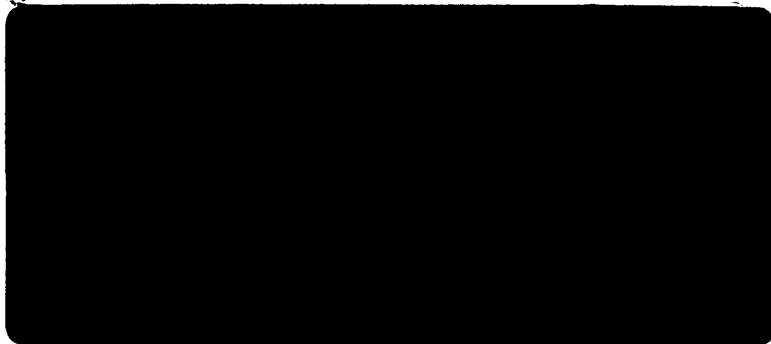


Original

04/90
11/15/90



Jim Smith Excavating

CUSTOMER # 10219

C E R T I F I C A T E O F I N S U R A N C E

ISSUE DATE: 11/08/90

PRODUCER
ANCHOR INSURANCE
& SURETY, INC.
P. O. BOX 25150
PORTLAND, OREGON
ZIP CODE 97225-5150

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS
NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND,
EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A AETNA CASUALTY

COMPANY LETTER B

COMPANY LETTER C

COMPANY LETTER D

COMPANY LETTER E

INSURED
JIM SMITH EXCAVATING
P.O. BOX 429
OREGON CITY, OREGON
ZIP CODE 97045

COVERAGES

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY
PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO
WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT
TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFF. DATE	POLICY EXP. DATE	ALL LIMITS IN THOUSANDS
A	GENERAL LIABILITY (X) COMMERCIAL GENERAL LIABILITY () CLAIMS MADE (X) OCCURRENCE (X) OWNERS & CONTRACTORS PROTECTIVE () ()	C05462772	11/01/90	11/01/91	GENERAL AGGREGATE \$2,000 PRODUCT-COMP/OPS AGGREGATE \$2,000 PERSONAL & ADVERTISING INJURY \$1,000 EACH OCCURRENCE \$1,000 FIRE DAMAGE (ANY ONE FIRE) \$ 100 MEDICAL EXPENSE (ANY ONE PERSON) \$ 5
A	AUTOMOBILE LIABILITY (X) ANY AUTO () ALL OWNED AUTOS () SCHEDULED AUTOS (X) HIRED AUTOS (X) NON-OWNED AUTOS () GARAGE LIABILITY ()	FJ819455	11/01/90	11/01/91	CSL \$1,000 BODILY INJURY (PER PERSON) \$ BODILY INJURY (PER ACCIDENT) \$ PROPERTY DAMAGE \$
	EXCESS LIABILITY () UMBRELLA FORM () OTHER THAN UMBRELLA FORM				EACH OCCURRENCE AGGREGATE \$ \$
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY \$ (EACH ACCIDENT) \$ (DISEASE-POLICY LIMIT) \$ (DISEASE-EACH EMPLOYEE)
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/RESTRICTIONS/SPECIAL ITEMS

RE: WATER SYSTEM IMPROVEMENTS - PARKWAY SUBDIVISION L.I.D.
SEE ADDITIONAL INSURED WORDING ATTACHED

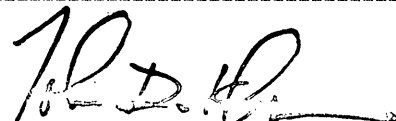
CERTIFICATE HOLDER

CITY OF NEWBERG
414 E. FIRST STRET
NEWBERG, OREGON
ZIP CODE 97132

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EX-
PIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS
WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE
TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND
UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
JOHN D. KLUMP



JIM SMITH EXCAVATION, INC. 11/1/90 TO 11/1/91

POLICY NUMBER: C05462772

COMMERCIAL GENERAL LIABILITY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED — OWNERS, LESSEES OR
CONTRACTORS (FORM B)**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART.

SCHEDULE

Name of Person or Organization:

CITY OF NEWBERG, ITS OFFICERS, EMPLOYEES RE: WATER SYSTEM IMPROVEMENTS
414 E. FIRST STREET & AGENTS PARKWAY SUBDIVISION L.I.D.
NEWBERG, OREGON 97132

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you.

CONTRACT DOCUMENTS
AND
SPECIFICATIONS

NEWBERG WATER SYSTEM IMPROVEMENTS
Parkway Subdivision L.I.D.
FOR
CITY OF NEWBERG, OREGON

SEPTEMBER, 1990

Bert S. Teitzel, P.E.
Director of Public Works

CNA INSURANCE COMPANIES

BID BOND

KNOW ALL MEN BY THESE PRESENTS: That we

JIM SMITH EXCAVATING, INC.

and AMERICAN CASUALTY COMPANY OF READING, PA , Principal,
Surety, are held and firmly bound unto

CITY OF NEWBERG , Oblige, in the sum of

TEN PERCENT OF TOTAL AMOUNT BID ----- Dollars (\$ 10% -----)
for the payment of which we bind ourselves, our legal representatives, successors and assigns,
jointly and severally, firmly by these presents.

WHEREAS, Principal has submitted or is about to submit a proposal to Oblige on a contract
for

PARKWAY SUBDIVISION LID

NOW, THEREFORE, if the said contract be awarded to Principal and Principal shall, within
such time as may be specified, enter into the contract in writing and give such bond or bonds as
may be specified in the bidding or contract documents with surety acceptable to Oblige; or if
Principal shall fail to do so, pay to Oblige the damages which Oblige may suffer by reason of
such failure not exceeding the penalty of this bond, then this obligation shall be void; otherwise to
remain in full force and effect.

Signed, sealed and dated
OCTOBER 23, 1990

JIM SMITH EXCAVATING, INC.

(Principal)

by James H. Smith (Seal)

AMERICAN CASUALTY COMPANY OF READING, PA

(Surety)

by Vicki L. Nicholson

VICKI L. NICHOLSON

Attorney-in-Fact

G-23054-C



For All the Commitments You Make®

**American Casualty Company
of Reading, Pennsylvania**



For All the Commitments You Make®

Offices/Chicago, Illinois

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men by these Presents, That AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA, a corporation duly organized and existing under the laws of the Commonwealth of Pennsylvania, and having its principal office in the City of Chicago, and State of Illinois, does hereby make, constitute and appoint James Dooney, W. Kent Thie, John D. Klump,
Karen A. Bristol, K. C. Kraig, Vicki L. Nicholson, Individually

of Portland, Oregon

its true and lawful Attorney-in-Fact with full power and authority hereby conferred to sign, seal and execute in its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA and all the acts of said Attorney, pursuant to the authority hereby given are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the Company:

"Article VI—Execution of Obligations and Appointment of Attorney-in-Fact

Section 2. Appointment of Attorney-in-fact. The President or Vice President may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Company in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority, shall have full power to bind the Company by their signature and execution of any such instruments and to attach the seal of the Company thereto. The President or any Vice President or the Board of Directors may at any time revoke all power and authority previously given to any attorney-in-fact."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 11th day of November, 1966:

"Resolved, that the signature of the President or a Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted pursuant to Section 2 of Article VI of the By-Laws, and the signature of the Secretary or an Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power, and any power or certificate bearing such facsimile signatures and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

In Witness Whereof, AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed this 13th day of June, 19 88.

State of Illinois)
County of Cook) ss

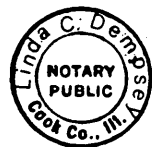


AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA

J. E. Purtell
J. E. Purtell

Vice President.

On this 13th day of June, 19 88, before me personally came J. E. Purtell, to me known, who, being by me duly sworn, did depose and say: that he resides in the Village of Glenview, State of Illinois; that he is a Vice-President of AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA, the corporation described in the which executed the above instrument; that he knows the seal of said Corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.



Linda C. Dempsey
Linda C. Dempsey

Notary Public.

CERTIFICATE My Commission Expires November 12, 1990

I, George R. Hobaugh, Assistant Secretary of AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA, do certify that the Power of Attorney herein above set forth is still in force, and further certify that Section 2 of Article VI of the By-Laws of the Company and the Resolution of the Board of Directors, set forth in said Power of Attorney are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said Company this 23RD day of OCTOBER, 19 90.



George R. Hobaugh
George R. Hobaugh

Assistant Secretary

ADDENDA NO. 1

CITY OF NEWBERG, OREGON
WATER SYSTEM IMPROVEMENTS
PARKWAY SUBDIVISION L.I.D.
OCTOBER 2, 1990

This addenda forms a part of the Contract Documents. It modifies the original bidding documents.

A. Schedule of Prices

Page 4, Item 4 - Pipe and installation 3/4" water service.

Change to read - Installation of 3/4" and 1" water service.

Clarification - The City is supplying all pipe materials including copper services, fittings, etc.

Bidders shall acknowledge, on page 6 of the Contract Documents, that they have received the addenda by writing in the addenda number and date received.

Bert S. Teitzel, P.E.
Director of Public Works

NEWBERG WATER SYSTEM IMPROVEMENTS
Parkway Subdivision L.I.D.

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S-2	Trench Backfill
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INVITATION TO BID
Newberg Water System Improvements
Parkway Subdivision L.I.D.

Sealed bids for the construction of the Newberg Water System Improvements, Parkway Subdivision L.I.D., in the City of Newberg, Oregon addressed to the Director of Public Works, 414 E. First St., Newberg, Oregon 97132, will be received by Bert S. Teitzel, Director of Public Works, until 2:00 p.m. prevailing time on the 23rd of October, 1990 at City Hall, 414 E. First St., Newberg, Oregon at which time and place all bids will be opened and publicly read aloud by the undersigned or his designated representative.

The project generally consists of the construction and installation of 1,460 lineal feet of 8" and 6" water main and appurtenant items, installation of 20 water services and site restoration. All 8" and 6" ductile iron pipe valves, ductile iron pipe fittings, and fire hydrants, will be provided by the City of Newberg.

Plans and Specifications may be obtained at the office of the Director of Public Works, City Hall, 414 E. First St., Newberg, Oregon 97132 upon receipt of a non-refundable payment of \$25.00 for each set.

Construction Data East Side, 1125 SE Madison St. Room 200, Portland, OR 97214; Builders Exchange Co-op, 1125 SE Madison St., Portland, OR 97214; Construction Data, 925 SW 12th, Portland, OR 97208; Daily Journal of Commerce, 2014 NW 24th Ave., Portland, OR 97210; Salem Contractors Exchange, 2256 Judson St. SE, Salem, OR 97302.

Bidders must be prequalified. Those who are not prequalified with the City must file application no later than 5:00 p.m. prevailing time on the 16th day of October, 1990. No proposal will be received or considered unless the bid contains statements by the bidder as part of his bid, that the provisions required by ORS 279.348 through 279.363, and the Davis-Bacon Act, as may be applicable are to be complied with. Applicable state wage rates are included with the contract documents.

All bidding shall comply with Presidents Executive Order No. 11246. All bidders shall comply with the applicable provisions of the Equal Employment Opportunity Act of 1972 and the Civil rights Act of 1964.

Each bid must be submitted on the prescribed form in a sealed envelope, and clearly marked on the outside that it is a bid. Each bid must be accompanied by a certified check or bid bond payable to the City of Newberg, Oregon, in an amount of not less than 10 percent of the total amount of the bid submitted. The successful bidder will be required to furnish a bond for faithful performance on the contract in the full amount of the contract price.

The City of Newberg reserves the right to reject any or all bids, to waive informalities, and to accept the bid which is in the best interest of the City. No bidder may withdraw his bid for a period of thirty (30) calendar days after the date set for opening.

BID

PLACE: CITY OF NEWBERG, OREGON

PROJECT: Newberg Water System Improvements
Parkway Subdivision L.I.D.

TO: MAYOR AND CITY COUNCIL
CITY OF NEWBERG, OREGON
414 E. FIRST ST.
NEWBERG, OREGON 97132

The undersigned, hereinafter called the Bidder, in compliance with your advertisement for bid offers to enter into a Contract with the City of Newberg, Oregon, hereinafter referred to as the Owner, to furnish all labor, materials, equipment, supplies and machinery to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

The Bidder declares that he has carefully examined the plans and specifications with related documents, that he has personally inspected the site of the proposed work; that he has satisfied himself as to the quantities involved including materials and equipment, and is familiar with all of the conditions surrounding the construction of the proposed project including availability of materials and labor.

The Bidder further declares that the Bid is made according to the provisions and under the terms of the Contract Documents, which are hereby made a part of this Bid, and that the prices below are to cover all expenses incurred in performing the work required under the Contract Documents of which this Bid is a part.

The Bidder agrees that if this Bid is accepted, he will, within ten calendar days after notification of acceptance, execute the Contract with the Owner; and will at that time deliver to the Owner the Performance and Payment Bond and insurance documents required herein, and will, to the extent of his Bid, furnish all labor, equipment and 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 Director of Public Works.

The Bidder further agrees to begin work within ten calendar days after receipt of written "Notice to Proceed" and to fully complete the project within sixty (60) consecutive calendar days thereafter. Bidder further agrees to pay as liquidated damages, the sum of one hundred and fifty dollars (\$150.00) for each consecutive calendar day thereafter until the work shall have been finished. Sundays and legal holidays shall be excluded in determining days in default.

BID Cont.

The Bidder further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract documents and based on the following schedule of lump sum or unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved. The Bidder agrees that the lump sum prices and unit prices represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in these Contract Documents.

The undersigned Bidder hereby agrees that the provisions of ORS 279.348 to 279.356 will be complied with, so that the undersigned Bidder and Bidder's subcontractors will pay to their employees not less than the specified minimum prevailing rate of wage as determined by the Oregon Commissioner of the Bureau of Labor and Industries, and further agrees to pay such wages not less than once per week.

SCHEDULE OF PRICES - PAGE 1

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT OF MEASUREMENT</u>	<u>UNIT PRICE FIGURES</u>	<u>UNIT PRICE IN WRITING</u>	<u>TOTAL AMOUNT</u>
1.	Mobilization	LS	LS	2500 ⁰⁰	Two thousand five hundred	2500 ⁰⁰
2.	Trench Excavation & Backfill					
	a. Class "B" Water main	1458	LF	10 ⁰⁰	Ten and ^{no} /100	14,580 ⁰⁰
	b. Class "B" Service lines	370	LF	11 ⁰⁰	Eleven and ^{no} /100	4,070 ⁰⁰
	c. Class "A" Service lines	140	LF	9 ⁰⁰	Nine and ^{no} /100	1,260 ⁰⁰
3.	Installation of Pipe					
	a. 8" Ductile Iron Pipe - Class 52	930	LF	1 75	One and 75/100	1,627.50
	b. 6" Ductile Iron Pipe - Class 52	528	LF	1 75	One and 75/100	924.00
4.	Pipe and Installation					
	3/4" Water Services	510	LF	2 ⁰⁰	Two and ^{no} /100	1,020 ⁰⁰
5.	3/4" Tap Existing 10" Cast Iron Water Main (includes tapping valve)	LS	LS	1800 ⁰⁰	one thousand eight hundred	1,800 ⁰⁰
6.	Installation of gate valves & valve boxes					
	a. 8" Flg X MJ	1	EA	50 ⁰⁰	Fifty and ^{no} /100	50 ⁰⁰
	b. 8" MJ	1	EA	50 ⁰⁰	Fifty and ^{no} /100	50 ⁰⁰
	c. 6" FLG X MJ	1	EA	50 ⁰⁰	Fifty and ^{no} /100	50 ⁰⁰
	d. 6" MJ	1	EA	50 ⁰⁰	Fifty and ^{no} /100	50 ⁰⁰
7.	Installation of fittings					
	a. 8" Connector Flg X MJ	2	EA	40 ⁰⁰	Forty and ^{no} /100	80 ⁰⁰
	b. 8" X 6" Tee MJ X Flg	2	EA	75 ⁰⁰	Seventy five and ^{no} /100	150 ⁰⁰
	c. 8" X 6" Tee Flg	1	EA	75 ⁰⁰	Seventy-five and ^{no} /100	75 ⁰⁰
	d. 6" - 90° Bend MJ	1	EA	40 ⁰⁰	Forty and ^{no} /100	40 ⁰⁰
	e. 3/4" Corporation Stops (compression type)	20	EA	35 ⁰⁰	Thirty five and ^{no} /100	700 ⁰⁰

SCHEDULE OF PRICES - PAGE 2

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT OF MEASUREMENT</u>	<u>UNIT PRICE FIGURES</u>	<u>UNIT PRICE IN WRITING</u>	<u>TOTAL AMOUNT</u>
f.	3/4" Angle Stops (compression type)	20	EA	35 ⁰⁰	Thirty-five and ⁰⁰ / ₁₀₀	700 ⁰⁰
g.	6" MJ Plug Tapped 2"	1	EA	40 ⁰⁰	Forty and ⁰⁰ / ₁₀₀	40 ⁰⁰
h.	8" MJ Plug Tapped 2"	1	EA	40 ⁰⁰	Forty and ⁰⁰ / ₁₀₀	40 ⁰⁰
i.	6" Flanged Spool 7'6" long	1	EA	40 ⁰⁰	Forty and ⁰⁰ / ₁₀₀	40 ⁰⁰
8.	Installation of Assemblies					
a.	Fire Hydrant Assemblies	2	EA	400	Four hundred & ⁰⁰ / ₁₀₀	800 ⁰⁰
b.	Blow off assemblies	2	EA	175	One hundred seventy five	350 ⁰⁰
9.	Trench Paving	550	SY	13 ⁰⁰	Thirteen & ⁰⁰ / ₁₀₀	7,150 ⁰⁰
10.	Saw Cutting - Asphalt	3,650	LF	40¢	Forty cents	1,460 ⁰⁰
11.	Pressure Testing and Chlorination	1,420	LF	40¢	Forty Cents	568 ⁰⁰
12.	3/4" tap on 8" and 6" water line	20	EA	35 ⁰⁰	Thirty five and ⁰⁰ / ₁₀₀	700 ⁰⁰
13.	Relocation of water meters & boxes & re-connection to service line	20	EA	35 ⁰⁰	Thirty-five and ⁰⁰ / ₁₀₀	700 ⁰⁰
14.	Lawn and Site Restoration	LS	LS	800 ⁰⁰	Eight hundred and ⁰⁰ / ₁₀₀	800 ⁰⁰
15.	Final Clean-Up	LS	LS	750 ⁰⁰	Seven hundred fifty & ⁰⁰ / ₁₀₀	750 ⁰⁰

Total Bid in Writing

Forty three thousand, one hundred twenty four
and ⁹⁰/₁₀₀

(Please Print)

Total Bid in Figures

43,124.90

Name of Bidder: JIM SMITH
 Title: PRESIDENT
 Company: JIM SMITH EXCAVATING INC
 Address, City, State, Zip: PO Box 429
 Telephone: OREGON CITY, OR 97045

BID Cont.

The above unit prices shall include all labor, materials, equipment, tools, overhead, profit, insurance, etc., to complete the work called for.

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 required Performance and Payment Bond within the time herein proposed, then, in that event, the bid security deposited herewith shall be retained by the Owner as liquidated damages.

The Bidder understands that the Owner may reject any or all bids and waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of thirty (30) calendar days after the scheduled closing time for receiving bids.

The Bidder acknowledges receipt of the following addendum.

NO. 1 DATE 10-16-90 NO. _____ DATE _____
NO. _____ DATE _____ NO. _____ DATE _____

The name of the Bidder submitting this Proposal is JIM SMITH

JIM SMITH EXCAVATING doing business at
PO BOX 429, OREGON CITY, OR, 97045
Street City State Zip

which is the address to which all communications shall be sent.

BIDDER'S PERFORMANCE BOND STATEMENT

JIM SMITH EXCAVATING INC, hereinafter referred to as
(Name of Contractor)

Contractor, is submitting a bid to the City of Newberg pursuant to the latter's advertisement for bids dated September 26, 1990 Newberg Water System Improvements, Parkway Subdivision L.I.D.

Contractor certifies that if awarded the Contract, Contractor has the financial ability to obtain a good and sufficient bond issued by a surety to Owner in a sum equal to the amount of the bid providing for the faithful performance of the Contract.

BID Cont.

Contractor understands and agrees if Contractor fails to provide the performance bond, the Owner will reject such bid and the bid bond or security submitted with the subject bid will be forfeited.

The Surety requested to issue the Performance Bond will be

AMERICAN CASUALTY COMPANY. Contractor hereby authorizes
(Surety Company)

AMERICAN CASUALTY COMPANY to disclose any information to the
(Surety Company)

Owner concerning Contractor's ability to supply a performance bond in the amount of the Contract.

In witness thereto the undersigned has set his (its) hand this

_____ day of _____, 1990.

Signature of Bidder

Title

(If Corporation)

In witness whereof the undersigned corporation has caused this instrument to be executed and the seal affixed by its duly authorized officers this _____ day of _____, 1990.

JIM SMITH EXCAVATING INC
Name of Corporation

By

James H. Smith
PRESIDENT

Title

Attest

George A. Smith
Secretary

CONTRACT FOR CONSTRUCTION

THIS CONTRACT, made and entered into this 16 day of November, 1990, by and between the CITY OF NEWBERG, OREGON, a municipal corporation, hereinafter called the "OWNER", and Jim Smith Excavating Inc.

of P.O. Box 429
Oregon City, Oregon 97045

hereinafter called the "CONTRACTOR".

WITNESS:

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 Newberg Water System Improvements, Parkway Subdivision L.I.D. to the extent of the Bid made by the Contractor on the 23rd day of October, 1990, all full compliance with contract documents referred to herein.

The Advertisement for Bid, the signed copy of the Bid made by the Contractor, the fully executed Performance and Payment Bond, the General Provisions, the Special Provisions, the Technical Provisions, and the Plans consisting of two (2) sheets entitled Newberg Water System Improvements, Parkway Subdivision L.I.D., dated November, 1987, are hereby referred to and by reference made a part of this Contract as fully as if the same were completely set forth herein.

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 Director of Public Works and to his satisfaction to the extent provided in the Contract Documents, or as otherwise herein provided and based on the said Bid made by the Contractor, and to make such payments in the manner at the times provided in the Contract Documents.

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

The Contractor agrees to indemnify and save harmless the Owner from any and all defects appearing or developing in the materials furnished and the workmanship performed under this Contract for a period of one year or such other time as applicable law may allow after the date of acceptance of the work in the Contract by the Owner.

CONTRACT FOR CONSTRUCTION Cont.

In the event that the Contractor shall fail to complete the work within the time limits or the extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid at the rate of One Hundred and Fifty (\$150.00) Dollars per consecutive calendar day. Sundays and legal holidays shall be excluded in determining days in default.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed the day and year first herein above written.

CITY OF NEWBERG, OREGON

David B. Cole
By

City Manager
Title

CONTRACTOR

Wonne A. Smith
By
Secretary
Title

Approved as to form:

John 11/15/90
City Attorney

PERFORMANCE - PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we

JIM SMITH EXCAVATING, INC.

A CORPORATION hereinafter called
(Corporation, Partnership, or Individual)

"Principal" and AMERICAN CASUALTY COMPANY OF of READING
READING, PA

State of PENNSYLVANIA, hereinafter called "Surety", are
held firmly bound unto the City of Newberg, Oregon, hereinafter
called "Owner" in the penal sum of FORTY-THREE THOUSAND ONE HUNDRED TWENTY-

FOUR AND 50/100 ----- Dollars (\$ 43,124.50 ----) in lawful money of the
United States, for the payment of which sum well and truly to be made, we bind
ourselves, our heirs, executors, administrators, and successors, jointly and
severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into
a certain contract with the Owner, dated this _____ day of _____
_____, 1990, a copy of which is hereto attached and made a part hereof for the
construction of PARKWAY SUBDIVISION L.I.D. - NEWBERG WATER SYSTEM IMPROVEMENTS

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its
duties, all the undertakings, covenants, terms, conditions, and agreements of
said contract during the original term thereof, and any extension thereof which
may be granted by the Owner, with or without notice to the Surety, and if he
shall fully indemnify and save harmless the Owner from all costs and damages
which it may suffer by reason of failure to do so, and shall reimburse and repay
the Owner all outlay and expense which the Owner may incur in making good any
default, and shall promptly make payment to all persons, firms, subcontractors,
and corporations furnishing materials for or performing labor in the prosecution
of the work provided for in such contracts and any authorized extension or
modification thereof, including all amounts due for materials, lubricants, oil,
gasoline, coal and coke, repairs on machinery, equipment and tools consumed or
used in connection with the construction of such work whether by subcontractor
or otherwise, then this obligation shall be void; otherwise to remain in full
force and effect.

PERFORMANCE - PAYMENT BOND cont.

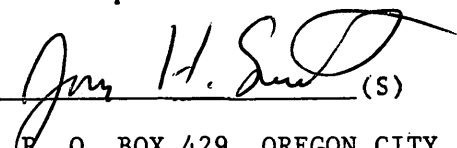
PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition of the terms of the contract or the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specification.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed this the _____ day
of _____, 1990.

JIM SMITH EXCAVATING, INC.
Principal

(Principal) Secretary

By  (S)

P. O. BOX 429, OREGON CITY, OR 97045
(Address - Zip Code)

(SEAL)

Witness as to Principal

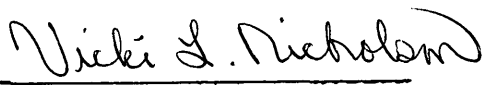
(Address - Zip Code)

ATTEST

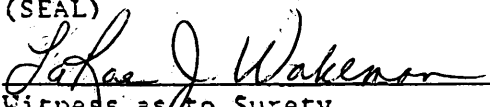
(Surety) Secretary

AMERICAN CASUALTY COMPANY OF
Surety READING, PA

By


Attorney-in-fact
VICKI L. NICHOLSON

(SEAL)


Witness as to Surety

21332 NE SAN RAFAEL
TROUTDALE, OR 97060
(Address - Zip Code)

ANCHOR INSURANCE & SURETY, INC.
P. O. BOX 25150, PORTLAND, OR 97225
(Address - Zip Code)

Note: Date of Bond must not be prior to the date of Contract. If Contractor is Partnership, all partners should execute bond.

**American Casualty Company
of Reading, Pennsylvania**



For All the Commitments You Make®

Offices/Chicago, Illinois

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men by these Presents, That AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA, a corporation duly organized and existing under the laws of the Commonwealth of Pennsylvania, and having its principal office in the City of Chicago, and State of Illinois, does hereby make, constitute and appoint James Dooney, W. Kent Thie, John D. Klump,
Karen A. Bristol, K. C. Kraig, Vicki L. Nicholson, Individually

of Portland, Oregon

its true and lawful Attorney-in-Fact with full power and authority hereby conferred to sign, seal and execute in its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA and all the acts of said Attorney, pursuant to the authority hereby given are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the Company:

"Article VI—Execution of Obligations and Appointment of Attorney-in-Fact

Section 2. Appointment of Attorney-in-fact. The President or Vice President may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Company in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority, shall have full power to bind the Company by their signature and execution of any such instruments and to attach the seal of the Company thereto. The President or any Vice President or the Board of Directors may at any time revoke all power and authority previously given to any attorney-in-fact."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 11th day of November, 1966:

"Resolved, that the signature of the President or a Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted pursuant to Section 2 of Article VI of the By-Laws, and the signature of the Secretary or an Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power, and any power or certificate bearing such facsimile signatures and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

In Witness Whereof, AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed this 13th day of June, 1988.

State of Illinois) ss
County of Cook |



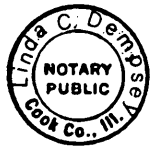
AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA

J. E. Purtell

J. E. Purtell

Vice President.

On this 13th day of June, 1988, before me personally came J. E. Purtell, to me known, who, being by me duly sworn, did depose and say: that he resides in the Village of Glenview, State of Illinois; that he is a Vice-President of AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA, the corporation described in the which executed the above instrument; that he knows the seal of said Corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.



Linda C. Dempsey

Linda C. Dempsey

Notary Public.

CERTIFICATE My Commission Expires November 12, 1990

I, George R. Hobaugh, Assistant Secretary of AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA, do certify that the Power of Attorney herein above set forth is still in force, and further certify that Section 2 of Article VI of the By-Laws of the Company and the Resolution of the Board of Directors, set forth in said Power of Attorney are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said Company this _____ day of _____, 19____.



George R. Hobaugh

George R. Hobaugh

Assistant Secretary

PERFORMANCE - PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we

_____ hereinafter called
(Corporation, Partnership, or Individual)

"Principal" and _____ of _____.

State of _____, hereinafter called "Surety", are
held firmly bound unto the City of Newberg, Oregon, hereinafter
called "Owner" in the penal sum of _____

_____ Dollars (\$_____) in lawful money of the
United States, for the payment of which sum well and truly to be made, we bind
ourselves, our heirs, executors, administrators, and successors, jointly and
severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into
a certain contract with the Owner, dated this _____ day of _____
_____, 1990, a copy of which is hereto attached and made a part hereof for the
construction of the Newberg Water System Improvements, Parkway Subdivision
L.I.D.

