

Document 00910

ADDENDUM NO. 1

Date of Addendum: 4/3/15

PROJECT NAME: CrossPoint Avenue, Fannin Street  
and West Orem Drive Panel Replacement Project

PROJECT NO: WBS No. N-321038-0006-4

BID DATE: 04/09/2015 (There is no change to the Bid Date.)

FROM: J. Timothy Lincoln, P.E., City Engineer  
City of Houston  
Department of Public Works and Engineering  
1002 Washington Avenue  
Houston, Texas 77002  
Attn: Rowaidah Ayoub, P.E., Project Manager

TO: Prospective Bidders

This Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable. Insofar as the original Project Manual and Drawings are inconsistent, this Addendum governs.

*This Addendum uses the change page method: remove and replace or add pages, or Drawing sheets, as directed in the change instructions below. Change bars ( | ) are provided in the outside margins of pages from the Project Manual to indicate where changes have been made; no change bars are provided in added Sections. Reissued Drawing Sheets show the Addendum number below the title block and changes in the Drawing are noted by a revision mark and enclosed in a revision cloud.*

ADDENDUM NO. 1

#### CHANGES TO PROJECT MANUAL

#### BIDDING REQUIREMENTS

1. Document 00410 - Remove entire document and replace with revised document 00410, Addendum No. 1.

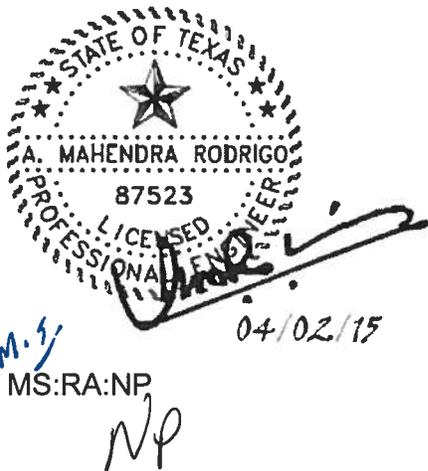
CONDITIONS OF THE CONTRACT

2. Document 01110 – Summary of work. Remove entire document and replace with revised document 01110 – Summary of work Addendum No. 1.

CHANGES TO DRAWINGS

3. Remove and replace sheets 9-11, 42-44, and 71-87.

END OF ADDENDUM NO. 1



DATED: Ravi Kaleyatodi  
Ravi Kaleyatodi, P.E., CPM  
Senior Assistant Director  
Department of Public Works and  
Engineering

END OF DOCUMENT

CrossPoint Avenue, Fannin Street  
and West Orem Drive Panel Replacement Project  
WBS No. N-321038-0006-4

**NOTICE OF ADDENDUM**

Document 00911

NOTICE OF  
ADDENDUM NO. 1

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Attn: Rowaidah Ayoub, P.E., Project Manager

TO: Prospective Bidders

The referenced Addendum forms a part of the Bidding Documents and will be incorporated into the Contract documents, as applicable.

Written questions regarding this Addendum may be submitted to the Project Manager following the procedures specified in Document 00200 – Instructions to Bidders. Immediately notify the City Engineer through the named Project Manager upon finding discrepancies or omissions in the Bid Documents.

This Addendum includes:

ADDENDUM SYNOPSIS

- Changes to Project Manual
- Bidding Requirements
- Condition of the Contract
- Changes to Drawings



*m.s.*

DATED:

Ravi Kaleyatodi  
Ravi Kaleyatodi, P.E., CPM  
Senior Assistant Director  
Department of Public Works and  
Engineering

END OF DOCUMENT

00911-1  
02-01-2004

Document 00410A

BID FORM – PART A

To: **The Honorable Mayor and City Council of the City of Houston  
City Hall Annex  
900 Bagby Street  
Houston, Texas 77002**

Project: CrossPoint Avenue, Fannin Street and West Orem Drive Panel  
Replacement Project

Project No.: WBS No. N-321038-0006-4

Bidder: \_\_\_\_\_  
(Print or type full name of business entity, such as corporation, LLC,  
etc)

**OFFER**

- A. **Total Bid Price:** Having examined the Project location and all matters referred to in Bid Documents for the Project, we, the undersigned, offer to enter into a Contract to perform the Work for the Total Bid Price shown on the signature page of this Document
- B. **Security Deposit:** Included with the Bid is a Security Deposit in the amount of 10 percent of the Total Bid Price subject to terms described in Document 00200 – Instructions to Bidders.
- C. **Period for Bid Acceptance:** This offer is open to acceptance and is irrevocable for 90 days from Bid Date. That period may be extended by mutual written agreement of the City and Bidder.
- D. **Addenda:** All Addenda have been received. Modifications to Bid Documents have been considered and all related costs are included in the Total Bid Price.
- E. **Bid Supplements:** The following documents are attached:
  - Security Deposit (*as defined in Document 00200 – Instructions to Bidders*)
  - Document 00450 - Bidder's Statement of MWSBE Status
  - Document 00452 - Contractor's Submission List - Fair Campaign Ordinance Form A
  - Document 00453 – Bidder's Statement of Residency (*not required for AIP funded project*)
  - Document 00454 - Affidavit of Non-interest
  - Document 00455 - Affidavit of Ownership or Control
  - Document 00456 - Bidder's Certificate of Compliance with Buy American Program (*required for AIP funded project*)
  - Document 00457 – Conflicts of Interest Questionnaire (CIQ)
  - Document 00458 - Bidder's Certificate Regarding Foreign Trade Restriction (*required for AIP funded project*)
  - Document 00459 - Contractor's Statement Regarding Previous Contracts Subject

to EEO (required for AIP funded project)

- Document 00460 – (POP 1) Pay or Play Acknowledgement Form
- Document 00470 – Bidder's MWSBE Participation Plan (required unless no MWSBE participation goal is provided in Document 00800 (the "Goal")).
- Document 00471 – Pre-bid Good Faith Efforts (required if the goal in Bidder's Participation Plan–Document 00470 is lower than the Goal).
- Document 00472 – Bidder's Goal Deviation Request (required if the goal in Bidder's Participation Plan–Document 00470 is lower than the Goal).
- Others as listed: Valid official letter from OBO with your designation as a City or Local Business (Bidder's Participation Hire Houston First)

**CONTRACT TIME**

- A.** If offer is accepted, Contractor shall achieve Date of Substantial Completion within 340 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

Document 00410B – Addendum No. 1

**BID FORM – PART B**

**1.0 TOTAL BID PRICE HAS BEEN CALCULATED BY BIDDER, USING THE FOLLOWING COMPONENT PRICES AND PROCESS (PRINT OR TYPE NUMERICAL AMOUNTS):**

**A. STIPULATED PRICE:**

**\$ N/A**

(Total Bid Price; minus Base Unit Prices, Extra Unit Prices, Cash Allowances and All Alternates, if any)

**B. BASE UNIT PRICE TABLE:**

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
1	01502	Mobilization	LS	1	\$ 60,000 <sup>1</sup>	\$ 60,000 <sup>1</sup>
2	01555	Traffic control and regulation (including signs)	LS	1		
3	01555	Flag men	LS	1	\$ 110,000 <sup>2</sup>	\$ 110,000 <sup>2</sup>
4	01562	Tree and Plant Protection	LS	1		
5	01570	Filter Fabric Fence: Type 2	LF	1,500		
6	01570	Stage 2 inlet protection barrier	LF	360		
7	02086	Adjust existing manholes, frame and cover, to new grade	EA	12		
8	02086	Adjust existing valve box to new grade	EA	8		
9	02221	Remove/dispose of reinforced concrete pavements, w/ or w/o asphalt overlay, regardless of its thickness, from back-to-back of curbs, w/ or w/o curb, all depths	SY	35,752		
10	02221	Remove/dispose of concrete sidewalks & driveways, all thickness	SY	172		
11	02221	Remove and dispose of concrete curb, or curb and gutter (all types) includes sawcutting pavement (for curb not adjacent to panel replacement work)	LF	170		
12	02319	Borrow soil	CY	5		

CrossPoint Avenue, Fannin Street  
and West Orem Drive Panel Replacement Project  
WBS No. N-321038-0006-4

**BID FORM  
PART B**

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
13	02336	Lime for lime stabilized subgrade (dry weight 6%)	TON	564		
14	02336	Lime stabilize subgrade, 8-inch thick	SY	33,661		
15	02338	Cement Stabilized Sand Subgrade, 8-inch thick, including excavation	SY	5,259		
16	02632/0 2633	Repair Inlet - Stage 2	EA	12		
17	02751	Reinforced concrete pavement, 8-inch thick	SY	5,096		
18	02751	Reinforced concrete pavement, 10-inch thick	SY	25,976		
19	02751	High Early Strength Reinforced Concrete Pavement, Min 8-inch thick or match existing pavement	SY	1,041		
20	02751	High Early Strength Reinforced Concrete Pavement, Min 10-inch thick or match existing pavement	SY	3,639		
21	02752	Horizontal Dowels, 24-Inch	EA	2,500		
22	02752	Expansion Joint, with or without load transfer	LF	1,975		
23	02754	Concrete Driveways including Excavation, all thickness, complete in place	SF	300		
24	02764	Raised pavement marker TY II two face reflective (W/Y)	EA	230		
25	02765	Paint for island curb (Yellow)	LF	560		
26	02765	Temporary Raised Pavement Markers, TY II, two face reflective (W/Y)	LF	2,000		
27	02767	Thermoplastic Pavement Marking 4-inch wide White/Yellow (SLD/BRK)	LF	4,905		
28	02767	Thermoplastic Pavement Marking 8-inch wide White/Yellow (SLD/BRK)	LF	1,675		
29	02767	Thermoplastic Pavement Marking 4-inch wide Double White/Yellow (SLD/BRK)	LF	4,382		
30	02767	Thermoplastic Pavement Marking 12-inch wide White/Yellow	LF	344		
31	02767	Thermoplastic Pavement Marking 24-inch wide White/Yellow	LF	1,030		
32	02767	Thermoplastic Pavement Marking 4-inch wide White/Yellow (CAT Tracks)	LF	238		

CrossPoint Avenue, Fannin Street  
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WBS No. N-321038-0006-4

**BID FORM  
PART B**

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
33	02767	Rail Road Cross Marking include Stop Lines/and Two Transverse lines and symbol "RR"	EA	4		
34	02767	Thermoplastic Pavement marking Symbol ARROW	EA	13		
35	02767	Thermoplastic Pavement Marking word "ONLY"	EA	12		
36	02771	6-inch Reinforced concrete curb	LF	17,128		
37	02771	6-inch Doweled curb	LF	170		
38	02772/0 2751/ 02761	Island median, Replace Concrete, colored black, complete in place	SF	2,520		
39	02775	4 1/2- inch Reinforced concrete sidewalk complete in place	SF	225		
40	02775	Concrete curb ramp including truncated domes, headers, saw cutting, dowels, expansion joints & staining, as shown on the drawings and referenced in the project manual	SF	1,120		
41	02922	Sodding	SY	5,710		
42	03315	Structural Concrete for Retaining Wall for Ramp Construction, 2-foot Max height (refer to sheet 44 of 96)	LF	15		
43	16727	Loop Detector (Inductive Type)	LF	900		
44	16750	Relocate pedestrian push button	EA	1		
<b><u>TOTAL BASE UNIT PRICES</u></b>						\$ _____

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**C. EXTRA UNIT PRICE TABLE:**

Item No.	Spec Ref.	Extra Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
45	02318	Extra Hand Excavation (Not requiring Trench Safety) Complete in Place	CY	60	\$ 30 <sup>2</sup>	\$ 1,800 <sup>2</sup>
46	02318	Extra Machine Excavation (Not requiring Trench Safety) Complete in Place	CY	60	\$ 20 <sup>2</sup>	\$ 1,200 <sup>2</sup>
<b><u>TOTAL EXTRA UNIT PRICES</u></b>						<b>\$ _____</b>

**D. CASH ALLOWANCE TABLE:**

Item No.	Spec Ref.	Cash Allowance Short Title	Cash Allowance in figures (1)
47	N/A	Street cut permit (Crosspoint Ave., Fannin St., and West Orem Dr.)	\$4,000 <sup>1</sup>
<b><u>TOTAL CASH ALLOWANCES</u></b>			

REST OF PAGE INTENTIONALLY LEFT BLANK

**E. ALTERNATES TABLE:**

Item No.	Spec Ref.	Alternate Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total Price for Alternate in figures
		N/A				
<b><u>TOTAL ALTERNATES</u></b>						\$ _____

REST OF PAGE INTENTIONALLY LEFT BLANK

**F. TOTAL BID PRICE:**

(Add Totals for Items A., B., C., D., and E. above)

\$ \_\_\_\_\_

**2.0 SIGNATURES:** By signing this Document, I agree that I have received and reviewed all Addenda and considered all costs associated with the Addenda in calculating the Total Bid Price.

Bidder:

\_\_\_\_\_  
(Print or type full name of your proprietorship, partnership, corporation, or joint venture.\*)

**\*\*By:**

\_\_\_\_\_  
Signature Date

Name:

\_\_\_\_\_  
(Print or type name) Title

Address:

\_\_\_\_\_  
(Mailing)

\_\_\_\_\_  
(Street, if different)

Telephone and Fax Number:

\_\_\_\_\_  
(Print or type numbers)

\* If Bid is a joint venture, add additional Bid Form signature sheets for each member of the joint venture.

\*\* Bidder certifies that the only person or parties interested in this offer as principals are those named above. Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding.

Note: This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.

Footnotes for Tables B through E:

- (1) Fixed Unit Price determined prior to Bid. Cannot be adjusted by the Bidder.
- (2) Minimum Bid Price determined prior to Bid. Can be increased by the Bidder by crossing out the Minimum and noting revised price on the line above.
- (3) Maximum Bid Price determined prior to Bid. Can be decreased but not increased by Bidder by crossing out the Maximum and noting revised price on the line above. A Bid that increases the Maximum Bid Price may be found non-conforming and non-responsive.
- (4) Fixed Range Bid Price determined prior to Bid. Unit Price can be adjusted by Bidder to any amount within the range defined by crossing out prices noted and noting revised price on the line above.

Section 01110

SUMMARY OF WORK – Addendum No. 1

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Summary of Work including work by the City, City-furnished Products, work sequence, future work, Contractor use of Premises, special conditions for substantial completion and City occupancy.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. The project includes the following road segments:
- i. Cross Point Avenue from Kirby Drive to Fannin Street,
  - ii. West Orem Drive from Bathurst Drive to Alameda Road, and
  - iii. Fannin Street from I-610 to Old Spanish Trail.

Work of the contract is for removing and replacing existing damaged or distressed concrete pavement by matching existing joints, concrete curb, inlets, manholes, and existing damaged or non-compliant wheelchair ramps as directed by the engineer, and according to the City of Houston Department of Public Works and Engineering Guidelines.

The work to be performed shall consist of furnishing and installing all materials, equipment, excavation, backfill, grading, or paving of distributed areas, disposal of all debris and surplus excavation material, and the demolition of existing facilities necessary to complete sidewalks and wheelchair ramps as directed by the engineer.

Contractor shall require use of colored concrete for sidewalk, median, median noses, direction islands, and esplanade curbs as directed by the engineer. No separate payment shall be made for colored concrete and considered to be incidental.

The construction of street pavement expansion joints and pre-formed expansion joints as required shall be incidental to the construction of proposed concrete paving. No separate pay for these items.

No separate pay for the saw cutting of pavement, curbs, sidewalks, ramps, and driveways. It is considered to be incidental to removal/dispose of reinforced concrete pavements w/ or w/o asphalt overlay, regardless of its thickness, from back-to-back of curbs. w/ or w/o base & subgrade, w/ or w/o curb, all depths.

No separate pay for removing and relocation of watermeter including box or adjustment or water service connection. No separate pay for repair/replace of irrigation lines. It is considered to be incidental to related Reinforced concrete pavement bid items.

Portland cement stabilized subgrade shall be used as subgrade for high early strength concrete and short spans which are less than 50 square yards in area.

Removal and Replacement of driveways in addition to those identified on plans may be required as determined by the Engineer in the field. The work shall be measured and

**SUMMARY OF WORK**

paid under bid items "Remove/dispose of concrete sidewalks & driveways, all thickness" and "Concrete Driveways including Excavation, all thickness, complete in place".

City of Houston Policy states that the replacement of custom sidewalks and/or driveways shall be made with plain concrete. If home owner or the HOA wants to keep the same concrete finish, a private agreement is required with the contractor independently of the City Contract.

Contractor to ensure the proposed Wheelchair ramps and sidewalks slopes shall comply with ADA requirements and standards. To achieve desire slopes, contractor may be required to extend sidewalk replacement beyond the plan callout limit specified. The Payment for additional work shall be paid under related bid items.

Contractor shall coordinate with Metropolitan Transit Authority of Harris County (METRO) for any work performed within or near METRO facilities. If any permits or/and notifications required for the proposed work, the contractor shall obtain such before commencing the work. The cost for obtaining permits or coordination shall be incidental to the Project.

B. Additional Work Includes:

(See extra unit price items.)

C. Contractor is responsible to follow the construction plans for the wheelchair ramp construction as recommended by the engineer.

D. Truncated dome will be incidental to new or replaced wheelchair ramps

Wheelchair ramps must be constructed in compliance with the Texas Accessibility Standards (TAS) as adopted by the Texas Department of Licensing and Regulation (TDLR).

City of Houston standard drawings for Section 02775 are to be used as a general guide only. Where they differ from TAS guidelines on slope, clearance, and spacing, the TAS guidelines are to be followed in construction.

E. Implement and maintain temporary traffic control during construction. The project area includes roadway segments with high traffic, intense seasonal fluctuation in traffic during sporting and other events, as well as working within and in the vicinity of mass transit facilities. The Contractor shall coordinate with affected entities and adjust his/her TCP and work schedules in order to ensure minimum disruption to traffic flow. This work is incidental to Section 01555 – Traffic Control and Regulation.

F. Stormwater Pollution Prevention

Contractor shall adhere to the requirement of Document 01570 "Storm Water Pollution Control".

G. Contractor's Work Responsibilities

Contractor shall have a temporary filed office as described in Section 01520.

1.03 CASH ALLOWANCES

- A. Include the following specific Cash Allowances in Contract Price under provision of General Conditions Paragraph 3.11:

1. Street Cut Permits: The contractor will be required to apply and receive all required street cut permits from the City of Houston. The fees associated with these permits will be reimbursed to the contractor as a cash allowance.

1.04 ALTERNATES

- A. No alternates proposed for this project.

1.05 CITY-FURNISHED PRODUCTS

- A. Contractor's Responsibilities:

1. Arrange and pay for Product delivery to the site.
2. Receive and unload Products at the site; jointly with the City, inspect for completeness or damage.
3. Handle, store, Install, and finish Products.
4. Repair or replace damaged items.

1.06 WORK SEQUENCE

- A. The contractor shall initiate construction work at Crosspoint Avenue first and complete within 90 days from Date of Commencement of the Work.
- B. The contractor shall begin construction work at Fannin Street following completion of Crosspoint Avenue and complete within 180 days of initiation of construction at this location.
- C. The contractor shall complete construction work at West Orem Drive within 70 days of initiation of construction at this location.
- D. Contractor shall perform traffic control at Fannin Street intersections at Naomi Street and Holly Hall Street in four quarters as shown on construction plans. Contractor to contact Traffic Operations Division / Signal Engineering and Operations Branch at TranStar (Phone: (713) 881-3172) to coordinate necessary signal timing adjustments during construction stage with a minimum of 48-hours advance notice.
- E. Contractor to maintain accessibility for Pedestrians to Push Buttons & Proper Signals for TCP Stages, otherwise bag Pedestrian Heads & Install "Crosswalk Closed Signs".
- F. The contractor shall complete all work under this contract within 340 days of Date

**SUMMARY OF WORK**

of Commencement of the Work.

- G. For projects with no Phases, do not disturb more than 50% of total project linear feet of disturbed right-of-way and easement until site restored in accordance with Section 01740 – Site Restoration
  - 1. No more than two consecutive intersections to be worked on at once
  - 2. No more than one lane, per side, to be closed at once.
- H. Coordination of the work: Refer to Section 01312 – Coordination and Meetings.

1.07 CONTRACTOR USE OF PREMISES

- A. Comply with procedures for access to the site and Contractor's use of rights-of-way as specified in Section 01145 - Use of Premises.
- B. Construction Operations: Limited to the City's rights-of-way provided by the City and areas shown or described in the Contract documents.
- C. The location of existing underground utilities are not provided, nor obtained from the respective agencies. Contractor has sole responsibility for field verification for all existing facilities in the project area. Contractor shall coordinate all conflict with appropriate governing agencies.
- D. Utility Outages and Shutdown: Provide a minimum of 48 hours notice to the City and private utility companies (when applicable), excluding weekends and holidays, in advance of required utility shutdown. Coordinate all work as required.

