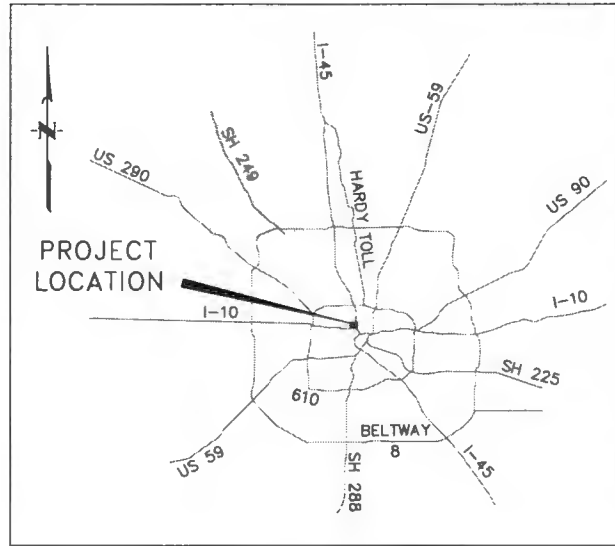


# MEMORIAL HEIGHTS REDEVELOPMENT AUTHORITY / TIRZ 5

## HOUSTON AVENUE AT WHITE OAK DRIVE WALL REPAIR AND WAVERLY AT MKT INTERSECTION IMPROVEMENTS

COH WBS No. N-T05000-0018-7



LOCATION MAP  
NTS



VICINITY MAP  
NTS

KEY MAP No. 493C  
GIMS TILE No. 5358d  
ZIP CODE: 77009



MAYOR  
JOHN WHITMIRE

CONTROLLER  
CHRIS HOLLINS

DISTRICT  
COUNCIL MEMBERS

- |                                |                                 |                                   |                                     |
|--------------------------------|---------------------------------|-----------------------------------|-------------------------------------|
| AMY PECK<br>DISTRICT A         | TARSHA JACKSON<br>DISTRICT B    | ABBIE KAMIN<br>DISTRICT C         | CAROLYN EVANS-SHABAZZ<br>DISTRICT D |
| FRED FLICKINGER<br>DISTRICT E  | TIFFANY D. THOMAS<br>DISTRICT F | MARY NAN HUFFMAN<br>DISTRICT G    | MARIO CASTILLO<br>DISTRICT H        |
| JOAQUIN MARTINEZ<br>DISTRICT I | EDWARD POLLARD<br>DISTRICT J    | MARTHA CASTEX-TATUM<br>DISTRICT K |                                     |

COUNCIL MEMBERS  
AT-LARGE

- |                              |                               |
|------------------------------|-------------------------------|
| JULIAN RAMIREZ<br>POSITION 1 | WILLIE DAVIS<br>POSITION 2    |
| TWILA CARTER<br>POSITION 3   | LETITIA PLUMMER<br>POSITION 4 |
| SALLIE ALCORN<br>POSITION 5  |                               |

SEPTEMBER 2025

Contractor shall notify the City of Houston, Department of Public Works and Engineering, Office of the City Engineer, 48 hours prior to starting work on this project. Telephone No.: 832-394-9098

TEXAS811 NOTIFICATION SYSTEM  
CALL BEFORE YOU DIG!!!  
www.texas811.org/ or  
Texas811 or 1-800-344-8377



NO.	DATE	REVISION	APP.

MEMORIAL HEIGHTS  
REDEVELOPMENT AUTHORITY  
TIRZ 5



SURVEYED BY: UNITED ENGINEERS, INC.  
FB NO. P-6086

NOTE: CITY SIGNATURE VALID FOR ONE YEAR ONLY, AFTER DATE OF SIGNATURE

DocuSigned by:  
*Johanna Clark*  
808098A38F5E457...

DIRECTOR OF HOUSTON PUBLIC WORKS

9/25/2025

SHEET NO 1 OF 14 SHEETS

FILE PATH: K:\14760\14760-0002-00 MHRA WA2\2 Design Phase\CAD\Plans 2 (Wall Repair)\14760-CI-201-P&P (Wall Repair).dwg PLOTTED: 9/24/2025 1:12 PM / HW

HOUSTON AVENUE AT WHITE OAK DRIVE INTERSECTION IMPROVEMENTS

FILE PATH: K:\14760\14760\_0002\_00 MIIRA WAZ2 Design Phase\CAD\Plans 2 (Wall Report)\14760 CI 201 P&P (Wall Report).dwg  
 PLOTTED: 6/19/2025 8:24 AM  
 HVF

**GENERAL CONSTRUCTION NOTES**

- UNLESS OTHERWISE NOTED AND APPROVED ON DRAWINGS, CONSTRUCT CIVIL INFRASTRUCTURE IN ACCORDANCE WITH THE EFFECTIVE EDITION OF THE HOUSTON PUBLIC WORKS STANDARD CONSTRUCTION SPECIFICATIONS, STANDARD CONSTRUCTION DETAILS, AND SUPPLEMENTS, ADDENDA AND AMENDMENTS THERETO. THE LATEST EDITION OF THE ABOVE PUBLICATIONS CAN BE FOUND AT: [HTTP://WWW.HOUSTONPERMITTINGCENTER.ORG/OFFICE-CITY-ENGINEER/DESIGN-AND-CONSTRUCTION-STANDARDS](http://www.houstonpermittingcenter.org/office-city-engineer/design-and-construction-standards)
- THE DESIGN MUST BE CONSISTENT WITH THE EFFECTIVE EDITION OF HOUSTON PUBLIC WORKS INFRASTRUCTURE DESIGN MANUAL AND TOED (TEXAS COMMISSION ON ENVIRONMENTAL QUALITY) REQUIREMENTS.
- UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT 713-223-4567/8111 OR 800-344-8377 AND LINE STAR NOTIFICATION CENTER AT 800-868-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION. UTILITIES MARKED WITHIN THE PUBLIC RIGHT OF WAY OR IN EASEMENTS SHALL COMPLY WITH TAG TITLE 18, PART 1, CHAPTER 18, RULE §18.6 AND THE AMERICAN PUBLIC WORKS ADMINISTRATION (APWA) UNIFORM COLOR CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING WATER, WASTEWATER, STORM WATER LINES AND TRAFFIC CONTROL DEVICES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE EFFECTIVE EDITION OF HOUSTON PUBLIC WORKS STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEM, WATER LINES, STORM DRAINAGE, STREET PAVING, AND TRAFFIC AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, STREET PAVING, AND TRAFFIC, REFERENCED ABOVE AND SUPPLEMENTS, ADDENDA AND AMENDMENTS THERETO, AT NO ADDITIONAL COST TO THE CITY OF HOUSTON.
- CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, HOUSTON PUBLIC WORKS @ 832-384-9098 OR VIA FAX AT 832-395-4424 FOR INSPECTION AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DESTROYED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER AND TO THE SATISFACTION OF THE OWNING AUTHORITY.
- CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREA OF EXCAVATION.
- CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION.
- CONTRACTOR SHALL MAINTAIN A SET OF REDLINE DRAWINGS AND RECORD AS-BUILT CONDITIONS DURING CONSTRUCTION. THESE AS-BUILT DRAWINGS WILL BE SUBMITTED TO THE DESIGN CONSULTANT WHO WILL MAKE THE CHANGES ON THE ORIGINAL TRACINGS, LABEL EACH SHEET IN THE SET AS "RECORD DRAWINGS", AND RETURN IT TO THE OFFICE OF THE CITY ENGINEER.

**ADDITIONAL GENERAL CONSTRUCTION NOTES**

- THE CONTRACTOR SHALL RETURN ALL EXISTING FACILITIES TO EXISTING OR BETTER CONDITION UNLESS OTHERWISE NOTED AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR TO FOLLOW CONSTRUCTION DETAILS IF DRAWINGS DEVIATE FROM CITY OF HOUSTON STANDARDS.
- CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY CITY OF HOUSTON, TEXAS PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN CITY OF HOUSTON ROAD RIGHTS-OF-WAY.

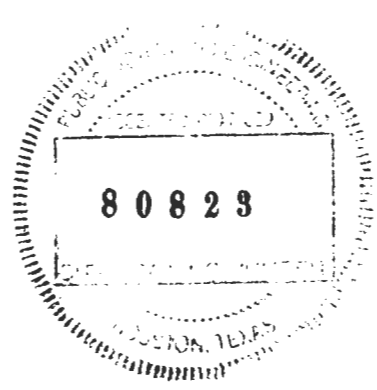
**GRADING CONSTRUCTION NOTES**

- GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.
- CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
- CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
- ALL EXISTING CONCRETE PAVING, SIDEWALK, AND CURB DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. DISPOSAL SHALL BE AT AN APPROVED OFF-SITE, LAWFUL LOCATION, UNLESS DIRECTED OTHERWISE BY THE OWNER.

