FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	STP 1702 (818) MM		1
STATE	STATE DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

PROJECT NO. STP 1702 (818) MM

CSJ NO. 0912-72-360

CSJ:	ROADWAY		TOTAL	
	FT	MILES	FT	MILES
0912-72-360	7,656	1.450	7,656	1.450

HARRIS COUNTY

BUFFALO SPEEDWAY

LIMITS: BUFFALO SPEEDWAY: BISSONNET TO HOLCOMBE

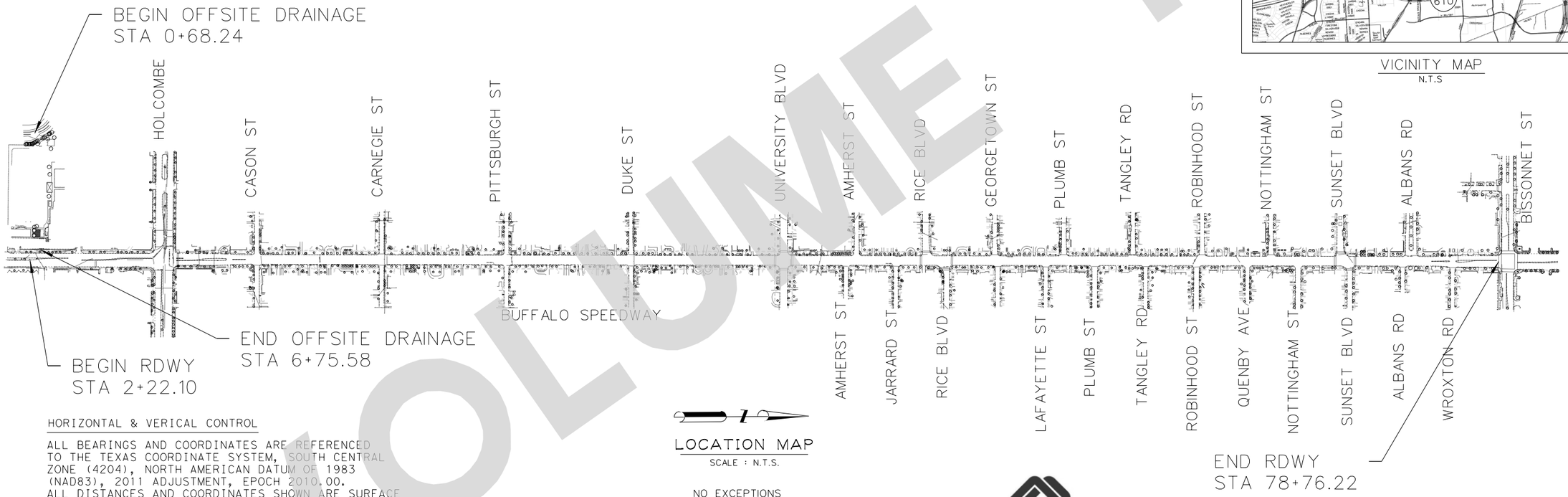
FOR THE CONSTRUCTION OF: RECONSTRUCT EXISTING ROAD CONSISTING OF PAVING, DRAINAGE, SIGNAL & STRIPING

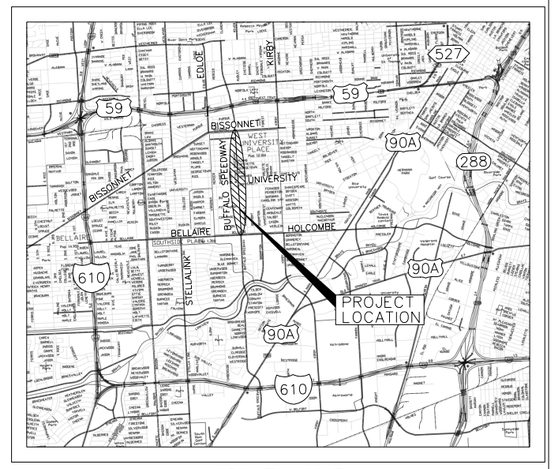
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REGISTERED ACCESSIBILITY SPECIALIST (RAS) INSPECTION REQUIRED TDLR PROJECT NUMBER TABS2020021433

DESIGN SPEED	= 40 MPH
FUNCTIONAL CLASSIFICATION (BUFFALO SPEEDWAY)	= URBAN MINOR ARTERIAL
ADT (YR 2021)	= 22,500
ADT (YR 2041)	= 30,900





VICINITY MAP

N.T.S

LOCATION MAP

SCALE : N.T.S.

NO EXCEPTIONS
NO EQUATIONS
NO RAILROAD CROSSING

HORIZONTAL & VERICAL CONTROL

ALL BEARINGS AND COORDINATES ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM OF 1983 (NAD83), 2011 ADJUSTMENT, EPOCH 2010.00. ALL DISTANCES AND COORDINATES SHOWN ARE SURFACE VALUES AND MAY BE CONVERTED TO GRID BY DIVIDING BY THE SURFACE ADJUSTMENT FACTOR OF 1.00013.

ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). HORIZONTAL CONTROL IS BASED ON TxDOT VRS GPS OBSERVATIONS, VERTICAL CONTROL IS BASED ON DIGITAL LEVELING.

MONUMENT NO. 040135 WAS HELD FOR HORIZONTAL AND VERTICAL CONTROL.

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 2014 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT: REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, MAY 2012)

COUNTY: HARRIS PROJ. NO. CSJ: 0912-72-360

HWY. NO. BUFFALO SPEEDWAY LETTING DATE 11/2020

DATE ACCEPTED

City of West University Place

CONCURRENCE

DIRECTOR OF PUBLIC WORKS
CITY OF WEST UNIVERSITY PLACE

CONCURRENCE

DIRECTOR OF PUBLIC WORKS
CITY OF HOUSTON

SUBMITTED FOR LETTING:

PROJECT MANAGER

APPROVED FOR LETTING:

DISTRICT ENGINEER

Texas Department of Transportation

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> THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

, PE 8/25/2020
DATE

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

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LEGEND

SPK SPRINKLER HEAD

SPV SPRK. VALVE

PP

STLT STREET LIGHT OR PARKING LIGHT POLE

STM. MH

SAN. MH

TSLP TRAFFC SIGNAL LIGHT POLE

TLPL TRAFFC LIGHT POLE OR WALK LIGHT

TCB TRAFFC CONTROL BOX
TSB TRAFFC SIGNAL BOX

'C' INLET

'G' INLET

'B' INLET

'BB' INLET

ELEC. BOX
JBE JUNCTION BOX ELECTRIC

PBOX PHONE BOX

FH FIRE HYDRANT

WM WATER METER

WV WATER VALVE

CO SANITARY CLEANOUT

GV GAS VALVE

ELEC. MKR. OR ELEC. PAINT

GAS MKR. OR GAS PAINT

PHONE MKR. OR PHONE PAINT

PLMK. OR PL PAINT

PLMK.UG

WATER MKR. OR WATER PAINT LINE

GAS CAT.

BUSH SHRUB

TREE

PHONE MH

TRAFFIC SIGN

BSSN BRICK BUSINESS SIGN

BLDG.

MISC

FND. X" IR

R

FENCE

OH POWER LINE

DITCH TOP

DITCH FLOW LINE

X" RCP CMP CULVERT

OVERHEAD PHONE LINE

X" STM.

X" SAN.

CenterPoint Energy gas

UTILITY PIPELINE

20" HOUSTON PIPELINE (APPROX. LOCATION)

GB

TOE

TREE LINE OR WOODED

RAIL

AT&T TEXAS\SWBT

STRUCTURE BUILDING

CONC.

U.G. ELEC. LINE (APPROXIMATE LOCATION)

STATE OF TEXAS
MEHRAN BAVARIAN
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8/25/2020

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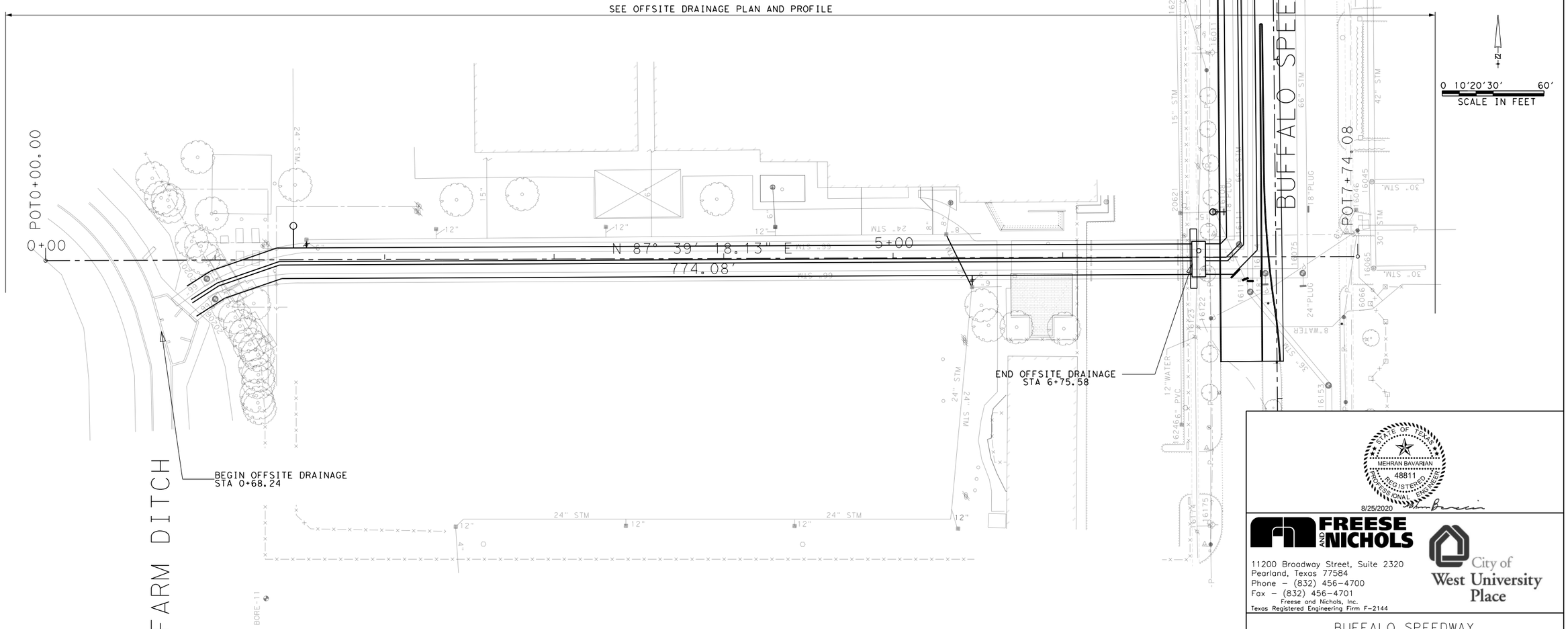
BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

LEGEND &
ABBREVIATIONS

SHEET 1 OF 1

Texas Department of Transportation

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STATE	DIST.	COUNTY	
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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

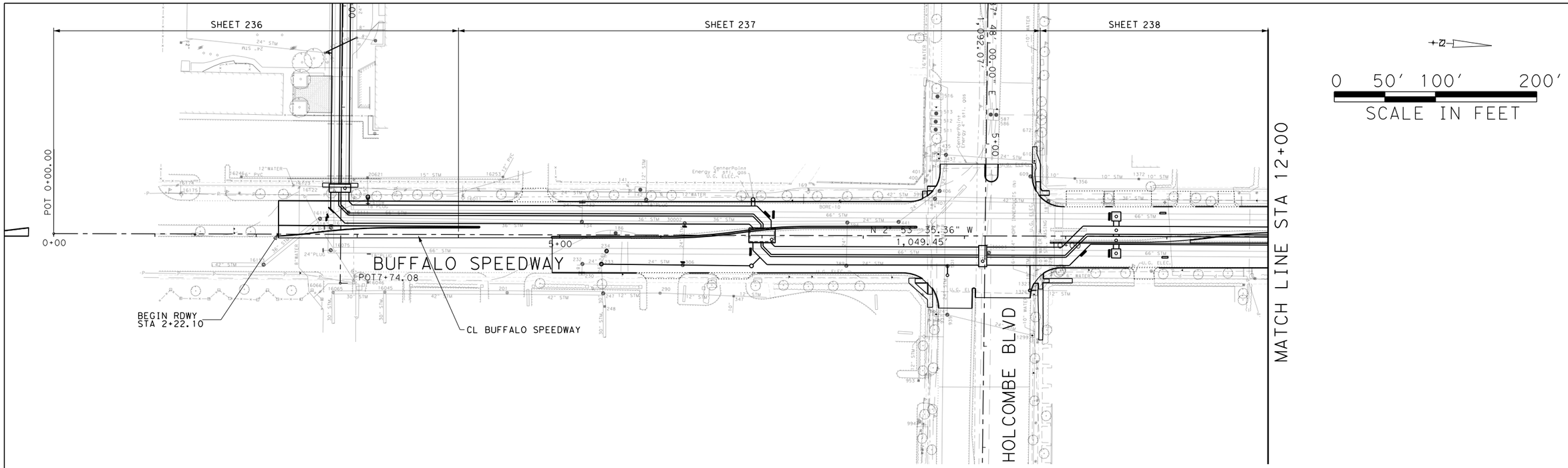
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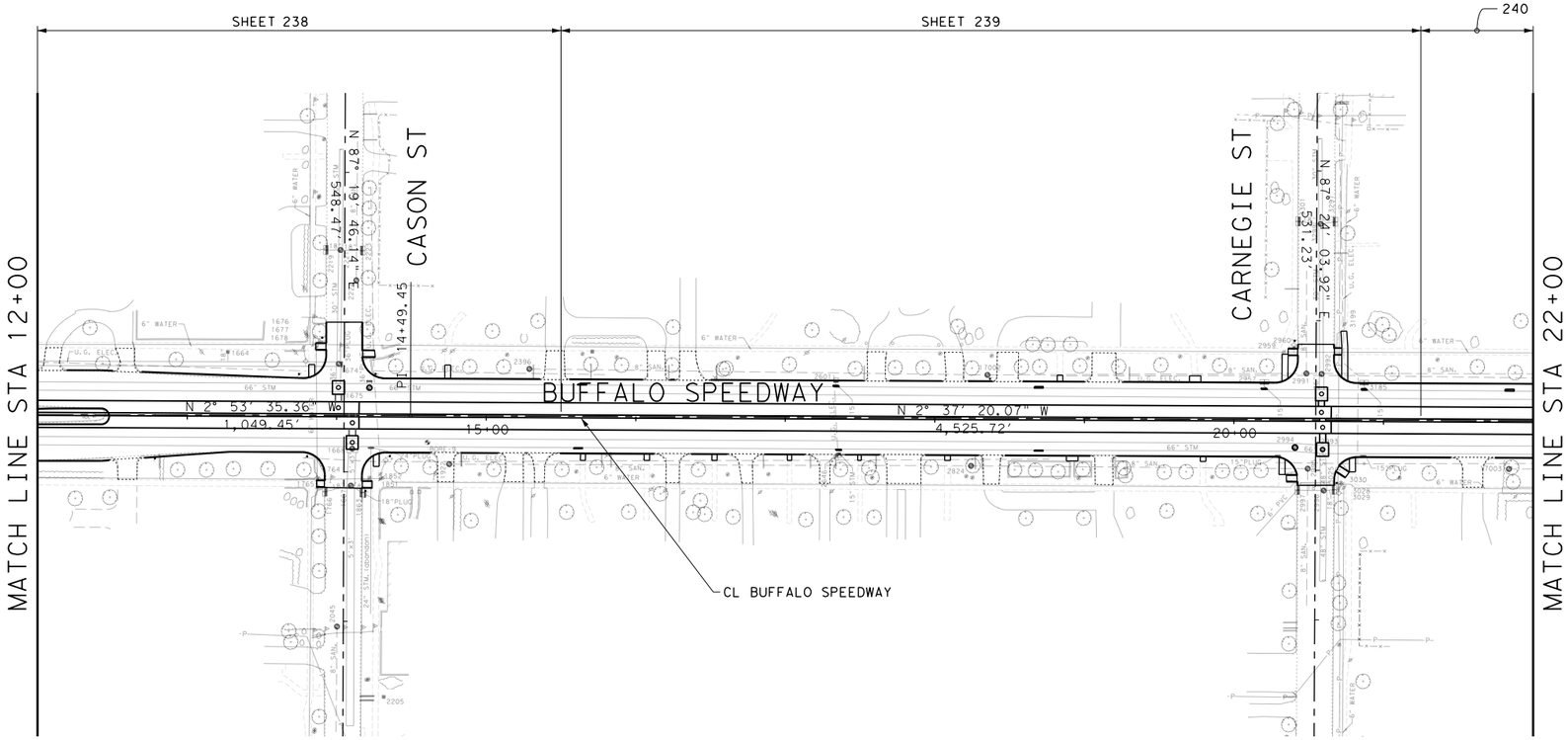
PROJECT LAYOUT

SHEET 1 OF 5

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		5
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED
PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

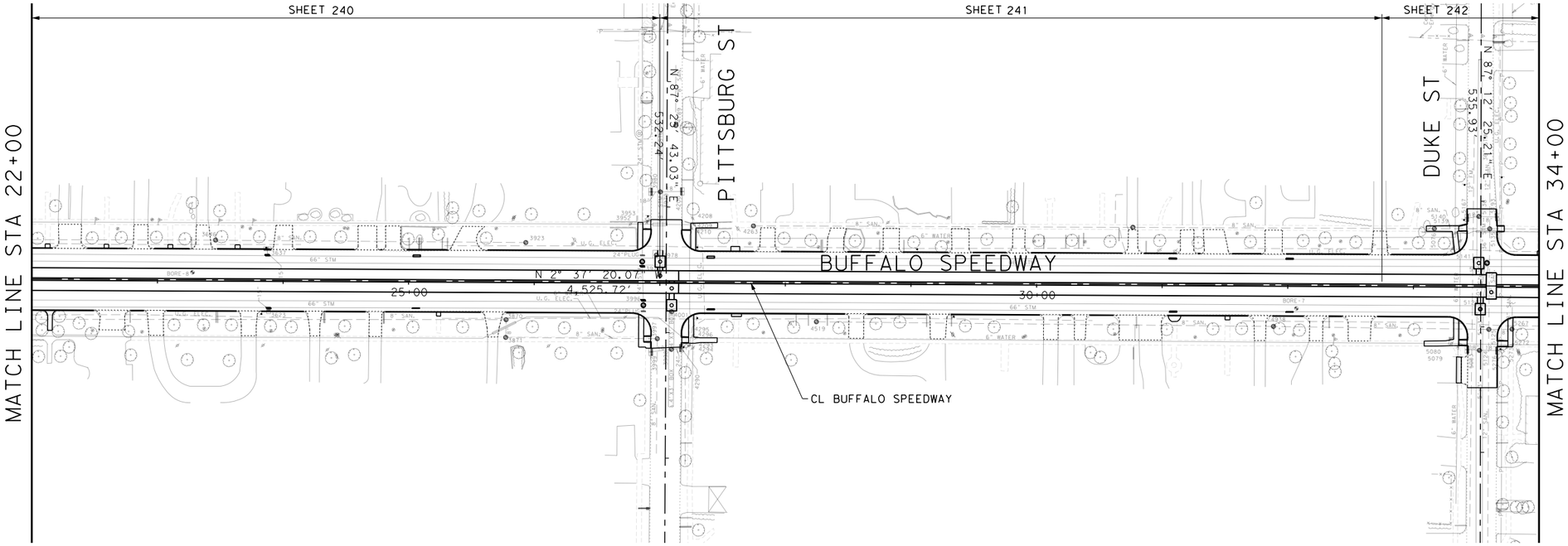
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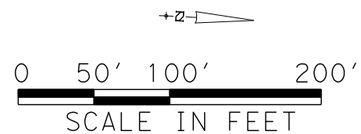
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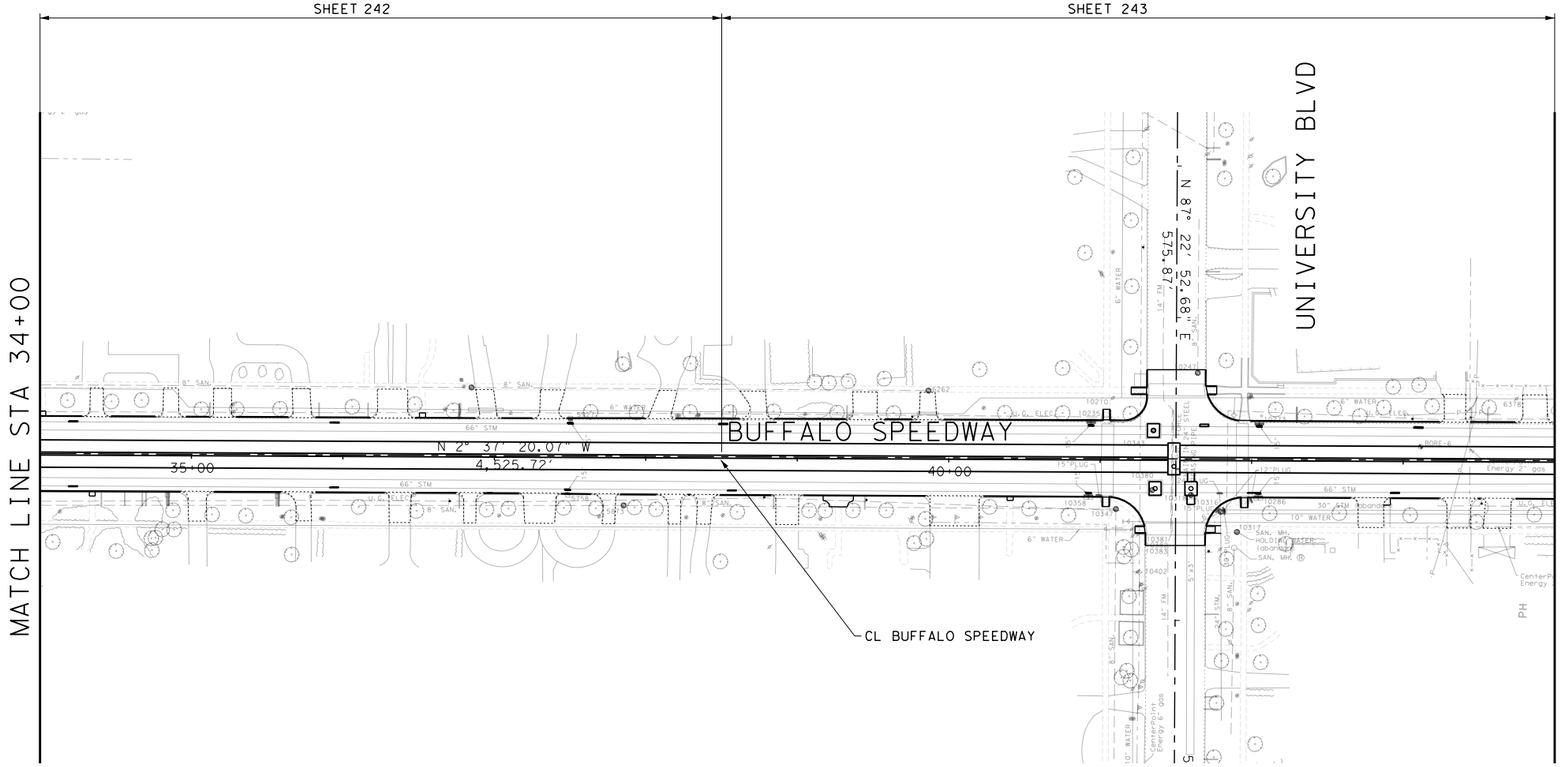
SHEET 2 OF 5

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			6
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	







STATE OF TEXAS
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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

PROJECT LAYOUT

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			7
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



STATE OF TEXAS
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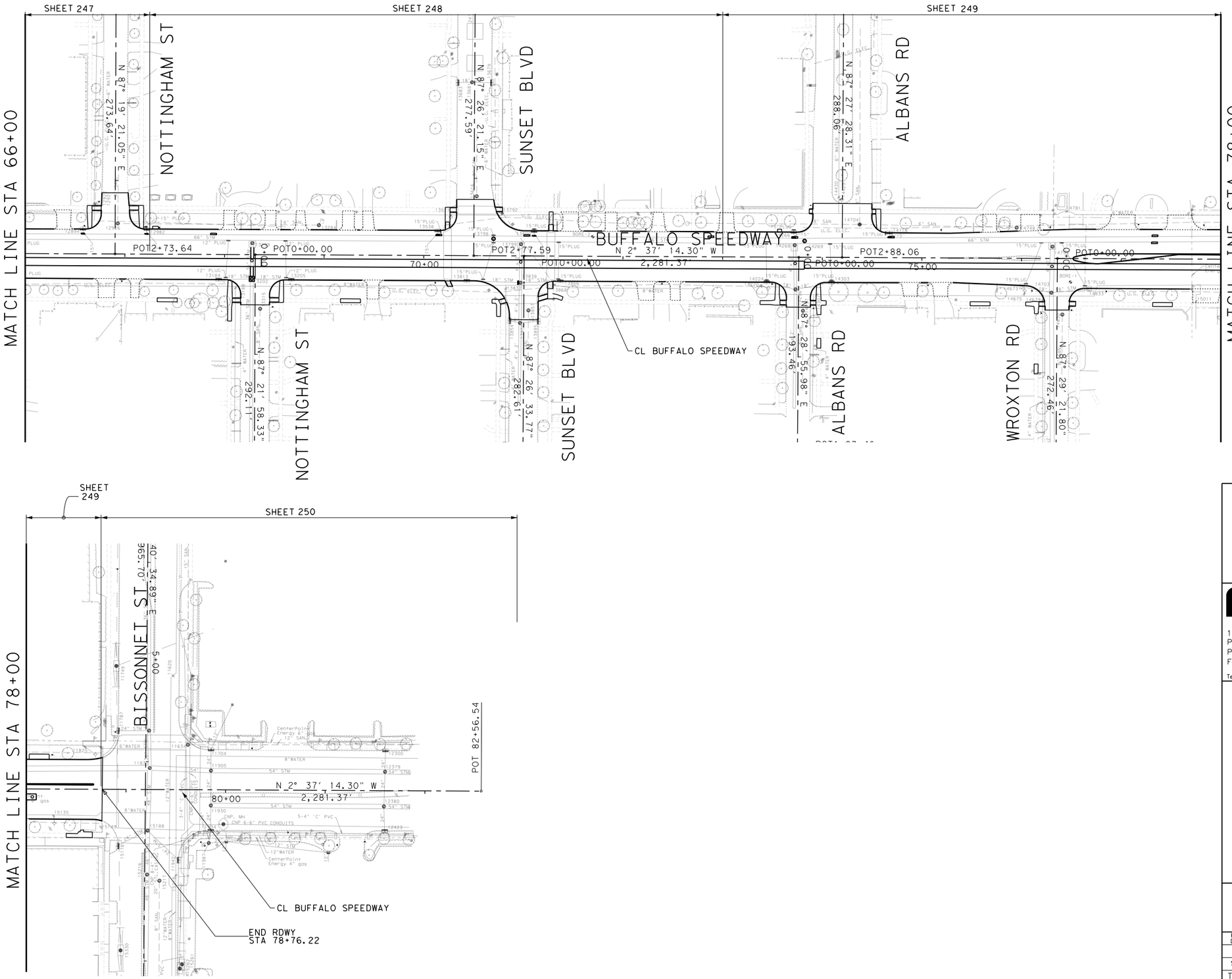
City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

PROJECT LAYOUT

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		8
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100' 200'

SCALE IN FEET

STATE OF TEXAS
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City of West University Place

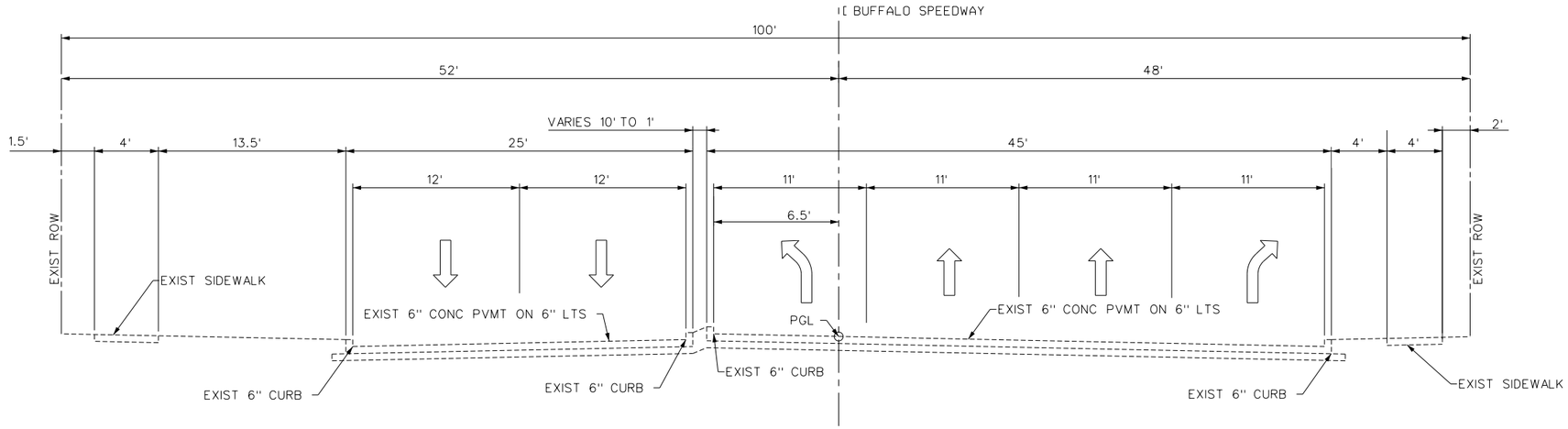
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

PROJECT LAYOUT

SHEET 5 OF 5

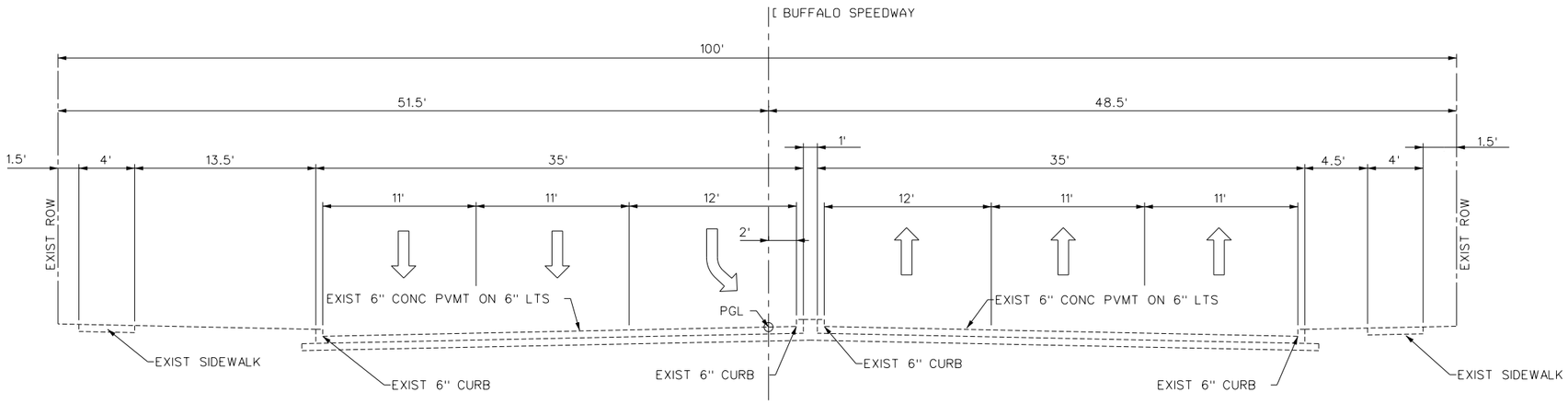
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		9
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

STA 2+22 TO STA 4+56



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

STA 4+56 TO STA 6+06

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City of West University Place

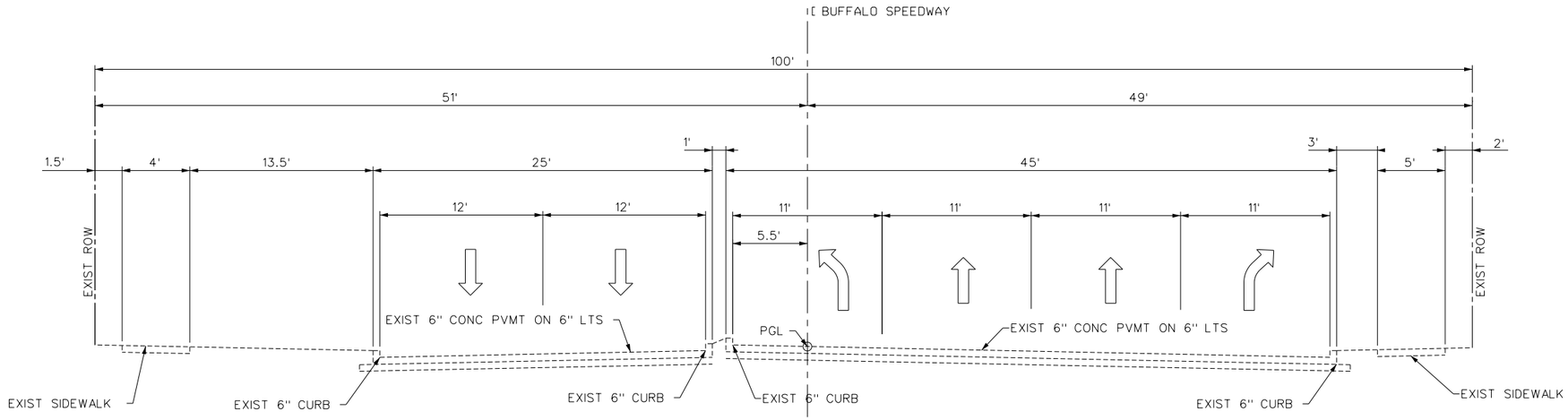
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

EXISTING TYPICAL SECTIONS

SHEET 1 OF 5

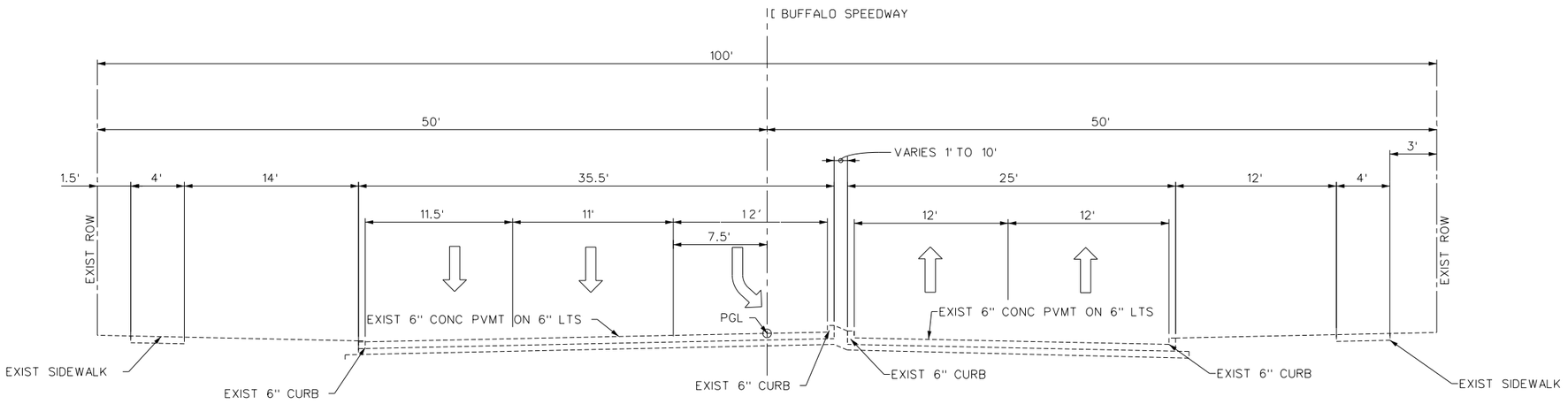
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		10
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

STA 6+06 TO STA 9+19



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

STA 9+19 TO STA 12+15

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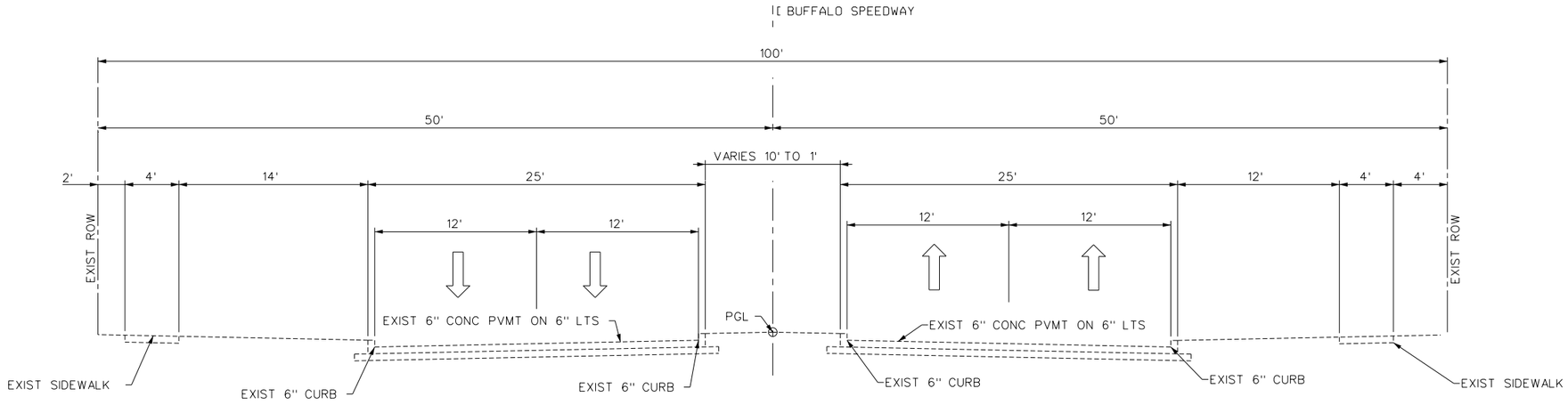
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City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)
EXISTING
TYPICAL SECTIONS

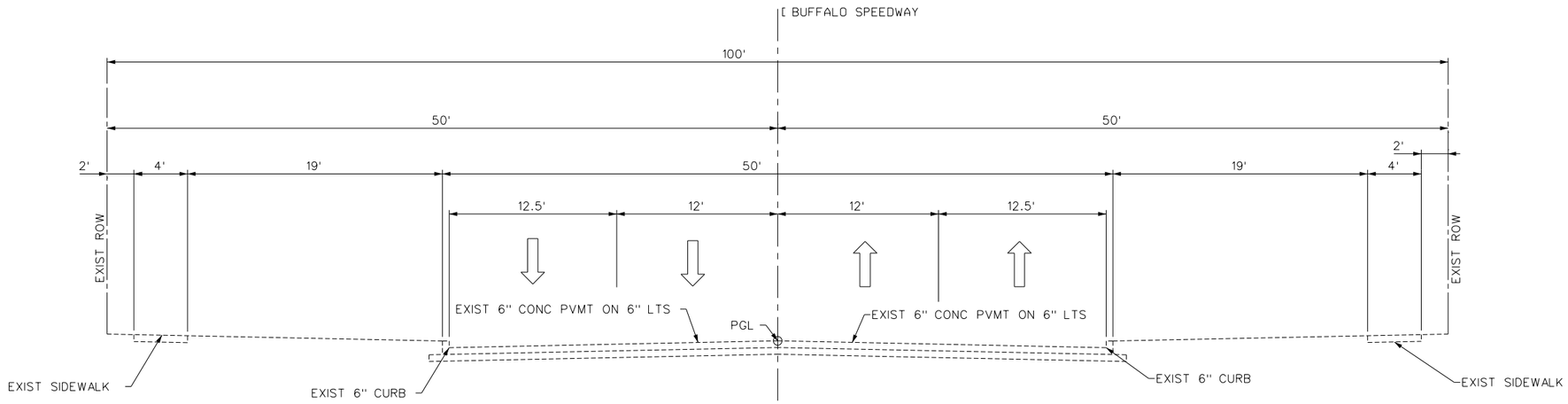
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		11
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

STA 12+15 TO STA 13+11



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

STA 13+11 TO STA 75+27

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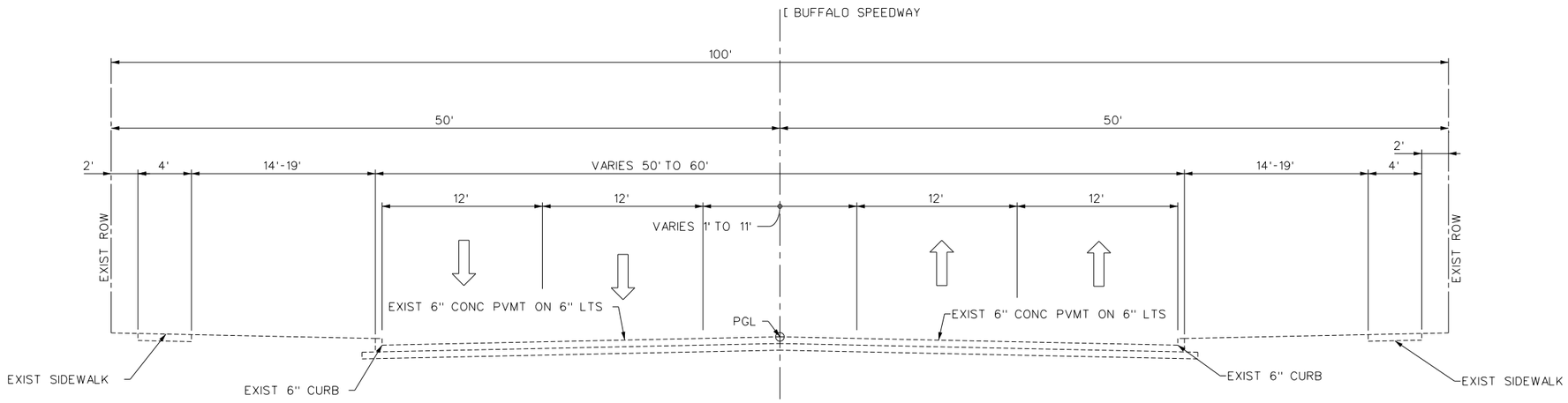
City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

EXISTING TYPICAL SECTIONS

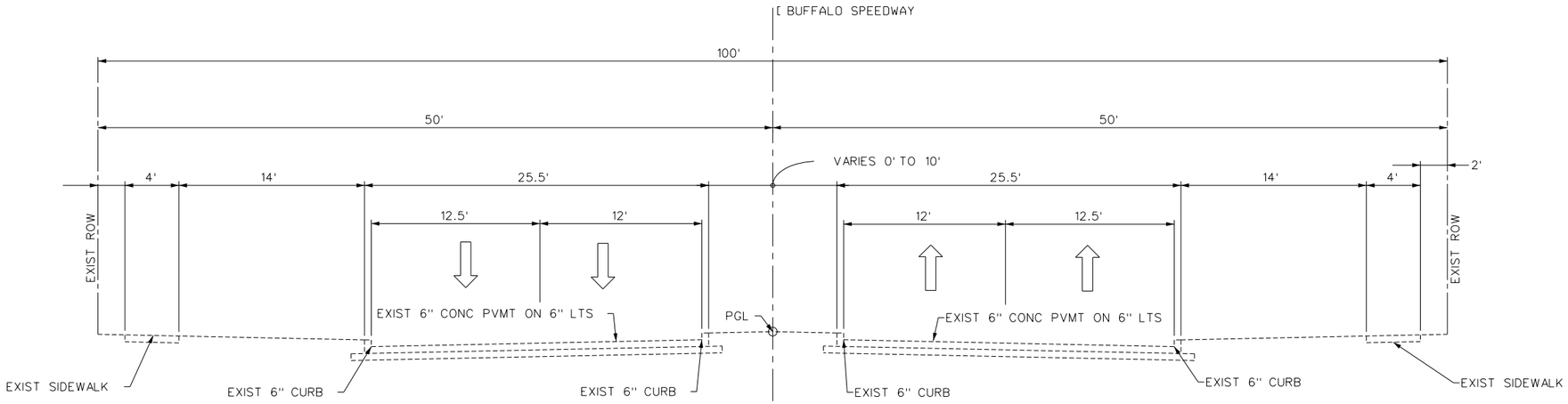
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		12
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

STA 75•27 TO STA 76•52



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

STA 76•52 TO STA 76•77

STATE OF TEXAS
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8/25/2020

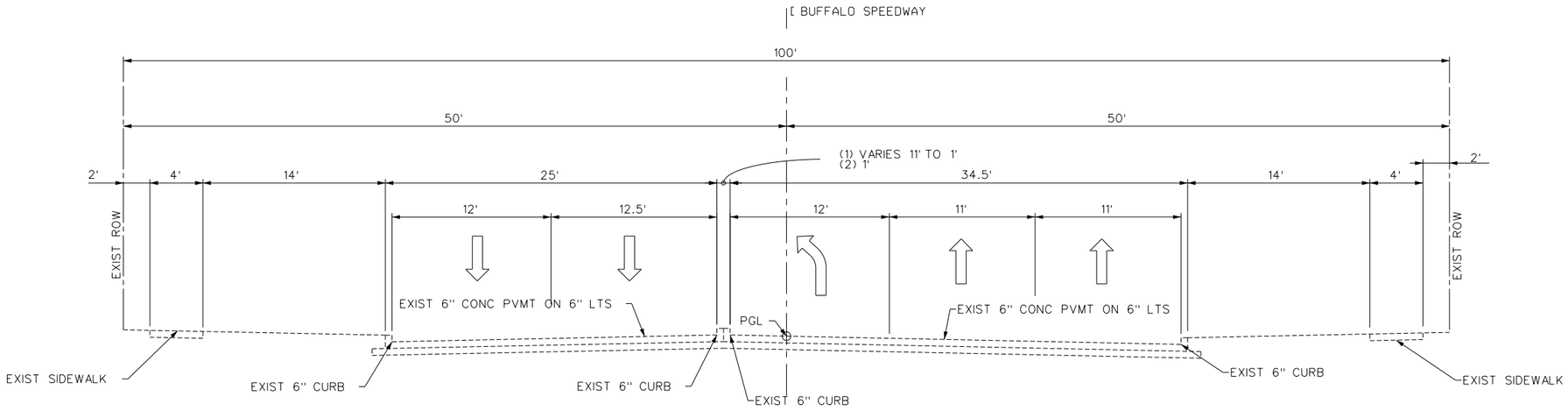
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City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)
EXISTING
TYPICAL SECTIONS

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		13
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
EXISTING TYPICAL SECTION

(1) STA 76•77 TO STA 77•58
(2) STA 77•58 TO STA 78•67

STATE OF TEXAS
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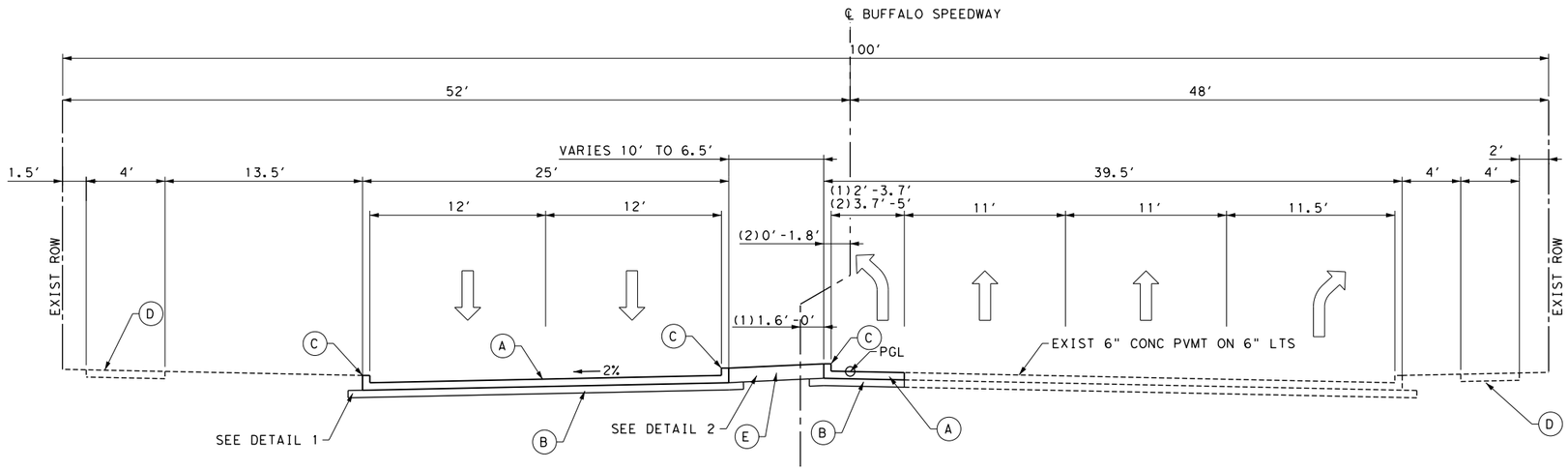
City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

EXISTING
TYPICAL SECTIONS

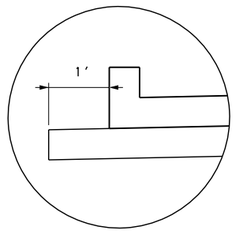
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		14
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND

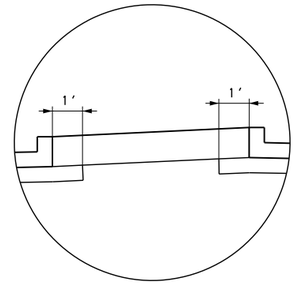
- (A) PROP 10" REINF CONC PVMT
- (B) PROP 8" LIME TREATED SUBGRADE
- (C) PROP 6" CURB
- (D) PROP & EXISTING SIDEWALK
- (E) PROP 4" RIP RAP



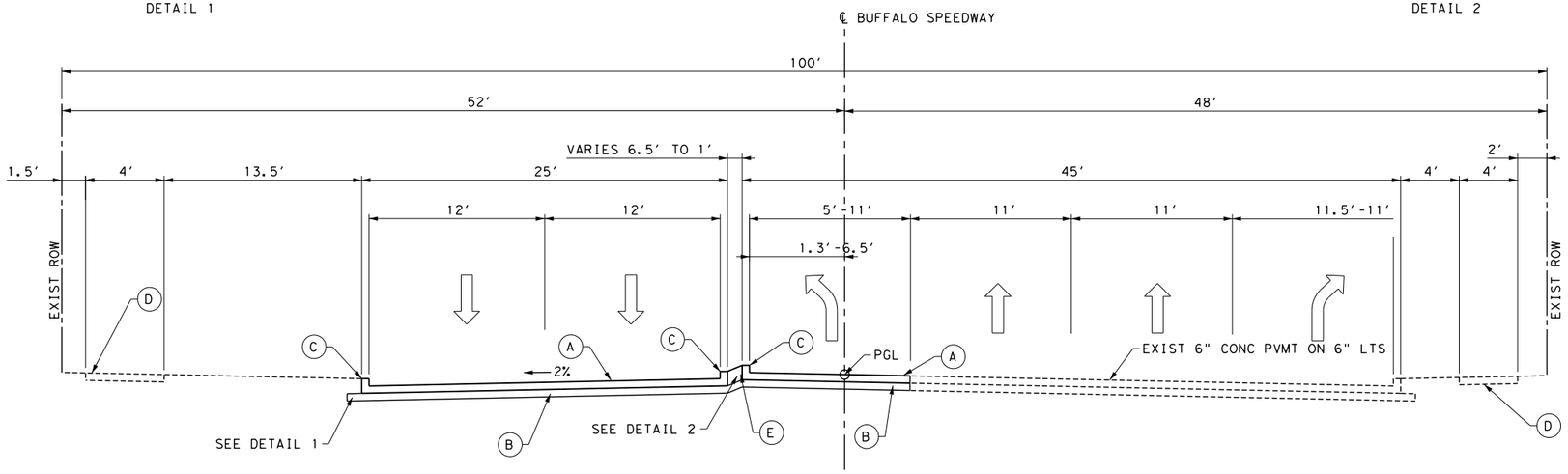
DETAIL 1

BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

(1) STA 2+22 TO STA 2+44
(2) STA 2+44 TO STA 2+58



DETAIL 2



BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

STA 2+58 TO STA 4+56

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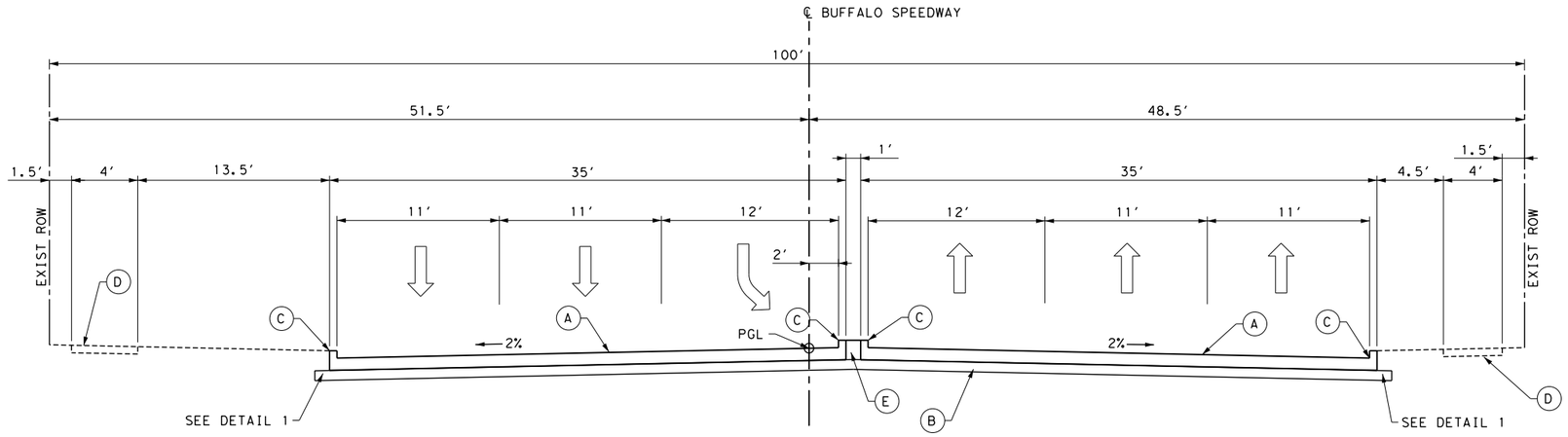
City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

PROPOSED
TYPICAL SECTIONS

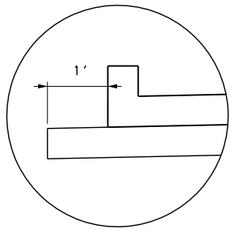
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		15
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND

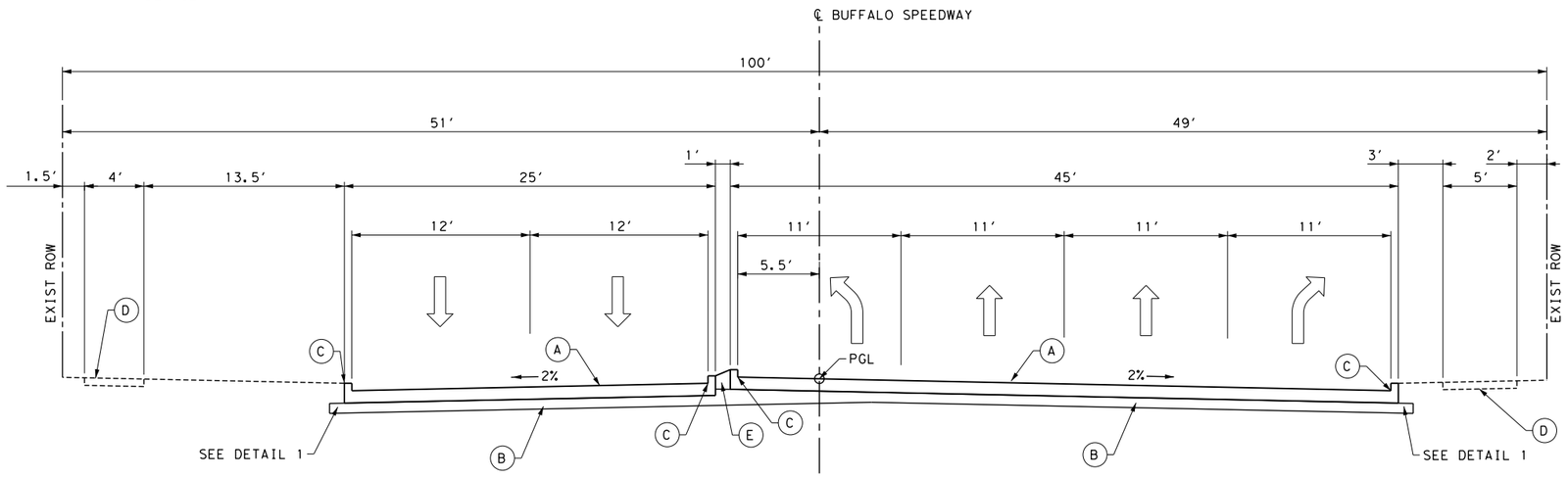
- (A) PROP 10" REINF CONC PVMT
- (B) PROP 8" LIME TREATED SUBGRADE
- (C) PROP 6" CURB
- (D) PROP & EXISTING SIDEWALK
- (E) PROP 4" RIP RAP



DETAIL 1

BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

STA 4+56 TO STA 6+06



BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

STA 6+06 TO STA 9+20

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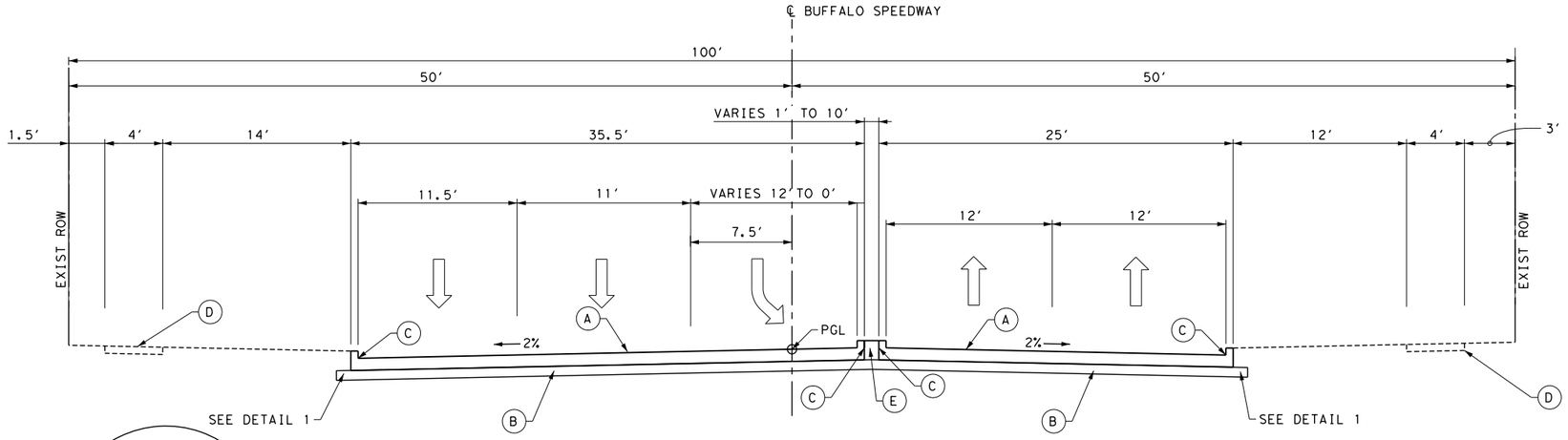
City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

PROPOSED
TYPICAL SECTIONS

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		16
STATE	DIST.	COUNTY	
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CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

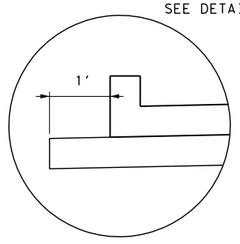


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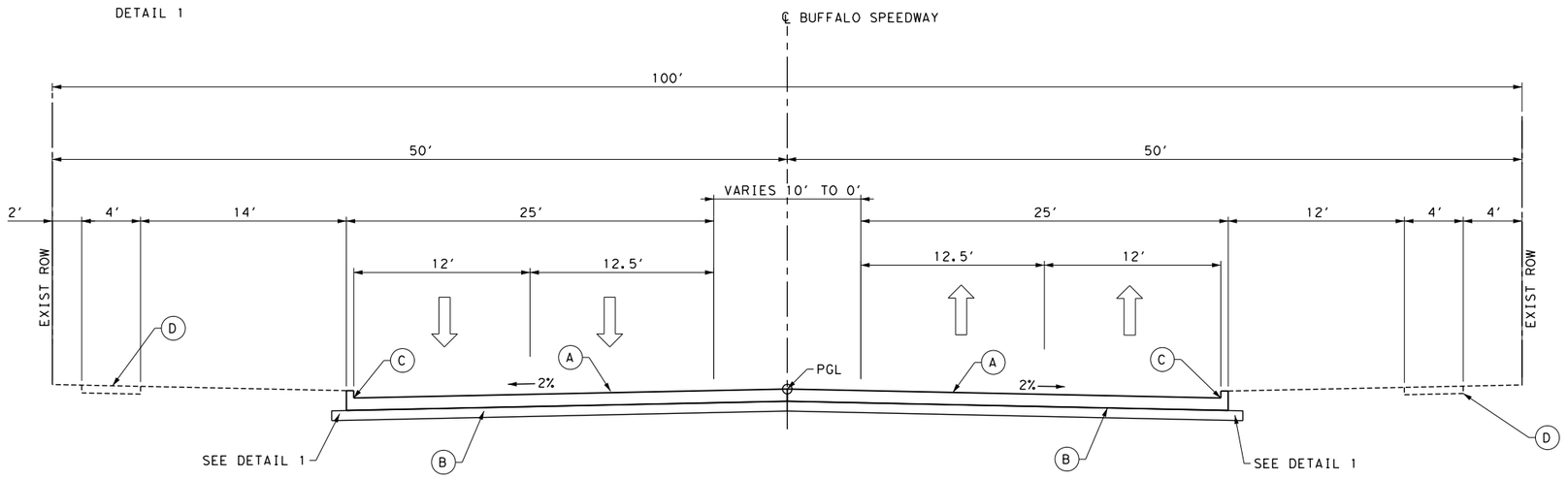
- (A) PROP 10" REINF CONC PVMT
- (B) PROP 8" LIME TREATED SUBGRADE
- (C) PROP 6" CURB
- (D) PROP & EXISTING SIDEWALK
- (E) PROP 4" RIP RAP

BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

STA 9+20 TO STA 12+42



DETAIL 1



BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

STA 12+42 TO STA 13+75

STATE OF TEXAS
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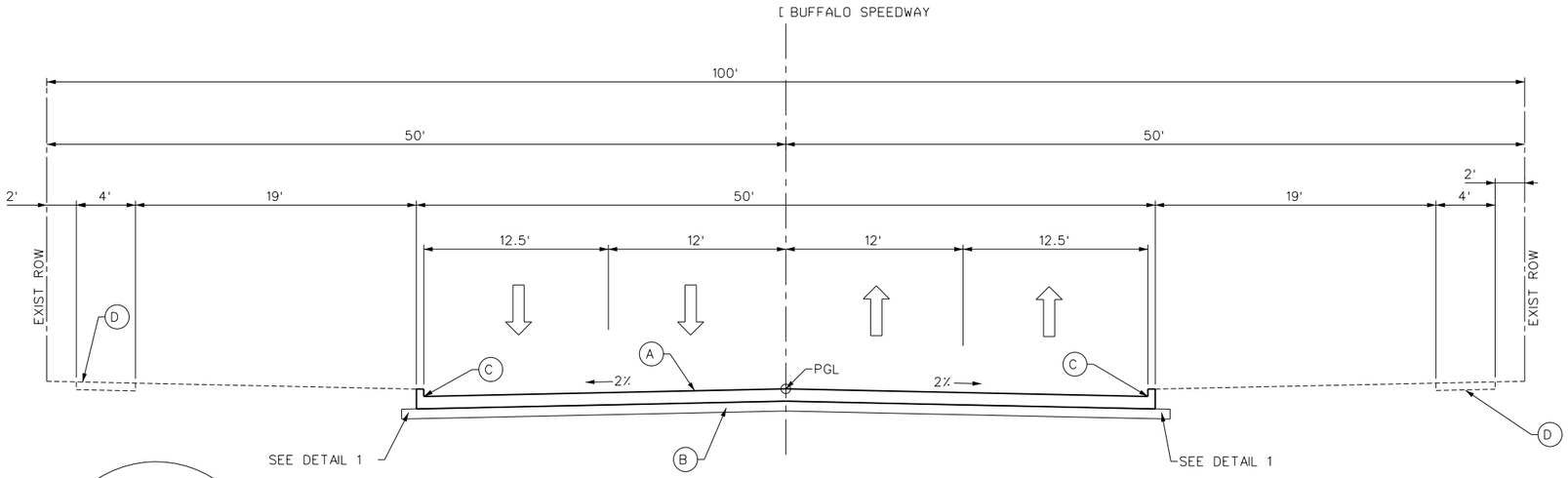
City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

PROPOSED
TYPICAL SECTIONS

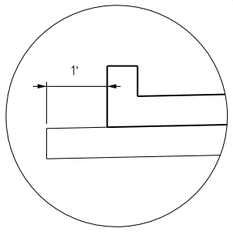
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		17
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

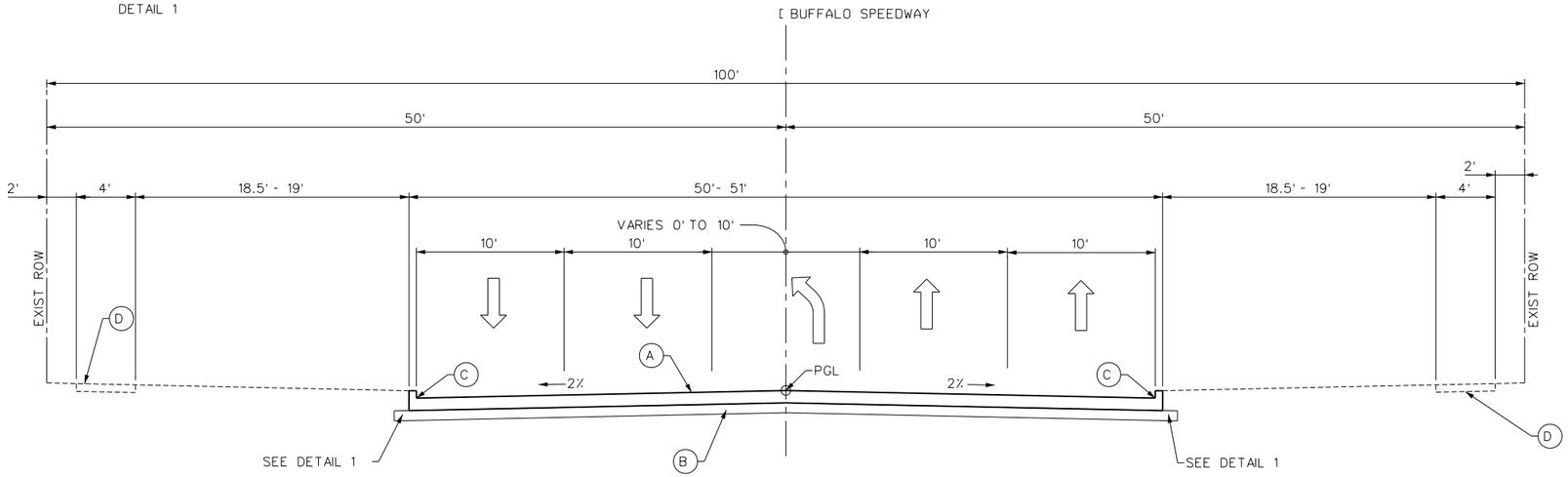
STA 13+75 TO STA 36+99
STA 54+33 TO STA 66+18



DETAIL 1

LEGEND

- (A) PROP 10" REINF CONC PVMT
- (B) PROP 8" LIME TREATED SUBGRADE
- (C) PROP 6" CURB
- (D) PROP & EXISTING SIDEWALK
- (E) PROP 4" RIP RAP



BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

STA 36+99 TO STA 38+49 TRANS FROM 50' TO 51'
STA 38+49 TO STA 41+50
STA 46+79 TO STA 49+45
STA 66+18 TO STA 67+68 TRANS FROM 50' TO 51'
STA 67+68 TO STA 70+82

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED
PROFESSIONAL ENGINEER
8/25/2020

FREESE AND NICHOLS
11200 Broadway Street, Suite 2320
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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

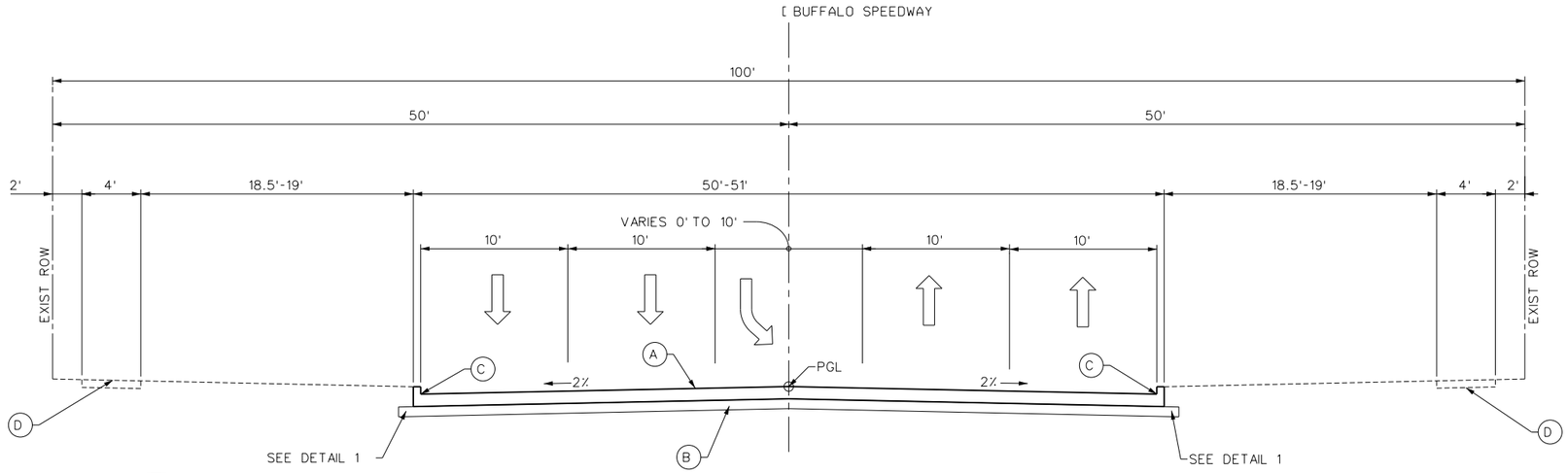
City of West University Place

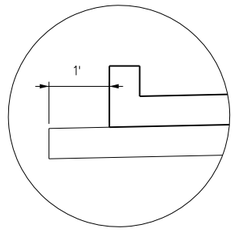
BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

PROPOSED
TYPICAL SECTIONS

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		18
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

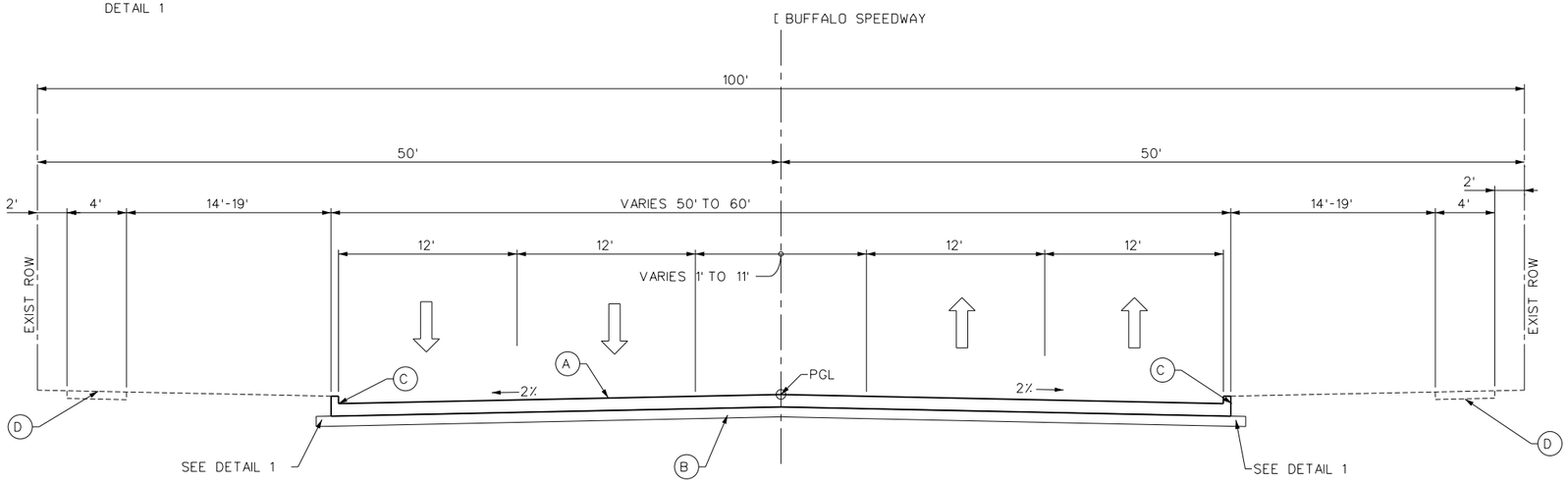




DETAIL 1

BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

STA 41+50 TO STA 46+79
STA 49+45 TO STA 52+82
STA 52+82 TO 54+33 TRANS FROM 51' to 50'
STA 70+82 TO STA 73+76
STA 73+76 TO STA 75+27 TRANS FROM 51' TO 50'



BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

STA 75+27 TO STA 76+52

LEGEND

- (A) PROP 10" REINF CONC PVMT
- (B) PROP 8" LIME TREATED SUBGRADE
- (C) PROP 6" CURB
- (D) PROP & EXISTING SIDEWALK
- (E) PROP 4" RIP RAP

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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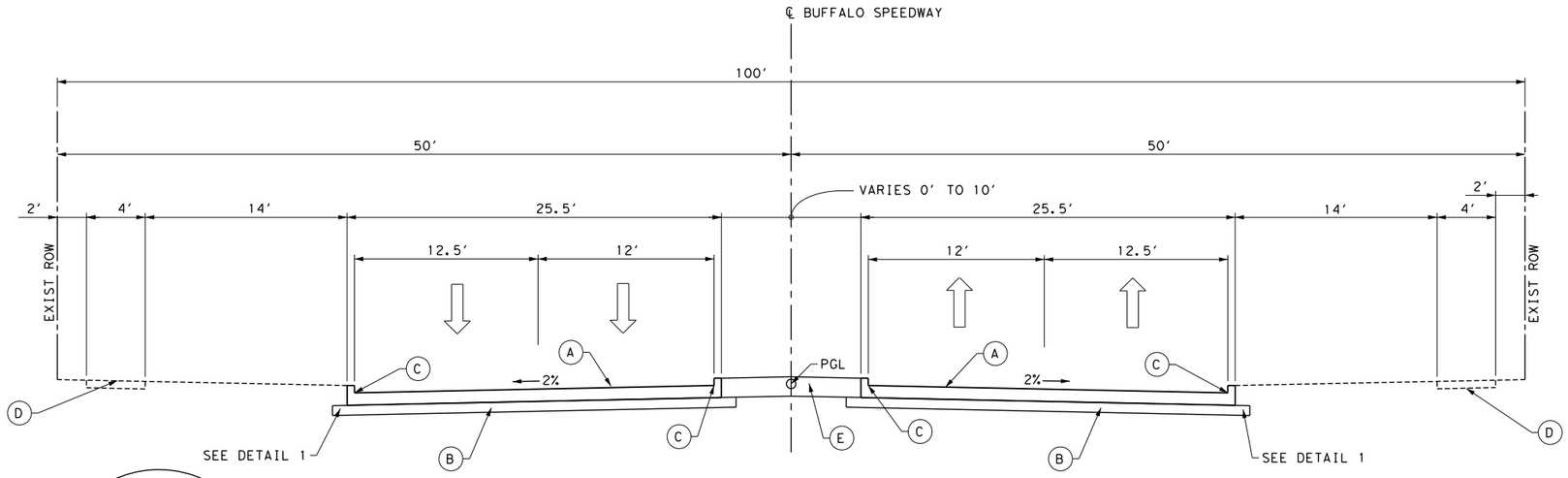
City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

PROPOSED
TYPICAL SECTIONS

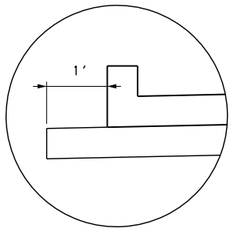
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		19
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

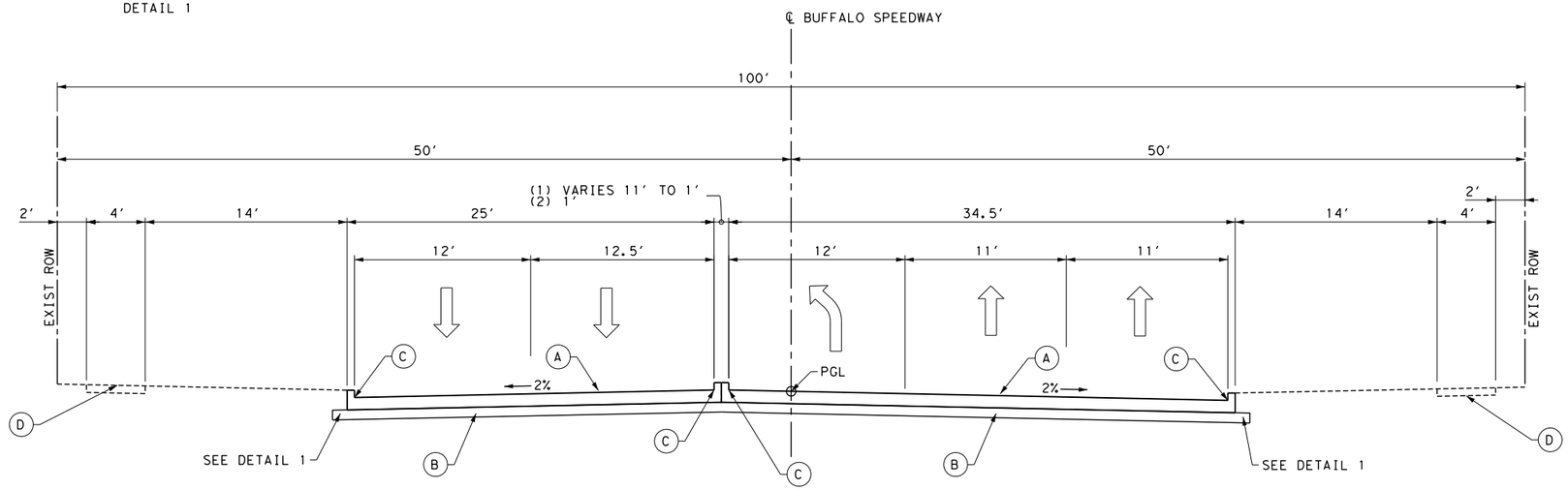
STA 76+52 TO STA 76+77



DETAIL 1

LEGEND

- (A) PROP 10" REINF CONC PVMT
- (B) PROP 8" LIME TREATED SUBGRADE
- (C) PROP 6" CURB
- (D) PROP & EXISTING SIDEWALK
- (E) PROP 4" RIP RAP



BUFFALO SPEEDWAY
PROPOSED TYPICAL SECTION

(1) STA 76+77 TO STA 77+58
(2) STA 77+58 TO STA 78+76

STATE OF TEXAS
MEHRAN BAVARIAN
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8/25/2020

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City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

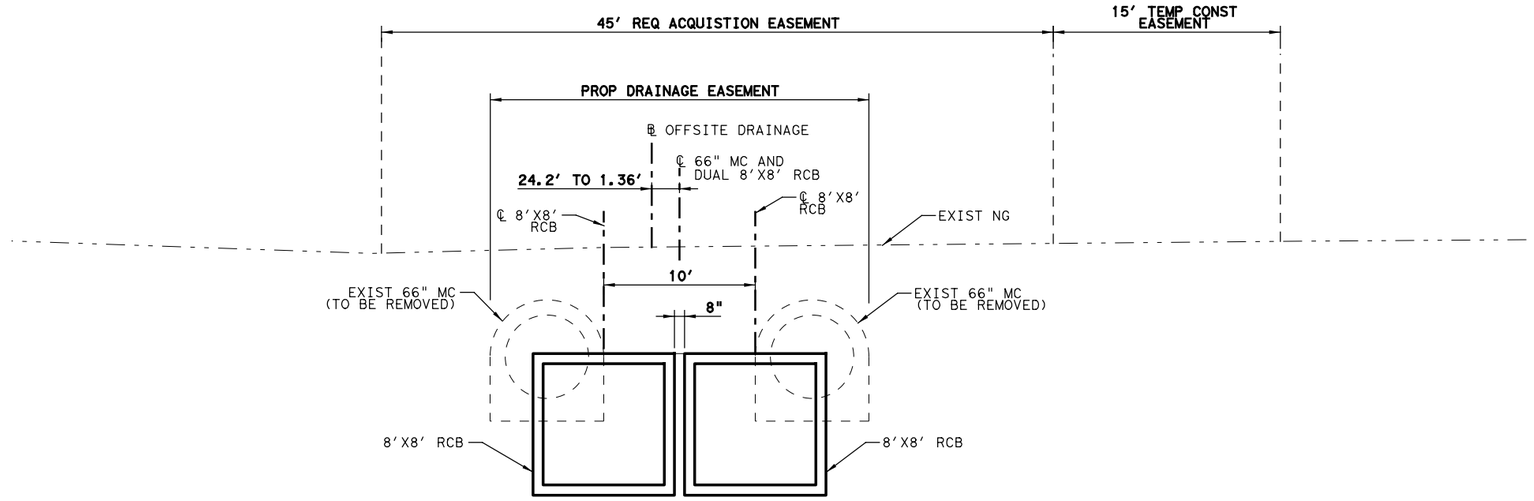
PROPOSED
TYPICAL SECTIONS

SHEET 6 OF 6

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		20
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

100% SUBMITTAL

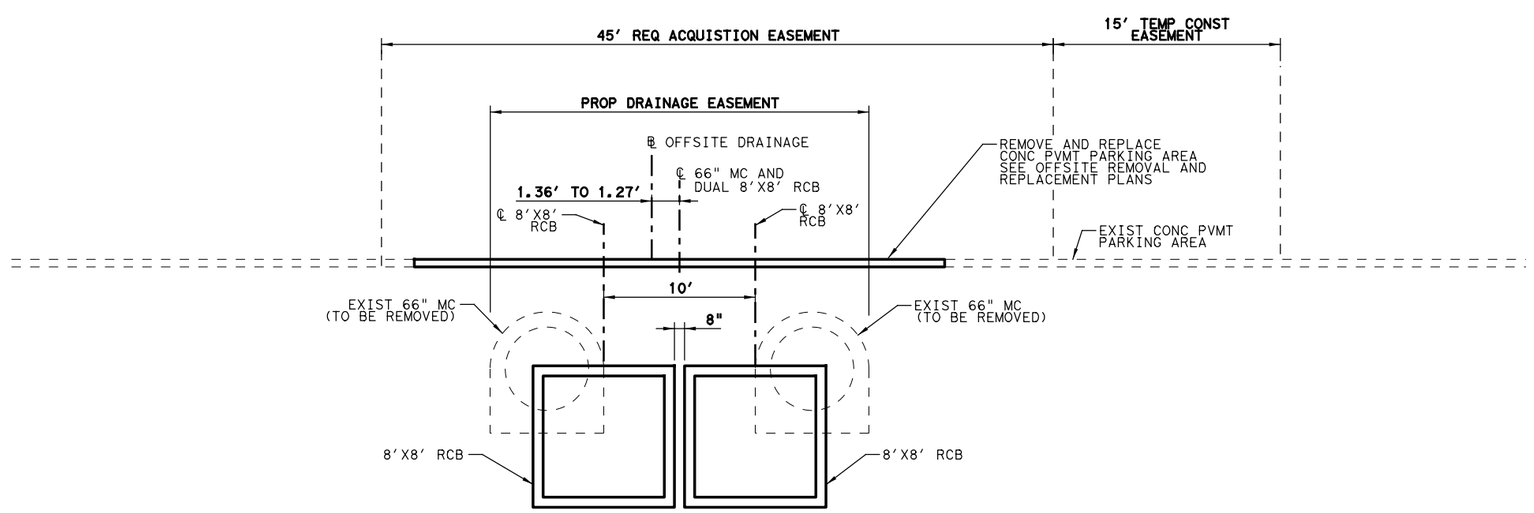


PROPOSED TYPICAL SECTION OFFSITE DRAINAGE

BEGIN TO STA 6+14

NOTE:

1. FOR TYPICAL SECTION STATIONING, SEE DRAINAGE PLAN AND PROFILE SHEETS.



PROPOSED TYPICAL SECTION OFFSITE DRAINAGE

APPROX. STA 6+14 TO STA 6+71

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8/24/2020

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HDR Engineering, Inc.
Texas Registered Engineering Firm 754

City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

PROPOSED TYPICAL DRAINAGE SECTIONS

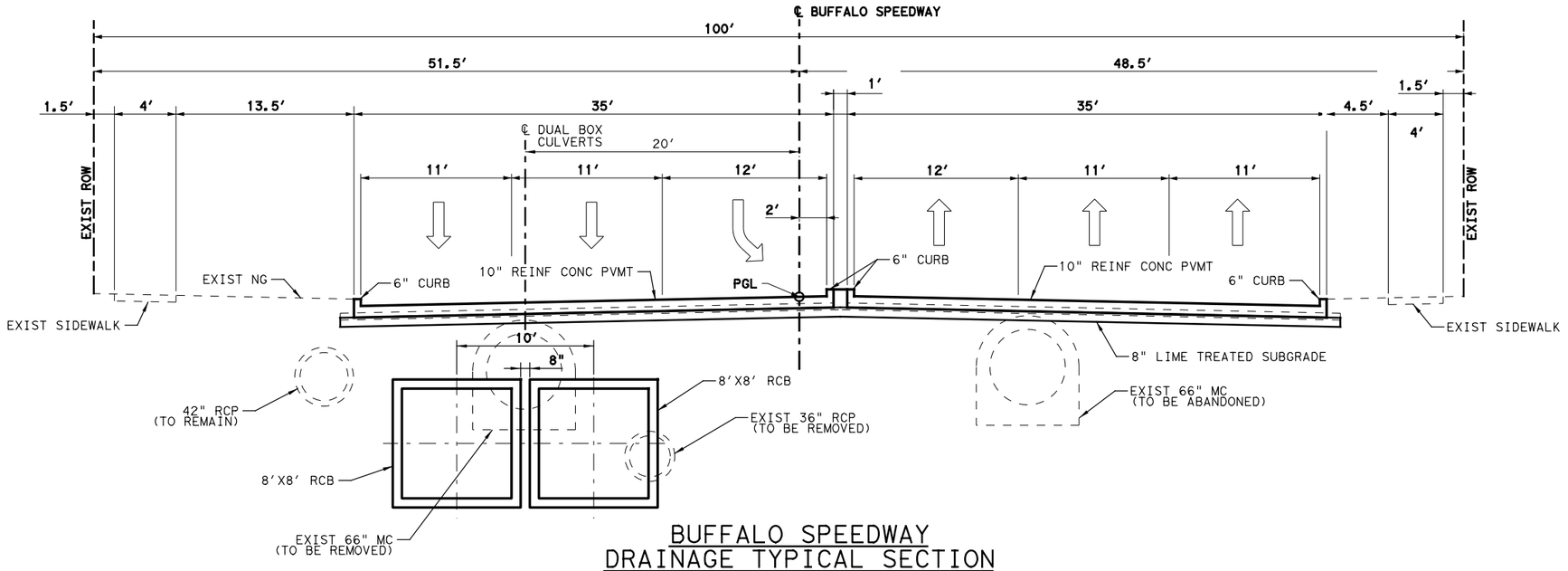
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Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		21
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

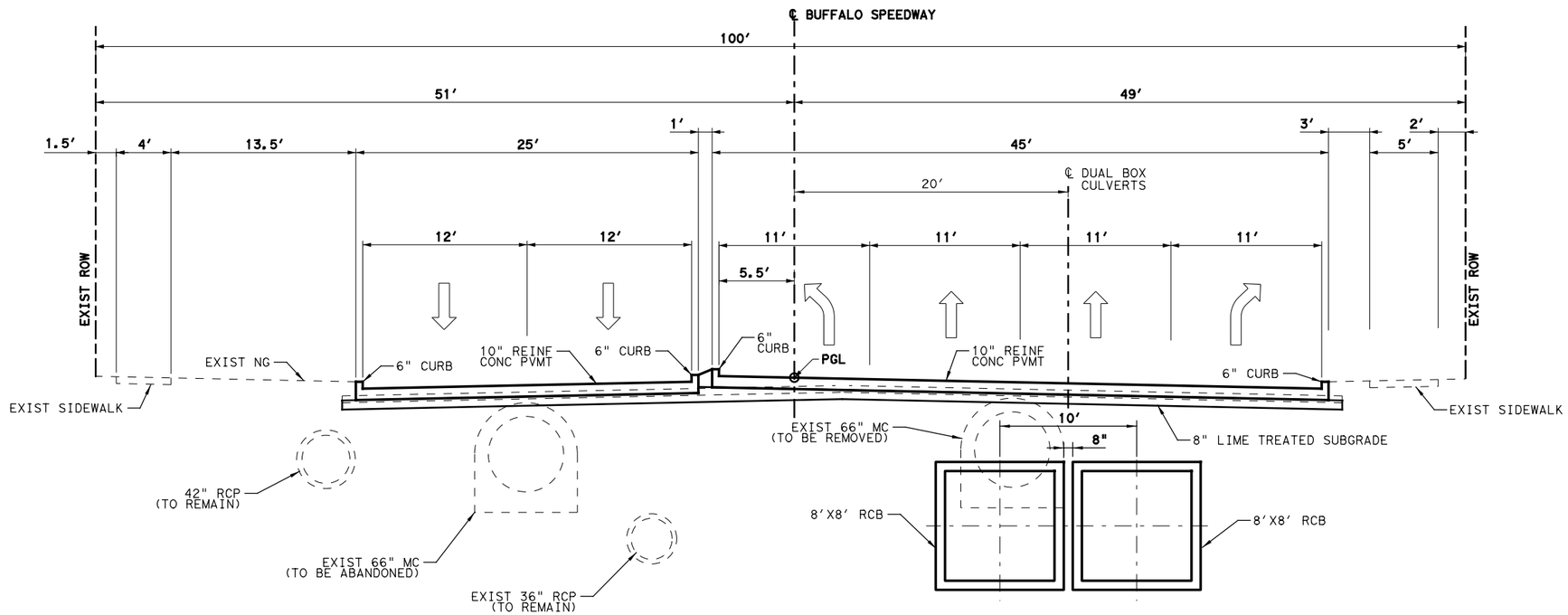
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100% SUBMITTAL



BUFFALO SPEEDWAY
DRAINAGE TYPICAL SECTION

DUAL BOX CULVERTS
APPROX. STA 2+83.97 TO STA 7+00.00



BUFFALO SPEEDWAY
DRAINAGE TYPICAL SECTION

DUAL BOX CULVERTS
APPROX. STA 7+00.00 TO STA 10+10.00

NOTES:

1. FOR TYPICAL SECTION STATIONING, SEE DRAINAGE PLAN AND PROFILE SHEETS.
2. SEE ROADWAY TYPICAL SECTIONS FOR DETAILS ON THE ROADWAY RECONSTRUCTION.

STATE OF TEXAS
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PROFESSIONAL ENGINEER
8/24/2020

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City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

PROPOSED
TYPICAL DRAINAGE SECTIONS

SCALE : NTS

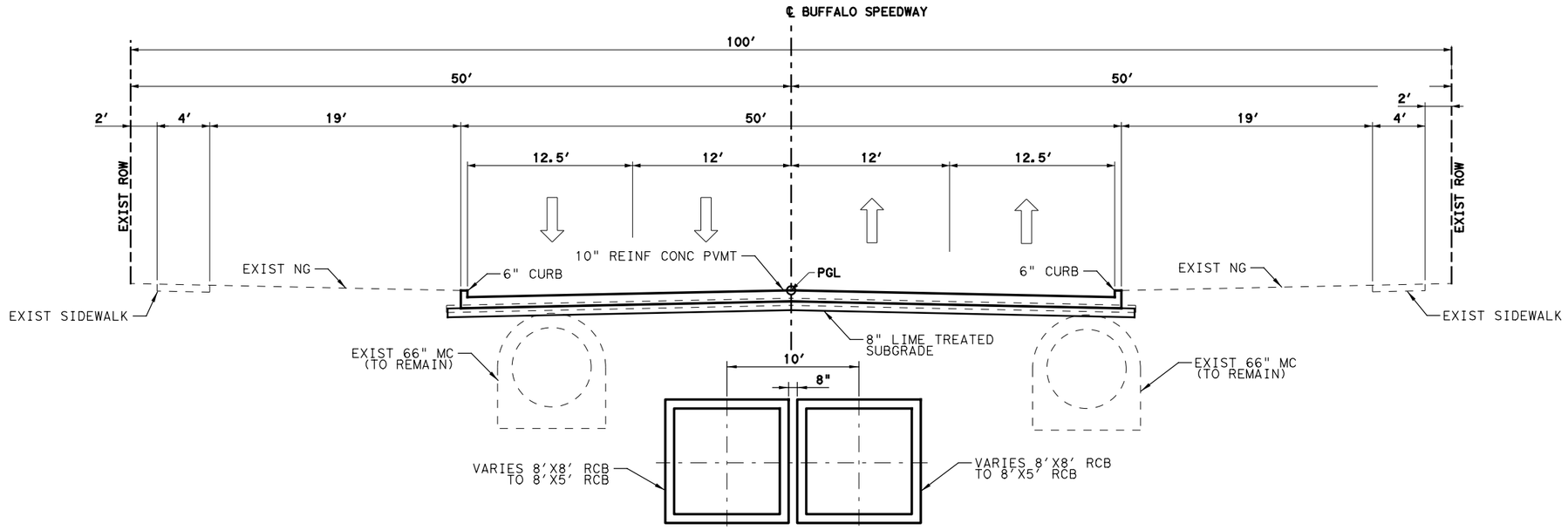
SHEET 2 OF 3

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		22
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

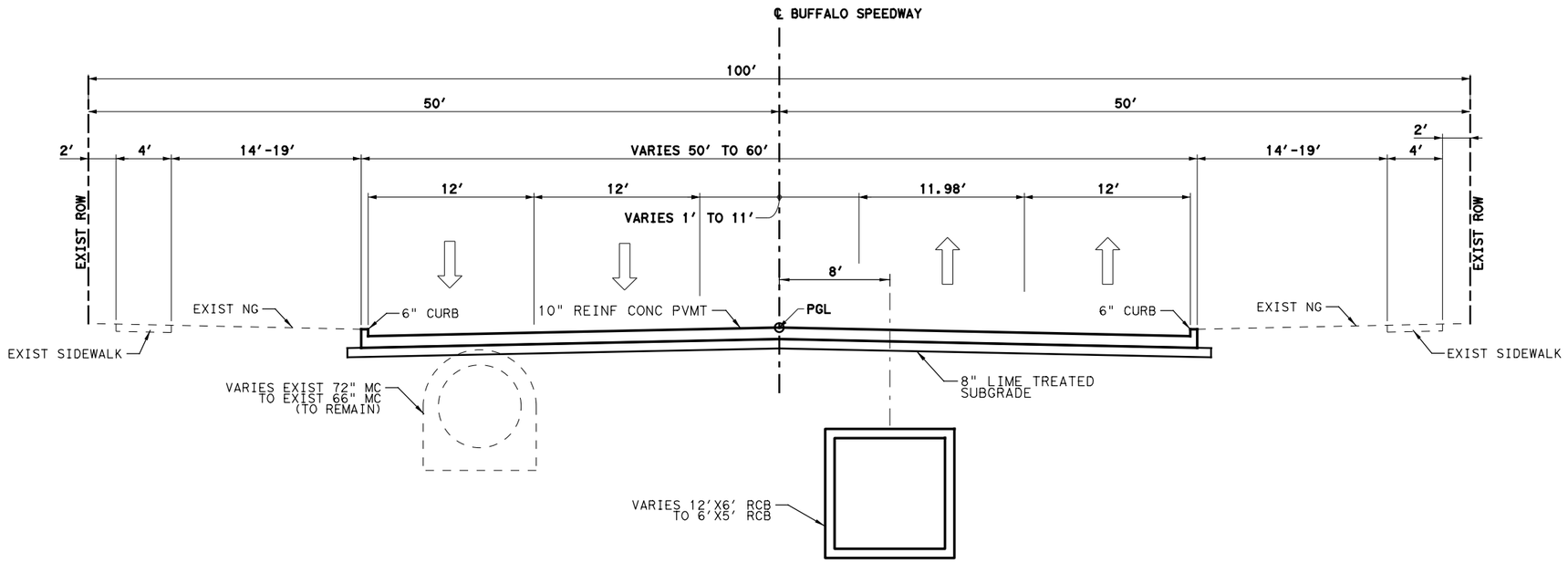
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100% SUBMITTAL



BUFFALO SPEEDWAY
DRAINAGE TYPICAL SECTION

DUAL BOX CULVERTS
NORTH OF HOLCOMBE BLVD TO AMHERST STREET
APPROX. STA 10+10.00 TO STA 45+10.61



BUFFALO SPEEDWAY
DRAINAGE TYPICAL SECTION

SINGLE BOX CULVERTS, AND RCP
NORTH OF HOLCOMBE FROM AMHERST STREET TO BISSONNET STREET
STA 45+10.61 TO STA 78+10.00

NOTES:

1. FOR TYPICAL SECTION STATIONING, SEE DRAINAGE PLAN AND PROFILE SHEETS.
2. SEE ROADWAY TYPICAL SECTIONS FOR DETAILS ON THE ROADWAY RECONSTRUCTION.

STATE OF TEXAS
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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

PROPOSED TYPICAL DRAINAGE SECTIONS

SCALE : NTS

SHEET 3 OF 3

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		23
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

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LOCATION	400 6007 CUT & RESTORE CONC PAVING SY	502 6001 BARRICADES, SIGNS AND TRAFFIC HANDLING MO	508 6001 CONSTRUCTING DETOURS SY	510 6001 ONE-WAY TRAF CONT (FLAGGER CONT) HR	512 6021 PORT CTB (DES SOURCE) (LOW PROF) (TY 1) LF	512 6022 PORT CTB (DES SOURCE) (LOW PROF) (TY 2) LF	512 6033 PORT CTB (MOVE) (LOW PROF) (TY 1) LF	512 6034 PORT CTB (MOVE) (LOW PROF) (TY 2) LF	512 6045 PORT CTB (STKPL) (LOW PROF) (TY 1) LF	512 6046 PORT CTB (STKPL) (LOW PROF) (TY 2) LF	662 6048 WK ZN PAV MRK REMOV (REFL) TY I-C EA	662 6050 WK ZN PAV MRK REMOV (REFL) TY II-A-A EA	662 6060 WK ZN PAV MRK REMOV (W)4"(BRK) LF	662 6066 WK ZN PAV MRK REMOV (W)6"(LNDP) LF	662 6067 WK ZN PAV MRK REMOV (W)6"(SLD) LF	662 6073 WK ZN PAV MRK REMOV (W)12"(SLD) LF	662 6075 WK ZN PAV MRK REMOV (W)24"(SLD) LF	662 6094 WK ZN PAV MRK REMOV (Y)4"(DOT) LF
CSJ: 0912-72-360		29																
PHASE 1																		
PHASE 2																		
STEP 1			168		600	40					125	150					26	65
STEP 2			85			40	600	40			5	95					29	
STEP 3			89				320	80			140	64					12	60
STEP 4	21		682				320	40			265	175					71	
STEP 5							200	40			170	140					33	
STEP 6							200	40			45	70					24	
STEP 7							100	40			245	170					49	
STEP 8							100	40			220	200					24	
STEP 9											175	210					44	
STEP 10							200	40				20	300	160	680	710	156	
PHASE 3																		
STEP 1			110	600	920		5760	520	1120	40	10	420					23	
STEP 2			91								235	515					11	
STEP 3			46								265	490					60	
STEP 4													1450		200		64	
PHASE 4																		
STEP 1			132				3480	480	400	40	270	470					33	50
STEP 2											270	470					87	63
PROJECT TOTALS	**21**	**29**	**1403**	**600**	**1520**	**80**	**11280**	**1360**	**1520**	**80**	**2440**	**3659**	**1750**	**160**	**880**	**710**	**746**	**238**

LOCATION	662 6095 WK ZN PAV MRK REMOV (Y)4"(SLD) LF	677 6001 ELIM EXT PAV MRK & MRKS (4") LF	677 6003 ELIM EXT PAV MRK & MRKS (8") LF	677 6005 ELIM EXT PAV MRK & MRKS (12") LF	677 6007 ELIM EXT PAV MRK & MRKS (24") LF	677 6008 ELIM EXT PAV MRK & MRKS (ARROW) EA	677 6012 ELIM EXT PAV MRK & MRKS (WORD) EA	681 6001 TEMP TRAF SIGNALS EA	690 6102 REPLACE VEHICLE LOOP DETECTOR LF	6001 6002 PORTABLE CHANGEABLE MESSAGE SIGN EA	6185 6002 TMA (STATIONARY) DAY	6185 6005 TMA (MOBILE OPERATION) DAY
CSJ: 0912-72-360								5	920			
PHASE 1										4		
PHASE 2												
STEP 1		450	435		46	3	3					
STEP 2		125	93									
STEP 3												
STEP 4		470	286		142	3	3					
STEP 5												
STEP 6												
STEP 7												
STEP 8												
STEP 9												
STEP 10												
PHASE 3												
STEP 1		6530		350	110						91	
STEP 2											39	
STEP 3											34	
STEP 4	5900											
PHASE 4												
STEP 1		3121		200	100						79	
STEP 2											36	2
PROJECT TOTALS	**5900**	**10696**	**814**	**550**	**398**	**6**	**6**	**5**	**920**	**4**	**279**	**2**

NOTE:

1) REMOVAL OF EXISTING BUTTONS IS INCIDENTAL TO THE COST OF REMOVING THE PAVEMENT MARKINGS THAT THEY SUBSTITUTE.
2) PORTABLE CHANGABLE MESSAGE SIGNS TO BE USED THROUGHOUT THE CONSTRUCTION PERIOD.

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF TRAFFIC CONTROL QUANTITIES

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		26
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

SUMMARY OF REMOVAL ITEMS														
LOCATION	104	104	104	104	104	496	496	496	496	496	7016	7016	7016	7016
	6001	6009	6011	6021	6036	6002	6003	6005	6007	6023	6028	6030	6032	6080
	REMOVING CONC (PAV)	REMOVING CONC (RIPRAP)	REMOVING CONC (MEDIANS)	REMOVING CONC (CURB)	REMOVING CONC (SIDEWALK OR RAMP)	REMOV STR (INLET)	REMOV STR (MANHOLE)	REMOV STR (WINGWALL)	REMOV STR (PIPE)	REMOVE STR (JUNCTION BOX)	REMOVE EXIST WATER PIPE (6")	REMOVE EXIST WATER PIPE (10")	REMOVE EXIST WATER PIPE (16")	REMOVE EXIST SAN SEWER PIPE (12")
	SY	SY	SY	LF	SY	EA	EA	EA	LF	EA	LF	LF	LF	LF
1 of 9		870						1	999	2				
2 of 9	861		117		130		1		478	1				
3 of 9	4780		153	620	72	2	10		1226				80	
4 of 9	6926		74		150	4	3		138	1				
5 of 9	6548				101	2	3		61	1	93			
6 of 9	6900			137	139	10	1		126	4	88			130
7 of 9	7426				264	17	8		704	3		178		
8 of 9	7214				380	14	2		424		83			
9 of 9	7385		30		250	10	3		632					
PROJECT TOTALS	**48040**	**870**	**374**	**757**	**1486**	**59**	**31**	**1**	**4788**	**12**	**264**	**178**	**80**	**130**

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF REMOVAL QUANTITIES

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		27
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

SUMMARY OF ROADWAY ITEMS

LOCATION	100 6002 PREPARING ROW	110 6001 EXCAVATION (ROADWAY)	132 6001 EMBANKMENT (FINAL)(ORD COMP)(TY A)	170 6002 IRRIGATION SYSTEM (TY I)	260 6016 LIME (HYD, COM, OR QK(SLURRY))	260 6027 LIME TRT (EXST MATL)(8")	360 6032 CONC PAV (JOINT REINF) (10")	432 6001 RIPRAP (CONC)(4 IN)	479 6001 ADJUST MH	479 6004 ADJUST MH (SAN)	481 6011 PIPE (PVC) (SCH 40) (4 IN)	529 6002 CONC CURB (TY II)	530 6004 DRIVEWAYS (CONC)	530 6026 INTERSECTIONS (CONC) (FAST TRACK)	531 6003 CONC SIDEWALKS (6")	531 6010 CURB RAMPS (TY 7)
	STA	CY	CY	LS	TON	SY	SY	CY	EA	EA	LF	LF	SY	SY	SY	EA
Sta 0+00 to Sta 4+00	1.78	213			12.86	714.2	654.9	12.73	2			534			30.3	
Sta 4+00 to Sta 9+75	5.75	2,168	10		56.63	3,145.9	2,967.2	4.63	7		20	1,608	61.5	1,846.5	54.5	4
Sta 9+75 to Sta 15+50	5.75	1,576	13		56.38	3,132.1	2,963.6	2.17	2	1	120	1,517	360.4	679.4	39.3	6
Sta 15+50 to Sta 21+25	5.75	1,171	1		52.90	2,939.2	2,840.2		1	2	220	891	343.3	449.3	56.1	4
Sta 21+25 to Sta 27+00	5.75	1,628	1		56.04	3,113.1	3,018.4		3	1	160	852	410.9	175.3	37.5	2
Sta 27+00 to Sta 32+75	5.75	1,283	5		54.79	3,043.9	2,958.6		1		200	768	521.8	293.7	37.0	2
Sta 32+75 to Sta 38+50	5.75	1,352	4		53.12	2,951.2	2,854.5		2	3	200	871	452.2	570.8	63.1	4
Sta 38+50 to Sta 44+25	5.75	1,213	1		50.47	2,803.8	2,707.9		1	1	120	863	365.5	821.3	19.7	7
Sta 44+25 to Sta 50+00	5.75	1,618	3		28.44	1,580.1	1,486.7			2	80	840	260.9	2,305.6	115.4	9
Sta 50+00 to Sta 55+75	5.75	1,424	4		43.79	2,433.0	2,322.7		2	4	180	992	311.6	1,344.6	88.3	9
Sta 55+75 to Sta 61+50	5.75	1,065	5		34.58	1,921.2	1,821.3			2	160	899	354.9	1,716.6	136.2	8
Sta 61+50 to Sta 67+25	5.75	1,333	1		38.59	2,144.1	2,042.0			3	140	919	385.6	1,569.4	130.0	8
Sta 67+25 to Sta 73+00	5.75	1,621			42.35	2,352.7	2,252.8		3	1	100	899	301.4	1,381.0	81.3	10
Sta 73+00 to Sta 78+75	5.75	1,422	1		45.14	2,507.5	2,405.7	7.43	4	1	80	916	271.7	1,380.5	83.3	6
Sta 78+75 to End	0.01	163			0.15	8.3	8.1					2				
				11												
PROJECT TOTALS	**77**	**19,250**	**49**	**11**	**626.23**	**34,790.3**	**33,304.7**	**26.95**	**28**	**21**	**1,780**	**13,371**	**4,401.8**	**14,534.0**	**971.9**	**79**

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City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF
ROADWAY
QUANTITIES

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		28
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

100% SUBMITTAL

SUMMARY OF DRAINAGE QUANTITIES

TxDOT Item No.		100 6002	110 6002	400 6005	400 6009	401 6001	402 6001	420 6010	420 6071	420 6074	420 6133	432 6005	462 6007	462 6012	462 6020	462 6021	462 6022	462 6023	462 6030	462 6036	462 6041	462 xxxx
Plan Sheet No.	Sheet Limits	PREPARING ROW	EXCAVATION (CHANNEL)	CEM STABIL BKFL	CEMENT STAB BACKFILL (INLET OR MH)	FLOWABLE BACKFILL	TRENCH EXCAVATION PROTECTION	CL A CONC (PLUG)	CL C CONC (COLLAR)	CL C CONC (MISC)	CL A CONC (CHANNEL LINING)	RIPRAP (CONC) (CL A)	CONC BOX CULV (5 FT X 3 FT)	CONC BOX CULV (6 FT X 5 FT)	CONC BOX CULV (8 FT X 5 FT)	CONC BOX CULV (8 FT X 6 FT)	CONC BOX CULV (8 FT X 7 FT)	CONC BOX CULV (8 FT X 8 FT)	CONC BOX CULV (10 FT X 6 FT)	CONC BOX CULV (11 FT X 6 FT)	CONC BOX CULV (12 FT X 6 FT)	FLOW REGULATOR
		STA	CY	CY	CY	CY	LF	EA	EA	CY	CY	CY	LF	LF	LF	LF	LF	LF	LF	LF	LF	SF
SHEET 1 OF 2	OSALI STA 0+00 to 5+75	5.75	654	1702	12		525				11	8						987				
SHEET 2 OF 2	OSALI STA 5+75 to 7+25	1.5		261			125											244				
SHEET 1 OF 15	BSW STA 0+00 to 4+00			313	8.25	133	125	3										235				104
SHEET 2 OF 15	BSW STA 4+00 to 9+75			1485	38.75	496	810	5		1.7								1171				
SHEET 3 OF 15	BSW STA 9+75 to 15+50			1358		64	611	3		1.7							254	916				130
SHEET 4 OF 15	BSW STA 15+50 to 21+25			1216			587	4		1.7							1150					88
SHEET 5 OF 15	BSW STA 21+25 to 27+00			1155			575	4		2							1150					
SHEET 6 OF 15	BSW STA 27+00 to 32+75			1166			590									1104	46					88
SHEET 7 OF 15	BSW STA 32+75 to 38+50			1162			585	2		1.7					980	170						56
SHEET 8 OF 15	BSW STA 38+50 to 44+25			1166			587	4					6		1150							
SHEET 9 OF 15	BSW STA 44+25 to 50+00			1035			613	6		1.7					180						490	
SHEET 10 OF 15	BSW STA 50+00 to 55+75			919			630	4												288	287	
SHEET 11 OF 15	BSW STA 55+75 to 61+50			843			593	7	1	1.1									103	472		
SHEET 12 OF 15	BSW STA 61+50 to 67+25			757			584	6		1.7						150			425			
SHEET 13 OF 15	BSW STA 67+25 to 73+00			670			600	4		1.1					455	120						
SHEET 14 OF 15	BSW STA 73+00 to 78+75			507			510	1		1.7				420	90							
SHEET 15 OF 15	BSW STA 78+75 to END																					
TOTAL		7.25	654	15715	59	693	8650	53	1	16.1	11	8	6	420	2855	1544	2600	3553	528	760	777	466

TxDOT Item No.		464 6005	464 6007	464 6008	464 6009	464 6010	464 6011	464 6013	465 6006	465 6009	465 xxxx	465 xxxx	465 xxxx	465 xxxx	465 xxxx	465 xxxx	465 xxxx	466 6232	481 6013	481 6016	780 6002	7033 6024
Plan Sheet No.	Sheet Limits	RC PIPE (CL III) (24 IN)	RC PIPE (CL III) (30 IN)	RC PIPE (CL III) (36 IN)	RC PIPE (CL III) (42 IN)	RC PIPE (CL III) (48 IN)	RC PIPE (CL III) (54 IN)	RC PIPE (CL III) (66 IN)	JCTBOX (COMPL) (PJB) (4FTX4FT)	JCTBOX (COMPL) (PJB) (5FTX5FT)	MANWAY ON BOX CULVERT	TYPE A JCT BOX (COMPL) (CIP) (21FTX8FT)	TYPE B JCT BOX (COMPL) (CIP) (9FTX8FT)	TYPE C JCT BOX (COMPL) (CIP) (24FTX12.42FT)	TYPE D JCT BOX (COMPL) (CIP) (9FTX9FT)	TYPE E JCT BOX (COMPL) (CIP) (9FTX11FT)	MANH (COMPL) (TY C)	WINGWALL (SPL)	PIPE (PVC) (SCH 40) (6 IN)	PIPE (PVC) (SCH 40) (12 IN)	CNC CRACK REPAIR (DISCRETE) (INJECT)	SWR (CLEANOUT) (6")
		LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA
SHEET 1 OF 2	OSALI STA 0+00 to 5+75	12															1	1	10	34		2
SHEET 2 OF 2	OSALI STA 5+75 to 7+25																					
SHEET 1 OF 15	BSW STA 0+00 to 4+00	8										1					1					
SHEET 2 OF 15	BSW STA 4+00 to 9+75	200			8							1		1			5					
SHEET 3 OF 15	BSW STA 9+75 to 15+50					5	7	14			4		2		2						10	
SHEET 4 OF 15	BSW STA 15+50 to 21+25					12					2		2								11	
SHEET 5 OF 15	BSW STA 21+25 to 27+00																				5	
SHEET 6 OF 15	BSW STA 27+00 to 32+75					15					2		2								10	
SHEET 7 OF 15	BSW STA 32+75 to 38+50					5	5					1	2								20	
SHEET 8 OF 15	BSW STA 38+50 to 44+25						6					1	3								10	
SHEET 9 OF 15	BSW STA 44+25 to 50+00	28				9			2		2	1	2			1						
SHEET 10 OF 15	BSW STA 50+00 to 55+75		40			15				1	2		1			1					50	
SHEET 11 OF 15	BSW STA 55+75 to 61+50					18					1		1								55	
SHEET 12 OF 15	BSW STA 61+50 to 67+25	9							1		2										15	
SHEET 13 OF 15	BSW STA 67+25 to 73+00			24						1	2											
SHEET 14 OF 15	BSW STA 73+00 to 78+75										3											
SHEET 15 OF 15	BSW STA 78+75 to END																					
TOTAL		257	40	24	8	79	18	14	3	2	20	5	15	1	2	2	7	1	10	34	186	2

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF DRAINAGE QUANTITIES

SCALE: N/A

SHEET 1 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		29
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

PLOT DRIVER: TXDOT_PDF_BW.pltcfg PENTABLE: TXDOT.tbl
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SUMMARY OF DRAINAGE ITEMS

LOCATION	400 6005	400 6009	420 6071	464 6005	465 6038	465 6039	465 6040	465 6330
	CEM STABIL BKFL	CEMENT STAB BACKFILL (INLET OR MH)	CL C CONC (COLLAR)	RC PIPE (CL III)(24 IN)	INLET (COMPL)(PCU)(5FT)(LEFT)	INLET (COMPL)(PCU)(5FT)(RIGHT)	INLET (COMPL)(PCU) (5FT)(BOTH)	INLET (COMPL) (TY BB)
	CY	CY	EA	LF	EA	EA	EA	EA
Sta 0+00 to Sta 4+00								
Sta 4+00 to Sta 9+75	2.87	14		6				2
Sta 9+75 to Sta 15+50	6.69	33.75	2	14	1		1	
Sta 15+50 to Sta 21+25	2.87	67.5	4	6			3	1
Sta 21+25 to Sta 27+00	2.87	67.5	4	6		2	2	
Sta 27+00 to Sta 32+75	4.30	95.5	6	9	2	2	2	
Sta 32+75 to Sta 38+50	2.87	56	4	6	2	2		
Sta 38+50 to Sta 44+25	4.30	66.75	6	9	2	1		3
Sta 44+25 to Sta 50+00	13.86	72.5	3	29	2		1	3
Sta 50+00 to Sta 55+75	7.65	50.25	2	16		1	1	2
Sta 55+75 to Sta 61+50	22.47	66	4	47				8
Sta 61+50 to Sta 67+25	12.43	41.25	3	26				5
Sta 67+25 to Sta 73+00	27.72	69.25	4	58	2			5
Sta 73+00 to Sta 78+75	50.67	61	4	106	1	1		4
DUKE ST	13.38	33		28				4
UNIVERSITY BLVD	30.59	16.5	1	64				2
E GEORGETOWN ST	8.13	16.5		17				2
LAFAYETTE ST	26.77	33.75		56		1	1	
E ROBINHOOD ST	28.20	16.5		59				2
PROJECT TOTALS	**268.64**	**877.5**	**47**	**562**	**12**	**10**	**11**	**43**

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City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF
DRAINAGE
QUANTITIES

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			30
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	

100% SUBMITTAL

SUMMARY OF CHURCH ITEM QUANTITIES

TxDOT Item No.		104 6001	104 6021	104 6036	162 6002	170 6001	275 6010	360 6028	360 6029	496 6041	496 6042	496 6052	496 6053	528 6006	529 6002	531 6003	550 6001	550 6003	550 6015	610 6004	1002 6004	1002 6005	1002 6028	5008 6001	6038 6001
Plan Sheet No.	Sheet Limits	REMOVING CONC (PAV)	REMOVING CONC (CURB)	REMOVING CONC (SIDEWALK OR RAMP)	BLOCK SODDING*	IRRIGATION SYSTEM	CEMENT TREAT (SUBGRADE) (8")	CONC PAV (JOINT REINF) (6")	CONC PAV (JOINT REINF) (7")	REMOV STR (LARGE)	REMOV STR (SMALL)	REMOV STR (TABLE)	REMOV STR (WOOD STR)	REMOVE AND RELAY PAVERS	CONC CURB (TY II)	CONC SIDEWALKS (6")	CHAIN LINK FENCE (INSTALL) (6')	CHAIN LINK FENCE (REMOVE)	REMOVE AND INSTALL EXISTING GATE	RELOCATE RDIL ASM (TRANS-BASE)	LANDSCAPE AMENITY (TY 3)	LANDSCAPE AMENITY (TY 4)	LANDSCAPE AMENITY (ENTRY GATE)	WHEEL STOPS	MULTIPOLYMER PAV MRK (W)(4")(SLD)
		SY	LF	SY	SY	LS	SY	SY	SY	EA	EA	EA	EA	SY	LF	SY	LF	LF	EA	EA	EA	EA	EA	EA	LF
SHEET 1 OF 2	OUTFALL AREA	39			2760	1		39		2	1	4	5				65	65							
SHEET 2 OF 2	PARKING LOT AREA	188	60	67	90		197		188					28	60	66			1	1	1	1	1	6	180
TOTAL		227	60	67	2850	1	197	39	188	2	1	4	5	28	60	66	65	65	1	1	1	1	1	6	180

* FOR MORE INFORMATION SEE STANDARD FERTILIZER, SEED, SOD, STRAW, COMPOST, AND WATER.

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BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF CHURCH QUANTITIES

SCALE: N/A

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		31
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

PLOT DRIVER: TXDOT_PDF_BW.pltcfg
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SUMMARY OF UTILITY QUANTITIES

TxDOT Item No.		7017 6007	7017 6079	7017 6091	7032 6011	7032 6012	7032 6013	7032 6091	7049 6010	7049 6011	7049 6012	7049 6013	7049 6014	7049 6037	7049 6043	7049 6045	7049 6046	7049 6048	7049 6052
Plan Sheet No.	Sheet Limits	SANITARY SEWER (12IN) (PVC) (C900)	ABANDON SANITARY SEWER (12IN)	FM CONNECTION (FORCE MAIN)	WTR(GATE VALVE & BOX)COMPL(10")	WTR(GATE VALVE & BOX)COMPL(8")	WTR(GATE VALVE & BOX)COMPL(6")	WTR(GATE VALVE & BOX)COMPL(12")	WATER MAIN PIPE (PVC) (4IN) (C 900)	WATER MAIN PIPE (PVC) (6IN) (C 900)	WATER MAIN PIPE (PVC) (8IN) (C 900)	WATER MAIN PIPE (PVC) (10IN) (C-900)	WATER MAIN PIPE (PVC) (12IN) (C-900)	WATER MAIN PIPE (DI) (16IN) LF	CASING STEEL (14IN)	CASING STEEL (18IN)	CASING STEEL (20IN)	CASING STEEL (24IN)	FIRE HYDRANT BRANCH (LEAD) (6IN)
		LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
SHEET 1 OF 17	STA 0+00 to 4+00							2							62				
SHEET 2 OF 17	STA 4+00 to 9+75											185		156		125		90	
SHEET 3 OF 17	STA 9+75 to 15+50																		
SHEET 4 OF 17	STA 27+00 to 32+75									125					54				
SHEET 5 OF 17	STA 32+75 to 38+50	130	2	2						85					54		54		
SHEET 6 OF 17	STA 44+25 to 50+00				1	3	4		40	55	434	165			19	70			8
SHEET 7 OF 17	STA 50+00 to 55+75					2	5		30	10	575				87				46
SHEET 8 OF 17	STA 55+75 to 61+50					2	5		82	98	577				130				22
SHEET 9 OF 17	STA 61+50 to 67+25					2	4		40	10	575								19
SHEET 10 OF 17	STA 67+25 to 73+00					2	4		40	35	575								15
SHEET 11 OF 17	STA 73+00 to 78+75					3	6		115	30	581								38
SHEET 12 OF 17	HOLCOMBE BOULEVARD																		
SHEET 13 OF 17	CASON STREET																		
SHEET 14 OF 17	PITTSBURG STREET																		
SHEET 15 OF 17	DUKE STREET																		
SHEET 16 OF 17	AMHERST STREET (EAST)				1					12									
SHEET 17 OF 17	TANGLEY ROAD (WEST)																		
TOTAL		130	2	2	2	14	28	2	347	460	3317	350	62	156	344	195	54	90	148

TxDOT Item No.		7049 6053	7049 6076	7049 6080	7049 6104	7049 6119	7049 6125	7049 6126	7049 6127	7049 6128	7049 6131	7049 6138	7049 6139	7049 6140	7049 6141	7049 6142	7049 6144	7049 xxxx
Plan Sheet No.	Sheet Limits	SPLIT STEEL CASING (20IN)	SERVICE LINE (SHORT SIDE) (1-1/2"TO 2")	TAPPING VALVE AND VALVE (6IN X 6IN)	FIRE HYDRANT ASSEMBLY	REMOVING AND SALVAGING FIRE HYDRANT	CUT AND PLUG WATER MAIN (4IN)	CUT AND PLUG WATER MAIN (6IN)	CUT AND PLUG WATER MAIN (8IN)	CUT AND PLUG WATER MAIN (10IN)	CUT AND PLUG WATER MAIN (16IN)	WET CONNECTION (4IN)	WET CONNECTION (6IN)	WET CONNECTION (8IN)	WET CONNECTION (10IN)	WET CONNECTION (12IN)	WET CONNECTION (16IN)	ABANDONING VALVES
		LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
SHEET 1 OF 17	STA 0+00 to 4+00															2		
SHEET 2 OF 17	STA 4+00 to 9+75									2	2				2		2	
SHEET 3 OF 17	STA 9+75 to 15+50																	
SHEET 4 OF 17	STA 27+00 to 32+75			1				2					3					
SHEET 5 OF 17	STA 32+75 to 38+50	30		2				2										
SHEET 6 OF 17	STA 44+25 to 50+00		4		1	2	2	1	1	1		2	1		1			2
SHEET 7 OF 17	STA 50+00 to 55+75		1		3	2	2					2						3
SHEET 8 OF 17	STA 55+75 to 61+50		2	1	2	2	2					2						2
SHEET 9 OF 17	STA 61+50 to 67+25		4		2	2	2					2						3
SHEET 10 OF 17	STA 67+25 to 73+00		1		2		2					2						2
SHEET 11 OF 17	STA 73+00 to 78+75		1		3	3	3		1			3		1				4
SHEET 12 OF 17	HOLCOMBE BOULEVARD																	
SHEET 13 OF 17	CASON STREET																	
SHEET 14 OF 17	PITTSBURG STREET																	
SHEET 15 OF 17	DUKE STREET																	
SHEET 16 OF 17	AMHERST STREET (EAST)									2			1		1			
SHEET 17 OF 17	TANGLEY ROAD (WEST)																	
TOTAL		30	13	4	13	11	13	5	2	5	2	13	5	1	4	2	2	16

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BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF UTILITY QUANTITIES

SCALE: N/A

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		32
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

PLOT DRIVER: TXDOT_PDF_BW.pltcfg PENTABLE: TXDOT.tbl
USER: DMAHER DATE: 8/18/2020 TIME: 4:8:05 PM
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SUMMARY OF TRAFFIC SIGNAL ITEMS

ITEM	CODE	DESCRIPTION	UNIT	UNIVERSITY BLVD	RICE BLVD	SUNSET BLVD	PROJECT TOTAL
416	6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	58	23		**81**
416	6033	DRILL SHAFT (TRF SIG POLE) (42 IN)	LF		13	34	**47**
618	6046	CONDT (PVC) (SCH 80) (2")	LF	75	155	190	**420**
618	6047	CONDT (PVC) (SCH 80) (2") (BORE)	LF		130	80	**210**
618	6053	CONDT (PVC) (SCH 80) (3")	LF	60	25		**85**
618	6058	CONDT (PVC) (SCH 80) (4")	LF	40	105	100	**245**
618	6059	CONDT (PVC) (SCH 80) (4") (BORE)	LF	250	260	160	**670**
620	6009	ELEC CONDR (NO.6) BARE	LF	415	665	520	**1600**
620	6011	ELEC CONDR (NO.4) BARE	LF	15	15	15	**45**
620	6012	ELEC CONDR (NO.4) INSULATED	LF	30	30	30	**90**
624	6010	GROUND BOX TY D (162922)W/APRON	EA	5	9	7	**21**
628	6146	ELC SRV TY D 120/240 060(NS)SS(E)SP(U)	EA	1	1	1	**3**
680	6003	INSTALL HWY TRF SIG (SYSTEM)	EA	1	1	1	**3**
	*	CONTROLLER, FULL ACTUATED W/CABINET	EA	1	1	1	**3**
	*	CONTROLLER FOUNDATION, TRAFFIC SIGNAL	EA	1	1	1	**3**
	*	ROD, 5/8" X 10' COPPER-CLAD GROUND (CONTROLLER ONLY)	EA	1	1	1	**3**
	*	SIGN, REGULATORY (LEFT TURN YIELD ON FLASHING YELLOW) (30" X 30") (R10-17T)	EA	2	2	2	**6**
	*	SIGN, REGULATORY (NO TURN ON RED) (24" X 30") (R10-11T)	EA		4		**4**
	*	SIGN, REGULATORY (LEFT TURN YIELD ON GREEN) (30" X 36") (R10-12)	EA			2	**2**
	*	SIGN, STREET NAME (BUFFALO SPDWY) (120" X 24")	EA	2	2	2	**6**
	*	SIGN, STREET NAME (UNIVERSITY BLVD) (120" X 24")	EA	2			**2**
	*	SIGN, STREET NAME (RICE BLVD) (96" X 24")	EA		2		**2**
	*	SIGN, STREET NAME (SUNSET BLVD) (120" X 24")	EA			2	**2**
	*	PTZ CAMERA (AXIS M5525-E)	EA	1	1	1	**3**
	*	PTZ CAMERA MOUNTING BRACKET	EA	1	1	1	**3**
	*	PTZ CAMERA POWER AND COMM CABLE	LF	70	155	65	**290**
	*	DETECTOR UNIT (DUEL CHANNEL)	EA	1	1	1	**3**
	*	DETECTOR CARD RACK (8 SLOTS & 4 SLOTS)	EA	1	1	1	**3**
	*	GPS COMMUNICATIONS UNIT	EA	1	1	1	**3**
	*	18" CABINET BASE EXTENSION	EA	1	1	1	**3**
	*	BBU FOUNDATION	EA	1	1	1	**3**
680	6004	REMOVING TRAFFIC SIGNALS	EA	1	1	1	**3**
682	6001	VEH SIG SEC (12")LED(GRN)	EA	9	8	9	**26**
682	6002	VEH SIG SEC (12")LED(GRN ARW)	EA	2	2	2	**6**
682	6003	VEH SIG SEC (12")LED(YEL)	EA	9	8	9	**26**
682	6004	VEH SIG SEC (12")LED(YEL ARW)	EA	4	4	4	**12**
682	6005	VEH SIG SEC (12")LED(RED)	EA	9	8	9	**26**
682	6006	VEH SIG SEC (12")LED(RED ARW)	EA	2	2	2	**6**
682	6018	PED SIG SEC (LED)(COUNTDOWN)	EA	8	6	8	**22**
682	6023	BACK PLATE (12")(3 SEC)	EA	9	8	9	**26**
	**	2-INCH RETROFLECTED YELLOW BORDER	EA	9	8	9	**26**
682	6024	BACK PLATE (12")(4 SEC)	EA	2	2	2	**6**
	***	2-INCH RETROFLECTED YELLOW BORDER	EA	2	2	2	**6**
684	6007	TRF SIG CBL (TY A)(12 AWG)(2 CONDR)	LF	1000	1320	1210	**3530**
684	6009	TRF SIG CBL (TY A)(12 AWG)(4 CONDR)	LF	1040	1350	1250	**3640**
684	6012	TRF SIG CBL (TY A)(12 AWG)(7 CONDR)	LF	1090	1440	1170	**3700**
686	6025	INS TRF SIG PL AM (S)1 ARM(24')	EA		1		**1**
686	6033	INS TRF SIG PL AM(S)1 ARM(32')	EA	3			**3**
686	6037	INS TRF SIG PL AM(S)1 ARM(36')	EA	1			**1**
686	6041	INS TRF SIG PL AM(S)1 ARM(40')	EA		1		**1**
686	6141	INS TRF SIG PL AM(S)2 ARM(40-32')	EA			1	**1**
686	6145	INS TRF SIG PL AM(S)2 ARM(40-36')	EA		1		**1**
686	6165	INS TRF SIG PL AM(S)2 ARM(44-36')	EA			1	**1**
687	6001	PED POLE ASSEMBLY	EA	4	6	7	**17**
	****	SCREW-IN TYPE ANCHOR ASSEMBLY	EA	4	6	7	**17**
688	6001	PED DETECT PUSH BUTTON (APS)	EA	8	6	8	**22**
	*****	SIGN, PEDESTRIAN PUSHBUTTON (SYMBOL TYPE) (9" X 15") (R10-3e) (L)	EA	6	2	2	**10**
	*****	SIGN, PEDESTRIAN PUSHBUTTON (SYMBOL TYPE) (9" X 15") (R10-3e) (R)	EA	2	4	6	**12**
688	6003	PED DETECTOR CONTROLLER UNIT	EA	1	1	1	**3**
6058	6001	BBU SYSTEM (EXTERNAL BATT CABINET)	EA	1	1	1	**3**
6292	6004	RVDS(PRESENCE DET ONLY)(INSTALL ONLY)	EA	4	4	4	**12**
	******	POWER AND COMM CABLE	LF	560	820	660	**2040**
6292	6005	RVDS(ADVANCE DET ONLY)(INSTALL ONLY)	EA	2	2	2	**6**
	*******	POWER AND COMM CABLE	LF	370	510	390	**1270**

NOTES:

* SUBSIDIARY TO ITEM 680 6003
** SUBSIDIARY TO ITEM 682 6023
*** SUBSIDIARY TO ITEM 682 6024
**** SUBSIDIARY TO ITEM 687 6001
***** SUBSIDIARY TO ITEM 688 6001
****** SUBSIDIARY TO ITEM 6292 6004
******* SUBSIDIARY TO ITEM 6292 6005

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF TRAFFIC SIGNAL QUANTITIES

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		33
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

SUMMARY OF ITS ITEMS			
LOCATION	618	618	6186
	6053	6054	6002
	CONDT (PVC) (SCH 80) (3")	CONDT (PVC) (SCH 80) (3") (BORE)	ITS GND BOX(PCAST) TY 1 (243636)W/APRN
	LF	LF	EA
1 OF 8	30	525	3
2 OF 8		1000	2
3 OF 8		1000	2
4 OF 8		1000	3
5 OF 8		1000	3
6 OF 8		1000	2
7 OF 8		1000	2
8 OF 8		550	4
PROJECT TOTALS	**30**	**7075**	**21**

SUMMARY OF ILLUMINATION ITEMS		
LOCATION	416	610
	6029	6004
	DRILL SHAFT (RDWY ILL POLE) (30 IN)	RELOCATE RD IL ASM (TRANS-BASE)
	LF	EA
1 OF 8	20	2
2 OF 8		3
3 OF 8		1
4 OF 8		
5 OF 8		3
6 OF 8		
7 OF 8		2
8 OF 8		3
PROJECT TOTALS	**20**	**14**

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF ITS AND ILLUMINATION QUANTITIES

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		34
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

SUMMARY OF PAVEMENT MARKING ITEMS

LOCATION	666 6019 REFL PAV MRK TY I (W)6"(LNDP)(060MIL) LF	666 6216 REFL PAV MRK TY II (Y)(ISLAND) SF	666 6224 PAVEMENT SEALER 4" LF	666 6225 PAVEMENT SEALER 6" LF	666 6298 RE PM W/RET REQ TY I (W)4"(BRK)(060MIL) LF	666 6307 RE PM W/RET REQ TY I (W)6"(SLD)(060MIL) LF	668 6074 PREFAB PAV MRK TY C (W)(12") (SLD) LF	668 6076 PREFAB PAV MRK TY C (W)(24") (SLD) LF	668 6077 PREFAB PAV MRK TY C (W)(ARROW) EA	668 6085 PREFAB PAV MRK TY C (W)(WORD) EA	672 6007 REFL PAV MRKR TY I-C EA	672 6009 REFL PAV MRKR TY II-A-A EA	672 6016 TRAFFIC BUTTON TY W EA	672 6017 TRAFFIC BUTTON TY Y EA	678 6001 PAV SURF PREP FOR MRK (4") LF	678 6002 PAV SURF PREP FOR MRK (6") LF
1 OF 15	36		280	94	280	58			1	1	38				280	94
2 OF 15	57	735	1060	748	1060	691	651	147	6	3	90				1060	748
3 OF 15							71	38	1	1	46	144	124	144		
4 OF 15											26	208	104	208		
5 OF 15											28	224	112	224		
6 OF 15											27	216	108	216		
7 OF 15											26	270	104	270		
8 OF 15							362	100	3	3	94	238	166	238		
9 OF 15							122	50	1	1	40	228	100	228		
10 OF 15							140	47	1	1	52	264	124	264		
11 OF 15											24	132	96	132		
12 OF 15											24	164	96	164		
13 OF 15							350	84	2	2	66	247	133	247		
14 OF 15								65	1	1	49	222	127	222		
15 OF 15											1		1			
PROJECT TOTALS	**93**	**735**	**1340**	**842**	**1340**	**749**	**1696**	**531**	**16**	**13**	**631**	**2557**	**1395**	**2557**	**1340**	**842**

SUMMARY OF SIGNING ITEMS

LOCATION	4018 6001 DRIVER FEEDBACK SPEED SIGN ASSM (SOLAR) EA	644 6027 IN SM RD SN SUP&AM TYS80(1)SA(P) EA	644 6076 REMOVE SM RD SN SUP&AM EA	685 6004 INSTL RDSD FLSH BCN ASSM (SOLAR PWRD) EA	685 6006 REMOV RDSD FLSH BCN AM (SOLAR PWRD) EA
1 OF 15		1	2		
2 OF 15		2	5	1	1
3 OF 15		10	6		
4 OF 15		3	4		
5 OF 15		3	5		
6 OF 15	1	4	2		1
7 OF 15		3	3		
8 OF 15		5	9		
9 OF 15		7	7		
10 OF 15		9	9		
11 OF 15		8	7		
12 OF 15	1	9	5		1
13 OF 15		4	9		
14 OF 15		8	5		
15 OF 15					
PROJECT TOTALS	**2**	**76**	**78**	**1**	**3**

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF SIGNING AND PAVEMENT MARKING QUANTITIES

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		35
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

ITEM NUMBER:	0432-6005	0528-6004	0528-6006	1002-6002	1002-6003
DESCRIPTION:	CLASS-A RIP RAP CONCRETE (6" THICK)	LANDSCAPE PAVERS (CONC. UNIT)	REMOVE AND RELAY PAVERS (CLAY)	LANDSCAPE AMENITY (TY 1)	LANDSCAPE AMENITY (TY 2)
UNIT:	CY	SY	SY	EA	EA
STATION/SHEET					
L1.01 (Holcombe Intersection)	0.0	69.0	0.0	1.0	4.0
L1.02 (University Intersection)	0.5	152.0	0.0	2.0	8.0
L1.03 (Rice Intersection)	0.0	152.0	0.0	2.0	8.0
L1.04 (Sunset Intersection)	0.5	157.0	0.0	2.0	8.0
L1.05 (Bissonnet Intersection)	0.0	0.0	118.0	1.0	0.0
TOTALS:	**1.0**	**530.0**	**118.0**	**8.0**	**28.0**

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF LANDSCAPING QUANTITIES

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO. (SEE THE TITLE SHEET)		SHEET NO.
6			36
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

Item no.	Unit Short Title	Unit	0+00-4+00	4+00-9+75	9+75-15+50	15+50-21+25	21+25-27+00	27+00-32+75	32+75-38+50	38+50-44+25	44+25-50+00	50+00-55+75	55+75-61+50	61+50-67+25	67+25-73+00	73+00-78+75	78+75-End	Total Qty
0100 6004	Preparing ROW (Tree) 12" -24" DIA	Ea	3	1	2			1	1			1	3			1		13
0100 6008	Preparing ROW (Tree) 0" -6" DIA	Ea	2	1														3
0100 6007	Prepare ROW (Tree) 24" DIA and larger	Ea	1		1				1		2							5
0100 6029	Prep ROW Root Pruning (To 12" Depth)	LF			450	550	560	620	620	570	550	570	580	490	580	460		6600
1004 6001	Tree Protection	EA	3	11	28	35	36	30	29	29	36	29	36	25	23	23	0	373
1022 6001	Landscape Treatment (TY 1)	EA			1		2	1	6	7								17

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S.L. ANDERSON COMPANY, LTD.
CONSULTING URBAN FORESTERS
P.O. Box 57134
Houston, TX 77527–1435
Eric E. Enos
S.L. Anderson Company, Ltd.
Consulting Urban Forester
713–515–0740

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET) TREE PROTECTION PLAN

BUFFALO SPEEDWAY IMPROVEMENTS
SUMMARY OF TPC QUANTITIES

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		37
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

SUMMARY OF SW3P ITEMS													
LOCATION	162	164	166	168	506	506	506	506	506	506	506	506	506
	6002	6009	6001	6001	6002	6011	6022	6024	6038	6039	6040	6041	6043
	* BLOCK SODDING	* BROADCAST SEED (TEMP) (WARM)	* FERTILIZER	* VEGETATIVE WATERING	ROCK FILTER DAMS (INSTALL) (TY 2)	ROCK FILTER DAMS (REMOVE)	CONSTRUCTION EXITS (INSTALL) (TY 3)	CONSTRUCTION EXITS (REMOVE)	TEMP SEDMT CONT FENCE (INSTALL)	TEMP SEDMT CONT FENCE (REMOVE)	BIODEG EROSN CONT LOGS (INSTL) (8")	BIODEG EROSN CONT LOGS (INSTL) (12")	BIODEG EROSN CONT LOGS (REMOVE)
	SY	SY	AC	MG	LF	LF	SY	SY	LF	LF	LF	LF	LF
1 OF 9					70	70			846	846		84	84
2 OF 9	127	106	0.05	5.78			222	222	290	290		14	14
3 OF 9	864	422	0.27	31.88					65	65	80		80
4 OF 9	1096	986	0.43	51.62			222	222	250	250	190	42	232
5 OF 9	1003	1003	0.41	49.74					100	100	247		247
6 OF 9	1209	1038	0.46	55.71			222	222	300	300	281	14	295
7 OF 9	1193	1179	0.49	58.81			222	222	987	987	364		364
8 OF 9	1234	1229	0.51	61.07					884	884	282		282
9 OF 9	1073	996	0.43	51.30			222	222	1083	1083	231		231
PROJECT TOTALS	**7799**	**6959**	**3.05**	**365.90**	**70**	**70**	**1110**	**1110**	**4805**	**4805**	**1675**	**154**	**1829**

*** FOR MORE INFORMATION SEE STANDARD DRAWING FERTILIZER, SEED, SOD, STRAW, COMPOST, AND WATER.**

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

SUMMARY OF SW3P QUANTITIES

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			38
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	

TRAFFIC CONTROL GENERAL CONSTRUCTION NOTES:

1. PLACE AND MAINTAIN ALL SIGNS, BARRICADES, PAVEMENT MARKINGS AND OTHER WARNING DEVICES AS SHOWN IN THESE PLANS, ACCORDING TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND ALL APPLICABLE STANDARDS. THE SIGNS, BARRICADES AND WARNING DEVICES SHOWN ARE CONSIDERED A MINIMUM AND ADDITIONAL SIGNS, BARRICADES OR WARNING DEVICES DEEMED NECESSARY BY THE ENGINEER OR DICTATED BY FIELD CONDITIONS SHALL BE PROVIDED ACCORDING TO ALL APPLICABLE STANDARDS. ADDITIONAL SIGNS OR BARRICADES WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO THE BID ITEM, "BARRICADES, SIGNS AND TRAFFIC HANDLING."
2. MAINTAIN ACCESS TO ALL PROPERTIES ALL TIMES. THIS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO VARIOUS BID ITEMS.
3. THE SEQUENCE OF WORK PROVIDED IS NOT TO BE CONSIDERED RESTRICTIVE. THE CONTRACTOR WITH WRITTEN APPROVAL OF THE ENGINEER, MAY ALTER THE SEQUENCE OF CONSTRUCTION PROVIDED THE TRAFFIC IS MAINTAINED AND THE CRITERIA ESTABLISHED HEREIN IS FOLLOWED.
4. DURING CONSTRUCTION, USE ONLY REMOVABLE PAVEMENT MARKINGS ON THE FINAL PROPOSED PAVEMENT SURFACES.
5. USE DETOUR FOR THE SIDE STREETS CONSTRUCTION. TWO CONSECUTIVE SIDE STREETS CANNOT BE CLOSED AT THE SAME TIME. SEE "SIDE STREET TYPICAL DETOUR LAYOUT" FOR ADDITIONAL INFORMATION.
6. THE CONTRACTOR SHALL ADJUST THE DRIVEWAY SIGNS AS REQUIRED FOR THE DRIVEWAY OPENING.
7. THE CONTRACTOR SHALL LIMIT THE CONSTRUCTION AREA IN ONE BLOCK AT A TIME.
8. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PER TMUTCD MUST BE PLACED 72 HOURS IN ADVANCE OF THE BEGINNING OF THE CONSTRUCTION.
9. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE THROUGHOUT THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL CORRECT DRAINAGE DEFICIENCIES THAT PRESENT A HAZARD TO THE TRAVELING PUBLIC OR PROPERTY.
10. PLACE FINAL STRIPING AND SIGNING WITH THE PROJECT LIMITS AFTER PHASE 4.
11. BARRICADES, SIGNS, CHANNELIZING DEVICES AS SHOWN SHALL BE ADJUSTED TO FIT FIELD CONDITIONS, AS DIRECTED BY THE ENGINEER.
12. ON BUFFALO SPEEDWAY, THE CONTRACTOR SHALL MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING HOURS UNLESS OTHERWISE SHOWN DIFFERENTLY IN TRAFFIC CONTROL PLANS.
13. NO WORK SHALL BE PERFORMED IN RESIDENTIAL AREA BETWEEN 7:00 PM TO 7:00 AM, UNLESS OTHERWISE SHOWN DIFFERENTLY IN TRAFFIC CONTROL PLANS AND GENERAL NOTES.
14. ALL EXISTING STOP, STREET NAME, AND OTHER NON-CONFLICTING SIGNS SHALL REMAIN IN PLACE, UNLESS OTHERWISE SPECIFIED, FOR THE ENTIRE DURATION OF THE CONSTRUCTION.
15. NO WORK SHALL BE PERFORMED IN THE TRAVELED WAY INCLUDING LOADING AND UNLOADING OF TRUCKS.
16. THE CONTRACTOR SHALL ENSURE THAT ALL BARRICADES, SIGNS, CHANNELIZING DEVICES, WARNING LIGHTS AND TRAFFIC HANDLING DEVICES ARE MAINTAINED IN A CLEAN FUNCTIONAL CONDITION ALL TIMES.
17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE TEMPORARY AND EXISTING PAVEMENT MARKINGS IN A GOOD AND VISIBLE CONDITION THROUGHOUT PROJECT DURATION.
18. THE CONTRACTOR SHALL MAINTAIN BARRICADES AND SAFETY FENCES AT EACH SITE WHERE PEDESTRIAN TRAFFIC IN EVIDENT.
19. THE CONTRACTOR SHALL REMOVE ALL EXISTING SIGNS AND STRIPING THAT CONFLICT WITH THE CONSTRUCTION SIGNS AND STRIPING. EXISTING PAVEMENT MARKINGS SHALL BE REMOVED IN AREAS WHERE TRAFFIC IS DIRECTED TO CROSS THEM. THE SIGNS SHALL BE PROPERLY STORED IN A SAFE PLACE UNTIL THE CONSTRUCTION HAS BEEN COMPLETED.
20. CONTRACTOR SHALL COVER OPEN EXCAVATIONS WITH STEEL PLATES AND ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC FLOW, AS APPLICABLE.
21. STATIONS AND OFFSETS ARE MEASURED FROM BUFFALO SPEEDWAY ℄ UNLESS NOTED OTHERWISE.
22. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
23. CONTRACTOR TO BE RESPONSIBLE FOR DAILY CLEANUP ON MISCELLANEOUS TRASH WITHIN THE PROJECT LIMITS.
24. CONTRACTOR WILL BE ALLOWED TO HAND POUR CONCRETE WHERE NECESSARY.
25. TEMPORARY PAVEMENT ON NON-CONCRETE AREAS SHALL BE A MINIMUM OF 6-INCH ASPHALT. THIS ITEM IS PAID UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
26. CONTROL THE DUST CAUSED BY CONSTRUCTION OPERATIONS. FOR SWEEPING THE BASE MATERIAL IN PREPARATION FOR LAYING ASPHALT AND FOR SWEEPING THE FINISHED CONCRETE PAVEMENT, REFER TO THE GENERAL NOTES FOR TYPES OF SWEEPERS AND APPROVED EQUALS.
27. CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF LOOP DETECTOR.
28. IRRIGATION SYSTEMS DAMAGED BY ANY CONSTRUCTION ACTIVITIES SHALL BE PAID FOR UNDER ITEM 170-6002 IRRIGATION SYSTEM (TY 1) AS LUMP SUM WHICH WILL INCLUDE THE PROJECT LIMITS IN ITS ENTIRETY.
29. THE TABLE BELOW LISTS ALL UTILITY CONTACTS FOR ANY UTILITY CONFLICTS.

UTILITY COMPANY	CONTACT NAME	PHONE NUMBER
AT&T	JOHN COWART	(713) 660-5349
CENTERPOINT ENERGY - STREET LIGHT	SANTOS CALDERON	(713) 945-3234
CENTERPOINT ENERGY - ELECTRIC	BELLAIRE SERVICE CENTER	(713) 945-4292
CENTERPOINT ENERGY - GAS	JENNIFER MARTIN	(713) 207-5649
CENTURYLINK	TODD PENTON	(713) 493-0437
CITY OF HOUSTON	MICHAEL WAHL	(832) 395-2443
	EMBRY WOODS	(832) 395-2386
CITY OF WEST UNIVERSITY PLACE	GERARDO BARRERA	(713) 662-5845
CROWN CASTLE FIBER	TERRY WALKER	(209) 484-7078
EXTENET	ROBERT BREWER	(512) 576-1768
ZAYO	MIKE PICKREL	(713) 344-2157

30. CONTRACTOR WILL ENSURE CONTINUOUS ACCESS FOR MAIL DELIVERY, TRASH PICKUP, AND EMERGENCY SERVICES DURING CONSTRUCTION.
31. CONTRACTOR SHALL MAINTAIN METRO BUS ACCESS TO METRO BUS ROUTE DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING OPERABLE METRO BUS ROUTES DURING ALL PHASES OF CONSTRUCTION.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY METRO FACILITIES DAMAGED DURING CONSTRUCTION. IF THE CONTRACTOR CANNOT IMMEDIATELY MAKE THE REPAIRS TO METRO'S SATISFACTION, METRO WILL MAKE THE REPAIRS AND BILL THE COST TO THE CONTRACTOR.
33. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE ARE NO CONFLICTS WITH METROS'S ELECTRICAL POWER, FIBER OPTICS, COMMUNICATION, SIGNALING, HIGH VOLTAGE CABLES OR ANY OTHER METRO INFRASTRUCTURE.
34. THE CONTRACTOR SHALL HAND EXCAVATE IN THE VICINITY OF COMMUNICATION AND POWER LINES FEEDING THE METRO SYSTEM.
35. THE CONTRACTOR SHALL CONTACT HOUSTON METRO'S DIRECTOR OF UNIVERSAL ACCESSIBILITY, TIM MILLS BY E-MAIL AT TM14@ridemetro.org OR BY PHONE 713-739-6861 ONE WEEK PRIOR TO CONSTRUCTION. METRO MAY ASSIGN AN INSPECTOR TO ASSURE NO DAMAGES ARE MADE TO METRO'S FACILITIES. UNIVERSAL ACCESSIBILITY WILL COORDINATE ANY PERMANENT OR TEMPORARY IMPACT ON BUS STOPS, SHELTERS AND SIDEWALK TO MAINTAIN ACCESSIBILITY.
36. THE CONTRACTOR SHALL CONTACT METRO BUS OPERATIONS A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO CONSTRUCTION IMPACTING BUS STOPS AND BUS ROUTES. THE CONTACT INFORMATION IS CARL TAYLOR, Carl.Taylor@ridemetro.org 713-615-7219, SHIRLEY MITCHELL, Shirley.Mitchell@ridemetro.org 713-615-7212 AND busstops@ridemetro.org
37. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY BUS STOP FACILITIES NEEDED, EXCEPT FOR BUS STOP SIGNS, AT NO COST TO METRO AND SHALL RESTORE ANY AFFECTED BUS STOPS PER COH IDM AND MEET CURRENT AMERICAN DISABILITY ACT (ADA) REQUIREMENTS AS REQUIRED BY LOCAL, STATE AND FEDERAL CODE AND REQUIREMENTS. NO BUS STOP SHALL BE PERMANENTLY REMOVED WITHOUT APPROVAL FROM METRO.

SEQUENCE OF CONSTRUCTION:

THE FOLLOWING NARRATIVE IS A SUPPLEMENT TO THE TRAFFIC CONTROL PLAN (TCP) SHEETS. THE TRAFFIC CONTROL PLAN RECOMMENDS SEGMENTAL CONSTRUCTION TO BALANCE CONSTRUCTION EFFICIENCY WITH THE SAFETY AND CONVENIENCE OF THE TRAVELING PUBLIC AND ABUTTERS.

PHASE 1 - WATERLINE RELOCATION

PHASE 1

1. INSTALL ADVANCED WARNING SIGNS, TRAFFIC CONTROL DEVICES, AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. INSTALL PROPOSED WATERLINES AND SANITARY SEWER IMPROVEMENTS ALONG THE EAST SIDE AND WEST SIDE OF BUFFALO SPEEDWAY EXCEPT FOR THE PROPOSED WATERLINES ALONG HOLCOMBE BLVD. INSTALL WATERLINES ALONG HOLCOMBE BLVD IN PHASE 2 STEP 4 AND STEP 7.
3. PROVIDE CONNECTIONS UNDER EXISTING ROADWAYS WHILE MAINTAINING AT LEAST ONE 10' WIDE LANE IN EACH DIRECTION ALL TIMES FOR TRAFFIC ALONG BUFFALO SPEEDWAY.
4. ALL WATERLINES AND SANITARY SEWER LINES WILL BE INSTALLED USING TRENCHLESS CONSTRUCTION.

PHASE 2 - BEGIN TO SOUTH OF CASON ST

PHASE 2 STEP 1

1. INSTALL TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. UPON COMPLETION OF SETTING THE SECURITY MEASURES, WORK WILL BEGIN AT THE HCFCD RIGHT-OF-WAY. THE CONTRACTOR SHALL MOVE WEST TO EAST REMOVING THE EXISTING MONOLITHIC PIPES, INSTALLING THE NEW BOX CULVERTS AND BACKFILLING IMMEDIATELY. NOTE THAT THE PROXIMITY OF THE EXISTING PIPE BEING REMOVED AND NEW BOX CULVERTS BEING INSTALLED NEEDS TO PROVIDE FOR TEMPORARY DRAINAGE CONNECTION WHEN REQUIRED.
3. CONNECTION OF THE 6" PVC OUTLET OF THE CHURCH DRAINAGE SYSTEM AT THE WEST AND EAST END MUST OCCUR IMMEDIATELY UPON THE INSTALLATION OF THE NEW BOX CULVERT IN THESE LOCATIONS TO PROVIDE DRAINAGE FOR THE CHURCH SYSTEM.
4. THE REMOVAL OF PIPE, INSTALLATION AND BACKFILLING OF BOXES SHALL PROCEED ACROSS THE CHURCH PROPERTY IN AN EXPEDITIOUS MANNER. REMOVAL OF THE CANOPY, BRICK PAVERS, CONCRETE SIDEWALKS, DECORATIVE METAL FENCE, ETC. SHALL OCCUR SIMULTANEOUSLY SO AS NOT TO IMPEDE THE PROGRESS OF THE REMOVAL OF PIPE AND INSTALLATION OF BOXES.
5. ONCE ALL ONSITE WORK WITHIN THE FENCE LIMIT IS COMPLETED INCLUDING REPLACEMENT OF ALL PERMANENT FENCING INCLUDING ELECTRICAL CONTROL TO PROVIDE SECURITY AS EXISTED PRIOR TO CONSTRUCTION, BUT EXCLUDING FINAL SODDING, THE SECURITY FENCING MAY BE REMOVED AT THIS TIME.
6. THE CONTRACTOR MUST COMPLETE THE OUTFALL HEADWALL INSTALLATION, BOX CULVERT INSTALLATION, RECONNECTION TO EXISTING STORM SEWER, AND THE REFURBISHMENT OF ALL CHURCH PROPERTIES, INCLUDING CANOPIES, SIDEWALK, PARKING LOT, METAL FENCING, ETC. WITHIN 90 CALENDAR DAYS.
7. A PRELIMINARY WALK THROUGH OF THE CHURCH PROPERTY WITH CHURCH REPRESENTATIVES WILL BE SCHEDULED IMMEDIATELY AFTER THE 90 DAY PERIOD. THE ENGINEER WILL IDENTIFY IN WRITING ALL DEFICIENCIES ON THE CHURCH PROPERTY AND OUTFALL LOCATION REQUIRING CORRECTION. THE CONTRACTOR SHALL CORRECT THE DEFICIENCIES IDENTIFIED WITHIN 14 CALENDAR DAYS. UPON CORRECTION, THE ENGINEER WILL MAKE AN INSPECTION TO VERIFY THAT ALL DEFICIENCIES WERE CORRECTED SATISFACTORILY.
8. INSTALL TEMPORARY TRAFFIC SIGNAL AT THE BUFFALO SPEEDWAY AND HOLCOMBE BLVD INTERSECTION.
9. REMOVE PORTION OF CONFLICTING TRAFFIC ISLANDS ALONG BUFFALO SPEEDWAY & HOLCOMBE BLVD. WITHIN THE CONSTRUCTION AREA. USE TEMPORARY PAVEMENT IN AREAS WHERE IT IS NEEDED TO CREATE MINIMUM 10' LANES.

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8/29/2016

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
SEQUENCE OF CONSTRUCTION

BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		39
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

10. CLOSE SB BUFFALO SPEEDWAY LANES ALONG SOUTH OF HOLCOMBE BLVD FROM STA 2+22 TO STA 8+30.
11. SB THROUGH TRAFFIC WILL BE SHIFTED TO THE INSIDE NB TRAVEL LANE AT HOLCOMBE BLVD. THERE WILL BE ONE LANE FOR THROUGH TRAFFIC HEADING SOUTH AND TO TURN LEFT ON TO HOLCOMBE BLVD HEADING EAST. THERE WILL BE A RIGHT TURN LANE FOR TRAFFIC TO TRAVEL WEST ON HOLCOMBE BLVD.
12. NB BUFFALO SPEEDWAY TRAFFIC WILL BE SHIFTED TO THE TWO OUTSIDE NB TRAVEL LANES. THE INSIDE NB BUFFALO SPEEDWAY TRAVEL LANE WILL BE FOR THROUGH AND LEFT TURN TRAFFIC AND THE OUTSIDE NB TRAVEL LANE WILL BE FOR THROUGH AND RIGHT TURN TRAFFIC.
13. CLOSE THE INNERMOST LEFT TURN LANE ALONG THE WB HOLCOMBE BLVD.
14. CONSTRUCT PORTION OF NEW 2-8′ X 8′ RCB STORM-SEWER ALONG BUFFALO SPEEDWAY FROM STA 2+82 TO STA 7+00.
15. CONSTRUCT PROPOSED CONCRETE PAVEMENT WITH CURBS, RAMPS, AND SIDEWALKS FROM STA 2+22 TO STA 8+30.

PHASE 2 STEP 2

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. CLOSE THE INSIDE NB AND SB TRAVEL LANES ALONG BUFFALO SPEEDWAY SOUTH OF HOLCOMBE BLVD.
3. THERE WILL BE ONE TRAVEL LANE FOR SB THROUGH TRAFFIC AND A LEFT TURN LANE TO TURN ONTO HOLCOMBE BLVD.
4. THERE WILL BE ONE THROUGH AND LEFT-TURN LANE AND ONE THROUGH AND RIGHT TURN LANE ON NB APPROACH ON BUFFALO SPEEDWAY.
5. CLOSE THE INNERMOST LEFT TURN LANE ALONG THE WB HOLCOMBE BLVD.
6. ADJUST TEMPORARY TRAFFIC SIGNAL, AS NECESSARY.
7. CONSTRUCT 14.5′ X 26′ JUNCTION BOX ON BUFFALO SPEEDWAY AT STA 7+00.
8. CONSTRUCT PROPOSED CONCRETE PAVEMENT WITH CURB, RAMPS, SIDEWALK, AND DRIVEWAYS FROM STA 2+22 TO STA 8+30.

PHASE 2 STEP 3

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT NB BUFFALO SPEEDWAY TRAFFIC TO THE INSIDE NB TRAVEL LANE. THIS WILL SERVE AS A THROUGH LANE AND LEFT AND RIGHT TURN LANE FOR TRAFFIC TURNING ONTO HOLCOMBE BLVD.
3. SB TRAFFIC WILL HAVE TWO THROUGH LANES AND A LEFT TURN LANE.
4. CLOSE THE INNERMOST LEFT TURN LANE ALONG THE HOLCOMBE BLVD WB LANES.
5. ADJUST TEMPORARY TRAFFIC SIGNAL, AS NECESSARY.
6. CONSTRUCT PORTION OF NEW 2-8′ X 8′ RCB STORM-SEWER ALONG BUFFALO SPEEDWAY FROM STA 7+00 TO STA 8+30.
7. CONSTRUCT PROPOSED CONCRETE PAVEMENT WITH CURBS, RAMPS, SIDEWALKS, AND DRIVEWAYS FROM STA 4+93 TO STA 8+30.

PHASE 2 STEP 4

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT ALL SB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE OUTERMOST SB TRAVEL LANE.
3. CLOSE NB TRAVEL LANES ALONG BUFFALO SPEEDWAY. SHIFT ALL NB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE INNERMOST SB TRAVEL LANE.
4. CLOSE EB TRAVEL LANES ALONG HOLCOMBE BLVD. SHIFT TWO LANES OF TRAFFIC TO THE INNERMOST WB TRAVEL LANES. ONE EB LANE WILL BE USED FOR THROUGH AND RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE FOR THROUGH TRAFFIC AND LEFT TURN LANE FOR NB TRAVEL ON BUFFALO SPEEDWAY.
5. SHIFT ALL WB TRAVEL LANES ALONG HOLCOMBE BLVD TO THE TWO OUTERMOST WB TRAVEL LANES. ONE WB LANE WILL BE USED FOR THROUGH TRAFFIC AND RIGHT TURN AND THE OTHER ONE WILL BE FOR THROUGH AND LEFT TURN ONTO SB BUFFALO SPEEDWAY.
6. ADJUST TEMPORARY TRAFFIC SIGNALS, AS NECESSARY.
7. REPLACE EXISTING 16" WATERLINE ON THE SOUTH SIDE OF THE BUFFALO SPEEDWAY. THIS WILL BE DONE WITH TRENCHLESS CONSTRUCTION.
8. CONSTRUCT PORTION OF NEW 2-8′ X 8′ RCB STORM-SEWER ALONG BUFFALO SPEEDWAY FROM STA 8+30 TO STA 9+02.
9. CONSTRUCT PROPOSED CONCRETE PAVEMENT WITH CURBS, RAMPS, AND SIDEWALKS IN THE SE QUADRANT FROM STA 8+30 TO STA 9+02.

PHASE 2 STEP 5

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. CONTRACTOR TO COORDINATE WITH AT&T FOR JOINT CONSTRUCTION DURING PHASE 2 STEPS 5 AND 6.
3. SHIFT ALL SB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE OUTERMOST SB TRAVEL LANE.
4. CLOSE NB TRAVEL LANES ALONG BUFFALO SPEEDWAY. SHIFT ALL NB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE INNERMOST SB TRAVEL LANE.
5. EB TRAFFIC ALONG HOLCOMBE BLVD WILL HAVE TWO THROUGH LANES AND ONE LEFT TURN LANE FOR NB TRAFFIC ALONG BUFFALO SPEEDWAY.
6. SHIFT WB TRAFFIC ALONG HOLCOMBE BLVD TO THE TWO OUTERMOST WB TRAVEL LANES. ONE LANE WILL BE FOR THROUGH RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE FOR THROUGH AND LEFT TURNING TRAFFIC HEADING SOUTH ON BUFFALO SPEEDWAY.
7. ADJUST TEMPORARY TRAFFIC SIGNAL, AS NECESSARY.
8. CONSTRUCT PORTION OF NEW 2-8′ X 8′ RCB STORM-SEWER ALONG BUFFALO SPEEDWAY FROM STA 9+02 TO STA 9+40. CONSTRUCT 21′ X 8′ CONFLICT BOX.
9. CONSTRUCT PROPOSED CONCRETE PAVEMENT FROM STA 9+02 TO STA 9+40.

PHASE 2 STEP 6

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT ALL NB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE OUTERMOST NB TRAVEL LANE.
3. CLOSE SB TRAVEL LANES ALONG BUFFALO SPEEDWAY. SHIFT ALL SB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE INNERMOST NB TRAVEL LANE.
4. SHIFT EB TRAFFIC ALONG HOLCOMBE BLVD TO THE OUTERMOST EB TRAVEL LANES. ONE LANE WILL BE FOR THROUGH AND RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE USED FOR THROUGH AND LEFT TURNING ONTO NB BUFFALO SPEEDWAY.
5. SHIFT WB TRAFFIC ALONG HOLCOMBE BLVD TO THE TWO OUTERMOST WB TRAVEL LANES. ONE LANE WILL BE FOR THROUGH AND RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE USED FOR THROUGH AND LEFT TURNING ONTO SB BUFFALO SPEEDWAY.
6. ADJUST TEMPORARY TRAFFIC SIGNAL, AS NECESSARY.
7. CONSTRUCT PROPOSED CONCRETE PAVEMENT FROM STA 9+02 TO STA 9+40.

PHASE 2 STEP 7

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT ALL SB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE OUTERMOST SB TRAVEL LANE.
3. CLOSE NB TRAVEL LANES ALONG BUFFALO SPEEDWAY. SHIFT ALL NB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE INNERMOST SB TRAVEL LANE.
4. CLOSE WB TRAVEL LANES ALONG HOLCOMBE BLVD. SHIFT TWO LANES OF TRAFFIC TO THE INNERMOST TRAVEL LANES. ONE WB LANE WILL BE FOR THROUGH AND RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE USED FOR THROUGH TRAFFIC AND LEFT TURNING ONTO SB BUFFALO SPEEDWAY.
5. SHIFT ALL EB TRAVEL LANES ALONG HOLCOMBE BLVD TO THE TWO OUTERMOST EB TRAVEL LANES. ONE EB LANE WILL BE FOR THROUGH TRAFFIC AND RIGHT TURN AND THE OTHER ONE WILL BE USED FOR THROUGH TRAFFIC AND LEFT TURN ONTO NB BUFFALO SPEEDWAY.
6. ADJUST TEMPORARY TRAFFIC SIGNAL, AS NECESSARY.
7. REPLACE EXISTING 10" WATERLINE ON THE NORTH SIDE OF THE BUFFALO SPEEDWAY. THIS WILL BE DONE WITH TRENCHLESS CONSTRUCTION.
8. CONSTRUCT PORTION OF NEW 2-8′ X 8′ RCB STORM-SEWER ALONG BUFFALO SPEEDWAY FROM STA 9+40 TO STA 10+00.
9. CONSTRUCT PROPOSED CONCRETE PAVEMENT WITH CURBS, RAMPS, AND SIDEWALKS IN THE NE QUADRANT FROM STA 9+40 TO STA 10+00.

PHASE 2 STEP 8

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT ALL NB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE OUTERMOST NB TRAVEL LANE.
3. CLOSE SB TRAVEL LANES ALONG BUFFALO SPEEDWAY. SHIFT ALL SB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE INNERMOST NB TRAVEL LANE.
4. CLOSE WB TRAVEL LANES ALONG HOLCOMBE BLVD. SHIFT TWO LANES OF WB TRAFFIC TO THE INNERMOST EB TRAVEL LANES. ONE WB LANE WILL BE FOR THROUGH AND RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE USED FOR THROUGH AND LEFT TURNING TRAFFIC ONTO SB BUFFALO SPEEDWAY.
5. SHIFT ALL EB TRAVEL LANES ALONG HOLCOMBE BLVD TO THE TWO OUTERMOST EB TRAVEL LANES. ONE EB LANE WILL BE FOR THROUGH AND RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE USED FOR THRU AND LEFT TURNING ONTO NB BUFFALO SPEEDWAY.
6. ADJUST TEMPORARY TRAFFIC SIGNAL, AS NECESSARY.
7. CONTRACTOR TO INSTALL CIP TYPE D JUNCTION BOX AT STA 10+50 WITH 66" STUB OUT.
8. CONSTRUCT PROPOSED CONCRETE PAVEMENT WITH CURBS, RAMPS, SIDEWALKS, AND DRIVEWAYS IN THE NW QUADRANT FROM STA 9+40 TO STA 12+20.

PHASE 2 STEP 9

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT ALL NB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE OUTERMOST NB TRAVEL LANE.
3. CLOSE SB TRAVEL LANES ALONG BUFFALO SPEEDWAY. SHIFT ALL SB THROUGH TRAFFIC ALONG BUFFALO SPEEDWAY TO THE INNERMOST NB TRAVEL LANE.
4. CLOSE EB TRAVEL LANES ALONG HOLCOMBE BLVD. SHIFT TWO LANES OF TRAFFIC TO THE INNERMOST WB TRAVEL LANES. ONE EB LANE WILL BE FOR THROUGH AND RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE USED FOR THROUGH TRAFFIC AND LEFT TURNING ONTO NB BUFFALO SPEEDWAY.
5. SHIFT ALL WB TRAVEL LANES ALONG HOLCOMBE BLVD TO THE TWO OUTERMOST WB TRAVEL LANES. ONE WB LANE WILL BE FOR THROUGH AND RIGHT TURNING TRAFFIC AND THE OTHER ONE WILL BE USED FOR THROUGH AND LEFT TURNING ONTO SB BUFFALO SPEEDWAY.
6. ADJUST TRAFFIC SIGNALS, AS NECESSARY.
7. CONSTRUCT PROPOSED CONCRETE PAVEMENT WITH CURBS, RAMPS, AND SIDEWALKS IN THE SW QUADRANT FROM STA 8+30 TO STA 9+02.
8. INSTALL TRAFFIC ISLANDS ALONG HOLCOMBE BLVD AND BUFFALO SPEEDWAY SOUTH OF THE HOLCOMBE/BUFFALO SPEEDWAY INTERSECTION.

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN SEQUENCE OF CONSTRUCTION

BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		40
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

PHASE 2 STEP 10

1. CONSTRUCTION OF PHASE 2 STEP 10 WILL HAVE TO BE DONE DURING OFF PEAK HOURS AND WEEKENDS.
2. INSTALL TEMPORARY MARKINGS SOUTH OF HOLCOMBE BLVD TO MATCH THE PROPOSED PAVEMENT MARKING PLAN.
3. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. DURING NON-CONSTRUCTION HOURS, SHIFT ALL SB BUFFALO SPEEDWAY TRAFFIC TO THE OUTERMOST TRAVEL LANE. THERE WILL BE ONE THROUGH LANE FOR SB TRAFFIC.
5. DURING NON-CONSTRUCTION HOURS, SHIFT ALL NB BUFFALO SPEEDWAY TRAFFIC TO THE OUTERMOST TRAVEL LANE. THERE WILL BE ONE THROUGH LANE FOR NB TRAFFIC.
6. DURING OFF PEAK AND WEEKEND CONSTRUCTION, ALL NB TRAVEL LANES ALONG BUFFALO SPEEDWAY (NORTH OF HOLCOMBE BLVD.) WILL BE CLOSED. NB BUFFALO SPEEDWAY AND HOLCOMBE BLVD. TRAFFIC WILL BE DETOURED THROUGH KIRBY DR. SEE PHASE 2 STEP 10 DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
7. DURING OFF PEAK AND WEEKEND CONSTRUCTION, THERE WILL BE TWO NB TRAVEL LANES ALONG BUFFALO SPEEDWAY, SOUTH OF HOLCOMBE BLVD. ONE WILL BE FOR LEFT TURN ONTO HOLCOMBE BLVD. AND THE OTHER ONE WILL BE FOR RIGHT TURN ONTO HOLCOMBE BLVD.
8. CONSTRUCT PORTION OF NEW 8′ X 8′ RCB STORM-SEWER ALONG BUFFALO SPEEDWAY FROM STA 10+00 TO STA 12+20.
9. CONSTRUCT PROPOSED CONCRETE PAVEMENT WITH CURBS AND DRIVEWAY FROM STA 10+00 TO STA 12+20.
10. DURING THE NON-CONSTRUCTION HOURS, COVER CONSTRUCTION AREA WITH METAL PLATES AND PROVIDE A MINIMUM 10′ LANE ALONG NB BUFFALO SPEEDWAY (NORTH OF HOLCOMBE BLVD.).

PHASE 3 - SOUTH OF CASON ST TO AMHERST ST

PHASE 3 STEP 1

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. INSTALL TEMPORARY PAINT SOUTH OF HOLCOMBE BLVD TO MATCH THE PROPOSED "SIGNING & PAVEMENT MARKING PLAN".
3. REMOVE ANY EXISTING MEDIANS OR TRAFFIC ISLANDS THAT CONFLICT WITH THE CONSTRUCTION. USE TEMPORARY PAVEMENT IN AREAS WHERE IT IS NEEDED TO CREATE MINIMUM 10′ LANES.
4. DURING DAYTIME, SHIFT TRAFFIC TO A ONE LANE TWO-WAY OPERATION ON THE EAST SIDE OF BUFFALO SPEEDWAY. THIS WILL BE CONTROLLED BY FLAGGERS AT THE BEGINNING AND END OF THE CONSTRUCTION AREA.
5. DURING NIGHTTIME, SHIFT TRAFFIC FROM THE INSIDE NB AND SB LANES TO THE OUTSIDE NB AND SB LANES.
6. ADJUST TRAFFIC SIGNAL, AS NECESSARY.
7. PROVIDE DETOUR FOR SIDE/CROSS STREET CLOSURES.
8. MAINTAIN ACCESS TO DRIVEWAYS AND SIDE STREETS.
9. INSTALL PROPOSED STORM SEWER LINES AND CONNECTIONS TO EXISTING STORM SEWER LINES ALONG BUFFALO SPEEDWAY FROM STA 12+20 TO STA 44+90. THE PROPOSED SEWER LINES WILL BE CONSTRUCTED BLOCK BY BLOCK ALONG BUFFALO SPEEDWAY SO THAT NO TWO SIDE STREETS ARE CLOSED AT ONE TIME.
10. CONSTRUCT PROPOSED PAVEMENT ALONG BUFFALO SPEEDWAY AFTER PROPOSED STORM SEWER LINES HAVE BEEN CONSTRUCTED BLOCK BY BLOCK, FROM STA 12+20 TO STA 44+90.

PHASE 3 STEP 2

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT NB TRAFFIC ALONG BUFFALO SPEEDWAY TO THE INNERMOST SB LANES TO PROVIDE TWO-WAY OPERATION.
3. CONTRACTOR TO PROVIDE ACCESS TO DRIVEWAYS.
4. ADJUST TRAFFIC SIGNALS AS NECESSARY.
5. CLOSE SIDE STREETS WHEN NECESSARY. DO NOT CLOSE TWO CONSECUTIVE SIDE STREETS DURING CONSTRUCTION.
6. PROVIDE DETOUR FOR SIDE/CROSS STREET CLOSURES. SEE SHEET 160 "TRAFFIC CONTROL PLAN - SIDE STREET TYPICAL DETOUR LAYOUT".
7. CONSTRUCT PROPOSED PAVEMENT, CURBS, DRIVEWAYS, RAMPS, AND SIDEWALKS ALONG BUFFALO SPEEDWAY AFTER PROPOSED SEWER LINES HAVE BEEN CONSTRUCTED, FROM STA 12+20 TO STA 44+90.
8. CONSTRUCT PROPOSED PAVEMENT, CURBS, RAMPS, AND SIDEWALKS ALONG AMHERST ST. EAST OF BUFFALO SPEEDWAY.
9. CONSTRUCT EAST SIDE OF UNIVERSITY BLVD. INTERSECTION PER TCP DETAIL.

PHASE 3 STEP 3

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT SB TRAFFIC ALONG BUFFALO SPEEDWAY TO THE NEWLY CONSTRUCTED NB PAVEMENT TO PROVIDE TWO-WAY TRAFFIC OPERATION.
3. CONTRACTOR TO PROVIDE ACCESS TO DRIVEWAYS.
4. CLOSE SIDE STREETS WHEN NECESSARY. DO NOT CLOSE TWO CONSECUTIVE SIDE STREETS DURING CONSTRUCTION.
5. ADJUST TRAFFIC SIGNALS, AS NECESSARY.
6. PROVIDE DETOUR FOR SIDE/CROSS STREET CLOSURES.
7. CONSTRUCT PROPOSED PAVEMENT, CURBS, DRIVEWAYS, RAMPS, AND SIDEWALKS WITHIN THE WORK ZONE FROM STA 12+20 TO STA 44+90.
8. INSTALL TRAFFIC ISLANDS ALONG BUFFALO SPEEDWAY, AS NECESSARY.
9. CONSTRUCT WEST SIDE OF UNIVERSITY BLVD. INTERSECTION PER TCP DETAIL.

PHASE 3 STEP 4

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. INSTALL TEMPORARY MARKINGS BETWEEN HOLCOMBE BLVD AND UNIVERSITY BLVD TO MATCH THE PROPOSED PAVEMENT MARKING PLAN.
3. CLOSE BUFFALO SPEEDWAY AND BOTH EAST AND WEST AMHERST ST.
4. PROVIDE DETOUR, PER DETOUR LAYOUT.
5. CONSTRUCT PROPOSED STORM SEWER LINES AND JUNCTION BOX ALONG BUFFALO SPEEDWAY FROM STA 44+90 TO STA 45+60.
6. CONSTRUCT PROPOSED PAVEMENT, USING FAST TRACK PAVEMENT, CURBS, RAMPS, AND SIDEWALKS WITHIN THE WORK ZONE FROM STA 44+90 TO STA 45+60.

PHASE 4 - AMHERST ST. TO END

PHASE 4 STEP 1

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. REMOVE ANY EXISTING MEDIANS OR TRAFFIC ISLANDS THAT CONFLICT WITH CONSTRUCTION. USE TEMPORARY PAVEMENT IN AREAS WHERE IT IS NEEDED TO CREATE MINIMUM 10′ LANES.
3. SHIFT NB AND SB TRAFFIC ALONG BUFFALO SPEEDWAY TO EXISTING SB TRAVEL LANES.
4. CONTRACTOR TO PROVIDE ACCESS TO DRIVEWAYS.
5. CLOSE SIDE STREETS WHEN NECESSARY. DO NOT CLOSE TWO CONSECUTIVE SIDE STREETS DURING CONSTRUCTION.
6. ADJUST TRAFFIC SIGNALS, AS NECESSARY.
7. PROVIDE DETOUR, PER DETOUR LAYOUT.
8. CONSTRUCT EAST SIDE OF RICE BLVD. AND SUNSET BLVD. INTERSECTIONS PER TCP DETAIL.
9. INSTALL PROPOSED STORM SEWER LINES AND CONNECTIONS TO EXISTING STORM SEWER LINES ALONG BUFFALO SPEEDWAY FROM STA 45+60 TO STA 78+76.21. THE PROPOSED SEWER LINE WILL BE CONSTRUCTED BLOCK BY BLOCK ALONG BUFFALO SPEEDWAY SO THAT NO TWO SIDE STREETS ARE CLOSED AT ONE TIME.
10. CONSTRUCT PROPOSED PAVEMENT, CURBS, DRIVEWAYS, AND SIDEWALKS ALONG THE NB LANE OF BUFFALO SPEEDWAY FROM STA 45+60 TO STA 78+76.21.

PHASE 4 STEP 2

1. INSTALL/ADJUST TRAFFIC CONTROL DEVICES AND STORMWATER POLLUTION DEVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. SHIFT NB AND SB TRAFFIC ALONG BUFFALO SPEEDWAY TO NEWLY CONSTRUCTED NB PAVEMENT.
3. CONTRACTOR TO PROVIDE ACCESS TO DRIVEWAYS.
4. CLOSE SIDE STREETS WHEN NECESSARY. DO NOT CLOSE TWO CONSECUTIVE SIDE STREETS DURING CONSTRUCTION.
5. PROVIDE DETOUR, PER DETOUR LAYOUT.
6. CONSTRUCT WEST SIDE OF RICE BLVD. AND SUNSET BLVD. INTERSECTION PER TCP DETAILS.
7. CONSTRUCT PROPOSED PAVEMENT, CURBS, DRIVEWAYS, AND SIDEWALKS ALONG THE SB LANE ALONG BUFFALO SPEEDWAY FROM STA 45+60 TO STA 78+76.21.
8. CONSTRUCT MEDIAN.

FINAL STEP

1. CONSTRUCT ALL FINAL MEDIANS ALONG BUFFALO SPEEDWAY.
2. PLACE FINAL STRIPING AND ALL OTHER APPURTENANCES REQUIRED TO COMPLETE BUFFALO SPEEDWAY TO THE FINAL CONFIGURATION AS SHOWN IN THE PLANS AND STANDARDS.

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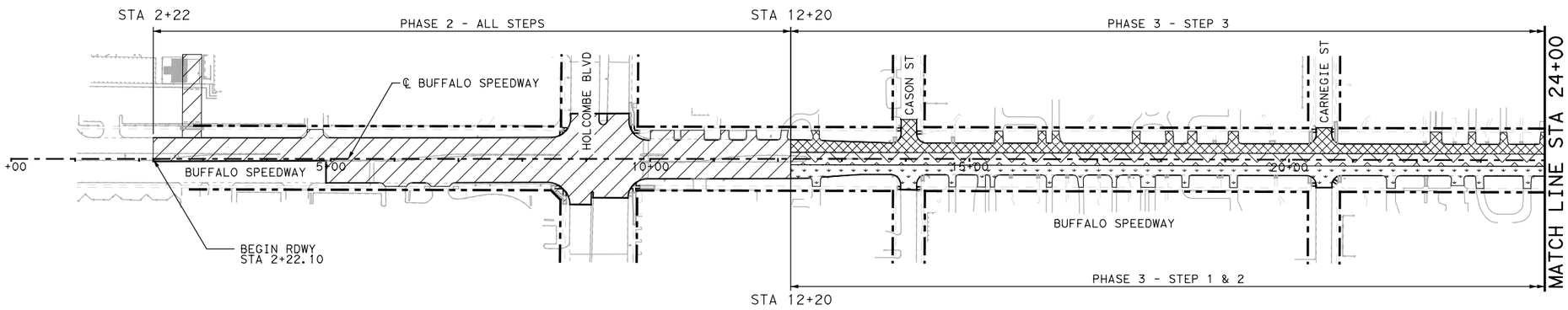
BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

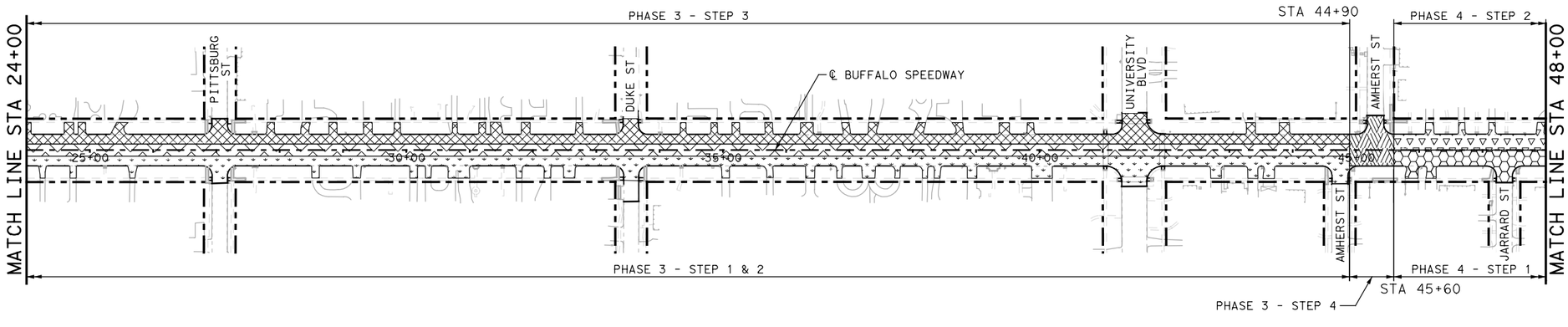
TRAFFIC CONTROL PLAN
SEQUENCE OF CONSTRUCTION

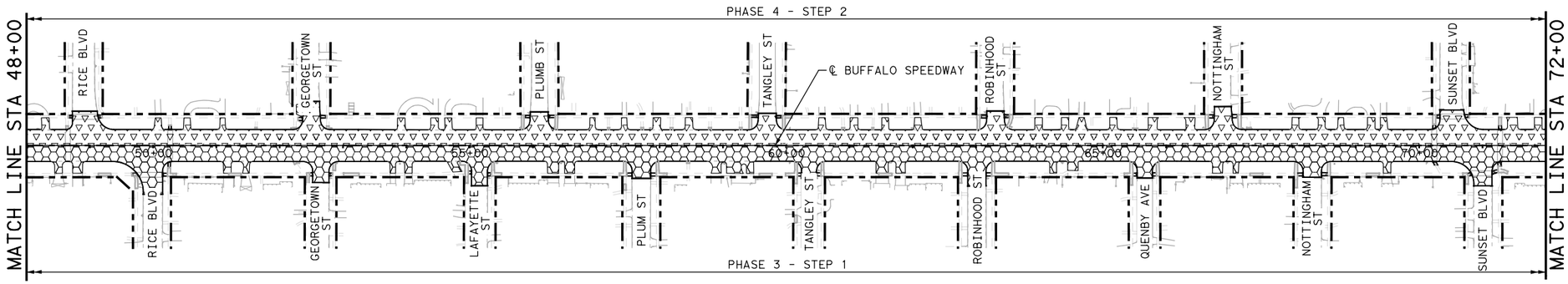
BUFFALO SPEEDWAY

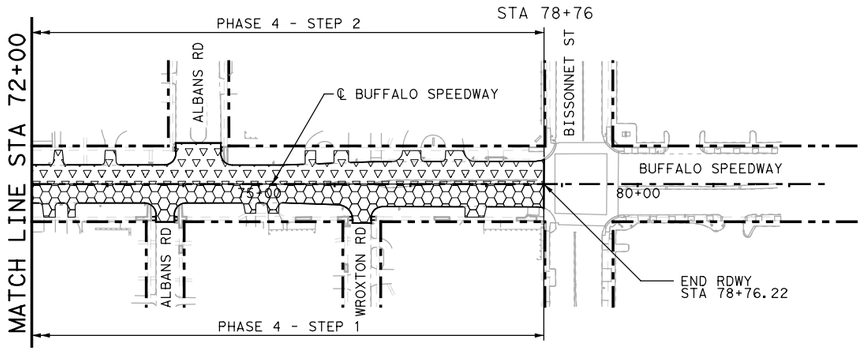
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			41
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	









NOTES:

1. TCP PHASE 1 CONSISTS OF WATER LINE INSTALLATION.
2. INTERSECTIONS TO BE CONSTRUCTED IN SECTIONS, REFER TO INTERSECTIONS TCP.
3. FOR MORE INFORMATION ON PHASE 2, REFER TO "PHASE 2 CONSTRUCTION SEQUENCE LAYOUT".



LEGEND:

- TCP PHASE 2 - ALL STEPS
- TCP PHASE 3 - STEP 1
- TCP PHASE 3 - STEP 2
- TCP PHASE 3 - STEP 3
- TCP PHASE 3 - STEP 4
- TCP PHASE 4 - STEP 1
- TCP PHASE 4 - STEP 1



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Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

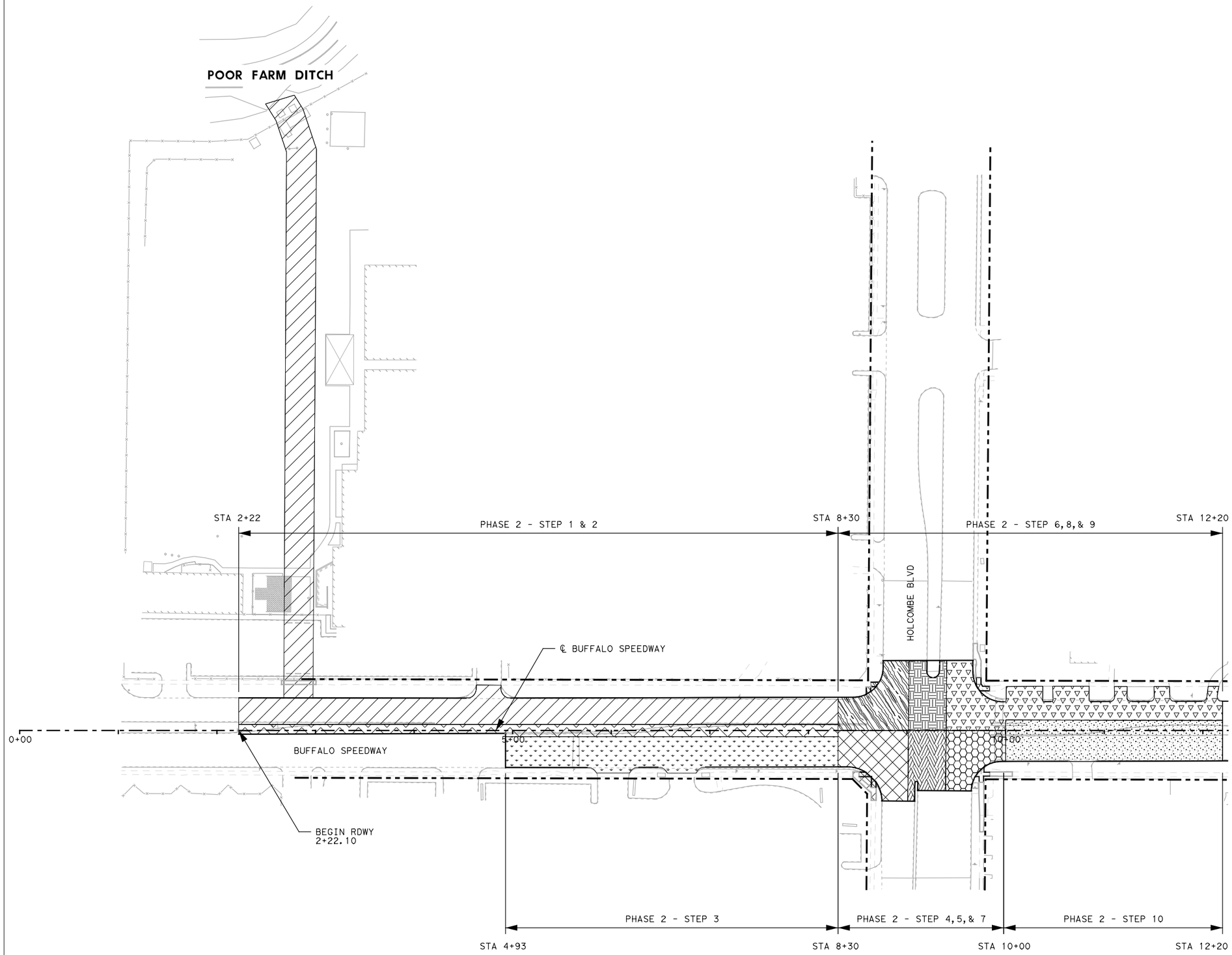
OVERALL CONSTRUCTION SEQUENCE LAYOUT

BUFFALO SPEEDWAY

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		42
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 100′ 200′

SCALE IN FEET

LEGEND:

- TCP PHASE 2 - STEP 1
- TCP PHASE 2 - STEP 2
- TCP PHASE 2 - STEP 3
- TCP PHASE 2 - STEP 4
- TCP PHASE 2 - STEP 5
- TCP PHASE 2 - STEP 6
- TCP PHASE 2 - STEP 7
- TCP PHASE 2 - STEP 8
- TCP PHASE 2 - STEP 9
- TCP PHASE 2 - STEP 10

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

PHASE 2 CONSTRUCTION SEQUENCE LAYOUT

BUFFALO SPEEDWAY

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		43
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

(1) OBEY WARNING SIGNS STATE LAW
R20-3T
48" x 42"

(2) STAY ALERT
TALK OR TEXT LATER
G20-10T
60" x 48"

(3) BEGIN WORK ZONE
TRAFFIC FINES DOUBLE
WHEN WORKERS ARE PRESENT
G20-9TP 24" x 24"
R20-5T 24" x 30"
R20-5aTP 24" x 12"

(4) ROAD WORK AHEAD
CW20-1D
48" x 48"

(5) DO NOT PASS
R4-1
36" x 48"

(6) BEGIN ROAD WORK NEXT 1.5 MILES
NAME
ADDRESS
CITY
STATE
CONTRACTOR
G20-5T 48" x 24"
G20-6T 48" x 30"

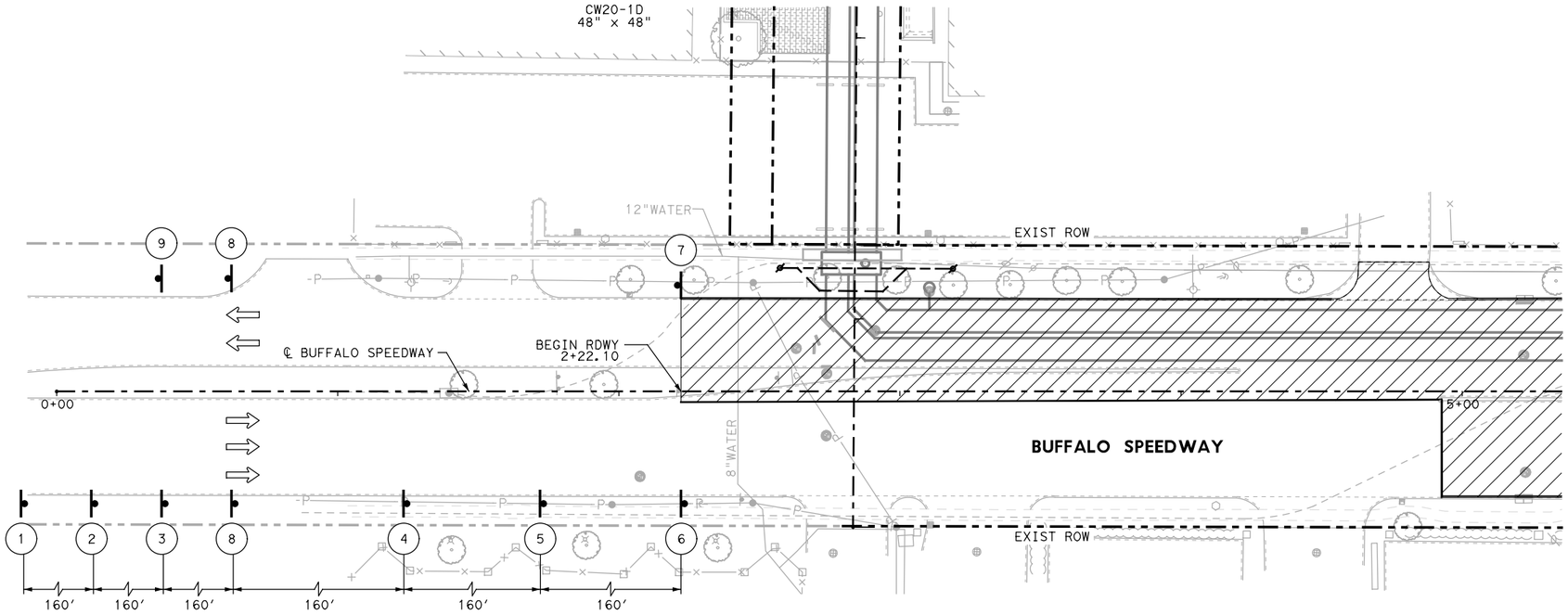
(7) END ROAD WORK
G20-2
36" x 18"

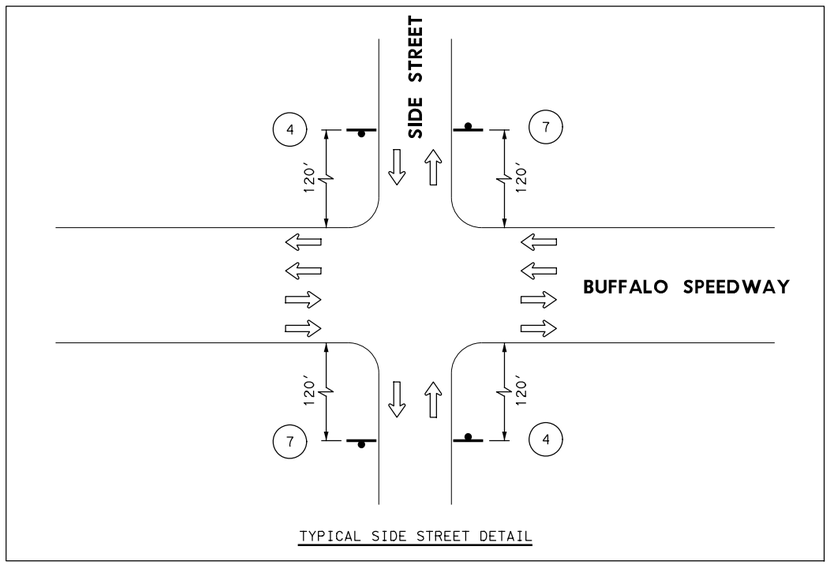
(8) SPEED LIMIT 35
R2-1
30" x 36"

(9) END WORK ZONE
G20-2bT
36" x 18"

0 50' 100'
SCALE IN FEET

LEGEND:
- TRAFFIC SIGN
- DIRECTION OF TRAFFIC
- WORK ZONE





TYPICAL SIDE STREET DETAIL

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

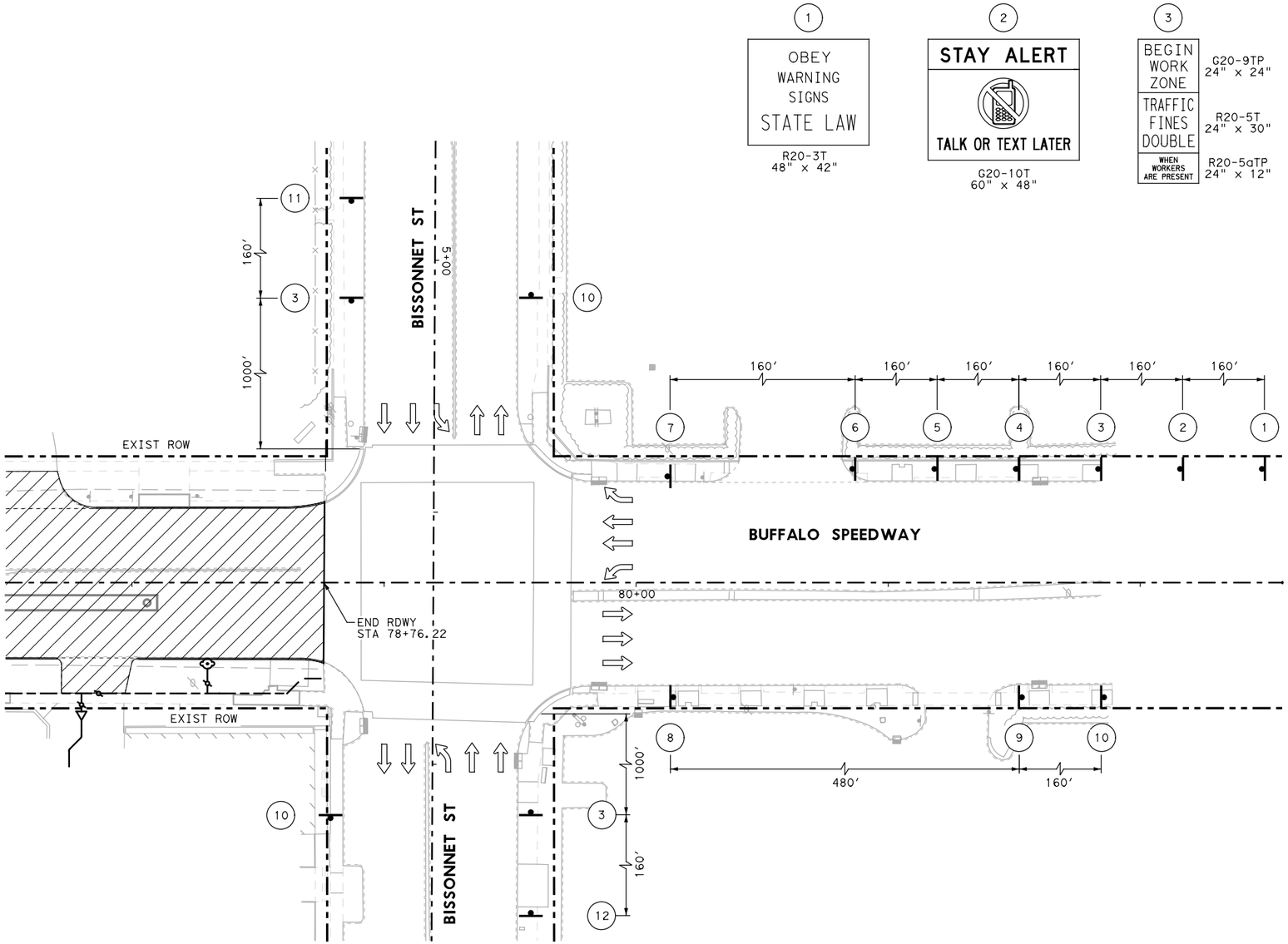
TRAFFIC CONTROL PLAN ADVANCED WARNING SIGNS

BUFFALO SPEEDWAY

SHEET 1 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		44
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- TRAFFIC SIGN
- DIRECTION OF TRAFFIC
- WORK ZONE

(1) OBEY WARNING SIGNS STATE LAW — R20-3T, 48" x 42"

(2) STAY ALERT / TALK OR TEXT LATER — G20-10T, 60" x 48"

(3) BEGIN WORK ZONE — G20-9TP, 24" x 24"; TRAFFIC FINES DOUBLE — R20-5T, 24" x 30"; WHEN WORKERS ARE PRESENT — R20-5qTP, 24" x 12"

(4) SPEED LIMIT 30 — R2-1, 30" x 36"

(5) ROAD WORK AHEAD — CW20-1D, 48" x 48"

(6) DO NOT PASS — R4-1, 36" x 48"

(7) BEGIN ROAD WORK NEXT 1.5 MILES — G20-5T, 48" x 24"; NAME, ADDRESS, CITY, STATE, CONTRACTOR — G20-6T, 48" x 30"

(8) END ROAD WORK — G20-2, 36" x 18"

(9) SPEED LIMIT 35 — R2-1, 30" x 36"

(10) END WORK ZONE — G20-2bT, 36" x 18"

(11) ROAD WORK NEXT 1.5 MILES ⇨ — G20-1bTR, 72" x 24"

(12) ⇦ ROAD WORK NEXT 1.5 MILES — G20-1bTL, 72" x 24"

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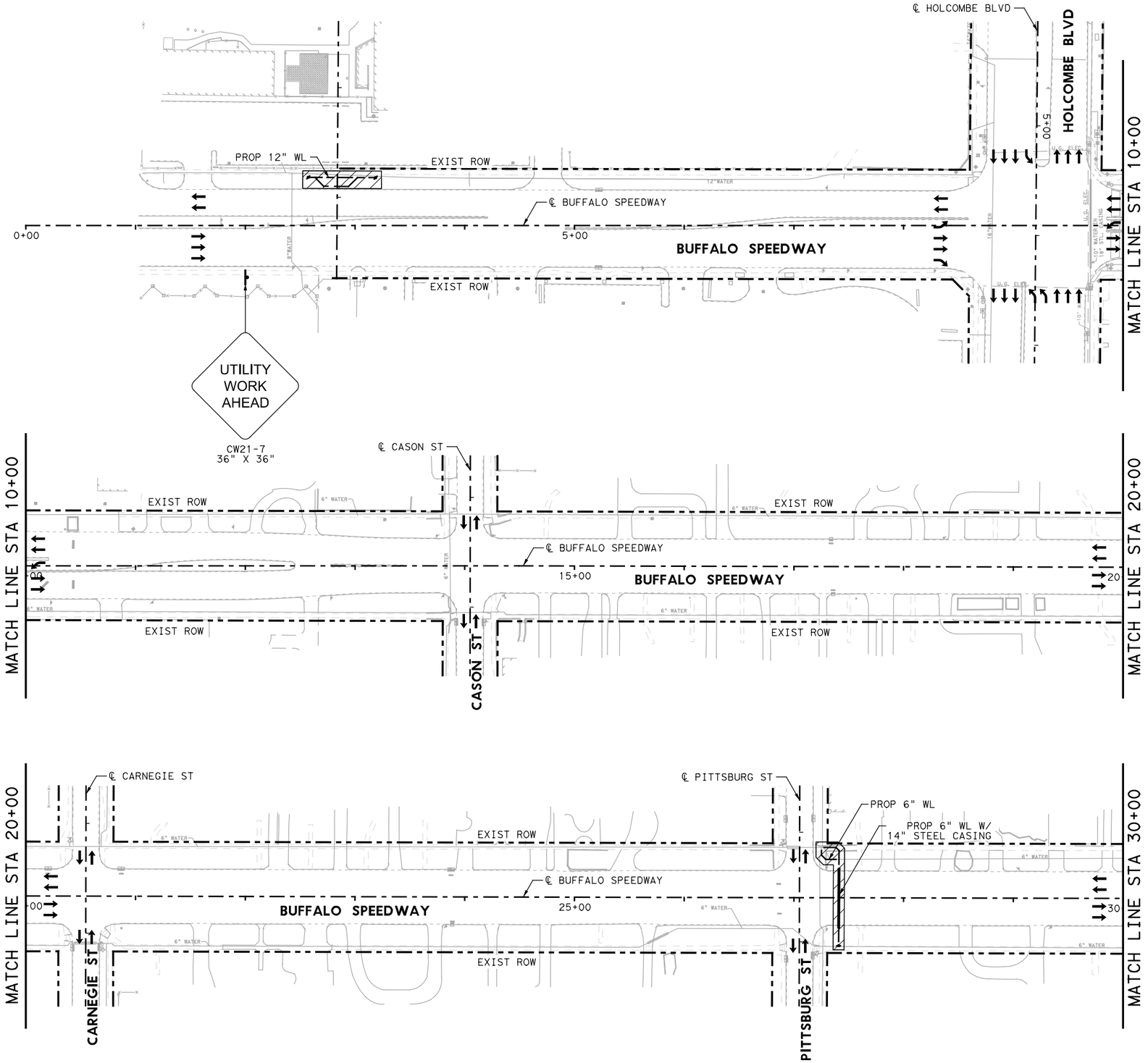
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN ADVANCED WARNING SIGNS

BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		45
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 100′ 200′

SCALE IN FEET

LEGEND:

- WORK ZONE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL/RELOCATE ALL WATERLINES IN THIS PHASE.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO COORDINATE WITH ENGINEER TO MAINTAIN ACCESS TO RESIDENCES.
3. IF SITE CONDITIONS WARRANT LANE CLOSURE, CONTRACTOR TO USE TXDOT STANDARDS TCP (1-4a) WITH PRIOR APPROVAL FROM THE ENGINEER.
4. NOTIFY ENGINEER IF PARALLEL PARKINGS ALONG SIDE STREETS NEED TO BE CLOSED.
5. CONTRACTOR TO PROVIDE ADEQUATE SIGNS TO DETOUR SIDEWALKS, WHERE NEEDED.
6. ALL WATER LINES AND SANITARY SEWER LINES WILL BE INSTALLED USING TRENCHLESS CONSTRUCTION.

