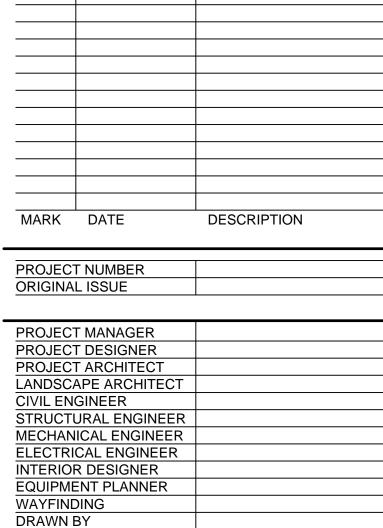
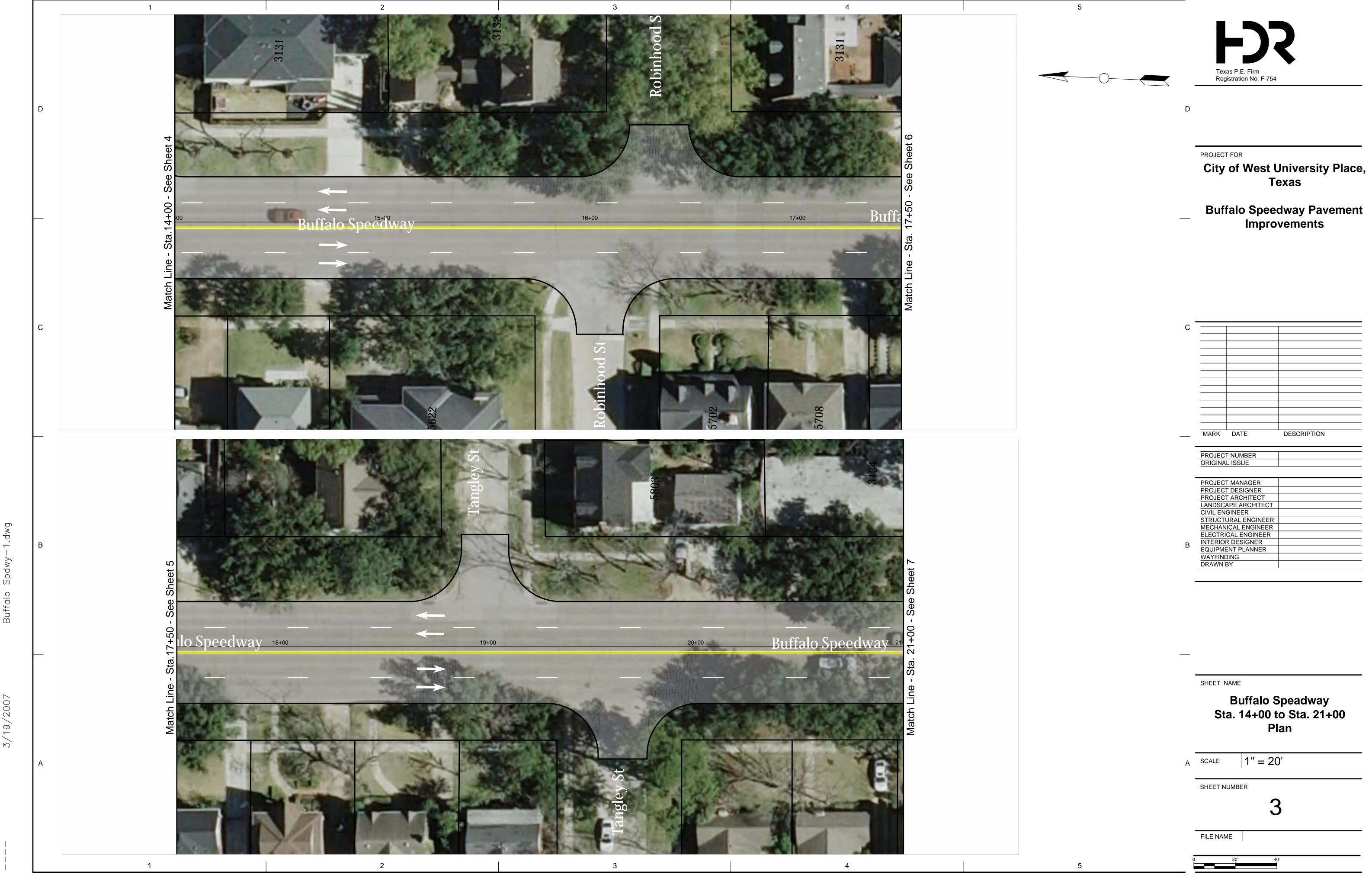
City of West University Place,

