

Controller's Office

To the Honorable Mayor and City Council of the City of Houston, Texas:

I hereby certify, with respect to the money required for the contract, agreement, obligation or expenditure contemplated by the ordinance set out below that:

- (2) Funds have been encumbered out of funds previously appropriated for such purpose.
- () Funds have been certified and designated to be appropriated by separate ordinance to be approved prior to the approval of the ordinance set out below.
- () Funds will be available out of current or general revenue prior to the maturity of any such obligation.
- () No pecuniary obligation is to be incurred as a result of approving the ordinance set out below.
- () The money required for the expenditure or expenditures specified below is in the treasury, in the fund or funds specified below, and is not appropriated for any other purposes.
- (1) A certificate with respect to the money required for the expenditure or expenditure specified below is attached hereto and incorporated hereby by this reference.
- () Other - Grant Funds Available

Annise D. Parker
Mallory D. Appel

Date: August 24, 2007 City Controller of the City of Houston, Texas

FUND REF: 1003-1000-4500-1300-2500-3000-3100-321405-09 AMOUNT: 196,000.00 ENCUMB. NO.: 4200001873/450003926/45-38684/
52012 AMOUNT: 449,654.39 ENCUMB. NO.: 4500037978/4500036943
FmBB 300003454 OA 4600008041
300003455

MRS. [unclear]
De

City of Houston, Texas Ordinance No. 2007-1052

AN ORDINANCE APPROPRIATING THE SUM OF \$196,000.00 OUT OF THE FIRE CONSOLIDATED CONSTRUCTION FUND AND AWARDING A CONTRACT TO SPRING EQUIPMENT COMPANY, INC. FOR CONCRETE REPAIR SERVICES FOR VARIOUS DEPARTMENTS (WBS C-000089-0002-4-01, C-000089-003-4-01-01); ESTABLISHING A MAXIMUM CONTRACT AMOUNT AND DECLARING AN EMERGENCY.

* * * *

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HOUSTON, TEXAS:

Section 1. The City Council appropriates the sum or sums of money set out in the title of this Ordinance, out of the respective fund or funds set out in such title as follows: The sum of \$196,000.00 is appropriated for services described in the title.

Section 2. Having duly advertised for and received competitive bids for the work described in the title of this ordinance, the City Council hereby finds and determines that the lowest responsible bid was submitted by the bidder named in the title hereof in the amount of \$2,625,020.44. The Contract for said work is hereby awarded to said bidder.

Section 3. The total allocation for the contract, agreement or other undertaking approved and authorized hereby shall never exceed \$2,625,020.44 unless and until this sum is increased by ordinance of City Council.

Section 4. There exists a public emergency requiring that this Ordinance be passed finally on the date of its introduction as requested in writing by the Mayor; therefore, this Ordinance shall be passed finally on such date and shall take effect immediately upon its passage and approval by the Mayor; however, in the event that the Mayor fails to sign this ordinance within five days after its passage and adoption, it shall take effect in accordance with Article VI, Section 6, Houston City Charter.

PASSED AND ADOPTED this 12th day of September, 2007.

APPROVED this _____ day of _____, 20____.

Mayor of the City of Houston, Texas

Pursuant to Article VI, Section 6, Houston City Charter, the effective date of the foregoing Ordinance is SEP 18 2007.

Chris Russell
City Secretary

Prepared by: Tom Smyer
Finance and Administration Dept.
Strategic Purchasing Division

Contact: Tom Smyer
Phone: 247-1257

This Ordinance and/or Contract have been reviewed as to form by the undersigned legal assistant and has been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

August 15, 2007
Date

Cecilia Martinez
Legal Assistant

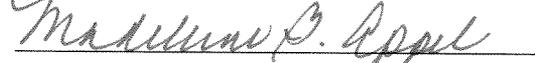
OPTION PUBLISHED IN DAILY COURT
REVIEW
DATE: SEP 18 2007

CERTIFICATE OF CITY CONTROLLER

I, Annise D. Parker, City Controller of the City of Houston, Texas, pursuant to Article II, Section 19a of the Charter of the City of Houston, with respect to the sum of \$196,000.00 required to perform, do hereby certify as follows:

- (1) The sum of \$196,000.00 will be funded from public improvement bond proceeds and/or public improvement commercial paper proceeds (first-in-first-out basis) pursuant to Ordinance No. 94-405 authorizing the creation of the Fire Consolidated Construction Fund. To the extent that this sum will be paid with bond proceeds, it is in the treasury in the said fund, and is not appropriated for any other purpose.

- (2) To the extent that the \$196,000.00 will be paid by commercial paper proceeds, funds will be received into the treasury and available before the maturity of said obligation, and such anticipated funds have not already been appropriated for any other purpose. Such sum will be received as a cash draw(s) to the City of Houston pursuant to the General Obligation Commercial Paper Ordinance, Ordinance No. 93-1149.

City Controller

AYE	NO	
✓		MAYOR WHITE
••••	••••	COUNCIL MEMBERS
✓		LAWRENCE
✓		JOHNSON
✓		CLUTTERBUCK
✓		EDWARDS
✓		WISEMAN
✓		KHAN
	ABSENT	HOLM
✓		GARCIA
✓		ALVARADO
✓		BROWN
✓		LOVELL
✓		NORIEGA
✓		GREEN
	ABSENT	BERRY
CAPTION	ADOPTED	

**AGREEMENT BETWEEN THE CITY OF HOUSTON
AND CONTRACTOR**

Owner: THE CITY OF HOUSTON, 901 Bagby Street, Houston, Texas 77002 (the City)

Contractor: Spring Equipment Company, Inc.

Address: 13118 Green River Drive, Houston, Texas 77044

Project No. S25-C22344

The Project Title: Concrete Repair Services for Various Departments

The Project Location: Citywide

The City Engineer is: Jack Sakolosky, P.E.

(Address for Written Notice) 611 Walker, Houston, Texas 77002

The Architect/Engineer is:

(Address)

THE OWNER AND THE CONTRACTOR AGREE AS SET FORTH BELOW:

**ARTICLE 1
WORK OF THIS CONTRACT**

- 1.1 The Contractor shall execute the Work in accordance with the provisions of the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others, or as otherwise provided herein. Work shall be described in the Work Order. More than one Work Order may be issued at anytime under the Contract or no Work Orders may be issued under the Contract.

**ARTICLE 2
CONTRACT TERM AND CONTRACT TIME**

- 2.1 The effective date of the Agreement is the date of countersignature by the City Controller. The Contract Term shall begin on the date specified in the Notice to Proceed issued by the City Purchasing Agent or Director and shall continue for one year thereafter. However, the Term may be extended for up to two additional one-year period, solely at the discretion of the City Purchasing Agent or the City Engineer by giving 30-days advance written notice to the Contractor prior to the expiration of the Term.
- 2.2 The Date of Commencement of the Work, as defined in General Conditions, is the date from which the Contract Time is measured, which date is established by the Work Order.
- 2.3 The Contractor shall achieve substantial completion of the Work during the Contract Time, subject to adjustments as provided in Contract Documents.

- 2.4 Contract Term shall not exceed 1 year, except as otherwise provided herein. During this time, City from time-to-time may issue Work Orders specifying the Work to be completed and Contract Time within which Contractor must achieve Substantial Completion.
- 2.5 Should Contractor fail to achieve substantial completion of the Work within that Contract Time, the Contractor agrees to pay liquidated damages as stipulated in Supplementary Conditions.

ARTICLE 3 THE CONTRACT PRICE

- 3.1 The City's duty to pay money to the Contractor for any purpose under the Contract is limited in its entirety by this Article 3.
- 3.2 (1) The City's duty to pay money to Contractor under this Agreement is limited in its entirety by the provisions of this Section.
(2) In order to comply with Article II, Section 19 and 19a of the City's Charter and Article XI, Section 5 of the Texas Constitution, the City has appropriated and allocated the sum of \$350,109.64 to pay money due under this Agreement (the "Original Allocation"). The executive and legislative officers of the City, in their discretion, may allocate supplemental funds for this Agreement, but they are not obligated to do so. Therefore, the parties have agreed to the following procedures and remedies:

(3) The Original Allocation plus all supplemental allocations are the Allocated Funds. The City shall never be obligated to pay any money under this Agreement in excess of the Allocated Funds. Contractor must assure itself that sufficient allocations have been made to pay for services it provides. If Allocated Funds are exhausted, Contractor's only remedy is suspension or termination of its performance under this Agreement, and it has no other remedy in law or in equity against the City and no right to damages of any kind.
- 3.3 Subject to all the terms and conditions of the Contract Documents, the City shall pay the Contract Price to the Contractor in current funds for the Contractor's performance of the Work, as provided in the Work Order. The Contract Price for those items of work listed in the Work Order is subject to readjustment due to variations in quantities of units of work actually incorporated in the work to be completed under the Work Order as provided in the Contract Documents.
- 3.4 The Contract Amount, for those unit price items of Work listed in the Bid Form for **Concrete Repair Services** submitted by the Contractor is subject to adjustment at completion of the Work due to variation in quantities of units of work actually incorporated in the completed Work and other adjustments as provided in Contract Documents.

**ARTICLE 4
PAYMENTS**

- 4.1 The City shall make progress payments to the Contractor on account of the Contract Price included in the Work Order as provided in this Article 4 and elsewhere in the Contract Documents.
- 4.2 The City Engineer or designated representative will issue a Certificate for Payment and the City will make a progress payment on the basis of such Certificate as provided in the General Conditions.
- 4.3 Final payment, constituting the entire unpaid balance of the Contract Price due under the Work Order, shall be made by the City to the Contractor as provided in the General Conditions.

**ARTICLE 5
MISCELLANEOUS PROVISIONS**

- 5.1 Where reference is made in this Agreement to a provision of the General Conditions or other Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.
- 5.2 The Contract may be terminated by the City or by the Contractor as provided in the General Conditions.
- 5.3 The Work may be suspended by the City as provided in the General Conditions.

**ARTICLE 6
ENUMERATION OF CONTRACT DOCUMENTS**

- 6.1 The basis for this Agreement is this executed Document 00510 - Agreement Between the City of Houston and Contractor. Other Contract Documents, except for Work Orders and Modifications issued after execution of this Agreement, are enumerated under this Article.
- 6.2 The General Conditions are Document 00700, current edition, **INCLUDING THE INDEMNITY PROVISIONS STATED IN PARAGRAPH 3.24.**
- 6.3 The Supplementary Conditions of the Contract are those stated in Document 00800.
- 6.4 The Specifications.
- 6.5 The Drawings are identified by Work Order No. _____ and bound separately and put in work order, if any.
- 6.6 The Addenda, issued separately, which applied to Contract Documents, if any, are as follows:
Addendum No. N/A

6.7 Attachments to this Agreement are as follows:

<u>Document</u>	<u>Title</u>
<input checked="" type="checkbox"/>	Fee Schedule
<input checked="" type="checkbox"/>	Wage Rate for Engineering Construction
<input checked="" type="checkbox"/>	One-Year Maintenance Bond
<input checked="" type="checkbox"/>	Statutory Payment Bond
<input checked="" type="checkbox"/>	Performance Bond
<input checked="" type="checkbox"/>	Certificates of Insurance
<input checked="" type="checkbox"/>	Technical Specifications
<input checked="" type="checkbox"/>	Equal Employment Opportunity Clause
<input checked="" type="checkbox"/>	General and Supplementary Conditions

AGREEMENT BETWEEN THE CITY OF HOUSTON AND CONTRACTOR

This Agreement is effective as of the date of countersignature by the City Controller and is executed in Four original copies of which one is to be retained by the City Controller and two are to be delivered to the Contractor.

CONTRACTOR:

(If Joint Venture)

By: *Jackie Muffrey*
Name: *Jackie Muffrey*
Title: *Vice President*
Date:
Federal I.D. No.: *76-0568395*

By: _____
Name:
Title:
Date:

CITY OF HOUSTON, TEXAS

APPROVED:

SIGNED:

By: *Calvin Wells*
[City Purchasing Agent]

By: _____
[Mayor]

ATTEST/SEAL:

COUNTERSIGNED:

By: _____
[City Secretary]

By: _____
[City Controller]

Date Countersigned:

This Ordinance has been reviewed as to form by the undersigned legal assistant and has been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

August 15, 2007
Date

Cecilia Martinez
Legal Assistant

END OF DOCUMENT

Fee Schedule
Concrete Repair Services Bid No. S25-C22344

YEAR ONE

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
GROUP 1 Job minimum set by minimum \$500/ work order			
1.	Curb Removal –All Types	L.F.	\$10.00
2.	Gutter Removal –All Types	L.F.	\$15.00
3.	Sidewalk Removal	S.F.	\$2.50
4.	6" Driveway Removal	S.F.	\$.80
5.	8" Driveway Removal drawing 100	S.F.	\$1.00
6.	Foundation Slab Removal drawing 103	S.F.	\$25.00
7.	Expansion Joints Repair (see Section 14)	L.F.	\$3.00
8.	6" Conc. Dr. & Pavement w/ Curbs (Incl. Reinforcement-in-Place drawings 02754-01 and 02754-02	S.F.	\$6.50
9.	6" Conc. Dr. & Pavement w/o Curbs Drawing 02754-02. State curve or Headwall (optional).	Cu .Ft.	\$12.00
10.	Removal/replace slab-all manhole/inlets, reset (incidental), all expansion joints included.	Cu .Ft.	\$10.00
11.	Remove/replace base 18"	Cu .Ft.	\$7.00
12.	Remove/replace curb only	L.F.	\$6.50
13.	Mud jacking	S.F.	\$4.00
14.	Conc. Curb & Gutter –All Types Incl. Reinforced -in-Place Drawings 02771-01 and 02775-01	L.F.	\$50.00
15.	8" Driveway for Fire Station drawing 100	S.F.	\$7.25
16.	4 ½" concrete Sidewalk Incl. Reinforced in-Place Drawing 02752-02	S.F.	\$7.00
17.	Remove & Replace Asphalt Surfaces including sub-grade (see Section 13)	S.F.	\$6.00
18.	Communication Equipment Slab drawing 101	each	\$4,000.00

YEAR ONE continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
19.	Generator Slab drawing 104	each	\$4,000.00
20.	Building Foundation Slab drawing 103	S.F.	\$25.00
21.	Grade Beam drawing 102	L.F.	\$45.00
22.	Saw cut concrete (4"-6")	L.F.	\$10.00
23.	Saw cut concrete (8"-10")	L.F.	\$20.00
24.	Wheelchair Access Ramp drawings 02775-02, 02775-03, 02775-04	S.F.	\$10.00
25.	Bollard (guard post), 6", painted, drawing 105	ea	\$150.00
26.	Pipe Protector Fencing (guard railing)painted, drawing 106	L.F.	\$200.00
27.	Cement Stabilized Sand	Cu. Yd.	\$80.00
28.	Lime for stabilization	lb.	\$2.00
29.	Select fill dirt	Cu. Yd.	\$50.00
30.	Storm Inlet Type "A" (catch basin) drawing 107	ea	\$1,500.00
31.	Trench drain, drawing 108	L.F.	\$450.00
32.	6" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$50.00
33.	8" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$50.00
34.	10" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$50.00
35.	12" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$50.00
36.	15" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$50.00
37.	18" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$50.00
38.	24" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$50.00
39.	12" RCP reinforced concrete pipe drawing 109	L.F.	\$100.00
40.	15" RCP reinforced concrete pipe drawing 109	L.F.	\$100.00

YEAR ONE continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
41.	18" RCP reinforced concrete pipe drawing 109	L.F.	\$100.00
42.	24" RCP reinforced concrete pipe drawing 109	L.F.	\$100.00
43.	6" PVC sch 40 pipe drawing 109	L.F.	\$50.00
44.	8" PVC sch 40 pipe drawing 109	L.F.	\$50.00
45.	10" PVC sch 40 pipe drawing 109	L.F.	\$50.00
46.	12" PVC sch 40 pipe drawing 109	L.F.	\$50.00
47.	18" Metal Corrugated Pipe	L.F.	\$75.00
48.	24" Metal Corrugated Pipe	L.F.	\$75.00
49.	30" Metal Corrugated Pipe	L.F.	\$75.00
50.	#5 rebar extra layer 12" o. c. both ways	S.F.	\$2.00
51.	Testing lab services for excavation, filling, & backfilling	each	\$500.00
52.	Testing lab services for cast-in-place-concrete	each	\$500.00
<p>GROUP 2 Job minimum set by minimum \$500/ work order PW & E Utility Customer Service use for water meter installation, Work Order by Key Map page</p>			
53.	Sidewalk removal	S.F.	\$20.00
54.	6" driveway removal	S.F.	\$25.00
55.	8" driveway removal, Drawing 100	S.F.	\$50.00
56.	6" concrete driveway and Pavement with curbs	S.F.	\$30.00
57.	8" driveway replacement	S.F.	\$75.00
58.	4-1/2" concrete sidewalk	S.F.	\$60.00
59.	Remove and replace asphalt surfaces	S.F.	\$100.00
60.	Saw cut concrete, 4"-6"	L.F.	\$20.00
61.	Mobilization Fee if 5/8" meter Can not be installed and contractor must return after securing site.	Ea	\$3,000.00

YEAR ONE continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
62.	Mobilization Fee if meter is Larger than 5/8"and can not be installed and contractor must return after securing site.	Ea	\$3,000.00
63.	Cost of Performance, Payment and Maintenance bonds for Year One Note: This item should be invoiced along with first Work Order		\$10,000.00

YEAR TWO

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
GROUP 1 Job minimum set by minimum \$500/ work order			
1.	Curb Removal –All Types	L.F.	\$10.50
2.	Gutter Removal –All Types	L.F.	\$15.75
3.	Sidewalk Removal	S.F.	\$2.63
4.	6" Driveway Removal	S.F.	\$.84
5.	8" Driveway Removal drawing 100	S.F.	\$1.05
6.	Foundation Slab Removal drawing 103	S.F.	\$26.25
7.	Expansion Joints Repair (see Section 14)	L.F.	\$3.15
8.	6" Conc. Dr. & Pavement w/ Curbs (Incl. Reinforcement-in-Place drawings 02754-01 and 02754-02)	S.F.	\$6.83
9.	6" Conc. Dr. & Pavement w/o Curbs Drawing 02754-02. State curve or Headwall (optional).	Cu .Ft.	\$12.60
10.	Removal/replace slab-all manhole/inlets, reset (incidental), all expansion joints included.	Cu .Ft.	\$10.50
11.	Remove/replace base 18"	Cu .Ft.	\$7.35
12.	Remove/replace curb only	L.F.	\$6.83
13.	Mud jacking	S.F.	\$4.20
14.	Conc. Curb & Gutter –All Types Incl. Reinforced -in-Place Drawings 02771-01 and 02775-01	L.F.	\$52.50
15.	8" Driveway for Fire Station drawing 100	S.F.	\$7.61
16.	4 1/2" concrete Sidewalk Incl. Reinforced in-Place Drawing 02752-02	S.F.	\$7.35
17.	Remove & Replace Asphalt Surfaces including sub-grade (see Section 13)	S.F.	\$6.30
18.	Communication Equipment Slab drawing 101	each	\$4,200.00

YEAR TWO continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
19.	Generator Slab drawing 104	each	\$4,200.00
20.	Building Foundation Slab drawing 103	S.F.	\$26.25
21.	Grade Beam drawing 102	L.F.	\$47.25
22.	Saw cut concrete (4"-6")	L.F.	\$10.50
23.	Saw cut concrete (8"-10")	L.F.	\$21.00
24.	Wheelchair Access Ramp drawings 02775-02, 02775-03, 02775-04	S.F.	\$10.50
25.	Bollard (guard post), 6", painted, drawing 105	ea	\$157.50
26.	Pipe Protector Fencing (guard railing)painted, drawing 106	L.F.	\$210.00
27.	Cement Stabilized Sand	Cu. Yd.	\$84.00
28.	Lime for stabilization	lb.	\$2.10
29.	Select fill dirt	Cu. Yd.	\$52.50
30.	Storm Inlet Type "A" (catch basin) drawing 107	ea	\$1,575.00
31.	Trench drain, drawing 108	L.F.	\$472.50
32.	6" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$52.50
33.	8" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$52.50
34.	10" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$52.50
35.	12" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$52.50
36.	15" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$52.50
37.	18" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$52.50
38.	24" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$52.50
39.	12" RCP reinforced concrete pipe drawing 109	L.F.	\$105.00
40.	15" RCP reinforced concrete pipe drawing 109	L.F.	\$105.00

YEAR TWO continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
41.	18" RCP reinforced concrete pipe drawing 109	L.F.	\$105.00
42.	24" RCP reinforced concrete pipe drawing 109	L.F.	\$105.00
43.	6" PVC sch 40 pipe drawing 109	L.F.	\$52.50
44.	8" PVC sch 40 pipe drawing 109	L.F.	\$52.50
45.	10" PVC sch 40 pipe drawing 109	L.F.	\$52.50
46.	12" PVC sch 40 pipe drawing 109	L.F.	\$52.50
47.	18" Metal Corrugated Pipe	L.F.	\$78.75
48.	24" Metal Corrugated Pipe	L.F.	\$78.75
49.	30" Metal Corrugated Pipe	L.F.	\$78.75
50.	#5 rebar extra layer 12" o. c. both ways	S.F.	\$2.10
51.	Testing lab services for excavation, filling, & backfilling	each	\$525.00
52.	Testing lab services for cast-in-place-concrete	each	\$525.00
<p>GROUP 2 Job minimum set by minimum \$500/ work order PW & E Utility Customer Service use for water meter installation, Work Order by Key Map page</p>			
53.	Sidewalk removal	S.F.	\$21.00
54.	6" driveway removal	S.F.	\$26.25
55.	8" driveway removal, Drawing 100	S.F.	\$52.50
56.	6" concrete driveway and Pavement with curbs	S.F.	\$31.50
57.	8" driveway replacement	S.F.	\$78.75
58.	4-1/2" concrete sidewalk	S.F.	\$63.00
59.	Remove and replace asphalt surfaces	S.F.	\$105.00
60.	Saw cut concrete, 4"-6"	L.F.	\$21.00
61.	Mobilization Fee if 5/8" meter Can not be installed and contractor must return after securing site.	Ea	\$3,150.00

YEAR TWO continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
62.	Mobilization Fee if meter is Larger than 5/8" and can not be installed and contractor must return after securing site.	Ea	\$3,150.00
63.	Cost of Performance, Payment and Maintenance bonds for Year One Note: This item should be invoiced along with first Work Order		\$10,500.00

YEAR THREE

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
GROUP 1 Job minimum set by minimum \$500/ work order			
1.	Curb Removal –All Types	L.F.	\$11.03
2.	Gutter Removal –All Types	L.F.	\$16.54
3.	Sidewalk Removal	S.F.	\$2.76
4.	6" Driveway Removal	S.F.	\$.88
5.	8" Driveway Removal drawing 100	S.F.	\$1.10
6.	Foundation Slab Removal drawing 103	S.F.	\$27.56
7.	Expansion Joints Repair (see Section 14)	L.F.	\$3.31
8.	6" Conc. Dr. & Pavement w/ Curbs (Incl. Reinforcement-in-Place drawings 02754-01 and 02754-02	S.F.	\$7.17
9.	6" Conc. Dr. & Pavement w/o Curbs Drawing 02754-02. State curve or Headwall (optional).	Cu .Ft.	\$13.23
10.	Removal/replace slab-all manhole/inlets, reset (incidental), all expansion joints included.	Cu .Ft.	\$11.03
11.	Remove/replace base 18"	Cu .Ft.	\$7.72
12.	Remove/replace curb only	L.F.	\$7.17
13.	Mud jacking	S.F.	\$4.41
14.	Conc. Curb & Gutter –All Types Incl. Reinforced -in-Place Drawings 02771-01 and 02775-01	L.F.	\$55.13
15.	8" Driveway for Fire Station drawing 100	S.F.	\$7.99
16.	4 ½" concrete Sidewalk Incl. Reinforced in-Place Drawing 02752-02	S.F.	\$7.72
17.	Remove & Replace Asphalt Surfaces including sub-grade (see Section 13)	S.F.	\$6.62
18.	Communication Equipment Slab drawing 101	each	\$4,410.00

YEAR THREE continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
19.	Generator Slab drawing 104	each	\$4,410.00
20.	Building Foundation Slab drawing 103	S.F.	\$27.56
21.	Grade Beam drawing 102	L.F.	\$49.61
22.	Saw cut concrete (4"-6")	L.F.	\$11.03
23.	Saw cut concrete (8"-10")	L.F.	\$22.05
24.	Wheelchair Access Ramp drawings 02775-02, 02775-03, 02775-04	S.F.	\$11.03
25.	Bollard (guard post), 6", painted, drawing 105	ea	\$165.38
26.	Pipe Protector Fencing (guard railing)painted, drawing 106	L.F.	\$220.50
27.	Cement Stabilized Sand	Cu. Yd.	\$88.20
28.	Lime for stabilization	lb.	\$2.21
29.	Select fill dirt	Cu. Yd.	\$55.13
30.	Storm Inlet Type "A" (catch basin) drawing 107	ea	\$1,653.75
31.	Trench drain, drawing 108	L.F.	\$496.13
32.	6" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$55.13
33.	8" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$55.13
34.	10" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$55.13
35.	12" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$55.13
36.	15" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$55.13
37.	18" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$55.13
38.	24" SDR-35 pipe, standard dimensional ratio, drawing 109	L.F.	\$55.13
39.	12" RCP reinforced concrete pipe drawing 109	L.F.	\$110.25
40.	15" RCP reinforced concrete pipe drawing 109	L.F.	\$110.25

YEAR THREE continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
41.	18" RCP reinforced concrete pipe drawing 109	L.F.	\$110.25
42.	24" RCP reinforced concrete pipe drawing 109	L.F.	\$110.25
43.	6" PVC sch 40 pipe drawing 109	L.F.	\$55.13
44.	8" PVC sch 40 pipe drawing 109	L.F.	\$55.13
45.	10" PVC sch 40 pipe drawing 109	L.F.	\$55.13
46.	12" PVC sch 40 pipe drawing 109	L.F.	\$55.13
47.	18" Metal Corrugated Pipe	L.F.	\$55.13
48.	24" Metal Corrugated Pipe	L.F.	\$78.75
49.	30" Metal Corrugated Pipe	L.F.	\$78.75
50.	#5 rebar extra layer 12" o. c. both ways	S.F.	\$2.21
51.	Testing lab services for excavation, filling, & backfilling	each	\$551.25
52.	Testing lab services for cast-in-place-concrete	each	\$551.25
<p>GROUP 2 Job minimum set by minimum \$500/ work order PW & E Utility Customer Service use for water meter installation, Work Order by Key Map page</p>			
53.	Sidewalk removal	S.F.	\$22.05
54.	6" driveway removal	S.F.	\$27.56
55.	8" driveway removal, Drawing 100	S.F.	\$55.13
56.	6" concrete driveway and Pavement with curbs	S.F.	\$33.08
57.	8" driveway replacement	S.F.	\$82.69
58.	4-1/2" concrete sidewalk	S.F.	\$66.15
59.	Remove and replace asphalt surfaces	S.F.	\$110.25
60.	Saw cut concrete, 4"-6"	L.F.	\$22.05
61.	Mobilization Fee if 5/8" meter Can not be installed and contractor must return after securing site.	Ea	\$3,307.50

YEAR THREE continued

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE
62.	Mobilization Fee if meter is Larger than 5/8"and can not be installed and contractor must return after securing site.	Ea	\$3,307.50
63.	Cost of Performance, Payment and Maintenance bonds for Year One Note: This item should be invoiced along with first Work Order		\$11,025.00

CITY OF HOUSTON
2006 Labor Classifications and Prevailing Wage Rates
For
Engineering Construction

Classification	Rate	Classification	Rate
Asphalt Distributor Operator	\$10.94	Milling Machine Operator - Fine Grade	\$13.17
Asphalt Paving Machine Operator	\$12.01	Mixer Operator	\$10.33
Asphalt Raker	\$11.13	Motor Grader Operator - Rough	\$13.13
Asphalt Shoveler	\$9.14	Motor Grader Operator	\$11.67
Broom or Sweeper Operator	\$11.19	Oiler	\$12.12
Bulldozer Operator	\$11.81	Painter - Structures	\$15.54
Carpenter - Rough	\$12.49	Pavement Marking Machine Operator	\$8.18
Concrete Finisher - Paving	\$11.38	Pile Driverman	\$12.22
Concrete Finisher - Structures	\$10.80	Pipe Layer	\$9.49
Concrete Paving Curbing Machine Operator	\$10.00	Reinforcing Steel Setter - Paving	\$15.14
Concrete Paving Finishing Machine Operator	\$13.07	Reinforcing Steel Setter - Structure	\$13.87
Concrete Paving Joint Sealer Operator	\$11.00	Roller Operator, Pneumatic - Self-propelled	\$9.91
Concrete Paving Saw Operator	\$12.75	Roller Operator, Steel Wheel, Flat Wheel/Tamping	\$10.43
Concrete Paving Spreader Operator	\$10.44	Roller Operator, Steel Wheel, Plant Mix Pavement	\$11.07
Concrete Rubber	\$9.00	Scraper Operator	\$9.92
Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel Operator	\$12.71	Servicer	\$10.96
Crusher and Screening Plant Operator	\$11.29	Sign Installer - PGM	\$8.54
Electrician	\$21.79	Slip Form Machine Operator	\$11.07
Flagger	\$9.42	Spreader Box Operator	\$11.12
Form Builder/Setter - Structures	\$10.50	Structural Steel Worker	\$12.13
Form Liner - Paving and Curb	\$11.75	Tractor Operator - Crawler Type	\$13.00
Form Setter - Paving and Curb	\$10.51	Tractor Operator - Pneumatic	\$10.07
Foundation Drill Operator - Crawler Mounted	\$15.00	Transit Mixer Truck Driver	\$11.00
Foundation Drill Operator - Truck Mounted	\$12.73	Truck Driver, Lowboy-float	\$13.16
Front Loader Operator	\$10.65	Truck Driver, Single-Axle - Heavy	\$10.65
Laborer - Common	\$9.15	Truck Driver, Single-Axle - Light	\$10.07
Laborer - Utility	\$9.81	Truck Driver, Tandem Axle Semi-Trailer	\$10.25
Manhole Builder	\$9.00	Work Zone Barricade Servicer	\$9.94
Mechanic	\$13.72	Welders - Receive rate prescribed for craft performing operation to which welding is incidental	

City of Houston
Engineering Prevailing Wages
Classification Definitions
February 1, 2006

DOL GENERAL DECISION: TX20030125
2005

Date: July 1,

State: Texas Construction Type: Engineering
County: Harris County

DOL GENERAL DECISION: TX20030048

Date: April 8, 2005

Asphalt Distributor Operator \$ 10.94 Rate

Drives distributor truck, sets spray bars and operates valves and levers to control distribution of bituminous material for highway surfacing. May oil, grease or otherwise service and make adjustments to equipment as needed. Performs other related duties.

Asphalt Paving Machine Operator \$ 12.01 Rate

Operates paving machine that spreads and levels asphaltic concrete on highway subgrade. Controls movement of machine, raises and lowers screed, regulates width of screed. May, oil, grease, service and make adjustments to equipment as needed. Performs other related duties.

Asphalt Raker \$ 11.13 Rate

Distributes asphaltic materials evenly over road surface by raking and brushing material to correct thickness; directs Laborers when to add or take away material to fill low spots or to reduce high spots. Performs other related duties.

Asphalt Shoveler \$ 9.14 Rate

A general term used on construction work covering many unskilled classifications requiring work of a physical nature. A laborer works with all crews doing everything from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms, may help set and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, helps lower pipe into ditch for pipelayers, builds fences, works with dirt crew keeping construction layout stakes out of the way of dirt moving equipment.

Broom or Sweeper Operator \$ 11.19 Rate

Operates a self-propelled machine to sweep and clean roadway surfaces. May oil grease, service and make adjustments to equipment as needed. Performs other related duties.

Bulldozer Operator \$ 11.81 Rate

Operates a crawler tractor with a bulldozer mounted in front of chassis to level, distribute and push earth or other material. May operate a ripper attachment to break up rock or other hard material. May use a push block on front of tractor to push load

scrapers. May oil grease, or otherwise service and make minor repairs to equipment as needed. Performs other related duties.

Carpenter, Rough \$ 12.49

Works from plans to build, assemble, fit together, align, plum, and set in place forms for molding concrete structures. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks form while concrete is placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slipforming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools Performs other related duties.

Concrete Finisher, Paving \$ 11.38

Finishes the exposed surfaces of fresh concrete paving, median barrier and every element of concrete structures to the final grade and contour structures to the final grade and contour with the use of straight edges and steel trowels. Operates bridge deck finishing machine. Finishes concrete curbs and gutters. Finishes exposed surface of concrete after forms have been removed by patching imperfections with fresh concrete, rubbing surface with abrasive stone, and directing others in removing excess or defective concrete with power tools. Performs other related duties.

Concrete Finisher, Structures \$ 10.80

A worker semi-skilled in concrete finishing who assists Concrete finisher by performing specific or general duties of lesser skill and keeping Concrete Finisher supplied with materials, tools, and supplies; cleaning working area an equipment; and holding materials and tools. Performs other related duties.

Concrete Paving Curbing Machine Operator \$ 10.00

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Paving Finishing Machine Operator \$ 13.07

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Paving Joint Sealer Operator \$ 11.00

Cleans and seals joints requiring a hot or cold sealing compound in concrete paving, sidewalks, driveway and approach slabs. May oil, grease or make necessary repairs adjustments to equipment as needed. Performs other related duties.

Concrete Paving Saw Operator \$ 12.75

Operates a water - cooled power saw with either or an abrasive blade to saw expansion and contraction joints in concrete paving. May also be used to saw asphaltic pavements. May oil grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Concrete Paving Spreader Operator \$ 10.44

Operates self - propelled machine(s) which may or may not travel on concrete

paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

Concrete Rubber \$ 9.00

Finishes the exposed surface of concrete masonry after the forms have been removed by patching holes and broken corners with fresh concrete, rubbing surface with abrasive stone to remove rough spots, and removing high spots and defective concrete with hand chisel and hammer or pneumatic chisel and powered abrasive stone. Performs other related duties.

Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel Operator \$ 12.71

A worker who operates a lattice boom type crane can hoist and move materials, raise and lower heavy weights and perform other related operations. May be crawler type or rubber tired. May include placement of rock riprap, clamshell, dragline, pipe and pile driving operations. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Crusher and Screed Plant Operator \$ 11.29

Operates a crusher or screening plant through which rock is run to break it into crushed stone for construction or to control flow of materials not needed. May include minor repairs and may service and make necessary adjustments to equipment as needed. Performs other related duties.

Electrician \$ 21.79

Plans and directs the layout of metal electrical conduit, installs wiring systems, switch-panels, buss bars, works on overhead distribution systems and underground distribution systems. Performs other related duties.

Flagger \$ 9.42

A worker who directs traffic in or around a construction site. May use signs or devices to direct traffic. May help assemble, position and clean devices or equipment used to direct traffic. Must be able to effectively communicate with the public. May require certain level of training by TXDOT specifications. Performs other related duties.

Form Builder/Setter, Structures \$ 10.50

Works from plans to build, assemble, fit together, align, plum, and set in place forms for molding concrete structures. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks forms while concrete is placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slipforming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools. Performs other related duties.

Form Liner, Paving & Curb \$ 11.75

Fits together, aligns and sets to grade metal and wooden forms for placement of concrete paving and curbs. Works with survey crew to set stringline for paving, curb, and gutter curb. Performs other related duties.

Form Setter, Paving & Curb \$ 10.51

Fits together, aligns and sets to grade metal and wooden forms for placement of concrete paving and curbs. Works with survey crew to set stringline for paving, curb, and gutter curb. Performs other related duties.

Foundation Drill Operator, Crawler Mounted \$ 15.00

Operates a hole-drilling machine that is crawler mounted. May include geotechnical operations such as soils nails, rock nails, tiebacks, anchors and jet grouting. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Foundation Drill Operator, Truck Mounted \$ 12.73

Operates a hole drilling machine that is mounted on the rear of a rubber tired vehicle or truck. May include soils nails, rock nails, tiebacks, anchors and jet grouting. Drive truck from location to location or may have laborer who drives truck. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Front End Loader Operator \$ 10.65

Operates a rubber tired, skid steer or crawler type tractor with an attached scoop type bucket on front end. Machine is used to load materials from stockpiles, excavation, charging batch plants, loading and unloading trucks. May be used with attachments in lieu of the bucket. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Laborer, Common \$ 9.15

A general term used on construction work covering many unskilled classifications requiring work of a physical nature. A laborer works with all crews doing everything from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms, may help set and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, helps lower pipe into ditch for pipelayers, builds fences, works with dirt crew keeping construction layout stakes out of the way of dirt moving equipment.

Laborer, Utility \$ 9.81

Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close direction. Unloads and transports reinforcing steel. May occasionally place and tie reinforcing steel. Directs common laborers in pouring concrete. Erects shoring and bracing. Assists in installation of pipe. Installs, operate and maintains dewatering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators. Directs truck drivers and scraper operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. His performance of a wide variety of construction jobs distinguishes him from a helper assigned to a specific craft. Installs and maintains erosion control. Is more or less a general utility construction worker. May be second step in learning a skill, and may later become a helper in a specific classification. Performs other related duties.

Manhole Builder \$ 9.00

Constructs a means of permanent access to water and sewer lines for maintenance purposes. This work consists of laying brick or concrete slab at bottom of ditch up to an approximate grade line near the surface of the ground. Brick or block is normally laid to form a nearly circular manhole. Brick or block is laid in by eyesight and is normally to a plumb line. Chipped or culled brick can be used quite often is. No effort may be made to keep mortar off the face of the brick and joints are not pointed. May apply coating of concrete to interior and exterior surface. Performs other related duties.

