SHEET 1 OF 4

WILLIAMSON COUNTY
1848

WILLIAMSON COUNTY

PRELIMINARY DESIGN FOR:

FM 3349 at US 79

PS22

PRECINCT #4

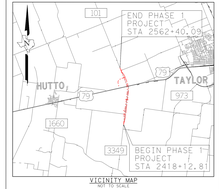
COUNTY: WILLIAMSON
LIMITS:FM 3349 FROM CR 404 TO NORTH OF CR 395
APPROX. LENGTH OF PROJECT = 2.73 MI
APPROX. LENGTH OF BRIDGE = 0.24 MI
FUNCTIONAL CLASSIFICATION = FREEWAY
ROADWAY CLASSIFICATION = RURAL
TERRAIN = ROLLING
MAXIMUM SUPERELEVATION RATE (emax) = 6.0%
FM 3349 AND US 79: TxDOT RDM (APRIL 2018)
COUNTY ROADS: WILLIAMSON COUNTY DCM

DESIGN SPEED CRITERIA

FM 3349 FRONTAGE ROAD:	45 MPH (INTERIM)
COUNTY ROADS:	45 MPH
JUG HANDLE * :	45 MPH

* LOW-SPEED DESIGN CRITERIA

	AADT		TRUCK PERCENTAGE	
	2018	2040		
FM 3349	950	66200	6.7	
US 79	18000	71000	17.2	



VICINITY MAP
NOT TO SCALE

BEARING BASIS: NAD83, TEXAS STATE PLANE, CENTRAL ZONE, US FOOT.

COORDINATES FOR THIS PROJECT ARE SURFACE VALUES BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.00012352
VERTICAL DATUM: NAD83, NORTH AMERICA DATUM OF 1983

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0 100 200 300 — H: 1"=100'
0 10 20 30 — V: 1"=10'

TUDTUD, FELIPE S. 104836 LICENSED PROFESSIONAL ENGINEER

9/10/2020

PRELIMINARY
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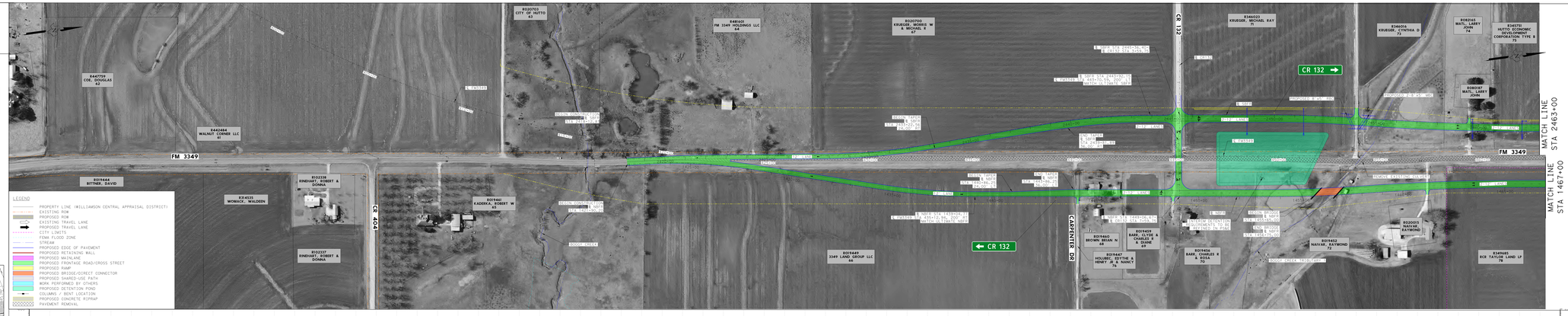
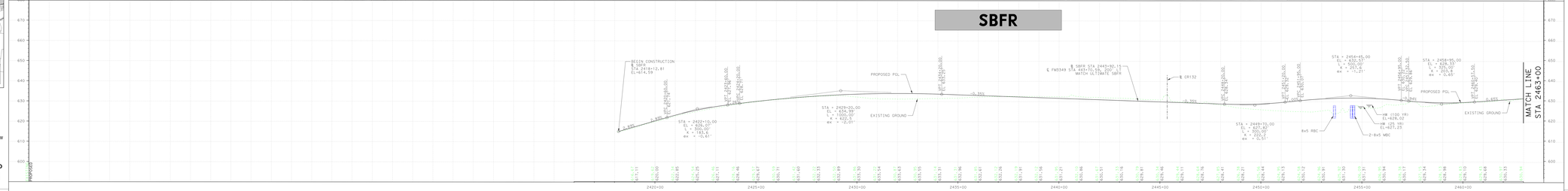
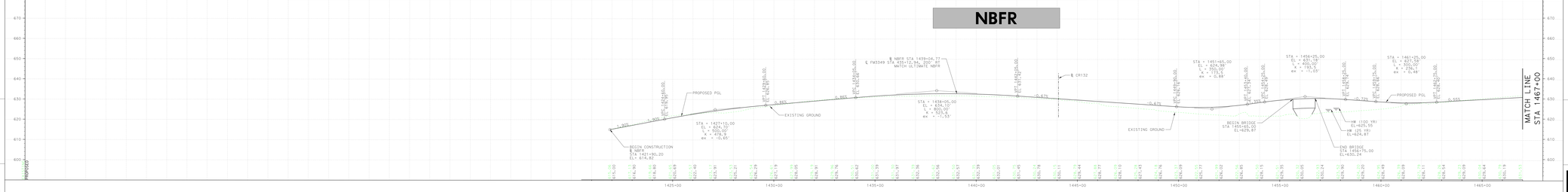
FM 3349
PHASE 1
INTERIM PROJECT
PLAN AND PROFILE

HDR Engineering Inc.
Texas P.E. Firm Registration No. F-754







WILLIAMSON COUNTY
1848

WILLIAMSON COUNTY

PRELIMINARY DESIGN FOR:

FM 3349 at US 79

PS22

PRECINCT #4

COUNTY: WILLIAMSON
LIMITS:FM 3349 FROM CR 404 TO NORTH OF CR 395
APPROX. LENGTH OF PROJECT = 2.73 MI
APPROX. LENGTH OF BRIDGE = 0.24 MI
FUNCTIONAL CLASSIFICATION = FREEWAY
ROADWAY CLASSIFICATION = RURAL
TERRAIN = ROLLING
MAXIMUM SUPERELEVATION RATE (emax) = 6.0%
FM 3349 AND US 79: TxDOT RDM (APRIL 2018)
COUNTY ROADS: WILLIAMSON COUNTY DCM

DESIGN SPEED CRITERIA

FM 3349 FRONTAGE ROAD:	45 MPH (INTERIM)
COUNTY ROADS:	45 MPH
JUG HANDLE * :	45 MPH

* LOW-SPEED DESIGN CRITERIA

	AADT		TRUCK PERCENTAGE	
	2018	2040		
FM 3349	950	66200	6.7	
US 79	18000	71000	17.2	

VICINITY MAP
NOT TO SCALE

BEARING BASIS: NAD83, TEXAS STATE PLANE, CENTRAL ZONE, US FOOT.

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VERTICAL DATUM: NAD83, NORTH AMERICA DATUM OF 1983

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TUDTUD, FELIPE S. 104836 LICENSED PROFESSIONAL ENGINEER

9/10/2020

PRELIMINARY
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FM3349
PHASE 1
INTERIM PROJECT
PLAN AND PROFILE

HDR Engineering Inc.
Texas P.E. Firm Registration No. F-754

SHEET 2 OF 4

WILLIAMSON COUNTY
1848

WILLIAMSON COUNTY

PRELIMINARY DESIGN FOR:

FM 3349 at US 79

P322

PRECINCT #4

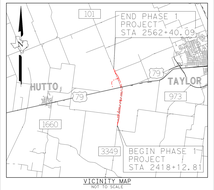
COUNTY: WILLIAMSON
LIMITS:FM 3349 FROM CR 404 TO NORTH OF CR 395
APPROX. LENGTH OF PROJECT = 2.73 MI
APPROX. LENGTH OF BRIDGE = 0.24 MI
FUNCTIONAL CLASSIFICATION = FREEWAY
NHS = NHS (INTERSTATE) = RURAL
TERRAIN = ROLLING
MAXIMUM SUPERELEVATION RATE (emax) = 6.0%
FM 3349 AND US 79: TxDOT RDM (APRIL 2018)
COUNTY ROADS: WILLIAMSON COUNTY DCM

DESIGN SPEED CRITERIA

FM 3349 FRONTAGE ROAD:	45 MPH (INTERIM)
COUNTY ROADS:	45 MPH
JUG HANDLE * :	45 MPH

* LOW-SPEED DESIGN CRITERIA

	AADT		TRUCK PERCENTAGE
	2018	2040	
FM 3349	950	66200	6.7
US 79	18000	71000	17.2



VICINITY MAP
NO SCALE

BEARING BASIS: NAD83, TEXAS STATE PLANE, CENTRAL ZONE, US FOOT.

