

[CF 263793]

ORIGINAL CONTRACT COPY

263793

6# 46153

THE CITY OF SEATTLE
BOARD OF PUBLIC WORKS

* * *

DEPARTMENT OF LIGHTING

* * *

CONSTRUCTION OF YARD DRAINAGE
ASPHALT CONCRETE PAVING AND FENCING
AT
NEWHALEM, WASHINGTON

SPECIFICATION NO. 2121

SEATTLE, WASHINGTON

1969



Gold-Moen-Owens 908 Commercial Anacortes, Washington

Certificate of Insurance

General Insurance Company of America hereby certifies that such insurance policies as are indicated hereunder have been issued and are in full force and effect on the effective date of this certificate.

Name of Insured and Mailing Address (Street, City, State)

Marine Asphalt & Company, Inc.
Rt. #3 Box 120
Anacortes, Washington

Policy Period: from July 1st-1967 to July 1st-1970
12:01 A.M., Standard Time, at the address of the insured shown above.

This certificate indicates insurance afforded only with respect to such and so many of the policies of insurance as are indicated by number herein, and to such and so many of the coverages under such policies as are indicated by the inclusion of limits of liability, amount of coverage or the word "Included".

This certificate is only a statement of the existence of the policy or policies of insurance herein referred to and does not change or affect the terms thereof.

Type of Insurance	Policy Number	Coverage	Limits of Liability or Amount of Coverage
Public Liability Other Than Auto or Elevator	CP 180152	Bodily Injury	100,000 One Person 300,000 One (Accident)(Occurrence)
		Property Damage	50,000 One Accident 50,000 Aggregate
Auto Public Liability	CP 180152	Bodily Injury	100,000 One Person 300,000 One (Accident)(Occurrence)
		Property Damage	50,000 One (Accident)(Occurrence)
Workmen's Compensation		Subject to the terms of the Workmen's Compensation laws of the state in which policy affords coverage.	
			One Person One (Accident)(Occurrence) Aggregate One (Accident)(Occurrence)

Location of risk covered, or description of automobile or elevator covered, or description and location of operations or work covered:

☐ This policy provides Products and Completed Operations coverage.

Certificate is issued to: Name and Address

City of Seattle
Board of Public Works
404 Seattle Municipal Bldg.
Seattle, Washington 98104

Dated at Anacortes, Washington

on May 26th-1969

GENERAL INSURANCE COMPANY OF AMERICA
GOLD-MOEN-OWENS

INSURANCE BROKERS

909 COMMERCIAL AVE.

ANACORTES, WASH. 98221

PHONE: 293-2011

By

THE CITY OF SEATTLE
BOARD OF PUBLIC WORKS

* * *

DEPARTMENT OF LIGHTING

* * *

ADDENDUM NO. 1 TO SPECIFICATION NO. 2121

for

CONSTRUCTION OF YARD DRAINAGE,
ASPHALT CONCRETE PAVING AND FENCING
AT NEWHALEM, WASHINGTON

Certified Special Delivery

Gentlemen:

Our records indicate that you have received Specification No. 2121 and related drawings issued by the City of Seattle, Board of Public Works, for the above project. This specification is modified in the following particulars:

The Bid Opening date as stated in the Instructions to Bidders is extended to May 14, 1969.

No changes have been made on the drawings or in the specification.

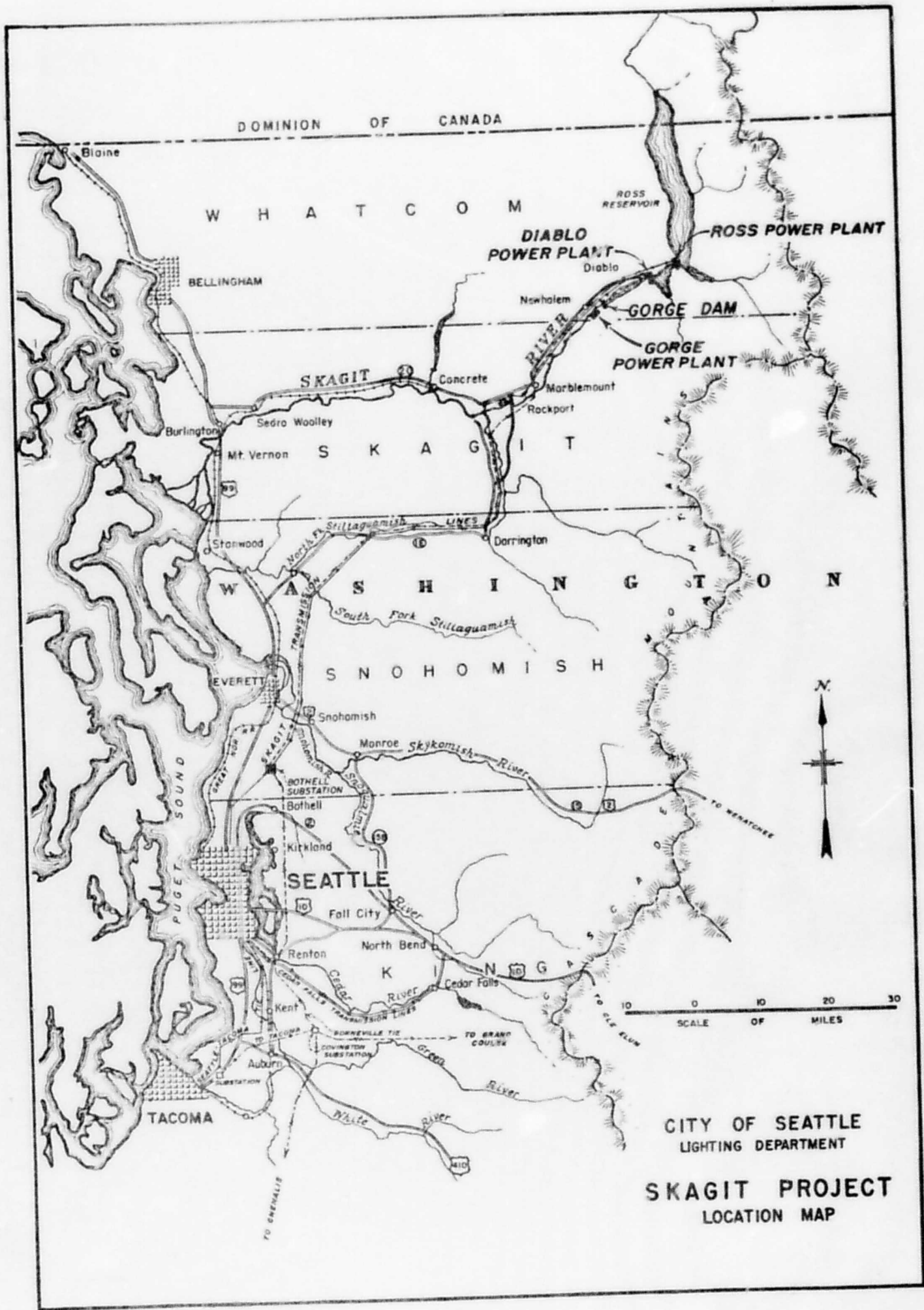
This addendum is hereby made a part of Specification No. 2121 and shall be attached to the original specification when submitted with a proposal.

Yours very truly,

JOHN M. NELSON
Superintendent of Lighting

by *G. L. McLean for R. H. Storce*
Chief Engineer

JMH:ljh



THE CITY OF SEATTLE
BOARD OF PUBLIC WORKS

* * *

INSTRUCTIONS TO BIDDERS, PROPOSAL,
CONTRACT, AND SPECIFICATION

for

CONSTRUCTION OF YARD DRAINAGE,
ASPHALT CONCRETE PAVING AND FENCING
AT
NEWHALEM, WASHINGTON

As authorized by Ordinance No. 97395
Prepared by the Superintendent of Lighting
March 1969

Submitted by

C. R. Hoidal
Chief Civil Engineer

Approved by

Robert L. Skone
Chief Engineer

Superintendent of Lighting

Examined and Approved by
The Board of Public Works

ATTEST:

Secretary

Chairman, Board of Public Works

Specification No. 2121

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INSTRUCTIONS TO BIDDERS

Sealed proposals for this work will be received by the Board of Public Works of the City of Seattle until 2:00 p.m. Wednesday, MAY 7 1969 in Room 404 Seattle Municipal Building, 600 Fourth Avenue, Seattle, Washington 98104.

All bids shall be accompanied by a certified check payable to the order of the City Comptroller, cash, or by bid bond approved as to form by the Corporation Counsel in writing, for a sum of not less than five per cent (5%) of the amount of the bid and no bid shall be considered unless accompanied by such cash, check or bid bond. A bid bond, the sum of which is not filled in, may be approved by the Corporation Counsel in writing up to five (5) days prior to the submission of said bid to the Board of Public Works providing the following items appear thereon: (a) Ordinance number of the improvement, (b) name and nature of the improvement, (c) authorized signature of the company's or contractor's officer empowered to sign official papers. The sum of the bid bond must be filled in by the bidder prior to submitting the bid to the Board of Public Works in the amount and at the time and place specified above.

If the contract is let, all checks or cash shall be returned to the bidder, except that of the successful bidder, which shall be retained until a contract is entered into between the bidder and the City, in accordance with such bid. If the said bidder fails to enter into such a contract in accordance with his bid within ten days from the date at which he is notified that he is the successful bidder, the said cash or check and the amount thereof shall be forfeited to the City, or, if a bid bond accompanied the bid, the necessary legal steps will be taken by the City to recover an amount equal to five per cent (5%) of the amount of the bid. Before such contract between the successful bidder and the City shall be valid or binding against the City of Seattle, the Contractor shall enter into a joint and several bond with the City of Seattle, for the use of said City, and also for the use of all persons who may perform or cause to be performed any work or labor, or furnish or cause to be furnished any skill, labor or material in the execution of such contract, which bond shall be signed by the Contractor and two or more good and sufficient sureties or with a surety company as surety, and shall be in the amount of _____ Dollars (\$ _____) but not less than one hundred per cent (100%) of the bid, plus estimated state sales tax when applicable.

All payments for this work shall be made by warrants drawn on the Light Fund.

The work embraced in the following proposal and contract shall be done in all respects in accordance with these instructions, the proposal, contract and special specifications attached hereto; the accompanying plans, such detail plans as may be furnished during the progress of the work and the Standard Plans and Specifications of the City of Seattle, being Comptroller's File No. 259087 approved April 5, 1967, insofar as applicable, and said Standard Plans and Specifications are by express reference thereto made a part of the contract.

INSTRUCTIONS TO BIDDERS (Cont.)

The work embraced in the following Proposal and Contract shall be under the direct supervision of the Superintendent of Lighting, subject to the acceptance and approval of the Board of Public Works. It shall be begun immediately upon notice from the Superintendent of Lighting to begin work; and shall be completed within 90 days (Sundays and holidays included) after the date of such notice.

Bidders are notified to examine thoroughly these instructions, the proposal, the form of contract, the plans and specifications. If there be any doubt or obscurity as to meaning of the same, intending bidders should ask the Superintendent of Lighting for an explanation before submitting their proposals.

Permission will not be given for the withdrawal or modification of any bid or proposal.

Bids will not be received if detached from the form of contract with which they are bound, nor shall any of the accompanying papers be detached therefrom, but the entire package must be unbroken, in good order and enclosed in a sealed envelope, endorsed with the name of the bidder and the name of the work.

Bids must be written with ink in both words and figures for item contained in the proposal provided for this improvement to the extent that the proposal represents a complete integral project. In case of discrepancy between written words and figures, the written words shall govern.

Quantities listed on the proposal blanks are for the purpose of comparing bids only.

The advertisement for bids provides that a deposit for plans and specifications will be required from each bidder. This deposit will be returned to him upon the return of the plans and specifications in good condition to the office of the Department of Lighting designated in the advertisement for bids, within ten (10) days after the bid opening date. Failure to comply will result in forfeiture of the deposit for the plans and specifications.

The Board of Public Works reserves the right to reject any or all bids, and to waive informalities.

Any bulletins or addenda issued during the time of bidding are to be covered in the proposal, and in closing a contract will be a part thereof.

In order to establish a basis of quality, certain materials or articles are specified by designating a particular manufacturer's name, brand or number. It is not the intent of the specifications to exclude other materials or articles that measure up to the standard of those specified. Should the Contractor desire to make substitutions, he shall first secure the written approval of the Superintendent of Lighting or his accredited representative. Whenever an article is specified by giving the manufacturer's name, it is understood that the words "or equal" follow thereafter.

BIDDER'S CHECK LIST

BID BOND APPROVAL

1. Has your bid bond form been approved by the Corporation Counsel prior to submitting your bid? (See Instructions to Bidders, page 1.) If the bid bond is not approved in the proper manner, your bid will not be read.

PROPOSAL

1. Is the amount of the bid bond or certified check at least 5% of the total of your bid?
2. Do the written amounts of the Proposal agree with the amounts shown in figures?
3. Have you bid on all items?

NON-COLLUSION AFFIDAVIT

1. Has the Non-Collusion Affidavit, page 12, been completed and notarized?

PROPOSAL

Seattle, Washington MAY 14, 1969

TO THE BOARD OF PUBLIC WORKS OF THE CITY OF SEATTLE:

The undersigned hereby certifies that WE have personally and carefully examined the plans, specifications, form of contract and foregoing instructions for

CONSTRUCTION OF YARD DRAINAGE,
ASPHALT CONCRETE PAVING AND FENCING, AT NEWHALEM, WASHINGTON

under Ordinance No. 97305; that WE have examined the site of the work and the location where said work is to be done, that WE fully understand the manner in which payment is proposed to be made for the cost thereof, and that WE fully understand that the quantities shown on the proposal are for the purpose of comparing bids only and, having made the necessary examination, hereby propose to furnish all material and to perform all labor which may be required to complete said work within the time fixed and upon the terms and conditions provided in the said plans, specifications, contract and foregoing instructions at the following prices:

Certified Check enclosed \$ _____ Bid Bond enclosed \$ _____

ITEM NO.	APPROX. QUANTITY	ITEM (Prices to be written in words)	UNIT PRICE		AMOUNT	
			Dollars	Cts.	Dollars	Cts.
1	Lump Sum	Construct yard and roadway drainage system. Lump Sum of <u>Fifteen Thousand Seven Hundred and No Cents</u>	15,700 xxx	00 xx	15,700	00
2	Lump Sum	Construct yard area and roadway to Gorge Powerhouse Bridge to sub-grade Lump Sum of <u>Sixteen Thousand Nine Hundred Sixty Dollars and No Cents</u>	16,960 xxx	00 xx	16,960	00
3	Lump Sum	Preparing streets in residential area to subgrade Lump Sum of <u>Twenty Seven Hundred Dollars and No Cents</u>	2,700 xxx	00 xx	2,700	00
4	2500 Tons	Placing crushed rock for leveling course, at <u>Two Dollars and five Cents per Ton</u>	2.05		5,125	00

PROPOSAL (continued)

ITEM NO.	APPROX. QUANTITY	ITEM (Prices to be written in words)	UNIT PRICE		AMOUNT	
			Dollars	Cts.	Dollars	Cts.
5	3500 Tons	Furnish and place asphaltic concrete paving, at <i>Fifteen dollars and fifty cents per Ton</i>	15	50	54,250	00
6	700 Sq. Yd.	Crushed rock, roadway shoulders, bituminous treated shoulders, at <i>One dollar and sixty five cents per Sq. Yd.</i>	1	65	1,155	00
7	Lump Sum	Furnish and install chain link fence and gates, including fence curb and post footings Lump Sum of <i>Fourteen thousand, eight hundred & sixty dollars</i>	14,860 xxx	00 xx	14,860	00
8	95 Sq. Yds	Construct concrete driveways, at <i>Fifteen dollars and twenty cents Per Sq. Yds</i>	15	70	1,491	50
9	350 Sq. Yds	Construct concrete sidewalks, at <i>Twelve dollars and no cents per Sq. Yd.</i>	12	00	4,200	00
10	760 Lin. Ft.	Construct concrete roadway curbs and gutters, at <i>Five dollars and fifty cents Per Lin. Ft.</i>	5	50	4,180	00
11	Lump Sum	Construct concrete retaining walls at loading dock and Building 55 Lump Sum of <i>Fifty three hundred dollars</i>	5,300	00	5,300	00

