Coffman Excavation, Inc.

By: _____
Principal

Fidelity and Deposit Company of Maryland

Surety

By: Holly Ulfers
Attorney-In-Fact

Holly Ulfers

Countersigned:

Christine M. Core

Resident Agent

Christine M. Core

Power of Attorney

FIDELITY AND DEPOSIT COMPANY OF MARYLAND

HOME OFFICE, BALTIMORE, MD

KNOW ALL MEN BY THESE PRESENTS: That the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, a corporation of the State of Maryland, by C. M. PECOT, JR. , Vice-President, and C. W. ROBBINS , Assistant Secretary, in pursuance of authority granted by Article VI, Section 2, of the By-Laws of said Company, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, does hereby nominate, constitute and appoint R. W. Branston, David J. Forsyth and Holly Ulfers, all of Seattle, Washington, EACH.....

its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: any and all bonds and undertakings.....

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Baltimore, Md., in their own proper persons. This power of attorney revokes that issued on behalf of R. W. Branston, etal, dated, February 2, 1988.

The said Assistant Secretary does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article VI, Section 2, of the By-Laws of said Company, and is now in force.

IN WITNESS WHEREOF, the said Vice-President and Assistant Secretary have hereunto subscribed their names and affixed the Corporate Seal of the said FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 8th day of November, A.D. 1988

FIDELITY AND DEPOSIT COMPANY OF MARYLAND

ATTEST: SEAL

C W Robbins
Assistant Secretary

By C M Pecot
Vice-President

STATE OF MARYLAND
CITY OF BALTIMORE } SS:

On this 8th day of November , A.D. 1988 , before the subscriber, a Notary Public of the State of Maryland, in and for the City of Baltimore, duly commissioned and qualified, came the above-named Vice-President and Assistant Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and they each acknowledged the execution of the same, and being by me duly sworn, severally and each for himself deposeth and saith, that they are the said officers of the Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and that the said Corporate Seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal, at the City of Baltimore, the day and year first above written.

CAROL J. FADER NOTARY PUBLIC BALTIMORE CITY, MD

Carol J. Fader
Notary Public Commission Expires July 1, 1990

CERTIFICATE

I, the undersigned, Assistant Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the original Power of Attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the Vice-President who executed the said Power of Attorney was one of the additional Vice-Presidents specially authorized by the Board of Directors to appoint any Attorney-in-Fact as provided in Article VI, Section 2, of the By-Laws of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND.

This Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 16th day of July, 1969.

RESOLVED: "That the facsimile or mechanically reproduced signature of any Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed."

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said Company, this 20th day of June, 1995

180-0011

J. Gregory Hamilton
Assistant Secretary

EXTRACT FROM BY-LAWS OF FIDELITY AND DEPOSIT COMPANY OF MARYLAND

"Article VI, Section 2. The Chairman of the Board, or the President, or any Executive Vice-President, or any of the Senior Vice-Presidents or Vice-Presidents specially authorized so to do by the Board of Directors or by the Executive Committee, shall have power, by and with the concurrence of the Secretary or any one of the Assistant Secretaries, to appoint Resident Vice-Presidents, Assistant Vice-Presidents and Attorneys-in-Fact as the business of the Company may require, or to authorize any person or persons to execute on behalf of the Company any bonds, undertakings, recognizances, stipulations, policies, contracts, agreements, deeds, and releases and assignments of judgements, decrees, mortgages and instruments in the nature of mortgages, . . . and to affix the seal of the Company thereto."

MOFFATT, NICHOL & BONNEY, INC. Consulting Engineers
1845 N.E. COUCH STREET . PORTLAND, OREGON 97232 . (503) 232-2117 FAX (503) 232-8023

FAX TRANSMITTAL

TO: All Planholders

DATE: 6/28/95

FROM: Dan Symons

NO. OF PAGES
Including Transmittal: 5

PROJECT: Elm Street L.I.D.

PROJECT NO: P4980

Attached is Addendum No. 1 to the Contract Documents for Elm Street L.I.D.. Included are revised page 4 and 7 of the Bid Proposal.

Please call Steve Wood at the City of Forest Grove (359-3232) if you have any questions.

COPIES/CIRCULATE TO:

ORIGINAL TO FOLLOW VIA: None

Please notify us if you do not receive all pages.

CITY OF FOREST GROVE
Engineering Department

Contract Documents

for

ELM STREET LOCAL IMPROVEMENT DISTRICT

W.O. #8194

ADDENDUM NO. 1

Opens: July 6, 1995 **Time:** 2:00 p.m. Local Time

Location: Administrative Offices
City of Forest Grove
1924 Council Street
Forest Grove, OR

TO ALL PLAN HOLDERS:

Ladies and Gentlemen:

This, ADDENDUM No. 1 to the plans and specifications for the Elm Street Local Improvement District, W.O. #8194, for the City of Forest Grove, Oregon, is a part of the Contract Documents and as such, supersedes anything within the applicable portions of the Contract Documents with which it may conflict.

ADDENDUM NO. 1 JUNE 28, 1995

ELM STREET LOCAL IMPROVEMENT DISTRICT
W.O. #8194

REVISION TO THE INVITATION TO BID

Add:	Append to Page 1: 3. Prevailing Wage Rates for Public Works Contracts in Oregon, effective January 1, 1995.

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REVISION TO THE DRAWINGS

Drawing C5 Profile	21" Storm Sewer: Add: "Class 'B' Bedding required between Sta. 15 + 13 to 15 + 39.

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
1.	Mobilization.	1	Lump Sum	35,000.00	Thirty-five thousand Unit Price in Writing	$ 35,000.00
2.	Temporary Traffic Control.	1	Lump Sum	5,000.00	Five thousand Unit Price in Writing	$ 5,000.00
3.	Environmental Controls	1	Lump Sum	2,000.00	Two thousand Unit Price in Writing	$ 2,000.00
4.	Unclassified Excavation.	1	Lump Sum	23,000.00	Twenty-three thousand Unit Price in Writing	$ 23,000.00
5.	Trench Foundation	100	Cub. Yards	30.00	Thirty Unit Price in Writing	$ 3,000.00
6.	Dewatering.	1	Lump Sum	5,000.00	Five thousand Unit Price in Writing	$ 5,000.00
7.	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	233	Lin. Feet	25.00	Twenty-five Unit Price in Writing	$ 5,825.00
8.	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	79	Lin. Feet	35.00	Thirty-five Unit Price in Writing	$ 2,765.00
9.	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	229	Lin. Feet	40.00	Forty Unit Price in Writing	$ 9,160.00
10.	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	76	Lin. Feet	40.00	Forty Unit Price in Writing	$ 3,040.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	50.00	Fifty Unit Price in Writing	$ 14,700.00
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	65.00	Sixty-five Unit Price in Writing	$ 1,690.00
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	45.00	Forty-five Unit Price in Writing	$ 17,730.00
14.	24-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	50.00	Fifty Unit Price in Writing	$ 4,000.00
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	115.00	One hundred fifteen Unit Price in Writing	$ 11,730.00
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	120.00	One hundred twenty Unit Price in Writing	$ 78,000.00
17.	48-inch sanitary manhole.	3	Each	2,000.00	Two thousand Unit Price in Writing	$ 6,000.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
14.	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
17.	48-inch sanitary manhole.	3	Each	_____	_____ Unit Price in Writing	$ _____

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
18.	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	1	Each	1,500.00	One thousand five hundred Unit Price in Writing	$ 1,500.00
19.	48-inch storm manhole complete	5	Each	1,200.00	One thousand two hundred Unit Price in Writing	$ 6,000.00
20.	Curb inlet.	6	Each	1,200.00	One thousand two hundred Unit Price in Writing	$ 7,200.00
21.	Monolithic curb and gutter.	1203	Lin. Feet	7.00	Seven Unit Price in Writing	$ 8,421.00
22.	Sidewalk.	5869	Sq. Feet	3.00	Three Unit Price in Writing	$ 17,607.00
23.	Driveway (8-inch thick P.C.C.)	2348	Sq. Feet	4.00	Four Unit Price in Writing	$ 9,392.00
24.	Aggregate Base (2"-0) (8" depth).	2825	Sq. Yards	6.00	Six Unit Price in Writing	$ 16,950.00
25.	Aggregate Base (3/4"-0) (2" depth).	3750	Sq. Yards	1.50	One and .50/100 Unit Price in Writing	$ 5,625.00
26.	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	2950	Sq. Yards	10.00	Ten Unit Price in Writing	$ 29,500.00
27.	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	360	Sq. Yards	25.00	Twenty-five Unit Price in Writing	$ 9,000.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
28.	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	5	Each	200.00	Two hundred Unit Price in Writing	$ 1,000.00
29.	Type I-L Barricade.	1	Each	200.00	Two hundred Unit Price in Writing	$ 200.00
30.	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	1	Lump Sum	900.00	Nine hundred Unit Price in Writing	$ 900.00
31.	10" tapping sleeve, 10' NRS Gat Valve Box, 10 x 12 reducer installed complete.	1	Lump Sum	3,000.00	Three-thousand Unit Price in Writing	$ 3,000.00
32.	6" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	35	Lin. Feet	40.00	Forty Unit Price in Writing	$ 1,400.00
33.	8" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	50	Lin. Feet	45.00	Forty-five Unit Price in Writing	$ 2,250.00
34.	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	567	Lin. Feet	35.00	Thirty-five Unit Price in Writing	$ 19,845.00
35.	12" NRS gate valve with valve box, complete.	1	Each	1,000.00	One thousand Unit Price in Writing	$ 1,000.00
36.	8" NRS gate valve with valve box, complete.	1	Each	500.00	Five hundred Unit Price in Writing	$ 500.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	200.00	Two hundred (Unit Price in Writing)	$ 200.00
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	400.00	Four hundred (Unit Price in Writing)	$ 400.00
39.	22-½° + 11-¼° Elbow Assembly	1	Each	600.00	Six hundred (Unit Price in Writing)	$ 600.00
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	400.00	Four hundred (Unit Price in Writing)	$ 400.00
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	8,000.00	Eight thousand (Unit Price in Writing)	$ 8,000.00
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	300.00	Three hundred (Unit Price in Writing)	$ 600.00
43.	2" water service taps with corp stop.	2	Each	400.00	Four hundred (Unit Price in Writing)	$ 800.00
44.	1" Polyethylene water service.	275	Lin. Feet	17.00	Seventeen (Unit Price in Writing)	$ 4,675.00
45.	2" Polyethylene water service.	50	Lin. Feet	25.00	Twenty-five (Unit Price in Writing)	$ 1,250.00
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	2,000.00	Two thousand (Unit Price in Writing)	$ 2,000.00
47.	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height.	5	Each	220.00	Two hundred twenty (Unit Price in Writing)	$ 1,100.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
39.	12" x 22.5 Deg. Elbow complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	_____	_____ Unit Price in Writing	$ _____
43.	2" water service taps with corp stop.	2	Each	_____	_____ Unit Price in Writing	$ _____
44.	1" Polyethylene water service.	275	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
45.	2" Polyethylene water service.	50	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
47.	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height.	5	Each	_____	_____ Unit Price in Writing	$ _____

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
48.	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2' caliper, 6 ft branch height.	4	Each	220.00	Two hundred twenty (Unit Price in Writing)	$ 880.00
49.	Furnish & plant: Acer Rubrum A.Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	8	Each	220.00	Two hundred Twenty (Unit Price in Writing)	$ 1,760.00
50.	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	4	Each	220.00	two hundred twenty (Unit Price in Writing)	$ 880.00
51.	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6 ft branch height.	8	Each	220.00	Two hundred twenty (Unit Price in Writing)	$ 1,760.00
52.	Seeded Lawn construction (in parkway area).	620	Sq. Yards	2.00	Two (Unit Price in Writing)	$ 1,240.00
53.	Furnish and place topsoil 6 inch in-place depth in parkway area. (Approximately 620 SY)	1	Lump Sum	2,000.00	Two thousand (Unit Price in Writing)	$ 2,000.00
54.	2" gray PVC conduit (for underground sleeving)	490	Lin. Feet	3.00	Three (Unit Price in Writing)	$ 1,470.00

TOTAL BID PRICE Three hundred ninety-eight thousand, nine hundred forty-five (IN WRITING)

TOTAL BID PRICE $ 398,945.00

It is agreed that if the Bidder is awarded the Contract for the work herein proposed and shall fail or refuse to execute the Contract and furnish the specified Performance Bond and the Labor and Material Payment Bond within ten (10) calendar days after receipt of notification of acceptance of his Proposal, then, in that event, the Proposal Guaranty deposited herewith according to the conditions of the Invitation for bids and General Conditions shall be retained by the Owner as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the Owner will sustain in case the Bidder shall fail or refuse to enter into the Contract for the said work and to furnish the Performance Bond and the Labor and Material Payment Bond as specified in the Contract Documents. Proposal Guaranty in the form of a certified check shall be subject to the same requirements as a bid bond.

If the Bidder is awarded a construction Contract on this Proposal, the Surety who will provide the Performance Bond and the Labor and Material Payment Bond will be Fidelity & Deposit Co. of Maryland whose address is:

Alexander & Alexander, 701 5th Ave., Seattle, WA 98104
(Street) (City) (State)

The name of the Bidder who is submitting this Proposal is Coffman Excavation ___ doing business at:

PO Box 687, 16038 S. Depot Ave., Oregon City, OR 97045
(Street) (City) (State)

which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

Carl T. Coffman - President
Paul G. Hansen - Controller
Patricia M. Coffman - Secretary

(If Corporation)

In Witness whereof the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers that 6 day of July, 1995

Coffman Excavation
Name of Corporation

By _____

President
Title

Attest _____

(If Sole Proprietor or Partnership)

In Witness hereto the undersigned has set his (its) hand this _____ day of _____, 19 __.

_____
Signature of Bidder

_____
Title

Oregon Construction Contractors Board Registration No. 33196
and/or
Oregon Landscape Contractors Board Registration No. _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT _____

_____, hereinafter called the Principal, and _____, a corporation duly organized under the laws of the State of _____, having its principal place of business at _____, in the State of _____ and authorized to do business in the State of Oregon, as Surety, are held and firmly bound unto the CITY OF FOREST GROVE, hereinafter called the Obligee in the penal sum of _____ Dollars. ($_____), for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Bond is such that, whereas, the Principal herein is herewith submitting his or its Bid Proposal for ELM STREET LOCAL IMPROVEMENT DISTRICT, WORK ORDER NO. 8194 said Bid Proposal, by reference thereto, being hereby made a part hereof.

NOW, THEREFORE, if the said Bid Proposal submitted by the said Principal be accepted, and the Contract be awarded to said Principal, and if the said Principal shall execute the proposed Contract and shall furnish the Performance Bond as required by the Bidding and Contract Documents within the time fixed by said Documents, then this obligation shall be void, otherwise to remain in full force and effect.

_____

By: _____
Principal

_____
Surety

Countersigned:

By: _____
Attorney-In-Fact

_____
Resident Agent

CITY OF FOREST GROVE
Engineering Department

Contract Documents

for

ELM STREET LOCAL IMPROVEMENT DISTRICT

W.O. #8194

ADDENDUM NO. 1

Opens: July 6, 1995 **Time:** 2:00 p.m. Local Time

Location: Administrative Offices
City of Forest Grove
1924 Council Street
Forest Grove, OR

TO ALL PLAN HOLDERS:

Ladies and Gentlemen:

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ADDENDUM NO. 1 JUNE 28, 1995

ELM STREET LOCAL IMPROVEMENT DISTRICT
W.O. #8194

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Add: Append to Page 1:

3. Prevailing Wage Rates for Public Works Contracts in Oregon, effective January 1, 1995.

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11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	57.00	Fifty Seven ; 00/100 Unit Price in Writing	$ 16,758.00
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	60.00	Sixty ; 00/100 Unit Price in Writing	$ 1560.00
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	51.00	Fifty One ; 00/100 Unit Price in Writing	$ 20,094.00
14.	24-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	61.00	Sixty One ; 00/100 Unit Price in Writing	$ 4880.00
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	102.00	One Hundred Two ; 00/100 Unit Price in Writing	$ 10,404.00
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	104.00	One Hundred Four ; 00/100 Unit Price in Writing	$ 67,600.00
17.	48-inch sanitary manhole.	3	Each	4400.00	Four Thousand Four Hundred ; 00/100 Unit Price in Writing	$ 13,200.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	300.00	Three Hundred ;00/100 Unit Price in Writing	$ 300.00
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	450.00	Four Hundred Fifty ;00/100 Unit Price in Writing	$ 450.00
39.	22-½° + 11-¼° Elbow Assembly	1	Each	350.00	Three Hundred Fifty ;00/100 Unit Price in Writing	$ 350.00
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	450.00	Four Hundred Fifty ;00/100 Unit Price in Writing	$ 450.00
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	7500.00	Seven Thousand Five Hundred ;00/100 Unit Price in Writing	$ 7500.00
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	300.00	Three Hundred ;00/100 Unit Price in Writing	$ 600.00
43.	2" water service taps with corp stop.	2	Each	650.00	Six Hundred Fifty ;00/100 Unit Price in Writing	$ 1300.00
44.	1" Polyethylene water service.	275	Lin. Feet	12.00	Twelve ;00/100 Unit Price in Writing	$ 3300.00
45.	2" Polyethylene water service.	50	Lin. Feet	15.00	Fifteen ;00/100 Unit Price in Writing	$ 750.00
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	20,500.00	Twenty Thousand Five Hundred ;00/100 Unit Price in Writing	$ 20,500.00
47.	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height.	5	Each	300.00	Three Hundred ;00/100 Unit Price in Writing	$ 1500.00

SAFECO®

SAFECO INSURANCE COMPANY OF AMERICA
GENERAL INSURANCE COMPANY OF AMERICA
FIRST NATIONAL INSURANCE COMPANY OF AMERICA
HOME OFFICE: SAFECO PLAZA
SEATTLE, WASHINGTON 98185

BID BOND

KNOW ALL BY THESE PRESENTS, That we, MARSHALL ASSOCIATED CONTRACTORS, INC.

of TUALATIN, OR (hereinafter called the Principal), as Principal, and SAFECO INSURANCE COMPANY OF AMERICA (hereinafter called the Surety), as Surety, are held and firmly bound unto CITY OF FOREST GROVE

(hereinafter called the Obligee) in the penal sum of FIVE PERCENT OF TOTAL AMOUNT BID ********** Dollars ($ 5% **********) for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, That WHEREAS, the Principal has submitted or is about to submit a proposal to the Obligee on a contract for ELM STREET LOCAL IMPROVEMENT DISTRICT

WORK ORDER # 8194

NOW, THEREFORE, If the said Contract be timely awarded to the Principal and the Principal shall, within such time as may be specified, enter into the contract in writing, and give bond, if bond is required, with surety acceptable to the Obligee for the faithful performance of the said Contract, then this obligation shall be void; otherwise to remain in full force and effect.

Signed and sealed this 6TH day of JULY, 19 95.

John M Marshall
Witness

MARSHALL ASSOCIATED CONTRACTORS, INC. (Seal)
Principal

R. L. Marshall / President
Title

SAFECO INSURANCE COMPANY OF AMERICA

By Vicki L. Nicholson
VICKI L. NICHOLSON
Attorney-in-Fact

® Registered trademark of SAFECO Corporation.

SAFECO®

POWER OF ATTORNEY

SAFECO INSURANCE COMPANY OF AMERICA
GENERAL INSURANCE COMPANY OF AMERICA
HOME OFFICE: SAFECO PLAZA
SEATTLE, WASHINGTON 98185

No. 7521

KNOW ALL BY THESE PRESENTS:

That **SAFECO INSURANCE COMPANY OF AMERICA** and **GENERAL INSURANCE COMPANY OF AMERICA**, each a Washington corporation, does each hereby appoint
JAMES P. DOONEY; WILLIAM KENT THIE; JOHN D. KLUMP; KAREN A. PIERCE; VICKI L. NICHOLSON; K. C. KRAIG; GENE M. DIETZMAN; GLORIA BRUNING; PHILIP O. FORKER; KENNETH L. deLOOZE; MELISSA C. HALL, Portland, Oregon*******

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, SAFECO INSURANCE COMPANY OF AMERICA and **GENERAL INSURANCE COMPANY OF AMERICA** have each executed and attested these presents

this 3rd day of August, 19 94.

R A Pierson
ASSISTANT SECRETARY

Dan Dwyer
SENIOR VICE PRESIDENT

CERTIFICATE

Extract from the By-Laws of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA:**

"Article V, Section 13. - FIDELITY AND SURETY BONDS . . . the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business . . . On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA** adopted July 28, 1970.

"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,
(i) The provisions of Article V, Section 13 of the By-Laws, and
(ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
(iii) Certifying that said power-of-attorney appointment is in full force and effect,
the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, R. A. Pierson, Secretary of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA**, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this 6TH day of JULY, 19 95.

SAFECO INSURANCE COMPANY OF AMERICA CORPORATE SEAL 1953 STATE OF WASHINGTON

GENERAL INSURANCE COMPANY OF AMERICA CORPORATE SEAL 1923 State of Washington

R A Pierson
ASSISTANT SECRETARY

S-974/EP 1/93

® Registered trademark of SAFECO Corporation.

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
1.	Mobilization.	1	Lump Sum	25,000.00	Twenty Five Thousand Unit Price in Writing	$ 25,000.00
2.	Temporary Traffic Control.	1	Lump Sum	$ 7000.00	Seven Thousand & NO/100 Unit Price in Writing	$ 7000.00
3.	Environmental Controls	1	Lump Sum	$ 5000.00	Five Thousand & NO/100 Unit Price in Writing	$ 5000.00
4.	Unclassified Excavation.	1	Lump Sum	$ 27,000.00	Twenty Seven Thousand NO/100 Unit Price in Writing	$ 27000.00
5.	Trench Foundation	100	Cub. Yards	10.00	Ten dollars & NO/100 Unit Price in Writing	$ 1000.00
6.	Dewatering.	1	Lump Sum	78,000.00	Seventy Eight Thousand NO Unit Price in Writing	$ 78,000.00
7.	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	233	Lin. Feet	39.00	Thirty Nine & NO/100 Unit Price in Writing	$ 9,087.00
8.	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	79	Lin. Feet	40.00	Forty dollars & NO/100 Unit Price in Writing	$ 3,160.00
9.	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	229	Lin. Feet	42.00	Forty two dollars & NO/100 Unit Price in Writing	$ 9,618.00
10.	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	76	Lin. Feet	54.00	Fifty four dollars & NO/100 Unit Price in Writing	$ 4,104.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	57.00	Fifty Seven dollars & NO/100 Unit Price in Writing	$ 16,758.00
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	60.00	Sixty dollars & NO/100 Unit Price in Writing	$ 1560.00
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	51.00	Fifty One dollars & NO/100 Unit Price in Writing	$ 20,094.00
14.	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	61.00	Sixty One dollars & NO/100 Unit Price in Writing	$ 4,880.00
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	102.00	One Hundred Two & NO/100 Unit Price in Writing	$ 10,404.00
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	104.00	One Hundred four & NO/100 Unit Price in Writing	$ 67,600.00
17.	48-inch sanitary manhole.	3	Each	4,400.00	Four Thousand Four Hundred Unit Price in Writing	$ 13,200.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
18.	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	1	Each	2,700.00	Two Thousand Seven Hundred Unit Price in Writing	$ 2700.00
19.	48-inch storm manhole complete	5	Each	2,200.00	Two thousand Two Hundred Unit Price in Writing	$ 11,000.00
20.	Curb inlet.	6	Each	1,800.00	Eighteen Hundred & No/100 Unit Price in Writing	$ 10,800.00
21.	Monolithic curb and gutter.	1203	Lin. Feet	8.40	Eight dollars & forty cents Unit Price in Writing	$ 10,105.20
22.	Sidewalk.	5869	Sq. Feet	2.75	Two dollars & Seventy five cents Unit Price in Writing	$ 16,139.75
23.	Driveway (8-inch thick P.C.C.)	2348	Sq. Feet	4.00	Four dollars & No/100 Unit Price in Writing	$ 9,392.00
24.	Aggregate Base (2"-0) (8" depth).	2825	Sq. Yards	6.00	Six dollars & No/cents Unit Price in Writing	$ 16,950.00
25.	Aggregate Base (3/4"-0) (2" depth).	3750	Sq. Yards	1.60	One dollar Sixty cents Unit Price in Writing	$ 6,000.00
26.	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	2950	Sq. Yards	11.00	Eleven dollars No/cents Unit Price in Writing	$ 32,450.00
27.	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	360	Sq. Yards	14.00	Fourteen dollars & No/cents Unit Price in Writing	$ 5,040.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
28.	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	5	Each	175.00	One Hundred Seventy Five 47/100 Unit Price in Writing	$ 875.00
29.	Type I-L Barricade.	1	Each	500.00	Five Hundred dollars & 47/100 Unit Price in Writing	$ 500.00
30.	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	1	Lump Sum	1810.00	One Thousand Eight Hundred Ten Unit Price in Writing	$ 1810.00
31.	10" tapping sleeve, 10' NRS Gat Valve Box, 10 x 12 reducer installed complete.	1	Lump Sum	2,500.00	Two Thousand Five Hundred Unit Price in Writing	$ 2500.00
32.	6" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	35	Lin. Feet	49.00	Forty Nine dollars & 47/100 Unit Price in Writing	$ 1715.00
33.	8" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	50	Lin. Feet	50.00	Fifty dollars & No/cents Unit Price in Writing	$ 2500.00
34.	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	567	Lin. Feet	51.00	Fifty One dollars Unit Price in Writing	$ 28,917.00
35.	12" NRS gate valve with valve box, complete.	1	Each	1200.00	Twelve Hunded dollars Unit Price in Writing	$ 1200.00
36.	8" NRS gate valve with valve box, complete.	1	Each	700.00	Seven Hundred dollars Unit Price in Writing	$ 700.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	300.00	Three Hundred dollars Unit Price in Writing	$ 300.00
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	450.00	Four Hundred Fifty & NO cents Unit Price in Writing	$ 450.00
39.	12" x 22.5 Deg. Elbow complete.	1	Each	350.00	Three Hundred Fifty dollars Unit Price in Writing	$ 350.00
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	450.00	Four Hundred fifty dollars Unit Price in Writing	$ 450.00
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	7,500.00	Seven Thousand Five Hundred Unit Price in Writing	$ 7,500.00
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	300.00	Three Hundred dollars Unit Price in Writing	$ 600.00
43.	2" water service taps with corp stop.	2	Each	650.00	Six Hundred Fifty dollars Unit Price in Writing	$ 1300.00 L.S. ~~650.00~~
44.	1" Polyethylene water service.	275	Lin. Feet	12.00	Twelve dollars Unit Price in Writing	$ 3300.00
45.	2" Polyethylene water service.	50	Lin. Feet	15.00	Fifteen dollars & NO cent Unit Price in Writing	$ 750.00
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	20,500.00	Twenty Thousand Five Hundred Unit Price in Writing	$ 20,500.00
47.	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height.	5	Each	300.00	Three Hundred & NO cent fifteen L.S.- Unit Price in Writing	$ 1500.00

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
48.	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2' caliper, 6 ft branch height.	4	Each	300.00	Three Hundred dollars Unit Price in Writing	$ 1200.00
49.	Furnish & plant: Acer Rubrum A.Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	8	Each	300.00	Three Hundred dollars Unit Price in Writing	$ 2400.00
50.	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	4	Each	300.00	Three Hundred dollars Unit Price in Writing	$ 1200.00
51.	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6 ft branch height.	8	Each	300.00	Three Hundred dollars Unit Price in Writing	$ 2400.00
52.	Seeded Lawn construction (in parkway area).	620	Sq. Yards	5.00	Five dollars Unit Price in Writing	$ 3100.00
53.	Furnish and place topsoil 6 inch in-place depth in parkway area. (Approximately 620 SY)	1	Lump Sum	3150.00 ~~4050.00~~ LS.	Three Thousand One Hund. Fifty Unit Price in Writing	$ 3150.00
54.	2" gray PVC conduit (for underground sleeving)	490	Lin. Feet	11.00	Eleven dollars & 00/cents Unit Price in Writing	$ 5390.00

TOTAL BID PRICE — Five Hundred Twenty Thousand. Five Hundred Ninety Eight dollars & Ninety Five Cents
IN WRITING

TOTAL BID PRICE $ 520,598.95

It is agreed that if the Bidder is awarded the Contract for the work herein proposed and shall fail or refuse to execute the Contract and furnish the specified Performance Bond and the Labor and Material Payment Bond within ten (10) calendar days after receipt of notification of acceptance of his Proposal, then, in that event, the Proposal Guaranty deposited herewith according to the conditions of the Invitation for bids and General Conditions shall be retained by the Owner as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the Owner will sustain in case the Bidder shall fail or refuse to enter into the Contract for the said work and to furnish the Performance Bond and the Labor and Material Payment Bond as specified in the Contract Documents. Proposal Guaranty in the form of a certified check shall be subject to the same requirements as a bid bond.

If the Bidder is awarded a construction Contract on this Proposal, the Surety who will provide the Performance Bond and the Labor and Material Payment Bond will be SAFECO INSURANCE Co.
___ whose address is: SAFECO PLAZA

SEATTLE , WASHINGTON (Street)
(City) (State)

The name of the Bidder who is submitting this Proposal is MARSHALL ASSOCIATED CONTRS, INC.
___ doing business at:

P.O. BOX 278 , TUALATIN OREGON 97062 (Street)
(City) (State)

which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

RICHARD L. MARSHALL
JOHN M. MARSHALL

(If Corporation)

In Witness whereof the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers that 6 day of July, 1995.

Marshall Associated Centers, Inc.
Name of Corporation

By R. L. Marshall

President
Title

Attest John M. Marshall

(If Sole Proprietor or Partnership)

In Witness hereto the undersigned has set his (its) hand this _____ day of _____, 19 __.

_____
Signature of Bidder

_____
Title

Oregon Construction Contractors Board Registration No. _____
and/or
Oregon Landscape Contractors Board Registration No. _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT _____

_____, hereinafter called the Principal, and _____, a corporation duly organized under the laws of the State of _____, having its principal place of business at _____, in the State of _____ and authorized to do business in the State of Oregon, as Surety, are held and firmly bound unto the CITY OF FOREST GROVE, hereinafter called the Obligee in the penal sum of _____ Dollars. ($_____), for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Bond is such that, whereas, the Principal herein is herewith submitting his or its Bid Proposal for ELM STREET LOCAL IMPROVEMENT DISTRICT, WORK ORDER NO. 8194 said Bid Proposal, by reference thereto, being hereby made a part hereof.

NOW, THEREFORE, if the said Bid Proposal submitted by the said Principal be accepted, and the Contract be awarded to said Principal, and if the said Principal shall execute the proposed Contract and shall furnish the Performance Bond as required by the Bidding and Contract Documents within the time fixed by said Documents, then this obligation shall be void, otherwise to remain in full force and effect.

_____

By: _____
Principal

_____
Surety

Countersigned:

By: _____
Attorney-In-Fact

_____
Resident Agent

Please file...
8194

Wage and Hc ion

PRIME CON...TOR ☒
SUBCONTRACTOR ☐

PAYROI MISSION
FIRST ☐ 9 ☐ LAST ☐

For Use in Complying with ORS 279.354

843

PR#30

Business Name (DBA): GELCO CONSTRUCTION CO. Phone: ( ) 364-2638	CCB Registration Number: 51290	Project Name: Forest Grove - Elm St. Type of Work:	Project Number: 85026
Street Address: 1745 SALEM INDUSTRIAL DR SALEM, OR 97303 Mailing Address: P.O. BOX 7716 SALEM, OR 97303		Project Location: Forest Grove, OR	Project County:
Date Pay Period Began: 7/28/97	Date Pay Period Ended: 8/3/97		

RECEIVED AUG 19 1997 CITY OF FOREST GROVE

THIS SECTION FOR PRIME CONTRACTORS ONLY 843
Public Contracting Agency Name: CITY OF SALEM
Phone ( )
Date Contract Specifications First Advertised For Bid: Contract Amount:

THIS SECTION FOR SUBCONTRACTORS ONLY
Subcontract Amount:
Prime Contractor Business Name (DBA):
Phone: ( ) CCB Registration Number:
Date You Began Work On The Project:

(1) Name, Address, and Social Security Number of Employees	(2) Trade Classification (Include group number if applicable)		(3) DAY AND DATE / HOURS WORKED EACH DAY	(4) Total Hours	(5) Basic Hourly Rate of Pay	(6) Hourly Fringe Benefit Paid as Wage To Employee	(7) Gross Amount Earned	(8) Total Deductions FICA, FED, STATE, etc.	(9) Net Wage Paid For Week	(10) Hourly Fringe Benefit Paid To Party, Plan, Fund or Program	(11) Name Of Benefit Party, Plan, Fund or Program
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2243

(1) Name, Address, And Social Security Number of Employee	(2) Trade Classification (Include group number if applicable)		(3) DAY AND DATE HOURS WORKED EACH DAY							(4) Total Hours	(5) Basic Hourly Rate Of Pay	(6) Hourly Fringe Benefit Paid As Wage To Employee	(7) Gross Amount Earned	(8) Total Deductions FICA, FED, STATE, ETC.	(9) Net Wage Paid For Week	(10) Hourly Fringe Benefit Paid To Party, Plan, Fund or Program	(11) Name Of Benefit Party, Plan, Fund, or Program
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CERTIFIED STATEMENT

I TINA SHINALL (Name of signatory party) . PAYROLL CLERK (Title) do here by state:

(1) That I pay or supervise the payment of the persons employed by GELCO CONSTRUCTION CO (Contractor, Subcontractor or Surety) on the Forest Grove - Elm St (Building or work);

that during the payroll period commencing on the 28th day of July, 19 92, and ending the 3rd day of August, 19 92, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said (Contractor, Subcontractor or Surety) from the full weekly wages earned by any person, and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as specified in ORS 652.610, and described as follows: FICA-SOCIAL SECURITY: FWT-FEDERAL WITHHOLDING: SWT-STATE WITHHOLDIN

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for workers contained therein are not less than the applicable wage rates contained in any wage determination incorporated in the contract; that the classification set forth therein for each worker conforms with work performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

I have read this certified statement, know the contents thereof and it is true to my knowledge.

NAME AND TITLE TINA SHINALL . PAYROLL CLERK

SIGNATURE Tina Shinall

Note to Contractors: Essential information has been provided on the shaded lines of this form by the contracting agency. You must attach copies of this form to each of your payroll submissions on this project. See the BOLI publication Prevailing Wage Rates for Public Works Contracts in Oregon for instructions on completing this form.

File this form with the contracting agency and send a true copy to the Bureau of Labor and Industries, Wage and Hour Division, 800 NE Oregon St. #32, Portland, OR 97232.

FORM WH-38S (REV 8/93) *Gelco Companies Profit Sharing Plan at 5%; Qualmed Insurance $.90/hr**Credit Union Garnishments; or W/C-Workmen's Compensation; $3/day vehicle use; & authorized employee de ions for family medical, athletic club dues & suppli

GELCO CONSTRUCTION — AUG 13, 1997 13:32:27

RP10108A — C E R T I F I E D P A Y R O L L T R A N S C R I P T — PAGE 1

PERIOD: 07/28/97 TO 08/03/97

JOB 85026- : FOREST GROVE - ELM STREET

CONTRACT NO: 85026-

EMPLOYEE	WORK CLASSIFICATION	HOURS	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL	RATE	PROJECT AMOUNTS	TOTAL GROSS	DEDUCTIONS		TOT DED NET PAY
BOGSTAD, GARY P																
543-48-2922 M-EX: S- 0	E4-TRACKHOE, BLADE, DOZER	REG T	0.00	8.00	8.00	8.00	0.00	0.00	0.00	24.00	21.0800	505.92	1176.04	FWT	240.00	522.53
2712 SUNNYVIEW RD NE	INSURANCE-Y	ROVERT	0.00	4.00	1.50	0.00	0.00	0.00	0.00	5.50	31.6200	173.91		SS-FI	72.20	
	E4-TRACKHOE, BLADE, DOZER	FRING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.1900	123.61		SS-ME	16.88	653.51
SALEM, OR 97303										OTHER TAXABLE		0.00		SWT-O	90.79	
RACE-SEX : C-M										OTHER NON-TAXABLE		0.00		W/C-O	0.52	
Check # 30978										PROJECT TOTAL		803.44		NY-SE	37.92	
														401K	52.62	
LA RONT, RONALD S																
541-98-9695 M-EX: S- 0	E5-CURB MACHINE, BACKHOE	REG T	0.00	0.00	4.00	0.00	0.00	0.00	0.00	4.00	19.5500	78.20	962.43	FWT	181.00	476.66
485 TIERRA CT NE	L3-PIPE LAYER, CONCRETE S	REG T	0.00	8.00	4.00	8.00	0.00	0.00	0.00	20.00	16.9900	339.80		SS-FI	58.95	
	INSURANCE-Y	SOVERT	0.00	4.00	2.00	0.00	0.00	0.00	0.00	6.00	25.4850	152.91		SS-ME	13.79	485.77
SALEM, OR 97301	E5-CURB MACHINE, BACKHOE	FRING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2100	16.84		SWT-O	72.50	
RACE-SEX : C-M	L3-PIPE LAYER, CONCRETE S	FRING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8300	99.58		W/C-O	0.52	
Check # 31005										OTHER TAXABLE		0.00		GARNI	96.00	
										OTHER NON-TAXABLE		0.00		401K	42.30	
										PROJECT TOTAL		687.33				
OSTERBERG, EDWARD E																
541-42-4893 M-EX: S- 0	T3-DUMP TRUCK 10-30 CYS	REG T	0.00	8.00	8.00	0.00	0.00	0.00	0.00	16.00	18.8200	301.12	1187.48	FWT	246.00	484.61
1825 LORAIN CT. SE	INSURANCE-Y	OVERT	0.00	6.00	2.00	0.00	0.00	0.00	0.00	8.00	28.2300	225.84		SS-FI	73.62	
	T3-DUMP TRUCK 10-30 CYS	FRING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0900	98.16		SS-ME	17.22	702.87
SALEM, OR 97302										OTHER TAXABLE		0.00		SWT-O	92.70	
RACE-SEX : C-M										OTHER NON-TAXABLE		0.00		W/C-O	0.60	
Check # 31014										PROJECT TOTAL		625.12		401K	54.47	
POLSTON, DANIEL J																
543-82-3813 M-EX: M- 0	T3-DUMP TRUCK 10-30 CYS	REG T	0.00	8.00	0.00	0.00	0.00	0.00	0.00	8.00	18.8200	150.56	1021.72	FWT	127.00	419.78
1948 WALN CREEK DR. S	INSURANCE-Y	OVERT	0.00	6.00	0.00	0.00	0.00	0.00	0.00	6.00	28.2300	169.38		SS-FI	63.35	
	T3-DUMP TRUCK 10-30 CYS	FRING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0900	57.26		SS-ME	14.81	601.94
SALEM, OR 97306										OTHER TAXABLE		0.00		SWT-O	69.24	
RACE-SEX : C-M										OTHER NON-TAXABLE		0.00		W/C-O	0.57	
Check # 31015										PROJECT TOTAL		377.20		401K	96.45	
														OTHER	48.36	

JOB HOURS:	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL		PROJECT AMOUNTS	TOTAL GROSS	DEDUCTIONS		TOT DED NET PAY
REG TIME	0.00	32.00	24.00	16.00	0.00	0.00	0.00	72.00		1375.60	4347.67	FWT	794.00	1903.58
OVERTIME	0.00	20.00	5.50	0.00	0.00	0.00	0.00	25.50		722.04		SS-FI	268.12	
FRINGE BEN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		395.45		SS-ME	62.70	2444.09
									OTHER TAXABLE	0.00		SWT-O	325.23	
									OTHER NON-TAXABLE	0.00		W/C-O	2.21	
									PROJECT TOTAL	2493.09		GARNI	96.00	
												NY-SE	37.92	
												401K	245.84	
												OTHER	48.36	

Wage and Ho ion

PRIME CON[illegible]TOR ☒
SUBCONTRACTOR ☐

PAYROL MISSION
FIRST ☐ 9(☐ LAST ☐

For Use in Complying with ORS 279.354

843

PR#69

Business Name (DBA):	CCB Registration Number:	Project Name:	Project Number:
GELCO CONSTRUCTION CO.	51290		85026
Phone: ( ) 364-2638		Type of Work:	
Street Address: 1745 SALEM INDUSTRIAL DR SALEM, OR 97303		Project Location:	Project County:
Mailing Address: P.O. BOX 7716 SALEM, OR 97303			
Date Pay Period Began: 7/21/97	Date Pay Period Ended: 7/27/97		

RECEIVED
AUG 19 1997
CITY OF FOREST GROVE

THIS SECTION FOR PRIME CONTRACTORS ONLY 843
Public Contracting Agency Name: CITY OF SALEM

Phone ( )
Date Contract Specifications First Advertised For Bid: Contract Amount:

THIS SECTION FOR SUBCONTRACTORS ONLY
Subcontract Amount:
Prime Contractor Business Name (DBA):

Phone: ( ) CCB Registration Number:
Date You Began Work On The Project:

(1)	(2)	(3) DAY AND DATE							(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Name, Address, and Social Security Number of Employees	Trade Classification (Include group number if applicable)		HOURS WORKED EACH DAY						Total Hours	Basic Hourly Rate of Pay	Hourly Fringe Benefit Paid as Wage To Employee	Gross Amount Earned	Total Deductions FICA, FED, STATE, etc.	Net Wage Paid For Week	Hourly Fringe Benefit Paid To Party, Plan, Fund or Program	Name Of Benefit Party, Plan, Fund or Program
See attached		OT														
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(1) Name, Address, And Social Security Number of Employee	(2) Trade Classification (Include group number if applicable)	(3) DAY AND DATE / HOURS WORKED EACH DAY							(4) Total Hours	(5) Basic Hourly Rate Of Pay	(6) Hourly Fringe Benefit Paid As Wage To Employee	(7) Gross Amount Earned	(8) Total Deductions FICA, FED, STATE, ETC.	(9) Net Wage Paid For Week	(10) Hourly Fringe Benefit Paid To Party, Plan, Fund or Program	(11) Name Of Benefit Party, Plan, Fund, or Program
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		S														

CERTIFIED STATEMENT

I TINA SHINALL (Name of signatory party), PAYROLL CLERK (Title) do here by state:

(1) That I pay or supervise the payment of the persons employed by GELCO CONSTRUCTION CO (Contractor, Subcontractor or Surety) on the Forest Grove - Elm St. (Building or work):

that during the payroll period commencing on the 21st day of July, 1992, and ending the 27th day of July, 1992, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said (Contractor, Subcontractor or Surety)

from the full weekly wages earned by any person, and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as specified in ORS 652.610, and described as follows: FICA-SOCIAL SECURITY: FWT-FEDERAL WITHHOLDING: SWT-STATE WITHHOLDIN

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for workers contained therein are not less than the applicable wage rates contained in any wage determination incorporated in the contract; that the classification set forth therein for each worker conforms with work performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

I have read this certified statement, know the contents thereof and it is true to my knowledge.

NAME AND TITLE TINA SHINALL . PAYROLL CLERK

SIGNATURE Tina Shinall

Note to Contractors: Essential information has been provided on the shaded lines of this form by the contracting agency. You must attach copies of this form to each of your payroll submissions on this project. See the BOLI publication Prevailing Wage Rates for Public Works Contracts in Oregon for instructions on completing this form.

File this form with the contracting agency and send a true copy to the Bureau of Labor and Industries, Wage and Hour Division, 800 NE Oregon St. #32, Portland, OR 97232.

FORM WH-38S (REV 8/93) *Gelco Companies Profit Sharing Plan at 5%; Qualmed Insurance $.90/hr**Credit Union Garnishments; or W/C-Workmen's Compensation; $3/day vehicle use; & authorized employee de ions for family medical, athletic club dues & suppli

GELCO CONSTRUCTION AUG 1, 1997 8:55:59

RP10108A C E R T I F I E D P A Y R O L L T R A N S C R I P T PAGE 1

PERIOD: 07/21/97 TO 07/27/97

JOB 85026- : FOREST GROVE - ELM STREET

CONTRACT NO: 85026-

EMPLOYEE	WORK CLASSIFICATION	HOURS :	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL	RATE	PROJECT AMOUNTS	TOTAL GROSS	DEDUCTIONS		TOT DED NET PAY
POLSTON, DANIEL J																
543-82-3813 M-EX: M- 0	L3-PIPE LAYER, CONCRETE	SREG T	0.00	3.50	0.00	0.00	0.00	0.00	0.00	3.50	16.9900	59.47	637.70	FWT	68.00	261.94
1948 WALN CREEK DR. S	INSURANCE-Y	SFRING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8300	13.41		SS-FI	39.54	
										OTHER TAXABLE		0.00		SS-ME	9.25	375.76
SALEM, OR 97306										OTHER NON-TAXABLE		0.00		SWT-O	38.10	
RACE-SEX : C-M										PROJECT TOTAL		72.88		W/C-O	0.36	
Check # 30946														401K	58.33	
														OTHER	48.36	

JOB HOURS:	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL		PROJECT AMOUNTS	TOTAL GROSS	DEDUCTIONS		TOT DED NET PAY
REG TIME	0.00	3.50	0.00	0.00	0.00	0.00	0.00	3.50		59.47	637.70	FWT	68.00	261.94
FRINGE BEN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		13.41		SS-FI	39.54	
									OTHER TAXABLE	0.00		SS-ME	9.25	375.76
									OTHER NON-TAXABLE	0.00		SWT-O	38.10	
									PROJECT TOTAL	72.88		W/C-O	0.36	
												401K	58.33	
												OTHER	48.36	

GELCO
CONSTRUCTION CO.

P.O. Box 7716
Salem, OR 97303
(503) 364-2638

RECEIVED
AUG 25 1997
CITY OF FOREST GROVE

Date August 22, 1997

CITY OF FOREST GROVE - ATTN: STEVE WOODS
PO BOX 326
FOREST GROVE, OR 97116

PLEASE PAY ON INVOICE.
NO STATEMENT ISSUED
UNLESS REQUESTED.

TERMS: NET CASH

ITEM	DESCRIPTION	QUANTITY	RATE		
	All labor equipment and materials to complete: Elm Street L.I.D. W.O. #8194 Request for Final Payment Retainage				$18,634.55

O.K. FOR PAYMENT
VENDOR #
FUND #
DEPT. #
BUDGET #
BY

See pay estimate #7
Dated August, 1997.

PAYMENT SHALL BE MADE WITHIN **30** DAYS FOLLOWING THE DATE OF INVOICE OR COMPLETION OF WORK, WHICHEVER IS EARLIER. A LATE CHARGE OF 1 1/2% PER MONTH WILL BE ASSESSED ON UNPAID BALANCES. IN THE EVENT SUIT OR ACTION INCLUDING ANY APPEAL THEREFROM, IS BROUGHT TO ENFORCE ANY TERMS OF THIS AGREEMENT, THE PREVAILING PARTY SHALL BE ENTITLED TO SUCH REASONABLE ATTORNEY'S FEES AND COSTS AS MAY BE AWARDED BY THE TRIAL AND APPELLATE COURTS.

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 8 Sheets
Pay Estimate: 1
Date: October 12, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: September 1, 1995 To: September 30, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	18,700.00	18,700.00	0.5	$9,350.00	0.5	$9,350.00
2	Temporary Traffic Controls	LS	1	3,000.00	3,000.00	0.25	$750.00	0.25	$750.00
3	Environmental Controls	LS	1	2,800.00	2,800.00	0.25	$700.00	0.25	$700.00
4	Unclassified Excavation.	LS	1	10,000.00	10,000.00	0	$0.00	0	$0.00
5	Trench Foundation	CY	100	30.00	3,000.00	50	$1,500.00	50	$1,500.00
6	Dewatering.	LS	1	1,000.00	1,000.00	0.25	$250.00	0.25	$250.00
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	5,592.00	0	$0.00	0	$0.00
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	2,212.00	0	$0.00	0	$0.00
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	8,702.00	0	$0.00	0	$0.00
					$55,006.00		$12,550.00		$12,550.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Pay Estimate: 1
Date: October 12, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: September 1, 1995 To: September 30, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	3,268.00	0	$0.00	0	$0.00
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	14,112.00	0	$0.00	0	$0.00
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	1,222.00	0	$0.00	0	$0.00
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	15,366.00	0	$0.00	0	$0.00
14	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	4,160.00	0	$0.00	0	$0.00
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	2,652.00	70	$1,820.00	70	$1,820.00
					$40,780.00		$1,820.00		$1,820.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Pay Estimate: 1
Date: October 12, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: September 1, 1995 To: September 30, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	25,350.00	425	$16,575.00	425	$16,575.00
17	48-inch sanitary manhole.	EA	3	2,500.00	7,500.00	1	$2,500.00	1	$2,500.00
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	4,000.00	0	$0.00	0	$0.00
19	48-inch storm manhole, complete.	EA	5	1,850.00	9,250.00	0	$0.00	0	$0.00
20	Curb inlet.	EA	6	1,030.00	6,180.00	0	$0.00	0	$0.00
21	Monolithic curb and gutter.	LF	1203	7.25	8,721.75	0	$0.00	0	$0.00
22	Sidewalk	SF	5869	1.95	11,444.55	0	$0.00	0	$0.00
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	8,218.00	0	$0.00	0	$0.00
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	12,712.50	0	$0.00	0	$0.00
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	5,625.00	0	$0.00	0	$0.00
					$99,001.80		$19,075.00		$19,075.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Pay Estimate: 1
Date: October 12, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: September 1, 1995 To: September 30, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	27,140.00	0	$0.00	0	$0.00
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	4,320.00	0	$0.00	0	$0.00
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	875.00	0	$0.00	0	$0.00
29	Type I-L Barricade.	EA	1	250.00	250.00	0	$0.00	0	$0.00
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	600.00	0	$0.00	0	$0.00
31	10" tapping sleeve, 10' NRS Gat Valve Box, 10x12 reducer installed, complete.	LS	1	2,000.00	2,000.00	0	$0.00	0	$0.00
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	1,050.00	0	$0.00	0	$0.00
					$36,235.00		$0.00		$0.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 8 Sheets
Pay Estimate: 1
Date: October 12, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: September 1, 1995 To: September 30, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	1,900.00	0	$0.00	0	$0.00
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	31,185.00	0	$0.00	0	$0.00
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	900.00	0	$0.00	0	$0.00
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	500.00	0	$0.00	0	$0.00
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	250.00	0	$0.00	0	$0.00
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	350.00	0	$0.00	0	$0.00
39	12" X 22.5 degrees. Elbow complete.	EA	1	475.00	475.00	0	$0.00	0	$0.00
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	400.00	0	$0.00	0	$0.00
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	10,000.00	0	$0.00	0	$0.00
					$45,960.00		$0.00		$0.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 8 Sheets
Pay Estimate: 1
Date: October 12, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: September 1, 1995 To: September 30, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	1,400.00	0	$0.00	0	$0.00
43	2" water service taps with corp stop.	EA	2	1,000.00	2,000.00	0	$0.00	0	$0.00
44	1" polyethylene water service.	LF	275	3.00	825.00	0	$0.00	0	$0.00
45	2" Polyethylene water service.	LF	50	5.00	250.00	0	$0.00	0	$0.00
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	2,000.00	0	$0.00	0	$0.00
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	1,125.00	0	$0.00	0	$0.00
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	900.00	0	$0.00	0	$0.00
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	1,800.00	0	$0.00	0	$0.00
					$10,300.00		$0.00		$0.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 7 of 8 Sheets
Pay Estimate: 1
Date: October 12, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: September 1, 1995 To: September 30, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	900.00	0	$0.00	0	$0.00
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	1,800.00	0	$0.00	0	$0.00
52	Seeded lawn construction (in parkway area).	SY	620	4.05	2,511.00	0	$0.00	0	$0.00
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	3,000.00	0	$0.00	0	$0.00
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	2,450.00	0	$0.00	0	$0.00
					$10,661.00		$0.00		$0.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 8 of 8 Sheets
Pay Estimate: 1
Date: October 12, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

O.K. FOR PAYMENT

VENDOR # _____

FUND # 34

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: September 1, 1995 To: September 30, 1995

ITEM / DEPT. # 010 / BUDGET # 5051000	Unit	Qty	CONTRACT SUM	AMOUNT COMPLETED THIS PAY PERIOD		AMOUNT COMPLETED TO DATE	
			$297,943.80		$33,445.00		$33,445.00

BY _____

Less 5% Withholding	$1,672.25
Less Liquidated Damages	
Less Previous Payment	
TOTAL DEDUCTIONS	$1,672.25
PAYMENT DUE	$31,772.75

Steve Wood, Project Engineer

Approved By:

Rob Foster, Director of Public Works

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PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	18,700.00	$18,700.00	0	$0.00	1	$18,700.00
2	Temporary Traffic Controls	LS	1	3,000.00	$3,000.00	0	$0.00	1	$3,000.00
3	Environmental Controls	LS	1	2,800.00	$2,800.00	0	$0.00	1	$2,800.00
4	Unclassified Excavation.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
5	Trench Foundation	CY	100	30.00	$3,000.00	0	$0.00	546	$16,380.00
6	Dewatering.	LS	1	1,000.00	$1,000.00	0	$0.00	1	$1,000.00
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	$5,592.00	0	$0.00	249	$5,976.00
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	$2,212.00	0	$0.00	44	$1,232.00
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	$8,702.00	0	$0.00	341	$12,958.00
					$55,006.00		$0.00		$72,046.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	$3,268.00	0	$0.00	32	$1,376.00
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	$14,112.00	0	$0.00	0	$0.00
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	$1,222.00	0	$0.00	318	$14,946.00
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	$15,366.00	0	$0.00	0	$0.00
14	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	$4,160.00	0	$0.00	511	$26,572.00
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	$2,652.00	0	$0.00	140	$3,640.00
					$40,780.00		$0.00		$46,534.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 3 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	$25,350.00	0	$0.00	650	$25,350.00
17	48-inch sanitary manhole.	EA	3	2,500.00	$7,500.00	0	$0.00	2	$5,000.00
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	$4,000.00	0	$0.00	1	$4,000.00
19	48-inch storm manhole, complete.	EA	5	1,850.00	$9,250.00	0	$0.00	4	$7,400.00
20	Curb inlet.	EA	6	1,030.00	$6,180.00	0	$0.00	6	$6,180.00
21	Monolithic curb and gutter.	LF	1203	7.25	$8,721.75	0	$0.00	1200	$8,700.00
22	Sidewalk	SF	5869	1.95	$11,444.55	0	$0.00	4676	$9,118.20
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	$8,218.00	0	$0.00	3438	$12,033.00
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	$12,712.50	0	$0.00	3302	$14,859.00
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	$5,625.00	0	$0.00	3035	$4,552.50
					$99,001.80		$0.00		$97,192.70

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	$27,140.00	0	$0.00	3035	$27,922.00
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	$4,320.00	0	$0.00	345	$4,140.00
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	$875.00	0	$0.00	5	$875.00
29	Type I-L Barricade.	EA	1	250.00	$250.00	0	$0.00	1	$250.00
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	$600.00	1	$600.00	1	$600.00
31	10" tapping sleeve, 10' NRS Gat Valve Box, 10x12 reducer installed, complete.	LS	1	2,000.00	$2,000.00	0	$0.00	1	$2,000.00
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	$1,050.00	0	$0.00	50	$1,500.00
					$36,235.00		$600.00		$37,287.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	$1,900.00	0	$0.00	54	$2,052.00
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	$31,185.00	0	$0.00	570	$31,350.00
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	$900.00	0	$0.00	1	$900.00
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	$500.00	0	$0.00	1	$500.00
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	$250.00	0	$0.00	1	$250.00
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	$350.00	0	$0.00	1	$350.00
39	12" X 22.5 degrees. Elbow complete.	EA	1	475.00	$475.00	0	$0.00	1	$475.00
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	$400.00	0	$0.00	1	$400.00
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
					$45,960.00		$0.00		$46,277.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	$1,400.00	0	$0.00	3	$2,100.00
43	2" water service taps with corp stop.	EA	2	1,000.00	$2,000.00	0	$0.00	1	$1,000.00
44	1" polyethylene water service.	LF	275	3.00	$825.00	0	$0.00	68	$204.00
45	2" Polyethylene water service.	LF	50	5.00	$250.00	0	$0.00	12	$60.00
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	$2,000.00	0	$0.00	0	$0.00
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	$1,125.00	0	$0.00	5	$1,125.00
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	0	$0.00	3	$675.00
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	$1,800.00	0	$0.00	8	$1,800.00
					$10,300.00		$0.00		$6,964.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 7 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	0	$0.00	3	$675.00
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	$1,800.00	0	$0.00	5	$1,125.00
52	Seeded lawn construction (in parkway area).	SY	620	4.05	$2,511.00	0	$0.00	620	$2,511.00
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	$3,000.00	0	$0.00	1	$3,000.00
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	$2,450.00	0	$0.00	450	$2,250.00
					$10,661.00		$0.00		$9,561.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 8 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 1								
55	21"CL A STM PIPE (B.I. 13)	LF	-394	$39.00	($15,366.00)	0	$0.00	0	$0.00
56	21"CL B STM PIPE (B.I. 12)	LF	258.21	$47.00	$12,135.87	0	$0.00	0	$0.00
57	24"CL A STM PIPE	LF	394	$52.00	$20,488.00	0	$0.00	0	$0.00
58	24"CL B STM PIPE	LF	26	$63.00	$1,638.00	0	$0.00	26	$1,638.00
59	24"STM PIPE ADD 1.05VF	LF	420	$1.00	$420.00	0	$0.00	485	$485.00
60	18" STORM S/O PLUG	EA	1	$150.00	$150.00	0	$0.00	1	$150.00
61	18" STM PIPE CL A	LF	10	$40.00	$400.00	0	$0.00	16	$640.00
62	18"CL B STM PIPE (B.I. 11)	LF	-284.21	$48.00	($13,642.08)	0	$0.00	0	$0.00
63	21" STM PIPE ADD 1.34VF	LF	284.21	$5.55	$1,577.37	0	$0.00	318	$1,764.90
64	8" LAT ADD .78VF	LF	43	$1.90	$81.70	0	$0.00	43	$81.70
65	MH ADD DEPTH	VF	5.4	$192.00	$1,036.80	0	$0.00	5.4	$1,036.80
66	15" STM ADD 1.52VF	LF	30	$6.03	$180.90	0	$0.00	32	$192.96
67	8" STM A D 1.86VF	LF	43	$6.23	$267.89	0	$0.00	43	$267.89
68	12" STM AD 1.64 VF	LF	67.76	$6.51	$441.12	0	$0.00	67.76	$441.12
69	8" STM ADD 1.75VF	LF	40	$4.29	$171.60	0	$0.00	40	$171.60
70	12" STM ADD 1.89VF	LF	160.93	$7.50	$1,206.98	0	$0.00	160.93	$1,206.98
71	8" STM ADD 1.84VF	LF	23	$4.48	$103.04	0	$0.00	23	$103.04
72	8" STM ADD 1.88VF	LF	40	$4.57	$182.80	0	$0.00	40	$182.80
73	8" STM LAT AD 2.12VF	LF	81	$5.18	$419.58	0	$0.00	81	$419.58
					$11,893.56		$0.00		$8,782.36

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 9 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 2								
74	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
75	10" X 2" SERVICE SADDLE	EA	1	$44.00	$44.00	0	$0.00	1	$44.00
76	10" DIP CL 52 SERVICE PIPE	LF	46	$52.00	$2,392.00	0	$0.00	46	$2,392.00
77	MOVE 10" GATE VALVE	EA	1	$195.00	$195.00	0	$0.00	1	$195.00
78	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
79	CAP 10" GATE VALVE	EA	1	$600.00	$600.00	0	$0.00	1	$600.00
80	12" X 2" SERVICE SADDLE	EA	-1	$75.00	($75.00)	0	$0.00	-1	($75.00)
81	2" PE SERVICE PIPE (B.I. 45)	LF	-38	$5.00	($190.00)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 3								
83	SANITARY MANHOLE STA 15+68 (DELETE)	EA	-1	$2,500.00	($2,500.00)	0	$0.00	0	$0.00
84	CONNECT TO EXISTING STUBOUT STA 15+68	EA	1	$1,620.00	$1,620.00	0	$0.00	1	$1,620.00
	CHANGE ORDER NO. 4								
85	48" STORM MANHOLE (B.I. 17) (DELETE)	EA	-1	$1,850.00	($1,850.00)	0	$0.00	0	$0.00
86	15" STORM PIPE (B.I. 10)	LF	-24	$43.00	($1,032.00)	0	$0.00	0	$0.00
87	72" STORM MANHOLE	EA	1	$4,400.00	$4,400.00	0	$0.00	1	$4,400.00
88	15" STORM - ADD DEPTH 1.05 VF	LF	22	$4.40	$96.80	0	$0.00	0	$0.00
					$4,792.80		$0.00		$10,268.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 10 of 12 Sheets
Pay Estimate No. 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 5								
89	ADD 24" CL V - CL D	LF	40	$52.00	$2,080.00	0	$0.00	40	$2,080.00
90	24" STORM ADDED DEPTH (2.10' AVG)	LF	453	$3.00	$1,359.00	0	$0.00	453	$1,359.00
91	RELOCATE FIRE HYDRANT	EA	1	$725.00	$725.00	0	$0.00	1	$725.00
92	PLUG 15" STUBOUT NOT USED MH 4	EA	1	$250.00	$250.00	0	$0.00	1	$250.00
93	DELETE 15" PIPE LATERAL MH 4	LF	-22	$43.00	($946.00)	0	$0.00	0	$0.00
94	DELETE 15" STM LTL XTRA DEPTH -1.05 VF	LF	-22	$4.40	($96.80)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 6								
95	STA 10+05 RT - 10" DIP R.J. FIRE SERVICE	LF	46	$62.00	$2,852.00	0	$0.00	46	$2,852.00
96	10" MJ GATE VALVE W/R.J.	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
97	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
98	10" MJ PLUG	EA	1	$115.00	$115.00	0	$0.00	1	$115.00
99	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
	CHANGE ORDER NO. 7								
100	STA 11+04 LT SANITARY SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 8								
101	ADD FIRE HYDRANT 10+20 LT: 6" DIP CL 52	LF	25	$30.00	$750.00	0	$0.00	18	$540.00
102	6" MJ X FLG GATE VALVE	EA	1	$450.00	$450.00	0	$0.00	1	$450.00
103	12" X 6" MJ X FLG TEE	EA	1	$350.00	$350.00	0	$0.00	1	$350.00
104	6" MJ FIRE HYDRANT	EA	1	$1,200.00	$1,200.00	0	$0.00	1	$1,200.00
105	CATHODIC PROTECTION	LS	1	$500.00	$500.00	0	$0.00	1	$500.00
					$16,598.20		$0.00		$17,431.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 11 of 12 Sheets
Pay Estimate No. 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 9								
107	14+46 RT 10" FIRE/DOM SERV REST. JT.	LF	62	$62.00	$3,844.00	0	$0.00	50	$3,100.00
108	10" X 10" MJ TEE W/ REST GLDS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
109	10" MJ PLUG	EA	2	$115.00	$230.00	0	$0.00	2	$230.00
110	2" PE 90 DEG EL	LS	1	$130.00	$130.00	0	$0.00	1	$130.00
111	10" GATE VALVE	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
112	10" X 6" REDUCER	EA	1	$185.00	$185.00	0	$0.00	1	$185.00
113	RELOCATE FIRE HYDRANT	EA	1	$300.00	$300.00	0	$0.00	1	$300.00
114	6" DIP FH PIPE & EXTENSION	LF	10	$30.00	$300.00	0	$0.00	10	$300.00
115	TUNNEL UNDER EXISTING VAULT	LS	1	$1,000.00	$1,000.00	0	$0.00	1	$1,000.00
116	RESET VAULT/CHK VALVE & SPLS	LS	1	$6,190.00	$6,190.00	0	$0.00	1	$6,190.00
117	DELETE 10" DIP PUSH ON JT (CO 2)	LF	-46	$52.00	($2,392.00)	0	$0.00	-46	($2,392.00)
	CHANGE ORDER NO. 10								
118	STA 15+50 LT WTR MN - REMOVE T-BLK/VLV	LS	1	$794.03	$794.03	0	$0.00	1	$794.03
	CHANGE ORDER NO. 11								
119	1" WATER SERVICE TO TAYLOR PROPERTY	LS	1	$4,130.86	$4,130.86	0	$0.00	1	$4,130.86
	CHANGE ORDER NO. 12								
120	STA 14+85 LT SAN. SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
					$21,091.89		$0.00		$20,347.89

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 12 of 12 Sheets
Pay Estimate No. 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

		UNIT	QTY	CONTRACT SUM	AMOUNT COMPLETED THIS PAY PERIOD		AMOUNT COMPLETED TO DATE	
				$352,320.25		$600.00		$372,690.95

Less 5% Withholding	$18,634.55
Less Liquidated Damages	$0.00
Less Previous Payment	$353,486.40
TOTAL DEDUCTIONS	$372,120.95
PAYMENT DUE	$570.00

Steve Wood, Project Engineer

Gelco Construction, Stanley E. Thompson, Project Manager

Approved By:

Rob Foster, Director of Public Works

20350
34
010
5052000

BY

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUL 05 '95 15:45)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 05	15:43	503 689 5530	G3EST	02'09"	OK	02	

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUL 05 '95 14:13)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 05	14:10	5034345710	G3EST	02'02"	OK	02	

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUL 05 '95 12:02)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 05	12:00	5032363902	G3EST	01'58"	OK	02	

Art

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUL 05 '95 15:02)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 05	15:01	92860848	G3EST	01'49"	OK	02	

TRANSMISSION REPORT

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:CITY-OF-FOREST-GROVE (JUL 05 '95 11:59)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 05	11:57	5036563900	G3EST	01'55"	OK	02	

Doug

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUL 05 '95 11:23)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 05	11:20	96422534	G3EST	02'14"	OK	03	

CITY OF FOREST GROVE
1924 Council Street, PO Box 326
Forest Grove, OR 97116
tel (503) 359-3200
fax (503) 359-3207

fax transmittal

to: Todd

fax #: 642-2534

from: Kelly, Engineering

date: 7/5/95

re: Elm Street LID

pages: 3, including this cover sheet

NOTES:

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUL 05 '85 11:19)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 05	11:16	503+274+2616	G3ST	02'15"	OK	03	

CITY OF FOREST GROVE
1924 Council Street, PO Box 326
Forest Grove, OR 97116
tel (503) 359-3200
fax (503) 359-3207

fax transmittal

to: Debbie, DJC

fax #: 274-2616

from: Kelly, Engineering

date: 7/5/95

re: Elm Street LID

pages: , including this cover sheet

NOTES:

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUL 05 '95 11:15)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 05	11:13	503 274 4416	G3EST	02'02"	OK	03	

CITY OF FOREST GROVE
1924 Council Street, PO Box 326
Forest Grove, OR 97116
tel (503) 359-3200
fax (503) 359-3207

fax transmittal

to: Allen

fax #: 274-4416

from: Kelly, Engineering

date: 7/5/95

re: Elm Street L.I.D.

pages: 3, including this cover sheet

NOTES:

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 8 Sheets
Pay Estimate: 1
Date:

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	18,700.00	18,700.00				
2	Temporary Traffic Controls	LS	1	3,000.00	3,000.00				
3	Environmental Controls	LS	1	2,800.00	2,800.00				
4	Unclassified Excavation.	LS	1	10,000.00	10,000.00				
5	Trench Foundation	CY	100	30.00	3,000.00				
6	Dewatering.	LS	1	1,000.00	1,000.00				
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	5,592.00				
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	2,212.00				
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	8,702.00				
					$55,006.00				

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 8 Sheets
Pay Estimate: 1
Date:

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	3,268.00				
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	14,112.00				
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	1,222.00				
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	15,366.00				
14	24-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	4,160.00				
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	2,652.00				
					$40,780.00				

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 3 of 8 Sheets
Pay Estimate: 1
Date:

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	25,350.00				
17	48-inch sanitary manhole.	EA	3	2,500.00	7,500.00				
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	4,000.00				
19	48-inch storm manhole, complete.	EA	5	1,850.00	9,250.00				
20	Curb inlet.	EA	6	1,030.00	6,180.00				
21	Monolithic curb and gutter.	LF	1203	7.25	8,721.75				
22	Sidewalk	SF	5869	1.95	11,444.55				
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	8,218.00				
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	12,712.50				
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	5,625.00				
					$99,001.80				

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 8 Sheets
Pay Estimate: 1
Date:

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	27,140.00				
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	4,320.00				
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	875.00				
29	Type I-L Barricade.	EA	1	250.00	250.00				
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	600.00				
31	10" tapping sleeve, 10' valve 10 x 12 reducer installed complete.	LS	1	2,000.00	2,000.00				
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	1,050.00				
					$36,235.00				

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 8 Sheets
Pay Estimate: 1
Date:

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	1,900.00				
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	31,185.00				
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	900.00				
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	500.00				
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	250.00				
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	350.00				
39	22-1/2 degree + 11-1/4 degree Elbow Assembly.	EA	1	475.00	475.00				
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	400.00				
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	10,000.00				
					$45,960.00				

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 8 Sheets
Pay Estimate: 1
Date:

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	1,400.00				
43	2" water service taps with corp stop.	EA	2	1,000.00	2,000.00				
44	1" polyethylene water service.	LF	275	3.00	825.00				
45	2" Polyethylene water service.	LF	50	5.00	250.00				
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	2,000.00				
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	1,125.00				
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	900.00				
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	1,800.00				
					$10,300.00				

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 7 of 8 Sheets
Pay Estimate: 1
Date:

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	900.00				
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	1,800.00				
52	Seeded lawn construction (in parkway area).	SY	620	4.05	2,511.00				
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	3,000.00				
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	2,450.00				
					$10,661.00				

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 8 of 8 Sheets
Pay Estimate: 1
Date:

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: To:

ITEM		Unit	Qty	CONTRACT SUM	AMOUNT COMPLETED THIS PAY PERIOD		AMOUNT COMPLETED TO DATE	
				$297,943.80				#VALUE!

Less 5% Withholding .....
Less Liquidated Damages .....
Less Previous Payment .....

TOTAL DEDUCTIONS .....

PAYMENT DUE ..... #VALUE!

Approved By:

Steve Wood, Project Engineer

Rob Foster, Director of Public Works

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TRANSMISSION REPORT

CITY OF FOREST GROVE (JUL 11 '95 08:44)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUL 11	08:38	5036560686	G3ST	05'47"	OK	10	

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 10

To Jim Shannon	From Kelly
Co. Coffman	Co. FG Eng
Dept.	Phone #
Fax #	Fax #

CITY OF FOREST GROVE

Bidding Record For: ELM STREET L.I.D.

Bid Opening Date: 6-Jul-95

Work Order No.: 8194

Time: 2:00 PM

	BIDDER	BID BOND ENCLOSED	ADDENDUM #1 ACKNOWLEDGED	BASE BID
1	PACIFIC WATER WORKS			
2	COFFMAN EXCAVATION	✓	✓ (4)	398,945.00
3	GELCO CONSTRUCTION	✓	✓ (1)	297,650.35
4	HILLSBORO PUMP & SUPPLY	✓	✓ (3)	309,311.63
5	WALT'S CONCRETE			
6	MICHAEL MARK LTD.	✓	✓ (2)	306,378.25
7	ROWELL & WICKERSHAM			
8	GRIMMETT ENTERPRISES			
9	HOSS PAVING			
10	SPEC INDUSTRIES			
11	MARSHALL ASSOC. CONTRACTORS	✓	✓ (5)	520,598.95
12	GOLDEN VALLEY CONSTRUCTION			
13				
14				

Catherine A. Jensen

Bids Opened and Read By:

Witnessed By:

The amounts sh[illegible] shown in both words and figures. In case of a discrepancy, the amount shown [illegible]rds shall govern.

JUNE 13TH
~~March~~, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
1.	Mobilization.	1	Lump Sum	$8,168.00	Unit Price in Writing	$8,168.00
2.	Temporary Traffic Control.	1	Lump Sum	$5,000.00	Unit Price in Writing	$5,000.00
3.	Environmental Controls	1	Lump Sum	$3,500.00	Unit Price in Writing	$3,500.00
4.	Unclassified Excavation.	1	Lump Sum	$10,000.00	Unit Price in Writing	$10,000.00
5.	Trench Foundation	100	Cub. Yards	$15.00	Unit Price in Writing	$1,500.00
6.	Dewatering.	1	Lump Sum	$10,000.00	Unit Price in Writing	$10,000.00
7.	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	233	Lin. Feet	$24.00	Unit Price in Writing	$5,592.00
8.	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	79	Lin. Feet	$26.50	Unit Price in Writing	$2,093.50
9.	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	229	Lin. Feet	$28.75	Unit Price in Writing	$6,583.75
10.	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	76	Lin. Feet	$32.00	Unit Price in Writing	$2,432.00

CONFIDENTIAL

The amounts sh[illegible] shown in both words and figures. In case of a discrepancy, the amount shown[illegible]rds shall govern.

March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	$38.25	Unit Price in Writing	$11,245.50
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	$40.00	Unit Price in Writing	$1,040.00
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	$32.00	Unit Price in Writing	$12,608.00
14.	24-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	$36.50	Unit Price in Writing	$2,920.00
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	$26.00	Unit Price in Writing	$2,652.00
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	$48.00	Unit Price in Writing	$31,200.00
17.	48-inch sanitary manhole.	3	Each	$2,800.00	Unit Price in Writing	$8,400.00

CONFIDENTIAL

The amounts sh[illegible] shown in both words and figures. In case of a discrepancy, the amount shown [illegible]rds shall govern.

March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
18.	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	1	Each	$700.00	Unit Price in Writing	$700.00
19.	48-inch storm manhole complete	5	Each	$1,600.00	Unit Price in Writing	$8,000.00
20.	Curb inlet.	6	Each	$1,350.00	Unit Price in Writing	$8,100.00
21.	Monolithic curb and gutter.	1203	Lin. Feet	$5.50	Unit Price in Writing	$6,616.50
22.	Sidewalk.	5869	Sq. Feet	$4.25	Unit Price in Writing	$24,943.25
23.	Driveway (8-inch thick P.C.C.)	2348	Sq. Feet	$6.00	Unit Price in Writing	$14,088.00
24.	Aggregate Base (2"-0) (8" depth).	2825	Sq. Yards	$3.25	Unit Price in Writing	$9,181.25
25.	Aggregate Base (3/4"-0) (2" depth).	3750	Sq. Yards	$1.00	Unit Price in Writing	$3,750.00
26.	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	2950	Sq. Yards	$6.00	Unit Price in Writing	$17,700.00
27.	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	360	Sq. Yards	$7.00	Unit Price in Writing	$2,520.00

CONFIDENTIAL

The amounts sh[illegible] shown in both words and figures. In case of a discrepancy, the amount shown [illegible]rds shall govern.

March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
28.	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	5	Each	$100.00	Unit Price in Writing	$500.00
29.	Type I-L Barricade.	1	Each	$150.00	Unit Price in Writing	$150.00
30.	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	1	Lump Sum	$600.00	Unit Price in Writing	$600.00
31.	10" tapping sleeve, 10' valve 10 x 12 reducer installed complete.	1	Lump Sum	$1,800.00	Unit Price in Writing	$1,800.00
32.	6" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	35	Lin. Feet	$21.00	Unit Price in Writing	$735.00
33.	8" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	50	Lin. Feet	$25.50	Unit Price in Writing	$1,275.00
34.	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	567	Lin. Feet	$36.00	Unit Price in Writing	$20,412.00
35.	12" NRS gate valve with valve box, complete.	1	Each	$2,000.00	Unit Price in Writing	$2,000.00
36.	8" NRS gate valve with valve box, complete.	1	Each	$1,000.00	Unit Price in Writing	$1,000.00

CONFIDENTIAL

The amounts s[illegible]e shown in both words and figures. In case of a discrepancy, the amount shown [illegible]rds shall govern.

March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	$750.00	Unit Price in Writing	$750.00
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	$1,200.00	Unit Price in Writing	$1,200.00
39.	12" x 33-3/4" Elbow Assemblies (22-1/2 + 11-1/4 Deg.), complete.	1	Each	$1,400.00	Unit Price in Writing	$1,400.00
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	$1,200.00	Unit Price in Writing	$1,200.00
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	$5,500.00	Unit Price in Writing	$5,500.00
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	$400.00	Unit Price in Writing	$800.00
43.	2" water service taps with corp stop.	2	Each	$400.00	Unit Price in Writing	$800.00
44.	1" Polyethylene water service.	275	Lin. Feet	$7.50	Unit Price in Writing	$2,062.50
45.	2" Polyethylene water service.	50	Lin. Feet		Unit Price in Writing	$0.00
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	$1,000.00	Unit Price in Writing	$1,000.00
47.	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height.	5	Each	$200.00	Unit Price in Writing	$1,000.00

CONFIDENTIAL

The amounts s[illegible]e shown in both words and figures. In case of a discrepancy, the amount shown [illegible]rds shall govern.

March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
48.	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2' caliper, 6 ft branch height.	4	Each	$200.00	Unit Price in Writing	$800.00
49.	Furnish & plant: Acer Rubrum A.Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	8	Each	$200.00	Unit Price in Writing	$1,600.00
50.	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	4	Each	$200.00	Unit Price in Writing	$800.00
51.	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6 ft branch height.	8	Each	$200.00	Unit Price in Writing	$1,600.00
52.	Seeded Lawn construction (in parkway area).	620	Sq. Yards	$3.25	Unit Price in Writing	$2,015.00
53.	Furnish and place topsoil 6 inch in-place depth in parkway area. (Approximately 620 SY)	1	Lump Sum	$1,500.00	Unit Price in Writing	$1,500.00
54.	2" gray PVC conduit (for underground sleeving)	490	Lin. Feet	$4.50	Unit Price in Writing	$2,205.00

TOTAL BID PRICE _____
IN WRITING

TOTAL BID PRICE $275,238.25
IN FIGURES

CONFIDENTIAL

MOFFATT, NICHOL & BONNEY, INC. Consulting Engineers
1845 N.E. COUCH STREET . PORTLAND, OREGON 97232 . (503) 232-2117 FAX (503) 232-8023

FAX TRANSMITTAL

TO: STEVE WOOD DATE: 6/15/95

AT: CITY OF FOREST GROVE FAX: 54

FROM: DAN SIMONS NO. OF PAGES Including Transmittal: 1

PROJECT: ELM ST. L.I.D PROJECT NO: 4980

UPDATED ESTIMATE

CIRCULATE TO: _____ COPIES: _____

ORIGINAL TO FOLLOW VIA: Ø

Please notify us if you do not receive all pages.

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

JUNE 13TH
~~March~~, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
1.	Mobilization.	1	Lump Sum	$8,168.00	Unit Price in Writing	$8,168.00
2.	Temporary Traffic Control.	1	Lump Sum	$5,000.00	Unit Price in Writing	$5,000.00
3.	Environmental Controls	1	Lump Sum	$3,500.00	Unit Price in Writing	$3,500.00
4.	Unclassified Excavation.	1	Lump Sum	$10,000.00	Unit Price in Writing	$10,000.00
5.	Trench Foundation	100	Cub. Yards	$15.00	Unit Price in Writing	$1,500.00
6.	Dewatering.	1	Lump Sum	$10,000.00	Unit Price in Writing	$10,000.00
7.	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	233	Lin. Feet	$24.00	Unit Price in Writing	$5,592.00
8.	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	79	Lin. Feet	$26.50	Unit Price in Writing	$2,093.50
9.	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	229	Lin. Feet	$28.75	Unit Price in Writing	$6,583.75
10.	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	76	Lin. Feet	$32.00	Unit Price in Writing	$2,432.00

CONFIDENTIAL

06/15/95 09:32 ☎503 232 8023 M.N. & BONNEY →→→ CITY OF FGROVE ☑002/007

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	$38.25	Unit Price in Writing	$11,245.50
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	$40.00	Unit Price in Writing	$1,040.00
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	$32.00	Unit Price in Writing	$12,608.00
14.	24-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	$36.50	Unit Price in Writing	$2,920.00
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	$26.00	Unit Price in Writing	$2,652.00
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	$48.00	Unit Price in Writing	$31,200.00
17.	48-inch sanitary manhole.	3	Each	$2,800.00	Unit Price in Writing	$8,400.00

CONFIDENTIAL

06/15/95 09:33 503 232 8023 M.N. & BONNEY →→→ CITY OF FGROVE 003/007

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
18.	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete	1	Each	$700.00	Unit Price in Writing	$700.00
19.	48-inch storm manhole complete	5	Each	$1,600.00	Unit Price in Writing	$8,000.00
20.	Curb inlet.	6	Each	$1,350.00	Unit Price in Writing	$8,100.00
21.	Monolithic curb and gutter.	1203	Lin. Feet	$5.50	Unit Price in Writing	$6,616.50
22.	Sidewalk.	5869	Sq. Feet	$4.25	Unit Price in Writing	$24,943.25
23.	Driveway (8-inch thick P.C.C.)	2348	Sq. Feet	$6.00	Unit Price in Writing	$14,088.00
24.	Aggregate Base (2"-0) (8" depth).	2825	Sq. Yards	$3.25	Unit Price in Writing	$9,181.25
25.	Aggregate Base (3/4"-0) (2" depth)	3750	Sq. Yards	$1.00	Unit Price in Writing	$3,750.00
26.	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	2950	Sq. Yards	$6.00	Unit Price in Writing	$17,700.00
27.	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	360	Sq. Yards	$7.00	Unit Price in Writing	$2,520.00

CONFIDENTIAL

06/15/95 09:34 ☎503 232 8023 M.N. & BONNEY →→→ CITY OF FGROVE ☑004/007

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March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
28.	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	5	Each	$100.00	Unit Price in Writing	$500.00
29.	Type I-L Barricade.	1	Each	$150.00	Unit Price in Writing	$150.00
30.	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	1	Lump Sum	$600.00	Unit Price in Writing	$600.00
31.	10" tapping sleeve, 10' valve 10 x 12 reducer installed complete.	1	Lump Sum	$1,800.00	Unit Price in Writing	$1,800.00
32.	6" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	35	Lin. Feet	$21.00	Unit Price in Writing	$735.00
33.	8" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	50	Lin. Feet	$25.50	Unit Price in Writing	$1,275.00
34.	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	567	Lin. Feet	$36.00	Unit Price in Writing	$20,412.00
35.	12" NRS gate valve with valve box, complete.	1	Each	$2,000.00	Unit Price in Writing	$2,000.00
36.	8" NRS gate valve with valve box, complete.	1	Each	$1,000.00	Unit Price in Writing	$1,000.00

CONFIDENTIAL

06/15/95 09:34 503 232 8023 M.N. & BONNEY →→→ CITY OF FGROVE 005/007

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March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	$750.00	Unit Price in Writing	$750.00
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	$1,200.00	Unit Price in Writing	$1,200.00
39.	12" x 33-3/4" Elbow Assemblies (22-1/2 + 11-1/4 Deg.), complete.	1	Each	$1,400.00	Unit Price in Writing	$1,400.00
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	$1,200.00	Unit Price in Writing	$1,200.00
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	$5,500.00	Unit Price in Writing	$5,500.00
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	$400.00	Unit Price in Writing	$800.00
43.	2" water service taps with corp stop.	2	Each	$400.00	Unit Price in Writing	$800.00
44.	1" Polyethylene water service.	275	Lin. Feet	$7.50	Unit Price in Writing	$2,062.50
45.	2" Polyethylene water service.	50	Lin. Feet		Unit Price in Writing	$0.00
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	$1,000.00	Unit Price in Writing	$1,000.00
47.	Furnish & plant: Pyrus Calleryana "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height	5	Each	$200.00	Unit Price in Writing	$1,000.00

CONFIDENTIAL

06/15/95 09:35 503 232 8023 M.N. & BONNEY →→→ CITY OF FGROVE 006/007

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

March, 1995

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
48.	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	4	Each	$200.00	Unit Price in Writing	$800.00
49.	Furnish & plant: Acer Rubrum A.Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	8	Each	$200.00	Unit Price in Writing	$1,600.00
50.	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	4	Each	$200.00	Unit Price in Writing	$800.00
51.	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6 ft branch height.	8	Each	$200.00	Unit Price in Writing	$1,600.00
52.	Seeded Lawn construction (in parkway area).	620	Sq. Yards	$3.25	Unit Price in Writing	$2,015.00
53.	Furnish and place topsoil 6 inch in-place depth in parkway area (Approximately 620 SY)	1	Lump Sum	$1,500.00	Unit Price in Writing	$1,500.00
54.	2" gray PVC conduit (for underground sleeving)	490	Lin. Feet	$4.50	Unit Price in Writing	$2,205.00

TOTAL BID PRICE _____
IN WRITING

TOTAL BID PRICE $275,238.25
IN FIGURES

CONFIDENTIAL

06/15/95 09:36 ☎503 232 8023 M.N. & BONNEY →→→ CITY OF FGROVE ☑007/007

PLANHOLDERS LIST:
ELM STREET L.I.D.
W.O. #8194

$30 PICK/UP
$35 MAIL

FIRM NAME	ADDRESS	PHONE	FAX #	DATE	CHECK #	RCPT #
*13 Walt's Concrete	945 N 28th St. Springfield, OR 97477	746-3673	746-4002	6/16/95	5381	57223
*14 MICHAEL MARK LTD.	15100 SW 150th Ave TIGARD, OR 97224	590-4411	590-4422	6/19/95	7546	57230
*15 Powell & Wickersham	2345 Three Mile Lane PO Box 472 McMinnville, OR 97128	472-5366	434-5710	6/20/95	13841 35.00	57232
*16 GRIMMETT ENTERPRISES, INC	1021 ELM ST. FOREST GROVE 97116	359-4670	357-3741	6/22/95	009250 30.00	57238
*17 Hoss Paving	22500 NW Quatama Rd Hillsboro, OR 97124	681-8029	693-0461	6/22/95	30.00	57240
*18 Spec. Industries	PO Box 40337 Eugene, OR 97404-0019	689-5523	689-5530	6/26/95	4434 35.00	57246
*19 Marshall Assoc. Contractors	PO Box 278 10400 SW Herman Sealatin, 97062	692-1350	692-1351	6/28/95	722 30.00	57261
*20 GOLDEN VALLEY CONST. plans-22	P.O BOX 928 DALLAS OR 97338	623-0677	623-6868	6/30/95	cash 30.00	57269
*21						
*22						
*23						
*24 City of Forest Grove - Rob Foster						

PLANHOLDERS LIST:
ELM STREET L.I.D.
W.O. #8194

$30 PICK/UP
$35 MAIL

FIRM NAME	ADDRESS	PHONE	FAX #	DATE	CHECK #	RCPT #
*25 City of F.G. - Steve Wood						
*26						
*27						
*28						
*29						
*30						
*31						
*32						
*33						
*34						
*35						

250-300

$4.10

PLANHOLDERS LIST:
ELM STREET L.I.D.
W.O. #8194

$30 PICK/UP
$35 MAIL

FIRM NAME	ADDRESS	PHONE	FAX #	DATE	CHECK #	RCPT #
*1 FOR OFFICE USE ONLY						
*2 FOR OFFICE USE ONLY						
*3 FOR OFFICE USE ONLY						
DAILY JOURNAL OF COMMERCE *4 PLAN CENTER-TIGARD	12254 SW GARDEN PLACE, #1 TIGARD, OR 97223					
DAILY JOURNAL OF COMMERCE *5 PLAN CENTER	PO BOX 10127 PORTLAND, OR 97210					
CONSTRUCTION DATA - WEST *6 PLAN CENTER	1200 NW FRONT, #180 PORTLAND, OR 97209					
CONSTRUCTION DATA-WLSNVL *7 PLAN CENTER	9140 SW PIONEER CT, #A WILSONVILLE, OR 97070					
OREGON CONTRACTOR *8 PLAN CENTER	PO BOX 477 CLACKAMAS, OR 97015					
*9 Pacific Water Works	6720 SW McEwan 97035 Lake Oswego, OR	620-9123	684-7213	6/13	4582 35.00	57204
*10 Coffman Excavation	PO Box 687 Oregon City, OR 97045	656-7000	656-0686	6/13	34383 35.00	57208
*11 Qelco Construction	PO Box 7716 Salem, OR 97303	364-2638	364-8115	6/13	1843 35.00	57209
*12 Helsboro Pump	598 Baseline Cornelius, OR 97113	357-4217		6/14	6735 30.00	57217

JABC 1994
920 Elm Street, Forest Grove, OR

Tel 503-357-7056 Fax 503-357-1014

Preliminary

Invoice

Invoice #: 00262626
Date: 12/14/95
Your Order #:
Terms: Net
Ship Via:
Shipping Date:
Page:1

Bill To:
Clean Fill Customer

Ship To:
City of Forest Grove
Gelco
PO Box 326
Forest Grove, OR 97116

Description	Amount
Clean fill dump fee 10,000 cu yds @ .85	$8,500.00

Talked to JABC 12/19/95 will rebill Gelco directly - 12/19/95 10:30

Freight:	$0.00
Sales Tax:	$0.00
Total Amount:	$0.00
Amount Applied:	$8,500.00
Balance	$8,500.00

$4.89 postage

forest grove

July 25, 1995

Mr. Bob Boren
Project Manager
Gelco Construction Company
P.O. Box 7716
Salem, OR 97303

SUBJECT: Elm Street L.I.D. No. 8194

Dear Bob:

The Forest Grove City Council, at its regular meeting on July 10, 1995, awarded the Contract for subject project to your firm.

In order to execute the Contract, the City is herewith providing three sets of the Contract Documents for signature (s). When returning the signed documents, you will need to include the executed Performance and Payment Bond along with proof of insurance. The documents must be fully executed and returned to the City within 10-days from receipt of this transmittal.

As the general contractor Gelco Construction Company, Inc., is prequalified with the City, However, if you plan to use sub-contractors on this project you will need to submit a complete list of your sub-contractors at the pre-construction conference (see page H-1, General Conditions).

We thank you for participating in our bidding process, congratulate you on being the successful bidder, and look forward to working with you on this project.

Sincerely,

Steve A. Wood
Project Engineer

enclosure: Contract Documents -- three (3) sets

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	18,700.00	$18,700.00	0	$0.00	1	$18,700.00
2	Temporary Traffic Controls	LS	1	3,000.00	$3,000.00	0.15	$450.00	1	$3,000.00
3	Environmental Controls	LS	1	2,800.00	$2,800.00	0.1	$280.00	1	$2,800.00
4	Unclassified Excavation.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
5	Trench Foundation	CY	100	30.00	$3,000.00	0	$0.00	546	$16,380.00
6	Dewatering.	LS	1	1,000.00	$1,000.00	0	$0.00	1	$1,000.00
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	$5,592.00	0	$0.00	249	$5,976.00
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	$2,212.00	0	$0.00	44	$1,232.00
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	$8,702.00	0	$0.00	341	$12,958.00
					$55,006.00		$730.00		$72,046.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	$3,268.00	0	$0.00	32	$1,376.00
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	$14,112.00	0	$0.00	0	$0.00
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	$1,222.00	0	$0.00	318	$14,946.00
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	$15,366.00	0	$0.00	0	$0.00
14	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	$4,160.00	0	$0.00	511	$26,572.00
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	$2,652.00	0	$0.00	140	$3,640.00
					$40,780.00		$0.00		$46,534.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 3 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	$25,350.00	0	$0.00	650	$25,350.00
17	48-inch sanitary manhole.	EA	3	2,500.00	$7,500.00	0	$0.00	2	$5,000.00
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	$4,000.00	0.75	$3,000.00	1	$4,000.00
19	48-inch storm manhole, complete.	EA	5	1,850.00	$9,250.00	0	$0.00	4	$7,400.00
20	Curb inlet.	EA	6	1,030.00	$6,180.00	0	$0.00	6	$6,180.00
21	Monolithic curb and gutter.	LF	1203	7.25	$8,721.75	0	$0.00	1200	$8,700.00
22	Sidewalk	SF	5869	1.95	$11,444.55	4676	$9,118.20	4676	$9,118.20
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	$8,218.00	1838	$6,433.00	3438	$12,033.00
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	$12,712.50	552	$2,484.00	3302	$14,859.00
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	$5,625.00	35	$52.50	3035	$4,552.50
					$99,001.80		$21,087.70		$97,192.70

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	$27,140.00	3035	$27,922.00	3035	$27,922.00
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	$4,320.00	345	$4,140.00	345	$4,140.00
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	$875.00	5	$875.00	5	$875.00
29	Type I-L Barricade.	EA	1	250.00	$250.00	1	$250.00	1	$250.00
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	$600.00	0	$0.00	0	$0.00
31	10" tapping sleeve, 10' NRS Gat Valve Box, 10x12 reducer installed, complete.	LS	1	2,000.00	$2,000.00	0	$0.00	1	$2,000.00
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	$1,050.00	0	$0.00	50	$1,500.00
					$36,235.00		$33,187.00		$36,687.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	$1,900.00	0	$0.00	54	$2,052.00
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	$31,185.00	0	$0.00	570	$31,350.00
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	$900.00	0	$0.00	1	$900.00
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	$500.00	0	$0.00	1	$500.00
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	$250.00	0	$0.00	1	$250.00
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	$350.00	0	$0.00	1	$350.00
39	12" X 22.5 degrees. Elbow complete.	EA	1	475.00	$475.00	0	$0.00	1	$475.00
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	$400.00	0	$0.00	1	$400.00
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
					$45,960.00		$0.00		$46,277.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	$1,400.00	0	$0.00	3	$2,100.00
43	2" water service taps with corp stop.	EA	2	1,000.00	$2,000.00	0	$0.00	1	$1,000.00
44	1" polyethylene water service.	LF	275	3.00	$825.00	0	$0.00	68	$204.00
45	2" Polyethylene water service.	LF	50	5.00	$250.00	0	$0.00	12	$60.00
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	$2,000.00	0	$0.00	0	$0.00
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	$1,125.00	5	$1,125.00	5	$1,125.00
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	3	$675.00	3	$675.00
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	$1,800.00	8	$1,800.00	8	$1,800.00
					$10,300.00		$3,600.00		$6,964.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
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Sheet 7 of 12 Sheets
Pay Estimate: 5
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W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

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			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	3	$675.00	3	$675.00
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	$1,800.00	5	$1,125.00	5	$1,125.00
52	Seeded lawn construction (in parkway area).	SY	620	4.05	$2,511.00	620	$2,511.00	620	$2,511.00
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	$3,000.00	1	$3,000.00	1	$3,000.00
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	$2,450.00	0	$0.00	450	$2,250.00
					$10,661.00		$7,311.00		$9,561.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
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Sheet 8 of 12 Sheets
Pay Estimate: 5
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W.O. #8194

Contractor: Gelco Construction
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Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

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			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 1								
55	21"CL A STM PIPE (B.I. 13)	LF	-394	$39.00	($15,366.00)	0	$0.00	0	$0.00
56	21"CL B STM PIPE (B.I. 12)	LF	258.21	$47.00	$12,135.87	0	$0.00	0	$0.00
57	24"CL A STM PIPE	LF	394	$52.00	$20,488.00	0	$0.00	0	$0.00
58	24"CL B STM PIPE	LF	26	$63.00	$1,638.00	0	$0.00	26	$1,638.00
59	24"STM PIPE ADD 1.05VF	LF	420	$1.00	$420.00	0	$0.00	485	$485.00
60	18" STORM S/O PLUG	EA	1	$150.00	$150.00	0	$0.00	1	$150.00
61	18" STM PIPE CL A	LF	10	$40.00	$400.00	0	$0.00	16	$640.00
62	18"CL B STM PIPE (B.I. 11)	LF	-284.21	$48.00	($13,642.08)	0	$0.00	0	$0.00
63	21" STM PIPE ADD 1.34VF	LF	284.21	$5.55	$1,577.37	0	$0.00	318	$1,764.90
64	8" LAT ADD .78VF	LF	43	$1.90	$81.70	0	$0.00	43	$81.70
65	MH ADD DEPTH	VF	5.4	$192.00	$1,036.80	0	$0.00	5.4	$1,036.80
66	15" STM ADD 1.52VF	LF	30	$6.03	$180.90	0	$0.00	32	$192.96
67	8" STM A D 1.86VF	LF	43	$6.23	$267.89	0	$0.00	43	$267.89
68	12" STM AD 1.64 VF	LF	67.76	$6.51	$441.12	0	$0.00	67.76	$441.12
69	8" STM ADD 1.75VF	LF	40	$4.29	$171.60	0	$0.00	40	$171.60
70	12" STM ADD 1.89VF	LF	160.93	$7.50	$1,206.98	0	$0.00	160.93	$1,206.98
71	8" STM ADD 1.84VF	LF	23	$4.48	$103.04	0	$0.00	23	$103.04
72	8" STM ADD 1.88VF	LF	40	$4.57	$182.80	0	$0.00	40	$182.80
73	8" STM LAT AD 2.12VF	LF	81	$5.18	$419.58	0	$0.00	81	$419.58
					$11,893.56		$0.00		$8,782.36

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 9 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 2								
74	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
75	10" X 2" SERVICE SADDLE	EA	1	$44.00	$44.00	0	$0.00	1	$44.00
76	10" DIP CL 52 SERVICE PIPE	LF	46	$52.00	$2,392.00	0	$0.00	46	$2,392.00
77	MOVE 10" GATE VALVE	EA	1	$195.00	$195.00	0	$0.00	1	$195.00
78	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
79	CAP 10" GATE VALVE	EA	1	$600.00	$600.00	0	$0.00	1	$600.00
80	12" X 2" SERVICE SADDLE	EA	-1	$75.00	($75.00)	0	$0.00	-1	($75.00)
81	2" PE SERVICE PIPE (B.I. 45)	LF	-38	$5.00	($190.00)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 3								
83	SANITARY MANHOLE STA 15+68 (DELETE)	EA	-1	$2,500.00	($2,500.00)	0	$0.00	0	$0.00
84	CONNECT TO EXISTING STUBOUT STA 15+68	EA	1	$1,620.00	$1,620.00	0	$0.00	1	$1,620.00
	CHANGE ORDER NO. 4								
85	48" STORM MANHOLE (B.I. 17) (DELETE)	EA	-1	$1,850.00	($1,850.00)	0	$0.00	0	$0.00
86	15" STORM PIPE (B.I. 10)	LF	-24	$43.00	($1,032.00)	0	$0.00	0	$0.00
87	72" STORM MANHOLE	EA	1	$4,400.00	$4,400.00	0	$0.00	1	$4,400.00
88	15" STORM - ADD DEPTH 1.05 VF	LF	22	$4.40	$96.80	0	$0.00	0	$0.00
					$4,792.80		$0.00		$10,268.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
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Forest Grove, OR 97116

Sheet 10 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 5								
89	ADD 24" CL V - CL D	LF	40	$52.00	$2,080.00	0	$0.00	40	$2,080.00
90	24" STORM ADDED DEPTH (2.10' AVG)	LF	453	$3.00	$1,359.00	0	$0.00	453	$1,359.00
91	RELOCATE FIRE HYDRANT	EA	1	$725.00	$725.00	0	$0.00	1	$725.00
92	PLUG 15" STUBOUT NOT USED MH 4	EA	1	$250.00	$250.00	0	$0.00	1	$250.00
93	DELETE 15" PIPE LATERAL MH 4	LF	-22	$43.00	($946.00)	0	$0.00	0	$0.00
94	DELETE 15" STM LTL XTRA DEPTH -1.05 VF	LF	-22	$4.40	($96.80)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 6								
95	STA 10+05 RT - 10" DIP R.J. FIRE SERVICE	LF	46	$62.00	$2,852.00	0	$0.00	46	$2,852.00
96	10" MJ GATE VALVE W/R.J.	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
97	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
98	10" MJ PLUG	EA	1	$115.00	$115.00	0	$0.00	1	$115.00
99	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
	CHANGE ORDER NO. 7								
100	STA 11+04 LT SANITARY SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 8								
101	ADD FIRE HYDRANT 10+20 LT: 6" DIP CL 52	LF	25	$30.00	$750.00	0	$0.00	18	$540.00
102	6" MJ X FLG GATE VALVE	EA	1	$450.00	$450.00	0	$0.00	1	$450.00
103	12" X 6" MJ X FLG TEE	EA	1	$350.00	$350.00	0	$0.00	1	$350.00
104	6" MJ FIRE HYDRANT	EA	1	$1,200.00	$1,200.00	0	$0.00	1	$1,200.00
105	CATHODIC PROTECTION	LS	1	$500.00	$500.00	0	$0.00	1	$500.00
					$16,598.20		$0.00		$17,431.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
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Pay Estimate: 5
Date: April 8, 1996

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W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 9								
107	14+46 RT 10" FIRE/DOM SERV REST. JT.	LF	62	$62.00	$3,844.00	0	$0.00	50	$3,100.00
108	10" X 10" MJ TEE W/ REST GLDS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
109	10" MJ PLUG	EA	2	$115.00	$230.00	0	$0.00	2	$230.00
110	2" PE 90 DEG EL	LS	1	$130.00	$130.00	0	$0.00	1	$130.00
111	10" GATE VALVE	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
112	10" X 6" REDUCER	EA	1	$185.00	$185.00	0	$0.00	1	$185.00
113	RELOCATE FIRE HYDRANT	EA	1	$300.00	$300.00	0	$0.00	1	$300.00
114	6" DIP FH PIPE & EXTENSION	LF	10	$30.00	$300.00	0	$0.00	10	$300.00
115	TUNNEL UNDER EXISTING VAULT	LS	1	$1,000.00	$1,000.00	0	$0.00	1	$1,000.00
116	RESET VAULT/CHK VALVE & SPLS	LS	1	$6,190.00	$6,190.00	0.1	$619.00	1	$6,190.00
117	DELETE 10" DIP PUSH ON JT (CO 2)	LF	-46	$52.00	($2,392.00)	0	$0.00	-46	($2,392.00)
	CHANGE ORDER NO. 10								
118	STA 15+50 LT WTR MN - REMOVE T-BLK/VLV	LS	1	$794.03	$794.03	0	$0.00	1	$794.03
	CHANGE ORDER NO. 11								
119	1" WATER SERVICE TO TAYLOR PROPERTY	LS	1	$4,130.86	$4,130.86	0	$0.00	1	$4,130.86
	CHANGE ORDER NO. 12								
120	STA 14+85 LT SAN. SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 13								
121	STA 15+50 LT - REPAIR WTR MAIN IN CASING		PENDING						
					$21,091.89		$619.00		$20,347.89

PAY ESTIMATE

CITY OF FOREST GROVE
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Sheet 12 of 12 Sheets
Pay Estimate : 5
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W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

		UNIT	QTY	CONTRACT SUM	AMOUNT COMPLETED THIS PAY PERIOD		AMOUNT COMPLETED TO DATE	
				$352,320.25		$66,534.70		$372,090.95

Less 5% Withholding	$18,604.55
Less Liquidated Damages	$0.00
Less Previous Payment	$290,278.44
TOTAL DEDUCTIONS	$308,882.99
PAYMENT DUE	$63,207.96

Steve Wood, Project Engineer

Gelco Construction, Stanley E. Thompson, Project Manager

O.K. FOR PAYMENT
VENDOR # 20350
FUND # 34
DEPT. # 010
BUDGET # 5052000
BY

Approved By:

Rob Foster, Director of Public Works

TRANSMISSION REPORT

CITY OF FOREST GROVE JUN 26 '95 09:23

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 26	09:21	5036563300	GFEST	01'49"	OK	02	

Post-it® Fax Note 7671	Date 6/26	# of pages ▶ 2
To Darrel	From Kelly	
Co./Dept. H.D. Fowler	Co. FG-Eng	
Phone #	Phone # 359.3228	
Fax # 656-1994	Fax # 359-3207	

INVITATION TO BID

ELM STREET LOCAL IMPROVEMENT DISTRICT
WORK ORDER NO. 8194

Sealed proposals for the construction of the **ELM STREET L.I.D.**, street, water distribution with cathodic protection, sanitary sewer, storm drainage, and landscaping reconstruction, will be received at the office of the Director of Support Services of the City of Forest Grove, 1924 Council Street, P.O. Box 326, Forest Grove, OR 97116, until 2:00 p.m. local time the 6th of July, 1995 and then publicly opened and read.