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its
duties, all the undertakings, covenants, terms, conditions, and agreements of
said contract during the original term thereof, and any extension thereof which
may be granted by the Owner, with or without notice to the Surety, and if he
shall fully indemnify and save harmless the Owner from all costs and damages
which it may suffer by reason of failure to do so, and shall reimburse and repay
the Owner all outlay and expense which the Owner may incur in making good any
default, and shall promptly make payment to all persons, firms, subcontractors,
and corporations furnishing materials for or performing labor in the prosecution
of the work provided for in such contracts and any authorized extension or
modification thereof, including all amounts due for materials, lubricants, oil,
gasoline, coal and coke, repairs on machinery, equipment and tools consumed or
used in connection with the construction of such work whether by subcontractor
or otherwise, then this obligation shall be void; otherwise to remain in full
force and effect.

PERFORMANCE - PAYMENT BOND cont.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition of the terms of the contract or the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specification.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed this the _____ day
of _____, 1990.

Principal

(Principal) Secretary

By _____ (S)

(Address - Zip Code)

(SEAL)

Witness as to Principal

(Address - Zip Code)

ATTEST

Surety

(Surety) Secretary

By _____
Attorney-in-fact

(SEAL)

Witness as to Surety

(Address - Zip Code)

(Address - Zip Code)

Note: Date of Bond must not be prior to the date of Contract. If Contractor is Partnership, all partners should execute bond.

GENERAL PROVISIONS

NEWBERG WATER SYSTEM IMPROVEMENTS

CITY OF NEWBERG, OREGON

SECTION 1.00 DEFINITIONS AND TERMS

Terms used or referred to herein are defined as follows:

1.01 BID

The offer of the bidder when submitted on the proposal form, properly signed and guaranteed.

1.02 BIDDER

Any individual, firm partnership, corporation or combination thereof acting directly or through a duly authorized representative, submitting a proposal on the work contemplated.

1.03 CHANGE ORDER

A written instruction to the Contractor, signed by the Engineer, prescribing any change in the work.

1.04 CONTRACTING AGENCY

The agency which has been contracted for the performance of the work or for whom the work is being performed.

1.05 CONTRACT

The written agreement covering performance of the work including formal contract, advertisement for bids, instructions to bidders, proposal with required affidavit, specifications, bonds, plans, and all other Contract Documents.

1.06 CONTRACTOR

The individual, partnership, corporation, or other entity entering into a contract with the Contracting Agency to perform the contemplated work. In the case of work being done under a permit issued by the Contracting Agency, the Permittee shall be construed to be the Contractor.

1.07 ENGINEER

The Engineer of the Contracting Agency, acting either directly or through his authorized representatives, and designated by the Contracting Agency to supervise the work during its execution.

1.08 HOUSE CONNECTION SEWER

Any sewer pipe line lying within an easement, public street or right of way which connects or is proposed to connect, a house sewer or any lot or part of a lot with a public sewer.

1.09 HOUSE SEWER

Any sewer pipe line which connects, or is proposed to connect, any building to a house connection sewer.

1.10 INSPECTOR

An authorized representative of the Engineer of the Contracting Agency, limited to the particular duties entrusted by the Engineer.

1.11 LABORATORY

A materials testing laboratory operated by a public agency or if approved by the Engineer, any private, commercial testing laboratory.

1.12 LINEAL FOOT

Horizontal measurement as determined by engineers' station.

1.13 MAJOR ITEM

Any items or work and/or materials having an original contract value in excess of \$500.00 or which exceeds ten (10) percent of the amount of the original contract, whichever is greater.

1.14 NOTICE TO PROCEED

A written notice to the Contractor from the Contracting Agency, designating the date by which the Contractor shall begin prosecution of the work.

1.15 PERSON

Any individual, firm, association, partnership, corporation, trust, or joint venture.

1.16 PLANS

The plans, profiles, cross sections, and drawings, or reproductions thereof, approved by the Engineer, which show the details of the work to be done.

1.17 PROPOSAL GUARANTY

Certified check or bidder's surety bond executed by a bonafide surety company, accompanying the Bid as a guarantee that the bidder will enter into a contract with the Board for the performance of the work.

1.18 REFERENCE SPECIFICATIONS

Bulletins, standards, rules, methods of analysis or test, codes and specifications of other agencies, engineering societies, or industrial associations referred to in these specifications. 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 issuing the permit for the project.

1.19 ROADWAY

That portion of the right-of-way or easement intended for use by vehicles.

1.20 SANITARY SEWER

A sewer that carries liquid and water-carried wastes together with minor quantities of storm, surface, and groundwaters that are not admitted intentionally.

1.21 SEWER

A pipe or conduit that carries wastewater or drainage water.

1.22 SPECIAL PROVISIONS

Specific clauses setting forth conditions or requirements peculiar to the work which modify or supplement the standard specification.

1.23 SPECIFICATIONS

This term includes the standard specifications and specifications included herein by reference, any special or project specifications, and specifications included therein by reference, specifications on the plans referred to and specifications contained or referred to in supplemental agreements between the Contractor and the Contracting Agency.

1.24 STANDARD DRAWINGS

Drawings of structures or devices referred to on the plans or in specifications by title and/or an index number.

1.25 STATE

The State of Oregon.

1.26 STORM SEWER

A sewer that carries storm water and surface water, street wash and other wash waters, or drainage, but excludes domestic wastewater and industrial wastes. Also called storm drain.

1.27 STREET

Any road, highway, parkway, freeway, alley, walk or way.

1.28 SURETY

The bondsman, party or parties who may guarantee the fulfillment of the contract by bond.

1.29 UTILITY .

Tracks, overhead or underground wires, pipe lines, conduits, ducts of structures, owned, operated, or maintained in or across a public right-of-way or private easement.

1.30 WORK

That which is proposed to be constructed or done under the contract.

1.31 ABBREVIATIONS AND SYMBOLS

A.A.S.H.O. (AASHO) American Association of State Highway Officials;
A.G.C. (AGC) Associated General Contractors of America; A.P.W.A. (APWA)
American Public Works Association; A.S.T.M. (ASTM) American Society for Testing
Materials; A.W.W.A. (AWWA) American Water Works Association; O.R.S. (ORS)
Oregon Revised Statutes.

SECTION 2.00 PROPOSAL REQUIREMENTS AND CONDITIONS

2.01 INTERPRETATION OF PLANS AND SPECIFICATIONS

The Engineer will interpret the meaning of any part of the plans and specifications about which any misunderstanding may arise, and his decision will be final.

Should the Contractor become aware of any error or discrepancy in or between the plans and specifications, he shall refer the matter to the Engineer for adjustment before proceeding further with the work. Should the Contractor proceed with the work without referring the matter, he does so on his own responsibility.

2.02 FIELD CONDITIONS

Logs of test holes, ground water levels, and any accompanying soil reports as furnished by the Contracting Agency are furnished for general information only. The field conditions so set forth shall not constitute a representation or warranty, expressed or implied that such conditions are actually existent. Bidders shall make their own investigations and form their own estimates of the site conditions. The Contracting Agency will not be liable for any loss sustained by the Contractor as a result of any variance between conditions as set forth in the soil reports or as shown by the logs of test holes and the actual conditions revealed during the progress of the work or otherwise.

2.03 CONTRACT DOCUMENTS

The Contract Documents under which it is proposed to execute this work consist of the material bound herewith. These Contract Documents are intended to be mutually cooperative and to provide all details reasonably required for the execution of the proposed work. Any person contemplating the submission of a Bid and being in doubt as to the meaning or intent of said Contract Documents should request of the Engineer, in writing, an interpretation thereof. Any interpretation or change in said Contract Documents will be made only in writing, and a copy of such interpretation or change will be mailed or delivered to each person receiving a set of the Documents. The Contracting Agency will not be responsible for any other explanation or interpretation of said Documents.

2.04 TYPE OF BID

The Bid for the work contemplated is to be submitted on the form prescribed in the Bid.

2.05 PREPARATION OF BIDS

All blank spaces in the Bid form must be filled, in ink, in both words and figures where required. No changes shall be made in the phraseology of the forms or in the items mentioned here in. Written amounts shall govern in cases of discrepancy between the amounts stated in writing and the amounts stated in figures. In the case of error in extending unit prices in the bid, the correct extension of the unit prices shall govern.

Any Bid shall be deemed informal which contains omissions, erasures, alterations or additions of any kind, or items uncalled for, or in which any of the items are obviously unbalanced, or which in any manner shall fail to conform to the conditions of the published Advertisement for Bids.

The Bidder shall sign his Bid in the blank space provided therefore. Bids made by corporations or partnerships shall contain names and addresses of the principal officers or partners. If the Bid is made by a corporation, it must be acknowledged by one of the principal officers thereof; if made by a partnership, by one of the partners.

2.06 SUBMISSION OF BIDS

All Bids must be submitted at the time and place and in the manner prescribed in the Advertisement for Bids. Bids must be made on the prescribed Bid forms and submitted with the Contract Documents.

2.07 WITHDRAWAL OF BID

Any bid may be withdrawn prior to the scheduled time for the opening of bids either by telegraph or written request, or in person. No bid may be withdrawn after the time scheduled for opening of bids unless the time specified in Section 3.01 has elapsed.

2.08 BID SECURITY

Bids must be accompanied by a certified check drawn on a bank in good standing, or a bid bond issued by a surety company authorized to issue such bonds in the State of Oregon, in an amount of not less than ten (10) percent of the total amount of the Bid submitted. This check or bid bond shall be given as a guarantee that if awarded the Contract, the successful Bidder will execute the attached Contract and furnish a properly executed Performance Bond in the full amount of the Contract price within the time specified.

The Contracting Agency reserves the right to retain the bid security of the three lowest bidders until the successful Bidder has signed and delivered the Contract, and furnished a one-hundred percent (100%) Performance Bond within the specified time; the next lowest bid may be accepted at the Owner's discretion whereupon the above instructions and requirements will apply to the said second bidder.

2.09 CONDITIONS OF WORK

Each Bidder must inform himself of the conditions relating to the regular execution of the work, and it is assumed that he will inspect the site and make himself thoroughly familiar with all the Contract Documents. Failure to do so will not relieve the successful Bidder of his obligation to enter into a Contract and complete the contemplated work in strict accordance with the Contract Documents.

Each Bidder must inform himself of all laws and statutes, both Federal and State, relative to the regular execution of the work, the employment of labor, protection of public health, the protection of private property, right-of-way, and access to the work, fire protection regulations, and similar requirements.

2.10 PREQUALIFICATION OF BIDDERS

Bidders who are in doubt as to their qualifications should refer to the requirements regarding prequalification in the Advertisement for Bids for this contract. Prequalification requests must be submitted by the time stipulated in the Advertisement for Bids.

SECTION 3.00 AWARD AND EXECUTION OF CONTRACT

3.01 AWARD OF CONTRACT

After the Bids for the contemplated work have been opened and read as provided in these specifications, the respective totals thereof will be checked and compared by the Contracting Agency; and the results thereupon will be considered public information.

Unless otherwise stated in the Special Provisions or in the Advertisement for Bids the contract will be awarded within the forty-five (45) days after the opening of Bids to the lowest bidder meeting the qualifications required by law, including but not limited to the law relating to prequalification of bidders, and the requirements stated in the advertisement for bids, and instructions to bidders, and/or the specifications, and whose bid complies with all the prescribed requirements unless all bids are rejected. The Contracting Agency reserves the right to reject any and all bids and no bid shall be considered as being binding upon the Contracting Agency until the execution of the Contract; and failure of the Awardee to properly execute the awarded contract and furnish acceptable bonds and insurance as provided herein, shall be just and sufficient cause for the annulment of the award and the forfeiture of his proposal guaranty.

3.02 EXECUTION OF CONTRACT

The contract shall be signed by the successful bidder and returned together with the contract bonds and required insurance documents within 15 calendar days after the award of the contract unless otherwise stated in the Special Provisions or in the Advertisement for Bids, and after receipt of same by the Contracting Agency the proposal guarantees will be returned to all bidders. The Contractor shall carry all insurance which may be required by Federal and State laws by local ordinances, and by these specifications.

The attention of the Contractor is called to the fact that, when the United States Government participates in all or any portion of the cost of the work, the Federal laws authorizing such participation and the rules and regulations made pursuant to such laws must be observed by the Contractor. The work shall be subject to the inspection and approval of the authorized representatives of such Federal agencies as are created for the administration of these laws.

3.03 CONTRACT BONDS

Prior to the execution of the Contract, the Contractor shall file with the Contracting Agency a Performance Bond in the amount and for the purposes noted below, duly executed by a responsible corporate surety authorized to issue such bonds in the State of Oregon, which bond must in all respects comply with ORS 279.029 and ORS 279.526 Et. Seq. inclusive, and be satisfactory and acceptable to the Contracting Agency and he shall pay all premiums and costs thereof and incidental thereto to keep such bond in full force until one year after acceptance of the work in writing by the Contracting Agency.

The bond must be signed by both the Contractor and Surety and shall be in the sum of not less than 100% of the contract price to assure the claims of

materialmen supplying materials to him, and of mechanics and laborers employed by him on the work, required under these specifications.

Provided the Contractor shall faithfully and truly observe and comply with the terms, conditions, and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by him undertaken, and within the time prescribed therein or as extended as provided in the applicable Standard Specifications, and shall indemnify and save harmless the Contracting Agency, its officers, employees, and agents, against any direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the said contract by the said Contractor or his subcontractors; and shall make payment promptly, as due, to all subcontractors and to all persons supplying to the Contractor or his subcontractors: equipment, supplies, labor, or materials for the prosecution of the work, or any part thereof, provided for in said contract, and shall pay all contributions or amounts due the State Industrial Accident Fund and the State Tax Commission; and shall pay all other debts, dues and demands incurred in the performance of the said contract and shall in all respects perform said contract according to law, then this obligation is to be void, otherwise to remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the Contracting Agency be obligated for the payment thereof.

Should any surety or sureties upon said bonds or any of them become insufficient, said Contractor shall renew said bond or bonds with good and sufficient sureties within ten (10) days after receiving notice from the Contracting Agency that the surety or sureties are insufficient.

3.04 PROTECTIVE LIABILITY INSURANCE REQUIREMENTS AND PROPERTY INSURANCE

The Contractor shall furnish to the Contracting Agency in triplicate, a policy or certificate of protective liability insurance in which the Contracting Agency shall be named insured or be named in such insurance as an additional insured with the Contractor. In compliance with this provision, the Contractor may file with the Contracting Agency a satisfactory "blanket coverage" policy or certificate of insurance. The policy shall insure the Contracting Agency, its officers, employees and agents against all claims arising out of or in connection with the work to be performed and shall remain in full force and effective until the work is accepted by the Contracting Agency. The policy shall provide the following minimum limits.

Bodily Injury.....	\$ 500,000 each person
	\$ 500,000 each occurrence
Property Damage.....	\$ 500,000 each accident

Such policy shall provide coverage at least as broad as that provided in the Standard Form approved by the National Bureau of Casualty Underwriters together with such endorsements as are required to cover the risks involved. In addition, the Contractor shall furnish evidence of a commitment by the insurance company to notify the Contracting Agency of the expiration or cancellation of the insurance policies.

The Contractor shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof. This insurance shall include the interests of Contracting Agency, Contractor, Subcontractors, and consultants in the Work, all of whom shall be listed as insureds or additional insured articles, shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in the SPECIAL PROVISIONS, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance or otherwise provided in the SPECIAL PROVISIONS. Contractor shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit.

All policies of insurance for the certificate or other evidence thereof required to be purchased and maintained by Contractor will contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least thirty days prior written notice has been given to the Contracting Agency by certified mail.

3.05 CONTRACTING AGENCY'S IMMUNITY FROM LIABILITY

The Contractor shall save, keep and hold harmless, the Contracting Agency and all 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 by reason of or in the course of performing said work, which may be occasioned by any negligence upon the part of the Contractor or any of said Contractor's employees, or any subcontractor performing any of the work contemplated by the Contract.

The Contracting Agency shall not be liable or responsible for any accident, loss, or damage happening to the works referred to in the contract prior to the completion and acceptance thereof.

3.06 INDUSTRIAL ACCIDENT INSURANCE

The Contractor shall secure and maintain in full force and effect and bear the cost of complete Industrial Accident Insurance in accordance with the requirements of the Workmen's Compensation laws. The Contracting Agency, its officers, employees, or agents will not be responsible for any claims or suits in law or equity occasioned by this paragraph.

SECTION 4.00 SCOPE OF WORK

4.01 INTENT OF CONTRACT

The intent of the contract is to prescribe a complete work or improvement which the Contractor undertakes to do, in full compliance with the provisions and requirements of the contract. The Contractor for all or any part shall furnish all labor, materials, tools, equipment, transportation, necessary supplies and incidentals required to make each and every item complete as contemplated by the contract. Any deviation from these requirements must be stipulated in the SPECIAL PROVISIONS.

4.02 PLANS, SPECIFICATIONS AND WORK

The plans, together with specifications and other contract documents will govern the work to be done. Anything mentioned in the specifications but not shown on the plans and detailed drawings, or anything shown on the plans and detailed drawings but not mentioned in the specifications, shall be of like effect as though shown or mentioned in both.

Specifications and plans referred to in any of the contract documents shall be considered as being included in the document in which such reference is made. A reference to a particular specification or standard drawing in the contract documents shall refer to the version that is in force at the time of advertisement for bids.

In case of conflict, the order of precedence of the following documents in controlling the work shall be:

- (1) Permits from outside agencies required by law.
- (2) Special Provisions
- (3) Plans
- (4) Standard Specifications

Change orders, supplemental agreements and approved revisions to plans and specifications will take precedence over contract documents listed above.

4.03 PLANS AND SHOP DRAWINGS

The plans furnished and included with the specifications will show such details as may be necessary to comprehensively indicate the work that is proposed and the results that are intended to be accomplished. The Contractor shall keep a copy of the plans and specifications at the job site and access thereto shall, at all times, be accorded the Engineer. Any additional working drawings, detail plans, or shop drawings that may be required in connection with the prosecution or construction of any part of such work shall be supplied by and at the expense of the Contractor as they will not be accepted by the Engineer from suppliers or others.

When shop drawings are required in the various sections of the specifications or are requested by the Engineer, they shall be prepared in accordance with standard engineering practice. Shop drawings shall be of sufficient size and scale to clearly illustrate all details. Unless otherwise specified, shop drawings shall be submitted in quadruplicate to the office of

the Engineer for approval or correction not less than 30 days before approved drawings will be required. One set will be returned to the Contractor marked "approved" or "approved as corrected". If changes are required, four copies of corrected shop drawings shall be delivered to the Engineer. No materials shall be furnished or work done on items requiring shop drawings prior to approval. Approval of shop drawings shall not relieve the Contractor from responsibility for errors or omissions of any sort in the shop drawing.

4.04 CHANGES AT THE CONTRACTOR'S REQUEST

Provision has been made in the specifications for certain specific changes in methods of construction which may be made at the Contractor's request and upon approval of the Engineer. Changes in the drawings and specifications, other than those specified herein, which do not materially affect the work, and which are not detrimental to the work or to the interests of the Contracting Agency as determined by the Engineer, may be granted to facilitate the work of the Contractor when such changes are requested in writing and submitted to the Engineer for approval. In the event such changes are granted, the changes shall be made without additional cost to the Contracting Agency, and the Contracting Agency reserves the right to receive an equitable adjustment in the contract price or contract time as a consideration for authorizing any such change.

4.05 ALTERATION OF QUANTITIES AND EXTRA WORK

The Contracting Agency reserves the right to make such increase or decrease in the quantity of any item of work or material to be performed or furnished under such contract, or to order the performance of such additional or extra work of a class not contemplated by the proposal as may be considered expedient or advantageous and essential to the satisfactory completion of proposed work and the full accomplishment of the intended purpose thereof, without thereby affecting the validity of the contract or contract bonds, and without giving notice to the surety of any such bond, unless the total bid price is increased more than 25%. In such cases the Contractor will be required to perform or furnish additional quantities or extra items of work or materials or to decrease the amount of work or materials to be performed or furnished under the contract or to omit portions thereof, and to furnish and provide the necessary labor and equipment to do so, when and as the Engineer may so order in writing within the limitations herein or by law provided. In the event that any such increase or decrease in the quantity of work or materials to be performed or furnished is so ordered, the amount to be paid the Contractor under his contract shall be correspondingly increased or decreased as the case may be, in proportion to the increased or decreased quantities of work or materials performed or furnished under such order.

4.06 ALTERATION OF QUANTITIES

In the event that the Contractor is directed by the Engineer to increase, decrease or omit portions of the work, and the total pay quantity for any items of work varies from the original contract quantity by 25% or less, payment will be made for the quantity of work performed at the contract unit price thereof.

If the total pay quantity for any item of work required under the contract varies from the original contract quantity by more than 25%, the compensation to the Contract will be determined as follows:

If a change is made which, together with any previous changes in quantity, increases the quantity of any major item or decreases the quantity of any item more than 25% of the original contract quantity, the payment for the work in excess of the 25% increase over the original contract amount of that item will be determined by negotiation; at the option of the Engineer, payment for such excess will be made on the basis of "Extra Work" as hereinafter provided. Credit for decreases in the quantity of any item may be determined by negotiation but in no event shall the amount of credit exceed the contract unit prices for the omitted items.

4.07 LABOR

The cost of all labor used in performing the work under this contract shall be based on the prevailing wage scale as may be set forth in the Special Provisions for each particular craft or type of workman involved. Employer payments for payroll taxes and insurance, health and welfare, pension, vacation, and other similar purposes shall be included in this cost.

4.08 EXTRA WORK

Any new and unforeseen work will be classed as "Extra Work" when determined by the Engineer that said work is not covered by any of the contract items for which there is a bid price, or by a combination of such items.

Changes in the work involving either additional costs or credits for unforeseen additions or omissions in the work shall be made only subsequent to execution of a Change Order by the Engineer or by Supplemental Agreement issued by the Contracting Agency.

Payment of extra work on a lump sum or Unit Price basis required to be performed in accordance with the provisions of this section will be established by mutual agreement between the Contractor and the Engineer within the legal limits provide by State Laws or local ordinances. When no mutual agreement can be reached, payment will be made on a force account basis as hereinafter prescribed.

When the extra work is to be performed on a force account basis, the Contractor shall keep full and complete records of the cost of such work and shall permit the Engineer to have access thereto as may be necessary to assist in the determination of the compensation payable for such work. An itemized statement of such work shall be submitted to the Engineer for approval prior to submitting invoice for payment. The Contractor will be paid for labor, materials, and equipment rental as hereinafter prescribed. Only materials incorporated in the work will be paid for.

To the totals computed as hereinafter prescribed for labor, materials and equipment rental will be added 15% for overhead, profit and supervision. It is understood that labor, materials, and equipment may be furnished by the Contractor or the subcontractor or by others on behalf of the Contractor. However, when extra work to be paid for on a force account basis is performed by forces other than those of the Contractor, the Contractor shall reach agreement with such other forces as to the distribution of the payment to be made by the Contracting Agency for such work and no additional payment will be made therefor.

4.08A LABOR

The cost of all labor used in performing extra work under this contract shall be in accordance with Section 4.07.

4.08B MATERIALS

The cost of materials incorporated in the work will be the cost to the purchaser, whether Contractor, Subcontractor or other forces, 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 and a direct billing by the actual supplier to such purchaser, the cost of such materials shall be deemed to be the price paid to 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, 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 Contracting Agency 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.

4.08C 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 Department 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 Oregon State Highway Department, 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% 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, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. Operators of rented equipment will be paid for as provided under Section 4.08D.

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 therefore.

a. Equipment on the Work - The rental time to be paid for equipment on the work shall be the time the equipment is in operation on the extra work being performed and, in addition, shall include the time required to move the equipment to the location of 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.

b. Equipment Not on the Work - For the use of equipment moved in for the work and used exclusively for extra work paid for on a force account basis, the Contractor will be paid rental rates as agreed to, as provided in Section 4.08C above, and for the cost of transportation of the equipment to the location of the work and its return to its original location, all in accordance with the following provisions.

(1) The original location of the equipment to be hauled to the location of the work shall be agreed to by the Engineer in advance.

(2) The Contracting Agency will pay the costs of loading and unloading such equipment.

(3) The cost of transporting equipment in low bed trailers shall not exceed the hourly rates charged by established haulers or the applicable minimum established rates of the Oregon Public Utility Commission.

(4) 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, Sundays 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 shall not exceed 8 hours unless the equipment is in operation for a longer period of time.

(5) Should the Contractor desire the return of the equipment to a location other than its original location, the Contracting Agency will pay the cost of transportation in accordance with the above provisions, provided such payment shall not exceed the cost of moving the equipment into the location of the work.

(6) Payment for transportation, loading, and unloading equipment as above provided, will not be made if the equipment is used on the work in any other way than upon extra work paid for on a force account basis.

4.08D RECORDS

The Contractor shall maintain his 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 the 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 all names or identifications and classifications of workmen, the hourly rate of pay and hours worked together with the size, type, and identification number of equipment and hours of equipment operation. All reports shall be signed by the Contractor or his authorized representative.

Material charges shall be substantiated 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 quantities concerned delivered to the location of the work.

The Engineer will compare his 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.

4.09 CLEANUP AND DUST CONTROL

Throughout the period of construction, the Contractor shall keep the site free and clean from all rubbish and debris and shall promptly clean up all or any portion of the site when notified to do so by the Engineer. Care shall be taken to prevent spillage on the streets over which hauling is done, and any such spillage or debris deposited on streets due to the Contractor's operations shall immediately be cleaned up. The Contractor shall promptly remove any parts from the working area of all unused materials, surplus earth, and debris. Construction areas shall be left in a clean, neat and acceptable condition at the earliest time following completion of that portion of the work.

In the event that the Contractor fails to comply with the orders of the Engineer regarding cleanup, the Engineer may require the Contractor to cease progress on any or all parts of the work under contract until the unsatisfactory condition is corrected. The Engineer may order such cleanup work performed by others and the costs therefor deducted from payments due the Contractor. No additional compensation will be allowed as a result of such suspension.

During all phases of the construction work; the Contractor shall take precautions to abate dust nuisance by cleaning up, sweeping, sprinkling with water, or other means as necessary to accomplish results satisfactory with the Engineer.

Upon completion of the work and prior to final inspection the entire site of operations shall be cleared of equipment, unused materials and rubbish so as to present a clean and neat appearance. All costs of "Cleanup," including all charges for water, are to be absorbed in the prices bid for the various bid items.

4.10 VERMIN CONTROL

At the time of occupancy by the Contracting Agency, any structure or structures entirely constructed under the contract shall be free of rodents, insects, vermin and/or pests. Extermination work as may be necessary shall be arranged and paid for by the Contractor as part of the contract work within the contract time and shall be performed by a licensed agency and in accordance with the requirements of governing authorities. The Contractor shall be responsible for any injury to persons or property resulting from extermination work.

4.11 SANITARY PROVISIONS

The Contractor shall provide, and maintain in a neat and sanitary condition, such accommodations for the use of the employees as may be necessary to comply with all applicable laws, ordinances and regulations.

In the event of damage to the existing sewer facilities, or interruptions of existing sewage flows, the Contractor shall promptly dispose of any free sewage by pumping or other means. Sewage shall not be permitted to flow in the trenches or be covered by backfill. Continuous sanitary sewer service in closed conduits shall be maintained at all times.

SECTION 5.00 CONTROL OF WORK

5.01 SUPERVISION AND INSPECTION

The Engineer shall decide within the provisions of the specifications all questions which may arise concerning the quality or acceptance of materials furnished and work performed, and all questions concerning the acceptable fulfillment of the contract by the Contractor.

The Engineer or his representatives shall have access to the work at all times. The Contractor shall furnish all facilities for inspection at the construction site, and at shops or yards, and shall not cover up any work requiring inspection until the same has been approved by the Engineer. If work should be covered up before being inspected, the Contractor will be required to remove such portions of the work as may be necessary to disclose the part in question.

The Contractor shall be fully responsible for providing proper supervision and sufficient labor and equipment to accomplish the work and to complete the work within the contract time. The Contractor shall notify the Engineer 24 hours prior to commencing any work, or resuming work after shutdowns, except for normal resumption of work following Saturdays, Sundays, or Holidays. The Contractor shall maintain a local telephone for the duration of the contract, at his own expense, where he or his authorized representative may be reached directly or by message at all times; during and outside of working hours.

5.02 COOPERATION WITH OTHERS

Ordinarily, utility owners and Contracting Agency responsible for facilities located within the right-of-way will be required to complete any installation, relocation, repair, or replacement prior to 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 Contracting Agency 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 repair, and the Contractor shall so conduct his operations as to provide the time needed for such work to be accomplished during the progress of the improvement.

Where two or more contractors are employed on related or adjacent work, each shall conduct his operations in such a manner as not to cause any unnecessary delay or hindrance to the other.

5.03 MUTUAL RESPONSIBILITY OF CONTRACTORS

The Contracting Agency may let other contracts on any portion of the site for any work not included in the contract.

The Contractor shall perform the work of the contract so that it will properly coordinate with and fit the work performed by other contractors. He also shall give the other contractors every reasonable opportunity to perform their work, store materials, and place equipment therefor, and fit their work to the work of other contractors. He shall furnish to the other contractors all information necessary in order that they may properly connect and fit their work to his and in ample time, so that they may have reasonable opportunity to

prepare their work accordingly. He shall make the work of the contract ready to receive the work of the other contractors at the time fixed therefor, and shall fit this work to that of the other contractors at the times fixed therefor.

5.04 UTILITIES

Utilities for the purposes of these specifications shall be considered as including but not limited to: pipe lines, conduits, transmission lines, and appurtenances of Public Utilities and those of private industry, businesses or individuals solely for their own use or for use of their tenants, and storm drains, sanitary sewers, irrigation facilities, street lighting, traffic signals, telephone, television, and fire alarm systems.