Mechanic \$ 13.72

Assembles, set up, adjusts and maintains and repairs all types of construction equipment and trucks. He may perform the duties of a welder in repair of equipment. Performs other related duties.

Milling Machine Operator, Fine Grade \$ 13.17

Operates a power-driven milling machine that planes material of the to roadbed and discharges the material into a hauling unit or a windrow. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Mixer Operator \$ 10.33

Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close direction. Unloads and transports reinforcing steel. May occasionally place and tie reinforcing steel. Directs common laborers in pouring concrete. Erects shoring and bracing. Assists in installation of pipe. Installs, operate and maintains dewatering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators. Directs truck drivers and scraper operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. His performance of a wide variety of construction jobs distinguishes him from a helper assigned to a specific craft. Installs and maintains erosion control. Is more or less a general utility construction worker. May be second step in learning a skill, and may later become a helper in a specific classification. Performs other related duties.

Motor Grader Operator, Rough \$ 13.13

Operates a motor grader. Equipment is used to grade excavation and embankment and to lay asphalt , base and other materials. May blade haul roads and do other general motor grader work, but does not perform finish grade work to close specification tolerances. This operator may be a learner in the first phase of learning the skills of motor grader work. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Motor Grader Operator \$ 11.67

Operates a motor grader. Equipment is used to grade excavation and embankment and to lay asphalt , base and other materials. May blade haul roads and do other general motor grader work, but does not perform finish grade work to close specification tolerances. This operator may be a learner in the first phase of learning the skills of motor grader work. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Oiler \$ 12.12

A learner or semi-skilled worker who under the direction of the watch engineer

May oil and grease or otherwise service all engines and necessary equipment as needed. He may clean and paint engine room as needed. Performs other related duties.

Painter, Structures \$ 15.54

Paints and stains structural steel and concrete surfaces of bridges, retaining walls, or other structures. Directs cleaning and abrasive blasting of surfaces prior to painting or staining. Performs other related duties.

Pavement Marking Machine Operator \$ 8.18

Operates machine used in laying paint stripes or markers on all types of paving. Loads machine with appropriate materials and may walk or ride on machine. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Piledriverman \$ 12.22

Sets in place, aligns, plumbs directs driving of timber, concrete, steel, pipe and any other type of piling. Sets, drives and pulls steel, concrete and other types of sheet piling. Rigs pile and leads and bracing. Signals operator. Splices piles before and after driving. Directs pile cutoff. May direct jetting or drilling equipment in connection with installing piles to grade. Performs other related duties.

Pipelayer \$ 9.49

Installs concrete, clay, steel, ductile iron, plastic, corrugated pipe and any other type of pipe for storm drainage, water lines, gas lines and sanitary sewer lines. Lays underground communication and electrical ducts. May install and set electrical ground boxes, hand holes, manholes, inlets and other structures. Caulks joints, make threaded and flanged connections. Installs valves and other accessories. Performs other related duties.

Reinforcing Steel Setter, Paving \$ 15.14

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Reinforcing Steel Setter, Structure \$ 13.87

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Roller Operator, Pneumatic, Self-Propelled \$ 9.91

Operates a self-propelled machine with either steel wheels pneumatic tires, which is used to compact and smooth all bituminous materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Roller Operator, Steel Wheel, Flat Wheel/Tamping \$ 10.43

Operates a self-propelled machine with either steel wheels or pneumatic tires which is used to compact earth fills, subgrade, flexible base and all other types of materials except bituminous. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Roller Operator, Steel Wheel, Plant Mix Pavement \$ 11.07

Operates a self-propelled machine with either steel wheels pneumatic tires, which is used to compact and smooth all bituminous materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Scraper Operator \$ 9.92

Operates a self-contained wheeled tractor scraper both self loading or assisted by crawler tractors or other scrapers. Used to excavate and transport earth or other materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Servicer \$ 10.96

Drives a truck, which carries various fuels, oils, greases and filters. Must have knowledge of and is responsible for the correct oiling and greasing and changing of filters on equipment according to the manufacturers' specifications. Uses compressed air grease guns, wrenches and other tools. May make adjustments to clutches, brakes and other mechanical items. Keeps record of service preventive maintenance records. May have laborer assisting him. May require CDL if driving truck on public highways. Performs other related duties.

Sign Installer (PGM) \$ 8.54

Sets forms, reinforcing steel, anchor bolts and pours concrete for Sign foundations. Fabricates and erects pipe and angle Frameworks by bolting, welding or other means prior to installation of signs that are normally prefabricated. Works from plans in location and drilling holes for proper location and alignment of signs. May direct hoisting of signs into place. Fastens signs to framework by bolting and other means. Locates and sets lighting brackets. May perform other work associated with signing projects. Supervises sign erector helper. Performs other related duties.

Slip Form Machine Operator \$ 11.07

Cleans and seals joints requiring a hot or cold sealing compound in concrete paving, sidewalks, driveway and approach slabs. May oil, grease or make necessary repairs adjustments to equipment as needed. Performs other related duties.

Spreader Box operator \$ 11.12

Operates spreader box by adjusting hopper and strike off blade so that the gravel, stone or other material may be spread to a specific depth on road surface during seal coat and surface treatment operations. May oil, grease or other wise service and make necessary adjustments to equipment as needed. Performs other related duties.

Structural Steel Worker \$ 12.13

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker (helper) or common or

utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

Tractor operator, Crawler Type \$ 13.00

Operates a crawler tractor with a bulldozer mounted in front of chassis to level, distribute and push earth or other material. May operate a ripper attachment to break up rock or other hard material. May use a push block on front of tractor to push load scrapers. May oil grease, or otherwise service and make minor repairs to equipment as needed. Performs other related duties.

Tractor Operator, Pneumatic \$ 10.07

Operates a gasoline or diesel powered agricultural tractor that tows compaction rollers, plow, disc, water tanks, scrapers and other similar operations. May use other miscellaneous attachments. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

Traveling Mixer Operator \$ 11.00

Drives a gasoline or diesel truck upon which is mounted a concrete mixer. Operates concrete mixer and dumps concrete on the grade, into forms or into concrete pumps or buckets. Cleans mixer drum. May require CDL license for on highway use. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Truck driver, lowboy-Float \$ 13.16

Drives a heavy-duty diesel powered truck to which is attached a trailer upon which heavy equipment is hauled. Driver is often required to operate heavy equipment to load or unload the lowboy. May require CDL license for on highway use. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Truck driver, Single Axle, Heavy \$ 10.65

Drive a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached, such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May services and make necessary adjustments for proper operation equipment. Performs other related duties

Truck driver, Single Axle,Light \$ 10.07

Drive a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached, such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May services and make necessary adjustments for proper operation equipment. Performs other related duties

Truck Driver, Tandem Axle, Semi-Trailer \$ 10.25

Drives a diesel-powered tractor pulling a semi trailer hauling materials. Hauls dirt, rock, aggregates or other material. May require CDL license for driving on highway. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

Work Zone Barricade Servicer \$ 9.94

Fabricates, erects and maintains temporary traffic control devices, including arrow boards, signs, barricades, channelizing devices, barrels and all message boards. May operate a truck during traffic control operations.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

SECTION B
TECHNICAL SPECIFICATIONS

SECTION 1: TERMS OF CONTRACT

A. GENERAL:

1. The term of the agreement shall begin upon issuance of the Notice-To-Proceed by the City Purchasing Agent (estimated to be July 20, 2007). During this period, work orders will be issued for items as needed. If there is any conflict between the terms and conditions as specified in the contract documents and said Work Orders, the term and conditions of the contract documents shall govern. The Contractor shall not perform against this agreement without first having received an official City of Houston Work Order, except in emergency cases as detailed below. It is emphasized that the City of Houston does not guarantee to purchase any specific quantity of any item listed during the term of the contract; rather, the quantities may vary depending upon the actual needs of the user departments. Given the quantities specified herein are good faith estimates of usage during the term of this Contract, the City Purchasing Agent has been delegated authority to increase the total amount of each awarded Contract resulting from this bid invitation if required to meet user requirements. Contractor shall remain obligated to the City under all clauses of this Contract that expressly or by their nature extend beyond and survive the expiration or termination of this Contract, including but not limited to warranties and indemnity provisions hereof.

Group 1 line items will have a minimum \$500.00 per work order. Group 2 line items will be used by Public Works & Engineering Department's Utility Customer Service and will have a \$500.00 minimum work order per Key Map page. Utility Customer Service will issue work orders comprised of several jobs in the same area by KEY MAP PAGE in the minimum dollar amount of \$500.00. These jobs will center around the repair of water meters located in driveways and sidewalks.

B. BIDDING AND AWARD:

1. It is the intent of the City to award, on the basis of overall low bid meeting specifications for the entire Contract term, however, the right is reserved to accept or reject in whole or in part any or all bids received and to make an award on the basis of individual item, combination of items or overall best bid, as it is deemed in the best interest of the City.
2. **THIS IS A WORK ORDER CONTRACT, FOR ONE YEAR, WITH TWO (2) ADDITIONAL ONE (1) YEAR OPTIONS TO EXTEND THE PERIOD OF PERFORMANCE.**

C. OPTIONAL EXTENSION:

1. This Contract may be extended for successive one (1) year periods up to two (2) additional years with thirty (30) days prior written notice from the City Purchasing Agent.
2. The successful bidder shall satisfy the City of Houston that it is maintaining a commercial business location staffed within the Greater Houston area with qualified personnel and has provisions for securing materials without undue delay. The apparent silence of these specifications as to any detail, or the apparent omission from them of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practice shall prevail and that only materials and workmanship of the first class quality are acceptable. (All interpretations of these specifications shall be made upon the basis of this statement.)

D. SPECIAL NOTE – PROPOSALS:

1. The contractor is required to visit any prospective job site as directed by the individual City Department to determine for itself the exact scope of repair work to be performed and to measure the exact square footage of each area of repair before submittal of proposal. Proposal will be submitted using amounts as shown on this bid document. The City Department will approve the proposal in writing. A WORK ORDER will be issued based on the proposal. **NO WORK WILL BEGIN BEFORE A WORK ORDER IS ISSUED, EXCEPT IN EMERGENCY CASES.**

SECTION 2: GENERAL REQUIREMENTS

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required to complete the concrete work as specified in the contract documents. Concrete work shall include sidewalks, driveways and paving, and other miscellaneous concrete structures, including splash pads, containment, catch basins, and equipment pads. The work will be at various locations throughout the City, spanning the term of this contract. The City Engineer will provide drawings for all the concrete work covered by this Concrete Specification. The Contractor is required to submit a written proposal utilizing all the bid documents for the required concrete work.
- B. The Contractor is required to review submitted proposed plans, verify field measurements, and other pertinent data prior to submittal of proposal for the concrete work. If there is a conflict or a discrepancy between the proposed field measurements and the other data, it is the Contractor's responsibility to notify the City Engineer of such conflict or discrepancy prior to commencing work on an assigned project. Otherwise, any additional cost incurred after work commences shall be at the expense of the Contractor.
- C. It is the Contractor's responsibility to obtain all necessary permits and to pay associated fees.
- D. The Contractor shall notify the City Engineer before the initiation of the project. City Personnel shall be authorized to observe all materials and work done. Such observation will not relieve the Contractor from any obligation to perform the work in accordance with the requirements of these Concrete Specifications.
- E. Under these Concrete Specifications, all the work shall be accomplished in such a manner as to prevent damage to the City of Houston facilities, equipment, roads, grounds, utilities, processes, etc., or to any other existing utilities. If any damage is caused, the Contractor shall be liable and will make repairs ordered by the City Engineer without additional compensation. If necessary, actual costs of repairs, or replacement, may be withheld from contract payment by the City of Houston or Contractor may issue a credit payment to the City.
- F. All work performed by the Contractor will be in accordance with the latest City of Houston Building, Electrical, Plumbing codes and other related City of Houston Standard Construction Specifications. In the event that more than one Code or standard addresses a construction issue, the most stringent requirement shall prevail. All concrete work performed under this contract shall conform to latest edition of ACI, ASTM Building Codes, City Ordinances, and all other applicable construction codes. Contractor shall remove all materials from the work site that do not conform to the applicable codes, and shall replace with materials that conform to the applicable codes
- G. The Contractor hereby agrees to employ only orderly, competent workers, skilled in the performance of the kind of work specified in this contract document. All work shall be performed and completed by using the latest standard industrial practices, notwithstanding any omissions from these specifications or drawings. All materials furnished and all work performed under this contract must be satisfactory to the City Engineer.
- H. All concrete work shall be completed within the time and procedure schedule as specified.
- I. Issuance of Work Orders
1. The City of Houston Project Manager will request a proposal and cost estimate from the Contractor for the designated project.
 2. The Contractor shall respond with its proposal and cost proposal within three (3) working days after receiving the request from the COH Project Manager. The proposal must include a breakdown by the applicable contract Fee Schedule Line Item of each service to be provided, the quantity, the total cost for that Line Item and all necessary drawings and specifications.
 - a. The Contractor will submit a completed **Hazard Communications Program / Contractor Compliance Form** (Form E) with each cost quotation if work is to be completed on City property.
 3. If the Contractor's Proposal is acceptable, the COH Project Manager will issue a "Work Order" (Exhibit K) authorizing the Contractor to perform work.
 - a. The Contractor will not begin work until the COH Project Manager has approved the submitted schedule of work.
 4. The Contractor shall start the approved work order within three (3) working days after the Work Order is issued. The Contractor agrees to start a specified Work Order within twenty-four (24) hours or less if an emergency condition exists."

5. **Contract Limit:** If repairs to any one site will **exceed \$25,000.00, on a single repair, the proposal must be submitted to the City Purchasing Agent for approval** prior to issuance of the Work Order. It is the joint responsibility of the Contractor and the department to insure the \$25,000.00 limit is not exceeded. Violation of this requirement is grounds for termination of the Contract.

J. TESTING LAB SERVICES FURNISHED BY CONTRACTOR

- A. The Contractor is responsible for all testing laboratory services in connection with concrete mix designs and other tests and engineering data required for review of materials and equipment by the Owner's Representative prior to the start of work. Contractor shall obtain acceptance of the testing laboratory by the Owner's representative before having services performed and shall pay all costs for services.
- B. The Contractor shall be responsible for providing materials, which meet the requirements indicated by the Contract Documents. Materials which do not meet those requirements shall be removed or modified as directed.

SECTION 3: ALTERATION OF EXISTING WORK

A. SCOPE OF WORK:

1. Perform alteration work as required by specification or drawings.
2. During modification of concrete work, maintain in operation all existing City of Houston utilities, unless otherwise specified by the City Engineer.
3. Patching shall be done with materials that match the existing materials in color, grade, texture and size. If it is impossible to furnish matching materials because of discontinuation by manufacturer, it shall be reported immediately to the City Engineer, who will determine what materials are to be substituted.

B. GENERAL:

C.

1. Sequence of operation:

The schedule of alteration work will be coordinated with City of Houston personnel so as not to interfere with City of Houston operations. Do not commence alteration work until the submitted schedule of work has been approved by the City Engineer.

2. Existing Utilities:

If a utility in an existing building is to be interrupted due to alteration work, the scheduled interruption will be coordinated with the City of Houston personnel and the City Engineer.

D. CUTTING, PATCHING & REPAIR:

1. Perform all cutting and patching as required to complete the alteration of concrete work according to the specs or drawings.
2. Other concrete work requiring patching shall be done with the same materials and in the same manner as adjacent similar work. Joining between old and new work shall be as perfect and invisible as possible.

E. PRESERVATION:

1. All trees and shrubbery which are not required to be cleared or removed for construction purposes shall be preserved and protected from damage that may be caused by the contractor's construction operations and equipment.
2. The Contractor shall repair individual trees damaged by construction operations immediately to prevent progressive deterioration. Repair work shall be subject to approval of the City Engineer. Repair costs will be charged to the Contractor's account.

F. PAYMENT:

1. Payment for all work prescribed under this item, and other miscellaneous concrete items not included, will be .

SECTION 4: SITE GRADING

A. SCOPE OF WORK:

1. This section pertains to grading of the site as required for construction of concrete surfaces, and drainage as shown on the drawings, and in accordance with these specifications.

B. PROTECTION OF EXISTING UTILITIES AND ADJACENT WORK:

1. Prior to earthwork operations, existing utilities, facilities and remaining permanent objects shall be located and adequately protected. When working near other utilities the Contractor shall request the appropriate utility company to locate its lines.
2. If unknown and uncharted utilities are encountered during excavation, promptly notify the City Engineer and the governing utility company for assistance.
3. If the City Engineer determines that such utility line has been abandoned and not properly capped at an approved depth, then remove the line as directed.
4. If such unknown utilities are encountered and work is continued without contacting the Water Production City Engineer for instructions, and damage is caused to said utilities, Contractor shall repair, at his own expense, such damage to the satisfaction of the City Engineer and the Utility Company.

C. PAYMENT:

Payment for all work prescribed under this item, "Site Grading" shall be from the Item, "Excavation", contained in Contract Fee Schedule.

SECTION 5: EXCAVATION

A. GENERAL:

1. The term "excavation" shall mean the removal of earth, loose rock, bituminous surface, gravel, shell base, pipe culverts, timber bridges, trees or stumps not larger than six (6) inches in diameter, and measuring one (1) foot above the ground. This also includes bases of old poles, roots, and any other like materials not concealed from view before work starts, that may be encountered during the process of securing the proper sub-grade for the pavement surface.
2. Under this item, the Contractor shall grade the entire length of the project between the required lines and grades and remove spongy materials from the sub-grade to the depth required; not to exceed twelve (12") inches, all as shown on the plans or as directed by the City Engineer. Where a spongy condition exists in a backfill trench, it is the Contractor's responsibility to remove such spongy material and promptly replace it with acceptable material excavated within the limits of the project at no additional cost. Backfill material shall be placed in accordance with the requirement of No. 6 of this item.
3. This item includes excavation, hauling, filling, and compaction necessary to complete the project, removal of all excess and objectionable materials and filling to the required grade with acceptable materials.
4. Excavated materials to be wasted shall become the property of the Contractor and shall be removed from City of Houston property by the Contractor without additional cost to the City of Houston. The Contractor shall haul all excavated materials to any site, or sites, unless otherwise ordered by the City Engineer, provided these sites are approved dump sites.

5. If the Contractor, for any reason, fails to use diligent care in excavating and preparing rough grade for compaction, resulting in a deficiency of earth after compaction, then he shall fill such low grade and re-compact at his own expense.
6. Embankments or fills shall be compacted to 95% proctor density in successive horizontal layers not exceeding one (1') foot in thickness.
7. Conform to "Protection Of Existing Utilities And Adjacent Work", of "Site Grading".
8. The Contractor will be held responsible for any damage to manholes, pipes, etc. The cost of repairing all such damages, unless repaired by the Contractor at his own expense, will be deducted from payment due to the Contractor after the repairs are made.
9. Water shall not be classified as excavated materials.
10. Payment for all work prescribed under this item, "Excavation", will be made at the unit price in the Contract Fee Schedule and according to specifications and drawings.

B. EXCAVATION FILLING AND BACKFILLING

The following is a Summary of basic procedures and quantities.

The "Site Specific" Construction Documents will detail the specific methods and types of tests required.

1. TESTING

Testing shall be the responsibility of the Contractor. Field in place densities shall be determined in accordance with the Construction Documents.

A. All or some of the following ASTM Publications will apply:

- D1556
- D1557
- D2216
- D2487
- D2922
- D3017
- D4318

2. This list is for reference only. The latest publications will apply.

1. In-place density of Subgrades: One test per 1000 square feet or fraction thereof.
2. In-place density of Fills and Backfills: One test per 1000 square feet or fraction thereof.
3. Moisture Contents: In the stock pile, excavation or borrow areas, a minimum of two tests per day per type of material or source of materials being placed during stable weather conditions.
 - a. Optimum Moisture and Laboratory maximum density: tests shall be made for each type of material or source of material including borrow material to determine the optimum moisture and laboratory maximum density values. One test per 500 cubic yards of fill and backfill.

SECTION 6: UNCLASSIFIED STRUCTURAL EXCAVATION

A. DESCRIPTION:

1. These specifications shall govern excavation for placing of other concrete structures, the disposal of all material obtained from such excavation, and for back-filling around completed structures to the level of the original ground. The work performed shall include all necessary pumping or bailing, sheeting, drainage, and construction, and removal of any required cofferdams. Unless otherwise provided, the work included shall provide for removal of old structures or portions (such as abutments, wing-walls, or piers) and all other obstructions.

B. CONSTRUCTION METHODS:

1. Excavation shall be performed in accordance with the lines and depths indicated on the plans, unless written permission to the contrary is given by the City Engineer.
2. The final elevation to which a foundation is constructed shall be as shown on the plans.
3. When a structure is to rest on an excavated surface rather than rock, special care shall be taken not to disturb the bottom of the excavation. The final removal of the foundation material to grade shall not be performed until just before the footing is placed.
4. All rock or other hard foundation material shall be freed from all loose material, cleaned, and cut to a firm surface, either leveled, stepped, or serrated, as directed by the City Engineer. All seams shall be cleaned out and filled with concrete at the time the footing is placed. The quantity of concrete required for filling seams shall be measured and included for payment in quantities for the unit of the structure for which the excavation is made.
5. Excavated material used for backfill may be deposited by the Contractor in storage piles at points convenient for re-handling of the material during the back-filling operations.
6. Conform to "Excavation."

C. PUMPING OR BAILING:

1. Pumping or bailing from the interior of any foundation enclosure shall be done in such manner as to preclude the possibility of movement of water through or alongside any concrete being placed. No pumping or bailing will be permitted during the placing of concrete, or for a period of at least 24 hours thereafter, unless it is done from a suitable sump separated from the concrete work by a watertight wall. Pumping or bailing water to a sealed cofferdam shall not start until the seal has set for at least 48 hours.

D. BACKFILLING:

1. As soon as it is practicable, all spaces excavated under these specifications, and not occupied by the permanent structure shall be backfilled. Backfill shall be placed in layers not more than ten (10") inches in depth, and shall be compacted satisfactorily to the level of the original surrounding surfaces. The material shall be free from large or frozen lumps, wood or other extraneous material.
2. No backfill shall be placed against any abutment or retaining wall until such structure shall have been in place for at least seven (7) days.
3. Backfill placed around abutments and piers shall be deposited on both sides to approximately the same elevation at the same time.
4. The City Engineer will be notified before all back-fill work is started.

E. DETERMINATION OF EXCAVATED QUANTITIES:

1. The yardage of structural excavation paid for will consist of that actually removed, as measured in its original position by the cross-section method, except as follows:
 - a. No material outside of vertical planes, one (1') foot beyond the edge of the footings and parallel thereto will be included.
 - b. In all cases where excavation diagrams are shown on the plans or in the specifications, such diagrams shall take precedence over these provisions.

- c. Measurements will not include additional yardage caused by slips, slides, cave-ins, silting, or fillings due to the action of the elements or the carelessness of the Contractor. Water will not be classified as excavated material.

F. PAYMENT:

1. Payment for all work prescribed and measured under this item will be at the bid price. Price shall be for full compensation for all excavation and backfill, constructing all cofferdams, all de-watering, and for furnishing of all materials, labor, equipment, tools, sheeting, bracing cofferdams, pumps, drills and for all incidentals necessary to complete the work.

SECTION 7: REMOVAL OF PAVEMENTS, SIDEWALKS, CURB, DRIVEWAYS CURB & GUTTERS ALL TYPES

A. SCOPE OF WORK:

Contractor shall furnish all labor, materials, equipment and incidentals as directed for the removal of existing concrete pavement, monolithic curb, curb and gutter, concrete sidewalk and driveways, and other miscellaneous structures of concrete, masonry, or a combination of both.

B. METHOD OF REMOVAL:

1. All materials removed under this specification shall be by methods that will not damage underground utilities. The method of removing and loading shall be such that an excessive amount of the earth is not incorporated with the material being loaded.
2. Materials to be removed under these specifications shall conform to "Excavation."

C. MEASUREMENT:

1. Removal of Concrete Pavement, Sidewalk and Driveway will be measured by the square yard.
2. Removal of Concrete Curb and Curb and Gutter, all types, will be measured by the linear foot.

D. PAYMENT:

1. Payment shall be at the unit price as shown in the Contract Fee Schedule and measured and at full compensation for all labor, tools, equipment and incidentals necessary to remove the material in accordance with these specifications.

SECTION 8: CONCRETE STRUCTURES AND CONCRETE FOR STRUCTURES

A. SCOPE OF WORK:

1. Contractor shall furnish all equipment, incidentals, labor and materials and perform all the required operations in connection with construction of forms, mixing, transporting, placing, furnishing and curing of concrete as shown on the drawings or specified herein.
2. Work covered by other Concrete Specifications: Except as otherwise specified herein, all concrete and concrete work shall be in accordance with the requirements of the City of Houston Public Works and Engineering Department's Standard Specifications entitled "Concrete for Structures" and Concrete Structures". Except as otherwise specified herein, all structural excavation work shall be in accordance with the requirements of the City of Houston Public Works and Engineering Department's Standard Specification entitled "Unclassified Structural Excavation". In event of conflict between provisions of these specifications and the Standard Specifications, these specifications shall govern.

B. CLASSIFICATIONS & PROPORTIONS:

1. Size of aggregate, cement content, water content and slump for various classes of mixes, in accordance with paragraph C, shall conform to the following:

Class of Concrete	Min. Cement Bags Per C.Y.	Max. Size of Coarse Aggregate	Max. Water Gals. Per Bags (Net)
AA	6.5	1"	6.0
A-2	5.25	1 ½"	6.5
B-1	4.5	1 ½"	7.5

2. Concrete mix will be designed with the intention of producing concrete which will be of the compressive or flexural strengths when tested, and cured under field conditions, equal to or greater than following:

Class of concrete	Compressive Strength		Flexural Strength
	7-Day	28-Day	
AA	4000	5000	-
A-2	2000	3000	-
B-1	1600	2500	-

3. Class "AA" concrete shall be steel reinforced as specified under "Concrete Reinforcement" and include the following:
- Foundations
 - Walls: Retaining, Non-Load Bearing.
 - Slabs, Pavement.
 - Driveways for commercial and/or industrial use.
 - Sidewalk section crossing commercial driveway.
4. Class "A2" concrete shall be steel reinforced as specified under "Concrete Reinforcement" and include the following:
- Curbs and Gutters.
 - Sidewalks section crossing residential driveway.
 - Driveways for residential use.
5. Class "B1" concrete shall be Steel wire or welded smooth wire fabric reinforcement as specified under "Concrete Reinforcement", and shall include other concrete work not specified under class "A" and "A2" concrete.

C. COURSE AGGREGATE FOR CONCRETE:

- Coarse aggregate for all classes of concrete shall conform to all requirements of the Standard Specification "Concrete for Structures".

D. FINE AGGREGATE FOR CONCRETE:

1. Fine aggregate for all classes of concrete shall conform to all requirements of the Standard Specification "Concrete for Structures".

E. READY-MIXED CONCRETE:

1. Conform to "Concrete Mixing", "Cast-In-Place Concrete".

F. ANCHORS & INSERTS:

1. All anchors inserts and other such items shall be accurately set and firmly secured prior to placing the concrete. Templates furnished by suppliers of such items shall be used to ensure accurate setting and accurate placement of such items to be embedded in the concrete.

G. CURING CONCRETE:

1. Conform to "Curing Methods," "Cast-In-Place Concrete".

H. FORMS:

1. All exposed faces of abutments and wingwalls shall be formed by plywood or forms lined with plywood or masonite. Surfaces against earth may be formed with lumber.
2. Form ties shall be of an approved type.

I. WRECKING FORMS:

1. Side forms of exposed portions of abutments and wingwalls may be removed after 48 hours, provided the Contractor proceeds without delay with the initial surface finish.

J. CONSTRUCTION JOINTS:

1. All construction joints shall be located at points shown on the plans, or as approved by the City Engineer, and shall be in accordance with details of the plans or as set forth under the specifications "Concrete Structures".

K. SURFACE FINISH:

1. All defective surface finishes shall conform to "Quality of Concrete Work", "Cast-In-Place Concrete".
2. All railing, curbs, the underside of hanging slabs, the outside and the bottom of exterior girders or fascia beams, and all portions of piers, columns, bents, abutments, retaining walls and culverts, which are exposed to view after backfill and roadway embankments are in place, shall be surface-finished. The area inside of culvert barrels, including both side-walls and the underside of the top slab for a distance equal to one-third (1/3) the clear height but not less than eighteen inches (18"), shall be considered as exposed to view.
3. The operation of surface finishing shall be in accordance with the following provisions:
 - a. The finish shall be a paint-type material, or equal, consisting of a synthetic elastomer-polyester base compound meeting the local building code requirements.
 - b. The finish shall be applied to a clean dry surface. For atmospheric temperature of concrete and compound, conform to "Cold Weather Placing" or "Hot Weather Placing" of "Cast-In-Place Concrete".

L. POURING CONCRETE:

1. All concrete shall be poured during the normal working day, except when specific permission by the City Engineer is given to the contrary.
2. Pouring of concrete in each and all pours shall not begin until the City Engineer has checked the reinforcing steel placement and the form alignment, horizontally and vertically, for compliance with plans and specifications, and until all inaccuracies discovered have been corrected. Where the concrete fall from pouring level exceeds 4 feet (4'), a hopper, and spout system shall be used for depositing the concrete. Mechanical vibration shall be used as directed by the City Engineer.
3. The contractor shall exercise care in the use of a vibrator in the concrete in the vicinity of anchor bolts.

M. MEASUREMENT & PAYMENT:

1. General: Except as indicated on the drawings or specified herein, no separate payment will be made for concrete and concrete work. The cost shall be included in the contract unit prices bid per cubic yard for items of which this work is a component part, and shall include the performance of the following operations:
 - a. Furnishing and placing the concrete in its final position, together with air-entering agent, where required.
 - b. Erection and removal of forms
 - c. Curing
 - d. Finishing concrete surfaces.
 - e. Other operations may be required for the proper construction of the concrete structures, according to the plans and specifications.
2. Structural Excavation: Except as indicated on the drawing or specified herein, no separate payment will be made for structural excavation. The cost shall be included in contract unit prices bid for items of which this work is a component part.

SECTION 9: CONCRETE SPILL CONTAINMENT TANK

A. SCOPE OF WORK:

3. For construction of the Concrete Spill Containment Tank conform to No. 1 & 2 of Scope of Work of "Concrete Structures and Structures for Concrete".
 1. Conform to "Concrete Mixing", "Cast-In-Place Concrete".
 4. The contractor shall pursue the work diligently and continuously, weather permitting, and work shall be completed within thirty (30) calendar days of notice to proceed.
 2. For payment conform to "Measurement & Payment" of "Concrete Structures and Concrete for Structures.

SECTION 10: CONCRETE DRIVEWAYS, SIDEWALKS OR PAVEMENTS

A. SCOPE OF WORK:

- A. Conform to scope of work of "Concrete Structures and Concrete for Structures".

B. CONCRETE DRIVEWAY:

1. Driveway shall consist of reinforcing steel and be composed of concrete cement of a specified strength, and constructed on an approved sub-grade, in conformity with the lines and grades established by the City Engineer and the details shown on the plans.
2. Driveway entrance length, as referred to in this specification, shall be constructed between the ends of "completed returns" behind the face of the curb. The driveway entrance length construction shall conform to the City of Houston typical driveway section details shown on drawing No. 524-S. Where there is not a definite driveway, the centerline shall be perpendicular to the curb line.
3. The work performed as prescribed by this item shall be paid for at the contract unit price for "Concrete Driveway."

NOTE: A "complete return means", the constant radius of the return is tangent to the line of the street curb and a line parallel to the centerline of the driveway.

C. CONCRETE SIDEWALKS OR PAVEMENTS:

Sidewalks or Pavements composed of concrete cement shall be of a specified strength constructed on an approved sub-grade, in conformity with the lines and grades established by the City Engineer, and the details shown on the plans.

1. Concrete Mix
 - a. Conform to "Concrete Mixing", of "Cast-In-Place Concrete".
2. Transit Mix Concrete
 - a. Conform to "Transporting Concrete" of "Cast-In-Place Concrete"
 - b. Conform to item "Concrete Conveying" of "Cast-In-Place Concrete"
3. Construction Methods
 - a. The sub-grade shall be excavated beyond the outside lines to set forms, shape to line, grade, and cross section. If the City Engineer considers it necessary, only the following materials may be utilized for the sub-grade fill.
 - "Lime Stabilized Sub-grade"
 - "Cement Stabilized Sand"
 - "Shell Fines" or "Quartered Shell"
 - b. The sub-grade shall be moist at the time the concrete is deposited. Tamping and sprinkling may be used to moisten the sub-grade if directed by the City Engineer.
 - c. Forms may be of wood or metal section satisfactory to the City Engineer, and must be straight and free from warp, and of sufficient depth so as to maintain the planned required thickness. They shall be securely stacked to line and grade and maintained in a true position during the concrete deposits.
 - d. Concrete shall be placed in the forms to the depth specified and tamped until thoroughly compacted, and mortar entirely covers the surface. The mortar top shall then be struck off with a wood strike-off board to a smooth finish. The top surface shall then be floated and finished to a gritty texture with a wooden hand float. An alternate method to obtain a uniform gritty texture may be a brush finish.
 - e. The sidewalk shall be marked off one-eighth inch (1/8") deep, at spacing equal to the width of the sidewalk and joint tool equal in width to the width of the edging tool. All edges shall be edged with a tool having a one-fourth inch (1/4") radius.
 - f. The sidewalk shall consist of an approved type of commercial pre-molded expansion joint, one-half inch (1/2") thick or a one inch (1") thick board joint tool equal in width to the width of the edging tool. All edges shall be edged with a tool having a one-fourth inch (1/4") radius.

- g. No concrete shall be mixed while the air temperature is at or below 35° F., or above 95° F. No materials containing frost or lumps of hardened materials shall be used.
- h. The sidewalk shall be covered with burlap or another suitable material continuously for a period of forty-eight (48) hours after the placing of the burlap or other material, and the curing shall commence as soon as the concrete has hardened sufficiently to be unmarked by the method of curing. In lieu of sprinkling, an approved material for maintaining a moist surface may be used. Sidewalks shall be protected from traffic for a period of forty-eight (48) hours after placing.
- i. After the concrete has set sufficiently, the space along the sides of the sidewalk shall be refilled with suitable material, approved by the City Engineer, and tamped until firm and solid. Dispose of excess material as prescribed under "Excavation".

4. Joints

- a. General: Construct expansion, contraction, and construction joints with faces perpendicular to surface of the curb, gutter and sidewalk. Construct transverse joints at right angles to the centerline as shown.
- b. Construction Joints: Provide these joints at ten feet (10') on centers for curbs and gutters and five feet (5') on centers for sidewalks.
- c. Construction Joints: Place at location where placement operations stopped for a period of more than a half (1/2) hour, except where such pours terminate at expansion joints.
- d. Expansion Joints: Provide a one-half inch (1/2") expansion joint filler where work abuts structures: at returns: and at thirty foot (30') spacing for straight runs. If curb, gutter, and sidewalk are not poured monolithically, provide expansion joints where each abuts the other.
 - Place top of expansion joints material not less than a one-half inch (1/2") or more than one inch (1") below concrete surface. Apply joint sealer on top of expansion joint material flush with concrete surface, and in accordance with manufacturer's instructions.
 - For the expansion joints placed at back of curb between longitudinal sidewalks and curbs and between the end of curbs return from intersection to intersecting streets, shall be paid for at the contract unit price bid for the item. The "Pre- molded Expansion Joint 1/2"(4"x8") or "Expansion Joint 1"(4"x 8") and for no Load Transfer Device," as the case may be, and no other expansion joint placed in accordance with the requirements of this specification will be paid as such.

5. Concrete Finishing

- a. Conform to "Monolithic Slab Finishes" of "Cast-In-Place Concrete".

6. Concrete Placement

- a. Conform to "Concrete Mixing" and "Concrete Placement", of "Cast-In-Place Concrete".
- b. For sidewalks and driveways place concrete in one course, monolithic construction, for the full width and depth of the walks.
- c. Machine formed: For atomic curb, gutter and sidewalk, machine forming may be used at contractor option. Concrete shall have properties as specified, except that maximum slump shall be two and one-half inches (2-1/2"). Machine forming shall produce curbs, gutters and sidewalks to the required cross-section, lines, grades, finish. If results are not acceptable, remove and replace at Contractor's expense.

7. Curing

- a. For "Curing" conform to "Curing Methods" of "Cast-In-Place Concrete".

8. Repair and Cleaning

- a. Conform to "Concrete Repairs" of "Cast-In-Place Concrete".

D. PAYMENT:

1. The work performed and materials furnished as prescribed shall be paid for at the unit price as bid, which shall be full compensation for furnishing and placing all materials, including expansion joint materials, for all manipulations, labor, tools, equipment and incidentals necessary to complete the work.

SECTION 11: CONCRETE REINFORCEMENT

A. SCOPE OF WORK:

1. Conform to scope of work of "Concrete Structures and Concrete for Structures".
2. The work includes fabrication and placement of reinforcement, including bars, ties and supports, and welded wire fabric for concrete, encasement and fire-proofing.

B. MATERIALS:

1. Reinforcement material shall conform to the following standards:
- a. Reinforcing Bars: ASTM A 615, latest edition.
 - b. Steel Wire: ASTM A 82.
 - c. Welded Smooth Wire Fabric: ASTM A 185.
Furnish in flat sheets, not rolls.
2. Supports for Reinforcement: Bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcement in place.
- a. Use wire bar type supports complying with CRSI recommendations, except as specified below. Do not use wood, brick, or other unacceptable materials.
 - b. For slabs on grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
 - c. For all concrete surfaces, where legs of supports are in contact with forms, provide supports complying with CRSI "Manual of Standard Practice" as follows:
 - Either hot-dip galvanized, plastic protected
 - Stainless steel legs
 - d. Over waterproof membranes, use pre-cast concrete chairs.