PROPOSAL (continued)

ITEM NO.	APPROX. QUANTITY	ITEM (Prices to be written in words)	UNIT PRICE		AMOUNT	
			Dollars	Cts.	Dollars	Cts.
12	2 Hydrants	Furnish and install fire hydrants, at .. <i>Eleven hundred</i> <i>dollars and no cents</i> .. per Hydrant	<i>1100</i>	<i>00</i>	<i>2200</i>	<i>00</i>
13	Lump Sum	Furnish and install beam guard rails and posts at four (4) locations Lump Sum of <i>Eighteen hundred and fifty dollars and no cents</i>	<i>1850</i> xxx	<i>00</i> xx	<i>1850</i>	<i>00</i>
14	4 Boxes	Adjust electrical pull boxes, at .. <i>Sixty five</i> <i>dollars and no cents</i> .. per Box	<i>65</i>	<i>00</i>	<i>260</i>	<i>00</i>
15	4 Boxes	Furnish and install valve boxes, at .. <i>Seventy dollars and no cents</i> .. per Box	<i>70</i>	<i>00</i>	<i>280</i>	<i>00</i>
16	180 Lin. Ft.	Furnish and install 3 inch galvanized steel pipe under driveways, at .. <i>Four dollars and no cents</i> .. per Lin. Ft.	<i>4</i>	<i>00</i>	<i>720</i>	<i>00</i>
17	Lump Sum	Treatment of bridge sidesway cables Lump Sum of <i>Three hundred</i> <i>dollars and no cents</i> ..	<i>300</i> xxx	<i>00</i> xx	<i>300</i>	<i>00</i>

PROPOSAL (continued)

ITEM NO.	APPROX. QUANTITY	ITEM (Prices to be written in words)	UNIT PRICE		AMOUNT	
			Dollars	Cts	Dollars	Cts
18	10 Cu. Yds.	Solid Rock excavation for drainage trench and manhole, at <i>Thirty Five Dollars and no cents</i> per Cu. Yd.	35	00	350	00
19	30 Cu. Yds.	Disposing of large boulders from trench & manhole excavation, at <i>Twenty Eight Dollars and no cents</i> per Cu. Yd.	28	00	840	00
Total					132,721	50
4.5% State Sales Tax					5,972	47
Total incl. Sales Tax					138,693	97

Date May 14, 1969

Address Rt. 3, Box 735

Anacortes, Washington 98221
Zip

Telephone 293-2169

Marine Asphalt Company, Inc.
Company Name

By Harold R. Olson, Secretary

C O N T R A C T

THIS CONTRACT, made this 21st day of MAY, A.D. 1969, by and between THE CITY OF SEATTLE, a Municipal Corporation of the State of Washington, party of the first part, and MARINE ASPHALT Co. Inc., party Y of the second part,

W I T N E S S E T H:

Section 1. That the said party Y of the second part agree S to perform the work covered by Specification No. 2121

CONSTRUCTION OF YARD DRAINAGE,
ASPHALT CONCRETE PAVING AND FENCING
AT
NEWHALEM, WASHINGTON

as ordered by Ordinance No. 97305, in all respects in accordance with the plans now on file in the office of the Superintendent of Lighting of said City, and in accordance with the Standard Plans and Specifications of the City of Seattle, duly approved by the Board of Public Works thereof on the 5th day of April, 1967, and filed in the office of the City Comptroller and ex officio City Clerk, being File No. C. F. 259087 in said office, insofar as the provisions of said Standard Plans and Specifications are applicable to said work, which said Standard Plans and Specifications are, by express reference thereto, hereby made a part of this Contract; and also in accordance with the special specifications and instructions hereto attached, and the Laws of the State of Washington, and Charter and Ordinances of the City of Seattle, as amended and now in force, all of which, so far as applicable, are hereby made a part of this Contract.

Section 2. The said party Y of the second part agree S to begin the work embraced in the Contract for this improvement immediately after written notice shall have been given to said party Y of the second part by the Superintendent of Lighting, and to carry on said work regularly and uninterruptedly thereafter (unless the Superintendent of Lighting or the Board of Public Works shall otherwise, in writing, especially direct), with such force as to secure its completion within 90 days (Sundays and holidays included) after such notice to begin work; the time of beginning, rate of progress and time of completion being essential conditions of this Contract.

SPECIFICATION CONTRACT (Cont.)

Section 3. That the said party of the first part agrees to pay to said party of the second part for the actual quantities in the completed work according to the schedule of unit prices set forth in the proposal hereto attached and made a part of the contract.

Section 4. Subject to the provisions of Chapter 63, Laws of Washington of 1945, the said party of the second part hereby covenants, stipulates, and agrees:

That he will pay or cause to be paid to the employees on or in connection with this work or under this contract not less than the current hourly rate of wages specified for the class of labor performed.

That he will not enter directly or indirectly into any agreement with any person or persons for labor or employment at any less wage.

That he will not make or permit any assignment or transfer of this contract, or any of the work to be performed hereunder, nor sublet said work or any part thereof in any manner or by any scheme, device or subterfuge which will permit or secure the performance of labor upon or in connection with this work or under this contract, at a rate of wage less than herein specified.

That every scheme or device by which employees employed upon or in connection with this work or under this contract shall sublet or subcontract the same, or take any transfer or assignment of this contract or of any work herein provided for, as a co-partnership or other association, whereby in lieu of receiving the minimum rate of wages hereinabove specified, they shall receive a less sum in cash and become sharers in the profits or losses under this contract in compensation for their labor, shall be deemed a subterfuge, device or scheme to evade the provisions of this contract, and shall be null and void and shall render this contract subject to forfeiture.

The above covenants are made for the benefit of the individual employees of the Contractor, and that any employee performing work or labor under this contract shall have a cause of action against the Contractor for the difference between the wages herein specified and the amount actually paid to such employee.

That he will keep complete and accurate payrolls upon which shall appear the following information with respect to each person employed upon or in connection with this work or under this contract:

- | | |
|---|---|
| 1. Employee's name and residence address; | 6. Rate of Wages; |
| 2. Classification of work as defined by specifications; | 7. Total amount earned; |
| 3. Number of hours employed each day; | 8. Deductions for medical aid; |
| 4. Total number of hours employed each payroll period; | 9. Net amount paid; |
| 5. Travel Time paid; | 10. Whether a Citizen of United States; |
| | 11. Whether a head of a family. |

Said payroll shall be at all times accessible and open to inspection by the Board of Public Works, and a copy thereof duly signed by the Contractor or his authorized agent and verified before a Notary Public, to be filed with the Secretary of said Board not later than seventy-two (72) hours after the expiration of each payroll period.

That all employees will be paid in full not less than once each week, and in lawful money of the United States, in the full amount accrued to each employee at the time of closing of the payroll, which shall not be more than three (3) days prior to the date of payment.

That preference in employment upon the work contemplated herein or done hereunder shall at all times be given to citizens of the United States who are heads of families and residents of The City of Seattle and who shall have been such residents for at least one year last past: Provided that citizens of the United States who are not heads of families and residents of The City of Seattle for at least one year last past may be employed in the event that citizens and residents who are heads of families and are competent and willing to perform the work required for or upon this improvement or under this contract, cannot be obtained; that the exclusion of aliens from the work will exclude any and all alien members of the undersigned contracting firm or co-partnership; and that no alien will be employed thereon or in connection therewith without a valid and subsisting permit from the Board of Public Works therefor.

That to facilitate the enforcement of the above covenants, the Contractor agrees to prepare and file with the Board of Public Works a complete list containing the names and residence addresses of all of his employees and keep the same up to date at all times.

That in the event of violation of any of these covenants or any provision thereof, payment due from the City of Seattle on any work done under this contract may be withheld until full compliance therewith; that the work may be stopped or, at the discretion of said Board of Public Works, with the consent of the City Council, this contract may be cancelled and forfeited.

IN WITNESS WHEREOF, said party of the first part has caused these presents to be signed by the Chairman of the Board of Public Works and to be attested by the Secretary of said Board; and said party of the second part has hereunto set _____ hand _____ the day and year first above written.

THE CITY OF SEATTLE

By *Samuel M. Lortman*
VICE Chairman of Board of Public Works

E. J. Hurry
Secretary of Board of Public Works

CONTRACTOR

MARINE ASPHALT COMPANY, INC.

By *Roscoe Washburn*

Title PRESIDENT

MINIMUM WAGE RATES - WHATCOM COUNTY

Furnished for the City of Seattle Department of Lighting by Industrial Relations
Division Department of Labor & Industries State of Washington.

Attention is called to the fact that many of the crafts have fringe benefits
such as Health and Welfare, Pension and Vacation Plans, which must be paid in
addition to the hourly wage rate listed.

Sole responsibility falls upon the contractor to ascertain for himself the
amount of such benefits.

January 28, 1969

<u>Job Classification</u>	<u>Per Hour</u>
<u>ASBESTOS WORKERS</u>	
Journeyman	\$5.92
Foreman - 25 cents per hour over Journeyman	
Health & Welfare 20 cents	
Pension Fund 25 cents	
Occupation Health & Research Fund 1 cent	
<u>BOILERMAKERS AND BLACKSMITHS</u>	
Foreman	6.40
Assistant Foreman - Leadman	6.15
Boilermaker-Blacksmith	5.90
Health & Welfare 30 cents	
Pension 40 cents	
Vacation 30 cents	
Apprenticeship 2 cents	
<u>BRICKLAYERS</u>	
Journeyman	6.05
Foreman - .50 per hour over Journeyman	
Health & Welfare 15 cents	
<u>CARPENTERS</u>	
Journeyman Carpenter	5.30
Carpenters on Creosoted Material	5.40
Sawfilers, Stationery Power Saw Operators, Floorfinishers	
Floorlayers, Floorsanders, Shingler & Operators of other	5.43
Stationery Power Woodworking Tools	5.45
Millwrights and Machine Erectors	5.45
Piledrivers, Bridge, Dock & Wharf Builders	5.50
Boom Men	5.46
Acoustical Workers	5.86
Acoustical Foreman	

MINIMUM WAGE RATES
WHATCOM COUNTY
PAGE 8b

<u>Job Classification</u>	<u>Per Hour</u>
<u>CARPENTERS (Continued)</u>	
Millwright Foreman	\$5.85
Health & Welfare	20 cents
Pension	20 cents
Apprentice Fund	1/2 cent
<u>CARPET, LINOLEUM & SOFT TILE LAYERS</u>	
Carpet & Linoleum Layers	5.00
Plastic & Metal Tile Installers	5.00
Resilient Tile Layers	5.00
Plastic Laminate Installers	5.00
Seamless Surface Coating Installers	5.00
Health & Welfare	17 cents
Pension Fund	15 cents
<u>CEMENT MASONS</u>	
Journeyman Cement Masons	5.12
Composition, Color & Mastic	5.37
Trowel Machine Operator	5.25
Grinder and all other power tools used by Cement Masons under their jurisdiction	5.37
Gunnite Nozzelman	5.37
Foreman - 25 cents per hour over highest paid classification supervised	
Swinging suspended scaffold work over 25 feet shall receive 13 cents per hour over classification of man working thereon	
Health & Welfare	17 cents
<u>ELECTRICIANS</u>	
Journeyman Wireman & Technician	5.835
Foreman - 10% over Journeyman	
General Foreman - 10% over foreman	
Cable-Splicer - 10% over Journeyman	
Cable-Splicer Foreman - 10% over Cable-Splicer	
Health & Welfare	15 cents
Pension Fund	1% of Gross
Apprenticeship Fund	1/2 cent
<u>GLAZIERS & GLASSWORKERS</u>	
Journeyman	4.35
Health & Welfare	12 cents
Pension	15 cents

MINIMUM WAGE RATES
WHATCOM COUNTY
PAGE 8c

<u>Job Classification</u>	<u>Per Hour</u>
<u>IRONWORKERS</u>	
Structural	\$5.85
Ornamental	5.85
Machinery Mover, Machinery Erector	5.85
Riggers & Signalman	5.85
Welders & Burners	5.85
Fence Erectors	5.85
Sheeters	5.85
Reinforcing	5.70
Foreman - .30 per hour over Journeyman with 3 men or less	
.55 per hour over Journeyman with 4 men or more	
Work requiring full face mask with remote air filter shall receive 25 cents over Journeyman	
Health & Welfare	35 cents
Pension	20 cents
Apprenticeship Fund	.1 cent
<u>PAINTERS</u>	
Journeyman Painters & Stripers	5.21
Journeyman Taper	5.21
Spray, Sandblasting, Steamcleaning, Swing Stage	
Bridges, Towers, Tanks on legs, Steeples, Stacks, Toxic Material, Bitumastics & Open Structural Steel	5.41
Foreman - 50 cents over Journeyman	
Health & Welfare	17 cents
Pension Fund	15 cents
Apprenticeship Fund	1 cent
<u>PLASTERERS</u>	
Journeyman	4.70
Plasting Machine Nozzleman	4.95
Foreman - 2 men or less	4.83
Foreman - 3 men or more	4.95
Health & Welfare	15 cents
<u>PLUMBERS & PIPEFITTERS</u>	
Journeyman Plumber & Pipefitter	5.70
Foreman - 40 cents per hour over Journeyman	
General Foreman - 65 cents per hour over Journeyman	
Superintendent - 90 cents per hour over Journeyman	
Health & Welfare	21 cents
Pension	30 cents
Vacation	35 cents
Apprenticeship	3 cents

MINIMUM WAGE RATES
WHATCOM COUNTY
PAGE 8a

<u>Job Classification</u>	<u>Per Hour</u>
<u>ROOFERS AND WATERPROOFERS</u>	
Journeyman	\$5.32
Kettlemen	5.32
Tile & Slate Roofers	5.57
Foreman - 25 cents per hour over Journeyman	
Helpers - 85% of Journeyman	
Health & Welfare	18 cents
Pension Fund	10 cents
<u>SHEETMETAL WORKERS</u>	
Journeyman Sheetmetal Worker	5.82
Foreman Sheetmetal worker	6.37
Health & Welfare	17 cents
Pension Fund	20 cents
Apprenticeship Fund	2 cents
<u>TILE SETTERS</u>	
Journeyman	5.05
Foreman - 25 cents per hour over Journeyman	
Health & Welfare	15 cents
<u>OPERATING ENGINEERS</u>	
<u>BATCH PLANT OPERATOR</u>	
Batch and Mixer - 200 yards per hour and under	5.66
<u>BULLDOZERS</u>	
D 9 or similar	5.83
Pay Dozers & Linked Pusher & Quad 9 & similar	6.00
Bump Cutter - Concut, Christianson or similar types	5.91
Engaged in Yoyo Operation - while clearing or scaling	6.00
<u>COMPRESSORS</u>	
Excavating	5.36
Steel Erection including Sand Blasting, painting of same	5.74
<u>CRANES</u>	
A-Frame Trucks - Single Power Drum	5.66
A-Frame Trucks - Double Power Drum	6.00
Crawler & Truck Type, Floating, Locomotive, Whirley, either 3 yds & under or 150 ft of boom, including jib - & under, or 45 tons and under	6.00
Crawler & Truck Type, Floating, Locomotive, Whirley, either over 3 yds or over 150 ft of boom - including jib - or over 45 ton up to 100 ton	6.36