The Contracting Agency has by a search of known records, endeavored to locate and indicate on the drawings, all utilities which exist within the limits of work. However, the accuracy or completeness of the utilities indicated on the drawings is not guaranteed. Service connections to adjacent property may or may not be shown on the drawings. It shall be the responsibility of the Contractor to determine the exact location of all utilities and their service connections. The Contractor shall contact all utility owners and request that they locate and mark any existing utilities and their appurtenances and that service connections which may be affected by the contract work also be marked. In addition, the Contractor shall notify the Engineer as to any utility, appurtenances, and service connections located by him which have been incorrectly shown or omitted from the drawings.

Unless otherwise specified the Contractor shall remove all interfering portions of utilities which are shown on the drawings as "abandoned" or "to be abandoned in place", and which interfere with the construction of the project. All costs involved in said removals shall be included in the prices bid for the various items of work. All such abandoned utilities removed by the Contractor, shall be included in the prices bid for the various items of work. All such abandoned utilities removed by the Contractor, shall be stored on the site where directed and shall remain the property of the owner utility company or Contracting Agency as determined by the Engineer.

Where utilities are shown on the drawings as "abandoned" or "to be abandoned in place", it shall be the Contractor's responsibility to contact the utility company involved, as required in Section 5.11 herein, prior to excavating around such utilities to ascertain that the abandonment of the utility has been completed.

In certain cases where indicated on the drawings, the Contractor shall locate utilities in advance of his construction operations. In these cases the Contractor shall backfill the excavations and shall construct either a temporary or permanent resurfacing over the backfill. The temporary resurfacing shall be constructed when the exploratory excavations are made in an area located within the proposed project excavation.

The permanent resurfacing when specified shall be constructed when the exploratory excavations are made in an area located outside the proposed project excavation. Said permanent resurfacing shall be of the type and thickness specified or as field conditions may otherwise require. In either case, the excavations shall be backfilled by the methods and to the relative density specified.

This work shall be performed as soon as practical after award of the contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the Contractor's work. All costs for making such exploratory excavations (including the backfilling and the resurfacing as specified herein) shall be included in the prices bid for the various items of work.

Utilities which upon exploration, are found to interfere with the permanent project work will be relocated, altered, or reconstructed by others in accordance with the provisions of Section 5.05 herein, or the Engineer may approve and order changes in location, line or grade of structures being built in order to avoid the utilities. The cost of such changes will be paid for under applicable bid items or as "Extra Work" as provided under Section 4.08.

5.05 BY OTHER THAN THE CONTRACTOR

When it is stated in the detailed specifications or indicated on the drawings, that a utility is to be relocated, altered or reconstructed by other than the Contractor, the Contracting Agency will conduct all negotiations with the owners in respect to such work and the work shall be done at no cost to the Contractor.

Service connections which physically interfere with project structures or appurtenances, whether or not so stated or indicated, shall be relocated by other than the Contractor; except as otherwise specified or unless directed by the Engineer in accordance with Section 5.08.

5.06 BY THE CONTRACTOR UNDER A SPECIFIC CONTRACT ITEM

When bidding schedule contains a separate item covering the relocation, alteration, or reconstruction of a utility by the Contractor, the price bid for said item shall cover all costs involved in such work.

The drawings and detailed specifications will give the construction details for the work, and unless the time at which the work must be done is specified in the detailed specifications, the Contractor shall coordinate with the Engineer in respect to when the work is to be done.

5.07 BY THE CONTRACTOR BUT NOT UNDER A SPECIFIC CONTRACT ITEM

When the work on a utility is specified or indicated on the drawings to be done by the Contractor, but is not included as a separate contract item in the bidding schedule, the Contracting Agency will make all arrangements with the owner of the utility in respect to the construction details, however, the Contractor shall coordinate with the owner as to when the work is to be done. Any costs for such work shall be absorbed or included in the prices bid for the various contract items.

5.08 BY THE CONTRACTOR - SERVICE CONNECTIONS (EXCEPT SANITARY SEWER)

For the purpose of these specifications, service connections shall be construed to mean all, or any portion of, the conduit cable or duct which connects a utility main distribution line to the meter box of an individual user.

Except when shown on the drawings to be relocated by others, and except as otherwise specified herein, the alteration or permanent relocation of service connections which physically interfere with project structures, or appurtenances thereto, which are to be constructed under this contract shall, when directed by the Engineer, be arranged for by the Contractor in accordance with the requirements of the utility owner. The costs for such work will be paid for as "Extra Work" as per Section 4.08.

5.09 BY THE CONTRACTOR FOR HIS OWN CONVENIENCE

The temporary or permanent relocation or alteration of utilities including service connections, desired by the Contractor for his own convenience, shall be the Contractor's own responsibility and he shall make all arrangements regarding such work. The costs of such work shall be absorbed or included in the prices bid for the various contract items.

5.10 BY THE CONTRACTOR OR BY OTHERS - UNKNOWN UTILITIES DISCLOSED DURING CONTRACT WORK

In the event that a utility is disclosed subsequent to the award of the contract, such utility not being indicated on the drawings, or in the event that an existing utility is found to be in a materially different location than shown on the drawings and thus requires additional or more costly work on the part of the Contractor for its maintenance, relocation, or support, the necessary alteration, relocation, proper support and protection shall be done and paid for as follows:

a. When said utility is found to occupy the space to be occupied by a part of the permanent works to be constructed, or when utility is, in the opinion of the Engineer, in such close proximity to the new work as to require the relocation or alteration of said utility the Contracting Agency will arrange for such relocation or alteration, or require the Contractor to do so as "Extra Work" as per Section 4.08.

b. When any portion of a utility is in close proximity and more or less parallel to the structure of conduit and does not lie between the vertical planes or pay lines specified in subparagraph a., above, the Contractor shall advise the owner thereof, and in cooperation with the owner, provide and place the necessary support for proper protection to insure continuous and safe operation of the utility structure. All costs for such work shall be borne by the Contractor.

c. With the exception of service connections, when said utility lies within the excavation but does not intercept the permanent works to be constructed and the length of said utility between the vertical planes or pay lines specified in paragraph a., above, is less than five times the perpendicular distance between pay lines, the Contractor shall maintain the utility in place. The work of maintaining the utility in place shall be considered as "Extra Work" (see Section 4.08).

5.11 RESPONSIBILITY OF THE CONTRACTOR

The Contractor shall be held responsible for all costs for the repair of any and all damage to the contract work or to any utility (whether previously known or disclosed during the work), as may be caused by his operations. Utilities not shown on the drawings to be relocated or altered by others, shall be maintained in place by the Contractor. Utilities which are relocated by others in order to avoid interference with structures and which cross the project work shall be maintained in the relocation positions by the Contractor. All costs for such work shall be absorbed or included in the prices bid for the various contract items.

The Contractor shall notify the owners of all utilities at least 2 working days in advance of excavating around any of their structures.

5.12 DELAYS CAUSED BY FAILURE TO RELOCATE UTILITIES

Where parties other than the Contractor are responsible for the relocation of utilities and a delay in the Contractor's work is caused by the failure on the part of said parties to remove or relocate such utilities in time to prevent such delay, or by any action or lack of action on the part of the Contracting Agency, it shall be understood that the Contractor shall not be entitled, as a result of such delay to his work, to damages or additional payments over and above the contract price. If delays in the Contractor's work are caused by the reasons mentioned herein, the Contractor shall be entitled to an extension of time. The length of such extension of time will be determined by the Engineer with consideration as to the effect of the delay on the project as a whole.

In order to minimize delays to the Contractor caused by the failure of other parties to relocate utilities which interfere with structures, the Contractor, after approval from the Engineer, may be permitted to temporarily omit the portion of work affected by the utility. The portion thus omitted shall be constructed by the Contractor immediately following the relocation of the utility involved.

5.13 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 Engineer and bear the expense of replacing any that may be disturbed without permission. Replacement shall be done or arranged for only by the Engineer.

When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, the Contractor shall, at his own expense, adjust the monument cover to the new grade unless otherwise specified.

5.14 LOT STAKES

Unless otherwise directed by the Engineer or shown on the plans, the Contractor shall preserve existing survey stakes that mark property lines and corners. Any stakes that become lost or disturbed by his operation shall be replaced at the Contractor's expense and by a Registered Land Surveyor.

5.15 SURVEY SERVICE

The Engineer will furnish and set construction stakes establishing lines and grades as determined necessary by the Engineer for all work indicated on the plans or required under the contract, including lines and grades for street excavation and fill, finished subgrade, finished base rock, curbs and gutters, walks, structures and utilities, and will furnish the Contractor all the necessary information relative to the lines and grades.

Line and grade stakes will be offset from the construction area. They will show the offset distances, stationing and required cut or fill to the finished grade or flow line as indicated on the plans or grade sheet. Upon request a copy of the grade sheet will be furnished to the Contractor. Grade stakes will be set by the Engineer to the finished grade of the subgrade and also of the base rock, or as determined necessary by the Engineer, and the tops of these stakes marked blue or red.

The Contractor shall construct the work in accordance with the Engineer's stakes and marks, making use of them before they are disturbed, and shall be charged with full responsibility for conformity and agreement of the work with such stakes and marks.

The Contractor shall be responsible for the preservation of 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 opinion of the Engineer need to be replaced, such replacement shall be by the Engineer at the expense of the Contractor. The cost of replacing them shall be charged against, and all shall be deducted from, the payment of the work.

The Contractor shall give notice to the Engineer not less than two working days in advance of when he will require survey services in connection with the laying out of any portion of the work.

5.16 PRIVATE ENGINEERS

Surveying by private engineers on permit projects or any other work under the control of the Contracting Agency shall conform in all respects to the quality and practice required of the Contracting Agency's surveyor as set forth in Section 5.15 above.

5.17 LINE AND GRADE

All work during its progress and upon its completion, shall conform to the lines, elevations, and grades shown on the plans. Distances and measurements, except elevations and structural dimensions, are given and made on horizontal planes.

Three consecutive points set on the same slope shall be used together in order that any variation from a straight grade can be detected. If any such variation is found, it shall be reported to the Inspector; and, in the absence of such report prior to completion of grade, the Contractor shall be responsible for any error in the grade of the finished work.

5.18 PRESERVATION OF PROPERTY

The Contractor shall protect all public and private property including irrigation berms, insofar as it may be endangered by his operations, and he shall take every reasonable precaution to avoid damage to such property.

Public or private improvements of facilities within the right of way not designated for removal but visibly evident or correctly shown on the plans which are damaged or injured directly or indirectly by or on account of any act, omission, or neglect of the Contractor in the execution of the work shall be restored by the Contractor at his expense 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, a suitable settlement shall be made with the owner of the damaged property.

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 the Contractor's operations.

The Contractor shall be responsible for the protection of all designated trees and planted areas within the right-of-way. He shall also exercise care and conduct his operations so as to minimize damages to other planted areas.

5.19 DAMAGE TO RAILROADS

The provisions given elsewhere herein, which require the Contractor to protect property against damage, and which place upon the contractor all responsibility for damage to property, injury to persons, and loss, expense, inconvenience and delay to the owners of the property and others, shall be understood to apply in connection with railway lines or railroads the same as in connection with other kinds of property. In the protection of railway lines and railroads, however, the Contractor will be required to exercise particular care to avoid any damage which might result in train wrecks or in delays in train service. In the performance of work in close proximity to railroad tracks, he shall consult with the railroad owners or officials in regard to means and methods of conducting the work, and unless the Engineer orders otherwise, he shall use in the performance of the work means and methods which are not unsatisfactory to said owners or officials and he shall at his own expense provide such trackwalkers and flagmen as the said owners and officials may deem necessary for the adequate protection of the railroad property and train service.

The Contractor shall be solely and directly responsible to the owners and operators of such properties for any damage, injury, expense, loss, inconvenience or delay which may result from the carrying out of the work to be done under this contract, and if the SPECIAL PROVISIONS so specify, he shall give bond or insurance in the amount therein specified to each corporation, company, partnership, or individual owning or operating any of the properties affecting, in guarantee of this responsibility. Any extension of time granted the Contractor in which to complete the contract shall not relieve him or his surety from this responsibility.

5.20 PROTECTION OF MATERIALS AND WORK

The Contractor shall provide and maintain substantial and adequate protection as necessary to protect new or existing work, and all items of equipment and furnishings, for the duration of the contract, except that by the Contracting Agency action the contractor may be relieved of certain responsibilities for maintenance and protection of completed portions of the work as provided under Section 5.23, hereof.

Unless relieved of responsibility as provided under Section 5.21, the Contractor and his sureties shall be fully liable for any loss or damage to the works referred to in the contract, resulting from any cause whatsoever, including but not limited to fire, theft, vandalism, malicious mischief, or injury or damage by the elements, except for any loss or damage that may be occasioned by acts of God, acts of the public enemy, acts of governmental authorities, or any act, omission, or default of the Contracting Agency prior to completions of the project and final acceptance thereof by the Contracting Agency.

5.21 RELIEF FROM MAINTENANCE AND RESPONSIBILITY

Upon the request of the Contractor and with the approval of the Contracting Agency, or upon the Contracting Agency, the Contractor will be relieved of the duty of maintaining and protecting certain portions of the work which are ready to be placed in service and which have been completed in accordance with the plans and specifications, including cleanup.

In addition, such action by the Contracting Agency will relieve the Contractor of responsibility for injury or damage to said completed portions of the improvement 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 from his 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 that result from his operations. However, nothing in this section shall be construed as relieving the Contractor from the full responsibility for making good defective work or materials found to be defective.

5.22 STORAGE OF MATERIALS IN PUBLIC STREETS, ROADS, OR HIGHWAYS

Materials shall not be stored in streets, roads, or highways for longer than four working days after being unloaded, unless a longer storage period is permitted by the Engineer. In the event that the rate of progress of construction is such that the materials stored in streets, roads, or highways are not installed in its final position within the time period stipulated

hereinabove, the Contractor shall when so directed by the Engineer remove such materials to storage areas to be provided by the Contractor at his own expense.

Unless otherwise permitted by the Engineer, no storage of excavated material will be permitted in public streets, roads, or highway. After the placing of the backfill in said trench, all remaining excavated material shall be removed from the site of the work.

5.23 HISTORICAL AND ARCHAEOLOGICAL REPORTS

Where historical objects of archaeological and paleontological nature, including ruins, sites, buildings, artifacts, fossils and other objects of antiquity are encountered within the areas on which the Contractor's operations are performed, the Contractor shall postpone operations in the area, shall preserve such objects for disturbance or damage and shall notify the Engineer of their existence and location.

Upon receipt of such notification, the Engineer will arrange for the disposition of the objects or for the recording of data relative thereto, and will notify the Contractor when it is proper for him to proceed with the work in the affected area. If the Contractor is directed by the Engineer to perform any work in salvaging said objects, the Contractor shall do so on the "Extra Work" basis set forth in Section 4.08.

5.24 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 determined by the Engineer. The Contractor shall install, maintain, and remove his temporary lines upon completion of work. All expenses in connection with temporary services and facilities shall be paid by the Contractor, unless specified differently in the SPECIAL PROVISIONS.

SECTION 6.00 CONTROL OF MATERIALS

6.01 MATERIALS AND WORKMANSHIP

All materials, parts and equipment furnished by the Contractor shall be new, high grade, and free from defects and imperfections unless otherwise hereinafter specified. Workmanship shall be in accord with the best standard practice. Both materials and workmanship shall be subject to the approval of the Engineer.

All materials and workmanship not conforming to the requirements of these specifications shall be considered as defective and will be rejected. Defective material whether in place or not, shall be removed immediately from the site of the work by the Contractor at his expense when so directed by the Engineer. No rejected material, the defects of which have been subsequently corrected, shall be used until approval in writing has been given by the Engineer.

In the event any defect in material or workmanship is of a minor nature and the Engineer determines that it is not of such consequence as to result in a dangerous and undesirable condition, or that the removal of such work would create a dangerous or undesirable condition, the Contracting Agency shall have the right to retain such work and make such deductions in the payment therefor as they determine reasonable and in the public interest. Such determination by the contracting Agency shall be final.

6.02 TEST OF MATERIALS

Except as may otherwise be provided, all testing that may be required by the Contracting Agency to determine the quality, fitness and suitability of such materials shall be performed under the direction and upon the order of the Engineer, and at no expense to the Contractor; samples being secured and tested wherever considered necessary by the Engineer. In those cases in which the Contractor is required to provide and bear the expense of such testing the specifications or drawings will definitely so state.

The Contractor at his own expense, shall deliver the materials for testing at the time and to the place designated by the Engineer.

6.03 TRADE NAMES AND EQUALS

Whenever in the specifications any particular materials, process, and/or equipment is indicated or specified by patent, proprietary, or brand name, or by name of manufacturer, such wording shall be deemed to be used for the purpose of facilitating description of the material, process, and/or equipment desired, and shall be deemed to be followed by the words "or approved equal." The lists of acceptable materials indicated in various sections of the specifications, or on drawings, for materials are not intended to be comprehensive lists, or in any order of preference. The Contractor may offer any material, process, and/or equipment which complies with the governing specification and which he considers to be equivalent to that indicated or specified.

The Contractor shall, before installation, submit data substantiating a request for substitution of "an equal" item. The Contractor shall, at his own expense, furnish information and/or data concerning the material and/or equipment offered by him as an equivalent to that specified or indicated by name, and if the Engineer shall so require, the Contractor, at his own expense, shall have the said material tested as to its quality, strength, physical, chemical, and/or other pertinent characteristics, including the durability, finish, efficiency, dimensions, service, suitability to perform the function intended to be served by the material and/or equipment.

The method of performing the test or tests shall be subject to the approval of the Engineer, and the results of said tests shall be reported promptly to the Engineer, who shall evaluate the results thereof and shall determine whether or not the substitute material and/or equipment so tested is deemed to be equivalent, and his findings shall be final. Installation and use of the material shall not be made until such substitute material has been approved by the Engineer. If a substitute offered by the Contractor is not found by the Engineer to be equal to the material specified, or indicated, then the Contractor shall furnish and install the item specified or indicated by name.

The time specified for completion of the work under the contract shall not be affected by any circumstances whatsoever developing from the provisions of this section.

SECTION 7.00 RESPONSIBILITY TO THE PUBLIC

7.01 PUBLIC CONVENIENCE

The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to traffic, and he shall have under construction no greater amount of work than he can prosecute properly with due regard for the rights of the public.

The Contractor shall obtain prior approval from the Engineer for the closing or partial closing of any street, alley or other public thoroughfare. He shall also give advance notice of such closure to all agencies providing emergency services, including police, fire and ambulance services.

Unless otherwise provided by the plans or project specifications or authorized by the Engineer, vehicular access to properties at established driveways and pedestrian access to building entrances shall be provided and maintained by the Contractor, except for such periods of time as may be reasonably necessary to expeditiously complete those construction operations which preclude such access.

The Contractor shall conduct his operations in a manner which will minimize interference with the normal use of property adjacent to the construction.

Occupants of property fronting on the street shall be given at least 24 hours advance notice that the entire street or half the street, as the case may be, will be closed to vehicular traffic whenever necessary for the normal prosecution of the work. Such notices shall be given by the Contractor unless otherwise directed by the Engineer, or otherwise specified in the SPECIAL PROVISIONS. Parking of cars may be prohibited on streets where construction work, such as grading or paving operations are in progress. When directed by the Engineer, traffic shall be controlled or routed through the construction area, such as maintaining controlled or one-way traffic over one-half of the street while construction is progressing on the other half.

In order that all unnecessary delay to the traveling public may be avoided where ordered by the Engineer, the Contractor shall provide and maintain temporary "No Parking" and/or detour signs, pilot cars and station competent flagmen whose sole duties shall consist of directing the movement of public traffic either through or around the work. Signs shall be of standard size and design as approved by the Engineer and shall comply with the requirements specified in Section 7.03 hereof. Such signs shall be removed as soon as practicable or when directed by the Engineer.

The cost of all work involved in providing for public convenience including detours, as set forth in this article shall be considered as included in the prices paid for the various contract items of work and no additional allowance will be made.

7.02 DETOURS

The Contractor shall construct and maintain temporary detours as shown on the plans or specified in the SPECIAL PROVISIONS, or as necessary to provide adequate passage of public traffic and for protection of his work, or as

determined necessary by the Contracting Agency. Routing and width of detours shall be approved by the Engineer.

Unless otherwise specified, when a detour is required the Contractor shall be governed by the following:

1. One day duration
 - (a) Passable - no gravel but graded
 - (b) Water and maintain smooth and dust free
2. One day to one week duration
 - (a) Gravel
 - (b) Water and maintain smooth and dust free
3. More than one week - if on a major or secondary arterial street (if on a collector street, treatment No. 2 above will suffice)
 - (a) Gravel 2 in. and graded
 - (b) Penetration with a minimum of .30 gal. per square yard MC70
 - (c) Maintain with patching of chuck holes
4. General Conditions
 - (a) If maintenance is not performed, the Contracting Agency will do the maintenance and bill the Contractor at rates specified in Section 4.08 and 4.09.
 - (b) When directed by the Engineer detours shall be removed and all ditches, etc. restored before the permit is closed out. If restoration is delayed more than one week after completion of work, the Contracting Agency will restore the area and bill the Contractor.
 - (c) Before pavement is cut, the Engineer must approve the construction and barricading.
 - (d) Provisions for public convenience and public safety shall be maintained in compliance with Section 7.01 through 7.03 hereof.

The Engineer will reserve the right to estimate the expected time the detour will be in use and will order construction accordingly.

7.03 PUBLIC SAFETY

The Contractor shall erect and maintain temporary fences, traffic control signs, bridges, railing, lights, and barriers, taking all other necessary precautions, and place proper guards for prevention of accidents. In the event any of the above items becomes misplaced, damaged, or destroyed, they shall be replaced immediately in their proper location.

All warning signs, barriers, barricades, lights and performance of flagmen shall conform to the "Oregon Manual on Uniform Traffic Control Devices for

Streets and Highway" issued by the Oregon State Highway Department; local ordinances; and existing published rules and/or traffic control manuals and regulations of the Contracting Agency.

The Contractor shall at all times keep open or backfilled excavations in a safe or protected condition. In the event of the existence of unsafe or hazardous conditions in the Contractor's work or operations, the Contractor shall immediately take such measures as are necessary to eliminate the conditions.

The cost for all work involved in providing for public safety as set forth in this article shall be considered as included in the prices paid for the various contract items of work and no additional allowance will be made.

7.04 FIRE HYDRANTS

Access shall be provided to all fire hydrants at all times. Pavements and sidewalks adjacent to fire hydrants shall be kept clean and clear of debris, materials and contractor's equipment. The Contractor shall not draw any water from a fire hydrant for use on the work other than for extinguishing fire, without first obtaining permission from the owner. Slow-closing valves will be required in connection with the use of fire hydrants. Unnecessary wasting or leakage of water shall not be permitted.

In the event a fire hydrant is damaged, or for any reason becomes inoperative, or is placed out of service due to the nature of the construction, it shall be the Contractor's responsibility to immediately notify the owner and the Engineer.

7.05 USE OF EXPLOSIVES

The use of explosives will be permitted only when authorized in writing by the Engineer unless otherwise stated in the SPECIAL PROVISIONS. Explosives shall be handled, used, and stored in accordance with the provisions and requirements of all applicable laws, ordinances, and regulations with respect thereto. The approval by the Engineer for the use of explosives shall not relieve the Contractor from his responsibility.

7.06 SAFETY

Construction materials, equipment, methods and workmanship shall be in accordance with applicable local ordinances and State laws. The Contractor shall comply with the lawful orders and codes issued by the Workmen's Compensation Board of the State of Oregon.

7.07 LABOR

The Contractor shall be bound by and comply with all applicable provisions of the Revised Statutes of the State of Oregon and shall keep informed of and observe and comply with, and cause all of his agents and employees to observe and comply with, all Federal, State, and local laws which in any way affect the conduct of the work in this contract.

None but competent workmen shall be employed on any work under these specifications; and any laborer, workman, mechanic, foreman, superintendent, or other person so employed who is found to be incompetent, intemperate, troublesome, disorderly or otherwise objectionable, or who fails or refuses to perform his work properly and in an acceptable manner, shall be removed from the job immediately upon notification in writing, and not again be employed on the work unless approved by the Engineer.

7.08 NONDISCRIMINATION OF LABOR

The attention of the Contractor is directed to the provisions of 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, or national origin. Particular reference is made to Section 659.030 ORS, which states that it is unlawful employment practice for an employer, because of the race, religion, color, 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 the contract is funded in whole or in part by federal funds, the Contractor shall comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the Secretary of Labor.

In the event of the Contractor's noncompliance with the nondiscrimination 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 for federally assisted construction contracts, in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 14, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

7.09 MINIMUM WAGE, PAYMENT OF LABORERS AND MATERIALMEN

The Contractor shall comply fully with ORS 279.348 through 279.363, which provide in part that "the hourly rate of wage to be paid by any contractor or subcontractor to workmen upon all public works shall be not less than the prevailing rate of wage for an hour's work in the same trade or occupation in the locality where such labor is performed".

The provisions of this law do not apply to workmen or to persons regularly employed on a monthly or per diem salary. The "prevailing rate of wage", for the purposes hereof, shall be the rate of hourly wage and overtime paid in the locality, as hereinafter defined, to the majority of workmen in the same trade or occupation; provided, however, that if there is not a majority in the same trade or occupation paid at the same rate, the average rate of hourly wage and overtime paid in the locality to workmen in the same trade or occupation shall be the prevailing rate, and provided further, that when a contractor or subcontractor is a party to a state-wide agreement in effect with any labor organization, the rate of wages as established in the agreement shall be considered to be the prevailing rate in the locality.

If the wage paid by any contractor or subcontractor to workmen is based on a period of time other than an hour, the hourly wage shall be mathematically determined by the number of hours worked in that period. The "locality", for the purposes hereof, shall be the largest city in the county or counties in which the work under the contract is performed.

In case any dispute arises as to what is the prevailing rate of wage for the same trade or occupation in the locality and that dispute cannot be settled by the parties involved, the dispute shall be referred to the Commissioner of the State Bureau of Labor, who will determine the prevailing rate of wage for the same trade or occupation in the locality.

The minimum wage rates applicable to the work to be done under the contract are those prescribed under the provisions of ORS 279.348 through 279.356 and laws amendatory thereto. The Contractor is reminded that a provision of these statutes requires the certification and filing of the payroll with the owner at each of the following times: (1) once before the payment of the first monthly estimate, (2) once immediately after any change in the wage rates, and (3) once before final payment is made.

Copies of prevailing wage rates may be obtained from the Bureau of Labor, 115 Labor and Industries Building, Salem, Oregon 97310.

The Contractor shall: 1) Make payment promptly, as due, to all persons supplying to such contractor labor or material for the prosecution of the work provided for in such contract. 2) Pay all contributions or amounts due the Industrial Accident Fund from such contractor or subcontractor incurred in the performance of the contract. 3) Not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished. 4) Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

Before payment is made by or on behalf of the Contracting Agency of any sum or sums due under the contract, the Contractor or his surety and every subcontractor or his surety shall submit a statement in writing in a form prescribed by the State Labor Commissioner certifying under oath the hourly rate of wage paid each classification of workmen employed by him upon the work under the Contract, and further certifying that no workmen employed by him upon work has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the contract. These statements are to be submitted to the Engineer in the manner and at the times designated by him.

In case of conflict between any of the minimum hourly wage rates set forth in the schedule above referred to and other pertinent minimum hourly wage rates, as such other rates may have been set forth in the contract provisions in accordance with the federal regulations, the higher of the conflicting wage rates shall be applicable under the contract.

There is no representation on the part of the Contracting Agency that labor can be obtained at the hourly rates as may be shown in the SPECIAL PROVISIONS. It is the responsibility of bidders to inform themselves as to local labor conditions and prospective changes or adjustments of wage rates. No increases

in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed.

If the Contractor fails, neglects, or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a subcontractor by any person, or the assignee of the person, in connection with the public works contract as such claim becomes due, the proper officer or officers of the public Contracting Agency may pay such claim and charge the amount of the payment against funds due or to become due the Contractor by reason of the contract. (Reference: ORS 279.314).

7.10 HOURS OF WORK, SATURDAY, SUNDAY, HOLIDAY AND OVERTIME WORK

The Contractor shall comply fully with ORS 279.334 of the Oregon Revised Statutes, which reads as follows: "In all cases where labor is employed by the state, county, school district, municipality, municipal corporation, or subdivision, through a contractor, no person shall be required or permitted to labor more than eight hours in any one day, or 40 hours in any one week, except in cases of necessity, emergency, or where the public policy absolutely required it, in which event, the person or persons so employed for excessive hours shall receive at least time and a half pay for all overtime in excess of eight hours a day, or for work performed on Saturday and on ...legal holidays."

However, if it is necessary for the Contractor to perform construction work on Saturdays, Sundays, legal holidays or outside the 8 hours regular working day, the Contractor shall first notify the Engineer of his intent to do so prior to commencing such "overtime work". In any event, all work shall be subject to approval of the City Engineer. Prior to start of such work, the Contractor shall arrange with the City Engineer for the continuous or periodical inspection of the work, surveys, and tests of materials when necessary.

7.11 PERMITS AND LICENSES

Except for private contracts or unless otherwise specified elsewhere in these specifications, the Contracting Agency will obtain all other permits and licenses and pay any fees connected therewith, having to do with his construction operations.

7.12 CLEARING AND BURNING PERMITS

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 or transportation utility right-of-way on any forest land, whether upon his land or that of another, where the 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) A person engaged in clearing any right-of-way or 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."