C. INSTALLATION:

1. Comply with the applicable recommendations of ACI 318-83, latest edition, for details and methods of reinforcement placement.
2. Clean reinforcement to remove loose rust, oil and mill scale, earth, ice, and other materials, which reduce or destroy bond with concrete.

3. Position, support and secure reinforcement against displacement during form work construction or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers, as required.
 - a. Place reinforcement to obtain the minimum concrete coverage as shown and as specified in ACI 318 latest edition. Arrange, space and securely tie bars and bar supports together with 16 gage wire to hold reinforcement accurately in position during concrete placement operations. Set wire ties so that twisted ends are directed away from expose concrete surfaces.
 - b. Reinforcing steel shall not be secured to forms with wire, nails or other ferrous metal. Metal supports subject to corrosion shall not touch formed or exposed concrete surfaces.
 - c. Installation of welded wire fabric shall conform to the latest edition of ASTM recommendations.
 - d. Lap adjoining pieces at least one full mesh and lace splices with 16 gage wire. Do not make end laps midway between supporting beams, or directly over beams of continuous structures. Offset end laps in adjacent widths to prevent continuous laps.
4. Provide sufficient number of supports of strength required for carrying reinforcement. Do not place reinforcing bars more than two inches (2") inches beyond the last leg of any continuous bar support. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.
5. Splices: Provide standard reinforcement splices by lapping ends, placing bars in contact, and tying tightly with wire. Comply with requirements shown for minimum lap of splice bars.

D. OBSERVATION OF REINFORCEMENT:

1. Concrete shall not be placed until the reinforcing steel is observed, and permission for placing is granted by the City Engineer. All concrete placed in violation of this provision will be rejected.

E. PAYMENT:

1. Payment at the unit prices shown in the Contract Fee Schedule for the item listed herein, shall be as bid and full compensation for all labor, tools, equipment and incidentals necessary.

SECTION 12: CAST-IN-PLACE CONCRETE

A. SCOPE OF WORK:

1. Conform to scope of work of "Concrete Structures and Concrete for Structures."
2. Concrete shall consist of portland cement, fine and coarse aggregate, water and approved admixtures; combined, mixed, transported, placed, finished and cured.

B. CLASSES OF CONCRETE:

1. Conform to item "A", "Classifications and Proportions", "Concrete Structures and Concrete for Structures."

C. PRODUCT DELIVERY, STORAGE AND HANDLING:

3. All materials used for concrete must be kept clean and free from all foreign matter during transportation and handling. Suitable means shall be taken during hauling, piling and handling to ensure that segregation of the coarse and fine aggregate particles does not occur and the grading is not affected.

D. CONCRETE MATERIALS:

4. Portland cement, ASTM C 150, Type II; or blended by hydraulic cement, ASTM 595, Type 1P. Type I may be used in lieu of Type II when acceptable to the City Engineer.

- a. Use portland cement made by a well-known acceptable manufacturer and produced one plant only.
 - b. Do not use deteriorated cement.
2. Aggregates: ASTM C33 and as herein specified.
- a. Do not use aggregates containing soluble salts or other substances such as iron sulfides, pyrite, marcasite, ochre, or other materials that can cause stains when exposed.
 - b. Fine Aggregates: Clean, sharp, natural and free from loam, clay, lumps or other deleterious substances. Dune sand, bank run sand and manufactured sand are not acceptable.
 - c. Coarse Aggregate: Clean, uncoated, processed, with 90% fractured face, aggregate containing no clay, mud, loam, or foreign matter, as follows:
 - Crushed stone processed from natural rock or stone only.
 - Washed gravel, either natural rocks or stone only.
 - Coarse Aggregate Size: Size to be ASTM C33 No. 467 may be used for footings, foundation mats and walls 16 inches or greater thickness.
3. Water: Use potable only

E. CONCRETE ADMIXTURES:

1. Provide admixtures produced by established reputable manufacturers, and used in compliance with the manufacturer's printed instruction. Do not use admixtures which have not been incorporated in the accepted mixes, unless otherwise authorized in writing by the City Engineer.
2. Water-Reducing Admixture: ASTM 494, Type A.
3. Proportion all concrete with non-air entraining, normal setting, water reducing, aqueous solution of a modification of salted polyhydroxylated organic acids. The admixture shall not contain any ligroin, nitrates, or chlorides added during manufacture.
 - a. Eucon WR-75 by, The Euclid Chemical Company.
 - b. Pozzolith by Master Builders Company.
3. Calcium Chloride: Do not use calcium chloride in concrete, unless otherwise authorized by the City Engineer.

D. CONCRETE MIXING:

1. Concrete may be produced at batch plants or by the ready-mixed process. Batch plants shall comply with the recommendations of ACI 304, and shall have sufficient capacity to produce concrete of the qualities specified, in quantities required to meet the construction schedule. Batch plants are subject to be observed and accepted by the City Engineer.
2. Mixing:
 - a. Mix concrete with an approved rotating type batch machine, except where hand mixing of very small quantities may be permitted.
 - b. Remove hardened accumulations of cement and concrete frequently from drum and blades to assure acceptable mixing action.
 - c. Replace mixer blades when they have lost 10 percent of their original height.

- d. Use quantities such that a whole number of bags of cement is required, unless otherwise permitted.
3. Job Site Mixing: Not permitted, except in No. 4 (d) Below.
 4. Ready Mix Concrete: Comply with the requirements of ASTM C94, and as herein specified. Proposed changes in mixing procedures, other than herein specified, must be accepted by the City Engineer before implementation.
 - a. Plant equipment and facilities: Conform to National Ready-Mix Concrete Association "Plant and Delivery Equipment Specification."
 - b. Mix concrete in a revolving type truck mixer, which is in good condition and which produces thoroughly mixed concrete of the specified consistency and strength.
 - c. Do not exceed the proper capacity of the mixer.
 - d. Mix concrete for minimum of two minutes after arrival at the job site, or as recommended by the mixer manufacturer.
 - e. Mix at proper speed until concrete is discharged.
 - f. Maintain adequate facilities at the job site for continuous delivery of concrete at the required rates.
 - g. Provide access to the plant site for the City of Houston personnel at all times.
 5. Schedule rates of delivery in order to prevent delay of placing the concrete after mixing, or holding dry-mixed materials too long in the mixer before the addition of water and admixtures.

E. TRANSPORTING CONCRETE:

1. Transport and place concrete not more than 45 minutes after water has been added to the dry ingredients.
2. Avoid spilling and separation of the mixture during transportation.
3. Do not place concrete when the ingredients have been separated.
4. Do not re-temper partially set concrete.
5. Use suitable and approved equipment for transporting concrete from mixer forms.

F. CONCRETE PLACEMENT:

1. General: Place concrete continuously, so that concrete will not be placed on other concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the section. If a section cannot be placed continuously, provide construction joints as specified in other sections of these Specifications. Deposit concrete as nearly as is practical in its final location to avoid segregation due to re-handling or flowing. Do not subject concrete to any procedures, which will cause segregation.
2. Do not use re-tempered concrete, or concrete which becomes non-plastic and unworkable, does not meet the required quality control limits, or has been contaminated by foreign materials. Remove rejected concrete from the job site.
3. Do not place concrete until all forms, bracing, reinforcement, and embedded items are in a final and secure position.
4. Do not place footings, piers, or pile caps in freezing weather unless adequate precautions are taken against frost

action.

5. Unless otherwise approved, place concrete only when the City Engineer is present.
6. Allow a minimum of 7 days before placing concrete against a slab or wall already in place.

G. CONCRETE CONVEYING:

1. Handle concrete from the point of delivery and transfer to the concrete conveying equipment and to the locations of the final deposit as rapidly and as is practical by methods which will prevent separation and loss of concrete mix materials.
2. Provide mechanical equipment for conveying concrete to ensure a continuous flow of concrete at the delivery end. Provide runways for wheeled concrete conveying equipment from the concrete delivery point to the locations of final deposit. Keep interior surfaces of conveying equipment, including chutes, free of hardened concrete, debris, water, snow, ice and other deleterious materials.
3. Do not use chutes for distributing concrete unless approved in writing by the City Engineer.
 - a. Provide sketches showing methods by which chutes will be employed when requesting such approval.
 - b. Design chutes, if permitted, with proper slopes and supports to permit efficient handling of the concrete.

H. PLACING CONCRETE INTO FORMS:

1. Deposit concrete in forms in horizontal layers not deeper than eighteen inches (18") and in a manner to avoid inclined construction joints. Where placement consist of several layers, place concrete at such a rate that concrete which is being integrated with fresh concrete is still plastic.
2. Do not permit concrete to free fall within the form a distance exceeding four feet (4'). Use "elephant trunks" to prevent free fall excessive splashing on forms and reinforcement.
3. Remove temporary spreaders in forms when concrete placing has reached the elevation of such spreaders.
4. Use equipment and procedures for consolidation of concrete in accordance with the applicable recommended practices of ACI 309.
5. Do not place concrete in beam and slab forms until the concrete previously placed in columns and walls is no longer plastic.
6. Force concrete under pipes, sleeves, openings and inserts from one side until visible from the other side to prevent voids.

I. PLACING CONCRETE SLABS:

1. Deposit and consolidate concrete slabs in a continuous operation, within the limits of construction joints, until the placing of a panel or section is completed.
2. Consolidate concrete during placing operations using mechanical vibrating equipment, so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
3. Bring slab surfaces to the correct level. Smooth the surface, leaving it free from humps or hollows. Do not sprinkle water on the plastic surface. Do not disturb the slab surfaces prior to beginning finishing operations.

J. BONDING FOR NEXT CONCRETE POUR:

1. Roughen surfaces of set concrete at all joints, except where bonding is obtained by use of a concrete bonding agent. Clean surfaces of coatings, loose particles, and foreign matter. Roughen surfaces in a manner to expose bonded aggregate uniformly and not to leave loose particles of aggregates, or damaged concrete at the surface.
2. Preparation for bonding of fresh concrete to new concrete that has set but is not fully cured, is as follows:
 - a. Thoroughly wet the surface, but allow no free standing water.
 - b. For horizontal surfaces place a two inch (2 inch) layer of mortar over the hardened concrete surface.
 - c. Place fresh concrete before the mortar has attained its initial set.
3. For bonding of fresh concrete to fully cure, hardened concrete or existing concrete shall be prepared by using an epoxy resin-bonding agent of standard practice.

K. QUALITY OF CONCRETE WORK:

1. Make all concrete solid, compacted, and smooth, and free of cracks and cold joints.
2. Concrete for liquid-retaining structures and all concrete in contact with earth or exposed directly to other elements shall be watertight.
3. Concrete surfaces, which are unduly rough, defective and have cracks, leaks or voids, shall be cut out and properly replace, repair, or make watertight to the extent ordered by the City Engineer. Thin patches or plastering will not be acceptable.

L. COLD WEATHER PLACING:

1. Protect all concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures, in compliance with the requirements of ACI 306 and as herein specified.
2. When the air temperature has fallen to, or may be expected to fall below 40° F, provide adequate means to maintain the temperature in the area where concrete is being placed between 50° F and 70° F for at least seven days after placing. Provide temporary housings or coverings including tarpaulins or plastic film. Maintain the heat and protection, if necessary, to insure that the ambient temperature does not fall more than 30° F in the 24 hours following the seven-day period. Avoid rapid dry-out of concrete due to overheating, and avoid thermal shock due to sudden cooling or heating.
3. When air temperature has fallen to, or is expected to fall below 40° F, uniformly heat all water and aggregates before mixing as required to obtain a concrete mixture temperature of not less than 55° F and not more than 85° F at point of placement.
4. Do not use salt and other materials containing antifreeze agents or chemical accelerators, or set-control admixtures in mix designs, unless approved by the City Engineer.

M. HOT WEATHER PLACING:

1. When hot weather conditions exist that would seriously impair the quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.
2. Cool ingredients before mixing to maintain concrete temperature at time of placement below 80° F when the temperature is rising, and below 85° F when the temperature is falling. Mixing water may be chilled, or chopped ice may be used, to control the concrete temperature provided, the water equivalent to the ice is calculated in the total amount of mixing water.

3. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that the steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.
4. Do not place concrete at a temperature so as to cause difficulty from loss of slump, flash set, or cold joints.
5. Do not use set-control admixtures in mix designs unless approved by the City Engineer.
6. Obtain the City Engineer's approval of other methods and materials proposed for use.

N. MONOLITHIC SLAB FINISHES:

1. Apply non-slip broom finish to exterior concrete surfaces, steps, ramps, roadway pavement, sidewalks, curbs, gutters, and elsewhere as directed.
2. Distribute concrete as required to remove surface irregularities. Refloat and repair areas to provide a continuous, smooth, finish, with a uniform texture. Perform concrete finishing using hand or machine methods as required. Work edges of slabs, transverse joints, and construction joints with an edging tool and round to a one-half inch ($\frac{1}{2}$ ") radius, unless otherwise indicated. After completion of floating, and when excess moisture or surface sheen has disappeared, complete surface finishing as follows:
 - a. Trowel finish, immediately after, slightly roughen the concrete surface by brooming in the direction perpendicular to the main traffic route. Use fiber-bristle broom unless otherwise directed. Repeat operation if required to provide a fine line texture. Coordinate the required final finish with the City Engineer before application.
3. Do not remove forms for 48 hours after placing the concrete. After form removal, clean ends of joints and point-up any minor honeycombed areas. Remove and replace areas or sections of major honeycombing, as directed by the City Engineer.

O. CONCRETE CURING AND PROTECTION:

1. Protect freshly placed concrete from premature drying and excessive cold or hot temperature, and maintain without drying at a relatively constant temperature for the period of time necessary for hydration of the cement and proper hardening of the concrete.
2. Start initial curing after placing and finishing of concrete as soon as free moisture has disappeared from its surface. Keep continuously moist for not less than 72 hours.
3. Begin final curing procedures immediately following initial curing and before the concrete has dried. Continue final curing for at least 7 days and in accordance with ACI 301 procedures. For concrete sections over 30 inches (30") thick, continue final curing for an additional 7 days, minimum. Avoid rapid drying at the end of the final curing period.

P. CURING METHODS:

1. N^o 1 & 2 of this item will apply to all structural concrete poured in place. Concrete shall be kept covered with standard curing material for a minimum period of seven days unless it is the opinion of the City Engineer that a shorter period is justified by temperature conditions during that curing period. The time concrete is uncovered to permit finishing operations shall not be included in specified curing time. It is the Contractor's responsibility to maintain a record that will reflect conditions during the curing period.
2. If the Contractor elects to use High Early Strength Cement or an admixture which secures High Early Strength in the concrete, curing may be discontinued when the concrete has obtained the required 4,000 lb. strength.
3. Prior to curing, protect all areas bordering finished concrete, concrete curbs, gutters and sidewalks. Protect and cure finished concrete, concrete curbs, gutters and sidewalks, complying with applicable requirements.

4. Perform curing of concrete by moisture-retaining cover curing, by curing compound, or by combinations thereof, as herein specified.
 - a. For curing, use water that is free of impurities, which could etch or discolor exposed natural concrete surfaces.
5. Provide moisture curing by any of the following methods:
 - a. Keeping the surface of the concrete continuously wet by covering with water.
 - b. Continuous water-fog spray.
 - c. Covering the concrete surface with the specified absorptive cover, thoroughly saturating the cover with water, and keeping the absorptive cover continuously wet with sprinklers or porous hoses. Place absorptive cover so as to provide coverage of the concrete surfaces and edges, with a four-inch (4") lap over adjacent absorptive covers.
6. Provide moisture retaining cover curing as follows:
 - a. Cover the concrete surface with the specified moisture-retaining cover for curing concrete, placed in the widest practical width with sides and ends lapped at least three inches (3") and sealed by waterproof tape. Immediately repair any holes or tears during the curing period using cover material and waterproof tape.

Q. TEMPERATURE OF CONCRETE DURING CURING:

1. When the atmospheric temperature is 40° F and below, maintain the concrete temperature between 50° F and 70° F continuously throughout the curing period. When necessary, before concrete placing make arrangements to provide heating, covering, insulation or housing as required to maintain the specified temperature and moisture conditions continuously for the concrete curing period. Provide cold weather protection complying with the requirements of ACI 306.
2. When the atmospheric temperature is 80° F and above, or during other climatic conditions which will cause too rapid drying of the concrete, make arrangements before the start of concrete placing, for the installation of wind breaks or shading, and for fog spraying, wet sprinkling, or moisture-retaining covering. Protect the concrete continuously for the concrete curing period. Provide hot weather protection complying with the requirements of ACI 305, unless otherwise specified.
3. Maintain concrete temperature as uniformly as possible, and protect from rapid atmospheric temperature changes. Avoid temperature changes in concrete, which exceed 5° F in any one hour and 50° F in any 24 hour period.

R. Protection from Mechanical Injury:

1. During the curing period, protect concrete from damage by mechanical disturbances, including load stresses, heavy shock, excessive vibration, and from damage caused by rain or flow water. Protect all finished concrete surfaces from damage by subsequent construction operations.

S. MISCELLANEOUS CONCRETE ITEMS:

1. Provide all miscellaneous concrete shown or required to complete the below mentioned and other work. Fill in holes and openings left in the concrete structures for the passage of work by other Contractors, unless otherwise shown or directed, after the work of other Contractors is in place. Mix, place and cure concrete as herein specified, to blend with in place construction.
2. Provide monolithic finish to interior curbs by stripping forms before the concrete is completely cured and steel trowel the surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.
3. Exterior curbs shall have rubbed finish for vertical surfaces and a broom finish for top surfaces.

T. CONCRETE REPAIRS:

1. Repair of Formed surfaces

- a. Repair exposed-to-view formed concrete surfaces, which contain defects, which adversely affect the appearance of the finish. Surface defects, which require repair include color and texture irregularities, cracks, spills and air bubbles, honeycomb, rock pockets, holes left by rods and bolts, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
- b. Repair concealed formed concrete surfaces that may contain defects adversely affecting the durability of the concrete. Surface defects that require repair include cracks in excess of 0.01 inch wide, cracks of any width and other surface deficiencies which penetrate to the reinforcement or completely through non-reinforced sections, honeycomb, rock pockets, holes left by tie rods and bolts, and spalls except minor breakage at corner.
- c. Pressure grout structural cracks and cracks in water-holding structures using one of the following:
 - Sikadur Hi-Mod L.V. and Gel by Sika Chemical Company.
 - Euco Epoxy No 460 and No 461 by The Euclid Chemical Company.
- d. Repair and patch defective areas with cement mortar immediately after removal of forms and as directed by the City Engineer.
- e. Cut out honeycomb, rock pockets, voids over one-half (½") diameter, and holes left by tie rods and bolts, down to solid concrete but, in no case, to a depth of less than one inch (1"). Make edges of cuts perpendicular to the concrete surface. Before placing the cement mortar, thoroughly clean, dampen with water, and brush-coat the area to be patched with the specified bonding agent.
- f. For exposed-to-view surfaces, blend white portland cement and standard portland cement so that, when dry, the patching mortar color will match the color of the surrounding concrete. Contractor shall impart texture to repaired surfaces to match texture of existing adjacent surfaces. Provide test areas at inconspicuous locations to verify mixture, texture and color match before proceeding with the patching.
- g. Fill holes extending through concrete by means of a plunger-type gun or other suitable device from the least exposed face, using a flush stop held at the exposed face to ensure complete filling.
- h. Abrasive blast expose-to-view surfaces that require removal of stains grout accumulations, sealing compounds, and other substances marring the surfaces. Use abrasive finer than No. 30 and air pressure from 15 to 25 psi.

2. Repair of Unformed Surfaces

- a. Test unformed surfaces, such as monolithic slabs, for smoothness and to verify surface plane to the tolerances specified for each surface and finish. Correct low and high areas as herein specified.
- b. Test unformed surfaces sloped to drain for trueness of slope and smoothness, using a template having the required slope. Correct high and low areas as required.
- c. Repair finish of unformed surfaces that contain defects which adversely affect the durability of the concrete. Surface Defects, as such, include crazing, cracks in excess of 0.01" wide or which penetrate to the reinforcement or completely through non-reinforced sections regardless of width, spalling, popouts, honeycomb, rock pockets, and other objectionable conditions.

- d. Grout structural cracks and cracks in water holding structures using one of the following:
- Sikadur Hi-Mod L.V. and Gel by Sika Chemical Company.
 - Euco Epoxy No. 460 and No. 461 by The Euclid Chemical Company.
- e. Correct high areas in unformed surfaces by grinding, after the concrete has cured sufficiently so the repairs can be made without damage to adjacent areas.
- f. Correct low areas in unformed surfaces during or immediately after completion of surface finishing operations by cutting out the low areas and replacing with fresh concrete. Finish repaired areas to blend into adjacent concrete. Use one of the following:
- Poly-Patch by The Euclid Chemical Company.
 - Top-N-Bond by H.T. Campbell Co.
- g. Repair defective areas, except random cracks and single holes not exceeding one inch (1") diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts, and expose reinforcing steel with at least three quarters on an inch (¾") clearance all around. Dampen all concrete surfaces in contact with patching concrete and brush with a bonding agent of standard practice. Place patching concrete before grout takes its initial set. Mix patching concrete of the same materials and proportions to provide concrete of the same type or class as the original adjacent concrete. Place, compact and finish as required to blend with adjacent finished concrete. Cure in the same manner as adjacent concrete.
- h. Repair isolated random cracks, and single holes not over one inch (1") diameter. Groove the top of cracks, and cut out holes to sound concrete and clean the dust, dirt and loose particles. Dampen all cleaned concrete surfaces and brush with a bonding agent of standard practice. Place dry-pack before the cement grout takes its initial set. Mix dry-pack, consisting of 1 part portland cement to 2-½ parts fine aggregate passing a _ 16 mesh sieve, using only enough water as required for handling and placing. Compact dry-pack mixture in place and finish to match adjacent concrete. Keep patched areas continuously moist for not less than 72 hours.

U. PAYMENT:

1. Payment at the unit bid prices for the item, "Cast-In-Place Concrete", shall be as bid and full compensation for all labor, tools equipment and incidentals necessary.

V. TESTING LAB SERVICES BY FURNISHED BY CONTRACTOR

- A. Three cylinder compression test sets (total of 6) for each 1,000 SF of concrete area at seven (7) days, fifteen (15) days and twenty-eight (28) days. Concrete is to reach 4000 PSI on or before twenty-eight (28) days. Tests to be paid for by the Contractor.
- B. All or some of the following American Concrete Institute specifications will apply:
- ACI 301
 - ACI 318
 - ACI 305
 - ACI 306
 - ACI 211.1

**Hazard Communications Program
CONTRACTOR COMPLIANCE FPRM**

DEPT: Public Works and Engineering
 LOCATION(S): **Form to be submitted with each Work Order.**

COMPLIANCE STEPS	CHECK, if yes	DATE
1. Will contractor bring chemicals on City property?	<input type="checkbox"/>	<input type="checkbox"/>
2. Have the chemicals been assessed for hazards? (Attach HCP-1)	<input type="checkbox"/>	<input type="checkbox"/>
3. Has Safety/Risk Management approved usage?	<input type="checkbox"/>	<input type="checkbox"/>
4. Has MSDS/HazCom Program information been exchanged?	<input type="checkbox"/>	<input type="checkbox"/>
5. Have City employees been trained on hazards posed by the contractor's chemicals brought onto City property?	<input type="checkbox"/>	<input type="checkbox"/>

RECEIPT OF INFORMATION

Exchange of HazCom Packets:

CITY REP (Name/Title): _____ Date: _____

CONTRACTOR REP: _____ Date: _____

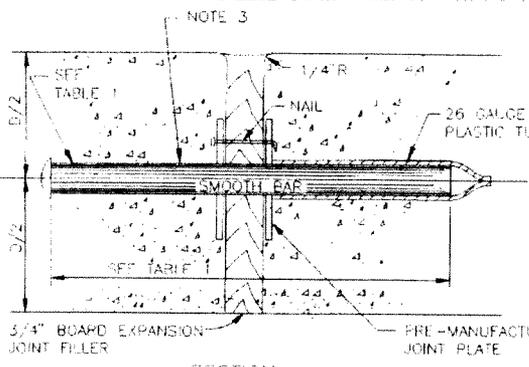
Has the CONTRACTOR documented HazCom training of their employees? If YES, sign below.

CITY REP (Name/Title): _____ Date: _____

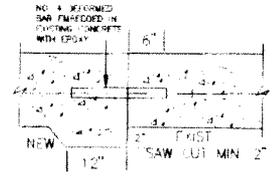
Drawing No.	Description	No. of Pages
02752-02	Sidewalk Expansion and Construction Joint Details	1
02754-01	Reinforced Concrete Driveway and Sidewalk Details on Curbed Type Streets	1
02754-02	Driveways with Culverts or Valley Gutters on Open Ditch Type Streets	1
02771-01	Curb, Curb and Gutter and Header Details	1
02775-01	Concrete Sidewalk Details for Streets with Curbs	1
02775-02	Wheel Chair Ramp Details	1
02775-03	Parallel Curb Ramp	1
02775-04	Curb Modifications for Wheel Chair Ramps & Crosswalks	1
100	Fire Station Driveway: 8" Driveway	1
101	Communications Bldg. Slab	5
102	Grade Beam	1
103	Foundation Repair	1
104	Generator Bldg. Slab	2
105	Typical Guard Post Detail	1
106	Pipe Protector Detail	1
107	Storm Inlet Detail	1
108	Trench Detail	1
109	Storm Pipe Detail	1
110	Trench & Inlet Detail	1
COHTA1-2	Type-A Grate Inlet	1
	Reinforced Concrete Culvert Pipe	2

Drawing #101 Sheet 3 of 5

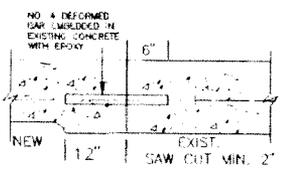
Change sentence at top of drawing to read: "Provide #5 vertical reinforcement bars in concrete masonry units spaced 32" o.c. maximum, bars to penetrate slab 6" minimum (typical).



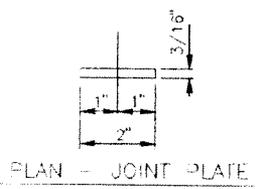
SECTION
DOWEL TYPE EXPANSION JOINT
N.T.S.



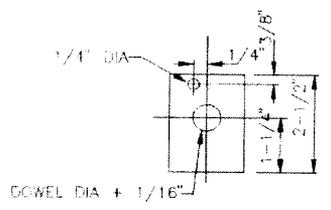
SECTION
SIDEWALK TO EXISTING SIDEWALK



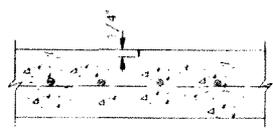
SECTION
SIDEWALK TO EXISTING DRIVEWAY



PLAN - JOINT PLATE



ELEVATION - JOINT PLATE
N.T.S.



SECTION
CONTROL JOINT
N.T.S.

NOTES:

1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS.
2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED AT A MAXIMUM DISTANCE OF 36' FEET. MAXIMUM SPACING FOR CONTROL JOINTS SHALL BE 5' FEET.
3. CENTER DOWEL HORIZONTALLY ON JOINT
4. CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN 2" MIN. COVER

TABLE 1

PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS		
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)
4 1/2	1/2	18	12
5	1/2	18	12
6	3/4	18	12
7	1	18	12

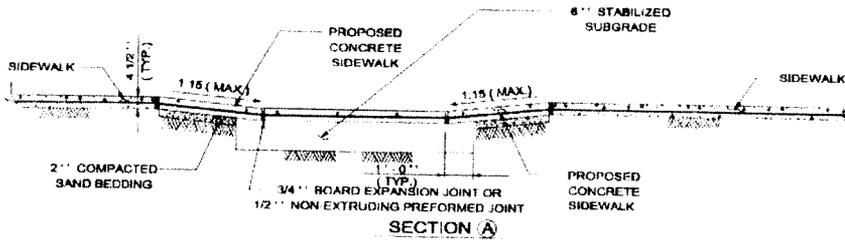
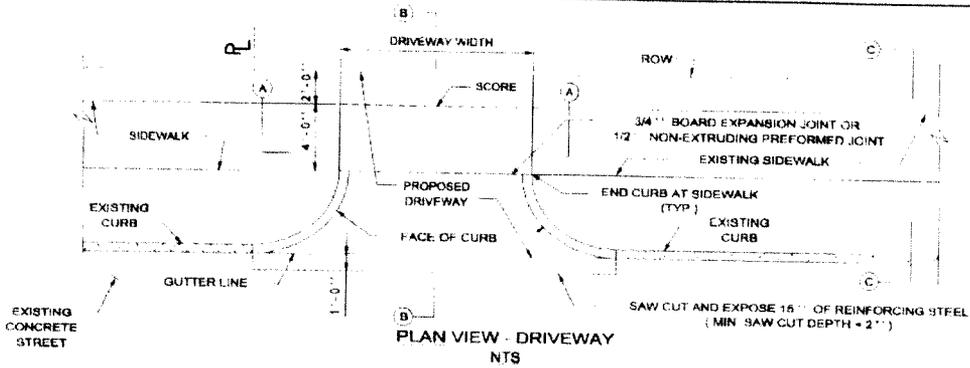
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

**SIDEWALK
EXPANSION AND CONSTRUCTION
JOINT DETAILS**
(NOT TO SCALE)

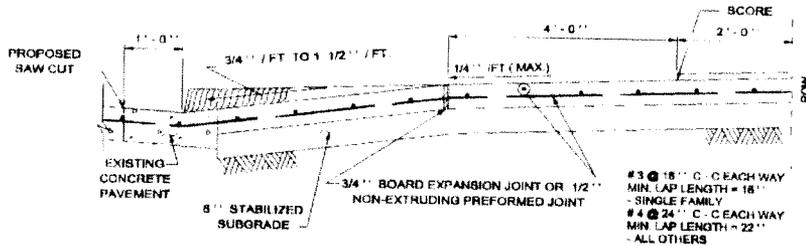
APPROVED BY: *Shandarin*
CITY ENGINEER

APPROVED BY: *[Signature]*
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

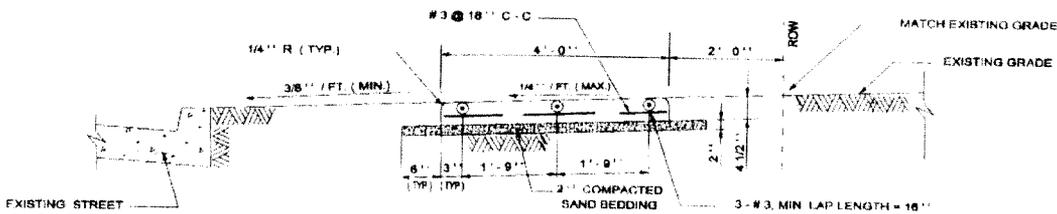
SIT DATE OCT-01-2002 DWG NO. 02752-02



SECTION A
PROPOSED SIDEWALK THROUGH DRIVEWAY
WITH EXCESSIVE ELEVATION DIFFERENCE
WITH EXISTING SIDEWALK
NTS



SECTION B
TYPICAL DRIVEWAY SECTION
NTS

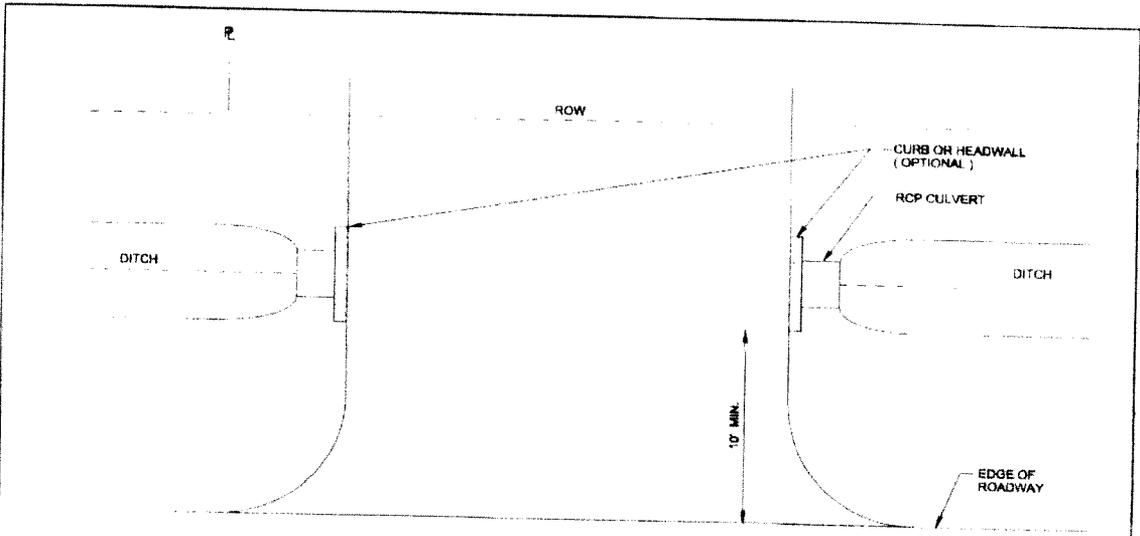


SECTION C
TYPICAL SIDEWALK SECTION
NTS

NOTES:

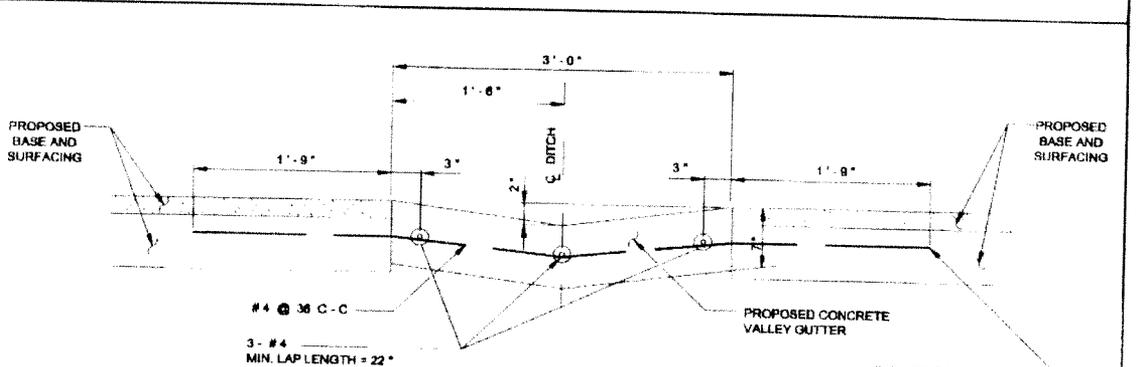
- 1 - DRIVEWAYS SHALL BE 8" THICK FOR SINGLE FAMILY USE AND 7" THICK FOR ALL OTHERS (I. E. COMMERCIAL, INDUSTRIAL, ETC.)
- 2 - DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5 - 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
- 3 - 6 X 6 - W 2.9 X W 2.9 WELDED WIRE FABRIC MAY BE USED IN LIEU OF THE REINFORCING STEEL.
- 4 - EXPANSION & CONSTRUCTION JOINTS ALONG SIDEWALKS SHALL BE ACCORDING TO DRAWING NO. 02752-02

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
REINFORCED CONCRETE DRIVEWAY AND SIDEWALK DETAILS ON CURBED TYPE STREETS	
APPROVED BY: <i>S. S. S. S.</i> CITY ENGINEER	APPROVED BY: <i>J. C. J. C.</i> DIRECTOR OF PUBLIC WORKS AND ENGINEERING
DATE: 05 - 23 - 03	
DWG NO: 02754 - 01	DWG NO: 17201-1 <small>(BUILDING CODE)</small>



STANDARD OPEN DITCH DRIVEWAY - PLAN

NTS

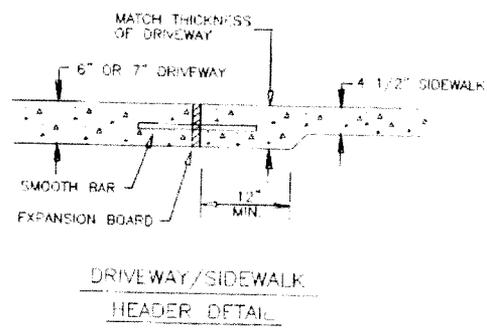
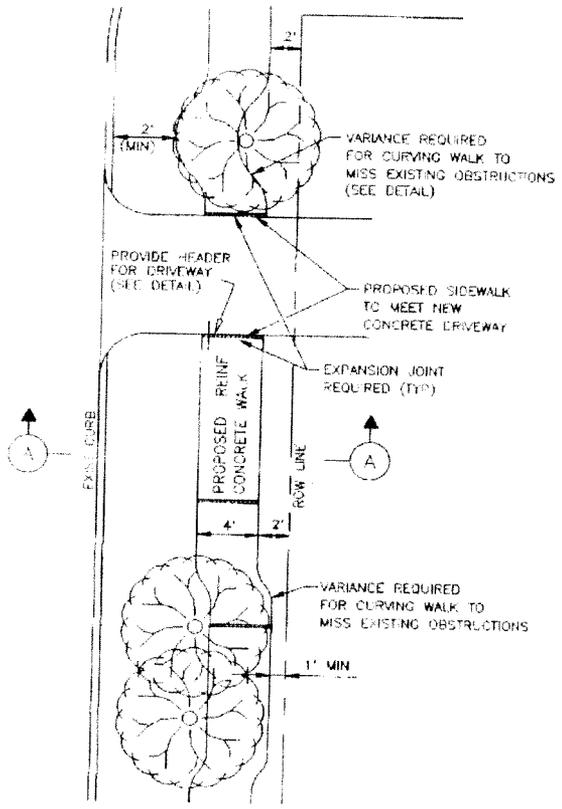
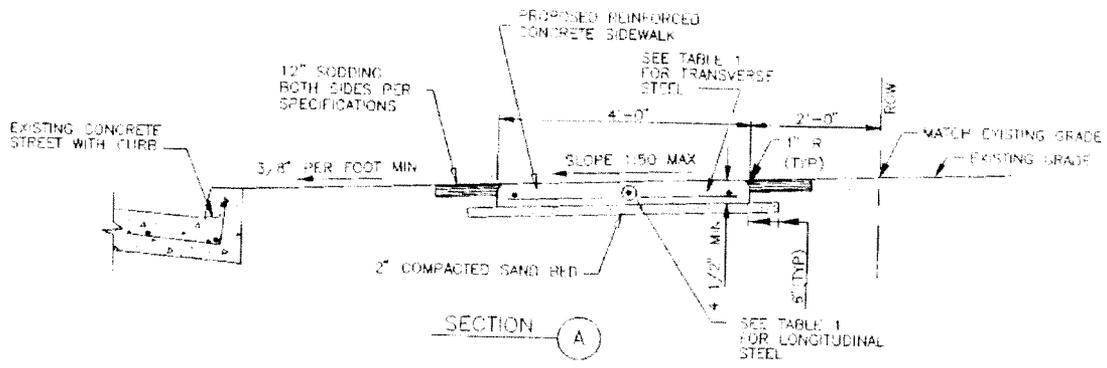


STANDARD CONCRETE VALLEY GUTTER SECTION

NTS

1. REINFORCED CONCRETE PIPE (RCP) CULVERTS AND CONCRETE VALLEY GUTTER GRADES SHALL BE SET BY CITY ENGINEER. PROFILE SHOWING THE PROPOSED AND EXISTING DITCH FLOWLINE WILL BE REQUIRED WHERE CONCRETE VALLEY GUTTERS ARE TO BE CONSTRUCTED IN LIEU OF CULVERTS.
2. CULVERT SIZE WILL BE APPROVED BY CITY ENGINEER WITH 18" DIAMETER MINIMUM.
3. SPACING OF TYPE "D" OR "D-1" INLETS SHALL BE DETERMINED BY CITY ENGINEER. SEE DRAWING NO. 02632 - 07 FOR TYPE "D" OR DRAWING NO. 02632 - 08 FOR TYPE "D-1".
4. DRIVEWAY MAY BE CONCRETE, ASPHALT OR ANY OTHER MATERIAL WHICH WILL NOT PERMIT WIND OR WATERBORNE EROSION.
5. A 3 - FOOT CONCRETE VALLEY GUTTER SECTION SHALL BE CONSTRUCTED THROUGH THE PROPOSED DRIVEWAY WHERE THE CITY ENGINEER DETERMINES THE INSTALLATION OF DITCH CULVERTS TO BE IMPRACTICAL DUE TO INSUFFICIENT DEPTH. THE VALLEY GUTTER SECTION WILL BE CONSTRUCTED OF 5 - 1/2 SACK CEMENT PER CUBIC YARD OF CONCRETE.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
DRIVEWAYS WITH CULVERTS OR VALLEY GUTTERS ON OPEN DITCH TYPE STREETS	
APPROVED BY: <i>Brandagiri</i> CITY ENGINEER	APPROVED BY: <i>Tom C. [Signature]</i> DIRECTOR OF PUBLIC WORKS AND ENGINEERING
DATE: 05 23 03	
DWG NO: 02754 - 02	DWG NO: 17201 - 2 <small>(BUILDING CODE)</small>



NOTES:

1. REINFORCED CONCRETE SIDEWALKS THRU DRIVEWAYS OPENINGS SHALL BE EITHER 6" THICK OR 7" THICK AS SPECIFIED ON 6" STABILIZED SUBGRADE. FOR THE REINFORCING STEEL REQUIREMENTS, SEE CITY OF HOUSTON DRAWING "REINFORCED CONCRETE DRIVEWAY DETAILS ON CURB TYPE STREETS".
2. CONTRACTOR SHALL CONSTRUCT SIDEWALK IN A MANNER NOT TO BLOCK THE NATURAL DRAINAGE FROM ADJACENT PROPERTY.