MINIMUM WAGE RATES
WHATCOM COUNTY
PAGE 8e

<u>Job Classification</u>	<u>Per Hour</u>
<u>CRANES</u>	
Crushers-Rock-Washing & Screening Plants	\$5.66
Derricks, all	6.00
Drilling Machines, Core, Cable, Rotary & Exploration	6.00
Hoists, Air Tuggers & Deck Winches-Power, Strato Tower	
Bucket, Elevators	5.66
<u>LOADERS</u>	
Elevating-Athey, Barber Greene and similar types	5.66
Elevating Belt Type - Euclid and similar types	5.95
Elevating Grader Type - Dumor and similar types	5.77
Fork lifts or lumber stacker - on construction job site,	
Drott Travel Lift	5.63
Fork Lifts with tower	5.74
Fork Lifts with power boom & Swing attachment	6.00
Overhead & Front End - under 2 1/2 yards	5.66
Overhead & Front End - 2 1/2 yards and up to 4 yards	6.00
Overhead & Front End - 4 yards up to 8 yards	6.20
Overhead & Front End - 8 yards and over	6.74
Mechanics, Heavy Duty	5.66
Mechanics Helpers, Heavy Duty Shop	5.12
Mechanic Leadman	5.91
<u>MIXERS</u>	
Asphalt up to 4 tons per batch	5.60
Asphalt 4 tons and over per batch	5.95
Mobile Type with Hoist Combination	6.00
Concrete Mixers & Batch - 200 yards per hour & under	5.66
Motor Patrol Graders, including Model 14 and similar	5.72
Motor Patrol Graders, over Model 14 and similar	6.00
Mucking Machines, Mole or Tunnel Drill, and/or shield	6.00
<u>OIL DISTRIBUTORS & BLOWER DISTRIBUTORS</u>	
Oilers, Grade Checkers, Stakeman and/or Brakemen	5.42
Equipment Service Oiler	5.21
Oiler Driver on Truck Cranes over 45 ton up to 100 tons	5.47
Oiler Driver on Truck Cranes 100 tons and over	5.37
Fireman	5.47
Post Hole Diggers, Mechanical	5.27
<u>PUMPS</u>	5.60
Fuller Kenyon	
Concrete and Pump Crete	5.66
Water	5.66
	5.48
<u>ROLLERS, TAMPERS & VIBRATORS</u>	
On Plant, Road Mix or Multilift Materials	5.66
Other than Plant Road Mix or Multilift Materials -	
where towed, to pay rate of equipment used to pull	5.36

MINIMUM WAGE RATES
WHATCOM COUNTY
PAGE 8f

<u>Job Classification</u>	<u>Per Hour</u>
<u>SAWS, CONCRETE</u>	\$5.63
<u>SCREED MAN</u>	5.66
<u>SHOVELS</u>	6.00
Crawler & Truck Type, all attachments - 3 yds & under	6.36
Crawler & Truck Type, all attachments - over 3 yds	5.72
Motor Patrol Graders, Model 14 and similar	6.00
Motor Patrol Graders, over Model 14 and similar	5.36
Tractors, Farmall Type, 60 horsepower and under	5.48
Tractors, Farmall Type, over 60 horsepower	5.80
Tractors, Farmall Type used as Backhoes, Rubber Tired - Ford, Ferguson, Case & similar - 60 H.P. and under	6.00
Tractors, Farmall Type used as Backhoes, Rubber Tired - Ford, Ferguson, Case & similar - over 60 H.P.	5.66
<u>TRENCHING MACHINES</u>	5.90
Under 16 inches	
16 inches and over	
Master mechanics - \$3.00 per day over shovel scale	
Foreman - \$0.40 per hour over highest classification under his supervision	
Wage scales for operators of equipment operated on heavy construction not listed herein shall be negotiated at the time such equipment is to be operated	
Operators on underground work shall receive a ten per cent additional premium, operators of mucking machines excepted	
<u>FRINGE BENEFITS - OPERATING ENGINEERS</u>	
Health & Welfare	30 cents
Pension Fund	40 cents
<u>TRUCK DRIVERS</u>	5.40
Buggymobile	5.25
Scissor Truck	5.45
Semi or Truck & Trailer - other than earthmoving equip	
Tractor - Small rubber tired when used in Teamster jurisdiction	5.25
Dump Trucks, Dumpsters, Letourneau, Caterpillar, Euclid and similar top loaded equipment - up to and including 5 yards	5.25
Over 5 yards to and including 12 yards	5.45
Over 12 yards to and including 16 yards	5.50
Over 16 yards to and including 20 yards	5.55
Greasers, Tire Service	5.25

MINIMUM WAGE RATES
WHATCOM COUNTY
PAGE 8g

<u>Job Classification</u>	<u>Per Hour</u>
<u>TRUCK DRIVERS</u>	
<u>FLAT BED</u>	
Single Rear Axle	\$5.25
Dual Rear Axle	5.35
Hyster Operators - handling bulk loose aggregates	5.40
Ross, Hyster and similar straddle equipment	5.40
Road Oil Distributor Driver	5.45
<u>TRANSIT-MIX USED EXCLUSIVELY IN HEAVY CONSTRUCTION</u>	
0 to and including 4 1/2 yards	5.44
Over 4 1/2 yards to and including 6 yards	5.59
Over 6 yards to and including 8 yards	5.74
Over 8 yards to and including 10 yards	5.89
Over 10 yards to and including 12 yards	6.04
Over 12 yards to and including 16 yards	6.19
Pickup Truck	5.15
Swampers	5.15
<u>WATER WAGON AND TANK TRUCK</u>	
Up to 1600 gallons	5.25
1600 gallons to 3000 gallons	5.40
Over 3000 gallons	5.55
<u>WINCH TRUCK</u>	
Single Rear Axle	5.25
Dual Rear Axle	5.45
<u>BULL LIFTS, OR SIMILAR EQUIPMENT USED IN LOADING OR UNLOADING TRUCKS TRANSPORTING MATERIALS OF JOB SITES</u>	
Warehousing	5.25
Other than Warehousing	5.57
Warehousemen	5.15
A-Frame, Hydralift Trucks when A-Frame or Hydralift is used	5.59
Bulk Cement Tanker	5.55
Wage scale for operators of equipment to be operated on heavy construction and not listed herein shall be negotiated at the time such equipment is to be operated	
Health & Welfare	37 cents
Pension Fund	30 cents

MINIMUM WAGE RATES
WHATCOM COUNTY
PAGE 8h

<u>Job Classification</u>	<u>Per Hour</u>
<u>LABORERS</u>	
Concrete Saw Operator	\$4.80
Dumpman	4.70
FALLER & BUCKER	
Hand	4.70
Chain Saw	4.90
Form Setter - Steel Forms	4.85
<u>GENERAL LABOR</u>	
Nipper, Truck Spotter, Pitman, Brush Cutter, Choker Setter, Concrete & Monolithic Laborer, Asphalt Laborer, Ditchdigger, Pot Tender, Drierman, Concrete Form Stripper, Carpenter Helper, Track Laborer, Flagman	4.60
Groutman - Pressure	4.75
High Scaler	4.90
Mortarman & Hod Carriers	4.90
Nozzelman - Sandblast, Gunite, Shot-Crete	4.85
Pipe Layer & Caulker, Pipe Wrapper	4.90
Pipe Pot Tenderer	4.80
Powderman	4.95
Powdermans Helper	4.70
Power Wheel Barrow or Buggy	4.80
POWER TOOLS - HEAVY DUTY	
Jackhammer, Pavement Breaker Vibrators, Tampers - Multiple and Self-Propelled - Railroad Spike Puller	4.80
POWER TOOLS - LIGHT DUTY	
Chippers, Grinders, Tampers, and similar Electric and Air Operated Tools	4.75
Raker - Asphalt	4.80
Rodder	4.85
Sloper - Over 20 feet	4.70
Spreader - carries grade with rodder	4.85
Swinging scaffold or boatswain chair over water or 25 ft in height	4.75
Timberman - Sewer	4.90
Wagon Driller and Airtrac	4.90
Wagon Drillers Helper	4.70
Health & Welfare	30 cents
Pension Fund	30 cents
Apprentice Training Fund	2 cents

DEPARTMENT OF PUBLIC WORKS
of
THE CITY OF SEATTLE
Office of the Secretary

CONTRACTOR'S QUESTIONNAIRE

Before the contract is awarded the successful bidder will be required to properly execute the following affidavit.

1. CORPORATION: Name MARINE ASPHALT COMPANY, INC. Address ANACORTES WASH Phone 293-2168
2. President ROSCOE S. WASHBURN Address ANACORTES, WASH Phone 293-2168
Secretary HAROLD R. OLSON Address CLAK HARBOR, WASH Phone OR 5-2800
Treasurer HAROLD R. OLSON Address CLAK HARBOR, WASH Phone OR 5-2800
3. Has Company paid its annual State License Fees for corporations? YES
4. Who is authorized to execute contracts and receipt for checks? ROSCOE S. WASHBURN,
HAROLD R. OLSON, AND NORMAN J. LORENTZEN
Signed by Harold R. Olson Title Secretary

1. PARTNERSHIP: Name _____ Address _____ Phone _____
2. Are you doing business under an assumed name? _____
3. Have you filed your certificate with the County Clerk of King County, in compliance with Chapter 145 of the Session Laws of the State of Washington for the year 1907? _____
4. State name, residence address, phone number, citizenship and what interest each partner holds in the partnership.
Name _____ Address _____ Phone _____
Citizenship _____ Interest _____
Name _____ Address _____ Phone _____
Citizenship _____ Interest _____
Name _____ Address _____ Phone _____
Citizenship _____ Interest _____
Name _____ Address _____ Phone _____
Citizenship _____ Interest _____
5. Who is authorized to execute contracts and receipt for checks? _____

(All partners must sign and swear to affidavit.)

Signed by _____

CONTRACTOR'S QUESTIONNAIRE, (Cont.)

1. SOLE TRADER: Name _____ Address _____ Phone _____
2. Are you doing business under an assumed name? _____
3. Are you an American citizen? _____

Signed by _____

STATE OF WASHINGTON)
COUNTY OF KING) ss.

I, HAROLD R. OLSON,

_____, having first been duly sworn, on

oath, hereby depose and say: That I have read all of the foregoing answers or know the contents thereof and that each and all of said answers are in all respects true.

Signed by MARINE ASPHALT COMPANY, INC.

Roscoe Washburn

Harold R. Olson

Subscribed and sworn to before me this 26TH day of MAY, 1969

Ronald B. Gold
Notary Public

SEAL

PAYROLL AFFIDAVITS

1. AFFIDAVIT FOR AN AGENT. The affidavit for an agent to accompany the first payroll report shall be in substantially the following form:

I, _____ (Affiant), hereby certify
that _____ (Agent) _____ (Title)
pays or supervises the paying of the employees of _____
_____, on the following project for the City of Seattle,

(Name of Project)

Ordinance No. _____, and is in a position to have full knowledge of
the facts set forth in the affidavit respecting the payment of wages of employees
working on the project herein mentioned.

Sworn to before me this _____ day of _____ 19 _____

(Affiant)

Notary Public

If the agent is changed, a new affidavit will be required.

2. PAYROLL AFFIDAVIT. The affidavit accompanying each payroll report shall
be in substantially the following form:

I, _____ (Affiant) _____ (Title),
hereby certify that I pay or supervise the payment of the persons employed by

(Contractor), on the following project
for the City of Seattle _____,
Ordinance No. _____.

That the attached payroll sets out accurately and completely the name,
occupation, hourly wage rate, total number of hours worked and the full weekly
wages earned, of each person employed on the above project for the weekly pay-
roll period from the _____ day of _____ 19____, to the
_____ day of _____ 19____;

That no laborer, workman or mechanic employed on the above project has
been paid less than the prevailing rate of wage or less than the minimum rate
of wage specified in the contract;

That no rebates have been made either directly or indirectly to or on
behalf of said Contractor from the full weekly wages earned as set out on the
attached payroll and that the full amount due has been paid.

Sworn to before me this _____ day of _____ 19____.

Signature of Affiant

Notary Public

The City Comptroller will withhold payment on all estimates of work performed
by the Contractor under this contract until all payroll reports of said
Contractor for work performed have been filed with the Secretary of the Board
of Public Works.

NON-COLLUSION AFFIDAVIT

STATE OF WASHINGTON)
COUNTY OF SKAGIT) ss.

Harold R. Olson, being first
duly sworn on his oath says that the bid above submitted is a genuine and not
a sham or collusive bid, or made in the interest or on behalf of any person not
therein named; and he further says that the said bidder has not directly or in-
directly induced or solicited any bidder on the above work or supplies to put in
a sham bid, or any other person or corporation to refrain from bidding; and that
said bidder has not in any manner sought by collusion to secure to.....
self an advantage over any other bidder or bidders.

Innane Asphalt Company, Inc.
By: Harold R. Olson, Secretary
(Contractor)

Subscribed and sworn to before me this 14 day of May 1965.....

Robert C. C.
Notary Public in and for the State of Washington, residing
at Ammon.....

GENERAL CONDITIONS

1. STANDARD PLANS AND SPECIFICATIONS - SPECIAL ATTENTION

Special attention is called to the general requirement and covenants of the City of Seattle Standard Plans and Specifications, Eighth Edition, Sections 1 to 9, and to the modifications of these requirements as are provided herein.

2. LIQUIDATED DAMAGES

In case the contract is not completed within the time allowed or extension thereof, the Contractor shall pay liquidated damages in accordance with the provisions of Section 8.08 of the Standard Plans and Specifications.

3. CONTRACTOR'S INSURANCE

The Contractor shall provide Workmen's Compensation Insurance, Public Liability and Property Damage Insurance in the amounts and in accordance with the provisions of Section 3.07 of the Standard Plans and Specifications.

4. WORK ON SATURDAYS, SUNDAYS AND HOLIDAYS

Contractors desiring to work on holidays, Saturdays and Sundays shall comply with the requirements of Section 8.12 of the Standard Plans and Specifications for permission to work on any of such days and for payment of overtime engineering costs.

5. CONSTRUCTION SCHEDULE

For purposes of this contract, Section 8.01 of the Standard Plans and Specifications is amended as follows: Within five days after date of notice to proceed with the work, the Contractor shall deliver to the Engineer a construction progress schedule in form satisfactory to the Engineer showing the proposed dates of commencement and completion of the various items of work.

6. CHARACTER OF WORK AND MECHANICS

All workmanship shall be first class, executed in the best and most workmanlike manner by qualified, careful and efficient workmen in strict accordance with the drawings and specifications.

7. MATERIALS

a. General. Unless the specifications provide otherwise, all materials and articles incorporated in the work covered by this contract shall be new and of the most suitable grade of their respective kinds for the purpose.

b. Source of Materials Procured Outside the Territorial Boundaries of United States. In the event the Contractor utilizes materials in the performance of the contract which are procured from sources beyond the territorial boundaries of the United States including Alaska and Hawaii in excess of Two Thousand Five Hundred Dollars (\$2,500.00), the Contractor, in accordance with Section 2, Chapter 139, Laws of 1967 of the State of Washington, shall upon completion of the contract, furnish the Engineer with a statement setting forth the nature and source of such materials.

8. LUMP SUM PRICE BREAKDOWN

The Contractor shall also furnish a complete breakdown of the lump sum prices included in the Proposal. The values employed in making up any of these schedules or breakdown of prices will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

9. BID ITEMS - COST TO BE INCLUDED

The prices bid in the Proposal for the work to be performed shall include all costs of supervision, labor, skill, tools, material (except City furnished material whenever specified), equipment, overhead and all other costs and expenses of all kinds to perform the work complete in accordance with the contract and shall include such items of related work as may be stated in this specification.