The work consists approximately of:

Concrete Storm Drainage (8" - 24")	**1411 L.F.**
Sanitary Sewer - PVC (6" - 8")	**752 L.F.**
Manholes (48")	**8 Ea**
Curb Inlets	**6 Ea**
PCC Curb and Gutter	**1203 L.F.**
PCC Sidewalk	**5869 S.F.**
PCC Driveway	**2348 S.F.**
Aggregate Base 2"-0 (8" Section)	**2825 S.Y.**
Aggregate Base 3/4"-0 (2"O Section	**3750 S.Y.**
A.C. Pavement (4" Section)	**2950 S.Y.**
Ductile Iron Water Line (6", 8", & 12") Class 52	**652 L.F.**
Parkway Lawn Construction	**620 S.Y.**
Street Trees	**29 Ea**

Plans and specifications may be examined at the office of the Engineering Department, City of Forest Grove Administrative Building, 1924 Council Street, P.O. Box 326, Forest Grove, OR 97116. A copy of said documents may be obtained at the above location/address upon payment of a $30.00 non-refundable fee. The non-refundable fee will be $35.00 if requested by mail.

Each proposal must be submitted on the prescribed form and accompanied by a certified check or bid bond payable to the City of Forest Grove, in an amount equal to five percent (5%) of the amount bid. No bids will be received or considered unless the proposal is properly completed and signed.

The successful bidder will be required to furnish a Performance Bond/ Labor and Material Payment Bond in the full amount of the Contract price.

Attention is called to the following:

1. Contractor, its subcontractors, if any, and all employers working under the Contract are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers.

2. Contractor and all subcontractors must be registered with the Oregon Construction Contractors Board (in compliance with ORS 701.055) and/or the Landscape Contractors Board (in compliance with ORS 671) **prior to the bid opening.**

Construction Contractors Board
(and/or)
Landscape Contractors Board
700 Summer Street, NE, Suite #300
Salem, OR 97310-0151
(503) 378-4621

Award shall be made only to responsible contractors that possess the potential ability to perform successfully under the terms and conditions of the contract. Consideration shall be given to contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

The City of Forest Grove reserves the right in its/their sole discretion to reject any and all proposals or to accept any proposal which appears to serve the best interest of the City.

For more information regarding this project, contact Steve Wood, Project Engineer at 359-3232.

Jeff Hecksel, Director of Support Services
City of Forest Grove

Published: Daily Journal of Commerce - 6/8/95



SPEC PIPE
SPEC REHAB

RONALD D. STALEY, CPA
CONTROLLER

P.O. BOX 40337
EUGENE, OREGON 97404-0049
503/689-5523

Please mail copy of Plans

FAX: 503/689-5530 • EUGENE • CORVALLIS

Sent 6/26/95

INVITATION TO BID

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WORK ORDER NO. 8194

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Curb Inlets	**6 Ea**
PCC Curb and Gutter	**1203 L.F.**
PCC Sidewalk	**5869 S.F.**
PCC Driveway	**2348 S.F.**
Aggregate Base 2"-0 (8" Section)	**2825 S.Y.**
Aggregate Base 3/4"-0 (2"O Section	**3750 S.Y.**
A.C. Pavement (4" Section)	**2950 S.Y.**
Ductile Iron Water Line (6", 8", & 12") Class 52	**652 L.F.**
Parkway Lawn Construction	**620 S.Y.**
Street Trees	**29 Ea**

RECEIVED
JUN 26 1995

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The successful bidder will be required to furnish a Performance Bond/ Labor and Material Payment Bond in the full amount of the Contract price.

Attention is called to the following:

1. Contractor, its subcontractors, if any, and all employers working under the Contract are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers.

SPEC INDUSTRIES INC.
P.O. BOX 40337
EUGENE, OREGON 97404-0049

EUGENE 2A OR 974 PM 22 JUN 1995

EUGENE OR JUN 21 '95 U.S. POSTAGE 32

ENGINEERING DEPT
CITY OF FOREST GROVE
~~0000~~ PO BOX 326
FOREST GROVE, OR 97116

Walt's Concrete Co.

An Oregon Corporation - An Equal Opportunity Employer



City of Forest Grove
Engineering Department
P. O. Box 326
Forest Grove, Oregon 97116

PLANS REQUEST

Enclosed please find our check for plans on the following project:

Elm Street L.I.D.(TV Hwy Bypass to SPRR)
Bid Date: July 6, 1995 @ 2:00 PM

Please send the plans at your earliest possible convenience. If available, please also send a planholder's listing. Thank you.

Sincerely,

Jeanne Oakes

Jeanne Marie Oakes
Contract Administration

enclosure

Sent 6/16/95

(503) 746-3673
FAX (503) 746-4002
945 North 28th Street, Springfield, Oregon 97477

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (JUN 13 '95 13:35)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
JUN 13	13:32	503 232 8023	G3ST	02'31"	OK	06	

COVER SHEET

FAX

To: Dan Symons
Fax #: (503) 232-8023
Subject: Example of Addendum for the City of Forest Grove
Date: June 13, 1995
Pages: 6, including this cover sheet.

COMMENTS:

Dan,

Attached is an example for an addendum to specifications and plans for the City of Forest Grove. These are copied on to colored paper, for example: yellow for addendum #1, orange for addendum #2, etc.

If you have any questions, please give me a call at 359-3228.

Thanks,

Kelly

From the desk of...

Kelly Strother
Engineering Secretary
City of Forest Grove
PO Box 326, 1924 Council Street
Forest Grove, OR 97116

(503) 359-3228
Fax: (503) 359-3207

6/12/95

Dan Symons
Moffatt, Nichol + Bonney
1845 NE Couch St
PDX, 97232

Kelly ...

Please FAX to Dan Symons (Moffat, Nichol & Bonney, Inc.) a copy of the Addendums for the Main St./23rd Ave project (that bids Tues, 6/13).

Also a note that advises to copy onto "yellow" paper.

Please call Dan to let him know FAX is sent. Thankyou STEVE

TEL. 232-2117
FAX 232-8023

sent + called mog 6/13/95 2:45pm

COFFMAN
EXCAVATION

June 12, 1995

Engineering Department
City of Forest Grove
P.O. Box 326
Forest Grove, Oregon 97116

RE: Elm Street LID (TV Hwy Bypass to SPRR) Street Storm, Sanitary Sewer & Water

Enclosed is our check for $35.00, please send the plans and specifications for the above mentioned projects to:

Coffman Excavation
P.O. Box 687
16038 South Depot Avenue
Oregon City, OR 97045

Thank you,

Fran Reusser

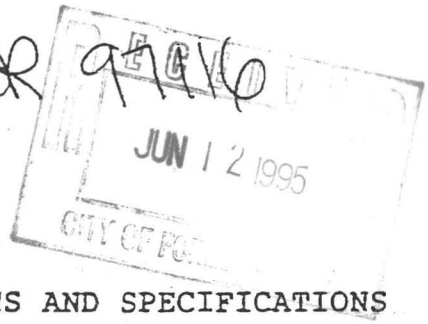
Fran Reusser

enclosure

sent 6/13/95

PACIFIC WATER WORKS SUPPLY CO., INC. OF OREGON
6720 S.W. McEWAN ROAD
LAKE OSWEGO, OREGON 97035
PHONE (503) 620-9123 FAX (503) 684-7213

City of Forest Grove
PO Box 326
Forest Grove, OR 97116



REQUEST FOR PLANS AND SPECIFICATIONS

To Whom It May Concern:

Please forward, to the address shown above, one set of plans and specifications covering the following project:

OWNER: City of Forest Grove

PROJECT: Elm Street LID

BID TIME AND DATE: 7-6-95, 2:00PM

We are enclosing our check number 0200458 in the amount of $ 35.00 to cover the A purchase or the _____ deposit.

We would appreciate receiving a list of current planholders when it is possible.

Very Truly Yours,

PACIFIC WATER WORKS SUPPLY CO., INC. OF OREGON

Lisa L. Johnston

Lisa L. Johnston, Estimator

Sent 6/13/95

Daily Journal of Commerce

PLAN CENTERS

Date: 6-8-95

6/13/95

Attn: Claudia or Nick
City of Forest Grove

As a Plan Center, we are responding to your request for bid on the following project(s):

Elm Street LID - Sanitary Sewer & Water

Would you please forward one set of plans and specs to each of our Plan Centers as listed below:

DJC Plan Center
Attn: Kellie Jenkins
PO Box 10127
2840 NW 35th Avenue
Portland, Oregon 97210
(503) 274-0624
(503) 274-2616

DJC Plan Center
Attn: Linda M. Miller
12254 SW Garden Place
Business Park 217 Bldg 1
Tigard, Oregon 97223
(503) 598-7561
(503) 598-8420

We appreciate your time and consideration and the opportunity to serve you. Please don't hesitate to call me should you have any questions.

Thank you.

Thank you again for your help!

Linda M Miller

Linda M. Miller
Project Coordinator for
DJC Portland and Tigard Plan Centers

LMM:

MOFFATT, NICHOL & BONNEY, INC. Consulting Engineers
1845 N.E. COUCH STREET . PORTLAND, OREGON 97232 . (503) 232-2117 FAX (503) 232-8023

March 1, 1995

Invoice Number 4980A-1
Revised 3-20-95

City of Forest Grove
P.O. Box 326
Forest Grove, OR 97116

Attn: Steve Wood

RE: Elm St. L.I.D. #8194
Forest Grove, OR
Engineering Feasibility Report

BASIC SERVICES

Professional Engineering Services
to February 24, 1995

Engineering	18 Hours @ 72.45 =	1,304.11
Drafting	1 Hour @ 29.93 =	29.93
		1,334.03

REIMBURSABLE EXPENSE

Liability Insurance @ 5% x 1,334.03 66.70

Invoice Total $ 1,400.73

O.K. FOR PAYMENT
VENDOR # _____
FUND # 34
010
5025500
BY _____

LETTER OF TRANSMITTAL

GELCO CONSTRUCTION CO.
1745 SALEM INDUSTRIAL DRIVE N.E.
P.O. BOX 7716
SALEM, OREGON 97303
Phone: (503) 364-2638
FAX: (503) 364-8115

DATE: June 9, 1995

TO: City of Forest Grove
1924 Council St.
P.O. Box 326
Forest Grove, Oregon 97116 Attention:

Sent 6/13/95

RE: City of Forest Grove/Elm Street L.I.D. (TV Hwy Bypass to SPRR)
Street, Strorm, Sanitary Sewer & Water

WE ARE SENDING YOU **X Attached** **__Under separate cover via _____the following items:**
__Drawings **__Tech.literature** **__Video Tapes** **__Samples** **__Specifications**
__Copy of letter **__Change Order** **__Work Reports** **__Submittals**

Copies	Date	Number	Description
		1	Check in the amount of $35.00
1			Call for Bids

REMARKS

Please send plans, specifications and bid documents on the above referenced project.

THESE ARE TRANSMITTED AS CHECKED BELOW:

__For approval __For your use __ As requested ___ copies for approval Return ___copies for distribution
__Return ___corrected prints __For review and comment __For bids due _____19___
__Prints returned after loan to us

Thank you.

Connie L. Karakey
Administrative Assistant

Official Call For Bids

ATTENTION LEGAL ADVERTISERS CHECK YOUR ADS

The first day they appear and notify the Legal Advertising Department of errors immediately. We will not be responsible for errors after the FIRST publication of any advertisement.

To place a Call For Bid advertisement please contact Sandra Ling, 226-1311, Ext. 249.

Deadline: 10:30 A.M. the day previous to publication.

Construction

PUBLISHED FIRST TIME TODAY
ADAMS COUNTY DEPARTMENT OF PUBLIC WORKS
BOOKER ROAD & LUCY ROAD IMPROVEMENTS
Bids due 2:30 pm, June 26
CALL FOR BIDS
RESOLUTION NO. R-70-95

NOTICE TO CONTRACTORS

Sealed bids will be received by Adams County at the office of the Board of County Commissioners located in the courthouse at 210 W. Broadway, Ritzville, Washington 99169, until 2:30 p.m., June 26, 1995 and will then and there be opened and publicly read for construction of the improvements:

The reconstruction of Booker Road #21901, (MP 0.00 to MP 4.29) from Franklin County Line to SR26 by the reconstruction of the roadway by grading, draining, gravel base, and asphalt surfacing. The reconstruction of Lucy Road #23004, (MP 1.99 to MP 4.03) from SR26 to Cunningham Road by the reconstruction of the roadway by grading, draining, gravel base, and asphalt surfacing.

All bid proposals shall be accompanied by a bid proposal deposit in cash, certified check, cashier's check or surety bond in the amount equal to five percent (5%) of the amount of such bid proposal. Should the successful bidder fail to enter into such contract and furnish satisfactory performance bond within the time stated in the specifications, the bid proposal deposit shall be forfeited to the County of Adams. All checks and bonds shall be made payable to the Adams County Treasurer.

The Board of Adams County Commissioners reserves the right to reject any or all bids, to waive informalities or irregularities in the bids or in the bidding, if the best interest of Adams County will be served, or to accept the bid, which in their opinion best serves the interest of Adams County.

Pre-qualification of bidders is required. Maps, plans, specifications, and proposals may be obtained from the office of the Department of Public Works, 210 W. Alder, Ritzville, Washington, 99169; phone (509) 659-4236.

The following is applicable to Federal-Aid projects. Adams County, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, nondiscrimination in federally assisted programs of the Department of Transportaion issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Informational copies of maps, plans and specifications are on file for inspection in the office of the Adams County Engineer in Ritzville, Washington, the chapter office of the Associated General Contractors of America in Spokane, Washington and Support Services Center, Seattle, Washington.

DATED this 5th day of June, 1995.

BOARD OF ADAMS COUNTY COMMISSIONERS
BILL SCHLAGEL, Chairman
BILL WILLS, Commissioner
SHAWN R. LOGAN, Commissioner

Published June 8, 15 & 22, 1995.
6748CB-3Th

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PUBLISHED FIRST TIME TODAY
CITY OF FOREST GROVE
ELM STREET L.I.D. (TV HWY BYPASS TO SPRR) STREET, STORM, SANITARY SEWER & WATER
W.O. #8194
Bids due 2:00 pm, July 6
INVITATION TO BID

Sealed proposals for the construction of the ELM STREET L.I.D., (TV Hwy Bypass to SPRR), Street, Storm, Sanitary Sewer and Water, W.O. #8194, will be received at the office of the Director of Support Services of the City of Forest Grove, 1924 Council Street, P.O. Box 326, Forest Grove, OR 97116, until 2:00 p.m. local time the 6TH OF JULY, 1995 and then publicly opened and read.

The work consists approximately of: Concrete Storm Drainage (8"-24"), 1411 LF; Sanitary Sewer - PVC (6"-8"), 752 LF; Manholes (48"), 8 EA; Curb Inlets, 6 EA; PCC Curb and Gutter, 1203 LF; PCC Sidewalk, 5869 SF; PCC Driveway; 2348 SF; Aggregate Base 2"-0 (8" Section), 2825 SY; Aggregate Base 3/4"-0 (2" O Section), 3750 SY; A.C. Pavement (4" Section), 2950 SY; Ductile Iron Water Line (6", 8" & 12") Class 52, 652 LF; Parkway Lawn Construction, 620 SY; Street Trees, 29 EA.

Plans and specifications may be examined at the office of the Engineering Department, City of Forest Grove Administrative Building, 1924 Council Street, P.O. Box 326, Forest Grove, OR 97116. A copy of said documents may be obtained at the above location/address upon payment of a $30.00 non-refundable fee. The non-refundable fee will be $35.00 if requested by mail. Plans and specifications will be available Tuesday, June 13, 1995.

Each proposal must be submitted on the prescribed form and accompanied by a certified check or bid bond payable to the City of Forest Grove, in an amount not less than ten percent (10%) of the amount bid. No bids will be received or considered unless the proposal is properly completed and signed.

The successful bidder will be required to furnish a Performance and Payment Bond for faithful performance of the Contract in the full amount of the Contract price.

Attention is called to the following:

1. Contractor, its subcontractors, if any, and all employers working under the Contract are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers.

2. Contractor and all subcontractors are subject to wage rates as per "Prevailing Wage Rates for Public Works Contracts in Oregon, effective January 1, 1995.

3. Contractor and all subcontractors must be registered with the Oregon Construction Contractors Board (in compliance with ORS 701.055) and/or the Landscape Contractors Board (in compliance with ORS 671) prior to bid opening. Construction Contractors Board and/or Landscape Contractors Board, 700 Summer Street, NE, Suite #300, Salem, OR 97310-0151, (503) 378-4621.

Award shall be made only to responsible contractors that possess the potential ability to perform successfully under the terms and conditions of the contract. Consideration shall be given to contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

The City of Forest Grove reserves the right in its sole discretion to reject any and all proposals or to accept any proposal which appears to serve the best interest of the City.

For more information regarding this project, contact Steve Wood, Project Engineer, at 359-3232.

JEFF HECKSEL,
Director of Support Services
City of Forest Grove

Published June 8, 1995. 6756CB-1t

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CITY OF KELSO
MULTI-MODAL TRANSPORTATION FACILITY PHASE III
Bids due 2:00 pm, June 14
ADVERTISEMENT FOR BIDS

Notice is hereby given that sealed bids will be received at the office of the PUBLIC WORKS DIRECTOR, City of Kelso, 312 Allen Street, up to 2 p.m. on the 14th day of JUNE, 1995, and immediately thereafter the proposals will be publicly opened and read. Contract of construction will be awarded within 10 calendar days after the bid opening date.

The proposed work for each schedule shall be for the furnishing of all labor, materials and supervision for: The improvements to the Kelso Multi-Modal Transportation Facility by redeveloping the site and improving the streets that serve the multi-modal transportation facility. The specific Phase Three work consists of the excavation and removal of existing material, constructing retaining walls, parking facilities, improving existing streets, and associated site work. A canopy structure, a clock tower, and landscaping are included under alternate bids.

Contract specifications may be obtained at the office of the Kelso City Engineering Department, 312 Allen Street, Kelso, Washington 98626; upon payment of a $35.00 non-refundable fee.

The City of Kelso in compliance with the standard USDOT Title VI Assurances hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, or national origin in consideration for an award.

All proposals must be submitted on the regular form furnished with the specifications and each must be accompanied by a certified check or bidder's bond made payable to the City of Kelso in an amount not less than five percent (5%) of the total bid. A corporate surety bond in the full amount of the contract award will be required to guarantee its faithful performance.

Wages: The bidders must be aware of the conditions of employment that must be complied with and the minimum wage requirements, state and/or federal, whichever governs, that shall be paid under this contract.

The City of Kelso reserves the right to reject any or all bids, waive informalities or irregularities and to accept any bid for the project which appears to serve the best interest of the City.

VERYL ANDERSON, Finance Director
City of Kelso, Washington

Published May 25, June 1 & 8, 1995.
6580CB-3Th

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PUBLISHED FIRST TIME TODAY
THE PORT OF PORTLAND
PORTLAND INTERNATIONAL AIRPORT RUNWAY 10R-28L REHABILITATION PHASE 1-B
Bids due 2:00 pm, June 29
ADVERTISEMENT FOR BIDS
AIRPORT IMPROVEMENT PROGRAM (AIP) PROJECT NO. 3-41-0048-28

Sealed bids for the Portland International Airport Runway 10R-28L Rehabilitation, Phase 1-B, will be received at the office of the Manager, Contracts and Procurement, of The Port of Portland, 700 N.E. Multnomah Street, 15th floor, Portland, Oregon 97232, (503) 731-7593 (mailing address: Post Office Box 3529, Portland, Oregon 97208) until, but not after, 2 p.m., June 29, 1995, and thereafter publicly opened and read.

Disadvantaged Business Enterprise (DBE) Program:

Bidders are required to show that small subcontractors, suppliers, or manufacturers which have been certified by the Oregon State Office of Minority, Women, and Emerging Small Business as disadvantaged, minority, or women business enterprises (collectively "Disadvantaged Business Enterprises" or "DBEs") will participate in not less than 5 percent of the total dollar amount bid.

Description of Work:

1. Install new conduits, wiring, transformers, base receptacles, and guidance sign, lighted wind cone, and "Brite" enclosure foundations. The work includes new taxiway hold position lighting, installing Port-provided guidance and distance-to-go signs, installing Port-provided wind cones, conversion of existing guidance sign electronics, and recircuiting of airfield guidance sign circuits.

2. Install new Port-furnished ADB-Alnaco airfield lighting control equipment on the airfield and in the Central Utility Plant (CUP). The work includes installation of control equipment at Taxiways B6/C6, E North, E South, B-ILS, and C-ILS. Relocation of Taxiway B-ILS and C-ILS. The work also includes "Brite" system airffield/CUP mock-up operation testing and final system connections.

3. Prepare RVR equipment sites, install power service and circuit extension to a new mid-field and a roll-out RVR. The work includes graveling RVR sites and access roads. Install RVR equipment concrete foundations and Port-furnished RVR cabling, RVR tower/poles, and associated hardware. RVR final equipment connections and system start up will be by others.

4. Install Port-provided Precision Approach Path Indicator (PAPI) lamp housings and power and control equipment on existing support racks. Perform final PAPI system light aiming and system operation testing.

A prebid conference will be held at 9:00 a.m. on Monday, June 19, 1995, at the Portland International Airport Maintenance Facility, 7111 N.E. Alderwood Road, Portland, Oregon, to discuss all aspects of the work, work phasing, and project safety and security. Bidders are strongly encouraged to attend. This will be the only time that the taxiways will be closed for site inspection prior to bid opening.

Please direct technical questions to the Project Engineer, Franko Martinec, (503) 731-7361.

Bids must be on the bid form which will be provided to prospective bidders and must be accompanied by a certified or cashier's check drawn on a United States bank or a bid bond payable to The Port of Portland in an amount equal to at least 10 percent of the total amount bid.

Prequalification is not required for this work.

The drawings and the contract manual may be examined at Port offices. Copies may be obtained by prospective bidders at no cost from Contracts and Procurement (address above).

This is a federal aid contract, and all labor shall be paid no less than the minimum wage rates establsihed by the U.S. Secretary of Labor, as included in the contract documents.

The labor and civil rights requirements in the Bid and the Supplementary Conditions apply to this work. The proposed Contract is under the subject of Executive Order 11246 on Nondiscrimination Under Federal Contracts, September 24, 1965, and as amended; and 49 CFR Part 23, on Participation By Disadvantaged Business Enterprises in United States Department of Transportation Programs, March 31, 1980, and as amended.

Disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the basis of race, color, national origin, or sex in consideration for an award of any contract entered into pursuant to this advertisement.

Bidders are required to state whether or not the bidder is a resident bidder, as defined in ORS 279.029. (Reference Article 3 of the Instructions to Bidders).

No bid will be received or considered unless the bidder is registered with the State of Oregon Construction Contractors Board, pursuant to ORS 701.055 (1), prior to submitting a bid. (Reference Articles 10, 12, and 13 in the Instructions to Bidders.)

A license for asbestos work under ORS 468A.720 is not required for this work.

Bids may be rejected if not in compliance with bidding procedures and requirements. Any or all bids may be rejected if in the public interest to do so.

THE PORT OF PORTLAND
RON STEMPEL, Manager for
Contracts and Procurement

June 8, 1995
Published June 8, 9 & 12, 1995.
6763CB-3t

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PUBLISHED FIRST TIME TODAY
EUGENE SCHOOL DISTRICT 4J
FIRE ALARM SYSTEM AT 6 SCHOOLS
Bids due 3:00 pm, June 27
ADVERTISEMENT FOR BIDS

Sealed bids will be received by Marilyn Thielke for the Fire Alarm System at 6 Schools on June 27, 1995 until 3:00 p.m. at the Eugene School District 4J Administration Office, 200 North Monroe, Eugene, Oregon 97402, at which time and place they will be publicly opened and read aloud.

Briefly the work is described as a new fire alarm and detection system with associated devices, wiring, and other equipment at the following schools: Awbrey Park Elementary School, 158 Spring Creek Drive, Eugene, Oregon; Crest Drive Elementary School, 1155 Crest Drive, Eugene, Oregon; Monroe Middle School, 2800 Bailey Lane, Eugene, Oregon; Cal Young Middle School, 2555 Gilham Road, Eugene, Oregon; Edison Elementary School, 1328 E. 22nd Avenue, Eugene, Oregon; Spencer Butte Middle School, 500 E. 43rd Street, Eugene, Oregon.

Prime Bidders may obtain one set of bidding documents beginning June 9, 1995 at the offices of Systems West Engineers, Inc., 1600 Valley River Dr., Suite 310, Eugene, Oregon 97404, (503) 342-7210. A refundable Bid Document Deposit of $100.00 is required with checks made payable to SCHOOL DISTRICT NO. 4J. Prime Bidders may obtain additional sets by paying the cost of reproduction.

Sub-bidders and suppliers may obtain bidding documents beginning June 9, 1995 at Central Blueprint, 47 West 5th Avenue, Eugene, Oregon, 97401 by paying the cost of production. However, it is

ELM STREET
V. I. P.
#8194

DOCUMENT #_____

ELM STREET
LOCAL IMPROVEMENT DISTRICT

WORK ORDER NO. 8194

PROJECT MANUAL

OREGON SPECIAL PUBLIC WORKS FUND

CITY OF FOREST GROVE, OREGON

CITY MANAGER: IVAN BURNETT

DIRECTOR OF PUBLIC WORKS: ROB FOSTER

CITY OF FOREST GROVE, OREGON

CONTRACT DOCUMENTS

For the Construction of the

ELM STREET
LOCAL IMPROVEMENT DISTRICT
WORK ORDER NO. 8194



Expires June 30, 1996

*****

Consisting of:
Invitation to Bid
Bid Proposal
Bid Bond
Contract Form
Performance and Payment Bond
General Conditions
Standard Specifications
Special Specifications
Plans

Prepared By:
MOFFATT, NICHOL & BONNEY, INC.
1845 N.E. COUCH STREET
PORTLAND, OREGON

and

CITY OF FOREST GROVE
ENGINEERING DEPARTMENT
FOREST GROVE, OREGON

CONTRACT DOCUMENTS

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Bid Bond ..... Bid Bond

Contract Form ..... Contract

Performance and Payment Bond ..... Perf. Bond

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BID PROPOSAL

TO: Catherine L. Jansen, City Recorder
City of Forest Grove Administration Building
1924 Council Street (PO Box 326)
Forest Grove, Oregon 97116

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein; that this Proposal is, in all respects, fair and without fraud; that it is made without collusion with any official of the Owner; and that the Proposal is made without any connection or collusion with any person making another proposal on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents; that he has personally inspected the site; that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the same quantities with the detailed requirements of the Contract Documents; and that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

The Bidder further agrees that he has exercised his own judgement regarding the interpretation of surface and subsurface information and has utilized all data which he believes pertinent from the Engineer, Owner, and other sources in arriving at his conclusions.

The Bidder further agrees that all of the applicable provisions of Oregon Law relating to public contracts (ORS Chapter 279) are, by this reference, incorporated in and made a part of this proposal.

The Bidder further agrees that if this Proposal is accepted, he shall, if requested by the Engineer, submit a statement of qualifications in a form adopted by the State of Oregon Public Contract Review Board and/or a list of names of subcontractors he intends to utilize in the execution of the contract, within twenty-four (24) hours of the request.

The Bidder further agrees that if this Proposal is accepted, he will, within ten (10) calendar days after notification of acceptance, execute the Contract with the Owner on the form of Contract annexed hereto; and will, at the time of execution of the Contract, deliver to the Owner the Performance and Payment Bond and will, to the extent of his Proposal, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all materials necessary to complete the work in the manner, in the time, and according to the methods as specified in the Contract Documents and required by the Engineer thereunder.

The Bidder further agrees to furnish the Owner, before commencing the work under this contract, the certificate of insurance as specified in these documents.

The Bidder further agrees to commence work following the issuance of a "Notice to Proceed" by the Owner and fully complete the project within **100 calendar days**.

Once the Contractor has moved onto the project site, work shall commence and continue, uninterrupted, until fully complete and accepted by the City.

In the event the Bidder is awarded the contract and shall fail to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, the Bidder further agrees to pay liquidated damages, until the work is finished, as specified in these Documents.

The Bidder further proposes to accept as full payment for the work proposed herein the amount computed under the provisions of the Contract Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the quantities involved, that said unit prices represent a true measure of the labor and material required to perform the specified unit of work, including all allowance for overhead and profit for each type and unit of work called for in these Contract Documents.

The amounts shown shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
1.	Mobilization.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
2.	Temporary Traffic Control.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
3.	Environmental Controls	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
4.	Unclassified Excavation.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
5.	Trench Foundation	100	Cub. Yards	_____	_____ Unit Price in Writing	$ _____
6.	Dewatering.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
7.	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	233	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
8.	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	79	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
9.	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	229	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
10.	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	76	Lin. Feet	_____	_____ Unit Price in Writing	$ _____

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
11.	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	294	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
12.	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	26	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
13.	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	394	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
14.	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	80	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
15.	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	102	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
16.	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B Backfill, complete and in place.	650	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
17.	48-inch sanitary manhole.	3	Each	_____	_____ Unit Price in Writing	$ _____

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
18.	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
19.	48-inch storm manhole complete	5	Each	_____	_____ Unit Price in Writing	$ _____
20.	Curb inlet.	6	Each	_____	_____ Unit Price in Writing	$ _____
21.	Monolithic curb and gutter.	1203	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
22.	Sidewalk.	5869	Sq. Feet	_____	_____ Unit Price in Writing	$ _____
23.	Driveway (8-inch thick P.C.C.)	2348	Sq. Feet	_____	_____ Unit Price in Writing	$ _____
24.	Aggregate Base (2"-0) (8" depth).	2825	Sq. Yards	_____	_____ Unit Price in Writing	$ _____
25.	Aggregate Base (3/4"-0) (2" depth).	3750	Sq. Yards	_____	_____ Unit Price in Writing	$ _____
26.	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	2950	Sq. Yards	_____	_____ Unit Price in Writing	$ _____
27.	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	360	Sq. Yards	_____	_____ Unit Price in Writing	$ _____

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
28.	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	5	Each	_____	_____ Unit Price in Writing	$ _____
29.	Type I-L Barricade.	1	Each	_____	_____ Unit Price in Writing	$ _____
30.	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
31.	10" tapping sleeve, 10' NRS Gat Valve Box, 10 x 12 reducer installed complete.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
32.	6" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	35	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
33.	8" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	50	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
34.	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	567	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
35.	12" NRS gate valve with valve box, complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
36.	8" NRS gate valve with valve box, complete.	1	Each	_____	_____ Unit Price in Writing	$ _____

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
37.	2" NRS gate valves with valve box, complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
38.	12 x 6 x 12 Ductile Iron Tee complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
39.	12" x 22.5 Deg. Elbow complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
40.	12 x 8 x 12 Ductile Iron Tee complete.	1	Each	_____	_____ Unit Price in Writing	$ _____
41.	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
42.	1" water service taps with corp stop, vault, & meter setter.	2	Each	_____	_____ Unit Price in Writing	$ _____
43.	2" water service taps with corp stop.	2	Each	_____	_____ Unit Price in Writing	$ _____
44.	1" Polyethylene water service.	275	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
45.	2" Polyethylene water service.	50	Lin. Feet	_____	_____ Unit Price in Writing	$ _____
46.	12 Month Establishment Period Watering and Maintenance.	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
47.	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear), 2" caliper, 6 ft branch height.	5	Each	_____	_____ Unit Price in Writing	$ _____

The amounts shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

ITEM		QUANTITY	UNIT OF MEASURE	UNIT PRICE FIGURES	WRITTEN UNIT PRICE OR LUMP SUM	TOTAL AMOUNT QUANTITY X UNIT PRICE
48.	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2' caliper, 6 ft branch height.	4	Each	_____	_____ Unit Price in Writing	$ _____
49.	Furnish & plant: Acer Rubrum A.Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	8	Each	_____	_____ Unit Price in Writing	$ _____
50.	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	4	Each	_____	_____ Unit Price in Writing	$ _____
51.	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6 ft branch height.	8	Each	_____	_____ Unit Price in Writing	$ _____
52.	Seeded Lawn construction (in parkway area).	620	Sq. Yards	_____	_____ Unit Price in Writing	$ _____
53.	Furnish and place topsoil 6 inch in-place depth in parkway area. (Approximately 620 SY)	1	Lump Sum	_____	_____ Unit Price in Writing	$ _____
54.	2" gray PVC conduit (for underground sleeving)	490	Lin. Feet	_____	_____ Unit Price in Writing	$ _____

TOTAL BID PRICE _____ IN WRITING

TOTAL BID PRICE $ _____

It is agreed that if the Bidder is awarded the Contract for the work herein proposed and shall fail or refuse to execute the Contract and furnish the specified Performance Bond and the Labor and Material Payment Bond within ten (10) calendar days after receipt of notification of acceptance of his Proposal, then, in that event, the Proposal Guaranty deposited herewith according to the conditions of the Invitation for bids and General Conditions shall be retained by the Owner as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the Owner will sustain in case the Bidder shall fail or refuse to enter into the Contract for the said work and to furnish the Performance Bond and the Labor and Material Payment Bond as specified in the Contract Documents. Proposal Guaranty in the form of a certified check shall be subject to the same requirements as a bid bond.

If the Bidder is awarded a construction Contract on this Proposal, the Surety who will provide the Performance Bond and the Labor and Material Payment Bond will be _____ ____ whose address is:

_____(Street)

(City) (State)

The name of the Bidder who is submitting this Proposal is _____ ___ doing business at:

_____(Street)

(City) (State)

which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

_____

_____

_____

(If Corporation)

In Witness whereof the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers that _____ day of _____, 19___.

_____
Name of Corporation

By _____

_____
Title

Attest _____

(If Sole Proprietor or Partnership)

In Witness hereto the undersigned has set his (its) hand this _____ day of _____, 19___.

_____
Signature of Bidder

_____
Title

Oregon Construction Contractors Board Registration No. _____
and/or
Oregon Landscape Contractors Board Registration No. _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT _____

_____, hereinafter called the Principal, and _____, a corporation duly organized under the laws of the State of _____, having its principal place of business at _____, in the State of _____ and authorized to do business in the State of Oregon, as Surety, are held and firmly bound unto the CITY OF FOREST GROVE, hereinafter called the Obligee in the penal sum of _____ Dollars. ($_____), for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Bond is such that, whereas, the Principal herein is herewith submitting his or its Bid Proposal for ELM STREET LOCAL IMPROVEMENT DISTRICT, WORK ORDER NO. 8194 said Bid Proposal, by reference thereto, being hereby made a part hereof.

NOW, THEREFORE, if the said Bid Proposal submitted by the said Principal be accepted, and the Contract be awarded to said Principal, and if the said Principal shall execute the proposed Contract and shall furnish the Performance Bond as required by the Bidding and Contract Documents within the time fixed by said Documents, then this obligation shall be void, otherwise to remain in full force and effect.

_____

By: _____
Principal

_____
Surety

Countersigned:

By: _____
Attorney-In-Fact

_____
Resident Agent

CONTRACT FOR CONSTRUCTION

THIS CONTRACT, made and entered into this _____ day of _____, 19___, by and between CITY OF FOREST GROVE, hereinafter called the "Owner", and _____, of___ _____, hereinafter called the "Contractor".

WITNESSETH:

Said Contractor, in consideration of the sum to be paid him by the said Owner and of the covenants and agreements herein contained, hereby agrees at his own proper cost and expense to do all the work and furnish all the materials, tools, labor, and all appliances, machinery and appurtenances for the construction of:

ELM STREET L.I.D.
WORK ORDER NO. 8194

to the extent of the Proposal made by the Contractor on the _____, all in full compliance with the Contract Documents referred to herein.

The signed copy of the Bid Proposal made by the Contractor on the _____, the fully executed Performance/Labor and Material Payment Bond, the General Conditions, the Standard and the Special Specifications, entitled **ELM STREET L.I.D.**, dated March, 1995, are hereby referred to and by reference made a part of this Contract (as fully and completely as if the same were fully set forth herein) and are mutually cooperative therewith.

In consideration of the faithful performance of the work herein embraced, as set forth in these Contract Documents, and in accordance with the direction of the Engineer and to his satisfaction to the extent provided in the Contract Documents, the Owner agrees to pay to the Contractor the amount bid as adjusted in accordance with the Proposal as determined by the Contract Documents, or as otherwise herein provided, and based on the said Proposal made by the Contractor, and to make such payments in the manner and at the times provided in the Contract Documents.

The Contractor agrees to meet with the Engineer for a pre-construction conference within seven (7) calendar days after the execution of this Contract to review and submit the Contractor's schedule of expected events, as specified in the General Conditions.

The Contractor agrees to complete the work within the time specified and to accept as full payment hereunder the amounts computed as determined by the Contract Documents and based on the said Proposal.

The Contractor agrees to indemnify and save harmless the Owner from any and all defects appearing to develop in the workmanship or materials performed or furnished under this Contract for a period of one (1) year after the date of the written notice from the Engineer recommending final acceptance of the entire project by the Owner.

In the event that the Contractor shall fail to complete the work within the time limit or the extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid as specified in the General Conditions.

The Contractor agrees that in the event there is any dispute between the parties arising out of this agreement, it shall be determined in Washington County, Oregon, and the prevailing party will be entitled to all costs whether or not arbitration, or suit or action is instituted, including without limitation, reasonable attorney's fees during arbitration, at trial, on appeal, and in connection with enforcement of any judgement.

IN WITNESS WHEREOF, we, the parties hereto, each herewith subscribe the same this _____day of _____, A.D., 19____.

CONTRACTOR:_____
By _____

Title_____

OWNER: CITY OF FOREST GROVE

By _____

Title: City Manager

PERFORMANCE AND PAYMENT BOND

AMOUNT$_____
BOND NO._____

KNOW ALL MEN BY THESE PRESENTS, that we _____
_____(Principal)
and the _____ (Surety), a corporation organized and existing under and by virtue of the laws of the State of _____ duly authorized to transact a surety business in the State of Oregon, are held firmly bound unto the city of Forest Grove, Oregon (Obligee) for the penal sum of _____DOLLARS $ _____, to be paid to Obligee, we do bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that on the _____ day of _____, 19_____, the Principal entered into a contract with the Obligee described as follows:

ELM STREET L.I.D., WORK ORDER NO. 8194

This performance bond shall guarantee the improvement against defects in materials or workmanship for a period of one (1) year from the date of written acceptance of the project by the Obligee.

NOW, THEREFORE, If the Principal shall faithfully and truly observe and comply with the terms of the Contract, and shall well and truly perform all matters and things undertaken to be performed under the Contract, and shall promptly make payments to all persons supplying labor or material for any prosecution of the work provided for in each contract, and shall not permit any lien or claim to be filled or prosecute against the Obligee on account of any labor or material furnished, and shall promptly pay all contributions or amounts due the State Accident Insurance Fund, and all contributions or amounts due the State Unemployment Compensation Trust Fund incurred in the performance of the Contract; and shall promptly, as due, make payment to the person, co-partnership, association or corporation entitled to the monies and sums mentioned in Section 279.320 of the Oregon Revised Statutes, then this obligation is to be void, otherwise, to remain in full force and effect.

The total amount of the Surety's liability under this bond, both to the Obligee and to the persons furnishing labor, materials, provisions, and goods and to any other person or persons, shall in no event exceed the penalty. Provided, however, that the conditions of the obligation shall not apply to any money loaned or advanced to the Principal or to any subcontractor or other person in the performance of any such work, whether specifically provided for in the contract or not.

This bond is executed for the purpose of complying with Chapter 279 of Title 26, Oregon Revised Statutes, the provisions of which are incorporated and made a part of this bond.

IN WITNESS WHEREOF, the above name parties have executed this instrument this _____ day of _____, 19_____.

WITNESS_____

_____	_____
Principal	Surety
By:_____	By:_____
	Attorney-In-Fact

ELM STREET
LOCAL IMPROVEMENT DISTRICT

WORK ORDER NO. 8194

GENERAL CONDITIONS

March 1995

A. DEFINITIONS AND ABBREVIATIONS

Unless otherwise defined in the contract documents, the following definitions and abbreviations shall apply wherever used.

The words directed, required, permitted, ordered, requested, instructed, designated, considered necessary, prescribed, approved, acceptable, satisfactory, or words of like import, refer to actions, expressions and prerogative of the Engineer.

Command type sentences are used throughout the contract documents. In all cases the command expressed or implied is directed to the Contractor.

1. DEFINITIONS

Acts of God

An act of God is to be construed to mean an earthquake, flood, cloudburst, tornado, hurricane or other phenomenon of nature of catastrophic proportions or intensity.

Advertisement

The public announcement inviting bids for work to be performed or materials to be furnished.

Approved Equal

A product, component or process whose use in or on a particular project is specific as a standard for comparison purposes only. The "equal" product, component or process shall be the same or better than that named in function, performance, reliability, quality and general configuration. Determination of equality in reference to the project design requirements will be made by the Engineer.

Attorney

The attorney representing the owner.

Bid Bond

The bond required to be submitted with each proposal as a proposal guarantee.

Bidder

Any individual, firm, co-partnership or corporation submitting a proposal in response to the advertisement calling for bids on the work contemplated.

Calendar Day

Any day shown on the calendar beginning and ending at midnight.

Change Order

A written order, approved by the owner, and issued by the Engineer to the Contractor, covering changes in either the plans, specification, or quantities within the scope of the contract.

Contract

A part of the contract documents which stipulates conditions on which the work is agreed to be performed, executed by the owner and the Contractor.

Contract Cost

The aggregate amount of price promised to be paid by the owner to the Contractor upon fulfillment of the contract.

Contract Documents

The written agreement covering the performance of the work, the advertisement calling for bids, the proposal, plans, all specifications, addenda, permits, contract, contract bonds, change orders in the course of the work, and any approved revisions made during the performance of the work to any of the above listed documents.

Contract Item

A specific unit of work for which a price or basis of payment is provided in the contract.

Contracting Agency

The legal entity for which the work is being performed.

Contractor

Any individual, firm, co-partnership, corporation or any combination thereof who has entered into the contract with the owner. In the case of work being done under permit issued by the owner, the permittee shall be construed to be the Contractor.

Easement

The right to use a defined area of property for a specific purpose or purposes as set forth in a document which has been made a part of the contract documents.

Engineer

The Engineer who represents the owner either directly or through his authorized representatives and designated by the contracting agency to supervise the work during its execution.

Extra Work

An item of work not provided for in the contract as awarded but determined by the Engineer as essential to the proper completion of the contract within its intended scope.

Highway

The whole area within the boundaries of a public right-of-way which is reserved for and secured for public use in constructing and maintaining a roadway and its appurtenances.

Inspector

The authorized representative of the Engineer entrusted with making detailed inspections of the work or materials.

Legal Holiday

The following, subject to subsequent change by law, are legal holidays: Sunday, New Years, Lincoln's birthday, Washington's birthday, Memorial day, Independence day, Labor day, Veterans day, Thanksgiving, Christmas, and those days declared as holidays by authorized public proclamation. When a legal holiday, other than Sunday, falls on a Sunday, the immediately following Monday is a legal holiday.

Loose Riprap

Specified classes of graded rock placed on prepared slope, geotextile, or filter blanket as specified.

Lump Sum

A method of payment providing for one all inclusive cost for the work or for a particular portion of the work.

Notice

A written communication delivered to the authorized individual, member of the firm or officer of the corporation for which it is intended. If delivered or sent by mail, it shall be addressed to the last known business address of the individual, firm or corporation. In the case of a contract with two (2) or more persons, firms or corporations, notice to one shall be deemed notice to all.

Notice to Proceed

A written notice to the Contractor from the Engineer or owner, designating the date the contract term is begun and the date for final completion of the contract.

OSHD Standard Specifications

The latest edition of the specification document published by the State of Oregon entitled "Standard Specifications for Highway Construction", Oregon State Highway Division; available from the Oregon State Highway Division, Salem, Oregon.

Owner

The legal entity or contracting agency for which the work is being performed.

Performance Bond

The form of security approved by the owner, furnished by the Contractor and his surety, guaranteeing the complete and faithful performance of all the obligations and conditions placed upon the Contractor by the contract.

Plans

The official plans, profiles, cross sections, elevations, details and other working, supplementary and detail drawings, or reproductions thereof, signed by the Engineer, which show the location, character, dimension and details of the work to be performed. Plans may either be bound in the same book as the balance of the contract documents or bound in separate sets, and are a part of the contract documents, regardless of the method of binding.

Proposal

The offer of the bidder to perform work at the prices quoted, submitted on the owner's official proposal form, properly signed and guaranteed.

Proposal Guaranty

The security furnished with a proposal to assure that the bidder will enter into the contract if the proposal is accepted.

Provide

When related to an item of work, provide shall be understood to mean furnish and install the work complete in place.

Reference Specifications

Bulletins, standards, rules, methods of analysis or test, codes and specifications of other agencies, engineering societies, or industrial associations referred to in the contract documents. All such references specified herein refer to the latest edition thereof, including any amendments thereto which are in effect and published at the time of advertising for bids or of issuing the permit for the project.

Right of Way

A general term denoting land, property, or interest therein, acquired for or devoted to public use.

Road

Every road or roadway, thoroughfare, and place including bridges, viaducts and other structures used or intended for use of vehicles.

Shown

As used herein, the work shown, or as shown, shall be understood to refer to work shown on the plans in the contract documents.

Special Specifications (Special Provisions)

Requirements peculiar to the project and changes and modifications of the standard specifications. Special specifications are used interchangeably with special provisions.

Specified

As used herein the work specified, or as specified, means as required by the contract documents.

Standard Plans or Drawings

Details of structures, devices, or instructions adopted by the owner as a standard and referred to in the contract documents by title or number.

Standard Specifications

The terms, directions, provisions and requirements set forth in this document, together with all subsequent addenda and supplements thereto identified as such.

Station

A distance of 100 feet measured horizontally along a surveyed centerline.

Street

Any road, highway, parkway, freeway, avenue, alley, walk, or way, including sidewalks, parking strips and all other structures including utilities above and below the surface, land and improvements within the public right of way between property lines.

Subcontractor

An individual, partnership, firm, corporation, or any acceptable combination thereof, or joint venture to whom the Contractor, with the written consent of the owner, sublets part of the contract.

Surety

The corporate body which is bound with and for the Contractor, for the acceptable performance of the contract, and for his payment of all obligations arising out of the contract. Where applying to the "Proposal Guaranty", it refers to the corporate body which engages to be responsible

for the bidder's execution of a satisfactory contract when and if his bid is accepted by the commission.

Ton
The short ton of 2,000 pounds avoirdupois.

Unit Price
A contact item of work providing for payment based on a specified unit of measurement; e.g. linear foot or cubic yard.

Utility
Tracks, overhead or underground wires, pipelines, conduits, ducts, or structures, owned, operated, or maintained in or across a public right-of-way or easement.

Work
That which is proposed to be constructed or performed under the contract or permit, including the furnishing of all material, labor, tools, machinery and appurtenances necessary to complete the contract.

Working Day
Any and every calendar day excluding Sundays and legal holidays.

Working Drawings
Stress sheets, shop drawings, erection plans, falsework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data which the Contractor is required to submit to the Engineer for approval.

2. ABBREVIATIONS

AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AGC	American General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APWA	American Public Work Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
DEQ	Department of Environmental Quality
DFPA	Division for Product Approval of American Plywood Assoc.
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
ITE	Institute of Traffic Engineers
JIC	Joint Industry Conferences of Hydraulic Manufacturers
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NLMA	National Lumber Manufacturer's Association
ORS	Oregon Revised Statutes
OSHA	Occupational Safety and Health Administration
OSHD	Oregon State Highway Division
PCA	Portland Cement Association
UBC	Uniform Building Code
UL	Underwriter's Laboratories, Inc.
WWPA	Western Wood Products Association

B. PROPOSAL REQUIREMENTS

1. PREQUALIFICATION OF BIDDERS

Attention of bidders is called to the requirements of Oregon Revised Statutes, Chapter 279, relating to prequalification of bidders on public contracts. All bidders shall prequalify in accordance with the enacted requirements of the owner.

2. FORM OF PROPOSAL

Bidders shall enclose the proposal, bid bond, or certified check or cashier's check in a sealed envelope, labeled and addressed as required in the Invitation for Bids, and file as required therein.

All proposals shall be clearly and distinctly typed or written. Changes may be made provided the change is initialed.

All proposals shall be on the form furnished by the owner, and in addition to the necessary unit price items and total prices in the column of totals to make a complete bid, all applicable blanks giving general information must be filled in and the bid signed by the Contractor or a duly authorized agent. Any statement accompanying and tending to qualify a bid may cause rejection of such bid, unless such statement is required or permitted.

Unless otherwise specified, bidders shall bid on all bid items included in the proposal and the lower bidder shall be determined in accordance with subsection C-1.

3. WITHDRAWAL, MODIFICATION OR ALTERATION OF PROPOSAL

A proposal may be withdrawn upon written request of the bidder prior to the scheduled closing time for filing bids. Negligence on the part of the bidder in preparing his proposal confers no right to withdraw his proposal after the scheduled closing time for filing bids.

Change in a delivered proposal will be permitted only if a request for making such modification is made in writing, signed by the bidder, and the specific modification is stated and received prior to the scheduled closing time for filing bids.

4. LATE PROPOSALS

Proposals received after scheduled closing time for filing bids will not be opened or considered by the owner unless such bid, if sent through the mails, shows a legible postmark or post office cancellation proving the time of mailing was at least 48 hours prior to the scheduled closing time for filing bids, and such proposal is received before the award has been made.

5. PROPOSAL GUARANTY

All proposals must be accompanied by a proposal guarantee in the form of a certified check payable to the order of the Owner, or a bidder's bond for the single bid submitted, in an amount not less than ten percent of the total amount of the proposal submitted. Such proposal guarantee may

be forfeited as liquidated damages in case the bidder shall fail or neglect to furnish a performance bond and insurance, as required, or to execute the contract within ten days after receiving said contract from the owner for execution.

6. EXAMINATION OF PLANS, STANDARD PLANS OR DRAWINGS, SPECIFICATIONS AND SITE OF WORK

Bidders shall determine for themselves all the conditions and circumstances affecting the project or the cost of the proposed work by personal examination of the site, the Contract Documents, and by such other means as they may choose. It is understood and agreed that information regarding underground or other conditions or obstruction indicated in the Contract Documents has been obtained by the owner from data at hand. There is no expressed or implied agreement that such conditions are fully or correctly shown and the bidder must take into consideration the possibility that conditions affecting the cost or quantity of work may differ from those indicated.

7. INTERPRETATION OF CONTRACT DOCUMENTS

If it should appear to a bidder that the work to be done or matters relative thereto are not sufficiently described or explained in the Contract Documents or that the Contract Documents are not definite and clear, the bidder may make written inquiry regarding same to the Engineer at least five (5) days before the scheduled closing time for filing bids. Then, if in the judgement of the Engineer, additional information or interpretation is necessary, such information will be supplied in the form of an addendum which will be delivered to all individuals, firms and corporations who have taken out Contract Documents. Such addendum shall have the same binding effect as though contained in the main body of the Contract Documents. ORAL INSTRUCTIONS OR INFORMATION CONCERNING THE CONTRACT DOCUMENTS OR THE PROJECT GIVEN OUT BY OFFICERS, EMPLOYEES OR AGENTS OF THE OWNER TO PROSPECTIVE BIDDERS SHALL NOT BIND THE OWNER.

8. ADDENDA TO CONTRACT DOCUMENTS

Any addendum or addenda issued by the Engineer which may include changes, corrections, additions, interpretations or information, and issued before the scheduled closing time for filing bids, shall be binding upon the bidder. The Owner shall send copies of such addenda to all contractors who have obtained copies of the Contract Documents for the purpose of bidding thereon, but failure of the Contractor to receive or obtain such addenda shall not excuse him from compliance therewith, if he is awarded the Contract.

9. FAMILIARITY WITH LAWS AND ORDINANCES

The bidder is assumed to be familiar with all Federal, State and local laws, ordinances, and regulations which in any manner affect those engaged or employed in the work or the materials or equipment used in the proposed construction, or which in any way affect the conduct of the work, and no plea of misunderstanding will be considered on account of ignorance thereof. If the bidder, or Contractor shall discover any provision in the Contract Documents which is contrary to or inconsistent with any law, ordinance, or regulation, he shall forthwith report it to the owner in writing.

10. AMOUNT OF WORK TO BE DONE

The Owner reserves the right to increase or decrease the amount of any class or portion of the work. No such change in the work shall be considered as a waiver of any condition of the contract nor shall such change invalidate any of the provisions thereof.

The estimate of quantities of work to be done under unit price bids is approximate and is given only as a basis of calculation for comparison of bids and award of the contract. The Owner does not by implication agree that the actual amount of work will correspond precisely to the amount as shown or estimated.

The scheduled quantities of work to be done and materials to be furnished may each be increased, decreased, or omitted. Payment will be made at unit prices under the contract only for the work performed or materials furnished.

11. BID PRICES TO COVER ENTIRE WORK

Bidders must include in their bid prices the entire cost of each item of work set forth in the proposal, and it is understood and agreed that there is included in each lump sum or unit price bid the entire cost of materials and labor incidental or necessary to the completion of that portion of the work covered, unless such incidental work is expressly included in other lump sum or unit price bids in the proposal.

12. REJECTION OF PROPOSALS

The owner reserves the right to reject all bids and waive irregularities.

13. DISQUALIFICATION OF BIDDERS

Either of the following reasons may be considered as being sufficient for the disqualification of a bidder and the rejection of his proposal or proposals:

a. More than one proposal for the same work from an individual, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Participants in such collusion will receive no recognition as bidders for any future work of the City until any such participant has been reinstated as a qualified bidder.

14. MATERIAL GUARANTY

The successful bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work together with samples. These samples may be subjected to the tests required elsewhere in these specifications to determine their quality and fitness for the work.

15. PREFERENCE FOR OREGON GOODS AND SERVICES

The bidder shall give preference to goods or services that have been manufactured or produced in Oregon if price, fitness, availability and quality are otherwise equal.

These provisions do not apply to contracts on projects financed wholly or in part by federal funds.

16. CONSIDERATION OF BIDS, AWARDS AND CONTRACT

After the proposals have been opened and read, they will be compared on the basis of total amounts. The right is reserved to reject any or all proposals, to waive technicalities and, with the consent of the bidder, to correct patent errors; if in the judgement of the City the best interest of the City will be served or promoted thereby. The results of the comparisons and considerations will be made available to the public within a reasonable time after opening of the proposals.

Award of contracts, return of proposal guaranties, execution of the contract and other provisions concerning the contract are set forth in Section C. Bidders shall familiarize themselves with Section C before submitting their proposals.

C. AWARD AND EXECUTION OF CONTRACT

1. AWARD OF CONTRACT

The award will be made by the owner to the bidder submitting the lowest acceptable bid. In determining the lowest acceptable bid, the owner may take into account, among other factors: the prices bid, the realistic balance of prices in the proposals for various parts of units of the work, and the experience and ability of the bidder to perform the work.

While price extensions are required as a matter of convenience, in the event of error in extensions the unit prices bid shall govern. In the event of discrepancy between the written and numerical amounts, the written prices will govern.

Determination of the lowest responsible bidder and award may be subject to review and determination by the owner's attorney as to legal sufficiency of any bid submitted.

The award of contract, if it be awarded, shall be made within thirty (30) calendar days after the date of opening of bids.

2. EXECUTION OF CONTRACT

Within ten (10) days after the date the bidder receives notification of award of contract as evidenced by receipt from the owner of properly prepared contract documents, the bidder to whom award is made shall execute and return the contract in the required number of copies, and shall execute and furnish the performance bond bound herewith and other required bonds and insurance satisfactory to the owner.

3. FAILURE TO EXECUTE CONTRACT

Failure on the part of the bidder to whom the contract is awarded to execute the contract and to deliver the contract and required performance bond as described herein, shall be just cause for cancellation of the award, withdrawal of the contract and forfeiture of the proposal guaranty. The forfeited proposal guaranty shall become the property of the owner. Award may then be made to the next lowest acceptable bidder, or the work may be readvertised, or it may be constructed under contract or otherwise, as the owner may decide.

4. RETURN OF PROPOSAL GUARANTY

Upon the execution of the contract and bond by the successful bidder, his proposal guaranty shall be returned to him. The bidder who has a contract awarded to him and who fails promptly and properly to execute the contract or bond shall forfeit the proposal guaranty that accompanied his bid. The proposal guaranty shall be taken and considered as liquidated damages and not as a penalty for failure of the bidder to execute the contract and bond. The proposal guaranty of unsuccessful bidders will be returned after the bids have been opened and the contract has been awarded, and shall not be retained after the contract has been duly signed. The owner reserves the right to retain the bid security of the three (3) lowest bidders until the awarded contract has been signed and returned.

5. ASSIGNMENTS

Neither the contract nor any interest therein shall be transferred to any other party or parties without the prior written consent of the owner. In case of such attempted transfer without permission, the owner may refuse to carry out the contract either with the transfer or the transferee, but

all rights of action for any breach of the contract by said Contractor are reserved to the owner. No officer of said owner nor any person employed in its service, is or shall be permitted any share or part of the contract or is or shall be entitled to any benefit which may arise therefrom.

6. PERFORMANCE AND PAYMENT BOND

The successful Bidder shall execute and furnish with the owner, at the time of execution of the contract, the Performance and Payment Bond bound herewith. The surety company furnishing this bond shall have a sound financial standing and a record of service satisfactory to the owner and shall be authorized to do business in the State of Oregon.

The Attorney in Fact (Resident Agent) who executes this Bond in behalf of the Surety company, must attach a copy of his power-of-attorney as evidence of his authority. A notary shall acknowledge the power as of the date of the execution of the surety bond which it covers.

7. OWNER'S IMMUNITY FROM LIABILITY

The Contractor shall save, keep and hold harmless, the owner, the Engineer and his consultants, and all employees, officers and agents thereof from all damages, costs or expenses in law or equity that may at any time arise or be set up because of damages to property or of personal injury received either by reason of or in the course performing said work which may be occasioned by any negligent act or omission to act which amounts to negligence upon the part of the Contractor or any of said Contractor's employees, or any subcontractor performing any of the work.

The owner shall not be liable or responsible for any accident, loss or damage happening to the work referred to in the contract prior to completion and acceptance thereof.

8. PROOF OF CARRIAGE OF INSURANCE

Work shall not commence until all insurance required in the contract has been obtained nor until such insurance has been approved by the owner, nor shall any subcontractor commence work until he also has first obtained insurance applicable to such work. The Contractor shall maintain insurance throughout the life of the contract which will hold the owner harmless and shall indemnify the owner for any and all losses to third persons or to the owner arising out of the operations, including any contingent liability arising therefrom.

9. CERTIFICATES OF COMPLIANCE

Prior to the acceptance of the work, the Contractor shall complete a certificate form obtained from the Engineer which substantially states the following: "I(We) hereby certify that all work has been performed and materials supplied in accordance with the Contract Documents for the above work, and that: (1) Not less than the prevailing rates of wages has been paid to laborers, workers and mechanics employed on this work; (2) There have been no unauthorized substitutions of subcontractors; nor have any subcontracts been entered into without the names of the subcontractors having been submitted to the Engineer prior to the start of such subcontracted work; (3) No subcontract was assigned or transferred or performed by any subcontractor other than the original subcontractor, without prior notice having been submitted to the Engineer together with the names of all subcontractors; (4) All claims for material and labor and other service performed in connection with these specifications have

been paid; (5) All monies due the State Industrial Accident Fund, the State Unemployment Compensation Trust Fund (ORS 279.510), the State Tax Commission (ORS 315.575, 316.575 or 316.711 and 316.714), hospital associations and/or others, (ORS 279.320), have been paid."

D. SCOPE OF WORK

1. INTENT OF CONTRACT

The intent of the contract is to provide for the construction and completion of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the plans, specifications and terms of the contract.

The Contractor shall perform all work in accordance with the lines, grades, typical cross sections, dimensions and other data shown on the plans or as modified by written orders of the Engineer, and all other work determined by the Engineer as necessary to proper prosecution and completion of the project.

2. PLANS AND SPECIFICATIONS

The plans, specifications and other contract documents will govern the work. The contract documents are intended to be complementary and cooperative and to describe and provide for a complete project. Anything in the specifications and not on the plans, or on the plans and not in the specifications, shall be as though shown or mentioned in both. Reference specifications and standard plans are a part of the contract documents.

While it is believed that much of the information pertaining to conditions which may affect the cost of the proposed work will be shown on the plans or indicated in the specifications, the owner does not warrant the completeness or accuracy of such information. It is the Contractor's responsibility to ascertain the existence of any conditions affecting the cost of the work which would have been disclosed by reasonable examination of the site.

The Contractor shall, upon discovering any error or omission in the plans or specifications, immediately call it to the attention of the Engineer.

3. PRECEDENCE OF CONTRACT DOCUMENTS

If there is a conflict between contract documents, the document highest in precedence shall control. The precedence shall be:

First: Permits from other agencies as may be required by law. Second: Special provisions. Third: Plans. Fourth: Standard plans. Fifth: Standard specifications. Sixth: Reference specifications.

Change orders, supplemental agreements and approved revisions to plans and specifications will take precedence over documents listed above. Detailed plans shall have precedence over general plans.

4. SHOP DRAWINGS

When shop drawings or other drawings are required by the Engineer, they shall be prepared in accordance with current modern engineering practice and at the Contractor's expense. Drawings shall be of a size and scale to show clearly all necessary details and shall be transmitted by letter to the Engineer for approval or correction before commencing the work.

Materials shall not be furnished or fabricated nor any work done for which drawings are required, before approval of the drawings.

Approval of drawings by the Engineer shall not relieve the Contractor from the

responsibility for errors or omissions in the drawings or from deviations from the contract documents unless such deviations were specifically called to the attention of the Engineer in the letter of transmittal submitted with the drawings. The Contractor shall be responsible for the correctness of the drawings, for shop fits and field connections, and for the results obtained by use of such drawings.

5. CHANGES IN WORK

a. Changes Requested by the Contractor

Changes in specified methods of construction may be made at the Contractor's request when approved in writing by the Engineer.

Changes in the plans and specifications, requested in writing by the Contractor, which do not materially affect the work and which are not detrimental to the work or to the interests of the owner, may be granted by the Engineer. Payment to be made per section J of these conditions.

b. Changes Initiated by the Owner

The owner may change the plans, specifications, character of the work, or quantity of work, provided the total arithmetic dollar value of all such changes, both additive and deductive, does not exceed 25% of the contract price. Should it become necessary to exceed this limitation, the change shall be by written supplemental agreement between the Contractor and owner.

Change orders shall be in writing and state the dollar value of the change or establish method of payment, any adjustments in contract time and, when negotiated prices are involved, shall provide for the Contractor's signature indicating acceptance.

Payment for all work to be made per section J of these conditions.

6. CHANGED CONDITIONS

The Contractor shall notify the Engineer in writing of the following work site conditions, hereinafter called changed conditions, promptly upon their discovery and before they are disturbed:

(a) Subsurface or latent physical conditions differing materially from those represented in the contract; and

(b) Unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character being performed.

The Engineer will promptly investigate conditions of which notified or any conditions discovered by the Engineer which appear to be changed conditions. If it is determined that the conditions are changed conditions and that they will materially increase or decrease the costs of any portion of the work, a change order will be issued by the Engineer adjusting the compensation for such portion of the work. If the Engineer determines that conditions of which notified by the Contractor do not justify an adjustment in compensation, the Contractor will be so advised in writing. Should the Contractor disagree with such determination, a notice of potential claim may be submitted

to the Engineer.

7. DISPUTED WORK

If unable to reach agreement under any of the foregoing procedures, the owner may direct the Contractor to proceed with the work. Payment shall be as later determined by arbitration under Section J-12.

Although not to be construed as proceeding under extra work provisions, the Contractor shall keep and furnish records of all disputed work.

8. RECORDS

The Contractor shall maintain records in such a manner as to provide a clear distinction between the direct cost of extra work paid for on the force account basis and the costs of other operations performed in connection with the contract.

The Contractor shall furnish to the Engineer daily reports in duplicate of the extra work to be paid for on a force account basis. The reports shall itemize the materials used and shall set forth the direct cost of labor and the charges for equipment rental whether furnished by the Contractor, or subcontractor. The reports shall provide names or identifications and classifications of workers, the hourly rate of pay and hours worked together with the size, type and identification number of equipment and hours of equipment operation.

Material charges shall be submitted by vendors' invoices. Such invoices shall be submitted with the reports; or, if not available, they shall be submitted with subsequent reports. In the event said vendors' invoices are not submitted within 15 days after acceptance of the work, the contracting agency reserves the right to establish the cost of such materials at the lowest current price at which said materials are available in the appropriate quantities delivered to the location of the work.

All reports shall be signed by the Contractor or an authorized representative.

The Engineer will compare records with the reports furnished by the Contractor, make any necessary adjustments and then compile the costs of extra work paid for on a force account basis on forms furnished by the contracting agency. When these extra work reports are agreed upon and signed by both parties, they shall become the basis of payment for the work performed.

9. EXTRA WORK

a. General

New or unforseen work will be classed as "extra work" when the Engineer determines that it is not covered by contract unit prices or stipulated unit prices and the character of such work is substantially different from that on which the Contractor bid. The Contractor shall not undertake any extra work unless authorized in writing by the owner or Engineer.

b. Payment

Payment for extra work will be established by agreement between the Contractor and the owner. If no agreement can be reached, payment will be made on the following basis:

The Contractor shall maintain records sufficient to distinguish the direct cost of extra work from the cost of other operations.

The Contractor shall furnish daily reports of extra work. The reports shall itemize all costs for labor, materials, and equipment rental. The reports shall include for workers hours worked, rates of pay, names and classifications; and for equipment, shall include size, type, identification number and hours of operation. All records and reports shall be made immediately available to the Engineer upon request.

All reports shall be signed by the Contractor or an authorized representative.

The Engineer's records will be compared with the Contractor's reports, and the necessary adjustments and compilation of the costs of extra work will be made. When extra work reports are agreed upon and signed by both parties, they shall become the basis of payment.

i. Labor

Labor costs shall be based on the prevailing wage scale for each craft or type of worker. Employer payments for payroll taxes and insurance, health and welfare, pension, vacation and other direct labor costs shall be included.

ii. Materials

The cost of materials incorporated in the work will be the cost to the purchaser, whether Contractor, subcontractor or other sources, from the supplier thereof, except as follows: (a) if materials are procured by the purchaser by any method which is not a direct purchase from a direct billing by the actual supplier to such purchaser, the cost of such materials shall be deemed to be the price paid the actual supplier as determined by the Engineer. No markup except for actual costs incurred in the handling of such materials will be permitted. (b) If the materials are obtained from a supplier or source owned wholly or in part by the purchaser, payment therefor will not exceed the price paid by the purchaser for similar materials furnished from said source on contract items or the current price of such materials delivered to the job site, whichever price is lower. (c) The owner reserves the right to furnish such materials as it deems advisable, and the Contractor shall have no claims for costs and profit on such furnished materials.

iii. Equipment Rental

The Contractor will be paid for the use of equipment on the basis of, but not exceeding the prevailing hourly rental rates established by the Oregon State Highway Division and recognized by the Associated General Contractors for the area where such equipment is required to be operated.

On any equipment for which no rental rate has been established by the Oregon State Highway Division, or where the required operation of the equipment is less than four hours or in excess of one week, rental rates shall be proposed by the Contractor and agreed upon in writing by the Engineer prior to the start of force account work.

Equipment that is in operational condition and is standing by with the Engineer's approval for participation in force account work, will be paid for at 50 percent of the agreed upon rental rate.

Rental time will not be allowed while equipment is inoperative due to breakdowns for periods in excess of 30 minutes. Rental time shall be computed in 1/2 hour increments. In computing rental time of equipment in actual operation, less than 30 minutes will be considered 1/2 hour.

The rental rates paid, as above provided, shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repair and maintenance of any kind, depreciation, storage, insurance and all incidentals.

All equipment shall, in the opinion of the Engineer, be in good working condition and suitable for the purpose for which the equipment is to be used.

Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

Individual pieces of equipment or tools having a replacement value of $50.00 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor.

The rental time to be paid for equipment on the work shall be the time the equipment is in operation on the extra work and return it to the original location, except that moving time will not be paid for if the equipment is used at the site of the extra work on other than such extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made if the equipment is used at the site of the extra work on other than such extra work.

The rental period shall begin at the time the equipment is unloaded at the site of the extra work, shall include each day that the equipment is at the site of the extra work, excluding Saturdays and legal holidays unless the extra work is performed on such days, and shall terminate at the end of the day on which the Engineer directs the Contractor to discontinue the use of such equipment. The maximum rental time to be paid per day will not exceed eight hours unless the equipment is in operation for a longer time.

E. CONTROL OF WORK

1. AUTHORITY OF THE ENGINEER

Subject to such authority as is delegated by the owner, the Engineer will decide all questions which may arise as to the quantity, quality and acceptability of materials furnished and work performed, the rate of progress of the work; change orders and time extensions; interpretation of the plans and specifications; the measurement of all quantities; the acceptable fulfillment of the contract on the part of the Contractor. The Engineer's estimates and decisions in these matters shall be final, binding and conclusive upon all parties to the contract.

It is further understood that all work to be done under the contract will not be considered completed until it has passed final inspection by the Engineer and is accepted by the owner. It is further understood that the authority of the Engineer is such that the Contractor shall at all times carry out and fulfill the instructions and directions of the Engineer insofar as they concern the work to be done under the contract.

Upon failure on the part of the Contractor to comply with any order made under the provisions of this subsection, the Engineer shall have the authority to cause unacceptable work to be remedied or removed and replaced, and unauthorized work to be removed, and to deduct the costs thereof from any monies due or to become due the Contractor.

The Engineer has the authority to suspend the work for cause as set forth in section H, particularly subsection H-5.

Approval by the Engineer signifies favorable opinion and qualified consent; it does not carry with it certification, nor assurance of completeness nor assurance of quality nor assurance of accuracy concerning details, dimensions and quantities. Such approval will not relieve the Contractor from responsibility for errors, for improper fabrication, for nonconformance to requirements or for deficiencies within his control.

2. AUTHORITY AND DUTIES OF INSPECTORS

The Engineer may appoint assistants to inspect all materials used and all work done. Such inspection may extend to any or all parts of the work and to the preparation or manufacture of the materials to be used. The inspectors will not be authorized to revoke, alter, enlarge or relax the provisions of these specifications. An inspector is placed on the work to set the necessary lines and grades and to keep the Engineer informed as to the progress of the work and the manner in which it is being done; also to call the attention of the Contractor to any infringements upon plans or specifications, but failure of the inspector or the Engineer to call the attention of the Contractor to faulty work or infringements upon the plans or specifications shall not constitute acceptance of said work.

An inspector will not be authorized to approve or accept any portion of the work or to issue instructions contrary to the plans and specifications. The inspector will have authority to reject defective material and to suspend any work that is being improperly done, subject to the final decision of the Engineer. The inspector will exercise such additional authority as may, from time to time, be especially delegated to him by the Engineer.

3. DISPUTED WORK

If the Contractor considers any work demanded of him to be outside the scope of the contract or considers any ruling of the Engineer to be unfair, upon such work being demanded or such ruling being made, the Contractor shall proceed without delay to perform the work or to conform to the ruling. The Contractor shall within ten days after date of receipt of the instructions or ruling, file a written protest with the Engineer, stating clearly and in detail the basis of objection, and include an itemized statement of any extra costs which may have resulted. Except for such protests or objections as are made of record in the manner herein specified and within the time limit stated, the records, rulings, instructions or decisions of the Engineer will be final and conclusive.

4. RESPONSIBILITY OF THE CONTRACTOR

The Contractor shall do all the work and furnish all labor, materials, equipment, tools and machines necessary for the performance and completion of the project in accordance with the contract documents within the specified time.

Material and construction details of plants, forms, shoring, falsework and other structures built by the Contractor but not a part of the permanent project shall meet the approval of the Engineer, but such approval shall not relieve the Contractor from responsibility for their safety and sufficiency.

The Contractor shall be responsible for all expense involved in making any required changes in the plans or specifications to accommodate a substitution approved by the Engineer for the convenience of the Contractor or to circumvent an unforeseen difficulty in obtaining a specified article.

The Contractor shall assume all responsibility for the work. As between him and the owner, the Contractor shall bear all losses and damages directly or indirectly resulting to him, to the owner or to others on account of the character of performance of the work, unforeseen difficulties, accidents or any other cause whatsoever. The Contractor shall assume the defense of indemnity and save harmless the owner, its officers and employees from all claims, liability, loss, damage and injury of every kind, nature and description, directly or indirectly resulting from the Contractor's activities in the performance of the Contract, the ownership, maintenance or use of motor vehicles in connection therewith, or the acts, omissions, operations, or conduct of the Contractor or any subcontractor under the contract, or in any way arising out of the contract, irrespective of whether act, omission or conduct of the Contractor or subcontractor is merely a condition rather than a cause of the claim, liability, loss, damage or injury.

5. NOTIFICATIONS RELATIVE TO CONTRACTOR'S ACTIVITIES

The Contractor shall obtain prior approval from the Engineer for the closing or partial closing of any road, street, alley or other public thoroughfare. The Contractor shall give advance notice of such closure to all agencies providing emergency services including, but not limited to, the sheriff, police, fire and ambulance services.

The Contractor shall notify all utilities before commencing work including, but not limited to, gas, communications, power and water.

Utilities may not be located as shown or marked as the location may have been established from records and not from on-site inspection. The Contractor shall notify utilities at least

two working days prior to commencing work of the date on which work will commence, in order to give the utilities a reasonable opportunity to establish the location of utilities by on-site examination prior to commencing the work. The Contractor shall adhere to the above notification requirements during the progress of the work where the work is such that location of utilities is necessary as the work progresses.

The Contractor shall notify all agencies affected by the operations so as to properly coordinate and expedite the work in such a manner as to cause the least amount of conflict and interference between such operations and those of other agencies.

Notification shall include, but not be limited to, the time of commencement and completion of work, names of streets or location of alleys to be closed, schedule of operations and routes of detours where possible.

Damages or claims resulting from improper or insufficient notification of the affected agencies shall be the responsibility of the Contractor.

6. UTILITIES AND EXISTING IMPROVEMENTS

Any information shown as to the location of existing water courses, drains, sewer lines or utility lines which cross or are adjacent to the project, has been compiled from the best available sources, but is not guaranteed to be accurate.

The Contractor shall provide for the flow of sewers, drains or water courses interrupted during the progress of the work, and shall restore such drains or water courses as approved by the Engineer. The Contractor shall make excavations and borings ahead of work as necessary, to determine the exact location of interfering utilities or underground structures.

Ordinarily, utility companies responsible for facilities located within the right-of-way will be required to complete any installation, relocation, repair, or replacement prior to the commencement of work by the Contractor. However, when this is not feasible or practicable or the need for such work was not foreseen, such utility owners or the owner shall have the right to enter upon the right-of-way and upon any structure therein for the purpose of making new installations, changes or repairs. The Contractor shall conduct operations so as to provide the time needed for such work to be accomplished during the progress of the improvement.

The Contractor shall be responsible for all costs for the repair of damage to the contract work or to any utility, previously known or disclosed during the work, as may be caused by operations. The Contractor shall maintain in place utilities now shown on the drawing to be relocated or altered by others and shall maintain utilities which are relocated by others in their relocated positions in order to avoid interference with structures which cross the project work. All costs for such work shall be included in the prices bid for the various items of work.

7. SURVEY SERVICE

The Contractor shall give notice to the Engineer not less than two working days in advance of when survey services will be required in connection with the laying out of any portion of the work.

The owner will furnish and set construction stakes establishing lines and grades as determined necessary by the Engineer for all work under the contract, including lines and grades for street excavation and fill, finished subgrade, finished base material, curbs and gutters, walks, structures and utilities, and will furnish the Contractor all the necessary information relative to the

lines and grades.

The owner will furnish appropriate offset lines and grades for all projects involving trenching operations. The Engineer will not transfer the offset lines or grades into the ditch, to batterboards, or any other point within the work which is provided by the Contractor.

8. PROTECTION OF SURVEY MARKERS

a. Permanent Survey Markers

The Contractor shall notify the Engineer not less than seven days prior to starting work in order that the Engineer may take necessary measures to insure the preservation of survey monuments, stakes and bench marks. The Contractor shall not disturb permanent survey monuments, stakes, or bench marks without the consent of the Engineer, and shall notify the Engineer and bear the expense of replacing any that may be disturbed without permission. Replacement shall be done by a registered land surveyor at no expense to the owner.

When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, the monument cover shall be adjusted to the new grade.

b. Lines and Grade

The Contractor shall preserve construction survey stakes and marks for the duration of their usefulness during construction. If any construction survey stakes are lost or disturbed, and in the judgement of the Engineer need to be replaced, such replacement shall be by the Engineer at no expense to the owner. The cost of replacement shall be charged against, and shall be deducted from, the payment for the work.

c. Lot Stakes

Unless otherwise directed by the Engineer or shown in the plans, the Contractor shall preserve existing survey stakes that mark property lines and corners. Any stakes that become lost or disturbed by his operations shall be replaced by a registered land surveyor at no expense to the owner.

9. OTHER SURVEYORS

Surveying by private land surveyors on permit projects or any other work under the control of the owner shall conform in all respects to the quality and practice required of the owner's surveyors as set forth in subsection E-7.

10. PROTECTION OF PROPERTY

The Contractor shall protect all public and private property insofar as it may be endangered by operations and take every reasonable precaution to avoid damage to such property.

The Contractor shall restore and bear the cost of any public or private improvement, facility or structure within the right-of-way which is damaged or injured directly or indirectly by or on account of any act, omission or neglect in the execution of the work and which is not designated for removal and is visibly evident or correctly shown on the plans. The Contractor shall restore to a condition substantially equivalent to that existing before such damage or injury occurred, by repairing, rebuilding or otherwise affecting restoration thereof, or if this is not feasible, make a

suitable settlement with the owner of the damaged property, all at no expense to the owner.

The Contractor shall give reasonable notice to occupants of buildings on property adjacent to the work to permit the occupants to remove vehicles, trailers and other possessions as well as salvage or relocate plants, trees, fences, sprinkler systems or other improvements in the right-of-way which are designated for removal or which might be destroyed or damaged by work operations.

The Contractor shall protect all designated trees and planted areas within the right-of-way easements, and shall exercise care and conduct operations so as to minimize damages to other planted areas.

The Contractor shall review with the Engineer the location, limits and methods to be used prior to clearing work. Clearing and grubbing shall be performed in strict compliance with all local, state and federal laws and requirements pertaining to clearing and burning, and particularly in conformity with the provisions of ORS 477 and all subsequent amendments which require, among other things, filing with the state forester a general description of the right-of-way to be cleared before the start of clearing operations and shall perform the clearing work in conformity with the terms of the permit issued by the state forester.

11. TEMPORARY TRAFFIC CONTROL

The contractor shall provide and be responsible at all times for such flagmen, signs and other devices not otherwise specified to be furnished by the owner. The Contractor shall erect and maintain all barricades, guards, standard construction signs, warning signs and detour signs, as are necessary to warn and protect the public at all times from injury or damage as a result of the work operations on highways, roads or streets affected by such operations.

Upon failure to immediately provide the necessary flagmen or to provide, erect, maintain and remove barricades, lights and standard signs when so ordered, the Engineer shall be at liberty, without further notice to the Contractor or the Contractor's surety, to do so and deduct all of the costs thereof from any payments due or coming due the Contractor.

Refer to TEMPORARY PROTECTION AND DIRECTIONAL MEASURES FOR TRAFFIC for additional requirements in Section II of Standard Specifications.

12. PROTECTION OF WORK

Until acceptance of the project, the Contractor shall at all times protect from damage all public property and private property which may be affected by the work and preserve all materials, supplies, equipment of any description, and all work already performed, from the nature of the work, the action of the elements, and damage by any person or persons or from any other cause whatsoever.

13. MAINTENANCE OF WORK AFTER ACCEPTANCE

Upon the request of the Contractor and with the approval of the Engineer, or upon the order of the Engineer, the Contractor will be relieved of the duty of maintaining and protecting certain portions of the work which are approved to be placed in service and which have been completed in accordance with the contract documents.

In addition, such action by the Engineer will relieve the Contractor of responsibility for injury or damage to said completed portions of the work resulting from use by public traffic or from the action of the elements or from any other cause, excepting injury or damage resulting from the Contractor's own operations or negligence. The Contractor will not be required to again clean

up such portions of the improvement prior to field acceptance, excepting for such items of work as result from the Contractor's operations. However, nothing in this section shall be construed as relieving the Contractor from full responsibility for making good work or materials found to be defective.

14. USE OF LIGHT, POWER AND WATER

The Contractor shall furnish temporary light, power and water complete with connecting piping, wiring, lamps and similar equipment necessary for the work as approved. The Contractor shall install, maintain and remove temporary lines upon completion of work. The Contractor shall obtain all permits and bear all costs in connection with temporary services and facilities at no expense to the owner.

15. SUBSURFACE DATA

All information obtained by the Engineer regarding subsurface information and groundwater elevations will be available for inspection at the office of the Engineer upon request. Known utilities and structures expected to be adjacent to or encountered in the work are shown on the plans. Such information is offered as supplementary information only. Neither the Engineer nor the owner assumes any responsibility for the completeness or interpretation of such supplementary information.

Logs of test holes, test pits, soils reports, groundwater levels and other supplementary subsurface information are offered as the best available information of underlying materials and conditions at the locations actually tested. The owner will not be liable for any loss sustained by the Contractor as a result of any variance between conditions contained in or interpretations of test reports and the actual conditions encountered during progress of the work.

The Contractor shall examine the site and available records, as set forth in subsection B-6. The submission of a proposal shall be conclusive evidence that the bidder has investigated and is satisfied as to the subsurface conditions to be encountered, as to the character, quality and quantities of work to be performed and materials to be furnished and as to the requirements of the contract documents.

The Contractor shall contact all utility companies as to underground utilities in the area of work as set forth in Section E-5. Relocation of underground utilities which lie within the construction area or trench width necessary to complete the work shall be the responsibility of the owner. Damage to existing utilities shall be the responsibility of the Contractor.

16. VERBAL AGREEMENTS

No verbal agreement or conversation with any officer, agent or employee of the owner, either before or after execution of the contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the contract. Any such verbal agreement or conversation shall be considered as unofficial information and in no way binding upon the owner.

17. DUST CONTROL

During all phases of the construction work, and when directed, the Contractor shall take precautions to abate dust nuisance by cleaning up, sweeping, sprinkling with water, or other means as necessary to accomplish the suppression of dust.

18. REMOVAL OF DEFECTIVE OR UNAUTHORIZED WORK

All work which does not conform to the requirements of the contract shall be considered as unacceptable.

The Contractor shall remove all unacceptable and defective work. The Contractor shall perform replacement by work and materials which conform to the contract documents, or remedy otherwise in an approved manner. The provision shall have full effect regardless of the fact that the unacceptable work may have been done or if the defective materials were used with the full knowledge of the inspector. The fact that the inspector in charge may have previously overlooked such defective work shall not constitute an acceptance of any part of such work.

The Contractor shall do no work without lines and grades having been given by the Engineer. Work done contrary to or regardless of the instructions of the Engineer, work done beyond the lines shown or as directed, except as herein provided, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at no expense to the owner.

In the event any defect in work is of a minor nature and the Engineer determines that it is not of such consequence as to result in a dangerous or undesirable condition, the owner shall have the right to retain such work and make such deductions in the payment therefore as determined reasonable and in the public interest. Such determination by the owner shall be final.

19. CLEANUP

From time to time as the work progresses and immediately after completion of the work, the Contractor shall clean up and remove all refuse and unused materials of any kind resulting from the work. Upon failure to do so within twenty-four hours after directed, the work may be done by the owner and the cost thereof be deducted from any payment due the Contractor.

After all other work embraced in the contract is completed and before final acceptance of the contract, the entire right-of-way and easement area including the roadbed, planting, sidewalk, shoulders, driveways, alley and side street approaches, slopes, ditches, utility trenches, and construction areas shall be neatly finished to the lines, grades and cross sections shown and as specified.

As a condition precedent to final acceptance of the project, the Contractor shall remove all equipment and temporary structures, and all rubbish, waste and generally clean up the right-of-way and premises to conform substantially to conditions as they existed before the commencement of work.

20. FINAL INSPECTION

At such time as all construction work on the project is complete and all extra work bills, forms and documents required under the contract are submitted, the Contractor shall so notify the Engineer in writing. The Engineer will make an inspection of the project and project records within fifteen days of receiving said notice. If, at such inspection, all construction provided for and ordered under the contract is found completed and satisfactory and all certificates, bills, forms and documents have been properly submitted, such inspection shall constitute the final inspection.

If any work in whole or in part is found unsatisfactory, or it is found that all certificates, bills, forms and documents have not been properly submitted, the Engineer will give the

Contractor the necessary instructions as to replacement of material and performance or reperformance of construction work necessary and prerequisite to satisfactory final completion of construction work and will give the Contractor the necessary instructions for submission of bills, forms and documents, and the Contractor forthwith shall comply with and execute such instructions. At such time as such instructions are complied with and executed, the Contractor shall so notify the Engineer in writing. The Engineer will make another inspection within fifteen days after such notice and this inspection shall constitute the final inspection, if all requirements of the instructions have been met to the satisfaction of the Engineer. If the instructions are not completed to the satisfaction of the Engineer, additional instructions will be issued by the Engineer and the process will be repeated until the Engineer is satisfied all requirements are complied with. The inspection, when the Engineer is satisfied all requirements have been met, will be considered the final inspection.

F. CONTROL OF MATERIALS

1. PREFERENCE FOR USE OF OREGON PRODUCTS

Preference may be given to articles or materials produced or manufactured in Oregon. These provisions do not apply to contracts on projects financed wholly or in part by federal funds.

2. QUALITY OF MATERIALS

The Contractor shall use only new materials, parts, products and equipment in the work which conform to the specified requirements. The Contractor shall determine the kind of work, amount of work and other factors that may be necessary or involved in furnishing the specified products and materials. Materials and products which, after approval, have become unsuitable or unacceptable for use, regardless of cause, will be rejected by the Engineer and shall not be used.

3. SAMPLING AND TESTING

Tests of materials, will be made by the Owner in accordance with the methods described or designated in the applicable specifications, and at any time during the production, fabrication, preparation and use of the materials.

The Owner reserves the right to require samples and to test products for compliance with pertinent requirements irrespective of prior certification of the products by the manufacturer thereof as set forth in Section F-4.

When tests of materials are necessary, as determined by the Engineer, such tests will be made by, and at the expense of, the Owner unless otherwise specified. The Contractor shall afford such facilities as required for collecting and forwarding samples where practical and withhold from use the materials represented by the samples until tests have been made and the materials found equal to the requirements of the specifications or to approved samples. In all cases, the Contractor shall furnish and make available the required samples without charge. Samples shall be made available in ample time to permit testing of the materials prior to use, and no claim will be allowed for any delay caused by awaiting test results. To facilitate and make safe the sampling of materials at plants, the Contractor shall provide safety measures and devices to protect those who take the samples.

In the absence of any reference specification, it shall be understood that such materials shall meet the specifications and requirements of the American Society for Testing and Materials (ASTM). When there is no pertinent coverage under ASTM, the material concerned shall meet specifications and requirements of applicable commercial standards of the Commodity Standards Division of the U.S. Department of Commerce. Lacking such coverage, the materials shall meet requirements established by reputable industry for a high quality product of the kind involved.

All testing shall be performed by or handled through the testing laboratory of the Owner or as directed by the Engineer.

In the event the Owner requests tests and materials fail, the Contractor shall bear all costs for all subsequent testing necessary to meet the specified requirements.

4. CERTIFICATION

For commercial products inclusive of industry standardized products, in lieu of normal sampling and testing procedures by the Contractor and the Owner, the Engineer may accept from the Contractor the manufacturer's certification with respect to the product involved, under the conditions set forth as follows:

a. The certification shall state that the named product conforms to the Owner's requirements and the representative samples thereof have been sampled and tested as specified.

b. The certification shall either be accompanied with a certified copy of the test results, or certify that such test results are on file with the manufacturer and will be furnished to the Engineer upon request.

c. The certification shall give the name and address of the manufacturer and the testing agency and the date of tests; and shall set forth the means of identification which will permit field determination of the product delivered to the project as being the product covered by the certification.

d. The certification shall be in duplicate with one copy to be sent with the shipment of the covered product to the Engineer, and with one copy sent to the Owner.

e. The Owner will not be responsible for any costs of certification or for any costs of the sampling and testing of products in connection therewith.

5. INSPECTION REQUIREMENTS

The Contractor shall allow access by the Engineer's representatives to all parts of the work and to the plants of producers and fabricators at all times and will furnish them with every reasonable facility for ascertaining whether or not the work is in accordance with the requirements and intent of the Contract Documents. The Contractor shall furnish such samples as are customarily required for testing purposes at no expense to the Owner.

6. INSPECTION BY OTHERS

Inspection of the work by persons other than representatives of the Owner will not constitute inspection by the Owner, except as set forth in section F-4.

7. STORAGE AND PROTECTION OF MATERIALS

Materials shall be stored so as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. Approved portions of the right-of-way may be used for storage purposes and for the placing of the Contractor's plant and equipment, but any additional space required therefor shall be provided by the Contractor at his expense. The Contractor shall not use private property for storage purposes without written permission of the property owner or lessee. When requested, the Contractor shall furnish copies of such written permission to the Engineer.

8. TRADE NAMES, APPROVED EQUALS OR SUBSTITUTIONS

In order to establish a basis of quality, certain processes, types or machinery and equipment, or kinds of materials may be specified either by description or process or by designating a manufacturer by name and referring to that brand or product designation, or by specifying a kind of material. It is not the intent of the specifications to exclude other processes, equipment or materials of equal value, utility or merit.

Whenever a process is designated, or a manufacturer's name, brand or item designation is given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether in fact they do so or not.

If it is desirable to furnish items of equipment by manufacturers other than those specified, as a substitute after the Contract is executed, the Contractor shall secure approval prior to placing a purchase order or furnishing the same.

If the proposal includes a list of equipment, materials, or articles for which the Contractor must name the manufacturer at the time of submission of the bid, no substitutions therefore will be permitted after a proposal has been accepted without the express consent of the Owner.

9. OWNER FURNISHED MATERIALS

Any material furnished by the Owner will be delivered or made available to the Contractor at the locations specified or shown. The cost of handling and placing such materials after they are delivered to the Contractor will be considered as included in the contract price for the item in connection with which they are used. The Contractor will be held responsible for all material delivered to the Contractor by the Owner and deductions will be made from any monies due to make good any shortages, deficiencies, and damages which may occur after such delivery, and for any demurrage charges.

G. LEGAL RELATIONS AND RESPONSIBILITIES

1. PERFORMANCE AND PAYMENT BOND

The Contractor shall provide and maintain performance and payment bond as set forth in subsection C-6.

2. LAWS AND REGULATIONS

The Contractor shall keep fully informed of all federal, state and local laws, ordinances and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affects the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders and decrees. The Contractor shall protect and indemnify the owner and his representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by the Contractor, his subcontractors, suppliers of materials or services, or others engaged by the Contractor of the employees of any of them.

The Contractor's attention is directed to the statutes of the State of Oregon for public works contracts. Section 279 of the Oregon Revised Statutes, as amended or superceded, including the latest additions and revisions, are incorporated by reference as a part of the contract documents.

In conformance with the requirements of ORS 279.318, the owner shall make specific reference to federal, state and local agencies that have enacted ordinances or regulations dealing with the prevention of environmental pollution and the preservation of natural resources that affect the performance of the contract. If the successful bidder is delayed or must undertake additional work by reason of existing regulations or ordinances of agencies not cited in the public contract or due to the enactment of new or the amendment of existing statutes, ordinances or regulations relating to the prevention of environmental pollution and the preservation of natural resources occurring after the submission of the successful bid, the awarding agency shall grant a time extension and issue a change order setting for the additional work that must be undertaken. The change order shall not invalidate the contract and there shall be, in addition to a reasonable extension of contract time, a reasonable adjustment in the contract price to compensate the successful bidder for all costs and expenses incurred, including overhead and profits, as a result of such delay or additional work.

Federal and state agencies normally having a responsibility relating to the environment include, but are not limited to, the following:

U.S. Environmental Protection Agency
U.S. Corps of Engineer
U.S. Coast Guard
Oregon Department of Environmental Quality

Oregon Division of State Lands
Oregon Department of Mining and Mineral Industries

3. ASSIGNMENT OF CONTRACT AND SUBLETTING

No contract or any portion thereof may be assigned or sublet without consent of the owner except that money due the Contractor may be assigned as specified below.

The Contractor may assign money due or to become due him under the contract and such assignment will be recognized by the owner, if given written notice thereof, to the extent permitted by law, but any assignment of money shall be subject to all proper setoffs and withholdings in favor of the owner and to all deductions provided for in the contract, and particularly all money withheld, whether assigned or not, shall be subject to being used by the owner for completion of the work in the event the Contractor should be in default therein.

4. SUBCONTRACTORS

No part of the work shall be transferred or subcontracted without prior written consent of the owner, or approval at the time of award, and no such consent or approval shall release the Contractor from any obligation to the owner or to persons employed by the subcontractors, or to those supplying materials to the subcontractors. In all cases, subcontractors will be considered by the owner as an employee and liable to be replaced for incompetency, neglect of duty or misconduct.

5. NO WAIVER OF LEGAL RIGHTS

The owner shall not be precluded or stopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work or payment therefore, from showing the true amount and character of the work performed and materials furnished by the Contractor, or from showing that any such measurement, estimate, or certificate is untrue or incorrectly made, or that the work or materials do not conform in fact to the contract. The owner shall not be precluded or stopped, notwithstanding any such measurement, estimate or certificate, or payment in accordance therewith, from recovering from the Contractor and the Contractor's sureties such damages as may be sustained by reason of failure to comply with the terms of the contract, or from enforcing compliance with the contract. Neither the acceptance by the owner, nor any payment for all or any part of the project, shall operate as a waiver of any portion of the contract or of any power herein reserved, or any right to damages herein provided. A waiver of any breach of the contract shall not be held to be a waiver of any other subsequent breach.

6. OTHER CONTRACTS

The owner shall have the right to let other contracts be coordinated with this contract. The Contractor shall cooperate with and afford such other Contractors reasonable opportunity for introduction and storage of materials and for execution of their work. Any matter of dispute shall be decided by the Engineer, and that decision shall be binding. If any part of the work depends for its proper execution upon the work of any such other Contractor, the Contractor shall inspect and promptly report to the Engineer any defects that affect the subsequent work. Failure to do so shall constitute an acceptance of such other Contractor's work as fit and proper for the reception and attachment of the Contractor's own work and equipment.

7. INSURANCE

The Contractor shall provide and maintain insurance as set forth in subsection C-8.

a. Public Liability and Property Damage Insurance

The Contractor shall maintain such public liability and property damage insurance as will protect the Contractor and the owner from any and all claims for damage or personal injury including death, which may arise from operations under this contract or in connection therewith, including all operations of subcontractors.

Such insurance shall provide coverage for not less than the following:

For Personal Injury:	$500,000 for one claimant $1,000,000 from one occurrence
For Property Damage:	$100,000 for one claimant $300,000 from one occurrence

In lieu of the foregoing, a single limit public liability policy for personal injury and property damage will be accepted in the sum of $1,000,000.

Such insurance shall be without prejudice to coverage otherwise existing, and shall name as additional insured the owner and all other governmental bodies with jurisdiction in the area involved in this project, their officers and employees, and shall further provide that this policy shall not be terminated or be cancelled prior to the completion of this contract without 30 days written notice by certified mail to the auditor, which notice shall be subject to the approval of the attorney, said notice to commence to run from the date notice is actually received at the office of the auditor.

Notwithstanding the naming of additional insured, the said policy shall protect each insured in the same manner as though a separate policy had been issued to each; but nothing herein shall operate to increase the insurer's liability as set forth elsewhere in the policy beyond the amount or amounts for which the insurer would have been liable if only one person or interest had been named as insured.

A certificate evidencing such insurance together with the proper endorsement shall be filed with the auditor and shall be subject to the approval of the attorney as to the adequacy of protection.

b. Workers' Compensation Insurance

The Contractor shall provide worker's compensation insurance coverage for all persons employed on the work to be done under the contract and assure that all workers will receive the compensation for compensable injuries provided in ORS 656.001 to 656.794 either by:

1. Contributing to the Industrial Accident Fund as a contributing employer; or

2. Qualifying as a direct responsibility employer under ORS 656.405 and 656.409.

In the event that the Contractor or any of the subcontractors shall elect to fulfill this responsibility by qualifying as a direct responsibility employer under ORS 656.405 and 656.409, satisfactory proof of such fact shall be required. In the event that the certification as a direct responsibility employer is withdrawn, as provided in ORS 656.417, the Contractor or any

subcontractor shall thereafter on the effective date of the withdrawal of certification, become a contributing employer.

8. ROYALTIES AND PATENTS

The Contractor shall hold harmless and be liable for all suits brought against the owner by reason of infringement of patent rights on any material, machine or appliance that may be used on the work or incorporated into the finished job, except where specifically exempted by the special provision. Unit prices names in the proposal shall include payment of royalties, if any.

9. PERMITS, LICENSES AND TAXES

The Contractor shall procure all permits and licenses, pay all charges, fees and taxes and give all notices necessary and incidental to the due and lawful prosecution of the work except that the owner will obtain and pay for the following:

a. All permits required by the Coast Guard for crossing navigable streams.

b. All permits required by the Corps of Engineers for encroachments on navigable streams where such encroachments are called for by the plans for the project.

c. All permits required by the Division of State Lands for removal of materials from or depositing materials in waterways where such work is specifically required by the Division of State Lands for operations in any owner controlled source of materials listed in the special provisions.

d. All permits required by the State Department of Geology and Mineral Industries for operations in any owner controlled source of materials or any disposal area listed in the special provisions.

e. All permits required from local agencies for construction of buildings where such work is required by the plans for the project.

The Contractor's attention is directed to ORS 274.530 relating to "lease of stream beds" by Division of State Lands.

The Contractor shall comply fully with ORS 477.685 which reads, in part, as follows:

> "(1) Before clearing any right of way for any highway or railroad, or any power, commercial telegraph or telephone line, or for any transmission utility right of way on any forest land, whether upon his land or that of another, where clearing would constitute a fire hazard, every person shall file with the forester a general description of the right of way to be cleared. The forester shall issue a written permit for such clearing. The permit shall set forth the precautionary conditions and manner under which the clearing shall be done.
>
> (2) Subsection (1) of this section does not apply to railroad spurs or temporary roads not exceeding one-half mile in length, or to forest land for which an operation permit is in effect.

(3) A person engaged in clearing any right of way on forest land shall not place on adjoining land or property any forest material or debris resulting from such clearing without the permission of the owner of the adjoining land."

10. WAGE RATES

The Contractor and all subcontractors shall pay employees no less than current Prevailing Wage Rates, (PWR), including fringe benefits, as determined by the Commission of Bureau of Labor and Industries, and as prescribed under the provisions of ORS 279.348 through 279.363. The Contractor and subcontractors must post the PWR which is contained in the contract specifications. Copies of the rates may be obtained from the Bureau of Labor and Industries. The rates must be posted on the job site in a conspicuous place which is accessible to employees and must remain posted for the duration of the job.

The Contractor shall submit a complete weekly payroll for the week immediately preceding the submission as follows:

(a) For projects of less than 90 days (2 times), once before the first payment is made and once before the final payment is made.

(b) For projects exceeding 90 days, once before the first payment is made; at 90 day intervals thereafter; and once before the final payment is made.

Payroll and Certified Statement forms are available at any office of the Bureau of Labor and Industries. The forms must be submitted to the City and to the Wage and Hour Division of Bureau of Labor and Industries. The payroll and certified statements must be kept by the Contractor for three (3) years.

11. EMPLOYER'S CONTRACT FOR MEDICAL CARE OF EMPLOYEES

The Contractor shall make payment promptly, as due, to any person, co-partnership, association or corporation furnishing medical, surgical and hospital care, or other needed care and attention, incident to sickness or injury, to employees, of all sums which have been agreed to be paid for such services and all monies and sums which: (1) may or shall be deducted from the wages of employees for such services pursuant to the terms of Oregon Revised Statutes Chapter 655, and any contract entered into pursuant thereto; or, (2) are collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

12. PAYMENT OF OBLIGATIONS

The Contractor shall make promptly as due, to all persons supplying labor or materials for the prosecution of work under the contract. The Contractor shall not permit any lien or claim to be filed or prosecuted against the owner on account of any labor or material furnished. Contractor shall pay to the State Tax Commission all sums withheld from employees pursuant to Oregon Revised Statutes Chapters 315 or 316.