TABLE 1

REINFORCING STEEL INFORMATION FOR 4 1/2" THICK SIDEWALKS
 EXPANSION JOINT SPACING = 36 FT
 $f_c' = 2,000$ PSI AND $f_y = 60,000$ PSI

SIDEWALK THICKNESS (IN)	SIDEWALK WIDTH (FT)	LONGITUDINAL STEEL # 3 BARS			TRANSVERSE STEEL # 3 BARS SPACING (IN)
		NUMBER OF BARS	SPACING (IN)	END BAR SPACING (IN)	
4.5	4	3	21	3	48
4.5	5	3	27	3	48
4.5	6	4	22	3	48

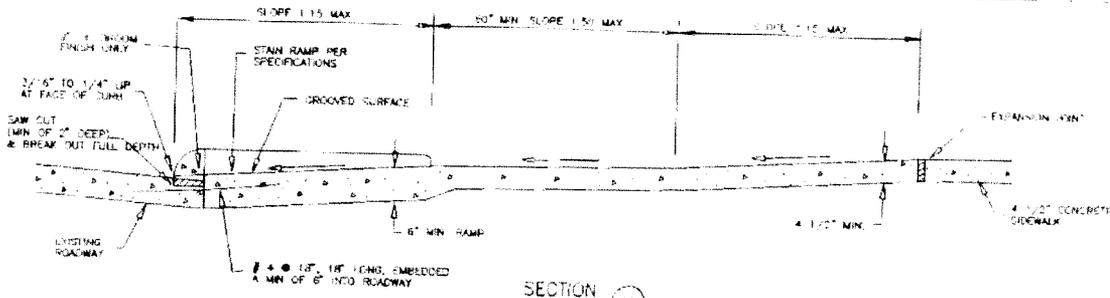
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

CONCRETE SIDEWALK DETAILS FOR STREETS WITH CURBS
 (NOT TO SCALE)

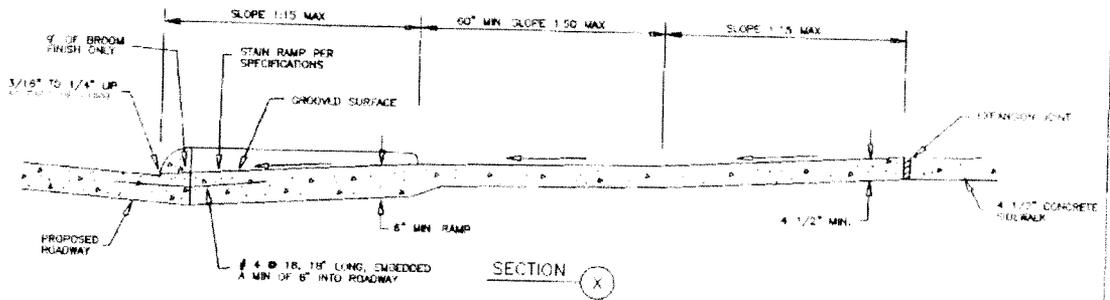
APPROVED BY: *E. Soudajni*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

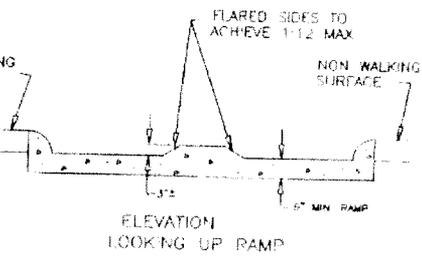
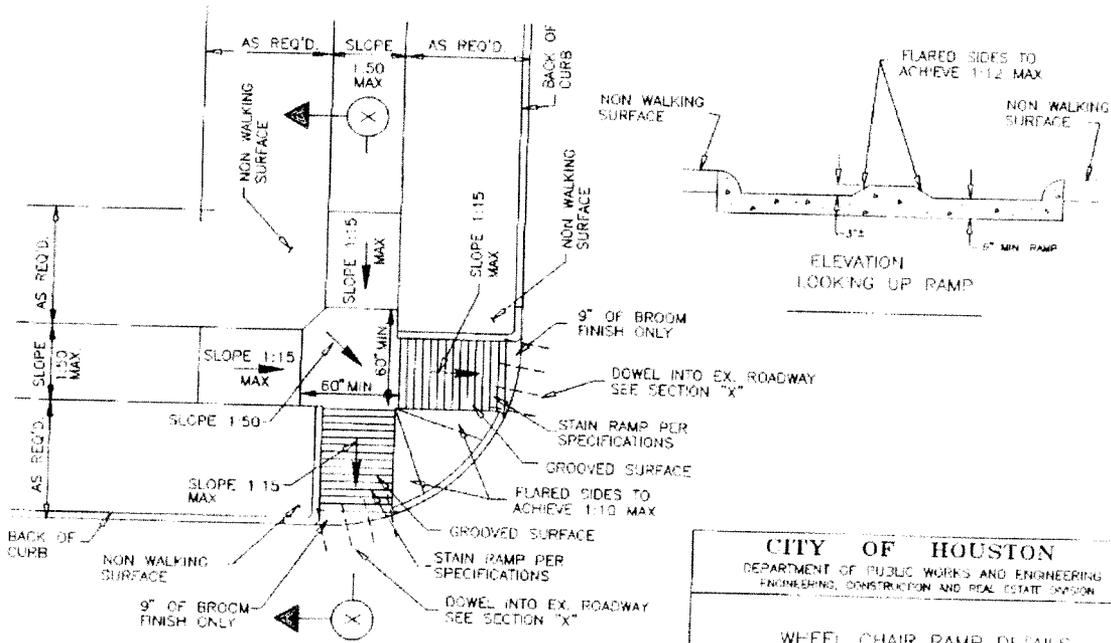
EFF. DATE: OCT-01-2002 DWO NO. 02775-03



SECTION X
EXISTING CONCRETE PAVEMENT CONSTRUCTION

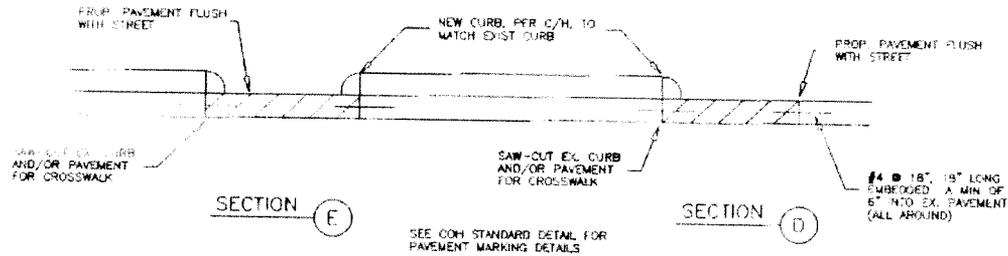
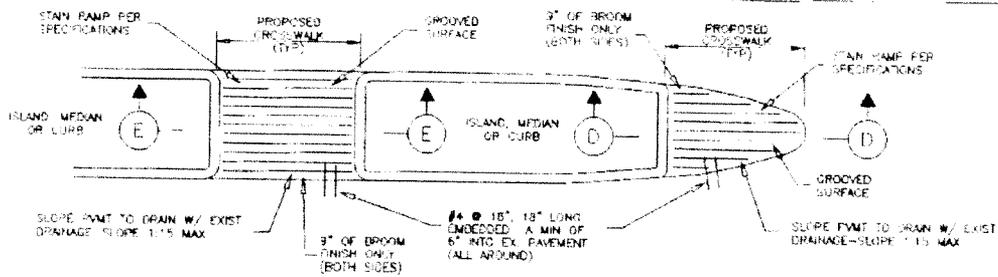


SECTION X
NEW CONCRETE PAVEMENT CONSTRUCTION

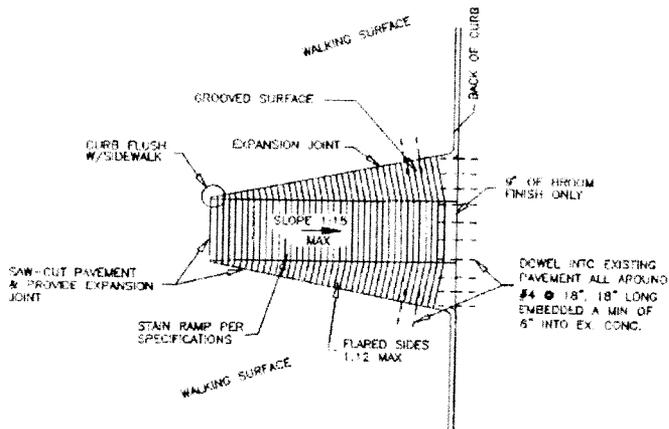


RESIDENTIAL & RURAL CONDITIONS
N.T.S.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
WHEEL CHAIR RAMP DETAILS (NOT TO SCALE)	
APPROVED BY <i>S. Audagiri</i> CITY ENGINEER	APPROVED BY <i>[Signature]</i> DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE/CDT 01-2002	DWG. NO. 02775-02

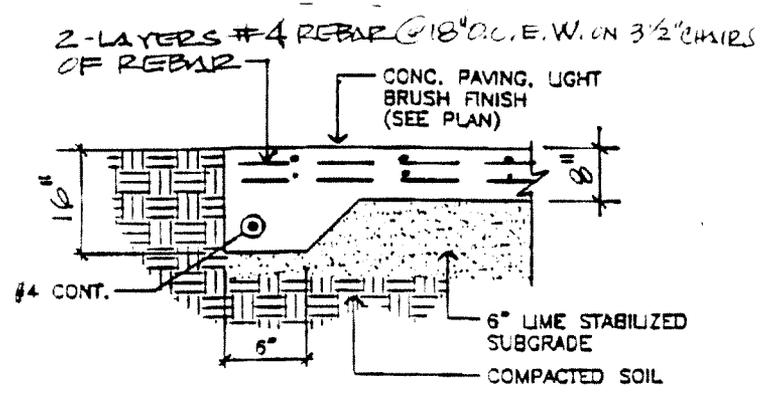
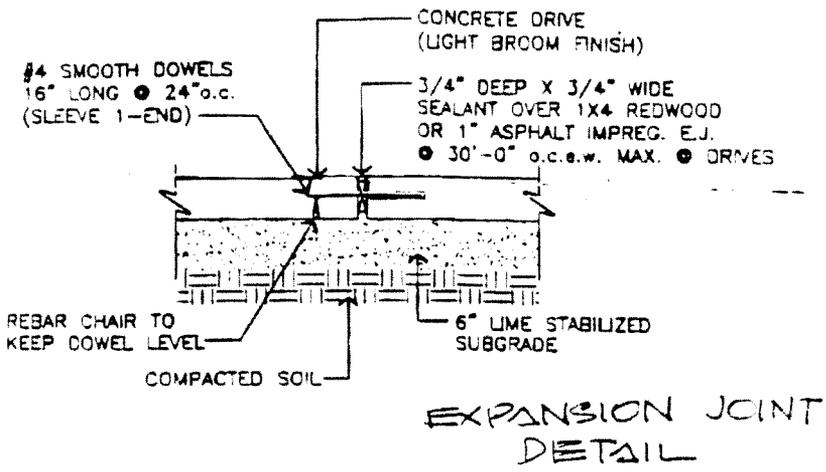


FOR ISLAND, MEDIAN, OR CURB MODIFICATIONS FOR CROSSWALKS

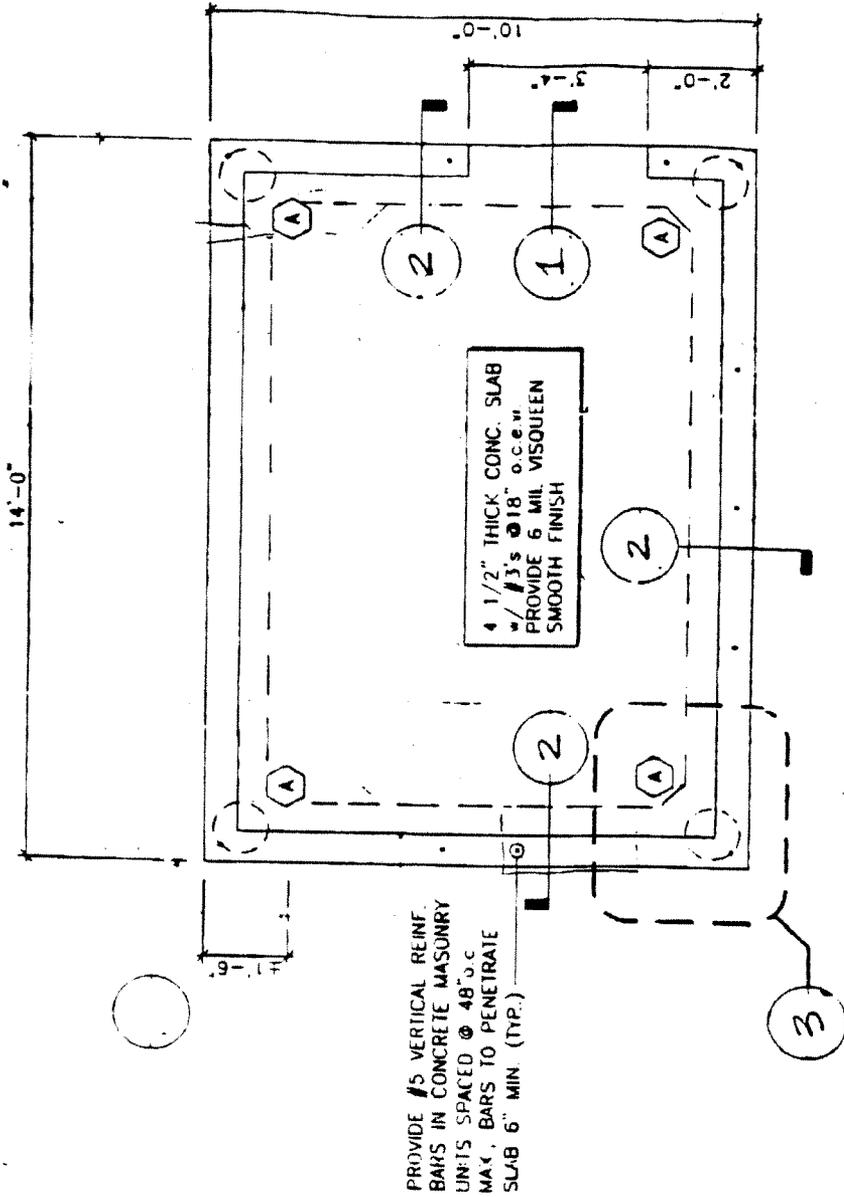


RAMP CONSTRUCTION FOR EXISTING SIDEWALK

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP	
CURB MODIFICATIONS FOR WHEEL CHAIR RAMPS & CROSSWALKS (NOT TO SCALE)	
APPROVED BY: <i>Strandafini</i> CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: NOV-03-01	DWG. NO.: 02775-04



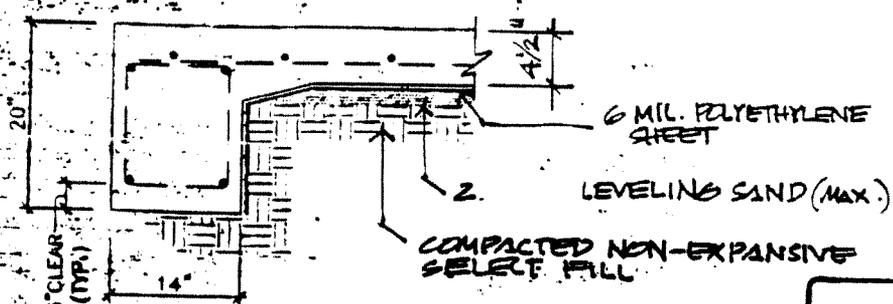
Dwg. # 100 Sheet 1 of 1 Fire Station Driveway



COMMUNICATIONS BLDG.
SLAB

Dwg. # 101 Sheet 1 of 5

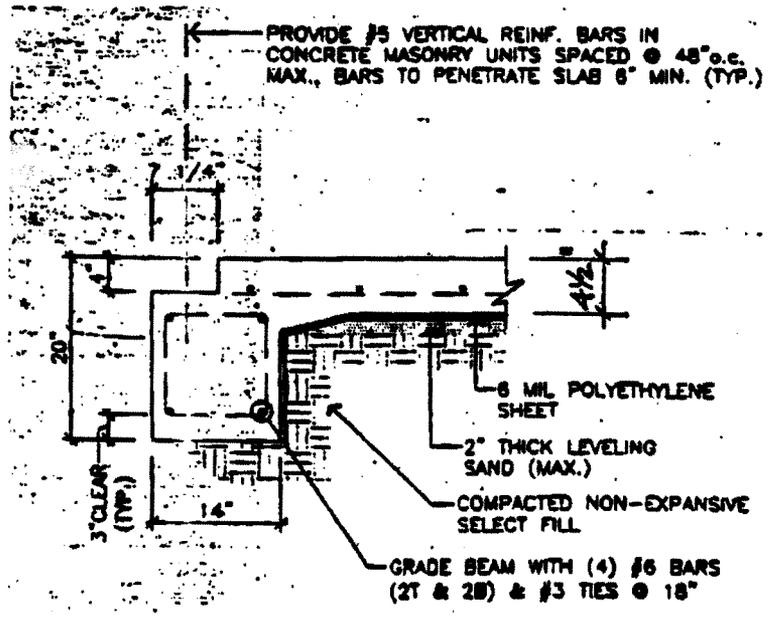
NOTE: ADDITIONAL FILL MATERIAL WITHIN THE BUILDING AREA SHOULD BE A SILTY OR SANDY CLAY HAVING A PLASTICITY INDEX (P.I.) OF TEN (10) TO TWENTY (20) AND A LIQUID LIMIT OF 28 OR MORE. FILL MATERIALS SHOULD BE PLACED IN SIX (6) TO EIGHT (8) INCH LOOSE LIFTS AND COMPACTED TO NINETY-FIVE (95) PERCENT OF THEIR MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D 698).



SECTION (1) DETAIL
GRADE BEAM

Aug. # 101
 Sheet 2 of 5

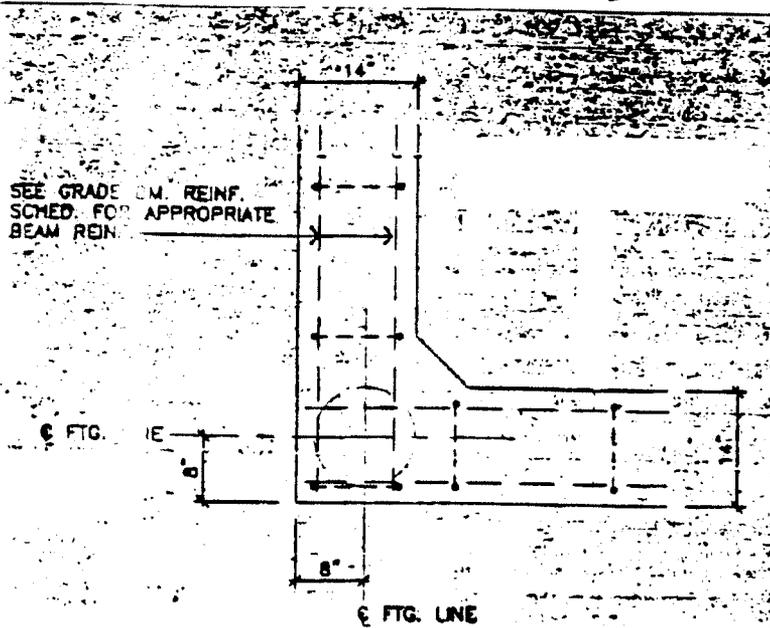
CMU WALL



SECTION (2) DETAIL
 GRADE BEAM
 (COMMUNICATIONS BLDG.)

Des. # 101 Sheet 3 of 5

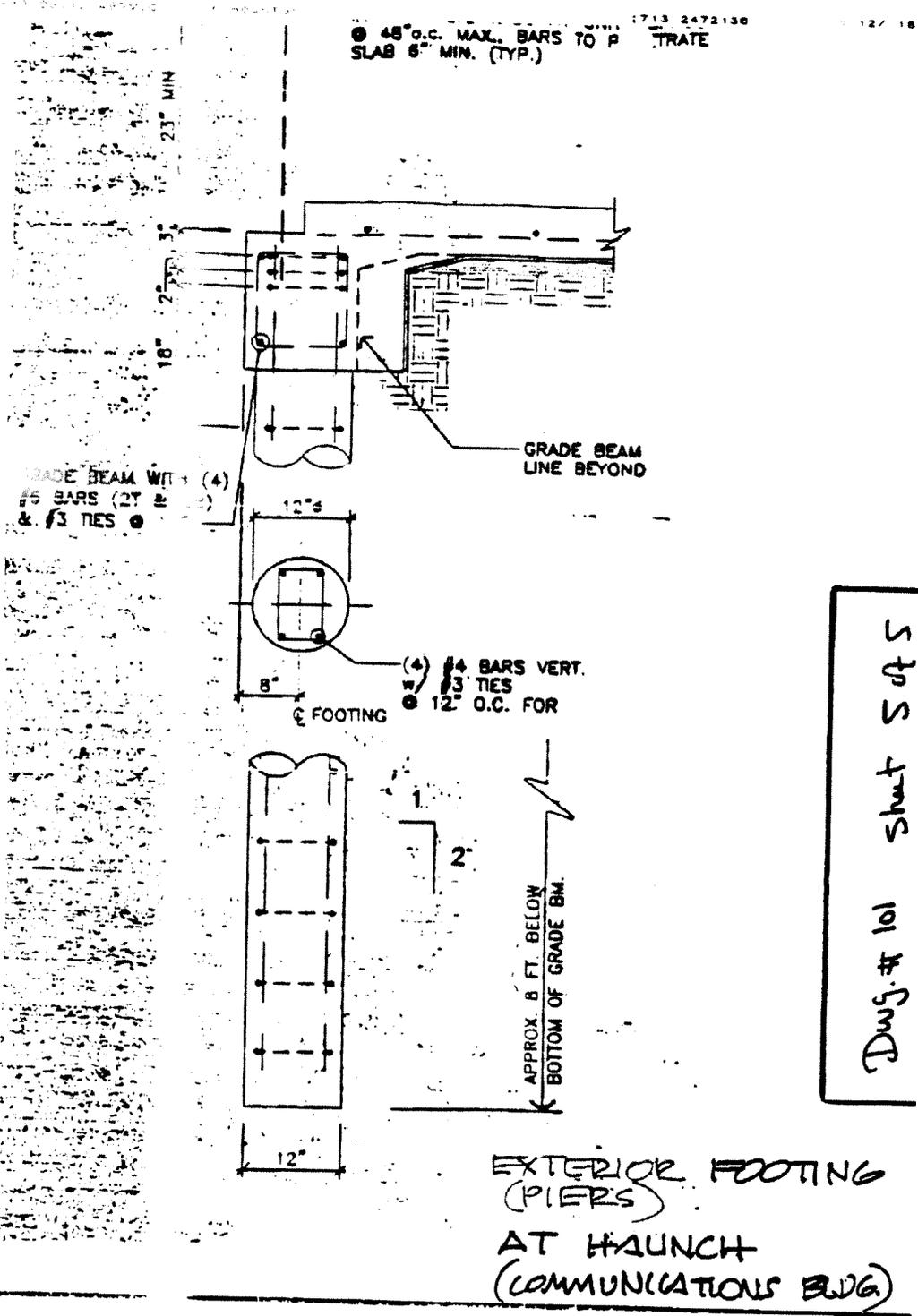
NOTE: PROVIDE CORNER BARS EQUAL IN SIZE AND NUMBER TO THE ONE IT LAPS WITH. CORNER BAR TO BE 3 FT. LONG (EACH LEG), IN EXTERIOR FACE OF BEAMS.



HAUNCH PLAN VIEW (COMMUNICATIONS SLAB)

Dwg. # 101 Sheet 4 of 5

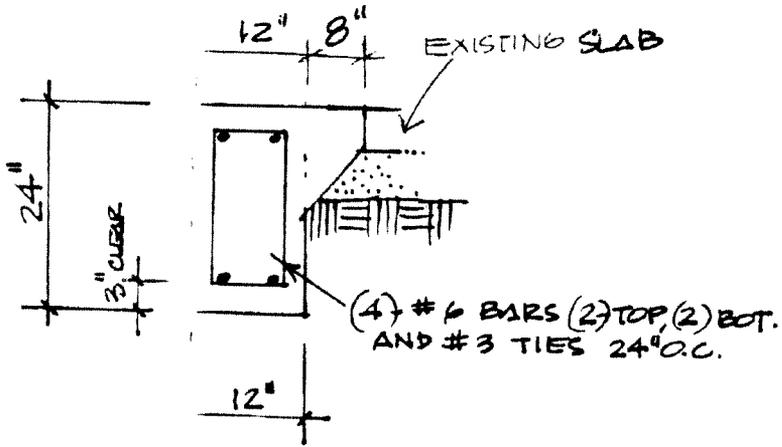
1713 2472136
① 48" O.C. MAX. BARS TO P. TRATE
SLAB 6" MIN. (TYP.)



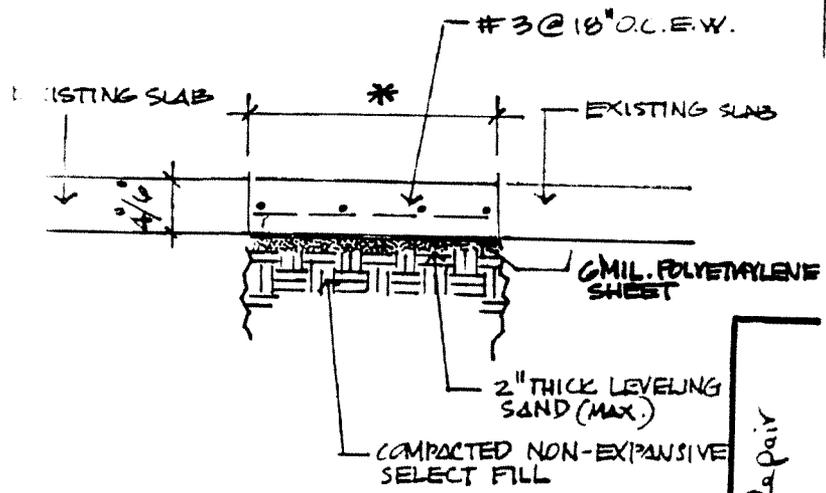
Dwg. # 101 Sheet 5 of 5

EXTERIOR FOOTING
(PIERS)
AT HAUNCH
(COMMUNICATIONS BLDG)

TYPICAL G I DE BEAM



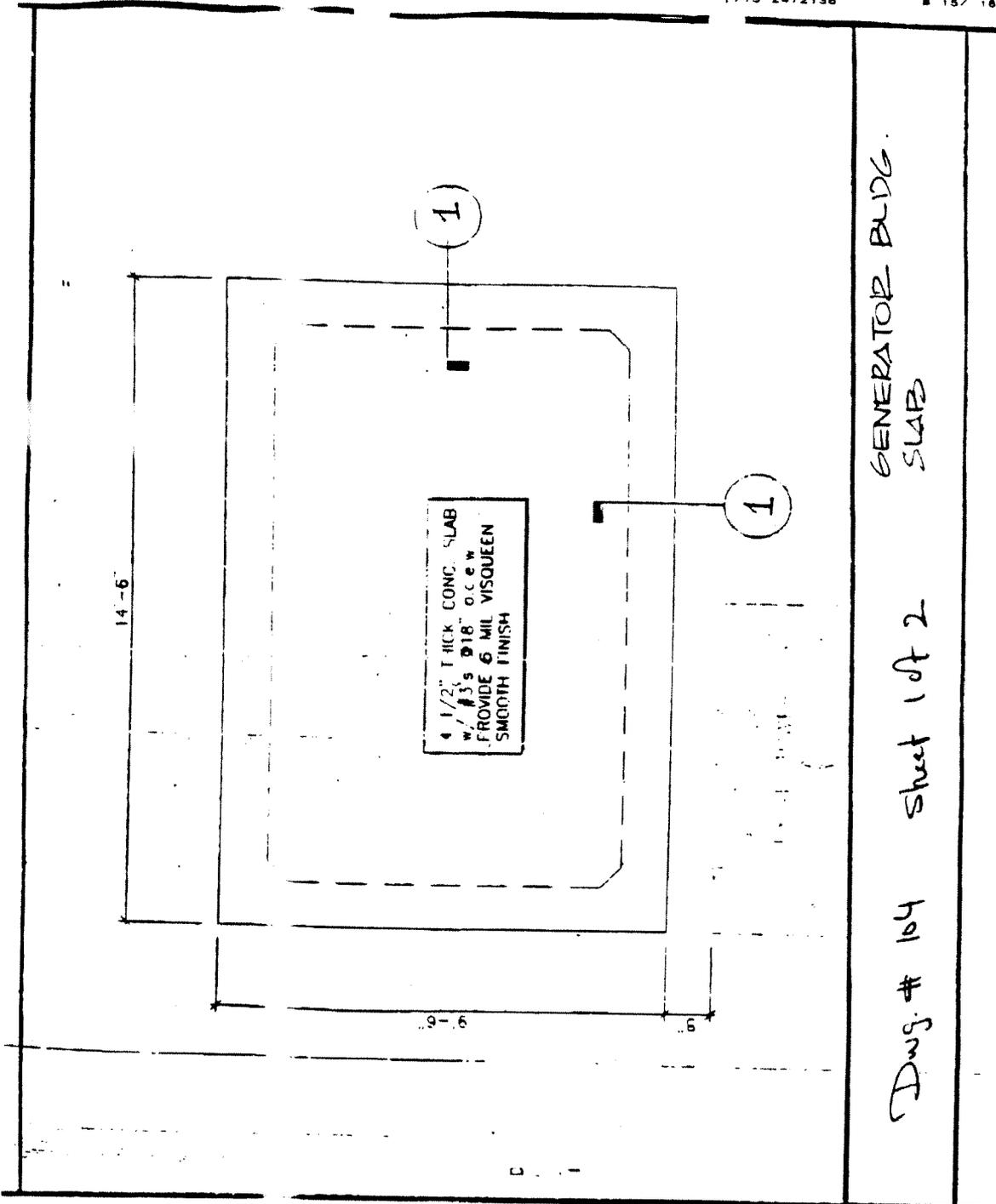
Dwg. # 102 Sheet 1 of 1 Grade Beam



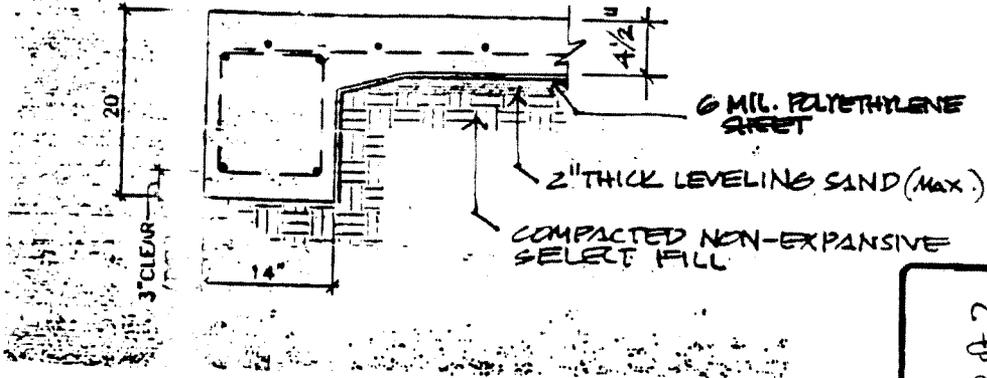
* SQUARE FOOTAGE VARIES.
 FIELD MEASURE AT SITE.

NOTE: LOCATION INSIDE BUILDING
 RESTRICTS ACCESS.
 WHEELING CONCRETE IN
 WHEN NECESSARY.