10. PROSECUTION OF THE WORK

Special attention is called to Section 8.01 of the Standard Plans and Specifications which requires that the Contractor shall prosecute the work vigorously and continuously to completion.

The Contractor shall be responsible for strict compliance with this requirement.

The Contractor shall also be responsible for securing all labor necessary for completion of the project within the time allowed. A shortage of labor in any job classification involved in the work will not be considered an unavoidable delay for which an extension of time will be allowed.

11. RETAINED PERCENTAGE

Section 9.05 of the Standard Plans and Specifications, relating to payment and retained percentage for the purpose of this contract, is hereby amended to include the following:

In accordance with Chapter 238, Laws of the State of Washington, 1963, there will be reserved from the moneys earned by the Contractor on estimates during the progress of the improvement, or work, a sum equal to ten percent (10%) of such estimates, as a trust fund for the protection and payment of any person or persons, mechanics, subcontractors or materialmen who shall perform any labor upon such contract or the doing of said work, and all persons who shall supply such person or persons or subcontractors with provisions and supplies for thirty (30) days following the final acceptance of said improvement or work as completed and every person performing labor or furnishing supplies towards the completion of said improvement or work, shall have a lien upon such fund so reserved; provided such notice of the lien of such claimant shall be given in the manner and within the time provided by the Laws of the State of Washington.

The owner, at any time after fifty percent (50%) of the original contract work has been completed, if it finds that satisfactory progress is being made, may make any of the partial payments subsequently made in full.

SPECIFICATIONS

SECTION 1

SPECIAL CONDITIONS

1. DESCRIPTION OF WORK

The work to be performed consists of furnishing all material (except City furnished material), labor, supervision, tools and equipment for the following described work.

- a. Clearing and Grubbing the area of work as specified.
- b. Demolition. This work consists of removal of existing concrete slabs and other existing features as shown on the drawings or in the way of the work.
- c. Site Drainage. This work consists of installing one manhole and ten (10) catch basins in the yard area and adjacent roadway area; installing approximately 215 feet of fifteen inch, 335 feet of twelve inch, 300 feet of ten inch, 105 feet of eight inch and 145 feet of six inch concrete sewer pipe; installing fittings for site drainage system; adjusting existing catch basins, manholes, handholes and valve boxes to grade; plugging existing drains and catch basin; testing the drainage system; and related work required for a complete installation.
- d. Watermain. This work consists of installing two fire hydrants in the yard area and related work required for a complete installation.
- e. Earthwork. This work consists of excavation and fill for constructing a new roadway to Gorge Powerhouse Bridge to subgrade for asphaltic concrete paving; preparing a yard area subgrade and existing roadways for asphaltic concrete paving; excavation and fill for concrete sidewalks, curbs and gutters, driveways and fence curbs and related earth work for all work to be performed.
- f. Concrete Retaining Walls. This work consists of constructing a reinforced concrete loading dock retaining wall and reinforced concrete retaining wall for Building #55 in the yard area and related work as shown on the drawings.
- g. Asphalt Paving. This work consists of placing a crushed rock leveling course, finish grading and placing asphaltic concrete on roadways and yard areas as shown on the drawings.
- h. Fencing. This work consists of installing chain link fencing around yard area including gates and related work required for a complete installation. The work includes the installation of concrete fence curbs and sills; setting fence posts in concrete bases, and related work required for a complete installation.
- i. Concrete Curbs and Gutters. This work consists of installing roadway concrete curbs and gutters and related work required for a complete installation.
- j. Concrete Sidewalks. This work consists of installing concrete sidewalks alongside road to Gorge Powerhouse Bridge and related work as shown on the drawings.

k. Concrete Driveways. This work consists of installing concrete driveways to yard area at the locations shown on the drawings.

1. Miscellaneous. Do other miscellaneous work as shown of the drawings and as specified.

2. LOCATION OF WORK

The site of the work is at Newhalem, located on State Highway No. 20, approximately 23 miles east of Rockport, Washington.

3. SEQUENCE OF OPERATIONS

The Contractor shall conduct his operations as to have under construction no greater amount of work than he can prosecute vigorously and he shall not open sections of the work and leave them unfinished, but he shall finish the work as he goes.

4. CONTRACT DRAWINGS

The Department of Lighting will furnish four complete sets of contract drawings to the Contractor at the start of the job. It shall be his responsibility to keep one complete up-to-date set on the job site.

The following drawings are made a part of these specifications.

Drawing No.

D-25159, Rev. 1 - Newhalem - Sewers and Paving - Vicinity Map.

D-25160, Rev. 1 - Newhalem - Machine Shop & Warehouse Area - Existing Features.

D-25192, Rev. 2 - Machine Shop & Warehouse Yard Area - Storm & Sanitary Sewers.

D-25317, Rev. 1 - Riverside Way - Sta. 0 + 00 to Sta. 12 + 83.39
Plan, profile and details.

D-25318, Rev. 1 - Machine Shop & Warehouse Yard Paving Plan & Details.

D-25319, Rev. 1 - Machine Shop & Warehouse Fencing & Miscellaneous Details.

D-25345, Rev. 1 - Paving Plan - Newhalem Way Sta. 2 + 95 to 14 98.

D-25346, Rev. 1 - Riverside Way Sta. 1 + 66.97 to Sta. 12 + 83.39 Cross Sections.

5. ACCESS TO HOUSING AND OTHER FACILITIES

In order to maintain access to houses, the Contractor shall, whenever the trench is open, install temporary foot bridges across the open trench not farther than 200 feet apart.

The Contractor shall perform the work in yard area so as not to unnecessarily hamper access to the warehouse and machine shop. Vehicular access into the warehouse and machine shop shall be provided at all times through at least one of the doorways in each building, except at such time as placing of crushed rock leveling course asphalt surfacing will prevent such access.

6. EXISTING GROUND CONDITIONS

The work to be performed occurs in areas which may have in the past years been filled to varying depths with numerous types of materials. Some of the fill consists of boulders and broken rock spoil from the excavation for Gorge Powerhouse and penstock tunnels and varies greatly in size. The exact extent of the various fill materials is not definitely known. The Contractor shall examine the areas of work and determine for himself the nature of the material that may be encountered in the excavations and the appropriate excavating equipment to be used.

7. LAYING OUT OF WORK

The City will provide the following lines and grades:

- a. Set slope stakes for the new road to Gorge Powerhouse Bridge, minimum spacing 50 feet apart and blue tops for the leveling course.
- b. Set bench marks at convenient locations.
- c. Stake control points for locations of manholes, catch basins, fence, drive-ways and loading dock.
- d. Set hubs (offset from centerline) for locations and grade at sewer extensions.
- e. Provide hubs along edge of roadway to Gorge Powerhouse Bridge not closer together than 20 feet for location and grade of the curbs and sidewalks.
- f. Set bench marks only for preparation of yard area subgrade.

The Contractor shall provide such additional lines and grades as may be necessary for the work.

The Contractor shall carefully preserve all reference points and stakes, established by the City, and in the case of negligent destruction due to the Contractor's operations, he shall be charged with the resulting expense for their replacement and shall be responsible for any mistakes caused by their loss or disturbance.

The Contractor shall give at least 48 hours notice in advance of the need for certain lines and grade.

The City reserves the right to check all work laid out by the Contractor during the progress of the work, as deemed necessary to verify conformance with the plans and specifications and the Contractor shall allow a reasonable time to permit such checks before completing the work. These checks will be made during the regular working hours.

The City will not be responsible for any delays incurred while making such checks.

8. MATERIALS FURNISHED BY CITY

The City will furnish the following material without cost to the Contractor.

- a. Granular Fill material for pipe bedding, (approx. 1/8" to 1/4" in size or coarse sand) from stockpiles at Crane Gravel Bar.
- b. Sand for concrete work from stockpiles at the Crane Gravel Bar.
- c. Crushed Rock Aggregate for concrete work from stockpile in Goodell Creek Pit.
- d. Crushed rock for leveling course for asphalt paving from stockpile in Goodell Creek Pit.
- d. Pit Run Material for fill from Goodell Creek Pit.
- e. Gravel for gravel pockets - from Crane Gravel Bar.
- f. Topsoil, from stockpiles in the vicinity of the work.

The Contractor shall load and transport all materials furnished by the City. The Engineer will designate the area at the stockpiles of aggregates and granular fill from which the Contractor shall obtain the materials. The material shall be loaded and hauled in a manner which will cause a minimum of waste. The Contractor shall excavate, load and haul pit run gravel from presently excavated faces in the Goodell Creek Pit.

Crane Gravel Bar is located approximately two miles downstream from Goodell Creek and Goodell Creek Pit is immediately west of Newhalem adjacent to Goodell Creek.

9. TEMPORARY BUILDINGS

The Contractor may construct or provide temporary buildings, at an approved or designated location, as may be necessary for the performance of the work. At the completion of the work all temporary buildings shall be removed.

10. MAINTAINING TRAFFIC

The Contractor shall conduct his operations in such a manner as will permit traffic in the area of work and shall maintain one way traffic across the state highway at all times when trenching across the highway. The Contractor shall not infringe upon the state highway roadway.

The streets and driveways to be paved in the residential areas shall be kept open during grading and preparation of subgrade. Areas to be paved may be completely barricaded during the paving process and during period as necessary for each day's operation by pre-arrangement with the Engineer.

The Contractor shall provide all barricades, signs and flagmen as may be required for the control of traffic through the work areas.

11. DUST CONTROL

Whenever dust becomes a nuisance due to operations of the Contractor, the Engineer shall direct the Contractor to sprinkle the streets or other areas of dust with water at the Contractor's expense to allay the dust.

12. CONSTRUCTION POWER AND WATER

a. Power. The Department of Lighting will make upon request, and remove, at no cost to the Contractor, the necessary temporary installation for lights and power at one location. To receive this service, the Contractor shall provide and set a temporary pole at least 4" x 6" in size and 16' long set 4' deep in the ground. This service will be limited to 3 wire, single phase, 60 amperes. The Contractor shall pay for the power used at the charges in Department of Lighting Rate Schedule 44. The Contractor shall request this service connection not less than five (5) days prior to requirement.

b. Water. Water may be obtained, at no cost to the Contractor, from fire hydrants convenient to the work. However, the hydrant valve shall not be used to throttle the flow of water. The Contractor shall install a valve at the hydrant outlet for this purpose. He shall lay temporary piping and extend the water as needed for work at his expense.

13. MEALS AND LODGING

Meals will be available at the established rates at the City's Gorge Inn at Newhalem. The City will not be able to furnish lodging to the Contractor or his forces and will not permit installation of such facilities in the area.

14. CONTRACTOR TO MAINTAIN GUARDS

The work to be performed is in a community in which there are numerous children. The Contractor shall, therefore, take special safety precautions by backfilling excavations promptly, erecting barricades immediately after excavations have been made, and taking such other precautions as may be requested to safeguard the area of work.

In the event the Contractor leaves the work in an unsafe or hazardous condition the Engineer will cause such conditions to be corrected by City forces by means of barricading, backfilling, or any other means which the Engineer deems necessary and the cost thereof shall be borne by the Contractor.

15. PROTECTION OF PROPERTY

The Contractor shall further be responsible for any damage done to any property in the work area, by reason of his operations.

16. USE OF UNSATISFACTORY MATERIALS

If any articles or materials furnished by the Contractor under these specifications are found to be unsatisfactory, as determined by the Engineer, the City of Seattle shall have the right to use and operate such unsatisfactory articles or materials until they can be replaced with satisfactory articles or materials without damage to the City of Seattle.

17. ADDRESSING CORRESPONDENCE

All correspondence directed to the City pertaining to this project should be addressed as follows:

Superintendent of Lighting
1015 - 3rd Avenue
Seattle, Washington 98104

Attention: Mr. E. R. Schindler
Principal Engineer

Newhalem Paving and
Drainage Improvements
Specification 2121

18. GUARANTEE

In addition to the general responsibility of the Contractor for work done as covered in the Standard Plans and Specifications, the Contractor shall guarantee all equipment furnished by him and he shall rectify without delay and at his expense, any defects which are discovered within one year of the date of acceptance of the contract by the Board of Public Works.

19. SHOP DRAWINGS

The Contractor shall furnish the Engineer one reproducible ozalid (sepia) and one print of all shop drawings for all fabricated material and/or schedule of all reinforcing steel and other items for which shop drawings are required. These drawings shall be submitted sufficiently in advance to allow ample time for review. These drawings shall be approved by the Engineer prior to fabrication of the items. A letter of transmittal shall accompany all shop drawings stating conformance to specifications or deviations if any. After approval, the ozalid will be returned to the Contractor who shall have the additional copies made and distributed as necessary for his use. The approval of shop drawings by the Engineer shall not relieve the Contractor of responsibility for errors contained therein. A check will be made on general conformity to the plans and specifications but will not be an acceptance of all dimensions, quantities and details of the materials shown in the shop drawings and/or schedule.

SECTION 2A
SITE DRAINAGE

1. SCOPE

The work consists of installing catch basins, one manhole, adjusting existing manhole and catch basin to final grade, plugging designated existing yard drains, backfilling an existing catch basin, installing drainage piping for yard area drainage and drainage for road to Gorge Powerhouse Bridge (Riverside Way) as shown on the drawings and as specified.

2. MATERIALS

- a. Catch Basins with frames and covers shall be as specified on the drawings.
- b. Drainage Pipe and Fittings shall be as specified on the drawings.
- c. Manhole shall be as specified on the drawings. Frame and cover shall be coated with coal-tar pitch varnish.
- d. Granular Fill for bedding sewer pipe shall be pea gravel or coarse sand as directed, obtained from the City's stockpiles as provided in Section 1.-8a.

3. EXCAVATION

- a. General. The Contractor shall perform all excavation of every description and of whatsoever materials encountered to the depths indicated on the drawings as specified herein. The maximum trench widths at bottom of trenches shall be as shown on the drawing or specified in the applicable section of this specification.

When necessary to control the trench width, the trench shall be properly sheeted and braced.

All excavation performed shall comply with the Washington State Safety Code for construction work as required by the State Safety Inspector.

Excavation for manholes shall be of sufficient size to permit proper setting of the manhole. The area under the manhole shall be excavated to the minimum depth shown on the drawings to provide for the bedding for the base section of the manhole as specified below.

Over-excavation due to the Contractor's operations or for his convenience shall be corrected at the Contractor's expense by backfilling with the concrete bedding for manholes specified hereinafter.

Excavated material shall be piled in an orderly manner and sufficient distance from the edge of trenches to avoid overloading and to prevent slides or cave-ins. Care shall be taken not to excavate below depth indicated; excavation below the depth shall be replaced, at the Contractor's expense, as provided elsewhere in this section of the specification.

3. EXCAVATION (Continued)

a. General. (Continued)

See other sections for additional requirements for excavation. Payment for excavation except as otherwise provided, shall be included in the applicable bid item.

b. Solid Rock Excavation. Solid rock excavation shall consist of rock requiring drilling and blasting with explosives for its removal and any boulders or broken rock larger than two (2) cubic yards in volume. Hardpan or cemented gravel shall not be classified as solid rock excavation. In trenches for drainage solid rock protruding above the bottom of the trench shall be excavated to a width equal to the minimum width of the trench and to a grade line not less than six inches below bottom of pipe. The bottom of the trench shall be brought up to grade by backfilling with granular fill and compacting by tamping. Protruding rock in trench bottom removed by drilling and blasting will be paid for as solid rock. Measurement for payment of the volume of solid rock excavated in the bottom of the trench will be of the quantity removed within the minimum width of the trench and to a grade six inches below the bottom of the pipe and the profile of the top of the rock as established by field measurements. Broken rock and boulders larger than 2 cubic yards in volume will be measured individually.