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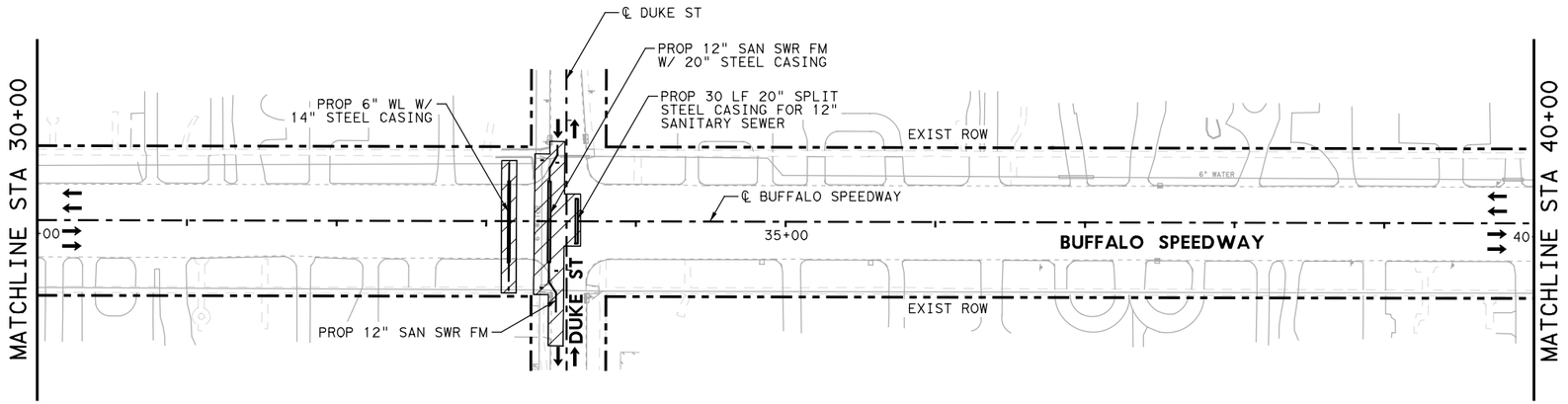
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

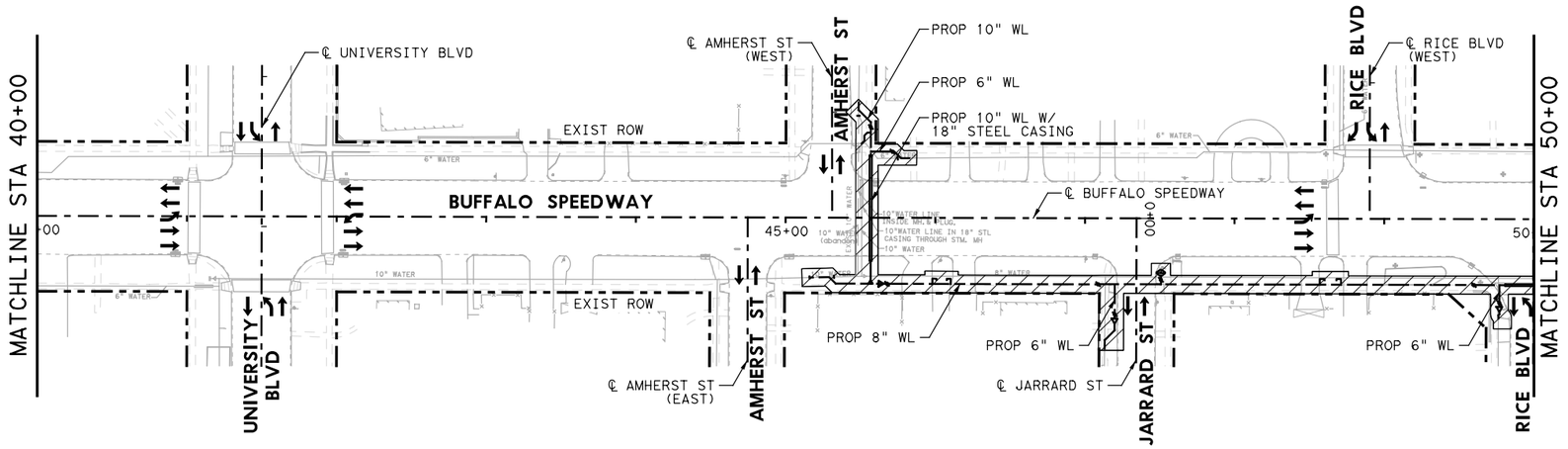
TRAFFIC CONTROL PLAN PHASE 1

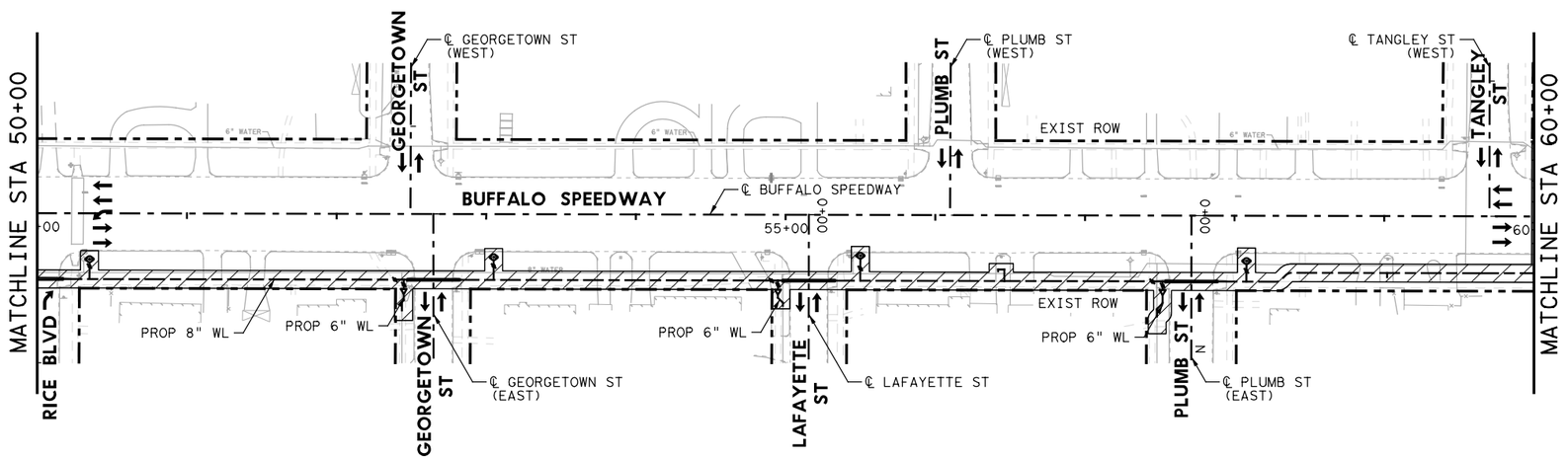
BUFFALO SPEEDWAY
STA 0+00 TO STA 30+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		46
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY







0 100′ 200′

SCALE IN FEET

LEGEND:

- WORK ZONE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL/RELOCATE ALL WATERLINES IN THIS PHASE.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO COORDINATE WITH ENGINEER TO MAINTAIN ACCESS TO RESIDENCES.
3. IF SITE CONDITIONS WARRANT LANE CLOSURE, CONTRACTOR TO USE TXDOT STANDARDS TCP (1-4a) WITH PRIOR APPROVAL FROM THE ENGINEER.
4. NOTIFY ENGINEER IF PARALLEL PARKINGS ALONG SIDE STREETS NEED TO BE CLOSED.
5. CONTRACTOR TO PROVIDE ADEQUATE SIGNS TO DETOUR SIDEWALKS, WHERE NEEDED.
6. ALL WATER LINES AND SANITARY SEWER LINES WILL BE INSTALLED USING TRENCHLESS CONSTRUCTION.

STATE OF TEXAS
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8/24/2020

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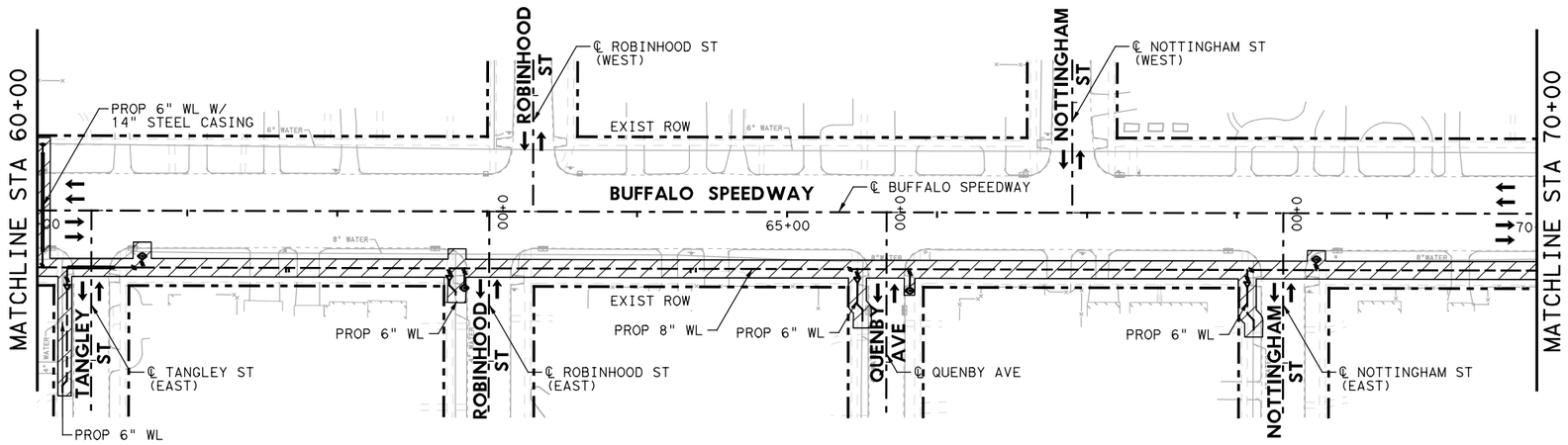
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

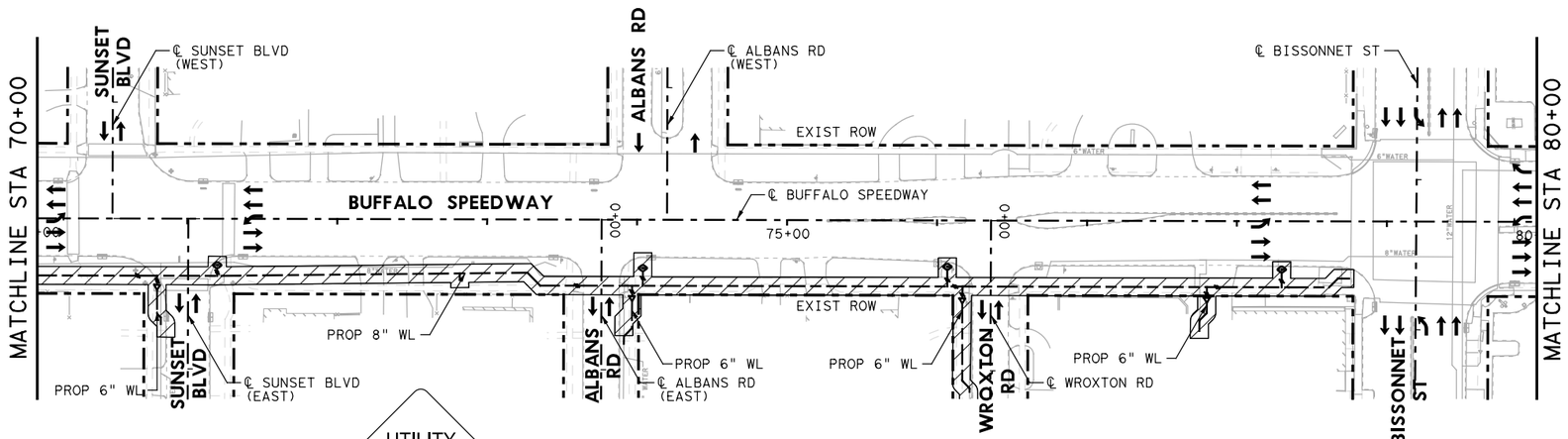
TRAFFIC CONTROL PLAN PHASE 1

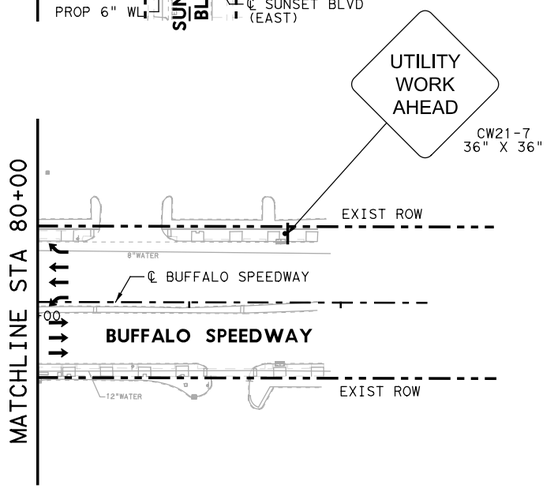
BUFFALO SPEEDWAY
STA 30+00 TO STA 60+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		47
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY







0 100′ 200′

SCALE IN FEET

LEGEND:

- WORK ZONE
- TEMP GROUND MOUNTED SIGN
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL/RELOCATE ALL WATERLINES IN THIS PHASE.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO COORDINATE WITH ENGINEER TO MAINTAIN ACCESS TO RESIDENCES.
3. IF SITE CONDITIONS WARRANT LANE CLOSURE, CONTRACTOR TO USE TXDOT STANDARDS TCP (1-4a) WITH PRIOR APPROVAL FROM THE ENGINEER.
4. NOTIFY ENGINEER IF PARALLEL PARKINGS ALONG SIDE STREETS NEED TO BE CLOSED.
5. CONTRACTOR TO PROVIDE ADEQUATE SIGNS TO DETOUR SIDEWALKS, WHERE NEEDED.
6. ALL WATER LINES AND SANITARY SEWER LINES WILL BE INSTALLED USING TRENCHLESS CONSTRUCTION.

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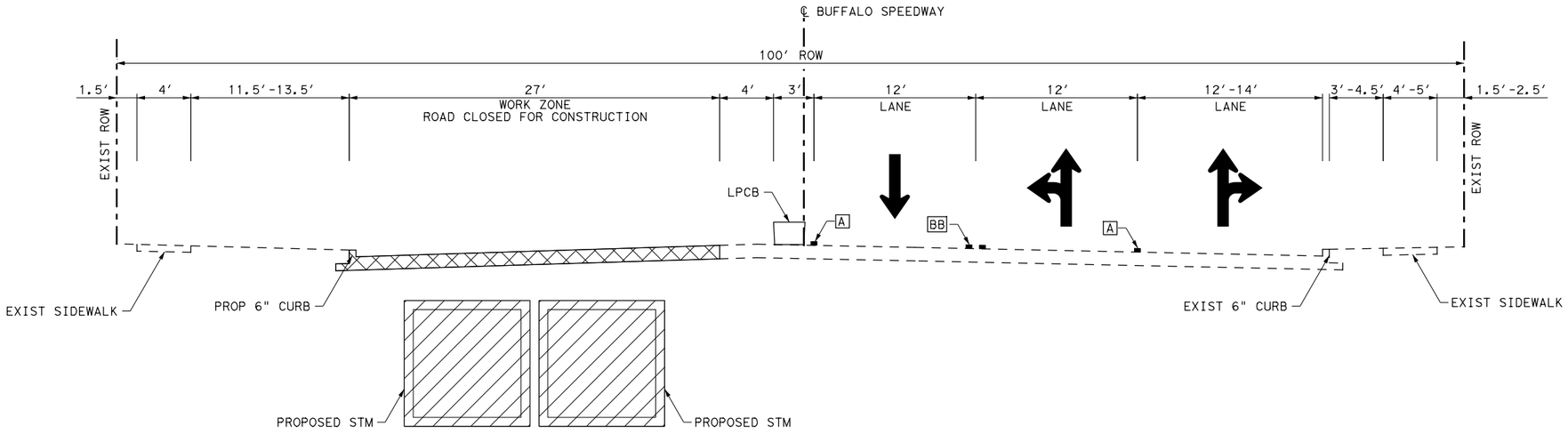
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 1

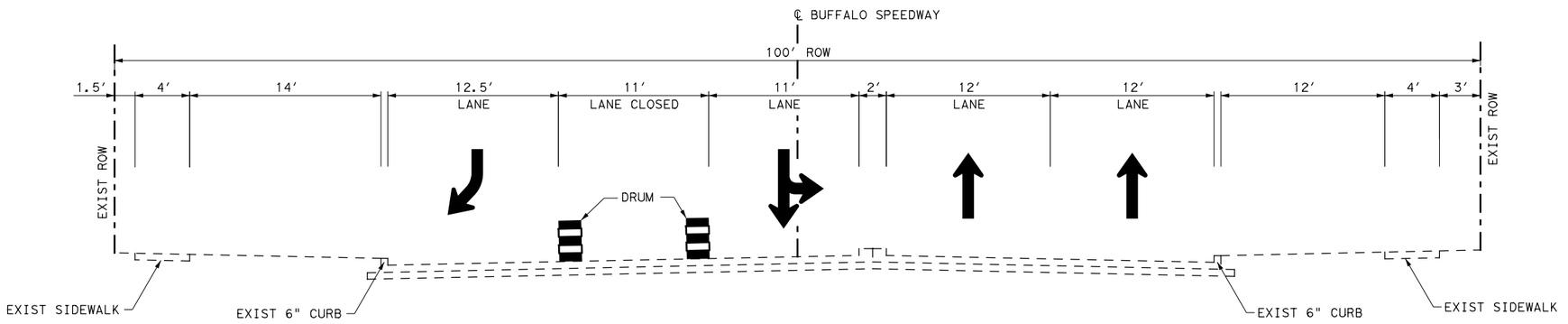
BUFFALO SPEEDWAY
STA 60+00 TO END PROJECT

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		48
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 1
(SOUTH OF HOLCOMBE BLVD)
STA 2+22 TO STA 8+30



BUFFALO SPEEDWAY
PHASE 2 STEP 1
(NORTH OF HOLCOMBE BLVD)
STA 9+85 TO STA 10+70

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- A WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- AA WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

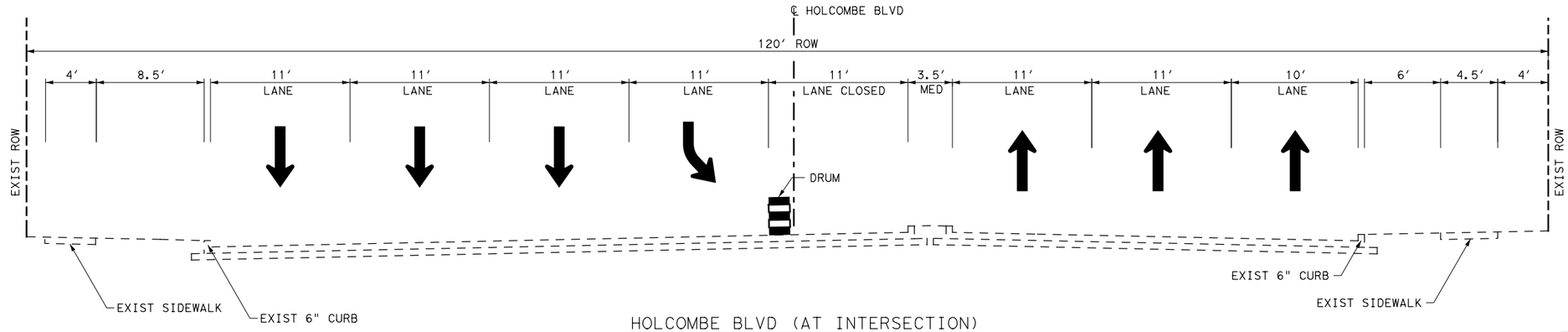
TRAFFIC CONTROL PLAN
PHASE 2 STEP 1 TYPICAL SECTION

BUFFALO SPEEDWAY

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		49
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 1 THRU 3
(EAST OF BUFFALO SPEEDWAY)
STA 6+45 TO STA 7+85

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- A WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- AA WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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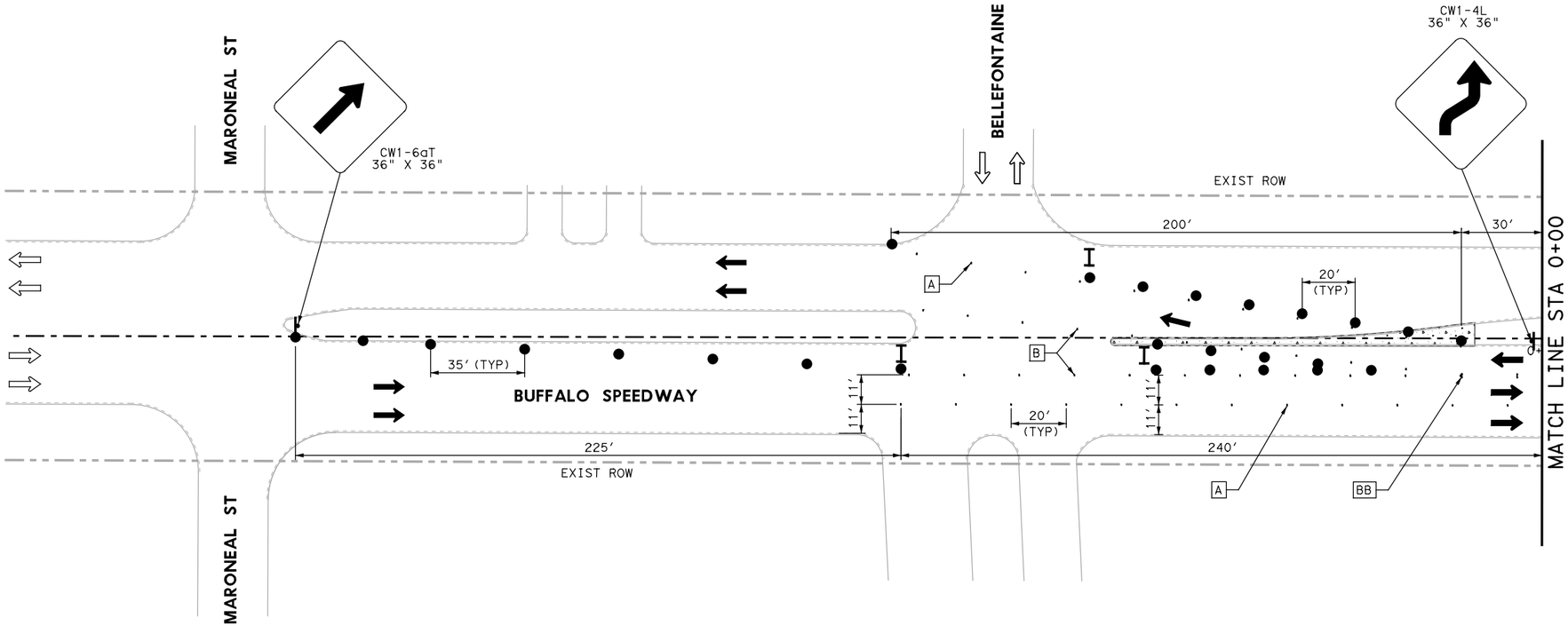
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 1 THRU 3 TYPICAL SECTION

HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		50
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMPORARY PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368
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HOUSTON, TEXAS 77042

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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

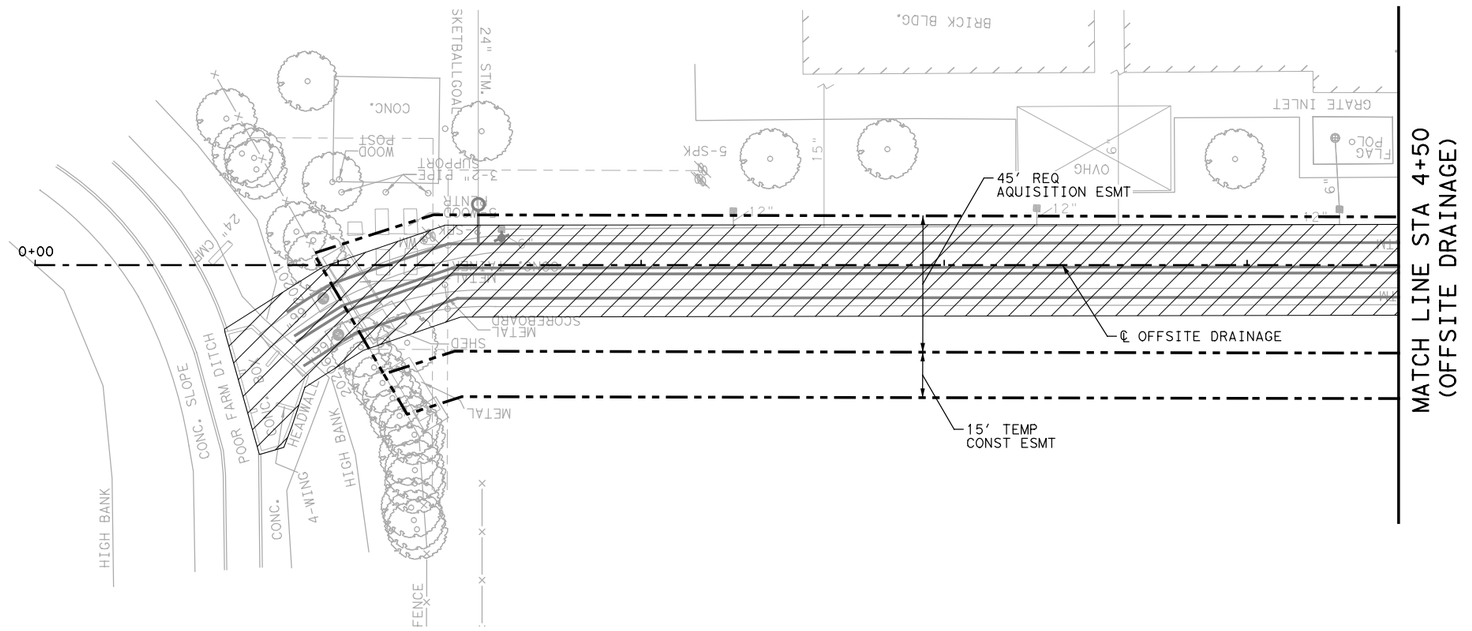
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

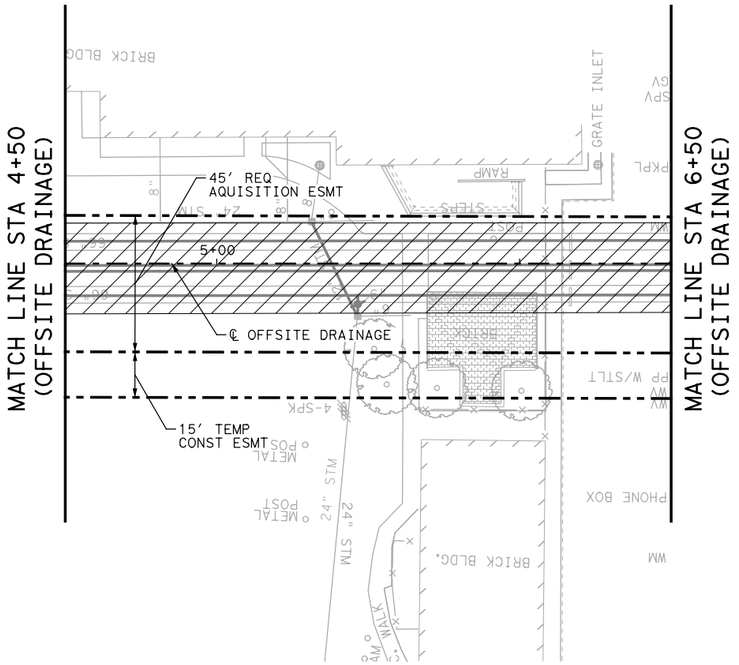
TRAFFIC CONTROL PLAN PHASE 2 STEP 1

BUFFALO SPEEDWAY
BEGIN TO STA 0+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			51
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	





0 50′ 100′
SCALE IN FEET

N

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

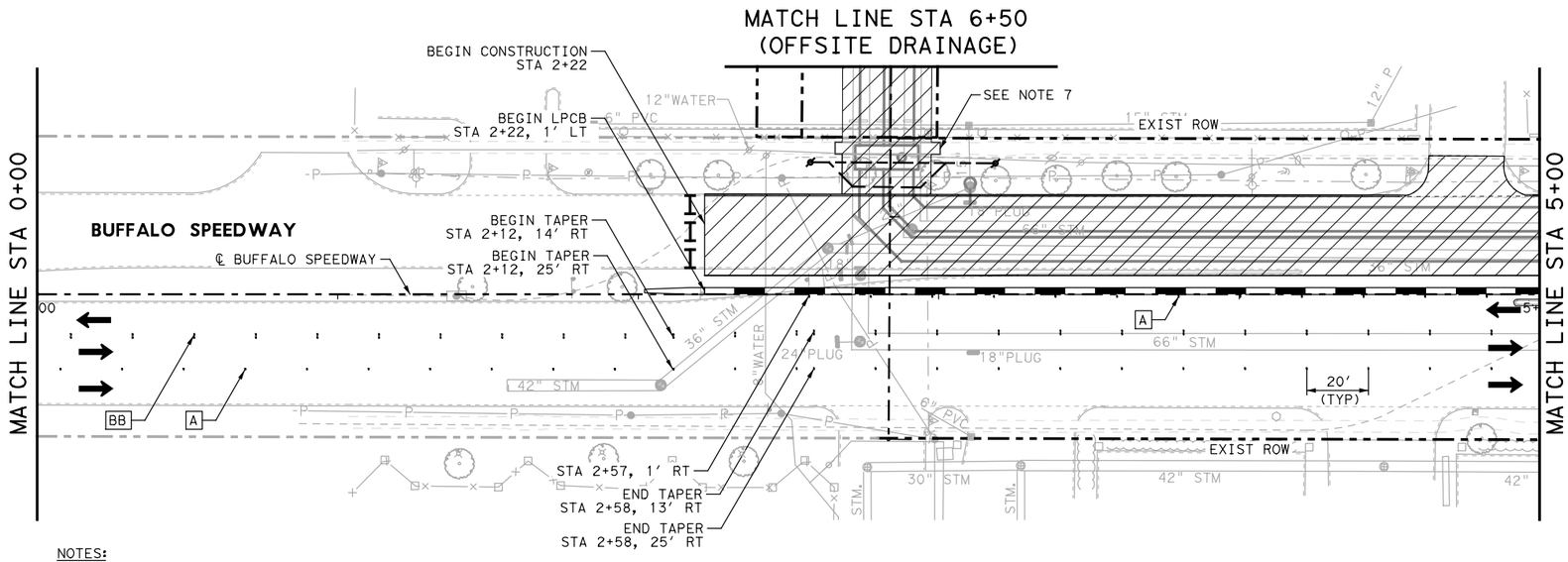
TRAFFIC CONTROL PLAN
PHASE 2 STEP 1

STA 0+00 TO STA 6+50

SHEET 2 OF 4

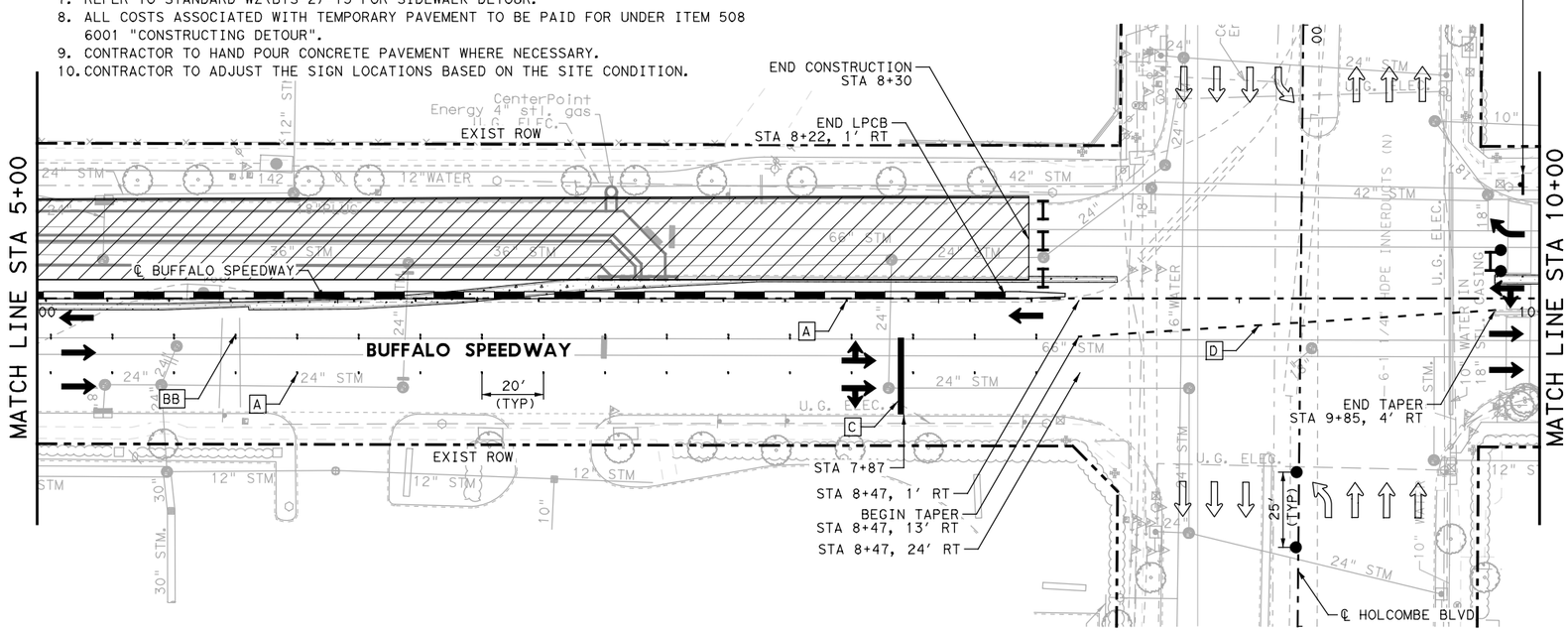
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		52
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. REFER TO STANDARD WZ(BTS-2)-13 FOR SIDEWALK DETOUR.
8. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
9. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
10. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.





0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
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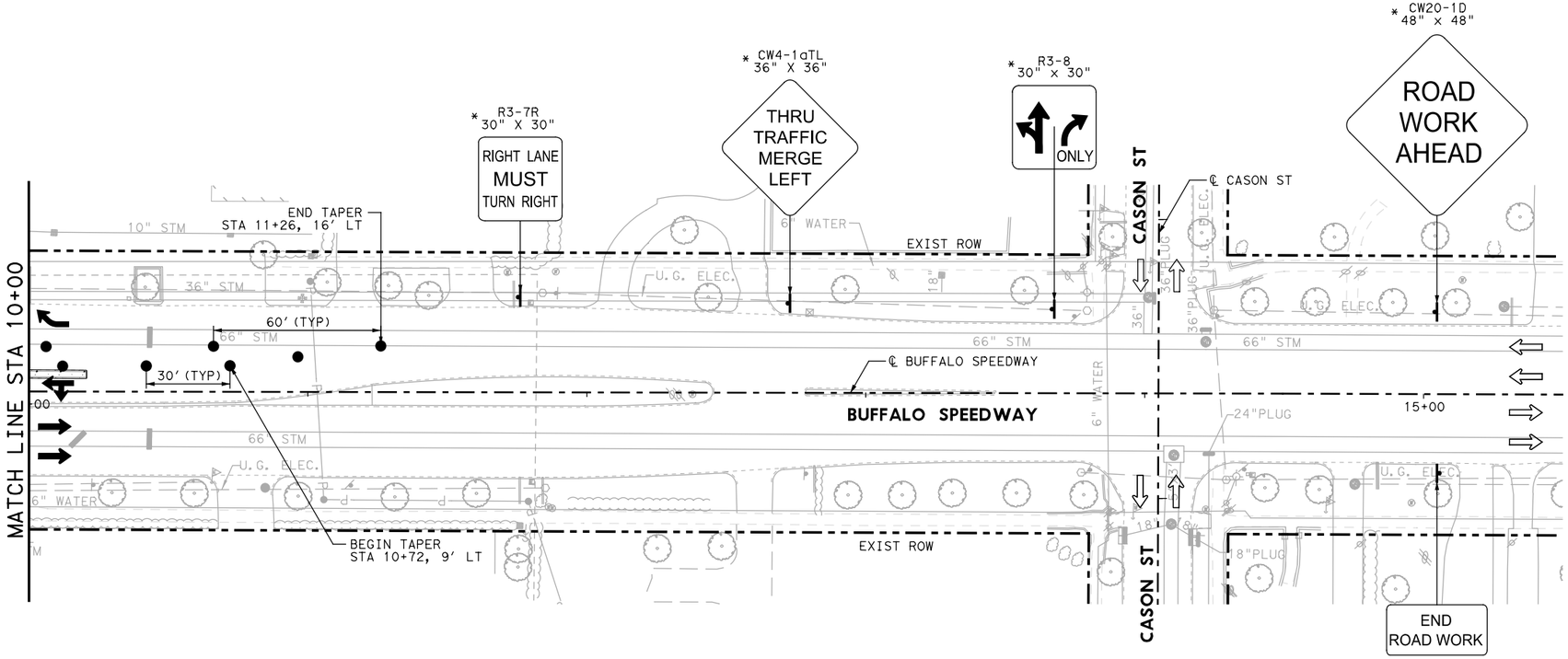
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 1

BUFFALO SPEEDWAY
0+00 TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		53
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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2. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
3. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
4. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
5. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
6. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

* ADVANCE WARNING SIGNS WILL BE PLACED AT MINIMUM 120' APART.

0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/29/2020

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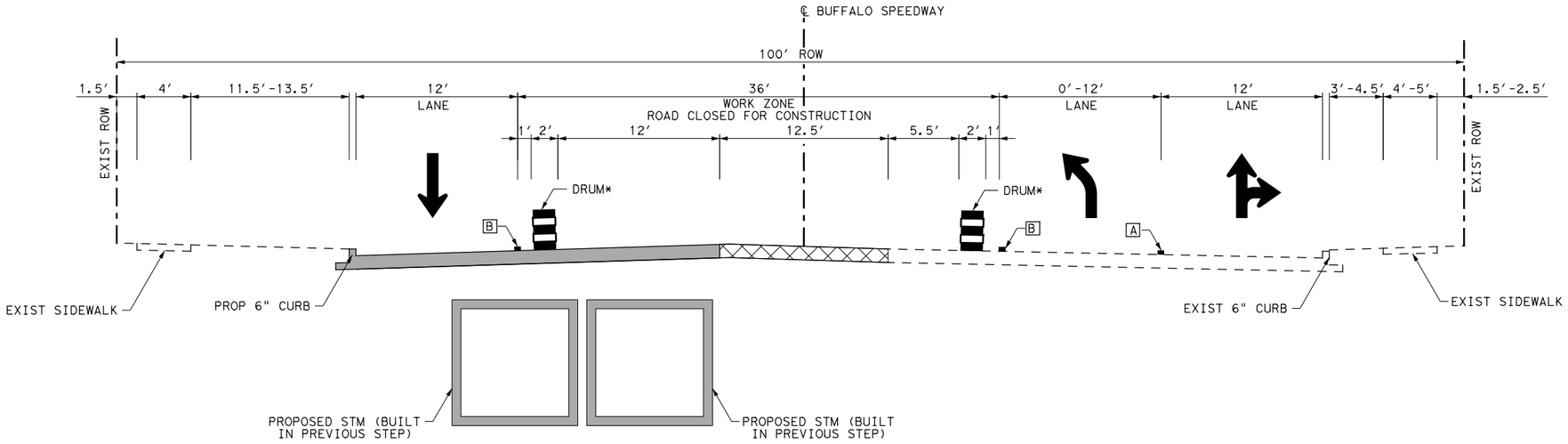
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 1

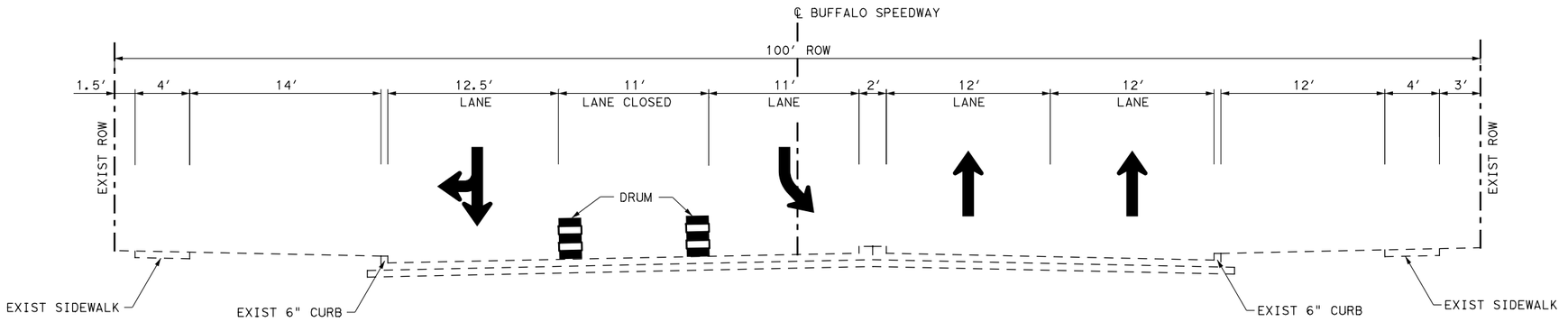
BUFFALO SPEEDWAY
STA 10+00 TO STA 15+50

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		54
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 2
(SOUTH OF HOLCOMBE BLVD)
STA 2+22 TO STA 8+30



BUFFALO SPEEDWAY
PHASE 2 STEP 2
(NORTH OF HOLCOMBE BLVD)
STA 9+85 TO STA 10+70

*SEE PLAN SHEET FOR LPCB PLACEMENT

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

STATE OF TEXAS
SYED S. HAQ P.E.
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8/24/2020

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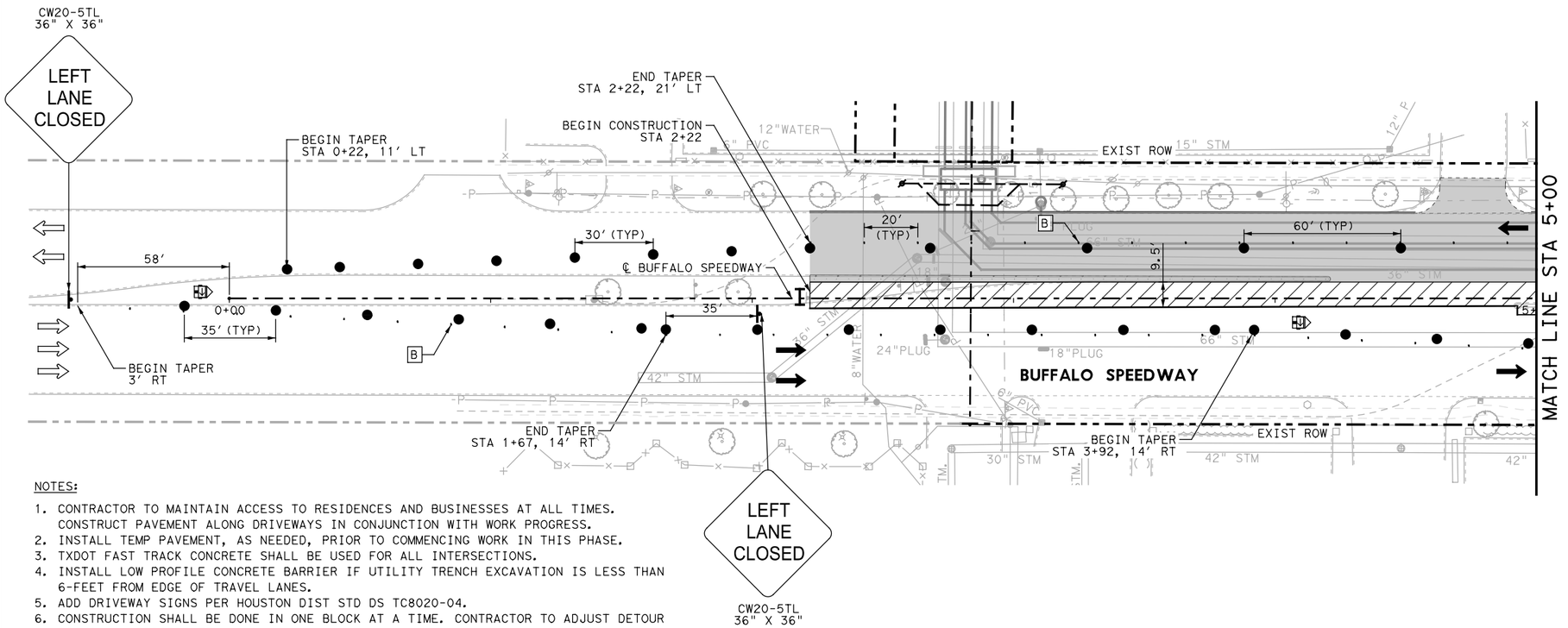
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 2 TYPICAL SECTION

BUFFALO SPEEDWAY

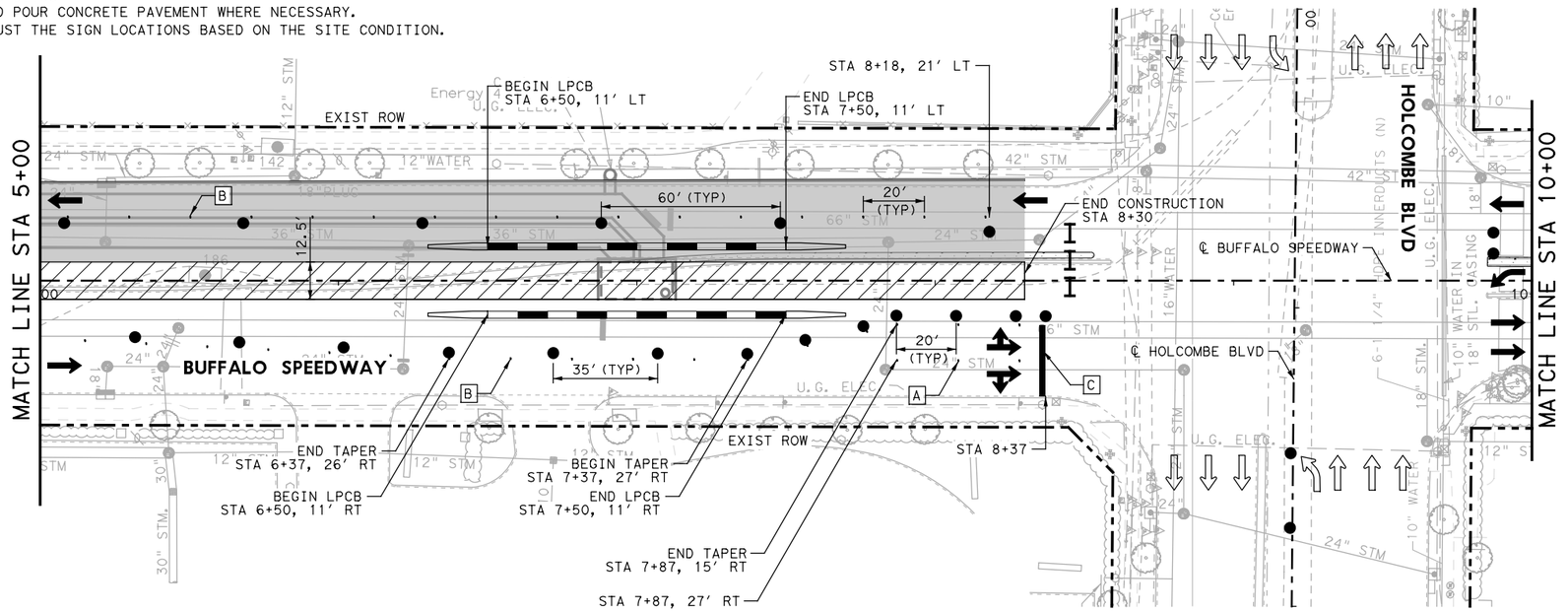
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		55
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFROMATION.
8. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
9. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

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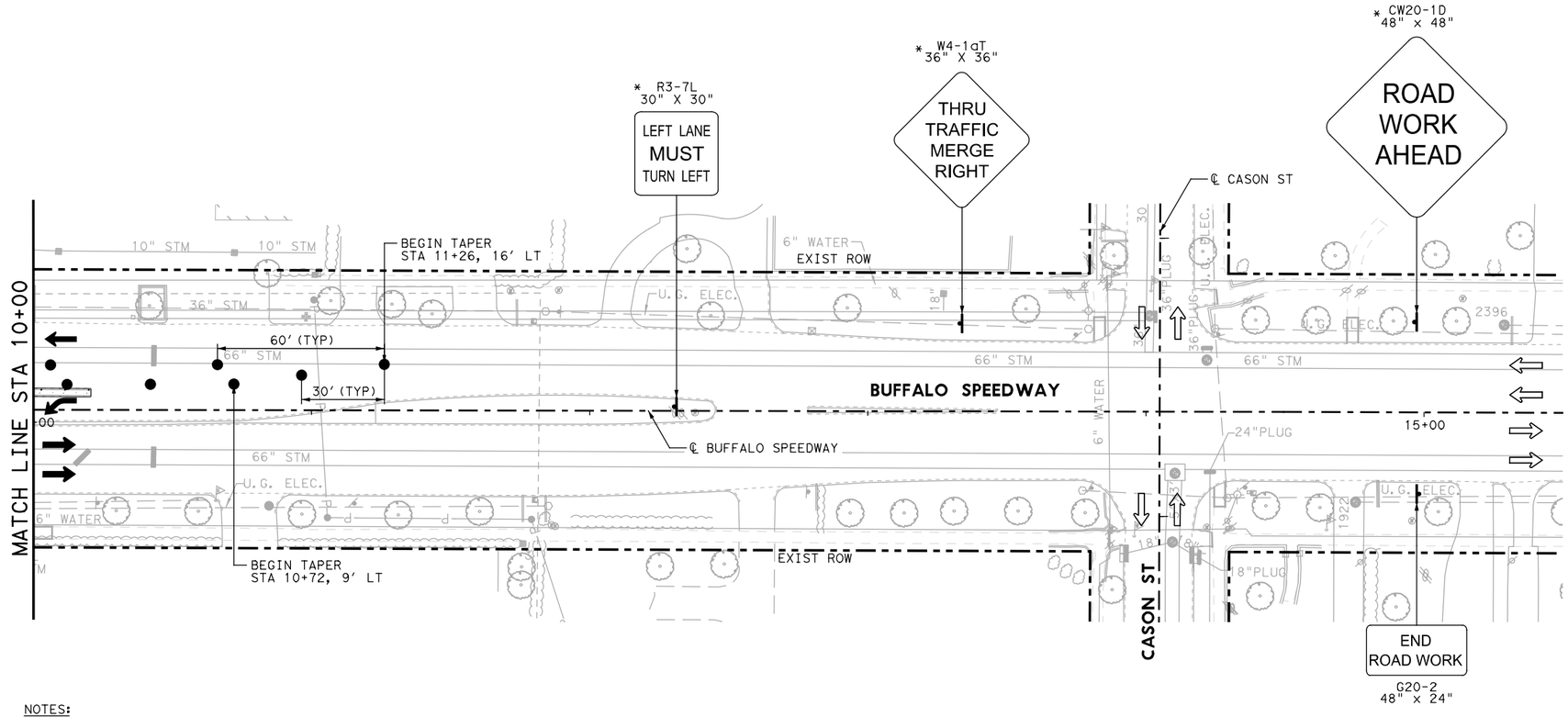
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 2

BUFFALO SPEEDWAY
BEGIN TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		56
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
3. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
4. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
5. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
6. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

* ADVANCE WARNING SIGNS WILL BE PLACED AT MINIMUM 120' APART.

0 50' 100'
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
SYED S. HAQ P.E.
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8/29/2016

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

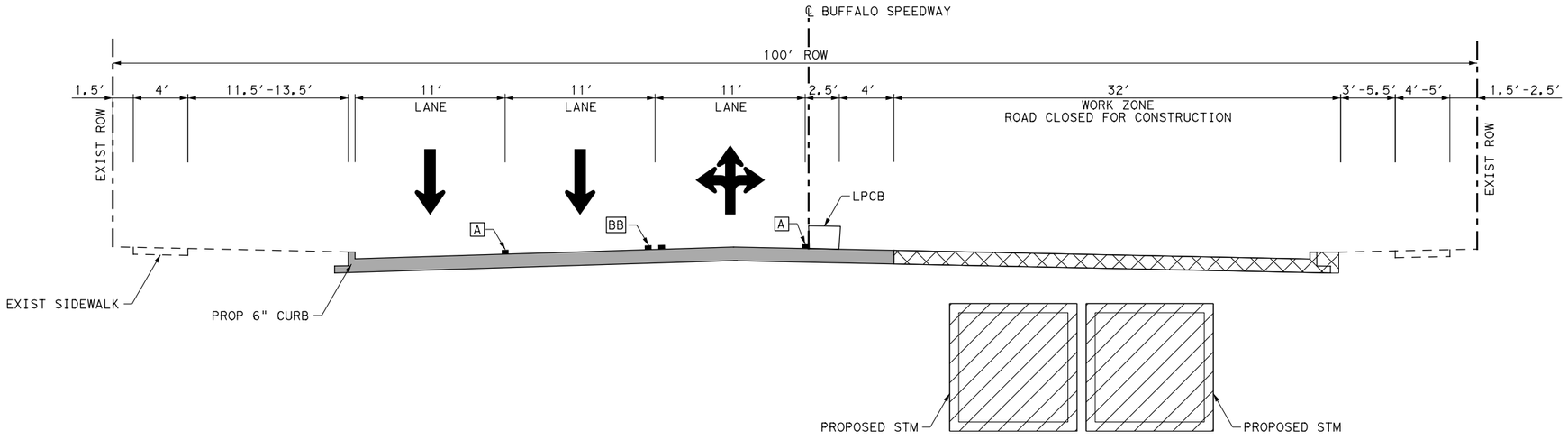
TRAFFIC CONTROL PLAN PHASE 2 STEP 2

BUFFALO SPEEDWAY
STA 10+00 TO STA 15+50

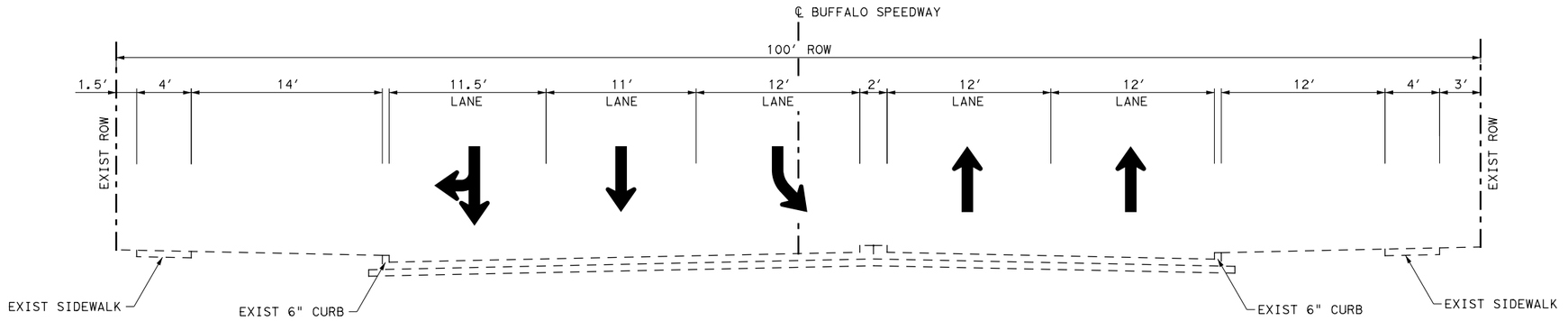
SHEET 2 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		57
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 3
(SOUTH OF HOLCOMBE BLVD)
STA 4+93 TO STA 8+30



BUFFALO SPEEDWAY
PHASE 2 STEP 3
(NORTH OF HOLCOMBE BLVD)
STA 9+85 TO STA 10+70

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

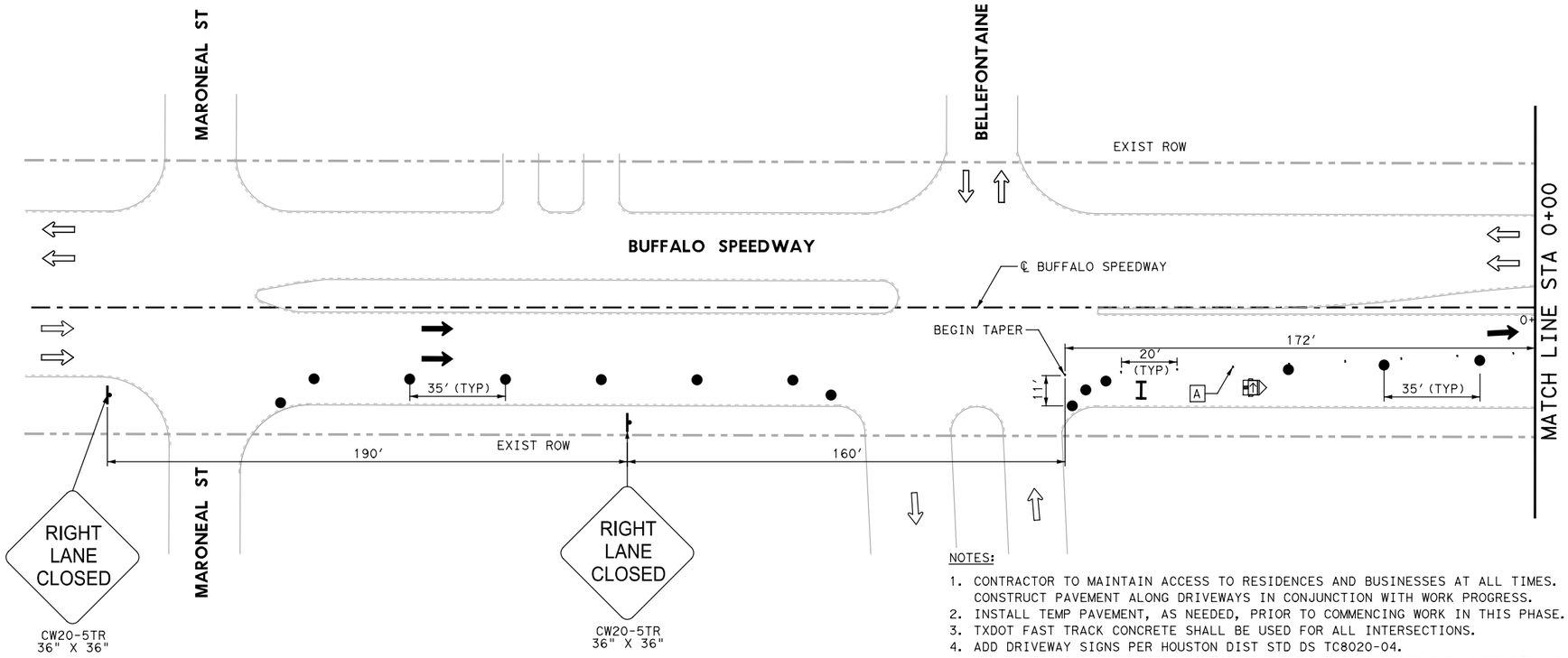
TRAFFIC CONTROL PLAN PHASE 2 STEP 3 TYPICAL SECTION

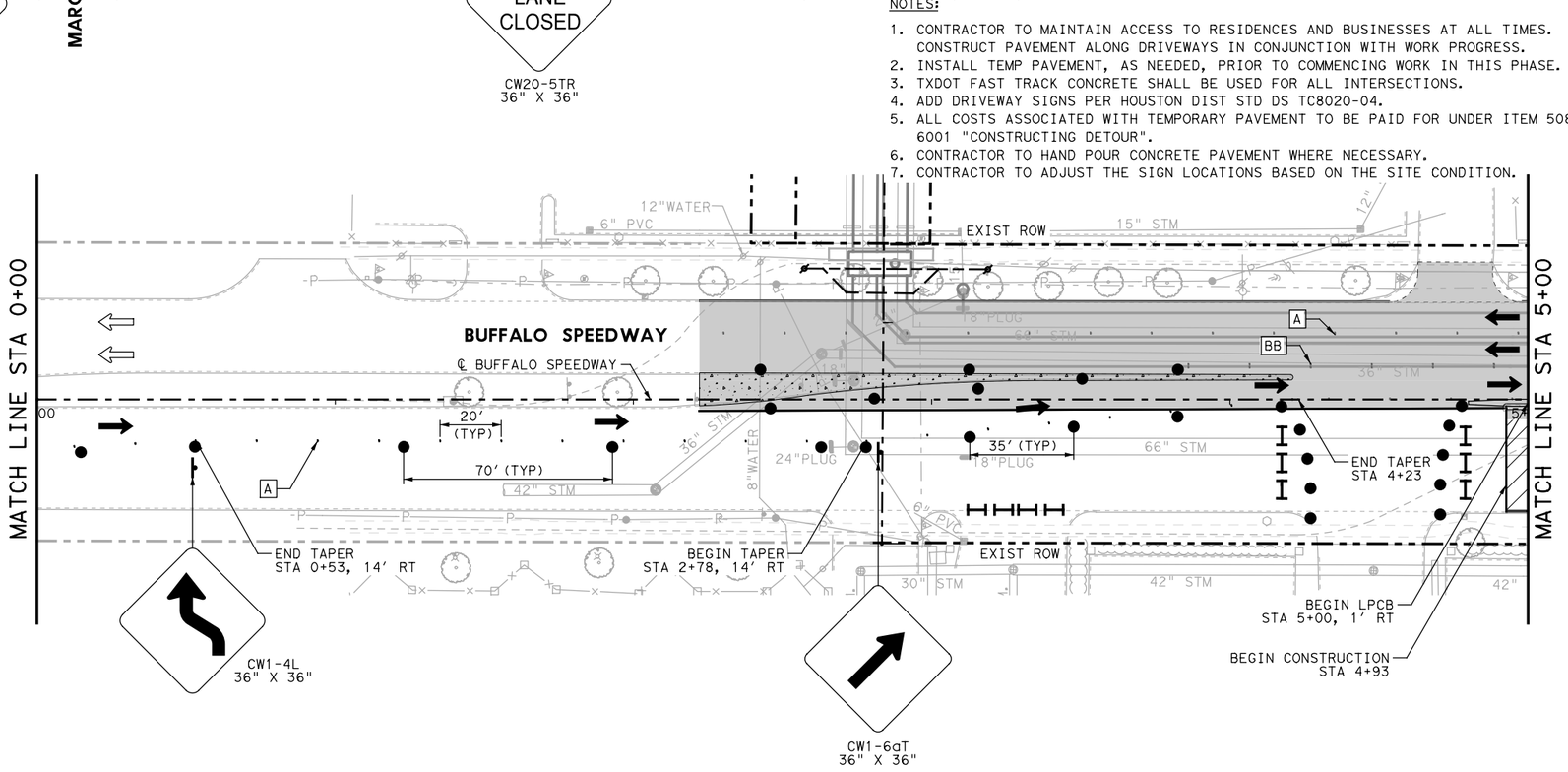
BUFFALO SPEEDWAY

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		58
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

0 50′ 100′
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

infraTECH
Engineers & Innovators, LLC
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City of West University Place

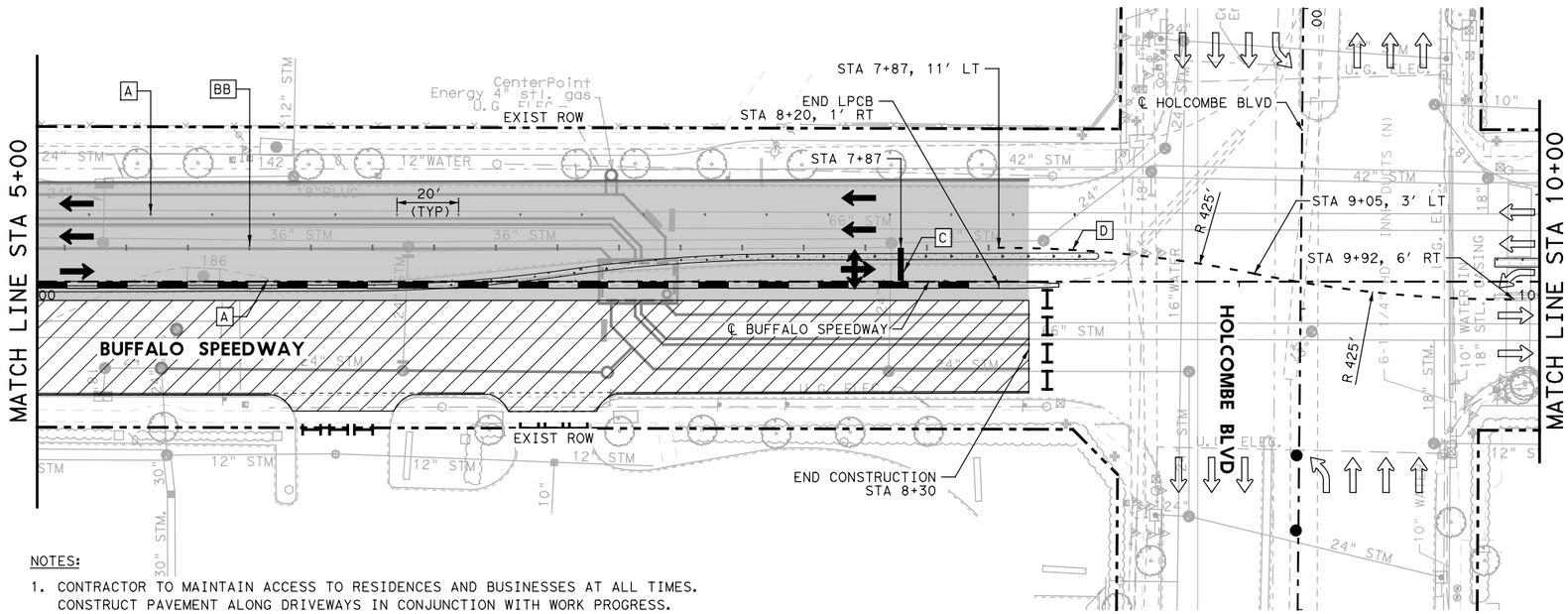
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 3

BUFFALO SPEEDWAY
BEGIN TO STA 5+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		59
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

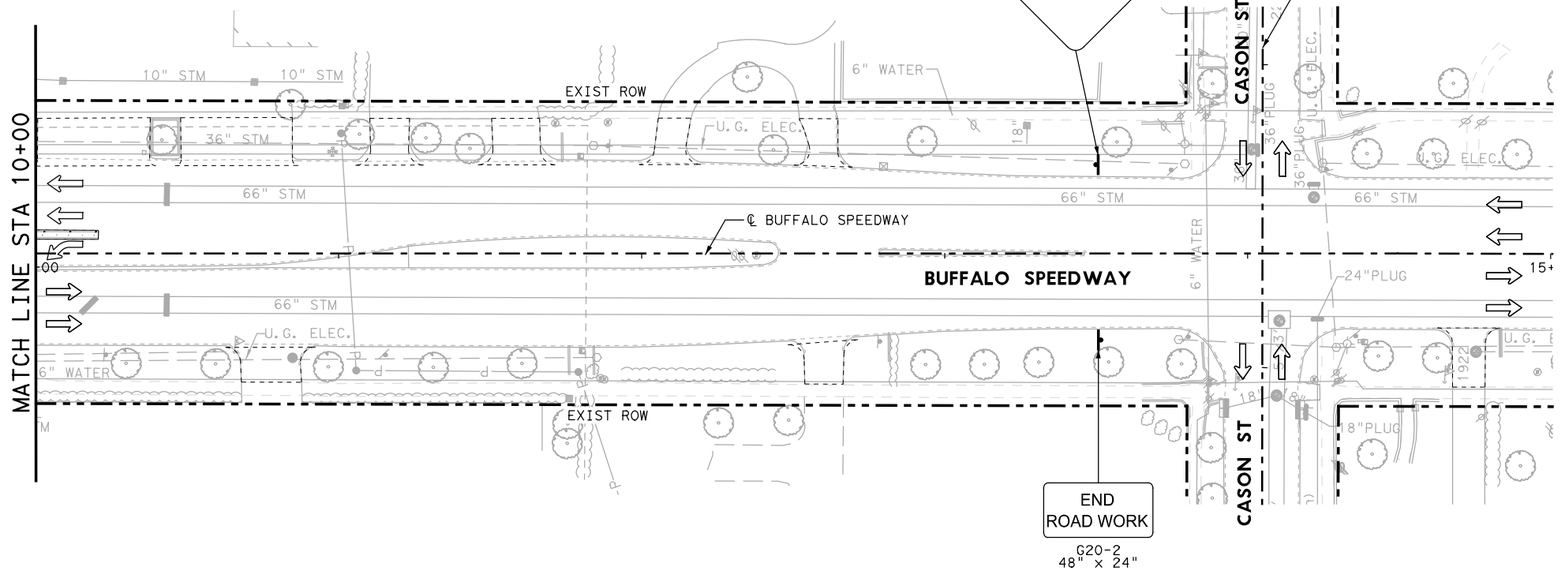


NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

CW20-1D
48" × 48"

ROAD
WORK
AHEAD



0 50′ 100′
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
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- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

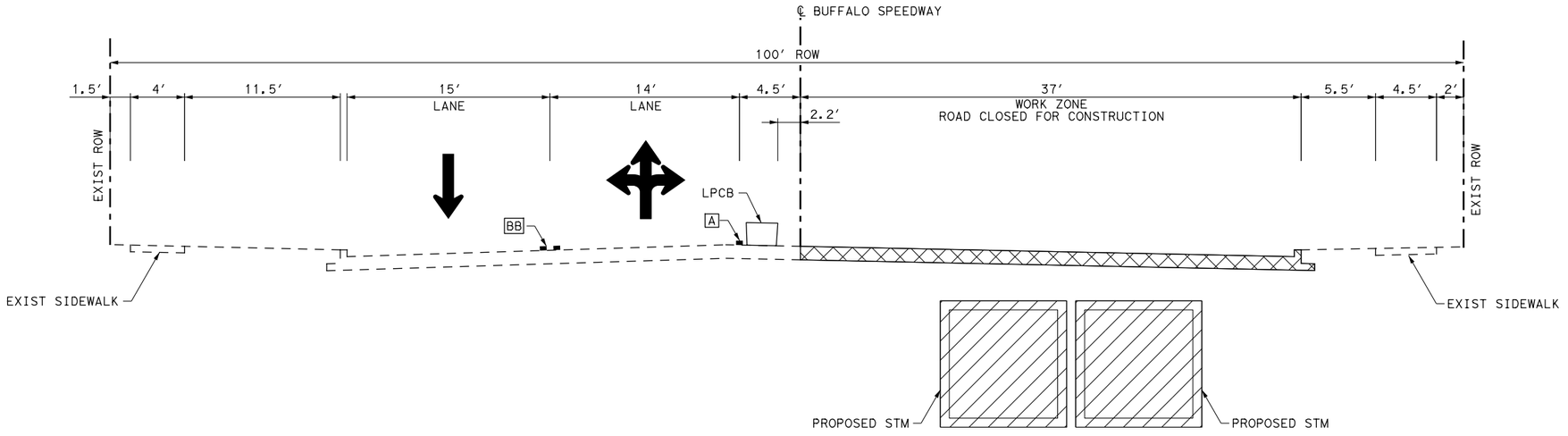
TRAFFIC CONTROL PLAN PHASE 2 STEP 3

BUFFALO SPEEDWAY
STA 5+00 TO STA 15+00

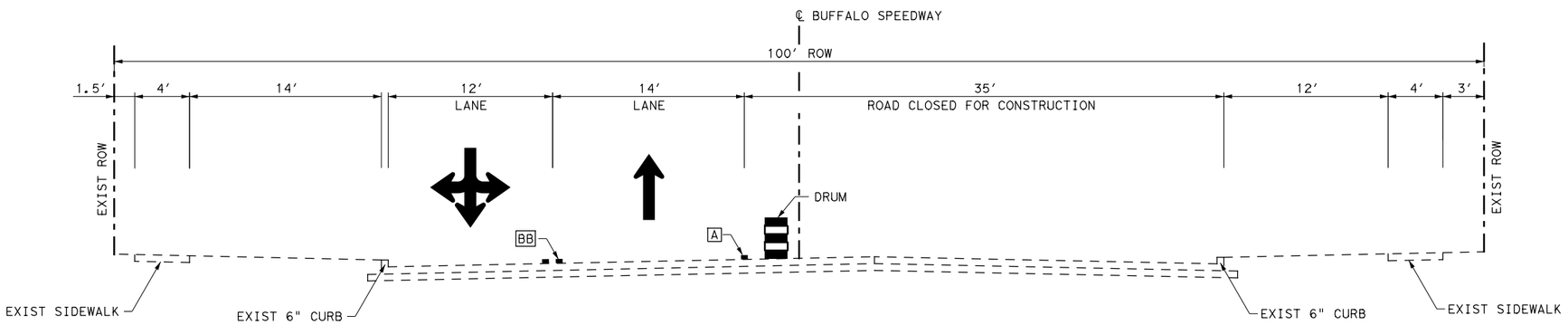
SHEET 2 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		60
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 4
(SOUTH OF HOLCOMBE BLVD)
STA 8+30 TO STA 9+02



BUFFALO SPEEDWAY
PHASE 2 STEP 4
(NORTH OF HOLCOMBE BLVD)
STA 9+85 TO STA 11+00

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM — STORM SEWER
- [A] — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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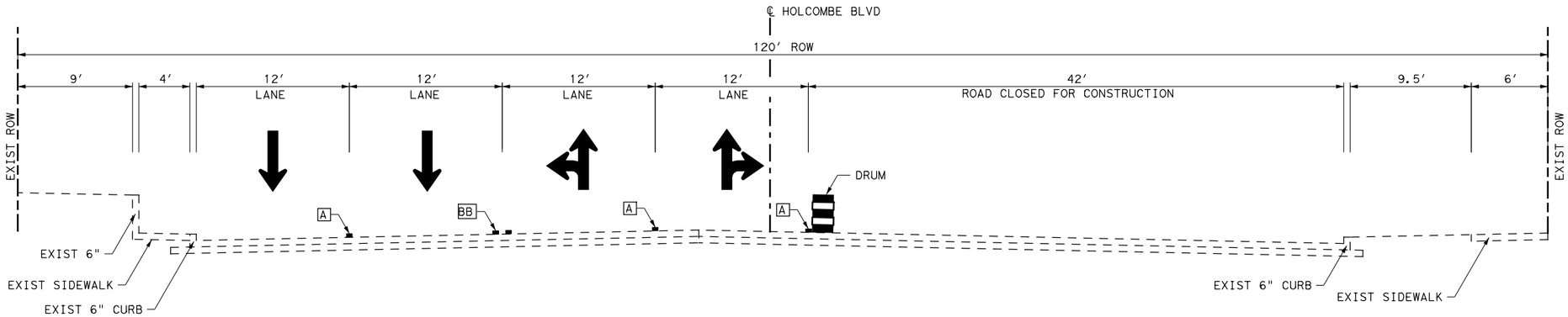
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 4 TYPICAL SECTION

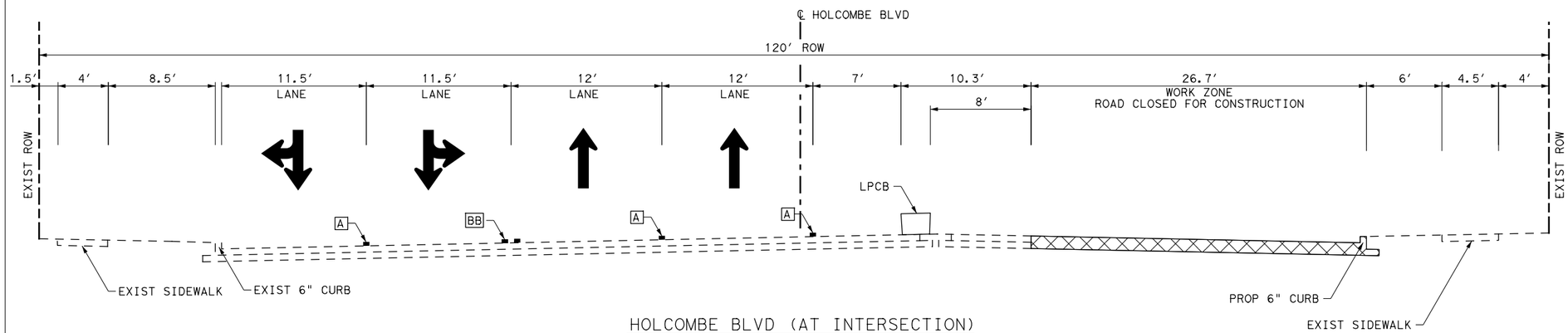
BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		61
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 4
(WEST OF BUFFALO SPEEDWAY)
STA 4+65 TO STA 5+35



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 4
(EAST OF BUFFALO SPEEDWAY)
STA 6+25 TO STA 6+65

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
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- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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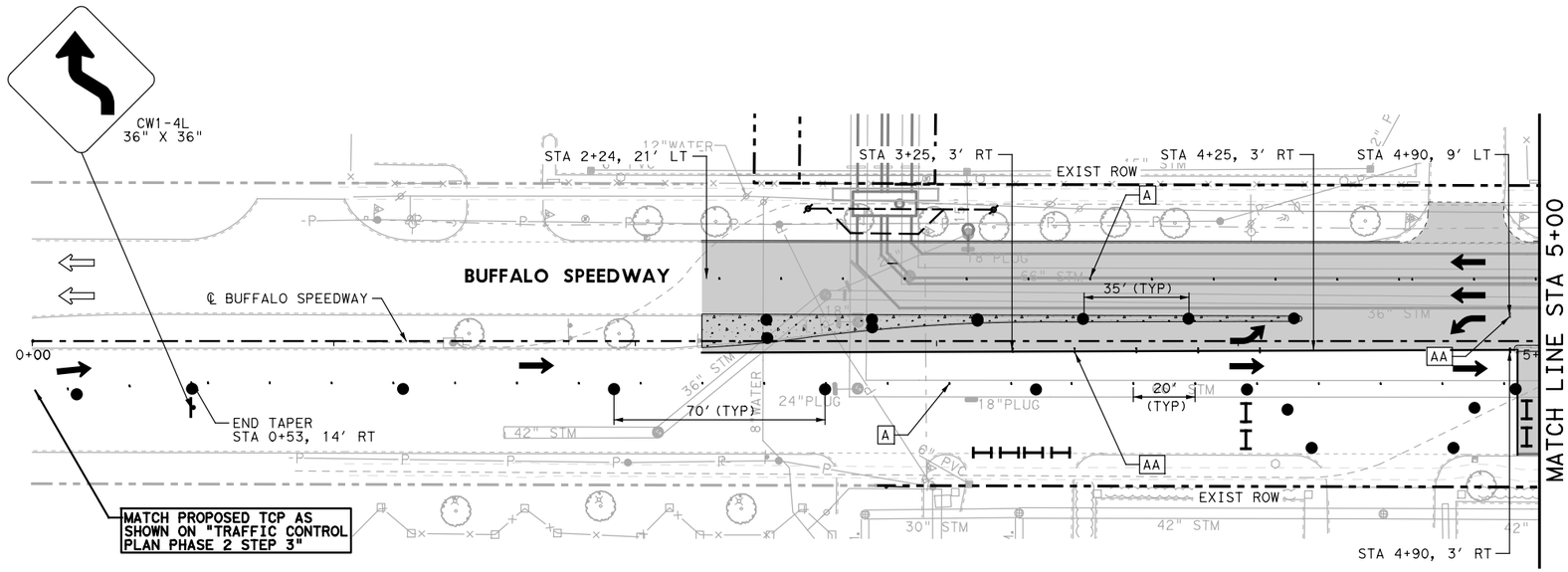
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

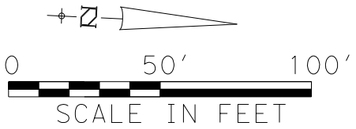
TRAFFIC CONTROL PLAN PHASE 2 STEP 4 TYPICAL SECTION

HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		62
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





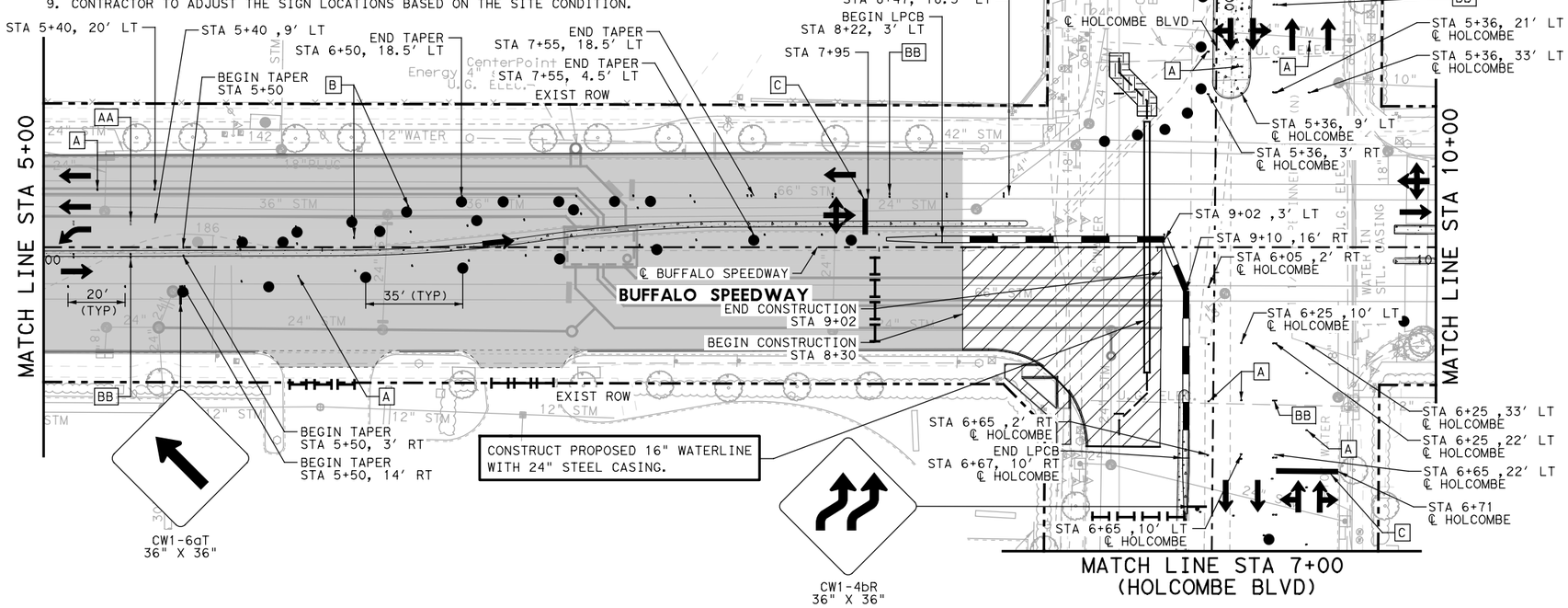
LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
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- COMPLETED PHASE
- TYPE III BARRICADE
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- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT
- CUT & RESTORE CONC PAVING

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
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4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

USE WATER FILLED PLASTIC BARRIER INSTEAD OF LPCB, AS NECESSARY, WITH PRIOR APPROVAL FROM THE ENGINEER. THIS WILL NOT BE PAID DIRECTLY BUT INCIDENTAL TO ITEM 502 6001.



STATE OF TEXAS
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94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

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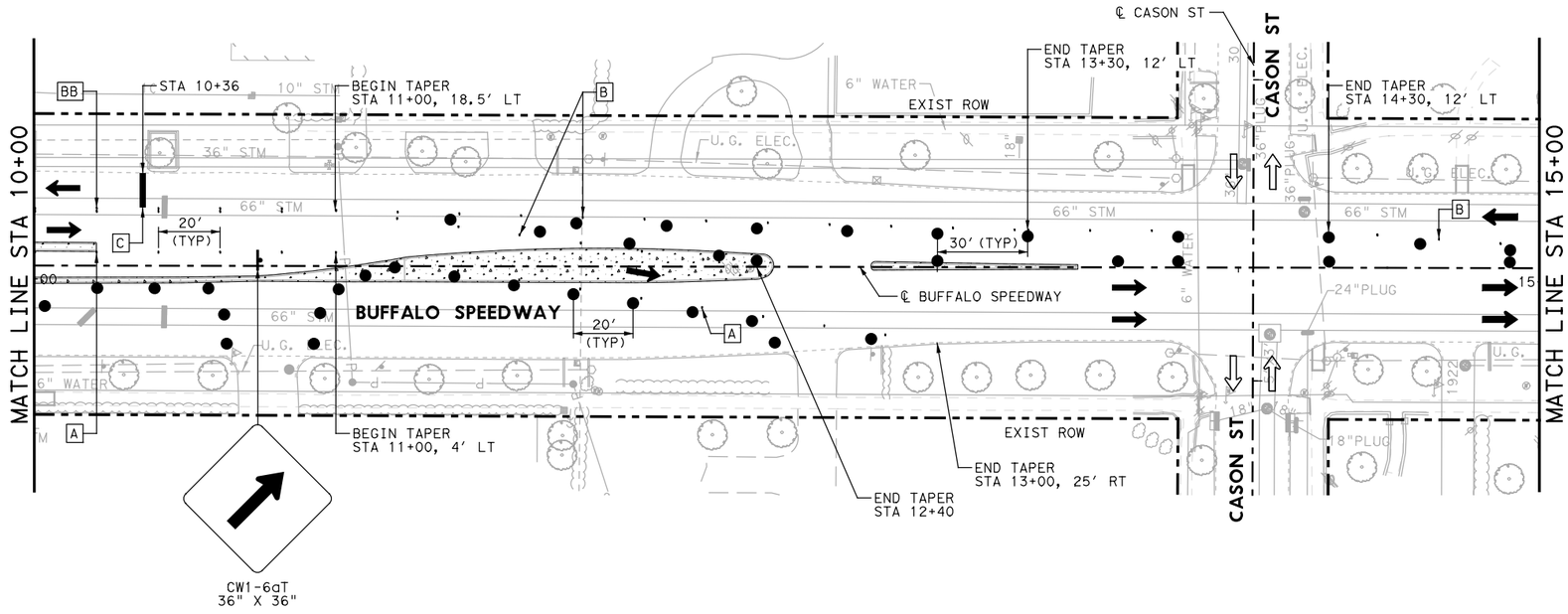
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 4

BUFFALO SPEEDWAY
STA 0+00 TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		63
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

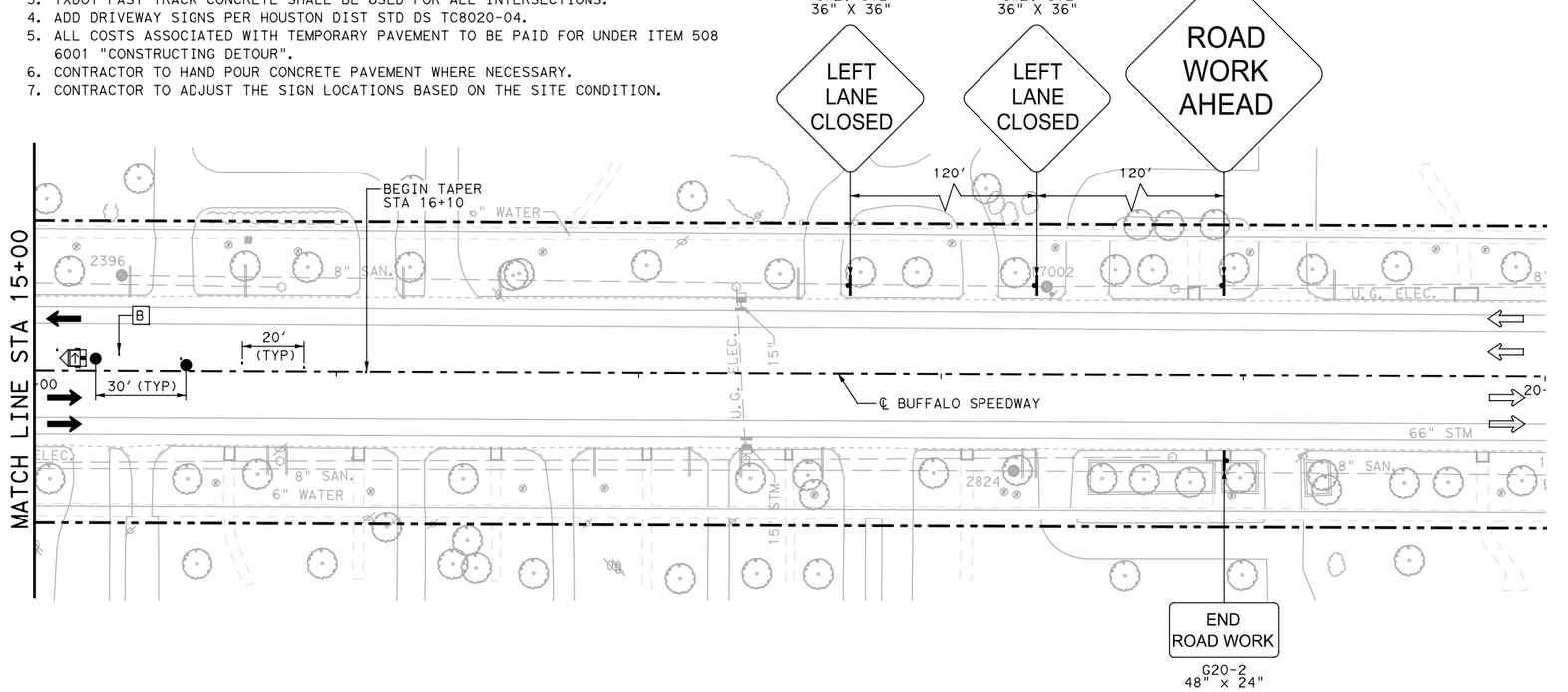
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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- TEMPORARY PAVEMENT

NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
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4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



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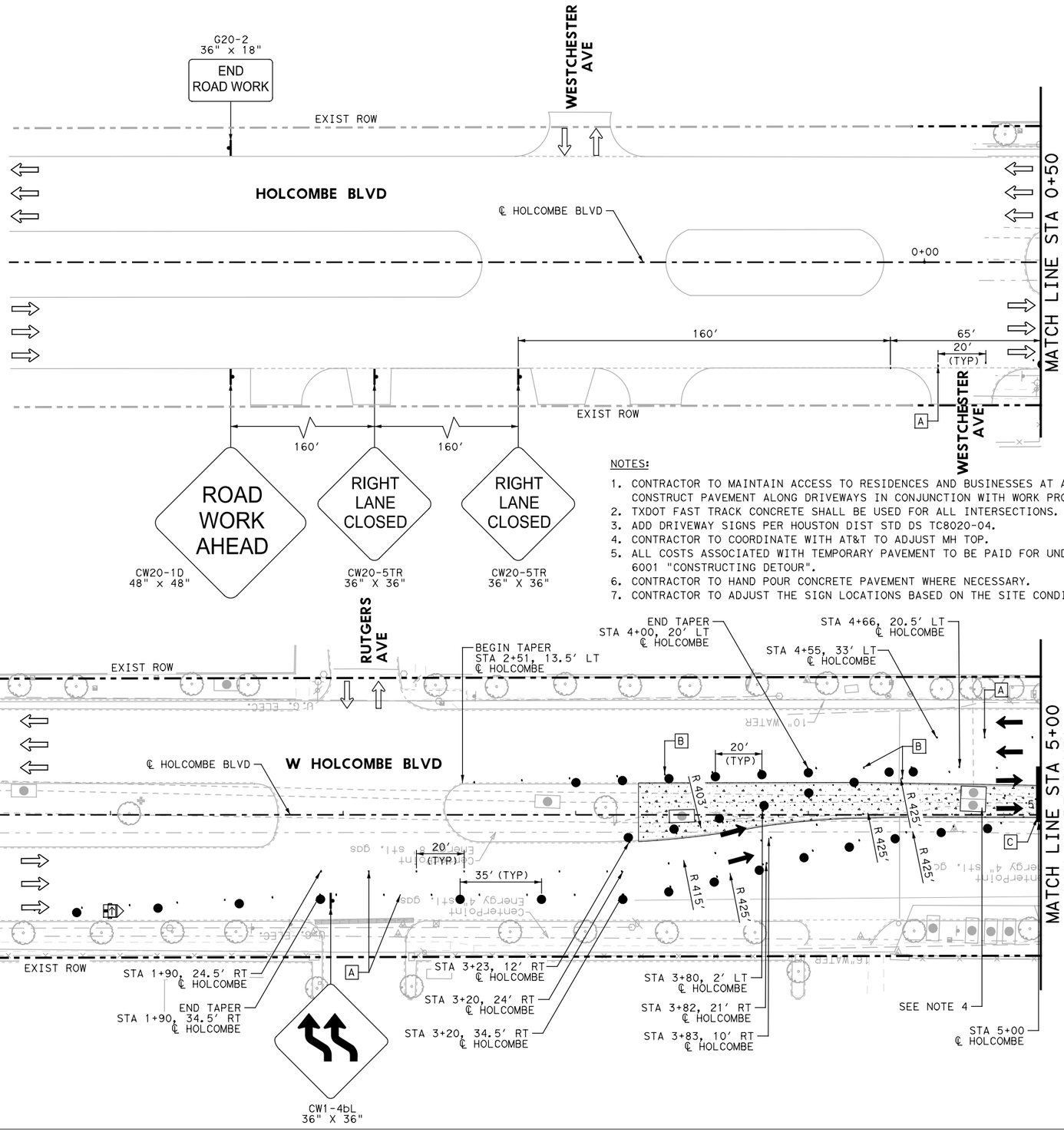
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 4

BUFFALO SPEEDWAY
STA 10+00 TO STA 20+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		64
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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2. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
3. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
4. CONTRACTOR TO COORDINATE WITH AT&T TO ADJUST MH TOP.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

0 50′ 100′
SCALE IN FEET

LEGEND:

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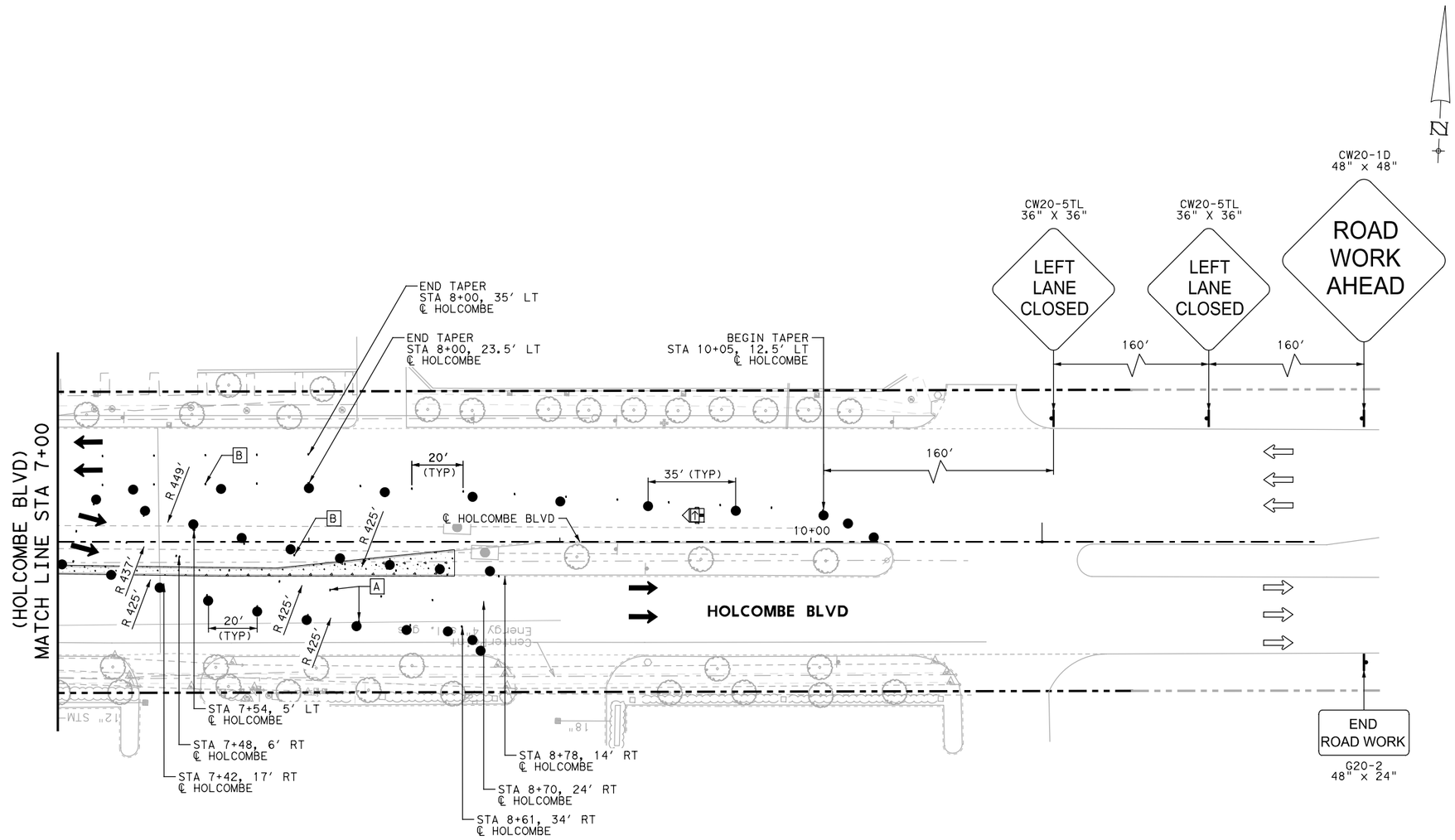
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 4

HOLCOMBE BLVD
BEGIN TO STA 5+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		65
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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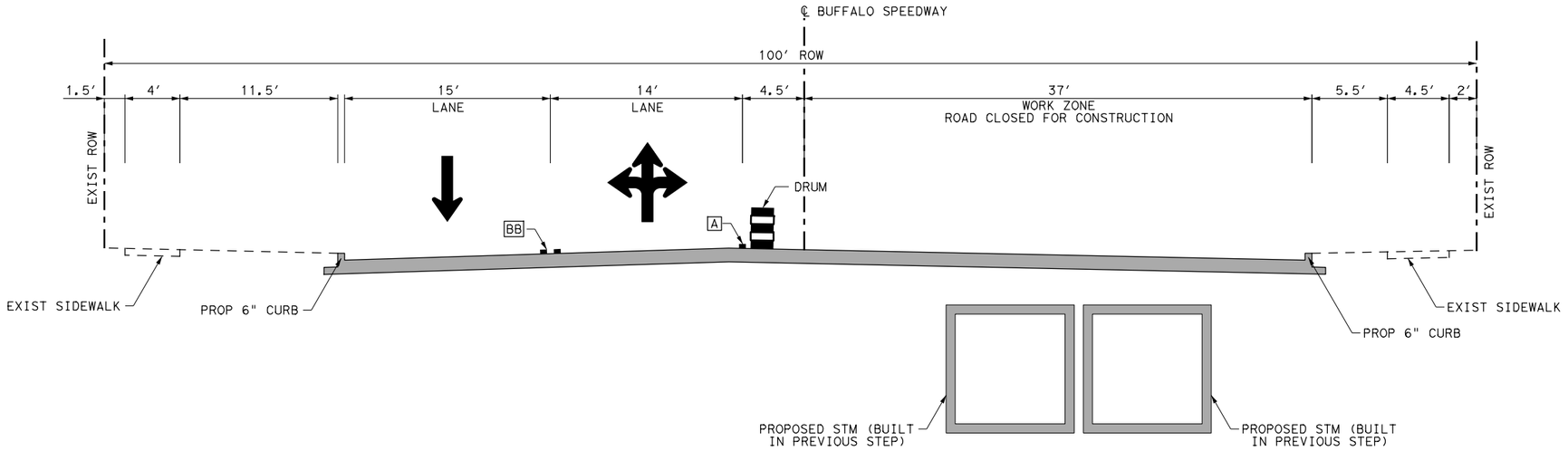
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 4

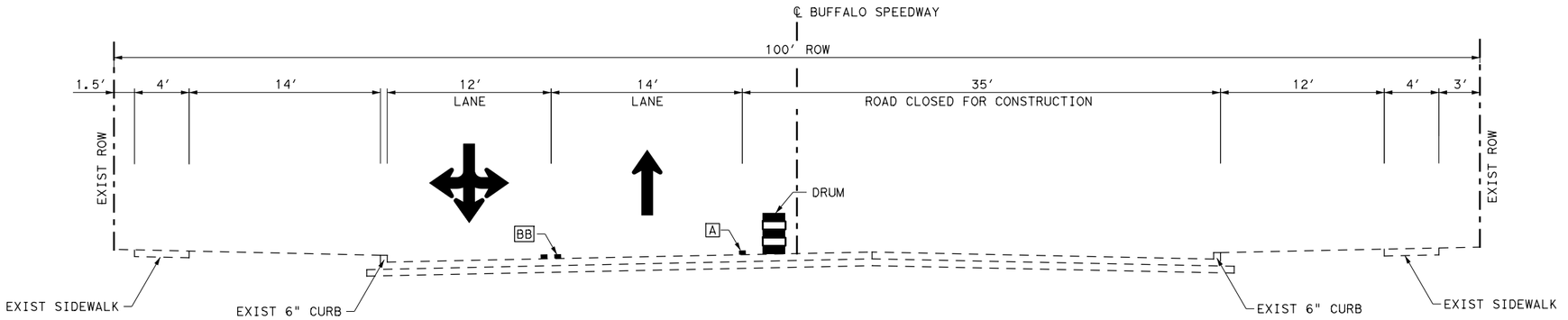
HOLCOMBE BLVD
STA 7+00 TO END

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		66
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 5
(SOUTH OF HOLCOMBE BLVD)
STA 7+55 TO STA 8+45



BUFFALO SPEEDWAY
PHASE 2 STEP 5
(NORTH OF HOLCOMBE BLVD)
STA 9+85 TO STA 11+00

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

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City of West University Place

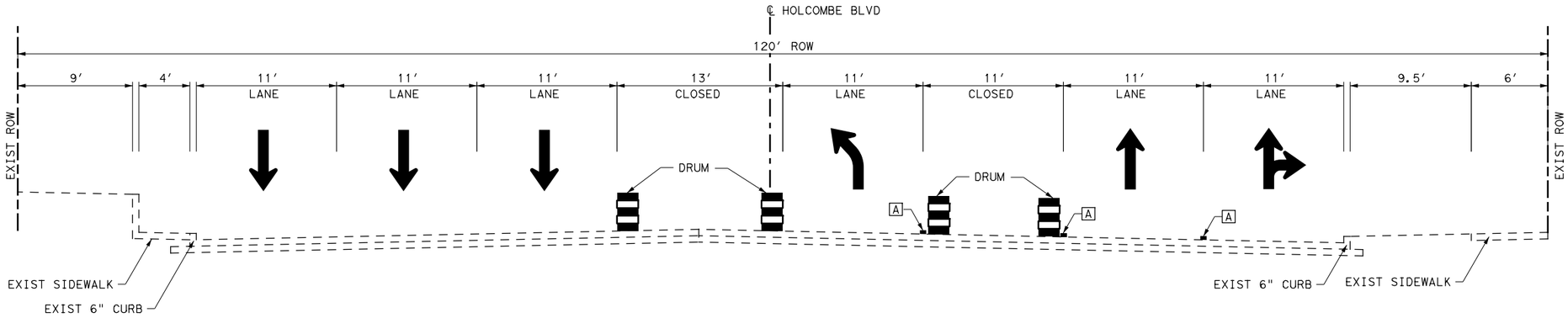
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 5 TYPICAL SECTION

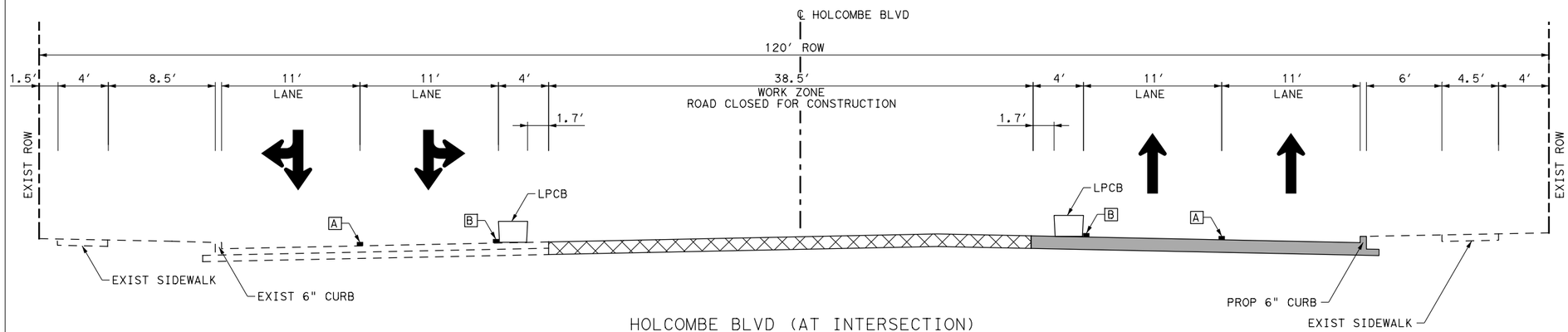
BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		67
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 5
(WEST OF BUFFALO SPEEDWAY)
STA 4+50 TO STA 5+35



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 5
(EAST OF BUFFALO SPEEDWAY)
STA 6+25 TO STA 7+00

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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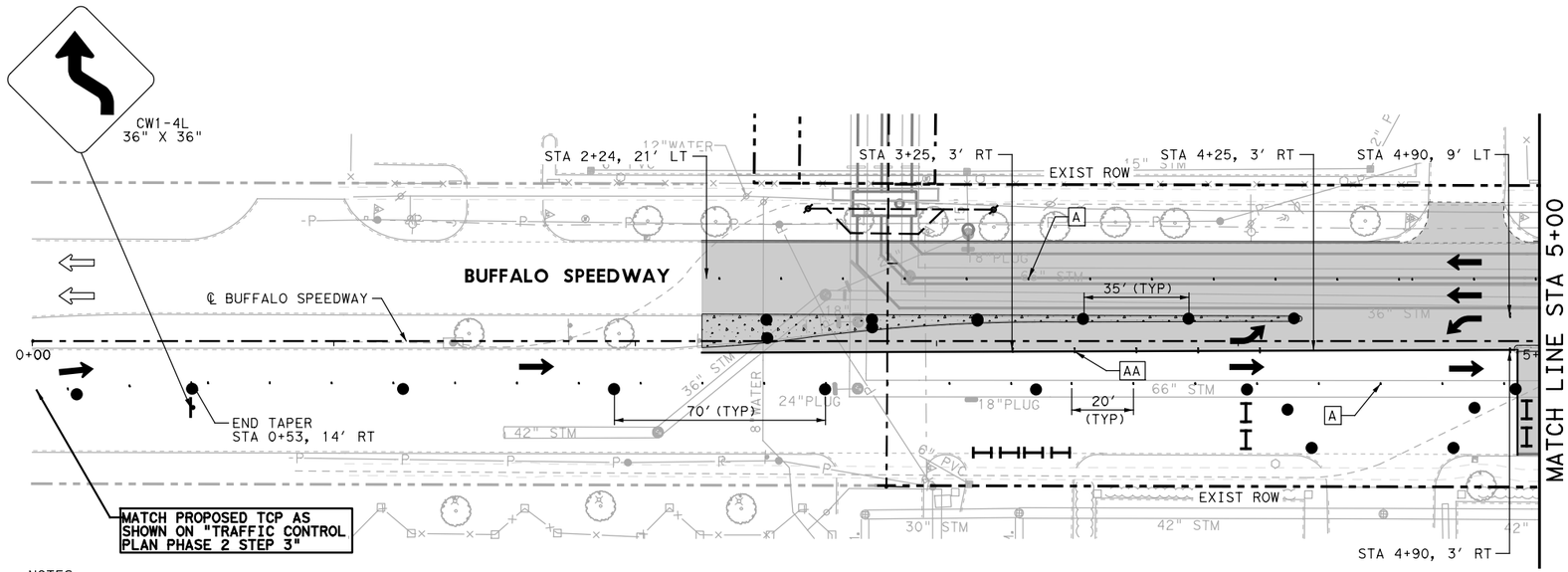
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

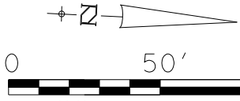
TRAFFIC CONTROL PLAN
PHASE 2 STEP 5 TYPICAL SECTION

HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		68
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





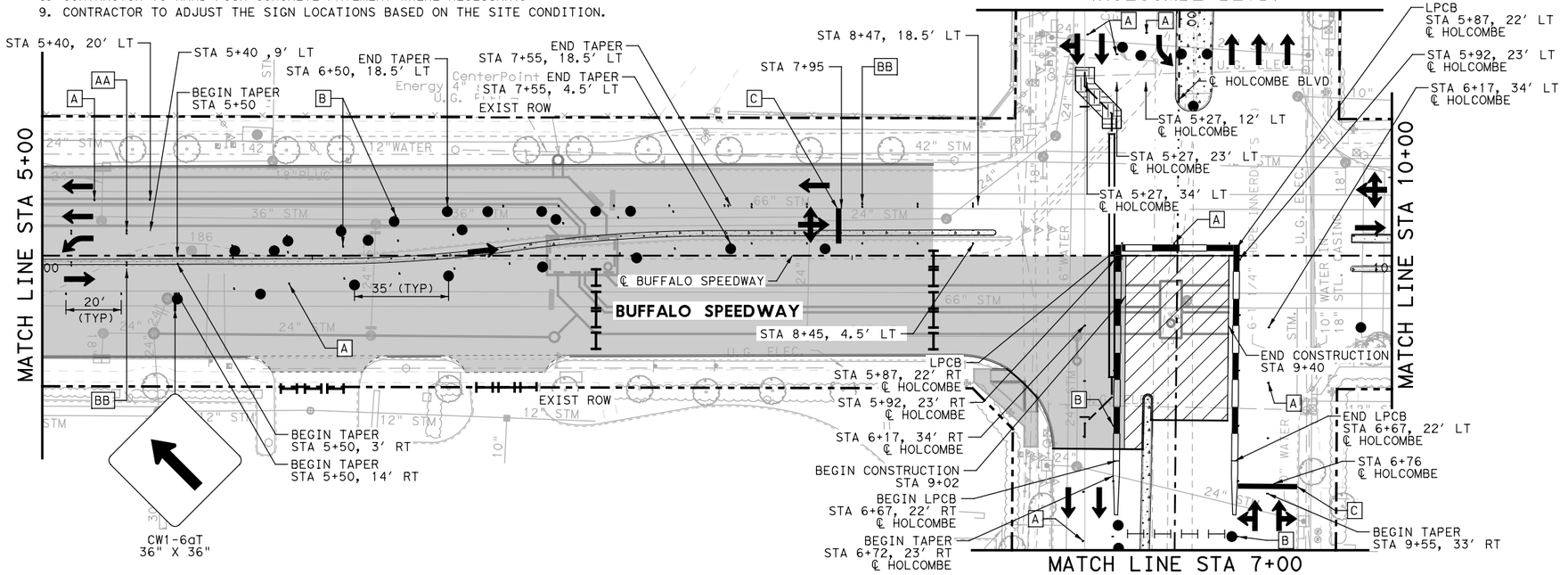
LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT
- CUT & RESTORE CONC PAVING

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

USE WATER FILLED PLASTIC BARRIER INSTEAD OF LPCB, AS NECESSARY, WITH PRIOR APPROVAL FROM THE ENGINEER. THIS WILL NOT BE PAID DIRECTLY BUT INCIDENTAL TO ITEM 502 6001.



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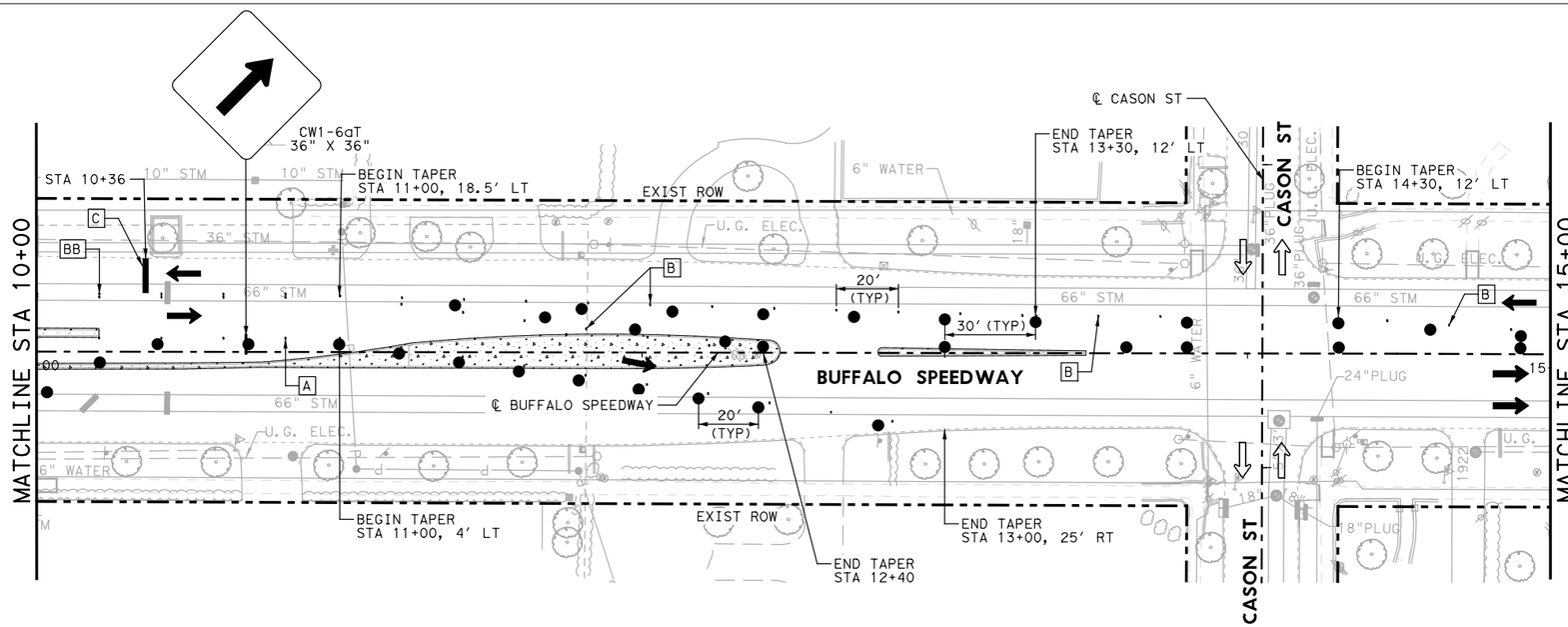
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 5

BUFFALO SPEEDWAY
STA 0+00 TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		69
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

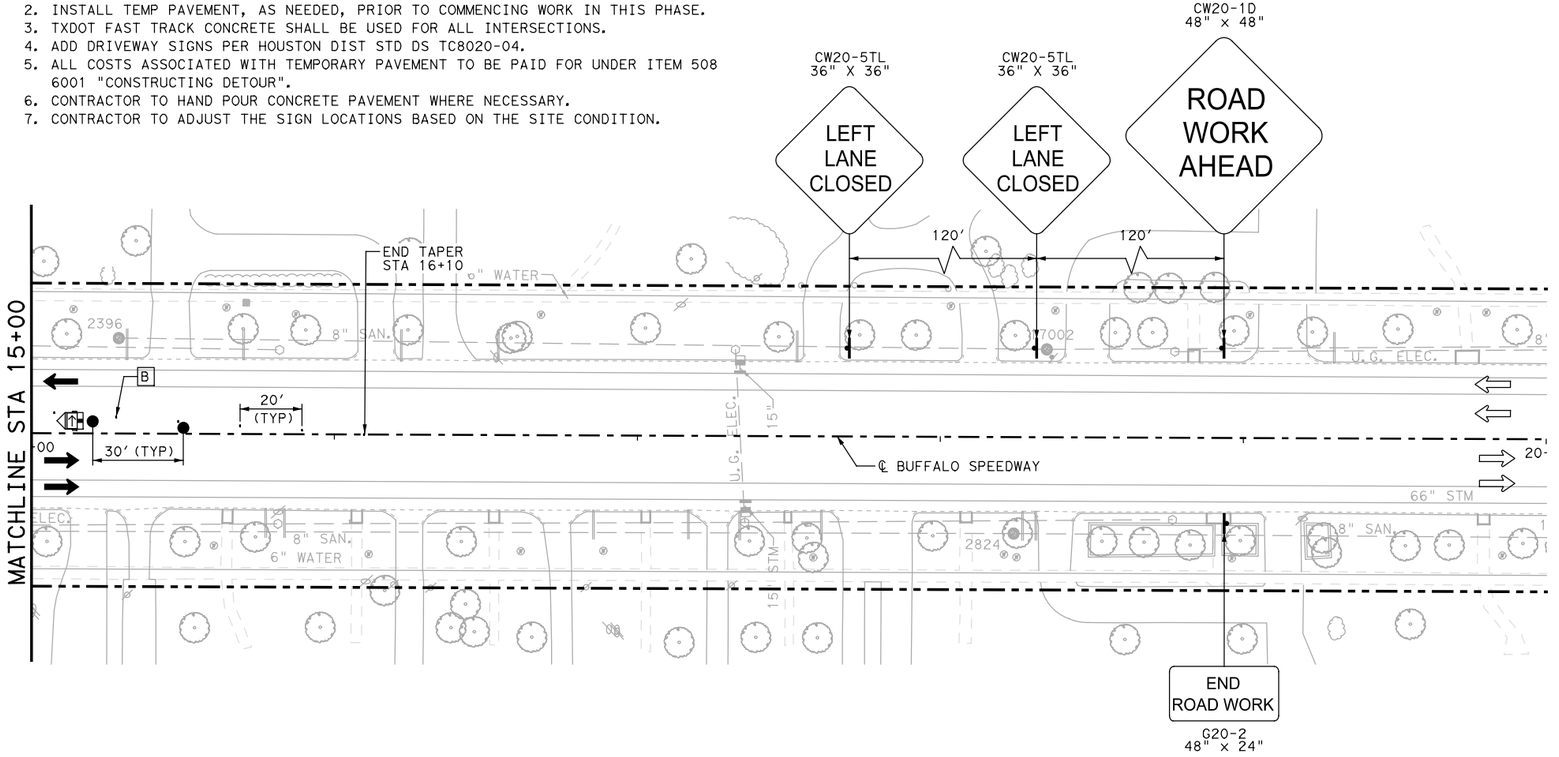
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



STATE OF TEXAS
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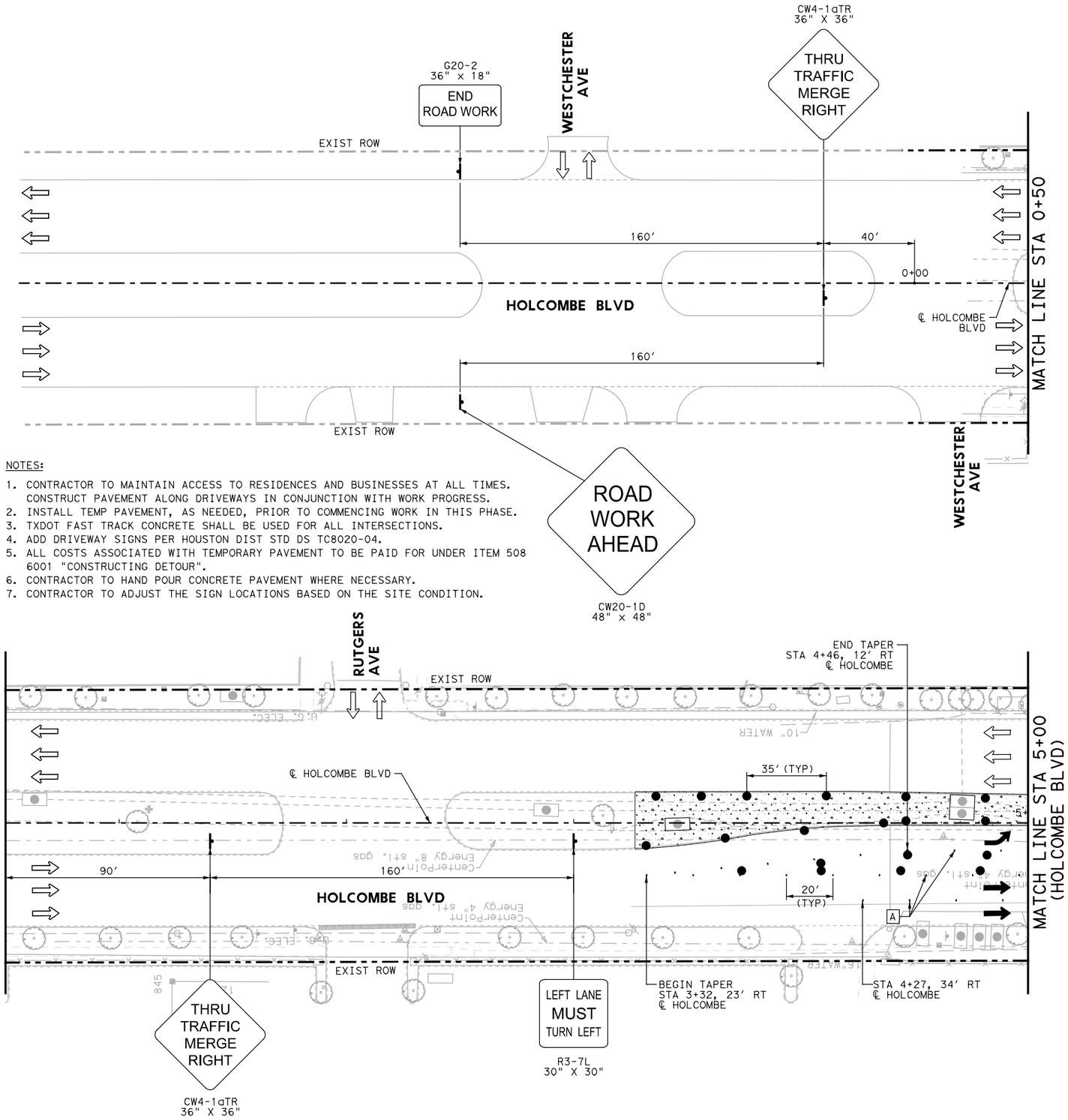
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 5

BUFFALO SPEEDWAY
STA 10+00 TO STA 20+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		70
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

0 50′ 100′
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
SYED S. HAQ P.E.
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8/24/2020

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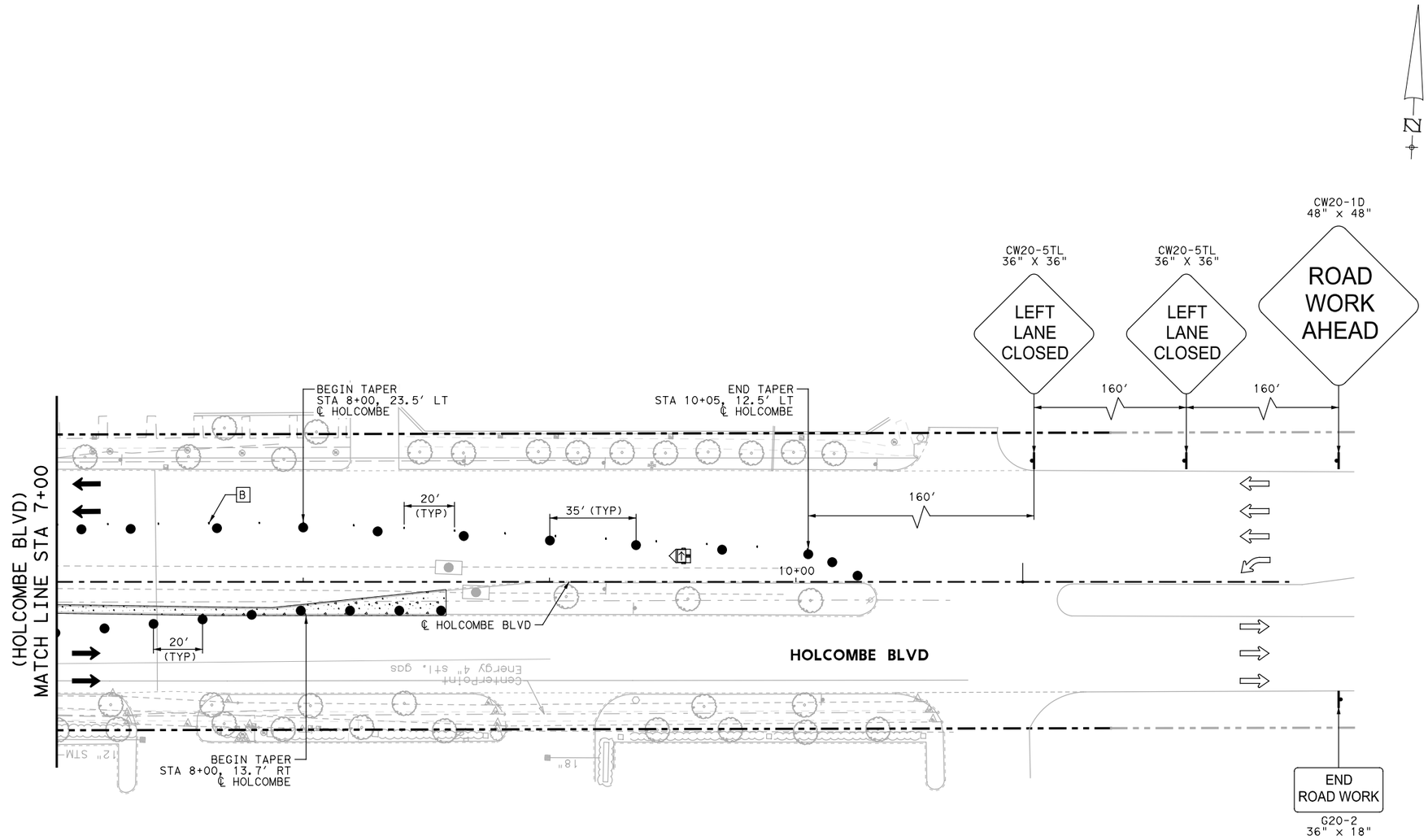
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 5

HOLCOMBE BLVD
BEGIN TO STA 5+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		71
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
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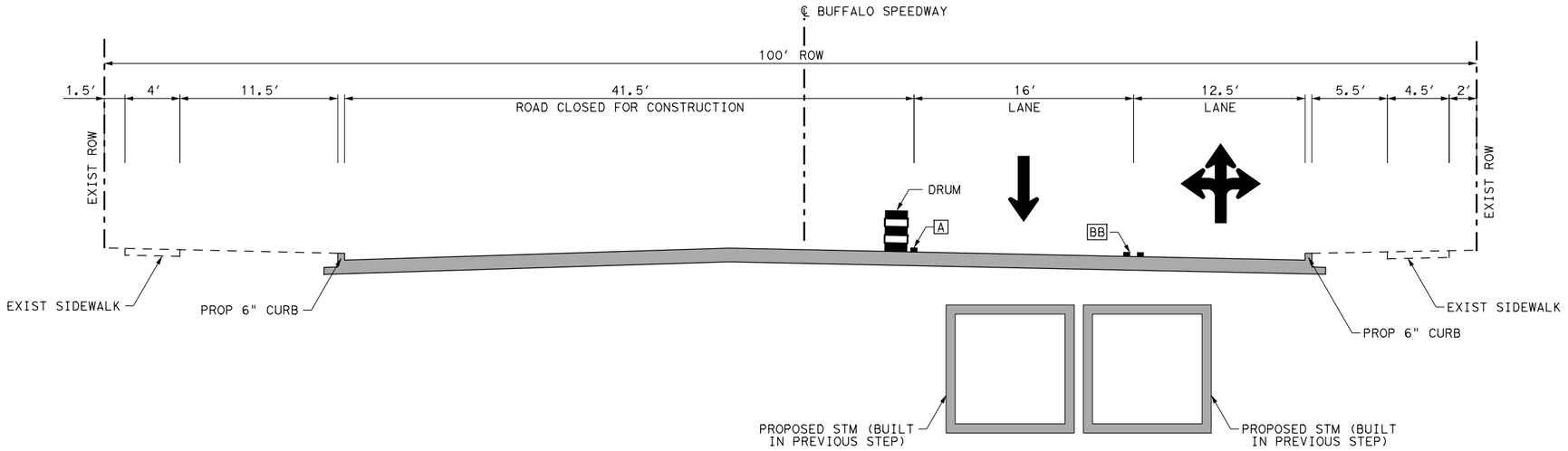
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 5

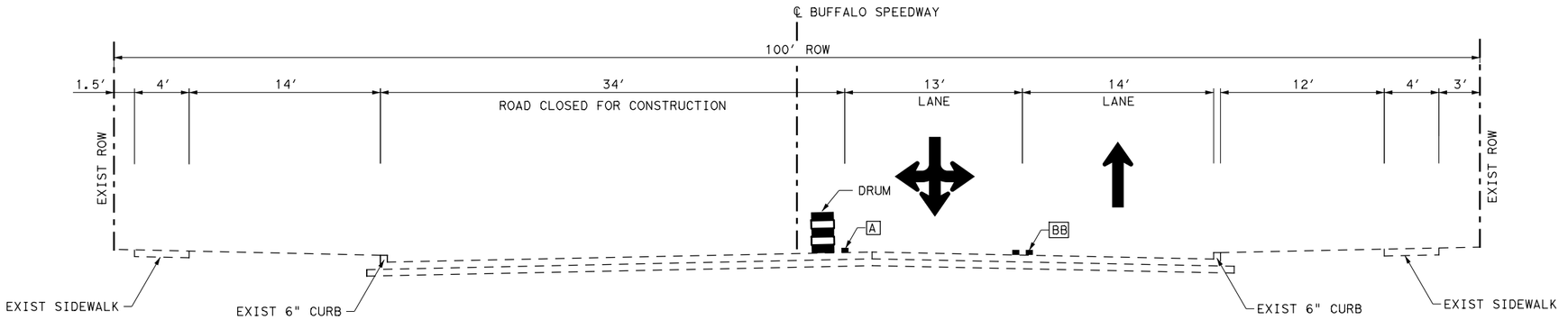
HOLCOMBE BLVD
STA 7+00 TO END

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		72
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 6
(SOUTH OF HOLCOMBE BLVD)
STA 7+00 TO STA 8+40



BUFFALO SPEEDWAY
PHASE 2 STEP 6
(NORTH OF HOLCOMBE BLVD)
STA 9+85 TO STA 12+20

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM — STORM SEWER
- [A] — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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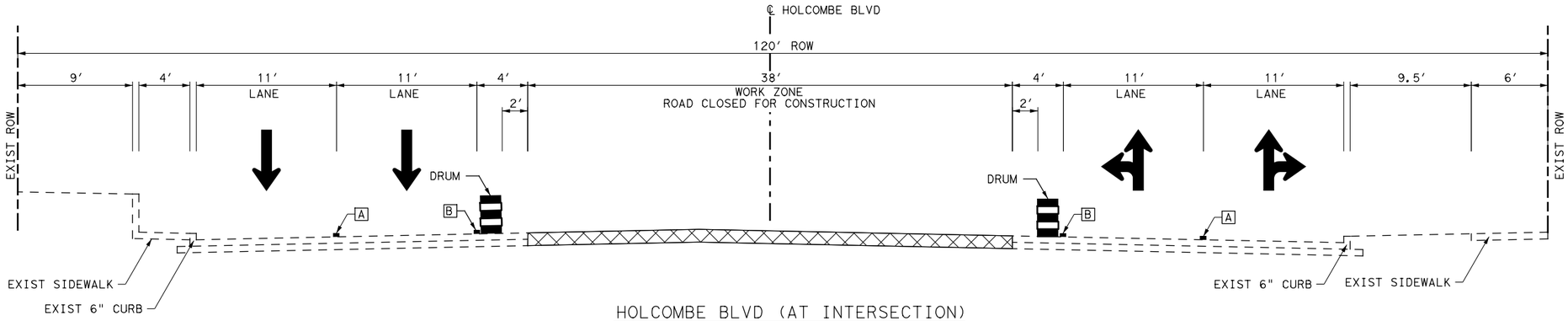
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 6 TYPICAL SECTION

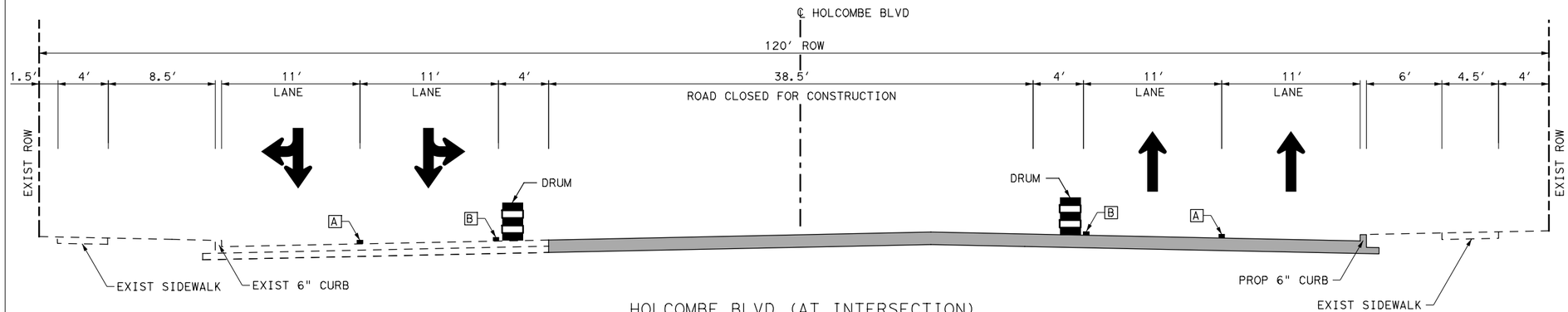
BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		73
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 6
(WEST OF BUFFALO SPEEDWAY)
STA 3+20 TO STA 5+20



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 6
(EAST OF BUFFALO SPEEDWAY)
STA 6+55 TO STA 8+00

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- A WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- AA WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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City of West University Place

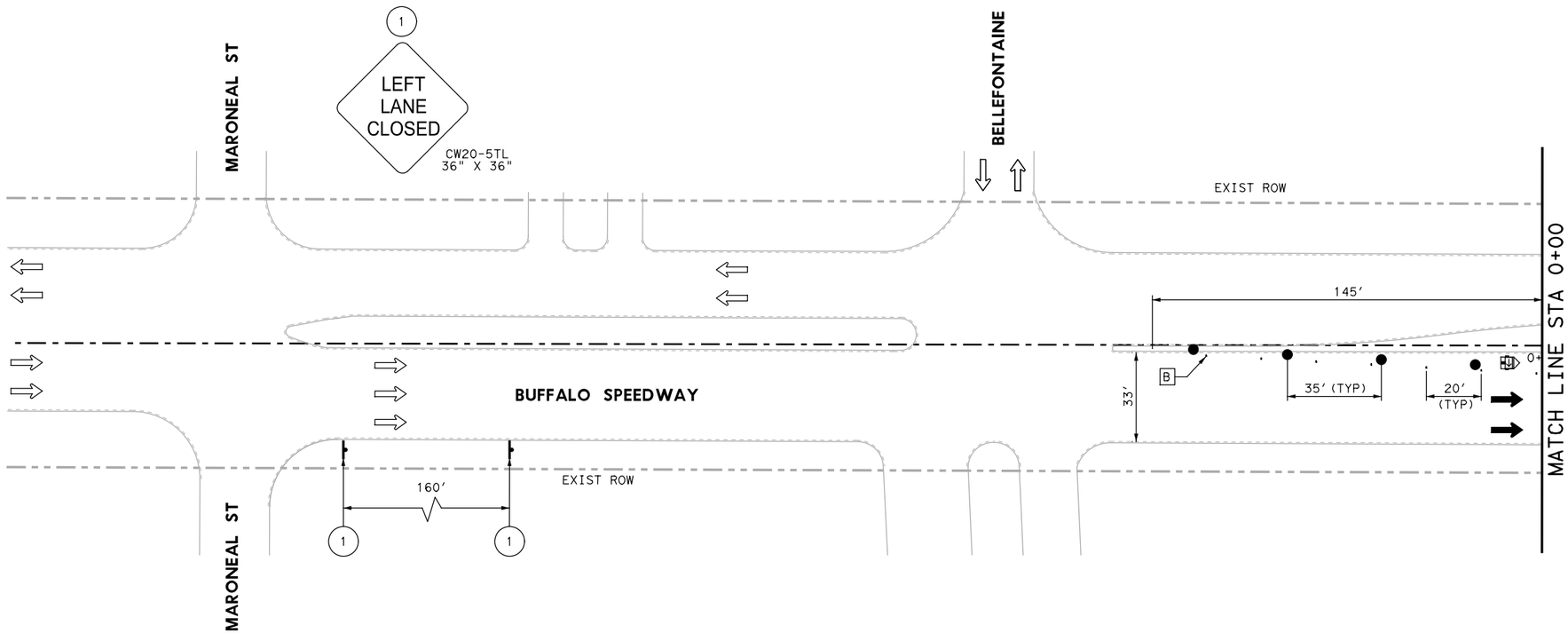
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 6 TYPICAL SECTION

HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		74
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
6. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368
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Texas Registered Engineering Firm F-2144

City of West University Place

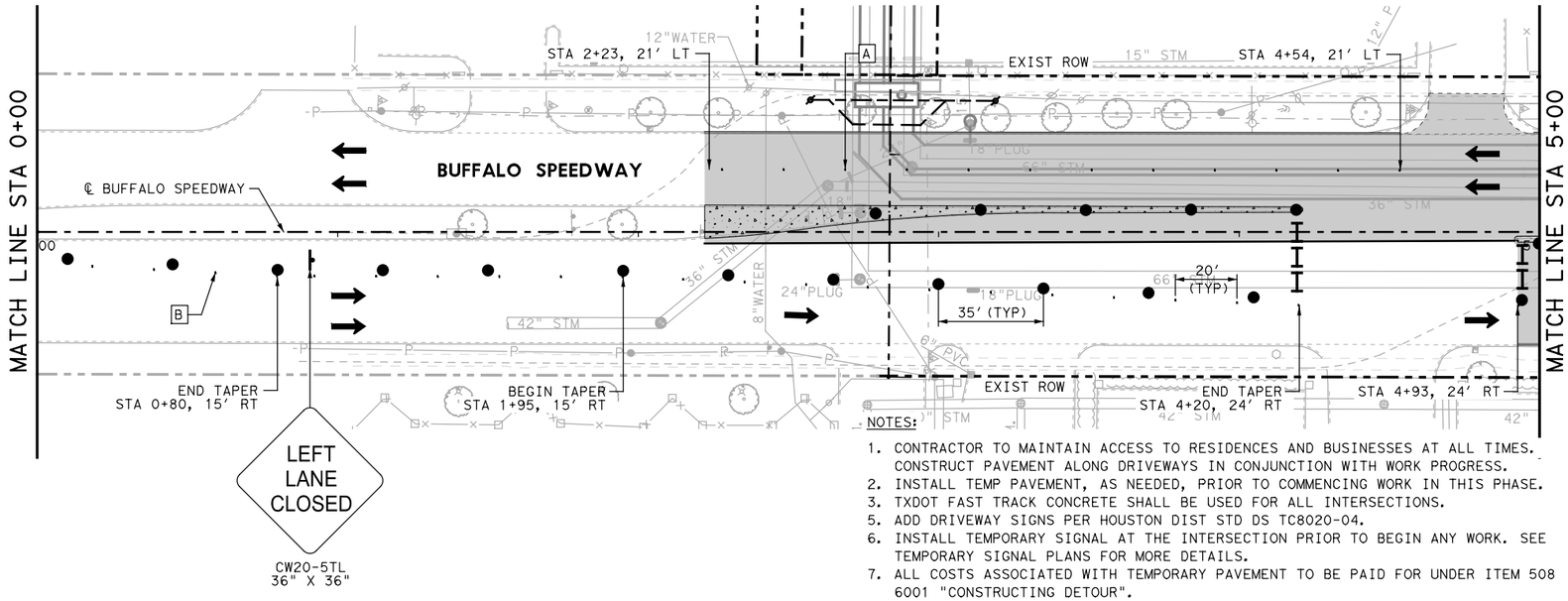
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 6

BUFFALO SPEEDWAY
BEGIN TO STA 0+00

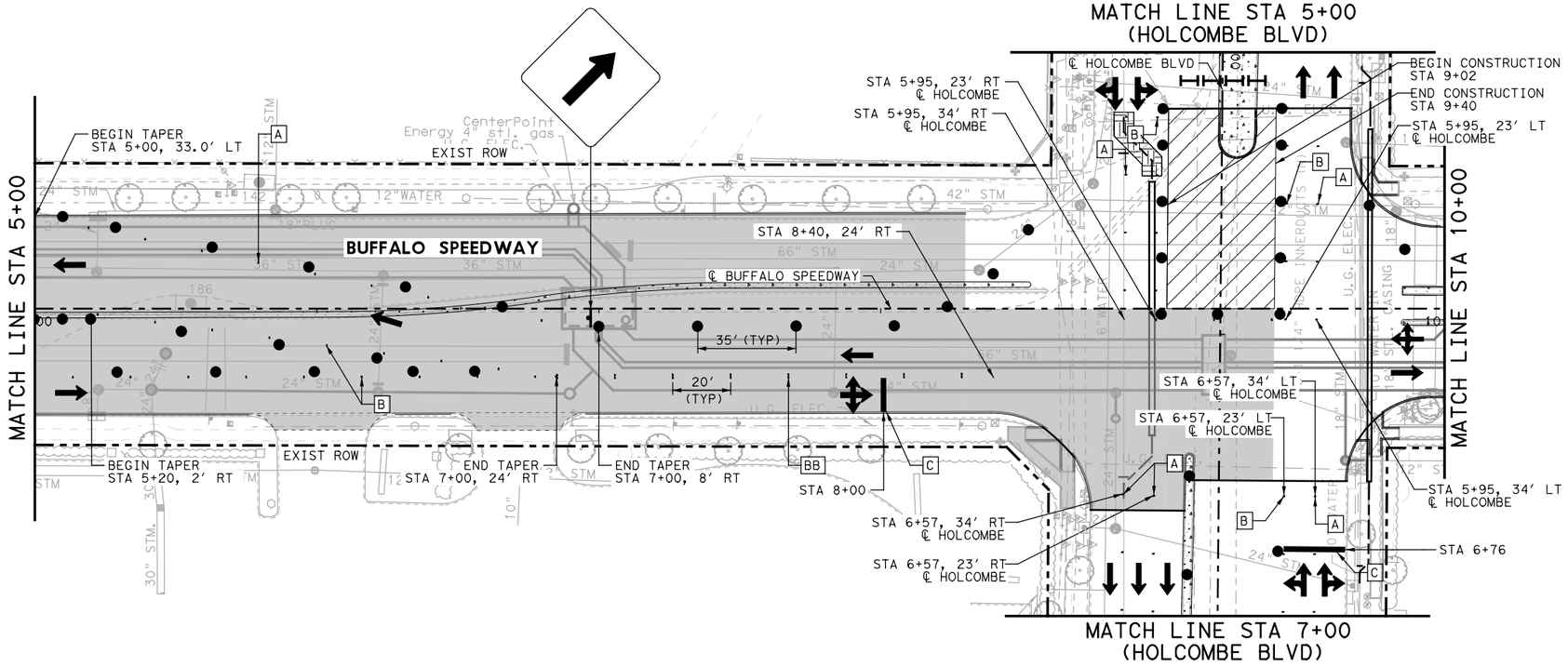
Texas Department of Transportation

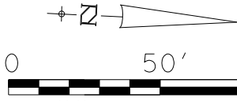
FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		75
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.





LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT
- CUT & RESTORE CONC PAVING

STATE OF TEXAS
SYED S. HAQ P.E.
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LICENSED PROFESSIONAL ENGINEER
8/24/2020

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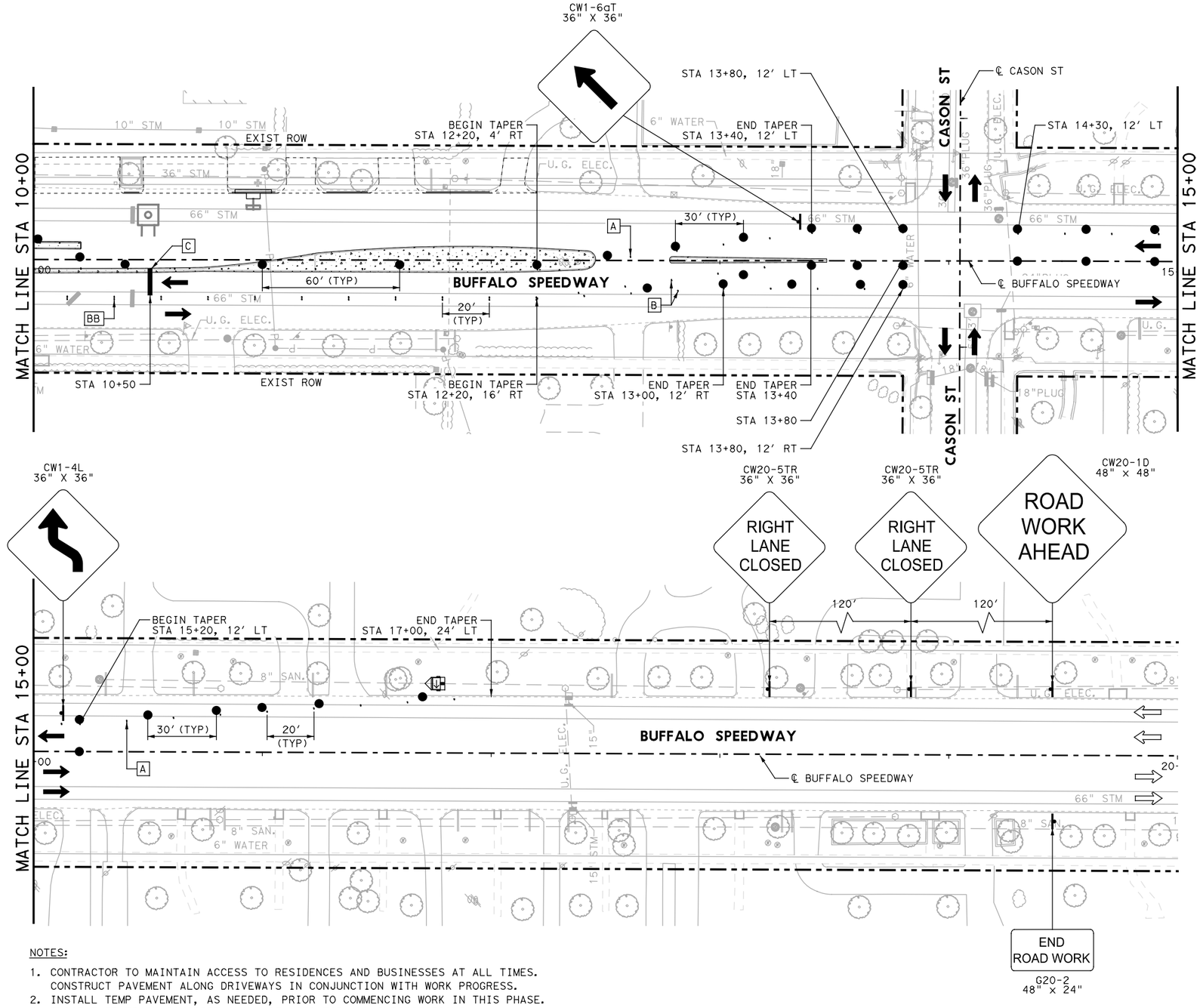
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 6

BUFFALO SPEEDWAY
STA 0+00 TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		76
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

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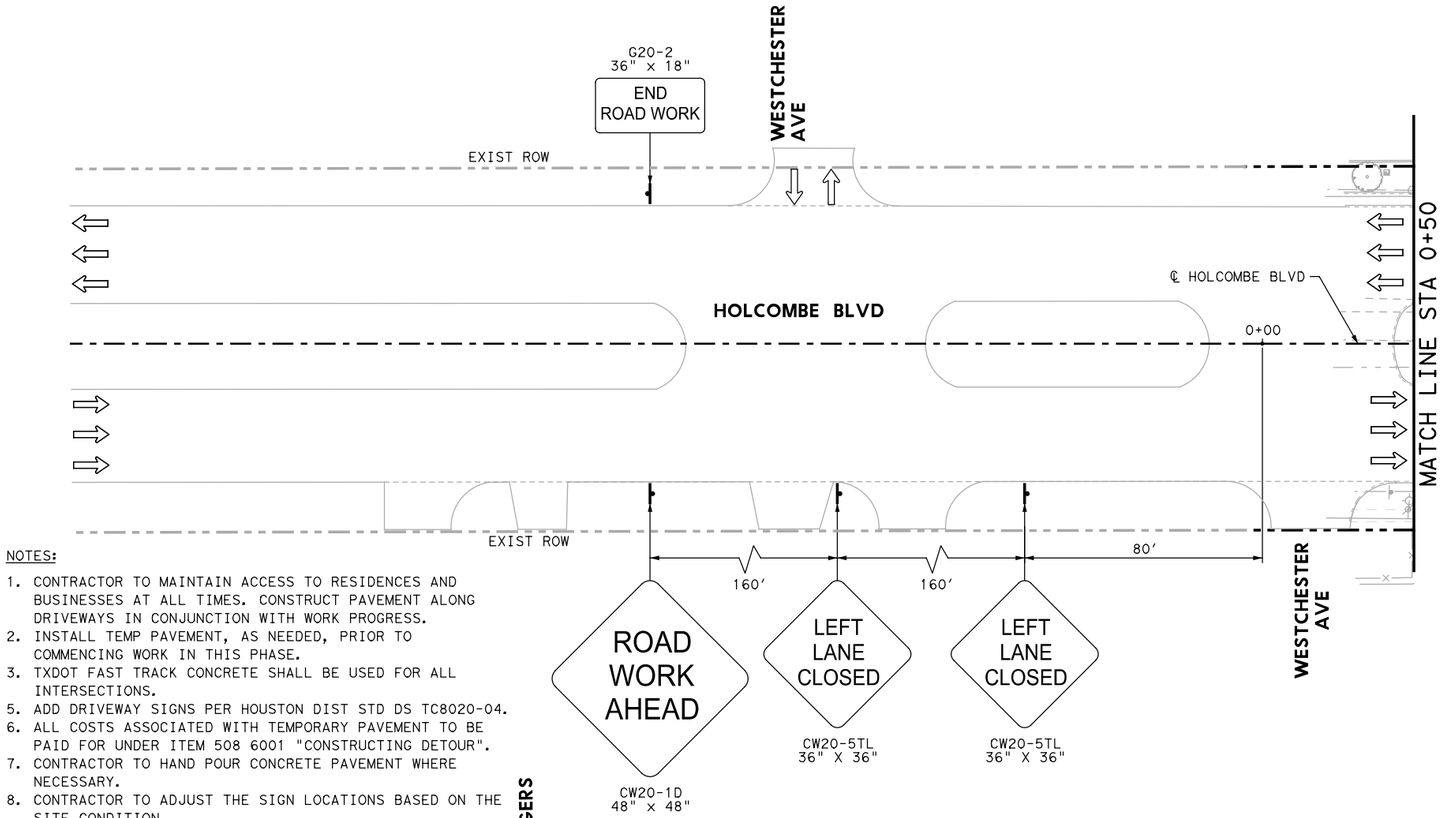
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 6

BUFFALO SPEEDWAY
STA 10+00 TO STA 20+00

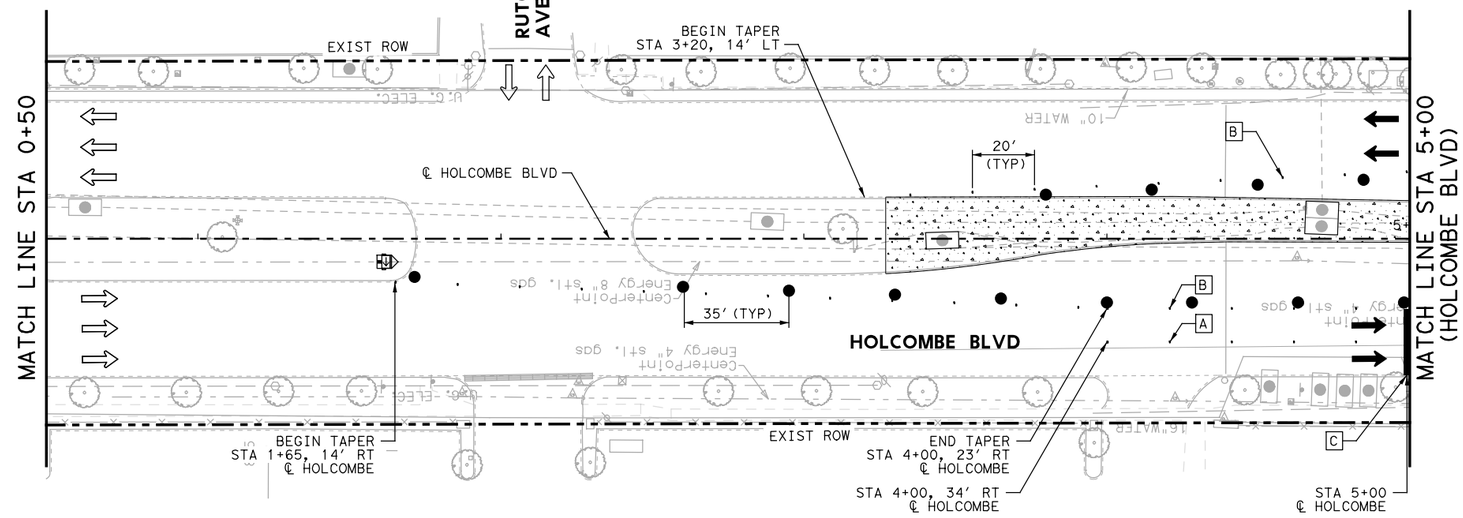
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		77
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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8. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.





0 50′ 100′
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
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- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
SYED S. HAQ P.E.
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LICENSED
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8/24/2020

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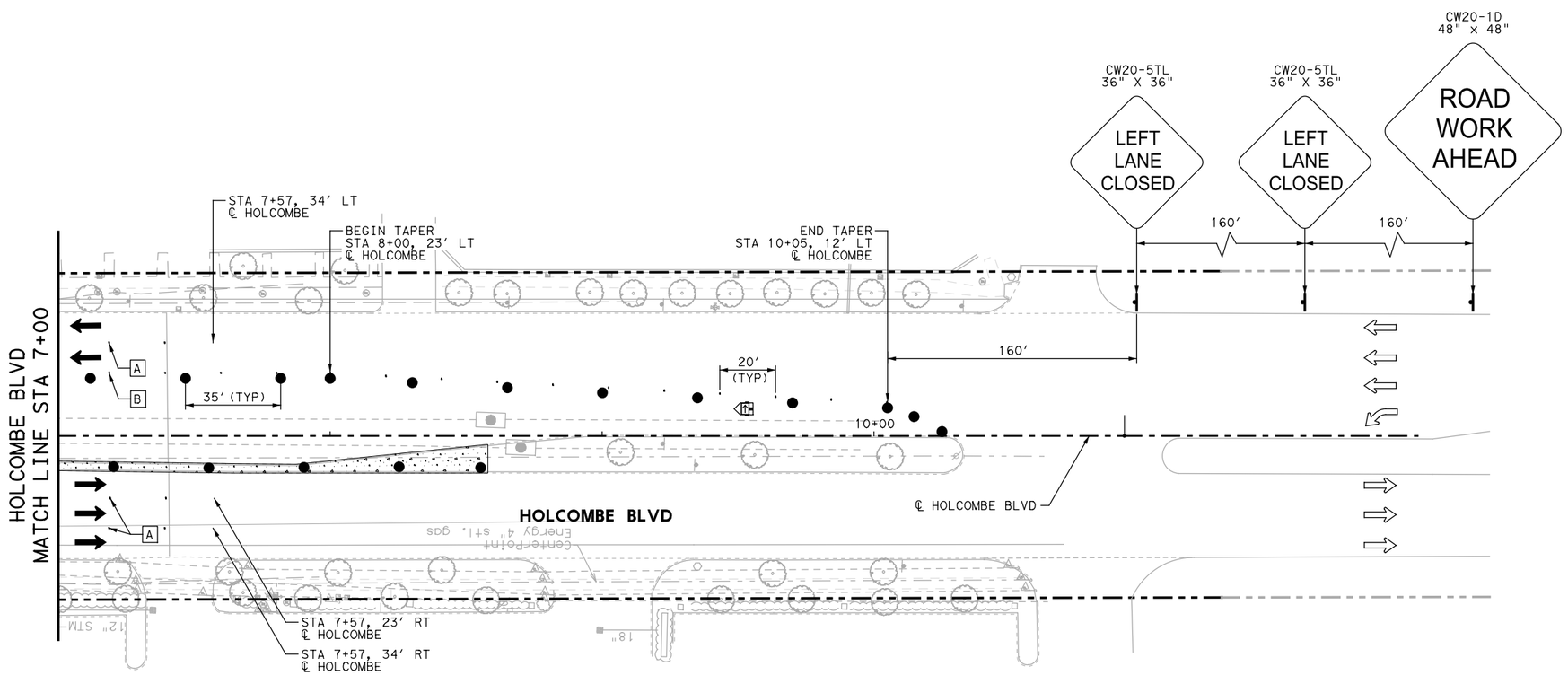
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 6

HOLCOMBE BLVD
BEGIN TO STA 5+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		78
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
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STATE OF TEXAS
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94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

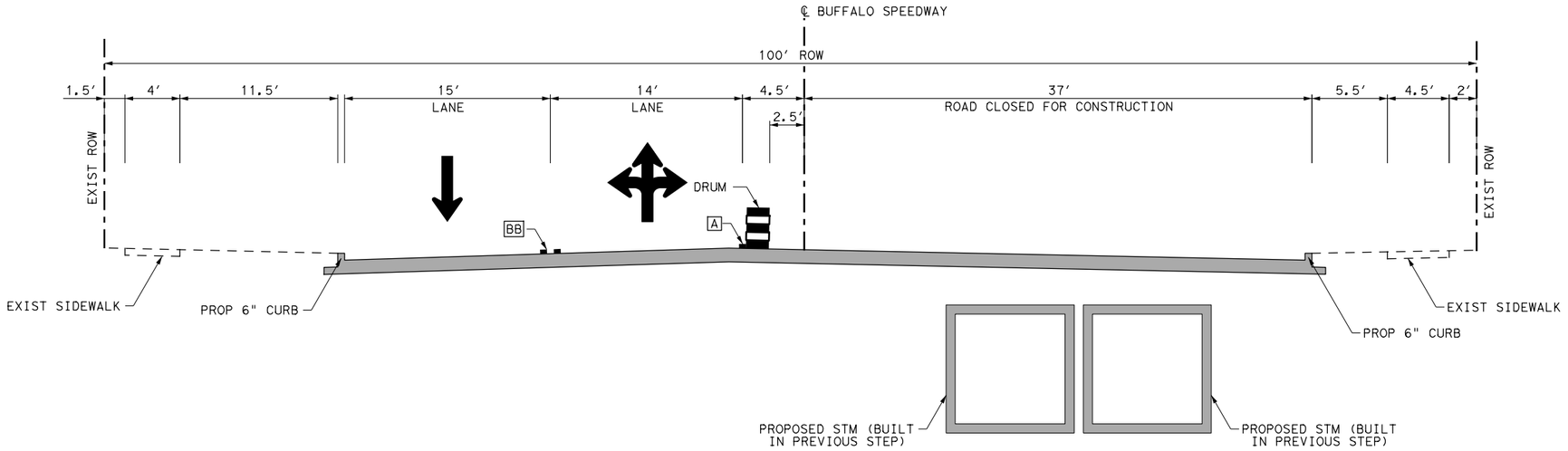
TRAFFIC CONTROL PLAN PHASE 2 STEP 6

HOLCOMBE BLVD
STA 7+00 TO END

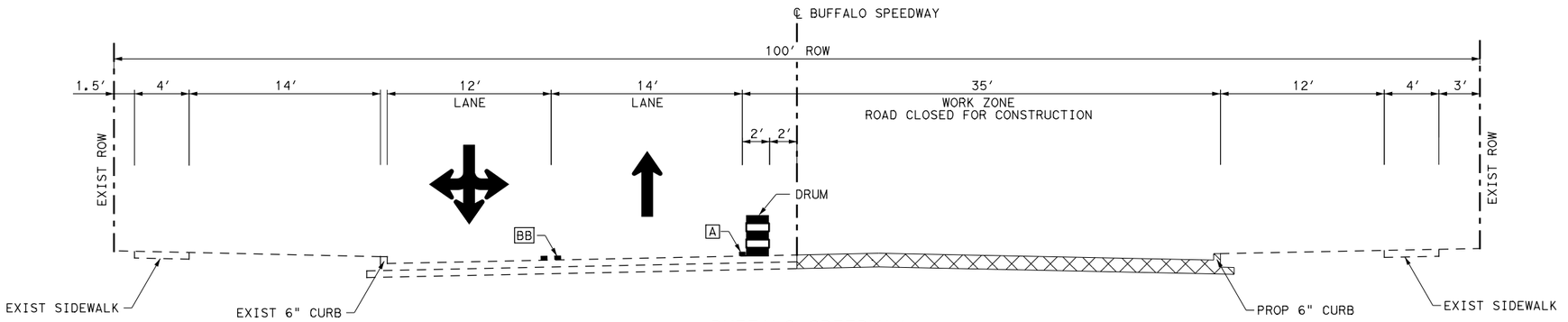
SHEET 5 OF 5

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		79
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 7
(SOUTH OF HOLCOMBE BLVD)
STA 7+55 TO STA 8+45



BUFFALO SPEEDWAY
PHASE 2 STEP 7
(NORTH OF HOLCOMBE BLVD)
STA 9+40 TO STA 10+00

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
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- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

STATE OF TEXAS
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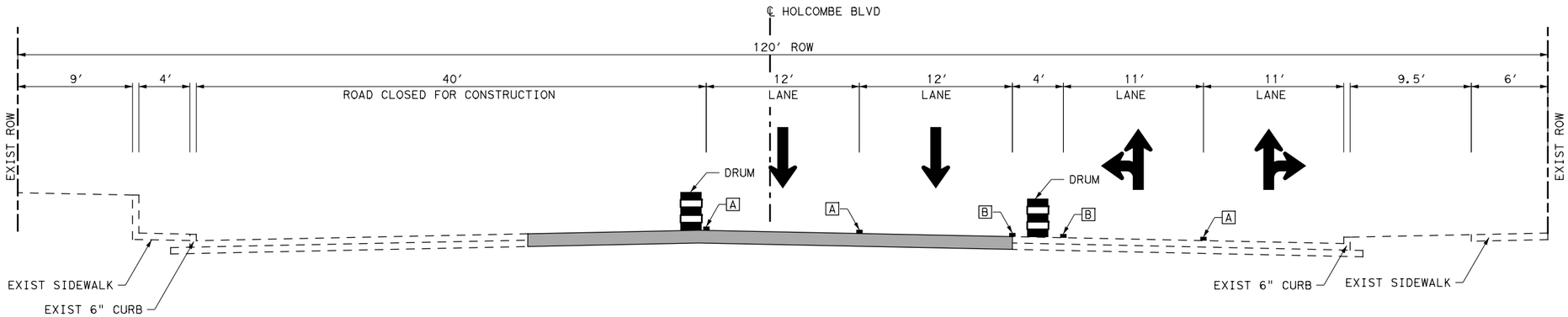
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 7 TYPICAL SECTION

BUFFALO SPEEDWAY

Texas Department of Transportation

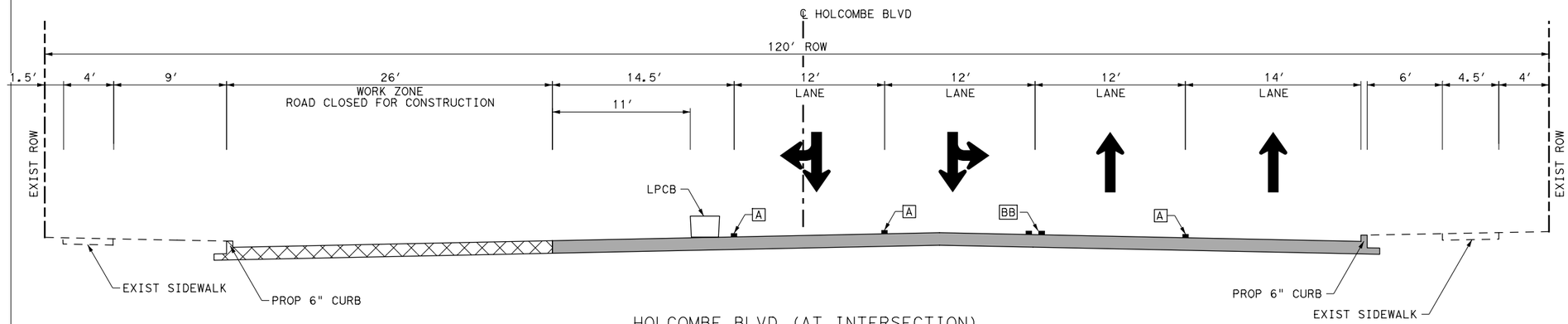
FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		80
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 7
(WEST OF BUFFALO SPEEDWAY)
STA 2+70 TO STA 5+25

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 7
(EAST OF BUFFALO SPEEDWAY)
STA 6+45 TO STA 7+00

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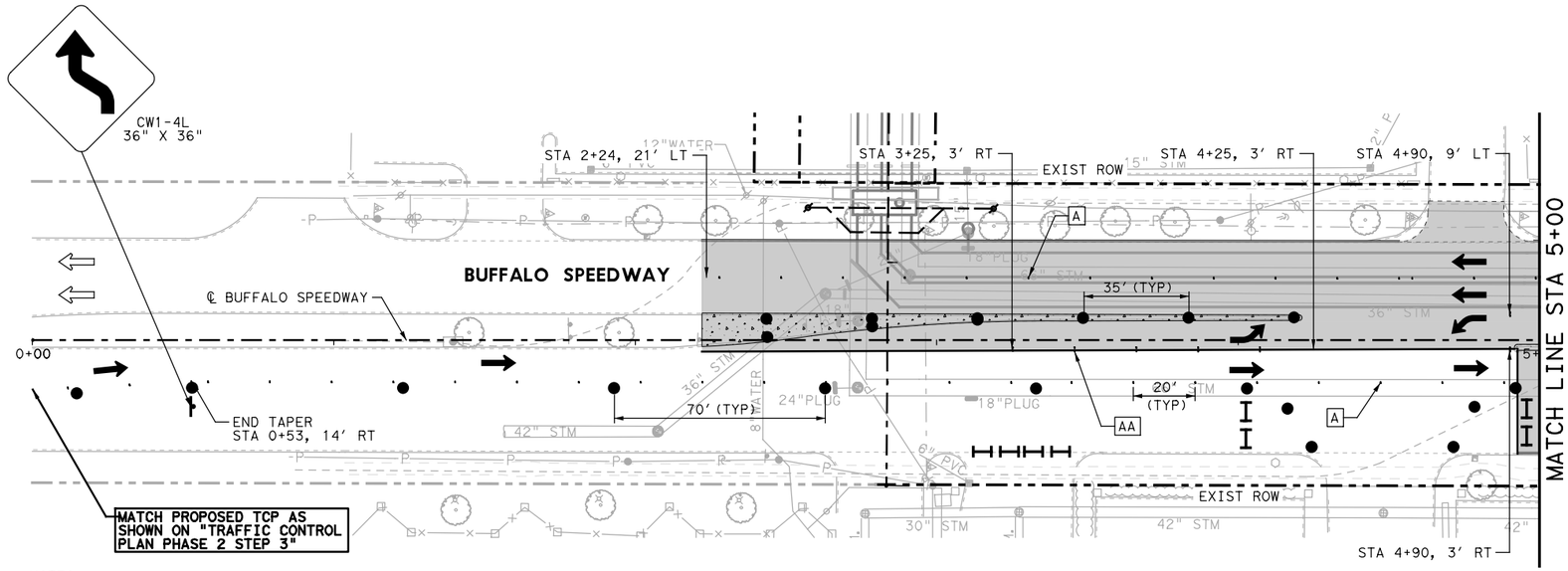
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 7 TYPICAL SECTION

HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		81
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





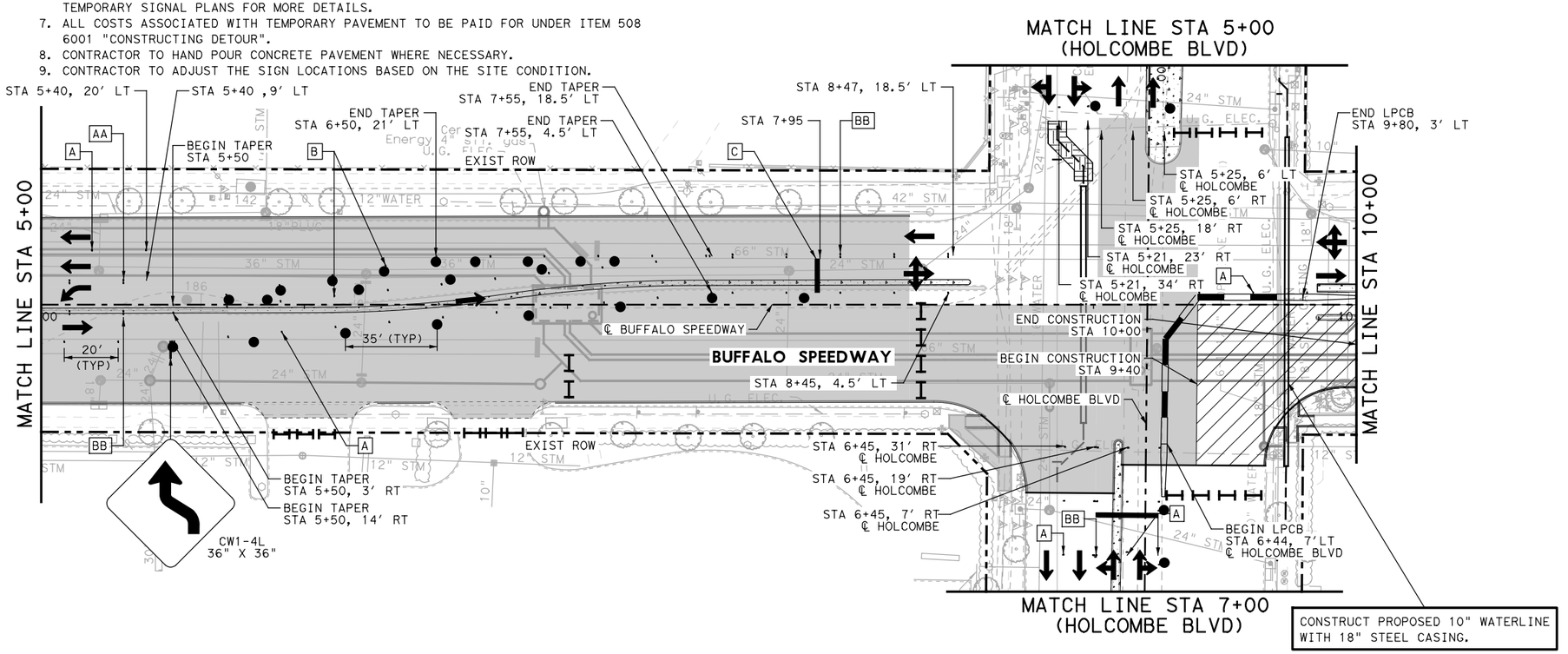
LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
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- TEMPORARY PAVEMENT
- CUT & RESTORE CONC PAVING

NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
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USE WATER FILLED PLASTIC BARRIER INSTEAD OF LPCB, AS NECESSARY, WITH PRIOR APPROVAL FROM THE ENGINEER. THIS WILL NOT BE PAID DIRECTLY BUT INCIDENTAL TO ITEM 502 6001.