Dwg # 103 Foundation Repair Sheet 1 of 1

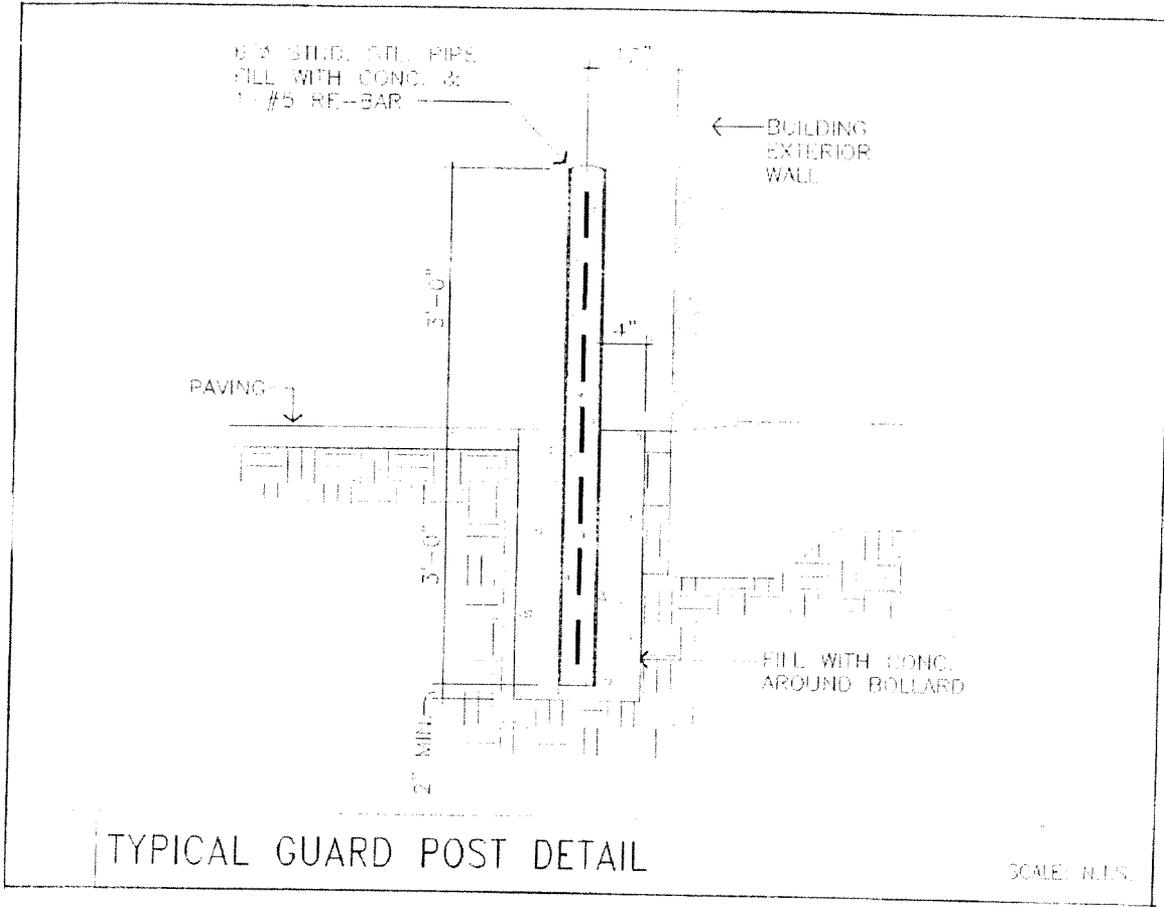


NOTE: ADDITIONAL FILL MATERIAL WITHIN THE BUILDING AREA SHOULD BE A SILTY OR SANDY CLAY HAVING A PLASTICITY INDEX (P.I.) OF TEN (10) TO TWENTY (20) AND A LIQUID LIMIT OF 26 OR MORE. FILL MATERIALS SHOULD BE PLACED IN SIX (6) TO EIGHT (8) INCH LOOSE LIFTS AND COMPACTED TO NINETY-FIVE (95) PERCENT OF THEIR MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D 698).

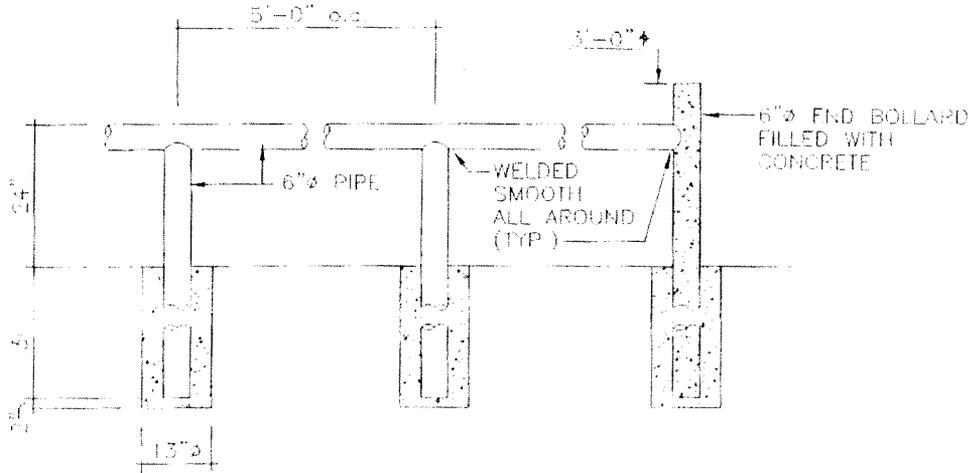


SECTION (1) DETAIL
GRADE BEAM

Proj # 104 Sheet 2 of 2



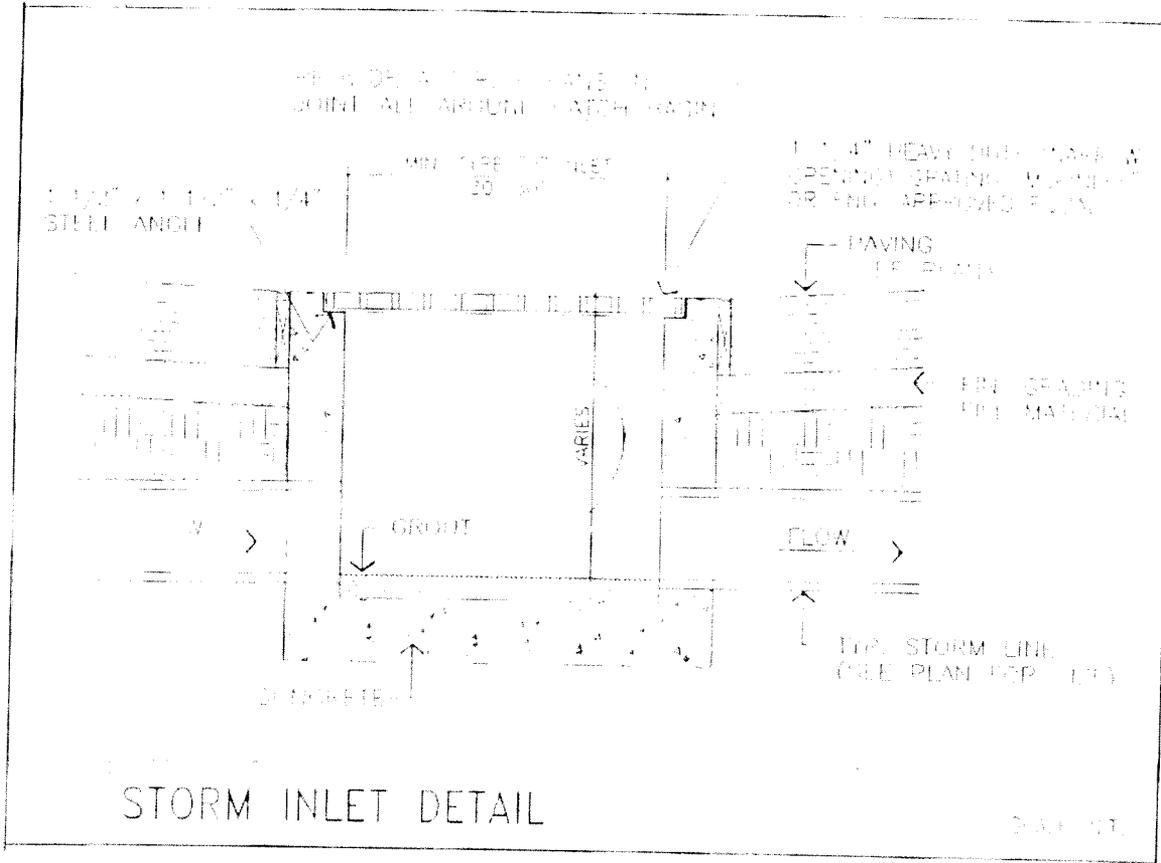
DRAWING No. 105



PIPE PROTECTOR DETAIL

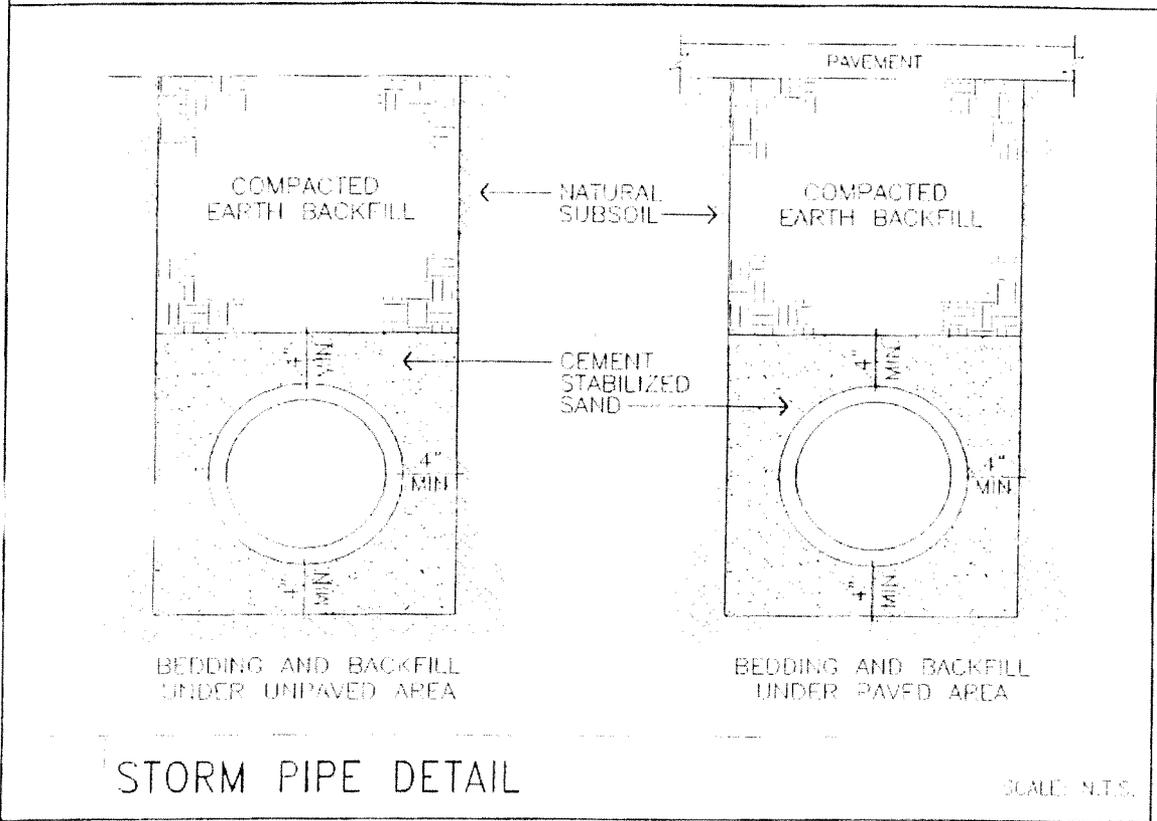
SCALE: N.T.S.

DRAWING No. 105

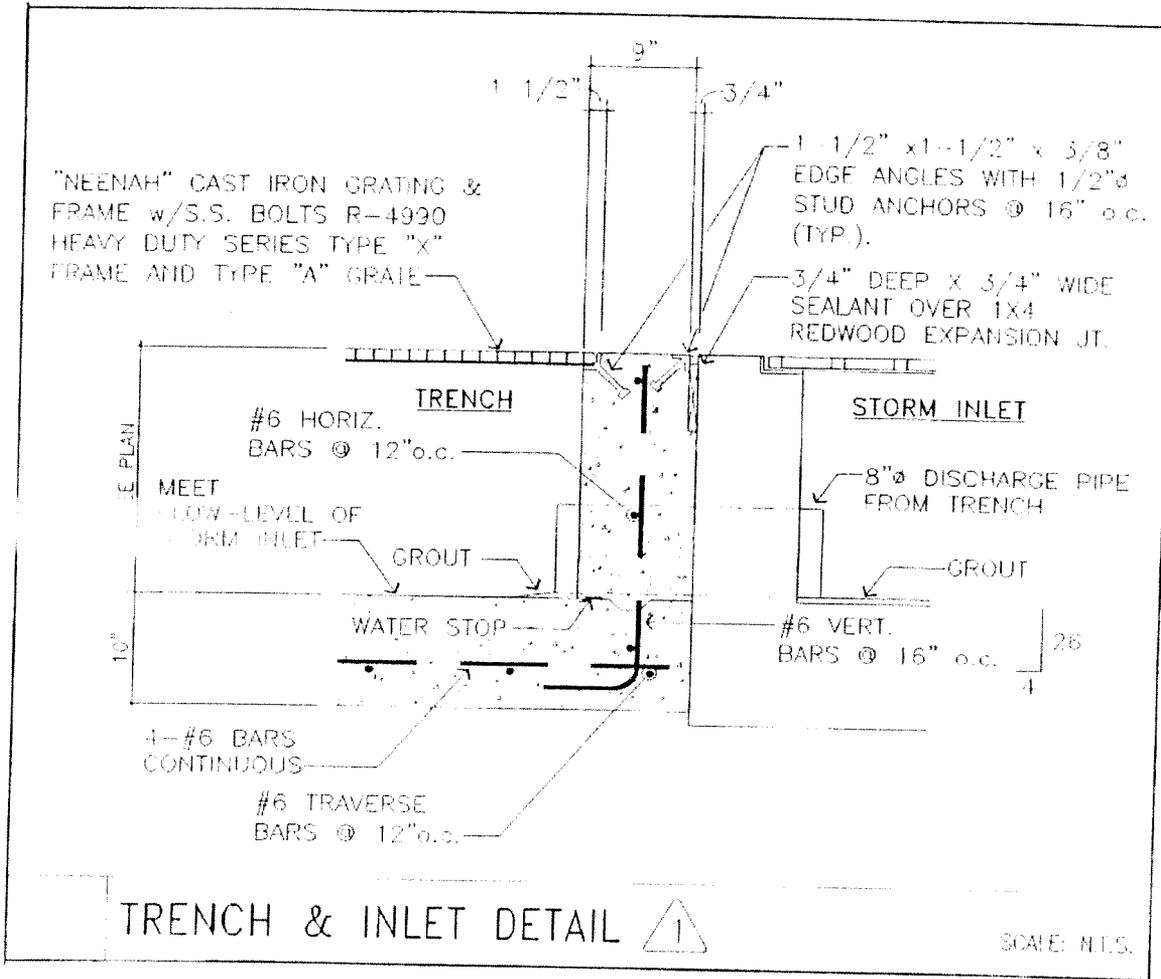


See drawing No. 110 for Storm Inlet connection with Trench Drain.

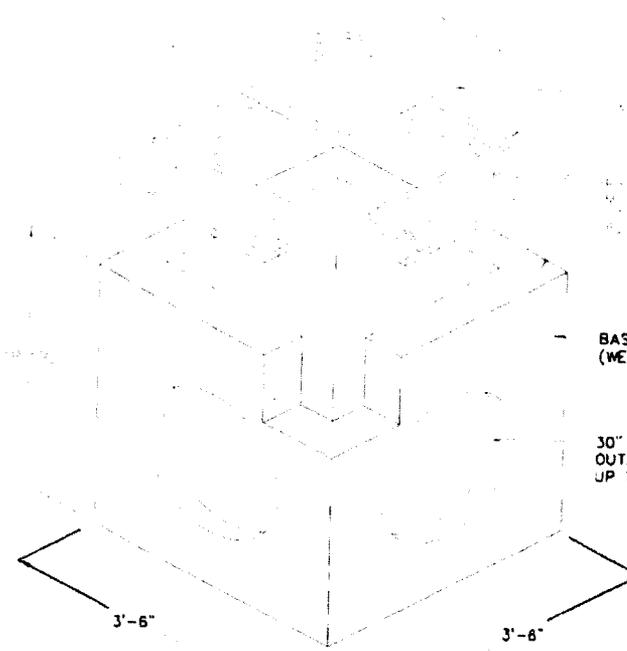
DRAWING No. 107



DRAWING No. 109



DRAWING No. 110



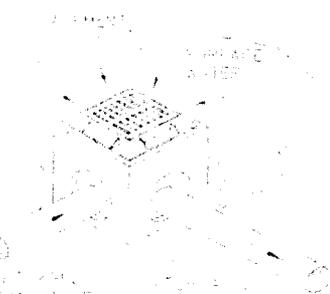
BASIN SECTION
(WEIGHT 3,300 lbs.)

30" DIAMETER KNOCK
OUT. (WILL ACCOMMODATE
UP TO 24" RCP.)



MODEL NO.
V4250-4

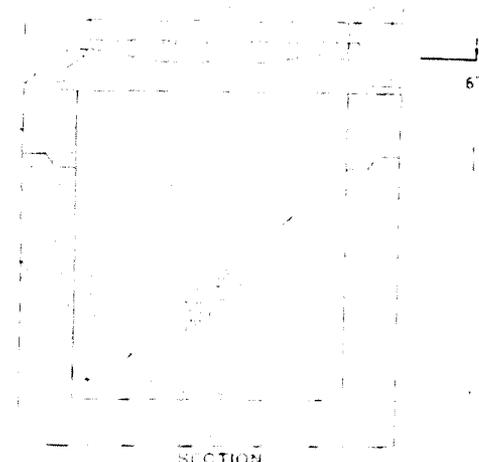
ISOMETRIC



RISER

BASIN

OUTLET PIPING
TO STORM
SEWER



SECTION

SPECIFICATIONS

1. This grate inlet is designed for use with 30" diameter RCP.

2. The grate inlet is made of heavy duty cast iron.

3. The grate inlet is designed to accommodate up to 24" RCP.

4. The grate inlet is designed to accommodate up to 24" RCP.

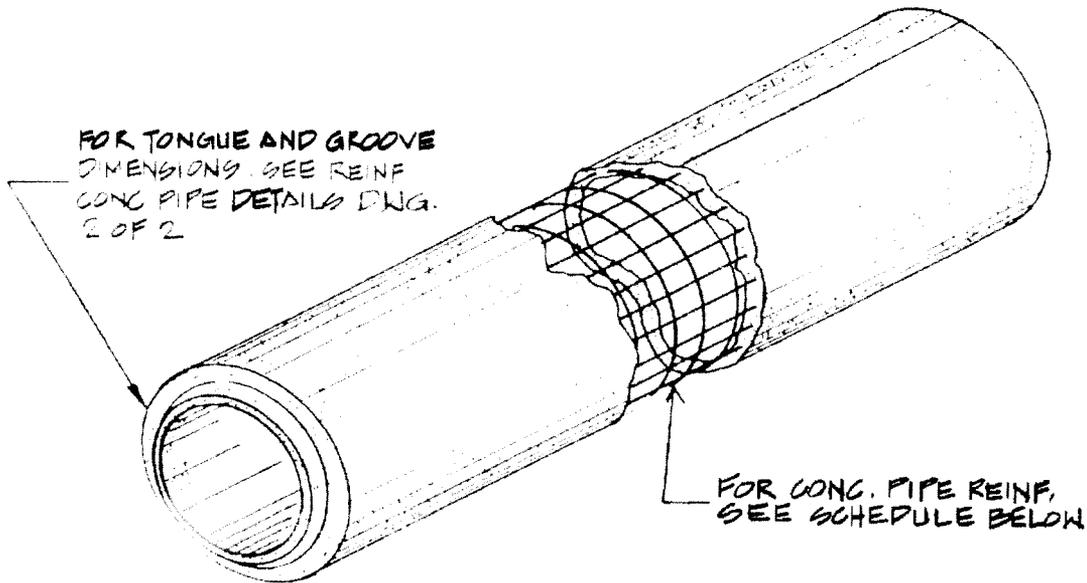
5. The grate inlet is designed to accommodate up to 24" RCP.



www.parkinc.com

TYPE-A GRATE INLET
SIZE 30"

08/23/2003 05:47 FAX 000000000



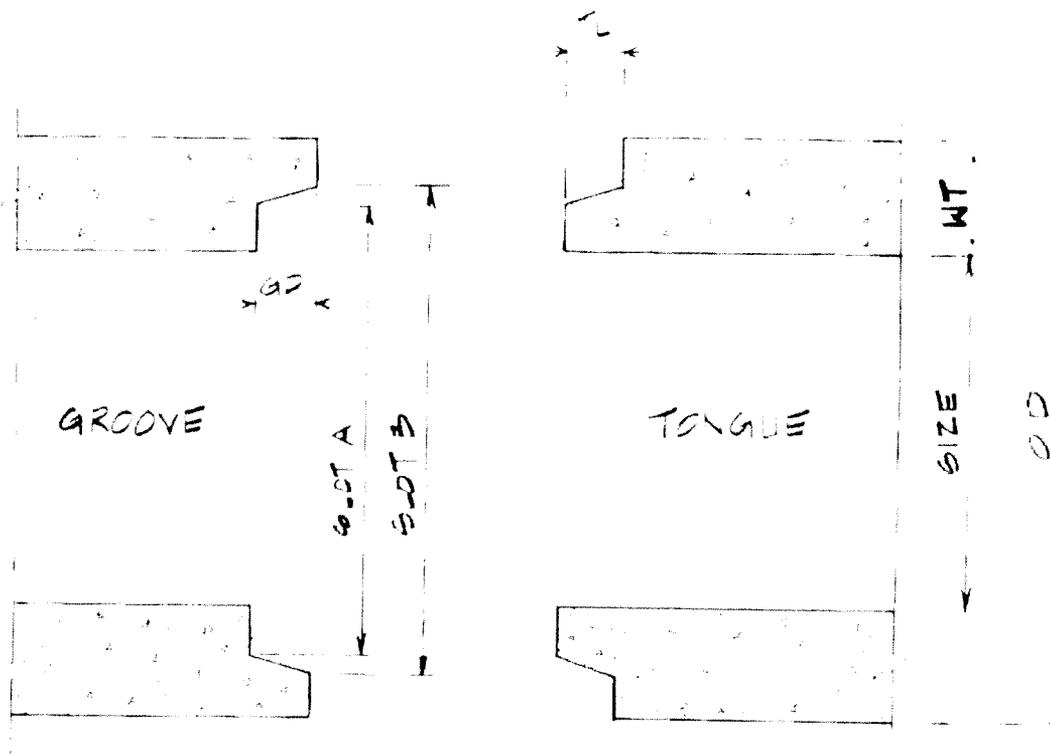
PIPE REINFORCEMENT SCHEDULE			
I.D.	O.D.	WT./FT.	REINFORCEMENT
12"	16"	100#	W 2.0x2.5 3"x8"
15"	19 1/2"	125#	W 2.0x2.5 3"x8"
18"	23"	160#	W 2.0x2.5 3"x8"
24"	30"	260#	W 2.0x2.5 3"x8"
30"	37 1/4"	395#	W 3.0x2.0 2"x8"
36"	44"	520#	W 3.5x2.0 2"x8"

NOTE: ALL PIPE AVAILABLE IN 6 FOOT LENGTH
(12" INCH - 24" INCH IN 4 FOOT LENGTHS)

CONG. NOTE: R.C.P. ASTM DESIGNATION: C76
CLASS III WALL B

DWG. 1 OF 2

REINFORCED CONCRETE CULVERT PIPE



DIMENSION SCHEDULE OF C-76 T&G. PIPE						
SIZE	OUTSIDE DIM	WALL THICKNESS	TONGUE LENGTH	GROOVE DEPTH	SLOT DIM	
					A	B
2"	10"	2"	2"	2"	3 1/2"	1 1/8"
15"	19 1/2"	2 1/4"	2 1/8"	2 1/8"	16 1/2"	17 3/8"
18"	23"	2 1/2"	2"	2 1/4"	25 5/8"	20 1/2"
24"	30"	3"	2 7/8"	2 3/4"	26 3/8"	27 3/8"
30"	37 1/4"	3 5/8"	3 3/8"	3 1/2"	31 3/4"	33 3/8"
36"	44"	4"				

CONC. NOTE: ASTM DESIGNATION: C-76
CLASS III WALL B PIPE

DWG. 2 OF 2

REINFORCED CONC. PIPE
DIMENSION DETAILS

CITY OF HOUSTON, TEXAS
EQUAL EMPLOYMENT OPPORTUNITY CLAUSE

Pursuant to City Council Ordinance No. 78-1538, passed August 9, 1978, all contracts entered into by the City of Houston involving the expenditure of Ten Thousand (\$10,000.00) Dollars, or more, shall incorporate the following Equal Employment Opportunity Clause:

1. The contractor, subcontractor, vendor, supplier, or lessee will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, or age. The contractor, subcontractor, vendor, supplier, or lessee will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, sex, national origin, or age. Such action will include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation and selection for training, including apprenticeship. The contractor, subcontractor, vendor, supplier, or lessee agrees to post in conspicuous places available to employees, and applicants for employment, notices to be provided by the City setting forth the provisions of this Equal Employment Opportunity Clause.
2. The contractor, subcontractor, vendor, supplier, or lessee states that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, national origin or age.
3. The contractor, subcontractor, vendor, supplier, or lessee will send to each labor union or representatives or workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer advising the said labor union or workers' representative of the contractor's and subcontractor's commitments under Section 202 of Executive Order No. 11246, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The contractor, subcontractor, vendor, supplier, or lessee will comply with all provisions of Executive Order No. 11246 and the rules, regulations, and relevant orders of the Secretary of Labor or other Federal Agency responsible for enforcement of the equal opportunity and affirmative action provisions applicable and will likewise furnish all information and reports required by the Mayor and/or Contractor Compliance Officer(s) for purposes of investigation to ascertain and effect compliance with this program.
5. The contractor, subcontractor, vendor, supplier, or lessee will furnish all information and reports required by Executive Order No. 11246, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to all books, records, and accounts by the appropriate City and Federal Officials for purposes of investigations to ascertain compliance with such rules, regulations, and orders. Compliance reports filed at such times as directed shall contain information as to the employment practice policies, program, and workforce statistics of the contractor, subcontractor, vendor, supplier, or lessee.
6. In the event of the contractor's, subcontractor's, vendor's, supplier's or lessee's non-compliance with the nondiscrimination clause of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part, and the contractor, subcontractor, vendor, supplier, or lessee may be declared ineligible for further City contracts in accordance with procedures provided in Executive Order No. 11246, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as may otherwise be provided by law.
7. The contractor shall include the provisions of paragraphs 1-8 of this Equal Employment Opportunity Clause in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965 so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontractor or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event the contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.
8. The contractor shall file and shall cause each of his subcontractors, if any, to file compliance reports with the City in the form and to the extent as may be prescribed by the Mayor. Compliance reports filed at such times as directed shall contain information as to the practices, policies, programs, and employment policies and employment statistics of the contractor and each subcontractor.

List of Changes:

- 02-04-2005: Added new Paragraph 3.25.1.3 concerning strict liability. Edited Paragraph 3.25.1.1 accordingly. Edited Paragraph 9.6.1.4 to remove the words "retainage of".*
- 08-15-2006: Revised many references to Section(s) to read Paragraph(s). Added Small Business Enterprise (SBE) requirement to Paragraphs 3.5.3, 3.5.3.1, 3.5.3.2 and 3.5.3.3.*
- 08-17-2006: Added new Paragraphs 5.2.4, 5.2.5, 9.2.1 and 9.4.2 concerning prompt payment provisions.*
- 10-10-2006: Added new Paragraphs 9.7.1.8, 9.7.1.9 concerning prompt payment provisions. Changed 9.8.1 to "20 days", and added new paragraph to 9.8.2 concerning "7 calendar days" and payment disputes.*

Document 00700

GENERAL CONDITIONS

August 15, 2006 EDITION

TABLE OF ARTICLES

- | | |
|--|---|
| 1. GENERAL PROVISIONS | 8. TIME |
| 2. THE CITY | 9. PAYMENTS AND COMPLETION |
| 3. CONTRACTOR | 10. SAFETY PRECAUTIONS |
| 4. ADMINISTRATION OF THE CONTRACT | 11. INSURANCE AND BONDS |
| 5. SUBCONTRACTORS AND SUPPLIERS | 12. UNCOVERING AND CORRECTION OF THE WORK |
| 6. CONSTRUCTION BY THE CITY OR BY SEPARATE CONTRACTORS | 13. MISCELLANEOUS PROVISIONS |
| 7. CHANGES IN THE WORK | 14. TERMINATION OR SUSPENSION OF THE CONTRACT |

ARTICLE 1 - GENERAL PROVISIONS.....	1	ARTICLE 4 - ADMINISTRATION OF THE CONTRACT.....	14
1.1 DEFINITIONS.....	1	4.1 CONTRACT ADMINISTRATION.....	14
1.2 EXECUTION, CORRELATION, AND INTENT.....	3	4.2 COMMUNICATIONS IN ADMINISTRATION OF THE CONTRACT.....	15
1.3 OWNERSHIP AND USE OF DOCUMENTS.....	3	4.3 CLAIMS AND DISPUTES.....	15
1.4 INTERPRETATION.....	4	4.4 RESOLUTION OF CLAIMS AND DISPUTES.....	16
ARTICLE 2 - THE CITY.....	4	4.5 NON-BINDING MEDIATION.....	16
2.1 LIMITATIONS OF THE CITY'S OFFICERS AND EMPLOYEES.....	4	ARTICLE 5 - SUBCONTRACTORS AND SUPPLIERS	
2.2 INFORMATION AND SERVICES REQUIRED OF THE CITY.....	4	5.1 AWARD OF SUBCONTRACTS OTHER CONTRACTS FOR PORTIONS OF THE WORK... 16	
2.3 AVAILABILITY OF LAND AND USE OF SITE.....	4	5.2 CONTRACTOR RESPONSIBILITY FOR SUBCONTRACTORS.....	17
2.4 THE CITY'S RIGHT TO STOP THE WORK.....	4	ARTICLE 6 - CONSTRUCTION BY THE CITY OR BY SEPARATE CONTRACTORS.....	17
2.5 THE CITY'S RIGHT TO CARRY OUT WORK.....	5	6.1 THE CITY'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS.....	17
ARTICLE 3 - CONTRACTOR.....	5	6.2 COORDINATION.....	17
3.1 RESPONSIBILITIES.....	5	6.3 MUTUAL RESPONSIBILITY.....	18
3.2 REVIEW OF CONTRACT AND FIELD CONDITIONS BY CONTRACTOR.....	5	6.4 THE CITY'S RIGHT TO CLEAN UP.....	18
3.3 SUPERVISION AND CONSTRUCTION PROCEDURES.....	5	ARTICLE 7 - CHANGES IN THE WORK.....	18
3.4 SUPERINTENDENT.....	5	7.1 CHANGES.....	18
3.5 LABOR.....	6	7.2 WORK CHANGE DIRECTIVES.....	18
3.6 PREVAILING WAGE RATES.....	7	7.3 ADJUSTMENTS IN CONTRACT PRICE.....	19
3.7 LABOR CONDITIONS.....	7	7.4 MINOR CHANGES IN THE WORK.....	20
3.8 DRUG DETECTION AND DETERRENCE.....	7	ARTICLE 8 - TIME.....	20
3.9 MATERIALS & EQUIPMENT.....	8	8.1 PROGRESS AND COMPLETION.....	20
3.10 PRODUCT OPTIONS AND SUBSTITUTIONS.....	9	8.2 DELAYS AND EXTENSIONS OF TIME.....	21
3.11 CASH ALLOWANCES.....	9	ARTICLE 9 - PAYMENTS AND COMPLETION.....	21
3.12 WARRANTY.....	9	9.1 UNIT PRICE WORK.....	21
3.13 TAXES.....	10	9.2 ESTIMATES FOR PAYMENT, UNIT PRICE WORK.....	21
3.14 PERMITS, FEES, AND NOTICES.....	10	9.3 STIPULATED PRICE WORK.....	22
3.15 CONSTRUCTION SCHEDULES.....	10	9.4 APPLICATIONS FOR PAYMENT, STIPULATED PRICE WORK.....	22
3.16 DOCUMENTS AND SAMPLES AT THE SITE.....	10	9.5 CERTIFICATES FOR PAYMENT.....	22
3.17 MANUFACTURER'S SPECIFICATIONS.....	11	9.6 COMPUTATIONS OF CERTIFICATES FOR PAYMENT.....	22
3.18 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.....	11	9.7 DECISIONS TO WITHHOLD CERTIFICATION.....	22
3.19 CULTURAL RESOURCES AND ENDANGERED SPECIES.....	12	9.8 PROGRESS PAYMENTS.....	23
3.20 CUTTING AND PATCHING.....	12	9.9 DATE OF SUBSTANTIAL COMPLETION.....	23
3.21 CLEANING.....	12	9.10 PARTIAL OCCUPANCY OR USE.....	24
3.22 SANITATION.....	12	9.11 FINAL COMPLETION AND FINAL PAYMENT.....	24
3.23 ACCESS TO WORK AND TO INFORMATION.....	12	9.12 LIQUIDATED DAMAGES.....	25
3.24 TRADE SECRETS.....	12		
3.25 INDEMNIFICATION.....	12		
3.26 RELEASE AND INDEMNIFICATION - PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET INFRINGEMENT.....	13		
3.27 INDEMNIFICATION PROCEDURES.....	13		

ARTICLE 10 - SAFETY PRECAUTIONS	25	ARTICLE 13 - MISCELLANEOUS PROVISIONS	32
10.1 SAFETY PROGRAMS.....	25	13.1 GOVERNING LAWS.....	32
10.2 POLLUTANTS AND POLLUTANT FACILITIES ...	26	13.2 SUCCESSORS.....	32
10.3 SAFETY OF THE ENVIRONMENT, PERSONS, AND PROPERTY	26	13.3 BUSINESS STRUCTURE AND ASSIGNMENTS... 32	
10.4 EMERGENCIES	26	13.4 WRITTEN NOTICE	32
ARTICLE 11 - INSURANCE AND BONDS.....	27	13.5 RIGHTS AND REMEDIES	33
11.1 GENERAL INSURANCE REQUIREMENTS	27	13.6 TESTS AND INSPECTIONS	33
11.2 INSURANCE TO BE PROVIDED BY CONTRACTOR.....	27	13.7 INTEREST	33
11.3 PROOF OF INSURANCE.....	30	13.8 PARTIES IN INTEREST	33
11.4 PERFORMANCE AND PAYMENT BONDS.....	30	13.9 ENTIRE CONTRACT.....	33
11.5 MAINTENANCE BONDS.....	31	13.10 WRITTEN AMENDMENT	33
11.6 SURETY	31	13.11 COMPLIANCE WITH LAWS.....	33
11.7 DELIVERY OF BONDS	31	13.12 ENFORCEMENT	33
ARTICLE 12 - UNCOVERING AND CORRECTION OF THE WORK.....	31	13.13 SEVERABILITY	34
12.1 UNCOVERING OF THE WORK.....	31	ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT.....	34
12.2 CORRECTION OF THE WORK.....	31	14.1 TERMINATION BY THE CITY FOR CAUSE.....	34
12.3 ACCEPTANCE OF NONCONFORMING WORK... 32		14.2 TERMINATION BY THE CITY FOR CONVENIENCE.....	35
		14.3 SUSPENSION BY THE CITY FOR CONVENIENCE.....	35
		14.4 TERMINATION BY CONTRACTOR.....	35

ARTICLE 1 - GENERAL PROVISIONS

1.1 *DEFINITIONS*

1.1.1 *Agreement*: Document signed by the Parties and binding the Parties, containing the name of Contractor, title and location of the Project, original Contract Time, Original Contract Price, enumeration of documents included in the Contract, and other provisions.

1.1.2 *Bonds*: Performance Bond, Payment Bond, Maintenance Bond, and other Surety instruments executed by Surety. When in singular form, refers to individual instrument.

1.1.3 *Cash Allowance*: An estimated sum of money to be used only for a limited class of expenditures such as utility relocation costs, fees for special licenses or permits, or other "pass-through" costs that would be the same for any contractor. Cash Allowances may not be used to purchase goods or services that are not specified in the Contract. The unspecified items must be purchased according to the terms of Article 7.

1.1.4 *Change Order*: Written instrument prepared by the City and signed by City Engineer and Contractor, specifying the following:

- .1 a change in the Work;
- .2 a change in Contract Price, if any; and
- .3 a change in Contract Time, if any.

The value of a Change Order is the net amount after offsetting all deductions against all additions effected by the Change Order.

1.1.5 *City*: The City of Houston, a municipal corporation located principally within Harris County, Texas, including its successors and its authorized representatives.

1.1.6 *City Engineer*: The City employee, designated in the Agreement, authorized to represent the City, or the successor to the employee.

1.1.7 *Claim*: Written demand or written assertion by one Party seeking adjustment of the Contract, payment of money, extension of time, or other relief under the Contract. The Party making the Claim has the responsibility to substantiate the Claim.

1.1.8 *Conditions of the Contract*: General Conditions and Supplementary Conditions.

1.1.9 *Construction Manager*: Person or firm under contract with the City as its authorized representative to oversee and administer construction of the Work, and who may perform the role of Project Manager and Inspector, as designated by City Engineer in writing.

1.1.10 *Contract*: The Agreement; documents enumerated in and incorporated into the Agreement; Modifications; and amendments.

1.1.11 *Contract Price*: The monetary amount stated in the Agreement adjusted by Change Order, and increases or decreases in Unit Price Quantities, if any.

1.1.12 *Contract Time*: The number of days stated in the Agreement to substantially complete the Work, plus days authorized by Change Order.

1.1.13 *Contractor*: Person or firm identified as such in the Agreement including its successors and its authorized representatives.

1.1.14 *Date of Commencement of the Work*: Date established in Notice to Proceed on which Contract Time will commence. This date will not be changed by failure of Contractor, or persons or entities for whom Contractor is responsible, to act.

1.1.15 *Date of Substantial Completion*: Date that construction, or portion thereof designated by City Engineer, is certified by City Engineer to be substantially complete.

1.1.16 *Design Consultant*: Person or firm, under contract with the City, to provide professional services during construction and its authorized representatives. If a Design Consultant is not employed for services during construction, Project Manager will perform duties of Design Consultant designated in the Contract in addition to usual duties of Project Manager.

1.1.17 *Drawings*: Graphic and pictorial portions of the Contract that define the character and scope of the Work.

1.1.18 *Extra Unit Price*: Unit Prices, which may be required for completion of the Work. These Unit Prices and Unit Price Quantities are in the Contract and are included in Original Contract Price.

1.1.19 *Furnish*: To supply, pay for, deliver to the site, and unload.