Payment for solid rock excavation will be made at the unit price per cubic yard bid in the Proposal for "Solid Rock Excavation", which price shall include the cost of all work described above and disposing of the oversized boulders or broken rock. No payment will be made for solid rock removed because of unnecessarily large excavations.

c. Removal of Stumps. Should buried stumps be encountered in excavations for drainage piping, they shall be removed by the Contractor.

Payment for removal of the stumps shall be made as for "Extra Work" in accordance with the provisions of the Standard Plans and Specifications.

d. Unsuitable Foundation Excavation. If, in the opinion of the Engineer, foundation material encountered is unsuitable, it shall be removed to the depth as directed and replaced with suitable material compacted in place.

Payment for removal and replacement of unsuitable material will be made as for "Extra Work" in accordance with the provisions of the Standard Plans and Specifications.

e. Disposal of Large Boulders. At the option and as directed by the Engineer, large boulders or broken rock up to two (2) cubic yards in volume contained in backfill material shall be removed and disposed of by the Contractor. Such boulders or broken rock shall be disposed of by dumping along the river bank at the disposal area adjacent to the yard area.

The quantity of such material is unknown and may vary greatly from the quantity indicated in the Proposal and the City will not be responsible in any way for variance or omission of work under this item.

3. EXCAVATION (continued)

e. Disposal of Large Boulders (continued)

Measurement for payment will be made of the volume of each individual boulder designated to be removed.

Payment will be made at the unit price bid in the Proposal for "Disposing of Large Boulders from Trench and Manhole Excavations" which price shall include all costs to handle, load, haul and unload the boulders and broken rock.

Payment for disposal of boulders and broken rock larger than two (2) cubic yards is included in the unit price bid for "Solid Rock Excavation for Drainage Trench and Manhole".

f. Disposal of Surplus Excavated Material. Surplus material from excavation of trenches and manholes shall be disposed of by dumping along the river bank at the disposal area adjacent to the yard area.

4. INSTALLATION OF CATCH BASINS

a. Excavation for catch basins shall be of sufficient size to permit proper setting of the catch basin. The bottom of the excavation shall be hand trimmed to a level surface to permit setting the catch basin to the proper grade. Over-excavation shall be corrected at the Contractor's expense by backfilling with approved material thoroughly compacted in layers of four (4) inches maximum loose thickness.

b. Installation. The catch basin shall be lowered carefully onto the prepared subgrade, positioned as shown on the drawings, with the top level. The frame and grate for the catch basins shall be adjusted to the elevation shown on the drawings by installing courses of brick laid with 1:3 cement-sand mortar. The cover frame for the catch basins shall be set in mortar to the required elevation.

c. Backfill. Catch basins shall be backfilled with material from the excavation placed in four (4) inch maximum layers of loose thickness and thoroughly compacted. Backfill shall not be completed until the mortar has cured. Backfill sufficiently to provide bedding from drain pipes entering the catch basins and inlets.

5. INSTALLATION OF MANHOLE

The manhole may be constructed with standard precast concrete sections, concrete masonry blocks or bricks, or concrete cast-in-place.

a. Special Bedding for Manhole Base. The special concrete bedding for manhole bases shall consist of a minimum of four sacks of cement per cubic yard mixed with the granular fill material specified below for bedding drain pipe with sufficient water added so that the mixture of cement and granular fill will set into a stabilized layer under the precast base.

b. Installing Manhole Sections. The base section of the manhole shall be carefully placed on the special bedding before it has set, so as to be fully and uniformly supported in true alignment, and so that all pipes to be inserted in the manhole will be at the proper grade.

5. INSTALLATION OF MANHOLES (continued)

b. Installing Manhole Sections. (continued)

Precast wall sections shall be placed and aligned to provide vertical sides and vertical alignment of the ladder rungs.

All lift holes and all joints between precast elements shall be thoroughly wetted and then be completely filled with mortar, smoothed and pointed inside and out to insure watertightness.

Cement mortar shall be 1:1-1/2, cement plaster sand mixture with the least amount of water to give it the consistency of putty. Cement mortar shall be used immediately after mixing and shall not be retempered.

The completed manhole shall be rigid and true to dimensions.

c. Manhole Channels. Channels shall be made with five-sack concrete to the proportions as directed by the Engineer. Channels shall be made to conform accurately to the grade and shall be brought together smoothly with well-rounded junctions. Channel sides shall be carried up vertically to the crown elevation of the various pipes and the concrete shelf between channels shall be smoothly finished and warped evenly with slopes to drain.

d. Backfill. Backfill for manholes may be material from excavation of the manhole except that broken rock or boulders larger than six (6) inches shall not come in direct contact with the sides of the manhole.

Backfill shall be placed, initially, around the manhole to be level even with the top of granular fill above the sewer pipes entering the manhole. Backfill shall be placed in layers of six-inch maximum loose thickness and thoroughly compacted with mechanical tampers. The remaining backfill shall be placed and compacted by any of the methods specified for backfill of drain pipe trenches. Care shall be taken to prevent rolling rocks from contacting the manhole.

e. Manhole Cover. Manhole covers shall be adjusted to the grades shown on the drawings by placing sufficient courses of radial manhole blocks laid in 1:3 cement-sand mortar between the precast manhole cone section and the frame of the cover.

6. INSTALLATION OF DRAINAGE PIPE

a. Excavation shall be in accordance with Section 2A - 3., Excavation.

b. Foundation Preparation. Proper preparation of the foundation for the pipe, placement of foundation material where required, and placement of bedding material shall precede the installation of all drainage pipe. This shall include the necessary leveling of trench bottom and the removal of all loosened material. It shall also include leveling of the foundation material to a uniform grade so that the entire length of pipe, when placed, will rest firmly upon an adequate foundation. Backfill around the pipe shall be placed in a manner to meet the requirements specified hereinafter.

6. INSTALLATION OF DRAINAGE PIPE (continued)

c. Laying Pipe. Conditions in the trench shall be such that pipe jointing can be accomplished without getting mud, silt, gravel or other foreign material into joints. Gaskets shall be installed in strict compliance with manufacturer's instructions. Pipe shall be laid upgrade.

Pipe shall be aligned properly before the joint is completed by forcing the spigot home into the bell. During insertion, the pipe shall be partially supported to minimize lateral pressure on the gasket and maintain concentricity until the gasket is properly positioned.

The maximum deviation from true line or grade shall be three-eighths ($3/8$) inch. There shall be no adverse grade in excess on one-eighth inch per pipe length.

The difference between deviation for two (2) successive joints shall not exceed one-third ($1/3$) of the maximum permissible deviation.

The line already jointed shall be restrained in such a manner that joints already made secure are maintained in that condition. Last pipe jointed at the end of each day's work shall be blocked to prevent creep.

The space between the inlet and the pipes entering catch basins and inlets shall be drypacked with 2:1 sand-cement mortar.

d. Backfill. Backfill from the bottom of the pipe to six (6) inches above the top of pipe shall be made with granular fill material placed simultaneously on each side of the pipe. No tamping of this material will be required. Backfill from six (6) inches above the top of the pipe shall be made with selected fill consisting of clean earth or sand free from all gravel or stones which will not pass through a two (2) inch ring placed in six (6) inch layers and thoroughly compacted by mechanical vibrating tampers.

7. ADJUSTMENT OF EXISTING MANHOLES AND CATCH BASINS

Adjustment to the existing manhole and catch basin to new elevations shall be made in accordance with the details shown on the drawings.

8. PAYMENT

Payment for the work under this section, including plugging existing drains and backfilling a catch basin, adjustment of manholes and catch basins will be made at the Lump Sum price bid in the Proposal for "Construct Yard and Roadway Drainage System", which price shall cover all costs (except as otherwise provided) for a complete installation.

SECTION 2C
CLEARING AND GRUBBING

1. SCOPE

The work consists of clearing and grubbing the portions of the yard area and the roadway to Gorge Powerhouse Bridge (Riverside Way) that require clearing and grubbing as specified. All clearing and grubbing in the area of work shall be completed prior to commencement of construction in that area.

2. CLEARING

This work consists of clearing the areas of work including areas of roadway fill of all trees and brush, including the removal of the present timber loading dock retaining wall and a portion of the yard fence and transmission tower guard rails and posts and other obstructions, shown on the drawings to be removed, or other obstructions that may interfere with the proposed work. The spoil material shall be removed from the sites of work and shall be disposed of in a manner approved by the Engineer.

Trees, to be cleared, shall be "close cut" parallel to the slope of the ground. The tops of all stumps shall be cut off not more than six (6) inches above the ground. Trees and brush shall be disposed of by burning in the garbage pit at Goodell Creek. Secure burning permit from National Park.

3. GRUBBING

This work consists of grubbing all areas on which asphaltic concrete pavement is to be placed and shall include the removal of all stumps, abandoned shrubs, sod and vegetable matter from the ground, and topsoil in planting areas within the work area to a depth of 12 inches below subgrade, and the burning or disposal as directed by the Engineer.

4. PAYMENT

No separate payment will be made for clearing and grubbing and removal of obstructions, the cost shall be included in the various items bid in the Proposal.

SECTION 2D
EARTHWORK

1. SCOPE

The work consists of excavation, backfill and placing fill where necessary for the construction of all work as shown on the drawings and as specified. Excavation and backfill for the yard drainage is covered in other sections of this specification.

2. EXISTING GROUND CONDITIONS

Existing ground conditions are described under Section 1.

3. EXCAVATION

a. General. The Contractor shall perform all excavation of every description and of whatsoever materials encountered to the depths indicated on the drawings or specified herein. All excavation performed shall comply with the State Safety Code for construction work.

Excavations shall be no larger than necessary to permit construction of the work. Subgrade surfaces of the earth shall be undisturbed and in a true plane. Shoring and bracing shall be installed if necessary to retain the side of the excavated areas. The subgrade shall be kept in a firm condition until the concrete or other work has been placed. Damage to the subgrade due to the Contractor's operations or adverse weather shall be repaired by the Contractor at his expense. Excavation for concrete structures below the grades shown on the drawings due to the Contractor's operations or for his convenience shall be corrected by him, at his expense, by filling to design subgrade with not less than four sack mix concrete.

b. Excavation for Retaining Walls. The Contractor shall perform excavation in the yard area for purposes of constructing a concrete loading dock retaining wall and a retaining wall at the east end of Building 55. The excavation for the loading dock shall include the removal of timber bulkhead wall and a portion of the existing concrete loading dock slab as shown on the drawings and removal of the large rocks presently retaining the ground.

c. Yard Area Excavation and Fill. The yard area shall be excavated and filled as necessary to produce the required subgrade. Where excavation is required in the existing yard area to secure the required subgrade, it shall be done with proper equipment and in such a manner as will not unduly disturb the foundation material below subgrade, except that because of large rocks that may be encountered, it may be necessary to excavate below the subgrade and backfill with suitable materials to the required subgrade.

The present original ground to be excavated adjacent to Building 55 shall not be used for fill material but shall be disposed of along the river bank disposal area. Disposal of boulders shall be as specified under Subparagraph (f), below.

Where fill is required over existing yard area surfaces to secure the required subgrade, the Contractor shall scarify the affected area and build up the subgrade in layers not to exceed four (4) inches in loose thickness with selected excess materials from the subgrade preparation or with pit run material from the Goodell Creek pit, watered if necessary, as directed. Each layer shall be thoroughly com-

3. EXCAVATION (Continued)

pacted to 95% of the maximum density, by rolling with a pneumatic-tired roller or smooth-wheeled roller before the next succeeding layer is placed.

The final subgrade surface for the yard area shall be prepared as specified in Section 2E.

d. Excavation and Fill for Road to Gorge Powerhouse Bridge (Riverside Way)
The road to Gorge Powerhouse Bridge shall be constructed by excavating and filling as required to meet the lines and grades shown on the drawing.

Material excavated for the roadway may be used for filling areas to be filled to the extent excavated material is available. Oversize rocks shall be disposed of outside edge of toe of roadway slope. Additional fill material shall be obtained from Goodell Creek pit or material presently between the roadway and riverbank above the final roadway grade may also be used.

Heavy fill material shall be placed in layers not more than 18 inches in loose thickness. Pit run or similar sized material shall be placed in 12 inch layers. The material shall be placed so that the larger pieces of rock or boulders are well distributed. The intervening spaces and interstices shall be filled with smaller stone and earth as may be available so as to form a dense, well-compacted fill. Each layer shall be compacted by at least four (4) full coverages with a vibrating roller. The vibrating roller shall be similar to an Easick Model UR-13-W or UR-28-W, shall have a compression roller not more than 30 inches in width and shall impart a compaction force per second of at least 94 tons. Wider rollers may be used provided they meet this compaction effort.

The fill material shall be moistened by sprinkling with water, when directed, if necessary to obtain the desired compaction and the cost of sprinkling shall be considered incidental to the work and no separate payment will be made for sprinkling.

A ballast course shall be placed on the portion of the roadway shown on the drawings to receive a ballast course. The ballast course shall consist of pit run material containing no rocks larger than 4 inches and compacted as specified above.

The final surface of the roadway subgrade to receive the crushed rock leveling course shall be prepared as specified in Section 2E.

4. FILL FOR WALKS AND DRIVWAYS

a. General. The Contractor shall excavate, load, haul, place and compact pit run gravel fill as necessary for the construction of concrete sidewalks and driveways. The pit run gravel for filling is available at the Goodell Creek Pit as provided in Section 1.

The pit run gravel shall not contain rocks larger than 3 inches. All fill material shall be placed in layers not to exceed four inches in loose thickness, sprinkled if necessary, and each layer shall be compacted with two complete passes of a vibrating type roller compactor to secure a compaction equivalent to 95% compaction at optimum moisture content.

5. BACKFILL OF STRUCTURES

Excavated material or pit run gravel shall be used for backfill of excavations for structures.

5. BACKFILL OF STRUCTURES (Continued)

All material for backfill of excavations against concrete structures shall be placed in layers not exceeding six (6) inches in thickness and compacted to a minimum degree of compaction of 95% at optimum moisture content in accordance with modified AASHTO Specification No. T-99. Compaction shall be accomplished with vibrating plate type or rammer type compacting equipment of proper size and type to secure the required degree of compaction and compaction equipment shall be subject to the approval of the Engineer.

6. UNSUITABLE FOUNDATION EXCAVATION

If, in the opinion of the Engineer, except as provided in Subparagraph 3c above, foundation material encountered is unsuitable, it shall be removed to the depth as directed and replaced with suitable material compacted in place. Payment for removal and replacement of such unsuitable material will be made as for "Extra Work" in accordance with the provisions of the Standard Plans and Specifications.

7. DISPOSAL OF SURPLUS EXCAVATED MATERIAL

All surplus excavated materials from the yard area, sidewalks and driveways shall be disposed of in the roadway area requiring fill or by dumping along the riverbank at designated locations opposite the warehouse and yard areas.

8. PAYMENT

a. Payment for all excavation and backfill, and fill for the yard area and road to Gorge Powerhouse Bridge including hauling, placing and compacting ballast and pit run gravel shall be made at the Lump Sum price bid in the Proposal for "Construct Yard Area and Roadway to Gorge Powerhouse Bridge to Subgrade", and which price shall cover all costs (except as otherwise provided) for securing a subgrade surface ready to receive the crushed rock leveling course.

Payment for excavation and backfill for the loading dock retaining wall and retaining wall at Building 55 and all other work shall be included in the item of the Proposal covering their construction.