1.08 STREET CUT ORDINANCE

- A. Excavations on or under pavement in the City's right-of-way must have a permit. Comply with City of Houston, Texas Ordinance No. 2000-1115, an ordinance amending Chapter 40 of the Code of Ordinances, Houston, Texas, relating to excavating in the Public right-of-way.
- B. Comply with the latest edition of street cut New Pavement Repair and Pavement Replacement details.
- C. Quantities are included for street cut pavement repair and replacement in applicable Specification sections for Unit Price contracts.

1.09 WARRANTY

- A. Comply with warranty requirements in accordance with Document 00700 - General Conditions.

1.10 CONDITIONS FOR SUBSTANTIAL COMPLETION

A. In addition to requirements outlined in Document 00700 – General Conditions, for Contractor to be substantially complete with the Work and call for inspection by Project Manager to confirm, the following conditions must be met or completed:

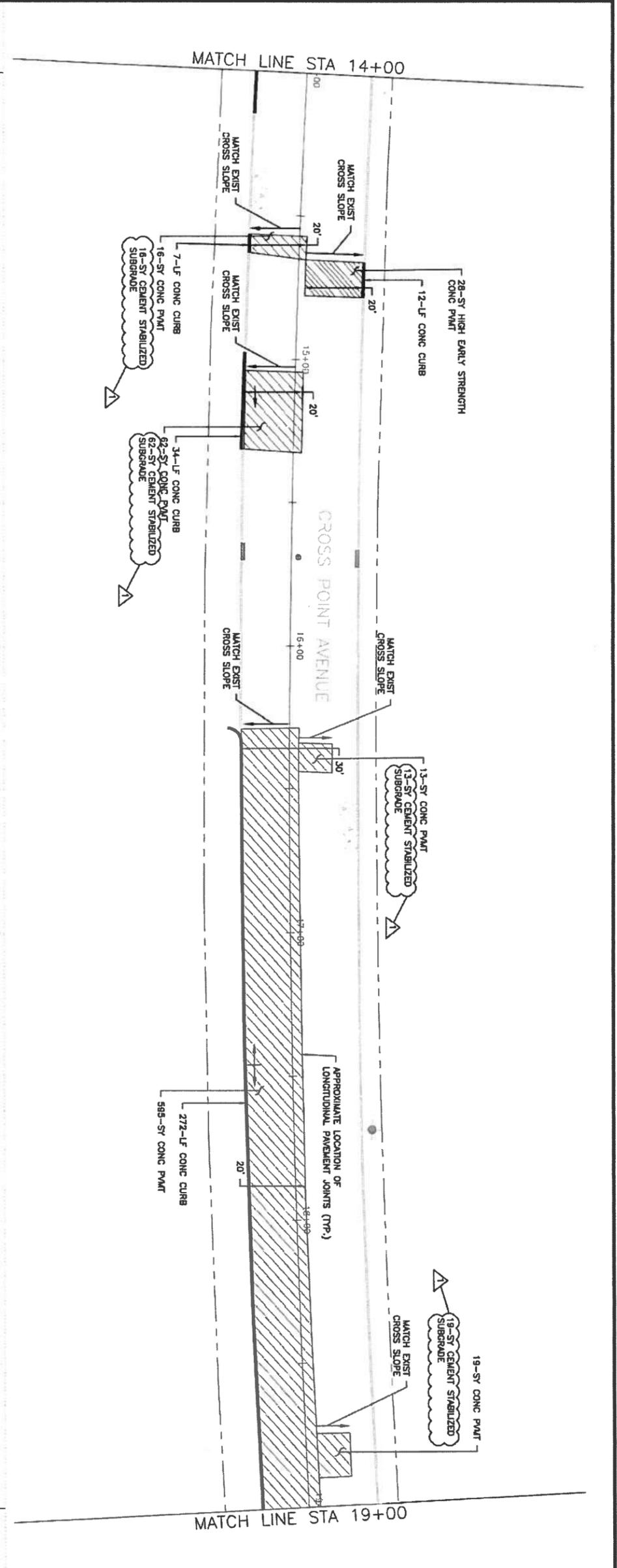
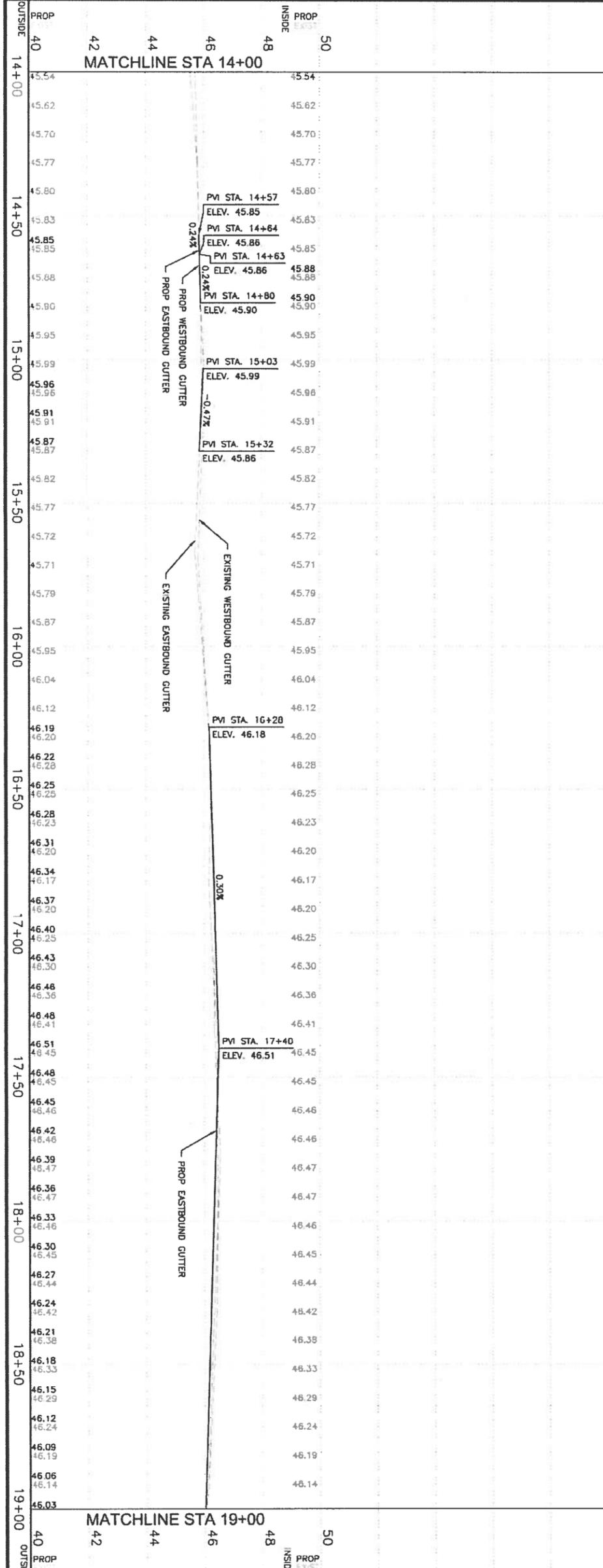
1. All Safety related work including pavement stripping, signing and signalization
- 1 (b). All safety-related systems and equipment shall be installed, accepted by manufacturer's representative and approved for use.
2. All pay items complete report.
3. Contractor shall contact Construction Project Manager to complete Texas Department of Licensing and Regulation Post Construction Inspection of pedestrian elements for Texas Accessibility Standards.

B. No additional condition described in Paragraph 1.10 may be included in Contractor's punch list.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION



**NOTES:**

- EXISTING UTILITIES (SANITARY, STORM, FIRE HYDRANTS) SHOWN IN THESE PLANS ARE AT APPROXIMATE LOCATION. THIS INFORMATION IS PROVIDED ACCORDING TO GINS OF CITY OF HOUSTON.

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**CROSSPOINT AVENUE, FANNIN STREET AND WEST OREM DRIVE PANEL REPLACEMENT PROJECT**

**PLAN & PROFILE**  
**CROSS POINT AVENUE**  
 FROM KIRBY DRIVE TO FANNIN STREET  
 STA. 14+00 TO STA. 19+00

APPENDIX No. 1	DATE	BY	CHK
	04/02/15	RA	AMR

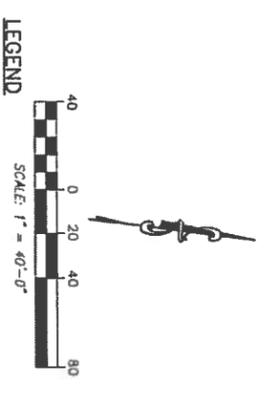
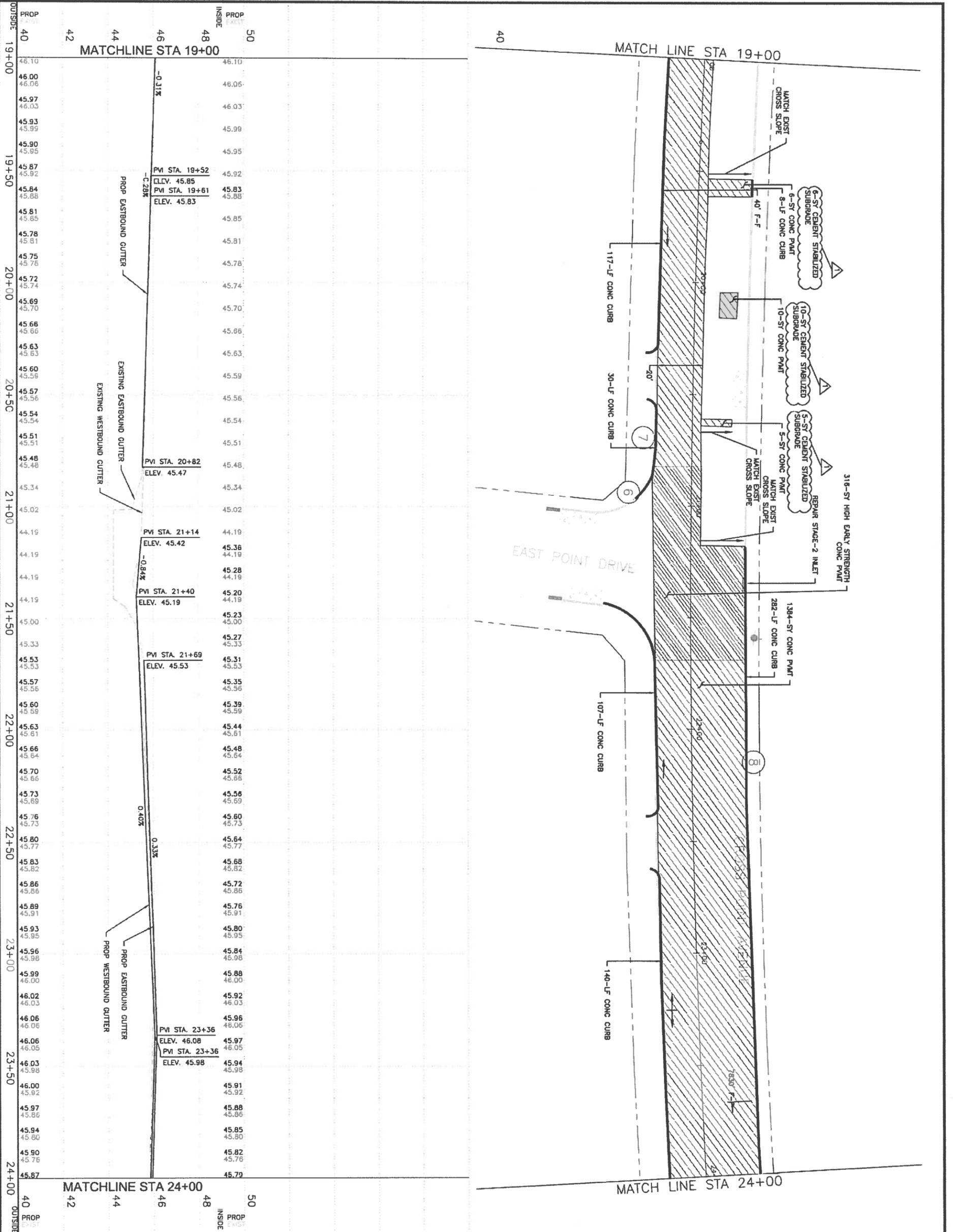
**GC ENGINEERING, INC.**  
 2025 PAVEN  
 87523  
 Phone: (281) 412-2042  
 Fax: (281) 412-4823  
 TIRRE Inspection No. F-21489  
 DIRECTED BY WESTERN GROUP  
 FOR CITY OF HOUSTON USE ONLY

WBS NUMBER: N-321038-0006-4  
 DRAWING SCALE: HORZ: 1"=40' VERT: 1"=4'  
 CITY OF HOUSTON P.M.  
 BOWNDYHAY AVOUR, P.E.  
 SHEET NO. 09 OF 97

**LEGEND**

40 0 20 40 80  
 SCALE: 1" = 40'-0"

- PROPOSED FULL DEPTH BASE REPAIR CONCRETE PAVEMENT (FDBR)
- PROPOSED MEDIUM/CONCRETE REPAIR PAVEMENT
- PROPOSED HIGH STRENGTH CONCRETE PAVEMENT
- PROPOSED CURB OR CURB AND GUTTER REPLACEMENT
- EXISTING STORM/SANITARY MANHOLE
- EXISTING STORM INLET
- EXISTING FIRE HYDRANT
- EXISTING EDGE OF PAVEMENT (SOURCE: SURVEY BY WESTERN GROUP CONSULTANTS)
- RIGHT-OF-WAY
- B1 BOREHOLE NUMBER
- PEDESTRIAN CURB RAMP NUMBER. SEE WHEELCHAIR RAMP SHEETS FOR PROPOSED CONSTRUCTION DETAILS
- GUTTER FLOW DIRECTION
- EXISTING ASPHALT PAVEMENT
- EXISTING JOINT ADJACENT TO DAMAGED OR REPAIR AREAS
- EXISTING GRAVE INLET
- EXISTING AT&T/SWBT MANHOLE
- EXISTING TYPE 'C' INLET



- LEGEND**
- PROPOSED FULL DEPTH BASE REPAIR CONCRETE PAVEMENT (FDBR)
  - PROPOSED MEDIAN/CONCRETE REPAIR PAVEMENT
  - PROPOSED HIGH STRENGTH CONCRETE PAVEMENT
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  - RIGHT-OF-WAY
  - BOREHOLE NUMBER
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  - GUTTER FLOW DIRECTION
  - EXISTING ASPHALT PAVEMENT
  - EXISTING JOINT ADJACENT TO DAMAGED OR REPAIR AREAS
  - EXISTING GRATE INLET
  - EXISTING FIRE/SWT MANHOLE
  - EXISTING TYPE 'C' INLET

**NOTES:**

- EXISTING UTILITIES (SANITARY, STORM, FIRE HYDRANTS) SHOWN IN THESE PLANS ARE AT APPROXIMATE LOCATION. THIS INFORMATION IS PROVIDED ACCORDING TO GIS OF CITY OF HOUSTON.

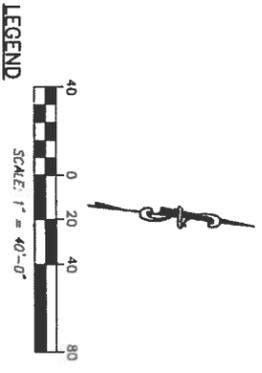
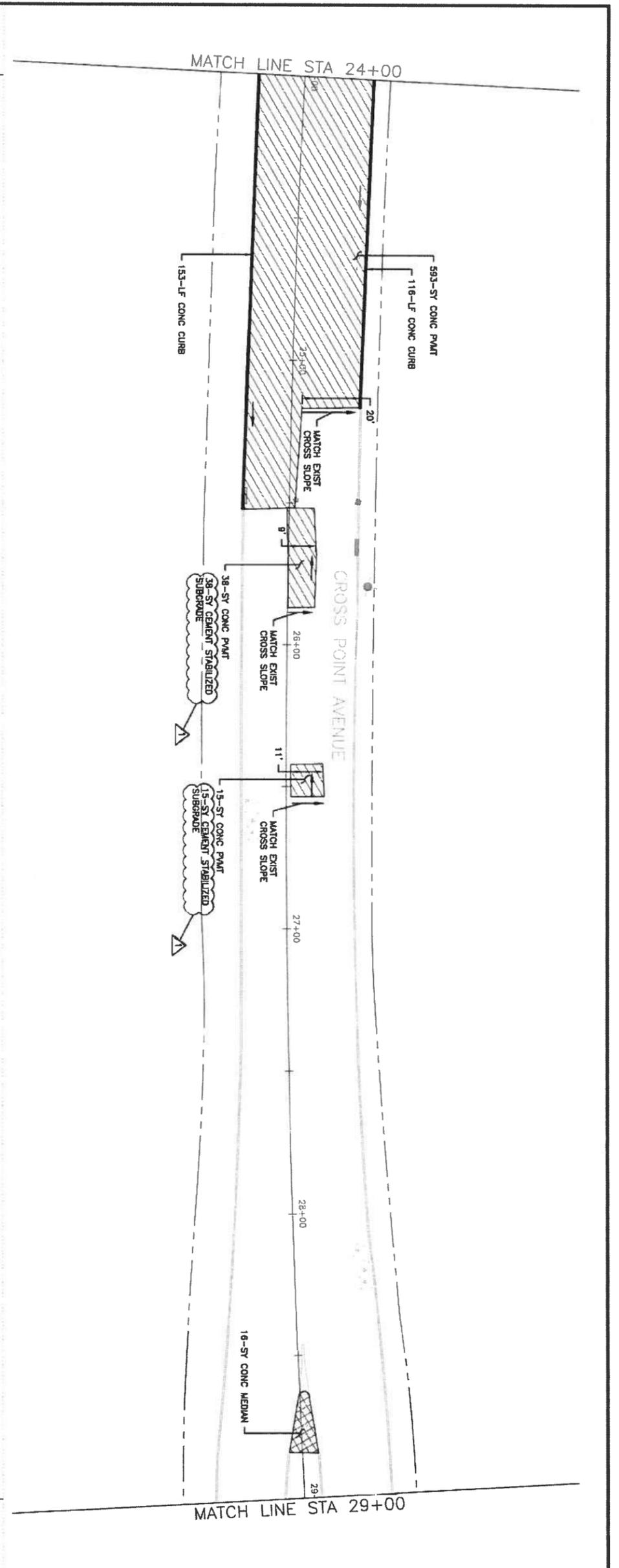
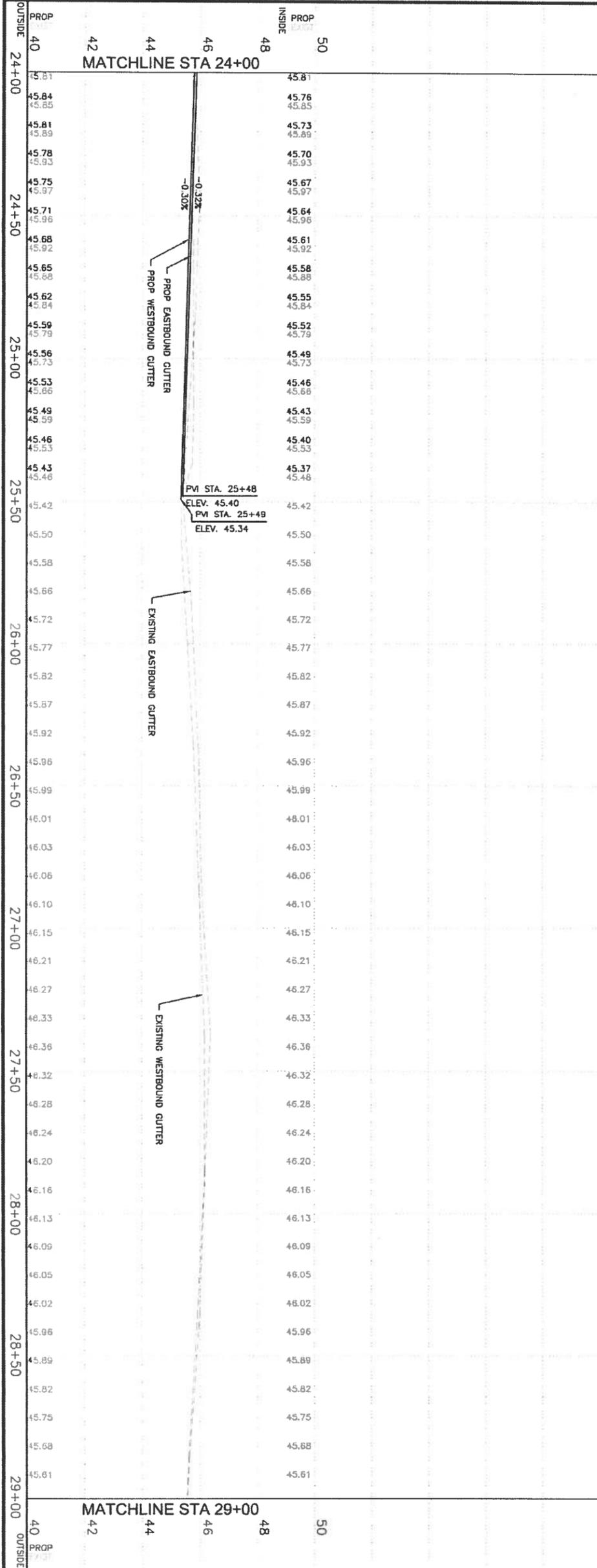
**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSSPOINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT  
**PLAN & PROFILE**  
 FROM KIRBY DRIVE TO FANNIN STREET  
 STA. 19+00 TO STA. 24+00

ADDENDUM No. 1	DATE: 04/01/15	BY: RA	CHK: AMR
DESCRIPTION:	DATE: 04/01/15	BY: DVM	CHK: CHK

GC ENGINEERING, INC.  
 2205 PAPER AVE.  
 HOUSTON, TEXAS 77051  
 Phone: (281) 412-2100  
 Fax: (281) 412-2101  
 Types and quantities No. F-1789  
 SURFER BY WESTERN GROUP

FOR CITY OF HOUSTON USE ONLY

WGS NUMBER: N-221038-0006-4  
 DRAWING SCALE: HORZ. 1"=40' VERT. 1"=4'  
 CITY OF HOUSTON PM: POWDAHAY AVGB, P.E.  
 SHEET NO. 10 OF 97



- LEGEND**
- PROPOSED FULL DEPTH BASE REPAIR CONCRETE PAVEMENT (FDBR)
  - PROPOSED MEDIUM/CONCRETE REPAIR PAVEMENT
  - PROPOSED HIGH STRENGTH CONCRETE PAVEMENT
  - PROPOSED CURB OR CURB AND GUTTER REPLACEMENT
  - EXISTING STORM/SANITARY MANHOLE
  - EXISTING STORM INLET
  - EXISTING FIRE HYDRANT
  - EXISTING EDGE OF PAVEMENT (SOURCE: SURVEY BY WESTERN GROUP CONSULTANTS)
  - BOREHOLE NUMBER
  - PEDESTRIAN CURB RAMP NUMBER. SEE WHEELCHAIR RAMP SHEETS FOR PROPOSED CONSTRUCTION DETAILS
  - GUTTER FLOW DIRECTION
  - EXISTING ASPHALT PAVEMENT
  - EXISTING JOINT ADJACENT TO DAMAGED OR REPAIR AREAS
  - EXISTING GRATE INLET
  - EXISTING AT&T/SWBT MANHOLE
  - EXISTING TYPE 'C' INLET

**NOTES:**  
 1. EXISTING UTILITIES (SANITARY, STORM, FIRE HYDRANTS) SHOWN IN THESE PLANS ARE AT APPROXIMATE LOCATION. THIS INFORMATION IS PROVIDED ACCORDING TO GIS OF CITY OF HOUSTON.