- 1.1.20 *General Requirements:* The sections of Division 01 Specifications that specify administrative and procedural requirements and temporary facilities required for the Work.
- 1.1.21 *Inspector:* City's employee or agent authorized to assist with inspection of the Work.
- 1.1.22 *Install:* Unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, clean, protect, and similar operations.
- 1.1.23 *Legal Holiday:* Day established by the City Council as a holiday.
- 1.1.24 *Major Unit Price Work:* An individual Unit Price item,
- .1 whose value is greater than five percent of Original Contract Price,
 - .2 whose value becomes greater than five percent of Original Contract Price as the result of an increase in quantity, or
 - .3 whose value is \$100,000, whichever is least.
- 1.1.25 *Minor Change in the Work:* A written change in the Work, ordered by City Engineer, that does not change Contract Price or Contract Time, and that is consistent with the general scope of the Contract.
- 1.1.26 *Modification:* Change Order, Work Change Directive, or Minor Change in the Work.
- 1.1.27 *Notice of Noncompliance:* A written notice by City Engineer to Contractor regarding defective or nonconforming work that does not meet the Contract requirements, and that establishes a time by which Contractor shall correct the defective or nonconforming work.
- 1.1.28 *Notice to Proceed:* A written notice by City Engineer to Contractor establishing Date of Commencement of the Work.
- 1.1.29 *Original Contract Price:* The monetary amount originally stated in the Agreement.
- 1.1.30 *Parties:* Contractor and the City. When in singular form, refers to Contractor or the City.
- 1.1.31 *Pollutant:* Any materials subject to the Texas Solid Waste Disposal Act.
- 1.1.32 *Pollutant Facility:* Any facility regulated by the State of Texas to protect the health and environment from contamination by Pollutants, including without limitation, land fills, oil and gas production and storage facilities, wastewater facilities, waste injection wells, and storage tanks (including drums).
- 1.1.33 *Product:* Materials, equipment, or systems incorporated into the Work or to be incorporated into the Work.
- 1.1.34 *Product Data:* Illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by Contractor to illustrate a Product.
- 1.1.35 *Project:* Total construction, of which the Work performed under the Contract may be the whole or a part, and which may include construction by the City or by separate contractors.
- 1.1.36 *Project Manager:* City Engineer's authorized representative for administration of the Work. Titles used within the City's departments may be different than those used in this definition.
- 1.1.37 *Provide:* Furnish and Install, complete, ready for intended use.
- 1.1.38 *Samples:* Physical examples that illustrate Products, or workmanship, and establish standards by which the Work is judged.
- 1.1.39 *Shop Drawings:* Drawings, diagrams, schedules, and other data specially prepared for the Work by Contractor, Subcontractor or Supplier, to illustrate a portion of the Work.
- 1.1.40 *Specifications:* Divisions 01 through 16 of the documents that are incorporated into the Agreement, consisting of written General Requirements and requirements for Products, standards, and workmanship for the Work, and performance of related services.
- 1.1.41 *Stipulated Price:* Single lump sum amount stated in the Contract for completion of the Work, or for designated portion of the Work.
- 1.1.42 *Subcontractor:* Person or firm that has direct or indirect contract with Contractor or with another Subcontractor to perform a portion of the Work and its authorized representatives.
- 1.1.43 *Superintendent:* Employee of Contractor having authority and responsibility to act for and represent Contractor.

- 1.1.44 *Supplementary Conditions:* Part of Conditions of the Contract that amends or supplements General Conditions.
- 1.1.45 *Supplier:* Manufacturer, distributor, materialman, or vendor having a direct agreement with Contractor or Subcontractor for Products, or services and its authorized representatives.
- 1.1.46 *Surety:* Corporate entity that is bound by one or more Bonds, and is responsible for completion of the Work, including the correction period, and for payment of debts incurred in fulfilling the Contract. Surety shall include co-surety or reinsurer, as applicable.
- 1.1.47 *Underground Facilities:* Pipes, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments and encasements containing such facilities that exist below ground level.
- 1.1.48 *Unit Price:* An amount stated in the Contract for an individual, measurable item of work, which, when multiplied by actual quantity incorporated into the Work, amounts to full compensation for completion of the item, including work incidental to it.
- 1.1.49 *Unit Price Quantities:* Quantities indicated in the Contract that are approximations made by the City for contracting purposes.
- 1.1.50 *Work:* Entire construction required by the Contract, including all labor, Products, and services provided by Contractor to fulfill Contractor's obligations. The Work may constitute the whole or a portion of the Project.
- 1.1.51 *Work Change Directive:* A written change in the Work, ordered by City Engineer, that is within the general scope of the Contract and consisting of additions, deletions, or other revisions. A Work Change Directive will state proposed basis for adjustment, if any, in Contract Price or Contract Time, or both.
- 1.2 **EXECUTION, CORRELATION, AND INTENT**
- 1.2.1 Execution of the Contract by Contractor is conclusive that Contractor has visited the Work site, become familiar with local conditions under which the Work will be performed, and fully informed itself as to conditions and matters which can affect the Work or costs. Contractor further agrees that it has carefully correlated personal observations with requirements of the Contract.
- 1.2.1.1 The Contract and Modifications have been read and carefully considered by Contractor, who understands and agrees to their sufficiency for the Work. The Contract may not be more strongly construed against the City than against Contractor and Surety.
- 1.2.2 Contractor shall include all items necessary for proper execution and completion of the Work.
- 1.2.3 Reference to standard specifications, manuals, or codes of a technical society, organization, or association, or to laws or regulations of a governmental authority, whether specific or implied, mean the latest edition in effect as of date of receipt of bids, except as may be otherwise specifically stated in the Contract.
- 1.2.4 No provision of any referenced standard, specification, or manual changes the duties and responsibilities of the City, City Engineer, Contractor, or Design Consultant from those set forth in the Contract. Nor do these provisions assign to Design Consultant any duty or authority to supervise or direct performance of the Work or any duty or authority to undertake any actions contrary to provisions of the Contract.
- 1.2.5 Organization of Specifications into divisions, sections, and articles and arrangement of Drawings does not control Contractor in dividing the Work among Subcontractors or in establishing the extent of work to be performed by any trade.
- 1.2.6 Unless otherwise defined in the Contract, words which have well-known construction industry technical meanings are used in the Contract in accordance with these recognized meanings.
- 1.3 **OWNERSHIP AND USE OF DOCUMENTS**
- 1.3.1 Drawings, Specifications, and other documents prepared by the City or by Design Consultant are instruments of service through which the Work to be executed by Contractor is described. Contractor may retain one Contract record set.
- 1.3.2 Neither Contractor, Subcontractor, nor Supplier will own or claim a copyright to documents contained in the Contract or any part of the Contract.

1.3.3 Documents contained in the Contract, prepared by the City or by Design Consultant, and copies furnished to Contractor, are for use solely with respect to the Work. They may not be used by Contractor, Subcontractor or Supplier on other projects or for additions to the Work, outside the scope of the Work, without the specific written consent of City Engineer, and Design Consultant, when applicable.

1.3.4 Contractor, Subcontractors, and Suppliers are granted a limited license to use and reproduce applicable portions of the Contract appropriate to and for use in execution of their work under the Contract.

1.4 INTERPRETATION

1.4.1 Specifications are written in an imperative streamlined form and are directed to Contractor, unless noted otherwise. When written in this form, words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

1.4.2 In the interest of brevity, the Contract frequently omits modifying words such as "all" and "any" and articles such as "the" and "an", but an absent modifier or article is not intended to affect interpretation of a statement.

ARTICLE 2 - THE CITY

2.1 LIMITATIONS OF THE CITY'S OFFICERS AND EMPLOYEES

2.1.1 No officer or employee of the City may authorize Contractor to perform an act or work contrary to the Contract, except as otherwise provided in the Contract.

2.2 INFORMATION AND SERVICES REQUIRED OF THE CITY

2.2.1 If a building permit is required, the City will process an application for, and Contractor shall purchase the building permit before Date of Commencement of the Work.

2.2.2 The City will make available to Contractor a reproducible set of Drawings. Additional copies will be furnished, on Contractor's request, at the cost of reproduction.

2.2.3 When necessary for performance of the Work, the City will provide surveys describing physical characteristics, legal limitations, legal

description of site, and horizontal and vertical control adequate to lay out the Work.

2.2.4 Information or services that the City is required to provide under the Contract will be provided by the City with reasonable promptness to avoid delay in orderly progress of the Work.

2.2.5 The foregoing are in addition to other duties and responsibilities of the City enumerated in the Contract and especially those in respect to Article 6 and Article 9.

2.3 AVAILABILITY OF LAND AND USE OF SITE

2.3.1 The City will furnish, as indicated in the Contract, rights-of-way, land on which the Work is to be performed, and other land designated in the Contract for use by Contractor unless otherwise provided in the Contract.

2.3.2 Contractor shall confine operations at site to those areas permitted by law, ordinances, permits, and the Contract, and may not unreasonably encumber site with materials or equipment.

2.3.3 In addition to land provided by the City under Paragraph 2.3, Contractor shall provide all land and access to land that may be required for use by Contractor for temporary construction facilities or for storage of materials and equipment, and shall indemnify the City during its use of the land as stated in Paragraph 3.25.

2.4 THE CITY'S RIGHT TO STOP THE WORK

2.4.1 If Contractor fails to carry out the Work in accordance with the Contract, or fails to correct work which is not in accordance with requirements of the Contract as required in Paragraphs 12.1.1 and 12.2, the City may, by Notice of Noncompliance, order Contractor to stop the Work or any portion of the Work until the cause for the order has been eliminated. However, the right of the City to stop the Work will not give rise to a Claim for delay or to a duty on the part of the City to exercise this right for the benefit of Contractor or any other person or entity, except to the extent required by Paragraph 6.2. If Contractor corrects the defective or nonconforming work within the time established in Notice of Noncompliance, City Engineer will give written notice to Contractor to resume performance of the Work.

2.5 *THE CITY'S RIGHT TO CARRY OUT WORK*

2.5.1 If Contractor fails to carry out work in accordance with the Contract, and fails within the period established in a Notice of Noncompliance to correct the nonconforming work, the City may, after expiration of the required period, correct the deficiencies without prejudice to other remedies the City may have, including rights of the City under Paragraph 14.1.

2.5.1.1 When the City corrects deficiencies, City Engineer will issue an appropriate Change Order and deduct from payments then or thereafter due Contractor the cost of correcting the deficiencies, including compensation for Design Consultant's and Construction Manager's additional services and expenses made necessary by such default, neglect, or failure. This action by the City and amounts charged to Contractor are both subject to prior approval of City Engineer. If payments, then or thereafter due Contractor, are not sufficient to cover these amounts, Contractor shall pay the difference to the City.

2.5.2 Notwithstanding the City's right to carry out work, maintenance and protection of the Work remains Contractor's responsibility, as provided in the Contract.

ARTICLE 3 - CONTRACTOR

3.1 *RESPONSIBILITIES*

3.1.1 Contractor shall maintain office with agent in the greater City of Houston area during the Contractor's performance under the Contract. Contractor shall file its street address with City Engineer.

3.1.2 Contractor and Contractor's employees shall not give or lend money or anything of value to an officer or employee of the City. Should this Paragraph 3.1.2 be violated, City Engineer may terminate the Contract under Paragraph 14.1.

3.2 *REVIEW OF CONTRACT AND FIELD CONDITIONS BY CONTRACTOR*

3.2.1 Contractor shall carefully study and compare documents contained in the Contract with each other and with information furnished by the City pursuant to Paragraph 2.2 and shall immediately report, in writing, any errors, inconsistencies, or omissions to City Engineer. If work is affected,

Contractor shall obtain a written interpretation or clarification from City Engineer before proceeding with the affected work. However, Contractor will not be liable to the City for failure to report an error, inconsistency, or omission in the Contract unless Contractor had actual knowledge or should have had knowledge of the error, inconsistency, or omission.

3.2.2 Contractor shall take field measurements and verify field conditions, and shall carefully compare the conditions and other information known to Contractor with the Contract, before commencing activities. Contractor shall immediately report, in writing, to City Engineer for interpretation or clarification of discrepancies, inconsistencies, or omissions discovered during this process.

3.2.3 Contractor shall make a reasonable attempt to understand the Contract before requesting interpretation from City Engineer.

3.3 *SUPERVISION AND CONSTRUCTION PROCEDURES*

3.3.1 Contractor shall supervise, direct, and inspect the Work competently and efficiently, devoting the attention and applying the skills and expertise as necessary to perform the Work in accordance with the Contract. Contractor is solely responsible and has control over construction means, methods, techniques, sequences, and procedures of construction; for safety precautions and programs in connection with the Work; and for coordinating all work under the Contract.

3.3.2 Regardless of observations or inspections by the City or City's consultants, Contractor shall perform and complete the Work in accordance with the Contract and submittals approved pursuant to Paragraph 3.18. The City is not liable or responsible to Contractor or Surety for work performed by Contractor that is not in accordance with the Contract regardless of whether discovered during construction or after acceptance of the Work.

3.4 *SUPERINTENDENT*

3.4.1 Contractor shall employ a competent Superintendent and necessary assistants who shall be present at the site during performance of the Work. Communications given to Superintendent are binding on the Contractor.

3.4.2 Contractor shall notify City Engineer in writing of its intent to replace the Superintendent. Contractor may not replace the Superintendent if City Engineer makes a reasonable objection in writing.

3.5 LABOR

3.5.1 Contractor shall provide competent, qualified personnel to survey and lay out the Work and perform construction as required by the Contract. The City may, by written notice, require Contractor to remove from the Work any employee of Contractor or Subcontractors to whom City Engineer makes reasonable objection.

3.5.2 Contractor shall comply with City Code of Ordinances, Chapter 15, Article II, relating to equal opportunity employment, and take affirmative action to ensure that applicants are employed and employees are treated without regard to race, religion, color, sex, national origin, or age.

3.5.3 When Original Contract Price is greater than \$1,000,000, Contractor shall comply with the City's Minority and Women-owned Business Enterprise ("MWBE"), Persons with Disabilities Business Enterprises ("PDBE") and Small Business Enterprise ("SBE") policy as set out in Chapter 15, Articles V, VI and IX of the City of Houston Code of Ordinances.

3.5.3.1 When Original Contract Price is greater than \$1,000,000, Contractor shall make good faith efforts to award subcontracts or supply agreements in at least the percentages set out in the Supplementary Conditions to MWBE, PDBE and SBE firms. Contractor acknowledges that it has reviewed the requirements for good faith efforts on file with the City's Affirmative Action and Contract Compliance Division and will comply with them.

3.5.3.2 Contractor shall require written subcontracts with MWBE, PDBE and SBE Subcontractors and Suppliers and shall submit all disputes with MWBE, PDBE and SBE firms to binding arbitration to be conducted in Houston, Texas, if directed to do so by the Affirmative Action and Contract Compliance Division Director ("Director"). MWBE, PDBE and SBE subcontracts must contain the terms set out in Paragraph 3.5.3.3. If Contractor is an individual person, as distinguished from a corporation, partnership, or other legal entity, and the amount of the subcontract is \$50,000 or less, the subcontract must also be signed by the attorneys of the respective parties.

3.5.3.3 Contractor shall ensure that subcontracts with MWBE, PDBE and SBE firms are clearly labeled "**THIS CONTRACT IS SUBJECT TO ARBITRATION ACCORDING TO THE TEXAS GENERAL ARBITRATION ACT**" and contain the following terms:

.1 (MWBE, PDBE and SBE firm) may not delegate or subcontract more than 50 percent of work under this subcontract to any other subcontractor without the express written consent of the Director.

.2 (MWBE, PDBE and SBE firm) shall permit representatives of the City of Houston, at all reasonable times, to perform (1) audits of the books and records of the Subcontractors and Suppliers, and (2) inspections of all places where work is to be undertaken in connection with this subcontract. (MWBE, PDBE and SBE firm) shall keep the books and records available for this purpose for at least four years after the end of its performance under this subcontract. Nothing in this paragraph shall affect the time for bringing a cause of action nor the applicable statute of limitations.

.3 Within five business days of execution of this subcontract, Contractor and (MWBE, PDBE and SBE firm) shall designate in writing to the Director an agent for receiving any notice required or permitted to be given pursuant to Chapter 15 of the Houston City Code of Ordinances, along with the street and mailing address and phone number of the agent.

.4 As concluded by the parties to this subcontract, and as evidenced by their signature to this subcontract, any controversy between the parties involving the construction or application of the terms of this subcontract will, on the written request of one party served upon the other or upon notice by Director served on both parties, be submitted to arbitration, under the Texas General Arbitration Act (TEX. CIV. PRAC. & REM. CODE ANN., Ch 171 - "Act"). Arbitration will be conducted according to the following procedures:

.1 Upon the decision of the Director or upon written notice to the Director from either party that a dispute has arisen, the Director shall notify all parties that they must resolve the dispute within

- 30 days or the matter may be referred to arbitration.
- .2 If the dispute is not resolved within the time specified, any party or the Director may submit the matter to arbitration governed by the American Arbitration Association rules.
 - .3 Upon submittal of the matter to arbitration, each party shall pay all fees required by the American Arbitration Association and its arbitrators from liability for decisions reached in the arbitration.
 - .4 If the City contracts with an organization other than the American Arbitration Association to provide arbitration services related to disputes between prime contractors and MWBE, PDBE and SBE firms, the parties may, at their option, proceed with arbitration before the American Arbitration Association or with the organization the City has contracted with.
 - .5 All arbitrations will be conducted in Houston, Texas unless the parties agree to another location in writing.

3.6 PREVAILING WAGE RATES

3.6.1.1 Contractor shall comply with governing statutes providing for labor classification of wage scales for each craft or type of laborer, worker, or mechanic.

3.6.1.2 Prevailing wage rates applicable to the Work may be one or a combination of the following wage rates identified in Division 00:

- .1 Federal Wage Rate General Decisions
 - .1 Highway Rates
 - .2 Building Rates
 - .3 Heavy Construction Rates
 - .4 Residential Rates
- .2 City Prevailing Wage Rates
 - .1 Building Construction Rates
 - .2 Engineering Construction Rates
 - .3 Asbestos Worker Rates

3.6.2 Each week Contractor shall submit to the City Affirmative Action and Contract Compliance Division certified copies of payrolls showing classifications and wages paid by Contractor, Subcontractors, and Suppliers for each employee

under the Contract, for any day included in the Contract.

3.7 LABOR CONDITIONS

3.7.1 In the event of labor disputes affecting Contractor or Contractor's employees, Contractor shall utilize all possible means to resolve disputes in order that the Work not be delayed to any extent. These means will include seeking injunctive relief and filing unfair labor practice charges, and any other action available to Contractor.

3.7.2 When Contractor has knowledge that any actual or potential labor dispute is delaying or is threatening to delay timely performance of the Work, Contractor shall immediately notify City Engineer in writing. No Claims will be accepted by City Engineer for costs incurred as a result of jurisdictional or labor disputes.

3.8 DRUG DETECTION AND DETERRENCE

3.8.1 It is the policy of the City to achieve a drug-free work force and to provide a workplace that is free from the use of illegal drugs and alcohol. It is also the policy of the City that manufacture, distribution, dispensation, possession, sale, or use of illegal drugs or alcohol by contractors while on the City's premises is prohibited. By executing the Contract, Contractor represents and certifies that it meets and will comply with all requirements and procedures set forth in the Mayor's Policy on Drug Detection and Deterrence, City Council Motion No. 92-1971 ("Mayor's Policy") and the Mayor's Drug Detection and Deterrence Procedures for Contractors, Executive Order No. 1-31, (Revised) ("Executive Order"). Mayor's Policy is on file in the office of the City Secretary. Copies of Executive Order may be obtained at the location specified in the Advertisement for Bids.

3.8.1.1 The Executive Order applies to the City's contracts for labor or services except the following:

- .1 contracts authorized by Emergency Purchase Orders,
- .2 contracts in which imposition of requirements of the Executive Order would exclude all potential bidders or proposers, or would eliminate meaningful competition for the Contract,
- .3 contracts with companies that have fewer than 15 employees during any

- .4 20-week period during a calendar year and no safety impact positions, contracts with non-profit organizations providing services at no cost or reduced cost to the public, and
- .5 contracts with federal, state, or local governmental entities.

3.8.1.2 Prior to execution of the Contract, Contractor shall have filed with the City:

- .1 a Drug Policy Compliance Agreement form (Attachment "A" to the Executive Order), and
- .2 a copy of Contractor's drug free workplace policy, and
- .3 a written designation of all safety impact positions, if applicable, or a Contractor's Certification of a No Safety Impact Positions form (Attachment "C" to the Executive Order).

3.8.1.3 Every six months during performance of the Contract and upon completion of the Contract, Contractor shall file a Drug Policy Compliance Declaration form (Attachment "B" to the Executive Order). The Contractor shall submit the Drug Policy Compliance Declaration within 30 days of expiration of each six-month period of performance and within 30 days of completion of the Contract. The first six-month period shall begin on Date of Commencement of the Work.

3.8.1.4 Contractor shall have a continuing obligation to file updated designation of safety impact positions when additional safety impact positions are added to Contractor's employee workforce during performance of the Work.

3.8.1.5 Contractor shall require its Subcontractors and Suppliers to comply with the Mayor's Policy and Executive Order. Contractor is responsible for securing and maintaining required documents from Subcontractors and Suppliers for the City inspection throughout the term of the Contract.

3.8.1.6 Failure of Contractor to comply with requirements will be a material breach of the Contract entitling the City to terminate in accordance with Paragraph 14.1.

3.9 MATERIALS & EQUIPMENT

3.9.1 Unless otherwise provided in the Contract, Contractor shall provide and assume full responsibility for Products, labor, transportation, construction equipment and machinery, tools,

appliances, fuel, power, light, heat, telephone, water, sanitary facilities, transportation, temporary facilities, supplies, and other facilities and incidentals necessary for Furnishing, performing, testing, starting-up, and completing the Work.

3.9.1.1 Contractor, Subcontractors, and Suppliers shall use Low Sulfur Diesel Fuel in all diesel operating vehicles and motorized equipment utilized in performing the Work. Low Sulfur Diesel Fuel is defined as diesel fuel having 500 ppm or the applicable standard set by state or federal law or rules and regulations of the Texas Commission on Environmental Quality, or the Environmental Protection Agency, whichever is less in sulfur content. Off-road Low Sulfur Diesel Fuel may be used in lieu of on-road Low Sulfur Diesel Fuel. Contractor shall provide, upon request by City Engineer, proof that Contractor, Subcontractors, and Suppliers are using Low Sulfur Diesel Fuel.

3.9.2 Contractor shall provide Products that are:

- .1 new, unless otherwise required or permitted by the Contract, and
- .2 of specified quality.

If required by City Engineer, Contractor shall furnish satisfactory evidence, including reports of required tests, as to kind and quality of Products.

3.9.3 Contractor shall store Products in a safe, neat, compact, and protected manner. Contractor shall also store Products delivered during the work, along the right-of-way:

- .1 so as to cause the least inconvenience to property owners, tenants, and general public; and
- .2 so as not to block access to, or be closer than, three feet to any fire hydrant.

Contractor shall protect trees, lawns, walks, drives, streets, and other improvements that are to remain, from damage. If private or public property is damaged by Contractor, Contractor shall, at its sole expense, restore the damaged property to at least its original condition.

3.9.3.1 Contractor shall obtain City Engineer's approval for storage areas used for Products for which payment has been requested under Paragraph 9.6.1. Contractor shall provide the City access to the storage areas for inspection purposes. Products, once paid for by the City, become the property of the City and may not be removed from place of storage, without City Engineer's written permission except for a movement to the site. Contractor's Installation Floater, required under Paragraph 11.2, shall cover all perils, including loss

- or damage to Products during storage, loading, unloading, and transit to the site.
- 3.10 *PRODUCT OPTIONS AND SUBSTITUTIONS*
- 3.10.1 For Products specified by reference standards or by description only, Contractor may provide any Product meeting those standards or description.
- 3.10.2 For Products specified by naming one or more manufacturers with provision for substitutions or equal, Contractor may submit a request for substitution for any manufacturer not named.
- 3.10.3 City Engineer will consider requests for substitutions only within the first 15 percent of Contract Time, or first 90 days after date of Notice to Proceed, whichever is less.
- 3.10.4 Contractor shall document each request for substitution with complete data substantiating compliance of proposed substitution with the Contract.
- 3.10.5 A request for substitution constitutes a representation that Contractor:
- .1 has investigated the proposed Product and determined that it meets or exceeds the quality level of the specified Product;
 - .2 shall provide the same warranty for the substitution as for the specified Product;
 - .3 shall coordinate installation of the proposed substitution and make changes to other work which may be required for the Work to be completed, with no additional cost or increase in time to the City;
 - .4 confirms that cost data is complete and includes all related costs under the Contract;
 - .5 waives Claim for additional costs or time extensions that may subsequently become apparent; and
 - .6 shall provide review or redesign services by a design consultant with appropriate professional license and shall obtain re-approval and permits from authorities.
- 3.10.6 City Engineer will not consider and will not approve substitutions when:
- .1 they are indicated or implied on Shop Drawing or Product Data submittals without separate written request; or
 - .2 acceptance will require revision to the Contract.
- 3.10.7 City Engineer may reject requests for substitution, and his decision will be final and binding on the Parties.
- 3.11 *CASH ALLOWANCES*
- 3.11.1 Contract Price includes Cash Allowances as identified in the Contract.
- 3.11.2 The City will pay the actual costs of Cash Allowance item exclusive of profit, overhead or administrative costs. If actual costs exceed the Cash Allowance, City Engineer must approve a Change Order for the additional costs.
- 3.12 *WARRANTY*
- 3.12.1 Contractor warrants to the City that Products furnished under the Contract are:
- .1 free of defects in title;
 - .2 of good quality; and
 - .3 new, unless otherwise required or permitted by the Contract.
- If required by the City Engineer, Contractor shall furnish satisfactory evidence as to kind, quality and title of Products, and that Products conform to requirements of the Contract.
- 3.12.2 In the event of a defect in a Product, either during construction or warranty period, Contractor shall take appropriate action with manufacturer of Product to assure correction or replacement of defective Product with minimum delay.
- 3.12.3 Contractor warrants that the Work is free of defects not inherent in the quality required or permitted, and that the Work does conform with the requirements of the Contract. Contractor further warrants that the Work has been performed in a thorough and workmanlike manner.
- 3.12.4 Contractor warrants that the Work is free of concentrations on polychlorinated biphenyl (PCB) and other substances defined as hazardous by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or any other applicable law or regulation.

3.12.5 Work not conforming to requirements of Paragraph 3.12, including substitutions not properly approved and authorized, may be considered nonconforming work.

3.12.6 Contractor's warranty excludes remedy for damage or defect caused by:

- .1 improper or insufficient maintenance by the City;
- .2 normal wear and tear under normal usage; or
- .3 claim that hazardous material was incorporated into the Work, if that material was specified in the Contract.

3.12.7 Contractor warrants that title to all work covered by Contractor's request for payment passes to the City upon incorporation into the Work or upon Contractor's receipt of payment, whichever occurs first. The Contractor further warrants that the title is free of all liens, claims, security interests or other interests ("Encumbrances"). If not, upon written demand from City Engineer, Contractor shall immediately take legal action necessary to remove Encumbrances.

3.13 TAXES

3.13.1 Contractor shall pay all sales, consumer, use, and similar taxes, which are in effect or scheduled to go into effect on or before bids are received, related to work provided by Contractor.

3.13.2 Contractor shall obtain, and require Subcontractors and Suppliers to obtain, necessary permits from the state and local taxing authorities to perform contractual obligations under the Contract, including sales tax permits.

3.13.3 The City is exempt from the Federal Transportation and Excise Tax. Contractor shall comply with federal regulations governing the exemptions.

3.13.4 Products incorporated into the Work are exempt from state sales tax according to provisions of the TEX. TAX CODE ANN. CH. 151, Subsection H.

3.14 PERMITS, FEES, AND NOTICES

3.14.1 Unless otherwise provided in the Contract, Contractor shall secure and pay for all construction permits, licenses, and inspections:

- .1 necessary for proper execution and completion of the Work; and
- .2 legally required at time bids are received.

3.15 CONSTRUCTION SCHEDULES

3.15.1 On receipt of Notice to Proceed, Contractor shall promptly prepare and submit construction schedule for the Work for City Engineer's review. The schedule must reflect the minimum time required to complete the Work not to exceed Contract Time.

3.15.1.1 Contractor shall give 24-hour written notice to City Engineer before commencing work or resuming work where work has been stopped. Contractor shall also give the same notice to inspectors.

3.15.2 Contractor shall incorporate milestones specified in Summary of Work Specification into the construction schedule. Contractor's failure to meet a milestone, as determined by City Engineer, may be considered a material breach of the Contract.

3.15.3 Each month, Contractor shall submit to City Engineer a copy of an updated construction schedule indicating actual progress, incorporating applicable changes, and indicating courses of action required to assure completion of the Work within Contract Time.

3.15.4 Contractor shall keep a current schedule of submittals that coordinates with the construction schedule, and shall submit the initial schedule of submittals to City Engineer for approval.

3.16 DOCUMENTS AND SAMPLES AT THE SITE

3.16.1 Contractor shall maintain at the site, and make available to City Engineer, one record copy of Drawings, Specifications, and Modifications. Contractor shall maintain the documents in good order and marked currently to record changes and selections made during construction. In addition, Contractor shall maintain at the site, approved Shop Drawings, Product Data, Samples, and similar submittals, which will be delivered to City Engineer prior to final inspection as required in Paragraph 9.11.4.

3.16.2 Contractor shall maintain all books, documents, papers, accounting records, and other relevant documentation pursuant to the Work and shall make the books, documents, papers, and accounting records available to representatives of the City for review and audits during the Contract term and for the greater of three years following Date of Substantial Completion or until all litigation or audits are fully resolved.

3.16.3 Contractor shall provide to City Attorney all documents and records that City Attorney deems necessary to assist in determining Contractor's compliance with the Contract, with the exception of those documents made confidential by federal or state law or regulation.

3.17 *MANUFACTURER'S SPECIFICATIONS*

3.17.1 Contractor shall handle, store, and install Products and perform all work in the manner required by Product manufacturer. Should the Contract and manufacturer's instructions conflict, Contractor shall report conflict to City Engineer for resolution prior to proceeding with the affected work.

3.17.2 References in the Contract to the manufacturer's specifications, directions, or recommendations, mean manufacturer's current published documents in effect as of date of receipt of bids, or in the case of a Modification, as of date of Modification.

3.18 *SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES*

3.18.1 Shop Drawings, Product Data, and Samples are not part of the Contract. The purpose of Contractor submittals is to demonstrate, for those portions of the Work for which submittals are required, the way Contractor proposes to conform to information given and design concept expressed in the Contract.

3.18.2 Contractor shall submit to Project Manager for review the Shop Drawings, Product Data, and Samples, which are required by the Contract. Review by Project Manager is subject to limitations of Paragraph 4.1.4. Contractor shall transmit the submittals to the Project Manager with reasonable promptness and in a sequence, so as to cause no delay in the Work or in activities of the City or of separate contractors. Contractor shall transmit submittals in time to allow a minimum of 30 days for Project Manager's review prior to date Contractor needs reviewed submittals returned. This time may be shortened for a particular job requirement if approved by Project Manager in advance of submittal.

3.18.3 Contractor shall certify that the content of submittals conforms to the Contract without exception by affixing Contractor's approval stamp and signature. By certifying and submitting Shop Drawings, Product Data, and Samples, Contractor represents, and Contractor's stamp of approval shall

state, that Contractor has determined and verified materials, quantities, field measurements, and field construction criteria related to the submittal, and has checked and coordinated information contained within the submittals with requirements of the Contract.

3.18.4 Contractor may not perform any work requiring submittal and review of Shop Drawings, Product Data, or Samples until the submittal has been returned with appropriate review decision by the Project Manager. Contractor shall perform work in accordance with the review.

3.18.5 If Contractor performs any work requiring submittals prior to review and acceptance of the submittals by Project Manager, such work is at Contractor's risk and the City is not obligated to accept work if the submittals are later found to be unacceptable.

3.18.6 If, in the opinion of Project Manager, the submittals are incomplete, or demonstrate an inadequate understanding of the Work or lack of review by the Contractor, then submittals may be returned to the Contractor for correction and resubmittal.

3.18.7 Contractor shall direct specific attention in writing and on the resubmitted Shop Drawings, Product Data, or Samples to any additional proposed revisions, other than those revisions requested by Project Manager on previous submittals.

3.18.8 Contractor is not relieved of responsibility for deviations from requirements of the Contract by Project Manager's review of Shop Drawings, Product Data, or Samples unless Contractor has specifically informed Project Manager in writing of the deviation at the time of the submittal, and Project Manager has given written approval of the deviation.

3.18.9 When professional certification of performance criteria of Products is required by the Contract, the City may rely upon accuracy and completeness of the calculations and certifications.

3.18.10 For Product colors or textures to be selected by the City, Contractor shall submit all samples together to allow preparation of a complete selection schedule.

3.18.11 Contractor shall submit informational submittals, on which Project Manager is not

expected to take responsive action, as required by the Contract.

3.18.12 Submittals made by Contractor which are not required by the Contract may be returned to Contractor without action.

3.19 *CULTURAL RESOURCES AND ENDANGERED SPECIES*

3.19.1 Contractor may not remove or disturb, or cause to be removed or disturbed, any historical, archaeological, architectural, or other cultural artifacts, relics, vestiges, remains, or objects of antiquity. If Contractor discovers one of these items, Contractor shall immediately notify City Engineer and further comply with the requirements of 13 Tex. Admin. Code Chs. 25 and 26 (2002), or successor regulation. Contractor shall protect site and cultural resources from further disturbance until professional examination can be made or until clearance to proceed is authorized in writing by City Engineer.

3.19.2 Should either threatened or endangered plant or animal species be encountered, Contractor shall cease work immediately in the area of encounter and notify City Engineer.

3.20 *CUTTING AND PATCHING*

3.20.1 Contractor is responsible for necessary cutting, fitting, and patching to accomplish the Work and shall suitably support, anchor, attach, match, and trim or seal materials to work of other contractors. Contractor shall coordinate the Work with work of other contractors to minimize conflicts, as provided in Article 6.

3.20.2 Contractor may not endanger work by cutting, digging, or other action, and may not cut or alter work of other contractors except by written consent of City Engineer and affected contractor.

3.21 *CLEANING*

3.21.1 Contractor shall perform daily cleanup of all dirt, debris, scrap materials and other disposable items resulting from Contractor's operations, whether on-site or off-site. Unless otherwise authorized in writing by City Engineer, Contractor shall keep all streets, access streets, driveways, areas of public access, walkways, and other designated areas clean and open at all times.

3.21.2 Failure of Contractor to maintain a clean site, including access streets, is the basis for City Engineer to issue a Notice of Noncompliance.

Should compliance not be attained within the time period in the Notice of Noncompliance, City Engineer may authorize necessary cleanup to be performed by others and the cost of the cleanup will be deducted from monies due Contractor.

3.21.3 Contractor shall legally dispose off-site, all waste materials and other excess materials resulting from Contractor's operations.

3.22 *SANITATION*

3.22.1 Contractor shall provide and maintain sanitary facilities at site for use of all construction forces under the Contract. Newly-constructed or existing sanitary facilities may not be used by Contractor.

3.23 *ACCESS TO WORK AND TO INFORMATION*

3.23.1 Contractor shall provide the City, Design Consultant, testing laboratories, and governmental agencies which have jurisdictional interests, access to the Work in preparation and in progress wherever located. Contractor shall provide proper and safe conditions for the access.

3.23.2 If required by City Engineer, Contractor shall furnish information concerning character of Products and progress and manner of the Work, including information necessary to determine cost of the Work, such as number of employees, pay of employees, and time employees worked on various classes of the Work.

3.24 *TRADE SECRETS*

3.24.1 Contractor will not make any claim of ownership of trade secrets as to products used in the Work, or preparation of any mixture for the Work. City Engineer will at all times have the right to demand and Contractor shall furnish information concerning materials or samples of ingredients of any materials used, or proposed to be used, in preparation of concrete placed or other work to be done. Mixtures, once agreed on, shall not be changed in any manner without knowledge and consent of City Engineer. The City will make its best efforts to protect confidentiality of proprietary information.

3.25 *INDEMNIFICATION*

3.25.1 CONTRACTOR AGREES TO AND SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECT-

IVELY THE "CITY") HARMLESS FOR ALL CLAIMS, CAUSES OF ACTION, LIABILITIES, FINES, AND EXPENSES (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS AND INTEREST) FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THE CONTRACT INCLUDING, WITHOUT LIMITATION, THOSE CAUSED BY:

- .1 CONTRACTOR'S AND/OR ITS AGENTS', EMPLOYEES', OFFICERS', DIRECTORS', CONTRACTORS', OR SUBCONTRACTORS' (COLLECTIVELY IN NUMBERED PARAGRAPHS .1 through .3, "CONTRACTOR") ACTUAL OR ALLEGED NEGLIGENCE OR INTENTIONAL ACTS OR OMISSIONS;
- .2 THE CITY'S AND CONTRACTOR'S ACTUAL OR ALLEGED CONCURRENT NEGLIGENCE, WHETHER CONTRACTOR IS IMMUNE FROM LIABILITY OR NOT;
- .3 THE CITY'S AND CONTRACTOR'S ACTUAL OR ALLEGED STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY, WHETHER CONTRACTOR IS IMMUNE FROM LIABILITY OR NOT.

CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY HARMLESS DURING THE TERM OF THE CONTRACT AND FOR FOUR YEARS AFTER THE CONTRACT TERMINATES. CONTRACTOR SHALL NOT INDEMNIFY THE CITY FOR THE CITY'S SOLE NEGLIGENCE.

3.25.2 NOTWITHSTANDING ANYTHING TO THE CONTRARY, THE LIABILITY OF CONTRACTOR FOR THE CITY'S CONCURRENT NEGLIGENCE SHALL NOT EXCEED \$1,000,000.