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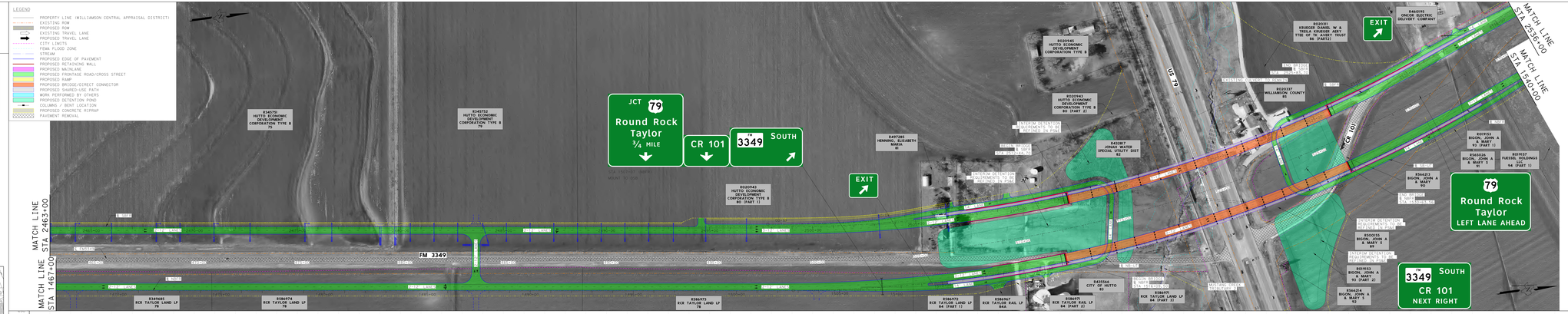
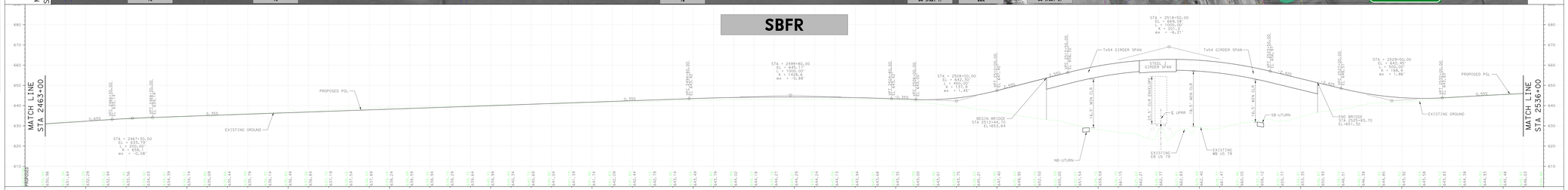
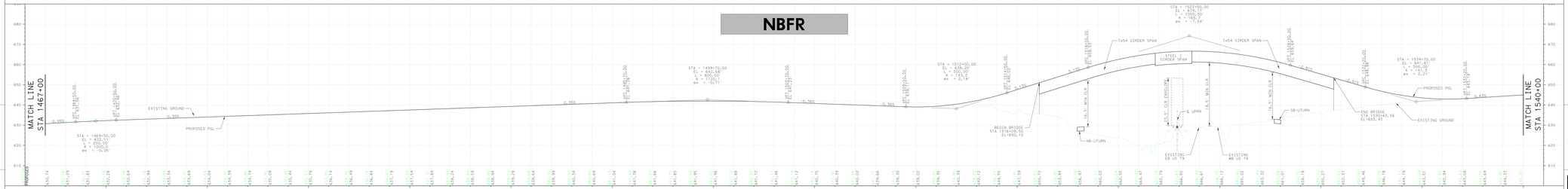
FM 3349
PHASE 1
INTERIM PROJECT
PLAN AND PROFILE

HDR Engineering Inc.
Texas P.E. Firm Registration No. F-754







WILLIAMSON COUNTY
1848

WILLIAMSON COUNTY

PRELIMINARY DESIGN FOR:

FM 3349 at US 79

P322

PRECINCT #4

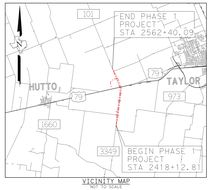
COUNTY: WILLIAMSON
LIMITS:FM 3349 FROM CR 404 TO NORTH OF CR 395
APPROX. LENGTH OF PROJECT = 2.73 MI
APPROX. LENGTH OF BRIDGE = 0.24 MI
FUNCTIONAL CLASSIFICATION = FREEWAY
NHS = NHS (INTERSTATE) = RURAL
TERRAIN = ROLLING
MAXIMUM SUPERELEVATION RATE (emax) = 6.0%
FM 3349 AND US 79: TxDOT RDM (APRIL 2018)
COUNTY ROADS: WILLIAMSON COUNTY DCM

DESIGN SPEED CRITERIA

FM 3349 FRONTAGE ROAD: 45 MPH (INTERIM)
COUNTY ROADS: 45 MPH
JUG HANDLE * : 45 MPH

* LOW-SPEED DESIGN CRITERIA

AADT / TRUCK PERCENTAGE
FM 3349: 2018 950, 2040 66200, 6.7
US 79: 2018 18000, 2040 71000, 17.2



VICINITY MAP
NO SCALE

BEARING BASIS: NAD83, TEXAS STATE PLANE, CENTRAL ZONE, US FOOT.

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9/10/2020

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FM3349
PHASE 1
INTERIM PROJECT
PLAN AND PROFILE

HDR Engineering Inc.
Texas P.E. Firm Registration No. F-754

WILLIAMSON COUNTY 1848

WILLIAMSON COUNTY

PRELIMINARY DESIGN FOR:

FM 3349 at US 79

P332

PRECINCT #4

COUNTY: WILLIAMSON
LIMITS:FM 3349 FROM CR 404 TO NORTH OF CR 395
APPROX. LENGTH OF PROJECT = 2.73 MI
APPROX. LENGTH OF BRIDGE = 0.24 MI
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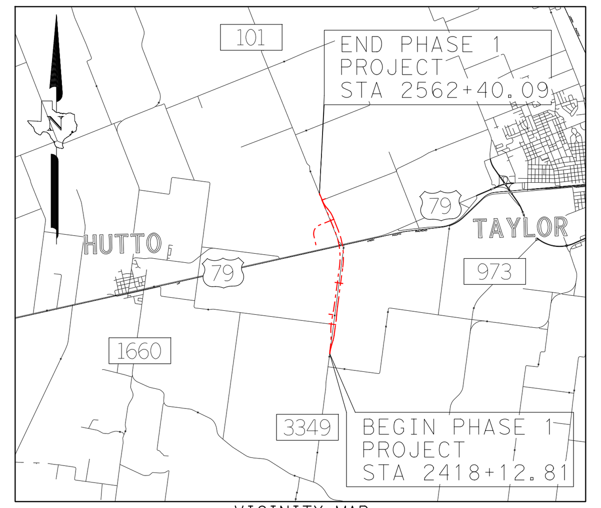
ROADWAY CLASSIFICATION = RURAL
TERRAIN = ROLLING
MAXIMUM SUPERELEVATION RATE (emax) = 6.0%
FM 3349 AND US 79: TxDOT RDM (APRIL 2018)
COUNTY ROADS: WILLIAMSON COUNTY DCM

DESIGN SPEED CRITERIA

FM 3349 FRONTAGE ROAD:	45 MPH (INTERIM)
COUNTY ROADS:	45 MPH
JUG HANDLE * :	45 MPH

* LOW-SPEED DESIGN CRITERIA

	AADT 2018	AADT 2040	TRUCK PERCENTAGE
FM 3349	950	66200	6.7
US 79	18000	71000	17.2



VICINITY MAP
NOT TO SCALE

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STATE OF TEXAS — FELIPE S. TUDTUD — 104836 — LICENSED PROFESSIONAL ENGINEER
9/10/2020

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FM 3349
PHASE 1
INTERIM PROJECT
PLAN AND PROFILE