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSSPOINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT  
**PLAN & PROFILE**  
 CROSS POINT AVENUE  
 FROM KIRBY DRIVE TO FANNIN STREET  
 STA. 24+00 TO STA. 29+00

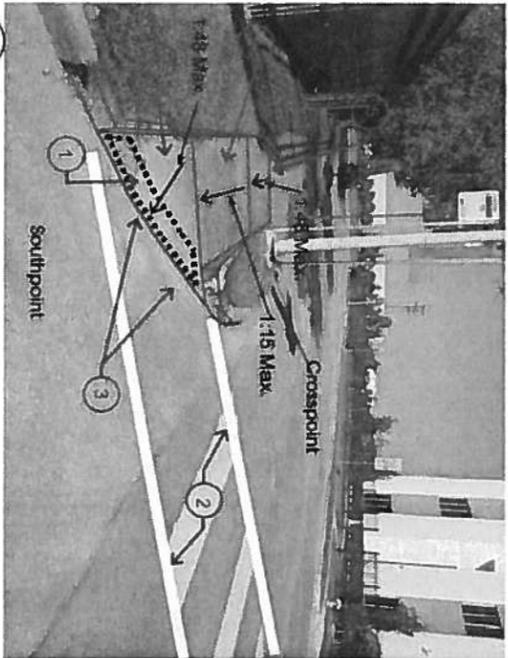
ADDENDUM No. 1	DATE	DATE	DATE

GC ENGINEERING, INC.  
 2205 PARK AVE.  
 FARMINGDale, TEXAS 77431  
 Phone: (281) 433-7028  
 Fax: (281) 433-7028  
 TYPED AND SEALED BY: J.M.B.  
 SUBMITTED BY: WESTERN GROUP

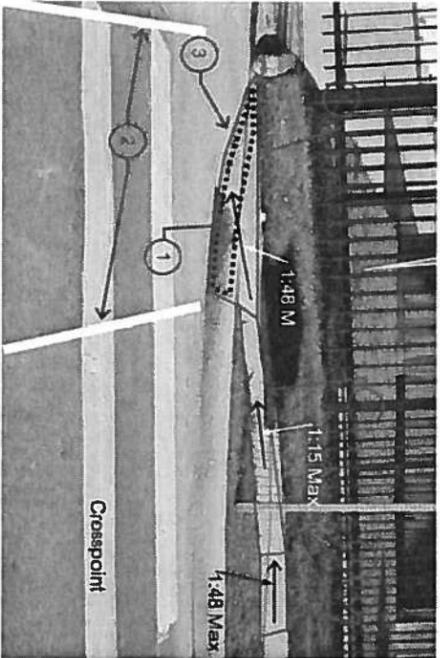
FOR CITY OF HOUSTON USE ONLY

DATE: 04/01/15  
 RA: AMR  
 DATE: 04/02/15  
 DATE: 04/02/15  
 CHK: CHK

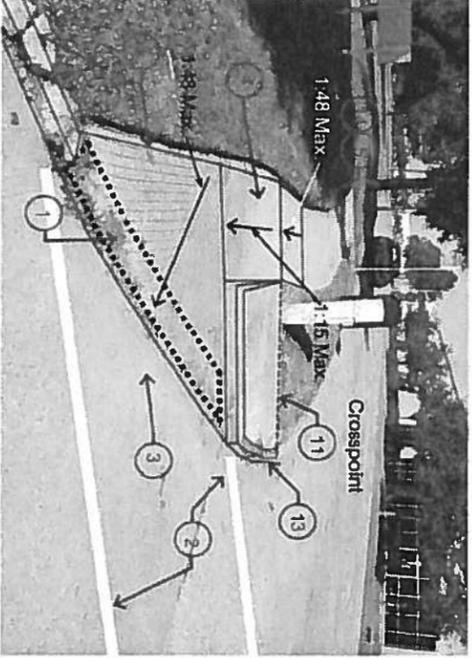
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 DRAWING SCALE: HORZ: 1"=40' VERT: 1"=4'  
 CITY OF HOUSTON PM: ROWLAND AYOUB, P.E.  
 SHEET NO. 1 OF 97



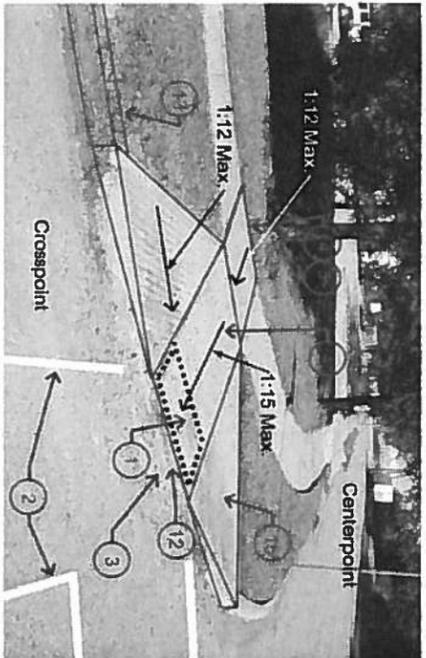
1 Crosspoint Avenue at Southpoint - Southwest Corner



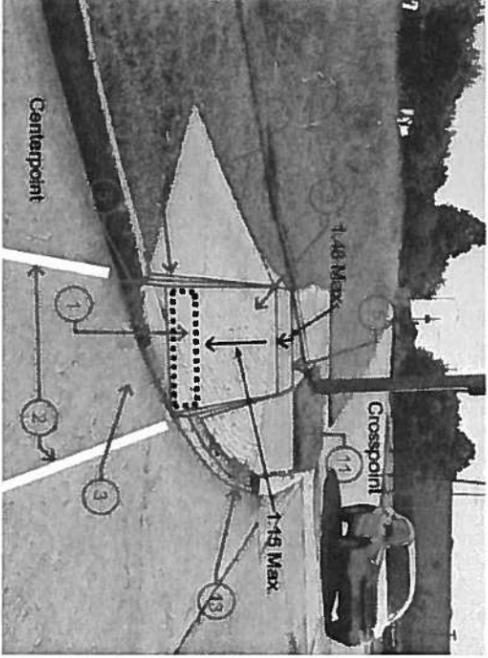
2 Crosspoint Avenue at Southpoint - North side at Crosswalk



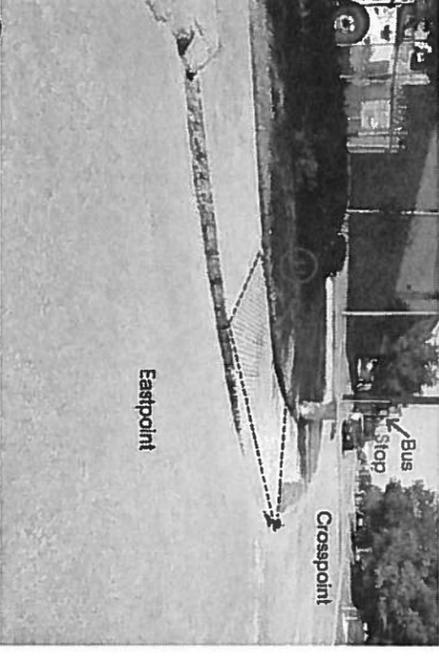
3 Crosspoint Avenue at Centerpoint - Southwest Corner



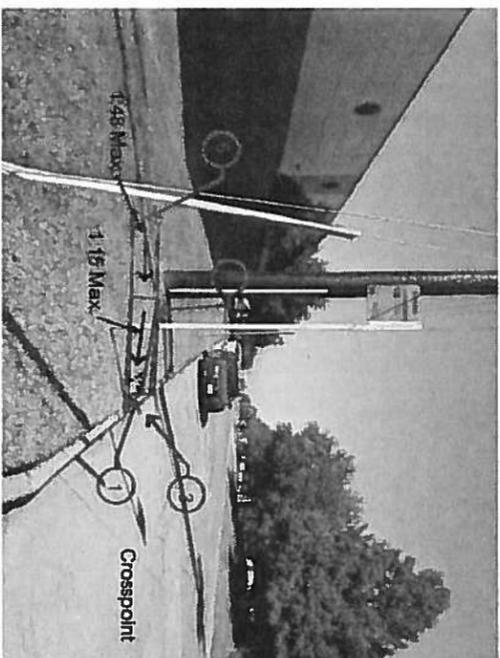
4 Crosspoint Avenue at Centerpoint - Northwest Corner



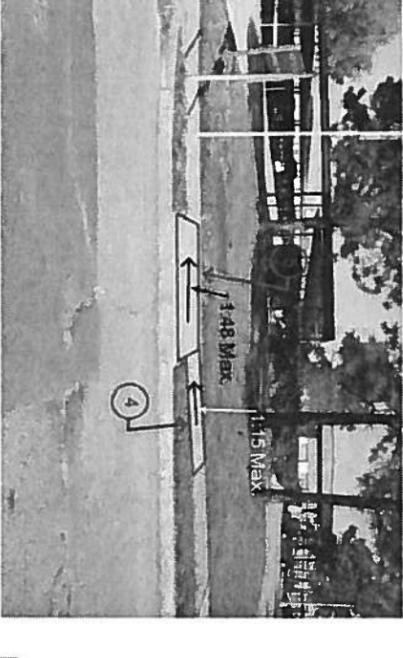
5 Crosspoint Avenue at Centerpoint - Northeast Corner



6 Crosspoint Avenue at Eastpoint - Southwest Corner



7 Crosspoint Avenue at Eastpoint - Southwest Corner Bus Stop



8 Crosspoint Avenue at Eastpoint - Northeast Corner Bus Stop (private driveway)

GENERAL NOTES

1. INSTALL OR ADD TRUNCATED DOMES FOR THE FULL WIDTH OF THE CURB RAMP OR LANDING FOR A MINIMUM DEPTH OF 24" FROM MIN. TO MAX. OF THE EDGE OF THE CUTTER PER ADMINISTRATIVE RULE 66.102 AND T&S 202.
2. INSTALL CROSSWALK PAVEMENT MARKING. INSURE THAT CURB RAMPS/DETENTABLE MARKINGS ARE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS. 48" CLEAR REQUIRED INSIDE MARKED CROSSING AT DIAGONAL CURB RAMPS AT INTERSECTIONS. PER T&S 406.6.
3. CREATE/MAINTAIN 1:20 MAXIMUM CUTTER/ADJOINING ROADWAY SLOPE WITH NEW OVERLAY.
4. CONSTRUCT CURB RAMP W/ 1:15 MAXIMUM RUNNING SLOPE AND 1:48 MAXIMUM CROSS SLOPE PER T&S 406. ALWAYS USE THE LEAST SLOPE POSSIBLE.
5. CONSTRUCT LANDING WITH 1:48 MAXIMUM SLOPE ANY DIRECTION. TOP LANDING SHALL BE 36" LONG AND AT LEAST THE FULL WIDTH OF CURB RAMP PER T&S 406.4. LANDINGS WITH A CHANGE IN DIRECTION SHALL BE A MINIMUM OF 5' BY 5'.
6. CONSTRUCT/MAINTAIN 30" X 48" MINIMUM CURB/GROUND SPACE AT EXISTING SLOPE OF 1:48 IN ANY DIRECTION. INSURE THAT EXISTING PUSH BUTTON/CONTROL IS LOCATED 48" MAXIMUM ABOVE THE GROUND SPACE. PARALLEL TO THE DIRECTION OF PEDESTRIAN TRAFFIC. PER T&S 406.6.
7. RETURNED CURBS SHALL HAVE THE EDGES TRAFFIC. PER T&S 406.6.
8. CONSTRUCT NEW REMAINING WALL/CURB, HEIGHT AS NEEDED.
9. REMOVE EXISTING SIDEWALK, CURB RAMP, AND/OR CONCRETE CURB.
10. RELOCATE PEDESTRIAN PUSH BUTTON SO IT IS PROVIDED ON THE ACCESSIBLE ROUTE. SEE NOTE 6 ON PICTURE FOR RECOMMENDED LOCATION.
11. REMOVE EXISTING CONCRETE AND FILL WITH SOIL AND RESEALMENT.
12. RAISE ELEVATION OF LEVEL LANDING/BOTTOM OF CURB RAMP TO PREVENT WATER/DEBRIS ACCUMULATION ALONG ACCESSIBLE ROUTE.
13. CONSTRUCT NEW CONCRETE CURB.
14. EXISTING CONCRETE CAN REMAIN IF LANDING MAINTAINS 5' BY 5' DIMENSION AND 1:48 MAXIMUM SLOPE IN ALL DIRECTIONS.
15. CONSTRUCT FLARED SLOPE FOR CURB RAMP WITH 1:12 MAXIMUM SLOPE FLUSH WITH ADJOINING PAVEMENT AT EDGES. PER T&S 406.3.
16. REFER TO PLAN AND PROFILE SHEETS FOR LOCATION OF RAMPS/5

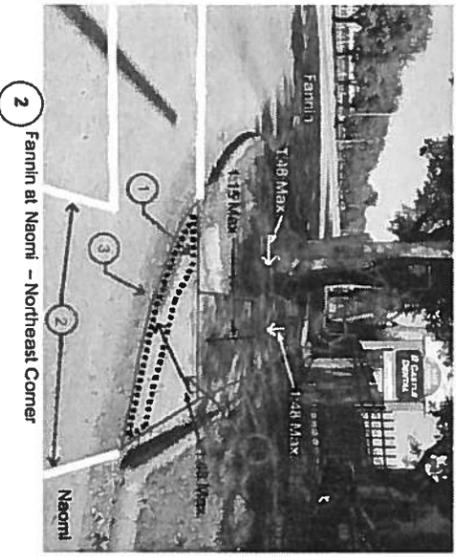
**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSSPOINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT  
 WHEELCHAIR RAMPS LAYOUT  
 CROSS POINT AVENUE

SHEET 1 OF 1

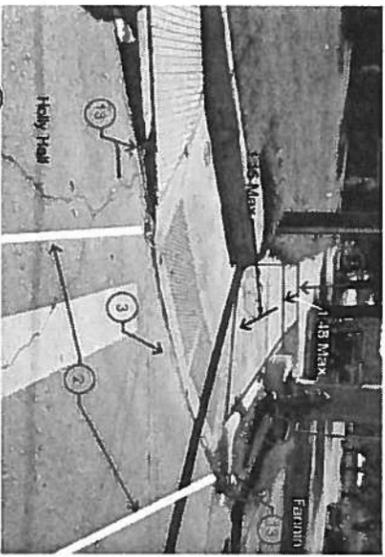
ADDENDUM No. 1	6/4/01	RA	AMB
MK. DESCRIPTION	2015		
	DATE	DWG	CHK
<p><b>GC ENGINEERING, INC.</b>                  2505 PARK AVE.                  PEARLAND, TEXAS 77581                  Phone (281) 432-7808                  Fax (281) 432-7809                  TONY RODRIGUEZ, P.E., F.T.P.E.                  SUGGESTED BY: WESTERN GROUP</p>			
<p>FOR CITY OF HOUSTON USE ONLY</p>			
<p>WBS NUMBER                  N-321039-0006-4</p>			
<p>DRAWING SCALE                  NTS</p>			
<p>CITY OF HOUSTON PM                  ROWANAH AYOUB, P.E.</p>			
<p>SHEET NO. 42 OF 97</p>			



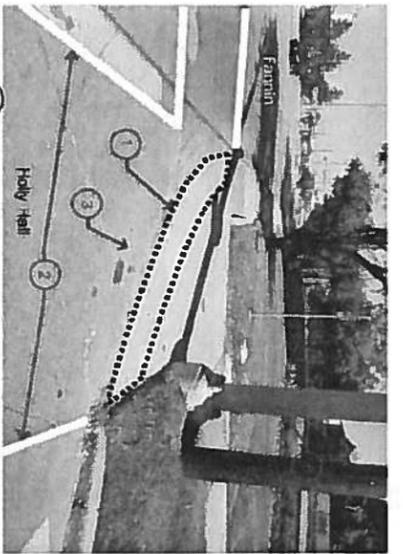
1 Fannin at Naomi - Southeast Corner



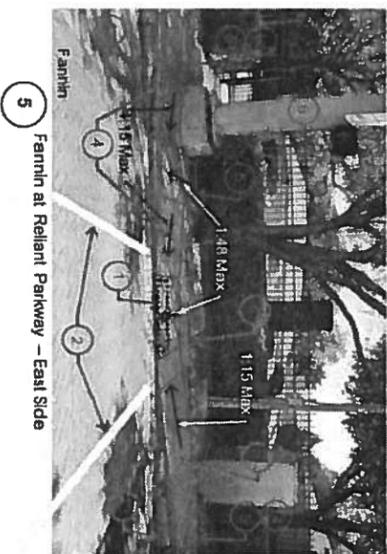
2 Fannin at Naomi - Northeast Corner



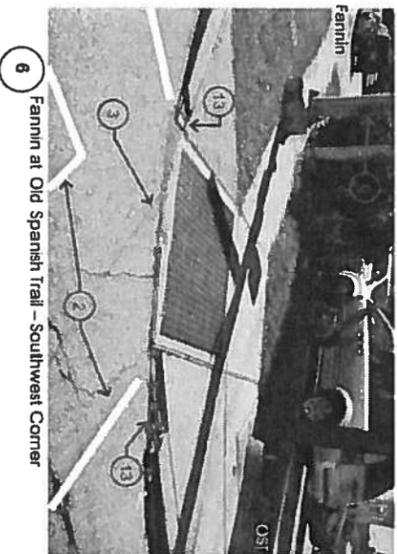
3 Fannin at Holly Hall - Southeast Corner



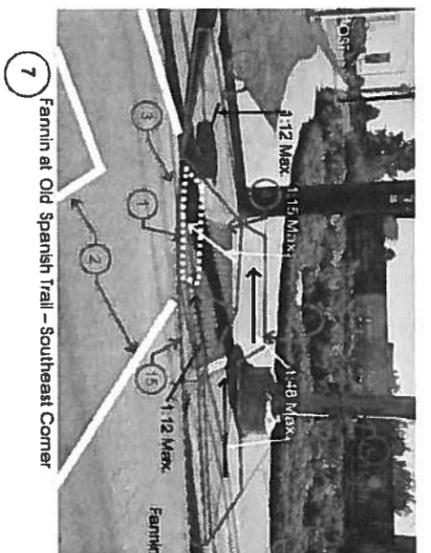
4 Fannin at Holly Hall - Northeast Corner