CONSTRUCT PROPOSED 10" WATERLINE WITH 18" STEEL CASING.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368
11111 WILCREST GREEN DR, SUITE 410
HOUSTON, TEXAS 77042

FREESE AND NICHOLS
11200 Broadway Street, Suite 2320
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Phone – (832) 456-4700
Fax – (832) 456-4701
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

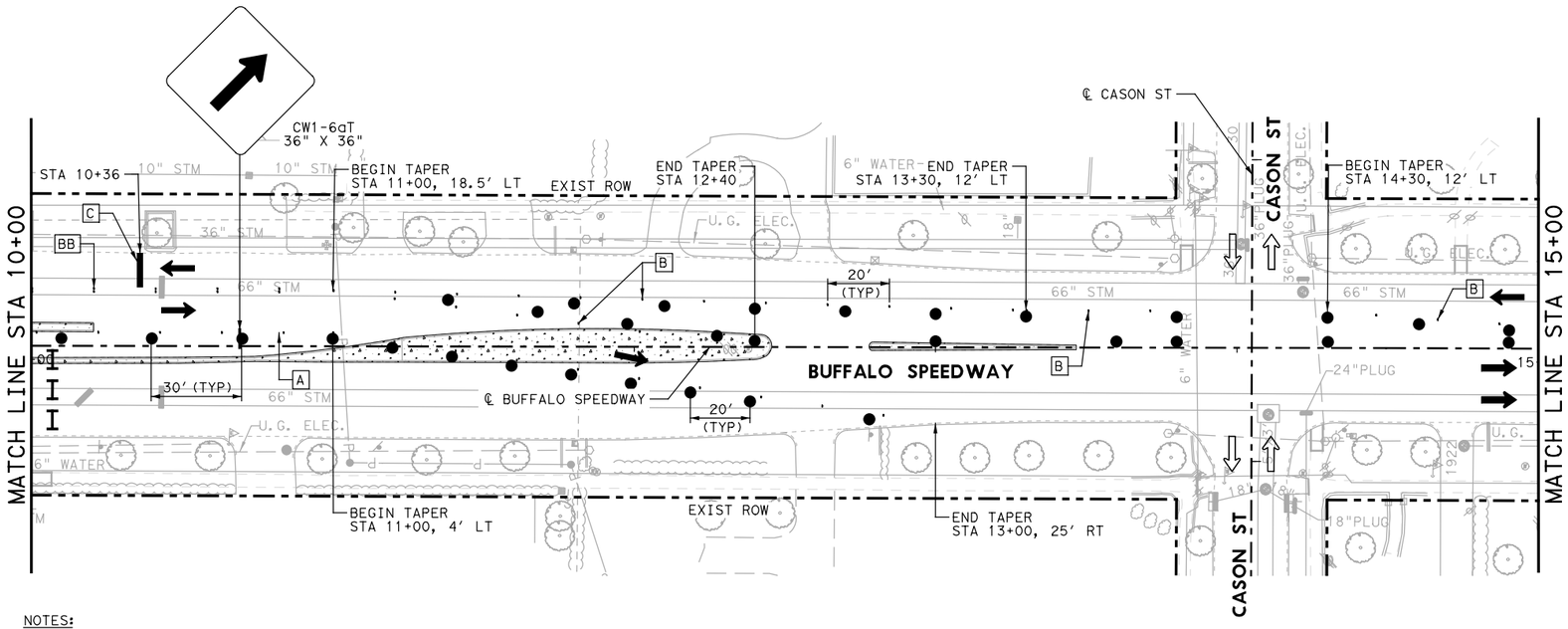
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 7

BUFFALO SPEEDWAY
BEGIN TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		82
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



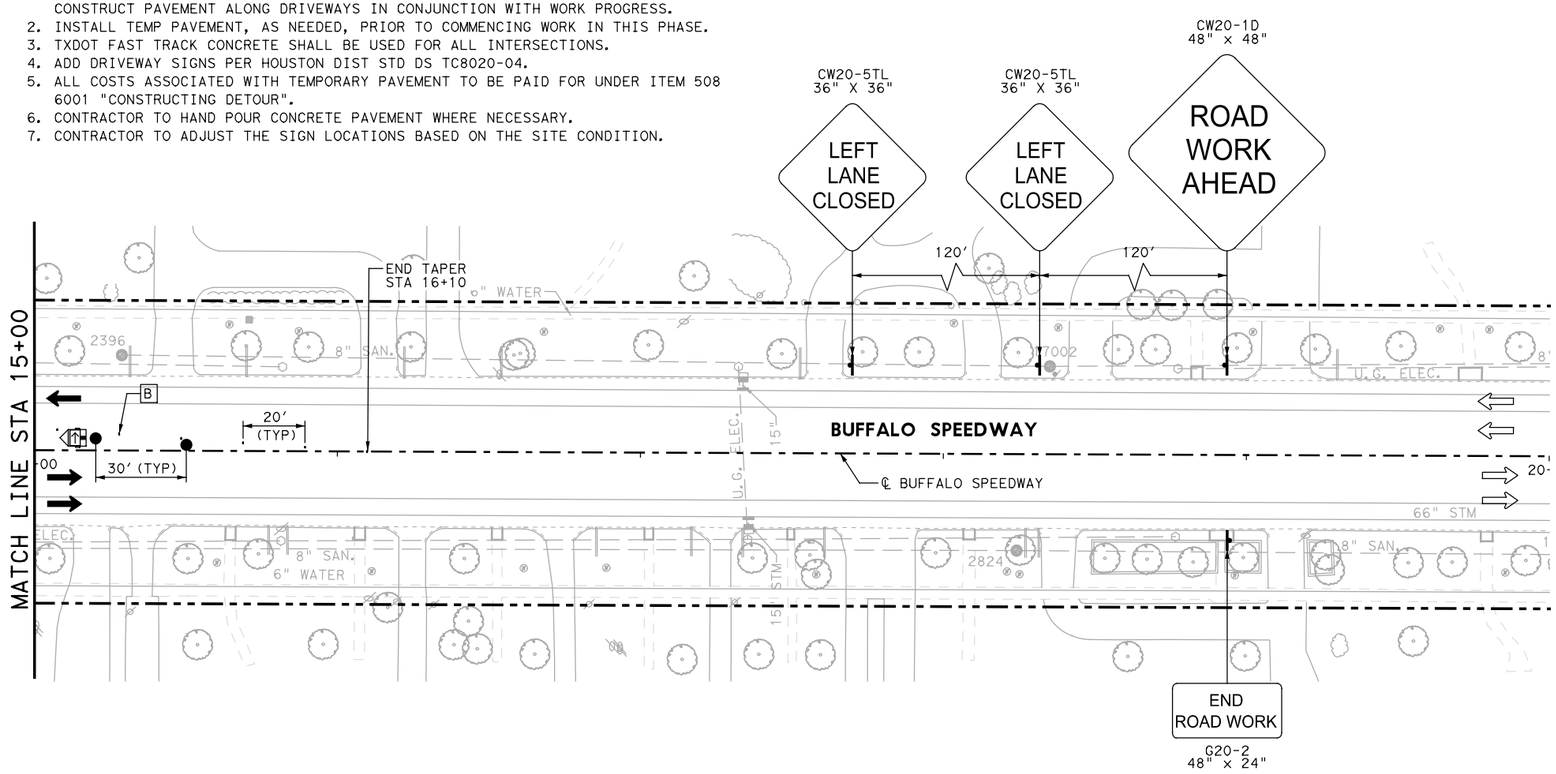


LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



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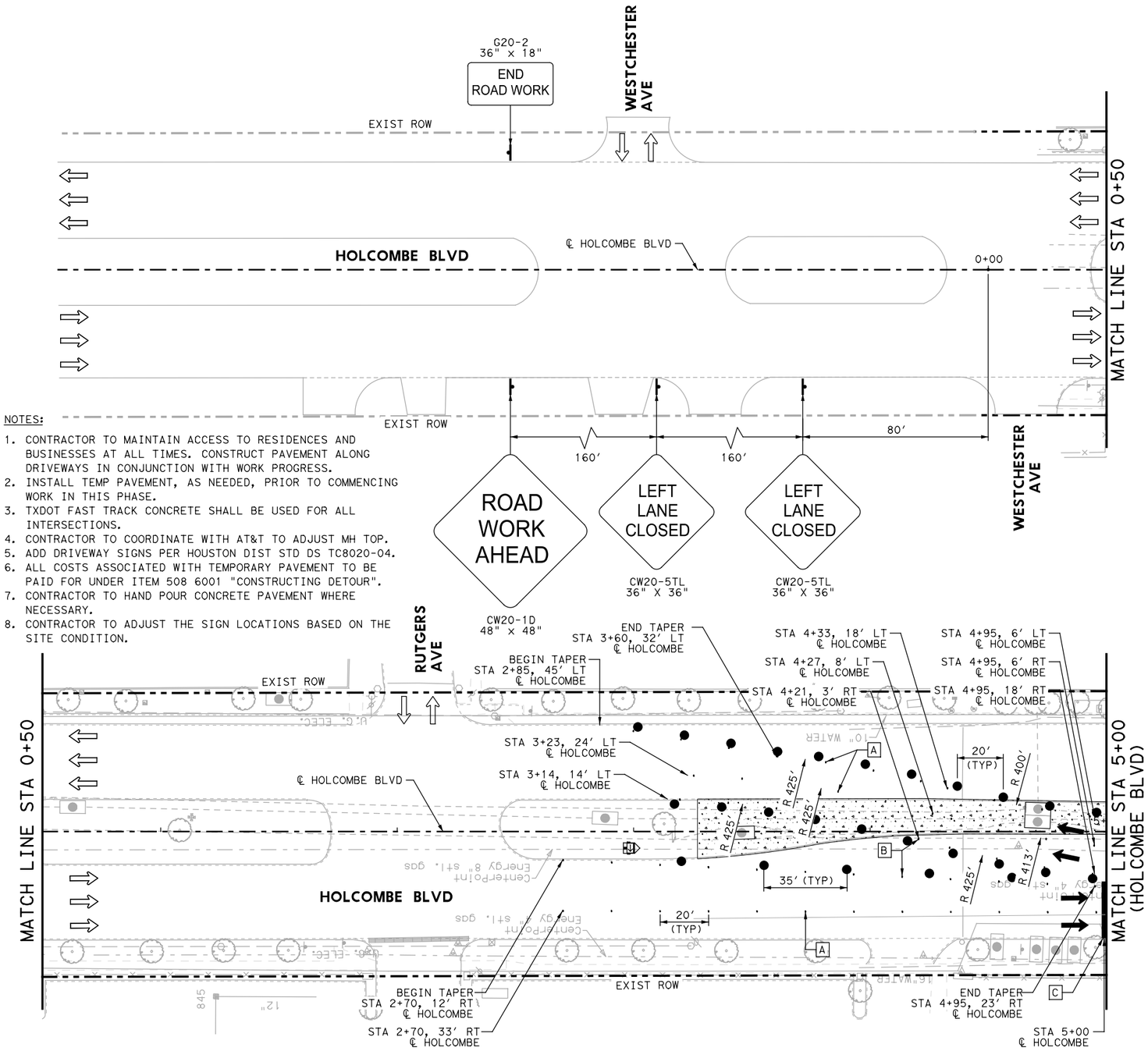
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 7

BUFFALO SPEEDWAY
STA 10+00 TO STA 20+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		83
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. CONTRACTOR TO COORDINATE WITH AT&T TO ADJUST MH TOP.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
7. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
8. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

0 50′ 100′
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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- TEMPORARY PAVEMENT

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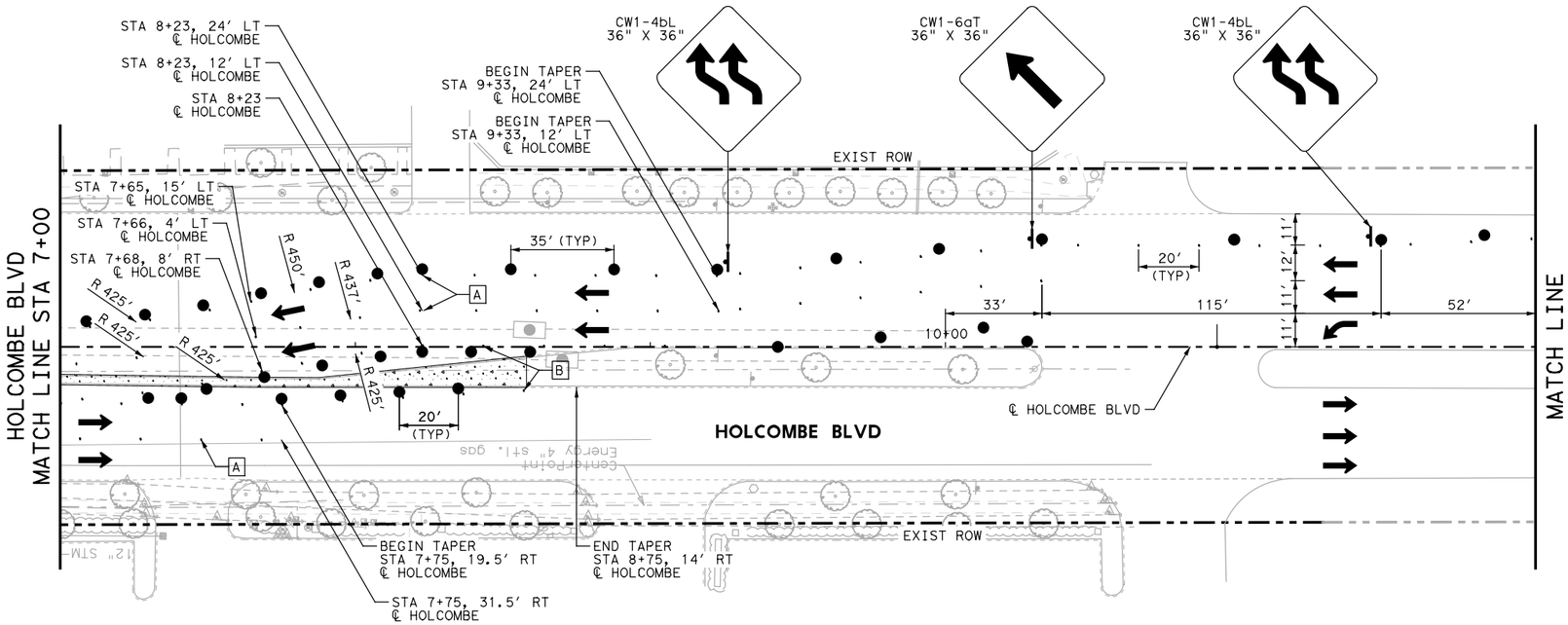
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 7

HOLCOMBE BLVD
BEGIN TO STA 5+00

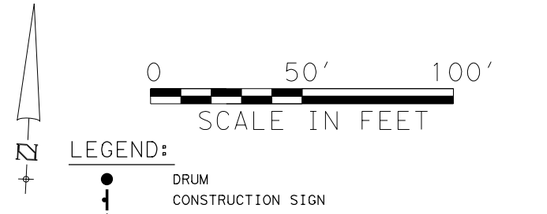
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		84
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



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6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
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- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

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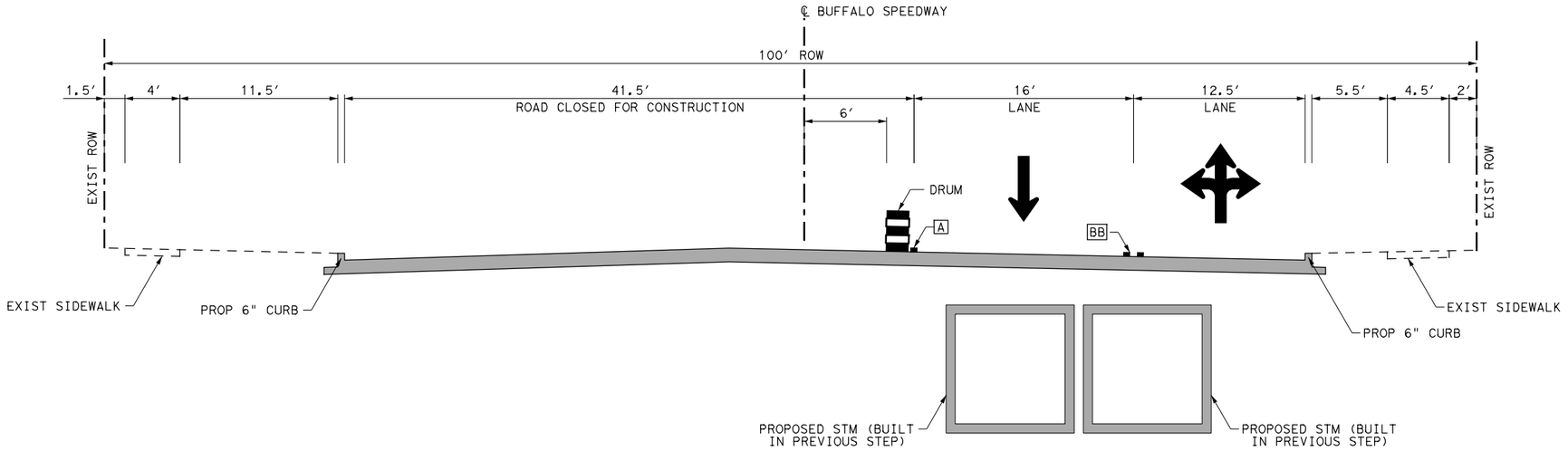
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 7

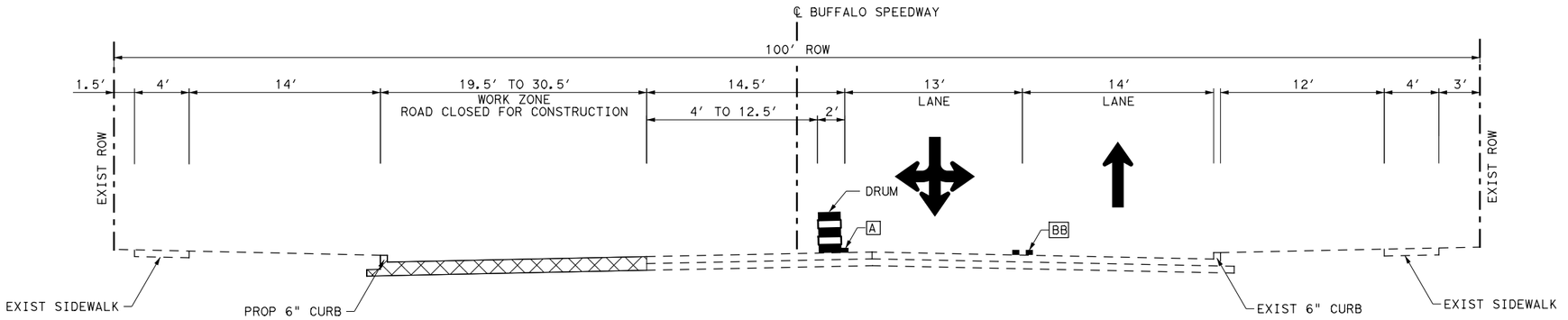
HOLCOMBE BLVD
STA 7+00 TO END

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			85
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



BUFFALO SPEEDWAY
PHASE 2 STEP 8
(SOUTH OF HOLCOMBE BLVD)
STA 7+00 TO STA 8+40



BUFFALO SPEEDWAY
PHASE 2 STEP 8
(NORTH OF HOLCOMBE BLVD)
STA 9+40 TO STA 12+20

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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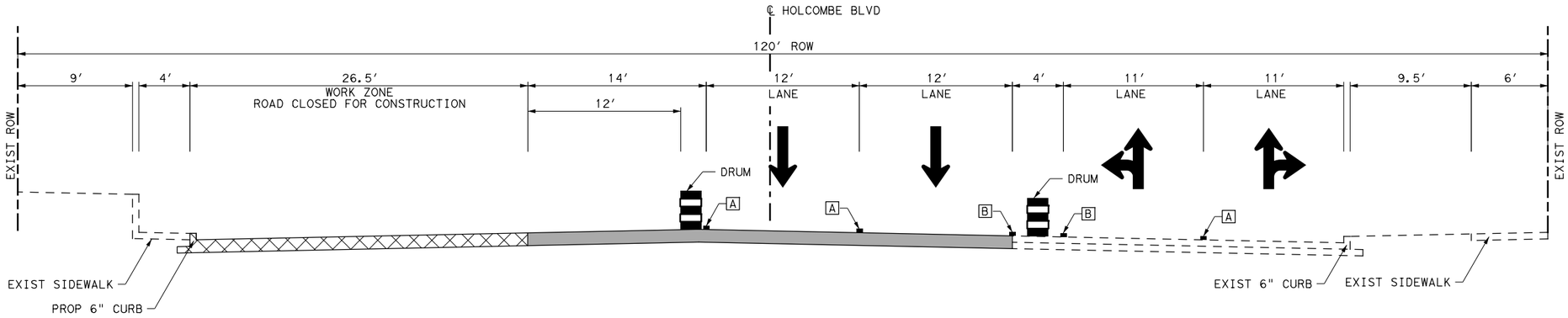
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 8 TYPICAL SECTION

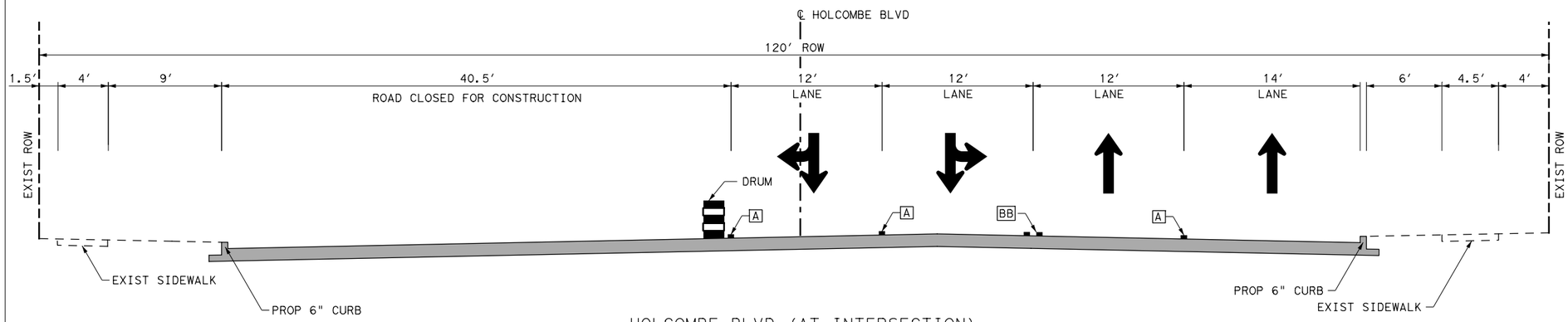
BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		86
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 8
(WEST OF BUFFALO SPEEDWAY)
STA 5+25



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 8
(EAST OF BUFFALO SPEEDWAY)
STA 6+45 TO STA 7+00

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM — STORM SEWER
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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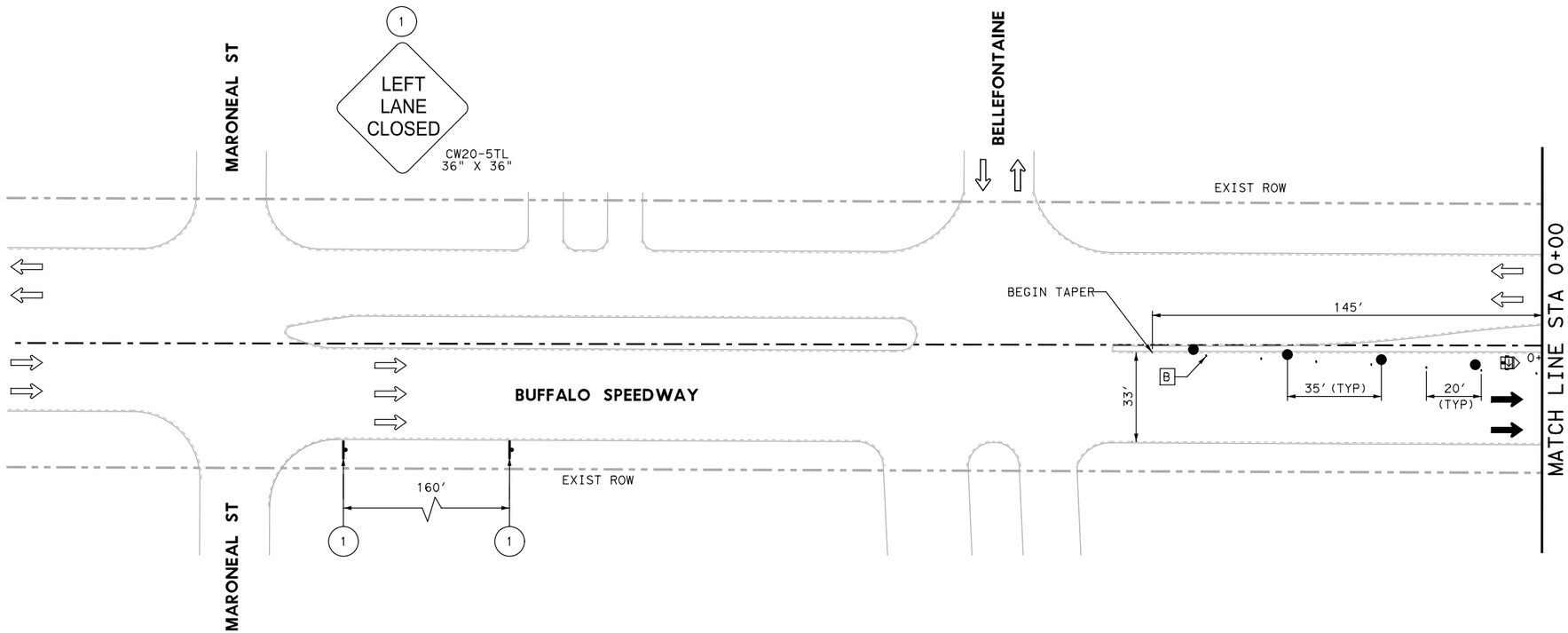
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 8 TYPICAL SECTION

HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			87
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
6. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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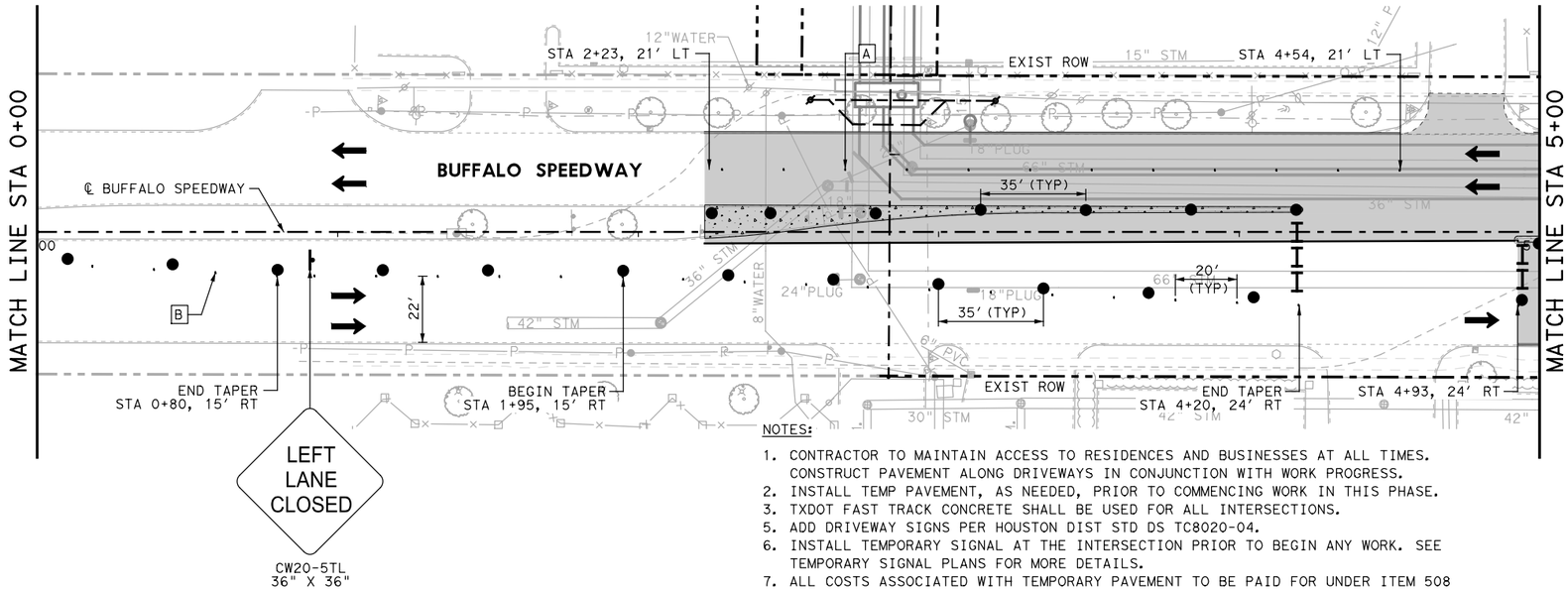
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 8

BUFFALO SPEEDWAY
BEGIN TO STA 0+00

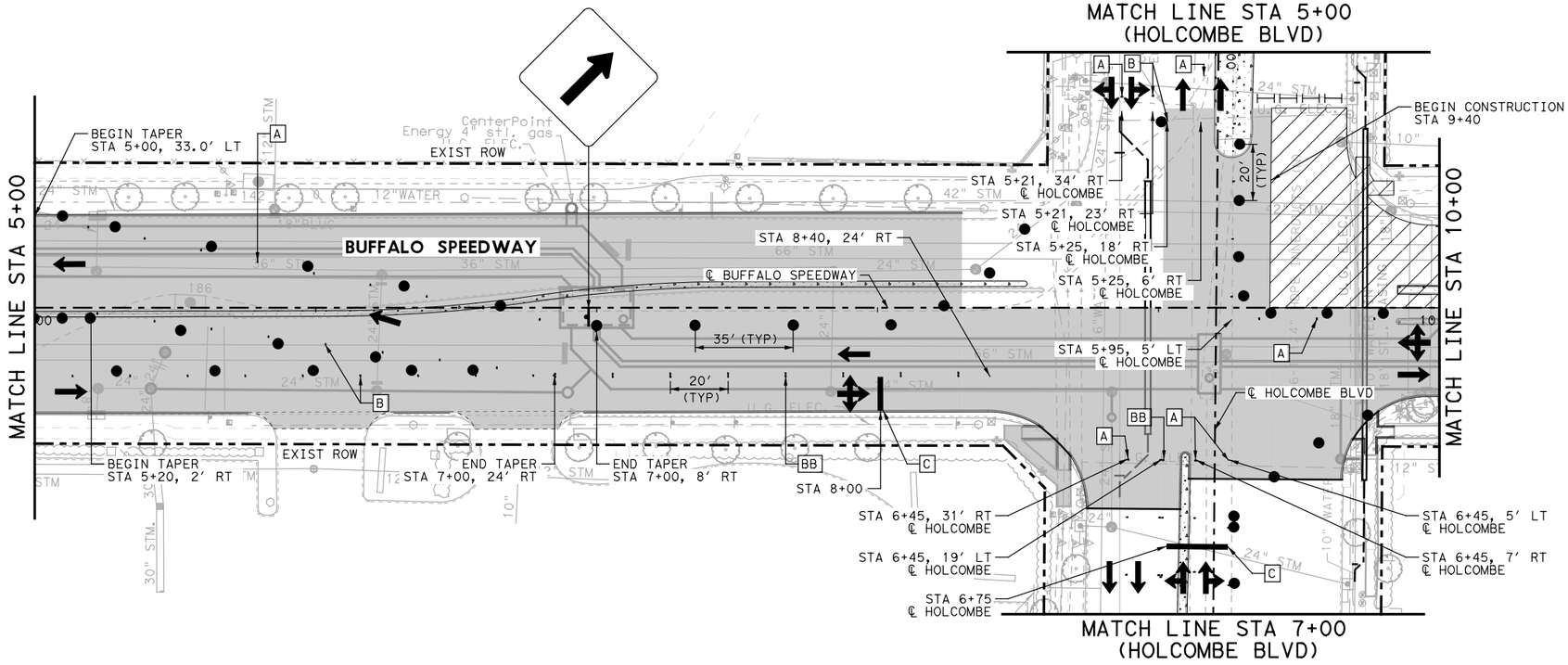
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		88
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
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- TEMPORARY PAVEMENT
- CUT & RESTORE CONC PAVING

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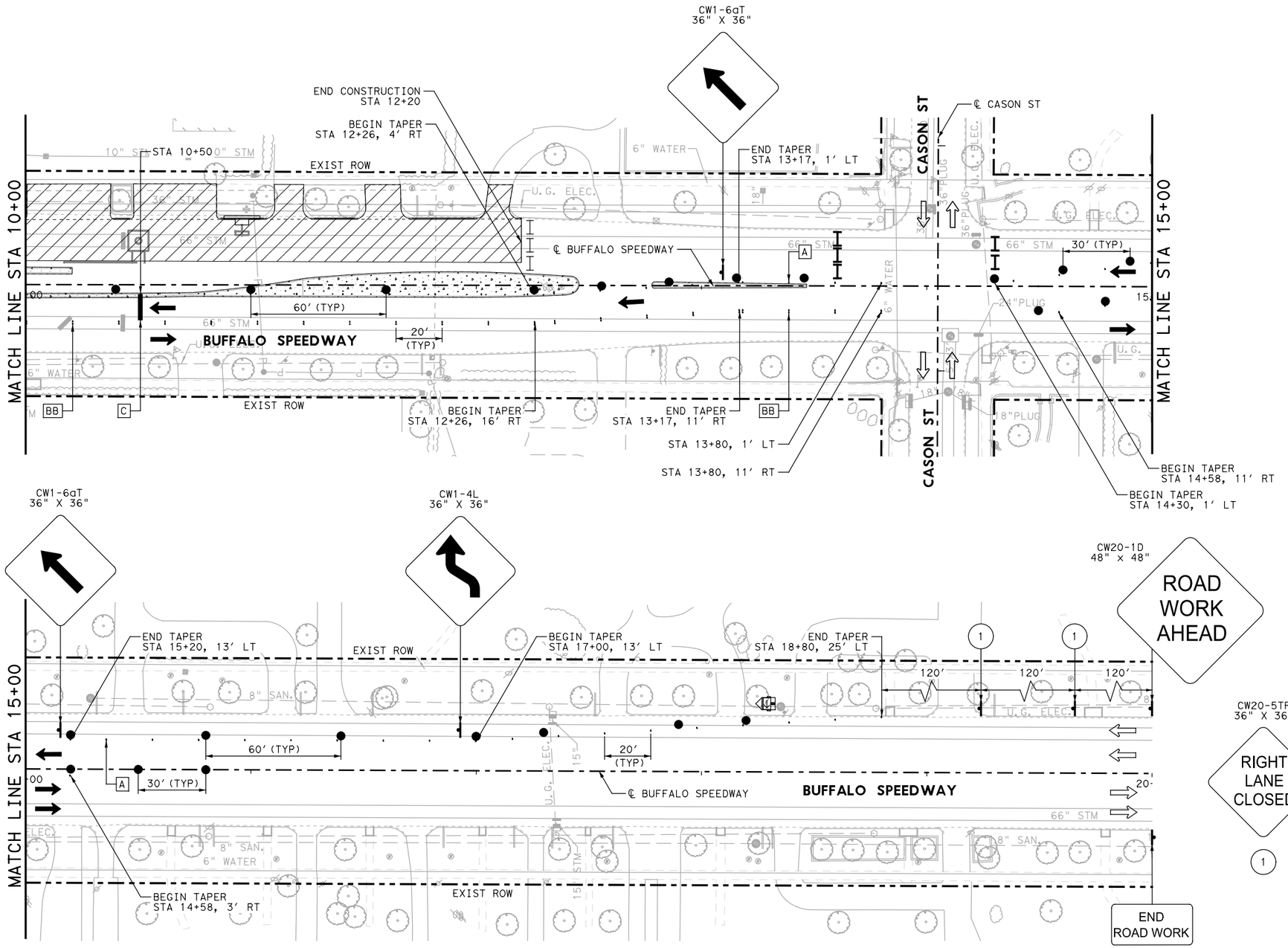
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 8

BUFFALO SPEEDWAY
STA 0+00 TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		89
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

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- EXIST DIRECTION OF TRAFFIC
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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/29/2020

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368
11111 WILCREST GREEN DR, SUITE 410
HOUSTON, TEXAS 77042

FREESE AND NICHOLS
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Pearland, Texas 77584
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Fax – (832) 456-4701
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Texas Registered Engineering Firm F-2144

City of West University Place

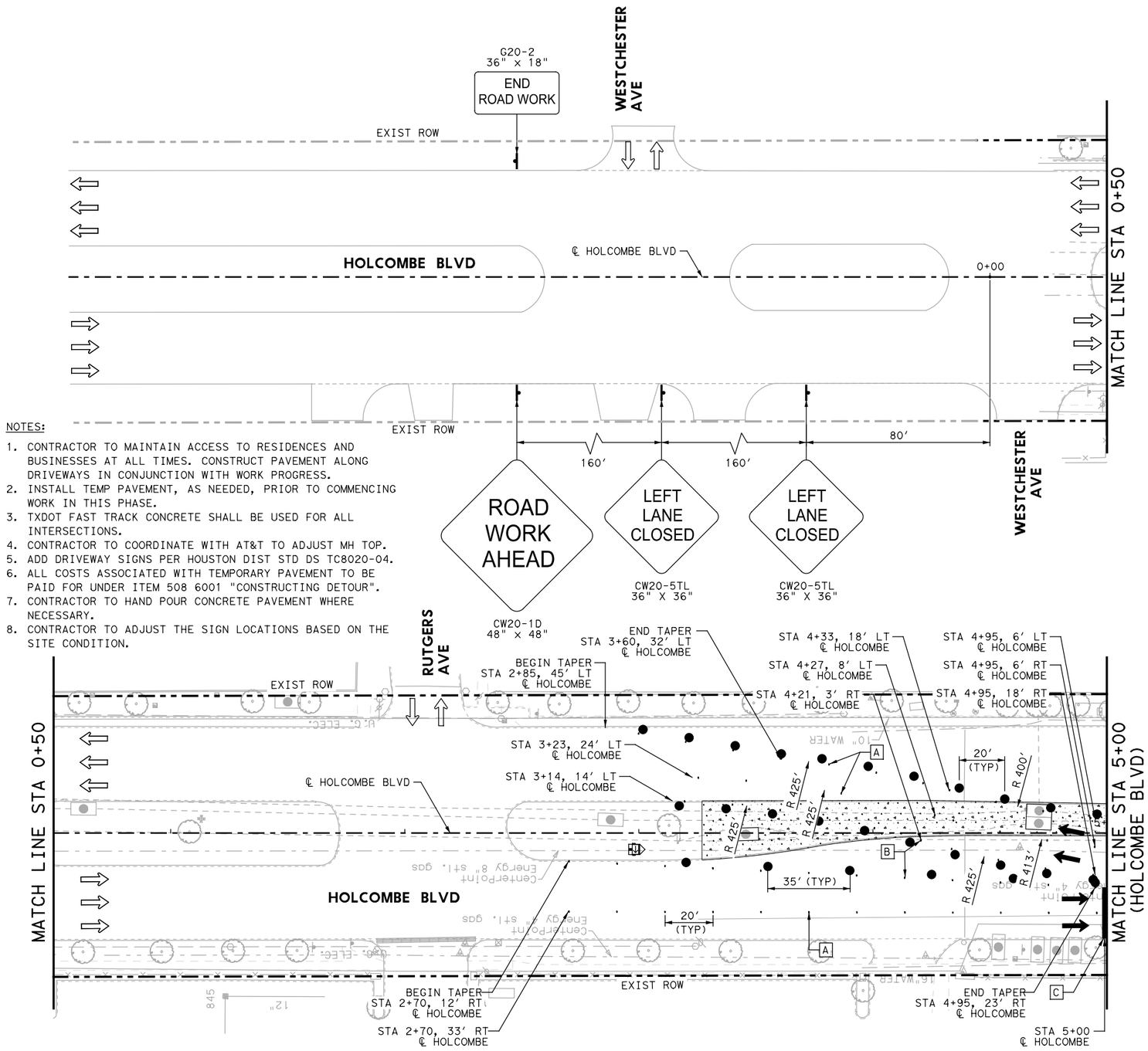
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 8

BUFFALO SPEEDWAY
STA 10+00 TO STA 20+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		90
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. CONTRACTOR TO COORDINATE WITH AT&T TO ADJUST MH TOP.
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7. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
8. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

0 50′ 100′
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
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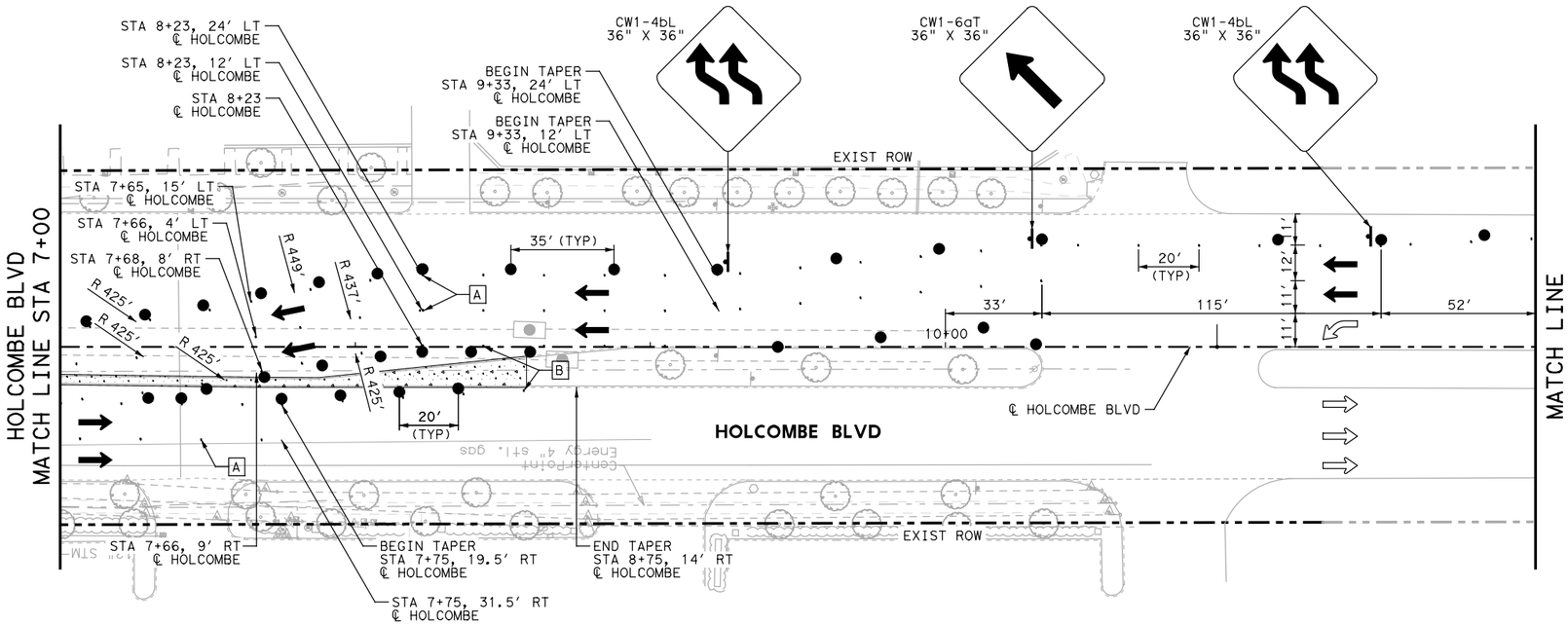
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

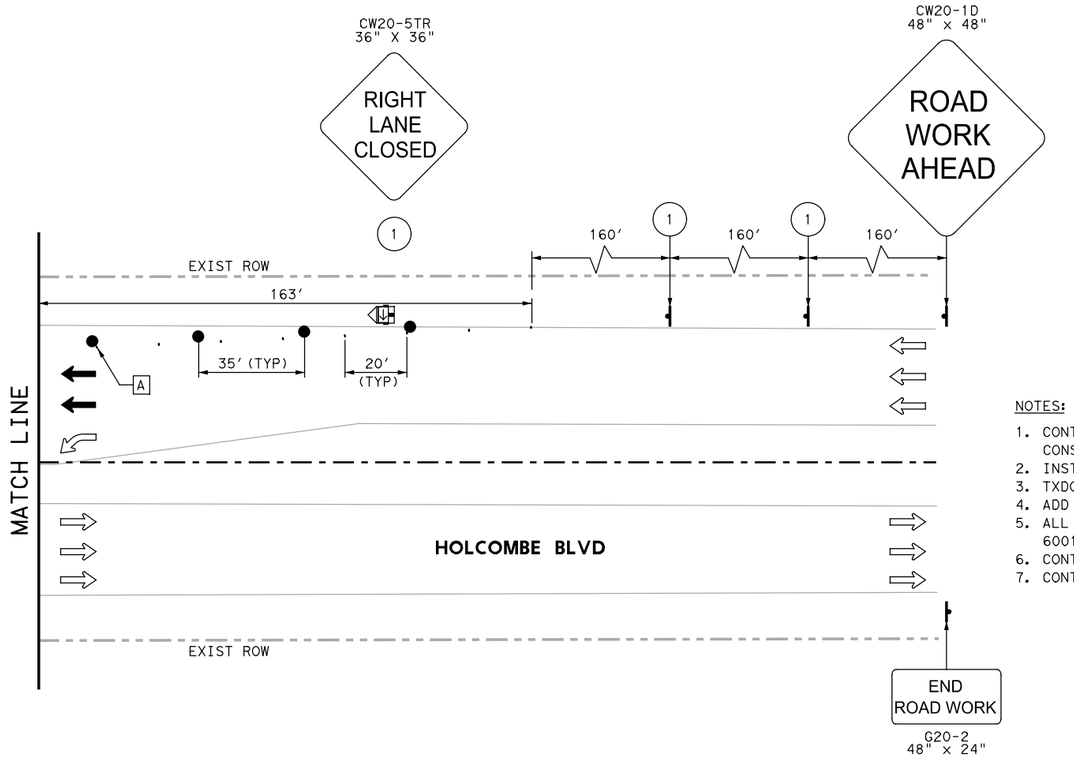
TRAFFIC CONTROL PLAN PHASE 2 STEP 8

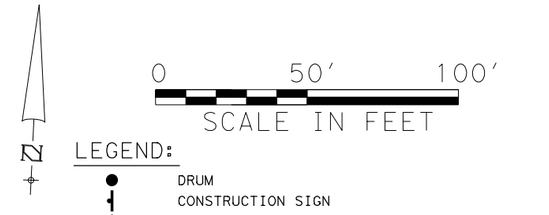
HOLCOMBE BLVD
BEGIN TO STA 5+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		91
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY







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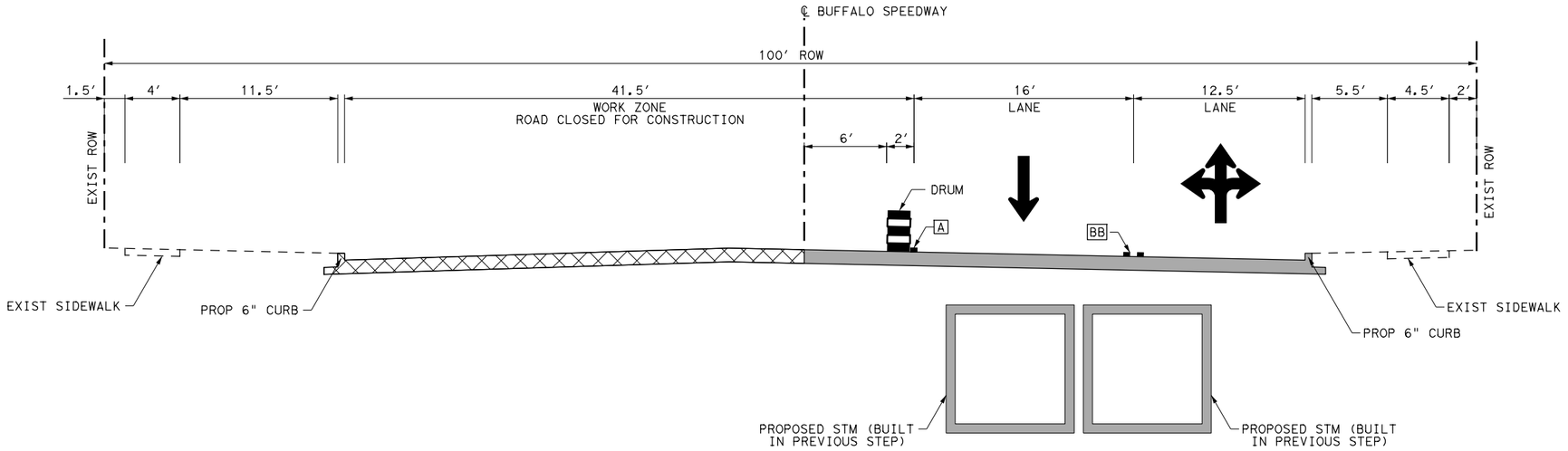
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 8

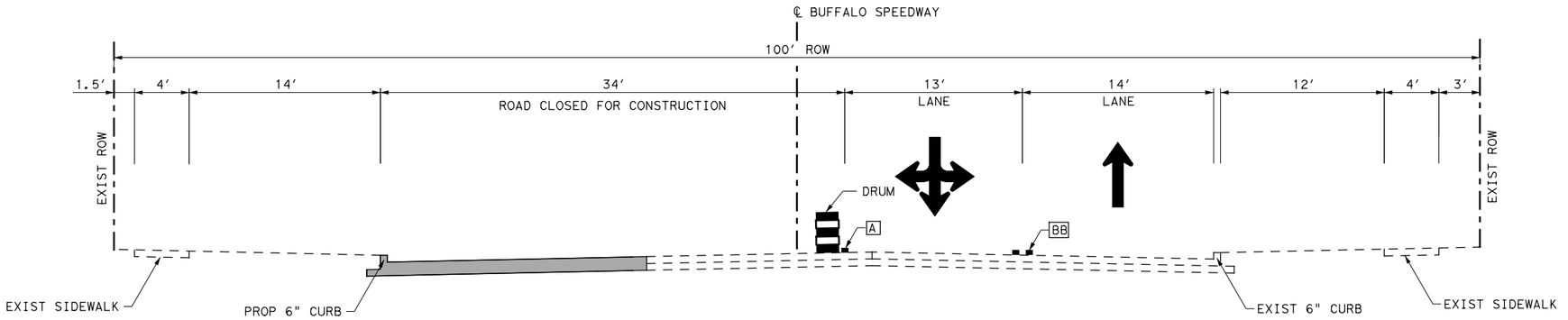
HOLCOMBE BLVD
STA 7+00 TO END

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		92
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 9
(SOUTH OF HOLCOMBE BLVD)
STA 8+30 TO STA 9+02



BUFFALO SPEEDWAY
PHASE 2 STEP 9
(NORTH OF HOLCOMBE BLVD)
STA 9+85 TO STA 12+20

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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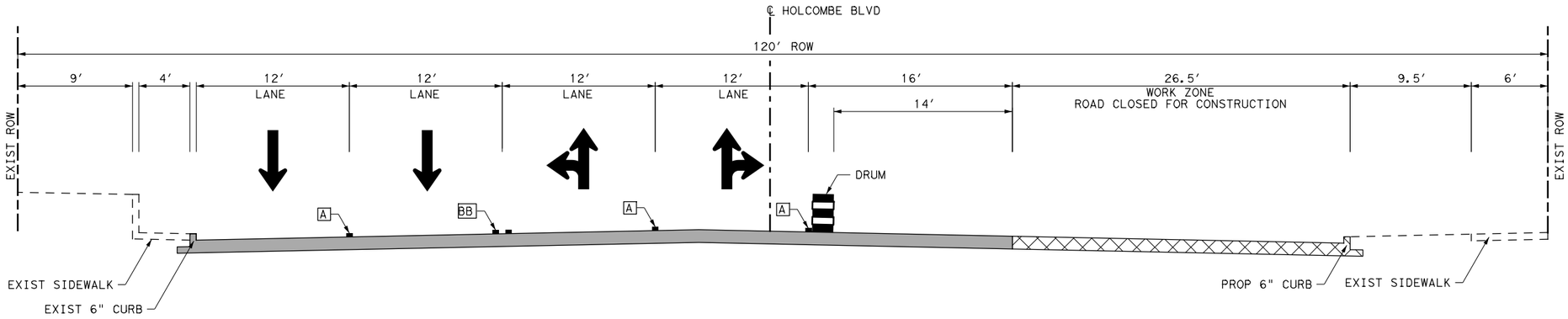
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 9 TYPICAL SECTION

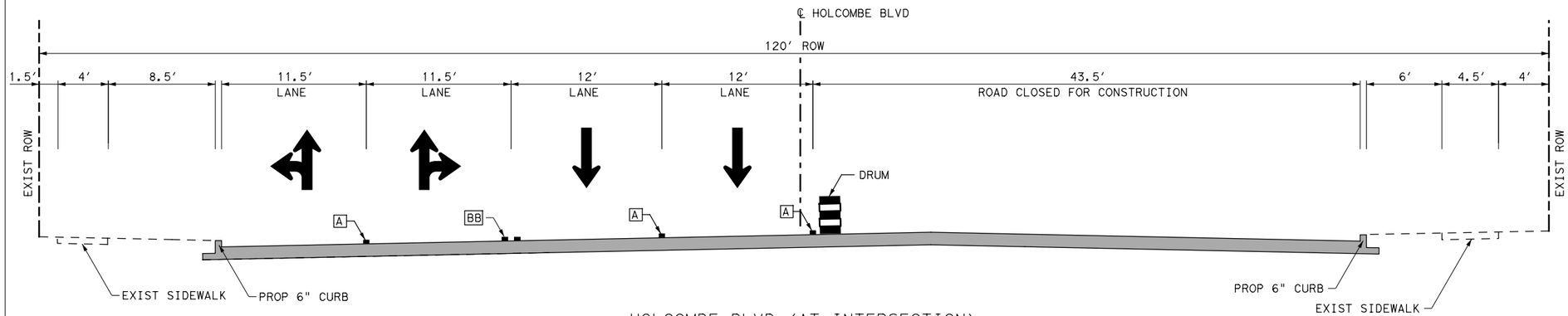
BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		93
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 9
(WEST OF BUFFALO SPEEDWAY)
STA 4+65 TO STA 5+35



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 9
(EAST OF BUFFALO SPEEDWAY)
STA 6+25 TO STA 6+65

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM — STORM SEWER
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
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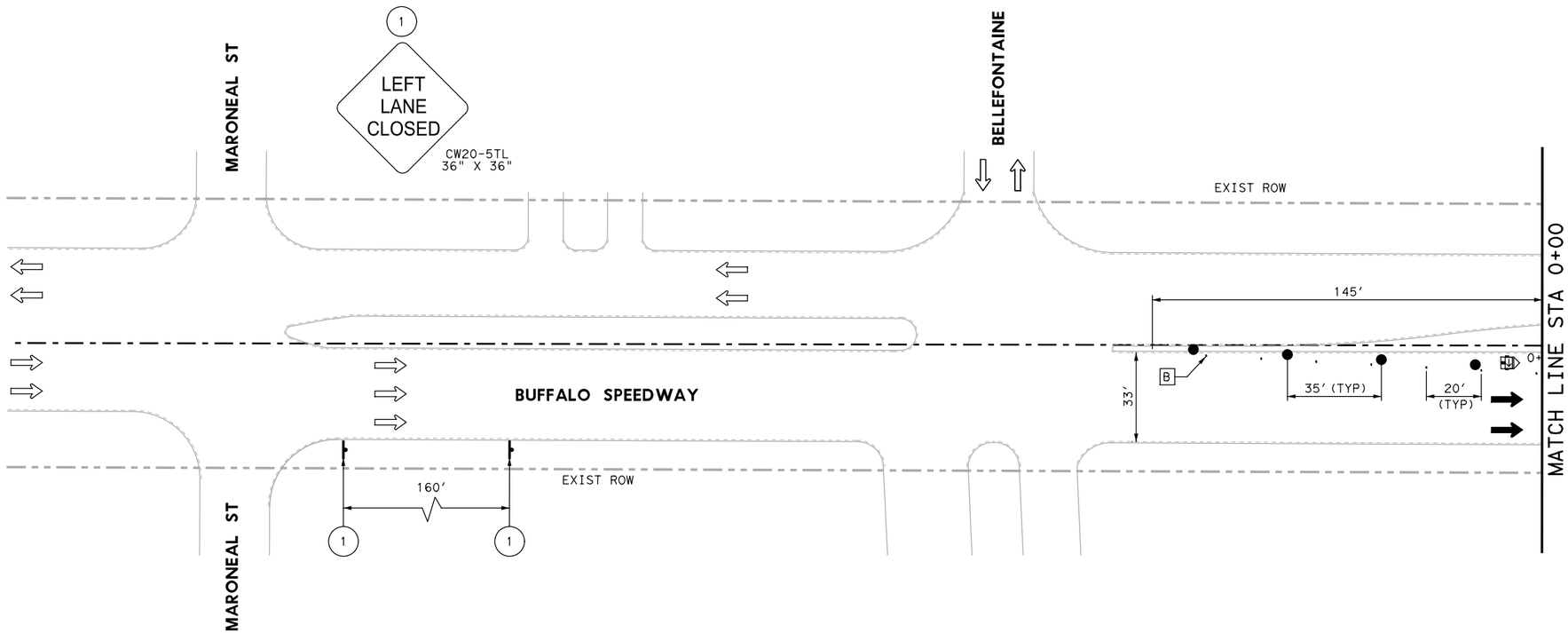
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 9 TYPICAL SECTION

HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		94
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
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5. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
6. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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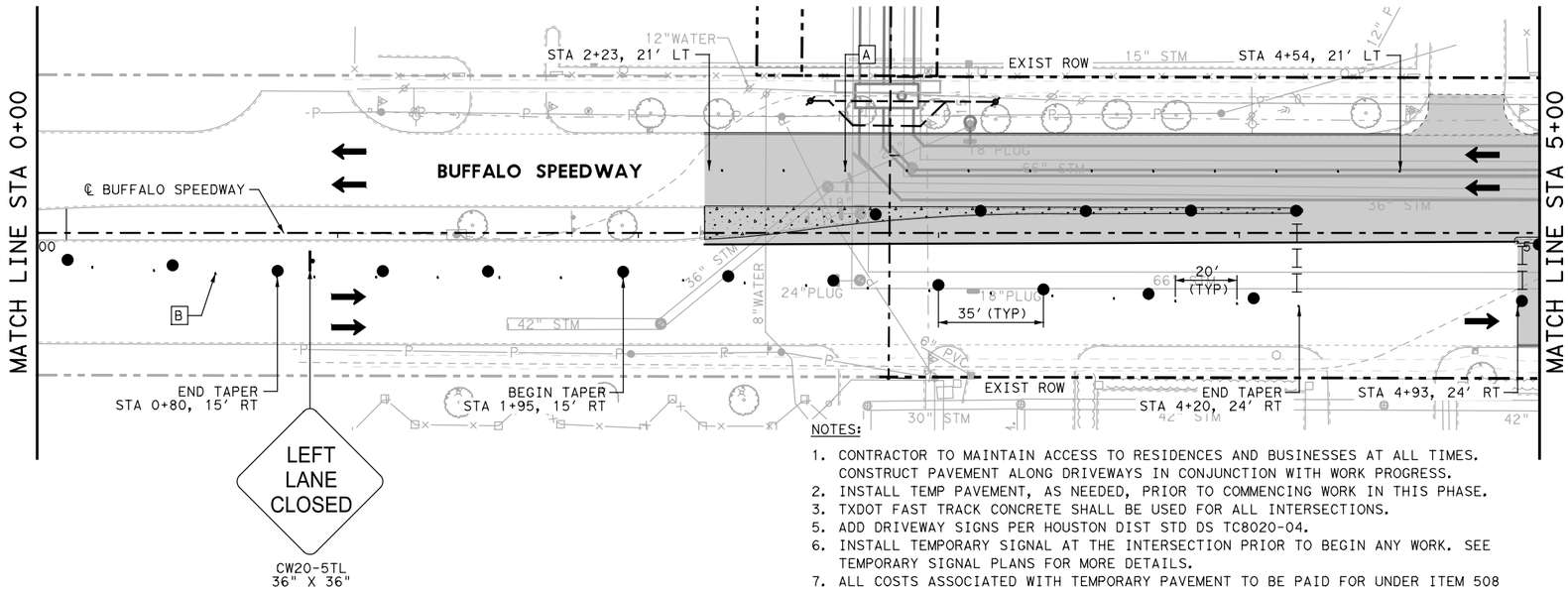
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 9

BUFFALO SPEEDWAY
BEGIN TO STA 0+00

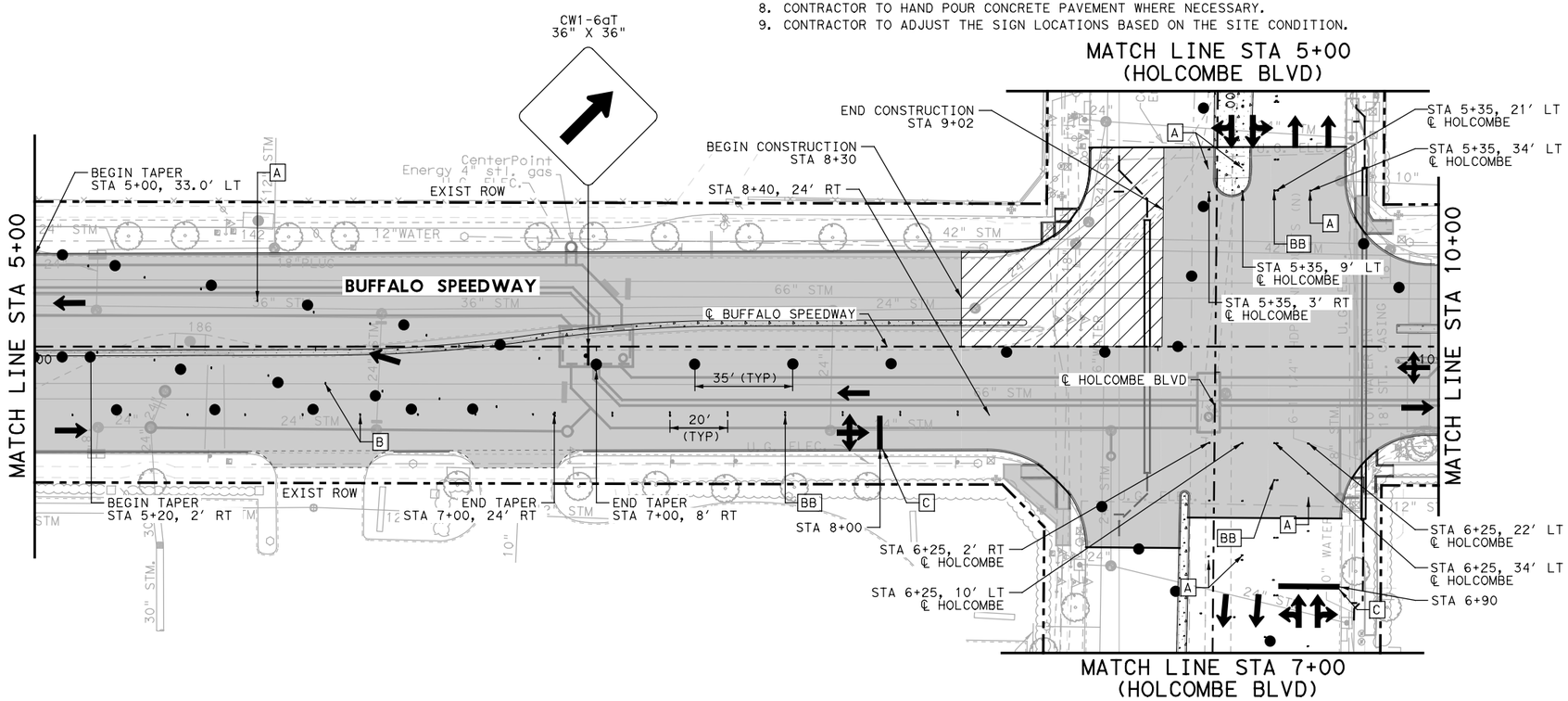
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		95
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



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5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
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- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
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- TEMPORARY PAVEMENT

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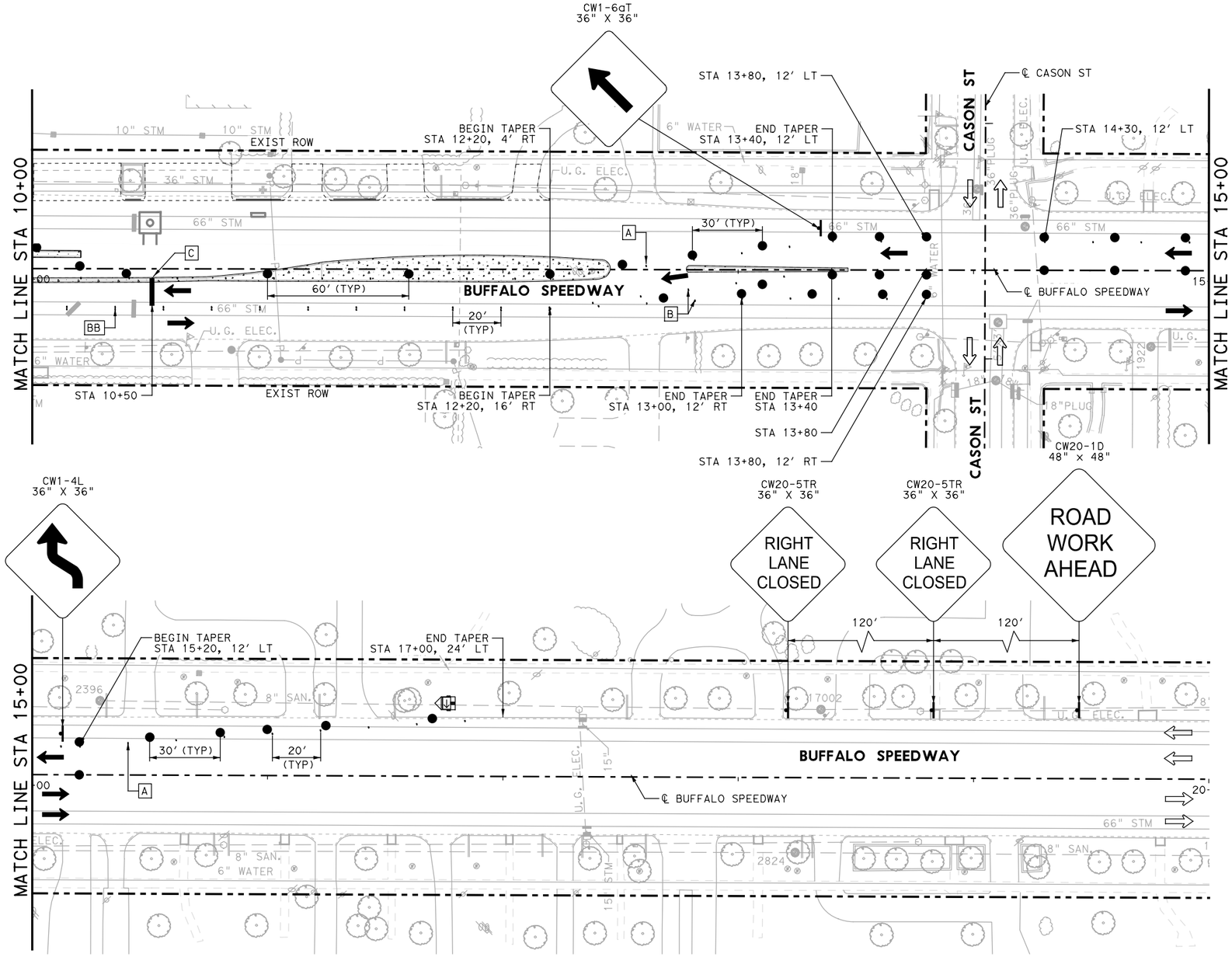
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 9

BUFFALO SPEEDWAY
STA 0+00 TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		96
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND:

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- PROP DIRECTION OF TRAFFIC
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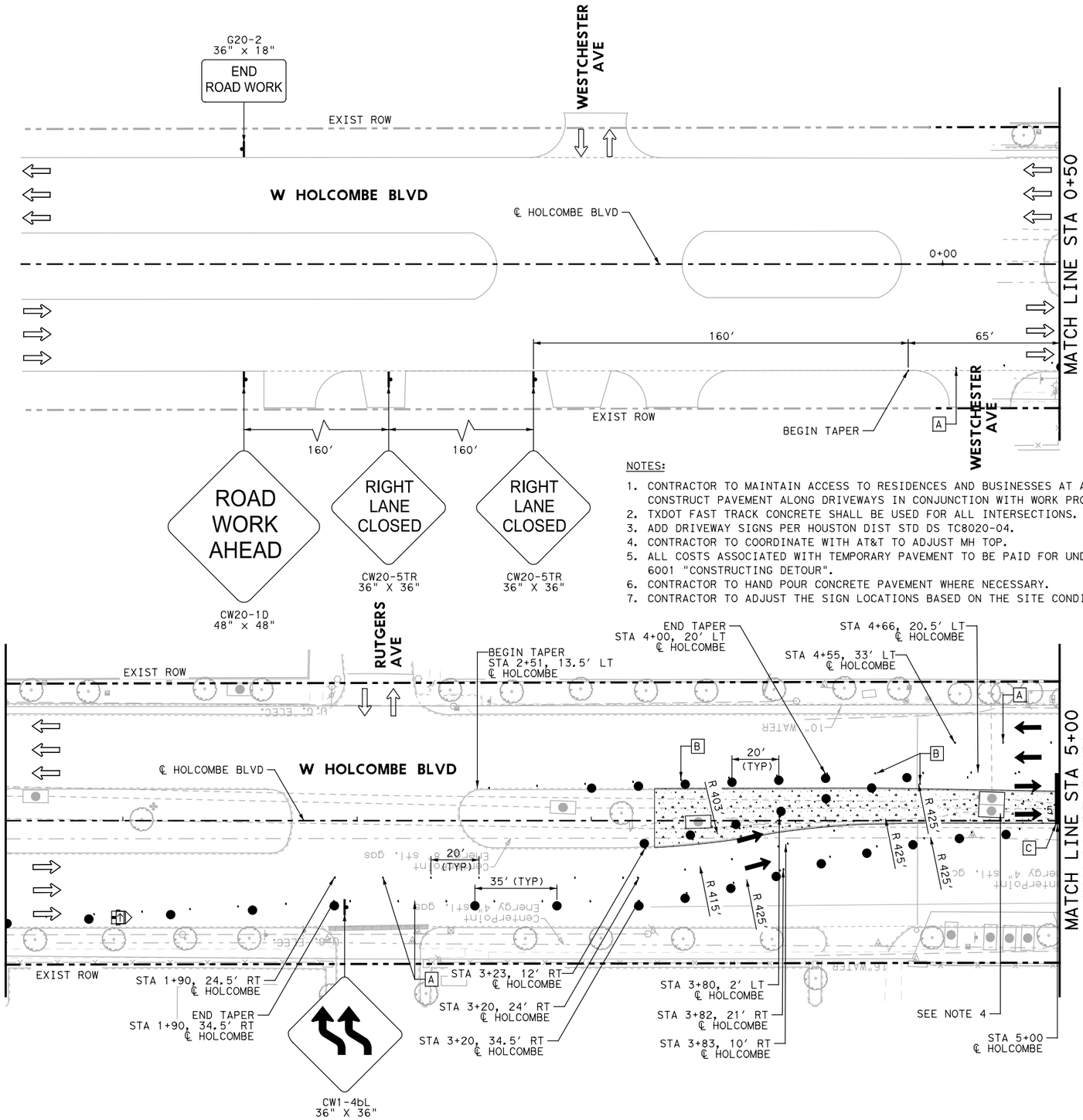
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 9

BUFFALO SPEEDWAY
STA 10+00 TO STA 20+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		97
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
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- TEMPORARY PAVEMENT

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Pearland, Texas 77584
Phone – (832) 456-4700
Fax – (832) 456-4701
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

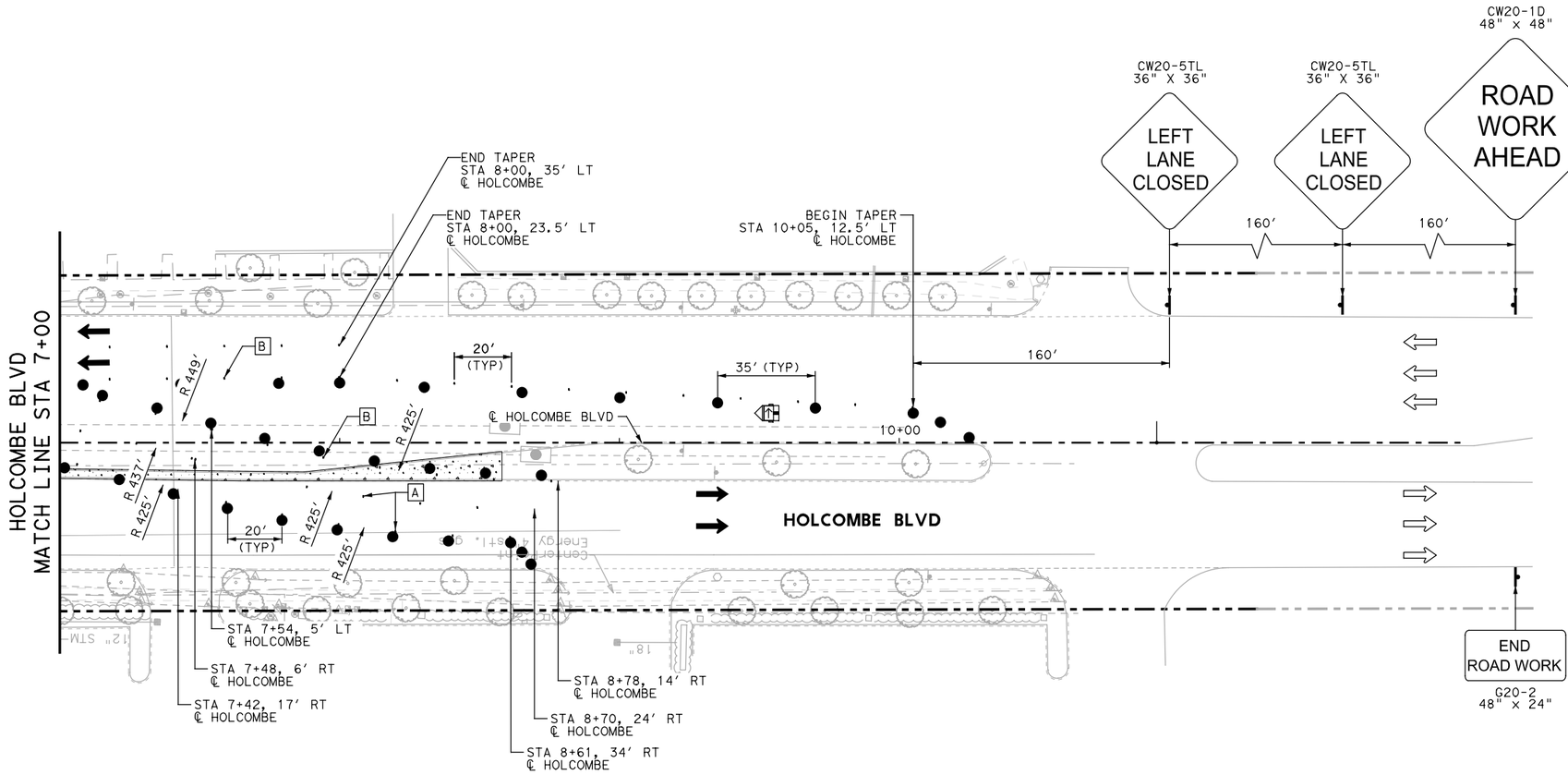
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 9

HOLCOMBE BLVD
BEGIN TO STA 5+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		98
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

infraTECH
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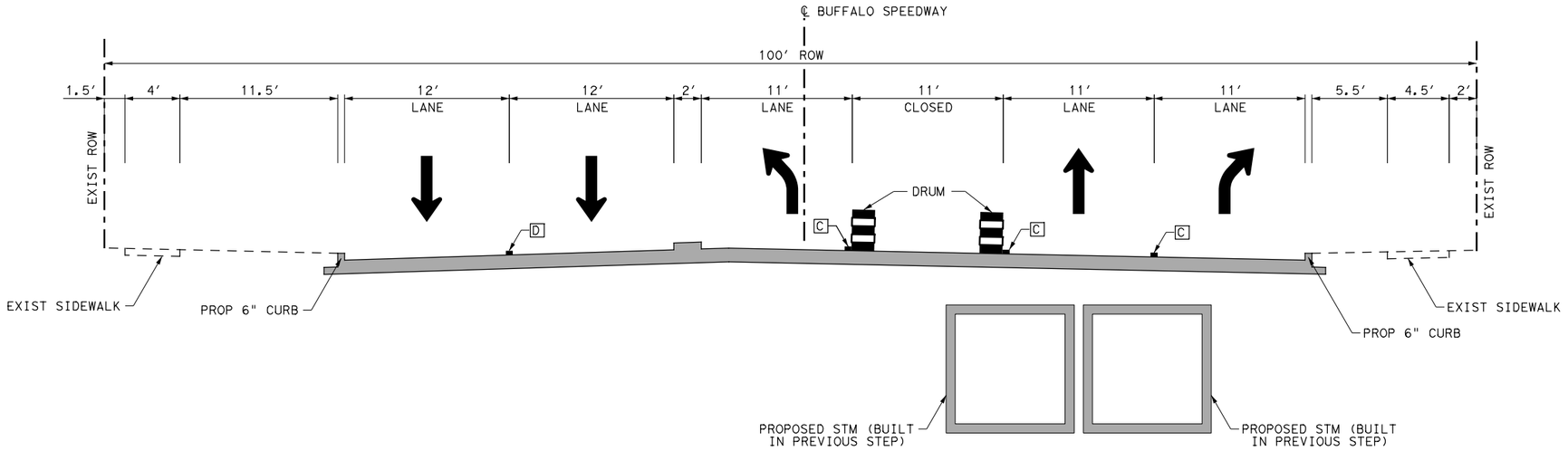
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 9

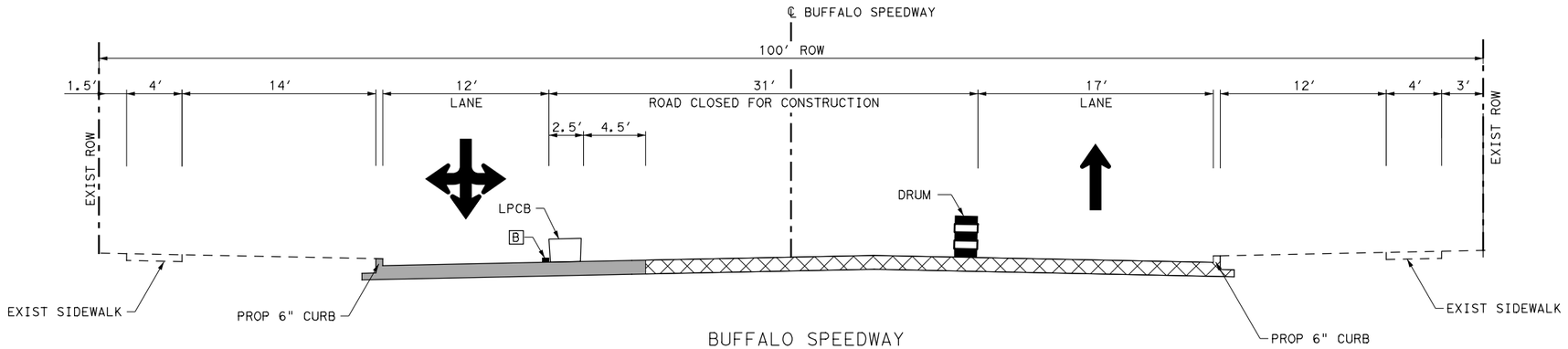
HOLCOMBE BLVD
STA 7+00 TO END

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		99
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 10 (DAY)
(SOUTH OF HOLCOMBE BLVD)
STA 7+50 TO STA 8+40



BUFFALO SPEEDWAY
PHASE 2 STEP 10 (DAY)
(NORTH OF HOLCOMBE BLVD)
STA 9+85 TO 11+35

NOTE: SEE SEQUENCE OF CONSTRUCTION NOTES AND OFF-PEAK AND WEEKEND TYPICAL SECTIONS FOR MORE INFORMATION.

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- [C] WK ZN PAV MRK REMOV (W) 6" (SLD)
- [D] WK ZN PAV MRK REMOV (W) 4" (BRK)

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

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City of West University Place

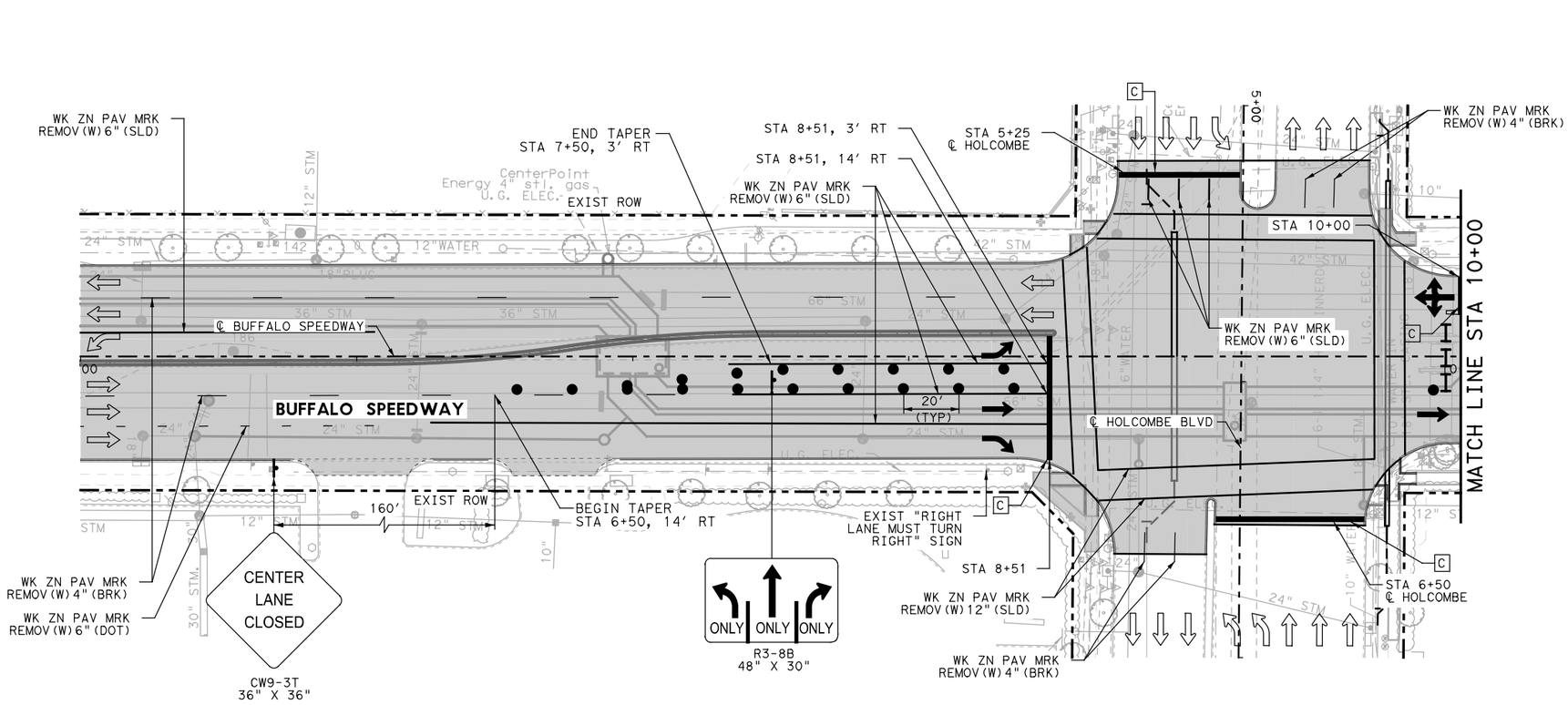
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

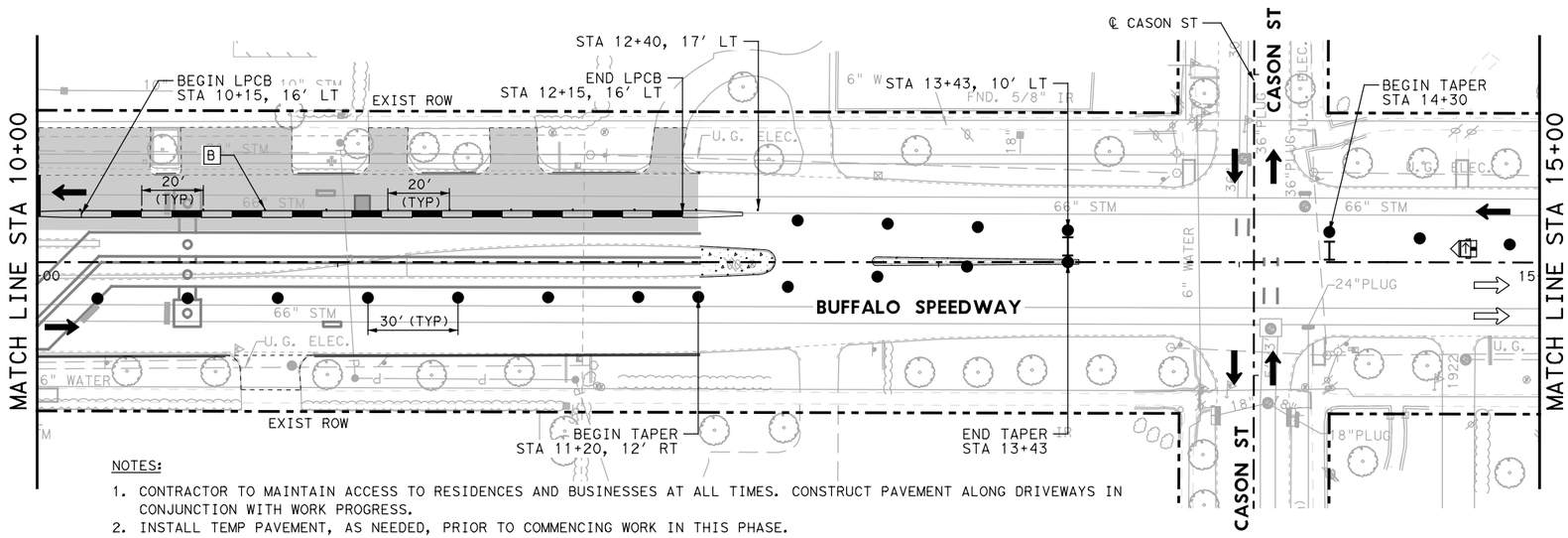
TRAFFIC CONTROL PLAN PHASE 2 STEP 10 (NON-CONSTRUCTION HOURS) TYPICAL SECTION

BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		100
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.
10. INSTALL TEMPORARY MARKINGS SOUTH OF HOLCOMBE BLVD TO MATCH THE PROPOSED PAVEMENT MARKING PLAN.

0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

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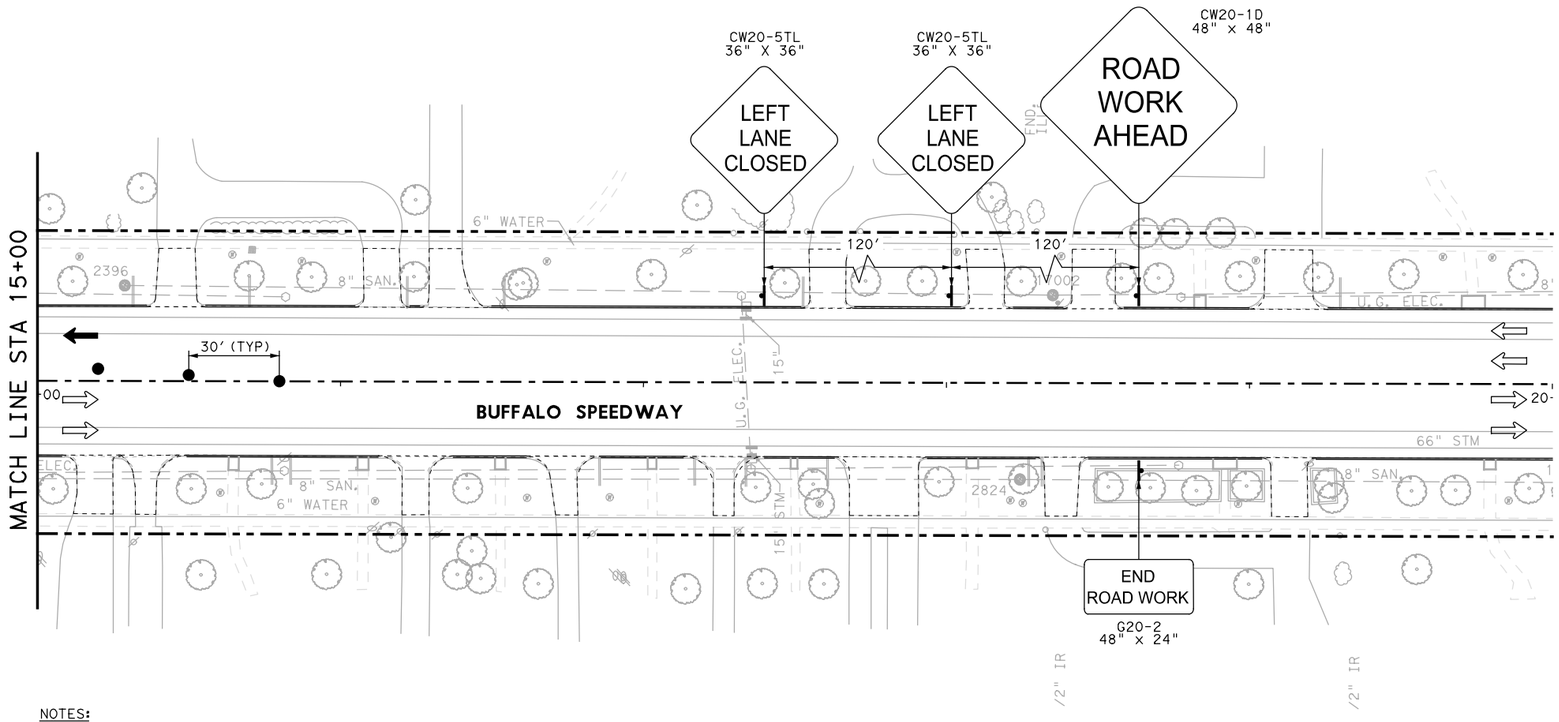
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

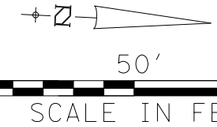
TRAFFIC CONTROL PLAN PHASE 2 STEP 10 (NON-CONSRTUCTION HOURS)

BUFFALO SPEEDWAY
STA 5+00 TO STA 15+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		101
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
2. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

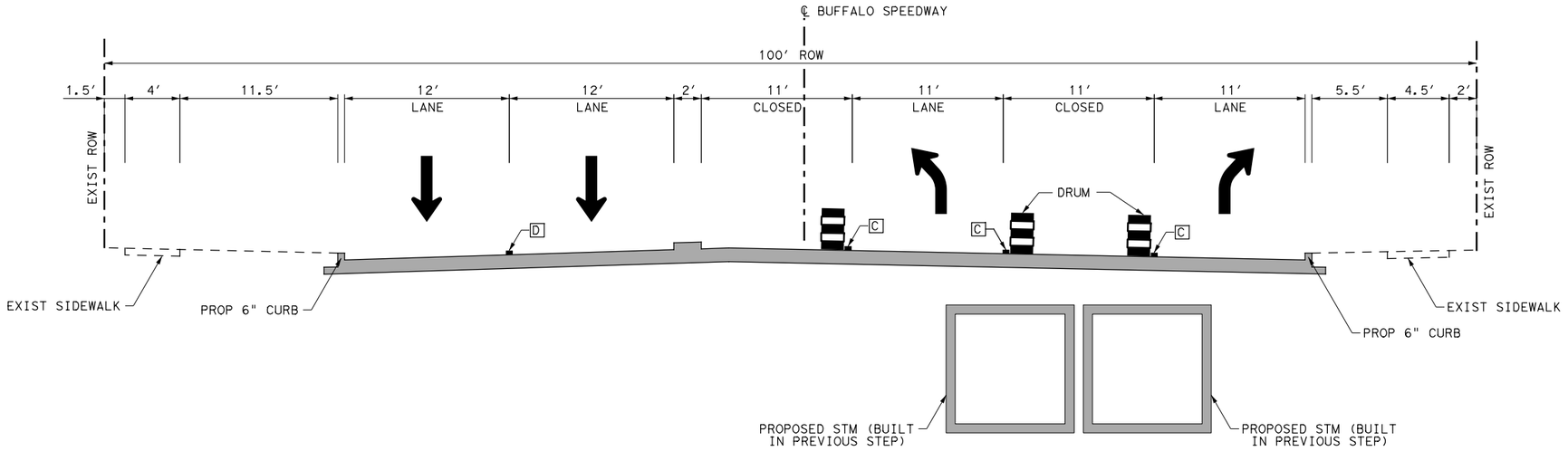
TRAFFIC CONTROL PLAN PHASE 2 STEP 10 (NON-CONSRTUCTION HOURS)

BUFFALO SPEEDWAY
STA 15+00 TO STA 20+00

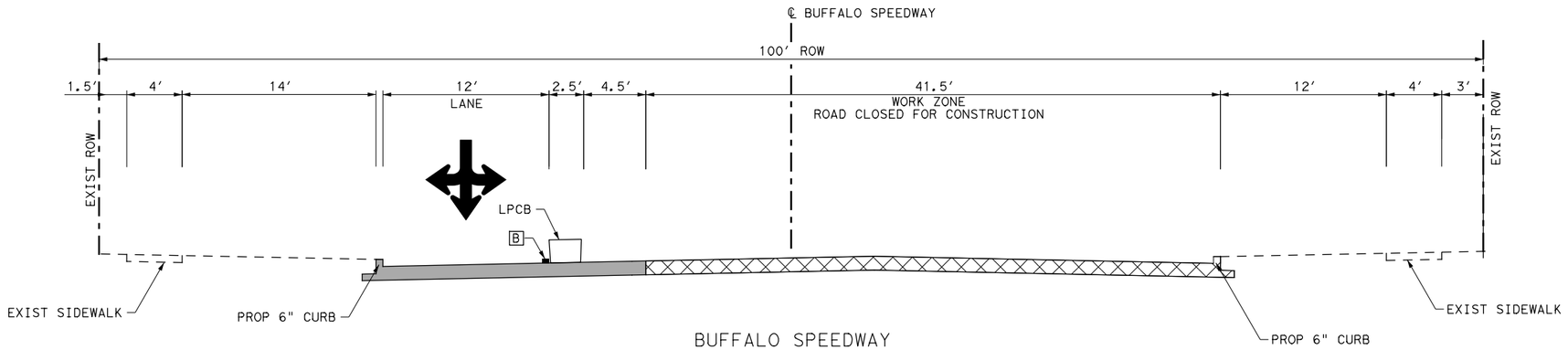
SHEET 2 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		102
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 2 STEP 10 (OFF-PEAK & WEEKEND)
(SOUTH OF HOLCOMBE BLVD)
STA 7+50 TOSTA 8+40



BUFFALO SPEEDWAY
PHASE 2 STEP 10 (OFF-PEAK & WEEKEND)
(NORTH OF HOLCOMBE BLVD)
STA 10+00 TO STA 12+20

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- [C] WK ZN PAV MRK REMOV (W) 6" (SLD)
- [D] WK ZN PAV MRK REMOV (W) 4" (BRK)

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 2 STEP 10 (OFF-PEAK & WEEKEND)
TYPICAL SECTION

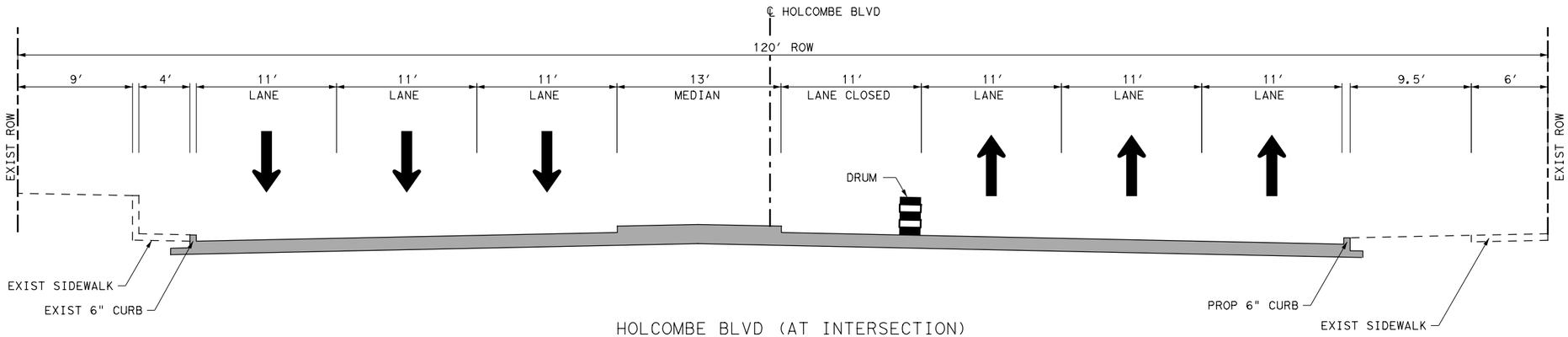
BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		103
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- A WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- AA WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)



HOLCOMBE BLVD (AT INTERSECTION)
PHASE 2 STEP 10 (OFF-PEAK & WEEKEND)
(WEST OF BUFFALO SPEEDWAY)
STA 4+40 TO STA 5+35

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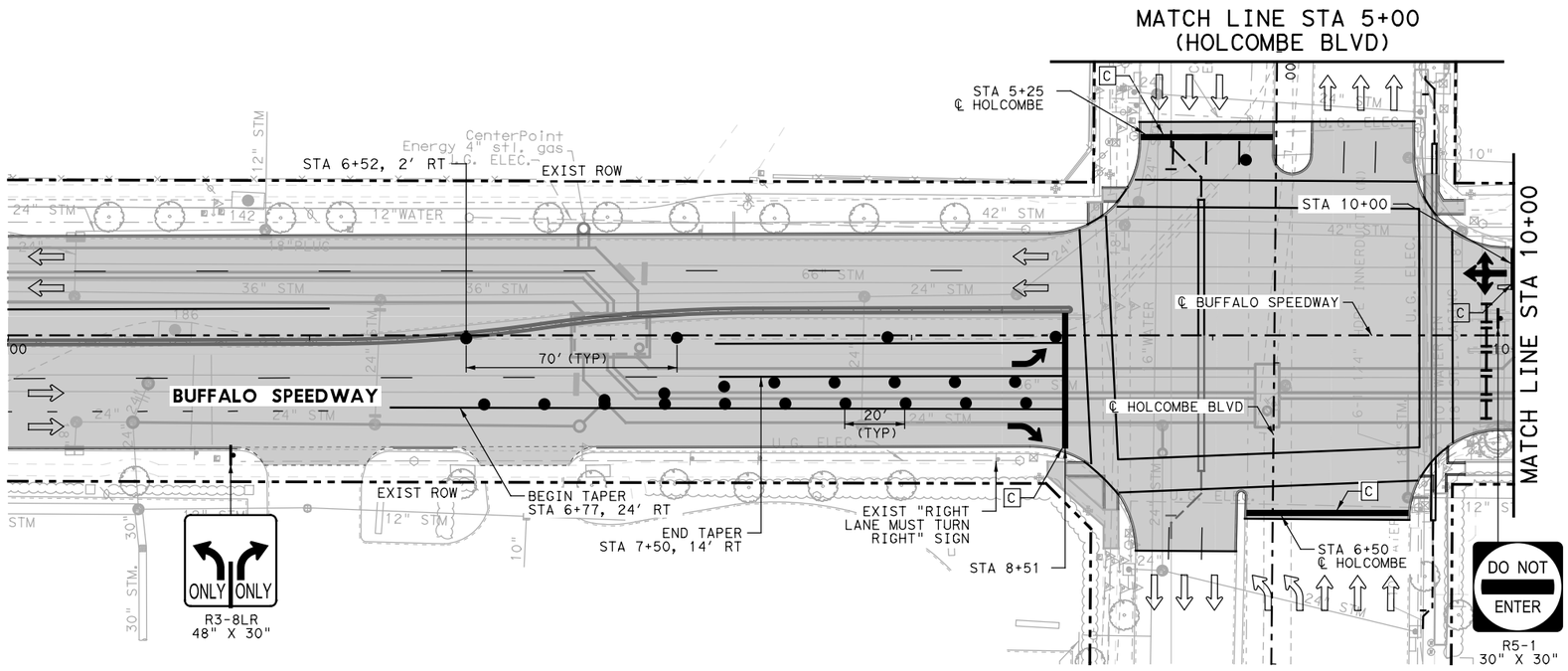
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

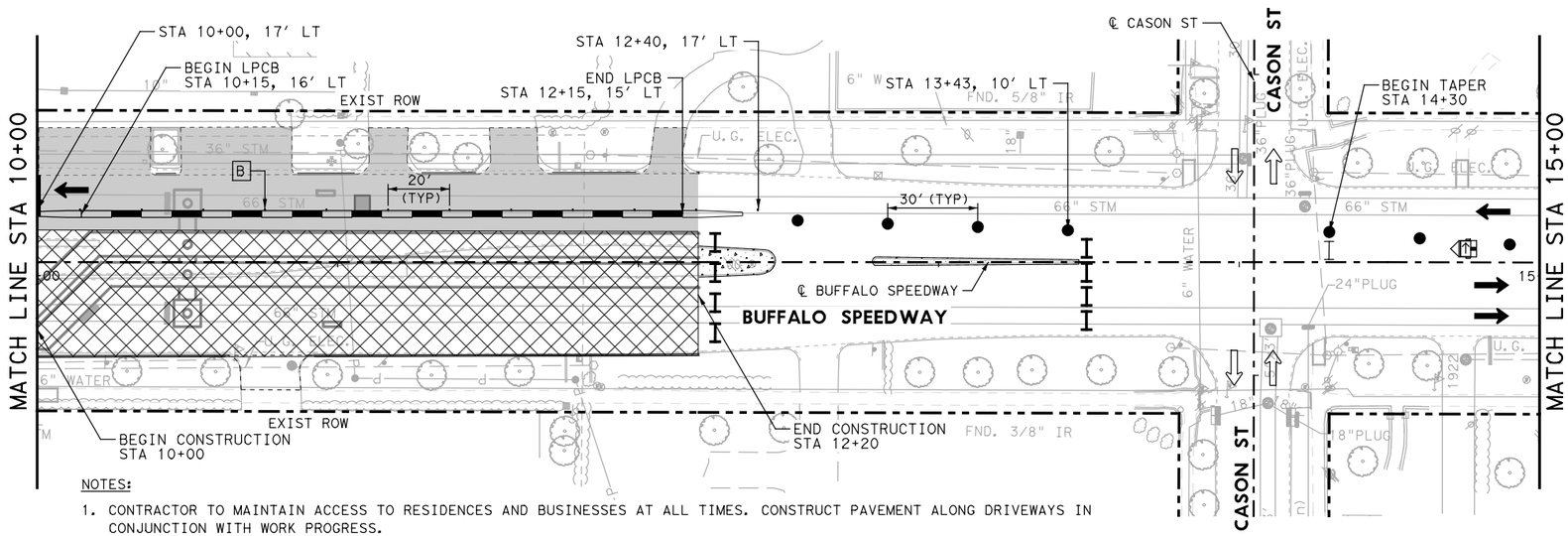
TRAFFIC CONTROL PLAN
PHASE 2 STEP 10 (OFF-PEAK & WEEKEND)
TYPICAL SECTION

HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		104
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





0 50′ 100′
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
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- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DSTC 8020-04.
6. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
7. SEE "DETOUR LAYOUT PHASE 2 STEP 10 (OFF-PEAK & WEEKEND) BUFFALO SPEEDWAY (NORTHBOUND)" FOR ADDITIONAL INFORMATION.
8. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
9. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
10. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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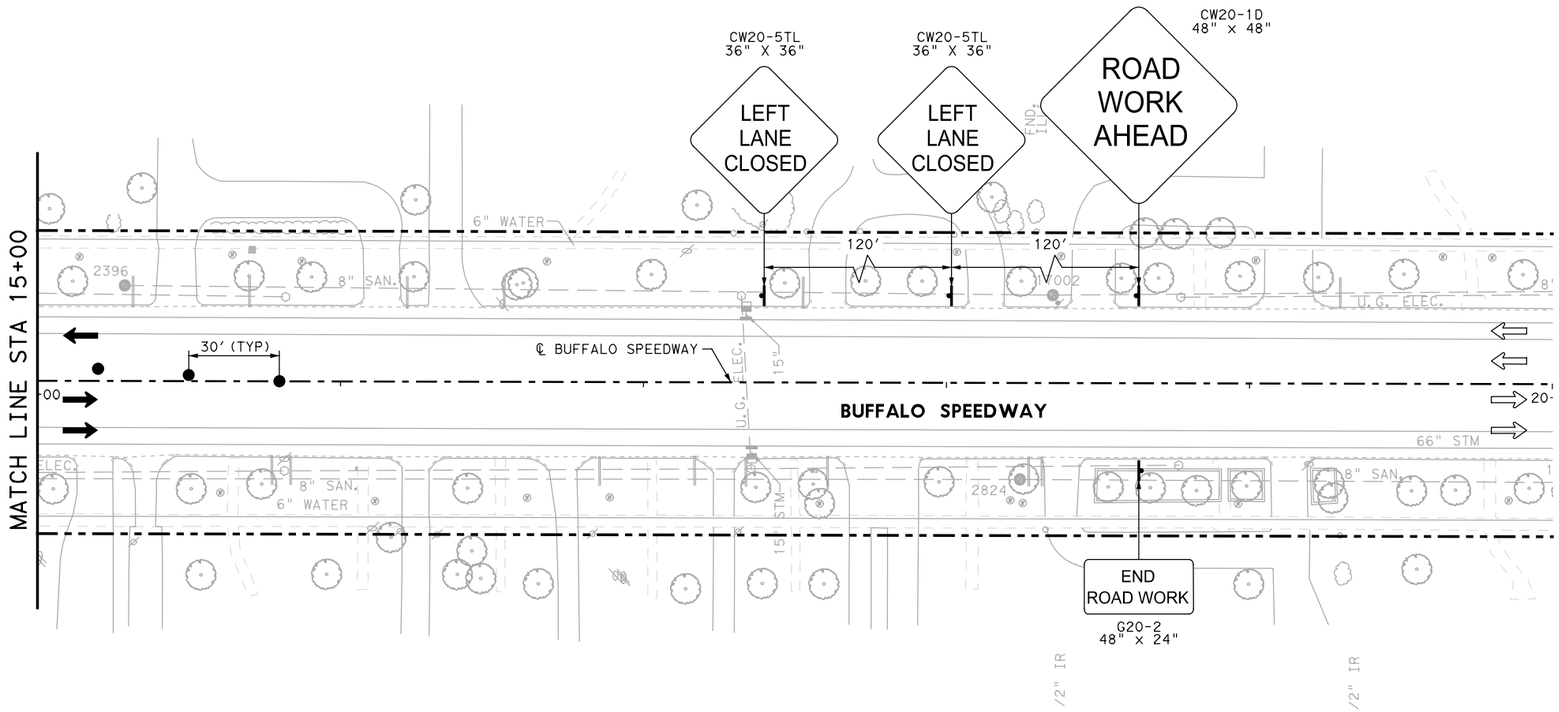
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

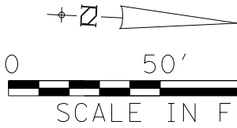
TRAFFIC CONTROL PLAN PHASE 2 STEP 10 (OFF-PEAK & WEEKEND)

BUFFALO SPEEDWAY
STA 5+00 TO STA 15+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		105
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
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- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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2. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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11200 Broadway Street, Suite 2320
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Fax – (832) 456-4701
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

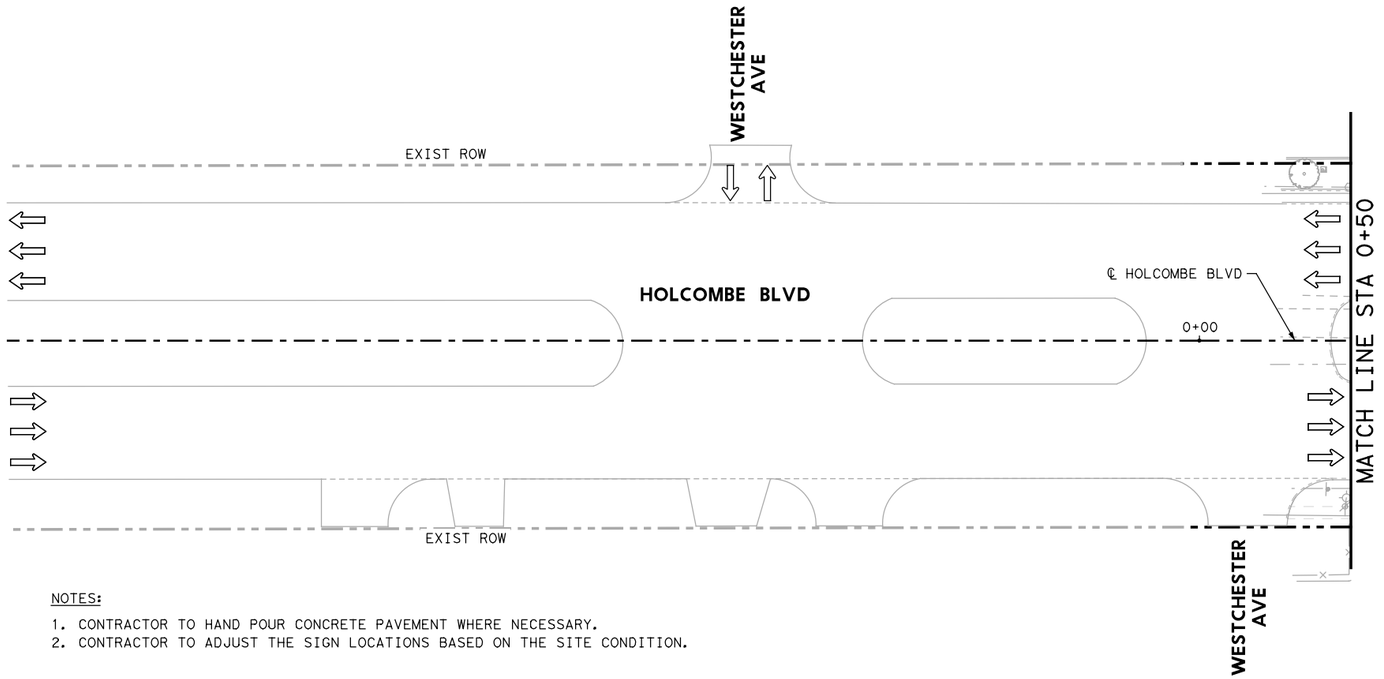
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 2 STEP 10 (OFF-PEAK & WEEKEND)

BUFFALO SPEEDWAY
STA 15+00 TO STA 20+00

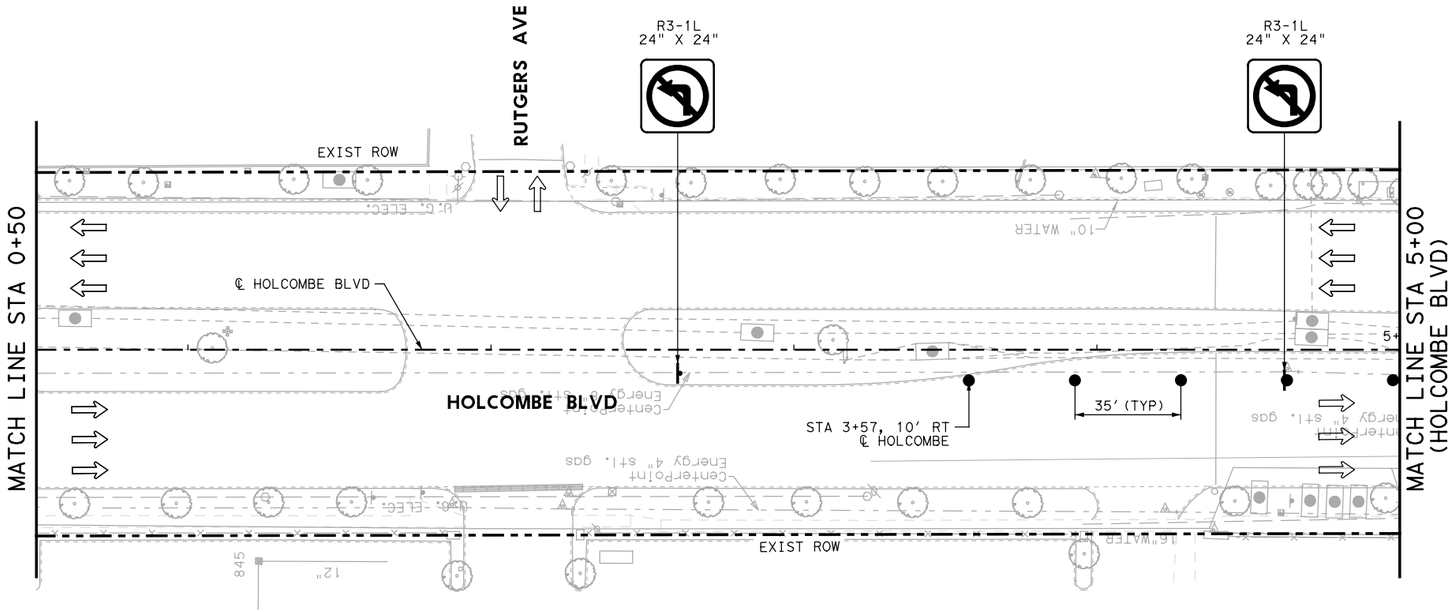
Texas Department of Transportation

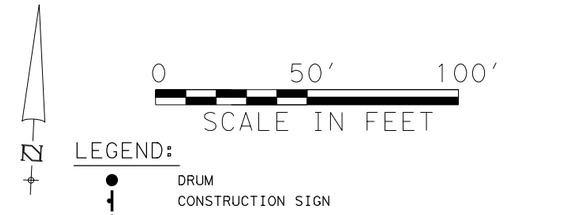
FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		106
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
2. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.





LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)



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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

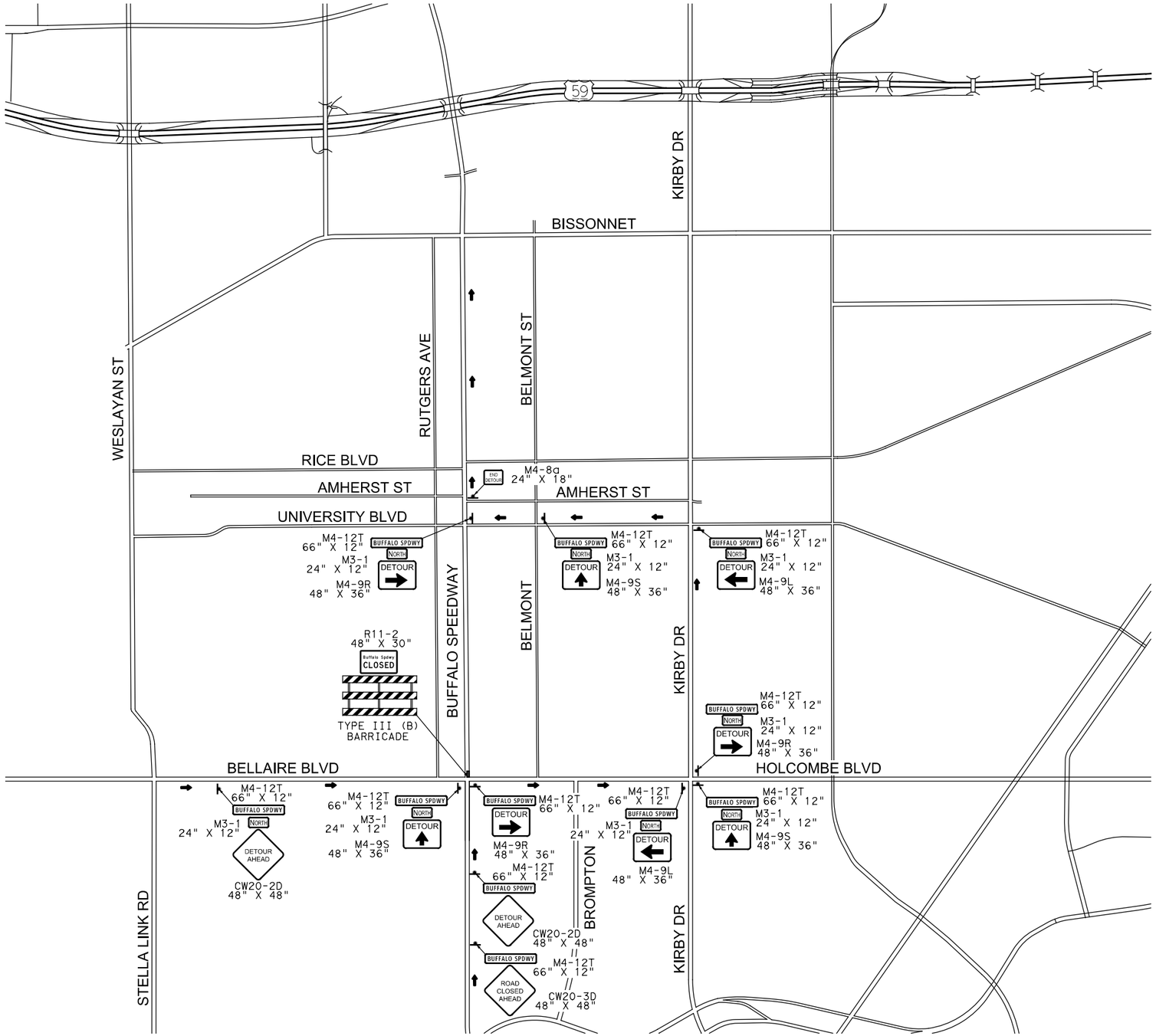
TRAFFIC CONTROL PLAN PHASE 2 STEP 10 (OFF-PEAK & WEEKEND)

HOLCOMBE BLVD
BEGIN TO STA 5+00

SHEET 3 OF 3

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			107
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



N

LEGEND

- TCP PHASE 2 - STEP 10
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
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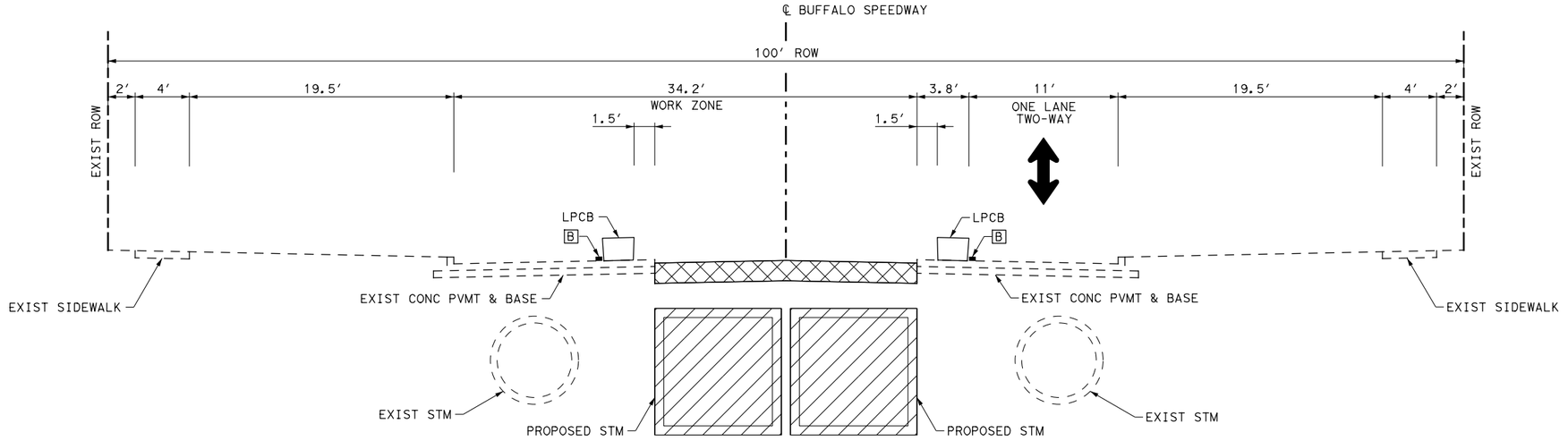
DETOUR LAYOUT PHASE 2 STEP 10 (OFF–PEAK & WEEKEND) BUFFALO SPEEDWAY (NORTHBOUND)

SCALE: NTS

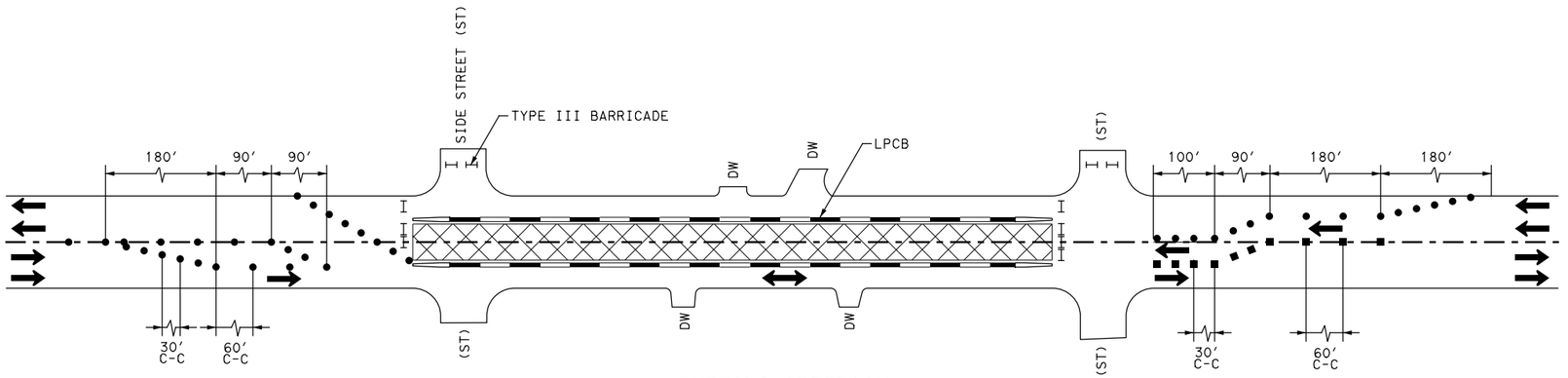
SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		108
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 3 STEP 1 (DAY)
SOUTH OF CASON ST TO AMHERST ST
STA 12+20 TO STA 44+90



BUFFALO SPEEDWAY
*PHASE 3 STEP 1 (DAY)

*NOTE: REFER TO TCP (2-2)-18 AND TCP (2-4)-18 FOR MORE INFORMATION.

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM — STORM SEWER
- [A] — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- DRUM
- TRAFFIC CONE
- TYPE III BARRICADE

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 3 STEP 1 TYPICAL SECTION
(DAY)

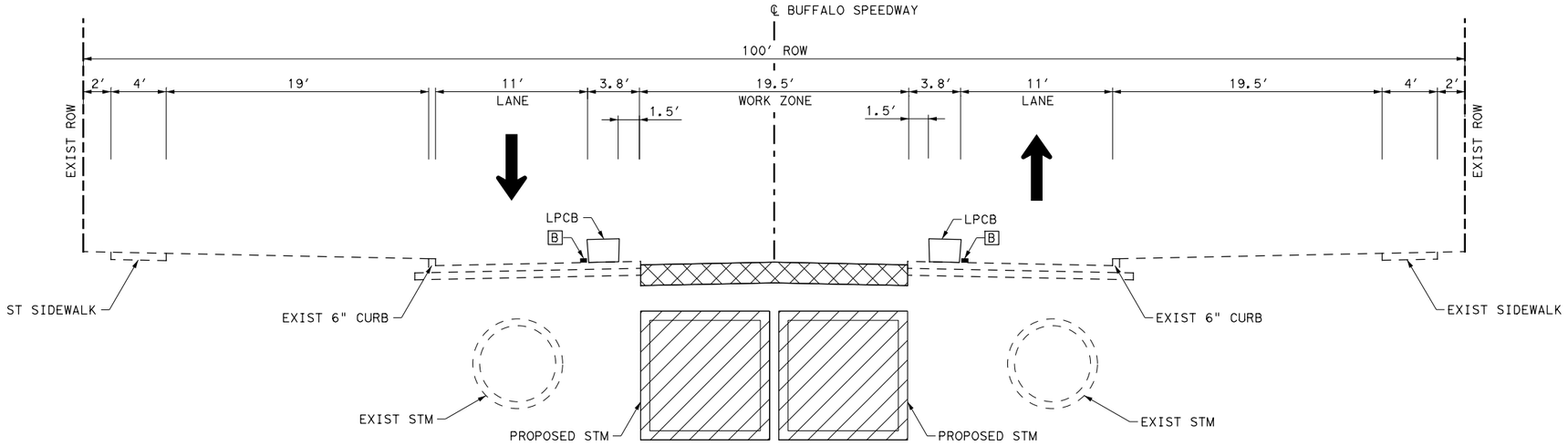
BUFFALO SPEEDWAY

SCALE: NTS

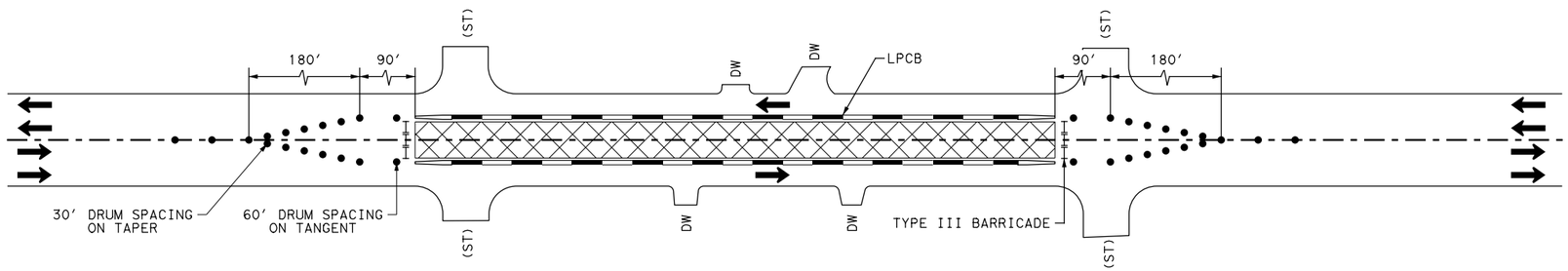
SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		109
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 3 STEP 1 (NIGHT)
SOUTH OF CASON ST TO AMHERST ST
STA 12+20 TO STA 44+90



BUFFALO SPEEDWAY
*PHASE 3 STEP 1 (NIGHT)

*NOTE: REFER TEXAS MUTCD MANUAL FIGURE 6H-30 - INTERIOR LANE CLOSURE ON A MULTI-LANE STREET (TA-30) FOR MORE INFORMATION.

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- DRUM
- TYPE III BARRICADE

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 1 TYPICAL SECTION (NIGHT)

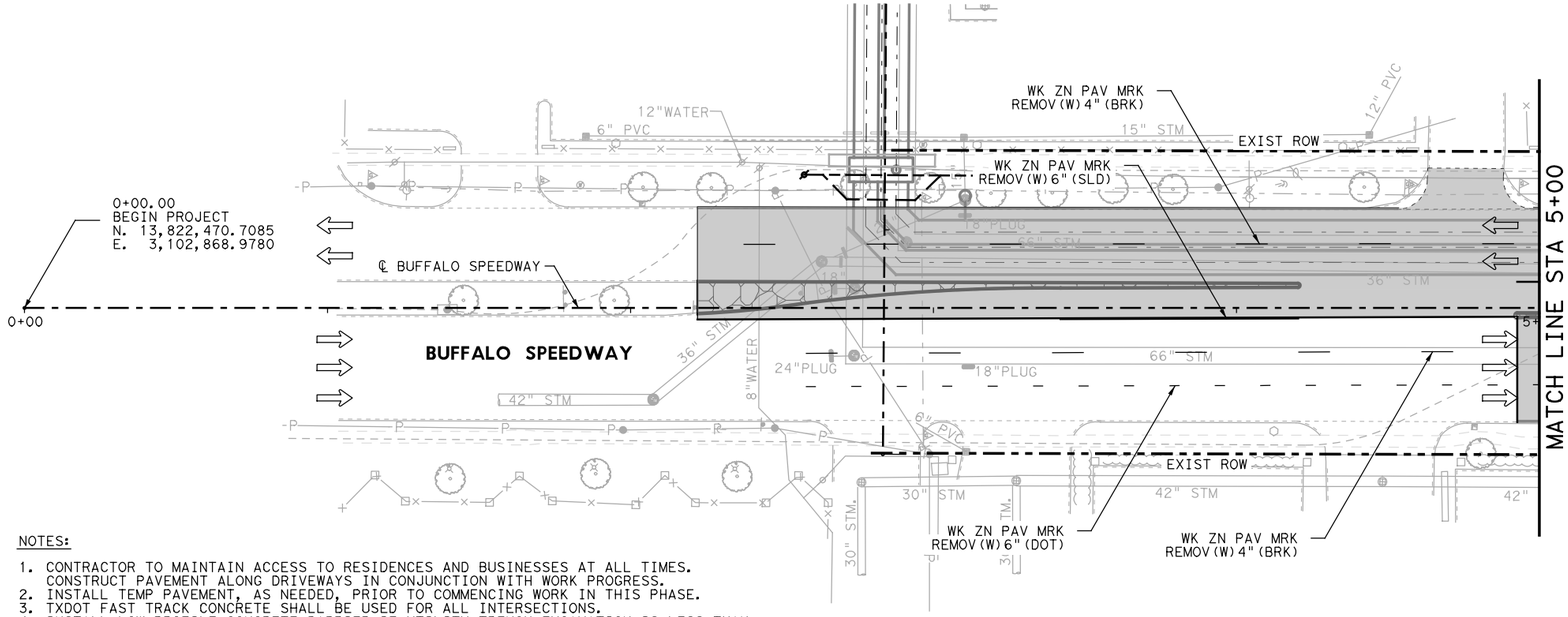
BUFFALO SPEEDWAY

SCALE: NTS

SHEET 1 OF 1

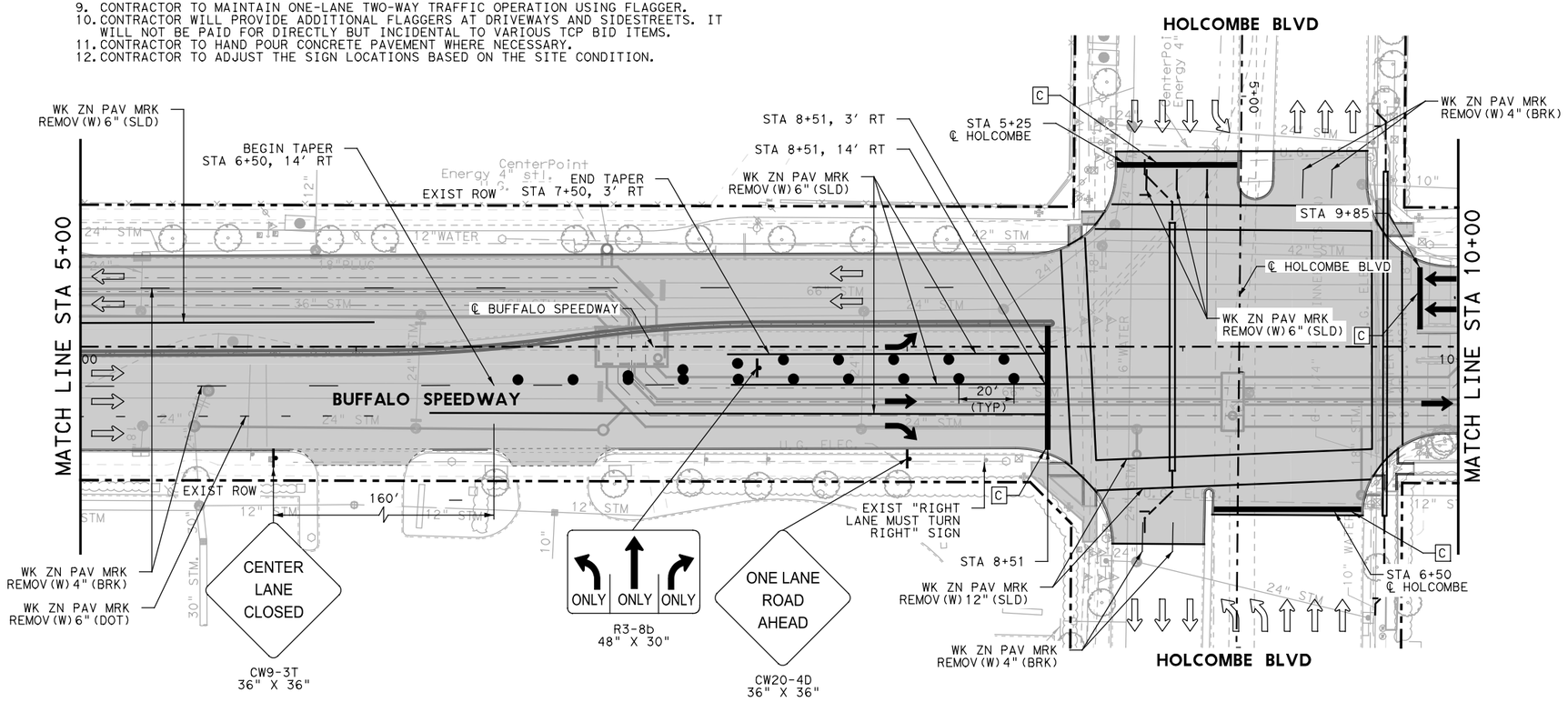
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		110
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY


0+00.00
BEGIN PROJECT
N. 13,822,470.7085
E. 3,102,868.9780
0+00
℄ BUFFALO SPEEDWAY
BUFFALO SPEEDWAY
12"WATER
6" PVC
12" PVC
15" STM
EXIST ROW
WK ZN PAV MRK REMOV (W) 4" (BRK)
WK ZN PAV MRK REMOV (W) 6" (SLD)
18" PLUG
66" STM
36" STM
42" STM
24"PLUG
18"PLUG
8"WATER
6" PVC
30" STM
WK ZN PAV MRK REMOV (W) 6" (DOT)
WK ZN PAV MRK REMOV (W) 4" (BRK)
MATCH LINE STA 5+00

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. COVER ONE-WAY SIGN DURING DAYTIME CONSTRUCTION.
8. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
9. CONTRACTOR TO MAINTAIN ONE-LANE TWO-WAY TRAFFIC OPERATION USING FLAGGER.
10. CONTRACTOR WILL PROVIDE ADDITIONAL FLAGGERS AT DRIVEWAYS AND SIDESTREETS. IT WILL NOT BE PAID FOR DIRECTLY BUT INCIDENTAL TO VARIOUS TCP BID ITEMS.
11. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
12. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.


HOLCOMBE BLVD
WK ZN PAV MRK REMOV (W) 6" (SLD)
BEGIN TAPER
STA 6+50, 14' RT
END TAPER
STA 7+50, 3' RT
EXIST ROW
STA 8+51, 3' RT
STA 8+51, 14' RT
WK ZN PAV MRK REMOV (W) 6" (SLD)
STA 5+25
℄ HOLCOMBE
WK ZN PAV MRK REMOV (W) 4" (BRK)
STA 9+85
℄ HOLCOMBE BLVD
WK ZN PAV MRK REMOV (W) 6" (SLD)
℄ BUFFALO SPEEDWAY
BUFFALO SPEEDWAY
MATCH LINE STA 5+00
MATCH LINE STA 10+00
20' (TYP)
EXIST ROW
160'
EXIST "RIGHT LANE MUST TURN RIGHT" SIGN
STA 8+51
WK ZN PAV MRK REMOV (W) 12" (SLD)
STA 6+50
℄ HOLCOMBE
WK ZN PAV MRK REMOV (W) 4" (BRK)
WK ZN PAV MRK REMOV (W) 4" (BRK)
WK ZN PAV MRK REMOV (W) 6" (DOT)
CENTER LANE CLOSED
CW9-3T
36" X 36"
ONLY ONLY ONLY
R3-8b
48" X 30"
ONE LANE ROAD AHEAD
CW20-4D
36" X 36"
HOLCOMBE BLVD

0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

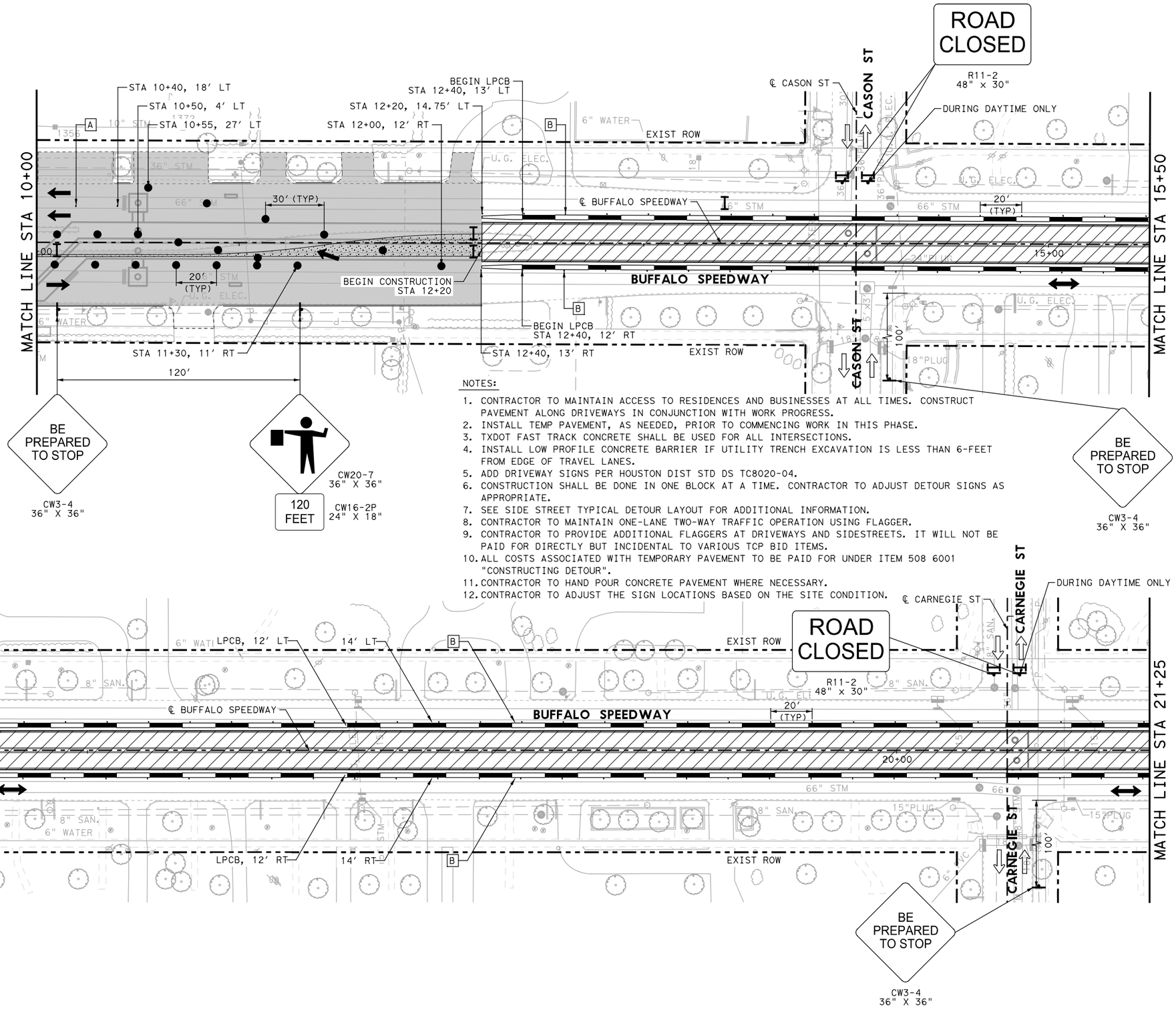
TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (DAY)

BUFFALO SPEEDWAY
STA 0+00 TO STA 10+00

SHEET 1 OF 6

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		111
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. CONTRACTOR TO MAINTAIN ONE-LANE TWO-WAY TRAFFIC OPERATION USING FLAGGER.
9. CONTRACTOR TO PROVIDE ADDITIONAL FLAGGERS AT DRIVEWAYS AND SIDESTREETS. IT WILL NOT BE PAID FOR DIRECTLY BUT INCIDENTAL TO VARIOUS TCP BID ITEMS.
10. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
11. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
12. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
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- TEMPORARY PAVEMENT

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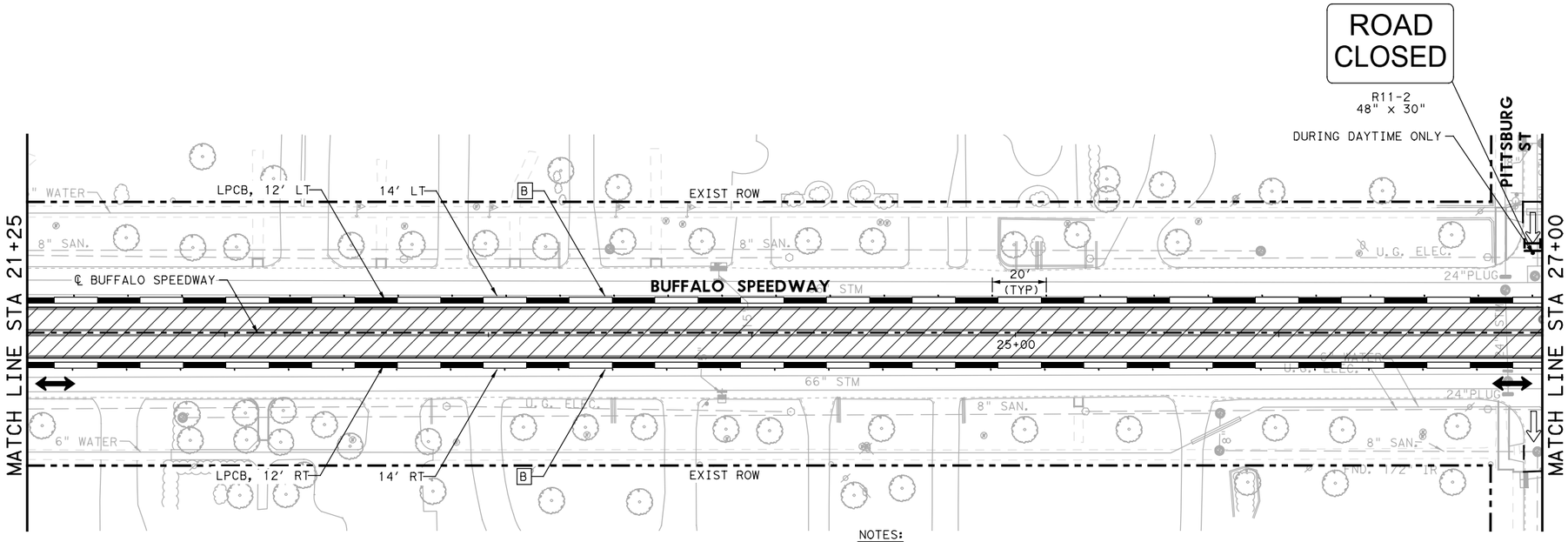
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (DAY)

BUFFALO SPEEDWAY
STA 10+00 TO STA 21+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		112
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



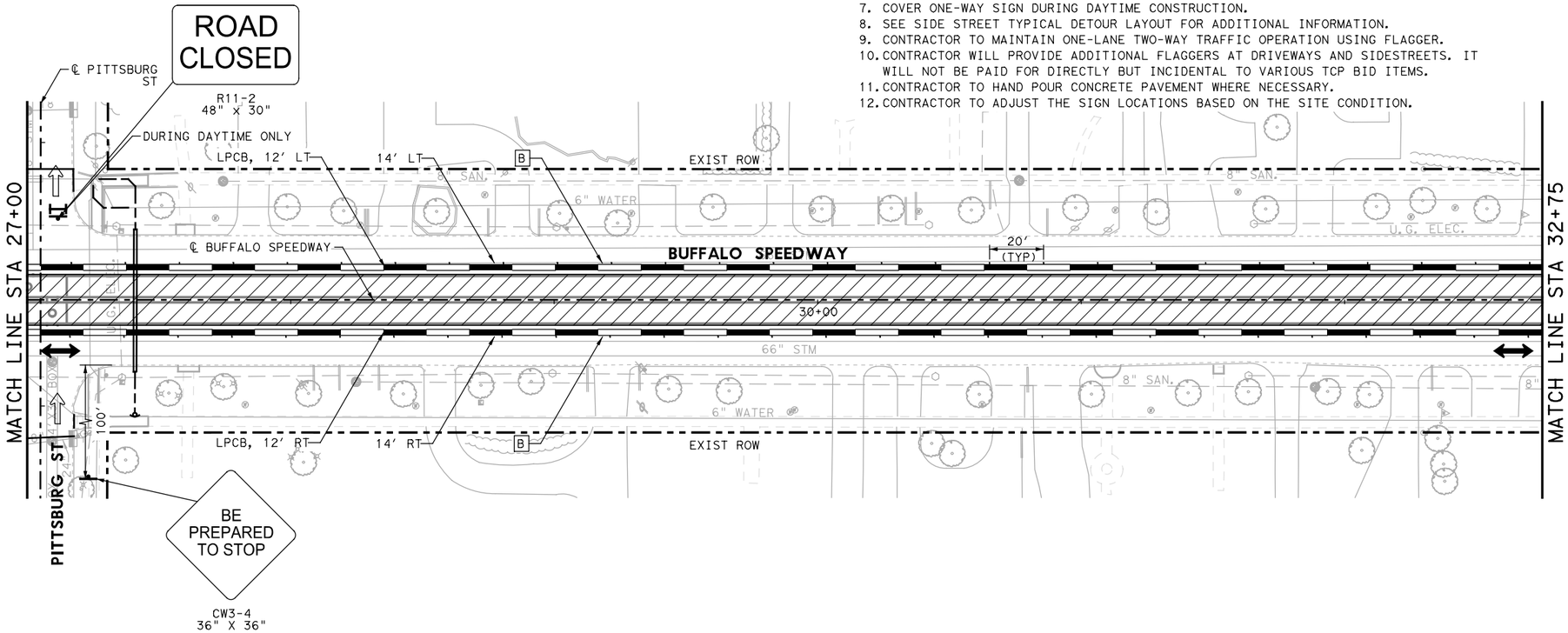


LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
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- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
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7. COVER ONE-WAY SIGN DURING DAYTIME CONSTRUCTION.
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Texas Registered Engineering Firm F-2144

City of West University Place

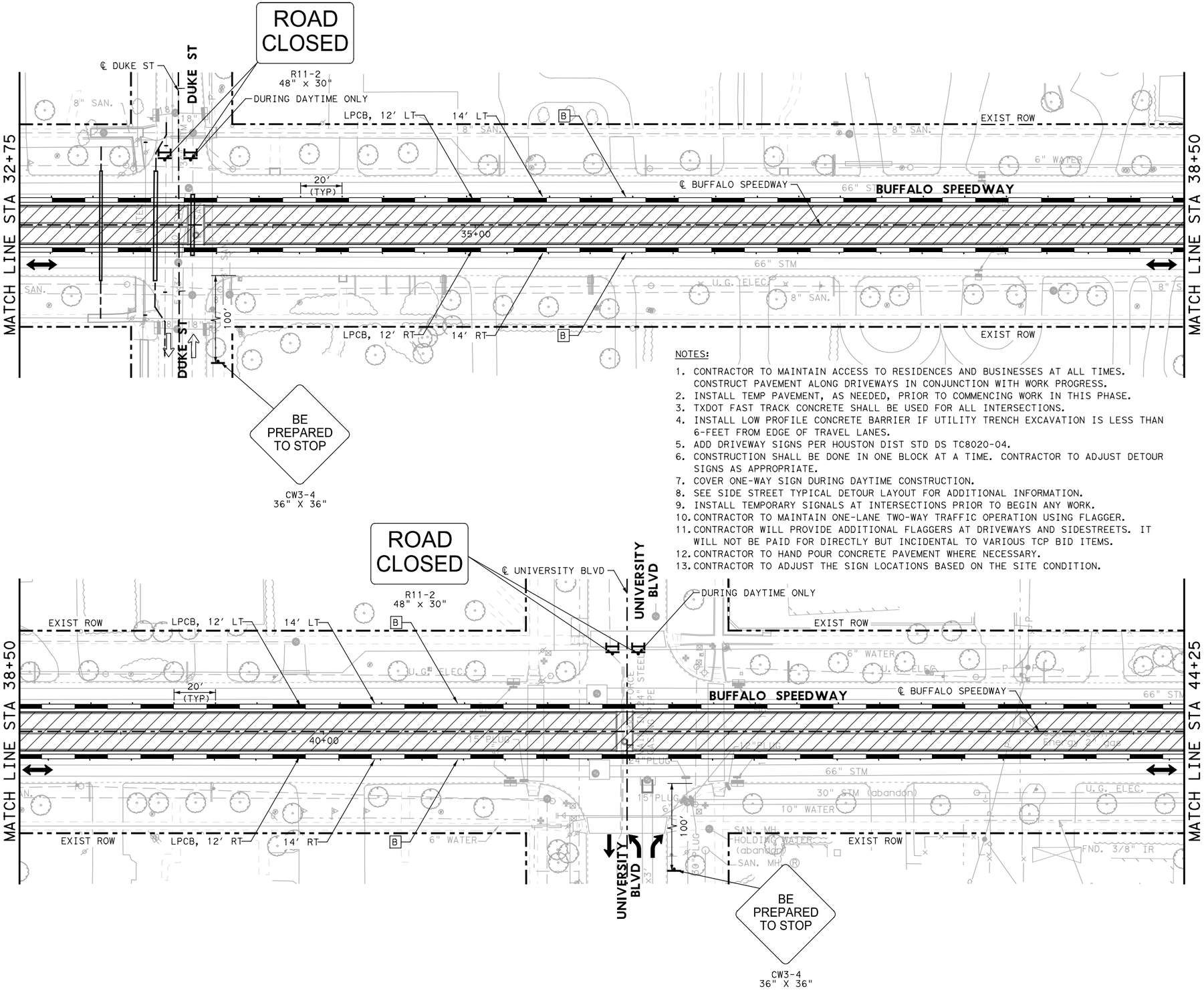
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (DAY)

BUFFALO SPEEDWAY
STA 21+25 TO STA 32+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			113
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. COVER ONE-WAY SIGN DURING DAYTIME CONSTRUCTION.
8. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
9. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
10. CONTRACTOR TO MAINTAIN ONE-LANE TWO-WAY TRAFFIC OPERATION USING FLAGGER.
11. CONTRACTOR WILL PROVIDE ADDITIONAL FLAGGERS AT DRIVEWAYS AND SIDESTREETS. IT WILL NOT BE PAID FOR DIRECTLY BUT INCIDENTAL TO VARIOUS TCP BID ITEMS.
12. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
13. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368
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HOUSTON, TEXAS 77042

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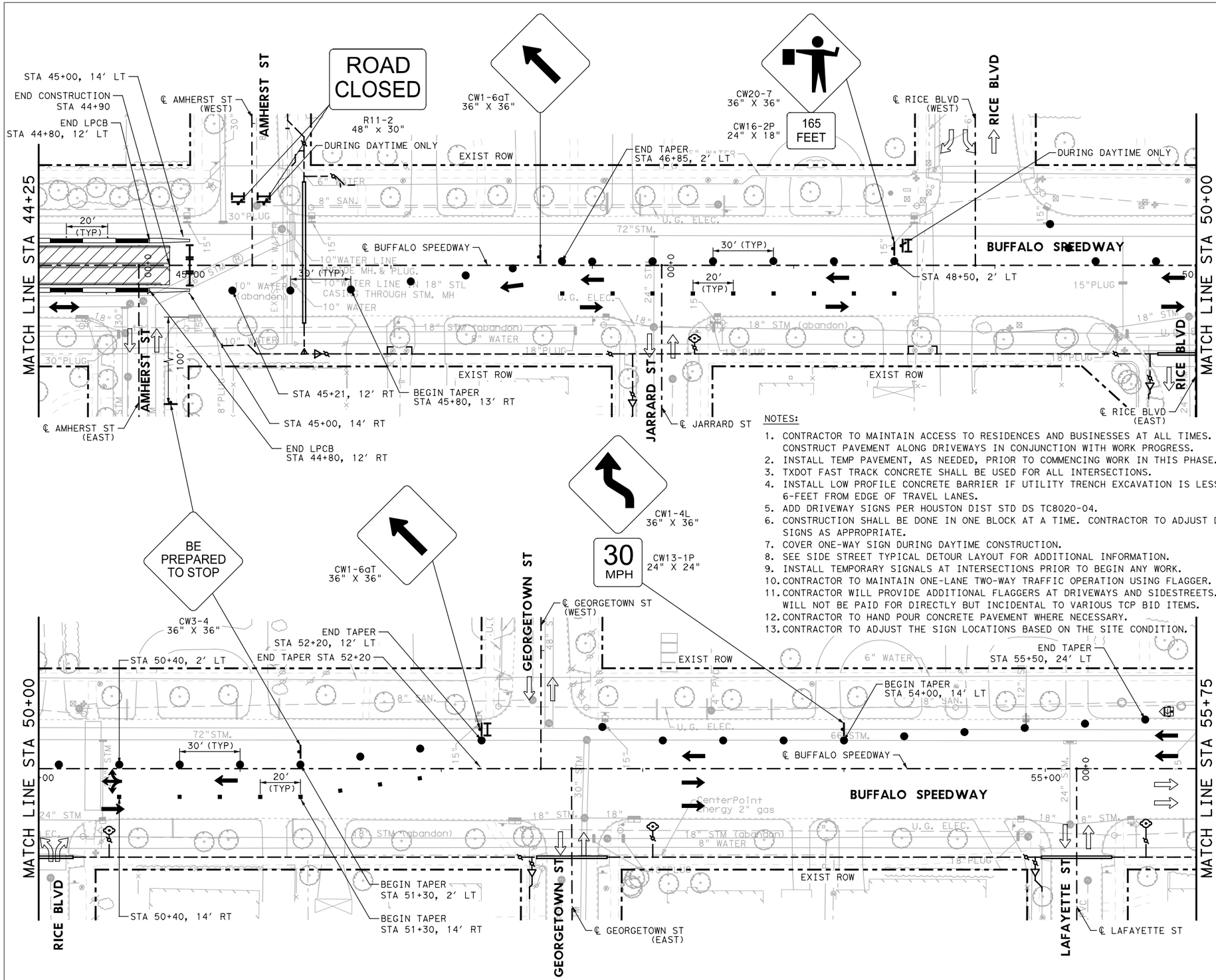
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (DAY)

BUFFALO SPEEDWAY
STA 32+75 TO STA 44+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		114
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
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- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
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4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
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8. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
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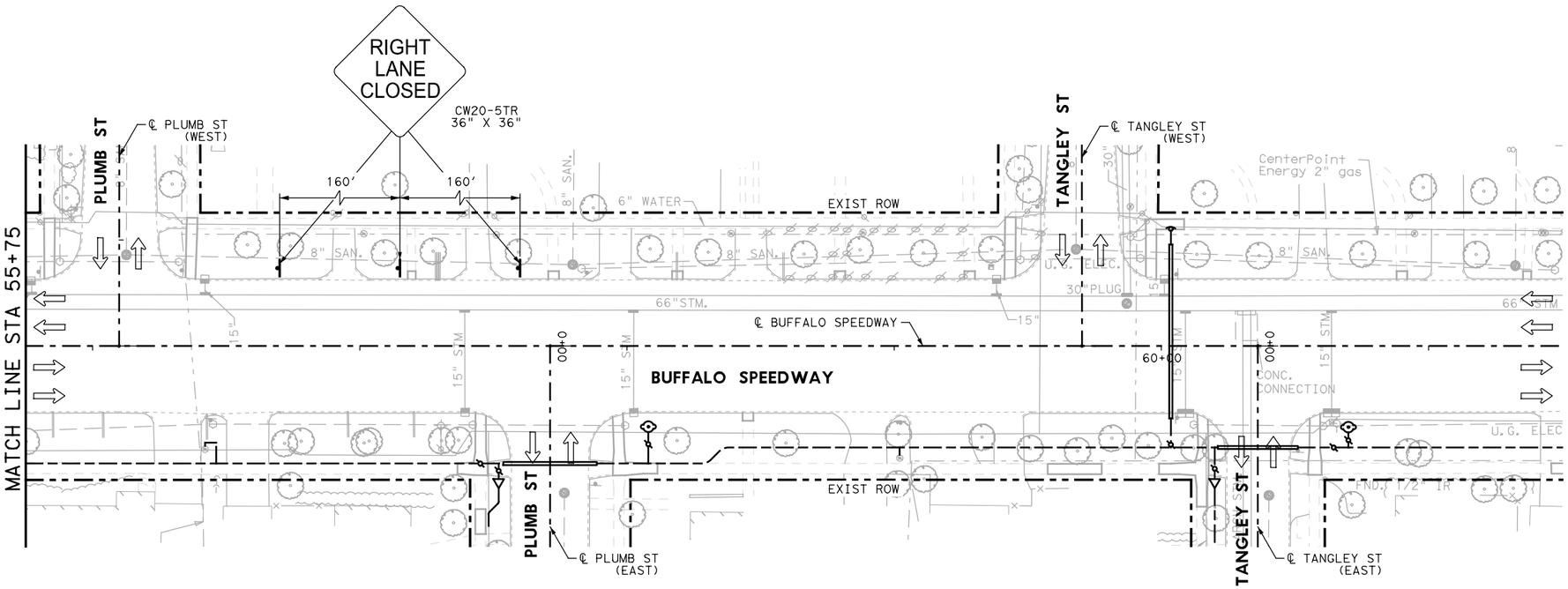
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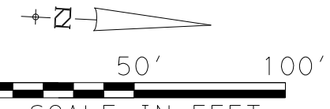
TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (DAY)

BUFFALO SPEEDWAY
STA 44+25 TO STA 55+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		115
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. COVER ONE-WAY SIGN DURING DAYTIME CONSTRUCTION.
8. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
9. CONTRACTOR TO MAINTAIN ONE-LANE TWO-WAY TRAFFIC OPERATION USING FLAGGER.
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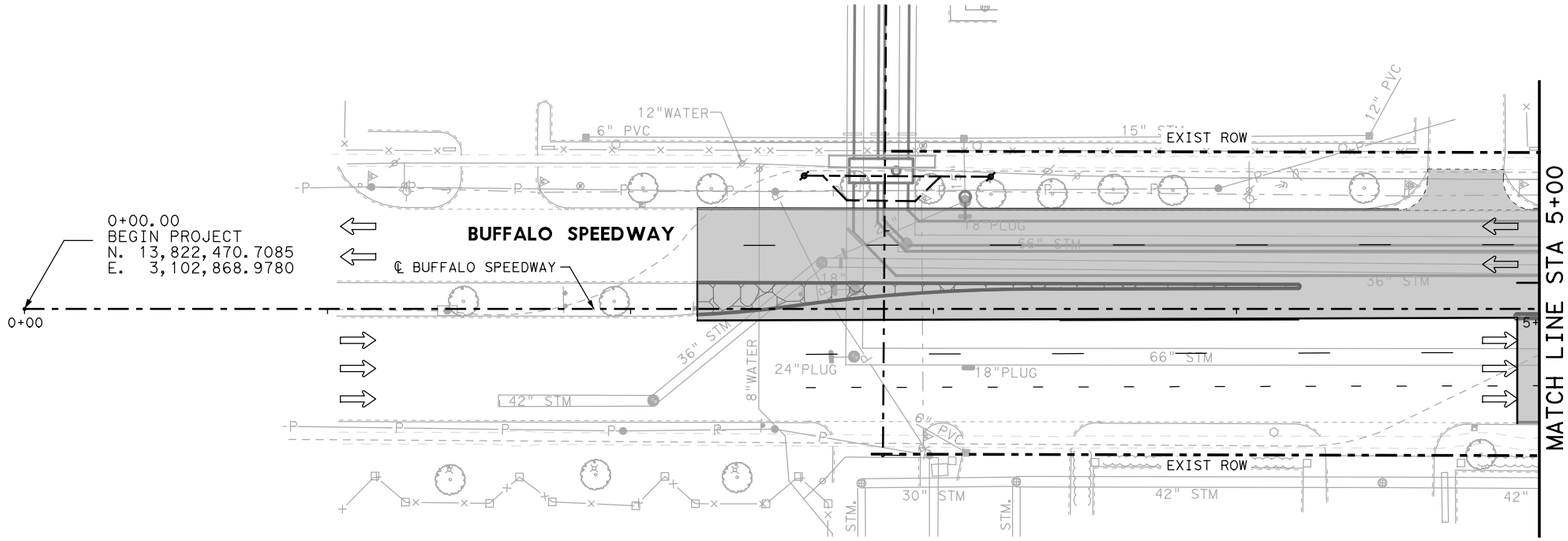
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

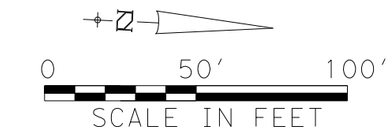
TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (DAY)

BUFFALO SPEEDWAY
STA 55+75 TO STA 61+50

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		116
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



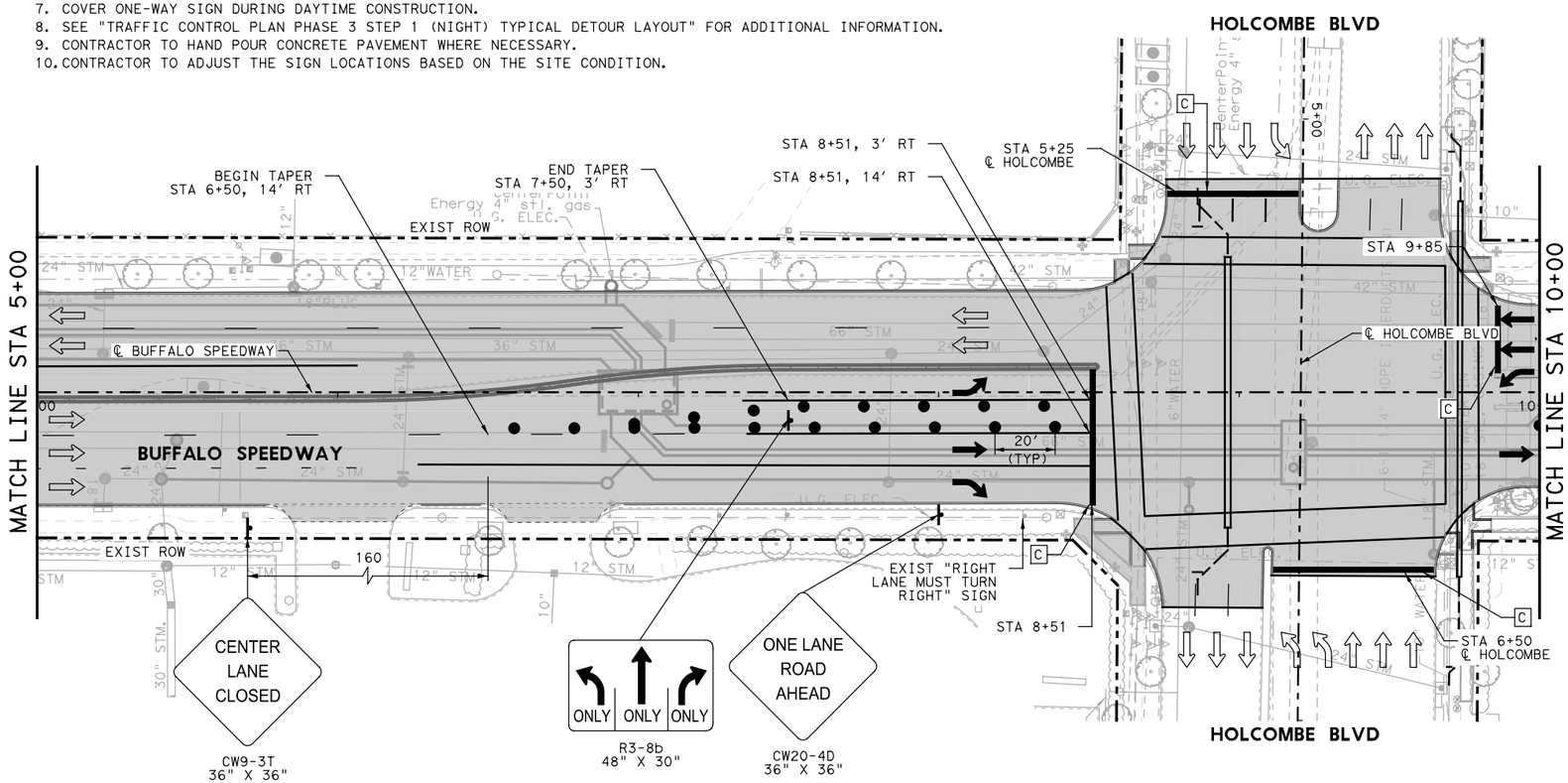


LEGEND:

- DRUM
- CONSTRUCTION SIGN
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- EXIST DIRECTION OF TRAFFIC
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7. COVER ONE-WAY SIGN DURING DAYTIME CONSTRUCTION.
8. SEE "TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT) TYPICAL DETOUR LAYOUT" FOR ADDITIONAL INFORMATION.
9. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
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STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/29/2019

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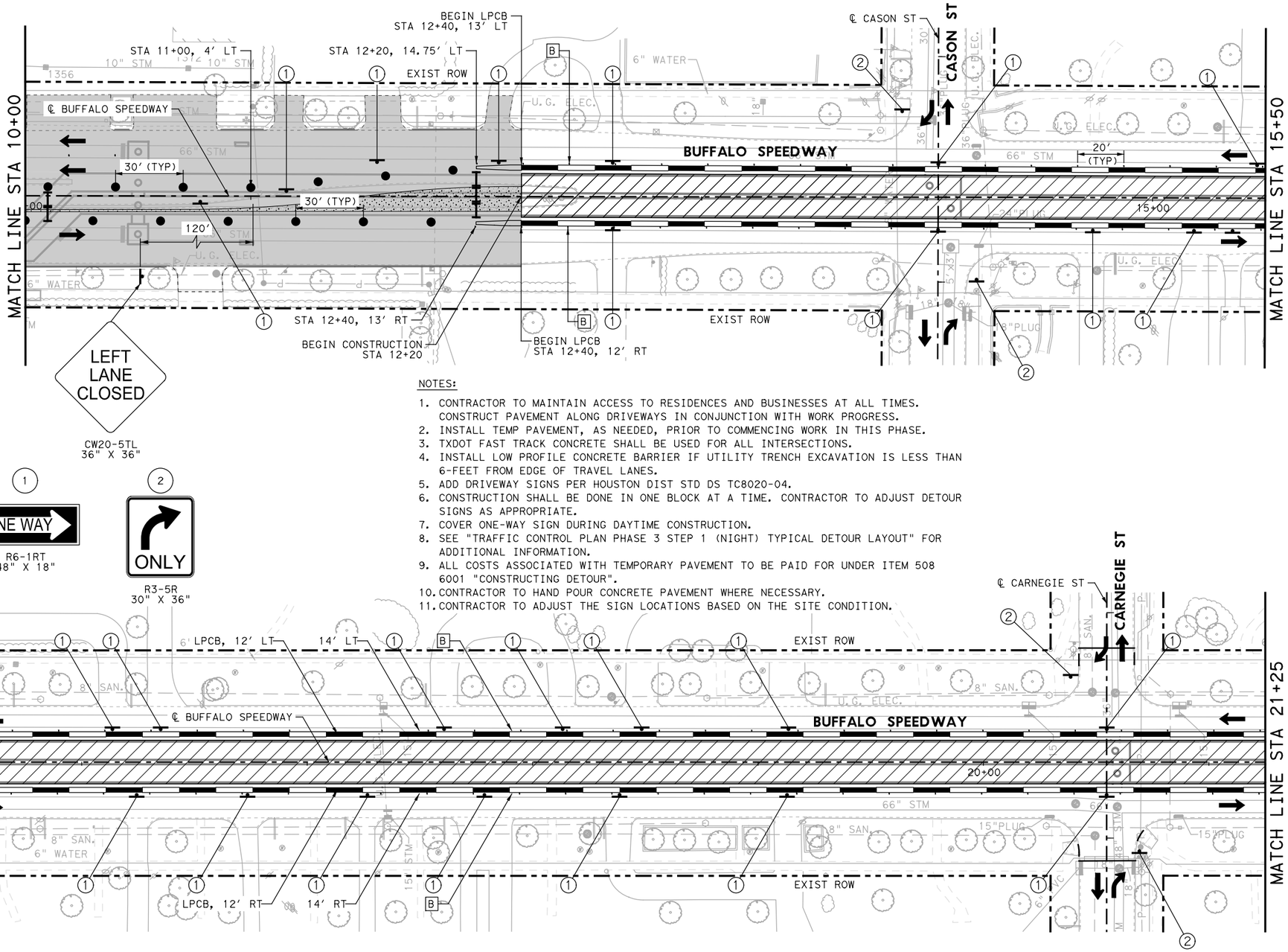
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT)

BUFFALO SPEEDWAY
BEGIN TO STA 10+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		117
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
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- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

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5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. COVER ONE-WAY SIGN DURING DAYTIME CONSTRUCTION.
8. SEE "TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT) TYPICAL DETOUR LAYOUT" FOR ADDITIONAL INFORMATION.
9. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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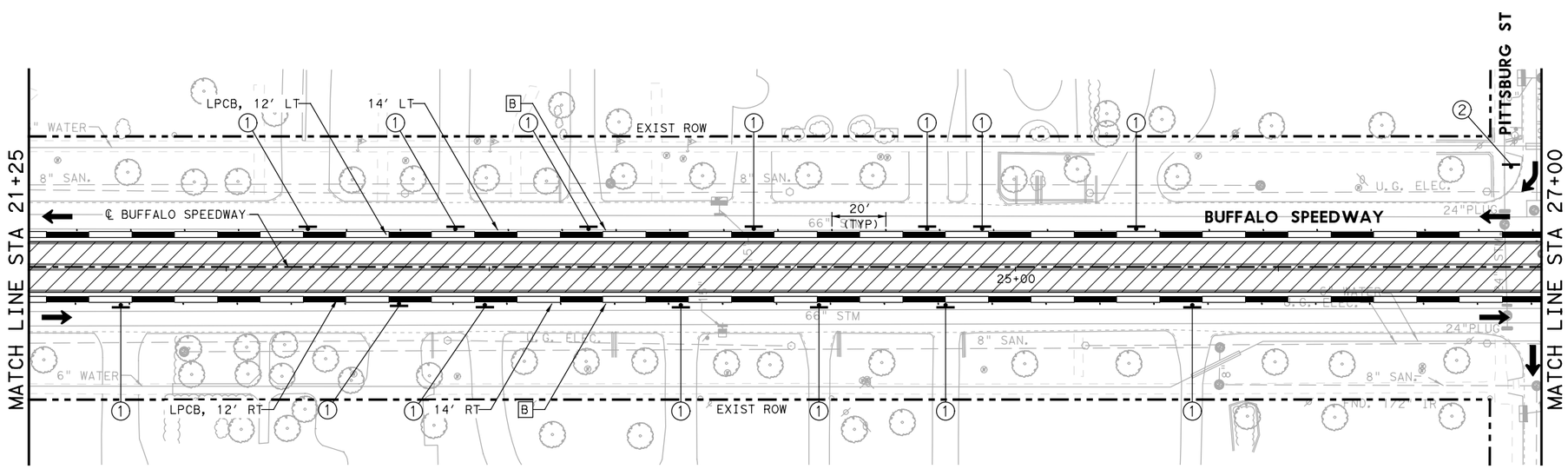
TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT)

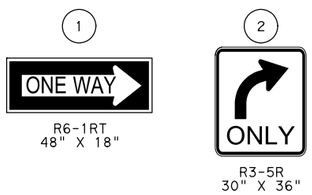
BUFFALO SPEEDWAY

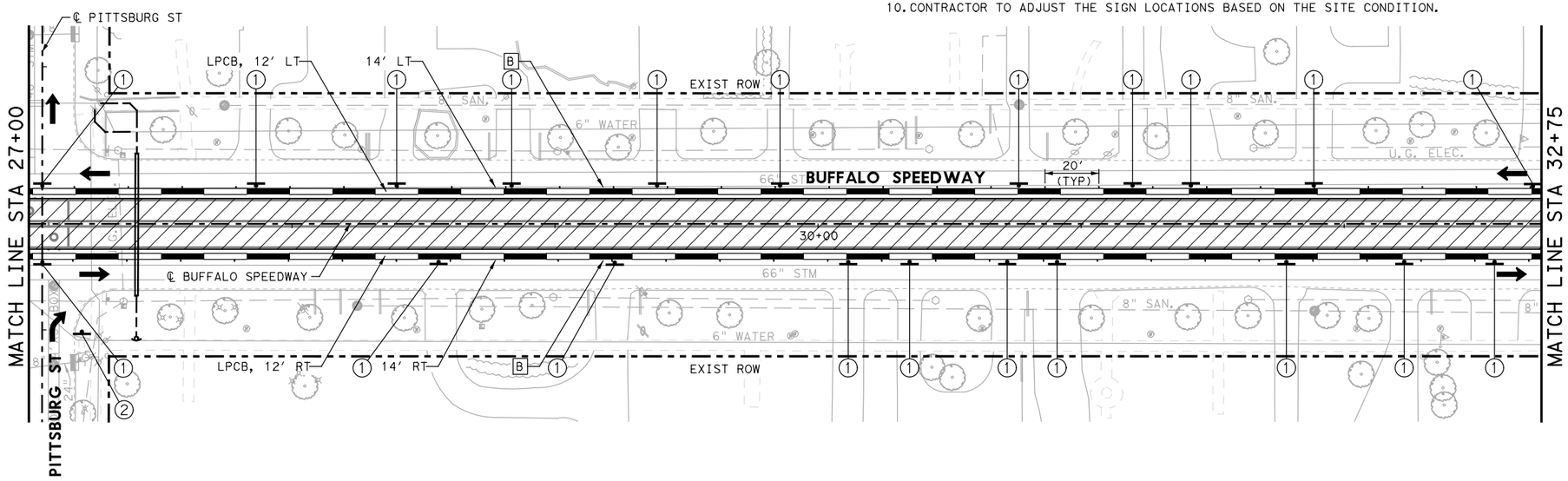
STA 10+00 TO STA 21+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		118
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY







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7. UNCOVER ONE-WAY SIGN DURING NIGHT.
8. SEE "TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT) TYPICAL DETOUR LAYOUT" FOR ADDITIONAL INFORMATION.
9. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
10. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

0 50′ 100′
SCALE IN FEET

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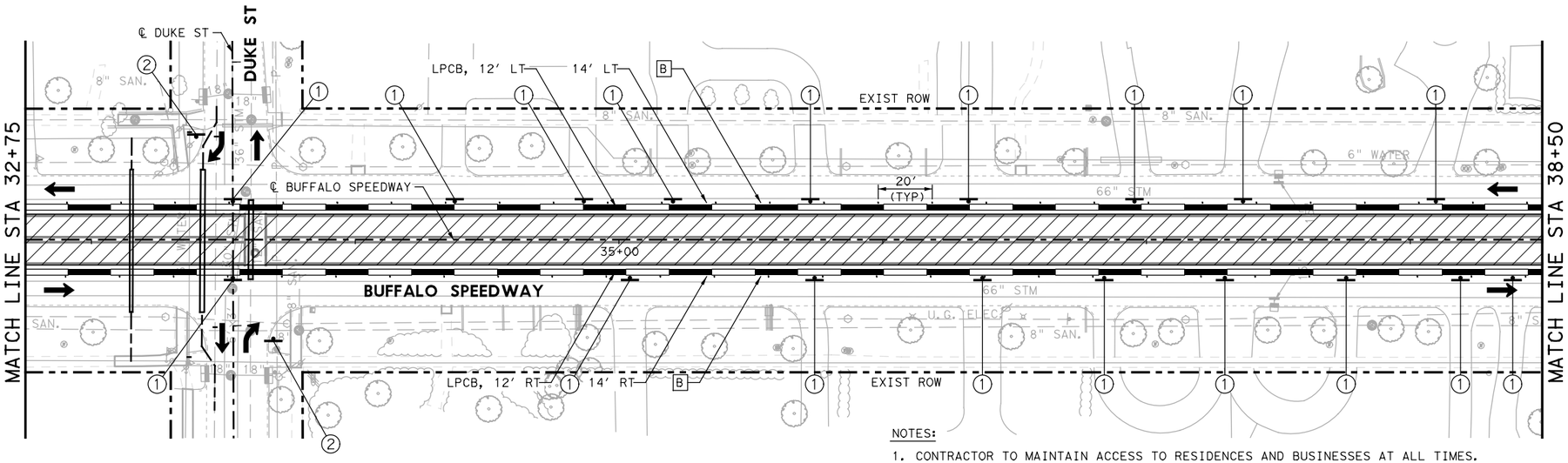
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

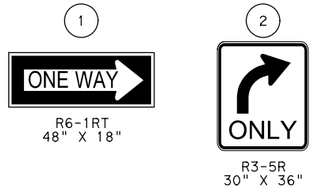
TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT)

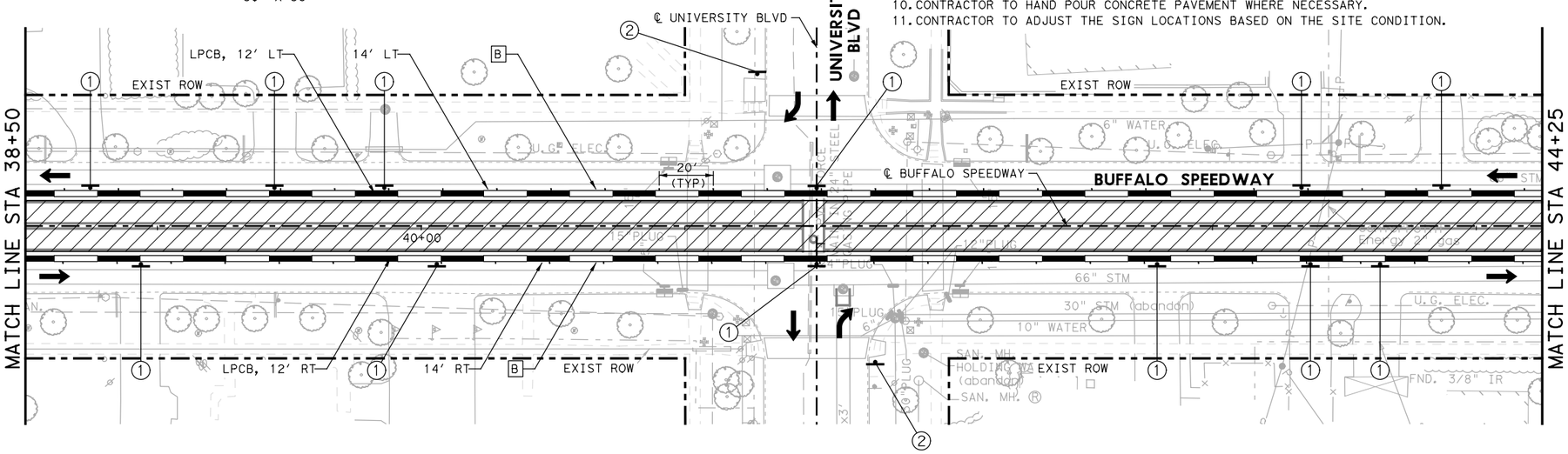
BUFFALO SPEEDWAY
STA 21+25 TO STA 32+75

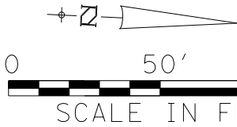
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			119
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	







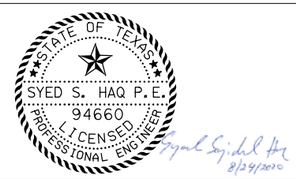


LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. COVER ONE-WAY SIGN DURING DAYTIME CONSTRUCTION.
8. SEE "TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT) TYPICAL DETOUR LAYOUT" FOR ADDITIONAL INFORMATION.
9. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

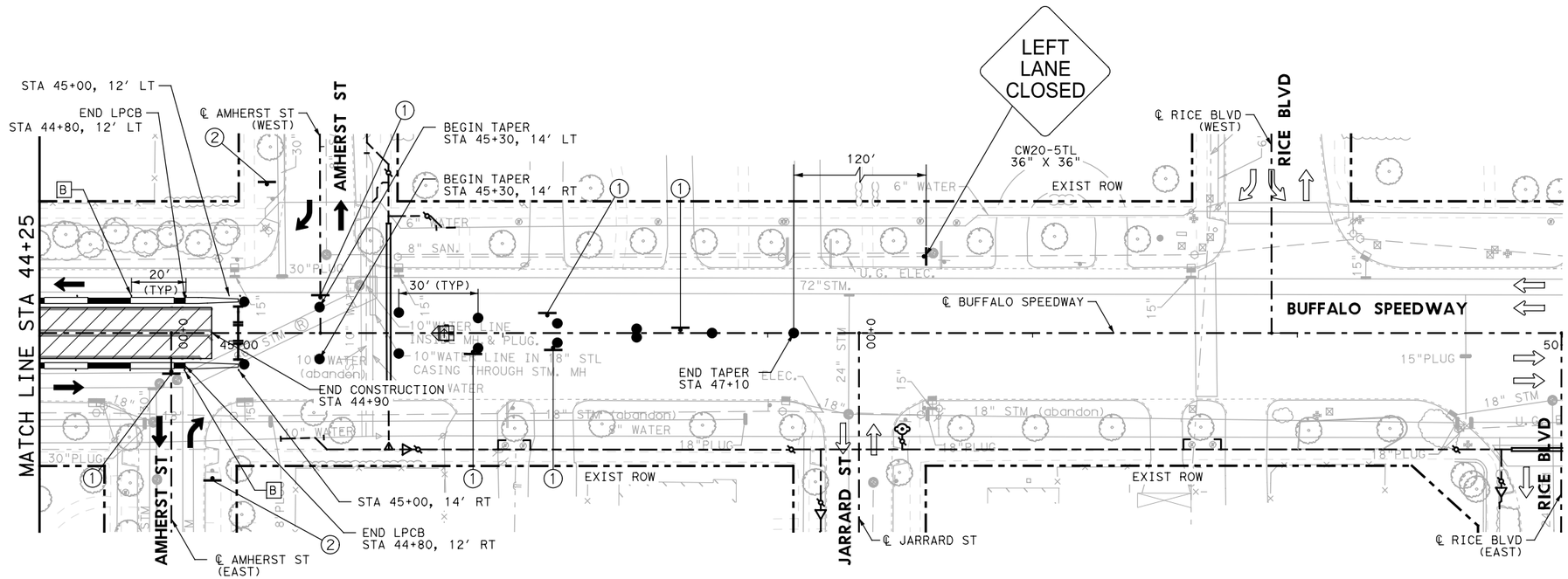
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT)

BUFFALO SPEEDWAY
STA 32+75 TO STA 44+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			120
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
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- COMPLETED PHASE
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- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

(1)



R6-1RT
48" X 18"

(2)



R3-5R
30" X 36"

NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
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5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. COVER ONE-WAY SIGN DURING DAYTIME CONSTRUCTION.
8. SEE "TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT) TYPICAL DETOUR LAYOUT" FOR ADDITIONAL INFORMATION.
9. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
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LICENSED
PROFESSIONAL ENGINEER
8/29/2020

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

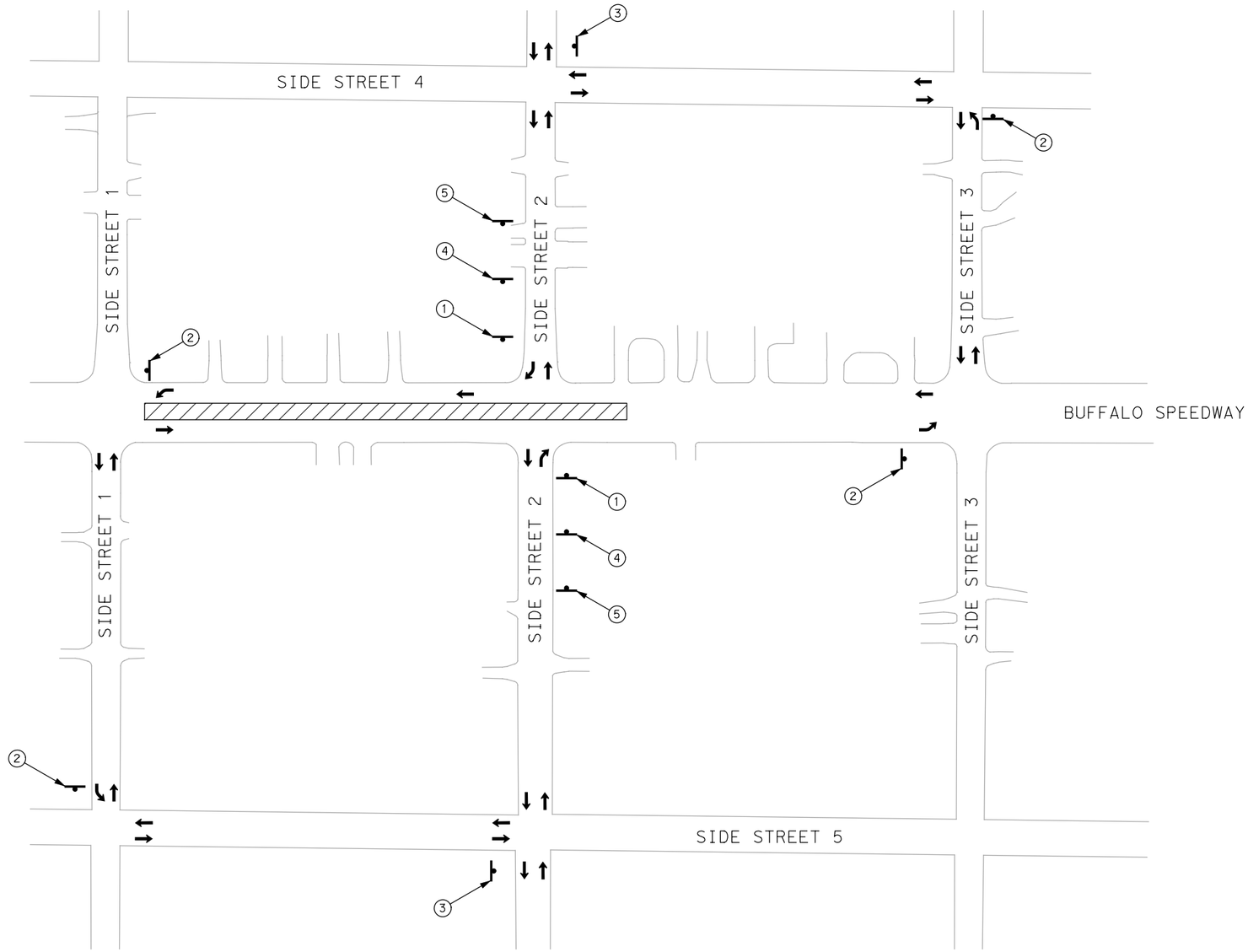
TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT)

BUFFALO SPEEDWAY

STA 44+25 TO STA 50+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			121
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



LEGEND

- TCP PHASE 3 - STEP 1 (NIGHT)
- DIRECTION OF TRAFFIC
- CONSTRUCTION SIGN

PHASE 3 - STEP 1 (NIGHT) TYPICAL DETOUR (FOR SIDE STREETS)

① DETOUR / ONE WAY — M4-10R 48" X 18" / R6-1RT 48" X 18"

② DETOUR — M4-9L 30" X 24"

③ DETOUR — M4-9 30" X 24"

④ DETOUR AHEAD — CW20-2 48" X 48"

⑤ ROAD WORK AHEAD — CW20-1D 48" X 48"

*TYPICAL DETOUR LAYOUT SHOWN FOR SIDE STREET 2.

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

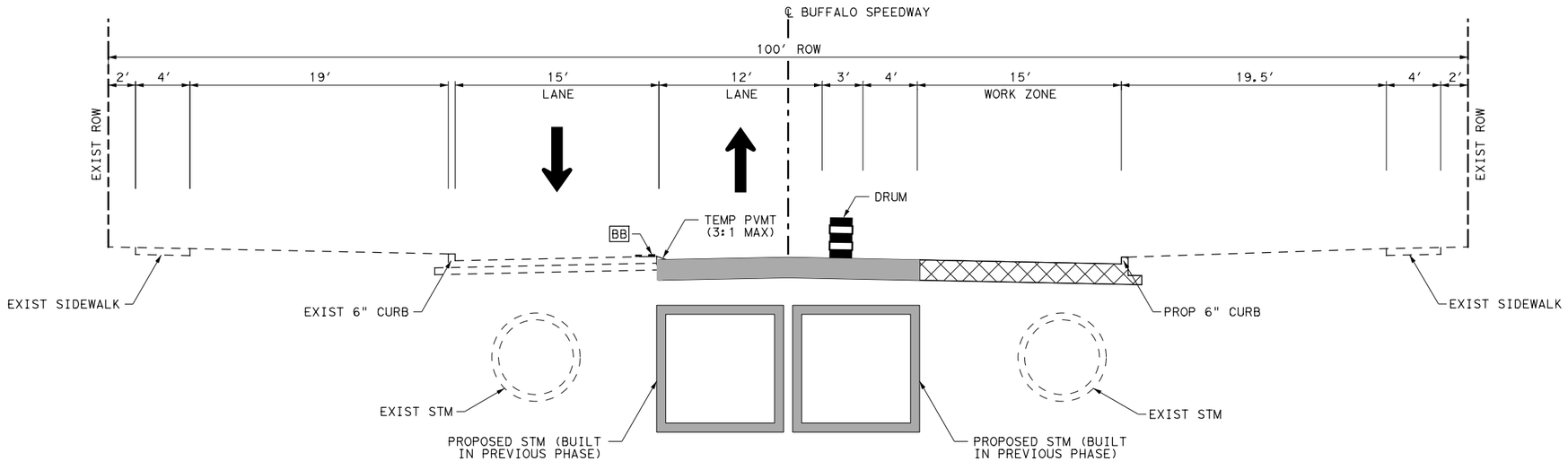
TRAFFIC CONTROL PLAN PHASE 3 STEP 1 (NIGHT) TYPICAL DETOUR LAYOUT

SCALE: NTS

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		121A
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY

PHASE 3 STEP 2

SOUTH OF CASON ST TO AMHERST ST

STA 12+20 TO STA 44+90

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

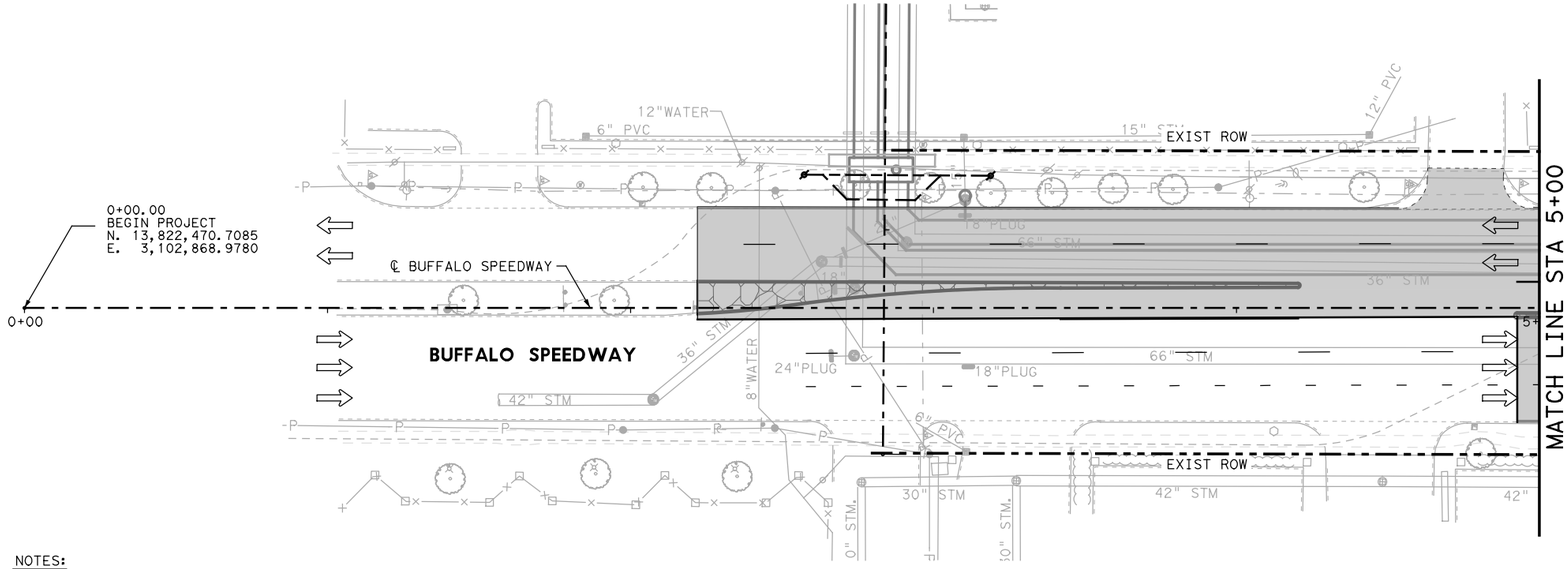
TRAFFIC CONTROL PLAN
PHASE 3 STEP 2 TYPICAL SECTION

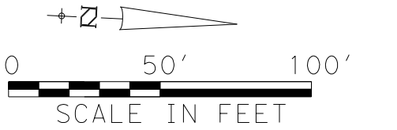
BUFFALO SPEEDWAY

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		122
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



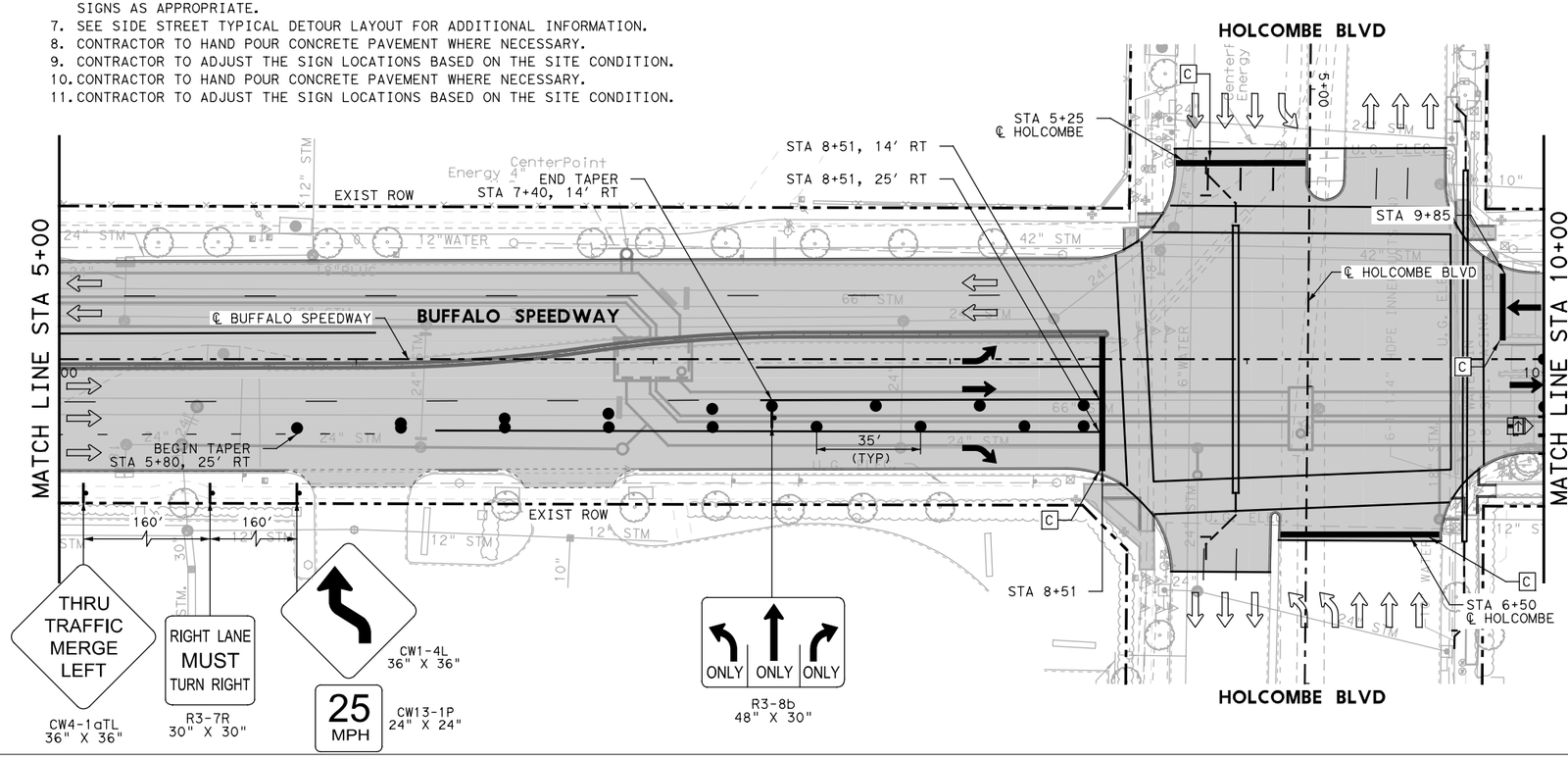


LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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NOTES:

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5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.
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STATE OF TEXAS
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94660
LICENSED PROFESSIONAL ENGINEER
8/29/2020

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

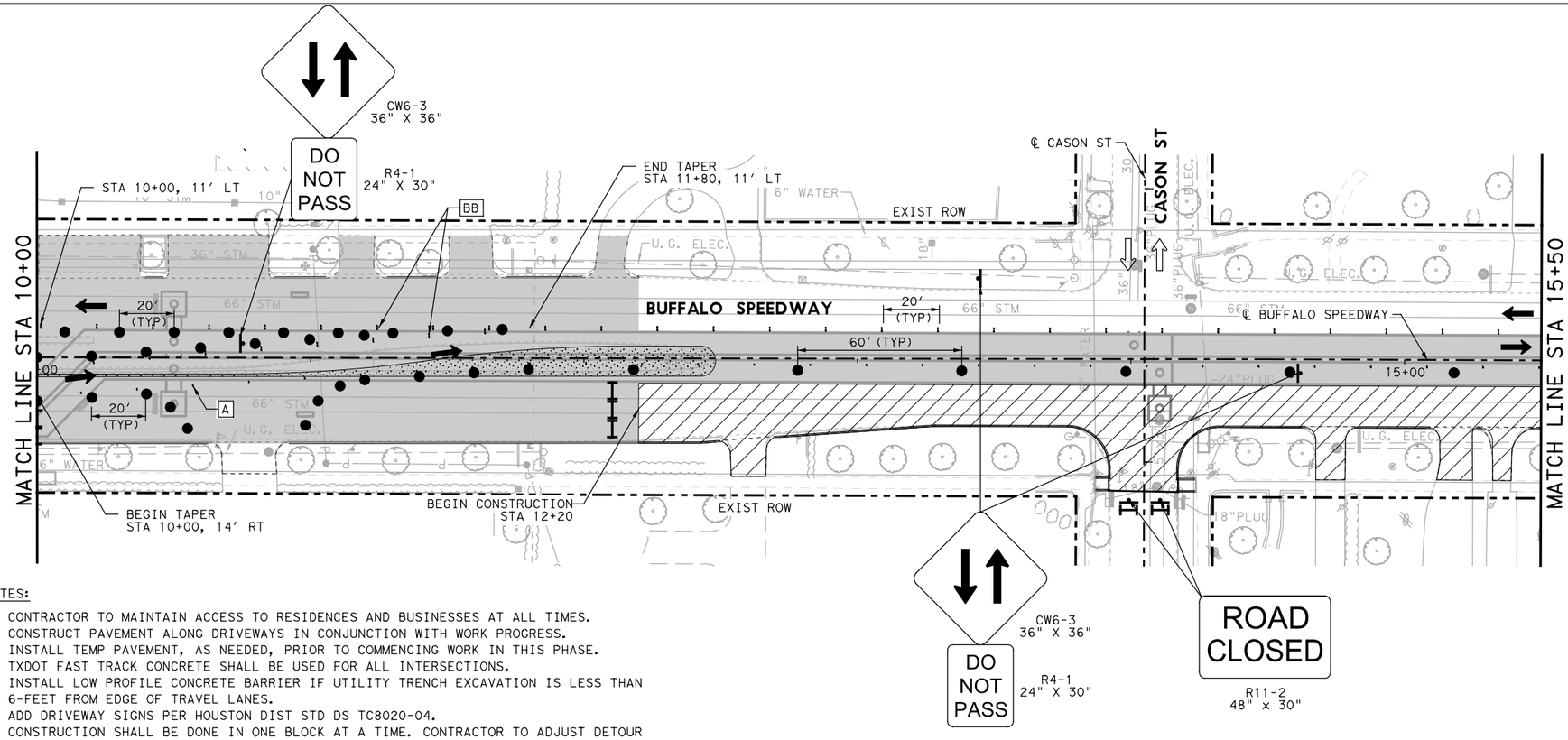
TRAFFIC CONTROL PLAN PHASE 3 STEP 2

BUFFALO SPEEDWAY

BEGIN TO STA 10+00

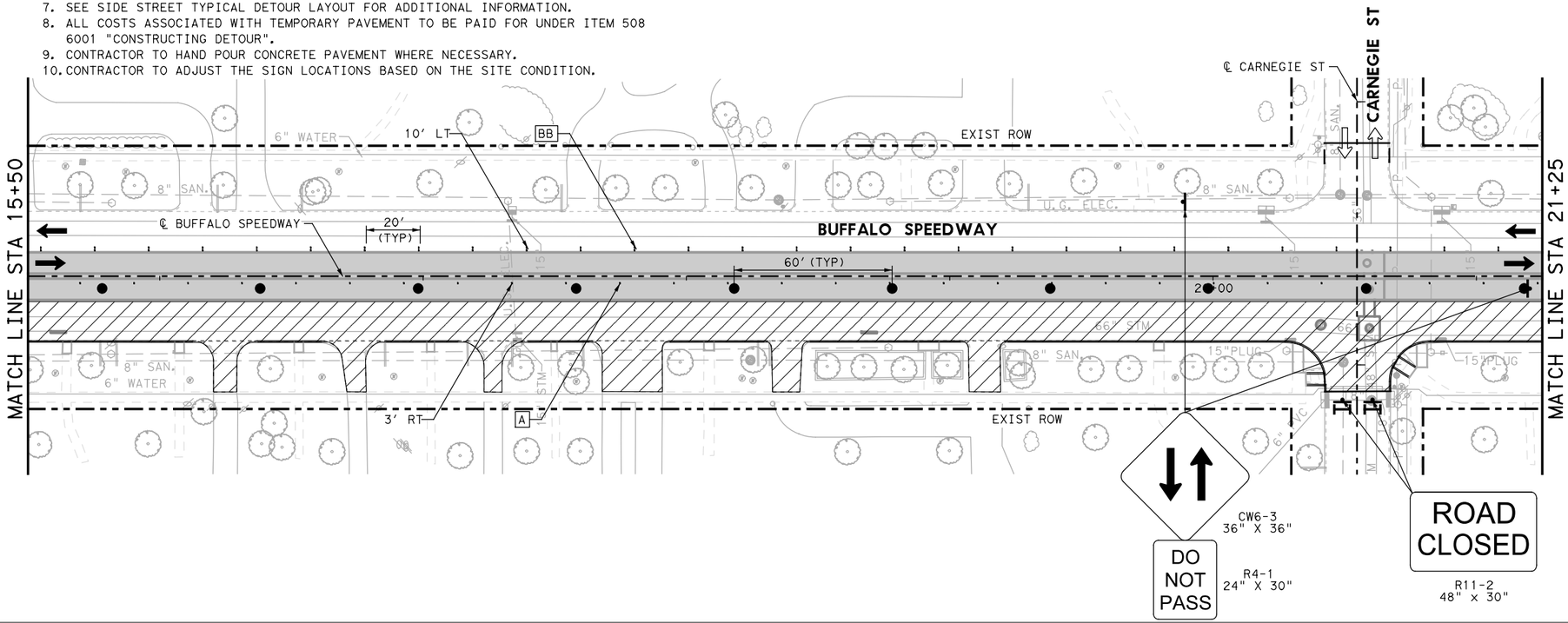
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		123
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
9. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
10. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
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- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

STATE OF TEXAS
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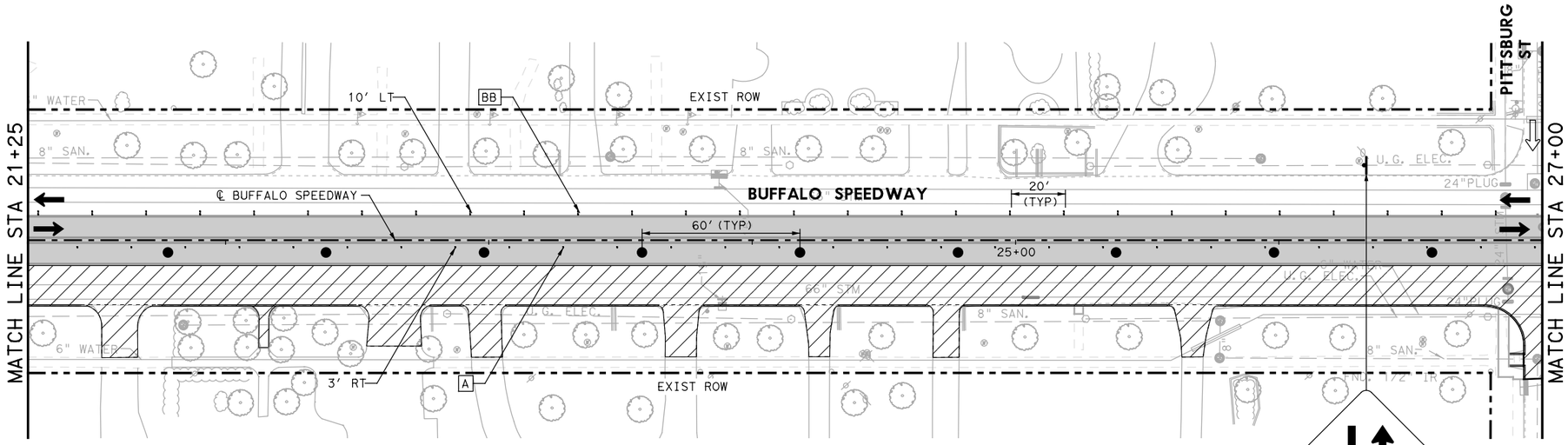
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

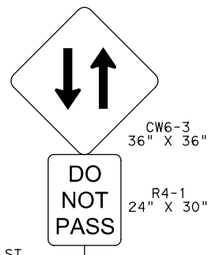
TRAFFIC CONTROL PLAN PHASE 3 STEP 2

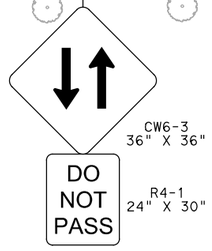
BUFFALO SPEEDWAY
STA 10+00 TO STA 21+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		124
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

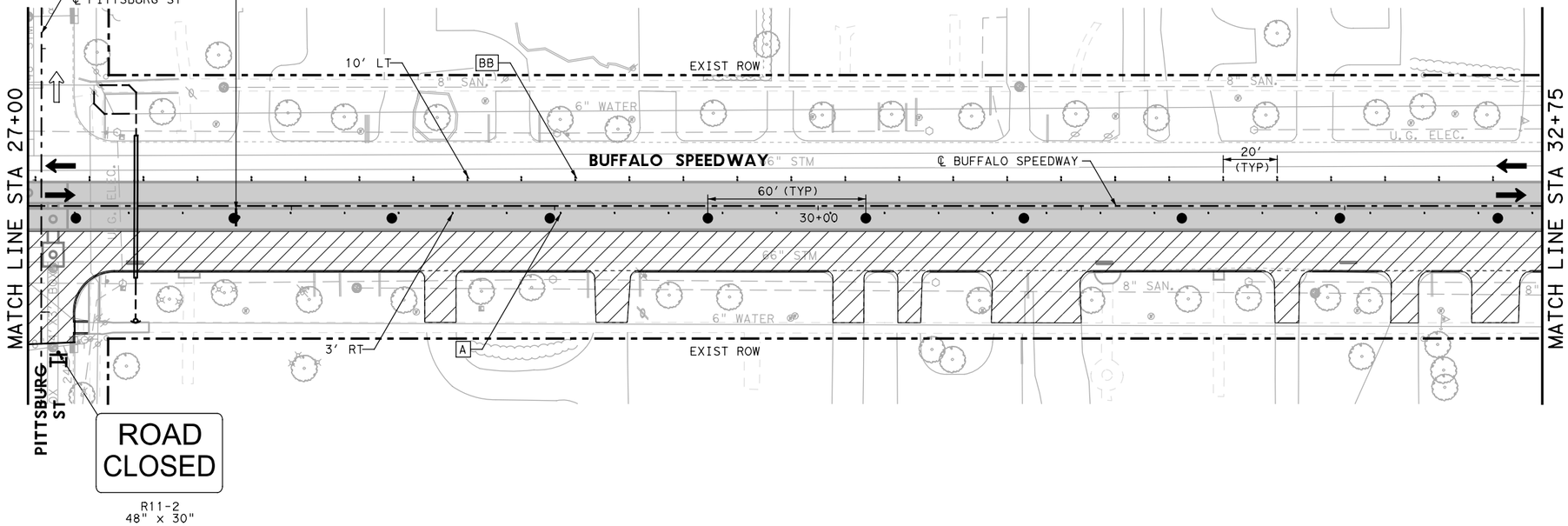






NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
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5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
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0 50' 100'

SCALE IN FEET

LEGEND:

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- CONSTRUCTION SIGN
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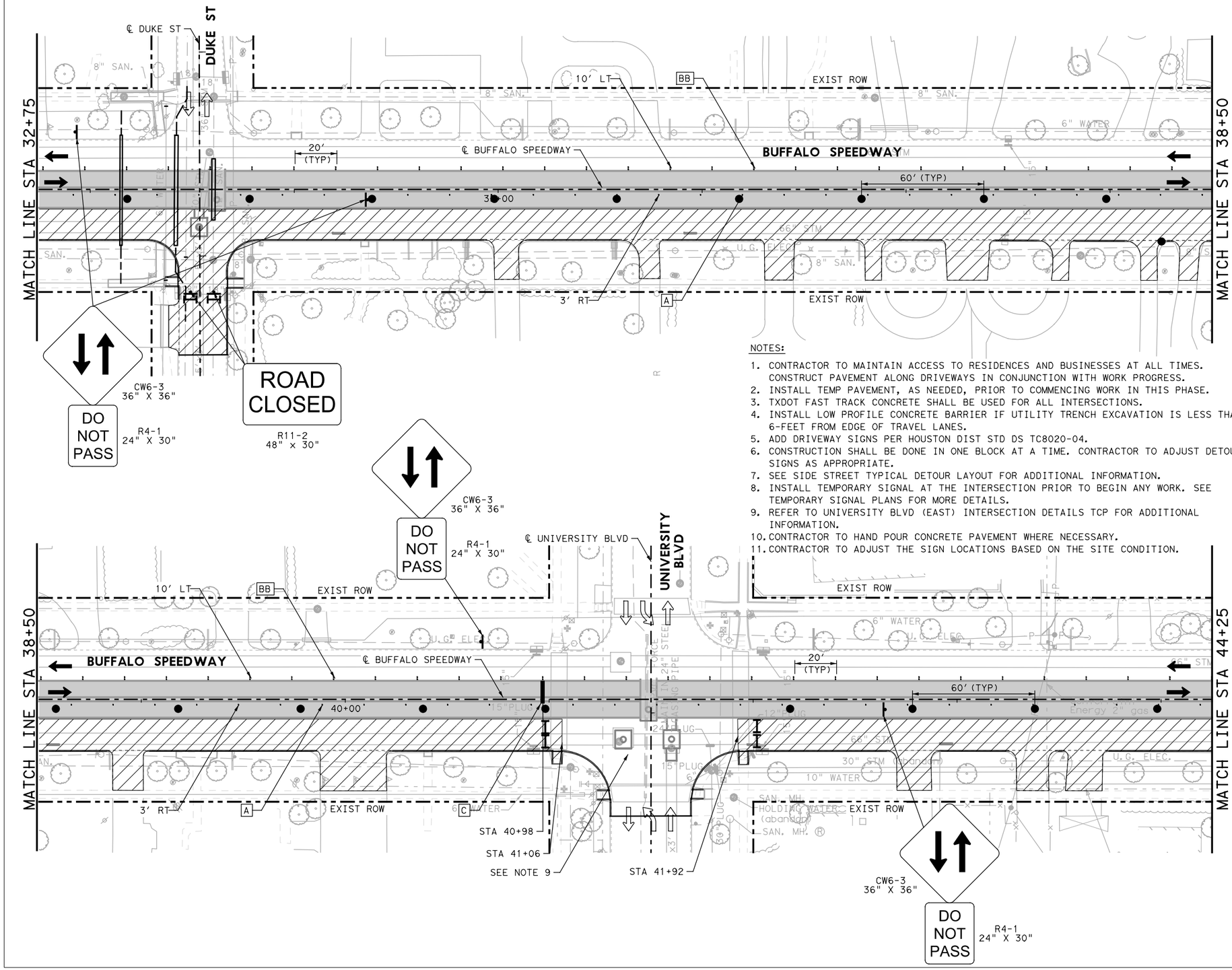
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 2

BUFFALO SPEEDWAY
STA 21+25 TO STA 32+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		125
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. INSTALL TEMPORARY SIGNAL AT THE INTERSECTION PRIOR TO BEGIN ANY WORK. SEE TEMPORARY SIGNAL PLANS FOR MORE DETAILS.
9. REFER TO UNIVERSITY BLVD (EAST) INTERSECTION DETAILS TCP FOR ADDITIONAL INFORMATION.
10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/29/2016

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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

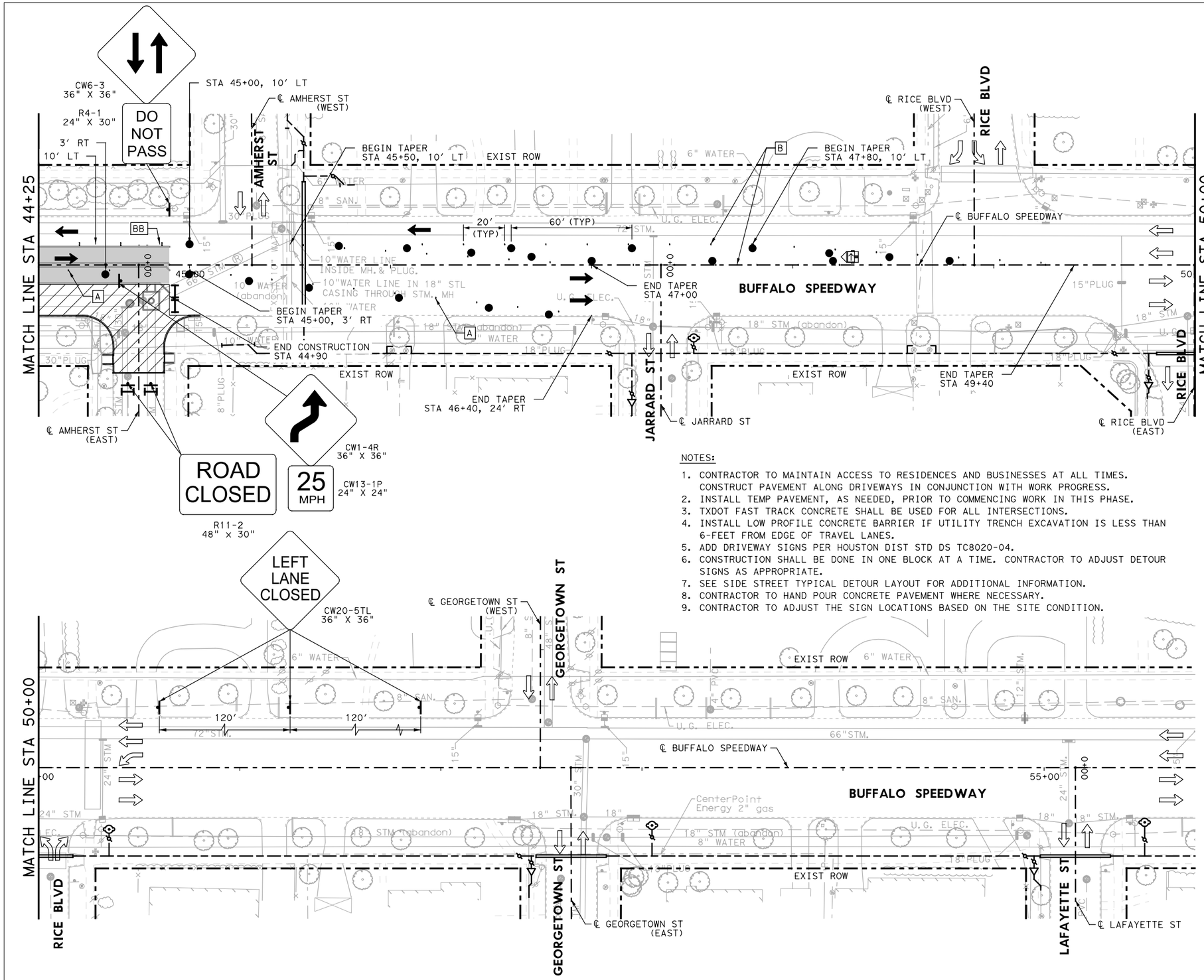
TRAFFIC CONTROL PLAN PHASE 3 STEP 2

BUFFALO SPEEDWAY

STA 32+75 TO STA 44+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		126
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
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- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
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NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
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8/24/2020

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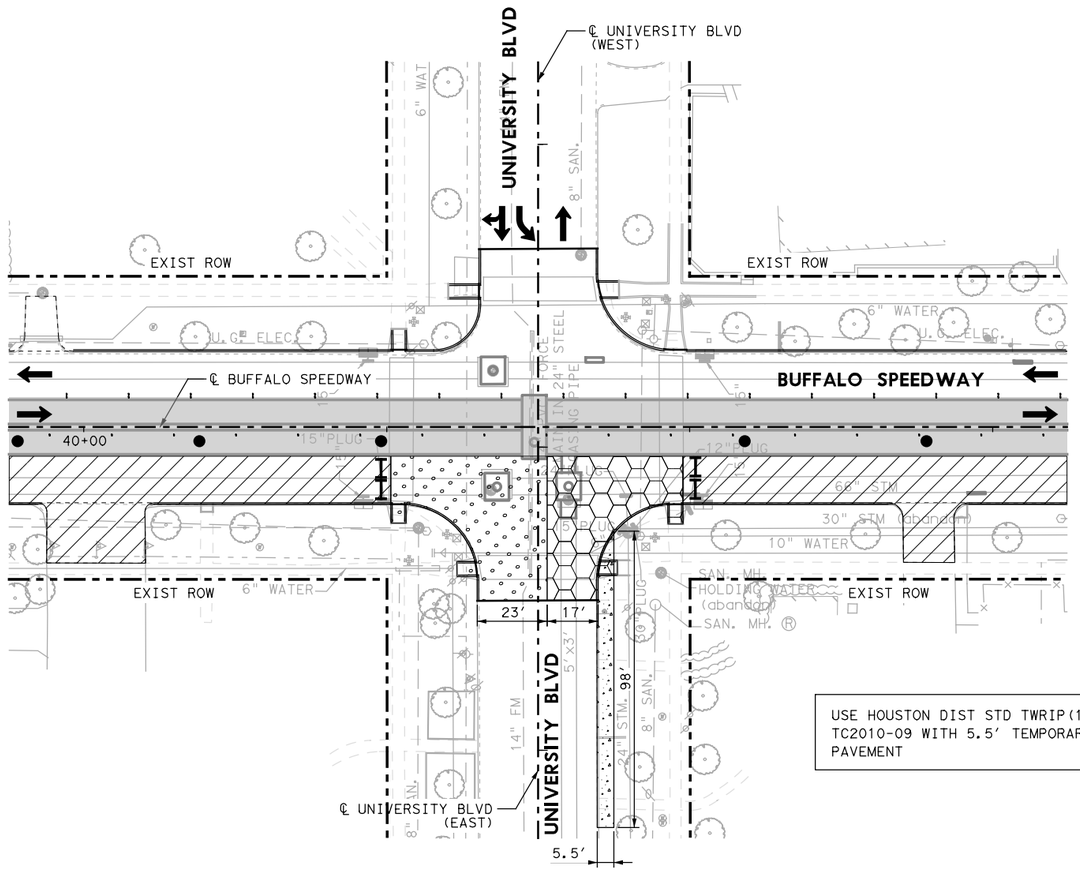
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 2

BUFFALO SPEEDWAY
STA 44+25 TO STA 55+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		127
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



USE HOUSTON DIST STD TWRIP(1) TC2010-09 WITH 5.5' TEMPORARY PAVEMENT

0 50' 100'

SCALE IN FEET

LEGEND:

- COMPLETED PHASE
- PHASE 3 STEP 2 CONSTRUCTION
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- TEMPORARY PAVEMENT
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL TEMPORARY TRAFFIC SIGNAL AT INTERSECTION PRIOR TO BEGIN ANY WORK.
2. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES.
3. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUCTION WITH WORK PROGRESS.
4. REMOVE STRIPING AS NECESSARY DURING THIS PHASE.
5. ALIGN TEMP SIGNAL HEADS AS NEEDED FOR LANE CONFIGURATIONS.
6. TXDOT FAST TRACK CONCRETE SHALL BE USED ON ALL INTERSECTIONS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO MAINTAIN A MINIMUM OF TWO 10' TRAVEL LANES. MAXIMUM BUFFER SPACE BETWEEN THE WORK AREA AND TRAVEL LANE WILL BE 2'.
9. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
10. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.
11. TEMPORARY PAVEMENT ON NON-CONCRETE AREAS SHALL BE A MINIMUM OF 6-INCH ASPHALT.

STAGE 1 - CLOSE EAST BOUND TRAFFIC APPROACH ON UNIVERSITY BLVD. CONSTRUCT SOUTH SIDE OF UNIVERSITY BLVD. MAINTAIN TWO WAY TRAFFIC WITH 2 LANES AT A MINIMUM 10' WIDTH.

STAGE 2 - CLOSE WEST BOUND TRAFFIC APPROACH ON UNIVERSITY BLVD. CONSTRUCT NORTH SIDE OF UNIVERSITY BLVD. MAINTAIN TWO WAY TRAFFIC WITH 2 LANES AT A MINIMUM 10' WIDTH.