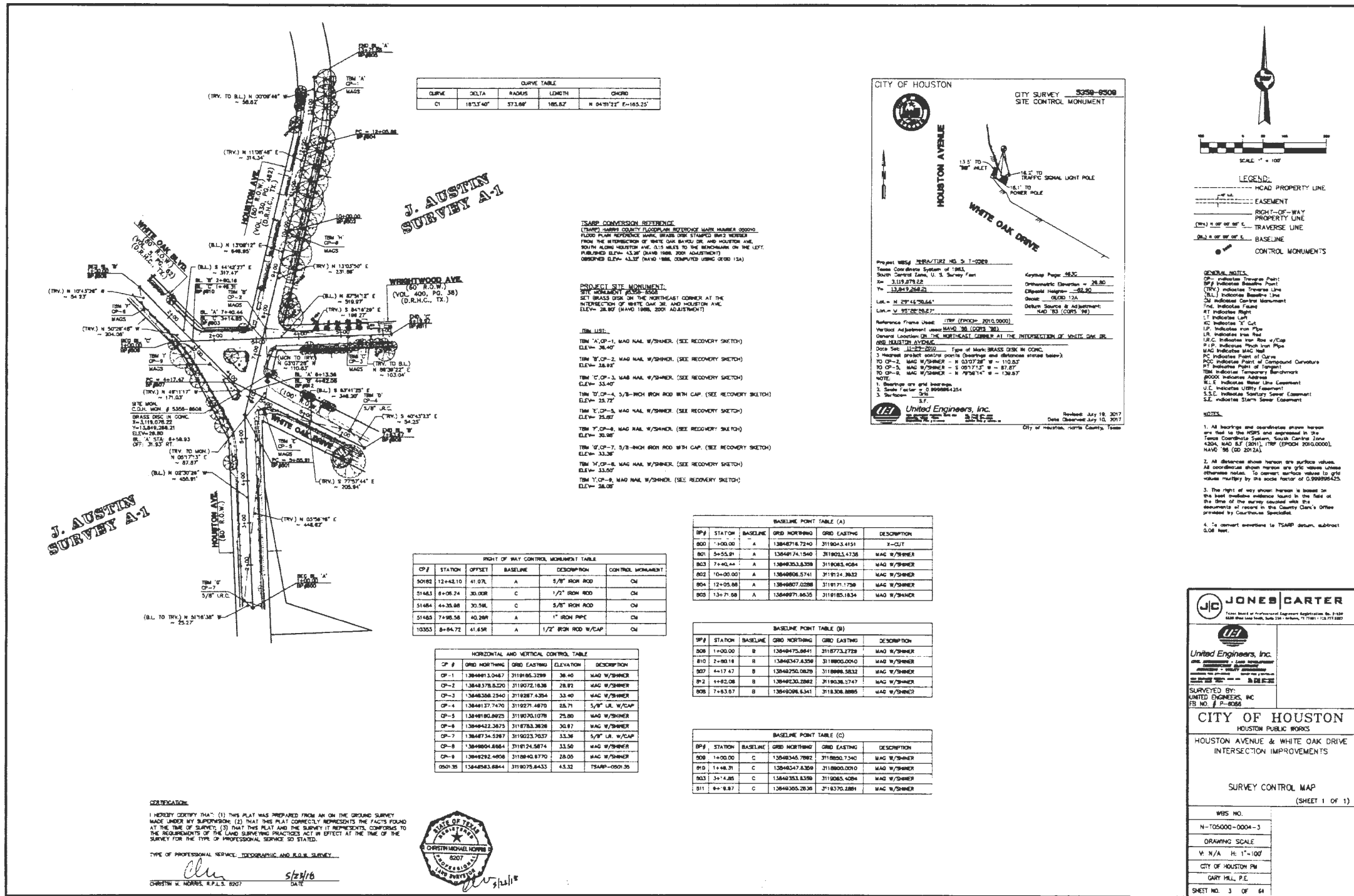
**ABBREVIATIONS**

ASHP	ASPHALT	SAN SWR	SANITARY SEWER
BLDC	BUILDING	SN	SPRINKLER HEAD
CONC	CONCRETE	SNT	SHEET
CJ	CONTROL JOINT	SM	SIMILAR
DNMS	DIMENSIONS	SP	SERVICE POLE
DIP	DUCTILE IRON PIPE	STA	STATION
D/W OR DW	DRIVERWAY	STL	STEEL
DWG	DRAWING	STM SWR	STORM SEWER
EL OR ELEV	ELEVATION	SV	SPRINKLER VALVE
EO	EQUAL	S/W OR SW	SIDEWALK
ER	END OF RADIUS	TD	TOP OF PAVEMENT
EXIST OR EX	EXISTING	TYP	TYPICAL
EJ OR EXP JT	EXPANSION JOINT	UG	UNDERGROUND
FN	FIRE HYDRANT	UNO OR U.O.	UNLESS NOTED OTHERWISE
GALV	GALVANIZED	UV	UNDERGROUND WATER METER
GM	GAS METER	WV	WATER VALVE
GUT	GUTTER		
GV	GAS VALVE		
HP	HIGH PRESSURE		
	GAS MAIN		
INSTR	INSTRUCTION		
IP	IRON PIPE		
IQ	INTERMEDIATE		
	PRESSURE GAS MAIN		
LT	LEFT		
LT STD	LIGHT STANDARD		
(M)	PER MH MAPPING		
MAT SCHED	MATERIALS SCHEDULE		
ME	MATCH EXIST		
MFR	MANUFACTURER		
MH	MANHOLE		
MCS	NATIONAL GEOLOGICAL SURVEY		
N/C	NOT IN CONTRACT		
(NR)	NOT IN RECORDS		
M/S	NOT TO SCALE		
OC	ON CENTER		
OC/W	ON CENTER EACH WAY		
POL	PROFILE GRADE LINE		
PI	POINT OF INTERSECTION		
PL M/R	PIPELINE MARKER		
PP	POWER POLE		
PROP	PROPOSED		
PVT	PRIVATE		
P/W/T	PAVEMENT		
R	RADIUS		
(R)	PER RECORDS		
RE	REFERENCE		
ROW	RIGHT-OF-WAY		
RT	RIGHT		
R/W or RW	RETAINING WALL		

INDEX OF SHEETS	
1	COVER
2	GENERAL NOTES & INDEX
3	SURVEY CONTROL MAP
4	SWINGTIES
5	SWINGTIES
6	HOUSTON AVE AT WHITE OAK DRIVE
7	LANDSCAPE DRAINAGE DETAILS
8	LANDSCAPE MATERIALS PLAN
9	HARDSCAPE DETAILS
10	HARDSCAPE DETAILS
11	HARDSCAPE DETAILS
12	HARDSCAPE DETAILS
13	HARDSCAPE DETAILS
14	MKT AT WAVERLY STREET SIGNING AND PAVEMENT MARKING LAYOUT



SURVEYED BY: UNITED ENGINEERS, NC. FB NO. P-6086	
<b>CITY OF HOUSTON</b> HOUSTON PUBLIC WORKS	
HOUSTON AVENUE & WHITE OAK DRIVE INTERSECTION IMPROVEMENTS	
<b>GENERAL NOTES &amp; INDEX</b>	
WBS NUMBER	N-T05000-0018-7
SHEET NO. <b>2</b> OF <b>14</b>	



CURVE	DELTA	RADIUS	LENGTH	CHORD
C1	183.40°	573.86'	185.82'	N 04°31'21" E=185.25'

**TRAMP CONVERSION REFERENCE**  
 (TRAMP HARRIS COUNTY FLOODPLAIN REFERENCE MARK NUMBER 00000)  
 FLOOD PLAIN REFERENCE MARK BRASS DISC STAMPED BRASS NUMBER  
 FROM THE INTERSECTION OF WHITE OAK DRIVE AND HOUSTON AVE.  
 SOUTH ALONG HOUSTON AVE. 31.5 FEET TO THE BRASS DISC ON THE LEFT.  
 PUBLISHED ELEV= 43.87 (NAVD 1988, 2004 ADJUSTMENT)  
 OBSERVED ELEV= 43.57 (NAVD 1988, COMPUTED USING GEO 134)

**PROJECT SITE MONUMENT**  
 SET BRASS DISC ON THE NORTHEAST CORNER AT THE  
 INTERSECTION OF WHITE OAK DR. AND HOUSTON AVE.  
 ELEV= 38.97 (NAVD 1988, 2004 ADJUSTMENT)

- TRIP LINE**
- TM 1/2 CP-1 MAG NAIL W/SHIMMER (SEE RECOVERY SKETCH)  
ELEV= 38.40
  - TM 1/2 CP-2 MAG NAIL W/SHIMMER (SEE RECOVERY SKETCH)  
ELEV= 38.97
  - TM 1/2 CP-3 MAG NAIL W/SHIMMER (SEE RECOVERY SKETCH)  
ELEV= 33.40
  - TM 1/2 CP-4 5/8" INCH IRON ROD WITH CAP (SEE RECOVERY SKETCH)  
ELEV= 33.77
  - TM 1/2 CP-5 MAG NAIL W/SHIMMER (SEE RECOVERY SKETCH)  
ELEV= 33.87
  - TM 1/2 CP-6 MAG NAIL W/SHIMMER (SEE RECOVERY SKETCH)  
ELEV= 33.36
  - TM 1/2 CP-7 5/8" INCH IRON ROD WITH CAP (SEE RECOVERY SKETCH)  
ELEV= 33.50
  - TM 1/2 CP-8 MAG NAIL W/SHIMMER (SEE RECOVERY SKETCH)  
ELEV= 38.08

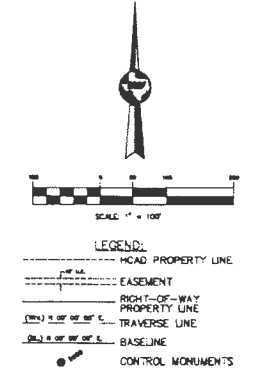
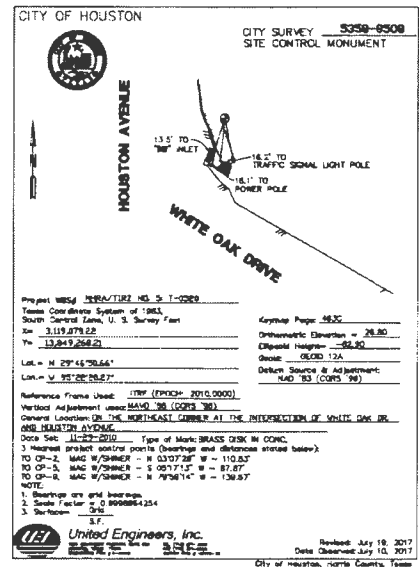
CP#	STATION	OFFSET	BASELINE	DESCRIPTION	CONTROL MONUMENT
5098	12+42.10	41.07'	A	5/8" IRON ROD	CM
51483	8+08.24	30.00'	C	1/2" IRON ROD	CM
51484	44+35.88	30.58'	C	5/8" IRON ROD	CM
51485	74+95.58	40.28'	A	1" IRON PIPE	CM
10353	8+84.72	41.63'	A	1/2" IRON ROD W/CAP	CM

CP #	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
CP-1	13848913.0467	31191863.3299	38.40	MAG W/SHIMMER
CP-2	13848378.8220	31190723.1636	28.92	MAG W/SHIMMER
CP-3	13848328.2340	3119287.4284	33.40	MAG W/SHIMMER
CP-4	13848137.7470	3119271.4870	26.71	5/8" I.R. W/CAP
CP-5	13848180.8820	3119070.1078	29.80	MAG W/SHIMMER
CP-6	13848432.2875	3118783.3828	30.87	MAG W/SHIMMER
CP-7	13848734.5267	3119023.7037	33.36	5/8" I.R. W/CAP
CP-8	13848804.8864	3119124.5874	33.50	MAG W/SHIMMER
CP-9	13848282.4808	3118840.8770	28.00	MAG W/SHIMMER
0501.35	13848583.8844	3118075.8433	43.32	TRAMP-0501.35