Failure to make prompt payment of any claim when due, for labor or services supplied for the prosecution of work under the contract, including labor or material supplied to subcontractors, may necessitate owner paying such claim to the person furnishing the labor or services and charging

the amount of payment against funds due or to become due to the Contractor by reason of his contract. Such payment shall not relieve the Contractor or his surety from obligations with respect to any unpaid claims.

13. PROTECTION OF OTHER GOVERNMENTAL AUTHORITIES

Whenever work under the contract affects or may affect public property owned by or under the jurisdiction of any governmental authority, agency or district, including a governmental subdivision other than the owner's, the Contractor shall indemnify and save harmless such governmental authority, its officers, agents and employees from any loss, damage or claim of loss or damage to such property or the use thereof, arising from work under the contract. The Contractor shall supply any bond or insurance and make any special guarantee deposit required by such governmental authority, before beginning any portion of the work which affects or may affect the property of such governmental authority or the use thereof.

14. PUBLIC SAFETY AND CONVENIENCE

The Contractor shall conduct the project with proper regard for the safety and convenience of the public. When the project involves use of public ways, Contractor shall provide flagmen when directed and install and maintain means of free access to all fire hydrants, service stations, warehouses, stores, houses, garages and other property.

Private residential driveways shall be closed only with approval of the Engineer or specific permission of the property owner. The Contractor shall not interfere with normal operation of public transit vehicles unless otherwise authorized. The Contractor shall not obstruct or interfere with travel over any public street or sidewalk without approval. Where detours are necessary, they shall be maintained with good surface and shall be clearly marked. The Contractor shall provide open trenches and excavations with adequate barricades of an approved type which can be seen from a reasonable distance. At night, the Contractor shall mark all open work and obstructions by lights. The Contractor shall install and maintain all necessary signs, lights, flares, barricades, railings, runways, stairs, bridges and facilities. The Contractor shall observe all safety instructions received from the Engineer or governmental authorities, but following of such instructions shall not relieve the Contractor from the responsibility or liability for accidents to workers or damage or injury to person or property.

Emergency traffic such as police, fire and disaster units shall be provided reasonable access to the work area at all times.

The Contractor shall be liable for any damages which may result from failure to provide such reasonable access or failure to notify the appropriate authority.

15. PERSONAL SAFETY

The Contractor shall be responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal work hours. Safety provisions shall conform to the applicable federal, state, county and local law, ordinances and codes. Where any of these are in conflict, the more stringent requirement shall be followed.

The Contractor shall maintain at the office or other well-known place at the job site, all articles necessary for giving first aid to the injured and establish the procedure for the immediate

removal to a hospital or a doctor's care of employees and other persons who may be injured on the job site.

The duty of the Engineer to conduct construction reviews of the Contractor's performance is not intended to include a review of the adequacy of the Contractor's safety measures in, on or near the construction site.

All accidents causing death or serious injuries or damages shall be reported immediately by telephone or messenger to both the Engineer and the owner. In addition, the Contractor shall promptly report in writing to the Engineer all accidents whatsoever arising out of or in connection with, the performance of the work, whether on or adjacent to the site, giving full details and statements of witnesses.

If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Engineer, giving full details of the claim.

16. LABOR

Upon notification in writing from the Engineer, the Contractor shall remove immediately from the job for its duration any laborer, worker, mechanic, foreperson, superintendent or other person employed who is found to be incompetent, intemperate, troublesome, disorderly or otherwise objectionable, or who fails or refuses to perform work properly and acceptably.

Attention is directed to provisions of owner's code regarding Equal Opportunity Program and certification thereunder, and to Chapter 659, Oregon Revised Statutes relative to unlawful employment practices and discrimination by employers against any employee or applicant for employment because of race, religion, color, sex or national origin. Particular reference is made to ORS 659.030 which states that it is an unlawful employment practice for an employer, because of race, religion, color, sex or national origin of any individual to refuse to hire or employ or to bar or discharge from employment such individual or to discriminate against such individual in compensation or in terms, conditions or privileges of employment.

In the event of the Contractor's noncompliance with the non-discrimination clauses of a contract so funded, or with any such rules, regulations or orders, the contract may be cancelled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order number 11246, and such other sanctions may be imposed and remedies invoked as provided in Executive Order number 11246, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

17. WORKING CONDITIONS

The Contractor agrees, pursuant to ORS Chapter 279, that no person shall be employed for more than 8 hours in any one day, or 40 hours in any one week, except in cases of necessity, emergency, or where the public policy absolutely requires it, and in such cases the worker shall be paid at least time and a half for all overtime in excess of eight hours a day and for work performed on Saturday and on any legal holiday specified in ORS Chapter 187, except Veteran's Day. However, when specifically agreed to under a written labor-management negotiated labor agreement, a worker may be paid at least time and a half pay for work performed on Veteran's Day or any legal holiday specified in ORS Chapter 187. Overtime provisions may be waived within a collective bargaining

agreement in accordance with ORS 279.342. This paragraph does not apply to labor performed in the manufacture or fabrication of any material ordered by the Contractor or manufactured or fabricated in any plant or place other than the place where the main contract is to be performed.

18. USE OF EXPLOSIVES

Any blasting or use of explosives requires the approval of the Engineer and is subject to all the provisions, laws, orders and regulations of any other governmental authority in whose jurisdiction such work may be done.

19. RAILROAD CROSSINGS OR RIGHT-OF-WAY

Whenever the project or work thereunder involves the crossing of any railroad line or the encroachment of any railroad right-of-way, the Contractor shall submit a program of proposed operations within the railroad rights-of-way area which shall be approved by the appropriate railroad officials and the Engineer before the work is started within such area. The Contractor shall pay for services of flagmen and/or watchmen furnished by the railroad company and provide drive piling, set cribbing, build bridges or tunnels, install enclosing pipe and do all other work required by the railroad company or necessary for the safety or maintenance of railroad traffic. The Contractor shall furnish any bond or insurance required of the owner by the railroad company as a result of such intended operations and indemnify the owner for any and all expenses incurred by the owner, and assume any and all liability or claims thereof imposed on the owner as a result of operations in the railroad right-of-way area. The Contractor shall bear all costs resulting from interferences, obstructions or liabilities set forth in this specification, whether or not herein specifically mentioned.

20. RIGHT-OF-WAY AND EASEMENTS

The Contractor shall confine construction activities within property lines, limits of easements and limits of construction permits as shown or specified in the contract documents, unless arrangements are made with owner(s) of adjacent private property. Prior to the use of any private property outside these specified boundaries, the Contractor shall file with the Engineer a written permission of the property owner(s), and upon terminating such usage, file with the Engineer a release from all damages, signed by the property owner(s).

The Contractor shall not unreasonably encumber the specified work areas with materials and equipment, and shall obtain and bear the cost of permits for special occupancy and the use of the specified work areas from the proper agencies. The Contractor shall comply with the Engineer's directions regarding signs, advertisements, fires and smoking.

21. WASTE SITES

Excavated materials not suitable or not required for backfill or embankment shall be deposited on one or both of the following waste sites: (1) predesignated waste sites contained in the contract documents, and (2) waste sites provided by the Contractor. All costs for disposing of this excess material shall be incidental to other items of work contained in the proposal.

The Contractor shall operate either type of waste site in such a manner as to meet all safety and health requirements of state and local agencies. Sites, operations or the result of such

operations which create a nuisance problem, or which result in damage to public or private properties will not be permitted.

The owner will provide permits for dumping at waste sites designated in the contract documents. The Contractor will be responsible for obtaining the necessary permits for dumping at waste sites provided by the Contractor.

22. VERMIN CONTROL

At the time of occupancy by the owner, any structure or structures entirely constructed under the contract shall be free of rodents, insects, vermin or pests. The Contractor shall arrange and pay for extermination work as may be necessary as part of the contract work within the contract time. Work shall be performed by a licensed agency in accordance with the requirements of governing authorities. The Contractor shall assume responsibility for any injury to persons or property resulting from extermination work and for the elimination of any offensive odors resulting from extermination operations.

23. WARRANTY AND MAINTENANCE

The Contractor shall make all necessary repairs and replacements to remedy, in a manner satisfactory to the Engineer and at no cost to the owner, any and all defects, breaks, or failures of the work occurring within one (1) year following the date of acceptance of the work due to: faulty or inadequate materials or workmanship, and for damage or disturbances to other improvements under, within, or adjacent to the work, whether or not caused by settling, washing or slipping when such damage or disturbance is caused, in whole or in part, from activities of the Contractor in performing the duties and obligations under this contract. When such defects or damage occur, within the time period described hereinbefore, in any part of the surface or subsurface work done under the contract, or in any adjacent surface or subsurface improvements not included in the work under the contract, the Contractor shall repair the same and the one year maintenance period required shall, with relation to such required repair, be extended one year from the date of completion of such repair.

H. PROSECUTION AND PROGRESS OF WORK

1. CONTRACTOR'S CONSTRUCTION SCHEDULE

Prior to beginning any work the Contractor shall submit a written schedule to the Engineer showing the proposed order of work and indicating the time required for completion of the major items of work. This working schedule shall take into account the passage or handling of traffic with the least practicable interference therewith and the orderly, timely and efficient prosecution of the work.

In the event that the work performed does not correspond to the schedule, the Contractor shall submit a revised schedule when requested by the Engineer. The schedule will be used as an indication of the sequence of the major construction operations and as a check on the progress of the work, but does not become a part of the contract documents.

2. PRECONSTRUCTION CONFERENCE

A preconstruction conference will be scheduled by the Contractor prior to the commencement of any work. The meeting is to include, but not necessarily be limited to, representatives of the following groups: owner or Engineer, Contractor and subcontractor, and affected utility companies.

The purpose of the conference will be to discuss the construction schedule and items of the work which require special coordination.

3. NOTICE TO PROCEED

Written notice to proceed will be given after the contract has been executed and the performance bond and all required insurances have been filed with and approved by the owner.

The Contractor shall notify the owner of the time and location that work will begin at least 48 hours prior to beginning work.

4. CONTRACT TIME

The contract time, unless otherwise specified, will begin with the tenth calendar day (excluding legal holidays) following the date upon which the contract and performance bond forms are mailed to the Contractor for execution.

The contract time shall be in terms of either calendar days or work days and shall be in calendar days unless otherwise specified.

Work days shall be defined as every day except Sundays and legal holidays observed by the State of Oregon subject to the exclusions hereinafter described.

Calendar days shall be defined as every day of every year subject to the exclusions hereinafter described.

Exclusions to the definitions of calendar days and work days will be those days to the nearest one half day when the Contractor is prevented from performing work under the contract for one or another of the causes or reasons: (1) Acts of God as such are defined in subsection A-1; (2) Epidemics, quarantine restrictions, strikes, labor disputes, freight embargoes and acts of the public enemy; (3) Periods when the work is temporarily suspended upon written order of the Engineer.

5. SUSPENSION OF WORK

The owner may, for good and sufficient reason, temporarily suspend the Contractor's operations on the project or upon any part of it. In the event of such suspension, the owner shall, except in emergency, give the Contractor three (3) days notice and the work shall be resumed within five (5) days after notice has been given by the owner to the Contractor to do so. The owner shall allow the Contractor an extension of time for completion corresponding to the total period of the temporary suspension, and shall reimburse the Contractor for necessary rental of unused equipment, services of watchmen, and other unavoidable expenses accruing by reason of the suspension without fault of Contractor. The Contractor shall not be entitled to damages, intangible or overhead costs, or anticipated profits arising from such temporary suspension.

Pursuant to Sections E-1 and E-2, the Engineer shall have authority to suspend the work wholly or in part for cause. The Engineer will have the authority to suspend the work wholly or in part due to: failure of the Contractor to correct conditions unsafe for the workers, the general public or the owner's employees; for failure to carry out the provisions of the contract; for failure to carry out orders; for such periods as the Engineer may deem necessary due to conditions considered unsuitable for the performance of the work or for any reason deemed to be in the public interest.

Pursuant to subsection H-6, if the Contractor voluntarily suspends operations because of seasonal conditions or other unsuitable conditions, an order to suspend the work may not be required or issued. However, in all cases of suspension of construction operations, the work shall not again be resumed until permitted by order of the Engineer.

At the commencement of and during any suspension of the work, the Contractor shall be responsible for the care of the work performed and take every precaution to prevent any damage or deterioration of the work including temporary protection devices to warn, safeguard, protect, guide and inform traffic, during suspension the same as though its performance had been continuous and without interferences.

If the suspension of the work is due to failure on the part of the Contractor to correct conditions unsafe for workers or the general public, or to carry out orders given, or to perform any provisions of the contract, then and in such event, be solely responsible for making suitable provisions for necessary traffic and bear the cost of maintaining the work under the contract during the period of suspension. If the Contractor at any time fails to provide for traffic and to maintain the work, the Engineer may immediately proceed to maintain such work and the entire cost of this maintenance will be deducted from monies due or to become due the Contractor on the contract.

The Contractor's voluntary or involuntary suspension or slowdown, with or without the approval of the Engineer, and suspension of the work ordered by the Engineer will not be grounds for claims by the Contractor for damages, idle equipment or labor, or extra compensations. No allowance or compensation will be made on account of such suspensions or work except as provided hereinbefore and as provided in subsection H-4 and H-6.

The Contractor shall be responsible for damage to the work that may occur during suspensions of work the same as though the damage had occurred while the work was in progress.

6. DELAYS AND EXTENSIONS

The owner may grant extensions of time to the extent it finds reasonable and justified when the delay is due solely to causes beyond the control of the Contractor and subcontractors and without any fault or negligence or participation by them.

Causes which will be given consideration for an extension of contract time include, but are not limited to, the following:

a. Errors, changes or omissions in the plans, or errors or changes in the specifications.

b. Failure of the owner, its representatives and its other Contractors to act promptly in carrying out obligations and duties.

c. Failure of the owner to submit the contract and bond to the Contractor for execution.

d. Performance of Extra Work as described in subsection D-9.

e. Court orders enjoining the prosecution of the project or an act of the owner not authorized by the contract or permitted by law.

The owner will not consider an extension of contract time based on shortage or inadequacy of labor and equipment, negligence or fault of the Contractor, and other deficiencies or lacks which are within the province of the Contractor's control or responsibility. Nor will the owner consider an extension of contract time due to seasonal weather or seasonal inclement weather.

If, in the judgement of the Engineer, insufficient force is being employed, or inadequate equipment and methods are used, or if progress is for any reason unduly delayed, the Engineer may instruct the Contractor in writing to increase the force or equipment, or adopt improved methods to expedite the work, and the Contractor shall heed and follow such instructions, but conformity to the Engineer's instructions shall not relieve the Contractor of any responsibilities under this contract.

An extension of contract time will be considered only if the Contractor has given written notice to the owner of the cause of delay, and makes claim for such extension prior to

the contract completion date. The decision by the owner of the term of any extension or detail thereof shall be final.

If work under a contract pursuant to subsection (1) of ORS 279.326, and is not the result of a labor dispute but the contract is not terminated, the Contractor is entitled to a reasonable extension of the contract time and reasonable compensation for all costs resulting from the suspension plus a reasonable allowance for overhead with respect to such costs.

7. LIQUIDATED DAMAGES

Time shall be considered the essence of the contract. If the Contractor fails to complete the project or to deliver the supplies or perform the services within the time specified in the contract or any extension thereof by the owner, the actual damage to the owner for the delay will be substantial but will be difficult or impractical to determine.

It is therefore agreed that the Contractor will pay to the owner, not as a penalty but as liquidated damages, the per diem amount set forth in the herein given Schedule of Liquidated Damages or modification thereof as given in the special provisions for each and every such day, as pertinent, elapsed in excess of the contract time or the final adjusted contract time applicable to the work required under the contract.

SCHEDULE OF LIQUIDATED DAMAGES

Original Amount of Contract		Per Diem Amount of Liquidated Damages	
For More Than	Up To and Including	Calendar Day*	Workday
$ 0	$ 25,000	$ 30	$ 42
25,000	50,000	50	70
50,000	100,000	75	105
100,000	500,000	100	140
500,000	1,000,000	150	210
1,000,000	2,000,000	200	280
2,000,000	-------	300	420

*Calendar day amounts are applicable when the contract time is expressed on the calendar day, or fixed date basis.

Permitting the Contractor to continue and finish the work or any part thereof after the contract time or adjusted contract time, as pertinent, has expired shall in no way operate as a waiver on the part of the owner or any of its rights under the contract.

Payment of liquidated damages shall not release the Contractor from obligations in respect to the fulfillment of the entire contract, nor shall the payment of such liquidated damages constitute a waiver of the owner's right to collect any additional damages which may be sustained by failure of the Contractor to carry out the terms of the contract, it being the interest of the parties that said liquidated damages be full and complete payment only for failure of the Contractor to complete the work on time.

8. CONTRACTOR'S REPRESENTATIVE

The Contractor shall designate in writing before starting work an authorized representative, who shall have complete authority to represent and to act for the Contractor in his absence from the work site, in all directions given to him by the Engineer. The Contractor or the authorized representative shall give efficient supervision to the work, using the best skill and personal attention to the prosecution of the work, and shall be present on the site continually during its progress.

If called for in the contract documents, the Contractor shall maintain an office on or adjacent to the site of the project. The Contractor shall keep a complete copy of the plans and specifications on or near the site at all times. If the Contractor and the authorized representative are not present on any part of the work where it may be necessary to give instructions, directions may be given by the Engineer to the superintendent or foreperson who may have charge of that particular part of the project, and such order shall be received and followed. Such directions shall not be deemed to change the status of Contractor or subcontractor, nor to make the owner an employer, nor to give the owner direct responsibility for the methods and manner of the work. Such directions of major importance will be confirmed in writing. Any direction will be so confirmed in each case on written request from the Contractor.

Incompetent, careless or negligent employees or agents shall be forthwith discharged by the Contractor upon written request of the Engineer, and failure to comply with such request shall be sufficient grounds for termination of the contract.

9. CONTRACTOR'S EQUIPMENT

The Contractor shall at all times employ sufficient and suitable equipment for prosecuting the work to full completion in the manner and time required by the terms of the contract.

On force account work the equipment and tools used shall be adequate in all respects for efficient performance of the force account work under the direction of the Engineer. The Engineer shall have the authority to refuse the use of equipment and tools on force account work which, in the Engineer's judgement are unsuitable for the work.

Should the Contractor fail to furnish suitable and sufficient equipment for the proper prosecution of the work, the Engineer may suspend the work by written notice until such orders are complied with and such deficiencies are corrected as provided in subsection H-5.

10. CONFLICTS, ERRORS AND OMISSIONS

The Contractor shall check and compare all plans prior to construction and notify the Engineer of any discrepancies or omissions in order to permit correction by the Engineer. Coordination of plans and specifications is intended. The Contractor shall furnish labor and materials required for the work if indicated on one and not the other as fully as if mentioned or indicated on both; and should any work or materials be reasonably required or intended for carrying the project to completion which are inadvertently omitted on the plans or specifications, the Contractor shall furnish the same as fully as if particularly delineated or described.

It is understood to be the intent of the plans and specifications to show and describe a complete project within the limits shown. Dimensions shown on the plans shall be used rather than scaled measurements. Whenever it may appear that the plans are not sufficiently detailed or explicit, the Engineer may furnish additional detail drawings or written instructions and the Contractor shall perform the work to such additional details or instructions. In case of conflict between the requirements set forth in the contract documents, the provisions for order of precedence in subsection D-3 shall apply.

11. OWNER'S RIGHT TO DO WORK

If the Contractor should neglect to prosecute the project properly, or fail or refuse to perform any of the terms or conditions of the contract, the owner may, without prejudice to any other remedy, supply or correct any deficiency or defect. Such action by the owner shall be taken only after three days notice by the Engineer to the Contractor and his surety, unless in the judgement of the Engineer an emergency or danger to the work or to the public exists, in which event action of the owner as set forth above may be taken without any notice whatsoever. The cost of such action by the owner shall be deducted from the payment then or thereafter due the Contractor. The Contractor shall pay to the owner any excess of cost over such a payment due.

12. USE OF IMPROVEMENT DURING CONSTRUCTION

The owner shall have the right to take possession of, and use any completed or partially

completed portions of the work. Such use shall not be considered as final acceptance of any portion of the work. If such prior use increases the cost of, or delays the work, the Contractor shall be entitled to such extra compensation or extension of time, or both, as the Engineer may determine.

13. TERMINATION OF CONTRACT

All terms and conditions of the contract are considered material, and failure by the Contractor to comply with any of said terms or conditions shall, at the owner's option, be deemed a breach of the contract. Upon such failure, the owner shall have the right, whether an alternative right is provided or not, to declare the contract terminated. The issuance by the owner or by the Engineer of an order stating that the contract is terminated, and service of a copy of said order upon the Contractor and the Contractor's surety shall be deemed a complete termination of the contract. Upon the contract being so terminated, the owner may retain all sums due under the contract and both the Contractor and his sureties shall be liable under the bond for all losses, expenses and damages caused to the owner by reason of failure to complete the contract and the surety shall be required, at the owner's option, to complete the project. Notwithstanding such termination, the Contractor and the Contractor's sureties shall remain liable under the terms of the contract for work performed prior to such termination.

In conformance with the requirements of ORS 279.326, the owner and the Contractor may agree to terminate the contract:

a. If work under the contract is suspended by an order of a public agency for any reason considered to be in the public interest other than by a labor dispute or by reason of any third party judicial proceeding relating to the work other than a suit or action filed in regards to a labor dispute; and

b. If the circumstances or conditions are such that it is impracticable within a reasonable time to proceed with a substantial portion of the work.

In the event of termination of a public contract pursuant to ORS 279.326, provision shall be made for the payment of compensation to the Contractor. In addition to a reasonable amount of compensation for preparatory work and for all costs and expenses arising out of termination, the amount to be paid to the Contractor:

a. Shall be determined on the basis of the contract price in the case of any fully completed separate item or portion of the work for which there is a separate or unit contract price; and

b. May, with respect to any other work be a percent of the contract price equal to the percentage of the work completed.

14. DEFAULT BY CONTRACTOR

If the Contractor fails to begin work as required by the contract, or be adjudged bankrupt, or make a general assignment for the benefit of his creditors, or a receiver is appointed on account of insolvency, or if at any time when work has been resumed after a Suspension of Work (pursuant to subsection H-5) the Contractor refuses, neglects or fails to correct the deficiency(s) or

reason(s) for the suspension, or if the Contractor abandons the work, the Engineer may give written notice of default to the Contractor and the Contractor's surety, and shall discontinue or not begin the work, and any or all payments due or that may become due the Contractor may be withheld by the owner until the completion by the owner, surety, or another person of all work included in the contract, and until expiration of any maintenance and/or warrantee period.

After service on the Contractor of such order to desist from work or part thereof, or notice of termination as set forth in subsection H-13, the owner may take possession of the project or such designated part thereof, and may use all or any part of the Contractor's plant, tools, equipment, materials or other property on the project, none of which shall be removed by the Contractor as long as they may be required for the work, and the owner may, by contract or otherwise, provide supervision of workers, materials, appliances and equipment necessary for the completion of, and may complete the project or such designated part thereof. The expense so incurred for completion of the project or part thereof, together with all damages, liquidated or otherwise sustained or to be sustained by the owner shall be deducted from the fund or appropriation set aside for the purpose of the contract and shall be charged to the Contractor as if paid. In case the amount of such expenses and damages exceeds the sum which would have been payable under the contract if completed entirely by the Contractor, the amount of such excess shall be paid to the owner by the Contractor and both the Contractor and the Contractor's sureties shall be liable to the owner therefore; in case the amount of such expenses and damages shall be less than the sum which would have been payable under the contract if completed entirely by the Contractor, he shall be entitled only to payment in accordance with contract terms for the work the Contractor actually performed, subject, however, to all terms of said contract.

The Contractor shall complete all work unless an order to desist as provided above has been received, and shall cooperate with and in no way hinder or interfere with forces employed by the owner or others.

Upon completion of the project by others, the Contractor shall be entitled to the return of all material which has not been used in the work or which has not been paid for, and for all plant, tools, equipment and other property, provided, however, that no claim will be allowed because of usual and ordinary depreciation, loss, wear and tear.

None of the foregoing provisions, or the provisions in subsection H-13 shall be construed to require the owner to complete the work, nor to waive or in any way limit or modify the provisions of the contract relating to the fixed and liquidated damages suffered by the owner on account of the failure of the Contractor to complete the project within the time prescribed.

15. COMPLETION AND ACCEPTANCE

After completion of all items of work specified in the contract, and completion of the final inspection as set forth in subsection E-20, the Engineer will recommend to the owner that the work be accepted and payment be made as provided for in subsection J-10.

It is mutually agreed between the parties to the contract that a certificate of completion of the project, submitted by the Engineer or other officer of the owner and approved by the governing body of the owner, shall constitute final acceptance of the work and materials included in the contract on the date of such approval. It is provided further that such approval shall not constitute an acceptance of any authorized work, that no payment made under the contract except the final payment

shall be evidence of the performance of the contract, either

wholly or in part, and that no payment shall constitute an acceptance of unauthorized or defective work or improper material.

The acceptance of the contract work shall not prevent the owner from making claim against the Contractor for any defective work if same is discovered within the guaranty period.

All work shall be and is guaranteed by the Contractor for a period as specified after the date of final acceptance of all the work by the owner.

If, within said guaranty period, repairs or changes are required in connection with guaranteed work, which, in the opinion of the Engineer, is rendered necessary as the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the contract, the Contractor shall, promptly upon receipt of notice from the owner, and without expense to the owner,

a. place in satisfactory condition in every particular all of such guaranteed work, correct all defects therein; and

b. make good all damage to the building or site, or equipment or contents thereof, which in the opinion of the Engineer, is the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the contract; and

c. make good any work or material, or the equipment and contents of building, structure or site disturbed in fulfilling any such guarantee.

If the Contractor, after notice, fails within ten (10) days to proceed to comply with the terms of this guaranty, the owner may have the defects corrected, and the Contractor and his surety shall be liable for all expense incurred, provided, however, that in case of an emergency where, in the option of the Engineer, delay would cause serious loss or damage, repairs may be made without notice being given to the Contractor and the Contractor shall pay the cost thereof.

J. MEASUREMENT AND PAYMENT

1. MEASUREMENT OF QUANTITIES

Payments shall be based on measurements of the completed work in accordance with United States Standard Measures. The units of measurement for payment shall be as shown or specified. In calculating quantities, all lengths and areas will be based on horizontal and vertical measurements unless otherwise specified.

Basis is defined as the particular standard unit of measurement which will be applied to a particular item of work as shown.

Each basis of measurement herein set forth is generally applicable and will be in effect.

Linear measurement of pay lengths will be by the linear foot, measured along the line and grade of the item involved as actually placed and accepted.

Volume of earthwork, particularly excavation and embankment, will be computed by the average end area method or by other methods of equivalent accuracy.

Volumes of materials measured in the vehicles by which they are transported, termed Vehicle Measurement, will require computing of the volume of the vehicle to the nearest 0.1 cubic yard for its approved capacity, and identification of the vehicle and its capacity. Pay quantities will be determined by vehicle measurement at the point of delivery with no allowance for settlement of material during transit. Loads shall be level and uniform. Measurement will not be made for material in excess of the approved capacity of the vehicle and deductions will be made for loads below the approved capacity.

Volumes of concrete and masonry in structures will be measured according to neat lines as shown on the plans or as altered on order of the Engineer.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard may be weighted and such weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

When payment for materials other than bituminous cements is on a weight basis and unless otherwise set forth in the specification under which the material is to be furnished, the pay quantities will be determined by weighing the material on weigh scales provided by the Contractor as set forth hereinafter.

Such weighing is to be of material in the hauling vehicle as loaded for delivery of the material to the place of its incorporation in the work. The determination of tare weights and the weight of loaded vehicles will be to the nearest ten pounds. Tare weights will be determined by weighing empty vehicles at intervals of such frequency as the Engineer deems necessary to insure accuracy of pay load weights.

Portland cement will be measured by the pound, hundredweight, ton, sack, bag or barrel. The term Barrel of cement will mean 376 pounds, avoirdupois. The terms Sack and Bag of cement will each mean 94 pounds, avoirdupois.

The quantities of asphalt cements, liquid asphalt materials and other bituminous cements normally shipped in tank cars or tank trucks, when they are to be paid for by the gallon (U.S. Standard) or by the ton, will be determined from volume computations of the materials when at a temperature of 60 degrees F., with standard recognized correction factors applied when the materials are measured at any temperature other than 60 degrees F. Net certified scale weights based on certified volumes in the

case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When bituminous materials are shipped by truck or transport, net certified weights or volume, subject to correction for loss of foaming, may be used for computing quantities.

Weights of materials and of metallic coatings will be determined on the basis as set forth in the specification under which their use is required.

The term Lump Sum when used as the basis of payment will mean complete payment for the work described to be done, complete and accepted without further measurement, as such work is covered under the applicable lump sum pay item.

The term All Required when used as the item of payment will mean that measurement for the item of work is to be on an All Required basis and that the corresponding payment is to be at a lump sum bid price. It is understood that the lump sum payment will be in effect without further measurement unless changes are ordered in writing by the Engineer.

When the contract specifies for materials which are to be measured by weighing on scales, the Contractor shall provide the scales at no expense to the owner and shall transport the materials so they can be weighed on the scales provided.

The scales shall be of a size, capacity, kind and type suitable for the weighing to be done, and shall be properly and adequately installed. Before use of scales is commenced, and as frequently thereafter as the Engineer may deem necessary to insure accuracy, the Contractor shall, at the Contractor's expense, have the scales certified by the Oregon Department of Weights and Measures.

The Contractor shall be responsible for maintaining the scales in an accurate condition at all times.

The Contractor shall furnish scales and so locate the scales so that the amount of hauling involved in the delivering of the materials is no greater than if no weighing were required. If hauling of materials is to be paid for as a separate pay item, the pay distance shall include only the distance via the most direct practicable route from the place of loading to the place of deposit and no allowance will be made for any extra hauling required to reach the scales.

2. SCOPE OF PAYMENT

The Contractor shall accept the compensation, as herein provided, in full payment for furnishing all materials, labor, tools and equipment necessary to the completed work and for performing all work contemplated and embraced under the contract; also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the owner, and for all risks of every description connected with the prosecution of the work; also for all expenses incurred in consequence of the suspension or discontinuance of the work as herein specified; and for completing the work according to the plans and specifications.

Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

The unit contract prices for the various bid items of the contract shall be full compensation for all labor, materials, supplies, equipment, tools and all things of whatsoever nature required for the complete incorporation of the item into the work the same as though the item were to read "In Place", unless the plans and special provisions shall provide otherwise.

3. COMPENSATION FOR ALTERATION OF CONTRACT

When the character of the work or the unit costs thereof are materially changed, pursuant to subsection D-6, compensation for such work will be made on such basis as may have been agreed to in advance of the performance of the work. When no such basis has been previously agreed upon, then an allowance may be made, either for or against the Contractor, in such amount as the Engineer may determine to be fair and equitable.

4. ELIMINATED ITEMS

The Engineer shall have the right to eliminate, omit or cancel (herein collectively termed elimination) the portions of the contract relating to the construction of any item or part of any item therein by payment to the Contractor of a fair and equitable amount covering all items of actual cost incurred directly in connection with the eliminated work and prior to the date of elimination of the work by order of the Engineer. Where practicable, the work completed before elimination shall be paid for at unit prices, otherwise the Contractor will be allowed a profit percentage on the materials used and construction work actually performed at rates as provided in subsection J-6 for force account work, but no allowance will be made for anticipated profits. Acceptable materials ordered by the Contractor, delivered on the work or properly stored at sites approved by the Engineer prior to the date of elimination of the work by order of the Engineer, will be purchased from the Contractor by the owner at actual cost, and thereupon shall become the property of the owner.

5. PAYMENT FOR EXTRA WORK

Upon written order by the Engineer, the Contractor shall carry out such work at prices agreed upon between the Contractor and the owner, but in no event exceeding the unit prices established in the contract. When such order pertains to work of a class or classes for which no unit prices are so established, then the agreed adjustment shall be based either on unit prices decided on fair and equitable grounds or shall be a lump sum similarly decided, as the owner may determine, or such work may be done on a force account basis. In no case shall the Contractor make any claim for extra work unless ordered as such.

6. PAYMENT FOR FORCE ACCOUNT WORK

When extra work is ordered to be done on a force account basis, such work will be paid for on the basis of cost plus certain percentage allowances.

The items of cost for which payment will be made and to which payment will be restricted, together with the percentage allowance applicable to the respective items, are as follows:

Items of Cost for Which Payments Will be Made	Percentage Allowance Additional to Actual Cost
Labor, including time of foreperson, while engaged directly upon force account work.	20
Industrial accident insurance, unemployment compensation contributions and social security	

for old age and assistance contributions incurred or required under statutory law and these standard specifications.	15
The amount paid to, or in behalf of, workers by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits or other benefits, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work.	15
Materials and supplies actually used in the force account work.	15
Rental on each piece of equipment having a value in excess of one hundred dollars, provided the rental rate does not exceed the current rates established by the Associated General Contractors, Oregon Chapter.	15

The payment to be made for labor used in the work will be computed at the rates actually paid by the Contractor or subcontractor, plus the allowance set forth above, unless these rates are in excess of the current local rates, in which event the payment shall be computed at the current local rate, plus allowances. The time allowed shall be the number of hours worked directly on force account operations.

Payment for purchased materials and supplies used on force account work will be computed at the prices billed to the Contractor or subcontractor by the supplier, less all discounts plus the allowance set forth hereinbefore. It shall be presumed that the Contractor or subcontractor has taken advantage of all possible discounts on bills for materials and supplies, and such discounts shall be subtracted from the total amounts of bills regardless of any failure of the Contractor to take advantage of same.

Freight and express on material and supplies will be considered to be a part of the cost of the materials and supplies and will be paid for as materials and supplies.

Materials and supplies produced by the Contractor or a subcontractor will be paid for at prices to be agreed upon between the Contractor and the Engineer.

Rental on equipment used will be computed at the rates actually paid by the Contractor or subcontractor plus the allowance unless these rates are in excess of the current local rates, or unless the equipment is owned by the Contractor or subcontractor. In either of which events payments shall be computed at rates to be agreed upon between the Contractor and the Engineer prior to beginning work, which rates shall in no case be greater than the current local rates.

When a piece of equipment and the operators thereof are hired, rented, or furnished as a unit, the additional percentage to be allowed shall be 5 percent, and the Contractor shall not be entitled to 15 percent on the time of the operators of such equipment. Neither shall the Contractor be entitled to payment for contributions made under the terms of the Workmen's Compensation Act, the

Unemployment Compensation Act, or the Social Security Act to cover the time of operators of equipment hired, rented or furnished on this basis.

For equipment rented on a day or hour basis, rental will be allowed for only those days or hours during which the equipment is in actual use. For equipment rented on a monthly basis, straight time rental will be allowed from the day the equipment is first used on the particular piece of force account work until and including the last day on which it is used on that particular work, excluding, however, the time during which the equipment is used on other work during the period, and further excluding the time that the equipment is idle for a continuous period of more than six days.

The rentals allowed for equipment will in all cases be understood to cover all fuel, supplies, repairs, and renewals, and no further allowances will be made for those items unless specific agreement to that affect is made in writing before the work is commenced. Individual pieces of equipment having a value of one hundred dollars or less will be considered to be tools or small equipment, and no rental shall be allowed on such.

The percentage allowances made to the Contractor in accordance with the terms outlined above will be understood to be reimbursement and compensation for all superintendence, use of tools and small equipment, overhead expense, bond cost, insurance premiums, profits, indirect costs and losses of all kinds, and all other items or cost not specifically designated herein as items for which payment is to be made, whether the service, costs and other items involved are furnished or incurred by the Contractor or by the subcontractor. No other reimbursement, compensation or payment shall be made for any such services, costs or other items.

Should any percentage allowance or other corresponding allowance be made by the Contractor to a subcontractor in connection with force account work, such allowance shall be at the sole expense of the Contractor and the Contractor shall not be reimbursed or otherwise compensated for the same by the owner.

All claims for extra work done in any month shall be filed in writing by the Contractor with the Engineer before the fifth of the following month, and such claims shall show the names and number of each worker employed thereon, the date and the number of hours so employed, the character of work, and the wages paid or to be paid; also the claim shall show the materials delivered for the extra work, the quantity and character of such materials, from whom purchased, and the net amount paid, or to be paid therefore.

7. PROGRESS PAYMENTS

At a regular period each month the Engineer will make an estimate of the amount of work completed and of the value of such completed work. The sum will hereinafter be collectively referred to in this subsection as the "value of completed work". With this estimate as a base, a partial payment will be made to the Contractor, which partial payment shall be equal to the value of completed work, less such amounts as may have been previously paid, less such other amounts as may be deductible or as may be owing and due to the owner for any cause, and less an amount to be retained in protection of the owner's interests.

The amount to be retained in protection of the owner's interest is not to include the full amounts earned under force account work performed during the period covered by the respective partial payments.

The amount to be retained from any given partial payment will be such that when added to the sum of amounts previously retained will bring the total of amounts retained equal to five percent of the value of completed work, unless otherwise specified.

Such amount of retainage shall be withheld and retained by owner until it is included in and paid to Contractor as part of the final payment of the contract amount.

If the Contractor fails to complete the project within the specified contract time, or any extension thereof, no additional progress payments will be made until the project is completed.

The making of progress payments shall, under no circumstances, be construed as an acceptance of any of the work or materials under the contract.

Payments for all work under the contract will be made at the price or prices bid therefore, and the prices shall include full compensation for all incidental work.

No progress payment will be made until Contractor has filed wage certification as described in subsection G-10.

Progress payments will be prepared on or about the 25th of each month and are payable to the Contractor within 30 days after receipt of invoice from the Contractor.

8. DEFERMENT OF PAYMENTS

No payment will be made until all orders made by the Engineer to the Contractor in accordance with the specifications are complied with, nor until all claims or liens filed or prosecuted against the owner, its officers or employees contrary to the provisions of the contract are satisfied.

In the event a complaint or charge of unlawful employment practices pursuant to the provisions of ORS Chapter 659 is filed against the Contractor with the Commission of Labor, and the Commissioner of Labor issues a cease and desist order as defined in ORS 659.010, no further payments will be made on the contract until such time as all of the provisions of the cease and desist order have been complied with by the Contractor.

9. FINAL ESTIMATE AND PAYMENT

The Contractor shall notify the Engineer when work is considered complete and the Engineer shall, within fifteen (15) days after receiving the notice, either accept the work or notify the Contractor of work yet to be performed on the contract. If accepted, the Engineer shall so notify the Contractor and will make a final estimate and recommend acceptance of the work as of a certain date. Upon approval and acceptance by the owner, the Contractor will be paid a total payment equal to the amount due under the contract including all retainage.

Prior to final payment, the Contractor shall deliver to the owner, a receipt for all amounts paid or payable to the Contractor and a release and waiver of all claims against the owner arising from or connected with the contract and shall furnish satisfactory evidence that all amounts due for labor, materials and all other obligations have been fully and finally settled, or are fully covered by insurance.

10. ACCEPTANCE OF FINAL PAYMENT

The acceptance by the Contractor of the final payment shall release the owner and the Engineer as agent of the owner from all claims and all liability to the Contractor for all things done or furnished in connection with the work, and every act of the owner and others relating to or arising out of the work. No payment, however, final or otherwise, shall operate to release the Contractor or the Contractor's sureties from obligations under the contract and the performance, payment and other bonds and warranties, as herein provided.

11. FINAL GUARANTY

All work shall be and is guaranteed by the Contractor for a specified period from and after the date of final acceptance of all the work by the owner.

If, within said guaranty period, repairs or changes are required in connection with guaranteed work, which, in the opinion of the Engineer is rendered necessary as the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the contract, the Contractor shall promptly upon receipt of notice from the owner, and without expense to the owner:

(a) place in satisfactory condition in every particular all of such guaranteed work, correct all defects therein;

(b) make good all damage to the building or site, or equipment or contents thereof, which in the opinion of the Engineer, is the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the contract; and

(c) make good any work or material, or the equipment and contents of building, structure or site disturbed in fulfilling any such guarantee.

If the Contractor, after notice, fails within ten days to proceed to comply with the terms of this guaranty, the owner may have the defects corrected, and the Contractor and the Contractor's surety shall be liable for all expense incurred, provided, however, that in case of an emergency where, in the opinion of the Engineer, delay would cause serious loss or damage, repairs may be made without notice being given to the Contractor and the Contractor shall pay the cost thereof.

12. ARBITRATION

All claims, disputes and other matters in question between Owner and Contractor arising out of, or relating to the Contract Documents or the breach thereof (except for claims which have been waived by the making or acceptance of final payment) will be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining subject to the limitations of this Section 12. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.

Notice of the demand for arbitration will be filed in writing with the other party to the Agreement and with the American Arbitration Association, and a copy will be sent to Engineer for information. The demand for arbitration will be made a reasonable time after the claim, dispute or other matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or other matter in question would be barred by the applicable statute of limitations.

No arbitration arising out of or relating to the Contract Documents shall include by consolidation, joinder or in any other manner any other person or entity (including Engineer, Engineer's agents, employees or consultants) who is not a party to this contract unless:

a) the inclusion of such other person or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration,

b) such other person or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings, and

c) the written consent of the other person or entity sought to be included and of Owner and Contractor has been obtained for such inclusion, which consent shall make specific reference to this paragraph; but no such consent shall constitute consent to arbitration of any dispute not specifically described in such consent or to arbitration with any party not specifically identified in such consent.

The award rendered by the arbitrators will be final, judgment may be entered upon it in any court having jurisdiction thereof, and will not be subject to modification or appeal.

PREVAILING WAGE RATES

for

Public Works Contracts in Oregon



BOLI

Mary Wendy Roberts
Commissioner
Bureau of Labor and Industries

Effective January 1, 1995

Oregon

BUREAU
OF LABOR
AND INDUSTRIES

MARY WENDY ROBERTS
COMMISSIONER

January 1, 1995

This booklet contains the Prevailing Wage Rates for non-residential building and construction trades in the State of Oregon. These rates are effective January 1 1995. These rates have been amended in accordance with ORS 279.348 through ORS 279.365. A new determination of these rates is issued two times each year.

Prevailing Wage Rates are the minimum wages that must be paid to all workers employed in the construction, reconstruction, major renovation or painting of any public works. Copies of these rates must be incorporated into all bid specifications when the advertisement for a public works contract is issued. A provision that Prevailing Wage Rates be paid must also be put in the contract. The rates in effect at the time the bid specifications are first advertised are those that apply for the duration of the project, with one exception; if during the bidding process the Prevailing Wage Rates change, the public contracting agency has the option of amending the bid specifications to reflect such changes.

If you identify any errors in the rates published, please bring them to the attention of the Prevailing Wage Rate Coordinator in Portland (731-4466). If you have any questions about the manner in which the Prevailing Wage Rates are enforced, contact the Wage and Hour Division in Portland (731-4074).

Mary Wendy Roberts

MARY WENDY ROBERTS
Commissioner
Bureau of Labor and Industries

PORTLAND
800 NE Oregon St. # 32
Portland, OR 97232
(503) 731-4200
FAX (503) 731-4069

EUGENE
165 E 7th Street, Suite 220
Eugene, OR 97401
(503) 686-7623
FAX (503) 686-7980

PENDLETON
200 SE Hailey Ave., Suite 308
PO Box 730
Pendleton, OR 97801
(503) 276-7884
FAX (503) 276-2950

BEND
1250 NE 3rd, Suite B105
Bend, OR 97701
(503) 388-6330
FAX (503) 388-6273

MEDFORD
700 E Main, Suite 105
Medford, OR 97504
(503) 776-6270
FAX (503) 776-6284

SALEM
3865 Wolverine St. NE; E-1
Salem, OR 97310
(503) 373-1447
FAX (503) 373-7636

COOS BAY
320 Central Ave., Suite 510
Coos Bay, OR 97420
(503) 269-4575
FAX (503) 267-3194

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ANNOUNCEMENT

The Prevailing Wage Rates contained in this booklet generally reflect non-residential building, heavy, and highway construction rates determined for Oregon by the Secretary of Labor of the United States pursuant to the Davis-Bacon Act; certain changes have been made to better reflect prevailing practices in Oregon. Pursuant to ORS 279.348 to ORS 279.365, these rates have been adopted for use on public works contracts in Oregon. If you have specific questions regarding how rates are determined or if you would like a copy of this booklet, please contact:

Prevailing Wage Rate Coordinator
Bureau of Labor and Industries
Wage and Hour Division
800 NE Oregon St. # 32
Portland, OR 97232
(503)731-4466

The first copy is free. Additional copies are available for $2.00 each.

GENERAL INFORMATION

Information in this section and in the "Commonly Asked Questions" is meant to provide a convenient reference to Oregon's Prevailing Wage Rate Law. It is in no way a complete statement of the laws and rules.

If you have questions about the enforcement of Prevailing Wage Rates, please contact the Wage and Hour Division. Division offices may be reached at the following phone numbers:

Bend	388-6330
Eugene	686-7623
Medford	776-6201
Pendleton	276-7884
Portland	731-4074
Salem	378-3292

Apprentices and Trainees

Apprentices and trainees may be employed on public works projects. To qualify as an apprentice or trainee, the worker must be registered in a bona fide apprenticeship or training program of the U.S. Department of Labor, Bureau of Apprenticeship and Training (BAT) or with any State Apprenticeship and Training Agency recognized by BAT. For information call 731-4072. The apprentice or trainee is to receive all fringe benefits and a percentage of the journeyman's wage rate which is listed in this booklet. This rate may be different than the rate contained in the Apprenticeship Standards for the trade. The correct percentage shall be determined by the appropriate apprenticeship or training committee. All other workers must receive rates as published.

Zone Pay

In certain trades, the basic hourly rate of pay progressively increases based upon the distance between the job site and a designated landmark; this is commonly referred to as zone pay. To determine the hourly wage, find the correct zone based on the number of road miles the job site is from the closest designated city (based either on distance from city hall or from geographical center of the city, depending on the trade) and add the amount for that zone to the basic hourly rate. Zone pay, unlike travel pay, is the basic hourly wage upon which overtime is computed.

Bid Specifications

The specifications for every public works contract must include the current Prevailing Wage Rates in effect at the time the specifications are first advertised. A statement incorporating the existing rates by reference will not satisfy this requirement (ORS 279.352).

NOTE: If a public agency fails to include the Prevailing Wage Rates in the contract specifications or fails to include in the contract the provision that Prevailing Wage Rates must be paid, the liability for any unpaid prevailing wages shall be exclusively that of the agency.[ORS 279.356(3)]

Fringe Benefits

Payments for fringe benefits are in addition to the basic hourly rate. The term "fringe benefits" refers to the payments such as:

a) medical or hospital care; pensions on retirement or death; compensation for injuries or illness resulting from an occupational activity, or insurance to provide any of the foregoing;
b) unemployment benefits, life insurance, disability and sickness insurance or accident insurance;
c) vacation and holiday pay;
d) defraying costs of apprenticeship or other similar programs; and
e) other such bona fide benefits.

For the purpose of Prevailing Wage Rates, fringe benefits do not include any benefits which may be required by federal, state or local law (e.g. Workers' Compensation, Unemployment Insurance, etc.).

Every Contractor or Subcontractor that provides for or contributes to a health and welfare plan or a pension plan, must post notice describing such plans in a conspicuous and accessible place on the project.[ORS 279.350(5)] Fringe benefits may be paid to the worker in cash or to a third party administering a fringe benefit program. When an hourly rate in excess of the required prevailing base rate is paid, the amount by which the rate is exceeded may be credited toward payment of fringe benefits.

Overtime

Workers employed on a public works job for more than eight hours in a day or 40 hours in a week must be paid overtime for each additional hour so worked (ORS 279.334). Overtime is calculated at no less than one and one-half times the basic hourly rate as determined by the Commissioner of Labor (not including fringe benefits which are paid at the straight rate for every hour worked). In the computation of overtime, travel pay does not need to be included but zone pay differentials do.

Work performed on Saturday, Sunday or legal holidays must also be compensated at time and one-half. Legal holidays for purposes of Prevailing Wage Rates include the following: 1) New Year's Day on January l; 2) Memorial Day on the last Monday in May; 3) Independence Day on July 4; 4) Labor Day on the first Monday in September; 5) Thanksgiving Day on the fourth Thursday in November; 6) Christmas Day on December 25. If one of these days falls on Saturday or Sunday, then the legal holiday becomes the preceding Friday or the following Monday.

NOTE: Contractors who are signatory to a collective bargaining agreement may be subject to different overtime requirements (ORS 279.334[3]).

Certification of Payroll

The law requires every contractor and subcontractor to file certain information on wages paid to each worker employed on a public works contract. This statement must completely and accurately reflect payroll records for the work week immediately preceding the submission. A contractor or subcontractor must complete and submit the certified statement contained on Form WH-38 as well as the information required on the weekly payroll. A sample of Form WH-38 and instructions for completing it are included in the back of this booklet. Copies for use in filing should be obtained from the public contracting agency.

The schedule for submitting payroll information is as follows: Once within 15 days of the date the contractor or subcontractor first began work on the project; once before the final inspection of the project by the public contracting agency; in addition, for projects exceeding 90 days, submissions are to be made at 90 day intervals. When work on a project starts and finishes in 15 days or less, the contractor or subcontractor which performed the work shall submit a payroll and certified statement form which accurately and completely sets out the payroll for all the work performed on the project. Payroll information is to be filed with both the public contracting agency and the Wage and Hour Division, Bureau of Labor and Industries, 800 NE Oregon St. # 32, Portland, Oregon 97232. The payroll information must be kept by the contractor and or subcontractor for three years.

COMMONLY ASKED QUESTIONS

1) What are "Prevailing Wage Rates?"

A prevailing wage rate is the minimum wage, including fringe benefits, to be paid workers employed on contracts for public works. Different rates are established for specific trades and specific geographical areas.

2) Who must be paid "Prevailing Wage Rates?"

All employees of a contractor or subcontractor engaged on a public works project when the total price of the project is $10,000 or more must receive at least the Prevailing Wage Rate (PWR) for time worked on the project, unless otherwise exempt.

Office/clerical employees and supervisory employees who are supervisory only and do not perform any hands-on labor are not required to be paid the PWR. A person who owns and operates his/her own truck on construction projects (Owner/Operator) is not required to be paid the PWR.

3) What about contracts when Federal funds are used?

When more than $2,000 of federal funds are involved, the contract is usually subject to the provisions of the federal Davis-Bacon Act, not Oregon PWR statutes. (Further information may be obtained from the U.S. Department of Labor, Wage and Hour Division, Portland, Oregon (326-3057).) In the event that federal funds are involved, but the contract is not regulated under the Davis-Bacon Act, Oregon's Prevailing Wage Rate Statutes may apply (ORS 279.348 - 279.365). Oregon statutes pertaining to overtime requirements apply on both state and federally regulated contracts. (ORS 279.334).

4) I don't have a pension fund. How do I calculate fringe benefits?

Workers must receive at a minimum the sum of the basic hourly rate plus all fringe benefits for each hour worked on a public works contract. Fringe benefits may be paid either to a third party trust account or in cash directly to the worker.

5) My employees receive health benefits. Do I get credit for the health benefit when I prepare my payroll on a public works project?

Yes. Any expenditures an employer makes for bona fide employee benefits can be charged against the fringe benefit payments designated in the Prevailing Wage Rate Booklet. To learn how to compute the correct hourly charge, call the Wage and Hour Division (731-4074).

6) What if the employees are not paid on an hourly basis?

All workers must receive at least the basic hourly rate of wage and fringe benefits for each hour worked on the project. If an employee is paid other than on an hourly basis, the equivalent hourly rate (for both wages and fringe benefits) must still be at least equal to the rates published.

7) How do I classify workers?

Virtually all of the job classifications/trades normally used in the non-residential construction industry are represented by the job classifications used in this PWR publication. These classification titles should be used according to common practice. Try to fit your workers into existing classifications. If you need residential construction rates, or if you have questions about how to classify workers,contact the Prevailing Wage Rate Coordinator at 731-4466.

Laborers who do basic work requiring no specific skills, training, or knowledge are generally classified as Group 1 Laborers.
(Note that Landscapers are classified as Laborers, and Ornamental Ironworkers are classified as Ironworkers.)

8) When are new rates determined? How long are they effective?

Prevailing Wage Rates are determined once each year by the Commissioner of the Bureau of Labor and Industries. The Commissioner may amend the rates at any time. The rates are usually amended at least once each year. The rates in effect at the time the bid specifications are first advertised are those that apply for the duration of the contract, with one exception. If during the bidding process the prevailing wage rate changes, the public contracting agency (not the contractor) has the option of amending the bid specifications to reflect such change.

9) How do I post Prevailing Wage Rates?

Every contractor or subcontractor employing workers on a public works project is required to post the applicable Prevailing Wage Rates in a conspicuous and accessible place in or about the work-site. Rates need to be posted for the duration of the job. Contractors and subcontractors who intentionally fail to post the PWR can be made ineligible to receive any public works contract for up to three years.

10) What can I do about a contractor who is not complying with Oregon's PWR law?

File a complaint with the nearest office of the Oregon Bureau of Labor and Industries or contact the Wage and Hour Division, Bureau of Labor and Industries, 800 NE Oregon St. # 32, Portland, Oregon 97232 (731-4074). Other Bureau offices are located in Bend (388-6330), Coos Bay (269-4575), Eugene (686-7623), Medford (776-6201), Pendleton (276-7884) and Salem (378-3292). You may also complain to the contracting agency, which has the contractual authority to pay PWR claims directly to a contractor's or subcontractor's workers (ORS 279.314).

11) What happens to contractors who do not comply with PWR statutes?

Contractors and subcontractors who pay less than the Prevailing Wage Rates may be liable to the workers affected for the amount found due plus an equal amount as liquidated damages (ORS 279.356). Contracting agencies also have the contractual authority to withhold payments due or to be due to the contractor or subcontractor in order to pay the unpaid prevailing wages directly to the worker (ORS 279.314).

Contractors and subcontractors who intentionally refuse to pay the Prevailing Wage Rate to workers employed on public works or to post the PWR on the job site may be determined to be ineligible to receive any public works contracts for a period of up to three years (ORS 279.361). Workers employed by the contractor or subcontractors have a right of action against the surety of the prime contractor for any unpaid prevailing wages.

A list is kept of all contractors, subcontractors, and other persons ineligible to receive public works contracts and subcontracts. When a contractor or subcontractor is a corporation, the individual officers and agents of the corporation can be debarred in addition to the corporation. As a result, individuals who intentionally fail to pay or post the PWR are prevented from simply moving from one corporation to another.

In addition, Chapter 323, Oregon Laws 1991, provides that any person that loses a competitive bid for a construction contract may bring an action for damages against the person who is awarded the contract, if the losing bidder can establish that the winner has knowingly violated any one of several laws, including the requirement to pay Prevailing Wage Rates while performing work under the contract. The losing bidder is entitled to recover, as liquidated damages, 10% of the losing bid amount, or $5,000, whichever is greater, plus reasonable attorney fees.

12) How much do I pay apprentices?

To qualify as an apprentice, the worker must be registered in a bona fide apprenticeship program of the U.S. Department of Labor, Bureau of Apprenticeship and Training (BAT) or with any State Apprenticeship Agency recognized by BAT. For information call 731-4072. The apprentice is to receive all fringe benefits and a percentage of the journeyman's wage rate as listed in this booklet. This rate may be different than the rate contained in the Apprenticeship Standards for the trade. The correct percentage shall be determined by the appropriate apprenticeship committee. All other workers receive rates as published.

13) What records must I keep? For how long?

Contractors and subcontractors are required to keep records necessary for determining if Prevailing Wage Rates were paid. These records must include the Payroll and Certified Statement Form (WH-38) as well as the following: The name and address of each employee; the work classification(s) of each employee; the rate(s) of wages and fringe benefits paid to each employee; the rate(s) of fringe benefit payments made in lieu of those required to be provided to each employee; total daily and weekly compensation paid to each employee; daily and weekly hours worked by each employee; apprenticeship and training agreements; any payroll and other such records pertaining to the employment of employees upon a public works contract.

Administrative rules on Prevailing Wage Rates require that these records be kept for a period of three (3) years from the completion of the public work contract. Other legal considerations may require retention of records for a period greater than 3 years. Records relating to public works contracts must be maintained separately from records relating to private projects/contracts.

14) What forms are public agencies required to file with the Bureau of Labor and Industries?

Public agencies are required to prepare and file a list of every public improvement that the agency intends to fund during the subsequent budget period with the Commissioner of the Bureau of Labor and Industries (ORS 279.023[2]). If, after the original filing, the agency plans additional public improvements, a revised list is to be submitted (OAR 839-16-008[2]).

The "Notice of Award of Public Works Contract" is to be filed with the Wage and Hour Division within 30 days of the date when a contract is awarded which requires the payment of Prevailing Wage Rates (i.e., is regulated under ORS 279.348 to 279.365).

Copies of the "Planned Public Improvement Summary" (Form No. WH-118), the "Capital Improvement Project Cost Comparison Estimate" (WH-119), and the "Notice of Award of Public Works Contract" (WH-81) can be found at the back of this booklet.

15) Does a contracting agency have any power to enforce payment of Prevailing Wage Rates on its public works projects?

Yes. According to ORS 279.314, all public contracts for work or services must contain a clause or condition permitting the contracting agency to pay a worker's past due wage claim, charging the payment against funds due or to become due to the contractor.



NOTE

As was noted for the first time in the January 94 edition of this booklet, the procedure for obtaining forms for the submission of certain information required from public contracting agencies, contractors, and subcontractors has been changed. All public agencies in Oregon have been supplied with personalized copies of the forms which previously were found in the back of this booklet. With the exception of forms WH-118 (Planned Public Improvement Summary), and WH-119 (Capitol Improvement Project Cost Comparison Estimate), the forms found in this booklet are examples only. Public contracting agencies are expected to provide contractors with the appropriate WH-38 (Payroll/Certified Statement) form, and WH-303 (List of Subcontractors By Project) form. The instruction sheet WH-38A, which is provided to assist contractors in filling out the Payroll/Certified Statement, has been revised to take into account this new procedure, and to improve its clarity and usefulness.

We have attempted to make all other changes more noticeable by printing them in **Bold Type**.

OREGON DETERMINATION 95-01	CONSTRUCTION TYPE:	HEAVY - ENTIRE STATE, HIGHWAY - ENTIRE STATE, NON-RESIDENTIAL BUILDING - EXCLUDES COOS, CURRY, DOUGLAS AND JOSEPHINE COUNTIES (SEE PAGE 22)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
ASBESTOS WORKERS		
Installation of insulation on mechanical systems*		
Journeyman Asbestos Worker		
o Projects in buildings which are not used for manufacturing, manufacturing services or similar processes (Offices, schools, laboratories, etc.)	20.79	6.01
o Projects in buildings which are used for manufacturing, manufacturing services and similar processes (water treatment plants, electrical generating plants, road maintenance shops, etc.)	20.79	6.01
Removal of insulation on mechanical systems* which are not going to be scrapped.**		
o Hazardous Materials Handler Mechanic (in any type of project regardless of value)	13.65	3.10
BOILERMAKERS	**22.94**	**8.39**

* Mechanical systems include pipes, boilers, ducts, flues, breechings, etc.

** The removal of all insulation materials from mechanical systems is ex clusively the work of Asbestos Workers, unless the mechanical systems are going to be scrapped. It does not matter whether the insulation materials contain asbestos. Laborers do all removal of insulation materials on mechanical systems to be scrapped and any non mechanical (walls, ceilings, floors, beams, etc.) insulation. They also do loading of any insulation materials that have already been removed, bagged and tagged, as well as cleanup at the removal site and all work done at the disposal site. Laborers performing asbestos removal are classified as Group 3 laborers.

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
BRICKLAYERS/STONEMASONS		
Area 1 (add $0.75 per hour to Fringe for Refractory repair work.)	21.60	5.92
Area 2 (add $0.75 per hour to Fringe for Refractory repair work.)	**20.32**	**5.68**

Area 1

Baker	Hood River	Multnomah	Wallowa
Benton (a)	Lincoln (a)	Polk	Wasco (a)
Clackamas	Linn (a)	Sherman	Washington
Clatsop	Malheur (a)	Tillamook	Yamhill
Columbia	Marion	Umatilla	
Gilliam	Morrow	Union	

Area 2

Benton (b)	Douglas	Josephine	Linn (b)
Crook	Grant	Klamath	Malheur (b)
Coos	Harney	Lake	Wasco (b)
Curry	Jackson	Lane	Wheeler
Deschutes	Jefferson	Lincoln (b)	

a) North half
b) South half

OREGON DETERMINATION 95-01	CONSTRUCTION TYPE:	HEAVY - ENTIRE STATE, HIGHWAY - ENTIRE STATE, NON-RESIDENTIAL BUILDING - EXCLUDES COOS, CURRY, DOUGLAS AND JOSEPHINE COUNTIES (SEE PAGE 22)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS

CARPENTERS

Zone 1 (Base Rate):		
o Group 1	20.62	5.57
o Group 2	20.77	5.57
o Group 3	21.12	5.57
o Group 4	21.27	5.57
o Group 5	21.12	5.57
o Group 6	21.27	5.57
o Group 7	21.62	5.57

Zone Differential for Carpenters
(Add to Zone 1 Rate)

Zone 2	.85
Zone 3	1.25
Zone 4	1.70
Zone 5	2.00
Zone 6	3.00

Zone 1: Projects within 30 miles of City Hall in the Cities listed below.
Zone 2: More than 30 miles but less than 40 miles.
Zone 3: More than 40 miles but less than 50 miles.
Zone 4: More than 50 miles but less than 60 miles.
Zone 5: More than 60 miles but less than 70 miles.
Zone 6: More than 70 miles.

Reference cities for Group 1 and 2 Carpenters

Albany	Eugene	Longview	Portland
Astoria	Goldendale	Madras	Port Orford
Baker	Grants Pass	Medford	Reedsport
Bend	Hermiston	McMinnville	Roseburg
Brookings	Hood River	Newport	Salem
Burns	Klamath Falls	Oregon City	The Dalles
Coos Bay	LaGrande	Ontario	Tillamook
Corvallis	Lakeview	Pendleton	Vancouver

Zones for Groups 3 and 4 Carpenters are determined by the distance between the project site and either 1) the worker's residence or 2) City Hall of a reference city for the appropriate group shown below, whichever is closer.

Reference Cities for Group 3 and 4 Carpenters

Eugene	Medford	Portland	Vancouver
Longview	North Bend	The Dalles	

CARPENTERS (Continued)

Zones for Groups 5, 6 and 7 Carpenters are determined as follows:

1. For those workers who reside within zone 1 of a reference city below, their zone pay differential shall be computed based upon the distance from the city hall of that city to the project site.

2. For those workers who reside nearer to the project than is the city hall of any reference city below, the mileage from their residence to the project may be used in computing their zone pay differential.
3. The zone pay differential for all other projects shall be computed from the city hall of Longview, North Bend, or Portland, whichever is closer to the project.

Reference Cities for Groups 5, 6 and 7

Astoria	Eugene	Newport	Salem
Bend	Klamath Falls	Portland	The Dalles
North Bend	Medford	Roseburg	Longview

Group 1

Auto. Nailing Machine
Carpenters
Form Stripper
Manhole Builders
Non-irritating Ins.
Cabinet & Shelving Installers (wood or steel)

Group 2

Floor Layers & Finishers
Stationary Power Saw Operators
Wall & Ceiling Insulators
Irritating Insulation

Group 3

Millwrights
Machine Erectors
Machinists

Group 4

Millwright/Welders
(Certified Welders receive $0.25/hour over Group 3)

Group 5

Bridge, Dock & Wharf Builders
Piledrivermen

Group 6

Boom Men

Group 7

Marine Piledriver

CEMENT MASONS

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
Zone 1 (Base Rate):		
o Group 1	17.54	7.77
o Group 2	17.89	7.77
o Group 3	17.89	7.77
o Group 4	18.24	7.77

Group 1 Cement Masons, finishing, hand chipping and patching grouting, end pointing, screed setting, plugging, filling bolt holes, dry packing, setting curb forms, planks, stakes, lines and grades.

Group 2 Composition Workers (includes installation of epoxy & other resinous toppings), and Power Machine Operators.

Group 3 Cement masons working on suspended, swinging and/or hanging scaffold.

Group 4 Cement Masons performing work of both Group 2 and Group 3 at the same time.

Zone Differential for Cement Masons
(Add to Zone 1 Rate)

Zone 2	.65
Zone 3	1.15
Zone 4	1.70
Zone 5	2.75

Zone 1: Projects within 30 miles of City Hall in the cities listed below.
Zone 2: More than 30 miles but less than 40 miles.
Zone 3: More than 40 miles but less than 50 miles.
Zone 4: More than 50 miles but less than 80 miles.
Zone 5: More than 80 miles.

Cities

Bend Eugene Medford Salem Vancouver
Corvallis Longview Portland The Dalles

DIVERS & DIVERS' TENDERS

o Divers	50.76	5.57
o Divers' Tenders	22.75	5.57

Depth Pay and Enclosure Pay are added to the Divers' Basic Hourly Rate to obtain the Total Hourly Rate for the diver.

BASIC HOURLY RATE	+	HOURLY DEPTH PAY	+	HOURLY ENCLOSURE PAY	=	DIVERS' TOTAL HOURLY PAY

DIVERS & DIVERS' TENDERS(continued)

o Divers' Depth Pay

Depth of Dive	Hourly Depth Pay
50-100 ft	([total ft- 50] x $1.00)/hr.
100-150 ft	$ 50 + ([total ft-100] x $1.50)/hr.
150-200 ft	$125 + ([total ft-150] x $2.00)/hr.

o Divers' Enclosure Pay(working without vertical escape)

Distance Travelled In the Enclosure	Hourly Enclosure Pay
5 - 50 ft	$ .50/hr
50 - 100 ft	$ .63/hr
100 - 150 ft	$ 2.13/hr
150 - 200 ft	$ 4.63/hr
200 - 300 ft	$ 4.63 + ([total ft-200]x $.05)/hr
300 - 450 ft	$ 9.63 + ([total ft-300]x $.10)/hr
450 - 600 ft	$24.63 + ([total ft-450]x $.20)/hr

DREDGING

Zone 1 (Base Rate):		
o Leverman (Hydraulic, Dipper, Floating Clamshell)	24.22	6.30
o Asst. Engineer (including: Watch Engineer, Welder, Mechanic, Machinist)	23.47	6.30
o Tenderman (Boatman, Attending Dredge Plant); Fireman	22.92	6.30
o Fill Equipment Operator	22.42	6.30
o Assistant Mate (Deckhand); Oiler	20.93	6.30

Zone Differential for Dredging
(Add to Zone 1 Rate)

Zone 2	1.50
Zone 3	1.90
Zone 4	2.40
Zone 5	3.00

Zone 1: Center of job site not more than 15 miles from the City Hall of Portland
Zone 2: More than 15 miles but not more than 30
Zone 3: More than 30 miles but not more than 50
Zone 4: More than 50 miles but not more than 70
Zone 5: More than 70 miles.

OREGON DETERMINATION 95-01	CONSTRUCTION TYPE:	HEAVY - ENTIRE STATE, HIGHWAY - ENTIRE STATE, NON-RESIDENTIAL BUILDING - EXCLUDES COOS, CURRY, DOUGLAS AND JOSEPHINE COUNTIES (SEE PAGE 22)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS

DRYWALL/WETWALL

o Drywall (Accoustical and Drywall Applicator)	**19.03**	**6.82**
o Wetwall (Lather)	**18.13**	**7.72**

ELECTRICIANS

Area 1:		
o Electricians	19.70	4.42
o Cable Splicers	21.67	4.51
Area 2:		
o Electricians	**22.50**	**7.51**
o Cable Splicers	**23.63**	**7.54**
Area 3:	**21.20**	**6.53**
Area 4:		
o Electricians	**23.75**	**5.51**
o Cable Splicers	**26.13**	**5.58**
Area 5:		
o Electricians	23.05	7.54
o Cable Splicers	23.80	7.56
Area 6:		
o Electricians	**21.15**	**6.68**
o Cable Splicers	**21.15**	**6.68**

Area 1	Area 2	Area 2(cont)	Area 3
Malheur	Baker	Umatilla	Coos
	Gilliam	Union	Curry
	Grant	Wallowa	Lincoln
	Morrow	Wheeler	Douglas (a)
			Lane (a)

Area 4	Area 5	Area 5(cont)	Area 6
Benton	Clackamas	Washington	Harney
Crook	Clatsop	Yamhill (d)	Jackson
Deschutes	Columbia		Josephine
Jefferson	Hood River		Klamath
Lane (b)	Multnomah		Lake
Linn	Sherman		Douglas (b)
Marion	Tillamook		
Polk	Wasco		
Yamhill(c)			

a) Those portions lying west of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County
b) That portion lying east of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County
c) South half
d) North half

ELEVATOR CONSTRUCTORS

Area 1		
o Mechanic	**23.96**	**6.78 + a**
o Helper	**16.77**	**6.58+ a**
o Probationary Helper	**11.98**	**.32**
Area 2		
o Mechanic	24.53	6.79+ a
o Helper	17.17	6.59+ a
o Probationary Helper	12.27	0.33

a) Plus 8% of basic hourly rate for employees with more than 5 years of service; 6% of basic hourly rate for 6 months to 5 years of service.

Area 1	Area 2
Umatilla	All
Wallowa	Remaining
Union	Counties
Baker	

GLAZIERS

Area 1	21.32	4.44
(Add $1.00 to base rate if safety belt is required by State safety regulations) (Add $4.00 to base rate for work done from a non-motorized single-man bosun chair)		
Area 2	**14.46**	**4.04**
(Add $0.50 to base rate if working at over 35 feet of free fall in height)		

Area 1	Area 2
All Counties except Malheur	Malheur

HIGHWAY AND PARKING STRIPERS

	19.25	2.94

IRONWORKERS

o Structural, Reinforcing, Ornamental, Riggers, Fence Erectors, Signal Men	20.25	**8.77**

OREGON DETERMINATION 95-01	CONSTRUCTION TYPE:	HEAVY - ENTIRE STATE, HIGHWAY - ENTIRE STATE, NON-RESIDENTIAL BUILDING - EXCLUDES COOS, CURRY, DOUGLAS AND JOSEPHINE COUNTIES (SEE PAGE 22)

LABORERS

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
Zone 1 (Base Rate):		
o Group 1	16.34	5.97
o Group 2	16.69	5.97
o Group 3	16.99	5.97
o Group 4	17.24	5.97
o Group 5	14.75	5.97

Note: A Hazardous Waste Removal Differential must be added to the base rate if work is performed inside the boundary of a Federally Designated Hazardous Waste Site. A Group 1 base rate is used for General Laborer on such a site. For further information on this, call the Prevailing Wage Rate Coordinator at 731-4466.

Zone Differential for Laborers
(Add to Zone 1 Rate)

Zone 2	.65
Zone 3	1.15
Zone 4	1.70
Zone 5	2.75

Zone 1: Projects within 30 miles of City Hall in the Cities listed below.
Zone 2: More than 30 miles but less than 40 miles.
Zone 3: More than 40 miles but less than 50 miles.
Zone 4: More than 50 miles but less than 80 miles.
Zone 5: More than 80 miles.

Reference Cities

Albany	Eugene	Longview	Portland
Astoria	Goldendale	Madras	Port Orford
Baker	Grants Pass	Medford	Reedsport
Bend	Hermiston	McMinnville	Roseburg
Brookings	Hood River	Newport	Salem
Burns	Klamath Falls	Oregon City	The Dalles
Coos Bay	LaGrande	Ontario	Tillamook
Corvallis	Lakeview	Pendleton	Vancouver

Group 1

Asphalt Plant Laborers
Asphalt Spreaders
Batch Weighman
Broomers
Brush Burners/Cutters
Carpenter Tender
Car & Truck Loaders
Change-House Man
Chipper Operator (a)
Choke Setter
Clean-up Laborers ***
Concrete Laborers
Curing, concrete
Demolition, wrecking and moving(industrial) ***
Guardrail, Median Rail (c)
Landscape or Planting Laborer
Leverman or Aggregate Spreader (d)
Loading Spotter
Material Yard Man (e)
Powderman Assistant
Railroad Track Laborers
Ribbon Setters (f)
Rip Rap Man (Hand Placed)
Road Pump Tender
Sewer Laborer

LABORERS Group 1(continued)

Driller Assistant
Dry-shack Man
Dumpers, road oiling crew
Dumpmen for grading crew
Elevator Feeders
Fence Builder
Fine Graders
Fire Watch
Form Strippers (b)
General Laborer ***
Signalman
Skipman
Slopers
Sprayman
Stake Chaser
Stockpiler
Tie Back Shoring
Timber Faller/Bucker (Hand Labor)
Toolroom Man (Job site)
Tunnel Bull Gang (Above Ground)
Weight-Man-Crusher (g)

a) Pittsburg or similar types
b) Not swinging stages
c) Reference Post, Guide Post, or Right-of Way Marker
d) Flaherty, and similar types
e) Including electrical
f) Including steel forms
g) Aggregate when used

*** Laborers can tear off roofs, clean up or handle roofing materials only when at least one new story is added or in demolition work, where no reroofing will occur.

Group 2

Applicators (a)
Brush Cutters (b)
Burners
Choker Splicer
Clary Power Spreader(c)
Clean up Nozzleman-Green Cutter (d)
Concrete Power Buggyman
Crusher Feeder
Demolition/Wrecking (e)
Grade Checker
Gunnite Nozzleman Tender
Gunite or Sandblasting Pot Tender
Handlers/Mixers (f)
Post Hole Digger, Air, gas or electric
Power Tool Operators (g)
Sand Blasting (wet)
Stake Setter
Tampers
Tunnel Muckers/Brakeman/Concrete Crew/Bull Gang (underground)
Vibrating Screed
Vibrators(less than 4" diam.)

a) Including Pot Tender for same, applying protective material by hand or nozzle on utility lines or storage tanks on project
b) Power saw
c) And similar types of spreaders
d) Concrete, rock, etc.
e) Charred Materials
f) Of all materials of an irritating nature including cement and lime
g) Includes, but not limited to: Dry Pack Machine, Jackhammer, Chipping Guns, Paving Breakers

LABORERS(continued)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
Group 3		
Asbestos Removal		
Bit Grinder		
Concrete Saw Operator		
Drill Doctor		
Drill Operators (a)		
Gunite Nozzleman		
High Scalers, Strippers, Drillers(b)		
Laser Beam (c)		
Manhole Builder		
Nippers & Timbermen		
Nuclear Plant Worker - Lead Shield		
Powdermen		
Power Saw Operators (d)		
Pumpcrete Nozzleman		
Sand Blasting (dry)		
Pipe Layers of all Types		
Sewer Timberman		
Track Liners (e)		
Tugger Operator		
Tunnel-Chuck Tenders		
Vibrator (4" and larger)		
Water Blaster		
Welder		

a) Air Tracks, Cat Drills, Wagon Drills, Rubber-mounted drills, and other similar types
b) Covers work in Swinging Stages, chairs or belts, under extreme conditions unusual to normal drilling, blasting, barring-down, or sloping and stripping
c) Pipe laying, applicable when employee assigned to move, set up, align Laser Beam.
d) Bucking and falling
e) Anchor Machines, Ballast Regulators, Multiple Tampers, Power Jacks

Group 4		
Asphalt Rakers		
Laser Beam (Tunnel), applicable when employee assigned to move, set-up, align laser beam		
Motorman - Dinky Locomotive		
Shield Operator		
Tunnel Miners		
Tunnel Powderman		
Group 5		
Clean-up Laborers (building only)***		
Demolition, Wrecking, & Moving (building only)***		
Flagger		

*** Laborers can tear off roofs, clean up or handle roofing materials only when at least one new story is added or in demolition work, where no reroofing will occur.

LIMITED ENERGY ELECTRICIANS

May only be used for electrical work not exceeding 100 va in Class II and III installations (as defined in Article 725 of the National Electrical Code):

Area 1	17.75	**6.68**
Area 2	17.75	**6.68**
Area 3	13.75	4.49
Area 4	13.75	4.49
Area 5	13.75	4.49
Area 6	13.75	4.49
Area 7	13.75	4.49
Area 8	13.75	4.49
Area 9	17.75	**6.68**
Area 10	13.75	4.49
Area 11	13.75	4.49
Area 12	16.21	2.14
Area 13	13.69	2.59
Area 14	13.37	2.33

Area 1	Clatsop, Columbia, Tillamook
Area 2	Clackamas, Multnomah, Washington, Yamhill (north half)
Area 3	Marion, Polk, Yamhill (south half)
Area 4	Benton, Lincoln, Linn
Area 5	Lane
Area 6	Douglas
Area 7	Coos, Curry
Area 8	Jackson, Josephine
Area 9	Hood River, Sherman, Wasco
Area 10	Crook, Deschutes, Jefferson
Area 11	Klamath, Lake, Harney
Area 12	Gilliam, Grant, Morrow, Umatilla, Wheeler
Area 13	Baker, Union, Wallowa
Area 14	Malheur

LINE CONSTRUCTION

Area 1:		
o Group 1	24.73	5.59
o Group 2	22.34	5.51
o Group 3	17.37	4.34
o Group 4	19.27	4.40
o Group 5	16.86	4.32
o Group 6	15.85	4.29
Area 2:		
o Cable Splicers	23.38	**4.99**
o Journeyman Lineman	21.20	**4.91**
o Line Equip. Mech. (Right-of-way)	17.98	**4.76**
o Line Equip. Oper.	17.98	**4.76**
o Groundman	13.15	**4.55**

LINE CONSTRUCTION(continued)

Area 1
All counties except Malheur County

Group 1	Group 2
Cable Splicers	Certified Lineman Welder
Leadman Pole Sprayer	Heavy Line Equipment Man
	Lineman
	Pole Sprayer

Group 3	Group 4
Tree Trimmer	Line Equipment Man

Group 5	Group 6
Head Groundman	Groundman
Jackhammer Man	
Powderman	

Area 2
Malheur County

MARBLE SETTERS (Includes Granite)

	BASIC HOURLY RATE	FRINGE BENEFITS
Area 1	22.60	5.92
Area 2	**21.32**	**5.68**

Area 1

Baker	Hood River	Multnomah	Wallowa
Benton (a)	Lincoln (a)	Polk	Wasco (a)
Clackamas	Linn (a)	Sherman	Washington
Clatsop	Malheur (a)	Tillamook	Yamhill
Columbia	Marion	Umatilla	
Gilliam	Morrow	Union	

Area 2

Benton (b)	Douglas	Josephine	Linn (b)
Crook	Grant	Klamath	Malheur (b)
Coos	Harney	Lake	Wasco (b)
Curry	Jackson	Lane	Wheeler
Deschutes	Jefferson	Lincoln (b)	

a) North half
b) South half

PAINTERS & DRYWALL TAPERS

	BASIC HOURLY RATE	FRINGE BENEFITS
Area 1		
o Painters & Drywall Tapers	12.90	2.51
Area 2		
o Brush Painting	**17.00**	**2.93**
(Add **$0.60** to base rate for spray, sandblasting, other pressure blasting over 3000 psi, and steam cleaning.) (Add $0.50 to base rate for work over 60 ft high on swing stage, mechanical climber, spider, or bucket truck.)		
o Drywall Tapers	**21.55**	4.33

Area 1	Area 2
Malheur County	Remaining Counties

PLASTERERS

o Nozzleman	22.26	4.81
o Swinging scaffold	21.26	4.81
o all other work	20.76	4.81

PLUMBERS & STEAMFITTERS/PIPEFITTERS

Area 1 (Both)	**21.45**	**5.70**
Area 2 (Both)	24.50	**8.40**
Area 3 (Both)	**23.19**	6.40

Area 1	Area 2	Area 3
Baker	Grant (b)	All remaining counties
Harney (a)	Morrow	
Malheur	Umatilla	
	Wallowa	
	Union	

a) Except Northwest Portion b) Except Southwest Corner

POWER EQUIPMENT OPERATORS

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
Zone 1 (Base Rate):		
o Group 1	21.53	6.30
o Group 2	21.16	6.30
o Group 3	20.51	6.30
o Group 4	20.08	6.30
o Group 5	19.55	6.30
o Group 6	18.00	6.30

Note: A Hazardous Waste Removal Differential must be added to the base rate if work is performed inside the boundary of a Federally Designated Hazardous Waste Site. For further information on this, call the Prevailing Wage Rate Coordinator at 731-4466.

ZONE RATES
(Add to Zone 1 Rate)

Zone 2	1.50
Zone 3	3.00

ZONE DESCRIPTIONS

Portland to Salem Metropolitan Area

Zone 1: Projects within the boundary of a region described as follows: Those portions of Multnomah, Clackamas, and Marion Counties which are West of the western boundary of Mt. Hood National Forest and West of Mile Post 30 on Interstate 84 and West of Mile Post 30 on State Highway 26 and West of Mile Post 30 on Highway 22. Also those portions of Washington County East of Highway 47, and of Yamhill County East of Highway 47 and Highway 99W.

Zone 2: Projects outside of any Zone 1, but less than 50 miles from the Portland city hall.

Zone 3: Projects outside of any Zone 1 or 2, and more than 50 miles from the Portland city hall.

Albany, Eugene, Roseburg, Grants Pass, Medford

Zone 1: Projects within 30 miles of the City Hall of the above cities.

Zone 2: Projects outside of any Zone 1 and more than 30 miles but less than 50 miles from the city hall.

Zone 3: Projects outside of any Zone 1 or 2, and more than 50 miles from the city hall.

Longview, Coos Bay, Klamath Falls, Bend

Zone 1: Projects within 20 miles of the City Hall of the above cities.

Zone 2: Projects outside of any Zone 1, and more than 20 but less than 40 miles from the city hall.

Zone 3: Projects outside of any Zone 1 or 2, and more than 40 miles from the city hall.

POWER EQUIPMENT OPERATORS (continued)

ZONE DESCRIPTIONS (continued)

Astoria, The Dalles, Pendleton, LaGrande, Baker, Ontario, McMinnville

Zone 1 : Projects within 5 miles of the city hall of the above cities.

Zone 2: No Zone 2 for these cities.

Zone 3: Projects outside of any Zone 1 or 2, and more than 5 miles from the city hall.

GROUP CLASSIFICATIONS

ASPHALT

6 Plant Oiler
6 Plant Fireman
6 Pugmill Operator (any type)
6 Truck mounted asphalt spreader, with screed
4 Screed Operator
5 Extrusion Machine Operator
2 Asphalt Plant Operator (any type)
4 Asphalt Paver Operator
5 Roller Operator (any asphalt mix)
4 Diesel-Electric Engineer, Plant
5 Asphalt Burner and Reconditioner Operator (anytype),84
4 Roto-Mill, pavement profiler operator, under 6 foot lateral cut
5 Roto-Mill, pavement profiler, ground man
2 Roto-Mill, pavement profiler operator, 6 foot lateral cut and over

BLADE

6 Blade Operator, pulled type
4 Blade Operator
4 Blade Operator, Finish
4 Blade Operator, externally controlled by electronic, mechanical hydraulic means
4 Blade Operator, multi-engine
2 Auto Grader or "Trimmer" Operator

BULLDOZERS

4 Bulldozer Operator
4 Drill Cat Operator
4 Side-Boom Operator
2 Tandem bulldozer operator (quadnine and similar type, D-11)
4 Bulldozer Operator, twin engine (TC 12 and similar type, D-10)
4 Cable-Plow Operator (any type)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
POWER EQUIPMENT OPERATORS (GROUP CLASS IFICATIONS continued)		
CLEARING		
Log Skidder Operator	4	
Chipper Operator	4	
Incinerator Operator	4	
Stump Splitter Operator	4	
Faller/Buncher Operator	4	
COMPRESSORS		
Compressor Operator (any power), under 1,250 cu. ft. total capacity	6	
Compressor Operator (any power), over 1,250 cu. ft. capacity	5	
COMPACTORS - Self-Propelled		
Compactor Operator, including vibratory	5	
Wagner Patcor Operator or similar type (without blade)	5	
Compactor Operator, with blade	4	
Compactor Operator, multi-engine	4	
CONCRETE		
Plant Oiler	6	
Assistant Conveyor Operator	6	
Conveyor Operator	6	
Mixer Box Operator (C.T.B., dry batch, etc.)	6	
Cement Hog Operator	6	
Concrete Saw Operator	6	
Concrete Curing Machine Operator (riding type)	6	
Wire Mat or Brooming Machine Operator	6	
Combination Mixer and Compressor Operator, gunite work	5	
Concrete Batch Plant Quality Control Operator	5	
Beltcrete Operator	5	
Pumpcrete Operator (any type)	5	
Pavement Grinder and/or Grooving Machine Operator (riding type)	5	
Mixer Mobile Operator	4	
Cement Pump Operator, Fuller-Kenyon and similar	5	
Concrete Pump Operator	5	
Grouting Machine Operator	5	
Screed Operator	4	
Concrete Cooling Machine Operator	4	
Concrete Mixer Operator, single drum, any capacity	5	
Batch Plant and/or Wet Mix Operator, 1 and 2 drum	2	
Batch Plant and/or Wet Mix Operator, 3 units or more	1	
Cast in place pipe laying machine	5	

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
POWER EQUIPMENT OPERATORS (GROUP CLASS IFICATIONS continued)		
CONCRETE (continued)		
Maginnis Internal Full Slab Vibrator Operator	5	
Concrete Finishing Machine Operator, Clary, Johnson, Bidwell, Burgess bridge deck or similar type	5	
Curb Machine Operator, Mechanical Berm, Curb and/or Curb and Gutter	5	
Concrete Joint Machine Operator	5	
Concrete Planer Operator	5	
Tower Mobile Operator	5	
Power Jumbo Operator setting slip forms etc., in tunnels	5	
Slip Form Pumps, power driven hydraulic lifting device for concrete forms	5	
Concrete Paving Machine Operator	5	
Concrete Finishing Machine Operator	5	
Concrete Spreader Operator	4	
Concrete Paving Road Mixer	2	
Automatic Concrete Slip Form Paver Operator	2	
Concrete Canal Line Operator	4	
Concrete Breaker	4	
Reinforced Tank Banding Machine (K-17 or similar types)	2	
Concrete Profiler, Diamond Head		
CRANE		
Oiler	6	
Truck Crane Oiler-Driver, 25 ton capacity or over	6	
Fireman, all equipment	6	
A-Frame Truck Operator, single drum	6	
Tugger or Coffin Type Hoist Operator	6	
Helicopter Hoist Operator	5	
Hoist Operator, single drum	5	
Elevator Operator	5	
A-Frame Truck Operator, double drum	5	
Boom Truck Operator	5	
Chicago Boom and similar types	4	
Lift Slab Machine Operator	4	
Boom Type lifting device, 5 ton capacity or less	4	
Cherry Picker or similar type crane-hoist, 5 ton capacity or less	4	
Hoist Operator, two drum	4	
Hoist Operator, three or more drums	4	
Derrick Operator, under 100 ton	4	
Hoist Operator, stiff leg, guy derrick or similar type, 50 ton and over	4	
Cableway Operator, up to 25 tons	4	
Bridge Crane Operator, Locomotive, Gantry, Overhead	2	
Cableway Operator, 25 tons and over		

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS

POWER EQUIPMENT OPERATORS
(GROUP CLASS IFICATIONS continued)
CRANE(continued)

1	Helicopter Operators, when used in erecting work	
	HYDRAULIC CRANE OPERATOR	
5	Hydraulic Boom Truck Operator, Pittman	
4	Hydro Crane Operator, under 50 tons	
3	Hydro Crane Operator, 50 tons through 89 tons	
2	Hydro Crane Operator, 90 tons through 199 tons	
1	Hydro Crane Operator, 200 tons and over	
	TOWER/WHIRLEY OPERATOR	
2	Tower Crane Operator	
2	Whirley Operator, under 90 tons	
1	Whirley Operator, 90 tons and over	
	LATICE BOOM CRANE OPERATOR	
4	Lattice Boom Crane Operator, under 50 tons	
3	Lattice Boom Crane Operator, 50 tons through 89 tons, and less than 150 ft boom	
2	Lattice Boom Crane Operator, 90 tons through 199 tons, and/or 150 ft -200 ft boom	
1	Lattice Boom Crane (Operator, 200 tons and over, and/or over 200 ft boom	
	CRUSHER	
6	Crusher Oiler	
6	Crusher Feederman	
4	Generator Operator	
4	Diesel-Electric Engineer	
4	Grizzley Operator	
2	Crusher Plant Operator	
	DRILLING	
6	Drill Assistant	
6	Auger Oiler	
5	Churn Drill and Earth Boring Machine Operator	
4	Drill Doctor	
4	Boring Machine Operator	
4	Driller - Percussion, Diamond, Core, Cable, Rotary and similar type	
4	Cat Drill (John Henry)	

POWER EQUIPMENT OPERATORS
(GROUP CLASS IFICATIONS continued)

	FLOATING EQUIPMENT	
6	Deckhand	
6	Boatman	
5	Fireman	
4	Diesel-Electric Engineer	
4	Jack Operator, elevating barges	
4	Barge Operator, self-unloading	
4	Piledriver Operator (not crane type)	
4	Floating Clamshell, etc. Operator, under 3 cu. yd.(only for construction projects - otherwise see Dredging)	
4	Floating Crane (derrick barge) Operator, less than 30 tons	
2	Floating Clamshell, etc. Operator, 3 cu. yd. and over (only for construction projects - otherwise see Dredging)	
2	Floating Crane (derrick barge) Operator, 30 tons but less than 150 tons	
1	Floating Crane, 150 tons and over	
	FORK LIFT	
6	Self-Propelled Scaffolding Operator (excluding working platform)	
6	Fork Lift or Lumber Stacker Operator	
6	Ross Carrier Operator	
5	Lull Hi-Lift Operator or similar type	
5	Fork Lift, over 5 tons	
3	Rock Hound Operator	
	GENERATORS	
4	Generator Operator	
4	Diesel-Electric Engineer	
	GUARDRAIL EQUIPMENT	
6	Oiler	
6	Auger Oiler	
6	Oiler, combination guardrail machines	
4	Guardrail Punch Operator (all types)	
6	Guardrail Punch Oiler	
4	Guardrail Auger Operator (all types)	
4	Combination Guardrail machines. i.e. punch, auger etc.	
	HAZARDOUS WASTE REMOVAL	
5	Assistant to the Engineer (Oiler)	
4	Assistant Incinerator Control Board Operator	
3	Incinerator Control Board Operator	

OREGON DETERMINATION 95-01	CONSTRUCTION TYPE:	HEAVY - ENTIRE STATE, HIGHWAY - ENTIRE STATE, NON-RESIDENTIAL BUILDING - EXCLUDES COOS, CURRY, DOUGLAS AND JOSEPHINE COUNTIES (SEE PAGE 22)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS

POWER EQUIPMENT OPERATORS
(GROUP CLASS IFICATIONS continued)
HEATING PLANT

6	Temporary Heating Plant Operator	
4	Surface Heater and Planer Operator	

HYDRAULIC HOES

5	Hydraulic Backhoe Operator, wheel type 3/8 cu. yd. and under with or without front end attachments 2-1/2 cu. yd. and under (Ford, John Deere, Case type)	
4	Hydraulic Backhoe Operator, Track Type 3/8 cu.yd. (Note: Over 3/8 cu. yd. takes Shovel Classification rate)	

LOADERS

6	Bobcat, Skid Steer (under 1 cubic yard)	
6	Bucket Elevator Loader Operator, Barber-Greene and similar types	
5	Loaders, rubber-tired type, 2-1/2 cu. yd. and under	
5	Elevating Grader Operator, Tractor Towed requiring Operator or Grader	
4	Belt Loader Operator, Kolman and Ko Cal types	
4	Loader Operator, front end and overhead, 2-1/2 cu. yd. and under 4 cu. yd.	
4	Elevating Loader Operator, Athey and similar types	
4	Elevating Grader Operator, Sierra, Euclid or similar types	
3	Loader Operator, 4 cu. yd. but less that 6 cu. yd.	
2	Loader Operator, 6 cu. yd. and over	

OILERS

6	Oiler	
6	Guardrail Punch Oiler	
6	Truck Crane Oiler-Driver, 25 ton or over	
6	Auger Oiler	
6	Grade Oiler, required to check grade	
5	Service Oiler (Greaser)	
6	Grade Checker	

PILEDRIVERS (Use Crane rates when driving or pulling piling)

4	Hammer Operator	
4	Piledriver Operator (not crane type)	

PIPE LINE - Sewer Water

6	Tar Pot Fireman	
6	Tar Pot Fireman (power agitated)	

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS

POWER EQUIPMENT OPERATORS
(GROUP CLASS IFICATIONS continued)
PIPE LINE - Sewer Water (continued)

6	Hydraulic Pipe Press Operator	
5	Hydra Hammer or similar types	
5	Pavement Breaker Operator	
4	Pipe Cleaning Machine Operator	
4	Pipe Doping Machine Operator	
4	Pipe Bending Machine Operator	
4	Pipe Wrapping Machine Operator	
4	Boring Machine Operator	
4	Back Filling Machine Operator	

PUMPS

6	Pump Operator, any power	
6	Hydrostatic Pump Operator	
5	Pump Operator, more than 5 (any size)	
5	Pot Rammer Operator	

RAILROAD EQUIPMENT

6	Brakeman	
6	Oiler	
6	Switchman	
6	Motorman	
6	Ballast Jack Tamper Operator	
5	Locomotive Operator	
5	Ballast Regulator Operator	
5	Ballast Tamper Multi-Purpose Operator	
5	Track Liner Operator	
5	Tie Spacer Operator	
5	Shuttle Car Operator	

REMOTE CONTROL

2	Remote controlled earth-moving equipment	

REPAIRMEN, Heavy Duty

6	Parts Man (Tool Room)	
6	H.D. Repairman Assistant	
6	Welder's Assistant	
4	Diesel-Electric Engineer (Plant or Floating)	
4	Bolt Threading Machine Operator	
4	Drill Doctor (Bit Grinder)	
4	H.D. Mechanic	
4	H.D. Welder	
4	Machine Tool Operator	
4	Combination H.D. Mechanic-Welder, when dispatched and/or when required to do both	
4	Welder - Certified, when dispatched and/or required	

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS

POWER EQUIPMENT OPERATORS
(GROUP CLASS IFICATIONS continued)

RUBBER-TIRED SCRAPERS

4	Rubber-tired Scraper Operator, single engine, single scraper	
4	Self-loading, paddle wheel, auger type under 15 cu. yd.	
4	Rubber-tired Scraper Operator, twin engine	
4	Rubber-tired Scraper Operator, with push-pull attachments	
3	Rubber-tired Scraper Operator, with tandem scrapers	
2	Rubber-tired Scraper Operator, with tandem scrapers, multi-engine	
4	Self-loading, paddle wheel, auger type 15 cu. yd. and over, single engine	
3	Self-loading, paddle wheel, auger type, finish and/or 2 or more units	

SHOVEL, DRAGLINE, CLAMSHELL, BACKHOE, SKOOPER, ETC., OPERATOR

6	Oiler	
6	Grade Oiler (required to check grade)	
6	Grade Checker	
6	Fireman	
4	Diesel-Electric Engineer	
4	Stationary Drag Scraper Operator	
4	Shovel, Dragline, Clamshell, Hoe etc., Operator under 3 cu. yd.	
4	Grade-all Operator	
2	Shovel, Dragline, Clamshell, Hoe etc., Operator 3 cu. yd. and over	

SIGNALMAN

6	Bell Boy, phones, etc., Operator	
6	Helicopter Radioman (ground)	

SURFACING (BASE) MATERIAL

6	Roller Operator, grading of base rock (not asphalt)	
5	Roller Operator, Oiling, C.T.B.	
6	Tamping Machine Operator, mechanical, self-propelled	
6	Hydrographic Seeder Machine Operator, straw, pulp or seed	
5	Rock Spreaders, self-propelled	
5	Pulva-mixer or similar types	
4	Blade Mounted Spreaders, Ulrich and similar types	
5	Chip Spreading Machine Operator	
5	Lime Spreading Operator	

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS

POWER EQUIPMENT OPERATORS
(GROUP CLASS IFICATIONS continued)

SWEEPERS

6	Broom Operator, self-propelled	
5	Sweeper Operator (Wayne type) self-propelled	

TRACTOR - RUBBER TIRED

5	Tractor Operator, rubber-tired, 50 H.P. Flywheel and under	
4	Tractor Operator, rubber -tired, over 50 H.P. Flywheel	
4	Tractor Operator, with boom attachment	
4	Rubber-tired Dozers and Pushers (Michigan, Cat, Hough type)	

TRENCHING MACHINE

6	Oiler	
6	Grade Oiler (required to check grade)	
5	Trenching Machine Operator, maximum digging capacity 3 ft. depth	
4	Trenching Machine Operator, maximum digging capacity over 3 ft. depth	
4	Back Filling Machine Operator	
2	Wheel Excavator	
2	Canal Trimmer	
2	Band Wagon (in conjunction with wheel excavator)	

TUNNEL

4	Mucking Machine Operator	
6	Conveyor Operator (any type)	
4	Shield Operator	
6	Air Filtration Equipment Operator	
6	Dinkey Operator	
6	Oiler	
4	Tunnel Boring Machine Operator	

WELDING MACHINES

6	Welding Machine Operator	

UNDERWATER EQUIPMENT

2	Underwater Equipment Operator, remote or otherwise, when used in construction work	

ROOFERS

(Installation and removal of sheet metal roofing is done by sheetmetal workers.)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
Area 1:		
o Roofers	**18.19**	**4.70**
o Handling coal tar pitch	**20.01**	**4.70**
Area 2:		
o Roofers	16.54	5.38
(Add $2.00 per hour to Fringe for work with irritable Bituminous material.)		
Area 3:		
o Roofers	14.85	3.33
(Add $1.50 per hour to Fringe for work with irritable Bituminous material.)		
Area 4:		
o Roofers	16.00	**5.40**
(Add $2.00 per hour to Fringe for work with irritable Bituminous materials)		
Area 5:		
o Roofers	16.50	5.42
(Add $3.00 per hour to Fringe for work with irritable Bituminous materials)		

Area 1	Area 1(cont)	Area 2	Area 2(cont)
Baker	Multnomah	Benton	Klamath
Clackamas	Sherman	Coos	Lake
Clatsop	Tillamook	Crook	Lane
Columbia	Wasco	Curry	Lincoln
Jefferson	Washington	Deschutes	Linn
Gilliam	Wheeler	Douglas	Marion
Grant		Harney	Polk
Hood River		Jackson	Yamhill
		Josephine	

Area 3	Area 4	Area 5
Malheur	Umatilla	Morrow
	Union	
	Wallowa	

SHEETMETAL WORKERS

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
Area 1	**20.33**	**6.98**
(Add $0.75 to base rate for work performed on any swinging platform, swinging chair, or swinging ladder)		
Area 2	18.51	5.03
(Add $1.75 to base rate for work performed whenever it is possible for worker to fall 30 feet or more) (Add $1.75 to base rate for work performed in an area where epoxy resins or other injurious chemicals are being applied)		
Area 3	22.22	6.27
(Add $1.00 to base rate for work where it is necessary to wear a chemically activated face mask) (Add $1.00 to base rate for work where employee is required to wear a fresh air mask due to nuclear related work) (Add $.45 to base rate for work on a swinging stage, swinging scaffold or bosun chair in excess of 30 feet above the ground)		
Area 4	**17.92**	**5.01**
Area 5	**18.30**	**4.63**

Area 1

Benton	Gilliam	Linn	Tillamook
Clackamas	Grant	Marion	Wasco
Clatsop	Harney	Multnomah	Washington
Columbia	Hood River	Polk	Wheeler
Crook	Jefferson	Sherman	Yamhill
Deschutes	Lincoln		

Area 2	Area 3	Area 4	Area 5
Baker	Morrow	Douglas	Coos
Malheur	Umatilla	Jackson	Curry
	Union	Josephine	
	Wallowa	Klamath	
		Lake	
		Lane	

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
SOFT FLOOR LAYERS	**17.73**	**5.03 + a**

a) plus 4% of basic hourly rate for employees with less than one year of service, 6% for those with more than one year.

SPRINKLER FITTERS	21.40	**6.28**

TENDERS TO MASON TRADES

o Tenders for Bricklayers, Tile Setters, Marble Setters and Terrazzo Workers; Topping for Cement Finishers and Morter Mixers. 16.86 4.97
(Add $0.50 to base rate for refractory work)
(Add to base rate an amount equal to that received for safety belt requirements or other unusual job conditions by the mechanic this worker is tending)

TENDERS TO PLASTERERS	16.50	4.97
TILE SETTER/TERRAZO WORKER	19.55	5.43

(Add $.50 to base rate if safety belt required by State safety regulations or if work involves epoxy, furnane, alkor acetylene black grouting or trowel applied waterproof membrane.)

TILE, TERRAZZO, BRICK & MARBLE FINISHERS

o Assists Tile Setters, Brick Layers, Marble Masons, Stone Masons, and Terrazzo Workers by striking, sawing, cleaning, washing or grouting. Does not lay or set any material. 14.84 3.95
(Add $.50 to base rate if safety belt required by State safety regulations or if work involves epoxy, furnane, alkor acetylene black grouting or trowel applied waterproof membrane.)
(Add $0.75 to fringe for refractory repair work.)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
TRUCK DRIVERS		
Zone 1 (Base Rate):		
o Group 1	18.57	6.14
o Group 2	18.69	6.14
o Group 3	18.82	6.14
o Group 4	19.07	6.14
o Group 5	19.29	6.14
o Group 6	19.44	6.14
o Group 7	19.64	6.14

Note: A Hazardous Waste Removal Differential must be added to the base rate if work is performed inside the boundary of a Federally Designated Hazardous Waste Site. For further information on this, call the Prevailing Wage Rate Coordinator at 731-4466.

Zone Differential for Truck Drivers
(Add to Zone 1 Rate)

Zone 2	.65
Zone 3	1.15
Zone 4	1.70
Zone 5	2.75

Zone 1: Projects within 30 miles of City Hall in the Cities listed below.
Zone 2: More than 30 miles but less than 40 miles.
Zone 3: More than 40 miles but less than 50 miles.
Zone 4: More than 50 miles but less than 80 miles.
Zone 5: More than 80 miles.