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 2 UNIVERSITY BLVD (EAST) INTERSECTION DETAILS

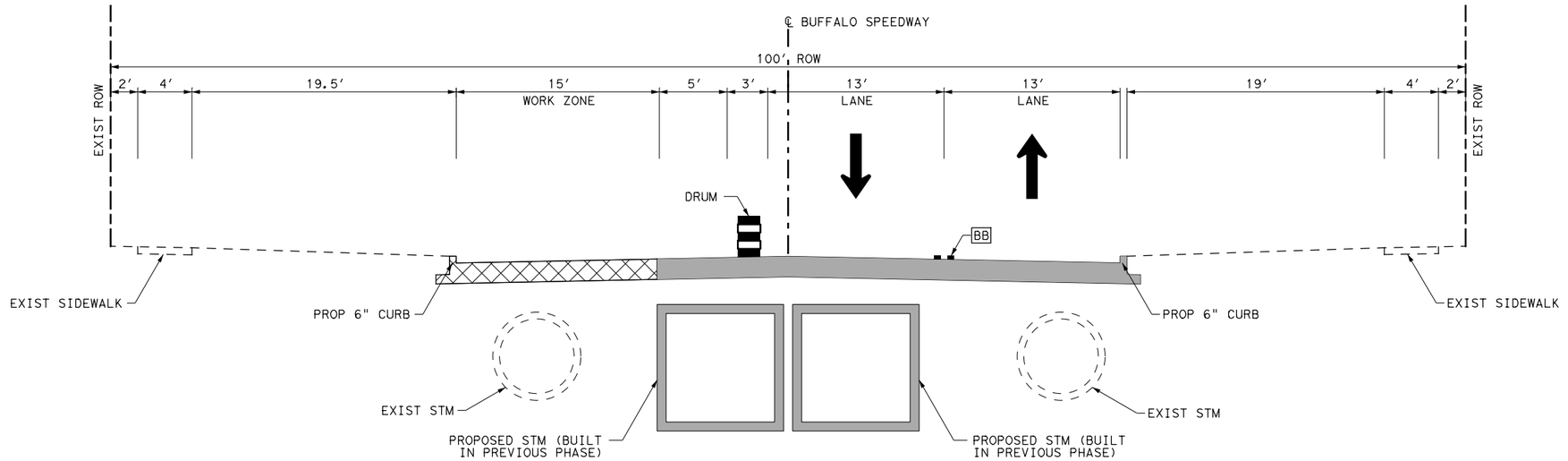
SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		128
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)



BUFFALO SPEEDWAY
PHASE 3 STEP 3
SOUTH OF CASON ST TO AMHERST ST
STA 12+20 TO STA 44+90

STATE OF TEXAS
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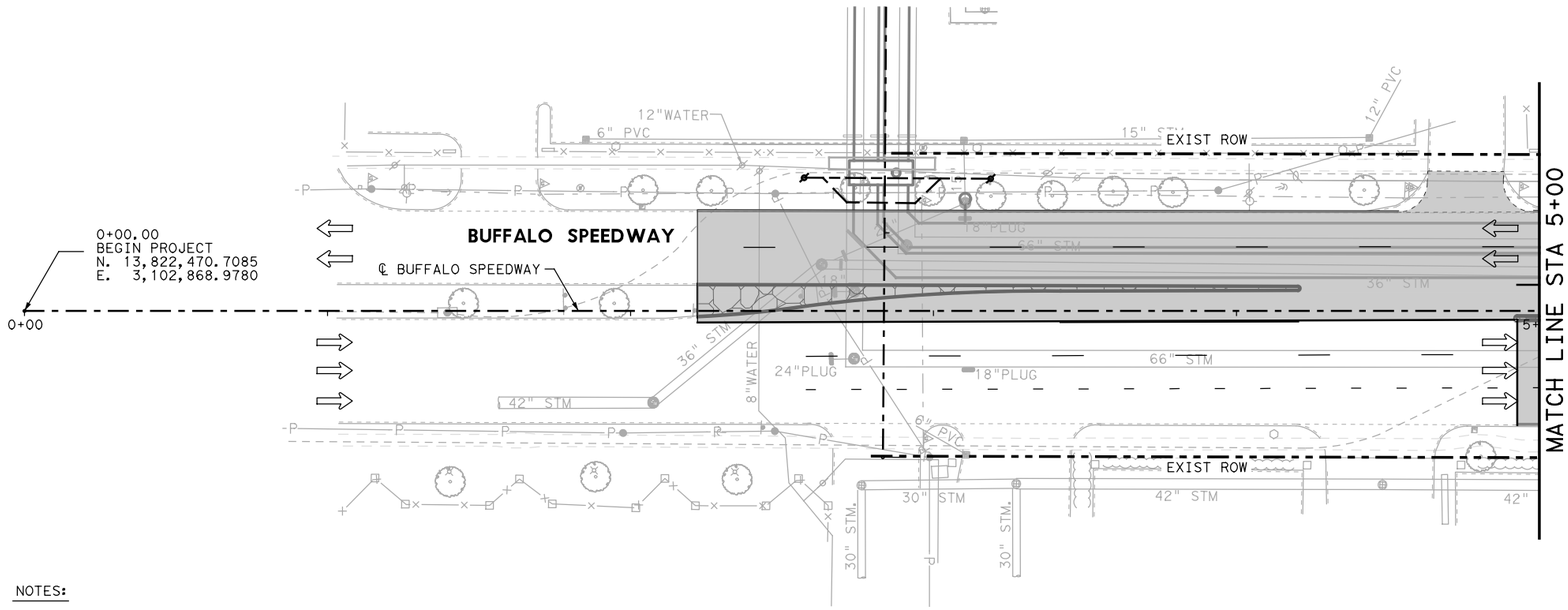
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 3 STEP 3 TYPICAL SECTION

BUFFALO SPEEDWAY

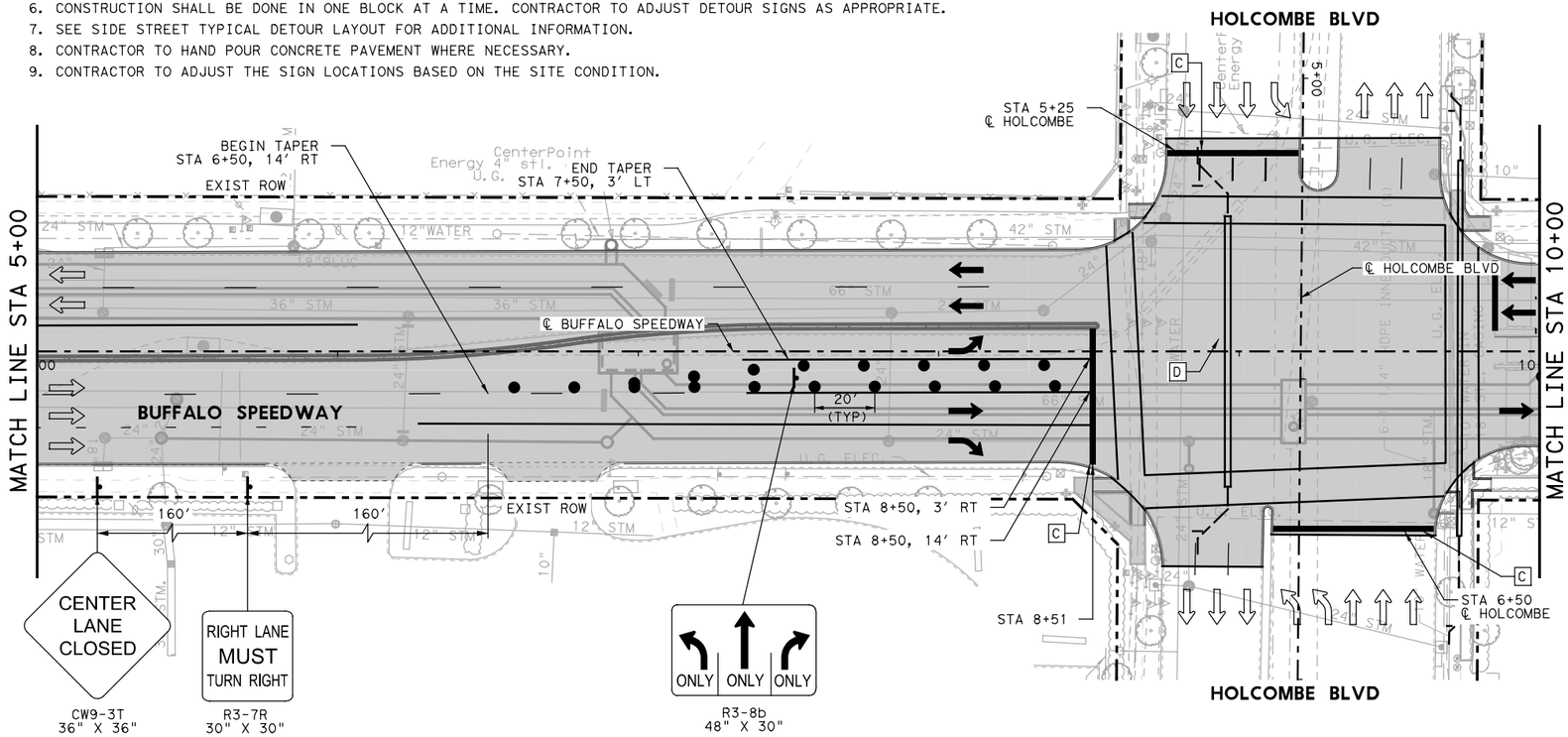
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		129
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
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7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
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- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

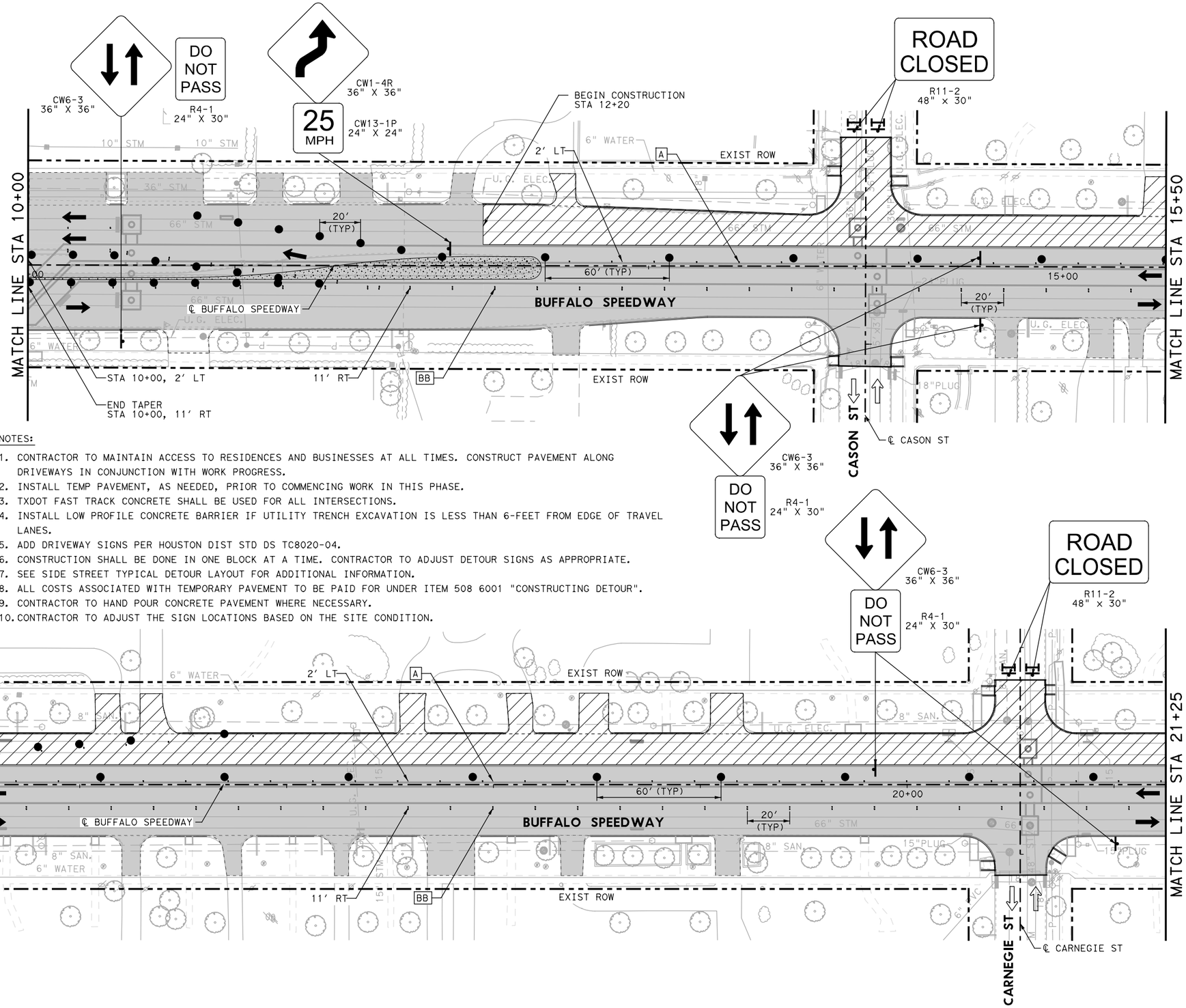
TRAFFIC CONTROL PLAN PHASE 3 STEP 3

BUFFALO SPEEDWAY
BEGIN TO STA 10+00

SHEET 1 OF 5

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		130
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
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- COMPLETED PHASE
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- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

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7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
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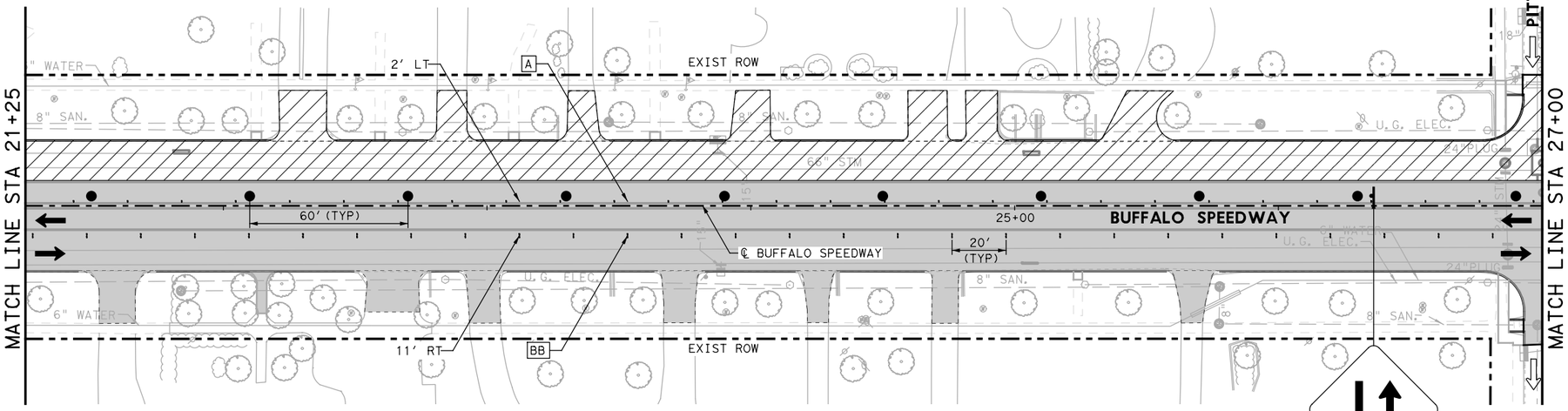
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 3

BUFFALO SPEEDWAY
STA 10+00 TO STA 21+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		131
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
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- CONSTRUCTION PHASE
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NOTES:

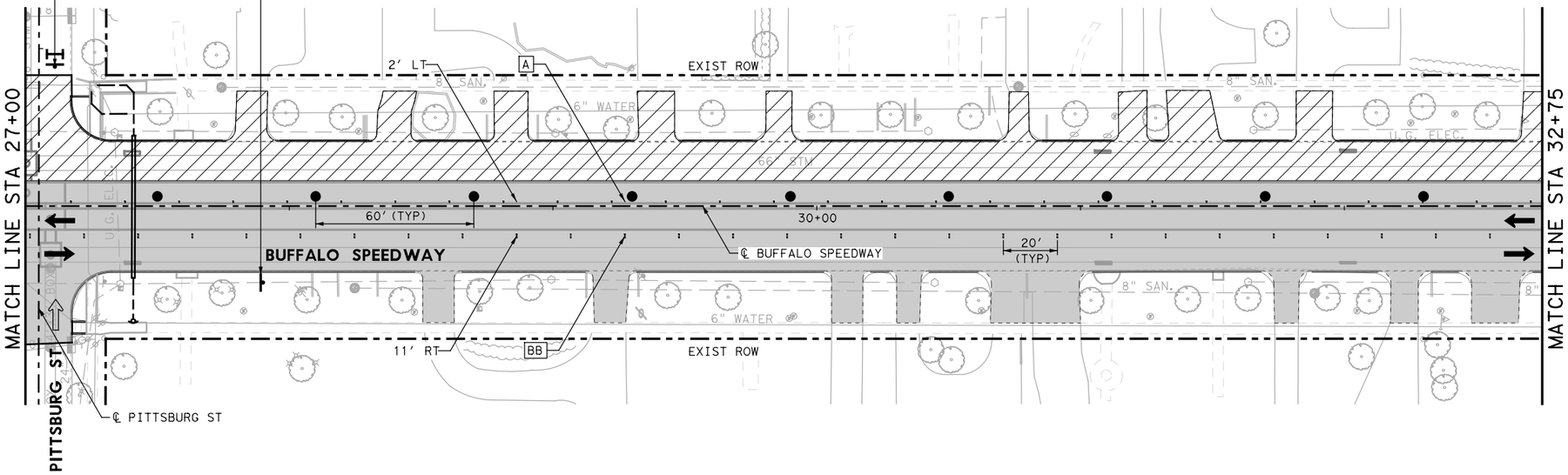
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9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

CW6-3
36" X 36"

DO NOT PASS
R4-1
24" X 30"

ROAD CLOSED
R11-2
48" x 30"

DO NOT PASS
R4-1
24" X 30"



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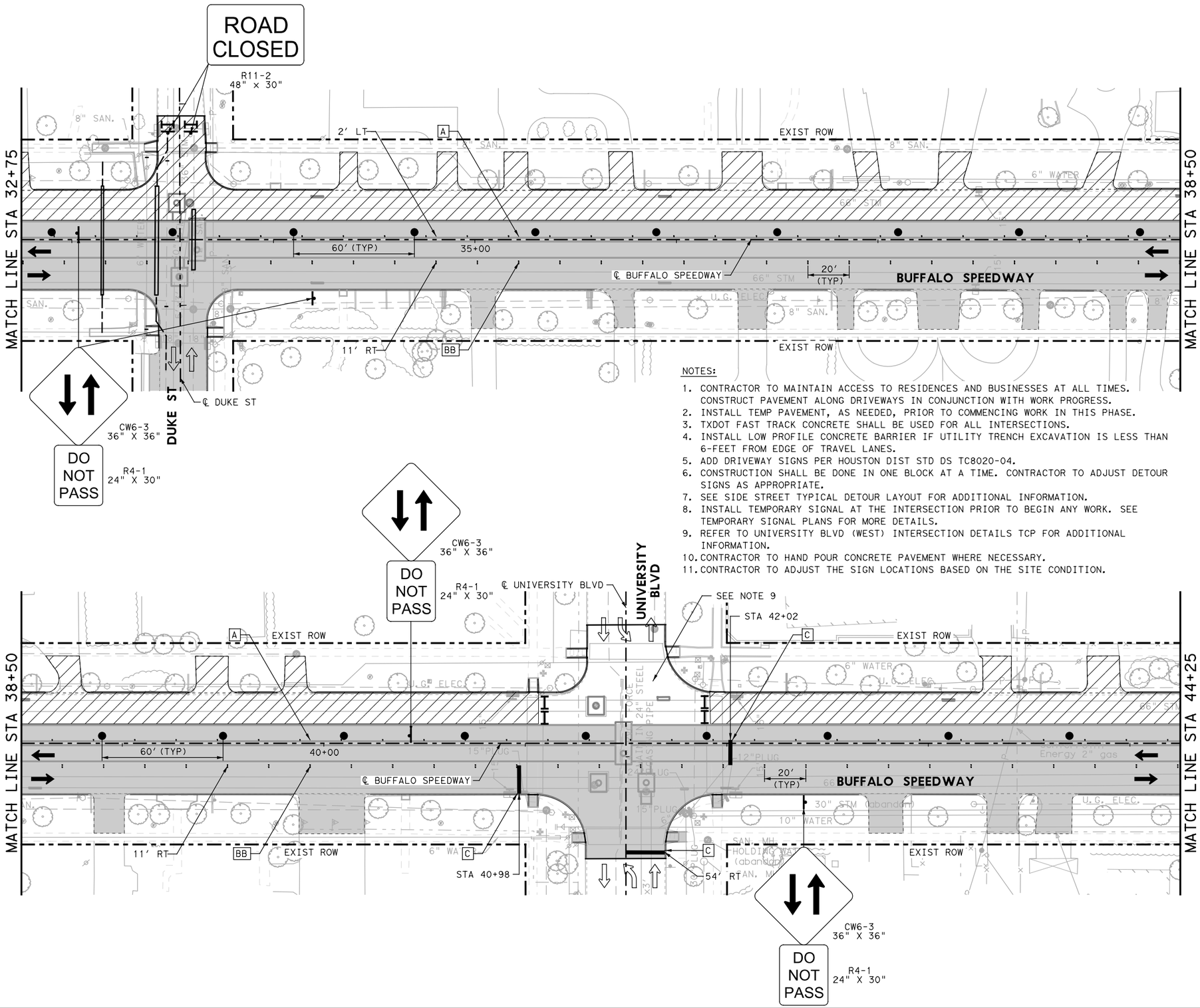
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 3

BUFFALO SPEEDWAY
STA 21+25 TO STA 32+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		132
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



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10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

0 50′ 100′
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
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- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/29/2020

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Texas Registered Engineering Firm F-2144

City of West University Place

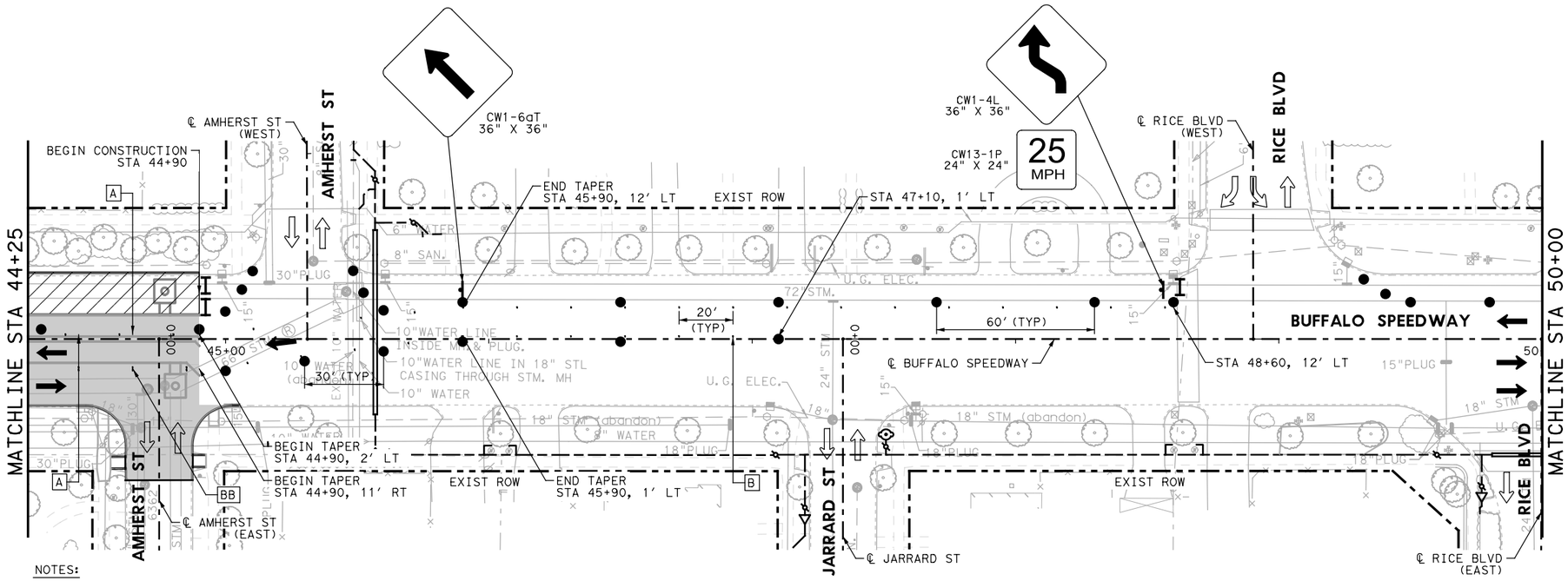
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 3

BUFFALO SPEEDWAY
STA 32+75 TO STA 44+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		133
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

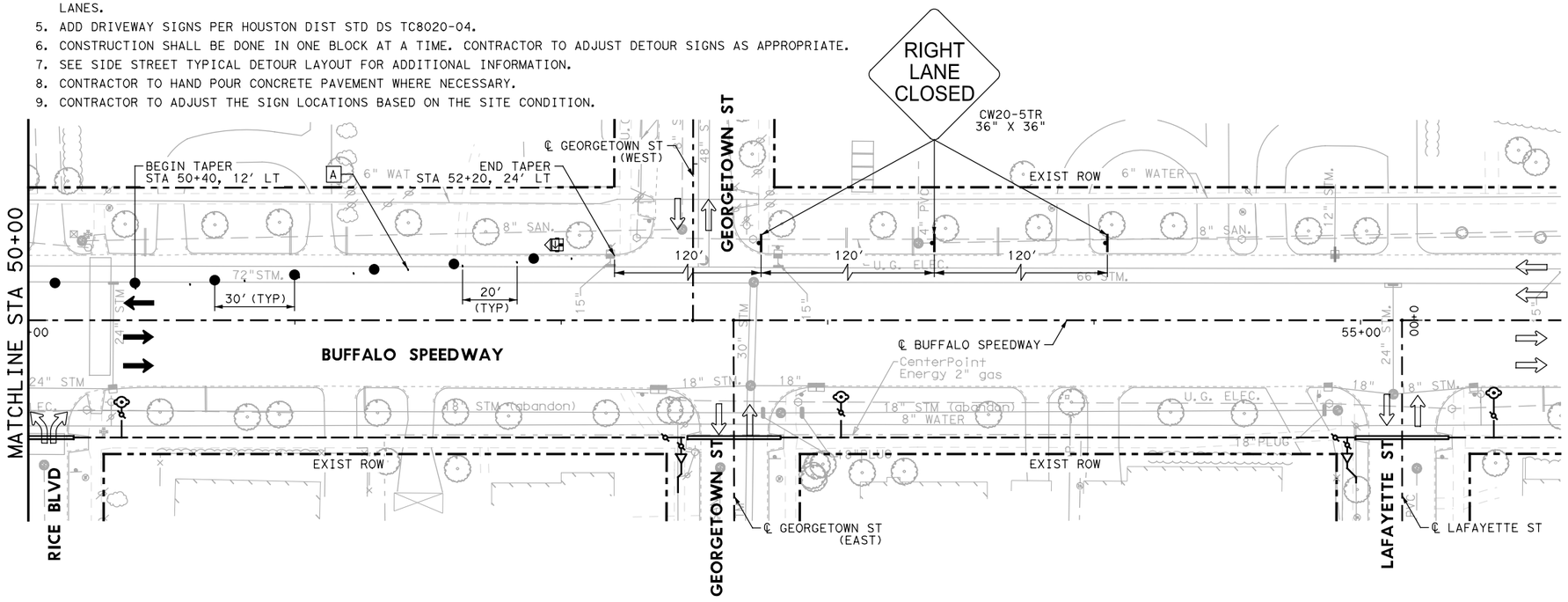
SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENTS AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS AND DRIVEWAYS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

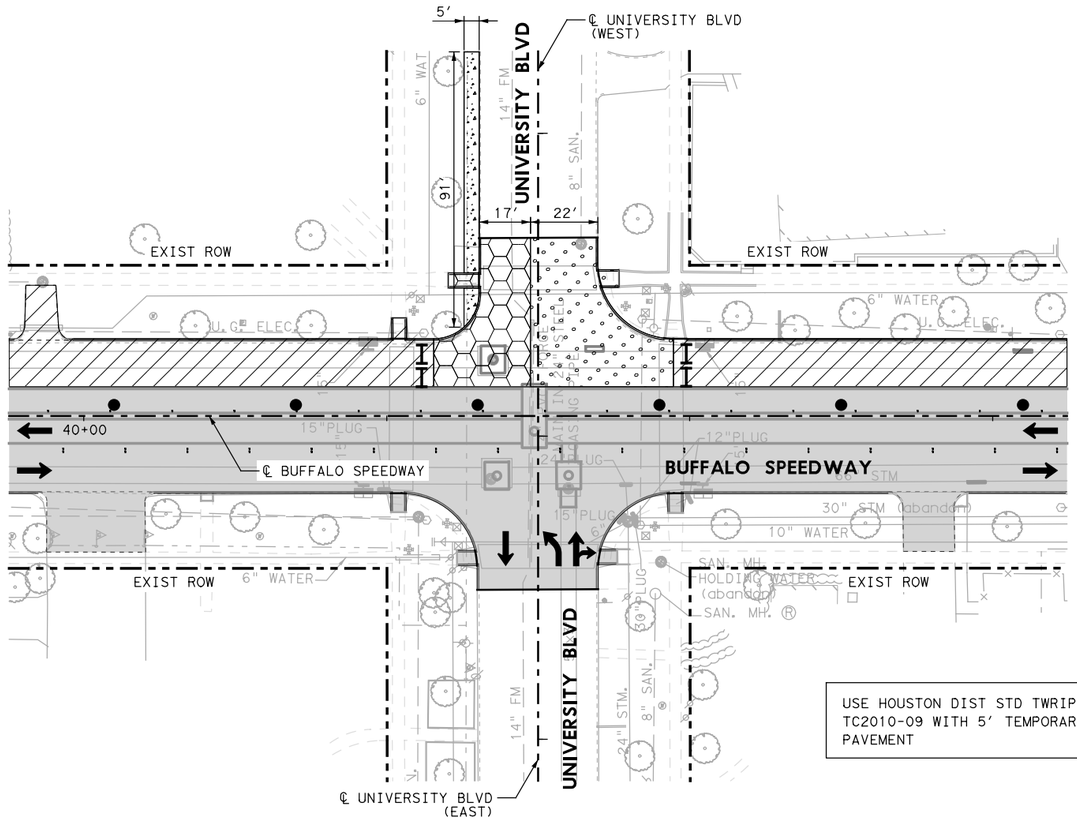
TRAFFIC CONTROL PLAN PHASE 3 STEP 3

BUFFALO SPEEDWAY

STA 44+25 TO STA 55+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		134
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



USE HOUSTON DIST STD TWRIP(1) TC2010-09 WITH 5' TEMPORARY PAVEMENT

0 50' 100'

SCALE IN FEET

LEGEND:

- COMPLETED PHASE
- PHASE 3 STEP 3 CONSTRUCTION
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- TEMPORARY PAVEMENT
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL TEMPORARY TRAFFIC SIGNAL AT INTERSECTION PRIOR TO BEGIN ANY WORK.
2. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCE AND BUSINESSES AT ALL TIMES.
3. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUCTION WITH WORK PROGRESS.
4. REMOVE STRIPING AS NECESSARY DURING THIS PHASE.
5. ALIGN TEMP SIGNAL HEADS AS NEEDED FOR LANE CONFIGURATIONS.
6. TXDOT FAST TRACK CONCRETE SHALL BE USED ON ALL INTERSECTIONS.
7. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
8. CONTRACTOR TO MAINTAIN A MINIMUM OF TWO 10' TRAVEL LANES. MAXIMUM BUFFER SPACE BETWEEN THE WORK AREA AND TRAVEL LANE WILL BE 2'.
9. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
10. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.
11. TEMPORARY PAVEMENT ON NON-CONCRETE AREAS SHALL BE A MINIMUM OF 6-INCH ASPHALT.

STAGE 1 - CLOSE WEST BOUND TRAFFIC APPROACH ON UNIVERSITY BLVD. CONSTRUCT NORTH SIDE OF UNIVERSITY BLVD. MAINTAIN TWO WAY TRAFFIC WITH 2 LANES AT A MINIMUM 10' WIDTH.

STAGE 2 - CLOSE EAST BOUND TRAFFIC APPROACH ON UNIVERSITY BLVD. CONSTRUCT SOUTH SIDE OF UNIVERSITY BLVD. MAINTAIN TWO WAY TRAFFIC WITH 2 LANES AT A MINIMUM 10' WIDTH.

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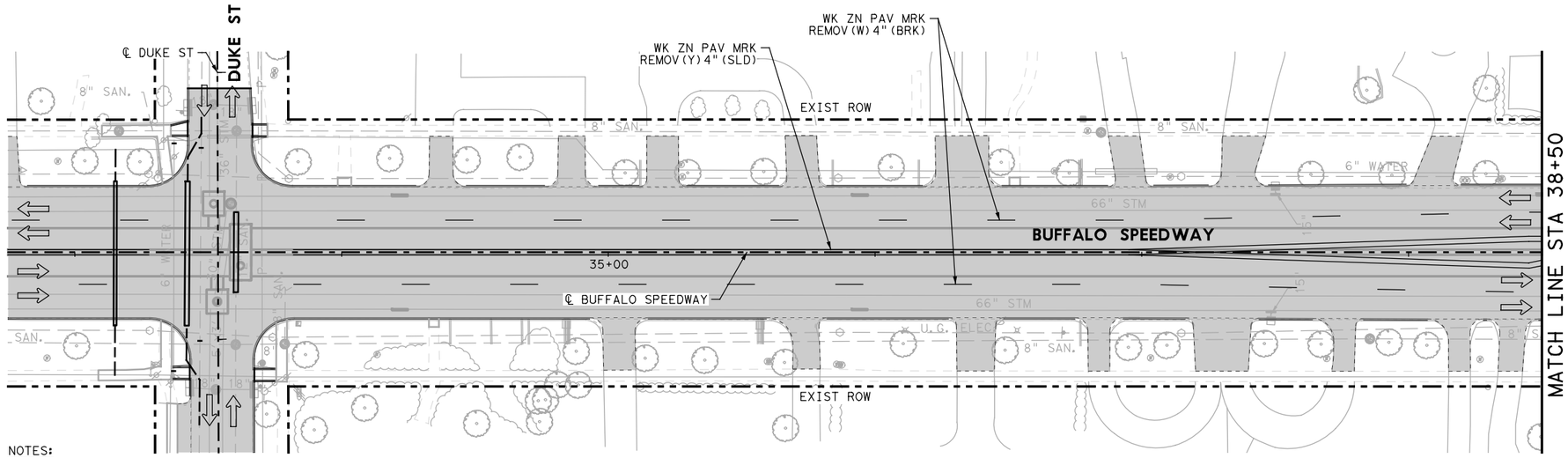
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

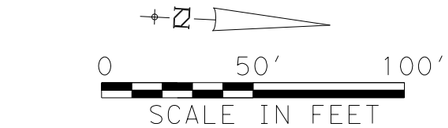
TRAFFIC CONTROL PLAN PHASE 3 STEP 3 UNIVERSITY BLVD (WEST) INTERSECTION DETAILS

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		135
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



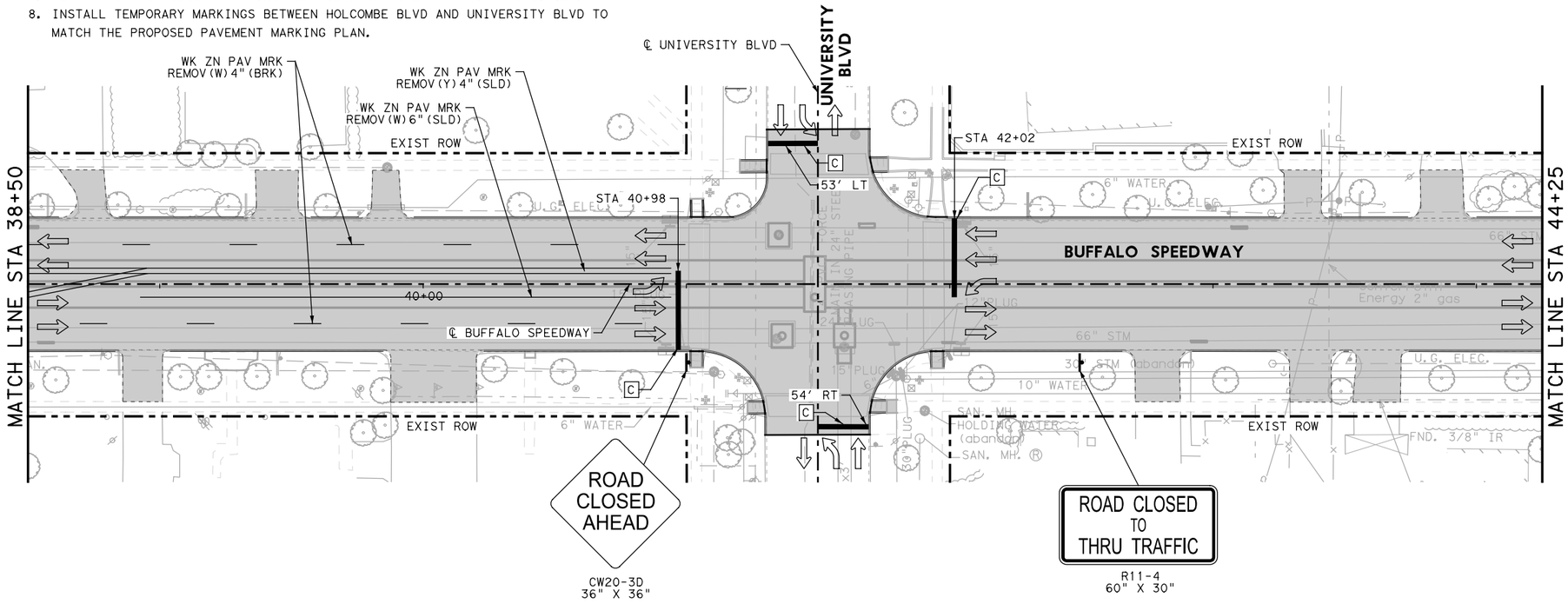


LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1) (LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
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- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
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NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. SEE PHASE 3 STEP 4 DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
6. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
7. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.
8. INSTALL TEMPORARY MARKINGS BETWEEN HOLCOMBE BLVD AND UNIVERSITY BLVD TO MATCH THE PROPOSED PAVEMENT MARKING PLAN.



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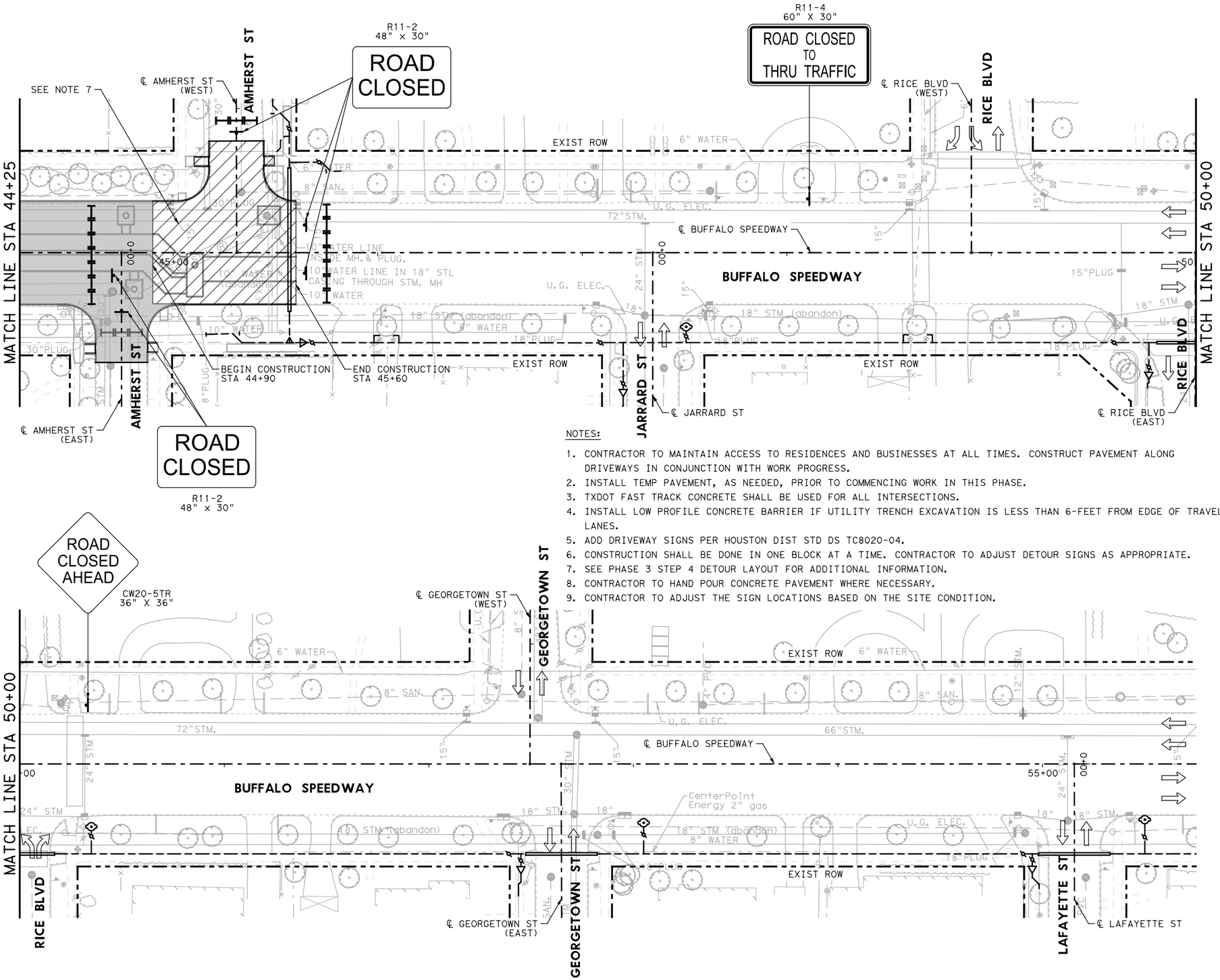
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 3 STEP 4 (OFF PEAK AND WEEKEND)

BUFFALO SPEEDWAY
STA 32+75 TO STA 44+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		136
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

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3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE PHASE 3 STEP 4 DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

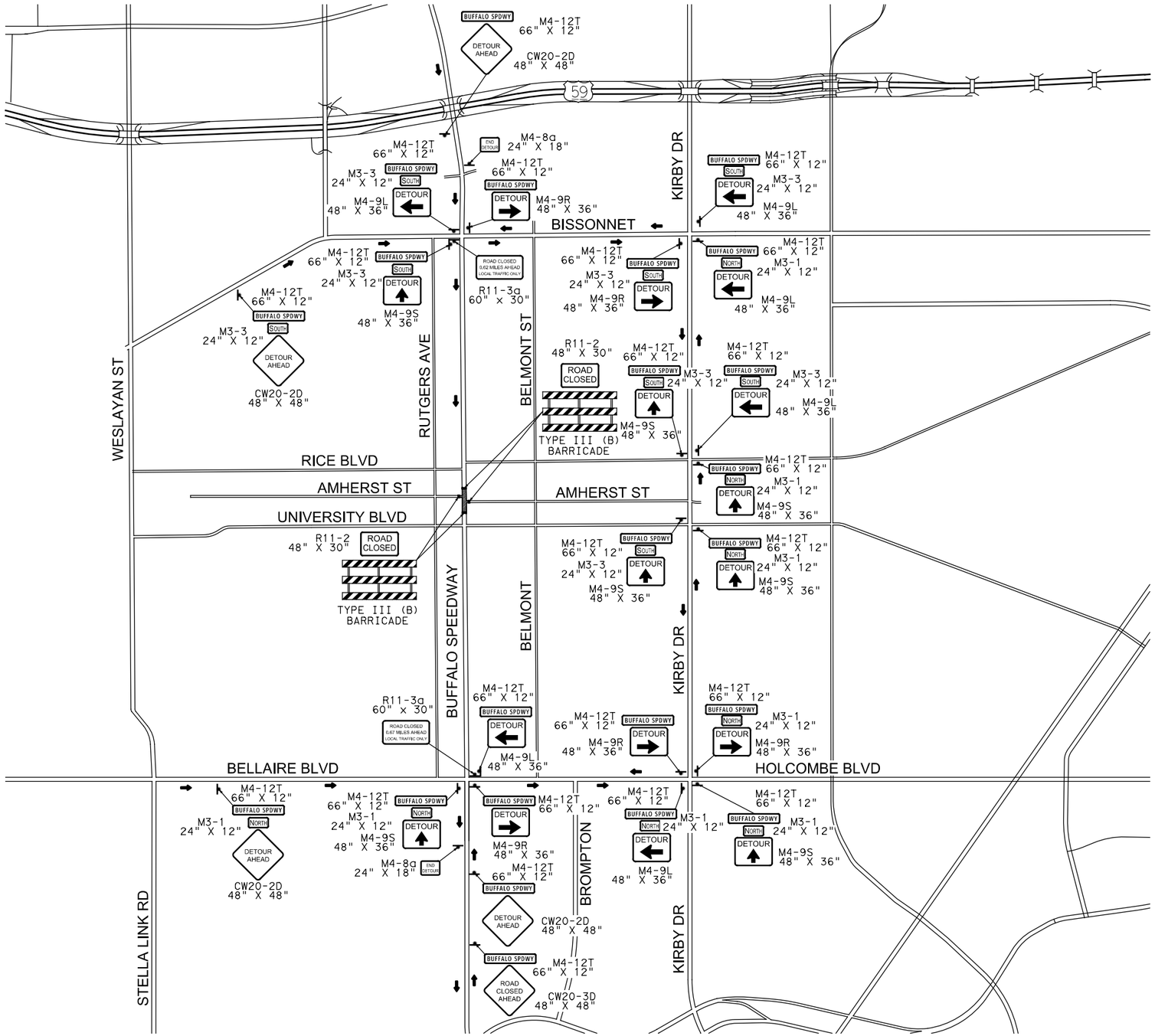
TRAFFIC CONTROL PLAN PHASE 3 STEP 4 (OFF PEAK AND WEEKEND)

BUFFALO SPEEDWAY

STA 44+25 TO STA 55+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		137
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND

- TCP PHASE 3 - STEP 4
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

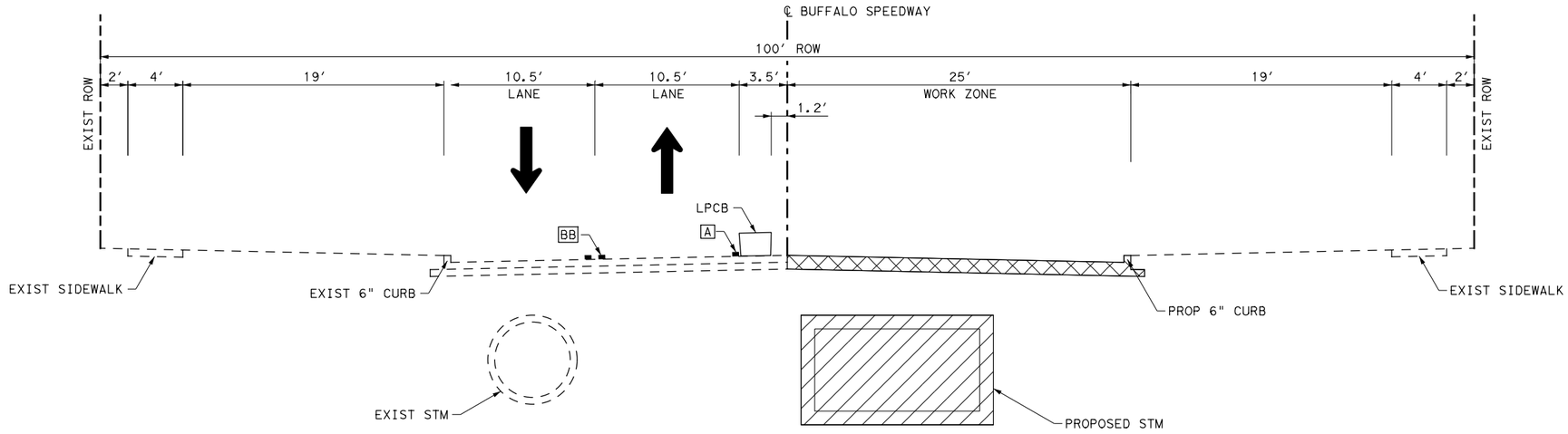
DETOUR LAYOUT PHASE 3 STEP 4 (OFF PEAK AND WEEKEND)

SCALE: NTS

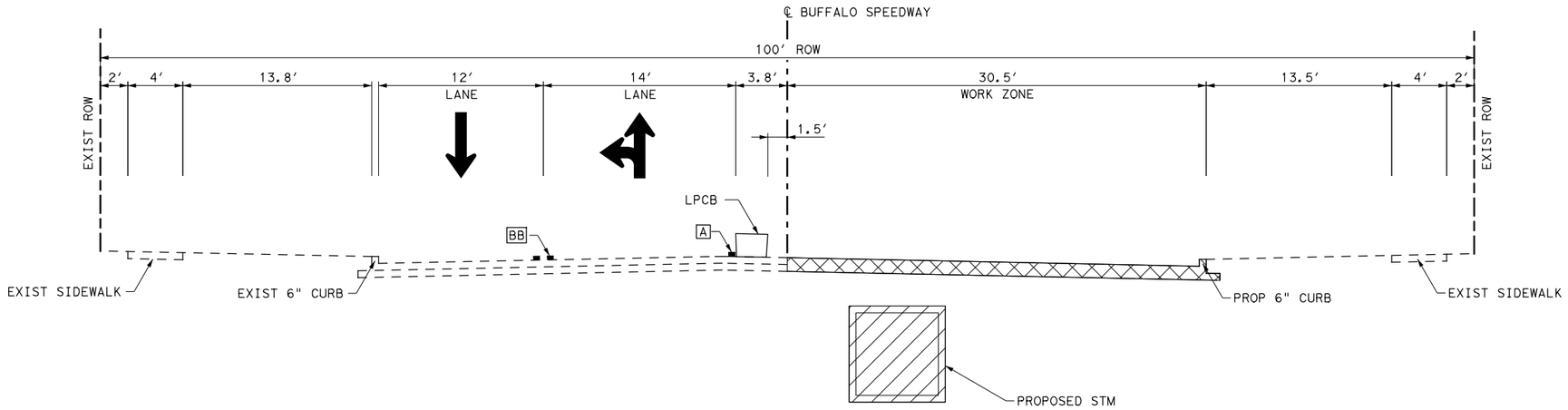
SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		138
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 4 STEP 1
AMHERST ST TO WROXTON RD
STA 45+60 TO STA 76+60



BUFFALO SPEEDWAY
PHASE 4 STEP 1
WROXTON RD TO BISSONNET ST
STA 76+60 TO STA 78+76

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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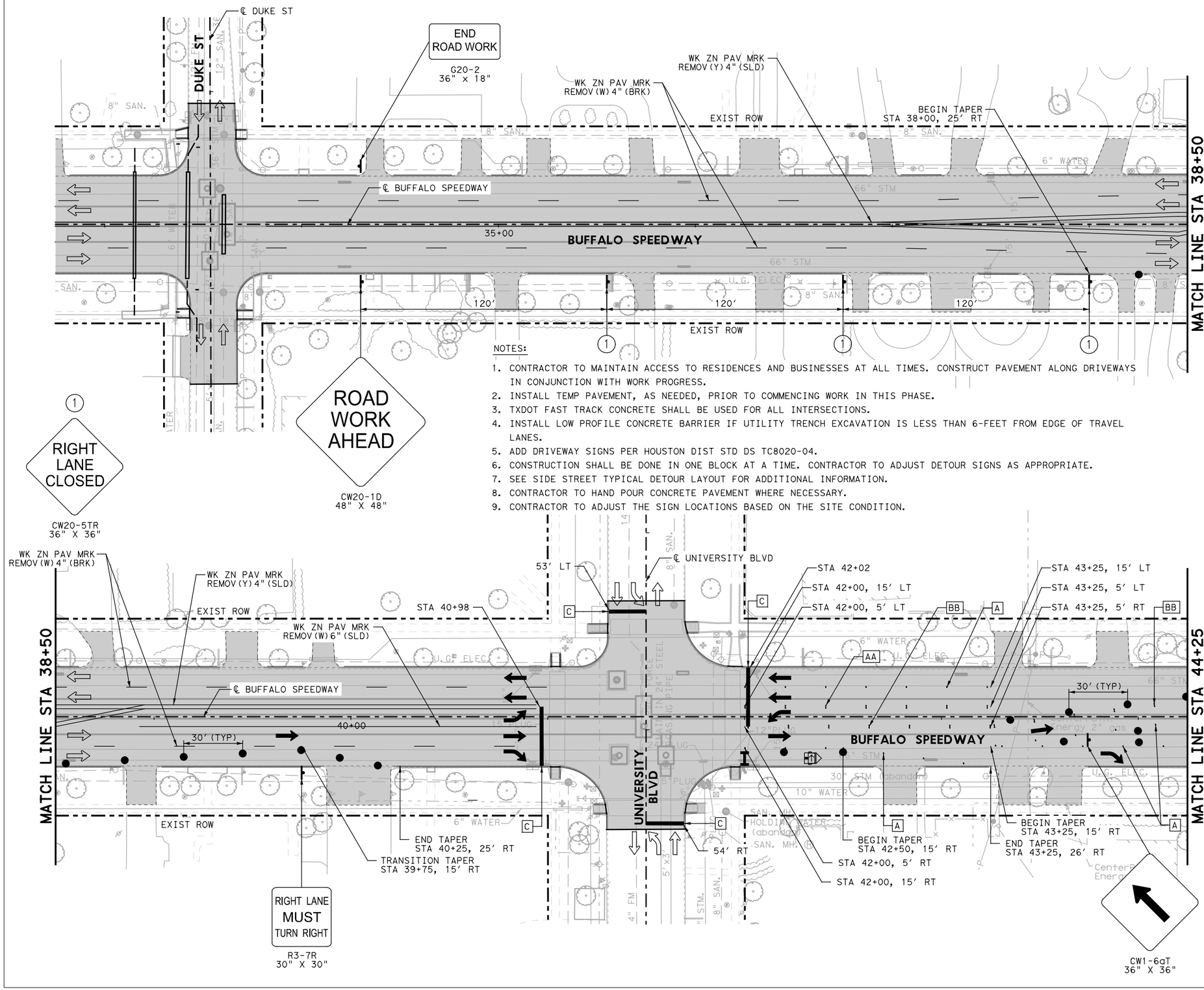
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN
PHASE 4 STEP 1 TYPICAL SECTION

BUFFALO SPEEDWAY

Texas Department of Transportation

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6	(SEE THE TITLE SHEET)		139
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- END TERMINAL
- CONSTRUCTION PHASE
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- TYPE III BARRICADE
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NOTES:

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2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
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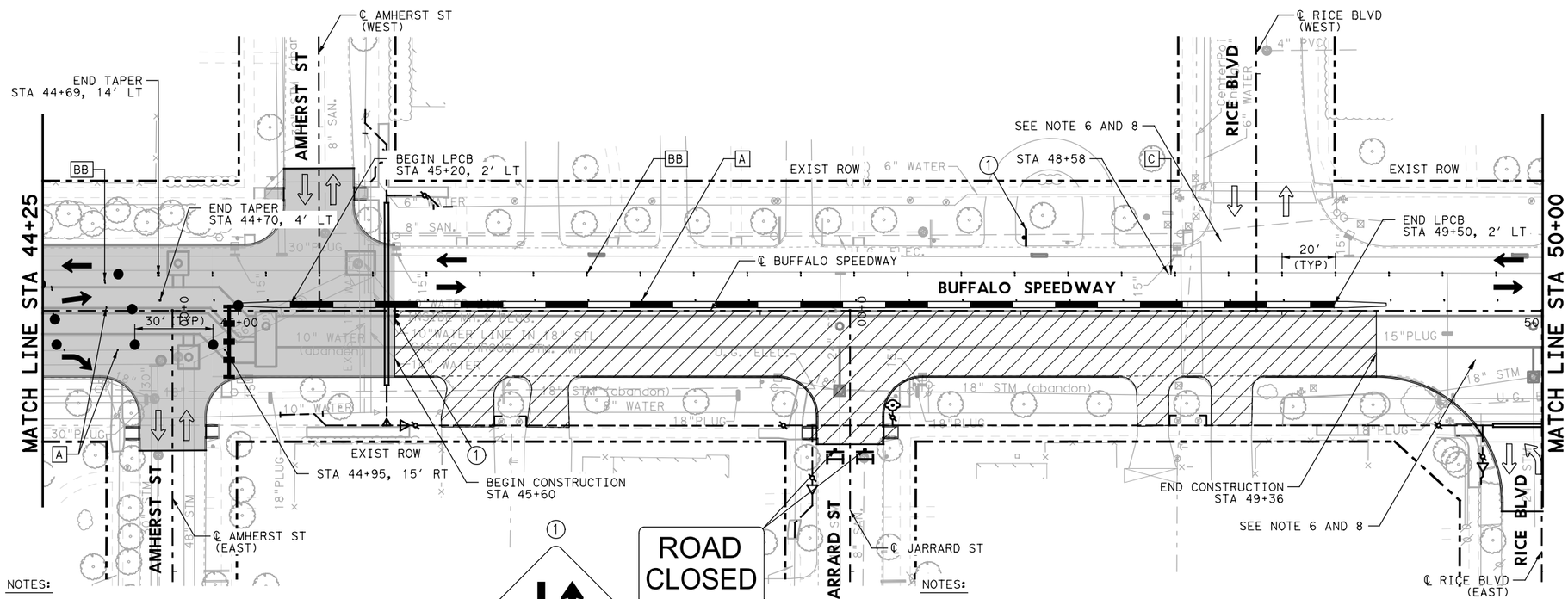
TRAFFIC CONTROL PLAN PHASE 4 STEP 1

BUFFALO SPEEDWAY
STA 32+75 TO STA 44+25

SHEET 1 OF 5

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		140
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

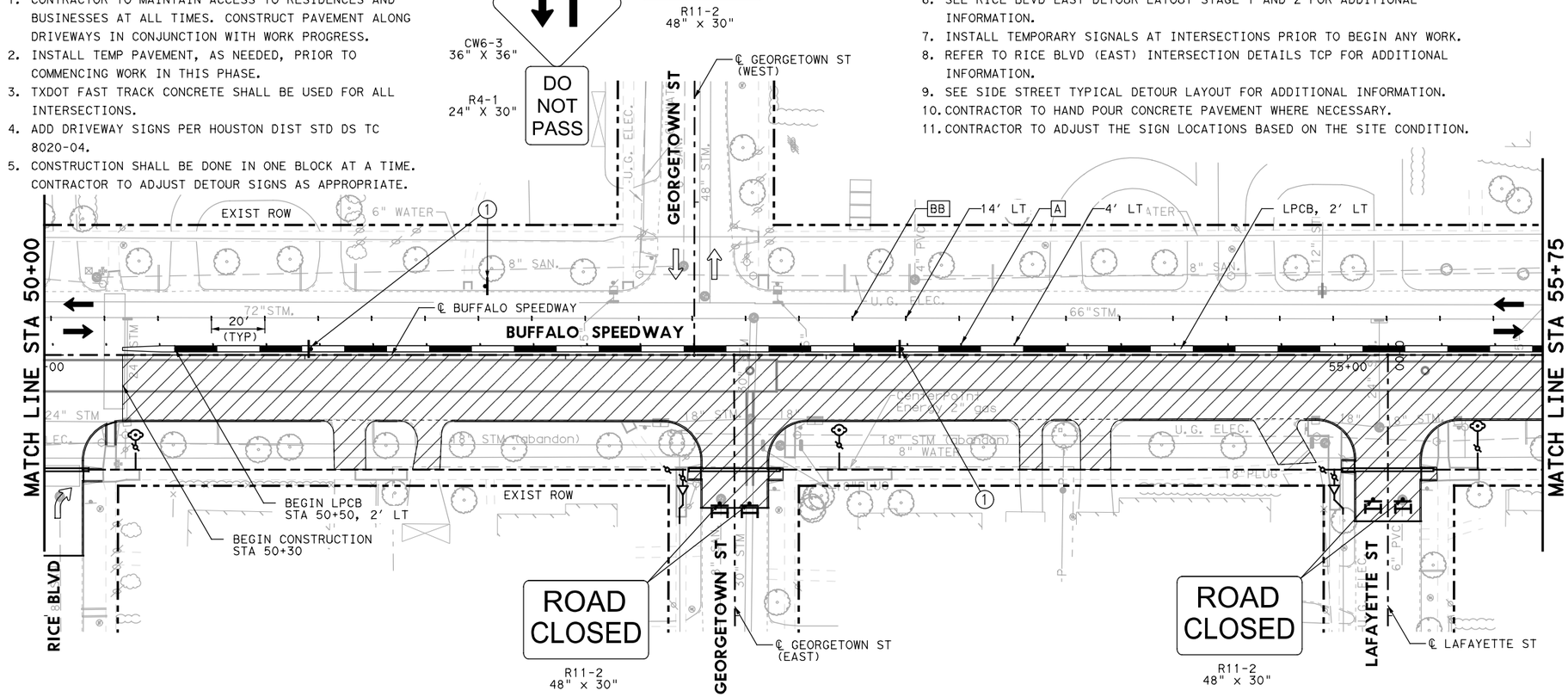
- DRUM
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3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC 8020-04.
5. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.

NOTES:

6. SEE RICE BLVD EAST DETOUR LAYOUT STAGE 1 AND 2 FOR ADDITIONAL INFORMATION.
7. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
8. REFER TO RICE BLVD (EAST) INTERSECTION DETAILS TCP FOR ADDITIONAL INFORMATION.
9. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.



STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
8/24/2020

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City of West University Place

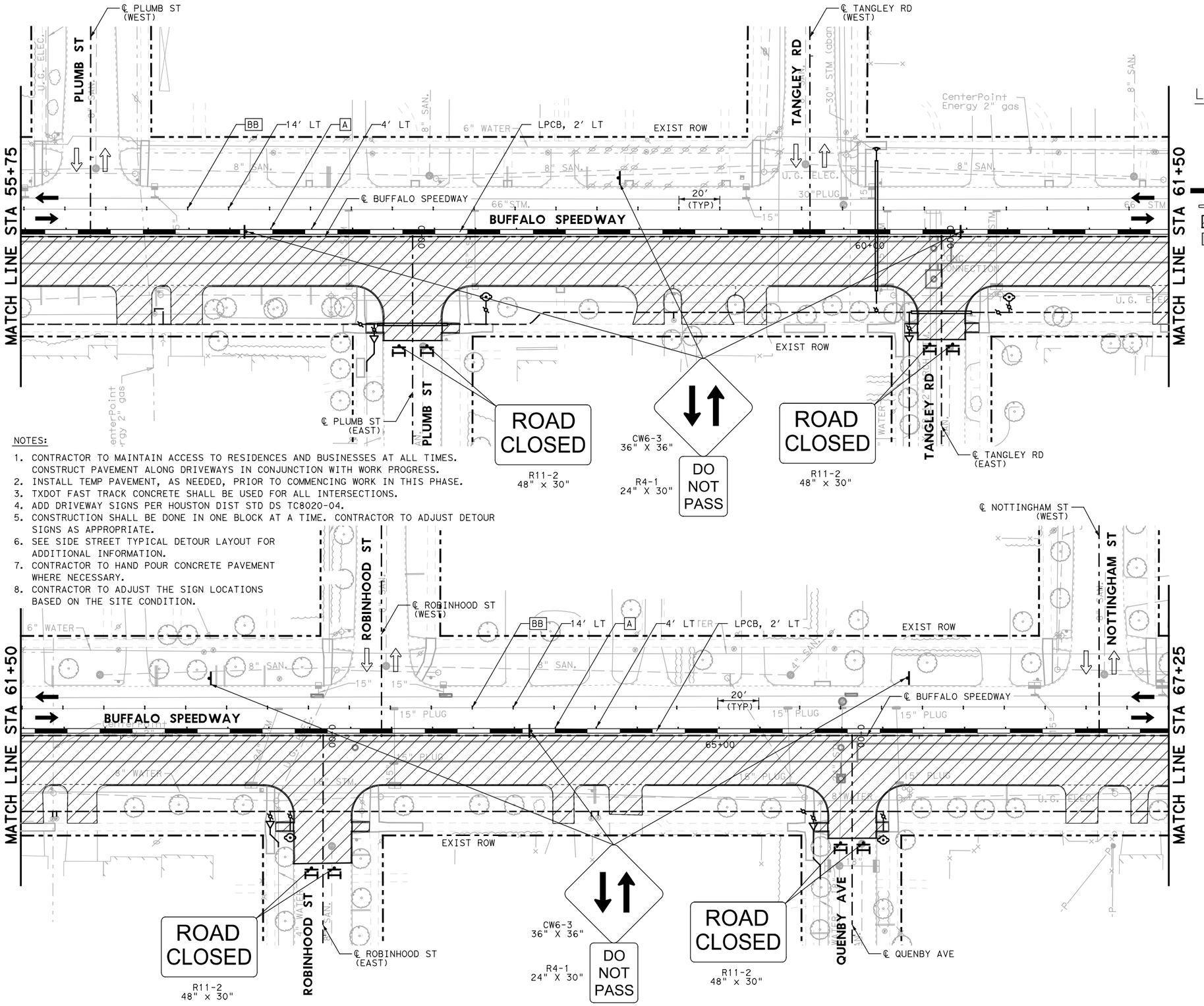
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 1

BUFFALO SPEEDWAY
STA 44+25 TO STA 55+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		141
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
6. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
8. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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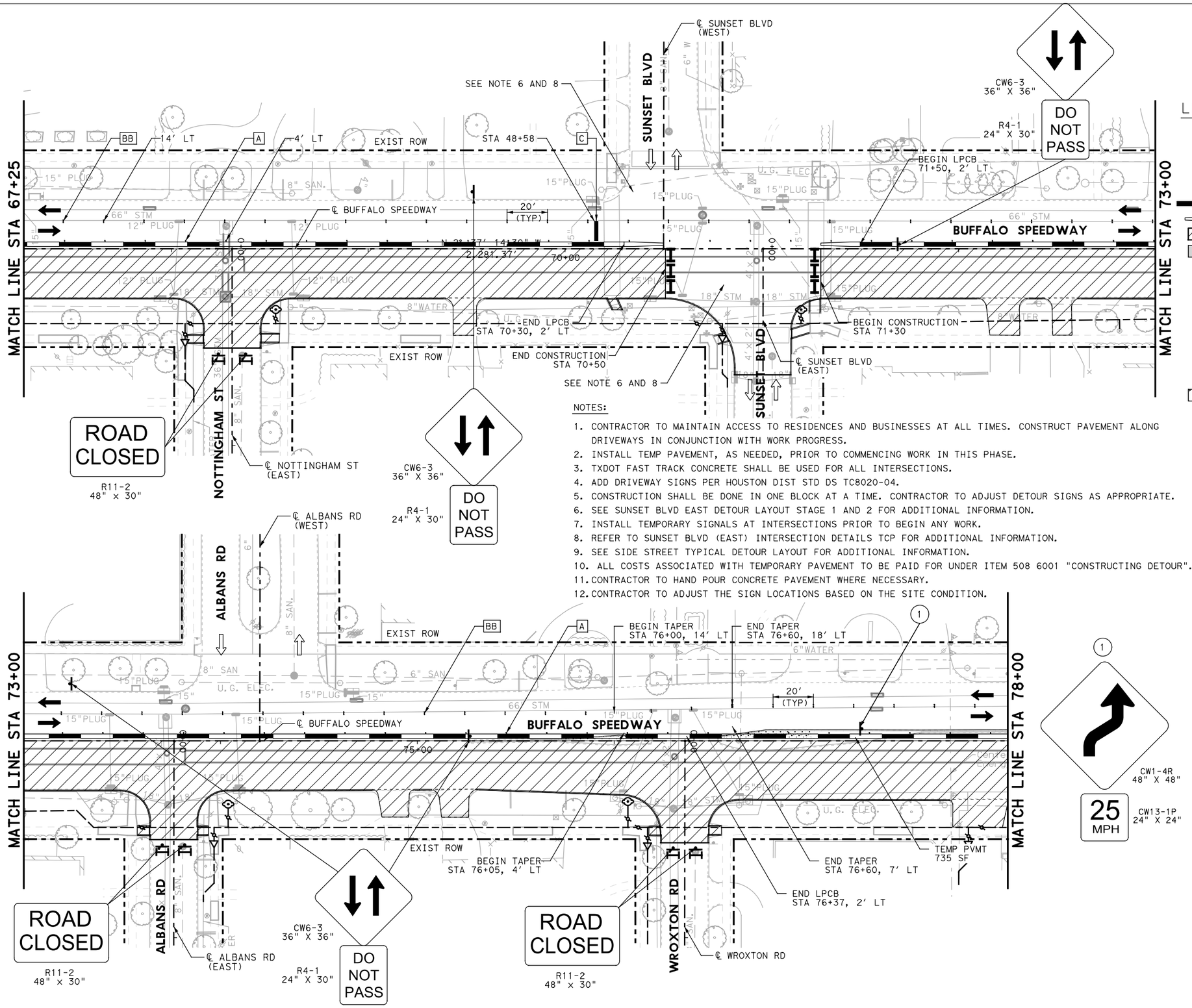
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 1

BUFFALO SPEEDWAY
STA 55+75 TO STA 67+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		142
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- END TERMINAL
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
6. SEE SUNSET BLVD EAST DETOUR LAYOUT STAGE 1 AND 2 FOR ADDITIONAL INFORMATION.
7. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
8. REFER TO SUNSET BLVD (EAST) INTERSECTION DETAILS TCP FOR ADDITIONAL INFORMATION.
9. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
10. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
11. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
12. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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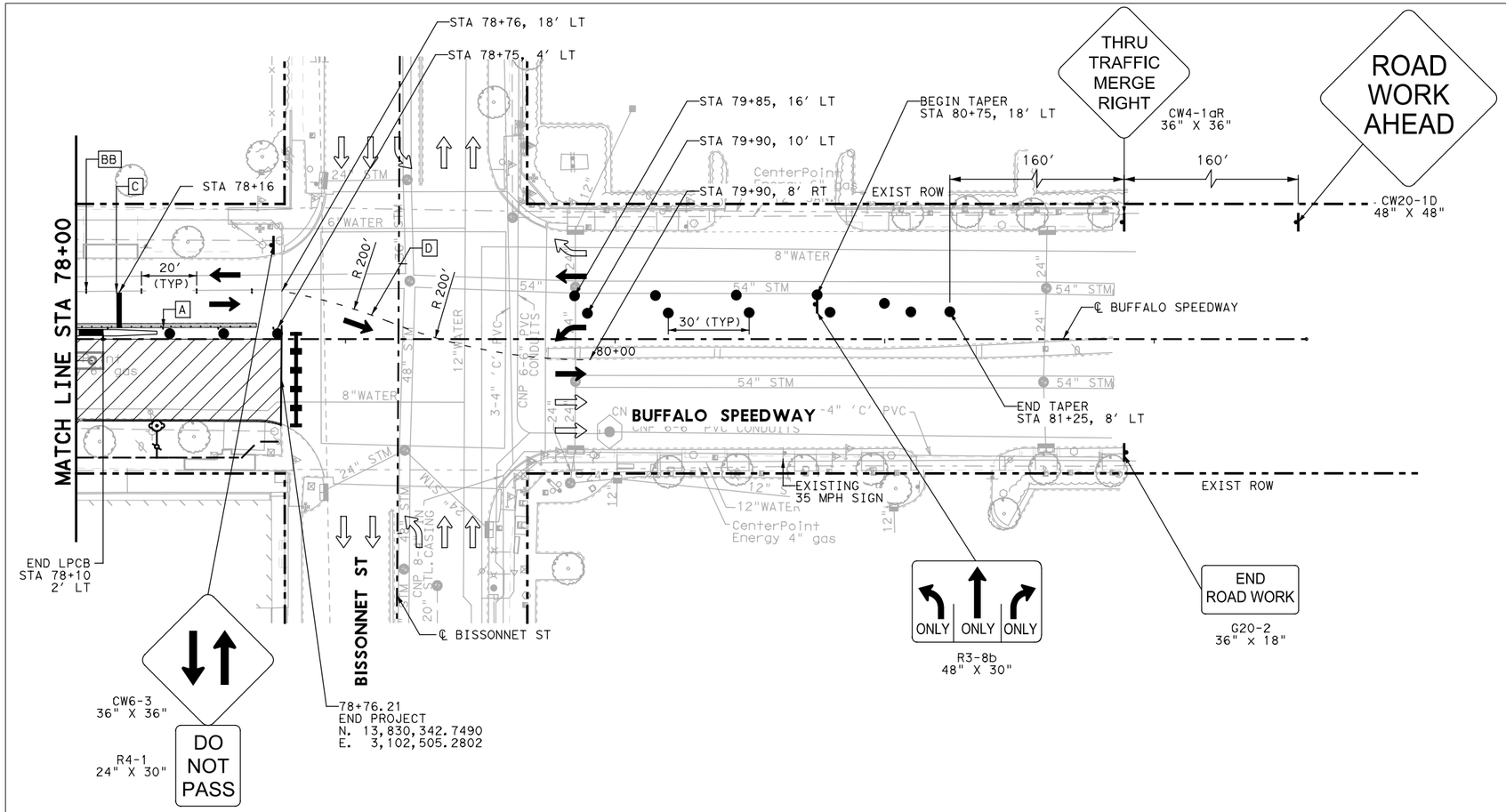
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 1

BUFFALO SPEEDWAY
STA 67+25 TO STA 78+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		143
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- END TERMINAL
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
9. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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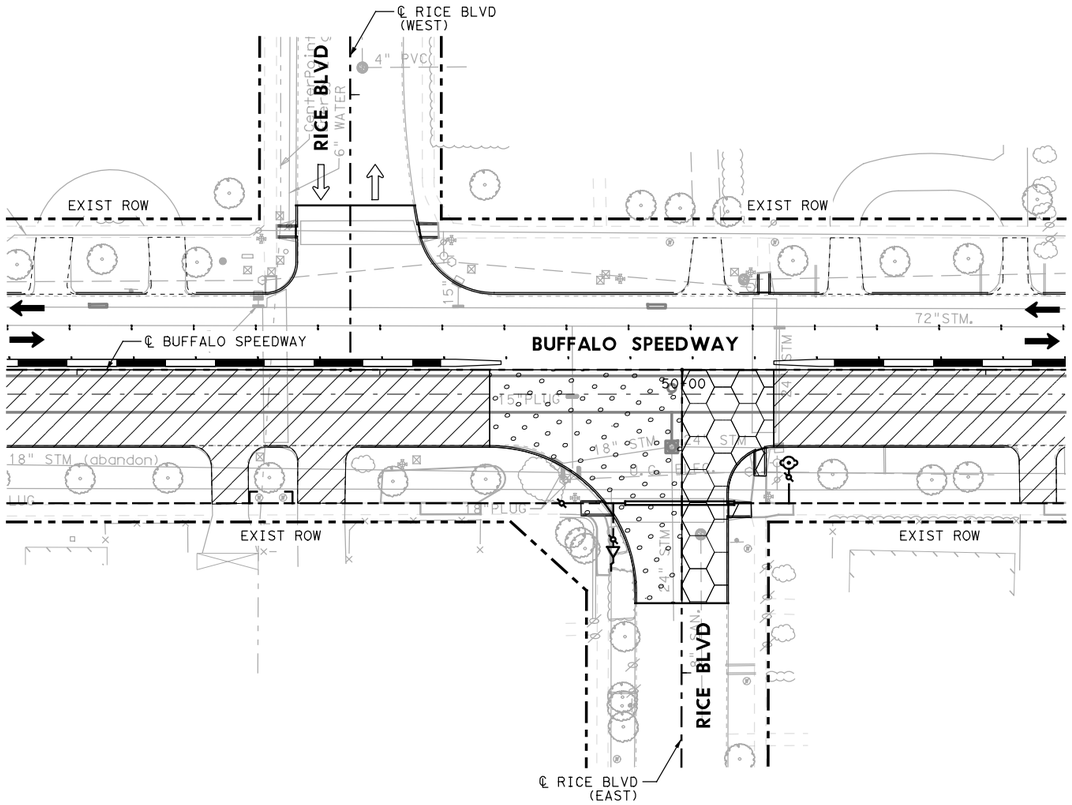
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 1

BUFFALO SPEEDWAY
STA 78+00 TO END

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		144
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- PHASE 4 STEP 1 CONSTRUCTION
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL TEMPORARY TRAFFIC SIGNAL AT INTERSECTION PRIOR TO BEGIN ANY WORK.
2. IMPLEMENT PHASE 4 STEP 1 - STAGE 1 AND STAGE 2 RICE BLVD (EAST) DETOUR PLAN.
3. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES.
4. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUCTION WITH WORK PROGRESS.
5. REMOVE STRIPING AS NECESSARY DURING THIS PHASE.
6. ALIGN TEMP SIGNAL HEADS AS NEEDED FOR LANE CONFIGURATIONS.
7. TXDOT FAST TRACK CONCRETE SHALL BE USED ON ALL INTERSECTIONS.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STAGE 1 - CLOSE EAST BOUND TRAFFIC ON RICE BLVD.
CONSTRUCT SOUTH SIDE OF RICE BLVD

STAGE 2 - CLOSE WEST BOUND TRAFFIC ON RICE BLVD.
CONSTRUCT NORTH SIDE OF RICE BLVD

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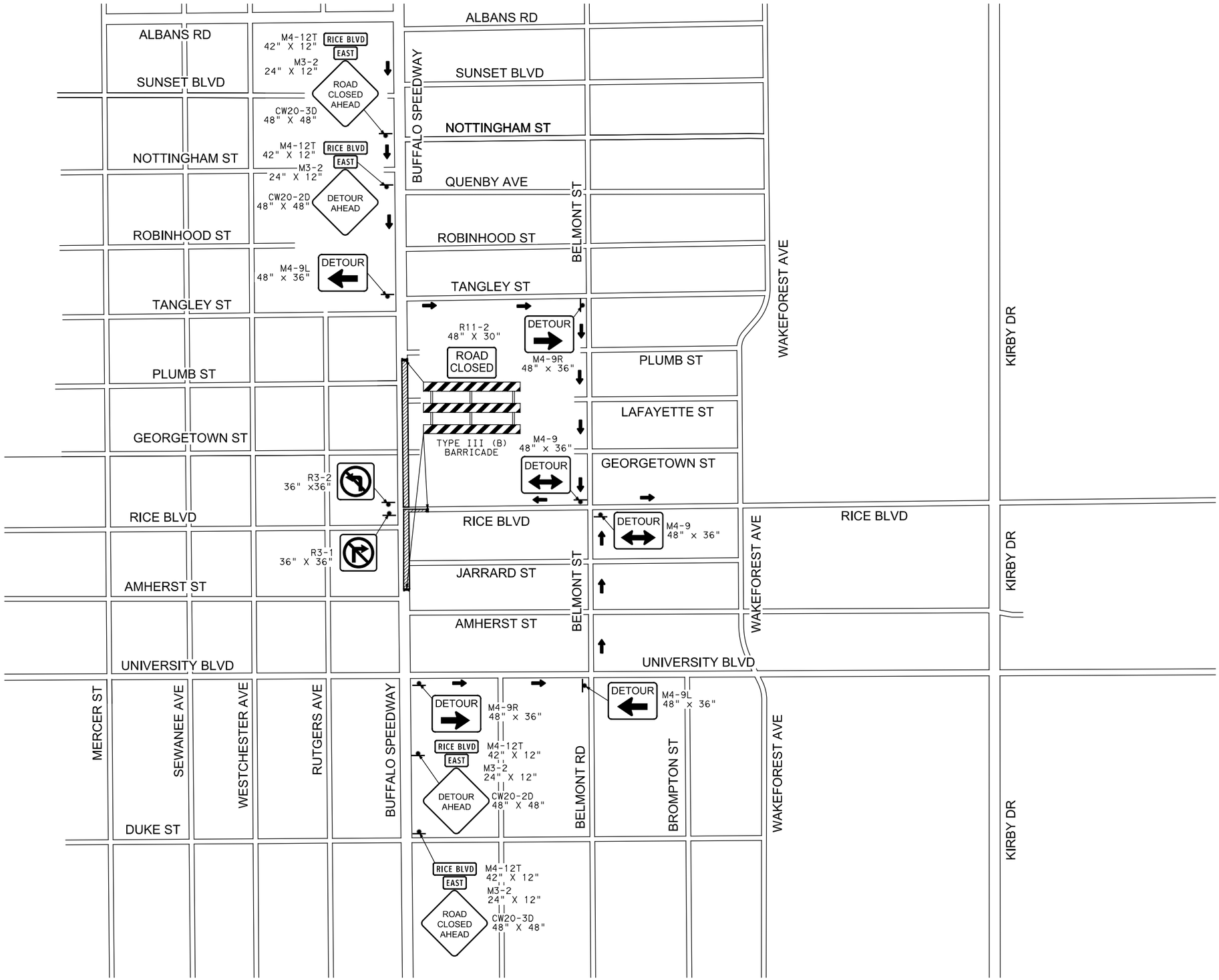
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 1 RICE BLVD (EAST) INTERSECTION DETAILS

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		145
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTE: SEE "DETOUR LAYOUT PHASE 4 STEP 1 - STAGE 2 RICE BLVD (EAST)" FOR ADDITIONAL INFORMATION.

N

LEGEND

- TCP PHASE 4 - STEP 1
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

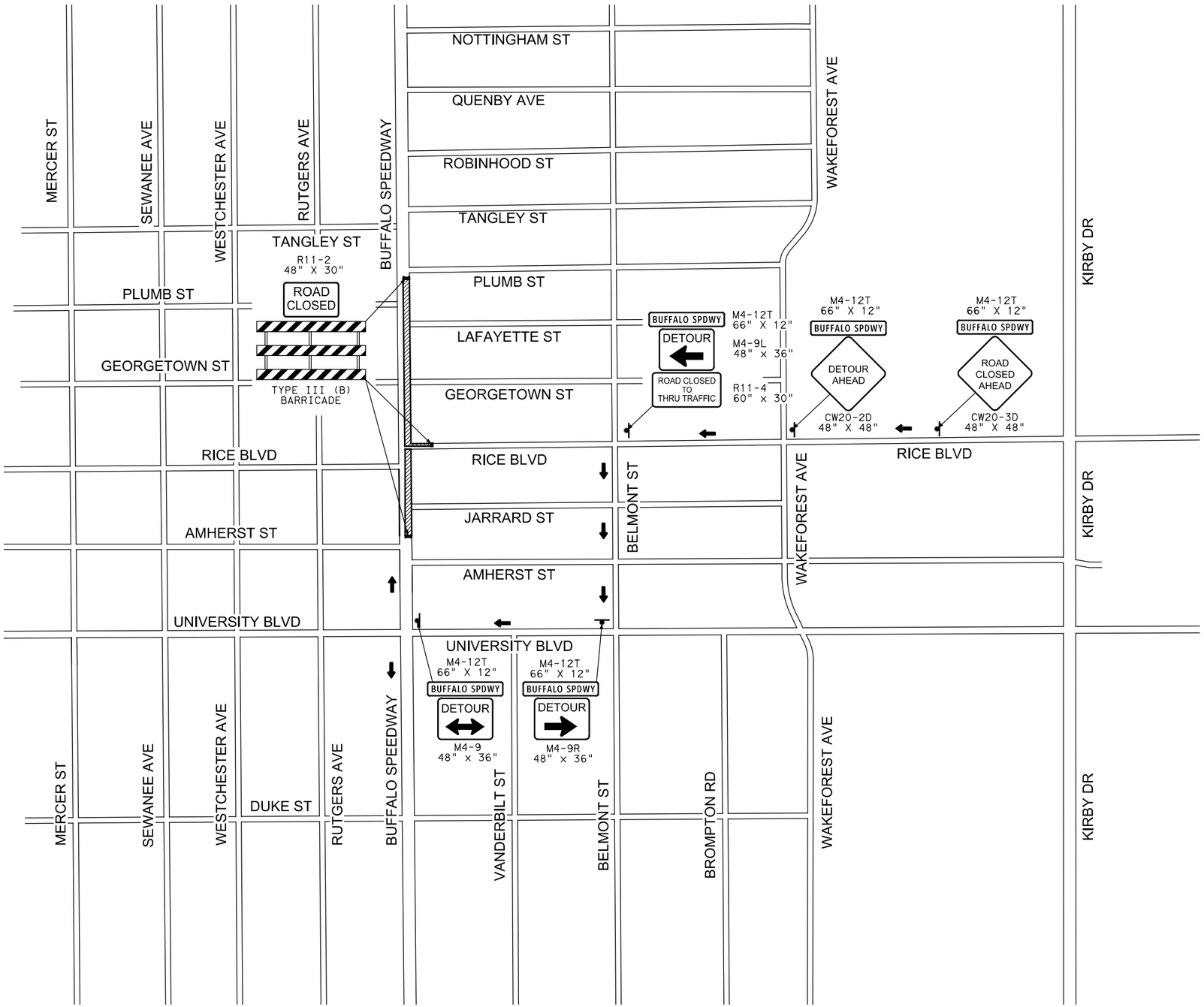
DETOUR LAYOUT PHASE 4 STEP 1 – STAGE 1 RICE BLVD (EAST)

SCALE: NTS

SHEET 1 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		146
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTE: SEE "DETOUR LAYOUT PHASE 4 STEP 1 - STAGE 1 RICE BLVD (EAST)" FOR ADDITIONAL INFORMATION.

N

LEGEND

- TCP PHASE 4 - STEP 1
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

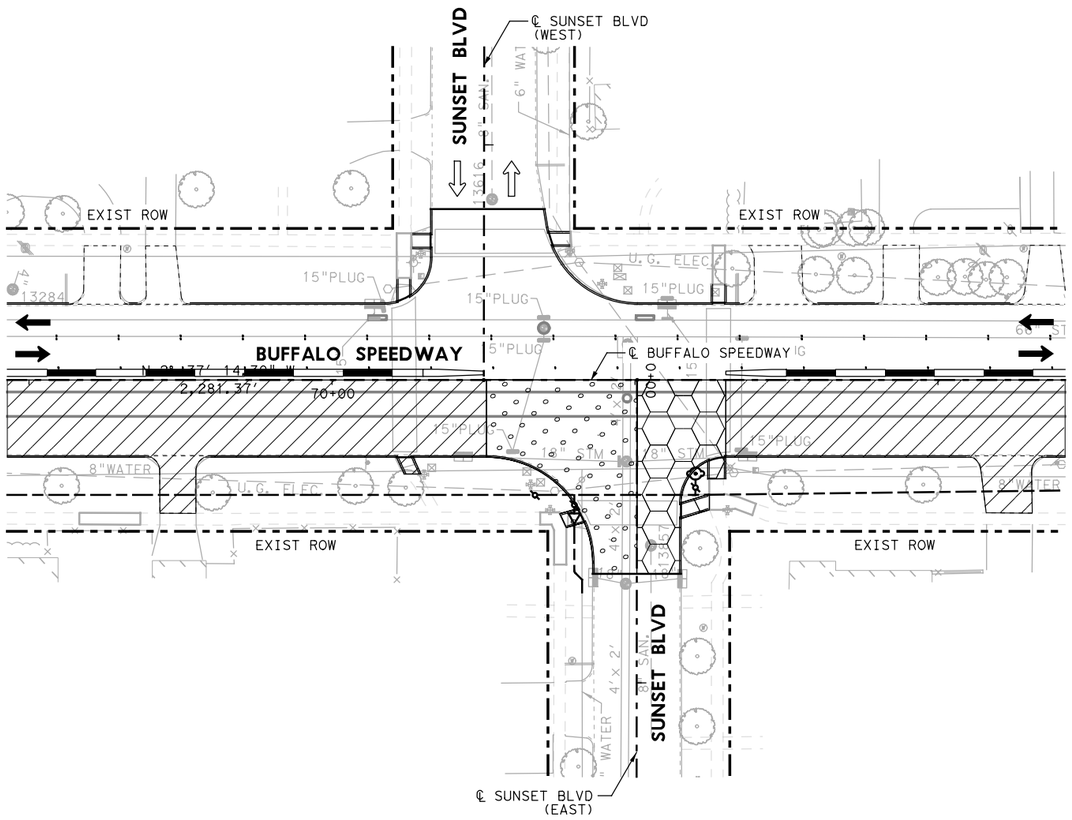
DETOUR LAYOUT PHASE 4 STEP 1 – STAGE 2 RICE BLVD (EAST)

SCALE: NTS

SHEET 2 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		147
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- PHASE 4 STEP 1 CONSTRUCTION
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL TEMPORARY TRAFFIC SIGNAL AT INTERSECTION PRIOR TO BEGIN ANY WORK.
2. IMPLEMENT PHASE 4 STEP 1 - STAGE 1 AND STAGE 2 SUNSET BLVD (EAST) DETOUR PLAN.
3. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES.
4. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUCTION WITH WORK PROGRESS.
5. REMOVE STRIPING AS NECESSARY DURING THIS PHASE.
6. ALIGN TEMP SIGNAL HEADS AS NEEDED FOR LANE CONFIGURATIONS.
7. TXDOT FAST TRACK CONCRETE SHALL BE USED ON ALL INTERSECTIONS.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STAGE 1 - CLOSE EAST BOUND TRAFFIC ON SUNSET BLVD.
CONSTRUCT SOUTH SIDE OF SUNSET BLVD

STAGE 2 - CLOSE WEST BOUND TRAFFIC ON SUNSET BLVD.
CONSTRUCT NORTH SIDE OF SUNSET BLVD

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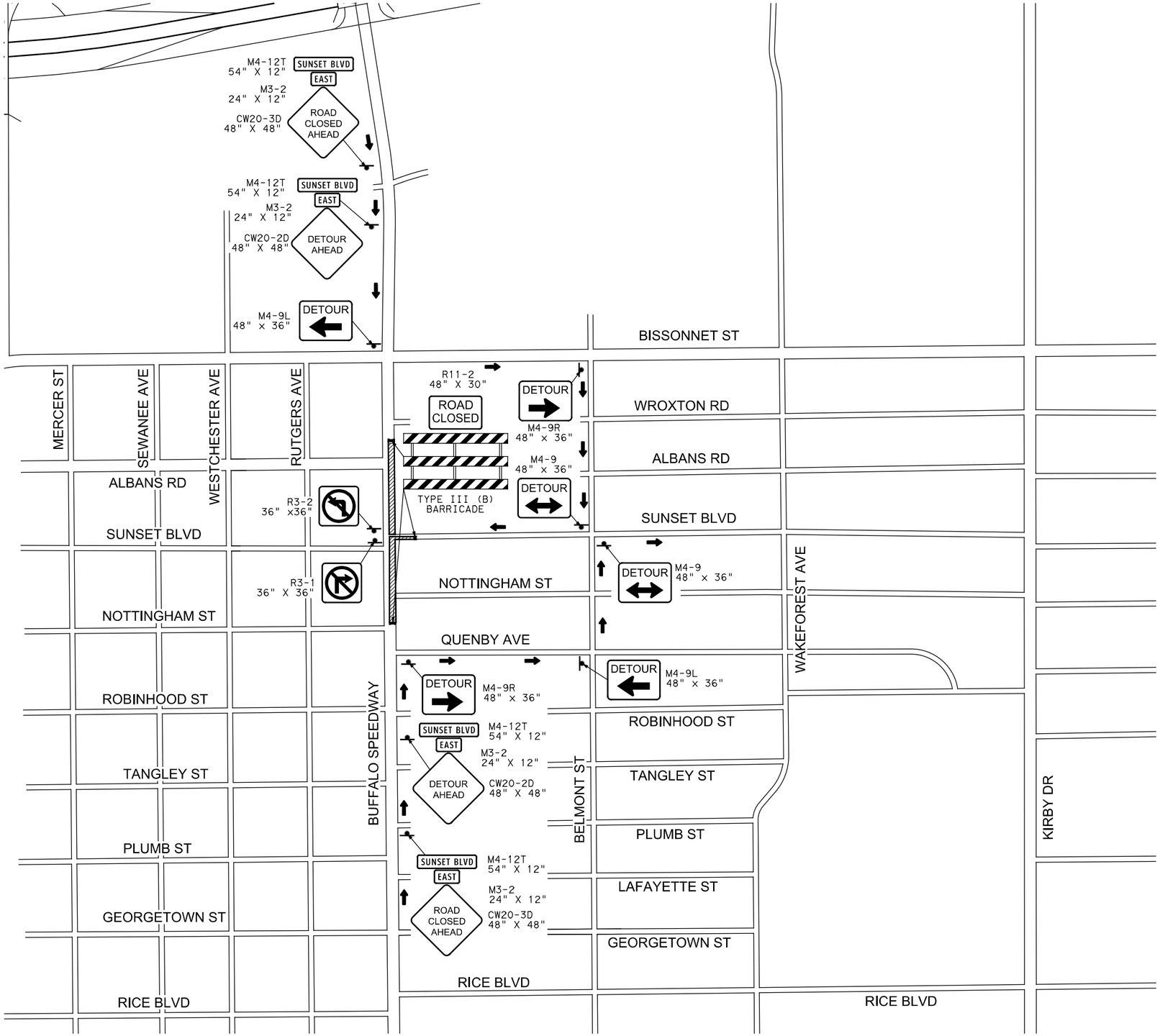
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 1 SUNSET BLVD (EAST) INTERSECTION DETAILS

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		148
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND

- TCP PHASE 4 - STEP 1
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

N

NOTE: SEE "DETOUR LAYOUT PHASE 4 STEP 1 - STAGE 2 SUNSET BLVD (EAST)" FOR ADDITIONAL INFORMATION.

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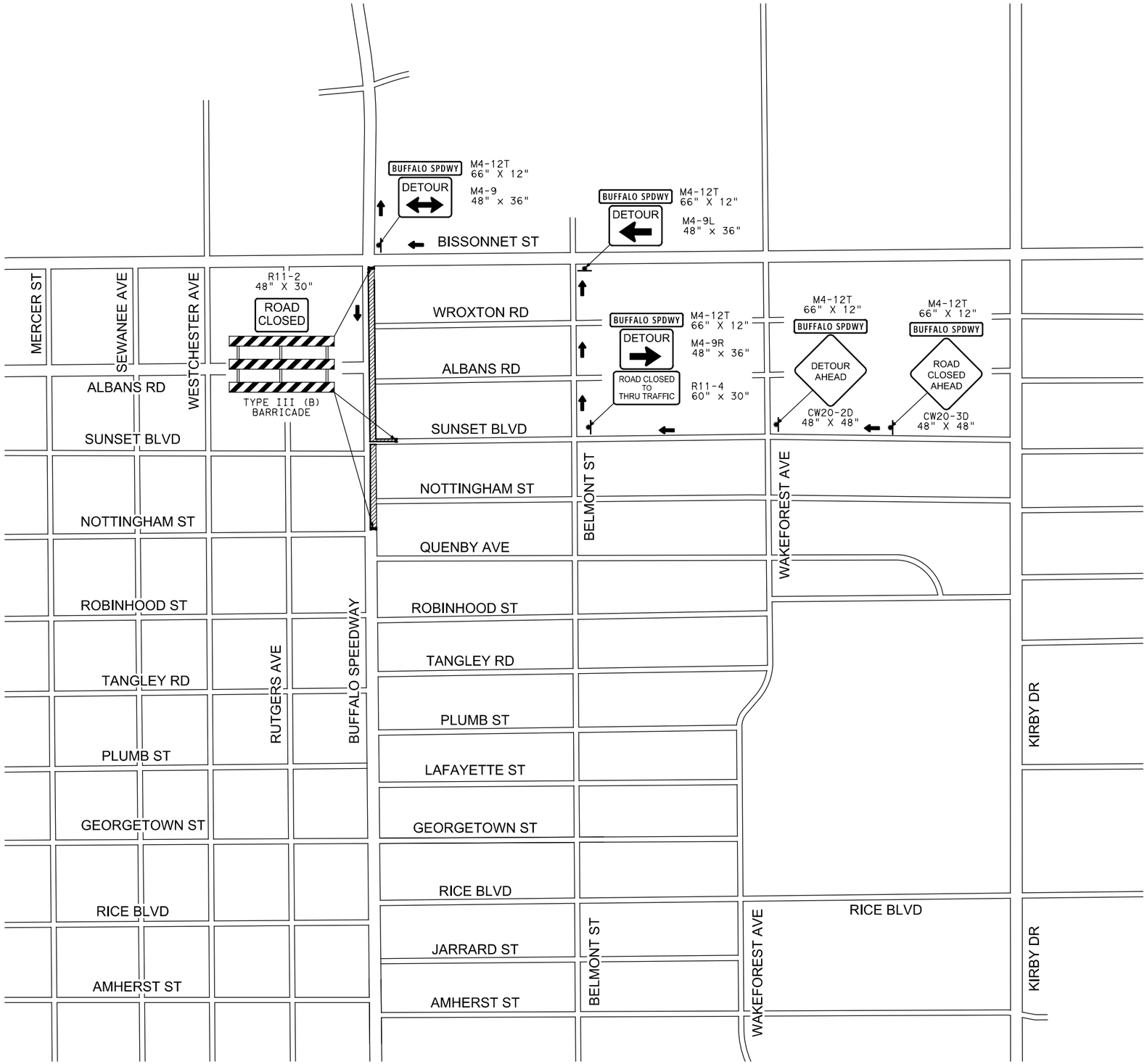
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

DETOUR LAYOUT PHASE 4 STEP 1 – STAGE 1 SUNSET BLVD (EAST)

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		149
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTE: SEE "DETOUR LAYOUT PHASE 4 STEP 1 - STAGE 1 SUNSET BLVD (EAST)" FOR ADDITIONAL INFORMATION.

LEGEND

- TCP PHASE 4 - STEP 1
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

N

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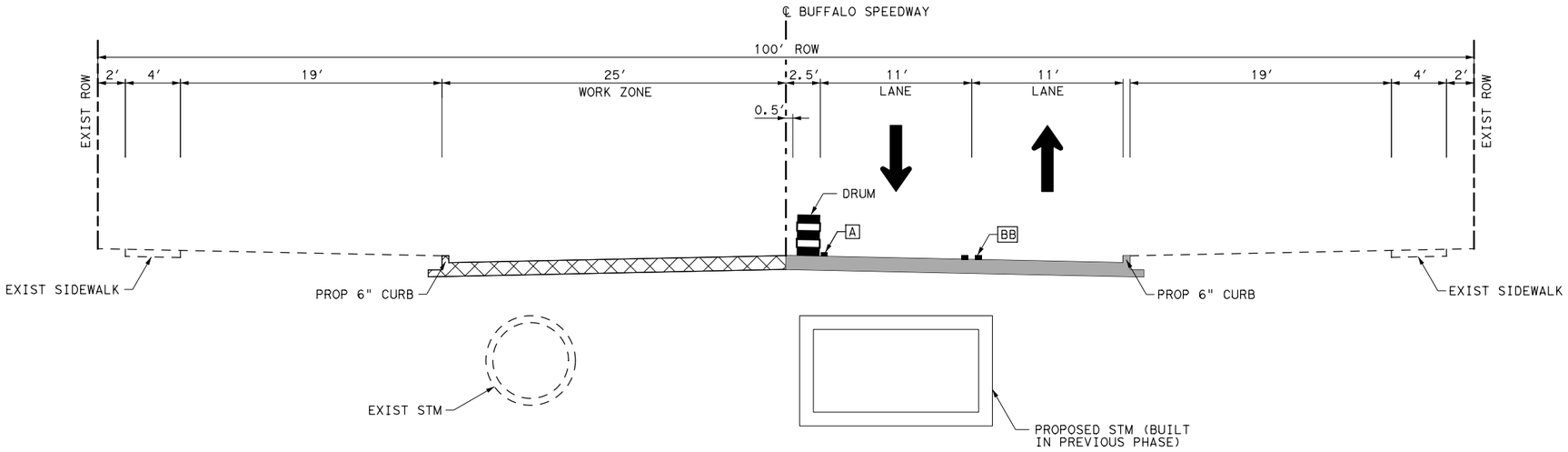
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

DETOUR LAYOUT PHASE 4 STEP 1 – STAGE 2 SUNSET BLVD (EAST)

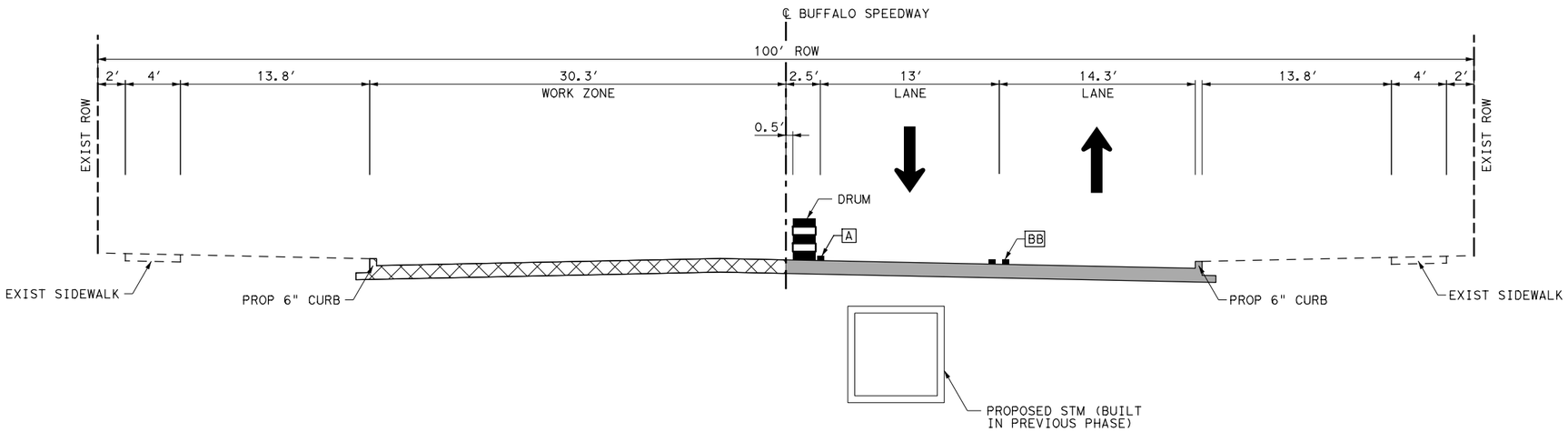
SCALE: NTS

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		150
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



BUFFALO SPEEDWAY
PHASE 4 STEP 2
AMHERST ST TO WROXTON RD
STA 45+60 TO STA 76+60



BUFFALO SPEEDWAY
PHASE 4 STEP 2
WROXTON RD TO BISSONNET ST
STA 76+60 TO STA 78+76

LEGEND:

- PAVEMENT BUILD THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CULVERT BUILD THIS STEP
- DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- STM STORM SEWER
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

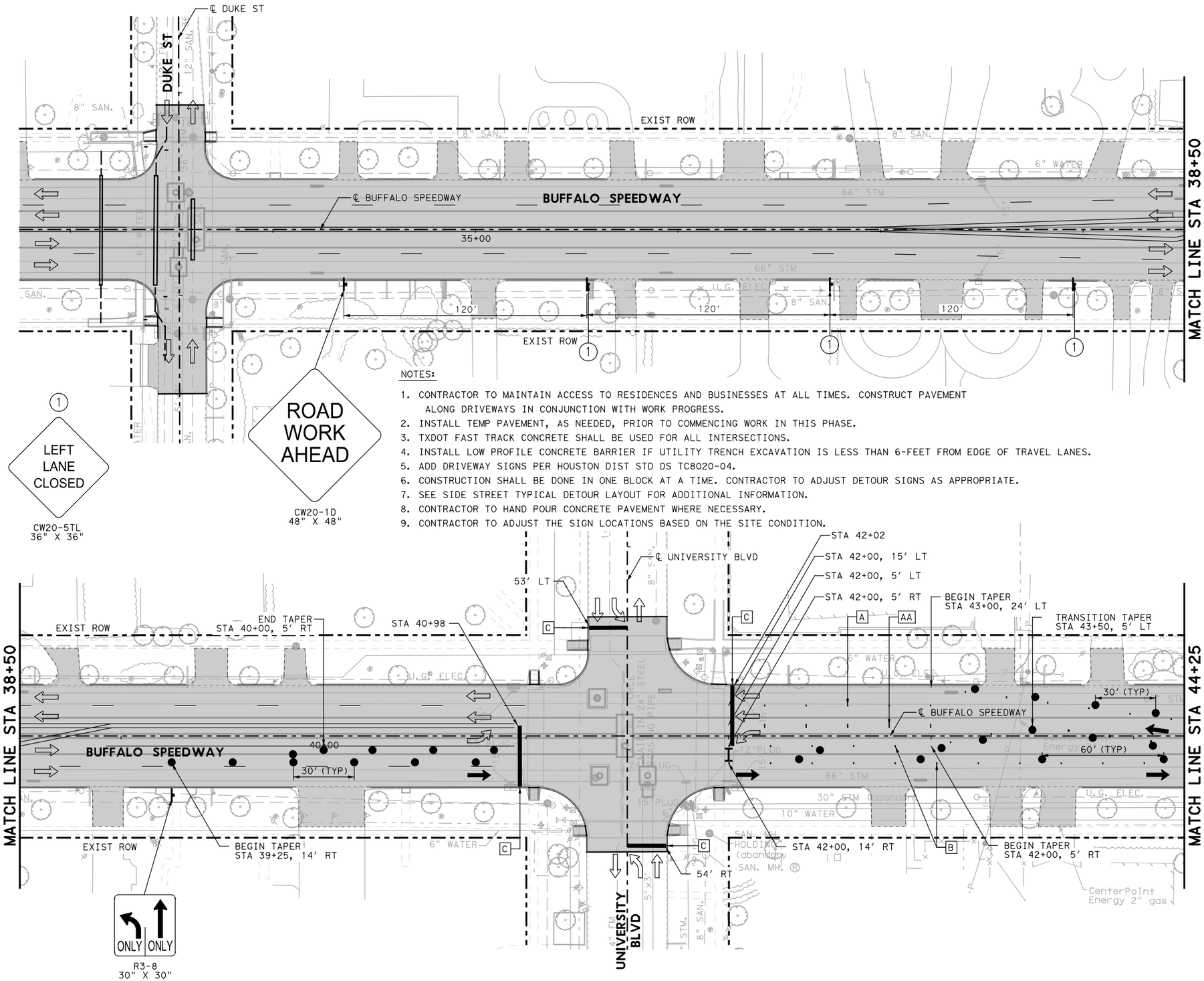
TRAFFIC CONTROL PLAN PHASE 4 STEP 2 TYPICAL SECTION

BUFFALO SPEEDWAY

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		151
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368
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HOUSTON, TEXAS 77042

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Freese and Nichols, Inc.
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City of West University Place

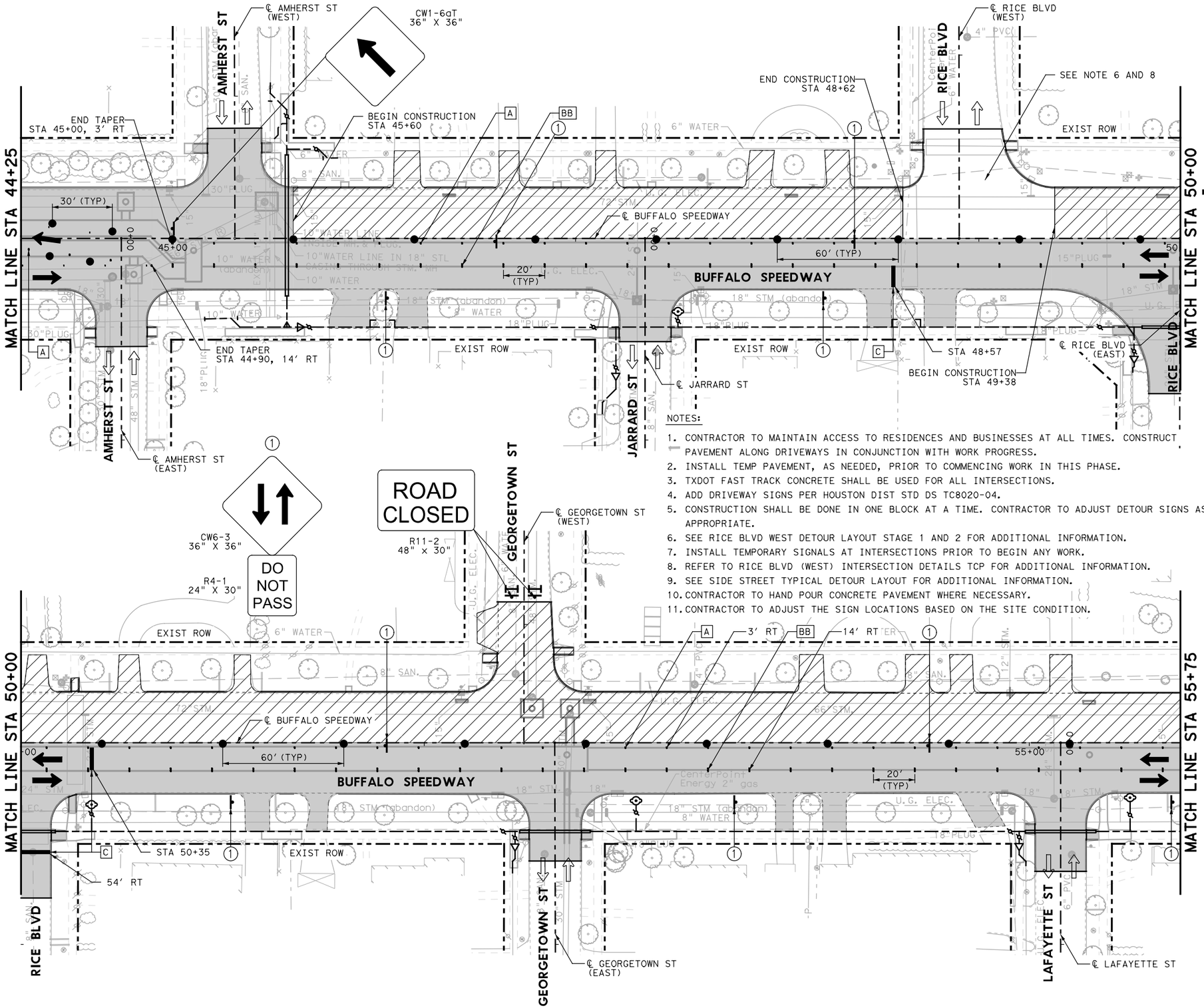
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 2

BUFFALO SPEEDWAY
STA 32+75 TO STA 44+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		152
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- END TERMINAL
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
6. SEE RICE BLVD WEST DETOUR LAYOUT STAGE 1 AND 2 FOR ADDITIONAL INFORMATION.
7. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
8. REFER TO RICE BLVD (WEST) INTERSECTION DETAILS TCP FOR ADDITIONAL INFORMATION.
9. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
10. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
11. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

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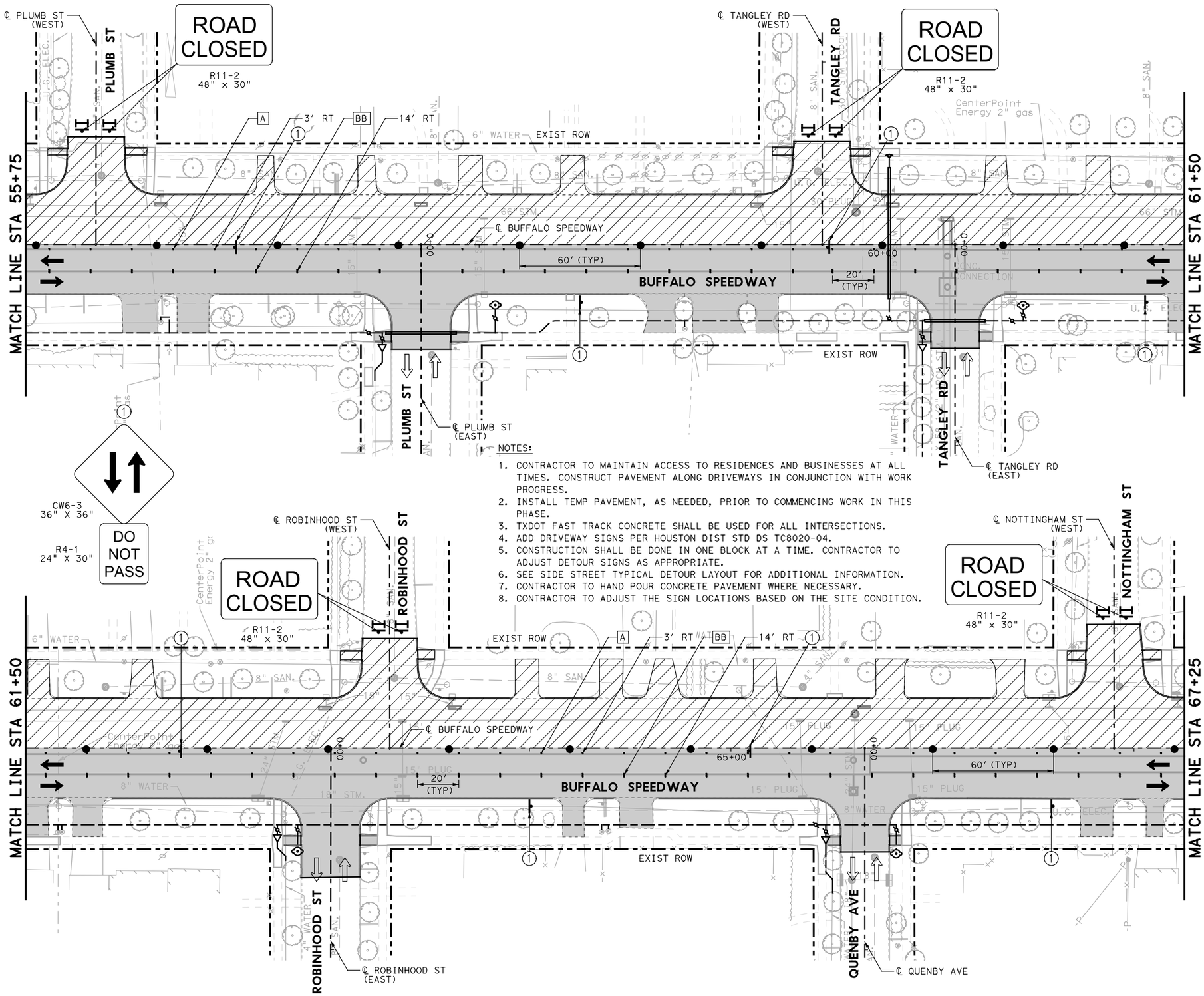
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 2

BUFFALO SPEEDWAY
STA 44+25 TO STA 55+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		153
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (TYPE 1)(LPCB)
- LOW PROFILE CONCRETE BARRIER (TYPE 2)
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
6. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
8. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
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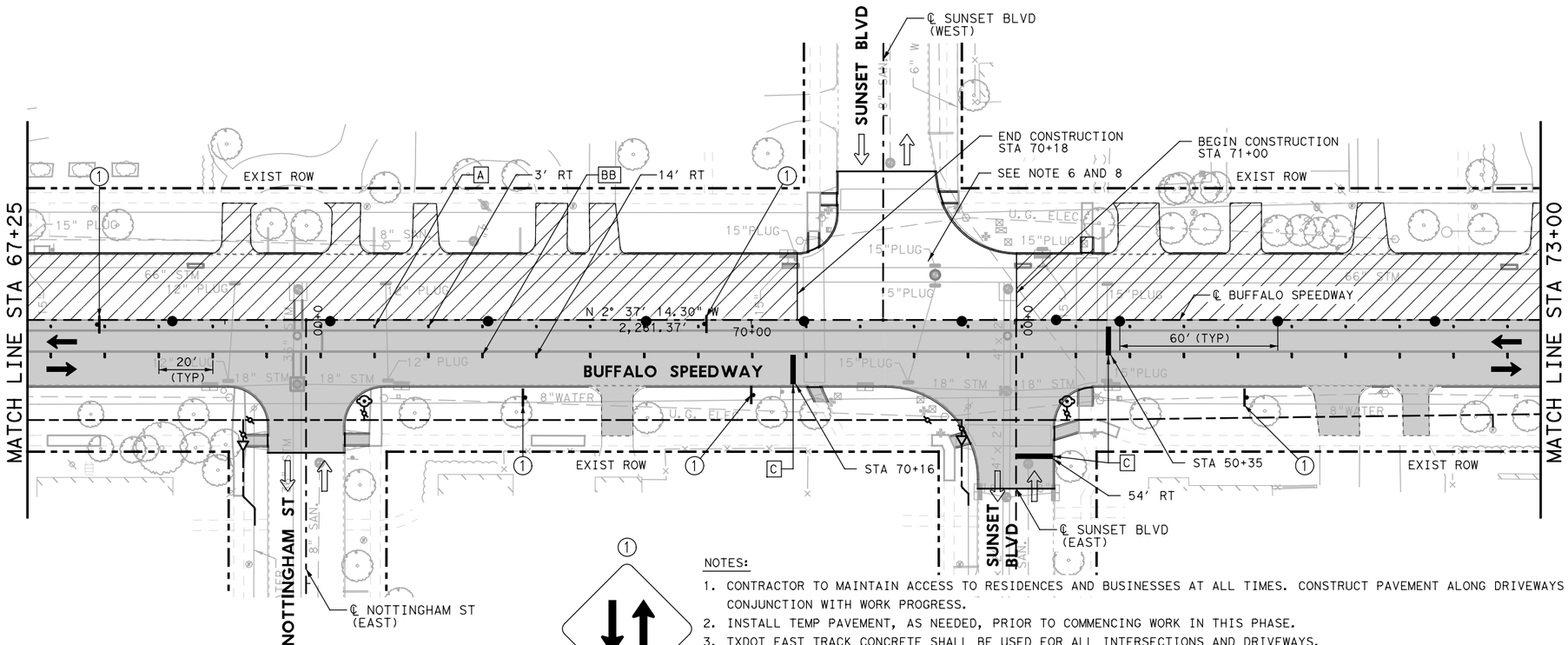
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

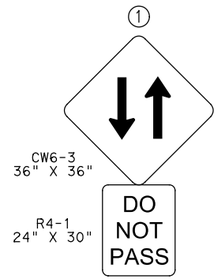
TRAFFIC CONTROL PLAN PHASE 4 STEP 2

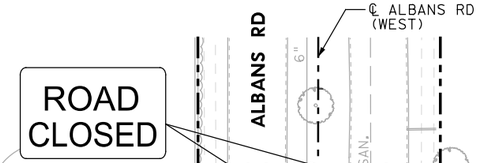
BUFFALO SPEEDWAY
STA 55+75 TO STA 67+25

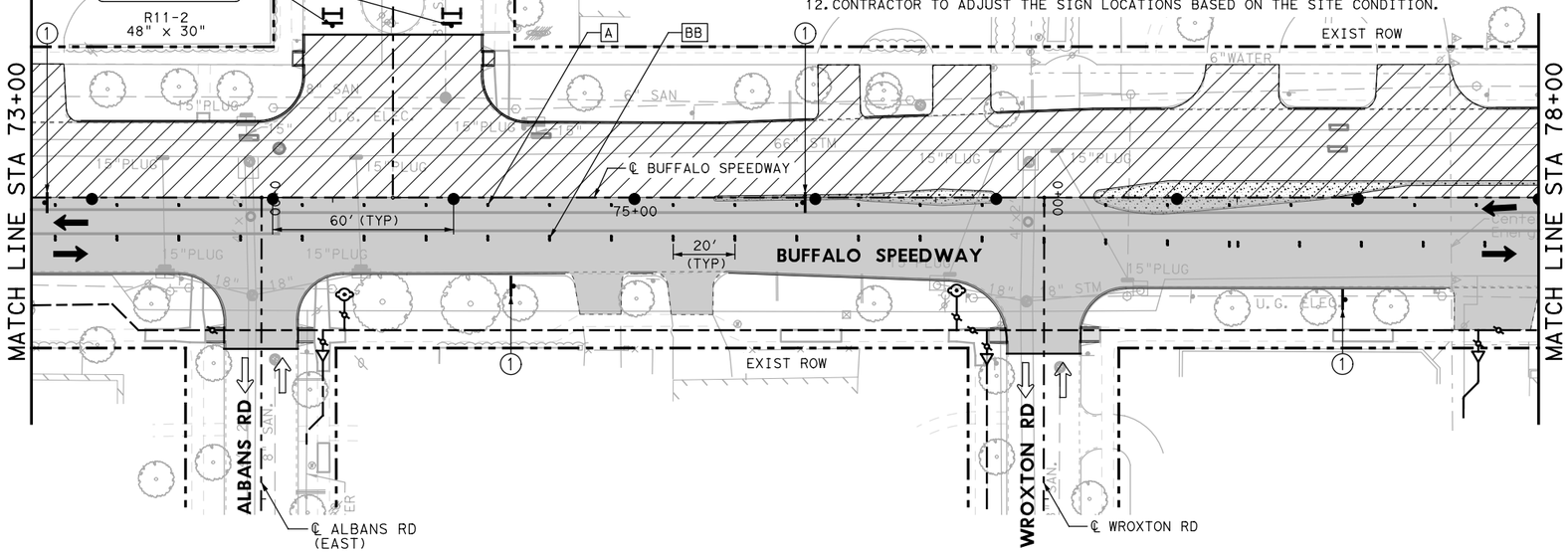
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		154
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY









0 50' 100'

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- END TERMINAL
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- A — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- B — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- C — WZ ZN PAV MRK REMOV (W) 24"(SLD)
- D — WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- AA — WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- BB — WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)
- TEMPORARY PAVEMENT

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS AND DRIVEWAYS.
4. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
5. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
6. SEE SUNSET BLVD WEST DETOUR LAYOUT STAGE 1 AND 2 FOR ADDITIONAL INFORMATION.
7. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
8. REFER TO SUNSET BLVD (WEST) INTERSECTION DETAILS TCP FOR ADDITIONAL INFORMATION.
9. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
10. ALL COSTS ASSOCIATED WITH TEMPORARY PAVEMENT TO BE PAID FOR UNDER ITEM 508 6001 "CONSTRUCTING DETOUR".
11. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
12. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

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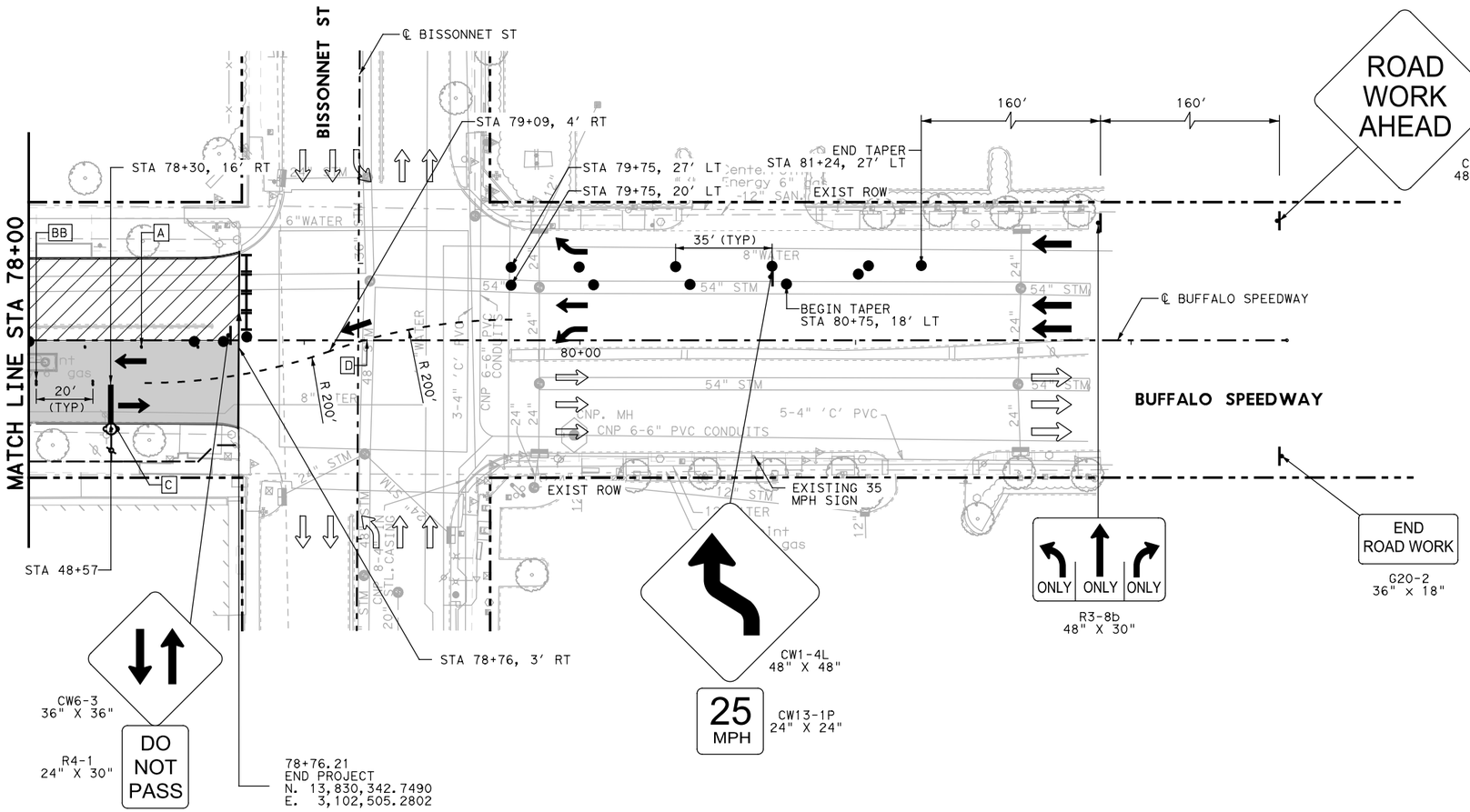
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 2

BUFFALO SPEEDWAY
STA 67+25 TO STA 78+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		155
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- DRUM
- CONSTRUCTION SIGN
- TRAILER MOUNTED FLASHING ARROW BOARD
- EXIST DIRECTION OF TRAFFIC
- PROP DIRECTION OF TRAFFIC
- LOW PROFILE CONCRETE BARRIER (LPCB)
- END TERMINAL
- CONSTRUCTION PHASE
- COMPLETED PHASE
- TYPE III BARRICADE
- [A] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W)
- [B] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2)
- [C] WZ ZN PAV MRK REMOV (W) 24"(SLD)
- [D] WZ ZN PAV MRK REMOV (Y) 4"(DOT)
- [AA] WZ PAV MRK REMOV (REFL) TY I-C (TYPE W) (DBL)
- [BB] WZ PAV MRK REMOV (REFL) TY II-A-A (TYPE Y-2) (DBL)

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
2. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
3. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS.
4. INSTALL LOW PROFILE CONCRETE BARRIER IF UTILITY TRENCH EXCAVATION IS LESS THAN 6-FEET FROM EDGE OF TRAVEL LANES.
5. ADD DRIVEWAY SIGNS PER HOUSTON DIST STD DS TC8020-04.
6. CONSTRUCTION SHALL BE DONE IN ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
7. SEE SIDE STREET TYPICAL DETOUR LAYOUT FOR ADDITIONAL INFORMATION.
8. INSTALL TEMPORARY SIGNALS AT INTERSECTIONS PRIOR TO BEGIN ANY WORK.
9. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
10. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STATE OF TEXAS
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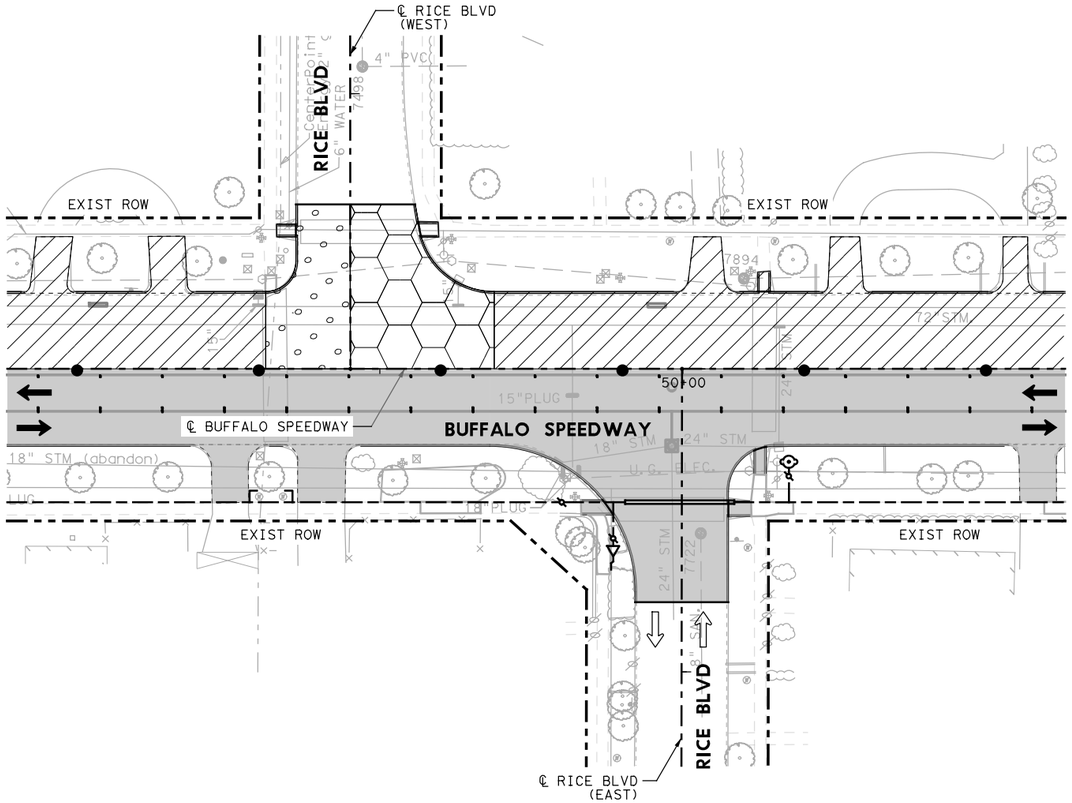
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 2

BUFFALO SPEEDWAY
STA 78+00 TO END

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		156
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- COMPLETED PHASE
- PHASE 4 STEP 2 CONSTRUCTION
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL TEMPORARY TRAFFIC SIGNAL AT INTERSECTION PRIOR TO BEGIN ANY WORK.
2. IMPLEMENT PHASE 4 STEP 2 - STAGE 1 AND STAGE 2 RICE BLVD (WEST) DETOUR PLAN.
3. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES.
4. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUCTION WITH WORK PROGRESS.
5. REMOVE STRIPING AS NECESSARY DURING THIS PHASE.
6. ALIGN TEMP SIGNAL HEADS AS NEEDED FOR LANE CONFIGURATIONS.
7. TXDOT FAST TRACK CONCRETE SHALL BE USED ON ALL INTERSECTIONS.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STAGE 1 - CLOSE EAST BOUND TRAFFIC ON RICE BLVD.
CONSTRUCT SOUTH SIDE OF RICE BLVD

STAGE 2 - CLOSE WEST BOUND TRAFFIC ON RICE BLVD.
CONSTRUCT NORTH SIDE OF RICE BLVD

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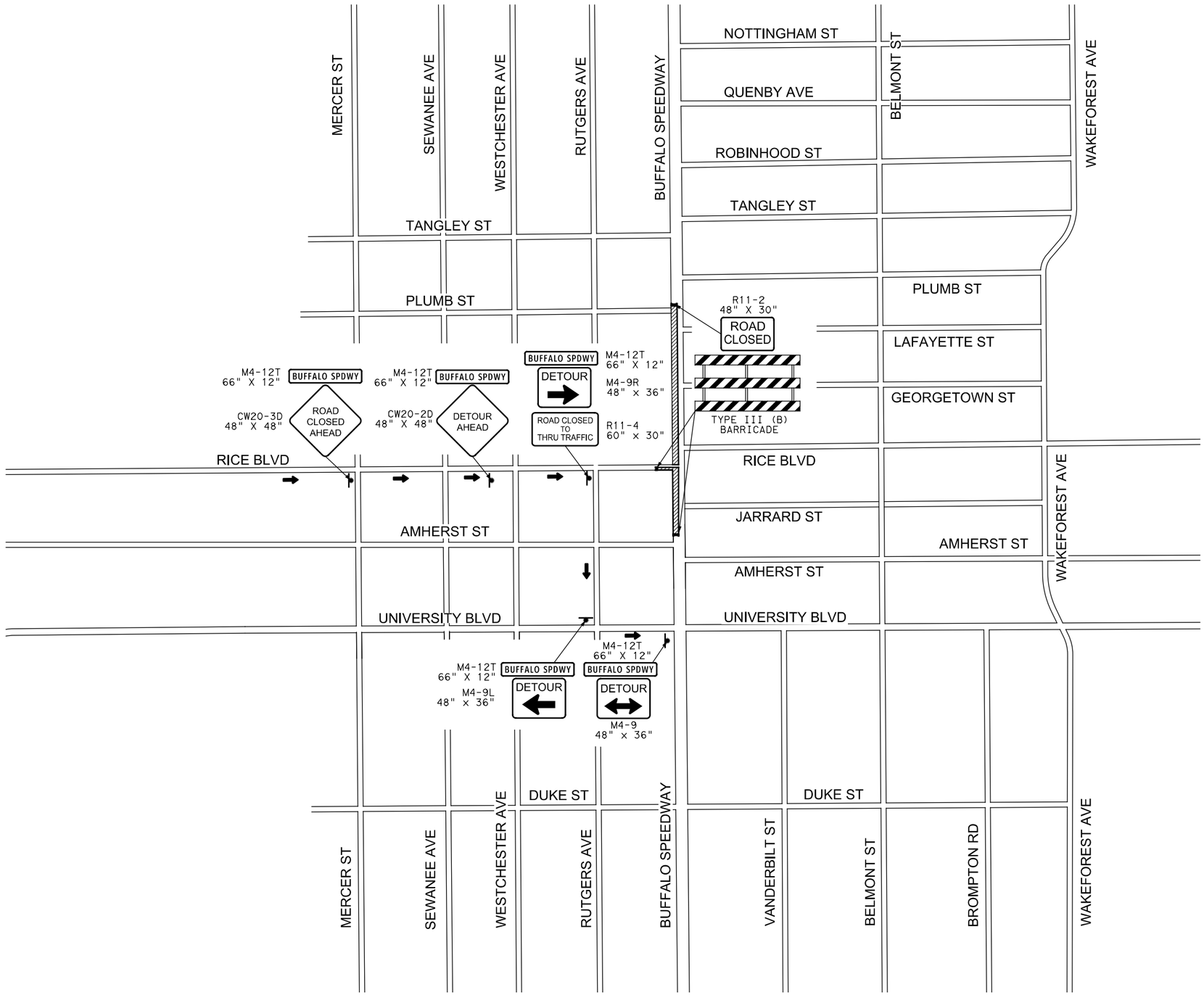
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 2 RICE BLVD (WEST) INTERSECTIONS DETAILS

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		157
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTE: SEE "DETOUR LAYOUT PHASE 4 STEP 2 - STAGE 2 RICE BLVD (WEST)" FOR ADDITIONAL INFORMATION.

LEGEND

- TCP PHASE 4 - STEP 2
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

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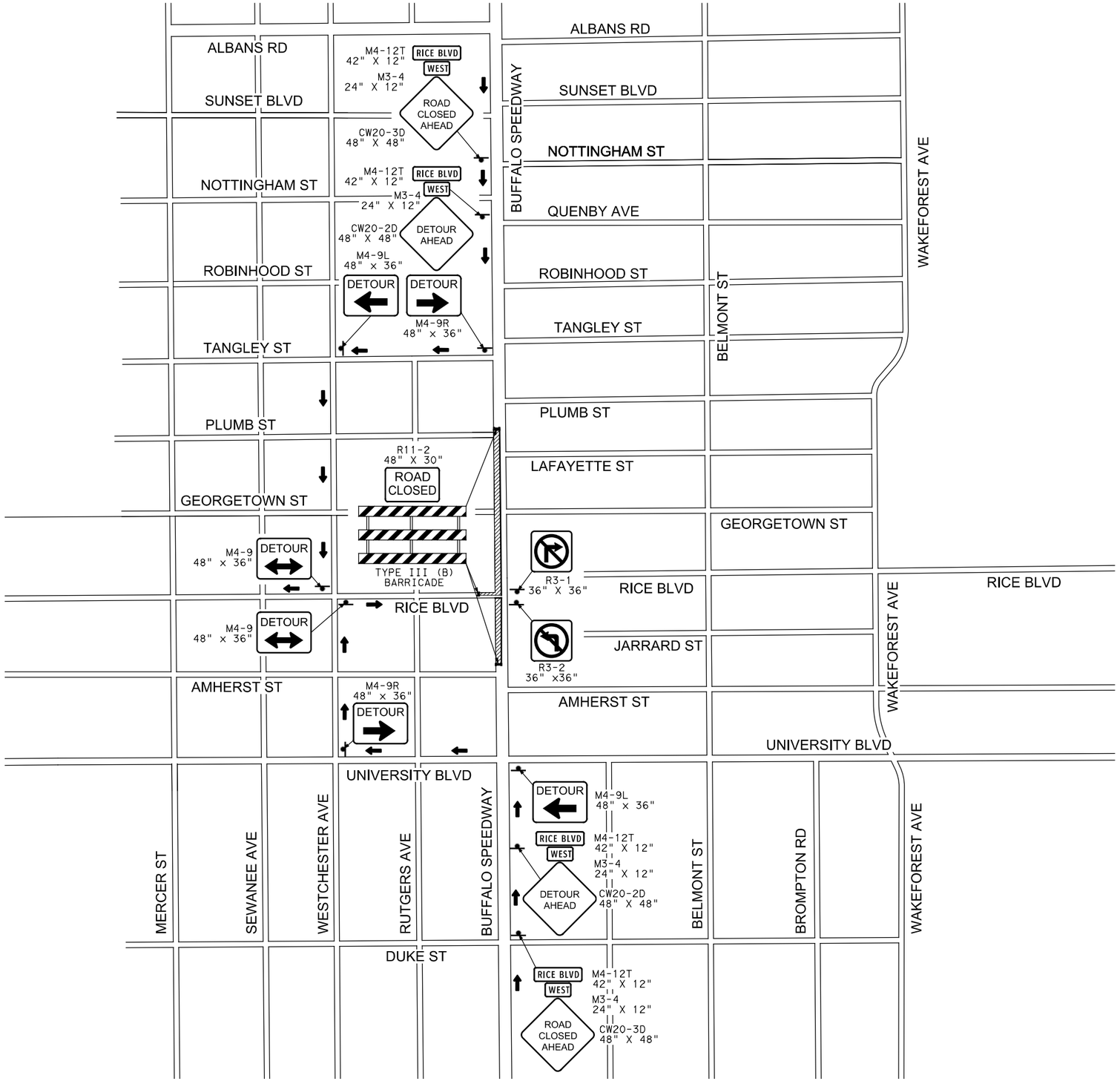
DETOUR LAYOUT PHASE 4 STEP 2 – STAGE 1 RICE BLVD (WEST)

SCALE: NTS

SHEET 1 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		158
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTE: SEE "DETOUR LAYOUT PHASE 4 STEP 2 - STAGE 1 RICE BLVD (WEST)" FOR ADDITIONAL INFORMATION.

N

LEGEND

- TCP PHASE 4 - STEP 2
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

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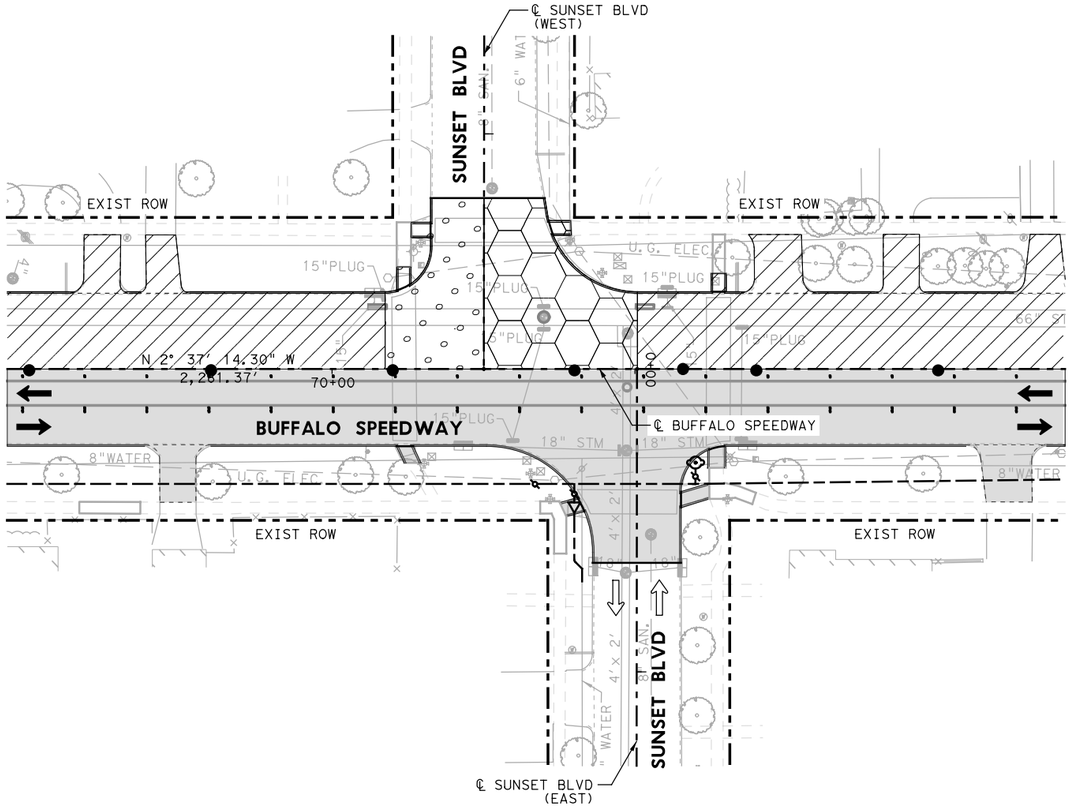
DETOUR LAYOUT PHASE 4 STEP 2 – STAGE 2 RICE BLVD (WEST)

SCALE: NTS

SHEET 2 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		159
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND:

- PHASE 4 STEP 2 COMPLETE
- PHASE 4 STEP 2 CONSTRUCTION
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- DIRECTION OF TRAFFIC

NOTES:

1. INSTALL TEMPORARY TRAFFIC SIGNAL AT INTERSECTION PRIOR TO BEGIN ANY WORK.
2. IMPLEMENT PHASE 4 STEP 2 - STAGE 1 AND STAGE 2 SUNSET BLVD (WEST) DETOUR PLAN.
3. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES.
4. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUCTION WITH WORK PROGRESS.
5. REMOVE STRIPING AS NECESSARY DURING THIS PHASE.
6. ALIGN TEMP SIGNAL HEADS AS NEEDED FOR LANE CONFIGURATIONS.
7. TXDOT FAST TRACK CONCRETE SHALL BE USED ON ALL INTERSECTIONS.
8. CONTRACTOR TO HAND POUR CONCRETE PAVEMENT WHERE NECESSARY.
9. CONTRACTOR TO ADJUST THE SIGN LOCATIONS BASED ON THE SITE CONDITION.

STAGE 1 - CLOSE EAST BOUND TRAFFIC ON SUNSET BLVD.
CONSTRUCT SOUTH SIDE OF SUNSET BLVD

STAGE 2 - CLOSE WEST BOUND TRAFFIC ON SUNSET BLVD.
CONSTRUCT NORTH SIDE OF SUNSET BLVD

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City of West University Place

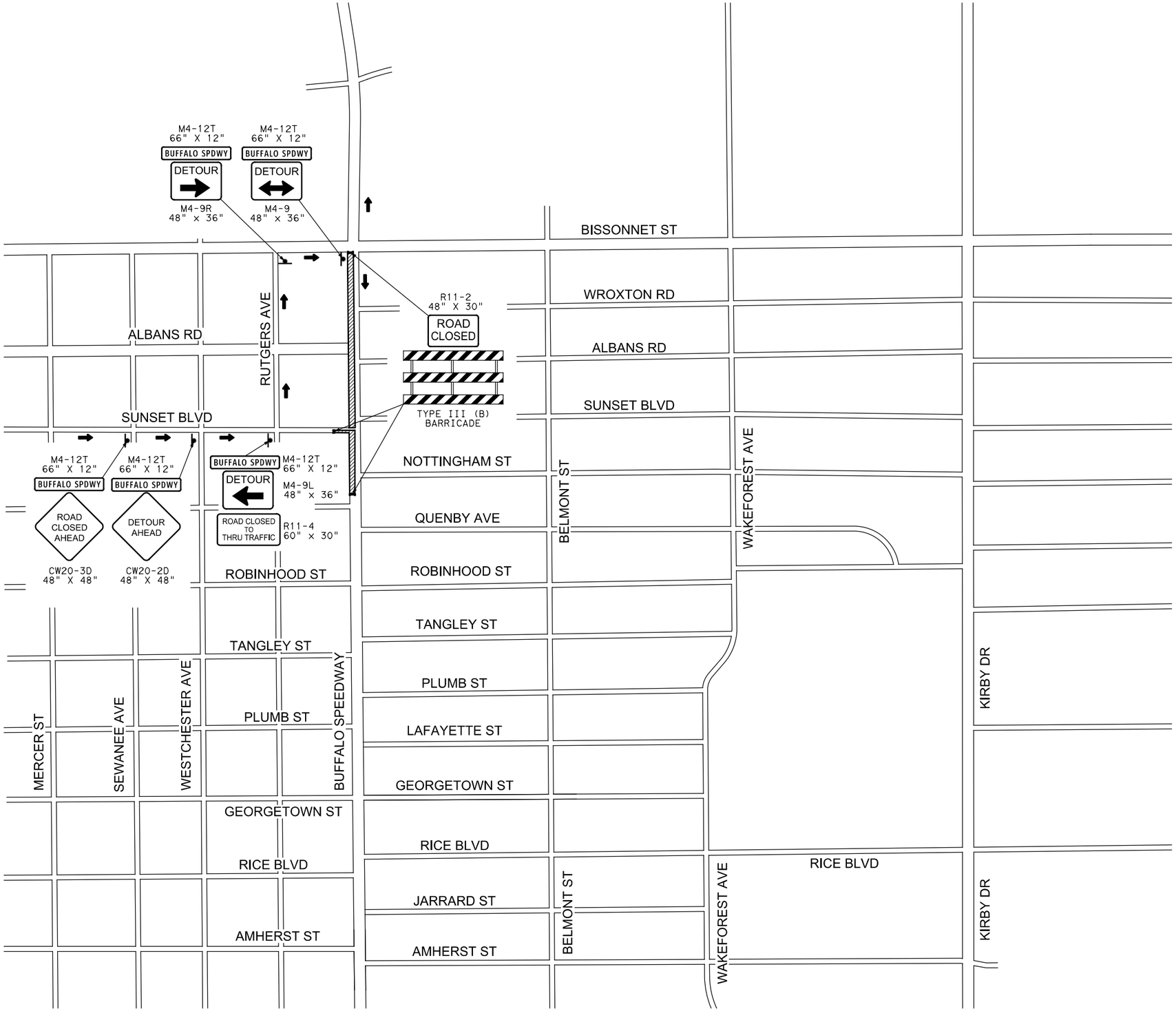
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN PHASE 4 STEP 2 SUNSET BLVD (WEST) INTERSECTION DETAILS

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		160
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTE: SEE "DETOUR LAYOUT PHASE 4 STEP 2 - STAGE 2 SUNSET BLVD (WEST)" FOR ADDITIONAL INFORMATION.

STATE OF TEXAS
SYED S. HAQ P.E.
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LICENSED PROFESSIONAL ENGINEER
8/24/2020

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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

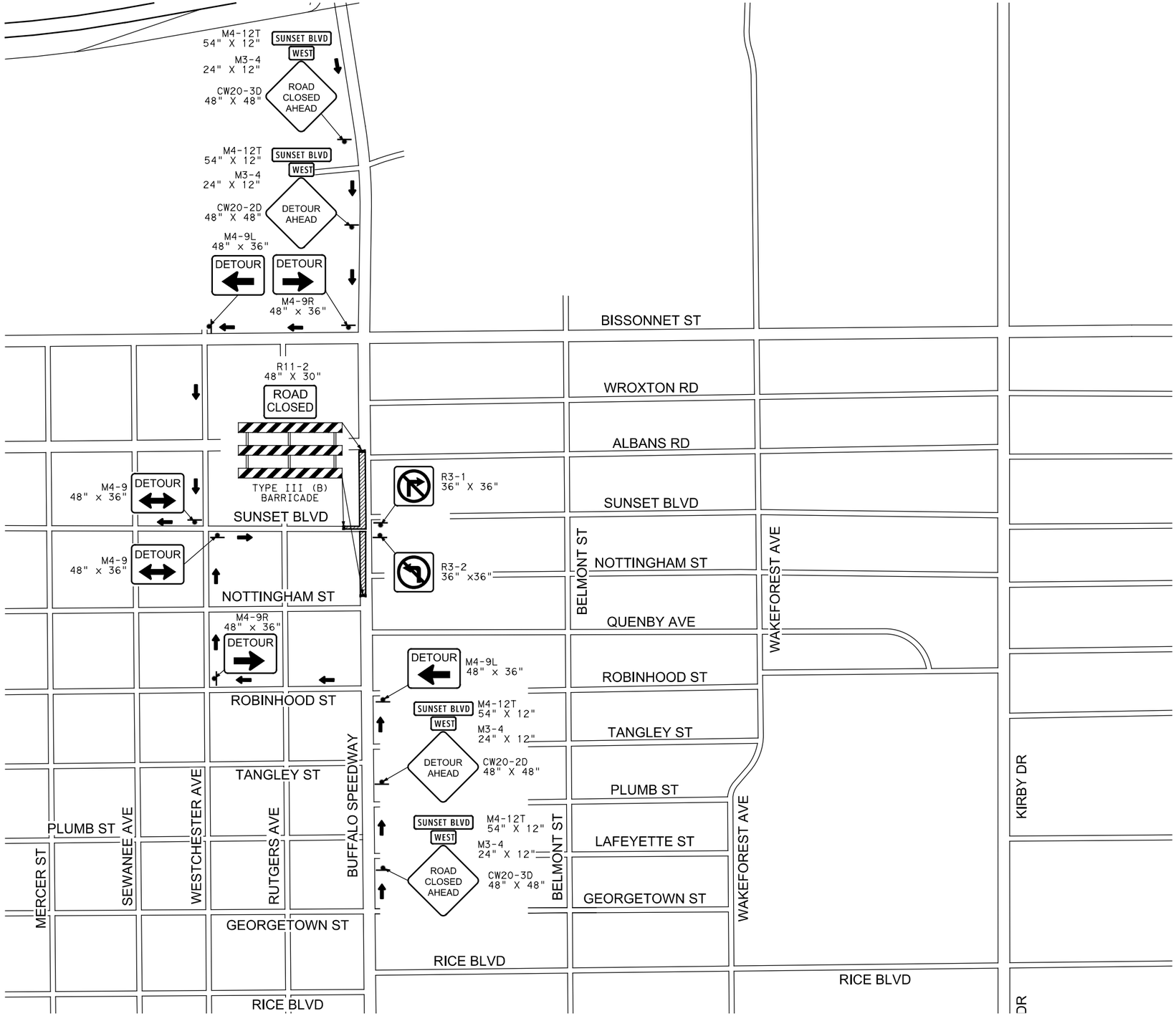
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

DETOUR LAYOUT PHASE 4 STEP 2 – STAGE 1 SUNSET BLVD (WEST)

SCALE: NTS

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		161
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



NOTE: SEE "DETOUR LAYOUT PHASE 4 STEP 2 - STAGE 1 SUNSET BLVD (WEST)" FOR ADDITIONAL INFORMATION.

N

LEGEND

- TCP PHASE 4 - STEP 2
- TRAFFIC DIRECTION
- TYPE III BARRICADE
- CONSTRUCTION SIGN

STATE OF TEXAS
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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

DETOUR LAYOUT PHASE 4 STEP 2 – STAGE 2 SUNSET BLVD (WEST)

SCALE: NTS

SHEET 2 OF 2

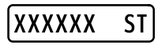
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		162
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

R11-2
48" X 30"



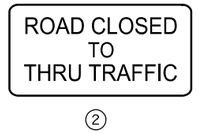
M4-12T
VAR X 12"

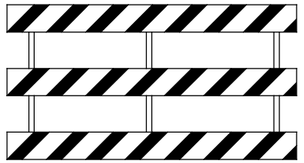


M4-9
48" X 36"

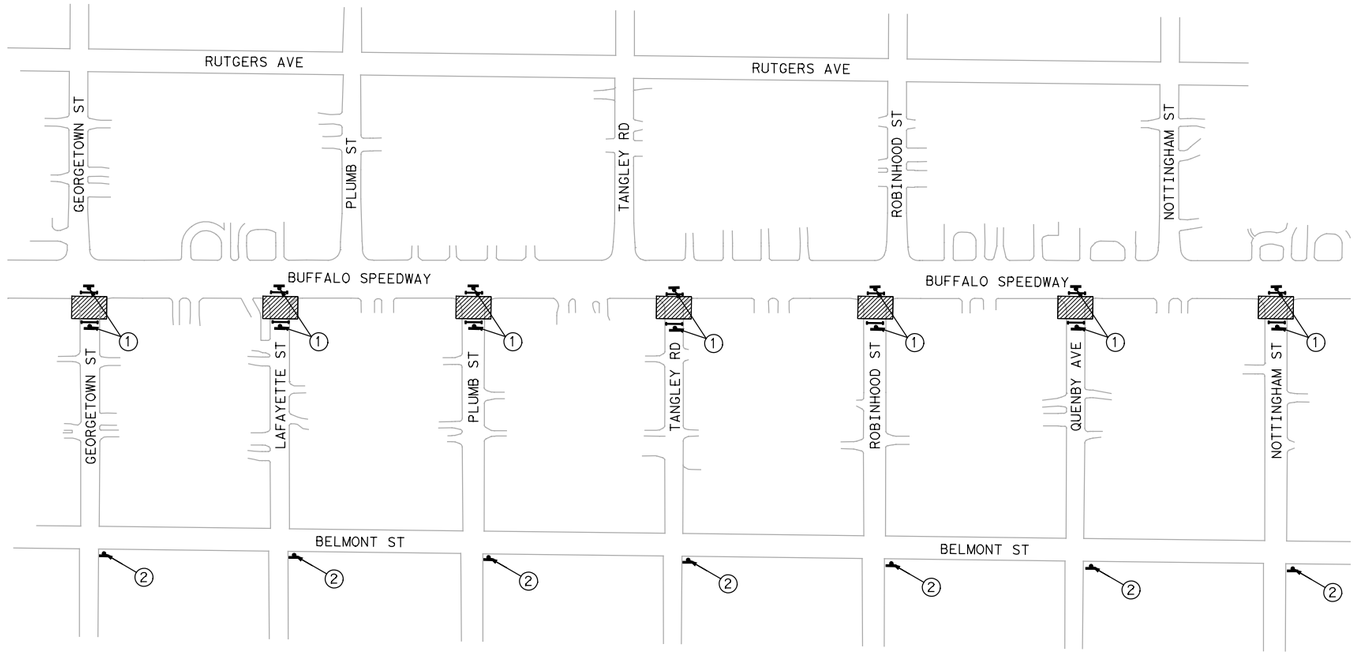


R11-4
60" X 30"





TYPE III (B) BARRICADE



PHASE 3 - STEP 2 AND PHASE 4 - STEP 1



PHASE 3 - STEP 3 AND PHASE 4 - STEP 2



LEGEND

- TCP PHASE 3 - STEP 2 AND PHASE 4 - STEP 1
- TCP PHASE 3 - STEP 3 AND PHASE 4 - STEP 2
- TYPE III BARRICADE
- CONSTRUCTION SIGN

NOTES:

1. CONSTRUCTION SHALL BE COMPLETED ONE BLOCK AT A TIME. CONTRACTOR TO ADJUST DETOUR SIGNS AS APPROPRIATE.
2. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES. CONSTRUCT PAVEMENT ALONG DRIVEWAYS IN CONJUNCTION WITH WORK PROGRESS.
3. INSTALL TEMP PAVEMENT, AS NEEDED, PRIOR TO COMMENCING WORK IN THIS PHASE.
4. TXDOT FAST TRACK CONCRETE SHALL BE USED FOR ALL INTERSECTIONS AND DRIVEWAYS.



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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TRAFFIC CONTROL PLAN SIDE STREET TYPICAL DETOUR LAYOUT

SCALE: NTS

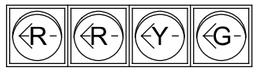
SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		163
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

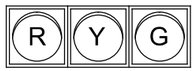
PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



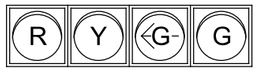
A, F

3-SECTION, 1-WAY



B, C, E,
G, H, K

4-SECTION, 1-WAY

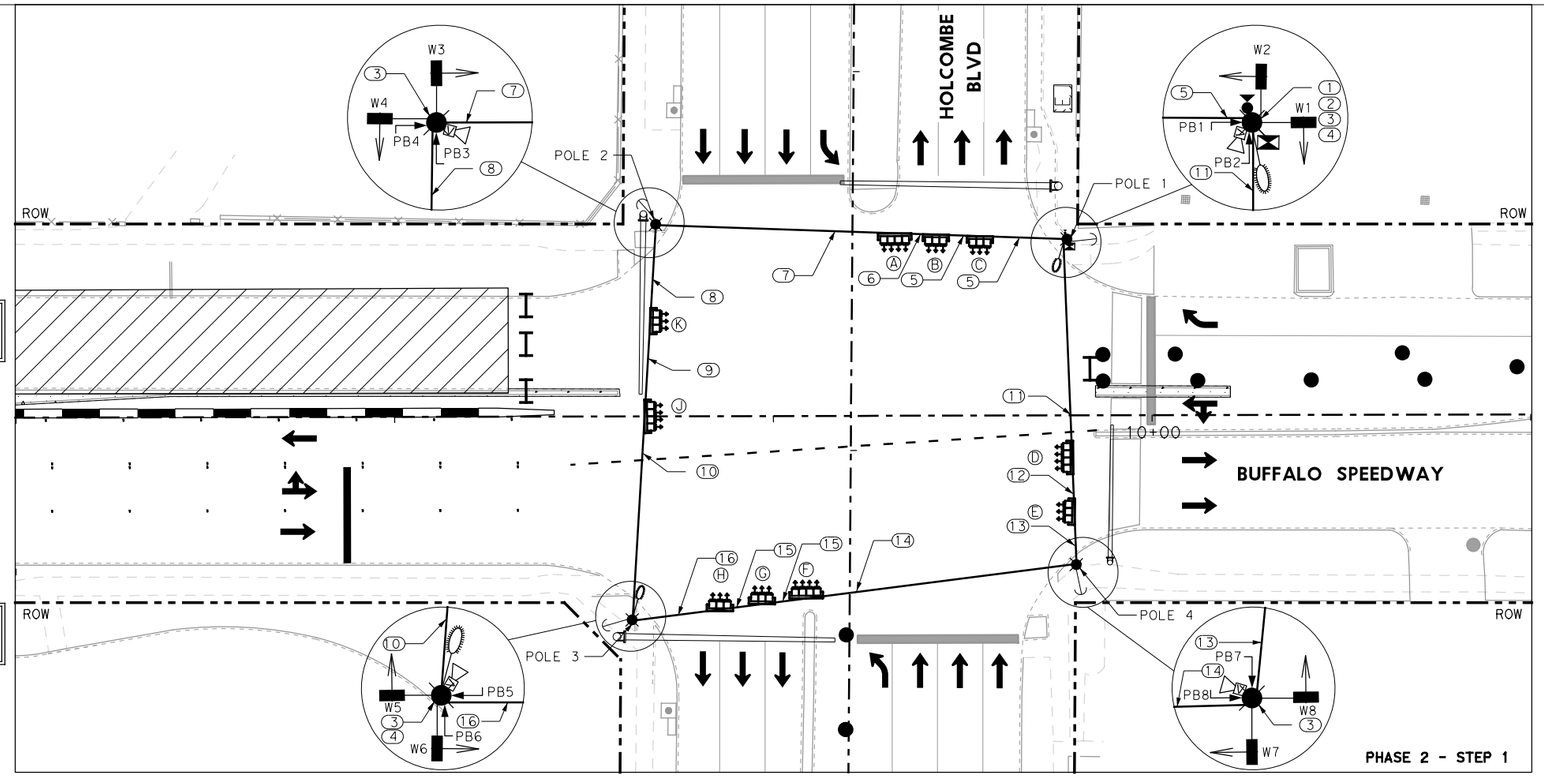


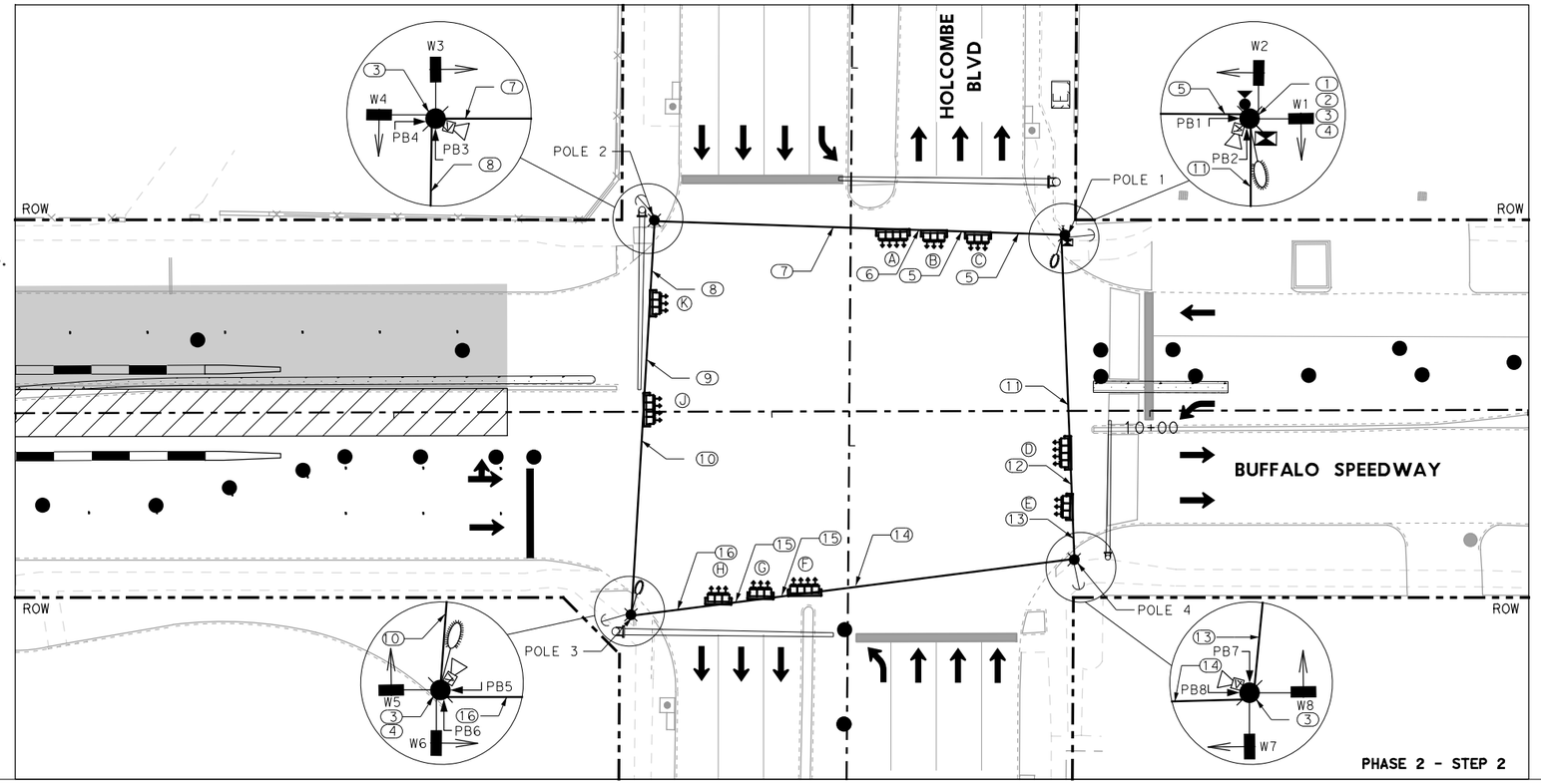
D, J

PEDESTRIAN SIGNAL
1-SECTION, 1-WAY

W1-W8

NOTE:
SEE NOTES FOR HOLCOMBE
BLVD INTERSECTION IN SHEET 9.





0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- INTERSECTION CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- PROP GUY WIRE
- PROP TEMP SERVICE METER
- PROP TEMP TIMBER POLE
- PROP TEMP POLE MOUNTED SIGNAL CONTROLLER
- PROP TEMP SIGNAL HEAD
- PROP TEMP VIVDS CAMERA
- PROP TEMP LUMINAIRE W/ ARM
- PROP TEMP PEDESTRIAN SIGNAL HEAD
- PROP TEMP PEDESTRIAN PUSH BUTTON
- PROP RUN NUMBER

STATE OF TEXAS
ZAHIDUL SIDDIQUE
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PROFESSIONAL ENGINEER
08/24/20

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

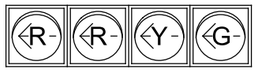
TEMPORARY SIGNAL LAYOUTS AT HOLCOMBE BLVD PHASE 2 STEP 1 & STEP 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		164
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

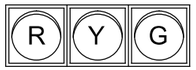
PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



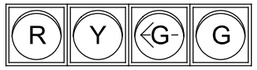
A, F

3-SECTION, 1-WAY



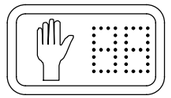
B, C, E,
G, H, K

4-SECTION, 1-WAY

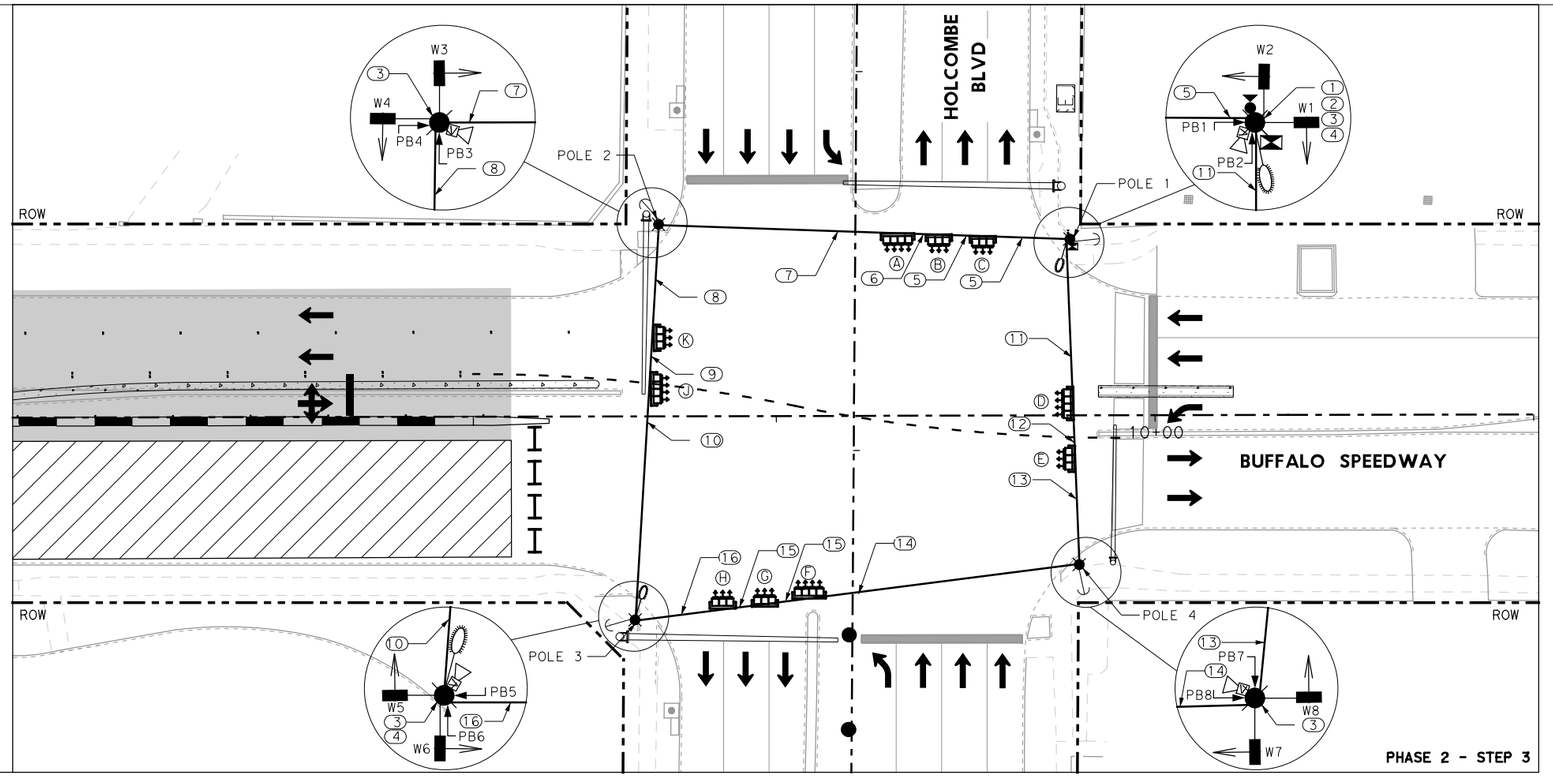


D, J

PEDESTRIAN SIGNAL
1-SECTION, 1-WAY

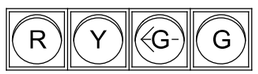


W1-W8



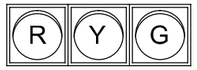
PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



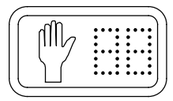
A, D, F, J

3-SECTION, 1-WAY



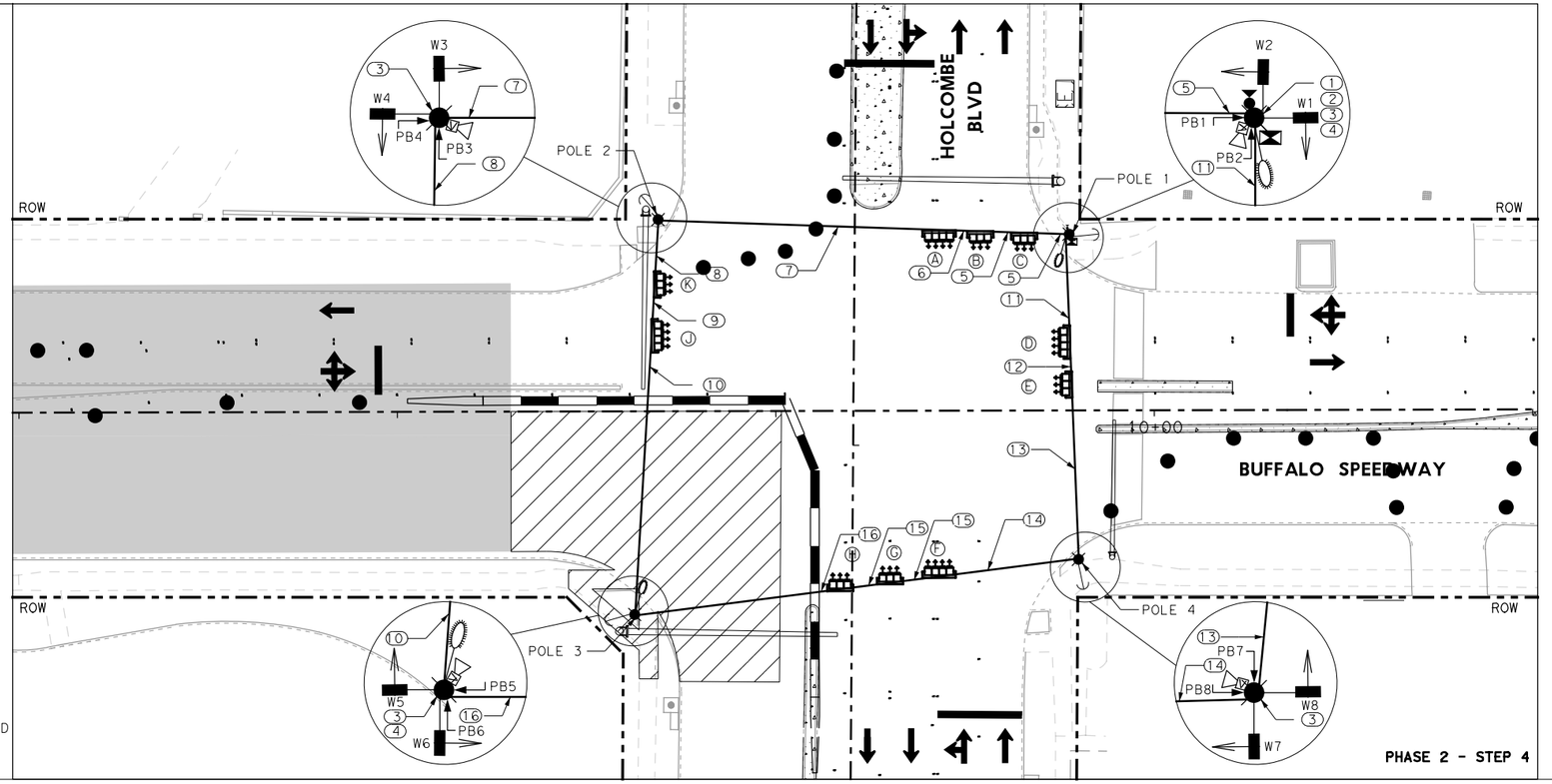
B, C, E,
G, H, K

PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



W1-W8

NOTES:
1. AT PHASE 2 STEP 4, REPLACE SIGNAL HEADS (A) AND (F) AS SHOWN.
2. SEE NOTES FOR HOLCOMBE BLVD INTERSECTION IN SHEET 9.



0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- INTERSECTION CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- PROP GUY WIRE
- PROP TEMP SERVICE METER
- PROP TEMP TIMBER POLE
- PROP TEMP POLE MOUNTED SIGNAL CONTROLLER
- PROP TEMP SIGNAL HEAD
- PROP TEMP VIVDS CAMERA
- PROP TEMP LUMINAIRE W/ ARM
- PROP TEMP PEDESTRIAN SIGNAL HEAD
- PROP TEMP PEDESTRIAN PUSH BUTTON
- PROP RUN NUMBER

STATE OF TEXAS
ZAHIDUL SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER
08/24/20

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

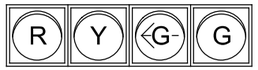
TEMPORARY SIGNAL LAYOUTS AT HOCOMBE BLVD PHASE 2 STEP 3 & STEP 4

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		165
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

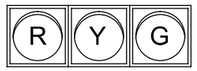
PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



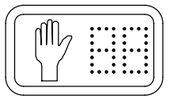
A, D, F, J

3-SECTION, 1-WAY



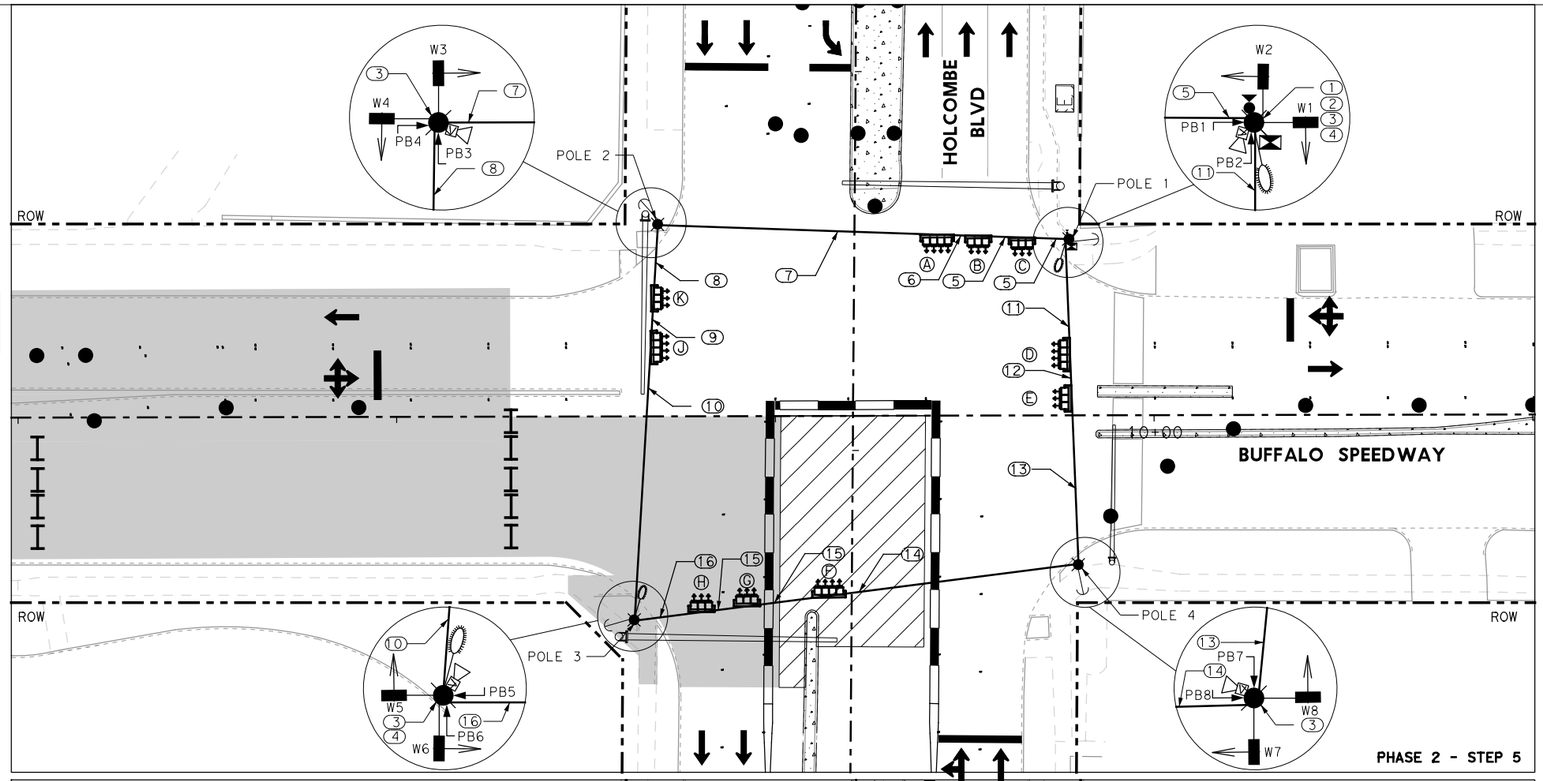
B, C, E,
G, H, K

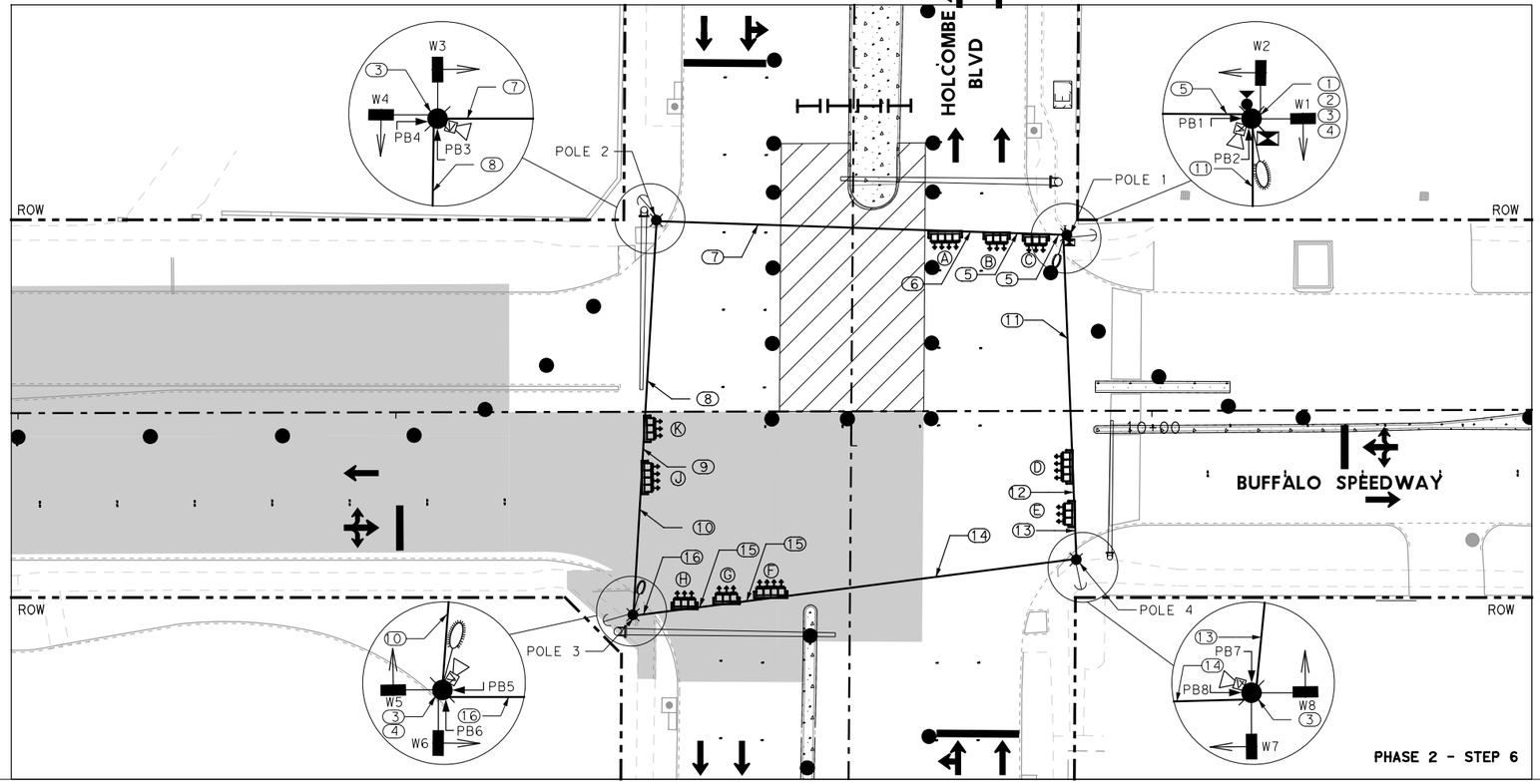
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



W1-W8

NOTE:
SEE NOTES FOR HOLCOMBE BLVD INTERSECTION IN SHEET 9.





0 40′ 80′
SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- INTERSECTION CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- PROP GUY WIRE
- PROP TEMP SERVICE METER
- PROP TEMP TIMBER POLE
- PROP TEMP POLE MOUNTED SIGNAL CONTROLLER
- PROP TEMP SIGNAL HEAD
- PROP TEMP VIVDS CAMERA
- PROP TEMP LUMINAIRE W/ ARM
- PROP TEMP PEDESTRIAN SIGNAL HEAD
- PROP TEMP PEDESTRIAN PUSH BUTTON
- PROP RUN NUMBER

STATE OF TEXAS
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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT HOLCOMBE BLVD PHASE 2 STEP 5 & STEP 6

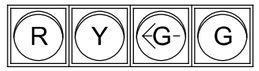
SHEET 3 OF 9

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		166
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



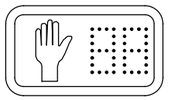
A, D, F, J

3-SECTION, 1-WAY



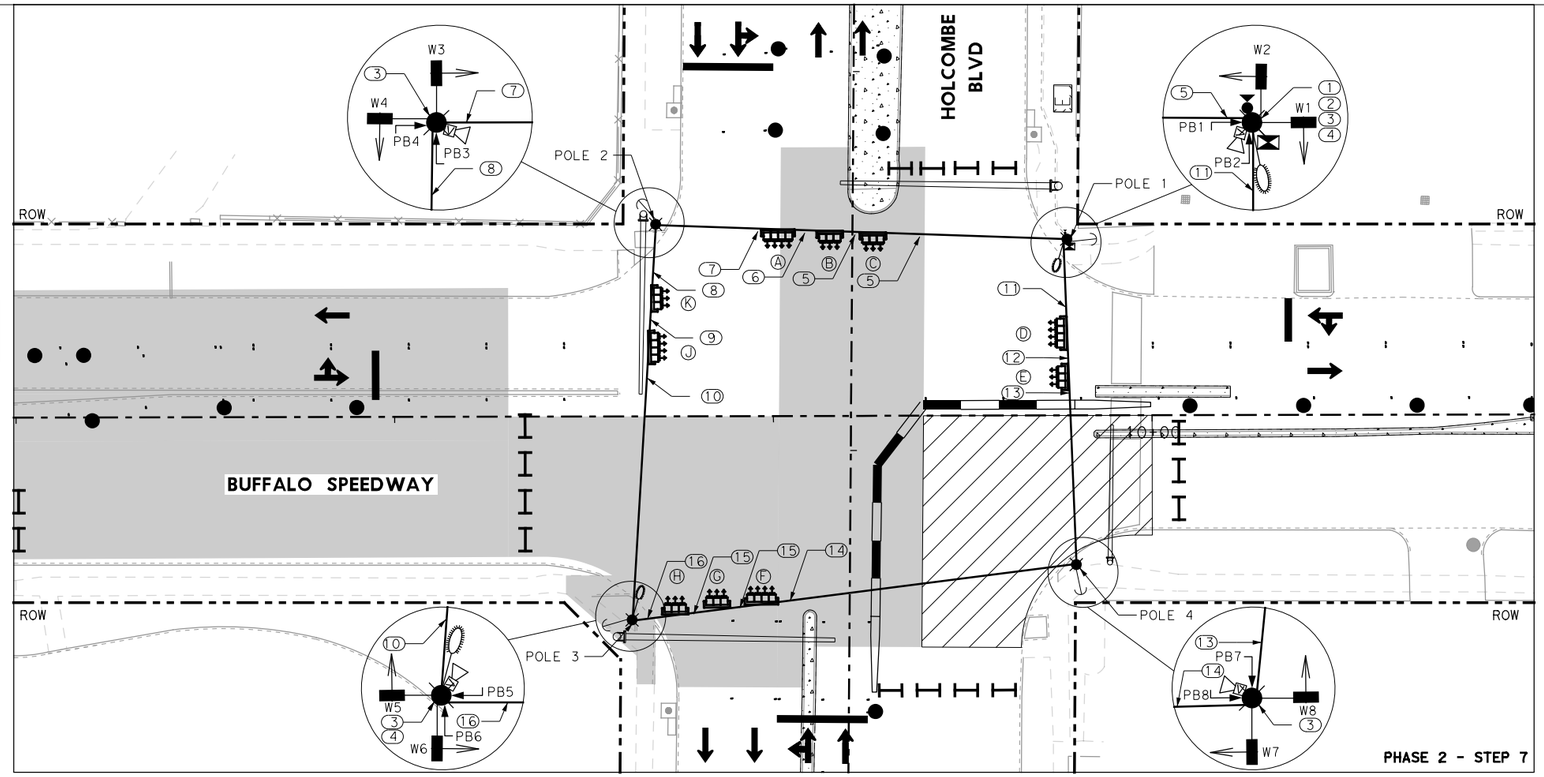
B, C, E,
G, H, K

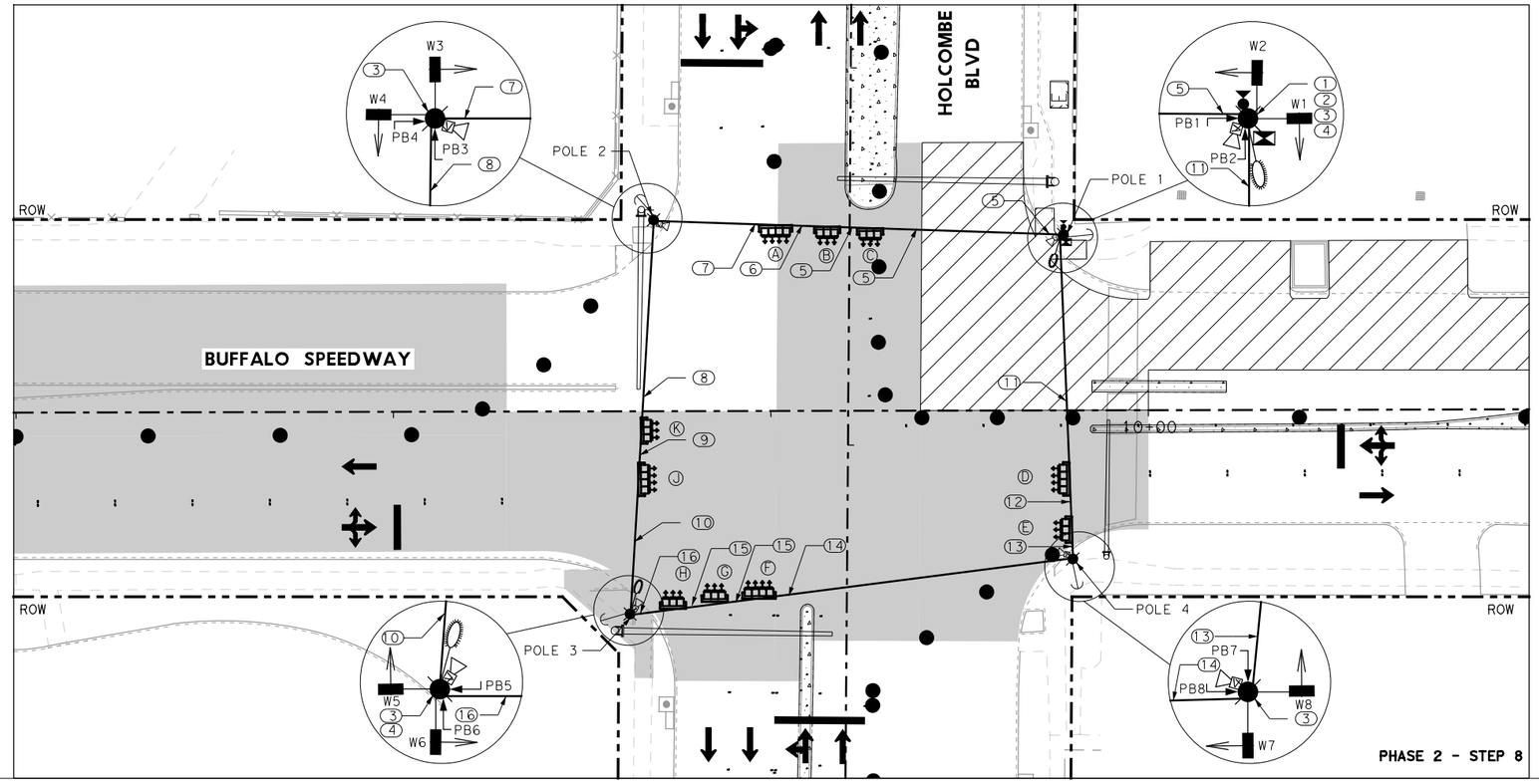
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



W1-W8

NOTE:
SEE NOTES FOR HOLCOMBE BLVD INTERSECTION IN SHEET 9.





0 40′ 80′
SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- INTERSECTION CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- PROP GUY WIRE
- PROP TEMP SERVICE METER
- PROP TEMP TIMBER POLE
- PROP TEMP POLE MOUNTED SIGNAL CONTROLLER
- PROP TEMP SIGNAL HEAD
- PROP TEMP VIVDS CAMERA
- PROP TEMP LUMINAIRE W/ ARM
- PROP TEMP PEDESTRIAN SIGNAL HEAD
- PROP TEMP PEDESTRIAN PUSH BUTTON
- PROP RUN NUMBER

STATE OF TEXAS
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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT HOLCOMBE BLVD PHASE 2 STEP 7 & STEP 8

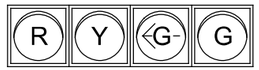
SHEET 4 OF 9

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		167
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



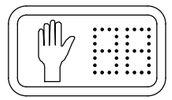
A, D, F, J

3-SECTION, 1-WAY

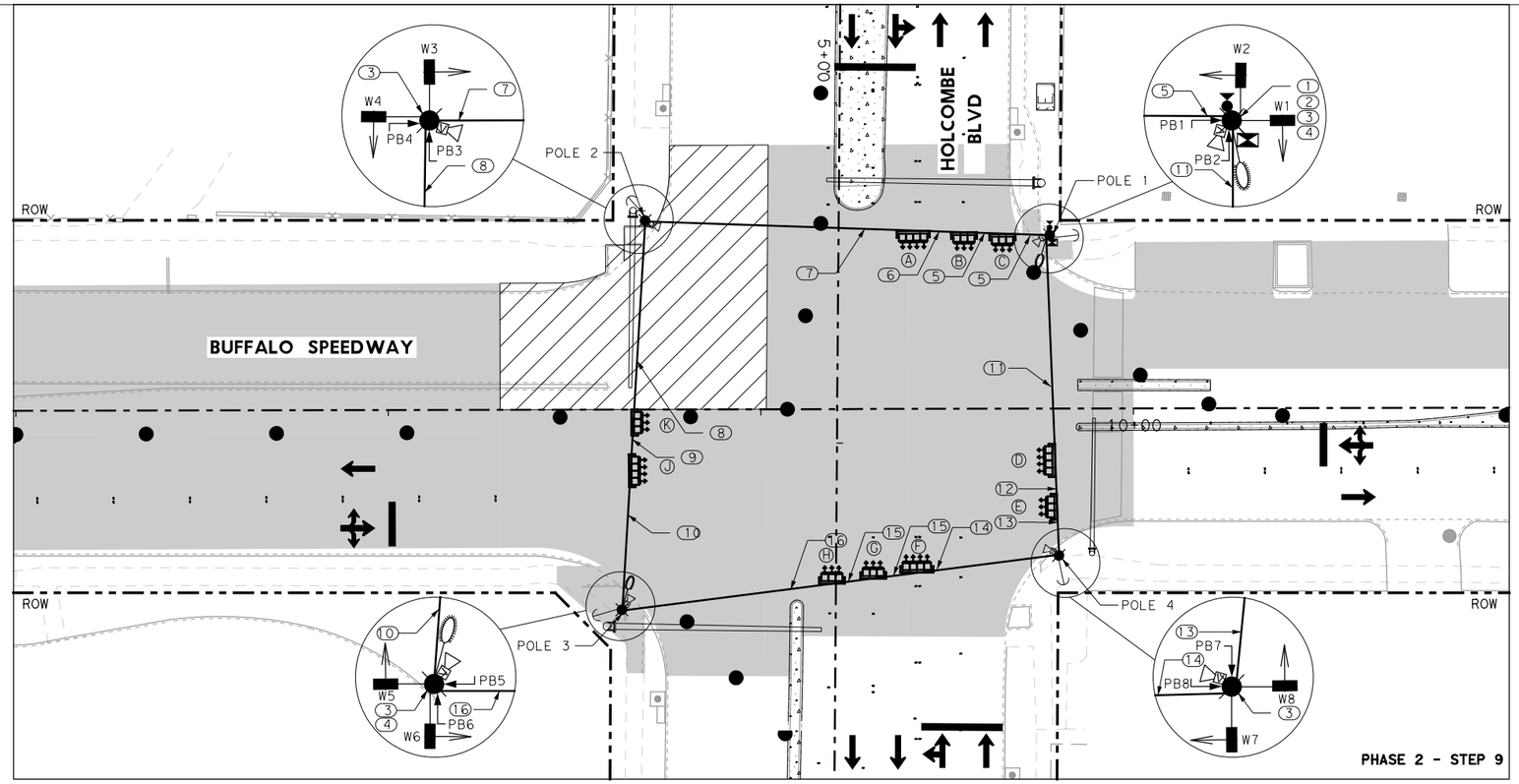


B, C, E,
G, H, K

PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



W1-W8



0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- INTERSECTION CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- PROP GUY WIRE
- PROP TEMP SERVICE METER
- PROP TEMP TIMBER POLE
- PROP TEMP POLE MOUNTED SIGNAL CONTROLLER
- PROP TEMP SIGNAL HEAD
- PROP TEMP VIVDS CAMERA
- PROP TEMP LUMINAIRE W/ ARM
- PROP TEMP PEDESTRIAN SIGNAL HEAD
- PROP TEMP PEDESTRIAN PUSH BUTTON
- PROP RUN NUMBER

NOTE:
SEE NOTES IN SHEET 9 FOR
HOLCOMBE BLVD INTERSECTION.

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS
AT HOLCOMBE BLVD
PHASE 2 STEP 9

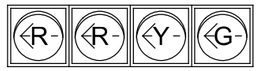
SHEET 5 OF 9

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			168
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	

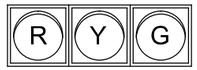
PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



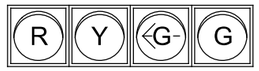
A, F

3-SECTION, 1-WAY



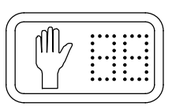
B, C, E,
G, H, K

4-SECTION, 1-WAY



D, J

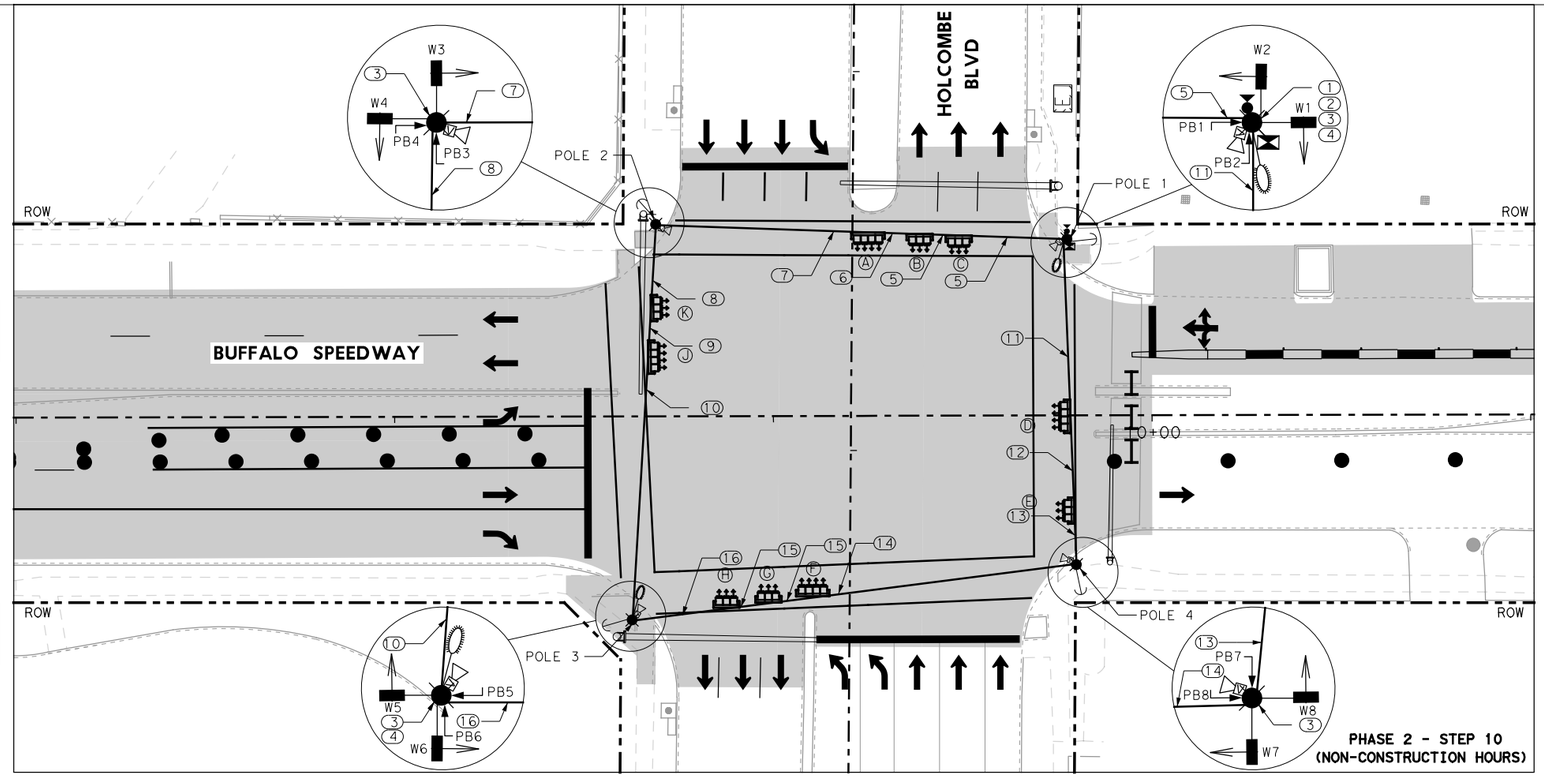
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY

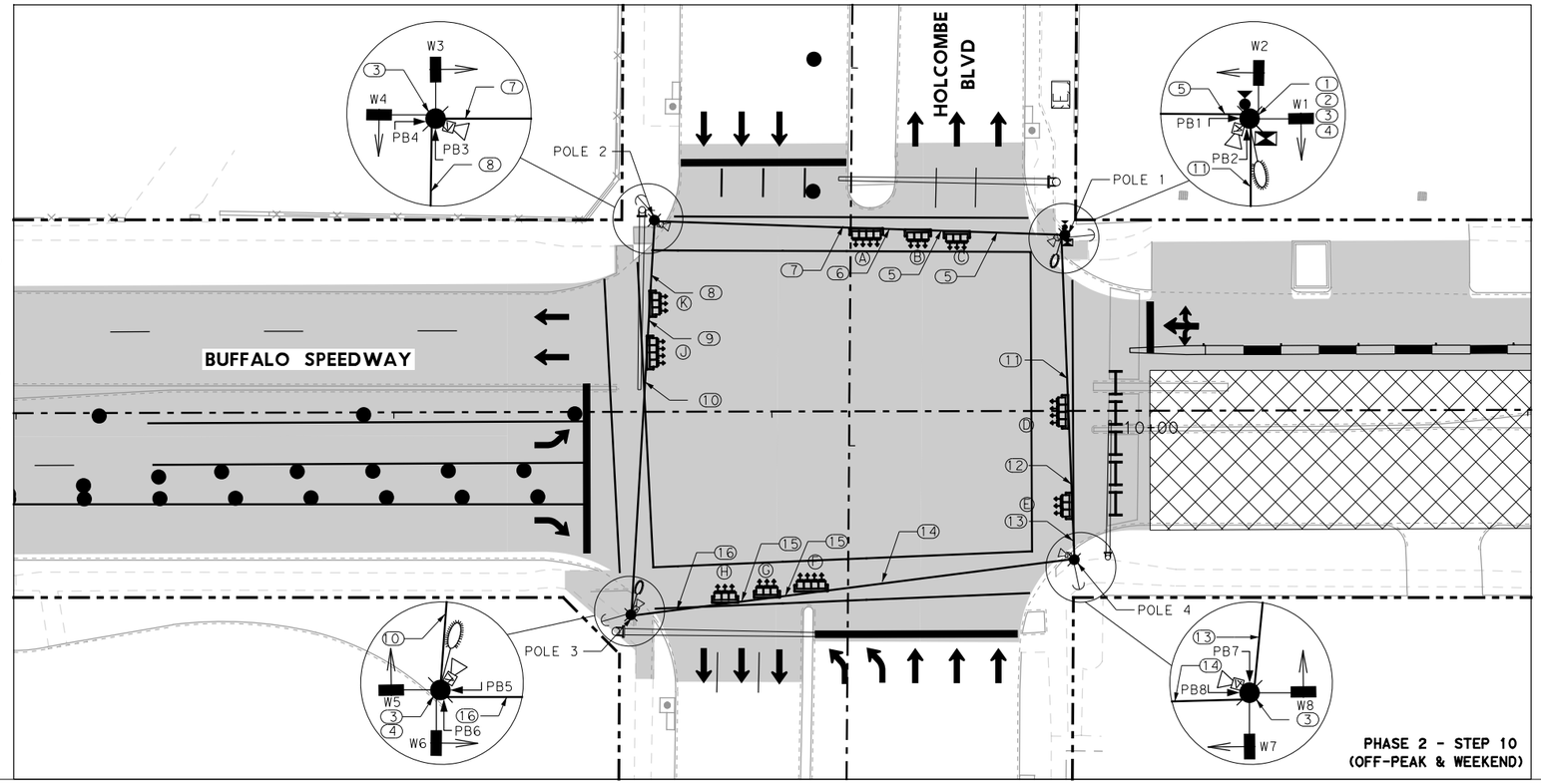


W1-W8

NOTES:

1. AT PHASE 2 STEP 10, REPLACE SIGNAL HEADS (A) AND (F) AS SHOWN.
2. PHASE 2 STEP 10, DISABLE HOLCOMBE BLVD EASTBOUND LEFT TURN SIGNAL HEAD (F) AT OFF-PEAK & WEEKEND TIME.
3. SEE OTHER NOTES FOR HOLCOMBE BLVD INTERSECTION IN SHEET 9.





0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- INTERSECTION CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- PROP GUY WIRE
- PROP TEMP SERVICE METER
- PROP TEMP TIMBER POLE
- PROP TEMP POLE MOUNTED SIGNAL CONTROLLER
- PROP TEMP SIGNAL HEAD
- PROP TEMP VIVDS CAMERA
- PROP TEMP LUMINAIRE W/ ARM
- PROP TEMP PEDESTRIAN SIGNAL HEAD
- PROP TEMP PEDESTRIAN PUSH BUTTON
- PROP RUN NUMBER

STATE OF TEXAS
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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

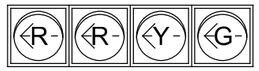
TEMPORARY SIGNAL LAYOUTS AT HOLCOMBE BLVD PHASE 2 STEP 10 (NON-CONTRUCTION HOURS AND OFF-PEAK & WEEKEND)

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		169
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

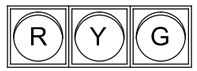
PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



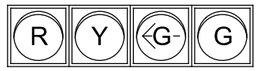
A, F

3-SECTION, 1-WAY



B, C, E,
G, H, K

4-SECTION, 1-WAY

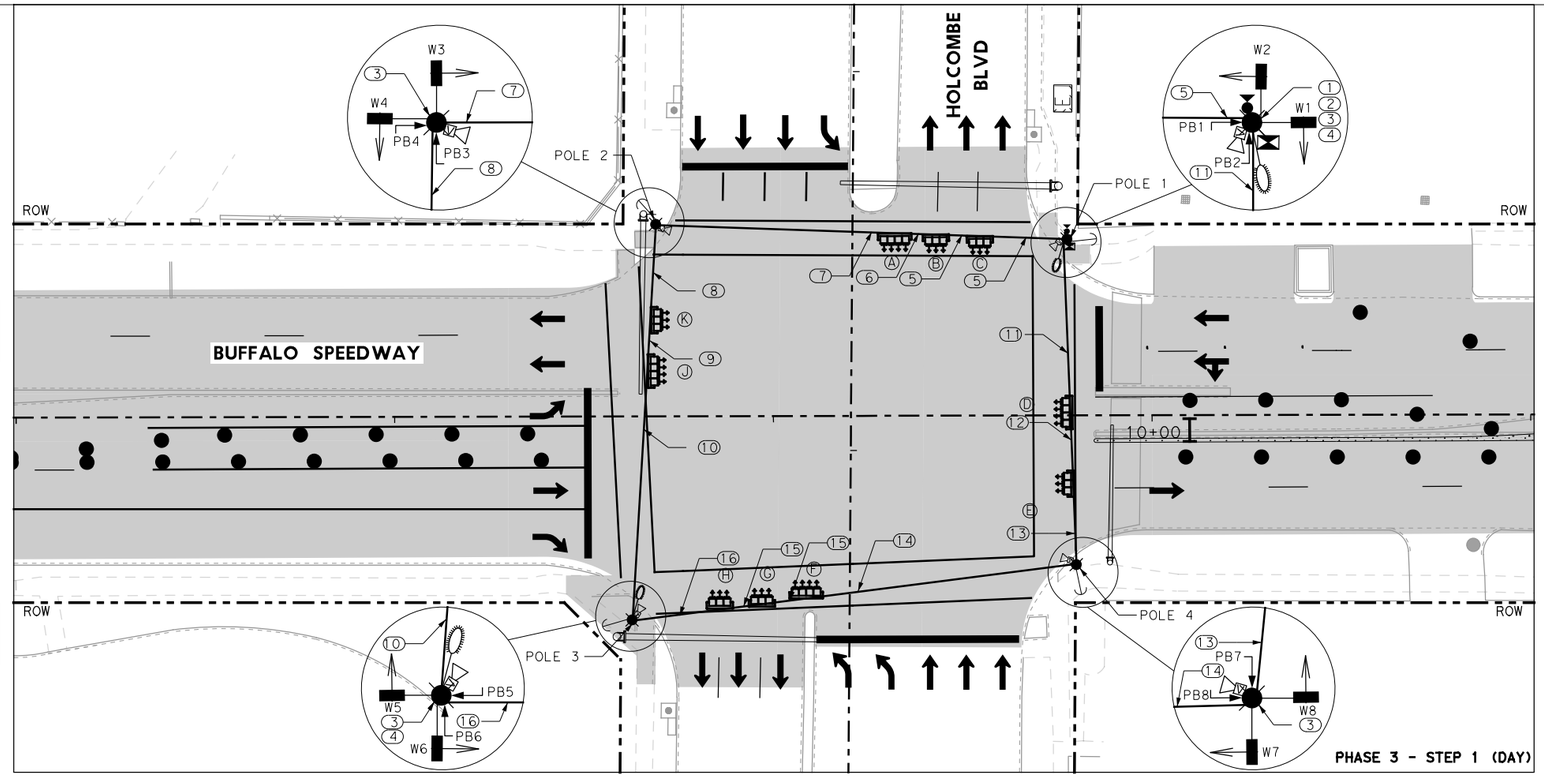


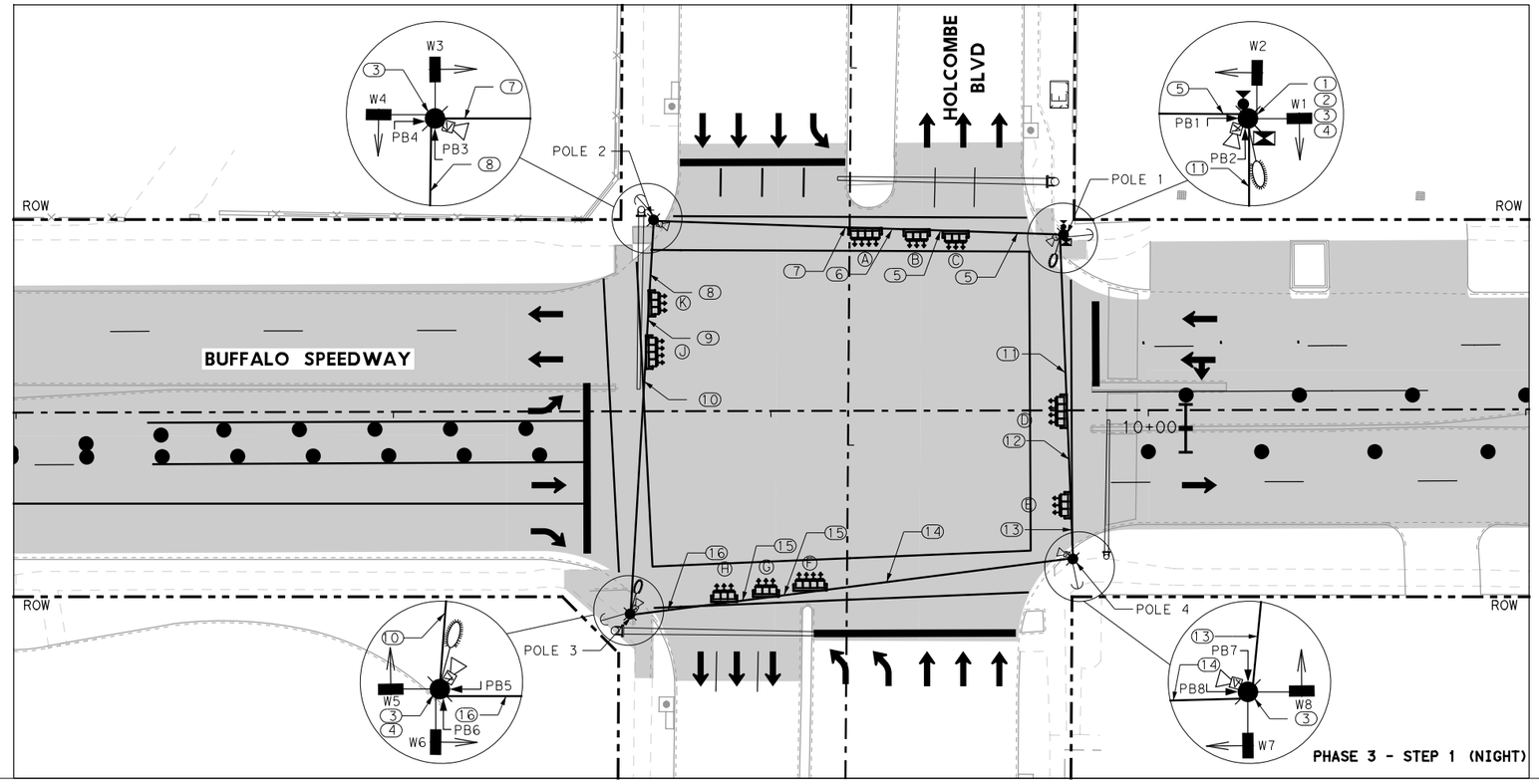
D, J

PEDESTRIAN SIGNAL
1-SECTION, 1-WAY

W1-W8

NOTE:
SEE NOTES FOR HOLCOMBE BLVD INTERSECTION IN SHEET 9.