BP#	STATION	BASELINE	GRID NORTHING	GRID EASTING	DESCRIPTION
800	1+00.00	A	13848718.7240	3118043.4151	T-CUT
801	5+55.81	A	13848174.1540	3118023.4738	MAG W/SHIMMER
803	7+40.44	A	13848353.8339	3118028.4084	MAG W/SHIMMER
802	10+00.00	A	13848808.5741	3119124.3832	MAG W/SHIMMER
804	12+05.88	A	13848807.0288	3119171.1758	MAG W/SHIMMER
805	13+71.08	A	13848971.8635	3119185.1834	MAG W/SHIMMER

BP#	STATION	BASELINE	GRID NORTHING	GRID EASTING	DESCRIPTION
808	1+00.00	B	13848475.8841	3118773.2729	MAG W/SHIMMER
810	2+80.18	B	13848347.8358	3118800.0040	MAG W/SHIMMER
807	4+17.47	B	13848250.0879	3118888.5832	MAG W/SHIMMER
812	1+82.08	B	13848230.2882	3118038.5747	MAG W/SHIMMER
808	7+83.07	B	13848208.6341	3118308.8885	MAG W/SHIMMER

BP#	STATION	BASELINE	GRID NORTHING	GRID EASTING	DESCRIPTION
808	1+00.00	C	13848346.7882	3118800.1340	MAG W/SHIMMER
810	1+48.31	C	13848347.8358	3118800.0040	MAG W/SHIMMER
803	3+4.85	C	13848353.8339	3118028.4084	MAG W/SHIMMER
811	8+8.87	C	13848305.2838	3118370.2881	MAG W/SHIMMER



**GENERAL NOTES**

- All bearings and coordinates shown herein are tied to the NAD 83 and expressed in the Texas Coordinate System, South Central Zone (NAD 83 (2011), TRIP (PROJ 20040000), NAVD 83 (2011)).
- All distances shown herein are surface values. All coordinates shown herein are GTC values unless otherwise noted. To convert surface values to GTC values multiply by the scale factor of 0.99999425.
- The right of way shown herein is based on the best available evidence shown in the field at the time of the survey coupled with the monuments of record in the County Clerk's Office prepared by a Court-appointed Surveyor.
- To convert elevations to TRAMP datum, subtract 3.08 feet.



**J.C. JONES CARTER**  
 Licensed Professional Engineer  
 State of Texas, License No. 90169

**United Engineers, Inc.**  
 10000 West Loop South, Suite 100, Houston, TX 77042-1121

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

**SURVEY CONTROL MAP**  
 (SHEET 1 OF 1)

WBS NO. N-T05000-0004-3  
 DRAWING SCALE V N/A H: 1"=100'  
 CITY OF HOUSTON PH GARY HILL, P.E.  
 SHEET NO. 3 OF 64

**QUIDDITY**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

**SURVEY CONTROL MAP**  
 (SHEET 1 OF 1)

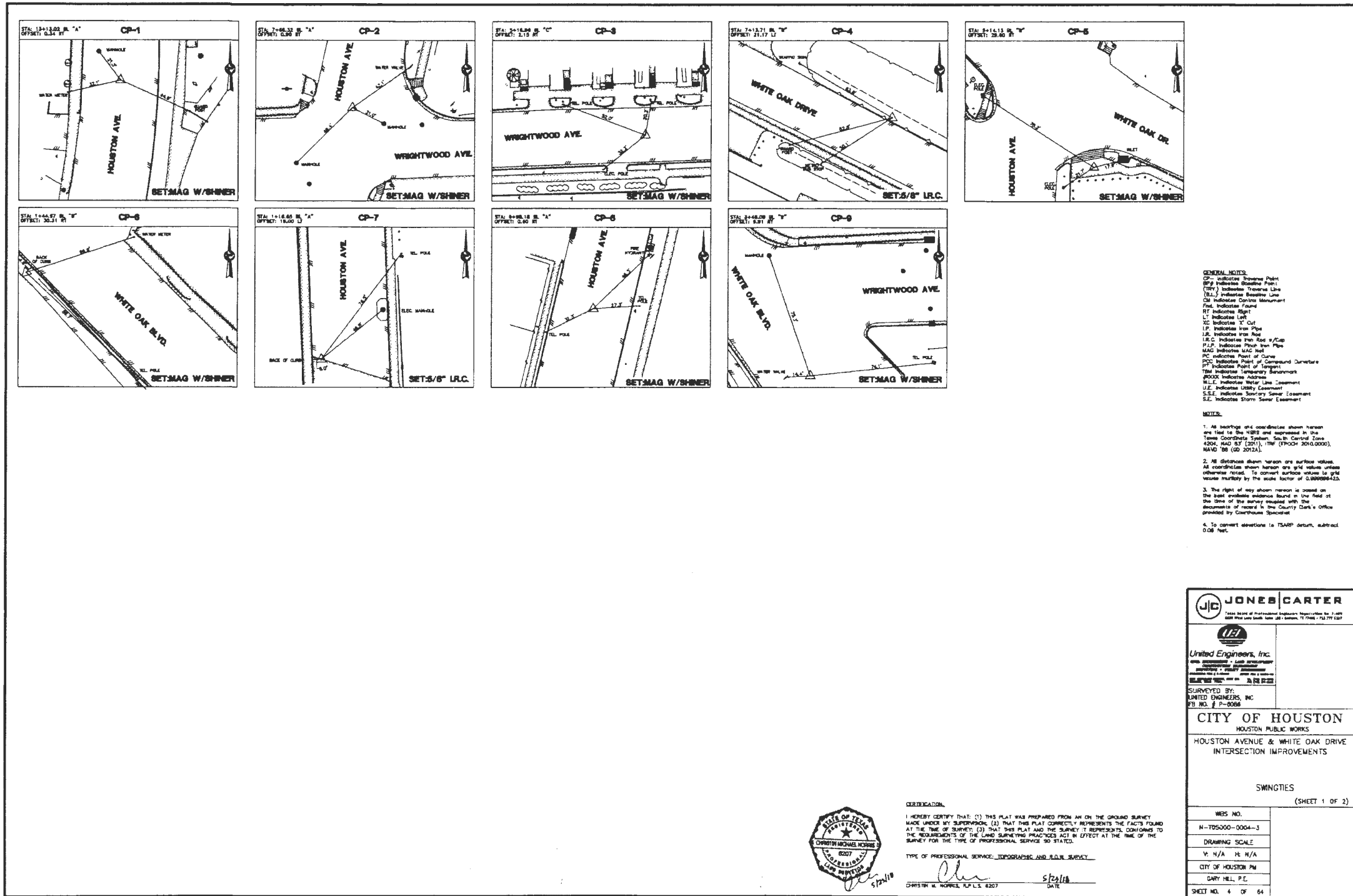
WBS NUMBER N-T05000-0018-7  
 SHEET NO. 3 OF 14

**CONVEYANCE**  
 I HEREBY CERTIFY THAT: (1) THIS PLAN WAS PREPARED FROM AN ON THE GROUND SURVEY MADE UNDER MY SUPERVISION; (2) THAT THIS PLAN CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF SURVEY; (3) THAT THIS PLAN AND THE SURVEY IT REPRESENTS CONFORMS TO THE REQUIREMENTS OF THE LAND SURVEYING PRACTICES ACT IN EFFECT AT THE TIME OF THE SURVEY FOR THE TYPE OF PROFESSIONAL SERVICE SO STATED.

TYPE OF PROFESSIONAL SERVICE: DESCRIPTIVE AND S.B.S. SURVEY

*Christin Monaghan* 5/23/16  
 CHRISTIN M. MONAGHAN, R.P.L.S. 8007 DATE





**CERTIFICATION:**

I HEREBY CERTIFY THAT: (1) THIS PLAN WAS PREPARED FROM AN ON THE GROUND SURVEY MADE UNDER MY SUPERVISION; (2) THAT THIS PLAN CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF SURVEY; (3) THAT THIS PLAN AND THE SURVEY IT REPRESENTS, CONFORMS TO THE REQUIREMENTS OF THE LAND SURVEYING PRACTICES ACT IN EFFECT AT THE TIME OF THE SURVEY FOR THE TYPE OF PROFESSIONAL SERVICE SO STATED.

TYPE OF PROFESSIONAL SERVICE: TOPOGRAPHIC AND PLUMB SURVEY

*Gary Hill*  
 GARY HILL, P.E.  
 05/18/2025  
 DATE

**JONES CARTER**  
 UNITED ENGINEERS, INC.  
 SURVEYED BY:  
 UNITED ENGINEERS, INC.  
 FB NO. P-6086

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

SWINGTIES  
 (SHEET 1 OF 2)

WBS NO.  
 N-T05000-0004-3  
 DRAWING SCALE  
 1" = 40' H & V  
 CITY OF HOUSTON PW  
 GARY HILL, P.E.  
 SHEET NO. 4 OF 64