5 Fannin at Reliant Parkway - East Side



6 Fannin at Old Spanish Trail - Southwest Corner



7 Fannin at Old Spanish Trail - Southeast Corner

- GENERAL NOTES**
1. INSTALL OR ADD TRUNCATED DOMES FOR THE FULL WIDTH OF THE CURB RAMP OR LANDING FOR A MINIMUM DEPTH OF 24" FROM 5" MIN. TO 10" MAX. OF THE EDGE OF THE CURB PER ADMINISTRATIVE RULE 68.102 AND T&S 705.
  2. INSTALL CROSSWALK PAVEMENT MARKING. INSURE THAT CURB RAMPS/DETECTABLE WARNINGS ARE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS. 48" CLEAR REQUIRED INSIDE MARKED CROSSING AT DIAGONAL CURB RAMPS AT INTERSECTIONS. PER T&S 406.8.
  3. CREATE/MAINTAIN 1:20 MAXIMUM GUTTER/ADJOINING ROADWAY SLOPE WITH NEW OVERLAY.
  4. CONSTRUCT CURB RAMP WITH 1:15 MAXIMUM RUNNING SLOPE AND 1:48 MAXIMUM CROSS SLOPE. USE THE MAXIMUM SLOPE IN ANY DIRECTION. TOP LANDING SHALL BE 36" LONG AND AT LEAST THE FULL WIDTH OF CURB RAMP PER T&S 406.4. LANDINGS WITH A CHANGE IN DIRECTION SHALL BE A MINIMUM OF 5' BY 5'.
  5. CONSTRUCT/MANTAIN 30" X 48" MINIMUM CLEAR GROUND SPACE AT PEDESTRIAN CONTROL SIGNALS WITH A MAXIMUM SLOPE OF 1:48 IN ANY DIRECTION. INSURE THAT EXISTING PUSH BUTTON/CONTROL IS LOCATED 48" MAXIMUM ABOVE THE GROUND SPACE. RETIRED CURBS SHALL HAVE THE EDGES PARALLEL TO THE DIRECTION OF PEDESTRIAN TRAFFIC. PER T&S 406.8.
  6. CONSTRUCT NEW RETAINING WALL/CURB. HEIGHT AS NEEDED.
  7. REMOVE EXISTING SIDEWALK, CURB RAMP, AND/OR CONCRETE CURB.
  8. RELOCATE PEDESTRIAN PUSH BUTTON SO IT IS PROVIDED ON THE ACCESSIBLE ROUTE. SEE NOTE 6 ON PICTURE FOR RECOMMENDED LOCATION.
  9. REMOVE EXISTING CONCRETE AND FILL WITH SOIL AND VEGETATION.
  10. RAISE ELEVATION OF LEVEL LANDING/BOTTOM OF CURB RAMP TO PREVENT WATER/DEBRIS ACCUMULATION ALONG ACCESSIBLE ROUTE. PER T&S 405.10.
  11. CONSTRUCT NEW CONCRETE CURB.
  12. EXISTING CONCRETE CAN REMAIN IF LANDING MAINTAINS 5' BY 5' DIMENSION AND 1:48 MAXIMUM SLOPE IN ALL DIRECTIONS.
  13. CONSTRUCT FLARED SIDES FOR CURB RAMP WITH 1:12 MAXIMUM SLOPE FLUSH WITH ADJOINING PAVEMENT AT EDGES. PER T&S 406.3.
  14. REFER TO PLAN AND PROFILE SHEETS FOR LOCATION OF RAMPS(S).

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

CROSSPOINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT

WHEELCHAIR RAMPS LAYOUT  
 FANNIN STREET

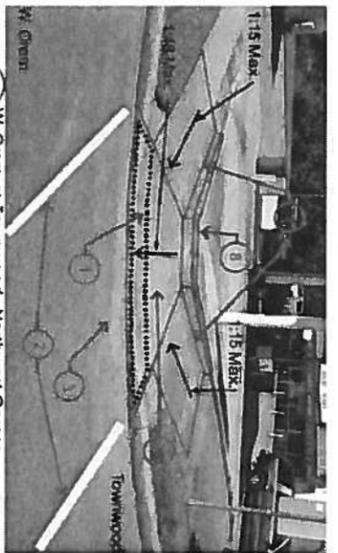
SHEET 1 OF 1

APPENDUM No. 1	DATE	RA	AMR
WKS DESCRIPTION	DATE	DWN	CHK

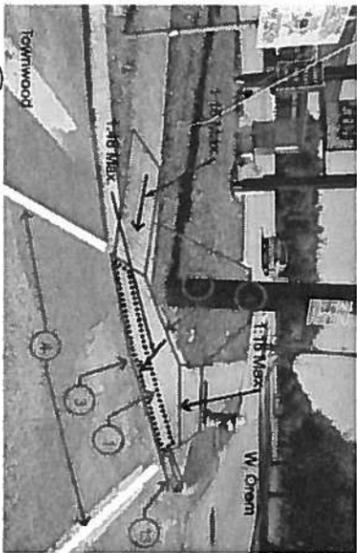
GC ENGINEERING, INC.  
 2505 PARK AVE. SUITE 2750  
 HOUSTON, TEXAS 77018  
 PHONE (281) 432-7008  
 FAX (281) 432-7008  
 TYPE REGISTRATION No. F-7189  
 SIGNED BY: WESTERN GROUP

FOR CITY OF HOUSTON USE ONLY

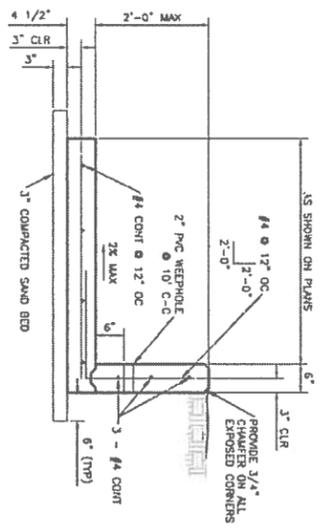
WBS NUMBER: N-321038-0006-4  
 DRAWING SCALE: NTS  
 CITY OF HOUSTON PM: ROWAYDAH AYOUB, P.E.  
 SHEET NO. 43 OF 97



1 W. Orem at Townwood - Northwest Corner



2 W. Orem at Townwood - Northeast Corner



TYPICAL RETAINING WALL DETAIL  
 SCALE: NONE

- GENERAL NOTES**
- INSTALL OR ADD TRUNCATED DOMES FOR THE FULL WIDTH OF THE CURB RAMP OR LANDING FOR A MINIMUM DEPTH OF 24" FROM (3" MIN. TO 10" MAX. OF) THE EDGE OF THE CUTTER PER ADMINISTRATIVE RULE 68.102 AND T&S 705.
  - INSTALL CROSSWALK PAYEMENT MARKING. INSURE THAT CURB RAMPS/DETECTABLE WARNINGS ARE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS. 48" CLEAR REQUIRED INSIDE MARKED CROSSING AT DIAGONAL CURB RAMPS AT INTERSECTIONS. PER T&S 406.6.
  - CREATE/MAINTAIN 1:20 MAXIMUM GUTTER/ADJOINING ROADWAY SLOPE WITH NEW OVERLAY.
  - CONSTRUCT CURB RAMP W/ 1:1.5 MAXIMUM RUNNING SLOPE AND 1:4.8 MAXIMUM CROSS SLOPE PER T&S 406. ALWAYS USE THE LEAST SLOPE POSSIBLE. TOP LANDING SHALL BE 36" LONG AND AT LEAST THE FULL WIDTH OF CURB RAMP PER T&S 406.4. LANDINGS WITH A CHANGE IN DIRECTION SHALL BE A MINIMUM OF 5' BY 5'. AT PEDESTRIAN CONTROL/MAINTAIN 50' X 48" MINIMUM CLEAR GROUND SPACE. INSURE THAT EXISTING PAVEMENT/CONTROL IS STOCKED 48" MINIMUM ABOVE THE GROUND SPACE EXPOSED CURBS SHALL HAVE THE EDGES PARALLEL TO THE DIRECTION OF PEDESTRIAN TRAFFIC. PER T&S 406.6.
  - CONSTRUCT NEW RETAINING WALL/CURB. HEIGHT AS NEEDED.
  - REMOVE EXISTING SIDEWALK, CURB RAMP, AND/OR CONCRETE CURB.
  - RELOCATE PEDESTRIAN PUSH BUTTON SO IT IS PROVIDED ON THE ACCESSIBLE ROUTE. SEE NOTE 6 ON PICTURE FOR RECOMMENDED LOCATION.
  - RAISE ELEVATION OF LEVEL LANDING/BOTTOM OF CURB RAMP TO PREVENT WATER/DEBRIS ACCUMULATION ALONG ACCESSIBLE ROUTE. PER T&S 405.10.
  - CONSTRUCT NEW CONCRETE CURB.
  - EXISTING CONCRETE CAN REMAIN IF LANDING MAINTAINS 5' BY 5' DIMENSION AND 1:4.8 MAXIMUM SLOPE IN ALL DIRECTIONS.
  - CONSTRUCT FLARED SIDES FOR CURB RAMP WITH 1:1.2 MAXIMUM SLOPE FLUSH WITH ADJOINING PAVEMENT AT EDGES. PER T&S 406.3.
  - REFER TO PLAN AND PROFILE SHEETS FOR LOCATION OF RAMPS(S)

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

CROSSPOINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT

WHEELCHAIR RAMPS LAYOUT  
 WEST OREM DRIVE

SHEET 1 OF 1

ADDENDUM No. 1	04/01/15	RA	AMR
DATE	DWN	CHK	

GC ENGINEERING, INC.  
 2209 PARK AVE.  
 HOUSTON, TEXAS 77058  
 PHONE: (281) 415-4500  
 FAX: (281) 415-4503  
 TYPE REGISTRATION No. F-7189

MAHEUDA RODRIGUEZ  
 87523  
 04/02/15

WBS NUMBER: N-3210138-0006-4  
 DRAWING SCALE: NTS  
 CITY OF HOUSTON PM  
 ROWAIDAH AYOUB, P.E.  
 SHEET NO. 44 OF 97

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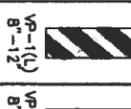
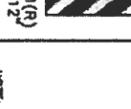
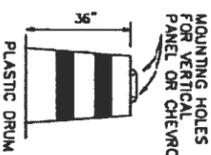
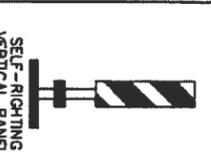
## GENERAL NOTES

1. The Contractor shall provide and install traffic control devices in conformance with Part VI of Texas Manual on Uniform Traffic Control Devices (TMUTCD) latest edition with revision during the entire construction period.
2. All signs and traffic control devices shall conform to the latest version of the TMUTCD.
3. No lanes shall be closed during the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM Monday thru Friday without approval of the City Traffic Engineer.
4. No work shall be performed in residential areas from 7:00 PM to 7:00 AM.
5. Contractor shall maintain approved number of thru lanes of traffic in each direction during construction working hours.
6. Traffic control plans shall include one-way and/or detour plans.
7. Contractor shall maintain traffic lanes and detours according to traffic control plans during working hours.
8. Contractor shall cover open pavement excavations for minor utility work with anchored steel plates during non-working hours, and open lanes for normal traffic flow when feasible.
9. If the Contractor chooses to use a different method of "Traffic Control Plans" during the construction than what is outlined in the contract drawings, the Contractor shall be responsible to prepare and submit an alternate set of traffic control plans to the City of Houston Project Manager for approval ten working days prior to implementation. These plans shall be drawn to scale on reproducible mylar and shall be sealed by a Licensed Engineer in the State of Texas. Traffic Operations Division representative approval is required to accept the proposed changes.
10. Contractor shall secure lane/closure permits from Traffic Operations Division (Mobility Permit Section at <http://www.dhs.houston.tx.gov/portal/MS/MobPermit.aspx>) before implementing the traffic control plan. The application must be submitted at least ten business days prior to the implementation of the traffic control plan and/or beginning construction work. The contractor shall provide traffic control plans, construction sequencing, and schedule with the application.
11. Contractor shall have approved traffic control plan and permit at the job site for inspection at all times.
12. During pavement surface restoration projects, the Contractor shall not open dead lanes until the pavement surface has cured enough to allow vehicular traffic according to City of Houston Standard Specifications.
13. The Contractor is responsible for scheduling and coordinating all construction activities with stakeholders in the vicinity including emergency response agencies such as Houston Police Department, Houston Fire Department, and Metropolitan Transit Authority.
14. Contractor shall be responsible for issuing all work directives to all sub-contractors, utility companies, and all other entities performing construction work associated with the project.
15. Nothing in these notes or plans shall relieve the Contractor of the responsibility for job site conditions during the course of construction of the project, including safety of all modes of transportation, persons, and property, and that this requirement shall apply continuously and not be limited to working hours.
16. The Traffic Operation Division (Mobility Permit Group) per the direction of the City Traffic Engineer have the right to demand the installation of additional traffic control devices or modifications to these plans and notes, as deemed necessary to promote the safe and orderly flow of traffic and pedestrians through the construction work zone. The Contractor shall comply with these additional requests or modifications with due diligence.
17. All existing traffic control signs and pavement markings shall be maintained in visible locations during construction unless prior written approval is obtained from City of Houston Project Manager. The Contractor shall restore or replace (at the discretion of the City Traffic Engineer) any pavement marking or signing damaged during construction operations, including Raised Pavement Markers (RPMS) and chip seal markers.
18. When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded shall in all cases yield to public traffic with assistance by Contractor provided certified flagger/peace officer.
19. Access to driveways adjacent to the construction work zone shall be maintained at all times as much as possible. Additional cones delineators may be required to delineate the driveway access route through the construction work zone. A minimum of one travel lane shall be maintained across the driveway, unless prior written approval is obtained from City of Houston Project Manager.
20. Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor.
21. The Contractor shall submit an application for temporary parking restrictions if there are parking meters located at the proposed lane closures from Parking Management Division (832-393-8590) at least ten business days before implementation of lane closures. In addition, temporary no parking signs shall be posted 24 hours prior to commencement of work.
22. Additional off duty police officers/flaggers may be requested to direct traffic when lanes are blocked at the discretion of the City Project Manager even if they are not specifically identified on the project plans.
23. The Contractor shall replace within 72 hours, all traffic signal loop detectors damaged during construction.
24. In general, a solar powered flashing arrow board shall be required on all major thoroughfare lane closures. Exceptions to flashing arrow boards and/or implementation on residential lane closures shall be approved by the City Traffic Engineer.
25. Approved traffic control plan shall be in place before starting any excavation.

## SPACING FOR CHANNELIZING DEVICES

- A. Plastic drums on merging taper @ 30' c-c with chevron sign @ 60' c-c and warning lights for overnight closure.
- B. Plastic drums on downstream taper @ 30' c-c (return taper and barricade are optional and divided roadway section)
- C. Plastic drums on radii @ 35' c-c.
- D. Plastic drums on tangent @ 35' c-c with vertical panel at 70' c-c and approved warning light @ 70' c-c (for overnight closure).
- E. Plastic drums in front of construction zone @ 20' c-c with vertical panel at 40' c-c and approved warning light @ 40' c-c (for overnight closure).
- F. Concrete Traffic Barrier (CTB) or Low Profile Concrete Traffic Barrier (LPCTB) with approved reflectors @ 15' c-c if pavement drop is greater than 1 foot.
- G. plastic drums w/Guard rail mounted.
- H. Self-Righting vertical panel spacing.
  - 4 lanes to 2 lanes undivided roadway section @ 20' c-c
  - 4 lanes divided roadway to one side two way roadway @ 20' c-c
  - Left lane and right lane storage bays @ 15' c-c
- I. Spacing shown on traffic control shall supersede the above spacing. Spacing may be adjusted to provide driveways, intersections and /or median openings.

## CHANNELIZATION AND BARRICADES

 GW-1-B 18" x 24"	 GW-1-B 18" x 24"	 VP-1(L) 8'-12"	 VP-1(R) 8'-12"
<b>LEGEND</b> • PLASTIC DRUM (see spacing for channelizing devices) ■ FLAGGER □ TYPE III BARRICADE ▣ FLASHING ARROW PANEL			
 MOUNTING HOLES FOR VERTICAL PANEL OR CHEVRON		 SELF-RIGHTING VERTICAL PANEL	
NOTE: SPACING SHOWN ABOVE ASSUMES IN THE DIRECTION (ARROWS) WHICH IS DIRECTED.			

### TYPICAL SIGN SPACING, TAPER LENGTHS, AND SUGGESTED SPACING OF CHANNELIZATION DEVICES

Posted Speed (mph)	Sign Spacing X <sub>s</sub>	Min. Desirable Taper Length L <sub>t</sub>		Suggested Minimum Spacing of Devices		Length for Barriers	
		10' Offset	11' Offset	On a Taper	On a Tangent	Posted Speed (mph)	Length in Feet (B)
30	120'	150'	165'	30'	60' - 75'	30	40
35	160'	205'	225'	35'	70' - 90'	35	45
40	240'	285'	325'	40'	90' - 110'	40	50
45	320'	450'	495'	45'	100' - 125'	45	55
50	400'	500'	550'	50'	100' - 125'	50	60
55	500'	550'	605'	55'	110' - 140'	55	65
						60	70
						65	75
						70	80
						75	85
						80	90
						85	95
						90	100
						95	105
						100	110
						105	115
						110	120
						115	125
						120	130
						125	135
						130	140
						135	145
						140	150
						145	155
						150	160
						155	165
						160	170
						165	175
						170	180
						175	185
						180	190
						185	195
						190	200
						195	205
						200	210
						205	215
						210	220
						215	225
						220	230
						225	235
						230	240
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						240	250
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						265	275
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						275	285
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						400	410
						405	415
						410	420
						415	425
						420	430
						425	435
						430	440
						435	445
						440	450
						445	455
						450	460
						455	465
						460	470
						465	475

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**TCP NOTES**  
CHANNELIZING DEVICES  
AND BARRICADES

(NOT TO SCALE)

APPROVED BY:  CITY ENGINEER

DESIGNED BY:  DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: JUL-01-2012      DWG. NO.: 01512-01

**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

CROSS POINT AVENUE, FANNIN STREET  
AND WEST OREM DRIVE  
PANEL REPLACEMENT PROJECT

**TCP NOTES ON  
CHANNELIZING DEVICES  
AND BARRICADES**

1	ADDENDUM NO. 1	DATE	4/1/15
MK DESCRIPTION		DATE	OWN/CHK

**NEDU ENGINEERING SERVICES, INC**  
6972 BONDURST Fwy, Suite 230  
HOUSTON, TEXAS 77074  
PHONE: (281) 528-1809  
FAX: (281) 528-1809  
TYPE REGISTRATION No. F-2889

**GC ENGINEERING, INC.**  
2605 PARK AVE.  
PEARLAND, TEXAS 77581  
PHONE: (281) 412-7000  
FAX: (281) 412-6823  
TYPE REGISTRATION No. F-2889

SIGNED BY:  DATE: 03/12/15

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE

N-321038-0006-4

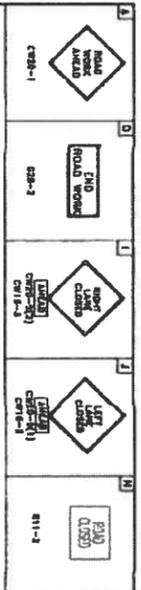
WBS NUMBER

HORZ: NTS VERT: NTS

CITY OF HOUSTON PM

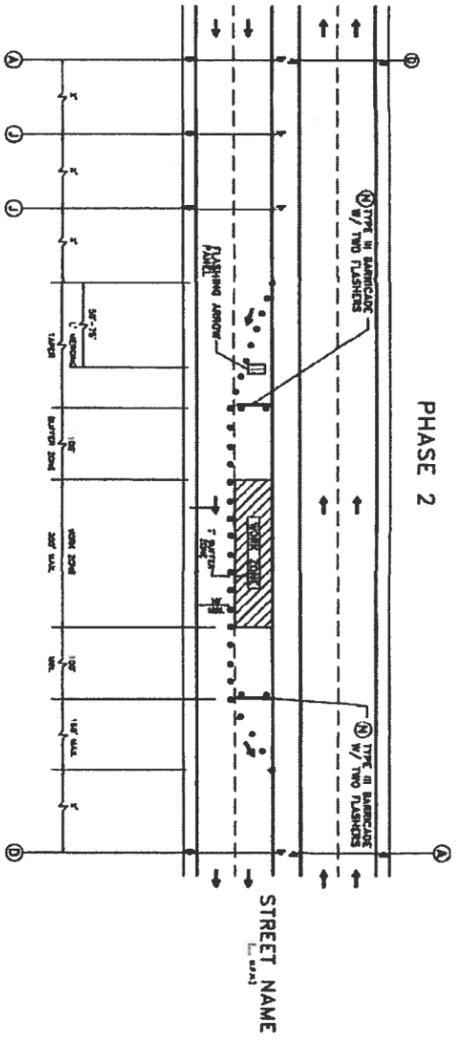
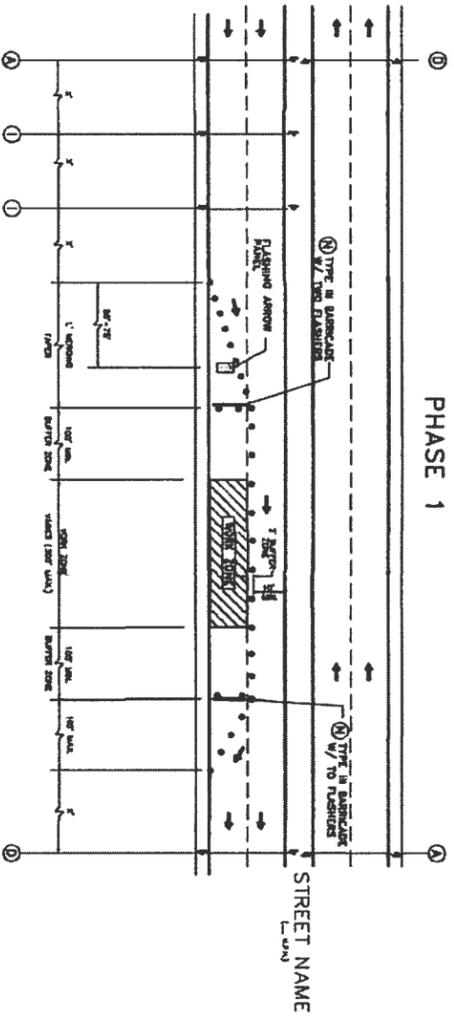
ROWADAH AYOUB, P.E.