Reference Cities

Albany	Eugene	Longview	Portland
Astoria	Goldendale	Madras	Port Orford
Baker	Grants Pass	Medford	Reedsport
Bend	Hermiston	McMinnville	Roseburg
Brookings	Hood River	Newport	Salem
Burns	Klamath Falls	Oregon City	The Dalles
Coos Bay	LaGrande	Ontario	Tillamook
Corvallis	Lakeview	Pendleton	

Work	Group
A-Frame or Hydra-lift Truck w/load bearing surface.	1
Battery Rebuilder	1
Bus or Man-Haul Driver.	1
Concrete Buggies (Power operated) . . . . . Drivers and Helpers handling sacked cement—add 15¢ per hour	1

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
TRUCK DRIVERS (continued)		
Dump Trucks, Side, End and Bottom Dumps, including Semi-Trucks and trains or combinations thereof:		
Up to and inc. 10 cu. yds.		1
Over 10 cu. yds. and inc. 30 cu. yds		3
Over 30 cu. yds. and inc. 50 cu. yds		4
Over 50 cu. yds. and inc. 60 cu. yds		5
Over 60 cu. yds. and inc. 80 cu. yds		6
Over 80 cu. yds. and inc. 100 cu. yds		7
Dumpsters or Similar Equipment—all sizes		2
Flaherty Spreader Driver or Leverman		2
Lift Jitneys, Fork Lifts—all sizes—used in loading, unloading & transporting material on job site.		1
Loader and/or Leverman on Concrete Dry Batch Plant, manually operated.		1
Low Bed Equipment, Flat Bed Semi-Truck and Trailer or Doubles transporting equipment or wet or dry materials		2
Lubrication Man, Fuel Truck Driver, Driver, Tireman, Wash Rack, Steam Cleaner or combination.		1
Lumber Carrier, Driver-Straddle Carrier—used in loading, unloading and transportation of material on job site.		2
Oil Distributor Driver or Leverman.		2
Pilot Car		1
Slurry Truck Driver or Leverman		1
Solo Flat Bed and Misc. Body Trucks—0-10 tons		1
Transit Mix and Wet or Dry Mix Trucks:		
5 cu. yds. and under		1
Over 5 cu. yds. and inc. 7 cu. yds		2
Over 7 cu. yds. and inc. 11 cu. yds		3
Over 11 cu. yds. and inc. 15 cu. yds.		4
Team Drivers.		1

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
TRUCK DRIVERS (Continued)		
Tireman, full-time basis.		1
Truck Assistant		1
Truck Mechanic—Welder—Body Repairman		3
Truck Mechanic Assistant		1
Water Wagons (Rated Capacity) up to:		
3000 gallons		1
3000 to 5000 gallons		2
5000 to 10,000 gallons.		3
10,000 to 15,000 gallons		4
Winch Truck—takes classification of truck on which winch is mounted		
WELDERS; RIGGERS		
Receive rate for craft performing operation to which welding and rigging are incidental.		

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
ASBESTOS WORKERS		
Installation of insulation on mechanical systems*		
Journeyman Asbestos Worker		
o Projects in buildings which are not used for manufacturing, manufacturing services or similar processes (Offices, schools, laboratories, etc.)	20.79	6.01
o Projects in buildings which are used for manufacturing, manufacturing services and similar processes (water treatment plants, electrical generating plants, road maintenance shops, etc.)	20.79	6.01
Removal of insulation on mechanical systems* which are not going to be scrapped.**		
o Hazardous Materials Handler Mechanic (in any type of project regardless of value)	13.65	3.10
BOILERMAKERS	**22.94**	**8.39**
BRICKLAYERS/STONEMASONS	**20.32**	**5.68**
CARPENTERS	13.20	3.67
CEMENT MASONS	10.00	0
DRYWALL/WETWALL		
o Drywall (Accoustical and Drywall Applicator)	**19.03**	**6.82**
o Wetwall (Lather)	**18.13**	**7.72**
ELECTRICIANS		
Coos, Curry, Douglas (western portion)		
o Electricians	**21.20**	**6.53**
Josephine, Douglas (eastern portion)		
o Electricians	**21.15**	**6.68**
o Cable Splicers	**21.15**	**6.68**
ELEVATOR CONSTRUCTORS		
o Mechanic	24.53	6.79+ a
o Helper	17.17	6.59+ a
o Probationary Helper	12.27	0.33
GLAZIERS	21.32	4.44
INSULATORS (BAT AND BLOWN)	7.85	0
IRONWORKERS		
o Structural, Reinforcing, Ornamental, Riggers, Fence Erectors, Signal Men	20.25	**8.77**
LABORERS	9.10	4.65

* Mechanical systems include pipes, boilers, ducts, flues, breechings, etc.

** The removal of all insulation materials from mechanical systems is exclusively the work of Asbestos Workers, unless the mechanical systems are going to be scrapped. It does not matter whether the insulation materials contain asbestos. Laborers do all removal of insulation materials on mechanical systems to be scrapped and any non mechanical (walls, ceilings, floors, beams, etc.) insulation. They also do loading of any insulation materials that have already been removed, bagged and tagged, as well as cleanup at the removal site and all work done at the disposal site.

a) Plus 8% of basic hourly rate for employees with more than 5 years of service; 6% of basic hourly rate for 6 months to 5 years of service.

(Add $1.00 to base rate if safety belt is required by State safety regulations)
(Add $4.00 to base rate for work done from a non-motorized single-man bosun chair)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
LIMITED ENERGY ELECTRICIANS		
May only be used for electrical work not exceeding 100 va in Class II and III installations (as defined in Article 725 of the National Electrical Code):	13.75	4.49
PAINTERS	13.00	0
PLASTERERS		
o Nozzleman	22.26	4.81
o Swinging scaffold	21.26	4.81
o all other work	20.76	4.81
PLUMBERS & STEAMFITTERS/PIPEFITTERS	**23.19**	**6.40**
POWER EQUIPMENT OPERATORS		
Backhoes	12.94	1.56
Bulldozers	13.50	1.56
Loader	13.50	1.56
ROOFERS	8.00	0
SHEETMETAL WORKERS		
Coos, Curry	**18.30**	**4.63**
Douglas, Josephine	**17.92**	**5.01**
SOFT FLOOR LAYERS	**17.73**	**5.03 + a**

a) plus 4% of basic hourly rate for employees with less than one year of service, 6% for those with more than one year.

SPRINKLER FITTERS	21.40	**6.28**

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
TENDERS TO MASON TRADES		
o Tenders for Bricklayers (Add $0.50 to base rate for refractory work) (Add to base rate an amount equal to that received for safety belt requirements or other unusual job conditions by the mechanic this worker is tending)	16.86	4.97
TENDERS TO PLASTERERS	16.50	4.97
TILE SETTER/TERRAZO WORKER	19.55	5.43
(Add $.50 to base rate if safety belt required by State safety regulations or if work involves epoxy, furnane, alkor acetylene black grouting or trowel applied waterproof membrane.)		
TILE, TERRAZZO, BRICK & MARBLE FINISHERS		
o Assists Tile Setters, Brick Layers, Marble Masons, Stone Masons, and Terrazzo Workers by striking, sawing, cleaning, washing or grouting. Does not lay or set any material.	14.84	3.95
(Add $.50 to base rate if safety belt required by State safety regulations or if work involves epoxy, furnane, alkor acetylene black grouting or trowel applied waterproof membrane.) (Add $0.75 to fringe for refractory repair work.)		
TRUCK DRIVERS		
Zone 1 (Base Rate):		
o Group 1	18.57	6.14
o Group 2	18.69	6.14
o Group 3	18.82	6.14
o Group 4	19.07	6.14
o Group 5	19.29	6.14
o Group 6	19.44	6.14
o Group 7	19.64	6.14

Note: A Hazardous Waste Removal Differential must be added to the base rate if work is performed inside the boundary of a Federally Designated Hazardous Waste Site. For further information on this, call the Prevailing Wage Rate Coordinator at 731-4466.

Zone Differential for Truck Drivers
(Add to Zone 1 Rate)

Zone 2	.65
Zone 3	1.15
Zone 4	1.70
Zone 5	2.75

TRUCK DRIVERS (continued)

Zone 1: Projects within 30 miles of City Hall in the Cities listed below.
Zone 2: More than 30 miles but less than 40 miles.
Zone 3: More than 40 miles but less than 50 miles.
Zone 4: More than 50 miles but less than 80 miles.
Zone 5: More than 80 miles.

Reference Cities

Albany	Eugene	Longview	Portland
Astoria	Goldendale	Madras	Port Orford
Baker	Grants Pass	Medford	Reedsport
Bend	Hermiston	McMinnville	Roseburg
Brookings	Hood River	Newport	Salem
Burns	Klamath Falls	Oregon City	The Dalles
Coos Bay	LaGrande	Ontario	Tillamook
Corvallis	Lakeview	Pendleton	

Work	Group
A-Frame or Hydra-lift Truck w/load bearing surface	1
Battery Rebuilder	1
Bus or Man-Haul Driver	1
Concrete Buggies (Power operated)	1
Drivers and Helpers handling sacked cement—add 15¢ per hour	
Dump Trucks, Side, End and Bottom Dumps, including Semi-Trucks and trains or combinations thereof:	
Up to and inc. 10 cu. yds.	1
Over 10 cu. yds. and inc. 30 cu. yds	3
Over 30 cu. yds. and inc. 50 cu. yds	4
Over 50 cu. yds. and inc. 60 cu. yds	5
Over 60 cu. yds. and inc. 80 cu. yds	6
Over 80 cu. yds. and inc. 100 cu. yds	7
Dumpsters or Similar Equipment—all sizes	2
Flaherty Spreader Driver or Leverman	2
Lift Jitneys, Fork Lifts—all sizes—used in loading, unloading & transporting material on job site	1
Loader and/or Leverman on Concrete Dry Batch Plant, manually operated	1

TRUCK DRIVERS (Continued)

Low Bed Equipment, Flat Bed Semi-Truck and Trailer or Doubles transporting equipment or wet or dry materials	2
Lubrication Man, Fuel Truck Driver, Driver, Tireman, Wash Rack, Steam Cleaner or combination	1
Lumber Carrier, Driver-Straddle Carrier—used in loading, unloading and transportation of material on job site	2
Oil Distributor Driver or Leverman	2
Pilot Car	1
Slurry Truck Driver or Leverman	1
Solo Flat Bed and Misc. Body Trucks—0-10 tons	1
Transit Mix and Wet or Dry Mix Trucks:	
5 cu. yds. and under	1
Over 5 cu. yds. and inc. 7 cu. yds	2
Over 7 cu. yds. and inc. 11 cu. yds	3
Over 11 cu. yds. and inc. 15 cu. yds.	4
Team Drivers	1
Tireman, full-time basis	1
Truck Assistant	1
Truck Mechanic—Welder—Body Repairman	3
Truck Mechanic Assistant	1
Water Wagons (Rated Capacity) up to:	
3000 gallons	1
3000 to 5000 gallons	2
5000 to 10,000 gallons	3
10,000 to 15,000 gallons	4
Winch Truck—takes classification of truck on which winch is mounted	

WELDERS; RIGGERS

Receive rate for craft performing operation to which welding and rigging are incidental.

Bureau of Labor and Industries
Wage and Hour Division

Payroll/Certified Statement Form WH-38S
For Use in Complying with ORS 279.354

PRIME CONTRACTOR ☐
SUBCONTRACTOR ☐

PAYROLL SUBMISSION
FIRST ☐ **90 DAY** ☐ **LAST** ☐

Business Name (DBA):	CCB Registration Number:	Project Name:	Project Number:
		The Calvin & Hobbes Animal Shelter	12345
Phone: ( )		Type Of Work:	
Street Address:		Project Location:	Project County:
Mailing Address:			
Date Pay Period Began:	Date Pay Period Ended:		

THIS SECTION FOR PRIME CONTRACTORS ONLY #3576

Public Contracting Agency Name: Central City Port Commission

Phone: ( )

Date Contract Specifications First Advertised For Bid: 1/15/94 Contract Amount: $6,452,897

THIS SECTION FOR SUBCONTRACTORS ONLY

Subcontract Amount:

Prime Contractor Business Name (DBA): AAAA General Contractors Inc.

Phone: ( ) CCB Registration Number: 99989

Date You Began Work On The Project:

(1) Name, Address, And Social Security Number of Employee	(2) Trade Classification (Include group number if applicable)	(3) DAY AND DATE HOURS WORKED EACH DAY	(4) Total Hours	(5) Basic Hourly Rate Of Pay	(6) Hourly Fringe Benefit Paid As Wage To Employee	(7) Gross Amount Earned	(8) Total Deductions FICA, FED, STATE, ETC.	(9) Net Wage Paid For Week	(10) Hourly Fringe Benefit Paid To Party, Plan, Fund or Program	(11) Name Of Benefit Party, Plan, Fund, or Program
		OT								
		S								

SAMPLE ONLY

Copies of the correct form must be obtained from the public contracting agency. The shaded boxes will be filled in by that agency as illustrated above, then the form will be copied and supplied to the contractors and subcontractors for use on that public works project which is named on the form.

(1) Name, Address, And Social Security Number of Employee	(2) Trade Classification (Include group number if applicable)	(3) DAY AND DATE								(4) Total Hours	(5) Basic Hourly Rate Of Pay	(6) Hourly Fringe Benefit Paid As Wage To Employee	(7) Gross Amount Earned	(8) Total Deductions FICA, FED, STATE, ETC.	(9) Net Wage Paid For Week	(10) Hourly Fringe Benefit Paid To Party, Plan, Fund or Program	(11) Name Of Benefit Party, Plan, Fund, or Program
			HOURS WORKED EACH DAY														
		OT															
		S															
		OT															
		S															
		OT															
		S															
		OT															
		S															

CERTIFIED STATEMENT

I _____, _____ do here by state:
(Name of signatory party) (Title)

(1) That I pay or supervise the payment of the persons employed by _____ on the _____;
(Contractor, Subcontractor or Surety) (Building or work)

that during the payroll period commencing on the _____ day of _____, 19_____, and ending the _____ day of _____, 19_____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said _____
(Contractor, Subcontractor or Surety)

from the full weekly wages earned by any person, and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as specified in ORS 652.610, and described as follows: _____

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for workers contained therein are not less than the applicable wage rates contained in any wage determination incorporated in the contract; that the classification set forth therein for each worker conforms with work performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

I have read this certified statement, know the contents thereof and it is true to my knowledge.

NAME AND TITLE _____ SIGNATURE _____

Note to Contractors: Essential information has been provided on the shaded lines of this form by the contracting agency. You must attach copies of this form to each of your payroll submissions on this project. See the BOLI publication Prevailing Wage Rates for Public Works Contracts in Oregon for instructions on completing this form.

File this form with the contracting agency and **send a true copy to the Bureau of Labor and Industries, Wage and Hour Division, 800 NE Oregon St. #32, Portland, OR 97232.**

FORM WH-38S (REV 8/93)

BUREAU OF LABOR AND INDUSTRIES - WAGE AND HOUR DIVISION

INSTRUCTIONS FOR COMPLETING PAYROLL/CERTIFIED STATEMENT FORM,
WH-38 (Rev 1/94)

General: This form meets needs resulting from the 1983 amendments to the Prevailing Wage Rate Law. Under this amended law, the contractor is required to pay not less than fringe benefits as predetermined by the Bureau of Labor and Industries, in addition to payment of not less than the predetermined rates. The contractor's obligation to pay fringe benefits may be met either by payment of the benefits to the various plans, funds, or programs or by making these payments to the employees as cash in lieu of fringe benefits.

This form provides for the contractor's showing of the payroll and all monies paid to the employees, whether as basic rates or as cash in lieu of fringe benefits, and provides for the contractor's representation in the payroll/ certified statement that he/she is paying other benefits required by the contract and not paid as cash in lieu of fringe benefits. Detailed instructions concerning the preparation of the form follow:

Fill in the box at the top of the form. Fill in the appropriate Prime Contractor or Subcontractor box. Be sure to enter the date the contract was first advertised for bid, if it has not been already entered by the Public Contracting Agency. If you are not sure of this date, contact the Public Contracting Agency.

Column 1 - Name, Address, and Social Security number of Employee: The employee's full name must be shown on each payroll submitted. The employee's address must also be shown on the first payroll submitted. The address need not be shown on subsequent payrolls unless the address changes. Although not required, space is available in the name and address section so that Social Security numbers can be listed.

Column 2 - Trade Classifications: List the classification found in the Bureau of Labor and Industries publication "Prevailing Wage Rates for Public Works Contracts in Oregon," which is most descriptive of the work actually performed by the employee. Give the group number for those worker classifications which include such information. Consult the worker classifications and minimum Prevailing Wage Rate schedule set forth in contract specifications. Refer to the appropriate Prevailing Wage Rates in effect at the time the contract was first advertised for bid for information regarding trade classifications, basic hourly rates, and hourly fringe benefits. Indicate which workers are apprentices, if any, and give their current percentage, trade classification, and group number when applicable. If additional worker classifications are deemed necessary, contact the contracting public agency. If an employee works in more than one worker classification, use the highest rate for all hours worked, or use separate line entries to show hours worked, rate of pay, and fringe benefit for each classification.

Column 3

- DAY AND DATE: Enter the day of the week (M, T, W, Th, F, S, Sn) in the top row of boxes, and the number of the day of the month below.

- HOURS WORKED EACH DAY: Enter as overtime hours all hours worked in excess of 8 hours per day, all hours worked on Saturday and Sunday and all hours worked on legal holidays as defined in ORS 279.334. See ORS 279.334(3) for exceptions to this requirement.

Column 4 - Total Hours: Enter separately the total number of overtime hours and straight time hours worked by each listed classification during this pay period; overtime ("OT") on top, straight time ("S") immediately below.

Column 5 - Basic Hourly Rate of Pay: Enter the basic hourly rate and the overtime hourly rate (if any) paid the employee in the appropriate overtime and straight time boxes. Payment of not less than one and one half times the basic or regular rate paid is required for overtime under ORS 279.334.

Column 6 - Hourly Fringe Benefit Paid as Wages to the Employee: Enter any additional cash paid directly to the employee in lieu of fringe benefits. It is not necessary to pay time and a half for overtime work on those wages which are paid in lieu of fringe benefits.

Column 7 - Gross amount earned: Enter the gross wages earned by the worker in this classification for all listed straight time hours, all listed overtime hours, and including all additional amounts paid directly to the employee.

Column 8 - Total Deductions, FICA, FED, STATE, ETC: Enter the total amount of deductions withheld from each employee for just those hours reported on this payroll/certified statement for this project. All deductions must be in accordance with the provisions of ORS 652.610.

Column 9 - Net Wages Paid for Week: Enter the amount of wage actually paid to the employee after subtracting the total deductions reported in Column 8 from the gross amount earned shown in Column 7.

Column 10 - Hourly Fringe Benefit Paid to Party, Plan, Fund or Program: Enter the hourly amount of fringe benefits paid to each individually approved party, plan, fund or program for each employee. List these amounts separately on the lines provided. Any contactor who is making payments to approved parties, plans, funds or programs in amounts less than the required hourly fringe benefit is obligated to pay the difference directly to the employee as wages in lieu of fringe benefits, and to show that amount in Column 6 of this form.

Column 11 - Name of Benefit Party, Plan, Fund or Program: Enter the name of the party, plan, fund or program that corresponds to the amount shown as an hourly fringe benefit in Column 10.

Summary - In order to determine if the wages and fringe benefits being certified by this statement are sufficient to meet Prevailing Wage Rate requirements, the following check may be performed:

1. Consider each Trade Classification listed in Column 2.
2. For that Trade Classification, take the sum of:
   a) the Basic Hourly Rate of Pay (Column 5),
   b) the Hourly Fringe Benefit Paid as Wage to Employee (Column 6),
   c) and the Hourly Fringe Benefit Paid To Party, Plan, Fund or Program (Column 10).
3. This sum must equal or exceed the sum of the Basic Hourly Rate (including zone pay and special wage differentials, if any) and the Fringe Benefit as they are listed for that Trade Classification in the appropriately dated issue of the Bureau of Labor and Industries publication; Prevailing Wage Rates for Public Works Contracts in Oregon.

PLANNED PUBLIC IMPROVEMENT SUMMARY

FISCAL YEAR_____ - _____ _____ PAGE_____OF_____

(Name of State or Local Government Agency)

Project Number	Project Name	Project Type	Project Location	Estimated Project Cost	Agency or Contract Work

ORS 279.023 generally states that not less than 30 days prior to adoption of its budget for the subsequent budget period, each public agency shall prepare and file with the Commissioner of the Bureau of Labor and Industries a list of every public improvement known to that agency that the agency plans to fund in the budget period... If the agency decides to use its own equipment and personnel for constructing projects estimated to cost more than $50,000, the agency shall show that the decision conforms to the policy of the State of Oregon that public agencies shall make every effort to construct public improvements at the least cost to the public agency, and the public agency shall cause to be kept and preserved a full, true and accurate account of the costs of performing the work including all engineering and administrative expenses and a reasonable estimate of the cost, including investment cost, of the equipment used. NOTE: This Improvement Summary together with the project estimate and least cost determination constitutes a public record available in the usual manner for public review or copying. Mail a copy of this public improvement summary to: Wage and Hour Division, 800 NE Oregon St. # 32, Portland, Oregon 97232.

FORM WH - 118 (Rev 6/91)

CAPITAL IMPROVEMENT PROJECT COST COMPARISON ESTIMATE

_____
(Name of State or Local Government Agency)

DEPARTMENT: PROJECT NAME: FUND:
PROPOSED YEAR: PROJECT NUMBER:
PROJECT DESCRIPTION:

Rough Quantity Estimate	Units	Work Class Description	Agency Force Estimate		Agency Contract Estimate	
			Unit Cost	Total Cost	Unit Cost	Total Cost
Estimated Construction Period _____				$		$

_____ determines that (Agency Forces)(Contractor) can perform this work at the least cost.
(Name of Agency) (cross out one)

FORM WH - 119 (Rev 6/91)

_____
(Agency Official)

BUREAU OF LABOR AND INDUSTRIES
NOTICE OF AWARD OF PUBLIC WORKS CONTRACT
(For use by Public Agencies in Complying with ORS 279.363)

1. CONTRACTING AGENCY INFORMATION

Name Central City Port Commission Agency Number #3576

Address _____

City, State, Zip _____

Agency Representative _____ Phone _____

2. CONTRACT INFORMATION

Project Name Calvin & Hobbes Animal Shelter Project Number 12345

Fax Number _____

Project Manager Name _____ Phone _____

Location of Work _____

NOTICE TO PUBLIC AGENCIES

Please use copies of the personalized forms which were mailed to you in August, 1993, or contact BOLI at the number below for an additional supply.

3. PRIME CONTRACTOR INFORMATION

Name AAAA General Contractors Inc.

Address _____

City, State, Zip _____ Phone _____

Construction Contractors Board Registration Number 99989

Workers' Comp Insurance Company _____

Workers' Comp Policy/Binder Number _____

RETURN THIS COMPLETED FORM TO:
Bureau of Labor and Industries
Wage and Hour Division Rm 1160
Prevailing Wage Section
800 NE Oregon # 32
Portland, Oregon 97232
731-4074
Fax Number 731-4623

Please fill out this entire form. Make sure the information you enter on the shaded lines matches the information you provide your contractors on the shaded lines of the forms Certified Payroll (WH-38), and List of Subcontractors by Project (WH-303). See instruction sheet for details.

WH81S2 (Rev. 8/93)

BUREAU OF LABOR AND INDUSTRIES
WAGE AND HOUR DIVISION

LIST OF SUBCONTRACTORS BY PROJECT
For use by Prime Contractors in Complying with
ORS 701.055 (11) and OAR 812-03-000 (14)

PRIME CONTRACTOR NAME AAAA General Contractors Inc.

Address _____

City, State, Zip _____ Phone _____

PROJECT NAME AND NUMBER The Calvin & Hobbes Animal Shelter #12345

Project Location _____

CONTRACTING AGENCY NAME Central City Port Commission #3576 Phone _____

SUBCONTRACTOR NAME	CCB REGISTRATION NUMBER	ADDRESS	PHONE NUMBER

NOTICE TO PUBLIC AGENCIES

Please provide your primary contractor with copies of the personalized forms which were mailed to you in August, 1993, or contact BOLI at the number on the previous page for an additional supply.

The primary contractor shall provide the initial list of subcontractors to the contracting public agency and to the Wage and Hour Division of the Bureau of Labor and Industries, 800 NE Oregon #32, Portland, OR 97232, on the same date that the initial payroll and certified statement form WH-38 is due. The primary contractor will prepare and submit updated lists of subcontractors with each submittal of the payroll and certified statement.

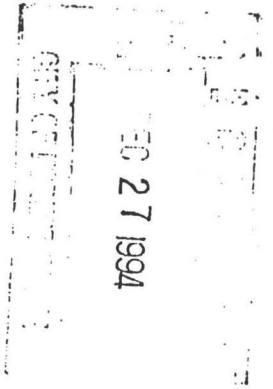
BUREAU OF LABOR AND INDUSTRIES
800 NE OREGON STREET # 32
PORTLAND, OREGON 97232

ADDRESS CORRECTION REQUESTED

BULK RATE
U.S. Postage
PAID
Portland, Oregon
Permit No. 0701

#1186

ENGINEERING DEPT.
CITY OF FOREST GROVE
PO BOX 326
FOREST GROVE OR 97116



ELM STREET
LOCAL IMPROVEMENT DISTRICT

WORK ORDER NO. 8194

STANDARD SPECIFICATIONS

March 1995

I. MOBILIZATION

A. DESCRIPTION

1. SCOPE

Mobilization shall consist of preparatory work and operations, including but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of offices, buildings and other facilities necessary for work on the project; for premiums on bond and insurance for the project and for other work and operations which the Contractor must perform or costs he must incur before beginning work on the project.

B. PAYMENT

1. LUMP SUM BASIS

Payment for the performance of the mobilization work as above specified will be made at the contract lump sum amount for the item "Mobilization".

The amounts to be allowed for "Mobilization" in the progress payment to be made under the contract will be made as follows:

a. When 5% of the total original contract amount is earned from other bid items, not including advances on materials, 50% of the amount bid for mobilization, or 5% of the total original contract amount, whichever is the least, less normal retainage, will be paid.

b. When 10% of the total original contract amount is earned from other bid items, not including advances on materials, 100% of the amount bid for mobilization, or 10% of the total original contract amount, whichever is the least, less normal retainage, will be paid.

c. Upon completion of all work on the project, payment of any amount bid for mobilization in excess of 10% of the total original contract amount will be paid.

The above schedule of progress payments for mobilization shall not limit or preclude progress payments otherwise provided by the contract.

2. INCIDENTAL BASIS

When neither the Special Specifications nor bid schedule indicate separate payment for mobilization, all mobilization will be considered incidental work for which no separate payment will be made.

II. TEMPORARY TRAFFIC CONTROL

A. DESCRIPTION

This section covers all work necessary to conduct construction operations so as to offer the least possible obstruction and inconvenience to the public and to protect pedestrian and vehicular traffic.

B. MATERIALS

1. UNIFORM TRAFFIC CONTROL DEVICES

Flagmen, barricades, signs and traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), published by the U.S. Department of Transportation, and as supplemented or modified by the State of Oregon Department of Transportation.

C. CONSTRUCTION

1. GENERAL

The Contractor shall provide and maintain such signs, barricades and warning lights as are necessary to warn and protect the public at all times on highways, roads or streets affected by work operations. In addition, the Contractor shall also provide all necessary flagmen and guards necessary to warn and protect the public.

The Contractor shall patrol the traffic-control area and reset all disturbed signs and traffic-control devices immediately, and will remove or cover all nonapplicable signs during periods not needed.

2. TRAFFIC CONTROL WITHIN THE PROJECT

When necessary, public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible.

The Contractor shall provide access to private properties at all times, except during urgent stages of construction when it is impractical to carry on the construction and maintain traffic simultaneously.

The Contractor shall give occupants of property fronting a street at least 24 hours notice before more than half the street is closed to vehicular traffic.

When, in the judgement of Engineer, vehicular parking is a hazard to through traffic or to the work, the Contractor shall furnish and place no parking signs on any street which is directly involved in the construction work.

3. CONSTRUCTION AND MAINTENANCE OF DETOURS

The Contractor shall construct and maintain approved temporary detours for the protection of the work and the safe passage of traffic through the work area.

4. ONE WAY PILOTED TRAFFIC CONTROL

When detours are not available, the Contractor shall confine operators to a width which provides for safe passage of traffic. If, in the judgement of the Engineer, one way piloted traffic is necessary, the Contractor shall provide at least two (2) flagpersons to control traffic, one flagperson being stationed at each end of the roadway being limited to restricted use and furnish a pilot car and driver to lead traffic. All pilot cars shall be identified with an appropriate information sign mounted on the rear of the vehicle. At the end of each day the Contractor shall leave work in such condition that it can be traveled without damage to the work and without danger to the public.

D. MEASUREMENT AND PAYMENT

1. INCIDENTAL BASIS

When neither specified nor listed in the proposal as a separate pay item, Temporary Traffic Control will be considered incidental work for which no separate payment will be made.

III. CLEARING AND GRUBBING

A. DESCRIPTION

This section covers the work necessary to clear, remove and dispose of all debris and vegetation such as stumps, trees, logs, roots, shrubs, vines, grass and weeds within the designated limits, and to preserve from injury or defacement such objects and vegetation as are designated to remain in place.

Clearing is defined as the cutting and removal of trees, bushes, vines and other vegetative growth at or above the surface of the ground.

Grubbing is defined as the removal of vegetative growth and wood items remaining at or below the ground surface following the clearing operation.

B. MATERIALS

None required.

C. CONSTRUCTION

1. DISPOSAL

Cleaning and grubbing vegetation, unless otherwise specified shall be disposed of by the Contractor in a manner satisfactory to the Engineer and in compliance with federal, state, and local laws and ordinances.

2. MERCHANTABLE TIMBER

Merchantable timber shall become the property of the Contractor unless otherwise specified.

3. CLEARING

Trees and brush shall be cut such that no stump extends above the ground surface more than six inches.

4. GRUBBING

a. Excavation Areas

All roots and embedded wood shall be removed to a depth not less than six inches below the subgrade or slope surface to which the excavation is constructed. All stumps shall be completely removed.

b. Embankment Areas

All stumps, roots, and embedded wood shall be removed to a depth not less than one foot below the subgrade or slope surface to which the embankment is to be constructed.

D. MEASUREMENT AND PAYMENT

1. LUMP SUM BASIS

Measurement and payment for clearing and grubbing will be made on a lump sum basis for the area cleared and grubbed within the limits specified.

2. INCIDENTAL BASIS

When not specified for payment, clearing and grubbing will be considered incidental work for which no separate payment will be made.

IV. EARTHWORK

A. DESCRIPTION

1. GENERAL

This section covers the work necessary for excavating and grading the roadway, side streets, sidewalk and planting areas, alleys, cuts, embankments, slopes, roadway ditches, driveway and alley approaches and all other earth-moving work required in the construction of the project including disposal of all surplus material.

When specifically included and provided for as incidental work for particular items or parts of work covered and included under other sections, such excavation and grading will not be included in this section.

2. UNCLASSIFIED EXCAVATION

Unclassified excavation is defined as all excavation regardless of the type, nature, or condition of the materials encountered. The Contractor shall assume full responsibility to estimate the kind and extent of the various materials to be encountered in order to accomplish the work.

3. BORROW EXCAVATION

Borrow material is defined as material obtained from borrow sources lying outside of, separated from and independent of, planned roadbed excavation or other required excavation occurring within the project limits.

B. MATERIAL

1. BORROW AND EMBANKMENT MATERIALS

The Contractor shall provide embankment and borrow materials of approved earth, sand, gravel, rock or combination thereof, free of peat, humus, muck, vegetative matter, organic matter or other materials detrimental to the construction of firm, dense and sound embankment.

The Contractor shall use all approved materials originating from the required excavations as far as practicable in the formation of embankments and subgrade, and for bedding, backfilling and other work as shown or directed.

2. SUBGRADE FOUNDATION/STABILIZATION MATERIALS

When directed by the Engineer the Contractor shall use crushed rock or gravel conforming to the specifications of Aggregate Bases, size as shown in proposal.

C. CONSTRUCTION

1. PRESERVATION OF EXISTING IMPROVEMENTS

The Contractor shall conduct operations in such a manner that existing highway facilities, utilities, railroad tracks and other non-highway facilities which are to remain in place will not be damaged as specified in the contract documents. The Contractor shall furnish and install sheet piling, cribbing, bulkheads, shores or whatever means may be necessary to support material carrying existing facilities or to support the facilities themselves, and maintain such supports until no longer needed. The Contractor shall protect temporary pavements, facilities, utilities and installations until they are no longer required. When temporary supports and other protective means are no longer required, the Contractor shall remove and dispose of them as directed.

2. EXCAVATION OF EXISTING IMPROVEMENTS AND MISCELLANEOUS

Earthwork includes excavating, hauling and depositing existing pavements, walks, driveways, surfacings, slabs, curbs, gutters and similar cement concrete structures or bituminous materials and of all rock or gravel road surfacing materials when such materials are within the limits of the excavation.

The Contractor shall remove and dispose of sewers, pipes, conduits, logs, timbers, concrete and other structures, materials, objects and matter encountered in the excavations, excepting only items for which removal is otherwise specifically provided, as part of the earthwork. The volumes of such items from within the excavation areas shown will be included in the excavation quantities.

The Contractor shall remove the remaining ends of abandoned pipes or portions of other items partially removed under this work which would be left exposed on side slopes or at subgrade to a minimum of one (1) foot of the finished slope or below subgrade. The Contractor shall plug or seal the ends of abandoned pipes in embankment areas as approved.

3. DISPOSITION OF EXCAVATED MATERIALS

Excavated material in excess of that needed to complete the work shall be disposed of at no expense to the owner. The Contractor shall replace any shortage of material caused by premature disposal at no expense to the owner.

4. OVER-EXCAVATION

a. Unapproved Subgrade Materials

The Contractor shall remove all unapproved subgrade materials to the dimensions and depth as directed by the Engineer. Excavation below subgrade shall be unclassified. The over-excavated areas shall be backfilled with approved excavated materials or subgrade foundation/stabilization materials as directed by the Engineer.

b. Overbreak

Overbreak is defined as that portion of any material which is excavated, displaced or loosened outside and beyond the slopes, lines or grades as staked or reestablished, with the

exception of slides as defined hereinafter, regardless of whether the overbreak is due to blasting, to the inherent character of any formation encountered, or to any other cause. Removal and disposal of all overbreak will be by the Contractor at no expense to the owner.

5. PREPARATION OF EMBANKMENT FOUNDATIONS

Prior to the construction of embankments, the Contractor shall excavate unstable material or unsuitable foundation material and dispose of it as directed. The Contractor shall limit excavation to the lines, grades and cross sections shown or approved. The Contractor shall backfill basements, trenches and holes which occur within the embankment limits with approved material which may include small pieces of broken concrete and masonry. The Contractor shall break concrete floors of basements as approved prior to backfill. The Contractor shall break up and roughen the ground surface before embankment material is placed as approved. The Contractor shall compact the natural ground underlying embankments to the depth of the grubbing or a minimum of 12 inches, to the density specified for the embankment material to be placed.

6. EMBANKMENT CONSTRUCTION

The Contractor shall place embankments and fills of all kinds in approximately horizontal layers of a maximum of 8 inches in thickness and compact each layer separately and thoroughly to the density specified.

In the immediate vicinity of curbs, walks, driveways, inlets, manholes and similar structures, in holes and where embankment and fill materials cannot be reached by the normal compacting equipment, the Contractor shall compact to specified density by approved methods.

The Contractor shall exercise precaution to insure that embankment construction and fill does not move, endanger or overstress any structure. The Contractor shall place and compact embankments at the end of bridges prior to the time that work begins on the bridge.

Embankments shall not be constructed when the embankment material, the foundation, or the embankment on which it would be placed is frozen.

7. COMPACTION AND DENSITY REQUIREMENTS

The density of compacted materials in place will be determined by AASHTO T191, T205 or T238 and the maximum density by ASSHTO T99 or T180.

The Contractor shall compact all embankments, fills and backfills within 3 feet of established subgrade elevation to a minimum density, in place, of 95 percent of maximum density. Below said 3 foot limit, compaction shall be a minimum density, in place, of 90 percent of maximum density.

Roadbed cuts and foundations for structures, to a depth of 1 foot below established subgrade or foundation elevation, shall be 3 inch maximum material and shall be compacted to a minimum density, in place, of 95 percent of maximum density.

The Contractor shall backfill holes resulting from grubbing, removal work, basements and trenches, which lie outside the limits of required excavation or embankment construction, with approved roadbed excavation material. The Contractor shall smooth and shape to blend with the surrounding area.

Embankment or backfill materials shall not be placed in final position until moisture, in excess of optimum moisture, has been removed.

8. SLIDE REMOVAL AND REPAIR

Side slopes shall be made as staked or reestablished. In case a slope, finished to the lines as staked or reestablished, slides back of the established slope into the roadway prism or out of an embankment before final acceptance of the work, the Contractor shall remove slide material from the roadway, or replace in the embankment and refinish slope as directed. The resloping will be paid for as extra work.

The Contractor shall obtain materials to replace embankment slides from an approved source. The Contractor shall repair slopes undercut at the base or destroyed in any manner due to negligence during the work by resloping parallel to the damaged slope or as approved at no expense to the owner.

9. FINISHING ROADBED AND SLOPES

After the main excavation in rock or rocky cuts is completed, the Contractor shall test slopes of the cuts thoroughly with bars, or by other approved means, and remove all loose, detached, broken or otherwise unstable rock. The Contractor shall remove jutting points and bring the entire cut slope area to a safe, trim and neat condition as approved. The Contractor shall dispose of the materials removed under this provision in the same manner as other excavated material.

As a part of the earthwork, the Contractor shall perform special grading on areas which are shown as planting areas. The Contractor shall finish planting areas to smooth flowing lines and to the grades and cross sections established or approved. Rock, boulders, vegetative matter and debris determined objectionable to intended development shall be removed from the areas as directed.

The Contractor shall blend the tops of cutbanks with the adjacent terrain by rounding of the top of cutbanks as shown. When rock extends to the top of the cuts making rounding impractical, it will not be required.

The Contractor shall trim all roadbeds, ditches and other excavations and embankments reasonably close to the established lines, grades and cross sections. The Contractor shall leave all surface features in a neat and well finished condition prior to the time the project is completed and accepted.

Immediately prior to completion of the earthwork, the Contractor shall clean the entire right-of-way area of debris and foreign matter of all kinds and dispose of as directed.

10. EXCAVATIONS BELOW GRADE

If directed by the Engineer, solid rock or boulders found in roadbed excavations shall be excavated to a depth not less than six inches below subgrade, and the resulting areas shall be backfilled with fine rock fragments or other suitable materials to subgrade elevations. Where the plans indicate the placement of "selected material" in the upper portion of roadbed excavation areas, materials shall be excavated to the depth necessary for placement of such selected material to its specified compacted thickness.

Where unstable material is encountered below subgrade in roadbed excavations, such material shall be excavated below subgrade as directed by the Engineer and the area shall be backfilled with selected material as indicated in subsection B(2) of this section.

D. MEASUREMENT AND PAYMENT

1. UNCLASSIFIED EXCAVATION

Quantities for unclassified excavation work will be measured on a cubic yard basis in original position prior to excavation. Pay quantities shall be computed to the neat lines of the cross sections as staked.

When shown in the proposal, this work will be measured and paid on a lump sum basis.

2. BORROW EXCAVATION

Quantities for borrow excavation work for materials used in embankment will be measured on a cubic yard basis as the quantity of embankment less, the quantity of unclassified excavation. Quantities shall be computed as described herein. Payment shall constitute full compensation for all labor, equipment and materials required for borrow excavation work, complete.

When shown in the proposal this work will be measured and paid on a lump sum basis.

3. EMBANKMENT

Quantities of embankment in place will be measured on a cubic yard basis by cross section measurement of the material in the approved embankment position of the work within the neat lines above the ground or base elevations existing at the time embankment construction begins. No measurement or payment will be made for quantities required due to subsidence and settlement of the ground or foundation, for settlement of materials within the embankments or for shrinkage, settlement, washout, slippage or loss regardless of cause, subject, however, to the provisions of "Responsibility of the Contractor" in the contract document.

When shown in the proposal this work will be measured and paid on a lump sum basis.

4. SUBGRADE FOUNDATION/STABILIZATION MATERIALS

Quantities of subgrade foundation/stabilization material shall be field measured prior to placing material. The Engineer shall use cross sections to measure length, width and depth below ground or design subgrade whichever is less. Quantities will be based on cubic yard measurement in place. Payment will include compensation for excavation and selected backfill material.

5. PAYMENT

Payment will be made for the following items when listed as pay items.

	Pay Items	Unit of Measure
1.	Unclassified excavation	cubic yard or lump sum
2.	Borrow excavation	cubic yard or lump sum
3.	Embankment in place	cubic yard or lump sum
4.	Subgrade foundation/ stabilization	cubic yard

V. WATERING

A. DESCRIPTION

This section covers the work necessary to furnish and apply water for roadway excavations, embankments, subgrades, roadbeds, backfills, subbases, bases and surfacings and water for the alleviation or prevention of dust nuisance within the project limits as directed.

Excluded from this section is watering used in connection with Portland cement concrete construction, wetting foundations preparatory to placing concrete thereon, curing concrete and watering which is specified as incidental to particular items or parts of the work in other sections.

B. MATERIALS

1. WATER

Water used in the work shall be free of silts and other matter deleterious to the quality of the material to which it is applied or with which it is mixed. The Contractor shall maintain an adequate supply of water at all times. The Contractor shall make all necessary arrangements for obtaining water and pay all costs involved in its procurement.

2. PROTECTION OF CITY WATER SUPPLY

The taking of water from the City of Forest Grove's water supply shall conform to all applicable requirements of City Ordinance No. 86-7 regulating and prohibiting cross-connections to the City water supply.

Prior to the taking of water from a public fire hydrant, a Hydrant Permit shall be obtained from the office of Business and Finance at the Forest Grove City Hall located at 1924 Council Street.

C. CONSTRUCTION

Watering work shall at all times be under the direction and control of the Engineer.

The Contractor shall water by means of tank trucks equipped with spray bars, by hose and nozzle or by other approved equal means which insures uniform and controlled application. The use of splash boards will not be permitted without prior approval.

The Contractor shall perform watering at any hour of the day and on any day of the week necessary for proper performance or protection of the work and for adequate alleviation of dust nuisance. The Contractor shall sprinkle directly on the road only at night or in the early morning hours when loss by evaporation is at a minimum unless otherwise directed.

D. MEASUREMENT AND PAYMENT

1. MEASUREMENT

Quantities of water determined by volume will be measured in units of 1,000 gallons (M-gals.) to the nearest 0.1 unit, exclusive of binders and additives mixed therewith. Measurement will be made in tanks or tank trucks of predetermined and approved capacities or by reliable approved meters provided by the Contractor. Measurement and payment will be made only for quantities as are approved for use in the work.

2. PAYMENT

a. Water on Incidental Basis

When neither specified nor shown in the proposal for separate payment, all water will be considered incidental to the other items of work and no separate payment will be made.

b. Water by Volume

Payment for water will be made on a 1,000 gallon (M-gal.) basis.

VI. TRENCH EXCAVATION, BEDDING & BACKFILL

A. DESCRIPTION

This section covers trench excavation, trench foundation, pipe bedding, pipe zone, trench backfill, embankment and surface removal and replacement.

1. TRENCH EXCAVATION

Trench excavation is defined as the removal of all material encountered in the trench to the depths as shown or as directed. Trench excavation shall be unclassified.

Unclassified trench excavation is defined as all excavation regardless of the type, nature or condition of materials encountered. The Contractor shall assume full responsibility to estimate the kind and extent of the various materials to be encountered in order to accomplish the work.

2. TRENCH FOUNDATION

Trench foundation is defined as the bottom of the trench on which the pipe bedding is to lay. The trench foundation provides the support for the pipe.

3. PIPE BEDDING

Pipe bedding is defined as the furnishing and placing of specified materials on the trench foundation so as to uniformly support the barrel of the pipe. The total bedding depth shall be as specified.

4. PIPE ZONE

The pipe zone is defined as the full width of the trench from six inches above the top outside surface of the barrel of the pipe, down to and including the pipe bedding.

5. TRENCH BACKFILL

Trench backfill is defined as the furnishing, placing and compacting of specified material in the trench between the top of the pipe zone material and the bottom of the pavement base rock, ground surface, or surface material as directed.

6. EMBANKMENT

Embankment is defined as furnishing, placing and compacting of the embankment material to the depth and configuration as specified.

7. SURFACE REMOVAL AND REPLACEMENT

Surface removal and replacement is defined as the removal and/or replacement of surface material such as topsoil, sod, pavement, sidewalks, gravel, etc. which requires special consideration in order to accomplish and restore the trench excavation area as specified.

B. MATERIAL

1. TRENCH FOUNDATION

The trench foundation shall be native material in all areas except where ground water or other conditions exist, and in the opinion of the Engineer, the native material is such that it cannot support the bedding and pipe. In those conditions, install geotextile fabrics approved by the Engineer or excavate the unsuitable material as required and backfill with approved crushed aggregate.

2. PIPE BEDDING

Pipe bedding material shall be clean crushed rock with a maximum size of 3/4-inch, uniformly graded from coarse to fine or as approved by the Engineer.

3. PIPE ZONE

The pipe zone material shall consist of bedding material, or native material, i.e., earth, gravel, rock, or combination thereof. It shall be free of humus, organic matter, vegetative matter, frozen material, clods, sticks, and debris and shall present no isolated points or areas, or larger stones which would cause fracture or denting of the structure or subject it to undue stress. All pipe zone materials shall be subject to the Engineer's approval.

4. TRENCH BACKFILL

Trench backfill shall consist of the following material:

a. Class A Backfill

Class A backfill shall be native or common material being earth, sand, gravel, rock or combination thereof, free of humus, organic matter, vegetative matter, frozen material, clods, stocks and debris and containing no stone having a dimension greater than 3 inches. All material shall be subject to the Engineer's approval.

b. Class B Backfill

Class B backfill shall be granular material consisting of an approved crushed rock meeting the requirements for aggregate bases. Designated size shall be 3/4 inch - 0, unless otherwise specified.

5. EMBANKMENT

All embankment material shall be as shown on the plan.

6. SURFACE REMOVAL AND REPLACEMENT

a. Topsoil

Topsoil shall be fertile, loamy, natural surface soil consisting of sands, silts, clays and organic matter in combination and free from substances toxic to plant growth, noxious weeds, roots, refuse, sticks and lumps.

b. Other Material

All other materials to be used in this section shall be in accordance with their respective Standard Specifications herewithin contained. Any special material required shall be designated in the Contract Documents.

7. GEOTEXTILE FABRIC

The geotextile fabric used in trench stabilization shall be lightweight, nonwoven filter fabric (Mirafi 140N or equal) for moderate soil conditions or high-strength woven filter fabric (Mirafi 600x or equal) for bad soil conditions. The Engineer shall select the appropriate fabric based on the soil conditions.

C. CONSTRUCTION

1. TRENCH EXCAVATION

a. General

All trench excavation and backfill shall conform to any and all specifications of any controlling regulatory agency under which the work is being performed.

b. Clearing the Right of Way

Where clearing of the right of way is necessary, it shall be completed prior to the start of the trenching. Brush shall be cut as near to the surface of the ground as practicable and removed to a disposal site.

The Contractor shall observe all federal and state laws relating to fire permits and local regulations relating to burning materials. Under no conditions shall excavated materials be permitted to cover brush prior to clearing and disposal of such brush.

c. Open Trench Limit

The length of the trench excavated shall always be kept to a minimum. The open trench length shall not exceed 100 feet. Related trench construction such as pavement, road gravel, concrete restoration, etc. shall also be completed within 800 feet of the open trench limit unless otherwise authorized.

d. Trench Width

It is the intent of these specifications that the trench width at the surface of the ground be kept to a minimum necessary to install the pipe in a safe manner. In all cases, trenches must be of sufficient width to allow for shoring and permit proper joining of the pipe and backfilling of material along the sides of the pipe. The minimum trench width, in the pipe zone, must provide a clear working space of six inches outside the maximum outside diameter of the pipe.

No maximum width of trench at the top of the pipe will be specified herein. When required by design, it will be shown on the plans. If the maximum width shown is exceeded by the Contractor without written authorization, the Contractor will be required, at no expense to the Owner, to provide pipe of a higher strength designation, a higher class of bedding, or both, as approved.

Excavation for manholes and other structures shall be wide enough to provide a minimum 12 inches between the structure surface and the sides of the excavation.

e. Grade

The Contractor shall excavate the trench a minimum of four inches plus the pipe wall thickness below the grade shown for pipe smaller than 18-inches and six inches for pipe 18-inches and larger, or as established by the Engineer. The subgrade upon which the bedding is to be placed shall be firm, undisturbed and true to grade. If the trench is over-excavated, the Contractor shall restore to grade with material of the type specified for pipe bedding at no expense to the owner and place the material over the full width of the trench.

f. Disposal of Excess Material

The Contractor shall dispose of all excess material not required elsewhere on the project, make arrangements for disposal and bear all cost related thereto.

g. Shoring

The Contractor shall provide all materials, labor and equipment necessary to adequately shore trenches to protect the work, existing property, utilities, pavement, etc., and to provide safe working conditions in the trench in such a manner as to comply with all requirements of OSHA.

That portion of cribbing or sheeting extending below the springline of rigid pipe or below the crown elevation of flexible pipe shall be left in place unless satisfactory means of reconsolidating bedding or side support, disturbed by cribbing or sheeting removal, can be demonstrated. If a moveable box is used in lieu of cribbing or sheeting and the bottom cannot be kept above the springline of rigid pipe or the crown elevation of flexible pipe, the bedding or side support shall be carefully reconsolidated behind the moveable box prior to placing backfill.

The use of horizontal strutting below the barrel of pipe or the use of the pipe as support for trench bracing will not be permitted.

h. Location of Excavated Material

Excavated material shall be placed at locations and in such a manner that it does not create a hazard to pedestrian or vehicular traffic, nor interfere with the function of existing drainage facilities.

i. Existing Abandoned Facilities

The Contractor shall remove and dispose of existing abandoned sewer pipe, structures, and other facilities necessary to construct the sewer. The cost of such removal will be considered incidental to the item Trench Excavation and Backfill.

2. DEWATERING

The Contractor shall provide and maintain ample means and devices with which to promptly remove and dispose of all water entering the trench excavation during the time the trench is being prepared for the pipe laying, during the laying of the pipe and until the backfill at the pipe zone has been completed. The manner of water disposal shall comply with applicable rules and regulations of the Unified Sewerage Agency of Washington County.

Groundwater shall be controlled such that softening of the bottom of excavations or formation of "quick" conditions or "boils" during excavation shall be prevented. Dewatering systems shall be designed and operated so as to prevent removal of the natural soils and so that the groundwater level outside the excavation is not reduced to the extent that would damage or endanger adjacent structures or property.

Dewatering of the trench shall be considered as incidental to, and all costs included in, the various contract pay items in the proposal.

3. TRENCH FOUNDATION

When, in the judgement of the Engineer, the existing material in the bottom of the trench is unsuitable for supporting the pipe, the Contractor shall either install geotextile fabrics or excavate below the pipe, as directed. The Contractor shall backfill the trench to subgrade of the pipe bedding, with trench foundation material over the full width of the trench and compact in layers not exceeding six inches deep to the required grade.

4. PIPE BEDDING

Pipe bedding consists of leveling the bottom of the trench or the top of the foundation material and placing bedding material to the horizontal centerline of the pipe unless specified otherwise.

The Contractor shall spread the bedding smoothly to proper grade so that the pipe is uniformly supported along the barrel and excavate bell holes at each joint to permit proper assembly

and inspection of the entire joint. Bedding under the pipe shall provide a firm, unyielding support along the entire pipe length.

Particular attention must be given to the area from the flow line to the horizontal centerline of the pipe or top of bedding to insure that firm support is obtained to prevent any lateral movement of the pipe during the final backfilling of the pipe zone.

Pipe bedding shall be placed the full width of the trench.

5. PIPE ZONE

The Contractor shall place the specified pipe zone material carefully around the pipe in six inch layers and thoroughly hand tamp with approved tamping sticks supplemented by "Walking In" and slicing with a shovel. The Contractor shall prevent pipe from movement either horizontally or vertically during placement and compaction of pipe zone material.

6. TRENCH BACKFILL

a. General

Backfill material shall be pushed onto the slope of the backfill previously placed and allowed to roll down into the trench. Backfill shall not be placed in the trench in such a way as to permit free fall of the material until at least three feet of cover is provided over the top of the pipe. Under no circumstances shall the Contractor allow sharp, heavy materials to drop directly onto the pipe or pipe zone material around the pipe.

b. Class A Backfill

The Contractor shall take necessary precautions to prevent excavated material from becoming saturated. Excavated material shall be pushed back into trench. A windrow of excavated material shall be placed over the trench to allow for subsequent settlement. The Contractor shall make his own estimate of the amount of settlement that will occur. The Contractor shall replace topsoil in the top 12 inches of the trench (see subsections VI.B.6.a. and VI.C.8.a.).

c. Class B Backfill

The Contractor shall place granular backfill material in suitable lifts to allow sufficient compactive effort to be applied. Any subsequent settlement of the finished surface during the warranty period shall be promptly repaired by the Contractor at no cost to the owner.

Granular backfill within four (4) feet of finish grade shall be compacted to no less than 95% of maximum density as determined by AASHTO T99, Method D. Backfill more than four (4) feet from finish grade shall be compacted to not less than 90% of maximum density.

d. Surface Maintenance

In paved or graveled areas the Contractor shall maintain the surface of the trench backfill level with the existing grade using 3/4 inch minus crushed aggregate material, or asphalt concrete, as directed, until final surface replacement is completed on the entire project and is accepted

by the City (or appropriate jurisdictional agency). The Contractor shall place asphalt concrete in conformance with the requirements for asphalt concrete pavement.

The Contractor shall maintain the backfilled trench surface between any two successive manholes and until the following operations have been completed and approved by the Engineer:

1. Service connections installed and backfilled, including water settling, when required.

2. Construction of manholes and appurtenances.

3. Hydrostatic, deflection, or air testing of pipeline section and manholes.

4. Cleanup and restoration of all physical features.

5. Utilities restored to their original condition or better.

6. All work required between the two manholes accomplished.

In the paved or graveled areas, this maintenance shall include, but not be limited to, the addition of asphalt concrete or crushed aggregate material to keep the surface of the backfilled trenches reasonably smooth, free from ruts and potholes, and suitable for normal traffic flow.

No final pavement replacement shall be undertaken until all items outlined above have been completed and approved.

Maintenance of backfilled trenches is considered as incidental to this item of work, and payment for such maintenance is included in payment for Trench Excavation and Backfill, except for asphalt concrete when directed.

7. EMBANKMENTS

a. Structural Embankments

The Contractor shall construct embankment to support the pipeline in accordance with the details shown on the plans. The Contractor shall spread excess excavated trench material suitable for embankment, or approved imported material when directed, in maximum one foot lifts for the full width of the embankment cross section and compact to a minimum of 95 percent of maximum density for the full depth of the fill as determined by AASHTO T99.

The Contractor shall moisten or dry layers of fill as required to obtain the compaction specified and compact the embankment to its final cross section before the trench excavation for the pipe is made.

b. Additional Pipe Cover

In locations where insufficient pipe cover exists, the Contractor shall place excess excavated trench material suitable for embankment over the pipe as shown on the plan and compact as required.

8. SURFACE REMOVAL AND REPLACEMENT

a. Topsoil

Where trenches cross lawns, garden areas, pasturelands, cultivated fields, or other areas on which reasonable topsoil conditions exist, the Contractor shall remove the topsoil to a depth as specified for the full width of the trench to be excavated and stockpile the topsoil. The Contractor shall not mix the topsoil with other excavated material. Contractor shall replace the same in the top of the trench, as specified.

The Contractor shall maintain the finished grade of the topsoil level with the area adjacent to the trench until final acceptance by the Engineer and repair damage to adjacent topsoil caused by work operations. The Contractor shall remove all rock, gravel, clay, and any other foreign materials from the surface; regrade, and add topsoil as required.

In lieu of stockpiling the topsoil, approved topsoil as defined herein, may be substituted to the depth as specified at no expense to the owner.

b. Pavement, Curb and Sidewalk

All bituminous pavement, regardless of thickness, shall be cut by an approved method prior to excavation of trenches.

Portland cement concrete pavement, curbs and sidewalks, regardless of thickness, shall be cut with a pavement saw. Width of cut shall be the minimum width necessary for the excavation and shall follow lines parallel to the pipe centerline. The use of any machine or device that, during the course of operation, results in damage to adjacent pavement, existing utilities, adjacent structures or improvements, shall not be permitted.

Replacement of these items shall be as specified in the applicable specifications.

9. IMPERVIOUS ZONE

When installing sanitary sewers within a stream corridor or wetland area an impervious zone of clay shall be installed, as needed, two feet wide and extending from the bottom to the top of the pipe zone. This zone shall be compacted to 90% relative compaction as determined by Method A of AASHTO T99.

D. MEASUREMENT AND PAYMENT

1. MEASUREMENT OF TRENCH EXCAVATION AND BACKFILL

Payment for Trench Excavation and Backfill is included in the appropriate pipe item.

2. MEASUREMENT OF TRENCH FOUNDATION

a. Measurement by the Cubic Yard

Measurement for this item will be made on a cubic yard basis. The volume will be computed upon the following basis for length, width and depth of trench:

Length. The length will be the entire horizontal distance on a linear foot basis along the centerline of the trench, including measurement through manhole or structure locations, except that the measurement through such structures will be deducted if the proposal carries a separate item of structure excavation that is applicable to the structure.

Width. The width upon which trench foundation will be calculated shall be the maximum outside diameter of the pipe plus 12 inches.

Depth. The depth measured will be the actual depth placed as directed below the level of the bottom of bedding. The depth will be measured at intervals of 25 feet along the centerline of the trench, beginning at the downstream beginning of the trench foundation and the average depth between measuring points will be the depth used for computing the depth of trench foundation between the measuring points.

Payment for this item shall constitute full compensation for all work necessary to furnish materials at trench side; for placing and compacting it in the trench; and for the extra depth of trench excavation required below the pipe bedding grade to provide for a stable foundation for the pipe.

3. MEASUREMENT FOR PIPE BEDDING

Payment for pipe bedding is included in the appropriate pipe item.

4. MEASUREMENT OF PIPE ZONE BACKFILL

Payment for pipe zone backfill is included in the appropriate pipe item.

5. MEASUREMENT OF EMBANKMENT

Measurement for embankment in place will be made on a cubic yard basis. Computation of the volume for payment will be based on field measurement of the actual number of cubic yards constructed and accepted, complete within the limits shown or directed.

Payment shall constitute full compensation for all labor and materials furnished, whether obtained from the project site or imported, complete and in place as specified.

Payment for trench excavation, bedding and backfill, placed in the completed embankment, will be paid separately under the appropriate pipe item.

6. PAYMENT

Payment will be made for the following items when listed as pay items.

Pay Item	Unit of Measure
Trench Foundation	Cubic Yard
Embankment Material	Cubic Yard

VII. STORM DRAINAGE PIPE & FITTINGS

A. DESCRIPTION

This section covers the work necessary for the construction of storm sewer, surface and underdrain facilities.

B. MATERIALS

1. NONREINFORCED CONCRETE PIPE

Nonreinforced concrete pipe shall conform to the requirements of ASTM C14 and shall be of the class as specified.

2. REINFORCED CONCRETE PIPE

Reinforced concrete pipe shall conform to the requirements of ASTM C76 and shall be of the class as specified.

3. POLYVINYL CHLORIDE (P.V.C.)

Polyvinyl Chloride (P.V.C.) pipe for parkway culverts shall be schedule 40, conforming to the requirements of ASTM D1785

4. DUCTILE IRON PIPE

Ductile iron pipe shall conform to the requirements of ANSI A21.51, or AWWA C151 and shall be cement lined, push-on joint, or mechanical joint unless otherwise specified. The minimum thickness class shall be class 52 up through 12 inch diameter pipe and class 51 for 14 inch diameter and larger pipe unless specified otherwise by the Engineer.

5. PERFORATED CONCRETE PIPE

Perforated concrete pipe shall conform to the requirements of ASTM C444.

6. PERFORATED POLYVINYL CHLORIDE PIPE (PVC)

Perforated polyvinyl chloride pipe shall conform to the requirements of ASTM D1785, schedule 40. The perforations shall consist of two rows of 2 inch by 3/8 inch slots transverse to the axis of the pipe and 120 degrees apart.

7. CEMENT MORTAR

Cement mortar shall conform to the requirements of ASTM C387, or be proportioned 1 part Portland Cement to 2 parts clean, well-graded sand which shall pass a 1/8 inch screen. Admixtures may be used not exceeding the following percentages by weight of

cement; hydrated lime, 10 percent; diatomaceous earth or other inert materials, 5 percent. Consistency of mortar shall be such that it will adhere readily to the pipe. Mortar mixed for longer than 30 minutes shall not be used.

8. JOINTS AND FITTINGS

a. Concrete Pipe

Joints shall be bell and spigot and gasket. Fittings on 18 inch and smaller concrete pipe shall be shop fabricated. Fittings on pipe 21 inches and larger may be field or shop fabricated. Fabrication details for fittings shall be submitted for and approval obtained prior to delivery of fittings to the job site.

Fittings fabricated by inserting a stub into a hole cut in the pipe shall be grouted with a nonshrinking grout. Surfaces to receive grout shall be coated with an epoxy bonding agent prior to grouting. Fitting stubs shall not protrude inside the sewer pipe.

b. Polyvinyl Chloride (P.V.C.)

Jointing of pipe sections and fittings shall be solvent welding. The pipe and fittings shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions or other injurious defects.

Solvent shall be of the type as recommended by the manufacturers of the pipe and fittings, also conforming to the applicable requirements of ASTM D2466 and ASTM D2467.

c. Cast Iron and Ductile Iron

Fittings shall be mechanical or push-on of the class as specified. Mechanical joint cast iron fittings shall conform to AWWA C110 and shall be of a class at least equal to that of the adjacent pipe. Push-on joint fittings shall be gray iron with body thickness and radii of curvature conforming to ANSI A21.10.

9. FILTER MATERIAL

Filter material shall be coarse sand, crushed or uncrushed gravel, rock or combinations thereof, and shall meet the following requirements:

SIEVE ANALYSIS

Sieve Size Passing	Percent by Weight
3/4 inch	100
1/4 inch	30-60
No. 8 sieve	20-50
No. 30 sieve	3-30
No. 50 sieve	3-12
No. 200 sieve (wet sieve)	0-1

Filter materials shall be crushed or natural granular material and shall contain not more than 1% by weight of clay lumps.

10. DRAINAGE GEOTEXTILE FABRIC

Drainage geotextile fabric shall be in conformance with the applicable sections of Section XXVIII-B.

C. CONSTRUCTION

1. TRENCH EXCAVATION, BEDDING AND BACKFILL

Trench excavation, pipe bedding and backfill shall conform to the applicable specifications for trench excavation and backfill.

2. INSTALLATION

Pipe installation shall be in accordance with the manufacturer's recommendations.

Normally pipe laying shall begin at the downstream end of the pipe line. The lower segment of the pipe shall be in contact with the shaped bedding throughout its full length. Bell ends shall be placed facing upstream. Joints shall be fitted with a gasket.

All field joints made in the joining of sections of pipe to form culverts and sewers and to connect to structures and special sections shall be closely fitted and tight, shall provide a smooth and uniform interior surface, shall secure and hold adjoining sections to each other and shall fasten securely to adjoining structures and special sections.

Perforated pipe shall be securely fastened together with couplings, fittings or bands as specified by the manufacturer for the type of pipe used. Upgrade ends of all subsurface drain pipe shall be closed with approved plugs.

Drainage geotextile fabric, when called for by plan details to be installed in conjunction with underdrain installations, shall be installed to conform to the applicable sections of Section XXVIII-C.

Perforated PVC pipe shall be placed with the slots facing up. All other perforated pipe shall be placed with the perforations facing down, unless otherwise specified or directed.

All pipe shall be inspected prior to lowering into the trench and, if necessary, cleaned of any material tending to plug the perforations of the pipe.

The contractor shall have available the proper tools, labor and equipment for efficient execution of the work. All pipe and fittings shall be carefully lowered into the trench to avoid any contamination of the filter material.

3. PARKWAY CULVERT INSTALLATION

Pipe shall be installed in a workmanlike manner with burrs and rough cuts removed. Pipe and fittings shall be wiped clean with ketone or other approved solvent. Solvent cement shall be applied liberally to fitting, including shoulder of fitting and butt end of pipe. Pipe shall be inserted immediately into the fitting after coating the surfaces and the fitting given one-quarter turn to seal the joint. The joint shall not be disturbed until the solvent has dried.

Large radii pipe bends shall be made by heating the conduit to a temperature between 200° and 275°F by means of a hot-air torch, hot-air oven, immersion in hot oil or other

approved methods. Overheating should be avoided and the pipe heating time shall not exceed 20 minutes. The pipe may be filled with hot sand to prevent flattening during bending. Pipe shall be bent around a mandrel or wooden jig with allowance made for pipe spring back. The bend radius shall not be less than 5 times the outside diameter of the pipe. The pipe may be cooled in water or with a stream of compressed air.

4. DUCTILE IRON PIPE

Pipe shall be protected against corrosion with welded bond wiring across each joint and 8 mil polyvinyl plastic-wrap casing. The poly-wrapped and bounded pipe shall be bedded upon and fully encased with clean sand extending a minimum of 6 inches (in all directions) from outmost portions of the pipe exterior.

5. PIPE ZONE BACKFILL

Pipe zone backfill material shall be placed in accordance with the specifications for trench excavation and backfill.

6. TRENCH BACKFILL

Trench backfill shall be placed in accordance with the specifications for trench excavation and backfill.

7. FILTER MATERIAL

The contractor shall place a minimum of 4 inches of filter material under perforated pipes. The material shall be brought to grade prior to placing the pipe. The placed material shall provide a firm unyielding support along the entire pipe length. Additional filter material will then be placed as specified in the contract documents.

D. MEASUREMENT AND PAYMENT

1. STORM DRAIN PIPE

Measurement and payment for storm drain pipe and fittings will be made on a linear foot basis for the various classes, types, and sizes of pipe installed, as shown, with respect to the specified backfill. The pipe will be measured horizontally from center-to-center of manholes or structures or to the end of the pipe, whichever is applicable. Payment shall constitute full compensation for the pipe and fittings, complete and in place, including, but not limited to, trench excavation, bedding, pipe zone and backfill. When using ductile iron pipe payment shall also include poly-wrap and sand encasement.

2. UNDERDRAINS

Measurement and payment for perforated drain pipe will be made on a linear foot basis for the actual number of feet of the size, type and class installed as shown. Payment shall constitute full compensation for trench excavation, filter material, trench backfill, drainage geotextile and all other work specified and/or as shown on plan details, complete.

3. PARKWAY CULVERTS

Measurement of polyvinyl chloride pipe will be taken along the neutral longitudinal axis of the pipe as installed and accepted. The pay quantity of pipe as determined above, will be paid for at the contract unit price per linear foot for the following item:

Item	Unit of Measurement
3-inch PVC Parkway Culverts	Linear Foot

Payment shall be full compensation for furnishing all materials, including labor, equipment, tools, fittings, special sections and incidentals necessary to complete the work.

VIII. SANITARY SEWER PIPE AND FITTINGS

A. DESCRIPTION

This section covers all work necessary for the installation of sanitary sewer pipe and fittings.

B. MATERIALS

1. NONREINFORCED CONCRETE PIPE

Nonreinforced concrete pipe shall conform to the requirements of ASTM C14, class 2.

2. REINFORCED CONCRETE PIPE

Reinforced concrete nonpressure pipe shall conform to the requirements of ASTM C76 and shall be of the class as specified. Unless otherwise specified, pipe shall meet the design requirements of wall B.

Reinforced concrete low head pressure pipe shall conform to the requirements of ASTM C361.

3. DUCTILE IRON PIPE

Ductile iron pipe shall conform to the requirements of ANSI A21.51 or AWWA C151, cement lined, push-on joint. The minimum thickness class shall be 52 through 12 inch diameter pipe and class 50 for 14 inch diameter and larger pipe.

4. POLYVINYL CHLORIDE (PVC) PIPE

Shall conform to ASTM D3034 for manufacturing and testing. Shall conform to ASTM 2321 for installation.

5. JOINTING MATERIALS

a. Concrete Pipe
Gaskets shall conform to the requirements of ASTM C443.

b. Ductile Iron Pipe
Push-on joints shall conform to the requirements of federal specification WW-P-421c.
Mechanical joints shall conform to the requirements of ANSI A21.11.

c. Polyvinyl Chloride (PVC)
Gaskets shall conform to the requirements of ASTM 1869

6. FITTINGS

a. General

Tee or wye fittings shall be provided in the sewer main for side sewer connection. All fittings shall be of sufficient strength to withstand all handling and load stresses encountered. All

fittings shall be of the same materials as the pipe unless otherwise specified. Material joining the fittings to the pipe shall be free from cracks and shall adhere tightly to each joining surface.

All fittings shall be capped or plugged and gasketed with the same gasket material as the pipe joint, fitted with an approved mechanical stopper, or have an integrally cast knockout plug. The plug shall be able to withstand all test pressures without leaking, and when later removed, shall permit continuation of piping with jointing similar to joints in the installed line.

b. Concrete Pipe

Fittings on 18 inch and smaller concrete pipe shall be shop fabricated. Fittings on pipe 21 inches and larger may be field or shop fabricated. Fabrication details for fittings shall be submitted for and approval obtained prior to delivery of fittings to the jobsite.

Fittings fabricated by inserting a stub into a hole cut in the pipe shall be grouted with a nonshrinking grout. Surfaces to receive grout shall be coated with an epoxy bonding agent prior to grouting. Fitting stubs shall not protrude inside the sewer pipe.

c. Cast Iron and Ductile Pipe

Fittings shall be mechanical or push-on of the class as specified. Mechanical joint cast iron fittings shall conform to AWWA C110 and shall be of a class at least equal to that of the adjacent pipe. Push-on joint fittings shall be gray iron with body thickness and radii of curvature conforming to ANSI A21.10.

7. MATERIAL CERTIFICATION

The manufacturer or fabricator shall furnish appropriate certification, based on manufacturer's routine quality control tests, that the materials in the pipe meet the requirements specified herein.

C. CONSTRUCTION

1. LINE AND GRADE

Survey line and grade control hubs will be provided by the Engineer in a manner consistent with accepted practices.

Variance from established line and grade shall not be greater than one thirty-second (1/32) of an inch per inch of pipe diameter and not to exceed one-half (1/2) inch, provided that such variation does not result in a level or reverse sloping invert; provided also, that variation in the invert elevation between adjoining ends of pipe, due to nonconcentricity of joining surface and pipe interior surfaces, does not exceed one sixty-fourth (1/64) per inch of pipe diameter, or one-half (1/2) inch maximum.

The Contractor shall establish line and grade for pipe by the use of lasers or by transferring the cut from the offset stakes to the trench at whatever intervals necessary to maintain the line and grade.

The Contractor shall constantly check line and grade and in the event they do not meet the limits described, the work shall be immediately stopped, the Engineer notified, and the cause remedied before proceeding with the work.

2. PIPE DISTRIBUTION AND HANDLING

The Contractor shall not distribute material on the job faster than it can be used to good advantage. The Contractor shall unload pipe only by approved means. Pipe will not be unloaded by dropping to the ground. More than one week's supply of material in advance of laying will not be distributed unless approved.

The Contractor shall inspect all pipe and fittings prior to lowering into trench to insure no cracked, broken, or otherwise defective materials are used. The Contractor shall clean ends of pipe thoroughly and remove foreign matter and dirt from inside of pipe and keep it clean during laying and joining.

The Contractor shall use approved implements, tools, and facilities for the safe and proper protection of the work. The Contractor shall lower pipe into the trench in such a manner as to avoid any physical damage to the pipe. The Contractor shall remove all damaged pipe from the jobsite. Pipe will not be dropped or dumped into trenches.

3. CONCRETE CLOSURE COLLARS

The Contractor shall use concrete collars only when approved, and then only to make connections between dissimilar pipe or where standard rubber gasketed joints are impractical. The Contractor shall construct in conformance with the details shown. The Contractor shall wash pipe to remove all loose material and soil from the surface on which the concrete will be placed.

The Contractor shall moisten nonmetallic pipe thoroughly prior to pouring the collars. The Contractor shall wrap and securely fasten a light gauge of sheet metal or building felt around the pipe to insure that no concrete shall enter the line. The entire collar shall be constructed in one concrete pour. Collars will not be poured in water. After the collars are poured and have taken their initial set, the Contractor shall cure by an approved method.

4. INSTALLATION OF SERVICE TEES AND WYES

The Contractor shall provide a compacted crushed aggregate base of pipe bedding material under all tees and wyes and branch fittings, extending to the springline of the fittings. The Contractor shall place bases on undisturbed native material or compacted foundation stabilization material.

Maximum deflection permissible with any one fitting shall not exceed 45 degrees and shall be accomplished with long radius curves or bends, except when approved.

The Contractor shall connect service lines to manholes only when directed. The Contractor shall make the connection so that the standard pipe joint is located not more than 1.0 feet from the structure.

The Contractor shall provide ends of all service lines and fittings with approved watertight plugs, caps or stopper, suitably braced to prevent blowoff during internal hydrostatic or air testing. Such plugs or caps shall be removable and their removal shall provide a socket suitable for making a flexible joint lateral connection or extension.

5. PIPE PLACING AND JOINTING

Trench excavation, bedding and backfill shall be in accordance with specifications for trench excavation and backfill.

a. Concrete Pipe

Pipe laying shall proceed upgrade with spigot ends in the direction of flow. After a section of pipe has been lowered into the prepared trench, the end of the pipe to be jointed will be cleaned as will the inside of the joint and the rubber ring, immediately before joining the pipe. The joint will be assembled in accordance with the recommendations of the manufacturer of the type of joint used. All special tools and appurtenances required for the jointing assembly will be provided by the Contractor.

After the joint has been made, pipe will be checked for alignment and grade. The trench bottom shall form a continuous and uniform bearing and support for the pipe at every point between joints. Sufficient pressure will be applied in making the joint to assure that the joint is "home", as defined in the standard installation instructions provided by the pipe manufacturer. Sufficient bedding material will be placed to secure the pipe from movement before the next joint is installed to assure proper pipe alignment and joint make-up.

Pipe 21 inches and smaller shall be laid so the inside joint space does not exceed 3/8 inch in width. If interior joints on 24 inches and larger pipe are greater than 3/8 inch, they shall be filled and sealed with premixed mortar conforming to ASTM C387 and troweled smooth on the inside surface.

When the pipe is laid within a movable trench shield, all necessary precautions will be taken to prevent pipe joints from pulling apart when the shield is moved ahead.

Elliptical reinforced pipe shall be laid so that the top or bottom marks are not more than 5 degrees from a vertical plane.

The Contractor shall take the necessary precautions required to prevent excavated or other foreign material from getting into the pipe during the laying operation. At all times, when laying operations are not in progress, at the close of the day's work, or whenever the workers are absent from the job, the open end of the last laid section of pipe will be closed and blocked to prevent entry of foreign material or creep of the gasketed joints.

The Contractor shall plug or close off pipes which are stubbed off for manhole construction or for connection by others, with temporary plugs.

The Contractor shall take all precautions necessary to prevent the uplift or floating of the line prior to the completion of the backfilling operation.

Where nonreinforced pipe is connected to manholes or concrete structures, the connection will be constructed so that the standard pipe joint is located not more than 1.0 feet from the outside edge of the structure.

When cutting and/or machining of the pipe is necessary, the Contractor shall use only the tools and methods recommended by the pipe manufacturer.

b. Ductile Iron Pipe

The Contractor shall conform to the applicable procedures described hereinbefore for concrete pipe. Foreign material will not be allowed to enter the pipe while it is being placed in the trench. After the first length of pipe is installed in the trench, pipe will be secured in place with approved bedding material tamped under and along sides to prevent movement. The Contractor shall keep ends clear of backfill. After each section is jointed, bedding or pipe zone material will be placed as specified to prevent movement.

Pipe shall be protected against corrosion with welded bond wiring across each joint and 8 mil polyvinyl plastic wrap casing. The poly-wrapped and bonded pipe shall be bedded upon

and fully encased with clean sand extending a minimum of 6" (in all directions) from outermost portions of the pipe exterior.

6. WATER AND EQUIPMENT FOR TEST

The Contractor shall make all arrangements for furnishing water for testing purposes. The Contractor shall perform the tests and provide all hoses, tank trucks, plugs, and other necessary equipment to complete the tests.

7. CLEANING PRIOR TO TEST

Prior to the internal pressure testing and inspection of the system by the Engineer, the Contractor shall flush and clean all parts of the system. The Contractor shall remove all accumulated construction debris, rocks, gravel, sand, silt and other foreign material from the system at or near the closest downstream manhole. If necessary, the Contractor shall use mechanical rodding or bucketing equipment.

Upon the Engineer's inspection of the system, if any foreign matter is still present, the sections and portions of the system will be reflushed and cleaned as required.

8. REQUIREMENTS PRIOR TO TESTS

a. General

All gravity systems and appurtenances shall successfully pass a hydrostatic or air test prior to acceptance and shall be free of visible leakage, using either method of testing. Information regarding air testing may be obtained from the Engineer. Manholes shall be tested as specified under manholes.

On pipe 54 inch in diameter and larger, individual joints may be tested by an approved joint testing device. All details of testing procedure shall be subject to approval of the Engineer.

b. Plugging of Tees, Wyes, Stubs and Service Connections

The Contractor shall plug all wyes, tees, stubs and service connections with gasketed caps or plugs securely fastened or blocked to withstand the internal test pressure. Such plugs or caps shall be removable, and their removal shall provide a socket suitable for making a flexible jointed lateral connection or extension.

c. Testing Equipment and Procedure

The Contractor shall furnish all necessary testing equipment and perform the tests in a manner satisfactory to the Engineer. Any arrangement of testing equipment which will provide observable and accurate measurements of either air or water leakage under the specified conditions will be permitted.

d. Time of Test

The Contractor shall test the system during the normal work day, scheduling the plugging, capping and other preparatory work so as to conduct the test during daylight hours.

9. REPAIRS

The Contractor shall repair or replace, in a manner approved by the Engineer, any portion of the system not passing the air or hydrostatic test.

Infiltration of ground water in an amount greater than specified, following a successful hydrostatic or air test, shall be considered as evidence that the original test was in error or that failure of the system has occurred. The Contractor shall correct such failures occurring within the warranty period in a manner approved by the Engineer and at no expense to the owner.

10. HYDROSTATIC TESTING

Pipe and joints shall sustain a maximum limit of 0.3 gallon per hours per inch diameter per 100 feet when field tested by exfiltration methods. The hydrostatic head for test purposes shall exceed the maximum estimated ground water level in the section being tested by at least 72 inches and in no case shall be less than 72 inches above the inside top of the highest section of pipe in the test section, including service connections. In every case the height of the water table at the time of the test shall be determined by the Contractor by exploratory holes or such other methods approved by the Engineer. The Engineer shall make the final decisions regarding test height for the water in the pipe section being tested. The length of pipe tested by exfiltration shall be limited so that the pressure on the invert of the lower end of the section shall not exceed 16 feet of water column.

The pipe test section may be filled 24 hours prior to time of exfiltration testing, if desired, to permit normal absorption into the pipe walls to take place.

All service connection footage, included in the test section and subjected to the minimum head specified, shall be taken into account in computing allowable leakage.

11. AIR TESTING

a. General

The Contractor has the option after completion of the system, including service connections, and backfilling and compaction, of conducting a low pressure air test in lieu of the hydrostatic test required herein. The owner may require testing of manhole to manhole sections as they are completed in order to expedite the acceptance of the system and allow connections before the entire system is complete.

The test shall be conducted at no expense to the owner. The Contractor shall provide all equipment and personnel for the test. The method, equipment and personnel shall be subject to the approval of the Engineer. The Engineer may, at any time, require a calibration check of the instrumentation used. The pressure gauge used shall have minimum division of 0.10 psi and have an accuracy of 0.0625 psi (one ounce per square inch). All air used shall pass through a single control panel.

b. Safety Precautions

All plugs used to close the sewer for the air test must be capable of resisting the internal pressures and must be securely braced, if necessary.

All air testing equipment must be placed above ground and no one shall be permitted to enter a manhole or trench where a plugged line is under pressure. All pressure must be released before the plugs are removed. The testing equipment used must include a pressure relief device designed to relieve pressure in the line under test at 10 psi or less and must allow continuous

monitoring of the test pressures in order to avoid excessive pressure. The Contractor shall use care to avoid the flooding of the air inlet by infiltrated ground water. The Contractor shall inject the air at the upper plug if possible. Only qualified personnel shall be permitted to conduct the test.

c. Ground Water

The presence of ground water will affect the results of the test. The average height of ground water over the lines must be determined immediately before starting the test. The method of checking the groundwater height shall be as approved.

d. Method

All air testing shall be by the Time Pressure Drop Method. The test procedures are described as follows:

1. Clean the lines to be tested and remove all debris where noted.

2. The Contractor has the option of wetting the lines prior to testing.

3. Plug all open ends with suitable test plugs. Brace each plug securely.

4. Check the average height of the ground water over the line. The test pressures required below shall be increased 0.433 psi for each foot of average water depth over the line.

5. Add air slowly to the section of system being tested until the internal air pressure is raised to 4.0 psig greater than the average back pressure of any ground water that may submerge the pipe.

6. After the internal test pressure is reached, allow at least 2 minutes for the air temperature to stabilize adding only the amount of air required to maintain pressure.

7. After the temperature stabilization period, disconnect the air supply.

8. Determine and record the time in seconds that is required for the internal air pressure to drop from 3.5 psig to 2.5 psig greater than the average back pressure of any ground water than may submerge the pipe.

9. Compare the time recorded in step 8 with the time required as determined hereinafter.

e. Acceptance

The system shall be considered acceptable when tested as described hereinbefore, if the section under test does not lose air at a rate greater than (1) 0.003 cfm per square foot of internal pipeline surface, or (2) 2 cfm, whichever is greater.

If a line fails to meet these requirements, the Contractor shall determine at his own expense the reason for leakage and shall repair or replace all defective materials or workmanship. The repaired section shall meet the requirements of this test before being considered acceptable.

This specification shall also be considered as satisfied if the time as measured by the preceding described methods is not less than the time as computed according to the following procedure.

1. Record the diameter in inches and the length in feet of all pipe in the section to be tested, including the service connections, in a table similar to the one shown below.

Diameter Inches	Length Feet	K= $0.011d^2L$	C= $0.0003882dL$

TOTAL

TIME REQUIRED BY INSPECTION = _____ SECONDS.
ACTUAL TIME AS DETERMINED BY TEST = _____ SECONDS.

2. Using the equations of $K = 0.011\ d^2L$ and $C = 0.0003882dL$ where d = pipe diameter in inches and L = section length in feet, calculate K and L and record those values in the table.

3. Add all value of "K" and all values of "C" for the section being tested.

4. If the total of all the "C" values is less than one, the time required by the specifications shall be the total of all the "K" values.

5. If the total of all the "C" values is more than one, the time required by the specifications shall be found by dividing the total of all the "K" values by the total of all the "C" values. The quotient is the time required by the specifications.

D. MEASUREMENT AND PAYMENT

1. SEWER PIPE

Measurement and payment for pipe will be made on a linear foot basis for the various classes, types, and size of pipe listed and installed with respect to the specified backfill. The pipe will be measured horizontally from center-to-center of manholes or to the end of the pipe, whichever is applicable.

Payment shall constitute full compensation for the pipe, complete and in place, including, but not limited to, trench excavation, bedding, pipe zone, backfill and testing.

No payment for pipe in place will be made until the pipe has successfully passed the air or hydrostatic test.

2. TEE AND WYE FITTINGS

Unless tee and wye fittings are listed in the Bid Proposal as a separate bid item, they will be considered incidental to the cost of the pipe and no separate payment will be made for these fittings.

3. CONCRETE CLOSURE COLLARS

Unless concrete closure collars are listed in the Bid Proposal as a separate bid item, they will be considered incidental to the cost of the pipe and no separate payment will be made for these fittings.

IX. SERVICE LINE SEWERS

A. DESCRIPTION

This section covers the work necessary for the installation of sewer service lines, and connections.

In general, service lines will extend from the sewer main to the street, alley or easement right-of-way line.

B. MATERIALS

1. EXCAVATION BACKFILL

The Contractor shall conform to the applicable requirements for trench excavation and backfill.

2. PIPE AND FITTINGS FOR SERVICE LINES

a. General

Pipe and fittings for service lines shall be of one type of material throughout and no interchanging of pipe and fittings will be allowed. Residential services shall normally be 6 inches. Larger service lines shall be as shown or specified.

b. Concrete Pipe

Concrete pipe shall conform to the requirements of ASTM C14 and shall be class 2 unless otherwise specified.

c. Ductile Iron Pipe

Ductile iron pipe shall conform to the requirements of ANSI A21.51 or AWWA C151, with push on joint or mechanical joints as specified, conforming to federal specification WWP421C and ANSI specification A21.11. Ductile iron pipe shall be lined with cement mortar and seal coated in accordance with ANSI standard A21.4 and AWWA C104.

d. Polyvinyl Chloride Pipe (PVC)

Polyvinyl chloride pipe shall conform to the requirements of ASTM D2729.

3. PIPE JOINTS

Pipe joint materials shall conform to the specifications for sanitary sewer pipe and fittings.

4. PIPE ZONE AND PIPE BEDDING MATERIAL

Pipe zone and pipe bedding material shall conform to the specifications for trench excavation and backfill.

5. SERVICE CONNECTION MARKERS

Service connection markers shall be new, one piece Douglas Fir or cedar, 2x4s, utility grade or better.

C. CONSTRUCTION

1. GENERAL

Construction shall conform to the applicable portions of the specifications for sanitary sewer pipe and fittings and trench excavation and backfill.

The Contractor shall install the pipe on a uniform grade between the tee or wye and the stake. Minimum slope shall be 1/4 inch per foot unless otherwise permitted by the Engineer.

2. TRENCH BACKFILL

Construction shall be in accordance with specifications for trench excavation and backfill.

3. DISPOSAL OF EXCESS MATERIAL

The Contractor shall dispose of excess material in accordance with the specifications for trench excavation and backfill.

4. INSTALLATION OF PIPE AND FITTINGS

Install the service line pipe upgrade from its connection to the lateral or main with bell or coupling ends upgrade.

The first length of pipe, out from the tee or wye on the lateral or main, shall not be greater than 3.5 feet in length.

Connect the service line to manholes only when directed. When this is permitted, make the connection so that the pipe joint is located not more than 1.0 feet from the manhole.

Provide the ends of all service lines and fittings with approved watertight plugs, caps, and stopper, suitably braced to prevent blowoff during internal hydrostatic or air testing.

Maximum deflection permissible with any one fitting shall not exceed 45 degrees and shall be accomplished with long radius curves or bends.

If foundation stabilization material is required, it shall be furnished, placed and paid for in accordance with specifications for trench excavation and backfill.

5. MARKERS

The Contractor shall install markers at the ends of those service lines not scheduled for user connection under the contract.

The markers shall be installed so as to extend from the end of the service line to 12 inches above the ground surface.

The Contractor shall determine the distance in feet and inches from the ground surface to the top of the service line and paint it on the marker. If the marker is broken or displaced, the Contractor shall reposition or replace the marker.

6. TESTING

Testing of the service line shall be included in the test of the sewer lines and shall conform to the specifications for sanitary sewer pipe and fittings.

D. MEASUREMENT AND PAYMENT

1. TRENCH EXCAVATION, SERVICE LINE PIPE AND BACKFILL

Measurement and payment will be made on a linear foot basis for the type and size of pipe and type of backfill installed as shown. Length will be measured horizontally to the nearest foot from the main or lateral centerline to the end of the pipe, as established by the Engineer. Payment shall include full compensation for all pipe, fittings, bedding and pipe zone backfill, and trench excavation, backfill and compaction. No differentiation will be made for trench depth.

No payment will be made until the section of sewer into which the services are connected has successfully passed the applicable internal pressure test, as described in specifications for sanitary sewer pipe and fittings.

2. SERVICE CONNECTION MARKERS

There will be no separate payment for service connection markers. The cost of furnishing and placing is to be included in one or more of the other bid items.

X. MANHOLES, CATCH BASINS, INLETS AND AREA DRAINS

A. DESCRIPTION

This section covers the work necessary for the construction of manholes and catch basins and inlets of the types and sizes shown.

B. MATERIALS

1. AGGREGATES

Aggregates shall conform to the requirements of Section 703 of the Standard Specifications for Highway Construction for the Oregon State Highway Division, 1984.

2. PORTLAND CEMENT

Portland cement shall conform to the requirements of Section 504 of the Standard Specifications for Highway Construction for the Oregon State Highway Division, 1984.

3. METAL REINFORCEMENT

Metal reinforcement shall conform to the requirements of ASTM A615, grade 40, deformed bars.

4. CONCRETE

Concrete shall conform to the requirements of ASTM C94, Alternate 2. Compressive field strength for manhole bases and miscellaneous concrete structures shall be not less than 3,000 psi at 28 days. Maximum size of aggregate shall be 1 1/2 inch. Slump shall be between 2 and 4 inches.

5. FORMS

Exterior surfaces shall be formed with steel or plywood. Other surfaces shall be formed with matched boards, plywood, or other approved material. Trench walls, rock, or earth will not be acceptable form material.

6. METAL CASTINGS

Metal casting materials shall conform to the requirements of ASTM A48, class 30B, with the following revisions:

Tensile strength	30,000 psi
Transverse strength:	(1.2" diameter bar - 18" centers)
Load - pounds	2,600-3,000
Deflection - inches	0.22-0.34
Brinell Hardness (as cast)	173-200

The foundry shall certify as to the tensile and transverse properties and the Brinell Hardness. The owner reserves the right to require a rough transverse bar (size of bar 1.2" diameter by 20" long) and/or a tensile bar as per ASTM A48 for each 20 castings or heat when less than 20 castings are made.

7. WELDED FRAMES AND GRATES

Welded frames and grates shall be fabricated of steel conforming to ASTM A7, A36, or A373 in accordance with the details shown.

8. CAP SCREWS

Cap screws and washers for watertight manhole covers shall be stainless steel with 60,000 psi minimum tensile strength conforming to the requirements of ASTM A453.

9. MANHOLES

a. Precast Concrete Manholes

Materials shall conform to the requirements of ASTM C478. Minimum wall thickness shall be 6 inches. Cones shall have the same wall thickness and reinforcement as riser sections. Joints shall be tongue-and-groove or keylock type. Cones shall be eccentric unless otherwise specified.

Prior to the delivery of any size of precast manholes section to the job site, yard permeability tests will be conducted at the point of manufacture. The precast sections to be tested will be selected at random from the stockpile material which is to be supplied to the project. All test specimens will be mat tested, and shall meet the permeability test requirements of ASTM C14.

b. Mortar

Mortar shall conform to the requirements of ASTM C387, or be proportioned 1 part Portland cement to 2 parts clean, well-graded sand which will pass a 1/8 inch screen. Admixtures may be used not exceeding the following percentage of weight of cement: hydrated lime, 10 percent; diatomaceous earth or other inert materials, 5 percent. Consistency of mortar shall be such that it will readily adhere to the precast concrete if using the standard tongue-and-
groove type joint. If the keylock type joint is used, the consistency shall be such that excess mortar will be forced out of the groove and support is not provided for the next precast manhole section to be placed. Mortar mixed for longer than 30 minutes shall not be used.

c. Preformed Plastic Gaskets

When approved, preformed plastic gaskets may be used in lieu of mortar type joints and shall meet all the requirements of federal specification SS-S-00210.

d. Rubber-Ring Gasket Joints

When approved, shall conform to ASTM C443.

10. PIPE FITTINGS

Pipe Fittings shall conform to the applicable specifications for pipe and fittings.

Tees, ells and other fittings for drop manholes shall be of the same material as the pipe in the adjacent trench unless specified otherwise.

11. PIPE STUBOUTS FOR SERVICE CONNECTIONS

Pipe stubouts for service connections shall conform to the applicable specifications for pipe and fittings and are to be of the same size and kind of material as the service connection pipes.

12. PIPE STUBOUTS FOR FUTURE SEWER CONNECTIONS

Pipe stubouts shall be the same type as approved for use in the lateral, main or trunk sewer construction. Strength classifications shall be the same class as in adjacent trenches. Where there are two different classes of pipe at a manhole, the higher strength pipe will govern strength classification. Rubber-gasketed, galvanized metal or concrete water tight plugs shall be installed in each stubout and shall be adequately braced against hydrostatic or air test pressures.

C. CONSTRUCTION

1. GENERAL

a. Foundation Stabilization

If, in the opinion of the Engineer, unstable material exists that will not support the manhole or other structure, the Contractor shall excavate below grade and backfill with foundation stabilization material in accordance with the specifications for trench excavation and backfill.

b. Excavation and Backfill

Excavation and backfill shall conform to the applicable specifications.

c. Forming, Pouring and Curing

Forms shall be tight and well-braced. Chamfer corners of forms. Prior to placing the concrete, remove all water and debris from the forms. Moisten forms just prior to placing the concrete. Handle concrete to prevent segregation or loss of ingredients. Immediately after placing, densify concrete with an approved vibrator. Limit vibration to the time necessary to produce satisfactory consolidation without causing segregation. Screen the top surface of exposed surfaces and trowel to a smooth finish free from marks or for a period of seven days with an approved curing compound. Apply the curing compound immediately after removal of forms or finishing. Protect concrete from damage during the seven day curing period. Remove forms and patch any defects in the concrete with mortar mixed in the same proportions as the original concrete mix.

d. Pipe Connections

All rigid pipes entering or leaving the manhole shall be provided with flexible joints within 1 foot of the manhole structure and shall be placed on firmly compacted bedding. Special care shall be taken to see that the openings through which pipes enter the structure are completely watertight. All flexible pipe shall be connected to manholes according to the manufacturer's recommendations.

e. Hydrostatic Testing

When, in the judgement of the Engineer, the ground water table is too low to permit visual detection of leaks, up to 20 percent, but in no case less than 10 percent, of the total project manholes shall be hydrostatically tested. The Engineer shall have the option of requiring a hydrostatic test on all manholes (up to a total of five) for projects consisting of less than 20 manholes. The test shall consist of plugging all inlets and outlets and filling the manhole with water to a height

determined by the Engineer. Leakage in each manhole shall not exceed 0.2 gallon per hour per foot of head above the invert. A manhole may be filled 24 hours prior to time of testing, if desired, to permit normal absorption into the manhole walls to take place.

If more than 25 percent of the manholes tested fail the hydrostatic test, the Contractor will be required to test all or as many manholes as the Engineer may deem necessary.

2. PRECAST CONCRETE MANHOLES

Precast manhole components shall be placed in a location free from outside drafts, covered and cured in a moist atmosphere maintained by an injection of steam for such a time and under such a temperature as may be needed to enable the manhole components to meet the strength requirements.

Or, precast components may be water-cured by covering the manhole components with a water saturated material, or by a system of perforated pipes, mechanical sprinklers, porous hose, or by any other approved method that will keep the manhole components continuously moist during the curing period. Cast-in-place manhole components shall be moist cured for a period not less than seven days, except that when high-early-strength cement is used the curing shall be not less than three days. Pigmented membrane curing compound or other approved method may be applied in lieu of moist curing.

a. Bases are cast in place atop a 12 inch thick compacted layer of 1-1/2" -0" crushed rock, the concrete shall be consolidated by mechanical vibration. The concrete shall be screened off in a manner such that the first manhole section to be placed has a level uniform bearing for the full circumference.

All lift holes and all joints between precast elements shall be thoroughly wetted and then completely filled with mortar, smoothed and pointed both inside and out, to ensure watertightness, except that rubber-gasketed joints need not be mortared.

Precast sections shall be placed and aligned to provide vertical sides. The completed manhole shall be rigid, true to dimensions, and watertight.

In precast manhole sections where steel loops have been provided in lieu of lift holes, the loops shall be removed flush with the inside wall surface after the manhole has been completed.

No sharp cutoff protrusions will be permitted. If concrete spalling occurs as a result of the loop removal, the spalled areas shall be restored in a professional manner with mortar to a uniform smooth surface.

b. Risers

Risers shall consist of circular sections in standard nominal inside diameters of 42", 48", 54", 60", 72", and 96". Heights of 42" and 48" sections shall be multiples of 12", at the option of the manufacturer. Heights of 72" and 96" sections shall be as required to fit site conditions. Reinforcement for standard sections shall be as designed by the manufacturer. Joints shall be made with mortar, mastic, or flexible gaskets unless specified otherwise, and shall conform to ASTM C478, paragraph 7.

c. Cast Grates, Frames and Covers

Cast grates, frames and covers shall be true to the size and shape as shown. Bearing surfaces shall be true and seat at all points. The casting shall be free of porosity, shrink cavities, cold shuts or cracks, or any defects which would impair serviceability, and shall conform to ASTM A4:

Class 30B. Repair of defects by welding, or by the use of "smooth-on" or similar material will not be permitted. All castings shall be shot or sandblasted and the application of paint or other coating will not be permitted. Each casting shall have the initials of the manufacturer and the year of the cast distinctly cast upon it. These characters shall be minimum 1 1/4 inch in height and 1/8 inch in relief.

When directed, the following strength test shall be made on covers. The cover, while resting in its frame, shall sustain a concentrated load of 40,000 pounds applied at its center through a 2 1/2 inch plug. The Engineer may, at any time, require up to 5 percent of the total number of covers and in no case less than one (1) cover to be tested in this manner. In case of failure during the test, additional covers shall be furnished until the tests prove satisfactory. All covers that pass this test will be returned. The owner will not be responsible for those that fail the test.

d. Welded Frames and Grates

Frame and grates shall be fabricated of steel conforming to ASTM A 36 in accordance with details shown. All connections shall be welded. Welding shall conform to the requirements of the American Welding Society. Frames and grates shall be tested one within the other and there shall be no more than 1/16 inch rock.

3. CAPPING ABANDONED PIPES

Abandoned pipes shall be capped or plugged in accordance with the pipe manufacturer's recommendations or as specified. All ends shall be watertight.

4. MANHOLES OVER EXISTING SEWERS

Construction shall be in accordance with the applicable specifications for manholes.

After completion of the manhole, the Contractor shall sever the existing pipe within the manhole, cover the edges with mortar, and trowel smooth, as required.

The Contractor shall prevent broken material or debris from entering the line.

Flow shall be maintained at all times. Prior approval by the Engineer will be required prior to diverting flows.

5. MANHOLE AND CATCH BASIN CONNECTIONS

The Contractor shall construct openings in the existing manhole base or catch basin or barrel as required and construct connections that are watertight and that will provide a smooth flow.

The Contractor shall provide all diversion facilities and perform all work necessary to maintain flow in existing lines during the connection.

D. MEASUREMENT AND PAYMENT

1. MANHOLES

Measurement and payment for manholes will be made on a per each basis for each type and size shown, to a depth of six feet, plus the unit price per foot for extra depth over six feet.

Payment shall include all materials and work necessary to construct all service connections shown.

2. CATCH BASIN, INLETS AND AREA DRAINS

Measurement and payment for catch basins and inlets will be made on a per each basis for the number and type shown.

3. MANHOLE AND CATCH BASIN CONNECTIONS

Measurement and payment for connections to existing manholes and catch basins will be made on a lump sum per each basis.

XI. CONCRETE DRIVEWAYS, SIDEWALKS, CURBS AND GUTTERS

A. DESCRIPTION

This section covers the work necessary for the construction of driveways, sidewalks, sidewalk ramps, curbs, gutters, monolithic curb and gutter; monolithic curb, gutter and sidewalk, islands and traffic separators, hereinafter referred to collectively as structures.

B. MATERIALS

1. PORTLAND CEMENT CONCRETE

Portland Cement Concrete shall conform to the applicable requirements of Sections 504, 608 and 609 of the Standard Specifications for Highway Construction of the Oregon State Highway Division, 1984.

Portland cement concrete in formed or extruded structures shall attain a compressive strength of not less than 3,000 pounds per square inch when tested at 28 days with 1 inch maximum size aggregate.

2. AGGREGATE BASE

Aggregate materials for base, foundation courses, leveling courses or bedding shall conform to the applicable requirements for aggregate bases, Section XIII of these Specifications.

3. DOWELS

Dowels shall conform to the requirements of ASTM A306, grade 70 unless otherwise specified.

4. PREFORMED EXPANSION JOINT FILLER

Preformed expansion joint fillers for concrete shall conform to the requirements of AASHTO M 153 or AASHTO M 213 except that those furnished under AASHTO M 213 shall be tested in conformance to ASTM D 1751. Fillers conforming to AASHTO M 213, except the binder if other than bituminous material, may also be used provided that they otherwise meet this specification and provided further that they have been demonstrated to be rot and vermin proof for a period of at least 5 years.

5. CURING MATERIALS

Curing materials shall conform to the following requirements as specified:

White Burlap-Polyethylene Sheets for Curing Concrete	AASHTO M 171
Waterproof Paper for Curing Concrete	AASHTO M 171
Liquid Membrane-Forming Compounds for Curing Concrete (white-pigmented)	AASHTO M 148
White Polyethylene (Film) for Curing Concrete	AASHTO M 171

Burlap Cloth (Jute or Kenaf) AASHTO M 182

C. CONSTRUCTION

1. PREPARATION OF BASE

a. Earthwork

When roadway earthwork is called for in connection with other items of work under the same contract which includes structure construction under this section, all excavation, backfilling and berm construction for the structures and in the vicinities thereof as required or as shown, shall conform to the applicable requirements for earthwork.

When the contract which includes structure construction under this section does not call for roadway earthwork to be performed as set forth by earthwork specifications, the Contractor shall perform required earthwork as follows: Make excavations for the structures to required depths and widths and the bottoms thereof to a firm, even surface. Remove all soft and unsuitable material and replace with material as directed. Backfill prior excavations at sites and in the vicinity of the new structures with approved material placed and compacted in successive layers to a dense and firm condition. Areas adjacent to the work shall be trimmed and shaped to a neat condition and disturbed areas restored to their original condition.

b. Aggregate Foundation or Bedding

Structures will require a 2" thick aggregate foundation as shown on the plans, unless otherwise specified.