Buffalo Speedway Pavement Improvements

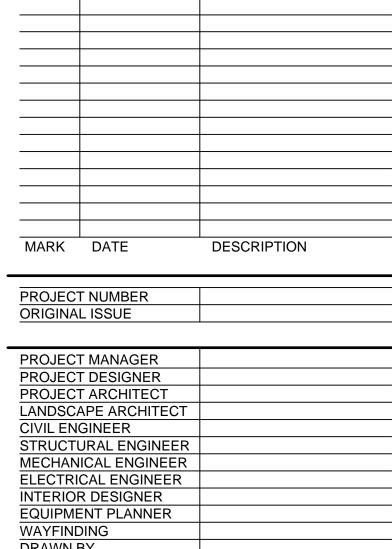


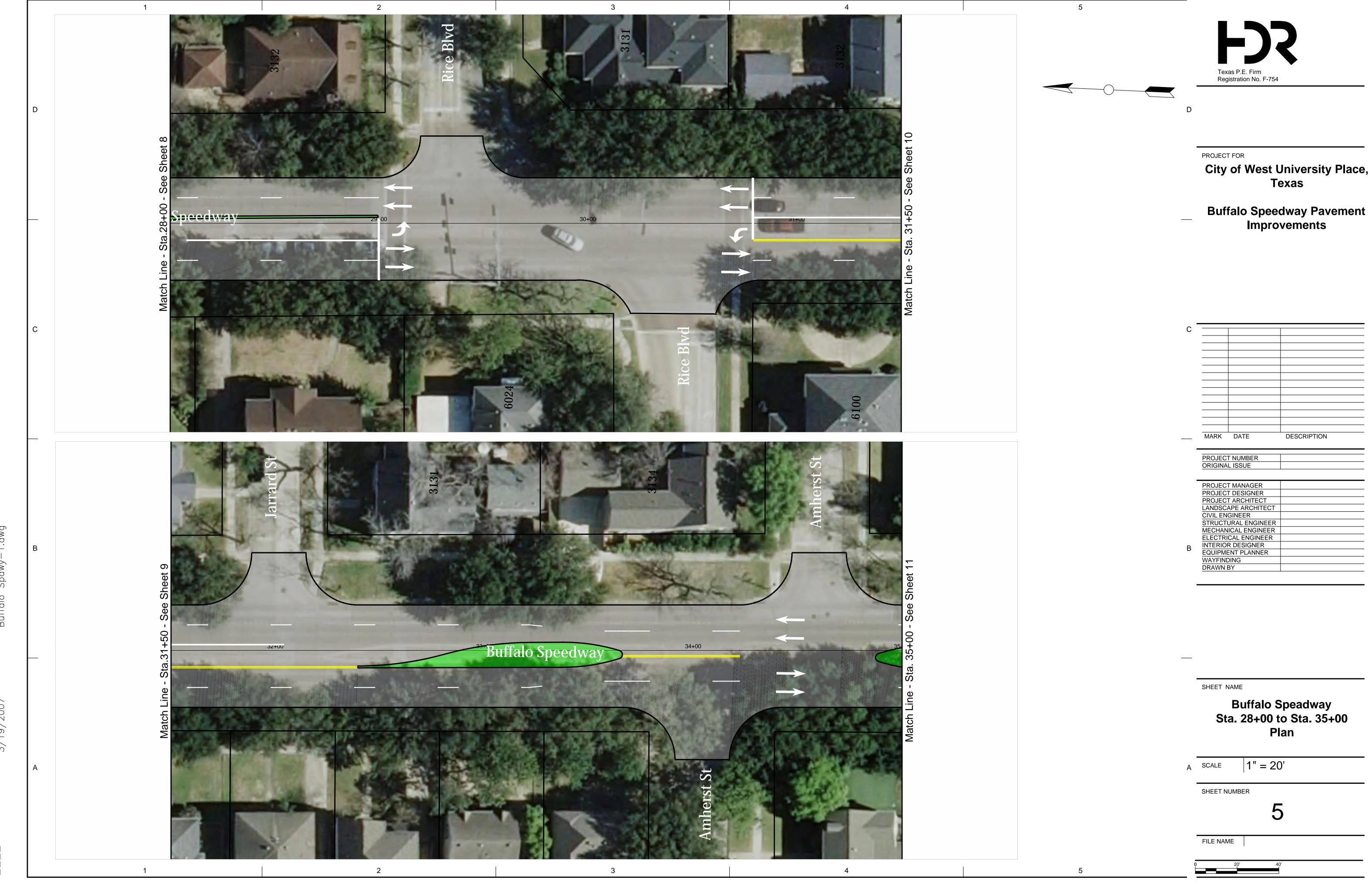
Buffalo Speadway Sta. 0+00 to Sta. 7+00 Plan



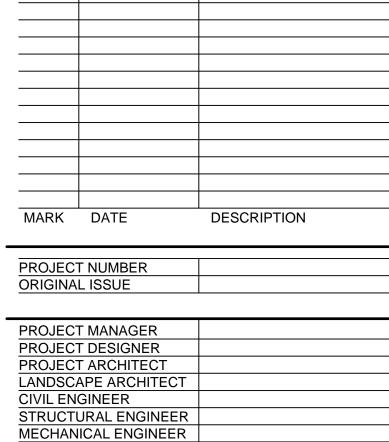


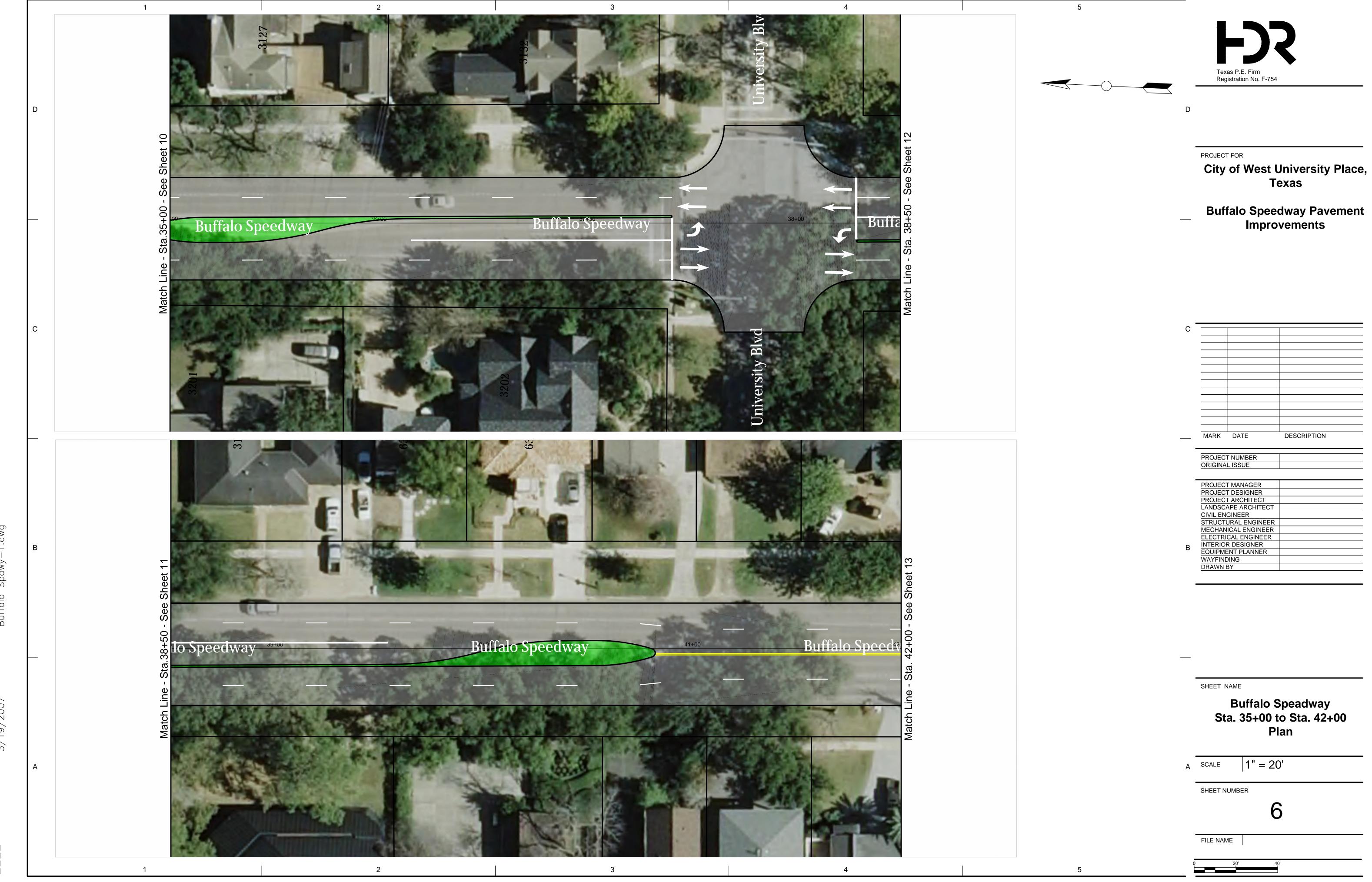
Buffalo Speedway Pavement





City of West University Place,





Buffalo Spdwy-1,dwa

7/19/2007





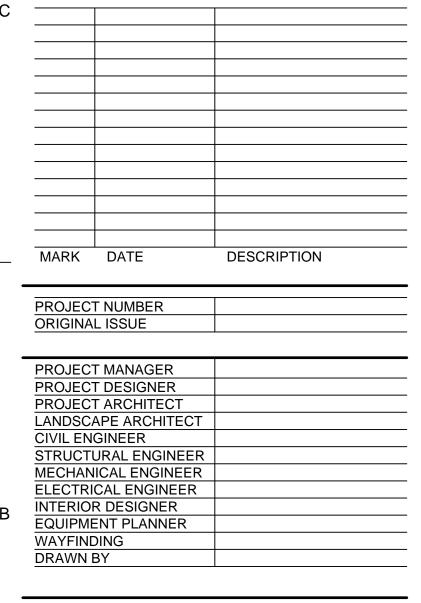




PROJECT FOR

City of West University Place, Texas

Buffalo Speedway Pavement Improvements



SHEET NAME

Buffalo Speadway Sta. 63+00 to Sta. 70+00 Plan

A SCALE 1" = 20'

SHEET NUMBER

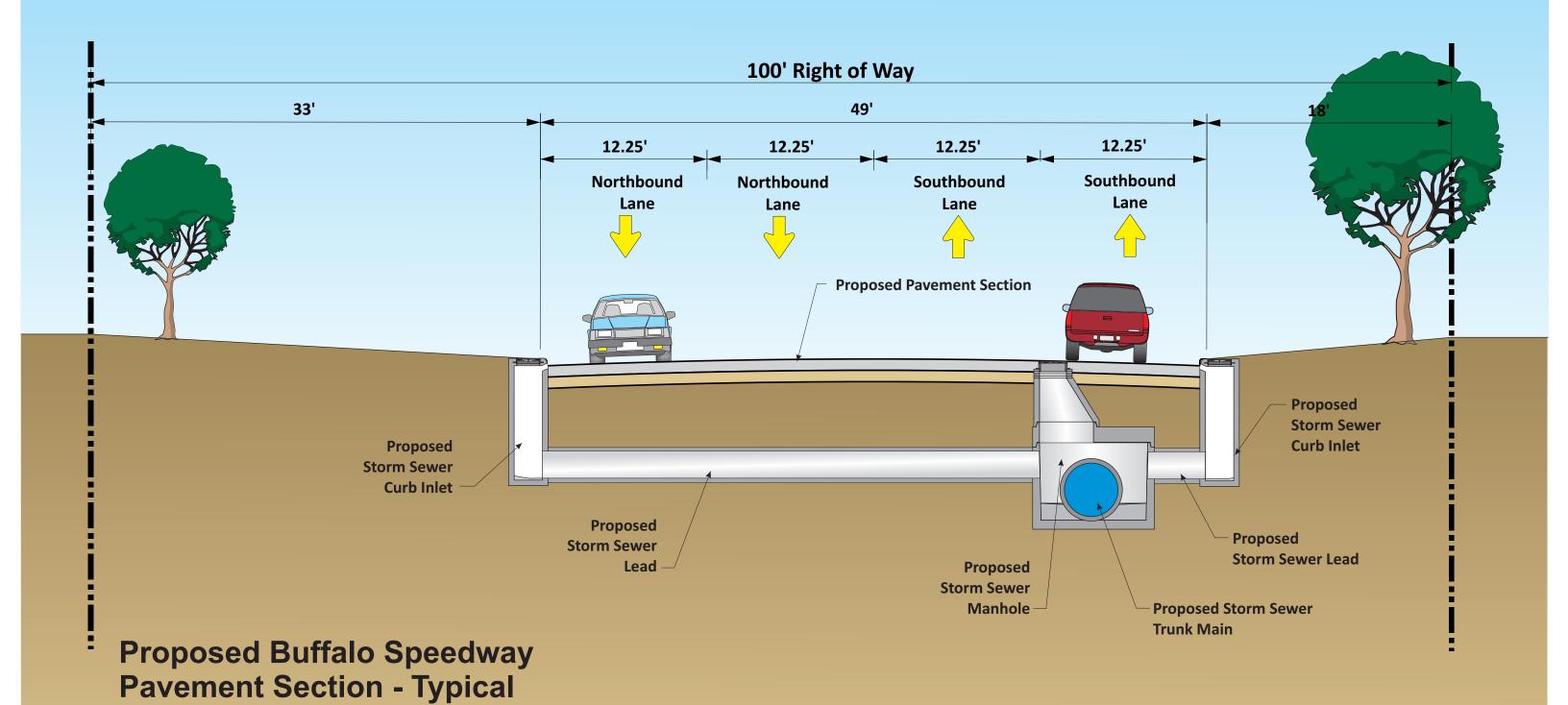
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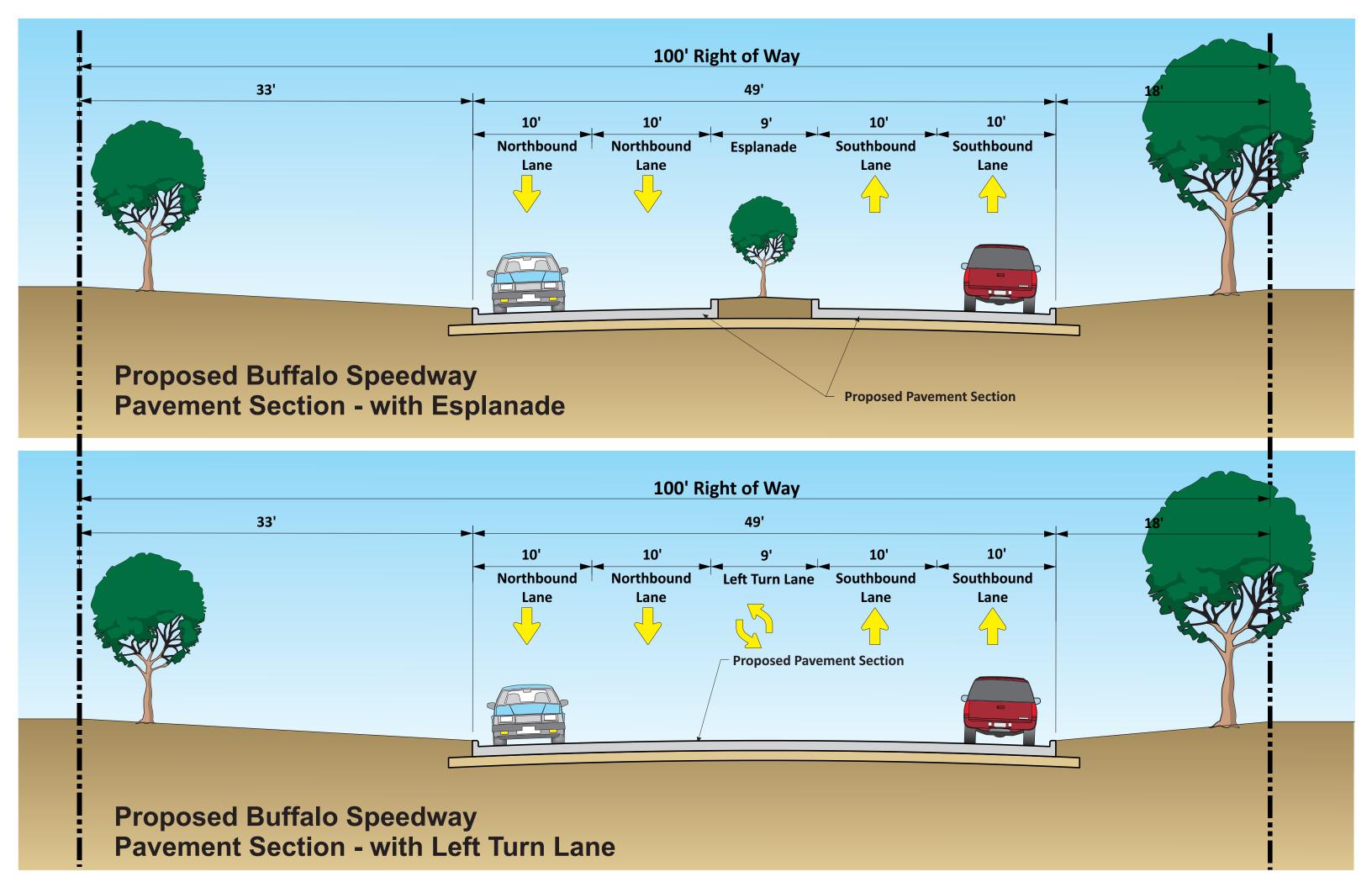
FILE NAME

Buffalo Spdwy-1.dwg

3/19/20

| | |





PRELIMINARY PAVEMENT ASSESSMENT

for

THE CITY OF WEST UNIVERSITY PLACE TEXAS

BUFFALO SPEEDWAY



May, 2010

Prepared by:

/

STEPHEN RATCLIF

CLAUNCH & MILLER
Engineering Consultants

HDR|Claunch & Miller Engineering Consultants 4635 SW Freeway, Suite 1000 Houston, Texas 77027

HDR Engineering Inc. Texas Reg. No. 754



May 19, 2010

Mr. Patrick Walters City of West University Place 3826 Amherst West University Place, TX 77005

Mr. Walters,

Re: Buffalo Speedway Pavement Assessment Report

The City of West University Place (West U) (City) requested HDR|Claunch & Miller (HDR|C&M) to provide a preliminary pavement assessment for Buffalo Speedway from Holcombe Blvd (Bellaire Blvd) to Bissonnet Street. It is understood that the intent of this assessment is to provide West U with a budgetary cost estimate for potential repairs for inclusion into the City's budget.

HDR | C&M walked the length of Buffalo Speedway on both sides making a cursory, visual inspection of the road surface to make a preliminary assessment of potential repairs. Photographs were taken of the various repair locations, which were identified on Right of Way maps. Sheets 1 to 5 attached to this letter report indicate 42 locations where repairs may be desirable. Photographs of the various locations have been inserted onto the maps. Larger copies of the same photographs labeled with the appropriate location are also included in this report.

It was noted that there are numerous cracks in the road surface, too many to accurately document individually in this preliminary assessment. Many of the cracks are small or hairline which can be repaired by sealing with a tar based sealant to prevent the ingress of moisture. For the purposes of cost estimating we have included a nominal linear footage of sealant. Some of the roadway expansion joints also require cleaning out and replacing. As with the crack sealing we have included a nominal linear footage of joint replacement in the cost estimate.

It was also noted that there is apparent evidence that the roadway may have sunken in some locations since at some of the joints the pavement panel is about one inch lower than its adjacent panel. The observed locations of these "sunken joints" are noted on the maps and a nominal linear footage for slab jacking is included in the cost estimate.

Throughout the length of Buffalo Speedway there are numerous incidents of pavement "spawling" at joints, some more extensive than others. This report identifies the more extensive incidents which are included as a potential repair location on the maps.

Our preliminary recommendations include replacement of some pavement panels at various locations. These were assessed based on the number of cracks in the pavement, the size of the cracks, whether they appeared to be new or old cracks and other factors. Some of these may be considered by the City to be repairable with sealant but for the purposes of presenting a preliminary budget for repairs these have been included in the cost estimate as pavement panel replacement. Prior to performing repairs it is recommended that a more detailed inspection than that performed for this report be carried out.

The repair locations are tabulated below documenting the location, condition and suggested repair method. The repairs are quantified and included in the cost estimate also included as part of this report.

Repair Location Schedule

Location No.	Description	Recommendation for repair		
1	Sunken joint, cracks	Replace ¼ panels – 150 LF		
2	Spawling	Clean & repair with high strength grout		
3	Large Cracks	Replace ¼ panels – 40 LF		
4	Spawling	Clean & repair with high strength grout		
5	Multiple cracks	Replace ¼ panel – 20 LF		
6	Multiple cracks	Replace ¼ panel – 30 LF		
7	Sunken joint, cracks	Replace ¼ panels – 70 LF		
8	Spawling	Clean & repair with high strength grout		
9	Spawling	Clean & repair with high strength grout		
10	Large cracks	Replace ¼ panel – 25 LF		
11	Spawling	Clean & repair with high strength grout		
12	Large crack (previously sealed)	Replace ¼ panels – 60 LF		
13	Storm inlet damage	Repair/Replace Inlet		
14	Multiple cracks	Replace ¼ panel – 20 LF		
15	Spawling at patch	Clean & repair with high strength grout		
16	Spawling at patch	Clean & repair with high strength grout		
17	Spawling & cracking	Replace ½ panel – 10 LF		
18	Sunken pavers @ crosswalk	Re-bed pavers		
19	Large cracks	Replace ¼ panel – 20 LF		
20	Multiple cracks	Replace ¼ panel – 20 LF		
21	Multiple cracks	Replace ¼ panels – 60 LF		
22 .	Spawling on old & new pavement	Clean & repair with high strength grout		
23	Storm inlet sunk & spawling	Replace inlet & repair spawling		
24	Cracks	Replace ¼ panels – 40 LF		
25	Large cracks	Replace ¼ panels – 40 LF, ½ panel 20 LF		
26	Three cracked panels	Replace center ¼ panels – 70 LF		
27	Spawling	Clean & repair with high strength grout		
28	Multiple cracks	Replace ¼ panel – 25 LF		
29	Cracked panels	Replace center ¼ panels – 70 LF		
30	Cracks in panel adjacent to inlet	Replace ¼ panel – 25 LF		
31	Multiple cracks	Replace ¼ panels – 45 LF		
32	Multiple cracks	Replace ¼ panel – 25 LF		

Location No.	Description	Recommendation for repair			
33	Cracked panel @ inlet	Replace ¼ panel – 25 LF			
34	Multiple cracks				
35	Cracks	Replace center 1/4 panels - 60 LF			
36	Cracks	Replace ¼ panel – 10 LF			
37	Multiple cracks	Replace ¼ panel – 20 LF			
38	Two cracked panels	Replace ¼ panels – 60 LF			
39	Two cracked panels	Replace ¼ panels – 60 LF			
40	Large crack	Replace ¼ panel – 20 LF			
41	Multiple cracks	Replace ¼ panels – 70 LF			
42	Large crack in multiple panels	Replace ¼ panels – 150 LF			

- Linear footage (LF) is approximate only
- 1/4 panel refers to single traffic lane (approx. 12 ft wide)
- ½ panel refers to double traffic lane (approx 24 ft wide)

A preliminary cost estimate has been prepared for the total project cost including construction and engineering. This cost may be higher or lower depending upon the final scope of the project and the extent of repair/replacement desired by the City. We have estimated that the total project cost, based on the information known at this time and the cursory inspection performed, will be approximately \$550,750. A breakdown of the costs is included as part of this letter report.

I trust that this report will meet you immediate needs, but should you require additional information or any adjustments please do not hesitate to contact me.

Sincerely,

HDR | Claunch & Miller

(HDR Engineering Inc. Texas Reg. No. 754)

Stephen Ratcliffe, P.E.

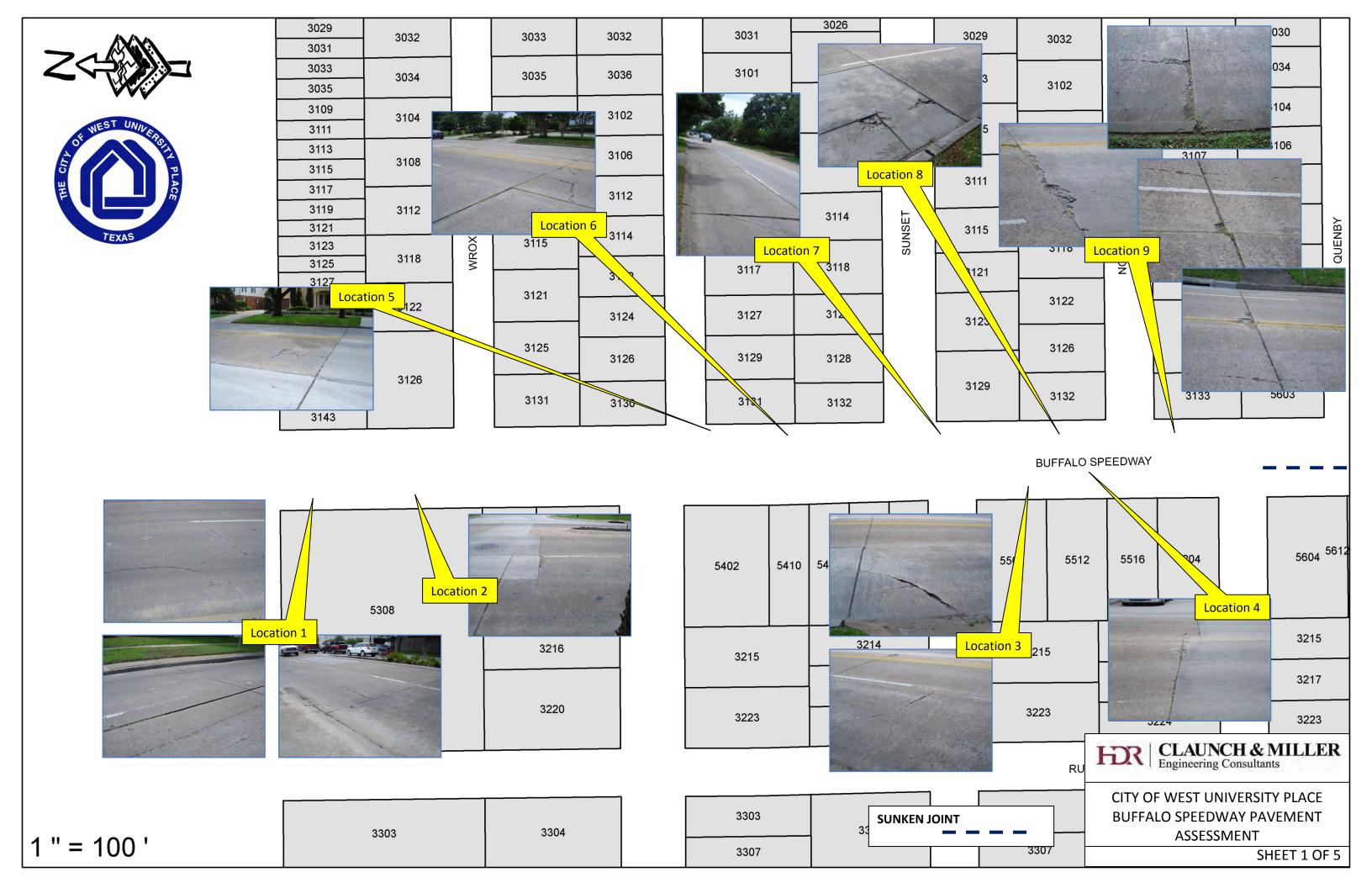
Senior Project Director.



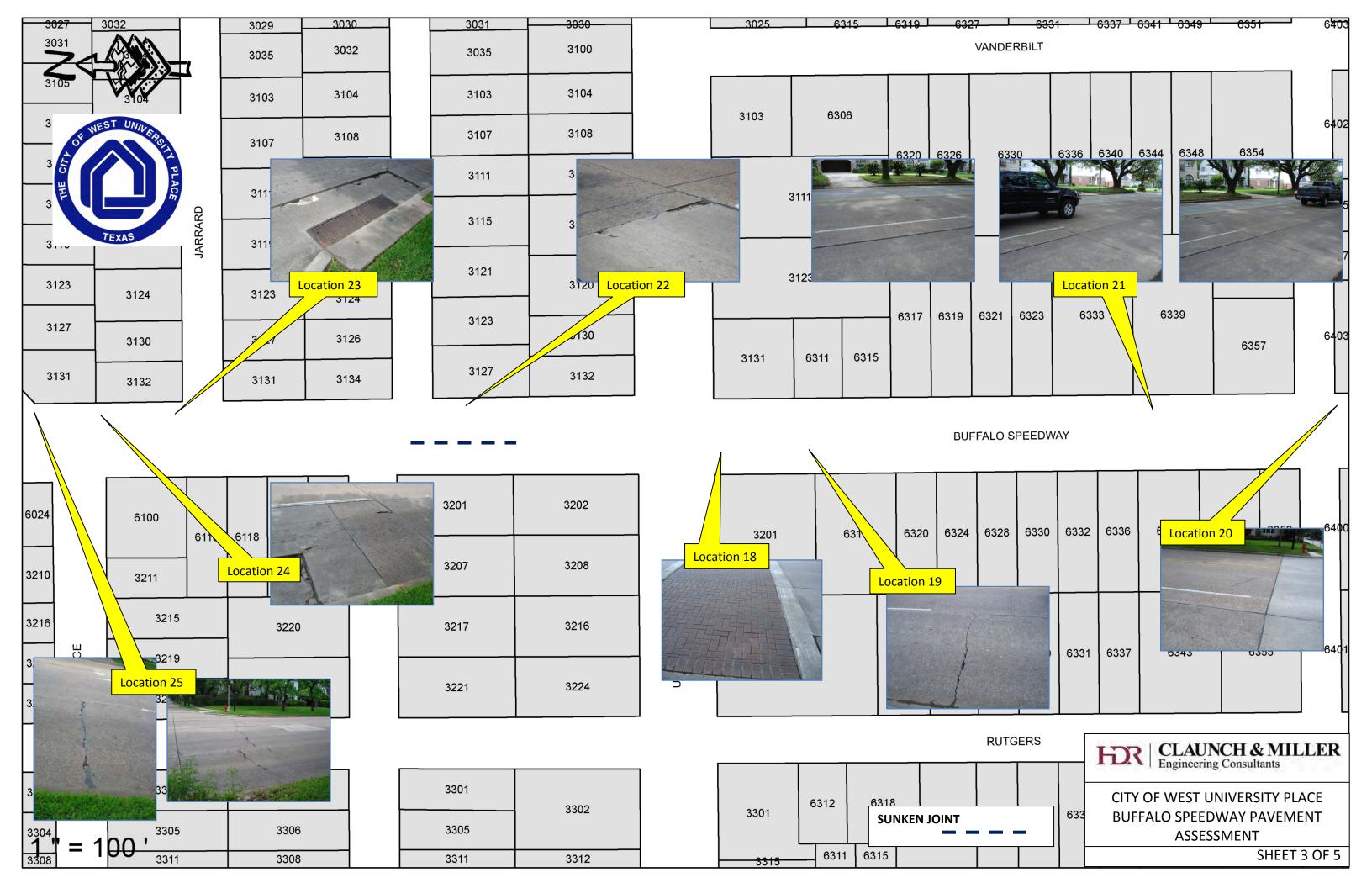
CITY OF WEST UNIVERSITY PLACE BUFFALO SPEEDWAY PAVEMENT ASSESSMENT ENGINEER'S PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COST

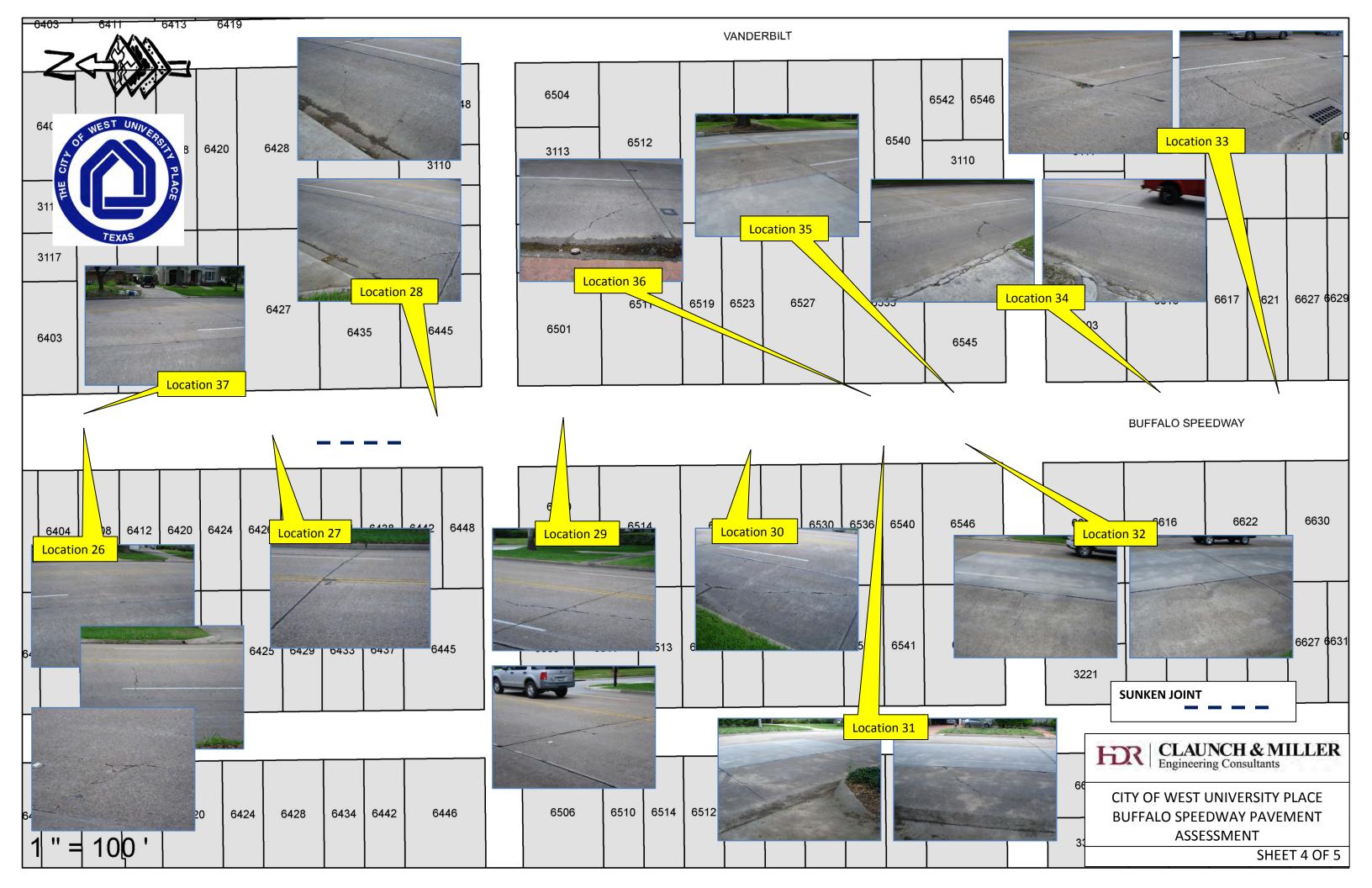
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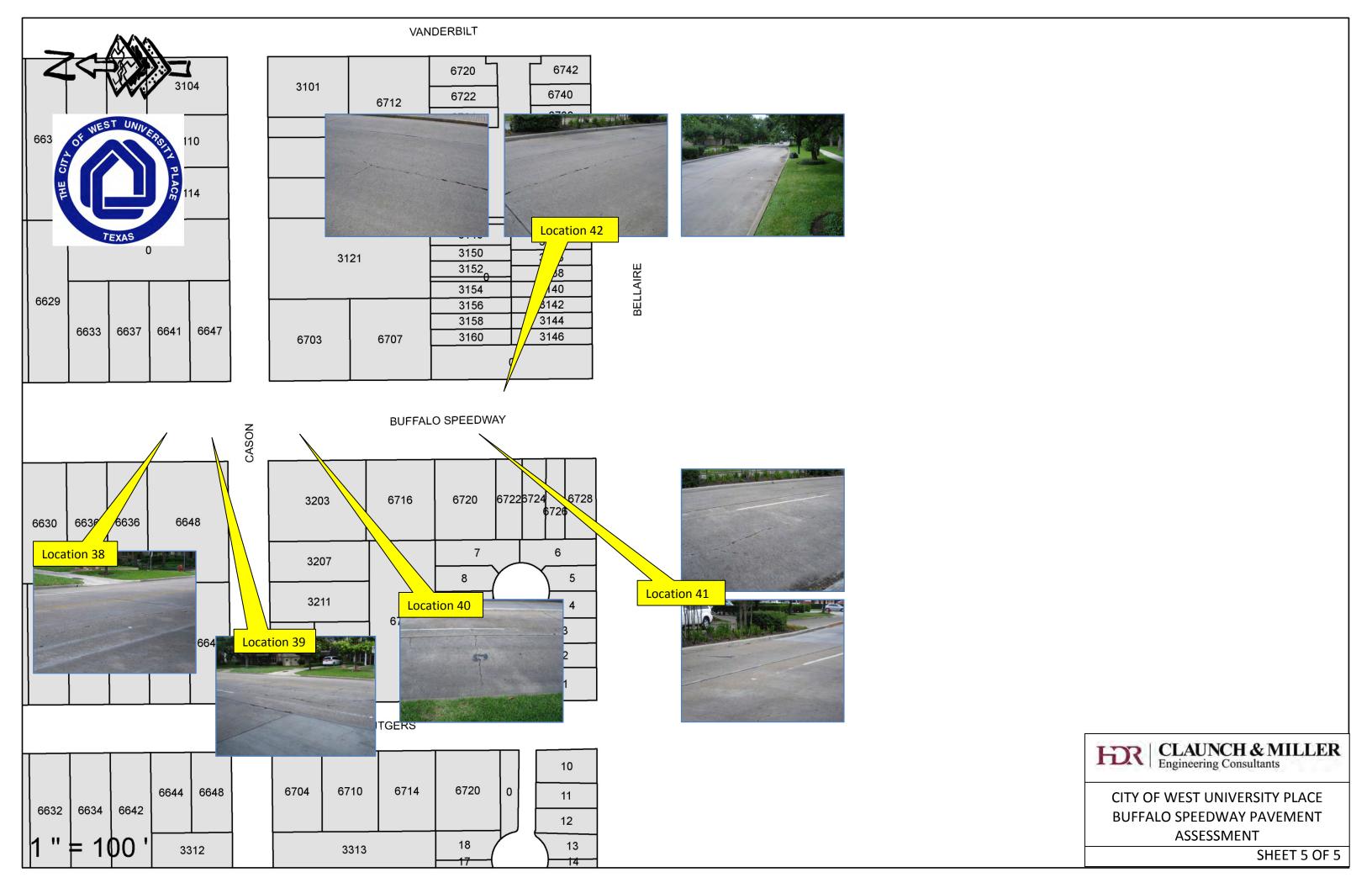
ITEM	EST					TOTAL
NO	QUAN	UNIT	DESCRIPTION	U	NIT PRICE	AMOUNT
1	1	LS	Mobilization	\$	11,000.00	\$ 11,000.00
2	1950	SY	8" Pavement Replacement	\$	85.00	\$ 165,750.00
3	10	EA	Spawling Repairs	\$	200.00	\$ 2,000.00
4	1500	LF	Slab Jacking	\$	50.00	\$ 75,000.00
5	10000	LF	Joint Repair	\$	6.00	\$ 60,000.00
6	10000	LF	Crack Sealant	\$	4.00	\$ 40,000.00
	2	EA	Storm Inlet	\$	3,000.00	\$ 6,000.00
7	1	LS	SWPPP	\$	2,000.00	\$ 2,000.00
8	1	LS	Traffic Control	\$	2,000.00	\$ 2,000.00
						\$ -
SUB TOTAL				\$ 363,750.00		
MISC UNIDENTIFIED CONSTRUCTION ITEMS 20%					\$ 72,800.00	
TOTAL ESTIMATED CONSTRUCTION COST						\$ 436,550.00
ENGINEERING & SURVEY 15%					\$ 65,500.00	
CONSTRUCTION INSPECTION 10%					\$ 43,700.00	
CONSTRUCTION TESTING				\$ 5,000.00		
TOTAL ESTIMATED PROJECT COST						\$ 550,750.00