SECTION 2E
SUBGRADE SURFACE PREPARATION
AND CRUSHED ROCK LEVELING COURSE

1. SCOPE

This work covers preparation of the subgrade surface of the various areas to be surfaced with asphalt concrete ready to receive the crushed rock leveling course or the asphalt concrete pavement and includes placing the crushed rock leveling course. It shall be an essential requirement that the Contractor take special care in shaping the subgrade in order that proper drainage will be obtained and no areas pond water.

2. SUBGRADE PREPARATION

a. General. After all excavation and filling has been completed to subgrade, all subgrade surfaces of the yard area and road to Gorge Powerhouse Bridge shall be shaped to the grade and cross sections as shown on the drawings, or as directed by the Engineer, by the use of a pneumatic-tired motor patrol road grader with not less than ten foot blade, equipped with scarifier and weighing not less than six tons; an approved water sprinkler equipped with eight foot spray bars of sufficient capacity for distributing the water; a pneumatic-tired roller or a self-propelled smooth-wheeled, three-wheel or tandem roller weighing not less than eight tons.

Excess material which cannot be disposed of by normal drifting to low spots during blading and shaping operations shall be disposed of in the designated disposal area.

The subgrade shall be sprinkled if necessary, bladed, and rolled until brought to the grade and section shown on the drawings. Rolling shall continue until the entire subgrade presents a firm and unyielding surface true to line, grade and cross section without projections of firmly embedded rocks more than one inch. The final subgrade surface shall be true to the required subgrade.

b. Subgrade of Streets to be Paved. The subgrade of the streets to be paved are presently surfaced with crushed rock. The subgrade of the streets to receive the asphalt concrete pavement shall be prepared by shaping the present roadway surface to the required cross sections and grade in accordance with the procedures specified in Subparagraph (a) above, using the present roadway surfacing materials. Surplus material shall be saved and disposed of by dumping at a designated location near the site of this work.

3. CRUSHED ROCK LEVELING COURSE

a. General. A crushed rock leveling course shall be placed on yard area and road to Gorge Powerhouse Bridge preparatory to receiving the surfacing of asphalt concrete.

b. Material. Crushed Rock for leveling course will be furnished by the City at the stockpile at the Goodell Creek Pit as provided in Section 1.

c. Placement. The crushed rock leveling course shall be placed, sprinkled, bladed and rolled until brought to the required grade and section. The surface

3. CRUSHED ROCK LEVELING COURSE (continued)

shall be rolled with a smooth-wheeled or pneumatic-tired roller or both except that the final rolling shall be accomplished with the smooth-wheeled roller. Rolling shall continue until the surface represents a smooth unyielding surface without projections.

During the operation of blading and rolling, water shall be applied as necessary to produce the required firm surface.

d. Truck Scale. The Contractor shall furnish truck scales for measurement of the weight of each truckload of crushed rock placed in the completed work and shall provide with each truckload a weight slip to be given to the inspector at the time of placement.

4. PAYMENT

a. Payment for preparation of the subgrade surface of the yard area and road to Gorge Powerhouse Bridge shall be included in the lump sum price bid in the Proposal for "Construct yard area and roadway to Gorge Powerhouse Bridge to subgrade."

b. Payment for preparation of the subgrade of the residential street to receive the asphalt concrete shall be made at the lump sum price bid in the Proposal for "Preparing Streets in Residential Area to Subgrade", which price shall include disposal of surplus material.

c. Payment for placing the crushed rock leveling will be made at the unit price per ton bid in the Proposal for "Placing Crushed Rock for Leveling Course", which price shall be full compensation for loading, hauling, placing, watering and compacting the crushed rock and furnishing the truck scales. No payment will be made for crushed rock placed outside the lines shown on the drawings.

SECTION 2F

ASPHALT PAVING AND ROADWAY SHOULDER

1. SCOPE

The work consists of paving the roadway to Gorge Powerhouse Bridge and the Machine Shop and Warehouse Yard Area and certain residential streets with asphaltic concrete and constructing roadway shoulders as shown on the plans and as specified.

2. MATERIALS

a. Asphalt shall be 85-100 penetration, conforming to the requirements of Section 25-2.01D of the Standard Specifications of the State of Washington for Road and Bridge Construction, 1963 Edition.

b. Mineral Filler shall be Portland cement or ground stone conforming to the requirements of Section 32-2.02D of the above Standard Specifications of the State of Washington.

c. Crushed Rock for Asphaltic Concrete shall conform to the requirements of Section 32-2.03 for Class B or Class F asphalt concrete of the above Standard Specifications of the State of Washington.

3. SOURCE OF ASPHALT CONCRETE

The Contractor may, at his option, obtain asphaltic concrete from any established source convenient to the work provided it meets the requirements of Section 32 of the Standard Specifications of the State of Washington for Bridge Construction, 1963 Edition, for Class B or Class F asphalt concrete and provided further that the temperature of the asphalt concrete mixture when deposited on the areas to be paved shall be not less than 250° F.

4. JOBSITE PLANT

In event the Contractor elects to set up a plant to manufacture the crushed rock and manufacture asphaltic concrete at the job site, the City will provide an area at Goodell Creek Pit without charge, for this purpose. The Contractor shall prepare the area as may be necessary. The City will also allow the Contractor to obtain, without cost, sufficient pit run material as may be necessary for the manufacture of the asphaltic concrete from the Goodell Creek Pit.

The dust and smoke from the jobsite plant shall be eliminated to the extent that it will not inconvenience the residents of Newhalem. The Contractor will be required to install a satisfactory precipitation device or other such methods as may be necessary to control the dust and smoke to the satisfaction of the Engineer.

Oversize rocks resulting from the manufacture of the crushed rock shall be disposed of in the pit area at a designated location.

The Contractor shall provide the Engineer with the sieve analysis of the aggregate produce and shall submit for approval the mix proportion for the asphalt concrete mixture he proposes to use.

5. MANUFACTURE, SPREADING, FINISHING, COMPACTION

The manufacture of the asphalt concrete, hauling, spreading and finishing, compacting and surface smoothness shall conform in all respects to the applicable requirements of the above mentioned Standard Specification of the State of Washington. The asphalt concrete surface shall be constructed to thickness shown on the drawings, each course shall not exceed 2 inches in thickness. The finished yard area and other flat areas shall be checked for depressions ponding water by flooding with water and such depressions shall be corrected by filling with asphalt concrete.

6. SCALES

The Contractor shall furnish and install and operate a recording truck scale for measurement of the asphalt placed.

7. WOOD RIBBON

An untreated wood ribbon of fir or cedar shall be installed adjacent to rockery in the yard area, as shown on the plans, to which the asphalt concrete shall terminate.

8. BITUMINOUS TREATED ROADWAY SHOULDERS

Bituminous treated roadway shoulders shall be constructed along the road to Gorge Powerhouse Bridge and other locations shown on the drawings. The shoulders shall be constructed of crushed rock over which shall be applied one coat of hot MC-800 asphalt (0.3 to 0.4 gallons per square yard) and then covered with a layer of crushed stone (25 to 30 pounds per square yard), all compacted by rolling to the depth shown on the drawings. The crushed stone shall be the crushed leveling course material available from the stockpile at Goodell Creek Pit.

9. MEASUREMENT AND PAYMENT

a. Measurement for payment for asphalt concrete pavement will be made of the actual number of tons of asphalt placed within the lines shown on the drawings and as determined by certified scale weights. Payment for asphalt concrete will be made at the unit price per ton bid in the Proposal for "Furnish and Place Asphaltic Concrete Paving", which price shall be full compensation for manufacturing, hauling, placing, compacting, rolling and finishing, including mineral filler, tack coats at existing concrete surfaces, installing wood ribbon by rockery and related work for constructing the asphalt pavement. The unit price includes all costs to move in and move out of a jobsite crushing and asphalt manufacturing plant and all related costs in connection with the jobsite manufacture of the asphalt including also such mineral filler as may be necessary.

b. Payment for bituminous shoulder treatment will be made at the unit price per square yard bid in the Proposal for "Crushed Rock, Roadway Shoulders, Bituminous Treated Shoulders", which price shall be full compensation for constructing the roadway shoulders as specified. Measurement for payment will be made of the actual area of roadway shoulder constructed.

SECTION 2G
CHAIN LINK FENCE

1. SCOPE

The work consists of installing chain link fence with gates as shown on the drawing or as specified. See Section 2H for concrete fence curbs and post footings.

2. DATA TO BE FURNISHED BY THE CONTRACTOR

The Contractor shall submit for approval descriptive information, specifications, and drawings as necessary to completely describe all parts of the fence proposed to be furnished and submit three (3) copies in addition to those needed by the Contractor of a drawing showing the location of fence posts and details of the gates.

3. FENCE

a. General. The following specifications are based largely upon the standards of a particular manufacturer. It is not the intent to require other manufacturers to alter their standards accordingly. Minor differences and variations from the specifications may be made to conform to another manufacturer's standard consistent with the quality required.

All materials except fabric shall be galvanized.

The chain link fence shall be manufactured by the American Wire and Steel Division of the United States Steel Company, shall be a Cyclone "Invincible" eight (8) feet (nominal) in height, and shall be in accordance with the specifications for the respective type of fence as set forth in the firm's Catalog No. 108A and as modified herein.

b. Fabric. The fabric shall be No. 9 gauge aluminum-coated steel conforming to ASTM Designation A 491-63T, Class II, with two (2) inch mesh with twisted and barbed top and bottom selvages, provided with a No. 7 gauge galvanized bottom tension wire secured to the fabric with No. 10 gauge aluminum hog rings.

The width of the fabric shall be seven (7) feet for the eight (8) foot "Invincible" fence.

c. Posts. Line posts shall be 2.25" x 1.95" H Section, 4.1#, galvanized. End and corner posts shall be 2-7/8" O.D. pipe, 5.79#/ft., galvanized.

Post spacing shall not exceed ten (10) feet. Install as shown on the drawings.

End and corner posts shall be horizontally center braced and diagonally trussed.

d. Top Rail. The fence shall be provided with a top rail, 1-5/8 inch O.D. pipe, 2.27 lb. per linear foot.

e. Gates. The gates shall be "Cantilever Slide Gates, Type D", as manufactured by the American Wire and Steel Division of the United States Steel Company. The size shall suit the gate opening shown on the drawing.

f. Extension Arms and Barbed Wire. The fence and gates shall be provided with extension arms and three (3) strands of barbed wire projected to the outside of the yard. Barbed wire shall be galvanized, No. 12 $\frac{1}{2}$ gauge with aluminum four point barbs spaced approximately five inches apart. Arms, except on gates, shall be designed to extend at a 45 degree angle with lock wire for securely fastening the barbed wire equally spaced with the top strand located 12 inches above the fabric and 12 inches out from the fence line.

g. Installation of Fence. The chain link fence, gates, and accessories shall be installed in strict accordance with the plans and detailed specification of the manufacturer. The installation shall be made in a workman-like manner by skilled mechanics, experienced in erection of this type of fence.

4. PAYMENT

Payment for the work in this section shall be included in the lump sum price bid in the Proposal for "Furnish and Install Chain Link Fence and Gates, Including Fence Curb and Post Footings".

SECTION 2H
CONCRETE FENCE CURB

1. SCOPE

The work consists of the construction of concrete fence curbs for the fence installation as specified and as shown on the drawings. The portion of fence with fence curb is shown on the drawings. See Section 2G for chain link fence.

2. EXCAVATION AND BACKFILL FOR FENCE CURB

a. Excavation. Excavation for the fence curb shall be no larger than necessary to permit construction of the item therein. Excavations for fence post footings shall be the size and depth shown on the drawings and shall be made by use of an auger or other approved method.

b. Backfill. Fence curbs and unaugered post footings shall be backfilled with the material excavated, if it is suitable, or with pit run material, placed in six (6) inch layers of loose thickness and thoroughly compacted by mechanical tamping.

c. Overexcavation. Overexcavation below the grades shown on the drawings due to the Contractor's operations or for his convenience or necessary due to adverse weather shall be corrected by him at his expense as follows:

(1) Under fence curbs, fill to designed grade with concrete of the class specified therefor or with approved backfill material placed in maximum layers of four (4) inches of loose thickness and thoroughly compacted with mechanical tampers.

(2) Under fence post footings, fill with concrete.

d. Disposal of Excess Excavated Material. Excavated material in excess of that required for backfill shall be disposed of in areas to be filled or off the site in the designated disposal area for surplus excavated material.

3. FORMS FOR FENCE CURB

Forms shall be constructed adequately of the proper size and shape to carry out the design of the fence curb. Forms shall remain in place until their removal is authorized which shall be as soon as practicable to permit curing and repair of surface imperfections. All forms shall be removed before backfilling.

No forms will be required for fence posts unless the soil does not stand sufficiently to permit construction of post footings or where the ground is such that auguring is impractical.

4. REINFORCING STEEL

Reinforcing steel shall be Intermediate Grade deformed bars placed as shown on the plans. The Contractor shall submit a placing plan and bar list for reinforcing steel for the fence curb.

5. EXPANSION JOINTS

Expansion joints of preformed bituminous material conforming to AASHTO Designation M33-48 shall be installed at 20-foot intervals midway between posts. The joint material shall be 3/8" thick unless otherwise shown on the drawings.

6. FENCE POSTS

Fence posts shall be part of the work specified in Section 2G.

7. CONCRETE

a. General. Concrete shall be Class 5.5 ($5\frac{1}{2}$ sacks per cubic yard) manufactured and placed to meet the requirements of Section 3B.

b. Finishing. The top surfaces of the fence curbs shall be edged to $\frac{1}{2}$ inch radius, troweled once and given a light brush finish. All irregularities such as defective concrete and gravel pockets shall be patched.

c. Curing. Concrete shall be kept wet until set has taken place and hardening is well advanced. Exposed concrete surfaces shall be protected from excessive heat from the sun after placement and during the curing period and shall be sealed against evaporation of moisture by the use of Hunt's Process Sealing Compound.

8. PAYMENT

Payment for the work under this section shall be included in the lump sum price bid in the Proposal for "Furnish and Install Chain Link Fence and Gate, Including Fence Curb and Post Footings".

SECTION 2I

CONCRETE ROADWAY CURBS AND GUTTERS

1. SCOPE

The work consists of constructing concrete roadway curbs and gutters as shown on the drawings and as specified.

2. MATERIALS

a. Concrete shall be Class 5.5 conforming to the requirements of Section 3B.

b. Expansion Joint material shall be preformed bituminous material conforming to ASSHO Designation M33-48, 3/8" thick, unless otherwise shown on the drawings.

3. SUBGRADE

If the subgrade for concrete curbs and gutters is high it shall be cut to grade, and if low the low places shall be filled to grade with sand or native material dampened and compacted. Firmly embedded rocks may extend above the subgrade not more than one inch. The subgrade shall be kept in a firm condition.

No concrete shall be placed until the subgrade has been approved by the Engineer.

4. FORMS

a. Wood Forms. The lumber for forms shall be surfaced on four (4) sides (S4S), and be "Construction Grade", Douglas Fir, West Coast Lumber Inspection Bureau, or be "Common Structural", per grading of Western Pine Association.

Form lumber shall vary from 12 to 16 feet in length, be free of warp and the ends true. Any form lumber which has defects which would impair the appearance or structural utility of the completed curb, or curb and gutter, shall not be used.

Where short radius forms are required, one-inch sound lumber (S4S) or plywood may be used.

b. Steel Forms. Steel forms may be used but the type of steel forms shall be subject to the approval of the Engineer. The forms shall extend the full height of the curb section and they shall be free of warps, bends, twists or other defects which would impair the appearance or utility of the completed work. When set in place, the forms shall possess adequate strength and rigidity to remain true to established line and grade within the limits and tolerances specified in Paragraph c below.

All metal forms except those for exposed surfaces shall have slots at the top and be spaced at one foot intervals so that metal spacer plates can be placed at intervals of one foot or more, as directed by the Engineer.

Forms shall consist of sections ten (10) feet in length and each section over six inches in height shall have not less than three stake pockets, one at each end and one in the center. Forms six inches or less in height will not require the center stake pocket. Stake pockets shall accommodate not less than 7/8-inch

diameter steel stake. There shall be provision for keying the form to the stake to allow positioning of the form to line and grade without depending upon the support of the subgrade.

The form stake shall not be less than seven-eighths ($7/8$) of an inch in diameter.

The length shall be not less than eighteen (18) inches and stakes of greater length shall be available on the job site as field conditions necessitate.

Form sections shall be held tightly together by means of a sliding joint which will make a tight, rigid joint, free of any movement. The face form shall be connected to the back form by hangers or connections to the divider plates. Additional bracing or support to the form shall be as directed by the Engineer.

c. Erecting Forms. Forms, wood or steel, shall be staked securely in place, true to line and grade. A 2-inch by 6-inch by 12-inch ($2" \times 6" \times 12"$) block of wood shall be placed at, and spanning each joint of the form. Additional blocks shall be placed if so directed by the Engineer.

Sufficient support shall be given to the form to prevent movement in any direction, resulting from the weight of the concrete or the concrete placement. Forms shall not be set until the subgrade has been compacted within one inch of the established grade. Forms shall be clean and well oiled prior to setting in place. When set, the top of the form shall not depart from grade more than one-eighth ($1/8$) inch when checked with a ten-foot straight-edge. The alignment shall not vary more than one-eighth ($1/8$) inch in ten (10) feet. Immediately prior to placing the concrete, forms shall be carefully inspected for proper grading, alignment and rigid construction. Adjustments and repairs as needed shall be completed before placing concrete.

5. PLACING CONCRETE

The subgrade shall be properly compacted and brought to specified grade before placing concrete. The subgrade shall be dampened to a depth of at least three (3) inches immediately prior to the placement of concrete. Concrete shall be spaded and tamped thoroughly into the forms to provide a dense, compacted concrete free of rock pockets. The exposed surfaces shall be floated, finished and brushed longitudinally with a fiber hair brush approved by the Engineer.

The rate of concrete placement shall not exceed the rate at which the various placing and finishing operations can be performed in accordance with these specifications.

6. STRIPPING FORMS AND FINISHING

If wood forms are used, the curb face form shall be stripped within 24 hours unless directed otherwise by the Engineer. Inspect curb face and correct all irregularities to the satisfaction of the Engineer. Back forms and front forms for gutter section may be stripped at a later time, as the Engineer may direct.

If the forms are steel, curb face form shall be stripped within a few hours in order to complete the finishing procedure while the concrete is still workable.

The curb face form shall be removed at a time specified by the Engineer and the remainder of the forms may be removed at a later date.

Forms shall not be removed until the concrete is sufficiently set to retain its true shape. The face of curb shall be troweled with a tool shaped to the exact section of curb, while maintaining the shape, grade and alignment. Exposed surfaces of combined curb and gutter shall be finished in the same manner. After troweling, the surface of the curb or curb and gutter shall be brushed with a fiber hair brush. Water shall not be sprinkled on the concrete when finishing the curb.

7. CURING

Transparent curing compound shall be applied to all exposed surfaces immediately after finishing. Transparent curing compound shall contain a color dye of sufficient strength to render the film distinctly visible on the concrete for a minimum period of four (4) hours after application. The curing compound shall be maintained for a period of five days.

If, at any time during the curing period, any of the forms are removed, a coat of curing compound shall be applied immediately to the exposed surface. The curing compound shall be applied in sufficient quantity to obscure the natural color of the concrete. Additional coats shall be applied if the Engineer determines that the coverage is not adequate. Concrete shall be protected from excessive heat from the sun, if necessary, by a suitable covering in addition to the sealer.

8. EXPANSION AND CONTRACTION JOINTS

Joints shall be constructed in the manner and at the locations shown on the drawings. They shall be cleaned and edged with an edging tool.

9. FINISHED WORK

The work shall be performed in a manner which results in a curb or curb and gutter constructed to specified line and grade, uniform in appearance and structurally sound. Curbs found with unsightly bulges, ridges, low spots in the gutter or other defects shall be removed and replaced at the Contractor's expense if the Engineer considers them to be irreparable. When checked with a ten (10) foot straight-edge, grade shall not deviate more than one-eighth (1/8) inch, and alignment shall not vary more than one-eighth (1/8) inch.

10. PAYMENT

Measurement for payment for concrete curb and gutter will be measured by the linear foot along the face of the curb for the actual length constructed; no deduction will be at curb inlet and driveway crossings. Payment will be made at the unit price per linear foot bid in the Proposal for "Construct Roadway Concrete Curbs and Gutters" which price shall include all costs for construction of the curbs and gutters complete in place.

SECTION 2J
CONCRETE SIDEWALKS

1. SCOPE

The work consists of constructing concrete sidewalks as shown on the drawings and as specified.

2. MATERIALS

a. Concrete shall be Class 5.5.

b. Expansion Joint material shall be a preformed bituminous material conforming to ASSHO Designation M33-48, 3/8" thickness to be 4" wide, 1/4" thickness to be 2" wide.

3. SUBGRADE

Before forms are set, the subgrade shall be rough-graded to within one (1) inch of the established grade.

4. FORMS AND FINE GRADING

Wood forms shall be nominal two (2) inches by four (4) inches (S4S) and in lengths of not less than ten (10) feet. Steel forms may be used upon approval of the Engineer. Forms shall be staked to a true line and grade. A subgrade template shall be set upon the forms and the fine grading completed so that the subgrade will be a minimum of three and five-eighths (3-5/8) inches below the top of the forms.

Low areas in the subgrade shall be backfilled with select materials or with suitable native material as directed by the Engineer. The backfill shall then be compacted to the satisfaction of the Engineer and any high areas in the subgrade shall be cut down to meet the subgrade requirements specified above. The subgrade shall be thoroughly dampened prior to the time the concrete is placed.

5. PLACING AND FINISHING CEMENT CONCRETE SIDEWALK

The concrete shall be spread uniformly between the forms and thoroughly compacted with a steel shod strikeboard. Through joints and dummy joints shall be located where shown on the drawings. The concrete shall be thickened as shown on the drawings where the sidewalk abuts the concrete curb.

After the concrete has been thoroughly compacted and leveled, it shall be floated with wood floats, and finished at the proper time with a steel float. Joints shall be edged with a 1/4-inch radius edger and the sidewalk edges shall be tooled with a 1/2-inch radius edger.

The sidewalk shall be divided into panels by scoring one-fourth (1/4) inch deep in the manner shown on the drawing.

The surface shall be brushed with a fiber hair brush of an approved type in a transverse direction.

The placing and finishing of all sidewalk shall be performed under the control of the Engineer, and the tools used shall meet with his approval.

6. EXPANSION JOINTS

Expansion and contraction joints shall be placed at the locations shown on the drawings.

Transverse and longitudinal expansion joints shall be three-eighths (3/8) inch thickness premolded joint material, cut to a width equal to the full depth of the concrete where located, plus one-half (1/2) inch. When installed, they shall be placed with top edge one-eighth (1/8) inch below the finished surface of the concrete, in a perpendicular plane to the surface, and with the bottom edge embedded in the subgrades. All joints shall be in straight alignment, except where placed in curved locations as required by the construction plans.

Contraction joints for sidewalks shall conform to the applicable requirements for expansion joints for placement, except for thickness of joint material being one quarter (1/4) inch and width of two (2) inches. The top edge shall be one-eighth (1/8) inch below the finished surface of the sidewalk.

In construction of through joints, the preformed joint filler shall be adequately supported until the concrete is placed on both sides of the joint.

Contraction joints shall be formed by first cutting a groove in the concrete with a tee bar of a depth equal to, but not greater than the joint filler material, and then working the premolded joint filler into the groove. Preformed joint filler for both through and contraction joints shall be positioned in true alignment at right angles to the line of the sidewalk and be normal to the surface.

No separate payment will be made for furnishing and placing expansion and contraction joint materials for cement concrete sidewalks. All costs thereof shall be considered incidental to the construction and included in the unit bid contract prices in the Proposal for sidewalk.

7. CURING AND PROTECTION

Transparent curing compound shall be applied to all walk surfaces. The curing agent shall be applied immediately after brushing and be maintained for a period of five (5) days.

Before commencing the placing of any concrete sidewalk, the Contractor shall have on the job site sufficient protective paper to cover the pour of an entire day, in event of rain or other unsuitable weather, or against excessive heat from the sun.

The sidewalk shall be protected against damage or defacement of any kind until it has been accepted by the Owner. Sidewalk which is not acceptable to the Engineer because of damage or defacement, shall be removed and replaced at the expense of the Contractor.

8. PAYMENT

Measurement for payment will be made by the square yard of the concrete actually placed in sidewalks.

Payment will be made at the unit price per square yard bid in the Proposal for "Construct Concrete Sidewalks", which price shall include all cost of grading, forms, concrete, joint material, finishing, curing and all other costs incidental to the construction of the sidewalks, including thickened edges.

SECTION 2K
CONCRETE DRIVEWAYS

1. SCOPE

The work consists of constructing concrete driveways as shown on the drawings and as specified.

2. MATERIALS

a. Concrete shall be Class 5.5.

b. Expansion Joint material shall be a preformed bituminous material conforming to ASTM Designation M33-48, thickness as shown on the drawings, width same as concrete thickness.

c. Reinforcing Steel shall be Intermediate Grade, deformed bars.

3. FORMS AND FINE GRADING

Forms for the driveway shall have a minimum thickness of two (2) inches. All forms shall be securely staked and blocked to true line and grade.

A template shall then be set upon the forms for fine grading the subgrade so it will conform to the section required. Low areas in the subgrade shall be back-filled with selected materials or suitable native material, as directed by the Engineer. The backfill shall then be compacted to the satisfaction of the Engineer. High areas in the subgrade shall be cut down to meet the grade requirements. The subgrade shall be thoroughly dampened prior to the placement of the concrete. Water for wetting the subgrade shall be considered as incidental to the construction and no payment will be made thereof.

4. PLACING AND FINISHING CEMENT CONCRETE

The concrete shall be spread uniformly between the forms and thoroughly compacted with an approved type of strikeboard. Through joints shall be located as shown on the drawings. In the construction of through joints, the premolded joint filler shall be adequately supported until the concrete is placed on both sides of the joint.

Premolded joint filler for through joints shall be positioned in true alignment and at right angles to the center line of the driveway and shall be plumb.

After the concrete has been thoroughly compacted and leveled, it shall be floated with wood floats and finished at the proper time with a steel float. Joints shall be edged with one-fourth (1/4) inch radius edger and the driveway return edges shall be tooled with one-half (1/2) inch radius edger.

The surface shall be brushed in a transverse direction in relation to the center line of the driveway return with a fiber hair brush of approved type. Finishing and brushing shall be as directed by the Engineer.

5. REINFORCEMENT

Reinforcement steel shall be placed in the driveway sill of one gate as shown on the drawing. The reinforcement shall be supported on concrete blocks or other method approved by the Engineer.

6. CURING AND PROTECTION

Transparent curing compound containing a color dye shall be applied to all exposed surfaces. The curing agent shall be applied immediately after brushing and shall be maintained for a period of five (5) days.

Before placing any concrete, the Contractor shall have on the jobsite enough protective paper to cover the pour of an entire day, in event of rain or other unsuitable weather conditions.

The driveway shall be protected against damage or defacement of any kind until it has been accepted by the Engineer. Driveways, not acceptable in the opinion of the Engineer because of damage or defacement, shall be removed and replaced at the expense of the Contractor.

7. PAYMENT

Measurement for concrete driveways including the gate sill will be made by the square yard of concrete actually placed.

Payment will be made at the unit price per square yard bid in the Proposal for "Construct Concrete Driveways", which price shall include the cost of forms, grading, expansion joint material, concrete, reinforcement steel, finishing, curing and all other costs incidental to the construction of the driveways complete.

SECTION 2L
RETAINING WALLS

1. SCOPE

The work consists of constructing concrete retaining walls and related work as specified and as shown on the drawings.

2. MATERIALS

- a. Concrete shall meet the requirements of Section 3B.
- b. Reinforcing steel shall meet the requirements of Section 3A.
- c. Anchor bolts and nuts shall meet the requirements of ASTM Designation A 307-65, Grade A.
- d. Structural steel shall meet the requirements of ASTM Designation A-36. Galvanized where shown on the drawings.
- e. Wood guards shall be as specified on the drawings.
- f. Expansion Joints. Expansion joint material shall be 1/4 inch thick, conforming to AASHTO Designation M33-48.

3. LOADING DOCK RETAINING WALL

- a. General. The Contractor shall construct a loading dock retaining wall including replacement of that portion of the existing loading dock slab removed for excavation purposes and including installation of wood guards, anchor bolts, weep holes, reinforcing steel and miscellaneous metal work as shown on the drawings.
- b. Materials shall be as specified under Paragraph 2 above.
- c. Excavation and backfill shall be performed as specified under Section 2D.
- d. Replacement of Loading Dock Slab. The Contractor shall trim the existing concrete slab to a straight edge in order to provide a neat appearing joint between the existing concrete and the replacement slab.
- e. Finishing shall be in accordance with Section 3B. 7., "FINISHING". The top of the replacement slab shall be brush finished in accordance with Section 3B.

4. RETAINING WALL FOR BUILDING 55

- a. General. The Contractor shall construct a retaining wall for Building 55 including the toe and top abutting slabs, as shown on the drawings.
- b. Materials shall be as specified under Paragraph 2 above.
- c. Excavation and backfill shall be performed as specified under Section 2D.

SECTION 2M
MISCELLANEOUS WORK

1. SCOPE

The work consists of installing and performing miscellaneous items of work as shown on the drawings and as specified.

2. BEAM GUARD RAILS AND POSTS

a. General. Beam guard rails and posts shall be furnished and installed as protective features for the transmission line tower, the warehouse loading dock and two fire hydrants as shown on the drawings.

b. Material

(1) Posts. Posts shall be wood posts as shown on the drawings and in accordance with Section 71-2.01A of The Standard Specifications for The State of Washington For Road And Bridge Construction, 1963 Edition.

(2) Beam Guard Rails. Beam guard rails shall be as shown on the drawings and in accordance with Section 72 of the above Standard Specifications for The State of Washington.

c. Installation. The installation of the beam guard rails and posts shall be in accordance with the details on the drawings and in accordance with Section 72 of the above Standard Specifications For The State of Washington. No painting of the beam guard rails and posts will be required.

3. ADJUST ELECTRICAL PULL BOXES

This work consists of adjusting existing electrical pull boxes to final grades as shown on the Drawing D-25318, Detail "A".

4. REMOVE EXISTING CONCRETE MANHOLE COLLARS

This work consists of removing and disposing of unreinforced concrete protective collars placed around the sewer manholes. The manhole locations are shown on Drawing D-25345.

5. ADJUST MANHOLES TO GRADE

This work consists of adjusting two existing manhole covers to the final grades as shown on the drawings.

The Contractor shall raise Manhole No. 3 in accordance with Drawing D-25192, Rev. 1, Detail 2, including furnishing and installing the 2" x 2" x $\frac{1}{4}$ " metal angle.

The Contractor shall raise Manhole No. 18 by adding concrete blocks and mortar to the existing manhole neck.

6. ADJUST VALVE BOXES TO GRADE

This work consists of adjusting existing valve boxes to final grade. It is ex-

6. ADJUST VALVE BOXES TO GRADE (Continued)

pected all valve boxes in the areas of work shall require some adjustment to final grade. The existing valve boxes are identical to the ones to be installed under this specification.

7. FURNISH AND INSTALL VALVE BOXES

The Contractor shall furnish and install valve boxes for fire hydrant valves and over existing valves as shown on Drawing D-25318. The valve boxes shall be the same as for fire hydrants as noted on the drawing.

8. INSTALL 3-INCH GALVANIZED PIPE UNDER DRIVEWAYS

Steel pipe shall be galvanized, Schedule 40. Screwed fittings shall be galvanized, malleable iron. The pipe shall be installed under the driveways at the locations and depth shown on the drawings. No bedding is required but the bottom of the trench shall have an even surface without protrusion of embedded rocks above the subgrade. The trench may be backfilled with the excavated material except that the backfill for a depth of six inches above the pipe shall not contain rocks larger than one inch (1").

Backfill shall be placed in six inch layers and each layer thoroughly compacted with a mechanical tamper.

9. TREATMENT OF BRIDGE SIDESWAY CABLES

The Suspension Foot Bridge sidesway cables shall be buried and treated as described in the Notes on Drawing D-25317.

10. PAYMENT

a. General. Payment shall be made at the prices bid in the Proposal which are stated below and which prices shall be full compensation for the respective work.

b. Furnish and Install Beam Guard Rails and Posts at Four Locations. Payment for this work will be made at the Lump Sum bid in the Proposal for "Furnish and Install Beam Guard Rails and Posts at Four Locations".

c. Adjust Electrical Pull Boxes. Payment for this work will be made at the unit price bid in the Proposal item "Adjust Electrical Pull Boxes".

d. Remove Concrete Manholes Collars. There will be no separate payment for this work. The cost of this work shall be included in the various bid items of the Proposal.

e. Adjusting Manholes and Valve Boxes to Grade. There will be no separate payment for this work. The cost of this work shall be included in the various bid items of the Proposal.

f. Install Pipe Under Driveway. Payment for furnishing and installing galvanized pipe under driveways will be made at the unit price per linear foot bid in the Proposal for "Furnish and Install 3-inch Galvanized Pipe under Driveways".

g. Furnish and Install Valve Boxes. Payment for furnishing and installing

10. PAYMENT (Continued)

valve boxes will be made under item bid in the Proposal for "Furnish and Install Valve Boxes".

h. Treatment of Bridge Sidesway Cables. Payment for this work will be made at the Lump Sum bid in the Proposal for "Treatment of Bridge Sidesway Cables".

SECTION 2N

FIRE HYDRANTS AND VALVE BOXES

1. SCOPE

The work consists of installing two fire hydrants, valve boxes and connecting the hydrants to the existing water service as shown on the drawings and as specified.

2. MATERIALS

- a. Fire hydrant. See Drawing D-25318 for description of fire hydrant.
- b. Valve boxes. See Drawing D-25318 for description of valve boxes.
- c. Valves. See Drawing D-25318 for description of valves.
- d. Cast iron pipe. The cast iron pipe shall be centrifugally cast, U. S. Tyton Joint, or equal, Class 150, cement lining 1/16 inch thick, bituminous coated on the exterior, conforming to Federal Specification WW-P-4216, Type II. Cement lining shall conform to AWWA Specification C 104.

3. DISINFECTING HYDRANT AND WATER MAIN CONNECTIONS

Immediately prior to installation, each length of pipe, fitting or other accessory shall be thoroughly cleaned of any dirt or foreign matter which might be present on the inside. Such cleaning shall consist of brushing or sweeping with wire brushes or by the use of tight-fitting swabs. Brushes and swabs shall be coated with dry calcium hypochlorite, having an available chlorine content of about 65%, or dipped into a solution containing 50 ppm of chlorine.

The new installation shall be cleaned of the disinfecting solution by filling the main and flushing through the new hydrants and the present blow-off valve on the suspension bridge to Gorge Powerhouse.

4. INSTALLATION OF FIRE HYDRANT

Installation of the fire hydrant shall be as shown on the drawings. All gaskets shall be cloth insertion ring gaskets 1/16 inch thick. The auxiliary gate valve, the portion of the hydrant below the surface of the ground, the shackle rods and fittings shall be cleaned of rust and thoroughly painted with two coats of Vitanic No. 10 as manufactured by the Far West Paint Company. The second coat on the shackle rods shall be applied after installation. The portion above the ground shall be painted as noted on the drawings.

5. WATER SHUTOFF

The City will shut off the water in the main once for a time sufficient for the installation of the shutoff valves, but shall not exceed 8 hours. The Contractor shall install the valves as quickly as possible in order that the shutoff time will be a minimum.

6. FIELD TESTS

The Contractor shall test the complete hydrant installation hydrostatically, prior to backfilling, using the existing system as the water source. The test will consist of an inspection by the City for the purposes of locating leaks or defective equipment. Any equipment found defective shall be removed and replaced at the Contractor's expense and leaks repaired.

7. VALVE BOXES

The Contractor shall furnish and install valve boxes for fire hydrants as shown on the drawings.

8. PAYMENT

a. Fire hydrants. Payment for the work performed under this section of the specification shall be made at the unit price bid in the Proposal for "Furnish and Install Two Fire Hydrants", which price shall cover all costs (except as otherwise provided) for a complete installation ready for use.

b. Valve boxes. Payment for furnishing and installing valve boxes will be made under the unit price bid in the Proposal for "Furnish and Install Valve Boxes", which price shall cover all costs for a complete installation.

SECTION 3A
REINFORCING STEEL

1. SCOPE

The work consists of furnishing and installing steel for concrete reinforcement as shown on the drawings and as specified.

2. MATERIAL

Reinforcement steel shall be deformed bars conforming to the ASTM Designation: A615-68, Grade 40, unless otherwise shown on the drawings.

3. PLACEMENT DRAWINGS

The Contractor shall submit reinforcing placement drawings, bar-bending details and bar lists in accordance with Special Conditions, Paragraph 19. Drawings shall be prepared in accordance with the American Concrete Institute, "Manual of Standard Practice for Detailing Reinforced Concrete Structures," ACI 315-65.

4. PLACING REINFORCEMENT

Reinforcing steel shall be placed in accordance with the requirements of the Concrete Reinforcing Steel Institute, "Recommended Practice for Placing Reinforcing Bars," 1959 Edition including 1963 Supplement, unless otherwise shown on the drawings.

5. PAYMENT

No separate payment for furnishing and installing reinforcing steel will be made, the cost thereof shall be included in the applicable concrete bid items.

SECTION 3B

CONCRETE

1. SCOPE

The work consists of installing all concrete work as shown on the drawings and specified herein.

2. MATERIALS

a. Sand and Gravel. The City will furnish all sand and crushed gravel required for concrete work, at stockpiles at the City's Crane Pit and Goodell Creek Pit as provided in Section 1.

b. Cement. Cement shall be Type I or Type II meeting requirements of ASTM Designation C94-65.

c. Expansion Joints. Expansion joint material shall be 3/8-inch thick unless otherwise shown on the drawings, conforming to AASHTO Designation: M33-48. Construction joints, same material 1/4" thick.

3. CONCRETE PROPORTIONING AND MIXING

All concrete shall be Class 5.5 (5-1/2 sacks of cement per cubic yard of concrete) produced by mixing cement, sand, and gravel in the proportions provided below.

For concrete, the sand and gravel shall be proportioned by weighing on approved scales. The quantities shall be measured separately to insure uniform proportioning. The sand and gravel shall be measured separately. The proportions of sand and gravel may be varied by the Engineer, if necessary, to produce the best workable mix without extra cost to the City.

Concrete mixed at the site shall be mixed by an approved batch-type machine of not less than one-third cubic yard capacity and mixed thoroughly until it is uniform in appearance and all materials are uniformly distributed.

The slump shall be as directed during the course of the work and shall be such as to secure dense workable concrete for placement with a vibrator.

Generally, the slump shall fall within 1-1/2 to 3 inches.

The proportions for the concrete mix shall be as follows:

Cement	-	517 lbs.
Crushed rock (3/4")	-	2075 lbs.
Sand	-	1265 lbs.
Total Water	-	36 gals.

(This design for a 4" slump - water to be adjusted in field depending on aggregate moisture and required slump)

4. FORMS

a. Material. Form lining for all exposed surfaces shall be plywood. Unexposed surfaces may be formed with shiplap. Plywood for forms shall be 5/8-inch or 3/4-inch thick conforming to the requirements of Product Standard PS 1-66 for Douglas Fir, Grade B-B Plyform Class I.

Studs and wales should not be less than 2 x 4 inch S1S1E or S4s. All studs and wales shall be Douglas Fir Construction or Standard Grade.

b. Form Construction. Forms shall be of a good sound material, free from defects of any nature that will impair the strength of the form or appearance of the concrete after forms are removed. They shall be of the proper size and shape to carry out the design of the structure faithfully as shown on the drawings, and shall be erected straight, plumb and true in every respect, and securely nailed and braced and otherwise secured to prevent bulging or displacement while concrete is being placed. Plywood forms shall be coated with a non-grain raising form oil or sealer.

Joints in plywood forms shall be made tight to prevent leakage of concrete and shall be filled where necessary to make them tight and smooth. Forms coming in contact with finished concrete surfaces shall be free from loose knots, warp, or other defects likely to cause irregularities in the surface. Forms may be reused for exposed concrete surfaces providing they are clean, free from defects and reoiled. Care shall be taken in all form work to produce surface free from honeycomb or other defects.

Bolts or rods with sleeve nuts, twist eyes, or other devices must be used for tying all forms above ground. The bolts or rods shall be so arranged that when forms are removed no metal shall be within one-half inch of any surface. Wire ties will not be permitted.

All exposed vertical and sloping corners, unless otherwise directed shall be chamfered by means of a 3/4-inch triangular strip in the form corners.

Form construction shall be subject to approval. The Engineer shall be notified by the Contractor not less than 24 hours prior to placing concrete, so that the forms may be checked for alignment and elevation.

5. CONSTRUCTION JOINTS

The location of construction joints, other than those shown on the drawings, shall be approved by the Engineer.

Whenever a run of concrete is made and permitted to harden before additional concrete is deposited thereon, as at horizontal construction joints, the surface thereof shall be roughened by brushing with steel wire brushes just after initial set has taken place or the surface coated with an approved concrete retardant and washed or otherwise cleaned of all laitance and inferior surface concrete.

Before concrete is deposited on hardened concrete, the surface thereof shall be thoroughly cleaned by jets of water under pressure; all laitance and other foreign matter shall be removed by chipping if necessary; loose fragments and

surplus water shall be removed. Before the surface has become dry, and immediately before concrete is deposited upon hardened concrete, it shall be grouted by spreading thereon a layer of cement mortar, mixed in proportions of one part cement to one and one-half parts of sand by volume with sufficient water to make it a workable grout. This mortar layer shall be one-half inch thick and it shall cover the entire surface of hardened concrete.

6. PLACING CONCRETE

Concrete placing operations shall not be started by the Contractor without first obtaining approval from the Engineer, and the concrete placing shall proceed continuously, after starting, until the structure or portion of structure being placed has been completed between expansion joints, construction joints, or such other limits as required and shown on the plans, or directed by the Engineer in accordance with these specifications.

Mixed concrete shall be placed as soon as possible after mixing and before initial set has occurred. In no case shall concrete be used which does not reach its final position in the forms within one and one-half (1-1/2) hours after water is first added to the mix.

All concrete shall be placed in continuous horizontal layers and so compacted that there will be no line of separation between succeeding batches. Special care shall be taken to fill each part of the forms by depositing concrete directly as near the final position as possible, to work the coarse aggregates back from the face and to force the concrete under and around the reinforcing bars without displacing them, and to avoid sand or rock pockets.

The use of an internal mechanical vibrator of an approved type will be required for densifying and compacting concrete accessible to such vibrator. It may be necessary to supplement the use of such vibrator with slice bars, spades or other hand placing methods in order to produce dense concrete free from segregation, gravel pockets, and other objectional defects. Vibrators shall be inserted to a depth sufficient to vibrate the bottom of each layer effectively but not deep enough to affect partially hardened concrete.

All concrete slabs shall be poured in one course unless otherwise shown on the plans.

Exposed concrete surfaces shall be protected from rain until the concrete has set. Before placing concrete, the forms and subgrade shall be thoroughly wetted with water.

7. FINISHING

Finishing of concrete surfaces shall be as specified in the applicable section of this specification for the work performed.

a. Trowel Finish. When a trowel finish is specified, it shall be performed as follows:

The troweling should start when the floated finish has hardened sufficiently to prevent an excess of fine material being brought to the surface. The troweling shall be performed with a firm pressure that will flatten and smooth the sandy surface left by the floating and shall produce a dense surface free of trowel

marks insofar as is practical. Brush finish, when required, shall follow the final trowel finish. The finishing operations shall be subject to the direction of the Engineer in order to secure the specified finish.

All exposed edges are to be edged to a radius of 1/2-inch unless otherwise specified.

b. Finishing Formed Surfaces. Immediately after removing the forms every concrete surface shall receive a basic finish consisting of the following: All irregularities, such as defective concrete, gravel pockets, bolt holes, form tie holes, etc., shall be neatly pointed with dry patching mortar consisting of one part cement to two parts by volume of fine sand, and the surface film of all such patches shall be rubbed off after initial setting has taken place.

On all formed surfaces exposed to view, neatly remove fins and other protrusions. Correct abrupt irregularities to match adjacent surface texture.

c. Finishing Concrete Loading Dock and Building #55 Retaining Walls. Vertical surfaces exposed to view shall be given a sack-rubbed finish. Surfaces against which backfill is to be placed will require only a basic finish as specified under subparagraph b. above. The top of wall shall be troweled and brushed with a fiber hair brush as specified under subparagraph a. above.

A sack-rubbed finish shall be accomplished in the following manner. The surfaces are thoroughly wetted and permitted to approach surface dryness immediately before sack rubbing is commenced. The mortar used consists of one (1) part cement, two (2) parts by volume of sand passing a No. 16 screen, and enough water so that the consistency of the mortar will be that of thick cream. The mortar shall be rubbed thoroughly over the area with clean burlap or a sponge rubber float so as to fill all pits. While the mortar in the pits is still plastic, the surface should be rubbed over with a dry mix of the above proportions and materials. No material should remain on the surface except that within the pits. Curing of the surface is then continued when possibility of damage to the finish is past. The results shall be a smooth, dense, uniform surface. When adjacent to existing surfaces, this finish shall match the existing finish unless otherwise specified.

8. FORM REMOVAL

Forms shall be left in place until their removal is authorized and shall be removed with care so as to avoid injury to concrete. Form removal will be authorized and forms shall be removed as soon as practicable in order to avoid delay in curing, but shall not be removed in less than 24 hours after final placement of the concrete unless otherwise specified.

9. CURING

Concrete shall be cured by keeping the exposed surfaces wet for a period of seven days by sprinkling or covering with wet burlap, or sealing against evaporation by the use of an approved sealer, such as Hunt Process Clear Curing Compound. The compound shall contain a dye of color strength sufficient to render the film distinctly visible for a period of at least four (4) hours after application. Curing of formed surfaces shall commence as soon as the forms are removed and wet curing of unformed surfaces shall commence as soon as the concrete has set sufficiently. Curing compounds shall be applied immediately after finishing.

In addition to the above, exposed surfaces shall be protected from excessive heat from the sun during placement and finishing of the concrete and shall, when directed, be kept cool by continuous sprinkling as soon as the surface has been finished and set sufficiently to be sprinkled. Sprinkling shall be maintained during the times of such heat throughout the curing period.

10. PROTECTION

Before placing any concrete, the Contractor shall have on hand enough protective paper or polyethylene film to cover the pour of an entire day, in event of rain or other unsuitable weather condition.

11. PAYMENT

No separate payment will be made for the work to be performed under this section of these specifications, the cost thereof shall be included in the applicable bid items covering the item of work.