When structures are to be constructed on areas when approved aggregate material is already in place, such materials may be salvaged and reused as bedding, at no cost to the owner.

Foundation courses or beddings involving the furnishing of new materials shall be constructed in conformance to the applicable requirements of aggregate bases.

c. Base for Portland Cement Concrete

All bases upon which new cement concrete structures are to be constructed shall be firm and free of all extraneous matter. Thoroughly dampen surfaces upon which new cement concrete is to be placed prior to placement of concrete. No payment will be made for water and the work for placing base materials. The cost of preparing bases shall be considered as incidental.

2. FORMS AND EQUIPMENT

a. Forms

All materials and procedures shall conform to the applicable requirements of Section 504 of the Standard Specifications for Highway Construction of Oregon State Highway Division, 1984.

b. Equipment

The machine for extruding Portland cement concrete curb shall be the self-propelled type equipped with a material hopper, distributing screw and adjustable curb forming

devices capable of placing cement concrete to the lines, grades and cross sections as shown, in an even homogeneous manner.

The forming tube portion of the extrusion machine shall be readily adjustable vertically during the forward motion of the machine to provide, when necessary, a variable height of curb conforming to the predetermined curb grade. A grade line gauge or pointer shall be attached to the machine in such a manner that a continual comparison can be made between the curb being placed and the established curb grade as indicated by the offset guide line.

3. PLACING, FINISHING AND CURING

a. Placement

The Contractor shall construct all structures within 0.02 foot of true line, within 0.02 foot of established surface grade, cross section and slope, and within 0.01 foot of specified thickness.

Portland cement concrete structures may be placed either by mechanical extrusion methods or between suitable forms, as the Contractor may elect.

No concrete shall be placed until the surface and forms, where used, have been inspected and approved by the Engineer.

If the structures are constructed by mechanical extrusion methods, the slump shall be between one and two inches. The Contractor shall feed the concrete into the extruding machine at a uniform rate and operate the machine under sufficient restraint in a forward motion to produce a well compacted mass of concrete.

If forms are used, the slump of concrete shall be between two and four inches. The Contractor shall remove forms from formed structures after the concrete has taken initial set and while the concrete is still green.

b. Finishing

Portland cement concrete structures shall have a broomed surface unless otherwise specified. Finished surfaces shall be free from humps, sags, or other irregularities.

Minor defects shall be repaired with mortar containing one part Portland cement and two parts sand. Plastering will not be permitted on the faces and exposed surfaces. Honeycombed and other structurally defective concrete shall be removed and replaced at no expense to the owner. While the concrete is still green, the Contractor shall finish exposed surfaces as required to provide a uniform texture, as specified.

Sidewalk surfaces shall be broomed transverse to the direction of traffic and shall be marked into rectangles with a scoring tool which will leave the edges rounded. The dimensions of the rectangles shall be as directed.

Driveway surfaces shall be floated with wood floats and finished at the proper time with a steel float. Joints shall be edged with 1/4 inch radius edger and the driveway return edges shall be tooled with 1/2 inch radius edger. The surface shall be broomed in a transverse direction in relation to the center line of the driveway.

Driveways shall not be constructed at the same time the pavement is placed unless authorized by the Engineer.

Curb and gutter surfaces shall be broomed in the direction of traffic.

c. Curing

After the concrete has been placed and finished, it shall be cured by application of a white pigmented liquid membrane-forming compound applied uniformly to the damp concrete by pressure spray methods, or by keeping the concrete protected and moist for at least 72 hours. The concrete structure shall be kept from contact and strain for at least seven days.

4. TRANSVERSE EXPANSION AND CONTRACTION JOINTS

Transverse contraction joints of the weakened plane or dummy type shall be formed in the exposed surfaces of the Portland cement concrete structures opposite contraction joints in abutting Portland cement concrete, over contraction joints in concrete underlying the new concrete and at other locations in the new structures as required to confine the contraction joint spacing to a maximum of 15 feet for curbs, gutters and driveways and 5 feet for sidewalks. The joints shall be formed by grooving, by insertion and removal of plates or other devices, or by other means approved by the Engineer. The top width of the joint shall be not less than 1/8 inch, not greater than 1/4 inch, and the depth of the joint shall be completely severed. The edges of joints shall be tooled and unfilled grooves shall be clean and neat.

Transverse expansion joints shall be provided opposite existing expansion joints, over expansion joints in underlying concrete, at each point of tangency, at connections to existing curbs, driveways, and sidewalks and around objects which protrude through, into, or about the sidewalk. Transverse expansion joints shall be provided at other locations as required to confine the expansion joint spacing to a maximum distance not to exceed 135 feet as measured longitudinally for sidewalks, curbs and monolithic curb-and-gutter. The width of the expansion joint filler shall be 1/2 inch unless otherwise specified.

Existing curbs, walks, driveways and other such structures shall be cut back to permit the new construction and where the new structures are to be constructed against or within four inches of the end, edge or side of other structures, the new construction shall include the construction of approved connections therewith, using the same kind of concrete as is used in the new construction. The joint between the old and new material shall be made with a saw cut. In this work, preformed expansion joint filler, minimum 1/2 inch thickness, shall be furnished and placed between new and old Portland cement concrete.

5. DOWELS, TIE BARS, REINFORCEMENT

The Contractor shall provide and place dowels with "slip sleeves" as load transfer mediums as shown. Provide and place dowels, but without "slip sleeves", as fastenings or ties between new concrete and existing underlying concrete when shown.

6. SIDEWALK RAMPS

Sidewalk installation shall include all sidewalk (wheelchair) ramps, in place, as designated on the plans or as additionally staked in the field by the Engineer.

Sidewalk ramps shall include, but not be limited to, concrete saw-cutting and removal and replacement of existing curb, asphalt concrete pavement saw-cutting and replacement, and all other materials and labor deemed necessary to construct said ramps, complete and in place.

7. THICKENED SIDEWALK SECTIONS

Sidewalk installation shall include all intermittent thickened sections, in place, as either designated on the plans and/or as called for and staked by the Engineer due to the construction of parkway culverts as specified in Section VII of these Specifications and as detailed in the plans.

D. MEASUREMENT AND PAYMENT

1. MEASUREMENT

a. Curb

Curb will be measured on a linear foot basis along the face of the curb for the actual length considered. No deduction or adjustments will be made in linear foot pay measurement for curb tapers or depressed lengths at driveways and ramps.

b. Monolithic Curb and Gutter

Curb and gutter will be measured on a linear foot basis along the face of the curb for the actual length constructed. No deduction or adjustments will be made in linear foot pay measurement for curb tapers or depressed lengths at driveways and ramps.

c. Sidewalks

Measurement and payment for sidewalks will be made on a square foot basis for the type, width, depth, and length specified and constructed. No additional compensation will be made for the extra thickness of concrete in walks in areas where the 3" parkway culverts are installed as payment will be understood to be included in payment made for the item "P.C.C. Sidewalk (4" thickness)".

Compensation for required work pertaining to the construction of sidewalk ramps will be considered to be included in the contract unit price per square foot for the item "P.C.C. Sidewalk (4" thickness)", which payment will be considered full compensation for all labor, materials, equipment and incidentals necessary for the construction of sidewalk ramps as specified herein and/or as indicated on plans. Sidewalk ramp curbs will be separately measured and paid for as set forth in Subsection XI D-1(a).

d. Driveways

Measurement for driveways will be made on a square foot basis.

Measurement will be made of the surface driveways and computed to the nearest square foot.

e. Concrete Valley Gutter

Concrete valley gutter will be measured on a linear foot or per square foot for the actual amount installed.

f. Incidental Items

Unless otherwise specified, no separate payment will be made for incidental items required for any of the herein-described bid items as listed in Subsection XI-D2 and as shown in the Bid Proposal. Said incidental items include, but are not limited to, excavation, embankment, aggregate base materials and existing structure saw-cutting; or any other related items as stipulated herein or as necessarily required to complete the structure installations in place.

2. PAYMENT

Payment will be made for the following items when listed as pay items:

	Pay Item	Unit of Measure
1.	Curb	Per Linear Foot
2.	Monolithic Curb and Gutter	Per Linear Foot
3.	Sidewalk	Per Square Foot
4.	Concrete Valley Gutter	Per Linear Foot or Square Foot
5.	Driveway	Per Square Foot

XII. SUBGRADE

A. DESCRIPTION

This section covers the work necessary for the preparation of the subgrade. Subgrade is defined as the area of new or existing roads, streets, alleys, driveways, sidewalks, or other public places upon which additional materials are to be placed as a part of work covered in other sections or by future work. Where applicable, subgrade is considered to extend over the full width of the specified base course. Subgrade is classified as untreated.

1. UNTREATED SUBGRADE

The uppermost material placed in embankments or unmoved from cuts in the normal grading of the roadbed and which is brought to true line and grade, shaped and compacted as necessary to provide a foundation for the pavement structure constitutes untreated subgrade.

B. MATERIALS

1. WATER

Shall conform to the requirements of specifications for Watering.

C. CONSTRUCTION

1. PREPARATION

In advance of setting line and grade, the Contractor shall clear and dispose of brush, weeds, vegetation, grass and debris from the subgrade. The Contractor shall drain all depressions or ruts which contain water. The Contractor shall blade and shape subgrade to remove irregularities and secure a uniform surface.

Prior to starting subgrade work, including backfill, all underground work contemplated in the area of the subgrade shall be completed. This requirement includes work on the contract, work to be performed by the owner or by others.

2. UNTREATED SUBGRADE

The Contractor shall excavate and shape subgrade to line, grade and cross section and compact to not less than 95 percent of maximum density as determined by AASHTO T99. Testing methods for density requirements shall be determined by AASHTO T191, T205, or T238. The Contractor shall compact to a line one foot beyond the edge of paving, curb or form.

Subgrade areas which cannot be compacted to specified density, but in the judgement of the Engineer otherwise meet the requirements herein, may be removed and aerated or stabilized with an approved soil stabilizing material, all at no additional expense to the owner.

The Contractor shall remove all unapproved subgrade materials as directed by the Engineer, see Earthwork.

3. TOLERANCES

The Contractor shall rework areas found to be deficient in thickness by more than 0.04 foot, except that fresh stabilizing material shall be added in an amount equal to one half of the original amount, as above specified. The Contractor shall accomplish all reworking at no expense to the owner.

The finished surface of treated and untreated subgrade shall not vary more than 0.04 foot from established grade and cross section at any point. The finished surface, when tested with a 10 foot straight-edge shall not vary from the testing edge by more than 0.04 foot at any point.

D. MEASUREMENT AND PAYMENT

1. INCIDENTAL WORK

No measurement or payment will be made for work involved in clearing the subgrade of vegetation and other debris, draining water from the subgrade, smoothing the subgrade in preparation for staking, blading, shaping and compacting the subgrade including roadbed materials to a depth of one foot below the subgrade, to final line, grade and cross section. All work involved in these processes will be considered incidental to the other items of work.

2. UNTREATED SUBGRADE

No measurement and payment will be made for preparation of untreated subgrade unless otherwise specified.

XIII. AGGREGATE BASES

A. DESCRIPTION

This section covers the work necessary to furnish and place one or more sources of aggregates and water, as subbase or base, on a prepared surface.

B. MATERIAL

Aggregates for aggregate base shall be crushed gravel or crushed rock, including sand.

1. FRACTURE OF GRAVEL

Base material produced from gravel shall have at least one mechanically fractured face based on the following percentage of particles retained on the 1/4 inch sieve for the designated size:

Designated Size	Minimum Percent Fractured Particles (by weight) of Material
Retained on 1/4" Sieve	
1 1/2" - 0 and Larger	50
Smaller than 1 1/2" - 0	70

The fractured particles shall be reasonably well distributed in proportion to the component fractions of the base aggregate larger than the 1/4 inch sieve as set forth in the table entitled "Grading Requirements" for base aggregates.

2. DURABILITY

The source material from which aggregate base materials are obtained, produced or manufactured, shall meet the following qualifying test requirements:

Test	Test Method	Requirements
Degradation:		
Passing No. 20 Sieve	OSHD Standard*	30% Maximum
Sediment Height	OSHD Standard*	3" Maximum
Abrasion	AASHTO T96	35% Maximum

*Available from Engineer of Materials, ODOT, Salem, Oregon 97310.

3. SAND EQUIVALENT

Base aggregates to be incorporated in the work shall have a sand equivalent of not less than 30 when tested in conformance with AASHTO T176.

4. LIQUID LIMIT AND PLASTICITY

Base aggregate shall meet the following requirements:

Quality	Test Method	Requirements
Liquid Limit	AASHTO T89	NP or 33 Maximum*
Plasticity Index	AASHTO T90	NP or 6 Maximum*

*When tested as specified and both the liquid limit and plasticity index are reportable with the numerical value, the pertinent quality requirements will be met when the numerical values of the test results conform to the following table:

Liquid Limit and Plasticity Index Values

Percent of Material Passing No. 40 Sieve	Liquid Limit (Maximum) AASHTO T89	(Maximum) AASHTO T90
0.0 to 5.0, inclusive	33	6
5.1 to 10.0, inclusive	30	5
10.1 to 15.0, inclusive	27	4
15.1 to 20.0, inclusive	24	3
20.1 to 25.0, inclusive	21	2
Over 25.0	21	0 or NP

5. GRADING REQUIREMENTS

Base aggregates shall be uniformly graded from course to fine and shall conform to one or another of the following grading requirements:

	Separate Sizes				
Sieve Size Passing	2 1/2"-0	2"-0	1 1/2"-0	1"-0	3/4"-0
	Percentages (by weight)				
3"	100				
2 1/2"	95-100	100			
2"		95-100	100		
1 1/2"			95-100	100	
1 1/4"	55-75				
1"		55-75		90-100	100
3/4"			55-75		90-100
1/2"				55-75	
3/8"					55-75
*1/4"	30-45	30-45	35-50	40-55	40-60

*Of the fraction passing the 1/4 inch sieve, 40 percent to 60 percent shall pass the No. 10 sieve.

Where a tolerance range is set forth in the above grading requirements, it shall be understood that the midpoint of the tolerance range is the target value and the product shall conform as closely as realistically possible to this target value. The purpose of the tolerance range is only to permit occasional minor variations from the target values that are, for practical reasons, unavoidable.

The determination of sizes and grading shall be in conformance with AASHTO T27.

6. ACCEPTANCE

Materials will be subject to acceptance as specified by one of the following methods:

a. In its final state on the roadbed after all processing and prior to the placement of subsequent surfacing materials.

b. In the stockpile after all shaping work has been completed.

c. Immediately after crushing.

C. CRUSHING

1. STOCKPILING

Stockpiling shall consist of the furnishing of crushed rock, crushed gravel or other aggregate in stockpiles at the places and in the manner hereinafter specified. Wherever in this specification the terms material or materials are used, it shall be understood to refer to crushed rock, crushed gravel or other aggregates.

The materials to be furnished in stockpiles shall be of the kinds, sizes and quality as stated in the contract documents. Sampling and testing of materials for determination of compliance with specified requirements may be at the point of manufacture, at the stockpile, or both, as the Engineer may elect.

The materials shall be placed in stockpiles at locations provided by the owner. The quantities of each designated size of material to be furnished in the stockpiles shall be as specified in the contract documents.

Each designated size of material shall be placed in a separate stockpile.

The method used in placing the material in the stockpile shall be such as to minimize segregation of the aggregate particles.

2. MIXING

Mixing shall provide a mixture of unsegregated materials. The Contractor shall add water during mixing in an amount sufficient to provide optimum moisture content plus or minus two percentage points.

3. PLACING

a. Weather Limitations

When, in the judgement of the Engineer, the weather is such that satisfactory results cannot be secured, the Contractor shall suspend operations until the weather is favorable. No surfacing materials shall be placed in the snow or on a soft, muddy or frozen subgrade. The owner shall not be liable for damages or claims of any kind or description by reason of operations suspended by the Engineer.

b. Equipment

Equipment necessary for construction of aggregate base will vary depending upon method of mixing chosen by Contractor, however, equipment furnished shall provide for efficient and continuous operations insofar as is practicable.

Equipment used shall conform to the following requirements:

Hauling Equipment - Vehicles for hauling aggregate or mixture of aggregate and water shall be capable of depositing the material within the receiving hopper of spreading equipment or windrowing device or in windrows of reasonably uniform size in front of spreading equipment with minimum of mix segregation.

Spreading Equipment - Spreading equipment shall have an adjustable screed or strike-off assembly and it may have a receiving, mixing and distribution system. It may be a complete and integral unit, self-propelled and powered; a crawler-track or wheeled type tractor intimately combined with a receiving, mixing, spreading and screeding unit attached thereto; or a heavy duty

self-propelled grader, equipped with at least an 8 foot blade. Equipment used shall be capable of spreading and striking off material to the designated line, grade and transverse slope with surface texture of uniform appearance without excessive segregation or fracture of material.

c. Thickness of Lifts

If the required compacted depth of the subbase or base course exceeds 6 inches, it shall be constructed in two or more layers of approximately equal thickness. The maximum compacted thickness of any one layer shall not exceed 6 inches. Each layer shall be placed in spreads as wide as practicable and to the full width of the course before a succeeding layer is placed.

4. COMPACTION

a. Equipment

Equipment used to compact aggregate bases shall be self-propelled steel wheel or pneumatic tire rollers. Rollers shall be capable of compacting materials to a firm, even surface. Steel wheel rollers shall be capable of providing a weight of not less than 200 pounds per inch width of the compression roll. Pneumatic tire rollers shall be capable of exerting a ground pressure of not less than 80 pounds per square inch of tire contact area. Vibratory rollers shall provide compaction of demonstrated equivalency to that of prescribed steel wheel or pneumatic tire rollers.

b. Density Requirements

At the time the compacting begins, the materials shall be at the moisture content specified or directed within a tolerance of plus or minus two percent. The Contractor shall begin compaction of each layer as soon as practicable after the material is spread and continue until a density of not less than 95 percent of the maximum density has been achieved. Maximum density will be determined by AASHTO T99. In-place density will be determined by AASHTO T191, T205, T238 or in accordance with such other methods as may be specified.

The Contractor shall maintain the surface of each layer during compaction operations in such a manner that a uniform texture is produced and the aggregates are firmly keyed. When needed for proper compaction, the Contractor shall apply water to the materials.

5. SURFACE FINISH

The aggregate base surface shall parallel the cross section and grade of the finished surface within 0.05 foot, and when tested with a 10 foot straightedge shall not vary from the testing edge by more than 0.04 foot at any point.

D. MEASUREMENT AND PAYMENT

1. MEASUREMENT

a. Cubic Yard Vehicle Measure Basis

Measurement of aggregate base will be made on a cubic yard basis. Measurement of the materials will be made in the hauling vehicle at the points of deposit, with no allowance for settlement of material during transit. Loads shall be made level or uniform in shape as necessary to assure accurate measurement thereof. To facilitate measurement in this manner, the Contractor, by striking off or other suitable means, shall bring the top of each load to a level surface with all corners filled.

b. Ton Basis

Measurement of aggregates will be made on a ton basis for the number of tons of aggregate as weighed on approved and tested scales. Weight scales are to be furnished to the Contractor. The determination of the weights and the weight of the loaded vehicles will be to the nearest 10 pounds. Tare weights will be determined by weighing empty vehicles at intervals of such frequency as the Engineer deems necessary to insure the accuracy of pay load weights. Appropriate serially numbered weigh tickets shall be furnished by the Contractor from self-printing types of scales. The weigh tickets shall include: information to identify the project, kind of material, source of materials, date, time of day, gross and tare weight, haul vehicle identifications, name of driver and name of weigh person.

c. Square Yard Basis

Measurement of aggregate bases will be made on a square yard basis. Measurement will be made to the nearest square yard for each type and compacted thickness specified. In roadway areas measurement will be made from curb face to curb face and/or the limits shown on the plans as appropriate. Aggregate bases underneath and behind curb areas will be included in the unit price bid for concrete curb.

2. PAYMENT

Payment will be made on a cubic yard, ton, or square yard basis as specified.

XIV. ADJUSTMENT OF INCIDENTAL STRUCTURES TO GRADE

A. DESCRIPTION

1. SCOPE

This work shall consist of the adjustment to required grade of the tops of manholes, sumps, inlets, valve boxes, meter boxes, monument boxes and similar structures as called for by the plans or as directed by the Engineer.

B. MATERIALS

1. GENERAL

Materials to be used in the adjustment of incidental structures shall be either materials salvaged from the existing installation and brought to a condition suitable for re-use or new materials conforming to the following requirements:

ITEM	SECTION
Portland Cement Concrete	XVIII
Precast Concrete Sections	X
Metal Frames, Covers, Grates and other Metals	X
Joint Materials	X

C. CONSTRUCTION

1. GENERAL

Excavation and backfill shall conform to the requirements of Section VI. Removal and disposal of old concrete and other materials shall conform to the applicable requirements of Section IV.

Metal frames, covers, grates and fittings salvaged from structures to be adjusted, shall be of suitable size and condition, and adequate for the intended purpose as determined by the Engineer.

New construction shall conform to the applicable requirements for the construction of new structures as set forth in Section X, or if not there covered, the new construction shall be of recognized high standards reflecting high quality workmanship.

Base drains at inlets, gravel backfill at sumps, and all stone bases disturbed by or fouled because of the adjusting work shall be repaired, replaced or restored to the condition obtaining at the time the work is commenced.

Any aggregate bases, treated base or pavements disturbed by the adjustment shall be repaired to the satisfaction of the Engineer.

The adjusted structures shall be adequate in all respects for the service rendered by them

prior to being adjusted.

2. RAISING OF TOPS OF MASONRY STRUCTURES

a. General Masonry Work

After existing frames, covers and grates have been removed, the exposed top surface of monolithic concrete on which new mortar or concrete is to be placed shall be chipped away to a depth of at least 1/4-inch to expose firm concrete, and the new surface shall be cleaned by brushing and shall be moistened with water at the time of placing new concrete thereon. The new concrete shall then be placed to required grade and cured at least 3 days, after which the frame shall be seated in fresh mortar and brought to proper grade. Masonry of bricks or concrete blocks shall be raised with new bricks, blocks, mortar or combinations thereof or with Portland cement concrete, as conditions may require or permit. Concrete boxes may be lifted and placed on precast concrete box extensions, on new brick or on cast-in-place concrete as may be suitable.

b. Limitation on Necks of Manholes

Manhole necks are defined as that upper portion of a manhole having vertical walls and a uniform diameter or dimensions just sufficient to receive and support the metal frame. In the raising of the tops of manholes, new necks may be constructed or existing necks may be extended; provided, however, that the total distance from the top of metal cover at its new adjusted grade to the bottom of the neck shall not exceed 2 feet.

c. Limitations on Manhole Dome or Cone Reconstruction

The dome or cone portions of manholes may be cut down in part or wholly and rebuilt to altered design, provided the batter or slope of the cone does not exceed 6 inches horizontal per 12 inches vertical.

d. Limiting Thicknesses of Mortar and New Concrete

Mortar for building up existing masonry shall not be placed to a depth of more than 2 inches. Concrete shall not be placed to a depth of less than 3-1/2 inches. To conform to these requirements, the existing shells or walls of structures to be raised shall be cut down as necessary to provide space for the new construction.

e. Precast Structures

Manholes, sumps and like structures comprised of precast concrete may be raised by the use of precast concrete rings or sections conforming to the general materials requirements applicable to the existing structure with which they are used. The precast rings or sections shall be set and joined to each other and to existing sections in a manner which will provide uniform bearing and positive safeguard from displacement.

f. Metal Steps and Ladders

Where the existing manhole or like structure is provided with metal steps or a metal ladder, new metal steps or a new metal ladder extension shall be provided in the adjusted structure, in kind, and in such position that the distance from the top of the adjusted structure to the top step will not be more than 20 inches and so that the distance between new steps and between the lower new step and the upper undisturbed step will not be more than 12 inches.

g. Metal Rings and Plates

Fabricated metal rings or plates may be furnished and used in the adjustment

work, provided: (1) the metal and its fabrication design shall be such that it will at least equal the pertinent characteristics of strength and support required of the covers or grates to be placed thereon; (2) that uniform bearing of bearing surfaces is assured; and (3) positive provision is afforded against displacement when in service.

3. LOWERING OF TOPS OF MASONRY STRUCTURES

a. General

Where the top of an existing structure of masonry construction is to be lowered, the masonry portion of the structure shall be exposed to required depth, cut off or removed to an elevation below that established for the bottom of the metal frame or cover which is to be reset on masonry and shall then be built up with mortar, concrete, brick or concrete blocks, or with metal rings or plates to required elevation and top design. The joining of new material to old, the minimum thicknesses of new mortar and concrete, the limitations, the curing and other details shall be as set forth in applicable portions of subsection XIV-C2.

In the lowering of precast concrete structures, the entire structure may be lowered and reset at established elevation when the nature of the structure or conditions permit. If the structure is composed of precast sections or rings, such integral units may be removed and other precast section or rings of suitable dimensions may be used in replacement, or monolithic concrete may be poured in place to the necessary form and dimensions required to achieve the required adjustment. Precast sections and rings removed in the adjusting work may be reused in other adjusting work or in new construction if in good condition, and such precast items that are not so used in the work will become the property of the Contractor.

4. ADJUSTING METAL STRUCTURES

Metal inlets, valve boxes, meter boxes, monument boxes and other like structures shall be raised or lowered to grade normally by resetting the entire structure on firm foundation; or, in the case of raising the structure to a point where it would not enclose or protect its contents, by adding metal extensions of like design below the original structure; or by complete replacement of the structure with a new structure of adequate design approved by the Engineer. Salvaged structures not reused on the project shall become the property of the Contractor.

D. MEASUREMENT

1. GENERAL

The quantities to be paid for will be the actual number of manholes, sumps, inlets, valve boxes, meter boxes, monument boxes and other like structures adjusted under this Section, measured as units in place, completed and accepted. Separate measurement will be made of each specific type or of each separate grouping of types of structures for which separate pay items are set forth in the bid schedule. Required earthwork, backfill, replacement of base drains, stone bases, pavements, and other miscellaneous work will be considered as incidental to the adjusting work and no separate measurement thereof will be made.

E. PAYMENT

1. GENERAL

The accepted unit pay quantities, will be paid for at the applicable contract unit price per each for one or another of the particular pay items listed below or covered under Special Specifications and set forth in the bid schedule.

Item Reference	Pay Item	Unit of Measurement
(a)	Adjusting Manholes	Each
(b)	Reconstructing Manholes	Each
(c)	Adjusting Inlets	Each
(d)	Adjusting Boxes	Each

Items (a) and (b) above refer to manholes, sumps and like structures designed to permit human entry and working space therein and to confine and control the flow of pipe-conveyed liquids; which structures are here collectively referred to as "manholes".

Item (a) above applies to manholes, regardless of the kind of materials of which they are composed and regardless of design, type or depth, which have had the tops thereof adjusted as specified; except as item (b) is applicable as hereinafter provided.

Item (b) above refers to monolithic concrete manholes which, in having their tops adjusted as specified, have necessarily had their entire existing domes destroyed and new domes constructed, or had their entire existing top slabs destroyed and new slabs constructed, or precast manholes which have necessarily had adjustments made below the top of the cone.

Item (c) above refers to inlets defined as structures designed to receive surface water through grates and orifices and to discharge said waters under control through pipes, and is applicable to such structures regardless of their designs, types or sizes.

Item (d) above refers to valve boxes, meter boxes, monument boxes and other like structures, which are comprised of a box-like body and removable cover provided for the protection of and access to meters, valves, markers, monuments, shutoffs, etc.

If a protective coating is required on the new metal used in the work, the pertinent Special Specifications will so indicate, and the coating shall be provided as an incidental item without separate or additional compensation.

Payment at the applicable contract price for the respective pay items will be full compensation, in each instance, for furnishing and placing all materials, performing all earthwork, including all labor, tools, equipment and incidentals necessary to complete the work described in this Section.

XV ASPHALT CONCRETE PAVEMENT

A. DESCRIPTION

This section covers the work necessary for the construction of hot mix asphalt concrete pavements upon existing pavements, prepared foundations or base surfaces, unless modified by the requirements of this section.

The Standard Specification shall be Section 00745 of the 1991 Edition Oregon State Highway Division, "Standard Specifications for Highway Construction," and are hereby referred to and by reference made a part of these contract documents.

1. ASPHALT CONCRETE

Asphalt concrete is defined as a mixture of asphalt cement; aggregate; mineral filler and additives as required; heated and plant mixed into a uniformly coated mass.

2. TACK COAT

A tack coat is a single light application of emulsified asphalt to an existing pavement prior to placing an overlying course of asphalt paving.

B. MATERIALS

1. GENERAL

Asphalt and aggregate will be subject to approval preceding mixing. Asphalt concrete will be subject to approval after blending and mixing, either at the plant or at the place of delivery prior to rolling. Final approval will be based on the specified product being placed and compacted as specified.

2. ASPHALT

Asphalt shall be aged residue grades 2000, 4000 or 8000 as specified by the Engineer, and with the Contractor's supply of asphalt cement on hand and shall conform to the specifications for asphalt materials as published by the Oregon Highway Division and available form the Engineer of Materials, Salem, Oregon 97310.

3. AGGREGATE

Aggregate shall conform to the requirements of the following specifications:

Sieve Analysis	AASHTO T27
Sand Equivalent	AASHTO T176
Abrasion	AASHTO T96
Soundness	AASHTO T104
Unit Weight	AASHTO T19
Specific Gravity	
Course Aggregate	AASHTO T85
Fine Aggregate	AASHTO T84

Degradation	OSHD Standard Text*

*Available from Engineer of Materials, Salem, Oregon 97310.

Aggregate passing the 1/4 inch sieve shall conform to the requirements of the following specifications:

Liquid Limit	AASHTO T89
Plastic Limit	AASHTO T90

Percent of Material Passing #40 Sieve	Liquid Limit Maximum	Plastic Limit Minimum
0 to 5.5	33	6
5.6 to 10.0	30	5
10.1 to 15.0	27	4
15.1 to 20.0	24	3
20.1 to 25.0	21	2
over 25	21	Non-plastic

Aggregate passing the 1/4 inch sieve shall have at least one mechanically fractured face on not less than 60 percent of the particles (by weight).

The sieve analysis of aggregate shall be as follows for each designated size (by weight).

Sieve Size Passing	Designated Size 3/4"-1/4"	1/2"-1/4"	3/8"-1/4"	1/4"-0
1"	100%			
3/4"	90-100%	100%		
1/2"	60-75%	85-100%	100%	
3/8"			85-100%	100%
1/4"	0-15%	0-15%	0-15%	0-15%

Of the fraction passing the 1/4 sieve, the following percentages thereof shall pass the No. 10 sieve:

Class of Asphalt Concrete	Percentage Passing
Class "B"	42.5 - 57.5
Class "C"	42.5 - 57.5
Class "D"	48.0 - 66.0
Class "E"	18.0 - 33.0

Where a tolerance range is set forth, it shall be understood that the midpoint of the tolerance range is the target value and the produce shall conform as closely as realistically possible to this target value. The purpose of the tolerance range is only to permit occasional minor variations from the target value that are, for practical reasons, unavoidable.

The respective sizes and gradings of the aggregate shall be such that when mixed, the respective resultant mixtures will be of the sizes and gradings specified in subsection 6.

4. MINERAL FILLER

Mineral filler shall conform to the requirements of AASHTO M17. Collector dust may be used as a mineral filler, in whole or in part, provided the dust or the resultant mineral filler mixture conforms to the above requirements.

5. ADDITIVES

Additives and admixtures may be used to prevent stripping or separation of bituminous coatings from aggregates, and to aid in the mixing or use of bituminous mixes or for experimental purposes. Admixtures and additives shall be standard recognized products of known value for the intended purpose and shall be approved by the Engineer on the basis of laboratory tests prior to their use in the work. They shall have no deleterious effect on the bituminous material and shall be completely miscible.

6. CLASSES OF CONCRETE AND PROPORTIONS OF MIXTURES

The class of asphalt concrete to be used shall be as shown and shall conform to the following requirements:

Sieve Size Passing	Class "B"	Class "C"	Class "D"	Class "E"
	Percentages of Total Aggregate (by weight)			
1"	100			
3/4"	95-100	100		
1/2"		95-100		100
3/8"			100	90-100
1/4"	52-72	65-85	85-100	51-71
No. 10	21-41	30-45	48-66	5-15
No. 40	8-24	8-26	20-35	
No. 200	3-7	3-7	4-8	2-6
Asphalt Cement	4-8*	4-8*	4-8*	4-9*

*The exact percentage used (mix formula) shall be as designated or approved by the Engineer. The mix formula shall conform within the following tolerances, but always within the range of proportions specified.

Constituent Mixture	Tolerance (Plus or Minus to Mix Formula)

Aggregate of designated sizes	4.0 percent
Aggregate, passing No. 200 sieve	2.0 percent
Asphalt	0.5 percent
Temperature of mixture	10 degree F

Should a change in source of material be made, or should conditions arise which the Engineer determines to justify a change, the Engineer may establish a new mix formula.

7. TACK COAT ASPHALT

Tack coat asphalt shall be one of another of the following asphalts as designated by the Engineer: RS-1, SS-1, SS1h, CRS-1, CSS-1, or CSS-1h.

C. CONSTRUCTION

1. PREPARATION OF FOUNDATION

All bases and foundations shall be constructed to the condition prescribed under the applicable specification. Depressed areas of existing pavements or bituminous surfaces shall receive a tack coat in conformance with the applicable requirements of subsection 4 then filled with asphalt cement and compacted to the prescribed density.

Broken or ragged edges of existing Portland cement concrete or bituminous surfaces underlying or abutting the new pavement shall be trimmed back to firm material. Contact surfaces of structures in the paving area shall be treated with an asphalt tack coat prior to placing the asphalt concrete.

2. RECONDITIONING OLD ROADBED

This work shall consist of the reconditioning of previously constructed roadbed subgrades, aggregate based, and pavement surfaces upon which material is to be placed, as stated in the contract.

Where unstable or unsuitable materials are encountered, they shall be removed and disposed of as directed by the Engineer and replaced with material as specified by the Engineer. The replacement materials shall be placed, compacted and finished in accordance with materials as specified by the Engineer. The replacement materials shall be placed, compacted and finished in accordance with requirements of the appropriate section of these specifications.

Removing, disposing of, and replacing unstable or unsuitable materials shall be extra work and payment will be in accordance with the General Conditions.

a. Subgrade

Existing roadbed subgrades shall be bladed, leveled, loosened, reshaped and otherwise brought in reasonably close conformity to the line, grade, slope and cross section establish by the Engineer. While the above work is underway, the materials shall be watered and rolled and the reconditioned and prepared subgrade shall be compacted to densities required for similar new work.

b. Aggregate Bases

Existing aggregate bases shall be bladed, scarified and shaped as the Engineer may determine to be necessary to bring the surface thereof in reasonably close conformity to lines, grades

and cross section established by the Engineer. The materials shall be watered and compacted as necessary to obtain densities required for similar new work.

c. Pavement Surfaces

Existing pavement surfaces shall be cleaned of all loose material, dirt and dust by brooming, by flushing with water of other approved methods.

3. TACK COAT

The surface upon which the tack coat is applied shall be dry and shall be made free of dirt, dust or other matter foreign to the surface or detrimental to the adherence of asphalt thereto.

Building paper shall be placed over the end of area previously placed spread and the adjoining application shall start on the paper, after which the paper shall be removed and disposed of.

Rates of application shall not vary from prescribed rates by more that 10 percent. Misses and thinness shall be corrected by approved means. The Contractor shall protect structures and vegetation from being spattered, stained or marred, and shall remove stains and remedy disfigurements.

Hand application or other approved means shall be used on areas inaccessible to the distributor.

Tack coat asphalt shall be applied to existing bituminous and Portland cement concrete surfaces prior to placing asphalt concrete. The application rate shall normally be within a range of 0.02 to 0.06 gallons per square yard of surface.

The temperature of the asphalt material at the time of application shall be within the limits for the type and grade being used as shown in the following table:

Type and Grade of Asphalt	Spraying Temperature Minimum	Maximum
RS-1	75	130
SS-1	75	130
SS-1h	75	130
CRS-1	125	185
CSS-1	70	140
CSS-1h	70	140

Asphalt shall not be applied to any wet surfaces or when the air temperature is less than 60 degrees F.

The asphalt shall be applied by pressure-spray equipment capable of providing a uniform application at the prescribed rate. It shall be applied only so far in advance of the asphalt concrete paving operations as is necessary in order to provide a tacky surface upon which to place the asphalt concrete.

4. ASPHALT CONCRETE

a. Placing

Asphalt concrete shall be a temperature of between 250 and 300 degrees F at the

time it is placed. It shall normally be placed on dry prepared surfaces and when the air temperature in the shade is 35 degrees F. or warmer. Placing during rain or other adverse weather conditions normally will not be permitted, except that material in transit at the time adverse conditions occur may be placed provided it is of proper temperature, has been covered during transit, and is placed on a foundation free from pools or flow of water.

Asphalt concrete shall be placed in panels of such width as to hold to a practical minimum the number of longitudinal joints required. The longitudinal joints in any panel shall offset those joints in underneath panels by not less than six inches. Special care shall be taken at longitudinal joints to provide the required bond and density.

The placing of asphalt concrete shall be a continuous operation as nearly as practicable. If the capacity of the paving machine exceeds the capacity of the hauling vehicles, the paving machine shall be operated at a reduced uniform speed so as to maintain a continuous operation.

b. Compaction

Unless otherwise specified, the degree of compaction shall be 90% as determined by ASSHTO T230. Rollers shall be capable of transmitting sufficient static or dynamic force necessary to compact the material to the specified degree of compaction.

Longitudinal joints shall be rolled directly behind the paving machine. The first panel shall have vertical edges, and the abutting panel shall be tightly crowded against its edge. Material form the second panel shall be pushed over the surface of the first panel so as to develop an overlap of from three to six inches.

Breakdown rolling shall immediately follow the rolling of the longitudinal joint and edges. Rollers shall be operated as close to the paving machine as necessary to obtain adequate density without causing undue displacement. The breakdown roller shall be operated with the drive roll or wheels nearest the paving machine. Exceptions may be made when working on steep slopes or superelevated curves.

Breakdown rolling and the rolling of longitudinal joints shall be performed with steel wheeled rollers. Unless otherwise specified, tandem and three wheel steel wheeled rollers will be acceptable. When both three wheel and tandem rollers are operating, the three wheel rollers shall provide the initial breakdown rolling followed by the tandem rollers.

Pneumatic-tired rolling will be allowed after breakdown rolling has occurred. This rolling shall follow the breakdown rolling as closely as possible and while the material is at a temperature that will result in the specified degree of compaction being achieved.

Roller wheels shall be kept moist with only enough water to avoid picking up the material. Rollers shall move at a uniform speed not to exceed 3 mph for steel wheeled rollers or 5 mph for pneumatic tired rollers. Rollers shall be in good condition and capable of being reversed without backlash. The line of rolling shall not be suddenly changed nor the direction of rolling suddenly reversed. Any pronounced change in the direction of the roller shall be made on stable material. If rolling causes displacement of the material, the affected areas shall be loosened and restored to the original grade with loose material before being rerolled. Heavy equipment, including rollers, shall not be permitted to stand on the finished surface before it has thoroughly cooled or set.

The finished surface shall be true to line and grade, free of irregularities and roller wheel tracks.

c. Placement Thickness

The number of lifts required for the total design compacted thickness is as follows:

Thickness	Lifts Required
2-1/2" or less	1
Greater than 2-1/2" up to 6"	2
Greater than 6"	As shown on plans or proposal

The maximum compacted thickness for any one lift is three (3) inches.

d. Surface Tolerances

The top surface of each lift shall closely parallel that specified for the top of the finished pavement. The test for trueness to specified grade will be with a 10-foot straightedge. The variation of the surface from the testing edge of the straightedge between any tow contact points with the surface shall at no point exceed 0.02 foot on an underlying course of pavement and 0.015 foot on the finished surface.

D. MEASUREMENT

1. TACK COAT ASPHALT

Unless otherwise specified, tack coat asphalt will be considered incidental work for which no separate payment will be made.

2. ASPHALT CONCRETE PAVEMENT

a. Tonnage Basis

When so listed as a bid item in the Proposal, measurement for asphalt concrete pavement will be made on ton basis for the class of asphalt concrete specified as weighed on approved and tested scales. Weigh scales are to be furnished by the Contractor. The determination of the weights and the weight of the loaded vehicles will be to the nearest 10 pounds. Tare weights shall be determined by weighing empty vehicles at intervals of such frequency as the Engineer deems necessary to insure the accuracy of pay load weights. Appropriate serially numbered weigh tickets shall be furnished by the Contractor from self-printing types of scales. The weigh tickets shall include: information to identify the project, kind of material, source of materials, date, time of day, gross and tare weight, haul vehicle identification, name of driver and name of weigh person.

b. Square Yard Basis

When so listed as a bid item in the Proposal, asphalt concrete pavement will be measured by the square yard, based on a specified compacted thickness, complete and in place.

E. PAYMENT

When listed in the Bid Proposal the following will be considered items for payment:

Pay Item	Unit
Asphalt Concrete Pavement	Ton

Asphalt Concrete Pavement (Thickness specified)	Sq. Yd.

XVI. CLEANUP

A. DESCRIPTION

This section covers the work necessary to clean up and remove all refuse and unused materials of any kind resulting from the work.

B. MATERIALS

Provide all materials required to accomplish the work as specified.

C. CONSTRUCTION

Perform all necessary work as described herein.

1. SURFACE DRESSING

Areas of earth adjacent to curbs, sidewalks, and new construction shall be filled or excavated as required to match the new grade and cross section with allowance for final settlement.

All areas disturbed by construction activity, new slopes, fill areas, sidewalk areas, park strips and planting areas shall be smoothed and dressed to a uniform grade and cross section. Place topsoil, hand rake and finish the surface areas to be free of stones, sticks, mortar, brick, concrete, rubble or any material detrimental to plant growth. The finished surface shall be free of holes, rough spots or irregularities and ready for seeding.

2. DISPOSAL OF WASTE MATERIAL

Remove all excess excavated or construction material and trash of all kinds resulting from the work and dispose of off the site as approved. Where brush and trees beyond the limits of the project have been disturbed, remove and dispose of or restore same as directed at no expense to the owner.

3. CLEANING DRAINS

Clean all drainage facilities such as inlets, catch basins, culverts and open ditches of all excess material or debris which is the result of the work.

4. CLEANING PAVED SURFACES AND APPURTENANCES

Clean all pavement surfaces within the limits of the project as directed. Clean existing improvements such as curbs, combination curbs and gutters, walls, sidewalks, manhole covers, monuments, poles, vaults, signs and other items as directed.

5. RESTORING PLANTED AREAS

Hand rake and drag all former grassed and/or planted areas leaving disturbed areas free from rocks, gravel, clay or any other foreign material, and ready in all respects for seeding.

The finished surface shall conform to the original surface, be free-draining and free from holes, rough spots, or other surface features detrimental to a seeded area.

6. RESTORING MOBILIZATION, BORROW AND DISPOSAL AREAS

Dispose of all uprooted stumps, felled trees, brush, excess excavation, rock, discarded materials, rubbish and debris. Remove all equipment, tools and supplies and restore the areas to a neat and orderly condition.

7. REMOVAL OF SIGNS

Do not remove warning, regulatory, guide or project signs prior to formal acceptance, except as directed.

8. PROPERTY OWNERS RELEASE

The Contractor shall, prior to formal acceptance, furnish the Engineer with written releases from property owners stating that all work areas situated on their property has been cleaned up and restored in accordance with these specifications.

D. MEASUREMENT AND PAYMENT

All cleanup will be considered incidental work for which no separate payment will be made.

XVII. EARTHWORK FOR STRUCTURES

A. DESCRIPTION

This section covers the work necessary for the earthwork, complete.

B. MATERIALS

1. SUBSURFACE AND SITE INFORMATION

The submission of a Proposal shall be conclusive evidence that the Bidder has investigated the site and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the Contract Documents.

2. EXCAVATION

Excavation is unclassified. Complete all excavation regardless of the type, nature, or condition of the materials encountered. The Contractor shall make his own estimate of the kind and extent of the various materials to be excavated in order to accomplish the work.

3. EARTH BACKFILL

Excavated material free from roots, debris, rocks larger than 3 inches, and other deleterious materials.

4. GRANULAR BACKFILL UNDER FACILITIES

One-inch-minus crushed gravel or crushed rock, free from dirt, clay balls, and organic material, well graded from coarse to fine, containing sufficient fines for proper compaction and less than 8 percent by weight passing the No. 200 sieve.

5. COMPACTION EQUIPMENT

Compaction equipment shall be of suitable type and adequate to obtain the densities specified and approved. Compaction equipment shall be operated in strict accordance with the manufacturer's instructions and recommendations. Equipment shall be maintained in such condition that it will deliver with manufacturer's rated compactive effort.

C. WORKMANSHIP

1. CLEARING AND GRUBBING

Clear the site within the limits shown. Remove the existing trees, brush, stumps, and waste material on the site within these limits. Grub out stumps and roots. Prevent damage to adjacent trees which are to remain. Dispose of waste materials and nonburnable debris by removal from the site. After completion of clearing and grubbing, get Engineer's approval before commencing excavation.

2. REMOVAL OF TOPSOIL

Prior to beginning any excavation or fill, remove the topsoil to a depth of 6 inches and stockpile for future use. In general, topsoil shall be removed where structures are to be built, trenches dug, and roads constructed within the areas presently covered with topsoil. Topsoil shall be stored clear of the construction area. Take reasonable care to prevent the topsoil from becoming mixed with subsoil.

3. EXCAVATION

Excavation is unclassified. Excavate for structures to the lines and grades shown or as required to accomplish the construction. Perform all excavation regardless of the type, nature, or condition of the material encountered. The method of excavation used is optional; however, no equipment shall be operated within 5 feet of existing structures or newly completed construction, except as approved. Excavation that cannot be accomplished without endangering the present or new structures shall be done with hand tools.

4. LIMITS OF EXCAVATION

Excavate to the depths and widths, as shown. Allow for forms, working space, gravel base, and finish topsoil where required. Do not carry excavation for footings and slabs deeper than the elevation shown. Excavation carried below the grade lines shown or established by the Engineer shall be replaced with approved compacted granular material. Excavations under footings shall be filled with concrete of equal strength to that of the footing. Cuts below grade shall be corrected by similarly cutting adjoining areas and creating a smooth transition. The Contractor shall bear all costs for correcting overexcavated areas.

5. REMOVAL OF WATER

Provide and operate equipment adequate to keep all excavations and trenches free of water. Remove all water during period when concrete is being deposited, when pipe is being laid, during the placing of backfill unless water settling is required, and at such other times as required for efficient and safe execution of the work. Avoid settlement or damage to adjacent property. Dispose of water in a manner that will not damage adjacent property, as approved. When dewatering open excavations, dewater from outside the structural limits and from a point below the bottom of the excavation when possible.

6. UNSUITABLE FOUNDATION MATERIAL

If, in the opinion of the Engineer, the material at the required footing depth is unsuitable for supporting the structure, the Contractor shall excavate the unsuitable material and backfill to the required grade with granular backfill material compacted as specified.

7. COMPACTION EQUIPMENT

Compaction equipment shall be of suitable type and adequate to obtain the densities specified and approved. Compaction equipment shall be operated in strict accordance with the manufacturer's instructions and recommendations. Equipment shall be maintained in such condition that it will deliver the manufacturer's rated compactive effort.

8. BACKFILL

a. Preparations for Placing Backfill

Backfill around concrete structures only after the concrete has attained 2/3 of the specified compressive strength. Remove all form materials and trash from the excavation before placing any backfill. Obtain the Engineer's approval of concrete work and attained strength prior to backfilling.

b. Imported Granular Backfill Under Facilities

Place imported gravel backfill in previously excavated areas under piping, slabs, walks, curbs, structures, facilities, and other areas as shown. Do not exceed loose lifts of 6 inches. Compact each lift to 80 percent relative density as determined by ASTM D 2049. Stop imported gravel backfill 6 inches below finished grade in all areas where topsoil is to be replaced. Moisten material as required to aid compaction. Place material in a manner which avoids segregation.

Any subsequent damage to slabs, piping, concrete structures, facilities, or other structures caused by settlement of fill material shall be corrected and repaired by the Contractor at no cost to the Owner.

9. MOISTURE CONTROL

During the compacting operations, maintain optimum practicable moisture content required for compaction purposes in each lift of the earth fill. Maintain moisture content uniform throughout the lift. Insofar as practicable, add water to the material at the site of excavation. Supplement, if required, by sprinkling the earth fill. At the time of compaction, the water content of the material shall be at optimum water content plus or minus 2 percentage points.

Do not compact embankment material which contains excessive moisture to obtain the required compaction. Aerate material by blading, discing, harrowing, or as approved, to hasten the drying process.

10. EARTH BACKFILL AROUND STRUCTURES

Place earth backfill in all areas not designated to be granular backfill. Deposit material from the excavation in lifts of maximum 6-inch depth and compact each lift to 95 percent of maximum density at optimum moisture content as determined by ASSHTO T 99, Method A. Maintain material at optimum moisture content for compaction. Place backfill material free of roots, organic matter, trash, and rocks larger than 4-inch diameter. Stop backfill at specified grade to allow for placing of topsoil when required.

11. COMPACTION TESTS

The Engineer will determine in-place density and moisture content by any one or combination of the following methods: AASTO T191, 204, 205, 214 or 238. The Contractor will cooperate with this testing work by leveling small test areas as designated by the Engineer.

12. DISPOSAL OF EXCESS EXCAVATION

Dispose of all excess excavated materials, not required for backfill or fills, outside of the area of work. Contractor shall make his own arrangements for the disposal of the excavated material and bear all costs or retain any profit incidental to such disposal.

13. SETTLEMENT

Any settlement in backfill, fill, or in structures built over the backfill or fill, which may occur within the 1-year guarantee period in the General Conditions will be considered to be caused by improper compaction methods and shall be corrected at no cost to the Owner.

D. PAYMENT

All earthwork for structures will be considered incidental work for which no separate payment will be made.

XVIII. CONCRETE

A. DESCRIPTION

This section covers the work necessary for the cast-in-place concrete, complete, including form work. See other sections for reinforcing steel and construction joints.

B. MATERIALS

1. CEMENT

a. General

Conform to ASTM C 150, including the maximum percent alkalies of 0.60 percent as prescribed in Table 1A, Cement shall be Type II.

2. WATER

Clean and free from oil, acid, alkali, organic matter, or other deleterious substances.

3. CONCRETE AGGREGATES

a. General

Natural aggregates, free from deleterious coatings, conforming to ASTM C 33, except as modified herein. Aggregates shall not be potentially reactive as defined in Appendix XI of ASTM C 33. Aggregates shall be thoroughly and uniformly washed before use.

b. Fine Aggregates

Section 4.2 of ASTM C 33 shall not apply. Materials finer than the 200 sieve shall not exceed 4 percent.

c. Coarse Aggregate

Use only natural gravels or a combination of gravels and crushed gravels containing no more than 15 percent flat or elongated particles (long dimension more than five times the short dimension). Materials finer than the 200 sieve shall not exceed 0.5 percent.

d. Mix Design

Contractor shall submit concrete mix design as herein specified.

4. GROUTS

a. Nonshrink Grout

Nonshrink grout for general use where required and for special uses as hereinafter specified shall conform to the Corps of Engineers Specification for Nonshrink Grout, CRD-C588-76 and to these Specifications.

Grout shall be a nonmetallic unless specified for special use hereinafter. The grout shall be a nongas-liberating type, cement base product, premixed product requiring only the addition of water for the required consistency.

b. Ordinary Type Grout (Dry Pack)

One part Portland cement to 2 parts fine sand. Add sufficient water to form a damp formable consistency.

5. CURING COMPOUND

Curing compound, conforming to the requirements of ASTM C 309 with the additional requirement that permeability not exceed .039 gm/cm2/72 hours. Masterseal, manufactured by Master Builders, Cleveland, OH; Euco Floor Coat, manufactured by Euclid Chemical Co., Cleveland, OH; or equal. Curing compounds shall be compatible with required finishes and/or coatings. Tests for compliance shall be made by manufacturer with certification furnished by the Contractor. Manufacturer's certification shall state quantity or coverage required to meet or exceed tests and method of application. The manufacturer shall submit certification that the product meets ASTM C 309 and the additional permeability requirement and shall specifically state the coverage required to meet these requirements.

6. CONCRETE ADMIXTURES

a. Air-Entraining Admixture

Provide air-entraining admixture in all concrete. Admixture shall conform to ASTM C 260, except it shall be nontoxic after 30 days and shall contain no chlorides. Furnish manufacturer's compliance statement for these requirements.

b. Water-Reducing Admixture

All concrete shall contain a water-reducing admixture. The admixture shall conform to ASTM C 494, Type A, except it shall contain no chlorides, shall be nontoxic after 30 days, and shall be compatible with the air-entraining admixtures. The amount of the admixture added to the concrete shall be in accordance with the manufacturer's recommendations. Furnish a compliance statement that the admixture used satisfies all requirements of this specification.

7. FORM MATERIAL

Plywood, hard plastic finished plywood, overlaid waterproof particle board, and steel of sufficient strength and surface smoothness to produce the specified finish shall be used.

All joints, gaps, and apertures in forms shall be taped, gasketed, plugged, and/or caulked with an approved material so that the joint will remain watertight and withstand placing pressures without bulging outward or creating surface patterns.

C. CONSTRUCTION

1. PROPORTIONS

The concrete shall be proportioned in accordance with ACI Standard 211 subject to the following specifications.

Design the mix to meet the following requirements:

a. Design strength shall be 3000 psi at 28 days unless otherwise shown on the plans or specified herein.

b. Maximum water-cement ratio = .50 by weight, unless otherwise approved in writing by the Engineer.

c. Minimum cement content required for performance and longevity, regardless of design strength, shall be 517 pounds per cubic yard for concrete with 1-1/2-inch maximum size aggregate and 564 pounds per cubic yard for 3/4-inch maximum size aggregate. The Contractor shall increase cement content as required to meet strength requirements.

d. Air content (ASTM C 231); range 4 to 6 percent.

e. Slump Range:

Slab on Grade or Heavy Sections Wider (in Plan View) than 3 feet	1 - 3 inches
Footings, Walls, Suspended Slabs, and Beams	2 - 4 inches

Verify that design mix test results reflect the slumps to be used.

f. Weight of fine aggregate shall be in the range of 35 to 45 percent of total weight of aggregates for concrete with 1 1/2 inch maximum size aggregate, and 40 to 48 percent for 3/4 inch maximum size aggregate.

g. Use a water-reducing agent in all concrete.

h. All lab-cured trial mix cylinders shall be designed to break at or above a strength equal to 120 percent of the design strengths shown or specified.

i. As an alternate to designing the concrete mixes for 118 percent of the design strength as specified above, the Contractor may design the concrete mixes in accordance with Table 1 of ASTM C 94 if the following requirements are met:

1) Provide sufficient current statistical data for each mix design to be used to substantiate a coefficient of variation in which case a trial mix design for that particular mix will not be required. If a coefficient is not established, use the mix design method above.

2) Use the average strength requirement for limiting probability of tests falling below the specified strengths, f'c, to one out of every 10 tests.

2. MIX DESIGN

Contractor shall submit concrete mix design as herein specified.

3. CERTIFICATION

Furnish to the Engineer with each batch of concrete before unloading åt the site, a delivery ticket with the information stated in section 15.1 to 15.1.10 of ASTM C 94. In addition to this information, indicate also the type and brand and amount of cement, total water content, maximum size aggregate, and weights of fine and coarse aggregate.

4. MEASUREMENT OF MATERIALS AND MIXING

Conform to ACI Standard 304 and to other requirements hereinbefore specified for mix design, testing, and quality control.

5. TIME OF HAULING READY-MIXED CONCRETE

Concrete shall be discharged at the job within 1-1/2 hours after the cement has been added to the water or the aggregates, except for high-early-strength concrete mixes which shall be 45 minutes.

6. RETEMPERING

The retempering of concrete or mortar in which the cement has partially hydrated will not be permitted.

7. FORMS

a. Form Tolerances

Forms shall be surfaced, designed, and constructed to meet ACI 347 and the following minimum requirements for the specified finishes. Failure of the forms to produce the specified requirements will be grounds for rejection of the concrete work. Rejected work shall be repaired or replaced by the Contractor at no additional cost to the Owner. All repair or replacement shall be subject to these Specifications and the approval of the Engineer.

8. FORM SURFACE PREPARATION

a. General

All form surfaces in contact with the concrete shall be thoroughly cleaned of all previous concrete, dirt, and other surface contaminants prior to preparing by the applicable method below.

b. Exposed Wood Forms

All wood surfaces in contact with the concrete shall be coated with an effective release agent prior to form installation. The release agent shall be nonstaining and nontoxic after 30 days.

c. Steel Forms

Mill scale and other ferrous deposits shall be sandblasted or otherwise removed from the contact surface for all forms, except those utilized for surfaces receiving a rough finish. All forms shall have the contact surfaces coated with a release agent. The release agent shall be effective in preventing discoloration of the concrete from rust, and shall be nontoxic after 30 days.

9. BEVELED EDGES

Form 3/4 inch bevels at all concrete edges, except those on top of walls and slabs. Where beveled edges on existing adjacent structures are other than 3/4 inch, obtain Engineer's approval of size prior to placement of bevel form strip. Round edges at top of walls and slabs as hereinafter specified.

10. REMOVAL OF FORMS

The Contractor shall be responsible for all damage resulting from removal of forms. Forms and shoring for structural slabs or beams shall remain in place in accordance with ACI 347-63 and until the concrete has reached a compressive strength equal to the specified 28-day compressive strength as determined by test cylinders.

11. PLACING CONCRETE

a. General

Before depositing concrete, remove debris from the space to be occupied by the concrete. Dampen gravel fill under slabs on ground, and sand where vapor barrier is specified, and all wood forms prior to placement of concrete. Reinforcement shall be secured in position and acceptable to the Engineer before concrete is placed. Conform to ACI Standard 304 and to other requirements needed to obtain the finishes specified.

b. Removal of Water

Remove all water from the space to be occupied by the concrete.

12. CONSOLIDATION

Concrete shall be consolidated with internal vibrators having a frequency of at least 7000 rpm, unless otherwise approved by the Engineer. At least one standby vibrator in operable condition shall be at the placement site prior to placing the concrete. Consolidation equipment and methods shall conform to ACI Standard 309.

13. SEQUENCE OF PLACING CONCRETE WALL AND SLAB PANELS

Alternate placement, regardless whether slab, or wall areas, to allow for shrinkage. Prepare a schedule for the sequence of Placing Concrete and obtain the approval of the Engineer. Where construction joints are required or shown, place panels alternately allowing a minimum of 7 days' curing time prior to placing adjacent panels. Refer to notes on the plans for specific project requirements.

14. PLACING CONCRETE IN HOT WEATHER

Prepare concrete aggregates, mixing water, and other ingredients, place concrete, cure, and protect in accordance with the requirements of ACI Standard 305. Provide special admixtures and special curing methods required by other sections in this Concrete Specification even though not required by ACI 305. Water-reducing and/or set retarding admixtures shall be used in such quantities as especially recommended by the manufacturer to assure that the concrete workable and lift lines will not be visible in architectural concrete finishes.

15. PLACING CONCRETE IN COLD WEATHER

Place and protect in accordance with the requirements of ACI Standard 306-66. No concrete shall be placed against frozen earth or ice or against forms with frost or ice present. Do not place concrete when the ambient temperature is below 40 degrees F or approaching 40 degrees F and falling without special protection as approved by the Engineer. Any concrete damaged by freezing shall be removed and replaced at no additional cost to the Owner.

16. BONDING TO NEW CONCRETE HORIZONTAL CONSTRUCTION JOINTS

Roughen the surface of the hardened concrete. Thoroughly clean and saturate with water, cover the horizontal surfaces only with at least 2 inches of grout, as hereinbefore specified, and immediately place concrete. New concrete is defined as less than 60 days old.

D. CONSTRUCTION JOINTS

1. DESCRIPTION

This section covers the work necessary for the expansion and construction joints, complete.

2. MATERIALS

a. Premolder Joint Filler - Bituminous Type

Bituminous type conforming to ASTM D 994 or D 1751, unless otherwise shown or specified.

3. CONSTRUCTION

a. Joint Preparation

1) General

The joints shall be accurately located and constructed to produce straight joints.

The concrete pour shall not commence until after the joint preparation has been inspected and approved by the Engineer.

2) Construction Joints

Prior to placing the abutting concrete, the contact surface shall be cleaned by sandblasting or other approved means to remove all laitance and expose the aggregate. The exposed portion of the reinforcing steel shall be cleaned of all concrete.

3) Location

Joints as shown on the Plans, or as approved.

b. Expansion Joints

1) General

Concrete shall be thoroughly vibrated along the joint form to produce a dense, smooth surface. Surface irregularities along the joint sealant cavity due to improper concrete consolidation or faulty form removal shall be repaired with an approved compound compatible with the joint sealant in a manner that is satisfactory to the sealant manufacturer.

2) Installation of Bituminous Type Premolded Joint Filler

Drive nails at about 1 foot on centers through the filler to provide anchors into the concrete when it is placed. Place premolded joint filler in the forms in the proper position before concrete is poured. Install premolded joint filler in all walks to provide expansion and contraction joints at not more than 25-foot intervals and at all changes in direction at intersections and at each side of driveway entrances.

3) Tests of Concrete

The Owner's representative will make or have tests made to determine compliance with the Specifications. The Contractor shall cooperate in the making of such tests. Specimens will be made and cured in accordance with ASTM C 31 and ASTM C 39. The minimum number of tests will be made as called for in ASTM C 94. Additional tests may be made as determined by the Engineer.

During the progress of the work, if the laboratory-cured values shown for each concrete design strength and quality as determined by compression cylinders and tests fail to attain the requirements specified, suspend all concrete work until new mixes are designed and reviewed as outlined. Concrete that has been placed in the work and does not meet the specified requirements will be reviewed by the Engineer and the Contractor. Any field testing such as core drilling, required to verify in-place concrete strengths after compression tests fail to meet requirements, shall be at the Contractor's expense. The Contractor shall, at his own expense, correct or remove the defective work in a manner approved by the Engineer.

c. Patching

1) Defective Areas

Remove all defective concrete down to sound concrete if chipping is required; the edges shall be perpendicular to the surface. Feather edges shall not be permitted. The defective area shall be filled with a nonshrink, nonmetallic grout with the use of a bonding agent. The Contractor shall consult with representatives of the bonding agent manufacturer and the nonshrink grout manufacturer and obtain a written recommendation for the patching of defective areas. Submit this information for review prior to performing the work.

SCHEDULE OF CONCRETE FINISHES

Area	Type of Finish
Exterior Slabs	Broomed
Interior Slabs	Monolithic

d. Concrete Slab Finishes

The excessive use of "jitterbugs" or other special tools designed for the purpose of forcing the coarse aggregate away from the surface will not be permitted on any slab finish. The dusting of surfaces with dry materials will not be permitted. Slabs and floors shall be thoroughly compacted by vibration. All edges of slabs and tops of walls shall be rounded off with a steel edging tool, except where a cove finish is indicated on the plans. Steel edging tool radius shall be 1/4 inch for all slabs subject to wheeled traffic.

1) Monolithic Finish

Finish by screeding and floating with straight edges to bring the surfaces to the required finish elevation shown on the plans. While the concrete is still green, but sufficiently hardened to bear a man's weight without deep imprint, it shall be wood floated to a true, even plane with no coarse aggregate visible. Sufficient pressure shall be used on the wood floats to bring moisture to the surface. After surface moisture has disappeared, the concrete shall be hand troweled to produce a smooth, impervious surface, free from trowel marks. An additional troweling shall be given the surface for the purpose of burnishing. The final troweling shall produce a ringing sound from the trowel. Dry cement or additional water shall not be used in troweling, nor will excessive troweling be permitted.

Apply approved propriety clear hardener in conformance with the manufacturer's printed instructions and as hereinafter specified.

2) Broomed Finish

Finish concrete as specified for monolithic floor finish above, except the final troweling shall be omitted and the surface shall be finished by a drawing a fine-hair broom lightly across the surface. All brooming shall be in the same direction and parallel to expansion joints, or, in the case of inclined slabs, perpendicular to the slope.

3) Power Machine Finish

In lieu of hand finishing, the Contractor may use an approved power machine for finishing concrete floors and slabs in accordance with the directions of the machine manufacturer and as approved by the Engineer.

e. Curing of Concrete

Cure Concrete by keeping the surface continuously wet for 7 days where normal Portland cement is used, or 3 days where high-early strength Type III cement is used. Subject to approval by the Engineer, one of the following methods shall be followed:

1) Slabs

a) Protect surface by ponding; or

b) Cover with burlap or cotton mats kept continuously wet; or

c) Cover with 1-inch layer of wet sand, earth, or sawdust, and keep continuously wet; or

d) Continuously sprinkle the exposed surface; or

e) Spray surface with curing compound and when hard enough to sustain foot traffic on same day as pour, lay sprinkler hoses and cover with Visqueen sheets. Keep enough water from sprinkler hoses to keep surface of slab under Visqueen wet for full cure period; or

f) Other agreed upon method that will provide that moisture is present and uniform at all times on the entire surface of the slab.

E. PAYMENT

Payment for the work in this section will be considered incidental and shall be included as part of lump sum bids under appropriate items.

XX. REINFORCING STEEL

A. DESCRIPTION

This section covers the work necessary for the reinforcing steel and welded wire fabric, complete.

B. MATERIALS

1. STEEL REINFORCEMENT

Deformed billet-steel bars conforming to ASTM A 615, rail-steel deformed bars conforming to ASTM A 616, or axle-steel deformed bars conforming to ASTM A 617, **Grade 60** unless otherwise shown on Plans.

2. FABRIC REINFORCEMENT

Conform to ASTM A 82 and A 185.

3. ACCESSORIES

Tie wire shall be 16-gauge, black, soft-annealed wire. Bar supports shall be of proper type for intended use. Bar support in beams and slabs exposed to view after stripping shall be galvanized or plastic coated. Use concrete supports for reinforcing in concrete placed on grade.

C. WORKMANSHIP

1. FABRICATION

In accordance with the current edition of the Manual of Standard Practice for Reinforced Concrete Construction, published by the Western Concrete Reinforcing Steel Institute. All bars shall be bent cold.

2. DELIVERY AND STORAGE

Deliver steel with suitable hauling and handling equipment. Tag steel for easy identification. Store to prevent contact with the ground.

3. PLACING REINFORCING STEEL

a. Cleaning

Clean metal reinforcement of any loose mill scale, oil, earth, and other contaminants.

b. Straightening and Rebending

Do not straighten or rebend metal reinforcement.

c. Protection, Spacing and Positioning

Conform to the current edition of the ACI Standard Building Code Requirements for Reinforced Concrete (ACI 318), and design drawings.

d. Location Tolerances

Conform to the current edition of Recommended Practice for Placing Reinforcing Bars published by Concrete Reinforcing Steel Institute.

e. Splicing

Conform to the plans and current edition of ACI Code 318. Splices in adjacent bars shall be staggered.

f. Tying Reinforcing Bars

Conform with CRSI Recommended Practice for Placing Reinforcing Bar (current edition).

g. Reinforcement Around Openings

Place an equivalent area of steel around the pipe or opening and extend on each side sufficiently to develop bond in each bar.

4. PLACING WIRE MESH

Extend fabric to within 2 inches of the edges of the slab, and lap splices at least 1-1/2 courses of the fabric and a minimum of 6 inches. Tie laps and splices securely at ends and at least every 24 inches with 16-gauge black annealed steel wire. Pull the fabric into position as the concrete is placed by means of hooks, and work concrete under the steel to insure that it is placed at the proper distance above the bottom of the slab.

5. FIELD BENDING

Field bending of reinforcing steel bars is not permitted when rebending will later be required to straighten bars.

D. PAYMENT

Payment for the work in this section will be included as part of the lump sum bid.

XXIII. ASPHALT TACK COAT

A. DESCRIPTION

1. SCOPE

This work shall consist of the furnishing of asphalt and the application thereof to a prepared asphalt concrete of portland cement concrete surface to insure thorough bond between courses. The tack coat shall be applied on the areas designated by the Engineer in accordance with these specifications.

B. MATERIALS

1. ASPHALT

The asphalt to be used in the tack coat shall be CRS-1, CSS-1 or CSS-1h cationic emulsified asphalt unless the Special Specifications require a viscosity or penetration graded asphalt. The asphalt to be used shall be the kind and type determined by the Engineer to be the proper asphalt for the conditions under which the work is being performed. The asphalt shall conform to the requirements given in Section 702 of the Standard Specifications for Highway Construction of the Oregon State Highway Division, 1984. The materials may be conditionally accepted at the source or point of loading for transport to the project.

C. CONSTRUCTION

1. GENERAL

Furnishing and applying of asphalt shall be in conformance to the requirements of subsection 406.35 of the Standard Specification for Highway Construction of the Oregon State Highway Division, 1984. The surface upon which the tack coat is applied shall be dry and shall be made free of dirt, dust or other matter foreign to the surface or detrimental to the adherence of asphalt thereto.

2. APPLICATION METHOD AND RATES

The asphalt shall be spread by means of a pressure distributor conforming to the requirements of subsection 406.32 of the Standard Specifications for Highway Construction of the Oregon State Highway Division, 1984, unless otherwise permitted. Viscosity or penetration graded asphalt shall be heated and applied at normal application temperature. Normally, the asphalt shall be applied to the prepared surface at a rate within the following ranges, the actual rate to be as directed by the Engineer:

	Gallons Per Square Yard of Surface
Emulsified Asphalt	0.06-0.10
Viscosity or Penetration Graded Asphalt	0.03-0.10

The tack coat shall not be applied during wet or cold weather or during darkness and shall be constructed only as far in advance as is appropriate to insure a tacky, sticky condition of the asphalt at the time of placing a course thereon. The tack coat shall be applied in such manner to offer the least interference to traffic and to permit one-way traffic without pickup or tracking of the asphalt. Traffic shall not be routed over areas where tack coat has been applied except when unavoidable.

D. MEASUREMENT AND PAYMENT

1. GENERAL

Asphalt used as directed in the asphalt tack coat will not be measured for payment as it will be considered an incidental item for which no separate payment will be made.

XXVI. PRESERVATIVE TREATMENT FOR TIMBER

A. DESCRIPTION

1. SCOPE

This work shall consist of applying preservative treatment by pressure process to lumber, timber, timber piling, guard rail posts, sign posts, fence posts or other items required by the plans or Special Specifications.

B. MATERIALS

1. PRESERVATIVES

Unless specified otherwise, the type of preservatives to be used shall meet the following requirements:

Creosote
Creosote-Petroleum Solution
Ammoniacal Copper Arsenate (ACA)
Chromated Copper Arsenate (CCA), Type A, Type B and Type C
Chromated Zinc Chloride (CZC)
Copperized Chromated Zinc Arsenate (CuCZA)
Fluor Chrome Arsenate Phenol (FCAP), Type A and Type B
Pentachlorophenol
Pentachlorophenol - heavy petroleum solvent solution
Pentachlorophenol - mineral spirits solvent solution
Pentachlorophenol - volatile petroleum solvent (LPG) solution

All preservatives and solvents shall conform to the pertinent portions of AASHTO M 133. The auxiliary solvent used shall conform to paragraph No. 3 of AWPA P9 and shall be the kind recommended for use in Federal Specification TT-W-572.

C. CONSTRUCTION

1. GENERAL

All pressure treatment shall be in conformance with AASHTO M 133.

2. PILING

Piling shall be creosote or creosote solution treated in conformance with AWPA Standards C1 and C3 except that marine piling, as identified in the Special Specifications, shall be treated in conformance with the American Wood Preservers Bureau Standard MP-2.

3. LUMBER AND TIMBER

Lumber and timber shall be treated in conformance with AWPA Standards C1 and C2 except timber in marine exposure shall be given a creosote, creosote-coal tar or creosote petroleum treatment in conformance with C1 and C18. All Douglas fir lumber whose least dimension is 2 inches or over shall be incised in a suitable power-driven machine before treatment. Lumber having a thickness of 3 inches and over shall be incised on all four sides. Lumber less than 3 inches thick shall be incised on the wide faces only, except where otherwise indicated on the plans. The spacing and shape of the cutting teeth and the method of incising shall be such as to produce a uniform penetration. The depth of the incisions shall be not less than the following:

Size (inches)	Minimum Depth of Incision
2 x 12	3/8"
3 x 12	7/16"
4 x 12	1/2"
8 x 10	9/16"
10 x 12	5/8"
12 x 12	3/4"

Intermediate sizes in proportion.

4. GUARD RAIL AND MEDIAN BARRIER POSTS

Except for penetration requirements, wood guardrail and median barrier posts shall be pressure treated in accordance with AWPA Standards C1 and C2 using one of the following kinds of preservatives. All posts shall be incised on all faces a minimum depth of 3/4 inch. White fir shall be treated in accordance with AWPA Standards for Pacific Coast Douglas fir. The minimum penetration shall be not less than 3/4 inch and 90% of sapwood. The minimum net retentions of preservatives by assay shall be as follows:

Preservatives	Minimum Retention (pounds/cu.ft.)
Creosote	10.0
Creosote - Petroleum	10.0

Pentachlorophenol		0.50
Chromated copper arsenate, CCA		
Type A, B or C	0.40	

5. GUARD RAIL BLOCKS

Guardrail blocks shall be treated in conformance with subsection 521.34, except that the incising will not be required and the minimum retention of preservative, determined by assay, shall be 6 lbs. per cu. ft. of wood for creosote or creosote-petroleum solution, 0.30 lb. per cu. ft. for pentachlorophenol dry salt and 0.20 lb. per cu. ft. for chromated copper arsenate, CCA, Types A, B or C. The preservative shall penetrate not less than 90% of sapwood, and shall penetrate not less than two inches longitudinally from block ends and bolt holes.

6. SIGN POSTS

Douglas fir and Hem-fir posts shall be pressure treated after fabrication in accordance with AWPA Standards C-1 and C-2 pertinent to the kind of preservative used. The minimum net retentions and minimum penetration of preservatives shall be as follows:

Preservative	Minimum Retention (pounds)	Minimum Penetration (inches)
Ammoniacal copper arsenate, ACA	0.40	3/8
Chromated copper arsenate, CCA, Types A, B or C	0.40	3/8
Pentachlorophenol - volatile petroleum solvent (LPG) solution	0.50	3/8
Pentachlorophenol - mineral spirits solvent solution	0.50	3/8
Pentachlorophenol - heavy petroleum solvent	0.50	3/8

The preservative to be used in treating cuts, abrasions and bolt holes shall be the same as that originally used to treat the post, except if the post was originally treated with pentachlorophenol - volatile petroleum solvent (LPG) solution, cuts, abrasions and bolt holes shall be treated with pentachlorophenol - mineral spirits solvent solution.

The strength of salt solutions used in treating cuts, abrasions, bolt holes, et cetera, for field repair of pressure-treated surfaces shall be a concentrate not less than 3 times and not greater than 5 times the strength of the original treating solution.

7. FENCE POSTS AND BRACE RAILS

Fence posts and brace rails shall be treated in conformance with AWPA Standards C1 and C2 or C5 as applicable.

8. POLES

Poles shall be treated in conformance with AWPA Standards C1 and C4. They shall be treated with oil-borne pentachlorophenol with a minimum retention of 0.5 lb. per cu. ft. of dry salt.

D. MEASUREMENT

1. GENERAL

No separate measurement will be made for preservative treatment as such work is a part of the work included in furnishing preservative treated materials.

E. PAYMENT

1. GENERAL

No separate payment will be made for preservative treatment of any material as payment therefor will be included in the payment made at the contract price for the particular material item.

XXVIII. GEOTEXTILE FABRICS

A. DESCRIPTION

1. SCOPE

This work consists of furnishing and placing geotextiles in underdrains, over roadbed subgrades, beneath pavement overlays, and over asphalt concrete pavement joints or cracks as shown on the plans and at other locations or as directed by the Engineer.

B. MATERIALS

1. GENERAL

The geotextile shall be composed of a polymeric yarn or fiber oriented into a stable network which retains its relative structure during handling, placement and design service life. Geotextiles may be rejected by the Engineer if dimensional stability or resistance of the geotextile to ambient temperatures, acid and alkaline conditions and micro-organisms/insects does not appear to be satisfactory for the intended purpose. The geotextile shall meet or exceed the properties specified herein and in the Special Specifications. The geotextile shall be free of any chemical treatment or coating which might significantly reduce permeability. The selvage of geotextiles shall be finished such that the outer fibers are prevented from pulling away from the fabric. The geotextile shall be free of defects or tears. The material shall be protected from damage and deterioration until incorporated into the project.

2. DEFINITIONS

a. Geotextile

A fabric manufactured specifically for use in civil engineering applications. Fibers used in the manufacture of geotextiles shall consist of long chain synthetic polymers. At least 85 percent by weight of the long chain polymers shall be polyolephins, polyesters, or polyamides.

i. Drainage geotextile

Geotextile for installation in underdrains or other drainage locations, as directed.

ii. Subgrade geotextile

Geotextile for installation on subgrades and in other material separation applications.

iii. Pavement overlay geotextile

Geotextile for installation beneath an asphalt concrete overlay.

iv. Pavement joint geotextile

Geotextile for installation over cracks in existing asphalt pavement.

b. Machine Direction

The long (or warp) direction of the geotextile. The cross-machine (or fill) direction is perpendicular to the machine direction.

c. Mean Roll Values

The mean roll value of any specific geotextile property is the average of the test results from any roll within a lot.

d. Nonwoven Geotextile

A textile produced by bonding or interlocking of fibers, or both, accomplished by mechanical, heat, or chemical means.

e. Seam Allowance

The minimum distance from the edge of a geotextile to the stitch line nearest to that edge.

f. Seam Type

A designation relating to the essential characteristics of geotextile positioning and rows of stitching in a specified sewn seam, as shown on the plans.

g. Selvage

The finished edge of a geotextile parallel to the machine direction.

h. Stitch Type

A designation relating to the essential characteristics of the interlacing of sewing thread(s) in a specified seam, as shown on the plans.

i. Woven Geotextile

A textile comprising two or more sets of filaments or yarns interlaced in such a way that they result in a uniform pattern.

3. FACTORY SEAMS

Where factory seams are made, the sheets of geotextile shall be sewn together using a lock-type stitch. The seams shall be sewn with polymeric thread; i.e., at least 85 percent by weight polyolphins, polyester, or polyamides, and shall be as resistant to deterioration as the geotextile being sewn. Nylon threads will not be allowed. The strength of the seam shall be determined by the wide strip tensile method and shall be at least equal to the larger of the minimum required tensile strengths for the intended application.

4. DRAINAGE GEOTEXTILE PROPERTY REQUIREMENTS

Both woven and nonwoven geotextiles are acceptable. Slit film or slit tape fabrics will not be permitted. The following requirements are for normal highway edge drains, blanket drains, trench drains and footing drains.

Geotextile Property	Test Method	Mean Roll Value
Grab Tensile strength, 1 lb.	OSHD TM 811 (ASTM D 1682 Modified)	80 min.*
Grab elongation, %	OSHD TM 812 (ASTM D 1682 Modified)	15 min.

Burst strength, (diaphragm method), psi.	OSHD TM 814 (ASTM D 3786 Modified)	130 min.*
Puncture strength, lbs.	OSHD TM 816 (ASTM D 3787 Modified)	80 min.
AOS (apparent opening size), US std. sieve	OSHD TM 815	> 50
Water permeability, cm./sec.	ASTM D 4491	.1

*Where angular aggregate larger than 4-inch size or sharp objects will be in contact with the geotextile, or if the trench is deeper than 10 feet, then the minimum grab tensile strength and burst strength shall be increased to 180 lbs. and 290 psi, respectively.

5. SUBGRADE GEOTEXTILE PROPERTY REQUIREMENTS

Both woven and nonwoven geotextiles are acceptable. The following requirements apply:

Geotextile Property	Test Method	Mean Roll Value
Grab Tensile strength, lbs.	OSHD TM 811 (ASTM D 1682 Modified)	180 min.
Grab elongation, %	OSHD TM 812 (ASTM D 1682 Modified)	15 min.
Burst strength, (diaphragm method), psi.	OSHD TM 814 (ASTM D 3786 Modified)	290 min.
Puncture strength, lbs.	OSHD TM 816 (ASTM D 3787 Modified)	80 min.
AOS (apparent opening size), US std. sieve	OSHD TM 815	> 50
Water permeability, cm./sec.	ASTM D 4491	0.01 min.

6. GEOTEXTILES BENEATH PAVEMENT OVERLAYS

Only nonwoven geotextiles are acceptable. The following requirements apply:

Geotextile Property	Test Method	Mean Roll Value

Grab Tensile strength, lbs.	OSHD TM 811 (ASTM D 1682 Modified)	80 min.
Grab elongation, %	OSHD TM 812 (ASTM D 1682 Modified)	50 min.
Asphalt retention, gal./sq.yd.	OSHD TM 817	0.20 min.
Melting point, degrees F	ASTM D 276	300 min.

7. PAVEMENT JOINT GEOTEXTILE

Only nonwoven geotextiles are acceptable. The following requirements apply:

Geotextile Property	Test Method	Mean Roll Value
Grab tensile strength, lbs.	OSHD TM 811 (ASTM D 1682 Modified)	180 min.
Strip tensile strength, lbs./in.	ASTM D 982	60 min.
Puncture resistance, lbs.	ASTM E 154	215 min.
Grab elongation, %	OSHD TM 812 (ASTM D 1682 Modified)	85 min.
Permeance	ASTM E 96, Method B	0.10 max.
Pliability	ASTM 146, Modified (1/4" mandrel 180 degree bend at -25 degree F.)	No changes in geotextile or rubberized asphalt concrete.
Peel Adhesion, lbs/in.	PSTC-1 (180 degree angle without primer)	13 min.
Thickness, mils.	ASTM D 1777	75

C. CONSTRUCTION

1. GENERAL

The rolls of geotextile shall be protected against damage and deterioration until incorporated into the project. The geotextile shall be dry at the time of installation. The geotextile shall be installed as described herein and as shown on the plans, or as directed by the Engineer. The geotextile will be rejected if, at the time of installation, it has defects, deterioration, or damage, as determined by the Engineer.

a. Geotextile Placement

The surface receiving the geotextile shall be prepared to a smooth condition free of obstructions, depressions and debris, unless otherwise directed by the Engineer. Where angular aggregate or sharp objects will be in contact with the geotextile, increased geotextile strength properties will be required, as stated in Section XXVIII-B. The geotextile shall not be dragged on the ground or mishandled in any way. The geotextile shall be placed loosely and without wrinkles so that placement of the overlying material will not tear the geotextile. The geotextile shall be lapped or sewn as specified, at the ends and sides of adjoining sheets.

i. Geotextile placement on slopes

The geotextile sheets shall be placed with the machine direction oriented up-down the slope. When the geotextile is placed on a slope steeper than 6H:1V, the upper sheets shall lap over the top of the lower sheets. The laps shall be securely anchored to the ground surface with pins/stakes as necessary to prevent slippage and tearing of the geotextile. Placement of fill material on the geotextile shall start at the toe of the slope and proceed upwards.

ii. Geotextile placement where exposed to water

Where geotextiles are placed under water, or in an area where water will flow, the geotextile shall be placed with its machine direction parallel to the direction of water flow, in lieu of the placement direction specified in (i) above. Successive geotextile sheets shall be overlapped in such a manner that the upstream sheet is placed over the top of the downstream sheet, as shown on the plans. The geotextile shall be adequately secured to prevent slippage. As the geotextile is placed under water, the backfill material shall be placed on it to the required thickness. The geotextile placement shall not progress more than 50 feet ahead of the backfill placement.

b. Protection of Geotextile

Traffic or construction equipment will not be permitted directly on the geotextile, except as authorized in subsection XXVIII-C7, or as directed by the Engineer. The geotextile shall be protected at all times during construction from contamination by surface runoff and construction activities. The geotextile shall be covered with the specified cover material as soon as possible; uncovered conditions shall not exceed 7 days, except when used with asphalt overlays, as required in subsection XXVIII-C7(e). Specified cover material shall be placed on the geotextile in such a manner that the geotextile is not torn, punctured, or shifted. The minimum cover layer shall be 6 inches thick or twice the maximum aggregate size, whichever is thicker before construction equipment is allowed over the area of the geotextile. End-dumping aggregate from trucks directly on the geotextile will not be permitted.

c. Repair of Geotextile

All geotextile that is torn, punctured, or contaminated during construction shall be repaired or replaced by the Contractor at no cost to the City. The repair shall consist of a patch of the same type of geotextile placed over the affected area. The patch shall overlap the existing geotextile a minimum of 2 feet from the edge of any part of the rupture, except as stated in subsection XXVIII-C7(d) for pavement overlay geotextiles. Where geotextile seams are required

to be sewn, any damaged sheets shall be repaired by sewing, unless otherwise indicated on the plans or Special Specifications, or as directed by the Engineer.

2. OVERLAPS

Minimum overlap requirements are listed in the following table:

Minimum Overlap Requirements

Underdrains	12 inches
Roadbed Subgrade Stabilization	2 feet
Geotextiles Beneath Pavement Overlays	(1)

(1) Minimum overlap shall be sufficient to insure closure, but shall not exceed 6 inches.

In the event that the specified overlap is not sufficient, as determined by the Engineer, the overlap shall be increased to provide adequate coverage or the geotextile shall be sewn together in the field. If field sewn, the provisions of Section XXVIII-C3 shall apply.

3. FIELD SEAMS

Field seams shall be sewn with polymeric thread, consisting of polypropylene, polyester, or Kevlar and shall be as resistant to deterioration as the geotextile being sewn. The thread shall be of a contrasting color with the geotextile being sewn, and shall be made such that the stitches are exposed for inspection when the geotextile is placed.

a. Stitching Equipment

The stitching equipment shall be such that it will provide an acceptable lock-type stitch, as recommended by the geotextile manufacturer and approved by the Engineer.

b. Stitch Requirements

Two rows of lock-type stitching shall be used to make the seam. The two rows of stitching shall be 1/2-inch apart with a tolerance of $\pm$ 1/4-inch and shall not cross, except for stitching.

c. Minimum Seam Allowance

The following table indicates the minimum required seam allowance, i.e., the minimum distance from the geotextile edge to the stitchline nearest to that edge.

Seam Type (see Plans)	Minimum Seam Allowance, In.
Flat, or Prayer, Seam Type SSa-1	1-1/2
"J" Seam, Type SSn-1	1
Butterfly-folded Seam, Type SSd-1	1

d. Seam Type

The Contractor shall obtain the geotextile manufacturer's recommendation for the type of seam and stitch to be used. If the Contractor does not provide the foregoing technical information, then the Contractor shall use a "J" seam with two passes of a Class 401 lock-type stitch with at least 3 stitches per inch. This seam will be tested as required by these Specifications. The prayer seam (flat) may be used for repair of damaged in-place geotextile.

4. UNDERDRAINS

Underdrains shall be constructed in accordance with the details shown on the plans. The geotextile shall be placed to conform loosely with the detail shown on the construction plans.

5. PAVEMENT JOINTS GEOTEXTILE

Pavement joint geotextile as specified in Section XXVIII-B8 shall be placed in 3-foot widths, centered over all longitudinal asphalt concrete pavement joints, and all other required joints, prior to resurfacing, by direction of the Engineer. Geotextile shall be handled and installed in accordance with manufacturer's specifications. Pavement must be dry and free of dust, dirt or vegetation. Cracks greater than 1/4-inch shall be filled with an acceptable crack filler prior to installation of the geotextile. If existing pavement surface is below 70°F, an approved priming material composed of refined asphalt and rapid-drying solvent such as "Celotex" asphalt primer must be used.

6. ROADBED SUBGRADE SEPARATION

The subgrade shall be prepared in accordance with Section XII. Construction vehicles shall be limited in size and weight such that rutting in the initial life above the geotextile is no greater than 3 inches deep to prevent overstressing the geotextile. Turning of vehicles on the first lift will not be permitted. Geotextile failures, as evidenced by soil pumping or roadbed distortion, shall be corrected by removing any covering material in the affected area and placing a geotextile patch on the exposed geotextile, in conformance with subsection XXVIII C-1(c). The patch shall be covered with the specified covering material and compacted prior to proceeding.

7. GEOTEXTILE BENEATH PAVEMENT OVERLAYS

The use of geotextiles in pavement overlays involves four basic steps: Initial surface preparation, application of a sealant, placement of the geotextile, and placement of the overlay.

a. Weather Limitations

The weather limitations for placement of sealant and geotextile shall conform to subsection XV-C1, except the minimum air temperature for paving grade asphalt sealant placement shall be at least 50°F and at least 60°F for asphalt emulsion sealant placement.

b. Surface Preparation

The pavement surface on which the sealant is to be placed shall be prepared as prescribed in the Standard Specifications, Sections XV and XXIII, and/or as required by the Engineer. Cracks exceeding 1/8-inch width shall be cleaned and filled with suitable bituminous crack filler and minor irregularities or depressions repaired as directed by the Engineer. Crack filling material shall be allowed to cure prior to geotextile placement. Where the pavement is severely cracked, rutted, deformed, or otherwise distressed, a leveling course shall be placed as directed by the Engineer, in lieu of extension surface preparation.

c. Asphalt Sealant

A normal paving grade asphalt shall be used. A cationic or anionic emulsion may be used, as approved by the Engineer. When asphalt emulsions are used, the emulsion shall be allowed to cure properly, essentially with no moisture remaining prior to placing the geotextile and final wearing surface. The use of cutbacks or emulsions which contain solvents will not be allowed.

The sealant material shall be spread by means of a pressure distributor conforming to the requirements as indicated in the Special Specifications and/or as required by the Engineer.

The asphalt sealant shall be uniformly spray applied to the prepared dry pavement surface at the rate of 0.20 to 0.30 gallons per square yard or as recommended by the geotextile manufacturer and approved by the Engineer. When using emulsions the application rate must be increased to offset water content of the emulsion. Some underlying surfaces may require a higher application rate. Within street intersections, on steep grades, or in other zones where vehicle speed changes are commonplace, the normal application rate shall be reduced about 20 percent, but to no less than 0.20 gallons per square yard, as directed by the Engineer.

For paving grade asphalt cements the maximum distributor tank temperature shall not exceed 325°F to avoid damage to the geotextile. For asphalt emulsions, the distributor tank temperatures shall be maintained between 130°F and 160°F.

The target width of sealant application shall be geotextile width plus 6 inches. The sealant shall be applied only as far in advance of geotextile installation as is appropriate to insure a tacky surface at the time of geotextile placement. Fabrics shall be placed the same day as the sealant. Traffic shall not be allowed on the sealant. Excess asphalt shall be cleaned from the road surface.

d. Placement of Geotextile

The geotextile shall be protected from moisture at all times during storage and placement. The geotextile shall be placed into the sealant using mechanical or manual laydown equipment capable of providing a smooth installation with a minimum amount of wrinkling or folding prior to the sealant cooling and losing tackiness. Wrinkles or folds in excess of one inch shall be slit and laid flat. All transverse joints and slit folds or wrinkles shall be shingle-lapped in the direction of the paving operation. Brooming and/or pneumatic rolling will be required to maximize geotextile contact with the pavement surface. For overlap requirements refer to table in subsection XXVIII-C2. Additional hand-placed sealant material may be required at laps, as determined by the Engineer. Traffic on the geotextile prior to and during paving shall be limited to necessary construction equipment and emergency vehicles, unless otherwise directed by the Engineer. Turning of the paver and other vehicles shall be done gradually and kept to a minimum to avoid movement and damage to the geotextile. Abrupt starts and stops shall also be avoided. Damaged geotextile shall be removed and replaced with the same type of geotextile, and other overlaps shall be shingle-lapped in the direction of paving. Overlaps shall not exceed 6 inches.

e. Placement of Overlay

Overlay placement shall closely follow geotextile placement. Sealant bleeding through the geotextile shall be removed. Windrowing asphalt on the geotextile ahead of the paving machine and using an asphalt pickup machine will not be allowed.

D. MEASUREMENT

Geotextile will be measured to the nearest square yard of surface area actually covered in accordance with the plans or as required by the Engineer. No separate measurement will be made for construction of laps, seams, joints or patches, unless the Engineer orders more than the specified lap, in which case the added lap width will be measured.

E. PAYMENT

The accepted pay quantities for geotextiles will be paid for at the contract price per unit of measurement for the following items:

Item Reference	Pay Item	Unit of Measurement
(a)	Subgrade Geotextile	Square Yard
(b)	Pavement Overlay Geotextile	Square Yard
(c)	Pavement Joint Geotextile	Square Yard

Item (b) above applies to payment for pavement overlay geotextile which will include payment for preparation work, tack sealant and geotextile.

Item (c) above applies to payment for pavement joint geotextile as specified in Section XXVIII-B7. Payment will include compensation for all preparation work, including sealing of all large cracks and application of any rapid-drying solvent, tack sealant and geotextile.

Payment for the above items will comprise full compensation for all labor, equipment, tools and incidentals necessary to complete the work specified to be done under this Section. No separate payment will be made for the construction of laps, seams, joints and patches unless the Engineer orders additional amounts over the minimum or specified. Any additional or wider lapping requirements as called out on the construction plans shall be strictly adhered to and without any further compensation.

If the Engineer orders geotextiles with properties more stringent than specified, price adjustments for the difference in material cost only will be allowed.

No separate payment will be made for the geotextile used in conjunction with underdrains, as payment therefor will be included in payment made for the item "6-inch PVC Perforated Drain Pipe".

XXIX. REMOVAL OF EXISTING SIGN INSTALLATIONS

A. DESCRIPTION

1. SCOPE

This work shall consist of the removal of existing sign installations and their accessories as called for on the plans or in the Special Specifications.

Sign installations shall consist of signs complete with supports and accessories and may also include flashing beacon installations and other appurtenances.

B. CONSTRUCTION

1. GENERAL

Those installations of concrete or steel set in the ground shall be removed to one foot below the ground line unless indicated otherwise in the Special Specifications. The resultant hole shall be filled and the surface finished to correspond with the surrounding area. The existing signs and appurtenances shall not be removed until ordered by the Engineer. Unless noted otherwise, all existing signs and appurtenances removed shall become the property of the Contractor and shall be removed from the job site.

C. MEASUREMENT

1. LUMP SUM BASIS

Unless otherwise set forth in the Special Specifications, measurement will be on a lump sum basis wherein there will be no measurement of work performed under this specification.

D. PAYMENT

1. LUMP SUM BASIS

Except as provided in subsection XXIX-D2, payment for the removal of existing sign installations as specified will be made at the contract lump sum amount for the item "Removal of Existing Sign Installations".

The amounts to be allowed for "Removal of Existing Sign Installations" in the progress payments to be made under the contract shall not be in excess of the reasonable value of the removal work performed under this specification, as said reasonable value is estimated by the Engineer.

2. INCIDENTAL BASIS

When the bid item "Removal of Existing Sign Installations" does not appear in the bid schedule, the work under this specification shall be performed as incidental work for which no separate payment will be made.

XXX. WOOD SIGN POSTS

A. DESCRIPTION

1. SCOPE

This work shall consist of the furnishing and installing of preservative treated wood sign posts at the locations indicated by the plans or as directed.

B. MATERIALS

1. WOOD SIGN POSTS

The wood sign posts shall be fabricated from either Douglas fir, surfaced four sides (S4S) and free of heart center (FOHC) or West Coast hemlock (S4S) (FOHC) conforming to the following requirements and be of the sizes indicated on the plans:

a. Grading

Grading requirements for wood sign posts shall conform with applicable paragraphs of either the current West Coast Lumber Inspection Bureau Grading Rules or with the current Western Products Grading Rules, as follows:

Specie	Grading Rule	
	4"x4"	4"x6"
Douglas Fir	122-b WCLIB 40.11 WWPA	123-c WCLIB 62.12 WWPA
Hem-Fir	122-b WCLIB 40.11 WWPA	123-b WCLIB 62.11 WWPA

C. CONSTRUCTION

1. TREATED POSTS

a. Preservative Treatment of Posts

Posts shall be pressure treated after fabrication in conformance with subsection XXVI-C6.

b. Handling

Treated posts shall be carefully handled without dropping, breaking of outer fibers, bruising or penetrating the surface with tools. Slings used to handle treated posts shall be made of rope. Cant hooks, peaveys, pikes or hooks shall not be used.

c. Framing and Boring

All cutting, framing, and boring of treated posts shall be done before treatment in so far as is practicable. When treated posts are to be placed in waters infested by marine borers, untreated cuts, borings and other joint framings below high-water elevation will not be permitted.

d. Treating Minor Imperfections

The preservative to be used in treating cuts, abrasions and bolt holes shall be the

same as that originally used to treat the post, except if the post was originally treated with pentachlorophenol - volatile petroleum solvent (LPG) solution, cuts, abrasions and bolt holes shall be treated with pentachlorophenol - mineral spirits solvent solution.

The strength of salt solutions used in treating cuts, abrasions, boltholes, etc., for field repair of pressure-treated surfaces shall be a concentrate not less than three times and not greater than five times the strength of the original treating solution.

e. Tops

The top of each post shall be "roofed" by beveling each side of the post at an angle of 30 degrees to produce a pointed end. The edges and corners of the finished "roofs" shall be clean cut.

f. Length

The length of the posts shall be as indicated on the plans, or, where not so indicated, the post shall be of sufficient length to provide proper sign mounting, a proper mounting height and the required foundation depth.

g. Temporary Attachment

Whenever, with the approval of the Engineer, forms or temporary braces are attached to treated posts with nails or spikes, the holes shall be filled by driving galvanized nails or spikes flush with the surface or plugging holes as required for bolt holes.

2. HOLES FOR BOLTS, DOWELS, RODS AND LAG SCREWS

Holes for drift pins shall be bored with a bit 1/16 inch less in diameter than the pin or dowel. Holes for truss rods or bolts shall be bored with a bit 1/16 inch larger than the rod or bolt. Holes for lag screws shall be bored in two parts: the lead hole for the shank shall have the same diameter as the shank and the same depth as the length of the unthreaded shank; the lead hole for the threaded portion shall have a diameter equal to approximately two-thirds of the shank diameter.

3. BOLTS AND WASHERS

A washer of the size and type designated shall be used under all bolt heads and nuts which would otherwise come in contact with wood. The nuts of all bolts shall be locked after they have been finally tightened.

4. COUNTERSINKING

Countersinking shall be done wherever smooth faces are required. Horizontal recesses formed for countersinking shall be painted with hot creosote oil and, after the bolt or screw is in place, shall be filled with hot pitch.

5. POST HOLES

Post holes shall be excavated to the lines and grades established and to the depth called for by the plans or to a depth necessary to achieve the required mounting height, whichever is greater. If necessary, the required depth shall be obtained by blasting. No post shall be set until the location, lines and grades of the holes have been checked by the Engineer. The post shall then be aligned to a vertical position in the hole and the hole backfilled. The backfill materials shall be earth, sand, gravel, rock or combinations thereof, free of humus and debris, placed in layers not greater than 6 inches. The layers shall be solidly rammed and tamped into the excavated area around the post. If the backfill materials are too dry to compact properly, they shall be dampened as they are placed.

On completion of the work, the surface around the post shall be replaced and finished to correspond with the surrounding surface.

6. STORAGE OF MATERIALS

Lumber and timber stored on the site shall be kept in orderly piles or stacks. Untreated material shall be open-stacked on supports at least 12 inches above the ground surface to avoid absorption of ground moisture and permit air circulation and it shall be so stacked and stickered as to permit free circulation of air between the tiers and courses. The Contractor shall provide protection from the weather by a suitable covering when necessary.

D. MEASUREMENT

1. GENERAL

There will be no measurement of quantities for payment as payment will be on a lump sum basis for all wood sign posts without measurement unless, the number of wood sign posts ordered by the Engineer to be installed differs from the number of posts called for by the plans by more than 25 percent from the estimated total quantity of wood sign posts as shown on the plans or as set forth in the Special Specifications.

No adjustment in the lump sum contract amount will be made, except as set forth above. Any adjustment in the lump sum contract amount will be made on the basis of the theoretical unit price determined by dividing the lump sum contract amount by the estimated total quantity of posts as called for on the plans or as set forth in the Special Specifications.

E. PAYMENT

1. GENERAL

Payment will be made at the lump sum contract amount for the item "Wood Sign Posts" unless this price is to be adjusted as set forth in subsection XXX-D1.

Payment for the above item plus or minus any adjustments, if any, will be full and complete compensation for furnishing and placing all materials including all labor, equipment, tools and incidentals necessary for all contract work specified.

XXXI. THERMOPLASTIC PAVEMENT MARKINGS

A. DESCRIPTION

1. SCOPE

This work shall consist of the furnishing and placing of thermoplastic pavement markings on prepared portland cement and asphalt concrete surfaces. The pavement markings shall be placed in close conformity to the lines indicated on the plans and as designated by the Engineer.

2. OPTIONAL MATERIAL

The Contractor may use one or another or both of two kinds of thermoplastic pavement marking material, as he may elect.

In this specification the word "material" will be used to denote the combination of the resins, plasticizers, pigments, fillers and intermixed glass beads but not including the surface-applied glass beads.

For convenience of reference, the material acceptable for use on the project will be designated by types as follows:

Type A - Liquid hot-laid, thermoplastic containing beads with a separate application of additional glass beads on the surface.

Type B - Prefabricated retroreflective film:
Class B-1: Cold Applied Plastic Film (90 mil)
Class B-2: Cold Applied Plastic Film (60 mil)

B. MATERIAL

1. TYPE A WHITE, HOT-LAID THERMOPLASTIC

a. Composition

The Type A material shall conform to the requirements of AASHTO M 249.

b. Skid Resistance

The finished material including the surface applied glass beads shall have a skid resistance of not less than 50 BPN when tested at 68°F with a British Portable Tester in accordance with ASTM E 303.

2. TYPE B WHITE PREFABRICATED RETROREFLECTIVE FILM

a. Class B-1

i. Composition

The Class B-1 material shall contain not less than 15% or more than 18% by weight of glass spheres; not less than 38% or more than 42% pigments; and not less than 40% or more than 46% plastics and plasticizers.