HDR Engineering Inc.
Texas P.E. Firm Registration No. F-754

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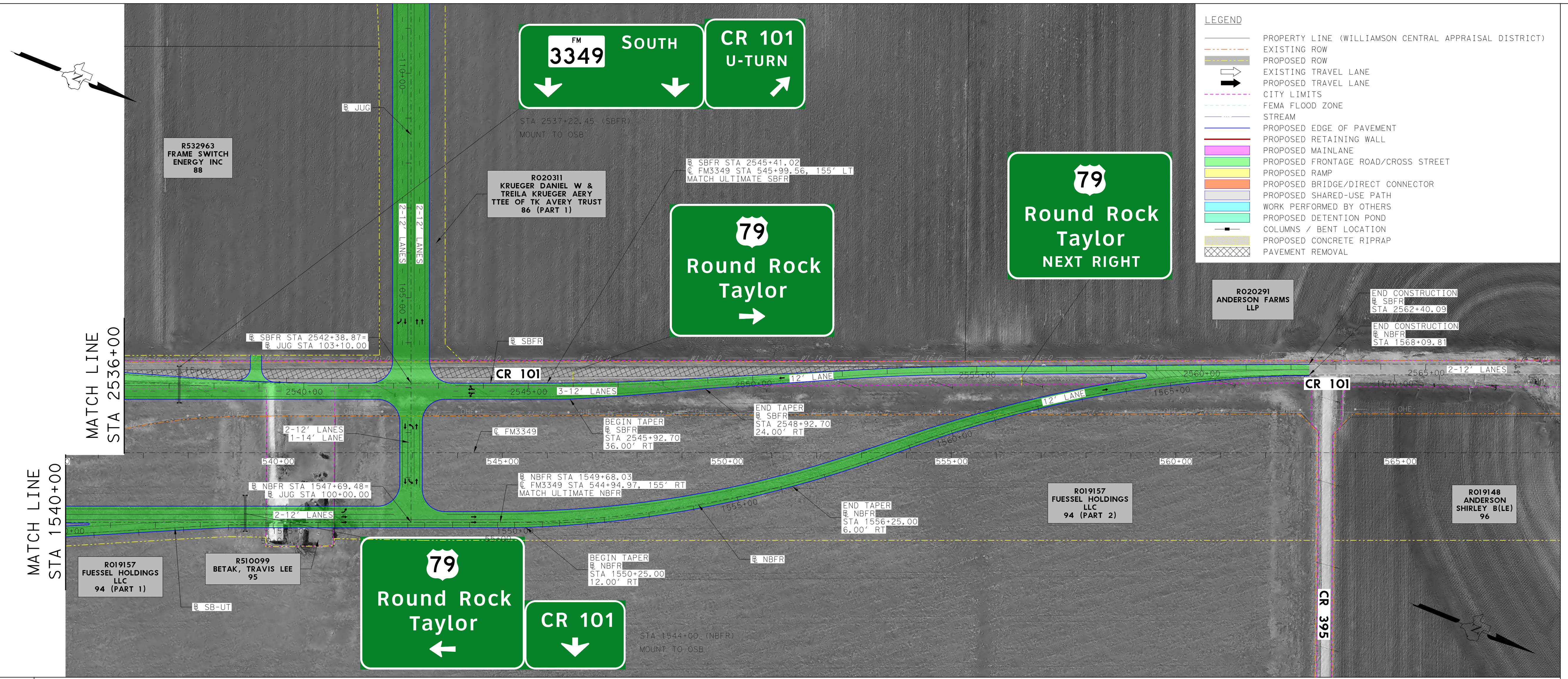

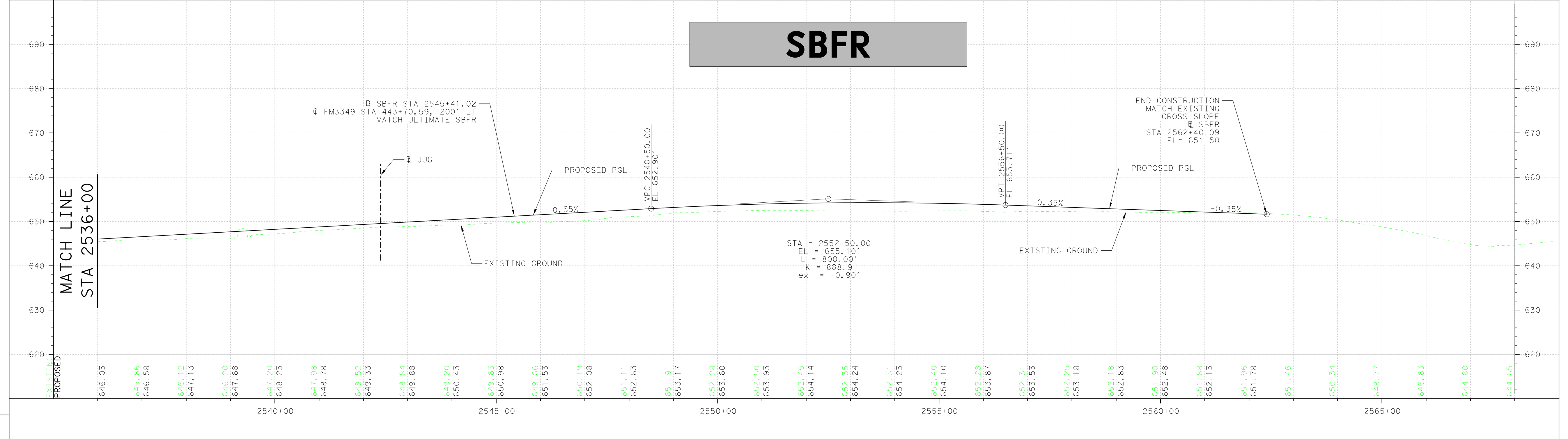

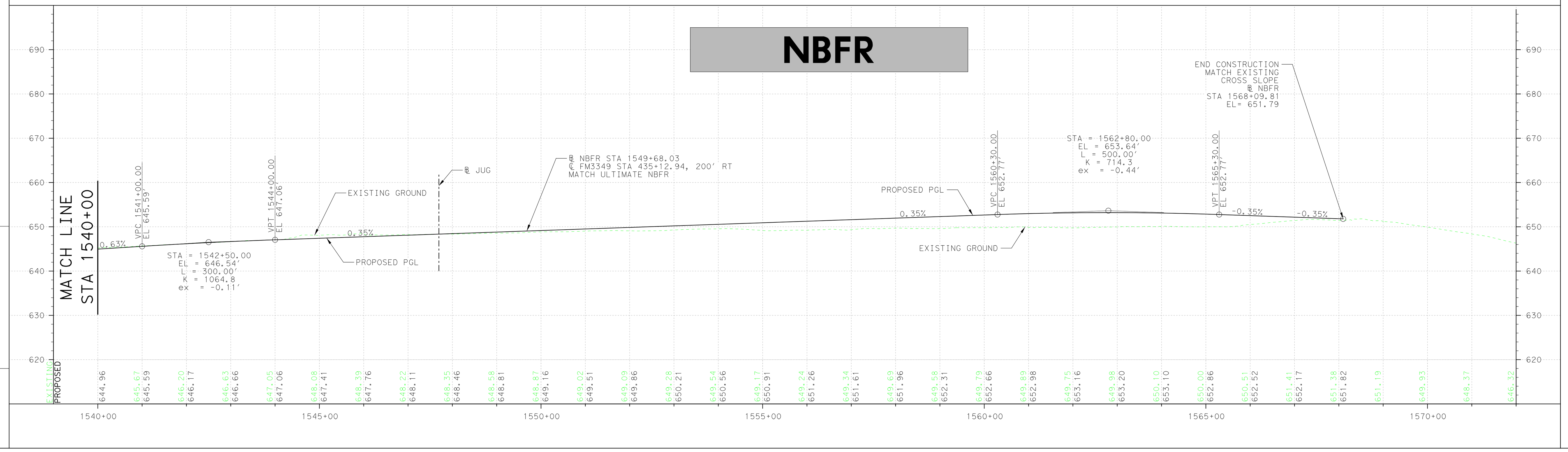

NB FRONTAGE ROAD "Ƀ NBFR"