Location 1



Location 1



Location 2



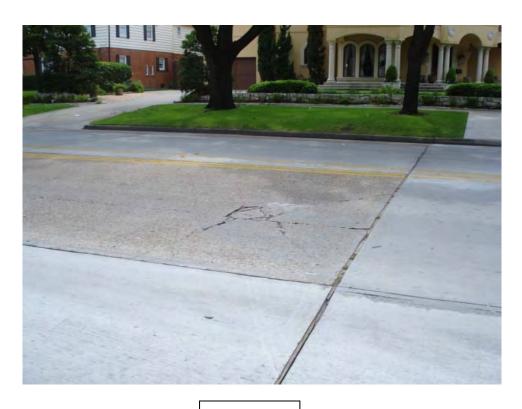
Location 3



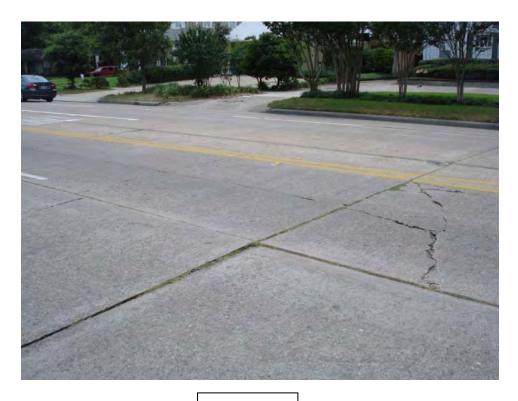
Location 3



Location 4



Location 5



Location 6



Location 7



Location 8



Location 9



Location 9



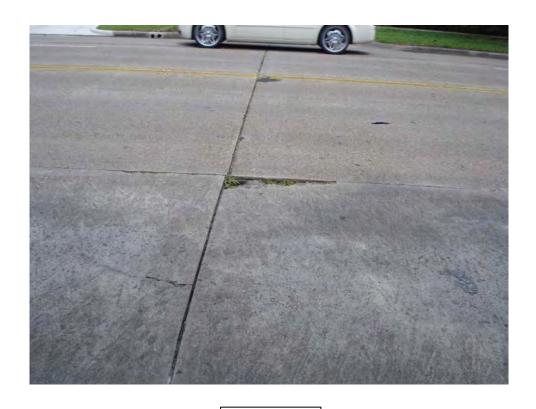
Location 9



Location 9



Location 10



Location 11



Location 11



Location 12



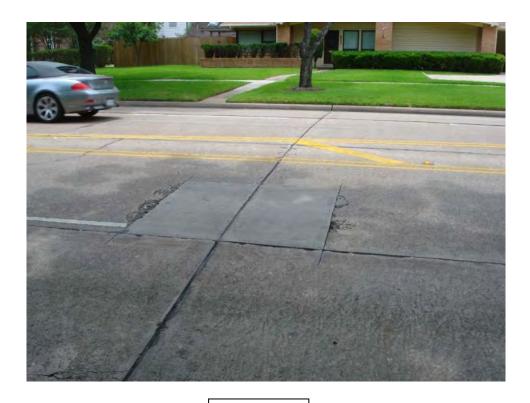
Location 13



Location 14



Location 14



Location 15



Location 16



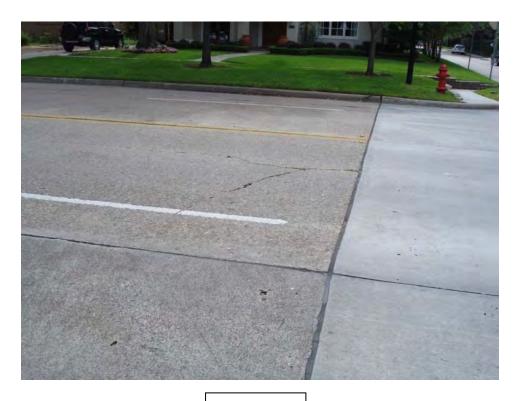
Location 17



Location 18



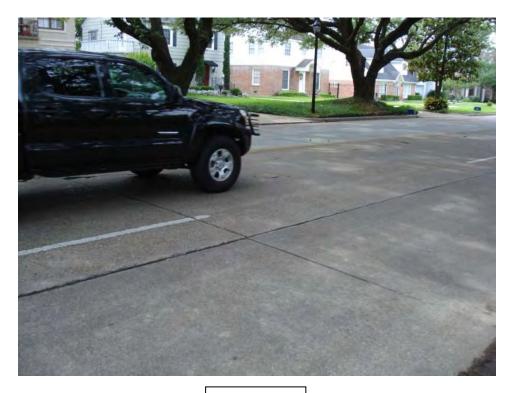
Location 19



Location 20



Location 21



Location 21



Location 21



Location 22



Location23



Location 24



Location 25



Location 25



Location 26



Location 26



Location 26



Location 27



Location 28



Location 28



Location 29



Location 29



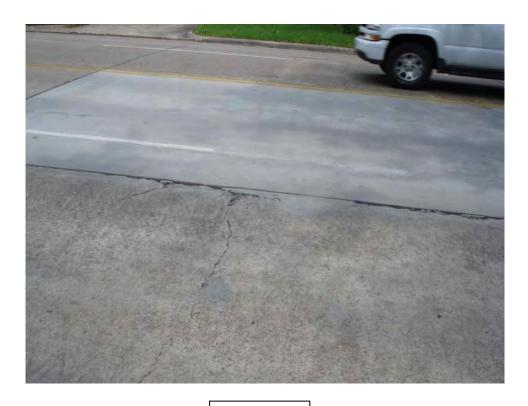
Location 30



Location 31



Location 31



Location 32



Location 32



Location 33



Location 33



Location 34



Location 34



Location 35



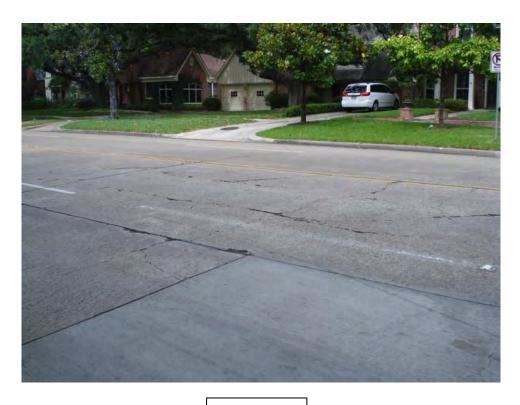
Location 36



Location 37



Location 38



Location 39



Location 40



Location 40



Location 41



Location 41



Location 42



Location 42



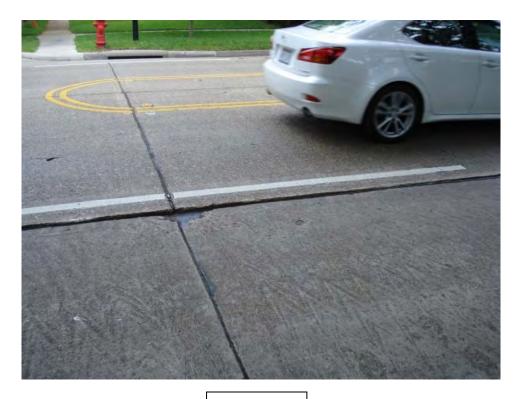
Location 42



Sunken Joint



Sunken Joint



Sunken Joint



Sunken Joint