The pigment shall include titanium dioxide. The glass spheres shall be colorless, clean and transparent and free from milkiness with a refractive index not less than 1.50 when tested by the liquid immersion method at 25°C and shall consist of 75% minimum by count of glass spheres retained on a 140 mesh US Standard Screen.

The material shall be not less than 0.09 inch thick, excluding the precoated adhesive, with clean cut and true edges.

ii. Physical Characteristics

The material shall be of such a structure that at a temperature of 80°F a piece 3"x6" placed on a one-inch diameter mandrel may be bent over the mandrel until the end surfaces are parallel and one inch apart. There shall be no fracture lines apparent in the outer surface by visual inspection. Upon removing the material from the mandrel, the material shall return to its original flat condition in not more than eight hours at a temperature of 80°F on a smooth, flat, glass surface.

The material shall have tensile strength of 300 psi plus or minus 100 psi when tested in accordance with ASTM D 638. Elongation shall not be greater than 50% utilizing a 6"x12" material sample. The rate of pull of the test shall be 0.20 inch per minute and shall be conducted at a temperature of 80°F.

The material shall have a maximum 60 degrees gloss of ten gloss units as measured according to the method described in ASTM D 523.

The maximum loss in weight of the material shall not exceed 0.25 gram in 500 revolutions when abraded according to Federal Test Method Standard No. 141 (Method 6192) using H-18 calibrated wheels, with 1000 grams load on each wheel.

Precoated adhesive backing shall be pressure sensitive and shall remain stable with a controlled degree of flexibility and flow. A 3"x6" sample shall withstand a static load of four pounds for a period of 30 minutes, as described in ASTM D 816 (Method A). The slippage between the sample and the emery cloth shall not exceed one inch. This test shall be conducted at a temperature of 80°F.

The material shall pass the following adhesive shear strength test according to ASTM D 638 as modified below. The sample shall be prepared as follows:

Samples 6"x1" shall have applied to the adhesive face a 1"x3" piece of carborundum extra-coarse emery cloth or its equivalent so that there is one square inch overlap. A pressure of 50 psi shall be applied over this area for a period of 30 seconds. Load is applied by gripping each end of the test piece in a suitable tensile test machine such as a Dillion or Scott tester. The average of the load required to break the adhesive bond from three such tests shall be not less than one-fourth of the load required to break a one-inch strip of the sample. The speed of testing shall be 0.20 inch per minute and the test shall be conducted at a temperature of 80°F.

The skid resistance of the material shall be not less than 50 BPN when tested at 68°F with a British Portable Tester in accordance with ASTM E 303.

b. Class B-2

i. Composition

The Class B-2 material shall contain not less than 33% by weight of glass spheres; not less than 30% pigments; and not less than 20% resins and plasticizers.

The pigment shall include titanium dioxide. The glass spheres shall be colorless, clean and transparent and free from milkiness with a fractive index not less than 1.50 when tested by the liquid immersion method at 25°C and shall consist of 75% minimum count of glass spheres retained on a 140 mesh U.S. Standard Screen.

The film shall be not less than 0.06 inch thick, excluding the precoated adhesive, with clean cut and true edges.

ii. Physical Characteristics

The film shall be of such a structure that at a temperature of 80°F a piece 3"x6" placed on a one inch diameter mandrel may be bent over the mandrel until the end surfaces are parallel and one inch apart. There shall be no fracture lines apparent in the outer surface by visual inspection.

The film shall have a minimum tensile strength of 40 psi when tested in accordance with ASTM D 638. Elongation shall be no less than 75% utilizing a 1"x6" x 0.06" film sample with a jaw speed of 12 inches per minute at a temperature of 70°F to 80°F.

The film shall have a minimum specific luminance (in candelas per square foot per footcandle) of 0.1 at observation angles of 0.2 degrees and 0.5 degrees.

The glass beads shall be strongly bonded to the film. Predominate failure mode shall be wear down with no more than 15% of the beads lost due to pop out when subjected to 200 cycles with an H-18 wheel on a Taber Abraser loaded at 125 grams. Microscopic observation should be used to determine the extent and type of bead failure. Precoated adhesive backing shall be pressure sensitive and shall remain stable with a controlled degree of flexibility and flow. A 3"x6" sample shall withstand a static load of four pounds for a period of 30 minutes, as described in ASTM D 816 (Method A). The slippage between the sample and the emery cloth shall not exceed one inch. This test shall be conducted at a temperature of 80°F.

The skid resistance of the material shall be not less than 50 BPN when tested at 68°F with a British Portable Tester in accordance with ASTM E 303.

3. PRIMERS

The primer used over concrete or asphalt pavements shall be a material designed to increase the bond of the thermoplastic material to the pavement. The primer shall be compatible for

use with concrete and thermoplastic material or asphalt and thermoplastic material. The primer shall cure in five minutes or less when used in accordance with manufacturer's recommendation.

4. CERTIFICATION

The Contractor shall submit to the City a certification from the manufacturer indicating that the skid resistance properties of the material are in accordance with subsections XXXI-B1 and XXXI-B2.

The Contractor shall also supply the City with a certification from the manufacturer indicating that the other properties of the material are in accordance with subsections XXXI-B1 and XXXI-B2.

C. CONSTRUCTION

1. GENERAL

All equipment used in the application of the pavement markings shall be so designed and operated to produce pavement markings of uniform quality conforming to the requirements of this specification. Installed pavement markings not conforming to these specifications shall be removed and replaced with conforming material.

Workmanship shall be first-class throughout the project. Only competent workmen experienced in placing thermoplastic material shall be employed.

Excess thermoplastic material left on the pavement shall be cleaned up prior to continuation of the operation.

2. PREPARATION OF PAVEMENT

All existing pavement markings (painted, thermoplastic, raised buttons, etc.) which are being replaced with new thermoplastic markings shall be completely removed by methods approved by the Engineer. Curing compounds or other similar materials which would adversely affect the bond between the pavement and the thermoplastic shall be removed. The methods used shall not adversely affect the pavement surface.

Prior to application of the thermoplastic material the pavement shall be cleaned of all other material which would reduce the bond of the thermoplastic material to the pavement. The pavement shall be air blasted with a high-pressure system acceptable to the Engineer to remove any extraneous or loose material. After cleaning, the area shall pass inspection of the Engineer prior to application of the primer coat.

After the pavement surface is cleaned, a primer shall be applied to the area receiving the thermoplastic pavement markings to assure proper bond of the material. The primer application shall effect a continuous, solid film over the pavement surface. The primer shall be applied in strict conformance to the recommendations of the primer manufacturer and the manufacturer of the thermoplastic material.

3. APPLICATION OF TYPE A THERMOPLASTIC MATERIAL

The thermoplastic pavement markings shall be applied to an initially dry pavement surface after sufficient time has elapsed to insure the primer has adequately dried and further curing of the primer will not adversely affect the thermoplastic.

The type A hot-laid thermoplastic material shall be applied to the pavement by a gravity and/or extrusion method. The pavement temperature at the time of application shall be as recommended by the manufacturer of the thermoplastic material. The width of pavement markings specified shall be applied in one or two applications. If the stripe width is obtained by two applications, they shall be made so that the adjacent applications fuse together with no apparent overlap or gap permitted. When completed, the pavement marking shall not be less than 1/8 inch, nor more than 3/16 inch, in thickness, exclusive of protecting surface-applied glass beads, and it shall have a continuous and uniform cross-sectional configuration with the upper surface slightly arched. The thermoplastic material shall be installed in a molten state within the temperature range recommended by manufacturer. The ambient air temperature shall be in accordance with the manufacturer's recommendations during application.

4. APPLICATION OF BEADS ON TYPE A HOT-LAID THERMOPLASTIC MATERIAL

Glass beads shall be separately applied to the material as it is being placed.

The glass bead dispenser shall be so designed and operated as to uniformly and properly distribute the glass beads over the entire width of the Type A material so that objectionable irregularities in the material's reflectorization will not be present. This independent application of beads shall be applied uniformly at a rate to meet the skid resistance properties listed in subsection XXXI-B1. The dispenser shall be located behind and controlled simultaneously with the pavement marking extrusion die such that the beads shall be imbedded in the pavement marking to a depth of at least one-half their diameters.

5. APPLICATION OF TYPE B MATERIAL

The Type B prefabricated film material shall be applied to the pavement in a manner which will provide a uniform surface over the various widths as required. At application, the ambient

air temperature shall be within the range recommended by the manufacturer. The Type B film material may be supplied complete with a precoated, factory applied adhesive or it may be furnished with separate adhesives as recommended by the manufacturer. Whether the adhesive is precoated or supplied separately, the adhesive shall be such as to allow the film to be repositioned on the pavement surface before permanently fixing it in its final position with a downward pressure. When completed, the pavement markings shall not be less than 90 mils in thickness for Class B-1 and 60 mils for Class B-2, exclusive of any precoated adhesive material, and shall have a uniform cross-sectional configuration. If the required pavement marking is 12 or more inches wide, it may be fabricated from 12-inch or 6-inch wide material. Longitudinal splices will be permitted, provided the gap at any splice does not exceed 1/16 inch.

Application of Type B film pavement markings shall be performed in a workmanlike manner. Any errors shall be corrected prior to continuing the application.

D. MEASUREMENT

1. GENERAL

Removal of all existing traffic markings, cleaning of pavement, priming, etc., as specified, will be on a lump sum basis and no separate measurement thereof will be made.

2. PAVEMENT MARKINGS

The quantity of pavement markings, exclusive of line markings, shall be the number by actual count of markings complete in place as specified and accepted.

3. PAVEMENT LINE

The quantity of pavement line for stop bars and crosswalks shall be the number of square feet, computed to the nearest square foot, complete and in place as specified.

E. PAYMENT

1. GENERAL

The accepted unit pay quantities will be paid for at the applicable contract unit price per unit of measurement for one or another of the pay items listed below and set forth in the bid schedule.

Item Reference	Pay Item	Unit of Measurement
a.	Removal of Existing Pavement Markings	Lump Sum
b.	Thermoplastic Pavement Arrows	Each

c.	Thermoplastic Pavement "ONLY"s	Each
d.	Thermoplastic Pavement "SCHOOL"s	Each
e.	Thermoplastic Pavement "SCHOOL CROSSING"s	Each
f.	Thermoplastic Pavement Line	Square Foot
g.	Thermoplastic Pavement Railroad Crossing Markings	Each

Payment for item (a) above will comprise complete compensation for removal of all existing pavement markings and cleaning and priming the pavement as specified.

Payment for item (f) will include the pavement lines for stop bars and crosswalks.

Payment for item (g) above will include three 24-inch wide white thermoplastic pavement bars and a R X R symbol as shown on the plans.

Payment at the applicable contract prices for the above items will be complete compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work as specified.

XXXIV. PLANTING TREES, SHRUBS, VINES AND GROUND COVERS

A. DESCRIPTION

1. SCOPE

This work shall consist of the furnishing, planting and establishment of specified plant materials in accordance with good horticultural practice.

Planting areas shall be as shown on the plans or as designated by the Engineer.

The term "plants" shall refer collectively to trees, shrubs, vines, ground covers and other plants.

All plant materials to be furnished shall be treated with an approved horticultural anti-desiccant prior to transporting to the project.

2. PLANTING SEASONS

Planting shall normally be done either in the "spring planting season" (prior to June 30) or the "fall planting season" (after October 15). Upon written approval of the Engineer, container-grown stock or irrigated areas may be planted in other than these planting seasons.

B. MATERIALS

1. PLANTS

a. Nomenclature

Plant names shall conform to the latest edition of "Standardized Plant Names", as prepared by the American Joint Committee on Horticultural Nomenclature. Botanical identification of plant materials shall be based on descriptions by Baily in the latest edition of "Hortus Third".

b. Quality of Plants

Plants shall be healthy, first-class representatives of their species or variety, free from disease and from insect pests, their eggs, larvae or pupae. The root system and branches or canes shall be well-developed, free of disfiguring knots, sun scalds, bark abrasions, wind or frost injury or any other objectionable features. Plants cut back from larger sizes to meet specified sizes will not be accepted.

All plants furnished by the Contractor shall conform to the applicable requirements set forth in the current issue of "American Standard for Nursery Stock", published by

the American Association of Nurserymen. When a conflict exists between the standards and the plans, the plans will prevail.

Plant material originating within the state shall have the Oregon Inspection certificate attached. Nursery stock imported from other states shall be accompanied by a certificate of inspection from the place of origin as required by Oregon law. All certificates shall be given to the Engineer prior to plant approval. The Contractor shall be responsible for making all arrangements with the State Department of Agriculture for inspection of plant materials shipped from out of state directly to the Contractor or the project.

Unless otherwise set forth in the Special Specifications or indicated on the plans, all plants shall be nursery grown. Native or collected plants shall have been growing continuously in only one licensed nursery for the following minimum number of growing seasons:

Plant Material	Time in Nursery
Trees	2 Growing Seasons
Shrubs, Evergreen	2 Growing Seasons
Shrubs, Deciduous	1 Growing Season
Vines and Ground covers	1 Growing Season

c. Trees

Each tree shall possess the top and root growth typical to the variety. Trees with central leaders shall have a straight trunk and a well-branched, symmetrical top. Trees having a damaged or missing leader, multiple leaders or Y-crotches will be rejected.

Trees that are pruned before planting shall not show any unhealed pruning cuts on delivery to the project. Trees showing any unhealed pruning cuts will be rejected.

d. Shrubs

Shrubs shall be well-formed and possess the top and root growth typical to the variety.

e. Container-Grown Plants

Plants shall have been transplanted into a container and grown therein long enough for new fibrous roots to have developed so that the root mass will retain its shape and hold together when removed from the container.

Container-grown plant material which is rootbound will be rejected.

Vines and ground cover plants shall be furnished in individual containers unless otherwise specified in the Special Specifications or shown on the plans.

f. Collected Plants

Collected plants, if permitted for use by the Special Specifications or by indication on the plans, shall conform to all appropriate quality, grade and class requirements of the current issue of the "American Standard for Nursery Stock".

g. Balled and Burlapped Plants

All shrubs shall be furnished as container-grown or balled and burlapped (B & B) unless otherwise specified on the plans or in the Special Specifications. All trees shall be dug and furnished to the project, balled and burlapped, in standard wire baskets. Those trees not delivered as such will be rejected. All wire baskets will be removed prior to planting and upon inspection and acceptance by City.

All evergreen and conifer plants shall be furnished balled and burlapped or in suitable containers. Balling and burlapping shall conform to the standards of the "American Standard for Nursery Stock". Root balls shall be firm, intact and held solidly together by a fibrous root system. Root balls shall consist of only the earth in which the plant has been growing. "Made" balls will be rejected. Root balls shall be securely wrapped with jute burlap or other wrapping material not harmful to plant life.

h. Labeling of Plants

Each plant shipped individually shall have a legible grower's label attached. Plants of the same variety shipped collectively shall have a legible grower's label attached to each box, bundle, bale or container or to one of the plants therein. The label shall give the complete horticultural name, size, age, caliper or other data required to identify the plant. When the label is attached to a container with more than one plant, the label shall also show the quantity. The original grower's label shall be left on only one plant in a group planting of the same species and on each plant of individual plantings until final acceptance of the contract. Labels shall be affixed so the plant will not be girdled. Plants not labeled as specified will be rejected.

i. Inspection and Rejection of Plants

Plants shall be subject to inspection at any place and at any time.

The City will not inspect plants at their source except at the written request of the Contractor. Such inspections shall be at the expense of the Contractor and the cost thereof shall be deducted from the Contractor's earnings under the contract.

A list of nursery sources for specified plants shall be furnished by the Contractor within 30 days after the execution of the contract. This list shall verify that all specified plant material has been located and is available for use on the project.

Plants will be inspected by the Engineer after arrival at the project and prior to planting. Material shall not be planted until such inspection is made. The presence of noxious weeds in the soil accompanying plants or at the nursery source shall be cause for rejection of any or all plants from that source. Plants not conforming to the specifications shall be replaced with specified plants at the Contractor's expense. Approval of plants for a project, either at the source, prior to planting or before final inspection, shall not be considered as final acceptance.

j. Substitution of Plants

No substitution of plant material will be permitted unless evidence is submitted in writing to the Engineer that a specified plant cannot be obtained and has been

unobtainable since the execution of the contract. If substitution is permitted, it will be by written approval of the Engineer for the nearest acceptable variety, size and grade.

k. Protection of Plants

Plants delivered to the project shall be protected at all times during handling, shipping, storage and planting. Plants shall be protected from windburn during transit, extreme weather conditions and drying of roots or rootballs. Any plant showing damage will be rejected by the Engineer and shall be replaced by the Contractor at his expense.

l. Kinds, Sizes and Quantities of Plants

The plans will call for the kinds and sizes of plants. The quantities listed on the plans and in the bid schedule are approximate, and the actual number required shall be as directed.

Sizes specified on the plans are minimums and larger plants may be furnished by the Contractor, at no extra charge to the City. Any plants substituted, as set forth in subsection XXXIV-B1(j), shall meet applicable quality requirements set forth in Section XXXIV-B1(b).

No material shall be planted until it has been inspected and approved by the Engineer.

2. FERTILIZERS

a. General

All fertilizers shall be of standard commercial manufacture and grade. Fertilizer, including plant tablets, shall be furnished in standard, unopened, moisture-proof containers and in dry condition. Granular or pelletized forms shall be free from lumps and caking.

Each container shall be marked with the weight and manufacturer's guaranteed analysis certifying the percentage of each ingredient. In addition, inorganic fertilizer shall be furnished with a Certificate of Analysis from the supplier stating the source of each component in the mixture.

Fertilizers shall conform to all State and Federal regulations and shall be subject to testing by the State Department of Agriculture.

Fertilizers shall be applied as indicated in subsection XXXIV-C7, shown on the plans or as directed by the Engineer.

b. Inorganic 22-16-8

This fertilizer shall analyze 22% nitrogen, 16% available phosphoric acid, 8% soluble potash, and include a minimum of 2% sulfur. The fertilizer shall contain not less than 30% available water-insoluble nitrogen derived by incorporating one of the following:

i. A minimum 800 lbs. of urea formaldehyde per ton of fertilizer which has a minimum Activity Index (AI) of 40. The AI shall be determined by the Association of Official Agricultural Chemists method.

ii. A minimum of 500 lbs. of Isobutylidene Diurea (IBDU) per ton of fertilizer.

c. Inorganic 5-4-3

This fertilizer shall analyze 5% nitrogen, 4% available phosphoric acid and 3% soluble potash. Four fifths of the nitrogen shall be derived from Hynite Tankage, 90% of which shall be cold water insoluble with an AI of 50. One fifth of the nitrogen shall be derived from sulphate of ammonia. The 4% available phosphorous shall be derived from 18% superphosphate. The 3% available potash shall be derived from muriate of potash. The source of calcium, magnesium and sulphur shall be calcium sulphate and dolomite limestone.

d. Plant Tablets 20-10-5

These, or approved equal, may be used instead of granular fertilizer for trees, shrubs, vines, and ground cover plants.

Plant tablets shall be tightly-compressed tablets or other form of controlled-release fertilizer with a minimum one year release period. Chemical formulation, rates, and use shall be as set forth in the Special Specifications or as approved by the Engineer.

3. SOIL CONDITIONERS

Soil conditioners are for modifying soil structure, as distinguished from plant foods and mulch. Soil conditioner shall be approved by the Engineer and shall be free of noxious weeds, living plants and rhizomes, and substances detrimental to plant life.

Soil conditioners shall be one of the following:

a. Spent mushroom growing compost.

b. Processed and composted unit plant residue (mint manure).

c. Peat moss as described in subsection XXXIV-B5(d).

d. Well-rotted pea vines.

e. A fully-composted nitrogen-fortified forest humus product (Soil-Aid) as manufactured by Boise Cascade Corp.

f. Other material as called for in the Special Specifications.

4. SOIL AMENDMENTS

a. Lime

This shall be either dolomite lime or a ground lime which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Ground lime shall be fine enough so that 50% will pass a 100-mesh sieve, and at least 98% will pass a 20-mesh sieve.

5. MULCH MATERIALS

a. General

All mulch materials shall be free of noxious weed seeds and plants and shall contain no substance detrimental to plant life. Mulch materials shall be indicated on the plans or in the Special Specifications and shall be approved by the Engineer.

b. Wood or Grass Straw Cellulose Fibre

This mulch shall be processed so that the wood or straw fibers will remain uniformly suspended under agitation in water. The mulch shall also blend with seed, fertilizer and other typical additives of a hydroseeding mixture to form a homogeneous slurry.

The processed mulch shall have the ability to cover and hold grass seed in contact with soil. The wood or grass straw fiber shall also have moisture-absorption and percolation properties to form a blotter-like ground cover. The cellulose fiber shall be colored green to visibly aid uniform application.

Wood or grass straw cellulose fiber shall be shipped in packages of uniform weight (±5%) and labeled with the manufacturer's name and air-dry weight.

c. Grass Straw

Straw mulch for non-hydroseeding applications shall be grass straw from bentgrass, bluegrass, fescue or ryegrass, singly or in combination. The straw shall not be moldy, caked, decayed or of otherwise low quality. The use of a straw binder or tackifier may be required by the Special Specifications.

d. Peat Moss

Peat moss shall be horticultural grade natural peat moss in air-dry condition and free from woody substances. Peat moss shall be furnished in bales or bags which are labeled for contents and volume.

e. Sawdust

Sawdust shall be free of chips, splinters, and strips.

f. Bark

Bark mulch shall be ground, shredded or broken particles from the bark of fir, pine, or hemlock trees. Bark shall be free of harmful bacteria, disease spores, pests and substances toxic to plant growth.

The mulch shall be the standard trade size known as "medium bark mulch". A 15-pound sample shall be submitted to the Engineer for visual inspection and approval prior to delivery of material to the project. The approved sample will be used as reference for acceptability of material used in the work.

6. GRASS SEED

Grass seed shall be installed as specified in Section XXXVIII and in accordance with the requirements of this section.

7. TOPSOIL

Topsoil materials shall be installed as specified in Section XXXV and in accordance with requirements of this section.

C. CONSTRUCTION

1. LAYOUT OF PLANTING

Outlines of planting areas shown on the plans are approximate only. The Contractor shall mark planting areas and stake plant locations in the field and so notify the Engineer. Planting shall not be started until the Engineer has approved the locations and layout.

2. PREPARATION OF AREAS FOR PLANTING

The boundary of plant beds shall be along generally curving lines as shown on the plans. The outer row of plants in a bed shall be placed one half the distance of their spacing from the boundary of the plant bed, for example; "Tamarix Juniper 5' o.c." place plants 2-1/2 feet from boundary.

Trees planted outside of plant beds shall have a 6-foot diameter circle maintained as a plant bed throughout the establishment period. Trees shown to be planted within street parkways (area between curb and sidewalk) shall have a plant bed width equal to the existing width of the parkway.

All vegetation to be cleared, large clods, rocks, debris and any excess soil shall be removed and disposed of in a satisfactory manner.

Areas receiving bark mulch, shall be leveled back from walks, pavement, and driveways to leave about 1-inch for the mulch. Edges of adjoining lawn areas shall be neatly trimmed. Areas with irregularities exceeding 1-inch below grade shall be repaired prior to placing bark mulch. Very steep slopes with vegetation to be removed may be prepared as set forth in subsection XXXIV-C2(b).

Planting areas shall be prepared by one or both of the following two methods as called for in the Special Specifications or shown on the plans:

a. Method "A" (Cultivated Areas)

Unless otherwise directed, these plant beds shall be cultivated to a depth of six inches. Cultivation shall occur prior to placing any topsoil. Any soil conditioners or other amendments called for by the Special Specifications or plans shall be thoroughly worked into the top six inches of the plant beds.

b. Method "B" (Non-Cultivated Areas)

Areas not requiring cultivation shall have existing vegetation, except plants to be saved, sprayed with the appropriate herbicide to kill all top growth and roots. After inspection

and approval, dead plant material shall be removed within 2 inches of the surface and disposed of in a satisfactory manner. Plant roots may be left in the soil. Any herbicide used shall have limited residual toxicity to permit safe planting as required under the contract. The Contractor shall, at his expense, furnish and plant replacements for any plants damaged by herbicide application.

3. EXCAVATION

Excavation of planting holes and trenches may be performed at any time during the spring and summer seasons or just prior to planting work in accordance with the following specifications:

a. General

Topsoil shall be kept separate from subsoil and rendered loose and friable. Alkali soil, subsoil, gravel or stones shall not be used in backfilling but shall be disposed of in a satisfactory manner.

The sides and bottoms of planting pits shall be scarified to eliminate any glazed surface.

If standing water is encountered in a planting hole the Contractor shall notify the Engineer so that corrective measures, if required, can be taken. Such corrective measures shall be performed as required by the Engineer and at the expense of the Contractor.

b. Trees

Diameter of pits for trees, measured immediately adjacent to the root ball, shall be at least 12 inches greater than that of the earth ball, or the spread root system of bare root trees. Tree bed area measurements at the finish ground surface shall be in accordance with subsection XXXIV-C2. Tree pits shall be not less than 2 feet depth or at least 12 inches below the bottom of the ball or the spread roots, whichever is the greatest.

c. Shrubs

Pits for shrubs shall be at least 12 inches greater in diameter than that of the earth ball, or the spread root system of bare-root shrubs. Shrub pits shall be not less than 1 foot deep and at least 6 inches below the bottom of ball or spread roots.

d. Vines, Ground Covers and Other Plants

Pits or trenches shall provide at least 6 inches around and beneath the spread roots or ball.

4. PLANTING

All planting work shall be performed using good horticultural practices.

Plants shall be planted in good quality topsoil, thoroughly mixed with soil amendments when specified. If sufficient suitable topsoil is not available from plant bed preparation, additional topsoil conforming to Section XXXV shall be furnished and placed by the Contractor. Determination of all topsoil suitability will be made by the Engineer.

Upright growing plants shall be set plumb and plants of the prostrate type shall be set normal to the ground surface. All plants shall be set so that, after settlement, they are at the same level as when growing in the nursery or container.

Plants shall be watered in during planting, as required, to eliminate air pockets and minimize settlement of the backfill. After fertilizer is placed, backfill shall be carefully tamped firm. A shallow, waterholding saucer shall be formed in the mulch. Any excess soil shall be disposed of by the Contractor in a satisfactory manner.

Balled and burlapped plants may be placed with the wrapping in place if all materials are untreated and biodegradable. When burlap is left around plants, any string shall be removed and the burlap folded down from the top half of the root ball.

The holes for vines and ground covers shall be watered before inserting the plants. Fertilizer as specified herein and/or in the Special Specifications shall then be placed in the planting hole and one inch of soil shall be added to protect plant roots. Immediately after placing vine or ground cover plants, the backfill shall be completely moistened.

Bark mulch may be placed before planting vines and ground covers and the plant holes made through the mulch.

5. CLEAN UP DURING CONSTRUCTION

The Contractor shall leave the project in a neat, orderly condition and remove unsightly material such as flats, cans, boxes and burlap at the end of each working shift.

6. SOIL CONDITIONERS

Soil conditioners shall be used where shown on the plans or as set forth in the Special Specifications and as directed by the Engineer. Soil conditioner shall generally be used in planting backfill mix or plant bed preparation.

7. FERTILIZING OF TREES, SHRUBS, VINES AND GROUND COVERS

Fertilizing as specified in the Special Specifications shall be done in two applications. The initial application shall be made at the time of planting and the second application shall be made just prior to the end of the establishment period.

8. PRUNING AND STAKING TREES

Pruning shall be done before the time of delivery and planting using good horticultural practice appropriate to the type of plant. Pruning shall remove all dead, damaged, crossed or rubbing twigs and branches and compensate for loss of roots during planting. Cuts shall be made close to the parent stem but not flush or through the bark "knob" at the branch joint. Cuts over 2 inches in diameter shall be treated with an approved tree wound dressing. All pruning cuts

shall be completely healed at time of delivery to project site. Any required pruning necessary after planting at the project will be done only upon approval or order of the Engineer.

Tree stakes shall be 2"x2" Douglas fir or Pine, construction grade or better either finished or rough sawn. All tree stakes shall be stained with a dark green penetrating oil stain approved by the Engineer. Tree stakes shall be 6 feet long for trees less than 8 feet tall and 8 feet long for trees 8 feet tall and taller. Tree stakes shall be placed parallel with the prevailing winds and driven vertically into the ground to a depth of 3 feet.

Tree ties shall be either of two types: (1) plastic chain-type, approximately 1 inch wide by 1/8 inch thick, or (2) rigid guy system, similar to those manufactured by Green Habit, Portland, Oregon.

When the plastic chain ties are used, all trees shall have two stakes. For a 6-foot stake, one plastic chain tie shall be located 2 to 6 inches below the top of the stake. An 8-foot stake shall have 2 plastic chain ties, with the bottom tie located about 12 inches below the top tie. Each plastic chain tie shall be crossed between the tree and stake, then wrapped once around the stake and securely fastened.

When the rigid guy system is used, one stake shall be required for deciduous trees and two stakes for conifer trees. The rigid guy shall be 9 gage galvanized wire with a plastic sleeve over that portion of wire around the tree. The rigid guy shall be at least 24 inches long, attached through a hole in the stake, and secured with fasteners. Six-foot stakes require one rigid guy and 8-foot stakes require two rigid guys.

9. BARK MULCH

Unless otherwise indicated on the plans or in the Special Specification, planted areas shall be uniformly mulched to a nominal 2-inch depth with fir, hemlock, or pine bark mulch.

Bark mulch shall be applied only after the bed is made free of weeds and debris and the surface is brought to a smooth and finished grade. All planting work, except for vine and ground cover planting, shall be completed prior to placing the bark mulch.

Bark mulch which is displaced, blown away, or placed to a greater than specified depth shall be corrected by the Contractor at his expense. Bark mulch shall be kept off plants, structures, roadways, rock shoulders, walks, and grass areas. Plants covered by mulch materials shall be completely uncovered as soon as possible.

The applied bark mulch shall present a smooth and even appearance as approved by the Engineer.

10. WATERING

All plants shall be watered at intervals as required to maintain and promote growth.

Water for use in planting and care of plants shall be obtained by the Contractor at his expense.

In watering shrub areas adjacent to lawns, the Contractor shall avoid excessive watering which may leach herbicide and damage the lawn. The Contractor shall repair any lawn so damaged at his expense.

11. SURFACE WEED CONTROL

To aid the Contractor in weed control during the establishment period, a granular pre-emergent herbicide approved by the Engineer may be applied. The herbicide shall be applied after planting, weeding and final grading are completed and before the application of mulch. Application shall be in accordance with the product label. The Contractor shall be responsible for any damage to plants caused by the herbicide.

12. PLANT ESTABLISHMENT AND REPLACEMENTS

The "plant establishment" shall be understood to be part of the planting work to assure satisfactory growth of the planted materials by the end of a period of time as hereinafter specified.

The Contractor's attention is directed to subsection E-4 of the General Conditions which states that, until final acceptance of the work under the contract, the Contractor shall be responsible for and shall repair any damage caused by traffic and shall bear the expense thereof. Pursuant thereto, the Contractor will be responsible for said damage both to the plants and the planting beds during the establishment period.

Prior to the beginning of the establishment period, all plants which are dead, partially dead or which do not otherwise meet specifications, shall be removed and replaced with healthy plants. All plants in place after this replacement will be classed as the "original planting" and will be subject to establishment.

The "plant establishment period" will begin when the "original planting" and all landscape construction under the contract has been completed and approved.

If the "original planting" is completed and approved prior to the end of the spring planting season (June 30th), the establishment period shall end October 31 of the same year.

If the "original planting" is completed and approved prior to the end of the fall planting season (December 31st), the establishment period shall end October 31 of the following year.

During the establishment period and until the final inspection, the Contractor shall be responsible for care of the planting to maintain a vigorous growing condition by watering, weeding, cultivating, pruning, repairing and adjusting tree stakes and guys, spraying for pest control, removal of dead plants or plants not showing vigorous growth, replacement of missing plants and remulching of planted areas when required.

The Contractor shall be responsible for the elimination of weeds and debris on the right of way between all seeded or planted areas and adjacent shoulders or paved areas until completion of the plant establishment period.

The cost of furnishing and replacing plants, and caring for the plants and adjacent areas as specified, shall be understood to be included in one or more of the listed pay items.

During the establishment period the Contractor shall make inspections jointly with the Engineer near the end of (a) one third of the establishment period, (b) two thirds of the establishment period and (c) the end of the establishment period.

At these inspections corrective work to be done as herein-before specified will be determined by the Engineer. Written notification, listing corrective work, will be mailed to the Contractor as soon as possible.

The corrective work shall be completed within fifteen calendar days after written notification has been mailed to the Contractor, except that plant replacements shall be made only during the appropriate planting season unless otherwise approved by the Engineer. The fifteen calendar days will not include those days that the Engineer determines it is impractical for work to be performed.

For each calendar day that corrective work is not completed after the aforementioned fifteen-day period has expired, a proportional amount of the monies otherwise due the Contractor for that inspection time shall be deducted from the contract as payment for liquidated damages accrued by the City. The amount of liquidated damages will be determined as follows: The number of calendar days from the written notification date to the next regular inspection time, minus the aforementioned fifteen days, equals the number of possible deduction days. The amount of money due the Contractor on the inspection day divided by the number of possible deduction days, will be the amount of damages deducted each calendar day. However, the damages per day will not exceed those listed in the Schedule of Liquidated Damages, subsection H-7 of the General Conditions. On days that the Engineer determines it is impractical for work to be performed, due to severe weather or other conditions and from the time the Contractor requests a reinspection in writing until the Engineer completes the reinspection, no deduction will be made. When the corrective work is completed, reinspection will be made and the Engineer will then authorize the proportional payment due the Contractor that the corrective work has been performed satisfactorily.

Plant replacements shall be of the same variety, size and quality as specified for the original plants. If balled and burlapped plants are not available, container grown plants shall be furnished.

After plant replacement work and any other required work has been completed, the Engineer will make a final inspection, at which time plant materials, planting beds and other facilities shall be in accordance with specifications as a prerequisite for acceptance.

D. MEASUREMENT

1. PLANT MATERIALS

The quantities of plant materials to be paid for will be the actual number of specified plants furnished, planted and accepted.

2. TOPSOIL

No separate measurement will be made for topsoil incorporated in the work as specified.

3. FERTILIZERS, SOIL CONDITIONERS AND SOIL AMENDMENTS

No separate measurement will be made for fertilizer, soil conditioners, and soil amendments incorporated in the work as specified.

4. MULCH MATERIALS

No measurement will be made for mulch materials required in planting, whether original or replacement.

E. PAYMENT

1. PLANTING

The unit pay quantities will be paid for at the contract unit price per each of the particular pay items as set forth in the bid schedule. Payment, as the applicable unit price, will be full compensation for all labor; plant materials; planting; staking; establishment; replacement work; furnishing and placing of fertilizers, and soil amendments; providing all tools and equipment; and the performance of all other work necessary to complete the work incidental thereto in accordance with the Standard and Special Specifications.

Pay items listed in the bid schedule will be in the form "Furnishing and Planting _ _____", wherein the blank will be completed by the insertion of the plant grouping under the botanical listing for trees, shrubs, vines and ground covers as indicated on the plant list.

The amounts of work and the value thereof to be allowed for the pay items in the partial payments to be made under the contract will be set forth in the lettered paragraphs which follow:

a. During the original planting, 70% of the contract unit price for each planted plant.

b. At the beginning of and during the plant establishment period, the amount of work and value thereof will be computed from the number of accepted planted plants in place multiplied by the appropriate percentage of the contract unit price.

Beginning of establishment	70 percent
At one third of establishment	80 percent
At two thirds of establishment period	90 percent

c. Upon expiration of the plant establishment period, the full amount earned under the planting work will be computed from the total number of planted plants inspected by the Engineer and found acceptable by him at that time, multiplied by the contract unit price.

Upon completion of any replacement planting, payment for the planting work will be made on the basis of partial payments and final acceptance and payment generally applicable to work under the contract, as set forth in subsection J-7 of the General Conditions.

2. TOPSOIL

The unit pay quantities of topsoil will be paid for as set forth in subsection XXXV-D.

XXXV. FURNISHING AND PLACING TOPSOIL

A. DESCRIPTION

1. SCOPE

This work shall consist of furnishing, excavating, loading and hauling topsoil, and of the placing of the topsoil on specified areas in accordance with these specifications.

B. MATERIALS

1. QUALITY REQUIREMENTS

Topsoil shall be a fertile, loamy, natural surface soil consisting of sands, silts, clays and organic matter in combination and free from substances toxic to plant growth, noxious weeds, roots, refuse, sticks and lumps.

2. ACQUISITION AND DEVELOPMENT OF SOURCES

Topsoil material shall be furnished from such independent and separate source or sources of suitable material as the Contractor may elect to use.

The acquisition, location and use of the sources shall be in conformance to the provisions of Section F of the General Conditions.

Each source of topsoil material shall be reasonably well drained and, prior to stripping, shall have healthy crops of grass or other vegetative growth, free from noxious weeds such as Canadian thistle, morning-glory, blackberry, horsetail, tansy ragwort or other plants designated as a noxious weed by authorized State or County officials. All heavy grass or other vegetation on sources of topsoil material shall be removed and disposed of prior to the taking of materials from the source. Ordinary sods need not be removed from the topsoil but if not removed shall be thoroughly broken up and intermixed with the soil.

Prior to the taking of topsoil material from any source, the Contractor shall give 10 days' notice to the Engineer of his intent to take material therefrom and the source and quality of the topsoil material intended for use shall be approved by the Engineer before the excavating of the topsoil material is commenced.

C. CONSTRUCTION

1. EXCAVATING

Excavating of topsoil material shall be selective from the sources to provide the most suitable material, and care shall be exercised to prevent fouling suitable material with subsoil or other extraneous matter. The excavating shall be to lines, cross sections and slopes approved by the Engineer. Sources shall be left in a neat, well trimmed condition.

2. HAULING

Topsoil material shall be transported to the designated areas on which it is to be placed in vehicles of relatively light wheel loading, preferably light dump trucks equipped with dual pneumatic tires. The hauling shall be done without damage to surrounding objects and without subjecting the topsoil and the areas on which it is placed to reasonably avoidable compaction. Existing roadbeds, shoulders, walks, curbs or other structures and areas which must be traveled, crossed or mounted shall be protected from damage caused by the hauling operations.

3. SPREADING AND FINISHING

Topsoil material shall be spread accurately and smoothly over the specified areas to the thickness, grades and slopes indicated in the Special Specifications, on the plans or as otherwise ordered by the Engineer. The methods used in the depositing and spreading of the material shall be such as will prevent compaction of the material, insofar as is practicable. The placing of the material during wet weather conditions which would tend to cause compacting of the material shall be avoided.

Topsoiled areas shall be finished to proper grades, contours and cross sections after which all topsoil not in a loose and friable condition shall be cultivated to a depth of not less than 4 inches and brought to surface condition ready for fertilizing and seeding operations.

The Contractor shall exercise care to avoid the wasting of topsoil material. Material placed contrary to the instructions of the Engineer or material placed elsewhere than as designated will not be paid for.

D. MEASUREMENT AND PAYMENT

Measurement and payment for furnishing and placing topsoil will be on a lump sum basis. Payment shall be full compensation for furnishing, excavating, loading, hauling and placing all topsoil; including all materials, labor, equipment, tools and incidentals necessary to complete the work as prescribed in this section.

XXXVIII. SEEDED LAWN CONSTRUCTION

A. DESCRIPTION

1. SCOPE

This work shall consist of the preparing, fertilizing, seeding, and establishment of seed grown lawns. The areas to be planted shall be as indicated on the plans and as designated by the Engineer.

2. CONSTRUCTION SEASON

Seeded lawn construction shall be performed only at times when local weather and other conditions are favorable to soil preparation and to germination and growth of grass seed.

B. MATERIALS

1. GRASS SEED

All grass and legume seed shall be delivered in standard, sealed containers. Each container shall be labeled with the following:

a. The variety of seed or the percentage of each variety in a mixture.
b. The percentage of germination.
c. The percentage of purity and weed content.
d. Date of the test.

All grass and legume seed shall be from blue tag stock and shall be the latest crop available. Each variety shall be tested and labeled in accordance with Oregon Laws and U.S. Department of Agriculture regulations. The seed shall have been tested within 9 months of the delivery date and shall not be moldy or show evidence of having been wet or otherwise damaged.

Seed minimum requirements shall be as indicated in the Special Specifications or the Oregon Seed Certification Standards. These standards are published in the current year's Oregon Certified Seed Handbook available from County Extension Offices or Oregon State University.

Each lot of seed shall be subject to inspection, sampling, and testing upon delivery to the project. Seed that is not labeled or that does not conform to specifications will be rejected.

2. FERTILIZERS

a. General

All fertilizers shall be of standard commercial manufacture and grade. Fertilizer, including plant tablets, shall be furnished in standard, unopened, moisture-proof containers and in dry condition. Granular or pelletized forms shall be free from lumps and caking.

Each container shall be marked with the weight and manufacturer's guaranteed analysis certifying the percentage of each ingredient. In addition, inorganic fertilizer shall be furnished with a Certificate of Analysis from the supplier stating the source of each component in the mixture.

Fertilizers shall conform to all State and Federal regulations and shall be subject to testing by the State Department of Agriculture.

Fertilizers shall be applied as indicated by the Special Specifications, shown on the plans or as directed by the Engineer.

b. Inorganic 22-16-8

This fertilizer shall analyze 22% nitrogen, 16% available phosphoric acid, 8% soluble potash, and include a minimum of 2% sulfur. The fertilizer shall contain not less than 30% available water-insoluble nitrogen derived by incorporating one of the following:

(i) A minimum 800 lbs. of urea formaldehyde per ton of fertilizer which has a minimum Activity Index (AI) of 40. The AI shall be determined by the Association of Official Agricultural Chemists method.

(ii) A minimum of 500 lbs. of Isobutylidene Diurea (IBDU) per ton of fertilizer.

c. Inorganic 5-4-3

This fertilizer shall analyze 5% nitrogen, 4% available phosphoric acid and 3% soluble potash. Four fifths of the nitrogen shall be derived from Hynite Tankage, 90% of which shall be cold water insoluble with an AI of 50. One fifth of the nitrogen shall be derived from sulphate of ammonia. The 4% available phosphorous shall be derived from 18% superphosphate. The 3% available potash shall be derived from muriate of potash. The source of calcium, magnesium and sulphur shall be calcium sulphate and dolomite limestone.

d. Plant Tablets 20-10-15

These, or approved equal, may be used instead of granular fertilizer for trees, shrubs, vines, and ground cover plants.

Plant tablets shall be tightly-compressed tablets or other form of controlled-release fertilizer with a minimum one year release period. Chemical formulation, rates, and use shall be as set forth in the Special Specifications or as approved by the Engineer.

3. SOIL CONDITIONERS

Soil conditioners are for modifying soil structure, as distinguished from plant foods and mulch. Soil conditioner shall be approved by the Engineer and shall be free of noxious weeds, living plants and rhizomes, and substances detrimental to plant life.

Soil conditioners shall be one of the following:

a. Spent mushroom growing compost.

b. Processed and composted unit plant residue (mint manure).

c. Horticultural grade peat moss free from woody substances.

d. Well-rotted pea vines.

e. A fully-composted nitrogen-fortified forest humus product (Soil-Aid) as manufactured by Boise Cascade Corp.

f. Other material as called for in the Special Specifications.

4. SOIL AMENDMENTS

a. Lime

This shall be either dolomite lime or a ground lime which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Ground lime shall be fine enough so that 50% will pass a 100-mesh sieve, and at least 98% will pass a 20-mesh sieve.

5. MULCH MATERIALS

a. General

All mulch materials shall be free of noxious weed seeds and plants and shall contain no substance detrimental to plant life. Mulch materials shall be indicated on the plans or in the Special Specifications and shall be approved by the Engineer.

b. Wood or Grass Straw Cellulose Fibre

This mulch shall be processed so that the wood or straw fibers will remain uniformly suspended under agitation in water. The mulch shall also blend with seed, fertilizer and other typical additives of a hydroseeding mixture to form a homogeneous slurry.

The processed mulch shall have the ability to cover and hold grass seed in contact with soil. The wood or grass straw fiber shall also have moisture-absorption and percolation properties to form a blotter-like ground cover. The cellulose fiber shall be colored green to visibly aid uniform application.

Wood or grass straw cellulose fiber shall be shipped in packages of uniform weight (±5%) and labeled with the manufacturer's name and air-dry weight.

c. Grass Straw

Straw mulch for non-hydroseeding applications shall be grass straw from bentgrass, bluegrass, fescue or rye grass, singly or in combination. The straw shall not be moldy, caked, decayed or of otherwise low quality. The use of straw binder or tackifier may be required by the Special Specifications.

d. Peat Moss

Peat moss shall be horticultural grade natural peat moss in air-dry condition and free form woody substances. Peat moss shall be furnished in bales or bags which are labeled for contents and volume.

e. Sawdust

Sawdust shall be free of chips, splinters and strips.

f. Bark

Bark mulch shall be ground, shredded or broken particles from the bark of fir, pine, or hemlock trees. Bark shall be free of harmful bacteria, disease spores, pests and substances toxic to plant growth.

The mulch shall be the standard trade size known as "medium bark mulch". A 15-pound sample shall be submitted to the Engineer for visual inspection and approval prior to delivery of material to the project. The approved sample will be used as reference for acceptability of material used in the work.

C. CONSTRUCTION

1. PREPARATION OF AREAS

Seeding areas shall be in a loose, friable, condition for a minimum depth of 6 inches and suitable for fine grading. Seeding areas shall be made substantially free of vegetative matter, stones, clods, roots, sticks, debris and other matter detrimental or toxic to the germination and growth of grass seed.

Seeding areas shall be at the established grades and shall be finished to provide good drainage and left level with the grades of adjacent walks, driveways and pavements.

Soil amendments and fertilizers shall be spread evenly over the seedbed at the rates specified in the Special Specifications, and then thoroughly incorporated into the upper 6 inches of the soil. The surface shall then be graded to a fine-textured, smooth and firm condition.

2. SEEDING

Seed, as a mixture, shall be sown uniformly on the prepared areas at the rates set forth in the Special Specifications, using such methods as the Contractor may elect. Seed shall then be worked into the soil to a depth not exceeding 1/4 inch.

Upon completion of the seeding, the ground surface shall be made free of ruts, footprints or other irregularities and uniformly covered with a light application of clean, aged sawdust, peat moss, organic mulch pellets or wood cellulose.

Areas that settle and collect water shall be brought to grade and reseeded as originally specified.

3. FERTILIZING

Fertilizer shall be Inorganic 22-16-8 and shall be applied uniformly in three separate applications as follows:

a. Once during seed bed construction prior to seeding.

b. Twice, at equal intervals, during the "establishment period".

4. ESTABLISHMENT OF SEEDED LAWN

a. General

The lawn construction work includes establishing all seeded lawn to a uniform, thick and healthy weed free growth of grass at the end of the "establishment period". "Weed free" refers primarily to perennial weeds and allows a tolerance of approximately one weed per 100 square feet of lawn. The establishment of the lawn shall be performed as a part of the contract and in conformance to the provisions set forth in this subsection.

b. Establishment Period

The seeded lawn establishment period shall begin on the day following the Engineer's approval of all grass sowing and terminate as follows:

(i) If the original lawn construction is completed and approved during the spring planting season, the establishment period shall end after the elapse of 75 calendar days.

(ii) If the lawn construction is completed and approved during the fall planting season the establishment period shall end when any necessary reseeding is completed near the beginning of the following spring planting season.

c. Lawn Establishment Work

The establishment of seeded lawn shall consist of the following:

(i) Protection

Planted areas shall be protected from trespass and other hazards or damage. Protective fences and signs shall be used at the discretion and expense of the Contractor. Any protective methods used shall be approved by the Engineer.

(ii) Fertilizing and Watering

Fertilizer shall be applied according to subsection XXXVIII-C3 and the Special Specifications.

Water shall be applied according to good horticultural practice under the prevailing conditions, as required to promote a healthy stand of grass. All water shall be obtained at the Contractor's expense.

(iii) Mowing

The first mowing of grass shall be done when the grass is approximately 3 inches tall, and the ground is firm enough to prevent rutting. After mowing, the grass shall be approximately 1-1/2 inches tall. Each subsequent mowing shall be done similarly. Grass clippings shall be removed from mowed areas no later than 3 days after the mowing.

(iv) Weeding

Lawns shall be kept reasonably "weed-free" throughout the establishment period. Methods used shall be in accordance with accepted lawn care practices.

(v) Restoration

Damaged, settled, or unproductive areas shall be restored to specified condition by the Contractor at his expense.

(vi) Cleanup

Grass clippings, weeds, litter, debris, stones and all other extraneous matter shall be removed from the lawn areas at appropriate times and shall be disposed of by the Contractor in a satisfactory manner.

(vii) Inspection

At the end of the establishment period, all lawn areas will be inspected by the Engineer. The grass shall be freshly cut and shall present the appearance of a healthy and well-cared-for lawn. The grass shall have a uniform green color and texture, and shall be free of weeds as set forth under subsection XXXVIII-C4(a). Any substandard areas, as determined by the Engineer at the end of the establishment period shall be promptly redone by the Contractor at his expense. Final payment for all lawn areas will not be made until 100% of the total lawn areas are in conformance with these specifications. The judgement of the Engineer as to conformance to these requirements will be final.

D. MEASUREMENT

1. GENERAL

Payment for the seeded lawn construction, as specified, will be made either (1) by the square yard, wherein each area will be measured to the nearest foot and computed to the nearest square yard; or (2) on a lump sum basis, wherein no measurement of area will be made.

E. PAYMENT

1. GENERAL COVERAGE OF PAYMENTS

Payment will be full compensation for furnishing and placing all materials, as specified, preparing the area, establishing seeded lawn and any necessary reworking; and for all labor, equipment, tools and incidentals necessary to complete the work prescribed in this section in an acceptable manner.

2. PARTIAL PAYMENTS

Partial payment will be made for up to 75 percent of the seeded lawn areas, upon inspection by the Engineer on the date of the halfway point of the establishment period.

The basis for determination of the allowable percentage of work areas to be paid for at the halfway date inspection will be as stated in subsection C4-c(vii). Partial payment may be made if, in the opinion of the Engineer, a uniform coverage of germinated seed is evident; and provided adequate protection, fertilizing, watering and weeding is being performed in accordance with subsection C4(c).

3. FINAL PAYMENT

Final payment for all lawn areas will be made when any and all substandard areas are re-worked and brought into conformance with these specifications as outlined in subsection C4-C(vii).

-XXXIX. WATER SYSTEM PIPE & FITTINGS

A. DESCRIPTION

1. SCOPE

This section describes the work necessary for furnishing, installing, and testing water pipe and fittings normally used for water supply and distribution systems.

2. CERTIFICATION

Furnish certification and test results properly executed by the manufacturer, showing compliance with the required specifications, as required in conformance with Section F-4, CERTIFICATION, of the General Conditions.

B. MATERIALS

1. GENERAL

Furnish the pipe and fitting materials, sizes, strengths, thickness classifications, and joint types as shown in the Plans and Special Specifications. Furnish catalogue data and/or shop drawings for all materials and fabricated items for approval prior to ordering or fabricating. For pipe with nominal diameters of 24 inches and larger, submit a pipe laying schedule, showing fittings and deflections at pipe joints.

2. DUCTILE IRON PIPE AND FITTINGS

a. Quality and Dimensions

Furnish ductile iron pipe conforming to ANSI/AWWA C151/A21.51. Furnish ductile iron fittings conforming to ANSI/AWWA C110/A21.10, or ANSI/AWWA C153/A21.53 for 3-inch through 12-inch fittings, and ANSI/AWWA C110/A21.10 for fittings larger than 12 inches. Furnish ductile iron flanged fittings conforming to ANSI/AWWA C110/A21.10.

Furnish pipe and fittings which are new and free of defects. Ensure that the pipe and fittings are sound, smooth and free from scales, lumps, blisters, sandholes, laps and defects of any nature which may be found unfit for the intended use. Plugging, filling, burning-in, or welding will not be permitted. Any pipe or fittings found to be cracked or otherwise defective will be unconditionally rejected.

Furnish pipe in uniform lengths of 18 or 20 feet with shorter lengths as required for closures and changes of alignment and grade. Ensure that the pipe is straight and with true circles in section with the inner and outer surfaces concentric. Ensure that the pipe and fittings, including stubs, bends, specials, joints, bulkheads, blind flanges, and plugs conforms to all detail requirements.

b. Joints

Furnish pipe and fittings with ends fabricated for push-on joints, flanged joints or mechanical joints, depending on the types of joints and the details specified.

For push-on joints, use a type which employs a single elongated, rubber, grooved gasket to effect the joint seal equal to the "Tyton Joint" as manufactured by the Pacific States Cast Iron Pipe Company and the United States Pipe and Foundry Company, or the "Fastite Joint" as manufactured by the American Cast Iron Company and conforming to ANSI/AWWA C111/A21.11. Provide gaskets and joint lubricant both conforming to ANSI/AWWA C111/A21.11 for all push-on joints.

For flanges on pipe, use threaded ductile iron flanges conforming to ANSI/AWWA C115/A21.15. For flanges on fittings, use fittings with flanges cast integrally with the fittings conforming to ANSI/AWWA C110/A21.10. Ensure that all flanges are drilled in accordance with ANSI B16.1, Class 125, unless otherwise specified. Provide full-faced gaskets, 1/8-inch in thickness between flanged joints. Provide flange bolts of the size and length conforming to ANSI/AWWA C115/A21.15 and ANSI B18.2. Ensure that bolts and nuts are threaded in accordance with ANSI B1.1, Class 2. Ensure that bolts and nuts are low carbon steel conforming to ASTM A307, Grade B.

For mechanical joints on pipe and fittings, use a joint that conforms to ANSI/AWWA C111/A21.11. Unless otherwise stated, use ductile iron glands with mechanical joints. Provide all accessories for mechanical joints, including nuts, bolts, gaskets, glands, and joint lubricant conforming to ANSI/AWWA C111/A21.11.

For restrained joint pipe and fittings, use a mechanical joint with the F-1058 retainer glands and set screws as manufactured by the Clow Corporation, 1050 East Irving Park Road, Bensenville, Illinois, 60106, or equal. Other acceptable restrained joints are the "Loc-Tyte" joint as manufactured by the Pacific States Cast Iron Pipe Company and the United States Pipe and Foundry Company, the "Locked Fastite" joint as manufactured by the American Cast Iron Company, and the "TR Flex" joint as manufactured by the United States Pipe and Foundry Company.

c. Lining

Furnish pipe and fittings with Type II cement mortar lining conforming to ANSI/AWWA C104/A21.4 and with a seal coat of bituminous material applied to the lining as specified in Section 4.12 of AWWA C104 standard.

d. Coating

Furnish pipe and fittings with an asphaltic outside coating approximately one mil thick conforming to ANSI/AWWA C151/A21.51 for pipe and ANSI/AWWA C110/A21.10 for fittings.

3. P.V.C. (POLYVINYL CHLORIDE) PLASTIC PIPE

Unless otherwise specified, furnish all P.V.C. pipe in conformance with AWWA C900. The pipe shall have elastomeric gasket joints conforming with ASTM D3139. Gaskets shall conform with ASTM F477 and ASTM D1869.

4. POLYETHYLENE (PE) PIPE

Unless otherwise specified, furnish all P.E. pipe in conformance with ASTM P.E. 3408, rated 200 P.S.I.

5. THRUST BLOCKS

Furnish Class 3,000-1 1/2 concrete (3,000 psi ultimate strength at 28 days of age and 1 1/2-inch maximum size aggregate) with a slump from two to four inches. Ensure that the design mix meets the requirements of Subsection XVIII - C1, PROPORTIONS.

For reinforcing of concrete, use deformed steel bars conforming to ASTM A615, Grade 60.

C. CONSTRUCTION

1. PREPARING TRENCH

Prepare the trench for pipe laying as specified in Section VI, TRENCH EXCAVATION, BEDDING AND BACKFILL, of these Standard Specifications. Grade the bottom of the trench by hand to the line and grade to which the pipe is to be laid, with proper allowance for pipe thickness and for pipe base when specified. The trench bottom shall form a continuous uniform bearing and support for the pipe between bell holes, except that the grade may be locally disturbed for removal of lifting tackle.

2. PIPE LAYING

Do not string the pipe along the street for more than 300 lineal feet unless authorized by the Engineer in writing. When stringing pipe, do not block driveways or otherwise interfere with the use of private property. Distribute the pipe so that no hazard will be presented to occupants of the adjoining property, pedestrians or vehicular traffic. Lift the pipe during unloading using a method approved by the manufacturer. When not being handled, support the pipe on timber cradles or on properly prepared ground, graded to eliminate all rock points and to provide uniform support along the full length. When being transported, support the pipe at all times in a manner which will not permit distortion or damage to the lining or coating. Replace or repair any pipe damaged in handling to the satisfaction of the Engineer. Payment will not be made for damaged pipe or repairs to such damaged pipe.

Repair all damages or flaws to the coating before the pipe is placed in the trench. Materials used for repair shall be the same as the material being repaired.

Thoroughly clean the ends of the pipe being joined by using a wire brush or other

method to remove all foreign matter from the pipe joint.

Prevent foreign material from entering the pipe, fittings and other accessories while being placed in the trench. Examine the interior of each length of pipe and every fitting and valve before lowering into the trench for installation. Remove any soil or debris observed either by brushing, scraping, or rinsing before the next pipe is placed. If the pipe cannot be placed into the trench and positioned without earth materials entering the pipe, the Engineer may require that wooden plugs or snugly fitted, tightly-woven canvas bags be placed over each end of the pipe before lowering it into the trench. In this event, leave the plugs or bags in place until the connection is to be made to the adjacent pipe. Whenever the workmen are not coupling the pipe, ensure that the last laid section of pipe is plugged, capped, or otherwise tightly closed to prevent the entry of trench water or other foreign materials. Keep debris, tools, rags or other materials out of the pipes at all times.

Follow pipe laying operations closely with joint coating operations as required and backfilling of trenches as specified in Section VI, TRENCH EXCAVATION, BEDDING AND BACKFILL. Schedule work so that at no time will more than 200 feet of pipeline trench be open at any time.

Lay pipe with it's bell end facing the direction of laying. For lines on an appreciable slope, face bells upgrade unless otherwise allowed by the Engineer. Whenever it is necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, do not exceed the specified allowable amount of deflection or that recommended by the pipe manufacturer. Where pipelines are intended to be laid in a straight line, do not deviate from a straight line in excess of one-inch for line and 1/4-inch for grade.

Do not lay pipe in water or when, in the opinion of the Engineer, trench conditions are unsuitable. Ensure that groundwater, surface drainage or any other foreign water does not enter the pipeline at any time during construction. Take all precautions to ensure that sewage, sludge, or other contaminants do not enter the pipeline. Ensure that no material enters the pipeline that is not needed for construction.

When groundwater or other water is found in or enters the trench, pump the trench dry before any pipe is placed and before protective plugs or caps are removed. If other fluids or contaminants are found in or enter the trench, remove them and clean the trench as directed by the Engineer.

In the event that groundwater, surface drainage or any other foreign water or other fluid enters the pipeline, disinfect the section of main exposed. Perform a chlorinating operation in the presence of the Engineer as follows:

(1) Prior to disinfecting, remove all dirt, sediment, and sludge from the main by brushing or flushing with water.

(2) Disinfect the main in accordance with AWWA C601 if no sewage or sludge has been present in the main. If sewage or sludge has been present in the main, spray a chlorine solution of approximately 200 mg/1 on all interior surfaces of the main. Then, fill the main with water containing chlorine such that upon completion of the filling operation, the water in the main shall

have a chlorine residual of at least 50 mg/1. Take care to prevent the strong chlorine solution water from flowing back into the water supply line.

(3) Retain the chlorinated water in the main for at least 24 hours. The chlorine residual of the water in the main at the end of the 24 hour period shall be at least 25 mg/1. Then, flush the main with water until the chlorine residual is less than 2 mg/1.

(4) Dispose of chlorinated water as specified in Subsection C-7, DISINFECTION.

3. JOINTING

a. Push-On Joint Pipe and Fittings

Lay pipe with push-on type joints in strict accordance with manufacturer's recommendations. Provide all special tools and equipment required for the installation. Thoroughly clean the groove and bell socket and install the gasket with uniform tension around the joint groove before placing the pipe in the trench. After cleaning dirt or foreign material from the spigot, apply joint lubricant to the bell and spigot in accordance with manufacturer's recommendations. Be sure that the plain end is beveled and push the plain end into the bell of the pipe. Keep the joint straight while pushing and make joint deflection after the joint is assembled within the limits recommended by the manufacturer.

b. Mechanical Joint Pipe and Fittings

Lay pipe with mechanical-type joints in strict accordance with manufacturer's recommendations. Provide all special tools and equipment required for the installation. Thoroughly clean the socket and plain end of the pipe. Wash the plain end, socket and gasket with a soap solution. Place the gland on the plain end with the lip extension toward the plain end, followed by the gasket with the narrow edge of the gasket toward the plain end. Insert the pipe into the socket and press the gasket firmly and evenly into the gasket recess. Slide the gland toward the socket and insert bolts and tighten nuts per manufacturer's recommendations. Keep the joint straight during assembly and make joint deflection after joint assembly but before tightening bolts. Ensure that joint deflection does not exceed the deflection recommended by the manufacturer.

c. Restrained Joints

Install restrained joints at the locations specified in the Plans, in accordance with the manufacturer's instructions for the type of restrained joint used. For retainer glands, make up the joint as specified in Subsection C-3b, MECHANICAL JOINT PIPE AND FITTINGS and then tighten set screws uniformly in the pattern and to the torques recommended by the manufacturer.

d. Flanged Joint Pipe and Fittings

Install flanged joints so that the contact faces are square and bear uniformly on the gasket and then are tightened with relatively uniform bolt stress. Ensure that flanged joints are watertight.

e. Screw Joint Pipe

Ream, clean and remove burrs and mill scale from piping before making up joint. Use joint compound acceptable for use with potable water. Cut all threads to the proper length and

depth so that the pipe extends into the fitting the full depth of the fitting threads.

4. FITTING INSTALLATION

Install fittings at the locations shown on Plans, specified or as directed. Handle, clean, and install the fittings as specified in the appropriate sections for laying pipe. Where a cut in the pipe is necessary for inserting valves, fittings, or closure pieces, cut the pipe mechanically without damaging it or its lining and leave a smooth end at right angles to the centerline of the pipe. Do not flame cut without approval of the Engineer. Dress and bevel the cut end of the pipe to remove sharp edges and projections which may damage the gasket. Repair all damaged lining and coating to the satisfaction of the Engineer.

5. ANCHORAGE

a. General

On all pipelines, securely anchor all tees, plugs, caps, and bends as shown on Plans, specified or as directed to prevent movement due to thrust. Achieve anchorage only by use of approved thrust blocking or approved joint restraint.

b. Thrust Blocking

Provide thrust blocking, as shown on the Plans, specified or as directed by the Engineer, using concrete as specified. Place the concrete blocking between undisturbed earth and the fitting to be anchored. The bearing surface shall be sized and located to adequately withstand the applied thrust force. Do not encase pipe joints or fitting joints with concrete. Wrap the pipe or fittings with two layers of 4 mil polyethylene plastic where pipe or fittings bear against concrete thrust blocks.

c. Joint Harness

Install harness rods as shown on Plans or as specified. Do not overtighten or pull pipe out of alignment, or damage pipe or pipe coating. Coat joint harnesses with Bitumastic 50, or equal, unless otherwise specified.

6. FIELD TESTING OF PIPE

Make leakage tests on all newly laid pipe in accordance with the following method:

Hydrostatic Test

This test method shall be used if rubber gasket push-on joints, mechanically-coupled joints, or partially-welded joints for thrust restraint are utilized. Prepare pipelines in place for hydrostatic testing by sealing the ends and securing the pipe to maintain line and grade and to prevent damage. Do not begin the hydrostatic test until the backfill has been placed, except for the areas where closure sections are planned and the Engineer is satisfied that adequate restraint against thrust has been provided at all horizontal joints, vertical bends, and the ends of the pipeline. Make all taps in the pipe as required and conduct the tests. Testing against closed valves will not be permitted without written authorization from the Engineer. Where any reach of pipe requires

concrete thrust blocks, do not make the pressure test until at least five days have elapsed after the concrete thrust blocks have been installed unless other approved temporary restraint is utilized. Furnish all equipment and materials for the test, including the following:

Amount	Description
2	Approved graduated containers
2	Pressure Gauges - calibrated in 2 psi increments
1	Pump approved by the Engineer
	Suitable hose and suction pipe as required

Unless otherwise required in the Plans and/or Specifications, conduct the pressure test so that the pipeline and any valved section thereof is subjected to a hydrostatic pressure of at least 150 psi.

Pipe installation will not be accepted if leakage is greater than the number of gallons per hour as determined by one of the following formulae:

$$L = \frac{ND(P^{1/2})}{7{,}400}$$

In the above formula:

L = Allowable leakage in gallons per hour
N = Number of joints in the length of pipe tested
D = Nominal diameter of the pipe in inches
P = Average test pressure during the leakage test in P.S.I.G.

or;

$$L = \frac{SD(P^{1/2})}{133{,}200}$$

Where:

L = Allowable leakage in gallons per hour
S = Length of pipe tested, in feet
D = Nominal diameter of the pipe, in inches
P = Average test pressure during leakage test, in P.S.I.G.

Provide all materials, air tanks, fittings, pumps, hoses, valves, meters, etc., necessary to fill and test the line. The City Water Department will provide the water to fill the

pipeline at no cost to the Contractor for the initial filling and one subsequent filling, if required. Water for additional line filling will be at the Contractor's expense.

Slowly fill the pipe with water to the test pressure as indicated in this section, while carefully expelling all air from the pipe. Apply and maintain the specified test pressure for a period of two hours and measure the leakage concurrently with the hydrostatic test during this period. During the entire two hours of the hydrostatic test, do not allow the pressure to vary more than $\pm$ 5.0 psi.

Repair any joints showing visible leakage or in which leaks can be detected by other means whether or not the total leakage in the system is less than that determined by the above formula. Replace defective pipe, fittings, or special fittings disclosed in the pressure tests with sound material and repeat tests until satisfactory results are obtained. Take particular care to ensure that all air has been purged from the section being tested. The cost of all repairs necessary to stop leaks shall be borne by Contractor.

When the pipe line has passed the hydrostatic test, remove enough water to allow the removal of the temporary bulkheads. The remaining water may be left in the pipeline.

7. DISINFECTION

After the hydrostatic test is acceptable, disinfect the main in accordance with the following procedure:

Before being placed in service, chlorinate all new mains and repaired portions, or extensions to existing mains, for not less than 24 hours with a chlorine solution with a concentration of 25 mg/liter. No service branch pipes will be connected and no connection will be made to the existing City water system until disinfection is complete and test results have been received showing that the pipe has successfully passed the bacteriological test.

Tightly close the inlet and outlet valves serving the section of main under disinfection during the entire disinfection period and take care to prevent unauthorized persons from operating these valves. Leave all other valves in the main being treated in an open position to assure contact of all internal parts with the chlorine solution. Retain the chlorine water mixture in the mains being disinfected at least 24 hours. After the 24-hour period, the free chlorine residual shall be checked, and if it is found to be less than 10mg/liter, the facilities shall be flushed, rechlorinated and rechecked until a final residual of 10 mg/liter or more is achieved.

When the chlorine residual check following the 24-hour period of disinfection is found to be 10 mg/liter or more, thoroughly flush the chlorine solution water from the line and dispose of the chlorine solution in an E.P.A. approved manner. Both the neutralization of the chlorinated water and the source for its discharge must be approved in writing by the Engineer.

Care should be taken that the extremities of the main are free of treated water before the line is placed in service.

Flush the chlorinated line until the treated water has been removed from the main as shown by the D.P.D. (N.N. Diethyl-P-Thenylene-Diamene) test. The water in the main shall be

comparable in quality to the water served to any consumer. Before any chlorinated main is placed in service to the consumer, notify the City Water Department at 359-3258, during regular working hours. The City Water Department will determine the suitability or nonsuitability of the water in the chlorinated main for consumer use. Suitability of the water in the main is based on the bacteriological test of the water performed by a qualified laboratory approved by the City water department, indicating whether or not coliform bacteria are present. When water is found to be unsuited for consumer use, the mains must be re-flushed and rechlorinated.

No extra payment or extension of time will be allowed the Contractor for the time elapsed to achieve acceptable sterilization of the pipe.

8. SANITARY SEWER CROSSINGS

In situations where a new waterline crosses an existing gravity sanitary sewer main, combination sewer or sanitary sewer lateral, the separation between the two shall be as follows:

a. Wherever possible, the bottom of the waterline shall be 1.5 feet above the top of the sewerline and one (1) full length (18 l.f.) of the waterline pipe shall be centered at the crossing.

b. Where it is not possible for the waterline to be 1.5 feet above the sewerline, or where the waterline passes under the sewerline, the existing sewerline shall be exposed for a distance of ten (10) feet on each side of the crossing and examined to determine the condition of the pipe and joints.

Depending on the conditions found, the sewerline shall be either replaced by a full length of PVC pressure pipe (ASTMO - 241, SDR 32.5), ductile-iron, Class 50 (AWWA C151), or other acceptable pipe; or else encased in a reinforced concrete jacket for a distance of ten (10) feet on both sides of the crossing.

c. The factors which shall be considered in evaluating the separation between waterlines and sewerlines shall include the materials and type of joint of both pipes, the soil conditions, compensating variations in the horizontal and vertical separations, and the space requirements for repair and maintenance.

Take all possible precautions to prevent sewage from entering the trench.

9. STORM SEWER REPLACEMENT

Remove and replace or support over the trench all storm sewer mains, service branches and inlet leads which are above the water pipeline. When supporting sewerlines over the trench, ensure that joints are supported adequately to prevent leaks from developing.

Replace or repair all other sewerlines which are broken, damaged or removed during construction. Replace sewers with ductile iron pipe of a diameter and class equal to the existing sewer pipe, or match existing sewer pipe material as directed by the Engineer.

The length of these replacements shall extend a distance of the waterpipe outside diameter plus ten (10) feet on each side of the crossing.

D. MEASUREMENT AND PAYMENT

1. PIPE

Measurement and payment for pipe will be made on a lineal foot basis for the various types and sizes of pipe listed in the Bid Proposal as actually installed. Pipe will be field-measured along the horizontal centerline of the pipe in place within the limits shown. The laying lengths of valves and fittings and specials listed as separate pay items in the Bid Proposal will be deducted from the measurement of the pipe. No payment will be made on any section or reach of pipe deemed unacceptable due to excessive leakage or other defects until such leakage and defects have been corrected. The cost of joints, bulkheads, blind flanges, plugs, temporary bracing, manufacturer's testing, field testing, disinfection, dewatering and cleanup will be incidental to the cost of the pipe and no separate payment will be made for these items.

2. FITTINGS AND SPECIALS

Unless otherwise stated in the Specifications, fittings listed as separate bid items in the Bid Proposal will be paid for at the unit price shown in the Bid Proposal for each fitting installed and approved. Where the fitting or outlet is fabricated into a length of pipe, the cost of the fitting or outlet shown in the Bid Proposal will be that cost necessary to fabricate the outlet or bend as specified. When fittings are fabricated in this manner, the measurement for pipe will continue through the fitting and the amount stated in the Bid Proposal for fitting or outlet will be that amount required to fabricate the fitting or outlet only. The cost of the short piece of outlet piping and its joint will also be covered under the cost of outlet as contained in the Bid Proposal. Fittings and special items will be measured on the unit price basis for each fitting or special item installed as approved and paid for at the price stated in the Bid Proposal. If any fittings or special items are not listed as separate bid items in the Bid Proposal, the cost of those fittings and special items will be considered incidental to the cost of the pipe and no separate measurement and payment will be made for these items.

3. THRUST BLOCKS

When listed in the Bid Proposal, payment for thrust blocks will be on a per each basis.

If thrust blocks are not listed as a separate bid item in the Bid Proposal, the cost of thrust blocks will be considered incidental and no separate measurement and payment will be made.

4. JOINT RESTRAINT

Unless otherwise shown in the Bid Proposal, joint restraint will be considered incidental to and included in the unit price bid for pipe or fittings.

5. SANITARY SEWER CROSSINGS

If sanitary sewer crossing replacement is not called out as a separate bid item in the Bid Proposal, measurement and payment for the replacement work or concrete encasement as caused by inadequate clearance, as stipulated in Subsection C-8, will be considered incidental to one or more of the aforementioned items. If called for as a separate item, measurement and payment will be on a per each basis.

6. STORM SEWER REPLACEMENT

All required storm sewer bracing or replacement work, as stipulated in Subsection C-9, shall be considered incidental to the water pipeline construction work and no separate payment will be made.

XXXX. WATER SYSTEM VALVES AND RELATED EQUIPMENT

A. DESCRIPTION

1. SCOPE

This section covers furnishing and installing the valves listed herein. The type and location of other special valves not listed herein will be specified and shown in the Plans and Specifications, when required. Furnish catalog data and/or shop drawings for all valves and valve boxes and obtain approval before ordering.

2. CERTIFICATION

Furnish certification and test results properly executed by the manufacturer showing compliance with the required specifications, as required in conformance with Subsection F-4, CERTIFICATION of the General Conditions.

B. MATERIALS

1. GATE VALVES

Gate valves shall conform to latest revision of AWWA, C509; shall be iron body, bonded elastomer (resilient) seat type, having a non-rising brass stem with a two (2)-inch square operating nut, and O-ring stem seals. Valves shall effect a bubble tight seal at a full differential of 200 psi when in the closed position. Each valve shall be tested from both directions by the manufacturer for sealing ability. Each valve shall also be tested in the open position at 400 psi resulting in a full shell test, and there shall be no leakage at any of the valve's joints or connections. All internal parts shall be accessable without removing the main body from the pressure line. All internal iron parts shall be completely protected with a corrosion resistant epoxy coating. The internal diameter of the water passageway shall be at least as large as the inside diameter of the intended connecting pipe. Valves are to open when turned counter-clockwise.

2. BUTTERFLY VALVES

Furnish Class 150B rubber-seated, tight-closure butterfly valves with flanged or mechanical joint ends as listed in the Bid Proposal and conforming to AWWA C504. Valves must be bubbletight when closed and subjected to a pressure of 150 psi with the flow from either direction. Valves must be satisfactory for applications involving throttling service and/or frequent operation and for applications involving valve operation after long periods of inactivity. Valves must resist the hydrostatic test pressure of 150 psi when open. Furnish valve bodies and flanges

constructed of cast iron conforming to ASTM A126, Class B.

Furnish valves for buried service operation with manual operators. Pin all operator extensions. Ensure that manual operators conform to AWWA C504. Provide an operator adequately sized to operate the valve up to and including maximum velocities of 16 feet per second and maximum working pressures of 150 psi. Provide an operator capable of operation of the valve with a totally unbalanced condition on either side of the disc. Ensure that the operator is designed to produce the specified torque with a maximum pull of 80 pounds on handwheel or chain operators, and a maximum input of 150 foot-pounds on operating nuts.

Provide manual operators of the traveling nut, self-locking type and designed to hold the valve in any intermediate position between fully open and fully closed without creeping or fluttering. Furnish operators equipped with mechanical stop-limiting devices to prevent over travel of the disc in the open and closed positions. Provide operator housing, supports and connections to the valve with provisions for four-bolt mounting. Furnish operators with a 2-inch square operating nut which are fully gasketed and grease-packed for buried service. Provide valves that open with a counterclockwise rotation of the nut. On 6-inch through 30-inch diameter valves, provide operator components to withstand an input torque of 450 foot-pounds at the extreme operator position without damage.

Furnish discs that will rotate 90° from the full open position to the tightly shut position. Furnish valve seats of a natural or synthetic rubber compound, mounted on the valve disc or in the valve body.

Furnish valve thrust bearings of the two-way type. Furnish shaft seals employing standard split-V packing or O-rings.

Valve shafts shall be constructed of wrought stainless steel or Monel.

3. VALVE BOXES

Use standard 8" diameter Portland-style City of Forest Grove valve boxes, having cast iron top section and cover. Valve box extensions shall be 8-inch diameter Schedule 40 PVC.

C. CONSTRUCTION

1. VALVES

Set valves in the same manner as previously specified for installation of pipe. Clean the face of flanges thoroughly before assembling the flanged joint. Insert the gasket and tighten the nuts uniformly around the flange. Align pipe carefully on both sides of the valve before final tightening of the flanges to avoid stressing the valve body. After installation, operate the valve from full open to full closed to make sure that the valve does not bind during operation. Correct any malfunction

in the operation of the valve. Test valve joints with the adjacent pipeline. Repair any leaks as previously specified. Backfill around valves in the same manner as specified for pipe.

When valves are installed to a depth such that the valve nut operator is 4 feet or more below finish grade, a valve operator extension shall be installed.

2. VALVE BOXES

Center the valve boxes and set plumb over the operating nut of the valve. Set valve boxes so they do not transmit shock or stress to the valve. Set the valve box covers flush with the surface of the finished pavement or to such other level as may be directed. Cut the extensions to the proper length as required for proper installation. Ensure that the backfill is the same as that specified for the adjacent pipe. Correct any misalignment of valve boxes without additional expense to the Owner.

3. VALVE PADS

Where required and indicated on the Plans, set valve pads on undisturbed earth in the trench bottom. Construct valve pads with reinforcing steel to the dimension shown on the plans. Set the valve pads to the elevation as shown so that when the valve is installed, it will rest on proper grade in contact with the valve pad. Concrete shall be as specified in Section XXXIX - B5, THRUST BLOCKS. Allow five days curing time before placing the valve on the pad.

D. MEASUREMENT AND PAYMENT

1. VALVES

Measurement and payment for each size and type of valve will be on the unit price basis as shown in the Bid Proposal, and includes the complete valve in place with valve pad and valve box as required.

2. VALVE BOXES

Measurement and payment for valve boxes and lids will be included in the payment for valves installed as specified.

3. VALVE PADS

Measurement and payment for valve pads will be included in the payment for valves installed as specified.

XXXXII. WATER SYSTEM CORROSION CONTROL

A. DESCRIPTION

1. SCOPE

This section includes materials, testing, and installation of joint bonds, test stations, reference cells, galvanic anodes, and polyethylene encasement. Furnish catalogue data for all corrosion control materials and obtain approval before ordering.

B. MATERIALS

1. EXOTHERMIC WELDS

Furnish molds, cartridges, and all required materials for exothermic (copper) welding as produced by "Cadweld", Erico Products, Inc., or equal. Provide molds and cartridges as recommended in writing by the manufacturer. Use "Cadweld" F-33 alloy or equal for connections to steel pipe. For connections to ductile iron pipe, "Cadweld" F-33 alloy or equal may be used if field testing indicates that it works adequately. Otherwise, use "Cadweld" XF-19 alloy or equal. Use "Cadweld" XF-19 alloy or equal for all connections to cast iron pipe. Welder molds shall be graphite; ceramic molds are not acceptable.

2. EXOTHERMIC-WELD CAPS

Furnish exothermic-weld caps of high-density polyethylene plastic, 15 mils (minimum) thick, as manufactured by Royston Laboratories, Phillips Petroleum, or equal. Provide caps that incorporate a dome for the weld, a tunnel to contain the lead wire from the weld connection, and a baseplate to cover the prepared pipe surface. The dome tunnel and baseplate shall be filled with an elastomeric adhesive 125 mils thick.

3. WIRE

Wire for joint bonds and galvanic anodes shall be single-conductor, stranded brass, with 600-volt type TW or THW or THWN insulation, except No. 12 AWG wire or smaller shall be solid and not stranded. Provide the wire size shown in the Plans or as specified.

4. GALVANIC ANODES

Supply galvanic anodes of the quantity, composition, dimensions, metal weight, and packaged backfill specified by the Engineer. Unless specified otherwise, zinc anodes shall meet the requirements of ASTM B418-73, Type II and magnesium anodes shall meet the requirements of ASTM AZ 63A, Type II or High Potential Magnesium Alloy, Galvmag, Dow Patent No. 2805198. The anodes shall be prepackaged in a permeable cloth bag containing the manufacturer's prescribed

backfill and the packaged anode shall be a minimum of 2.5 times the bare anode weight. The anode lead wire shall be connected by the manufacturer and it shall be of an unspliced length specific to the application but not less than 10 feet. Anode type(s) shall be as specified in the Special Specifications.

5. INSULATING FLANGES, FLEXIBLE SLEEVE COUPLINGS, CASINGS, WALL PENETRATION SLEEVES

Furnish flange dielectric insulators as the product of a single manufacturer. Flange insulation shall include a Type E insulating gasket, insulating sleeves, and insulating washers for both sides of the flange. The gasket shall have an integral facing to obtain a watertight seal. Asbestos is not an acceptable material.

Furnish flexible sleeve coupling insulators with two insulating boots, one for each pipe end.

Furnish pipe casing insulators with dielectric runners and a dielectric liner if the insulator collar is metallic. Furnish dielectric casing end seals with stainless steel bands or provide insulating wall sleeves as casing seals.

Furnish wall sleeves consisting of dielectric compression disks and insulated pressure plates.

6. POLYETHYLENE ENCASEMENT

Furnish 8-mil polyethylene encasement in accordance with AWWA C105-82, tube type encasement. Polyethylene sheet is not acceptable.

7. SAND

Furnish clean sand conforming to the requirements of AASHTO M45.

C. CONSTRUCTION

1. EXOTHERMIC WELDING AND UNDERGROUND ELECTRICAL CONNECTIONS

Unless specified otherwise, all electrical connections to the pipe shall be by exothermic welding. Remove a window of any existing coating on the pipe and grind the exposed metal surface to produce a bright metal finish, equivalent to Steel Structures Painting Council SP-5.

After completing any required testing of the completed exothermic weld connection, coat the connection as follows:

The wire connection to mortar-coated pipe or concrete cylinder pipe shall be covered with a mortar coating of 1 part Portland cement to not more than two parts fine aggregate. The connection to uncoated or dielectrically-coated pipe shall be covered with an exothermic-weld cap applied directly to the pipe. Coat areas of damaged coating that extend beyond the weld cap with Koppers, Bitumastic 50, Tenemec 46-450, or equal mastic coating.

2. GALVANIC ANODE INSTALLATION

Unless specified otherwise, anodes shall be installed 1 foot below the pipe invert and 5 feet perpendicular to the edge of the pipe or alternately 5 feet below the pipe invert and up to 3 feet perpendicular from the pipe edge. Do not place the anodes within 3 feet of a neighboring metallic structure. When anodes are distributed along the pipeline, alternate the perpendicular offset from one side of the pipe to the other. Install the anode in clean, native backfill and not in the select bedding material. Compact the soil to 95 percent of maximum density as determined by ASTM D 698-78 (delete paragraph 5.1), to 1 foot above the anode.

3. WIRING

All wiring is to be splice-free, except where splices are specified or shown in the plans. All underground connections must be pre-approved in writing by the Engineer. Coil and snake buried wire in a slack fashion to prevent stress from backfill operations and earth settlement. All wire is to be buried a minimum of 24 inches below finish grade or installed in rigid conduit. All wire connections to test station terminal boards are to be made with crimp-on ring terminals. Repair any damage to the wire insulation with 2 layers of self-adhering butyl
rubber electrical tape, Scotch No. 130C or equal, and overwrap with 2 layers of vinyl electrical tape, Scotch No. 88 or equal. Spirally apply each layer at 50 percent overlap. This repair method is not applicable to repair of anode wire for impressed current systems.

4. POLYETHYLENE ENCASEMENT

When specified, install polyethylene encasement, tube type, on all pipe and appurtenances. Install this encasement in accordance with AWWA C105-82, Method A, one length of polyethylene tube for each length of pipe. The use of polyethylene sheets will not be allowed.

5. SAND ENCASEMENT

When specified, install clean sand in accordance with details on Plans and/or as specified in the Special Specifications.

D. MEASUREMENT AND PAYMENT

Any items under this section which are specifically shown as items on the bid proposal form will be bid and paid accordingly. All items under this section which are not specifically shown as separate items on the bid proposal form must be included in the price bid for the

pipeline, and no additional payment will be made for them. The bid prices, whether covered as separate items or as part of the pipeline price, includes all costs for labor, equipment and materials required for a complete installation as shown in the contract documents.

XXXXIV. ENVIRONMENTAL CONTROLS

A. GENERAL

1. The City of Forest Grove requires temporary and permanent measures for all construction projects to lessen the adverse effects of construction on the environment.

The Contractor shall properly, install, operate and maintain both temporary and permanent works as provided in this section or in an approved plan, to protect the environment during the term of the project.

The City may in addition require that a construction project be scheduled so as to minimize erosion or other environmental harm.

Nothing in this section shall relieve any person from the obligation to comply with the regulations or permits of any federal, state, or local authority.

2. Notwithstanding the terms of any approved environmental protection plan, the City may temporarily suspend the work, require additional or different protection measures if it appears, based upon observed conditions of the project, that the approved plan is insufficient to prevent environmental harm, and that such suspension or additional measures will prevent or minimize such harm.

B. EROSION CONTROL

The Contractor shall prepare an Erosion Control Plan and comply with all requirements of **City of Forest Grove Ordinance No. 89-13** relative to erosion control. The Erosion Control Plan shall be submitted to the Engineer for review. The plan shall show Contractor's protection techniques to control soil erosion and sediment transport prior to any work beginning on the project.

The Contractor shall minimize the length of time the disturbed work area is exposed to potential erosion by proper scheduling, limiting work area, and restoration of disturbed areas.

1. DUST PREVENTION

During all phases of work, the Contractor shall minimize dust to the extent practicable, utilizing all measures necessary. The following are some methods that can be used: sprinkling haul and access roads and other exposed dust producing areas with water; applying dust palliatives on access and haul roads; sweeping of asphalt surfaces; placing wood chips or other effective mulches on vehicle and pedestrian use areas; and pre-wetting cut and borrow area surfaces and use of covered haul equipment.

2. STREET CLEAN UP

The Contractor shall clean all spilled dirt, gravel, or other foreign material caused by the construction operations from all streets and roads at the conclusion of each day's operation. Cleaning shall be by brushing and hand labor unless approved otherwise by the Engineer. **Dirt, mud and debris shall not be washed or brushed into storm drain inlets or catch basins.**

C. CONTROL OF NOISE LEVELS

Construction noise shall be minimized by the use of proper engine mufflers, protective sound reducing enclosures, and other sound barriers. Construction activities producing excessive noise that cannot be reduced by mechanical means shall be restricted to locations where their sound impact is reduced to a minimum at the edge of the work area.

D. NATURAL VEGETATION

1. As far as is practicable, the natural existing vegetation shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage to limbs and roots. Pre-construction pruning of selected vegetation by the contractor may be required to ensure clearance for heavy equipment. In addition, special care shall be exercised by the Contractor to prevent compaction of root zones. Trees shall not be used as anchors for stabilizing working equipment.

2. Where natural vegetation has been removed, or the original land contours disturbed, the site shall be re-vegetated as soon as practicable after construction has commenced, except where construction of pipeline will be followed by paving or other hard surface restoration.

E. MEASUREMENT AND PAYMENT

Unless listed separately in the Bid Proposal, Environmental Controls shall be considered incidental to the Contract.

Payment for Erosion Control measures will be paid on a lump sum basis and shall cover cost for furnishing, installing, maintaining, removal and restoration of all facilities and/ or measures shown on the Contractor's plan submittal; including the cost of any changes or additions as directed by the Engineer throughout the duration of the project.

XXXXV. MAILBOX RELOCATION

A. SCOPE

All existing mailboxes within the project work area will be relocated to their original site if temporary removal is required.

B. MATERIALS

Contractor shall utilize existing mailboxes and install on new posts. Posts shall be treated wood, S4S.

C. CONSTRUCTION

Construction shall be to the original location or as directed by the U.S. Postal Department through the Engineer. Location with reference to centerline stationing will be subject to Engineer approval. Access to mailboxes will be provided at all times. Contractor shall provide temporary mailbox locations if required.

D. PAYMENT

No separate payment. Mailbox relocation shall be considered incidental to the project bid.

ELM STREET
LOCAL IMPROVEMENT DISTRICT

WORK ORDER NO. 8194

SPECIAL SPECIFICATIONS

March 1995

ELM STREET
LOCAL IMPROVEMENT DISTRICT
WORK ORDER NO. 8194

INTRODUCTION

The Standard Specifications of the City of Forest Grove (current edition), as amended herein, these Special Specifications, the Invitation to Bid, the Bid Proposal, the Contract for Construction, the Plans, the Standard Details and the supplemental specifications and appended hereto or referenced herein, all addenda issued prior to the execution of the Contract for Construction, and all modifications thereto comprise the "Contract Documents" or the "Contract".

The work embraced herein shall be performed in accordance with the current City of Forest Grove Standard Specifications, Standard Details and General Conditions, insofar as the same may apply and in accordance with the following Special Specifications and the approved construction plans.

Supplemental specifications and provisions are referenced in these Special Specifications and apply to work performed upon land or rights-of-way, owned and/or under the jurisdiction of the following:

1. Oregon Dept. of Transportation - Highway Division
2. Unified Sewerage Agency of Washington County

GENERAL CONDITIONS

The General conditions of the City of Forest Grove, Washington County, Oregon, for use as part of this Contract are amended as follows:

A. DEFINITIONS

Engineer:

Modify to read:

The Director of Public Works of the City of Forest Grove or his authorized representative.

B. PROPOSAL REQUIREMENTS

4. LATE PROPOSALS

Add:

Delivery of the Proposal to the City of Forest Grove is the sole responsibility of the bidder.

6. EXAMINATION OF PLANS, STANDARD PLANS OR DRAWINGS, SPECIFICATIONS AND SITE WORK

Add:

It is understood that the plans, specifications and other contract documents do not purport to control the method of performing the work, but only the requirements as to the nature of the completed work. The Contractor assumes the entire responsibility for the method of performing and installing the work. Suggestions as to the method of performing and installing the work required in the contract documents shall be deemed advisory only and the feasibility of such methods, or lack thereof, shall not affect the Contractor's liability or status as an independent Contractor under this contract.

8. ADDENDA TO CONTRACT DOCUMENTS

Add:

If deemed necessary by the Engineer that an addendum or addenda be issued but that in the opinion of the Engineer insufficient time exists to ensure all planholders receive such notice by mail prior to the bid opening, such addendum or addenda shall be made available for all planholders

to obtain through the office of that Engineer. **IT SHALL BE THE PROSPECTIVE BIDDER'S RESPONSIBILITY TO ENSURE THAT HE HAS RECEIVED ALL ADDENDA TO THE CONTRACT DOCUMENTS PRIOR TO THE BID OPENING BY INQUIRY TO THE CITY OF FOREST GROVE.** Call Steve A. Wood, Engineering Department, at 1-503-359-3232 to confirm the latest issue of addenda.

11. BID PRICES TO COVER ENTIRE WORK

Add:

Costs for labor, equipment, and material required to complete the project but not identified as specifically included in individual proposal items shall be absorbed in other bid items.

C. AWARD AND EXECUTION OF CONTRACT
(No Changes)

D. SCOPE OF WORK

8. RECORDS

Add:

A true and accurate record of the location of all branches, laterals, clean-outs, dead-end stubs and other connections and appurtenances, called for by the contract documents, shall be kept by the Contractor, and such record shall be furnished to the Engineer no later than upon completion of the work. Records ("as-builts") of all deviations from the plans whether directed by the City or not, shall be included and provided to the Engineer on a clean set of blueline plans (provided to the Contractor for that purpose).

E. CONTROL OF WORK

4. RESPONSIBILITY OF THE CONTRACTOR

Add:

It will be the direct responsibility of the Prime Contractor to insure that each and every Subcontractor will not only be issued a complete set of construction plans (and specifications) but also to insure that these plans are on the project site and in use when the Subcontractor is performing his portion of the project.

5. NOTIFICATIONS RELATIVE TO CONTRACTOR'S ACTIVITIES

Add:

The Contractor, as directed by the Engineer, shall communicate with affected local residents apprising them of construction activities and work schedules. Such open communication shall be continuous for the duration of the project.

6. UTILITIES AND EXISTING IMPROVEMENTS

Add:

Forest Grove Light and Power Department and Forest Grove Public Works Department will be working in the project area relocating and/ or adjusting facilities as required by the project. Gas, telephone, and cable television companies may also have some facilities that may require adjusting and/ or relocating due to this project. If underground utility relocations and/ or adjustments are not complete at the time the Contractor commences work on this project, **the Contractor shall schedule and conduct his operations so as to provide the time needed for such utility installation work during the progress of the improvement.**

The downstream sanitary sewer connection and the south water main tie, both located on the north side of the railroad, is proposed for construction as a developer-construct project and accepted completion of that work is anticipated within 21 days after notice-to-proceed has been

issued. Full cooperation is required of both contractors to obtain a completed system that complies fully to the standards and policies of the City of Forest Grove.

8. PROTECTION OF SURVEY MARKERS

a. Permanent Survey Markers

Modify first paragraph to read:

Prior to commencement of any construction activity, the Contractor shall locate, identify, mark, and inventory existing survey monumentation. When construction is completed the Contractor shall make a comparative site examination. Monumentation determined lost or disturbed shall be replaced and a survey of record filed. **All relevant work shall be performed by a Professional Land Surveyor licensed by the State of Oregon.** Survey monuments located within pavement areas shall consist of a 3/4" diameter x 30" long iron pipe capped with a 2" diameter convex brass or aluminum cap securely set in the top of the pipe and accurately punched to identify the exact point. As the work described herein is considered incidental to the project, no separate payment will be made.

F. CONTROL OF MATERIALS
(No Changes)

G. LEGAL RELATIONS AND RESPONSIBILITIES

14. PUBLIC SAFETY AND CONVENIENCE

Add:

For public convenience, unless stated or approved otherwise, **working hours** shall be limited to **7:00 A.M. through 6:00 P.M.**

15. PERSONAL SAFETY

Modify heading to read:

PERSONAL SAFETY - PROTECTION OF LIVES AND HEALTH

Add:

The Contractor shall comply with U.S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (Public Law 91-596 and all subsequent amendments) and under Section 107 of the Contract Work Hours and Safety Standards Act (Public Law 91-54 and all subsequent amendments).

The Contractor shall have a **competent person or persons**, as required under the Occupational Safety and Health Act, on the site to inspect the work and to supervise the conformance of the Contractor's operations with the regulations of the Act.

The project is subject to all of the Safety and Health Regulations (CFR 29, Part 1926 and all subsequent amendments) as promulgated by the U.S. Department of Labor on June 24, 1974 and CFR 29, Part 1910 and all subsequent amendments, to include 29 CFR 1926 Subpart M (Amended) and Subpart P (Amended) October 31, 1989, General Industry Safety and Health Regulations Identified As Applicable to Construction. Contractors are urged to become familiar with the requirements of these regulations.

Prior to entering public-owned confined spaces the Contractor will be required to secure a *CONFINED SPACES PERMIT* from the City of Forest Grove in accordance with OSHA Federal Regulation 29 CFR 1910.146 and OAR 437-02-140 (Oregon-initiated rule which adopts by reference the new 1993 Federal regulations).

Contact: **City of Forest Public Works Department Bus. 503-359-3258**
2551-A 23rd Avenue FAX 503-357-6060
Forest Grove, OR 97116

H. PROSECUTION AND PROGRESS OF WORK

3. NOTICE TO PROCEED

Add:

"On-site" work shall not begin until such time as the Contractor has labor, tools, equipment and all materials on the project without delaying the work, and the Contractor is ready to prosecute the work to completion in a continuous and efficient manner.

For the purpose of these Specifications, "on-site" shall be understood to mean any physical construction work at the project site.

4. CONTRACT TIME

Add:

The completion time for this project from commencement of contract time (stated in the "Notice to Proceed") to project completion (including time for correcting deficiencies), is **100 CALENDAR DAYS.**

J. MEASUREMENT AND PAYMENT

2. SCOPE OF PAYMENT

Add:

Payment for work will be in accordance with unit and/or lump sum prices as shown in the bid proposal for actual work performed or installed.

7. PROGRESS PAYMENTS

Modify last paragraph as follows:

Progress payments will be prepared on or about the **last day** of each month and are payable to the Contractor within 30 days after receipt of the invoice from the Contractor.

STANDARD SPECIFICATIONS

The current Standard Specifications of the City of Forest Grove, Washington County, Oregon, for use as part of this contract are amended as follows:

I. MOBILIZATION
(No Changes)

II. TEMPORARY TRAFFIC CONTROL

C. CONSTRUCTION

C.2 TRAFFIC CONTROL WITHIN THE PROJECT

Add:

The Contractor shall **submit** a construction **traffic control plan** to the Engineer for approval prior to proceeding with any construction which impacts traffic or properties within the vicinity of the project. **Particular consideration shall be given to insure that local access is maintained on Elm Street, 9th and 10th at all times.**

Elm Street shall remain open to local traffic. Street closures with "flagger controlled" traffic will be permitted only for those brief periods while equipment is working directly in the traveled way.

All temporary devices and their installations, for the protection and direction of traffic (vehicular and pedestrian), shall conform with the latest issue of the Manual of Uniform Traffic Control Devices, as amended by the State of Oregon.

C.4 ONE WAY PILOTED TRAFFIC CONTROL

Delete references to pilot car and driver.

D. MEASUREMENT AND PAYMENT

Add:

D.2 LUMP SUM BASIS

Measurement and Payment for temporary traffic control will be made on a lump sum basis when shown in the bid proposal.

III. CLEARING AND GRUBBING

C. CONSTRUCTION

C.3 CLEARING

Add:

Unless otherwise indicated on the plans all vegetation adjacent to the work area shall be protected from the work. All pruning, trimming, shrub relocation and the like shall conform to standard practices of the landscape industry.

IV. EARTHWORK

C. CONSTRUCTION

C.2 EXCAVATION OF EXISTING IMPROVEMENTS AND MISCELLANEOUS

Add:

Where pavement, sidewalk, curbing, walls or other similar facilities are to be removed, the Contractor shall either remove those facilities to the nearest cold joint or saw cut to a neat and straight line those facilities as indicated on the plans or as marked in the field by the Engineer.

C.7 COMPACTION AND DENSITY REQUIREMENTS

Modify to read:

The density of compacted materials in place will be determined by ASSHTO T191, T205, or T238 and the maximum density by ASSHTO T99.

All following paragraphs remain unchanged.

D. MEASUREMENT AND PAYMENT

D.4 SUBGRADE FOUNDATION/STABILIZATION MATERIALS

Add:

Subgrade foundation removal and placement of stabilization material will be paid **only** when approved and authorized by the Engineer prior to removal of such material.

D.5 PAYMENT

Modify as follows:

Payment for unclassified excavation and embankment in place will be paid on a lump sum basis. Subgrade foundation/stabilization will be paid on a cubic yard basis.

V. WATERING
(No Changes)

VI. TRENCH EXCAVATION, BEDDING AND BACKFILL

B. MATERIALS

B.3 PIPE ZONE

Add:

Pipe zone material shall be clean well-graded crushed rock (3/4-inch minus). At sewer lines and clean sand at water lines. Native material not allowed in pipe zone.

C. CONSTRUCTION

A.8 UNDERGROUND OBSTRUCTIONS

Removal of existing inlet, removal and capping of abandoned utilities encountered shall be part of this work item.

C.1a. (TRENCH EXCAVATION) Open Trench Limit

Add:

Trench opened within the right-of-way shall be backfilled and surfaced with a temporary pavement at the close of each working day or otherwise covered sufficiently to sustain traffic unless approved otherwise by the Engineer. Engineer may require temporary pavement at contractor's expanse if contractor does not maintain travelling surfaces over backfilled trenches.

C.2 DEWATERING

Modify last paragraph to read:

High water table is anticipated and dewatering of ground water shall be included.

C.6 TRENCH BACKFILL

Add:

Unless otherwise specified or directed by the Engineer, backfill within pavement/hard-surface areas shall be backfilled with Class B backfill. Areas outside of pavement/hard-surface areas may be backfilled with approved select native material (class A backfill). All class A backfill for this project shall be sufficiently compacted to support landscaping without subsequent surface settlement. Water settling of trench backfill will not be permitted.

C.8 SURFACE REMOVAL AND REPLACEMENT

Add:

c. Permanent surface replacement shall consist of 1 1/2 inches of Class `C' A.C. pavement mix over a minimum base course of 2 1/2 inches of Class `B' A.C. pavement mix. Total of 4 inch minimum thickness A.C. mix, compacted in place. Increase base course thickness, as necessary to match existing, if total existing thickness exceeds 4 inches.

D. MEASUREMENT AND PAYMENT

D.6 PAYMENT

Add to pay item

Dewatering Lump Sum

D.7 MEASUREMENT OF DEWATERING

Measurement shall include all labor, material, and equipment to provide and maintain pumps, well points, sumps, suction and discharge lines and other dewatering system components necessary to convey water away from excavations. Include in cost any permits, sampling/testing

required by Unified Sewerage Agency of Washington County.

D.8 MEASUREMENT FOR REMOVAL OF UNDERGROUND OBSTRUCTIONS

No separate measurement and payment will be made. It shall be considered incidental to trench excavation.

VII. STORM DRAINAGE PIPE AND FITTINGS

C. CONSTRUCTION

Add:

All new storm drainage pipe and fittings shall be tested with same procedures as outlined for sanitary sewer. (See Section VIII., these Special Specifications)

VIII. SANITARY SEWER PIPE AND FITTINGS

B. MATERIALS

Add:

B.6d. Transition Fittings. When adjoining different types of pipes, the Contractor shall use approved ridged fittings. Flexible fittings will not be approved.

1) PVC couplers or adapters shall meet the ASTM 3034-SDR 35/C900-DR 18-D1784 specifications.

C. CONSTRUCTION

C.12 VIDEO INSPECTION OF GRAVITY SYSTEMS

All sanitary and storm systems shall be video inspected and taped prior to U.S.A. or City acceptance of the systems. If the system is video inspected by a private firm, a U.S.A. or City representative shall be present during the taping. A copy of the video tape, and written TV Inspection Report, on an approved form, shall be supplied to U.S.A. and the City. The video tape shall be recorded in color, on VHS format.

C.13 VIDEO INSPECTION FOR WARRANTY ACCEPTANCE

The sanitary and storm systems shall be video inspected during the one-year warranty period to determine any defects in the system that are to be corrected by the contractor. The inspection for sanitary shall be completed during wet weather periods of the year.