Element: Linear

	STATION	NORTHING	EASTING
POB ( )	1421+90.21	10167798.190	3192725.606
PC ( )	1422+86.92	10167894.507	3192734.278
Tangent Direction:	N 5°08'40.19" E		
Tangent Length:	96.7064		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	1422+86.92	10167894.507	3192734.278
PI ( )	1425+34.10	10168140.692	3192756.442
CC ( )		10167670.337	3195224.207
PT ( )	1427+79.68	10168377.771	3192826.388
Radius:	2500.0000		
Delta:	11°17'35.72" Right		
Degree of Curvature(Arc):	2°17'30.59"		
Length:	492.7612		
Tangent:	247.1814		
Chord:	491.9639		
Middle Ordinate:	12.1309		
External:	12.1900		
Tangent Direction:	N 5°08'40.19" E		
Radial Direction:	S 84°51'19.81" E		
Chord Direction:	N 10°47'28.05" E		
Radial Direction:	S 73°33'44.09" E		
Tangent Direction:	N 16°26'15.91" E		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	1427+79.68	10168377.771	3192826.388
PC ( )	1434+45.32	10169016.204	3193014.746
Tangent Direction:	N 16°26'15.91" E		
Tangent Length:	665.6397		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	1434+45.32	10169016.204	3193014.746
PI ( )	1436+75.50	10169236.971	3193079.879
CC ( )		10169865.125	3190137.363
PT ( )	1439+04.77	10169465.089	3193110.572
Radius:	3000.0000		
Delta:	8°46'29.33" Left		
Degree of Curvature(Arc):	1°54'35.49"		
Length:	459.4482		
Tangent:	230.1742		
Chord:	458.9993		
Middle Ordinate:	8.7912		
External:	8.8171		
Tangent Direction:	N 16°26'15.91" E		
Radial Direction:	S 73°33'44.09" E		
Chord Direction:	N 12°03'01.24" E		
Radial Direction:	S 82°20'13.42" E		
Tangent Direction:	N 7°39'46.58" E		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	1439+04.77	10169465.089	3193110.572
PC ( )	1453+50.11	10170897.526	3193303.301
Tangent Direction:	N 7°39'46.58" E		
Tangent Length:	1445.3437		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	1453+50.11	10170897.526	3193303.301
PI ( )	1455+75.18	10171120.586	3193333.313
CC ( )		10171730.266	3187114.071
PRC ( )	1458+00.06	10171345.228	3193347.190
Radius:	6245.0000		
Delta:	4°07'41.18" Left		
Degree of Curvature(Arc):	0°55'02.88"		
Length:	449.9461		
Tangent:	225.0704		
Chord:	449.8488		
Middle Ordinate:	4.0518		
External:	4.0545		
Tangent Direction:	N 7°39'46.58" E		
Radial Direction:	S 82°20'13.42" E		
Chord Direction:	N 5°35'55.99" E		
Radial Direction:	S 86°27'54.60" E		
Tangent Direction:	N 3°32'05.40" E		

Element: Circular

	STATION	NORTHING	EASTING
PRC ( )	1458+00.06	10171345.228	3193347.190
PI ( )	1462+00.10	10171744.512	3193371.855
CC ( )		10170660.854	3204426.073
PT ( )	1465+99.80	10172140.985	3193425.199
Radius:	11100.0000		
Delta:	4°07'41.18" Right		
Degree of Curvature(Arc):	0°30'58.24"		
Length:	799.7441		
Tangent:	400.0451		
Chord:	799.5711		
Middle Ordinate:	7.2018		
External:	7.2065		
Tangent Direction:	N 3°32'05.40" E		
Radial Direction:	S 86°27'54.60" E		
Chord Direction:	N 5°35'55.99" E		
Radial Direction:	S 82°20'13.42" E		
Tangent Direction:	N 7°39'46.58" E		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	1465+99.80	10172140.985	3193425.199
PC ( )	1502+38.34	10175747.027	3193910.380
Tangent Direction:	N 7°39'46.58" E		
Tangent Length:	3638.5353		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	1502+38.34	10175747.027	3193910.380
PI ( )	1519+99.39	10177492.353	3194145.208
CC ( )		10176634.439	3187314.812
PT ( )	1536+81.52	10179125.392	3193486.049
Radius:	6655.0000		
Delta:	29°38'37.94" Left		
Degree of Curvature(Arc):	0°51'39.40"		
Length:	3443.1849		
Tangent:	1761.0528		
Chord:	3404.9094		
Middle Ordinate:	221.4417		
External:	229.0636		
Tangent Direction:	N 7°39'46.58" E		
Radial Direction:	S 82°20'13.42" E		
Chord Direction:	N 7°09'32.39" W		
Radial Direction:	N 68°01'08.64" E		
Tangent Direction:	N 21°58'51.36" W		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	1536+81.52	10179125.392	3193486.049
PI ( )	1546+73.52	10180045.277	3193114.748
Tangent Direction:	N 21°58'51.36" W		
Tangent Length:	991.9949		

Element: Linear

	STATION	NORTHING	EASTING
PI ( )	1546+73.52	10180045.311	3193114.734
PC ( )	1549+68.03	10180318.415	3193004.499
Tangent Direction:	N 21°58'51.36" W		
Tangent Length:	294.5128		

NB FRONTAGE ROAD "Ƀ NBFR" - CONTINUE

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	1549+68.03	10180318.415	3193004.499
PI ( )	1554+08.85	10180727.189	3192839.502
CC ( )		10179382.670	3190686.228
PT ( )	1558+40.70	10181054.878	3192544.646
Radius:	2500.0000		
Delta:	20°00'00.00" Left		
Degree of Curvature(Arc):	2°17'30.59"		
Length:	872.6646		
Tangent:	440.8175		
Chord:	868.2409		
Middle Ordinate:	37.9806		
External:	38.5665		
Tangent Direction:	N 21°58'51.36" W		
Radial Direction:	N 68°01'08.64" E		
Chord Direction:	N 31°58'51.36" W		
Radial Direction:	N 48°01'08.64" E		
Tangent Direction:	N 41°58'51.36" W		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	1558+40.70	10181054.878	3192544.646
PC ( )	1559+17.08	10181111.660	3192493.554
Tangent Direction:	N 41°58'51.36" W		
Tangent Length:	76.3845		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	1559+17.08	10181111.660	3192493.554
PI ( )	1563+50.20	10181433.623	3192203.851
CC ( )		10182783.868	3194351.972
PT ( )	1567+74.80	10181834.278	3192039.338
Radius:	2500.0000		
Delta:	19°39'26.66" Right		
Degree of Curvature(Arc):	2°17'30.59"		
Length:	857.7162		
Tangent:	433.1149		
Chord:	853.5157		
Middle Ordinate:	36.6937		
External:	37.2403		
Tangent Direction:	N 41°58'51.36" W		
Radial Direction:	N 48°01'08.64" E		
Chord Direction:	N 32°09'08.03" W		
Radial Direction:	N 67°40'35.30" E		
Tangent Direction:	N 22°19'24.70" W		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	1567+74.80	10181834.278	3192039.338
PI ( )	1568+56.88	10181910.208	3192008.160
Tangent Direction:	N 22°19'24.70" W		
Tangent Length:	82.0820		

Element: Linear

	STATION	NORTHING	EASTING
PI ( )	1568+56.88	10181910.208	3192008.160
POE ( )	1574+65.56	10182474.504	3191779.975
Tangent Direction:	N 22°01'01.17" W		
Tangent Length:	608.6854		

SB FRONTAGE ROAD "Ƀ SBFR"

Element: Linear

	STATION	NORTHING	EASTING
POB ( )	2418+12.81	10167797.925	3192701.485
PC ( )	2420+60.10	10168044.215	3192723.659
Tangent Direction:	N 5°08'40.19" E		
Tangent Length:	247.2865		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	2420+60.10	10168044.215	3192723.659
PI ( )	2421+58.87	10168142.587	3192732.515
CC ( )		10167529.343	3198442.529
PT ( )	2422+57.62	10168240.596	3192744.750
Radius:	5742.0000		
Delta:	1°58'15.33" Right		
Degree of Curvature(Arc):	0°59'52.21"		
Length:	197.5198		
Tangent:	98.7696		
Chord:	197.5101		
Middle Ordinate:	0.8493		
External:	0.8494		
Tangent Direction:	N 5°08'40.19" E		
Radial Direction:	S 84°51'19.81" E		
Chord Direction:	N 6°07'47.86" E		
Radial Direction:	S 82°53'04.48" E		
Tangent Direction:	N 7°06'55.52" E		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	2422+57.62	10168240.596	3192744.750
PI ( )	2427+00.65	10168680.216	3192799.628
Tangent Direction:	N 7°06'55.52" E		
Tangent Length:	443.0320		

Element: Linear

	STATION	NORTHING	EASTING
PI ( )	2427+00.65	10168680.216	3192799.628
PC ( )	2427+35.64	10168714.890	3192804.323
Tangent Direction:	N 7°42'39.92" E		
Tangent Length:	34.9899		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	2427+35.64	10168714.890	3192804.323
PI ( )	2429+99.38	10168976.241	3192839.710
CC ( )		10169117.424	3189831.451
PT ( )	2432+61.76	10169239.758	3192828.955
Radius:	3000.0000		
Delta:	10°02'53.34" Left		
Degree of Curvature(Arc):	1°54'35.49"		
Length:	526.1200		
Tangent:	263.7363		
Chord:	525.4460		
Middle Ordinate:	11.5260		
External:	11.5705		
Tangent Direction:	N 7°42'39.92" E		
Radial Direction:	S 82°17'20.08" E		
Chord Direction:	N 2°41'13.25" E		
Radial Direction:	N 87°39'46.58" E		
Tangent Direction:	N 2°20'13.42" W		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	2432+61.76	10169239.758	3192828.955
PC ( )	2438+68.56	10169846.047	3192804.212
Tangent Direction:	N 2°20'13.42" W		
Tangent Length:	606.7936		

SB FRONTAGE ROAD "Ƀ SBFR" - CONTINUE

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	2438+68.56	10169846.047	3192804.212
PI ( )	2441+31.02	10170108.294	3192793.509
CC ( )		10169968.381	3195801.716
PT ( )	2443+92.15	10170368.417	3192828.507
Radius:	3000.0000		
Delta:	10°00'00.00" Right		
Degree of Curvature(Arc):	1°54'35.49"		
Length:	523.5988		
Tangent:	262.4660		
Chord:	522.9345		
Middle Ordinate:	11.4159		
External:	11.4595		
Tangent Direction:	N 2°20'13.42" W		
Radial Direction:	N 87°39'46.58" E		
Chord Direction:	N 2°39'46.58" E		
Radial Direction:	S 82°20'13.42" E		
Tangent Direction:	N 7°39'46.58" E		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	2443+92.15	10170368.417	3192828.507
PC ( )	2449+79.85	10170950.864	3192906.874
Tangent Direction:	N 7°39'46.58" E		
Tangent Length:	587.6956		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	2449+79.85	10170950.864	3192906.874
PI ( )	2452+04.92	10171173.924	3192936.886
CC ( )		10170118.123	3199096.104
PRC ( )	2454+29.80	10171394.246	3192982.877
Radius:	6245.0000		
Delta:	4°07'41.18" Right		
Degree of Curvature(Arc):	0°55'02.88"		
Length:	449.9461		
Tangent:	225.0704		
Chord:	449.8488		
Middle Ordinate:	4.0518		
External:	4.0545		
Tangent Direction:	N 7°39'46.58" E		
Radial Direction:	S 82°20'13.42" E		
Chord Direction:	N 9°43'37.16" E		
Radial Direction:	S 78°12'32.25" E		
Tangent Direction:	N 11°47'27.75" E		

Element: Circular

	STATION	NORTHING	EASTING
PRC ( )	2454+29.80	10171394.246	3192982.877
PI ( )	2458+29.84	10171785.849	3193064.624
CC ( )		10173662.453	3182117.094
PT ( )	2462+29.54	10172182.322	3193117.968
Radius:	11100.0000		
Delta:	4°07'41.18" Left		
Degree of Curvature(Arc):	0°30'58.24"		
Length:	799.7441		
Tangent:	400.0451		
Chord:	799.5711		
Middle Ordinate:	7.2018		
External:	7.2065		
Tangent Direction:	N 11°47'27.75" E		
Radial Direction:	S 78°12'32.25" E		
Chord Direction:	N 9°43'37.16" E		
Radial Direction:	S 82°20'13.42" E		
Tangent Direction:	N 7°39'46.58" E		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	2462+29.54	10172182.322	3193117.968
PC ( )	2498+68.08	10175788.364	3193603.149
Tangent Direction:	N 7°39'46.58" E		
Tangent Length:	3638.5353		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	2498+68.08	10175788.364	3193603.149
PI ( )	2515+47.10	10177452.390	3193827.038
CC ( )		10176634.439	3187314.812
PT ( )	2531+50.87	10179009.360	3193198.584
Radius:	6345.0000		
Delta:	29°38'37.94" Left		
Degree of Curvature(Arc):	0°54'10.82"		
Length:	3282.7961		
Tangent:	1679.0203		
Chord:	3246.3036		
Middle Ordinate:	211.1266		
External:	218.3935		
Tangent Direction:	N 7°39'46.58" E		
Radial Direction:	S 82°20'13.42" E		
Chord Direction:	N 7°09'32.39" W		
Radial Direction:	N 68°01'08.64" E		
Tangent Direction:	N 21°58'51.36" W		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	2531+50.87	10179009.360	3193198.584
PC ( )	2545+42.01	10180299.377	3192677.882
Tangent Direction:	N 21°58'51.36" W		
Tangent Length:	1391.1410		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	2545+42.01	10180299.377	3192677.882
PI ( )	2546+72.94	10180420.789	3192628.876
CC ( )		10178427.887	3188041.340
PT ( )	2548+03.81	10180539.470	3192573.582
Radius:	5000.0000		
Delta:	3°00'00.00" Left		
Degree of Curvature(Arc):	1°08'45.30"		
Length:	261.7994		
Tangent:	130.9296		
Chord:	261.7695		
Middle Ordinate:	1.7134		
External:	1.7140		
Tangent Direction:	N 21°58'51.36" W		
Radial Direction:	N 68°01'08.64" E		
Chord Direction:	N 23°28'51.36" W		
Radial Direction:	N 65°01'08.64" E		
Tangent Direction:	N 24°58'51.36" W		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	2548+03.81	10180539.470	3192573.582
PC ( )	2552+57.03	10180950.286	3192382.182
Tangent Direction:	N 24°58'51.36" W		
Tangent Length:	453.2155		

SB FRONTAGE ROAD "Ƀ SBFR" - CONTINUE

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	2552+57.03	10180950.286	3192382.182
PI ( )	2553+73.00	10181055.409	3192333.205
CC ( )		10183061.869	3196914.423
PT ( )	2554+88.93	10181162.689	3192289.154
Radius:	5000.0000		
Delta:	2°39'26.66" Right		
Degree of Curvature(Arc):	1°08'45.30"		
Length:	231.9025		
Tangent:	115.9720		
Chord:	231.8817		
Middle Ordinate:	1.3444		
External:	1.3448		
Tangent Direction:	N 24°58'51.36" W		
Radial Direction:	N 65°01'08.64" E		
Chord Direction:	N 23°39'08.03" W		
Radial Direction:	N 67°40'35.30" E		
Tangent Direction:	N 22°19'24.70" W		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	2554+88.93	10181162.689	3192289.154
PI ( )	2562+87.22	10181901.152	3191985.934
Tangent Direction:	N 22°19'24.70" W		
Tangent Length:	798.2913		

Element: Linear

	STATION	NORTHING	EASTING
PI ( )	2562+87.22	10181901.152	3191985.934
POE ( )	2568+85.33	10182455.646	3191761.713
Tangent Direction:	N 22°01'01.17" W		
Tangent Length:	598.1130		

JUG HANDLE "Ƀ JUG"

Element: Linear

	STATION	NORTHING	EASTING
POB ( )	100+00.00	10180134.298	3193078.815
PC ( )	114+27.10	10179600.136	3191755.449
Tangent Direction:	S 68°01'08.64" W		
Tangent Length:	1427.1050		

Element: Circular

	STATION	NORTHING	EASTING
PC ( )	114+27.10	10179600.136	3191755.449
PI ( )	121+50.48	10179329.378	3191084.659
CC ( )		10178811.923	3192073.602
PT ( )	126+25.76	10178623.921	3191244.654
Radius:	850.0000		
Delta:	80°47'50.63" Left		
Degree of Curvature(Arc):	6°44'26.45"		
Length:	1198.6535		
Tangent:	723.3734		
Chord:	1101.7744		
Middle Ordinate:	202.6799		
External:	266.1403		
Tangent Direction:	S 68°01'08.64" W		
Radial Direction:	N 21°58'51.36" W		
Chord Direction:	S 27°37'13.33" W		
Radial Direction:	S 77°13'18.01" W		
Tangent Direction:	S 12°46'41.99" E		

Element: Linear

	STATION	NORTHING	EASTING
PT ( )	126+25.76	10178623.921	3191244.654
POE ( )	138+00.13	10177478.632	3191504.402
Tangent Direction:	S 12°46'41.99" E		
Tangent Length:	1174.3745		

WILLIAMSON COUNTY 1848

WILLIAMSON COUNTY

PRELIMINARY DESIGN FOR:

FM 3349 at US 79

P332

PRECINCT #4

COUNTY: WILLIAMSON
LIMITS:FM 3349 FROM CR 404 TO NORTH OF CR 395
APPROX. LENGTH OF PROJECT = 2.73 MI
APPROX. LENGTH OF BRIDGE = 0.24 MI
FUNCTIONAL CLASSIFICATION = FREEWAY
ROADWAY CLASSIFICATION = RURAL
TERRAIN = ROLLING
MAXIMUM SUPERELEVATION RATE (emax) = 6.0%
FM 3349 AND US 79: TxDOT RDM (APRIL 2018)
COUNTY ROADS: WILLIAMSON COUNTY DCM

DESIGN SPEED CRITERIA
FM 3349 FRONTAGE ROAD: 45 MPH (INTERIM)
COUNTY ROADS: 45 MPH
JUG HANDLE * : 45 MPH
* LOW-SPEED DESIGN CRITERIA

AADT 2018 2040 TRUCK PERCENTAGE
FM 3349 950 66200 6.7
US 79 18000 71000 17.2

VICINITY MAP
NOT TO SCALE

BEARING BASIS: NAD83, TEXAS STATE PLANE, CENTRAL ZONE, US FOOT.

COORDINATES FOR THIS PROJECT ARE SURFACE VALUES BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.00012352
VERTICAL DATUM: NAD83, NORTH AMERICA DATUM OF 1983

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF FELIPE S. TUDTUD, P.E. 104836. IT IS NOT INTENDED TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

0 100 200 300 — H: 1"=100'
0 10 20 30 — V: 1"=10'

STATE OF TEXAS — FELIPE S. TUDTUD — 104836 — LICENSED PROFESSIONAL ENGINEER
9/10/2020

PRELIMINARY
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FM3349
PHASE 1
INTERIM PROJECT
PLAN AND PROFILE

HDR Engineering Inc.
Texas P.E. Firm Registration No. F-754

SHEET 4 OF 4

WILLIAMSON COUNTY 1848

WILLIAMSON COUNTY

PRELIMINARY DESIGN FOR:

FM 3349 at US 79

P332

PRECINCT #4

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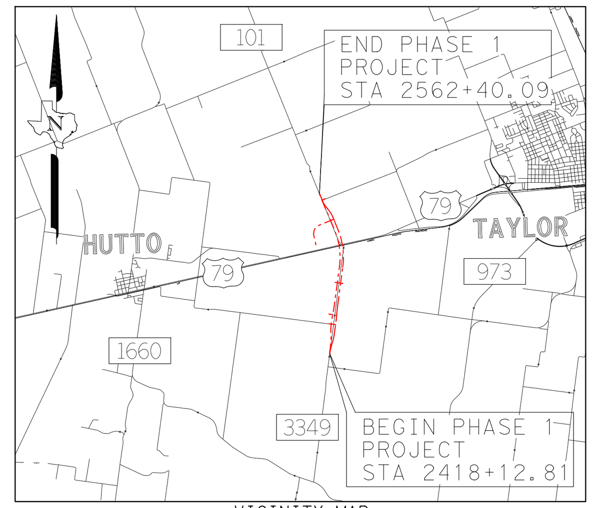
TERRAIN = ROLLING
MAXIMUM SUPERELEVATION RATE (emax) = 6.0%
FM 3349 AND US 79: TxDOT RDM (APRIL 2018)
COUNTY ROADS: WILLIAMSON COUNTY DCM

DESIGN SPEED CRITERIA

FM 3349 FRONTAGE ROAD:	45 MPH (INTERIM)
COUNTY ROADS:	45 MPH
JUG HANDLE * :	45 MPH

* LOW-SPEED DESIGN CRITERIA

	AADT 2018	AADT 2040	TRUCK PERCENTAGE
FM 3349	950	66200	6.7
US 79	18000	71000	17.2



VICINITY MAP
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STATE OF TEXAS — FELIPE S. TUDTUD — 104836 — LICENSED PROFESSIONAL ENGINEER

9/10/2020

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FM 3349
PHASE 1 INTERIM PROJECT-JUG HANDLE PLAN AND PROFILE

HDR Engineering Inc.
Texas P.E. Firm Registration No. F-754

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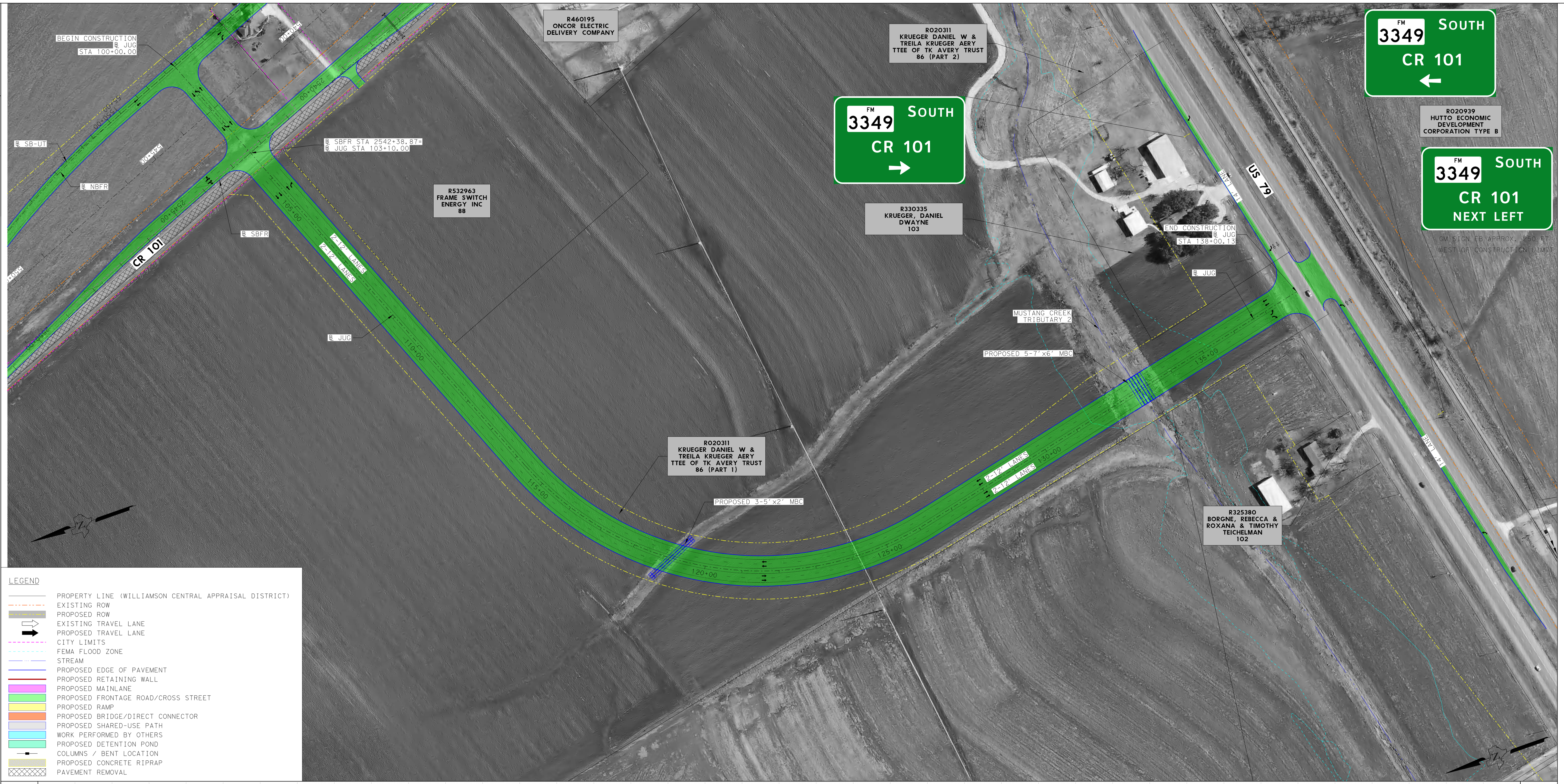
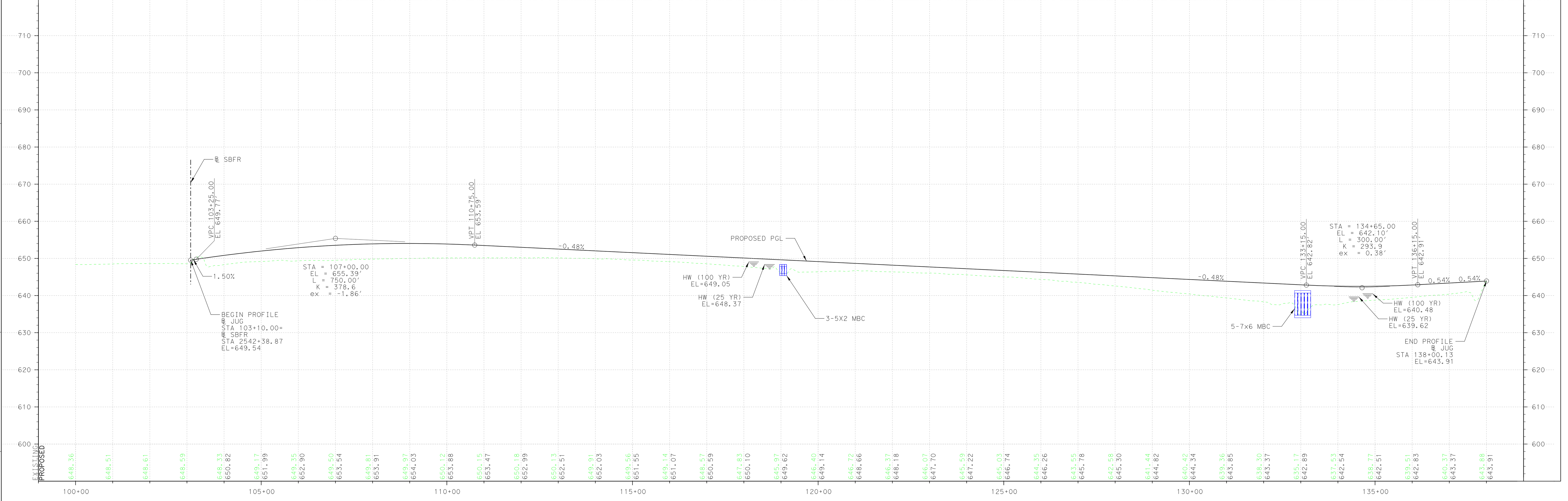
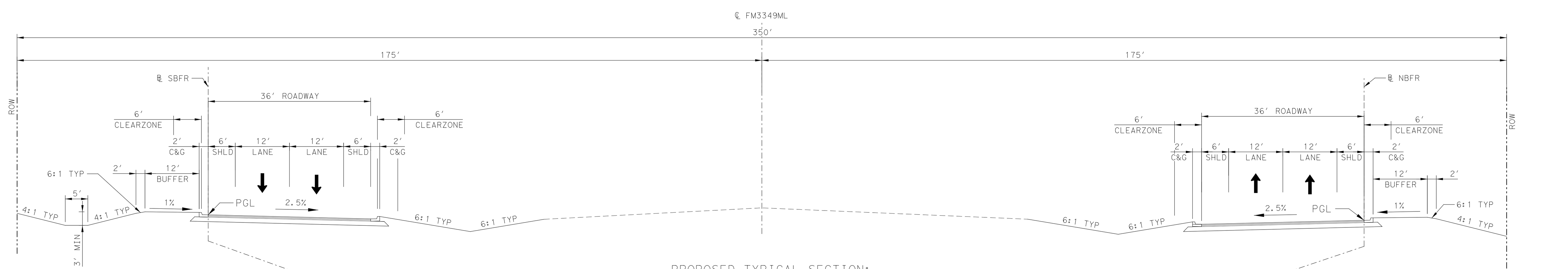
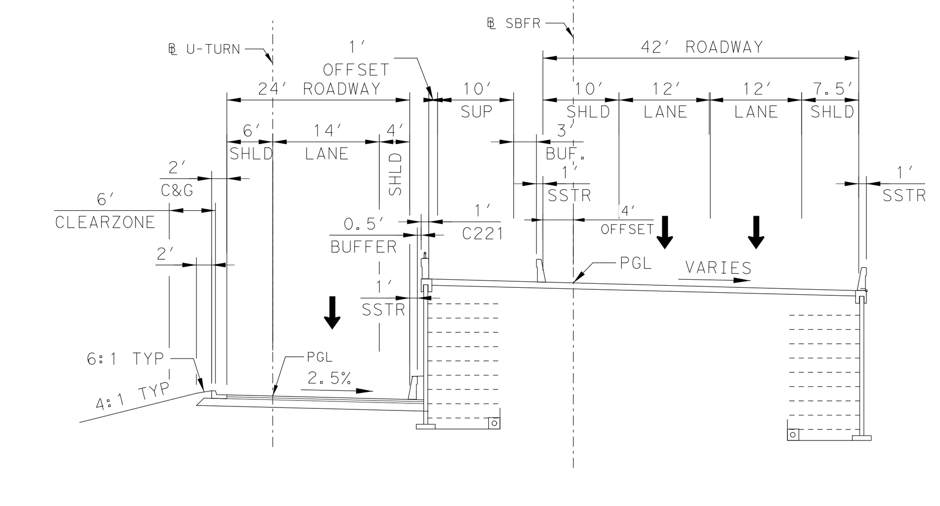


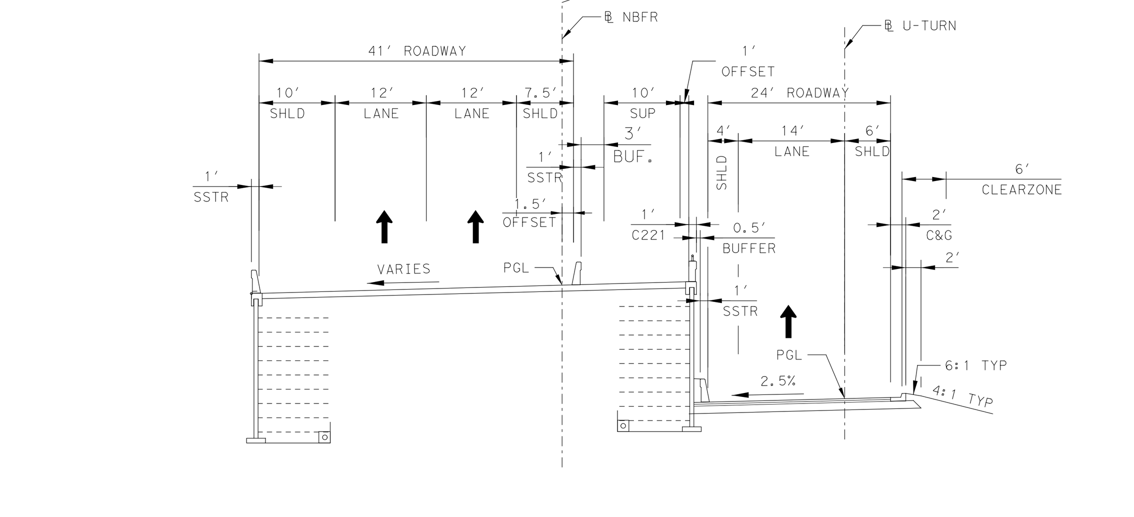




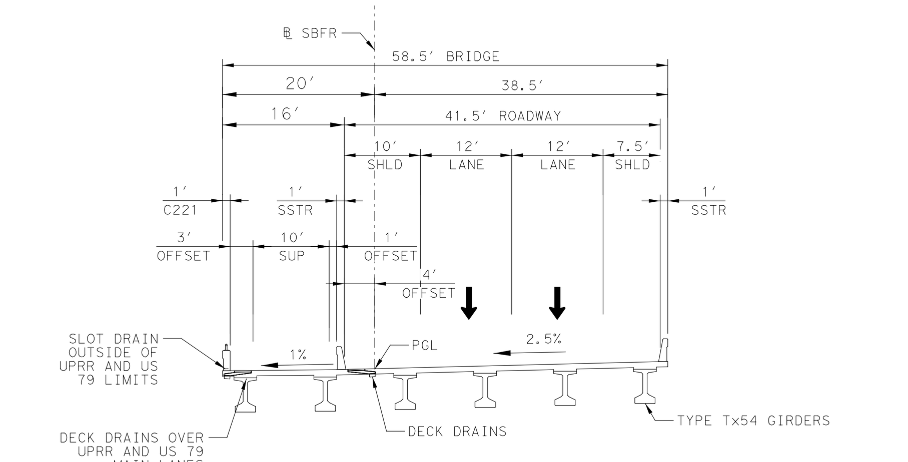
PROPOSED TYPICAL SECTION:
SB AND NB FRONTAGE ROAD



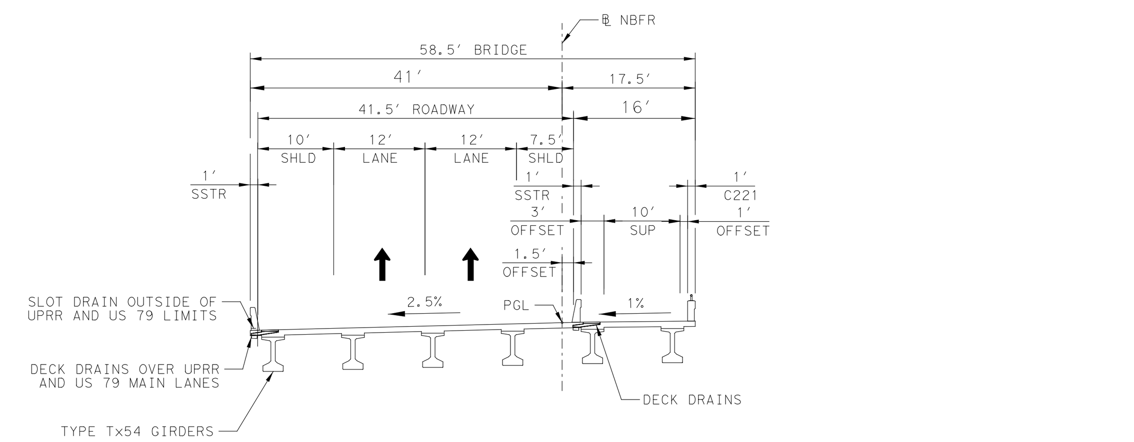
DETAIL A: SB FRONTAGE ROAD
RETAINING WALL SECTION WITH TURNAROUND



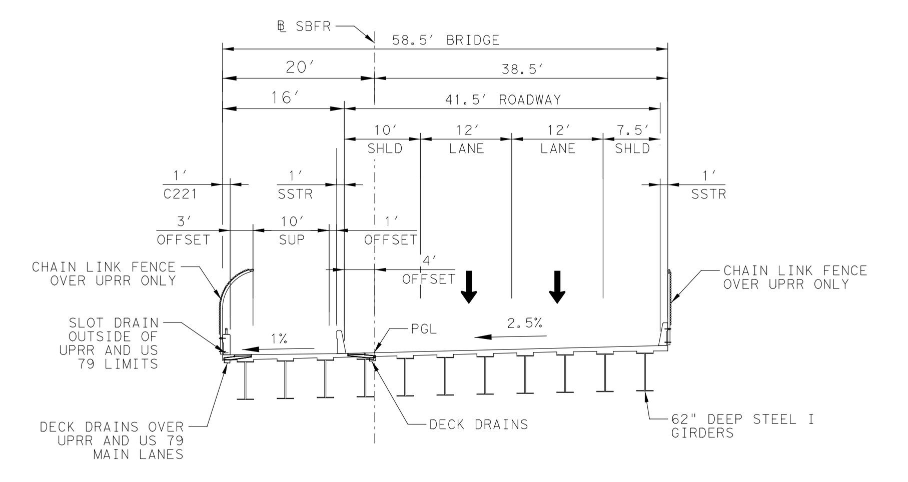
DETAIL B: NB FRONTAGE ROAD
RETAINING WALL SECTION WITH TURNAROUND



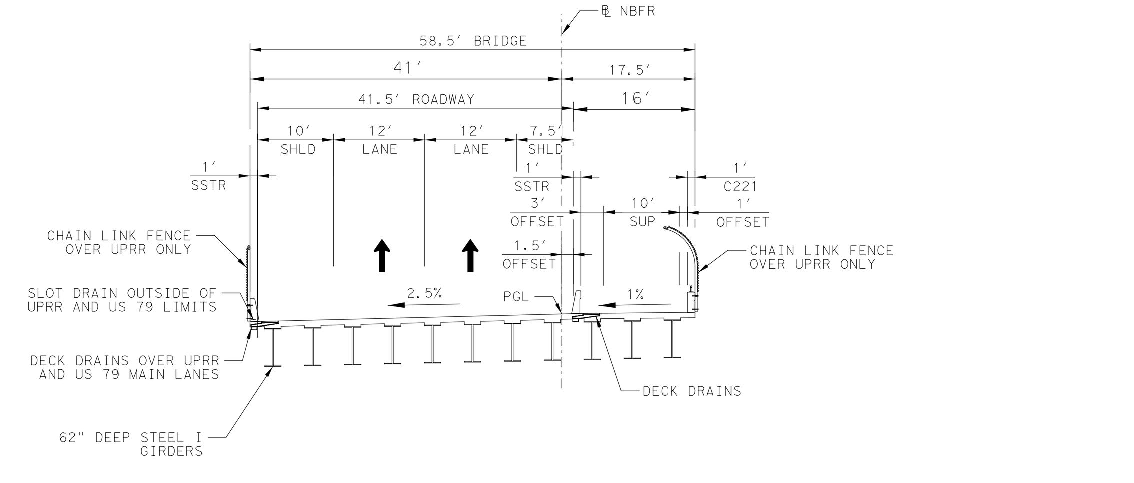
DETAIL C: SB FRONTAGE ROAD
BRIDGE SECTION



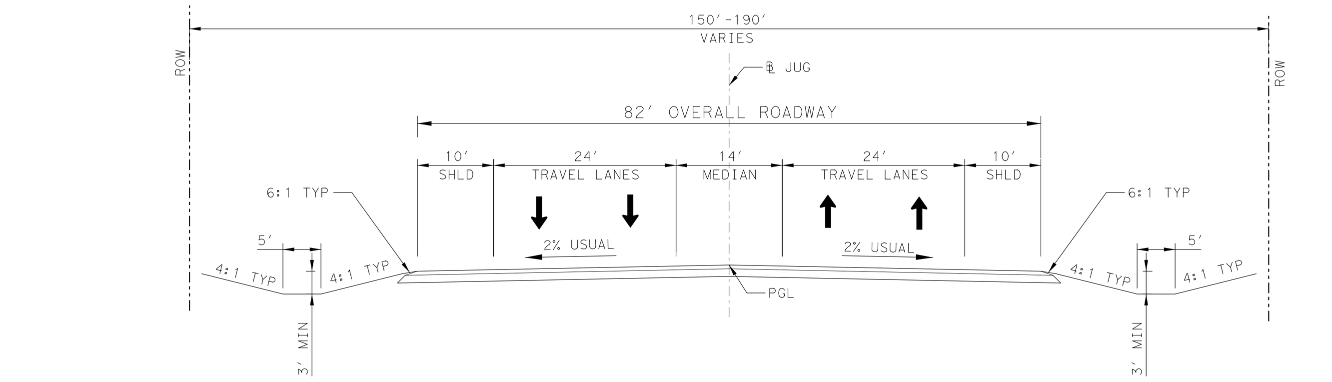
DETAIL D: NB FRONTAGE ROAD
BRIDGE SECTION



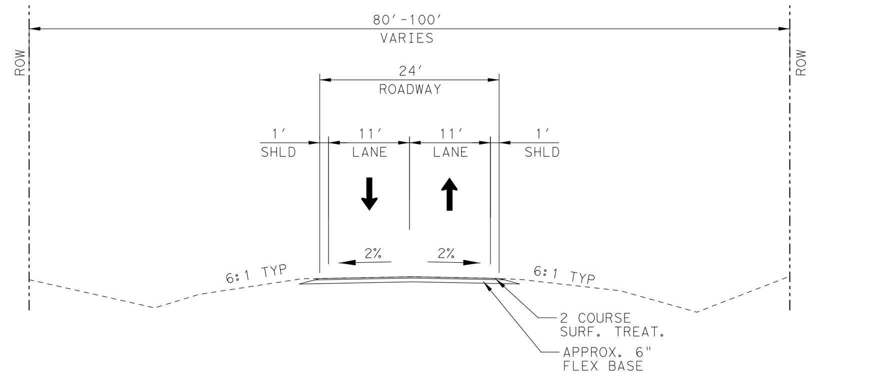
DETAIL E: SB FRONTAGE ROAD
BRIDGE SECTION OVER UPRR



DETAIL F: NB FRONTAGE ROAD
BRIDGE SECTION OVER UPRR



PROPOSED TYPICAL SECTION:
JUGHANDLE



EXISTING FM 3349

WILLIAMSON COUNTY 1848

WILLIAMSON COUNTY

PRELIMINARY DESIGN FOR:

FM 3349 at US 79

P332

PRECINCT #4

COUNTY: WILLIAMSON
LIMITS:FM 3349 FROM CR 404 TO NORTH OF CR 395
APPROX. LENGTH OF PROJECT = 2.73 MI
APPROX. LENGTH OF BRIDGE = 0.24 MI
FUNCTIONAL CLASSIFICATION = FREEWAY
ROADWAY CLASSIFICATION = RURAL
TERRAIN = ROLLING
MAXIMUM SUPERELEVATION RATE (emax) = 6.0%
FM 3349 AND US 79: TxDOT RDM (APRIL 2018)
COUNTY ROADS: WILLIAMSON COUNTY DCM

DESIGN SPEED CRITERIA
FM 3349 FRONTAGE ROAD: 45 MPH (INTERIM)
COUNTY ROADS: 45 MPH
JUG HANDLE * : 45 MPH
* LOW-SPEED DESIGN CRITERIA

AADT 2018 2040 TRUCK PERCENTAGE
FM 3349 950 66200 6.7
US 79 18000 71000 17.2

VICINITY MAP
NOT TO SCALE

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9/10/2020

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FM3349
PHASE 1 INTERIM PROJECT-JUG HANDLE PLAN AND PROFILE

HDR Engineering Inc.
Texas P.E. Firm Registration No. F-754