7.13 LICENSING OF CONTRACTORS

The Contractor shall be licensed in accordance with all state and local requirements.

7.14 PATENTS, FEES OR ROYALTIES

In the event that any patented article, material or process is to be installed or used in the performance of the work as shown on the plans or particular specifications therefore, the Contractor shall pay the royalty chargeable, if any, and shall save, keep and hold the Contracting Agency harmless from any damage, costs and expenses by reason of any infringement of the patent thereof, and any loss to the Contracting Agency if enjoined from using such patented article or material and the incidental damage caused by the loss of use and damage to the Contracting Agency's property in removing same, and the cost of replacing the article or material the use of which is enjoyed. Provided further the Bond for Faithful Performance shall be deemed to be expressly applied to this provision of the specifications.

7.15 LIABILITY FOR MONIES DUE STATE COMMISSIONS

The Contractor shall promptly pay all contributions or amounts due the State Industrial Accident Fund and the State Unemployment Compensation Trust Fund from such Contractor or his subcontractors, incurred in the performance of the contract.

The Contractor shall pay all sums of money withheld from his employees and payable to the Department of Revenue pursuant to ORS 316.162 to 316.212.

7.16 LIABILITY FOR AMOUNTS DUE HOSPITAL ASSOCIATIONS, ETC.

The Contractor shall comply fully with ORS 279.320 which reads in part as follows:

"...The Contractor shall promptly, as due, make payments 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 the employees of such Contractor, of all sums which the Contractor agrees to pay for such services and all monies and sums which the Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service."

7.17 CONTRACTOR'S CONSTRUCTION EQUIPMENT

The Contractor shall furnish and maintain in good condition all equipment and facilities including stairs, ramps, runways, scaffolds, hoists, etc., as required for the proper execution and inspection of the work. All such equipment and facilities shall meet all requirements of all ordinances and laws applicable thereto.

7.18 RIGHT-OF-WAY

The right-of-way for the improvement will be provided by the Contracting Agency. Unless the plans or specifications show additional work

area to be provided by the Contracting Agency, the Contractor shall make his own arrangements and pay all expenses for additional area required by him outside the limits of the right-of-way.

SECTION 8.00 PROSECUTION AND PROGRESS

8.01 PROGRESS OF THE WORK

The Contractor shall commence the work within 10 calendar days after receiving notice to proceed, unless otherwise stated in the SPECIAL PROVISIONS, and shall diligently prosecute the same to completion within the time limit specified.

8.02 CONTRACTOR'S CONSTRUCTION SCHEDULE

Before starting work, the Contractor shall submit for approval his proposed construction schedule to the Engineer. In the event the Contractor desires to carry on operations in more than one location simultaneously he shall submit for approval a schedule therefor, two weeks in advance of beginning such operations. In the event that the Contractor's proposed construction schedule does not meet the necessary construction program schedule as determined by the Contracting Agency, he may be required to resubmit a schedule that shall conform to an approved program of construction operations. The Contractor must obtain from the Engineer written approval of a construction schedule prior to start of work.

8.03 SUSPENSION OF WORK

The Engineer shall have the authority to suspend work wholly or in part for such periods as may be necessary because of unsuitable weather or unforeseen conditions or the failure of the Contractor to carryout lawful orders to comply with any of the provisions of the contract. The Contractor shall immediately suspend work when so ordered, and he shall resume work after such suspension only on written instruction from the Engineer. Upon receipt of such instructions to resume work, he shall immediately proceed with the work.

If through the fault of the Contracting Agency, the Contractor must suspend operations and incurs expenses or sustains losses which could not have been avoided by the judicious handling of forces and equipment, and if by a diligent prosecution of the work he could not have completed the work before such suspension, the Contractor will be paid such amounts as may be agreed upon between the Contractor and the Contracting Agency to be a fair and reasonable compensation and a commensurate extension of contract time will be granted.

If work is suspended through no fault of the Contracting Agency, all such expenses and losses incurred by the Contractor during such suspensions of work shall be borne in full by him. In the event the Contractor fails to properly provide for public safety, traffic, and protection of the work, during periods of suspension of work, the Contracting Agency may elect to do so, and deduct the cost thereof from monies due the Contractor.

8.04 TIME OF COMPLETION

The Contractor shall complete the work called for under the contract in all part and requirements within the number of calendar days set forth in the contract. Unless otherwise provided, all work shall be performed during normal working days. A working day is defined as any day except Saturdays, Sundays, legal holidays, days on which the Contractor is specifically required by the

Contract to suspend construction operations, and days on which the Contractor is prevented from working by inclement weather or interference from utility relocation or alteration work.

Credit for inclement weather or interference from utility relocation or alteration work will be allowed only when the Contractor is prevented by such weather or utility work or conditions resulting immediately therefrom, from proceeding for at least five hours with at least 75% of the normal labor and equipment force engaged in the current controlling operation or operations. The current controlling operation or operations is to be construed to include any feature of the work which, if delayed at the time being considered, could delay the completion of the work beyond the contract period.

Should the Contractor prepare to begin work at the regular starting time in the morning of any day on which inclement weather or the conditions resulting from the weather, or the condition of the work, prevents the work from beginning at the usual starting time and the new crew is dismissed as a result thereof, the Contractor will not be charged for a working day whether or not conditions should change thereafter during said day and the major portion of the day could be considered suitable for such construction operations.

Determination of each nonworking day except Saturdays, Sundays, legal holidays, and days on which the Contractor is specifically required by the contract to suspend construction operations shall be made and agreed upon during such a day by conference between the Engineer and the Contractor. In the event of failure to agree, the Contractor will be allowed 15 days in which to file a written protest setting forth in what respects he differs from the Engineer. Otherwise the decision of the Engineer shall be deemed to have been accepted by the Contractor as correct.

8.05 LIQUIDATED DAMAGES

It is agreed by the parties of the contract that in case all of the work required under the terms of this contract is not completed within the number of calendar days as specified therefor in the contract or any lawful extension thereof as provided herein, damage will be sustained by the Contracting Agency as a result thereof, but to definitely determine and ascertain the actual amount of such damage, either before or after the occurrence thereof would be difficult and impractical. The sum stated in the SPECIAL PROVISIONS for liquidated damages for each and every calendar day that the completion of said work is delayed beyond the prescribed completion date, or lawful extension thereof, is hereby stipulated as being the nearest and most exact measure of such damage that can be fixed at this or any subsequent time; and when so assessed by the Contracting Agency, the Contractor shall become liable for and shall pay to the Contracting Agency as liquidated damages and not as a penalty said sum per day for each and every calendar day of such delay. When the amount of liquidated damages is not stated in the SPECIAL PROVISIONS it is agreed by the parties to the Contract that the amount of liquidated damages shall be One Hundred and Fifty Dollars (\$150.00) per day for each and every day of such delay. The amount of such liquidated damages may be deducted by the Contracting Agency from any compensation due, or that may become due, the Contractor under his contract, and the Contractor and his sureties shall be liable for any excess.

It is further agreed that if the work is not finished and completed in all parts and requirements within the number of calendar days as specified therefor in the Contract or any lawful extension thereof as provided herein, the Contracting Agency will have the right to extend the time for completion if to do so seems best to serve its interests; and in case said Contracting Agency decides to so extend the time limit for the completion of the work, it shall have further right to charge to the Contractor, his heirs, assigns, or sureties, all or any part as it may deem proper, the actual costs of engineering, inspection, supervision, and other overhead expenses, that are directly chargeable to the contract and accrue during the period of such extension, and deduct the amount thereof from the final payment for the work; provided, however, that the cost of the final survey and preparation of the final estimate will not be included in such charges.

In the event that the Contractor is directed to perform extra or additional work, the number of calendar days specified in the contract shall be extended by an amount determined by application to the original number of calendar days of the ratio that the value of the extra or additional work bears to the original contract value. Should the nature of the extra or additional work be such that the Contractor believes that a longer time extension should be granted than that computed by the above procedures, he may notify the Engineer in writing. The Contracting Agency may grant such additional time extension as it feels warranted.

Should any default, act or omission of the Contracting Agency, act of the State, act of public enemy or act of God, epidemic, quarantine restriction, strike, freight embargo, fire or flood cause any delay in the completion of the work the Contractor will not be assessed for liquidated damages nor engineering or other overhead charges for the period of such delay, provided that he shall, within ten (10) days subsequent to the beginning of any such delay, file a written report as to the cause thereof with the Engineer, who will ascertain the facts relative thereto and the extent of the delay, and whose finding in connection therewith shall be final and conclusive. The Contracting Agency shall not be liable to the Contractor for any damages on account of such delay.

8.06 RESPONSIBILITY OF CONTRACTOR AND OF CONTRACTOR'S REPRESENTATIVE ON THE WORK

The Contractor shall give his personal attention and supervision to the work until same is entirely completed. In the absence of the Contractor from the work, he shall have a representative in charge who shall be competent to superintend and direct the progress of the work and who shall be authorized to receive instructions and to act for the Contractor on all matters relating to the work. The name, address and telephone number of this representative shall be sent by letter to the Engineer immediately after the awarding of the contract.

8.07 PROVISIONS RELATIVE TO DEFAULT BY CONTRACTOR

If, at any time, the Contractor shall neglect or refuse to prosecute the work with reasonable diligence, or should refuse or neglect to perform the work according to the drawings and specifications, as interpreted by the

Engineer, the Contracting Agency will give him written notice to proceed. If the Contractor fails to comply with such notice within a period of seven (7) days, he shall be in default of the contract. The Contracting Agency will have the right, without further notice to the Contractor, and without voiding the Contract, to take possession of all materials, to complete the work, and to charge cost of so doing against the Contractor. Should the unpaid balance of the contract price exceed the expense of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expenses shall exceed the balance due the Contractor, the Contractor and his bondsmen agree to pay the excess to the Contracting Agency.

Notice, for the purposes of this section, may be served personally, or may be served by mail, addressed to the Contractor and his surety at their respective places of business as indicated in the contract documents.

The determination by the Engineer of the question as to whether any of the terms of the Contract or specifications have been violated, or have not been performed satisfactorily, shall be conclusive upon the Contractor, his surety, and any and all other parties who may have any interest in the Contract or any portion thereof.

The foregoing provisions of this section shall be in addition to all other rights and remedies available to the Contracting Agency under law.

8.08 TERMINATION OF CONTRACT

If Conditions encountered during the progress of the work make it impossible or impracticable to proceed with the work, the Contracting Agency may order the termination of the contract. Upon such termination, the Contracting Agency will pay the Contractor fair and reasonable compensation as agreed upon between the Contractor and the Contracting Agency. In the event that no agreement is reached between the Contractor and the Contracting Agency as to fair and reasonable compensation, the Contracting Agency will be liable to the Contractor only for the reasonable value of the work performed and any other actual costs sustained by the Contractor.

8.09 ADVERTISING

No advertising matter shall be attached or painted on surfaces of buildings, fences or canopies, except the names of contractors and subcontractors, with their addresses and the designation of their particular branch may be shown on signs of a removable type. Size and location of such signs shall be subject to approval of the Engineer.

8.10 ASSIGNMENT

No contract or any portion thereof, may be assigned without consent of the Contracting Agency 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 Contracting Agency, if given

written notice thereof, to the extent permitted by law, but any assignment of money shall be subject to all proper set-offs and withholdings in favor of the Contracting Agency 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 Contracting Agency for completion of the work in the event the Contractor should be in default therein.

8.11 SUBCONTRACTS

Names of subcontractors for all or any portion of the work shall be submitted to the Engineer prior to commencement of any subcontracted work. Such submittals shall state the types of work to be subcontracted and the names of the proposed subcontractors. Subcontracting all or any portion of the work shall not be construed to relieve the Contractor of any of his responsibility under the Contract.

No subcontractors will be recognized as such, and all persons engaged in the work of construction will be considered as employees of the Contractor. The Contractor will be held responsible for their work, which shall be subject to the provisions of the contract and specifications.

8.12 CERTIFICATE OF COMPLIANCE

The Contractor shall file with the Engineer, prior to the acceptance of the work, a certificate in form substantially as follows: "I, (We) hereby certify that all work has been performed and materials supplied in accordance with the plans, specifications and contract documents for the above work, and that:

1. Not less than the prevailing rates of wages as ascertained by the Contracting Agency has been paid to laborers, workmen 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, transferred to, 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 Department of Revenue (ORS 316.162 to .212), hospital associations and/or others, (ORS 279.320), have been paid."

SECTION 9.00 MEASUREMENT AND PAYMENT

9.01 METHODS OF MEASUREMENT

Materials and items of work which are to be paid for on the basis of measurement shall be measured in accordance with the methods stipulated in the particular sections herein covering materials or types of work.

When material is to be paid for on a volume basis and it would be impracticable to determine a volume by the specified method of measurement, or when requested by the Contractor and approved by the Engineer, the material will be weighed in accordance with the requirements specified for weight measurement and such weights will be converted to volume measurement 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 will be adopted.

Unless otherwise provided, when mineral aggregate or roadway material is being paid for by weight, deductions from pay quantities will be made for the weight of water in excess of 3% if the material is to be treated with bitumen, and 6% if the material is to be waterbound.

GENERAL PROVISIONS

9.02 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORKS

Unless otherwise specified, linear or area quantities of work such as grading, landscaping, paving, curb, gutter, walk and other work of a similar nature shall be determined from measurements of dimensions of such work and computed in horizontal planes. However, linear quantities of underground cable, piling and timber, shall be considered as being the true length measured along the longitudinal axis thereof. For pipe work see related sections.

Volumetric quantities shall be determined by the average end area method.

9.03 UNITS OF MEASUREMENT

Measurements shall be in accordance with U.S. Standard Measures. A pound shall be avoirdupois. A ton shall be 2,000 pounds. The unit of liquid measure shall be the U.S. gallon.

9.04 CERTIFIED WEIGHTS

When payment is specified to be made on the basis of weight, the weighing shall be done on certified platform scales licensed in accordance with Chapter 618 Oregon Revised Statutes. The Contractor shall furnish the Engineer with licenses issued with the information required by Chapter 618 Oregon Revised Statutes. The Contractor shall pay all costs, if any, in connection with obtaining said information. The Contracting Agency will accept the certificates as evidence of the weight delivered.

9.05 PAYMENT

Once each month, the Engineer will make an approximate measurement of the work performed to that date and an estimate of the value thereof based on the contract prices. When the work has been satisfactorily completed, the Engineer will determine the final quantity of work performed and prepare the final estimate of the value thereof. The quantities listed in the bid schedule do not govern final payment. Payments to the Contractor shall be made only for the actual quantities of contract items performed in accordance with the plans and specifications and if upon completion of the construction these actual quantities show either an increase or decrease from the quantities given in the bid schedule, the contract unit prices will still prevail.

In unit price contracts, when an item for mobilization is included in the bid, this item shall include the cost of assembling of materials, plant, and equipment as set forth in said bid items, and as more fully described in the specifications. An evaluation for the purpose of payment for mobilization will be included in progress estimates in unit price contracts only when mobilizations is so set forth as an item in the bid. In such cases, the

GENERAL PROVISIONS

specifications will indicate a fixed sum or a percentage of the total bid price as a maximum that may be bid on this item.

In accordance with ORS Chapter 279, from each progress and final estimate, except on contracts for County roads and bridges, or unless otherwise required by the SPECIAL PROVISIONS applicable Federal or State laws or local ordinances, 5% will be deducted and retained by the Contracting Agency, and the remainder less the amount of all previous payments will be paid to the Contractor.

At the expiration of 30 days from the date of acceptance of the work by the Contracting Agency, provided that the Contractor has furnished the Contracting Agency satisfactory receipts for all labor and material bills and waivers or liens from any and all persons holding claims against the wage rates as required by Section 279.354, Oregon Revised Statutes, the amount deducted from the final estimate and retained by the Contracting Agency will be paid to the Contractor, with the exception of such amounts as are required by law to be further retained.

Payments for work or materials performed or furnished under an assessment proceedings contract will be made as provided in the particular proceedings or legislative act under which such contract was awarded.

SECTION 10.00 REQUIREMENTS OF OREGON LAW FOR PUBLIC CONTRACTS

To any extent that they are not already incorporated into the Contract Documents the terms and conditions of ORS 279.310 to ORS 279.575 are an integral part of this Contract and Contract Documents, and incorporated herein at this point by reference.

SPECIAL PROVISIONS

NEWBERG WATER SYSTEM IMPROVEMENTS

CITY OF NEWBERG, OREGON

SPECIAL PROVISIONS

1. TEMPORARY UTILITIES

a. Telephone

Not required at the site

b. Electrical Power

The Contractor will arrange for all electric power required for construction including power necessary for the operation of all tools and equipment.

c. Water

Water is available from hydrants. The Contractor shall secure permission from the City before obtaining water from fire hydrants.

The Contractor shall make his own arrangements and pay all costs for obtaining and transporting the water from the hydrants to the area of usage for the construction and testing of the facilities. Upon completion of the work, the Contractor shall remove all temporary piping and facilities used during the construction.

Use only special hydrant operating wrenches to open hydrants and also make certain that the hydrant valve is open "full", since "cracking" the valve causes damage to the hydrant. If any hydrants are damaged, the Contractor will be held responsible and shall notify the City so that all damage can be repaired as quickly as possible. Maintain fire hydrants used for temporary water within the work area in a completely accessible condition available to the Fire Department at all times.

2. CONTRACT COMPLETION TIME

As set forth in the contract, the contractor has 60 consecutive calendar days to complete all work.

3. PRECONSTRUCTION CONFERENCE

A preconstruction conference will be held at a time and place as prescribed by the City Engineer after the Contract is awarded and before the Notice to Proceed is issued. At the preconstruction conference, the Contractor shall provide the City Engineer with an estimated schedule of progress of the work. In addition to the Prime Contractor, all available subcontractors will be required to attend.

4. SALVAGE OF MATERIALS

The contractor will remove the valves and fittings from the old line where shown on the plans and deliver them to the City Public Works yard at

SPECIAL PROVISIONS

500 West Third Street.

5. TEMPORARY ASPHALT COLD PATCH

Cover the trench backfill where directed by the Engineer with a one inch lift of SPEC 200 Cold Mix Asphalt until the area is ready for final paving.

6. LANDSCAPING

Landscaped surfaces shall be restored to their original condition or better.

7. TRAFFIC CONTROL

The contractor shall be responsible for detouring traffic and providing signs and flagmen as required by the State Uniform Traffic Code, and shall notify the City Policy dispatcher at 538-8321 ext. 218 before detouring traffic. Emergency vehicle access must be maintained at all times. The contractor shall restore the street to a safe passable condition at the end of each work day.

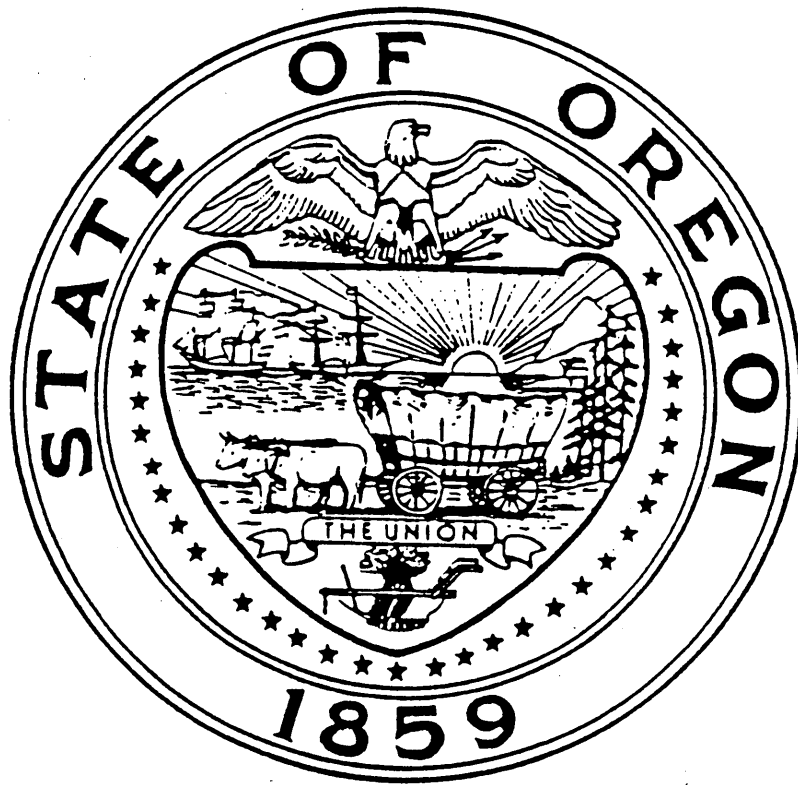
8. PREVAILING RATE OF WAGE AND CERTIFICATIONS OF RATE OF WAGE

As prescribed in ORS 279.352 AND 279.354 Bidder as Contractor and Bidder's subcontractors will pay to their workers not less than the specified minimum prevailing wage as set forth in the attached copy of "Prevailing Wage Rates for Public Works Contracts in Oregon" which is attached hereto and incorporated herein at this point by reference.

Once before the first payment and once before final payment is made of any sum due on account of a contract for a public work, the Contractor or his surety and every subcontractor or his surety shall file a statement with the public contracting agency in writing in form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each classification of workers employed by him upon such public work, and further certifying that no worker employed by him upon such public work has been paid less than the minimum hourly rate of wage specified in the contract, which certificate and statement shall be verified by the oath of the Contractor or his surety or subcontractor or his surety that he has read such statement and certificate and knows the contents thereof and that the same is true to his knowledge. A true copy of the certification or certifications required to be filed pursuant to this section shall also be filed at the same time with the Commissioner of the Bureau of Labor and Industries. (ORS 279.354).

The existing prevailing rate of wage is that rate which is in effect at the time the specifications are first advertised for bid solicitation. If during the bidding process the prevailing wage rate changes, the Owner retains the option to amend these SPECIAL PROVISIONS to reflect such change.

PREVAILING WAGE RATES
for
Public Works Contracts in Oregon



BOLI

Mary Wendy Roberts
Commissioner
Bureau of Labor and Industries

Effective January 1, 1990



BUREAU OF LABOR AND INDUSTRIES

Mary Roberts, Commissioner

January 1, 1990

This booklet contains the Prevailing Wage Rates for the building and construction trades in the State of Oregon. These rates are effective January 1, 1990. These rates have been amended in accordance with ORS 279.348 through ORS 279.365.

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 specialist in Portland (229-6655). If you have any questions about the manner in which the Prevailing Wage Rates are enforced, contact the Wage and Hour Division in Portland (229-5750).

MARY WENDY ROBERTS
Commissioner
Bureau of Labor and Industries

PORTLAND
1400 SW 5th Avenue
Portland, Oregon 97201

MEDFORD
700 E. Main
Medford, Oregon 97504

SALEM
3865 Wolverine St. NE; E-1
Salem, Oregon 97310

COOS BAY
320 Central Ave., Suite 510
Coos Bay, Oregon 97420

BEND
1250 NE 3rd, Suite 8105
Bend, Oregon 97701

EUGENE
165 E. 7th Street, Suite 220
Eugene, Oregon 97401

PENDLETON
700 SE Emigrant, Suite 240
Pendleton, Oregon 97801

AN EQUAL OPPORTUNITY EMPLOYER

ANNOUNCEMENT

The Prevailing Wage Rates contained in this booklet generally reflect those 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 Analyst
Bureau of Labor and Industries
1400 S. W. 5th Avenue,
Portland, OR 97201
(503)229-6655

The first copy is free. Additional copies are available for 75¢ 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	229-5750
Salem	378-3292

Apprentices and Trainees

Apprentices and trainees may be employed on public works. To qualify as an apprentice or trainee, the worker must be registered in a bonafide 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. The apprentice or trainee is to receive all fringe benefits and a percentage of the journeyman's wage rate; the appropriate percentage shall be determined by the 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 could be exclusively that of the agency.

Fringe Benefits

Payments for fringe benefits are in addition to the basic hourly rate. Fringe benefits means the amount for:

- 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.

NOTE: 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.).

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 1; 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.

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 side of the form. A copy of Form WH-38 and instructions for completing it are included in the back of this booklet; xeroxed copies may be used for filing.

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 and 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. Payroll information is to be filed with both the public contracting agency and the Wage and Hour Division, Bureau of Labor and Industries, 1400 S.W. Fifth Avenue, Portland, Oregon 97201. 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.

Supervisory and office/clerical employees are not required to be paid the PWR. A person who owns and operates his/her own truck or other hauling equipment 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 Davis-Bacon Act, not Oregon statutes. Further information may be obtained from the U.S. Department of Labor, Wage and Hour Division, Portland, Oregon (221-3057). However, in the event that federal funds are involved, but the contract is not regulated under Davis-Bacon, Oregon's Prevailing Wage Rates Statutes may apply (ORS 279.348 - 279.365).

COMMONLY ASKED QUESTIONS (Continued)

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) 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.

6) How do I classify workers?

Virtually all of the job classifications/trades normally used in the 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 have questions about how to classify workers, contact the Wage and Hour Division at 229-5750 in Portland or at one of the offices listed on page 1 of this booklet.

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.)

7) 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.

8) 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.

COMMONLY ASKED QUESTIONS (Continued)

- 9) 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, 1400 S.W. 5th Avenue, Portland, Oregon 97201 (229-5750). Other Bureau offices are located in Bend (388-6330), Coos Bay (269-4575), Eugene (686-7623), Medford (776-6013), 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).

- 10) 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.

- 11) 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. The apprentice is to receive all fringe benefits and a percentage of the journeyman's wage rate; the appropriate percentage shall be determined by the apprenticeship committee. All other workers receive rates as published.

COMMONLY ASKED QUESTIONS (Continued)

12) 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.

These need to be kept for a period of three (3) years from the completion of the public work contract. Records relating to public works contracts must be maintained separately from records relating to private projects/contracts.

13) What forms are public agencies required to file with the Bureau of Labor and Industries?

Public agencies are required to prepare and file with the Commissioner of the Bureau of Labor and Industries a list of every public improvement that the agency intends to fund during the subsequent budget period (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.

14) 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.

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS	TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
ASBESTOS WORKERS			BRICKLAYERS/Stonemasons		
<u>Installation of insulation on mechanical systems*</u>			Area 1		
Journeyman Asbestos Worker			Area 2		
o Projects in buildings which are not used for manufacturing, manufacturing services or similar processes (Offices, schools, laboratories, etc.)			Area 1		
16.65 4.03			Baker Hood River Polk Wallowa		
o Projects in buildings which are used for manufacturing, manufacturing services and similar process (water treatment plants, electrical generating plants, road maintenance shops, etc.)			Clackamas Malheur (a) Sherman Wasco (b)		
17.25 4.03			Clatsop Marion Tillamook Washington		
o Contracts and subcontracts less than \$100,000			Columbia Morrow Umatilla Yamhill		
18.16 4.03			Gilliam Multnomah Union		
o Contracts and subcontracts of \$100,000 or more			Area 2		
Removal of insulation on mechanical systems* which are not going to be scrapped.**			Benton Douglas Josephine Linn		
o Hazardous Materials Handler Mechanic (in any type of project regardless of value)			Crook Grant Klamath Malheur (c)		
12.00 2.45			Coos Harney Lake Wasco (d)		
* Mechanical systems include pipes, boilers, ducts, flues, breechings, etc.			Curry Jackson Lane Wheeler		
** 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. Laborers performing asbestos removal are classified as Group 3 laborers.			Deschutes Jefferson Lincoln		
BOILERMAKERS			a) North half		
o Erection and repair of storage tanks, tower tanks, standpipes, swimming pools and reservoirs.			b) North of the City of Maupin		
20.58 4.80			c) South half		
o All other work			d) Including the City of Maupin and South thereof		
21.61 4.80			CARPENTERS (see page 11)		
			CEMENT MASONS		
			Zone 1 (Base Rate):		
			o Cement Masons		
			16.79 5.27		
			o Composition Workers (includes installation of epoxy & other resinous toppings), and Power Mach. Oper.		
			17.13 5.27		
			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 Corvallis Coos Bay Roseburg Eugene		
			Pasco The Dalles Medford Longview K. Falls		
			Salem Pendleton Astoria Portland Newport		

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS	TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
DIVERS & DIVERS' TENDERS			ELECTRICIANS (continued)		
o Divers 44.44 3.67			Area 5:		
o Divers' Tenders 19.55 3.67			o Electricians 20.75 5.12		
Depth Pay and Enclosure Pay are added to the Divers' Basic Hourly Rate to obtain the Total Hourly Rate for the diver.			o Cable Splicers 21.50 5.15		
BASIC HOURLY + DEPTH + ENCLOSURE = DIVERS' HOURLY PAY			Area 6:		
o Divers' Depth Pay			o Electricians 17.58 4.38		
Depth of Dive Hourly Depth Pay			o Cable Splicers 19.34 4.43		
50-100 ft ((total ft- 50) x \$1.00)/hr.			Area 1 Area 2 Area 2(cont) Area 3		
100-150 ft \$ 50 + ((total ft-100) x \$1.50)/hr.			Malheur Baker Umatilla Coos		
150-200 ft \$125 + ((total ft-150) x \$2.00)/hr.			Gilliam Union Curry		
			Grant Wallowa Lincoln		
			Morrow Wheeler Douglas (a)		
			Lane (a)		
o Divers' Enclosure Pay(working without vertical escape)			Area 4 Area 5 Area 6		
Distance Travelled In the Enclosure Hourly Enclosure Pay			Benton Clackamas Harney		
5 - 50 ft \$.50/hr			Crook Clatsop Jackson		
50 - 100 ft \$.63/hr			Deschutes Columbia Josephine		
100 - 150 ft \$ 2.13/hr			Jefferson Hood River Klamath		
150 - 200 ft \$ 4.63/hr			Lane (b) Multnomah Lake		
200 - 300 ft \$ 4.63 + ((total ft-200)x \$.05)/hr			Linn Sherman Douglas (b)		
300 - 450 ft \$ 9.63 + ((total ft-300)x \$.10)/hr			Marion Tillamook		
450 - 600 ft \$24.63 + ((total ft-450)x \$.20)/hr			Polk Wasco		
			Yamhill(c) Washington		
			Yamhill (d)		
DREDGING			a) Those portions lying west of a line North and South from the NE corner of Coos County to the SE corner of Lincoln County		
o Leverman-Hydraulic 20.07 5.17			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		
o Leverman-Dipper 20.88 5.17			c) South half		
o Asst. Engineer (including: Watch Engineer, Welder, Mechanic, Machinist) 19.45 5.17			d) North half		
o Tenderman (Boatman, Attending Dredge Plan); Fireman 18.98 5.17			ELEVATOR CONSTRUCTORS		
o Assistant Mate (Deckhand); Oiler 18.58 5.17			Area 1		
DRYWALL/WETWALL			o Mechanic 18.74 4.78 + a		
o Drywall (Accoustical and Drywall Applicator) 16.55 4.02			o Helper 13.12 4.78 + a		
o Wetwall (Lather) 15.30 5.27			o Probationary Helper 9.37 -		
ELECTRICIANS			Area 2		
Area 1:			o Mechanic 19.94 4.78 + a		
o Electricians 17.00 3.35			o Helper 13.96 4.78 + a		
o Cable Splicers 18.70 3.43			o Probationary Helper 9.97 -		
Area 2:			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.		
o Electricians 20.71 5.63			Area 1 Area 2		
o Cable Splicers 21.75 5.66			Umatilla All		
Area 3:			Wallowa Remaining		
17.15 5.21			Union Counties		
Area 4:			Baker		
17.93 3.41					

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS	TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
<u>GLAZIERS</u>			<u>LINE CONSTRUCTION</u>		
Area 1	18.12	3.08	<u>Area 1</u>		
Area 2	13.76	1.72	Zone 1 (Base Rate):		
<u>Area 1</u>	<u>Area 2</u>		o Group 1	21.68	4.56
All Counties	Malheur		o Group 2	19.59	4.49
except Malheur			o Group 3	15.35	4.34
			o Group 4	16.89	3.59
			o Group 5	14.78	3.51
			o Group 6	13.90	3.49
<u>HIGHWAY AND PARKING STRIPERS</u>			Zone Differential (Add to Zone 1 Rate)		
	17.70	2.53	Zone 2	2.40	
			Zone 3	3.15	
			Zone 4	3.90	
			Zone 5	5.15	
<u>IRONWORKERS</u>			Group 3 receives Zone 1 Rate ONLY		
o Structural,			(No Zone Differential)		
Reinforcing,			<u>Area 2:</u>		
Ornamental,			o Cable Splicers	18.06	2.97
Riggers,			o Journeyman Lineman	16.42	2.90
Fence Erectors,			o Line Equip. Mech.		
Signal Men	18.26	6.16	(Right-of-way)	15.55	2.88
			o Line Equip. Oper.	14.81	2.84
			o Line Equip. Srvcmn	14.57	2.84
			o Groundman	11.55	2.72
<u>LABORERS</u> (see page 11)			<u>Area 1</u>		
<u>LIMITED ENERGY ELECTRICIANS</u>			All counties except Malheur County		
May only be used for electrical work not			<u>Zone 1:</u>	0 to 3 miles from the geographical	
exceeding 100 va in Class II and III				center of Medford and Portland	
installations (as defined in Article 725 of the			<u>Zone 2:</u>	0 to 20 miles from the geographical	
National Electrical Code):				center of Astoria, Baker, Burns, Bend,	
				Corvallis, Eugene, Klamath Falls,	
				Lakeview, Longview, Pendleton, Salem,	
				Roseburg, The Dalles, Umatilla (NOTE:	
				for Portland and Medford, Zone 2 is 3	
				to 20 miles)	
			<u>Zone 3:</u>	20 to 35 miles radius	
			<u>Zone 4:</u>	35 to 50 miles radius	
			<u>Zone 5:</u>	Over 50 miles radius	
			<u>Group 1</u>	<u>Group 2</u>	
Area 1	9.50	2.28	Cable Splicers	Certified Lineman Welder	
Area 2	9.95	1.53	Leadman Pole	Heavy Line Equipment Man	
Area 3	9.44	2.00	Sprayer	Lineman	
Area 4	9.69	2.14		Pole Sprayer	
Area 5	10.57	2.17			
Area 6	9.55	2.28			
Area 7	9.88	1.77			
Area 8	9.40	2.18			
Area 9	9.92	1.70			
Area 10	9.81	1.59			
Area 11	10.65	1.66			
Area 12	12.78	1.69			
Area 13	10.79	2.04			
Area 14	10.54	1.84			
<u>Area 1</u>	Clatsop, Columbia, Tillamook		<u>Group 3</u>	<u>Group 4</u>	
<u>Area 2</u>	Clackamas, Multnomah, Washington		Tree Trimmer	Line Equipment Man	
<u>Area 3</u>	Marion, Polk, Yamhill				
<u>Area 4</u>	Benton, Lincoln, Linn				
<u>Area 5</u>	Lane				
<u>Area 6</u>	Douglas				
<u>Area 7</u>	Coos, Curry				
<u>Area 8</u>	Jackson, Josephine				
<u>Area 9</u>	Hood River, Sherman, Wasco				
<u>Area 10</u>	Crook, Deschutes, Jefferson				
<u>Area 11</u>	Klamath, Lake				
<u>Area 12</u>	Gilliam, Grant, Morrow, Umatilla,				
	Wheeler				
<u>Area 13</u>	Baker, Union, Wallowa				
<u>Area 14</u>	Harney, Malheur				
			<u>Area 2</u>		
			Malheur County		

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
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MARBLE SETTERS (Includes Granite)

Area 1 19.63 4.33

Area 1

Baker	Hood River	Sherman	Wallowa
Clackamas	Malheur (a)	Tillamook	Wasco (b)
Clatsop	Morrow	Union	Washington
Columbia	Multnomah	Umatilla	Yamhill (a)
Gilliam			

a) North half b) North of the City of Maupin

PAINTERS & DRYWALL TAPERS

Area 1
o Painter & Drywall Tapers 12.02 2.01

Area 2
o Brush 14.35 3.03

o Spray, sandblasting, other pressure blasting over 3000 psi, and steam cleaning 14.85 3.03

o Drywall Tapers 17.55 3.03

Area 1	Area 2
Malheur County	Remaining Counties

PLASTERERS

Area 1 17.88 4.02

Area 2
o Nozzleman 19.38 4.01
o Swinging scaffold 18.38 4.01
o all other work 17.88 4.01

Area 1	Area 1(cont)	Area 1(cont)	Area 2
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Benton	Deschutes	Lincoln (b)	All
Coos	Harney	Linn (b)	remaining
Crook	Jefferson	Wasco (b)	counties
Curry	Klamath (a)	Wheeler (b)	
Douglas	Lane		

a) Northern one-third b) South half

PLUMBERS & STEAMFITTERS/PIPEFITTERS

Area 1 (Both) 19.55 5.05

Area 2 (Both) 21.75 4.91

Area 3 (Both) 19.00 4.50

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 (see page 11)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
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ROOFERS

Area 1:
o Roofers 15.60 3.70
o Handling coal tar pitch 17.16 3.70

Area 2:
o Roofers(a) 15.04 2.93
(Add \$2.00 per hour to Fringe for work with irritable Bituminous material.)

Area 3:
o Roofers 13.05 2.70
(Add \$1.50 per hour to Fringe for work with irritable Bituminous material.)

Area 4:
o Roofers 14.75 3.60
(Add \$2.00 per hour to Fringe for work with irritable Bituminous materials)

Area 5:
o Roofers 11.55 3.55
(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

Area 1 17.40 4.97

Area 2 16.43 3.65

Area 3 18.86 4.39

Area 4 16.62 3.51

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 4 (cont)
Baker	Morrow	Coos	Josephine
Malheur	Umatilla	Curry	Klamath
	Union	Douglas	Lake
	Wallowa	Jackson	Lane

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
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SOFT FLOOR LAYERS

Area 1	15.17	3.67 + a
Area 2	12.99	2.01

a) plus 4% of basic hourly rate for employees with less than one year of service, 6% for those with more than one year.

Area 1 - All counties except Malheur County

Area 2 - Malheur County

<u>SPRINKLER FITTERS</u>	20.30	4.25
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TENDERS TO MASON TRADES

Tenders for Bricklayers, Tile Setters, Marble Setters and Terrazzo Workers; Topping for Cement Finishers and Mortar Mixers.

15.11	3.90
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<u>TENDERS TO PLASTERERS</u>	14.62	3.90
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TILE SETTERS

Area 1	17.10	4.20
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(Add \$.50 to base rate if safety belt required by State safety regulations or work involves epoxy, furnane, alkor, acetylene, black grouting and/or steam cleaning.)

Area 2	18.00	4.37
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(Add \$.24 to base rate if safety belt required by State safety regulations; \$.20 if work involves epoxy, furnane, alkor, acetylene, black grouting, and/or steam cleaning.)

Area 1	Area 1(cont)	Area 2	Area 2(cont)
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Baker	Polk	Benton	Josephine
Clackamas	Sherman	Coos	Klamath
Clatsop	Tillamook	Crook	Lake
Columbia	Umatilla	Curry	Lane
Gilliam	Union	Deschutes	Lincoln
Hood River	Wallowa	Douglas	Linn
Malheur(a)	Wasco (b)	Grant	Malheur (c)
Marion	Washington	Harney	Wasco (d)
Morrow	Yamhill	Jackson	Wheeler
Multnomah		Jefferson	

a) North half c) South half
b) North of Maupin d) Maupin and south thereof

TILE & TERRAZZO HELPERS

Area 1	13.32	2.85
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Area 1

Baker	Hood River	Sherman	Wallowa
Clackamas	Gilliam (a)	Tillamook	Wasco (b)
Clatsop	Morrow	Umatilla	Washington
Columbia	Multnomah	Union	Yamhill (a)
Malheur (North Half)		Yamhill (North Half)	
Wasco (North of Maupin)			

TRUCK DRIVERS (see below)

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
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WELDERS; RIGGERS

Receive rate for craft performing operation to which welding and rigging are incidental.

CARPENTERS, LABORERS, POWER EQUIPMENT OPERATORS and TRUCK DRIVERS

Under the following circumstances a rate lower than the basic hourly rate may be used for these four trades:

The lower rate applies to all public works projects of less than \$1.0 million. The lower rate also applies to projects under \$1.5 million involving the construction, reconstruction, major renovation or painting of buildings, bridges or docks. (When the amount is between \$1.0 and \$1.5 million the work done on a building, bridge or dock must constitute at least 20% of the total project price to use the lower rates.) In determining the \$1.5 million figure, do not include the cost of underground utilities (i.e., the amount of the contract dedicated to facilities for electricity, water, gas, sewerage including storm water, and communications) which are five feet or more outside of and away from the building, bridge or dock and are subordinate and incidental to the major purpose of the project.

NOTE: In determining whether or not the lower rates are applicable, consider the total project cost, and not the cost of any individual contract (or schedule) within that project.

ZONE RATES AND DESCRIPTIONS

Zone Differential for Carpenters (Groups 1 and 2 only), Laborers, Power Equipment Operators and 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.

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	

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
CARPENTERS (See preceding page for explanation of when the lower rates may be used)		

	LESS THAN 100%	100%	
Zone 1 (Base Rate):*			
o Group 1	15.19	18.17	3.67
o Group 2	15.31	18.32	3.67
o Group 3	15.39	18.42	3.67
o Group 4	15.51	18.57	3.67
o Group 5	15.27	18.27	3.67
o Group 6	15.35	18.37	3.67

*NOTE: Zone rates for Carpenter Groups 1 and 2 are listed in the preceding column. Zone rates for Carpenter Groups 3 through 6 are listed below.

Zone Differential for Groups 3 through 6 Only
(Add to Zone 1 Rate)

Zone 2	.85
Zone 3	1.25
Zone 4	1.70
Zone 5	1.95
Zone 6	2.80

Zones for Groups 3, 4, 5 and 6 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.

Zone 1:	0-30 miles.
Zone 2:	30-40 miles.
Zone 3:	40-50 miles.
Zone 4:	50-60 miles.
Zone 5:	60-70 miles.
Zone 6:	Over 70 miles.

Cities for Groups 3 and 4

Corvallis	Longview	North Bend	The Dalles
Eugene	Medford	Portland	

Cities for Groups 5 and 6

Astoria	Eugene	Newport	Salem
Bend	Klamath Falls	Portland	The Dalles
Coos Bay	Medford	Roseburg	

Group 1

Auto. Nailing Machine
Carpenters
Form Stripper
Manhole Builders

Group 3

Millwrights
Machine Erectors

Group 5

Bridge, Dock & Wharf
Builders
Piledrivermen

Group 2

Floor Layers & Finishers
Stationary Power Saw
Operators
Wall & Ceiling Insulators

Group 4

Certified Welders

Group 6

Boom Men

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
LABORERS¹		
	<u>LESS THAN 100%</u>	<u>100%</u>
Zone 1 (Base Rate): ²		
o Group 1	11.57	13.74 4.90
o Group 2	11.85	14.09 4.90
o Group 3	12.09	14.39 4.90
o Group 4	12.29	14.64 4.90
o Group 5	9.94	11.50 4.90
o Group 6	8.90	8.90 4.90
Group 1		
Asphalt Plant Laborers	General Laborer ***	
Asphalt Spreaders	Guardrail, Median	
Batch Weighman	Rail (c)	
Broomers	Leverman or Aggregate	
Brush Burners/Cutters	Spreader (d)	
Carpenter Tender	Material Yard Man (e)	
Car & Truck Loaders	Powderman Tender	
Change-House Man	Railroad Track Laborers	
Choke Setter	Ribbon Setters (f)	
Chipper Operator (a)	Rip Rap Man (Hand	
Clean-up Laborers ***	Placed)	
Concrete Laborers	Road Pump Tender	
Culvert (hand labor)	Sewer Laborer	
Curing, concrete	Signalman	
Demolition, wrecking	Skipman	
and moving ***	Slopers	
Driller Tender	Sprayman	
Dry-shack Man	Stake Chaser	
Dumpers, road oiling	Stockpiler	
crew	Timber Faller/Bucker	
Dumpmen for grading	(Hand Labor)	
crew	Toolroom Man (Job site)	
Elevator Feeders	Tunnel Bull Gang	
Fine Graders	(Above Ground)	
Fire Watch	Weight-Man-Crusher (g)	
Form Strippers (b)		
a) Pittsburg or similar types		
b) Not swinging stages		
c) Reference Post, Guide Post, or		
Right-of Way Marker		
d) Flaherty, Loading Spotters or 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)	Guniting or Pot Tender	
Brush Cutters (b)	Handlers/Mixers (f)	
Burners	Post Hole Digger, Air,	
Choker Splicer	gas or electric	
Clay Power Spreader(c)	Power Tool Operators (g)	
Clean-up Nozzlemans	Sand Blasting (wet)	
Green Cutter (d)	Stake Setter	
Concrete Power Buggyman	Tampers	
Crusher Feeder	Tunnel Muckers/Brakeman/	
Demolition/Wrecking (e)	Concrete Crew/Bull	
Grade Checker	Gang (underground)	
Granite Nozzlemans		
Tender		
(Group 2 continues top of next page.)		

¹ See page 11 for description of when rates less than 100% may be used

² See page 11 for zone rates and descriptions

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS	TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
<u>LABORERS Group 2 (continued)</u>			<u>POWER EQUIPMENT OPERATORS¹</u>		
a) Including Pot Tender for same, applying protective material by hand or nozzle on utility lines or storage tanks on project				LESS THAN 100%	100%
b) Power saw			Zone 1 (Base Rate): ²		
c) And similar types			o Group 1	13.44	16.64 5.17
d) Concrete, rock, etc.			o Group 2	13.59	16.82 5.17
e) Charred Materials			o Group 3	13.71	16.98 5.17
f) Of all materials of an irritating nature including cement and lime			o Group 4	13.87	17.18 5.17
g) Includes, but not limited to: Dry Pack Machine, Jackhammer, Chipping Guns, Paving Breakers, Vibrators (less than 4" diameter)			o Group 5	13.91	17.22 5.17
			o Group 6	13.99	17.33 5.17
			o Group 7	14.05	17.40 5.17
			o Group 8	14.16	17.54 5.17
			o Group 9	14.23	17.63 5.17
			o Group 10	14.30	17.71 5.17
			o Group 11	14.31	17.73 5.17
			o Group 12	14.39	17.83 5.17
			o Group 13	14.47	17.93 5.17
			o Group 14	14.67	18.17 5.17
			o Group 15	14.82	18.36 5.17
			o Group 16	15.02	18.61 5.17
			o Group 17	15.18	18.81 5.17
			o Group 18	15.38	19.06 5.17
			o Group 19	15.52	19.24 5.17
<u>Group 3</u>			<u>Group 1</u>		
Asbestos Removal	Power Saw Operators (d)		Assistant Conveyor Operator	Partsman (tool room)	
Asphalt Rakers	Pumpcrete Nozzleman		Brakeman/Switchman	Pump Operator (a)	
Bit Grinder	Sand Blasting (dry)		Crusher Feeder	Oiler (b)	
Concrete Saw Operator	Pipe Layers of all Types		Deckhand	Scaffolding Operator (c)	
Drill Doctor	Sewer Timberman		Guardrail Punch Oiler	Switchman	
Drill Operators (a)	Track Liners (e)				
Guniting Nozzleman	Tugger Operator				
High Scalers	Tunnel-Chuck Tenders				
Strippers, Drillers(b)	Nippers, Timberman				
Laser Beam (c)	Vibrator (4" and larger)				
Manhole Builder	Water Blaster				
Powdermen	Welder				
a) Air Tracks, Cat Drills, Wagon Drills, Rubber-mounted drills, and other similar types			a) Under 4 inches		
b) Covers work in Swinging Stages, chairs or belts, under extreme conditions unusual to normal drilling, blasting, barring-down, or sloping and stripping			b) Including Plant, Crane, Crusher, Guardrail Equipment, and Trenching Machine		
c) Pipe laying, applicable when employee assigned to move, set up, align Laser Beam.			c) Self-propelled		
d) Bucking and falling					
e) Anchor Machines, Ballast Regulators, Multiple Tampers, Power Jacks					
<u>Group 4</u>			<u>Group 2</u>		
Laser Beam (Tunnel), applicable when employee assigned to move, set-up, align laser beam			A-Frame Truck Operator (a)	Helicopter Radioman (Ground)	
Tunnel Miners			Auger	Oiler (f)	
Tunnel Powderman			Blade Operator (b)	Roller Operator (g)	
			Boatman	Tar Pot Fireman (h)	
			Crane Fireman (c)	Temporary Heating Plant Operator	
			Driller Tender	Truck Crane Oiler/Driver (i)	
			Fork Lift or Lumber Stacker (d)	Tugger or Coffin type Hoist Operator	
			Grade Checker	Welder's Tender	
			Grade Oiler (e)		
			Heavy Duty Repairman Tender		
<u>Group 5**</u>			a) Single drum		
Flagger			b) Pulled type		
<u>Group 6**</u>			c) All equipment except floating		
Fence Builder	Landscaping or planting laborer		d) On job site		
			e) Required to check grade		
			f) Including combination guardrail machines		
			g) Grading of base rock (not asphalt)		
			h) Including power agitated type		
			i) 25 ton capacity and over		

¹ See page 11 for description of when rates less than 100% may be used

² See page 11 for zone rates and descriptions

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS	TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
POWER EQUIPMENT OPERATORS (continued)			POWER EQUIPMENT OPERATORS (continued)		
Group 3			Group 6		
Air Filtration Equipment	Hydrographic Seeder Machine (e)		Asphalt Burner and Reconditioner	Concrete Spreader	
Asphalt Plant Fireman	Hydrostatic Pump		Cast-In Place Pipe Laying Machine	Curb Machine (b)	
Ballast Jack Tamper	Mixer Box Operator (f)		Concrete Finishing Machine (A)	Loaders (c)	
Bell Boy, Phones, etc	Motorman		Concrete Joint Machine	Maginnis Internal Full Slab Vibrator	
Broom Operator (a)	Pugmill Operator (any type)		Concrete Paving Machine	Pavement Grinder and/or Grooving Machine (d)	
Bucket Elevator Loader (b)	Pump Operator (g)		Concrete Planer	Rock Spreaders (e)	
Cement Hog	Ross Carrier Operator (h)				
Compressor Operator (c)	Tamping Machine (i)				
Concrete Saw and Concrete Curing Machine (d)	Truck-mounted Asphalt Spreader (with screed)		a) Clary, Johnson, Bidwell, Burgess, Bridges Deck or similar type		
Conveyor Operator	Welding Machine Operator		b) Mechanical Berm, Curb and/or Gutter		
Hydraulic Pipe Press	Wire Mat or Brooming Machine Operator		c) Rubber-tired type, 2 1/2 cu. yds. and under		
			d) Riding type		
			e) Self-propelled		
a) Self-propelled on job site					
b) Barber Greene and similar type					
c) Any power, under 1250 cubic feet total capacity					
d) Riding type					
e) Straw, pulp or seed					
f) C.T.B. Drybatch, etc.					
g) Any power, 4 inches and over					
h) On job site					
i) Mechanical self-propelled					
Group 4			Group 7		
Combination Mixer & Compressor (a)	Helicopter Hoist Operator		A-Frame Truck (a)	Grouting Machine	
Compactor, including Vibratory	Hydra Hammer or similar types		Ballast Regulator	Hydraulic Backhoe (e)	
Compactor (Any Power (b))	Locomotive, under 40 tons		Ballast Tamper (b)	Locomotive, 40 tons & over	
Concrete Mixer Operator (c)	Lull Hi-Lift Operator (d)		Beltcrete Boom Truck	Pot Rammer	
Floating Equipment	Pavement Breaker		Churn Drill/ Earth Boring Machine	Pumpcrete Operator (any type)	
Fireman	Pump Operator (e)		Concrete Mixer (c)	Roller (any asphalt mix)	
Fork Lift, over 5 ton	Roller Operator, Oiling C.T.B.		Concrete Pump	Shuttle Car	
	Screed Operator		Elevating Grader (d)	Tie Spacer	
	Service Oiler (Greaser)		Fuller-Kenyon and similar	Tower Mobile Operator	
				Track Liner	
a) Gunnite work			a) Double drum		
b) Over 1,250 cu. ft. total capacity			b) Multiple purpose		
c) Single drum, under five bag capacity			c) Single drum, five bag capacity and over		
d) Or similar type			d) Tractor towed requiring operator or grader		
e) More than 5 (any size)			e) Wheel type 3/8 cu. yds. and under with or without front end attachment 2 1/2 cu. yds. and under (Ford, John Deere, Case type)		
Group 5			Group 8		
Chip Spreading Machine Operator	Pulva Mixer or similar types		Asphalt Paver Operator	Diesel-Electric Engineer (c)	
Concrete Batch Plant Quality Control Operator	Slip Form Pumps, power driven hydraulic lifting device for concrete forms		Batch Plant and/or wet-mix (a)	Generator Operator	
Elevator Operator	Sweeper, Wayne type (b)		Belt Loader (b)		
Extrusion Machine	Tractor (c)				
Hoist, single drum	Trenching Machine (d)				
Lime Spreading (a)	Wagner Pactor (e)				
Power Jumbo, setting slip forms, etc. in tunnels.					
a) On job site					
b) Self-propelled on job site					
c) Rubber-tired 50 H.P. flywheel and under					
d) Maximum digging capacity 3 ft. depth					
e) Or similar type without blade					
			Group 9		
			Asphalt Plant Operator	Guardrail Punch and Auger (d)	
			Bolt-Threading Machine	H.O. Mechanic and Welder	
			Boom-Type Lifting Device (a)	Hammer Operator	
			Boring Machine	Hydraulic Backhoe (e)	
			Bulldozer	Lift Slab Machine	
			Cherry Picker (a)(b)	Loader (f)	
			Chicago Boom (c)	Machine Tool Operator	
			Compactor with Blade	Pipe Cleaning, Doping, Bending and wrapping Machines	
			Concrete Cooling Machine	Side-boom Cat	
			Crusher Plant Operator		
			(Group 9 continues top of next page.)		

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS	TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
POWER EQUIPMENT OPERATORS Group 9 (continued)			POWER EQUIPMENT OPERATORS (continued)		
Drill Cat Operator		Stationary Drag Scraper	Group 13		
Drill Doctor		Surface Heater and Planer	Back Filling Machine		Derrick, under 100 tons
Drill Doctor (Bit		Tractor (g)	Blade (a)		Elevating Grader (e)
Grinder)		Tractor (h)	Blade, multi-engine		Floating Clamshell, etc. (f)
Grizzly Crusher		Trench Machine (i)	Blade Operator, finish		Floating Crane (g)
a) 5 ton capacity or less			Bridge Crane		Grade-all, 1 cu. yd.
b) Or similar type crane-hoist			Operator (b)		and over
c) And similar types			Cableway Operator (c)		Hoist (h)
d) All types			Concrete Paving Road		Piledriver Operator
e) Track type 3/8 cu. yds.			Mixer		Shovel, etc (i)
f) Front end and overhead, 2 1/2 cu. yds. and under			Crane (d)		
g) With boom attachments			a) Externally controlled by electronic,		
h) Rubber-tired over 50 H.P. flywheel			mechanical hydraulic manes		
i) Maximum digging capacity over 3 ft. depth			b) Locomotive Crane, Gantry and Overhead		
Group 10			c) 25 ton and over		
Barge Operator,		Compactor, multi-engine	d) Over 25 ton and including 40 tons		
self-loading		Dozers and Pushers (c)	e) Operated by Tractor Operator, Sierra, Eculid,		
Bulldozer (a)		Driller (d)	or similar		
Cable Plow (any type)		Jack Operator/Elevating	f) Under 3 cu. yds.		
Combination H.D.		Barges	g) Derrick Barge, less than 30 ton		
Mechanic-Welder (b)			h) Stiff Leg, Guy Derrick, or similar, 50 tons		
a) Twin engine (TC 12 and similar)			and over		
b) With dispatcher and/or required to do both			i) 1 cu. yd. and less than 3 cu. yds.		
c) Rubber-tired (Michigan, Cat, Hough type)			Group 14		
d) Percussion, Diamond, Core, Cable, Rotary			Rubber-tired Scraper (a)		
and similar type			Tower Crane Operator		
Group 11			a) With Tandem Scrapers, self-loading, Paddle		
Clamshell, Hoe, etc. (a)		Dragline	Wheel, Auger type, finish and/or 2 or more		
Combination Guardrail		Grade-Alls (a)	units		
Machines (b)		Mixer Mobile	Group 15		
Concrete Breaker		Mucking Machine (tunnel)	Loader, 4 cu. yds., but less than 6 cu. yds.		
Crane Operator (c)		Shovel	Rock Hound Operator		
a) Under 1 cu. yd.			Group 16		
b) i.e., Punch, Auger, etc.			Autograder or		Floating Crane (Derrick
c) 25 tons and under			"Trimmer"		Barge) (c)
Group 12			Automatic Concrete		Loader (d)
Batch Plant and/or		Paddle Wheel, Auger Type	Slip Form Paver		Rubber-tired Scraper (e)
Wet Mix (a)		Piledriver (not crane	Cableway (a)		Shovel (f)
Blade Mounted		type)	Concrete Canal Line		Tandem Bulldozer (g)
Spreaders (b)		Reinforced Tank Banding	Crane (b)		Wheel Excavator (h)
Blade Operator		Machine (K-17 or	Floating Clamshell,		Whirley, 80 ton and under
Elevating Loader (c)		similar)	etc., 3 cu. yds.		
Hoist, two or more		Rubber-tired Scraper (d)	and over		
drums		Shield Operator	a) 25 tons and over		
		Single Scraper (e)	b) Over 40 ton and including 100 ton		
a) 3 units or more			c) 30 ton but less than 80 ton		
b) Ulrich and similar types			d) 6 cu. yds., but less than 12 cu. yds.		
c) Athey and similar			e) With Tandem Scrapers, multi-engine		
d) Single and twin engine			f) 3 cu. yds., but less than 5 cu. yds.		
e) With Push-pull attachments, self loader			g) Quad-nine and similar		
			h) Under 750 cu. yds. per hour		
Group 17			Group 17		
			Canal Trimmer		Loader (c)
			Crane (a)		Shovel, etc. (d)
			Floating Crane (b)		Whirley (e)
			(Group 17 continues top of next page.)		

¹ See page 11 for description of when rates less than 100% may be used.
² See page 11 for zone rates and descriptions.

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
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POWER EQUIPMENT OPERATORS Group 17 (continued)

- a) Over 100 ton and including 200 ton
- b) Derrick Barge, 80 ton, but less than 150 ton
- c) 12 cu. yds. and over
- d) 5 cu. yds. and over
- e) Over 80 ton and including 150 ton

Group 18

- Band Wagons (a) Wheel Excavator (d)
- Crane (b) Whirley (e)
- Floating Crane (c)

- a) In conjunction with Wheel Excavator
- b) Over 200 ton
- c) 150 ton but less than 250 ton
- d) Over 200 ton
- e) 150 ton and over

Group 19

- Floating Crane (a) Remote Controlled Earth
- Helicopter (b) Moving Equipment
- Under Water Equipment (c)

- a) 250 ton and over
- b) When used in erecting work
- c) Remote or otherwise

TRUCK DRIVERS¹

	LESS THAN 100%	100%	
Zone 1 (Base Rate): ²			
o Group 1	13.24	15.88	5.20
o Group 2	13.28	15.93	5.20
o Group 3	13.32	15.98	5.20
o Group 4	13.36	16.03	5.20
o Group 5	13.40	16.08	5.20
o Group 6	13.48	16.18	5.20
o Group 7	13.56	16.28	5.20
o Group 8	13.64	16.38	5.20
o Group 9	13.72	16.48	5.20
o Group 10	13.86	16.65	5.20
o Group 11	13.94	16.75	5.20
o Group 12	14.02	16.85	5.20
o Group 13	14.10	16.95	5.20
o Group 14	14.18	17.05	5.20

Work	Group
A-Frame or Hydra-lift Truck w/load bearing surface.	2
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:	
6 cu. yds. and under	1
Over 6 cu. yds. and inc. 10 cu. yds.	3
Over 10 cu. yds. and inc. 20 cu. yds.	6
Over 20 cu. yds. and inc. 30 cu. yds.	7

TRADES	BASIC HOURLY RATE	FRINGE BENEFITS
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TRUCK DRIVERS (continued)

- Over 30 cu. yds. and inc. 40 cu. yds. 8
- Over 40 cu. yds. and inc. 50 cu. yds. 9
- Over 50 cu. yds. and inc. 60 cu. yds. 10
- Over 60 cu. yds. and inc. 70 cu. yds. 11
- Over 70 cu. yds. and inc. 80 cu. yds. 12
- Over 80 cu. yds. and inc. 90 cu. yds. 13
- Over 90 cu. yds. and inc. 100 cu. yds. 14

Dumpsters or Similar Equipment—all sizes 5

Flaherty Spreader Driver or Leverman. 4

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 4

Lubrication Man, Fuel Truck Driver, Driver, Tireman, Wash Rack, Steam Cleaner or combination. 2

Lumber Carrier, Driver—Straddle Carrier—used in loading, unloading and transportation of material on job site. 4

Oil Distributor Driver or Leverman. 4

Pilot Car 1

Slurry Truck Driver or Leverman 3

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. 5
- Over 7 cu. yds. and inc. 9 cu. yds. 6
- Over 9 cu. yds. and inc. 11 cu. yds. 7
- Over 11 cu. yds. and inc. 13 cu. yds. 8
- Over 13 cu. yds. and inc. 15 cu. yds. 9

Team Drivers. 2

Tireman, full-time basis. 3

Truck Helper. 1

Truck Mechanic—Welder—Body Repairman. 6

Truck Mechanic Helper 1

Water Wagons (Rated Capacity) up to:

- 1600 gallons 1
- 1600 to 3000 gallons 3
- 3000 to 5000 gallons 4
- 5000 to 7000 gallons 6
- 7000 to 10,000 gallons 7
- 10,000 to 15,000 gallons 8

Winch Truck—takes classification of truck on which winch is mounted

¹ See page 11 for description of when rates less than 100% may be used.

² See page 11 for zone rates and descriptions.

PAYROLL

**Payroll and Certified Statement
Form - For Use in Complying
with ORS 279.354**

[illegible]

CERTIFIED STATEMENT

I, _____, _____
(Name or signatory party) (Title)

do hereby state:

(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 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
below:

(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 into the contract; that the classifications set
forth therein for each worker conform 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.

FORM WH-34 (3/84)

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS OR PROGRAMS
In addition to the basic hourly wage rates paid to each worker listed
in the above referenced payroll, payments of fringe benefits as
listed in the contract have been or will be made to appropriate
programs for the benefit of such employees, except as noted in
Section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH
Each worker listed in the above referenced payroll has been paid,
as indicated on the payroll, an amount not less than the sum of
the applicable basic hourly wage rate plus the amount of the
required fringe benefits as listed in the contract, except as noted
in Section 4(c) below.

(c) EXEMPTIONS

EXCEPTION (CRAFT)	EXPLANATION
REMARKS	

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

NAME AND TITLE

SIGNATURE

☐ Contractor

☐ Subcontractor

☐ Surety

File this form with the contracting agency and send a true copy to the
Bureau of Labor and Industries, 1400 SW Fifth Ave., Portland, OR 97201

BUREAU OF LABOR AND INDUSTRIES - WAGE AND HOUR DIVISION

INSTRUCTIONS FOR COMPLETING PAYROLL AND CERTIFIED STATEMENT FORM, WH-38 (Rev 3/84)

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 fringes to the various plans, funds, or programs or by making these payments to the employees as cash in lieu of fringes.

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 fringes and provides for the contractor's representation in the certified statement that he/she is paying to others fringes required by the contract and not paid as cash in lieu of fringes. Detailed instructions concerning the preparation of the form follow:

Fill in all boxes at top of form. Be sure to enter the date the contract was first advertised for bid by the contracting agency. This date should appear on the bid documents.

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 may be listed.

Column 2 - Withholding Exemptions: This column is merely inserted for the employer's convenience and is not a requirement.

Column 3 - Work Classifications: List classification descriptive of work actually performed by employees. Include group number when appropriate. Consult classifications and minimum wage schedule set forth in contract specifications. If additional classifications are deemed necessary, see Contracting Officer or Agency representative. Employee may be shown as having worked in more than one classification provided accurate breakdown of hours so worked is maintained and shown on submitted payroll by use of separate line entries.

Column 4 - Hours Worked: Enter as overtime hours all hours worked in excess of 8 hours per day, all hours worked on Saturday and Sunday and hours worked on legal holidays as defined in ORS 279.334.

Column 5 - Total: Self-explanatory.

Column 6 - Rate of Pay, including Fringe Benefits: In straight time box, list actual hourly rate paid the employee for straight time worked plus any cash in lieu of fringes paid the employee. When recording the straight time hourly rate, any cash paid in lieu of fringes may be shown separately from the basic rate, thus \$12.50/2.35. This is of assistance in correctly computing overtime. See "Fringe Benefits" below. Payment of not less than time and one half the basic or regular rate paid is required for overtime under ORS 279.334. In addition to paying not less than the predetermined rate for the classification in which the employee works, the contractor shall pay to approved plans, funds, or programs or shall pay as cash in lieu of fringes amounts predetermined as fringe benefits in the wage decision made part of the contract. See "FRINGE BENEFITS" below.

FRINGE BENEFITS -- Contractors who pay all required fringe benefits: A contractor who pays fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Commissioner of the Bureau of Labor and Industries shall continue to show on the payroll the basic cash hourly rate and overtime rate paid to employees. Such a contractor shall check paragraph 4(a) of the Certified Statement to indicate that he/she is also paying to approved plans, funds, or programs not less than the amount predetermined as fringe benefits for each craft. Any exceptions shall be noted in Section 4(c).

Contractors who pay no fringe benefits: A contractor who pays no fringe benefits shall pay to the employee, and insert in the straight time hourly rate column of the payroll, an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the applicable wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringes, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on basic or regular rate, plus the required cash in lieu of fringes at the straight time rate. In addition, the contractor shall check paragraph 4(b) of the Certified Statement to indicate that he/she is paying fringe benefits in cash directly to employees. Any exceptions shall be noted in Section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination required is obliged to pay the deficiency directly to the employees as cash in lieu of fringes. Any exceptions to Section 4(a) or 4(b), whichever the contractor may check, shall be entered in Section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid the employee as cash in lieu of fringes and the hourly amount paid to plans, funds, or programs as fringes. The contractor shall pay, and shall show that he/she is paying to each such employee for all hours (unless otherwise provided by applicable determination) worked on the project an amount not less than the predetermined rate plus cash in lieu of fringes as shown in Section 4(c). The rate paid and amount of cash paid in lieu of fringe benefits per hour should be entered in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

Column 7 - Gross Amount Earned: Enter gross amount earned on this project. If part of the employees' wage was earned on projects other than the project described on this payroll, enter in column 7 first the amount earned on the project and then the gross amount earned on all projects, thus \$63.00/120.00.

Column 8 - Deductions: Four columns are provided for showing deductions made. If more than four deductions should be involved, use first 3 columns; show the balance of deductions under "Other" column; show actual total under "Total Deductions" column; and in the attachment to the payroll describe the deductions contained in the "Other" column. All deductions must be in accordance with the provisions of ORS 652.610. If the employee worked on other jobs in addition to this project, show actual deductions from gross wage, but indicate that deductions are based on gross wages.

Column 9 - Net Wages Paid for Week: Self-explanatory.

Certified Statement Required by ORS 279.354: While this form need not be notarized, the Certified Statement is subject to the penalties provided by ORS 279.990. Accordingly, the party signing this required statement should have knowledge of the facts represented as true.

Space has been provided between items (1) and (2) of the Statement for describing any deductions made. If all deductions made are adequately described in the "Deductions" column above, state "See Deductions column in this payroll." See paragraph entitled "FRINGE BENEFITS" above for instructions concerning filling out paragraph 4 of the Statement.

PLANNED PUBLIC IMPROVEMENT SUMMARY

PAGE ____ OF ____

FISCAL YEAR ____ - ____

(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, 306 State Office Building; Portland, Oregon 97201

(Name of State or Local Government Agency)

FUND:
PROJECT NUMBER:

Rough Quantity Estimate	Units	Work Class Description	Agency Force Unit Cost	Estimate Total Cost	Agency Contract Unit Cost	Estimate 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 (10/82)

(Agency Official)

1. PRIME CONTRACTOR

Name _____

Address _____

City, State, Zip _____

Phone Number () _____

2. CONTRACTING AGENCY

Name _____

Address _____

City, State, Zip _____

Phone Number () _____

Submit this completed notice to:
Wage and Hour Division,
Prevailing Wage Section,
1400 S.W. 5th Avenue - Room 306
Portland, Oregon 97201

FORM WH-81 (Rev. 6/88)

3. CONTRACT INFORMATION

A. Contract Name and Number: _____

B. Location of work: _____

C. County: _____

D. Amount of the Award: \$ _____

E. Source of Funds: (i.e. 100%
Federal Funds; 50/50,
Federal, State; 100% local)

F. Date Contract Awarded: _____

G. Date Contract Specifications
Advertised for Bid: _____

NOTICE OF AWARD OF PUBLIC WORKS CONTRACT
(For Use by Public Agency in Complying with ORS 279.363)

1. PRIME CONTRACTOR

Name ZAK CONSTRUCTION COMPANY

Address 1234 N.W. Camille Street

City, State, Zip Alexandra, OR 97201

Phone Number (503) 12-4567

2. CONTRACTING AGENCY

Name LOPEZ IRRIGATION DISTRICT

Address 1234 N.W. Shannon Court

City, State, Zip Jamestown, OR 97201

Phone Number (503) 987-6543

Submit this completed notice to:
Wage and Hour Division,
Prevailing Wage Section,
1400 S.W. 5th Avenue - Room 306
Portland, Oregon 97201

FORM WH-81 (Rev. 6/88)

3. CONTRACT INFORMATION

A. Contract Name and Number:

Dam Repair 100-H

B. Location of work: Becca, Oregon

C. County: Malheur

D. Amount of the Award: \$ 25,000

E. Source of Funds: (i.e. 100%
Federal Funds; 50/50,
Federal, State; 100% local)

100% State

F. Date Contract Awarded: July 16, 1985

G. Date Contract Specifications
Advertised for Bid:

July 10, 1985

TECHNICAL PROVISIONS

NEWBERG WATER SYSTEM IMPROVEMENTS

CITY OF NEWBERG, OREGON

TECHNICAL PROVISIONS

SECTION 3.00 TRENCH EXCAVATION AND BACKFILL

3.01 GENERAL

This section covers the work necessary for the trench excavation and backfill. Trench excavation and backfill will be divided into the following classifications for the purpose of payment:

Class A Backfill. Generally will be limited to areas where trenches are located in unsurfaced areas and on street and road shoulders where prevention of subsequent trench settlement is not considered critical.

Class B Backfill. Generally will be limited to traveled roadways and crossings where surfacing replacement will be made shortly after backfilling and subsequent trench settlement must be held to a minimum.

Concrete Encasement. Limited to areas as designated by the City Engineer.

3.02 MATERIALS

A. Trench Bedding. Bedding to be in conformance with Standard Drawing No. W-1.

B. Trench Backfill. Backfill to be in conformance with Standard Drawing S-2 and ST-15.

3.03 WORKMANSHIP

A. Clearing the Right-of-Way. Cut trees and brush as near to the surface of the ground as practicable for disposal. Stumps within 4 feet of the trench center line shall be removed. All trees, brush, and other flammable debris from the clearing shall be burned or otherwise disposed of off the construction site at an approved location. All Federal and State laws relating to fire permits and local regulations relating to burning such materials shall be observed. Do not permit excavated materials to cover brush or trees prior to clearing and burning.

B. Pavement, Curb, and Sidewalk Removal. Cut all bituminous and concrete pavements, regardless of the thickness, and all curbs and sidewalks prior to excavation of the trenches with an approved pavement saw, hydrohammer, or other approved breaker. Width of the pavement cut shall be at least equal to the required width of the trench at ground surface. See Standard Drawings No. ST- 15.

C. Trench Width. Maximum width of trenches in which pipe is to be laid shall be as shown in Standard Drawings S-1. Sheet piling requirements shall be independent of trench widths.

TECHNICAL PROVISIONS

The maximum clear width at the top of the pipe will not be limited, except in cases where excess width of excavation would cause damage to adjacent structures.

In all cases, confine trench widths to dedicated rights-of-way for public thoroughfares or within areas for which construction easements have been obtained unless special arrangement have been made with the affected property owners.

D. Grade. Carry the bottom of the trench to the lines and grades shown or as established by the approved plans with proper allowance for pipe thickness and for gravel base or special bedding when required.

E. Shoring, Sheet piling, and Bracing of Trenches. Whenever necessary to prevent caving during excavation in sand, gravel, sandy soil, or other unstable material, or to protect adjacent structures or property, adequately sheet and brace the trench. Where sheet piling and bracing are used to increase trench widths accordingly. Keep trench sheet piling in place until the pipe has been placed, backfilled at the pipe zone, tested for defects, and repaired, if necessary.

F. Removal of Water. 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 layout, during the time the trench is being prepared for the pipe layout, during the laying of the pipe, and until the backfill at the pipe zone has been completed.

Dispose of the water in an approved manner without damage to adjacent property. Drainage of trench is water through the pipeline under construction is prohibited.

G. Drainage Culverts. Replace in kind drainage culverts which are removed and are at or near right angles to the trench center line. If the pipe is damaged during removal, dispose of it and furnish and install new pipe.

Where the center line of the proposed pipeline is within 4 feet of the center line of existing parallel culvert, the Developer shall remove and replace the culvert, as outlined under Section 8.00 SURFACE RESTORATION.

All culverts with center lines over 4 feet from the trench center line shall be protected from damage or restored to equivalent condition if damaged.

Replace all culvert pipe to the lines and grades established by the City. Do not replace culverts until the proposed pipeline is installed and the proper backfilling of the trench has been completed to the subgrade of the culvert.

TECHNICAL PROVISIONS

SECTION 4.00 DUCTILE CAST IRON PIPE AND FITTINGS

4.01 GENERAL

This section covers the work necessary for installing ductile iron pipe and fittings, complete.

Reference herein is made to the latest editions of standards, tests, methods, and specifications or research and technical organization as follows:

<u>Item</u>	<u>Standard Specification, Test, or Method Legislation</u>
Flanged Pipe and Fittings	Federal Specification WW-P-421 USAS B 16.1
Ductile Cast Iron Pipe	USAS A21.51, 1986 AWWA C-15 1-F6

Reference to ASTM, AWWA, SASI, or Federal Specification shall be understood to mean the latest standard or specification, unless otherwise stated.

A. Foundation Stabilization. Imported material will, generally, be limited to locations in Class C Backfill areas where unstable ground conditions necessitate the importation.

B. Definition of Pipe Zone. The pipe zone shall include the full width of the trench from six (6) inches below the barrel of the pipe to twelve (12) inches above the barrel of the pipe.

4.02 MATERIALS

A. Joints. Pipe joints shall be push-on joints. Fitting joints shall be mechanical or push-on joint ends, except where specifically shown or detailed otherwise.

B. Push-on Joint Pipe. Push-on joint pipe shall be cement mortar lined and conform to USAS A21.4 and USAS A21.11. The type and thickness class shall be 52 for ductile iron pipe unless otherwise approved by the City Engineer. The rubber ring gaskets shall conform to USAS A21.11, be suitable for the specified pipe sizes and pressures, and shall be furnished with the pipe. A nontoxic vegetable soap lubricant shall be supplied in sufficient quantities for installing the pipe furnished. Pipe for this project shall be supplied by the owner. See SPECIAL PROVISIONS.

C. Push-on or Mechanical Joint Cast Iron Fittings. Fittings shall be gray iron push-on joint fittings, pressure rating 350.

TECHNICAL PROVISIONS

D. Gaskets. Gasket material for flanged joints in cast iron pipe shall be cloth-inserted sheet rubber gaskets conforming C-111 to AWWA, and USAS 816.21, 1/8-inch thick. The gasket shall be full-cut, with holes to pass bolts. Gasket material shall be free from corrosive alkali or acid ingredients.

E. Pipe Zone. Material in the pipe zone shall consist of 3/4"-0" crushed rock, having reasonable even graduation from coarse to fine, same as Select Trench Backfill.

F. Foundation Stabilization. Imported material shall be Select Backfill material.

4.03 WORKMANSHIP

A. Preparation of Trench.

1. Grade. 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 gravel cushion when specified or indicated. Before laying each section of the pipe, check the grade with a straightedge and correct any irregularities found. The trench bottom shall form a continuous and uniform bearing and support for the pipe at every point between bell holes, except that the grade may be disturbed for the removal of lifting tackle.

2. Bell (Joints) Holes. At the location of each joint, dig bell (joint) holes of ample dimensions in the bottom of the trench and at the sides where necessary to permit the joint to be made properly and to permit easy visual inspection of the entire joint.

3. Removal of Water. Provide and maintain ample means and devices at all times to remove and dispose of all water entering the trench excavation during the process of pipe laying.

B. Laying Pipe.

1. Handling Material. Provide and use proper implements, tools, and facilities satisfactory to the Engineer for the safe and convenient prosecution of the work. Lower all pipe, fittings, and appurtenances into the trench, piece by piece, by means of a crane, ropes, or other suitable tools or equipment, in such a manner as to prevent damage to the pipeline materials and protective coatings and linings. End hooks must be protected with rubber cushions where contact is made with the pipe's interior lining. Do not drop or dump pipe line materials into the trench.

2. Cleaning Pipe and Fittings. Remove all lumps, blisters, and excess coal-tar coating from the bell-and-spigot ends of each pipe. Wire brush the outside of the bell-and-spigot ends of each pipe. Wire brush the outside of the spigot and the inside of the bell and wipe clean, dry, and free from oil

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and grease before the pipe is laid.

Wipe the ends of mechanical joint pipe and fittings and of rubber gasket joint pipe and fittings clean off all dirt, grease, and foreign matter.

3. Placing of Pipe in the Trench. Do not allow foreign material to enter the pipe while it is being placed in the line. If the pipe laying crew cannot put the pipe into the trench and in place without getting earth into the pipe, the engineer may require that a heavy, tightly woven canvas bag of suitable size be placed over each end before lowering the pipe into the trench and left there until the connection is to be made to the adjacent pipe. During laying operations, prevent debris, tools, clothing, or other materials from entering the pipe.

4. Push-on Joint Pipe. After the first length of push-on joint pipe is installed in the trench, secure pipe in place with approved backfill material tramped under and along sides to prevent movement. Keep ends clear of backfill. After each section is joined, place backfill as specified to prevent movement.

5. Preventing Trench Water or Animals from Entering Pipe. At times when pipe laying is not in progress, close the open ends of pipe by a watertight plug or other means approved by the Engineer, and allow no trench water or animals to enter the pipe. If water is in the trench keep the seal in place until the trench is pumped dry.

6. Bell End to Face Direction of Laying. Unless otherwise directed, lay pipe with bell end facing in the direction of the laying.

For lines on an appreciable slope, face bells upgrade (at the discretion of the Engineer).

7. Permissible Deflection at Joints. Wherever it is necessary to deflect pipe from a straight line, either in the vertical or horizontal place, to avoid obstructions or plumb stems, or where long-radius curves are permitted, the amount of deflection allowed shall not exceed that approved by the Engineer.

8. Alignment. For pipelines intended to be straight, do not deviate from the straight line at any joint in excess of one inch.

9. Unsuitable Conditions for Laying Pipe. Do not lay pipe in water or when, in the opinion of the Engineer, trench conditions are unsuitable.

10. Material in Pipe Zone. Pipe zone material shall be placed, in a manner approved by the Engineer, simultaneously on both sides of pipe in lifts not to exceed six (6) inches. Each lift shall be "walked in" and supplemented by slicing with a shovel to assure that all voids around the pipe have been completely filled.

TECHNICAL PROVISIONS

11. Installation of Ductile Iron Retainer Glands on Mechanical Joint Fittings. Install in accordance with the pipe manufacturer's printed instructions. Use torque wrench for correct tightening of set screws.

Torque range to be applied to bolts and wrench lengths which should produce the required torque when applied by the average man should be as follows:

<u>Diameter of Bolt-In</u>	<u>Torque Range Ft.-Lbs.</u>	<u>Wrench Length - In</u>
5/8"	40 - 60	8
3/4"	60 - 90	10
1"	70 - 100	12
1-1/4"	90 - 120	14

When tightening bolts, bring the gland up toward the flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. Tighten all nuts progressively a little at a time. Do not overstress bolts to compensate for poor alignment. If effective sealing is not attained at the maximum torque, disassemble the joint and reassemble after cleaning.

12. Jointing Push-on Joint Pipe. Lay and joint pipe with push-on type joints in strict accordance with the manufacturer's recommendations as approved by the Engineer. Provide all special tools and devices, such as special jacks, chokers, and similar items required for the installation. Lubricant for the pipe gaskets shall be furnished by the pipe manufacturer, and no substitutes will be permitted under any circumstances.

C. Cutting Pipe.

1. General. Cut pipe for inserting valves, fittings, or closure pieces in a neat and workmanlike manner without damaging the pipe or lining and so as to leave a smooth end at right angles to the axis of the pipe.

2. Ductile Iron Pipe. Cut pipe with milling-type cutter or diamond carbide saw only. Do not flame cut.

3. Dressing Cut Ends. Dress cut ends of pipe to remove sharp edges or projections which may damage the rubber gasket and bevel cut ends of push-on joint pipe as recommended by the manufacturer.

D. Anchorage.

1. Thrust Blocking. Provide reaction or thrust blocking as shown. The concrete mix shall not be leaner than 1 part cement, 2-1/2 parts sand, 5 parts stone. The concrete shall have a compressive strength of not less than 3,000 pounds per square inch. Place blocking between the undisturbed ground and the

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fitting to be anchored. The quantity of concrete and the area of bearing on the pipe shall be as shown or as directed by the Engineer. Place the blocking so that the pipe and fitting joints will be accessible to repairs, unless otherwise shown.

2. Metal Harness. Metal harness of adequate strength to prevent movement may be used instead of concrete blocking only when directed by the Engineer. Hot-dip galvanized metal harness after fabrication and cover with asphalt or furnish with comparable corrosion protection.

E. Hydrostatic Tests. Make pressure and leakage tests on all newly laid pipe. Furnish all necessary equipment and materials, make all taps in the pipe as required, and conduct the tests. The Engineer will monitor the tests.

Furnish the following equipment and materials for the tests:

- 2 Approved graduate containers.
- 2 Pressure gauges
- 1 Hydraulic force pump as approved by the Engineer
- Suitable hose and suction pipe as required

Conduct the tests after the trench has been backfilled or partially backfilled with the joints left exposed for inspection, or when completely backfilled, as permitted by the Engineer. Where any section of pipe is provided with concrete reaction blocking, do not make the pressure test until at least five (5) days have elapsed after the concrete thrust blocking is installed. If high-early cement is used for the concrete thrust blocking, the time may be cut in two (2) days.

Conduct the pressure test in the following manner, unless otherwise approved by the Engineer: After the trench has been backfilled or partially backfilled as hereinbefore specified, fill the pipe with water. The test pressure shall be 150 pounds per square inch.

1. Duration. The duration of each pressure test shall be 60 minutes, unless otherwise directed by the Engineer.

2. Expelling Air. Before applying the specified test pressure, expel all air from the pipe.

3. Procedure. Fill the pipe with water and apply the specified test pressure by pumping, if necessary. Then valve off the pump and hold the pressure in the line for the test period. At the end of the test period, operate the pump until the test pressure is again attained. The pump suction shall be in a barrel or similar device, or metered so that the amount of water required to restore the test pressure may be measured accurately.

4. Leakage. Leakage shall be defined as the quantity of water

TECHNICAL PROVISIONS

necessary to restore the specified test pressure at the end of the test period. No pipe installation will be accepted if the leakage is greater than the number of gallons per hour as determined by the following formula:

$$L = \frac{SD P}{133,200}$$

L = allowable leakage in gallons per hour
S = length of pipe tested, in feet
D = nominal diameter of pipe, in inches
P = average test pressure during the leakage test in pounds per square inch (gauge)

5. Correction of Leakage. Should any test of pipe laid disclose leakage greater than that allowed, locate and repair the defective joints or pipe until the leakage of a subsequent test is within the specified allowance.

F. Sterilization. (Chlorination). Pipe lines intended to carry potable water shall be sterilized before placing in service. Sterilizing will be performed by the Contractor. The Contractor shall bear the responsibility of making taps and maintaining open trenches until a satisfactory laboratory analysis has been obtained by the Contractor.

1. Flushing Completed Pipe Lines. The main shall be thoroughly flushed following the pressure test and before chlorination. It must be understood that flushing removes only the lighter solids and cannot be relied upon to remove heavy materials allowed to enter the pipe.

Where a hydrant is not installed at the end of the main, a blow off must be provided that is large enough to develop a scouring velocity in the main of at least 2.5 feet per second. Where facilities are available a scouring velocity of 4 feet per second is recommended. (See Table #1 for opening required to develop scouring velocities of 2.5 and 4 feet per second).

Mains greater than 16 inches in diameter may be difficult to flush at a scouring velocity and therefore the preliminary inspection and precautions to prevent contamination from entering the pipe line must be rigidly enforced.

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TABLE I

Required Openings to Flush Pipelines
(40-psi Pressure)

2.5-fps Flushing Velocity					4-fps Flushing Velocity		
Pipe Size	Flow GPM	Orifice Size	No.	Hydrant Openings Size-In.	Flow GPM	No.	Hydrant Openings Size-In.
4	100	15/16	1	2-1/2	160	1	2-1/2
6	220	1-3/8	1	2-1/2	350	1	2-1/2
8	390	1-7/8	1	2-1/2	630	1	2-1/2
10	610	2-5/16	1	2-1/2	980	1	2-1/2
12	880	2-13/16	1	2-1/2	1,400	2	2-1/2
14	1,200	3-14	2	2-1/2	1,920	2	2-1/2
16	1,565	3-5/8	2	2-1/2	2,510	3	2-1/2
						or: 1	4-1/2
18	1,980	4-3/16	2	2-1/2	3,180	3	2-1/2

2. Chlorination of Pipelines. Before being placed into service, all new mains, repaired portions or extensions must be chlorinated so that a chlorine residual of at least 10 parts per million remains in the water after 24 hours standing in the pipe. This residual may ordinarily be expected with an initial application of 25 parts per million although some conditions may require more. Ineffective preliminary flushing of the main may require a larger application of chlorine to produce the desired residual.

3. Form of Applied Chlorine. Methods of applying chlorine to a main are listed below in order of preference:

- Liquid chlorine gas - water mixture.
- Direct chlorine feed (dry gas).
- Calcium or sodium hypochlorite and water mixture.
- Chlorinated lime and water mixture.

Note: The practice of adding a small amount of chlorine powder or tablets at each joint as the main is being laid is not an acceptable method of chlorinating a pipe line. The procedure does not permit preliminary flushing nor does it provide uniform chlorine distribution.

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4. The Use of Liquid Chlorine (Gas). A chlorine gas-water mixture shall be applied by means of a solution feed chlorinating device or dry gas may be fed directly through proper devices for regulating the rate of flow and providing effective diffusion of the gas into the water within the pipe being treating. Chlorinating devices for feeding solution of chlorine gas or the gas itself must provide means for preventing the backflow of water into the chlorine cylinder. Feeding of dry gas is limited to main pressures of less than 10 psi.

5. Chlorine-Bearing Compounds. A mixture of water and a chlorine-bearing compound of known chlorine content may be used. Acceptable compounds are calcium or sodium hypochlorite and chlorinated lime. These compounds should be mixed with water to yield a 1% chlorine solution according to Table 2.

TABLE 2

<u>Product</u> <u>Gal.</u>	<u>Amount of</u> <u>Compound</u>	<u>Quantity of</u> <u>Water -</u>
High-test calcium hypochlorite (65-70% Cl)	1 lb.	7.50
Chlorinated Lime (32-35% Cl)	2 lb.	7.50
Liquid Laundry Bleach (5.25% Cl)	1 lb.	4.25
Concentrated Liquid Bleach (15% Cl)	1 gal.	14.00

Note: Calcium hypochlorite or bleaching powder should be made into a paste and then thinned to a 1% chlorine solution.

TABLE 3

Chlorine Requirements for 100-ft. Lengths of
Various Sizes of Pipe

Pipe Size In.	Volume of 100-ft. Length gal.	<u>Amount Required to</u> <u>Give 25 ppm Cl</u>	
		100% Chlorine lb.	1% Chlorine Water Solution gal.

TECHNICAL PROVISIONS

4	65.3	0.0135	1/6
6	146.5	0.0305	3/8
8	261.0	0.054	2/3
10	408.0	0.085	1
12	588.7	0.120	1-1/2

6. Point of Application. The preferable point of application of the chlorinating agent is at the beginning of the pipeline or any valved section and through a corporation stop in the top of the pipe. The water injector for delivery of the gas-water mixture into the pipe should be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension. Chlorine-bearing compounds should be pumped or ejected into the pipe as a 1% solution under the same conditions as above.

Valves should be manipulated so that the strong chlorine solution in the new pipe will not flow back into the supply line.

7. Rate Application. Water from the existing distribution system shall be controlled so as to flow slowly into the main to be chlorinated. The feed rate of the chlorine mixture shall be in such proportion to the rate of flow of water entering the pipe that at least 10 ppm residual may be obtained after 24 hours. (The initial application should be at least 25 ppm).

8. Retention Period. Treated water shall be retained in the pipeline long enough to destroy all non-spore forming bacteria. This period should be at least 24 hours and chlorine residual of at least 10 ppm through the line should be obtained at the end of the retention period.

Note: Shorter retention periods with increased chlorine concentrations may be used under certain circumstances. Prior approval must be obtained from the State Board of Health when shorter retention periods are necessary.

9. Chlorinating Valves and Hydrants. In the process of chlorinating pipelines, all valves should be operated while the pipeline is filled with chlorinating agent.

10. Final Flushing and Bacteriological Tests. Following a retention period of 24 hours, all treated water in the main shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water is of the same quality normally served from the distribution system. The satisfactory quality of water delivered from the new main must be verified by bacteriological samples collected from points along the new main. Samples should not be collected from unsterilized hoses or fire hydrants.

TECHNICAL PROVISIONS

11. Repetition of Procedure. Should the initial treatment fail to yield satisfactory bacteriological results, the original chlorination and flushing procedure must be repeated and additional samples collected.

12. Procedure when Repairing or Cutting into Existing Mains. Whenever an old line is opened by accident or design, the excavation is always wet and frequently badly contaminated. Where the main has been partially or totally dewatered that section of the main must be chlorinated and flushed the same as a new main. In the event that water service cannot be disrupted to provide the full 24 hour retention period, an application of 100 ppm of chlorine may be used with a retention period of one hour followed by flushing.

13. Summary of Chlorination Procedure.

a. In order to avoid creating air pockets in the line which cannot be effectively chlorinated, start with the pipeline full of water following flushing operations.

b. Open the supply valve ahead of the new work wide open, and then immediately open the valve at the discharge end of the new pipe under pressure.

c. Feed chlorine into the pipeline ahead of the new work at a rate calculated to give approximately 25 parts per million for the regulated flow through the pipe.

d. Continue feeding chlorine until the discharge water shows approximately 25 ppm chlorine as indicated by a deep reddish-brown color development upon adding orthotolidine reagent or until the required amount of chlorine, as calculated, has been introduced into the pipe. (It is a good idea to open and close all valves in the new pipe system several times while the chlorine is being fed.)

e. Close both valves; discharge valve first and then the supply valve immediately after to maintain pressure in the line.

f. The chlorinated water must be held in the pipeline for a period of 24 hours and a chlorine residual of at least 10 ppm should be obtained throughout the new line at the end of the retention period.

g. Following the retention period the new line must be thoroughly flushed and bacteriological samples collected.

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SECTION 5.00 VALVES AND VALVE BOXES

5.01 GENERAL

This section covers the work necessary for installing valves and valve boxes, complete.

5.02 MATERIALS

A. Gate Valves. Valves shall be iron body, bronze mounted, double disc, parallel seat NRS valves with o-ring seals, and shall open when the stem is rotated counterclockwise. Unless otherwise shown, valves shall have a 2-inch square wrench nut. Valve ends and valve size shall be shown. Valves shall conform to AWWA C500.

B. Butterfly Valves. Butterfly valves shall be of the tight closing, rubber seat type. No metal to metal sealing surfaces are permitted. Valve discs shall rotate 90° from the fully open position to the tight such position and shall open with a counterclockwise rotation of the 2-inch square wrench nut. Valve ends and valve sizes shall be as shown. Butterfly valves shall comply in all respects with AWWA C504, Class 150-B.

Jointing materials for mechanical joints or push-on joint for cast iron pipe shall conform to AWWA C111. Joining materials for flanged joints shall consist of 1/8-inch thick, full-face, rubber gaskets conforming to Section 7 or AWWA C207. Bolts and nuts shall conform to Section 8 of AWWA C207.

C. Valve Boxes. Valve boxes shall be 2-piece sliding type, cast iron with 5-1/4 inch shaft. The word "Water" shall be cast into the top of the lid. Extension pieces, if required, shall be the manufacturer's standard type for use with the valve box.

Where the pipe cover is more than 4 feet, operating extensions shall be provided to bring the operating nut to a point 18 inches below the surface of the ground to pavement. The extension stem shall be constructed of steel.

5.03 WORKMANSHIP

A. Valves. Before installation, the valves shall be thoroughly cleaned of all foreign material, and shall be inspected for proper operation, both opening and closing, and to verify that the valves seat properly. Valves shall be installed in accordance with Standard Drawing W-4.

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Faces of flanges shall be cleaned thoroughly before flanged joint is assembled. After cleaning, the gasket shall be inserted and the nuts tightened uniformly around the flange. If flanges leak under test, the nuts shall be loosened, the gasket reset or replaced, the nuts retightened, and the valve and/or pipeline retested.

B. Valve Boxes. Center the valve boxes and set plumb over the wrench nuts of the valves. Set valve boxes so that they do not transmit shock or stress to the valves. Set the valve box covers flush with the surface of the finished pavement as shown, or such other level as may be ordered by the engineer. Cut extensions to the proper length so that the valve box does not ride on the extension when set at grade.

Place backfill around the valve boxes and thoroughly compact to a density equal to that of the undisturbed ground or the adjacent trench, whichever is the highest requirement, and in such a manner that will not damage or displace the valve box from proper alignment or grade. Misaligned valve boxes shall be excavated, plumbed, and backfilled.

SECTION 6.00 FIRE HYDRANTS, FIRE HYDRANT STUBS AND BLOWOFFS

6.01 GENERAL

This section covers the work necessary for installing the fire hydrant, relocating existing hydrants where shown, and removing and salvaging existing hydrants where shown, complete.

6.02 MATERIALS

A. Hydrants. Nominal 5-inch main valve opening with 6-inch flanges bottom connection. Equip with two 2-1/2 inch host nozzles and one 4-1/2 inch pumper nozzle. Operating nut shall be 1-1/2 inch National Standard pentagon nut. The main valve shall be equipped with o-ring seals and shall open when turned to the left or counterclockwise. Hydrants shall be of the break flange or safety-top type. Hydrants shall conform to AWWA C502 and this Specification. The depth of bury shall be 3 feet. Nozzle threads shall be American National Standard. The inlet connection shall be flanged. Fire hydrants shall be Iowa brand "cory style" or approved equal to match the existing system.

B. Base Block. Solid precast concrete pier block having nominal dimensions of 16" x 16" x 8" high.

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C. Gravel for Drainage. Graded river gravel free of organic matter, sand, loam, clay, and other small particles that will tend to restrict water flow through the gravel.

D. Concrete for Blocking. Concrete for blocking shall have a twenty-eight day compressive strength minimum of 3,000 psi. Engineer shall approve quality of materials prior to their use.

E. Blow Off Units. Blow off units shall conform to Standard Drawing W-6. The blow off unit shall be placed as shown in the details, securely blocked with concrete as required, and having not less than two (2) cubic feet of clean drain gravel.

Placing of the blow off unit shall include transporting, assembling, and placing of the complete unit, blocking and drain gravel in a suitable excavation plus backfill and servicing.

6.03 WORKMANSHIP

Construction and installation shall conform to provisions of Section 11 and 12 of AWWA 0600, except where otherwise specified.

A. Location and Position. Locate as shown or directed so as to provide complete accessibility and minimize the possibility of damage from vehicles or injury to pedestrians. Improperly located hydrants shall be disconnected and relocated at the Contractor's expense.

When placed behind the curb, set hydrant barrel so that no portion of the pumper or hose nozzle cap will be less than 24 inches from the gutter face of the curb. See Standard Drawing No. W-4.

When set in lawn space between curb and sidewalk, or between sidewalk and property line, let no portion of the hydrant or nozzle cap be within 24 inches of the sidewalk.

Set all hydrants plumb and nozzles parallel with, or at right angles to, the curb with the pumper nozzle facing the curb. Set hydrants so that safety flange is a minimum of 2 inches above finished ground or sidewalks level to clear bolts and nuts, and as directed.

B. Excavation. Do not carry below sub-base grade. Refill over-excavated areas with crushed rock and hand tamp to provide firm foundation.

C. Base Block. Place on firm, level sub-base to assure uniform support.

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D. Hydrants. Place carefully to prevent the base blocking from breaking. When cast iron pipe is used joining procedures shall conform to Section 9 of AWWA C600, except that cement joints shall not be used.

After hydrant is in place and connected to the pipe line, place temporary blocks to maintain the hydrant in a plumb position during subsequent work.

E. Gravel for Drainage. Place around base block and hydrant bottom after hydrant has been blocked in its final position and hydrant is joined to pipe. Concrete thrust block shall have a minimum of 4 square feet of bearing area against undisturbed earth.

F. Concrete Thrust Blocking. Place after hydrant is blocked in its final position and hydrant is joined to pipe. Concrete thrust block shall have a minimum of four square feet of bearing area against undisturbed earth.

G. Relocating Existing Hydrants. Remove existing hydrant and auxiliary valve. Reinstall hydrant and valve as specified above. Provide gravel, base block, thrust blocking, and other miscellaneous materials, as required.

SECTION 7.00 WATER SERVICE CONNECTIONS

7.01 GENERAL

The Contractor shall install services complete from the main to the meter box locations, as shown on the plans.

Backfill material in the pipe zone shall be fine excavated material or sand. Backfill above the pipe zone shall be approved pit run gravel within the street improvement and two feet behind the curbs, and shall be firmly compacted. Service connections shall be made by a single strap service saddle and the main tapped and a bronze corporation stop installed. See Standard Drawing No. W-2.

7.02 MATERIALS

A. Meter Boxes. Meter boxes shall be Brooks Concrete Meter Box #4, three piece concrete box with cast iron lid reading Water as manufactured by Brooks Products or approved equal; these meter boxes shall be installed where single meters are required.

B. Corporation Stops. A corporation stop shall be installed on the main for each service. The corporation stop shall be 1" Ford for double

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services, and 3/4" Ford for single services, or approved equal. All corporation stops shall comply with AWWA specifications. See Standard Drawing No. W-1.

C. Curb Stop. A curb stop shall be installed in each meter box. The curb stop shall be 3/4" angle meter stop Ford, or approved equal, with locking wing type. All curb stops shall comply to AWWA Specifications. See Standard Drawing No. W-1.

Section 8.00 SURFACE RESTORATIONS

8.01 GENERAL

This section covers the work necessary for all required replacement of pavement, complete.

8.02 MATERIALS

A. Rock for Surface Replacement. Rock shall be 3/4"-0" crushed rock.

B. Asphalt Concrete. Hot-plant mix with maximum 3/4-inch aggregate, conforming to Section 403 of the Standard Specifications for Highway Construction of the Oregon State Highway Department, 1984 edition, for the class of asphalt specified.

Asphalt cement shall be 85-100 penetration paving asphalt conforming to AASHTO M 20.

C. Asphalt Prime and Tack. Liquid asphalt for use as prime or tack coat under asphalt concrete shall be RC-70 to MC-70 liquid asphalt.

D. P.C. Concrete. Concrete for curbs, sidewalks, pavement, and miscellaneous construction shall conform to ASTM C95, Alternate 2, and shall have a design mix proportioned for 3,000 pounds per square inch compressive strength at 28 days. Concrete mix shall contain no less than 5-1/2 sacks of cement per cubic yard.

8.03 WORKMANSHIP

A. Construction Procedure. The Engineer reserves the right to vary the classes of backfill and the type of resurfacing as best serves the interest of the Owner. Trench backfill shall be as specified in SECTION 3.00 TRENCH EXCAVATION AND BACKFILL.

TECHNICAL PROVISIONS

B. Progress of Construction. Complete surface restoration not more than 5 calendar days after compaction of the backfilling of the trench.

C. Removal of Pavement. Removal of all pavement shall conform to SECTION 3.00 TRENCH EXCAVATION AND BACKFILL.

D. Street Maintenance. Maintain all trenches as specified under SECTION 3.00 TRENCH EXCAVATION AND BACKFILL.

E. Asphalt Concrete Pavement Replacement.

1. Subgrade. Bring the trench to a smooth, even grade not less than 3 inches below the top of the existing pavement surface. Trim existing pavement to a straight line to remove any pavement which has been damaged or which is broken and unsound to provide a smooth, sound edge for joining the new pavement.

Compact the subgrade to 95 percent relative density. Accomplish supplementary compaction where required with approved mechanical vibrating or power tampers.

2. Prime Coats. After the subgrade has been compacted apply as an asphalt prime coat, specified above, at 0.25 to 0.40 gallons per square yard to the surface of the subgrade and to the edges of the existing pavement.

3. Asphalt Concrete. After the prime coat has set, but before it loses its adhering qualities, place the asphalt concrete on the prepared subgrade over the trench to a depth of not less than 3 inches or the depth of the adjacent pavement whichever is the greater unless otherwise directed. If the thickness is greater than 3-1/2 inches, place the surfacing in 2 lifts. Spread and level the asphalt concrete with hand tools or by use of a mechanical spreader, depending upon the area to be paved. Bring the asphalt concrete to the proper grade and compact by rolling, or use hand tampers where rolling is impossible.

Roll with power rollers capable of providing compression of 350 pounds per linear inch. Begin the rolling at the edges of the patch overlapping the existing surface at least 1/2 the width of the roller and progress toward the center of the resurfaced area. Overlap each preceding track by at least 1/2 the width of the roller and make sufficient passes over the entire area to produce the desired result, as determined by the Engineer.

4. Surface Smoothness. The surface smoothness of the replaced pavement shall be such that when a straightedge is laid across the patched area between

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the edge of the old surfacing and the surface of the new pavement, the new pavement shall not deviate from the straightedge more than 1/4 inch. Any settlement within one year maintenance period will be restored to proper grade.

5. Weather Conditions. Resurfacing will be permitted only during dry weather and while trench conditions are satisfactory for pavement replacement. Exceptions will be permitted only in special cases and only with approval of the Engineer.

6. Protection of Structures. Provide whatever protective coverings may be necessary to protect the exposed portions of bridges, culverts, curbs, gutters, posts, guard fences, road signs and other structures from splashing oil and asphalt from the paving operations. Remove any oil, asphalt, dirt, or any other undesirable matter than may come upon these structures by reason of the paving operations.

Where water valve boxes, manholes, catch basins, or other underground utility appurtenances are within the area to be surfaced, the resurfacing shall be level with the top of the existing finished elevation of these facilities. If it is evident that these facilities are not in accordance with the proposed finished surface, notify the Engineer to have the proper authority contacted in order to have the facility altered before proceeding with the resurfacing around the obstruction.

7. Excessive Materials and Contractor's Responsibility. Dispose of excess materials. Repair all settlement of pavement over Class B backfilled trenches within the warranty period at no additional cost to the Owner.

F. Rock Surfacing. As indicated hereinbefore, replacement of existing rock surfaced areas will be accomplished by backfill and compaction of the entire trench with 3/4"-0 crushed rock. All existing graveled service areas will be backfilled with 3/4"-0" crushed rock. Existing rock surfacing shall be restored to its original condition with 3/4"-0", the areas covered and depth of application shall be as directed by the Engineer. Spread the material by "tailgating" and supplement by hand labor where necessary. Level and grade the rock to conform to existing grades and surfaces.

G. Sidewalks, Curbs and Driveways. Replace sidewalks, curbs, and driveways to the section, width, depth, line and grade as required by the Engineer. On private property or in other areas not under the jurisdiction of a public agency the replacement work shall match the existing walk, curb, driveway, etc. in quantity, quality, and finished appearance. Replace sidewalks to the same section width, depth, and to the same line and grade as that removed or damaged. Prior to replacing the sections, properly backfill

TECHNICAL PROVISIONS

and compact the trench to prevent subsequent settlement. Use a minimum 2-inch thick compacted leveling course of clean 3/4"-0" rock or gravel under all sidewalks. Place concrete continuously to avoid separation of ingredients. Finish all discontinuous edges with suitable edging tool. Replace concrete sidewalks between scored joints, and make replacement in a manner which will avoid a patched appearance. Finish sidewalks similar to the existing and abutting areas.

Tunneling under sidewalks is optional. However, should any subsequent cracking, subsidence, or any other indication of failure occur within the warranty period, the damaged section shall promptly be replaced by the Contractor.

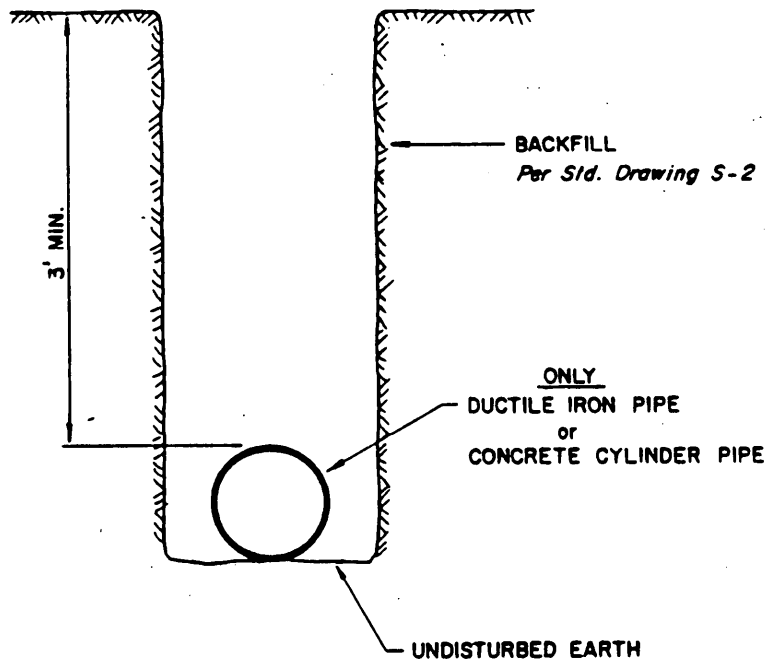
H. Saw Cutting. All trench excavation in hard surfaced areas (asphalt or cement) shall be saw cut common width for the length of the trench prior to paving. It shall be the contractor's responsibility to protect freshly sawn hard surfaced areas against damage until paving material has been placed.

STANDARD DRAWINGS

NEWBERG WATER SYSTEM IMPROVEMENTS

CITY OF NEWBERG, OREGON

CLASS 'D'



PIPE BEDDING

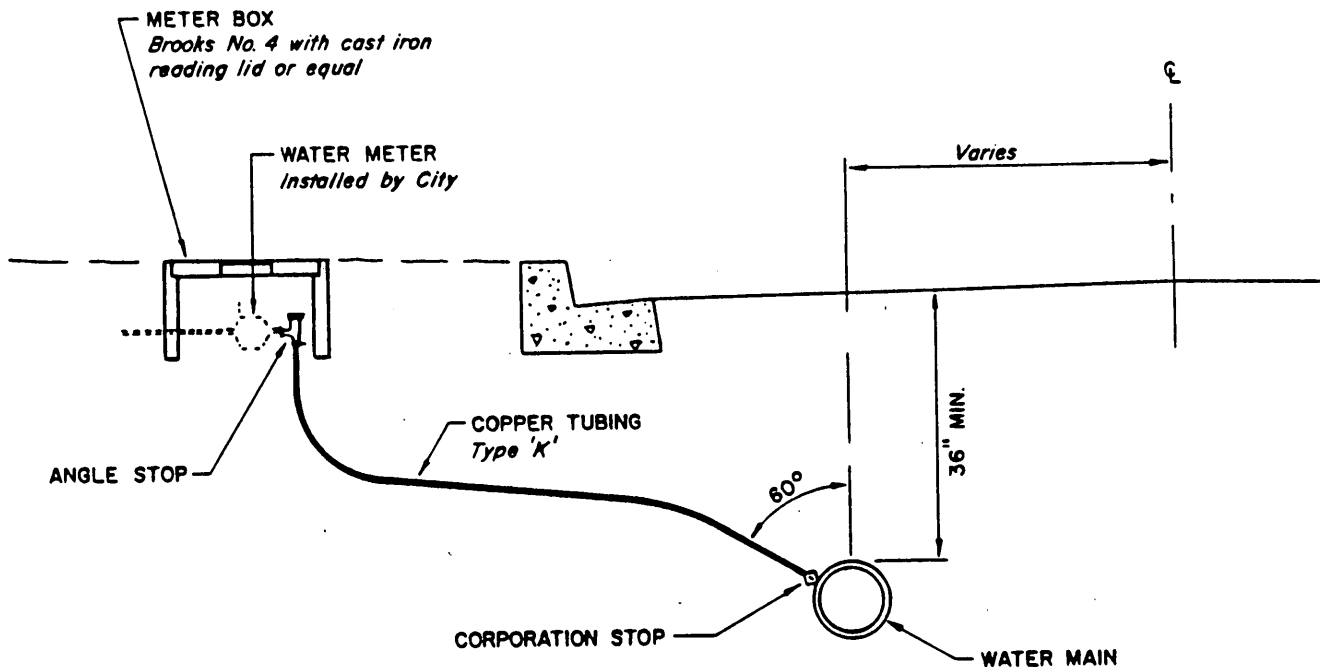
ENGINEERING DEPT.

CITY of NEWBERG

STANDARD
DRAWING NO.

W-1

REVISIONS



WATER METER LOCATIONS

SIDEWALK	LOCATION
TYPE 'A'	Adjacent to sidewalk between curb and sidewalk
TYPE 'B'	7' from face of curb
NONE	Adjacent to curb

NOTES

1. Compression type fittings shall be Mueller 110.
2. Corporation Stops and Angle Stops shall be Ford Brass or equal.
3. For location of water main, see Std. Drawings M-7 to M-15.

WATER SERVICE

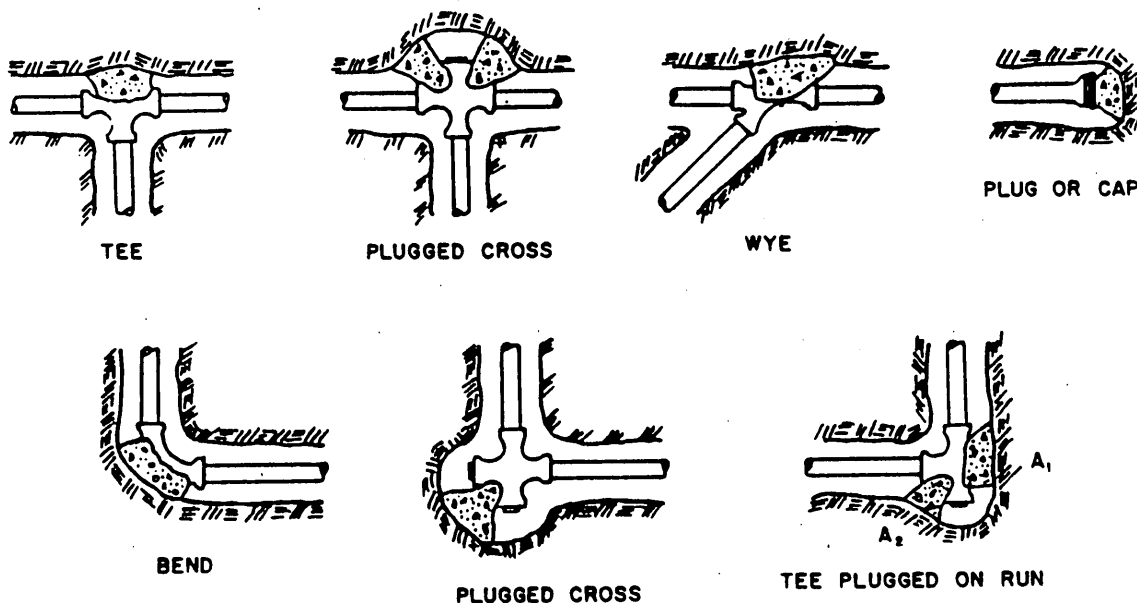
ENGINEERING DEPT.

CITY of NEWBERG

STANDARD
DRAWING NO.

W-2

REVISIONS



BEARING AREA OF THRUST BLOCK (in sq. ft.)

FITTING SIZE (in.)	TEE, WYE, PLUG or CAP	90° BEND, PLUGGED CROSS	TEE PLUGGED ON RUN		45° BEND	22½° BEND	11½° BEND
			A ₁	A ₂			
4	1.0	1.4	1.9	1.4	1.0	-	-
6	2.1	3.0	4.3	3.0	1.6	1.0	-
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0
10	5.9	8.4	11.8	8.4	4.6	2.4	1.2
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7
14	11.5	16.3	23.0	16.3	8.9	4.6	2.3
16	15.0	21.3	30.0	21.3	11.6	6.0	3.0
18	19.0	27.0	38.0	27.0	14.6	7.6	3.8
20	23.5	33.3	47.0	33.3	18.0	9.4	4.7
24	34.0	48.0	68.0	48.0	26.2	13.6	6.8

NOTES

- Concrete shall be poured against undisturbed earth.
- Concrete shall be kept clear of joint and accessories.
- The required thrust bearing area for special connections is shown encircled on the plans. For example, (15) indicates 15 SQ. FT. bearing area required.
- If not shown on plans, required bearing area at fitting shall be as indicated above, adjusted if necessary to conform to the test pressures and allowable soil bearing stresses stated in the special specifications.
- Bearing areas and special blocking details shown on the plans shall take precedence over this standard.
- Above bearing areas are based on a test pressure of 150 P.S.I. and an allowable soil bearing stress of 2000 LBS./SQ. FT. To compute bearing areas for different test pressures and soil bearing stresses, use the following equation:

$$\text{BEARING AREA} = \text{TABLE VALUE} \times \frac{\text{TEST PRESSURE}}{150} \times \frac{2000}{\text{SOIL BEARING STRESS}}$$

THRUST BLOCKING

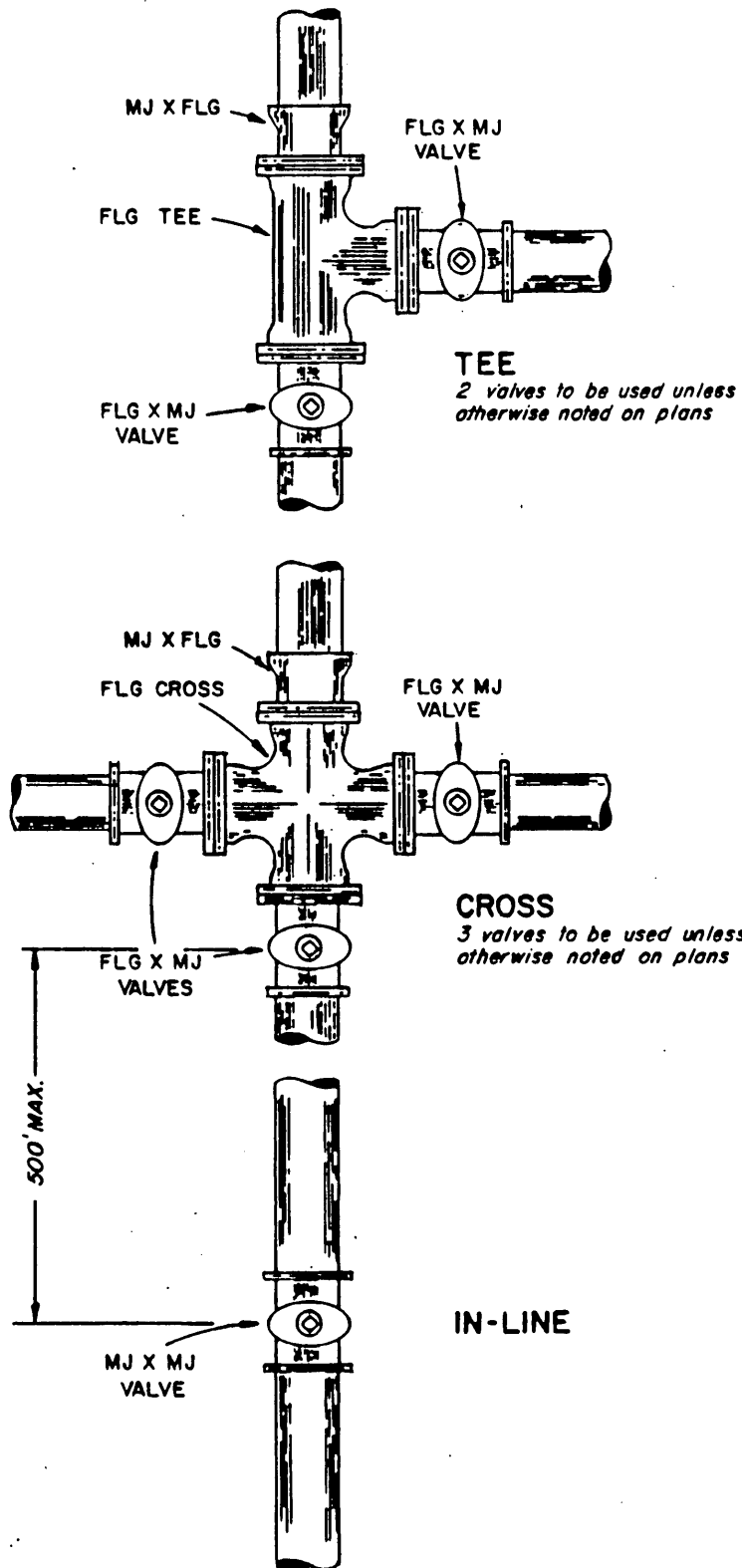
ENGINEERING DEPT.

CITY of NEWBERG

STANDARD
DRAWING NO.

W-3

REVISIONS



VALVE LOCATIONS

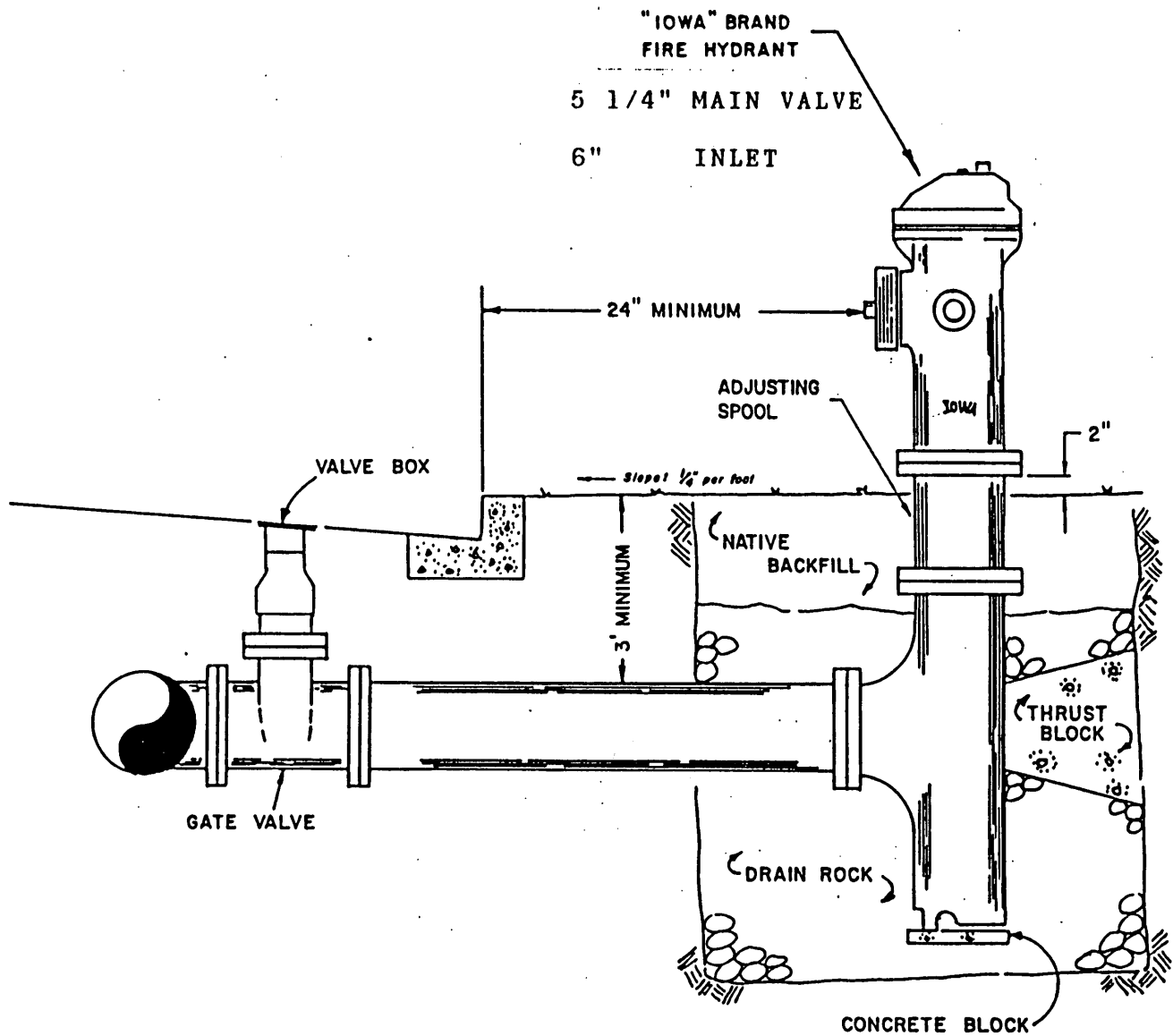
ENGINEERING DEPT.

CITY of NEWBERG

STANDARD
DRAWING NO.

W-4

REVISIONS



NOTES

1. Hydrant to have 2 - 2 1/2" openings and 1 - 4 1/2" opening (NST)
2. 6" Minimum pipe size supplying hydrant
3. Flange fittings standard. Mechanical joint hydrant and MJ x FLG valve may be used, if valve to hydrant distance is greater than 10'.
4. Adjusting Spool not to be used on new construction where finished grade is known.

FIRE HYDRANT

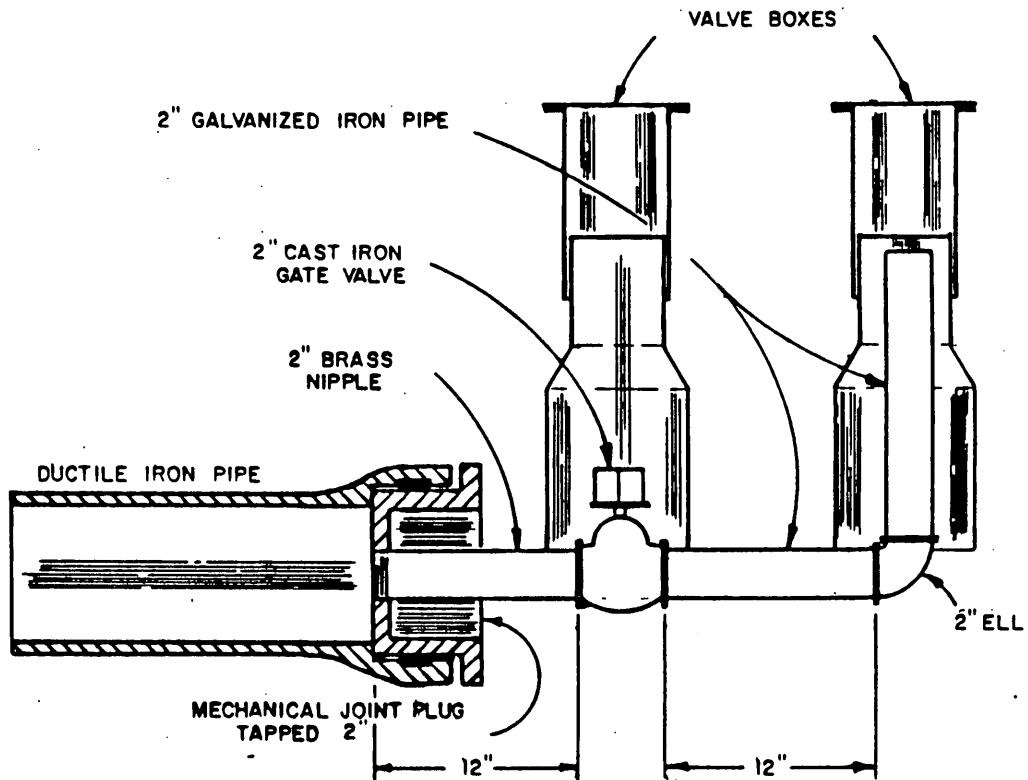
ENGINEERING DEPT.

CITY of NEWBERG

STANDARD
DRAWING NO.

W-5

REVISIONS



NOTES

1. Coat all galvanized pipe or exposed steel with protective coating conforming to AWWA C 203
2. Restrain mechanical joint plug to pipe
3. This standard applicable for pipe sizes thru 8"

BLOW-OFF ASSEMBLY

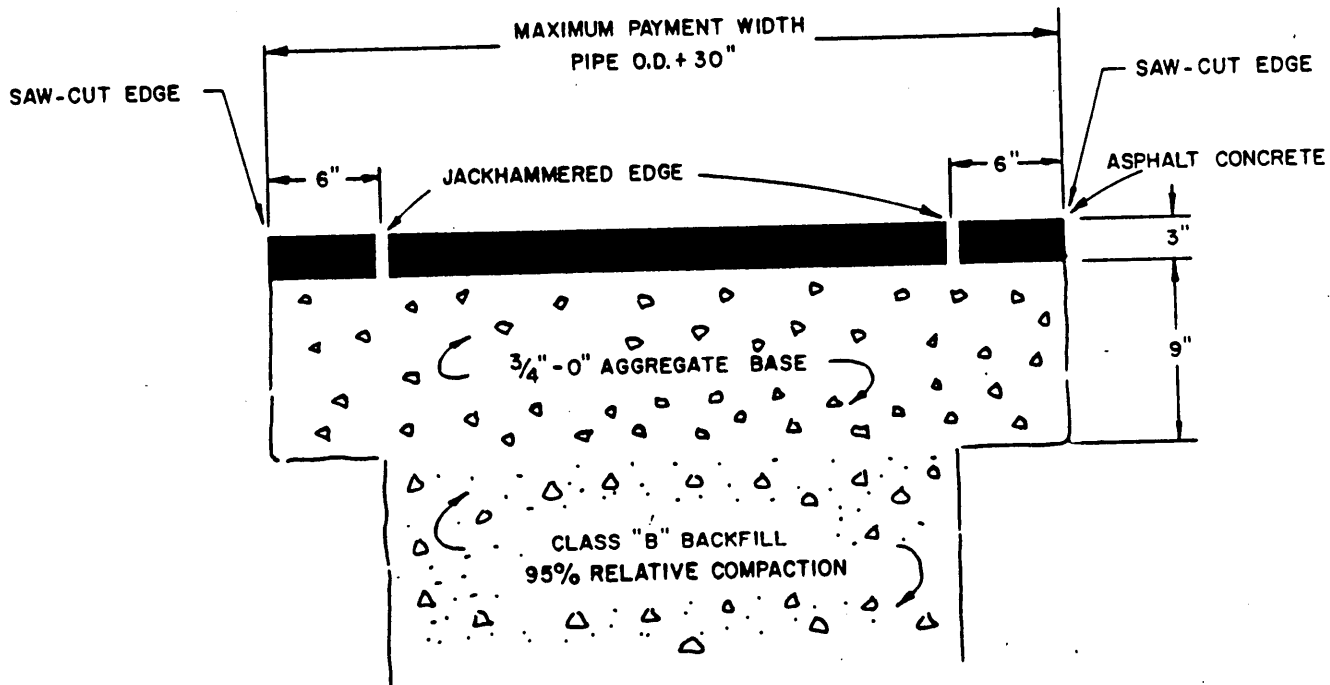
ENGINEERING DEPT.

CITY of NEWBERG

STANDARD
DRAWING NO.

W-6

REVISIONS



NOTES

1. Sawcut asphalt to neat straight lines.
2. Asphalt - Class 'C' mix placed in 2 lifts.
3. Oil and sand all joints.
4. Actual payment width to be determined at site prior to paving.

TRENCH PAVING

ENGINEERING DEPT.

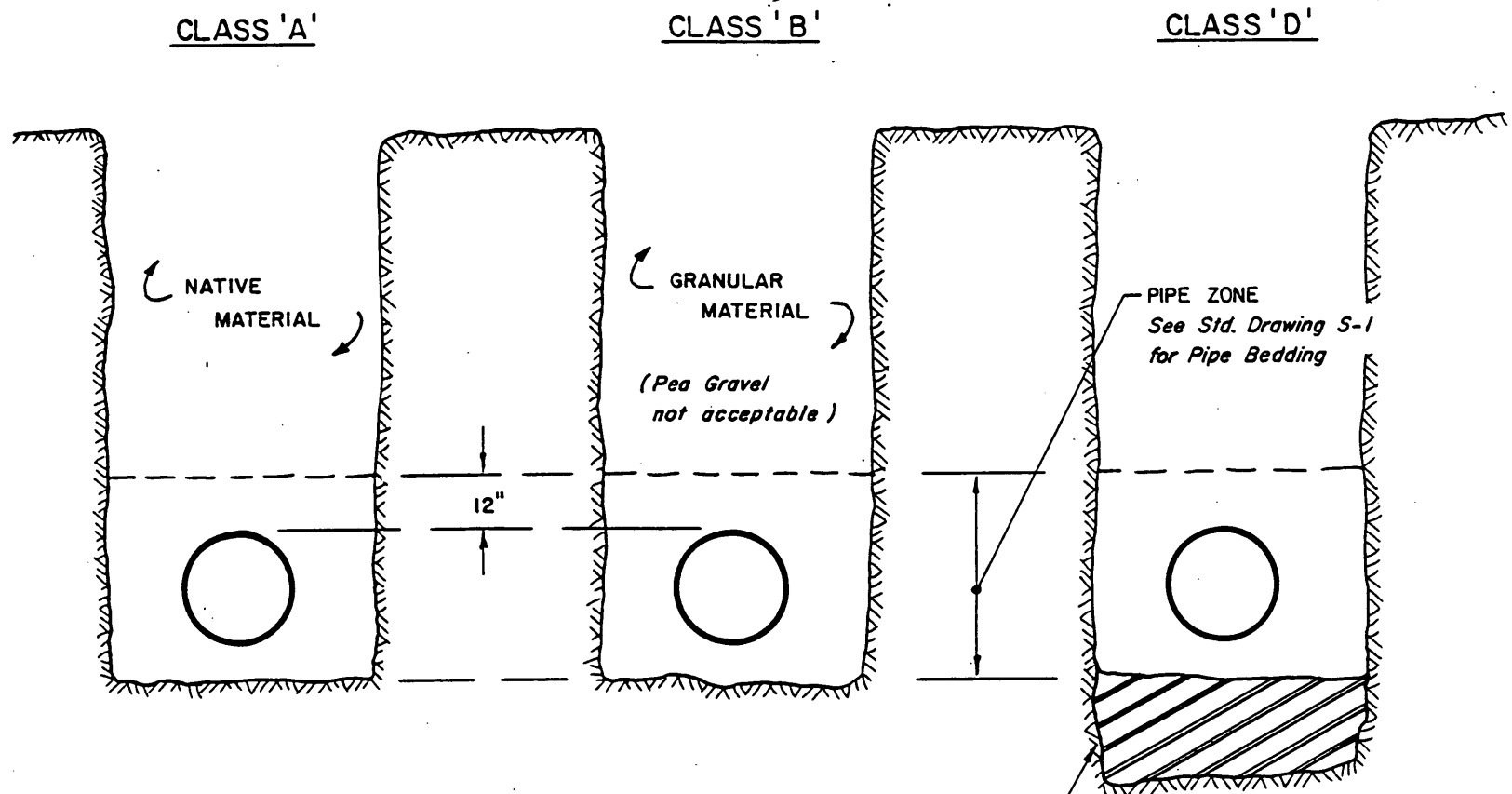
CITY of NEWBERG

STANDARD
DRAWING NO.

ST-15

REVISIONS

TRENCH BACKFILL



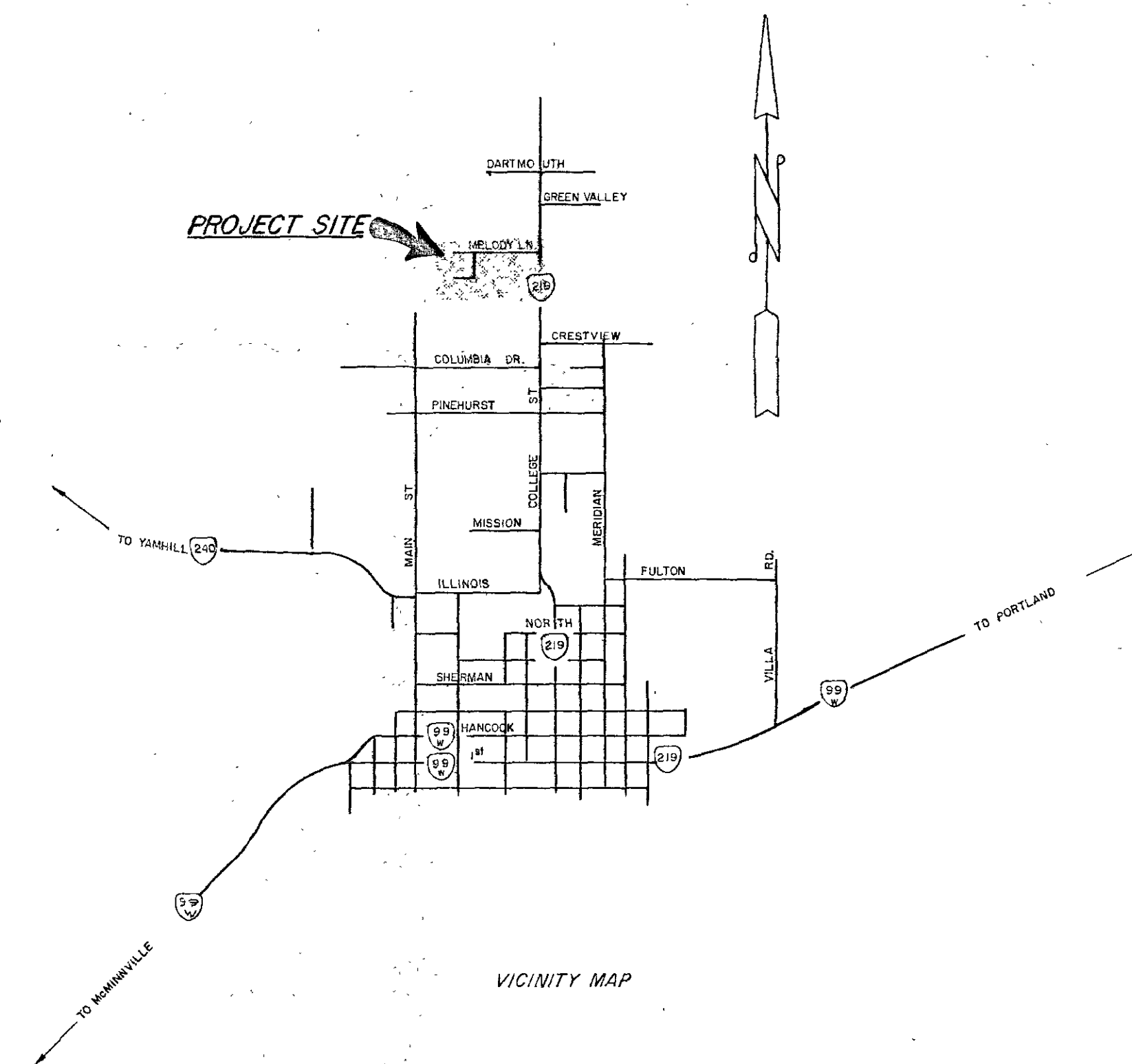
NOTES

1. Compact backfill to not less than 95% relative compaction.
2. Initial compaction of backfill over R.V.C. pipe, to 3 feet over top of pipe, shall be 85% relative compaction. Δ

Remove unsuitable material.
Replace with approved
Foundation material.

PARKWAY SUBDIVISION

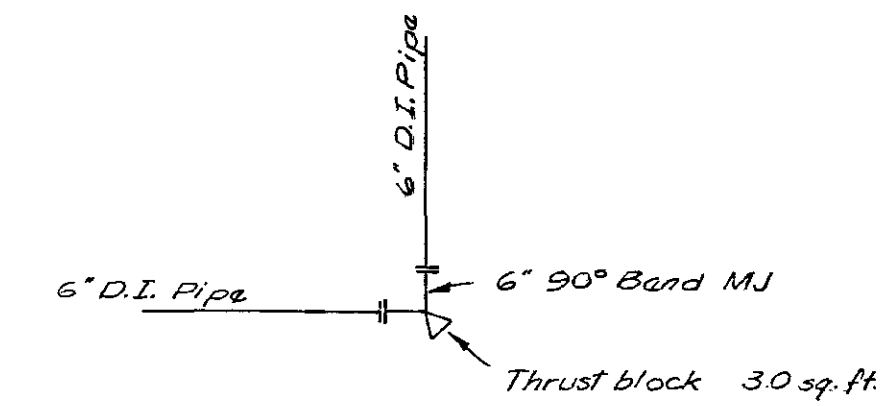
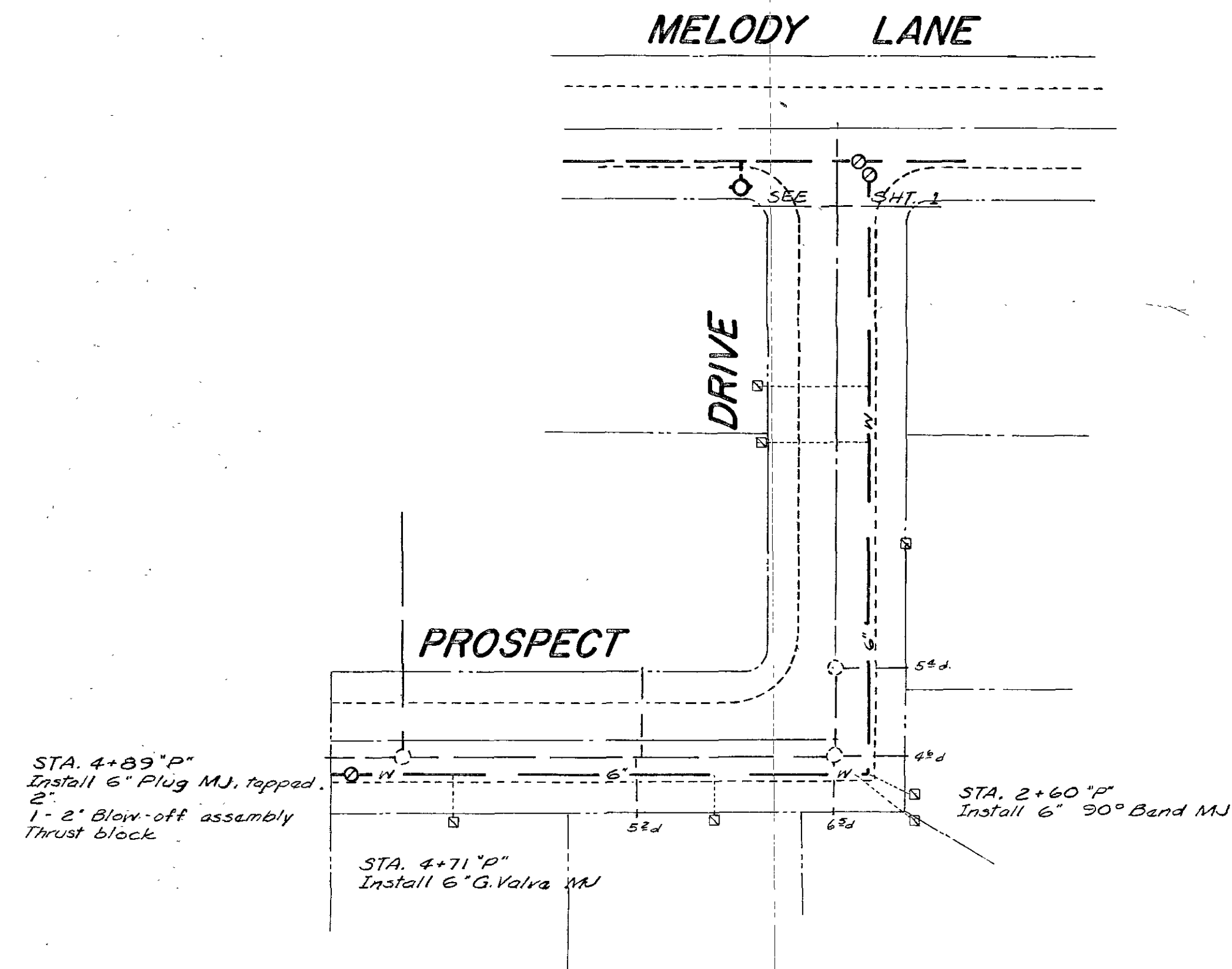
WATER LINE IMPROVEMENT



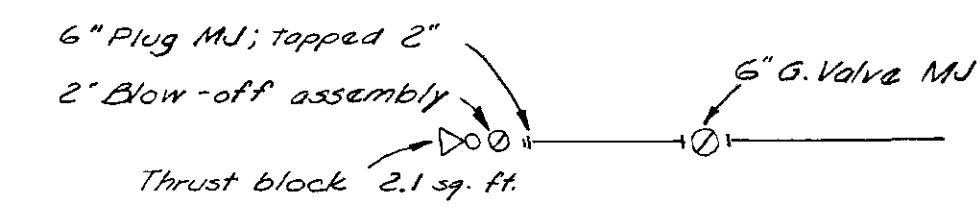
PLAN	DATE
SURVEYED	BY
ALIGNED	BY
CHECKED	BY
NO.	

PROFILE	DATE
SURVEYED	BY
GRADES CHECKED	BY
NO.	

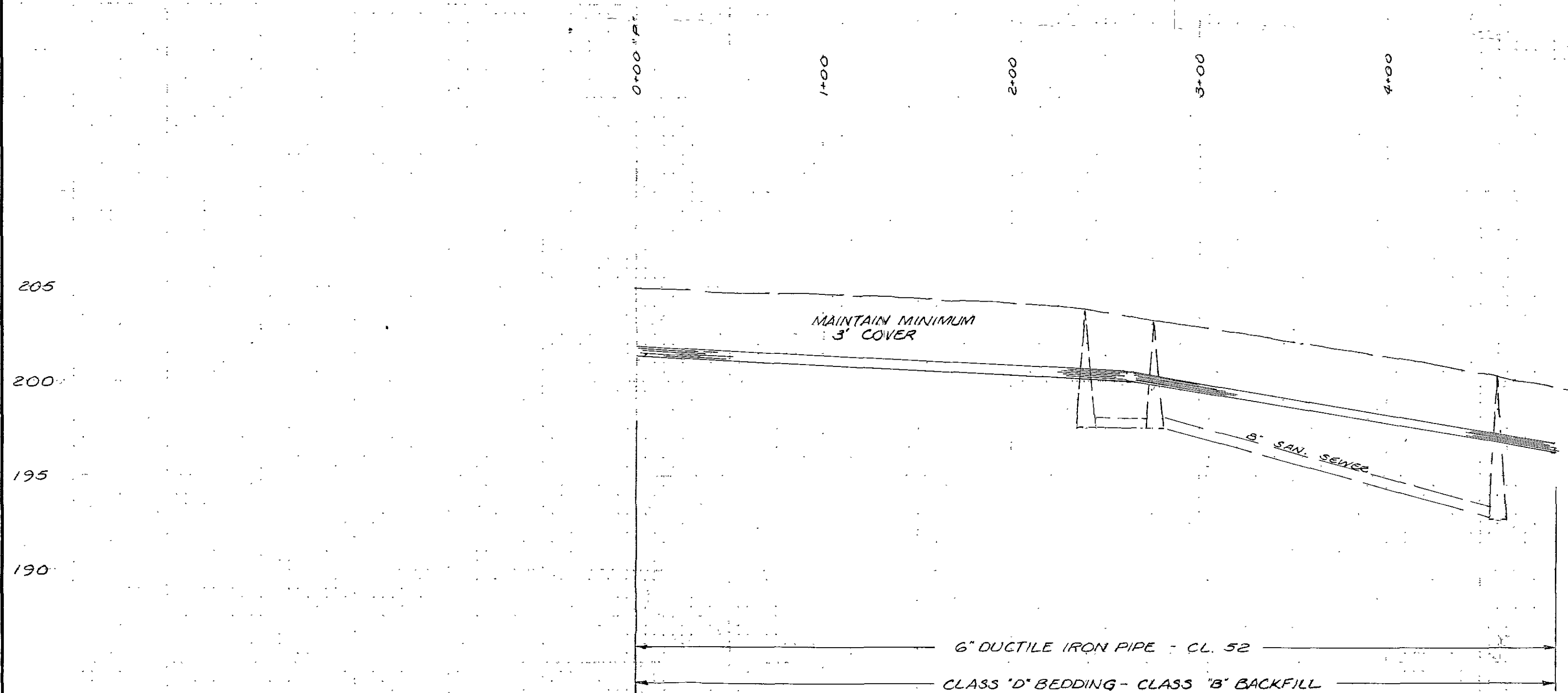
CITY OF NEWBERG ENGINEERING DEPT.	
PARKWAY SUBDIVISION WATER LINE IMPROVEMENT	
DESIGNED BY: J. Raineri	DRAWN BY: J. Raineri
CHECKED BY: J. Raineri	APPROVED BY: B. Teitzel
1" = 50' Horiz 1" = 5' Vert	November 1988 2 of 2



STA. 2+60.00



STA. 4+89 to 4+71.00



PROFILE		BY	DATE
SURVEYED			
PLOTTED			
GRADE CHECKED			
B. M. # NOTED			
STRUCTURE NOTATIONS CHKD			
NO.			