C.14 DEFLECTION TESTING OF FLEXIBLE PIPE

The Contractor shall conduct deflection tests of sanitary sewers constructed of flexible pipe. The testing shall be conducted by pulling an approved mandrel through the completed line. The diameter of the mandrel shall be 95 percent of the pipe nominal inside diameter.

Testing shall be conducted on a manhole to manhole basis and **shall be done after the line has been completely balled and flushed out with water.** The tests shall be conducted not less than 30 days after the trench backfill and compaction has been completed and may be conducted concurrently with video inspection.

IX. SERVICE LINE SEWERS

A. DESCRIPTION

Delete: "and connections"

Add: No connections to on site sewage systems is required for this project.

B.2 PIPE AND FITTINGS FOR SERVICE

Modify subsection d. to read:

d. Polyvinyl Chloride Pipe (PVC)
Polyvinyl chloride pipe shall conform to the requirements of ASTM D3034.

B.5 SERVICE CONNECTION MARKERS

Amend to read:

Service connection markers shall be new, one-piece pressure-treated Douglas fir or hem-fir; or untreated cedar or redwood. All shall be 2" x 4" or 2" x 6" utility grade or better. The top two feet shall be painted white and include a reference to pipe depth, stenciled with black paint on the white.

Wherever possible, service laterals shall also be marked by "wet-imprinting" the letter "S" into new P.C. concrete curbs during curb installation.

Add:

B.7 SERVICE LINE AS BUILT DATA

Contractor shall accurately map asbuilt locations of new and unused service sewer line ends within 0.5 feet accuracy, both horizontally and vertically, and supply such data to the Engineer.

3. SERVICE LINE SEWERS

Service line sewers will be paid for on a linear foot basis for the actual length of pipe installed to property line, unless directed or approved otherwise by the Engineer.

X. MANHOLES, CATCH BASINS, INLETS AND AREA DRAINS

B. MATERIALS

Add:

The requirements of Section 4.03.1 and 4.03.2 of the Unified Sewerage Agency "Construction Standards" (R&O 91-47, as amended by R&O 91-75) are hereby incorporated by reference into these Special Specifications. These requirements shall add to and/or replace applicable provisions of the Standard Specifications.

C. CONSTRUCTION

Add:

The requirements of Section 4.03.3, 4.03.4, 4.03.5 and 4.10 (testing and acceptance) of the Unified Sewerage Agency "Construction Standards" (R&O 91-47, as amended by R&O 91-75) are hereby incorporated by reference into these Special Specifications. These requirements shall add to and/or replace applicable provisions of the Standard Specifications.

D. MEASUREMENT AND PAYMENT

D.1 MANHOLES

Modify to read:

Measurement and payment for manholes will be made on a per each basis as listed in the Bid Proposal.

Payment shall constitute full compensation for each manhole constructed to its full depth with all required specialties including, but not limited to chimney seals, connections with existing/ new sewer lines, and any additional work required to construct the new manhole complete and in place.

D.3 Manhole and Catch Basin Connections
(Delete this section)

XI. CONCRETE DRIVEWAYS, SIDEWALKS, CURBS AND GUTTERS
(No Change)

XII. SUBGRADE
(No Change)

XIII. AGGREGATE BASES

D. MEASUREMENT AND PAYMENT

1. MEASUREMENT

Modify to read:

Measurement will be on a square yard basis.

2. PAYMENT

Modify to read:
Payment will be made on the basis of square yards of specified thicknesses of aggregate base.

XIV. ADJUSTMENT OF INCIDENTAL STRUCTURES TO GRADE

E. PAYMENT

Add:

2. INCIDENTAL

Unless particular individual pay items are specifically included in the Proposal for this work, any work which may be referenced to this section shall be considered incidental to other required work and no separate payment thereof will be made.

XV. ASPHALT CONCRETE PAVEMENT

B. MATERIALS

1. GENERAL

Add:

All asphaltic concrete pavement specified or called for by the contract plans shall be either Class `B' or Class `C', per the Standard Specification for highway construction latest edition.

2. ASPHALT

Modify to read:

Asphalt shall be PBA-2 that meets the requirements of Section 02710 of the Standard Specifications for highway construction.

7. TACK COAT ASPHALT

Modify to read:

Tack coat asphalt shall be asphalt emulsion SS-1h per the Standard Specifications for highway construction.

C. CONSTRUCTION

1. PREPARATION OF FOUNDATION

Add:

Connection of new work to existing shall be made at clean vertical saw cut joints, which vertical surfaces shall be treated with a tack coat prior to placement of new asphalt-concrete pavement.

Delete the following subsections:

D. MEASUREMENT

E. PAYMENT

Add:

D. MEASUREMENT AND PAYMENT

1. TACK COAT ASPHALT

Tack coat asphalt will be considered incidental work to asphalt-concrete paving for which no separate payment will be made.

2. ASPHALT-CONCRETE PAVEMENT

Measurement and payment of asphalt-concrete pavement shall be on a square yard basis for the various class and in-place thickness listed in the bid proposal. Asphalt-concrete driveway approach item shall include associated aggregate base. Asphalt-concrete sidewalk transitions and associated aggregate base shall be considered incidental for which no separate measurement or payment will be made.

XVI. CLEAN UP
(No change)

XVII. EARTHWORK FOR STRUCTURES
(No change)

XVIII. CONCRETE
(No Change)

XIX. SURFACE REPLACEMENT
(This section of the Standard Specifications is deleted for this project.)

XX. REINFORCING STEEL
(No Changes)

XXI. REINFORCED HOLLOW UNIT MASONRY
(This section of the Standard Specifications is deleted for this project.)

XXII. PORTLAND CEMENT CONCRETE PAVEMENT
(This section of the Standard Specifications is deleted for this project.)

XXIII. ASPHALT TACK COAT

A.1 **Modify** third "of" to read "or".

B.1 **Modify to read:**

Tack coat asphalt shall be asphalt emulsion SS-1h per the Standard Specifications for highway construction.

XXIV. GUARD RAIL AND BARRIERS
(This section of the Standard Specifications is deleted for this project.)

XXV. TRAFFIC DELINEATORS
(This section of the Standard Specifications is deleted for this project.)

XXVI. PRESERVATIVE TREATMENT FOR TIMBER
(No Change)

XXVII. SIGNS
(This section of the Standard Specifications is deleted for this project.)

XXVIII. GEOTEXTILE FABRICS

E. PAYMENT

No separate payment will be made. Geotextile at outfall will be considered incidental to that item.

XXIX. REMOVAL OF EXISTING SIGN INSTALLATIONS

A.1 **Add:**

Relocation of existing signs, mail box set and (1) new stop sign are included in this work item.

C. MEASUREMENT

Add:

2. RELOCATION OF EXISTING SIGN INSTALLATIONS

The quantities to be paid for will be the actual number of sign units reinstalled in permanent new sign or mail box set locations on new wood sign posts. The sign unit may consist of one or more signs, all mounted on one or more new support posts to form a single sign unit. Relocation will include any temporary locations required during construction prior to permanent installation.

D. PAYMENT

Add:

2. RELOCATION OF EXISTING SIGN INSTALLATIONS

The accepted quantities will be paid for at the contract unit price per each. Payment will constitute full compensation for furnishing and placing all materials, performing all relocations including all labor, tools, equipment necessary for each permanent relocation, complete. Payment for furnishing new wood support posts shall be included in the contract unit price for sign relocation and no separate payment will be made.

XXX. WOOD SIGN POSTS

E. PAYMENT

No separate payment will be made as this work shall be considered incidental to sign relocation.

XXXI. THERMOPLASTIC PAVEMENT MARKINGS

D. MEASUREMENT

Delete all and add the following:

Measurement and payment for thermoplastic pavement markings will be made on a Lump Sum Basis as set forth in the Bid Proposal.

Delete:

E. PAYMENT

XXXII. PAVEMENT MARKERS
(This section of the Standard Specifications is deleted for this project.)

XXXIII. ROADSIDE SEEDING AND MULCHING
(This section of the Standard Specifications is deleted for this project.)

XXXIV. PLANTING TREES, SHRUBS, VINES AND GROUNDCOVERS

Add:

C.12 Establishment period shall in no case be less than 12 months.

D.5 Measurement for 12 month Establishment Period Watering and Maintenance shall be on a Lump Sum Basis.

E.3 Payment for 12 month Establishment Period Watering and Maintenance will occur after final acceptance of planting work. No interim payments will be made.

XXXV. FURNISHING AND PLACING TOPSOIL
(No Change)

XXXVI. PERMANENT PAVEMENT STRIPING
(This section of the Standard Specifications is deleted for this project.)

XXXVII. WILDFLOWER SEEDING
(This section of the Standard Specifications is deleted for this project.)

XXXVIII. SEEDED LAWN CONSTRUCTION

B. MATERIALS

1. GRASS SEED

Add:

Seed mix shall be "Pro Time Brand Supreme Mix" or Engineer approved equal.

C. CONSTRUCTION

2. SEEDING

Add:

Seed shall be sown uniformly at the manufacturer recommended rates.

Add:

C.4 Establishment period shall in no case be less than 12 months.

D.2 Measurement for 12 month Establishment Period Watering and Maintenance shall be on a Lump Sum Basis.

E.3 Payment for 12 month Establishment Period Watering and Maintenance will occur after final acceptance of planting work. No interim payments will be made.

XXXIX. WATER SYSTEM PIPE & FITTINGS

B. MATERIALS

2. DUCTILE IRON PIPE AND FITTINGS

Add to paragraph 2.a:

Ductile iron mechanical joint fittings (MJ) shall conform to ANSI/AWWA CI53/A21.53-88 cement-mortar lined.

Ductile iron flanged fittings (FL) shall conform to ANSI/AWWA C110/A21.10-87 cement-mortar lined, or latest edition.

Add:

6. SPOOLS

Class 125 Flanges unless specified otherwise.

7. TUBING

Polyethylene Tubing: ASTM PE 3408, 200 PSI, UHMW Class 200
Acceptable Brands: Drisco 5100
Westflex Gold

8. FLANGED COUPLING ADAPTERS

City of Forest Grove approved couplers:

SIZE	MANUFACTURER	OD RANGE/INCHES	CATALOG #
3"	ROMAC	3.80-4.05	FCA 501-4.05-3X
	JCM	3.80-4.17	301-0396
	This range covers 3" DI (3.80) and 4" OD Steel (4.00)		
4"	ROMAC	4.50-4.81	FCA 501-4.81-3X
	This range covers 4-1/2" Steel (4.50) and 4" DI Steel (4.80)		
6"	ROMAC	6.90-7.10	FCA 501-7.10X
	JCM	6.90-7.20	301-0690
8"	ROMAC	9.05-9.30	FCA 501-9.30X

JCM 9.05-9.40 301-0905

Do not include set screws or flange bolts

9. COMPRESSION FITTINGS

Ford	Grip Nut (G)
McDonald	"T" Series Nut (T)
Muellar	110 Compression Fitting
Jones	Super Grip Compression Fitting (SG)

CTS - Copper Tube Size

10. APPROVED FITTING MANUFACTURERS:

All brands accepted: Muellar, Jones, McDonald, Ford, etc. as long as the fittings meets the City of Forest Grove description.

Examples:	Corp Stops	Ford F500	IP x IP
		Ford F1100	MIP x Compression
		Ford F1000	AWWA x Compression
	Angle Stops	Ford KV43-332W	Locking Wing Nut, Meter x Compression
		Ford FV43-666W	Locking Wing Nut, Meter Flange x Comp. Used this style for 1-1/2" & 2" Meters
	Couplings	Ford C44-33	Straight Coupling Comp x Comp
		Ford C14-33	FIP St. Adapter FIP x Comp
		Ford C84-33	MIP St. Adapter MIP x Comp
		Ford L84-33	MIP 1/4 Bend MIP x Comp
		Ford L14-33	FIP 1/4 Bend FIP x Comp

XXXX. WATER SYSTEM VALVES AND RELATED EQUIPMENT

B. MATERIALS

1. GATE VALVES

Add:

External body of valve shall be epoxy coated.

Acceptable manufacturers and models:

Clow
Kennedy Ken-Seal II
M & H Style 4067
US Pipe Metroseal 250

3. VALVE BOXES - RISERS

Change to:

8" CI GATE VALVE BOX BODY/PORTLAND STYLE #5-603A
8" CI GATE VALVE BOX LID/PORTLAND STYLE #5-603B

Bitumous Coating
Grind off "Portland, OR"

1.5" CI GATE VALVE BOX RISERS/PORTLAND STYLE #5-604A
2" CI GATE VALVE BOX RISER/PORTLAND STYLE #5-604B

8" 3034 PVC SEWER PIPE / Sets on Valve, CI box Slides up and down for Height Adjustments

4. METER SETTERS

5/8" x 3/4" Meter Setter:	Ford VB-72-82W-41-33-G McDonald 39-207WXTD33
	Locking Wing Nut Ball Type Angle Stop Inlet CTS/PE Compression Outlet Dual Purpose Nut
1" Meter Setter:	Ford VB-74-84W-41-44-G McDonald 39-409WXTD44

5. TAPPING SLEEVES

US Pipe Ductile Iron T-28 Dual Compression Seal Tapping Sleeve or Equivalent

6. PIPE RESTRAINTS/UNIFLANGES

Uniflanges - Romac Filed Flange with Torque head that shears off Standard "Kwik-Flange" with Auto Tork Set Screws.

7. SOCKET CLAMPS

Size Range: 4 through 24 inch.

Material: Two carbon steel half bands and four bolts and nuts.

Finish: Galvanized.

Service: Clamps mechanical joint piping or mechanical joint or socket joint fittings together thus stopping separation or distortion of pipe line under excessive water pressure.

Approvals: Complies with the requirements of the National Fire Protection Association Standard NFPA-24 for Outside Protection.

8. PARKWAY METER BOXES

3/4"	Meter Boxes:	Brooks 36H	Body & concrete cover with CI hinged lid
1" & 1-1/2"	Meter Boxes:	Brooks 38H	Body & concrete cover with CI hinged lid
2"	Meter Boxes:	Brooks 65H	Body & concrete cover with CI hinged lid

***See comparison chart for boxes that are supposed to interchange with Brooks

Brooks	Meter Box Equip.	Christy
36H 10½" x 17¼"	66H	B9XG LID/B9XBOX BOX
38H 13" x 24"	68H	
65H 17" x 28"	69h	
36T	66T	B9-61G LID/B9XBOX BOX
38T	68T	
65TR 17" x 28"	69ST	

9. DRIVEWAY METER BOXES

3/4"	Brooks 36T
1" & 1-1/2"	Brooks 38TR
2"	Brooks 65TR

10. VAULTS

1. Fiberglass Vaults made by Northwest Utilities Products, PO Box 6064, Sister, OR 97759.

2. Concrete Vaults made by Utility Vault, Wilsonville, OR.

11. FIBERGLASS REINFORCED PLASTIC UTILITY VAULT

Utility vaults shall be manufactured of continuous strand fiberglass mat, unsaturated polyester isopthalic resin, silica and alumina hydrate for fire resistance.

Utility vaults shall be manufactured to nominal dimensions as shown below.

Vault structure shall conform to H-20 wheel loading requirements and sidewalls shall withstand saturated earth loading conditions without deflection.

Structure shall incorporate a top flange and a bottom flange for proper load bearing.

Optional diamond plate steel traffic lid shall withstand H-20 traffic loading and shall be provided with four brass bolt down bolts upon customer request.

Fiberglass non traffic lid shall withstand 1000 pounds loading without deflection and shall withstand 3000 pound loading without failure. Four brass bolt down bolts shall be provided upon customer request.

A fiberglass flat bottom plate shall be available at customer option.

DIMENSIONS

	FEET			INCHES						
MODEL	W	L	H	W1	L1	FW	T1	T2	T3	T4
V-443	4.0	4.0	3.0	---	---	4.0	0.25	0.25	0.25	0.25
V-444	4.0	4.0	4.0	---	---	4.0	0.25	0.25	0.25	0.25
V-445	4.0	4.0	5.0	---	---	4.0	0.25	0.25	0.25	0.25

V-453	4.0	5.0	3.0	---	1.0	4.0	0.25	0.25	0.25	0.25
V-454	4.0	5.0	4.0	---	1.0	4.0	0.25	0.25	0.25	0.25
V-455	4.0	5.0	5.0	---	1.0	4.0	0.25	0.25	0.25	0.25
V-463	4.0	6.0	3.0	---	2.0	4.0	0.25	0.25	0.25	0.25
V-464	4.0	6.0	4.0	---	2.0	4.0	0.25	0.25	0.25	0.25
V-465	4.0	6.0	5.0	---	2.0	4.0	0.25	0.25	0.25	0.25
V-483	4.0	8.0	3.0	---	4.0	4.0	0.25	0.25	0.25	0.25
V-484	4.0	8.0	4.0	---	4.0	4.0	0.25	0.25	0.25	0.25
V-485	4.0	8.0	5.0	---	4.0	4.0	0.25	0.25	0.25	0.25
V-663	6.0	6.0	3.0	2.0	2.0	4.0	0.25	0.25	0.25	0.25
V-664	6.0	6.0	4.0	2.0	2.0	4.0	0.25	0.25	0.25	0.25
V-665	6.0	6.0	5.0	2.0	2.0	4.0	0.25	0.25	0.25	0.25
V-683	6.0	8.0	3.0	2.0	4.0	4.0	0.25	0.25	0.25	0.25
V-684	6.0	8.0	4.0	2.0	4.0	4.0	0.25	0.25	0.25	0.25
V-685	6.0	8.0	5.0	2.0	4.0	4.0	0.25	0.25	0.25	0.25

XXXXI. WATER SYSTEM HYDRANTS

(This section of the Standard Specifications is deleted for this project.)

XXXXII. WATER SYSTEM CORROSION CONTROL

B. MATERIALS

1. EXOTHERMIC WELDS

Change:

"Caldweld" F-33 to "Caldweld" CA15

Last sentence; change to read:

Welder molds shall be "Caldweld" GAHAA1G.

3. WIRE

Change to read:

Wire for joint bonds shall be #12, Solid Copper, Bare

4. GALVANIC ANODES

Add:

Anodes shall be: #32, Certified, Hi Pot Magnesium with 10 Ft #12 TW, Solid Lead

Add:

8. APPROVED VENDORS

Farwest Corrosion Control
17311 S. Main St.
Gardena, CA 90248-3105
Phone: 310-532-9524
Fax: 310-532-3934

Acme Tool
480 SE Market St.
Portland, OR 97214

Pagel Electric 357-4013

General Pacific 257-0327
Western States 653-8619

Maydwell & Hartzell
PO Box 1049
Tualatin, OR 97062-1049
Phone: 503-692-0575
Fax: 503-692-5910

XXXXIII. HORIZONTAL EARTH BORING AND JACKING

(This section of the Standard Specifications is deleted for this project.)

Add the following section:

XXXXIV. ENVIRONMENTAL CONTROLS

A. GENERAL

Add:

3. Contractor shall not operate any water valves or take water from any fire hydrants without first securing the appropriate permits and approvals from the City.

B. EROSION CONTROL

Add:

Erosion control vegetation and storm drain water quality facility vegetation must be completely established prior to City's acceptance of public improvements.

D. NATURAL VEGETATION

Add to paragraph 1

Fertilize and water natural vegetation as required to assure its survival during the construction period.

Deterioration of "establishment" shall be at the sole discretion of the City.

XXXXV. MAILBOX RELOCATION

(No change)

Add the following section:

XXXXVI. PROJECT SIGN

General Specifications

1. Description

   a. One project identification sign shall be provided and installed by the Contractor.

2. Product Delivery, Storage and Handling

   a. Install project sign before any construction is started. Maintain sign for the duration of the construction.

   b. Remove sign within ten (10) days of Final Certificate of Payment.

i. Fill all post holes.
ii. Finish site area as directed by Engineer.

3. Ownership

a. Upon removal of sign, sign and posts shall belong to owner as identified in the construction contract.

4. Material

a. 3/4" plywood (4' x 5'), grade B-B high density, exterior, good two sides, conforming to PS-1.

b. Supports, 4" x 4" p.t. D.F. posts. Provide length as necessary for two (2) foot clearance at grade and three (3) foot embedment of posts.

c. Paint shall be white background, deep green gloss lettering.

d. Type face shall be Helvetica with letters not to exceed 3 3/8" high or less than 2 3/3" high.

e. Information shall be all capital letters, all lines centered. Approximate layout:

ELM STREET
LOCAL IMPROVEMENT DISTRICT
WORK ORDER NO. 8194

A COOPERATIVE COMMUNITY IMPROVEMENT
PROJECT WITH THE CITY OF FOREST GROVE

YOUR STATE AND LOCAL TAX DOLLARS
BEING REINVESTED IN YOUR COMMUNITY

5. Installation

a. Locate sign as directed by Engineer.

b. Contractor shall post all required project posting on the back of the sign under a weatherproof transparent cover (visqueen, plastic, etc.)

6. Payment

No separate payment.

Project Sign shall be considered incidental to the project bid.

City of Forest Grove

Memo

To: Paul Downey, Finance Director

From: Rob Foster. Public Works Director RAF

CC: Bev Maughan, Executive Assistant

Date: 7/2/2003

Re: Special Public Works Fund, Project #B95009

Please see the attached request from Oregon Economic & Community Development Department. This is the result of a conditional grant awarded in May 1995 for Elm Street in Forest Grove. My office has checked with our Community Development Department and has found that there have been no permits issued for this property. Therefore, the property is still classified as undeveloped and repayment is not necessary at this time.

Elm St. 1017

July 1, 2003

OREGON ECONOMIC & COMMUNITY DEVELOPMENT DEPARTMENT

RECEIVED
JUL 01 2003
FOREST GROVE ENGINEERING DEPT.

Rob Foster, City Engineer
City of Forest Grove
PO Box 326
Forest Grove, OR 97116

RE: Special Public Works Fund, Project No. B95009, ($23,000), City of Forest Grove, Infrastructure Improvement (Japan America Beverage Co.)

Dear Mr. Foster:

The city received a Special Public Works Fund award on May 15, 1995. The conditional grant in the amount of $23,000 becomes due and payable once the property, identified as a beneficiary of the award, is developed. The department considers any property to be developed once a building permit is issued on the property.

In order to monitor the conditional grant repayment, it is necessary for the city to fill out Section II of the enclosed report, sign the certification and **return it to me by July 31, 2003**. Please submit any remittance due to the Fiscal Services Section at the Oregon Economic & Community Development Department, 775 Summer Street NE, Suite 200, Salem, OR 97301-1280. Please be sure to label it appropriately.

If you have any questions about this matter, please contact me at (503) 986 -0127 or Janet Hillock, your regional coordinator, at (503) 229-5222.

Sincerely,

Ted Johnson

Ted Johnson, Fiscal Analyst
Finance and Program Development

Enclosure

c: Richard G. Kidd, Mayor
Janet Hillock, Regional Coordinator

TJ/kmg

OREGON ECONOMIC & COMMUNITY
DEVELOPMENT DEPARTMENT
775 Summer Street NE, Suite 200
Salem, OR 97301-1280

CONDITIONAL GRANT REPORT
Date of Report: July 1, 2003

SPECIAL PUBLIC WORKS FUND PROGRAM

Recipient: City of Forest Grove Project No. B95009

Project Name: Infrastructure Improvement (Japan America Beverage Co.)

CONDITIONAL GRANT DATA

Date awarded: May 15, 1995 Future date of conversion to outright grant: May 15, 2005

Conditional Grant Amount: $23,000

I CONDITIONAL GRANT SUMMARY

Listed below is a summary of properties subject to the conditional grant awarded to the above-noted recipient. If any property has been divided or otherwise separated from the original property, please contact your project coordinator.

	Property Identification	Assessment $	Assessment Owed $ or Date Paid
1	Parcel #3, Taylor Industrial Park, 20.35 acres	$23,000.00	$23,000.00
2			
3			
4			
5			
6			
TOTAL		**$23,000.00**	**$23,000.00**

II REMITTANCE OWED THIS REPORTING PERIOD (JULY 1, 2002 TO JUNE 30, 2003)

In the spaces below, list any assessments sent to the Oregon Economic & Community Development Department (formerly OEDD) now or in the fiscal year noted above.

	Identification of Property Developed	Date Assessment Sent to OECDD	Assessment $ Attached
1			
2			
3			
4			
5			
6			
TOTAL			

CERTIFICATION OF THE RECIPIENT

It is hereby certified that, to the best of my knowledge, this jurisdiction has accounted for the development of participating properties in accordance with the conditional grant agreement executed with the State of Oregon Economic & Community Development Department. Every statement and amount set forth in this instrument is, to the best of my knowledge, true and correct as of this date. The recipient agrees to report annually to the state on the development of benefitting property in conjunction with this project, through June 30, 2005, using report formats supplied by the department.

For the Recipient:

Date	Typed Name and Title of Highest Elected Official	Signature of Highest Elected Official

For the Economic Development Department:

___ Conditional Grant Report reviewed and accepted as complete.

___ Accounting records verified

___ Other comments:

Date	Name of Fiscal Analyst	Signature of Fiscal Analyst

Date	Name of Regional Coordinator	Signature of Regional Coordinator

Date	Name of Regional Manager	Signature of Regional Manager

Gelco Construction
#20350
Fund 34-
1999-36

I don't think we ever got this info together for Bev.

file

RECEIVED
JAN 30 2003
FOREST GROVE ENGINEERING DEPT.

OREGON ECONOMIC & COMMUNITY DEVELOPMENT DEPARTMENT

RECEIVED
JAN 2 [illegible] 2003

January 24, 2003

cc: Rob Foster

Vergie Reis, City Manager
City of Forest Grove
P.O. Box 326
Forest Grove, OR 97116

RE: Special Public Works Fund, Project Completion Report and Certification, Project Number B95009, ($554,481), City of Forest Grove, Infrastructure Improvements (Japan America Beverage Company)

Dear Ms. Reis:

We are planning to close out the infrastructure project referenced above and wanted to provide the City of Forest Grove with the opportunity to update the job creation figures for Japan America Beverage Company and any other businesses directly benefiting from the project.

In February 2001, we sent correspondence to Mayor Richard Kidd requesting the jobs be reported (attached). The most current data we have is from a 1997 Economic Benefit Report (also attached).

Please verify that all the information on the Project Completion Report and Certification is correct and complete the jobs and wages section, including any additional data on average annual wage. Please report the total number of jobs created and the subset number above county family wage. For your information, in Washington County the average family wage was $39,198 in 1999, $44,461 in 2000, and $42,222 in 2001 (most current year available). In addition, we are requesting you report the average annual wage overall for the new jobs created, based on more recent changes in our department's overall reporting of performance measures.

We request that Mayor Kidd signs the report as the highest elected official. Please return the completed and signed form to me at the address at the top of the form. We will send you a copy of the report once we have reviewed and signed the form, your indication that the project is closed.

Please contact Janet Hillock, Regional Coordinator if you have any questions about the enclosed materials. She can be reached in our Portland office at (503) 229-5222.

Sincerely,

Joan Rutledge, Manager
Northwest Team

Enclosure(s)

cc: Marcy Jacobs, Regional Development Officer

SPECIAL PUBLIC WORKS FUND
Project Completion Report and Certification

Oregon Economic and Community Development Department
121 SW Salmon, Suite 205, Portland, Oregon 97204

Recipient City of Forest Grove Project Number B95009

Project Name Infrastructure Improvement (Japan America Beverage Co.)

Date awarded May 10, 1995 Date completed September 4, 1996

I ACCOMPLISHMENTS AND FINANCIAL SUMMARY

In the space below, summarize the accomplishments for the infrastructure project. Report job creation or retention in Section II.

Actual Accomplishments	Program $ Spent	Other $ Spent
Water Improvements	$169,638.00	$43,500.00
Sanitary Sewer Improvements	45590 $167,193.00	$ 0
Storm Sewer Improvements	114891 37 $103,934.00	$ 0
Road and Bridge Improvements	$74,772.00	$ 0
Contractural Services (Engineering)	$38,944.00	$ 0
Administration	$ 0	$24,000.00
Acquisition/Clearance	$ 0	$34,200.00
	$ 0	$ 0
Total	**$554,481.00**	**$101,700.00**

Financial Summary

Date of last approved budget: Month August 25, 1995	Last Approved Budget	Actual $ Spent
Bond Loan	$280,000.00	$280,000.00
Grant	$251,481.00	$251,481.00
Conditional Grant	$23,000.00	$23,000.00
City of Forest Grove	$67,500.00	$67,500.00
Other Private Funds	$36,000.00	$34,200.00
Interest	$ 0	$ 0
Total	**$657,981.00**	**$656,181.00**

II JOB CREATION/RETENTION

Permanent Full-Time Equivalent Jobs

Business Name	Proposed Jobs			Minimum Required			Actual Jobs		
	Created	Retained	Family-Wage	Created	Retained	Family-Wage	Total Created (number)	Average Annual Wage	Above Family-Wage (number)
Japan America Beverage Co.	28		14	28		9		$	
Total	**28**		**14**	**28**		**9**			

Project Number B95009 **Project Completion Report and Certification**

Recipient City of Forest Grove

CERTIFICATION OF RECIPIENT

It is hereby certified that, to the best of my knowledge, all work on the subject project is complete and acceptable and the contractor(s) obligations have been fulfilled. The recipient has accepted the project.

It is hereby certified that, to the best of my knowledge, the recipient has carried out this project in accordance with the financial assistance agreement executed with the State of Oregon Economic and Community Development Department; the State of Oregon is under no obligation to make any further payment to the recipient under the financial assistance agreement in excess of the amount already distributed; and every statement and amount set forth in this instrument is, to the best of my knowledge, true and correct as of this date. The recipient agrees to report annually to the state on the economic benefits of this project, including permanent job creation, through June 30, 2005, using report formats supplied by the department.

For the Recipient:

	Richard G. Kidd, Mayor	
Date	Typed Name and Title of Highest Elected Official	Signature of Highest Elected Official

For the Economic and Community Development Department:

___ Project Completion Report reviewed and accepted as complete
___ Accounting records verified
___ Project can be formally closed
___ Project must be kept open for additional job creation/retention
___ Other comments:

	Janet Hillock	
Date	Name of Regional Coordinator	Signature

	Joan Rutledge	
Date	Name of Regional Manager	Signature

	David Schreffler	
Date	Name of Fiscal Financial Accountant	Signature

LOAN AMORTIZATION SCHEDULE
SPECIAL PUBLIC WORKS FUND
*******ANNUAL PAYMENT*******

EXHIBIT D

As described in item (d) of the Promisory Note, referenced as Exhibit F of this Loan Agreement, payments of principal and interest are required to be made by the Borrower on the first day of the month shown below during which such payment is due. Accordingly, amounts due on January 1 shall be paid on the preceding December 1.

The annual payments of the principal of and interest on the Loan which are required to be paid pursuant to item (a) of the Promissory Note, referenced as Exhibit F of this Loan Agreement, are set forth below.

FILE NUMBER:	B95009	PRINCIPAL AMOUNT:	$280,000
		INTEREST RATE:	5.47%
MUNICIPALITY:	City of Forest Grove	LOAN TERM IN YEARS:	20
		CLOSING DATE:	13-Sep-95
BUSINESS/PROJECT:	Infrastructure Improvements	TRUE INTEREST COST (TIC):	0.00000%
	(Japan American Beverage Company)	NET INTEREST COST (NIC):	5.54680%
		WEIGHTED AVERAGE MATURI	12.76301

YEAR	PAYMENT DATE	PAYMENT	INTEREST	PRINCIPAL	CUMULATIVE INTEREST	CUMULATIV PRINCIPAL	UNPAID BALANCE	PERIODS
1997	01-Dec-96	21,014.67	20,291.67	723.00	20,291.67	723.00	279,277.00	1.3000
1998	01-Dec-97	21,298.00	14,834.00	6,464.00	35,125.67	7,187.00	272,813.00	2.3000
1999	01-Dec-98	26,092.00	14,569.00	11,523.00	49,694.67	18,710.00	261,290.00	3.3000
2000	01-Dec-99	25,668.00	14,080.00	11,588.00	63,774.67	30,298.00	249,702.00	4.3000
2001	01-Dec-2000	25,228.00	13,570.00	11,658.00	77,344.67	41,956.00	238,044.00	5.3000
2002	01-Dec-2001	24,768.00	13,034.00	11,734.00	90,378.67	53,690.00	226,310.00	6.3000
2003	01-Dec-2002	24,294.00	12,477.00	11,817.00	102,855.67	65,507.00	214,493.00	7.3000
2004	01-Dec-2003	23,814.00	11,909.00	11,905.00	114,764.67	77,412.00	202,588.00	8.3000
2005	01-Dec-2004	23,323.00	11,325.00	11,998.00	126,089.67	89,410.00	190,590.00	9.3000
2006	01-Dec-2005	22,824.00	10,725.00	12,099.00	136,814.67	101,509.00	178,491.00	10.3000
2007	01-Dec-2006	22,304.00	10,095.00	12,209.00	146,909.67	113,718.00	166,282.00	11.3000
2008	01-Dec-2007	21,773.00	9,447.00	12,326.00	156,356.67	126,044.00	153,956.00	12.3000
2009	01-Dec-2008	26,232.00	8,781.00	17,451.00	165,137.67	143,495.00	136,505.00	13.3000
2010	01-Dec-2009	25,407.00	7,822.00	17,585.00	172,959.67	161,080.00	118,920.00	14.3000
2011	01-Dec-2010	24,567.00	6,838.00	17,729.00	179,797.67	178,809.00	101,191.00	15.3000
2012	01-Dec-2011	23,705.50	5,819.50	17,886.00	185,617.17	196,695.00	83,305.00	16.3000
2013	01-Dec-2012	22,844.00	4,791.00	18,053.00	190,408.17	214,748.00	65,252.00	17.3000
2014	01-Dec-2013	21,980.50	3,752.50	18,228.00	194,160.67	232,976.00	47,024.00	18.3000
2015	01-Dec-2014	26,118.00	2,704.00	23,414.00	196,864.67	256,390.00	23,610.00	19.3000
2016	01-Dec-2015	24,968.00	1,358.00	23,610.00	198,222.67	280,000.00	0.00	20.3000

forest grove

60525372

Nov 4, 1997

Mr. Stan Thompson
Gelco Construction Company
P.O. Box 77116
1745 Salem Industrial Dr. NE
Salem, OR 97303

SUBJECT: **Elm Street L.I.D. – W.O. No. 8194**

Dear Stan:

Enclosed herewith is a check in the amount of **$18,634.55**, representing **"final payment"** (Payment No. 7), otherwise *payment in full* for work connected with the subject project. An itemized spreadsheet detailing this pay estimate is included for your files.

Additionally you will find a Certificate of Acceptance for the project. Please note that the one-year warranty, on all labor and materials, remains in effect until September 22, 1998.

Prior to the end of the warranty period the City will make an inspection of the facilities. If deficiencies are found you will be advised of such and requested to make corrections.

If you have any questions regarding this project please call me at (503) 359-3232.

Sincerely,

Steve A. Wood
Project Engineer

SAW/sw

Enclosures: Check No. 92561
Spreadsheet - Itemized payment

cc: Margie Taylor - O.E.D.D.
Rob Foster – Dir. of Public Works
Cal Bowersox – Supt. Of Public Works

forest grove

CERTIFICATE OF ACCEPTANCE

Name of Project: ELM STREET L.I.D.

Project No.: 8194

Contractor: GELCO CONST. CO.

It is hereby certified that the work performed under contract on the above referenced project is accepted as being satisfactorily completed in accordance with the Contract Documents.

The one year guarantee against defective material and workmanship, in accordance with Section H-15 of the General Conditions, shall continue in effect until SEPT. 22, 1998

Enclosed is a check in the amount of $18,634.55 as final payment for substantial completion of work on this project.

Date: Nov. 4, 1997

By: [signature]

Title: Project Engineer

CITY OF FOREST GROVE P.O. Box 326 Forest Grove, Oregon 97116 (503) 359-3200 FAX (503) 359-3207

92561

ANCE	DATE	GROSS AMOUNT	VOUCHER NO.	REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.
1:7	08/22/97	18634.55	05815				

Forest grove

CITY OF FOREST GROVE
P.O. BOX 326
FOREST GROVE, OR 97116

VENDOR NO.	CHECK NO.	CHECK DATE	CHECK AMOUNT
20350	92561	09/09/97	$**18634.55

forest grove

City of Forest Grove
P. O. BOX 326
FOREST GROVE, OR 97116

Forest Grove Branch
First Interstate Bank of Oregon, N.A.
Forest Grove, Oregon

24-12/1230 090

92561

DATE 09/09/97 CK NO 92561

CHECK AMOUNT
$**18634.55**

PAY ****18634 DOLLARS & 55 CENTS ******

TO GELCO CONSTRUCTION CO.
P.O. BOX 7716
SALEM OR 97303

CITY TREASURER

⑈092561⑈ ⑆123000123⑆090 065002 ⑈

forest grove

January 7, 1997

Mr. Stan Thompson
Gelco Construction Company
P.O. Box 77116
1745 Salem Industrial Dr. NE
Salem, OR 97303

Dear Stan:

Enclosed herewith is a check in the amount of $570.00, representing **Payment No. 6.** An itemized spreadsheet detailing this pay estimate is also enclosed.

If you have any questions regarding this payment please call me at (503) 359-3232.

Sincerely,

Steve A. Wood
Project Engineer

SAW/sw

enclosures: Check No. 89589
Spreadsheet - Itemized payment

cc: Margie Taylor - O.E.D.D.

89589

REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.	REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.
PAY EST #6	11/13/96	570.00	02554				

CITY OF FOREST GROVE
P.O. BOX 326
FOREST GROVE, OR 97116

VENDOR NO.	CHECK NO.	CHECK DATE	CHECK AMOUNT
20350	89589	01/03/97	$****570.00

forest grove

City of Forest Grove
P.O. BOX 326
FOREST GROVE, OR 97116

Forest Grove Branch
First Interstate Bank of Oregon, N.A.
Forest Grove, Oregon

24-12 / 1230 090

89589

DATE 01/03/97

CK NO 89589

CHECK AMOUNT
$****570.00**

PAY ******570 DOLLARS & 00 CENTS ******

TO GELCO CONSTRUCTION CO.
P.O. BOX 7716
SALEM OR 97303

CITY TREASURER

⑈089589⑈ ⑆123000123⑆090 065002 1⑈

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	18,700.00	$18,700.00	0	$0.00	1	$18,700.00
2	Temporary Traffic Controls	LS	1	3,000.00	$3,000.00	0	$0.00	1	$3,000.00
3	Environmental Controls	LS	1	2,800.00	$2,800.00	0	$0.00	1	$2,800.00
4	Unclassified Excavation.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
5	Trench Foundation	CY	100	30.00	$3,000.00	0	$0.00	546	$16,380.00
6	Dewatering.	LS	1	1,000.00	$1,000.00	0	$0.00	1	$1,000.00
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	$5,592.00	0	$0.00	249	$5,976.00
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	$2,212.00	0	$0.00	44	$1,232.00
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	$8,702.00	0	$0.00	341	$12,958.00
					$55,006.00		$0.00		$72,046.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	$3,268.00	0	$0.00	32	$1,376.00
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	$14,112.00	0	$0.00	0	$0.00
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	$1,222.00	0	$0.00	318	$14,946.00
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	$15,366.00	0	$0.00	0	$0.00
14	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	$4,160.00	0	$0.00	511	$26,572.00
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	$2,652.00	0	$0.00	140	$3,640.00
					$40,780.00		$0.00		$46,534.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 3 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	$25,350.00	0	$0.00	650	$25,350.00
17	48-inch sanitary manhole.	EA	3	2,500.00	$7,500.00	0	$0.00	2	$5,000.00
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	$4,000.00	0	$0.00	1	$4,000.00
19	48-inch storm manhole, complete.	EA	5	1,850.00	$9,250.00	0	$0.00	4	$7,400.00
20	Curb inlet.	EA	6	1,030.00	$6,180.00	0	$0.00	6	$6,180.00
21	Monolithic curb and gutter.	LF	1203	7.25	$8,721.75	0	$0.00	1200	$8,700.00
22	Sidewalk	SF	5869	1.95	$11,444.55	0	$0.00	4676	$9,118.20
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	$8,218.00	0	$0.00	3438	$12,033.00
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	$12,712.50	0	$0.00	3302	$14,859.00
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	$5,625.00	0	$0.00	3035	$4,552.50
					$99,001.80		$0.00		$97,192.70

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	$27,140.00	0	$0.00	3035	$27,922.00
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	$4,320.00	0	$0.00	345	$4,140.00
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	$875.00	0	$0.00	5	$875.00
29	Type I-L Barricade.	EA	1	250.00	$250.00	0	$0.00	1	$250.00
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	$600.00	1	$600.00	1	$600.00
31	10" tapping sleeve, 10' NRS Gat Valve Box, 10x12 reducer installed, complete.	LS	1	2,000.00	$2,000.00	0	$0.00	1	$2,000.00
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	$1,050.00	0	$0.00	50	$1,500.00
					$36,235.00		$600.00		$37,287.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	$1,900.00	0	$0.00	54	$2,052.00
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	$31,185.00	0	$0.00	570	$31,350.00
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	$900.00	0	$0.00	1	$900.00
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	$500.00	0	$0.00	1	$500.00
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	$250.00	0	$0.00	1	$250.00
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	$350.00	0	$0.00	1	$350.00
39	12" X 22.5 degrees. Elbow complete.	EA	1	475.00	$475.00	0	$0.00	1	$475.00
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	$400.00	0	$0.00	1	$400.00
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
					$45,960.00		$0.00		$46,277.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	$1,400.00	0	$0.00	3	$2,100.00
43	2" water service taps with corp stop.	EA	2	1,000.00	$2,000.00	0	$0.00	1	$1,000.00
44	1" polyethylene water service.	LF	275	3.00	$825.00	0	$0.00	68	$204.00
45	2" Polyethylene water service.	LF	50	5.00	$250.00	0	$0.00	12	$60.00
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	$2,000.00	0	$0.00	0	$0.00
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	$1,125.00	0	$0.00	5	$1,125.00
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	0	$0.00	3	$675.00
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	$1,800.00	0	$0.00	8	$1,800.00
					$10,300.00		$0.00		$6,964.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 7 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	0	$0.00	3	$675.00
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	$1,800.00	0	$0.00	5	$1,125.00
52	Seeded lawn construction (in parkway area).	SY	620	4.05	$2,511.00	0	$0.00	620	$2,511.00
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	$3,000.00	0	$0.00	1	$3,000.00
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	$2,450.00	0	$0.00	450	$2,250.00
					$10,661.00		$0.00		$9,561.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

Pay Estimate: 6
Date: November 13, 1996

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 1								
55	21"CL A STM PIPE (B.I. 13)	LF	-394	$39.00	($15,366.00)	0	$0.00	0	$0.00
56	21"CL B STM PIPE (B.I. 12)	LF	258.21	$47.00	$12,135.87	0	$0.00	0	$0.00
57	24"CL A STM PIPE	LF	394	$52.00	$20,488.00	0	$0.00	0	$0.00
58	24"CL B STM PIPE	LF	26	$63.00	$1,638.00	0	$0.00	26	$1,638.00
59	24"STM PIPE ADD 1.05VF	LF	420	$1.00	$420.00	0	$0.00	485	$485.00
60	18" STORM S/O PLUG	EA	1	$150.00	$150.00	0	$0.00	1	$150.00
61	18" STM PIPE CL A	LF	10	$40.00	$400.00	0	$0.00	16	$640.00
62	18"CL B STM PIPE (B.I. 11)	LF	-284.21	$48.00	($13,642.08)	0	$0.00	0	$0.00
63	21" STM PIPE ADD 1.34VF	LF	284.21	$5.55	$1,577.37	0	$0.00	318	$1,764.90
64	8" LAT ADD .78VF	LF	43	$1.90	$81.70	0	$0.00	43	$81.70
65	MH ADD DEPTH	VF	5.4	$192.00	$1,036.80	0	$0.00	5.4	$1,036.80
66	15" STM ADD 1.52VF	LF	30	$6.03	$180.90	0	$0.00	32	$192.96
67	8" STM A D 1.86VF	LF	43	$6.23	$267.89	0	$0.00	43	$267.89
68	12" STM AD 1.64 VF	LF	67.76	$6.51	$441.12	0	$0.00	67.76	$441.12
69	8" STM ADD 1.75VF	LF	40	$4.29	$171.60	0	$0.00	40	$171.60
70	12" STM ADD 1.89VF	LF	160.93	$7.50	$1,206.98	0	$0.00	160.93	$1,206.98
71	8" STM ADD 1.84VF	LF	23	$4.48	$103.04	0	$0.00	23	$103.04
72	8" STM ADD 1.88VF	LF	40	$4.57	$182.80	0	$0.00	40	$182.80
73	8" STM LAT AD 2.12VF	LF	81	$5.18	$419.58	0	$0.00	81	$419.58
					$11,893.56		$0.00		$8,782.36

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 9 of 12 Sheets
Pay Estimate: 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 2								
74	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
75	10" X 2" SERVICE SADDLE	EA	1	$44.00	$44.00	0	$0.00	1	$44.00
76	10" DIP CL 52 SERVICE PIPE	LF	46	$52.00	$2,392.00	0	$0.00	46	$2,392.00
77	MOVE 10" GATE VALVE	EA	1	$195.00	$195.00	0	$0.00	1	$195.00
78	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
79	CAP 10" GATE VALVE	EA	1	$600.00	$600.00	0	$0.00	1	$600.00
80	12" X 2" SERVICE SADDLE	EA	-1	$75.00	($75.00)	0	$0.00	-1	($75.00)
81	2" PE SERVICE PIPE (B.I. 45)	LF	-38	$5.00	($190.00)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 3								
83	SANITARY MANHOLE STA 15+68 (DELETE)	EA	-1	$2,500.00	($2,500.00)	0	$0.00	0	$0.00
84	CONNECT TO EXISTING STUBOUT STA 15+68	EA	1	$1,620.00	$1,620.00	0	$0.00	1	$1,620.00
	CHANGE ORDER NO. 4								
85	48" STORM MANHOLE (B.I. 17) (DELETE)	EA	-1	$1,850.00	($1,850.00)	0	$0.00	0	$0.00
86	15" STORM PIPE (B.I. 10)	LF	-24	$43.00	($1,032.00)	0	$0.00	0	$0.00
87	72" STORM MANHOLE	EA	1	$4,400.00	$4,400.00	0	$0.00	1	$4,400.00
88	15" STORM - ADD DEPTH 1.05 VF	LF	22	$4.40	$96.80	0	$0.00	0	$0.00
					$4,792.80		$0.00		$10,268.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 10 of 12 Sheets
Pay Estimate No. 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 5								
89	ADD 24" CL V - CL D	LF	40	$52.00	$2,080.00	0	$0.00	40	$2,080.00
90	24" STORM ADDED DEPTH (2.10' AVG)	LF	453	$3.00	$1,359.00	0	$0.00	453	$1,359.00
91	RELOCATE FIRE HYDRANT	EA	1	$725.00	$725.00	0	$0.00	1	$725.00
92	PLUG 15" STUBOUT NOT USED MH 4	EA	1	$250.00	$250.00	0	$0.00	1	$250.00
93	DELETE 15" PIPE LATERAL MH 4	LF	-22	$43.00	($946.00)	0	$0.00	0	$0.00
94	DELETE 15" STM LTL XTRA DEPTH -1.05 VF	LF	-22	$4.40	($96.80)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 6								
95	STA 10+05 RT - 10" DIP R.J. FIRE SERVICE	LF	46	$62.00	$2,852.00	0	$0.00	46	$2,852.00
96	10" MJ GATE VALVE W/R.J.	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
97	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
98	10" MJ PLUG	EA	1	$115.00	$115.00	0	$0.00	1	$115.00
99	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
	CHANGE ORDER NO. 7								
100	STA 11+04 LT SANITARY SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 8								
101	ADD FIRE HYDRANT 10+20 LT: 6" DIP CL 52	LF	25	$30.00	$750.00	0	$0.00	18	$540.00
102	6" MJ X FLG GATE VALVE	EA	1	$450.00	$450.00	0	$0.00	1	$450.00
103	12" X 6" MJ X FLG TEE	EA	1	$350.00	$350.00	0	$0.00	1	$350.00
104	6" MJ FIRE HYDRANT	EA	1	$1,200.00	$1,200.00	0	$0.00	1	$1,200.00
105	CATHODIC PROTECTION	LS	1	$500.00	$500.00	0	$0.00	1	$500.00
					$16,598.20		$0.00		$17,431.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 11 of 12 Sheets
Pay Estimate No. 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 9								
107	14+46 RT 10" FIRE/DOM SERV REST. JT.	LF	62	$62.00	$3,844.00	0	$0.00	50	$3,100.00
108	10" X 10" MJ TEE W/ REST GLDS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
109	10" MJ PLUG	EA	2	$115.00	$230.00	0	$0.00	2	$230.00
110	2" PE 90 DEG EL	LS	1	$130.00	$130.00	0	$0.00	1	$130.00
111	10" GATE VALVE	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
112	10" X 6" REDUCER	EA	1	$185.00	$185.00	0	$0.00	1	$185.00
113	RELOCATE FIRE HYDRANT	EA	1	$300.00	$300.00	0	$0.00	1	$300.00
114	6" DIP FH PIPE & EXTENSION	LF	10	$30.00	$300.00	0	$0.00	10	$300.00
115	TUNNEL UNDER EXISTING VAULT	LS	1	$1,000.00	$1,000.00	0	$0.00	1	$1,000.00
116	RESET VAULT/CHK VALVE & SPLS	LS	1	$6,190.00	$6,190.00	0	$0.00	1	$6,190.00
117	DELETE 10" DIP PUSH ON JT (CO 2)	LF	-46	$52.00	($2,392.00)	0	$0.00	-46	($2,392.00)
	CHANGE ORDER NO. 10								
118	STA 15+50 LT WTR MN - REMOVE T-BLK/VLV	LS	1	$794.03	$794.03	0	$0.00	1	$794.03
	CHANGE ORDER NO. 11								
119	1" WATER SERVICE TO TAYLOR PROPERTY	LS	1	$4,130.86	$4,130.86	0	$0.00	1	$4,130.86
	CHANGE ORDER NO. 12								
120	STA 14+85 LT SAN. SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
					$21,091.89		$0.00		$20,347.89

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 12 of 12 Sheets
Pay Estimate No. 6
Date: November 13, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: March 31, 1996 To: November 15, 1996

	UNIT	QTY	CONTRACT SUM	AMOUNT COMPLETED THIS PAY PERIOD		AMOUNT COMPLETED TO DATE	
			$352,320.25		$600.00		$372,690.95

Less 5% Withholding	$18,634.55
Less Liquidated Damages	$0.00
Less Previous Payment	$353,486.40
TOTAL DEDUCTIONS	$372,120.95
PAYMENT DUE	$570.00

Steve Wood, Project Engineer

Gelco Construction, Stanley E. Thompson, Project Manager

Approved By:

Rob Foster, Director of Public Works

20350
34
010
505 2000

BY

forest grove

May 7, 1996

Mr. Stan Thompson
Gelco Construction Company
P.O. Box 7716
1745 Salem Industrial Dr. NE
Salem, OR 97303

SUBJECT: **Elm Street L.I.D. No. 8194**

Dear Stan:

Enclosed herewith is a check in the amount of $63,207.96, representing **Payment No. 5.** An itemized spreadsheet detailing this pay estimate is also enclosed.

If you have any questions regarding this payment please call me at (503) 359-3232.

Sincerely,

Steve A. Wood
Project Engineer

SAW/sw

enclosures: Check No. 86481
Spreadsheet - Itemized payment

cc: Margie Taylor - O.E.D.D.

86481

REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.	REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO
WO#8194	4-8-96	$63,207.96	8787				

CITY OF FOREST GROVE
P.O. BOX 326
FOREST GROVE, OR 97116

VENDOR NO.	CHECK NO.	CHECK DATE	CHECK AMOUNT
20350	86481	5-3-96	$63,207.96

forest grove

City of Forest Grove
P.O. BOX 326
FOREST GROVE, OR 97116

Forest Grove Branch
First Interstate Bank of Oregon, N.A.
Forest Grove, Oregon

24-12
1230 090

86481

DATE 5-3-96

CK NO 86481

CHECK AMOUNT
** $63,207.96

PAY

EXACTLY $63207 AND 96 CTS

TO Gelco Construction Co.
PO Box 7716
Salem, OR 97303

CITY TREASURER

⑈086481⑈ ⑆123000123⑆090 065002 1⑈

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	18,700.00	$18,700.00	0	$0.00	1	$18,700.00
2	Temporary Traffic Controls	LS	1	3,000.00	$3,000.00	0.15	$450.00	1	$3,000.00
3	Environmental Controls	LS	1	2,800.00	$2,800.00	0.1	$280.00	1	$2,800.00
4	Unclassified Excavation.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
5	Trench Foundation	CY	100	30.00	$3,000.00	0	$0.00	546	$16,380.00
6	Dewatering.	LS	1	1,000.00	$1,000.00	0	$0.00	1	$1,000.00
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	$5,592.00	0	$0.00	249	$5,976.00
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	$2,212.00	0	$0.00	44	$1,232.00
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	$8,702.00	0	$0.00	341	$12,958.00
					$55,006.00		$730.00		$72,046.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	$3,268.00	0	$0.00	32	$1,376.00
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	$14,112.00	0	$0.00	0	$0.00
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	$1,222.00	0	$0.00	318	$14,946.00
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	$15,366.00	0	$0.00	0	$0.00
14	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	$4,160.00	0	$0.00	511	$26,572.00
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	$2,652.00	0	$0.00	140	$3,640.00
					$40,780.00		$0.00		$46,534.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
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Forest Grove, OR 97116

Sheet 3 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	$25,350.00	0	$0.00	650	$25,350.00
17	48-inch sanitary manhole.	EA	3	2,500.00	$7,500.00	0	$0.00	2	$5,000.00
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	$4,000.00	0.75	$3,000.00	1	$4,000.00
19	48-inch storm manhole, complete.	EA	5	1,850.00	$9,250.00	0	$0.00	4	$7,400.00
20	Curb inlet.	EA	6	1,030.00	$6,180.00	0	$0.00	6	$6,180.00
21	Monolithic curb and gutter.	LF	1203	7.25	$8,721.75	0	$0.00	1200	$8,700.00
22	Sidewalk	SF	5869	1.95	$11,444.55	4676	$9,118.20	4676	$9,118.20
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	$8,218.00	1838	$6,433.00	3438	$12,033.00
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	$12,712.50	552	$2,484.00	3302	$14,859.00
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	$5,625.00	35	$52.50	3035	$4,552.50
					$99,001.80		$21,087.70		$97,192.70

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	$27,140.00	3035	$27,922.00	3035	$27,922.00
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	$4,320.00	345	$4,140.00	345	$4,140.00
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	$875.00	5	$875.00	5	$875.00
29	Type I-L Barricade.	EA	1	250.00	$250.00	1	$250.00	1	$250.00
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	$600.00	0	$0.00	0	$0.00
31	10" tapping sleeve, 10' NRS Gat Valve Box, 10x12 reducer installed, complete.	LS	1	2,000.00	$2,000.00	0	$0.00	1	$2,000.00
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	$1,050.00	0	$0.00	50	$1,500.00
					$36,235.00		$33,187.00		$36,687.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	$1,900.00	0	$0.00	54	$2,052.00
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	$31,185.00	0	$0.00	570	$31,350.00
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	$900.00	0	$0.00	1	$900.00
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	$500.00	0	$0.00	1	$500.00
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	$250.00	0	$0.00	1	$250.00
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	$350.00	0	$0.00	1	$350.00
39	12" X 22.5 degrees. Elbow complete.	EA	1	475.00	$475.00	0	$0.00	1	$475.00
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	$400.00	0	$0.00	1	$400.00
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
					$45,960.00		$0.00		$46,277.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	$1,400.00	0	$0.00	3	$2,100.00
43	2" water service taps with corp stop.	EA	2	1,000.00	$2,000.00	0	$0.00	1	$1,000.00
44	1" polyethylene water service.	LF	275	3.00	$825.00	0	$0.00	68	$204.00
45	2" Polyethylene water service.	LF	50	5.00	$250.00	0	$0.00	12	$60.00
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	$2,000.00	0	$0.00	0	$0.00
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	$1,125.00	5	$1,125.00	5	$1,125.00
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	3	$675.00	3	$675.00
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	$1,800.00	8	$1,800.00	8	$1,800.00
					$10,300.00		$3,600.00		$6,964.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 7 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	3	$675.00	3	$675.00
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	$1,800.00	5	$1,125.00	5	$1,125.00
52	Seeded lawn construction (in parkway area).	SY	620	4.05	$2,511.00	620	$2,511.00	620	$2,511.00
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	$3,000.00	1	$3,000.00	1	$3,000.00
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	$2,450.00	0	$0.00	450	$2,250.00
					$10,661.00		$7,311.00		$9,561.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 8 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 1								
55	21"CL A STM PIPE (B.I. 13)	LF	-394	$39.00	($15,366.00)	0	$0.00	0	$0.00
56	21"CL B STM PIPE (B.I. 12)	LF	258.21	$47.00	$12,135.87	0	$0.00	0	$0.00
57	24"CL A STM PIPE	LF	394	$52.00	$20,488.00	0	$0.00	0	$0.00
58	24"CL B STM PIPE	LF	26	$63.00	$1,638.00	0	$0.00	26	$1,638.00
59	24"STM PIPE ADD 1.05VF	LF	420	$1.00	$420.00	0	$0.00	485	$485.00
60	18" STORM S/O PLUG	EA	1	$150.00	$150.00	0	$0.00	1	$150.00
61	18" STM PIPE CL A	LF	10	$40.00	$400.00	0	$0.00	16	$640.00
62	18"CL B STM PIPE (B.I. 11)	LF	-284.21	$48.00	($13,642.08)	0	$0.00	0	$0.00
63	21" STM PIPE ADD 1.34VF	LF	284.21	$5.55	$1,577.37	0	$0.00	318	$1,764.90
64	8" LAT ADD .78VF	LF	43	$1.90	$81.70	0	$0.00	43	$81.70
65	MH ADD DEPTH	VF	5.4	$192.00	$1,036.80	0	$0.00	5.4	$1,036.80
66	15" STM ADD 1.52VF	LF	30	$6.03	$180.90	0	$0.00	32	$192.96
67	8" STM A D 1.86VF	LF	43	$6.23	$267.89	0	$0.00	43	$267.89
68	12" STM AD 1.64 VF	LF	67.76	$6.51	$441.12	0	$0.00	67.76	$441.12
69	8" STM ADD 1.75VF	LF	40	$4.29	$171.60	0	$0.00	40	$171.60
70	12" STM ADD 1.89VF	LF	160.93	$7.50	$1,206.98	0	$0.00	160.93	$1,206.98
71	8" STM ADD 1.84VF	LF	23	$4.48	$103.04	0	$0.00	23	$103.04
72	8" STM ADD 1.88VF	LF	40	$4.57	$182.80	0	$0.00	40	$182.80
73	8" STM LAT AD 2.12VF	LF	81	$5.18	$419.58	0	$0.00	81	$419.58
					$11,893.56		$0.00		$8,782.36

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 9 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 2								
74	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
75	10" X 2" SERVICE SADDLE	EA	1	$44.00	$44.00	0	$0.00	1	$44.00
76	10" DIP CL 52 SERVICE PIPE	LF	46	$52.00	$2,392.00	0	$0.00	46	$2,392.00
77	MOVE 10" GATE VALVE	EA	1	$195.00	$195.00	0	$0.00	1	$195.00
78	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
79	CAP 10" GATE VALVE	EA	1	$600.00	$600.00	0	$0.00	1	$600.00
80	12" X 2" SERVICE SADDLE	EA	-1	$75.00	($75.00)	0	$0.00	-1	($75.00)
81	2" PE SERVICE PIPE (B.I. 45)	LF	-38	$5.00	($190.00)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 3								
83	SANITARY MANHOLE STA 15+68 (DELETE)	EA	-1	$2,500.00	($2,500.00)	0	$0.00	0	$0.00
84	CONNECT TO EXISTING STUBOUT STA 15+68	EA	1	$1,620.00	$1,620.00	0	$0.00	1	$1,620.00
	CHANGE ORDER NO. 4								
85	48" STORM MANHOLE (B.I. 17) (DELETE)	EA	-1	$1,850.00	($1,850.00)	0	$0.00	0	$0.00
86	15" STORM PIPE (B.I. 10)	LF	-24	$43.00	($1,032.00)	0	$0.00	0	$0.00
87	72" STORM MANHOLE	EA	1	$4,400.00	$4,400.00	0	$0.00	1	$4,400.00
88	15" STORM - ADD DEPTH 1.05 VF	LF	22	$4.40	$96.80	0	$0.00	0	$0.00
					$4,792.80		$0.00		$10,268.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 10 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 5								
89	ADD 24" CL V - CL D	LF	40	$52.00	$2,080.00	0	$0.00	40	$2,080.00
90	24" STORM ADDED DEPTH (2.10' AVG)	LF	453	$3.00	$1,359.00	0	$0.00	453	$1,359.00
91	RELOCATE FIRE HYDRANT	EA	1	$725.00	$725.00	0	$0.00	1	$725.00
92	PLUG 15" STUBOUT NOT USED MH 4	EA	1	$250.00	$250.00	0	$0.00	1	$250.00
93	DELETE 15" PIPE LATERAL MH 4	LF	-22	$43.00	($946.00)	0	$0.00	0	$0.00
94	DELETE 15" STM LTL XTRA DEPTH -1.05 VF	LF	-22	$4.40	($96.80)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 6								
95	STA 10+05 RT - 10" DIP R.J. FIRE SERVICE	LF	46	$62.00	$2,852.00	0	$0.00	46	$2,852.00
96	10" MJ GATE VALVE W/R.J.	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
97	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
98	10" MJ PLUG	EA	1	$115.00	$115.00	0	$0.00	1	$115.00
99	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
	CHANGE ORDER NO. 7								
100	STA 11+04 LT SANITARY SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 8								
101	ADD FIRE HYDRANT 10+20 LT: 6" DIP CL 52	LF	25	$30.00	$750.00	0	$0.00	18	$540.00
102	6" MJ X FLG GATE VALVE	EA	1	$450.00	$450.00	0	$0.00	1	$450.00
103	12" X 6" MJ X FLG TEE	EA	1	$350.00	$350.00	0	$0.00	1	$350.00
104	6" MJ FIRE HYDRANT	EA	1	$1,200.00	$1,200.00	0	$0.00	1	$1,200.00
105	CATHODIC PROTECTION	LS	1	$500.00	$500.00	0	$0.00	1	$500.00
					$16,598.20		$0.00		$17,431.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 11 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 9								
107	14+46 RT 10" FIRE/DOM SERV REST. JT.	LF	62	$62.00	$3,844.00	0	$0.00	50	$3,100.00
108	10" X 10" MJ TEE W/ REST GLDS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
109	10" MJ PLUG	EA	2	$115.00	$230.00	0	$0.00	2	$230.00
110	2" PE 90 DEG EL	LS	1	$130.00	$130.00	0	$0.00	1	$130.00
111	10" GATE VALVE	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
112	10" X 6" REDUCER	EA	1	$185.00	$185.00	0	$0.00	1	$185.00
113	RELOCATE FIRE HYDRANT	EA	1	$300.00	$300.00	0	$0.00	1	$300.00
114	6" DIP FH PIPE & EXTENSION	LF	10	$30.00	$300.00	0	$0.00	10	$300.00
115	TUNNEL UNDER EXISTING VAULT	LS	1	$1,000.00	$1,000.00	0	$0.00	1	$1,000.00
116	RESET VAULT/CHK VALVE & SPLS	LS	1	$6,190.00	$6,190.00	0.1	$619.00	1	$6,190.00
117	DELETE 10" DIP PUSH ON JT (CO 2)	LF	-46	$52.00	($2,392.00)	0	$0.00	-46	($2,392.00)
	CHANGE ORDER NO. 10								
118	STA 15+50 LT WTR MN - REMOVE T-BLK/VLV	LS	1	$794.03	$794.03	0	$0.00	1	$794.03
	CHANGE ORDER NO. 11								
119	1" WATER SERVICE TO TAYLOR PROPERTY	LS	1	$4,130.86	$4,130.86	0	$0.00	1	$4,130.86
	CHANGE ORDER NO. 12								
120	STA 14+85 LT SAN. SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 13								
121	STA 15+50 LT - REPAIR WTR MAIN IN CASING		PENDING						
					$21,091.89		$619.00		$20,347.89

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 12 of 12 Sheets
Pay Estimate : 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

		UNIT	QTY	CONTRACT SUM	AMOUNT COMPLETED THIS PAY PERIOD		AMOUNT COMPLETED TO DATE	
				$352,320.25		$66,534.70		$372,090.95

Less 5% Withholding	$18,604.55
Less Liquidated Damages	$0.00
Less Previous Payment	$290,278.44
TOTAL DEDUCTIONS	$308,882.99
PAYMENT DUE	$63,207.96

Steve Wood, Project Engineer

Gelco Construction, Stanley E. Thompson, Project Manager

O.K. FOR PAYMENT
VENDOR # 20350
FUND # 34
DEPT. # 010
BUDGET # 5052000
BY

Approved By:

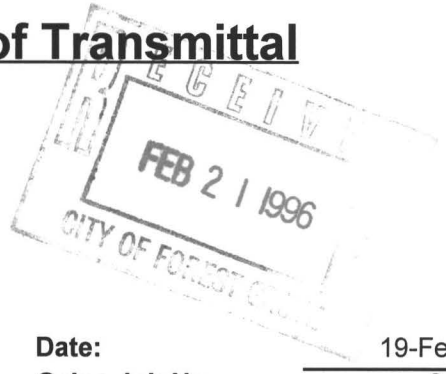
Rob Foster, Director of Public Works

GELCO
Construction Company

Letter of Transmittal

Oregon Office:
[xx] Salem, Oregon 97303
1745 Salem Industrial Dr. N.E.
P.O. Box 7716
(503) 364-2638 \ Fax (503) 364-8115

Project Office:



To: City of Forest Grove
P.O. Box 326
Forest Grove, Oregon 97116

Date: 19-Feb-96
Gelco Job No: 85026
Client Job No: 8194

Re: Elm Street L.I.D. No. 8194

Attn: Steve Wood

We Are Sending You:

[xx] Attached [ ] Under separate cover via _____ the following items:

[ ] Copy of letter [ ] Tech. Literature [ ] Video Tapes [ ] Samples [ ] Specifications
[ ] Drawings [ ] Change Order [ ] Work Reports [ ] Submittals [xx] Pay Request

Copies	Date	Number	Description
1			Progress Invoice No. 5, Through January 31, 1996

These Are Transmitted as checked below:

[xx] For approval [ ] Approved as submitted [ ] Resubmit _____ copies for approval
[ ] For your use [ ] Approved as noted [ ] Submit _____ copies for distribution
[ ] As requested [ ] Returned for corrections [ ] Return _____ corrected prints
[ ] For review and comment [ ] For bids due _____ [ ] Prints returned after loan to us
[ ] Other _____

Remarks: We apologize for being late with this request. Please note that Bob Boren is no longer with our organization and send all correspondence to our Salem office.

Signed: Stanley E Thompson
Stan Thompson Project Manager

GELC ONST. CO.
P.O. Box 7716
Salem, Oregon 97303
(503) 364-2638

PROGRE NVOICE
NO. 5
January 1996

GELCO JC 5026
FOREST GROVE W.C. 8194

ELM STREET LID NO.8194

TO: CITY OF FOREST GROVE
1924 COUNCEL STREET
P.O. BOX 326
FOREST GROVE, OR 97116

ATTN: STEVE WOOD

DATE: 14-Feb-96

ITEM NO.	DESCRIPTION	UNIT PRICE	UNIT	TOTAL QUANT.	CONTRACT AMOUNT	PRIOR INVOICE QUANT.	PRIOR INVOICE AMOUNT	THIS INVOICE QUANT.	THIS INVOICE AMOUNT	TOTAL TO DATE QUANT.	TOTAL TO DATE AMOUNT
1	MOBILIZATION	$18,700	LS	1	$18,700.00	100%	$18,700.00	0%	$0.00	100%	$18,700.00
2	TEMP TRAFFIC CONTROL	$3,000	LS	1	$3,000.00	85%	$2,550.00	10%	$300.00	95%	$2,850.00
3	ENVIRONMENTAL CONTROL	$2,800	LS	1	$2,800.00	90%	$2,520.00	10%	$280.00	100%	$2,800.00
4	UNCLASSIFIED EXCAVATION	$10,000.0	CY	1	$10,000.00	100%	$10,000.00	0%	$0.00	100%	$10,000.00
5	TRENCH FOUNDATION	$30	CY	100	$3,000.00	546	$16,380.00	0	$0.00	546	$16,380.00
6	DEWATERING	$1,000.0	LS	1	$1,000.00	100%	$1,000.00	0%	$0.00	100%	$1,000.00
7	8" C14 CL 3 STORM B BKFILL	$24.0	LF	233	$5,592.00	249	$5,976.00	0	$0.00	249	$5,976.00
8	10" C14 CL 3 STORM B BKFL	$28	LF	79	$2,212.00	44	$1,232.00	0	$0.00	44	$1,232.00
9	12" C14 CL 3 STORM B BKFL	$38.00	LF	229	$8,702.00	341	$12,958.00	0	$0.00	341	$12,958.00
10	15" C76 CL IV STM B BKFL	$43.00	LF	76	$3,268.00	32	$1,376.00	0	$0.00	32	$1,376.00
11	18" C76 CL IV STM B BKFL	$48	LF	294	$14,112.00	0	$0.00	0	$0.00	0	$0.00
12	21" C76 CL IV STM B BKFL	$47.0	LF	26	$1,222.00	318	$14,946.00	0	$0.00	318	$14,946.00
13	21" C76 CL IV STM A BKFL	$39	LF	394	$15,366.00	0	$0.00	0	$0.00	0	$0.00
14	24" C76 CL IV STM A BKFL	$52	LF	80	$4,160.00	511	$26,572.00	0	$0.00	511	$26,572.00
15	6"D3034 SAN B BCKFL	$26	LF	102	$2,652.00	140	$3,640.00	0	$0.00	140	$3,640.00
16	8"D3034 SAN B BCKFL	$39	LF	650	$25,350.00	650	$25,350.00	0	$0.00	650	$25,350.00
17	48" SAN MANHOLE	$2,500	EA	3	$7,500.00	2	$5,000.00	0	$0.00	2	$5,000.00
18	STORM OUTFALL	$4,000	LS	1	$4,000.00	25%	$1,000.00	25%	$1,000.00	50%	$2,000.00
19	48" STORM MH	$1,850	EA	5	$9,250.00	4	$7,400.00	0	$0.00	4	$7,400.00
20	CURB INLET	$1,030	EA	6	$6,180.00	6	$6,180.00	0	$0.00	6	$6,180.00
21	MONO - CURB & GUTTER	$7	LF	1203	$8,721.75	1200	$8,700.00	0	$0.00	1200	$8,700.00
22	SIDEWALK	$2	SF	5869	$11,444.55	0	$0.00	4208	$8,205.60	4208	$8,205.60
23	DRIVEWAY - 8" PCC	$4	SF	2348	$8,218.00	1600	$5,600.00	1838	$6,433.00	3438	$12,033.00
24	AGG BASE 2"-0 X 8" DEPTH	$5	SY	2825	$12,712.50	2750	$12,375.00	552	$2,484.00	3302	$14,859.00
25	AGG BASE 3/4"-0 X 2" DEPTH	$2	SY	3750	$5,625.00	3000	$4,500.00	35	$52.50	3035	$4,552.50
26	AC PAVEMENT 4"(2"C/2"B)	$9.20	SY	2950	$27,140.00	0	$0.00	3035	$27,922.00	3035	$27,922.00
27	AC DWY 3" ON 6"AGG BASE	$12.00	SY	360	$4,320.00	0	$0.00	0	$0.00	0	$0.00

GELC ONST. CO.
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PROGRE NVOICE
NO. 5
January 1996

GELCO JO 5026
FOREST GROVE W.O. 8194

ELM STREET LID NO.8194

ITEM NO.	DESCRIPTION	UNIT PRICE	UNIT	TOTAL QUANT.	CONTRACT AMOUNT	PRIOR INVOICE QUANT.	PRIOR INVOICE AMOUNT	THIS INVOICE QUANT.	THIS INVOICE AMOUNT	TOTAL TO DATE QUANT.	TOTAL TO DATE AMOUNT
28	REMOVE/RELCT SIGNS/MBX	$175.00	EA	5	$875.00	0	$0.00	5	$875.00	5	$875.00
29	TYPE 1-L BARRICADE	$250.00	EA	1	$250.00	0	$0.00	1	$250.00	1	$250.00
30	RRXING MARKINGS	$600.00	LS	1	$600.00	0%	$0.00	0%	$0.00	0%	$0.00
31	10" TAPPING SLEEVE/VLV	$2,000.00	LS	1	$2,000.00	100%	$2,000.00	0%	$0.00	100%	$2,000.00
32	6"DIP CL 52	$30.00	LF	35	$1,050.00	50	$1,500.00	0	$0.00	50	$1,500.00
33	8"DIP CL 52	$38.00	LF	50	$1,900.00	54	$2,052.00	0	$0.00	54	$2,052.00
34	12" DIP CL 52	$55	LF	567	$31,185.00	570	$31,350.00	0	$0.00	570	$31,350.00
35	12"NRS GATE VALVE	$900	EA	1	$900.00	1	$900.00	0	$0.00	1	$900.00
36	8"NRS GATE VALVE	$500	EA	1	$500.00	1	$500.00	0	$0.00	1	$500.00
37	2"NRS GATE VALVE	$250	EA	1	$250.00	1	$250.00	0	$0.00	1	$250.00
38	12X6X12 DI TEE	$350	EA	1	$350.00	1	$350.00	0	$0.00	1	$350.00
39	22 1/2 & 11 1/4 DEG ASMB	$475.00	EA	1	$475.00	1	$475.00	0	$0.00	1	$475.00
40	12X8X12 DI TEE	$400.00	EA	1	$400.00	1	$400.00	0	$0.00	1	$400.00
41	CORRISION CONTROL SYST	$10,000	LS	1	$10,000.00	100%	$10,000.00	0%	$0.00	100%	$10,000.00
42	1" WATER TAPS/BOX/STR	$700.00	EA	2	$1,400.00	3	$2,100.00	0	$0.00	3	$2,100.00
43	2" WATER TAPS/BOX/STR	$1,000.00	EA	2	$2,000.00	1	$1,000.00	0	$0.00	1	$1,000.00
44	1" PE WATER SERV.	$3.00	LF	275	$825.00	68	$204.00	0	$0.00	68	$204.00
45	2" PE WATER SERV.	$5	LF	50	$250.00	12	$60.00	0	$0.00	12	$60.00
46	12 MONTH ESTB PERIOD	$2,000	LS	1	$2,000.00	0%	$0.00	0	$0.00	0%	$0.00
47	REDSPIRE FLWRING PEAR	$225	EA	5	$1,125.00	0	$0.00	0%	$0.00	0	$0.00
48	FLAME MAPLE	$225	EA	4	$900.00	0	$0.00	0	$0.00	0	$0.00
49	AUTUMN BLAZE MAPLE	$225	EA	8	$1,800.00	0	$0.00	0	$0.00	0	$0.00
50	AKEBONO FLWRG CHERRY	$225.00	EA	4	$900.00	0	$0.00	0	$0.00	0	$0.00
51	GREENSPIRE LINDEN	$225.00	EA	8	$1,800.00	0	$0.00	0	$0.00	0	$0.00
52	SEEDED LAWN CONST.	$4.05	SY	620	$2,511.00	0	$0.00	0	$0.00	0	$0.00
53	TOPSOIL 6" THICK	$3,000.00	LS	1	$3,000.00	0%	$0.00	0%	$0.00	0%	$0.00
54	2" GRAY PVC CONDUIT SLV	$5.00	LF	490	$2,450.00	450	$2,250.00	0	$0.00	450	$2,250.00
	TOTAL CONTRACT				$297,943.80		$249,346.00		$47,802.10		$297,148.10
CO1	CHANGE ORDER 1 (SEE ATT)	$8,782.36	LS	100%	$8,782.36	100%	$8,782.36	0%	$0.00	100%	$8,782.36
CO2	CHANGE ORDER 2 (SEE ATT)	$4,248.00	LS	100%	$4,248.00	100%	$4,248.00	0%	$0.00	100%	$4,248.00

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PROGRE NVOICE
NO. 5
January 1996

GELCO JO 5026
FOREST GROVE W.O. 8194

ELM STREET LID NO.8194

ITEM NO.	DESCRIPTION	UNIT PRICE	UNIT	TOTAL QUANT.	CONTRACT AMOUNT	PRIOR INVOICE QUANT.	PRIOR INVOICE AMOUNT	THIS INVOICE QUANT.	THIS INVOICE AMOUNT	TOTAL TO DATE QUANT.	TOTAL TO DATE AMOUNT
CO3	CHANGE ORDER 3 (SEE ATT)	$1,620.00	LS	100%	$1,620.00	100%	$1,620.00	0%	$0.00	100%	$1,620.00
CO4	CHANGE ORDER 4 (SEE ATT)	$4,400.00	LS	100%	$4,400.00	100%	$4,400.00	0%	$0.00	100%	$4,400.00
CO5	CHANGE ORDER 5 (SEE ATT)	$4,414.00	LS	100%	$4,414.00	100%	$4,414.00	0%	$0.00	100%	$4,414.00
CO6	CHANGE ORDER 6 (SEE ATT)	$4,987.00	LS	100%	$4,987.00	100%	$4,987.00	0%	$0.00	100%	$4,987.00
CO7	CHANGE ORDER 7 (SEE ATT)	$4,990.00	LS	100%	$4,990.00	100%	$4,990.00	0%	$0.00	100%	$4,990.00
CO8	CHANGE ORDER 8 (SEE ATT)	$3,040.00	LS	100%	$3,040.00	100%	$3,040.00	0%	$0.00	100%	$3,040.00
CO9	CHANGE ORDER 9 (SEE ATT)	$10,433.00	LS	100%	$10,433.00	94%	$9,814.00	6%	$619.00	100%	$10,433.00
CO10	CHANGE ORDER 10(SEE ATT)	$794.03	LS	100%	$794.03	100%	$794.03	0%	$0.00	100%	$794.03
CO11	CHANGE ORDER 11(SEE ATT)	$4,130.86	LS	100%	$4,130.86	100%	$4,130.86	0%	$0.00	100%	$4,130.86
CO12	CHANGE ORDER 12(SEE ATT)	$4,990.00	LS	100%	$4,990.00	100%	$4,990.00	0%	$0.00	100%	$4,990.00
CO13	CHANGE ORDER 13(SEE ATT)	PENDING	LS	0%	$0.00	0%	$0.00	0%	$0.00	0%	$0.00
	TOTAL CHANGE ORDERS				$56,829.25		$56,210.25		$619.00		$56,829.25

TOTAL CONTRACT	$297,943.80	$249,346.00	$47,802.10	$297,148.10
TOTAL CHANGE ORDERS	$56,829.25	$56,210.25	$619.00	$56,829.25
SUBTOTAL	$354,773.05	$305,556.25	$48,421.10	$353,977.35
Less 5% RETAINAGE				($17,698.87)
SUBTOTAL				$336,278.48
Less PRIOR PAYMENTS				($290,278.44)
NET AMOUNT DUE				$46,000.04

GELC ONST. CO.
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PROGRE NVOICE
NO. 5
JANUARY 1995
CHANGE ORDER SUMMARY
ELM STREET LID NO.8194

GELCO J(5026
FOREST GROVE W.O. 8194

ITEM NO.	DESCRIPTION	UNIT PRICE	UNIT	TOTAL QUANT.	CONTRACT AMOUNT	PRIOR INVOICE QUANT.	PRIOR INVOICE AMOUNT	THIS INVOICE QUANT.	THIS INVOICE AMOUNT	TOTAL TO DATE QUANT.	TOTAL TO DATE AMOUNT
C01	21" CL A STM PIPE (B.I. 13)	$39.00	LF	-394	($15,366.00)	0	$0.00		$0.00	0	$0.00
	21" CL B STM PIPE (B.I. 12)	$47.00	LF	258.21	$12,135.87	0	$0.00		$0.00	0	$0.00
	24" CL A STM PIPE	$52.00	LF	394	$20,488.00	0	$0.00		$0.00	0	$0.00
	24" CL B STM PIPE	$63.00	LF	26	$1,638.00	26	$1,638.00		$0.00	26	$1,638.00
	24" STM PIPE ADD 1.05 VF	$1.00	LF	420	$420.00	485	$485.00		$0.00	485	$485.00
	18" STPR, S/O PLUG	$150.00	EA	1	$150.00	1	$150.00		$0.00	1	$150.00
	18" STM PIPE CL A	$40.00	LF	10	$400.00	16	$640.00		$0.00	16	$640.00
	18" CL B STM PIPE (B.I. 11)	$48.00	LF	-284.2	($13,642.08)	0	$0.00		$0.00	0	$0.00
	21" STM PIPE ADD 1.34 VF	$5.55	LF	284.21	$1,577.37	318	$1,764.90		$0.00	318	$1,764.90
	8" LAT ADD 0.78 VF	$1.90	LF	43	$81.70	43	$81.70		$0.00	43	$81.70
	48" MH ADD DEPTH	$192	VF	5.4	$1,036.80	5.4	$1,036.80		$0.00	5.4	$1,036.80
	15" STM ADD 1.52 VF	$6.03	LF	30	$180.90	32	$192.96		$0.00	32	$192.96
	8" STM ADD 1.86 VF	$6.23	LF	43	$267.89	43	$267.89		$0.00	43	$267.89
	12" STM ADD 1.64 VF	$6.51	LF	67.76	$441.12	67.76	$441.12		$0.00	67.76	$441.12
	8" STM ADD 1.75 VF	$4.29	LF	40	$171.60	40	$171.60		$0.00	40	$171.60
	12" STM ADD 1.89 VF	$7.50	LF	160.93	$1,206.98	160.93	$1,206.98		$0.00	160.93	$1,206.98
	8" STM ADD 1.84 VF	$4.48	LF	23	$103.04	23	$103.04		$0.00	23	$103.04
	8"STM ADD 1.88 VF	$4.57	LF	40	$182.80	40	$182.80		$0.00	40	$182.80
	8" STM LAT ADD 2.12 VF	$5.18	LF	81	$419.58	81	$419.58		$0.00	81	$419.58
	TOTAL CO 1				$11,893.56		$8,782.36		$0.00		$8,782.36
CO2	12"X10" MJ TEE W/ BLOCKS	$462	EA	1	$462.00	1	$462.00		$0.00	1	$462.00
	10"X2" SERVICE SADDLE	$44	EA	1	$44.00	1	$44.00		$0.00	1	$44.00
	10" DIP CL 52 SERVICE PIPE	$52	LF	46	$2,392.00	46	$2,392.00		$0.00	46	$2,392.00
	MOVE 10" GATE VALVE	$195	EA	1	$195.00	1	$195.00		$0.00	1	$195.00
	CATHODIC PROTECTION	$630	LS	100%	$630.00	100%	$630.00		$0.00	100%	$630.00
	CAP 10" GATE VALVE	$600	EA	1	$600.00	1	$600.00		$0.00	1	$600.00
	12 X 2" SERVICE SADDLE	$75	EA	-1	($75.00)	-1	($75.00)		$0.00	-1	($75.00)
	2" PE SERVICE PIPE (B.I. 45)	$5	LF	-38	($190.00)	0	$0.00		$0.00	0	$0.00
	TOTAL CO 2				$4,058.00		$4,248.00		$0.00		$4,248.00

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PROGRE NVOICE
NO. 5
JANUARY 1995
CHANGE ORDER SUMMARY
ELM STREET LID NO.8194

GELCO J(5026
FOREST GROVE W.O. 8194

ITEM NO.	DESCRIPTION	UNIT PRICE	UNIT	TOTAL QUANT.	CONTRACT AMOUNT	PRIOR INVOICE QUANT.	PRIOR INVOICE AMOUNT	THIS INVOICE QUANT.	THIS INVOICE AMOUNT	TOTAL TO DATE QUANT.	TOTAL TO DATE AMOUNT
CO3	DELETE SAN MH STA 15+68	$2,500	EA	-1	($2,500.00)	0	$0.00		$0.00	0	$0.00
	CONNECT EXISTG MH STUB	$1,620	EA	1	$1,620.00	1	$1,620.00		$0.00	1	$1,620.00
	TOTAL CO 3				($880.00)		$1,620.00		$0.00		$1,620.00
CO4	DELETE STM MH (B.I. 17)	$1,850	EA	-1	($1,850.00)	0	$0.00		$0.00	0	$0.00
	15" STM PIPE (B.I. 10)	$43	LF	-24	($1,032.00)	0	$0.00		$0.00	0	$0.00
	72" STORM MANHOLE	$4,400	EA	1	$4,400.00	1	$4,400.00		$0.00	1	$4,400.00
	15" STM ADD DEPTH 1.05 VF	$4	LF	22	$96.80	0	$0.00		$0.00	0	$0.00
	TOTAL CO 4				$1,614.80		$4,400.00		$0.00		$4,400.00
CO5	ADD 24" CL V - CL D	$52.00	LF	40	$2,080.00	40	$2,080.00		$0.00	40	$2,080.00
	24" STM ADD DEPTH	$3.00	LF	453	$1,359.00	453	$1,359.00		$0.00	453	$1,359.00
	RELOCATE FIRE HYDRANT	$725.00	EA	1	$725.00	1	$725.00		$0.00	1	$725.00
	PLUG 15" STUBOUT MH 4	$250.00	EA	1	$250.00	1	$250.00		$0.00	1	$250.00
	DELETE 15" PIPE LAT MH 4	$43.00	LF	-22	($946.00)	0	$0.00		$0.00	0	$0.00
	DELETE 15" STM ADD 1.05VF	$4.00	LF	-22	($88.00)	0	$0.00		$0.00	0	$0.00
	TOTAL CO 5				$3,380.00		$4,414.00		$0.00		$4,414.00
CO6	10" DIP RJ FIRE SERVICE	$62.0	LF	46	$ 2,852.00	46	$2,852.00		$0.00	46	$2,852.00
	10" MJ GATE VALVE W/RJ	$928.0	EA	1	$ 928.00	1	$928.00		$0.00	1	$928.00
	12"x10" MJ TEE W/BLOCK	$462.0	EA	1	$ 462.00	1	$462.00		$0.00	1	$462.00
	10" MJ PLUG	$115.0	EA	1	$ 115.00	1	$115.00		$0.00	1	$115.00
	CATHODIC PROTECTION	$630.0	LS	100%	$ 630.00	100%	$630.00		$0.00	100%	$630.00
	TOTAL CO 6				$ 4,987.00		$4,987.00		$0.00		$4,987.00
CO7	SAN SWR TAP/LAT STA11+04	$4,990.00	LS	100%	$4,990.00	100%	$4,990.00		$0.00	100%	$4,990.00

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ELM STREET LID NO.8194

GELCO JC 5026
FOREST GROVE W.O. 8194

ITEM NO.	DESCRIPTION	UNIT PRICE	UNIT	TOTAL QUANT.	CONTRACT AMOUNT	PRIOR INVOICE QUANT.	PRIOR INVOICE AMOUNT	THIS INVOICE QUANT.	THIS INVOICE AMOUNT	TOTAL TO DATE QUANT.	TOTAL TO DATE AMOUNT
CO8	ADD 6" DIP HYDRANT LAT	$30.00	LF	25	$750.00	18	$540.00		$0.00	18	$540.00
	6" MJxFLG GATE VALVE	$450.00	EA	1	$450.00	1	$450.00		$0.00	1	$450.00
	12"x6" MJxFLG TEE	$350.00	EA	1	$350.00	1	$350.00		$0.00	1	$350.00
	6" MJ FIRE HYDRANT	$1,200.00	EA	1	$1,200.00	1	$1,200.00		$0.00	1	$1,200.00
	CATHODIC PROTECTION	$500.00	LS	100%	$500.00	100%	$500.00		$0.00	100%	$500.00
	TOTAL CO 8				$3,250.00		$3,040.00		$0.00		$3,040.00
CO9	10" FIRE/DOM SERV REST JT	$62.00	LF	62	$3,844.00	50	$3,100.00		$0.00	50	$3,100.00
	10"x10" MJ TEE W/REST GLD	$462.00	EA	1	$462.00	1	$462.00		$0.00	1	$462.00
	10" MJ PLUG	$115.00	EA	2	$230.00	2	$230.00		$0.00	2	$230.00
	2" PE 90 DEG ELL	$130.00	LS	100%	$130.00	100%	$130.00		$0.00	100%	$130.00
	10" GATE VALVE	$928.00	EA	1	$928.00	1	$928.00		$0.00	1	$928.00
	10"x6" REDUCER	$185.00	EA	1	$185.00	1	$185.00		$0.00	1	$185.00
	RELOCATE FIRE HYDRANT	$300.00	EA	1	$300.00	1	$300.00		$0.00	1	$300.00
	6" DIP FH PIPE & EXTENSION	$30.00	LF	10	$300.00	10	$300.00		$0.00	10	$300.00
	TUNNEL UNDER EX. VAULT	$1,000.00	LS	100%	$1,000.00	100%	$1,000.00		$0.00	100%	$1,000.00
	RESET VLT/CHECK VALVES	$6,190.00	LS	100%	$6,190.00	90%	$5,571.00	10%	$619.00	100%	$6,190.00
	DELETE 10" DIP JT (CO 2)	$52.00	LF	-46	($2,392.00)	-46	($2,392.00)		$0.00	-46	($2,392.00)
	TOTAL CO 9				$11,177.00		$9,814.00		$619.00		$10,433.00
CO10	REMOVE T-BLK/VLV 15+50L	$794.03	LS	100%	$794.03	100%	$794.03		$0.00	100%	$794.03
CO11	1" WTR SERV TAYLOR PROP	$4,130.86	LS	100%	$4,130.86	100%	$4,130.86		$0.00	100%	$4,130.86
CO12	SAN SWR TAP & LAT 14+85L	$4,990.00	LS	100%	$4,990.00	100%	$4,990.00		$0.00	100%	$4,990.00
CO13	REPAIR WTR MAIN IN CASING - PENDING										

forest grove

January 26, 1996

Mr. Bob Boren
Estimator & Project Manager
Gelco Construction Company
PO Box 7716
Salem, OR 97303

RE: Elm Street L.I.D. #8194

Dear Bob:

Enclosed herewith is check number 85167 & 85169 in the amount of $88,609.25 and $23,023.25, representing **Payment No. 3 & No. 4.** Itemized spreadsheets detailing these pay estimates are also enclosed. Also enclosed are copies of Change Order Nos. 5 thru 10.

If you have any questions, please give me a call at (503) 359-3228.