SHEET NO. 71 OF 97



CROSSPOINT AVE. 35 MPH  
 STREET NAME SPEED LIMIT  
 BUFFALO SPEEDWAY 35 MPH  
 STREET NAME SPEED LIMIT

**LEGEND**  
 1 SIGN  
 2 FLAGGER  
 3 APPROVED CHANNELIZATION DEVICE  
 4 TRAFFIC FLOW  
 5 CONSTRUCTION AREA



**NOTE:**  
 1. RETURN TAPES AND DOWNSTREAM BARRELS ARE OPTIONAL ON A DIVIDED ROADWAY SECTION.  
 2. DOUBLE SIGNS SHALL BE USED ONLY ON ROADWAYS WITH MEDIAN.  
 3. FOR DIMENSIONS REFER TO SHEET 01312-01.

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 TOP ONE LANE CLOSURE  
 PHASE 1 & 2  
 (NOT TO SCALE)  
 APPROVED BY: [Signature]  
 CITY ENGINEER  
 DATE: 03/12/15  
 DWG NO.: 01312-04

TYPICAL LANE CLOSURE TWO PHASE ON CROSSPOINT AVE.  
 CROSSPOINT AVENUE NORTH SIDE 2+50 TO 4+20  
 CROSSPOINT AVENUE SOUTH SIDE 2+50 TO 4+20  
 CROSSPOINT AVENUE 6+80 TO 11+50  
 CROSSPOINT AVENUE 14+50 TO 14+80  
 CROSSPOINT AVENUE 15+00 TO 15+50  
 CROSSPOINT AVENUE 16+30 TO 18+75  
 CROSSPOINT AVENUE 18+75 TO 20+65  
 CROSSPOINT AVENUE 21+78 TO 23+70  
 CROSSPOINT AVENUE 7+00-9+00  
 CROSSPOINT AVENUE 15+00-15+50  
 CROSSPOINT AVENUE 16+50-18+75  
 CROSSPOINT AVENUE 23+80-29+00

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSS POINT AVENUE, FANNIN STREET AND WEST ORDM DRIVE  
 PANEL REPLACEMENT PROJECT

1	ADDENDUM NO. 1	4/1/15	
DATE	DWN	CHK	

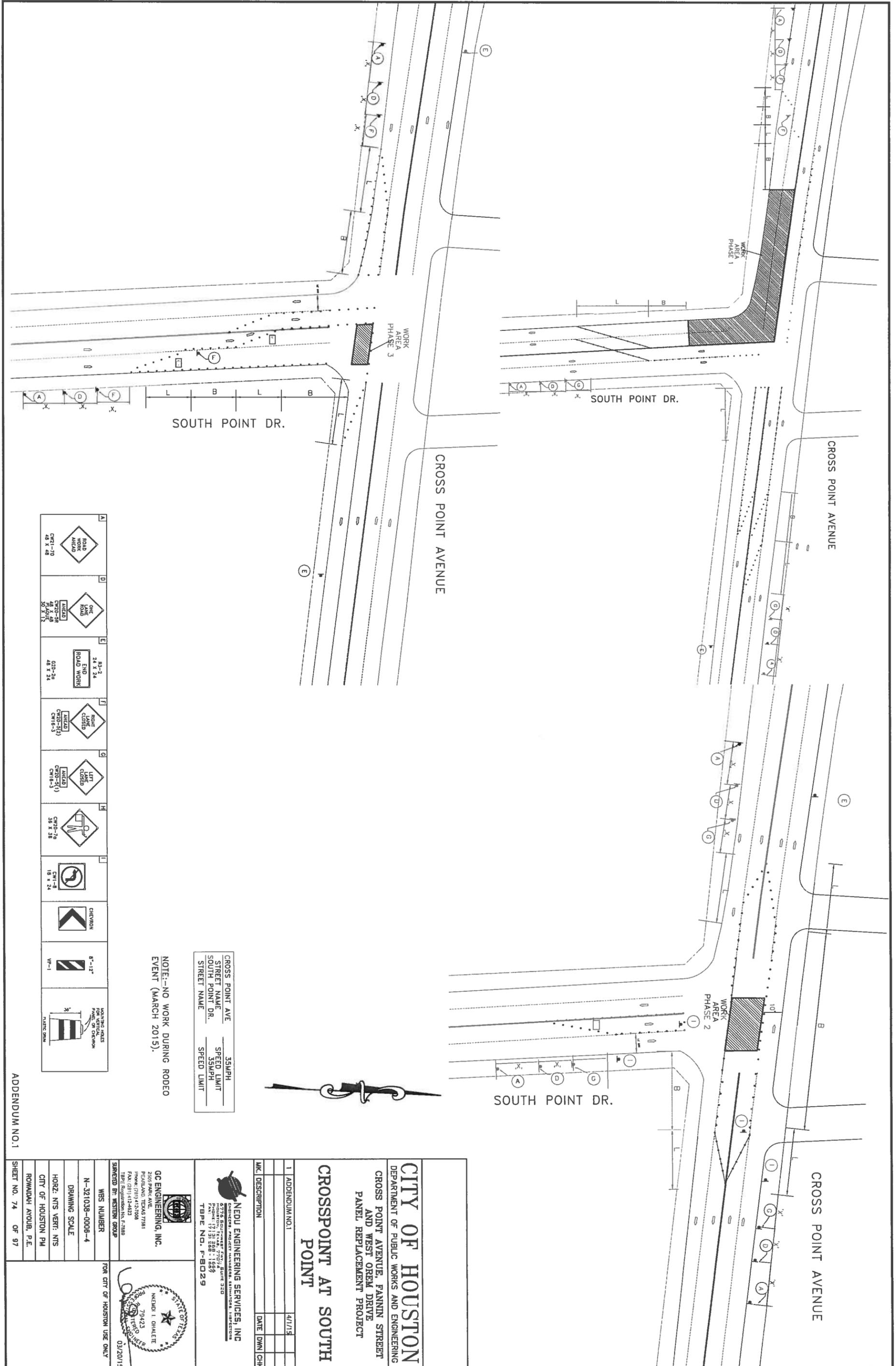
**GC ENGINEERING, INC.**  
 2505 PARK AVE  
 PEARLAND, TEXAS 77581  
 PHONE: (281) 412-7008  
 FAX: (281) 412-4823  
 THE REGISTRATION NO. IS 11888

**NEDU ENGINEERING SERVICES, INC.**  
 6776 SOUTHVIEW DRIVE, SUITE 320  
 HOUSTON, TEXAS 77057  
 PHONE: (713) 868-1889  
 FAX: (713) 868-1889  
 TYPE NO. F8029

FOR CITY OF HOUSTON USE ONLY  
 WBS NUMBER: N-321038-0006-4  
 DRAWING SCALE  
 HORZ. NTS VERT. NTS  
 CITY OF HOUSTON PM  
 ROWADAH ANOUB, P.E.  
 SHEET NO. 72 OF 97

ADDENDUM NO. 1





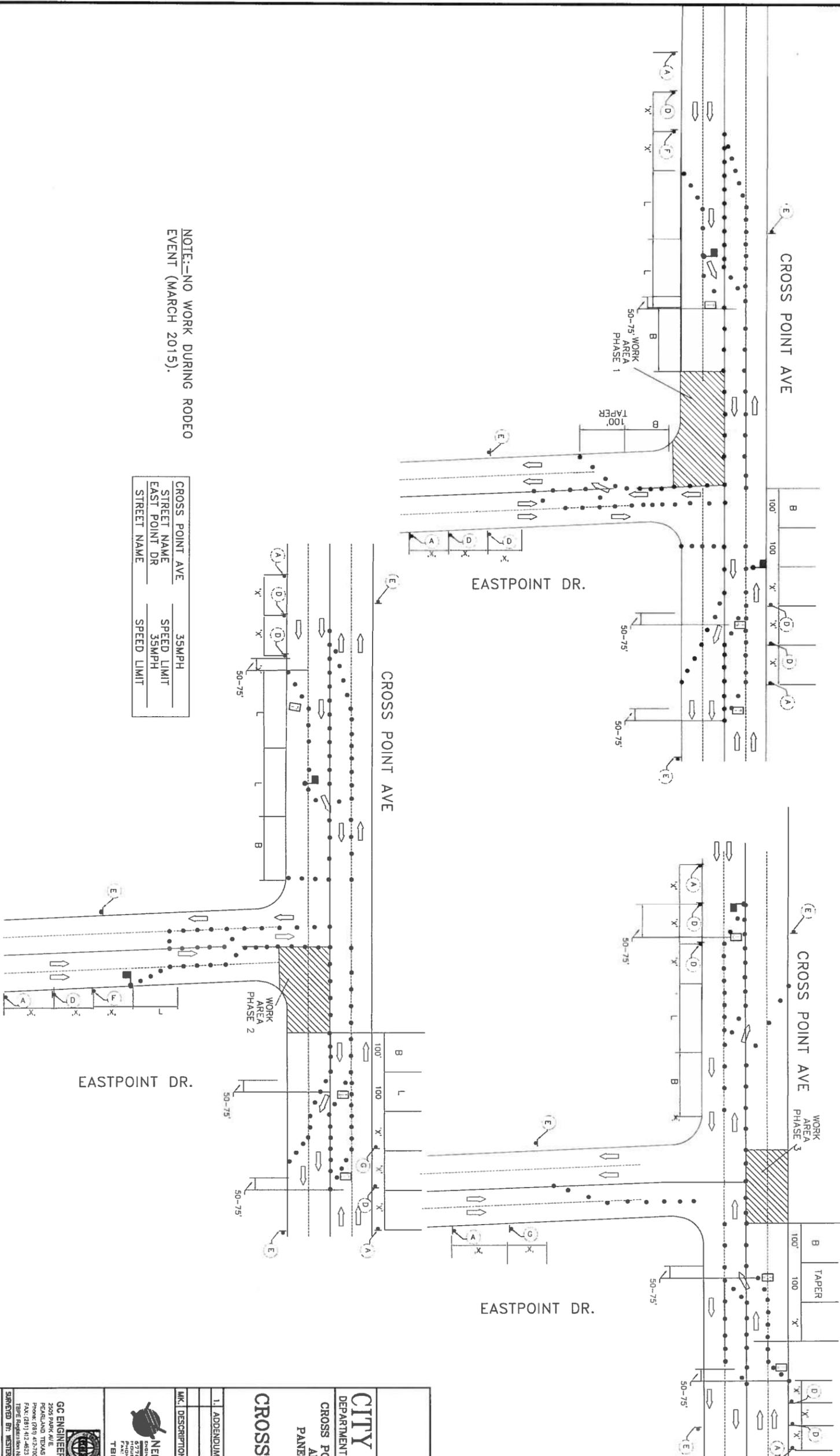
CP1-10 48 X 48	CP20-5R 36 X 48	CP3-24 48 X 24	CP20-23 48 X 24	CP20-21 48 X 24	CP20-75 36 X 36	CP1-8 18 X 24	CP-12	VP-1	FLASHING LIGHTS PANEL OR CHEVRON 18 X 24

CROSS POINT AVE 35MPH  
 STREET NAME SPEED LIMIT  
 SOUTH POINT DR. 35MPH  
 STREET NAME SPEED LIMIT

NOTE:--NO WORK DURING RODEO  
 EVENT (MARCH 2015).

ADDENDUM NO.1

<p><b>CITY OF HOUSTON</b>                  DEPARTMENT OF PUBLIC WORKS AND ENGINEERING                  CROSS POINT AVENUE, FANNIN STREET                  AND WEST OREM DRIVE                  PANEL REPLACEMENT PROJECT</p>			
<p><b>CROSSPOINT AT SOUTH POINT</b></p>			
1	ADDENDUM NO.1	4/1/15	
CHK	DESCRIPTION	DATE	DWN/CHK
<p><b>NEU ENGINEERING SERVICES, INC.</b>                  REGISTERED PROFESSIONAL ENGINEERS                  2205 PARK AVE.                  HOUSTON, TEXAS 77012                  PHONE: (713) 288-1859                  FAX: (713) 288-1859                  TYPE: B (BUSINESS), F (FIRM)</p>		<p>FOR CITY OF HOUSTON USE ONLY                  03/20/15</p>	
<p><b>GC ENGINEERING, INC.</b>                  2205 PARK AVE.                  HOUSTON, TEXAS 77012                  PHONE: (713) 288-1859                  FAX: (713) 288-1859                  TYPE: B (BUSINESS), F (FIRM)</p>		<p>WBS NUMBER                  N-321038-0006-4                  DRAWING SCALE                  HORIZ. NTS VERT. NTS                  CITY OF HOUSTON PM                  ROWLANDY KHOUR, P.E.                  SHEET NO. 74 OF 97</p>	



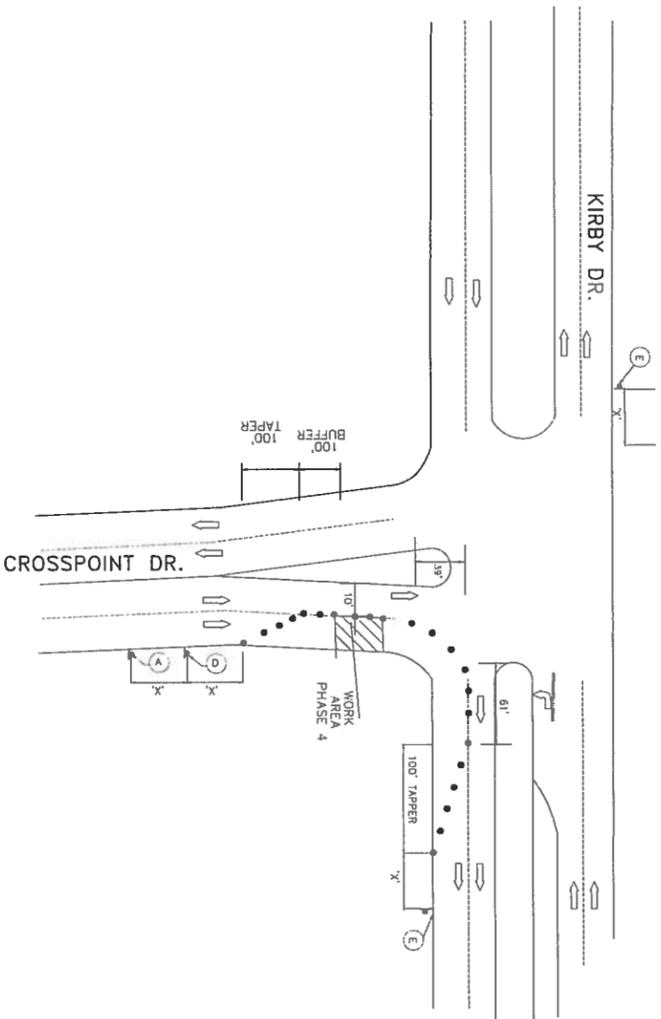
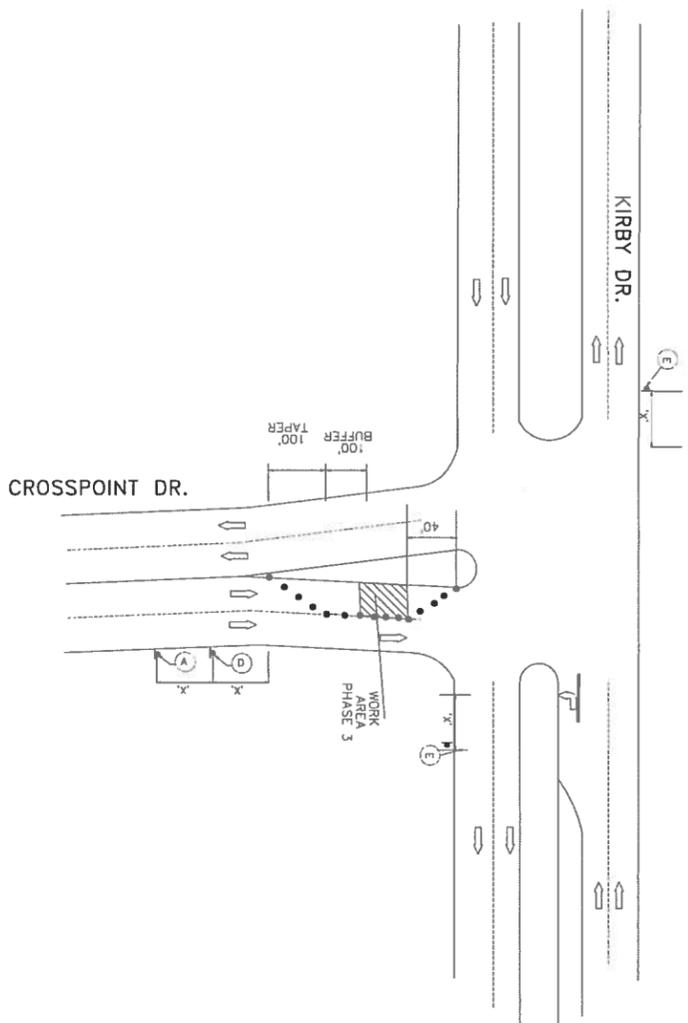
NOTE:-NO WORK DURING RODEO  
 EVENT (MARCH 2015).

CROSS POINT AVE	35MPH
SPEED LIMIT	
EAST POINT DR	35MPH
SPEED LIMIT	
STREET NAME	SPEED LIMIT

CW21-7D 48 X 48	CW20-5B 48 X 48 30 X 12	CD0-2d 48 X 24	CW20-5(2) CW18-3	CW20-5(1) CW18-3	CW1-8 18 X 24	VP-1	WARNING SIGNS FOR VERTICAL PANEL OR CHEVRON PLASTIC SIGN

ADDENDUM NO. 1

<p><b>CITY OF HOUSTON</b>                  DEPARTMENT OF PUBLIC WORKS AND ENGINEERING                  CROSS POINT AVENUE, FANNIN STREET                  AND WEST OREM DRIVE                  PANEL REPLACEMENT PROJECT</p>	
<p><b>CROSS POINT AT EAST                  POINT</b></p>	
1. ADDENDUM NO. 1	4/1/15
CHK/ DESCRIPTION	DATE/ DWN/ CHK
<p><b>NEU ENGINEERING SERVICES, INC.</b>                  REGISTERED PROFESSIONAL ENGINEERING FIRM                  2505 PARK AVE.                  FORTLAND TEXAS 77423                  PHONE (781) 472-0088                  FAX (781) 412-2023                  TIRRELL@NESI.COM                  TIRRELL@NESI.COM</p>	
<p><b>GC ENGINEERING, INC.</b>                  2505 PARK AVE.                  FORTLAND TEXAS 77423                  PHONE (781) 472-0088                  FAX (781) 412-2023                  TIRRELL@NESI.COM                  TIRRELL@NESI.COM</p>	
<p>WBS NUMBER                  N-321038-0008-4</p>	<p>FOR CITY OF HOUSTON USE ONLY                  3/20/15</p>
<p>DRAWING SCALE                  HORIZ. NTS VERT. NTS                  CITY OF HOUSTON PM                  ROWADAH AHYUB, P.E.</p>	<p>SHEET NO. 75 OF 97</p>



CROSSPOINT AVE.	35 MPH
STREET NAME	SPEED LIMIT
KIRBY DR.	40 MPH
STREET NAME	SPEED LIMIT

A		CW21-7D 48 X 48
D		CW5-1 36 X 36
E		G20-29 48 X 24
		CW1-8 18 X 24
		VP-1
		36 PLASTIC BRUSH

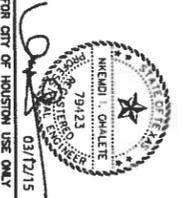
**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSS POINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT

**CROSS POINT AT KIRBY  
 DR.**

1. ADDENDUM NO.1	4/1/15
DATE	OWN/CHK

**NEDU ENGINEERING SERVICES, INC**  
 6700 S. DUNLAP ST., SUITE 230  
 HOUSTON, TEXAS 77058  
 PHONE: 713.248.1889  
 FAX: 713.248.1889  
 TYPE: REGISTRATION NO. F-18029

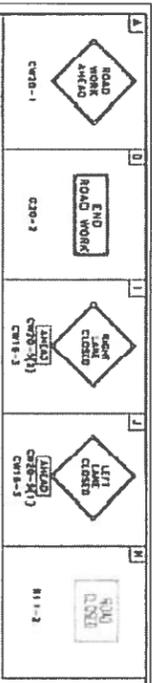
**GC ENGINEERING, INC.**  
 2808 PARK AVE.  
 PEARLAND, TEXAS 77661  
 PHONE: 281.438.1791  
 FAX: (281) 432-6223  
 TYPE: REGISTRATION NO. F-17889



FOR CITY OF HOUSTON USE ONLY  
 03/17/15

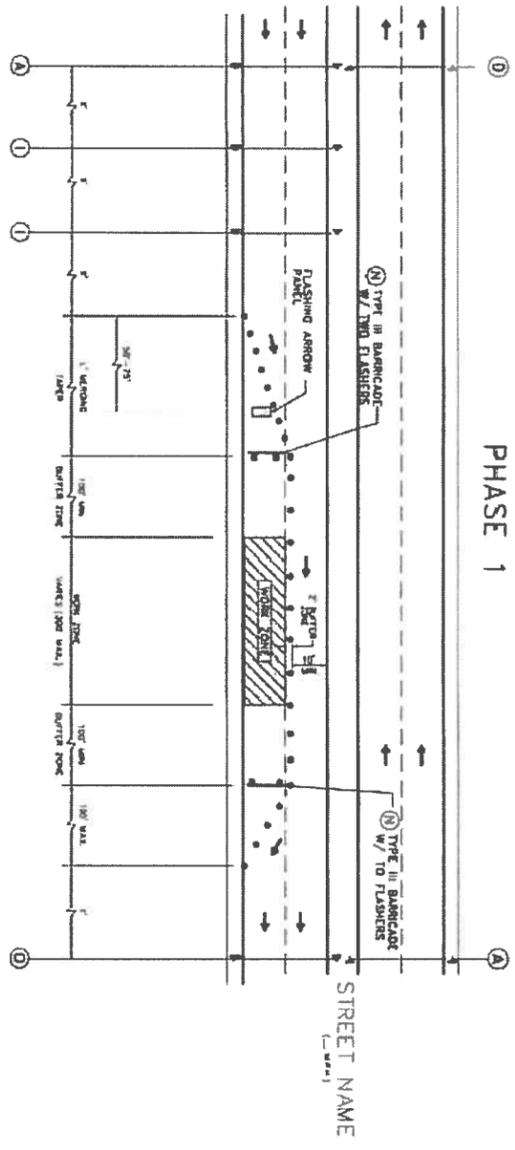
WBS NUMBER: N-321038-0008-4  
 DRAWING SCALE:  
 HORZ: NTS VERT: NTS  
 CITY OF HOUSTON PM  
 ROWALDAH AYOUB, P.E.  
 SHEET NO. 76 OF 97

ADDENDUM NO.1

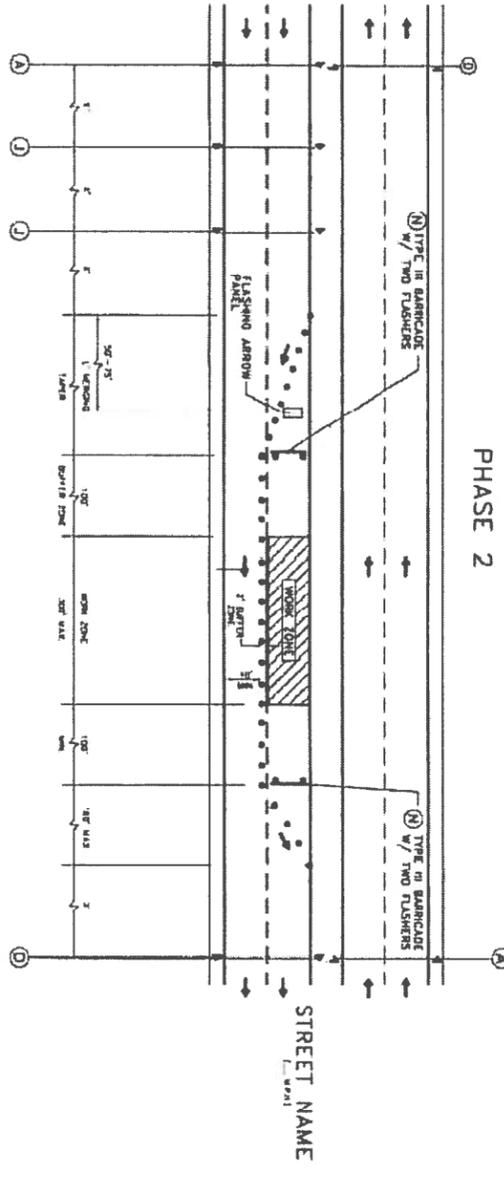


FANNIN STREET  
 SPEED LIMIT 40MPH

PHASE 1



PHASE 2



- LEGEND**
- ◆ SIGN
  - ▬ FLAGGER
  - APPROVED CHANNELIZATION DEVICE
  - TRAFFIC FLOW
  - ▨ CONSTRUCTION AREA

Posted Speed (mph)	Length in Feet (B)	TYPICAL SIGN SPACING and TAPER LENGTHS			
		Posted Speed (mph)	Sign Spacing "X"	Offset	Min. Desirable Taper Length "L"
20	35	100	10'	11'	12'
25	35	120	10'	11'	12'
30	85	150	10'	11'	12'
35	120	180	10'	11'	12'
40	170	205	10'	11'	12'
45	220	225	10'	11'	12'
50	280	245	10'	11'	12'
55	335	265	10'	11'	12'

- \* ENGINEER TO STRIKE THROUGH ALL SPEED LIMITS NOT APPLICABLE
- NOTE:**
1. ACTUAL TAPERS AND DOWNSTREAM BARRICADES ARE OPTIONAL ON A DIVIDED ROADWAY SECTION WITH MEDIANS.
  2. DOUBLE SIGNS SHALL BE USED ONLY ON ROADWAYS.
  3. FOR DIMENSIONS REFER TO SHEET 01312-01.

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CONTRACT LINE DISCURE  
 PHASE 1 & 2  
 (NOT TO SCALE)  
 APPROVED BY ENGINEERING  
 DATE: 03/12/15  
 DRAWING NO. 01312-04

ADDENDUM NO.1

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSS POINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT  
 FANNIN AT 610 SOUTH  
 WEST SIDE OF FANNIN

1. ADDENDUM NO.1	4/7/15
CHK/ DESCRIPTION	DATE/DWN/CHK

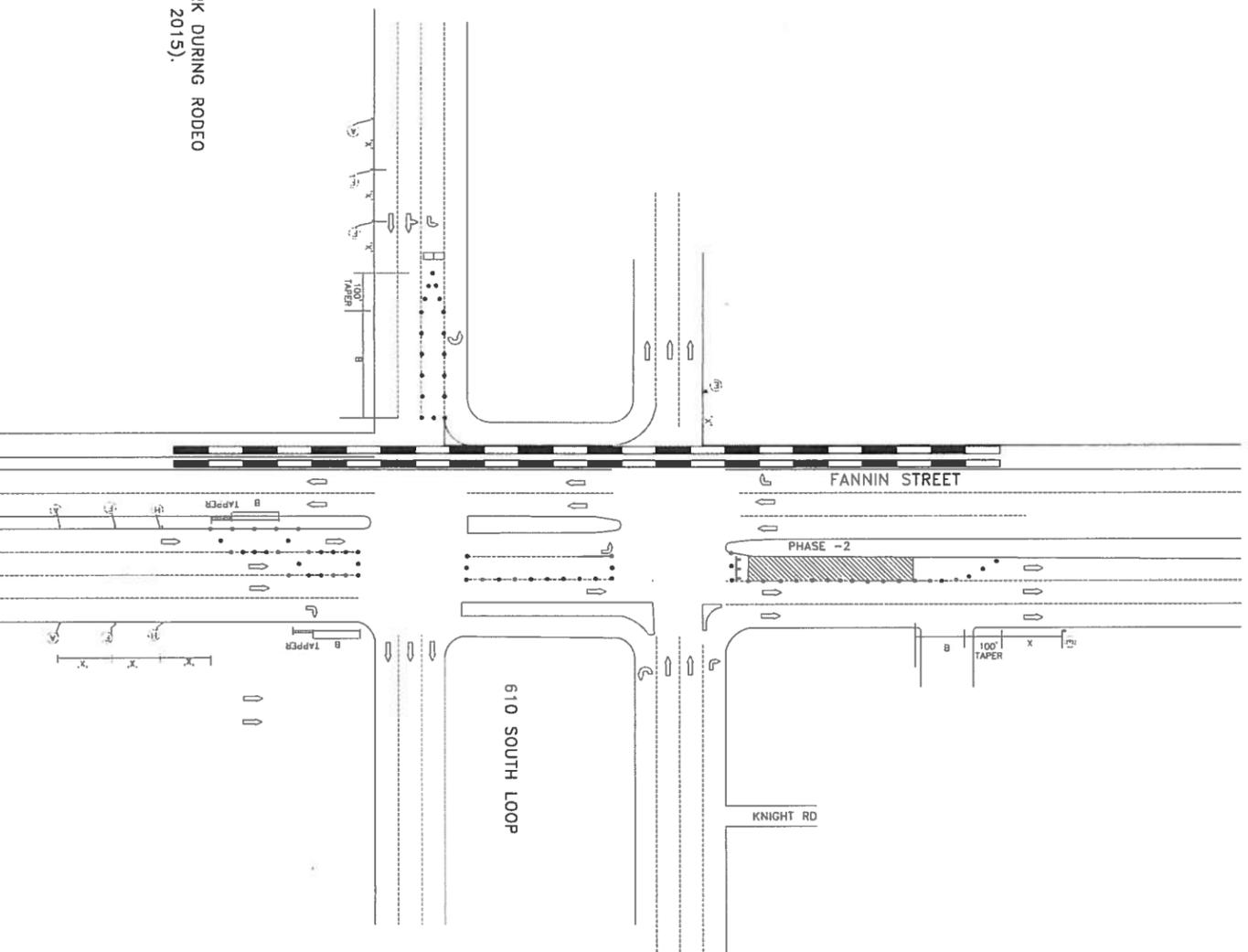
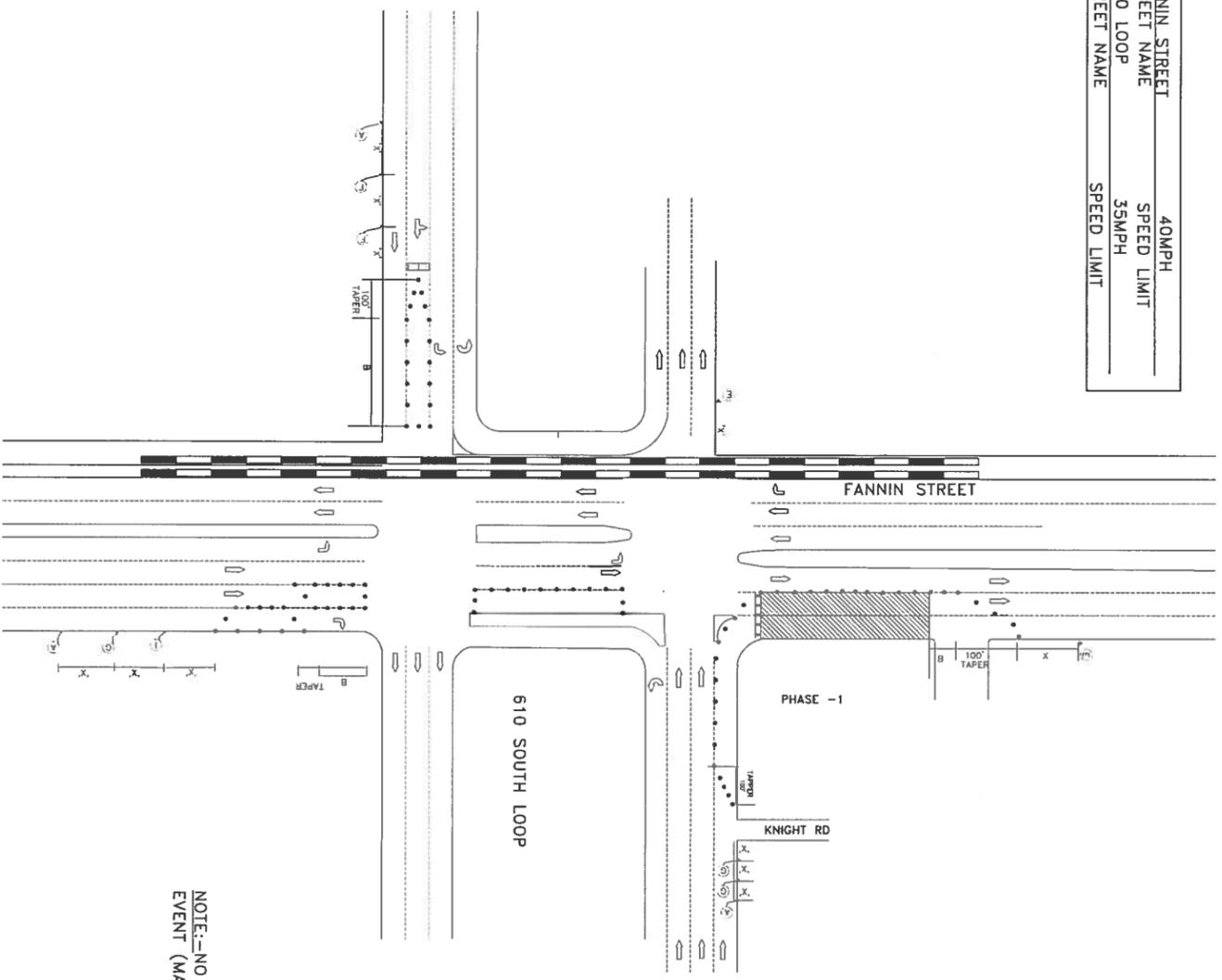
**NEU ENGINEERING SERVICES, INC.**  
 ENGINEER, PROJECT MANAGER, ESTIMATOR, SUPERVISOR  
 2505 PARK AVE., SUITE 200  
 HOUSTON, TEXAS 77019  
 Phone: 713.588.1659  
 FAX: 713.588.1659  
 TYPE NO. F-8029

**GC ENGINEERING, INC.**  
 2505 PARK AVE.  
 HOUSTON, TEXAS 77019  
 PHONE: 713.420.0088  
 FAX: 713.420.0088  
 TYPE NO. F-8029

WIS NUMBER: N-371038-0008-4  
 DRAWING SCALE:  
 HORZ. NTS VERT. NTS:  
 CITY OF HOUSTON PM  
 ROWAYDAH AYOUB, P.E.  
 SHEET NO. 77 OF 97

FOR CITY OF HOUSTON USE ONLY

FANNIN STREET	40MPH
STREET NAME	SPEED LIMIT
610 LOOP	35MPH
STREET NAME	SPEED LIMIT

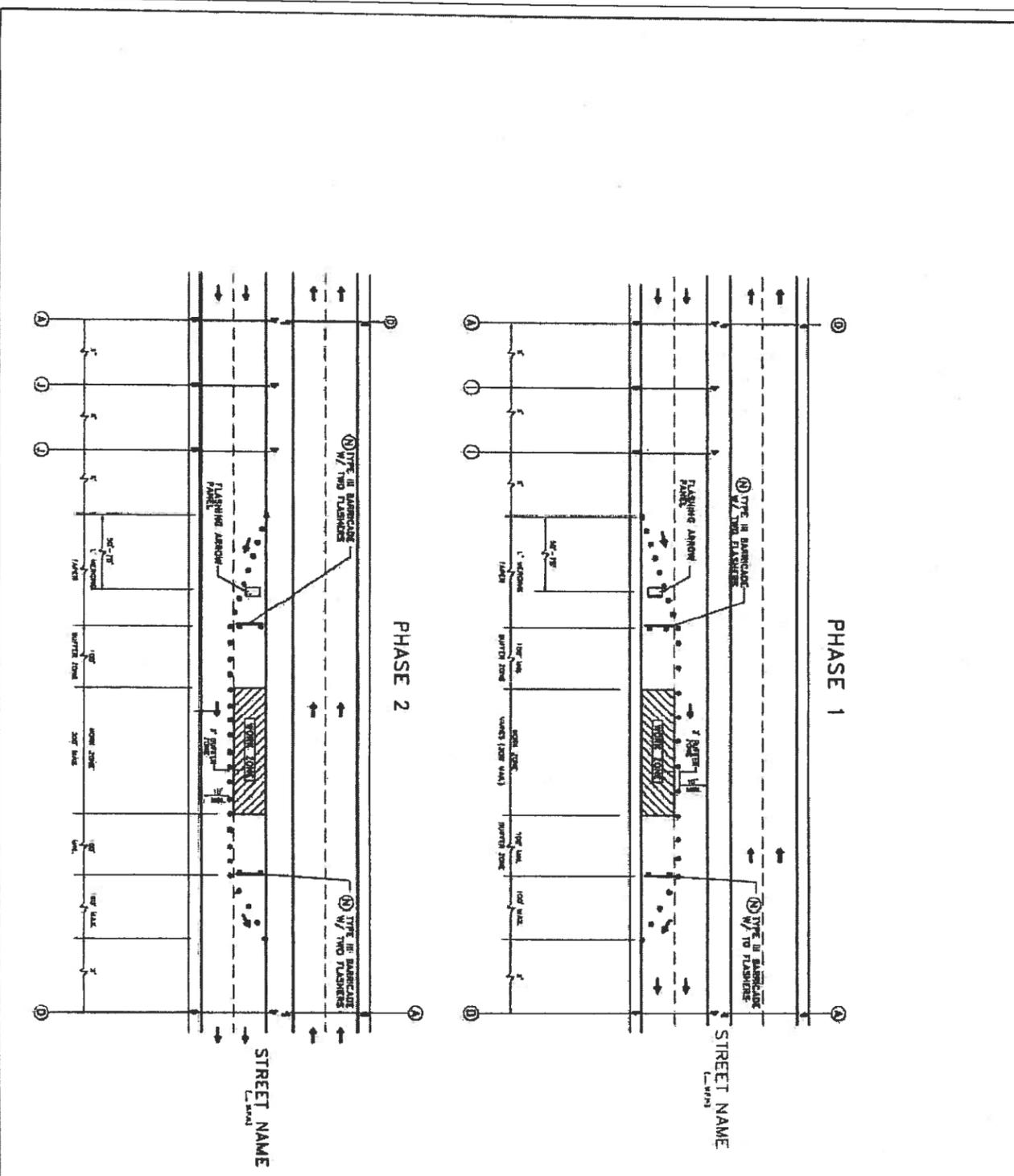


NOTE:-NO WORK DURING RODEO  
 EVENT (MARCH 2015).

CW-21-70 48 X 48	CS-20-24 48 X 24	CS-18-24 48 X 24	CS-18-24 48 X 24	CW-1-8 18 X 24	VP-1	ADJUSTING HOLES FOR VERTICAL PANEL OPERATION 11.5" DIA. HOLES	RS-7L 30" X 30"	RS-7R 30" X 30"

ADDENDUM NO.1

<b>CITY OF HOUSTON</b> DEPARTMENT OF PUBLIC WORKS AND ENGINEERING CROSS POINT AVENUE, FANNIN STREET AND WEST OREM DRIVE PANEL REPLACEMENT PROJECT <b>FANNIN AT 610 SOUTH          EAST SIDE OF FANNIN</b>	
<b>NEU ENGINEERING SERVICES, INC</b> ENGINEER PROJECT MANAGER, ESTIMATOR, SUPERVISOR 6776 SOUTH LOOP WEST, SUITE 320 HOUSTON, TEXAS 77058 PHONE: 713.288.1469 FAX: 713.288.1469 TYPE NO. F-8029	
<b>GC ENGINEERING, INC.</b> 2505 PARK AVE. PEARLAND, TEXAS 77661 PHONE: (281) 472-7008 FAX: (281) 472-8233 TYPE NO. W-3288	WBS NUMBER: N-321038-0006-4 DRAWING SCALE: AS SHOWN HORZ. NTS VERT. NTS: NTS CITY OF HOUSTON PM: ROWLAND ANQUB, P.E. SHEET NO. 78 OF 97



- LEGEND**
- 1 SIGN
  - 2 FLAGGER
  - 3 APPROVED CHANNELIZATION DEVICE
  - 4 TRAFFIC FLOW
  - 5 CONSTRUCTION AREA

**NOTE:**  
 1. RETURN TAPERS AND DOMESTIC/AL BARRICADES ARE OPTIONAL ON A DIVIDED ROADWAY SECTION.  
 2. DOUBLE SIGNS SHALL BE USED ONLY ON ROADWAYS WITH MEDIAN.  
 3. FOR DIMENSIONS REFER TO SHEET 01912-01.

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 ONE LANE CLOSURE  
 PHASE 1 & 2

APPROVED BY: [Signature]  
 DATE: 3/12/15

TYPICAL ONE LANE CLOSURE OF A MULTILANE STREET FANNIN STREET  
 FANNIN STREET STATION 7+50

**NOTE:**—THE ABOVE LANE CLOSURES SHOULD BE DONE ONLY ON WEEKENDS AND OR NIGHTS WITH NO EVENTS AT THE NRG STADIUM.

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 GROSS POINT AVENUE, FANNIN STREET AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT  
 FANNIN STREET

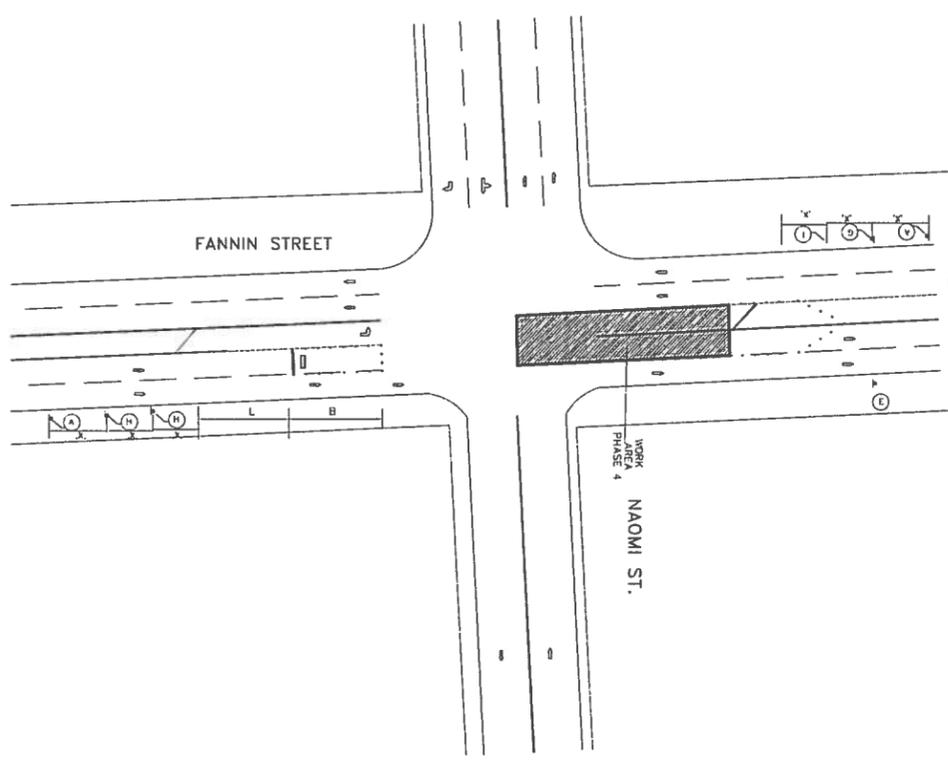
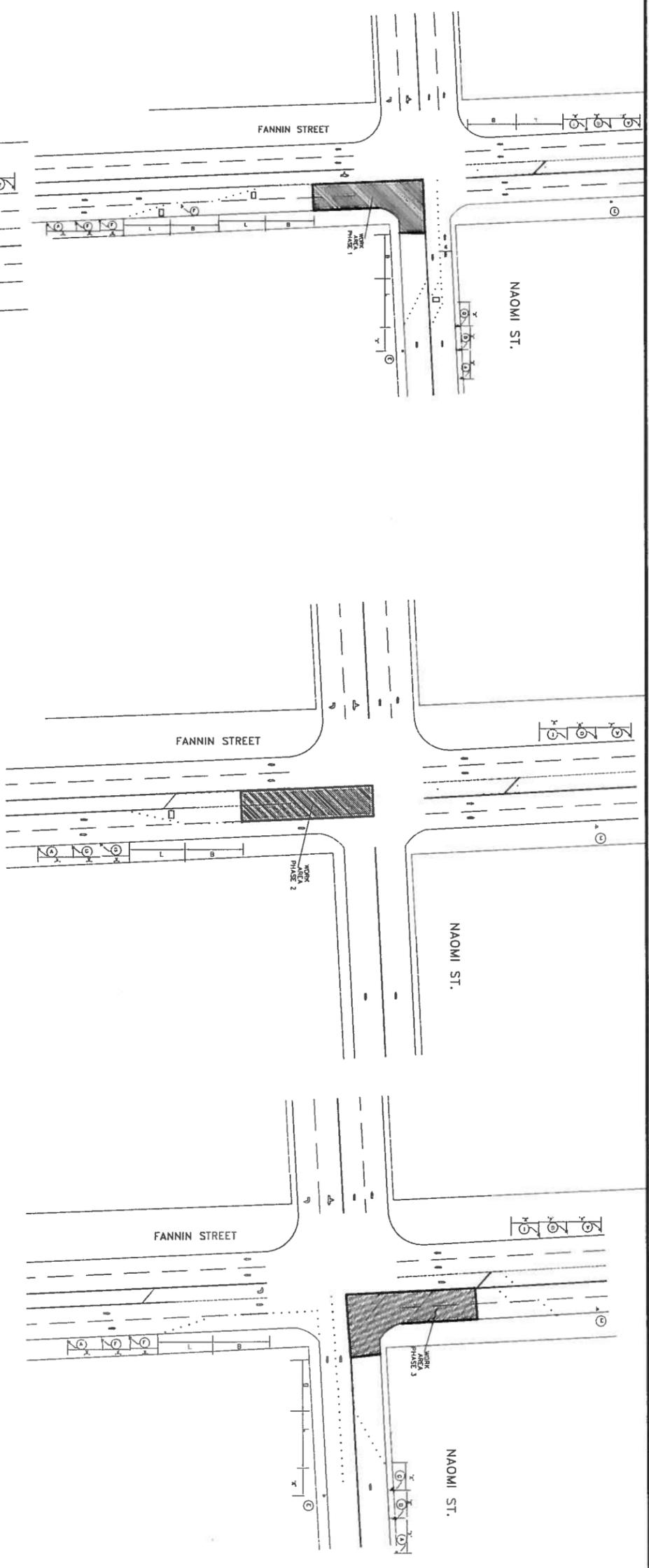
1. ADDENDUM NO.1	4/1/15
DATE	DWN/CHK

**NEGU ENGINEERING SERVICES, INC.**  
 6778 SOUTH LOOP WEST, SUITE 3100  
 HOUSTON, TEXAS 77058  
 PHONE: 713.338.1889  
 FAX: 713.338.1889  
 LICENSE NO. 17000  
 TAPER NO. F-8029

**GC ENGINEERING, INC.**  
 2608 FANNIN AVE.  
 HOUSTON, TEXAS 77058  
 PHONE: (281) 412-2700  
 FAX: (281) 412-2823  
 LICENSE NO. 57388

FOR CITY OF HOUSTON USE ONLY  
 3/12/15

ADDENDUM NO.1



- NOTE**
1. CONTACT TRAFFIC OPERATIONS DIVISION/SIGNAL ENGINEERING AND OPERATIONS BRANCH AT TRANSTAR (713) 881-3172 TO COORDINATE NECESSARY SIGNAL TIMING ADJUSTMENTS DURING CONSTRUCTION STAGE WITH A MINIMUM OF 48 HOURS ADVANCE NOTICE.
  2. MAINTAIN ACCESSIBILITY FOR PEDESTRIANS TO PUSH BUTTONS AND PROPER SIGNALS FOR TCP STAGES, OTHERWISE BAG PEDESTRIAN HEADS AND INSTALL CROSSWALK CLOSED SIGNS.
  3. NO WORK DURING RODEO EVENT (MARCH 2015)

FANNIN STREET	40MPH
STREET NAME	SPEED LIMIT
NAOMI STREET	35MPH

AH CW21-70 48 X 48	AH CW20-56 48 X 48 10' X 10' X 5'	200-20 48 X 24	AH CW20-5(2) CW16-3	AH CW20-5(1) CW16-3	AH CW9-3 48 X 48 12.5X11.9	43-2 24 X 24	CW1-9 18 X 24	VP-1	5'

ADDENDUM NO. 1

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSS POINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT

**FANNIN STREET AT  
 NAOMI ST**

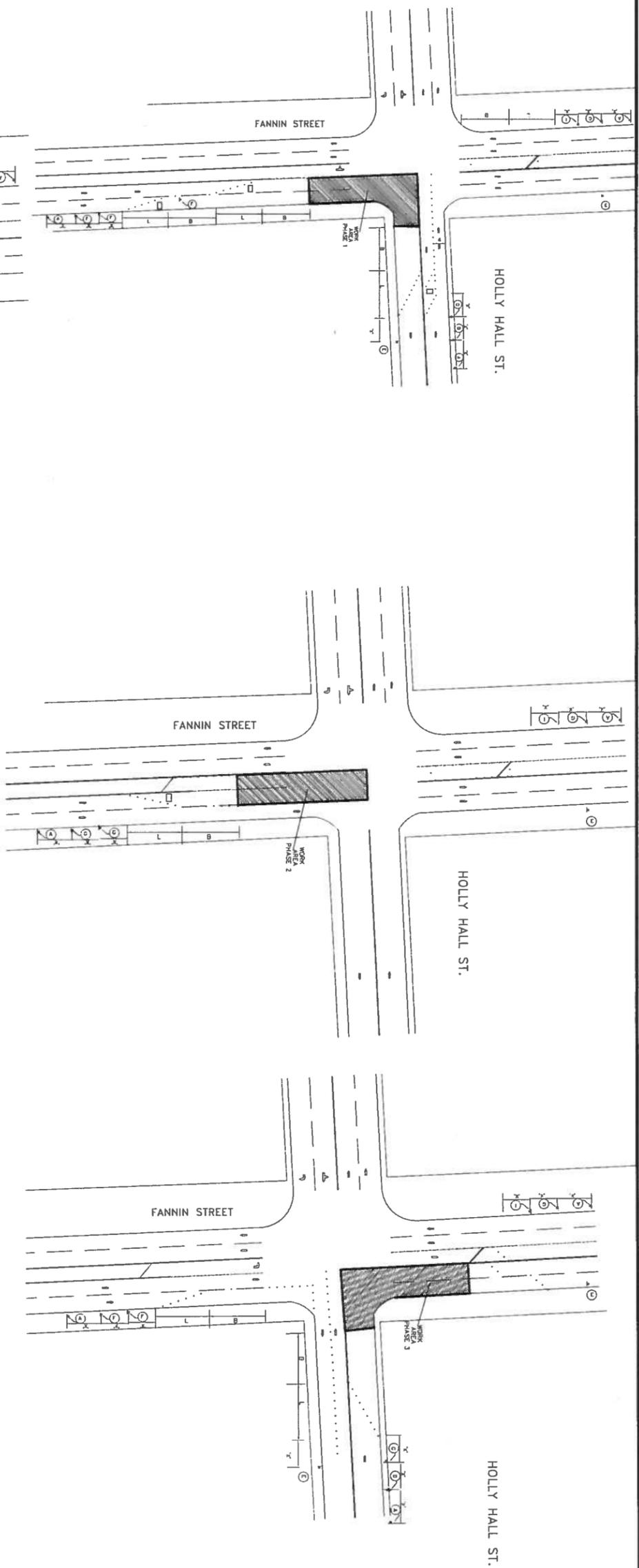
1. ADDENDUM NO. 1	4/1/14	
DATE	DWN	CHK

**NEU ENGINEERING SERVICES, INC.**  
 2505 PARK AVE.  
 HOUSTON, TEXAS 77018  
 PHONE: (713) 288-1889  
 FAX: (713) 288-1889  
 TYPE NO. F-8029

**GC ENGINEERING, INC.**  
 2505 PARK AVE.  
 HOUSTON, TEXAS 77018  
 PHONE: (713) 288-1889  
 FAX: (713) 288-1889  
 TYPE NO. F-8029



ISSUED BY: WESTERN GROUP	FOR CITY OF HOUSTON USE ONLY
WSS NUMBER	
N-321038-0006-4	
DRAWING SCALE	
HORIZ. NTS VERT. NTS	
CITY OF HOUSTON PM	
ROWLANDH AYOUB, P.E.	
SHEET NO. 80 OF 97	



- NOTE**
1. CONTACT TRAFFIC OPERATIONS DIVISION/SIGNAL ENGINEERING AND OPERATIONS BRANCH AT TRANSTAR (713) 881-3172 TO COORDINATE NECESSARY SIGNAL TIMING ADJUSTMENTS DURING CONSTRUCTION STAGE WITH A MINIMUM OF 48 HOURS ADVANCE NOTICE.
  2. MAINTAIN ACCESSIBILITY FOR PEDESTRIANS TO PUSH BUTTONS AND PROPER SIGNALS FOR TCP STAGES, OTHERWISE BAG PEDESTRIAN HEADS AND INSTALL CROSSWALK CLOSED SIGNS.
  3. NO WORK DURING RODEO EVENT (MARCH 2015)

FANNIN STREET 40MPH  
 HOLLY HALL ST 35MPH  
 STREET NAME SPEED LIMIT

A		CW21-7D 48 X 48
D		CW20-5R 48 X 48 30
E		Q20-26 48 X 24
F		CW20-5(2) CW18-3
G		CW20-5(1) CW18-3
H		CW9-3 48 X 48 1219X1219
I		R3-2 24 X 24
		CW1-8 18 X 24
		VP-1
		59 PLATE DIMS

ADDENDUM NO.1

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSS POINT AVENUE, FANNIN STREET  
 AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT  
**FANNIN STREET AT  
 HOLLY HALL**

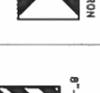
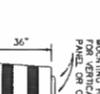
1. ADDENDUM NO.1	4/1/15
DATE	OWN
DATE	CHK

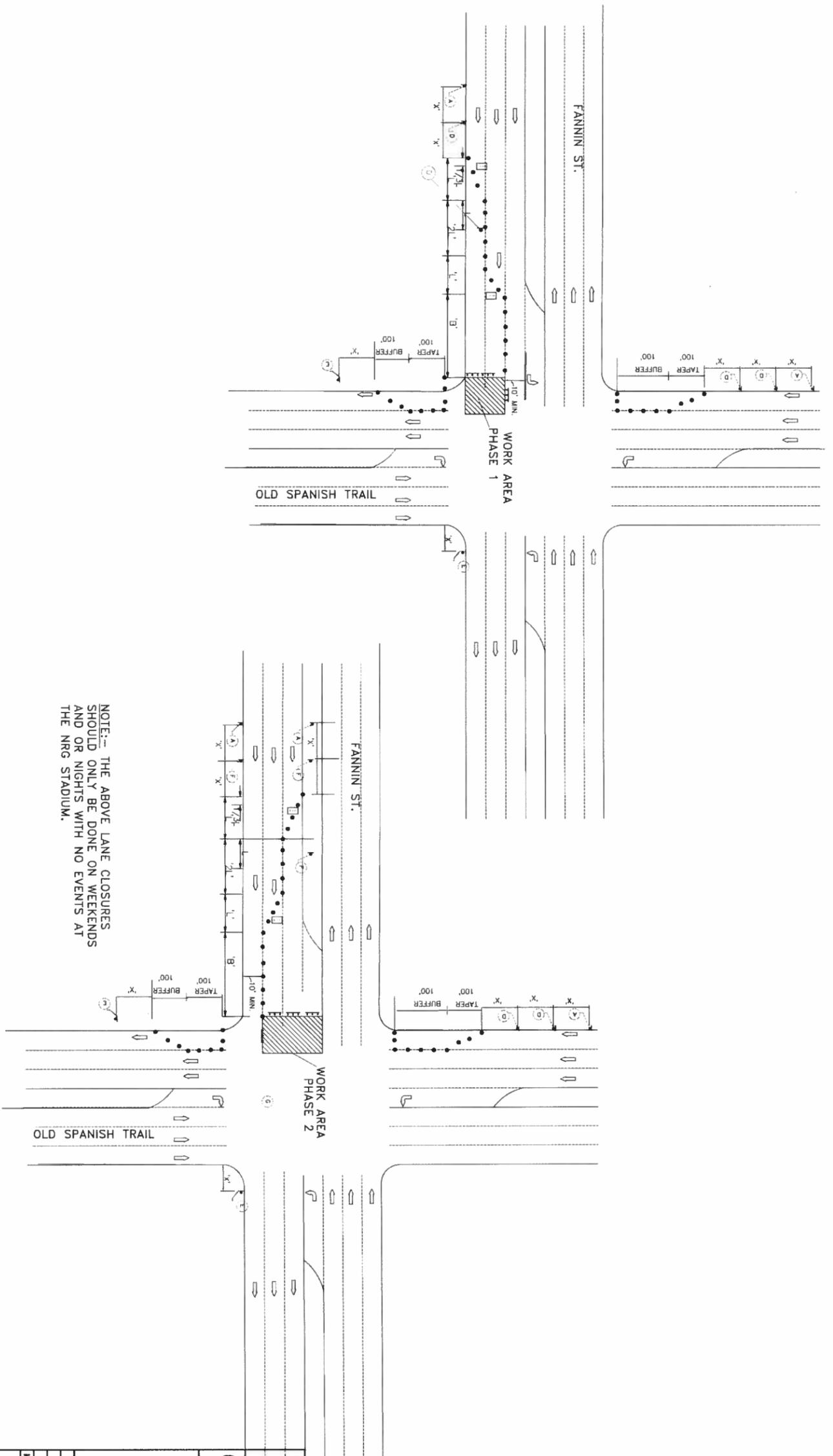
**NEOU ENGINEERING SERVICES, INC.**  
 REGISTERED PROFESSIONAL ENGINEER  
 PROJECT MANAGER  
 2505 PARK AVE.  
 HOUSTON, TEXAS 77018  
 PHONE (713) 770-7704  
 FAX (713) 770-7704  
 TBP# NO. F-8029

**GC ENGINEERING, INC.**  
 2505 PARK AVE.  
 HOUSTON, TEXAS 77018  
 PHONE (713) 421-0108  
 FAX (713) 421-0108  
 TBP# (801) 421-0108



FOR CITY OF HOUSTON USE ONLY  
 WBS NUMBER N-321038-0006-4  
 DRAWING SCALE  
 HORIZ. NTS VERT. NTS  
 CITY OF HOUSTON PM  
 ROWLANDH AYOUB, P.E.  
 SHEET NO. 81 OF 97

 CW21-7D 48 X 48	 CW22-9R 30 X 172	 R20-74 48 X 24	 CW1-8 18 X 24	 VP-1 8" X 12"	 MOUNTING POSTS PANEL OR CHEVRON PLASTIC BRAM	 AHEAD (CW23-5L) CW15-3	 R3-2 24 X 24
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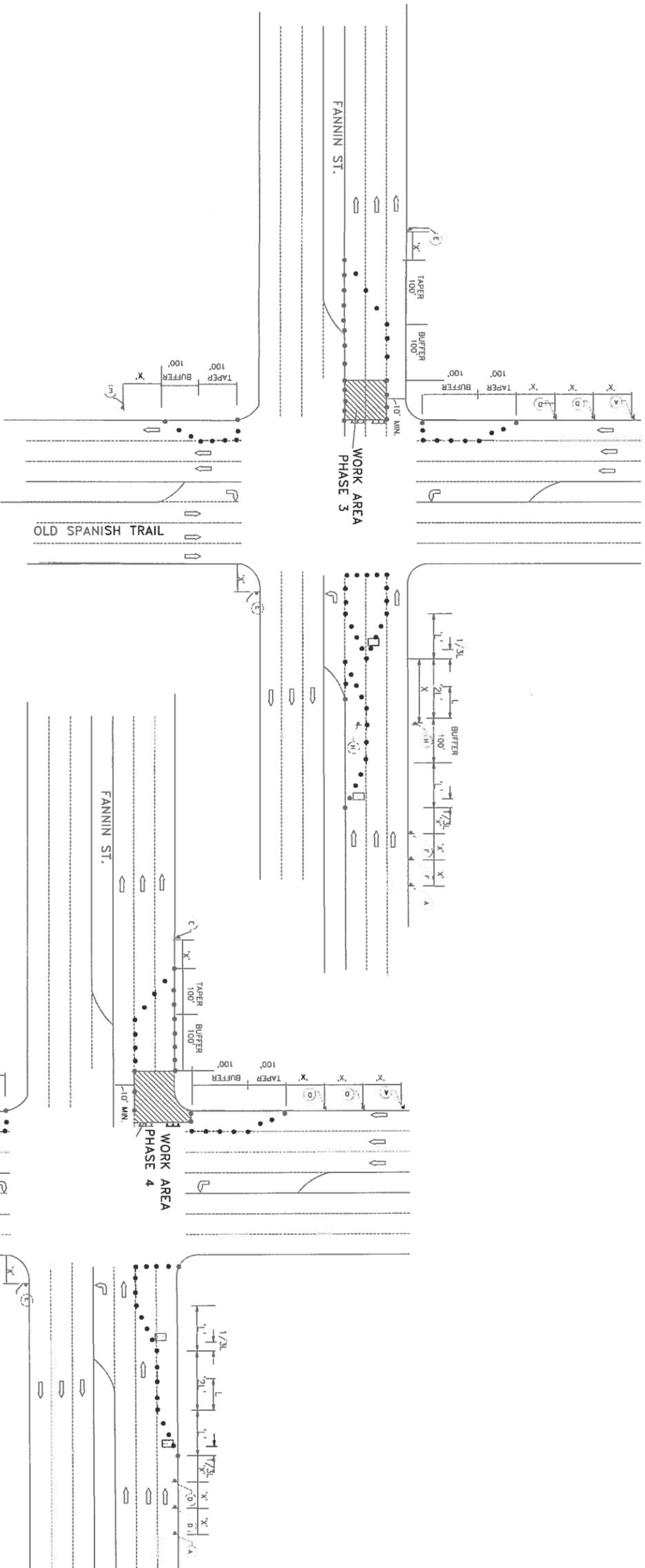


NOTE:- THE ABOVE LANE CLOSURES SHOULD ONLY BE DONE ON WEEKENDS AND OR NIGHTS WITH NO EVENTS AT THE NRG STADIUM.