**QUIDDITY**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

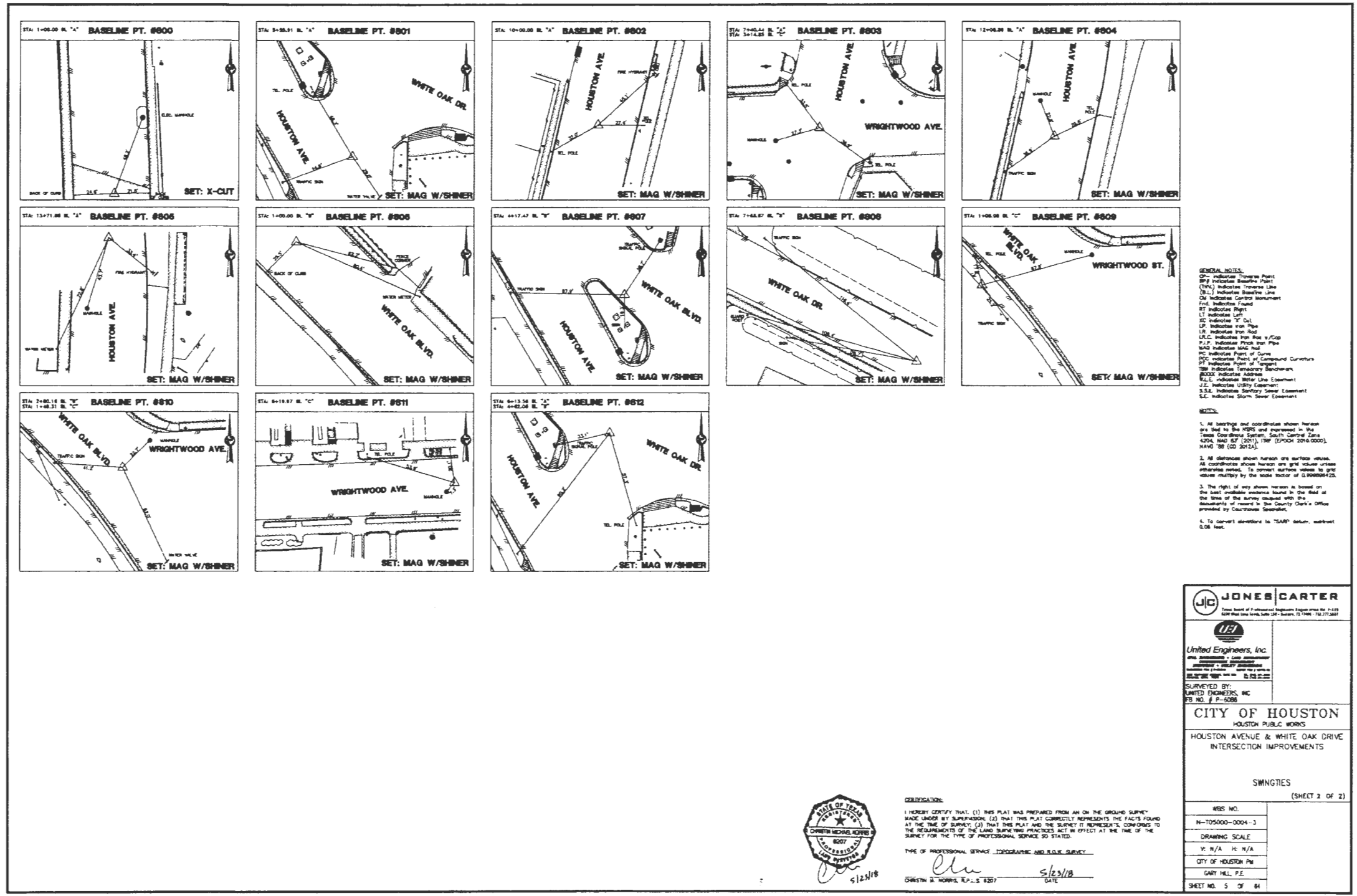
SWINGTIES

SURVEYED BY:  
 UNITED ENGINEERS, INC.  
 FB NO. P-6086

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

SWINGTIES

WBS NUMBER N-T05000-0018-7  
 SHEET NO. 4 OF 14



**GENERAL NOTES:**  
 CP - indicates Corner Point  
 BP - indicates Baseline Point  
 TP - indicates Traverse Line  
 BL - indicates Baseline Line  
 CM - indicates Control Monument  
 Fnd - indicates Found  
 RT - indicates Right  
 LT - indicates Left  
 IC - indicates 'I' Cut  
 IC - indicates 'I' Cut  
 IR - indicates Iron Rod  
 I.R.C. - indicates Iron Rod w/ Cap  
 P.P. - indicates Precast Iron Pipe  
 M&M - indicates Manhole  
 PC - indicates Point of Curve  
 CC - indicates Point of Curvature  
 PT - indicates Point of Tangent  
 BM - indicates Benchmark  
 B.M. - indicates Benchmark  
 J.L. - indicates Utility Line Easement  
 S.S.E. - indicates Sanitary Sewer Easement  
 S.E. - indicates Storm Sewer Easement

- All bearings and coordinates shown herein are tied to the NAD83 and expressed in the Texas Coordinate System, South Central Zone, 4304, MAG 83 (2011), TRIP (EPOCH 2014-2020), NAVD 88 (00 2012).
- All distances shown herein are surface values. All coordinates shown herein are grid values unless otherwise noted. To convert surface values to grid values multiply by the scale factor of 0.999999425.
- The rights of any shown herein is based on the best available evidence found in the field at the time of the survey coupled with the requirements of the Land Surveying Practices Act in effect at the time of the survey provided by Court House Specialist.
- To convert elevations to "SAMP" datum, subtract 0.06 feet.



**LEGEND:**  
 I HEREBY CERTIFY THAT: (1) THIS PLAN WAS PREPARED FROM AN ON THE GROUND SURVEY; (2) THIS PLAN CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF SURVEY; (3) THIS PLAN AND THE SURVEY IT REPRESENTS, CONFORMS TO THE REQUIREMENTS OF THE LAND SURVEYING PRACTICES ACT IN EFFECT AT THE TIME OF THE SURVEY FOR THE TYPE OF PROFESSIONAL SERVICE SO STATED.  
 TYPE OF PROFESSIONAL SERVICE: TOPOGRAPHIC AND BOUNDARY SURVEY  
 SURVEYED BY: Kristin J. Hennings  
 DATE: 5/23/18  
 GARY HILL, P.E.  
 DATE: 5/23/18

**JONES CARTER**  
 United Engineers, Inc.  
 SURVEYED BY:  
 UNITED ENGINEERS, INC.  
 FB NO. # P-6086

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

SWINGTIES  
 (SHEET 2 OF 2)

WBS NO.	N-705000-0018-7
DRAWING SCALE	AS SHOWN
CITY OF HOUSTON PW	GARY HILL, P.E.
SHEET NO. 5	OF 84



**QUIDDITY**

**STATE OF TEXAS**  
 KRISTIN J. HENNINGS  
 90169  
 LICENSED PROFESSIONAL ENGINEER  
 8/6/2025

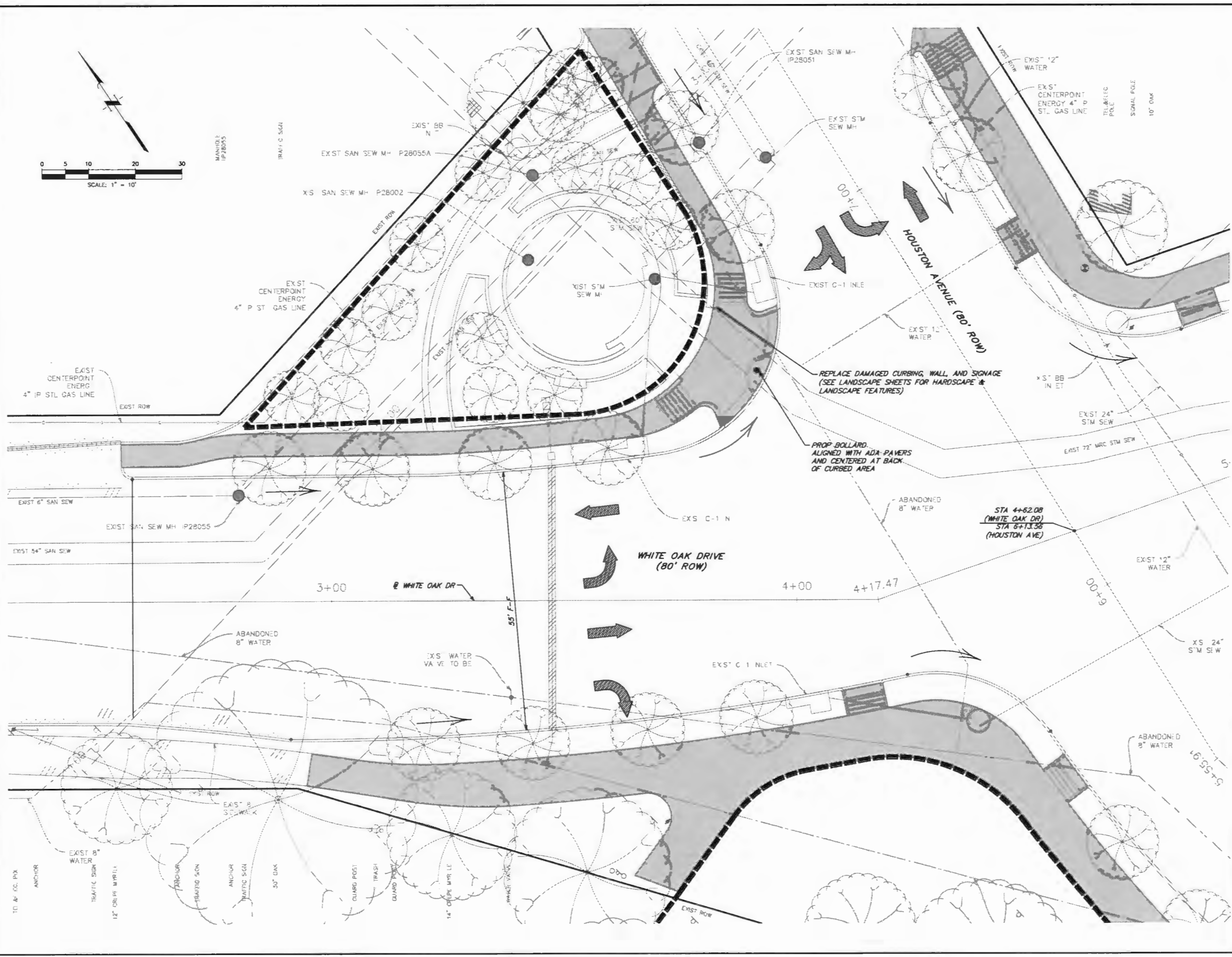
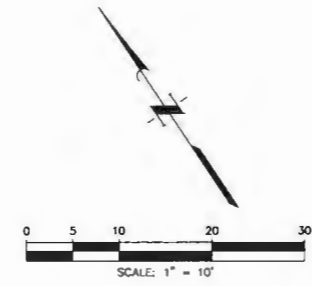
SURVEYED BY:  
 UNITED ENGINEERS, INC.  
 FB NO. P-6086

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

**SWINGTIES**

WBS NUMBER	N-705000-0018-7
SHEET NO.	5 OF 14

FILE PATH: K:\14760\14760-0002-00 MHRA WA2\2 Design Phase\CAD\Plans 2 (Wall Repair)\14760-CI-201-P&P (Wall Repair).dwg PLOTTED: 6/19/2025 8:24 AM HVF



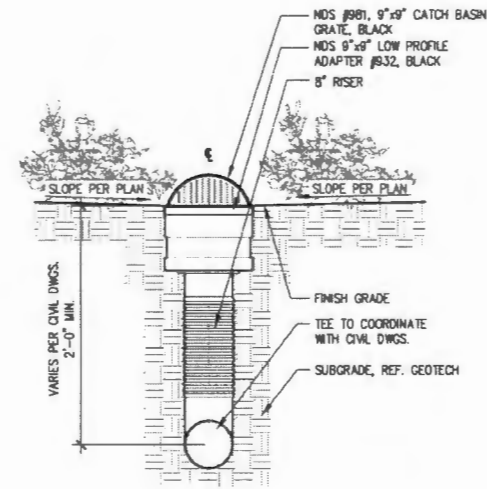
- LEGEND**
- EXISTING SIDEWALK
  - TRAFFIC DIRECTION
  - DRAINAGE DIRECTION

- GENERAL NOTES**
- A. CONTRACTOR TO ADJUST EXISTING VALVE/METER/WAULT/PULLBOX TO REMAIN TO NEW PAVING GRADE. REPLACE ALL MISSING OR DAMAGED BOXES AND COVERS.
  - B. CONTRACTOR TO ADJUST EXISTING CLEANOUTS TO GRADE. INSTALL WITH ADA APPROVED COVER.
  - C. WORK BENEATH EXISTING MATURE OAK TREES SHALL BE COMPLETED BY USING HAND TOOLS. NO LARGE EQUIPMENT OR ANY EQUIPMENT WITH TRACKS SHALL BE ALLOWED TO WORK OR DRIVE UNDER THE DRIP LINE OF THE EXISTING TREES.
  - D. CONTRACTOR TO COORDINATE WITH CITY OF HOUSTON URBAN FORESTER DALE TEMPLE AT (832)385-8458 OR DALE.TEMPLE@HOUSTON.TX.GOV PRIOR TO WORK BENEATH EXISTING MATURE OAK TREES FOR ANY ADDITIONAL TREE PROTECTION REQUIREMENTS.
  - E. CONTRACTOR TO USE CAUTION WHEN EXCAVATING AROUND EXISTING GAS LINE. GAS LINE SHOULD BE EXPOSED PRIOR TO COMMENCING WORK. ADJUSTMENTS TO WORK TO AVOID CONFLICT WITH EXISTING GAS LINE SHOULD BE COORDINATED WITH CONSTRUCTION MANAGER.
  - F. FOR DETAILS ON CURB RAMP AND CORNER CONDITIONS, SEE SHEET 14.

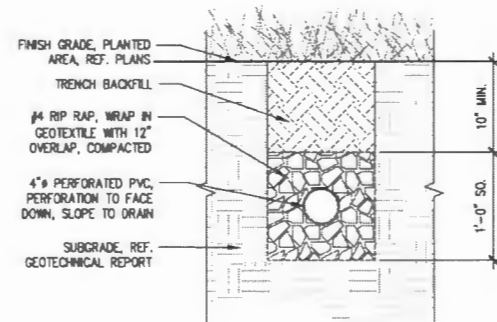
- KEYED NOTES**
- (A) PROP 5' CONCRETE SIDEWALK
  - (B) PROP 10' CONCRETE SIDEWALK
  - (C) MATCH EXISTING SIDEWALK
  - (D) PROP WHEEL CHAIR RAMP
  - (E) ASPHALTIC CONCRETE 1/2" 6" MONOLITHIC CONCRETE CURB & GUTTER
  - (F) 2" MILL & 2" MMAAC OVERLAY
  - (G) PROP 24-INCH STORM SEWER
  - (H) PROP TYPE C-1 INLET
  - (I) REMOVE EXIST INLET AND REPLACE W/ TYPE C MH
  - (J) CONNECT EXIST STORM SEWER TO EXIST/PROP MH/INLET
  - (K) ADJUST EXIST MH COVER TO FIT NEW GRADE



	SURVEYED BY: UNITED ENGINEERS, INC. FB NO. P-6086
<b>CITY OF HOUSTON</b> HOUSTON PUBLIC WORKS	
HOUSTON AVENUE & WHITE OAK DRIVE INTERSECTION IMPROVEMENTS	
<b>HOUSTON AVE AT                  WHITE OAK DRIVE</b>	
WBS NUMBER	N-T05000-0018-7
SHEET NO. 6 OF 14	



02 SECTION - AREA DRAIN IN LANDSCAPE  
1" = 1'-0"



01 SECTION - FRENCH DRAIN  
1 1/2" = 1'-0"

ARRANGE FOR...  
MOVED AL CENTERPO...  
PRIVATE...  
SLOPE PER PLAN

NA  
NA  
NA

JONES CARTER  
SURVEYED BY:  
UNITED ENGINEERS, INC.  
HOUSTON, TEXAS

CITY OF HOUSTON  
HOUSTON AVENUE & WHITE OAK DRIVE  
INTERSECTION IMPROVEMENTS

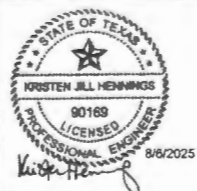
LANDSCAPE DRAINAGE DETAILS

**swa**  
1245 West 18th Street  
Houston, Texas  
77008-3342  
United States  
www.swagroup.com  
+1.713.868.1878

WBS NUMBER	N-T05000-0018-7
DATE	AS NOTED
BY	GARY HILL
CHECKED	GARY HILL



**QUIDDITY**  
SURVEYED BY:  
UNITED ENGINEERS, INC.  
FB NO. P-6086



**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

HOUSTON AVENUE & WHITE OAK DRIVE  
INTERSECTION IMPROVEMENTS

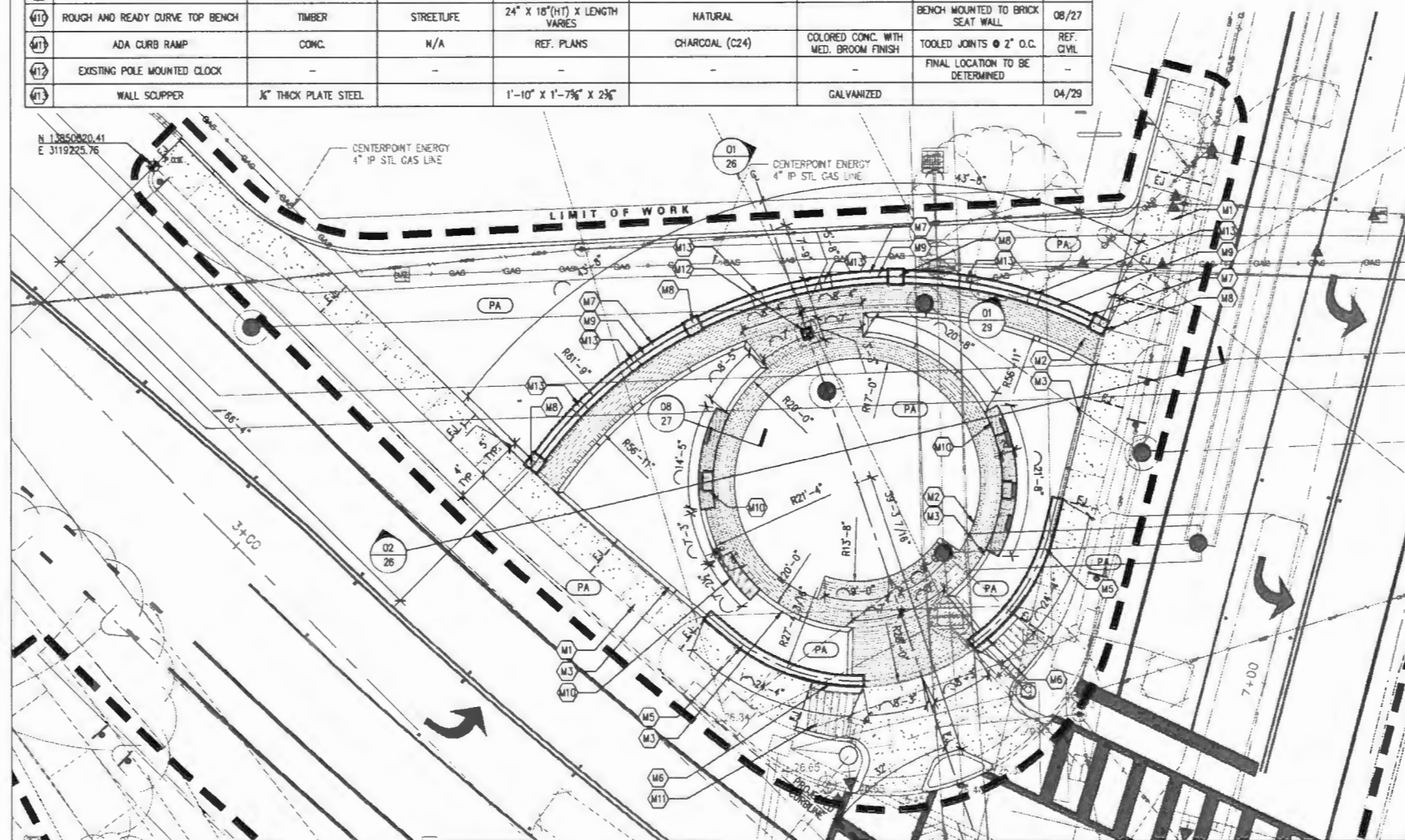
**LANDSCAPE DRAINAGE DETAILS**

P:\JAC\JCS701 Houston @ White Oak Inter4 Drawings\Graphics\AutoCAD\Sheets\4 LAYOUT & MATERIALS\25 LANDSCAPE MATERIALS PLAN.dwg | A PASTE (ANSI D (22.00 X 34.00 INCHES)) | 6/23/2018

MATERIALS SCHEDULE								
KEY	DESCRIPTION	MATERIAL	SUPPLIER	SIZE	COLOR	FINISH	REMARK	DETAIL
M1	CONC. PAVING	CONCRETE	N/A	VARIABLE	NATURAL GREY	MED. BROOM FINISH	REF. PLANS FOR WIDTH	REF. CIVIL
M2	CLAY BRICK PAVERS	CLAY BRICK	UPCHURCH KIMBROUGH	3 5/8" X 2 1/2" X 7 5/8"	OLD WILLIAMSBURG	SMOOTH TUMBLED	MORTARED ON CONC. SUB BASE WITH TYPE N MORTAR, BUTT JOINTED	02/27
M3	LANDSCAPE CURBING	CONCRETE	N/A	8" X 4" (HT) X LENGTH VARIES	NATURAL GREY	LIGHT SANDBLAST	INSTALL WITH STANDARD JOINTS	07/27
M4	NOT IN USE							
M5	ENTRY WALL	BRICK WALL W/ CAST STONE CAP & RECESSED PANEL FOR TILE	N/A	24" X 24" - 4" X 30" (HT)	OLD WILLIAMSBURG BRICK VENEER BY KANSAS BRICK & TILE COMPANY. BEIGE CAST STONE CAP.	SMOOTH TUMBLED BRICK	TYPE N MORTAR	01/28
M6	TILE SIGN INSERT	CERAMIC	CROWLEY SIGNS AND GRAPHICS	1" X 1" TILE	BLUE AND WHITE		TILE SELECTED TO MATCH EXISTING SIGN	01/28
M7	FENCE WALL	BRICK WALL W/ CAST STONE CAP	UPCHURCH KIMBROUGH	16" X 12" (HT)	OLD WILLIAMSBURG BRICK VENEER BY KANSAS BRICK & TILE COMPANY. BEIGE CAST STONE CAP.	SMOOTH TUMBLED BRICK	TYPE N MORTAR	01/29
M8	FENCE COLUMN	BRICK COLUMN W/ CAST STONE CAP	N/A	24" X 24" COLUMN W/ 28" X 28" CAP	OLD WILLIAMSBURG BRICK VENEER BY KANSAS BRICK & TILE COMPANY. BEIGE CAST STONE CAP.	SMOOTH TUMBLED BRICK	TYPE N MORTAR	01/29
M9	FENCE	WROUGHT IRON	N/A	30" HT.	BLACK	PAINTED		03/29
M10	ROUGH AND READY CURVE TOP BENCH	TIMBER	STREETLIFE	24" X 18" (HT) X LENGTH VARIES	NATURAL		BENCH MOUNTED TO BRICK SEAT WALL	08/27
M11	ADA CURB RAMP	CONC.	N/A	REF. PLANS	CHARCOAL (C24)	COLOR CONC. WITH MED. BROOM FINISH	TOOLED JOINTS @ 2' O.C.	REF. CIVIL
M12	EXISTING POLE MOUNTED CLOCK						FINAL LOCATION TO BE DETERMINED	
M13	WALL SCUPPER	1/2" THICK PLATE STEEL		1'-10" X 1'-7 1/2" X 2 1/2"		GALVANIZED		04/29

- MATERIALS NOTES:**
- MEASURE PERPENDICULAR OFF OF DIMENSIONING SURFACE. DIMENSIONS ARE FROM BACK OF CURB UNLESS OTHERWISE NOTED.
  - EDGE OF CONCRETE WALK SHALL BE OUTSIDE TREE DRIP LINE UNLESS OTHERWISE NOTED.
  - TYPICAL 2% MAXIMUM CROSS SLOPE ON WALKS TO DRAIN TOWARD ROAD, MAXIMUM 4.9% LONGITUDINAL SLOPE.
  - MATCH NEW WALKS TO EXISTING WALKS OR TRAIL WIDTHS.
  - CONTRACTOR SHALL GRADE PER PROPOSED GRADING.
- R.O.W. LINE  
 --- MATCHLINE  
 --- LIMIT OF WORK

FURNITURE ACCESSORIES		
SYMBOL	QTY	DESCRIPTION
	6	ROUGH & READY BENCH BACK
	5	ROUGH & READY BENCH ARMREST



TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT AT 713-207-2222.

**PRIVATE UTILITY LINES SHOWN**  
 FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS VERIFICATION DOES NOT FULFILL YOUR OBLIGATION TO CALL 811.

CenterPoint Energy/Natural Gas Facilities Verification ONLY  
 This signature verifies that you have shown CPE National Gas Base coverage. Not to be used for conflict verification. This service does not show. Signature valid for six months.

Date: 5-29-18

Approved for AT&T Texas SWBT underground conduit facilities ONLY  
 Signature valid for one year.

CenterPoint Energy/Underground Electrical Facilities Verification ONLY  
 This signature verifies existing underground facilities. Not to be used for conflict verification. Signature valid for six months.

Date: 5-24-18



**CITY OF HOUSTON**  
 HOUSTON AVENUE & WHITE OAK DRIVE INTERSECTION IMPROVEMENTS

LANDSCAPE MATERIALS PLAN

**swa**  
 1245 West 18th Street  
 Houston, Texas  
 77008-3342  
 United States  
 www.swagroup.com  
 +1.713.866.1878

DATE PLOTTED	6/19/2025
DWG NO.	05000 0004
DRAWING SCALE	1/2" = 1'-0"
DATE OF 1/4" SCALE PLAN	04/29/25
DATE	
NO.	0

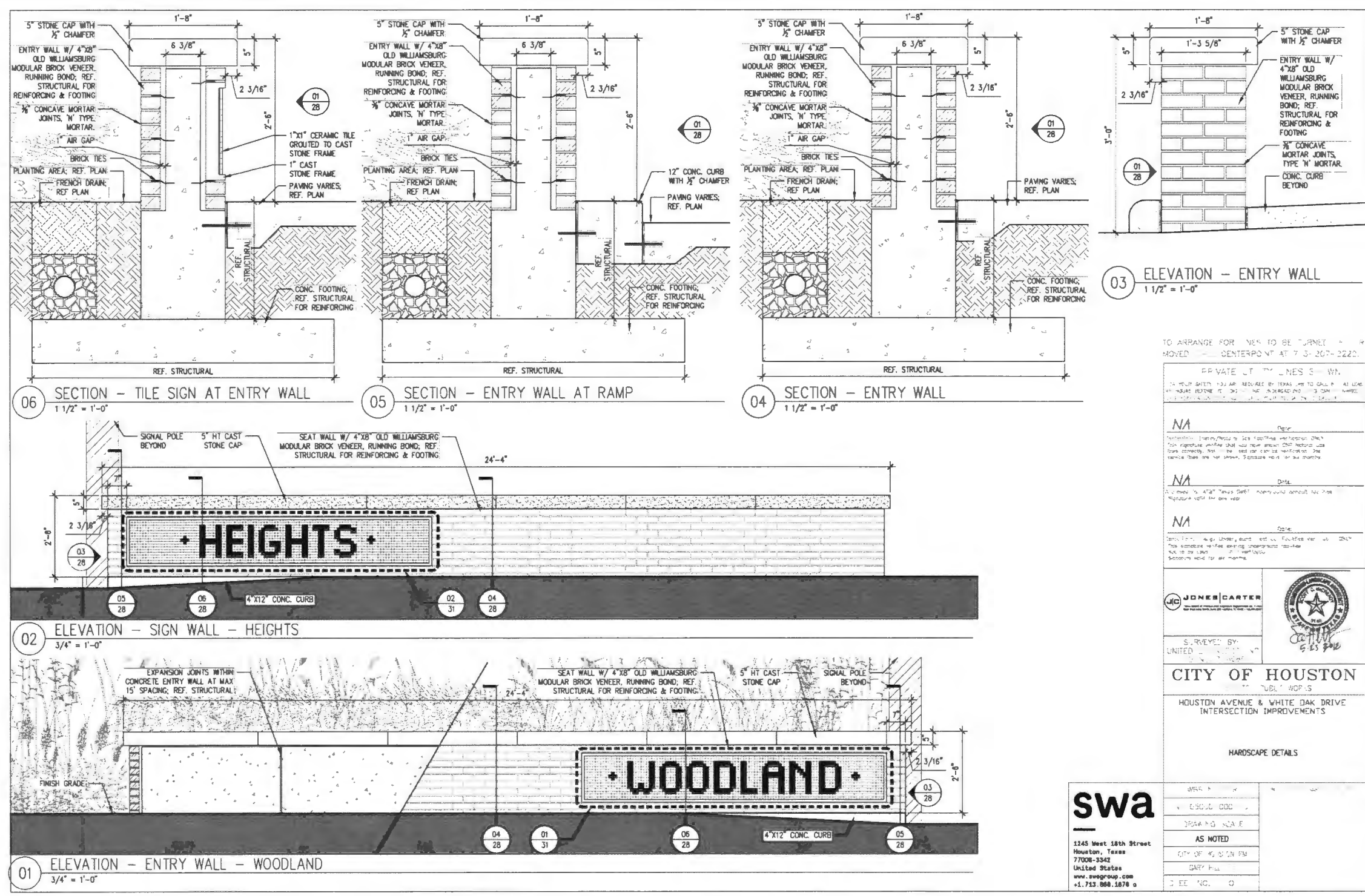


SURVEYED BY: UNITED ENGINEERS, INC. FB NO. P-6086	
<b>CITY OF HOUSTON</b> HOUSTON PUBLIC WORKS	
HOUSTON AVENUE & WHITE OAK DRIVE INTERSECTION IMPROVEMENTS	
LANDSCAPE MATERIALS PLAN	
WBS NUMBER	N-T05000-0018-7
SHEET NO. 8 OF 14	



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P:\JAC\14760\14760-0002-00 MHRA WA2\2 Design Phase\CAD\Plans 2 (Wall Repair)\14760-CI-201-P&P (Wall Repair).dwg PLOTTED: 6/19/2025 8:24 AM HVF



TO ARRANGE FOR NEA TO BE TURNED  
MOVED - CENTERPOINT AT 7-3-2024-2220

PRIVATE UTILITY LINES - W.N.  
THESE UTILITIES ARE LOCATED BY THE CITY OF HOUSTON AND ARE NOT TO BE MOVED OR ALTERED WITHOUT THE CITY'S PERMISSION. ANY WORK TO BE DONE TO THESE UTILITIES MUST BE APPROVED BY THE CITY OF HOUSTON.

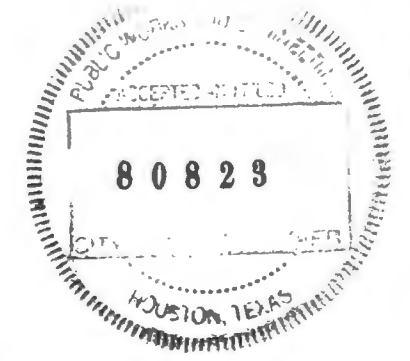
NO  
NO  
NO

CITY OF HOUSTON  
HOUSTON AVENUE & WHITE OAK DRIVE  
INTERSECTION IMPROVEMENTS

HARDSCAPE DETAILS

swa  
1245 West 18th Street  
Houston, Texas  
77008-3342  
United States  
www.swagroup.com  
+1.713.880.1870

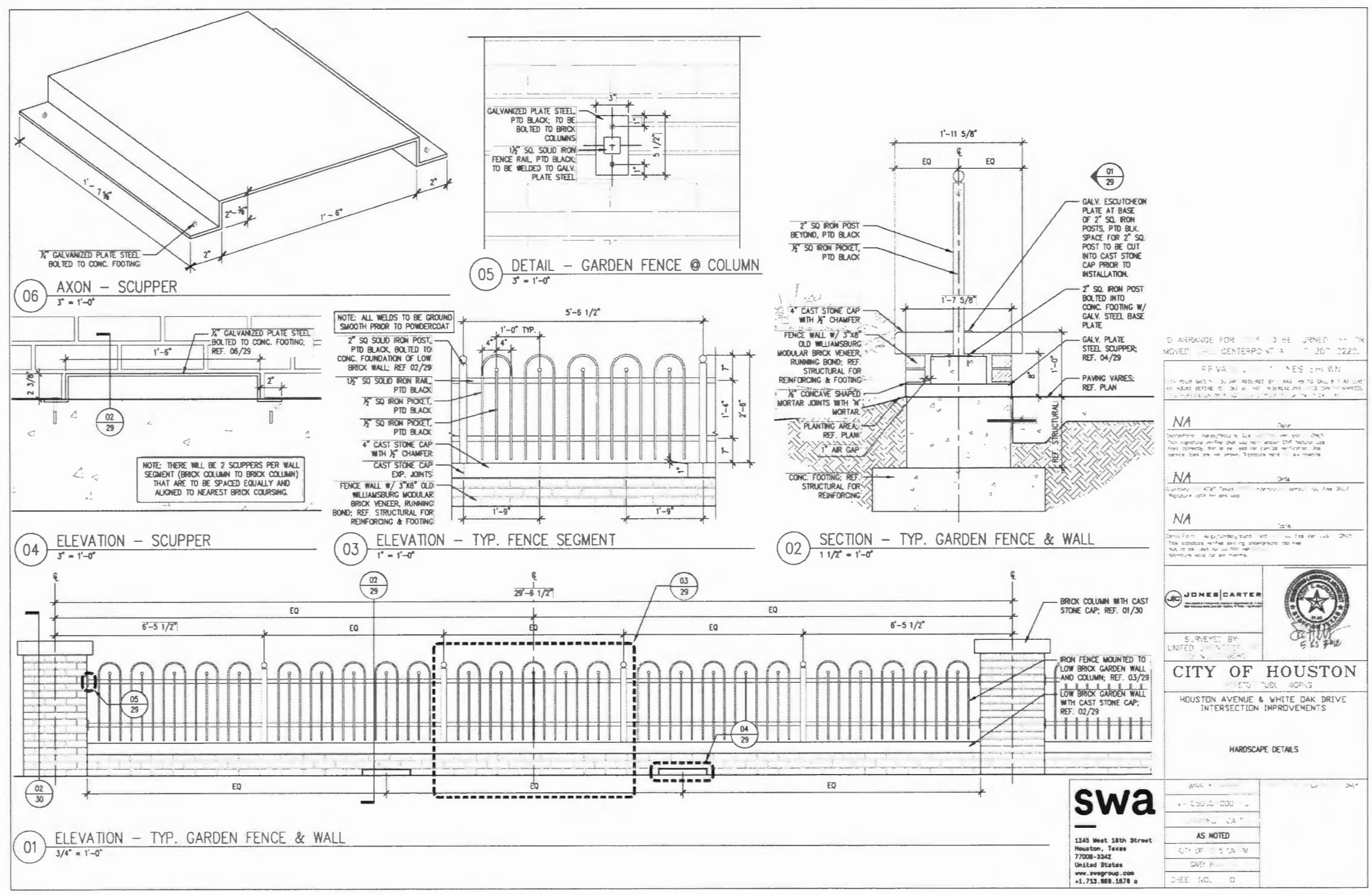
DATE	
BY	ESD/J. ODD
DRAWN	NO. E
AS NOTED	
CITY OF HOUSTON PM	
CITY PM	
DATE	
BY	



SURVEYED BY: UNITED ENGINEERS, INC. FB NO. P-6086	
<b>CITY OF HOUSTON</b> HOUSTON PUBLIC WORKS	
HOUSTON AVENUE & WHITE OAK DRIVE INTERSECTION IMPROVEMENTS	
<b>HARDSCAPE DETAILS</b>	
WBS NUMBER	N-T05000-0018-7
SHEET NO. 10 OF 14	

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P:\JAC\JAC6701 Houston @ White Oak Inter4 Drawings\Graphics\AutoCAD\Sheets\15 SITE DETAILS\29 HARDSCAPE DETAILS.dwg | APATE | ANSI D (22.00 X 34.00 INCHES) | 6/23/2018



ARRANGE FOR THIS TO BE JOINED TO THE  
 MOVED TO CENTERPOINT A 7 20" 2220.

REV. 01/25/25  
 01/25/25  
 01/25/25

NA

NA

NA

JONES & CARTER

SURVEYED BY:  
 UNITED ENGINEERS, INC.  
 FB NO. P-6086

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

HARDSCAPE DETAILS

DATE: 6/19/2025

AS NOTED

CITY OF HOUSTON

DATE: 6/19/2025

SHEET NO. 0



**QUIDDITY**

**STATE OF TEXAS**  
 KRISTEN JILL HENNINGSON  
 90189  
 LICENSED PROFESSIONAL ENGINEER  
 8/8/2025

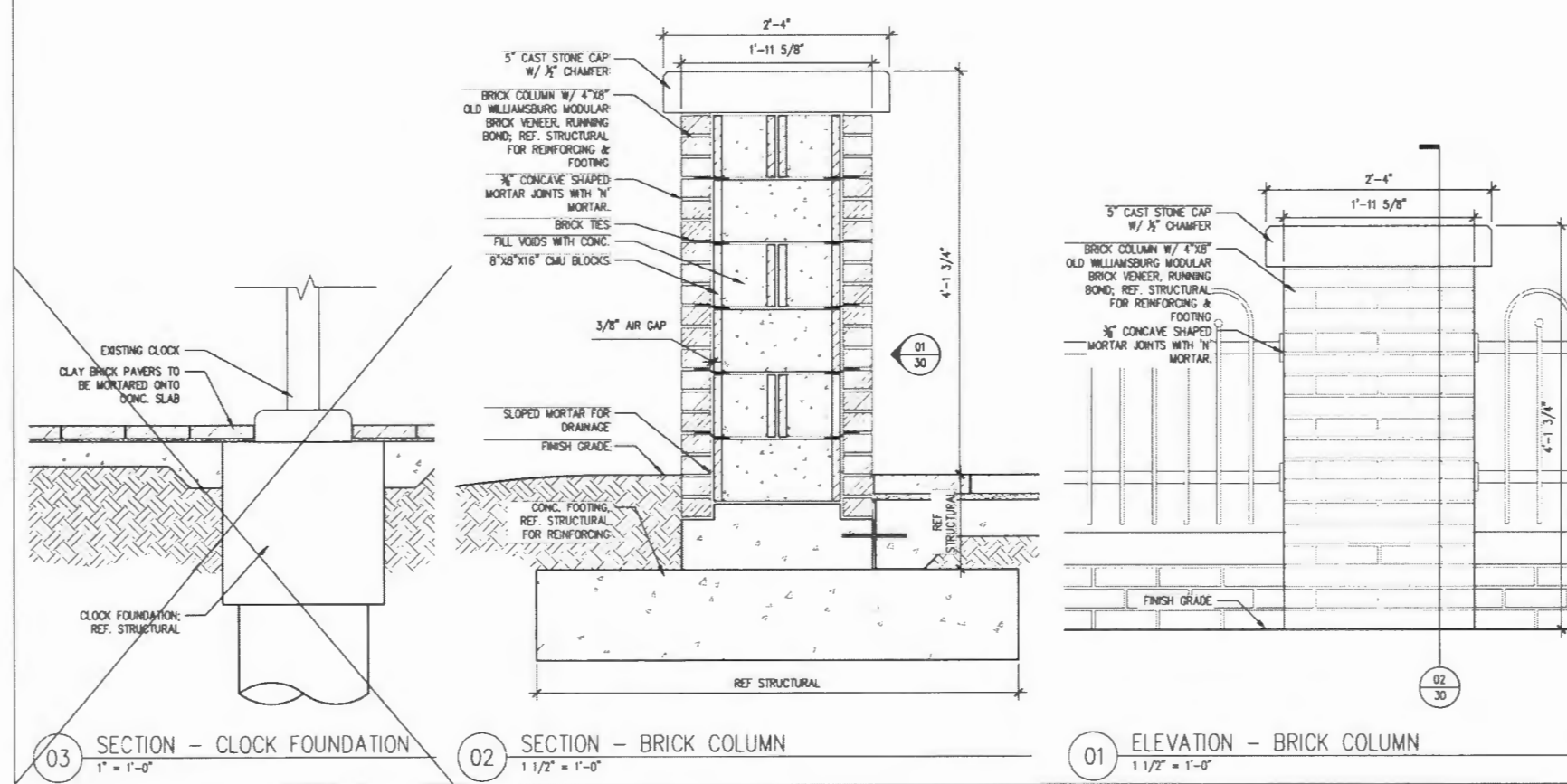
SURVEYED BY:  
 UNITED ENGINEERS, INC.  
 FB NO. P-6086

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
 HOUSTON AVENUE & WHITE OAK DRIVE  
 INTERSECTION IMPROVEMENTS

HARDSCAPE DETAILS

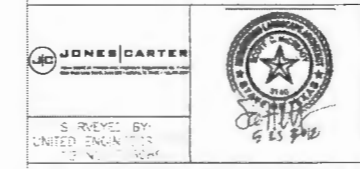
WBS NUMBER: N-T05000-0018-7

SHEET NO. 11 OF 14



ARRANGE FOR...  
MOVED TO CENTERPOINT 4 11 20 2220

PRIVATE...  
FOR YOUR SAFETY...  
PROFESSIONAL ENGINEER/ARCHITECT...  
NA  
NA  
NA



**CITY OF HOUSTON**  
HOUSTON AVENUE & WHITE OAK DRIVE INTERSECTION IMPROVEMENTS

**HARDSCAPE DETAILS**

**swa**  
1245 West 18th Street  
Houston, Texas  
77008-3342  
United States  
www.swagroup.com  
+1.753.868.1878

DATE	6/19/2025
BY	JAC
DESCRIPTION	AS NOTED
CITY OF HOUSTON	
DATE	
NO.	0



**QUIDDITY**

**STATE OF TEXAS**  
KIRSTEN JILL HENNING  
90189  
PROFESSIONAL ENGINEER  
8/8/2025

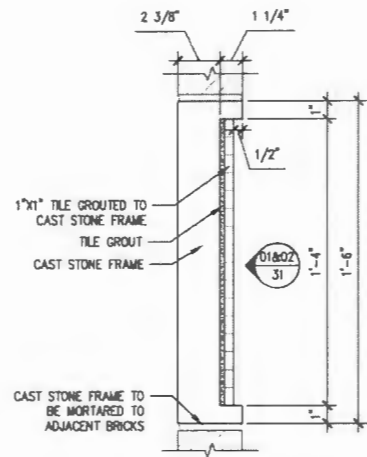
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**UNITED ENGINEERS, INC.**  
FB NO. P-6086

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

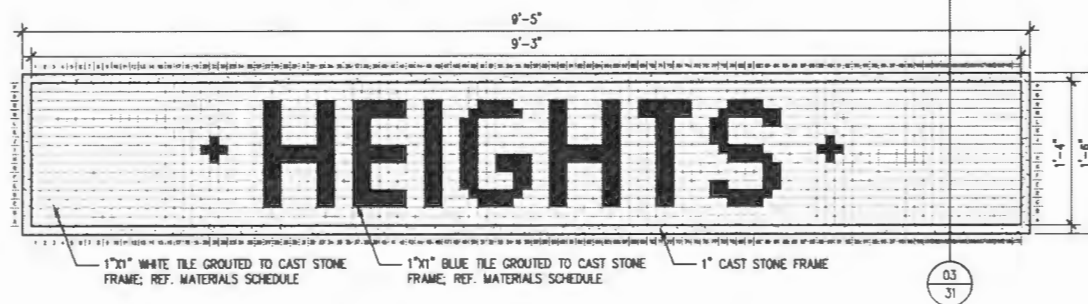
**HOUSTON AVENUE & WHITE OAK DRIVE INTERSECTION IMPROVEMENTS**

**HARDSCAPE DETAILS**

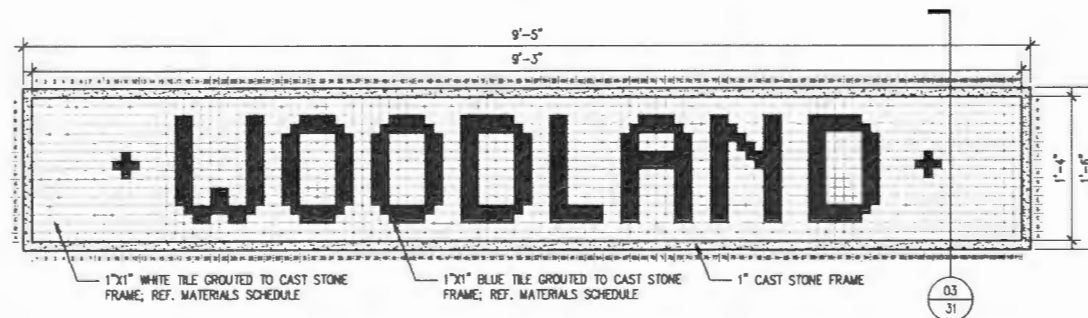
WBS NUMBER: N-T05000-0018-7  
SHEET NO. 12 OF 14



03 SECTION - CAST STONE SIGN FRAME  
3" = 1'-0"



02 DETAIL - TILE SIGN - HEIGHTS  
1 1/2" = 1'-0"



01 DETAIL - TILE SIGN - WOODLAND  
1 1/2" = 1'-0"

0 ARRANGE FOR NES TO BE TURNED  
MOVED, TAIL CENTERPOINT A T L 207 0222

PRIVATE UT LINES & OWN  
ON YOUR SHEET, YOU ARE REQUIRED BY TEXAS LAW TO CALL AT LEAST  
48 HOURS BEFORE YOU DO NOT WORKING AND THIS CAN BE WAIVED  
BY A SUPERVISOR WITH THE SIGNATURE OF THE OWNER.

NA  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Approved: "AT&T Texas Self" (Name) (Title) (Date)  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

NA  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Approved: "AT&T Texas Self" (Name) (Title) (Date)  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

NA  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Approved: "AT&T Texas Self" (Name) (Title) (Date)  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

JONES CARTER  
SURVEYED BY:  
UNITED ENGINEERS, INC.  
12, 101, 100005

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS  
HOUSTON AVENUE & WHITE OAK DRIVE  
INTERSECTION IMPROVEMENTS

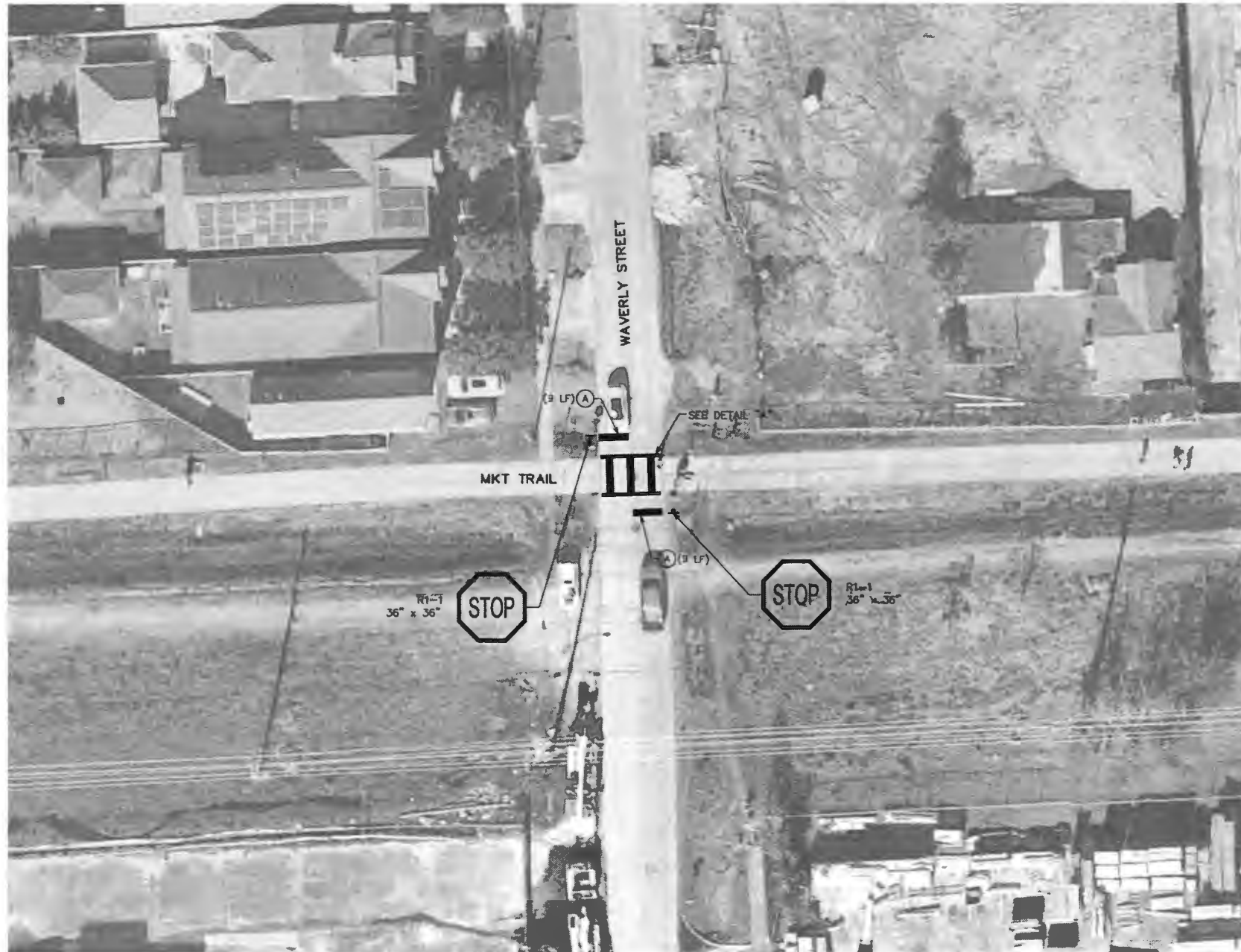
HARDSCAPE DETAILS

**swa**  
1245 West 18th Street  
Houston, Texas  
77008-3342  
United States  
www.swagroup.com  
+1.753.868.5878

WBS NUMBER	N-T05000-0018-7
PROJECT NUMBER	05000-0004-3
SCALE	AS NOTED
DATE OF HOUSTON PM	GARY HILL & E
DRAWING NO.	0



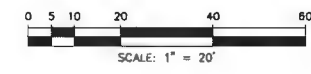
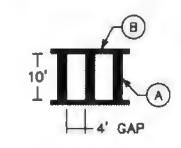
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<b>CITY OF HOUSTON</b> HOUSTON PUBLIC WORKS	
HOUSTON AVENUE & WHITE OAK DRIVE INTERSECTION IMPROVEMENTS	
<b>HARDSCAPE DETAILS</b>	
WBS NUMBER	N-T05000-0018-7
SHEET NO. 13 OF 14	



LEGEND

- (A) WS24
- (B) WS12

DETAIL "A"



--	--

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**MKT AT WAVERLY STREET**  
INTERSECTION IMPROVEMENTS

**SIGNING AND PAVEMENT MARKING LAYOUT**

WBS NUMBER	N-T05000-0018-7
SHEET NO. <b>14</b> OF <b>14</b>	