Sincerely,

Kelly Strother

Kelly Strother
Engineering Secretary

/ks

Enclosures: Check Nos. 85167 & 85169
Pay Estimate No. 3 & 4
Change Order Nos. 5 thru 10

cc: Margie Taylor, OEDD

REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.	REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.
PAY ESTIMATE 4	01/26/96	**23023.25					

CITY OF FOREST GROVE
P.O. BOX 326
FOREST GROVE, OR 97116

20350	85169	01/26/96	**$23023.25
VENDOR NO.	CHECK NO.	CHECK DATE	CHECK AMOUNT

forest grove

City of Forest Grove
P. O. BOX 326
FOREST GROVE, OR 97116

Forest Grove Branch
First Interstate Bank of Oregon, N.A.
Forest Grove, Oregon

24-12/1230 090

85169

DATE	CK NO.	CHECK AMOUNT
01/26/96	85169	$$23023.25

PAY

EXACTLY $$23023 AND 25 CTS

TO GELCO CONTRUSTION CO.
SALEM, OR 97303

CITY TREASURER

⑈085169⑈ ⑆123000123⑆090 065002 ⑈

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	18,700.00	$18,700.00	0	$0.00	1	$18,700.00
2	Temporary Traffic Controls	LS	1	3,000.00	$3,000.00	0.1	$300.00	0.85	$2,550.00
3	Environmental Controls	LS	1	2,800.00	$2,800.00	0.05	$140.00	0.9	$2,520.00
4	Unclassified Excavation.	LS	1	10,000.00	$10,000.00	0.1	$1,000.00	1	$10,000.00
5	Trench Foundation	CY	100	30.00	$3,000.00	88	$2,640.00	546	$16,380.00
6	Dewatering.	LS	1	1,000.00	$1,000.00	0	$0.00	1	$1,000.00
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	$5,592.00	0	$0.00	249	$5,976.00
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	$2,212.00	0	$0.00	44	$1,232.00
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	$8,702.00	0	$0.00	341	$12,958.00
					$55,006.00		$4,080.00		$71,316.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	$3,268.00	0	$0.00	32	$1,376.00
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	$14,112.00	0	$0.00	0	$0.00
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	$1,222.00	0	$0.00	318	$14,946.00
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	$15,366.00	0	$0.00	0	$0.00
14	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	$4,160.00	0	$0.00	511	$26,572.00
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	$2,652.00	0	$0.00	140	$3,640.00
					$40,780.00		$0.00		$46,534.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 3 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	$25,350.00	0	$0.00	650	$25,350.00
17	48-inch sanitary manhole.	EA	3	2,500.00	$7,500.00	0	$0.00	2	$5,000.00
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	$4,000.00	0.25	$1,000.00	0.25	$1,000.00
19	48-inch storm manhole, complete.	EA	5	1,850.00	$9,250.00	0	$0.00	4	$7,400.00
20	Curb inlet.	EA	6	1,030.00	$6,180.00	0	$0.00	6	$6,180.00
21	Monolithic curb and gutter.	LF	1203	7.25	$8,721.75	0	$0.00	1200	$8,700.00
22	Sidewalk	SF	5869	1.95	$11,444.55	0	$0.00	0	$0.00
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	$8,218.00	1600	$5,600.00	1600	$5,600.00
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	$12,712.50	250	$1,125.00	2750	$12,375.00
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	$5,625.00	3000	$4,500.00	3000	$4,500.00
					$99,001.80		$12,225.00		$76,105.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	$27,140.00	0	$0.00	0	$0.00
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	$4,320.00	0	$0.00	0	$0.00
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	$875.00	0	$0.00	0	$0.00
29	Type I-L Barricade.	EA	1	250.00	$250.00	0	$0.00	0	$0.00
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	$600.00	0	$0.00	0	$0.00
31	10" tapping sleeve, 10' NRS Gat Valve Box, 10x12 reducer installed, complete.	LS	1	2,000.00	$2,000.00	0	$0.00	1	$2,000.00
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	$1,050.00	0	$0.00	50	$1,500.00
					$36,235.00		$0.00		$3,500.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	$1,900.00	0	$0.00	54	$2,052.00
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	$31,185.00	0	$0.00	570	$31,350.00
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	$900.00	0	$0.00	1	$900.00
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	$500.00	0	$0.00	1	$500.00
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	$250.00	0	$0.00	1	$250.00
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	$350.00	0	$0.00	1	$350.00
39	12" X 22.5 degrees. Elbow complete.	EA	1	475.00	$475.00	0	$0.00	1	$475.00
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	$400.00	0	$0.00	1	$400.00
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
					$45,960.00		$0.00		$46,277.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	$1,400.00	0	$0.00	3	$2,100.00
43	2" water service taps with corp stop.	EA	2	1,000.00	$2,000.00	0	$0.00	1	$1,000.00
44	1" polyethylene water service.	LF	275	3.00	$825.00	0	$0.00	68	$204.00
45	2" Polyethylene water service.	LF	50	5.00	$250.00	0	$0.00	12	$60.00
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	$2,000.00	0	$0.00	0	$0.00
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	$1,125.00	0	$0.00	0	$0.00
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	0	$0.00	0	$0.00
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	$1,800.00	0	$0.00	0	$0.00
					$10,300.00		$0.00		$3,364.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 7 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	0	$0.00	0	$0.00
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	$1,800.00	0	$0.00	0	$0.00
52	Seeded lawn construction (in parkway area).	SY	620	4.05	$2,511.00	0	$0.00	0	$0.00
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	$3,000.00	0	$0.00	0	$0.00
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	$2,450.00	450	$2,250.00	450	$2,250.00
					$10,661.00		$2,250.00		$2,250.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 8 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 1								
55	21"CL A STM PIPE (B.I. 13)	LF	-394	$39.00	($15,366.00)	0	$0.00	0	$0.00
56	21"CL B STM PIPE (B.I. 12)	LF	258.21	$47.00	$12,135.87	0	$0.00	0	$0.00
57	24"CL A STM PIPE	LF	394	$52.00	$20,488.00	0	$0.00	0	$0.00
58	24"CL B STM PIPE	LF	26	$63.00	$1,638.00	0	$0.00	26	$1,638.00
59	24"STM PIPE ADD 1.05VF	LF	420	$1.00	$420.00	0	$0.00	485	$485.00
60	18" STORM S/O PLUG	EA	1	$150.00	$150.00	0	$0.00	1	$150.00
61	18" STM PIPE CL A	LF	10	$40.00	$400.00	0	$0.00	16	$640.00
62	18"CL B STM PIPE (B.I. 11)	LF	-284.21	$48.00	($13,642.08)	0	$0.00	0	$0.00
63	21" STM PIPE ADD 1.34VF	LF	284.21	$5.55	$1,577.37	0	$0.00	318	$1,764.90
64	8" LAT ADD .78VF	LF	43	$1.90	$81.70	0	$0.00	43	$81.70
65	MH ADD DEPTH	VF	5.4	$192.00	$1,036.80	0	$0.00	5.4	$1,036.80
66	15" STM ADD 1.52VF	LF	30	$6.03	$180.90	0	$0.00	32	$192.96
67	8" STM A D 1.86VF	LF	43	$6.23	$267.89	0	$0.00	43	$267.89
68	12" STM AD 1.64 VF	LF	67.76	$6.51	$441.12	0	$0.00	67.76	$441.12
69	8" STM ADD 1.75VF	LF	40	$4.29	$171.60	0	$0.00	40	$171.60
70	12" STM ADD 1.89VF	LF	160.93	$7.50	$1,206.98	0	$0.00	160.93	$1,206.98
71	8" STM ADD 1.84VF	LF	23	$4.48	$103.04	0	$0.00	23	$103.04
72	8" STM ADD 1.88VF	LF	40	$4.57	$182.80	0	$0.00	40	$182.80
73	8" STM LAT AD 2.12VF	LF	81	$5.18	$419.58	0	$0.00	81	$419.58
					$11,893.56		$0.00		$8,782.36

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 9 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 2								
74	12"X10" MJ TEE W/ BLOCKS	EA	1	$462	$462.00	0	$0.00	1	$462.00
75	10"X2" SERVICE SADDLE	EA	1	$44	$44.00	0	$0.00	1	$44.00
76	10" DIP CL 52 SERVICE PIPE	LF	46	$52	$2,392.00	-8	($416.00)	46	$2,392.00
77	MOVE 10" GATE VALVE	EA	1	$195	$195.00	0	$0.00	1	$195.00
78	CATHODIC PROTECTION	LS	1	$630	$630.00	0	$0.00	1	$630.00
79	CAP 10" GATE VALVE	EA	1	$600	$600.00	0	$0.00	1	$600.00
80	12X2" SERVICE SADDLE	EA	-1	$75	($75.00)	-1	($75.00)	-1	($75.00)
81	2" PE SERVICE PIPE (B.I. 45)	LF	-38	$5	($190.00)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 3								
83	SANITARY MANHOLE STA 15+68 (DELETE)	EA	-1	$2,500	($2,500.00)	0	$0.00	0	$0.00
84	CONNECT TO EXISTING STUBOUT STA 15+68	EA	1	$1,620	$1,620.00	0	$0.00	1	$1,620.00
	CHANGE ORDER NO. 4								
85	48"STORM MANHOLE (B.I. 17) (DELETE)	EA	-1	1,850.00	($1,850.00)	0	$0.00	0	$0.00
86	15"STORM PIPE (B.I. 10)	LF	-24	43.00	($1,032.00)	0	$0.00	0	$0.00
87	72"STORM MANHOLE	EA	1	4,400.00	$4,400.00	0	$0.00	1	$4,400.00
88	15"STORM - ADD DEPTH 1.05 VF	LF	22	4.40	$96.80	0	$0.00	0	$0.00
					$4,792.80		($491.00)		$10,268.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
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Forest Grove, OR 97116

Sheet 10 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

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W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 5								
89	ADD 24" CL V - CL D	LF	40	$52	$2,080.00	0	$0.00	40	$2,080.00
90	24" STORM ADDED DEPTH (2.10'AVG)	LF	453	$3	$1,359.00	0	$0.00	453	$1,359.00
91	RELOCATE FIRE HYDRANT	EA	1	$725	$725.00	0	$0.00	1	$725.00
92	PLUG 15" STUBOUT NOT USED MH4	EA	1	$250	$250.00	0	$0.00	1	$250.00
93	DELETE 15" PIPE LATERAL MH 4	LF	-22	$43	($946.00)	0	$0.00	0	$0.00
94	DELETE 15"STM LTL XTRA DEPTH -1.05VF	LF	-22	$4	($96.80)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 6								
95	STA 10+05RT - 10"DIP R.J. FIRE SERVICE	LF	46	$62	$2,852.00	0	$0.00	46	$2,852.00
96	10" MJ GATE VALVE W/R.J.	EA	1	$928	$928.00	0	$0.00	1	$928.00
97	12'X10" MJ TEE W/BLOCKS	EA	1	$462	$462.00	0	$0.00	1	$462.00
98	10" MJ PLUG	EA	1	$115	$115.00	0	$0.00	1	$115.00
99	CATHODIC PROTECTION	LS	1	$630	$630.00	0	$0.00	1	$630.00
	CHANGE ORDER NO. 7								
100	STA 11+04 LT SANITARY SWR TAP & LTL	LS	1	$4,990	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 8								
101	ADD FIRE HYDRANT 10+20LT: 6" DIP 52	LF	25	$30	$750.00	0	$0.00	18	$540.00
102	6"MJXFLG GATE VALVE	EA	1	$450	$450.00	0	$0.00	1	$450.00
103	12"X6"MJXFLG TEE	EA	1	$350	$350.00	0	$0.00	1	$350.00
104	6" MJ FIRE HYDRANT	EA	1	$1,200	$1,200.00	0	$0.00	1	$1,200.00
105	CATHODIC PROTECTION	LF	1	$500	$500.00	0	$0.00	1	$500.00
					$16,598.20		$0.00		$17,431.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 11 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: December 1, 1995 To: December 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 9								
107	14+46RT 10"FIRE/DOM SERV REST. JT.	LF	62	$62	$3,844.00	0	$0.00	50	$3,100.00
108	10"X10" MJ TEE W/ REST GLDS	EA	1	$462	$462.00	0	$0.00	1	$462.00
109	10" MJ PLUG	EA	2	$115	$230.00	0	$0.00	2	$230.00
110	2" PE 90 DEG EL	LS	1	$130	$130.00	0	$0.00	1	$130.00
111	10" GATE VALVE	EA	1	$928	$928.00	0	$0.00	1	$928.00
112	10" X 6" REDUCER	EA	1	$185	$185.00	0	$0.00	1	$185.00
113	RELOCATE FIRE HYDRANT	EA	1	$300	$300.00	1	$300.00	1	$300.00
114	6" DIP FH PIPE & EXTENSION	LF	10	$30	$300.00	10	$300.00	10	$300.00
115	TUNNEL UNDER EXISTING VAULT	LS	1	$1,000	$1,000.00	0	$0.00	1	$1,000.00
116	RESET VAULT/CHK VALVE & SPLS	LS	1	$6,190	$6,190.00	0.9	$5,571.00	0.9	$5,571.00
117	DELETE 10" DIP PUSH ON JT (CO 2)	LF	-46	$52	($2,392.00)	0	$0.00	-46	($2,392.00)
	CHANGE ORDER 10								
118	STA 15+ 50LT WTR MN - REMOVE T-BLK/VLV	LS	1	794.03	$794.03	0	$0.00	1	$794.03
	CHANGE ORDER 11								
119	1" WATER SERVICE TO TAYLOR PROPERTY	LS	1	$4,130.86	$4,130.86	0	$0.00	1	$4,130.86
	CHANGE ORDER 12								
120	STA 14+85LT SAN. SWR TAP & LTL	LS	1	$4,990	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER 13								
121	STA 15 + 50LT - REPAIR WTR MAIN IN CASING	PENDING							
					$21,091.89		$6,171.00		$19,728.89

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 12 of 12 Sheets
Pay Estimate: 4
Date: January 4, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

O.K. FOR PAYMENT
VENDOR # 20350
FUND # 34

From: December 1, 1995 To: December 31, 1995

ITEM DEPT. # 010 / BUDGET # 5052000 / BY	Unit	Qty	CONTRACT SUM	AMOUNT THIS PAY	COMPLETED PERIOD	AMOUNT TO DATE	COMPLETED DATE
			$352,320.25		$24,235.00		$305,556.25

Less 5% Withholding	$15,277.81
Less Liquidated Damages	$0.00
Less Previous Payment	~~$273,318.63~~ 267,255.19
TOTAL DEDUCTIONS	~~$288,596.44~~ 282,533.00
PAYMENT DUE	~~$16,959.81~~ 23,023.25

Steve Wood, Project Engineer

Gelco Construction, Robert Boren, Project Manager

Approved By: Robert A. Foster

Rob Foster, Director of Public Works

g:\groups\engineer\8194E3.xls

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	18,700.00	$18,700.00	0	$0.00	1	$18,700.00
2	Temporary Traffic Controls	LS	1	3,000.00	$3,000.00	0.25	$750.00	0.75	$2,250.00
3	Environmental Controls	LS	1	2,800.00	$2,800.00	0.1	$280.00	0.85	$2,380.00
4	Unclassified Excavation.	LS	1	10,000.00	$10,000.00	0.9	$9,000.00	0.9	$9,000.00
5	Trench Foundation	CY	100	30.00	$3,000.00	0	$0.00	458	$13,740.00
6	Dewatering.	LS	1	1,000.00	$1,000.00	0	$0.00	1	$1,000.00
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	$5,592.00	0	$0.00	249	$5,976.00
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	$2,212.00	0	$0.00	44	$1,232.00
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	$8,702.00	0	$0.00	341	$12,958.00
					$55,006.00		$10,030.00		$67,236.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	$3,268.00	0	$0.00	32	$1,376.00
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	$14,112.00	0	$0.00	0	$0.00
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	$1,222.00	0	$0.00	318	$14,946.00
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	$15,366.00	0	$0.00	0	$0.00
14	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	$4,160.00	26	$1,352.00	511	$26,572.00
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	$2,652.00	0	$0.00	140	$3,640.00
					$40,780.00		$1,352.00		$46,534.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 3 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	$25,350.00	42	$1,638.00	650	$25,350.00
17	48-inch sanitary manhole.	EA	3	2,500.00	$7,500.00	0	$0.00	2	$5,000.00
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	$4,000.00	0	$0.00	0	$0.00
19	48-inch storm manhole, complete.	EA	5	1,850.00	$9,250.00	0	$0.00	4	$7,400.00
20	Curb inlet.	EA	6	1,030.00	$6,180.00	6	$6,180.00	6	$6,180.00
21	Monolithic curb and gutter.	LF	1203	7.25	$8,721.75	1200	$8,700.00	1200	$8,700.00
22	Sidewalk	SF	5869	1.95	$11,444.55	0	$0.00	0	$0.00
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	$8,218.00	0	$0.00	0	$0.00
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	$12,712.50	2500	$11,250.00	2500	$11,250.00
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	$5,625.00	0	$0.00	0	$0.00
					$99,001.80		$27,768.00		$63,880.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	$27,140.00	0	$0.00	0	$0.00
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	$4,320.00	0	$0.00	0	$0.00
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	$875.00	0	$0.00	0	$0.00
29	Type I-L Barricade.	EA	1	250.00	$250.00	0	$0.00	0	$0.00
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	$600.00	0	$0.00	0	$0.00
31	10" tapping sleeve, 10' NRS Gat Valve Box, 10x12 reducer installed, complete.	LS	1	2,000.00	$2,000.00	0	$0.00	1	$2,000.00
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	$1,050.00	0	$0.00	50	$1,500.00
					$36,235.00		$0.00		$3,500.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	$1,900.00	0	$0.00	54	$2,052.00
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	$31,185.00	264	$14,520.00	570	$31,350.00
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	$900.00	0	$0.00	1	$900.00
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	$500.00	0	$0.00	1	$500.00
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	$250.00	1	$250.00	1	$250.00
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	$350.00	0	$0.00	1	$350.00
39	12" X 22.5 degrees. Elbow complete.	EA	1	475.00	$475.00	0	$0.00	1	$475.00
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	$400.00	0	$0.00	1	$400.00
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	$10,000.00	0.5	$5,000.00	1	$10,000.00
					$45,960.00		$19,770.00		$46,277.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	$1,400.00	3	$2,100.00	3	$2,100.00
43	2" water service taps with corp stop.	EA	2	1,000.00	$2,000.00	1	$1,000.00	1	$1,000.00
44	1" polyethylene water service.	LF	275	3.00	$825.00	68	$204.00	68	$204.00
45	2" Polyethylene water service.	LF	50	5.00	$250.00	12	$60.00	12	$60.00
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	$2,000.00	0	$0.00	0	$0.00
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	$1,125.00	0	$0.00	0	$0.00
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	0	$0.00	0	$0.00
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	$1,800.00	0	$0.00	0	$0.00
					$10,300.00		$3,364.00		$3,364.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 7 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	0	$0.00	0	$0.00
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	$1,800.00	0	$0.00	0	$0.00
52	Seeded lawn construction (in parkway area).	SY	620	4.05	$2,511.00	0	$0.00	0	$0.00
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	$3,000.00	0	$0.00	0	$0.00
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	$2,450.00	0	$0.00	0	$0.00
					$10,661.00		$0.00		$0.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 8 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 1								
55	21"CL A STM PIPE (B.I. 13)	LF	-394	$39.00	($15,366.00)	0	$0.00	0	$0.00
56	21"CL B STM PIPE (B.I. 12)	LF	258.21	$47.00	$12,135.87	0	$0.00	0	$0.00
57	24"CL A STM PIPE	LF	394	$52.00	$20,488.00	0	$0.00	0	$0.00
58	24"CL B STM PIPE	LF	26	$63.00	$1,638.00	0	$0.00	26	$1,638.00
59	24"STM PIPE ADD 1.05VF	LF	420	$1.00	$420.00	0	$0.00	485	$485.00
60	18" STORM S/O PLUG	EA	1	$150.00	$150.00	0	$0.00	1	$150.00
61	18" STM PIPE CL A	LF	10	$40.00	$400.00	0	$0.00	16	$640.00
62	18"CL B STM PIPE (B.I. 11)	LF	-284.21	$48.00	($13,642.08)	0	$0.00	0	$0.00
63	21" STM PIPE ADD 1.34VF	LF	284.21	$5.55	$1,577.37	0	$0.00	318	$1,764.90
64	8" LAT ADD .78VF	LF	43	$1.90	$81.70	0	$0.00	43	$81.70
65	MH ADD DEPTH	VF	5.4	$192.00	$1,036.80	0	$0.00	5.4	$1,036.80
66	15" STM ADD 1.52VF	LF	30	$6.03	$180.90	0	$0.00	32	$192.96
67	8" STM A D 1.86VF	LF	43	$6.23	$267.89	0	$0.00	43	$267.89
68	12" STM AD 1.64 VF	LF	67.76	$6.51	$441.12	0	$0.00	67.76	$441.12
69	8" STM ADD 1.75VF	LF	40	$4.29	$171.60	0	$0.00	40	$171.60
70	12" STM ADD 1.89VF	LF	160.93	$7.50	$1,206.98	0	$0.00	160.93	$1,206.98
71	8" STM ADD 1.84VF	LF	23	$4.48	$103.04	0	$0.00	23	$103.04
72	8" STM ADD 1.88VF	LF	40	$4.57	$182.80	0	$0.00	40	$182.80
73	8" STM LAT AD 2.12VF	LF	81	$5.18	$419.58	0	$0.00	81	$419.58
					$11,893.56		$0.00		$8,782.36

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 9 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 2								
74	12"X10" MJ TEE W/ BLOCKS	EA	1	$462	$462.00	0	$0.00	1	$462.00
75	10"X2" SERVICE SADDLE	EA	1	$44	$44.00	0	$0.00	1	$44.00
76	10" DIP CL 52 SERVICE PIPE	LF	46	$52	$2,392.00	0	$0.00	54	$2,808.00
77	MOVE 10" GATE VALVE	EA	1	$195	$195.00	0	$0.00	1	$195.00
78	CATHODIC PROTECTION	LS	1	$630	$630.00	0	$0.00	1	$630.00
79	CAP 10" GATE VALVE	EA	1	$600	$600.00	0	$0.00	1	$600.00
80	12X2" SERVICE SADDLE	EA	-1	$75	($75.00)	0	$0.00	0	$0.00
81	2" PE SERVICE PIPE (B.I. 45)	LF	-38	$5	($190.00)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 3								
83	SANITARY MANHOLE STA 15+68 (DELETE)	EA	-1	$2,500	($2,500.00)	0	$0.00	0	$0.00
84	CONNECT TO EXISTING STUBOUT STA 15+68	EA	1	$1,620	$1,620.00	0	$0.00	1	$1,620.00
	CHANGE ORDER NO. 4								
85	48"STORM MANHOLE (B.I. 17) (DELETE)	EA	-1	1,850.00	($1,850.00)	0	$0.00	0	$0.00
86	15"STORM PIPE (B.I. 10)	LF	-24	43.00	($1,032.00)	0	$0.00	0	$0.00
87	72"STORM MANHOLE	EA	1	4,400.00	$4,400.00	0	$0.00	1	$4,400.00
88	15"STORM - ADD DEPTH 1.05 VF	LF	22	4.40	$96.80	0	$0.00	0	$0.00
					$4,792.80		$0.00		$10,759.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 10 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 5								
89	ADD 24" CL V - CL D	LF	40	$52	$2,080.00	40	$2,080.00	40	$2,080.00
90	24" STORM ADDED DEPTH (2.10'AVG)	LF	453	$3	$1,359.00	453	$1,359.00	453	$1,359.00
91	RELOCATE FIRE HYDRANT	EA	1	$725	$725.00	1	$725.00	1	$725.00
92	PLUG 15" STUBOUT NOT USED MH4	EA	1	$250	$250.00	1	$250.00	1	$250.00
93	DELETE 15" PIPE LATERAL MH 4	LF	-22	$43	($946.00)	0	$0.00	0	$0.00
94	DELETE 15"STM LTL XTRA DEPTH -1.05VF	LF	-22	$4	($96.80)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 6								
95	STA 10+05RT - 10"DIP R.J. FIRE SERVICE	LF	46	$62	$2,852.00	46	$2,852.00	46	$2,852.00
96	10" MJ GATE VALVE W/R.J.	EA	1	$928	$928.00	1	$928.00	1	$928.00
97	12'X10" MJ TEE W/BLOCKS	EA	1	$462	$462.00	1	$462.00	1	$462.00
98	10" MJ PLUG	EA	1	$115	$115.00	1	$115.00	1	$115.00
99	CATHODIC PROTECTION	LS	1	$630	$630.00	1	$630.00	1	$630.00
	CHANGE ORDER NO. 7								
100	STA 11+04 LT SANITARY SWR TAP & LTL	LS	1	$4,990	$4,990.00	1	$4,990.00	1	$4,990.00
	CHANGE ORDER NO. 8								
101	ADD FIRE HYDRANT 10+20LT: 6" DIP 52	LF	25	$30	$750.00	18	$540.00	18	$540.00
102	6"MJXFLG GATE VALVE	EA	1	$450	$450.00	1	$450.00	1	$450.00
103	12"X6"MJXFLG TEE	EA	1	$350	$350.00	1	$350.00	1	$350.00
104	6" MJ FIRE HYDRANT	EA	1	$1,200	$1,200.00	1	$1,200.00	1	$1,200.00
105	CATHODIC PROTECTION	LF	1	$500	$500.00	1	$500.00	1	$500.00
					$16,598.20		$17,431.00		$17,431.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 11 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 9								
107	14+46RT 10"FIRE/DOM SERV REST. JT.	LF	62	$62	$3,844.00	50	$3,100.00	50	$3,100.00
108	10"X10" MJ TEE W/ REST GLDS	EA	1	$462	$462.00	1	$462.00	1	$462.00
109	10" MJ PLUG	EA	2	$115	$230.00	2	$230.00	2	$230.00
110	2" PE 90 DEG EL	LS	1	$130	$130.00	1	$130.00	1	$130.00
111	10" GATE VALVE	EA	1	$928	$928.00	1	$928.00	1	$928.00
112	10" X 6" REDUCER	EA	1	$185	$185.00	1	$185.00	1	$185.00
113	RELOCATE FIRE HYDRANT	EA	1	$300	$300.00	0	$0.00	0	$0.00
114	6" DIP FH PIPE & EXTENSION	LF	10	$30	$300.00	0	$0.00	0	$0.00
115	TUNNEL UNDER EXISTING VAULT	LS	1	$1,000	$1,000.00	1	$1,000.00	1	$1,000.00
116	RESET VAULT/CHK VALVE & SPLS	LS	1	$6,190	$6,190.00	0	$0.00	0	$0.00
117	DELETE 10" DIP PUSH ON JT (CO 2)	LF	-46	$52	($2,392.00)	-46	($2,392.00)	-46	($2,392.00)
	CHANGE ORDER 10								
118	STA 15+ 50LT WTR MN - REMOVE T-BLK/VLV	LS	1	794.03	$794.03	1	$794.03	1	$794.03
	CHANGE ORDER 11								
119	1" WATER SERVICE TO TAYLOR PROPERTY	LS	1	$4,130.86	$4,130.86	1	$4,130.86	1	$4,130.86
	CHANGE ORDER 12								
120	STA 14+85LT SAN. SWR TAP & LTL	LS	1	$4,990	$4,990.00	1	$4,990.00	1	$4,990.00
	CHANGE ORDER 13								
121	STA 15 + 50LT - REPAIR WTR MAIN IN CASING	PENDING							
					$21,091.89		$13,557.89		$13,557.89

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 12 of 12 Sheets
Pay Estimate: 3
Date: December 11, 1995

Job Name: ELM STREET L.I.D.
W.O. #8194

O.K. FOR PAYMENT
VENDOR # 20350
34

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: November 1, 1995 To: November 31, 1995

ITEM 010
5052000

ITEM		Unit	Qty	CONTRACT SUM	AMOUNT THIS PAY	COMPLETED PERIOD	AMOUNT TO DATE	COMPLETED
				$352,320.25		$93,272.89		$281,321.25

Less 5% Withholding	$14,066.06
Less Liquidated Damages	$0.00
Less Previous Payment	$178,645.94
TOTAL DEDUCTIONS	$192,712.00
PAYMENT DUE	$88,609.25

Steve Wood, Project Engineer

Gelco Construction, Robert Boren, Project Manager

Approved By Robert A. Foster
Rob Foster, Director of Public Works

g:\groups\engineer\8194E3.xls

forest grove

December 21, 1995

Mr. Bob Boren
Estimator & Project Manager
Gelco Construction Company
5892 Jean Road
Lake Oswego, OR 97035

RE: Elm Street L.I.D. #8194

Dear Bob:

Enclosed herewith is check number 84823 in the amount of $146,873.19, representing **Payment No. 2.** An itemized spreadsheet detailing this pay estimate is also enclosed.

If you have any questions, please give me a call at (503) 359-3228.

Sincerely,

Kelly Strother

Kelly Strother
Engineering Secretary

/ks

Enclosures: Check No. 84823
Pay Estimate No. 2

cc: Margie Taylor, OEDD

forest grove

October 23, 1995

Mr. Bob Boren
Estimator & Project Manager
Gelco Construction Company
5892 Jean Road
Lake Oswego, OR 97035

SUBJECT: **Elm Street L.I.D. No. 8194**

Dear Bob:

Enclosed herewith is a check in the amount of $31,772.75, representing **Payment No. 1.** An itemized spreadsheet detailing this pay estimate is also enclosed.

If you have any questions regarding this payment please call me at (503) 359-3232.

Sincerely,

Steve A. Wood
Project Engineer

SAW/sw

enclosures: Check No. 84020
Spreadsheet - Itemized payment

cc: Margie Taylor - O.E.D.D.

TRANSMISSION REPORT

:CITY-OF-FOREST-GROVE (NOV 01 '95 16:04)

DATE	START TIME	REMOTE TERMINAL IDENTIFICATION	MODE	TIME	RESULTS	TOTAL PAGES	DEPT. CODE
NOV 01	16:01		USW GSEST	02'10"	OK	05	

CITY OF FOREST GROVE
1924 Council Street, PO Box 326
Forest Grove, OR 97116
tel (503) 359-3200
fax (503) 359-3207

fax transmittal

to: Jim Shannon

fax #: 656-0686

from: Rob Foster

date: 11-1-95

re: Water & Sewer Imp. Forest Grove

pages: 5 , including this cover sheet

NOTES: Please fill in the "Completed to Date"

thanks
Rob

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 4 Sheets
Pay Estimate: 1
Date:

Job Name: Sanitary Sewer & Waterline Extension Taylor Way to Elm Street
W.O. #3118

Contractor: Coffman Excavation
PO Box 687
Oregon City, OR 97045

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
1	Mobilization	LS	1	37,000.00	37,000.00	0	$0.00	0	$0.00
2	Clearing and Grubbing.	LS	1	2,400.00	2,400.00	0	$0.00	0	$0.00
3	Trench Foundation.	CY	300	25.00	7,500.00	0	$0.00	0	$0.00
4	Dewatering.	LS	1	25,000.00	25,000.00	0	$0.00	0	$0.00
5	Environmental Controls.	LS	1	2,000.00	2,000.00	0	$0.00	0	$0.00
6	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class A Backfill.	LF	20	75.00	1,500.00	0	$0.00	0	$0.00
7	8" Diameter Sanitary Sewer, ASTM D3034 Carrier Pipe, installed within casing and bore pit.	LF	50	22.00	1,100.00	0	$0.00	0	$0.00
8	10-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class A Backfill.	LF	1358	31.00	42,098.00	0	$0.00	0	$0.00
9	48-inch sanitary manhole.	EA	4	1,500.00	6,000.00	0	$0.00	0	$0.00
					$124,598.00		$0.00		$0.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 4 Sheets
Pay Estimate: 1
Date:

Job Name: Sanitary Sewer & Waterline Extension Taylor Way to Elm Street
W.O. #3118

Contractor: Coffman Excavation
PO Box 687
Oregon City, OR 97045

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	12" Class 52 ductile iron water line, excavation, bedding and pipe zone, Class A backfill, thrust restraint, and fittings, complete.	LF	1170	31.00	36,270.00	0	$0.00	0	$0.00
11	12" Class 52 Ductile Iron Water Carrier Pipe installed within casing and bore pit.	LF	50	35.00	1,750.00	0	$0.00	0	$0.00
12	12" NRS gate valve including valve box, complete.	EA	3	1,000.00	3,000.00	0	$0.00	0	$0.00
13	6" NRS gate valves including valve box, complete.	EA	4	400.00	1,600.00	0	$0.00	0	$0.00
14	Fire Hydrant.	EA	4	1,200.00	4,800.00	0	$0.00	0	$0.00
15	12 x 6 x 12 Ductile Iron Tee, complete.	EA	4	500.00	2,000.00	0	$0.00	0	$0.00
16	12" Ductile Iron Tee, complete.	EA	1	1,000.00	1,000.00	0	$0.00	0	$0.00
17	45 Deg. Ductile Iron Elbow, complete.	EA	1	300.00	300.00	0	$0.00	0	$0.00
18	Water System Corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	14,000.00	14,000.00	0	$0.00	0	$0.00
19	Bore Pit Excavation, Set Up and Backfill for Two (2) Crossings.	LS	1	15,000.00	15,000.00	0	$0.00	0	$0.00
					$79,720.00		$0.00		$0.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 3 of 4 Sheets
Pay Estimate: 1
Date:

Job Name: Sanitary Sewer & Waterline Extension Taylor Way to Elm Street
W.O. #3118

Contractor: Coffman Excavation
PO Box 687
Oregon City, OR 97045

From: To:

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
20	16" Dia. Jacked and Bored Welded Steel Casing.	LF	40	90.00	3,600.00	0	$0.00	0	$0.00
21	24" Dia. Jacked and Bored Welded Steel Casing.	LF	40	130.00	5,200.00	0	$0.00	0	$0.00
					$8,800.00		$0.00		$0.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 4 Sheets
Pay Estimate: 1
Date:

Job Name: Sanitary Sewer & Waterline Extension Taylor Way to Elm Street
W.O. #3118

Contractor: Coffman Excavation
PO Box 687
Oregon City, OR 97045

ITEM		Unit	Qty	From: CONTRACT SUM	To: AMOUNT COMPLETED THIS PAY PERIOD		AMOUNT COMPLETED TO DATE	
	CO 1	LS		11,268 224,386				
				~~$213,118.00~~		$0.00		$0.00

Less 5% Withholding	$0.00
Less Liquidated Damages	$0.00
Less Previous Payment	$0.00
TOTAL DEDUCTIONS	$0.00
PAYMENT DUE	$0.00

Approved By:

Steve Wood, Project Engineer

Rob Foster, Director of Public Works

g:\groups\engineer\3114\payest1.xls

forest grove

December 19, 1995

Doug Kresse, Controller
Crann Corporation
PO Box 158
Sheridan, OR 97378

Dear Mr. Kresse,

Enclosed please find payment for sanitary sewer and waterline extensions that have been completed by Coffman Excavation at Taylor Industrial Park. We are withholding $6,382.57 from the payment for work performed by another contractor and agreed to by Coffman Excavation. This amount may be adjusted when the two contractors work out details in their agreement. If at that time additional money is due to Coffman Excavation, the City will reimburse Crann Corporation the agreed amount.

If you have any questions please give me a call at 359-3225.

Sincerely,

Robert A. Foster
Director of Public Works

Enclosure

CITY OF FOREST GROVE P.O. Box 326 Forest Grove, Oregon 97116 (503) 359-3200 FAX (503) 359-3207

CRANN CORPORATION

P.O. Box 158, Sheridan, Oregon 97378
Phone: (503) 843-2122 FAX: (503) 843-3172

INVOICE

Mr. Rob Foster
Director of Public Works
City of Forest Grove
P.O. Box 326
Forest Grove, Oregon 97116

This invoice is for Sanitary Sewer & Waterline Extensions that have been completed by Coffman Excavation at the Taylor Industrial Park (Taylor Way to Elm Street - South Side of SPRR Right-of-Way). This work was performed pursuant to our Agreement Allowing Developer To Construct Public Improvement dated July 20, 1995.

Amount Due $224,386.85

Please remit to: Crann Corporation
P.O. Box 158
Sheridan, Oregon 97378

O.K. FOR PAYMENT

VENDOR # _____

FUND # 34

DEPT. # 010

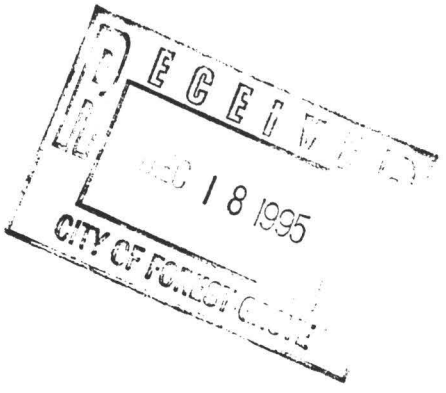
BUDGET # 5052000

pay → $218,004.28

BY Robert A. Foster

CRANN CORPORATION

P.O. Box 158, Sheridan, Oregon 97378
Phone: (503) 843-2122 FAX: (503) 843-3172



Mr. Rob Foster
Director of Public Works
City of Forest Grove
P.O. Box 326
Forest Grove, Oregon 97116

Dear Mr. Foster,

Enclosed please find a revised invoice for work performed by Coffman Excavation at the Taylor Industrial Park. It is my understanding that you will pay this invoice short by $6,382.57 for work performed by Gelco on behalf of Coffman.

I am sending this by facsimile and will mail it also.

If you have any questions, I can be reached at (503) 843-2122.

Thank you for your help on this matter.

Sincerely,

Crann Corporation

Doug Kresse

Doug Kresse
Controller

forest grove

October 27, 1995

Mr. Dan Symons
Project Manager
Moffatt, Nichol, & Bonney, Inc.
1845 N.E. Couch Street
Portland, OR 97232

SUBJECT: Elm Street L.I.D. No. 8194

Dear Dan:

Enclosed herewith, is a check in the amount of $13,294.38, which represents payment for Professional Engineering Services as per your Invoice Number 4980-2.

Please take note of my comment on the copy of your submitted invoice. If you have any questions please contact me at 359-3232.

Sincerely,

Steve A. Wood
Project Engineer

enclosure: Check No. 84151
Copy of Invoice No. 4980-2

forest grove

August 23, 1995

Ms. Janie Moeller
Manager - Contracts
1860 Lincoln Street
Denver, CO 80295

Subject: **RELMIS: F-758.51 and F-758.52**
LEASE 715726 - NO. 33985
Elm Street L.I.D. No. 8194 & W.O. No. 3118

Dear Janie:

Enclosed herewith is a check in the amount of $1,150.00, which represents payment for the sanitary sewer and waterline pipe crossings of your facilities at Elm Street.

As you have already received the signed Agreement document I would like to express thanks, on behalf of the City of Forest Grove, for allowing us to delay transmitting the check until our finance department completed its move into the 1995-96 fiscal year.

If you have any questions or concerns regarding the City's project please do not hesitate to contact me at (503) 359-3232, Monday through Friday between the hours of 8:00 AM to 5:00 PM, Pacific Daylight-Savings time.

Very Truly Yours

Steve A. Wood, Project Engineer

SW:sw

Enclosure: check No. 82915, dated 7/20/95

CITY OF FOREST GROVE P.O. Box 326 Forest Grove, Oregon 97116 (503) 359-3200 FAX (503) 359-3207

82915

REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.	REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.
F-758.52	06/16/95	1150.00	04868				

CITY OF FOREST GROVE
P.O. BOX 326
FOREST GROVE, OR 97116

VENDOR NO.	CHECK NO.	CHECK DATE	CHECK AMOUNT
77038	82915	07/20/95	$***1150.00

forest grove

City of Forest Grove
P.O. BOX 326
FOREST GROVE, OR 97116

Forest Grove Branch
First Interstate Bank of Oregon, N.A.
Forest Grove, Oregon

24-12/1230 090

82915

DATE 07/20/95

CK NO 82915

CHECK AMOUNT
$***1150.00**

PAY *****1150 DOLLARS & 00 CENTS ******

TO SOUTHERN PACIFIC LINES
1860 LINCOLN STREET
12TH FLOOR
DENVER CO 80295

CITY TREASURER

⑈082915⑈ ⑆123000123⑆090 065002 1⑈

forest grove

August 23, 1995

Ms. Janie Moeller
Manager - Contracts
1860 Lincoln Street
Denver, CO 80295

Subject: **RELMIS: F-758.51 and F-758.52**
LEASE 715726 - NO. 33985
Elm Street L.I.D. No. 8194 & W.O. No. 3118

Dear Janie:

Enclosed herewith is a check in the amount of $1,150.00, which represents payment for the sanitary sewer and waterline pipe crossings of your facilities at Elm Street.

As you have already received the signed Agreement document I would like to express thanks, on behalf of the City of Forest Grove, for allowing us to delay transmitting the check until our finance department completed its move into the 1995-96 fiscal year.

If you have any questions or concerns regarding the City's project please do not hesitate to contact me at (503) 359-3232, Monday through Friday between the hours of 8:00 AM to 5:00 PM, Pacific Daylight-Savings time.

Very Truly Yours

Steve A. Wood, Project Engineer

SW:sw

Enclosure: check No. 82915, dated 7/20/95

82915

REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.	REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.
F-758.52	06/16/95	1150.00	04868				

CITY OF FOREST GROVE
P.O. BOX 326
FOREST GROVE, OR 97116

VENDOR NO.	CHECK NO.	CHECK DATE	CHECK AMOUNT
77038	82915	07/20/95	$***1150.00

forest grove

City of Forest Grove
P.O. BOX 326
FOREST GROVE, OR 97116

Forest Grove Branch
First Interstate Bank of Oregon, N.A.
Forest Grove, Oregon

24-12
1230 090

82915

DATE 07/20/95

CK NO 82915

CHECK AMOUNT
$***1150.00**

PAY *****1150 DOLLARS & 00 CENTS ******

TO SOUTHERN PACIFIC LINES
1860 LINCOLN STREET
12TH FLOOR
DENVER CO 80295

CITY TREASURER

⑈082915⑈ ⑆123000123⑆090 065002 1⑈

forest grove

June 1, 1995

Mr. Dan Symons
Project Manager
Moffatt, Nichol, & Bonney, Inc.
1845 N.E. Couch Street
Portland, OR 97232

SUBJECT: Elm Street L.I.D. No. 8194
(Vicinity Map for O.E.D.D. submittal)

Dear Dan:

Enclosed herewith, is a check in the amount of $114.11, which represents payment for Professional Engineering Services as per your Invoice Number 4980C-1.

Thank you for your timely response to this matter.

Sincerely,

Steve A. Wood
Project Engineer

enclosure: Check No. 82139

82139

REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.	REFERENCE	DATE	GROSS AMOUNT	VOUCHER NO.
4980C-1	05/01/95	114.11	04030				

CITY OF FOREST GROVE
P.O. BOX 326
FOREST GROVE, OR 97116

VENDOR NO.	CHECK NO.	CHECK DATE	CHECK AMOUNT
76875	82139	05/11/95	$****114.11

forest grove

City of Forest Grove
P. O. BOX 326
FOREST GROVE, OR 97116

Forest Grove Branch
First Interstate Bank of Oregon, N.A.
Forest Grove, Oregon

24-12
1230 090

82139

DATE 05/11/95

CK NO 82139

CHECK AMOUNT
$****114.11**

PAY ******114 DOLLARS & 11 CENTS ******

TO MOFFATT, NICHOL & BONNEY, INC.
1845 N.E. COUCH STREET
PORTLAND OR 97232

CITY TREASURER

⑈082139⑈ ⑆123000123⑆090 065002 ⑆

MOFFATT, NICHOL & BONNEY, INC. Consulting E ineers
1845 N.E. COUCH STREET . PORTLAND, OREGON 97232 . (503) 232-2117 FAX (503 2-8023

May 1, 1995 Invoice Number 4980C-1

City of Forest Grove
1923 Council street
P.O. Box 326
Forest Grove, OR 97116

Attn: Steve Wood

RE: Vicinity Map

BASIC SERVICES

Professional Engineering Services to April 28, 1995	108.68

REIMBURSABLE EXPENSE

Liability Insurance @ 5% x 108.68	5.43
Invoice Total	$114.11

Date 5/31/95 # of pages 1
To STEVE W. Co CITY OF F.G.
Fax # From DANE
Moffatt, Nichol & Bonney Inc. Tel: 503/232-2117 Fax: 503/232-8023

9-4-95

CLOSING TRIAL BALANCE - YTD — PERIOD CLOSING DATE 06/30/95 — HK30054 — PAGE644

FU-DEP-ITEM/NO	TITLE / JC-JD	VND-#	SOURCE	REFERENCE	TRAN-DT	EX-PD	BEGINNING-BAL	YTD-ACTIVITY	ENDING BAL
***	EXPENDITURES								
**	SERVICES & SUPPLIES								
34-010-5025500	PROFESSIONAL SERVICES								
	08-01	76631	03001	4980-1	02/01/95	02/95		16,500.00	
	08-01	76726	03348	4980A-1	03/01/95	03/95		1,400.73	
	08-01	76875	04030	4980C-1	05/01/95	05/95		114.11	
*	ACCOUNT TOTAL							18,014.84	18,014.84
**	TOTAL SERVICES & SUPPLIES							18,014.84	18,014.84
**	CAPITAL OUTLAY								
34-010-5052000	PROJECT CONSTRUCTION								
*	ACCOUNT TOTAL								- .00
**	TOTAL CAPITAL OUTLAY								
**	DEBT SERVICE								
34-010-5060100	PRINCIPAL - S.P.W.F. LOAN								
	08-01	16399	01573	B91008	11/01/94	11/94		18,476.14	
*	ACCOUNT TOTAL							18,476.14	18,476.14
34-010-5060200	DEBT DEFEASANCE								
*	ACCOUNT TOTAL								.00
34-010-5061000	INTEREST - S.P.W.F. LOAN								
	08-01	16399	01573	B91008	11/01/94	11/94		36,180.05	
*	ACCOUNT TOTAL							36,180.05	36,180.05
**	TOTAL DEBT SERVICE							54,656.19	54,656.19
**	CONTINGENCY								
34-010-5070100	CONTINGENCY								
*	ACCOUNT TOTAL								.00
**	TOTAL CONTINGENCY								
**	RESERVED FOR FUTURE YEARS								
34-010-5090200	RESERVED FOR FUTURE DEBT SVC								
*	ACCOUNT TOTAL								.00
**	TOTAL RES. FOR FUTURE YEARS								
***	TOTAL DEPARTMENT							72,671.03	72,671.03
****	TOTAL FUND								

***			EXPENDITURES						
**			SERVICES & SUPPLIES						
	34-010-5025500		PROFESSIONAL SERVICES						
		08-01 77037 04867		4980C-2	07/12/95	07/95		725.00	
		08-01 77107 05173		9505019	07/30/95	08/95		1,505.00	
		08-01 77370 06266		4980-2	08/07/95	10/95		13,294.38	
		08-01 9268 06786		43505	11/25/95	12/95		196.00	
		08-01 9268 07947		1993	02/24/96	03/96		180.00	
*			ACCOUNT TOTAL					15,900.38	15,900.38
**			TOTAL SERVICES & SUPPLIES					15,900.38	15,900.38
**			CAPITAL OUTLAY						
	34-010-5052000		PROJECT CONSTRUCTION						
		03-01 JV24		V0U6946	04/05/96	03/96		43,500.00-	
		08-01 77038 04868		F-758.52	06/16/95	07/95		1,150.00	
		08-01 20350 06154		ESTIMATE #1	10/12/95	10/95		31,772.75	
		08-01 77512 06946		SEWER/WATER	12/20/95	12/95		218,004.28	
		08-01 77524 06992		EST #2	12/20/95	12/95		146,873.19	
		08-01 20350 07409		EST #3	01/26/96	01/96		88,609.25	
		08-01 20350 07410		EST #4	01/26/96	01/96		23,023.25	
		08-01 20350 08787		WO#8194	04/08/96	04/96		63,207.96	
*			ACCOUNT TOTAL					529,140.68	529,140.68
**			TOTAL CAPITAL OUTLAY					529,140.68	529,140.68
**			DEBT SERVICE						
	34-010-5060100		PRINCIPAL - S.P.W.F. LOAN						
		03-01 JV14		VOID CK	11/27/95	11/95		19,693.31-	
		08-01 16399 06036		B91008	10/01/95	10/95		19,693.31	
		08-01 16399 06422		B91008/PRNPL	11/01/95	11/95		19,693.31	
*			ACCOUNT TOTAL					19,693.31	19,693.31
	34-010-5060200		DEBT DEFEASANCE						
*			ACCOUNT TOTAL						.00
	34-010-5061000		INTEREST - S.P.W.F. LOAN						
		03-01 JV14		VOID CK	11/27/95	11/95		34,962.88-	
		08-01 16399 06036		B91008	10/01/95	10/95		34,962.88	
		08-01 16399 06422		B91008/INT	11/01/95	11/95		34,962.88	
*			ACCOUNT TOTAL					34,962.88	34,962.88
**			TOTAL DEBT SERVICE					54,656.19	54,656.19
**			CONTINGENCY						

95-96

571,590.63

572,640.68

#1 11/97 18,634.55

#5 -63,207.96

#6 -570.00

FU-DEP-ITEM/NO	TITLE JC-JD	VND-#	SOURCE	REFERENCE	TRAN-DT	EX-PD	BEGINNING-BAL	YTD-ACTIVITY	ENDING BAL
**	LIABILITIES								
*	GENERAL LIABILITIES								
34-000-2320100	ACCOUNTS PAYABLE								
	08-01	77038	04868	F-758.52	06/16/95	07/95		1,150.00-	
	08-01	77037	04867	4980C-2	07/12/95	07/95		725.00-	
	08-01	77107	05173	9505019	07/30/95	08/95		1,505.00-	
	08-01	77370	06266	4980-2	08/07/95	10/95		13,294.38-	
	08-01	16399	06036	B91008	10/01/95	10/95		19,693.31-	
	08-01	16399	06036	B91008	10/01/95	10/95		34,962.88-	
	08-01	20350	06154	ESTIMATE #1	10/12/95	10/95		31,772.75-	
	08-01	16399	06422	B91008/PRNPL	11/01/95	11/95		19,693.31-	
	08-01	16399	06422	B91008/INT	11/01/95	11/95		34,962.88-	
	08-01	9268	06786	43505	11/25/95	12/95		196.00-	
	08-01	77512	06946	SEWER/WATER	12/20/95	12/95		218,004.28-	
	08-01	77524	06992	EST #2	12/20/95	12/95		146,873.19-	
	08-01	20350	07409	EST #3	01/26/96	01/96		88,609.25-	-
	08-01	20350	07410	EST #4	01/26/96	01/96		23,023.25-	
	08-01	9268	07947	1993	02/24/96	03/96		180.00-	
	08-01	20350	08787	WO#8194	04/08/96	04/96		63,207.96-	
	08-02		20064 PBL'S	DISBURSEMENT	07/20/95	07/95		1,875.00	
	08-02		20064 PBL'S	DISBURSEMENT	08/11/95	08/95		1,505.00	
	08-02		20064 PBL'S	DISBURSEMENT	10/12/95	10/95		54,656.19	
	08-02		20064 PBL'S	DISBURSEMENT	10/20/95	10/95		31,772.75	
	08-02		20064 PBL'S	DISBURSEMENT	10/27/95	10/95		13,294.38	
	08-02		20064 PBL'S	DISBURSEMENT	11/09/95	11/95		54,656.19	
	08-02		20064 PBL'S	DISBURSEMENT	12/08/95	12/95		196.00	
	08-02		20064 PBL'S	DISBURSEMENT	12/21/95	12/95		364,877.47	
	08-02		20064 PBL'S	DISBURSEMENT	01/26/96	01/96		111,632.50	
	08-02		20064 PBL'S	DISBURSEMENT	03/08/96	03/96		180.00	
	08-02		20064 PBL'S	DISBURSEMENT	05/03/96	05/96		63,207.96	
*	ACCOUNT TOTAL								.00
34-000-2333400	DUE TO ASSESSMENT FUND						25,895.73-		
	03-01		JV4		07/13/95	07/95		25,895.73	
	03-01		JV17		06/27/96	06/96		310,000.00-	
*	ACCOUNT TOTAL							284,104.27-	310,000.00-
*	SUBTOTAL						25,895.73-	310,000.00-	310,000.00-
*	DEFERRED ITEMS								
34-000-2533400	DEFERRED REV. - CONTRACT REC.								
*	ACCOUNT TOTAL								.00
*	SUBTOTAL								
**	TOTAL LIABILITIES						25,895.73-	310,000.00-	310,000.00-

Rick - please! Rick will explain anyway

See if you can ~~figure out~~ match the numbers from this pay request to the OEDD final report.
RG

fund 36

forest grove

August 26, 1996

Margie Taylor
OEDD
775 Summer Street, NE
Salem, OR 97310

RE: Special Public Works Fund Project No. App111 City of Forest Grove (Japan America Beverage Company)

Dear Ms. Taylor:

I am sending the third Cash Request for the above referenced project. I have included the contractor's pay request to the City as support documentation. The project cost over ran the original budget significantly. This is due largely to unexpected changes in the proposed underground water and sewer lines. The project location is the site of an old log mill and changes were necessary to properly construct the utilities. The contractor's pay request reflects these additional costs.

I have completed the Project Expenditure Report to reflect what has been spent to date which totals $626,975. The current cash request is for only the remaining funds, ($29,206), which will not cover all the construction costs. The following is a summary of all the costs:

1-4	Construction	$596,830
6	Contractual Services	$46,359
7.b	Administration	$24,000
8.a	Other	$34,200
	Total	$701,389

The total project is $701,389 which exceeds the original budget of $657,981 by $43,408.

Please let me know if and how the SPWF Loan amount might be increased to cover these additional costs.

If you have any questions about the Cash Request figures, please call me at (503) 359-3225.

Sincerely,

Robert A. Foster

Robert A. Foster, P.E.
Director of Public Works

RAF:ks
Enclosures

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 1 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE		
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT	
1	Mobilization	LS	1	18,700.00	$18,700.00	0	$0.00	1	$18,700.00	RD
2	Temporary Traffic Controls	LS	1	3,000.00	$3,000.00	0.15	$450.00	1	$3,000.00	
3	Environmental Controls	LS	1	2,800.00	$2,800.00	0.1	$280.00	1	$2,800.00	
4	Unclassified Excavation.	LS	1	10,000.00	$10,000.00	0	$0.00	1	*$10,000.00	
5	Trench Foundation	CY	100	30.00	$3,000.00	0	$0.00	546	$16,380.00	SD
6	Dewatering.	LS	1	1,000.00	$1,000.00	0	$0.00	1	$1,000.00	SD
7	8-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	233	24.00	$5,592.00	0	$0.00	249	$5,976.00	SD
8	10-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	79	28.00	$2,212.00	0	$0.00	44	$1,232.00	SD
9	12-inch diameter, C14, Class 3 storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	229	38.00	$8,702.00	0	$0.00	341	$12,958.00	SD
					$55,006.00		$730.00		$72,046.00	

* Identifies roadway improvements

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 2 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
10	15-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	76	43.00	$3,268.00	0	$0.00	32	$1,376.00
11	18-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	294	48.00	$14,112.00	0	$0.00	0	$0.00
12	21-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	26	47.00	$1,222.00	0	$0.00	318	$14,946.00
13	21-inch diameter, C76, Class IV storm drain, Class A backfill; including excavation, bedding and pipe zone, complete.	LF	394	39.00	$15,366.00	0	$0.00	0	$0.00
14	24-inch diameter, C76, Class IV storm drain, Class B backfill; including excavation, bedding and pipe zone, complete.	LF	80	52.00	$4,160.00	0	$0.00	511	$26,572.00
15	6-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	102	26.00	$2,652.00	0	$0.00	140	$3,640.00
					$40,780.00		$0.00		$46,534.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 3 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
16	8-inch diameter sanitary sewer, ASTM, D3034 PVC, including excavation, bedding and pipe zone with Class B backfill, complete and in place.	LF	650	39.00	$25,350.00	0	$0.00	650	$25,350.00
17	48-inch sanitary manhole.	EA	3	2,500.00	$7,500.00	0	$0.00	2	$5,000.00
18	Storm water outfall: excavation, backfill, concrete head wall, geotextile, and rip rap complete.	EA	1	4,000.00	$4,000.00	0.75	$3,000.00	1	$4,000.00
19	48-inch storm manhole, complete.	EA	5	1,850.00	$9,250.00	0	$0.00	4	$7,400.00
20	Curb inlet.	EA	6	1,030.00	$6,180.00	0	$0.00	6	$6,180.00
21	Monolithic curb and gutter.	LF	1203	7.25	$8,721.75	0	$0.00	1200	$8,700.00
22	Sidewalk	SF	5869	1.95	$11,444.55	4676	$9,118.20	4676	$9,118.20
23	Driveway (8-inch thick P.C.C.)	SF	2348	3.50	$8,218.00	1838	$6,433.00	3438	$12,033.00
24	Aggregate Base (2"-0) (8" depth)	SY	2825	4.50	$12,712.50	552	$2,484.00	3302	$14,859.00
25	Aggregate Base (3/4"-0) (2" depth)	SY	3750	1.50	$5,625.00	35	$52.50	3035	$4,552.50
					$99,001.80		$21,087.70		$97,192.70

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 4 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
26	Asphalt Concrete Pavement (4" thick) 2-inch Class C (over) 2 inches Class B.	SY	2950	9.20	$27,140.00	3035	$27,922.00	3035	$27,922.00
27	A.C. driveway approach 3" Class C pavement (minimum or match existing, whichever is greater) over 6 inch aggregate base.	SY	360	12.00	$4,320.00	345	$4,140.00	345	$4,140.00
28	Remove and relocate existing signs or mail box set, with (1) new STOP sign.	EA	5	175.00	$875.00	5	$875.00	5	$875.00
29	Type I-L Barricade.	EA	1	250.00	$250.00	1	$250.00	1	$250.00
30	Thermoplastic Pavement Markings, 60 LF of 12" stop bar and one Railroad crossing graphic complete.	LS	1	600.00	$600.00	0	$0.00	0	$0.00
31	10" tapping sleeve, 10' NRS Gat Valve Box, 10x12 reducer installed, complete.	LS	1	2,000.00	$2,000.00	0	$0.00	1	$2,000.00
32	6" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	35	30.00	$1,050.00	0	$0.00	50	$1,500.00
					$36,235.00		$33,187.00		$36,687.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 5 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
33	8" Class 52 ductile iron water line, excavation bedding, backfill, thrust restraint, and fittings complete.	LF	50	38.00	$1,900.00	0	$0.00	54	$2,052.00
34	12" Class 52 ductile iron water line, excavation, bedding, backfill, thrust restraint, and fittings complete.	LF	567	55.00	$31,185.00	0	$0.00	570	$31,350.00
35	12" NRS gate valve with valve box, complete.	EA	1	900.00	$900.00	0	$0.00	1	$900.00
36	8" NRS gate valve with valve box, complete.	EA	1	500.00	$500.00	0	$0.00	1	$500.00
37	2" NRS gate valves with valve box, complete.	EA	1	250.00	$250.00	0	$0.00	1	$250.00
38	12 x 6 x 12 Ductile Iron Tee complete.	EA	1	350.00	$350.00	0	$0.00	1	$350.00
39	12" X 22.5 degrees. Elbow complete.	EA	1	475.00	$475.00	0	$0.00	1	$475.00
40	12 x 8 x 12 Ductile Iron Tee complete.	EA	1	400.00	$400.00	0	$0.00	1	$400.00
41	Water System corrosion control, exothermic welds and 32 lb magnesium anodes, complete.	LS	1	10,000.00	$10,000.00	0	$0.00	1	$10,000.00
					$45,960.00		$0.00		$46,277.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 6 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
42	1" water service taps with corp stop, vault, & meter setter.	EA	2	700.00	$1,400.00	0	$0.00	3	$2,100.00
43	2" water service taps with corp stop.	EA	2	1,000.00	$2,000.00	0	$0.00	1	$1,000.00
44	1" polyethylene water service.	LF	275	3.00	$825.00	0	$0.00	68	$204.00
45	2" Polyethylene water service.	LF	50	5.00	$250.00	0	$0.00	12	$60.00
46	12 Month Establishment Period Watering and Maintenance.	LS	1	2,000.00	$2,000.00	0	$0.00	0	* $0.00
47	Furnish & plant: Pyrus Callerena "Redspire" (Redspire Flowering Pear) 2" caliper, 6 ft branch height.	EA	5	225.00	$1,125.00	5	$1,125.00	5	* $1,125.00
48	Furnish & plant: Acer Ginalla "Flame" (Flame Maple), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	3	$675.00	3	* $675.00
49	Furnish & plant: Acer Rubrum A. Saccarinum "Autumn Blaze" (Autumn Blaze Maple), 2" caliper, 6 ft branch height.	EA	8	225.00	$1,800.00	8	$1,800.00	8	* $1,800.00
					$10,300.00		$3,600.00		$6,964.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 7 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
50	Furnish & plant: Prunus Yedoens "Akebono" (Akebono Flowering Cherry), 2" caliper, 6 ft branch height.	EA	4	225.00	$900.00	3	$675.00	3	$675.00
51	Furnish & plant: Tilia Cordata "Greenspire" (Greenspire Linden), 2" caliper, 6ft branch height.	EA	8	225.00	$1,800.00	5	$1,125.00	5	$1,125.00
52	Seeded lawn construction (in parkway area).	SY	620	4.05	$2,511.00	620	$2,511.00	620	$2,511.00
53	Furnish and place topsoil, 6 inch in-place depth in parkway area. (Approximately 620 SY)	LS	1	3,000.00	$3,000.00	1	$3,000.00	1	$3,000.00
54	2" gray PVC conduit (for underground sleeving). branch height.	LF	490	5.00	$2,450.00	0	$0.00	450	$2,250.00
					$10,661.00		$7,311.00		$9,561.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 8 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 1								
55	21"CL A STM PIPE (B.I. 13)	LF	-394	$39.00	($15,366.00)	0	$0.00	0	$0.00
56	21"CL B STM PIPE (B.I. 12)	LF	258.21	$47.00	$12,135.87	0	$0.00	0	$0.00
57	24"CL A STM PIPE	LF	394	$52.00	$20,488.00	0	$0.00	0	$0.00
58	24"CL B STM PIPE	LF	26	$63.00	$1,638.00	0	$0.00	26	$1,638.00
59	24"STM PIPE ADD 1.05VF	LF	420	$1.00	$420.00	0	$0.00	485	$485.00
60	18" STORM S/O PLUG	EA	1	$150.00	$150.00	0	$0.00	1	$150.00
61	18" STM PIPE CL A	LF	10	$40.00	$400.00	0	$0.00	16	$640.00
62	18"CL B STM PIPE (B.I. 11)	LF	-284.21	$48.00	($13,642.08)	0	$0.00	0	$0.00
63	21" STM PIPE ADD 1.34VF	LF	284.21	$5.55	$1,577.37	0	$0.00	318	$1,764.90
64	8" LAT ADD .78VF	LF	43	$1.90	$81.70	0	$0.00	43	$81.70
65	MH ADD DEPTH	VF	5.4	$192.00	$1,036.80	0	$0.00	5.4	$1,036.80
66	15" STM ADD 1.52VF	LF	30	$6.03	$180.90	0	$0.00	32	$192.96
67	8" STM A D 1.86VF	LF	43	$6.23	$267.89	0	$0.00	43	$267.89
68	12" STM AD 1.64 VF	LF	67.76	$6.51	$441.12	0	$0.00	67.76	$441.12
69	8" STM ADD 1.75VF	LF	40	$4.29	$171.60	0	$0.00	40	$171.60
70	12" STM ADD 1.89VF	LF	160.93	$7.50	$1,206.98	0	$0.00	160.93	$1,206.98
71	8" STM ADD 1.84VF	LF	23	$4.48	$103.04	0	$0.00	23	$103.04
72	8" STM ADD 1.88VF	LF	40	$4.57	$182.80	0	$0.00	40	$182.80
73	8" STM LAT AD 2.12VF	LF	81	$5.18	$419.58	0	$0.00	81	$419.58
					$11,893.56		$0.00		$8,782.36

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 9 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 2								
74	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
75	10" X 2" SERVICE SADDLE	EA	1	$44.00	$44.00	0	$0.00	1	$44.00
76	10" DIP CL 52 SERVICE PIPE	LF	46	$52.00	$2,392.00	0	$0.00	46	$2,392.00
77	MOVE 10" GATE VALVE	EA	1	$195.00	$195.00	0	$0.00	1	$195.00
78	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
79	CAP 10" GATE VALVE	EA	1	$600.00	$600.00	0	$0.00	1	$600.00
80	12" X 2" SERVICE SADDLE	EA	-1	$75.00	($75.00)	0	$0.00	-1	($75.00)
81	2" PE SERVICE PIPE (B.I. 45)	LF	-38	$5.00	($190.00)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 3								
83	SANITARY MANHOLE STA 15+68 (DELETE)	EA	-1	$2,500.00	($2,500.00)	0	$0.00	0	$0.00
84	CONNECT TO EXISTING STUBOUT STA 15+68	EA	1	$1,620.00	$1,620.00	0	$0.00	1	$1,620.00
	CHANGE ORDER NO. 4								
85	48" STORM MANHOLE (B.I. 17) (DELETE)	EA	-1	$1,850.00	($1,850.00)	0	$0.00	0	$0.00
86	15" STORM PIPE (B.I. 10)	LF	-24	$43.00	($1,032.00)	0	$0.00	0	$0.00
87	72" STORM MANHOLE	EA	1	$4,400.00	$4,400.00	0	$0.00	1	$4,400.00
88	15" STORM - ADD DEPTH 1.05 VF	LF	22	$4.40	$96.80	0	$0.00	0	$0.00
					$4,792.80		$0.00		$10,268.00

PAY ESTIMATE

CITY OF FOREST GROVE
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Sheet 10 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 5								
89	ADD 24" CL V - CL D	LF	40	$52.00	$2,080.00	0	$0.00	40	$2,080.00
90	24" STORM ADDED DEPTH (2.10' AVG)	LF	453	$3.00	$1,359.00	0	$0.00	453	$1,359.00
91	RELOCATE FIRE HYDRANT	EA	1	$725.00	$725.00	0	$0.00	1	$725.00
92	PLUG 15" STUBOUT NOT USED MH 4	EA	1	$250.00	$250.00	0	$0.00	1	$250.00
93	DELETE 15" PIPE LATERAL MH 4	LF	-22	$43.00	($946.00)	0	$0.00	0	$0.00
94	DELETE 15" STM LTL XTRA DEPTH -1.05 VF	LF	-22	$4.40	($96.80)	0	$0.00	0	$0.00
	CHANGE ORDER NO. 6								
95	STA 10+05 RT - 10" DIP R.J. FIRE SERVICE	LF	46	$62.00	$2,852.00	0	$0.00	46	$2,852.00
96	10" MJ GATE VALVE W/R.J.	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
97	12" X 10" MJ TEE W/BLOCKS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
98	10" MJ PLUG	EA	1	$115.00	$115.00	0	$0.00	1	$115.00
99	CATHODIC PROTECTION	LS	1	$630.00	$630.00	0	$0.00	1	$630.00
	CHANGE ORDER NO. 7								
100	STA 11+04 LT SANITARY SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 8								
101	ADD FIRE HYDRANT 10+20 LT: 6" DIP CL 52	LF	25	$30.00	$750.00	0	$0.00	18	$540.00
102	6" MJ X FLG GATE VALVE	EA	1	$450.00	$450.00	0	$0.00	1	$450.00
103	12" X 6" MJ X FLG TEE	EA	1	$350.00	$350.00	0	$0.00	1	$350.00
104	6" MJ FIRE HYDRANT	EA	1	$1,200.00	$1,200.00	0	$0.00	1	$1,200.00
105	CATHODIC PROTECTION	LS	1	$500.00	$500.00	0	$0.00	1	$500.00
					$16,598.20		$0.00		$17,431.00

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 11 of 12 Sheets
Pay Estimate: 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

ITEM	ITEM DESCRIPTION	UNIT	ORIGINAL CONTRACT			THIS ESTIMATE		COMPLETED TO DATE	
			QTY	UNIT PRICE	AMOUNT	QTY	AMOUNT	QTY	AMOUNT
	CHANGE ORDER NO. 9								
107	14+46 RT 10" FIRE/DOM SERV REST. JT.	LF	62	$62.00	$3,844.00	0	$0.00	50	$3,100.00
108	10" X 10" MJ TEE W/ REST GLDS	EA	1	$462.00	$462.00	0	$0.00	1	$462.00
109	10" MJ PLUG	EA	2	$115.00	$230.00	0	$0.00	2	$230.00
110	2" PE 90 DEG EL	LS	1	$130.00	$130.00	0	$0.00	1	$130.00
111	10" GATE VALVE	EA	1	$928.00	$928.00	0	$0.00	1	$928.00
112	10" X 6" REDUCER	EA	1	$185.00	$185.00	0	$0.00	1	$185.00
113	RELOCATE FIRE HYDRANT	EA	1	$300.00	$300.00	0	$0.00	1	$300.00
114	6" DIP FH PIPE & EXTENSION	LF	10	$30.00	$300.00	0	$0.00	10	$300.00
115	TUNNEL UNDER EXISTING VAULT	LS	1	$1,000.00	$1,000.00	0	$0.00	1	$1,000.00
116	RESET VAULT/CHK VALVE & SPLS	LS	1	$6,190.00	$6,190.00	0.1	$619.00	1	$6,190.00
117	DELETE 10" DIP PUSH ON JT (CO 2)	LF	-46	$52.00	($2,392.00)	0	$0.00	-46	($2,392.00)
	CHANGE ORDER NO. 10								
118	STA 15+50 LT WTR MN - REMOVE T-BLK/VLV	LS	1	$794.03	$794.03	0	$0.00	1	$794.03
	CHANGE ORDER NO. 11								
119	1" WATER SERVICE TO TAYLOR PROPERTY	LS	1	$4,130.86	$4,130.86	0	$0.00	1	$4,130.86
	CHANGE ORDER NO. 12								
120	STA 14+85 LT SAN. SWR TAP & LTL	LS	1	$4,990.00	$4,990.00	0	$0.00	1	$4,990.00
	CHANGE ORDER NO. 13								
121	STA 15+50 LT - REPAIR WTR MAIN IN CASING		PENDING						
					$21,091.89		$619.00		$20,347.89

PAY ESTIMATE

CITY OF FOREST GROVE
1924 Council Street
PO Box 326
Forest Grove, OR 97116

Sheet 12 of 12 Sheets
Pay Estimate : 5
Date: April 8, 1996

Job Name: ELM STREET L.I.D.
W.O. #8194

Contractor: Gelco Construction
PO Box 7716
Salem, OR 97303

From: January 1, 1996 To: March 31, 1996

		UNIT	QTY	CONTRACT SUM	AMOUNT COMPLETED THIS PAY PERIOD		AMOUNT COMPLETED TO DATE	
				$352,320.25		$66,534.70		$372,090.95

Less 5% Withholding	$18,604.55
Less Liquidated Damages	$0.00
Less Previous Payment	$290,278.44
TOTAL DEDUCTIONS	$308,882.99
PAYMENT DUE	$63,207.96

Steve Wood, Project Engineer

Gelco Construction, Stanley E. Thompson, Project Manager

O.K. FOR PAYMENT
VENDOR # 20350
FUND # 34
DEPT. # 010
BUDGET # 5052000
BY

Approved By:

Rob Foster, Director of Public Works

WORK ORDER

DATE 8/23/96 DEPARTMENT Engineering W.O. NO. 8194

WORK DESIRED
(DESCRIPTION & LOCATION)
Project: ELM STREET L.I.D.
Period: February, 1996 thru June, 1996

EQUIPMENT				
UNIT	NO.	HOURS	RENT	AMOUNT
TOTAL	XXXXX	0	XXXXXX	0.00

LABOR

EMPLOYEE	HOURS	RATE	AMOUNT
R. Foster	20	35.14	702.80
S. Wood	135.25	25.30	3,421.83
TOTALS	155.25	xxxxxx	4,124.63

MATERIALS

NO.	ITEM	P.O.	AMOUNT
	TOTAL		0.00

CONTRACT SERVICES

CONTRACTOR	PURCHASE ORDER	AMOUNT

COST SUMMARY

LABOR	4,124.63
EQUIPMENT	0.00
MATERIALS	0.00
CONTRACTS	0.00
SUBTOTAL	4,124.63
OVERHEAD	0.00
TOTAL COST	4,124.63

UNIT		DATE FINISH	
QUANTITY		DATE START	
UNIT		CERTIFIED	

Windwood	3141																					1.0											1.0
The Hampton	3151																								0.5	2.5							3.0
NAME Steve Wood																						MONTH June, 1996											
Lancaster Sq. #2	3149																		0.5														0.5
Project Name	W.O.#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Hours
General				1	2	2	2.5	2.5			1.25	2.5	2.5	4	1			1	2	2	1				1.25	0.5	0.5	0.75					30.25
Pac. Grov.	3124			1		4							1	1	2				2	3	2	1			1.5		0.75						19.25
Knox R.	3127			1	1	0.5	0.5	0.5			1	0.5	0.5	0.5	1				0.5						1.5		0.75						9.75
Willa. Pk.	3129			1		1	1.5	0.5			1		0.5	1.5	0.5			0.5		0.5	1	1			0.25		0.5						11.25
Fairmt 4	3131			2	1	2	2	1			2		1	1	1.5			1.5	0.5	1	2	2				3	1	0.75					25.25
Arch K. Ph. II	3132						1				1								0.5														2.5
The Grove	3134											0.5																					0.5
Hagger Ctr.	3136											1																					1.0
Main St Ext	3144										2	2		0.5				0.5		2		2			1								10.0
Westgate	3146											0.5													2.5	0.5		1					4.5
K.R. II	3148										0.75																						0.75
Joseph Gale	3147											0.5																					0.5
Elm St. L.I.D.	8194			1	1	0.5						1	1						1		2												7.5
Heather St. L.I.D.	8199			1	3	[illegible]	2.5	4						1.5	2			6.5	1		1	2			2	4	5.5	7.5	9				52.5
Holiday																																	
Vacation																																	
Sick Leave																																	
Total Hours				8	8	10	10	8.5			9	9	8	10	8			11	8	9	9	9			10.5	10.5	9	10	9				183.5
Crosley	3145											0.5																					0.5
Central School	3142												1.0					1.0		0.5													2.5
23rd/24th CDBG.	108												0.5																				0-

NAME Steve Wood MONTH May, 1996

Project Name	W.O.#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Hours
Westgate	3146																												1S			2	3.5
General			1S	4S			2S		1	1S	2S			2				1				1S	1S	1S					1S		2	24.5
Pal. Grow.	3124	1	1S				1							3			1	1					1		0S					1	1		12.0
Fairmt 3	3123						0S																										0.5
Arch K. 6	3125														1	1								1									3.0
Knox R.	3127	0S	0S	0S			0S	0S		0S					0S	0S	0S				1		0S	0S	0S				0S	0S	0S		8.5
Will P.	3129	0S	1	0S			0S	0S	2	1							0S					1											7.5
Fairmt 4	3131	2	0S					1S		2	1			2	2	2	2	2			1		2	3	2				2	2	1		30.0
Arch K 6-II	3132	0S						1	2		2				0S	1									2						0S		9.5
The Grow	3134							0S		0S											1S												2.5
Joseph Gale	3147													0S																			0.5
Main St	3144	2S	1S	1S			2	2	1		1				2	2	2	2			3	3	2	2	2				2S	2	2		38.0
Elm St. L.D	8194	1		1			1	2	2	2	1				2		2	2			1	1	1		1				1	1	1	2	25.0
Crosley Apts	3145		1S							0S				0S															0S				3.0
Assit. L. (Main)	3135										0S																						0.5
Holiday																											8						8.0
Catching-H	3143															1S																	1.5
Windwood E.	3141																				0S	1S											2.0
Total Hours		8	8	8			8	8	8	8	8			8	8	8	8	8			8	8	8	8	8			8	8	8	8	8	184.0
Heather L.D	8199																														2	2	4.0

NAME Steve Wood

MONTH April, 1996

Project Name	W.O.#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Hours
General		1			2				2.5	3	8	1	2			1	2.5	8					1	7		3	1			1.5			44.5
Pac. Grov.	3124		2													1									1		0.5				1.5		6.0
Fairmt 3	3123	1.5				3				1.5						1									1								8.0
Arch K.6	3125	0.5			0.5											1	1						1.5		0.5					1			6.0
Knox R.	3121	0.5	0.5	0.5	0.5	2			1.5	0.5		2				1							1.5		0.5		0.5			0.5			12.0
Will. P.	3129	1.5		0.5	3	1				0.5		0.5	2												0.5					2	1		12.5
Fairmt 4	3131	0.5		0.5					1	0.5		1.5	2				3		6	5			3		2								25.0
Arch K.6 II	3132		2		0.5				2																								4.5
The Grove	3134	0.5		0.5		0.5						0.5	2			1	0.5			1					0.5								7.0
Central Sch.	3142			2	0.5											1										1							4.5
Whidwood	3141	[redacted]	0.5																														0.5
Main St Ext.	3154																							1	2	3	4			2	2		14.0
Elm St. UD	8194	2	2	4	1	1.5			1	2		2.5				1	2	[redacted]	2	2			1			2	1			1	2			30.0
THE Hamptons	3151																														1.5		1.5
Holiday																																	
Vacation																																	
Sick Leave																																	
Total Hours		8	8	8	8	8			8	8	8	8	8			8	8	8	8	8			8	8	8	8	8			8	8			176

NAME Steve Wood MONTH March, 1996

Project Name	W.O.#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Hours
General		2	[redacted]	[redacted]	1	1 5/8	0 5/8	2				3	3	4	1.	0 5/8				1 5/8	2	4 5/8	2 5/8			1.	1.	1		4			36
Fairmt 3	3123							0 5/8												0 5/8	1 5/8						1		2	0 5/8			6
PAC. Grv.	3124																			1	2												3
Arch K. 6	3126	2	[redacted]	[redacted]	2	1	1	4 5/8	2			2.	3	5	6.	5 5/8	10 5/8		[redacted]	0 5/8	1 5/8	0 5/8	1 5/8			2 5/8	4	2	1	0 5/8			72.5
Knox R.	3127	1	[redacted]	[redacted]	1	0 5/8	0 5/8	0 5/8	2 5/8			2	1		0 5/8	0 25/100			0 25/100	0 5/8	0 5/8	0 5/8	1				1 5/8		1	0 5/8			20.5 ✓
Will Pt.	3129	3			1	1	4	1 5/8	1			1	1		1.	0 25/100			0 25/100	1	0 5/8	0 5/8	1 5/8				1 5/8		1.	0 5/8			21.5 ✓
Fairmt 4	3131											1	1																				2
The Grove	3134															2				1						1 0/100							4
Windwood	3141																						1 5/8			1 0/100							2.5
Elm St. Ltd	8194				3	4	3		2 5/8						1 5/8	1			0 5/8	3		2				2 5/8		4	4	2			33
Westgate	3146																											1					1
Holiday																																	
Vacation																																	
Sick Leave																																	
Total Hours		8	[redacted]	[redacted]	8	8	9	9	8			9	9	9	10	[redacted] 9.5	10 5/8		8	9	8	8	8			8	9	8	9	8			206

1 5

206

NAME Steve Wood

MONTH February, 1996

Project Name	W.O.#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Hours
General		4	3.5			4.5	4	3.75	3.5	4.5			2	3	1	2	1			3.5	5	3.5	8	3			4	3.5	3	5.5	2		77.75
Arch KVI	3125		1			0.25	1	0.25					0.5	0.5	0.5		2			1	1	3		1.5			1	3	0.5	0.5	2		19.5
Knox Ridge	3127		0.5			0.25							0.5	0.5	0.25		0.25			0.5	0.5	0.25		0.5			0.5	0.5		0.5	1		6.5
Will. Pk	3129	0.5	0.5			1							0.5	0.5	0.5		0.75			1	0.5	0.25		1			0.5			1	3		11.0
Main St Sp.	3107	0.5											1.5																				2.0
The Grove	3134	1.5	0.5						1				1																				4.0
Elm St. UD.	8194	1.5	2			2	3		2				2	4	4.75	6	4			2	1	1		0.5			2	1	1				39.75
Fairmt IV	3131									3					1																		4.0
Arch KA-2	3132									0.5																							0.5
Tom VanVoo	3126																												1.5				1.5
Pac. Grove	3124																							1.5					2				3.5
Fairmt 3	3123																													0.5			0.5
Pers. Hol.									1.5																								1.5
Holiday																																	
Vacation								4																									4.0
Sick Leave																																	
Total Hours		8	8			8	8	8	8	8			8	8	8	8	8			8	8	8	8	8			8	8	8	8	8		176

Progress on Activities

CITY OF FOREST GROVE — Recipient

B95009 — Project #

INFRASTRUCTURE IMPROVEMENTS JAPAN AMERICA BEVERAGE COMPANY — Project Name

JANUARY 1, 1996 to JUNE 30, 1996 — Report Period

A. Project Goals (report for every cash request)
List each project activity and describe progress on each activity since your last report. Also discuss any problems or delays encountered (change orders, schedule revisions, etc.). Attach additional sheets if necessary.

Proposed Accomplishments		Results Achieved	
12-Inch Water Line	1958 LF	1985	LF
8-Inch Sanitary Sewer	2096 LF	2077	LF
Storm Drainage	2074 LF	1495	LF
Roadway Paving	600 LF	640	LF (Course 2 of 2)

B. Construction Employment
In the space below, show the cumulative total number of hours construction employees worked on the infrastructure project. Also show cumulative construction man hours worked on any private business projects served by the infrastructure project.

Business Projects

1. Firm Name _____
   Hours Worked _____
2. Firm Name _____
   Hours Worked _____
3. Firm Name _____
   Hours Worked _____

Infrastructure Projects
Hours Worked _____

C. Permanent Jobs (for SPWF projects only)
In the space below, show the **cumulative** number of new or retained permanent jobs in private businesses served by the infrastructure project. Show all jobs as full-time equivalents based on a standard 40 hour work week.

Firm Name	Jobs	New	Retained
Firm Name	Jobs	New	Retained
Firm Name	Jobs	New	Retained

Certification: We certify that the data is correct and that the amount of any grant request is not in excess of current needs. (TWO SIGNATURES REQUIRED)

Jeffrey A. Heckstel — Authorized Signature/Title — Date 7/30/96

Authorized Signature/Title — Date 7/31/96

Contact Person — Phone #

Prepare & Mail Check To:

_____

_____

_____

and Wire Transfers To:

Name of Payee: _____

Name of Receiving Bank: _____

Location or Branch Name of Bank: _____

Bank Address: _____

_____

Bank Account Number: _____

Bank ABA Routing Number: _____

For State of Oregon Use

Total Amount Approved _____

Project Manager _____ Date _____

Amount	Description	Fund	Cost Center
$			
$			
$			
$			
$			
$			

Fiscal Coordinator _____ Date _____

CD Manager _____ Date _____

Oregon Special Public Works Fund Program
Water/Wastewater Financing Pr[illegible]m
Progress Report and Cash Reques[illegible]orm

City of Forest Grove
Recipient
PO Box 326
Address
Forest Grove, OR 97116

Community Development Programs (OCD)
Oregon Economic Development Department
775 Summer Street NE, Salem, OR 97310
Telephone: 378-3732

Infrastructure Improvements
(Japan America Beverage Company)
Project Title
B95009
Project #
July 26, 1996
Date
January 1, 1996 to June 30, 1996
Progress Reporting Period

Request is for SPWF Loan [XX] SPWF Grant [XX] W/W Loan [ ] W/W Grant [ ]

Cash Request # 3

Total Project Expenditure Report						Activities	Cash Request			
A. SPWF Grant	B. SPWF Loan	C. Other Public Funds	D. Private Funds	E.	F. Total	G.	H. Cash Request	I. Prior Requests	J. Approved Budget	K. Balance
$ 60,775	$ 108,863	$ 43,500	$	$	$ 213,138	1. Water Improvements	$ 0	$ 169,638	$ 164,060	$ [5,578]
						a.				
						b.				
35,000	132,193				167,193	2. Sanitary Sewer Improvements	0	167,193	145,972	[21,221]
						a.				
						b.				
102,500	0				102,500	3. Storm Sewer Improvements	1,434	102,500	93,940	[9,994]
						a.				
						b.				
47,000	0				47,000	4. Road and Bridge Improvements	27,772	47,000	100,102	25,330
						a.				
						b.				
						5. Public Trans. and R.R. Fac.				
						a.				
						b.				
0	38,944				38,944	6. Contractual Services (Engineering)	0	38,944	50,407	11,463
						a.				
						b.				
						7. a. Engineering/Architectural				
	0	24,000			24,000	b. Administration				
						c. Contingencies				
						8. Other				
			34,200		34,200	a. Acquisition/Clearance				
						b.				
						c.				
$ 245,275	$ 280,000	$ 67,500	$ 34,200	$ 0	$ 626,975	9. Total	$ 29,206	$ 525,275	$ 554,481	$ 0

Cash On Hand:

1. Please show the amount of funds currently on hand (total prior monies received minus total expenditures) $ _____

2. If you have funds on hand, attach information supporting the request for additional funds.


43,500
12
8

Infrastructure Recommendation by Source:

SOURCES		USES	
SPWF Loan	$ 280,000	Water Improvements	$ 207,560
		Sanitary Sewer Improve.	145,972
SPWF Conditional Grant	23,000	Storm Drainage Improve.	93,940
		Roadway Improvements	100,102
SPWF Grant	251,481	Engineering	50,407
		Administration	24,000
City of Forest Grove	67,500	Acquisition/Clearance	36,000
Benefitted Property Owners	36,000		
Total	$ 657,981	Total	$ 657,981

IV. FINANCIAL FEASIBILITY

Proposed Award

We propose the following structure for the award to the City of Forest Grove:

Loan	$280,000
Conditional Grant	$ 23,000
Grant	$251,481
Total	$554,481

LID/Sizing of Loan

The City of Forest Grove has pledged revenues from a Local Improvement District (LID) for the repayment of a Special Public Works Fund (SPWF) loan. The LID derives revenues from assessments imposed on the property holders within the LID that will benefit from the capital improvements. The city will also pledge its full faith and credit obligation payable from its general fund and all other lawfully available funds of the city, including taxes authorized to be levied by the city within and subject to the limitations of Article XI, Sections 11 and 11b of the Oregon Constitution.

The primary security for the loan to the city is the repayment of assessment liens by the participants in the LID. The city has formed and assessed the LID on a front footage basis.

The property owners are comprised of the following:

** Crann Corp., Tax Lot 800, area of .90 acres, 238' front footage.
** Crann Corp, Tax Lot 8200, area of .22 acres, 90' front footage.
** Japan America Beverage Company, Tax Lot 1300, area of 1.23 acres, 229' front footage.
** Momokawa Sake Ltd., Tax Lot 2400, area of 3.57 acres, 276'front footage.
** Southern Pacific Transportation, Tax Lot 900, area of 3.83 acres, 199' front footage.

In order to come up with a justifiable SPWF loan amount, total increased value per acre was used. John Hortenstein and Fred Smith, industrial/commercial appraisers for the Washington County Assessor's Office, were contacted for information on the values in the Taylor Industrial Park. Both individuals estimated that a conservative value for improved industrial land would be $50,000 to $55,000/acre; for unimproved, $25,000 to $30,000/acre. Hence, the differential is $25,000/acre.

Value of improvements/acre X 9.75 ACRES	$ 25,000 x 9.75
Total Estimated/Increased Value of LID	$243,750

Although the increased value of the improvements are only $243,750, the SPWF loan must be at least $280,000 because there are not enough jobs to qualify for the balance of the request in grant funds.

Credit reports issued to the City of Forest Grove indicated no negative credit worthiness for any of the LID petitioners. All the parties are capable of and committed to repayment of the LID financing.

Sizing of Conditional Grant

The water and sewer lines of this project "loop" along the southern right-of-way of the Southern Pacific Rail Road. Three parcels are bordered by these lines, Parcrels 1,2, and 3.

Parcels 1 and 2 are not benefitted by these lines but are served by utilities located in Taylor Way, which were constructed with the prior SPWF award. The owner of the properties, Joe Chamberlain, has granted the City an easement for the lines. If Chamberlain does any further development of these parcels, the services will come

from this existing infrastrucure. Hence, although the parcels are bordered by the water and sewer lines, the parcels are not benefitted by the lines and should not be required to pay for them.

Parcel 3 is benefitted by about 150' of these lines. When Parcel 3 develops, the services will come from these lines. However, at the present time, Parcel 3 is not developed. Being undeveloped, the property has no ability to generate income to pay an assessment for these lines.

Under these circumstances, our policy has always been to make a conditional grant for that portion of the property benefitted by the lines:

Water Line Portion --

Total Cost of Water Line = $164,060
Divided by total water line footage of 1,958' = $84.00/ft.
Multiplied by 150' = $12,600

Sewer Line Portion

Total Cost of Sewer Line = $145,972
Divided by total water line footage of 2,096' = $69.64/ft.
Multiplied by 150' = $10,446

Total conditional grant = $12,600 + $10,446 = $23,046

Conditional grant (rounded) = $23,000

General Fund

The fiscal condition of the General Fund is stable.The city's current year collection rate averages 94.35 percent, which meets our minimum guideline of at least 87 percent. The total tax collection rate has averaged 98.77 percent over the last three years, which meets our minimum guideline of at least 95 percent.

General Fund revenues have increased over the last three years by 13.7 percent, from $3,239,314 to $3,683,283. The city's non-school tax rate was $7.57/$1,000 in 1994. The city is apparently out of compression.

General Fund balance as a percent of expenditures finished fiscal year 1994 at 19.98 percent, in excess of our minimum guideline of at least 3 percent. The General Fund balance is the equivalent of 2.4 months' worth of General Fund expenses.

END ELM ST. LID STREET IMPROVEMENTS AT SPUR P.I.

EXIST. BOTTLE CROSSING

OUTFALL TO DRAINAGE DITCH

OUTFALL TO DRAINAGE DITCH

9th AVENUE

N 57° 50' 48" W 231.00

446.51

± DRAINAGE BREAK

VAULTS

BOOK 314 PAGE 421

SM 28+85 IE 155.90

30 37.5

229.27 (228.8 DEED)

48 20

ELM STREET 256.56

N 03° 30' 00" E 510.76

0.20% 15.54

N 01° 49' 56" E 328.51

498±

628.32

33 33 33 99±

249.89

178.51 60.00 90.00

30 30

FUT. ACCESS

SHED 120 SF

OFFICE

DOC. # 88-0655

105.72 [105.80]

107.41 [107.38]

89.90

S 89° 22' 38" W 296.34

S 00° 45' 32" W

424.67 (424.60 C.S. # 18474) [425.01]

S 89° 31' 37" E 10th AVENUE

BLOCK 2

S 00° 20' 47" W 72.57 [72.20]

N 79° 21' 59" E 30.14

290+03.45 PCS

N 59° 53' 00" E 502.77

BOOK M, PAGE 42 (DEPOT GROUNDS)

349.17

153.60 [153.6]

30.01

N 60° 04' 08" E 487.30 (487.29 C.S. # 18474)

MEASURED CHORD = N 79° 21' 59" E 398.00

286+05.12 PCS

Δ = 1° 56' 04"
R = 2940.00
L = 99.27
LC = 99.26
S 74° 31' 27" W

99.27

326.93

BOOK 217 PAGE 399

N 59° 44' 29" E 312.50

62.68

N 22° 19' 05" W

Δ = 19° 29' 55"
R = 2865.00
L = 975.00
LC = 970.30
T = 492.26

CL TUALATIN VALLEY HIGHWAY (STATE HIGHWAY 8)

280+28

EXISTING RAILROAD SPUR

N 59° 44' 29" E 2654.86 BASIS OF BEARING PER COUNTY SURVEY # 21635

N 59° 44' 29" E 1181.18 (1181.20)

3.874 ACRES

SOUTHERN PACIFIC RAILROAD

WAREHOUSE 195 F5

F4

F3

F2

F1

F6

F7

F8

F9

F10

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forest grove

ENGINEER'S FINAL ASSESSMENT REPORT
Elm Street (TV Hwy to SPRR) - L.I.D. No. 8194

PROJECT TEAM: **Rob Foster, Director of Public Works**
Steve Wood, Project Engineer

ISSUE STATEMENT: The improvements proposed in the ENGINEER'S REPORT dated January 23, 1989 and ordered in RESOLUTION No. 89-10 have been completed and a final cost has been tabulated. Proposed assessments are presented here. Staff is requesting direction to give notice to owners of affected properties.

A resolution declaring cost of improvements, proposed assessments and directing notice has been prepared for Council motion. Notice of proposed assessment will be mailed to each owner following passage of resolution. The Council may consider any objections to assessment.

STAFF RECOMMENDATION: It is recommended the Resolution Declaring Cost of Improvements be approved. Notices will be mailed to benefitting property owners stating the following information:

1) The amount of the proposed assessment on each property;

2) That written objections to the proposed assessment, stating the grounds of the objection, may be filed with the City Recorder no later than 5:00 p.m. on _____ _____.

3) That any such objections will be considered by Council at the regular meeting on _____.

BACKGROUND: In 1989 a Local Improvement District (LID) was formed for the portion of Elm Street south of the bypass. To help finance the LID, in 1994 the City applied for Special Public Works Funds (SPWF) from the Oregon Economic Development Department.

The OEDD application included some off-site water and sewer construction along with the Elm Street Local Improvement District which included paving, drainage, water, and sewer. In the application the City agreed to participate in the project administration and a portion of the LID water line. Two of the property owners involved agreed to pay for the off-site water and sewer improvements.

The City received a grant for $251,481 and a loan of $280,000 for the project. The project cost, minus the grant amount, will be repaid to the City through LID assessments.

BOUNDARY: The boundary was identified in the engineer's report. It included all property fronting Elm Street between TV Highway and the Southern Pacific Railroad to a property depth of 105 feet. This included four property owners:

Lumberman's of Washington Inc.	0.55 acres
Momokawa Sake, LTD	0.86 acres
Thomas Mark & Debra Strassel, (previously Crann Corp.)	0.71 acres, and
Southern PacificTransportation	0.48 acres

PROJECT DESCRIPTION: The project includes the reconstruction of Elm Street with curb and gutter (40 feet wide), storm drainage, water, and sewer from TV Highway to Southern Pacific Railroad, (approximately 600 feet). In addition, approximately 1300 feet of offsite water and sewer line extended to the project.

PROJECT COST: Final Costs are as follows:

ELM STREET (Paving, Drainage, Water, Sewer)	Gelco Construction Co.	$372,093
OFFSITE (Water and Sewer)	Coffman Excavation Co.	$224,386
ENGINEERING AND ADMINISTRATION	Moffat, Nichol & Bonney	$ 55,814 43,500
TOTAL		**$652,293**

ASSESSMENT: This cost will be divided among the four property owners according to frontage. The offsite utility cost of $224,386 will be assessed to Japan America Beverage Company according a separate agreement. The City agreed to pay the water line oversize cost ($43,500). The grant from the OEDD will be credited to each property owner according to frontage. Table 1 (attached) lists the total assessment to each property owner.

ELM STREET L.I.D. (TV HIGHWAY TO SPRR)
Street, Storm Drainage, Water and Sewer
W.O. #8194

September 23, 1996

Property Owner/ Address	Washington County Tax Map & Lot	Land Frontage On Elm Street	INDIVIDUAL ASSESSEMENT $ Elm Street	$ Off-Site Utilities	Grant	Estimated Assessment
Strassel, Thomas Mark & Debra 26535 NW August Drive Buxton, OR 97109	1S36D-00800	328 Feet	$122,176	201 386	~~$79,928~~ 323 562	$ 42,248 192 833
Lumbermen's of Washington, Inc. PO Box 3406 Olympia, WA 98503	1S36C-01300	229 Feet	$ 85,300		~~$55,803~~	$ 29,497 50062
Momokawa Sake, LTD 820 Elm Street Forest Grove, OR 97116	1S36C-02400	276 Feet	$102,807	~~$224,386~~ 125807 23000	~~$67,257~~	$259,936 73836
Southern Pacific Transporation One Market Plaza, Suite #250 San Francisco, CA 94105	1S36D-00900	199 Feet	$ 74,125		~~$48,493~~	$ 25,632 43503
TOTAL		**1,032 Feet**	**$384,408**	**$224,386** 68 714	**$251,481**	**$357,313**

ELM STREET L.I.D. (TV HIGHWAY TO SPRR)
Street, Storm Drainage, Water and Sewer
W.O. #8194

September 23, 1996

TOTAL PROJECT COST	$372,093
ENGINEERING AND ADMINISTRATION	$ 55,814
LESS CITY PRT. WATER	-$ 43,500
TOTAL TO BE ASSESSED	**$384,407**

TOTAL FRONT FOOTAGE	1,032
UNIT COST PER FRONT FOOTAGE	$ 372.49

F:\GROUPS\ENGINEER\8194\PROPASSM.NT

RESOLUTION NO. _____

RESOLUTION DECLARING COST OF IMPROVEMENTS, PROPOSED ASSESSMENTS ON BENEFITED PROPERTY AND DIRECTING THAT NOTICE OF THE PROPOSED ASSESSMENTS BE GIVEN TO THE OWNERS OF AFFECTED PROPERTIES.

Nature of Improvement: *Streets, Storm Drainage, Water and Sewer*
W.O. #8194

Location: *Elm Street (TV Highway to SPRR)*

WHEREAS, The Council has previously by resolution declared its intention to construct the above described improvements, declared its intention to assess the cost of such improvements upon the properties benefited thereby, given proper notice of and held a public hearing to hear remonstrances and after such hearing authorized the construction of such improvements; and

WHEREAS, The construction of the improvements has been completed, inspected and approved by the City; and

WHEREAS, The costs of the improvements have been ascertained and allocated to the benefited properties, which allocations by individual assessment are hereby found to be fair, just and reasonable and represent the special and particular benefit to each of the properties so assessed; and

WHEREAS, There is on file in the office of the City Recorder a copy of the proposed assessments.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF FOREST GROVE AS FOLLOWS:

Section 1. The total cost of the improvements, the total amount to be assessed, the amount of each assessment, the description of each property to be assessed and the name(s) of the owner(s) of the assessed properties are hereby determined in accordance with the attached Exhibits A.

Section 2. The Recorder is directed to mail or deliver personally to the owner of each property proposed to be assessed a notice stating the amount of the proposed assessment on such property and informing the property owner that written objections to the proposed assessment, stating the grounds of the objection, may be filed with the Recorder prior to a date to be fixed by the Recorder which shall not be less than 10 days from the date of mailing or personal service of the notice. The Council shall consider such objections prior to finally adopting the assessments by ordinance.

PRESENTED AND PASSED this 25th day of November, 1996.

_____
Catherine L. Jansen, City Recorder

APPROVED by the Mayor this 25th day of November, 1996.

_____
Michael O'Brien, Mayor

ORDINANCE NO._____

ORDINANCE DECLARING ASSESSMENTS, DIRECTING THAT NOTICE OF THE ASSESSMENTS BE GIVEN TO OWNERS OF AFFECTED PROPERTIES, AUTHORIZING ENTRY OF ASSESSMENTS IN DOCKET OF CITY LIENS AND DECLARING AN EMERGENCY

Nature of Improvement: ***Streets, Storm Drainage, Water and Sewr W.O. #8194***

Location: ***Elm Street (TV Highway to SPRR)***

WHEREAS, The Council by resolution determined the total cost of the above improvement, the total amount to be assessed therefore, the amount of each assessment, the description of each property to be assessed and the names of the owners of the affected properties; and

WHEREAS, The recorder has mailed or personally delivered to the owners of each property proposed to be assessed a notice stating the amount of the proposed assessment on such property and informing the property owner that written objections to the proposed assessment, stating the grounds of the objection, could be filed with the recorder by a date certain specified in the notice; and

WHEREAS, The Council has considered any objections filed with the recorder and hereby finds that the assessments adopted by this ordinance are fair, just and reasonable and represent the special and particular benefit accruing from the improvement to each of the properties so assessed;

NOW, THEREFORE, THE CITY OF FOREST GROVE ORDAINS AS FOLLOWS:

Section 1. That the parcels of property described on the attached Exhibit A are hereby assessed the amount set opposite the described property.

Section 2. The recorder shall enter in the docket of city liens a statement of the amounts assessed upon each lot, parcel of land or portion thereof, together with a description of the improvement, the names of the owners and the date of this assessment ordinance. Upon such entry, the amount entered shall become a lien and charge upon the property described.

Section 3. Within 10 days of the date of this ordinance, the recorder shall send by registered or certified mail a notice of assessment to the owner of the assessed property, and shall publish notice of such assessment once in the Washington County News-Times not later than 10 days after the adoption of this ordinance. The notice of assessment shall recite the date of the assessment ordinance and shall state that upon the failure of the owner of the property to pay the assessment in full within 30 days from the date of the assessment ordinance, then interest will

commence to run on the assessment and the property addressed will be subject to foreclosure; and said notice shall further set forth a description of the property assessed, the name of the owner of the property and the amount of each assessment.

Section 4. That inasmuch as it is necessary for the health, peace and safety of the citizens of Forest Grove that this ordinance go into effect at once upon its passage, an emergency is declared to exist and this ordinance shall be in full force and effect upon its passage by the City Council and approved by the Mayor.

PRESENTED AND PASSED the first reading this 25th day of November, 1996.

PASSED the second reading this _____ day of _____, 1996.

_____

Catherine L. Jansen, City Recorder

APPROVED by the Mayor this 25th day of November, 1996.

_____

Michael O'Brien, Mayor

NOTICE OF
ELM STREET LOCAL IMPROVEMENT DISTRICT ASSESSMENT

Elm Street L.I.D. (TV Highway to SPRR)
W.O. #8194

NOTICE IS HEREBY GIVEN, that in accordance with the Charter and Ordinances of the City of Forest Grove, the cost and benefits for improvements to the property described below by the installation of ***streets, storm drainage, water and sewer*** improvements have been ascertained and apportioned as follows:

Owner Name & Address	*Property Description*	*Assessment*
Strassel, Thomas Mark & Debra 26535 NW August Drive Buxton, OR 97109	1S36D-00800	$ 42,248
Lumbermen's of Washington, Inc. PO Box 3406 Olympia, WA 98503	1S36C-01300	$ 29,497
Momokawa Sake, LTD 820 Elm Street Forest Grove, OR 97116	1S36C-02400	$259,936
Southern Pacific Transporation One Market Plaza, Suite #250 San Francisco, CA 94105	1S36D-00900	$ 25,632

Each of you and any others claiming rights, title or interest on and to the above described property is hereby notified that upon failure to pay the assessment in full within thirty (30) days from the date of the assessment ordinance, _____, then interest will commence to run on the assessment and the property assessed will be subject to foreclosure.

Published by the direction of the City Council of the City of Forest Grove.

CITY OF FOREST GROVE

_____
Catherine L. Jansen, City Recorder

Publish:

forest grove

ENGINEER'S FINAL ASSESSMENT REPORT
Elm Street (TV Hwy to SPRR) - L.I.D. No. 8194

PROJECT TEAM: **Rob Foster, Director of Public Works**
Steve Wood, Project Engineer

ISSUE STATEMENT: The improvements proposed in the ENGINEER'S REPORT dated January 23, 1989 and ordered in RESOLUTION No. 89-10 have been completed and a final cost has been tabulated. Proposed assessments are presented here. Staff is requesting direction to give notice to owners of affected properties.

A resolution declaring cost of improvements, proposed assessments and directing notice has been prepared for Council motion. Notice of proposed assessment will be mailed to each owner following passage of resolution. The Council may consider any objections to assessment.

STAFF RECOMMENDATION: It is recommended the Resolution Declaring Cost of Improvements be approved. Notices will be mailed to benefitting property owners stating the following information:

1) The amount of the proposed assessment on each property;

2) That written objections to the proposed assessment, stating the grounds of the objection, may be filed with the City Recorder no later than 5:00 p.m. on _____ _____.

3) That any such objections will be considered by Council at the regular meeting on _____.

BACKGROUND: In 1989 a Local Improvement District (LID) was formed for the portion of Elm Street south of the bypass. To help finance the LID, in 1994 the City applied for Special Public Works Funds (SPWF) from the Oregon Economic Development Department.

The OEDD application included some off-site water and sewer construction along with the Elm Street Local Improvement District which included paving, drainage, water, and sewer. In the application the City agreed to participate in the project administration and a portion of the LID water line. Two of the property owners involved agreed to pay for the off-site water and sewer improvements.

The City received a grant for $274,481 and a loan of $280,000 for the project. The project cost, minus the grant amount, will be repaid to the City through LID assessments.

BOUNDARY: The boundary was identified in the engineer's report. It included all property fronting Elm Street between TV Highway and the Southern Pacific Railroad to a property depth of 105 feet. This included four property owners:

Lumberman's of Washington Inc.	0.55 acres
Momokawa Sake, LTD	0.86 acres
Thomas Mark & Debra Strassel, (previously Crann Corp.)	0.71 acres, and
Southern PacificTransportation	0.48 acres

PROJECT DESCRIPTION: The project includes the reconstruction of Elm Street with curb and gutter (40 feet wide), storm drainage, water, and sewer from TV Highway to Southern Pacific Railroad, (approximately 600 feet). In addition, approximately 1300 feet of offsite water and sewer line extended to the project.

PROJECT COST: Final Costs are as follows:

ELM STREET (Paving, Drainage, Water, Sewer)	Gelco Construction Co.	$372,093 (10 000) Le laterals
OFFSITE (Water and Sewer)	Coffman Excavation Co. Crann paid Eng on offsite	$224,386 inc Eng 15%
ENGINEERING AND ADMINISTRATION	Moffat, Nichol & Bonney 15%	$ 55,814
TOTAL		**$652,293**

ASSESSMENT: This cost will be divided among the four property owners according to frontage. The offsite utility cost of $224,386 will be assessed to Japan America Beverage Company according a separate agreement. The City agreed to pay the water line oversize cost ($43,500). The grant from the OEDD will be credited to each property owner according to frontage. Table 1 (attached) lists the total assessment to each property owner.

ELM STREET L.I.D. (TV HIGHWAY TO SPRR)
Street, Storm Drainage, Water and Sewer
W.O. #8194

September 23, 1996

Property Owner/ Address	Washington County Tax Map & Lot	Land Frontage On Elm Street	INDIVIDUAL ASSESSEMENT $ Elm Street	$ Off-Site Utilities	Grant	Estimated Assessment
Strassel, Thomas Mark & Debra 26535 NW August Drive Buxton, OR 97109	1S36D-00800	328 Feet	$122,176 122016		$79,928	$ 42,248 42088
Lumbermen's of Washington, Inc. PO Box 3406 Olympia, WA 98503	1S36C-01300	229 Feet	$ 85,300 85,188		$55,803	$ 29,497 29385
Momokawa Sake, LTD 820 Elm Street Forest Grove, OR 97116	1S36C-02400	276 Feet	$102,807 102,672	$224,386	$67,257	$259,936 259,801
Southern Pacific Transporation One Market Plaza, Suite #250 San Francisco, CA 94105	1S36D-00900	199 Feet	$ 74,125 74,028		$48,493	$ 25,632 25532
TOTAL		**1,032 Feet**	**$384,408** 383904	**$224,386**	**$251,481**	**$357,313** 356809

ELM STREET L.I.D. (TV HIGHWAY TO SPRR)
Street, Storm Drainage, Water and Sewer
W.O. #8194

September 23, 1996

TOTAL PROJECT COST	$372,093
ENGINEERING AND ADMINISTRATION	$ 55,814
LESS CITY PRT. WATER	-$ 43,500
TOTAL TO BE ASSESSED	**$384,407**

TOTAL FRONT FOOTAGE	1,032
UNIT COST PER FRONT FOOTAGE	$ 372

RESOLUTION NO. _____

RESOLUTION DECLARING COST OF IMPROVEMENTS, PROPOSED ASSESSMENTS ON BENEFITED PROPERTY AND DIRECTING THAT NOTICE OF THE PROPOSED ASSESSMENTS BE GIVEN TO THE OWNERS OF AFFECTED PROPERTIES.

Nature of Improvement: *Streets, Storm Drainage, Water and Sewer*
W.O. #8194

Location: *Elm Street (TV Highway to SPRR)*

WHEREAS, The Council has previously by resolution declared its intention to construct the above described improvements, declared its intention to assess the cost of such improvements upon the properties benefited thereby, given proper notice of and held a public hearing to hear remonstrances and after such hearing authorized the construction of such improvements; and

WHEREAS, The construction of the improvements has been completed, inspected and approved by the City; and

WHEREAS, The costs of the improvements have been ascertained and allocated to the benefited properties, which allocations by individual assessment are hereby found to be fair, just and reasonable and represent the special and particular benefit to each of the properties so assessed; and

WHEREAS, There is on file in the office of the City Recorder a copy of the proposed assessments.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF FOREST GROVE AS FOLLOWS:

Section 1. The total cost of the improvements, the total amount to be assessed, the amount of each assessment, the description of each property to be assessed and the name(s) of the owner(s) of the assessed properties are hereby determined in accordance with the attached Exhibits A.

Section 2. The Recorder is directed to mail or deliver personally to the owner of each property proposed to be assessed a notice stating the amount of the proposed assessment on such property and informing the property owner that written objections to the proposed assessment, stating the grounds of the objection, may be filed with the Recorder prior to a date to be fixed by the Recorder which shall not be less than 10 days from the date of mailing or personal service of the notice. The Council shall consider such objections prior to finally adopting the assessments by ordinance.

PRESENTED AND PASSED this 25th day of November, 1996.

_____
Catherine L. Jansen, City Recorder

APPROVED by the Mayor this 25th day of November, 1996.

_____
Michael O'Brien, Mayor

ORDINANCE NO._____

ORDINANCE DECLARING ASSESSMENTS, DIRECTING THAT NOTICE OF THE ASSESSMENTS BE GIVEN TO OWNERS OF AFFECTED PROPERTIES, AUTHORIZING ENTRY OF ASSESSMENTS IN DOCKET OF CITY LIENS AND DECLARING AN EMERGENCY

Nature of Improvement: ***Streets, Storm Drainage, Water and Sewr W.O. #8194***

Location: ***Elm Street (TV Highway to SPRR)***

WHEREAS, The Council by resolution determined the total cost of the above improvement, the total amount to be assessed therefore, the amount of each assessment, the description of each property to be assessed and the names of the owners of the affected properties; and

WHEREAS, The recorder has mailed or personally delivered to the owners of each property proposed to be assessed a notice stating the amount of the proposed assessment on such property and informing the property owner that written objections to the proposed assessment, stating the grounds of the objection, could be filed with the recorder by a date certain specified in the notice; and

WHEREAS, The Council has considered any objections filed with the recorder and hereby finds that the assessments adopted by this ordinance are fair, just and reasonable and represent the special and particular benefit accruing from the improvement to each of the properties so assessed;

NOW, THEREFORE, THE CITY OF FOREST GROVE ORDAINS AS FOLLOWS:

Section 1. That the parcels of property described on the attached Exhibit A are hereby assessed the amount set opposite the described property.

Section 2. The recorder shall enter in the docket of city liens a statement of the amounts assessed upon each lot, parcel of land or portion thereof, together with a description of the improvement, the names of the owners and the date of this assessment ordinance. Upon such entry, the amount entered shall become a lien and charge upon the property described.

Section 3. Within 10 days of the date of this ordinance, the recorder shall send by registered or certified mail a notice of assessment to the owner of the assessed property, and shall publish notice of such assessment once in the Washington County News-Times not later than 10 days after the adoption of this ordinance. The notice of assessment shall recite the date of the assessment ordinance and shall state that upon the failure of the owner of the property to pay the assessment in full within 30 days from the date of the assessment ordinance, then interest will

commence to run on the assessment and the property addressed will be subject to foreclosure; and said notice shall further set forth a description of the property assessed, the name of the owner of the property and the amount of each assessment.

Section 4. That inasmuch as it is necessary for the health, peace and safety of the citizens of Forest Grove that this ordinance go into effect at once upon its passage, an emergency is declared to exist and this ordinance shall be in full force and effect upon its passage by the City Council and approved by the Mayor.

PRESENTED AND PASSED the first reading this 25th day of November, 1996.

PASSED the second reading this _____ day of _____, 1996.

_____

Catherine L. Jansen, City Recorder

APPROVED by the Mayor this 25th day of November, 1996.

_____

Michael O'Brien, Mayor

NOTICE OF
ELM STREET LOCAL IMPROVEMENT DISTRICT ASSESSMENT

Elm Street L.I.D. (TV Highway to SPRR)
W.O. #8194

NOTICE IS HEREBY GIVEN, that in accordance with the Charter and Ordinances of the City of Forest Grove, the cost and benefits for improvements to the property described below by the installation of ***streets, storm drainage, water and sewer*** improvements have been ascertained and apportioned as follows:

Owner Name & Address	*Property Description*	*Assessment*
Strassel, Thomas Mark & Debra 26535 NW August Drive Buxton, OR 97109	1S36D-00800	$ 42,248
Lumbermen's of Washington, Inc. PO Box 3406 Olympia, WA 98503	1S36C-01300	$ 29,497
Momokawa Sake, LTD 820 Elm Street Forest Grove, OR 97116	1S36C-02400	$259,936
Southern Pacific Transporation One Market Plaza, Suite #250 San Francisco, CA 94105	1S36D-00900	$ 25,632

Each of you and any others claiming rights, title or interest on and to the above described property is hereby notified that upon failure to pay the assessment in full within thirty (30) days from the date of the assessment ordinance, _____, then interest will commence to run on the assessment and the property assessed will be subject to foreclosure.

Published by the direction of the City Council of the City of Forest Grove.

CITY OF FOREST GROVE

_____
Catherine L. Jansen, City Recorder

Publish: