

**SIGNALIZATION AGREEMENT**

**FOR THE**

**PRESIDENT GEORGE BUSH TURNPIKE**

**(DNT 303)**

(DNT 303)

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**SIGNALIZATION AGREEMENT**  
**FOR THE**  
**PRESIDENT GEORGE BUSH TURNPIKE**

**(DNT 303)**

**THE STATE OF TEXAS   §**  
**§**  
**COUNTY OF DALLAS    §**

**THIS AGREEMENT**, by and between the **NORTH TEXAS TOLLWAY AUTHORITY**, a regional tollway authority and a political subdivision of the State of Texas, hereinafter identified as the “Authority,” and the **CITY OF DALLAS**, a Texas municipal corporation, hereinafter identified as the “City,” is to be effective as of the 10<sup>th</sup> day of January, 2001.

**W I T N E S S E T H**

**WHEREAS**, the Authority constructs, operates, maintains, and periodically improves and modifies toll turnpike projects in certain counties in North-Central Texas, all in conformance with the provisions of Chapter 366, Texas Transportation Code, as amended, (the “Regional Tollway Authority Act”); and

**WHEREAS**, the Authority proposes to design, construct, and operate the President George Bush Turnpike, hereinafter referred to as the “Turnpike,” following the planned route of SH190 from its eastern terminus at SH78 in eastern Dallas County to its western terminus at West Belt Line Road in Irving, with a portion of the Turnpike being situated within the municipal limits of the City, all in conformance with the terms of: (i) a Trust Agreement dated as of July 1, 1989, as supplemented by seven (7) Supplemental Trust Agreements, pertaining to the issuance of Dallas North Tollway System Revenue Bonds, Series 1995 and 1998 (President

George Bush Turnpike), to pay a portion of the costs of the construction of the Turnpike, and (11) the provisions of the Regional Tollway Authority Act, said Turnpike being designed, constructed and operated as an extension and enlargement of the "Dallas North Tollway System"; and

**WHEREAS**, the Authority has retained HNTB Corporation to serve as general consulting engineer for the Turnpike, said HNTB Corporation being hereinafter called the "Consulting Engineer" (with that term being further defined in the Trust Agreement) to represent and assist the Authority in the planning, design, review and coordination of the design and construction phases of the Turnpike; and

**WHEREAS**, the Authority has retained the engineering firms listed in Exhibit A (said firms being hereinafter collectively referred to as "Section Engineers") to prepare plans and specifications for the construction of the Turnpike (the "Turnpike Plans"), which will provide for the construction of toll lanes, approaches, interchanges, ramps, toll facilities, bridges, buildings and the modification of existing pavement and structures, all to be operated and maintained by the Authority; and

**WHEREAS**, the Authority has retained the firm of Brown and Root, Inc., (hereinafter called the "Construction Manager") to provide the Authority with complete and comprehensive construction management engineering services as to the construction of the Turnpike; and

**WHEREAS**, the City has requested that the Authority provide funding for traffic signalization systems at the hereinafter specified intersections of City streets intersecting with the Turnpike within the City; and

**WHEREAS**, the Authority has requested that the City assume responsibility for the design, issuance of plans and specifications, taking of bids, award of contracts and purchase orders, and the installation, testing, maintenance and supervision of traffic signalization work

required in connection with the construction of the Turnpike, subject to certain reimbursement and other obligations of the Authority; and

**WHEREAS**, the City is a Texas home rule municipal corporation with all of the authority and powers related thereto as prescribed by the laws of the State of Texas; and

**WHEREAS**, the Interlocal Cooperation Act, Chapter 791 of the Texas Government Code, authorizes local governmental entities to contract with one another to perform governmental functions and services under the terms thereof, and the Authority and the City have determined that mutual benefits and advantages can be obtained by formalizing their agreement as to the installation and subsequent operation and maintenance of traffic signalization equipment, as well as with respect to other related matters.

#### **AGREEMENT**

**NOW, THEREFORE**, in consideration of these premises and of the mutual covenants and agreements of the parties hereto to be by them respectively kept and performed as hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency of which being hereby acknowledged, the Authority and the City agree as follows:

#### **ARTICLE I. SIGNALIZATION**

A. **The Signalization Work.** Except as otherwise set forth in Section I.B. below with respect to the "Authority Signalization Work," the City, in conformity with the Turnpike Plans, shall design, prepare and issue construction plans and specifications, take bids, award contracts and purchase orders and shall install, test, supervise and maintain traffic signalization systems at the City street intersections with the Turnpike described (and in the manner shown) on Exhibit B attached hereto and made a part hereof (all said work, exclusive of the Authority Signalization Work, being hereinafter called the "Signalization Work"). The Signalization Work shall include:

- (1) the preparation of any plans and specifications required for the permanent signals portion of the Signalization Work (the "City Signalization Plans") and the submission of said plans and specifications to the Authority for its review and approval, said City Signalization Plans, when approved in writing by the Consulting Engineer for the Turnpike, shall become part of the Turnpike Plans for the purposes of this Agreement; the City Signalization Plans shall not describe any features relating to the installation of temporary signals insofar as the Authority has received a satisfactory plan from the City showing the installation locations for the temporary signals and no formal design work is required therefor;
- (2) the letting of any construction contracts, the supervision of construction, the furnishing, installing, testing, regulating and adjusting of all traffic signals (complete with lamps, ballasts, ballast boxes, all conduit and interconnect cables required for the proper operation of the traffic signals, conductors between the traffic signals and the base of the tower or post supporting the traffic signal, mounting brackets, cables and guys, fastenings, hardware and internal connections), the procurement and installation of the signal control equipment software, the development and implementation of the traffic signal timing, the fabrication and installation of sign hardware associated with the signal operation, and the furnishing of all labor, tools, equipment, and incidentals necessary to provide the traffic signals complete in place, in a neat and workmanlike finished appearance and ready for operation. The Signalization Work shall include the construction of a CATV link to the City's central signal computer system, provided, however, that the Authority's reimbursement obligations for such work

shall not exceed \$10,000.00. The Signalization Work shall not include any features constituting betterment or enhancements to standard signalization systems maintained by the City, provided, however, that the City may elect to procure or install any such features in connection with the Signalization Work at the City's sole cost and without reimbursement by the Authority; and

- (3) the completion of the Signalization Work in accordance with the following timetable (the "Timetable"):

on or before January 31, 2001

- installation of temporary signals at the north one-half of Marsh Lane intersection, and
- installation of additional signal heads for the eastbound leg of Midway Road intersection;

on or before July 31, 2001

- installation of permanent signals at Frankford Road and Rosemeade Parkway, and
- installation of permanent signals at the south one-half of Marsh Lane intersection;

on or before January 1, 2003

- substitution of permanent signals at the north one-half of Marsh Lane intersection, and
- substitution of permanent signals at Midway Road intersection;

as of the effective date of this Agreement, permanent signals have been installed at the Coit Road intersection and temporary signals have been installed at the Midway Road intersection, as summarized on Exhibit B.

The City shall perform the Signalization Work (a) through its utilization of one or more independent third-party contractors (collectively, the "Contractor") selected by the City through the competitive bid process or (b) by the City's use of labor and/or supervisory personnel employed by the City ("City Forces"). The Contractor and/or the City Forces shall perform all of the Signalization Work on behalf of the City, with the exception of the Authority Signalization

work, as defined and described in Section 1.B. below. The City shall supervise and inspect the Contractor's work through the use of City-employed supervisory and inspection personnel utilizing City-owned machinery, equipment and vehicles. Except for the materials or equipment utilized to perform the Authority Signalization Work, the City and/or its Contractor will provide all materials and equipment necessary to install the traffic signalization systems. With respect to such materials and equipment provided by the City, such items shall be furnished from City stock. The use of items of equipment and new and unused materials normally carried in stock by the City will be deemed satisfactory, and the Authority will reimburse the City for the cost of such new and unused items. Prior to the letting of construction contracts or the purchase of materials and equipment related to the City's performance of this Agreement, the Authority shall review and approve in writing all such construction contracts to be let by the City and shall review and approve all material and equipment purchases to be made by the City which cost greater than \$25,000.00, such approval not to be unreasonably withheld or delayed. Notwithstanding the foregoing, with respect to any portion of the Signalization Work performed by the City or its Contractor prior to the execution of this Agreement (including the installation of permanent signals at Coit Road and of temporary signals at Midway Road), the Authority nonetheless shall reimburse those expenditures which are reasonable, otherwise consistent with the terms of this Agreement, and comparable to items or expenditures reviewed and preapproved by the Authority in accordance with the preceding sentence. The Authority's review and approval authority specified herein shall not impose any obligation or liability as to the Authority concerning the City's contracting or purchasing processes related to this Agreement or alter or abrogate any of the City's obligations pursuant to any construction or purchasing contract entered into by the City related to the City's performance of this Agreement.



**D. THE AUTHORITY SIGNALIZATION WORK.**

Notwithstanding anything to the contrary in Section I.A. above, the Authority shall design, prepare and issue construction plans and specifications, and install and test the underground conduit required for the traffic signalization systems at the intersections described on Exhibit B (all said work being hereinafter called the "Authority Signalization Work"). The City and the Authority acknowledge and agree that the plans and specifications for the Authority Signalization Work (the "Authority Signalization Plans") have been prepared and/or approved by the City. The Authority Signalization Plans have become part of the Turnpike Plans, and all of the Authority Signalization Work has been completed in accordance therewith.

**C. Tests and Inspection of Signalization Work.**

The City shall provide opportunities and facilities as may be required to enable the Authority and its agents, contractors, consultants or representatives to carry on suitable inspections of materials, equipment and installation methods sufficient to permit the Authority to confirm that all installation methods, component materials and equipment comply with the Turnpike Plans and accepted requirements. The Authority will promptly notify the City of any failure of the materials, equipment or installation methods to meet accepted requirements, and the City will take such measures as are necessary to obtain acceptable system components and installation procedures without delay.

**D. Protection of Turnpike From Damage Resulting From Signalization Work.**

The City shall not suffer or permit the Signalization Work to damage, or to interfere with the construction or operation of, any portion of the Turnpike, and adequate provisions shall be taken to ensure minimum inconvenience to the traveling public, adjoining property owners, and other parties employed in connection with the construction or maintenance of the Turnpike.

**E. Payment.**

- (1) The Authority shall reimburse the City for costs actually and properly incurred and supported under the terms and conditions of this Agreement and in the manner and amounts, and subject to the limitations, hereinafter described.
- (2) The Authority shall reimburse the City for all costs incurred in completing the Signalization Work for the intersections described in Exhibit B of this Agreement and in accordance with the Timetable. Reimbursement shall be made by the Authority to the City for construction contracts, labor, equipment, materials, supplies, labor additives, and warehouse or material handling charges incurred in conformity with this Agreement, subject to the limitations set forth in subsections I.A.(2) regarding CATV link costs, I.E.(6), and I.E.(9).
- (3) The City shall maintain complete and accurate cost records for the intersections described in Exhibit B of this Agreement. The Authority and its representatives shall be allowed to inspect said records during the City's regular business hours. All records relating to Signalization Work shall be maintained by the City for four (4) years after the City's receipt of final payment from the Authority.
- (4) Payments to the City pursuant to this Agreement shall be made no more frequently than monthly based upon itemized certified statements prepared for each intersection for which reimbursement is sought (the "Statements"), detailed to show (a) in the instance of work performed by City Forces, the employees, the rates of wage, the time worked, the equipment used, the time of its use and the materials used or (b) in the instance of work performed by the Contractor, the name of the contractor, the quantities or names, unit price and extensions, the "notice to proceed" and "final acceptance" dates, the date(s) of the City's

inspection, and similar information. The Statements also shall show the total dollar amount which is sought to be reimbursed. Labor additives or burden, overhead, and material handling charges will be shown as a percentage factor and applied to the total cost of labor or materials as applicable, as further described in subsection I.E.(6) below. The original and four (4) copies of the Statements shall be submitted to the Authority at the following address:

North Texas Tollway Authority  
Attn: Executive Director  
P.O. Box 260729  
Plano, Texas 75026

- (5) The Statements will indicate the total reimbursable amount that has become due for the Signalization Work actually performed throughout the term of this Agreement for the intersections described in Exhibit B and the amount then due and payable to the City by the Authority. Five percent (5%) of all reimbursable amounts shall be withheld pending: (a) completion of construction of the Signalization Work, (b) satisfactory completion of final inspection of the Signalization Work and audit, and, (c) verification that the claims of all mechanics and materialmen have been resolved.
- (6) With respect to that portion of the Signalization Work performed by, including equipment or materials furnished by, the Contractor, the Statements shall include only those costs that have been actually paid for the Signalization Work from City funds up to the date of the Statements. The Authority shall not reimburse the City for any of the City's overhead, administrative or processing costs or expenses relating to the Signalization Work performed by the Contractor, nor shall the Authority have any obligation to discharge any of the wages or other personnel

expenses incurred by the City in connection with said portion of the Signalization Work. With respect to that portion of the Signalization Work performed by City Forces or with materials and equipment furnished from City stock, the City may include in the Statements, as separate cost items, an overhead charge not exceeding twenty-five percent (25%) and a material handling charge not exceeding three percent (3%) of the applicable labor or material cost. The Authority shall have no obligation to discharge any wages or personnel expenses incurred by the City in the preparation of this Agreement. The City certifies that it has used its best efforts in preparing the Cost Estimate (herein so called) for the Signalization Work, said Cost Estimate being attached hereto as Exhibit C and made a part hereof for all purposes.

- (7) In addition to the limitations set forth in subsections I.E.(6) and I.E.(9), unsupported charges or charges made after final acceptance by the Authority shall not be considered eligible for reimbursement.
- (8) Except as otherwise expressly provided in Section I.B. of this Agreement with respect to the Authority Signalization Work, the obligations of the Authority with respect to the Signalization Work is one of reimbursement only. This Agreement creates no obligations on behalf of the Authority with respect to the ultimate construction, operation and/or maintenance of the Signalization Work, and the Authority makes no representation, and assumes no obligations, with respect thereto.
- (9) Notwithstanding anything to the contrary set forth in this Agreement, the City acknowledges and agrees that in no event shall the Authority's reimbursement obligation hereunder exceed in the aggregate Seven Hundred Sixty-Five

thousand eight hundred ten and 10/100 Dollars (\$18,810.00), said amount being the total amount for the Signalization Work (less the CATV link costs) shown on the Cost Estimate *plus* either (a) 1.15 times (a 15% contingency) the "Cost of Permanent Signal Hardware" at Frankford Road and Rosemeade Parkway or (b) 1.30 times (a 30% contingency) the "Cost of Permanent Signal Hardware" at Marsh Lane and Midway Road, *plus* \$10,000.00 (the maximum amount to be provided by the Authority for the CATV link pursuant to subsection I.A.(2)). Further, the Authority shall have no obligation to reimburse the City for any portion of the Signalization Work performed subsequent to the applicable deadline (*i.e.*, January 31, 2001; July 31, 2001; or January 1, 2003) provided in the Timetable set forth in subsection I.A.(3).

**F. Indemnification.**

- (1) To the extent permitted by law and except as limited in subsection I.F.(2) below, the City agrees to indemnify the Authority and the Authority's agents, directors and employees against any and all damages, including, claims for personal injury or for damages to abutting or other property and all court costs, attorneys' fees, and all expenses, for which the Authority may be liable arising out of, incident to or in any way connected with the negligent or otherwise tortious acts or omissions of the City, its agents, employees or contractors in the installation, construction, existence, use and/or maintenance of the traffic signalization systems which are the subject of this Agreement, and the City does hereby agree to defend the Authority in connection with any claims or lawsuits brought against the Authority relating to said traffic signalization systems. The City may elect to discharge all or part of its indemnity and other obligations hereunder by including the

Authority as a co-indemnitee under its agreement(s) with the Contractor, and the City shall be released from said obligations to the extent said indemnity, defense and other rights and benefits are actually provided to and/or received by the Authority.

- (2) Nothing in this Agreement shall be construed to place any liability on either the City, the Authority or the Consulting Engineer, Construction Manager or Section Engineers for personal injury or property damage arising out of the Signalization Work. Furthermore it is not the intent of this Agreement to impose upon the City or the Authority any liability, pursuant to the indemnity contained in subsection I.F.(1) or otherwise, for injury to persons or property arising out of the Authority Signalization Work or any construction unrelated to the terms of this Agreement undertaken by any contractor employed by the Authority. Nothing herein shall be construed as a waiver of any rights which may be asserted by either party hereto, including the defense of governmental immunity.

**G. Operation and Maintenance of Completed Signalization System.**

Upon completion of the Signalization Work, the City agrees to operate and maintain the described traffic signalization systems at its sole expense and to assume the cost of all electrical power required for signal operations, including that required during construction and test periods.

**H. No Abrogation of City's Signalization Responsibility.**

The Authority's rights and obligations contained in this Agreement shall in no way reduce or otherwise modify the City's responsibility for (i) the proper operation of traffic signalization along the Turnpike corridor within the City boundaries, or (ii) the police enforcement required for securing compliance with the traffic signals described herein.

**I. Safety Responsibility During the work.**

The City shall ensure that flagmen, construction barricades, lights, warning signs, detours and other safety devices are provided and maintained throughout the duration of the City's performance of the Signalization Work. The flagmen shall be utilized, and all safety devices shall be installed and maintained, in accordance with the "Texas Manual on Uniform Traffic Control Devices" adopted by the Texas Transportation Commission pursuant to Section 544.001, et seq., of the Texas Transportation Code. Requirements for these safety devices shall be included in the Signalization Plans.

**ARTICLE II.  
MISCELLANEOUS PROVISIONS**

**A. Relationship of the Parties.**

Nothing in this Agreement shall be deemed or construed by the parties, or by any third party, as creating the relationship of principal and agent, partnership or joint venture between the City and the Authority.

**B. Notices.**

In each instance under this Agreement in which one party is required or permitted to give notice to the other, such notice shall be deemed given (i) when delivered in hand, (ii) one (1) business day after being deposited with a reputable overnight air courier service, or (iii) three (3) business days after being mailed by United States mail, registered or certified mail, return receipt requested, postage prepaid, and, in all events, addressed as follows:

In the case of the City:

City of Dallas  
City Hall  
1500 Marilla Street  
Dallas, Texas 75201

Attn: Teodoro J. Benavides, City Manager

In the case of the Authority, if mailed:

North Texas Tollway Authority  
Attn: Executive Director  
P.O. Box 260729  
Plano, Texas 75026

or, if delivered by hand or by air courier service:

North Texas Tollway Authority  
Attn: Executive Director  
5900 West Plano Parkway, Suite 100  
Plano, Texas 75093

Either party hereto may from time to time change its address for notification purposes by giving the other party prior written notice of the new address and the date upon which it will become effective.

**C. Successors and Assigns.**

This Agreement shall bind, and shall be for the sole and exclusive benefit of, the respective parties and their legal successors. Other than as provided in the preceding sentence, neither the City nor the Authority shall assign, sublet, or transfer their respective interests in this Agreement without the prior written consent of the other party to this Agreement, unless otherwise provided by law.

**D. Severability**

If any provision of this Agreement, or the application thereof to any person or circumstance, is rendered or declared illegal for any reason and shall be invalid or unenforceable, the remainder of the Agreement and the application of such provision to other persons or circumstances shall not be affected thereby, but shall be enforced to the greatest extent permitted by applicable law.



**E. Written Amendments.**

Any change in the agreement, terms and/or responsibilities of the parties hereto must be enacted through a written amendment. No amendment to this Agreement shall be of any effect unless in writing and executed by the City and the Authority.

**F. Limitations.**

All covenants and obligations of the City and the Authority under this Agreement shall be deemed to be valid covenants and obligations of said entities, and no officer, director, or employee of the City or the Authority shall have any personal obligations or liability hereunder.

**G. Sole Benefit.**

This Agreement is entered into for the sole benefit of the City and the Authority and their respective successors and permitted assigns. Nothing in this Agreement or in any approval subsequently provided by either party hereto shall be construed as giving any benefits, rights, remedies, or claims to any other person, firm, corporation or other entity, including, without limitation, the public in general.

**H. Authorization.**

This Agreement is entered into subject to the provisions of the City's charter and the ordinances of the City and all applicable state and federal laws and the applicable regulations of administrative agencies with jurisdiction over the subject matter of this Agreement. Each party to this Agreement represents to the other that it is fully authorized to enter into this Agreement and to perform its obligations hereunder, and that no waiver, consent, approval, or authorization from any third party is required to be obtained or made in connection with the execution, delivery, or performance of this Agreement. Each signatory on behalf of the City and the Authority, as applicable, is fully authorized to bind that entity to the terms of this Agreement.

**I. Venue.**

The provisions of this Agreement shall be construed in accordance with the laws and court decisions of the State of Texas, and exclusive venue for any legal actions arising hereunder shall be in Dallas County, Texas.

**J. Interpretation.**

No provision of this Agreement shall be construed against or interpreted to the disadvantage of any party by any court, other governmental or judicial authority, or arbitrator by reason of such party having or being deemed to have drafted, prepared, structured, or dictated such provision.

**K. Waiver.**

No delay or omission by either party hereto to exercise any right or power hereunder shall impair such right or power or be construed as a waiver thereof. A waiver by either of the parties hereto of any of the covenants, conditions, or agreements to be performed by the other or any breach thereof shall not be construed to be a waiver of any succeeding breach thereof or of any other covenant, condition, or agreement herein contained.

**L. Entire Agreement.**

This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof. There are no representations, understandings, or agreements relative hereto which are not fully expressed in this Agreement.

**M. Counterparts.**

This Agreement may be executed in several counterparts, each of which shall be deemed an original, and all such counterparts shall constitute one single agreement between the parties.

**N. Headings.**

The article and section headings used in this Agreement are for reference and convenience only, and shall not enter into the interpretation hereof.

**O. No Liability.**

Nothing in this Agreement shall be construed to place any liability on either the City, the Authority, the Consulting Engineer, the Construction Manager or the Section Engineers or any liability on any of the Authority's or City's respective employees, agents, servants, directors or officers for personal injury or property damage arising out of the City's operation, policing, regulation, maintenance or repair of the service roads or the City streets over and under the turnpike lanes. Furthermore it is not the intent of this Agreement to impose upon the City or the Authority any liability for injury to persons or damage to property arising out of any construction unrelated to the terms of this Agreement undertaken by any contractor employed or engaged by the Authority or the City. Nothing herein shall be construed as a waiver of any rights which may be asserted by either party hereto, including the defense of governmental immunity.



[end of page]

the dates shown below, to be effective on the date listed above.

**APPROVED AS TO FORM:**

MADELEINE B. JOHNSON  
City Attorney

By:

  
Assistant City Attorney  
Submitted to City Attorney  


**CITY OF DALLAS,**

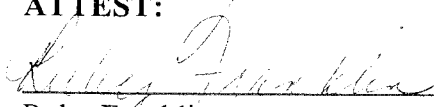
a Texas municipal corporation  
TEODORO J. BENAVIDES  
City Manager

By:

  
Name: Jill Jordan  
Title: Assistant City Manager

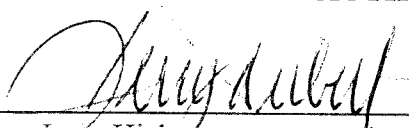
Date: February 8, 2001

**ATTEST:**

  
Ruby Franklin  
Secretary

**NORTH TEXAS TOLLWAY AUTHORITY**

By:

  
Name: Jerry Hiebert  
Title: Executive Director

Date: February 6, 2001

**EXHIBIT A  
PRESIDENT GEORGE BUSH TURNPIKE  
SIGNALIZATION AGREEMENT  
FOR THE CITY OF DALLAS**

**DESIGNATED SECTION ENGINEERS**

**Engineering Firms**

**Turnpike Sections**

Lockwood, Andrews & Newnam, Inc.	Turnpike Centerline Station 643 + 50 to 568 + 00
Halff Associates, Inc.	Turnpike Centerline Station 568 + 00 to 466 + 00
Mateo Consulting Engineers, Inc.	Turnpike Centerline Station 466 + 00 to 338 + 00
Boyle Engineering Corporation	Turnpike Centerline Station 338 + 00 to 237 + 00
Huitt-Zollars, Inc.	Turnpike Centerline Station 237 + 00 to 127 + 00

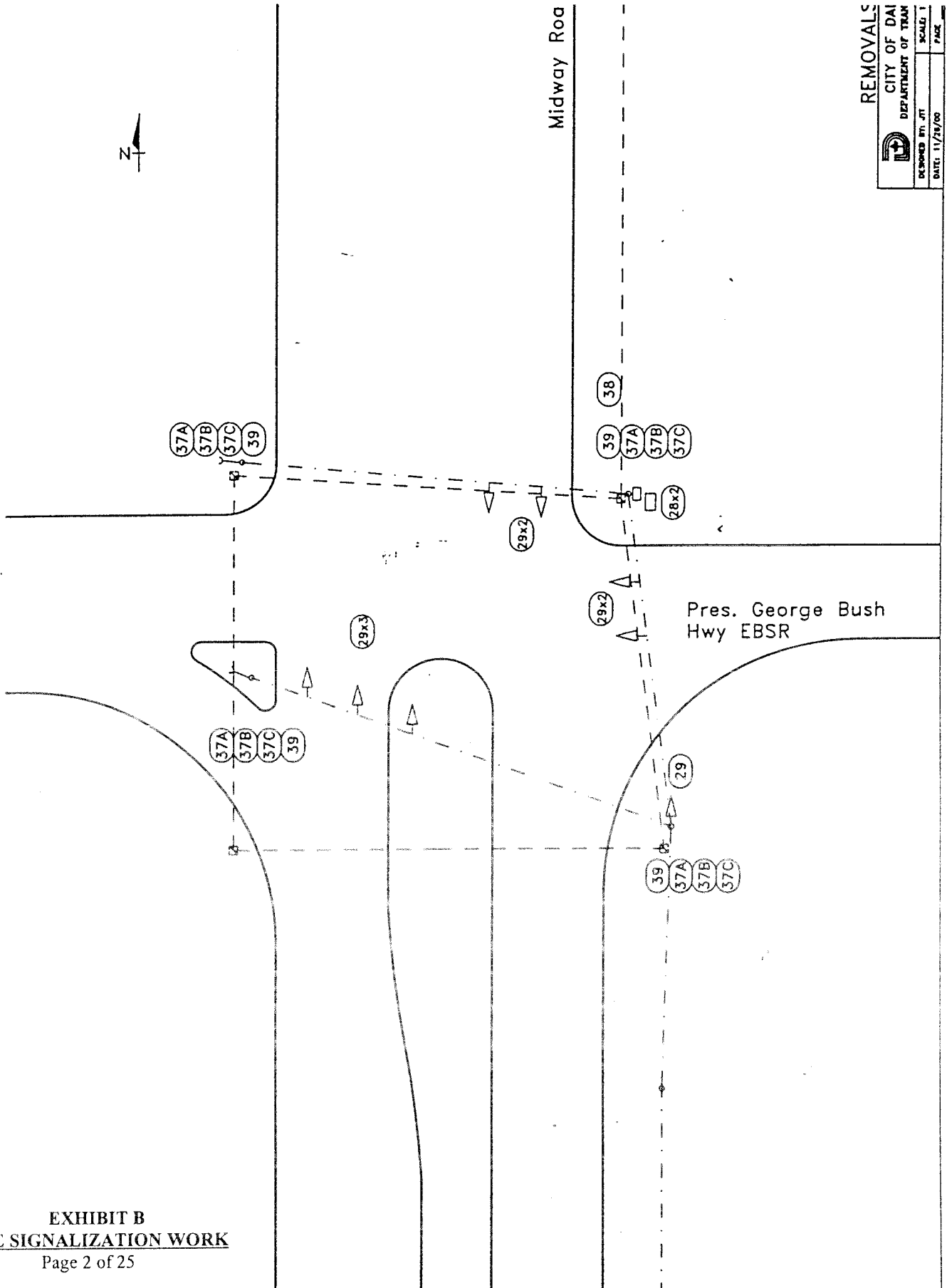
**EXHIBIT B  
PRESIDENT GEORGE BUSH TURNPIKE  
SIGNALIZATION AGREEMENT  
FOR THE CITY OF DALLAS**

**THE SIGNALIZATION WORK**

**Intersections Covered By The Signalization Agreement:  
Applicable Signalization Work and Timetable**

<b><u>INTERSECTION</u></b>	<b><u>APPLICABLE SIGNALIZATION WORK</u></b>	<b><u>TIMETABLE</u></b>
Frankford Road	Install Permanent Signals	Complete by 7/31/01.
Marsh Lane	Install Temporary and Permanent Signals	Temporary Signals on north one-half by 1/31/01; Permanent Signals on south one-half by 7/31/01; Permanent Signals substituted on north one-half by 1/1/03.
Rosemeade Parkway	Install Permanent Signals	Complete by 7/31/01.
Midway Road	Install Temporary and Permanent Signals	Temporary Signals currently installed; add additional heads for eastbound leg by 1/31/01; Permanent Signals substituted by 1/1/03.
Coit Road	Install Permanent Signals	Completed. Permanent Signals currently installed.

# Midway Road at Pres. George Bush Highway EBSR (South)



REMOVALS	
CITY OF DAI	
DEPARTMENT OF TRAN	
DESIGNED BY: JTT	SCALE: 1
DATE: 11/18/00	PAGE: 1

# Midway Road at Pres. George Bush Highway WBSR (North)



Pres. George Bush  
Hwy WBSR

37A  
37B  
37C  
39

37A  
37B  
37C  
39

29x2

29x3

39  
37A  
37B  
37C

39  
37A  
37B  
37C

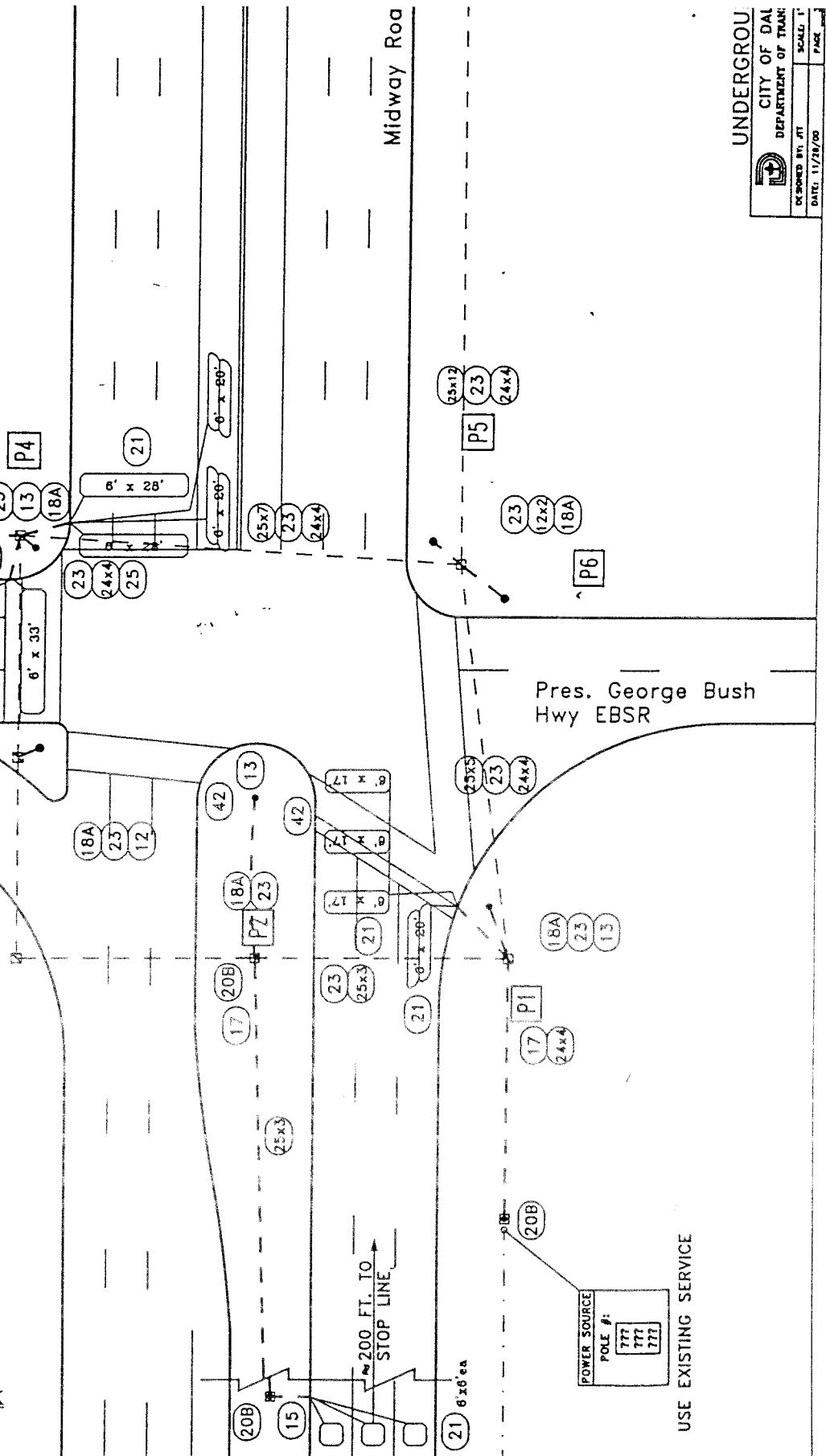
38

Midway Road



# Midway Road at Pres. George Bush Highway EBSR (South)

EXHIBIT B  
THE SIGNALIZATION WORK  
Page 4 of 25



# Midway Road at Pres. George Bush Highway WBSR (North)

Pres. George Bush  
Hwy WBSR



~ 320 FT. TO  
STOP LINE

~ 330 FT. TO  
STOP LINE

Midway Road

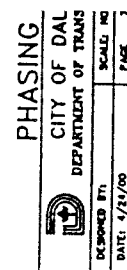
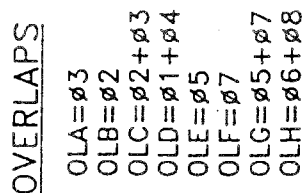
LOCATE CONTROLLER FOUNDATION  
UNDER BRIDGE.

UNDERGROUND	
CITY OF DALLAS DEPARTMENT OF TRANSPORTATION	
DESIGNED BY: JTT	SCALE: 1" = 40'
DATE: 11/28/00	PAGE: 4



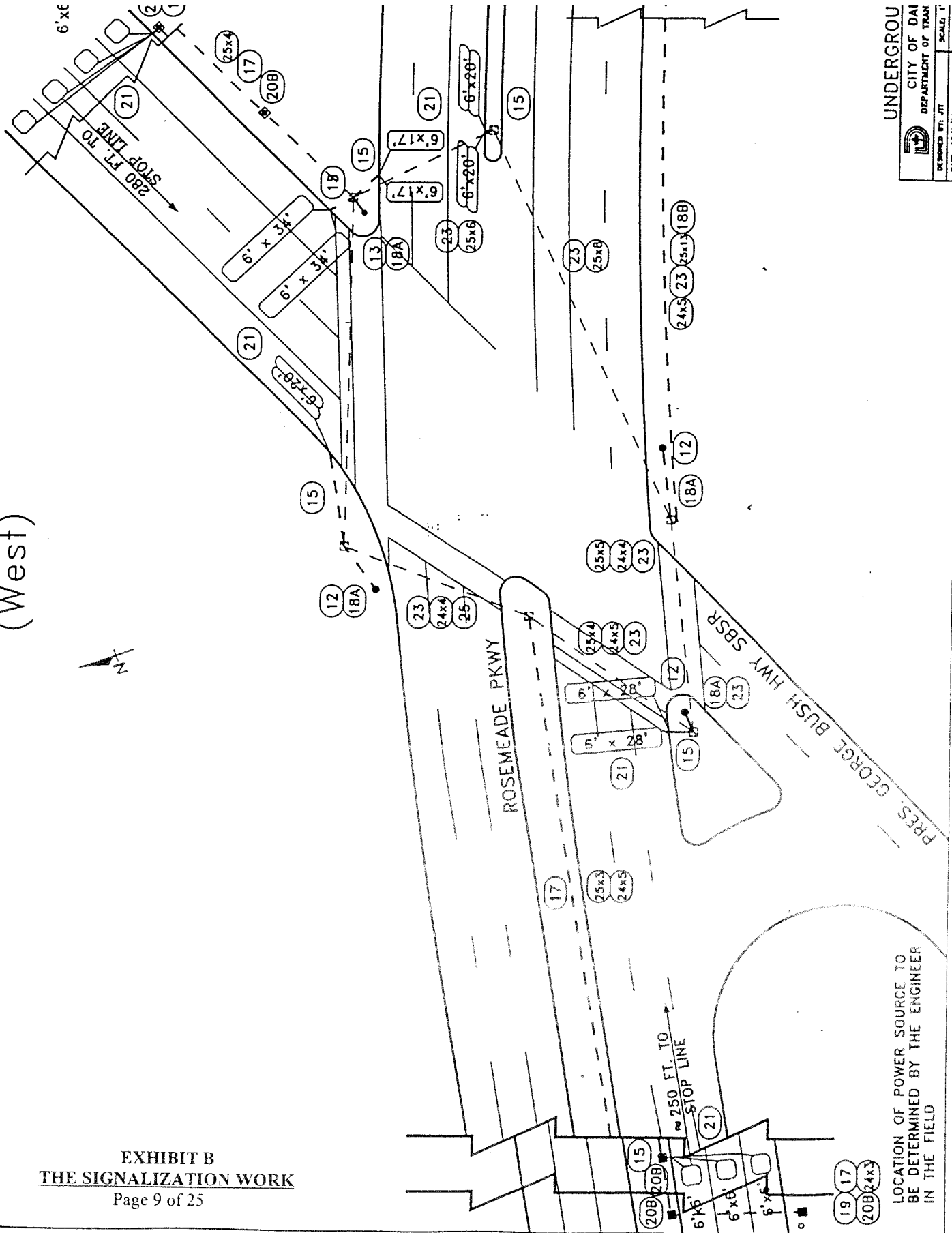


**EXHIBIT B**  
**THE SIGNALIZATION WORK**  
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# Pres. George Bush Highway SBSR at Rosemeade Parkwa (West)

EXHIBIT B  
THE SIGNALIZATION WORK  
Page 9 of 25

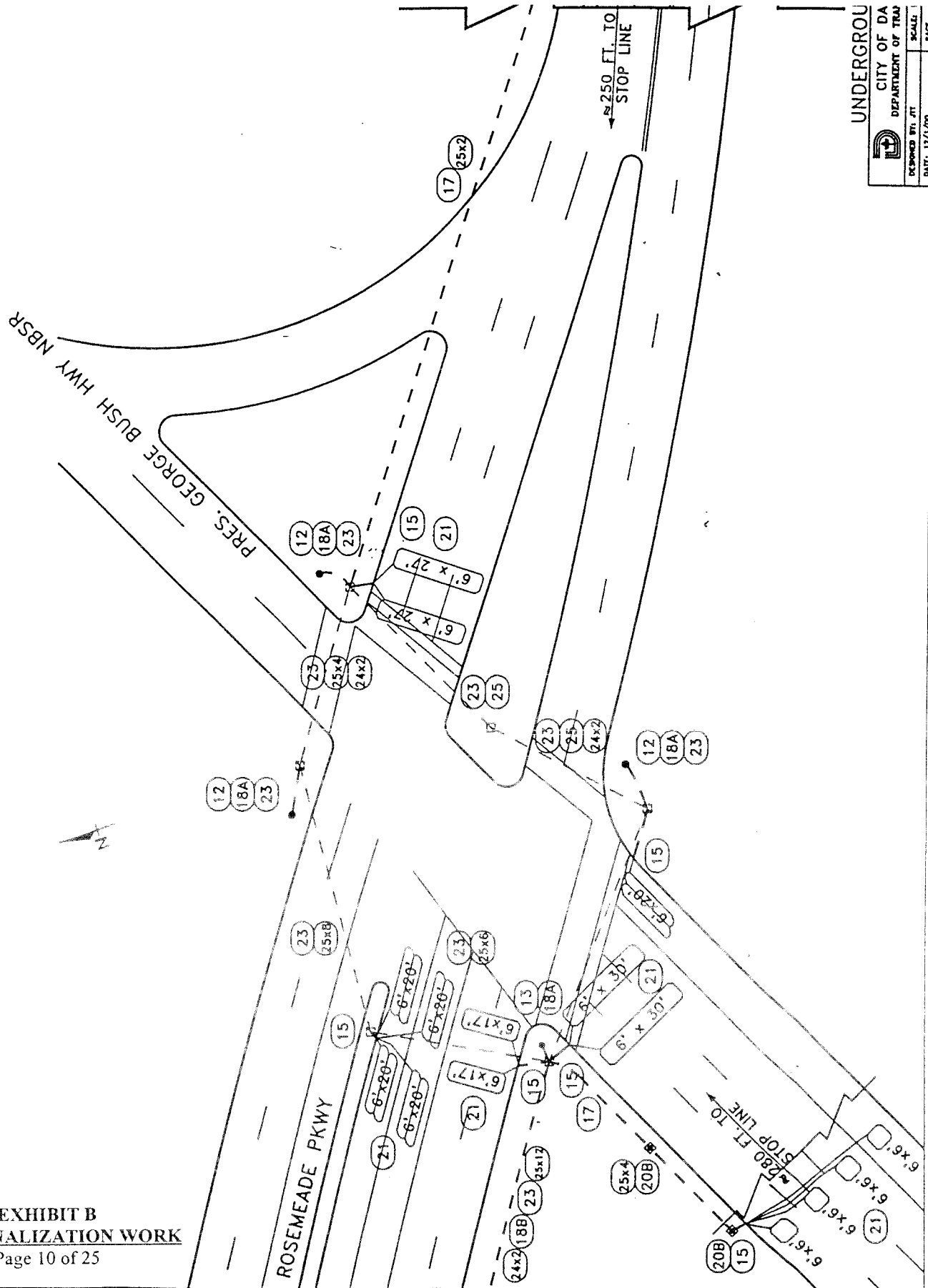


LOCATION OF POWER SOURCE TO  
BE DETERMINED BY THE ENGINEER  
IN THE FIELD

UNDERGROU  
CITY OF DAI  
DEPARTMENT OF TRAN  
DESIGNED BY: JTT  
SCALE: 1  
DATE: 12/1/00  
PAGE

# Pres. George Bush Highway NBSR at Rosemeade Parkway (East)

EXHIBIT B  
THE SIGNALIZATION WORK  
Page 10 of 25



UNDERGROUND		
CITY OF DA		
DEPARTMENT OF TRANSPORTATION		
DESIGNED BY: J.T.	SCALE:	PAGE
DATE: 12/1/00		

# Pres. George Bush Highway SBR at Rosemeade Parkwa (West)

## NEW SIGNS

George Bush Hwy  
???? →

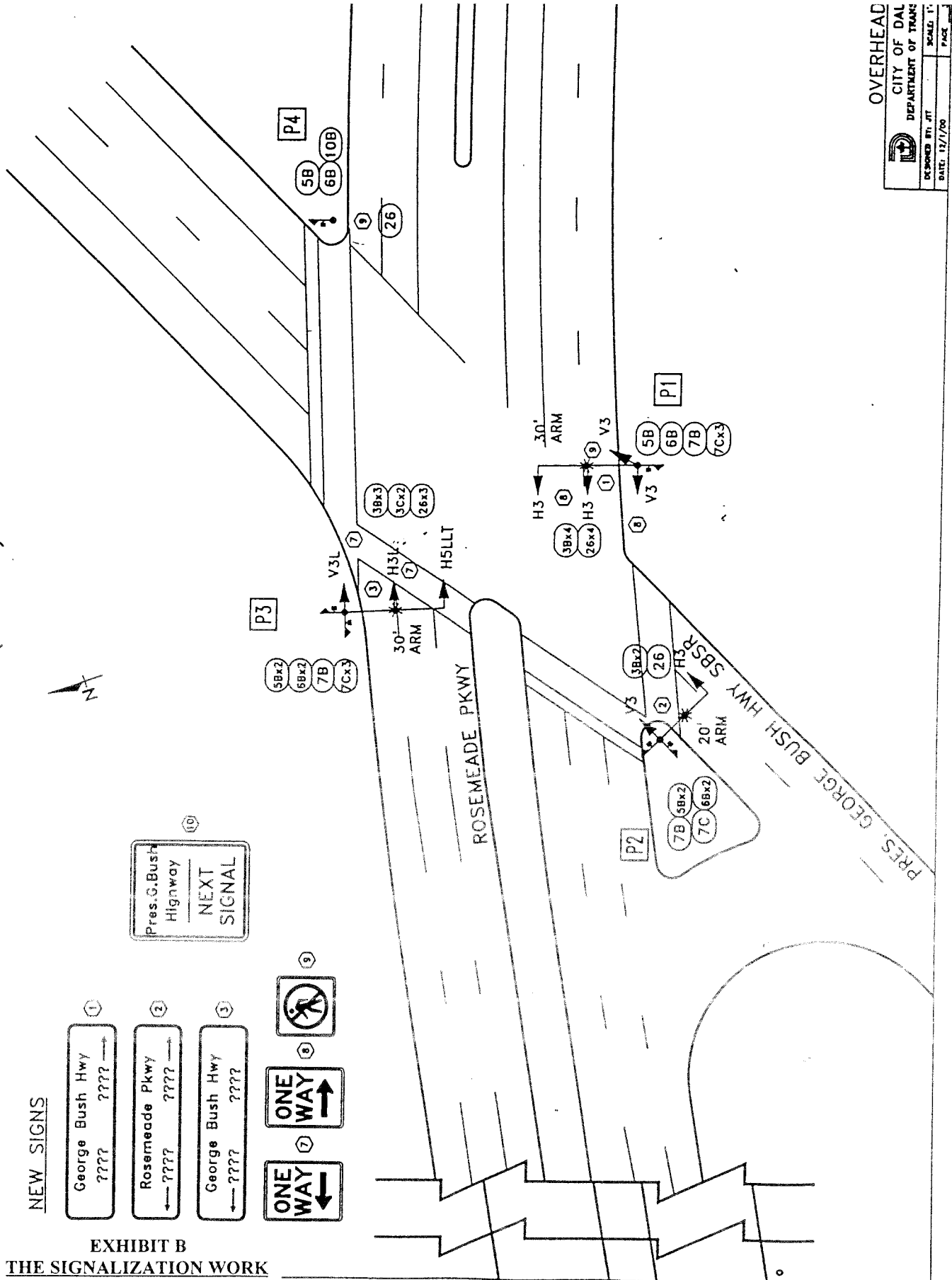
Rosemeade Pkwy  
← ????

George Bush Hwy  
← ????

ONE WAY  
ONE WAY

Pres. G. Bush  
Highway  
NEXT  
SIGNAL

EXHIBIT B  
THE SIGNALIZATION WORK

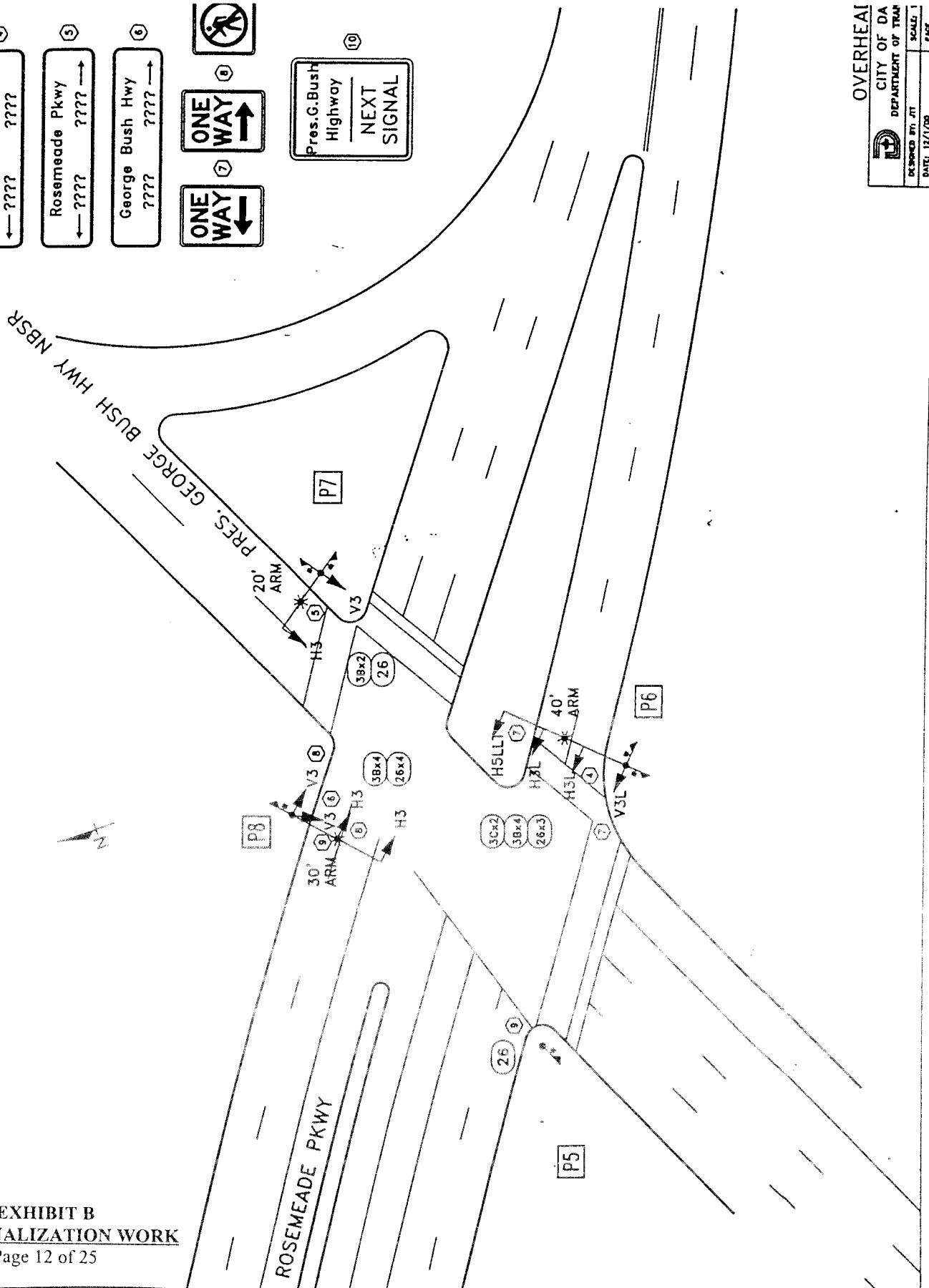




# Pres. George Bush Highway NBSR at Rosemeade Parkwa (East)

## NEW SIGNS

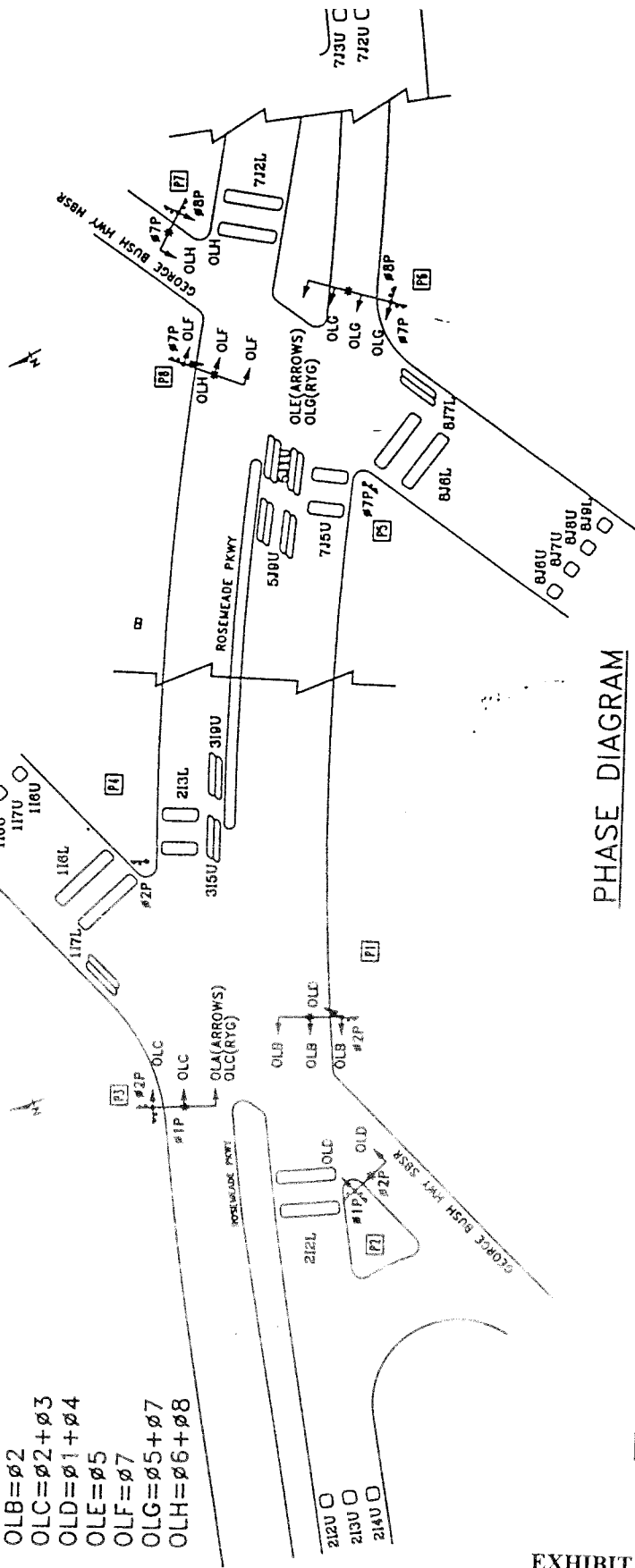
- ④ George Bush Hwy  
← ????
- ⑤ Rosemeade Pkwy  
← ????
- ⑥ George Bush Hwy  
← ????
- ⑦ ONE WAY  
←
- ⑧ ONE WAY  
→
- ⑨ Pres. G. Bush  
Highway  
NEXT  
SIGNAL
- ⑩ [No Pedestrian Crossing Sign]



# President George Bush Highway at Rosemeade Parkway

## OVERLAPS

- OLA=ø3
- OLB=ø2
- OLC=ø2+ø3
- OLD=ø1+ø4
- OLE=ø5
- OLF=ø7
- OLG=ø5+ø7
- OLH=ø6+ø8



## PHASE DIAGRAM

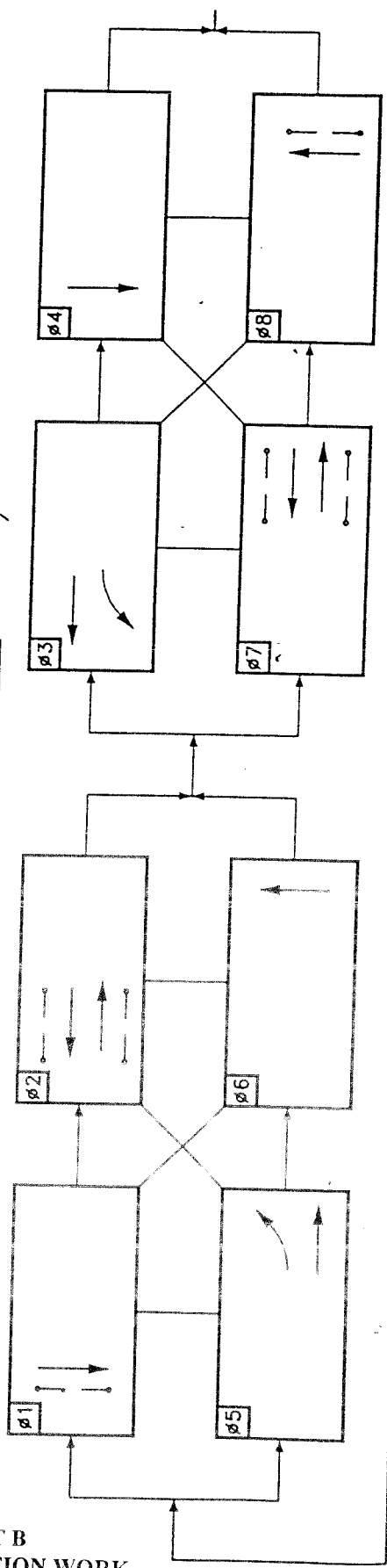
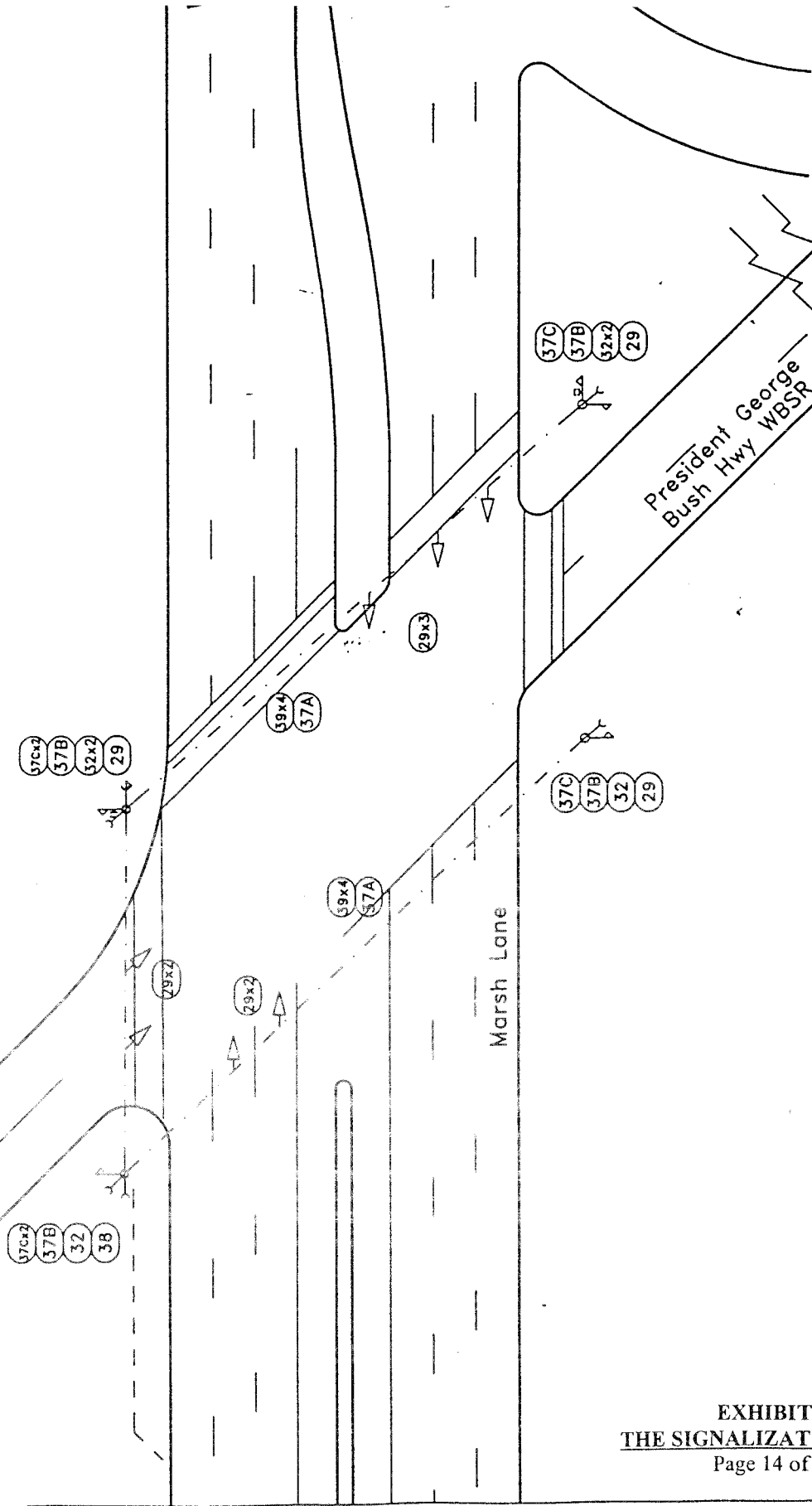


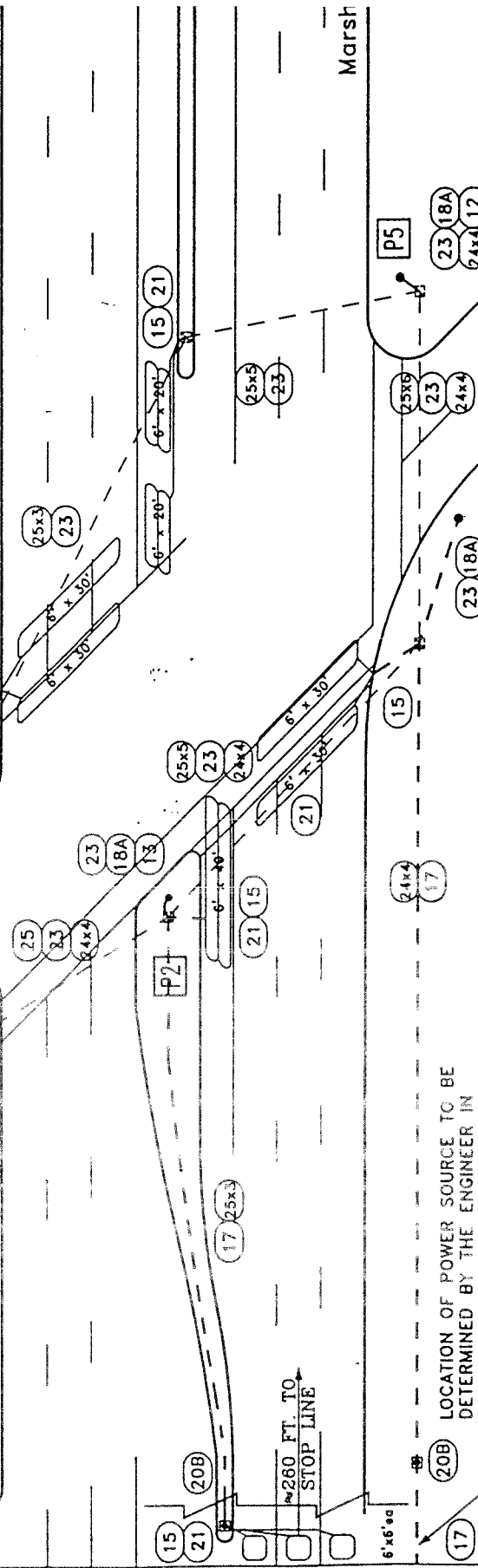
EXHIBIT B  
THE SIGNALIZATION WORK  
Page 13 of 25

# Marsh Lane at Pres. George Bush Highway WBSR (North)




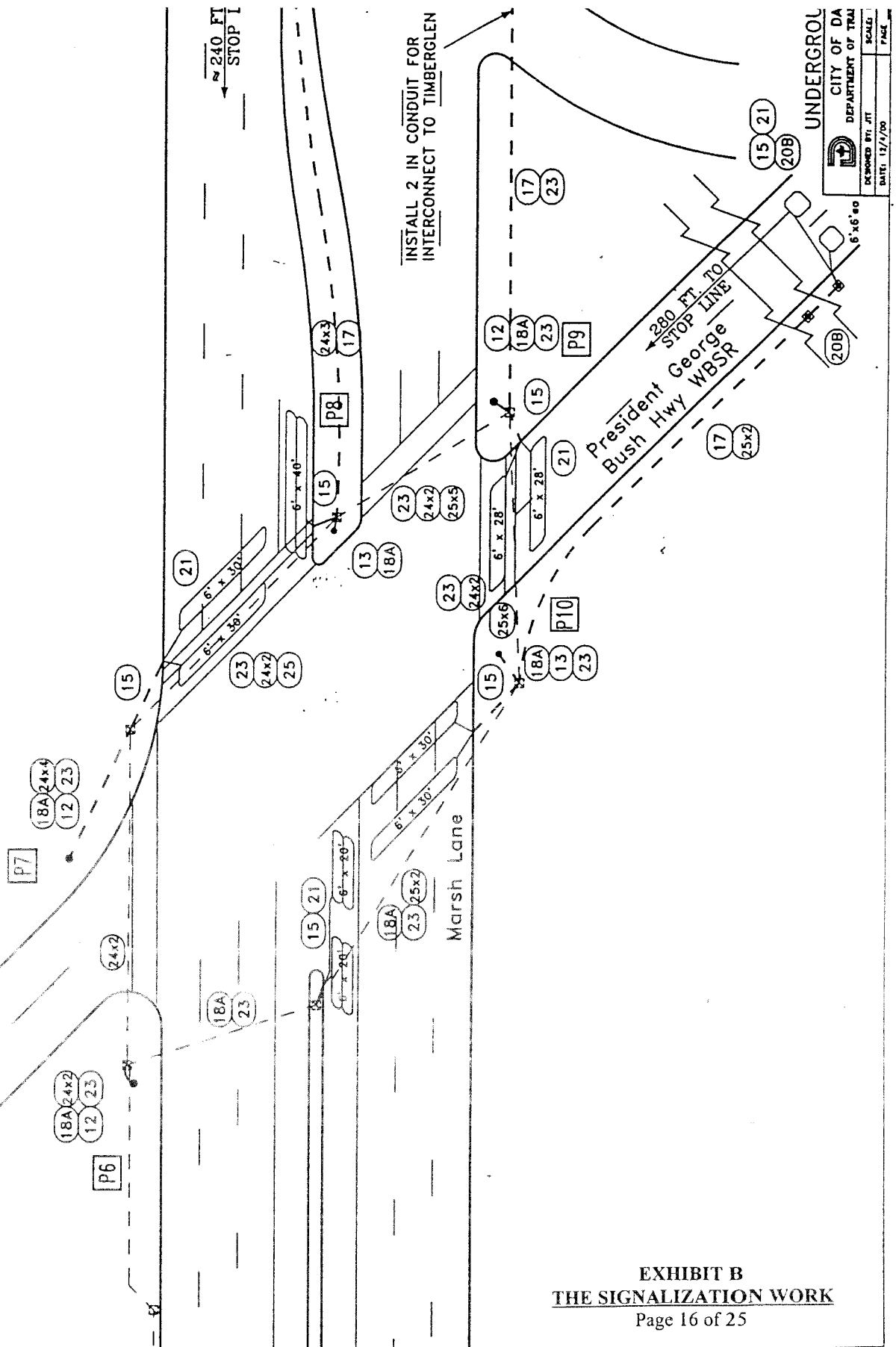
REMOVAL	
CITY OF DA	
DEPARTMENT OF TRAN	
DESIGNED BY: JTT	SCALE:
DATE: 12/1/00	PAGE:

Marsh Lane at Pres. George Bush Highway EBSR (South)



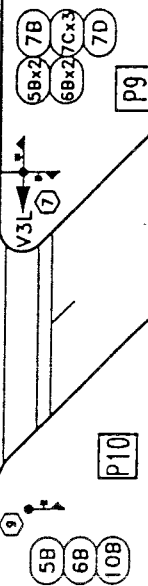
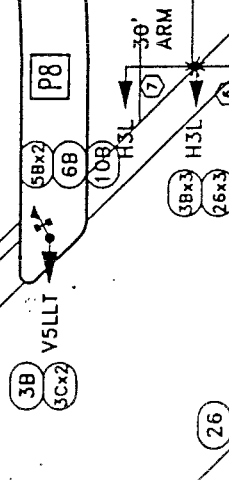
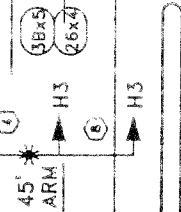
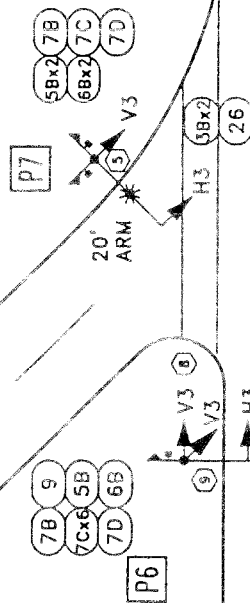
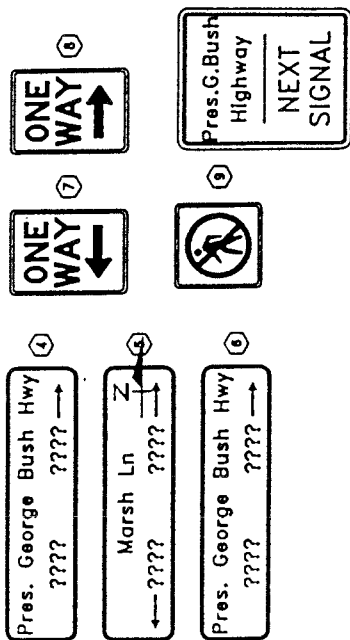
INSTALL 900 FT. 2" CONDUIT FOR  
INTERCONNECT TO FRANKFORD.  
INCLUDE PULL BOX EVERY 250 FT.

 CITY OF DALLAS DEPARTMENT OF TREASURY	DESIGNED BY: JTT	SCALE:
	DATE: 12/4/00	PAGE:





# Marsh Lane at Pres. George Bush Highway WBSR (North)

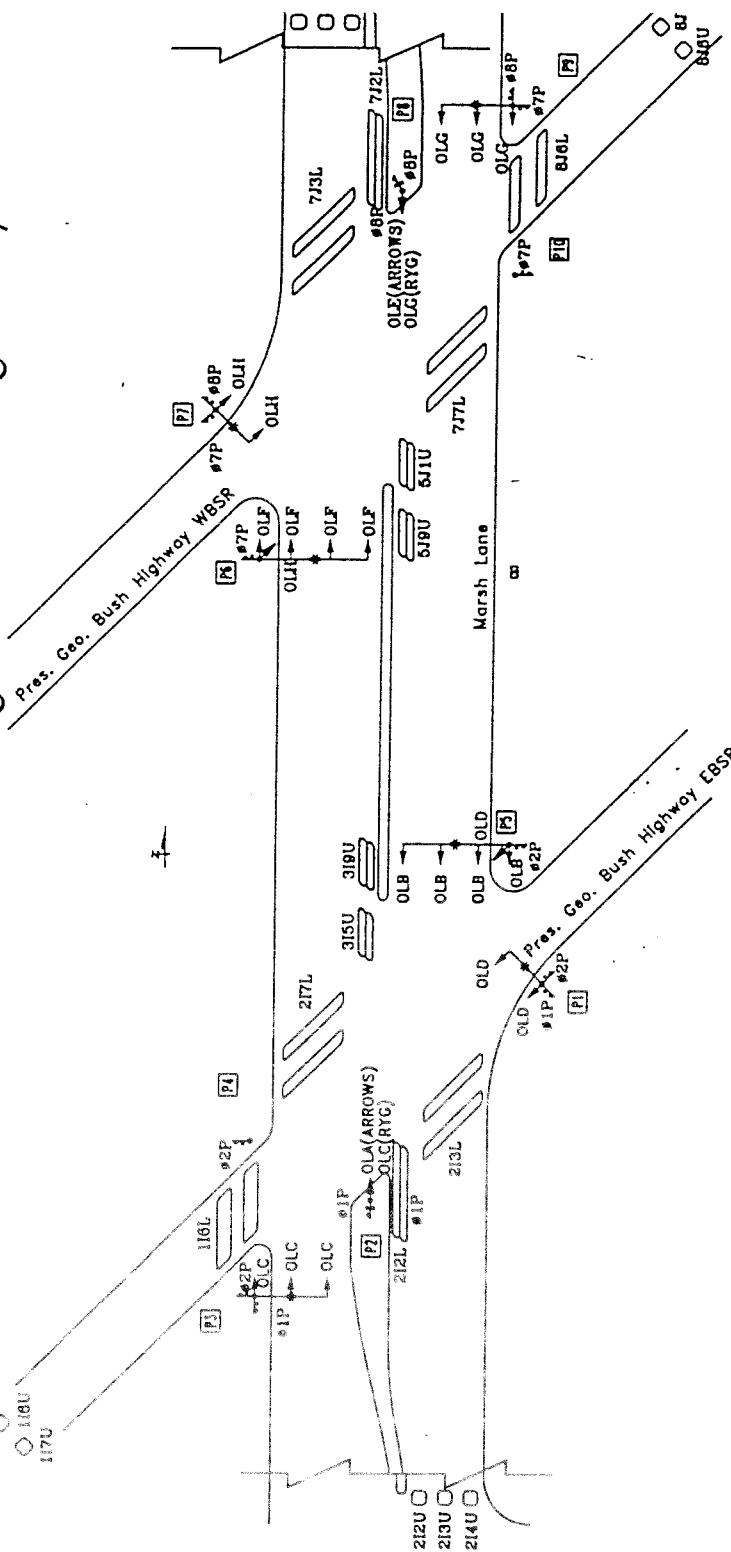


President George Bush Hwy WBSR

Marsh Lane at Pres. George Bush Highway

## THE SIGNALIZATION WORK

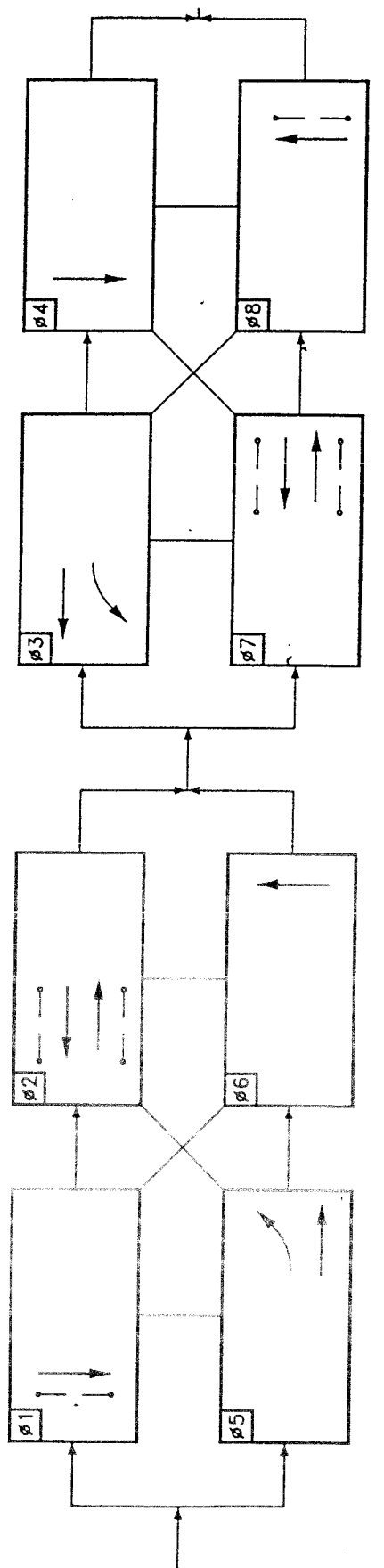
Page 19 of 25



## OVERLAPS

OLA=ø3  
OLB=ø2  
OLC=ø2+ø3  
OLD=ø1+ø4  
OLE=ø5  
OLF=ø7  
OLG=ø5+ø7  
OLH=ø6+ø8

PHASE DIAGRAM



## PHASING

**CITY OF DAL  
PARTMENT OF TRANS**

SCALE NO.	
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PAGE 9



# Frankford Road at Pres. George Bush Highway S&SR (West)

POLE AND CABINET FOUNDATIONS SHALL BE LOCATED IN THE FIELD BY C.O.D. ENGINEER

POLE FOUNDATIONS SHALL BE LOCATED SUCH THAT INDICATIONS WILL NOT BE IN EXCESS OF 150 LF FROM THE STOP LINE.

Frankford Road

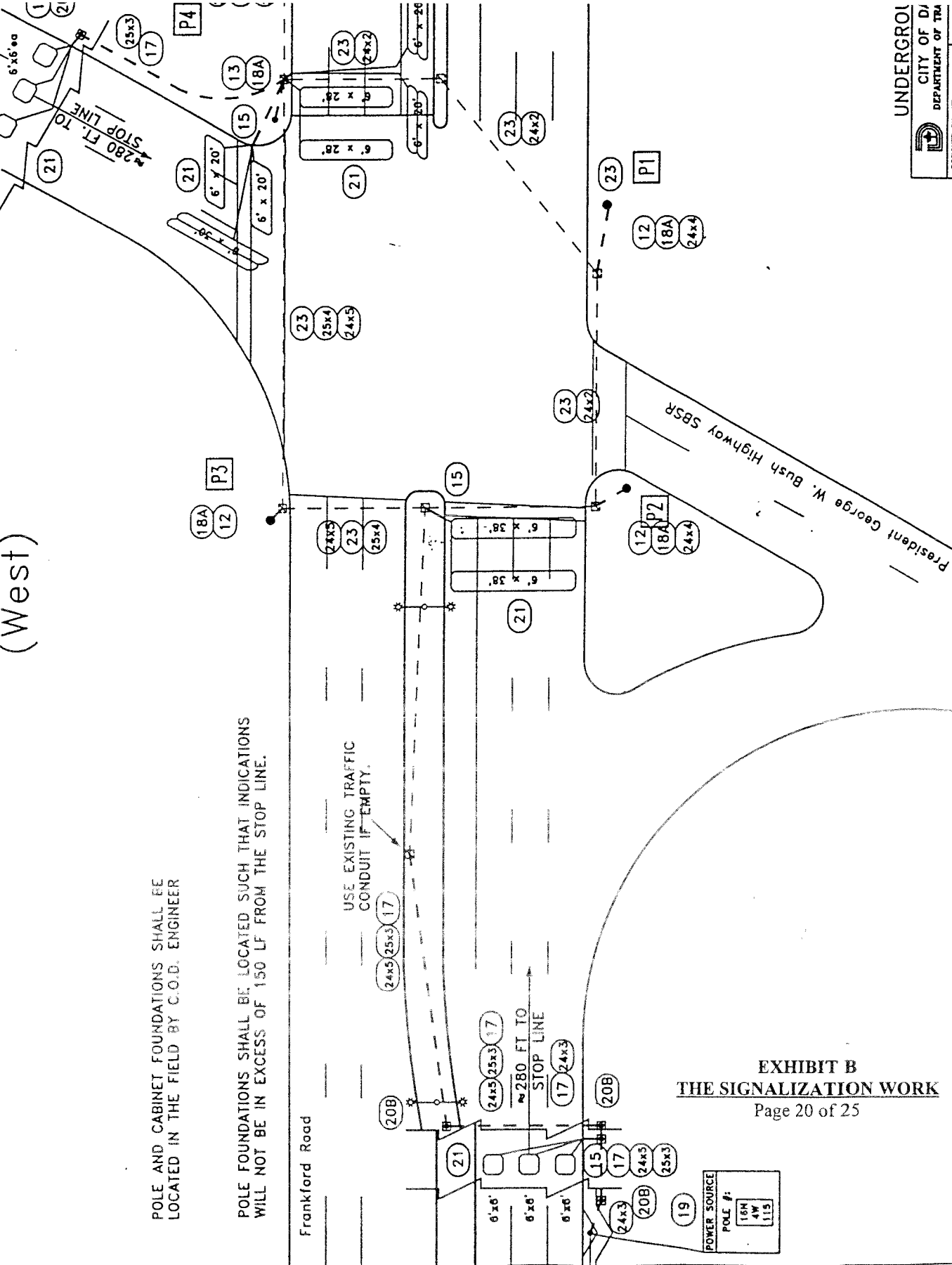
USE EXISTING TRAFFIC CONDUIT IF EMPTY.

280 FT TO STOP LINE

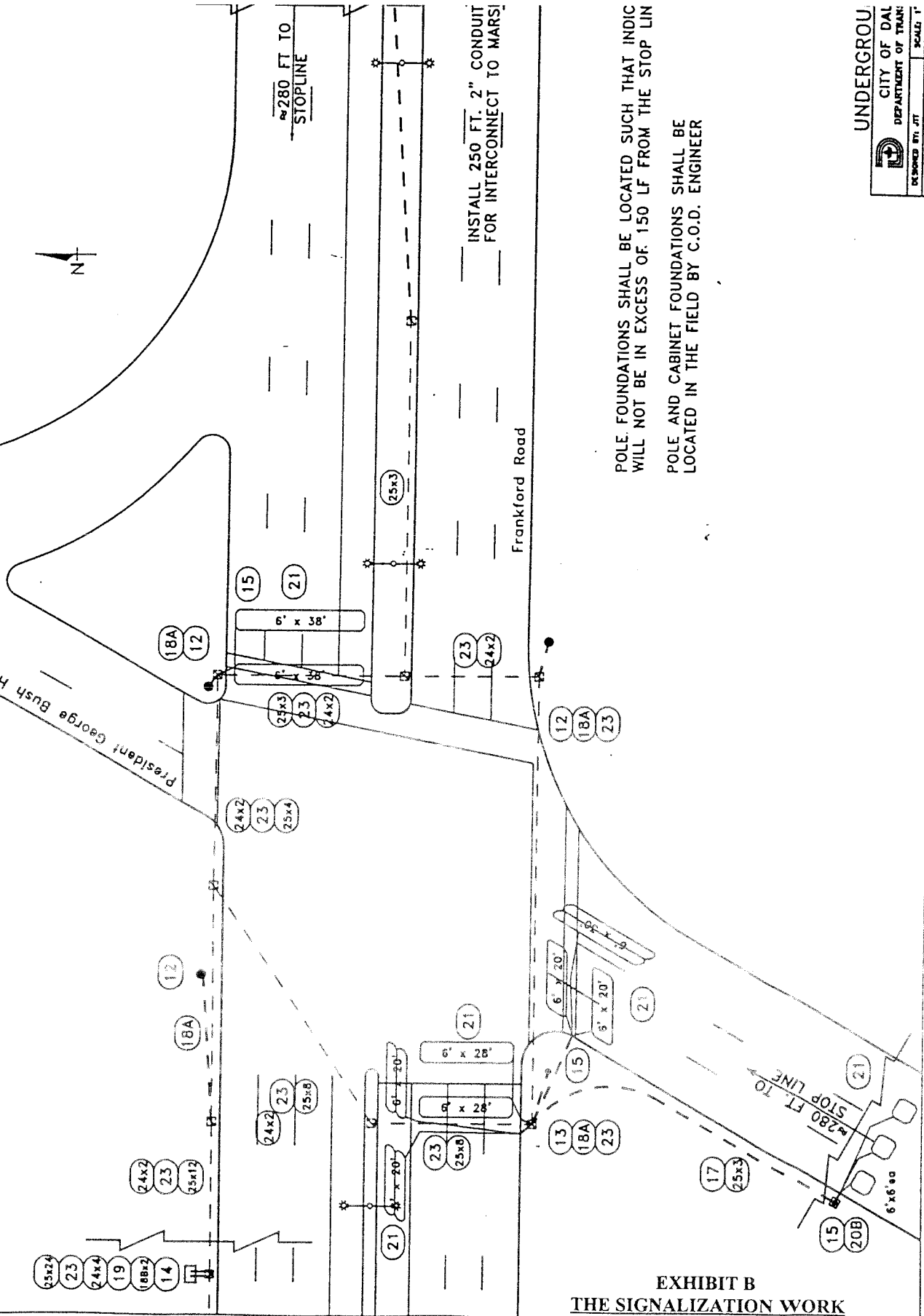
EXHIBIT B  
THE SIGNALIZATION WORK  
Page 20 of 25

POWER SOURCE  
POLE #:  
16W  
4W  
115

UNDERGROU	
CITY OF D	DEPARTMENT OF TR
DESIGNED BY: JTT	SCALE:
DATE: 12/1/00	PAGE:

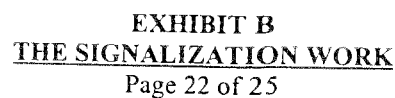


# Frankford Road at Pres. George Bush Highway NBSR (East)



POLE FOUNDATIONS SHALL BE LOCATED SUCH THAT INDIC WILL NOT BE IN EXCESS OF 150 LF FROM THE STOP LIN

POLE AND CABINET FOUNDATIONS SHALL BE LOCATED IN THE FIELD BY C.O.D. ENGINEER



# Frankford Road at Pres. George Bush Highway NBSR (East)

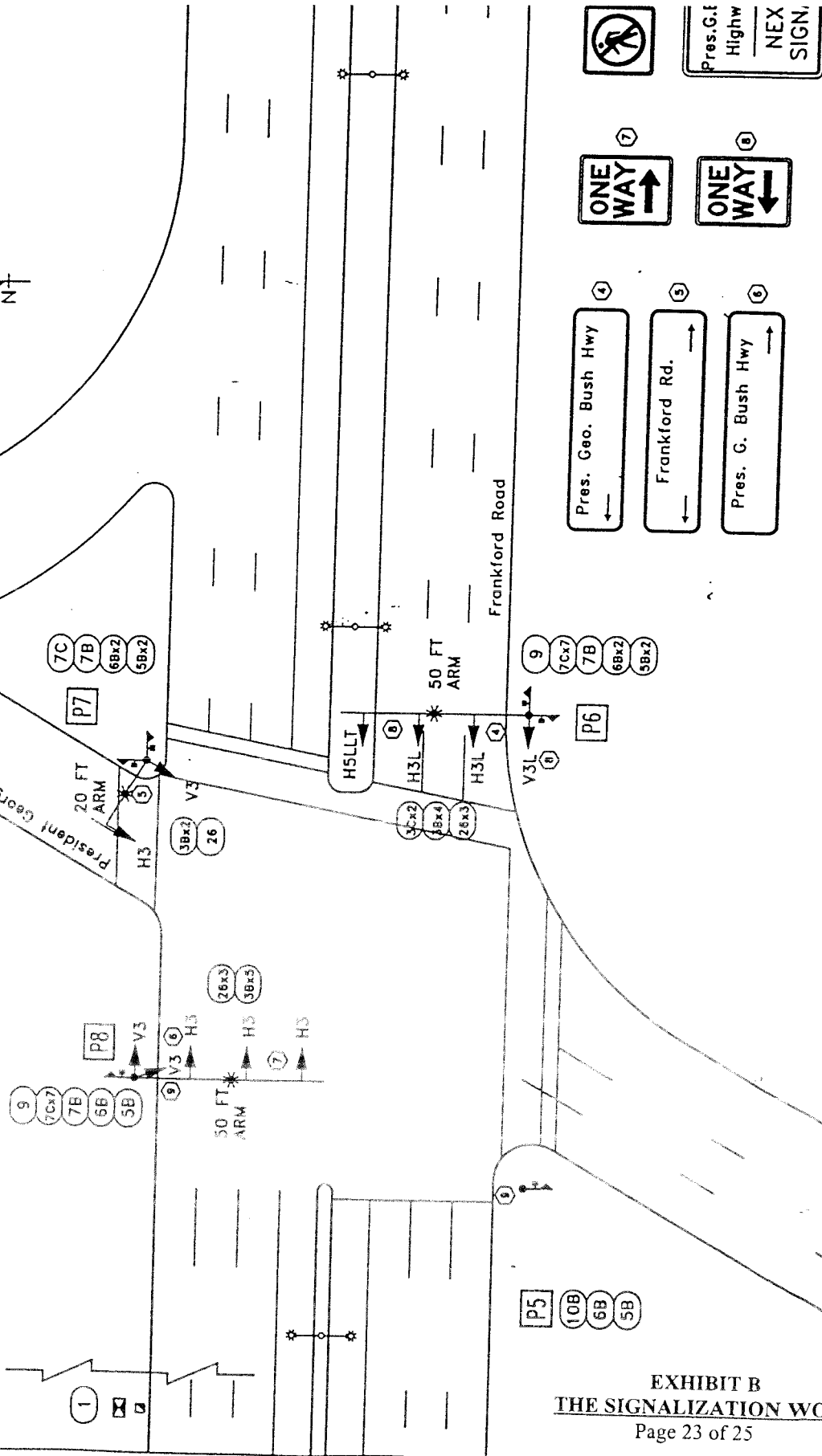


EXHIBIT B  
THE SIGNALIZATION WORK  
Page 23 of 25



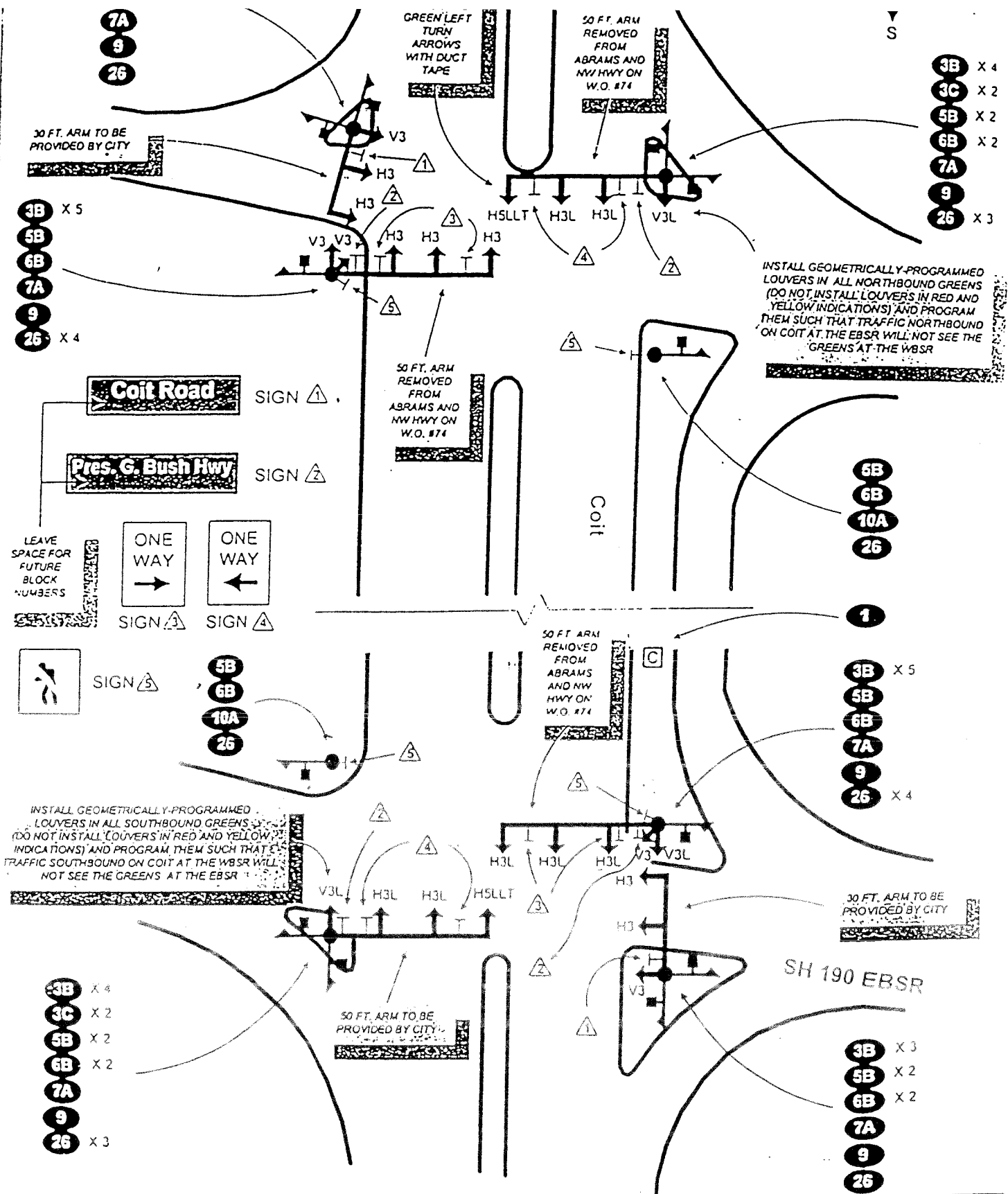


EXHIBIT B  
THE SIGNALIZATION WORK  
Page 25 of 25

**SUMMARY OF TRAFFIC SIGNAL CONSTRUCTION COSTS  
ASSOCIATED WITH PRESIDENT BUSH TURNPIKE  
IN THE CITY OF DALLAS**

INTERSECTION	COST OF TEMPORARY SIGNALS (PHASE 1) <sup>(1)</sup>	COST OF TEMPORARY SIGNALS (PHASE 2) <sup>(2)</sup>	COST OF PERMANENT SIGNAL HARDWARE	COST OF CATV DROPS	TOTAL COST OF SIGNAL
COIT	N/A	N/A	\$75,483	\$5,609	\$81,092
MIDWAY	\$45,697	\$5,000	\$122,789	\$3,344	\$176,830
ROSEMEADE	N/A	N/A	\$123,405	\$3,047	\$126,452
MARSH	N/A	\$20,000	\$131,030	\$1,739	\$152,769
FRANKFORD	N/A	N/A	\$119,783	\$8,203	\$127,986
SUBTOTALS →	\$45,697	\$25,000	\$572,489	\$21,942	\$665,128
15% CONTINGENCY FACTOR →	N/A	N/A	\$36,478 <sup>(3)</sup>	N/A	\$36,478
30% CONTINGENCY FACTOR →	N/A	N/A	\$76,146 <sup>(4)</sup>	N/A	\$76,146
PORTION OF CATV DROP COSTS FUNDED BY CITY →	N/A	N/A	N/A	\$11,942	(\$11,942)
TOTAL REIMBURSEMENT AMOUNT →	\$45,697	\$25,000	\$685,113	\$10,000	\$765,810

NOTES:

- 1) Phase 1 temporary signals refers to the construction of span wire signals at Midway related to the opening of the Turnpike from Coit to Midway in late 1998.
- 2) Phase 2 temporary signals refers to the construction of span wire signals on the westbound service road at Marsh and the completion of the span wire signal installation at Midway related to the opening of the Turnpike from Midway to Frankford in February, 2001.
- 3) The 15% contingency factor applies only to the permanent signal installations which must be completed by July 31, 2001—namely, PGBT @ Rosemeade and Frankford.
- 4) The 30% contingency factor applies only to the permanent signal installations which must be completed by January 1, 2003—namely, PGBT @ Midway and Marsh.

## QUANTITY ESTIMATE SHEET

MATERIALS & LABOR PROVIDED BY PRICE AGREEMENT CONTRACTOR					
ITEM #	DESCRIPTION	UNIT OF MEAS.	UNIT COST	QUANTITY	EXTENDED COST
0	MOBILIZATION	LF	\$ 5,427.89	1	\$ 5,427.89
1	INST BASE MOUNT CONTROLLER CABINET	EA	\$ 1,100.00	1	\$ 1,100.00
3B	PROC & INST 3 SECTION TRAFFIC SIGNAL HEAD	EA	\$ 460.00	20	\$ 9,200.00
3C	PROC & INST SINGLE SECTION TRAFFIC SIGNAL HEAD	EA	\$ 150.00	4	\$ 600.00
5B	PROC & INST PEDESTRIAN SIGNAL HEAD	EA	\$ 340.00	16	\$ 5,440.00
6B	PROC & INST PEDESTRIAN PUSH BUTTON	EA	\$ 110.00	14	\$ 1,540.00
7B	PROC & INST GALV SIG POLE ASSEMBLY W/15' ARM & NO LUM EXT	EA	\$ 2,300.00	6	\$ 13,800.00
7C	PROC & INST 5' INCREMENTAL MAST ARM LENGTH	EA	\$ 300.00	18	\$ 5,400.00
7D	PROC & INST LUM EXT FOR GALV MAST ARM SIGNAL POLE ASSEMBLY	EA	\$ 400.00	6	\$ 2,400.00
9	PROC & INST DAMPENING PLATE ON MAST ARM	EA	\$ 170.00	2	\$ 340.00
10B	PROC & INST GALVANIZED PEDESTAL SIGNAL POLE	EA	\$ 600.00	5	\$ 3,000.00
12	INST MAST ARM POLE FOUNDATION	EA	\$ 2,300.00	6	\$ 13,800.00
13	INST PEDESTAL POLE FOUNDATION	EA	\$ 600.00	5	\$ 3,000.00
14	INST CONTROLLER CABINET FOUNDATION	EA	\$ 700.00	1	\$ 700.00
15	PROC & INST 1 IN RIGID METAL CONDUIT	LF	\$ 4.00	110	\$ 440.00
16	PROC & INST 1.5 IN RIGID METAL CONDUIT	LF	\$ 6.50	20	\$ 130.00
17	PROC & INST 2 IN RIGID METAL OR PVC CONDUIT	LF	\$ 3.90	1000	\$ 3,900.00
18A	PROC & INST 3 IN RIGID METAL OR PVC CONDUIT	LF	\$ 4.70	210	\$ 987.00
18B	PROC & INST 4 IN RIGID METAL OR PVC CONDUIT	LF	\$ 12.00	130	\$ 1,560.00
20B	PROC & INST PULL BOX	EA	\$ 345.00	7	\$ 2,415.00
21	PROC & INST LOOP DET SAWCUT, WIRE AND SEALANT	LF	\$ 3.80	2480	\$ 9,424.00
23	PROC & INST MULTICONDUCTOR SIGNAL CABLE	LF	\$ 2.30	4015	\$ 9,234.50
24	PROC & INST ELECTRICAL POWER WIRE	LF	\$ 0.70	4130	\$ 2,891.00
25	PROC & INST SHIELDED 2 CONDUCTOR LOOP DETECTOR	LF	\$ 0.65	10410	\$ 6,766.50
26	INST TRAFFIC SIGN	EA	\$ 90.00	20	\$ 1,800.00
28	REM CONTROLLER CABINET	EA	\$ 300.00	2	\$ 600.00
29	REM VEHICULAR AND PEDESTRIAN TRAFFIC SIGNAL HEAD	EA	\$ 35.00	15	\$ 525.00
37A	REM STRAIN WIRE	LF	\$ 0.30	2200	\$ 660.00
37B	REM STEEL DOWN GUY	EA	\$ 300.00	8	\$ 2,400.00
37C	REM DOWN GUY ASSEMBLY	EA	\$ 20.00	14	\$ 280.00
38	REM WIRE IN CONDUIT	LF	\$ 1.00	500	\$ 500.00
39	REM TRAFFIC SIGN	EA	\$ 33.10	8	\$ 264.80
42	INST BARRIER FREE SIDEWALK RAMP	EA	\$ 865.00	4	\$ 3,460.00
CONTRACTOR TOTAL					\$ 113,985.69

MATERIALS AND LABOR PROVIDED BY THE CITY OF DALLAS					
CONTROLLER, MONITOR	EA	\$ 1,300.00		\$	-
CABINET, 170/332	EA	\$ 4,500.00		\$	-
SIGNS	EA	\$ 50.00	20	\$	1,000.00
				Subtotal	\$ 1,000.00
				2% handling	\$ 20.00
				MATERIALS TOTAL	\$ 1,020.00
SIGN FABRICATION					\$ 800.00
CITY FORCES WORK					\$ 1,500.00
ENGINEERING					\$ 4,000.00
				Subtotal	\$ 6,300.00
				23.55% overhead	\$ 1,483.65
				LABOR TOTAL	\$ 7,783.65
				CITY TOTAL	\$ 8,803.65
COST OF PERMANENT SIGNAL HARDWARE					\$ 122,789.34

COMMUNICATIONS TO BE INSTALLED					
MODEM				\$	1,100.00
				2% handling	\$ 22.00
CATV CABLE				\$	2,222.22
COMMUNICATIONS TOTAL					\$ 3,344.22

MIDWAY TOTAL \$ 126,133.56

**EXHIBIT C**  
**THE COST ESTIMATE**



## QUANTITY ESTIMATE SHEET

MATERIALS & LABOR PROVIDED BY PRICE AGREEMENT CONTRACTOR					
ITEM #	DESCRIPTION	UNIT OF MEAS.	UNIT COST	QUANTITY	EXTENDED COST
0	MOBILIZATION	LF	\$5,175.48	1	\$ 5,175.48
1	INST BASE MOUNT CONTROLLER CABINET	EA	\$1,100.00	1	\$ 1,100.00
3B	PROC & INST 3 SECTION TRAFFIC SIGNAL HEAD	EA	\$ 460.00	19	\$ 8,740.00
3C	PROC & INST SINGLE SECTION TRAFFIC SIGNAL HEAD	EA	\$ 150.00	4	\$ 600.00
5B	PROC & INST PEDESTRIAN SIGNAL HEAD	EA	\$ 340.00	12	\$ 4,080.00
6B	PROC & INST PEDESTRIAN PUSH BUTTON	EA	\$ 110.00	12	\$ 1,320.00
7B	PROC & INST GALV SIG POLE ASSEMBLY W/15' ARM & NO LUM EXT	EA	\$2,300.00	6	\$ 13,800.00
7C	PROC & INST 5' INCREMENTAL MAST ARM LENGTH	EA	\$ 300.00	16	\$ 4,800.00
7D	PROC & INST LUM EXT FOR GALV MAST ARM SIGNAL POLE ASSEMBLY	EA	\$ 400.00	6	\$ 2,400.00
9	PROC & INST DAMPENING PLATE ON MAST ARM	EA	\$ 170.00	1	\$ 170.00
10B	PROC & INST GALVANIZED PEDESTAL SIGNAL POLE	EA	\$ 600.00	2	\$ 1,200.00
12	INST MAST ARM POLE FOUNDATION	EA	\$2,300.00	6	\$ 13,800.00
13	INST PEDESTAL POLE FOUNDATION	EA	\$ 600.00	2	\$ 1,200.00
14	INST CONTROLLER CABINET FOUNDATION	EA	\$ 700.00	1	\$ 700.00
15	PROC & INST 1 IN RIGID METAL CONDUIT	LF	\$ 4.00	117	\$ 468.00
17	PROC & INST 2 IN RIGID METAL OR PVC CONDUIT	LF	\$ 3.90	1330	\$ 5,187.00
18A	PROC & INST 3 IN RIGID METAL OR PVC CONDUIT	LF	\$ 4.70	140	\$ 658.00
18B	PROC & INST 4 IN RIGID METAL OR PVC CONDUIT	LF	\$ 12.00	570	\$ 6,840.00
19	PROC & INST ELECTRICAL POWER SERVICE	EA	\$ 650.00	1	\$ 650.00
20B	PROC & INST PULL BOX	EA	\$ 345.00	9	\$ 3,105.00
21	PROC & INST LOOP DET SAWCUT, WIRE AND SEALANT	LF	\$ 3.80	2840	\$ 10,792.00
23	PROC & INST MULTICONDUCTOR SIGNAL CABLE	LF	\$ 2.30	3380	\$ 7,774.00
24	PROC & INST ELECTRICAL POWER WIRE	LF	\$ 0.70	5490	\$ 3,843.00
25	PROC & INST SHIELDED 2 CONDUCTOR LOOP DETECTOR	LF	\$ 0.65	13050	\$ 8,482.50
26	INST TRAFFIC SIGN	EA	\$ 90.00	20	\$ 1,800.00
CONTRACTOR TOTAL					\$ 108,684.98

## MATERIALS AND LABOR PROVIDED BY CITY OF DALLAS

CONTROLLER, MONITOR	EA	\$1,300.00	1	\$ 1,300.00
CABINET, 170/332	EA	\$4,500.00	1	\$ 4,500.00
SIGNS	EA	\$ 50.00	20	\$ 1,000.00
			Subtotal	\$ 6,800.00
			2% handling	\$ 136.00
			MATERIALS TOTAL	\$ 6,936.00
SIGN FABRICATION		\$ 800.00	1	\$ 800.00
CITY FORCES WORK		\$1,500.00	1	\$ 1,500.00
ENGINEERING		\$4,000.00	1	\$ 4,000.00
			Subtotal	\$ 6,300.00
			23.55% overhead	\$ 1,483.65
			LABOR TOTAL	\$ 7,783.65
			CITY TOTAL	\$ 14,719.65
COST OF PERMANENT SIGNAL HARDWARE				\$ 123,404.63

## COMMUNICATIONS TO BE INSTALLED

MODEM			\$ 1,100.00
		2% handling	\$ 22.00
CATV CABLE			\$ 1,925.00
COMMUNICATIONS TOTAL			\$ 3,047.00

ROSEMEADE TOTAL \$ 126,451.63

EXHIBIT C  
THE COST ESTIMATE

**QUANTITY ESTIMATE SHEET**

11/16/01

**MATERIALS & LABOR PROVIDED BY PRICE AGREEMENT CONTRACTOR**

ITEM #	DESCRIPTION	UNIT OF MEAS.	UNIT COST	QUANTITY	EXTENDED COST
0	MOBILIZATION	LF	\$5,538.57	1	\$ 5,538.57
1	INST BASE MOUNT CONTROLLER CABINET	EA	\$1,100.00	1	\$ 1,100.00
3B	PROC & INST 3 SECTION TRAFFIC SIGNAL HEAD	EA	\$ 460.00	22	\$ 10,120.00
3C	PROC & INST SINGLE SECTION TRAFFIC SIGNAL HEAD	EA	\$ 150.00	4	\$ 600.00
5B	PROC & INST PEDESTRIAN SIGNAL HEAD	EA	\$ 340.00	16	\$ 5,440.00
6B	PROC & INST PEDESTRIAN PUSH BUTTON	EA	\$ 110.00	14	\$ 1,540.00
7B	PROC & INST GALV SIG POLE ASSEMBLY W/15' ARM & NO LUM EXT	EA	\$2,300.00	6	\$ 13,800.00
7C	PROC & INST 5' INCREMENTAL MAST ARM LENGTH	EA	\$ 300.00	20	\$ 6,000.00
7D	PROC & INST LUM EXT FOR GALV MAST ARM SIGNAL POLE ASSEMBLY	EA	\$ 400.00	6	\$ 2,400.00
9	PROC & INST DAMPENING PLATE ON MAST ARM	EA	\$ 170.00	2	\$ 340.00
10B	PROC & INST GALVANIZED PEDESTAL SIGNAL POLE	EA	\$ 600.00	4	\$ 2,400.00
12	INST MAST ARM POLE FOUNDATION	EA	\$2,300.00	6	\$ 13,800.00
13	INST PEDESTAL POLE FOUNDATION	EA	\$ 600.00	4	\$ 2,400.00
14	INST CONTROLLER CABINET FOUNDATION	EA	\$ 700.00	1	\$ 700.00
15	PROC & INST 1 IN RIGID METAL CONDUIT	LF	\$ 4.00	135	\$ 540.00
17	PROC & INST 2 IN RIGID METAL OR PVC CONDUIT	LF	\$ 3.90	2570	\$ 10,023.00
18A	PROC & INST 3 IN RIGID METAL OR PVC CONDUIT	LF	\$ 4.70	165	\$ 775.50
18B	PROC & INST 4 IN RIGID METAL OR PVC CONDUIT	LF	\$ 12.00	20	\$ 240.00
20B	PROC & INST PULL BOX	EA	\$ 345.00	12	\$ 4,140.00
21	PROC & INST LOOP DET SAWCUT, WIRE AND SEALANT	LF	\$ 3.80	2560	\$ 9,728.00
23	PROC & INST MULTICONDUCTOR SIGNAL CABLE	LF	\$ 2.30	4375	\$ 10,062.50
24	PROC & INST ELECTRICAL POWER WIRE	LF	\$ 0.70	5060	\$ 3,542.00
25	PROC & INST SHIELDED 2 CONDUCTOR LOOP DETECTOR	LF	\$ 0.65	10355	\$ 6,730.75
26	INST TRAFFIC SIGN	EA	\$ 90.00	20	\$ 1,800.00
28	REM CONTROLLER CABINET	EA	\$ 300.00	1	\$ 300.00
29	REM VEHICULAR AND PEDESTRIAN TRAFFIC SIGNAL HEAD	EA	\$ 35.00	7	\$ 245.00
32	REM PEDESTRIAN PUSH BUTTON	EA	\$ 10.00	6	\$ 60.00
37A	REM STRAIN WIRE	LF	\$ 0.30	420	\$ 126.00
37B	REM STEEL DOWN GUY	EA	\$ 300.00	4	\$ 1,200.00
37C	REM DOWN GUY ASSEMBLY	EA	\$ 20.00	6	\$ 120.00
38	REM WIRE IN CONDUIT	LF	\$ 1.00	300	\$ 300.00
39	REM TRAFFIC SIGN	EA	\$ 33.10	6	\$ 198.60