3.26 *RELEASE AND INDEMNIFICATION – PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET INFRINGEMENT*

3.26.1 UNLESS OTHERWISE SPECIFICALLY REQUIRED BY THE CONTRACT, CONTRACTOR AGREES TO AND SHALL RELEASE AND DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") FROM ALL CLAIMS OR CAUSES OF

ACTION BROUGHT AGAINST THE CITY BY ANY PARTY, INCLUDING CONTRACTOR, ALLEGING THAT THE CITY'S USE OF ANY EQUIPMENT, SOFTWARE, PROCESS, OR DOCUMENTS CONTRACTOR FURNISHES DURING THE TERM OF THE CONTRACT INFRINGES ON A PATENT, COPYRIGHT, OR TRADEMARK, OR MISAPPROPRIATES A TRADE SECRET. CONTRACTOR SHALL PAY ALL COSTS (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS, AND INTEREST) AND DAMAGES AWARDED.

3.26.2 CONTRACTOR SHALL NOT SETTLE ANY CLAIM ON TERMS WHICH PREVENT THE CITY FROM USING THE EQUIPMENT, SOFTWARE, PROCESS, OR PRODUCT WITHOUT THE CITY ENGINEER'S PRIOR WRITTEN CONSENT.

3.26.3 UNLESS OTHERWISE SPECIFICALLY REQUIRED BY THE CONTRACT, WITHIN 60 DAYS AFTER BEING NOTIFIED OF THE CLAIM, CONTRACTOR SHALL, AT ITS OWN EXPENSE, EITHER:

- .1 OBTAIN FOR THE CITY THE RIGHT TO CONTINUE USING THE EQUIPMENT, SOFTWARE, PROCESS, OR PRODUCT, OR
- .2 IF BOTH PARTIES AGREE, REPLACE OR MODIFY THEM WITH COMPATIBLE AND FUNCTIONALLY EQUIVALENT PRODUCTS.

IF NONE OF THESE ALTERNATIVES IS REASONABLY AVAILABLE, THE CITY MAY RETURN THE EQUIPMENT, SOFTWARE, OR PRODUCT, OR DISCONTINUE THE PROCESS, AND CONTRACTOR SHALL REFUND THE PURCHASE PRICE.

3.27 *INDEMNIFICATION PROCEDURES*

3.27.1 *Notice of Indemnification Claims:* If the City or Contractor receives notice of any claim or circumstances which could give rise to an indemnified loss, the receiving party shall give written notice to the other Party within 10 days. The notice must include the following:

- .1 a description of the indemnification event in reasonable detail,
- .2 the basis on which indemnification may be due, and
- .3 the anticipated amount of the indemnified loss.

This notice does not estop or prevent the City from later asserting a different basis for indemnification or

a different amount of indemnified loss than that indicated in the initial notice. If the City does not provide this notice within the 10-day period, it does not waive any right to indemnification except to the extent that Contractor is prejudiced, suffers loss, or incurs expense because of the delay.

- 3.27.2 *Defense of Indemnification Claims:*
- .1 *Assumption of Defense:* Contractor may assume the defense of the claim at its own expense with counsel chosen by it that is reasonably satisfactory to the City. Contractor shall then control the defense and any negotiations to settle the claim. Within 10 days after receiving written notice of the indemnification request, Contractor must advise the City as to whether or not it will defend the claim. If Contractor does not assume the defense, the City shall assume and control the defense, and all defense expenses constitute an indemnified loss.
 - .2 *Continued Participation:* If Contractor elects to defend the claim, the City may retain separate counsel to participate in, but not control, the defense and to participate in, but not control, any settlement negotiations. Contractor may settle the claim without the consent or agreement of the City, unless it:
 - .1 would result in injunctive relief or other equitable remedies or otherwise require the City to comply with restrictions or limitations that adversely affect the City;
 - .2 would require the City to pay amounts that Contractor does not fund in full; or
 - .3 would not result in the City's full and complete release from all liability to the plaintiffs or claimants who are parties to or otherwise bound by the settlement.

ARTICLE 4 - ADMINISTRATION OF THE CONTRACT

4.1 *CONTRACT ADMINISTRATION*

4.1.1 City Engineer will provide administration of the Contract and City Engineer is authorized to issue Change Orders, Work Change Directives, and Minor Changes in the Work.

4.1.1.1 City Engineer may act through Project Manager, Design Consultant, or Inspector. When the term "City Engineer" is used in the Contract, action by City Engineer is required unless City Engineer delegates his authority in writing.

4.1.2 The City does not have control over or charge of, and is not responsible for, supervision, construction, and safety procedures enumerated in Paragraph 3.3. The City does not have control over or charge of and is not responsible for acts or omissions of Contractor, Subcontractors, or Suppliers.

4.1.3 The City and Design Consultant may attend project meetings and visit the site to observe progress and quality of the Work. The City and Design Consultant are not required to make exhaustive or continuous on-site inspections to check quality or quantity of the Work.

4.1.4 Project Manager will review and approve or take other appropriate action on Contractor's submittals, but only for limited purpose of checking for conformance with information given and design concept expressed in the Contract.

4.1.4.1 Project Manager's review of the submittals is not conducted for purpose of determining accuracy and completeness of other details, such as dimensions and quantities, or for substantiating instructions for installation or performance of Products, all of which remain the responsibility of Contractor.

4.1.4.2 Project Manager's review of submittals does not relieve Contractor of its obligations under Paragraphs 3.3, 3.12, and 3.18. Review does not constitute approval of safety precautions or, unless otherwise specifically stated by Project Manager in writing, of construction means, methods, techniques, sequences, or procedures. Project Manager's review of a specific item does not indicate approval of an assembly of which the item is a component.

4.1.5 Based on field observations and evaluations, Project Manager will process Contractor's progress payments, certify amounts due Contractor, and issue Certificates for Payment in the amount certified.

4.1.6 Project Manager will receive and forward to City Engineer for his review and records, written warranties and related documents required by the Contract and assembled by Contractor.

4.1.7 Upon written request by Contractor or Project Manager, City Engineer will resolve matters of interpretation of or performance of the Contract, which are not Claims. City Engineer's decisions are final and binding on the Parties.

4.1.8 City Engineer may reject work which does not conform to the Contract.

4.1.9 When City Engineer considers it necessary to implement the intent of the Contract, City Engineer may require additional inspection or testing of work in accordance with Paragraphs 13.6.3 and 13.6.4, whether such work is fabricated, installed, or completed.

4.2 COMMUNICATIONS IN ADMINISTRATION OF THE CONTRACT

4.2.1 Except as otherwise provided in the Contract or when authorized by City Engineer in writing, Contractor shall communicate with Project Manager. Contractor shall communicate with Design Consultant, Design Consultant's subconsultants, and separate contractors through Project Manager. The City will communicate with Subcontractors and Suppliers through Contractor.

4.3 CLAIMS AND DISPUTES

4.3.1 *Documentation by Project Manager:* Contractor shall submit Claims, including those alleging an error or omission by Project Manager or Design Consultant, to Project Manager for documentation and recommendation to City Engineer.

4.3.2 *Decision of City Engineer:* Upon submission of Claim by Project Manager or Contractor, City Engineer will resolve Claims in accordance with Paragraph 4.4. City or Contractor must present a Claim to City Engineer for a decision and receive a decision as a condition precedent to litigation.

4.3.3 *Time Limits on Claims:* Claims by Contractor must be made within 90 days after occurrence of event giving rise to the Claim.

4.3.4 *Continuing the Contract Performance:* Pending final resolution of a Claim including referral to non-binding mediation, unless otherwise agreed in writing, Contractor shall proceed diligently with the performance of the Contract and the City will continue to make payments in accordance with the Contract.

4.3.4.1 Pending final resolution of a Claim including referral to non-binding mediation, Contractor is responsible for safety and protection of physical properties and conditions at site.

4.3.5 *Claims for Concealed or Unknown Conditions:* Concealed or unknown physical conditions include utility lines, other man-made structures, storage facilities, Pollutants and Pollutant Facilities, and the like, but do not include conditions arising from Contractor operations, or failure of Contractor to properly protect and safeguard subsurface facilities. Concealed conditions also include naturally-occurring soil conditions outside the range of soil conditions identified through geotechnical investigations, but do not include conditions arising from groundwater, rain, or flood.

4.3.5.1 If conditions are encountered at the site which are Underground Facilities or otherwise concealed or unknown conditions which differ materially from:

- .1 those indicated by the Contract; or
- .2 conditions which Contractor could have discovered through site inspection, geotechnical testing, or otherwise;

then Contractor will give written notice to City Engineer no later than five days after Contractor's first observation of the condition and before condition is disturbed. Contractor's failure to provide notice constitutes a waiver of a Claim.

4.3.5.2 City Engineer will promptly investigate concealed or unknown conditions. If City Engineer determines that conditions at the site are not materially different and that no change in Contract Price or Contract Time is justified, City Engineer will notify Contractor in writing, stating reasons. If City Engineer determines the conditions differ materially and cause increase or decrease in Contractor's cost or time required for performance of part of the Work, City Engineer will recommend an adjustment in Contract Price or Contract Time, or both, as provided in Article 7. Opposition by a Party to the City Engineer's determination must be made within 21 days after City Engineer has given notice of the decision. If the Parties cannot agree on adjustment to Contract Price or Contract Time, adjustment is subject to further proceedings pursuant to Paragraph 4.4.

4.3.6 *Claims for Additional Cost:* If Contractor wishes to make a Claim for increase in Contract Price, Contractor shall give written notice before proceeding with work for which Contractor intends to submit a Claim. Prior notice is not

required for Claims relating to an emergency endangering life or property arising under Paragraph 10.4.

4.3.6.1 Contractor may file a Claim in accordance with Paragraph 4.4 if Contractor believes it has incurred additional costs, for the following reasons:

- .1 written interpretation of City Engineer;
- .2 order by City Engineer to stop the Work when Contractor is not at fault;
- .3 suspension of the Work by City Engineer;
- .4 termination of the Contract by City Engineer; or
- .5 The City's non-compliance with another provision of the Contract.

4.3.6.2 No increase in Contract Price is allowed for delays or hindrances to the Work, except for direct and unavoidable extra costs to Contractor caused by failure of the City to provide information and services, or to make land and materials available, when required of the City under the Contract. Any increase claimed is subject to the provisions of Paragraph 4.4 and Article 7.

4.3.6.3 The City is not liable for Claims for delay when Date of Substantial Completion occurs prior to expiration of Contract Time.

4.3.7 *Claims for Additional Time:* If Contractor wishes to make a Claim for an increase in Contract Time, Contractor shall give written notice as provided in Paragraph 8.2. In case of continuing delay, only one Claim is necessary.

4.4 *RESOLUTION OF CLAIMS AND DISPUTES*

4.4.1 City Engineer will review Claims and take one or more of the following preliminary actions within 30 days of receipt of Claim:

- .1 submit a suggested time to meet and discuss the Claim with City Engineer;
- .2 reject Claim, in whole or in part, stating reasons for rejection;
- .3 recommend approval of the Claim by the other Party;
- .4 suggest a compromise; or
- .5 take other actions as City Engineer deems appropriate to resolve the Claim.

4.4.2 City Engineer may request additional supporting data from claimant. Party making Claim shall, within 10 days after receipt of City Engineer's

request, submit additional supporting data requested by City Engineer.

4.4.3 At any time prior to rendering a written decision regarding a Claim, City Engineer may refer Claim to non-binding mediation as provided in Paragraph 4.5. If Claim is resolved, City Engineer will prepare and obtain all appropriate documentation.

4.4.4 If Claim is not referred to non-binding mediation, City Engineer will render a written decision within 75 days of receipt of Claim, or a time mutually agreed upon by the Parties in writing. City Engineer may notify Surety and request Surety's assistance in resolving Claim. City Engineer's decision is final and binding on the Parties.

4.5 *NON-BINDING MEDIATION*

4.5.1 If City Engineer refers a Claim to non-binding mediation, the mediation will be conducted according to the Construction Industry Mediation Rules of the American Arbitration Association in effect at the time unless the Parties agree to other rules. The Parties shall make their best efforts to complete mediation within 30 days of City Engineer's referral.

4.5.2 Contractor shall initially pay fees required by American Arbitration Association. The City will reimburse Contractor by Change Order for the City's share of proceedings, in accordance with Paragraph 7.3, plus interest, at the rate of one percent per month.

4.5.3 If entire Claim is not settled by mediation, Claim, or unsettled part thereof, will be decided by City Engineer as provide in Paragraph 4.4 within 40 days of termination of mediation by the mediator. Contractor shall immediately notify City Engineer in writing of termination of mediation.

ARTICLE 5 - SUBCONTRACTORS AND SUPPLIERS

5.1 *AWARD OF SUBCONTRACTS OTHER CONTRACTS FOR PORTIONS OF THE WORK*

5.1.1 Contractor may not contract with a Subcontractor or Supplier that City Engineer has made a reasonable and timely objection to.

5.1.2 If City Engineer has a reasonable objection to person or entity proposed by Contractor,

Contractor shall propose another with whom City Engineer has no reasonable objection.

5.1.3 Contractor shall execute contracts with approved Subcontractors and Suppliers before the Subcontractors or Suppliers begin work under the Contract.

5.1.4 Contractor shall notify City Engineer in writing of any proposed change of Subcontractor or Supplier previously accepted by the City.

5.1.5 Contractor shall make timely payments to Subcontractors and Suppliers for performance of the Contract. Contractor shall protect, defend, and indemnify the City from any claim or liability arising out of Contractor's failure to make the payments. Disputes relating to payment of MWBE Subcontractors or Suppliers will be submitted to arbitration in same manner as other disputes under MWBE subcontracts. Failure of Contractor to comply with decisions of arbitrator may be determined by City Engineer a material breach leading to termination of the Contract.

5.2 *CONTRACTOR RESPONSIBILITY FOR SUBCONTRACTORS*

5.2.1 Contractor is responsible to the City, as may be required by laws and regulations, for all acts and omissions of Subcontractors, Suppliers, and other persons and organizations performing or furnishing any of the Work under direct or indirect contract with Contractor.

5.2.2 Contractor shall make available to each proposed Subcontractor, prior to execution of subcontract, copies of the Contract to which Subcontractor is bound by this Paragraph 5.2. Contractor shall notify Subcontractor of any terms of proposed subcontract which may be at variance with the Contract.

5.2.3 The City's approval of Subcontractor or Suppliers does not relieve Contractor of its obligation to perform, or to have performed to the full satisfaction of the City, the Work required by the Contract.

5.2.4 Unless there is a contractual relationship between Contractor and a Subcontractor or Supplier to the contrary, Contractor shall withhold no more retainage from Subcontractors or Suppliers than City withholds from Contractor under this Agreement. However, once a Subcontractor or Supplier completes performance, Contractor shall release all retainage to that Subcontractor or Supplier

regardless if City continues to retain under this Agreement.

5.2.5 Prior to a Subcontractor or Supplier commencing performance for Contractor, Contractor shall meet with that Subcontractor or Supplier to provide instructions on invoicing procedures, dispute resolution procedures, and statutory rights, such as claim filing procedures under the McGregor Act. Subcontractors and Suppliers must certify to the City Engineer that Contractor has fulfilled the requirements of this Section.

ARTICLE 6 - CONSTRUCTION BY THE CITY OR BY SEPARATE CONTRACTORS

6.1 *THE CITY'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS*

6.1.1 The City may perform on-site construction operations related to the Work and as part of the Project with the City's workforce or with separate contractors.

6.2 *COORDINATION*

6.2.1 The City will coordinate activities of the City's workforce and of each separate contractor with work of Contractor, and Contractor shall cooperate with the City and separate contractors.

6.2.1.1 Contractor shall participate with other separate contractors and the City in reviewing their construction schedules when directed to do so by the Project Manager. Contractor shall make revisions to construction schedule and Contract Price deemed necessary after joint review and mutual agreement. Construction schedules shall then constitute schedules to be used by Contractor, separate contractors, and the City, until subsequently revised.

6.2.2 Contractor shall afford to the City and to separate contractors reasonable opportunity for introduction and storage of their materials and equipment, and for performance of their activities.

6.2.3 If part of Contractor's work depends on proper execution of construction or operations by the City or a separate contractor, Contractor shall, prior to proceeding with that portion of the Work, inspect the other work and promptly report to City Engineer apparent discrepancies or defects in the other construction that would render it unsuitable for the

proper execution of the Work. Failure of Contractor to report apparent discrepancies or defects in the other construction shall constitute acknowledgment that the City's or separate contractor's completed or partially completed construction is fit and proper to receive Contractor's work, except as to discrepancies or defects not then reasonably discoverable.

6.3 MUTUAL RESPONSIBILITY

6.3.1 The responsible party bears the costs caused by delays, by improperly timed activities, or by nonconforming construction.

6.3.2 Contractor shall promptly remedy damage caused by Contractor to completed or partially completed construction or to property of the City or separate contractor.

6.3.3 Claims or disputes between Contractor and other City contractors, or subcontractors of other City contractors, working on the Project must be submitted to binding arbitration in accordance with Construction Industry Arbitration Rules of the American Arbitration Association upon demand by any party to the dispute or by the City.

6.4 THE CITY'S RIGHT TO CLEAN UP

6.4.1 If dispute arises among Contractor, separate contractors, and the City as to responsibility under their respective contracts for maintaining premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.21, the City may clean up and allocate cost among those responsible, as determined by City Engineer.

ARTICLE 7 - CHANGES IN THE WORK

7.1 CHANGES

7.1.1 Changes in scope of the Work, subject to limitations in Article 7 and elsewhere in the Contract, may be accomplished without invalidating the Contract, or without notifying Surety by:

- .1 Change Order;
- .2 Work Change Directive; or
- .3 Minor Change in the Work.

7.1.2 The following types of Change Orders require City Council approval:

- .1 a single Change Order that exceeds five percent of Original Contract Price,

- .2 a Change Order which, when added to previous Change Orders, exceeds five percent of Original Contract Price,
- .3 a Change Order, in which the total value of increases outside of the general scope of work approved by City Council, when added to increases outside the general scope of work approved by City Council in previous Change Orders, exceeds 40 percent of the Original Contract Price, even if the net increase to the Original Contract Price is five percent or less. In this context, "increase" means an increase in quantity resulting from the addition of locations not within the scope of work approved by City Council, or the addition of types of goods or services not bid as unit price items.

Nothing in this Paragraph is intended to permit an increase of the Contract Price in excess of the limit set out in TEX. LOC. GOV'T CODE ANN. §252.048 or its successor statute.

7.1.3 Contractor shall proceed promptly to execute changes in the Work provided in Modifications, unless otherwise stated in the Modification.

7.2 WORK CHANGE DIRECTIVES

7.2.1 A Work Change Directive cannot change Contract Price or Contract Time, but is evidence that the Parties agree that a change, ordered by directive, will be incorporated in a subsequently issued Change Order as to its effect, if any, on Contract Price or Contract Time.

7.2.2 Failure by Contractor to commence work identified in a Work Change Directive within the time specified by City Engineer, or to complete the work in a reasonable period of time, may be determined by City Engineer to be a material breach of Contract.

7.2.3 A Work Change Directive is used in the absence of total agreement of the terms of a Change Order. Interim payments are made in accordance with Paragraph 9.6.1.

7.2.4 If Contractor signs a Work Change Directive, then Contractor agrees to its terms including adjustment in Contract Price and Contract Time or method for determining them. Agreement by the Parties to adjustments in Contract Price and Contract Time are immediately recorded as a Change Order.

7.2.5 City Engineer, by Work Change Directive, may direct Contractor to take measures as necessary to expedite construction to achieve Date of Substantial Completion on or before expiration of Contract Time. When the Work is expedited solely for convenience of the City and not due to Contractor's failure to prosecute timely completion of the Work, then Contractor is entitled to an adjustment in Contract Price equal to actual costs determined in accordance with Article 7.

7.3 *ADJUSTMENTS IN CONTRACT PRICE*

7.3.1 Adjustments in Contract Price are accomplished by Change Order and are based on one of the following methods:

- .1 mutual acceptance of fixed price, properly itemized and supported by sufficient data to permit evaluation;
- .2 unit prices stated in the Contract or subsequently agreed upon;
- .3 cost to be determined in a manner agreed upon by the Parties and mutually acceptable fixed or percentage fee; or
- .4 as provided in Paragraph 7.3.2.

7.3.2 If Contractor does not agree with a change in Contract Price or Contract Time or the method for adjusting them specified in the Work Change Directive within 21 days from date of the Work Change Directive's issuance, method and adjustment are determined by City Engineer. If Project Manager or Contractor disagree with City Engineer's determination they then may file a Claim in accordance with Paragraph 4.4.

7.3.2.1 If City Engineer determines a method and adjustment in Contract Price under Paragraph 7.3.2, Contractor shall provide, in a form as City Engineer may prescribe, appropriate supporting data for items submitted under Paragraph 7.3.2. Failure to submit the data within 21 days of request for the data by City Engineer shall constitute waiver of a Claim.

7.3.2.2 Unless otherwise provided in the Contract, costs for the purposes of this Paragraph 7.3.2 are limited to the following:

- .1 costs of labor, including labor burden as stated below for social security, unemployment insurance, customary and usual fringe benefits required by agreement or custom, and Workers' Compensation insurance;

- .1 the maximum labor burden applied to costs of labor for changes in the Work is 55 percent;
- .2 costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 rental costs of machinery and equipment, exclusive of hand tools, whether rented from Contractor or others, with prior approval of City Engineer;
- .4 costs of premiums for Bonds and insurance and permit fees related to the change in the Work;
- .5 additional costs of direct supervision of work and field office personnel directly attributable to the change; and
- .6 allowances for overhead and profit as stated below.
 - .1 the maximum allowances for overhead and profit on increases due to Change Orders:

	Overhead	Profit
to Contractor for change in the Work performed by Subcontractors:	10 percent	0 percent
to first tier Subcontractors for change in the Work performed by its Subcontractors:	10 percent	0 percent
to Contractor and Subcontractor for change in the Work performed by their respective firms:	10 percent	5 percent

.2 for changes in the Work performed by Contractor and Subcontractors, allowance for overhead and profit are applied to an amount equal to cost of all additions less cost of all deletions to the Work. Allowance for overhead to Contractor and first tier Subcontractors on changes performed by Subcontractors are applied to an amount equal to the sum of all increases to the Work by applicable Subcontractors.

7.3.3 If the City deletes or makes a change, which results in a net decrease in Contract Price, the City is entitled to a credit calculated in accordance with Paragraphs 7.3.1, 7.3.2, 7.3.2.1, and 7.3.2.2.1 through 7.3.2.2.5. When both additions and credits covering related work or substitutions are involved in a change, allowance for overhead and profit is figured on the basis of a net increase, if any, with respect to that change in accordance with Paragraph 7.3.2.2.6.

7.3.4 When Contractor agrees with the determination made by City Engineer concerning adjustments in Contract Price and Contract Time, or the Parties otherwise reach agreement upon the adjustments, the agreement will be immediately recorded by Change Order.

7.4 *MINOR CHANGES IN THE WORK*

7.4.1 A Minor Change in Work is binding on the Parties. Contractor shall acknowledge, in a written form acceptable to City Engineer, that there is no change in Contract Time or Contract Price and shall carry out the written orders promptly.

ARTICLE 8 - TIME

8.1 *PROGRESS AND COMPLETION*

8.1.1 Time is of the essence in the Contract. By executing the Contract, Contractor agrees that Contract Time is a reasonable period for performing the Work.

8.1.2 *Computation of Time:* In computing any period of time prescribed or allowed by the General Conditions, the day of the act, event, or default after which designated period of time begins to run is not to be included. Last day of the period so computed is to be included, unless it is a Sunday or Legal Holiday, in which event the period runs until end of next day which is not a Sunday or Legal Holiday. Sundays and Legal Holidays are considered to be days and are to be included in all other time computations relative to Contract Time.

8.1.3 Contractor may not commence the Work prior to the effective date of insurance and Bonds required by Article 11.

8.1.4 Contractor shall proceed expeditiously and without interruption, with adequate forces, and shall achieve Date of Substantial Completion within Contract Time.

8.1.5 Should progress of the Work fall behind construction schedule, except for reasons stated in Paragraph 8.2.1, Contractor shall promptly submit at the request of Project Manager, updated construction schedule to City Engineer for approval. Contractor's failure to submit updated schedule may, at City Engineer's discretion, constitute a material breach of the Contract. Contractor shall take action necessary to restore progress by working the hours, including night shifts and lawful overtime operations as necessary, to achieve Date of Substantial Completion within Contract Time.

8.1.6 Except in connection with safety or protection of persons or the Work or property at the site or adjacent to the site, and except as otherwise indicated in the Contract, all the Work at the site will be performed Monday through Saturday between the hours of 7:00 a.m. and 7:00 p.m. Contractor may not perform work between 7:00 p.m. and 7:00 a.m., on a Sunday, or on a Legal Holiday, without giving City Engineer 24-hour prior written notice and receiving written consent of City Engineer.

ARTICLE 9 - PAYMENTS AND COMPLETION

8.2 *DELAYS AND EXTENSIONS OF TIME*

8.2.1 Contractor may request extension of Contract Time for a delay in performance of work that arises from causes beyond control and without fault or negligence of Contractor. Examples of these causes are:

- .1 acts of God or of the public enemy,
- .2 acts of government in its sovereign capacity,
- .3 fires,
- .4 floods,
- .5 epidemics,
- .6 quarantine restrictions,
- .7 strikes,
- .8 freight embargoes,
- .9 unusually severe weather; and
- .10 discovery of Pollutants or Pollutant Facilities at the site.

8.2.2 Contractor may request an extension of Contract Time for delay only if:

- .1 delay is caused by failure of Subcontractor or Supplier to perform or make progress; and
- .2 cause of failure is beyond control of both Contractor and Subcontractor or Supplier.

8.2.3 Claims relating to Contract Time must be made in accordance with Paragraph 4.3.7.

8.2.4 Claims for extending or shortening Contract Time are based on written notice promptly delivered by the Party making Claim to other Party. Claim must accurately describe occurrence generating Claim, and a statement of probable effect on progress of the Work.

8.2.5 Claims for extension of Contract Time are considered only when a Claim is filed within the time limits stated in Paragraph 4.3.3.

8.2.6 Written notice of Claim must be accompanied by claimant's written statement that adjustment claimed is entire adjustment to which claimant is entitled as a result of the occurrence of the event. When the Parties cannot agree, Claims for adjustment in Contract Time are determined by City Engineer in accordance with Paragraph 4.4.

8.2.7 Adjustments to Contract Time are accomplished by Change Order.

9.1 *UNIT PRICE WORK*

9.1.1 Where the Contract provides that all or part of the Work is based on Unit Prices, the Original Contract Price includes, for all Unit Price work, an amount equal to the sum of Unit Prices times Unit Price Quantities for each separately identified item of Unit Price work.

9.1.2 Each Unit Price includes an amount to cover Contractor's overhead and profit for each separately identified item.

9.1.3 The Contractor may not make a Claim against the City for excess or deficiency in Unit Price Quantities provided in the Contract, except as provided in Paragraph 9.1.4.1. Payment at the prices stated in the Contract is in full for the completed work. Contractor is not entitled to additional payment for materials, supplies, labor, tools, machinery and all other expenditures incidental to satisfactory completion of the Work.

9.1.4 City Engineer may increase or decrease quantities of the Work within limitations stated in Paragraph 7.1.2. Contractor is entitled to payment for actual quantities of items provided at Unit Prices set forth in the Contract.

9.1.4.1 Where the final quantity of work performed by Contractor on Major Unit Price Work item differs by more than 25 percent from quantity of the item stated in the Contract, a Party may request an adjustment in Unit Price, for the portion that differs by more than 25 percent, by a Change Order under Paragraph 7.3.

9.2 *ESTIMATES FOR PAYMENT, UNIT PRICE WORK*

9.2.1 Following the day of each month indicated in the Contract, Project Manager will prepare a Certificate for Payment for the preceding monthly period based on estimated units of work completed. Prior to preparing Certificate of Payment, Contractor shall have submitted to City Engineer on a form approved by the Director of Affirmative Action, evidence satisfactory to the City Engineer of payments made to Subcontractors and Suppliers for the month preceding the month for which the Certificate for Payment is prepared.

9.2.2 Before final completion, City Engineer will review and confirm with Contractor the actual

final installed Unit Price quantities. City Engineer's determination of actual final installed Unit Price quantities will be included in the final Certificate for Payment and any previous underpayments and overpayments will be reconciled with the actual final Unit Price quantities. Contractor shall file written notice of intent to appeal, if any, City Engineer's determination within 10 days of receipt of final Certificate for Payment. Upon expiration of the 10-day period, City Engineer's decision is final and binding on the Parties. If Contractor submits notice within the 10-day period, Contractor shall submit a Claim in accordance with Paragraph 4.4.

9.3 *STIPULATED PRICE WORK*

9.3.1 For work contracted on a Stipulated Price basis, 10 days before submittal of first Application for Payment, Contractor shall submit to City Engineer a Schedule of Values allocated to various portions of the Work, prepared in the form and supported by the data as City Engineer may require to substantiate its accuracy. This schedule, as approved by City Engineer, is used as a basis for approval of Contractor's Applications for Payment.

9.4 *APPLICATIONS FOR PAYMENT, STIPULATED PRICE WORK*

9.4.1 For work contracted on a Stipulated Price basis, Contractor shall submit Applications for Payment to City Engineer each month on a form acceptable to City Engineer in accordance with Schedule of Values. Application must indicate percentages of completion of each portion of the Work listed in Schedule of Values as of the end of the period covered by the Application for Payment.

9.4.2 Applications for Payment must be supported by substantiating data as City Engineer may require and must reflect retainages as provided below. Evidence satisfactory to the City Engineer of payments made to Subcontractors and Suppliers for the month preceding the month for which the Application for Payment is submitted must accompany each Application for Payment on a form approved by the Director of Affirmative Action. Application must be sworn and notarized.

9.5 *CERTIFICATES FOR PAYMENT*

9.5.1 City Engineer will, within 10 days after the date specified in the Contract for Unit Price work, or upon receipt of Contractor's Application for Payment for Stipulated Price work, issue a Certificate for Payment for work based on amount which City Engineer determines is properly due, with copy to Contractor.

9.5.2 Unless otherwise provided in the Contract, payment for completed work and for properly stored Products is conditioned upon compliance with procedures satisfactory to City Engineer to protect the City's interests. Procedures will include applicable insurance, storage, and transportation to site for materials and equipment stored off-site. Contractor is responsible for maintaining materials and equipment until Date of Substantial Completion.

9.5.3 Contractor shall document its use of Low Sulfur Diesel Fuel by providing invoices and receipts evidencing Contractor's use.

9.6 *COMPUTATIONS OF CERTIFICATES FOR PAYMENT*

9.6.1 Subject to the provisions of the Contract, the amount of each Certificate for Payment is calculated as follows:

- .1 that portion of Contract Price allocated to completed work as determined by:
 - .1 multiplying the percentage of completion of each portion of the Work listed in the Schedule of Values by the value of that portion of the Work, or
 - .2 multiplying Unit Price quantities Installed times the Unit Prices listed in the Contract;
- .2 plus progress payments for completed work that has been properly authorized by Modifications;
- .3 less retainage of five percent;
- .4 plus actual costs, properly substantiated by certified copies of invoices and freight bills, of non-perishable materials and equipment delivered and properly stored, if approved in advance by Project Manager, less 15 percent;
- .5 less any previous payments by the City.

9.7 *DECISIONS TO WITHHOLD CERTIFICATION*

9.7.1 City Engineer may decline to certify payment and may withhold payment in whole or in part to the extent reasonably necessary to protect the City if, in City Engineer's opinion, there is reason to believe that:

- .1 nonconforming work has not been remedied;
- .2 the Work cannot be completed for unpaid balance of Contract Price;

- .3 there is damage to the City or another contractor;
- .4 the Work will not be completed within Contract Time and that unpaid balance will not be adequate to cover actual and liquidated damages;
- .5 probable evidence that third party claims will be filed in court, in arbitration, or otherwise;
- .6 Contractor has failed to make payments to Subcontractors or Suppliers for labor, material, or equipment; or
- .7 Contractor has persistently failed to carry out work in accordance with the Contract.
- .8 Contractor has not paid Subcontractors or Suppliers because of a payment dispute; or
- .9 Contractor has failed to provide satisfactory evidence described in Sections 9.2.1, 9.4.2, and 9.8.2.
- 9.7.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.
- 9.7.3 City Engineer may decline to certify payment and may withhold request for payment in whole or in part upon failure of Contractor to submit initial construction schedule or monthly schedule updates, as required in Paragraphs 3.15.1 and 3.15.3.
- 9.8 *PROGRESS PAYMENTS*
- 9.8.1 The City will make payment, in an amount certified by City Engineer, within 20 days after City Engineer has issued a Certificate for Payment.
- 9.8.2 The City has no obligation to pay or to facilitate the payment to a Subcontractor or Supplier, except as may otherwise be required by law. Contractor shall comply with the prompt payment requirements of Chapter 2251 of the Government Code. However, Contractor within 7 calendar days of Contractor's receipt of payment from the City, unless there is a payment dispute between Contractor and a Subcontractor or Supplier evidenced on a form approved by the Director of Affirmative Action and submitted to the City Engineer each month with Application for payment or Estimate for Payment.
- 9.8.2.1 The City may, upon request and at the discretion of City Engineer, furnish to Subcontractor information regarding percentages of completion or the amounts applied for by Contractor, and action taken thereon by the City because of work done by the Subcontractor.
- 9.8.2.2 Contractor shall prepare and submit to City Engineer a Certification of Payment to Subcontractors and Suppliers form to be attached to each monthly Estimate for Payment or Application for Payment.
- 9.8.3 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Work by the City, does not constitute acceptance of work which is not in accordance with the Contract.
- 9.9 *DATE OF SUBSTANTIAL COMPLETION*
- 9.9.1 When Contractor considers the Work, or a portion thereof designated by City Engineer, to be substantially complete, Contractor shall prepare and submit to Project Manager a comprehensive punch list of items to be completed or corrected. Failure to include an item on the punch list does not alter the responsibility of Contractor to comply with the Contract.
- 9.9.1.1 By submitting the punch list to Project Manager, Contractor represents that work on the punch list will be completed within the time provided for in Paragraph 9.9.4.3.
- 9.9.2 Upon receipt of Contractor's punch list, Project Manager will inspect the Work, or designated portion thereof, to verify that the punch list contains all items needing completion or correction. If Project Manager's inspection discloses items not on Contractor's punch list, the items must be added to the punch list of items to be completed or corrected. If Project Manager's inspection reveals that Contractor is not yet substantially complete, Contractor shall complete or correct the deficiencies and request another inspection by Project Manager. The City may recover the costs of re-inspection from Contractor.
- 9.9.3 Prior to City Engineer's issuing a Certificate of Substantial Completion, Contractor shall also provide:
- .1 Certificate of Occupancy for new construction, or Certificate of Compliance for remodeled work, as applicable, and
- .2 compliance with Texas Accessibility Standards through state inspection of the Work, if required. If Contractor

calls for inspection in a timely manner and the inspection is delayed through no fault of Contractor, and City Engineer so confirms, City Engineer may, upon request by Contractor, add the inspection to the punch list in Paragraph 9.9.2 and issue a Certificate of Substantial Completion.

9.9.4 When the Work, or designated portion thereof, is determined by City Engineer to be sufficiently complete in accordance with the Contract so the City can occupy or utilize the Work, or designated portion thereof, for the purpose for which it is intended, City Engineer will prepare a Certificate of Substantial Completion that incorporates the punch list in Paragraph 9.9.2 and establishes:

- .1 Date of Substantial Completion;
- .2 responsibilities of the Parties for security, maintenance, heating, ventilating and air conditioning, utilities, damage to the Work, and insurance; and
- .3 fixed time within which Contractor shall complete all items on punch list of items to be corrected accompanying the certificate.

9.9.5 Warranties required by the Contract shall commence on the Date of Substantial Completion unless otherwise provided by City Engineer in Certificate of Substantial Completion. Warranties may not commence on items not substantially completed.

9.9.6 After Date of Substantial Completion and upon application by Contractor and approval by City Engineer, the City may make payment, reflecting adjustment in retainage, if any, as follows:

- .1 with the consent of Surety, the City may increase payment to Contractor to 96 percent of Contract Price, less value of items to be completed and accrued liquidated damages.

9.9.7 Contractor shall complete or correct the items in Paragraph 9.9.2 within the time period set out in the Certificate of Substantial Completion. If Contractor fails to do so, the City may issue a Notice of Noncompliance and proceed according to Paragraph 2.5.

9.10 PARTIAL OCCUPANCY OR USE

9.10.1 The City may occupy or use any completed or partially completed portion of the Work at any stage, provided the occupancy or use is consented to by Contractor and Contractor's insurer

and authorized by public authorities having jurisdiction over the Work. Consent of Contractor to partial occupancy or use may not be unreasonably withheld.

9.10.2 Immediately prior to the partial occupancy or use, Project Manager and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used to determine and record condition of the Work.

9.10.3 Partial occupancy or use of a portion of the Work does not constitute acceptance of work not in compliance with requirements of the Contract.

9.11 FINAL COMPLETION AND FINAL PAYMENT

9.11.1 Contractor shall review the Contract and inspect the Work prior to Contractor notification to City Engineer that the Work is complete and ready for final inspection. Contractor shall submit affidavit that the Work has been inspected and that the Work is complete in accordance with requirements of the Contract.

9.11.2 Project Manager will make final inspection within 15 days after receipt of Contractor's written notice that the Work is ready for final inspection and acceptance. If Project Manager finds the Work has been completed in accordance with the Contract, Contractor shall submit items set out in Paragraph 9.11.4 and, for stipulated price contracts, a final Application for Payment. City Engineer will, within 10 days, issue Certificate of Final Completion stating that to the best of City Engineer's knowledge, information, and belief, the Work has been completed in accordance with the Contract, and will recommend acceptance of the Work by City Council.