0 40′ 80′
SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- INTERSECTION CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- PROP GUY WIRE
- PROP TEMP SERVICE METER
- PROP TEMP TIMBER POLE
- PROP TEMP POLE MOUNTED SIGNAL CONTROLLER
- PROP TEMP SIGNAL HEAD
- PROP TEMP VIVDS CAMERA
- PROP TEMP LUMINAIRE W/ ARM
- PROP TEMP PEDESTRIAN SIGNAL HEAD
- PROP TEMP PEDESTRIAN PUSH BUTTON
- PROP RUN NUMBER

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT HOLCOMBE BLVD PHASE 3 STEP 1 (DAY AND NIGHT)

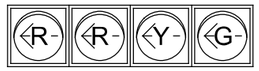
SHEET 7 OF 9

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		170
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

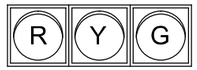
PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



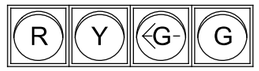
A, F

3-SECTION, 1-WAY



B, C, E,
G, H, K

4-SECTION, 1-WAY

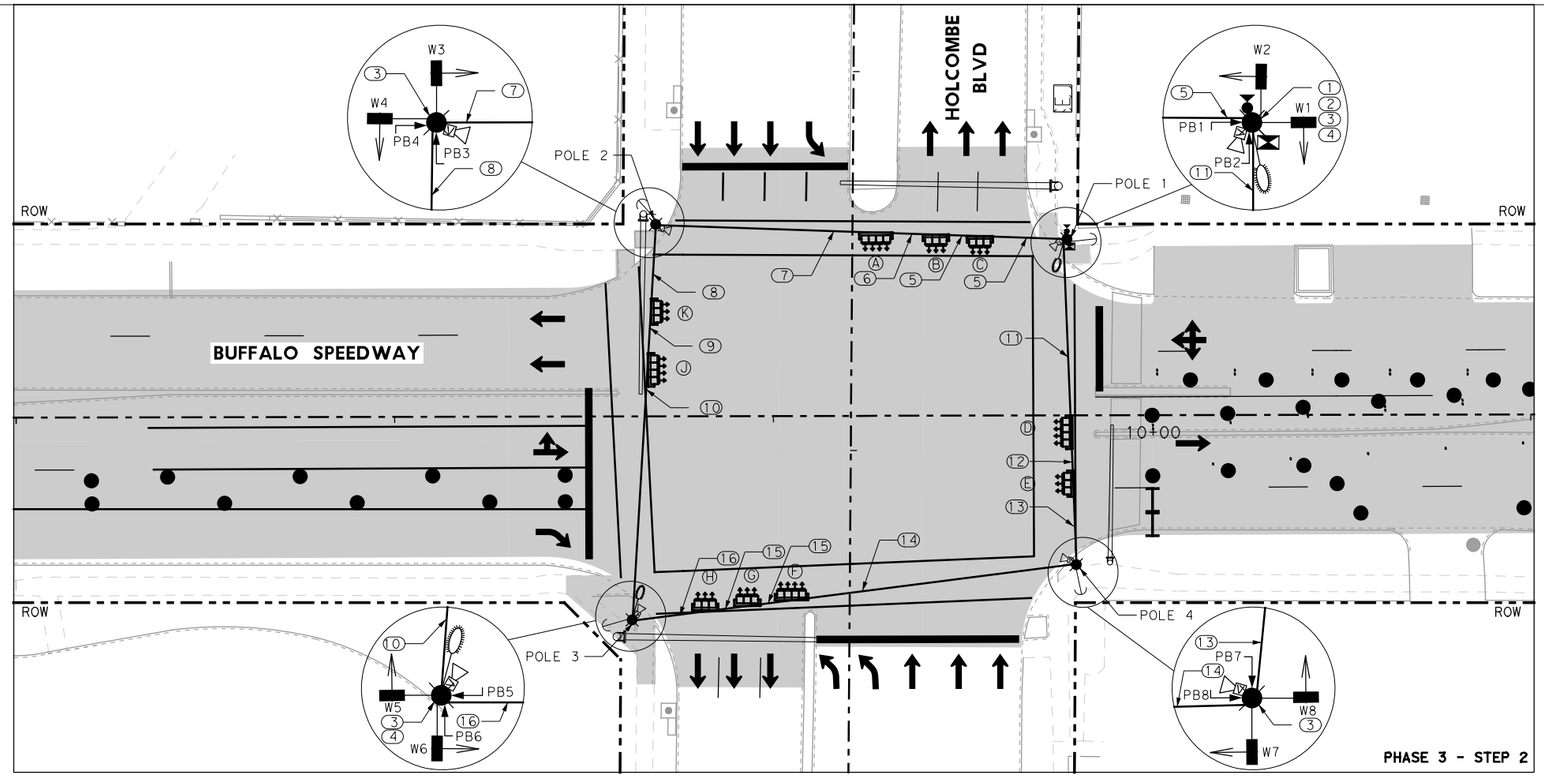


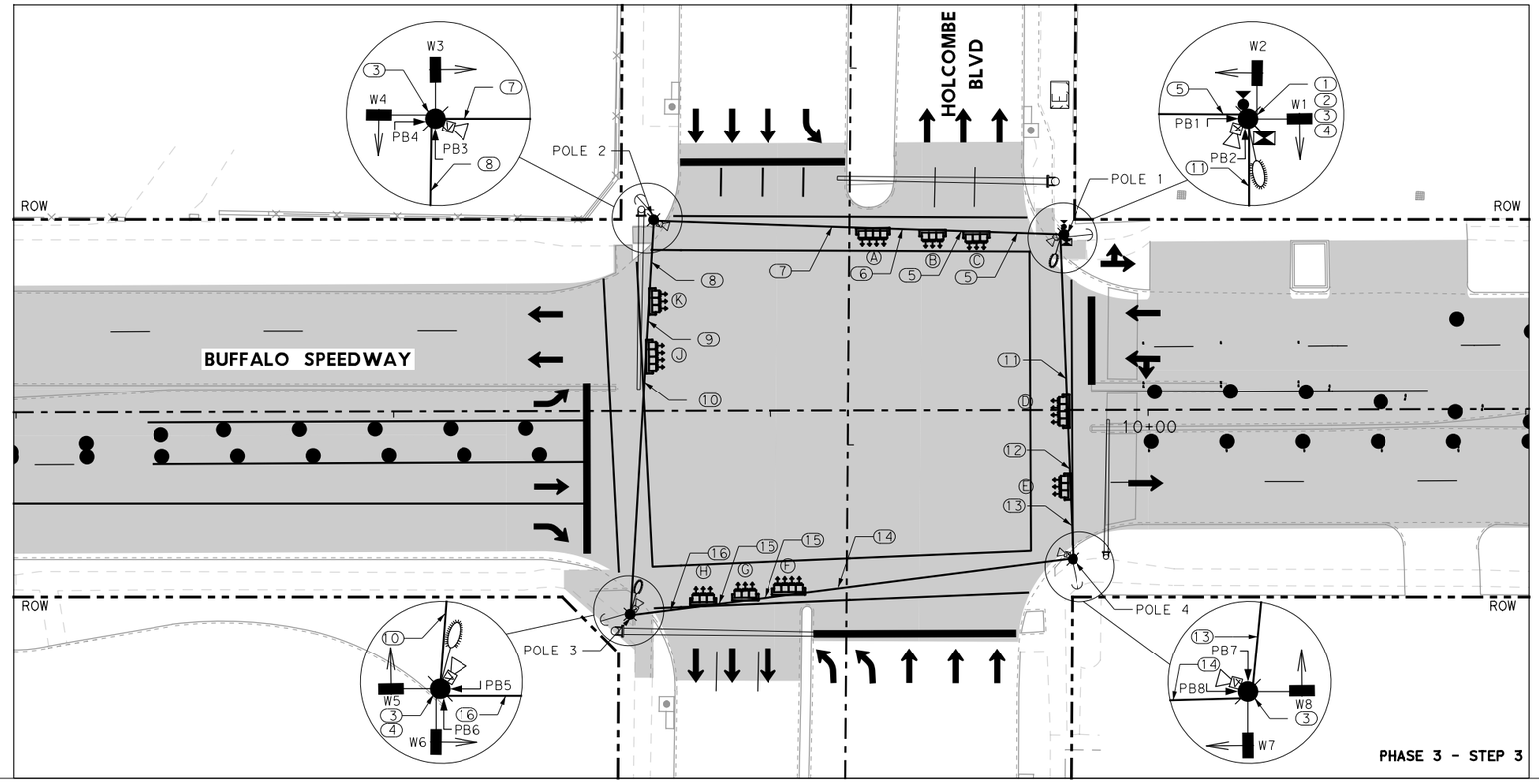
D, J

PEDESTRIAN SIGNAL
1-SECTION, 1-WAY

W1-W8

NOTE:
SEE NOTES FOR HOLCOMBE BLVD INTERSECTION IN SHEET 9.





0 40′ 80′
SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- INTERSECTION CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- PROP GUY WIRE
- PROP TEMP SERVICE METER
- PROP TEMP TIMBER POLE
- PROP TEMP POLE MOUNTED SIGNAL CONTROLLER
- PROP TEMP SIGNAL HEAD
- PROP TEMP VIVDS CAMERA
- PROP TEMP LUMINAIRE W/ ARM
- PROP TEMP PEDESTRIAN SIGNAL HEAD
- PROP TEMP PEDESTRIAN PUSH BUTTON
- PROP RUN NUMBER

STATE OF TEXAS
ZAHIDUL SIDDIQUE
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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT HOLCOMBE BLVD PHASE 3 STEP 2 & STEP 3

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		171
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

Run No.	CONDUIT				CONDUCTOR						CABLES								VIVDS	
	SPAN WIRE		RMC		INSULATED		BARE				ILLUMINATION		PUSH BUTTON		PED SIGNAL		VEHICLE SIGNAL		POWER & COAX	
	WIRE STRAND		2" RMC		#4 XHHW		#4 BARE		#6 BARE		TRAY CABLE #12/4C		#12/2C		#12/4C		#12/7C			
	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF
1			1	15	2	15	1	15												
2			1	40					1	40			6	40	6	40	8	40	3	40
3			1	40					1	40			2	40	2	40			1	40
4			1	40					1	40	2	40								
5	1	110											4	110	4	110	4	110	2	110
6	1												4		4		3		2	
7	1												4		4		2		2	
8	1	110											2	110	2	110	2	110	1	110
9	1												2		2		1		1	
10	1												2		2				1	
11	1	90									1	90	2	90	2	90	4	90	1	90
12	1										1		2		2		3		1	
13	1										1		2		2		2		1	
14	1	120									1	120					2	120		
15	1										1						1			
16	1										1									
TOTAL		430		135		30		15		120		290		1160		1160		1580		580

NOTE:
RUN 6 AND RUN 7 QUANTITIES ARE INCLUDED IN RUN 5 QUANTITIES; RUN 9 AND RUN 10 QUANTITIES ARE INCLUDED IN RUN 8 QUANTITIES;
RUN 12 AND RUN 13 QUANTITIES ARE INCLUDED IN RUN 11 QUANTITIES; RUN 15 AND RUN 16 QUANTITIES ARE INCLUDED IN RUN 14 QUANTITIES;

POLE CHART	
POLE #	DESCRIPTION
POLE 1	40' TIMBER POLE W/ POLE MOUNTED CONTROLLER, LUMINAIRE, AND VIVDS
POLE 2	40' TIMBER POLE W/ VIVDS
POLE 3	40' TIMBER POLE W/ LUMINAIRE AND VIVDS
POLE 4	40' TIMBER POLE W/ VIVDS

TEMPORARY SIGNAL NOTES:

1. INSTALL 40' TIMBER POLES WITH ANCHORS.
2. INSTALL SPAN WIRE WITH SIGNAL HEADS AND PROVIDE ENOUGH SLACK AT EACH SIGNAL.
3. COVER/REMOVE EXISTING SIGNAL HEADS MOUNTED ON MAST ARM DURING THE OPERATION OF TEMPORARY SIGNAL.
4. KEEP EXISTING STREET NAME SIGNS AND COVER OTHER SIGNS AS NEEDED.
5. ADJUST SIGNAL HEADS, VIDEO CAMERA & DETECTION ZONES DURING DIFFERENT PHASES OF CONSTRUCTION AS DIRECTED BY THE FIELD ENGINEER. THE COST TO RELOCATE SIGNAL HEADS DURING DIFFERENT PHASES AND STEPS WILL BE INCIDENTAL TO THE PAY ITEM No. 0681 6001 (TEMP TRAFFIC SIGNALS).
6. PHASE 2 STEP 1-3, PROTECTED LEFT TURN SIGNAL HEADS TO BE USED FOR HOLCOMBE BLVD TRAFFIC. PHASE 2 STEP 4-9, REPLACE LEFT TURN SIGNAL HEADS TO MAKE ALL TRAFFIC APPROACHES TO BE OPERATED AS SPLIT PHASE. PHASE 2 STEP 10 AND PHASE 3 STEP 1-3, LEFT TURN SIGNAL HEADS TO BE USED FOR HOLCOMBE BLVD TRAFFIC. AFTER PHASE 3 STEP 3, REMOVE TEMPORARY SIGNAL SYSTEM, AND USE EXISTING SIGNAL SYSTEM.
7. ALL SIGNAL EQUIPMENT INCLUDING DETECTION AFFECTED BY CONSTRUCTION SHALL BE INSTALLED AT ORIGINAL POSITION/LOCATION BY CONTRACTOR AFTER CONSTRUCTION IS COMPLETED.
8. REUSE EXISTING ELECTRICAL SERVICE, GROUND BOX AND CONDUITS WHERE POSSIBLE.
9. EXISTING PAVEMENT MARKING TO BE USED IF NOT MENTIONED .SEE TRAFFIC CONTROL PLAN FOR TEMPORARY PAVEMENT MARKING LAYOUTS.
10. COIL SUFFICIENT SIGNAL AND VIVDS CABLES TO ACCOMMODATE SIGNAL HEAD ADJUSTMENTS DURING THE VARIOUS PHASES OF CONSTRUCTION.
11. LOCATIONS SHOWN FOR ALL TEMPORARY SIGNAL APPURTENANCES ARE SUBJECT TO ADJUSTMENT DUE TO FIELD CONDITIONS WITH THE APPROVAL OF THE FIELD ENGINEER.
12. LOCATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK. CONTRACTOR SHOULD CONTACT ALL PRIVATE AND PUBLIC UTILITIES FOR LOCATION OF UNDERGROUND FACILITIES AT LEAST 48 HOURS PRIOR TO ANY DRILLING, BORING, TRENCHING, OR EXCAVATION. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGE CAUSED BY CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ALL UTILITIES.

STATE OF TEXAS
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08/24/20

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

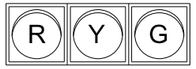
TEMPORARY SIGNAL LAYOUTS
PLAN LAYOUT DETAILS
AT HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			172
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	

EXISTING SIGNAL HEADS

3-SECTION, 1-WAY



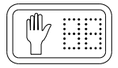
A, B, C, D,
E, F, J, H

3-SECTION, 1-WAY



G

PEDESTRIAN SIGNAL
1-SECTION, 1-WAY

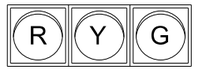


W1-W8

PHASE 3 - STEP 1

EXISTING SIGNAL HEADS

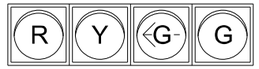
3-SECTION, 1-WAY



A, B, D,
E, F, J

PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



C, H

NOTE: OTHER SIGNAL HEADS REMAIN SAME WITH PHASE 3 STEP 1.

PHASE 3 - STEP 2

TEMPORARY SIGNAL NOTES:

1. EXISTING TRAFFIC SIGNAL SYSTEM TO BE USED DURING CONSTRUCTION. REPLACE EXISTING SIGNAL HEADS AS NEEDED. CONTRACTOR MAY USE EXISTING SIGNAL HEADS WITH THE APPROVAL OF THE FIELD ENGINEER.

2. ADJUST SIGNAL HEADS WITHIN LANE OF TRAFFIC DURING DIFFERENT PHASES OF CONSTRUCTION. THE COST TO RELOCATE SIGNAL HEADS DURING DIFFERENT PHASES AND STEPS WILL BE INCIDENTAL TO THE PAY ITEM No. 0681 6001 (TEMP TRAF SIGNALS).

3. KEEP EXISTING STREET NAME SIGNS AND COVER/REMOVE OTHER SIGNS AS NEEDED.

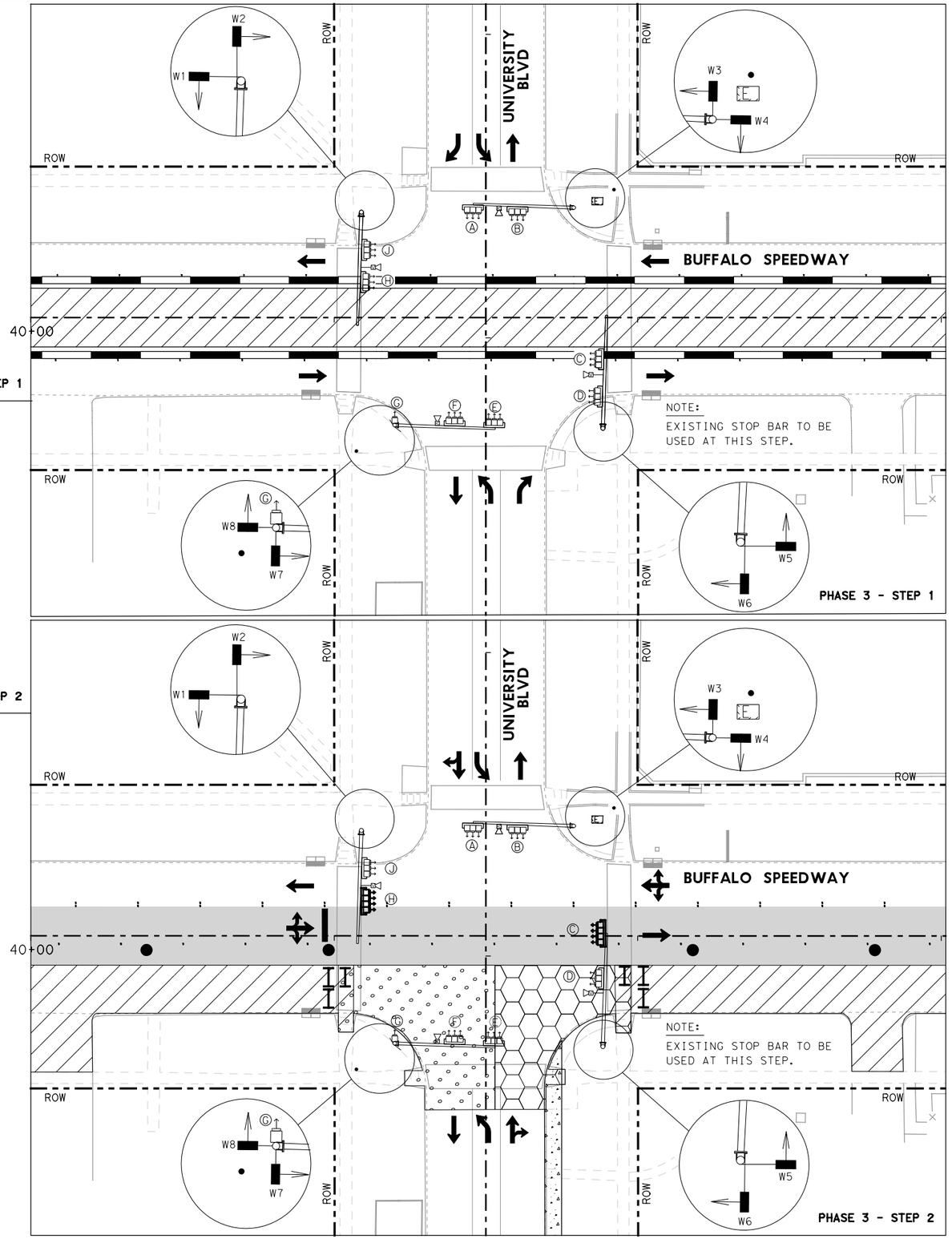
4. ADJUST SIGNAL HEADS, VIDEO CAMERAS & DETECTION ZONES AS DERECTED BY THE FIELD ENGINEER.

5. COIL SUFFICIENT SIGNAL AND VIVDS CABLES TO ACCOMMODATE SIGNAL HEAD ADJUSTMENTS DURING THE VARIOUS PHASES OF CONSTRUCTION.

6. SEE TRAFFIC CONTROL PLAN FOR TEMPORARY PAVEMENT MARKING LAYOUTS. EXISTING PAVEMENT MARKING TO BE USED IF NOT REFERED.

7. ALL SIGNAL EQUIPMENT INCLUDING DETECTION AFFECTED BY CONSTRUCTION SHALL BE INSTALLED AT ORIGINAL POSITION/LOCATION BY CONTRACTOR AFTER CONSTRUCTION IS COMPLETED.

8. AT PHASE 3 STEP 2, REPLACE SIGNAL HEADS (C) AND (H) AS SHOWN.



0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- EXIST SIGNAL HEAD
- EXIST VIVDS CAMERA
- EXIST PEDESTRIAN SIGNAL HEAD
- EXIST PEDESTRIAN PUSH BUTTON
- PROP TEMP SIGNAL HEAD

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98635
LICENSED
PROFESSIONAL ENGINEER
08/24/20

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Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT UNIVERSITY BLVD PHASE 3 STEP 1 & STEP 2

SHEET 1 OF 3

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		173
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

EXISTING SIGNAL HEADS

3-SECTION, 1-WAY



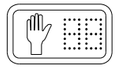
A, B, D,
E, F, J

3-SECTION, 1-WAY



G

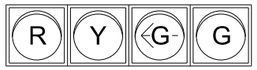
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



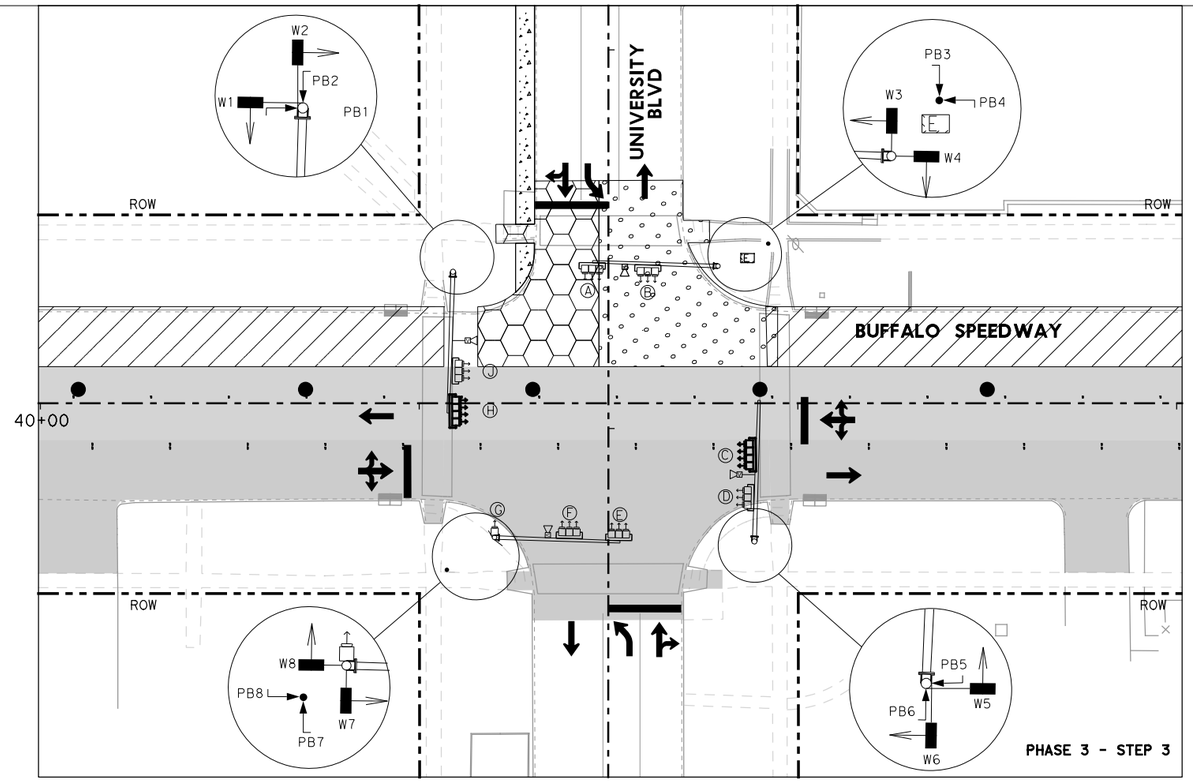
W1-W8

PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



C, H



0 40' 80'

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- EXIST SIGNAL HEAD
- EXIST VIVDS CAMERA
- EXIST PEDESTRIAN SIGNAL HEAD
- EXIST PEDESTRIAN PUSH BUTTON
- PROP TEMP SIGNAL HEAD

TEMPORARY SIGNAL NOTES:

1. EXISTING TRAFFIC SIGNAL SYSTEM TO BE USED DURING CONSTRUCTION. REPLACE EXISTING SIGNAL HEADS AS NEEDED. CONTRACTOR MAY USE EXISTING SIGNAL HEADS WITH THE APPROVAL OF THE FIELD ENGINEER.
2. ADJUST SIGNAL HEADS WITHIN LANE OF TRAFFIC DURING DIFFERENT PHASES OF CONSTRUCTION. THE COST TO RELOCATE SIGNAL HEADS DURING DIFFERENT PHASES AND STEPS WILL BE INCIDENTAL TO THE PAY ITEM No. 0681 6001 (TEMP TRAF SIGNALS).
3. KEEP EXISTING STREET NAME SIGNS AND COVER/REMOVE OTHER SIGNS AS NEEDED.
4. ADJUST SIGNAL HEADS, VIDEO CAMERAS & DETECTION ZONES AS DERECTED BY THE FIELD ENGINEER.
5. COIL SUFFICIENT SIGNAL AND VIVDS CABLES TO ACCOMMODATE SIGNAL HEAD ADJUSTMENTS DURING THE VARIOUS PHASES OF CONSTRUCTION.
6. SEE TRAFFIC CONTROL PLAN FOR TEMPORARY PAVEMENT MARKING LAYOUTS. EXISTING PAVEMENT MARKING TO BE USED IF NOT REFERRED.
7. ALL SIGNAL EQUIPMENT INCLUDING DETECTION AFFECTED BY CONSTRUCTION SHALL BE INSTALLED AT ORIGINAL POSITION/LOCATION BY CONTRACTOR AFTER CONSTRUCTION IS COMPLETED.
8. WHEN PHASE 3 STEP 3 IS COMPLETED, PROPOSED SIGNAL TO BE USED FOR TRAFFIC.



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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT UNIVERSITY BLVD PHASE 3 STEP 3

SHEET 2 OF 3

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		174
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

EXISTING SIGNAL HEADS

3-SECTION, 1-WAY



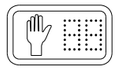
A, B, D,
E, F, J

3-SECTION, 1-WAY



G

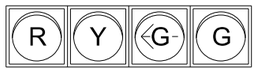
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



W1-W8

PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



C, H

TEMPORARY SIGNAL NOTES:

1. EXISTING TRAFFIC SIGNAL SYSTEM TO BE USED DURING CONSTRUCTION. REPLACE EXISTING SIGNAL HEADS AS NEEDED. CONTRACTOR MAY USE EXISTING SIGNAL HEADS WITH THE APPROVAL OF THE FIELD ENGINEER.

2. ADJUST SIGNAL HEADS WITHIN LANE OF TRAFFIC DURING DIFFERENT PHASES OF CONSTRUCTION. THE COST TO RELOCATE SIGNAL HEADS DURING DIFFERENT PHASES AND STEPS WILL BE INCIDENTAL TO THE PAY ITEM No. 0681 6001 (TEMP TRAF SIGNALS).

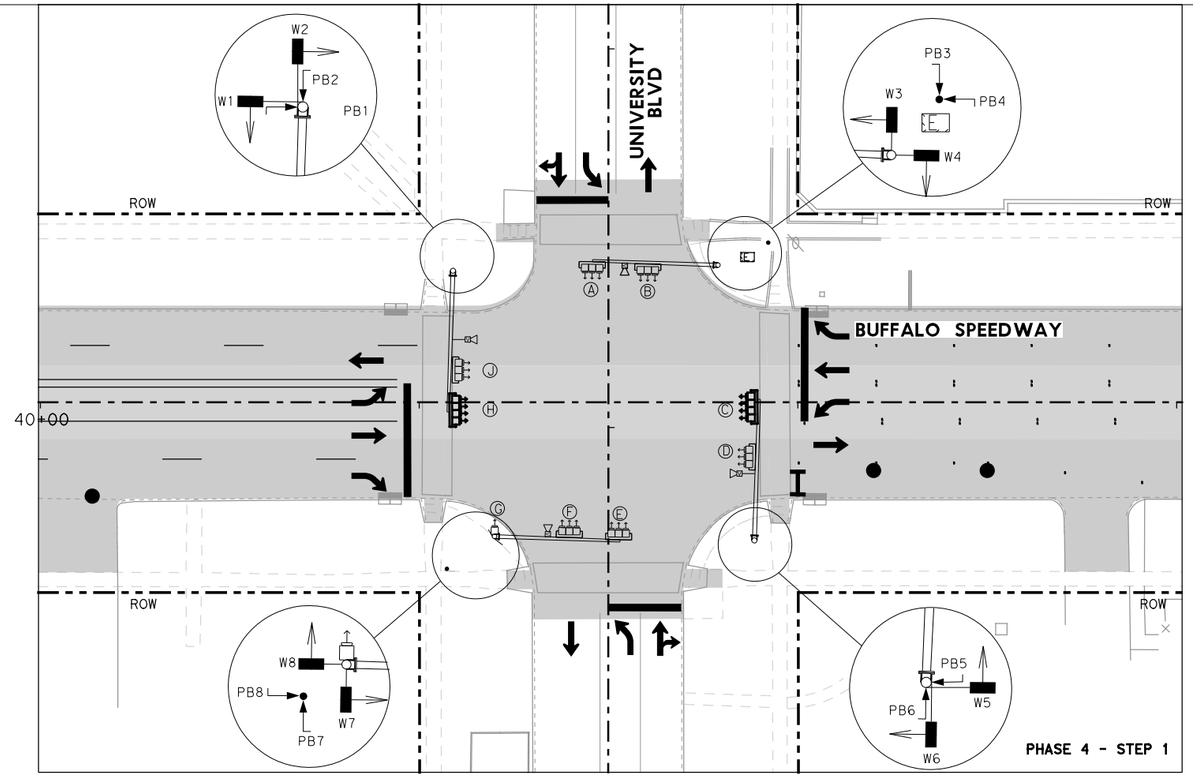
3. KEEP EXISTING STREET NAME SIGNS AND COVER/REMOVE OTHER SIGNS AS NEEDED.

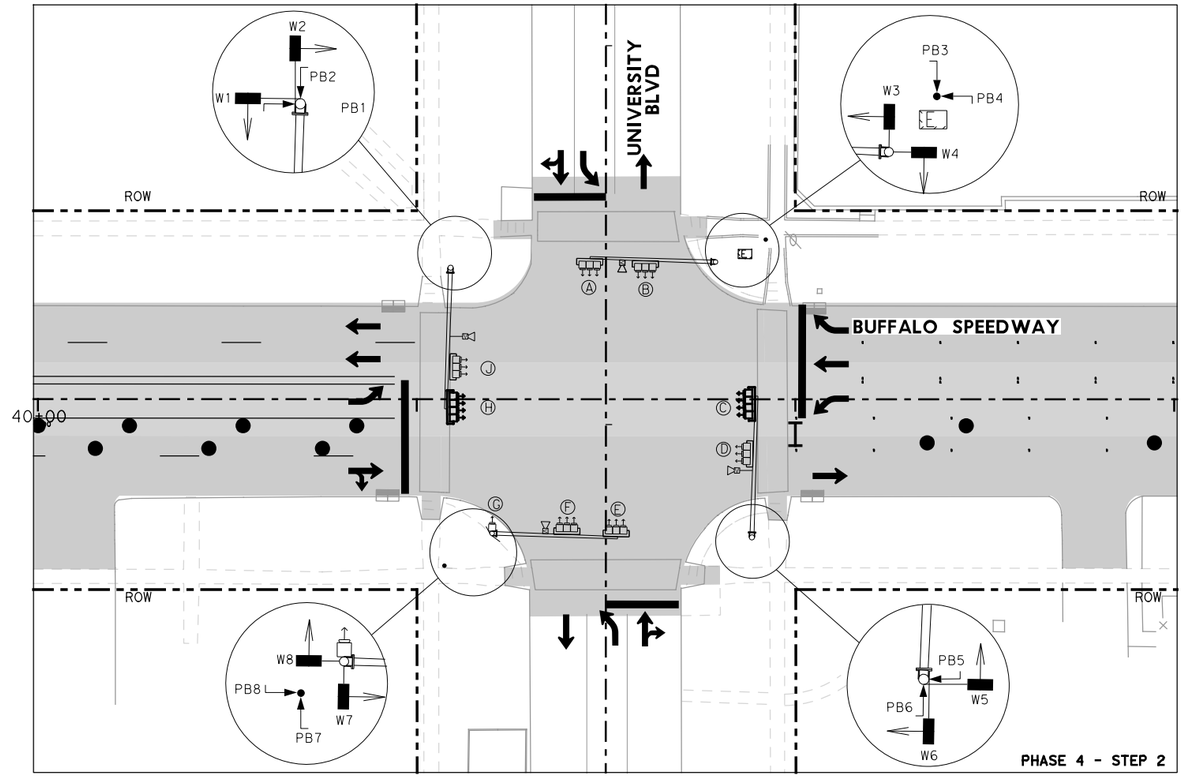
4. ADJUST SIGNAL HEADS, VIDEO CAMERAS & DETECTION ZONES AS DERECTED BY THE FIELD ENGINEER.

5. COIL SUFFICIENT SIGNAL AND VIVDS CABLES TO ACCOMMODATE SIGNAL HEAD ADJUSTMENTS DURING THE VARIOUS PHASES OF CONSTRUCTION.

6. SEE TRAFFIC CONTROL PLAN FOR TEMPORARY PAVEMENT MARKING LAYOUTS. EXISTING PAVEMENT MARKING TO BE USED IF NOT REFERED.

7. ALL SIGNAL EQUIPMENT INCLUDING DETECTION AFFECTED BY CONSTRUCTION SHALL BE INSTALLED AT ORIGINAL POSITION/LOCATION BY CONTRACTOR AFTER CONSTRUCTION IS COMPLETED.



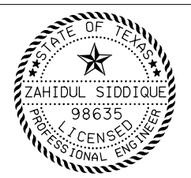


0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- EXIST SIGNAL HEAD
- EXIST VIVDS CAMERA
- EXIST PEDESTRIAN SIGNAL HEAD
- EXIST PEDESTRIAN PUSH BUTTON
- PROP TEMP SIGNAL HEAD



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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT UNIVERSITY BLVD PHASE 4 STEP 1 & STEP 2

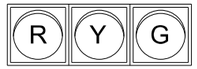
SHEET 3 OF 3

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		175
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

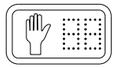
EXISTING SIGNAL HEADS

3-SECTION, 1-WAY



B, D, F, H

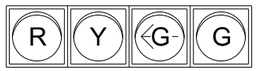
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



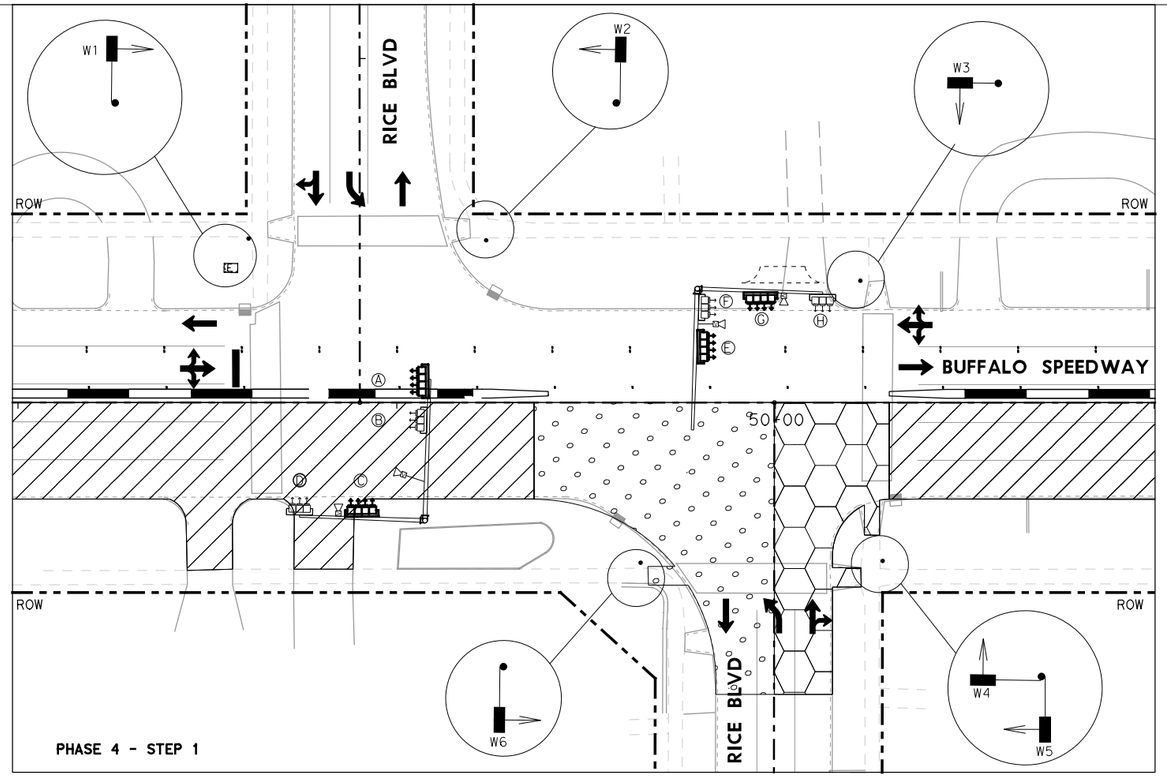
W1-W6

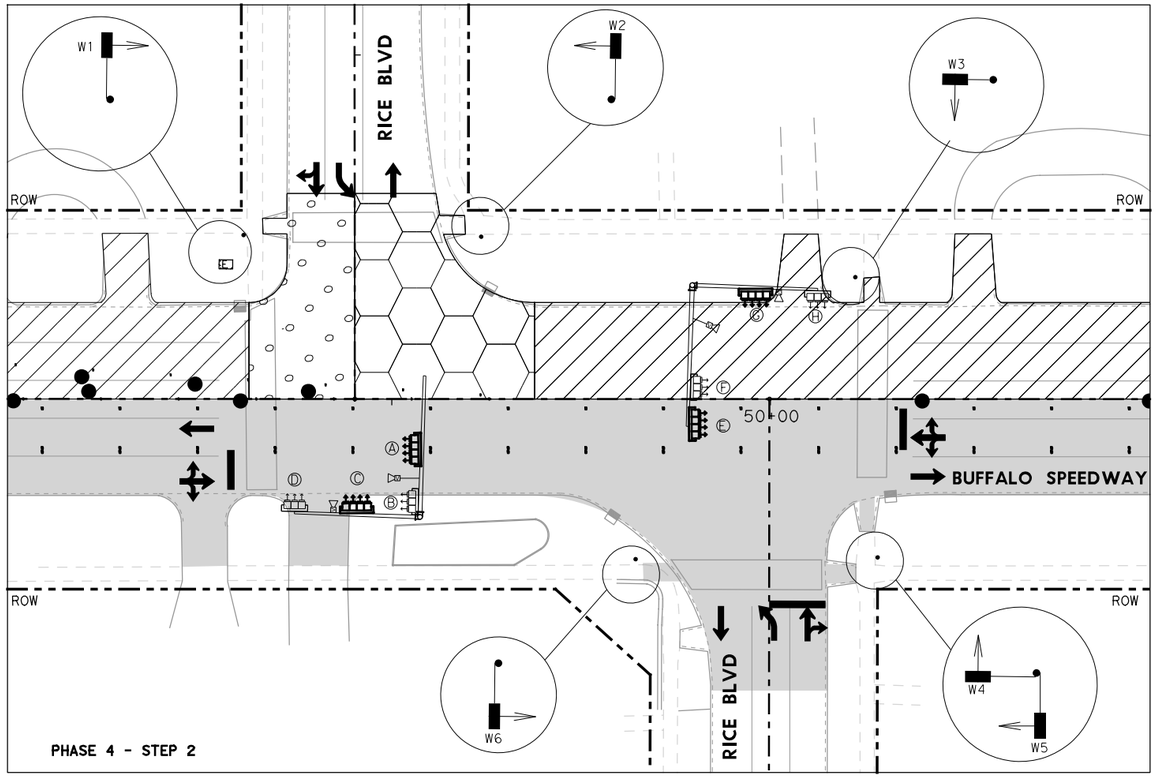
PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



A, C, E, G





TEMPORARY SIGNAL NOTES:

1. EXISTING TRAFFIC SIGNAL SYSTEM TO BE USED DURING CONSTRUCTION. REPLACE EXISTING SIGNAL HEADS AS NEEDED. CONTRACTOR MAY USE EXISTING SIGNAL HEADS WITH THE APPROVAL OF THE FIELD ENGINEER.

2. ADJUST SIGNAL HEADS WITHIN LANE OF TRAFFIC DURING DIFFERENT PHASES OF CONSTRUCTION. THE COST TO RELOCATE SIGNAL HEADS DURING DIFFERENT PHASES AND STEPS WILL BE INCIDENTAL TO THE PAY ITEM No. 0681 6001 (TEMP TRAF SIGNALS).

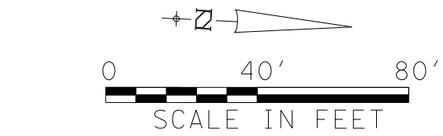
3. KEEP EXISTING STREET NAME SIGNS AND COVER/REMOVE OTHER SIGNS AS NEEDED.

4. ADJUST SIGNAL HEADS, VIDEO CAMERAS & DETECTION ZONES AS DERECTED BY THE FIELD ENGINEER.

5. COIL SUFFICIENT SIGNAL AND VIVDS CABLES TO ACCOMMODATE SIGNAL HEAD ADJUSTMENTS DURING THE VARIOUS PHASES OF CONSTRUCTION.

6. SEE TRAFFIC CONTROL PLAN FOR TEMPORARY PAVEMENT MARKING LAYOUTS. EXISTING PAVEMENT MARKING TO BE USED IF NOT REFERED.

7. ALL SIGNAL EQUIPMENT INCLUDING DETECTION AFFECTED BY CONSTRUCTION SHALL BE INSTALLED AT ORIGINAL POSITION/LOCATION BY CONTRACTOR AFTER CONSTRUCTION IS COMPLETED.



LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- EXIST SIGNAL HEAD
- EXIST VIVDS CAMERA
- EXIST PEDESTRIAN SIGNAL HEAD
- EXIST PEDESTRIAN PUSH BUTTON
- PROP TEMP SIGNAL HEAD



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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT RICE BLVD PHASE 4 STEP 1 & STEP 2

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		176
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

EXISTING SIGNAL HEADS

3-SECTION, 1-WAY



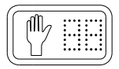
B, D, F, J

3-SECTION, 1-WAY



G

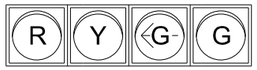
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



W1-W6

PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



A, C, E, H

TEMPORARY SIGNAL NOTES:

1. EXISTING TRAFFIC SIGNAL SYSTEM TO BE USED DURING CONSTRUCTION. REPLACE EXISTING SIGNAL HEADS AS NEEDED. CONTRACTOR MAY USE EXISTING SIGNAL HEADS WITH THE APPROVAL OF THE FIELD ENGINEER.

2. ADJUST SIGNAL HEADS WITHIN LANE OF TRAFFIC DURING DIFFERENT PHASES OF CONSTRUCTION. THE COST TO RELOCATE SIGNAL HEADS DURING DIFFERENT PHASES AND STEPS WILL BE INCIDENTAL TO THE PAY ITEM No. 0681 6001 (TEMP TRAF SIGNALS).

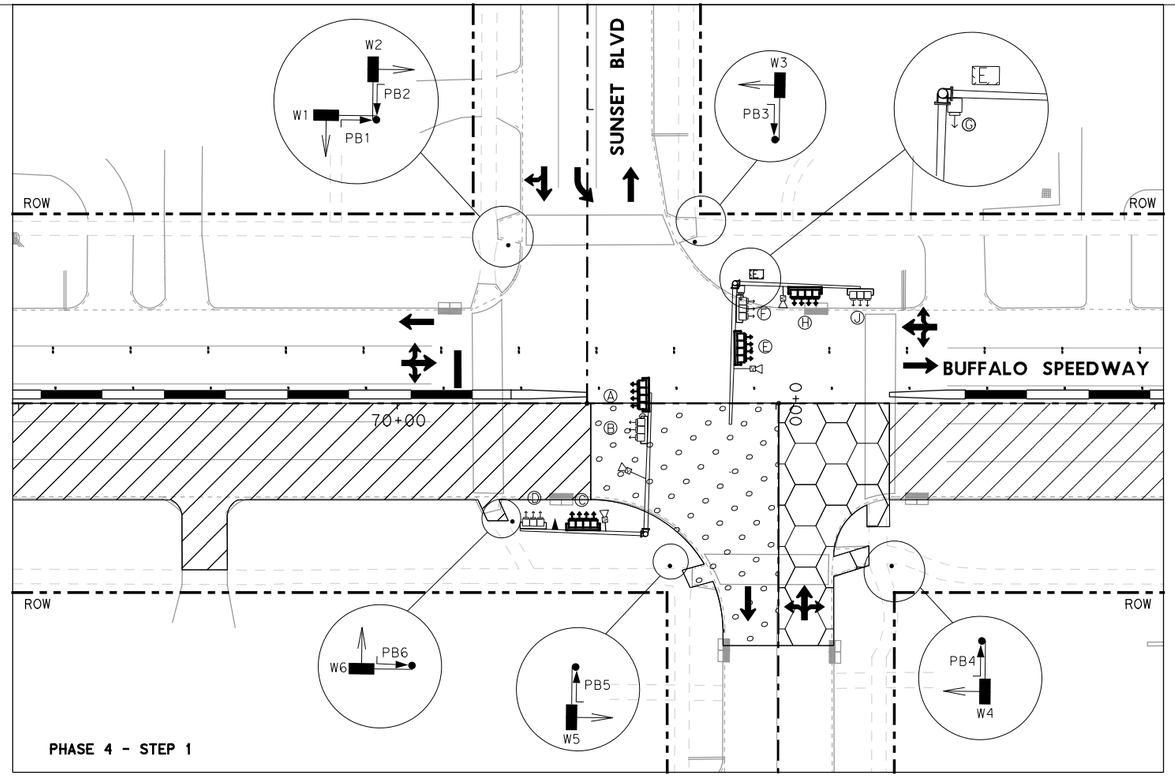
3. KEEP EXISTING STREET NAME SIGNS AND COVER/REMOVE OTHER SIGNS AS NEEDED.

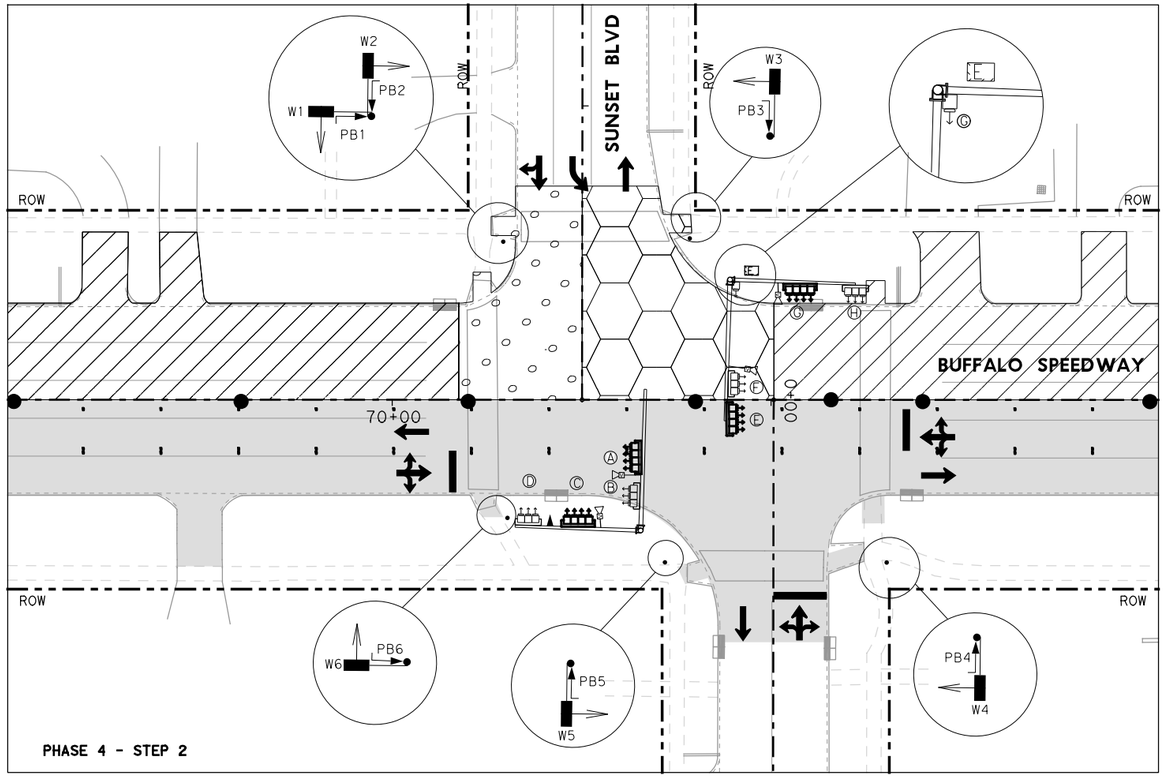
4. ADJUST SIGNAL HEADS, VIDEO CAMERAS & DETECTION ZONES AS DERECTED BY THE FIELD ENGINEER.

5. COIL SUFFICIENT SIGNAL AND VIVDS CABLES TO ACCOMMODATE SIGNAL HEAD ADJUSTMENTS DURING THE VARIOUS PHASES OF CONSTRUCTION.

6. SEE TRAFFIC CONTROL PLAN FOR TEMPORARY PAVEMENT MARKING LAYOUTS. EXISTING PAVEMENT MARKING TO BE USED IF NOT REFERED.

7. ALL SIGNAL EQUIPMENT INCLUDING DETECTION AFFECTED BY CONSTRUCTION SHALL BE INSTALLED AT ORIGINAL POSITION/LOCATION BY CONTRACTOR AFTER CONSTRUCTION IS COMPLETED.





0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- CONSTRUCT INTERSECTION STAGE 1
- CONSTRUCT INTERSECTION STAGE 2
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- EXIST SIGNAL HEAD
- EXIST VIVDS CAMERA
- EXIST PEDESTRIAN SIGNAL HEAD
- EXIST PEDESTRIAN PUSH BUTTON
- PROP TEMP SIGNAL HEAD

STATE OF TEXAS
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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT SUNSET BLVD PHASE 4 STEP 1 & STEP 2

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		177
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

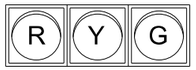
EXISTING SIGNAL HEADS

3-SECTION, 1-WAY



A, F

3-SECTION, 1-WAY



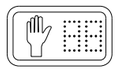
B, C, G,
H, K, N

3-SECTION, 1-WAY



D, E, J, O

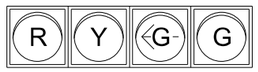
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



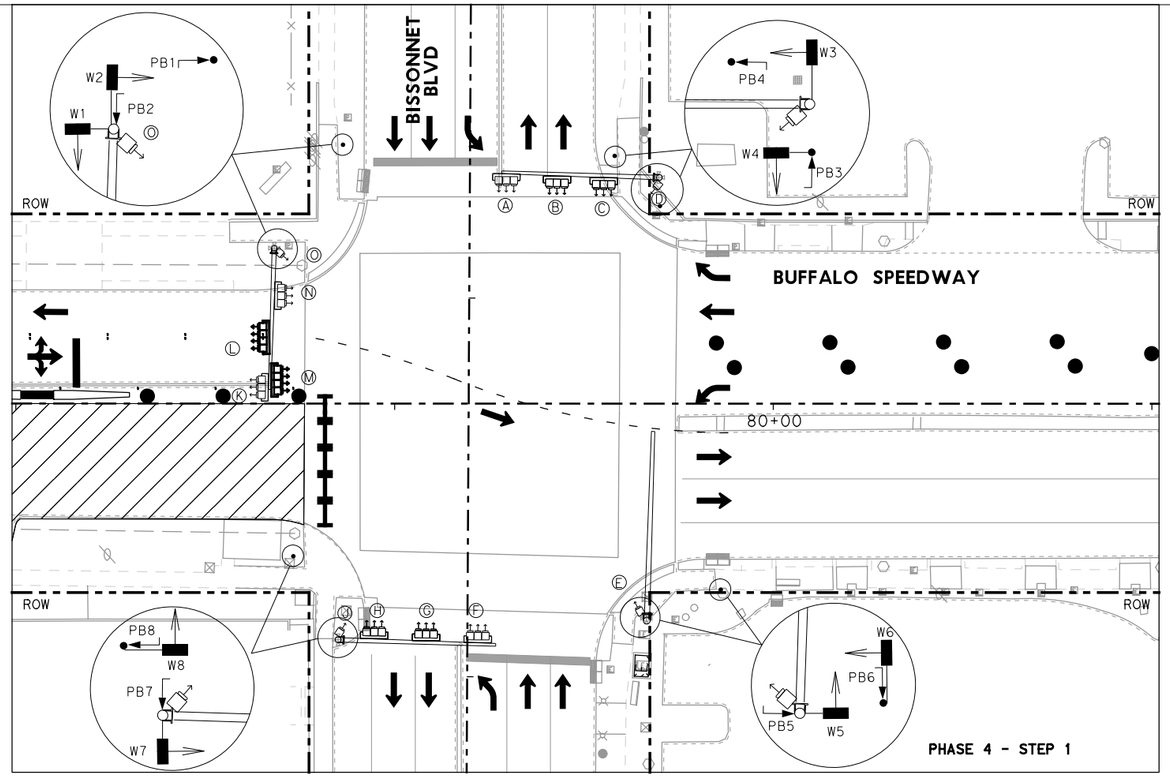
W1-W8

PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



L, M



0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- EXIST SIGNAL HEAD
- EXIST VIVDS CAMERA
- EXIST PEDESTRIAN SIGNAL HEAD
- EXIST PEDESTRIAN PUSH BUTTON
- PROP TEMP SIGNAL HEAD

TEMPORARY SIGNAL NOTES:

1. EXISTING TRAFFIC SIGNAL SYSTEM TO BE USED DURING CONSTRUCTION. REPLACE EXISTING SIGNAL HEADS AS NEEDED. CONTRACTOR MAY USE EXISTING SIGNAL HEADS WITH THE APPROVAL OF THE FIELD ENGINEER.
2. ADJUST SIGNAL HEADS WITHIN LANE OF TRAFFIC DURING DIFFERENT PHASES OF CONSTRUCTION. THE COST TO RELOCATE SIGNAL HEADS DURING DIFFERENT PHASES AND STEPS WILL BE INCIDENTAL TO THE PAY ITEM No. 0681 6001 (TEMP TRAF SIGNALS).
3. KEEP EXISTING STREET NAME SIGNS AND COVER/REMOVE OTHER SIGNS AS NEEDED.
4. ADJUST SIGNAL HEADS, VIDEO CAMERAS & DETECTION ZONES AS DERECTED BY THE FIELD ENGINEER.
5. COIL SUFFICIENT SIGNAL AND VIVDS CABLES TO ACCOMMODATE SIGNAL HEAD ADJUSTMENTS DURING THE VARIOUS PHASES OF CONSTRUCTION.
6. SEE TRAFFIC CONTROL PLAN FOR TEMPORARY PAVEMENT MARKING LAYOUTS. EXISTING PAVEMENT MARKING TO BE USED IF NOT REFERED.
7. ALL SIGNAL EQUIPMENT INCLUDING DETECTION AFFECTED BY CONSTRUCTION SHALL BE INSTALLED AT ORIGINAL POSITION/LOCATION BY CONTRACTOR AFTER CONSTRUCTION IS COMPLETED.
8. COVER/REMOVE EXISTING SIGNAL HEADS NOT IN USE.

STATE OF TEXAS
ZAHIDUL SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

08/24/20

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

11111 WILCREST GREEN DR, SUITE 410
HOUSTON, TEXAS 77042

FREESE AND NICHOLS

11200 Broadway Street, Suite 2320
Pearland, Texas 77584
Phone – (832) 456-4700
Fax – (832) 456-4701
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT BISSONNET BLVD PHASE 4 STEP 1

SHEET 1 OF 2

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		178
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

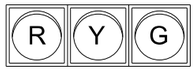
EXISTING SIGNAL HEADS

3-SECTION, 1-WAY



A, H

3-SECTION, 1-WAY



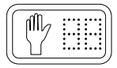
B, C, F, J, K, N

3-SECTION, 1-WAY



D, G, L, O

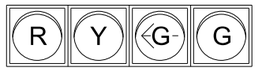
PEDESTRIAN SIGNAL
1-SECTION, 1-WAY



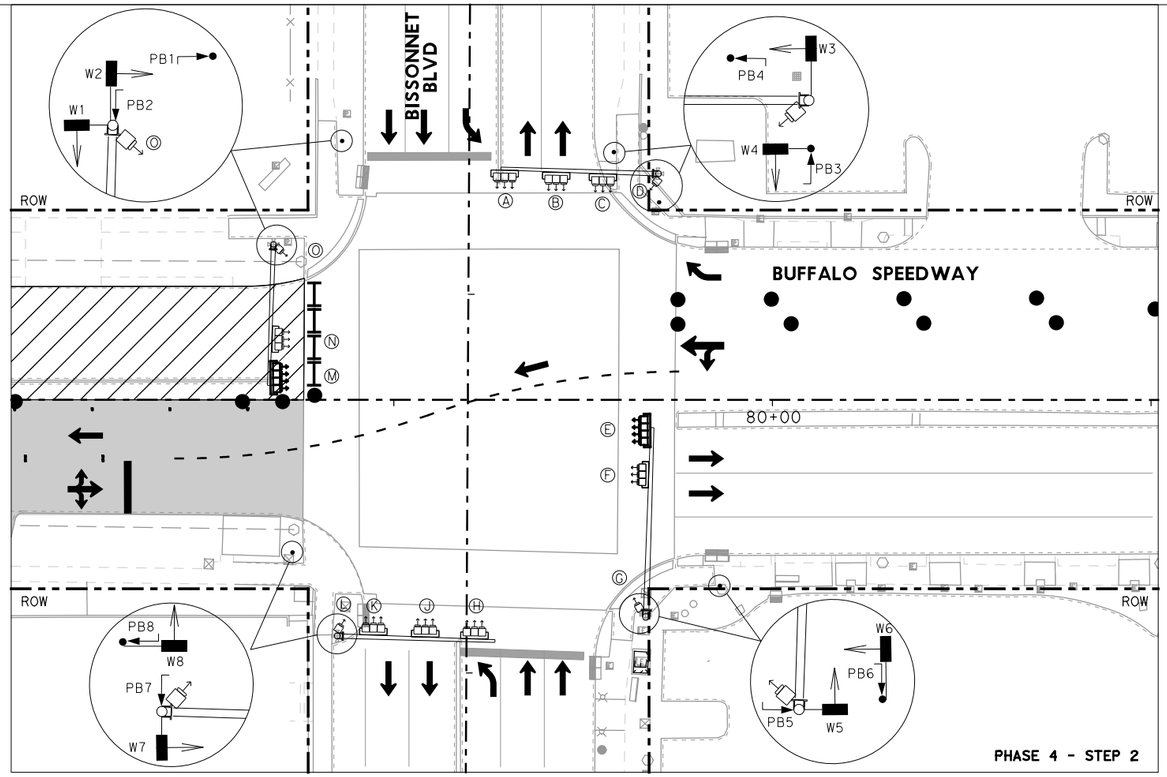
W1-W8

PROPOSED SIGNAL HEADS

4-SECTION, 1-WAY



E, M



0 40′ 80′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- COMPLETED PAVEMENT
- PERMANENT ROADWAY CONSTRUCTION THIS PHASE
- TEMPORARY PAVEMENT
- EXIST MAST ARM
- EXIST SIGNAL CONTROLLER
- EXIST SIGNAL HEAD
- EXIST VIVDS CAMERA
- EXIST PEDESTRIAN SIGNAL HEAD
- EXIST PEDESTRIAN PUSH BUTTON
- PROP TEMP SIGNAL HEAD

TEMPORARY SIGNAL NOTES:

1. EXISTING TRAFFIC SIGNAL SYSTEM TO BE USED DURING CONSTRUCTION. REPLACE EXISTING SIGNAL HEADS AS NEEDED. CONTRACTOR MAY USE EXISTING SIGNAL HEADS WITH THE APPROVAL OF THE FIELD ENGINEER.
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8. COVER/REMOVE EXISTING SIGNAL HEADS NOT IN USE.

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

TEMPORARY SIGNAL LAYOUTS AT BISSONNET BLVD PHASE 4 STEP 2

SHEET 2 OF 2

Texas Department of Transportation

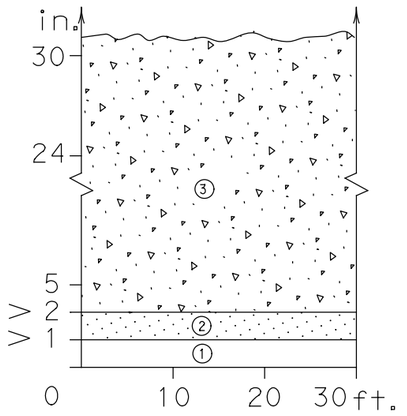
FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		179
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

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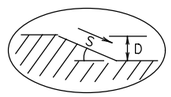
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FILE:

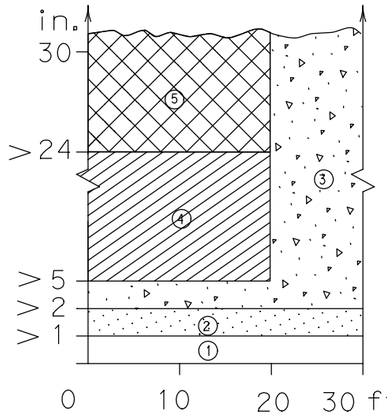
DEFINITION OF TREATMENT ZONES FOR VARIOUS EDGE CONDITIONS

Edge Height (D) in Inches versus Lateral Clearance (Y) in Feet

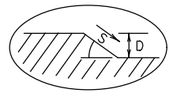


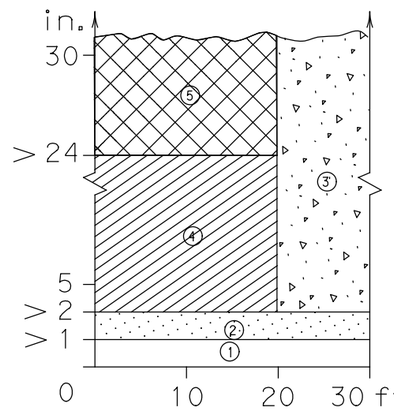
Edge Condition I
S = (3:1) (or flatter)



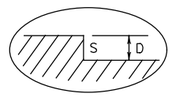


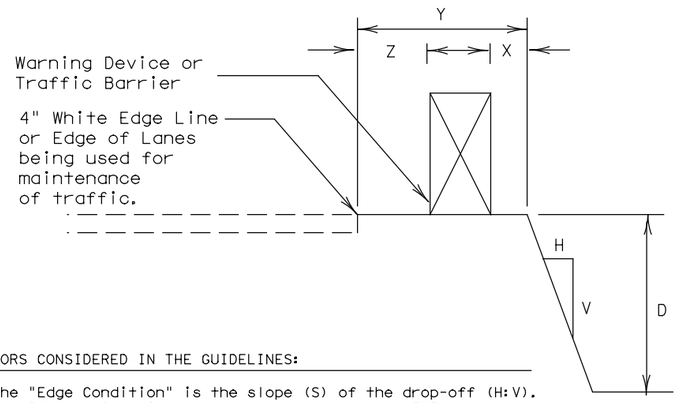
Edge Condition II
S = ((2.99):1) to (1:1)





Edge Condition III
S is steeper than (1:1)





FACTORS CONSIDERED IN THE GUIDELINES:

1. The "Edge Condition" is the slope (S) of the drop-off (H:V). The "Edge Height is the depth of the drop-off "D".

2. Distance "X" is to be the maximum practical under job conditions. Two feet minimum for high speed conditions. Distance "Y" is the lateral clearance from edge of travel lane to edge of dropoff. Distance "Z" does not have a minimum.

3. In addition to the factors considered in the guidelines, each construction zone drop-off situation should be analyzed individually, taking into account other variables, such as: traffic mix, posted speed in the construction zone, horizontal curvature, and the practicality of the treatment options.

4. The conditions for indicating the use of positive or protective barriers are given by Zone-5 and Figure-1. Traffic barriers are primarily applicable for high speed conditions. Urban areas with speeds of 30 mph or less may have a lesser need for signing, delineation, and barriers. Right-angled edges, however, with "D" greater than 2 inches and located within a lateral offset of 6 feet, may indicate a higher level of treatment.

5. If the distance "Y" must be less than 3 feet, the use of a positive barrier may not be feasible. In such a case, consider either: 1) narrowing the lanes to a desired 11 to 12 feet or 10 foot minimum (see CW20-8 sign), or 2) provide an edge slope such as Edge Condition I.

Zone	Treatment Types Guidelines:
①	No treatment.
②	CW 8-11 "Uneven Lanes" signs.
③	CW 8-9a "Shoulder Drop-Off" or CW 8-11 signs plus vertical panels.
④	CW 8-9a or CW 8-11, signs plus drums. Where restricted space precludes the use of drums, use vertical panels. An edge fill may be provided to change the edge slope to that of the preferable Edge Condition I.
⑤	Check indications (Figure-1) for positive barrier. Where positive barrier is not indicated, the treatment shown above for Zone- 4 may be used after consideration of other applicable factors.

Edge Condition Notes:

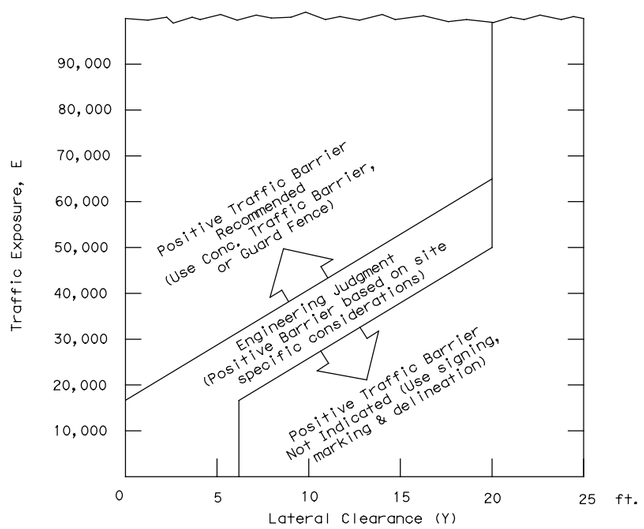
1. Edge Condition I: Most vehicles are able to traverse an edge condition with a slope rate of (3 to 1) or flatter. The slope must be constructed with a compacted material capable of supporting vehicles.

2. Edge Condition II: Most vehicles are able to traverse an edge condition with a slope between (2.99 to 1) and (1to 1) so long as "D" does not exceed 5 inches. Under-carriage drag on most automobiles will occur when "D" exceeds 6 inches. As "D" exeeds 24 inches, the possibility for rollover is greater in most vehicles.

3. Edge Condition III: When slopes are greater than (1 to 1) and where "D" is greater than 2 inches, a more difficult control factor may exist for some vehicles, if not properly treated. For example, where "D" is greater than 2 inches and up to 24 inches different types of vehicles may experience different steering control at different edge heights. Automobiles might experience more steering control differential when "D" is greater than 2 inches and up to 5 inches. Trucks, particularly those with high loads, have more steering control differential when "D" is greater than 5 inches and up to 24 inches. When "D" exceeds 24 inches, the possibility of rollover is greater for most vehicles.

4. Milling or overlay operations that result in Edge Condition III should not be in place without appropriate warning treatments, and these conditions should not be left in place for extended periods of time.

FIGURE-1: CONDITIONS INDICATING USE OF POSITIVE BARRIER FOR ZONE 5 (▨)



1 E = ADT x T
Where ADT is that portion of the average daily traffic volume traveling within 20 feet (generally two adjacent lanes) of the edge dropoff condition; and, T is the duration time in years of the dropoff condition.

2 Figure-1 provides a practical approach to the use of positive barriers for the protection of vehicles from pavement drop-offs. Other factors, such as the presence of heavy machinery, construction workers, or the mix and volume of traffic may make the use of positive barriers appropriate, even when the edge condition alone may not justify the use of a barrier.

3 An approved end treatment should be provided for any positive barrier end located within a lateral offset of 20 feet from the edge of the travel lane.

These guidelines apply to temporary traffic control areas or work zones where continuous pavement edges or drop-offs exists parallel and adjacent to a lane used by traffic. The edge conditions may be present between shoulders and travel lanes, between adjacent or opposing travel lanes, or at intermediate points across the width of the paved surface. Due to the variability in construction operations, tolerances in the variables may be allowed by the engineer. These guidelines do not apply to short term operations. These guidelines do not constitute a rigid standard or policy; rather, they are guidance to be used in conjunction with engineering judgement. These guidelines may be updated on the Design Division's on-line manuals.

Engineer's Seal

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER

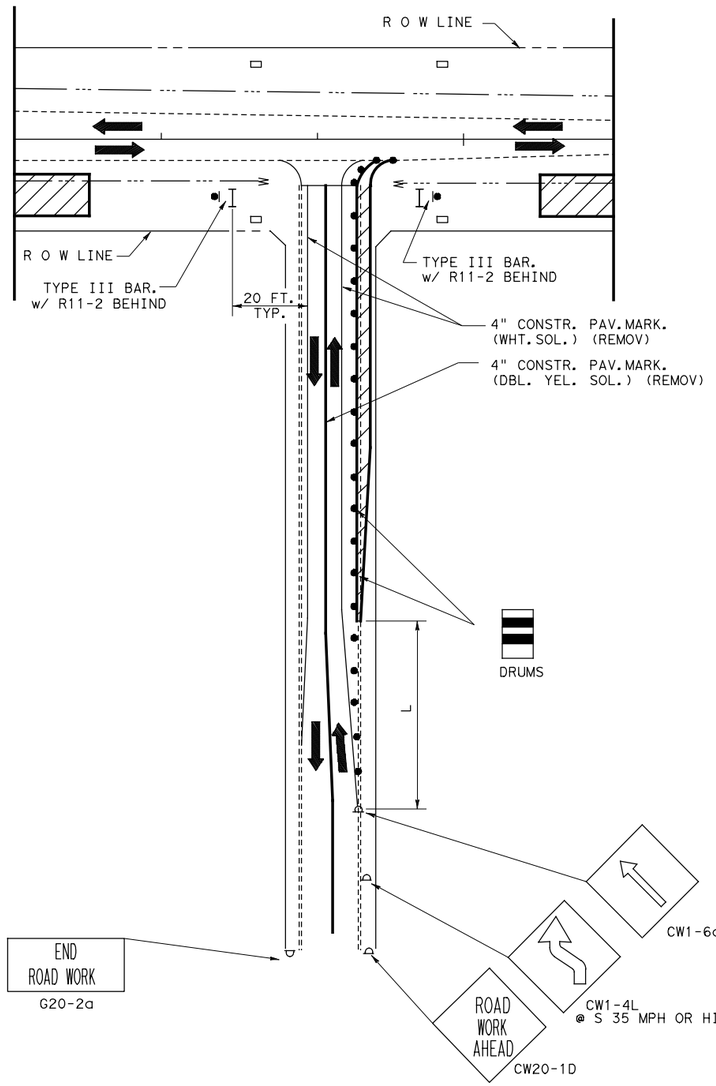
Signed 8/29/2000

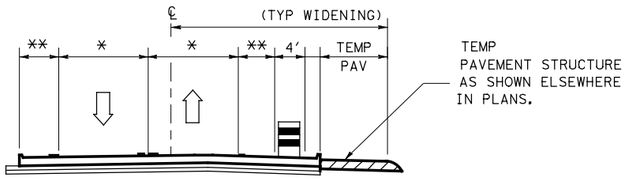
Texas Department of Transportation
Traffic Operations Division

TREATMENT FOR VARIOUS EDGE CONDITIONS

© TxDOT August 2000

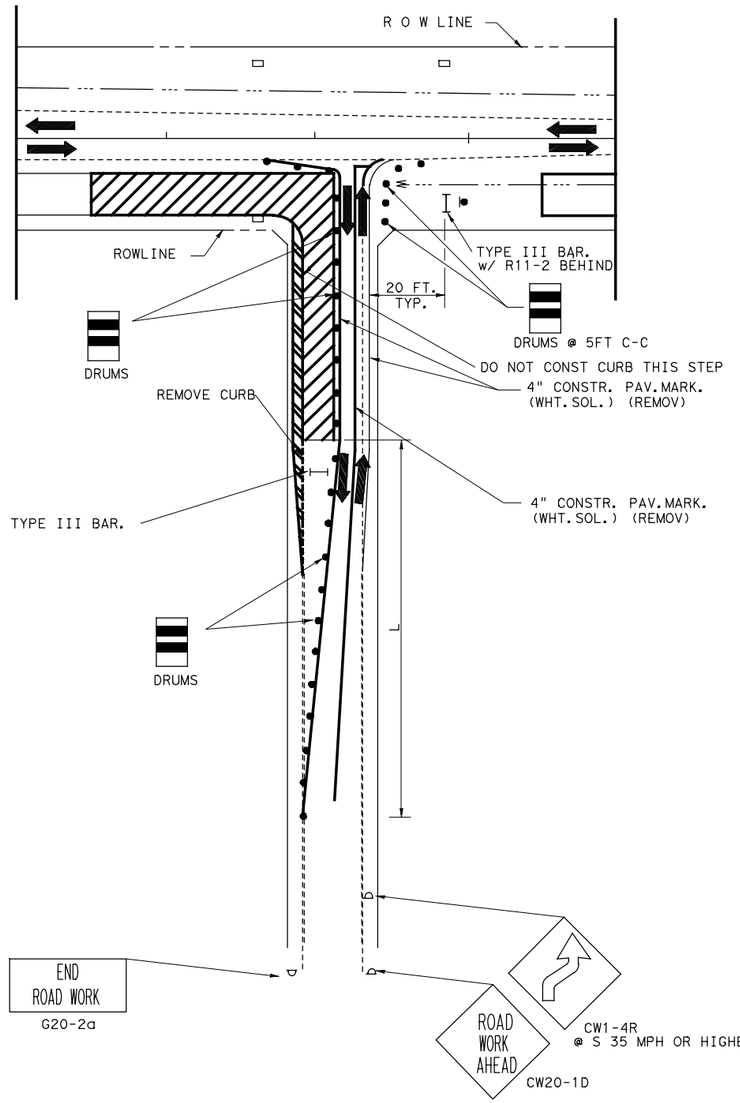
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	12	HARRIS		180

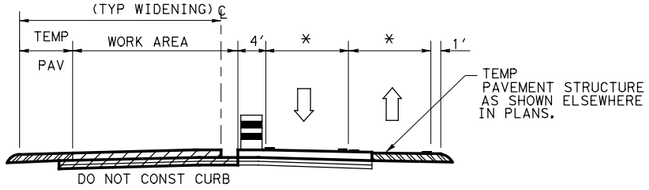




** MIN. 0 FT.
MAX. 10 FT.

STEP 1





STEP 2

* 10 FT. MIN.
12 FT. DESIRABLE IF SPACE AVAILABLE.

* IN CASES WHERE EXISTING SIDE STREETS HAVE LESS THAN 10 FT. LANE WIDTHS, PROVIDE LANE WIDTHS EQUAL OR GREATER THAN EXISTING.

TYPICAL ADVANCE SIGNING
TO REMAIN PLACE DURING ALL PHASES
OR AS DIRECTED BY ENGINEER

END
ROAD WORK
G20-2a

ROAD
WORK
AHEAD
CW20-1D

CONSTRUCTION WARNING
SIGN SPACING

POSTED SPEED (MPH)	"X" SIGN SPACINGS (FEET)
30 OR LESS	120
35	160
40	240
45	320
50	400
55	500
60	600
65	700
70	800

TYPICAL TRANSITION LENGTHS
AND
SUGGESTED MAXIMUM SPACING OF DEVICES

POSTED SPEED	FORMULA	MINIMUM DESIRABLE TAPER LENGTHS ⊛⊛ 10′ OFFSET	11′ OFFSET	12′ OFFSET	SUGGESTED MAX. SPAC. OF DEVICE ON A TAPER	ON A TANGENT	MINIMUM SIGN SPACING x DISTANCE
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′-75′	120′
35		205′	225′	245′	35′	70′-90′	160′
40		265′	295′	320′	40′	80′-100′	240′
45	L=WS	450′	495′	540′	45′	90′-110′	320′
50		500′	550′	600′	50′	100′-125′	400′
55		550′	605′	660′	55′	110′-140′	500′
60		600′	660′	720′	60′	120′-150′	⊛ 600′
65		650′	715′	780′	65′	130′-165′	⊛ 700′
70		700′	770′	840′	70′	140′-175′	⊛ 800′

⊛ CONVENTIONAL ROADS ONLY

⊛⊛ TAPER LENGTHS HAVE BEEN ROUNDED OFF.

LEGEND

CONSTRUCTION AREA

TEMPORARY PAVEMENT

OPEN TO TRAFFIC

SHEET 1 OF 1

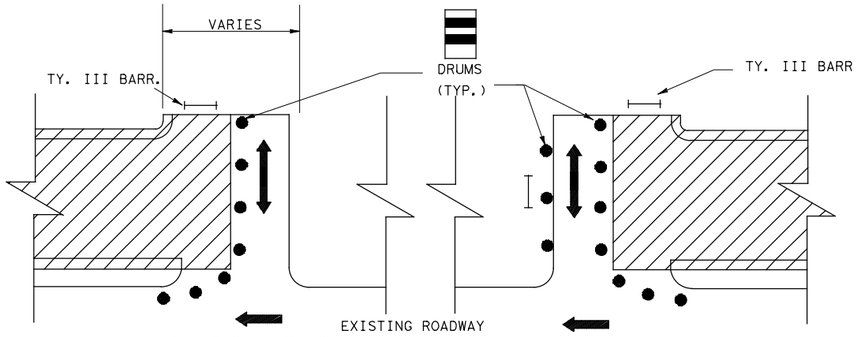
Texas Department of Transportation
Houston District

TWO WAY ROADWAY INTERSECTION PHASING

TWRIP(1) TC2010-09

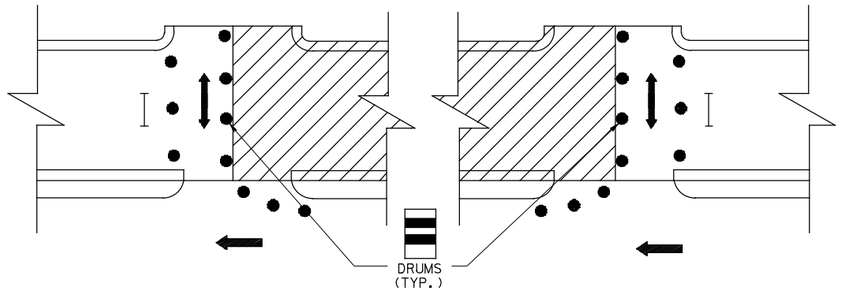
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©TxDOT OCT 2009	DIST	FED REG	PROJECT NO.	SHEET
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	HARRIS	0912	72	360	BSW

STD H-5A

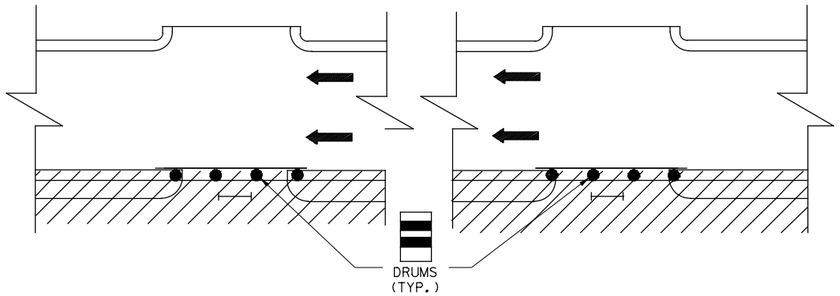


1) WITH TRAFFIC ON EXISTING
BUILD ONE-HALF OF DRIVE.

2) BUILD OTHER HALF OF DRIVE



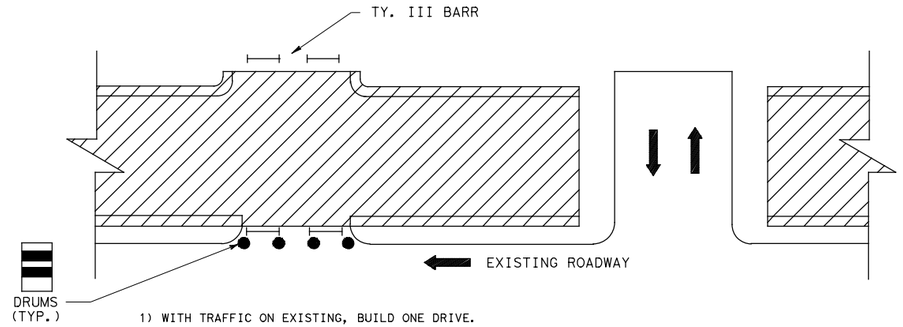
2) BUILD OTHER HALF OF DRIVE



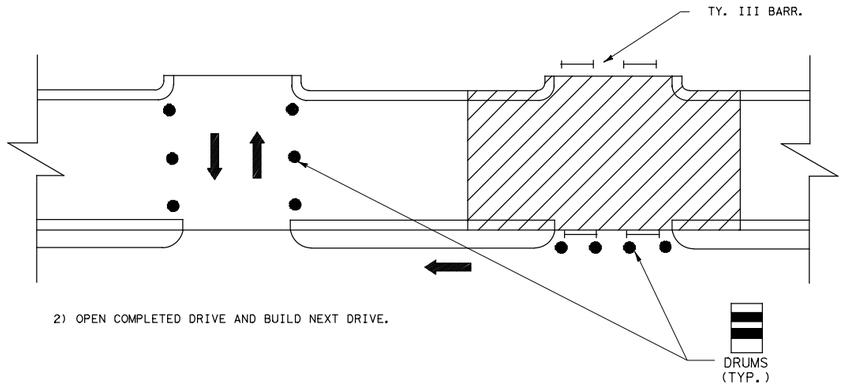
3) OPEN DRIVE

4) AFTER TRAFFIC MOVES TO NEW ROADWAY,
BUILD REMAINING CURB.

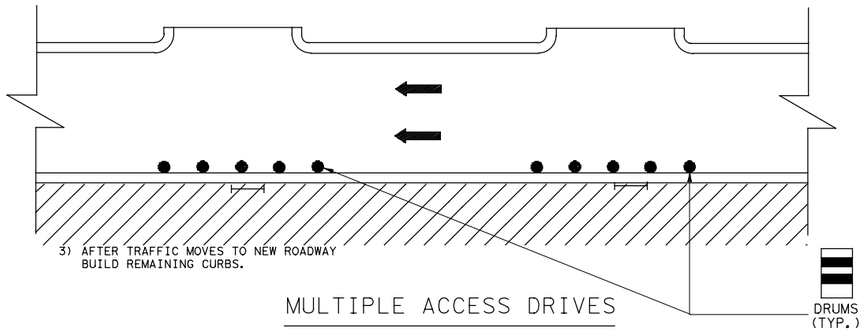
SINGLE ACCESS DRIVES



1) WITH TRAFFIC ON EXISTING, BUILD ONE DRIVE.



2) OPEN COMPLETED DRIVE AND BUILD NEXT DRIVE.



3) AFTER TRAFFIC MOVES TO NEW ROADWAY
BUILD REMAINING CURBS.

MULTIPLE ACCESS DRIVES

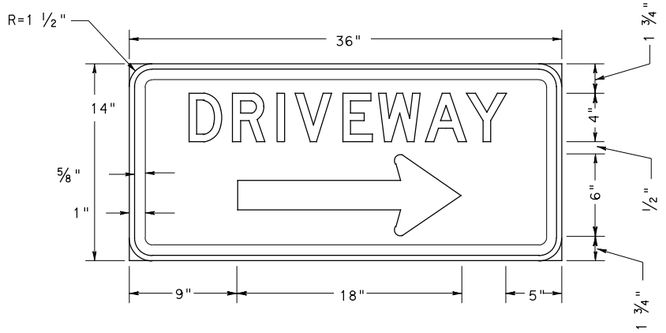
Texas Department of Transportation
Houston District

CONSTRUCTION SEQUENCE FOR MISCELLANEOUS DRIVES

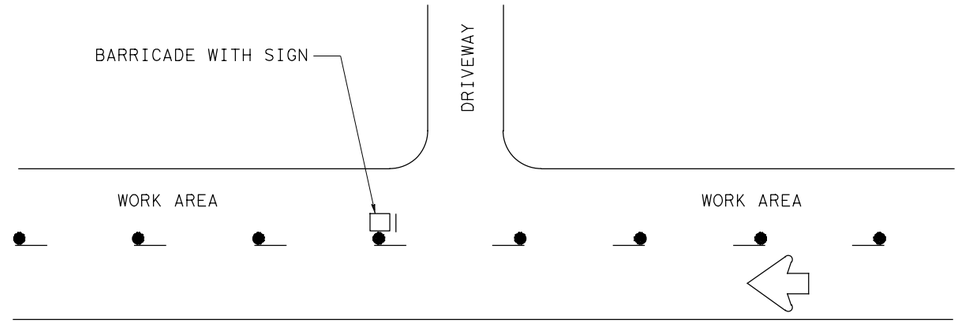
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	COUNTY	CONTROL	SECT JOB	HIGHWAY
	HARRIS	0912	72 360	BSW

STD H-29



LETTERS: WHITE
BORDER: WHITE
BACKGROUND: BLUE



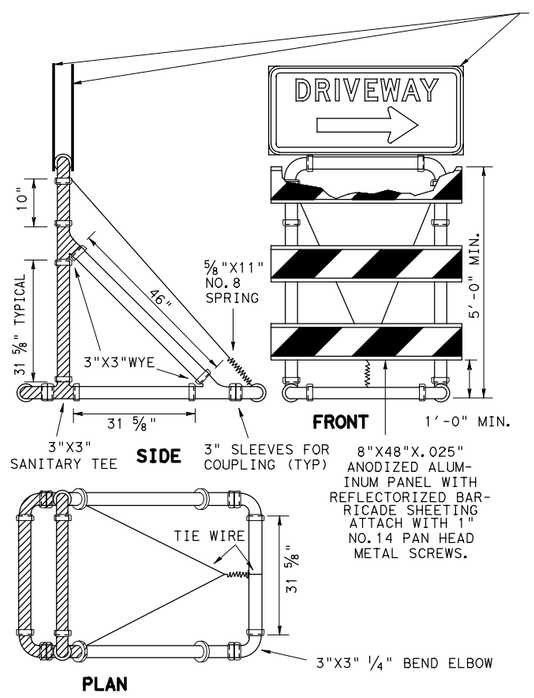
TYPICAL LOCATION OF DRIVEWAY SIGN

TYPE III PVC BARRICADES TYPICAL DESIGN DETAILS

MAY BE USED AT THE OPTION OF THE CONTRACTOR.

NOTES:

1. ALL PIPE SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE RATED PIPE SDR 21 OR SDR 26 ASTM D2241.
2. JOINT FITTINGS MAY BE PVC-ASTM D2665 OR ACRYLONITRILE BUTADLENE STYRENE (ABS) ASTM D2661 (DRAINAGE WASTE AND VENT).
3. ALL PIPE AND FITTINGS SHALL BE WHITE.
4. ALL JOINTS SHALL BE FREE TO SEPARATE UPON VEHICLE IMPACT.
5. CROSS HATCHED CONDUIT TO BE TIED TOGETHER WITH ROPE THREADED INTO PIPE INTERIOR. USE ⅜" NO. 6 SOLID BRAIDED NYLON OR EQUIVALENT.
6. A FIXED FRANGIBLE PAVEMENT CONNECTION IS PREFERRED. SAND BAGS MAY BE SUBSTITUTED.



CONSTRUCTION SIGN NOTES

MATERIALS

CONSTRUCTION SIGNS SHALL BE MADE FROM APPROVED FIBERGLASS OR HIGH IMPACT PLASTIC AS PRIMARY MATERIALS.

SIGN SHEETING

REFLECTORIZED SIGN SHALL BE CONSTRUCTED OF RETRO REFLECTIVE SHEETING MEETING THE COLOR AND REFLECTIVITY REQUIREMENTS OF MATERIAL SPECIFICATIONS, D-9-8300.

TYPE C SHEETING SHALL BE USED FOR THIS APPLICATION.

SIGN LETTERS

ALL SIGNS LETTERING SHALL BE CLEAR, OPEN ROUNDED TYPE CAPITAL LETTERS AS APPROVED BY AND AS PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. SIGNS AND LETTERING SHALL BE OF FIRST CLASS WORKMANSHIP EQUIVALENT TO THAT OF THE DEPARTMENT'S STANDARD SIGNS.

Texas Department of Transportation
Houston District

DRIVEWAY SIGNING STD H-30 (HOU DIST)

DS TC8020-04

FILE:	DN:TXDOT	CK:TXDOT	DW:TXDOT	CK:TXDOT
©TxDOT 2004 REVISIONS	DIST	FED REG	PROJECT NO.	SHEET
	12	6	(SEE THE TITLE SHEET)	183
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	HARRIS	0912	72	360	BSW

STD H-30

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BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).

2. The development and design of the Traffic Control Plan (TCP)is the responsibility of the Engineer.

3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.

4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.

5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.

6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.

7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.

8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.

10. As shown on BC(2), the OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER (see Sign Detail G20-10T) and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. However, the TRAFFIC FINES DOUBLE sign will not be required on projects consisting solely of mobile operation work, such as striping or milling edgeline rumble strips. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits.

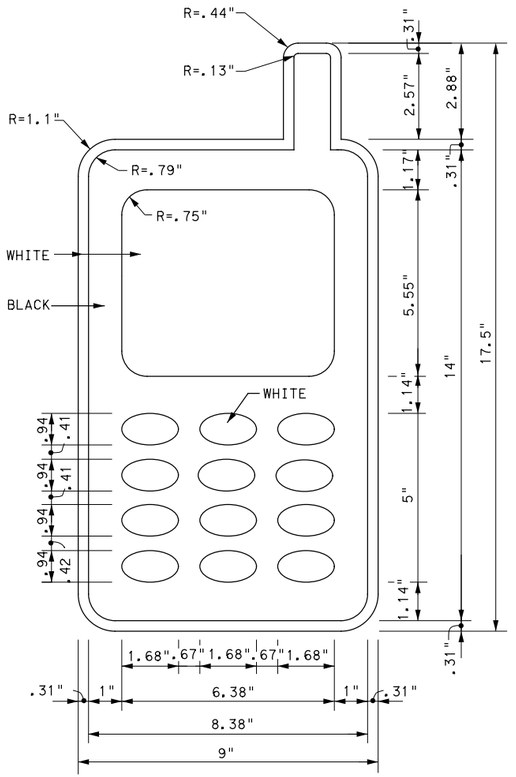
11. Except for devices required by Note 10, traffic control devices should be in place only while work is actually in progress or a definite need exists.

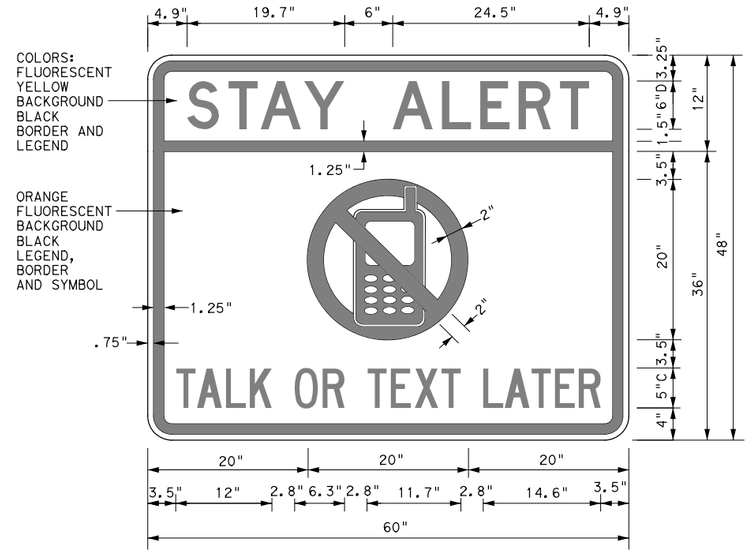
12. The Engineer has the final decision on the location of all traffic control devices.

13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY APPAREL NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.





3.0" Radius, 1.25" Border, 0.75" Indent, Black on Yellow;
[STAY ALERT] Font: D
3.0" Radius, 1.25" Border, 0.75" Indent, Black on Orange;
[TALK OR TEXT LATER] Font: C specified length;

SIGN DETAIL (G20-10T)

Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found on-line at the web address given below or by contacting:

Texas Department of Transportation
Traffic Operations Division - TE
Phone (512) 416-3118

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)
MATERIAL PRODUCER LIST (MPL)
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)
TRAFFIC ENGINEERING STANDARD SHEETS

Texas Department of Transportation | Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

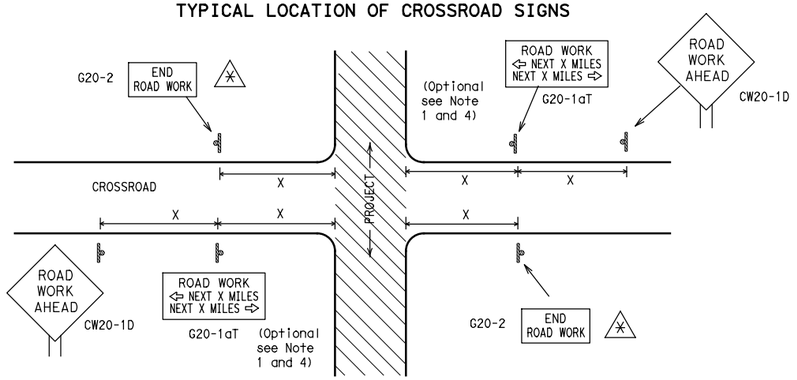
BC(1)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0912	72	360	BSW
4-03 5-10 8-14	DIST	COUNTY		SHEET NO.
9-07 7-13	12	HARRIS		184

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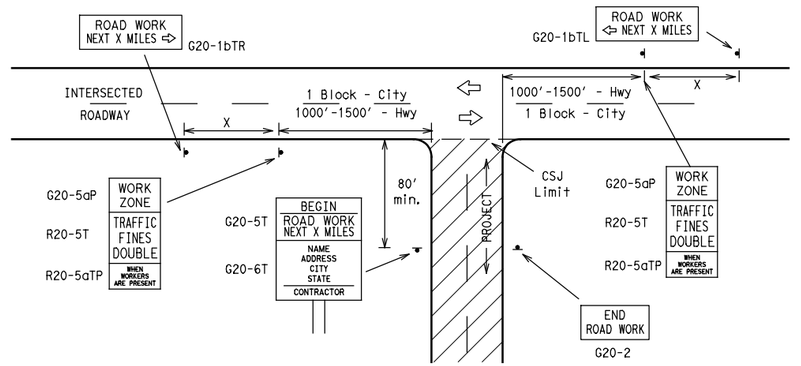
TYPICAL LOCATION OF CROSSROAD SIGNS



✳ May be mounted on back of "ROAD WORK AHEAD"(CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D)sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK"(G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES"(G20-1aT)sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection the Contractor shall place the "CONTRACTOR NAME"(G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow(G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR)" signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING[1,5,6]

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign Spacing "X" △
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500[2]
60	600[2]
65	700[2]
70	800[2]
75	900[2]
80	1000[2]
✳	✳[3]

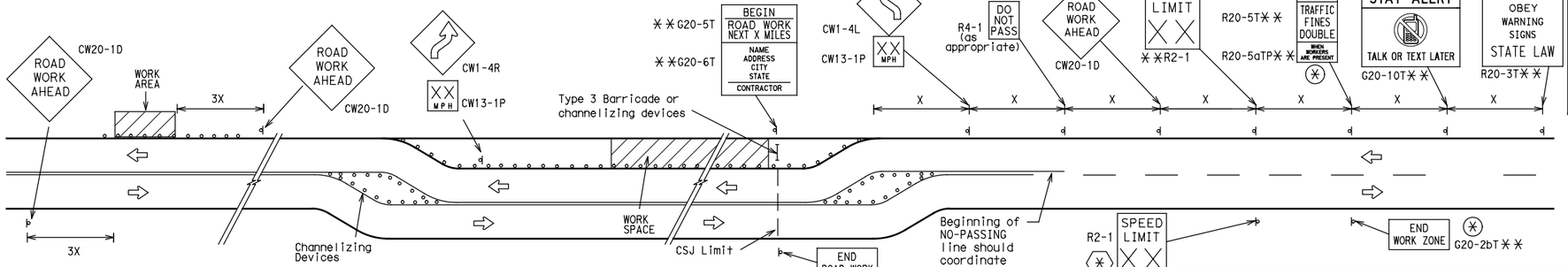
✳ For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

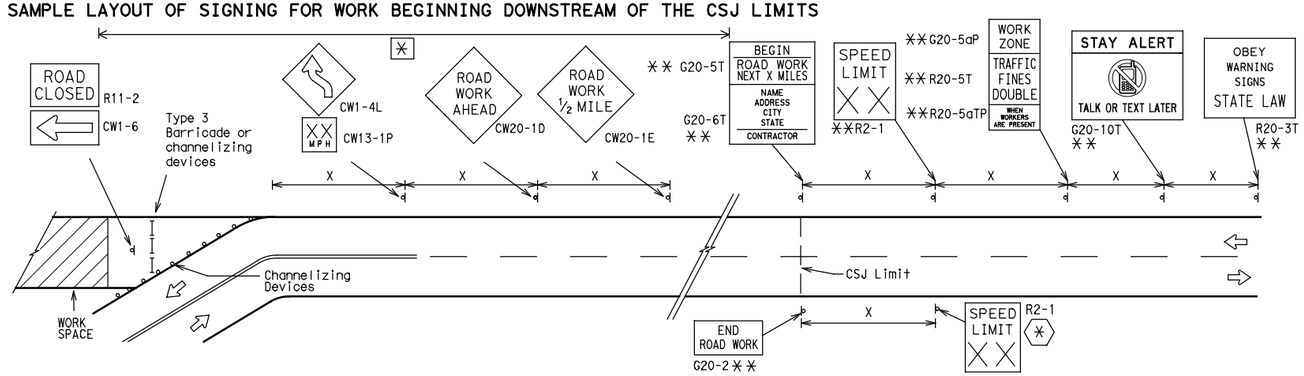
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD"(CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES"(G20-5T)sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

(✳) The "BEGIN WORK ZONE"(G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

✳✳ Required CSJ Limit signing. See Note 10 on BC(1). TRAFFIC FINES DOUBLE signs will not be required on projects consisting solely of mobile operations work.

[✳] Area for placement of "ROAD WORK AHEAD" (CW20-1D)sign and other signs or devices as called for on the Traffic Control Plan.

(✳) Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND	
⊢⊣	Type 3 Barricade
○ ○ ○	Channelizing Devices
▬	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

SHEET 2 OF 12

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-14

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9-07 8-14	DIST	COUNTY		SHEET NO.
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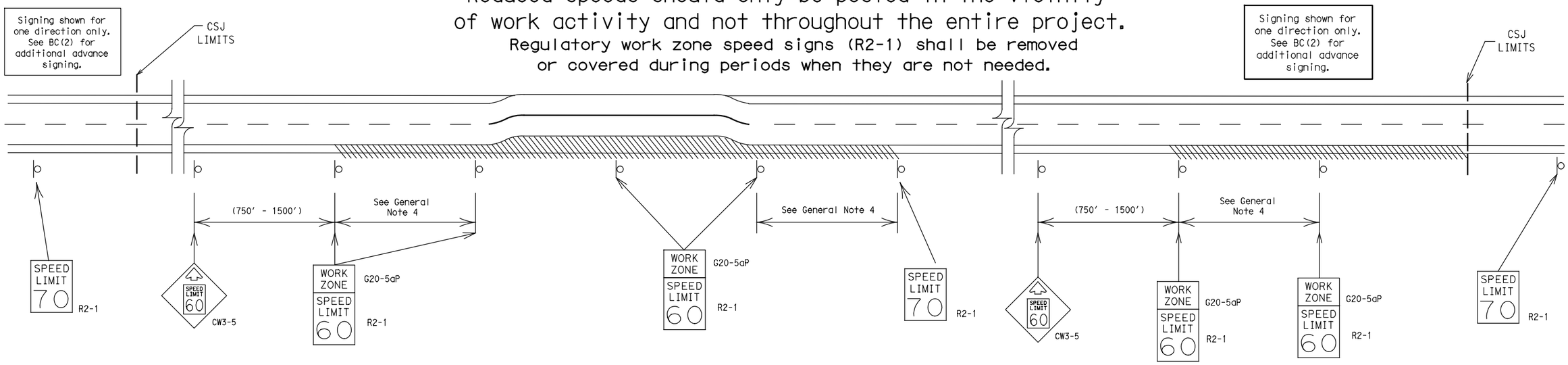
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TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.

Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the travelled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, erection and maintenance of the"ADVANCE SPEED LIMIT"(CW3-5)sign, "WORK ZONE"(G20-5aP) plaque and the "SPEED LIMIT"(R2-1)signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
10. For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

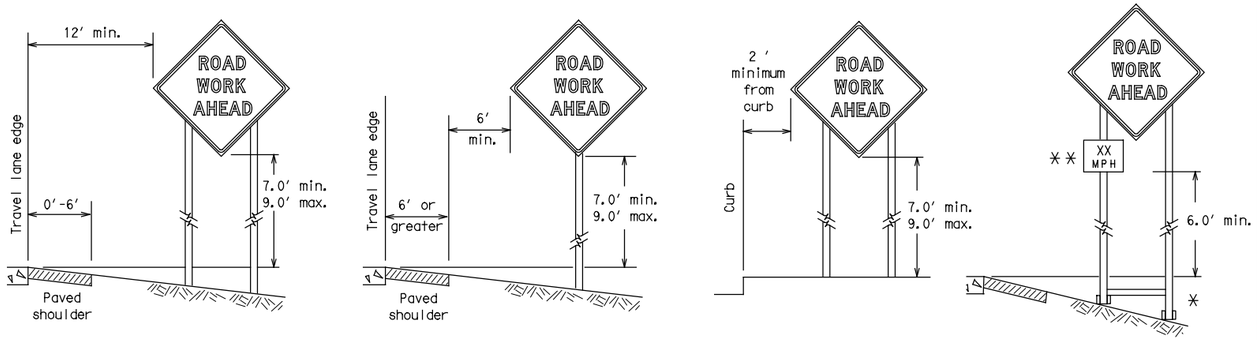
BC(3)-14

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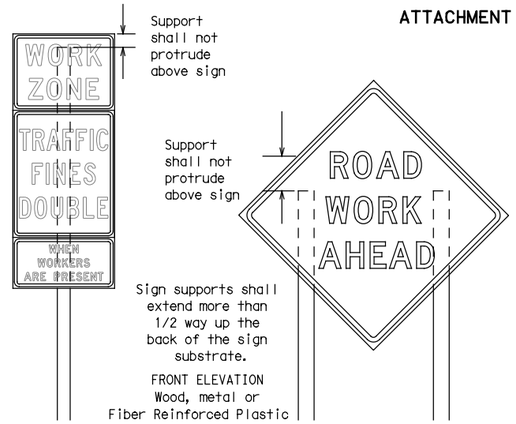
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



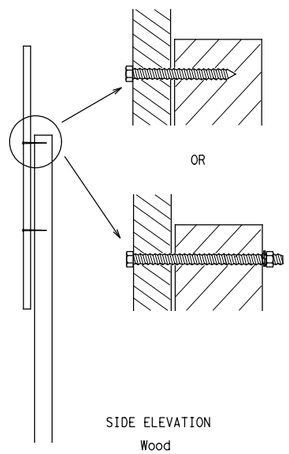
⚹ When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

⚹⚹ When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS



Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

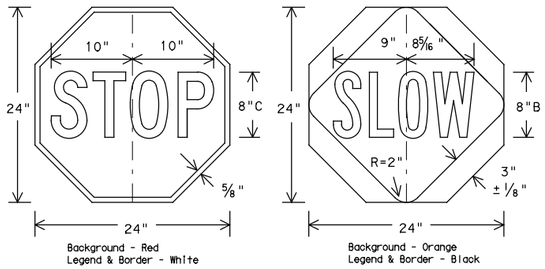


Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24" as detailed below.
2. When used at night, the STOP/SLOW paddle shall be retroreflectorized.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6′ to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC sheets or the CWZTCD. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD). The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_{FL}, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

1. Flags may be used to draw attention to warning signs. When used the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

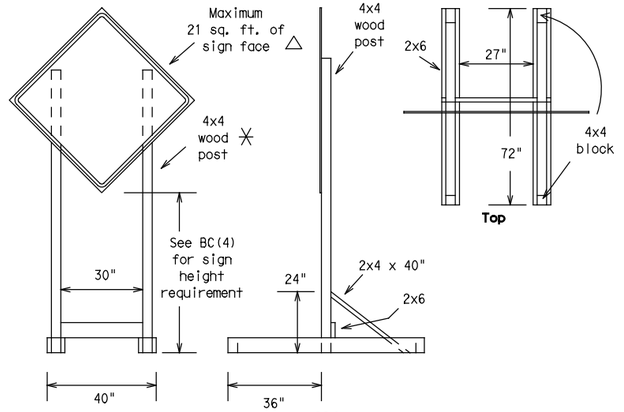
Texas Department of Transportation | Traffic Operations Division Standard

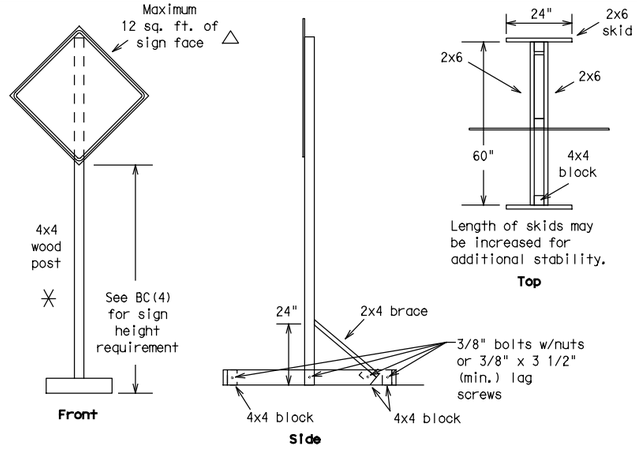
BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 9-07 8-14 7-13	0912	72	360	BSW
	DIST	COUNTY		SHEET NO.
	12	HARRIS		187

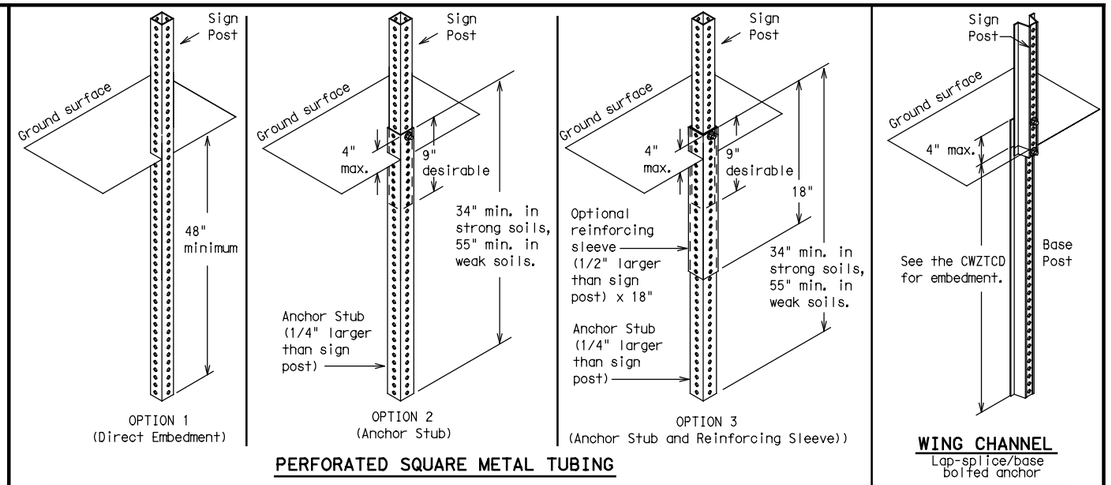
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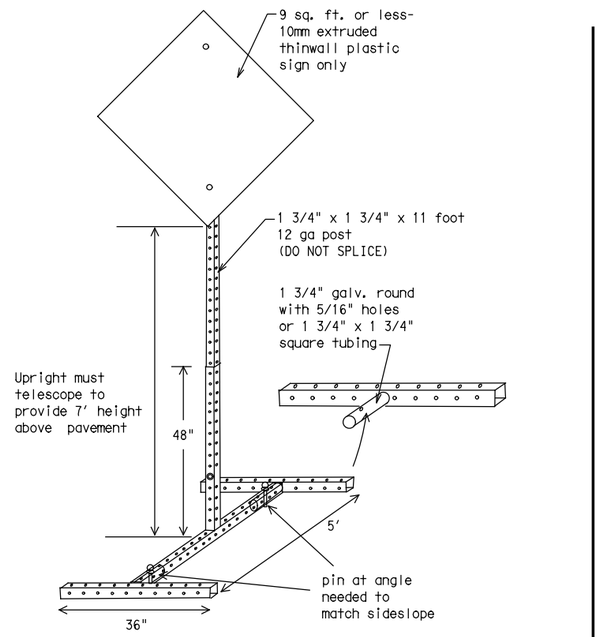
SKID MOUNTED WOOD SIGN SUPPORTS

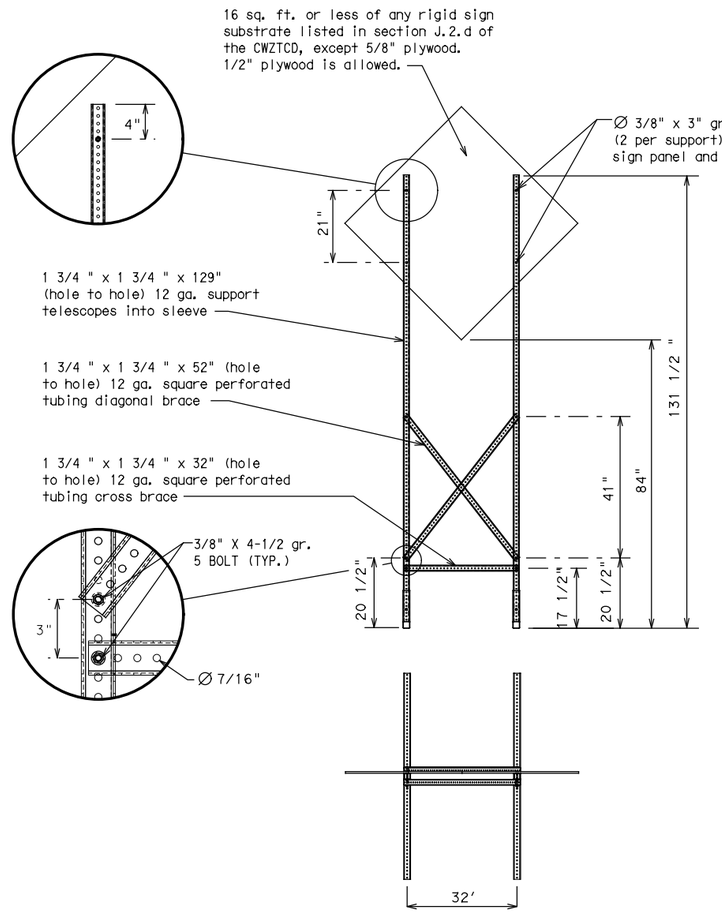
LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS □

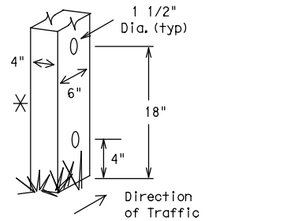


GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.

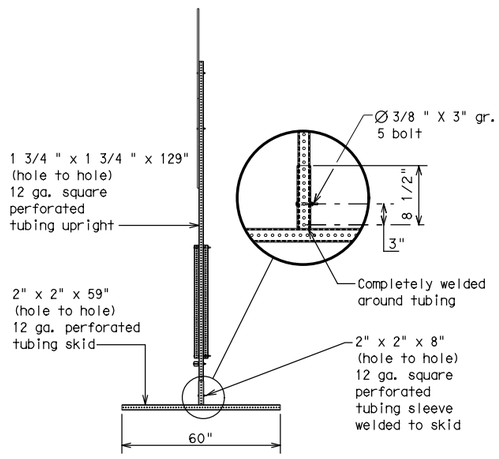






Nominal Post Size	Number of Posts	Maximum Sq. feet of Sign Face	Minimum Soil Embedment	Drilled Hole(s) Required
4 x 4	1	12	36"	NO
4 x 4	2	21	36"	NO
4 x 6	1	21	36"	YES
4 x 6	2	36	36"	YES

WOOD POST SYSTEM FOR GROUND MOUNTED SIGN SUPPORTS



SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

□ See BC(4) for definition of "Work Duration."

✳ Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

△ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

SHEET 5 OF 12

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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	DIST	COUNTY		SHEET NO.
	12	HARRIS		188

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WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT
Major	MAJ
Miles	MI
Miles Per Hour	MPH
Minor	MNR
Monday	MON
Normal	NORM
North	N
Northbound	(route) N
Parking	PKING
Road	RD
Right Lane	RT LN
Saturday	SAT
Service Road	SERV RD
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	(route) S
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Thursday	THURS
To Downtown	TO DWNTN
Traffic	TRAF
Travelers	TRVLRS
Tuesday	TUES
Time Minutes	TIME MIN
Upper Level	UPR LEVEL
Vehicles (s)	VEH, VEHS
Warning	WARN
Wednesday	WED
Weight Limit	WT LIMIT
West	W
Westbound	(route) W
Wet Pavement	WET PVMT
Will Not	WONT

Roadway designation # IH-number, US-number, SH-number, FM-number

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

- FREEWAY CLOSED X MILE
- FRONTAGE ROAD CLOSED
- ROAD CLOSED AT SH XXX
- SHOULDER CLOSED XXX FT
- ROAD CLSD AT FM XXXX
- RIGHT LN CLOSED XXX FT
- RIGHT X LANES CLOSED
- RIGHT X LANES OPEN
- CENTER LANE CLOSED
- DAYTIME LANE CLOSURES
- NIGHT LANE CLOSURES
- I-XX SOUTH EXIT CLOSED
- VARIOUS LANES CLOSED
- EXIT XXX CLOSED X MILE
- EXIT CLOSED
- RIGHT LN TO BE CLOSED
- MALL DRIVEWAY CLOSED
- X LANES CLOSED TUE - FRI
- XXXXXXXX BLVD CLOSED

Other Condition List

- ROADWORK XXX FT
- ROAD REPAIRS XXXX FT
- FLAGGER XXXX FT
- LANE NARROWS XXXX FT
- RIGHT LN NARROWS XXXX FT
- TWO-WAY TRAFFIC XX MILE
- MERGING TRAFFIC XXXX FT
- CONST TRAFFIC XXX FT
- LOOSE GRAVEL XXXX FT
- UNEVEN LANES XXXX FT
- DETOUR X MILE
- ROUGH ROAD XXXX FT
- ROADWORK PAST SH XXXX
- ROADWORK NEXT FRI-SUN
- BUMP XXXX FT
- US XXX EXIT X MILES
- TRAFFIC SIGNAL XXXX FT
- LANES SHIFT *

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

- MERGE RIGHT
- FORM X LINES RIGHT
- DETOUR NEXT X EXITS
- USE XXXXX RD EXIT
- USE EXIT XXX
- USE EXIT I-XX NORTH
- STAY ON US XXX SOUTH
- USE I-XX E TO I-XX N
- TRUCKS USE US XXX N
- WATCH FOR TRUCKS
- WATCH FOR TRUCKS
- EXPECT DELAYS
- EXPECT DELAYS
- PREPARE TO STOP
- REDUCE SPEED XXX FT
- END SHOULDER USE
- USE OTHER ROUTES
- WATCH FOR WORKERS
- STAY IN LANE *

Location List

- AT FM XXXX
- BEFORE RAILROAD CROSSING
- NEXT X MILES
- PAST US XXX EXIT
- XXXXXXX TO XXXXXXX
- US XXX TO FM XXXX

Warning List

- SPEED LIMIT XX MPH
- MAXIMUM SPEED XX MPH
- MINIMUM SPEED XX MPH
- ADVISORY SPEED XX MPH
- RIGHT LANE EXIT
- USE CAUTION
- DRIVE SAFELY
- DRIVE WITH CARE

** Advance Notice List

- TUE-FRI XX AM- X PM
- APR XX-XX X PM-X AM
- BEGINS MONDAY
- BEGINS MAY XX
- MAY X-X XX PM - XX AM
- NEXT FRI-SUN
- XX AM TO XX PM
- NEXT TUE AUG XX
- TONIGHT XX PM- XX AM

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

** See Application Guidelines Note 6.

APPLICATION GUIDELINES

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

WORDING ALTERNATIVES

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the "Flagger Symbol"(CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

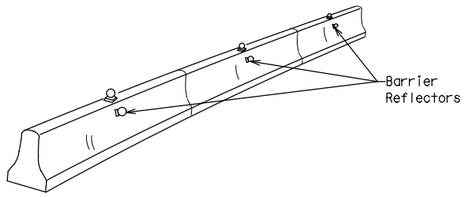
BC(6)-14

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©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
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7-13	12	HARRIS		189

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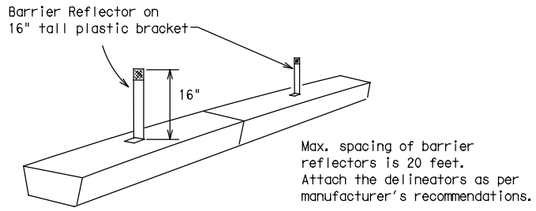
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1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.

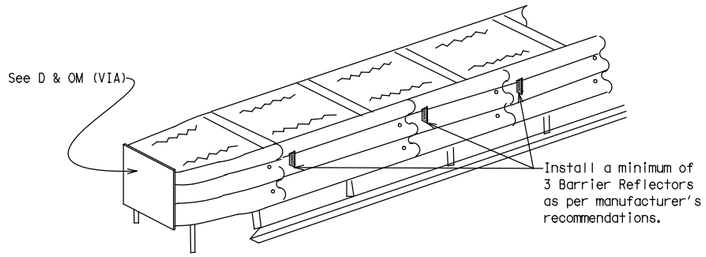


CONCRETE TRAFFIC BARRIER (CTB)

3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional)while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.



LOW PROFILE CONCRETE BARRIER (LPCB)

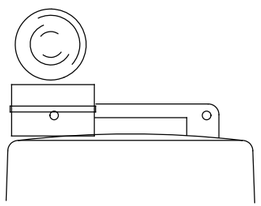


DELINEATION OF END TREATMENTS

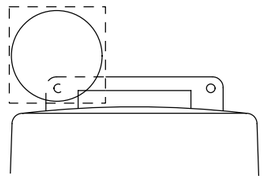
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet crashworthy standards as defined in the National Cooperative Highway Research Report 350. Refer to the CWZTCD List for approved end treatments and manufacturers.

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS



Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square.Must have a yellow reflective surface area of at least 30 square inches

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B_{FL} or C_{FL} Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

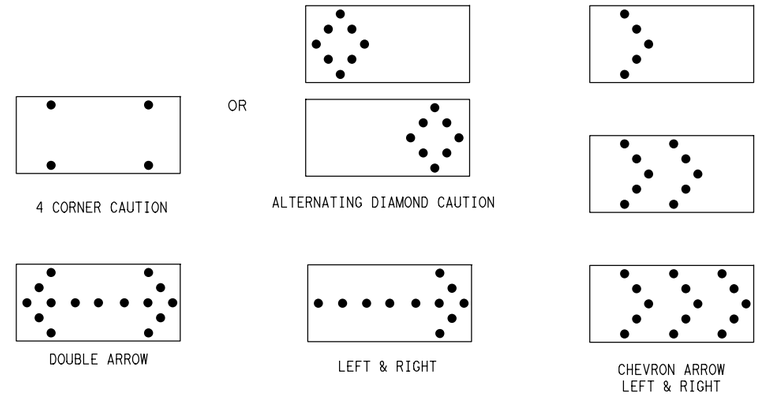
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
4. The Flashing Arrow Board should be able to display the following symbols:



5. The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential Chevron display may be used during daylight operations.
11. The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

REQUIREMENTS			
TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

ATTENTION

Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

FLASHING ARROW BOARDS

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the National Cooperative Highway Research Report No. 350 (NCHRP 350) or the Manual for Assessing Safety Hardware (MASH).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the CWZTCD for a list of approved TMAs.
4. TMAs are required on freeways unless otherwise noted in the plans.
5. A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
6. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.

SHEET 7 OF 12

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

BC(7)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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9-07 8-14	DIST	COUNTY		SHEET NO.
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GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

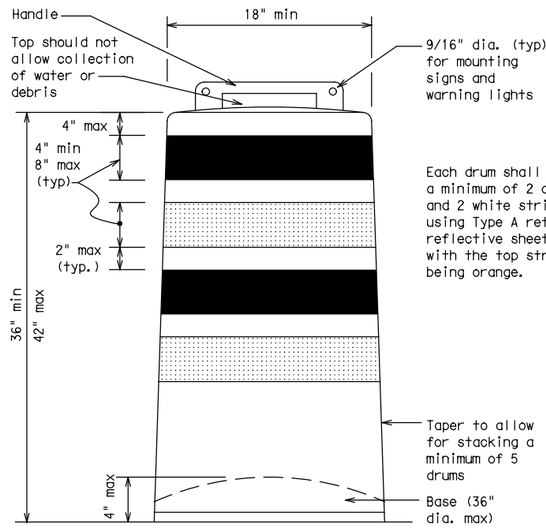
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

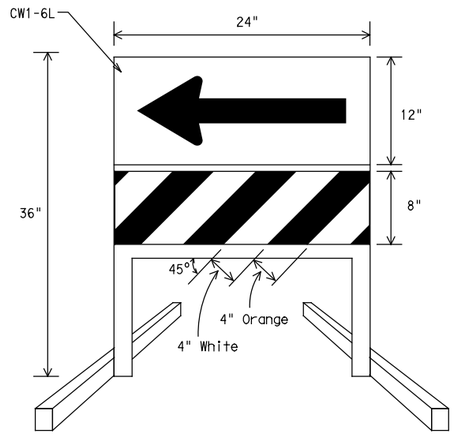
RETROREFLECTIVE SHEETING

1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

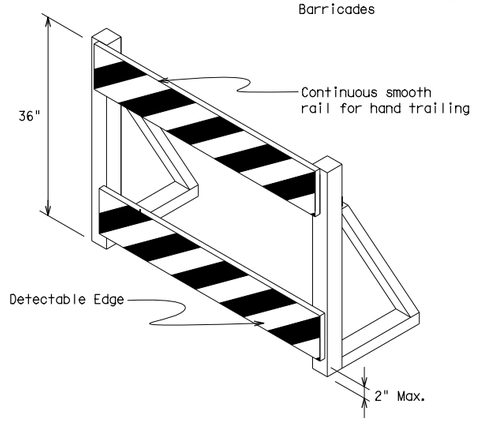




DIRECTION INDICATOR BARRICADE

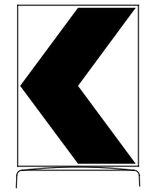
1. The Direction Indicator Barricade may be used in tapers, transitions, and other areas where specific directional guidance to drivers is necessary.
2. If used, the Direction Indicator Barricade should be used in series to direct the driver through the transition and into the intended travel lane.
3. The Direction Indicator Barricade shall consist of One-Direction Large Arrow (CW1-6) sign in the size shown with a black arrow on a background of Type B_{FL} or Type C_{FL} Orange retroreflective sheeting above a rail with Type A retroreflective sheeting in alternating 4" white and orange stripes sloping downward at an angle of 45 degrees in the direction road users are to pass. Sheeting types shall be as per DMS 8300.
4. Double arrows on the Direction Indicator Barricade will not be allowed.
5. Approved manufacturers are shown on the CWZTCD List. Ballast shall be as approved by the manufacturers instructions.

This detail is not intended for fabrication. See note 3 and the CWZTCD list for providers of approved Detectable Pedestrian Barricades

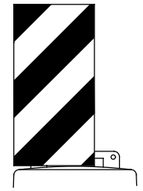


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a device that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades may use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation

Traffic Operations Division Standard

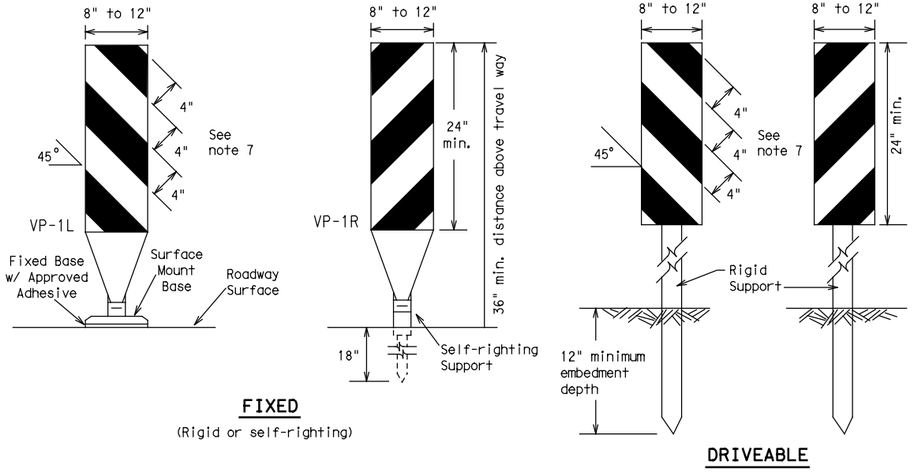
BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-14

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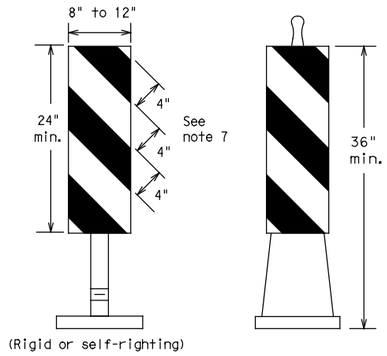
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FIXED
(Rigid or self-righting)

DRIVEABLE

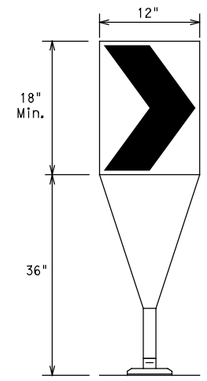


(Rigid or self-righting)

PORTABLE

1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual Appendix B "Treatment of Pavement Drop-offs in Work Zones" for additional guidelines on the use of VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.

VERTICAL PANELS (VPs)



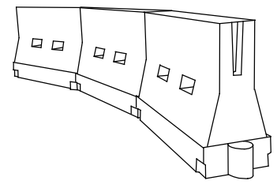
Fixed Base w/ Approved Adhesive
(Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

CHEVRONS

GENERAL NOTES

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.



LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10) placed near the top of the LCD along the full length of the device.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate NCHRP 350 crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

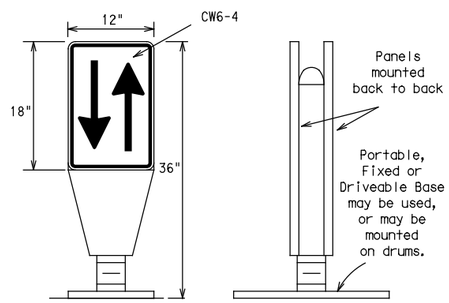
If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10′ Offset	11′ Offset	12′ Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′
35		205′	225′	245′	35′	70′
40		265′	295′	320′	40′	80′
45	L=WS	450′	495′	540′	45′	90′
50		500′	550′	600′	50′	100′
55		550′	605′	660′	55′	110′
60		600′	660′	720′	60′	120′
65		650′	715′	780′	65′	130′
70		700′	770′	840′	70′	140′
75		750′	825′	900′	75′	150′
80		800′	880′	960′	80′	160′

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS



1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

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BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-14

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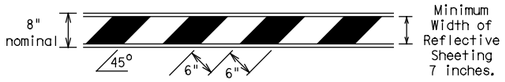
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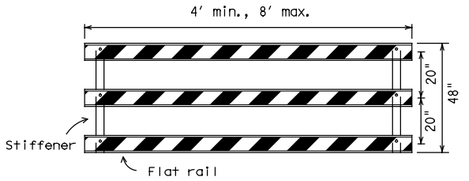
TYPE 3 BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.



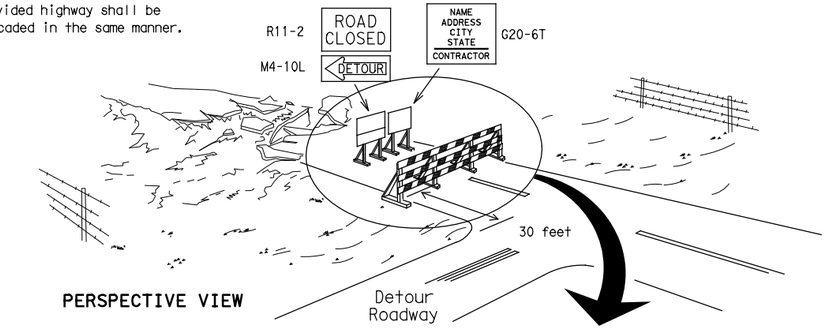
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

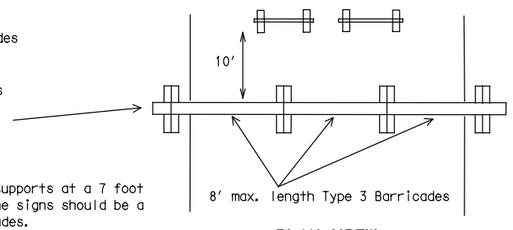
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

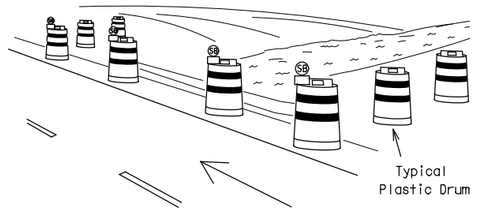
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

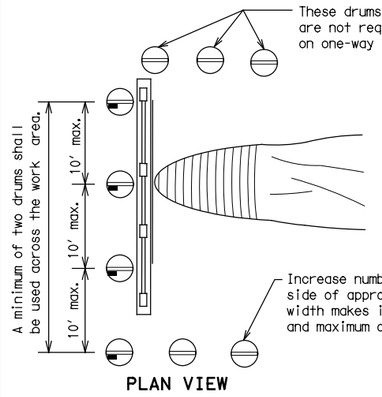
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

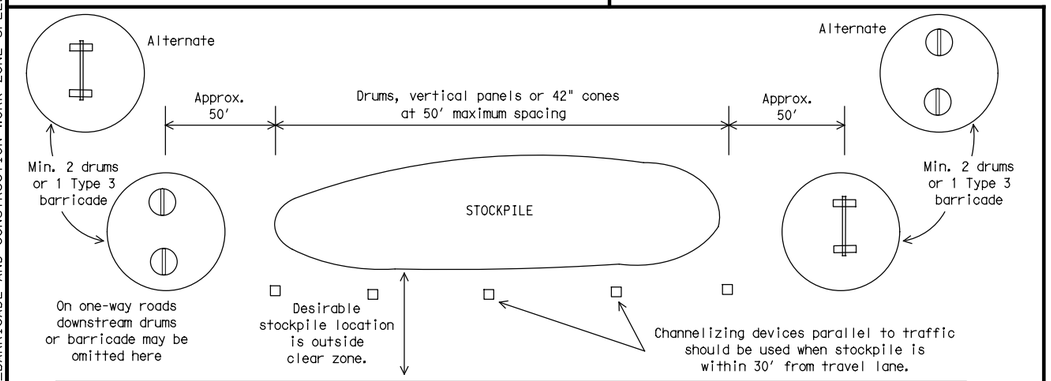
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.



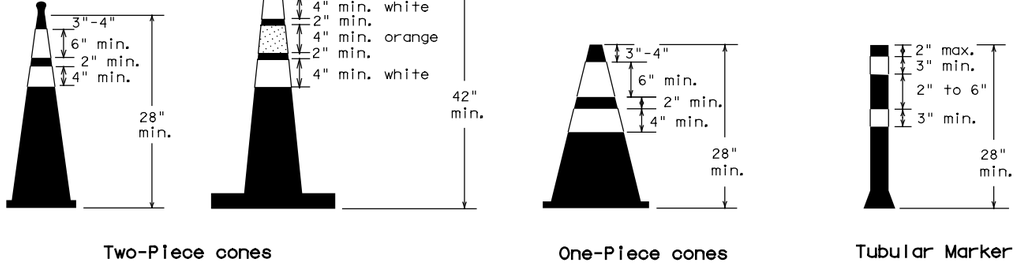
PLAN VIEW

LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



TRAFFIC CONTROL FOR MATERIAL STOCKPILES

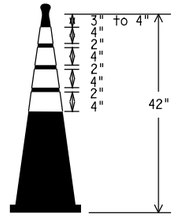


28" Cones shall have a minimum weight of 9 1/2 lbs.

42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers used at night shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.

THIS DEVICE SHALL NOT BE USED ON PROJECTS LET AFTER MARCH 2014.



EDGELINE CHANNELIZER

1. This device is intended only for use in place of a vertical panel to channelize traffic by indicating the edge of the travel lane. It is not intended to be used in transitions or tapers.
2. This device shall not be used to separate lanes of traffic (opposing or otherwise) or warn of objects.
3. This device is based on a 42 inch, two-piece cone with an alternate striping pattern: four 4 inch retroreflective bands, with an approximate 2 inch gap between bands. The color of the band should correspond to the color of the edgeline (yellow for left edgeline, white for right edgeline) for which the device is substituted or for which it supplements. The reflectorized bands shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
4. The base must weigh a minimum of 30 lbs.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 9-07 8-14 7-13	0912	72	360	BSW
	DIST	COUNTY		SHEET NO.
	12	HARRIS		193

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DATE: 8/24/2020 11:42:38 AM
FILE: 180-191_BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT BC-14.dgn

WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

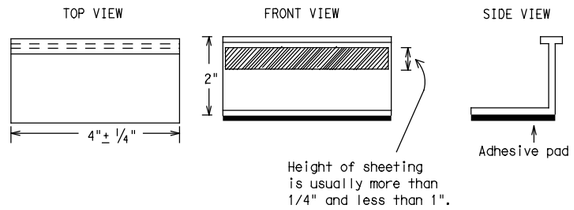
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS	DMS-8241
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

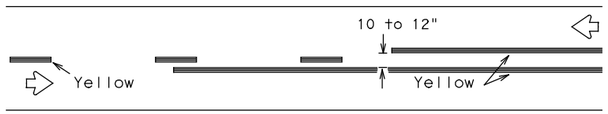
BC(11)-14

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©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
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2-98 9-07	DIST	COUNTY		SHEET NO.
1-02 7-13	12	HARRIS		194
11-02 8-14				

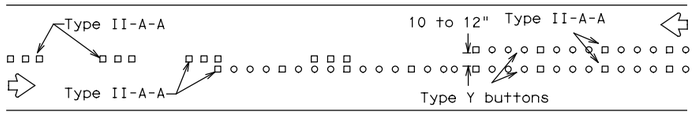
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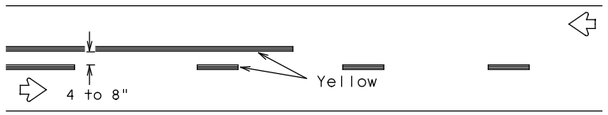
PAVEMENT MARKING PATTERNS



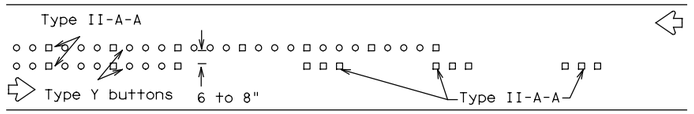
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



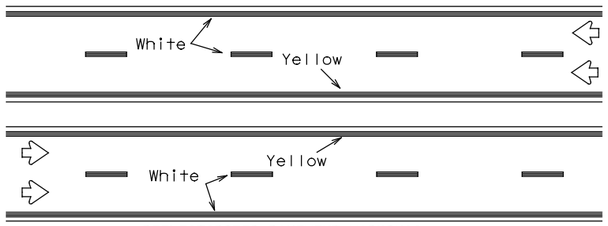
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



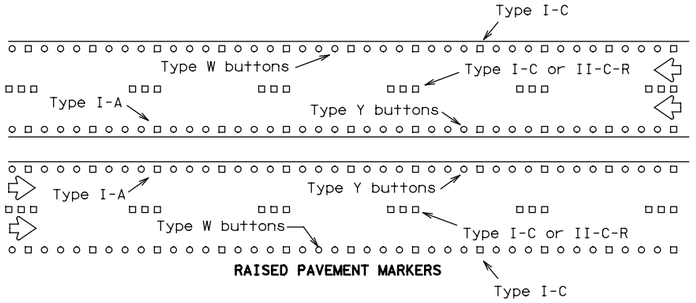
RAISED PAVEMENT MARKERS - PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer.
Prefabricated markings may be substituted for reflectorized pavement markings.

CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



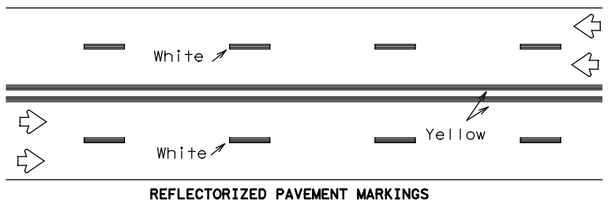
REFLECTORIZED PAVEMENT MARKINGS



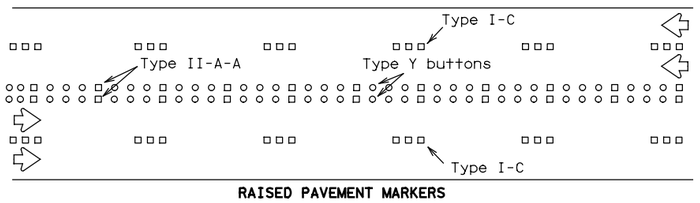
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



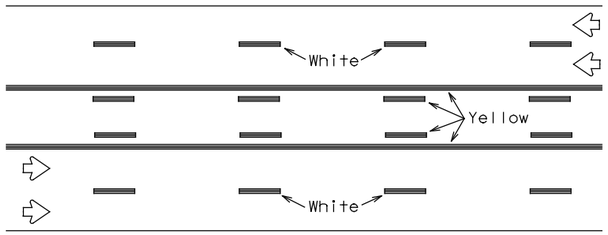
REFLECTORIZED PAVEMENT MARKINGS



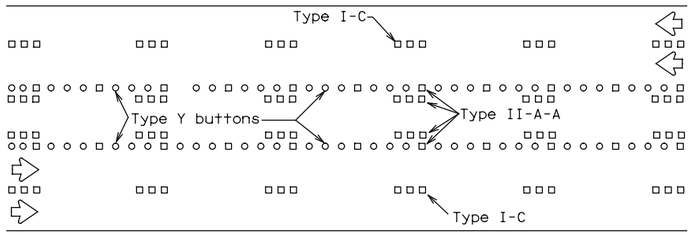
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

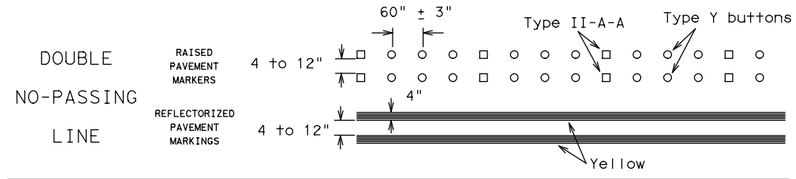
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

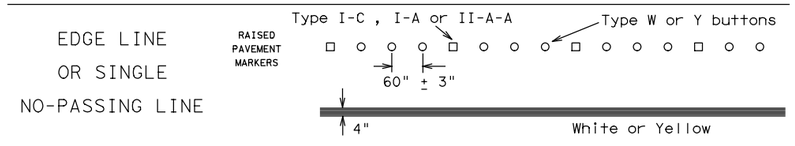
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

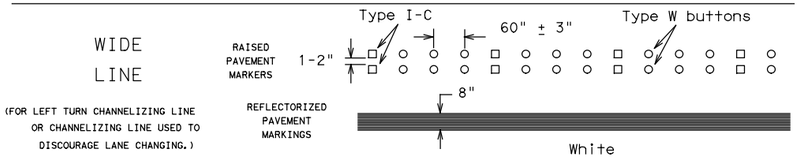


EDGE LINE OR SINGLE NO-PASSING LINE



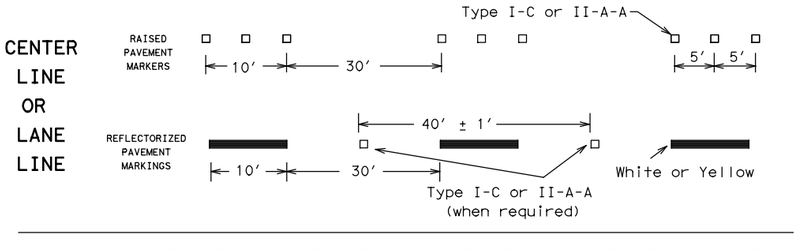
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)

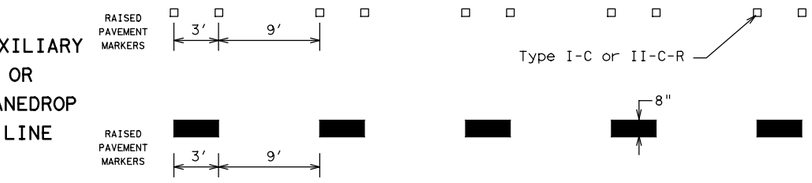


BROKEN LINES

CENTER LINE OR LANE LINE

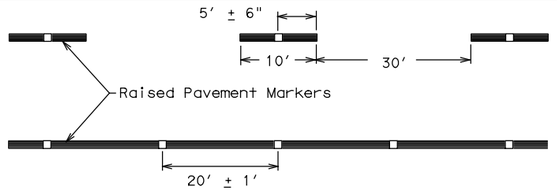


AUXILIARY OR LANEDROP LINE



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

SHEET 12 OF 12

Texas Department of Transportation

Traffic Operations Division Standard

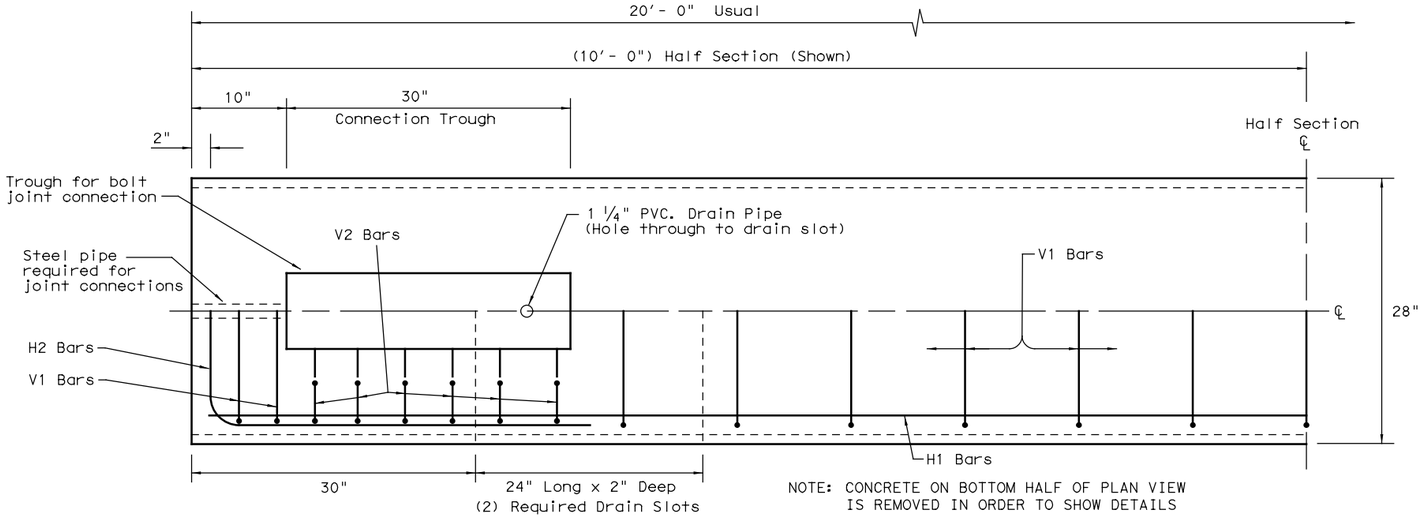
BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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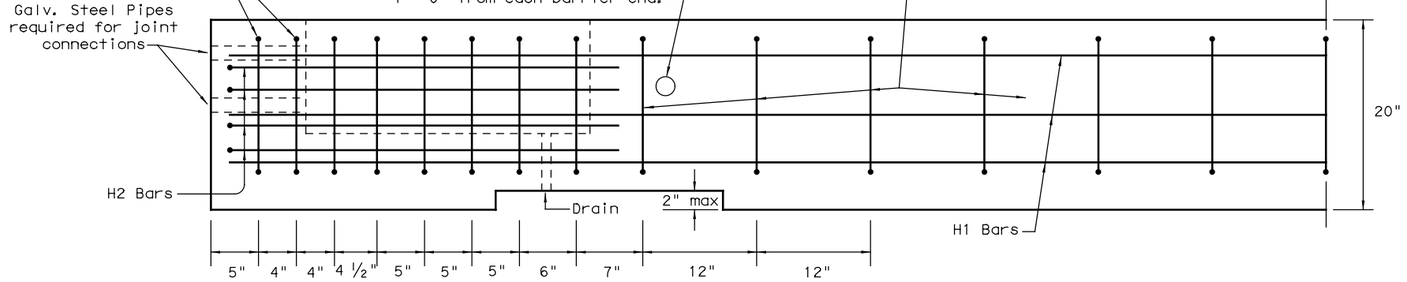
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DATE: 8/24/2020
FILE: 192-193_LOW PROFILE CONCRETE BARRIER (TYPE 1&2) LPCB-13.dgn

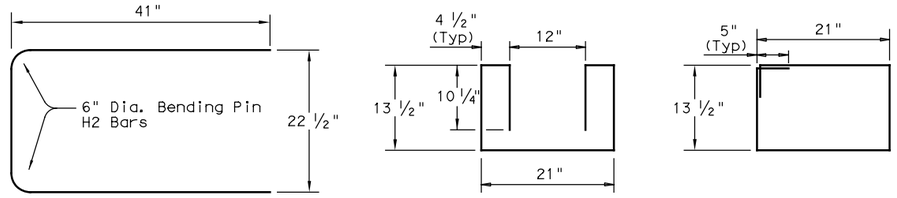


NOTE: CONCRETE ON BOTTOM HALF OF PLAN VIEW IS REMOVED IN ORDER TO SHOW DETAILS

PLAN
(TYPE 1) BARRIER SEGMENT
(SYMMETRICAL ABOUT CENTER LINES)



ELEVATION
(TYPE 1) BARRIER SEGMENT
(SYMMETRICAL ABOUT CENTER LINES)



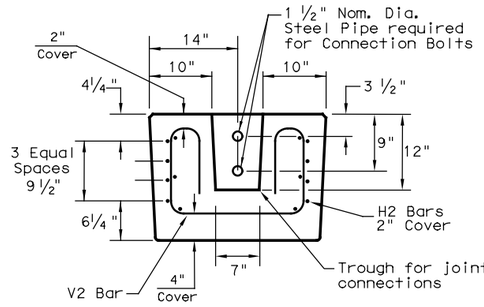
(8)~H2 Bars (#5) Bars

(12)~V2 Bars (#4) Bars

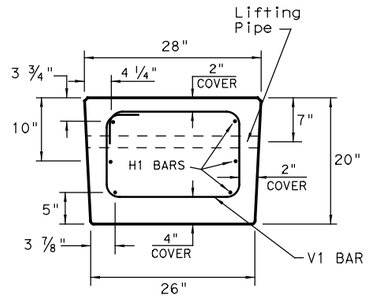
(17)~V1 Bars (#4) Bars

REINFORCING STEEL DETAILS
TYPE 1 - BARRIER SEGMENT

Note: Use 2" Dia. Bending Pin, unless otherwise shown



SECTION A-A



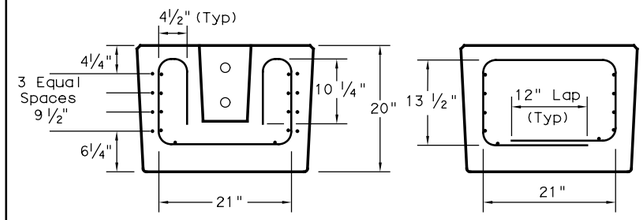
SECTION B-B

GENERAL NOTES

1. Low Profile Concrete Barrier (LPCB), is approved for use in temporary work zone locations, where the posted speed is 45 mph, or less.
2. Concrete shall be Class H for precast barrier with a minimum compressive strength of 3,600 psi.
3. Where used, rebar reinforcement shall be Grade 60 and conform to ASTM A615.
4. Precast LPCB barrier length shall be 20 ft.
5. All barrier edges shall have ¾" chamfer or a tooled radius.
6. Joint connection hardware shall be in accordance with Item 449, "Anchor Bolts." and is considered subsidiary.
7. Steel pipe required for joint connection bolts shall be galvanized in accordance with Item 445,"Galvanizing."
8. Welded wire reinforcement (WWR) may be used in lieu of conventional reinforcement for Type 1 barrier, and shall meet the requirements shown.

FOR CONTRACTORS INFORMATION ONLY

(TYPE 1) APPROX. QUANTITIES 20 FT. SECTION		
CONCRETE	CY	2.6
REINFORCING STEEL	LBS	330
TOTAL BARRIER WT.	LBS	11000



SECTION A-A **SECTION B-B**

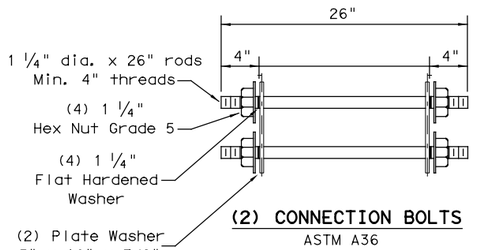
(WWR) GENERAL NOTES

1. Deformed Welded Wire Reinforcement shall conform to ASTM A497.
2. Welded wire cage may be cut or bent, if necessary, but must be approved by the Engineer.
3. Combinations of reinforcing steel and WWR are permitted, as directed by the Engineer. The dimensions from the end of the barrier section to the first wire shall not exceed 3".

REQUIRED (WWR) WIRE DESIGN

8 ~ (D31) Horizontal Wires (Equally spaced)
10 ~ (D20) Horizontal Wires (Equally spaced)
29 ~ (D20) Vertical Wires (Spaced as shown in Elevation View)

WELDED WIRE REINFORCEMENT (WWR)- OPTIONAL REINFORCING



(2) CONNECTION BOLTS ASTM A36

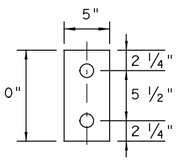


PLATE WASHER 5" x 10" x ⅜"

Note: Rods, Hex nuts and Washers shall be Galvanized.

SHEET 1 OF 2

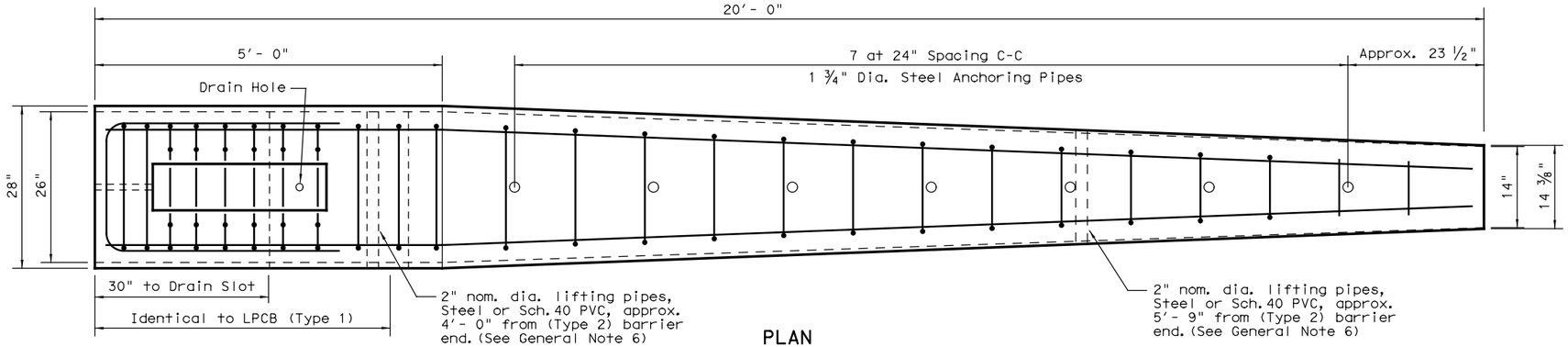
Texas Department of Transportation — Design Division Standard

LOW PROFILE CONCRETE BARRIER
PRECAST BARRIER (TYPE 1)
LPCB-13

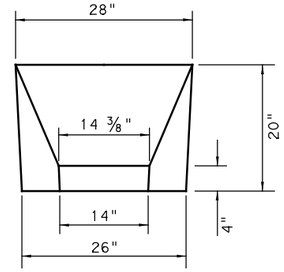
FILE: lpcb13.dgn	DN: TxDOT	CK: AM	DW: VP	CK:
©TxDOT December 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	0912	72	360	BSW
	DIST	COUNTY		SHEET NO.
	12	HARRIS		196

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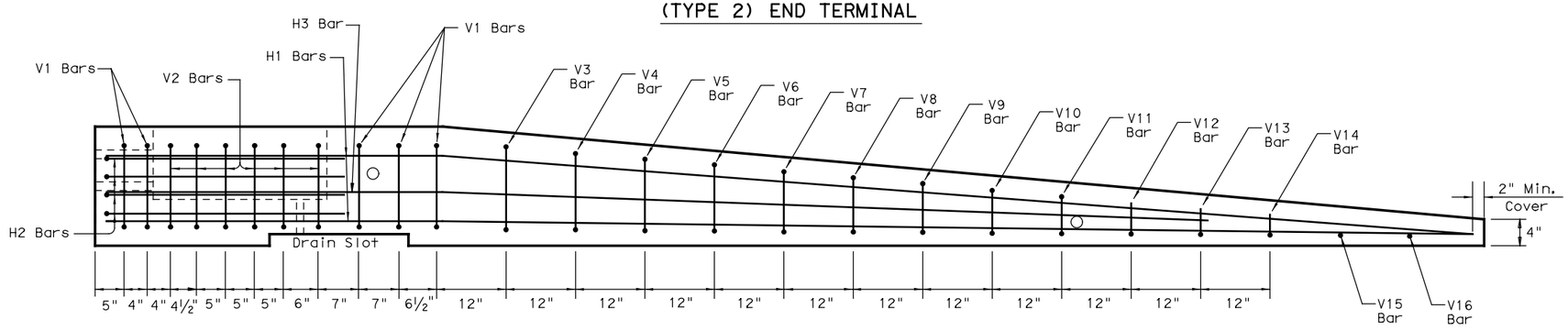
DATE: 8/24/2020
FILE: 192-193_LOW PROFILE CONCRETE BARRIER (TYPE 1&2) LPCB-13.dgn



PLAN
(TYPE 2) END TERMINAL



APPROACH VIEW

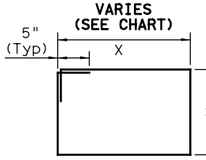


ELEVATION
(TYPE 2) END TERMINAL

Note:
Anchoring pipes not shown in Elevation View

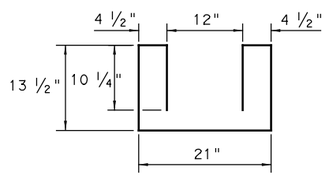
TYPE 2 - NOTES

1. Welded wire reinforcment (WWR) is "not" an option for Type 2 Barrier.
2. Type 2 Barrier shall be used as an end treatment for the Type 1 barrier segments, when applicable.
3. The end treatment can be used without the anchor pins in locations that can accommodate approximately 4 ft. of lateral displacement of the end treatment. The use of non-pinned end treatment does not affect the performance or the deflection of the Low-Profile barrier system.
4. The anchor pins are all the same length and are to be driven flush with the top of the (Type 2) barrier surface.
5. The bends in the H3 and H1 bars are slight, no formal bend is necessary.
6. The Type 2 barrier segment must be lifted from the rear first, to prevent cracking of sloped section.
7. See LPCB sheet 1 for additional information.

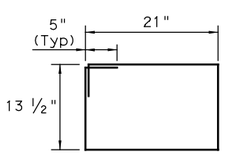


V3-V14 Bars

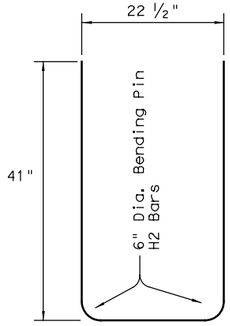
BAR (#4)	X (IN.)	Y (IN.)
V3 BAR	20 ¼	14 ½
V4 BAR	19 ½	13 ½
V5 BAR	18 ½	12 ¼
V6 BAR	17 ½	11 ¼
V7 BAR	17	10 ¼
V8 BAR	16 ¼	9
V9 BAR	15 ½	8
V10 BAR	14 ½	7
V11 BAR	13 ¾	6



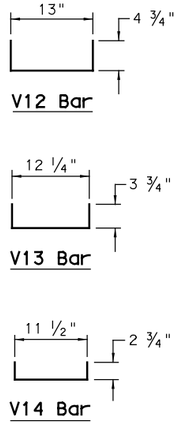
(6)~V2 Bars



(5)~V1 Bars

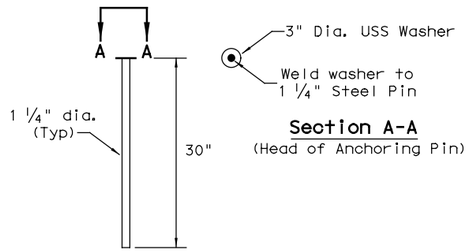


(4)~H2 Bars
(#5) Bars



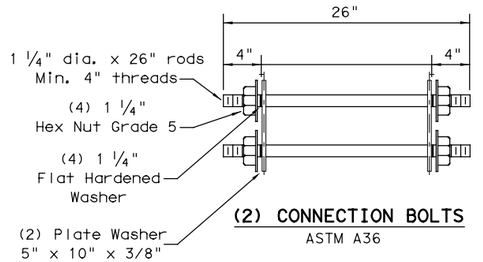
Note: All V Bars are (#4)

REINFORCING STEEL DETAILS
TYPE 2 - END TERMINAL



Section A-A
(Head of Anchoring Pin)

(7) Anchor Pins
ASTM A36 Steel
(See Note 3)

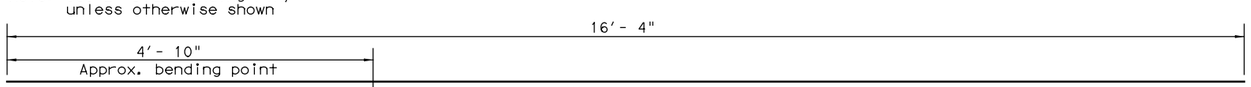


(2) CONNECTION BOLTS
ASTM A36

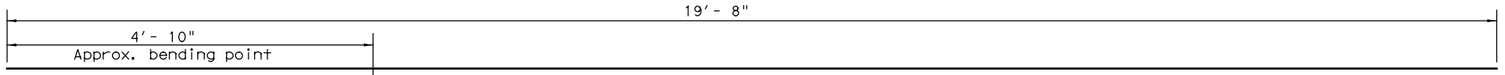
PLATE WASHER
5" x 10" x ⅜"

Note: Rods, Hex nuts and Washers shall be Galvanized.

Note: Use 2" Dia. Bending Pin, unless otherwise shown



(2)~H3 Bars
(#5) Bar



Note: Bends on H1 and H3 bars are slight and do not require formal bends.

(4)~H1 Bars
(#5) Bar

FOR CONTRACTORS INFORMATION ONLY

(TYPE 2) APPROX. QUANTITIES	20 FT. SECTION	
CONCRETE	CY	1.65
REINFORCING STEEL	LBS	240
TOTAL BARRIER WT.	LBS	7000

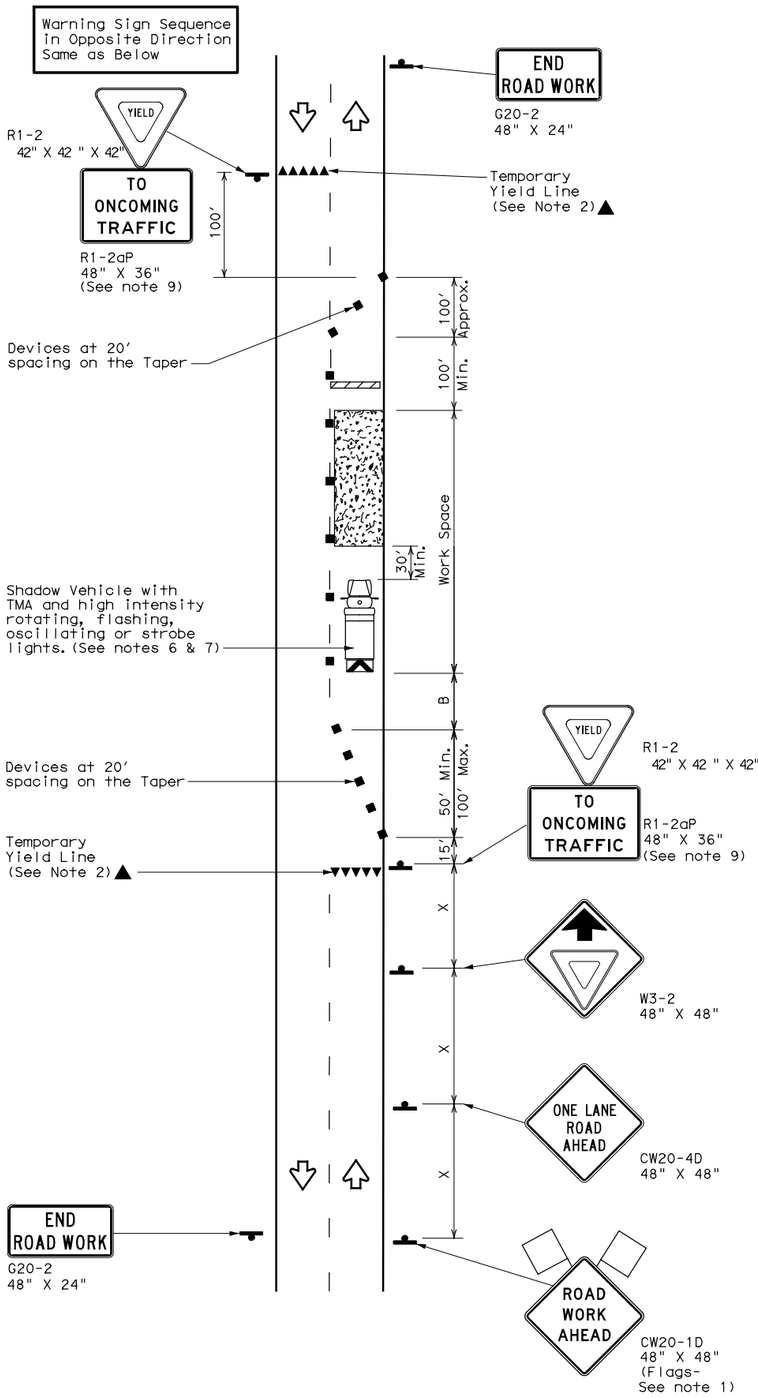
Texas Department of Transportation
Design Division Standard

LOW PROFILE CONCRETE BARRIER
PRECAST BARRIER (TYPE 2)
LPCB-13

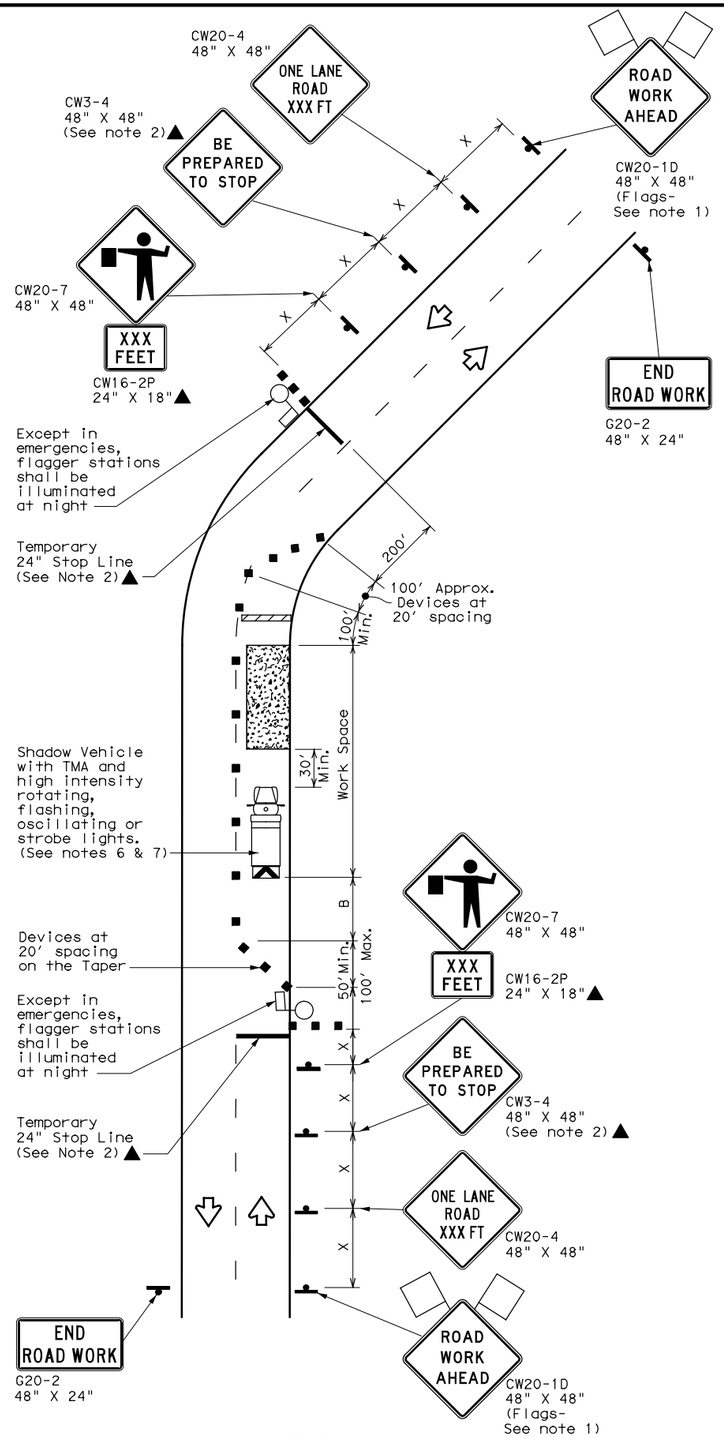
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© TxDOT December 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	0912	72	360	BSW
	DIST	COUNTY		SHEET NO.
	12	HARRIS		197

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DATE: 8/24/2020 11:42:41 AM
FILE: 194_TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL TCP (2-2)-18.dgn



TCP (2-2a)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(Less than 2000 ADT - See Note 9)



TCP (2-2b)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH FLAGGERS

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained.
4. Flaggers should use two-way radios or other methods of communication to control traffic.
5. Length of work space should be based on the ability of flaggers to communicate.
6. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
7. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-2a)

8. The R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work space should be no longer than one half city block. In rural areas, roadways with less than 2000 ADT, work space should be no longer than 400 feet.
9. The R1-2aP "YIELD TO ONCOMING TRAFFIC" sign shall be placed on a support at a 7 foot minimum mounting height.

TCP (2-2b)

10. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the flagger and a queue of stopped vehicles. (See table above).
12. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situtations.

Texas Department of Transportation
Traffic Operations Division Standard

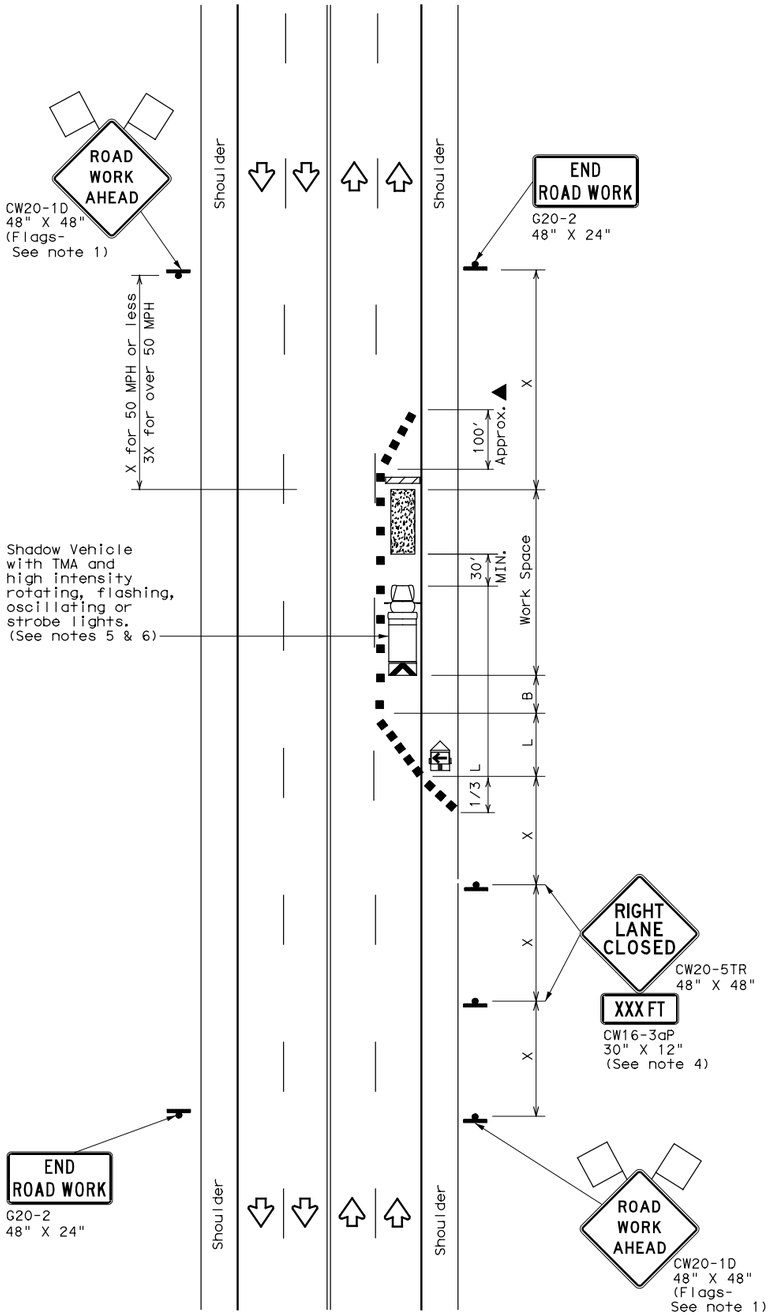
TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP (2-2)-18

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©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0912	72	360	BSW
8-95 3-03	DIST	COUNTY		SHEET NO.
1-97 2-12	12	HARRIS		198
4-98 2-18				

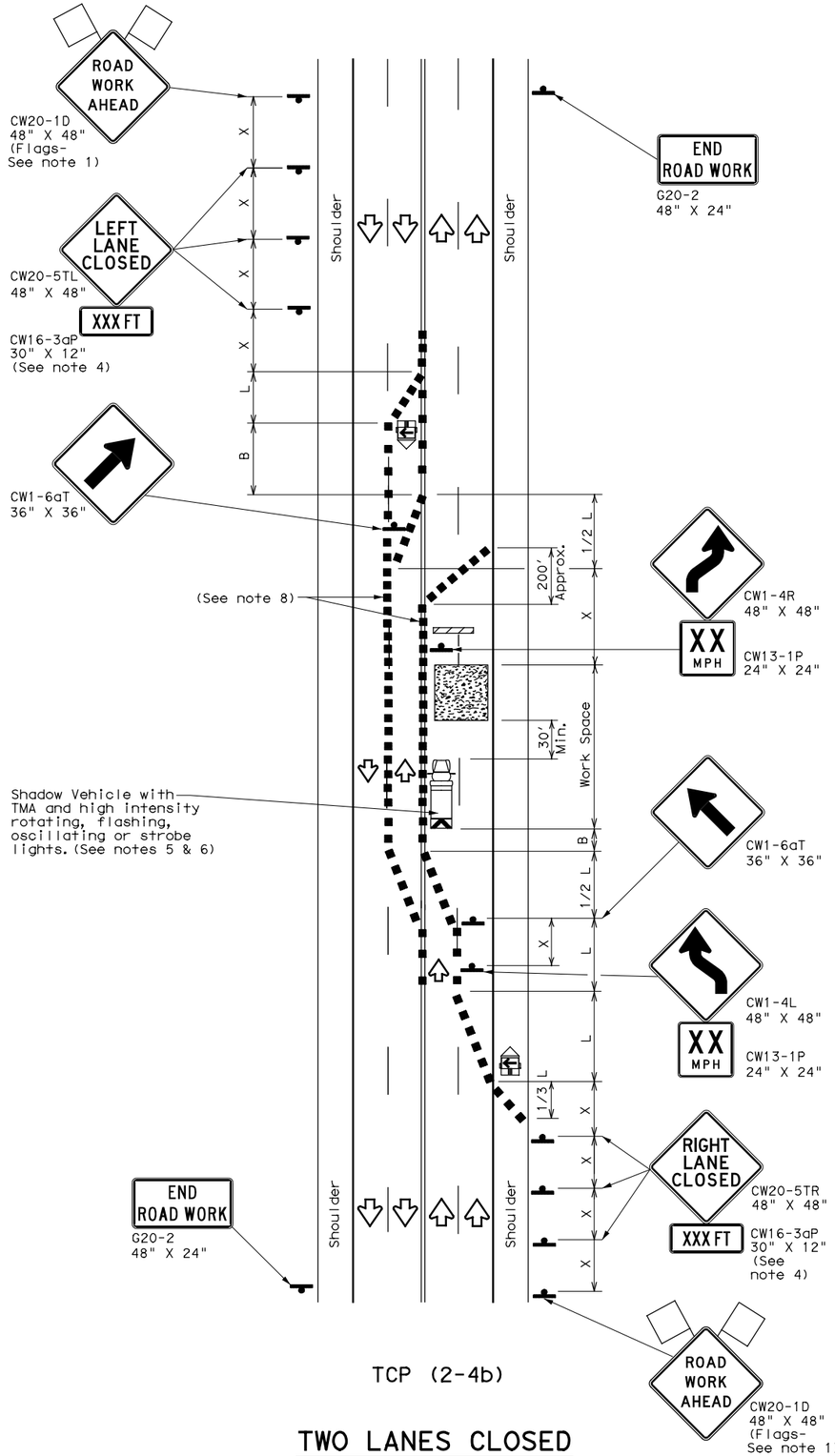
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DATE: 8/24/2020 11:42:41 AM
FILE: 195_TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS (2-4)-18.dgn



TCP (2-4a)

ONE LANE CLOSED



TCP (2-4b)

TWO LANES CLOSED

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10′ Offset	11′ Offset	12′ Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′	120′	90′
35		205′	225′	245′	35′	70′	160′	120′
40		265′	295′	320′	40′	80′	240′	155′
45	L=WS	450′	495′	540′	45′	90′	320′	195′
50		500′	550′	600′	50′	100′	400′	240′
55		550′	605′	660′	55′	110′	500′	295′
60		600′	660′	720′	60′	120′	600′	350′
65		650′	715′	780′	65′	130′	700′	410′
70		700′	770′	840′	70′	140′	800′	475′
75		750′	825′	900′	75′	150′	900′	540′

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
		✓	✓	

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The downstream taper is optional. When used, it should be 100 feet minimum length per lane.
4. For short term applications, when post mounted signs are not used, the distance legend may be shown on the sign face rather than on a CW16-3aP supplemental plaque.
5. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
6. Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-4a)

7. If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED"signs shall be used and channelizing devices shall be placed on the centerline to protect the work space from opposing traffic with the arrow board placed in the closed lane near the end of the merging taper.

TCP (2-4b)

8. For shorter durations where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20′ or 15′ if posted speeds are 35 mph or slower, and for tangent sections, at 1/2(S) where S is the speed in mph. This tighter devices spacing is intended for the area of conflicting markings, not the entire work zone.

Texas Department of Transportation

Traffic Operations Division Standard

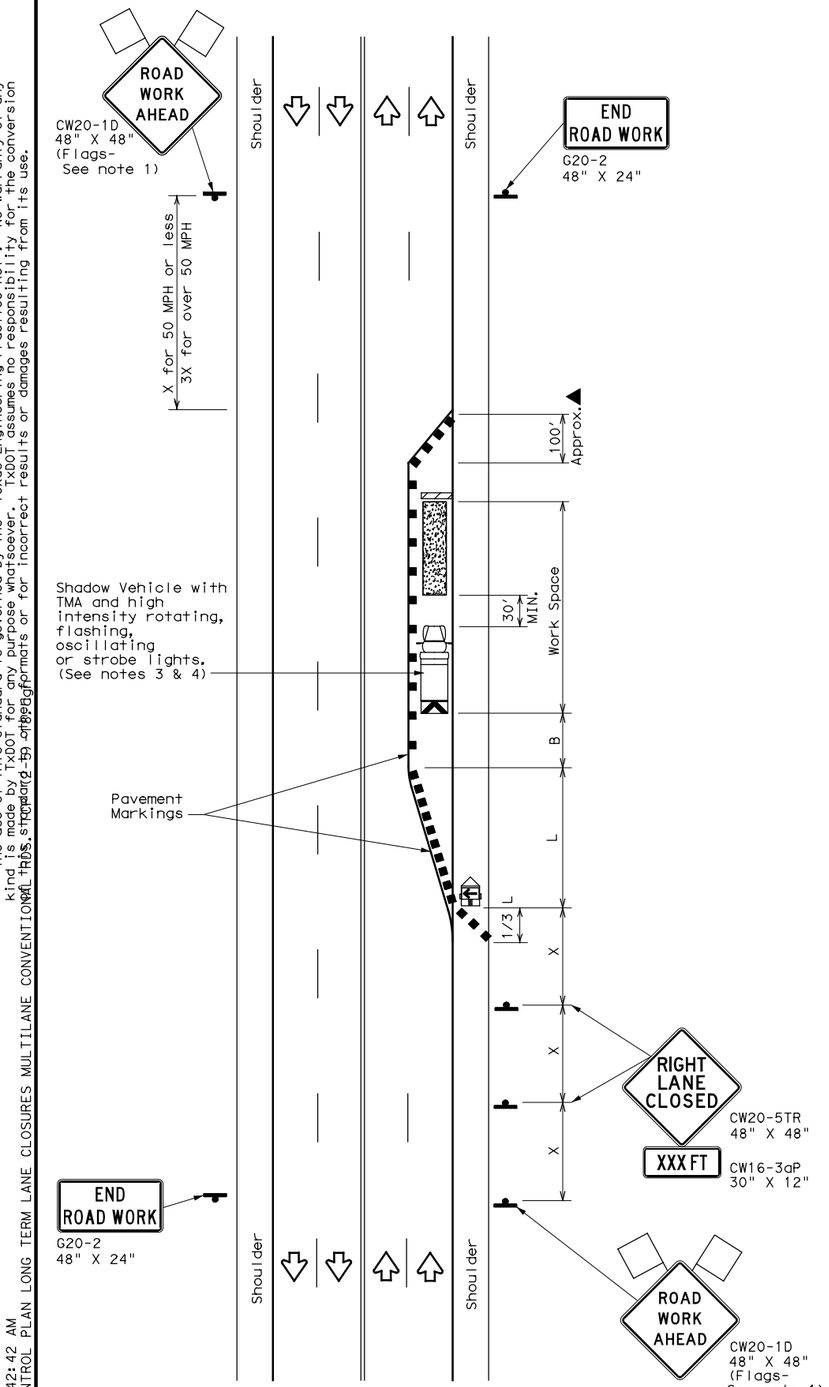
TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(2-4)-18

FILE: tcp2-4-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
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1-97 2-12	DIST	COUNTY		SHEET NO.
4-98 2-18	12	HARRIS		199

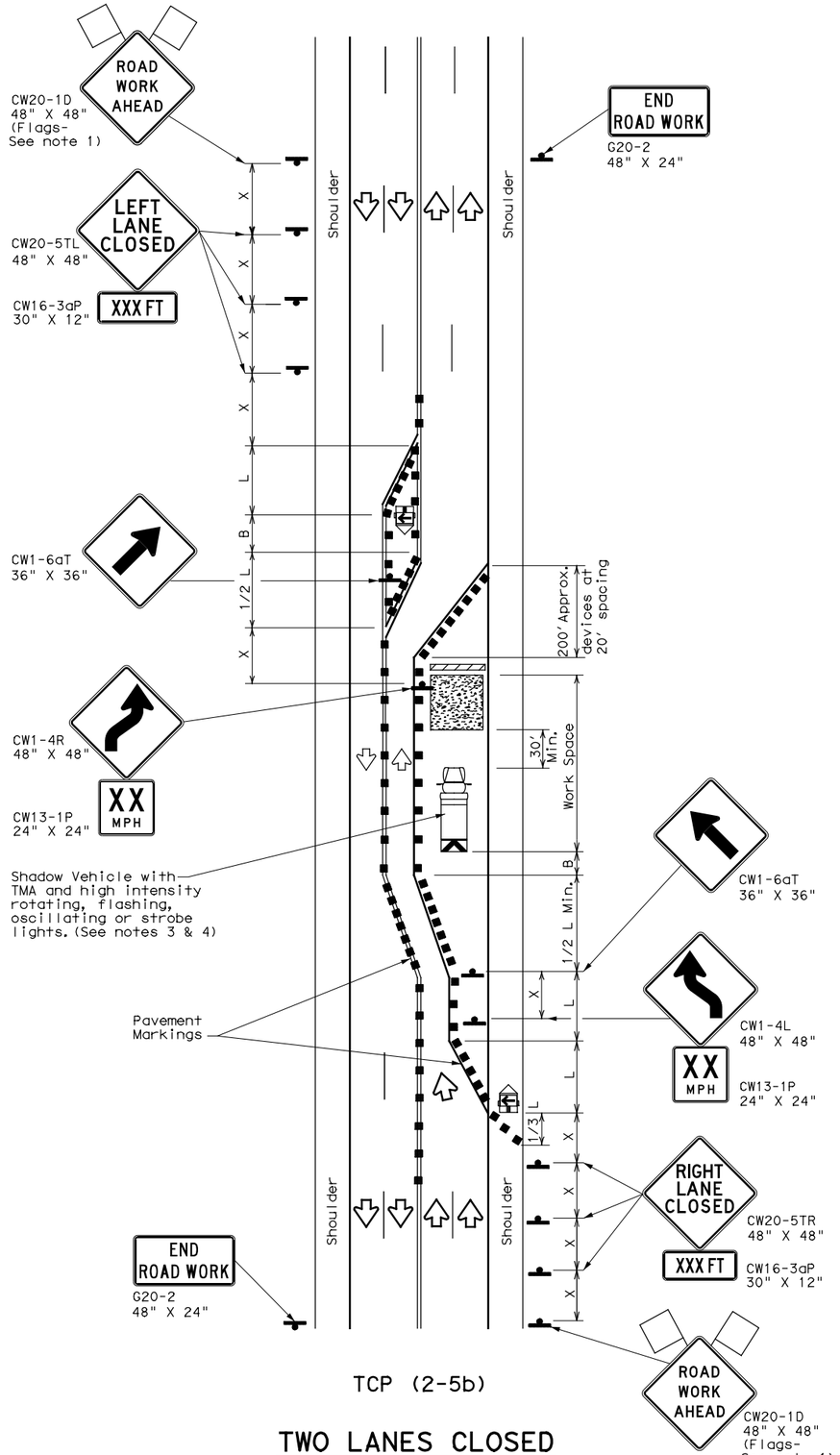
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DATE: 8/24/2020 11:42:42 AM
FILE: 196_TRAFFIC CONTROL PLAN LONG TERM LANE CLOSURES MULTILANE CONVENTIONAL RDS.dgn



TCP (2-5a)

ONE LANE CLOSED



TCP (2-5b)

TWO LANES CLOSED

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
			✓	✓

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew eposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substitutued for the Shadow Vehicle and TMA.
4. Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.
5. The downstream taper is optional. When used, it should be 100 feet approximately per lane, with channelizing devices spaced at 20 feet.

TCP (2-5a)

6. If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline to protect the work space from opposing traffic, with the arrow board placed in the closed lane near the end of the merging taper.

TCP (2-5b)

7. Conflicting pavement markings shall be removed for long-term projects.

Texas Department of Transportation

Traffic Operations Division Standard

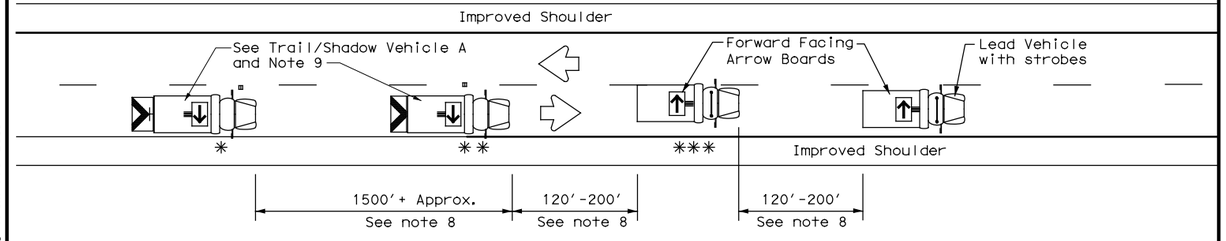
TRAFFIC CONTROL PLAN LONG TERM LANE CLOSURES MULTILANE CONVENTIONAL RDS.

TCP(2-5)-18

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©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
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1-97 3-03	DIST	COUNTY		SHEET NO.
4-98 2-18	12	HARRIS		200

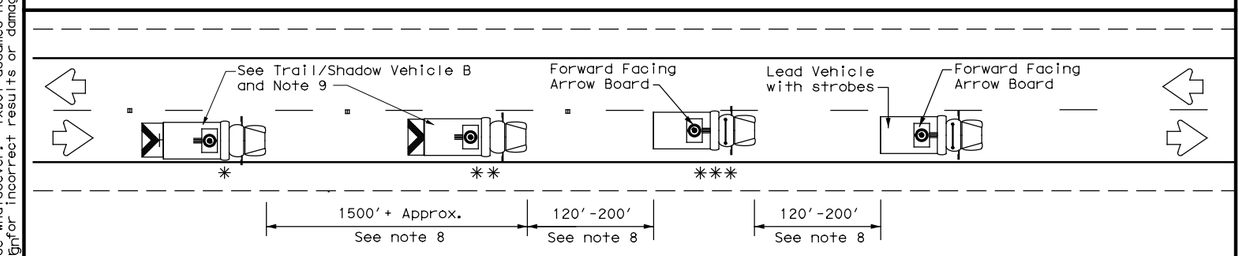
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DATE: 8/24/2020 11:42:42 AM
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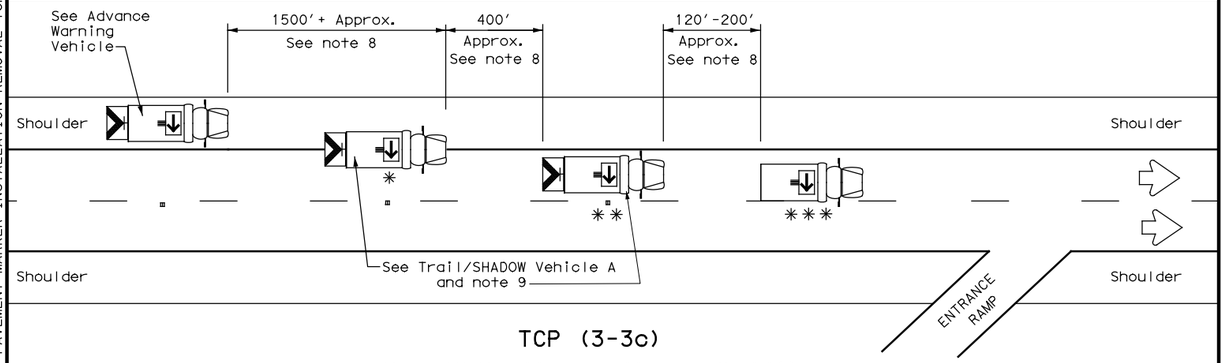
TCP (3-3a)

TWO LANE HIGHWAY WITH PAVED SHOULDERS (WORK ON TRAVEL LANE)



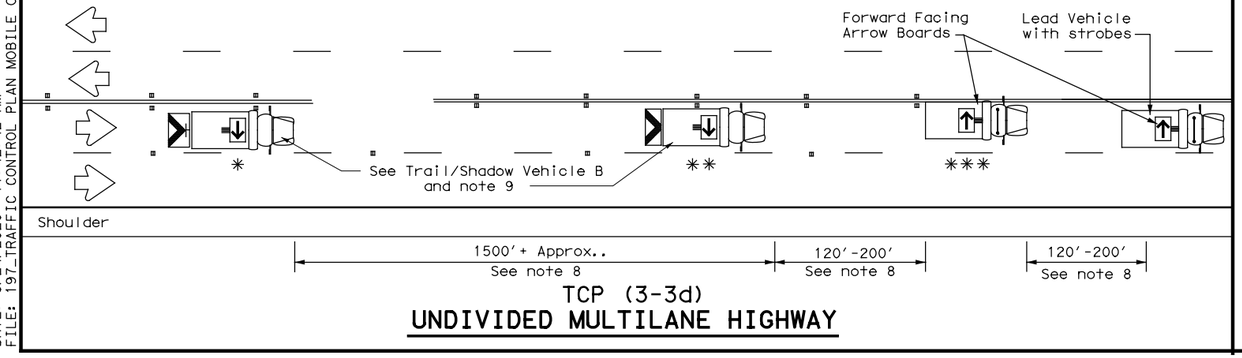
TCP (3-3b)

TWO LANE HIGHWAY WITHOUT PAVED SHOULDERS (WORK ON TRAVEL LANE)



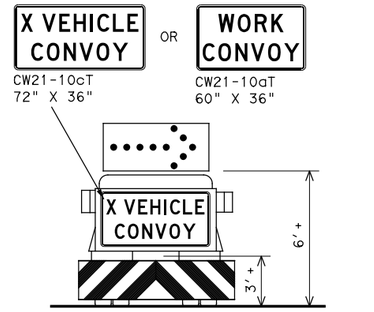
TCP (3-3c)

DIVIDED MULTILANE HIGHWAY



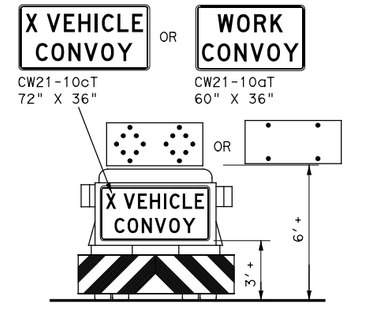
TCP (3-3d)

UNDIVIDED MULTILANE HIGHWAY



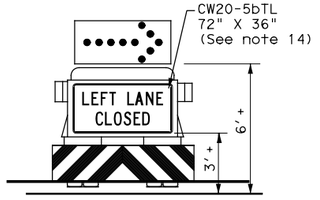
TRAIL/SHADOW VEHICLE A

with RIGHT Directional display
Flashing Arrow Board

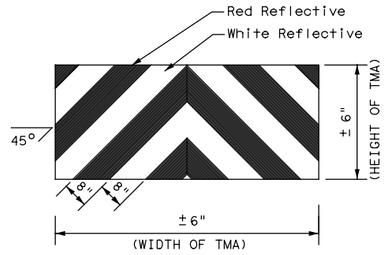


TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board
in Caution Mode



ADVANCE WARNING VEHICLE



STRIPING FOR TMA

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
**	Shadow Vehicle		
***	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
✓				

GENERAL NOTES

1. TRAIL, SHADOW, and LEAD vehicles shall be equipped with arrow boards as illustrated. When a LEAD vehicle is not used on two way roads the WORK vehicle must have an arrow board. For divided roadways, the arrow board on the WORK vehicle is optional based on the type of work being performed. The Engineer will determine if the LEAD vehicle and/or TRAIL vehicle are required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.
2. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating, or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
3. The use of truck mounted attenuators (TMA) on the SHADOW VEHICLE, ADVANCE WARNING and TRAIL VEHICLE are required.
4. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DEPARTMENTAL MATERIAL SPECIFICATION DMS 8300, Type A.
5. Flashing arrow boards shall be Type B or Type C as per the Barricade and Construction (BC) standards. The board shall be controlled from inside the vehicle.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE and vehicle spacing between WORK VEHICLE and LEAD VEHICLE may vary according to terrain, work activity and other factors.
9. X VEHICLE CONVOY (CW21-10cT) or WORK CONVOY (CW21-10aT) signs shall be used on TRAIL VEHICLES and SHADOW VEHICLES as shown. As an option 48" x 48" diamond shaped WORK CONVOY (CW21-10T) or X VEHICLE CONVOY (CW21-10bT) signs may be used where adequate mounting space exists. When used, the X VEHICLE CONVOY sign shall have the number of the convoy vehicles displayed on the sign in the number designation "X" location. The X VEHICLE CONVOY sign shall not be used on the SHADOW VEHICLE if a TRAIL VEHICLE is used.
10. For divided highways with two or three lanes in one direction, the appropriate LEFT LANE CLOSED (CW20-5bTL), RIGHT LANE CLOSED (CW20-5bTR), or CENTER LANE CLOSED (CW20-5dT) sign should be used on the Advance Warning Vehicle. As an option, a portable changeable message sign (PCMS) or truck mounted changeable message sign (TMCMS) with a minimum character height of 12", and displaying the same legend may be substituted for these signs. An appropriate directional arrow display, simulating the size and legibility of the flashing arrow board may be used in the second phase of the PCMS/TMCMS message. When this is done, the arrow board will not be required on the Advance Warning Vehicle.
11. A double arrow shall not be displayed on the arrow board on the Advance Warning Vehicle.
12. For divided highways with three or four lanes in each direction, use TCP(3-2).
13. Standard diamond shape versions of the CW20-5 series signs may be used as an option if the rectangular signs shown are not available.
14. The Advance Warning Vehicle may straddle the edgeline when Shoulder width makes it necessary.
15. On two-lane two-way roadways, the work and protection vehicles should pull over periodically to allow motor vehicle traffic to pass. If motorists are not allowed to pass the work convoy, a DO NOT PASS (R4-1) sign should be placed on the back of the rearmost protection vehicle.

Texas Department of Transportation

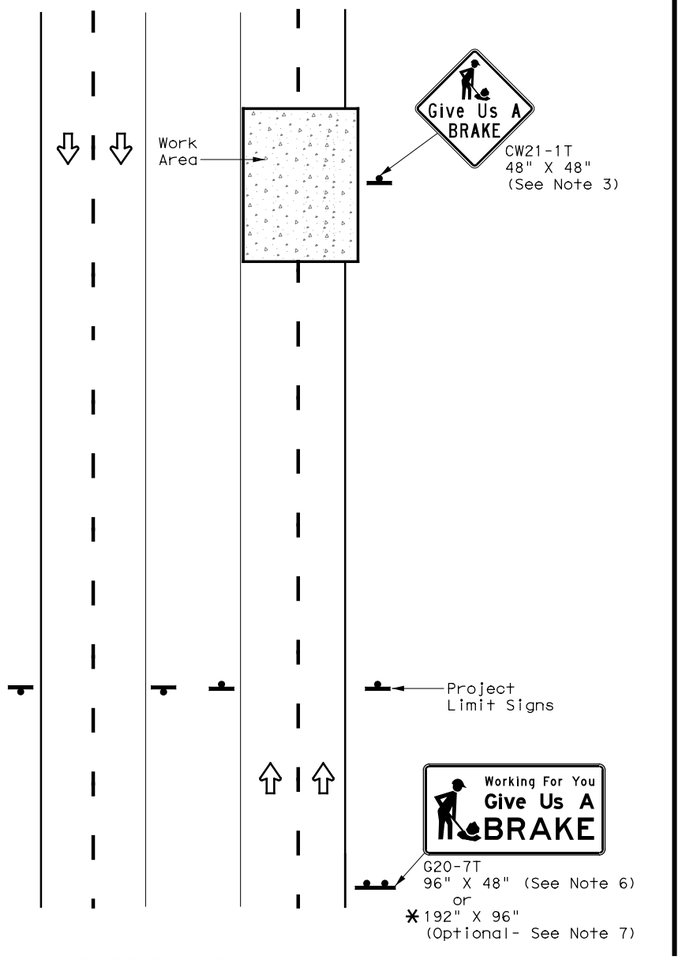
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS RAISED PAVEMENT MARKER INSTALLATION/ REMOVAL

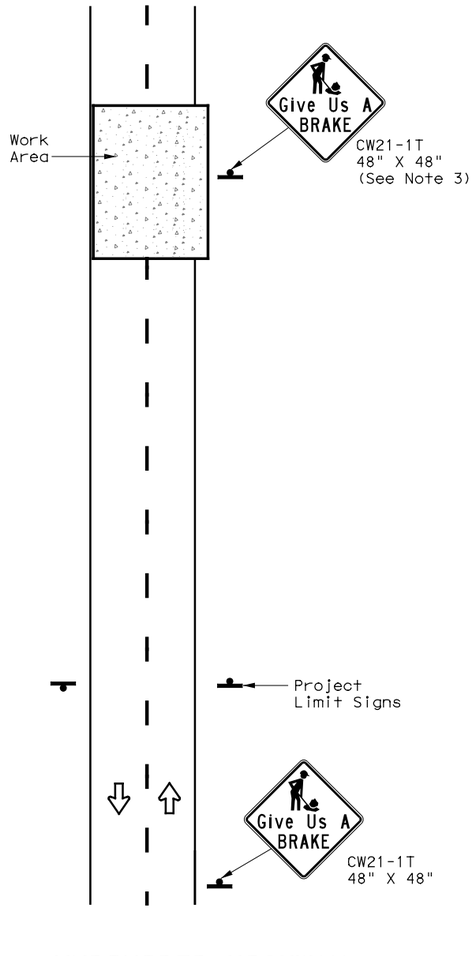
TCP(3-3)-14

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©TxDOT September 1987	CONT	SECT	JOB	HIGHWAY
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2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 7-13				
1-97 7-14	12	HARRIS		201

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DIVIDED HIGHWAY



UNDIVIDED HIGHWAY

SIGNS ARE SHOWN FOR ONE DIRECTION OF TRAVEL

* When the optional larger WORKING FOR YOU GIVE US A BRAKE (G20-7T) 192" x 96" sign is required, the locations shall be noted elsewhere in the plans.

SUMMARY OF LARGE SIGNS

BACKGROUND COLOR	SIGN DESIGNATION	SIGN	SIGN DIMENSIONS	REFLECTIVE SHEETING	SQ FT	GALVANIZED STRUCTURAL STEEL			DRILLED SHAFT 24" DIA. (LF)
						Size	(LF) ①	(LF) ②	
Orange	G20-7T	Working For You Give Us A BRAKE	96" X 48"	Type B_{FL} or C_{FL}	32	▲	▲	▲	▲
Orange	G20-7T	Working For You Give Us A BRAKE	192" X 96"	Type B_{FL} or C_{FL}	128	W8x18	16	17	12

▲ See Note 6 Below

LEGEND	
	Sign
	Large Sign
	Traffic Flow

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PLYWOOD SIGN BLANKS	DMS-7100
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B_{FL} OR TYPE C_{FL}
BLACK	LEGEND & BORDERS	NON-REFLECTIVE ACRYLIC FILM

GENERAL NOTES

1. See BC and SMD sheets for additional sign support details.
2. Sign locations shall be approved by the Engineer.
3. For projects more than two miles in length, Give Us a BRAKE signs should be repeated halfway through the project. The Give Us a Brake (CW21-1T) may be used for this purpose.
4. Work zone speed limits are sometimes used in conjunction with GIVE US A BRAKE signing. See BC(3) for location and spacing of construction speed zone signing when required.
5. Give Us a Brake (CW21-1T) signs and supports shall be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling."
6. The 96" X 48" Working For You Give Us A BRAKE (G20-7T) may use a 1/2" or 5/8" plywood substrate or 0.125" aluminum sheeting substrate and may be supported by two 4" x 6" wood posts with drilled holes for breakaway as per BC(5) and will be subsidiary to Item 502.
7. The Working For You Give Us A BRAKE (G20-7T) 192" X 96" sign shall be paid for under the following specification items:
   Item 636 - Aluminum Signs
   Item 647 - Large Roadside Sign Supports and Assemblies.
   Item 416 - Drilled Shaft Foundations
8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

Texas Department of Transportation

Traffic Operations Division Standard

WORK ZONE "GIVE US A BRAKE" SIGNS

WZ(BRK)-13

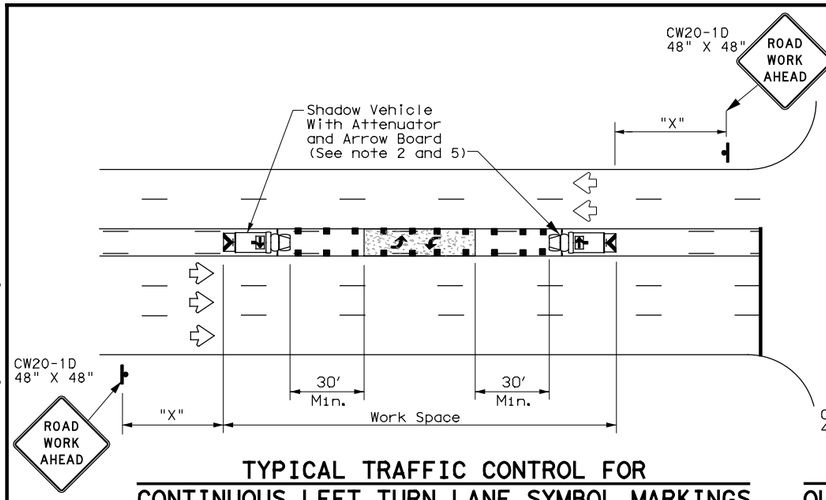
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©TxDOT August 1995	CONT	SECT	JOB	HIGHWAY
REVISIONS	0912	72	360	BSW
6-96 5-98 7-13	DIST	COUNTY		SHEET NO.
8-96 3-03	12	HARRIS		202

116

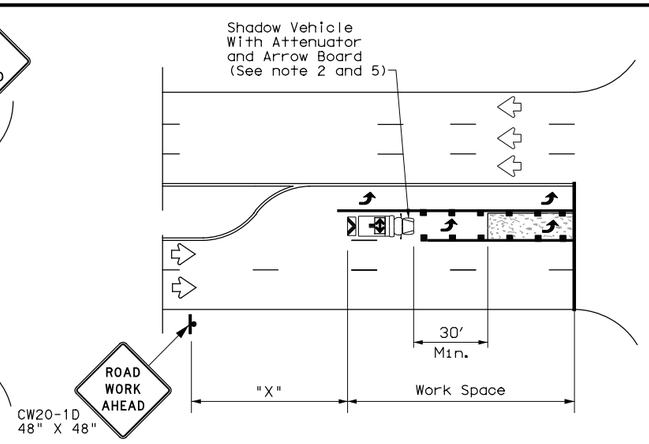
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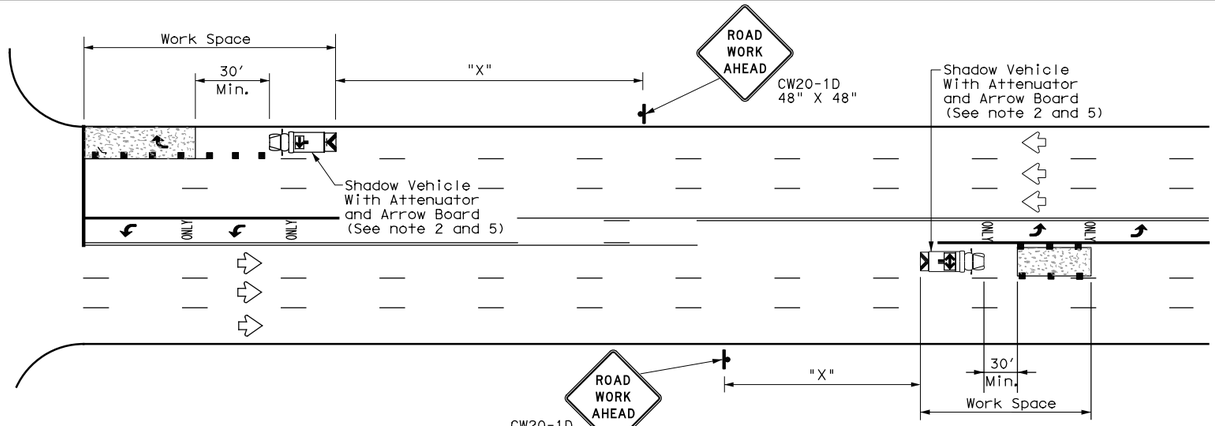
DATE: 8/24/2020 11:42:44 AM
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TYPICAL TRAFFIC CONTROL FOR CONTINUOUS LEFT TURN LANE SYMBOL MARKINGS

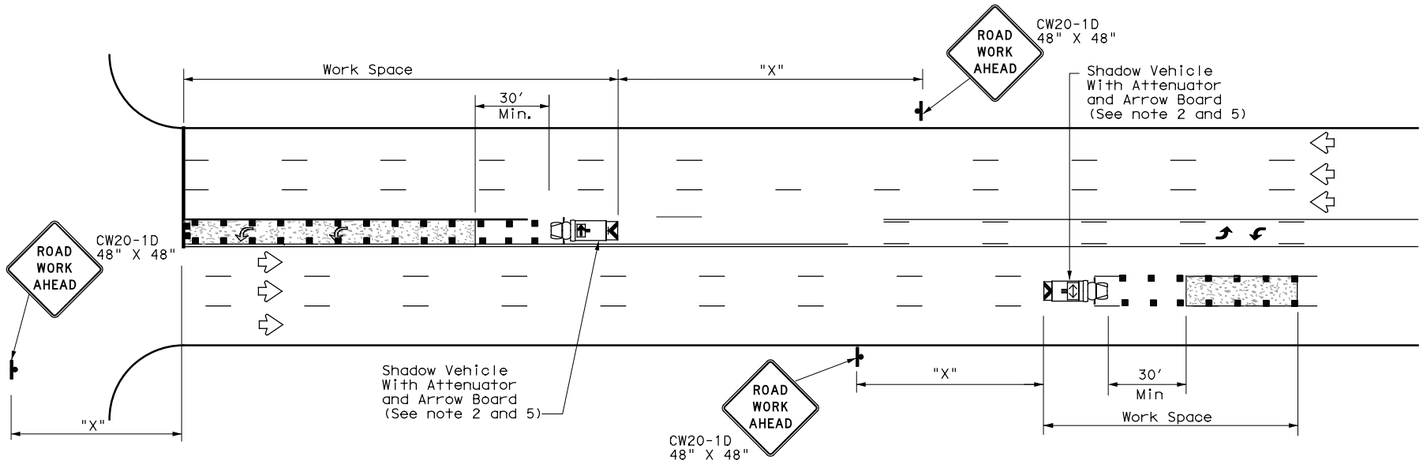


TYPICAL TRAFFIC CONTROL FOR OUTSIDE DUAL LEFT TURN LANE SYMBOL MARKINGS



TYPICAL TRAFFIC CONTROL FOR OUTSIDE LANE MARKINGS

TYPICAL TRAFFIC CONTROL FOR INSIDE LANE MARKINGS



TYPICAL TRAFFIC CONTROL FOR LEFT TURN LANE MARKINGS

TYPICAL TRAFFIC CONTROL FOR CENTER LANE MARKINGS

LEGEND			
✳	Trail Vehicle	ARROW BOARD DISPLAY	
✳✳	Shadow Vehicle		
✳✳✳	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow	■ ■ ■	Channelizing Devices

Posted Speed ✳	Formula	Minimum Desirable Taper Lengths ✳✳ 10′ Offset	11′ Offset	12′ Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′	120′	90′
35		205′	225′	245′	35′	70′	160′	120′
40		265′	295′	320′	40′	80′	240′	155′
45	L=WS	450′	495′	540′	45′	90′	320′	195′
50		500′	550′	600′	50′	100′	400′	240′
55		550′	605′	660′	55′	110′	500′	295′
60		600′	660′	720′	60′	120′	600′	350′
65		650′	715′	780′	65′	130′	700′	410′
70		700′	770′	840′	70′	140′	800′	475′
75		750′	825′	900′	75′	150′	900′	540′

✳ Conventional Roads Only

✳✳ Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
✓				

GENERAL NOTES

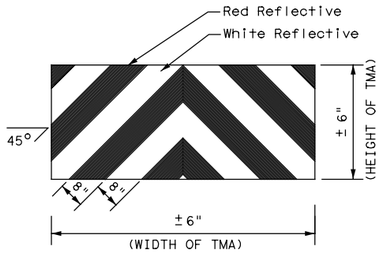
1. This traffic control plan is for use on conventional roads posted at 45 mph or less and is intended for mobile operations that move continuously or intermittently (stopping up to approximately 15 minutes) such as short-line striping and in-lane rumble strips. When activities are anticipated to take longer amounts of time or traffic conditions warrant, a short duration or short-term stationary traffic control plan should be used.

2. A Truck Mounted Attenuator shall be used on Shadow Vehicle. Striping on the back panel of all truck mounted attenuators shall be 8" red and white reflective sheeting placed in an inverted "V" design. Reflective sheeting shall meet or exceed the reflectivity and color requirements of departmental material specification DMS-8300, Type A.

3. All traffic control devices shall be in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD), latest edition.

4. The use of yellow rotating beacons or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating or strobe lights when mounted on the drivers side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.

5. Flashing arrow board shall be used on Shadow Vehicle. Flashing arrow board shall be Type B or Type C as per BC Standards. The arrow board operation shall be controlled from inside the truck.



STRIPING FOR TMA

Texas Department of Transportation

Traffic Operations Division Standard

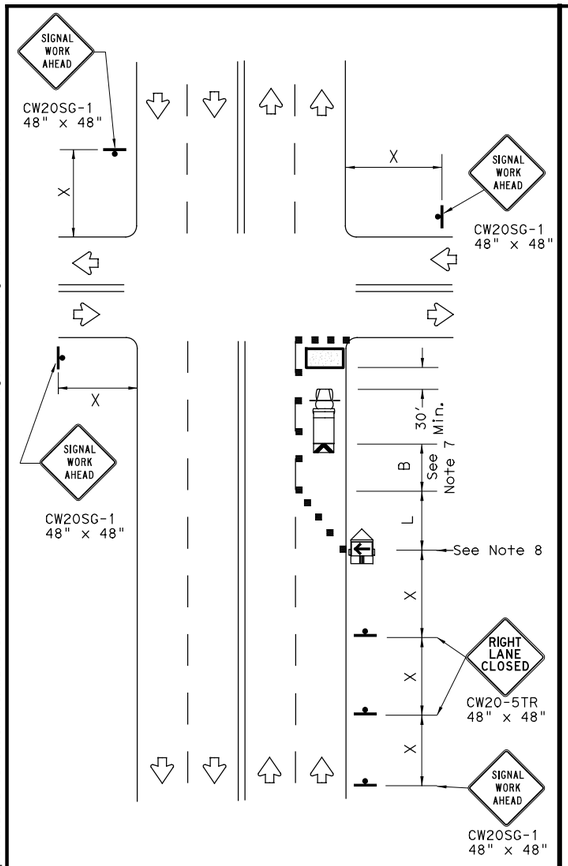
TRAFFIC CONTROL PLAN MOBILE OPERATIONS FOR ISOLATED WORK AREAS UNDIVIDED HIGHWAYS

TCP(3-4)-13

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©TxDOT July, 2013	CONT	SECT	JOB	HIGHWAY
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	DIST	COUNTY		SHEET NO.
	12	HARRIS		203

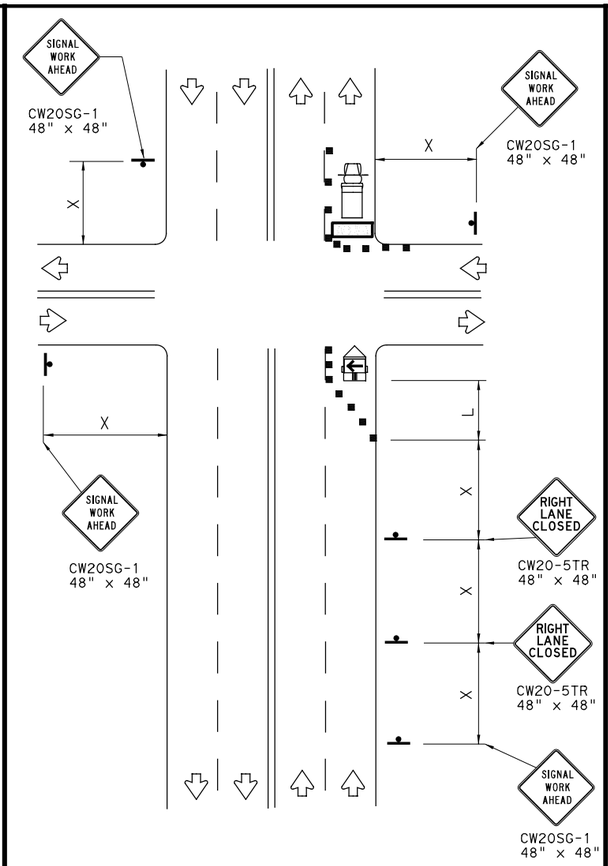
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DATE: 8/24/2020 11:42:44 AM
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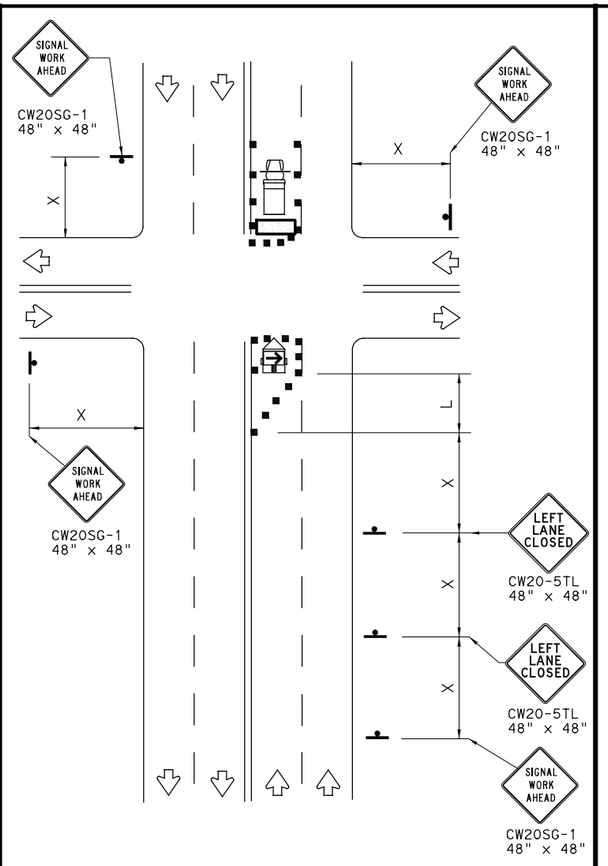
NEAR SIDE LANE CLOSURE

SHORT DURATION OR SHORT TERM STATIONARY



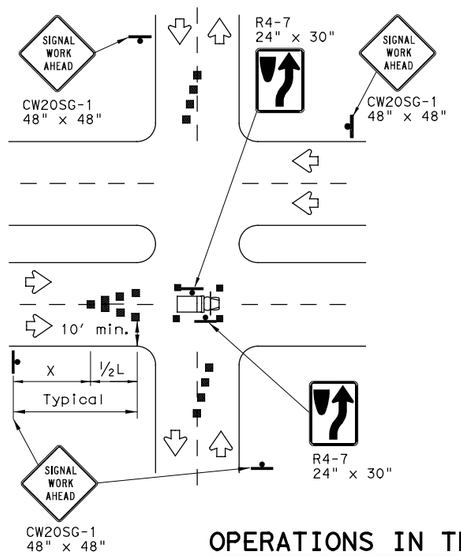
FAR SIDE RIGHT LANE CLOSURE

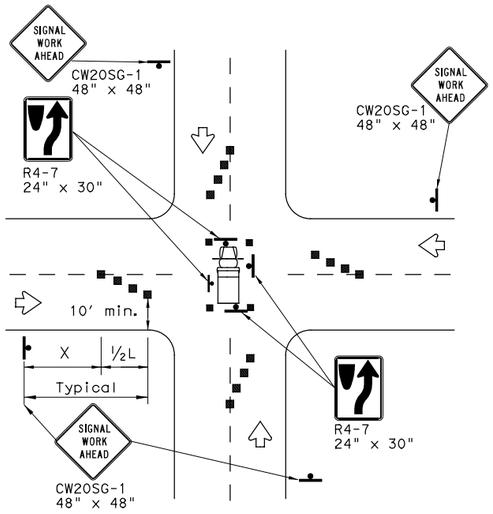
SHORT DURATION OR SHORT TERM STATIONARY



FAR SIDE LEFT LANE CLOSURE

SHORT DURATION OR SHORT TERM STATIONARY





OPERATIONS IN THE INTERSECTION

SHORT DURATION

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′	120′	90′
35		205′	225′	245′	35′	70′	160′	120′
40		265′	295′	320′	40′	80′	240′	155′
45	L=WS	450′	495′	540′	45′	90′	320′	195′
50		500′	550′	600′	50′	100′	400′	240′
55		550′	605′	660′	55′	110′	500′	295′
60		600′	660′	720′	60′	120′	600′	350′
65		650′	715′	780′	65′	130′	700′	410′
70		700′	770′	840′	70′	140′	800′	475′
75		750′	825′	900′	75′	150′	900′	540′

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

WORKERS IN BUCKET TRUCKS SHALL NOT WORK ABOVE OPEN LANES OF TRAFFIC.

GENERAL NOTES

1. The minimum size channelizing device is the 28" cone. 42" Two-piece cones, drums, vertical panels or barricades will be required when the device must be left unattended at night.
2. Obstructions or hazards at the work area shall be clearly marked and delineated at all times.
3. Flaggers and Flagger Symbol (CW20-7) signs may be required according to field conditions.
4. Vehicles parked in roadway shall be equipped with at least two high intensity rotating, flashing, oscillating or strobe type lights.
5. High level warning devices (flag trees) may be used at corners of the vehicle.
6. When work operations are performed on existing signals, the signals may be placed in flashing red mode when approved by the engineer. If existing signals do not have power, All-Way Stop (R1-1 and R1-3P) signs may be implemented when approved by the engineer.
7. For Short-Term Stationary work the buffer space "B" from the above table should be used if field conditions permit. For Short Duration (less than 1 hour) any buffer space provided will enhance the safety of the setup.
8. The arrow board at this location may be omitted for Short Duration work if the work vehicle has an arrow board in operation. As an option, the arrow board may be placed at the end of the taper in the closed lane if space is not available at the beginning of the taper.
9. Signs and devices for the NEAR SIDE LANE CLOSURE may be altered for a left lane closure by using a LEFT LANE CLOSED (CW20-5TL) and adding channelizing devices on the centerline to protect the work space from opposing traffic.

Texas Department of Transportation

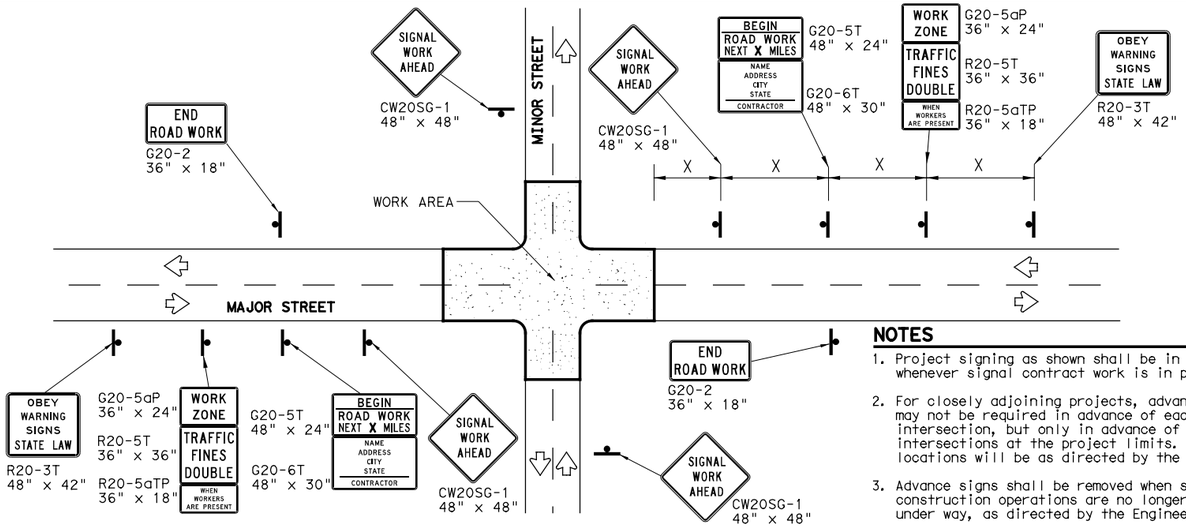
Traffic Operations Division Standard

TRAFFIC SIGNAL WORK TYPICAL DETAILS

WZ(BTS-1)-13

FILE: wzbts-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS	0912	72	360	BSW
2-98 10-99 7-13	DIST	COUNTY		SHEET NO.
4-98 3-03	12	HARRIS		204

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TYPICAL ADVANCE SIGNAL PROJECT SIGNING

FOR LONG TERM and INTERMEDIATE-TERM STATIONARY WORK OPERATIONS

NOTES

1. Project signing as shown shall be in place whenever signal contract work is in progress.
2. For closely adjoining projects, advance signing may not be required in advance of each intersection, but only in advance of the intersections at the project limits. Actual locations will be as directed by the Engineer.
3. Advance signs shall be removed when signal construction operations are no longer under way, as directed by the Engineer.
4. Warning sign spacing shown is typical for both directions.
5. See the Table on sheet 1 of 2 for Typical warning sign spacing.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Signs shall be installed and maintained in a straight and plumb condition.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. Nails shall NOT be used to attach signs to any support.
5. All signs shall be installed in accordance with the plans or as directed by the Engineer.
6. The Contractor shall furnish the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD).
7. The Contractor shall furnish sign supports and substrates listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD), installed as per the manufacturer's recommendations.
8. Temporary signs that have damaged or cracked substrates and/or damaged or marred reflective sheeting shall be replaced as directed by the Engineer.
9. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1".
10. Damaged wood posts shall be replaced. Splicing wood posts will not be allowed.

DURATION OF WORK

1. Work zone durations are defined in Part 6, Section 6G.02 of the Texas Manual on Uniform Traffic Control Devices (TMUTCD).

SIGN MOUNTING HEIGHT

1. Sign height of Long-term/Intermediate-term warning signs shall be as shown on Figure 6F-1 of the TMUTCD.
2. Sign height of Short-term/Short Duration warning signs shall be as shown on Figure 6F-2 of the TMUTCD.
3. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered, unless otherwise approved by the Engineer.
2. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night without damaging the sign sheeting. Burlap, or heavy materials such as plywood or aluminum shall not be used to cover signs.
3. Duct tape or other adhesive material shall NOT be affixed to a sign face.
4. Signs and anchor stubs shall be removed and holes back filled upon completion of the work.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the requirements of the DMS and color usage table shown on this sheet.

SIGN SUPPORT WEIGHTS

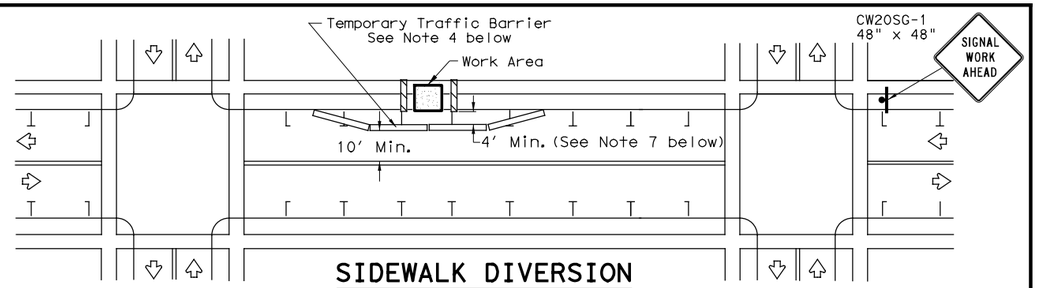
1. Weights used to keep signs from turning over should be sandbags filled with dry, cohesionless material.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects will not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber, such as tire inner tubes, shall not be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fastners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

LEGEND	
	Sign
	Channelizing Devices
	Type 3 Barricade

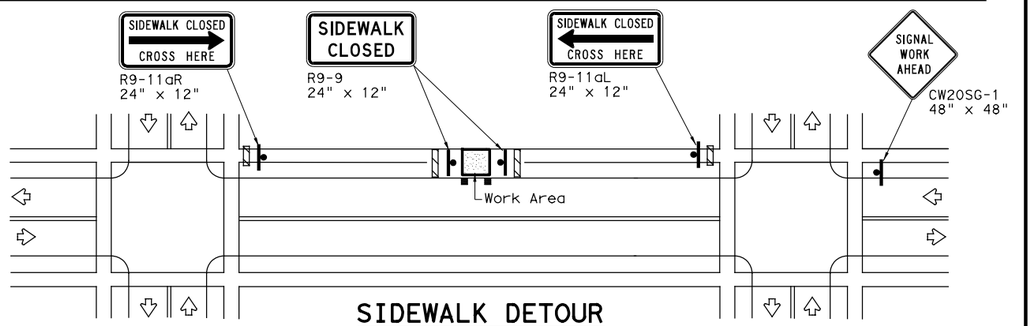
DEPARTMENTAL MATERIAL SPECIFICATIONS	
SIGN FACE MATERIALS	DMS-8300
FLEXIBLE ROLL-UP REFLECTIVE SIGNS	DMS-8310

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B_{FL} OR TYPE C_{FL} SHEETING
WHITE	BACKGROUND	TYPE A SHEETING
BLACK	LEGEND & BORDERS	ACRYLIC NON-REFLECTIVE SHEETING

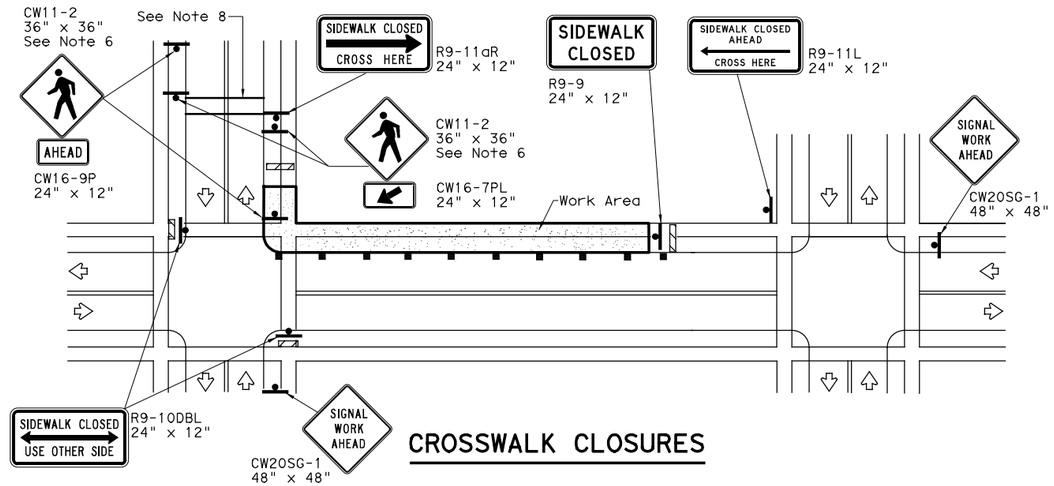
Only pre-qualified products shall be used. A copy of the "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found at the following web address:
http://www.txdot.gov/txdot_library/publications/construction.htm



SIDEWALK DIVERSION



SIDEWALK DETOUR



CROSSWALK CLOSURES

PEDESTRIAN CONTROL

1. Holes, trenches or other hazards shall be adequately protected by covering, delineating or surrounding the hazard with orange plastic pedestrian fencing or longitudinal channelizing devices, or as directed by the Engineer.
2. "CROSSWALK CLOSURES" as detailed above will require the Engineer's approval prior to installation.
3. R9 series signs shown may be placed on supports detailed on the BC standards or CWZTCD list, or when fabricated from approved lightweight plastic substrates, they may be mounted on top of a plastic drum at or near the location shown.
4. For speeds less than 45 mph longitudinal channelizing devices may be used instead of traffic barriers when approved by the Engineer. Attenuation of blunt ends and installation of water filled devices shall be as per BC(9) and manufacturer's recommendations.
5. Location of devices are for general guidance. Actual device spacing and location must be field adjusted to meet actual conditions.
6. Where pedestrians with visual disabilities normally use the closed sidewalk Detectable Pedestrian Barricades should be used instead of the Type 3 Barricades shown.
7. The width of existing sidewalk should be maintained if practical.
8. Pavement markings for mid-block crosswalks shall be paid for under the appropriate bid items.
9. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

DATE: 8/24/2020 11:42:45 AM
FILE: 200-201_TRAFFIC SIGNAL WORK TYPICAL DETAILS WZ(BTS-1)-13 & WZ(BTS-2)-13.dgn

Texas Department of Transportation — Traffic Operations Division Standard

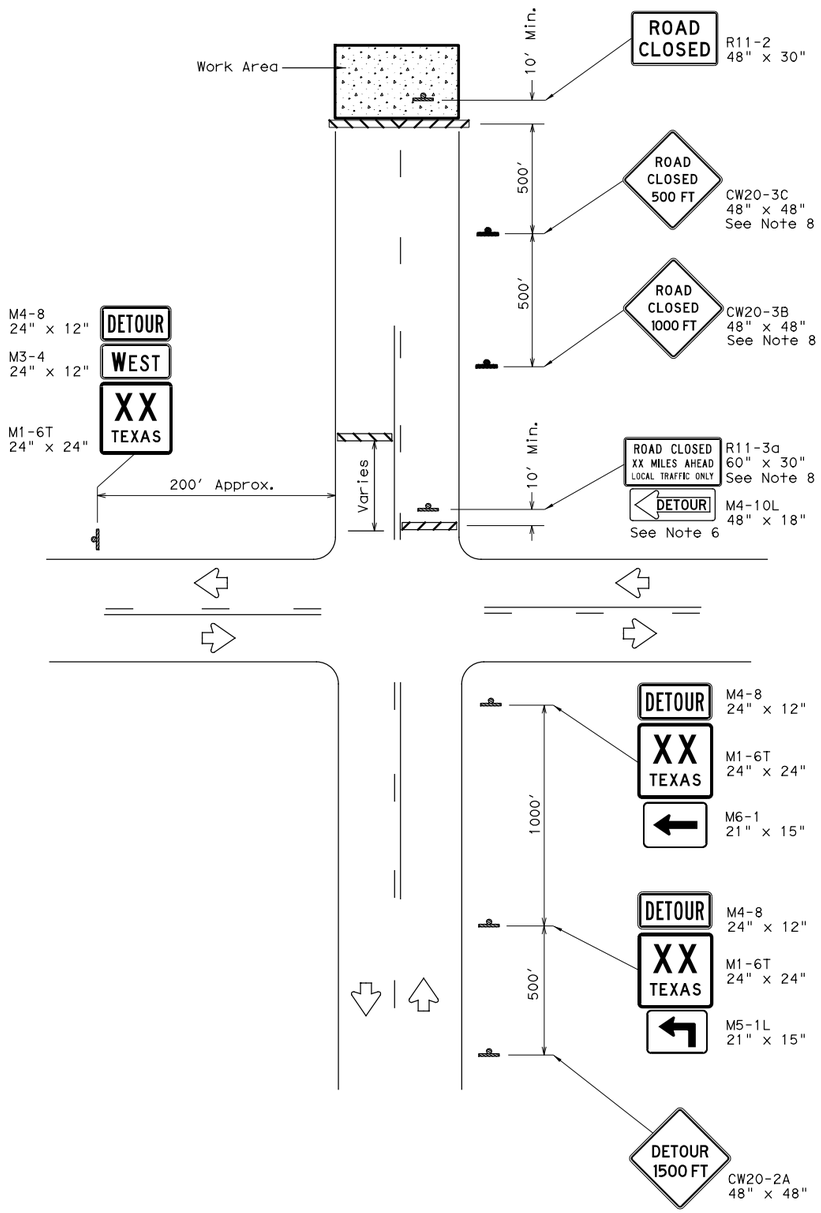
TRAFFIC SIGNAL WORK BARRICADES AND SIGNS

WZ(BTS-2)-13

FILE: wzbts-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
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2-98 10-99 7-13	DIST	COUNTY		SHEET NO.
4-98 3-03	12	HARRIS		205

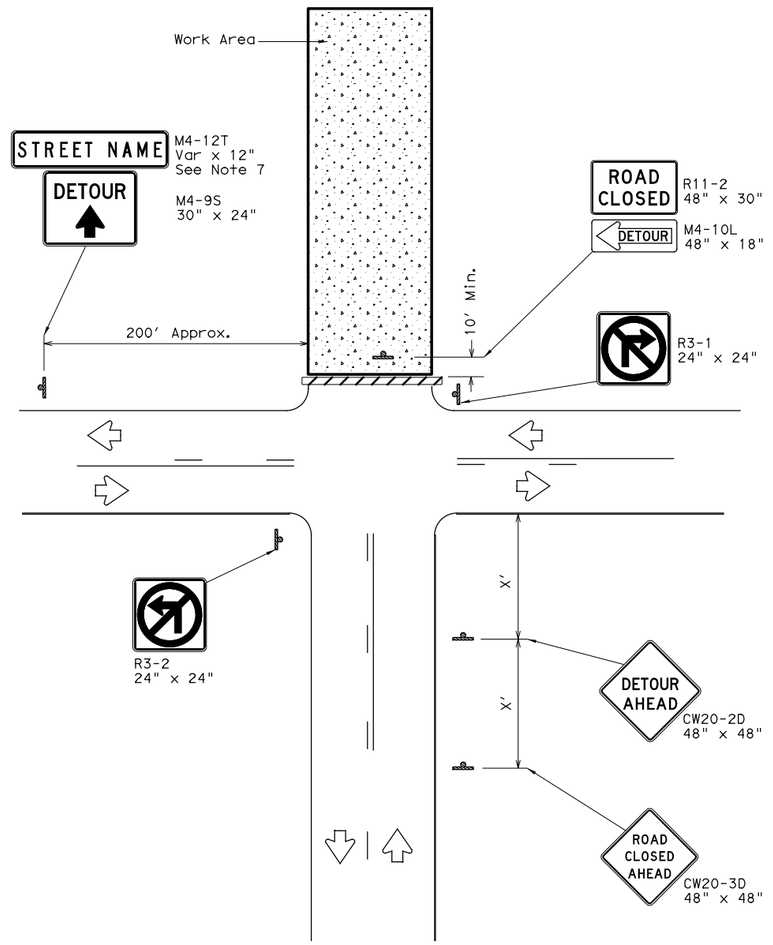
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DATE: 8/24/2020 11:42:45 AM
FILE: 202_WORK ZONE ROAD CLOSURE DETAILS WZ(RCD)-13.dgn



ROAD CLOSURE BEYOND THE INTERSECTION

Signing for a Numbered Route with an Off-Site Detour



ROAD CLOSURE AT THE INTERSECTION

Signing for an Un-numbered Route with an Off-Site Detour

LEGEND	
	Type 3 Barricade
	Sign

Posted Speed *	Minimum Sign Spacing "X" Distance
30	120'
35	160'
40	240'
45	320'
50	400'
55	500'
60	600'
65	700'
70	800'
75	900'

* Conventional Roads Only

GENERAL NOTES

1. This sheet is intended to provide details for temporary work zone road closures. For permanent road closure details see the D&OM standards.
2. Barricades used shall meet the requirements shown on Barricade and Construction Standard BC(10) and listed on the Compliant Work Zone Traffic Control Devices list (CWZTCD).
3. Stockpiled materials shall not be placed on the traffic side of barricades.
4. Barricades at the road closure should extend from pavement edge to pavement edge.
5. Detour signing shown is intended to illustrate the type of signing that is appropriate for numbered routes or un-numbered routes as labeled. It does not indicate the full extent of detour signing required. Detour routes should be signed as shown elsewhere in the plans.
6. If the road is open for a significant distance beyond the intersection or there are significant origin/destination points beyond the intersection, the signs and barricades at this location should be located at the edge of the traveled way.
7. The Street Name (M4-12T) sign is to be placed above the DETOUR (M4-9S) sign.
8. For urban areas where there is a shorter distance between the intersection and the actual closure location, the ROAD CLOSED XX MILES AHEAD (R11-3a) sign may be replaced with a ROAD CLOSED TO THRU TRAFFIC (R11-4) sign. If adequate space does not exist between the intersection and the closure a single ROAD CLOSED AHEAD (CW20-3D) sign spaced as per the table above may replace the ROAD CLOSED 1000 FT (CW20-3B) and ROAD CLOSED 500 FT (CW20-3C) signs.
9. Signs and barricades shown shall be subsidiary to Item 502. Locations where these details will be required shall be as shown elsewhere in the plans.

Texas Department of Transportation

Traffic Operations Division Standard

WORK ZONE ROAD CLOSURE DETAILS

WZ(RCD)-13

FILE: wzrcd-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT August 1995	CONT	SECT	JOB	HIGHWAY
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2-98 3-03	12	HARRIS		206

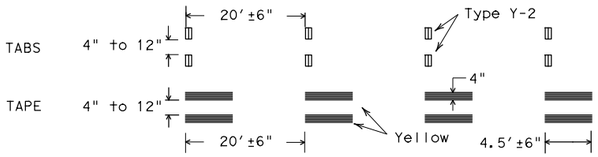
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DATE: 8/24/2020 11:42:46 AM
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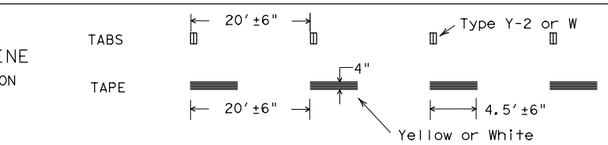
WORK ZONE SHORT TERM PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

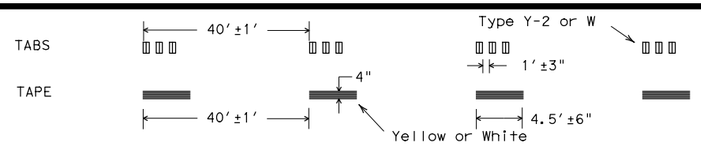


SINGLE NO-PASSING LINE or CHANNELIZATION LINE



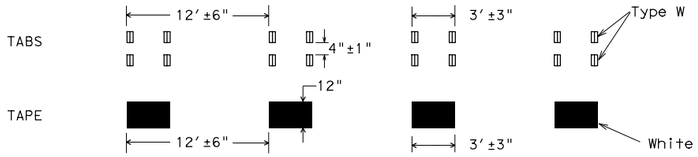
BROKEN LINES

(FOR CENTER LINE OR LANE LINE)

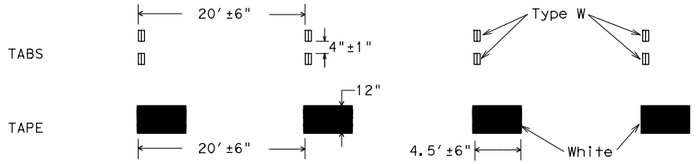


WIDE DOTTED LINES

(FOR LANE DROP LINES)



WIDE GORE MARKINGS



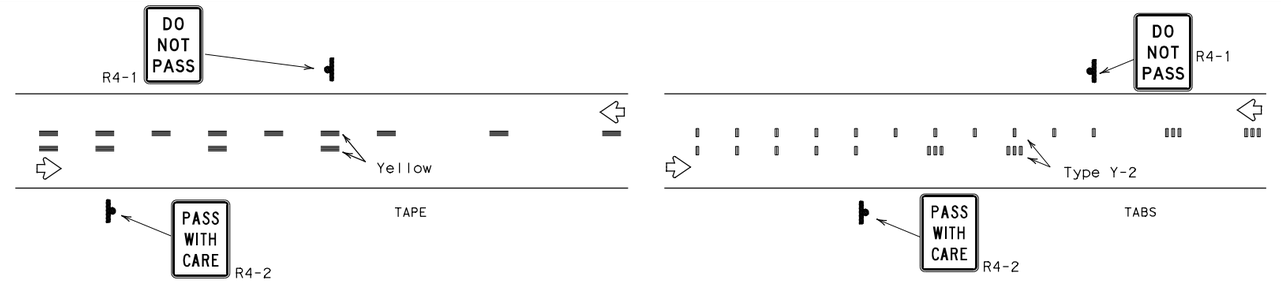
NOTES:

1. Short term pavement markings may be prefabricated markings (stick down tape) or temporary flexible-reflective roadway marker tabs unless otherwise specified elsewhere in plans.
2. Short term pavement markings shall NOT be used to simulate edge lines.
3. Dimensions indicated on this sheet are typical and approximate. Variations in size and height may occur between markers or devices made by manufacturers, by as much as 1/4 inch, unless otherwise noted.
4. Temporary flexible-reflective roadway marker tabs will require normal maintenance replacement when used on roadways with an ADT per lane of up to 7500 vehicles with no more than 10% truck mix. When roadways exceed these values, additional maintenance replacement of devices should be planned.
5. No segment of roadway open to traffic shall remain without permanent pavement markings for a period greater than 14 calendar days. The Contractor will be responsible for maintaining short term pavement markings until permanent pavement markings are in place. When the Contractor is responsible for placement of permanent pavement markings, no segment of roadway shall remain without permanent pavement markings for a period greater than 14 calendar days unless weather conditions prohibit placement. Permanent pavement markings shall be placed as soon as weather permits.
6. For two lane, two-way roadways, DO NOT PASS signs shall be erected to mark the beginning of sections where passing is prohibited and PASS WITH CARE signs shall be erected to mark the beginning of sections where passing is permitted. Signs shall be in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and may be used to indicate the limits of no-passing zones for up to 14 calendar days. Permanent pavement markings should then be placed.
7. For low volume two lane, two-way roadways of 4000 ADT or less, no-passing lines may be omitted when approved by the Engineer. DO NOT PASS and PASS WITH CARE signs shall be erected (see note 6).
8. For exit gores where a lane is being dropped place wide gore markings or retroreflective channelizing devices to guide motorist through the exit. If channelizing devices are to be used it should be noted elsewhere in the plans. One piece cones are not allowed for this purpose.

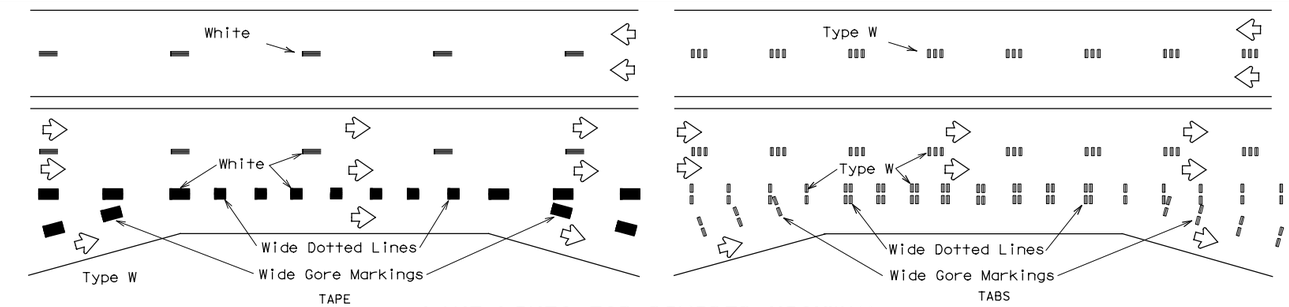
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS (TABS)

1. Temporary flexible-reflective roadway marker tabs detailed on this sheet will be designated Type Y-2 (two amber reflective surfaces with yellow body); Type Y (one amber reflective surface with yellow body); and Type W (one white or silver reflective surface with white body). Additional details may be found on BC(11).
2. Tabs shall meet requirements of Departmental Material Specification DMS-8242.
3. When dry, tabs shall be visible for a minimum distance of 200 feet during normal daylight hours and when illuminated by automobile low-beam head light at night, unless sight distance is restricted by roadway geometrics.
4. No two consecutive tabs nor four tabs per 1000 feet of line shall be missing or fail to meet the visual performance requirements of Note 3.

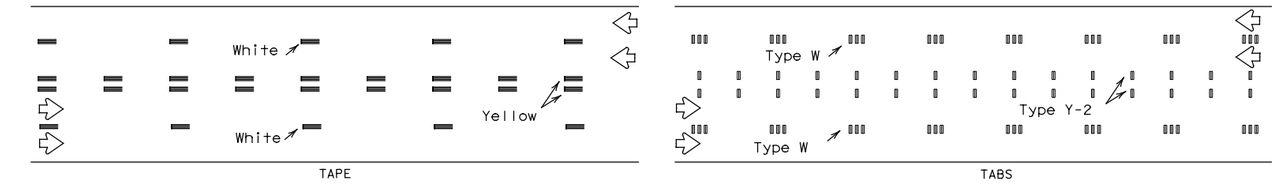
WORK ZONE SHORT TERM PAVEMENT MARKINGS PATTERNS



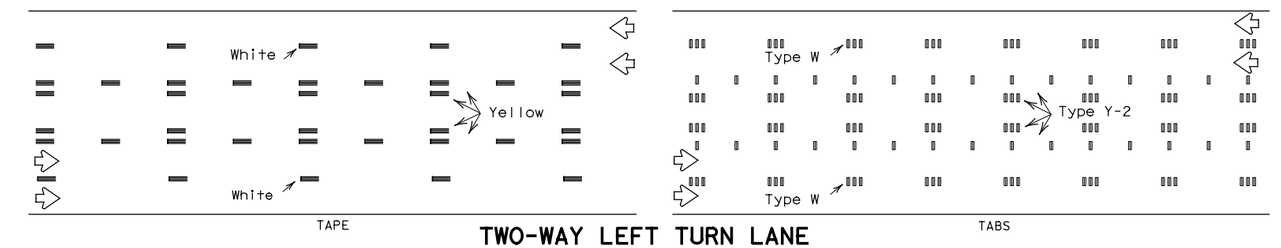
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO LANE TWO-WAY HIGHWAYS



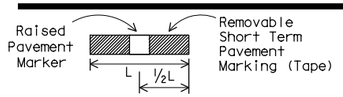
LANE LINES FOR DIVIDED HIGHWAY



LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



TWO-WAY LEFT TURN LANE



If raised pavement markers are used to supplement REMOVABLE short term markings, the markers shall be applied to the top of the tape at the approximate mid length of the tape. This allows an easier removal of raised markers and tape.

PREFABRICATED PAVEMENT MARKINGS

1. Temporary Removable Prefabricated Pavement Markings shall meet the requirements of DMS-8241.
2. Non-removable Prefabricated Pavement Markings shall meet the requirements of either DMS-8240 "Permanent Prefabricated Pavement Markings" or DMS-8243 "Temporary Costruction-Grade Prefabricated Pavement Markings."

RAISED PAVEMENT MARKERS

1. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and DMS-4200.

DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS) & MATERIAL PRODUCER LISTS (MPL)

1. DMSs referenced above can be found along with embedded links to their respective MPLs at the following website:
   http://www.txdot.gov/business/contractors_consultants/material_specifications/default.htm

Texas Department of Transportation

Traffic Operations Division Standard

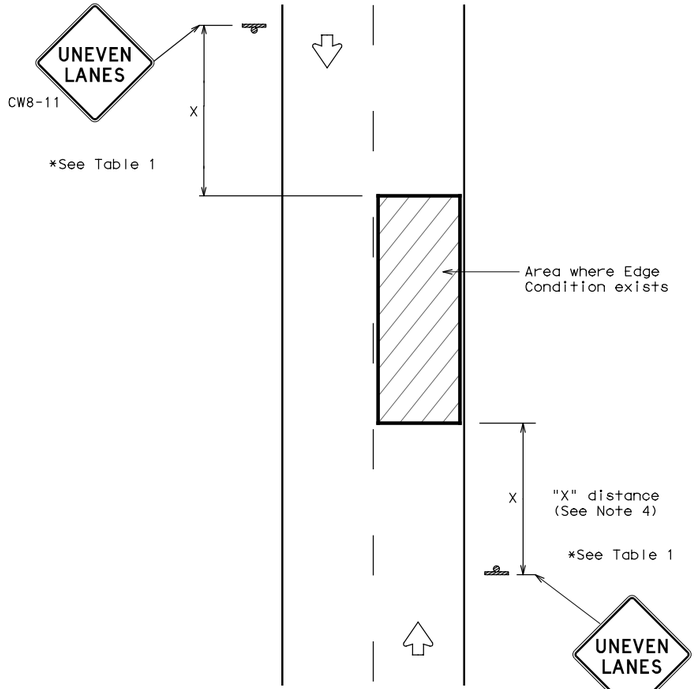
WORK ZONE SHORT TERM PAVEMENT MARKINGS

WZ(STPM)-13

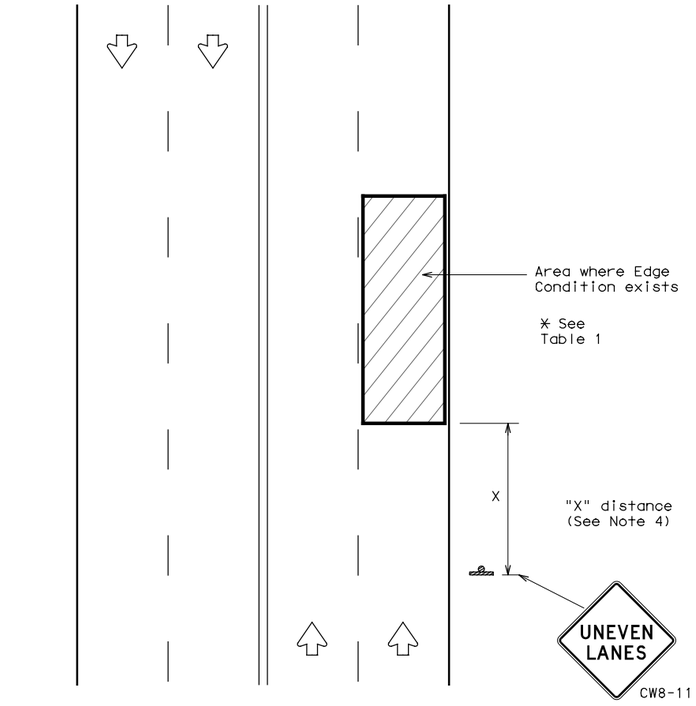
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©TxDOT	April 1992	CONT	SECT	JOB	HIGHWAY
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3-03		12	HARRIS		207
7-13					

111

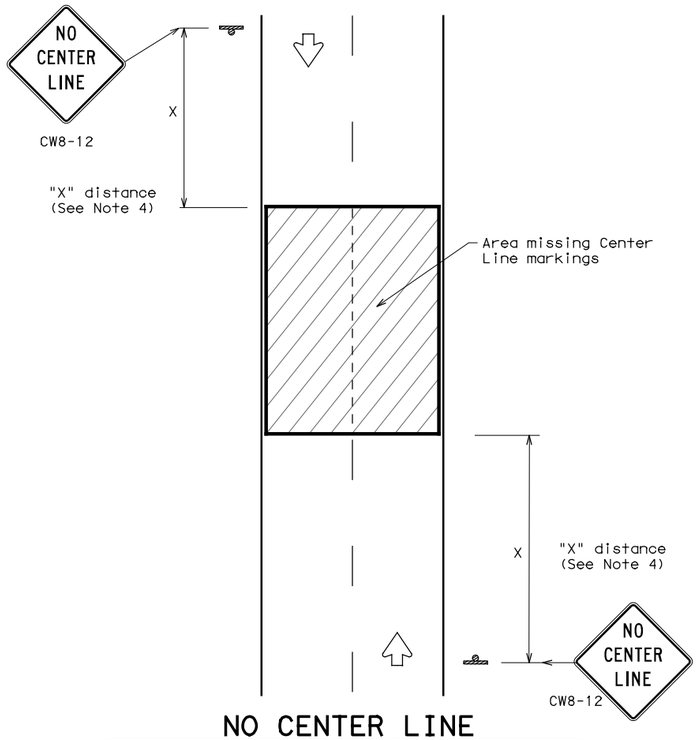
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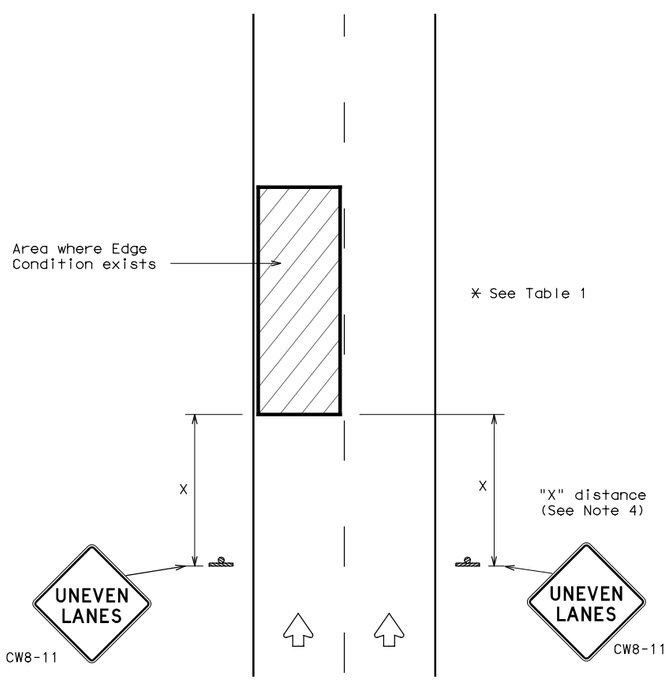
UNEVEN LANES
TWO LANE CONVENTIONAL ROAD



UNEVEN LANES
FOUR LANE CONVENTIONAL ROAD



NO CENTER LINE
TWO LANE CONVENTIONAL ROAD



UNEVEN LANES
DIVIDED ROADWAY

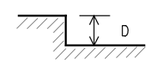
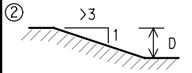
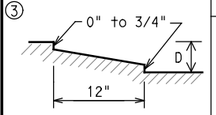
DEPARTMENTAL MATERIAL SPECIFICATIONS	
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY (REMOVABLE) PREFABRICATED PAVEMENT MARKINGS	DMS-8241
SIGN FACE MATERIALS	DMS-8300

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B_{FL} OR TYPE C_{FL} SHEETING
BLACK	LEGEND & BORDERS	ACRYLIC NON-REFLECTIVE SHEETING

GENERAL NOTES

1. If spalling or holes occur, ROUGH ROAD (CW8-8) signs should be placed in advance of the condition and be repeated every two miles where the condition persists.
2. UNEVEN LANES (CW8-11) signs shall be installed in advance of the condition and repeated every mile. Signs installed along the uneven lane condition may be supplemented with the NEXT XX MILES (CW7-3aP) plaque or Advisory Speed (CW13-1P) plaque.
3. NO CENTER LINE (CW8-12) signs and temporary pavement markings as per the WZ(STPM) standard shall be installed if yellow centerlines separating two way traffic are obscured or obliterated. Repeat NO CENTER LINE signs every two miles where the center line markings are not in place. The signs and markings shall remain in place until permanent pavement markings are installed.
4. Signs shall be spaced at the distances recommended as per BC standards.
5. Additional signs may be required as directed by the Engineer. Signs shall remain in place until final surface is applied. Signs shall be considered subsidiary to Item 502 "BARRICADES, SIGNS AND TRAFFIC HANDLING."
6. Signs shall be fabricated and mounted on supports as shown on the BC standards and/or listed on the "Compliant Work Zone Traffic Control Devices" list.
7. Short term markings shall not be used to simulate edge lines.
8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition.

TABLE 1

Edge Condition	Edge Height (D)	* Warning Devices
① 	Less than or equal to: 1¼" (maximum-planing) 1½" (typical-overlay)	Sign: CW8-11
	Distance "D" may be a maximum of 1 1/4 " for planing operations and 2" for overlay operations if uneven lanes with edge condition 1 are open to traffic after work operations cease.	
② 	Less than or equal to 3"	Sign: CW8-11
③  Notched Wedge Joint	Distance "D" may be a maximum of 3" if uneven lanes with edge condition 2 or 3 are open to traffic after work operations cease. Uneven lanes should not be open to traffic when "D" is greater than 3".	

TRAFFIC CONTROL DURING PLANING, OVERLAY AND LEVELING OPERATIONS ARE SHOWN ELSEWHERE IN THE PLANS.

MINIMUM WARNING SIGN SIZE	
Conventional roads	36" x 36"
Freeways/expressways, divided roadways	48" x 48"

Texas Department of Transportation

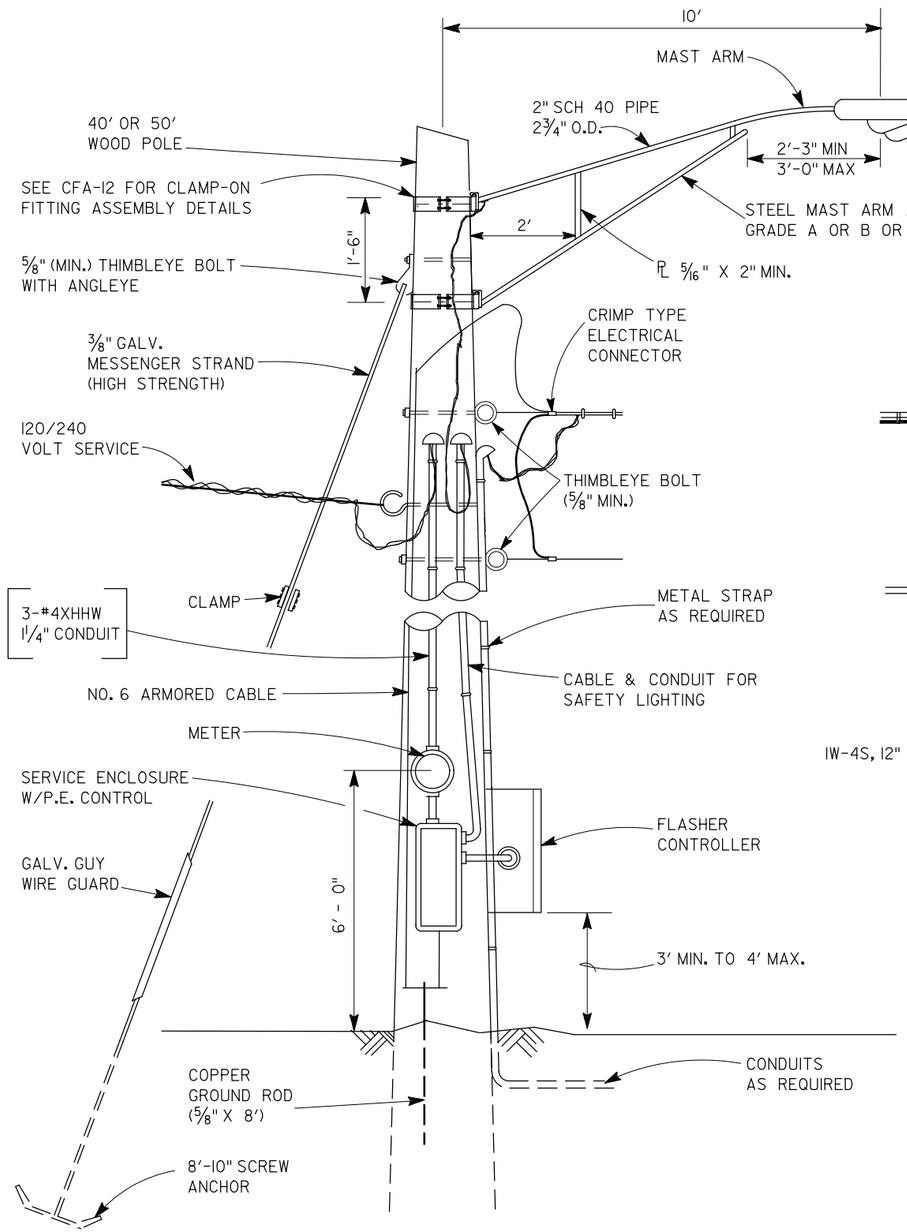
Traffic Operations Division Standard

SIGNING FOR UNEVEN LANES

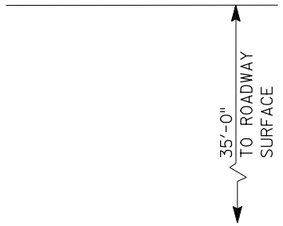
WZ(UL)-13

FILE: wzul-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS	0912	72	360	BSW
8-95 2-98 7-13	DIST	COUNTY		SHEET NO.
1-97 3-03	12	HARRIS		208

DATE: 8/24/2020 11:42:47 AM
FILE: 204_SIGNING FOR UNEVEN LANES WZ(UL)-13.dgn

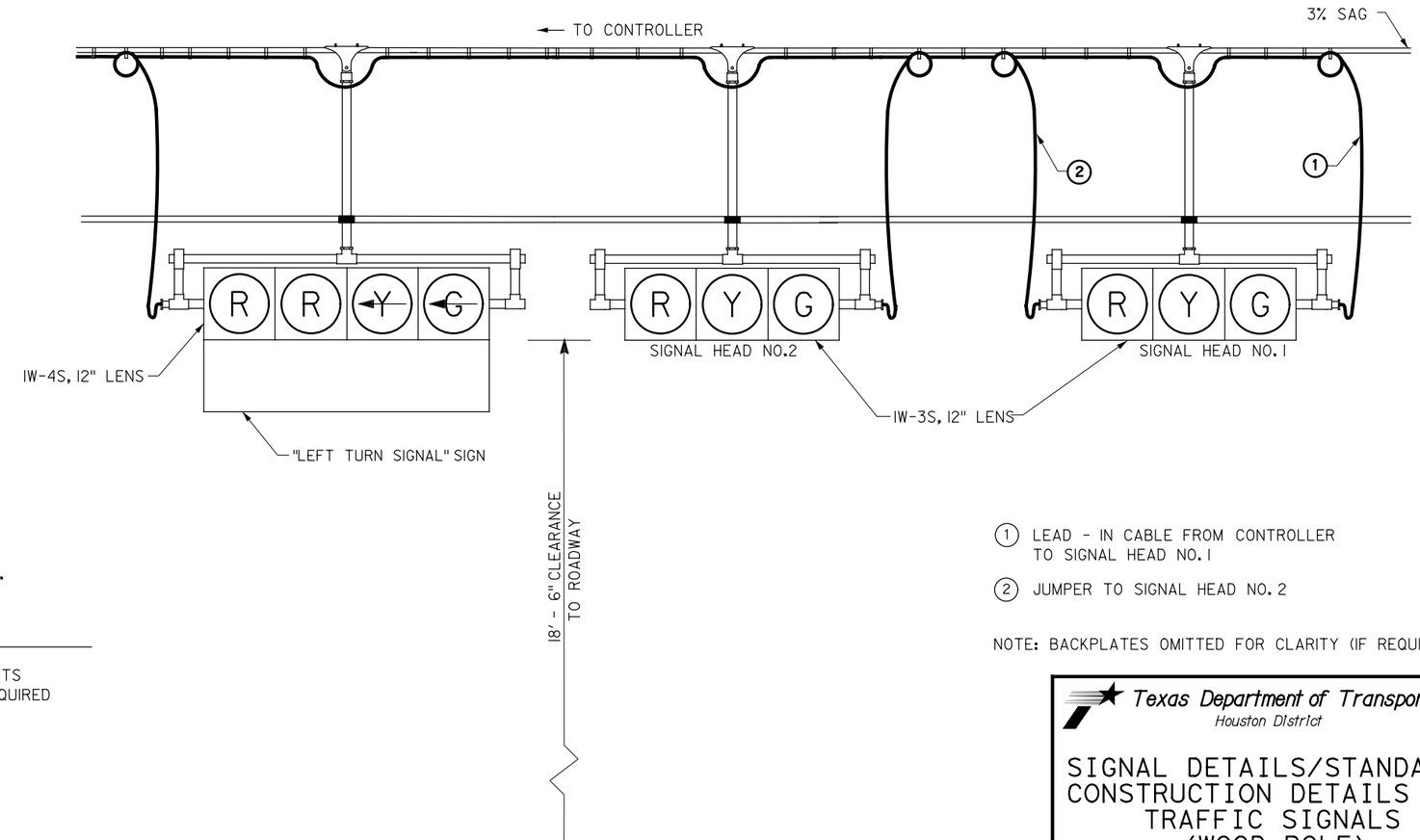


NOTE: THE CONTRACTOR SHALL COIL ON THE SPAN WIRE A SUFFICIENT LENGTH OF SIGNAL CABLE FOR ADJUSTING SIGNAL HEADS DURING THE VARIOUS PHASES OF CONSTRUCTION.



NOTES:

1. WRAP SIGNAL HEADS WITH DARK PLASTIC OR SUITABLE MATERIAL TO CONCEAL THE SIGNAL FACES FROM THE TIME OF INSTALLATION UNTIL PLACING INTO OPERATION.
2. INSTALL GROUNDING BUSHINGS ON THE ENDS OF UNDERGROUND RIGID METAL CONDUITS. GROUND AND BOND CONDUITS, POLES, AND CONTROLLERS TO THE NEAREST GROUND ROD USING SOFT BARE NO. 6 COPPER WIRE.
3. FURNISH HIGH STRENGTH GALVANIZED SPAN WIRE.
4. FURNISH MINIMUM 2 SIGNAL HEADS PER APPROACH.
5. FURNISH LEFT TURN SIGNAL HEAD WHEN REQUIRED.
6. FOR TEMPORARY SIGNAL INSTALLATION, INSTALL A SEPARATE POWER SOURCE, IF REQUIRED.
7. FOR TEMPORARY SIGNAL INSTALLATION, INSTALL LUMINAIRES ON WOOD SIGNAL POLES, IF REQUIRED. CONSTRUCT STEEL UPSWEEP MAST ARM FOR WOOD POLE MOUNTING OF 2 IN. PIPE WITH SLIPFITTER MOUNTING OF THE LUMINAIRE.
8. FOR TEMPORARY SIGNAL INSTALLATION, COIL A SUFFICIENT LENGTH OF SIGNAL CABLE ON THE SPAN WIRE FOR ADJUSTING SIGNAL HEADS DURING THE VARIOUS PHASES OF CONSTRUCTION.



(1) LEAD - IN CABLE FROM CONTROLLER TO SIGNAL HEAD NO. 1

(2) JUMPER TO SIGNAL HEAD NO. 2

NOTE: BACKPLATES OMITTED FOR CLARITY (IF REQUIRED)

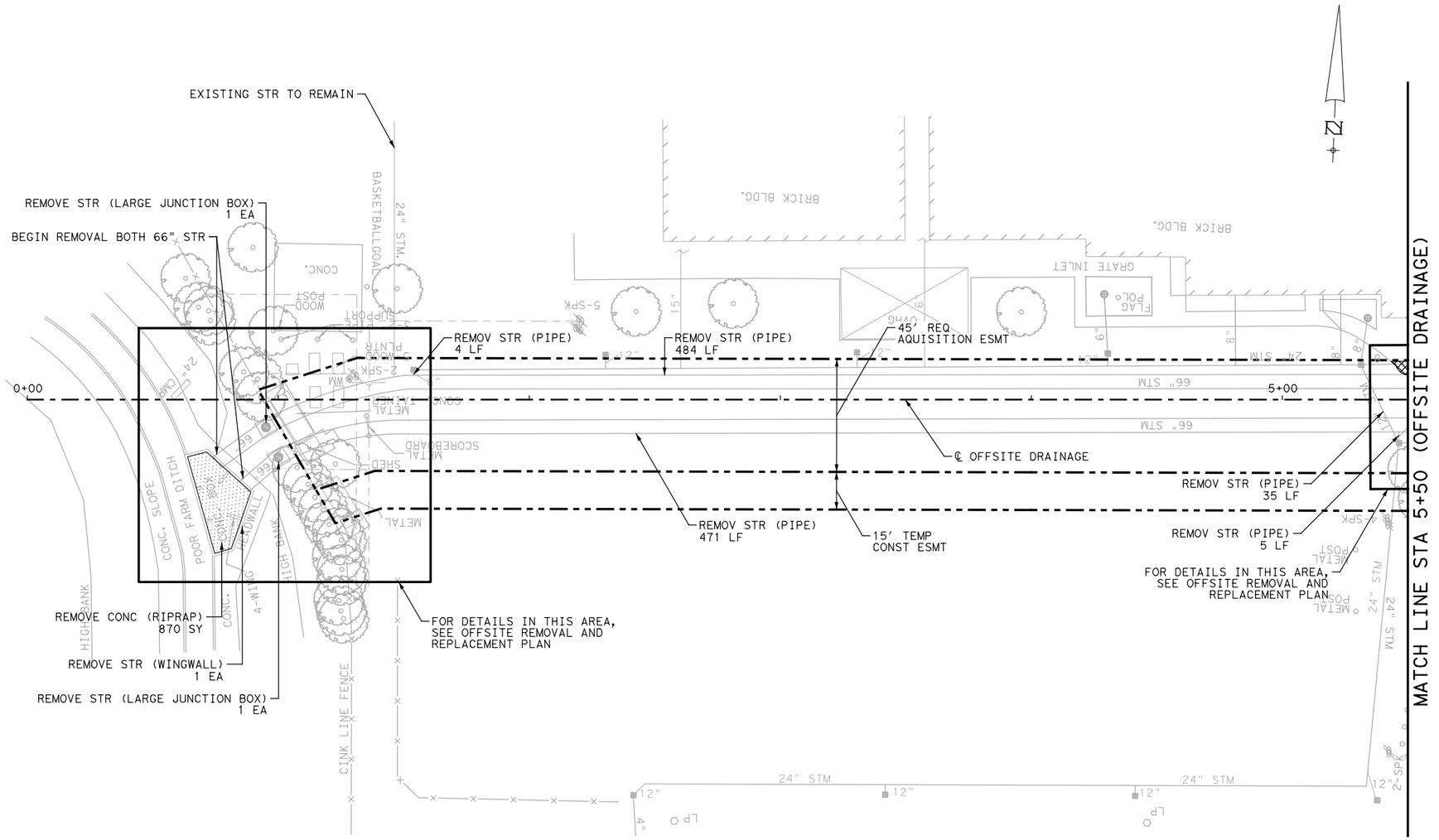
Texas Department of Transportation
Houston District

SIGNAL DETAILS/STANDARDS CONSTRUCTION DETAILS FOR TRAFFIC SIGNALS (WOOD POLE)

CD/TS/WP

FILE:	DN:	CK:	DW:	CK:
©TxDOT 2008	DIST	FED REG	PROJECT NO.	SHEET
REVISIONS 03-07 05-08 8-12	12	6		209
	COUNTY	CONTROL	SECT JOB	HIGHWAY
	HARRIS	0912	72 360	BSW

STD-M10



0 50′ 100′
SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK
- REMOVE CONCRETE MEDIAN
- REMOVE EXIST GRASS MEDIAN
- REMOVE CONCRETE CURB
- DW-XX DRIVEWAY ID
- REMOVE DRIVEWAY

NOTES

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7. CONTRACTOR TO VERIFY LIMITS OF REMOVAL FOR ALL ABANDONED WATER LINE FOR PROPOSED STORM SEWER AND UTILITY INSTALLATION.

REMOVAL OF EXIST FENCE QUANTITY IN THE CHURCH AREA IS QUANTIFIED IN THE CHURCH SUMMARY QUANTITY TABLE

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

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Texas Registered Engineering Firm F-2144

City of West University Place

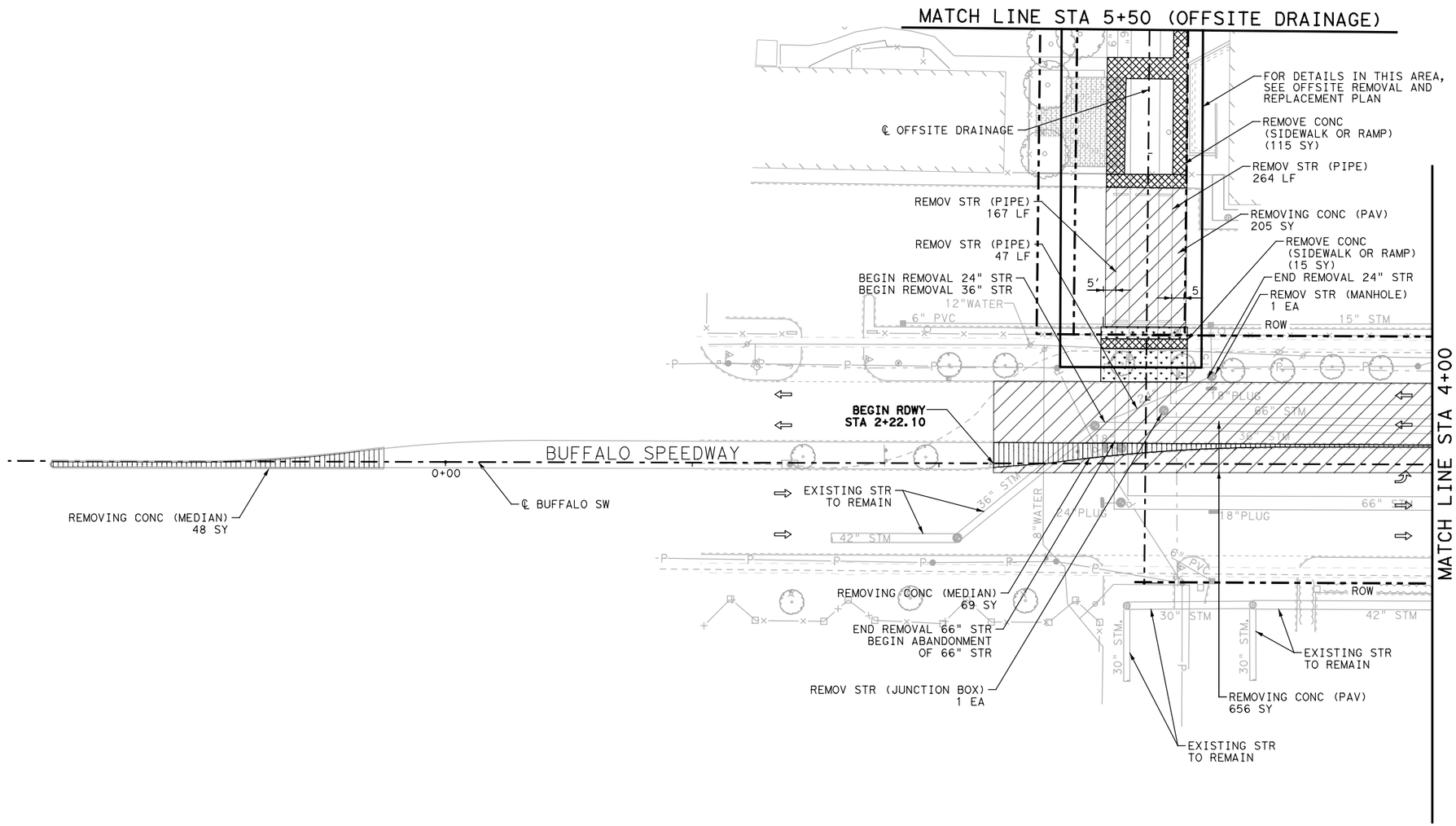
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

REMOVAL PLAN

OFFSITE DRAINAGE
BEGIN TO STA 5+50

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		210
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- ⇦ DIRECTION OF TRAFFIC
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK
- REMOVE CONCRETE MEDIAN
- REMOVE EXIST GRASS MEDIAN
- REMOVE CONCRETE CURB
- ⟨DW-XX⟩ DRIVEWAY ID
- REMOVE DRIVEWAY

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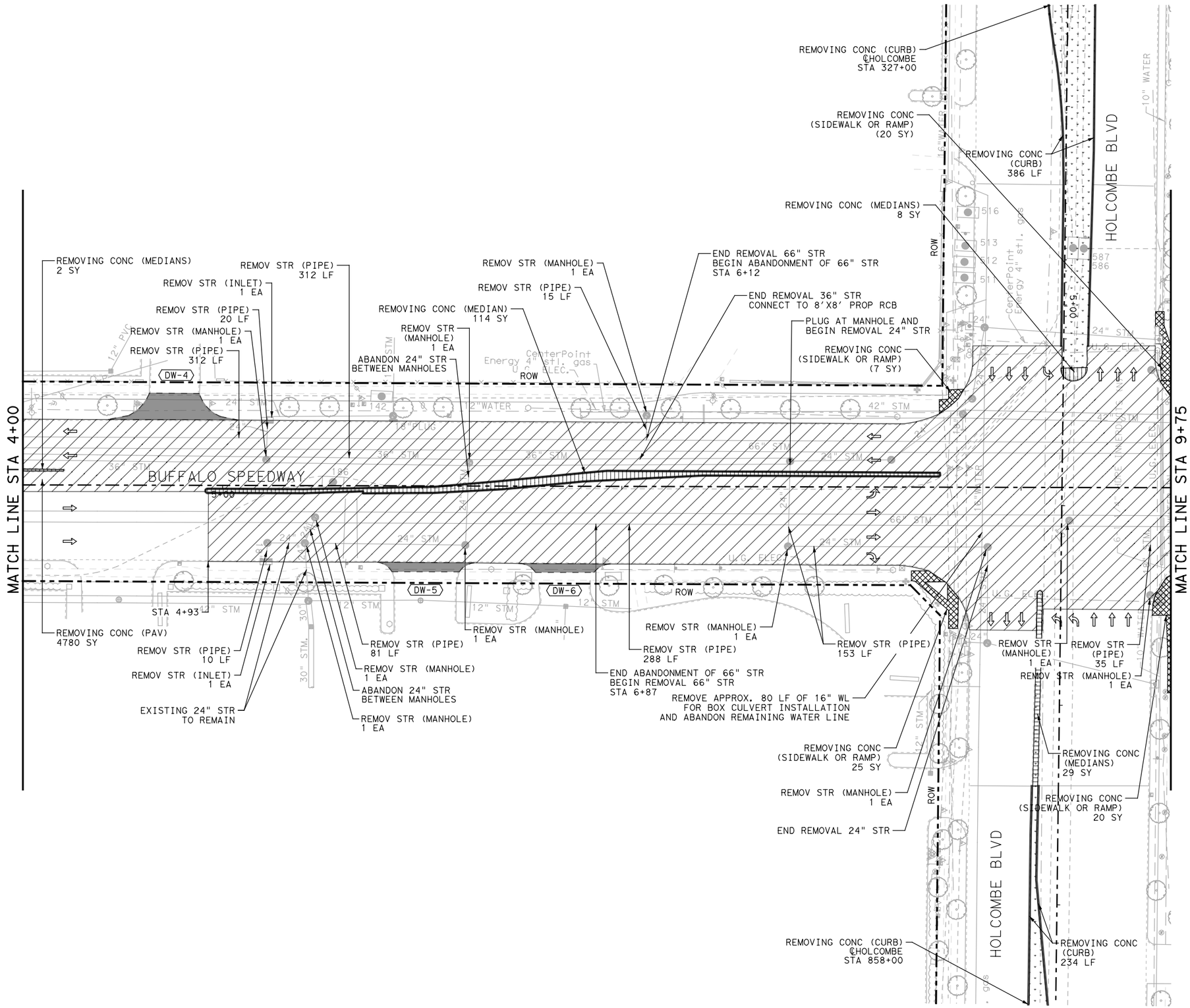
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

REMOVAL PLAN

BUFFALO SPEEDWAY
BEGIN TO STA 4+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		211
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK
- REMOVE CONCRETE MEDIAN
- REMOVE EXIST GRASS MEDIAN
- REMOVE CONCRETE CURB
- DW-XX DRIVEWAY ID
- REMOVE DRIVEWAY

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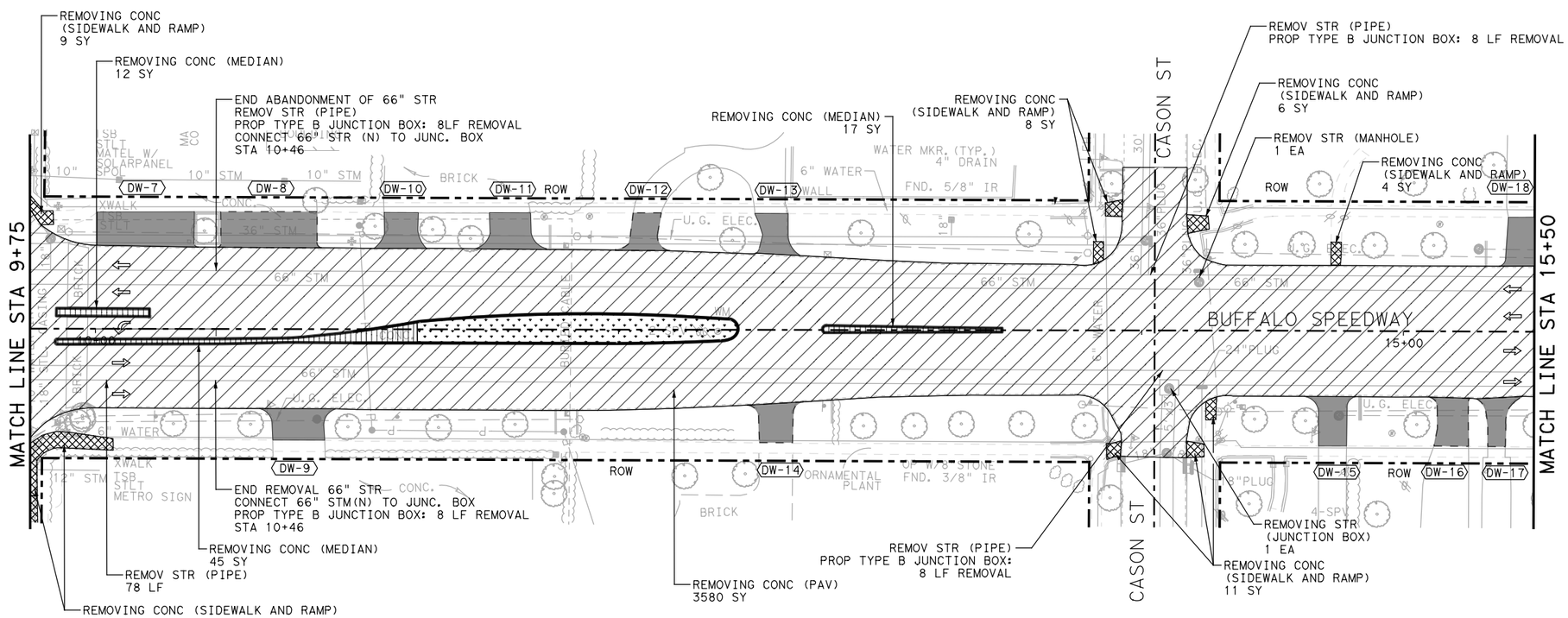
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

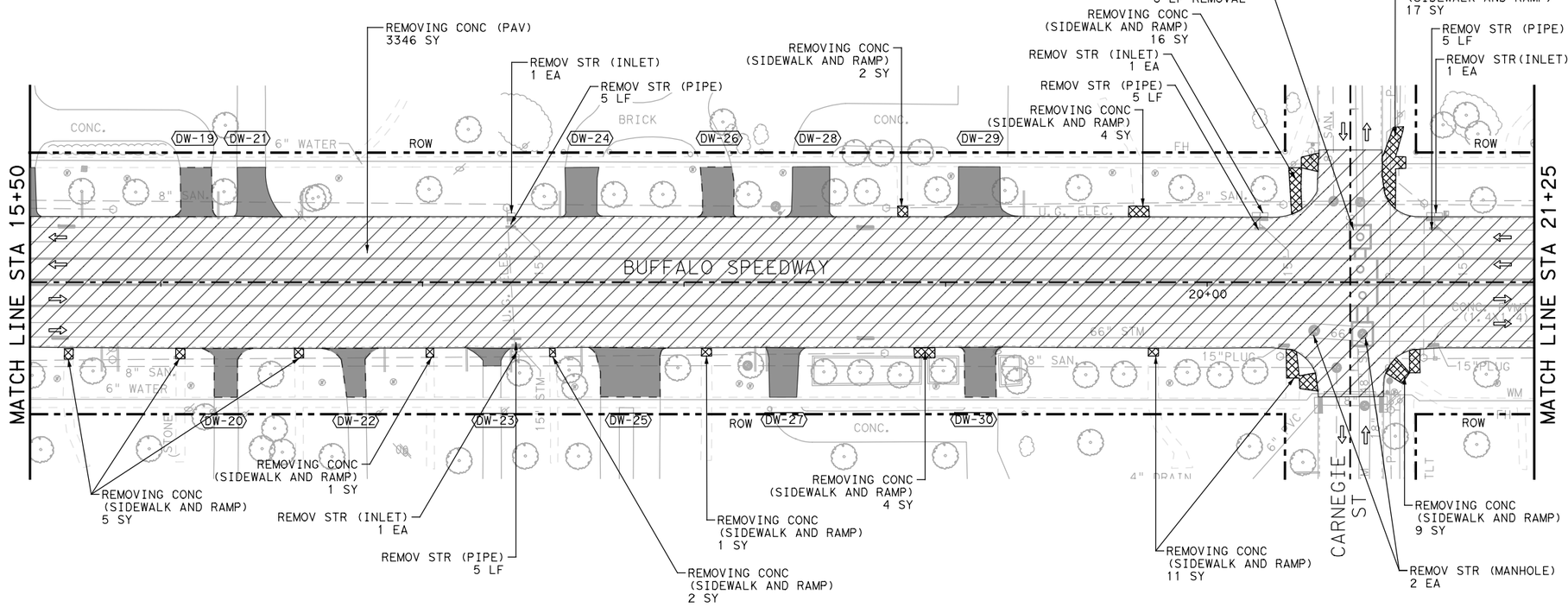
REMOVAL PLAN

BUFFALO SPEEDWAY
STA 4+00 TO STA 9+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		212
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





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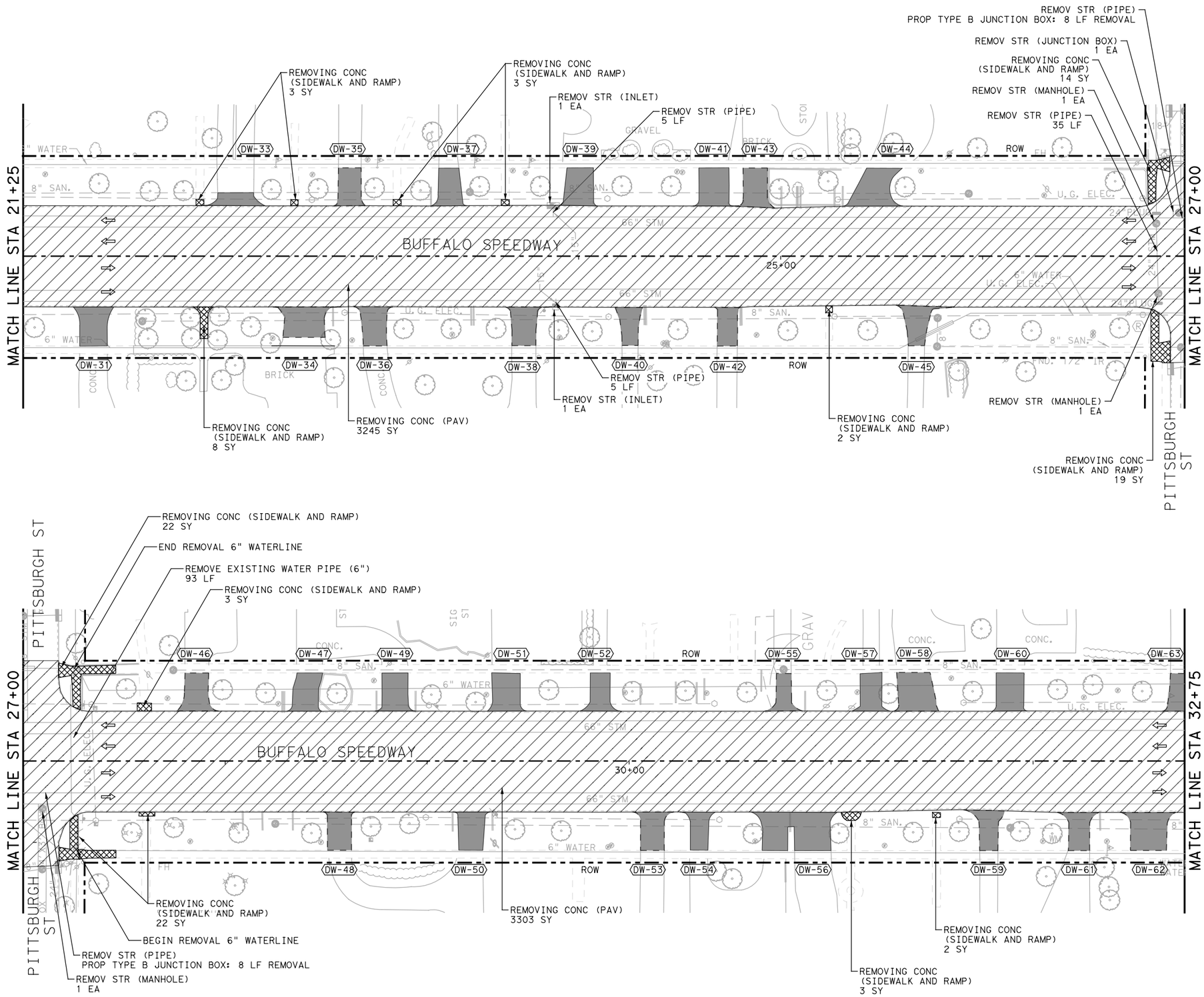
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

REMOVAL PLAN

BUFFALO SPEEDWAY
STA 9+75 TO STA 21+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		213
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND

- DIRECTION OF TRAFFIC
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK
- REMOVE CONCRETE MEDIAN
- REMOVE EXIST GRASS MEDIAN
- REMOVE CONCRETE CURB
- DW-XX DRIVEWAY ID
- REMOVE DRIVEWAY

NOTES

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

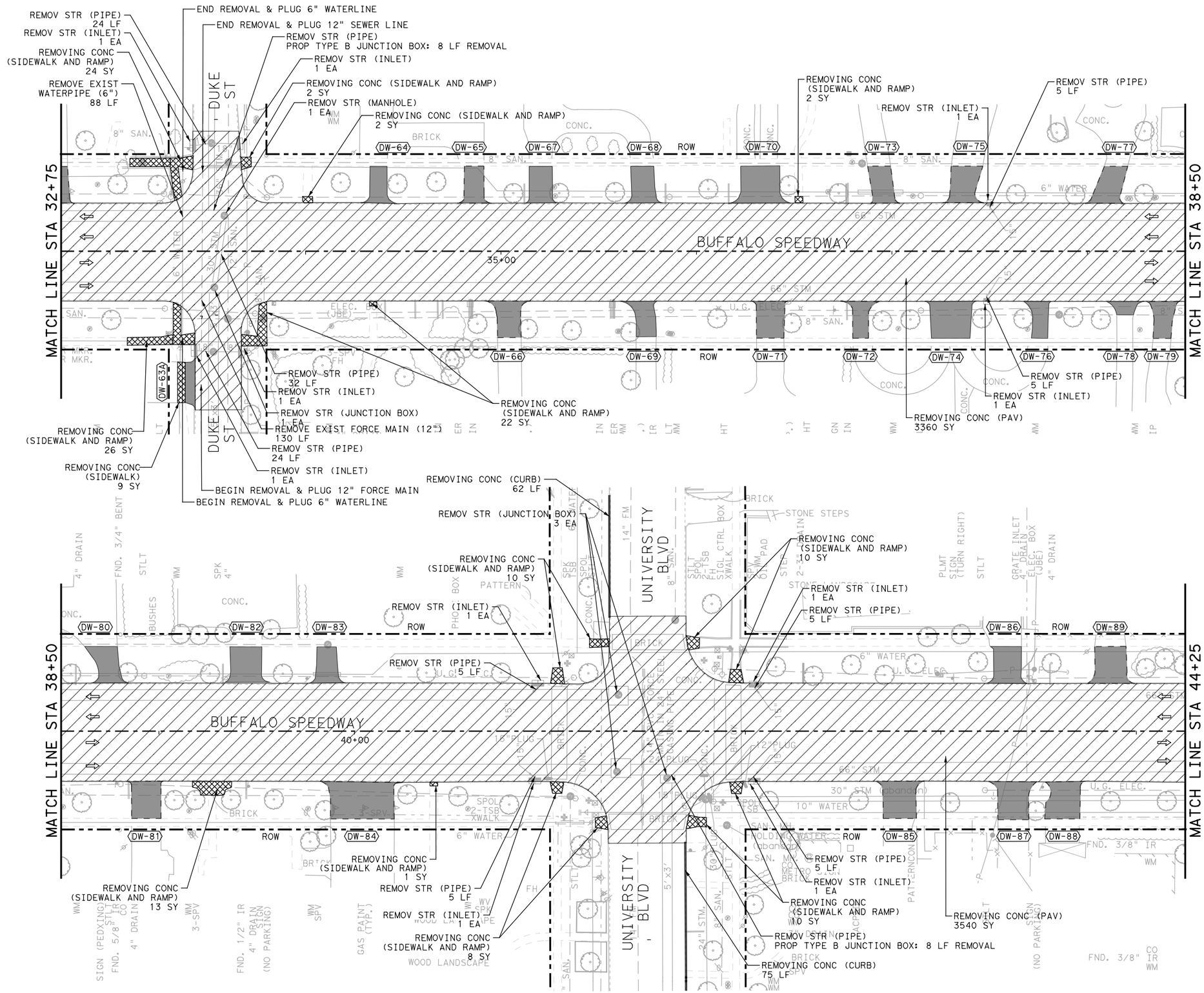
REMOVAL PLAN

BUFFALO SPEEDWAY
STA 21+25 TO STA 32+75

SHEET 5 OF 9

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		214
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK
- REMOVE CONCRETE MEDIAN
- REMOVE EXIST GRASS MEDIAN
- REMOVE CONCRETE CURB
- DW-XX DRIVEWAY ID
- REMOVE DRIVEWAY

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

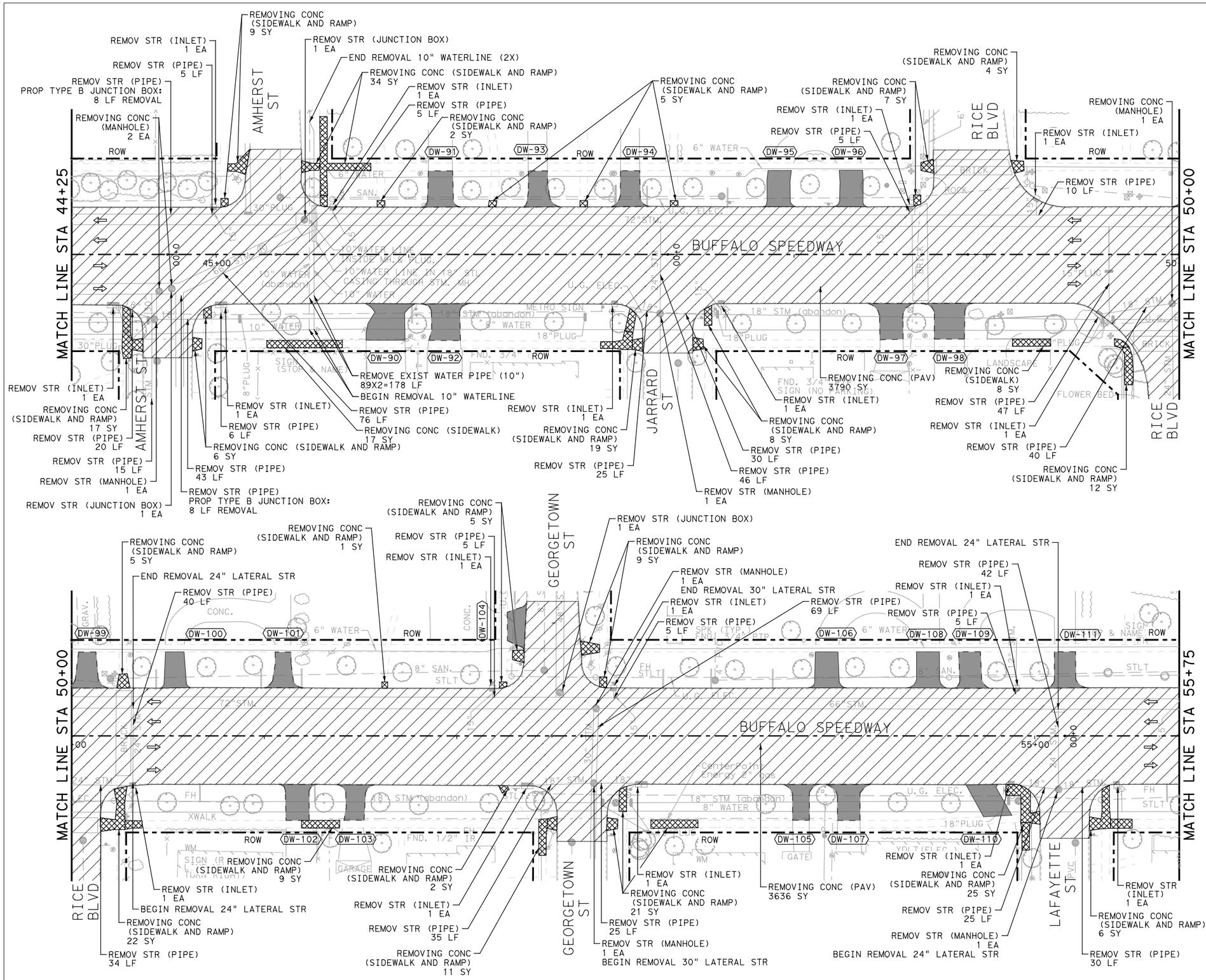
REMOVAL PLAN

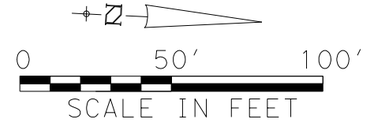
BUFFALO SPEEDWAY
STA 32+75 TO STA 44+25

SHEET 6 OF 9

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			215
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	





LEGEND

- DIRECTION OF TRAFFIC
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK
- REMOVE CONCRETE MEDIAN
- REMOVE EXIST GRASS MEDIAN
- REMOVE CONCRETE CURB
- DW-XX DRIVEWAY ID
- REMOVE DRIVEWAY

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

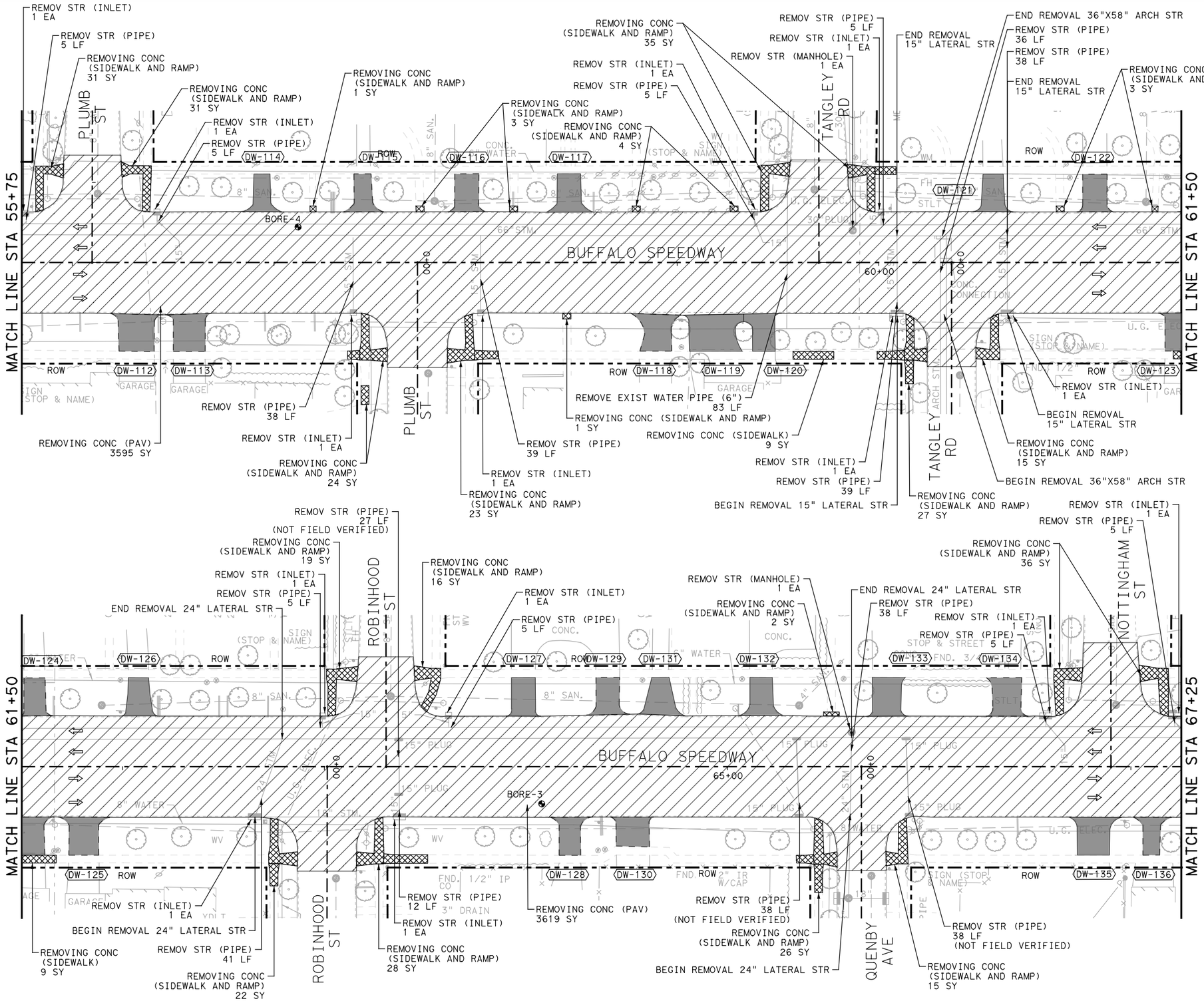
REMOVAL PLAN

BUFFALO SPEEDWAY
STA 44+25 TO STA 55+75

SHEET 7 OF 9

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		216
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND

- DIRECTION OF TRAFFIC
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK
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- REMOVE CONCRETE CURB
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STATE OF TEXAS
SYED S. HAQ P.E.
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LICENSED PROFESSIONAL ENGINEER
8/24/2020

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City of West University Place

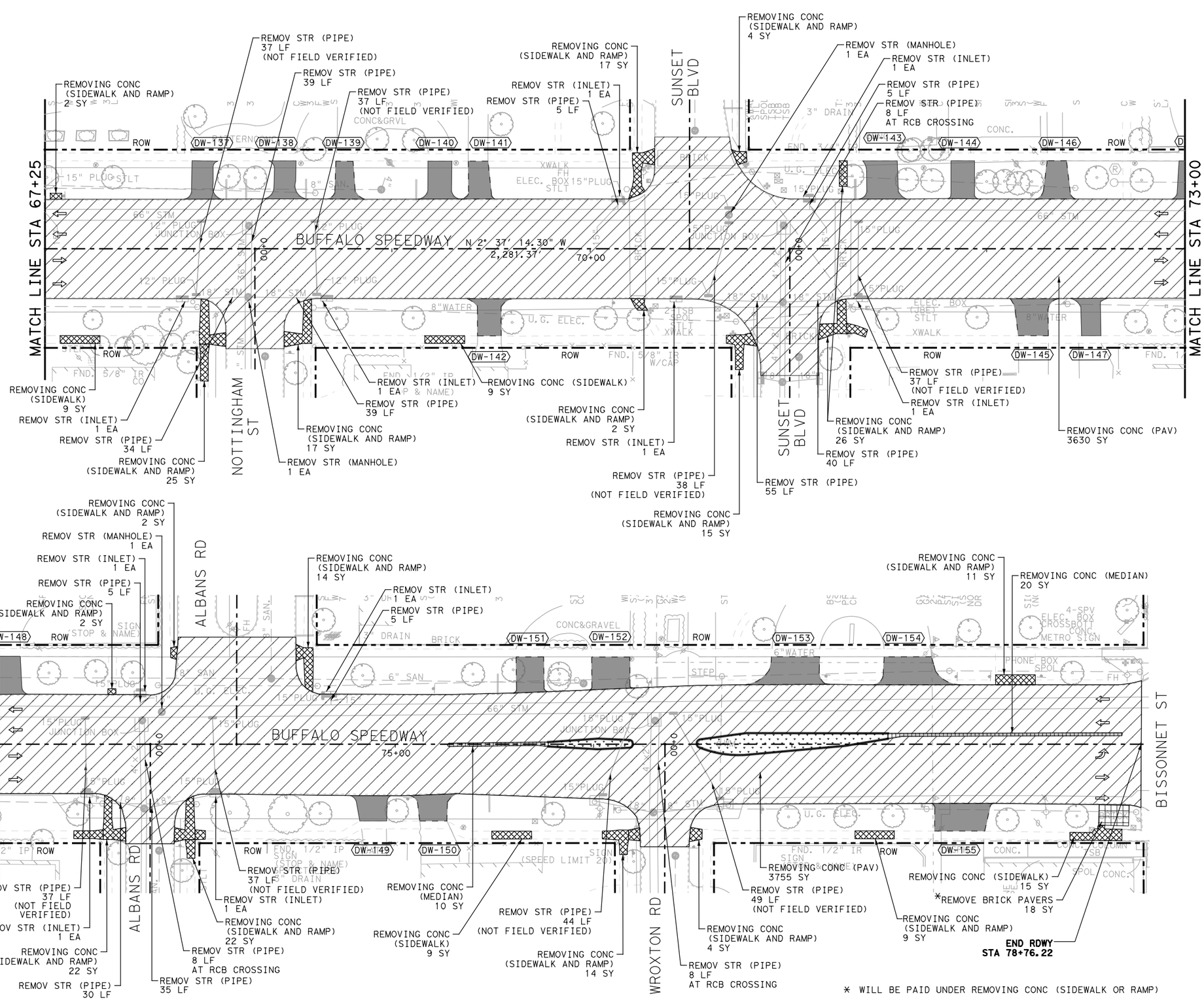
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

REMOVAL PLAN

BUFFALO SPEEDWAY
STA 55+75 TO STA 67+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		217
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK
- REMOVE CONCRETE MEDIAN
- REMOVE EXIST GRASS MEDIAN
- REMOVE CONCRETE CURB
- DW-XX DRIVEWAY ID
- REMOVE DRIVEWAY
- REMOVE BRICK PAVERS

NOTES

1. REMOVAL OF EXIST FENCE WILL BE SUBSIDIARY TO PAY ITEM 100 PREP ROW, UNLESS NOTED OTHERWISE.
2. REMOVAL OF EXIST GRASS MEDIAN WILL NOT BE PAID DIRECTLY BUT WILL BE INCIDENTAL TO VARIOUS PAY ITEMS.
3. REFER TO TREE PROTECTION PLANS FOR ADDITIONAL INFORMATION.
4. REFER TO SIGNING AND PAVEMENT MARKING DRAWINGS FOR THE SIGN REMOVAL.
5. REMOVAL OF CURB IS INCLUDED IN ITEM 104 6001 – REMOVING CONC (PAV).
6. DRIVEWAY REMOVAL SHOWN FOR INFORMATION ONLY. DRIVEWAY REMOVAL WILL BE INCIDENTAL TO ITEM 530 6004 – DRIVEWAYS (CONC).
7. CONTRACTOR TO VERIFY LIMITS OF REMOVAL FOR ALL ABANDONED WATER LINE FOR PROPOSED STORM SEWER AND UTILITY INSTALLATION.

* WILL BE PAID UNDER REMOVING CONC (SIDEWALK OR RAMP)

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

infraTECH Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368
11111 WILCREST GREEN DR, SUITE 410
HOUSTON, TEXAS 77042

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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

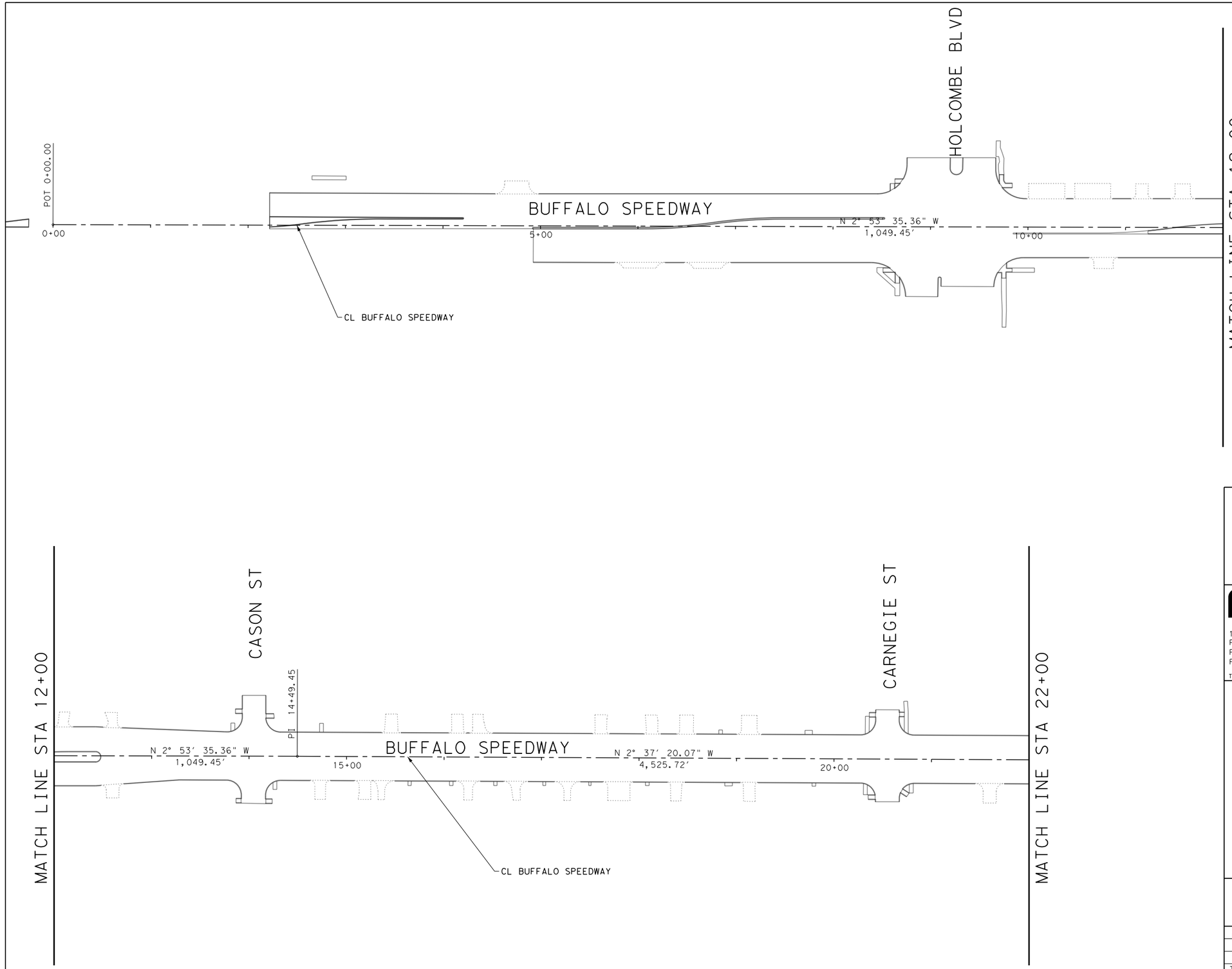
REMOVAL PLAN

BUFFALO SPEEDWAY
STA 67+25 TO END

SHEET 9 OF 9

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		218
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED
PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

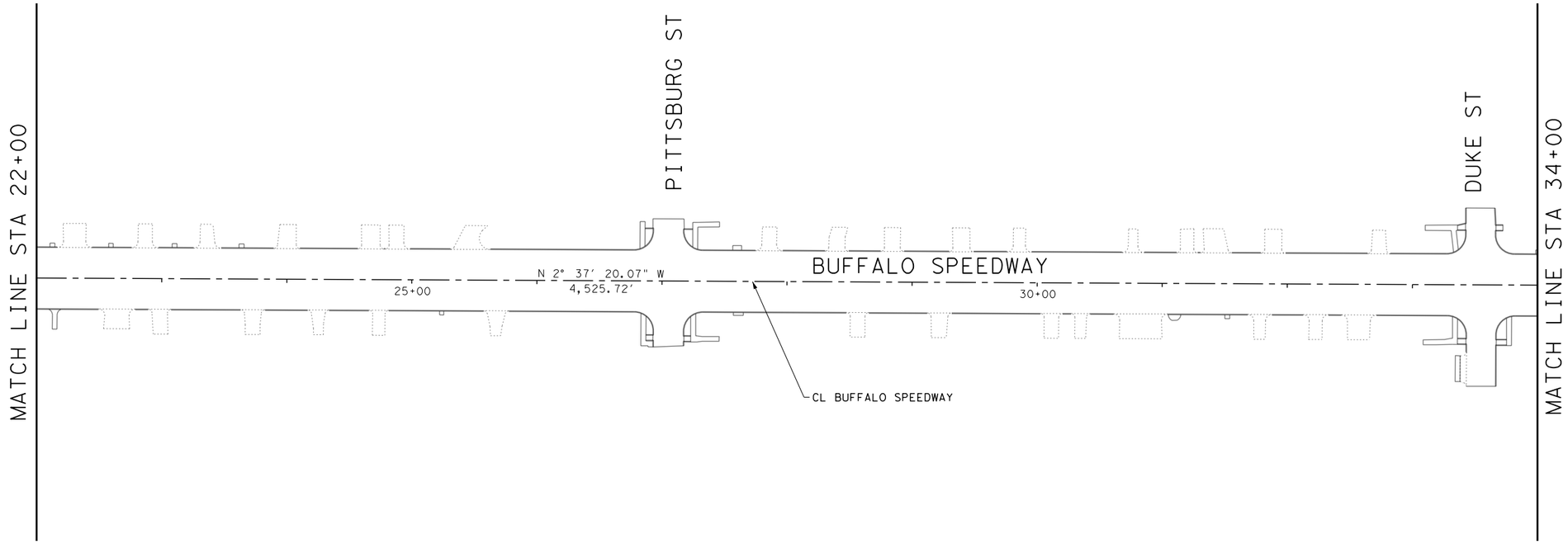
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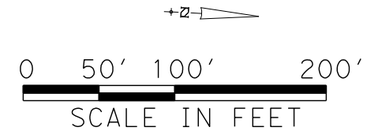
BUFFALO SPEEDWAY

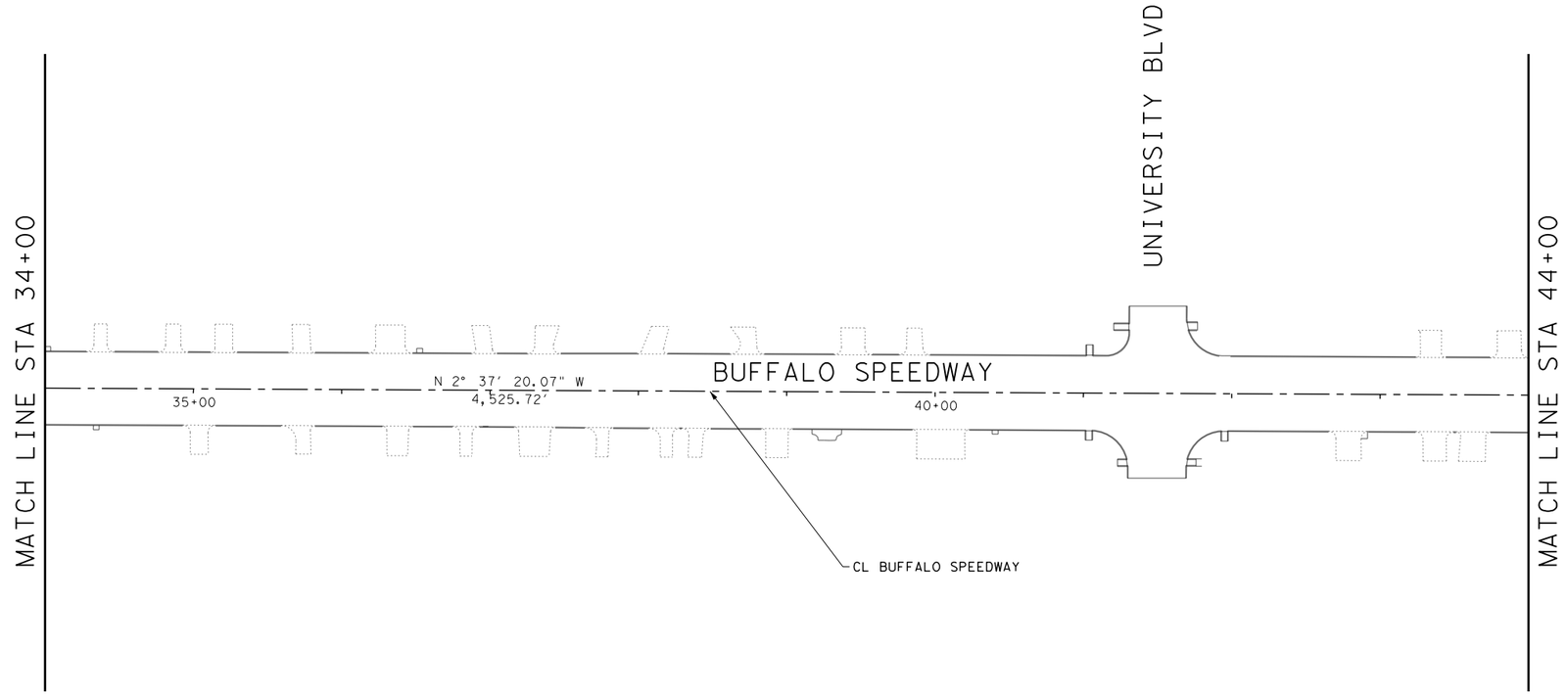
SHEET 1 OF 11

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		219
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY









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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		220
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

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City of West University Place

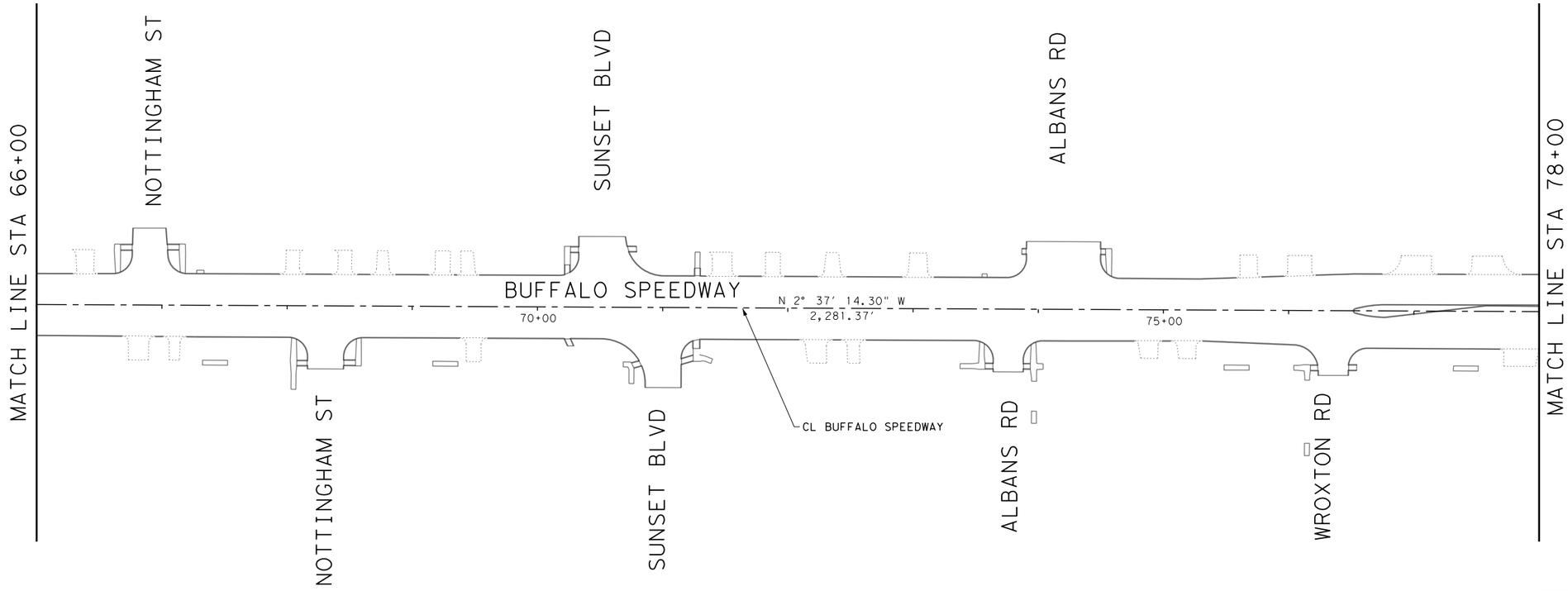
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

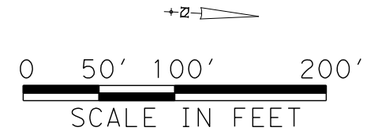
HORIZONTAL ALIGNMENT DATA

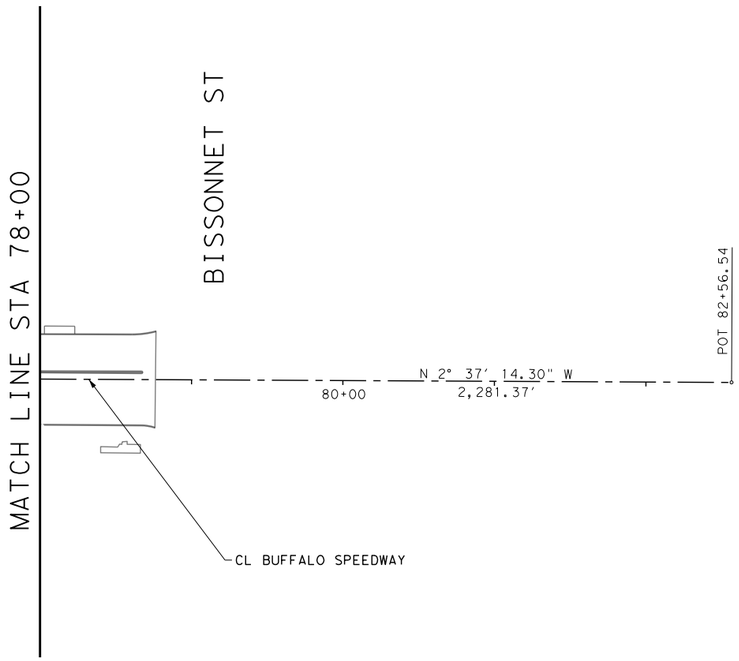
BUFFALO SPEEDWAY

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		221
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY







Beginning chain CLBS description
Feature: Road*Centerline

Point CLBS1	N 13,822,474.9255 E	3,102,868.7811	Sta	0+00.00
Course from CLBS1 to CLBS3 N 2° 45' 00.73" W Dist 1,449.4527				
Point CLBS3	N 13,823,922.7088 E	3,102,799.2340	Sta	14+49.45
Course from CLBS3 to CLBS5 N 2° 37' 20.07" W Dist 4,525.7167				
Point CLBS5	N 13,828,443.6865 E	3,102,592.1788	Sta	59+75.17
Course from CLBS5 to CLBS6 N 2° 37' 14.30" W Dist 2,281.3732				
Point CLBS6	N 13,830,722.6738 E	3,102,487.8680	Sta	82+56.54

Ending chain CLBS description

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

BUFFALO SPEEDWAY

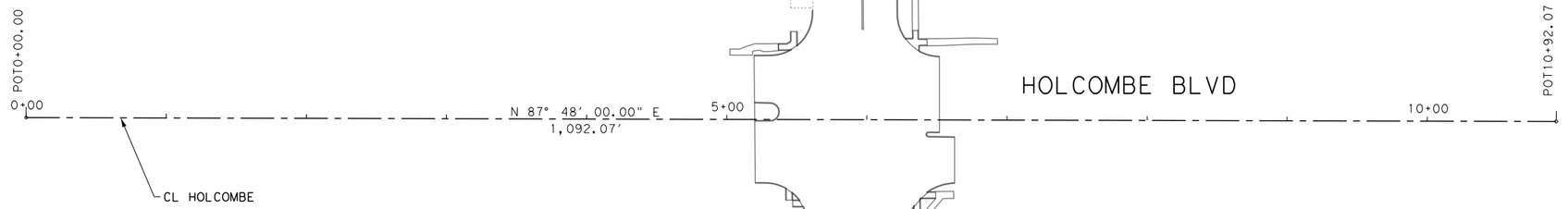
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			222
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	

Beginning chain CLHOL description
Feature: Road*Centerline

Point CLHOL1	N 13,823,371.6721	E 3,102,234.1548	Sta	0+00.00
Course from CLHOL1 to CLHOL2 N 87° 48′ 00.00" E Dist 1,092.0660				
Point CLHOL2	N 13,823,413.5941	E 3,103,325.4159	Sta	10+92.07

Ending chain CLHOL description

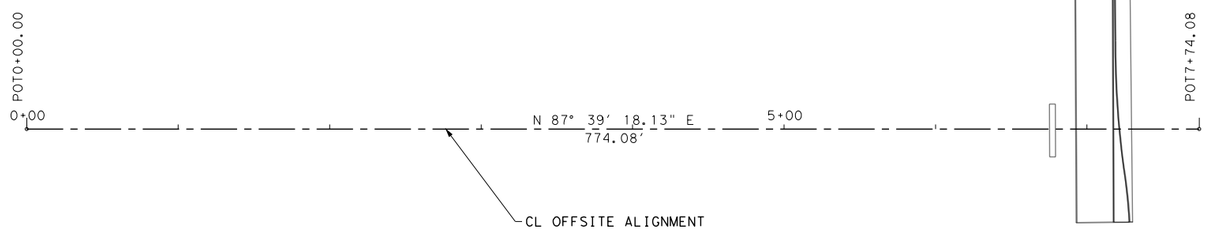




Beginning chain OSALI description
Feature: Geom*Centerline

Point OSALI1	N 13,822,728.5492	E 3,102,129.9781	Sta	0+00.00
Course from OSALI1 to OSALI2 N 87* 39′ 18.13" E Dist 774.0752				
Point OSALI2	N 13,822,760.2212	E 3,102,903.4051	Sta	7+74.08

Ending chain OSALI description



8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

OFFSITE & HOLCOMBE

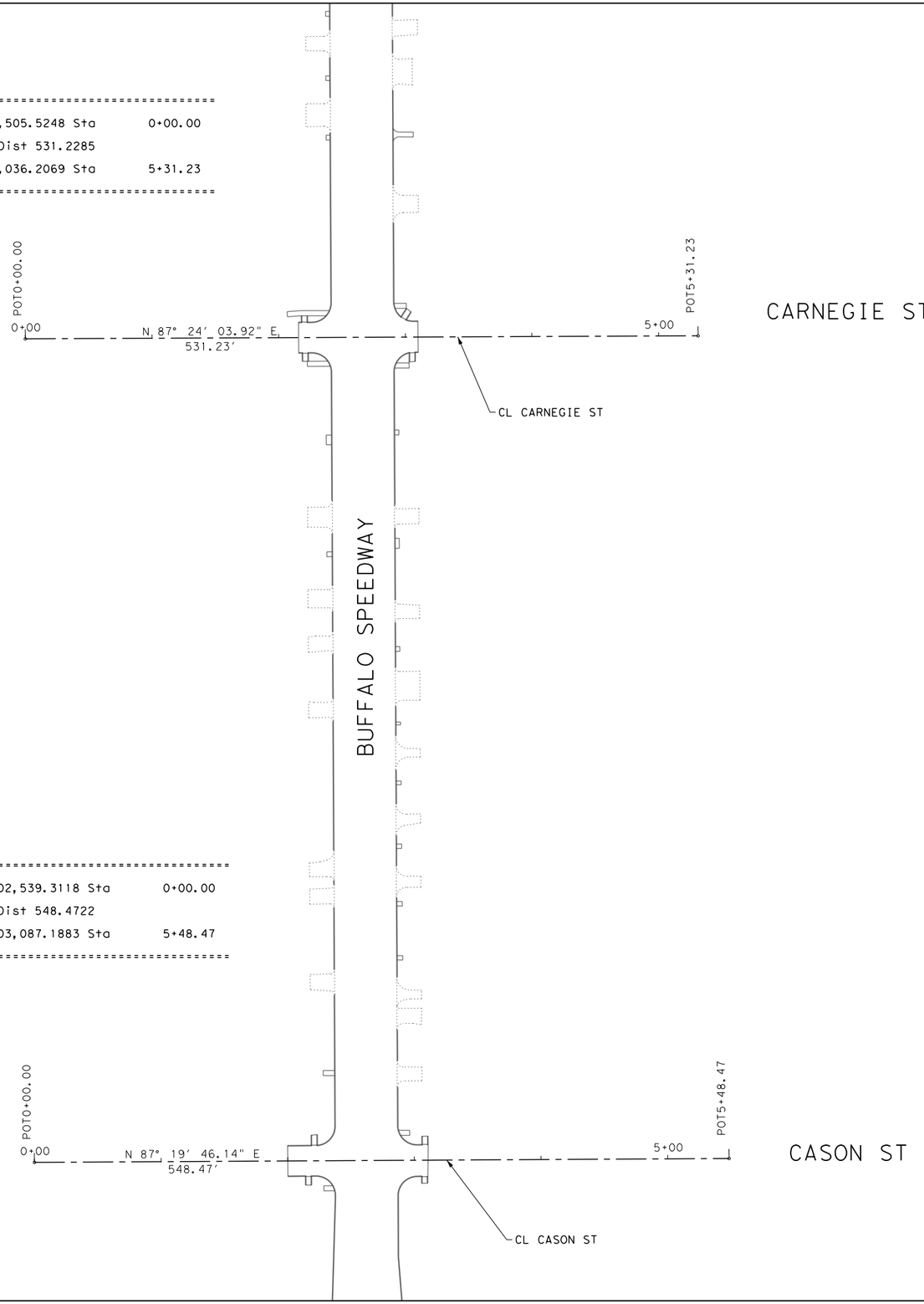
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		223
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

Beginning chain CLCARN description
Feature: Road*Centerline

Point CLCARN1	N 13,824,515.2030	E 3,102,505.5248	Sta	0+00.00
Course from CLCARN1 to CLCARN2 N 87° 24′ 03.92" E Dist 531.2285				
Point CLCARN2	N 13,824,539.2910	E 3,103,036.2069	Sta	5+31.23

Ending chain CLCARN description



Beginning chain CLCAS description
Feature: Road*Centerline

Point CLCAS1	N 13,823,865.9907	E 3,102,539.3118	Sta	0+00.00
Course from CLCAS1 to CLCAS2 N 87° 19′ 46.14" E Dist 548.4722				
Point CLCAS2	N 13,823,891.5454	E 3,103,087.1883	Sta	5+48.47

Ending chain CLCAS description

N

0 50′ 100′ 200′
SCALE IN FEET

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

CASON ST & CARNEGIE ST

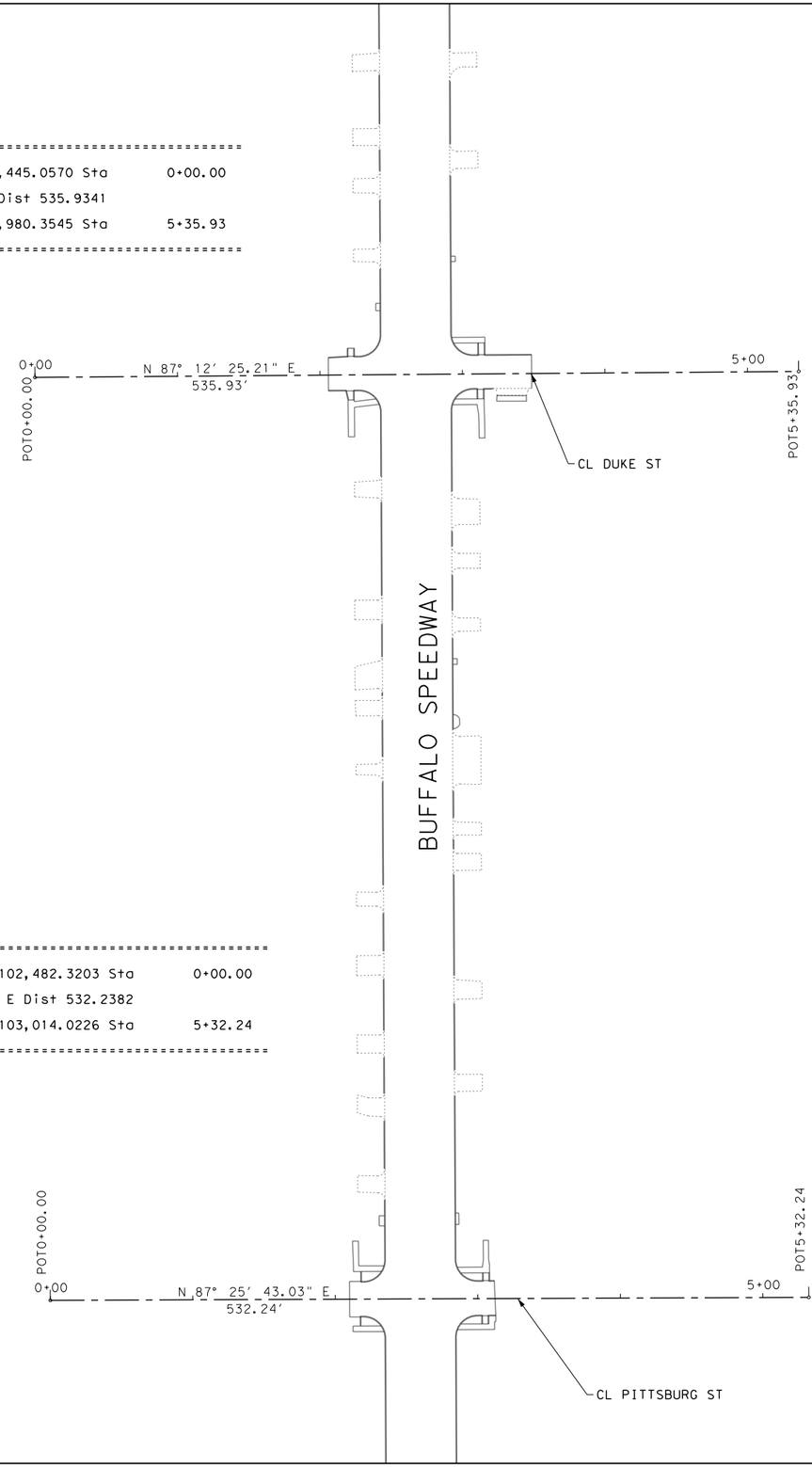
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		224
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

Beginning chain CLDUKE description
Feature: Road*Centerline

Point CLDUKE1	N 13,825,811.8810	E 3,102,445.0570	Sta	0+00.00
Course from CLDUKE1 to CLDUKE2 N 87° 12' 25.21" E Dist 535.9341				
Point CLDUKE2	N 13,825,837.9958	E 3,102,980.3545	Sta	5+35.93

Ending chain CLDUKE description



Beginning chain CLPITT description
Feature: Road*Centerline

Point CLPITT1	N 13,825,165.3544	E 3,102,482.3203	Sta	0+00.00
Course from CLPITT1 to CLPITT2 N 87* 25' 43.03" E Dist 532.2382				
Point CLPITT2	N 13,825,189.2327	E 3,103,014.0226	Sta	5+32.24

Ending chain CLPITT description

N

0 50' 100' 200'
SCALE IN FEET

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

PITTSBURG ST & DUKE ST

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		225
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

Beginning chain CLWRICE description
Feature: Road*Centerline

Point CLWRICE1	N 13,827,346.3687 E	3,102,351.2827 Sta	0+00.00	
Course from CLWRICE1 to CLWRICE2 N 87° 19′ 52.56" E Dist 290.8472				
Point CLWRICE2	N 13,827,359.9109 E	3,102,641.8144 Sta	2+90.85	

Ending chain CLWRICE description

Beginning chain CLERICE description
Feature: Road*Centerline

Point CLERICE1	N 13,827,469.2672 E	3,102,636.8060 Sta	0+00.00	
Course from CLERICE1 to CLERICE2 N 87° 26′ 53.94" E Dist 294.6696				
Point CLERICE2	N 13,827,482.3860 E	3,102,931.1834 Sta	2+94.67	

Ending chain CLERICE description

Beginning chain CLWAMH description
Feature: Road*Centerline

Point CLWAMH1	N 13,826,988.0367 E	3,102,388.0960 Sta	0+00.00	
Course from CLWAMH1 to CLWAMH2 N 87° 13′ 55.88" E Dist 270.4672				
Point CLWAMH2	N 13,827,001.0972 E	3,102,658.2476 Sta	2+70.47	

Ending chain CLWAMH description

Beginning chain CLJAR description
Feature: Road*Centerline

Point CLJAR1	N 13,827,204.2933 E	3,102,648.9415 Sta	0+00.00	
Course from CLJAR1 to CLJAR2 N 87° 22′ 50.72" E Dist 277.1336				
Point CLJAR2	N 13,827,216.9579 E	3,102,925.7856 Sta	2+77.13	

Ending chain CLJAR description

Beginning chain CLEAMH description
Feature: Road*Centerline

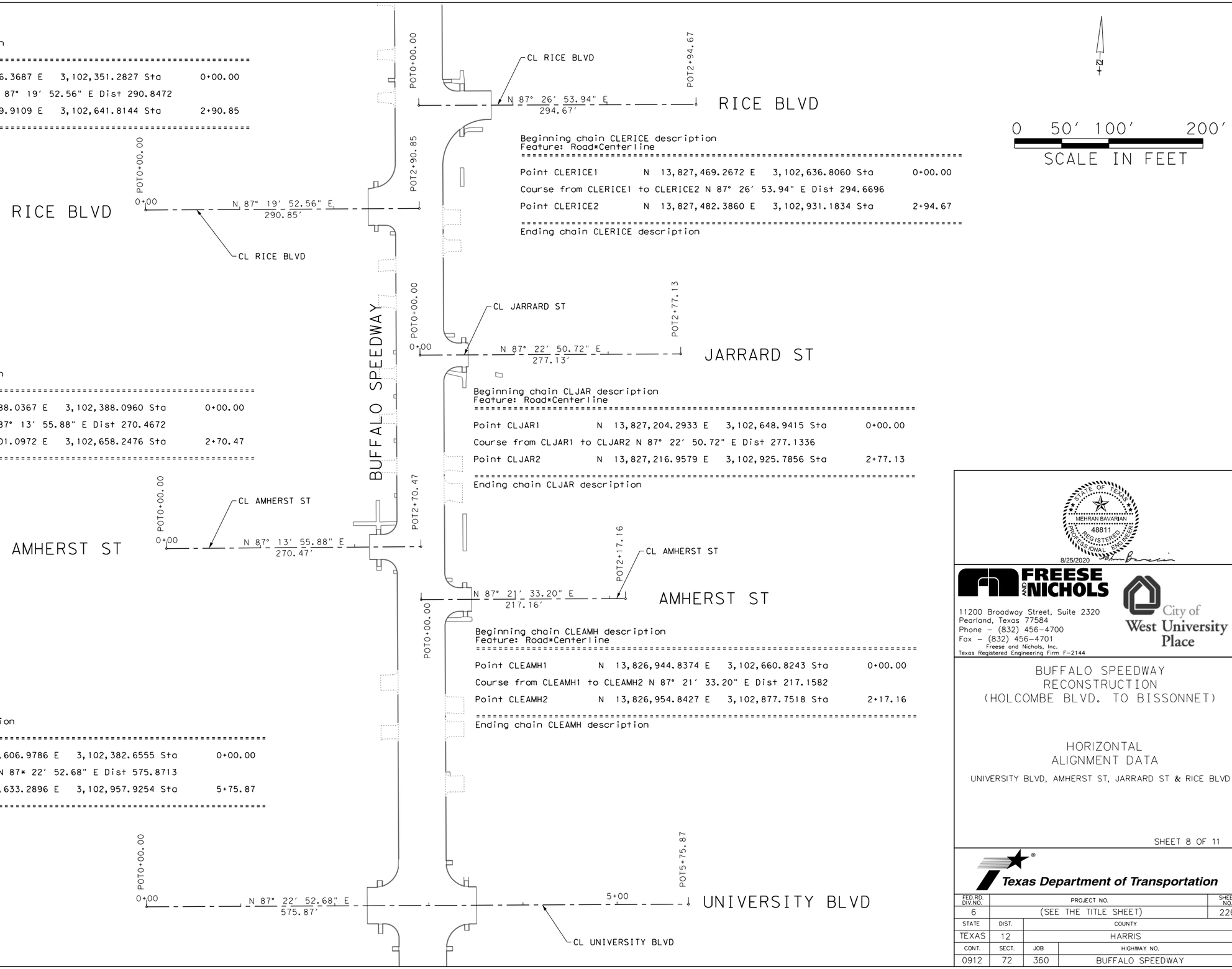
Point CLEAMH1	N 13,826,944.8374 E	3,102,660.8243 Sta	0+00.00	
Course from CLEAMH1 to CLEAMH2 N 87° 21′ 33.20" E Dist 217.1582				
Point CLEAMH2	N 13,826,954.8427 E	3,102,877.7518 Sta	2+17.16	

Ending chain CLEAMH description

Beginning chain CLUNIV description
Feature: Road*Centerline

Point CLUNIV1	N 13,826,606.9786 E	3,102,382.6555 Sta	0+00.00	
Course from CLUNIV1 to CLUNIV2 N 87* 22′ 52.68" E Dist 575.8713				
Point CLUNIV2	N 13,826,633.2896 E	3,102,957.9254 Sta	5+75.87	

Ending chain CLUNIV description



N

0 50′ 100′ 200′

SCALE IN FEET

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

UNIVERSITY BLVD, AMHERST ST, JARRARD ST & RICE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		226
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

Beginning chain CLWTANG description
Feature: Road*Centerline

Point CLWTANG1	N 13,828,425.3040 E	3,102,302.2791 Sta	0+00.00	
Course from CLWTANG1 to CLWTANG2 N 87° 20′ 03.52" E Dist 290.4372				
Point CLWTANG2	N 13,828,438.8118 E	3,102,592.4021 Sta	2+90.44	

Ending chain CLWTANG description

Beginning chain CLWPLUM description
Feature: Road*Centerline

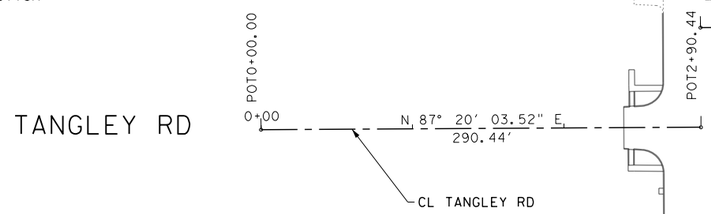
Point CLWPLUM1	N 13,828,068.1064 E	3,102,369.4329 Sta	0+00.00	
Course from CLWPLUM1 to CLWPLUM2 N 87° 26′ 39.26" E Dist 239.6959				
Point CLWPLUM2	N 13,828,078.7948 E	3,102,608.8904 Sta	2+39.70	

Ending chain CLWPLUM description

Beginning chain CLWGTWN description
Feature: Road*Centerline

Point CLWGTWN1	N 13,827,707.2303 E	3,102,367.0117 Sta	0+00.00	
Course from CLWGTWN1 to CLWGTWN2 N 87° 27′ 43.31" E Dist 258.6251				
Point CLWGTWN2	N 13,827,718.6826 E	3,102,625.3831 Sta	2+58.63	

Ending chain CLWGTWN description



Beginning chain CLETANG description
Feature: Road*Centerline

Point CLETANG1	N 13,828,504.5453 E	3,102,589.3933 Sta	0+00.00	
Course from CLETANG1 to CLETANG2 N 87° 22′ 13.55" E Dist 281.7796				
Point CLETANG2	N 13,828,517.4730 E	3,102,870.8761 Sta	2+81.78	

Ending chain CLETANG description

Beginning chain CLEPLUM description
Feature: Road*Centerline

Point CLEPLUM1	N 13,828,239.9764 E	3,102,601.5085 Sta	0+00.00	
Course from CLEPLUM1 to CLEPLUM2 N 87° 22′ 29.60" E Dist 278.6850				
Point CLEPLUM2	N 13,828,252.7404 E	3,102,879.9011 Sta	2+78.69	

Ending chain CLEPLUM description

Beginning chain CLLAF description
Feature: Road*Centerline

Point CLLAF1	N 13,827,984.5726 E	3,102,613.2057 Sta	0+00.00	
Course from CLLAF1 to CLLAF2 N 87° 21′ 22.99" E Dist 285.9474				
Point CLLAF2	N 13,827,997.7614 E	3,102,898.8487 Sta	2+85.95	

Ending chain CLLAF description

Beginning chain CLEGTWN description
Feature: Road*Centerline

Point CLEGTWN1	N 13,827,733.9468 E	3,102,624.6840 Sta	0+00.00	
Course from CLEGTWN1 to CLEGTWN2 N 87° 11′ 27.29" E Dist 266.1328				
Point CLEGTWN2	N 13,827,746.9895 E	3,102,890.4970 Sta	2+66.13	

Ending chain CLEGTWN description

0 50′ 100′ 200′
SCALE IN FEET

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

GEORGETOWN ST, LAFAYETTE ST, PLUMB ST & TANGLEY RD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		227
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

Beginning chain CLWSUN description
Feature: Road*Centerline

Point CLWSUN1	N 13,829,505.0985 E	3,102,265.7133 Sta	0+00.00	
Course from CLWSUN1 to CLWSUN2 N 87° 26′ 21.15" E Dist 277.5935				
Point CLWSUN2	N 13,829,517.5012 E	3,102,543.0296 Sta	2+77.59	

Ending chain CLWSUN description

Beginning chain CLWNOT description
Feature: Road*Centerline

Point CLWNOT1	N 13,829,145.1089 E	3,102,286.1455 Sta	0+00.00	
Course from CLWNOT1 to CLWNOT2 N 87° 19′ 21.05" E Dist 273.6424				
Point CLWNOT2	N 13,829,157.8918 E	3,102,559.4892 Sta	2+73.64	

Ending chain CLWNOT description

Beginning chain CLWROB description
Feature: Road*Centerline

Point CLWROB1	N 13,828,785.9413 E	3,102,298.8290 Sta	0+00.00	
Course from CLWROB1 to CLWROB2 N 87* 20′ 32.00" E Dist 277.3943				
Point CLWROB2	N 13,828,798.8042 E	3,102,575.9249 Sta	2+77.39	

Ending chain CLWROB description

Beginning chain CLESUN description
Feature: Road*Centerline

Point CLESUN1	N 13,829,568.0460 E	3,102,540.7161 Sta	0+00.00	
Course from CLESUN1 to CLESUN2 N 87° 26′ 33.77" E Dist 282.6145				
Point CLESUN2	N 13,829,580.6558 E	3,102,823.0492 Sta	2+82.61	

Ending chain CLESUN description

Beginning chain CLENOT description
Feature: Road*Centerline

Point CLENOT1	N 13,829,298.5105 E	3,102,553.0529 Sta	0+00.00	
Course from CLENOT1 to CLENOT2 N 87° 21′ 58.33" E Dist 292.1070				
Point CLENOT2	N 13,829,311.9335 E	3,102,844.8513 Sta	2+92.11	

Ending chain CLENOT description

Beginning chain CLQUEN description
Feature: Road*Centerline

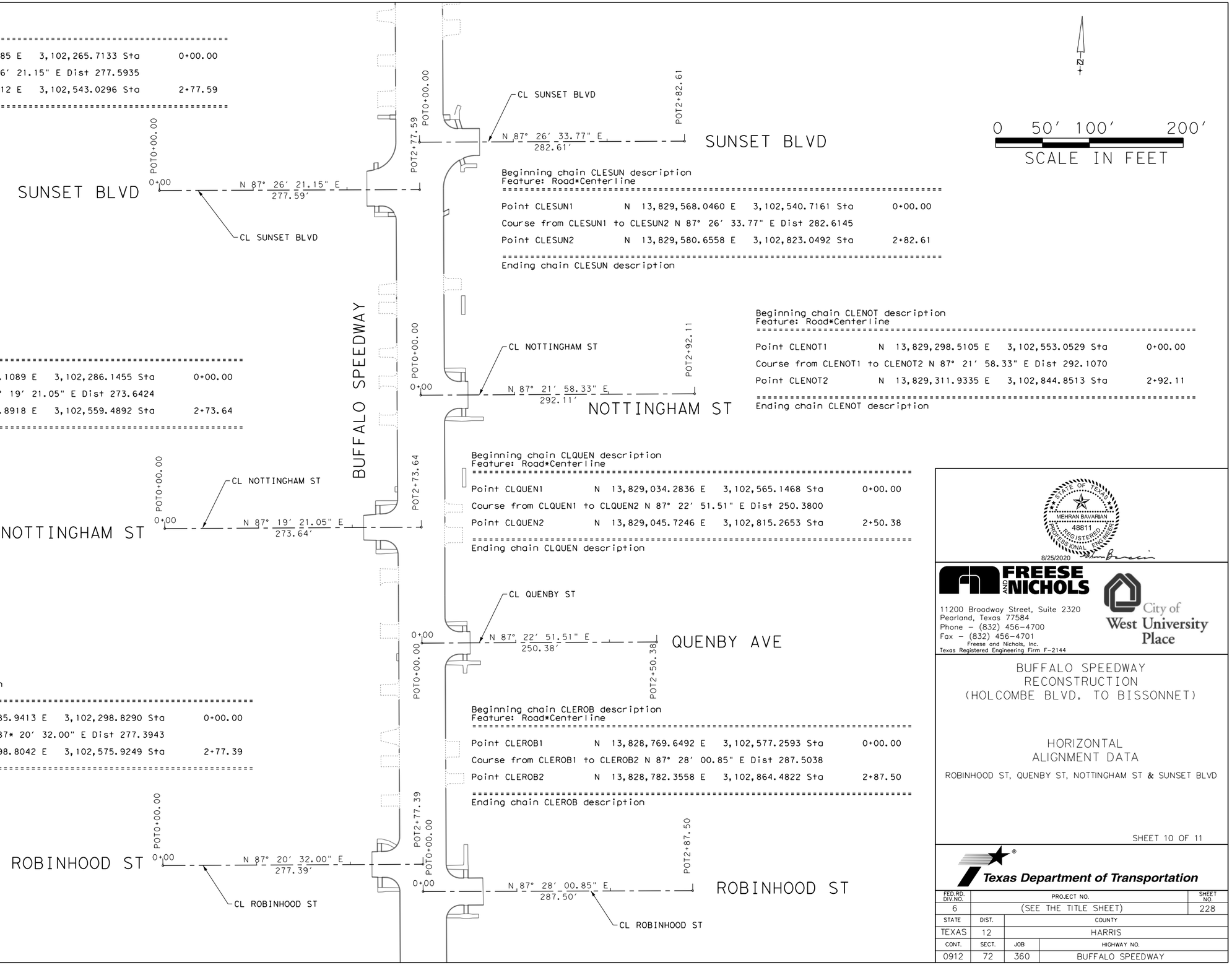
Point CLQUEN1	N 13,829,034.2836 E	3,102,565.1468 Sta	0+00.00	
Course from CLQUEN1 to CLQUEN2 N 87° 22′ 51.51" E Dist 250.3800				
Point CLQUEN2	N 13,829,045.7246 E	3,102,815.2653 Sta	2+50.38	

Ending chain CLQUEN description

Beginning chain CLEROB description
Feature: Road*Centerline

Point CLEROB1	N 13,828,769.6492 E	3,102,577.2593 Sta	0+00.00	
Course from CLEROB1 to CLEROB2 N 87° 28′ 00.85" E Dist 287.5038				
Point CLEROB2	N 13,828,782.3558 E	3,102,864.4822 Sta	2+87.50	

Ending chain CLEROB description



STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED
PROFESSIONAL ENGINEER
8/25/2020

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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

ROBINHOOD ST, QUENBY ST, NOTTINGHAM ST & SUNSET BLVD

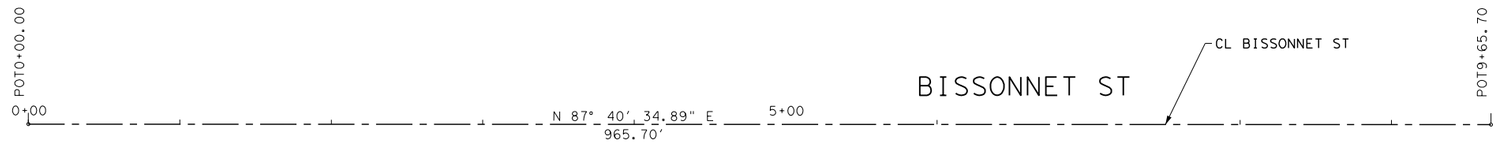
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		228
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

Beginning chain CLBISS description
Feature: Road*Centerline

Point CLBISS1	N 13,830,360.5959	E 3,101,875.8953	Sta	0+00.00
Course from CLBISS1 to CLBISS2 N 87° 40′ 34.89" E Dist 965.6952				
Point CLBISS2	N 13,830,399.7491	E 3,102,840.7965	Sta	9+65.70

Ending chain CLBISS description



Beginning chain CLWROX description
Feature: Road*Centerline

Point CLWROX1	N 13,830,102.7831	E 3,102,516.2408	Sta	0+00.00
Course from CLWROX1 to CLWROX2 N 87° 29′ 21.80" E Dist 272.4647				
Point CLWROX2	N 13,830,114.7183	E 3,102,788.4440	Sta	2+72.46

Ending chain CLWROX description

Beginning chain CLWALB description
Feature: Road*Centerline

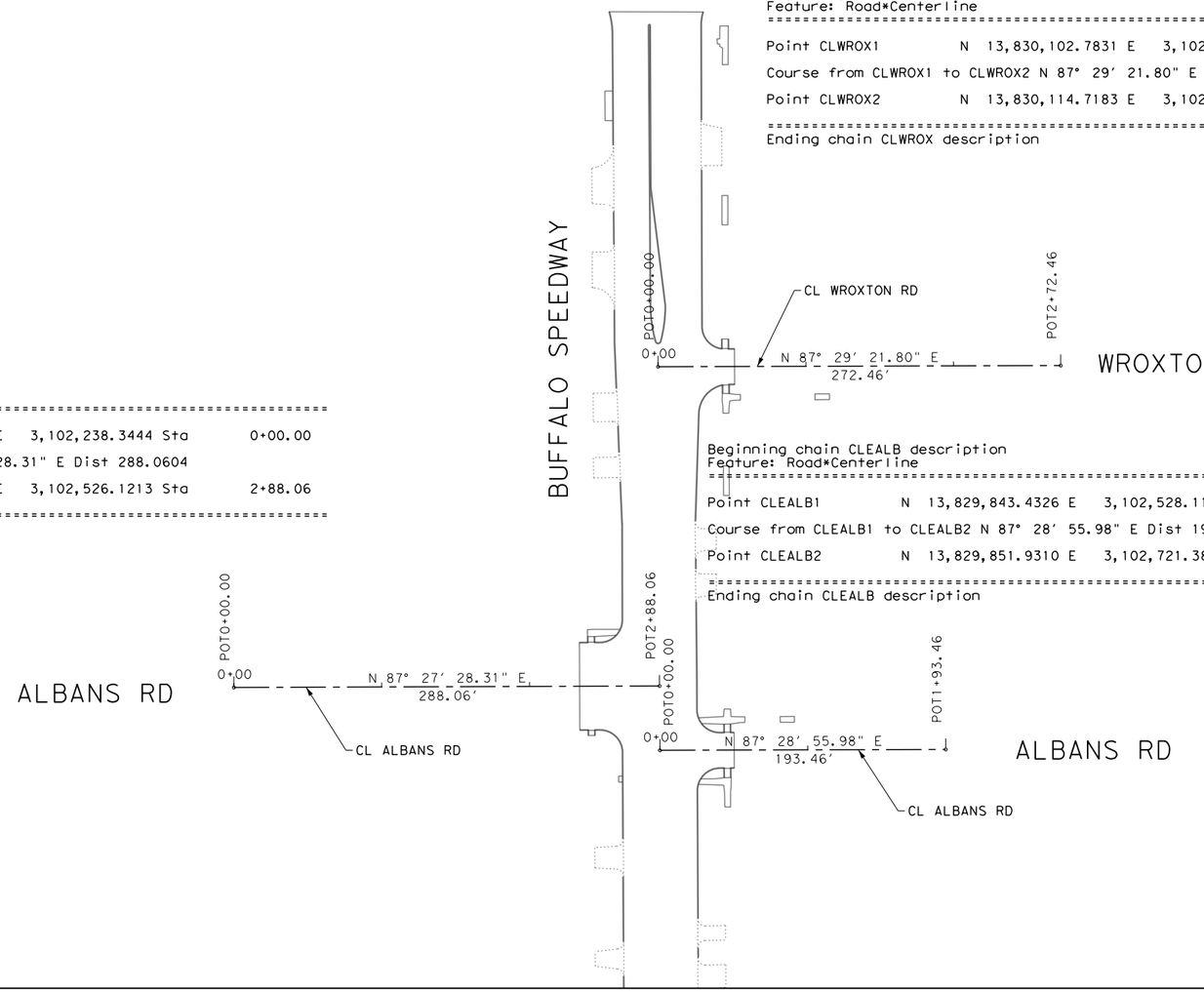
Point CLWALB1	N 13,829,874.1380	E 3,102,238.3444	Sta	0+00.00
Course from CLWALB1 to CLWALB2 N 87* 27′ 28.31" E Dist 288.0604				
Point CLWALB2	N 13,829,886.9146	E 3,102,526.1213	Sta	2+88.06

Ending chain CLWALB description

Beginning chain CLEALB description
Feature: Road*Centerline

Point CLEALB1	N 13,829,843.4326	E 3,102,528.1115	Sta	0+00.00
Course from CLEALB1 to CLEALB2 N 87° 28′ 55.98" E Dist 193.4563				
Point CLEALB2	N 13,829,851.9310	E 3,102,721.3811	Sta	1+93.46

Ending chain CLEALB description



0 50′ 100′ 200′
SCALE IN FEET

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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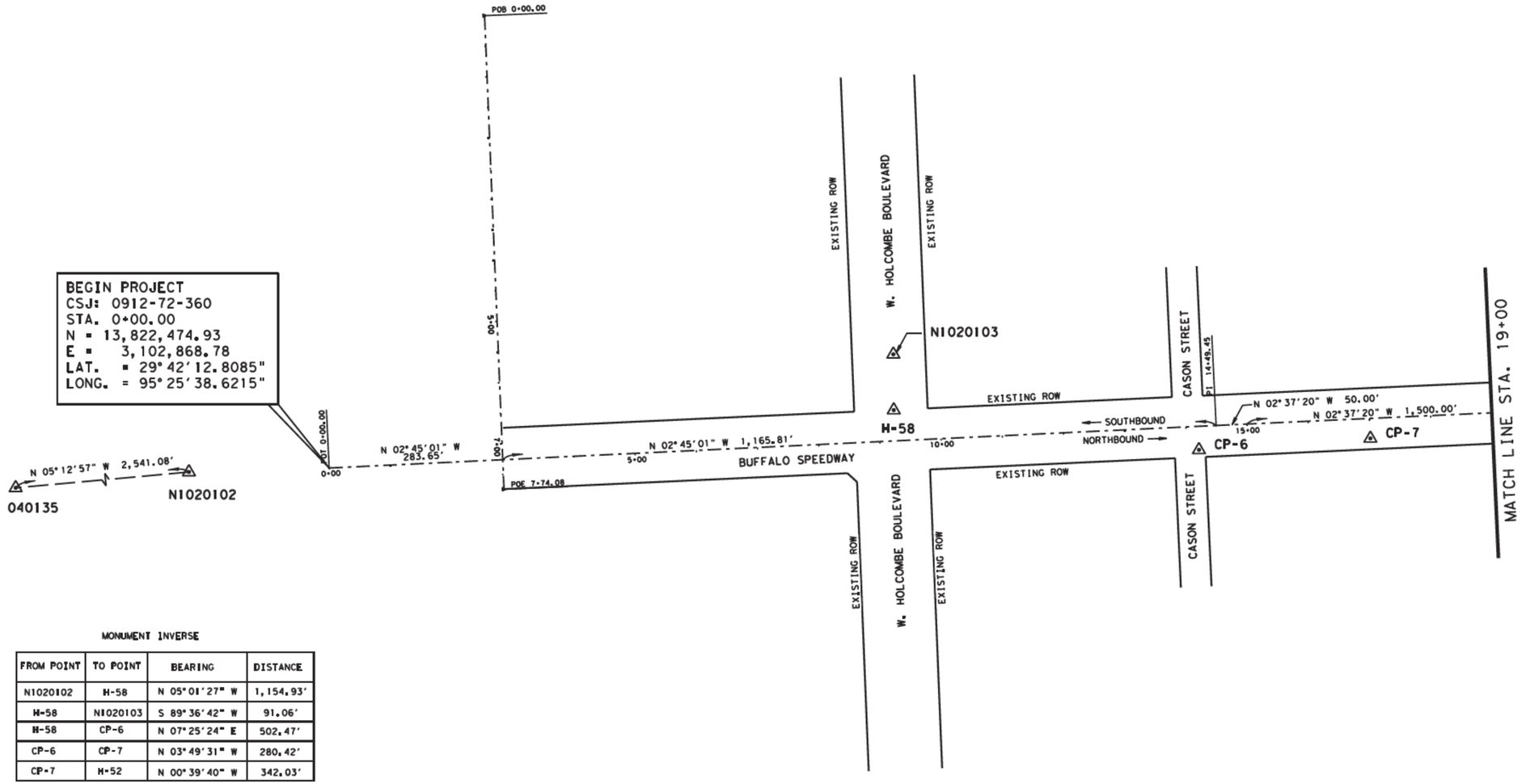
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL ALIGNMENT DATA

ALBANS RD, WROXTON RD, & BISSONNET ST

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			229
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



NOTES:

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3. MONUMENT NO.040135 (STAMPING D100 BM18) WAS HELD FOR HORIZONTAL AND VERTICAL CONTROL.
4. FIELD SURVEYS WERE PERFORMED BETWEEN OCTOBER, 2018 THROUGH OCTOBER, 2019.
5. UNIT OF MEASURE: U.S. SURVEY FEET.

THE CONTROL POINTS SHOWN HEREIN WERE DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION.

STATE OF TEXAS
REGISTERED
PAUL P. KWAN
4313
PROFESSIONAL
LAND SURVEYOR

8/17/2020

THIS SURVEY CONTROL INFORMATION HAS BEEN ACCEPTED AND INCORPORATED INTO THIS PS&E.

MONUMENT INVERSE

FROM POINT	TO POINT	BEARING	DISTANCE
N1020102	H-58	N 05°01'27" W	1,154.93'
H-58	N1020103	S 89°36'42" W	91.06'
H-58	CP-6	N 07°25'24" E	502.47'
CP-6	CP-7	N 03°49'31" W	280.42'
CP-7	H-52	N 00°39'40" W	342.03'

CONTROL MONUMENTATION

POINT	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
040135	N/A	N/A	13,819,715.43	3,103,106.28	49.49'	FND. HCFP CAP RM 040135* (STAMPING D100 BM18)
N1020102	N/A	N/A	13,822,245.99	3,102,875.28	45.22'	SET TXDOT ALUMINUM CAP IN CONCRETE
N1020103	9+28.79	-141.30	13,823,395.86	3,102,683.08	46.45'	SET 5/8" IR W/TXDOT ALUMINUM CAP
H-58	9+25.03	-50.32	13,823,396.48	3,102,774.13	45.78'	SET "X" CUT IN CONCRETE
CP-6	14+19.60	38.43	13,823,894.74	3,102,839.05	45.72'	SET 3/8" IR W/LANDTECH YELLOW CAP
CP-7	17+00.05	32.61	13,824,174.53	3,102,820.34	46.73'	SET 3/8" IR W/LANDTECH YELLOW CAP

* INDICATES HELD MONUMENT

CONTROL POINT COMPARISON

* INDICATES HELD MONUMENT

PUBLISHED INFORMATION				OBSERVED INFORMATION				COMPARISON			MONUMENT DESCRIPTION
TSARP DATUM: NAD83/2001 ADJ. & NAVD88/2001 ADJ.				TXDOT VRS DATUM: NAD83/2011 ADJ. & NAVD88/GEOID12B				(PUBLISHED - OBSERVED)			
MARK NO.	GRID NORTHING	GRID EASTING	ELEVATION	PT. NO.	GRID NORTHING	GRID EASTING	ELEVATION	NORTHING	EASTING	ELEVATION	
040135	13,817,918.95	3,102,702.85	49.48'	40135	13,817,919.10	3,102,702.92	49.49'	-0.15'	-0.07'	-0.01'	FND. HCFP CAP RM 040135* (STAMPING D100 BM18)

0 100 200
SCALE: 1"=100' (22" x 34" SHEET)
SCALE: 1"=200' (11" x 17" SHEET)

UNIT OF MEASURE: U.S. SURVEY FEET

$FILE$

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City of West University Place

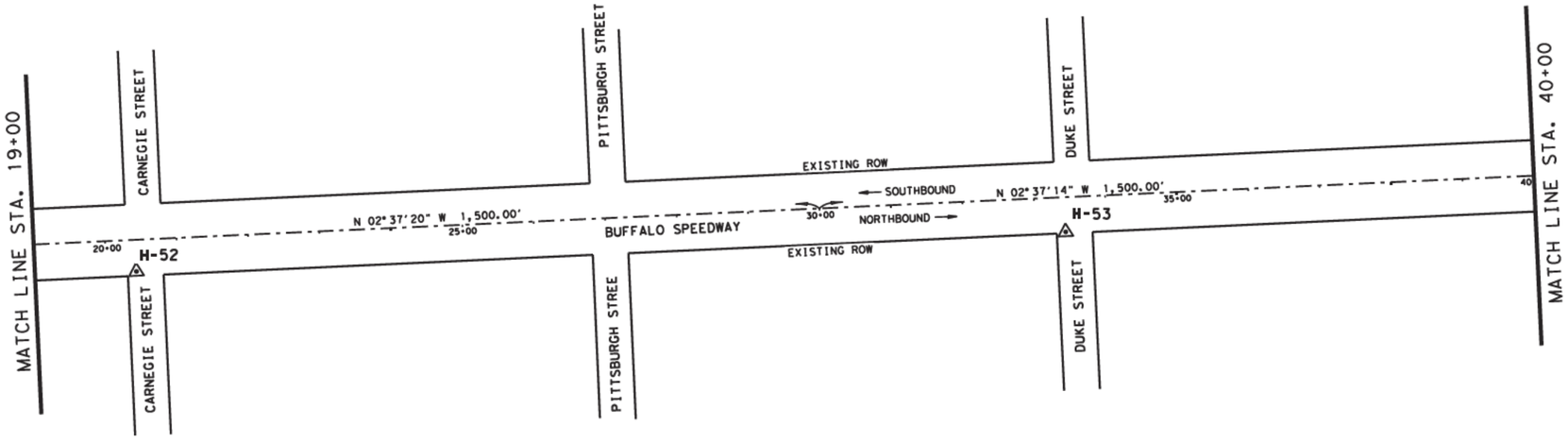
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

SURVEY CONTROL INDEX

SHEET 1 OF 4

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			230
STATE	DISTRICT	COUNTY	
TEXAS	12	HARRIS	
CONTROL	SECTION	JOB	HIGHWAY NO.
0912	72	360	CS



NOTES:

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STATE OF TEXAS REGISTERED PAUL P. KWAN 4313 PROFESSIONAL LAND SURVEYOR

8/17/2020

MONUMENT INVERSE

FROM POINT	TO POINT	BEARING	DISTANCE
CP-7	H-52	N 00° 39' 40" W	342.03'
H-52	H-53	N 02° 26' 06" W	1,300.65'
H-53	CP-14	N 07° 47' 55" W	861.93'

CONTROL MONUMENTATION

POINT	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
H-52	20+41.88	44.31	13,824,516.54	3,102,816.40	46.69'	SET TXDOT ALUMINUM CAP IN CONCRETE ON BB-INLET
H-53	33+42.52	48.56	13,825,816.02	3,102,761.13	46.66'	SET TXDOT ALUMINUM CAP IN CONCRETE ON BB-INLET

0 100 200
SCALE: 1"=100' (22" x 34" SHEET)
SCALE: 1"=200' (11" x 17" SHEET)

UNIT OF MEASURE: U.S. SURVEY FEET

THIS SURVEY CONTROL INFORMATION HAS BEEN ACCEPTED AND INCORPORATED INTO THIS PS&E.

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City of West University Place

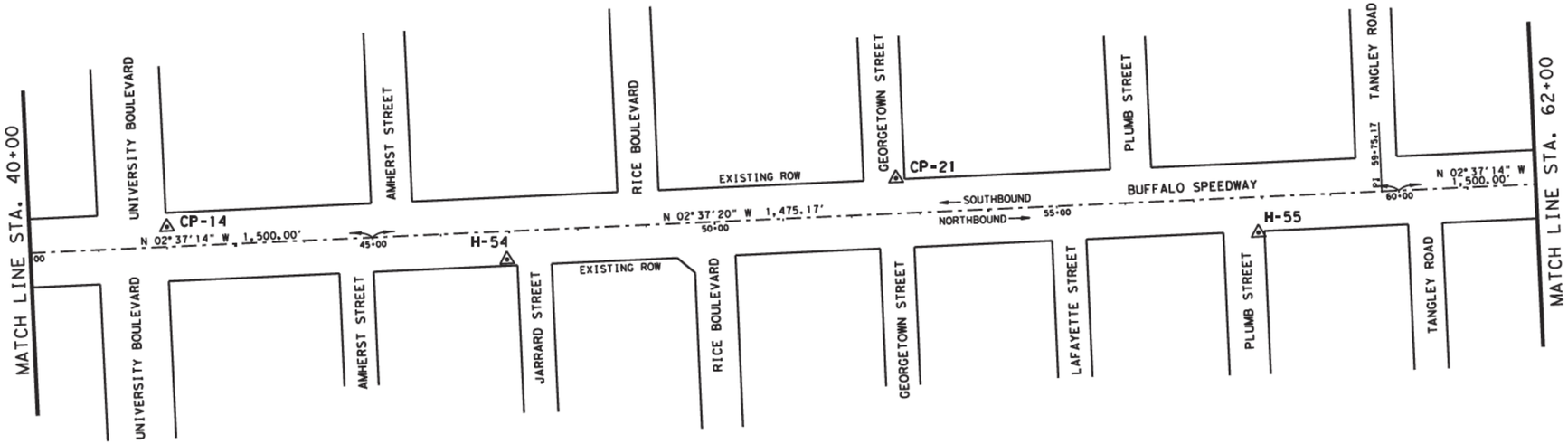
BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

SURVEY CONTROL INDEX

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6			231
STATE	DISTRICT	COUNTY	
TEXAS	12	HARRIS	
CONTROL	SECTION	JOB	HIGHWAY NO.
0912	72	360	CS

$FILE$



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STATE OF TEXAS
REGISTERED
PAUL P. KWAN
4313
PROFESSIONAL
LAND SURVEYOR

8/17/2020

MONUMENT INVERSE

FROM POINT	TO POINT	BEARING	DISTANCE
H-53	CP-14	N 07°47'55" W	861.93'
CP-14	H-54	N 05°28'07" E	498.95'
H-54	CP-21	N 11°48'16" W	579.94'
CP-21	H-55	N 08°32'33" E	535.12'
H-55	CP-27	N 11°32'11" W	563.00'

CONTROL MONUMENTATION

POINT	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
CP-14	42+00.94	-29.20	13,826,669.98	3,102,644.18	48.21'	SET 3/8" IR W/LANDTECH YELLOW CAP
H-54	46+94.92	41.02	13,827,166.66	3,102,691.73	48.89'	SET 5/8" IR W/TXDOT ALUMINUM CAP
CP-21	52+67.43	-51.52	13,827,734.33	3,102,573.09	48.98'	SET 3/8" IR W/LANDTECH YELLOW CAP
H-55	57+92.42	52.09	13,828,263.52	3,102,652.55	48.85'	SET 5/8" IR W/TXDOT ALUMINUM CAP

0 100 200
SCALE: 1"=100' (22" x 34" SHEET)
SCALE: 1"=200' (11" x 17" SHEET)

UNIT OF MEASURE: U.S. SURVEY FEET

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City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

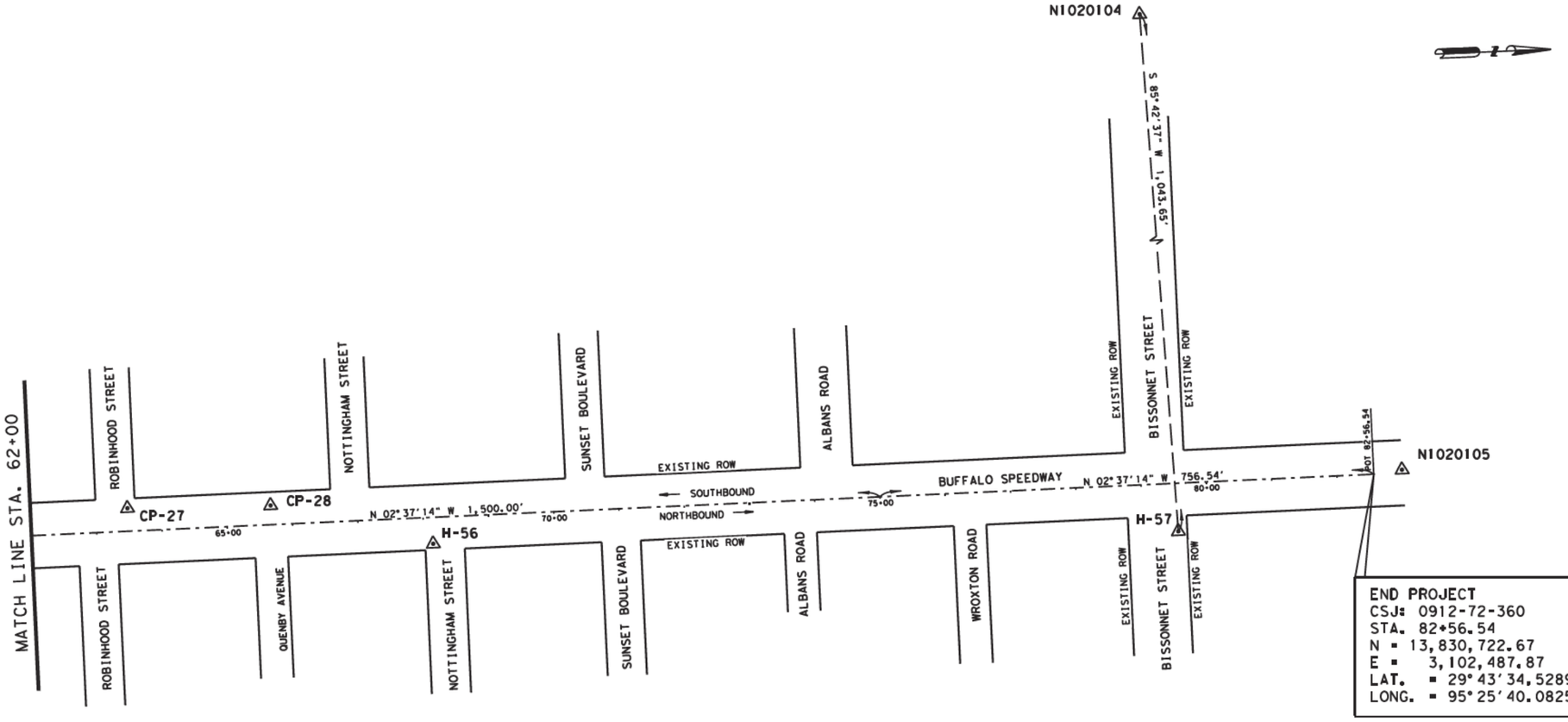
SURVEY CONTROL INDEX

SHEET 3 OF 4

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			232
STATE	DISTRICT	COUNTY	
TEXAS	12	HARRIS	
CONTROL	SECTION	JOB	HIGHWAY NO.
0912	72	360	CS

$FILE$



END PROJECT
CSJ: 0912-72-360
STA. 82+56.54
N = 13,830,722.67
E = 3,102,487.87
LAT. = 29°43'34.5289"
LONG. = 95°25'40.0825"

NOTES:

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STATE OF TEXAS
REGISTERED
PAUL P. KWAN
4313
PROFESSIONAL
LAND SURVEYOR

8/17/2020

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MONUMENT INVERSE

FROM POINT	TO POINT	BEARING	DISTANCE
H-55	CP-27	N 11°32'11" W	563.00'
CP-27	CP-28	N 01°06'24" W	219.09'
CP-28	H-56	N 13°15'02" E	255.74'
H-56	H-57	N 00°57'26" W	1,140.61'
H-57	N1020104	S 85°43'13" W	1,043.65'
H-57	N1020105	N 15°23'58" W	355.05'

CONTROL MONUMENTATION

POINT	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
CP-27	63+48.63	-35.16	13,828,815.15	3,102,539.98	48.89'	SET 3/8" IR W/LANDTECH YELLOW CAP
CP-28	65+67.64	-29.37	13,829,034.19	3,102,535.75	50.23'	SET 3/8" IR W/LANDTECH YELLOW CAP
H-56	68+13.62	40.57	13,829,283.12	3,102,594.37	49.25'	SET 5/8" IR W/TXDOT ALUMINUM CAP
H-57	79+53.75	73.68	13,830,423.57	3,102,575.31	48.86'	SET TXDOT ALUMINUM CAP IN CONCRETE ON BB-INLET
N1020104	79+23.53	-969.53	13,830,345.68	3,101,534.58	51.30'	SET 5/8" IR W/TXDOT ALUMINUM CAP
N1020105	N/A	N/A	13,830,765.87	3,102,481.03	51.10'	SET 5/8" IR W/TXDOT ALUMINUM CAP

0 100 200
SCALE: 1"=100' (22" x 34" SHEET)
SCALE: 1"=200' (11" x 17" SHEET)

UNIT OF MEASURE: U.S. SURVEY FEET

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BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

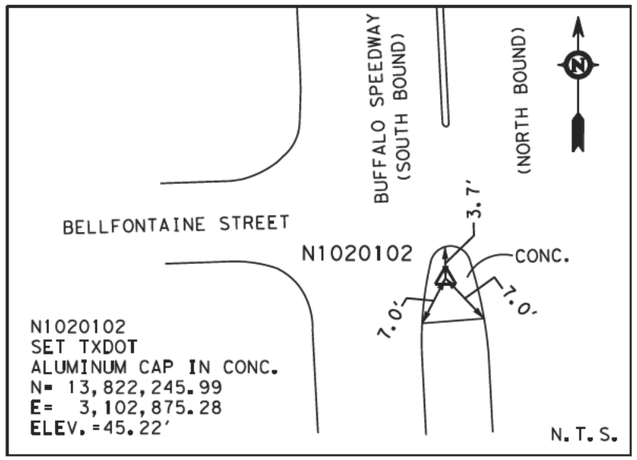
SURVEY CONTROL INDEX

SHEET 4 OF 4

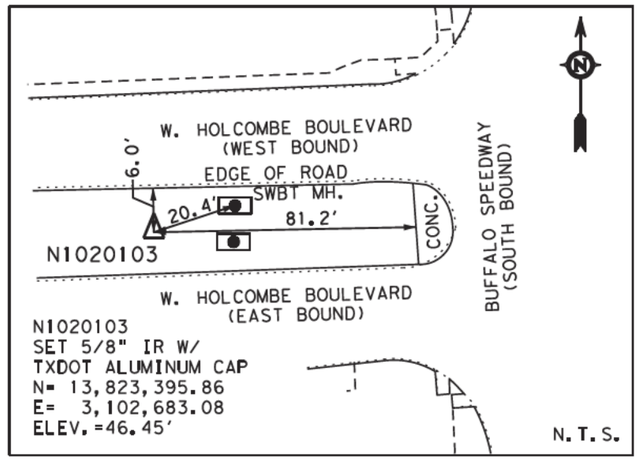
Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			233
STATE	DISTRICT	COUNTY	
TEXAS	12	HARRIS	
CONTROL	SECTION	JOB	HIGHWAY NO.
0912	72	360	CS

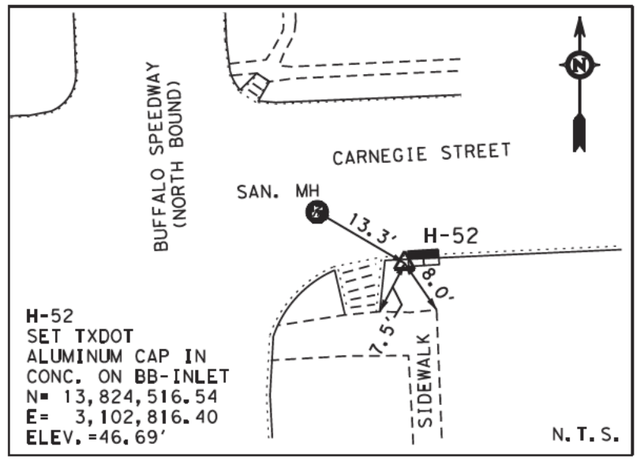
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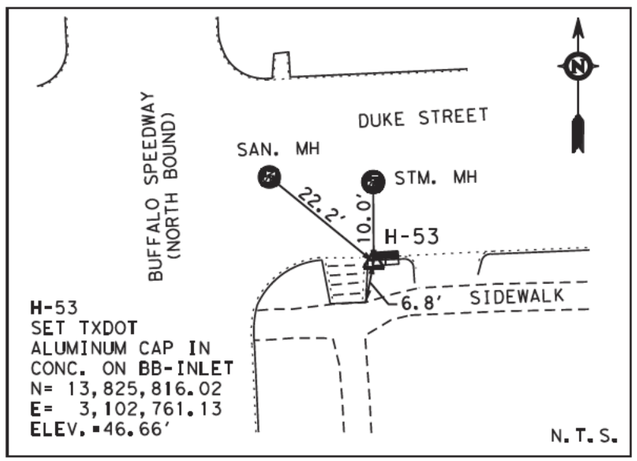
N1020102: LOCATED ON THE NOSE OF SOUTH MEDIAN ON BUFFALO SPEEDWAY AT THE INTERSECTION WITH BELLEFONTAINE STREET.



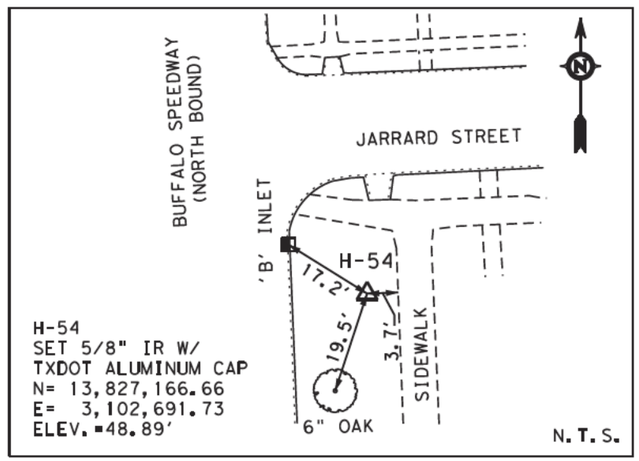
N1020103: LOCATED ON THE WEST MEDIAN ON W. HOLCOMBE BOULEVARD, APPROXIMATELY 140 FEET WEST FROM THE INTERSECTION WITH BUFFALO SPEEDWAY.



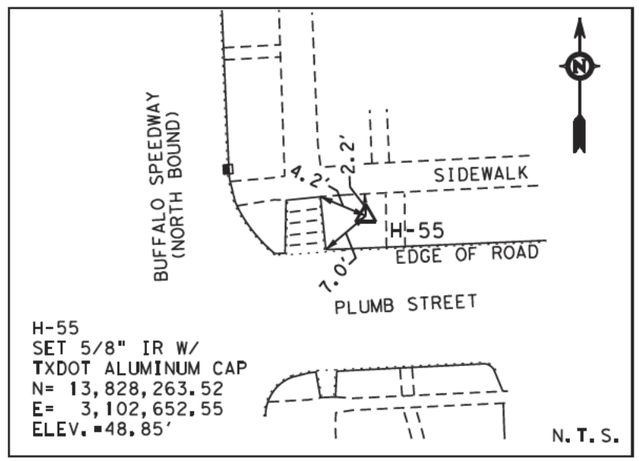
H-52: LOCATED ON BB-INLET AT THE SOUTHEAST CORNER OF THE INTERSECTION OF BUFFALO SPEEDWAY AND CARNEGIE STREET.



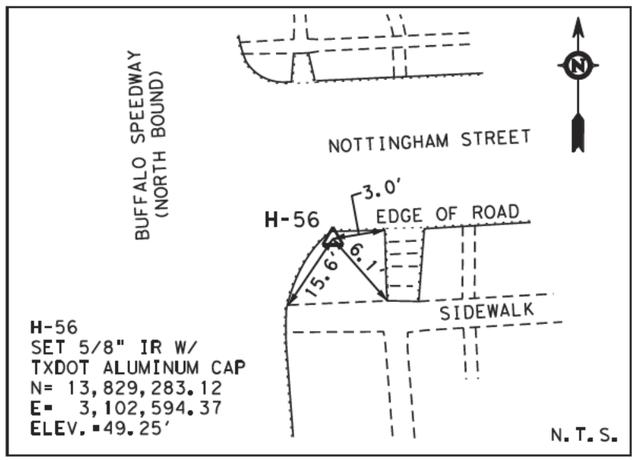
H-53: LOCATED ON BB-INLET AT THE SOUTHEAST CORNER OF THE INTERSECTION OF BUFFALO SPEEDWAY AND DUKE STREET.



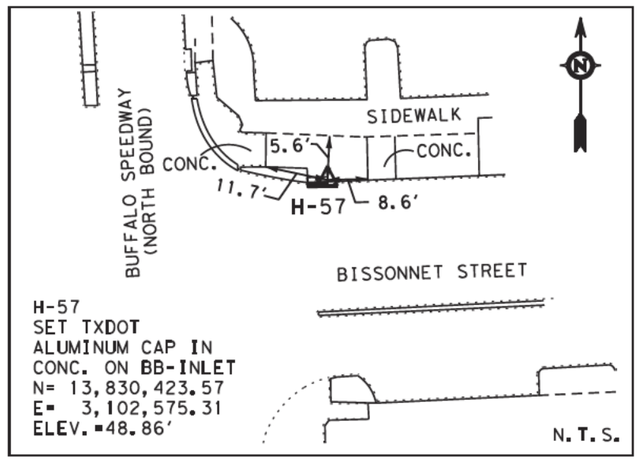
H-54: LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF BUFFALO SPEEDWAY AND JARRARD STREET.



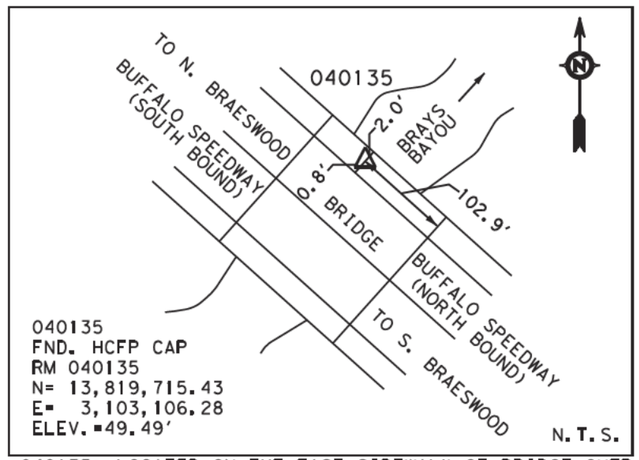
H-55: LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF BUFFALO SPEEDWAY AND PLUMB STREET.



H-56: LOCATED ON BB-INLET AT THE SOUTHEAST CORNER OF THE INTERSECTION OF BUFFALO SPEEDWAY AND NOTTINGHAM STREET.



H-57: LOCATED ON BB-INLET AT THE NORTHEAST CORNER OF THE INTERSECTION OF BUFFALO SPEEDWAY AND BISSONNET STREET.



040135: LOCATED ON THE EAST SIDEWALK OF BRIDGE OVER BRAYS BAYOU (DOWNSTREAM) ON BUFFALO SPEEDWAY.

NOTES:

1. ALL BEARINGS AND COORDINATES ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM OF 1983 (NAD83), 2011 ADJUSTMENT, EPOCH 2010.00. ALL DISTANCES AND COORDINATES SHOWN ARE SURFACE VALUES AND MAY BE CONVERTED TO GRID BY DIVIDING BY THE SURFACE ADJUSTMENT FACTOR OF 1.00013.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). HORIZONTAL CONTROL IS BASED ON TxDOT VRS GPS OBSERVATIONS, VERTICAL CONTROL IS BASED ON DIGITAL LEVELING.
3. MONUMENT NO.040135 (STAMPING D100 BM18) WAS HELD FOR HORIZONTAL AND VERTICAL CONTROL.
4. FIELD SURVEYS WERE PERFORMED BETWEEN OCTOBER, 2018 THROUGH OCTOBER, 2019.
5. UNIT OF MEASURE: U.S. SURVEY FEET.

THE CONTROL POINTS SHOWN HEREIN WERE DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION.

STATE OF TEXAS
REGISTERED
PAUL P. KWAN
4313
PROFESSIONAL
LAND SURVEYOR

8/17/2020

THIS SURVEY CONTROL INFORMATION HAS BEEN ACCEPTED AND INCORPORATED INTO THIS PS&E.

LANDTECH
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Houston, Texas 77008
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Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

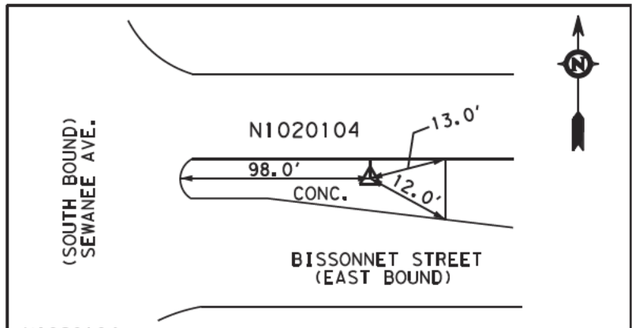
HORIZONTAL & VERTICAL CONTROL

SHEET 1 OF 2

Texas Department of Transportation

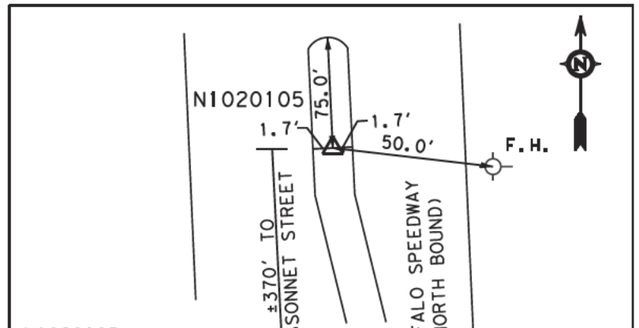
FED.RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			234
STATE	DISTRICT	COUNTY	
TEXAS	12	HARRIS	
CONTROL	SECTION	JOB	HIGHWAY NO.
0912	72	360	CS

$FILE$



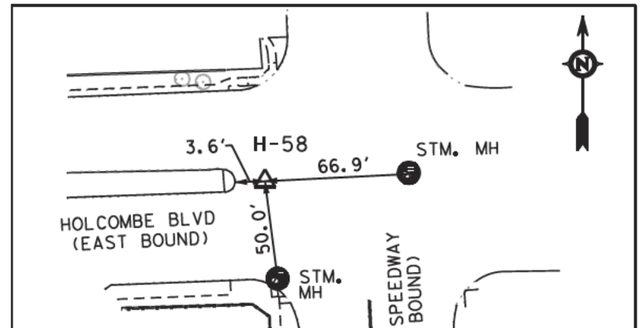
N1020104
SET 5/8" IR W/TXDOT
ALUMINUM CAP
N= 13,830,345.68
E= 3,101,534.58
ELEV. =51.30'
N.T.S.

N1020104: LOCATED ON BISSONNET STREET, APPROXIMATELY 970 FEET WEST FROM THE INTERSECTION WITH BUFFALO SPEEDWAY.



N1020105
SET 5/8" IR W/TXDOT
ALUMINUM CAP
N= 13,830,765.87
E= 3,102,481.03
ELEV. =51.10'
N.T.S.

N1020105: LOCATED ON BUFFALO SPEEDWAY, APPROXIMATELY 370 FEET NORTH FROM THE INTERSECTION WITH BISSONNET STREET.



H-58
SET "X" CUT IN CONC.
N= 13,823,396.48
E= 3,102,774.13
ELEV. =45.78'
N.T.S.

H-58: LOCATED AT THE INTERSECTION OF W. HOLCOMBE BOULEVARD AND BUFFALO SPEEDWAY, APPROXIMATELY 3 FEET EAST FROM THE NOSE OF WEST MEDIAN.

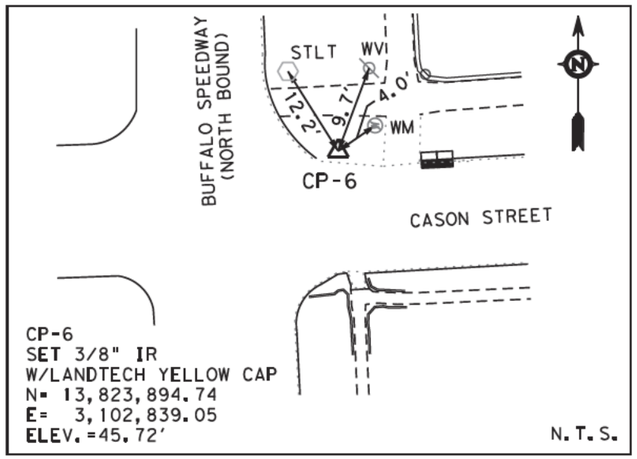
NOTES:

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5. UNIT OF MEASURE: U.S. SURVEY FEET.

THE CONTROL POINTS SHOWN HEREIN WERE DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION.

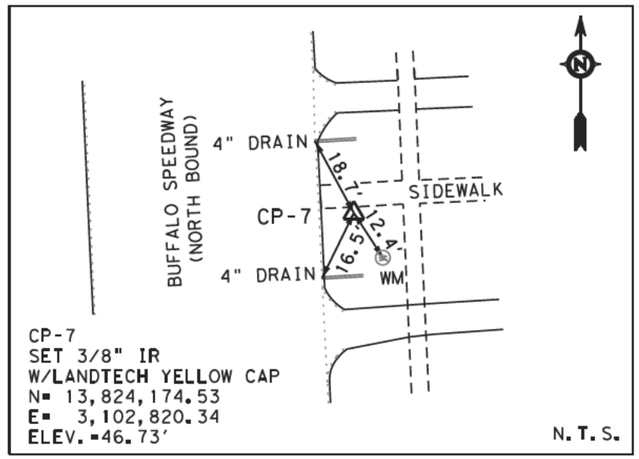
STATE OF TEXAS
REGISTERED
PAUL P. KWAN
4313
PROFESSIONAL
LAND SURVEYOR

8/17/2020



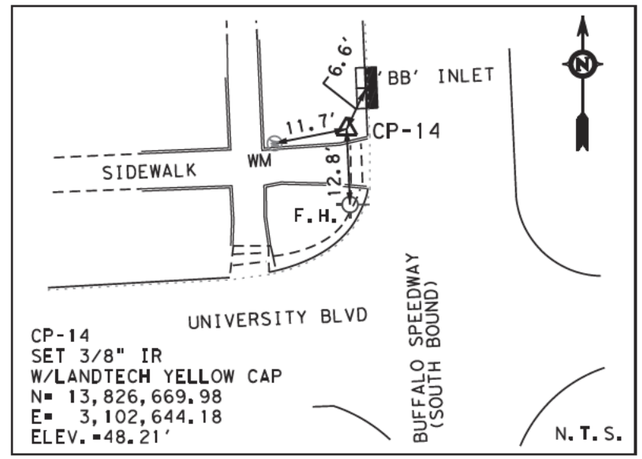
CP-6
SET 3/8" IR
W/LANDTECH YELLOW CAP
N= 13,823,894.74
E= 3,102,839.05
ELEV. =45.72'
N.T.S.

CP-6: LOCATED AT THE NORTHEAST CORNER OF BUFFALO SPEEDWAY AND CASON STREET.



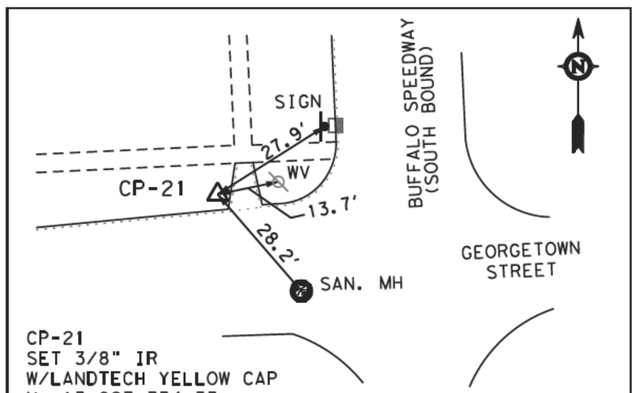
CP-7
SET 3/8" IR
W/LANDTECH YELLOW CAP
N= 13,824,174.53
E= 3,102,820.34
ELEV. =46.73'
N.T.S.

CP-7: LOCATED ON EAST SIDE OF BUFFALO SPEEDWAY, APPROXIMATELY 290 FEET NORTH FROM THE INTERSECTION WITH CASON STREET.



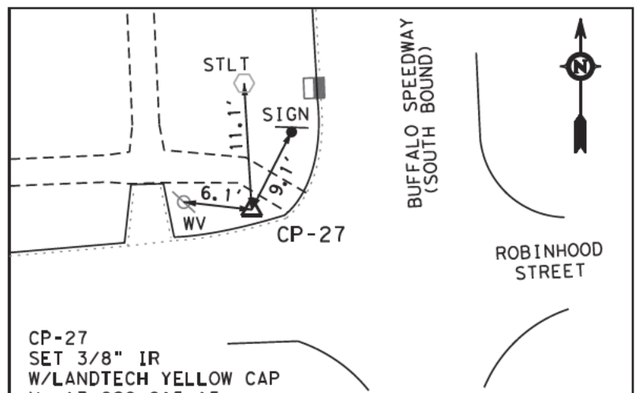
CP-14
SET 3/8" IR
W/LANDTECH YELLOW CAP
N= 13,826,669.98
E= 3,102,644.18
ELEV. =48.21'
N.T.S.

CP-14: LOCATED AT THE NORTHWEST CORNER OF BUFFALO SPEEDWAY AND UNIVERSITY BOULEVARD.



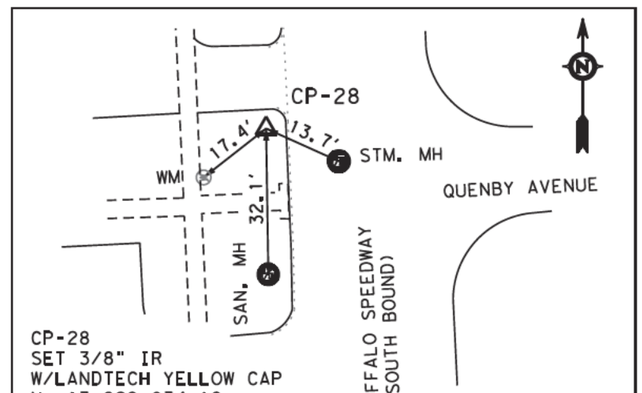
CP-21
SET 3/8" IR
W/LANDTECH YELLOW CAP
N= 13,827,734.33
E= 3,102,573.09
ELEV. =48.98'
N.T.S.

CP-21: LOCATED AT THE NORTHWEST CORNER OF BUFFALO SPEEDWAY AND GEORGETOWN STREET.



CP-27
SET 3/8" IR
W/LANDTECH YELLOW CAP
N= 13,828,815.15
E= 3,102,539.98
ELEV. =48.89'
N.T.S.

CP-27: LOCATED AT THE NORTHWEST CORNER OF BUFFALO SPEEDWAY AND ROBINHOOD STREET.



CP-28
SET 3/8" IR
W/LANDTECH YELLOW CAP
N= 13,829,034.19
E= 3,102,535.75
ELEV. =50.23'
N.T.S.

CP-28: LOCATED ON WEST SIDE OF BUFFALO SPEEDWAY, APPROXIMATELY 230 FEET NORTH FROM THE INTERSECTION WITH ROBINHOOD STREET.