**CONTRACTOR TOTAL \$ 116,309.92**

**MATERIALS AND LABOR PROVIDED BY CITY OF DALLAS**

CONTROLLER, MONITOR	\$1,300.00	1	\$ 1,300.00
CABINET, 170/332	\$4,500.00	1	\$ 4,500.00
SIGNS	\$ 50.00	20	\$ 1,000.00
		Subtotal	\$ 6,800.00
		2% handling	\$ 136.00
		<b>MATERIALS TOTAL</b>	<b>\$ 6,936.00</b>
SIGN FABRICATION			\$ 800.00
CITY FORCES WORK			\$ 1,500.00
ENGINEERING			\$ 4,000.00
		Subtotal	\$ 6,300.00
		23.55% overhead	\$ 1,483.65
		<b>LABOR TOTAL</b>	<b>\$ 7,783.65</b>

**CITY TOTAL \$ 14,719.65**

<b>COST OF PERMANENT SIGNAL HARDWARE</b>	<b>\$ 131,029.57</b>
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**COMMUNICATIONS TO BE INSTALLED**

MODEM			\$ 1,100.00
		2% handling	\$ 22.00
CATV CABLE			\$ 617.00

**COMMUNICATIONS TOTAL \$ 1,739.00**

**MARSH TOTAL \$ 132,768.57**

**EXHIBIT C  
THE COST ESTIMATE**

**QUANTITY ESTIMATE SHEET**

MATERIALS & LABOR PROVIDED BY THE PRICE AGREEMENT CONTRACTOR						
LINE #	ITEM #	DESCRIPTION	UNIT OF MEAS.	UNIT COST	QUANTITY	EXTENDED COST
1	0	MOBILIZATION	LF	\$ 5,003.01	1	\$ 5,003.01
2	1	INST BASE MOUNT CONTROLLER CABINET	EA	\$ 1,100.00	1	\$ 1,100.00
3	3B	PROC & INST 3 SECTION TRAFFIC SIGNAL HEAD	EA	\$ 460.00	22	\$ 10,120.00
4	3C	PROC & INST SINGLE SECTION TRAFFIC SIGNAL HEAD	EA	\$ 150.00	4	\$ 600.00
5	5B	PROC & INST PEDESTRIAN SIGNAL HEAD	EA	\$ 340.00	12	\$ 4,080.00
6	6B	PROC & INST PEDESTRIAN PUSH BUTTON	EA	\$ 110.00	12	\$ 1,320.00
7	7B	PROC & INST GALV SIG POLE ASSEMBLY W/15' ARM & NO LUM EXT	EA	\$ 2,300.00	6	\$ 13,800.00
8	7C	PROC & INST 5' INCREMENTAL MAST ARM LENGTH	EA	\$ 300.00	30	\$ 9,000.00
9	7D	PROC & INST LUM EXT FOR GALV MAST ARM SIGNAL POLE ASSEMBLY	EA	\$ 400.00	6	\$ 2,400.00
10	9	PROC & INST DAMPENING PLATE ON MAST ARM	EA	\$ 170.00	4	\$ 680.00
11	10B	PROC & INST GALVANIZED PEDESTAL SIGNAL POLE	EA	\$ 600.00	2	\$ 1,200.00
12	12	INST MAST ARM POLE FOUNDATION	EA	\$ 2,300.00	6	\$ 13,800.00
13	13	INST PEDESTAL POLE FOUNDATION	EA	\$ 600.00	2	\$ 1,200.00
14	14	INST CONTROLLER CABINET FOUNDATION	EA	\$ 700.00	1	\$ 700.00
15	15	PROC & INST 1 IN RIGID METAL CONDUIT	LF	\$ 4.00	81	\$ 324.00
16	17	PROC & INST 2 IN RIGID METAL OR PVC CONDUIT	LF	\$ 3.90	1535	\$ 5,985.50
17	18A	PROC & INST 3 IN RIGID METAL OR PVC CONDUIT	LF	\$ 4.70	160	\$ 752.00
18	18B	PROC & INST 4 IN RIGID METAL OR PVC CONDUIT	LF	\$ 12.00	20	\$ 240.00
19	19	PROC & INST ELECTRICAL POWER SERVICE	EA	\$ 650.00	1	\$ 650.00
20	20B	PROC & INST PULL BOX	EA	\$ 345.00	11	\$ 3,795.00
21	21	PROC & INST LOOP DET SAWCUT, WIRE AND SEALANT	LF	\$ 3.80	2460	\$ 9,348.00
22	23	PROC & INST MULTICONDUCTOR SIGNAL CABLE	LF	\$ 2.30	2995	\$ 6,888.50
23	24	PROC & INST ELECTRICAL POWER WIRE	LF	\$ 0.70	5780	\$ 4,046.00
24	25	PROC & INST SHIELDED 2 CONDUCTOR LOOP DETECTOR	LF	\$ 0.65	9585	\$ 6,230.25
25	26	INST TRAFFIC SIGN	EA	\$ 90.00	20	\$ 1,800.00

**CONTRACTOR TOTAL \$ 105,063.26**

MATERIALS AND LABOR PROVIDED BY CITY OF DALLAS						
CONTROLLER, MONITOR	EA	\$ 1,300.00	1	\$	1,300.00	
CABINET, 170/332	EA	\$ 4,500.00	1	\$	4,500.00	
SIGNS	EA	\$ 50.00	20	\$	1,000.00	
				Subtotal	\$	6,800.00
				2% handling	\$	136.00
				<b>MATERIALS TOTAL</b>	\$	<b>6,936.00</b>
SIGN FABRICATION		\$ 800.00	1	\$	800.00	
CITY FORCES WORK		\$ 1,500.00	1	\$	1,500.00	
ENGINEERING		\$ 4,000.00	1	\$	4,000.00	
				Subtotal	\$	6,300.00
				23.55% overhead	\$	1,483.65
				<b>LABOR TOTAL</b>	\$	<b>7,783.65</b>

**CITY TOTAL \$ 14,719.65**

<b>COST OF PERMANENT SIGNAL HARDWARE</b>	<b>\$ 119,782.91</b>
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COMMUNICATIONS TO BE INSTALLED						
MODEM				\$	1,100.00	
				2% handling	\$	22.00
CATV CABLE				\$	7,080.59	

**COMMUNICATIONS TOTAL \$ 8,202.59**

**FRANKFORD TOTAL \$ 127,985.50**

**EXHIBIT C  
THE COST ESTIMATE**

# **FINAL QUANTITY SHEET**

1/16/01

MATERIALS & LABOR PROVIDED BY PRICE AGREEMENT CONTRACTOR					
ITEM #	DESCRIPTION	UNIT OF MEAS.	UNIT COST	QUANTITY	EXTENDED COST
1	INST BASE MOUNT CONTROLLER CABINET	EA	\$ 1,700.00	1	\$ 1,700.00
3B	PROC & INST 3 SECTION TRAFFIC SIGNAL HEAD	EA	\$ 340.00	24	\$ 8,160.00
3C	PROC & INST SINGLE SECTION TRAFFIC SIGNAL HEAD	EA	\$ 75.00	4	\$ 300.00
4B	PROC & INST LOUVER IN EXISTING TRAFFIC SIGNAL HEAD	EA	\$ 105.00	3	\$ 315.00
5B	PROC & INST PEDESTRIAN SIGNAL HEAD	EA	\$ 305.00	12	\$ 3,660.00
6B	PROC & INST PEDESTRIAN PUSH BUTTON	EA	\$ 90.00	12	\$ 1,080.00
7A	INST PAINTED OR GALVANIZED MAST ARM SIGNAL POLE ASSEMBLY	EA	\$ 500.00	6	\$ 3,000.00
9	PROC & INST DAMPENING PLATE ON MAST ARM	EA	\$ 170.00	6	\$ 1,020.00
10A	INST PAINTED OR GALVANIZED PEDESTAL SIGNAL POLE	EA	\$ 265.00	2	\$ 530.00
12	INST MAST ARM POLE FOUNDATION	EA	\$ 1,200.00	6	\$ 7,200.00
13	INST PEDESTAL POLE FOUNDATION	EA	\$ 670.00	2	\$ 1,340.00
14	INST CONTROLLER CABINET FOUNDATION	EA	\$ 750.00	1	\$ 750.00
15	PROC & INST 1 IN RIGID METAL CONDUIT	LF	\$ 3.30	70	\$ 231.00
17	PROC & INST 2 IN RIGID METAL OR PVC CONDUIT	LF	\$ 3.80	550	\$ 2,090.00
18A	PROC & INST 3 IN RIGID METAL OR PVC CONDUIT	LF	\$ 9.00	140	\$ 1,260.00
19	PROC & INST ELECTRICAL POWER SERVICE	EA	\$ 550.00	1	\$ 550.00
20B	PROC & INST PULL BOX	EA	\$ 320.00	6	\$ 1,920.00
21	PROC & INST LOOP DET SAWCUT, WIRE AND SEALANT	LF	\$ 3.00	1620	\$ 4,860.00
23	PROC & INST MULTICONDUCTOR SIGNAL CABLE	LF	\$ 1.90	2181	\$ 4,143.90
24	PROC & INST ELECTRICAL POWER WIRE	LF	\$ 0.90	782	\$ 703.80
25	PROC & INST SHIELDED 2 CONDUCTOR LOOP DETECTOR	LF	\$ 0.85	7291	\$ 6,197.35
26	INST TRAFFIC SIGN	EA	\$ 90.00	18	\$ 1,620.00

MATERIALS AND LABOR PROVIDED BY CITY OF DALLAS				
POLES, ARMS, ETC.				\$ 9,692.62
CONTROLLER, MONITOR				\$ 1,216.74
CABINET, 170/332				\$ 3,487.00
CABLE				\$ 1,459.00
CABLE, TAPE, DRILL BITS				\$ 1,143.23
SIGNAL HEADS				\$ -
SIGNS				\$ -
				\$ -
			Subtotal	\$ 16,998.59
			2% handling	\$ 339.97
			<b>MATERIALS TOTAL</b>	<b>\$ 17,338.56</b>
SIGN FABRICATION				\$ 789.99
CITY FORCES WORK				\$ 3,321.43
ENGINEERING				\$ 407.86
			Subtotal	\$ 4,519.28
			22% overhead	\$ 994.24
			<b>LABOR TOTAL</b>	<b>\$ 5,513.52</b>
			<b>CITY TOTAL</b>	<b>\$ 22,852.08</b>
<b>COST OF PERMANENT SIGNAL HARDWARE</b>				<b>\$ 75,483.13</b>

COMMUNICATIONS (TO BE INSTALLED)				
MODEM				\$ 1,004.00
			2% handling	\$ 20.08
CATV CABLE DROP				\$ 4,585.36
<b>COMMUNICATIONS TOTAL</b>				<b>\$ 5,609.44</b>

**COIT TOTAL \$ 81,092.57**

## **EXHIBIT C THE COST ESTIMATE**

**FINAL QUANTITY SHEET**

MATERIALS & LABOR PROVIDED BY PRICE AGREEMENT CONTRACTOR					
ITEM #	DESCRIPTION	UNIT OF MEAS.	UNIT COST	QUANTITY	EXTENDED COST
0	MOBILIZATION	LF	\$ 3,316.25	1	\$ 3,316.25
2	INST POLE MOUNT CONTROLLER CABINET	EA	\$ 900.00	1	\$ 900.00
3A	INST TRAFFIC SIGNAL HEAD	EA	\$ 100.00	12	\$ 1,200.00
11A	INST STEEL GUY POLE	EA	\$ 600.00	8	\$ 4,800.00
11B	PROC & INST DOWN GUY ASSEMBLY	EA	\$ 160.00	8	\$ 1,280.00
11C	PROC & INST STRAIN WIRE	LF	\$ 1.70	1697	\$ 2,884.90
15	PROC & INST 1 IN RIGID METAL CONDUIT	LF	\$ 4.00	20	\$ 80.00
16	PROC & INST 1.5 IN RIGID METAL CONDUIT	LF	\$ 6.50	55	\$ 357.50
17	PROC & INST 2 IN RIGID METAL OR PVC CONDUIT	LF	\$ 3.90	360	\$ 1,404.00
18B	PROC & INST 4 IN RIGID METAL OR PVC CONDUIT	LF	\$ 12.00	425	\$ 5,100.00
19	PROC & INST ELECTRICAL POWER SERVICE	EA	\$ 650.00	1	\$ 650.00
20B	PROC & INST PULL BOX	EA	\$ 345.00	4	\$ 1,380.00
23	PROC & INST MULTICONDUCTOR SIGNAL CABLE	LF	\$ 2.30	2110	\$ 4,853.00
24	PROC & INST ELECTRICAL POWER WIRE	LF	\$ 0.70	400	\$ 280.00
25	PROC & INST SHIELDED 2 CONDUCTOR LOOP DETECTOR	LF	\$ 0.65	2396	\$ 1,557.40
26	INST TRAFFIC SIGN	EA	\$ 90.00	8	\$ 720.00
<b>CONTRACTOR TOTAL</b>					<b>\$ 30,763.05</b>

MATERIALS AND LABOR PROVIDED BY CITY OF DALLAS					
	CONTROLLER, MONITOR				\$ 1,215.22
	CABINET, 170/332				\$ 4,146.30
	SIGNAL HEADS				\$ 1,573.61
	SIGNS				\$ 988.21
				Subtotal	\$ 7,923.34
				2% handling	\$ 158.47
				<b>MATERIALS TOTAL</b>	<b>\$ 8,081.81</b>
	SIGN FABRICATION				
	CITY FORCES WORK				\$ 1,749.21
	ENGINEERING				\$ 3,866.89
				Subtotal	\$ 5,616.10
				22% overhead	\$ 1,235.54
				<b>LABOR TOTAL</b>	<b>\$ 6,851.64</b>
				<b>CITY TOTAL</b>	<b>\$ 14,933.45</b>

Total Midway (TEMPORARY) \$ 45,696.50