9.11.3 Should work be found not in compliance with requirements of the Contract, City Engineer will notify Contractor in writing of items of noncompliance. Upon inspection and acceptance of the corrections by Project Manager, compliance with all procedures of Paragraph 9.11.2, and Contractor's submission of the items set out in Paragraph 9.11.4, the City Engineer will issue Certificate of Final Completion to Contractor as provided in Paragraph 9.11.2.

9.11.4 Contractor shall submit the following items to City Engineer before City Engineer will issue a Certificate of Final Completion:

- .1 affidavit that payrolls, invoices for materials and equipment, and other indebtedness of Contractor connected

- with the Work, less amounts withheld by the City, have been paid or otherwise satisfied. If required by City Engineer, Contractor shall submit further proof including waiver or release of lien or claims from laborers or Suppliers of Products;
- .2 certificate evidencing that insurance required by the Contract to remain in force after final payment is currently in effect, will not be canceled or materially changed until at least 30 days written notice has been given to the City;
 - .3 written statement that Contractor knows of no substantial reason that insurance will not be renewable to cover correction and warranty period required by the Contract;
 - .4 consent of Surety to final payment; and
 - .5 copies of record documents, maintenance manuals, tests, inspections, and approvals.

Upon City Engineer's issuance of a Certificate of Final Completion, Contractor may request increase in payment to 99 percent of Contract Price, less accrued liquidated damages.

9.11.5 If Contractor fails to submit required items in Paragraph 9.11.4 within 10 days of Project Manager's inspection of the Work under Paragraph 9.11.2 or Paragraph 9.11.3, City Engineer may, but is not obligated to:

- .1 deduct liquidated damages accrued from monies held;
- .2 proceed to City Council for acceptance of the Work, minus some or all of the items Contractor fails to submit under Paragraph 9.11.4; and,
- .3 upon acceptance by City Council of the portion of the Work completed, either make final payment as set out in Paragraph 9.11.8 or request that the City Attorney interplead the balance due to Contractor under the Contract into the registry of a court of appropriate jurisdiction.

9.11.6 If final completion is materially delayed through no fault of Contractor, or by issuance of Change Orders affecting date of final completion, and City Engineer so confirms, the City may, upon application by Contractor and certification by City Engineer, and without terminating the Contract, make payment of balance due for that portion of the Work fully completed and accepted.

9.11.7 If remaining balance due for work not corrected is less than retainage stipulated in the Contract, Contractor shall submit to City Engineer written consent of Surety to payment of balance due for that portion of the Work fully completed and accepted, prior to certification of the payment. The payment is made under terms governing final payment, except that it does not constitute waiver of Claims.

9.11.8 The City will make final payment to Contractor within 30 days after acceptance of the Work by City Council, subject to limitations, if any, as stated in the Contract.

9.11.9 Acceptance of final payment by Contractor shall constitute a waiver of all Claims, whether known or unknown, by Contractor, except those previously made in writing and identified by Contractor as unsettled at time of final Application for Payment.

9.12 LIQUIDATED DAMAGES

9.12.1 Contractor, Surety, and the City agree that failure to complete the Work within Contract Time will cause damages to the City and that actual damages from harm are difficult to estimate accurately. Therefore, Contractor, Surety, and the City agree that Contractor and Surety are liable for and shall pay to the City the amount stipulated in Supplementary Conditions as liquidated damages, and that the amount of damages fixed therein is a reasonable forecast of just compensation for harm to the City resulting from Contractor's failure to complete the Work within Contract Time. The amount stipulated will be paid for each day of delay beyond Contract Time until Date of Substantial Completion.

9.12.2 Contractor shall pay the City an amount equal to \$1,200.00 per diesel operating vehicle or piece of motorized equipment per incident of high sulfur diesel fuel usage.

ARTICLE 10 - SAFETY PRECAUTIONS

10.1 SAFETY PROGRAMS

10.1.1 Contractor is responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with performance of the Contract. Contractor shall submit a safety program to City Engineer prior to mobilizing for the Work, and is solely responsible for safety, efficiency, and adequacy of ways, means, and methods, and for

damage which might result from failure or improper construction, maintenance, or operation performed by Contractor.

10.2 *POLLUTANTS AND POLLUTANT FACILITIES*

10.2.1 If Contractor encounters material on-site which it reasonably believes to be a Pollutant or facilities which it reasonably believes to be a Pollutant Facility, Contractor shall immediately stop work in affected area and immediately notify City Engineer, confirming the notice thereafter in writing.

10.2.2 If City Engineer determines that the material is a Pollutant or facility is a Pollutant Facility, work in affected area may not be resumed except by Modification, and only if the work would not violate applicable laws or regulations.

10.2.3 If City Engineer determines that the material is not a Pollutant or a facility is not a Pollutant Facility, work in affected area will be resumed upon issuance of a Modification.

10.2.4 Contractor is not required to perform, unless authorized by Change Order, work relating to Pollutants or Pollutant Facilities except for that work relating to Pollutants or Pollutant Facilities specified in the Contract.

10.3 *SAFETY OF THE ENVIRONMENT, PERSONS, AND PROPERTY*

10.3.1 Contractor shall take reasonable precautions for safety and shall provide reasonable protection to prevent damage, injury, or loss from all causes, to:

- .1 employees performing work on-site, and other persons who may be affected thereby;
- .2 work, including Products to be incorporated into the Work, whether in proper storage, under control of Contractor or Subcontractor; and
- .3 other property at or adjacent to the site, such as trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal or replacement in course of construction.

10.3.2 Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on safety of persons, property, or environment.

10.3.2.1 Contractor shall comply with requirements of Underground Facility Damage Prevention and Safety Act TEX. UTIL. CODE ANN. Ch. 251 (Vernon Supp. 2002).

10.3.2.2 Contractor shall comply with all safety rules and regulations of the Federal Occupational Health and Safety Act of 1970 and subsequent amendments (OSHA).

10.3.3 Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection of persons and property, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

10.3.4 Contractor shall designate responsible member of Contractor's organization at site whose duty is prevention of accidents. This person will be Contractor's Superintendent unless otherwise designated by Contractor in writing to City Engineer.

10.3.5 Contractor shall prevent windblown dust and may not burn or bury trash debris or waste products on-site. Contractor shall prevent environmental pollution, including but not limited to particulates, gases and noise, as a result of the Work.

10.3.6 When use or storage of hazardous materials or equipment, or unusual methods are necessary for execution of the Work, Contractor shall exercise utmost care and carry on the activities under supervision of properly qualified personnel.

10.3.7 Contractor shall promptly remedy damage and loss to property referred to in Paragraphs 10.3.1.2 and 10.3.1.3, caused in whole or in part by Contractor, or Subcontractors, which is not covered by insurance required by the Contract. Contractor is not required to remedy damage or loss attributable to the City, Design Consultant, or other contractors.

10.4 *EMERGENCIES*

10.4.1 In emergencies affecting safety of persons or property, Contractor shall act at Contractor's discretion to prevent imminent damage, injury, or loss. Additional compensation or extension of time claimed by Contractor because of emergencies are determined as provided in Article 7.

ARTICLE 11 - INSURANCE AND BONDS

11.1 *GENERAL INSURANCE REQUIREMENTS*

11.1.1 With no intent to limit Contractor's liability under indemnification provisions set forth in Paragraphs 3.25 and 3.26, Contractor shall provide and maintain in full force and effect during term of the Contract and all extensions and amendments thereto, at least the following insurance and available limits of liability.

11.1.2 If any of the following insurance is written as "claims made" coverage and the City is required to be carried as additional insured, then Contractor's insurance shall include a two-year extended discovery period after last date that Contractor provides any work under the Contract.

11.1.3 Aggregate amounts of coverage, for purposes of the Contract, are agreed to be amounts of coverage available during fixed 12-month policy period.

11.2 *INSURANCE TO BE PROVIDED BY CONTRACTOR*

11.2.1 *Risks and Limits of Liability:* Contractor shall provide at a minimum insurance coverage and limits of liability set out in Table 1.

11.2.1.1 If Limit of Liability for Excess Coverage is \$2,000,000 or more, Limit of Liability for Employer's Liability may be reduced to \$500,000.

11.2.2 *Form of Policies:* Insurance may be in one or more policies of insurance, form of which is subject to approval by City Engineer. It is agreed, however, that nothing City Engineer does or fails to do with regard to insurance policies relieves Contractor from its duties to provide required coverage and City Engineer's actions or inactions will never be construed as waiving the City's rights.

11.2.3 *Issuers of Policies:* Issuer of any policy shall have:

- .1 a Certificate of Authority to transact business in Texas, or
- .2 have a Best's rating of at least B+ and a Best's Financial Size Category of Class VI or better, according to the most current edition of Best's Key Rating Guide, and the issuer must be an eligible nonadmitted insurer in the State of Texas.

Each insurer is subject to approval by City Engineer in City Engineer's sole discretion as to conformance with these requirements, pursuant to Paragraph 11.2.2.

11.2.4 *Insured Parties:* Each policy, except those for Workers' Compensation and Owner's and Contractor's Protective Liability, must name the City, its officers, agents, and employees as additional insured parties on original policy and all renewals or replacements during term of the Contract. The City's status as additional insured under Contractor's insurance does not extend to instances of sole negligence of the City unmixed with any fault of Contractor.

11.2.5 *Deductibles:* Contractor assumes and bears any claims or losses to extent of deductible amounts and waives any claim it may ever have for same against the City, its officers, agents, or employees.

11.2.6 *Cancellation:* Each policy must expressly state that it may not be canceled, non-renewed, or materially changed unless 30 days advance notice of cancellation, non-renewal, or material change is given in writing to City Engineer by insurance company.

11.2.7 *Subrogation:* Each policy except Owner's and Contractor's Protective Liability must contain endorsement to the effect that issuer waives any claim or right in nature of subrogation to recover against the City, its officers, agents, or employees.

11.2.8 *Endorsement of Primary Insurance:* Each policy must contain an endorsement that the policy is primary insurance to any other insurance available to additional insured with respect to claims arising hereunder.

11.2.9 *Liability for Premium:* Contractor is solely responsible for payment of all insurance premium requirements hereunder and the City is not obligated to pay any premiums.

11.2.10 *Additional Requirements for Workers' Compensation Insurance Coverage:* Contractor shall, in addition to meeting the obligations set forth in Table 1, maintain throughout the term of the Contract Workers' Compensation coverage as required by statute, and Contractor shall specifically comply with requirements set forth in Paragraph 11.2.10. The definitions set out below shall apply only for purposes of this Paragraph 11.2.10.

11.2.10.1 Definitions:

- .1 *Certificate of Coverage:* A copy of certificate of insurance, or coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory Workers' Compensation insurance coverage for Contractor's, Subcontractor's, or Supplier's employees providing services for the duration of the Contract.
- .2 *Duration of the Work:* Includes the time from Date of Commencement of the Work until Contractor's work under the Contract has been completed and accepted by City Council.
- .3 *Persons providing services for the Work (Subcontractor in Texas Labor Code § 406.096):* includes all persons or entities performing all or part of services Contractor has undertaken to perform on the Work, regardless of whether that person contracted directly with Contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of the entity, or employees of entity which furnishes persons to provide services on the Work. Services include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to the Work. Services do not include activities unrelated to the Work, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.
- 11.2.10.2 Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for employees of Contractor providing services on the Work, for duration of the Work.
- 11.2.10.3 Contractor shall provide a Certificate of Coverage to the City prior to being awarded the Contract.
- 11.2.10.4 If coverage period shown on Contractor's original Certificate of Coverage ends during duration of the Work, Contractor shall file new Certificate of Coverage with the City showing that coverage has been extended.
- 11.2.10.5 Contractor shall obtain from each person providing services on the Work, and provide to City Engineer:
- .1 Certificate of Coverage, prior to that person beginning work on the Work, so the City will have on file Certificates of Coverage showing coverage for all persons providing services on the Work; and
- .2 no later than seven days after receipt by Contractor, new Certificate of Coverage showing extension of coverage, if coverage period shown on current Certificate of Coverage ends during the duration of the Work.
- 11.2.10.6 Contractor shall retain all required Certificates of Coverage for the duration of the Work and for one year thereafter.
- 11.2.10.7 Contractor shall notify City Engineer in writing by certified mail or personal delivery, within 10 days after Contractor knew or should have known, of any change that materially affects provision of coverage of any person providing services on the Work.
- 11.2.10.8 Contractor shall post on-site a notice, in text, form and manner prescribed by Texas Workers' Compensation Commission, informing all persons providing services on the Work that they are required to be covered, and stating how person may verify coverage and report lack of coverage.
- 11.2.10.9 Contractor shall contractually require each person with whom it contracts to provide services on the Work to:
- .1 provide coverage, based on proper reporting of classification codes, payroll amounts and filing of any coverage agreements, which meets statutory requirements of Texas Labor Code, Section 401.011(44) for all its employees providing services on the Work, for the duration of the Work;
- .2 provide to Contractor, prior to that person's beginning work on the Work, a Certificate of Coverage showing that coverage is being provided for all employees of the person providing services on the Work, for the duration of the Work;
- .3 provide Contractor, prior to the end of the coverage period, a new Certificate of Coverage showing extension of coverage, if the coverage period shown on the current Certificate of Coverage ends during the duration of the Work;

- .4 obtain from each other person with whom it contracts, and provide to Contractor: (1) Certificate of Coverage, prior to other person's beginning work on the Work; and (2) new Certificate of Coverage showing extension of coverage, prior to end of coverage period, if coverage period shown on the current Certificate of Coverage ends during duration of the Work.
- .5 retain all required Certificates of Coverage on file for the duration of the Work and for one year thereafter;
- .6 notify City Engineer in writing by certified mail or personal delivery within 10 days after person knew, or should have known, of change that materially affects provision of coverage of any person providing services on the Work; and
- .7 contractually require each person with whom it contracts to perform as required by Paragraphs 11.2.10.1 through 11.2.10.7, with Certificates of Coverage to be provided to person for whom they are providing services.
- 11.2.10.10 By signing the Contract or providing or causing to be provided a Certificate of Coverage, Contractor is representing to the City that all employees of Contractor who will provide services on the Work will be covered by Workers' Compensation coverage for the duration of the Work, that coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with appropriate insurance carrier. Contractor is not allowed to self-insure Workers' Compensation. Contractor may be subject to administrative penalties, criminal penalties, civil penalties, or other civil actions for providing false or misleading information.
- 11.2.10.11 Contractor's failure to comply with Paragraph 11.2.10 is a breach of the Contract by Contractor, which entitles the City to declare the Contract void if Contractor does not remedy breach within 10 days after receipt of notice of breach from City Engineer.
- 11.2.11 *Subcontractor Insurance Requirements:* Contractor shall require Subcontractors and Suppliers to obtain Commercial General Liability, Workers' Compensation, Employer's Liability and Automobile Liability coverage that meets all the requirements of Paragraph 11.2. The amount must be commensurate with the amount of the subcontract, but not less than \$500,000 per occurrence. Contractor shall require all Subcontractors with whom it contracts directly, whose subcontracts exceed \$100,000, to provide proof of Commercial General Liability and Automobile Liability insurance coverage meeting the above requirements. Contractor shall comply with all requirements set out under Paragraph 11.2.10 as to Workers' Compensation Insurance for all Subcontractors and Suppliers.

TABLE 1
REQUIRED COVERAGE

(Coverage)	(Limit of Liability)
.1 Workers' Compensation	Statutory Limits for Workers' Compensation
.2 Employer's Liability	Bodily Injury by Accident \$1,000,000 (each accident) Bodily Injury by Disease \$1,000,000 (policy limit) Bodily Injury by Disease \$1,000,000 (each employee)
.3 Commercial General Liability: Including Contractor's Protective, Broad Form Property Damage, Contractual Liability, Explosion, Underground and Collapse, Bodily Injury, Personal Injury, Products, and Completed Operations (for a period of one year following completion of the Work).	Combined single limit of \$1,000,000 (each occurrence), subject to general aggregate of \$2,000,000; Products and Completed Operations \$1,000,000 aggregate.
.4 Owner's and Contractor's Protective Liability	\$1,000,000 combined single limit each Occurrence/aggregate
.5 Installation Floater	Value of stored material or equipment, listed on Certificates of Payments, but not yet incorporated into the Work
.6 Automobile Liability Insurance: (For automobiles furnished by Contractor in course of his performance under the Contract, including Owned, Non-owned, and Hired Auto coverage)	\$1,000,000 combined single limit each occurrence
.7 Excess Coverage	\$1,000,000 each occurrence/combined aggregate in excess of limits specified for Employer's Liability, Commercial General Liability, and Automobile Liability
Defense costs are excluded from face amount of policy. Aggregate Limits are per 12-month policy period unless otherwise indicated.	

11.3 *PROOF OF INSURANCE*

11.3.1 Prior to commencing services and at time during the term of the Contract, Contractor shall furnish City Engineer with Certificates of Insurance, along with Affidavit from Contractor confirming that Certificate accurately reflects insurance coverage that is available during term of the Contract. If requested in writing by City Engineer, Contractor shall furnish City Engineer with certified copies of Contractor's actual insurance policies. Failure of Contractor to provide certified copies, as requested, may be deemed, at City Engineer's or City Attorney's discretion, a material breach of the Contract.

11.3.2 Notwithstanding the proof of insurance requirements, Contractor shall continuously maintain in effect required insurance coverage set forth in Paragraph 11.2. Failure of Contractor to comply with this requirement does constitute a material breach by Contractor allowing the City, at its option,

to immediately suspend or terminate work, or exercise any other remedy allowed under the Contract. Contractor agrees that the City has not waived or is not estopped to assert a material breach of the Contract because of any acts or omissions by the City regarding its review or non-review of insurance documents provided by Contractor, its agents, employees, or assigns.

11.4 *PERFORMANCE AND PAYMENT BONDS*

11.4.1 For Contracts over the value of \$25,000, Contractor shall provide Bonds on the City's standard forms covering faithful performance of the Contract and payment of obligations arising thereunder as required in the Contract pursuant to Chapter 2253 of the Government Code. The Bonds must be for 100 percent of Original Contract Price and in accordance with conditions stated on standard City Performance and Payment Bond and Statutory Payment Bond forms. Bonds may be

obtained from Contractor's usual source and cost for the Bonds are included in Contract Price.

11.5 MAINTENANCE BONDS

11.5.1 *One-year Maintenance Bond:*

Contractor shall provide Bond on standard City One-year Maintenance Bond form, providing for Contractor's correction, replacement, or restoration of any portion of the Work which is found to be not in compliance with requirements of the Contract during one-year correction period required in Paragraph 12.2.

11.6 SURETY

11.6.1 A Bond that is given or tendered to the City pursuant to the Contract must be executed by a surety company that is authorized and admitted to write surety Bonds in the State of Texas.

11.6.2 If a Bond is given or tendered to the City pursuant to the Contract in an amount greater than 10 percent of Surety's capital and surplus, Surety shall provide certification that Surety has reinsured that portion of the risk that exceeds 10 percent of Surety's capital and surplus. The reinsurance must be with one or more reinsurers who are duly authorized, accredited, or trusted to do business in the State of Texas. The amount reinsured by reinsurer may not exceed 10 percent of reinsurer's capital and surplus. The amount of allowed capital and surplus must be based on information received from State Board of Insurance.

11.6.3 If the amount of a Bond is greater than \$100,000, Surety shall:

- .1 also hold certificate of authority from the United States Secretary of Treasury to qualify as surety on obligations permitted or required under federal law; or,
- .2 Surety may obtain reinsurance for any liability in excess of \$100,000 from reinsurer that is authorized and admitted as a reinsurer in the State of Texas and is the holder of a certificate of authority from the United States Secretary of the Treasury to qualify as surety or reinsurer on obligations permitted or required under federal law.

11.6.4 Determination of whether Surety on the Bond or the reinsurer holds a certificate of authority from the United States Secretary of the Treasury is based on information published in Federal Register covering the date on which Bond was executed.

11.6.5 Each Bond given or tendered to the City pursuant to the Contract must be on City forms with no changes made by Contractor or Surety, and must be dated, executed, and accompanied by power of attorney stating that the attorney in fact executing such the bond has requisite authority to execute such Bond. The Bonds must be dated and must be no more than 30 days old.

11.6.6 Surety shall designate in its Bond, power of attorney, or written notice to the City, an agent resident in Harris County to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of the suretyship.

11.6.7 Contractor shall furnish information to a payment bond beneficiary as required by TEX. GOV'T CODE ANN. CH. 2253.

11.7 DELIVERY OF BONDS

11.7.1 Contractor shall deliver required Bonds to the City within time limits stated in Notice of Intent to Award and prior to Date of Commencement of the Work.

ARTICLE 12 - UNCOVERING AND CORRECTION OF THE WORK

12.1 UNCOVERING OF THE WORK

12.1.1 If a portion of the Work has been covered which City Engineer has not specifically requested to observe prior to its being covered, City Engineer may request to see such work and it must be uncovered by Contractor. If such work is in accordance with the Contract, the costs of uncovering and covering such work is charged to the City by Change Order. If such work is not in accordance with the Contract, Contractor shall pay for uncovering and shall correct the nonconforming Work promptly after receipt of Notice of Noncompliance to do so.

12.2 CORRECTION OF THE WORK

12.2.1 Contractor shall promptly correct or remove work rejected by City Engineer or work failing to conform to requirements of the Contract, whether observed before or after Date of Substantial Completion and whether fabricated, installed, or completed.

12.2.2 Contractor bears costs of correcting the rejected or nonconforming work including additional testing and inspections, and compensation for Design Consultant's services and expenses made necessary thereby.

12.2.3 If within one year after Date of Substantial Completion, or after date for commencement of warranties established under Paragraph 9.9.5 or by other applicable special warranty required by the Contract, whichever is later in time, any of the Work is found not to be in accordance with the requirements of the Contract, Contractor shall correct such work promptly after receipt of Notice of Noncompliance to do so.

12.2.4 One-year correction period for portions of the Work completed after Date of Substantial Completion will begin on the date of acceptance of that portion of the Work. This obligation under this Paragraph survives acceptance of the Work under the Contract and termination of the Contract.

12.2.5 The one-year correction period does not establish a duration for the Contractor's general warranty under Paragraph 3.12. The City retains the right to recover damages from the Contractor as long as may be permitted by the applicable statute of limitations.

12.2.6 If Contractor does not proceed with correction of the nonconforming work within time fixed by Notice of Noncompliance, the City may correct nonconforming work or remove nonconforming work and store salvageable Products at Contractor's expense. Contractor shall pay the costs of correction of nonconforming work and removal and storage of salvageable Products to the City. If Contractor does not pay costs of the correction or removal and storage within 10 days after written notice, the City may sell the Products at auction or at private sale. The City will account for proceeds thereof after deducting costs and damages that would have been borne by Contractor, including compensation for services of Design Consultant and necessary expenses. If the proceeds of sale do not cover costs which Contractor should have borne, Contractor shall pay the value of the deficiency to the City.

12.2.7 Contractor bears cost of correcting work originally installed by Contractor, the City, or by separate contractors and damaged by Contractor's correction or removal of Contractor's work.

12.3 ACCEPTANCE OF NONCONFORMING WORK

12.3.1 If City Engineer prefers to accept work which is not in accordance with requirements of the Contract, City Engineer may do so only by issuance of Change Order, instead of requiring its removal and correction. City Engineer will determine Contract Price reduction. The reduction will become effective even if final payment has been made.

ARTICLE 13 - MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAWS

13.1.1 The Contract is subject to the laws of the State of Texas, the City Charter and Ordinances, the laws of the federal government of the United States, and all rules and regulations of any regulatory body or officer having jurisdiction.

13.1.2 Venue for any litigation relating to the Contract is Harris County, Texas.

13.2 SUCCESSORS

13.2.1 The Contract binds and benefits the Parties and their legal successors and permitted assigns; however, this Paragraph 13.2.1 does not alter the restrictions on assignment and disposal of assets set out in Paragraph 13.3.1. The Contract does not create any personal liability on the part of any officer or agent of the City.

13.3 BUSINESS STRUCTURE AND ASSIGNMENTS

13.3.1 Contractor may not assign the Contract at law or otherwise, or dispose of all or substantially all of its assets without City Engineer's prior written consent. Nothing in this Paragraph, however, prevents the assignment of accounts receivable or the creation of a security interest as described in §9.406 of the Texas Business & Commerce Code. In the case of such an assignment, Contractor shall immediately furnish the City with proof of the assignment and the name, telephone number, and address of the assignee and a clear identification of the fees to be paid to the assignee.

13.4 WRITTEN NOTICE

13.4.1 All notices required or permitted by the Contract must be in writing and must be effected by hand delivery; registered or certified mail, return receipt requested; or facsimile with confirmation copy mailed to receiving Party. Notice is sufficient if made or addressed with proper postage to the address stated in the Agreement for each Party ("Notice Address") or faxed to the facsimile number

stated in the Agreement for each Party. The notice is deemed delivered on the earlier of:

- .1 the date the Notice is actually received;
- .2 the third day following deposit in a United States Postal Service post office or receptacle; or
- .3 the date the facsimile is sent unless the facsimile is sent after 5:00 p.m. local time of the recipient and then it is deemed received on the following day.

Any Party may change its Notice Address or facsimile number at any time by giving written notice of the change to the other Party in the manner provided for in this Paragraph at least 15 days prior to the date the change is effected.

13.5 RIGHTS AND REMEDIES

13.5.1 Duties and obligations imposed by the Contract and rights and remedies available thereunder are in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

13.5.2 No act or failure to act by the City or Contractor is a waiver of rights or duties afforded them under the Contract, nor is the act or failure to act constitute approval of or acquiescence in a breach of the Contract. No waiver, approval or acquiescence is binding unless in writing and, in the case of the City, signed by City Engineer.

13.6 TESTS AND INSPECTIONS

13.6.1 Contractor shall give City Engineer, Construction Manager, and Design Consultant timely notice of the time and place where tests and inspections are to be made. Contractor shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

13.6.2 The City will employ and pay for services of an independent testing laboratory to perform inspections or acceptance tests required by the Contract except:

- .1 inspections or tests covered by Paragraph 13.6.3;
- .2 those otherwise specifically provided in the Contract; or
- .3 costs incurred in connection with tests or inspections conducted pursuant to Paragraph 12.2.2.

13.6.3 Contractor is responsible for and shall pay all costs in connection with inspection or testing required in connection with City Engineer's acceptance of a Product to be incorporated into the

Work, or of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation into the Work.

13.6.4 Neither observations by the City, Construction Manager, or Design Consultant, nor inspections, tests, or approvals by others, relieves Contractor from Contractor's obligations to perform the Work in accordance with the Contract.

13.7 INTEREST

13.7.1 No interest will accrue on late payments by the City except as provided under Chapter 2251 of the Government Code.

13.8 PARTIES IN INTEREST

13.8.1 The Contract does not bestow any rights upon any third party, but binds and benefits the Parties only.

13.9 ENTIRE CONTRACT

13.9.1 The Contract merges the prior negotiations and understandings of the Parties and embodies the entire agreement of the Parties. No other agreements, assurances, conditions, covenants, express or implied, or other terms of any kind, exist between the Parties regarding the Contract.

13.10 WRITTEN AMENDMENT

13.10.1 Changes to the Contract that cannot be effected by Modifications, must be made by written amendment, which will not be effective until approved by City Council.

13.11 COMPLIANCE WITH LAWS

13.11.1 Contractor shall comply with the Americans with Disabilities Act of 1990 as amended (ADA) and Texas Architectural Barriers Act and all regulations relating to either statute.

13.11.2 Contractor shall comply with all applicable federal, state, and city laws, rules and regulations.

13.12 ENFORCEMENT

13.12.1 City Attorney or designee will have the right to enforce all legal rights and obligations under the Contract without further authorization.

13.13 SEVERABILITY

13.13.1 If any part of the Contract is for any reason found to be unenforceable, all other parts remain enforceable to the extent permitted by law.

ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CITY FOR CAUSE

14.1.1 Each of the following acts or omissions of Contractor or occurrences shall constitute an "Event of Default" under the Contract:

- .1 Contractor refuses or fails to supply enough properly skilled workers or proper Products;
- .2 Contractor disregards laws, ordinances, rules, regulations, or orders of a public authority having jurisdiction;
- .3 Contractor is guilty of material breach of any duty or obligation of Contractor under the Contract;
- .4 Contractor has had any other contract with the City terminated for cause at any time subsequent to the effective date of the Contract as set out in the Agreement; or
- .5 Contractor fails to utilize Low Sulfur Diesel Fuel, as required in Paragraph 3.9.1.1.

14.1.2 If an Event of Default occurs, City Engineer may, at his option and without prejudice to any other rights or remedies which the City may have, deliver a written notice to Contractor and Surety describing the Event of Default and giving the Contractor 10 days to cure the Event of Default. If after the cure period, Contractor has failed or refused to cure the Event of Default, then City Engineer may deliver a second written notice to Contractor giving notice of the termination of the Contract or of the termination of Contractor's performance under the Contract ("Notice of Termination"). If City Engineer issues a Notice of Termination, then City Engineer may, subject to any prior rights of Surety and any other rights of the City under the Contract or at law:

- .1 request that Surety complete the Work; or
- .2 take possession of the site and all materials, equipment, tools, and construction equipment and machinery on the site owned by Contractor; and

.3 finish the Work by whatever reasonable method City Engineer may deem expedient.

14.1.3 After Contractor's receipt of a Notice of Termination, and except as otherwise directed in writing by City Engineer, Contractor shall:

- .1 stop the Work on the date and to the extent specified in the Notice of Termination;
- .2 place no further orders or subcontracts for Products or services;
- .3 terminate all orders and subcontracts to the extent that they relate to performance of work terminated;
- .4 assign to the City, in the manner, at the times, and to the extent directed by City Engineer, all rights, title, and interest of Contractor, under the terminated supply orders and subcontracts. The City may settle or pay claims arising out of termination of the orders and subcontracts;
- .5 settle all outstanding liabilities and all claims arising out of the termination of supply orders and subcontracts with approval of City Engineer;
- .6 take action as may be necessary, or as City Engineer may direct, for protection and preservation of property related to the Work that is in possession of Contractor, and in which the City has or may acquire an interest; and
- .7 secure the Work in a safe state before leaving the site, providing any necessary safety measures, shoring, or other devices.

14.1.4 If the City terminates the Contract or terminates Contractor's performance under the Contract for any one or more of the reasons stated in Paragraph 14.1.1, Contractor may not receive any further payment until the Work is complete, subject to Paragraph 14.1.5.

14.1.5 If the unpaid balance of Contract Price exceeds the costs of finishing the Work, including liquidated damages and other amounts due under the Contract, the balance will be paid to Contractor. If the costs of finishing the Work exceed the unpaid balance, Contractor shall, within 10 days of receipt of written notice setting out the amount of the excess costs, pay the difference to the City. The amount to be paid to Contractor or the City will be certified by City Engineer in writing, and this obligation for payment shall survive termination of the Contract or termination of Contractor's performance under the Contract. Termination of the Contractor for cause

shall not relieve the Surety from its obligation to complete the project.

14.2 *TERMINATION BY THE CITY FOR CONVENIENCE*

14.2.1 City Engineer may, without cause and without prejudice to other rights or remedies of the City, give Contractor and Surety a Notice of Termination with a seven days written notice.

14.2.2 After receipt of the Notice of Termination, and except as otherwise approved by City Engineer, Contractor shall conform to requirements of Paragraph 14.1.3.

14.2.3 After receipt of the Notice of Termination, Contractor shall submit to the City its termination Claim, in forms required by City Engineer. The Claim will be submitted to the City promptly, but no later than six months from the effective date of termination, unless one or more extensions are granted by City Engineer in writing. If Contractor fails to submit its termination Claim within the time allowed, in accordance with Paragraph 14.2.4, City Engineer will determine, on the basis of available information, the amount, if any, due to Contractor because of termination, and City Engineer's determination is final and binding on the Parties. The City will then pay to Contractor the amount so determined.

14.2.4 City Engineer will determine, on the basis of information available to City Engineer, the amount due, if any, to Contractor for the termination as follows:

- .1 Contract Price for all work performed in accordance with the Contract up to the date of termination determined in the manner prescribed for monthly payments in Article 9, except no retainage is withheld by the City either for payment determined by percentage of completion or for materials and equipment delivered to the site, in storage or in transit.
- .2 Reasonable termination expenses, including costs for settling and paying Subcontractor and Supplier claims arising out of termination of the Work, reasonable cost of preservation and protection of the City's property after termination, if required, and the cost of Claim preparation. Termination expenses do not include field or central office overhead, salaries of employees

of Contractor, or litigation costs, including attorneys' fees.

No amount is allowed for anticipated profit or central office overhead on uncompleted work, or any cost or lost profit for other business of Contractor alleged to be damaged by the termination.

14.2.5 Contractor shall promptly remove from the site any construction equipment, tools, and temporary facilities, except the temporary facilities which City Engineer may wish to purchase and retain.

14.2.6 Contractor shall cooperate with City Engineer during the transition period.

14.2.7 The City will take possession of the Work and materials delivered to the site, in storage, or in transit, as of date or dates specified in the Notice of Termination, and is responsible for maintenance, utilities, security, and insurance, as stated in Notice of Termination.

14.3 *SUSPENSION BY THE CITY FOR CONVENIENCE*

14.3.1 City Engineer may, without cause, after giving Contractor and Surety 24-hour prior written notice, order Contractor to suspend, delay, or interrupt the Work in whole or in part for a period of time as City Engineer may determine.

14.3.2 An adjustment will be made in Contract Time equivalent to the time of suspension.

14.3.3 Adjustment will be made to Contract Price for increases in the cost of performance of the Work, including profit on increased cost of performance caused by suspension, delay, or interruption of the Work in accordance with Paragraph 7.3. No adjustment will be made to the extent that:

- .1 performance was, or would have been, suspended, delayed, or interrupted by another cause for which Contractor is responsible; or
- .2 adjustment is made or denied under another provision of the Contract.

14.4 *TERMINATION BY CONTRACTOR*

14.4.1 Contractor may terminate the Contract if the Work is stopped for a period of 30 days through no act or fault of Contractor, directly related to one of these events:

- .1 issuance of an order of a court or other public authority having jurisdiction;

- .2 act of government, such as a declaration of national emergency which makes material unavailable; or
- .3 if repeated suspensions, delays, or interruptions by the City as described in Paragraph 14.3 constitute, in the aggregate, more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less;

No termination will be effective for the above reasons if Contractor delivers written notice to City

Engineer describing the reason for termination, giving the proposed termination date, and granting the City a reasonable opportunity to respond and cure any City default before termination is effective.

14.4.2 If the Contract is terminated pursuant to this Paragraph 14.4, Contractor shall comply with the requirements of Paragraphs 14.2.2 through 14.2.7.

END OF DOCUMENT

Document 00800

SUPPLEMENTARY CONDITIONS

The following Paragraphs amend and supplement the 2005 edition of General Conditions. Unaltered portions of General Conditions remain in effect.

ARTICLE 3 - THE CONTRACTOR

3.5 *LABOR: Insert the following Paragraph 3.5.3.1.1.*

3.5.3.1.1 Contractor shall make good faith efforts to comply with the City ordinances regarding Minority and Women Business Enterprises (MWBE) and Persons with Disabilities Business Enterprises (PDBE) participation goals which are as follows:

- .1 the MWBE goal is **15 percent**, and
- .2 the SBE goal is **5 percent**.

3.28 CONTRACTOR DEBT

3.28.1 IF CONTRACTOR, AT ANY TIME DURING THE TERM OF THIS AGREEMENT, INCURS A DEBT, AS THE WORD IS DEFINED IN SECTION 15-122 OF THE HOUSTON CITY CODE OF ORDINANCES, IT SHALL IMMEDIATELY NOTIFY CITY CONTROLLER IN WRITING. IF CITY CONTROLLER BECOMES AWARE THAT CONTRACTOR HAS INCURRED A DEBT, IT SHALL IMMEDIATELY NOTIFY CONTRACTOR IN WRITING. IF CONTRACTOR DOES NOT PAY THE DEBT WITHIN 30 DAYS OF EITHER SUCH NOTIFICATION, CITY CONTROLLER MAY DEDUCT FUNDS IN AN AMOUNT EQUAL TO THE DEBT FROM ANY PAYMENTS OWED TO CONTRACTOR UNDER THIS AGREEMENT, AND CONTRACTOR WAIVES ANY RECOURSE THEREFORE.

ARTICLE 8 - TIME

- 8.1 *PROGRESS AND COMPLETION: Delete Paragraph 8.1.6. and replace with the following 8.1.6.*
- 8.1.6.1 Contractor shall credit the City by Change Order for inspection services for overtime work or work performed on Sundays or Legal Holidays. The amount Contractor credits the City will be **\$50.00 per hour** per inspector for inspection services.

ARTICLE 9 - PAYMENTS AND COMPLETION

- 9.1 *UNIT PRICE WORK: Delete Section 9.1 in its entirety and insert the following Section 9.1.*
- 9.1 References to Unit Prices in individual Specification sections are not applicable to the Contract. Include payment for portions of the Work required by these sections in the Stipulated Price for the Contract.
- 9.12 *LIQUIDATED DAMAGES: Insert the following Paragraph 9.12.1.1.*
- 9.12.1.1 The amount of liquidated damages provided in General Conditions Paragraph 9.12.1 payable by Contractor or Surety for each and every day of delay beyond Contract Time, are **\$500 per day**.

ARTICLE 11 - INSURANCE AND BONDS

- 11.2 *INSURANCE TO BE PROVIDED BY CONTRACTOR: Delete Paragraph 11.2.8. and replace with the following 11.2.8.*
- 11.2.1.4 Contractor shall provide Owners and Contractor's Protective Liability Insurance only if the contractor's bid price is equal to or greater than \$100,000.00.
- 11.2.8 *Endorsement of Primary Insurance: Each policy except Workers' Compensation Insurance must contain an endorsement that the policy is primary insurance to any other insurance available to additional insured with respect to claims arising under the Contract.*

END OF DOCUMENT