FANNIN STREET	40MPH
STREET NAME	SPEED LIMIT
OLD SPANISH TRAIL	40MPH
STREET NAME	SPEED LIMIT

ADDENDUM NO.1

<p><b>CITY OF HOUSTON</b>                  DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p> <p>CROSS POINT AVENUE, FANNIN STREET                  AND WEST OREM DRIVE                  PANEL REPLACEMENT PROJECT                  FANNIN AT OLD                  SPANISH TRAIL</p>	
<p>1. ADDENDUM NO.1</p> <p>DATE: 4/1/15</p> <p>CHK: [ ]</p> <p>DATE: [ ]</p> <p>CHK: [ ]</p>	<p><b>NEU ENGINEERING SERVICES, INC.</b>                  2505 PARK AVE.                  FORTLAND, TEXAS 77074                  PHONE: (713) 288-1889                  FAX: (713) 288-1889                  TYPE NO. F-8029</p>
<p><b>GC ENGINEERING, INC.</b>                  2505 PARK AVE.                  FORTLAND, TEXAS 77074                  PHONE: (713) 288-1889                  FAX: (713) 288-1889                  TYPE REGISTRATION NO. F-8029</p>	<p>STATE OF TEXAS                  MENDU I OHALETE                  PROJECT NO. 94423                  PROFESSIONAL SEAL                  CIVIL ENGINEER                  EXPIRES 03/12/15</p>
<p>SIGNED BY: WESTERN GROUP</p> <p>WBS NUMBER: N-321038-0006-4</p> <p>DRAWING SCALE: [ ]</p> <p>HORZ. NTS VERT: NTS</p> <p>CITY OF HOUSTON PM</p> <p>ROWLAND AYVOUR, P.E.</p> <p>SHEET NO. 82 OF 97</p>	<p>FOR CITY OF HOUSTON USE ONLY</p>



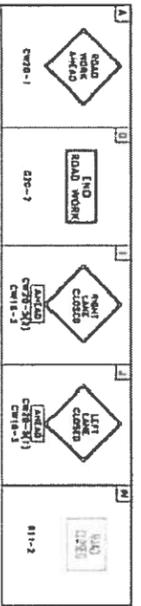
NOTE:- THE ABOVE LANE CLOSURES SHOULD ONLY BE DONE ON WEEKENDS AND OR NIGHTS WITH NO EVENTS AT THE NRG STADIUM

A		D	
E		F	
		G	
H			

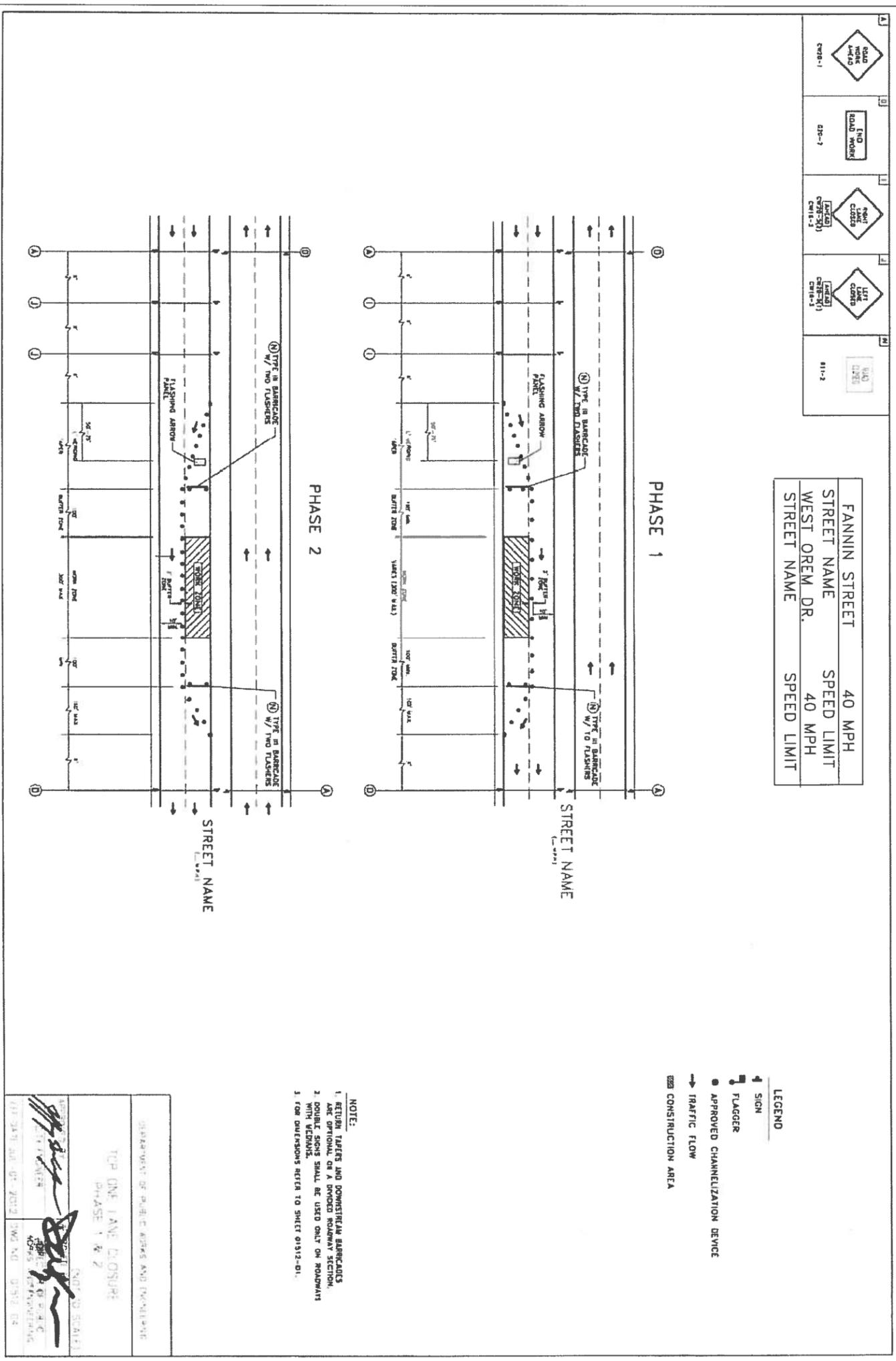
FANNIN STREET	40MPH
STREET NAME	SPEED LIMIT
OLD SPANISH TRAIL	40MPH
STREET NAME	SPEED LIMIT

ADDENDUM NO.1

<p><b>CITY OF HOUSTON</b>                  DEPARTMENT OF PUBLIC WORKS AND ENGINEERING                  CROSS POINT AVENUE, FANNIN STREET                  AND WEST OREM DRIVE                  PANEL REPLACEMENT PROJECT  <b>FANNIN AT OLD                  SPANISH TRAIL</b></p>	
<p>1. ADDENDUM NO.1</p>	<p>4/1/15</p>
<p>DATE</p>	<p>DATE</p>
<p>CHK</p>	<p>CHK</p>
<p><b>NEU ENGINEERING SERVICES, INC.</b>                  2505 PARK AVE.                  FEARLAND TEXAS 77831                  PHONE: (281) 412-2008                  FAX: (281) 412-2012                  TOLL FREE: 1-800-833-5188</p>	
<p><b>GC ENGINEERING, INC.</b>                  2505 PARK AVE.                  FEARLAND TEXAS 77831                  PHONE: (281) 412-2008                  FAX: (281) 412-2012                  TOLL FREE: 1-800-833-5188</p>	
<p>WBS NUMBER: N-321038-0006-4                  DRAWING SCALE:                  HORZ. NTS VERT. NTS:                  CITY OF HOUSTON PM                  ROWLAND AVOUR, P.E.                  SHEET NO. 83 OF 97</p>	
<p>FOR CITY OF HOUSTON USE ONLY</p>	



FANNIN STREET	40 MPH
STREET NAME	SPEED LIMIT
WEST OREM DR.	40 MPH
STREET NAME	SPEED LIMIT



- LEGEND**
- ▲ SIGN
  - ◆ FLAGGER
  - APPROVED CHANNELIZATION DEVICE
  - TRAFFIC FLOW
  - ▨ CONSTRUCTION AREA

**NOTE:**

1. RETURN TABLES AND DOWNSTREAM BARRICADES ARE OPTIONAL ON A DIVIDED ROADWAY SECTION WITH VEDMMS.
2. DOUBLE SIGNS SHALL BE USED ONLY ON ROADWAYS FOR DIVISIONS REFER TO SHEET 01312-01.

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 TOP ONE LANE CLOSURE  
 PHASE 1 & 2  
 (NOT TO SCALE)  
 DATE: 03/12/15  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]

TYPICAL ONE LANE CLOSURE OF A MULTILANE STREET FANNIN STREET

FANNIN STREET SOUTH EAST SIDE	FROM 58+90 TO 61+70
FANNIN STREET NORTH WEST SIDE	FROM 60+20 TO 60+70
FANNIN STREET FROM 9+60 TO 21+50	
FANNIN STREET FROM 9+60 TO 21+50	
FANNIN STREET FROM 23+20 TO 23+50	
FANNIN STREET FROM 24+20 TO 24+50	
FANNIN STREET FROM 24+70 TO 26+00	
FANNIN STREET FROM 24+70 TO 26+00	
FANNIN STREET FROM 44+50 TO 46+20	
FANNIN STREET FROM 44+50 TO 46+20	
FANNIN STREET FROM 47+50 TO 48+30	
FANNIN STREET FROM 47+50 TO 48+30	
FANNIN STREET FROM 49+30 TO 49+70	
FANNIN STREET FROM 49+30 TO 49+70	
FANNIN STREET FROM 50+20 TO 55+50	
FANNIN STREET FROM 50+20 TO 55+50	
FANNIN STREET FROM 52+70 TO 63+50	
FANNIN STREET FROM 52+70 TO 63+50	
FANNIN STREET FROM 8+00-9+60	
FANNIN STREET FROM 22+00-22+50	
FANNIN STREET FROM 22+70-23+20	
FANNIN STREET FROM 23+50-24+20	
FANNIN STREET FROM 24+50-24+70	
FANNIN STREET FROM 24+50-24+70	
FANNIN STREET FROM 43+00-44+50	
FANNIN STREET FROM 43+00-44+50	
FANNIN STREET FROM 57+00-59+70	
FANNIN STREET FROM 57+00-59+70	
FANNIN STREET FROM 63+50-65+30	
FANNIN STREET FROM 63+50-65+30	
FANNIN STREET FROM 64+20-66+90	
FANNIN STREET FROM 64+20-66+90	

TYPICAL ONE LANE CLOSURE OF A MULTILANE STREET WEST OREM

WEST OREM FROM STATION 7+50-11+70	
WEST OREM FROM STATION 12+50-16+00	
WEST OREM FROM STATION 19+50-20+20	
WEST OREM FROM STATION 31+50-33+00	
WEST OREM FROM STATION 38+50-40+00	
WEST OREM FROM STATION 62+20-63+75	

ADDENDUM NO.1

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 CROSS POINT AVENUE, FANNIN STREET AND WEST OREM DRIVE  
 PANEL REPLACEMENT PROJECT  
 FANNIN STREET AT 610 ON SOUTH WEST SIDE OF FANNIN

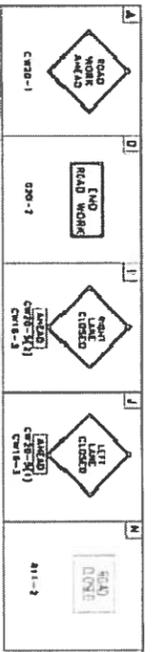
1. ADDENDUM NO.1	4/1/15
DATE	DATE
DATE	DATE

**NEDU ENGINEERING SERVICES, INC.**  
 6778 SOUTHWEAST Fwy, Suite 320  
 Houston, TX 77030  
 Phone: 713.258.1509  
 Fax: 713.258.1509  
 TYPE NO. F-8029

**GC ENGINEERING, INC.**  
 2505 PARK AVE.  
 PEARLAND, TEXAS 77581  
 Phone: (281) 412-7108  
 Fax: (281) 412-8523  
 TYPE REGISTRATION NO. F-7309

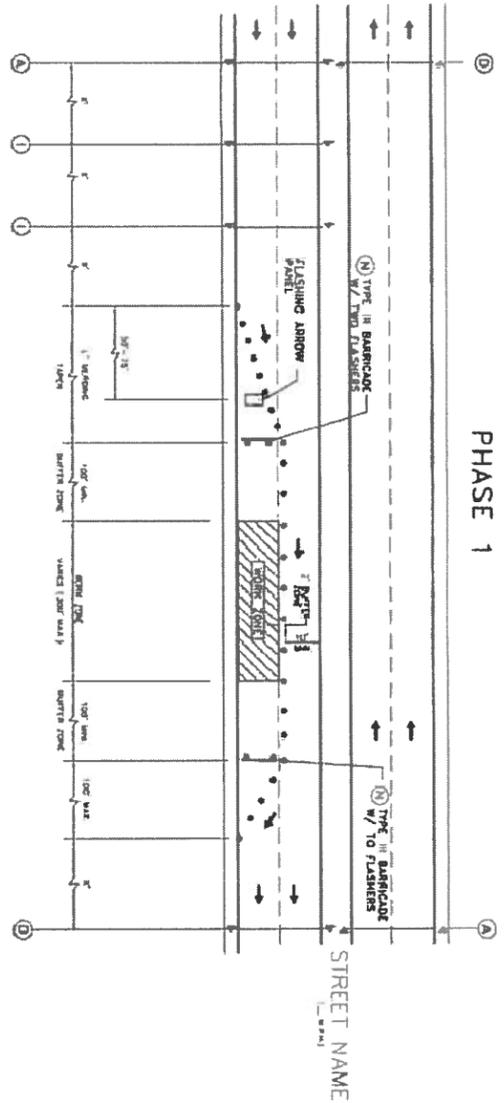
**STATE OF TEXAS**  
 PROFESSIONAL ENGINEER  
 NIKEMDI I. ORHALETTE  
 79423  
 03/12/15

ISS NUMBER: N-321038-0006-4  
 DRAWING SCALE:  
 HORIZ. NTS VERT. NTS:  
 CITY OF HOUSTON PM  
 ROWANDAH ANDRUB, P.E.  
 SHEET NO. 84 OF 97

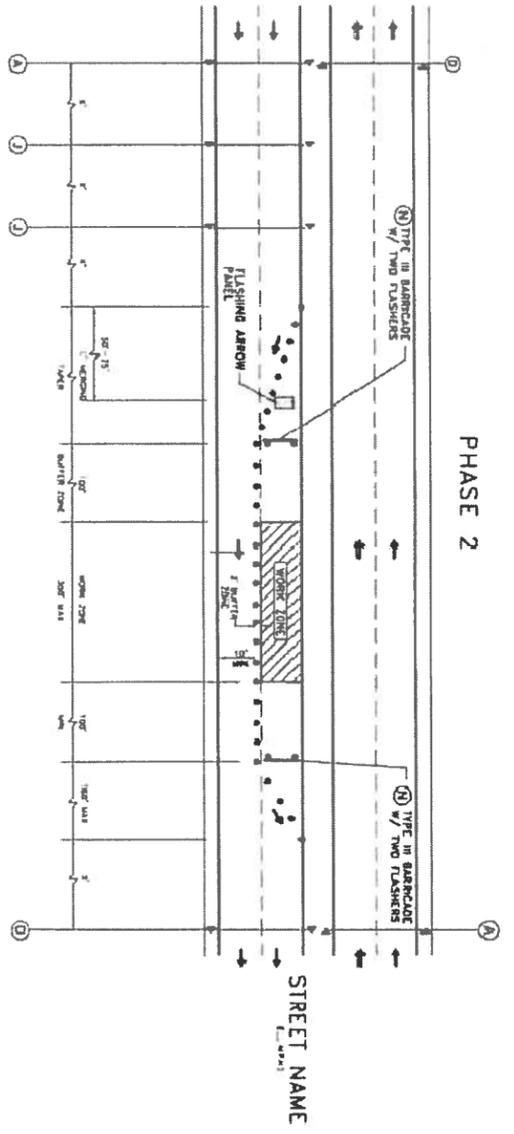


WEST OREM DR. 40 MPH  
 STREET NAME SPEED LIMIT

PHASE 1



PHASE 2



- LEGEND
- ↑ SIGN
  - ↑ FLAGGER
  - APPROVED CHANNELIZATION DEVICE
  - TRAFFIC FLOW
  - ▨ CONSTRUCTION AREA

- NOTE:
1. RETURN TAPERS AND DOWNSTREAM BARRICADES ARE OPTIONAL ON A DIVIDED ROADWAY SECTION.
  2. DOUBLE SIGNS SHALL BE USED ONLY ON ROADWAYS WITH MEDIANS.
  3. FOR DIMENSIONS REFER TO SHEET 01512-01.

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 TOP ONE LANE CLOSURE  
 PHASE 1 & 2  
 (NOT TO SCALE)  
 DATE: JUL 01 2012 DWG NO. 01512-01

ADDENDUM NO.1

<b>CITY OF HOUSTON</b> DEPARTMENT OF PUBLIC WORKS AND ENGINEERING CROSS POINT AVENUE, FANNIN STREET AND WEST OREM DRIVE PANEL REPLACEMENT PROJECT WEST OREM AT TOWNDOOR DR.	
1. ADDENDUM NO.1 DATE: 4/1/15 CHK:	4/1/15 DATE: 4/1/15 CHK:
<b>NEDU ENGINEERING SERVICES, INC.</b> 6776 SOUTH WINTER ST. SUITE 320 HOUSTON, TEXAS 77030 Phone: (713) 588-1889 Fax: (713) 588-1889 TYPE NO. F-8029	
<b>GC ENGINEERING, INC.</b> 2505 PARK AVE. PEARLAND, TEXAS 77581 Phone: (281) 412-7008 Fax: (281) 412-8023 TYPE Registration No. F-3088 SIGNED BY: WESTON GROUP	
WBS NUMBER: N-371038-0006-4 DRAWING SCALE: HORIZ. NTS. VERT.: NTS. CITY OF HOUSTON PM ROWLANDH ANDUB. P.E. SHEET NO. 85 OF 97	
FOR CITY OF HOUSTON USE ONLY 03/12/15 NAKEMI I. OKAFITE 79423 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS	