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City of West University Place

BUFFALO SPEEDWAY
RECONSTRUCTION
(HOLCOMBE BLVD. TO BISSONNET)

HORIZONTAL & VERTICAL CONTROL

SHEET 2 OF 2

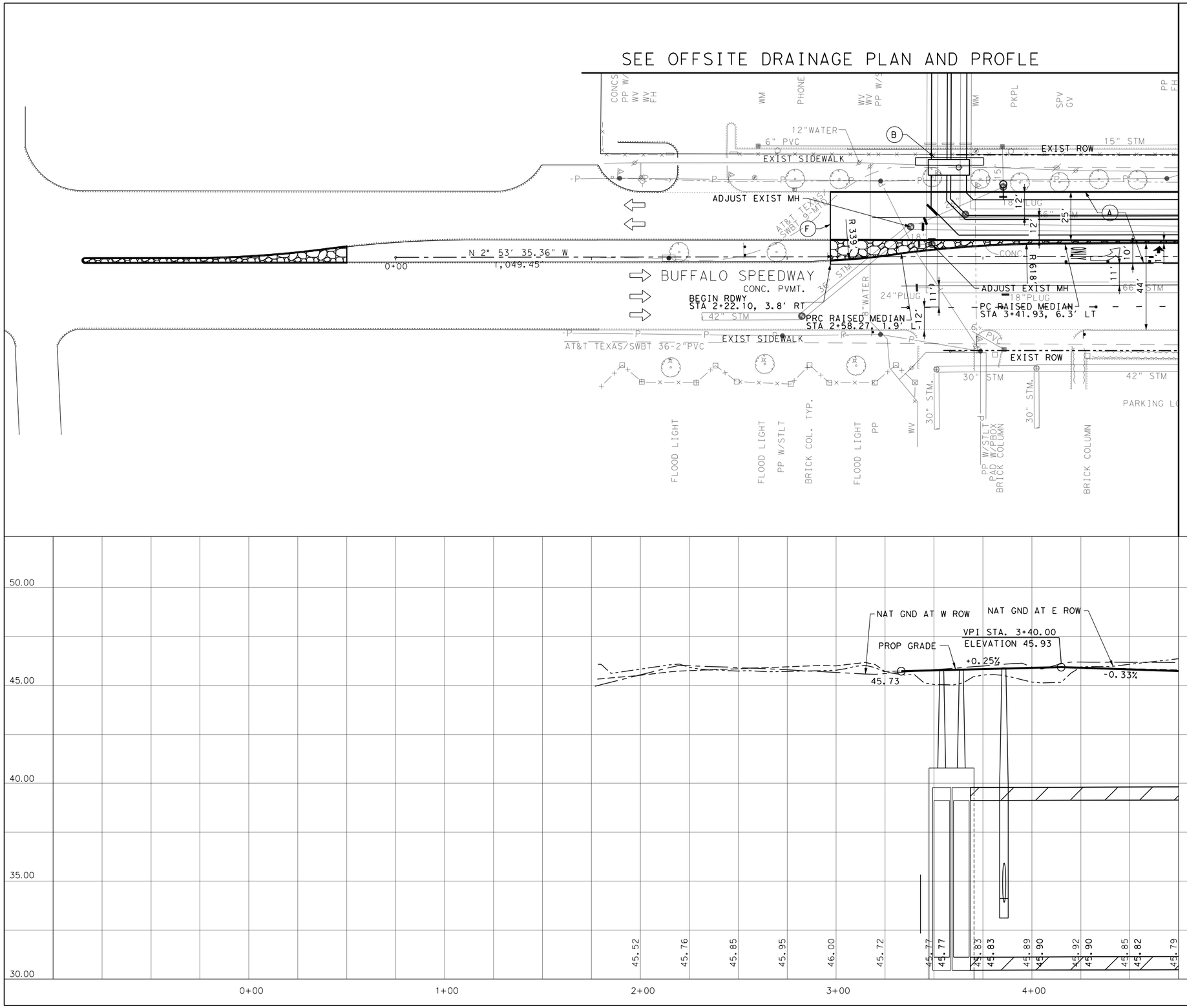
Texas Department of Transportation

FED.RD. DIV. NO.	PROJECT NO.	SHEET NO.
6		235

STATE	DISTRICT	COUNTY
TEXAS	12	HARRIS

CONTROL	SECTION	JOB	HIGHWAY NO.
0912	72	360	CS

$FILE$



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

GENERAL NOTES

1. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.
2. FOR DRIVEWAY STATION AND OFFSET DATA SEE DRIVEWAY DETAIL SHEETS.
3. ALL STATIONS ARE FOR ℄ BUFFALO SPEEDWAY UNLESS NOTED OTHERWISE.
4. SEE CROSSWALK PAVING LAYOUT PLANS FOR ADDITIONAL DETAILS.
5. ANY NECESSARY ADJUSTMENTS AND REPAIRS TO EXISITNG IRRIGATION LINES WILL BE PAID FOR UNDER ITEM 170-6002 IRRIGATION SYSTEM (TY I).
6. CONTRACTOR TO VERIFY DEPTH OF COVER TO EXISTING STORM SEWER TO REMAIN AND HAND MIX SUBGRADE IF NECESSARY.
7. SEE TREE PROTECTION PLANS FOR ADDITIONAL DETAILS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
8. SEE INTERSECTION LAYOUT FOR ADDITIONAL INTERSECTION GRADING INFORMATION.
9. SEE DRAINAGE PLAN & PROFILE SHEETS FOR LOCATION OF EXISTING DRAINAGE STRUCTURES.
10. SEE UTILITY COORDINATION PLANS FOR LOCATIONS OF EXISTING UTILITIES.

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

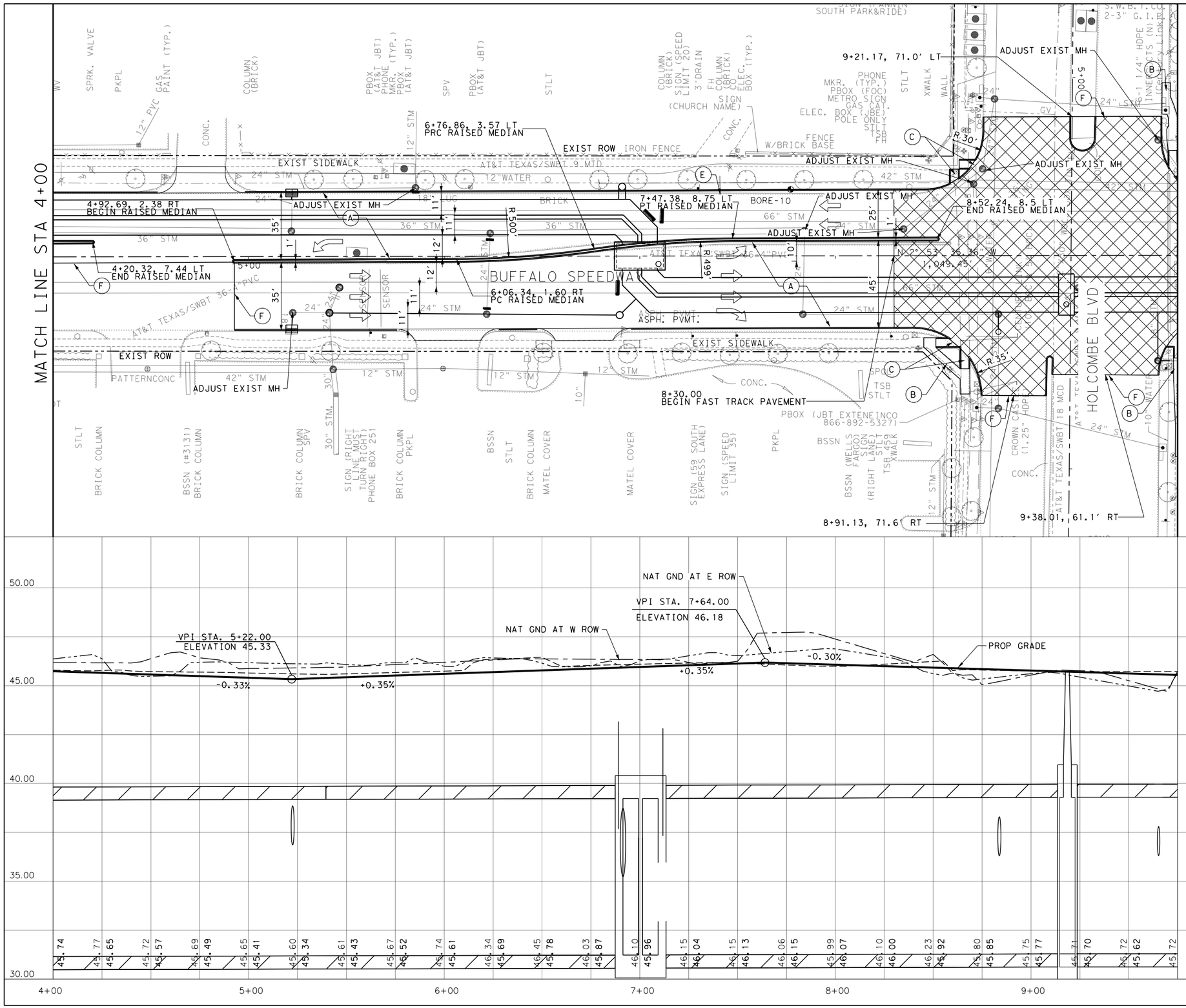
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 0+00 TO STA 4+00

SHEET 1 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		236
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



GENERAL NOTES

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City of West University Place

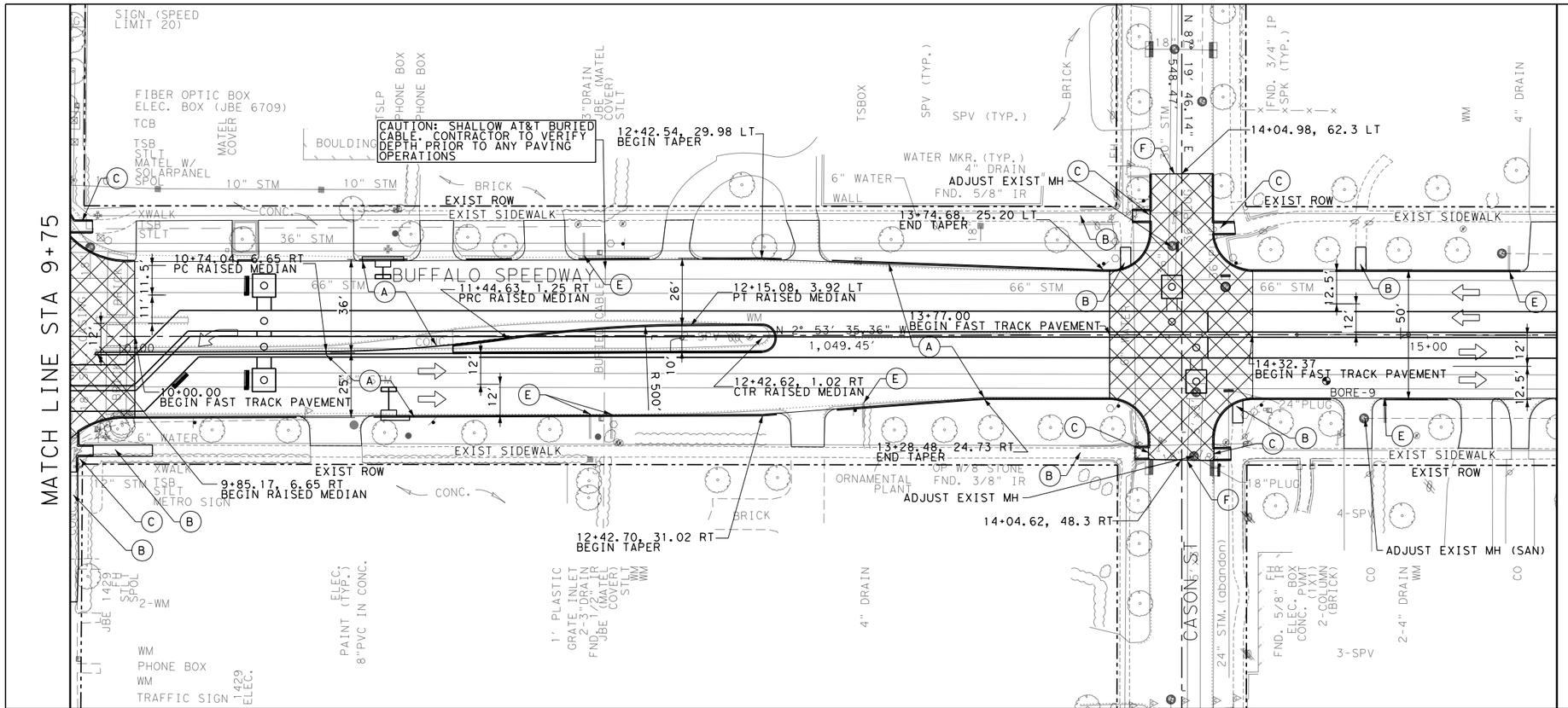
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 4+00 TO STA 9+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		237
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

GENERAL NOTES

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STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

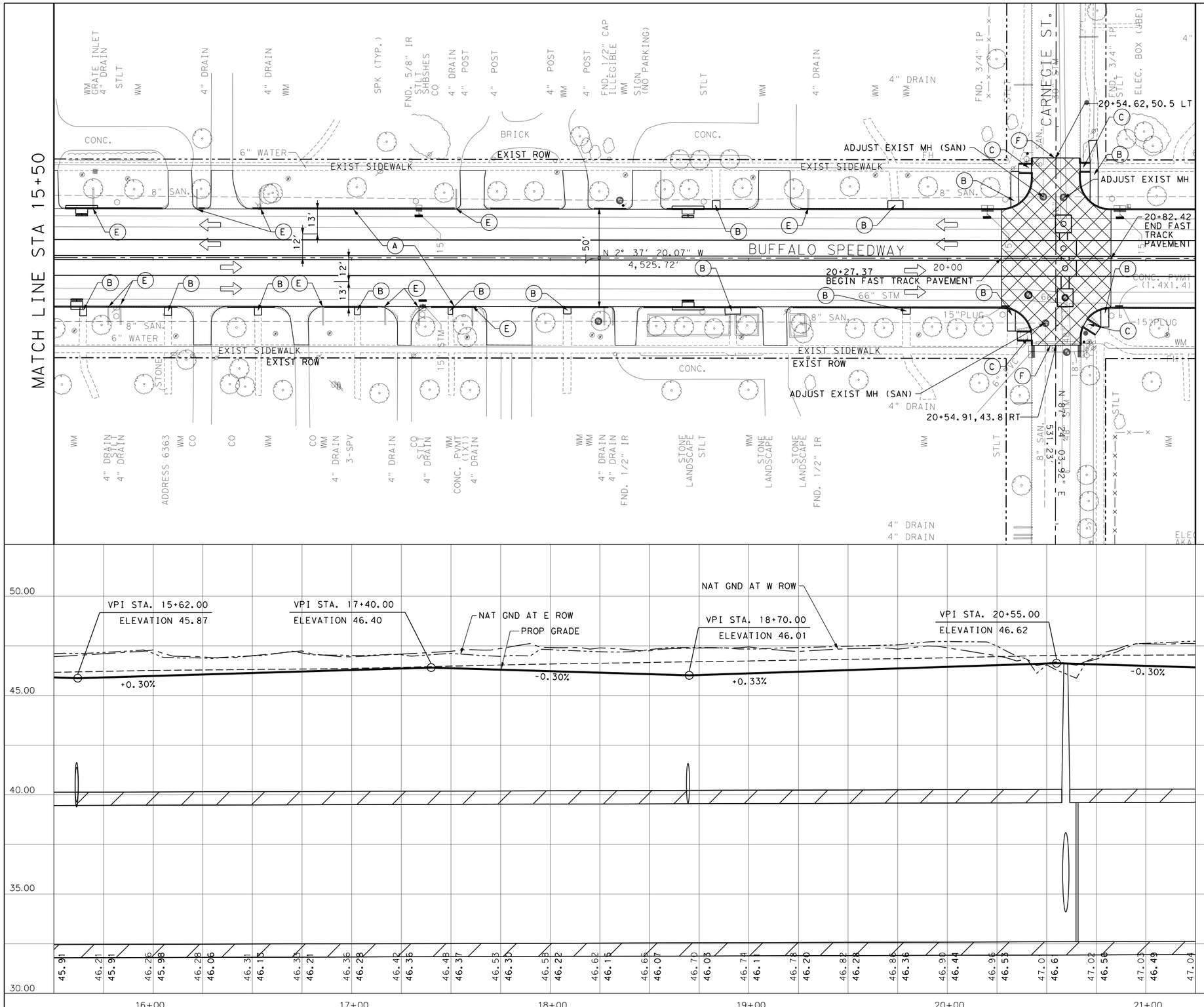
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 9+75 TO STA 15+50

SHEET 3 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		238
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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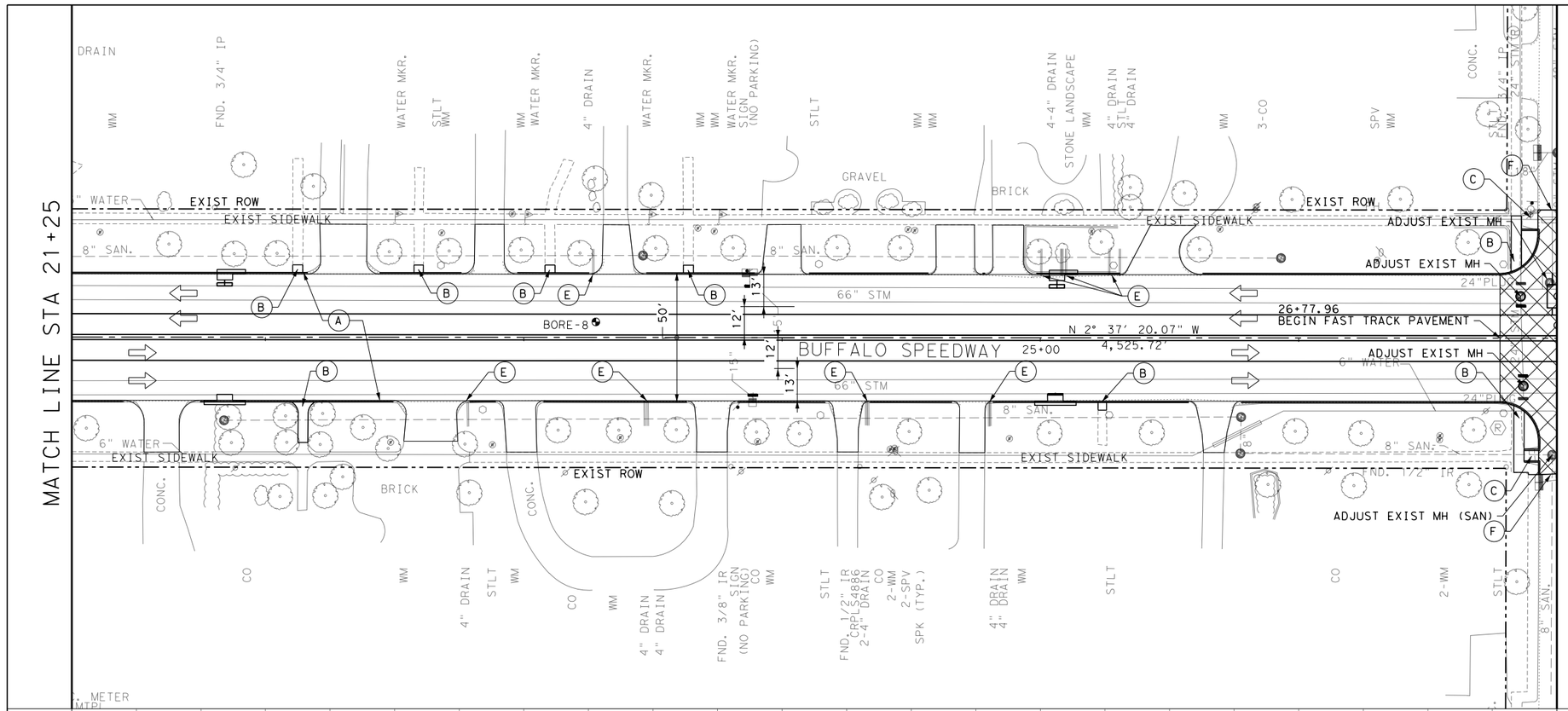
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

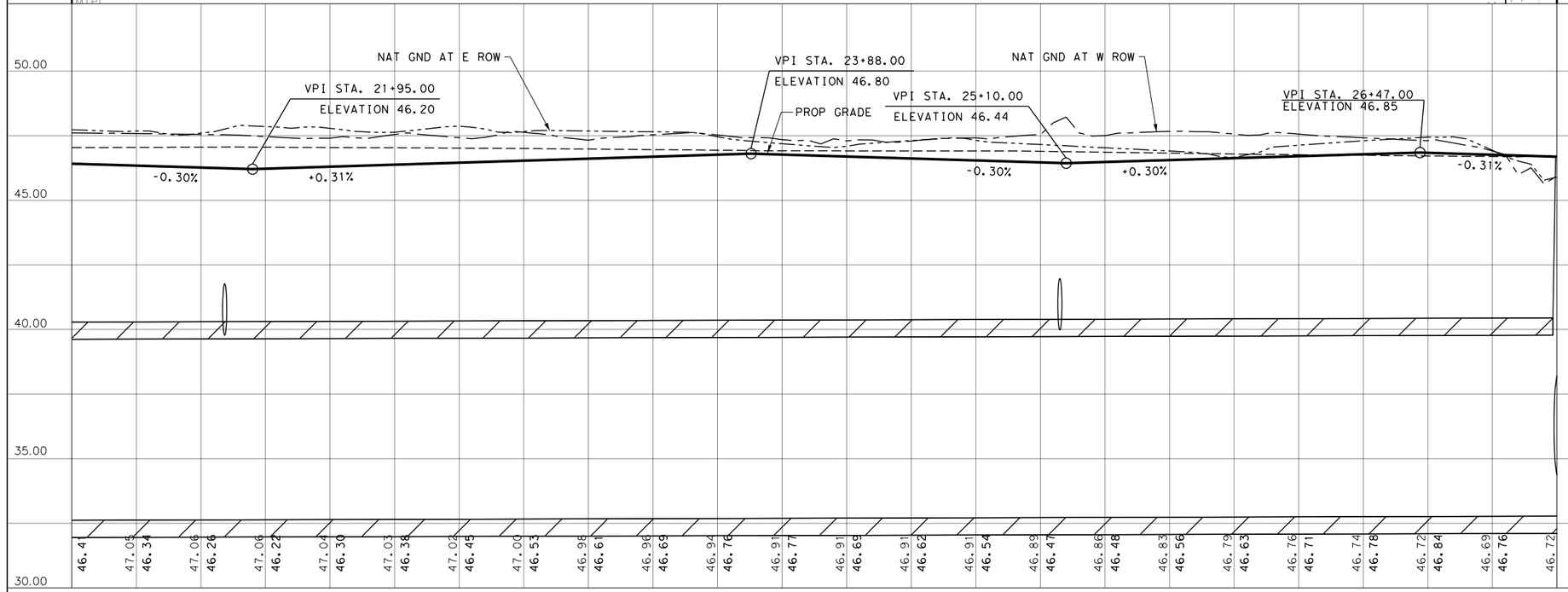
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 15+50 TO STA 21+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		239
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





0 50' 100'

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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City of West University Place

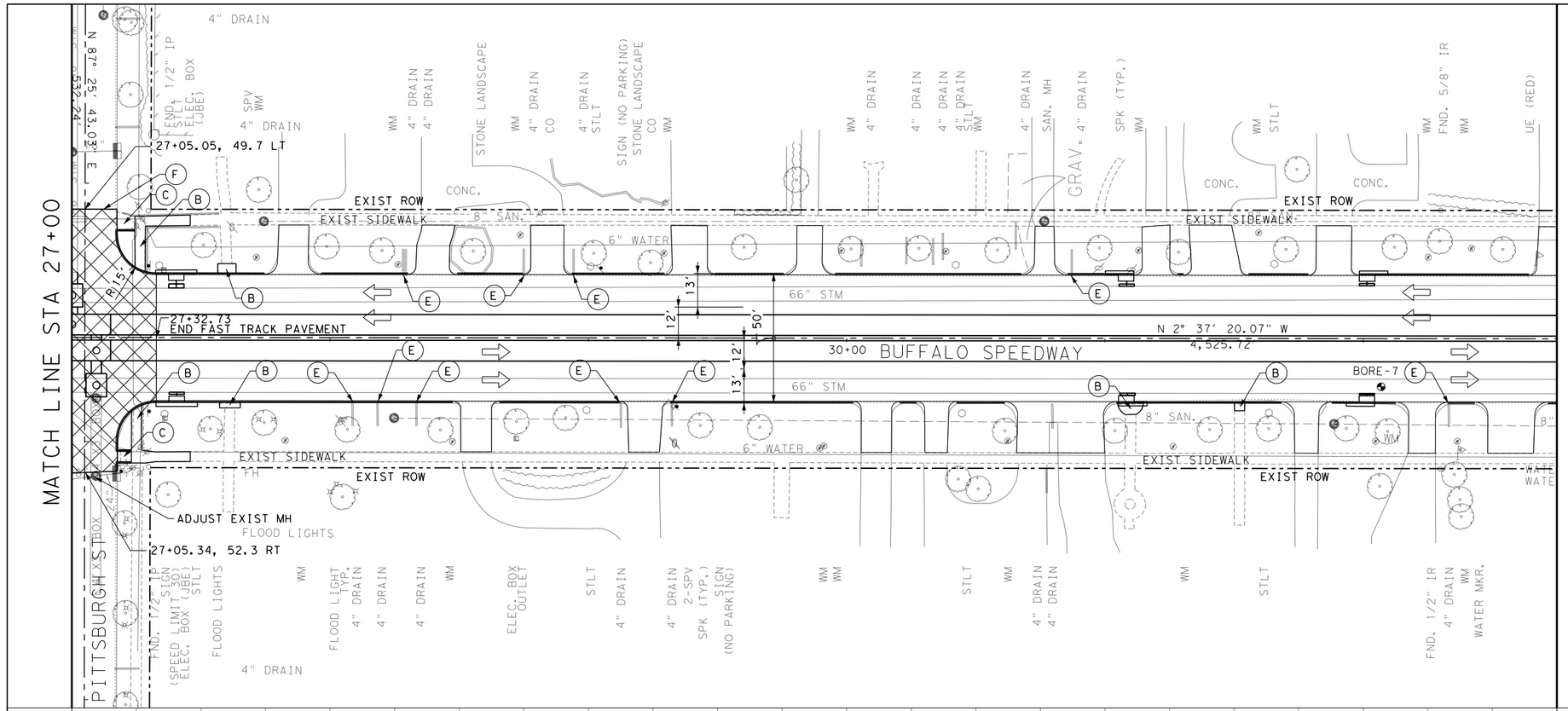
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

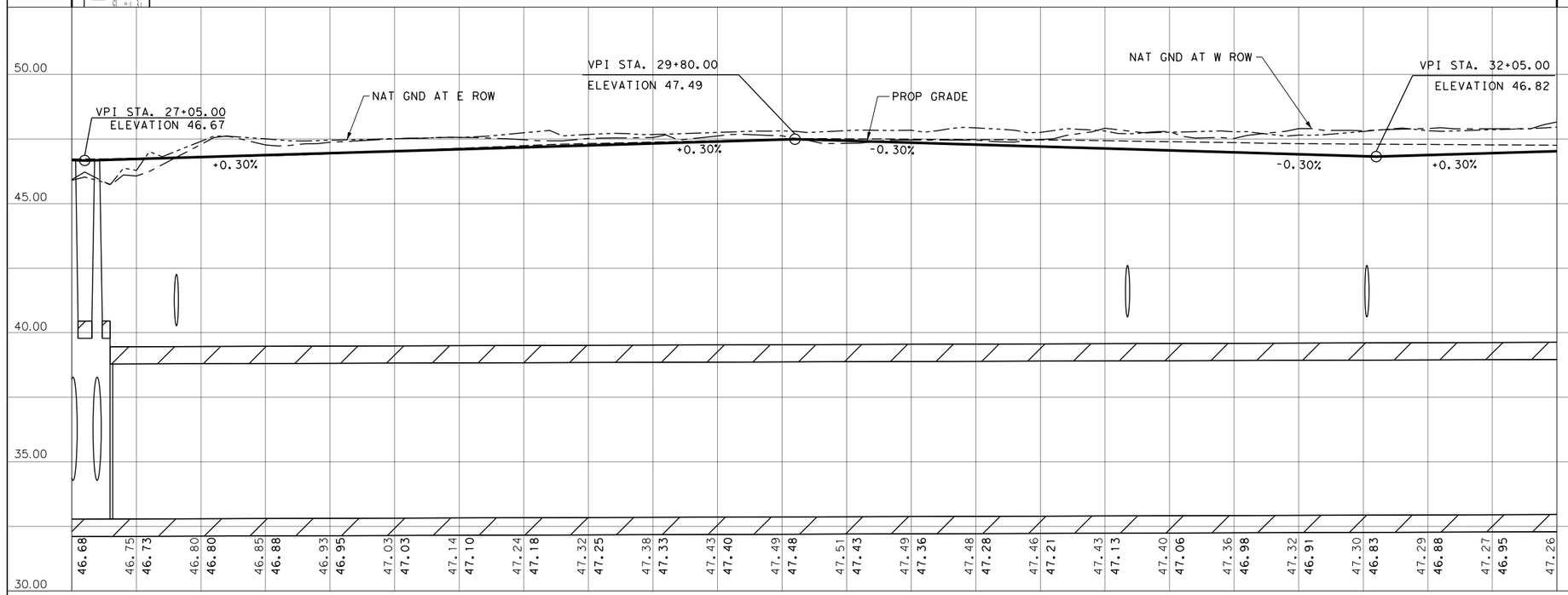
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 21+25 TO STA 27+00

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		240
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





0 50' 100'

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

GENERAL NOTES

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BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 27+00 TO STA 32+75

SHEET 6 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		241
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

MATCH LINE STA 32+75

MATCH LINE STA 38+50

33+49.24, 61.4 LT
ADJUST EXIST MH

ADJUST EXIST MH (SAN)

EXIST ROW

EXIST SIDEWALK

BRICK

CONC.

33+82.28
END FAST TRACK PAVEMENT

N 2° 37' 20.07" W
4,525.72'

33+28.16
BEGIN FAST TRACK PAVEMENT

35+00

BUFFALO SPEEDWAY

66" STM

8" SAN.

6" WATER

38+49.0, 25.5'LT & RT
END TRANS

36+99.0, 25'LT & RT
BEGIN TRANS

ADJUST EXIST MH (SAN)

ADJUST EXIST MH

33+49.67, 81.1 RT

DUKE ST

4" DRAIN

ELEC. BOX

4-4" DRAIN

4-2" DRAIN

METAL COVER 2-WM

YDLT (ELEC.)

FND. 5/8" IR

STLT 3-WM

FLOOD LIGHT

SPK (TYP.)

SIGN

FND. 1/2" IP

0 50' 100'

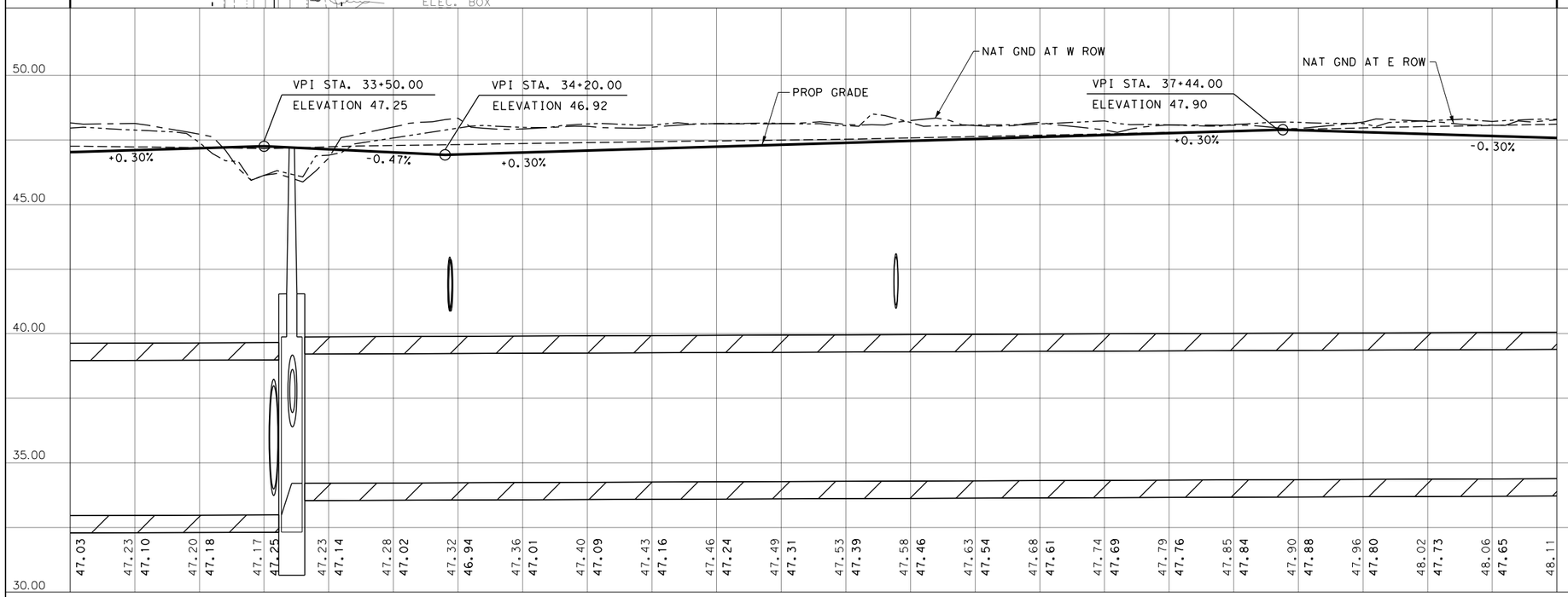
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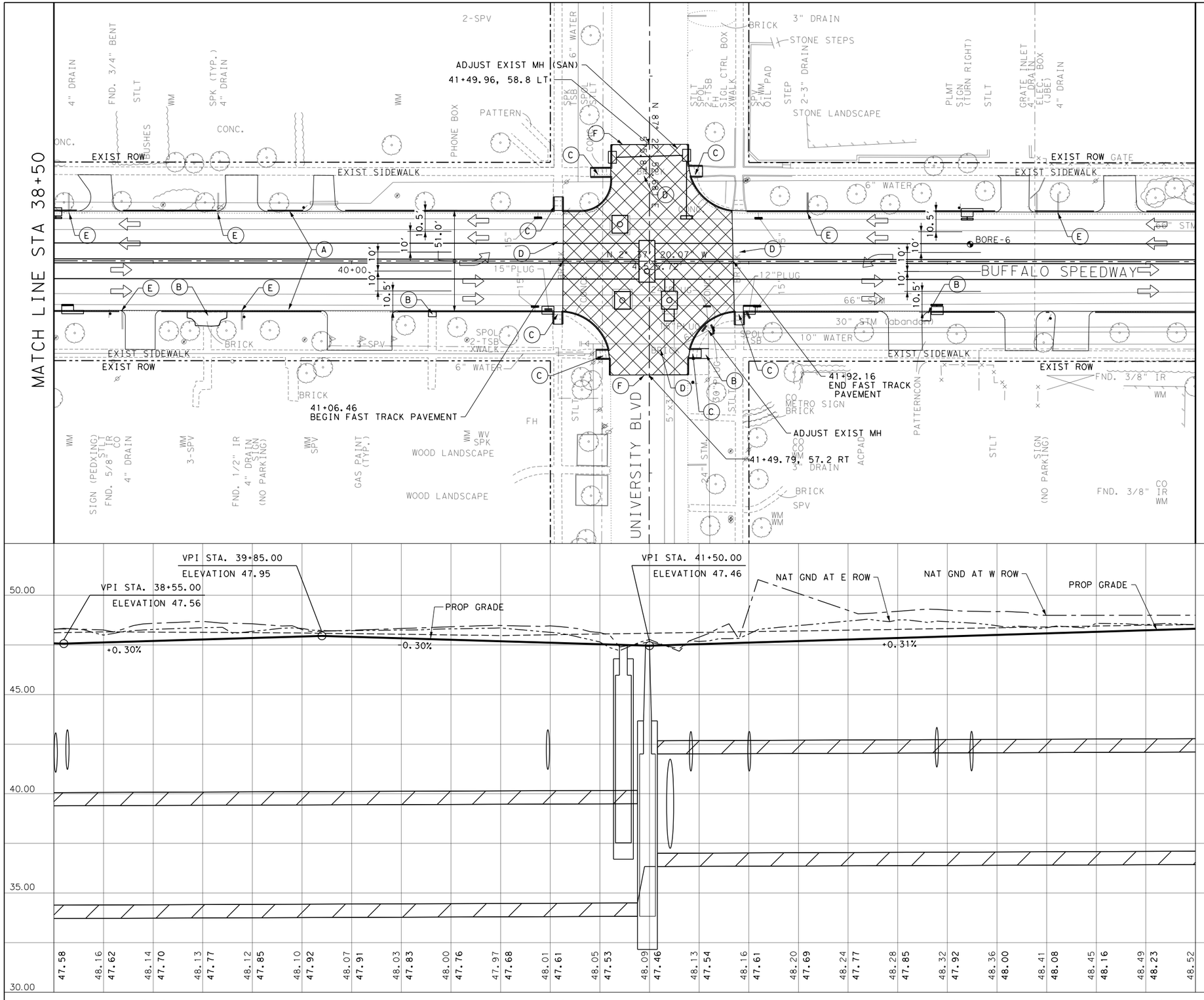
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 32+75 TO STA 38+50

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		242
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
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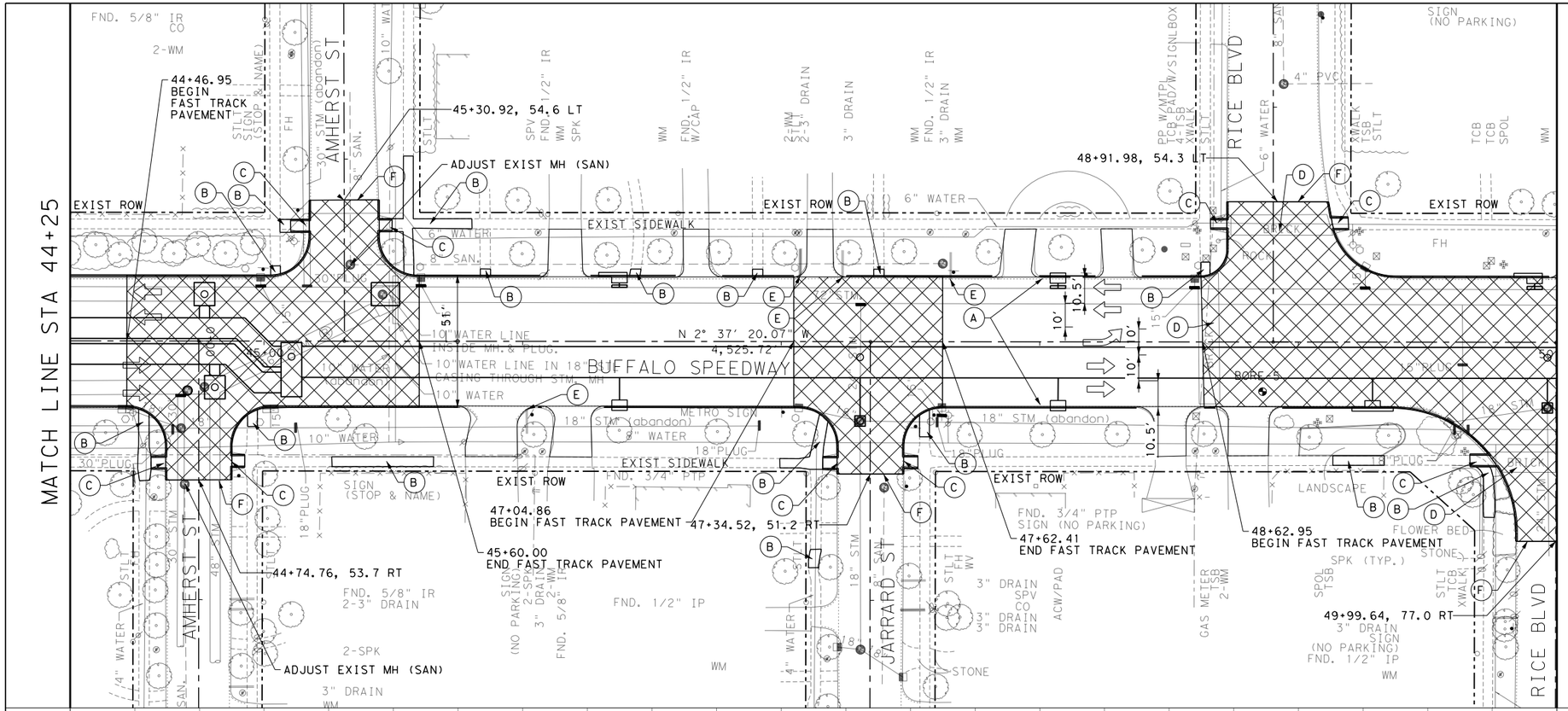
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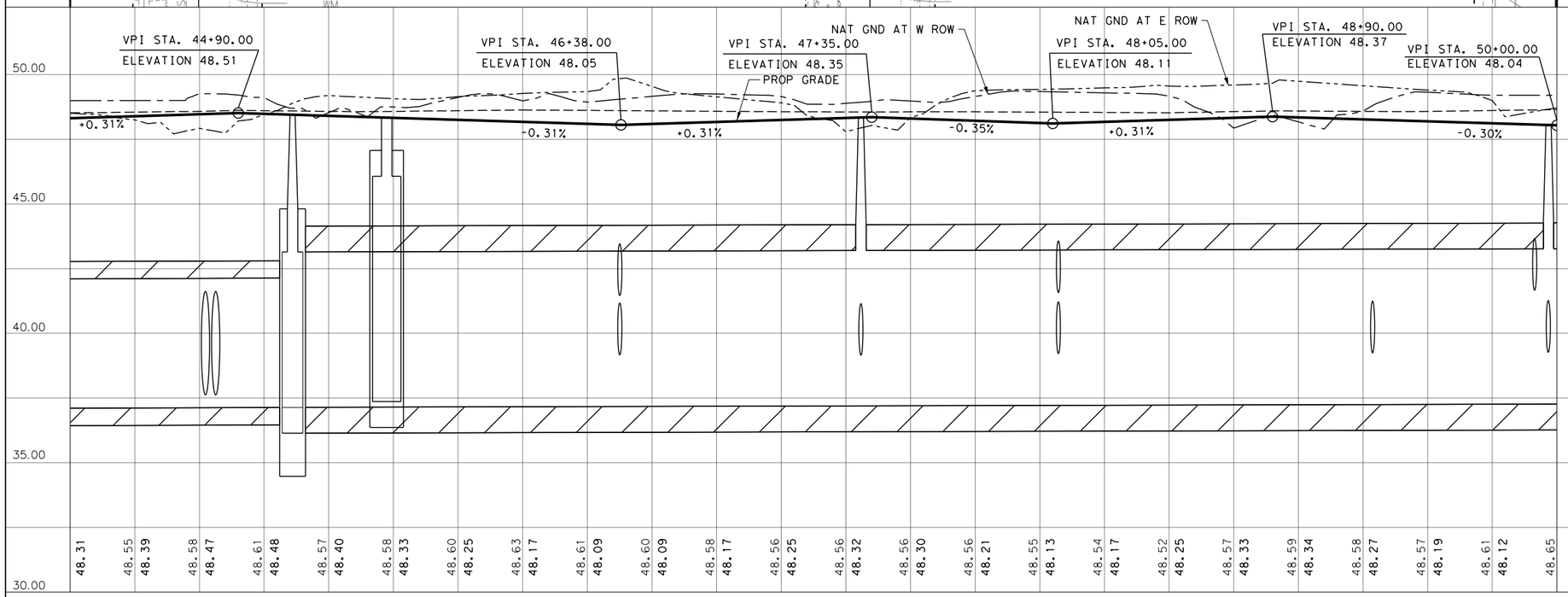
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 38+50 TO STA 44+25

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		243
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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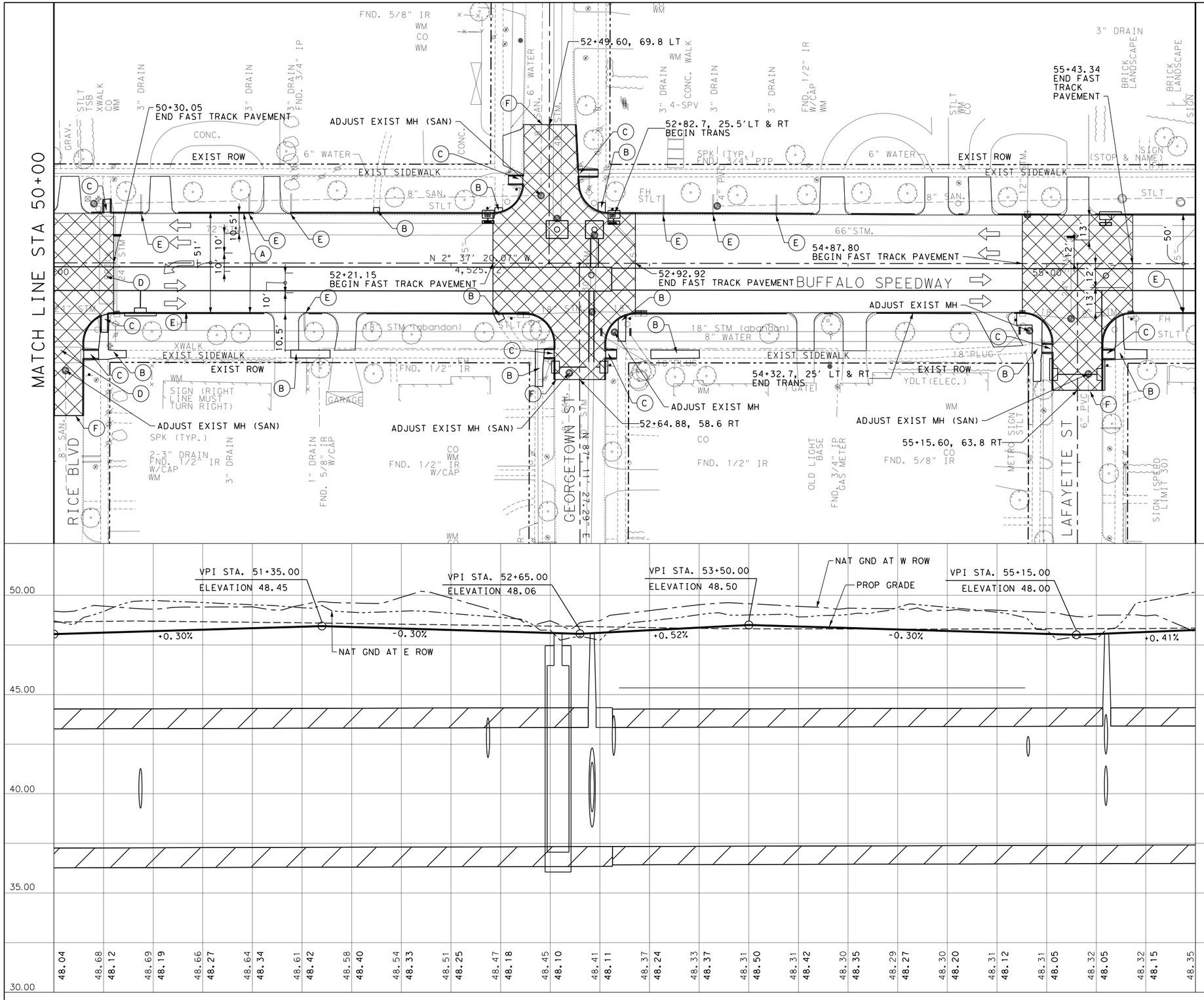
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 44+25 TO STA 50+00

SHEET 9 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		244
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
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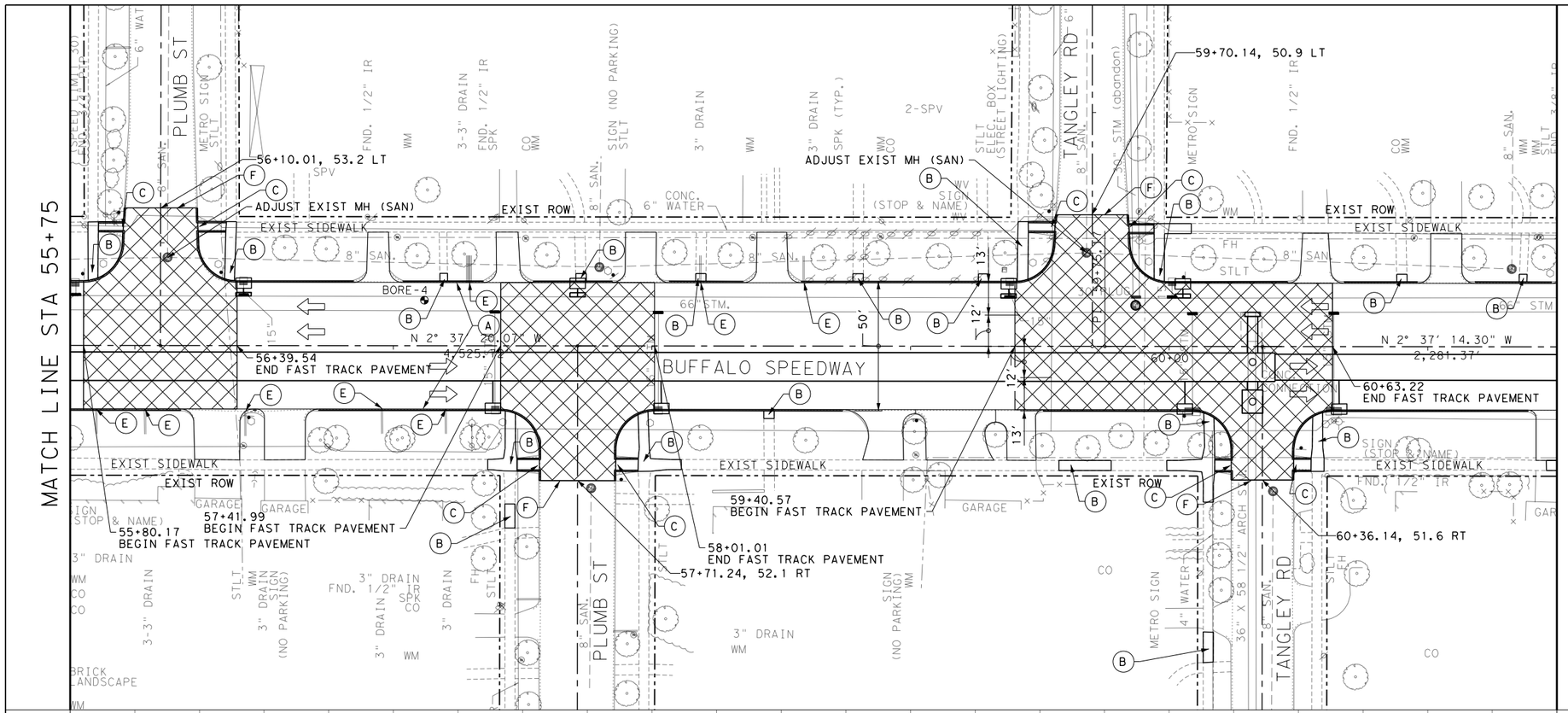
ROADWAY PLAN AND PROFILE

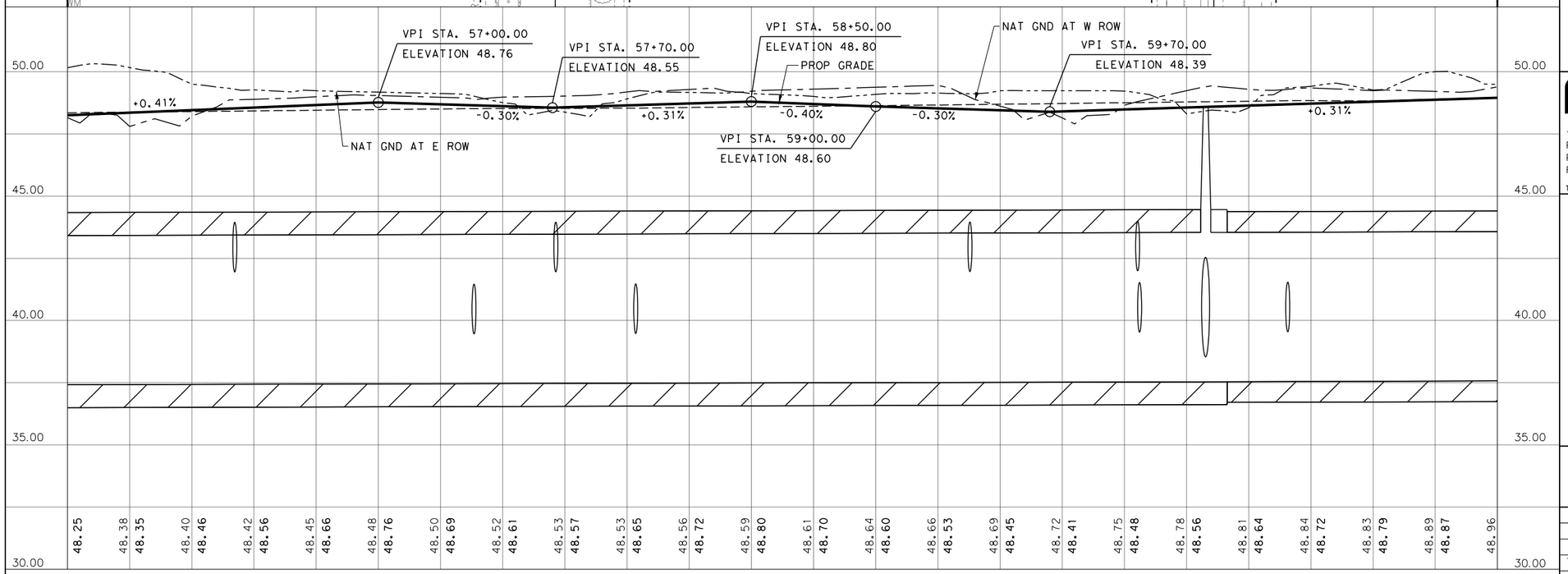
BUFFALO SPEEDWAY
STA 50+00 TO STA 55+75

SHEET 10 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		245
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





0 50' 100'

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
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- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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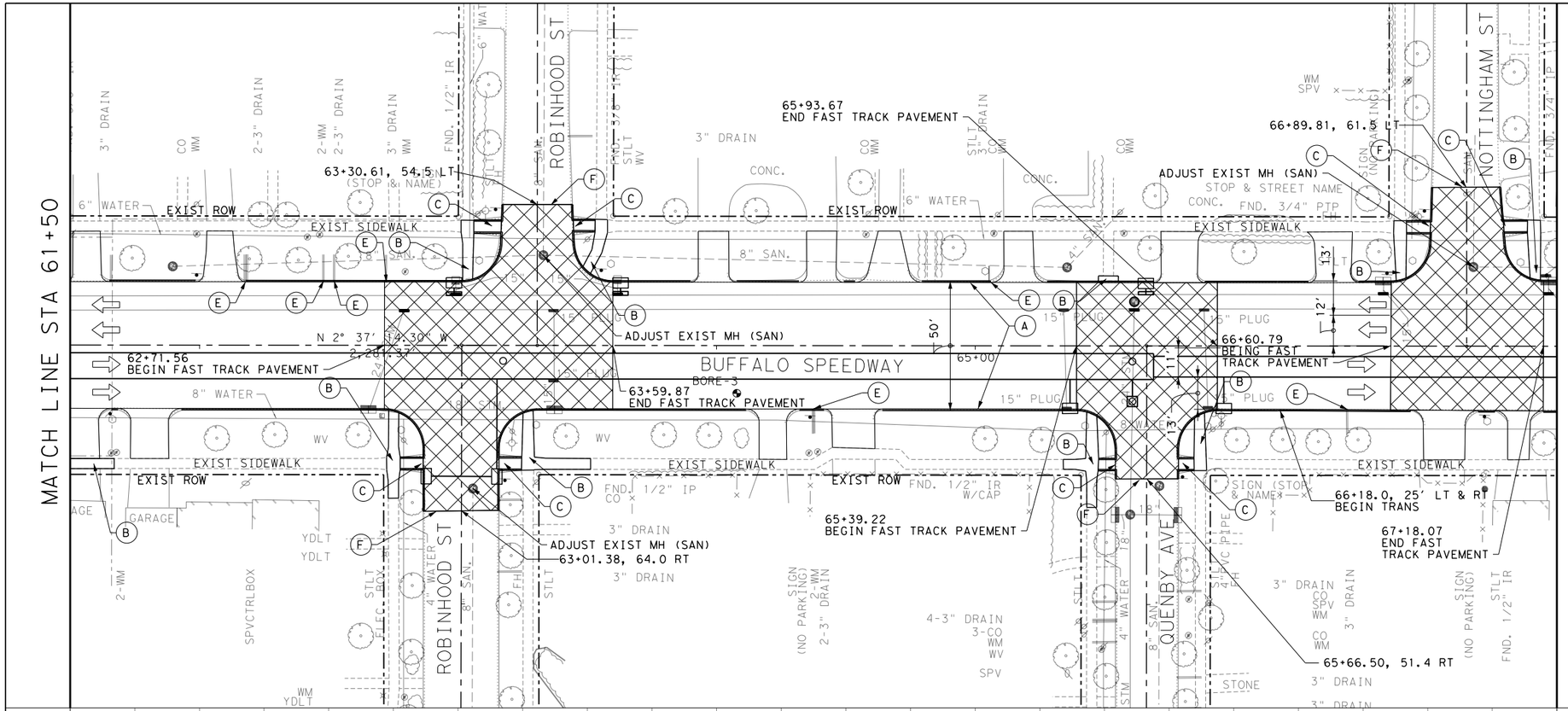
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 55+75 TO STA 61+50

SHEET 11 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		246
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
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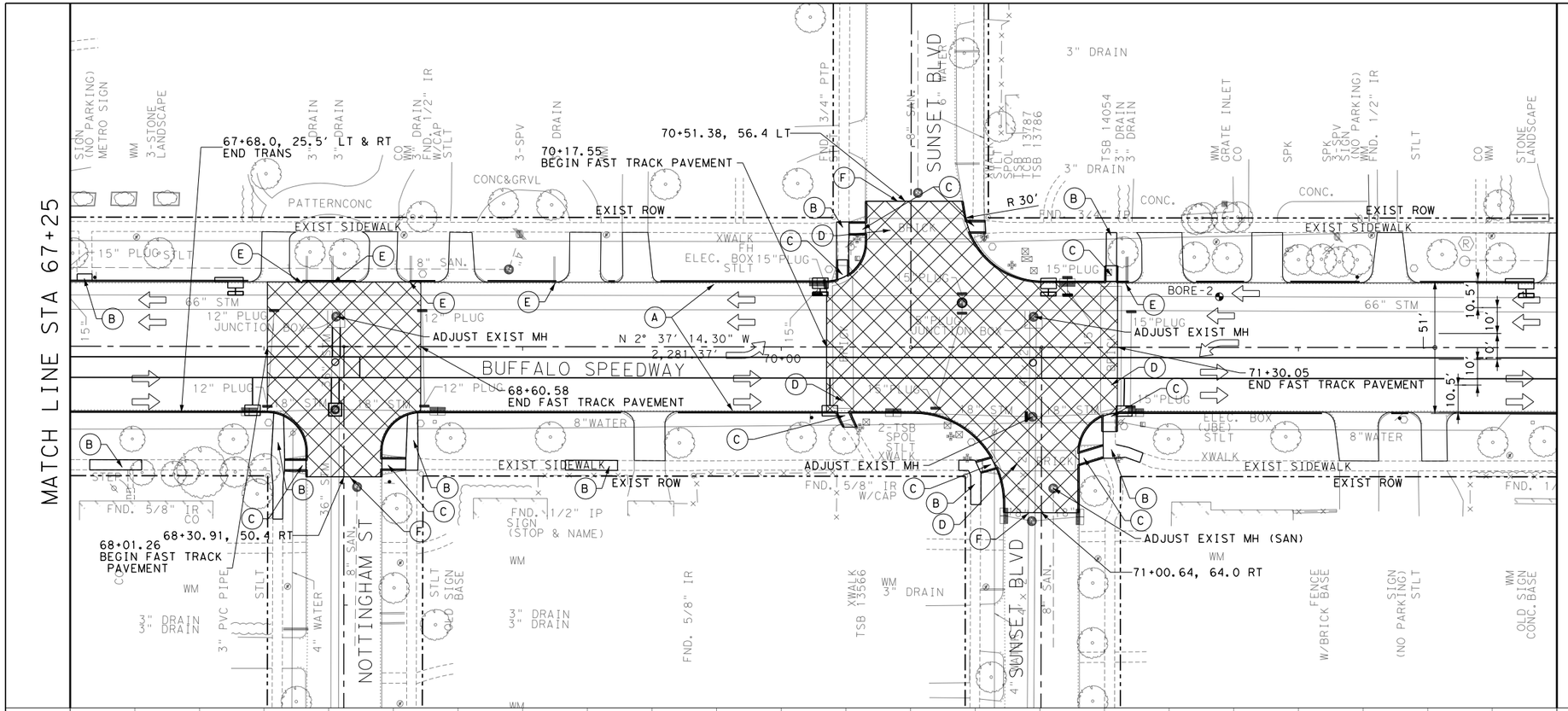
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 61+50 TO STA 67+25

SHEET 12 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		247
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND

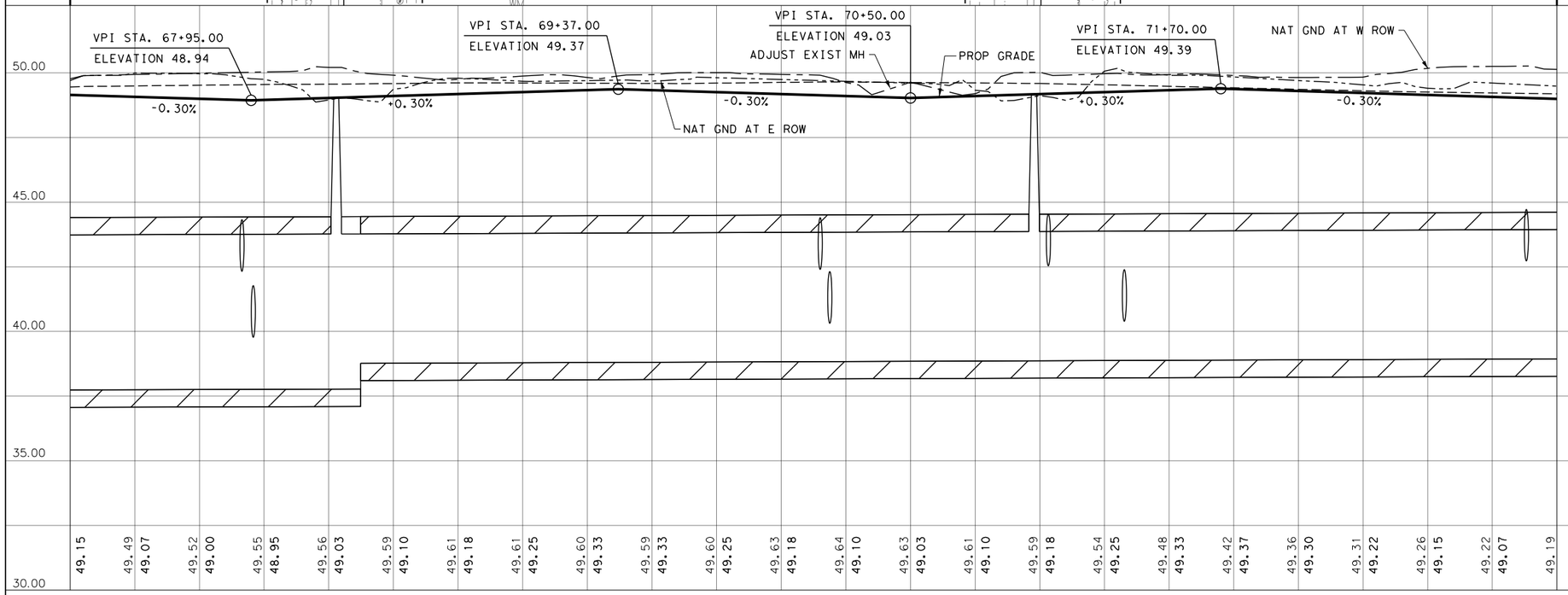
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PROP FAST TRACK PAVEMENT

PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS
8/25/2020

FREESE AND NICHOLS
11200 Broadway Street, Suite 2320
Pearland, Texas 77584
Phone – (832) 456-4700
Fax – (832) 456-4701
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

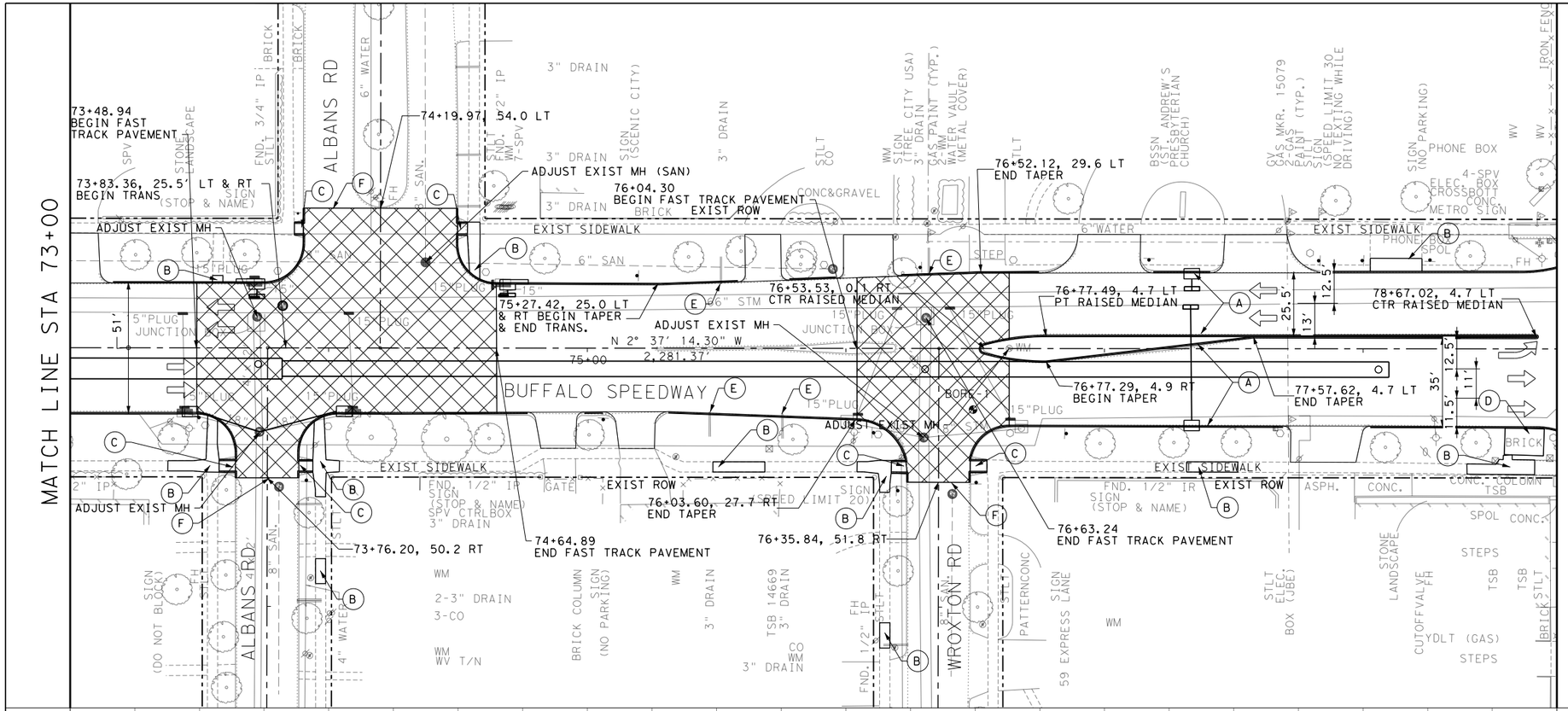
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 67+25 TO STA 73+00

SHEET 13 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		248
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

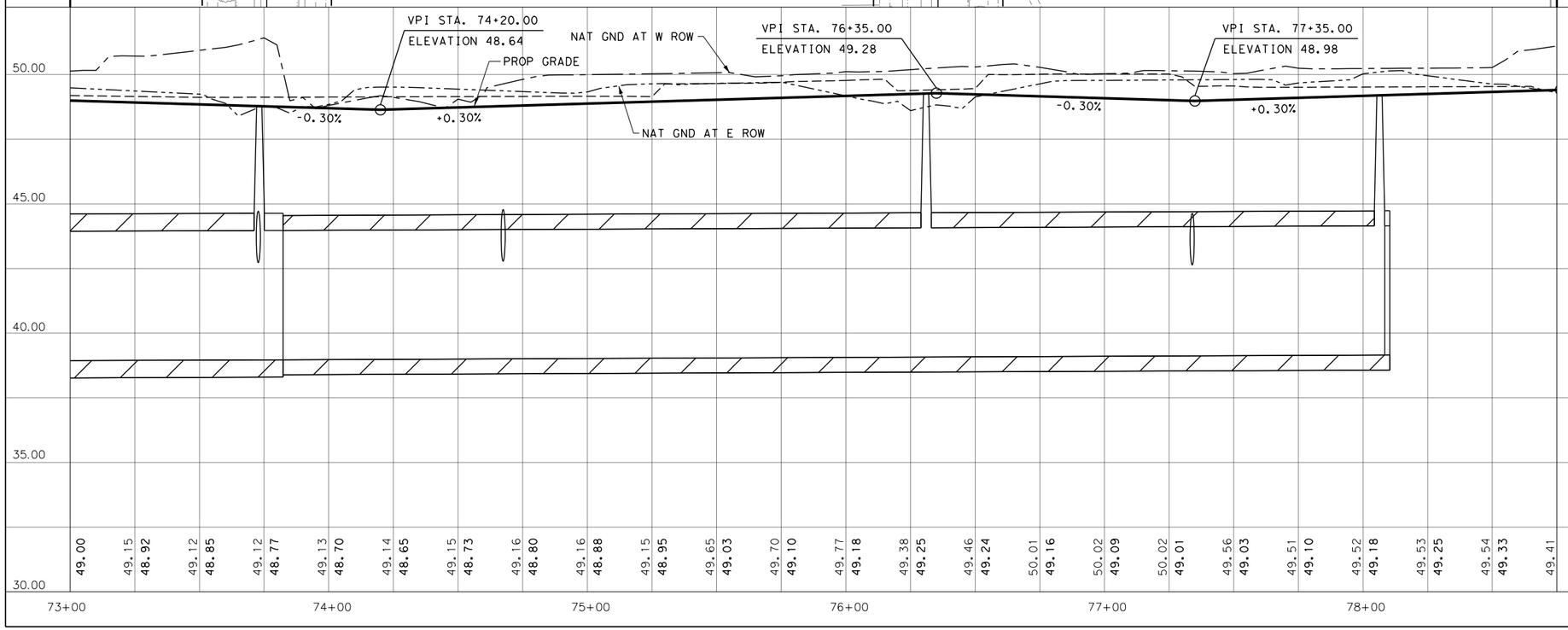


LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

GENERAL NOTES

1. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.
2. FOR DRIVEWAY STATION AND OFFSET DATA SEE DRIVEWAY DETAIL SHEETS.
3. ALL STATIONS ARE FOR ℄ BUFFALO SPEEDWAY UNLESS NOTED OTHERWISE.
4. SEE CROSSWALK PAVING LAYOUT PLANS FOR ADDITIONAL DETAILS.
5. ANY NECESSARY ADJUSTMENTS AND REPAIRS TO EXISITNG IRRIGATION LINES WILL BE PAID FOR UNDER ITEM 170-6002 IRRIGATION SYSTEM (TY I).
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8. SEE INTERSECTION LAYOUT FOR ADDITIONAL INTERSECTION GRADING INFORMATION.
9. SEE DRAINAGE PLAN & PROFILE SHEETS FOR LOCATION OF EXISTING DRAINAGE STRUCTURES.
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STATE OF TEXAS
MEHRAN BAVARIAN
48811
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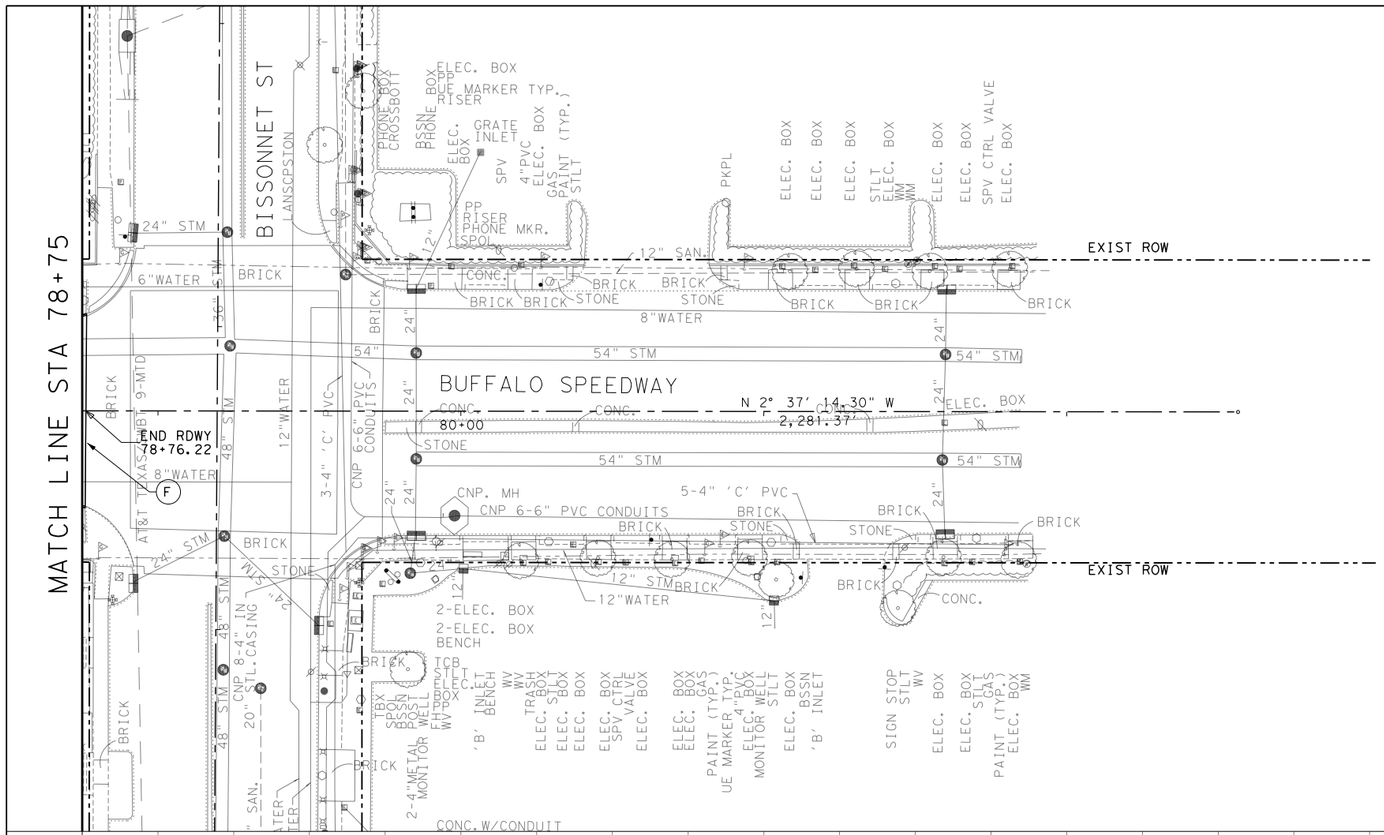
BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 73+00 TO STA 78+75

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		249
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
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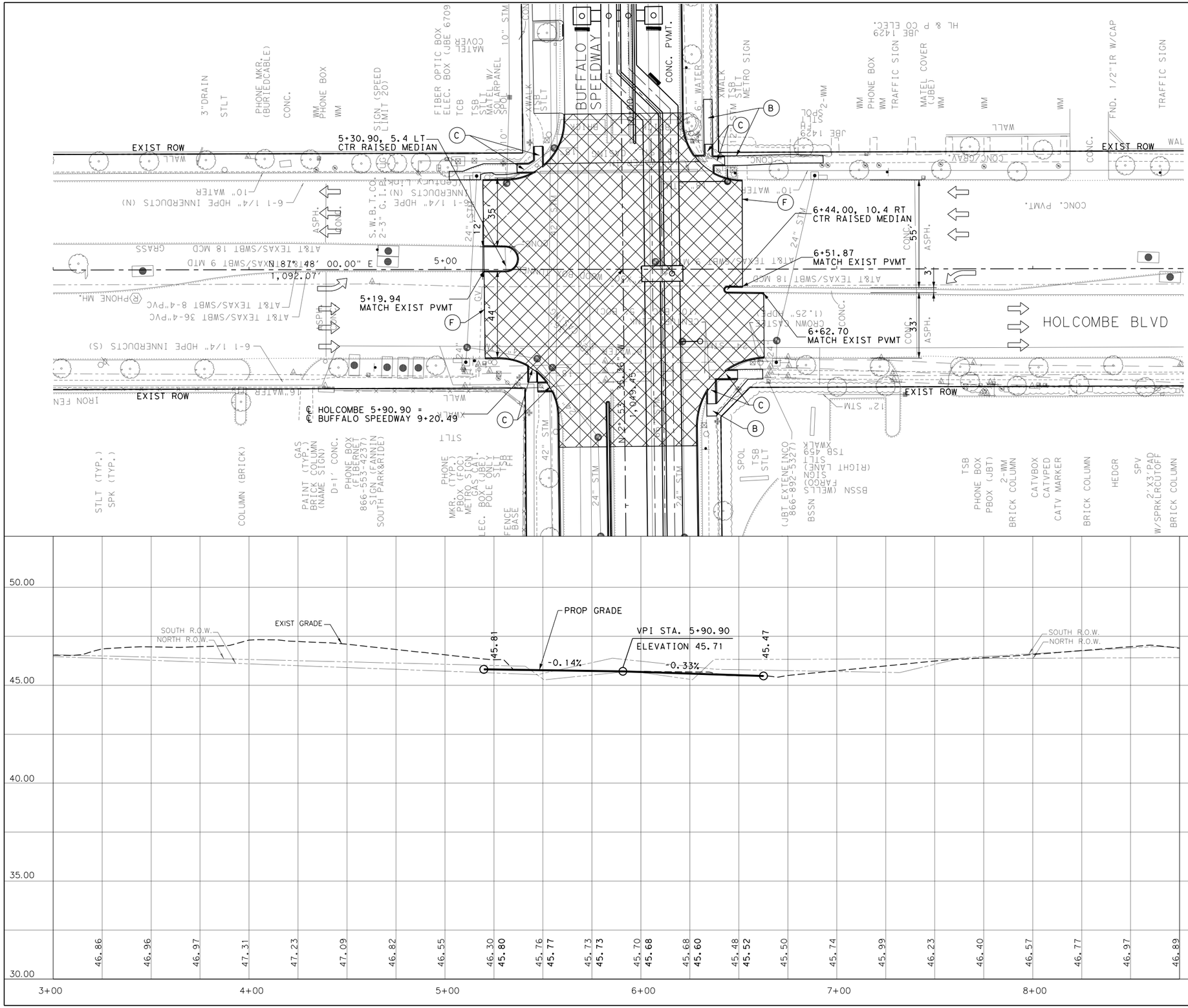
ROADWAY PLAN AND PROFILE

BUFFALO SPEEDWAY
STA 78+75 TO END

SHEET 15 OF 15

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		250
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



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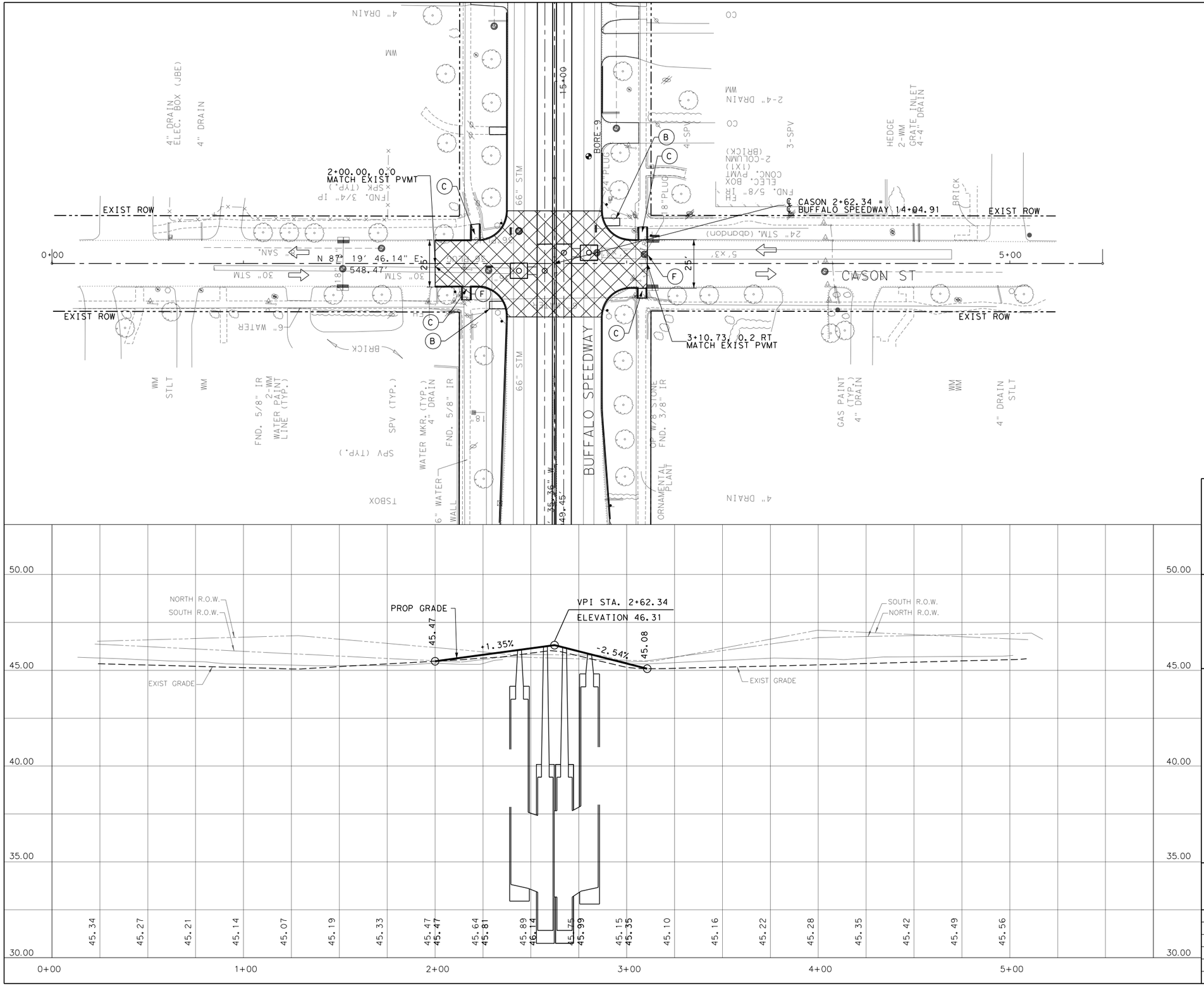
ROADWAY PLAN AND PROFILE

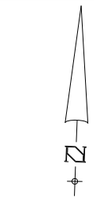
HOLCOMBE BLVD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			251
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	





0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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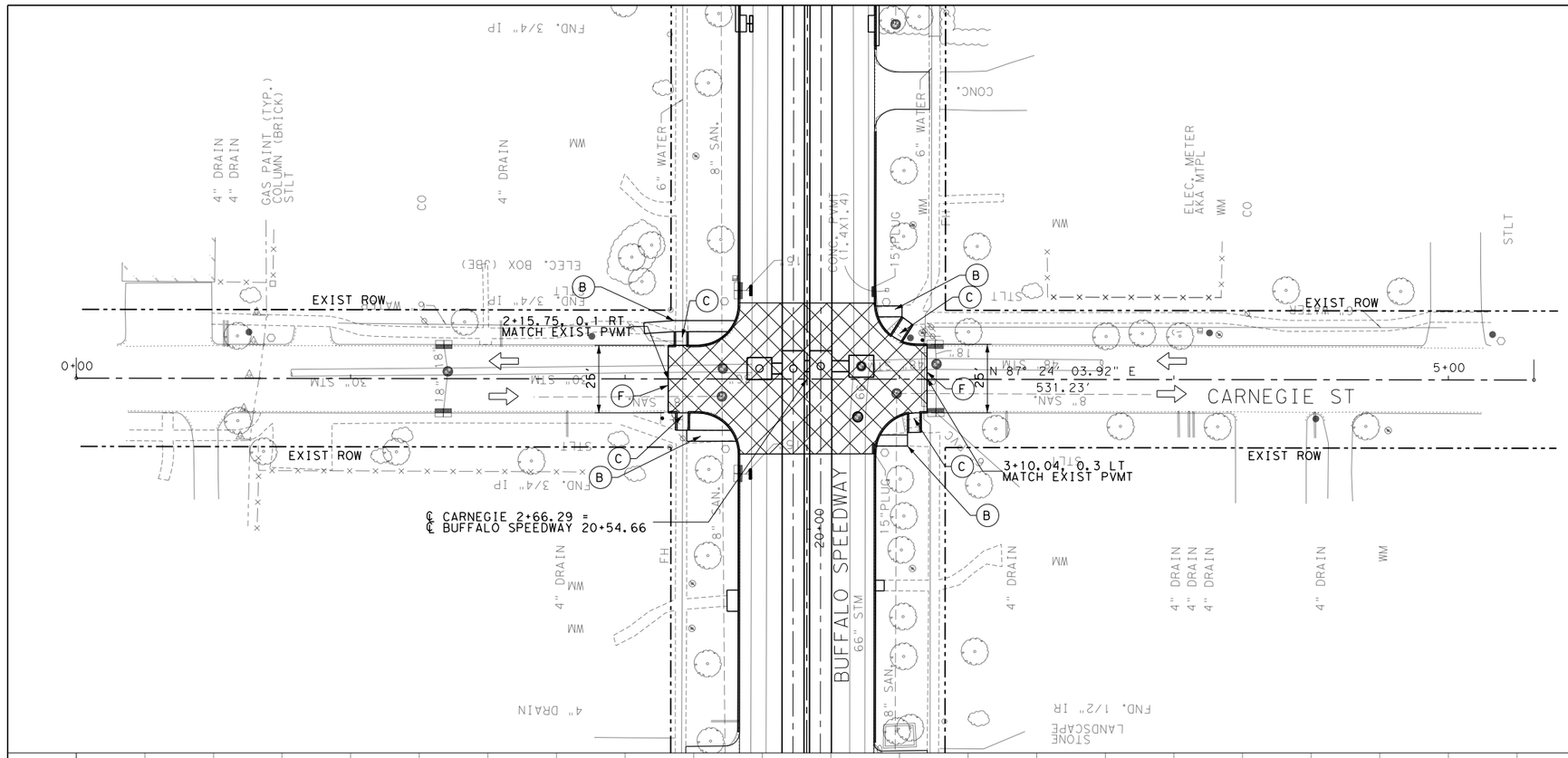
ROADWAY PLAN AND PROFILE

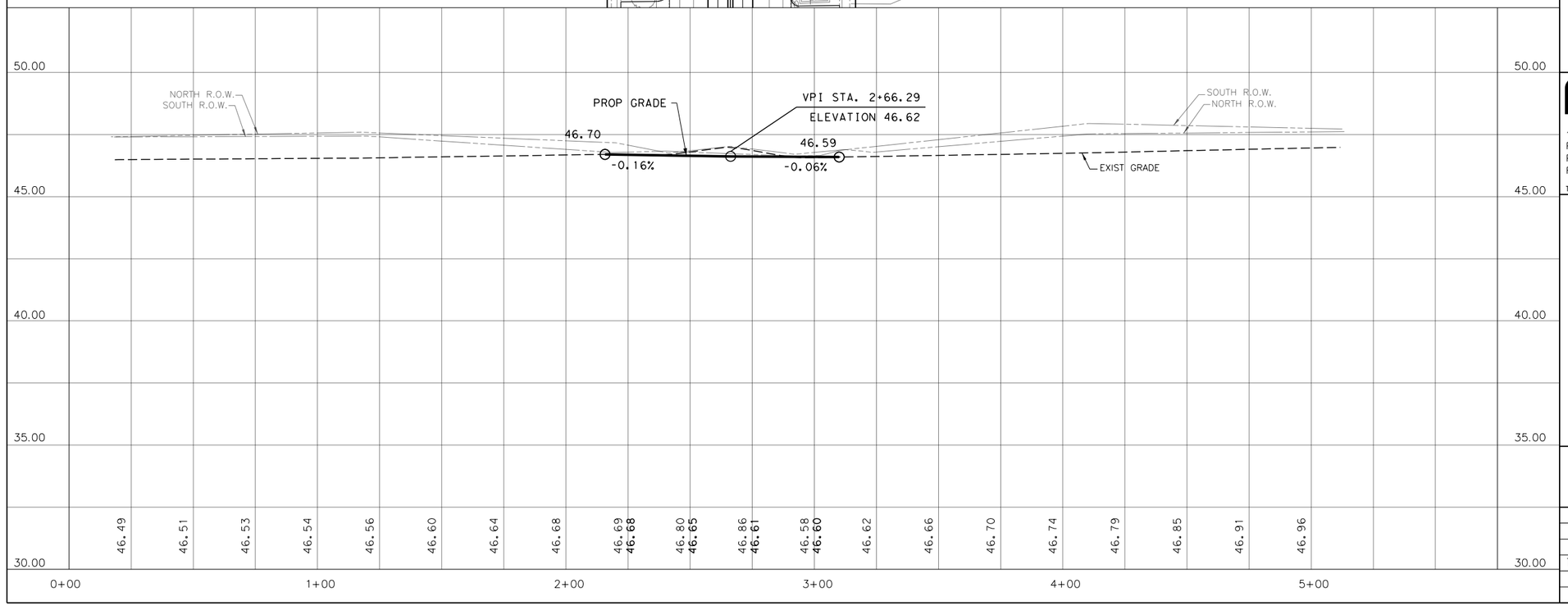
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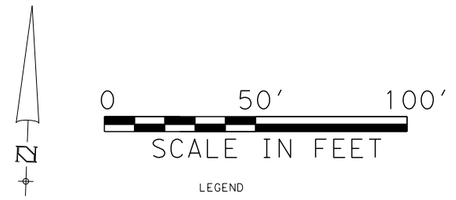
SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			252
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	





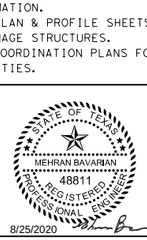


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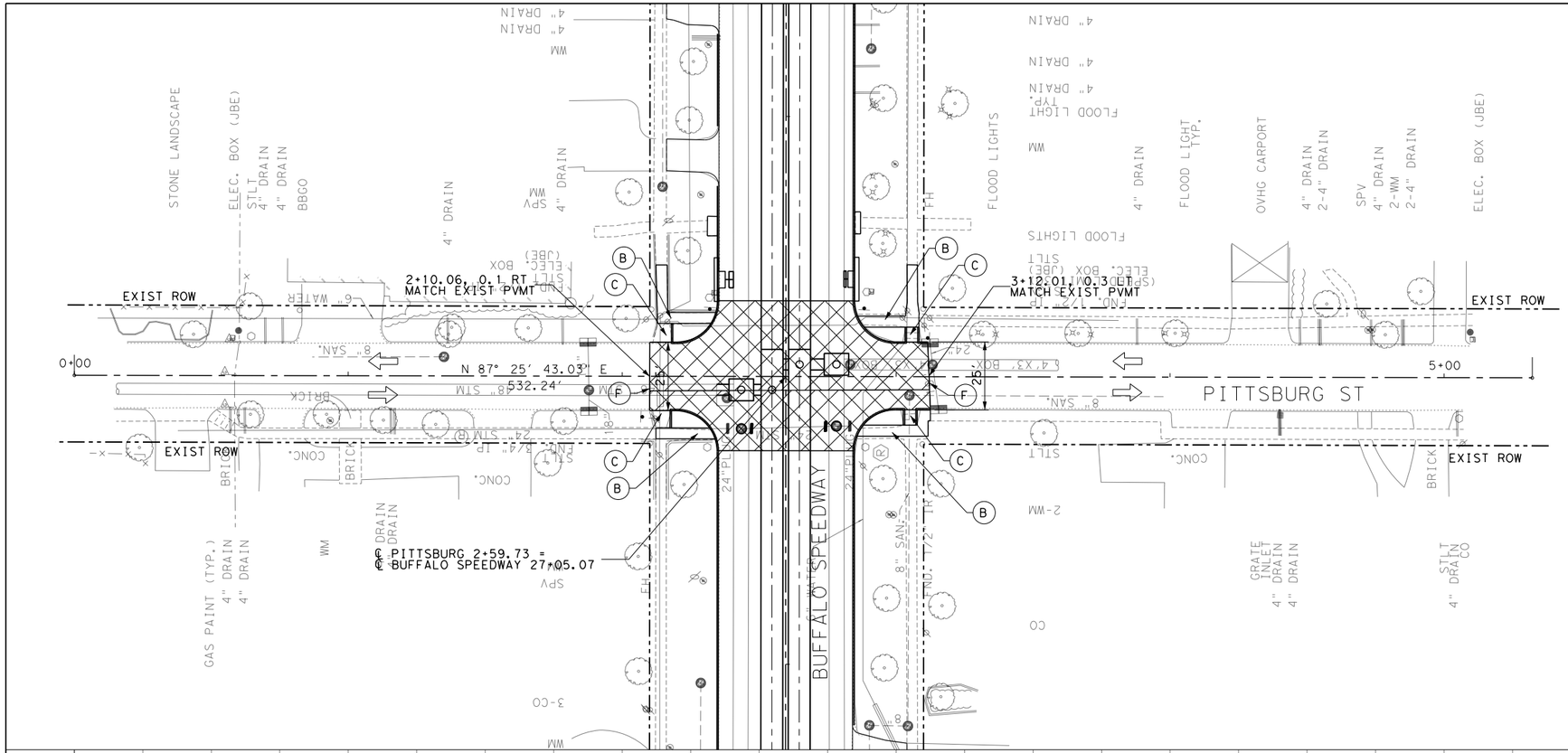
ROADWAY PLAN AND PROFILE

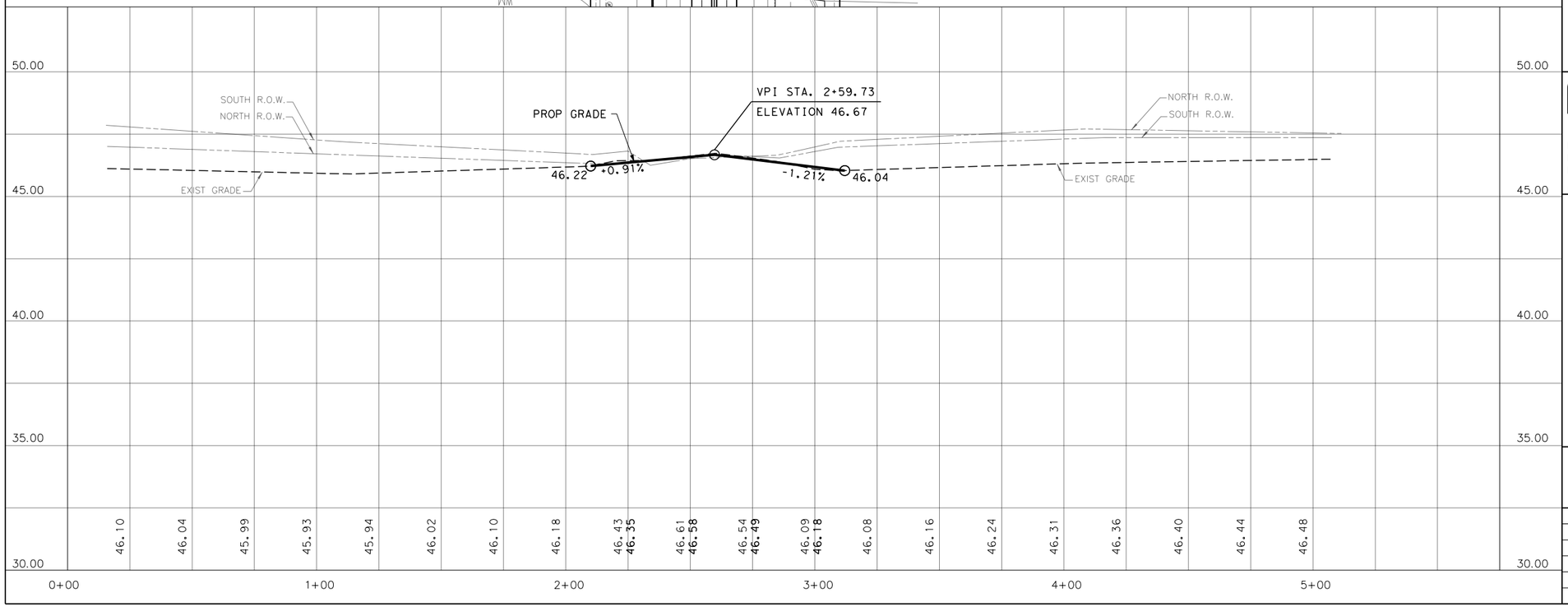
CARNEGIE ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			253
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	





0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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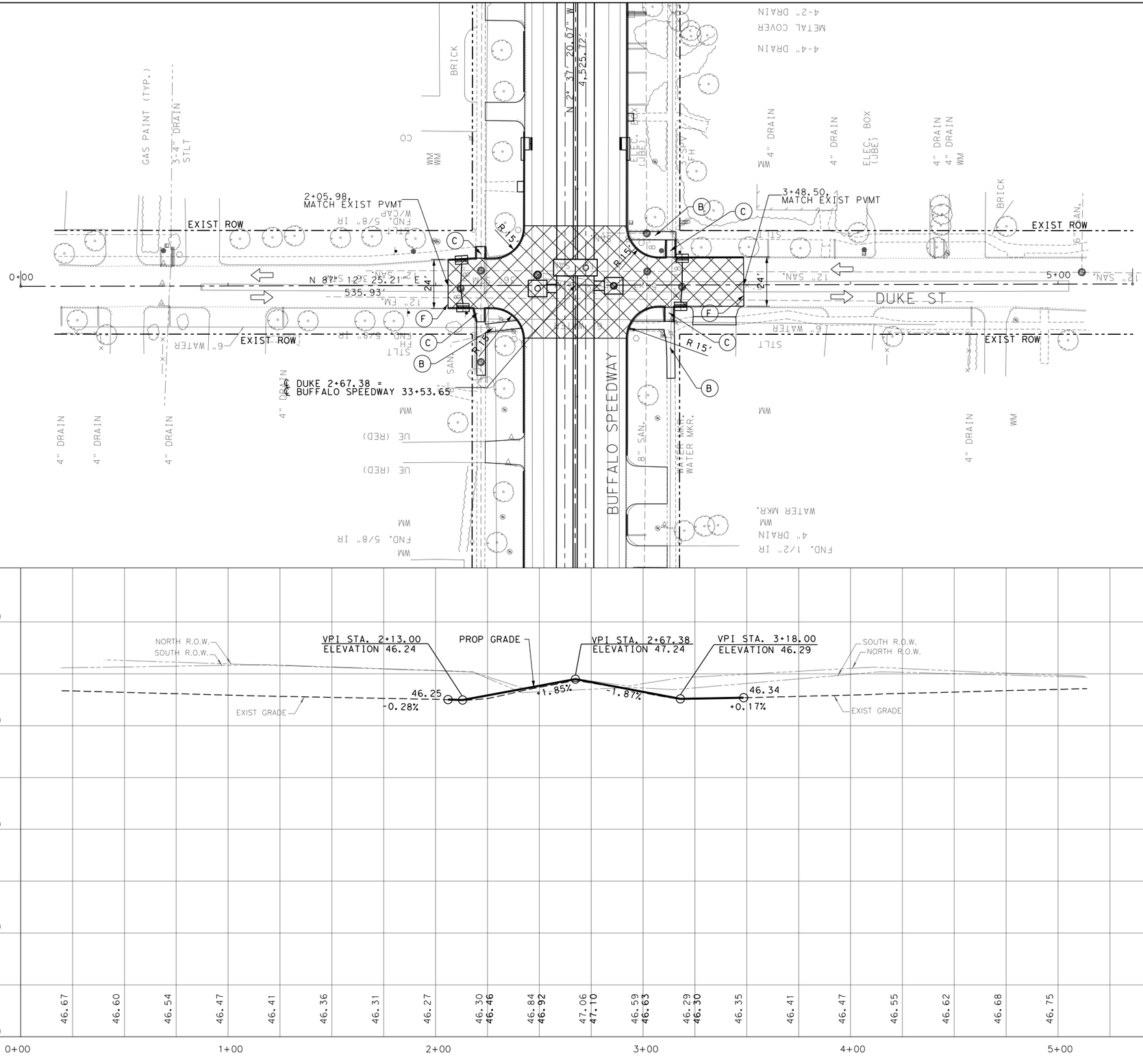
ROADWAY PLAN AND PROFILE

PITTSBURG ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			254
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



N

0 50′ 100′

SCALE IN FEET

LEGEND

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- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
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- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
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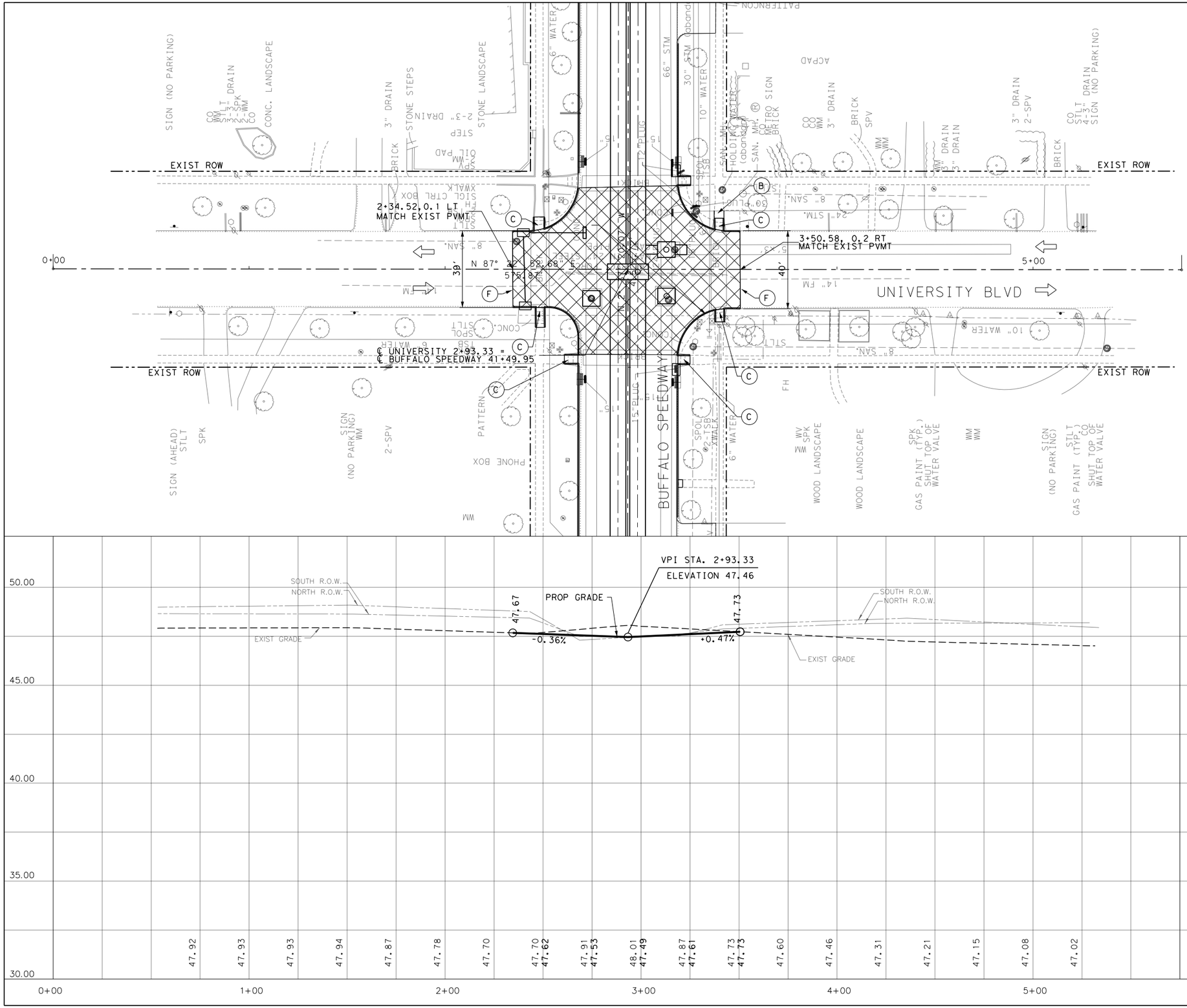
ROADWAY PLAN AND PROFILE

DUKE ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			255
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 50′ 100′

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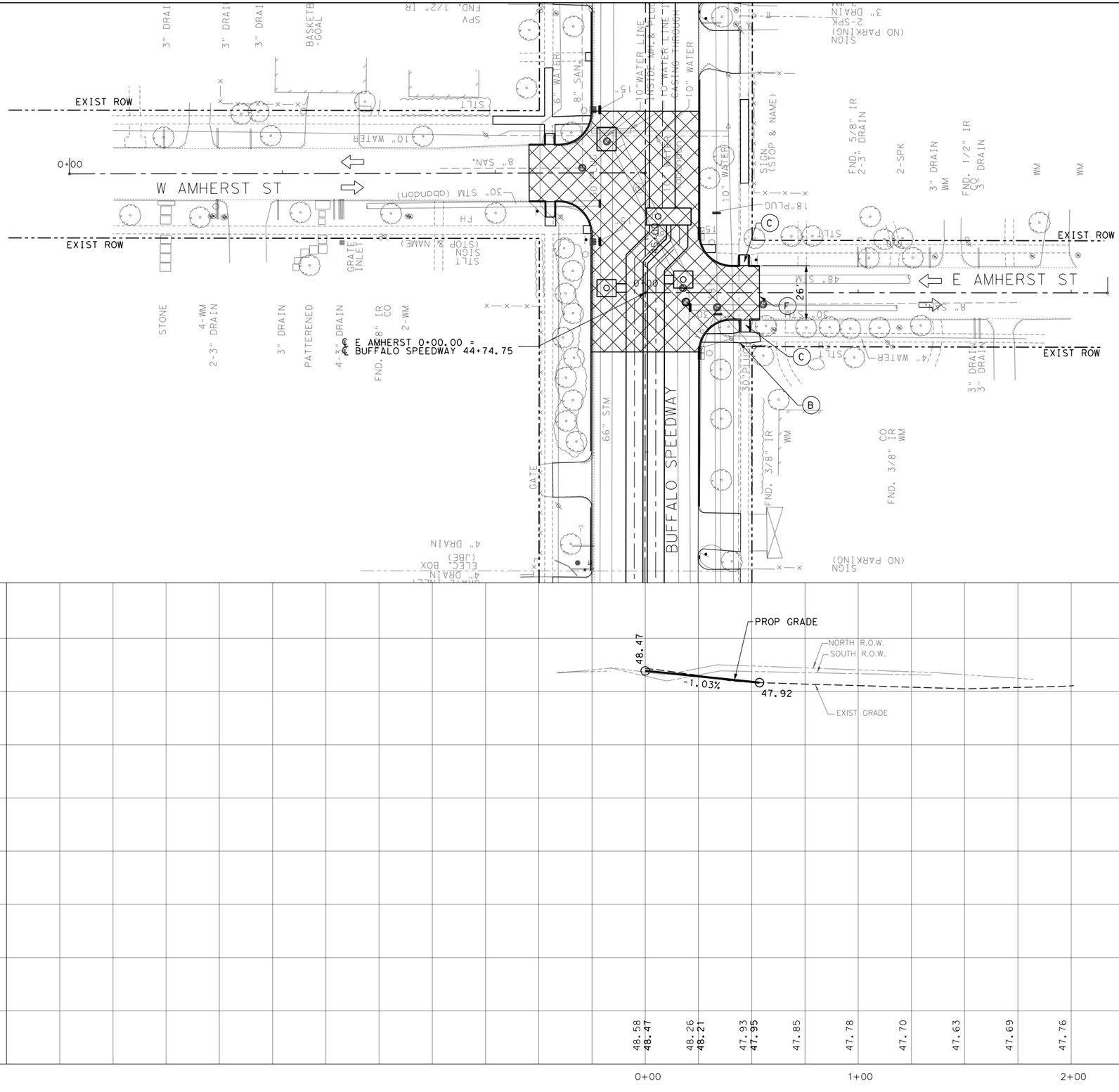
ROADWAY PLAN AND PROFILE

UNIVERSITY BLVD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			256
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



LEGEND

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50.00	45.00	40.00	35.00	30.00

0+00		1+00					2+00		
48.58	48.47	48.26	48.21	47.93	47.95	47.85	47.78	47.70	47.63	47.69	47.76

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

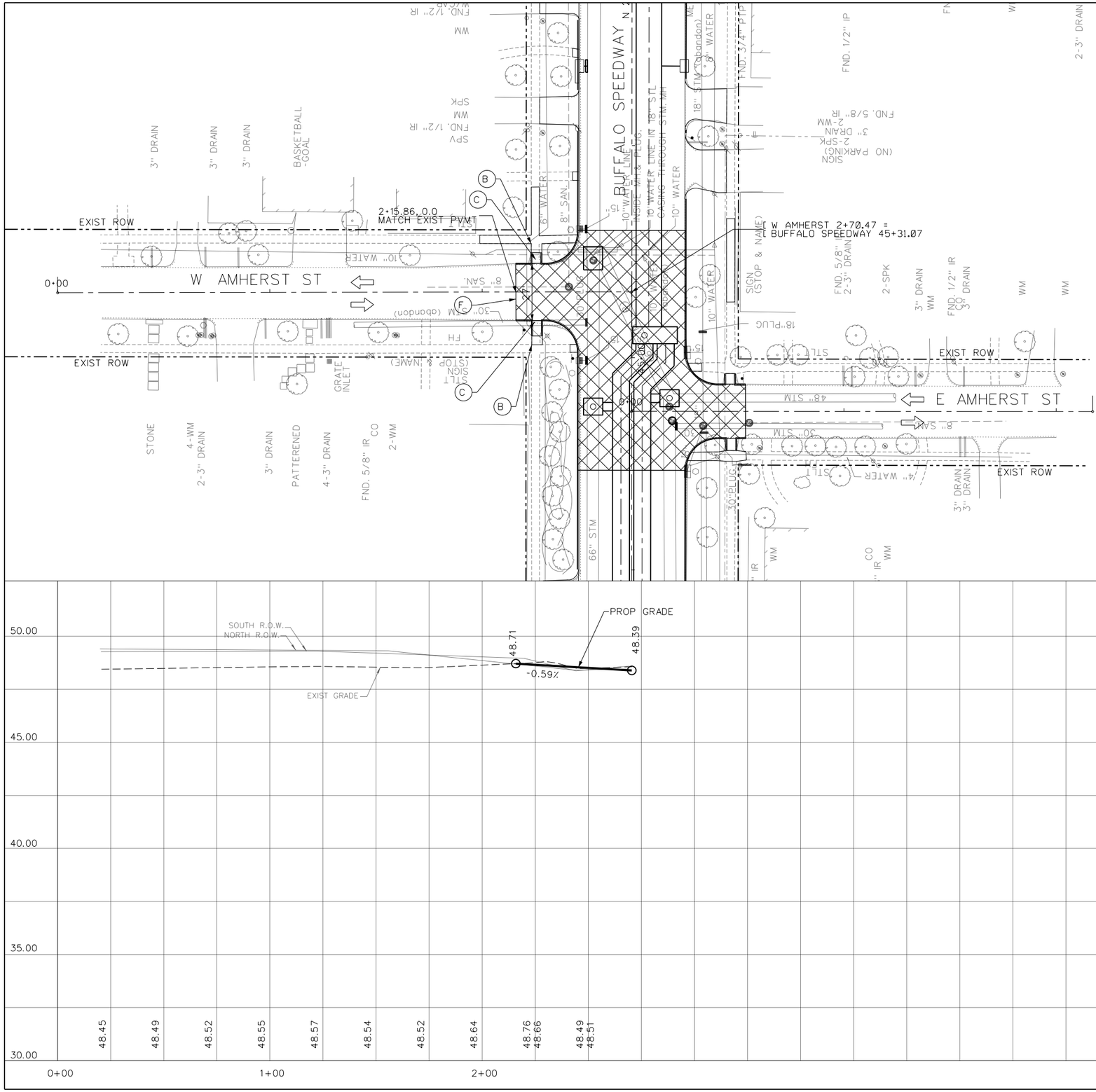
ROADWAY PLAN AND PROFILE

E AMHERST ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		257
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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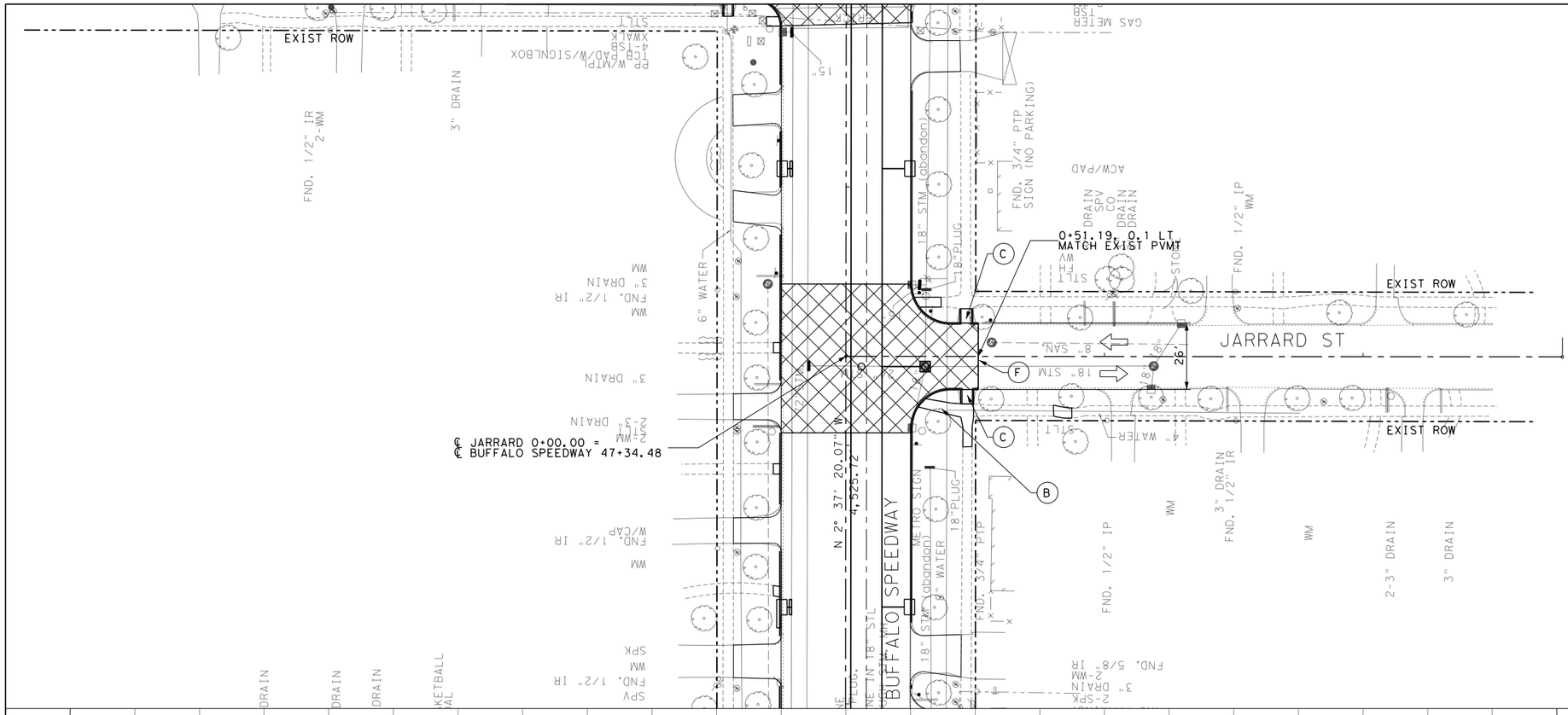
ROADWAY PLAN AND PROFILE

W AMHERST ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		258
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
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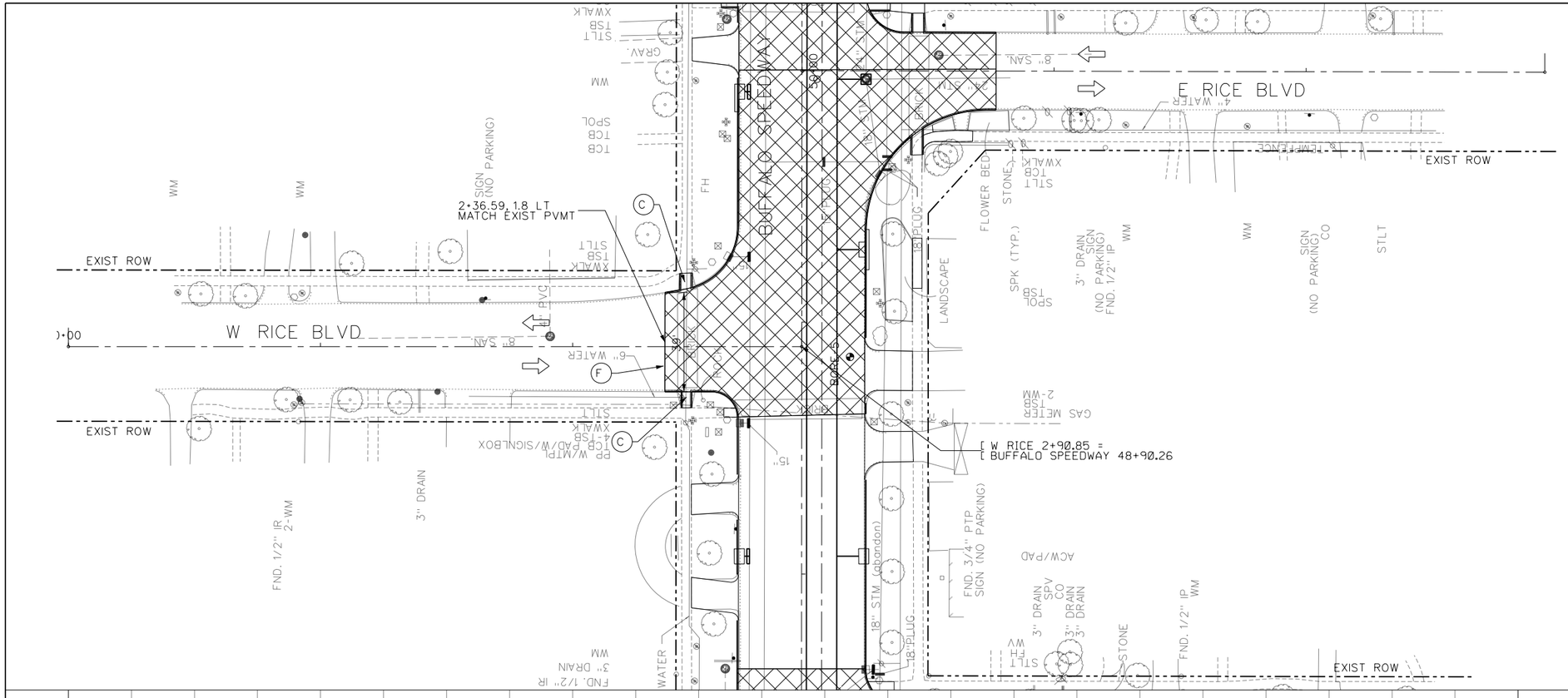
ROADWAY PLAN AND PROFILE

JARRARD ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		259
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

N

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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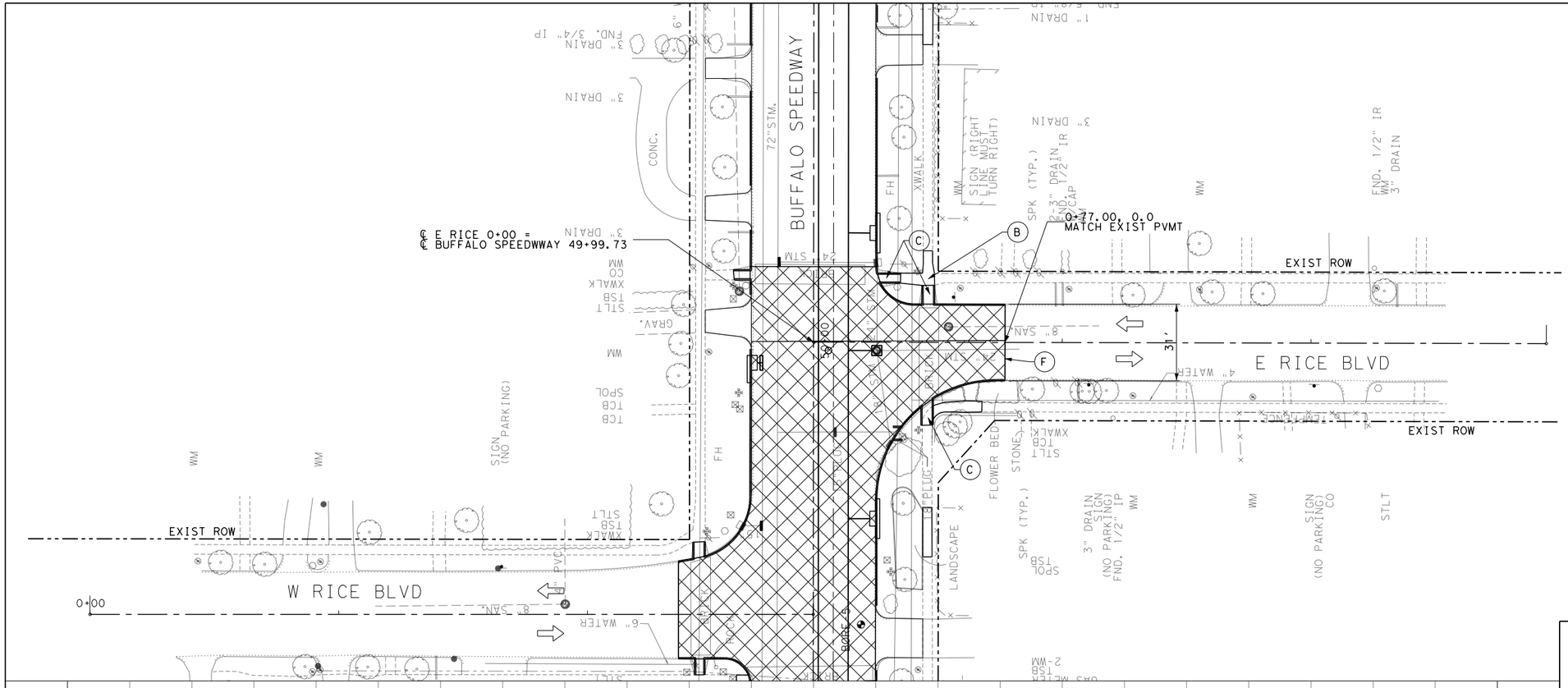
ROADWAY PLAN AND PROFILE

W RICE BLVD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		260
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

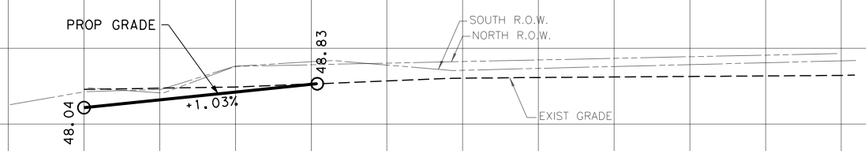


LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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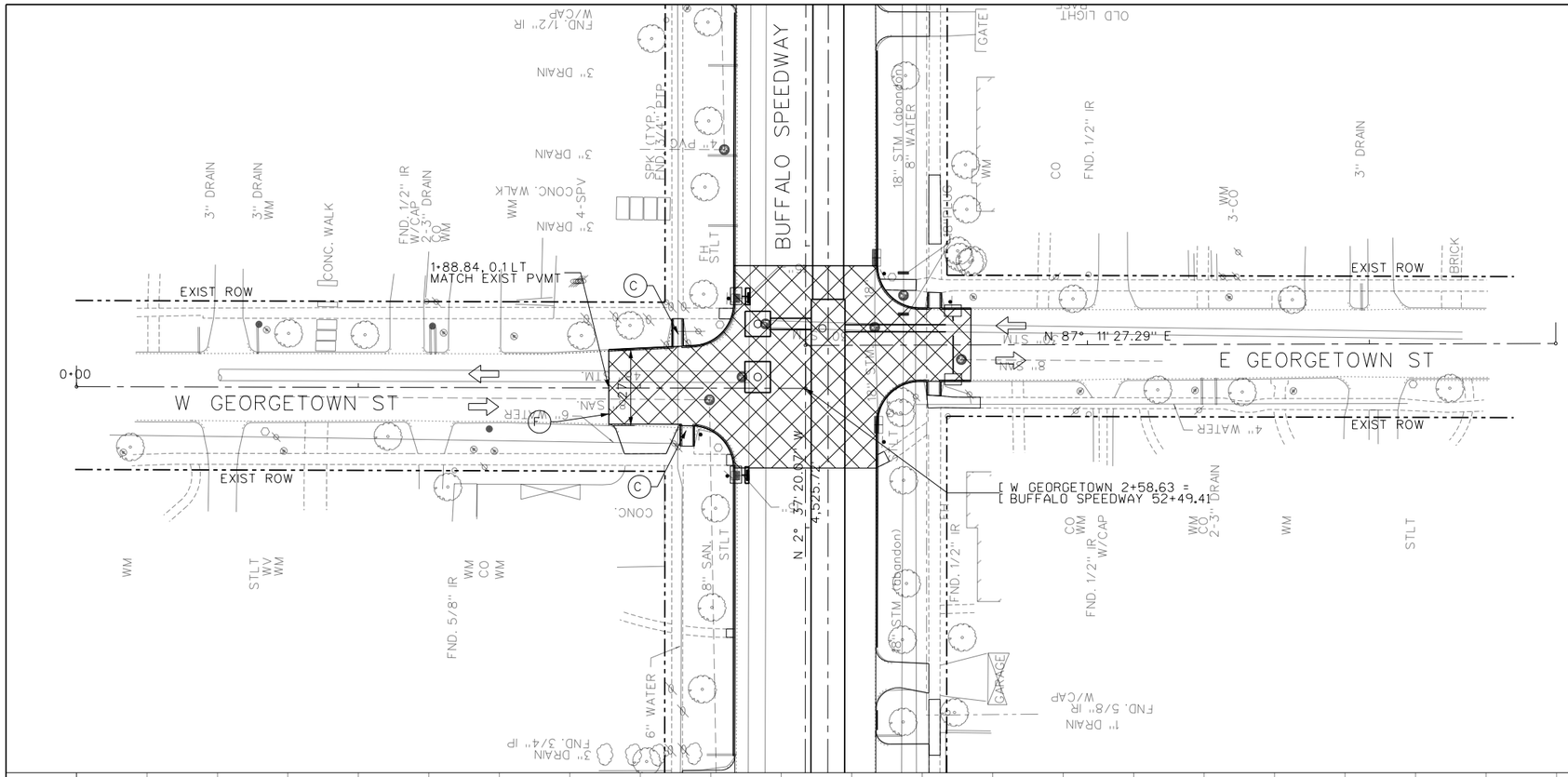
ROADWAY PLAN AND PROFILE

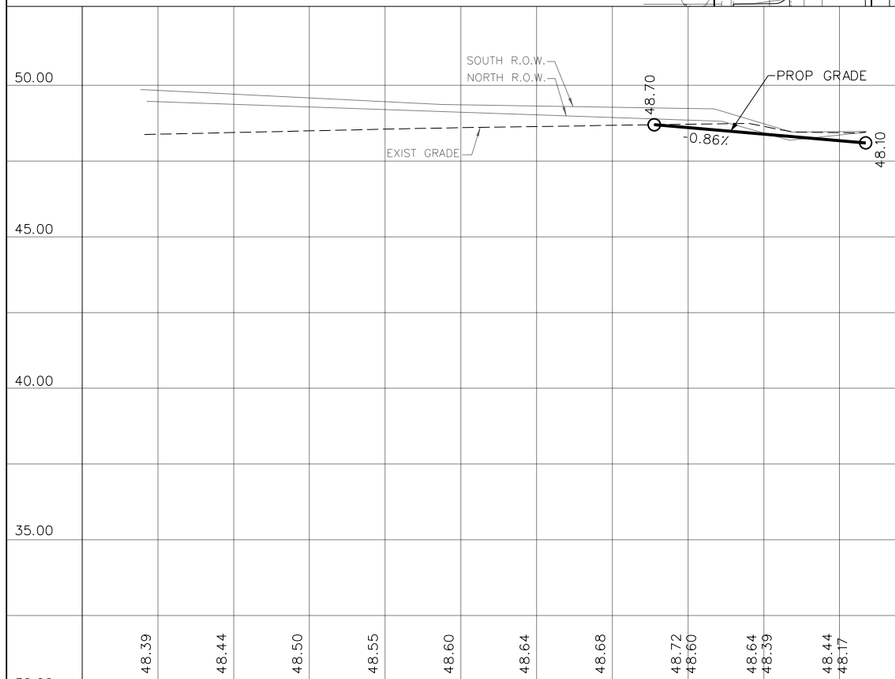
E RICE BLVD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			261
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	





N

0 50' 100'

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
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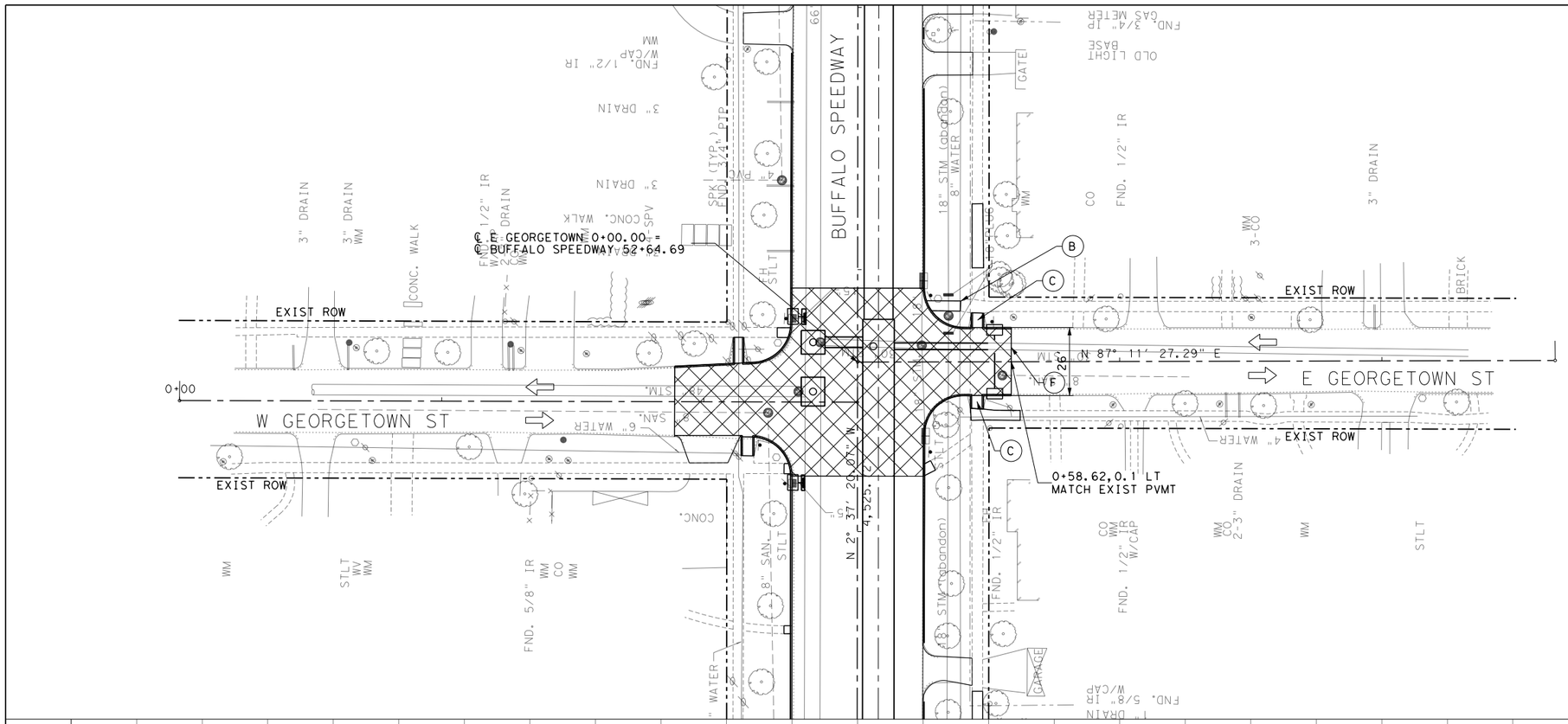
ROADWAY PLAN AND PROFILE

W GEORGETOWN ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		262
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





52	50	48	46	44	42	40	38	36	34	32	30
50.00	50.00		45.00		40.00	40.00		35.00		30.00	30.00

0+00					1+00				2+00		
48.44	48.06	48.08	48.02	47.93	47.98	48.00	48.05	48.11	48.13	48.10	48.06	48.03

0 50′ 100′

SCALE IN FEET

LEGEND

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- (B) PROP SIDEWALK
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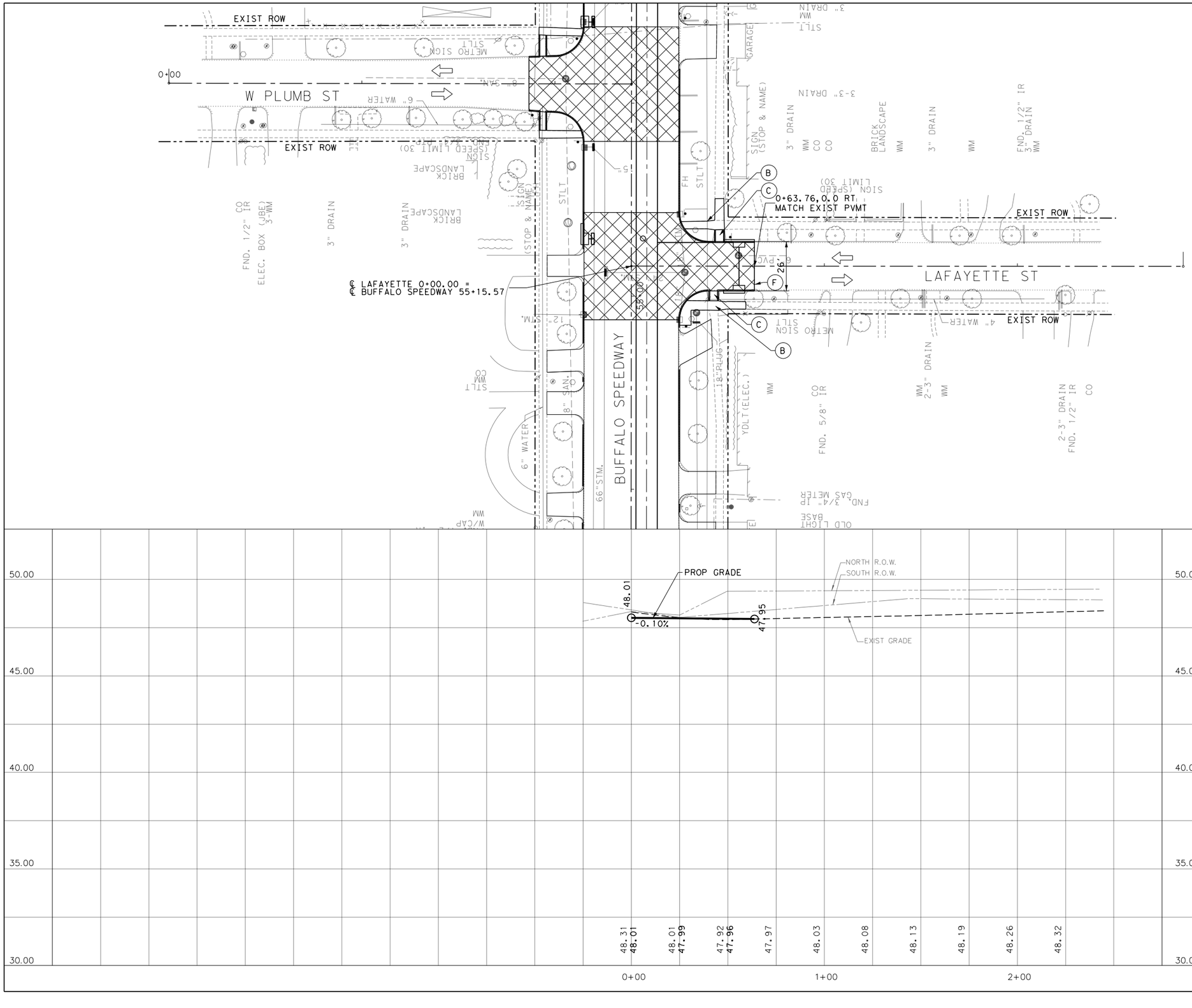
ROADWAY PLAN AND PROFILE

E GEORGETOWN ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			263
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 50′ 100′

SCALE IN FEET

LEGEND

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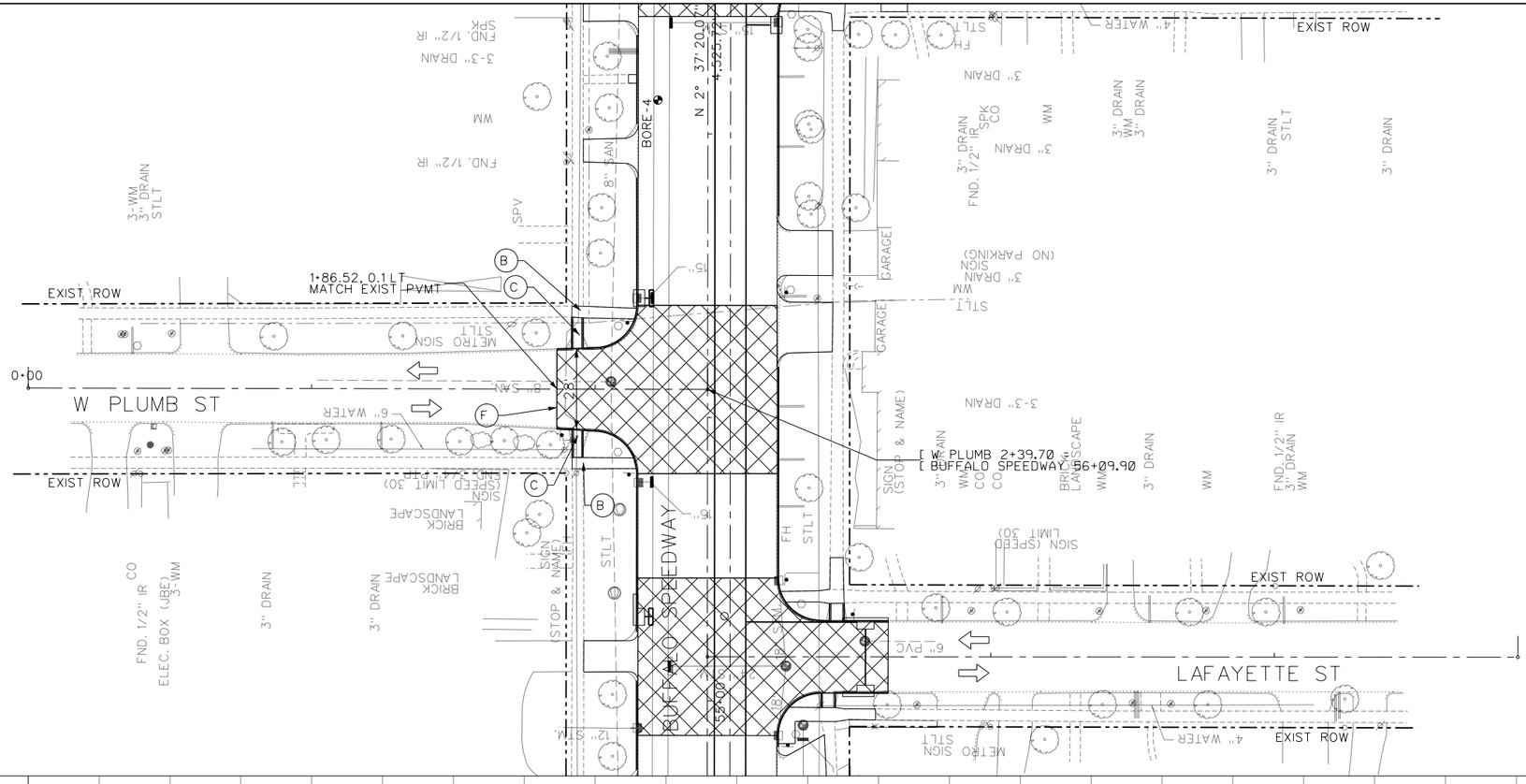
ROADWAY PLAN AND PROFILE

LAFAYETTE ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		264
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

N

LEGEND

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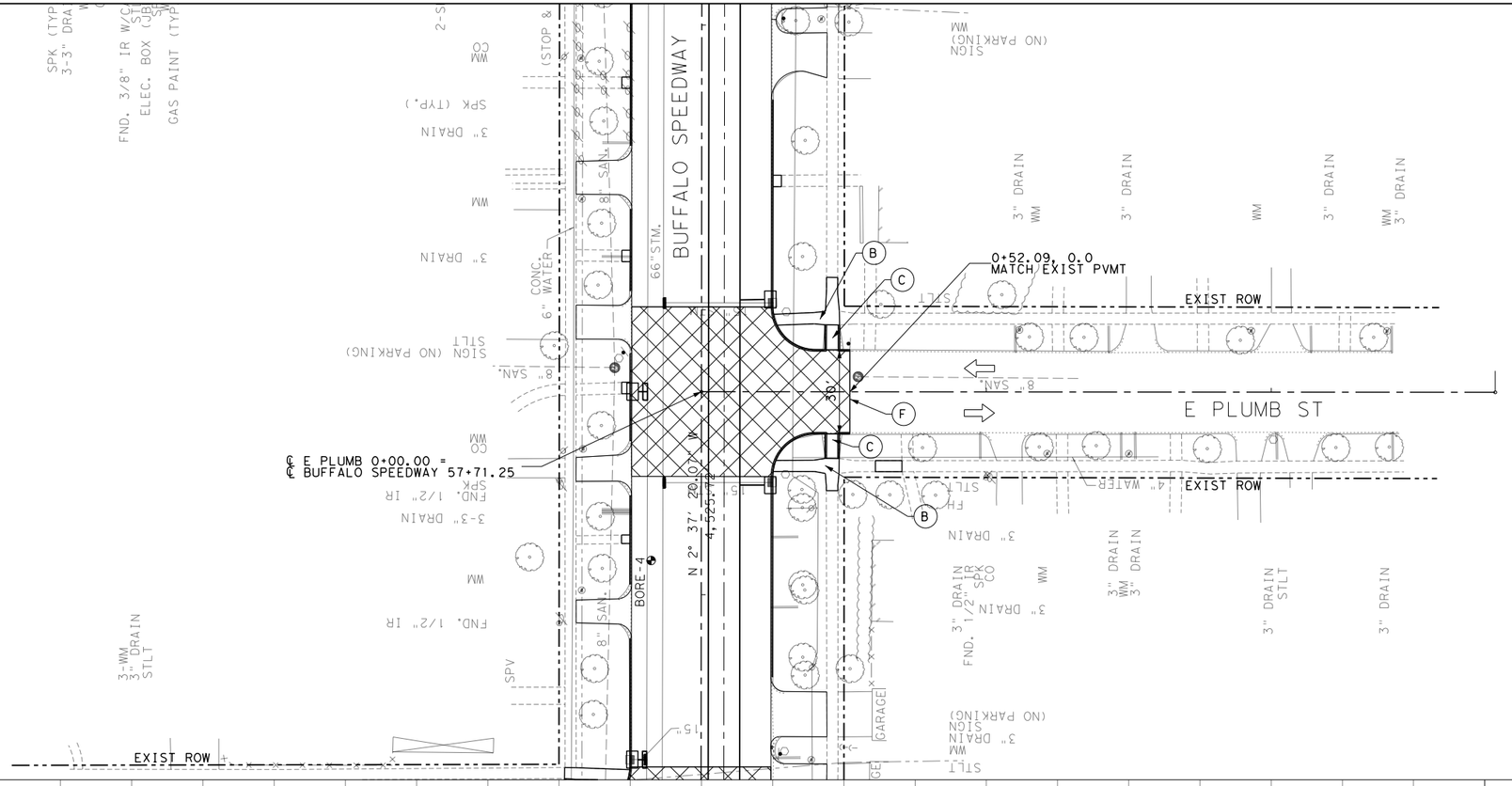
ROADWAY PLAN AND PROFILE

W PLUMB ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		265
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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8/25/2020

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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

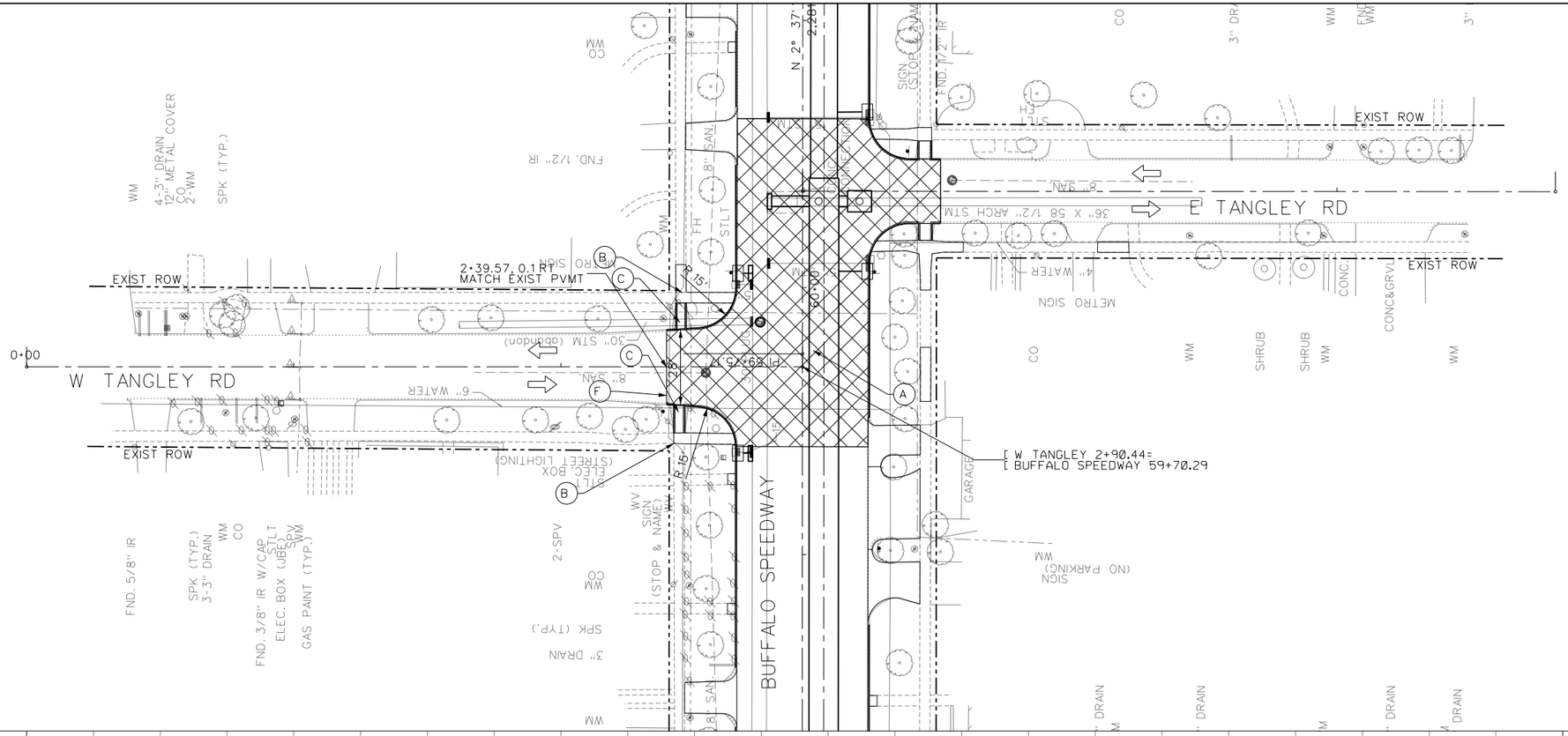
ROADWAY PLAN AND PROFILE

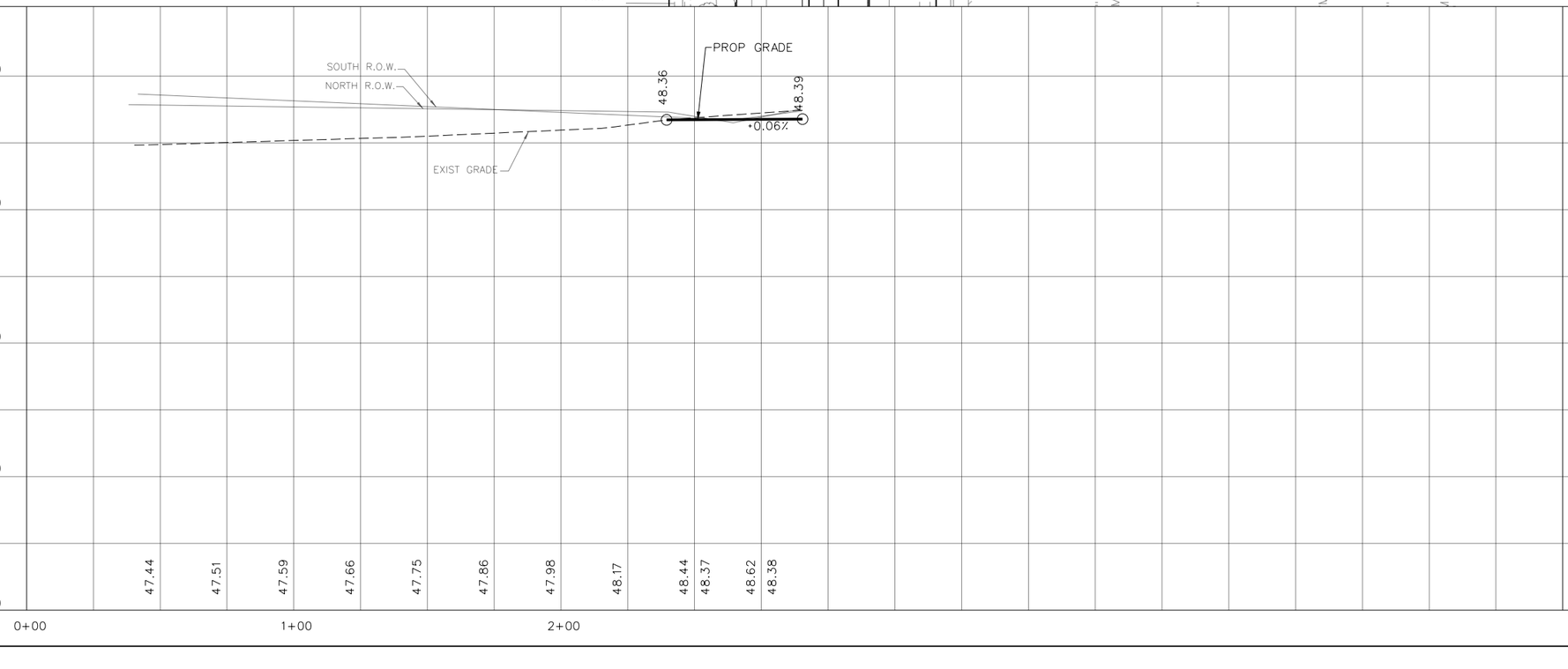
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SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		266
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





0 50' 100'

SCALE IN FEET

N

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
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- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

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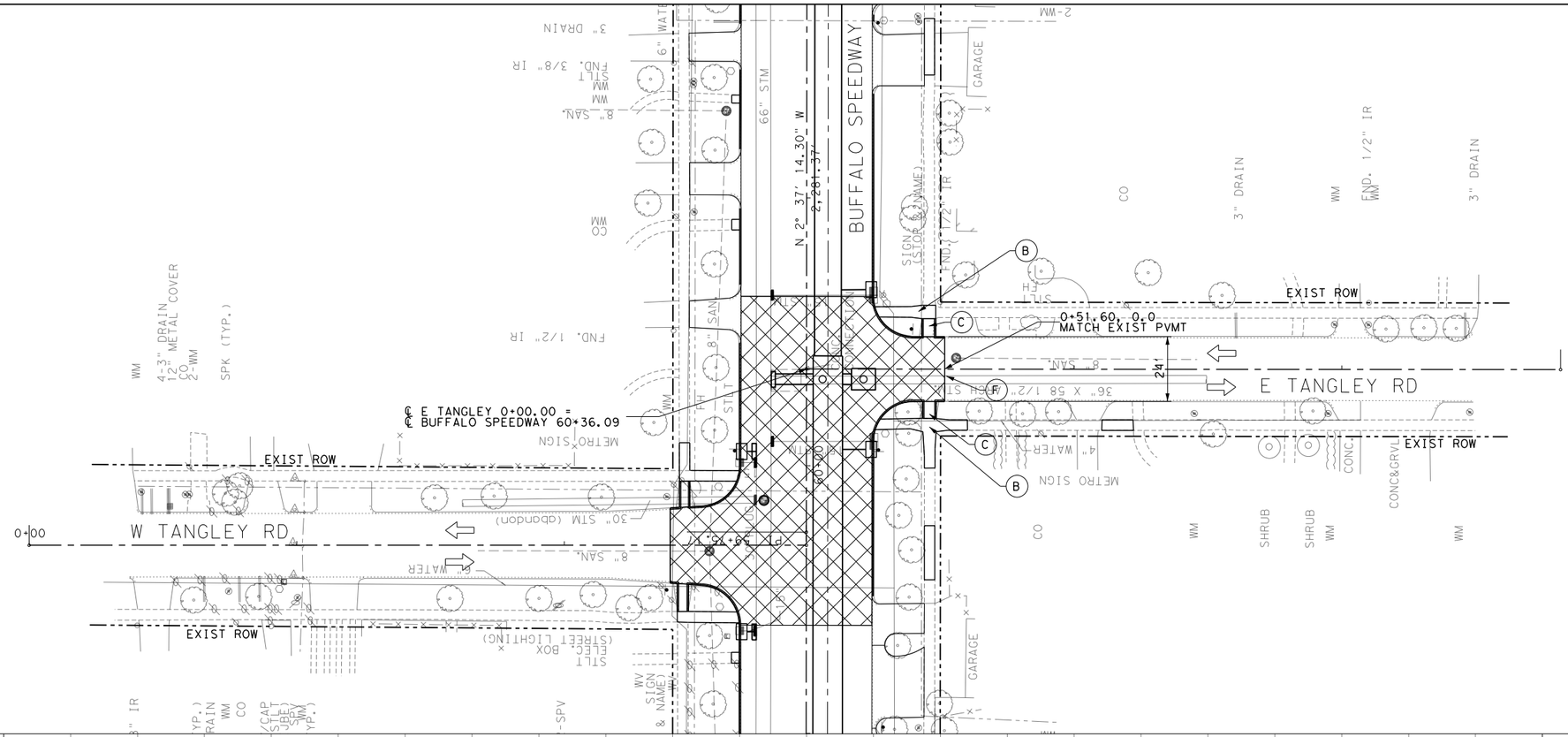
ROADWAY PLAN AND PROFILE

W TANGLEY RD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		267
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



LEGEND

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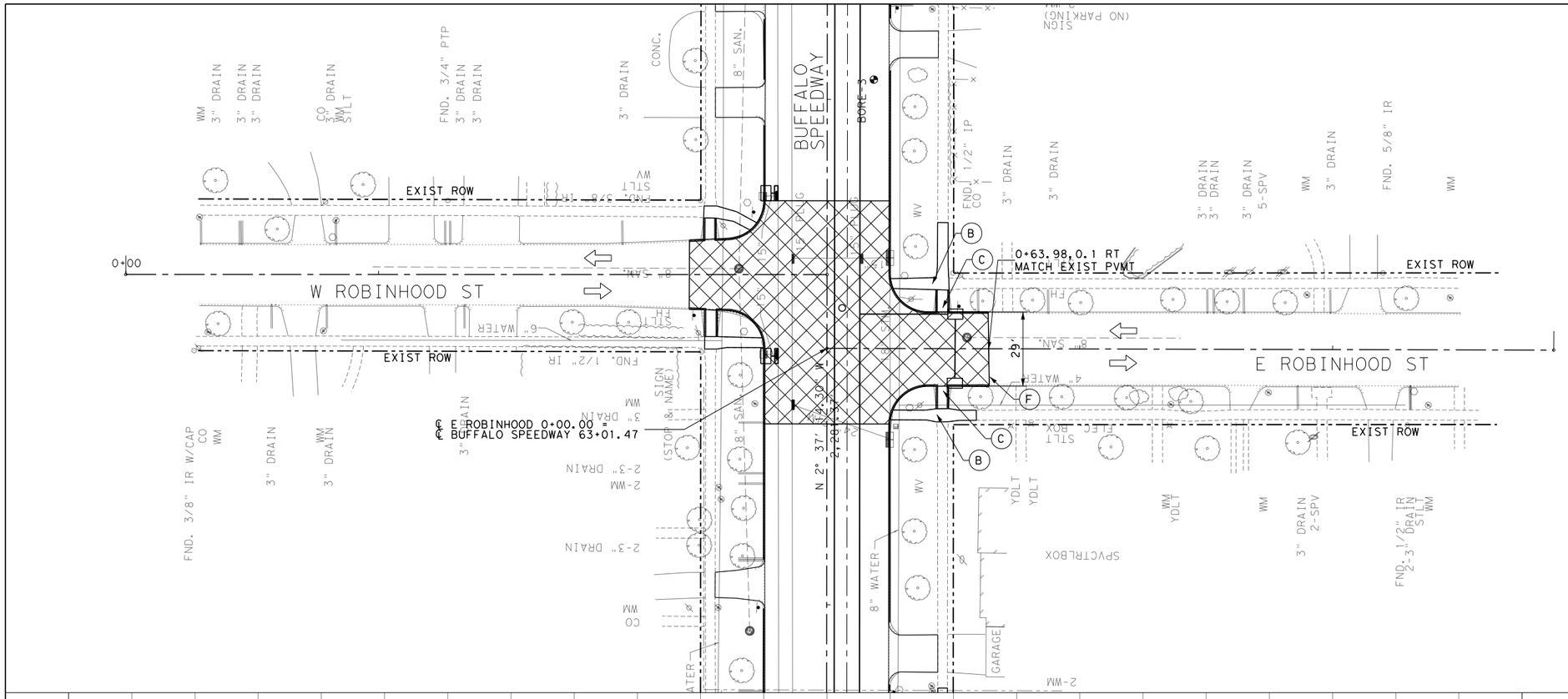
ROADWAY PLAN AND PROFILE

E TANGLEY RD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			268
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 50′ 100′

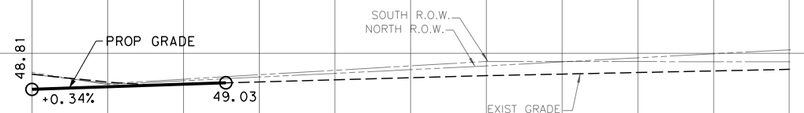
SCALE IN FEET

LEGEND

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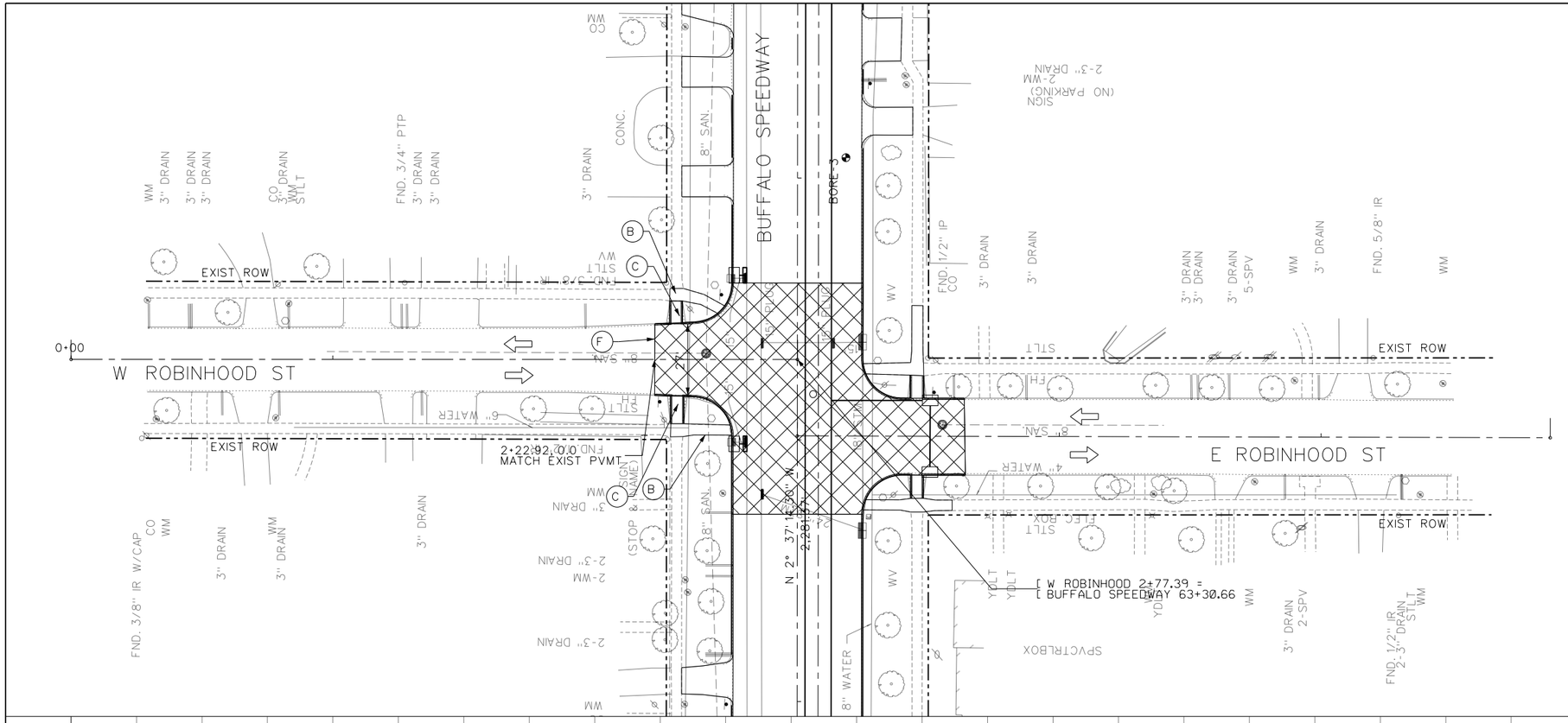
ROADWAY PLAN AND PROFILE

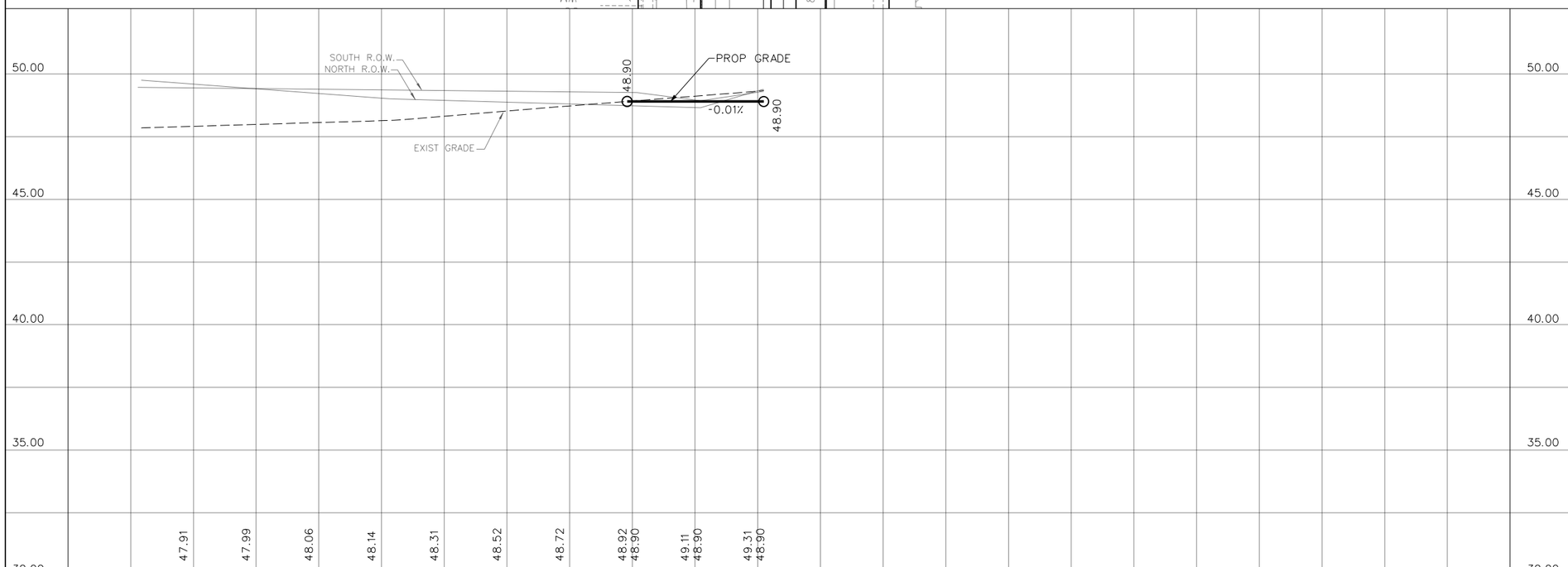
E ROBINHOOD ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		269
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





0 50' 100'

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
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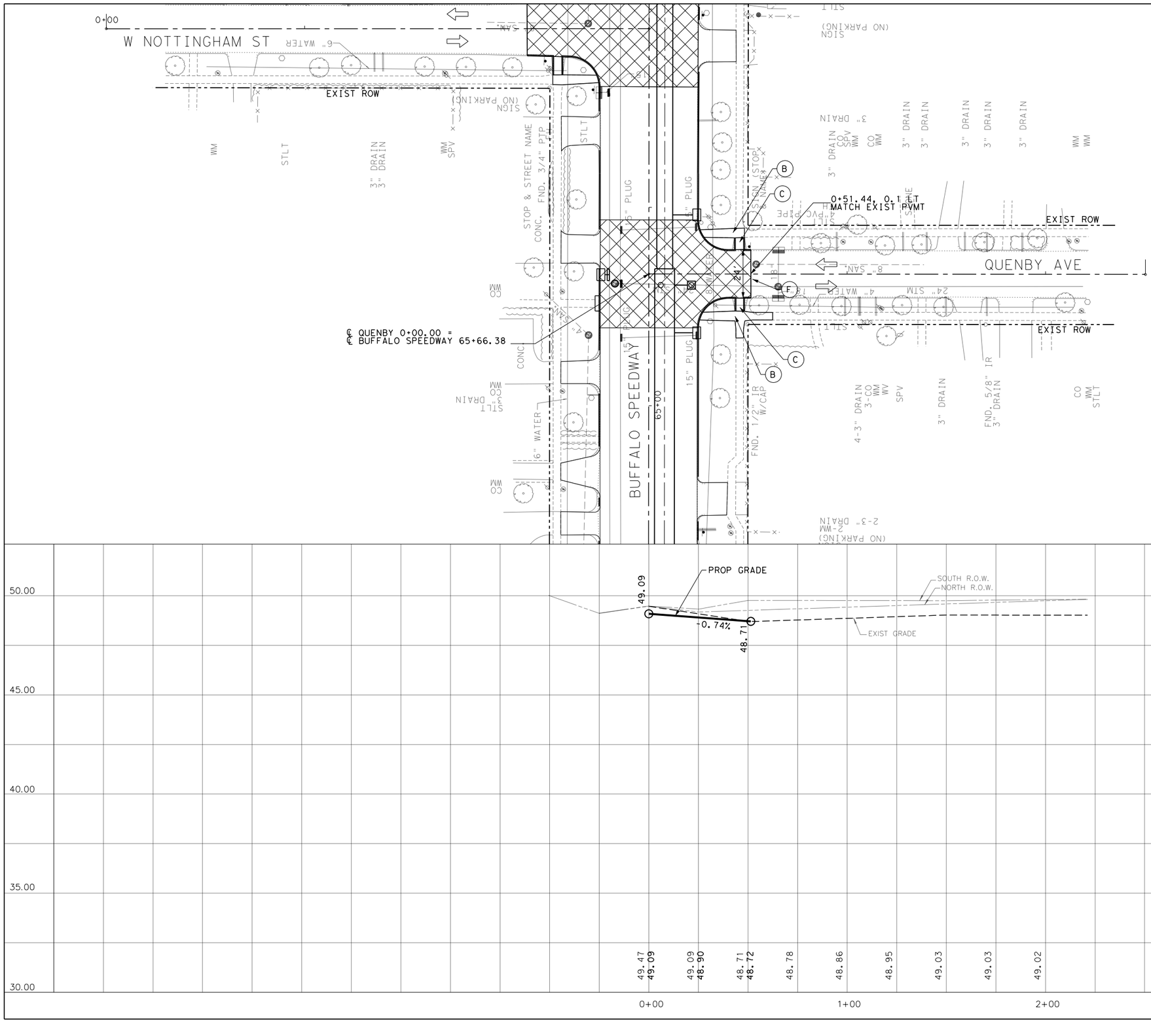
ROADWAY PLAN AND PROFILE

W ROBINHOOD ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			270
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 50′ 100′

SCALE IN FEET

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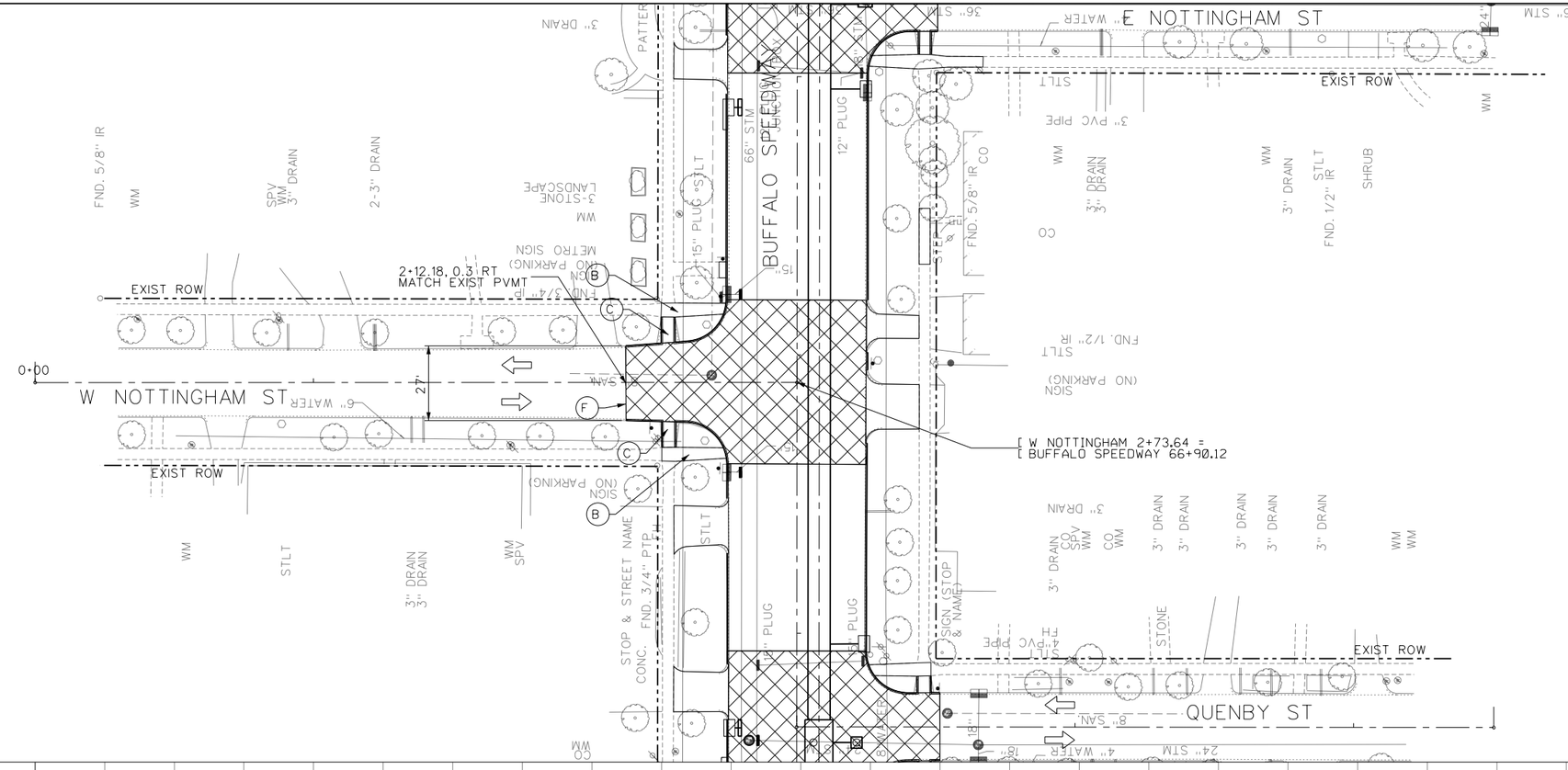
ROADWAY PLAN AND PROFILE

QUENBY AVE

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		271
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50' 100'

SCALE IN FEET

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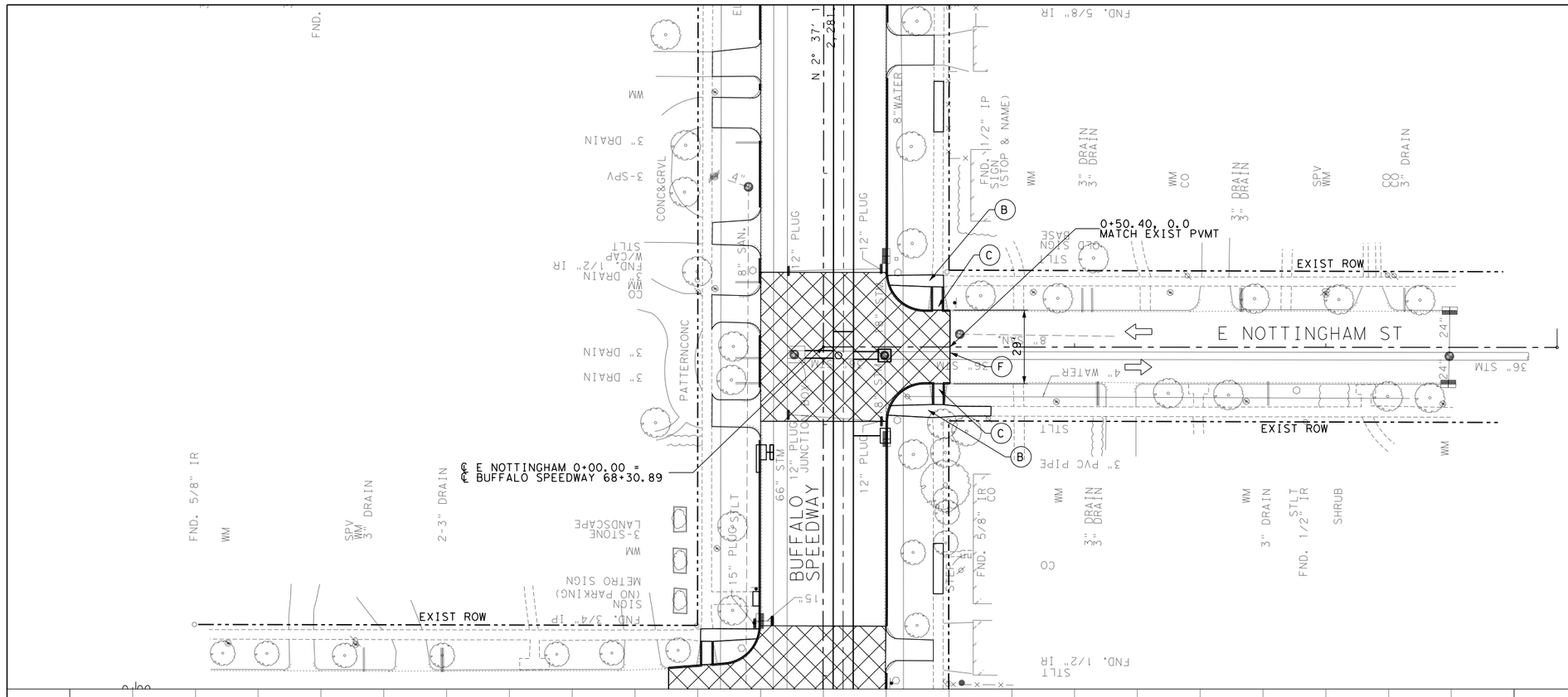
ROADWAY PLAN AND PROFILE

W NOTTINGHAM ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			272
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 50′ 100′

SCALE IN FEET

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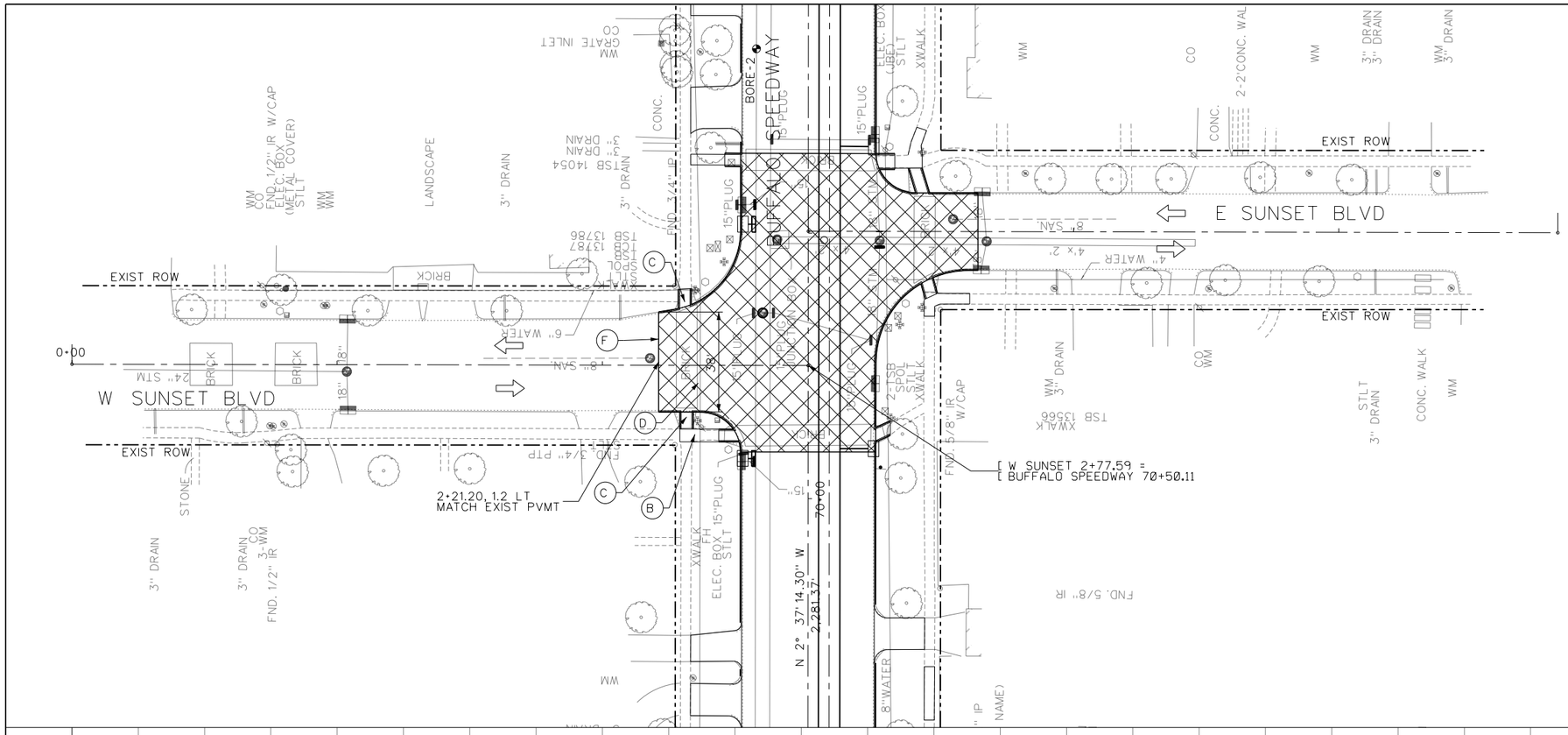
ROADWAY PLAN AND PROFILE

E NOTTINGHAM ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			273
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



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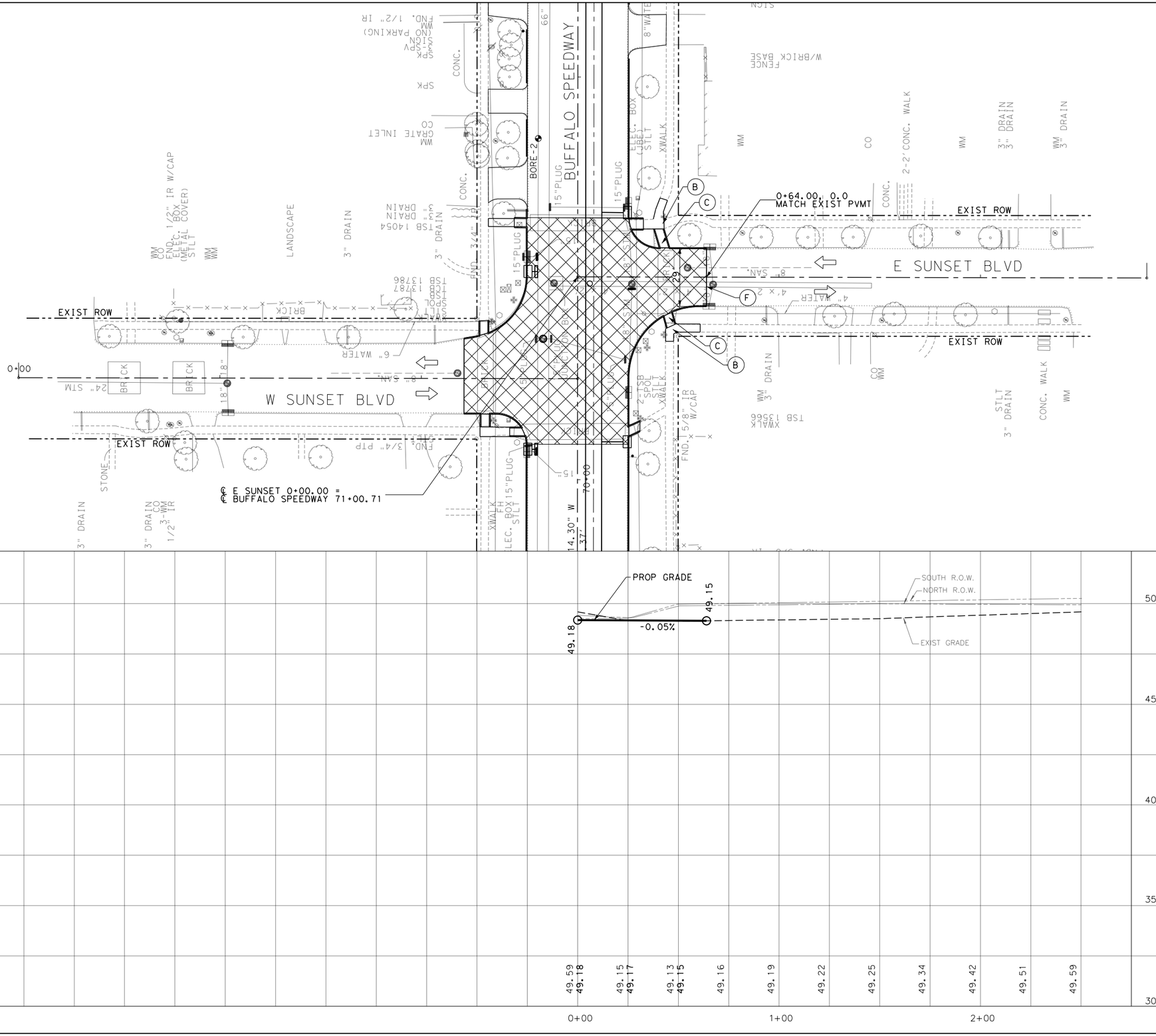
ROADWAY PLAN AND PROFILE

W SUNSET BLVD

SHEET 1 OF 1

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FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		274
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

GENERAL NOTES

1. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.
2. FOR DRIVEWAY STATION AND OFFSET DATA SEE DRIVEWAY DETAIL SHEETS.
3. ALL STATIONS ARE FOR ℄ BUFFALO SPEEDWAY UNLESS NOTED OTHERWISE.
4. SEE CROSSWALK PAVING LAYOUT PLANS FOR ADDITIONAL DETAILS.
5. ANY NECESSARY ADJUSTMENTS AND REPAIRS TO EXISITNG IRRIGATION LINES WILL BE PAID FOR UNDER ITEM 170-6002 IRRIGATION SYSTEM (TY I).
6. CONTRACTOR TO VERIFY DEPTH OF COVER TO EXISTING STORM SEWER TO REMAIN AND HAND MIX SUBGRADE IF NECESSARY.
7. SEE TREE PROTECTION PLANS FOR ADDITIONAL DETAILS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
8. SEE INTERSECTION LAYOUT FOR ADDITIONAL INTERSECTION GRADING INFORMATION.
9. SEE DRAINAGE PLAN & PROFILE SHEETS FOR LOCATION OF EXISTING DRAINAGE STRUCTURES.
10. SEE UTILITY COORDINATION PLANS FOR LOCATIONS OF EXISTING UTILITIES.

STATE OF TEXAS
MEHRAN BAVARIAN
48811
REGISTERED PROFESSIONAL ENGINEER
8/25/2020

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11200 Broadway Street, Suite 2320
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Fax – (832) 456-4701
Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

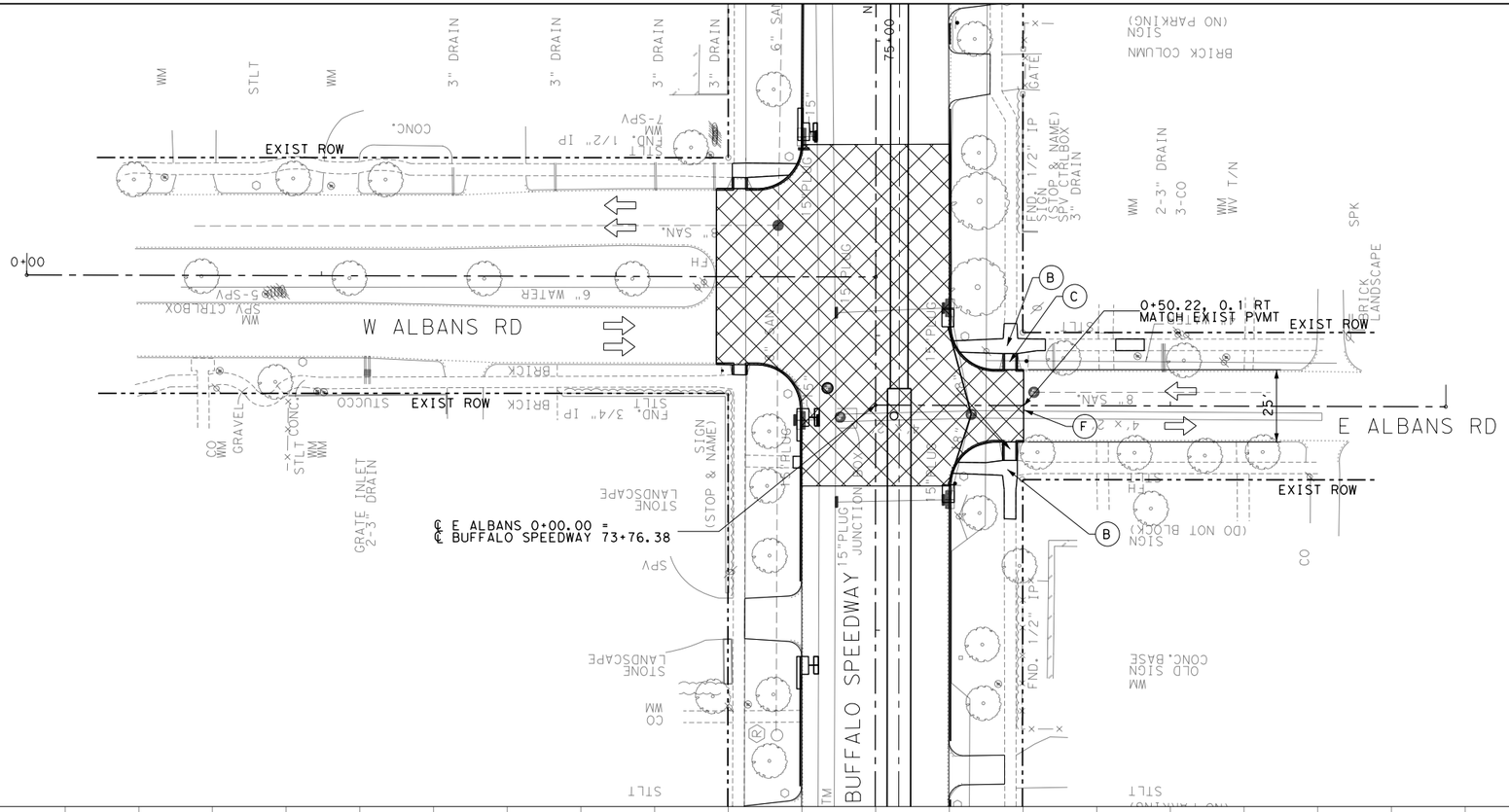
ROADWAY PLAN AND PROFILE

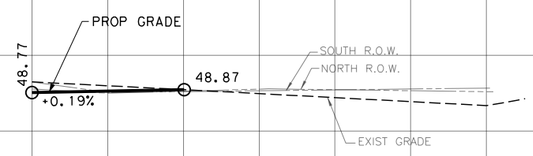
E SUNSET BLVD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		275
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY





0 50′ 100′

SCALE IN FEET

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
- (E) EXTEND EXIST PVC DRAIN THROUGH CURB
- (F) SAWCUT FULL DEPTH & TIE-IN TO EXIST PVMT
- PROP FAST TRACK PAVEMENT
- PROP CONCRETE RIP RAP (REFER TO ITEM 432 FOR MORE INFORMATION)

GENERAL NOTES

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2. FOR DRIVEWAY STATION AND OFFSET DATA SEE DRIVEWAY DETAIL SHEETS.
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City of West University Place

BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

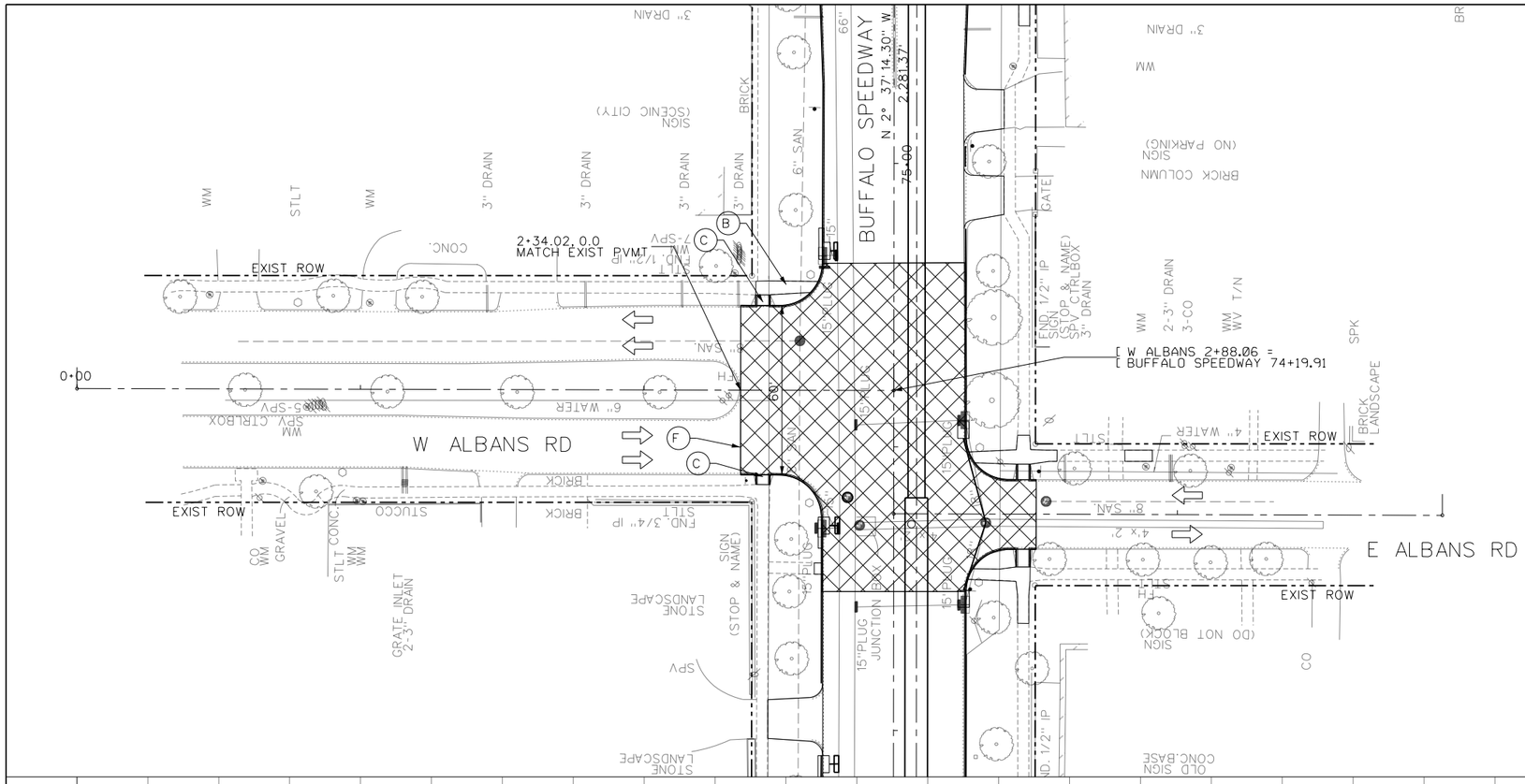
ROADWAY PLAN AND PROFILE

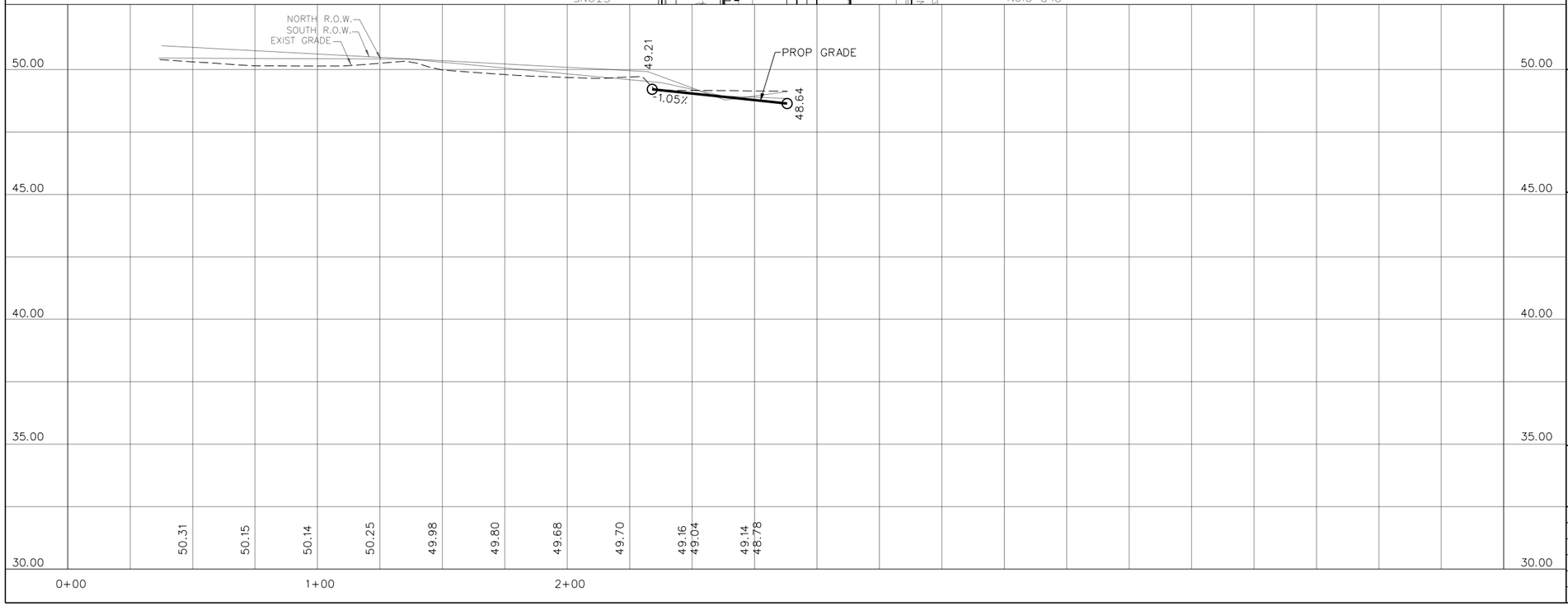
E ALBANS RD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			276
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	





0 50' 100'

SCALE IN FEET

N

LEGEND

- (A) PROP 10" REINF CONC PVMT W/ 8" LTS
- (B) PROP SIDEWALK
- (C) PROP SIDEWALK RAMP
- (D) PROP BRICK PAVERS
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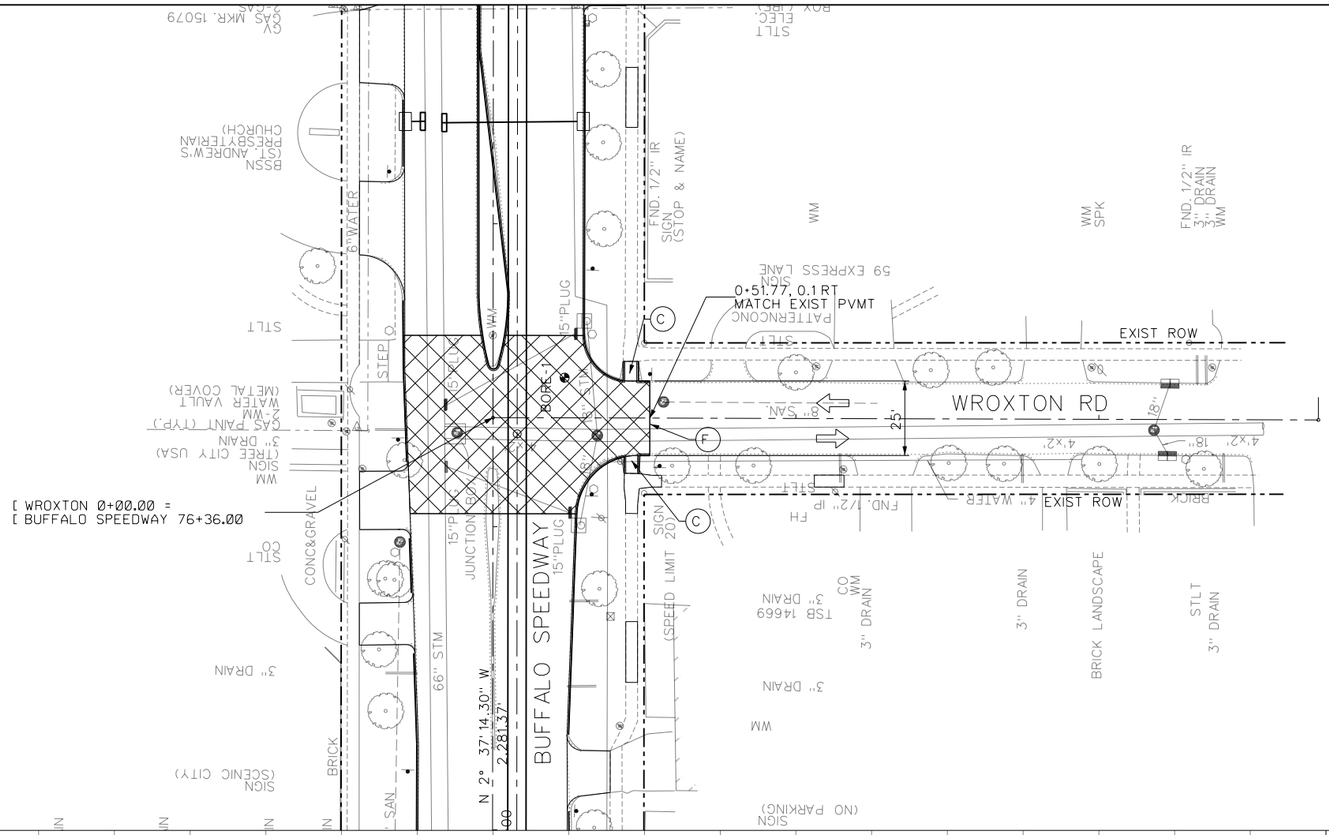
ROADWAY PLAN AND PROFILE

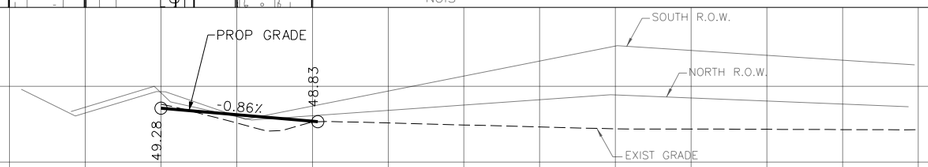
W ALBANS RD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		277
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY







0 50' 100'

SCALE IN FEET

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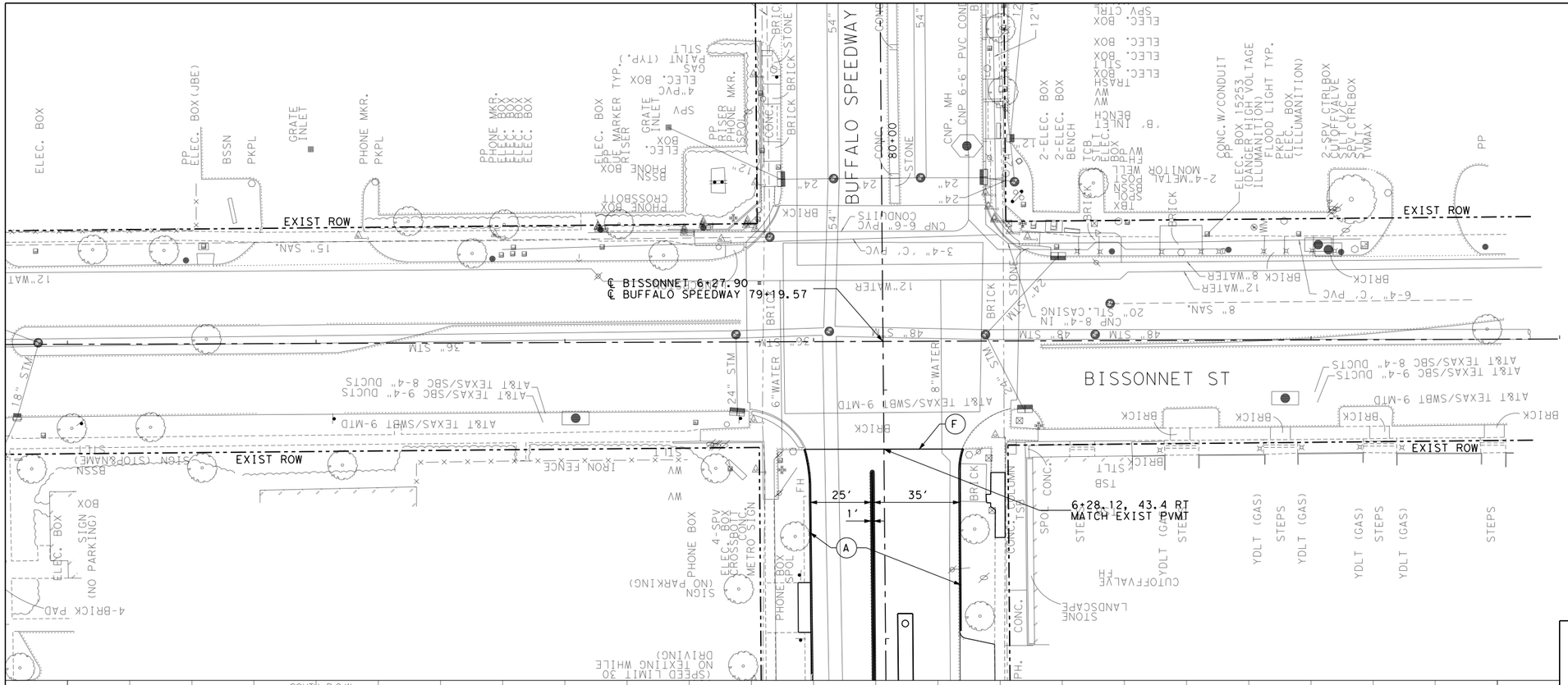
ROADWAY PLAN AND PROFILE

WROXTON RD

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		278
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 50′ 100′

SCALE IN FEET

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BUFFALO SPEEDWAY RECONSTRUCTION (HOLCOMBE BLVD. TO BISSONNET)

ROADWAY PLAN AND PROFILE

BISSONNET ST

SHEET 1 OF 1

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			279
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	

DW ID	DRIVEWAY CL STATION	OFFSET				ELEVATION			X%	RADIUS (FT)		DRIVEWAY WIDTH, W (FT)	DRIVEWAY AREA (SY)	DRIVEWAY TYPE
		LT/RT	POINT "A"	POINT "B"	POINT "C"	POINT "A"	POINT "B"	POINT "C"		R1	R2			
1	2+81.14	RT	-	-	-	-	-	-	-	-	-	-	-	OMITTED
2	3+27.56	RT	-	-	-	-	-	-	-	-	-	-	-	OMITTED
3	4+47.41	RT	-	-	-	-	-	-	-	-	-	-	-	OMITTED
4	4+76.17	LT	32.50	45.97	-	44.89	46.35	-	10.8%	10	10	25.25	42.22	COMMERCIAL
5	6+01.55	RT	37.10	43.03	-	44.93	45.59	-	11.1%	10	10	34.00	25.64	COMMERCIAL
6	6+71.05	RT	37.00	43.25	-	45.17	45.72	-	8.7%	10	10	29.25	23.90	COMMERCIAL
7	10+19.19	LT	28.92	44.74	-	44.90	46.52	-	10.2%	2	2	37.25	65.38	COMMERCIAL
8	10+66.25	LT	29.05	44.88	-	44.75	46.29	-	9.7%	2	2	37.00	64.89	COMMERCIAL
9	10+77.71	RT	30.92	42.44	-	44.68	46.06	-	12.0%	5	5	20.00	26.49	COMMERCIAL
10	11+16.85	LT	29.17	44.65	-	44.73	46.01	-	8.3%	5	5	13.00	23.11	RESIDENTIAL
11	11+58.44	LT	29.27	44.64	-	44.88	45.98	-	7.2%	5	5	15.75	28.01	RESIDENTIAL
12	12+09.57	LT	29.40	44.69	-	45.06	46.17	-	7.2%	5	5	10.75	18.99	RESIDENTIAL
13	12+59.87	LT	28.85	44.53	-	45.26	46.20	-	6.0%	5	5	12.75	19.11	RESIDENTIAL
14	12+60.18	RT	29.23	43.29	-	45.25	46.35	-	7.8%	5	5	12.75	21.19	RESIDENTIAL
15	14+73.08	RT	24.50	44.00	-	45.71	46.89	-	6.0%	5	5	10.75	24.70	RESIDENTIAL
16	15+19.09	RT	24.50	43.88	-	45.58	46.85	-	6.6%	5	2	13.25	26.73	RESIDENTIAL
17	15+35.53	RT	24.50	43.99	-	45.53	46.72	-	6.1%	9	10	6.75	19.22	RESIDENTIAL
18	15+45.75	LT	24.50	43.75	-	45.50	46.64	-	5.9%	3	3	12.00	28.08	RESIDENTIAL
19	16+13.77	LT	24.50	43.88	-	45.60	46.76	-	6.0%	3	3	12.00	26.49	RESIDENTIAL
20	16+24.85	RT	24.50	43.96	-	45.63	46.72	-	5.6%	8	8	9.00	22.24	RESIDENTIAL
21	16+35.98	LT	24.50	43.93	-	45.66	46.69	-	5.3%	8	3	11.00	27.50	RESIDENTIAL
22	16+74.12	RT	24.50	43.96	-	45.78	46.89	-	5.7%	8	8	7.33	21.08	RESIDENTIAL
23	17+26.51	RT	24.50	44.00	-	45.94	46.90	-	4.9%	10	10	7.00	19.62	RESIDENTIAL
24	17+60.73	LT	24.50	44.02	-	45.91	47.10	-	6.1%	3	3	13.00	26.60	RESIDENTIAL
25	17+79.45	RT	24.50	43.89	-	45.85	46.95	-	5.7%	5	3	23.00	49.90	RESIDENTIAL
26	18+13.05	LT	24.50	44.06	-	45.75	47.18	-	7.3%	3	3	12.00	26.40	RESIDENTIAL
27	18+38.04	RT	24.50	43.96	-	45.68	47.20	-	7.8%	3	3	10.33	24.42	RESIDENTIAL
28	18+48.42	LT	24.50	44.16	-	45.65	47.06	-	7.2%	3	3	14.25	31.60	RESIDENTIAL
29	19+12.87	LT	24.50	44.12	-	45.72	47.23	-	7.7%	5	5	15.75	35.91	RESIDENTIAL
30	19+13.23	RT	24.50	43.95	-	45.73	47.16	-	7.4%	3	3	12.00	26.33	RESIDENTIAL
31	21+59.83	RT	24.50	44.53	-	45.88	47.44	-	7.8%	8	8	13.66	33.37	RESIDENTIAL
32	-	-	-	-	-	-	-	-	-	-	-	-	-	OMITTED
33	22+30.24	LT	24.50	43.77	-	45.88	47.21	-	6.9%	5	5	18.25	39.65	RESIDENTIAL
34	22+64.14	RT	24.50	40.23	-	45.99	47.40	-	9.0%	5	5	21.00	36.07	RESIDENTIAL
35	22+86.63	LT	24.50	43.77	-	46.06	47.40	-	7.0%	5	5	11.25	25.67	RESIDENTIAL
36	22+98.83	RT	24.50	44.43	-	46.09	47.50	-	7.1%	3	3	11.75	27.22	RESIDENTIAL
37	23+36.37	LT	24.50	43.64	-	46.21	47.30	-	5.7%	5	5	10.00	25.15	RESIDENTIAL
38	23+72.93	RT	24.50	44.33	-	46.32	47.29	-	4.9%	3	3	12.00	27.92	RESIDENTIAL
39	24+00.04	LT	24.50	43.76	-	46.34	47.05	-	3.7%	3	3	13.00	30.74	RESIDENTIAL
40	24+25.25	RT	24.50	44.26	-	46.26	46.98	-	3.6%	3	3	8.00	20.83	RESIDENTIAL
41	24+67.03	LT	24.50	43.71	-	46.14	47.13	-	5.2%	3	3	15.00	32.31	RESIDENTIAL
42	24+73.70	RT	24.50	44.49	-	46.12	47.19	-	5.4%	3	3	10.00	22.37	RESIDENTIAL
43	24+87.50	LT	24.50	43.68	-	46.07	47.40	-	6.9%	5	3	12.00	26.22	RESIDENTIAL
44	25+44.99	LT	24.50	43.59	-	46.12	47.51	-	7.3%	9	3	17.75	38.62	RESIDENTIAL
45	25+67.45	RT	24.50	44.35	-	46.18	46.62	-	2.2%	3	3	8.00	24.79	RESIDENTIAL
46	27+85.56	LT	24.50	43.61	-	46.48	47.21	-	3.8%	5	5	11.66	26.18	RESIDENTIAL
47	28+39.94	LT	24.50	43.61	-	46.65	47.45	-	4.2%	3	3	13.00	27.63	RESIDENTIAL
48	28+56.55	RT	24.50	44.16	-	46.70	47.47	-	3.9%	3	3	12.00	26.47	RESIDENTIAL
49	28+84.10	LT	24.50	43.60	-	46.78	47.27	-	2.6%	3	3	13.00	27.61	RESIDENTIAL
50	29+21.96	RT	24.50	44.22	-	46.89	47.55	-	3.3%	3	3	12.00	28.58	RESIDENTIAL
51	29+39.25	LT	24.50	43.59	-	46.95	47.40	-	2.4%	3	3	14.25	29.71	RESIDENTIAL
52	29+85.95	LT	24.50	43.59	-	47.04	47.30	-	1.3%	5	5	10.00	22.03	RESIDENTIAL
53	30+11.54	RT	24.50	44.30	-	46.97	47.71	-	3.7%	3	3	11.75	26.29	RESIDENTIAL
54	30+34.92	RT	24.50	44.31	-	46.90	47.57	-	3.4%	3	3	8.66	20.30	RESIDENTIAL
55	30+76.53	LT	24.50	43.38	-	46.77	47.44	-	3.5%	5	5	7.33	17.21	RESIDENTIAL

NOTES:

1. REFER TO THE DRIVEWAY DETAILS SHEET 4 OF 4 FOR DETAIL INFORMATION.
2. DRIVEWAYS SHALL BE DESIGNED PER CITY OF WEST UNIVERSITY PLACE STANDARDS. REFER TO THE CITY OF WEST UNIVERSITY PLACE STANDARD DRIVEWAY AND SIDEWALK DETAILS SHEET FOR ADDITIONAL INFORMATION.
3. ELEVATION AT POINT "B" IS (+/−) AS SHOWN IN DRIVEWAY TABLE. CONTRACTOR TO MATCH EXISTING ELEVATION.
4. REFER TO PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

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HOUSTON, TEXAS 77042

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

DRIVEWAY DETAILS

SHEET 1 OF 4

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			280
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	

DW ID	DRIVEWAY CL STATION	OFFSET				ELEVATION			X%	RADIUS (FT)		DRIVEWAY WIDTH, W (FT)	DRIVEWAY AREA (SY)	DRIVEWAY TYPE
		LT/RT	POINT "A"	POINT "B"	POINT "C"	POINT "A"	POINT "B"	POINT "C"		R1	R2			
56	30+82.85	RT	24.50	44.36	-	46.75	47.76	-	5.1%	5	5	34.25	75.32	RESIDENTIAL
57	31+20.01	LT	24.50	43.58	-	46.64	47.84	-	6.3%	3	3	11.00	23.23	RESIDENTIAL
58	31+42.86	LT	24.50	43.84	-	46.57	47.50	-	4.8%	3	3	16.50	38.99	RESIDENTIAL
59	31+77.97	RT	24.50	44.39	-	46.47	47.56	-	5.5%	5	5	9.00	21.74	RESIDENTIAL
60	31+88.58	LT	24.50	43.68	-	46.44	47.69	-	6.5%	3	3	13.75	29.68	RESIDENTIAL
61	32+22.84	RT	24.50	44.37	-	46.45	47.68	-	6.2%	5	5	10.00	24.14	RESIDENTIAL
62	32+57.35	RT	24.50	44.35	-	46.55	47.66	-	5.6%	5	5	17.75	40.98	RESIDENTIAL
63	32+72.94	LT	24.50	43.38	-	46.60	47.90	-	6.9%	3	3	10.25	24.20	RESIDENTIAL
63A*	3+34.83	RT	10.30	15.38	19.38	46.22	46.82	46.90	11.9%	3	3	20.55	12.40	RESIDENTIAL
64	34+37.29	LT	24.50	43.50	-	46.54	47.66	-	5.9%	5	5	8.66	19.89	RESIDENTIAL
65	34+86.24	LT	24.50	43.54	-	46.69	47.67	-	5.1%	5	5	10.00	22.64	RESIDENTIAL
66	35+04.00	RT	24.50	44.16	-	46.74	47.93	-	6.0%	5	5	12.00	27.45	RESIDENTIAL
67	35+20.39	LT	24.50	43.57	-	46.79	47.96	-	6.1%	3	3	12.00	25.66	RESIDENTIAL
68	35+73.12	LT	24.50	43.62	-	46.95	47.93	-	5.1%	3	3	12.00	25.96	RESIDENTIAL
69	35+73.59	RT	24.50	43.74	-	46.95	47.84	-	4.6%	10	3	10.25	23.84	RESIDENTIAL
70	36+32.67	LT	24.50	43.62	-	47.13	48.07	-	4.9%	5	5	20.00	43.57	RESIDENTIAL
71	36+37.88	RT	24.50	44.48	-	47.15	47.92	-	3.9%	3	3	14.00	32.35	RESIDENTIAL
72	36+83.97	RT	24.50	44.52	-	47.28	47.98	-	3.5%	5	5	8.00	19.35	RESIDENTIAL
73	36+95.69	LT	24.50	43.55	-	47.32	47.97	-	3.4%	3	3	11.75	24.73	RESIDENTIAL
74	37+30.15	RT	24.65	44.54	-	47.42	48.05	-	3.2%	3	3	20.00	46.49	RESIDENTIAL
75	37+36.30	LT	24.65	43.55	-	47.44	47.91	-	2.5%	5	5	16.00	30.30	RESIDENTIAL
76	37+75.01	RT	24.90	44.61	-	47.37	48.02	-	3.3%	8	3	8.50	19.45	RESIDENTIAL
77	38+09.75	LT	25.00	43.53	-	47.27	48.07	-	4.3%	3	3	12.00	27.93	RESIDENTIAL
78	38+19.11	RT	25.00	44.58	-	47.24	48.21	-	5.0%	8	5	8.00	19.79	RESIDENTIAL
79	38+38.90	RT	25.00	44.58	-	47.18	48.24	-	5.4%	5	5	9.25	21.73	RESIDENTIAL
80	38+74.68	LT	25.00	43.35	-	47.18	48.09	-	5.0%	5	7	16.75	27.30	RESIDENTIAL
81	38+93.54	RT	25.00	44.65	-	47.24	48.17	-	4.7%	3	3	15.00	33.27	RESIDENTIAL
82	39+44.65	LT	25.00	43.23	-	47.39	48.22	-	4.5%	5	5	16.30	33.55	RESIDENTIAL
83	39+85.97	LT	25.00	43.18	-	47.51	48.07	-	3.1%	5	5	10.00	22.71	RESIDENTIAL
84	40+04.02	RT	25.00	44.89	-	47.46	48.12	-	3.3%	3	3	32.50	72.26	RESIDENTIAL
85	42+78.75	RT	25.00	44.67	-	47.42	48.51	-	5.5%	5	5	17.00	38.11	RESIDENTIAL
86	43+34.05	LT	25.00	43.33	-	47.59	48.92	-	7.2%	3	3	16.00	29.34	RESIDENTIAL
87	43+37.10	RT	25.00	44.79	-	47.60	48.26	-	3.3%	5	5	15.75	35.91	RESIDENTIAL
88	43+62.62	RT	25.00	44.85	-	47.68	48.29	-	3.1%	3	3	17.00	38.84	RESIDENTIAL
89	43+86.70	LT	25.00	43.38	-	47.76	48.72	-	5.2%	5	5	16.00	34.23	RESIDENTIAL
90	45+90.27	RT	25.00	44.55	-	47.76	48.99	-	6.3%	5	8	20.00	43.39	RESIDENTIAL
91	46+16.45	LT	25.00	43.39	-	47.68	48.77	-	5.9%	3	3	12.50	27.13	RESIDENTIAL
92	46+19.10	RT	25.00	44.68	-	47.67	49.13	-	7.4%	5	5	16.50	33.70	RESIDENTIAL
93	46+67.41	LT	25.00	43.43	-	47.70	49.16	-	7.9%	5	3	10.00	21.21	RESIDENTIAL
94	47+15.01	LT	25.00	43.47	-	47.85	48.75	-	4.9%	5	5	10.00	22.09	RESIDENTIAL
95	47+91.93	LT	25.00	43.62	-	47.71	49.08	-	7.3%	3	3	12.00	25.46	RESIDENTIAL
96	48+29.94	LT	25.00	43.75	-	47.75	49.01	-	6.7%	3	3	12.00	25.32	RESIDENTIAL
97	48+50.52	RT	25.00	44.31	-	47.81	49.51	-	8.8%	7	7	12.00	28.17	RESIDENTIAL
98	48+80.83	RT	25.00	43.99	-	47.91	49.40	-	7.9%	5	5	16.00	34.44	RESIDENTIAL
99	50+07.83	LT	25.00	43.56	-	47.63	48.90	-	6.9%	5	5	9.00	23.48	RESIDENTIAL
100	50+53.67	LT	25.00	43.61	-	47.76	49.03	-	6.8%	3	3	10.66	22.66	RESIDENTIAL
101	51+09.72	LT	25.00	43.57	-	47.93	49.10	-	6.3%	5	5	8.25	18.11	RESIDENTIAL
102	51+17.13	RT	25.00	43.89	-	47.95	49.11	-	6.1%	5	5	12.00	26.76	RESIDENTIAL
103	51+46.56	RT	25.00	43.82	-	47.98	48.89	-	4.8%	8	5	10.50	21.99	RESIDENTIAL
104**	2+01.86	RT	13.17	23.64	-	48.38	49.00	-	6.0%	3	1	14.75	22.21	RESIDENTIAL
105	53+78.62	RT	24.75	43.83	-	47.98	48.70	-	3.8%	5	5	8.67	19.71	RESIDENTIAL
106	53+92.08	LT	24.70	43.65	-	47.94	48.98	-	5.5%	3	3	11.75	26.41	RESIDENTIAL
107	54+03.40	RT	24.65	43.93	-	47.91	48.63	-	3.7%	5	5	11.67	26.27	RESIDENTIAL
108	54+44.59	LT	24.50	43.68	-	47.79	48.94	-	6.0%	5	5	12.00	26.58	RESIDENTIAL

* STATION AND OFFSET ARE BASED ON ℄ DUKE STREET.
** STATION AND OFFSET ARE BASED ON ℄ W GEORGETOWN STREET.

NOTES:

1. REFER TO THE DRIVEWAY DETAILS SHEET 4 OF 4 FOR DETAIL INFORMATION.
2. DRIVEWAYS SHALL BE DESIGNED PER CITY OF WEST UNIVERSITY PLACE STANDARDS. REFER TO THE CITY OF WEST UNIVERSITY PLACE STANDARD DRIVEWAY AND SIDEWALK DETAILS SHEET FOR ADDITIONAL INFORMATION.
3. ELEVATION AT POINT "B" IS (+/−) AS SHOWN IN DRIVEWAY TABLE. CONTRACTOR TO MATCH EXISTING ELEVATION.
4. REFER TO PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.



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Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

DRIVEWAY DETAILS

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		281
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

DW ID	DRIVEWAY CL STATION	OFFSET				ELEVATION			X%	RADIUS (FT)		DRIVEWAY WIDTH, W (FT)	DRIVEWAY AREA (SY)	DRIVEWAY TYPE
		LT/RT	POINT "A"	POINT "B"	POINT "C"	POINT "A"	POINT "B"	POINT "C"		R1	R2			
109	54+66.71	LT	24.50	43.68	-	47.72	48.93	-	6.3%	3	3	11.33	24.53	RESIDENTIAL
110	54+72.92	RT	24.50	41.90	-	47.70	48.52	-	4.3%	3	3	14.67	29.07	RESIDENTIAL
111	55+15.73	LT	24.50	43.66	-	47.58	48.82	-	6.5%	3	3	11.00	23.84	RESIDENTIAL
112	56+31.77	RT	24.50	44.06	-	48.05	49.14	-	5.6%	5	5	17.50	39.67	RESIDENTIAL
113	56+58.06	RT	24.50	44.12	-	48.16	48.99	-	4.2%	3	5	15.75	35.31	RESIDENTIAL
114	56+94.08	LT	24.50	43.92	-	48.31	48.73	-	2.2%	5	5	8.00	19.56	RESIDENTIAL
115	57+44.28	LT	24.50	43.99	-	48.20	48.77	-	2.9%	5	5	8.50	20.45	RESIDENTIAL
116	57+95.73	LT	24.50	43.98	-	48.20	49.01	-	4.1%	5	5	12.00	27.06	RESIDENTIAL
117	58+46.43	LT	24.50	44.03	-	48.36	49.03	-	3.4%	5	5	11.50	27.05	RESIDENTIAL
118	58+89.42	RT	24.50	43.97	-	48.21	48.87	-	3.4%	10	4	15.75	33.71	RESIDENTIAL
119	59+19.20	RT	24.50	44.01	-	48.11	48.90	-	4.0%	4	4	26.25	54.97	RESIDENTIAL
120	59+43.00	RT	24.50	44.04	-	48.04	48.96	-	4.7%	4	3	11.25	27.26	RESIDENTIAL
121	60+56.69	LT	24.50	43.80	-	48.23	49.07	-	4.3%	5	5	9.75	24.76	RESIDENTIAL
122	61+07.15	LT	24.50	43.81	-	48.39	49.10	-	3.7%	5	5	12.00	27.11	RESIDENTIAL
123	61+51.62	RT	24.50	43.92	-	48.53	49.24	-	3.7%	3	5	19.50	42.25	RESIDENTIAL
124	61+56.42	LT	24.50	43.99	-	48.54	49.15	-	3.1%	3	3	10.50	23.85	RESIDENTIAL
125	61+80.76	RT	24.50	43.92	-	48.62	49.09	-	2.4%	5	5	15.00	32.90	RESIDENTIAL
126	62+08.06	LT	24.50	44.14	-	48.65	49.05	-	2.0%	3	3	10.00	25.80	RESIDENTIAL
127	63+98.80	LT	24.50	44.21	-	48.67	49.33	-	3.4%	3	3	12.00	26.41	RESIDENTIAL
128	64+21.76	RT	24.50	43.99	-	48.74	49.46	-	3.7%	5	5	10.67	24.17	RESIDENTIAL
129	64+40.51	LT	24.50	44.26	-	48.79	49.51	-	3.6%	3	3	11.75	25.73	RESIDENTIAL
130	64+52.90	RT	24.50	39.59	-	48.83	49.62	-	5.2%	3	3	16.50	28.08	RESIDENTIAL
131	64+66.50	LT	24.50	44.28	-	48.87	49.29	-	2.1%	5	5	8.50	29.67	RESIDENTIAL
132	65+16.91	LT	24.50	44.32	-	48.78	49.47	-	3.5%	5	5	11.50	26.50	RESIDENTIAL
133	65+78.98	LT	24.50	44.26	-	48.69	49.66	-	4.9%	3	3	16.33	32.02	RESIDENTIAL
134	66+38.55	LT	24.58	44.14	-	48.87	49.96	-	5.6%	3	3	17.50	31.63	RESIDENTIAL
135	66+81.47	RT	24.75	43.87	-	48.85	49.54	-	3.6%	5	5	16.00	35.49	RESIDENTIAL
136	67+10.10	RT	24.92	43.87	-	48.76	49.54	-	4.1%	5	5	8.25	19.14	RESIDENTIAL
137	68+04.37	LT	25.00	44.40	-	48.53	49.82	-	6.6%	5	5	13.00	24.64	RESIDENTIAL
138	68+45.97	LT	25.00	44.41	-	48.66	49.79	-	5.8%	5	5	13.75	24.87	RESIDENTIAL
139	68+76.07	LT	25.00	44.22	-	48.75	49.49	-	3.9%	5	5	8.67	21.65	RESIDENTIAL
140	69+24.07	LT	25.00	44.30	-	48.89	49.63	-	3.8%	3	5	12.00	26.60	RESIDENTIAL
141	69+44.40	LT	25.00	44.25	-	48.91	49.60	-	3.6%	3	3	10.00	23.59	RESIDENTIAL
142	69+49.07	RT	25.00	43.97	-	48.90	49.56	-	3.5%	5	5	12.00	26.36	RESIDENTIAL
143	71+47.42	LT	25.00	44.40	-	48.88	49.64	-	3.9%	5	5	17.50	35.59	RESIDENTIAL
144	71+87.91	LT	25.00	44.44	-	48.90	49.51	-	3.1%	3	3	12.00	26.10	RESIDENTIAL
145	72+23.53	RT	25.00	43.87	-	48.79	49.36	-	3.0%	5	5	15.25	35.03	RESIDENTIAL
146	72+35.33	LT	25.00	44.49	-	48.76	49.83	-	5.5%	5	5	10.00	27.13	RESIDENTIAL
147	72+52.47	RT	25.00	43.90	-	48.71	49.18	-	2.5%	5	5	10.00	21.91	RESIDENTIAL
148	73+03.85	LT	25.00	44.37	-	48.55	50.01	-	7.5%	5	5	13.75	32.92	RESIDENTIAL
149	74+88.02	RT	24.71	38.75	-	48.41	49.03	-	4.4%	3	3	13.50	23.70	RESIDENTIAL
150	75+18.69	RT	24.58	38.79	-	48.51	49.10	-	4.2%	5	5	13.75	24.32	RESIDENTIAL
151	75+68.03	LT	26.00	44.15	-	48.63	49.71	-	6.0%	3	3	14.00	28.31	RESIDENTIAL
152	76+08.70	LT	27.50	44.14	-	48.72	49.83	-	6.7%	3	3	19.25	35.60	RESIDENTIAL
153	77+01.83	LT	29.20	44.15	-	48.56	49.76	-	8.0%	5	15	24.25	46.13	COMMERCIAL
154	77+58.48	LT	29.30	44.15	-	48.53	49.84	-	8.8%	15	5	24.00	46.73	COMMERCIAL
155	77+84.65	RT	29.87	43.83	-	48.59	49.55	-	6.8%	3	3	25.25	41.88	COMMERCIAL

NOTES:

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4. REFER TO PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
8/24/2020

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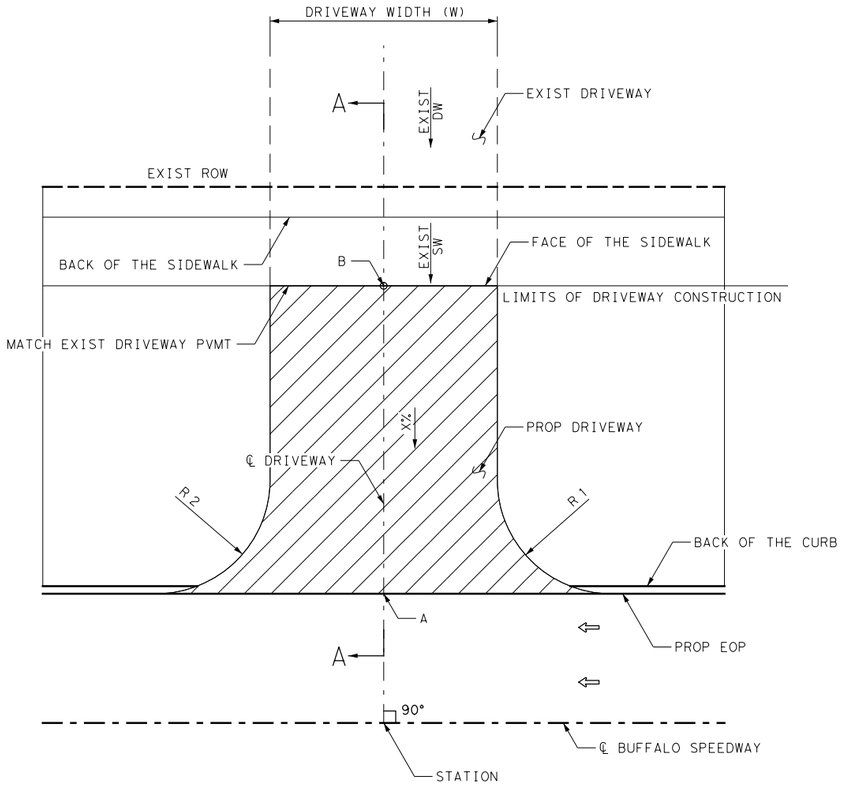
City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

DRIVEWAY DETAILS

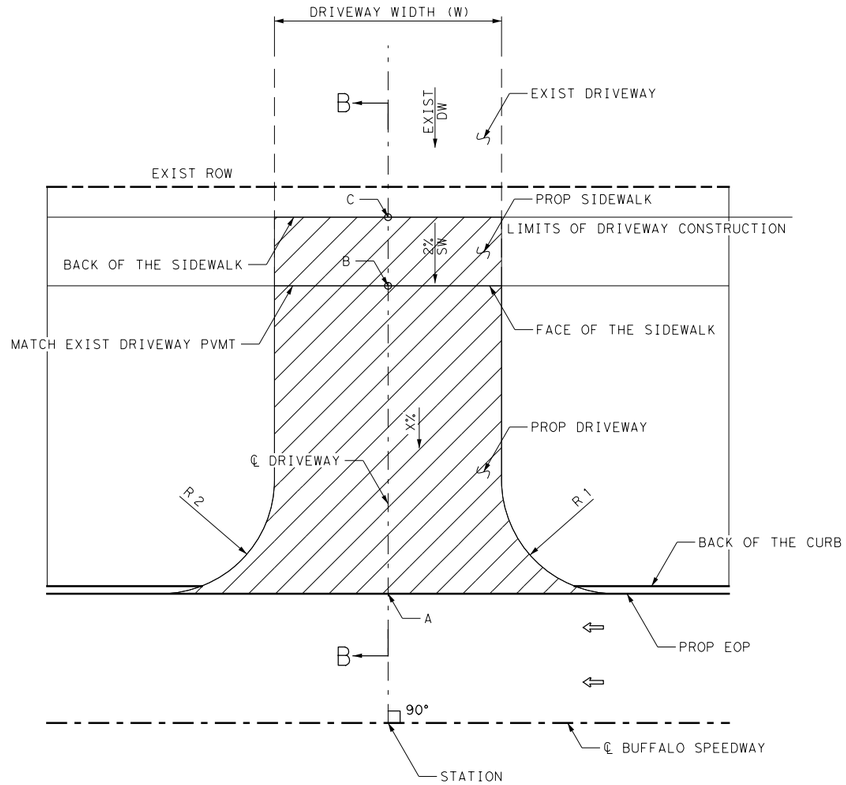
Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			282
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



TYPICAL DRIVEWAY LAYOUT

NTS



TYPICAL DRIVEWAY LAYOUT

NTS

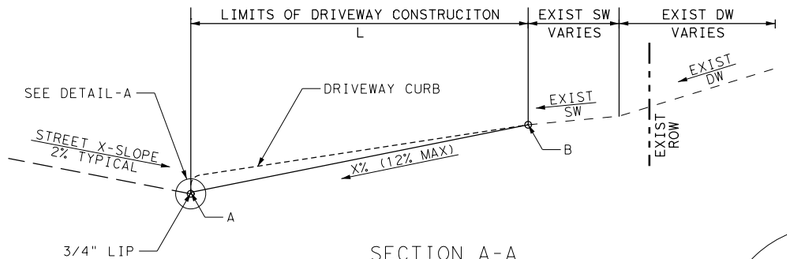
LEGEND

⇦ DIRECTION OF TRAFFIC

DRIVEWAY PAY LIMITS

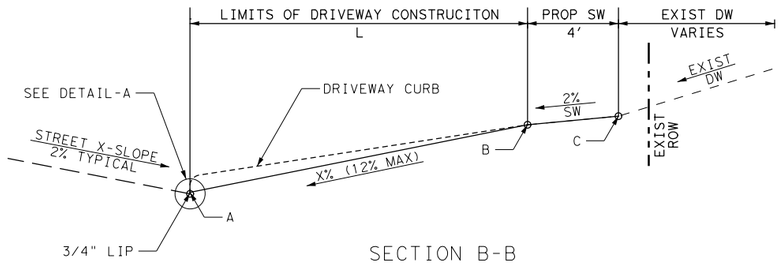
NOTE:

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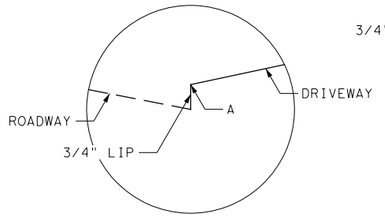
SECTION A-A

NTS



SECTION B-B

NTS



DETAIL-A

NTS

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED
PROFESSIONAL ENGINEER
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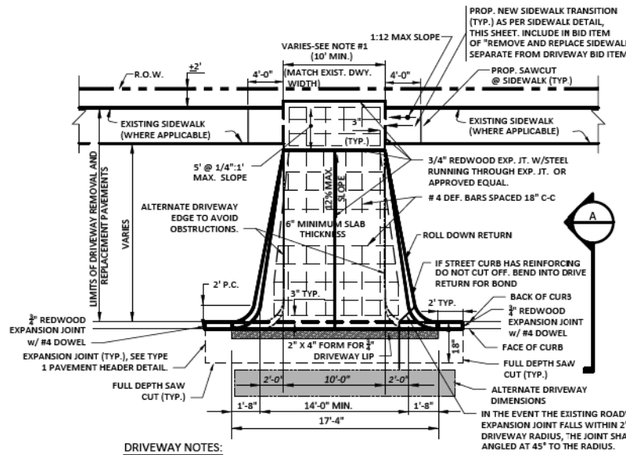
BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

DRIVEWAY DETAILS

SHEET 4 OF 4

Texas Department of Transportation

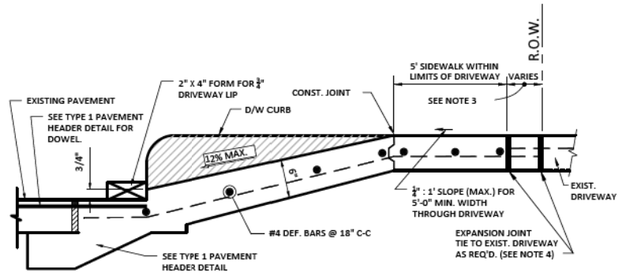
FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		283
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



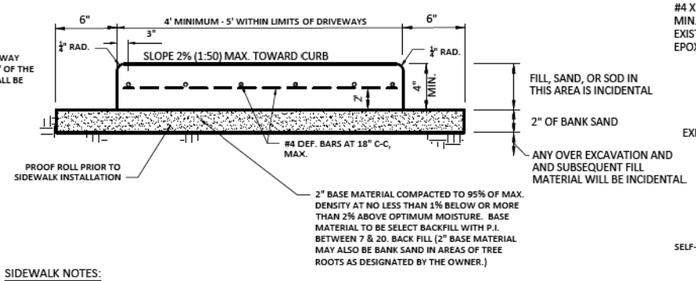
DRIVEWAY NOTES:

1. PROPOSED DRIVEWAY FINISH SURFACE MATERIAL SHALL MATCH EXISTING DRIVE-WAY MATERIAL.
2. SEE TYPE 1 PAVEMENT HEADER DETAIL.
3. LIMIT OF DRIVEWAY REMOVAL AND REPLACEMENT MAY BE LOCATED AT THE R.O.W. TO ENSURE LESS THAN 12% DRIVEWAY GRADE WHERE REQUIRED. CONSTRUCTION JOINT SHALL THEN BE LOCATED AT R.O.W.
4. SEE TYPE 1 PAVEMENT HEADER FOR CONNECTION TO PAVING.

1 DRIVEWAY DETAIL
Scale: NTS



A SECTION
Scale: NTS



SIDEWALK NOTES:

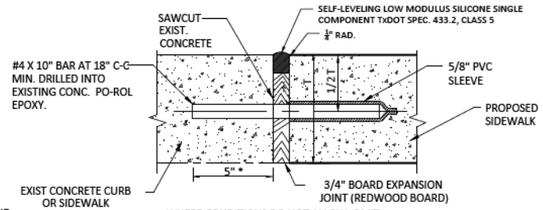
1. SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE 4" THICK WITH COMPRESSIVE STRENGTH OF 3,000 psi, 4' MINIMUM WIDTH. 6" REINFORCEMENT CONC. SIDEWALK THRU DRIVEWAY OPENINGS SHALL BE 6" THICK AND 5' WIDE TO MEET ADA TURN-AROUND REQUIREMENT. SEE "DRIVEWAY DETAIL" ABOVE.
2. PLASTIC CHAIRS SHALL BE USED TO HOLD REINFORCEMENT STEEL AT 2" HIGH.
3. 3/4" REDWOOD JOINT AT INTERVALS OF 20' (MAX.) THROUGHOUT ENTIRE LENGTH OF SIDEWALK AND WHERE NEW WALK MEETS OLD WALK. CONSTRUCTION JOINT SHALL BE PLACED EVERY 5'.
4. 3/4" EXPANSION JOINT WHERE SIDEWALK MEETS CURB, AROUND FIRE HYDRANTS AND UTILITY POLES.
5. SIDEWALK SHALL BE 5" THICK IF LAID IN A TREE ROOT ZONE. CONTRACTOR MUST CONTACT URBAN FORESTER PRIOR TO INSTALLATION.
6. SIDEWALK SHALL NOT HAVE ANY JOINTS IN ROOT ZONE AREA UNLESS IT IS LOCATED AT A DRIVEWAY. CONTRACTOR MUST CONTACT URBAN FORESTER PRIOR TO INSTALLATION.

2 CONCRETE SIDEWALK DETAIL
Scale: NTS

CITY OF WEST UNIVERSITY PLACE

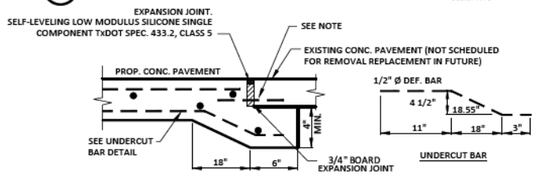
DRIVEWAY & SIDEWALK ADDITIONAL REQUIREMENTS

- WHERE THERE ARE TREE CANOPIES OVERHANGING ANY PORTION OF THE DRIVEWAYS OR SIDEWALKS A ROOT PROTECTIVE LAYER OF 6 MIL POLY SHALL BE PLACED ON TOP OF THE GROUND, UNDER THE REBAR WHICH WILL PROTECT ANY ROOT SYSTEM THAT COULD BE BECOME DAMAGED FROM THE CONCRETE. **NO TREE ROOTS 1" DIAMETER OR LARGER SHALL BE CUT OF DAMAGED WITHOUT APPROVAL OF CITY FORESTER, 713-662-5834.**
- THE FINISH ON ALL PUBLIC DRIVEWAYS APPROACHES AND SIDEWALKS SHALL BE NATURAL CONCRETE WITH A LIGHT BROOM FINISH. NO PIGMENT, COLOR, TILE, BRICK OR PATTERNING SHALL BE PLACED OR INSTALLED.
- SHOULD AN UNDER PAVEMENT CONDUIT WISH TO BE INSTALLED TO AFFORD ACCESS LATER OR FOR IRRIGATION THE PIPING MATERIAL SHALL BE SCHEDULE 40 MINIMUM SIZE PIPING.
- NO WATER METERS, WATER VALVES, HYDRANTS VALVES OR CLEANOUTS SHALL BE INSTALLED IN PAVED AREAS **UNLESS APPROVED IN WRITING BY THE CITY OF WEST UNIVERSITY PLACE.**
- ON SIDE STREET ENTRY GARAGES THE GARAGE DOOR SHALL BE 18 FEET MINIMUM FROM THE CLOSEST EDGE OF THE PUBLIC SIDEWALK.
- FOR MORE INFORMATION SEE CITY ORDINANCES APPENDIX A, ARTICLE 7, 8, 10 & 12.



WHERE CONDITIONS DO NOT ALLOW, OMIT BARS & PROVIDE 3/4" REDWOOD BOARD WITH A PAVEMENT HEADER.

3 PROPOSED SIDEWALK AT EXIST. CONCRETE DETAIL
Scale: NTS



NOTE:
PROVIDE 3/4" (6" THK. PAVEMENT) OR 1" (7" THK. OR GREATER PAVEMENT) DIAMETER SMOOTH STEEL BAR, 20" LONG ON 12" CENTERS. END TREATMENT SHALL MATCH EXPANSION JOINT ADJACENT TO HEADER. WHERE THE ADJACENT DOWEL INTO EXPANSION JOINT HAS A SLIP SLEEVE ADJACENT TO HEADER, DRILL HOLE AND DRIVE EXISTING PAVEMENT. WHERE ADJACENT EXPANSION JOINT HAS A SLIP SLEEVE OPPOSITE TO THE HEADER, DRILL AND EPOXY DOWEL INTO EXISTING PAVEMENT WITH "PO-ROL" OR EQUAL, AND PROVIDE SLIP SLEEVE ON EXPOSED END.

4 TYPE 1 PAVEMENT HEADER
Scale: NTS

STATE OF TEXAS
SYED S. HAQ P.E.
94660
LICENSED PROFESSIONAL ENGINEER
8/24/2020

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Texas Registered Engineering Firm F-2144

City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS
(HOLCOMBE BLVD. TO BISSONNET)

CITY OF WEST UNIVERSITY PLACE
STANDARD DRIVEWAY AND
SIDEWALK DETAILS

HDR

City of West University Place, Texas

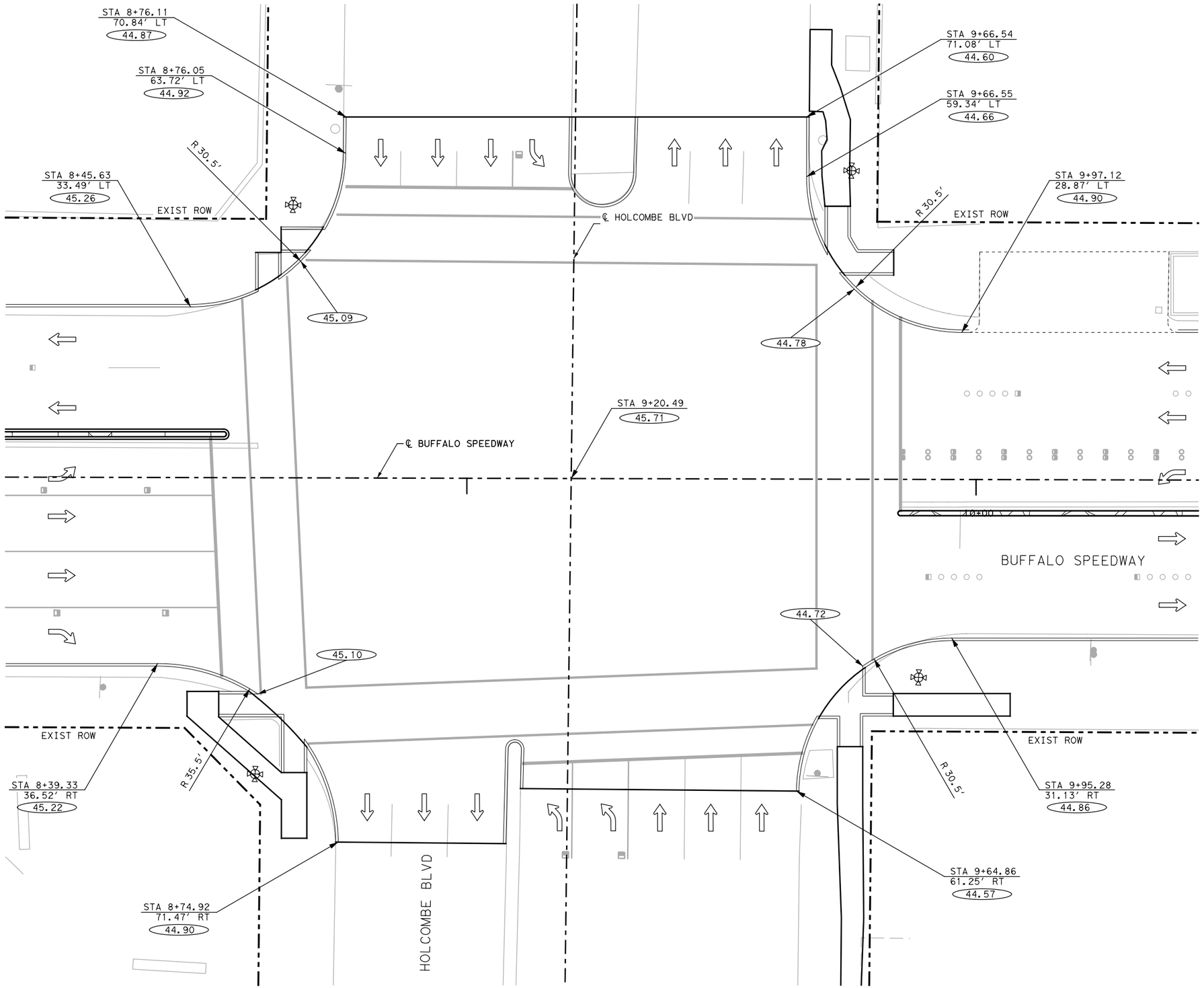
Standard Driveway and Sidewalk Details

DATE

FIGURE

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			284
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 20' 40'

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- XX.XX — EDGE OF PAVT ELEVATION (FT)
- EXISTING SIGNAL POLE
- PROPOSED SIGNAL POLE

NOTES:

1. ALL STATIONS ARE BASED ON ℄ BUFFALO SPEEDWAY UNLESS NOTED OTHERWISE.
2. REFER TO ROADWAY PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.

STATE OF TEXAS
ZAHIDUL SIDDIQUE
98635
LICENSED PROFESSIONAL ENGINEER
08/24/20

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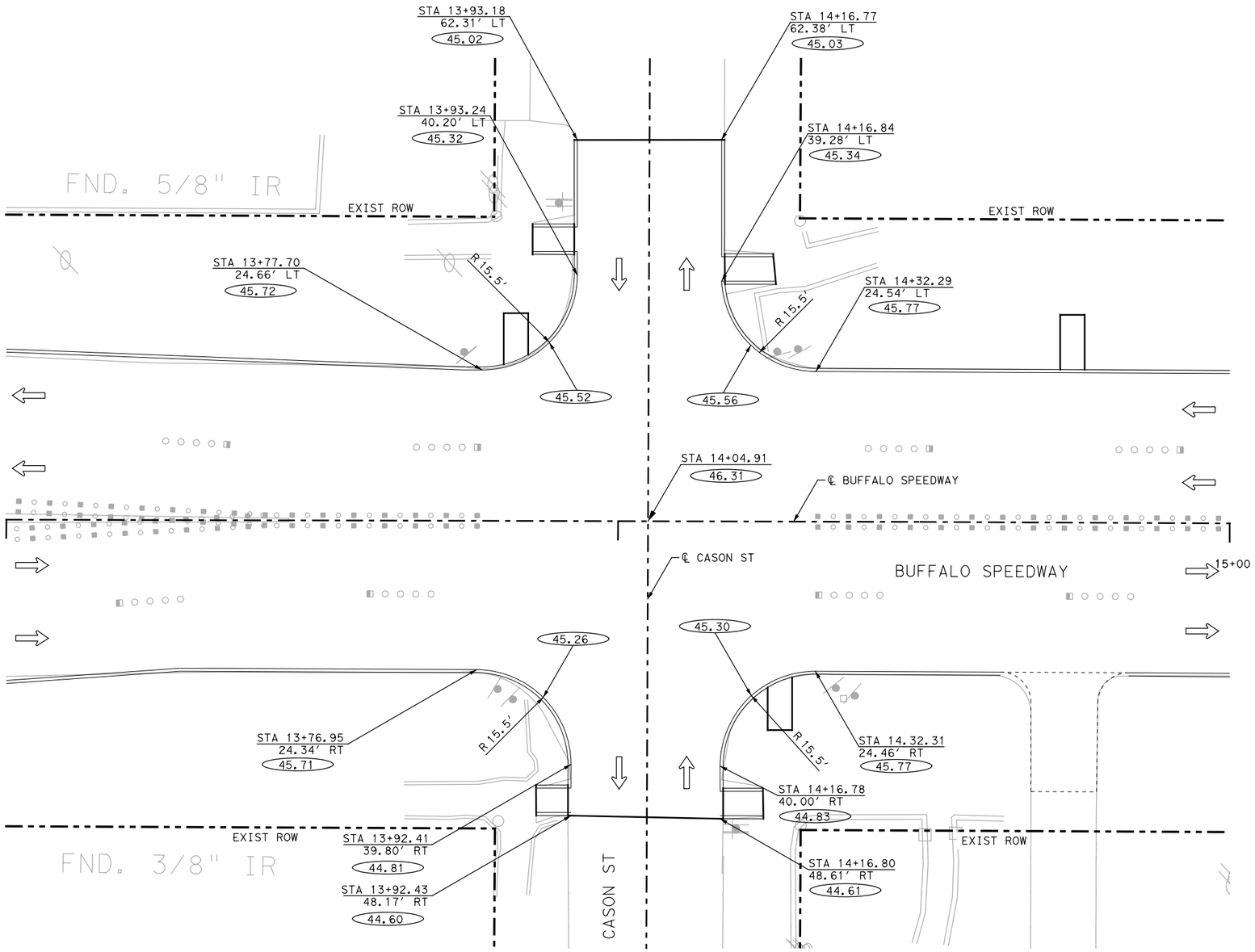
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
HOLCOMBE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		285
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

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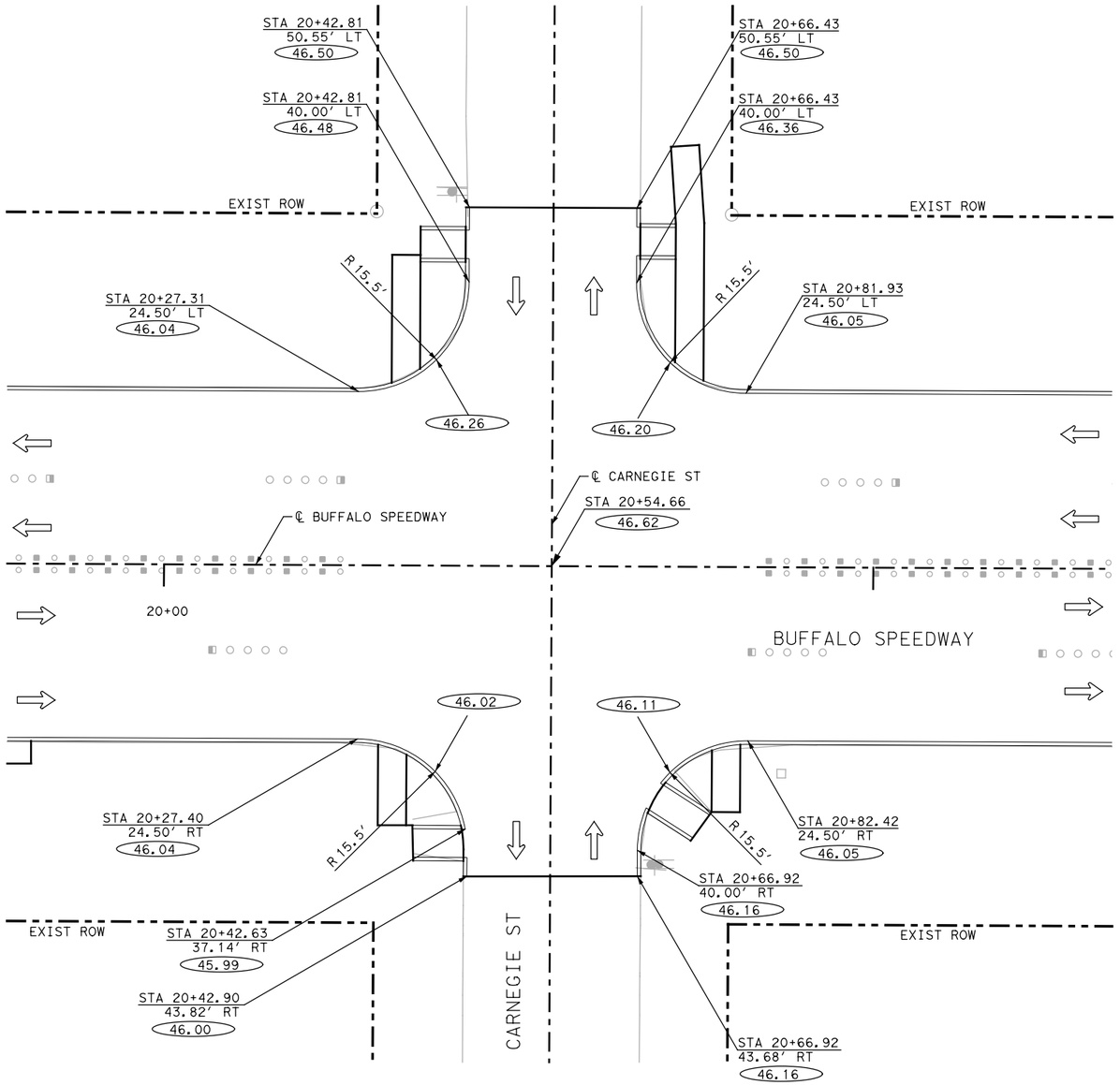
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
CASON ST

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		286
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
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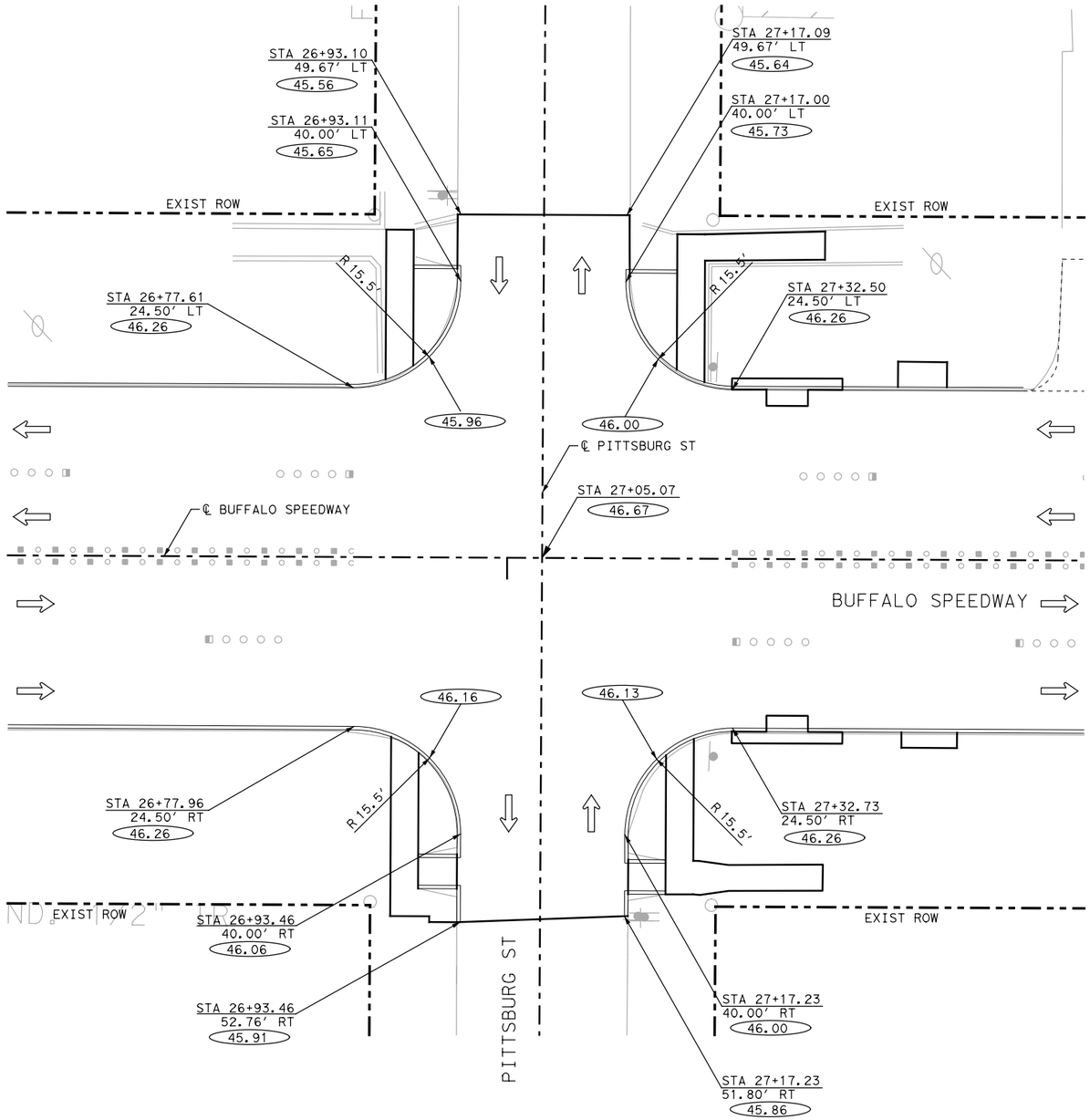
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
CARNEGIE ST

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		287
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

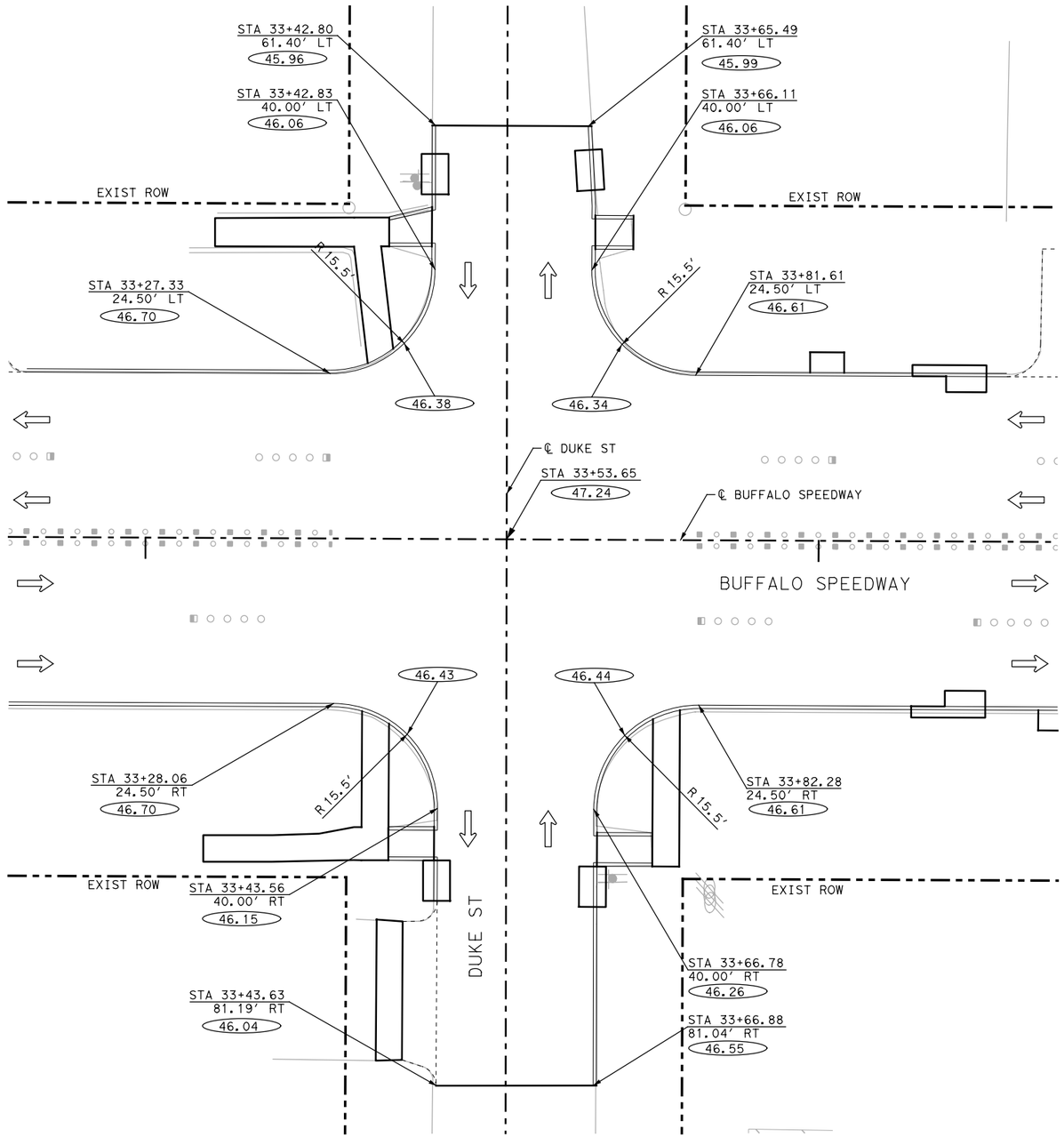
INTERSECTION DETAILS

BUFFALO SPEEDWAY
PITTSBURG ST

SHEET 4 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		288
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

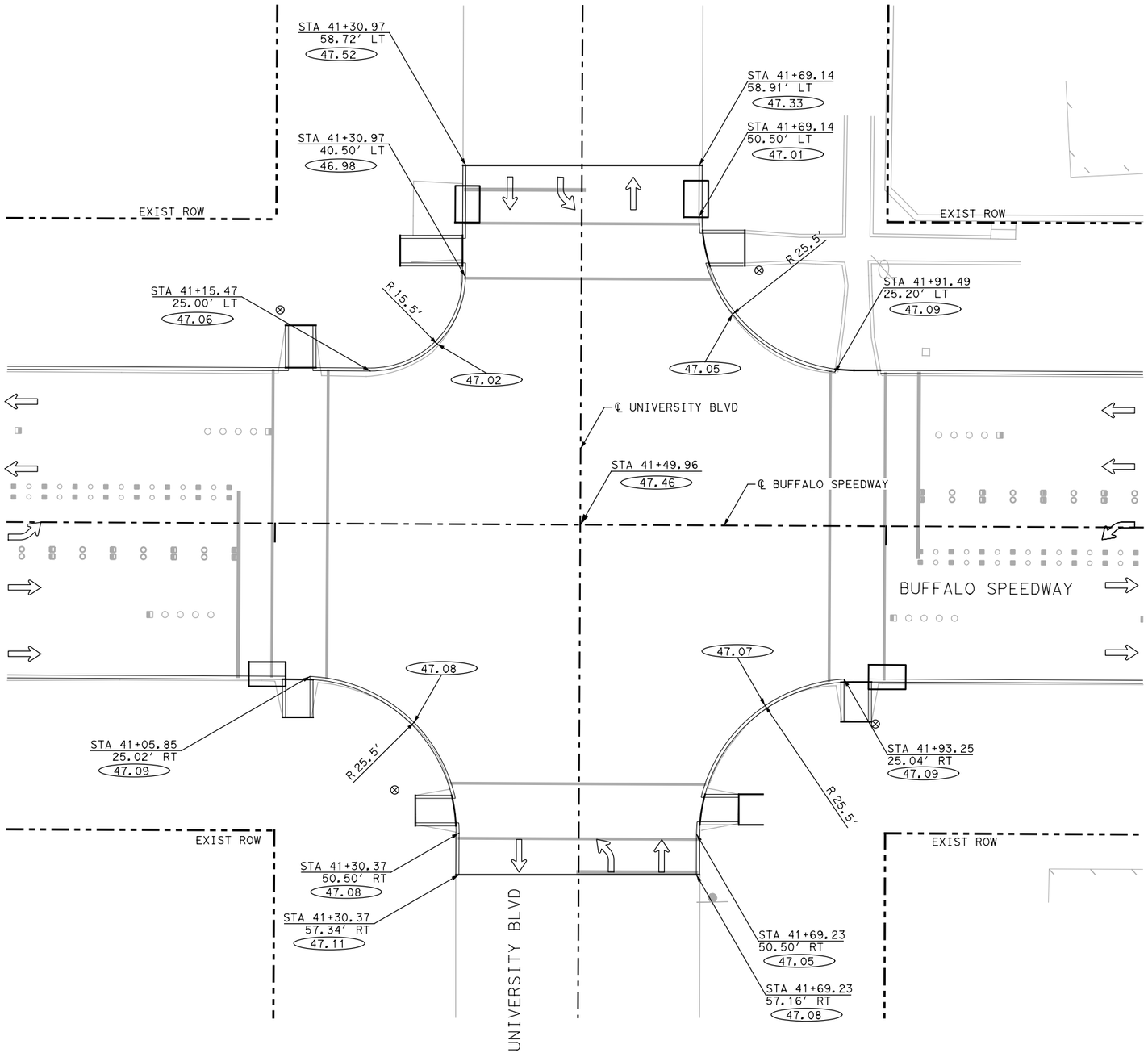
INTERSECTION DETAILS

BUFFALO SPEEDWAY
DUKE ST

SHEET 5 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		289
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

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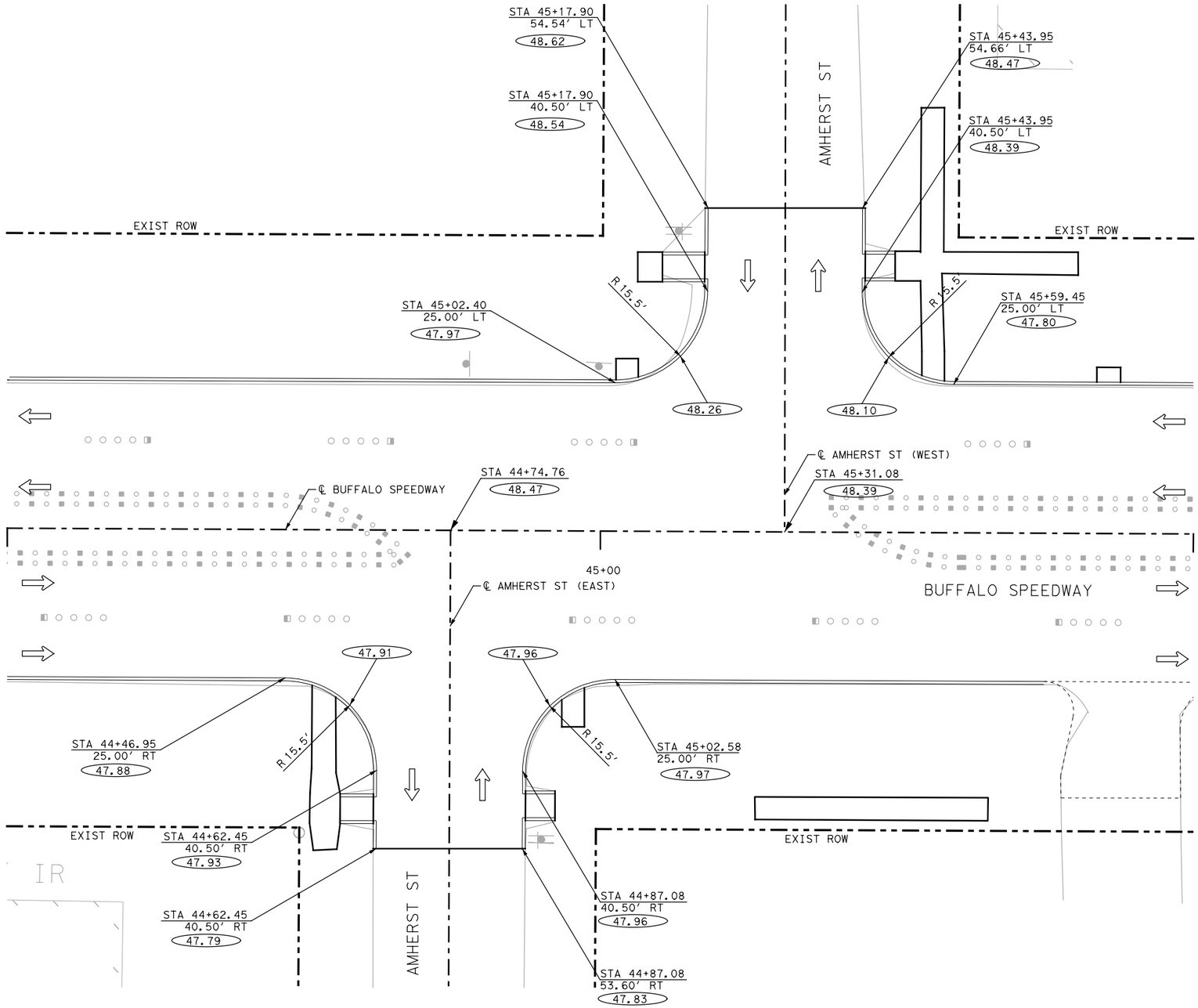
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
UNIVERSITY BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		290
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



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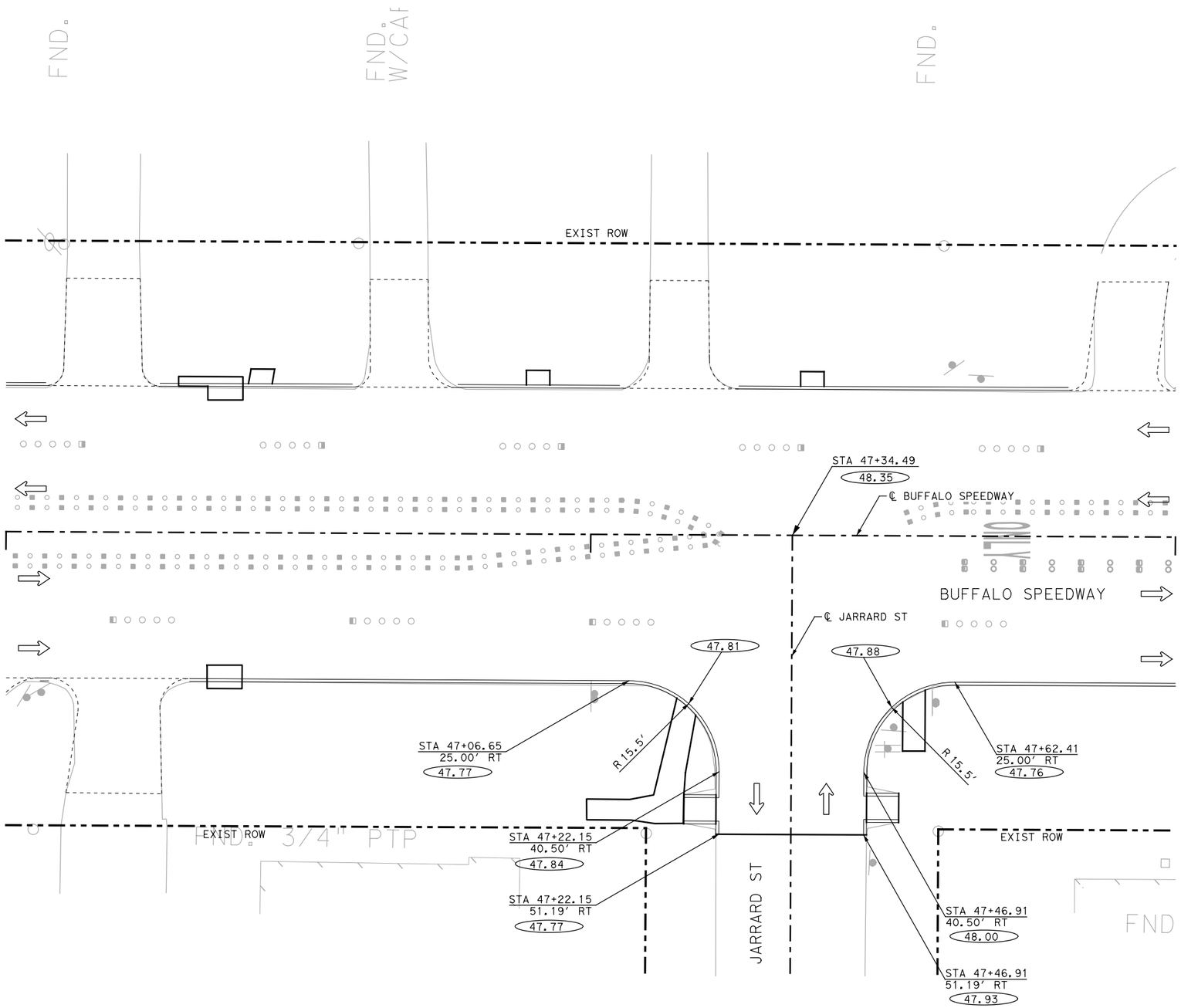
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
AMHERST ST

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		291
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

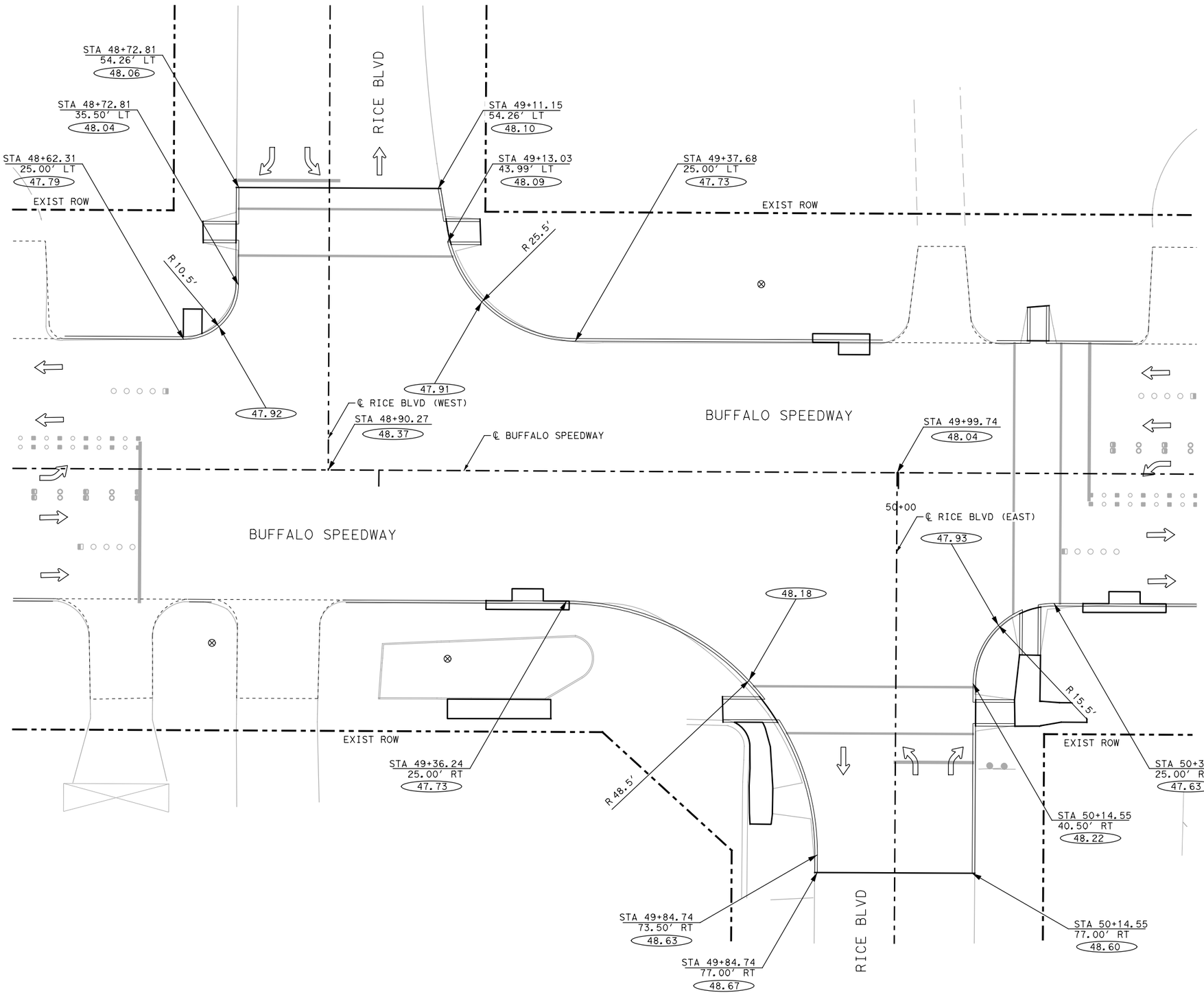
INTERSECTION DETAILS

BUFFALO SPEEDWAY
JARRARD ST

SHEET 8 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		292
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

SCALE IN FEET

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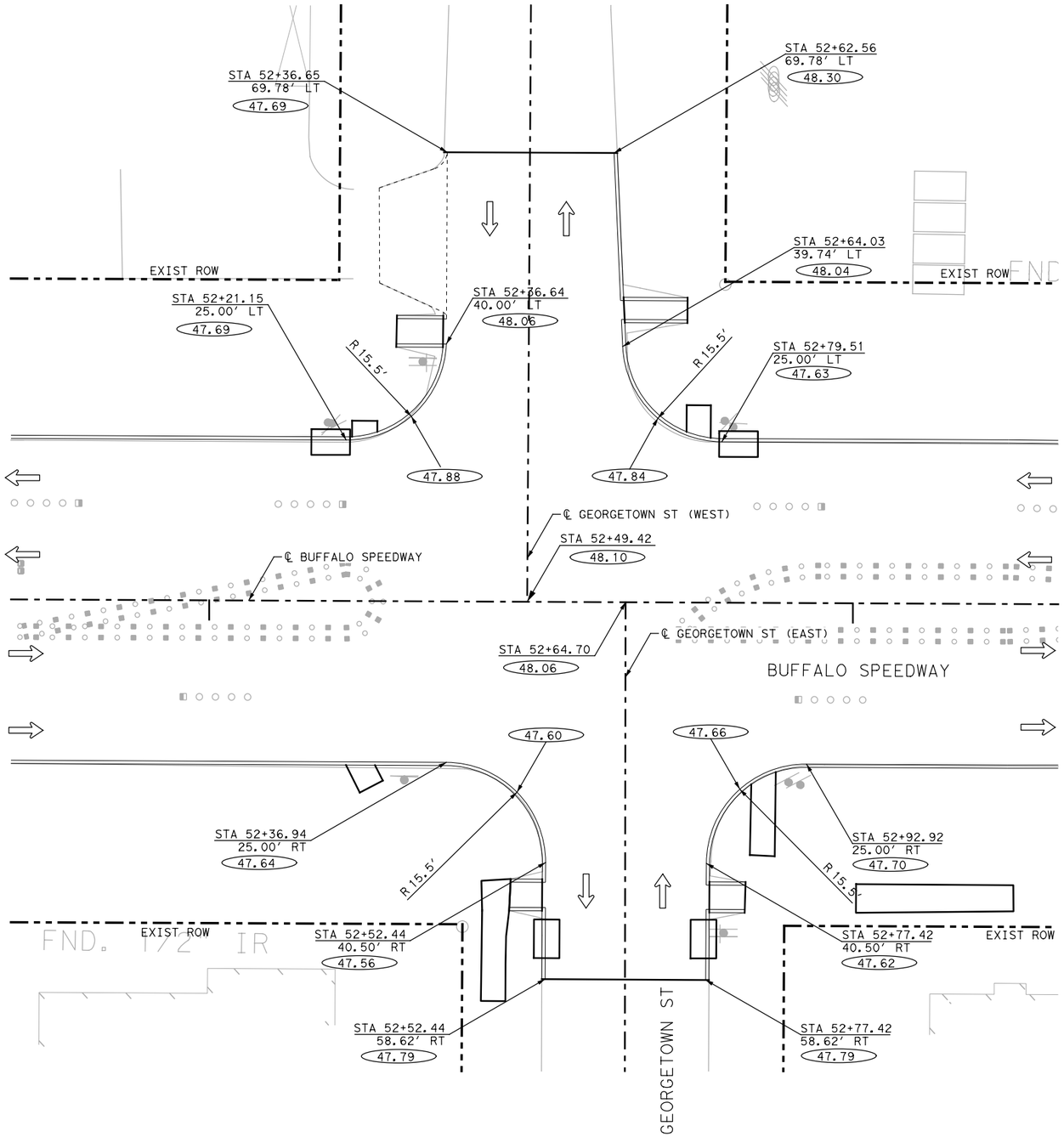
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
RICE BLVD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		293
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

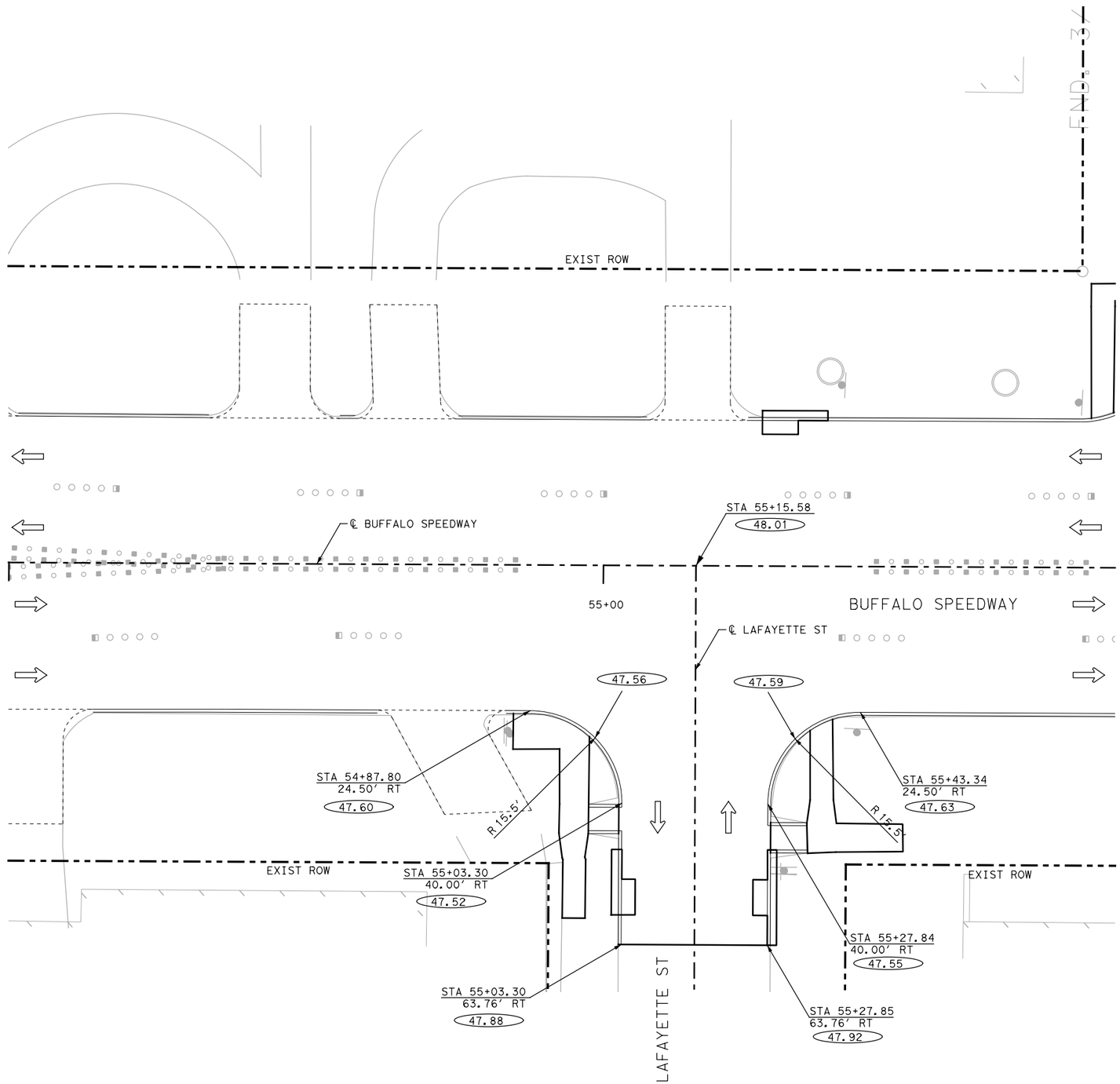
INTERSECTION DETAILS

BUFFALO SPEEDWAY
GEORGETOWN ST

SHEET 10 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		294
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
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0 20' 40'

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City of West University Place

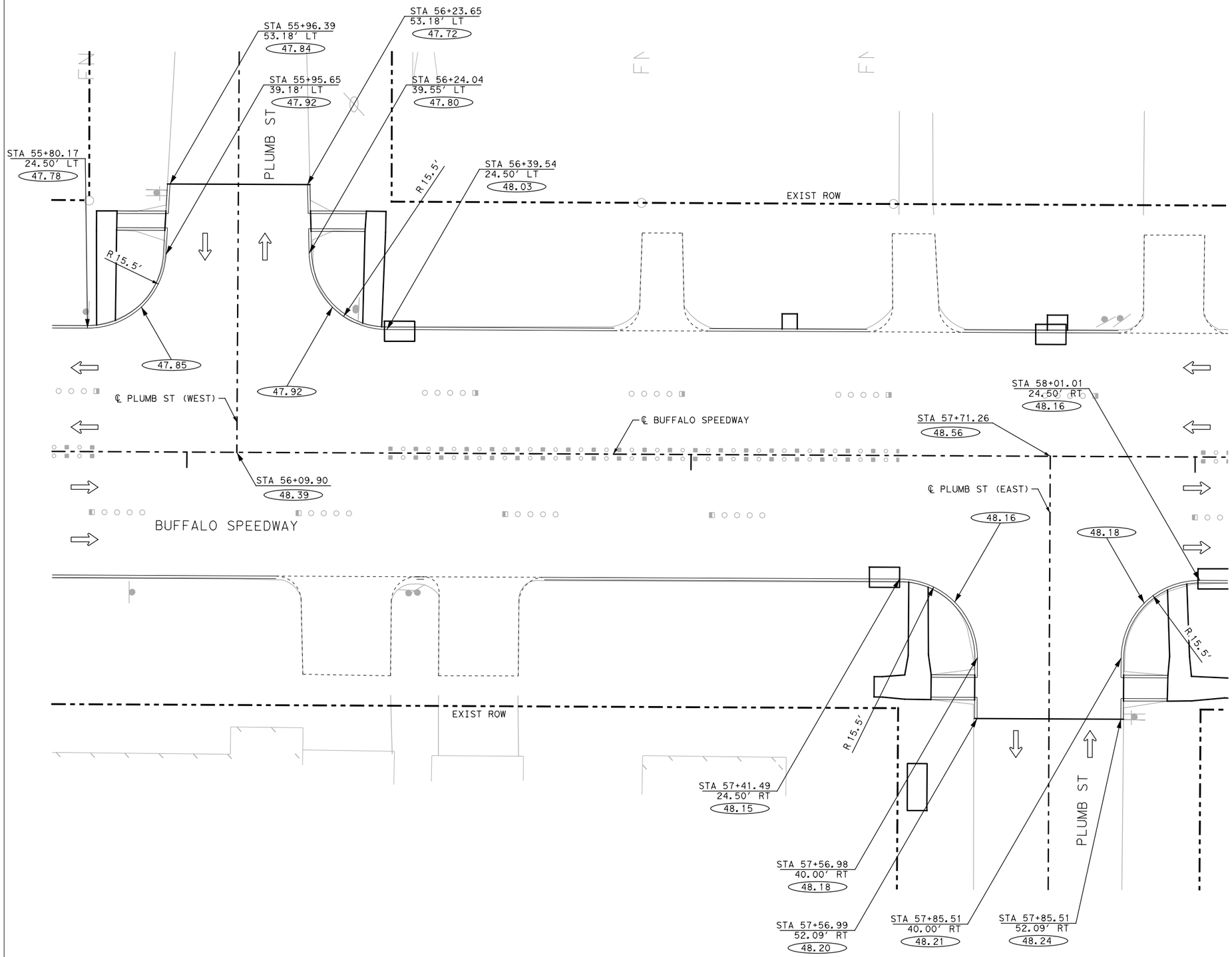
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
LAFAYETTE ST

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		295
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- XX.XX — EDGE OF PAVT ELEVATION (FT)
- EXISTING SIGNAL POLE
- PROPOSED SIGNAL POLE

NOTES:

1. ALL STATIONS ARE BASED ON ℄ BUFFALO SPEEDWAY UNLESS NOTED OTHERWISE.
2. REFER TO ROADWAY PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.

STATE OF TEXAS
ZAHIDUL SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER
08/24/20

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City of West University Place

BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

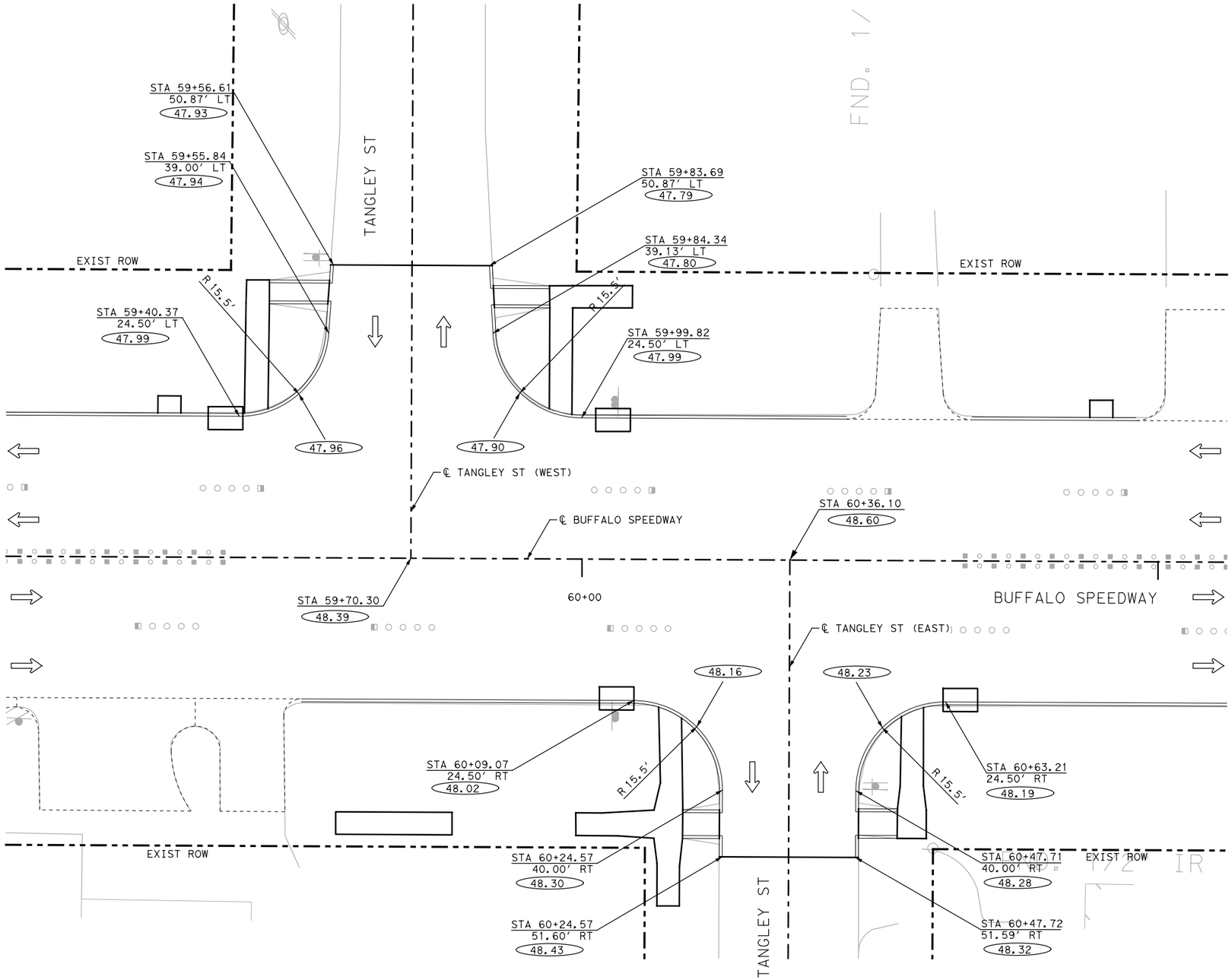
INTERSECTION DETAILS

BUFFALO SPEEDWAY
PLUMB ST

SHEET 12 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		296
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

SCALE IN FEET

LEGEND

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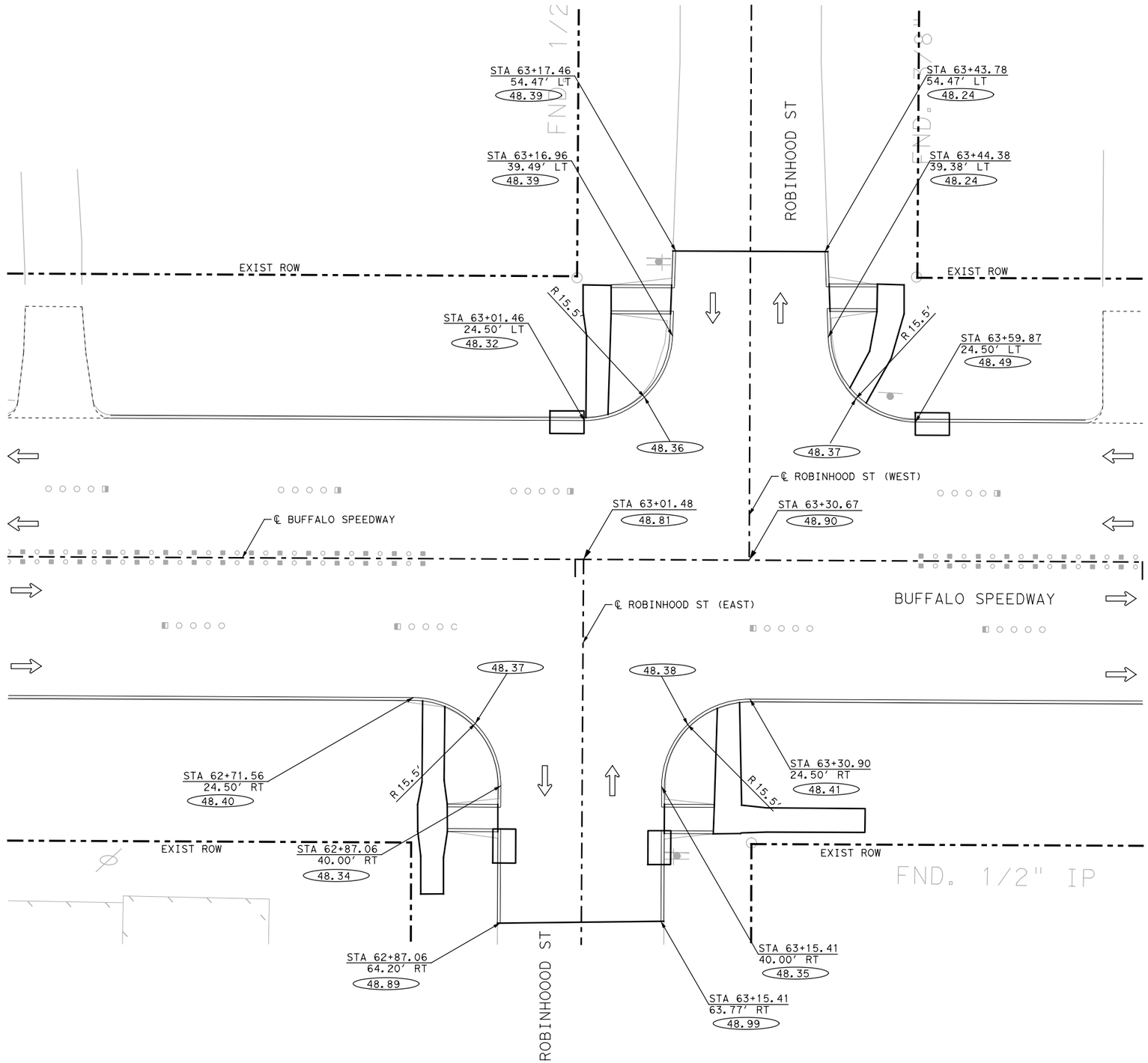
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
TANGLEY ST

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		297
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

SCALE IN FEET

LEGEND

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- XX.XX — EDGE OF PAVT ELEVATION (FT)
- EXISTING SIGNAL POLE
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BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

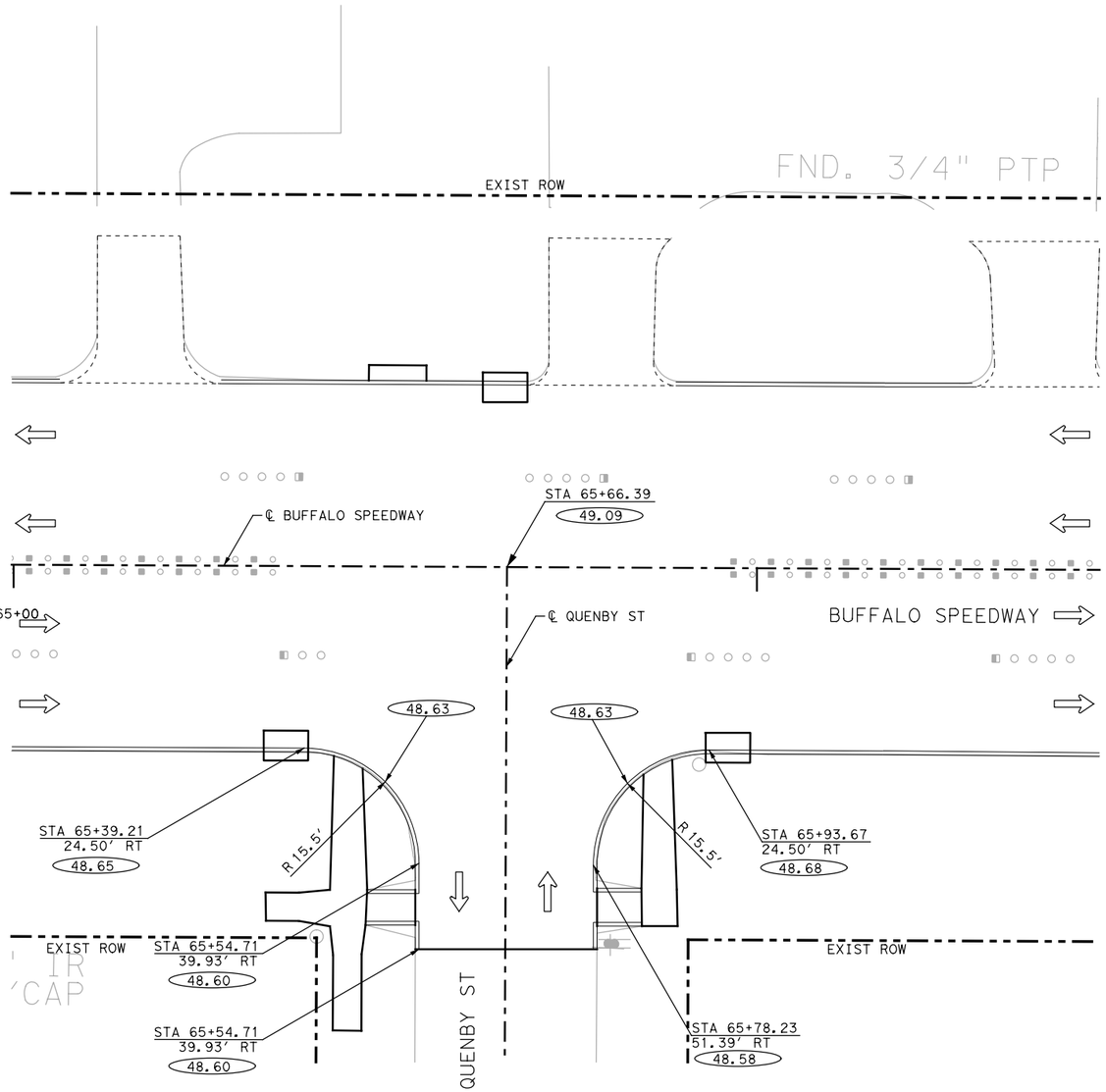
INTERSECTION DETAILS

BUFFALO SPEEDWAY
ROBINHOOD ST

SHEET 14 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		298
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



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SCALE IN FEET

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- XX.XX — EDGE OF PAVT ELEVATION (FT)
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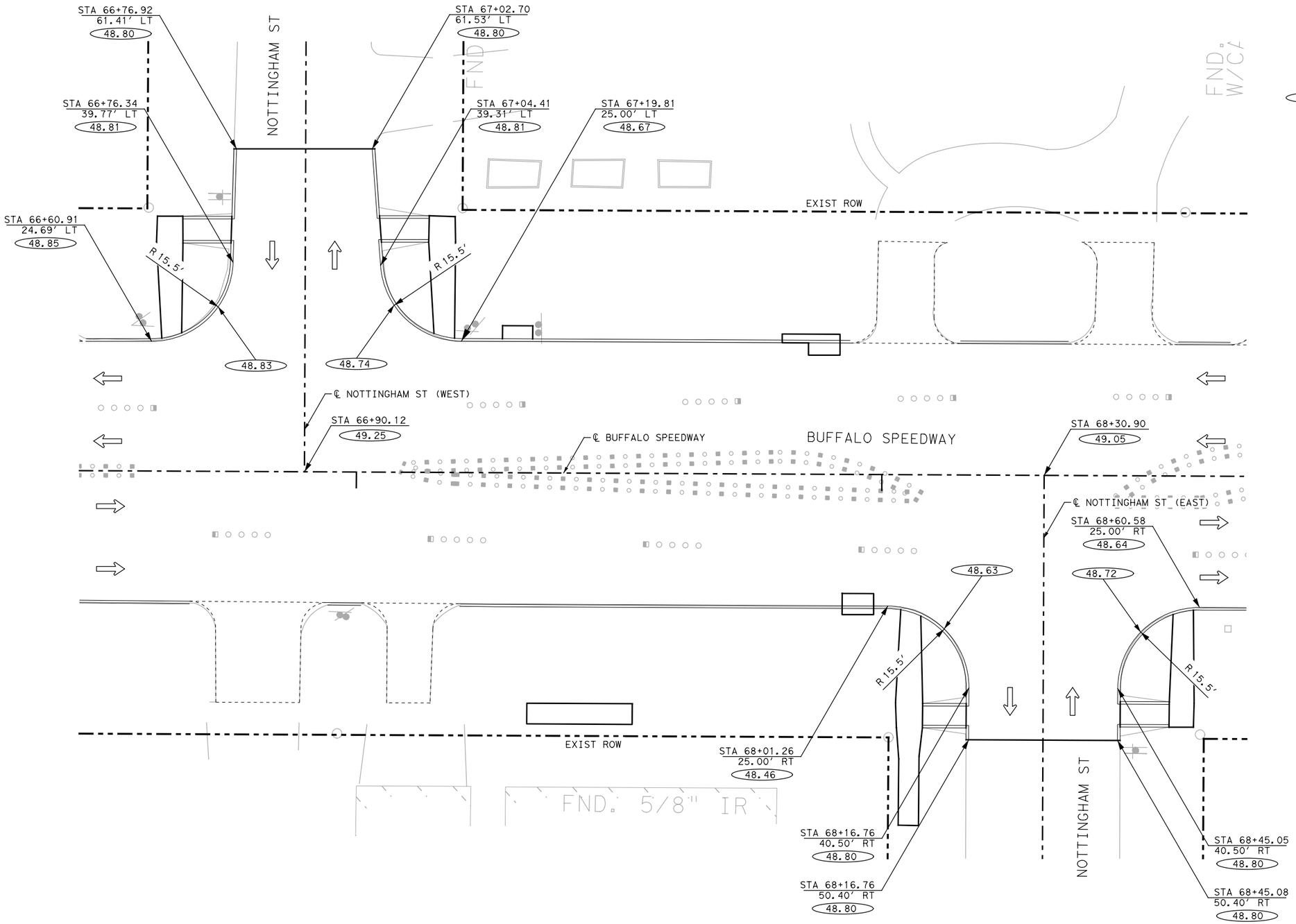
INTERSECTION DETAILS

BUFFALO SPEEDWAY
QUENBY ST

SHEET 15 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			299
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 20' 40'

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- XX.XX — EDGE OF PAVT ELEVATION (FT)
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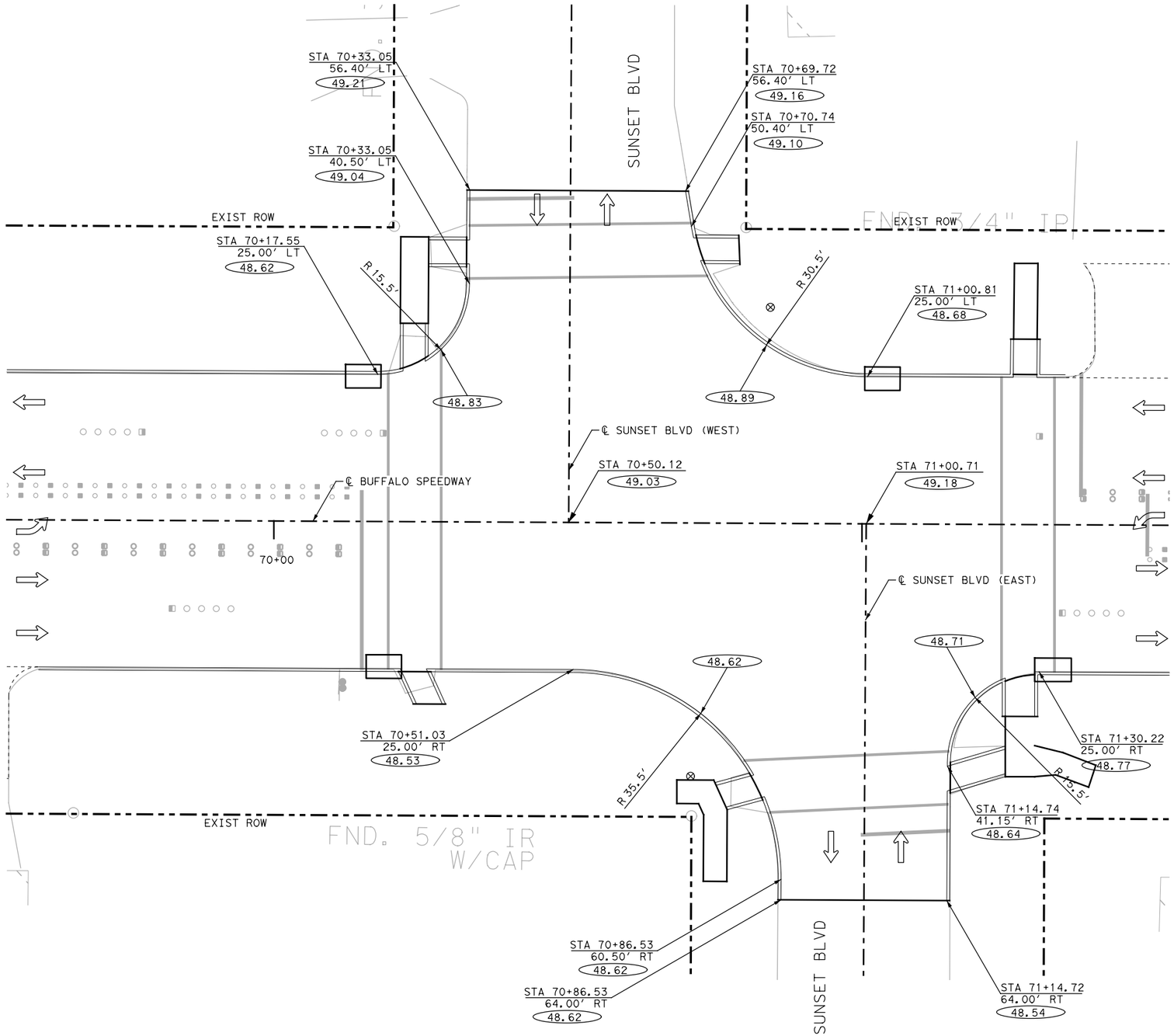
INTERSECTION DETAILS

BUFFALO SPEEDWAY
NOTTINGHAM ST

SHEET 16 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		300
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

SCALE IN FEET

LEGEND

- DIRECTION OF TRAFFIC
- (XX.XX) EDGE OF PAVT ELEVATION (FT)
- EXISTING SIGNAL POLE
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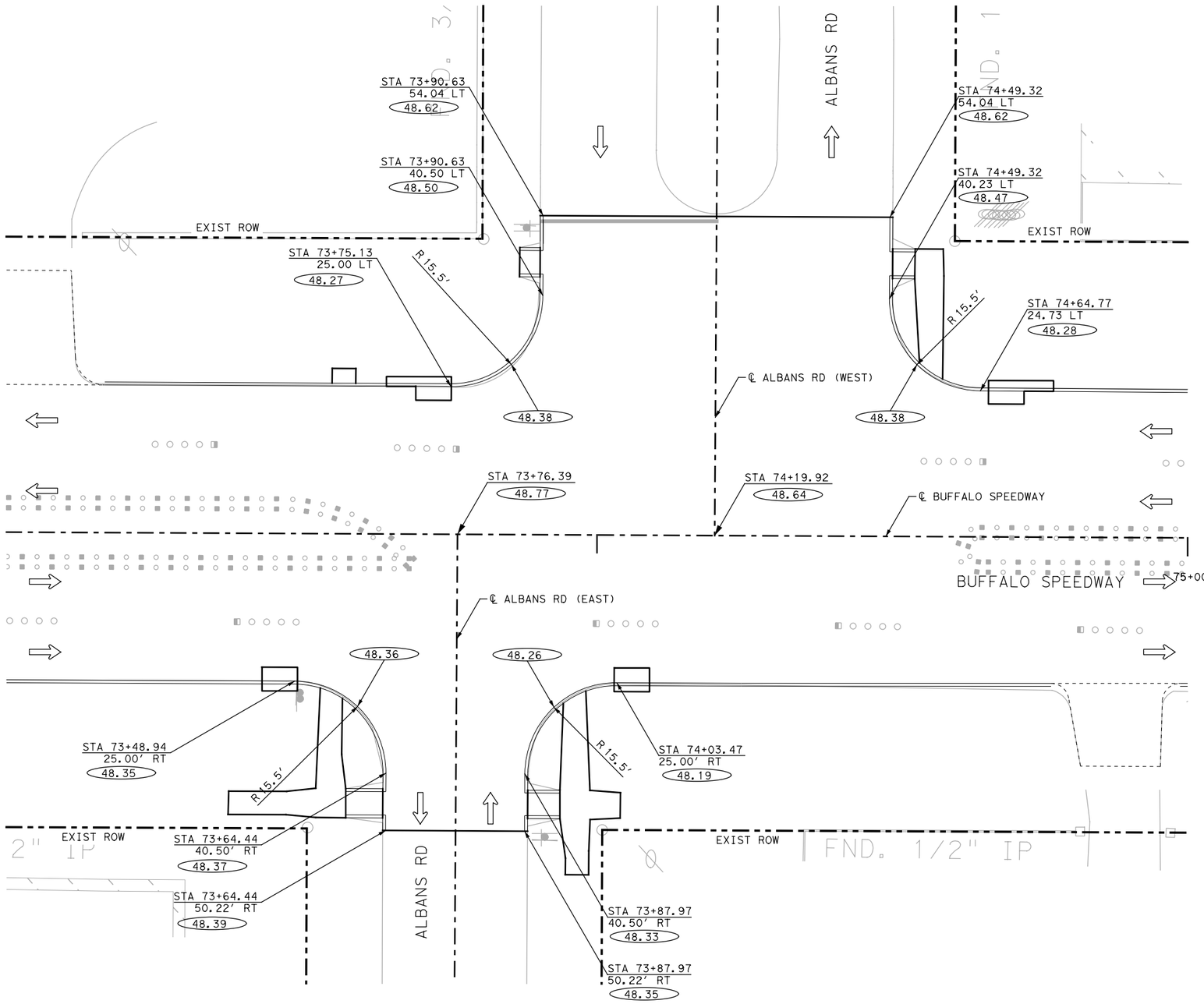
INTERSECTION DETAILS

BUFFALO SPEEDWAY
SUNSET BLVD

SHEET 17 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		301
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



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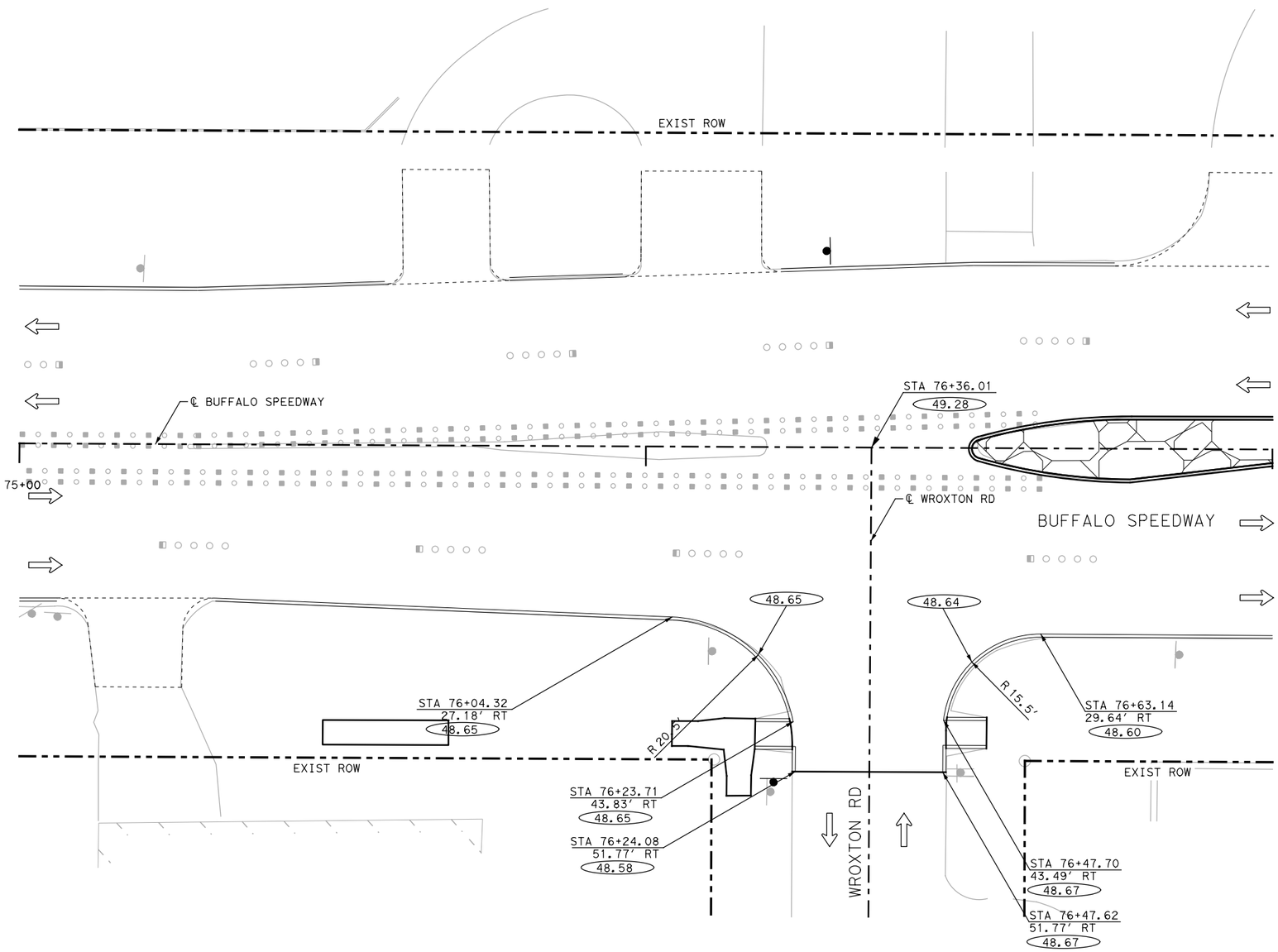
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
ALBANS RD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6	(SEE THE TITLE SHEET)			302
STATE	DIST.	COUNTY		
TEXAS	12	HARRIS		
CONT.	SECT.	JOB	HIGHWAY NO.	
0912	72	360	BUFFALO SPEEDWAY	



0 20' 40'

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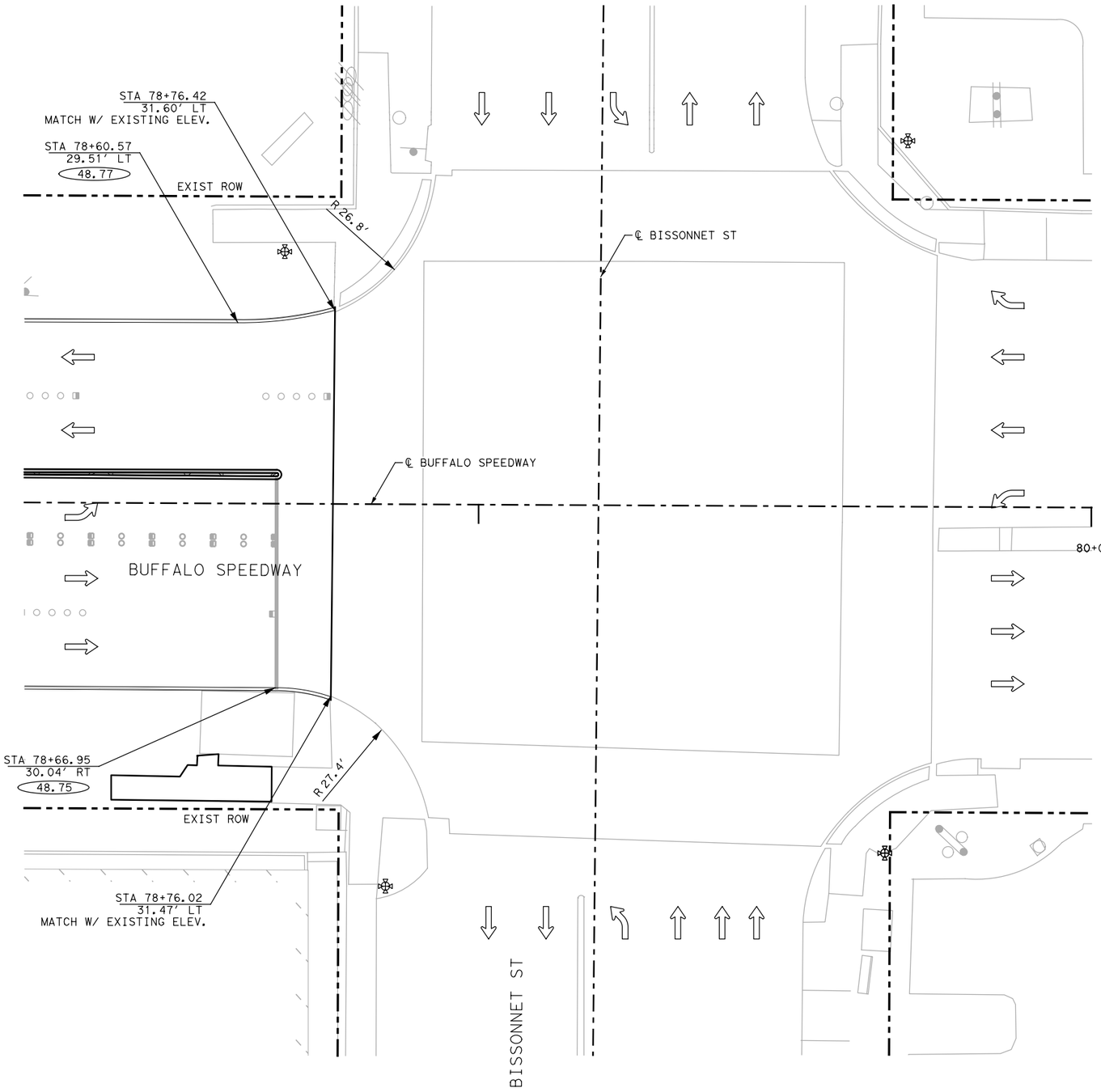
BUFFALO SPEEDWAY IMPROVEMENTS (HOLCOMBE BLVD. TO BISSONNET)

INTERSECTION DETAILS

BUFFALO SPEEDWAY
WROXTON RD

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		303
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY



0 20' 40'

SCALE IN FEET

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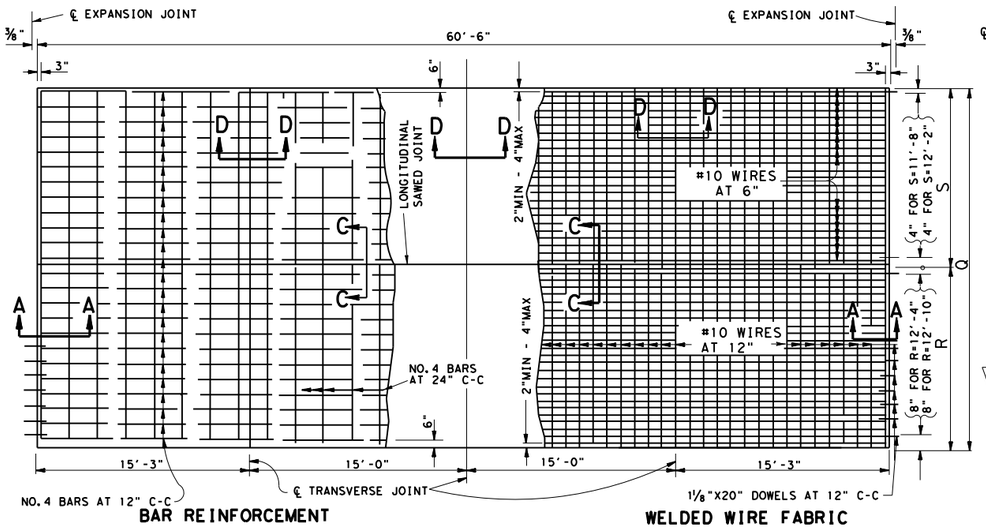
INTERSECTION DETAILS

BUFFALO SPEEDWAY
BISSONNET ST

SHEET 20 OF 20

Texas Department of Transportation

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6	(SEE THE TITLE SHEET)		304
STATE	DIST.	COUNTY	
TEXAS	12	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0912	72	360	BUFFALO SPEEDWAY

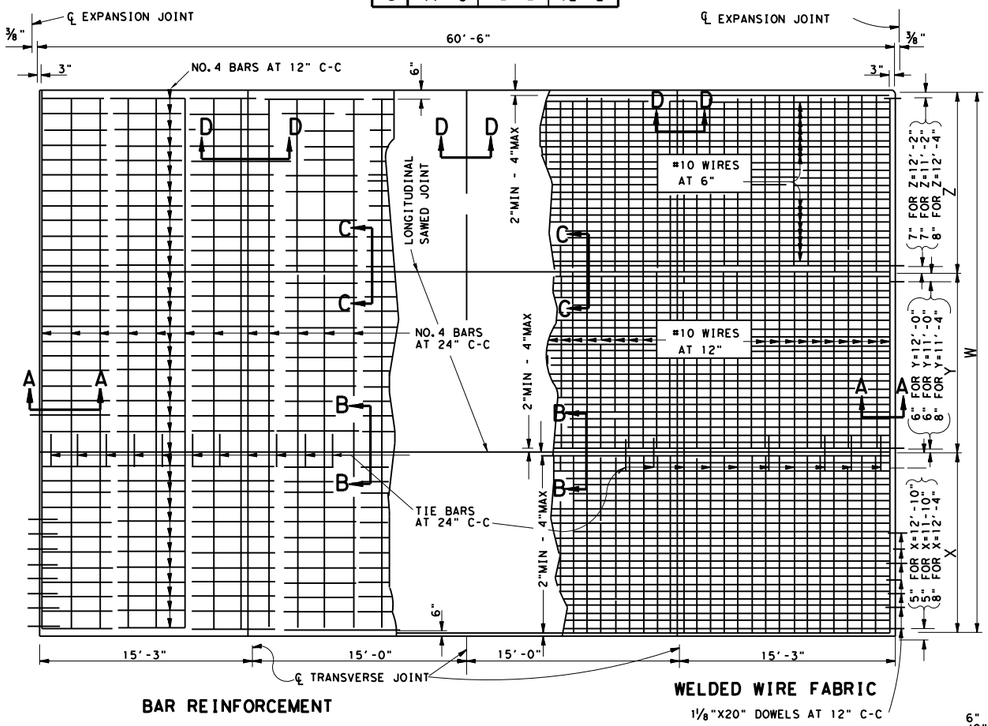


BAR REINFORCEMENT

WELDED WIRE FABRIC

TWO LANE PAVEMENT PLAN

	WIDTH - Q		
	24'-0"	24'-6"	25'-0"
R	12'-4"	12'-4"	12'-10"
S	11'-8"	12'-2"	12'-2"



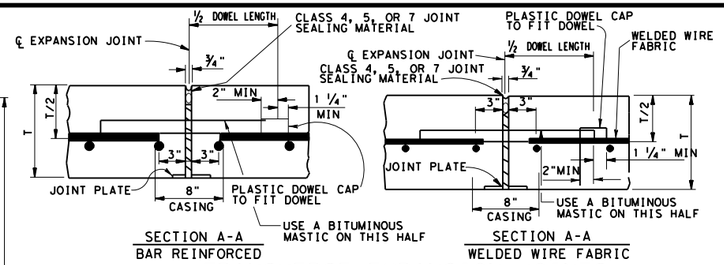
BAR REINFORCEMENT

WELDED WIRE FABRIC

THREE LANE PAVEMENT PLAN

	WIDTH - W		
	37'-0"	36'-0"	34-0"
X	12'-10"	12'-4"	11'-10"
Y	12'-0"	11'-4"	11'-0"
Z	12'-2"	12'-4"	11'-2"

D = DIAMETER
R = RADIUS
T = THICKNESS

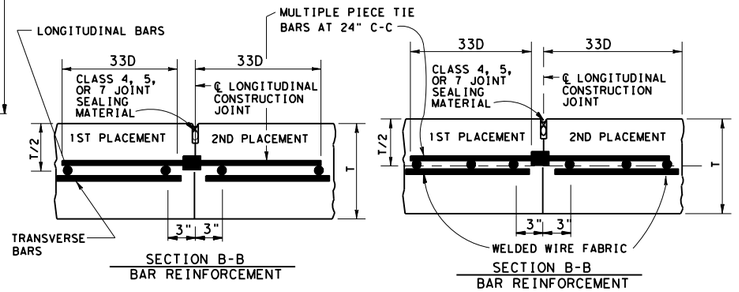


SECTION A-A
BAR REINFORCED

SECTION A-A
WELDED WIRE FABRIC

TRANSVERSE EXPANSION JOINTS

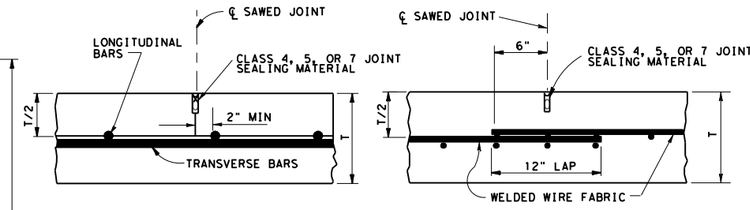
NOTE: DOWEL BARS CONFORMING TO ASTM A615 OR A616 GRADE 60 ARE ACCEPTABLE



SECTION B-B
BAR REINFORCEMENT

SECTION B-B
BAR REINFORCEMENT

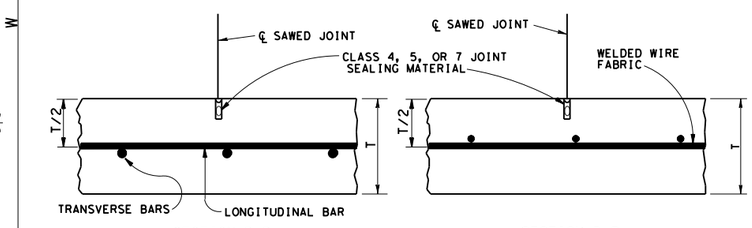
LONGITUDINAL CONSTRUCTION JOINTS



SECTION C-C
BAR REINFORCEMENT

SECTION C-C
WELDED WIRE FABRIC

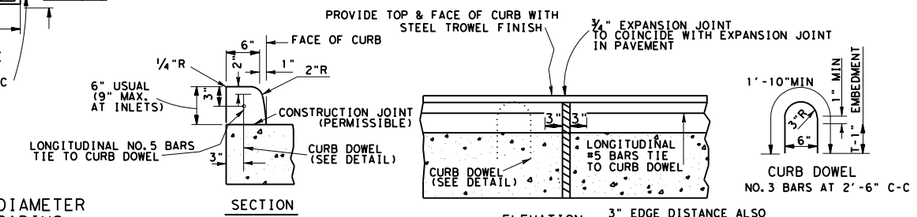
LONGITUDINAL SAWED JOINTS



SECTION D-D
BAR REINFORCEMENT

SECTION D-D
BAR REINFORCEMENT

TRANSVERSE SAWED JOINTS



SECTION

ELEVATION

3" EDGE DISTANCE ALSO APPLIES TO TRANSVERSE GROOVED PLANE JOINT IN CURB

TYPICAL 6" CURB (DETAIL)

GENERAL NOTES

1. MULTIPLE PIECE TIE BARS ARE REQUIRED AT LONGITUDINAL CONSTRUCTION JOINTS. USE MULTIPLE PIECE TIE BAR ASSEMBLIES WITH STOP TYPE COUPLINGS AND WITH THREADS ON THE BARS. ENSURE THE MULTIPLE PIECE TIE BAR ASSEMBLIES DEVELOP A MINIMUM ULTIMATE TENSILE STRENGTH EQUAL TO 1.25 TIMES THE YIELD STRENGTH OF THE TRANSVERSE BARS BEING JOINED. USE DEFORMED REINFORCING BARS FOR TIE BARS. TIE BAR ASSEMBLIES MADE FROM STEELS OTHER THAN ASTM GRADE 60 AND WITH DEFORMATIONS OTHER THAN ASTM STANDARD MAY BE USED IF IT CAN BE PROVEN TO THE ENGINEER THAT THEY ARE IN EVERY RESPECT THE EQUAL OF THE ASSEMBLIES SPECIFIED. LABORATORY TESTING OF THE PROPOSED ASSEMBLIES, AT THE CONTRACTOR'S EXPENSE, MAY BE REQUIRED.
2. FORM CONSTRUCTION JOINTS WITH METAL OR WOOD FORMS EQUAL IN DEPTH TO THE NOMINAL DEPTH OF THE PAVEMENT OR BY OTHER MEANS APPROVED PRIOR TO THEIR USE.
3. SAW LONGITUDINAL AND TRANSVERSE JOINTS AS SOON AS SAWING CAN BE ACCOMPLISHED WITHOUT DAMAGE TO THE PAVEMENT AND BEFORE 24 HOURS AFTER PLACING THE CONCRETE, THE EXACT TIME WILL BE APPROVED BY THE ENGINEER. PREFORMED JOINT WITH ASPHALT STRIP IS NOT ACCEPTABLE.
4. LONGITUDINAL JOINTS ARE SHOWN OFFSET FOUR INCHES FROM THE THEORETICAL LANE LINE AND MAY BE OFFSET TO EITHER SIDE IF THE WIDTH OF THE WIRE FABRIC IS PROPERLY ADJUSTED.
5. ONE OF THE LONGITUDINAL JOINTS OF PAVEMENT SLABS WIDER THAN TWO LANES MAY BE A CONSTRUCTION JOINT. FOR PAVEMENT SLABS WIDER THAN 15 FT. PROVIDE A LONGITUDINAL SAWED JOINT UNLESS OTHERWISE DIRECTED.
6. FORM THE JOINT SEAL SPACE AT TRANSVERSE EXPANSION JOINTS BY USING A STRAIGHT FORM PLACED BEHIND THE LONGITUDINAL FLOAT. LOOSEN THE FORM AS SOON AS THE CONCRETE WILL RETAIN ITS SHAPE AND EDGE WITH AN APPROVED EDGING TOOL. TOOL BOTH EDGES OF LONGITUDINAL CONSTRUCTION JOINTS TO A ⅛ IN. RADIUS AT THE PAVEMENT SURFACE.
7. DO NOT DISCHARGE CONCRETE FROM THE MIXER DIRECTLY ON TOP OF OR ON THE SIDES OF THE EXPANSION JOINT ASSEMBLIES.
8. LAP TRANSVERSE EDGES OF SHEETS OF WELDED WIRE FABRIC 12 INCHES EXCEPT AT TRANSVERSE EXPANSION JOINTS. LAP LONGITUDINAL EDGES 6 INCHES EXCEPT AT LONGITUDINAL CONSTRUCTION JOINTS.
9. DOWEL BARS MAY BE COATED WITH STAINLESS STEEL, MONEL METAL, OR IN ACCORDANCE WITH THE ITEM "REINFORCING STEEL" SECTION ON EPOXY COATING; WITH A WELDED DOWEL ASSEMBLY SUPPORT, AS APPROVED. ENSURE THE CASING CONFORMS TO THE REQUIREMENTS OF ONE OF THE GRADES OF ASTM A167-70 OR A176-71 AND IS NOT LESS THAN 0.010 INCH THICK. PROVIDE A CASING AT LEAST 8 INCHES LONG AND THAT COVERS THE MIDDLE 8 INCHES OF THE DOWEL.
10. SECURE DOWELS PARALLEL TO THE PAVEMENT SURFACE AND PERPENDICULAR TO THE JOINT WITH THE AID OF APPROVED WELDED WIRE BASKET ARRANGEMENTS. ENSURE WELDED WIRE BASKET ARRANGEMENTS DO NOT CROSS THE EXPANSION JOINT. UNIFORMLY COAT DOWELS WITH A BITUMINOUS MASTIC ON THE END WITH THE DOWEL CAP.
11. DO NOT BEND TIE BARS AND DOWEL BARS. TO PREVENT DISPLACEMENT OF WIRE FABRIC BY CONCRETE PLACEMENT, TIE THE FABRIC PANEL TOGETHER AND TIE THE INITIAL FABRIC PANELS OF EACH SLAB TO THE DOWEL BASKET OR AS DIRECTED.
12. TOOL PAVEMENT EDGES TO A RADIUS OF ⅛ IN. WITH AN APPROVED EDGING TOOL.
13. DETAILS FOR PAVEMENT WIDTH, PAVEMENT THICKNESS, AND CROWN-SLOPE ARE ELSEWHERE SHOWN ON THE PLANS.
14. THE CONTRACTOR HAS THE OPTION OF USING WELDED WIRE FABRIC OR BAR REINFORCEMENT. LOCATE THE LONGITUDINAL STEEL AT THE CENTER OF THE SLAB. TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE FINAL POSITION OF STEEL IS WITHIN ½ IN. OF THE SLAB CENTER. ENSURE THE LONGITUDINAL AND TRANSVERSE STEEL SPACING DOES NOT VARY MORE THAN ONE-TWELFTH OF SPACING SHOWN.
15. LONGITUDINAL STEEL MAY BE SPLICED WITH 33 TIMES BAR DIAMETER LAPS.
16. FOR LANE WIDTHS NOT SHOWN OR FOR VARIABLE PANEL LENGTHS AND WIDTHS, SPACE REINFORCING STEEL AND DOWELS AS DIRECTED.
17. USE APPROVED BAR MAT CHAIRS. DO NOT EXCEED CHAIR SPACING OF 30 IN. C-C (TRANSVERSE) AND 48 IN. C-C (LONGITUDINAL). GALVANIZING THE CHAIRS IS NOT REQUIRED.
18. OBTAIN BOARDS FOR EXPANSION JOINT FILLER FROM REDWOOD TIMBER.
19. PROVIDE AND CONSTRUCT THE JOINT PLATE AS APPROVED.
20. WHEN CURB IS PLACED SEPARATELY FROM THE CONCRETE PAVEMENT, PROVIDE THE REINFORCING STEEL AS SHOWN IN THE CURB DETAIL. THE CURB REINFORCING STEEL MAY BE OMITTED WHEN THE CURB IS PLACED MONOLITHICALLY.

(GENERAL NOTES CONTINUED ON SHEET 2 OF 2)

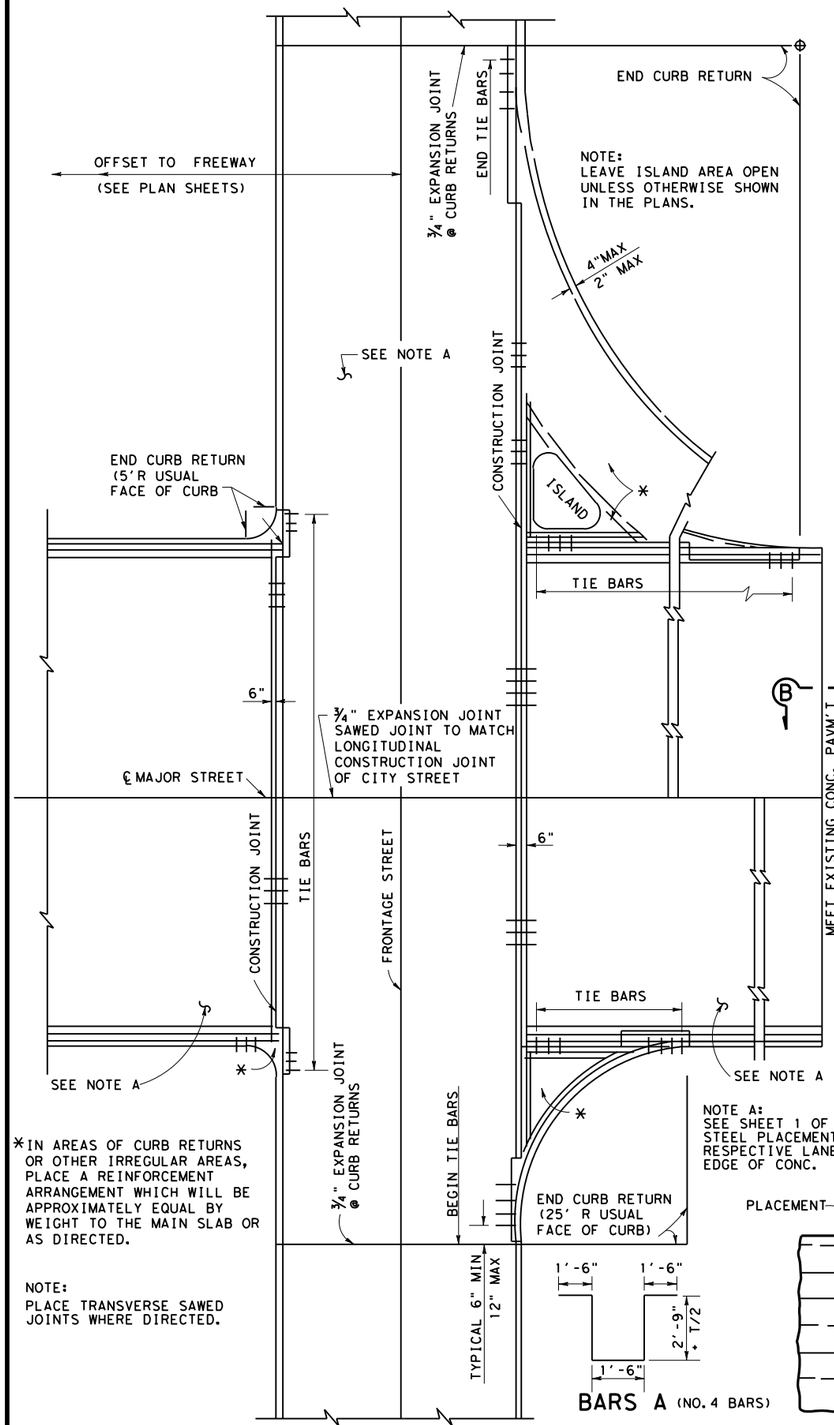
Texas Department of Transportation
Houston District

JOINTED REINFORCED CONCRETE PAVEMENT DETAILS

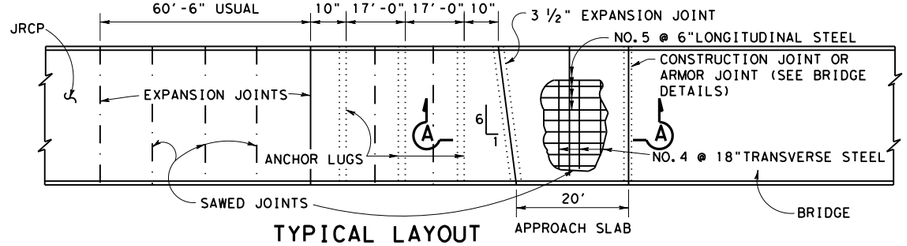
(FOR PAVEMENT THICKNESS 10 INCHES OR LESS)

JRCP SHEET 1 OF 2

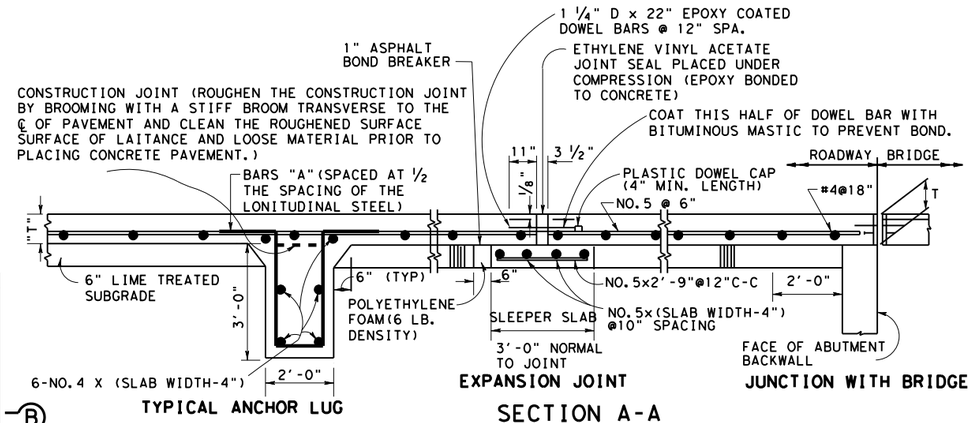
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©TxDOT MAR. 2004	DIST	FED REG	PROJECT NO.	SHEET
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	HARRIS	0912	72 360	BSW



INTERSECTION OF MAJOR STREET WITH FRONTAGE STREET TYPICAL REINFORCING PLAN

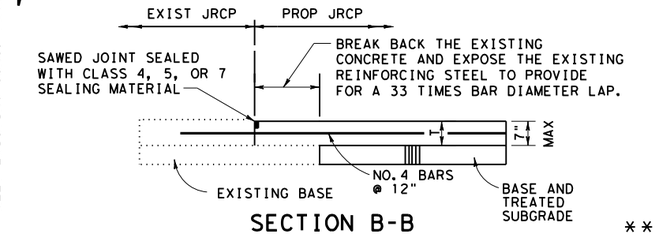


TYPICAL LAYOUT
(TERMINAL ANCHORAGE AT BRIDGES)



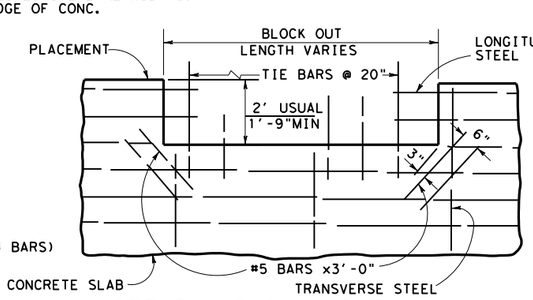
TYPICAL ANCHOR LUG | **EXPANSION JOINT** | **JUNCTION WITH BRIDGE**

SECTION A-A



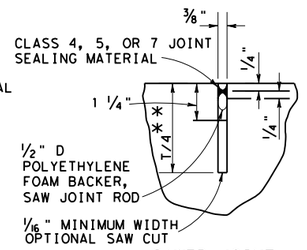
SECTION B-B
(FOR PROPOSED PAVEMENT DEPTHS OF 7" MAX)

REPLACE ANY BENT LONGITUDNIAL REINFORCING. IF THERE IS NOT SUFFICIENT EXPOSED REINFORCING TO PROVIDE A MINIMUM OF A 33 TIMES BAR DIAMETER LAP, REMOVE THE EXISTING PAVEMENT AND SUFFICIENTLY EXPOSE THE EXISTING REINFORCING TO PROVIDE A 33 TIMES BAR DIAMETER LAP. REPLACE ANY SHEAR BARS THAT ARE DISTURBED, BY DRILLING AND GROUTING AS REQUIRED BY NOTE #29. PERFORM THIS CORRECTIVE ACTION AT NO EXPENSE TO THE DEPARTMENT.

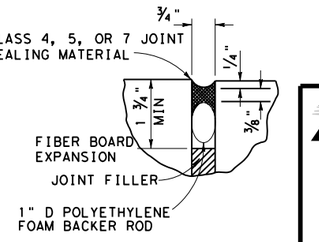


DETAIL OF BLOCKOUT

*OMIT TIE BARS @ INLET BLOCK-OUT



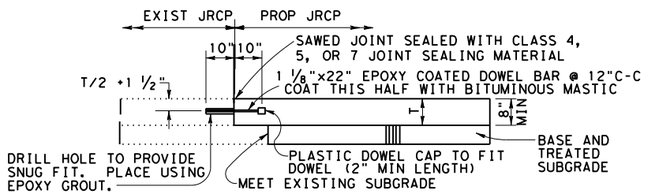
SAWED JOINT



EXPANSION JOINTS

JOINT SEALING DETAILS

** IF SILICEOUS RIVER GRAVEL IS USED AS THE COARSE AGGREGATE, THIS DEPTH IS T/3.



SECTION B-B
(FOR PROPOSED PAVEMENT DEPTHS OF 8" MIN)

GENERAL NOTES (CONTINUED FROM SHEET 1 OF 2)

21. CONSTRUCT ANCHOR LUGS, EXPANSION JOINTS, AND SLEEPER SLABS AS DETAILED IN SECTION A-A. THESE WILL BE PAID FOR IN ACCORDANCE WITH ITEM, "CONCRETE PAVEMENT TERMINALS."
22. REINFORCING STEEL FOR TERMINAL ANCHOR SYSTEMS MAY BE GRADE 40 OR GRADE 60.
23. PLACE CONCRETE FOR ANCHOR LUGS AS SOON AS POSSIBLE AFTER COMPLETING EXCAVATION, TO PRESERVE THE INHERENT SOIL CHARACTERISTICS. EXCAVATING FOR AND PLACING CONCRETE FOR ANCHOR SYSTEM MAY BE IN PREFORMED SECTIONS CORRESPONDING TO THE WIDTH OF PAVING PLACEMENT.
24. APPLY A STEEL TROWEL FINISH TO SLEEPER SLABS AND AND COAT WITH AN ASPHALT BOND BREAKER.
25. THE DETAILS FOR ANCHORS, LUGS, EXPANSION JOINTS, AND SLEEPER SLABS ARE NOT APPLICABLE UNLESS SHOWN ELSEWHERE IN THE PLANS.
26. APPROACH SLAB WILL BE PAID FOR IN ACCORDANCE WITH THE ITEM "CONCRETE STRUCTURES."
27. WITHIN 5 MINUTES OF SAWING, COMPLETELY REMOVE THE RESULTING SLURRY FROM THE JOINT BY FLUSHING WITH HIGH PRESSURE WATER. THEN ALLOW THE JOINT TO DRY FOR A MINIMUM OF 48 HOURS BEFORE SANDBLASTING THE JOINT.
28. DO NOT SHEAR CUT DOWEL BARS.
29. SIZE ADDITIONAL SHEAR BARS AS LONGITUDIAL BARS AND SPACE THEM MIDWAY BETWEEN ALTERNATE LONGITUDINAL BARS ALONG THE TRANSVERSE CONSTRUCTION JOINT FORMED AT THE LEAVE-OUT.
30. IF THE CONCRETE DESIGN REQUIRES GREATER THAN 5.5 SACKS OF CEMENTITIOUS MATERIAL PER CUBIC YARD, WRITTEN APPROVAL BY THE AREA ENGINEER WILL BE REQUIRED. ENSURE CONCRETE PAVEMENT MIXES PLACED FROM APRIL 1 TO OCTOBER 31 CONTAIN A MINIMUM OF 25 PERCENT BY WEIGHT OF CLASS "F" FLY ASH.
31. IN LOCATIONS WHERE THE PLANS CALL FOR FAST TRACK CONCRETE PAVEMENT IN LIEU OF JRCP (LAID ON COMPACTED OR STABILIZED SUBGRADE), USE DETAILS IN THIS STANDARD IN CONJUNCTION WITH THE APPROPRIATE FAST TRACK CONCRETE SPECIFICATION. IF THE JRCP IS LAID UPON A BASE STRUCTURE, ADD 3" TO THE FAST TRACK PAVEMENT THICKNESS TO COMPENSATE FOR THE BASE.

Texas Department of Transportation
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JOINTED REINFORCED CONCRETE PAVEMENT DETAILS
EXPANSION JOINT DESIGN
(FOR PAVEMENT THICKNESS 10 INCHES OR LESS)

JRCP — SHEET 2 OF 2

FILE: STDB-2.dgn	DN:	CK:	DW:	CK:	
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REVISIONS 5/05 2004 SPECS 7/2010 ADDED NOTE 9/2013 ADDED NOTE	12	6	(SEE THE TITLE SHEET)		306
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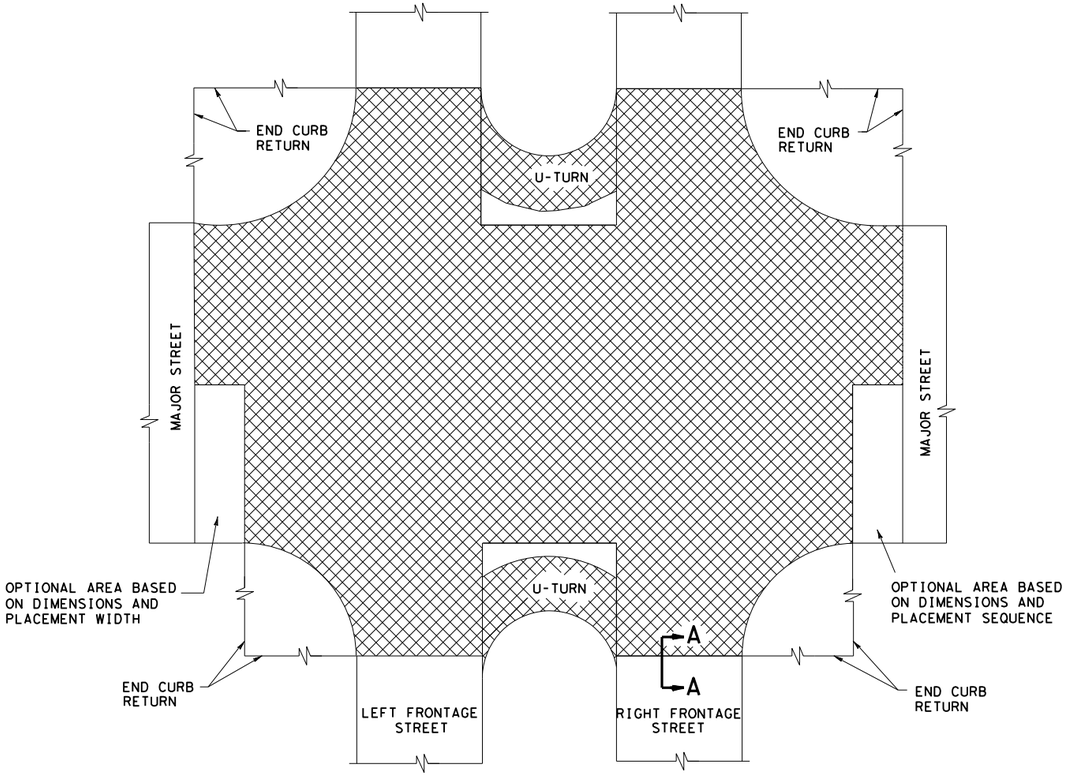


FIGURE 2

INTERSECTION OF MAJOR STREET
WITH FRONTAGE STREET

TABLE 1

EQUIVALENT PAVEMENT THICKNESS	
T * (IN.)	T_{FS} ** (IN.)
<=12"	T+3"
>12"	15"

*WITH BASE STRUCTURE OF:
1" ASPHALT STABILIZED BASE
6" PORTLAND CEMENT TREATED BASE
6" LIME TREATED SUBGRADE

**ON AS CUT SUBGRADE

***SEE JOINT SEALING DETAILS ON CRCP STANDARDS

GENERAL NOTES

1. DEFINITION OF TERMS

   T_{FS} - FAST TRACK CONCRETE PAVING DEPTH AT INTERSECTIONS AND LEAVE OUTS.
   T - NOMINAL CONCRETE PAVING DEPTH AS SHOWN IN THE PLANS.
   DETERMINE FAST TRACK CONCRETE PAVING DEPTH USING TABLE 1 AND THE NOMINAL CONCRETE PAVING DEPTH "T" SHOWN IN THE PLANS.

2. AT INTERSECTIONS AND LEAVE-OUT LOCATIONS USE THE SAME LONGITUDINAL AND TRANSVERSE BAR SPACING FOR THE FAST TRACK PAVING AREA AS THAT USED FOR THE ADJACENT CONCRETE PAVING DEPTH "T"(EXCEPT BAR SIZE SHALL BE #7 ON SINGLE MAT). FOR SINGLE MAT FAST TRACK PAVING, PLACE THE LONGITUDINAL AND TRANSVERSE BARS FOR THE FAST TRACK PAVING AREA AT THE HORIZONTAL PLANE ELEVATION THAT IS TWO TIE-BAR DIAMETERS LOWER THAN THAT USED FOR THE ADJACENT CONCRETE PAVEMENT DEPTH "T", AS SHOWN IN FIGURE 1. USE SINGLE MAT STEEL IN FAST TRACK PAVING AREAS ADJACENT TO PAVEMENT SLABS WITH SINGLE MAT REINFORCING. USE DOUBLE MAT STEEL IN FAST TRACK PAVING AREAS ADJACENT TO PAVEMENT SLABS WITH DOUBLE MAT REINFORCING.

3. THE REQUIRED FAST TRACK PAVING AREAS WILL BE SHOWN ON THE PLANS. THE CONTRACTOR HAS THE OPTION TO UTILIZE FAST TRACK CONCRETE PAVING AT U-TURNS, AT INTERSECTIONS, AT MINOR STREETS, AND AT DRIVEWAYS WITH FRONTAGE ROAD LEAVE-OUT AREAS THAT ARE NOT SHOWN ON THE PLANS, WITH PRIOR WRITTEN APPROVAL FROM THE ENGINEER. TYPICAL PAVING PLANS FOR THE INTERSECTION OF A MAJOR STREET WITH THE FRONTAGE ROAD ARE SHOWN AS FIGURE 2, AND FOR THE INTERSECTION OF A MINOR STREET OR DRIVEWAY WITH THE FRONTAGE ROAD AS FIGURE 3. FAST TRACK PAVE THE FRONTAGE ROAD FOR THE FULL FRONTAGE ROAD WIDTH AND PLACE IN STAGES AS REQUIRED.

4. USE ADDITIONAL #6 REINFORCING STEEL BARS (MINIMUM 42 INCHES LONG) AND SPACE THEM MIDWAY BETWEEN ALTERNATE LONGITUDINAL BARS ALONG THE THE TRANSVERSE CONSTRUCTION JOINT FORMED AT THE FAST TRACK PAVING INTERFACE (T_{FS}) WITH THE ADJACENT PAVEMENT SLAB (T).

5. SPLICE LENGTH IS A MINIMUM OF 33 TIMES THE NOMINAL STEEL DIAMETER.

6. PLACE THE CONCRETE PLACEMENT AT A UNIFORM DEPTH THROUGHOUT THE FAST TRACK CONCRETE PAVING AREA.

7. FOR CONTINUOUS SECTIONS OF ROADWAY WHERE FAST TRACK PAVING IS THE PRIMARY PAVEMENT TYPE, USE THE BAR SIZE AND SPACING FROM THE CRCP STANDARDS THAT CORRESPONDS TO THE FAST TRACK SLAB THICKNESS.

8. USE LONGITUDINAL TIE-BARS OF THE SAME SIZE DIAMETER AND SPACING AS THE LONGITUDINAL BAR. A SINGLE PIECE TIE-BAR MAY BE USED IF THE 33 TIMES DIAMETER TIE-BAR PROJECTION DOES NOT INTERFERE WITH THE SAFE HANDLING OF TRAFFIC.

9. BASE THE DEPTH OF SAW CUTS FOR SAWED JOINTS ON THE FAST TRACK CONCRETE PAVEMENT THICKNESS.

10. THIS STANDARD IS NOT INTENDED TO REPLACE OTHER STANDARDS EXCEPT WHERE SPECIFICALLY STATED HEREIN. FOR PAVING DETAILS NOT SHOWN ON THIS DRAWING, REFER TO THE STANDARD SHEETS FOR CONTINUOUSLY REINFORCED CONCRETE PAVEMENT SHOWN ELSEWHERE IN THE PLANS.

FAST TRACK PAVING AREA

TYPICAL PAVING PLANS

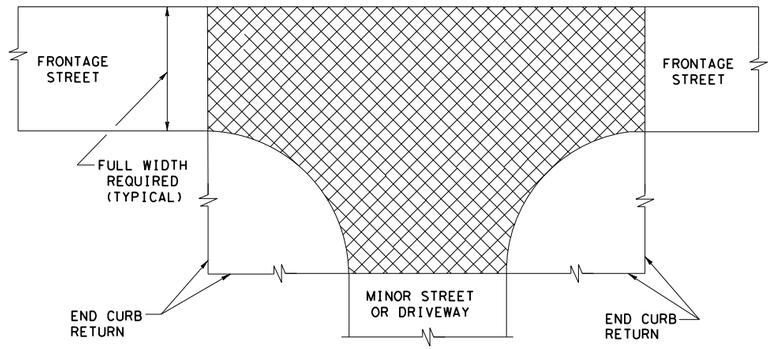
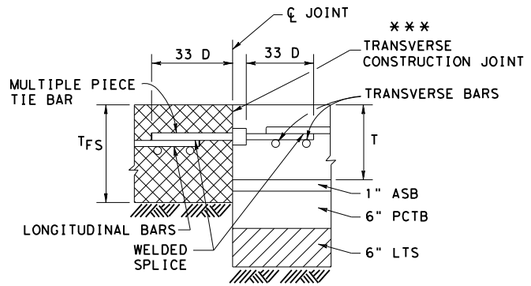


FIGURE 3

INTERSECTION OF MINOR STREET OR
DRIVEWAY WITH FRONTAGE STREET



SINGLE MAT

TRANSVERSE CONSTRUCTION JOINTS

SECTION A - A
FIGURE 1

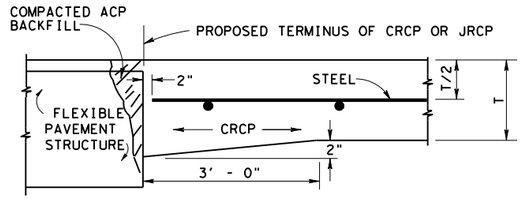
LEGEND

ASB - ASPHALT STABILIZED BASE
CRCP - CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
D - DIAMETER
LTS - LIME TREATED SUBGRADE
PCTB - PORTLAND CEMENT TREATED BASE

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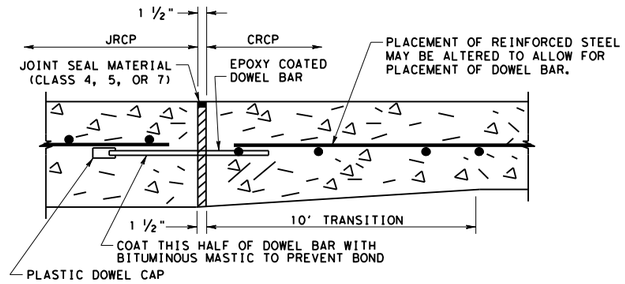
FAST TRACK CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
DETAILS
CRCP-FT

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	HARRIS	0912	72 360	BSW



NOTE:
ADDITIONAL CONCRETE FOR THICKENED EDGE IS SUBSIDIARY TO VARIOUS BID ITEMS. BACKFILL DISTURBED MATERIAL IN THE FLEXIBLE PAVEMENT WITH ACP. THIS ACP IS SUBSIDIARY TO VARIOUS BID ITEMS.

JUNCTURE A & B - CRCP OR JRCP WITH FLEXIBLE TYPE PAVEMENT STRUCTURE

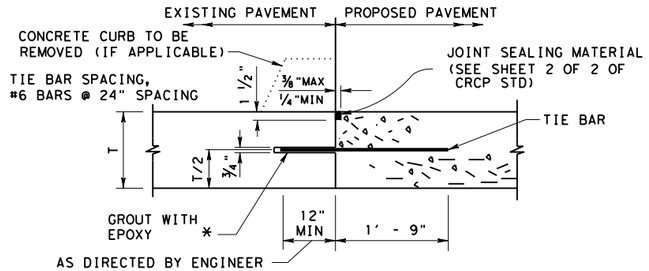


FOR DETAILS NOT SHOWN, SEE TRANSVERSE EXPANSION JOINT DETAILS ELSEWHERE IN PLANS.

DETAIL "B" - DOWEL ASSEMBLY AT EXPANSION JOINT

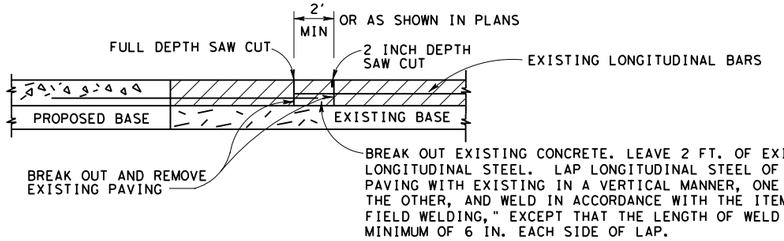
DOWEL BAR DATA			
SLAB THICKNESS(T)	6"-7.5"	8"-10"	10.5"-15"
DOWEL SIZE	1"	1 ¼"	1 ½"
DOWEL LENGTH	18"	20"	22"
DOWEL BAR SPACING	12"	12"	12"

TABLE A - DOWEL BAR DATA



JUNCTURE D - TYPICAL CONNECTION TO EXISTING CONCRETE

*FOR EPOXY TYPE SEE ITEM 361.



JUNCTURE F - "BREAK BACK" CONCRETE CRCP WITH CRCP OR JRCP WITH JRCP

GENERAL NOTES

1. FOR FURTHER INFORMATION REGARDING PLACING CONCRETE AND REINFORCEMENT, REFER TO THE GOVERNING SPECIFICATION FOR CONCRETE PAVEMENT.
2. THE DESIGN REQUIREMENTS FOR THE PAVEMENT STRUCTURE, I.E. BAR SPACING, BAR SIZE LAP REQUIREMENTS, ETC., ARE SHOWN ON THE APPROPRIATE PAVEMENT DESIGN DETAIL.
3. SLEEPER SLAB AND ADDITIONAL REINFORCING REQUIRED ON THIS DRAWING ARE INCIDENTAL TO THE VARIOUS BID ITEMS.
4. USE THE SIZE, SPACING, AND LENGTH OF DOWEL BARS SHOWN IN TABLE "A".
5. WHERE THERE WILL BE A JUNCTURE AND ADDITIONAL JRCP PAVING WILL BE PLACED AT A FUTURE DATE, MULTIPLE PIECE DOWEL BARS WILL BE PERMITTED AT THE JUNCTURE. PROVIDE MULTIPLE PIECE DOWEL BAR ASSEMBLIES WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 60.0 KIPS AND THAT HAVE SMOOTH EPOXY COATED BARS. ENSURE THE MULTIPLE PIECE DOWEL BAR ASSEMBLIES HAVE STOP TYPE COUPLINGS AND HAVE HAVE ROLLED THREADS ON THE BARS. DISMANTLE THE BAR AND FIT THE COUPLING PORTION USED IN CONSTRUCTION, WITH A PLASTIC CAP. FURNISH THE REMAINING PORTION OF THE BAR TO THE ENGINEER.
6. WHERE THE PAVING IS CRCP AND A RAMP COMPOSED OF A FLEXIBLE PAVEMENT WILL BE USED AT THE JUNCTURE UNTIL FUTURE PAVING IS CONSTRUCTED, MULTIPLE PIECE TIE BARS MAY BE USED IF PERMITTED BY THE ENGINEER. IF USED, ENSURE THE MULTIPLE PIECE TIE BAR ASSEMBLIES HAVE STOP TYPE COUPLINGS AND ROLLED THREADS ON THE BARS. FURNISH MULTIPLE PIECE TIE BAR ASSEMBLIES THAT DEVELOP A MINIMUM ULTIMATE TENSILE STRENGTH EQUAL TO 1.25 TIMES THE YIELD STRENGTH OF THE TRANSVERSE BARS BEING JOINED. FOR TIE BARS, USE DEFORMED REINFORCING BARS. TIE BAR ASSEMBLIES MADE FROM STEELS OTHER THAN ASTM GRADE 60 AND WITH DEFORMATIONS OTHER THAN ASTM STD. MAY BE USED PROVIDED THEY PROVE SATISFACTORY TO THE ENGINEER AND ARE IN EVERY RESPECT THE EQUAL TO THE ASSEMBLIES SPECIFIED. LABORATORY TESTING OF THE PROPOSED ASSEMBLIES, AT THE CONTRACTOR'S EXPENSE, MAY BE REQUIRED. LAP AND WELD ONE PORTION OF THE TIE BAR ASSEMBLY TO EACH LONGITUDINAL BAR IN ACCORDANCE WITH THE ITEM "STRUCTURAL FIELD WELDING "AND THE OTHER PORTION INTO THE COUPLING PRIOR TO PAVING. ENSURE MULTIPLE PIECE TIE BAR LENGTHS CONFORM TO THE TIE BAR LENGTHS SHOWN ELSEWHERE IN THE PLANS. ADDITIONAL "SHEAR STEEL" WILL ALSO BE REQUIRED AND MAY BE USED WITH MULTIPLE PIECE ASSEMBLIES AS PREVIOUSLY DESCRIBED. USE ADDITIONAL STEEL BARS OF EQUAL DIAMETER AT A SPACING DOUBLE THAT OF THE LONGITUDINAL STEEL AND ENSURE THE LENGTH IS 66 TIMES THE TIE BAR DIAMETER.
7. DO NOT SHEAR CUT DOWEL BARS.
8. ENSURE DOWEL BAR EPOXY COATING CONFORMS TO ARTICLE 440.2.7., "EPOXY COATING".
9. REPLACE ANY BENT LONGITUDINAL REINFORCING. IF THERE IS NOT SUFFICIENT EXPOSED REINFORCING TO PROVIDE A MINIMUM OF A 33 TIMES BAR DIAMETER LAP, REMOVE THE EXISTING PAVEMENT AND SUFFICIENTLY EXPOSE THE EXISTING REINFORCING TO PROVIDE A 33 TIMES BAR DIAMETER LAP. REPLACE ANY SHEAR BARS THAT ARE DISTURBED, BY DRILLING AND GROUTING AS REQUIRED BY NOTE 12 BELOW. PERFORM THIS CORRECTIVE ACTION AT NO EXPENSE TO THE DEPARTMENT.
10. TIE BARS AND DOWEL BARS OMITTED, LOST, OR DAMAGED SHALL BE REPAIRED BY DRILLING AND EPOXY GROUTING AT NO EXPENSE TO THE DEPARTMENT.
11. JUNCTURES A & B ARE ONLY SUITABLE FOR MINOR STREETS WITH LOW TRAFFIC VOLUMES.
12. FURNISH ADDITIONAL SHEAR BARS (DIAMETER "D") OF THE SAME SIZE AS LONGITUDINAL BARS AND SPACE THEM MIDWAY BETWEEN ALTERNATE LONGITUDINAL BARS ALONG THE TRANSVERSE CONSTRUCTION JOINT FORMED AT THE LEAVE-OUT.

LEGEND

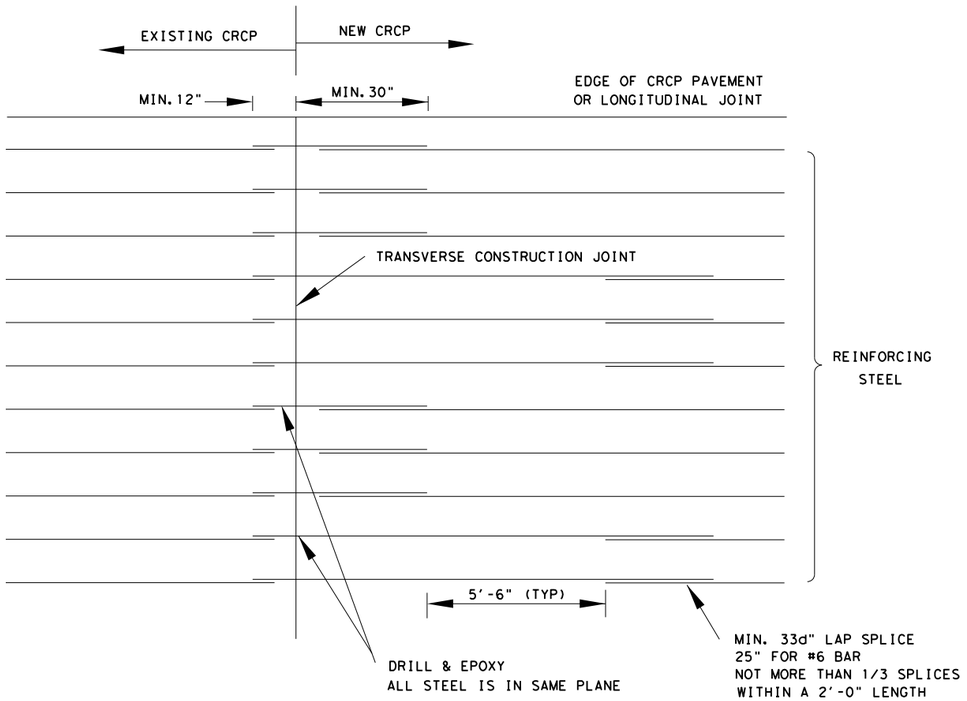
ACP - ASPHALT CONCRETE PAVEMENT
CRCP - CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
JRCP - JOINTED REINFORCED CONCRETE PAVEMENT
T - THICKNESS

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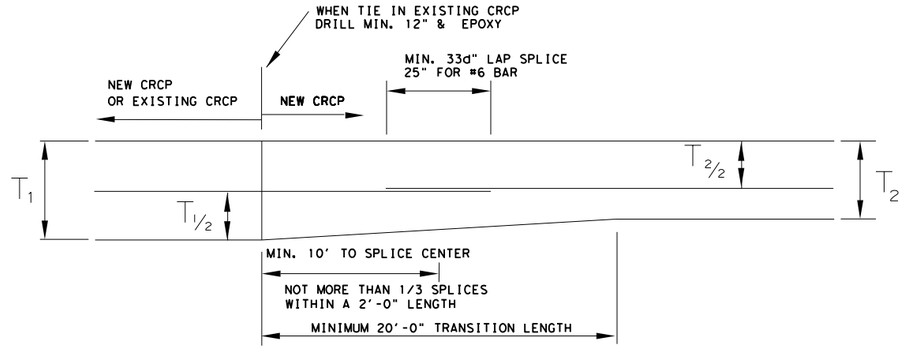
CONCRETE PAVEMENT JUNCTURES

CPJ

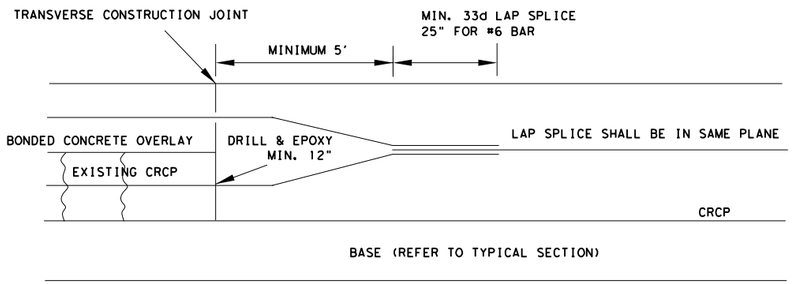
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	HARRIS		0912	72	360	BSW



EXISTING CRCP TO NEW CRCP

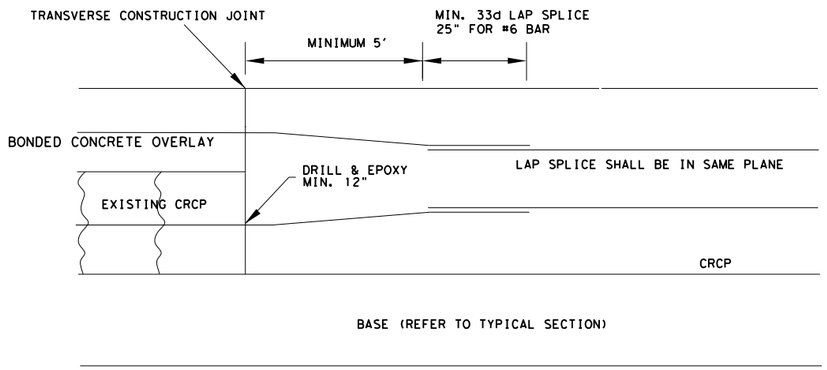


CRCP THICKNESS TRANSITION



CRCP BONDED OVERLAY TO CRCP TRANSITION

(ONE LAYER STEEL)



CRCP BONDED OVERLAY TO CRCP TRANSITION

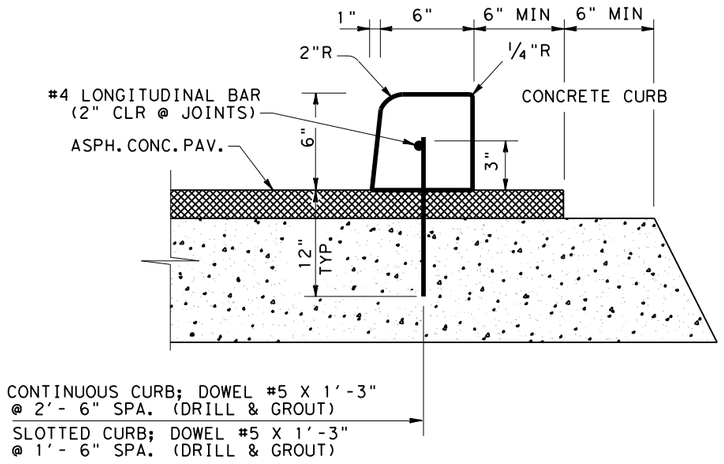
(TWO LAYER STEEL)

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CONCRETE PAVEMENT JUNCTURES

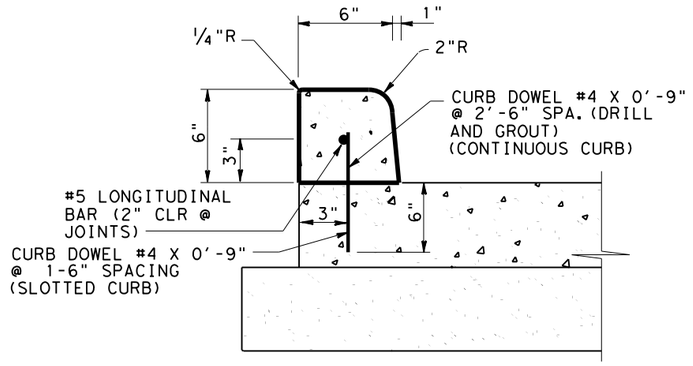
CPJ

FILE: STDB-5.dgn	DN:	CK:	DW:	CK:	
© TxDOT DEC. 2009	DIST	FED REG	PROJECT NO.		SHEET
REVISIONS 5/05 2004 SPECS REVISED 4/2008 2/15 2014 SPECS	12	6	(SEE THE TITLE SHEET)		308
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	HARRIS		0912	72	360	BSW



SHOWN ON EXISTING OR PROPOSED ACP PAVEMENT

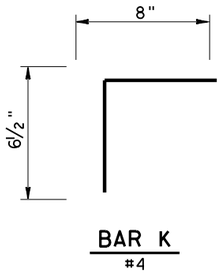
(PAY ITEM 529-6011) - FOR CONTINUOUS



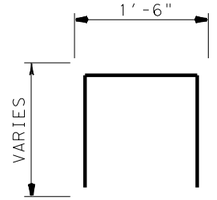
SHOWN ON EXISTING OR PROPOSED CONCRETE PAVEMENT

(PAY ITEM 529-6011) - FOR CONTINUOUS

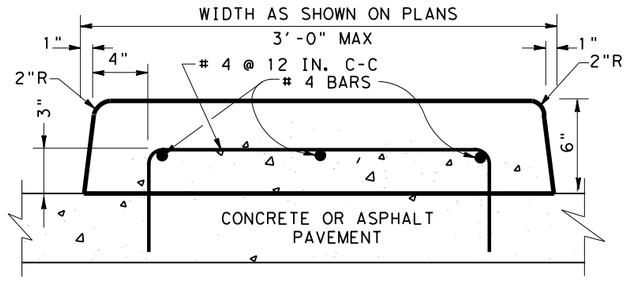
CONCRETE CURB (DOWEL) (6 IN.)



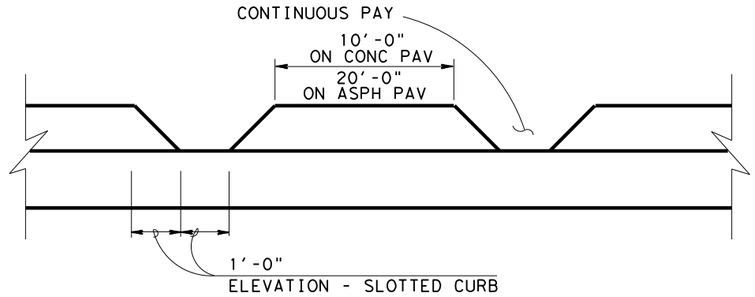
BAR K
#4



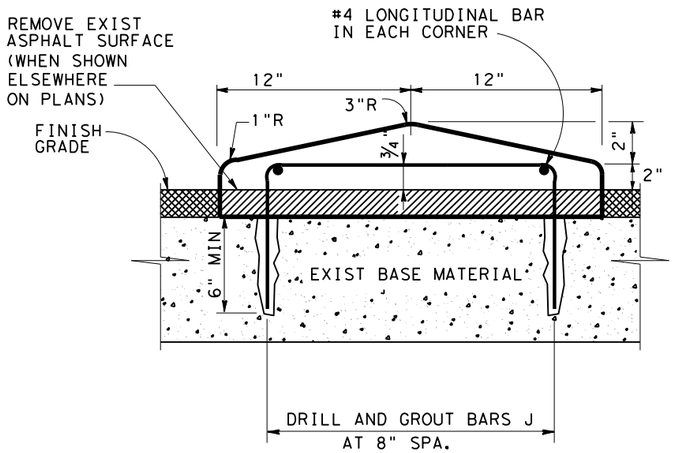
BAR J
#4



ITEM 536-6001 CONCRETE MEDIAN
SEE NOTE 2

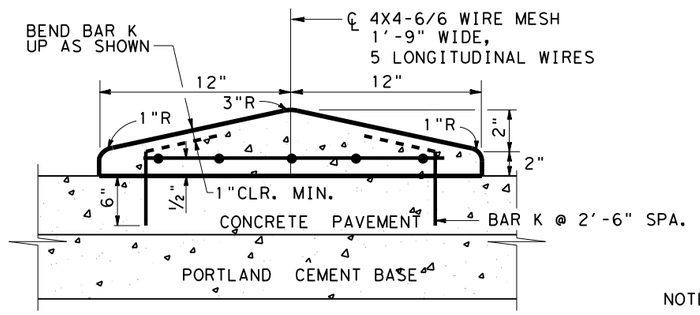


ITEM 529-6012 CONCRETE CURB (SLOTTED) - ON CONC.
ITEM 529-6009 CONC CURB (DOWEL)(SLOTTED) - ON ASPH.



SHOWN ON EXISTING ACP PAVEMENT

SEE NOTE 2 - ITEM 536-6003 CONC DIRECTIONAL ISLAND



SHOWN ON EXISTING OR PROPOSED CONCRETE PAVEMENT

SEE NOTE 2 - ITEM 536-6003 CONC DIRECTIONAL ISLAND

NOTES:

1. DRILL AND GROUT BARS SHOWN AS PER ITEM 420.4.7.10, 6" EMBEDMENT, MINIMUM ON CONC.
2. INSTALL A 2 INCH DRAINAGE OPENING AT 10 FT C-C WHEN CURB/ISLAND IS NOT ON TOP OF CROSS SECTION. (LOCATED ON A 2 OR 3 PERCENT TRANSVERSE GRADE, OR SUPERELEVATION.)

CONCRETE DIRECTIONAL ISLAND

Texas Department of Transportation
Houston District

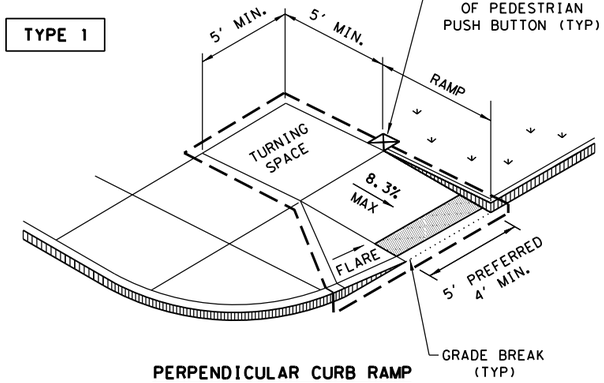
CONCRETE CURB AND DIRECTIONAL ISLAND DETAILS
CC & DID

FILE: STDB-9.dgn	DN:	CK:	DW:	CK:
©TxDOT 2014	DIST	FED REG	PROJECT NO.	SHEET
REVISIONS	HOU	6	(SEE THE TITLE SHEET)	309
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	HARRIS	0912	72	360	BSW

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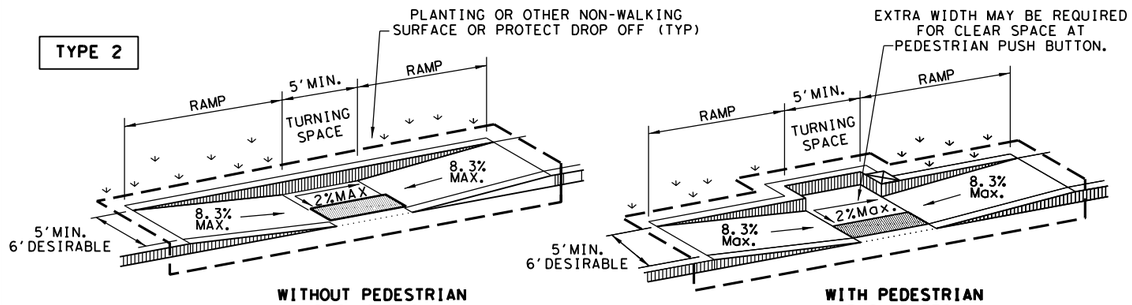
DATE:
FILE:

TYPE 1



PERPENDICULAR CURB RAMP

TYPE 2

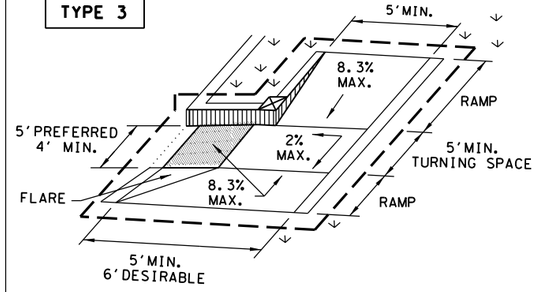


WITHOUT PEDESTRIAN PUSH BUTTON

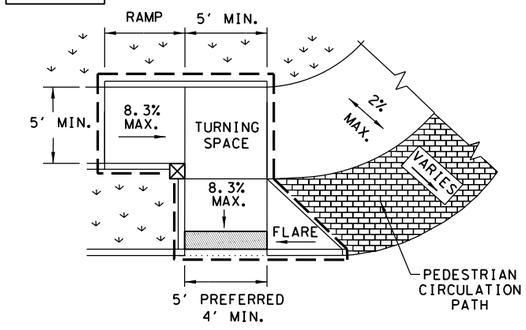
WITH PEDESTRIAN PUSH BUTTON

PARALLEL CURB RAMP

TYPE 3

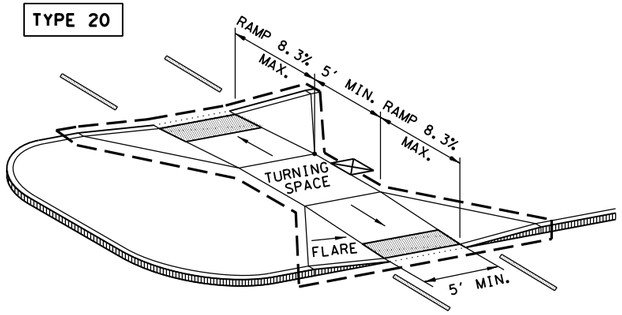


TYPE 6



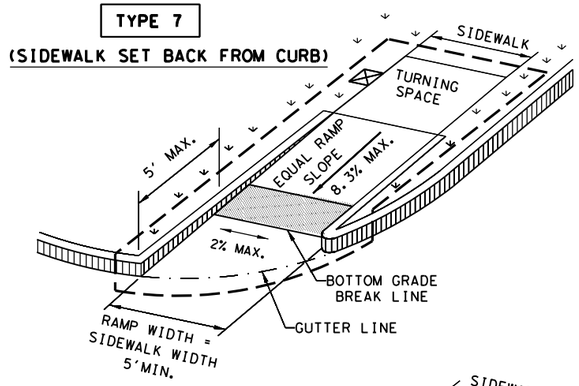
COMBINATION CURB RAMPS

TYPE 20

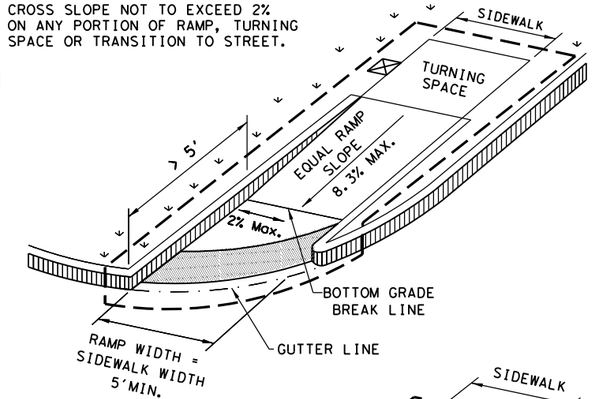


CURB RAMPS AT MEDIAN ISLANDS

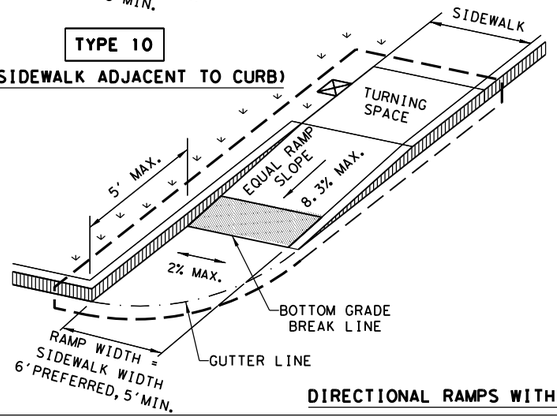
TYPE 7
(SIDEWALK SET BACK FROM CURB)



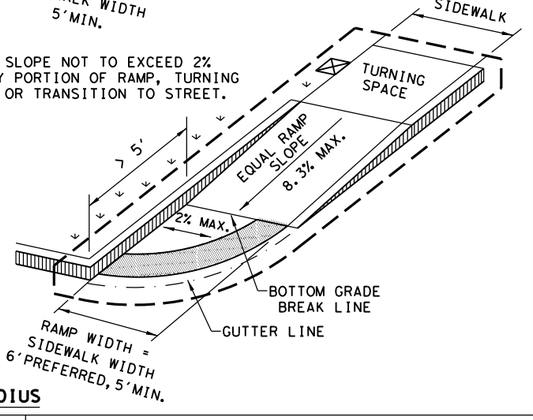
CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.



TYPE 10
(SIDEWALK ADJACENT TO CURB)

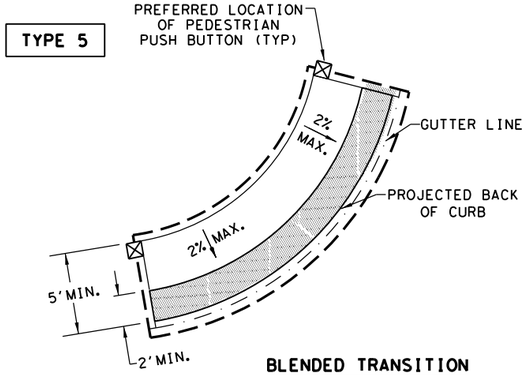


CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.



DIRECTIONAL RAMPS WITHIN RADIUS

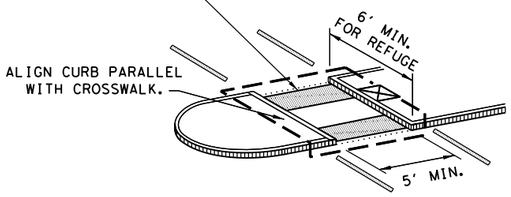
TYPE 5



BLENDED TRANSITION
(FLUSH LANDING)

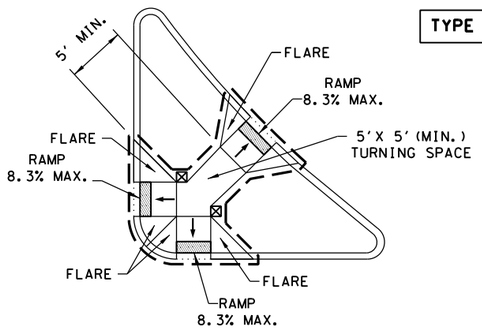
TYPE 21

INSTALL DETECTABLE WARNING SURFACE AT EACH END OF THE CUT-THROUGH RAMP WITH A MINIMUM 2' USUAL SIDEWALK SURFACE BETWEEN. IF MEDIAN IS LESS THAN 6' WIDE, ELIMINATE DETECTABLE WARNING SURFACES.



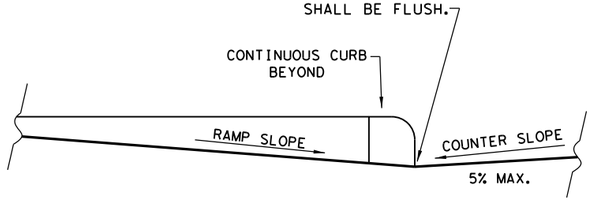
NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS

BOTTOM GRADE BREAK OF CURB RAMP WILL NORMALLY BE AT GUTTER LINE. SURFACE SLOPES AT GRADE BREAKS SHALL BE FLUSH.



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DETECTABLE WARNING SURFACE

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

GUTTER LINE

GRADE BREAK

RAMP LIMITS OF PAYMENT

SHEET 1 OF 4

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0912	72	360	BSW	
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY		SHEET NO.	
	12	HARRIS		310	

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DATE:
FILE:

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicalble standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

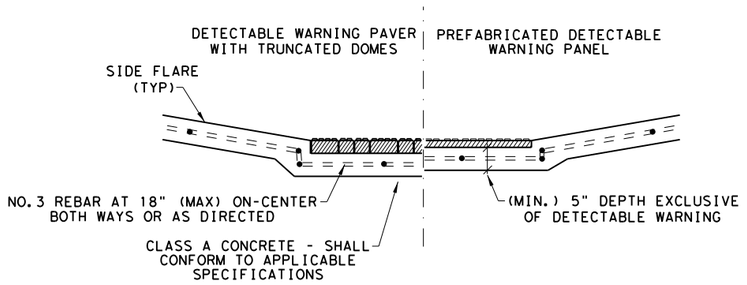
19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

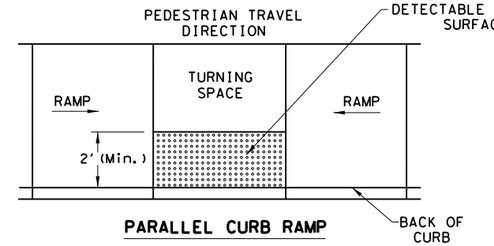
SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.

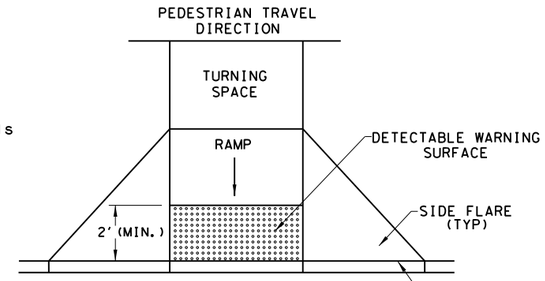


SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS

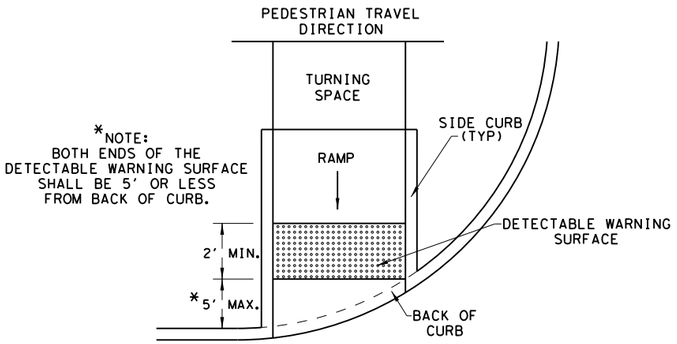
DETECTABLE WARNING SURFACE DETAILS



PARALLEL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



DIRECTIONAL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

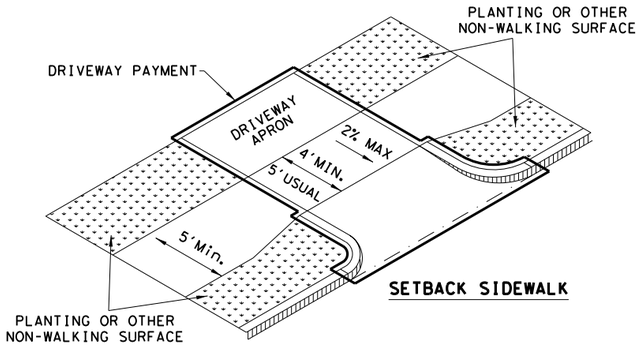
PED-18

FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS	0912	72	360		BSW
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY			SHEET NO.
	12	HARRIS			311

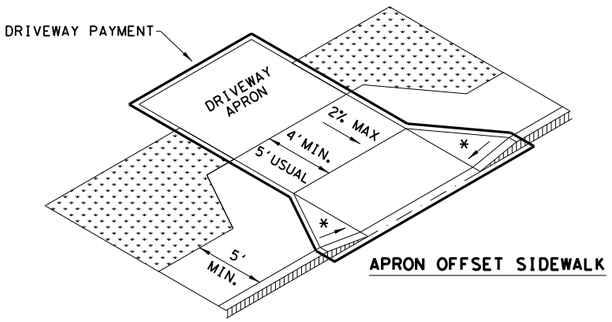
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DATE:
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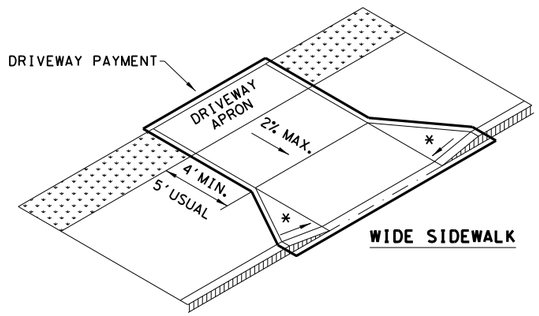
SIDEWALK TREATMENT AT DRIVEWAYS



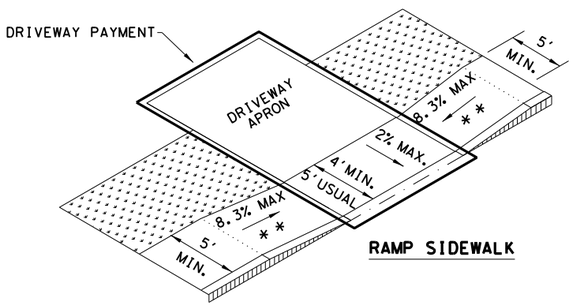
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



WIDE SIDEWALK

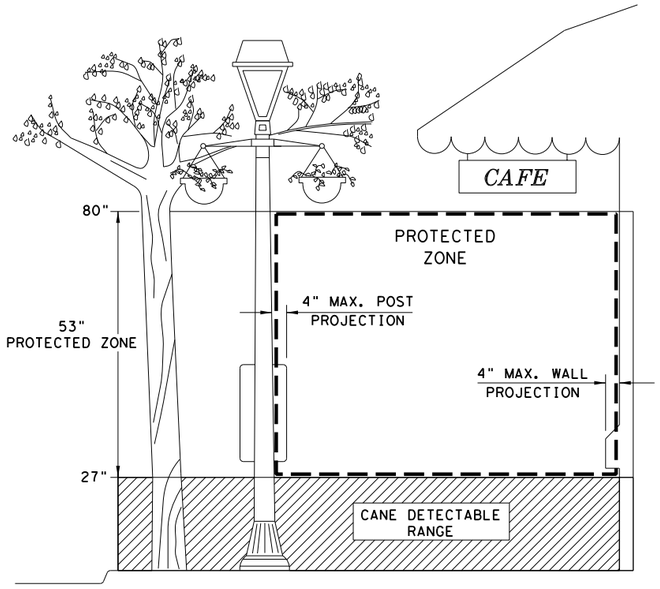


RAMP SIDEWALK

NOTES:

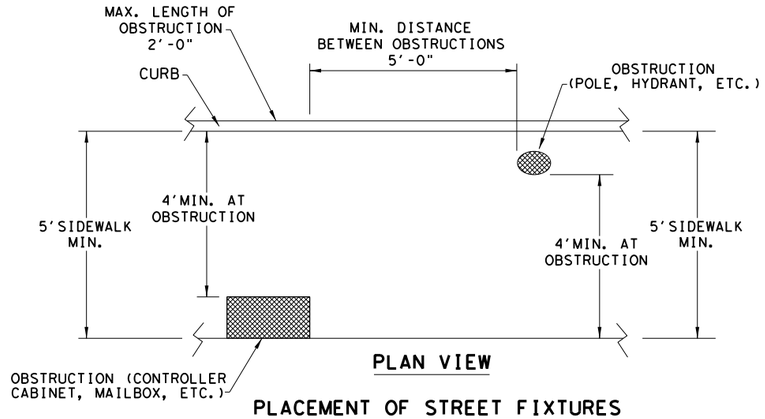
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

* * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.



PROTECTED ZONE

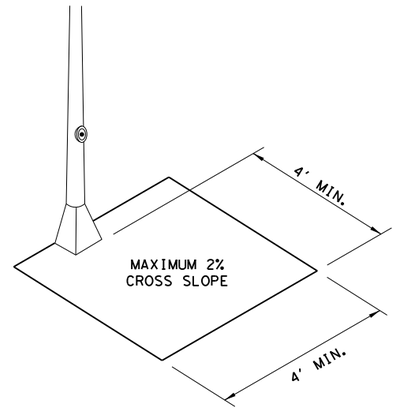
NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



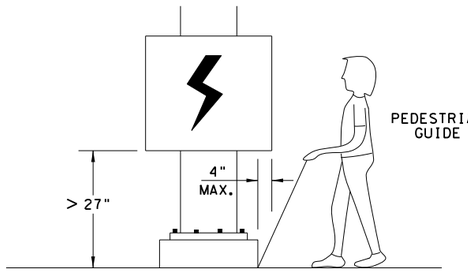
PLAN VIEW

PLACEMENT OF STREET FIXTURES

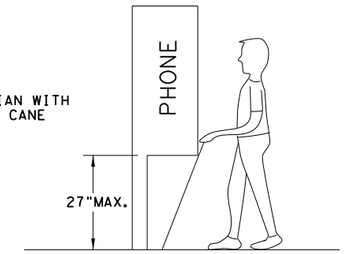
NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.



PROTRUDING OBJECTS OF A HEIGHT ≤ 27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS

PED-18

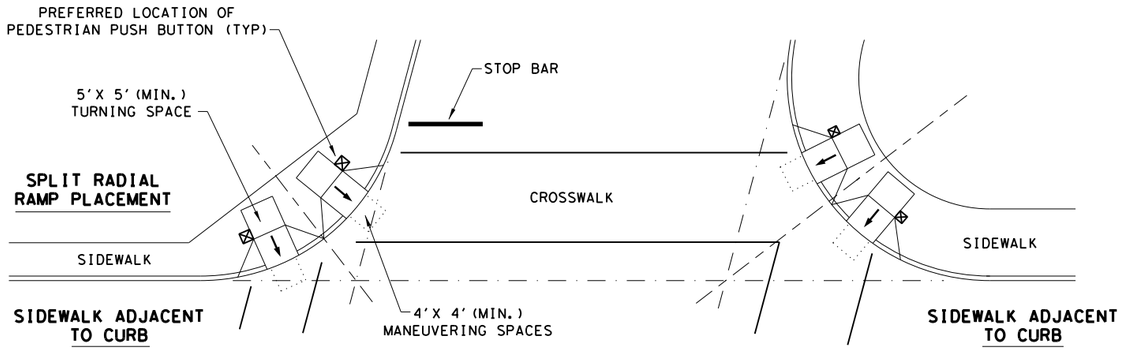
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© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	0912	72	360		BSW
	DIST	COUNTY			SHEET NO.
	12	HARRIS			312

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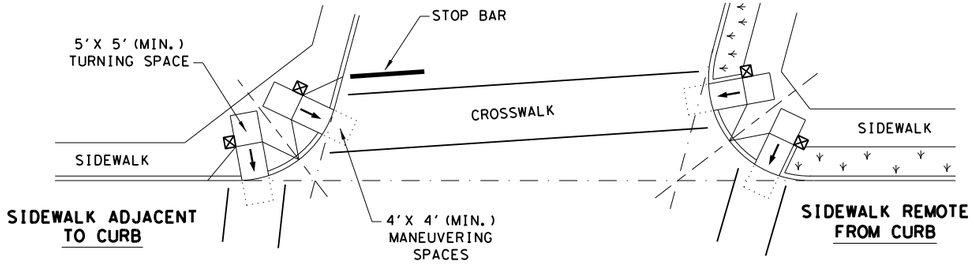
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TYPICAL CROSSING LAYOUTS

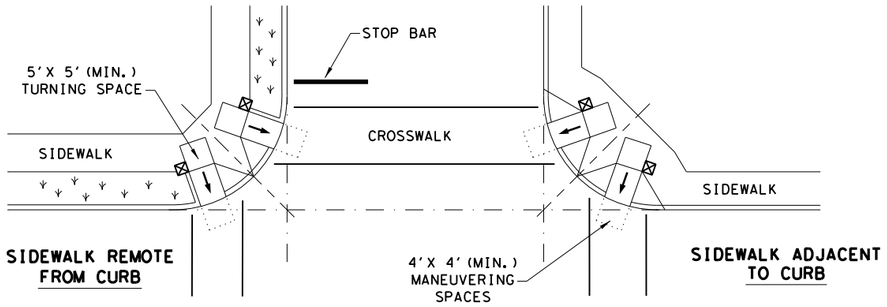
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



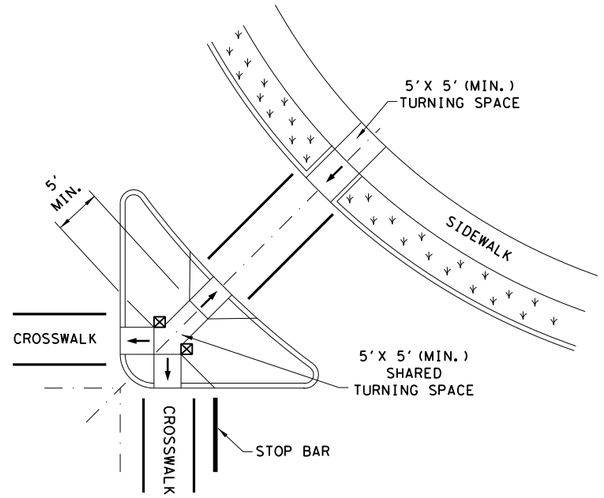
SKEWED INTERSECTION WITH "LARGE" RADIUS



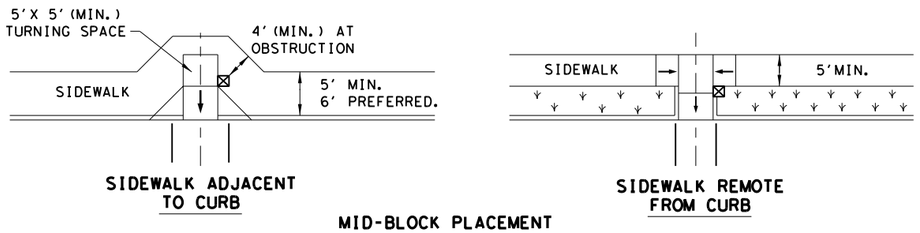
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

LEGEND:

SHOWS DOWNWARD SLOPE. →

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE). ☒

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

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REVISIONS	0912	72	360	BSW
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY		SHEET NO.
	12	HARRIS		313