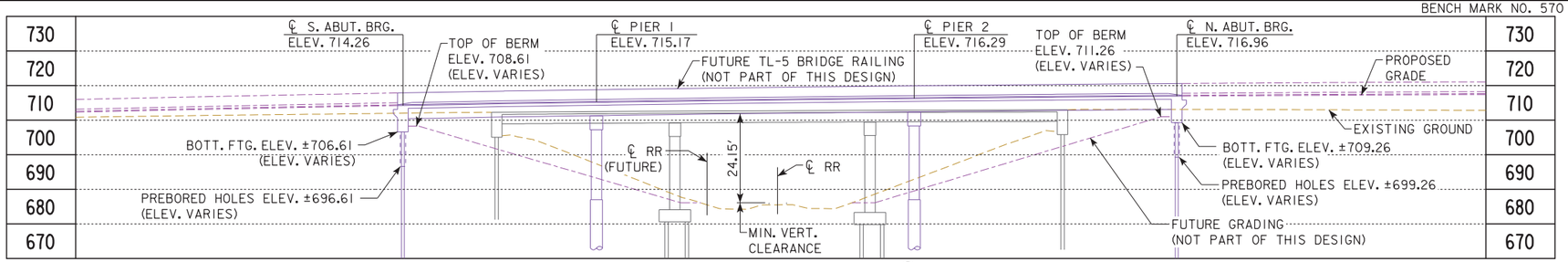
BENCH MARK NO. 570 STA. 1198+34.501 65.02 RT. FD. DOT BUTTON SE. WING BR. ELEV. 714.922



LONGITUDINAL SECTION ALONG ℄ N.B. ROADWAY

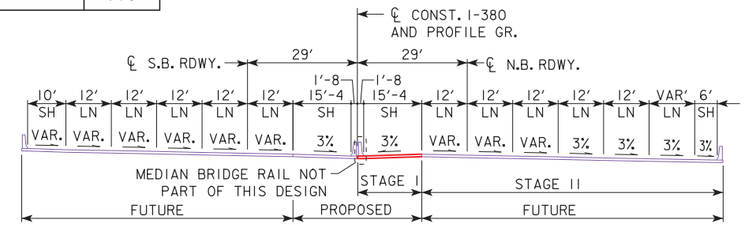
(LONGITUDINAL SECTION THROUGH STAGE II CONSTRUCTION)

NOTE: TO ACCOUNT FOR CROSS SLOPE, THE TOP OF BRIDGE DECK AT CENTERLINE N.B. ROADWAY NORTH OF STA. 1198+49.86 IS +0.24' ABOVE PROFILE GRADE. FROM STA. 1197+89.86 TO STA. 1198+19.86, THIS DISTANCE VARIES FROM +0.12' TO +0.18' ABOVE PROFILE GRADE. FROM STA. 1198+19.86 TO STA. 1198+49.86, THIS DISTANCE VARIES FROM +0.18' TO +0.24' ABOVE THE PROFILE GRADE.

+2.4997% -1.1734%

VPI STA. = 1200+60.00
VPI ELEV. = 721.00
VC = 910'

PROPOSED PROFILE GRADE I-380



TYPICAL BRIDGE SECTION

NOTES:
TL-5 MEDIAN BRIDGE RAIL TO BE CONSTRUCTED WITH A FUTURE DESIGN.

STAGE I OF SB BRIDGE (SEPARATE DESIGN) TO BE CONSTRUCTED WITH THIS DESIGN. SLOTTED DRAIN REQUIRED IN THE 2" GAP.

BULB TEE B BEAMS AND FRAME PIERS WITH DRILLED SHAFT FOUNDATION.

SUPERELEVATION TRANSITION OCCURS ON THE BRIDGE SOUTH OF STA. 1198+49.86.

BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN.

BOTTOM OF ABUTMENT FOOTINGS ARE SLOPED. ABUTMENT SLOPES TO BE CONFIRMED DURING FINAL DESIGN.

BERM SLOPE LOCATION TABLE IS NOT REQUIRED FOR STAGE I CONSTRUCTION.

SEE DESIGN SHEET 2 FOR TOP OF RAIL ELEVATIONS.

CURVE DATA

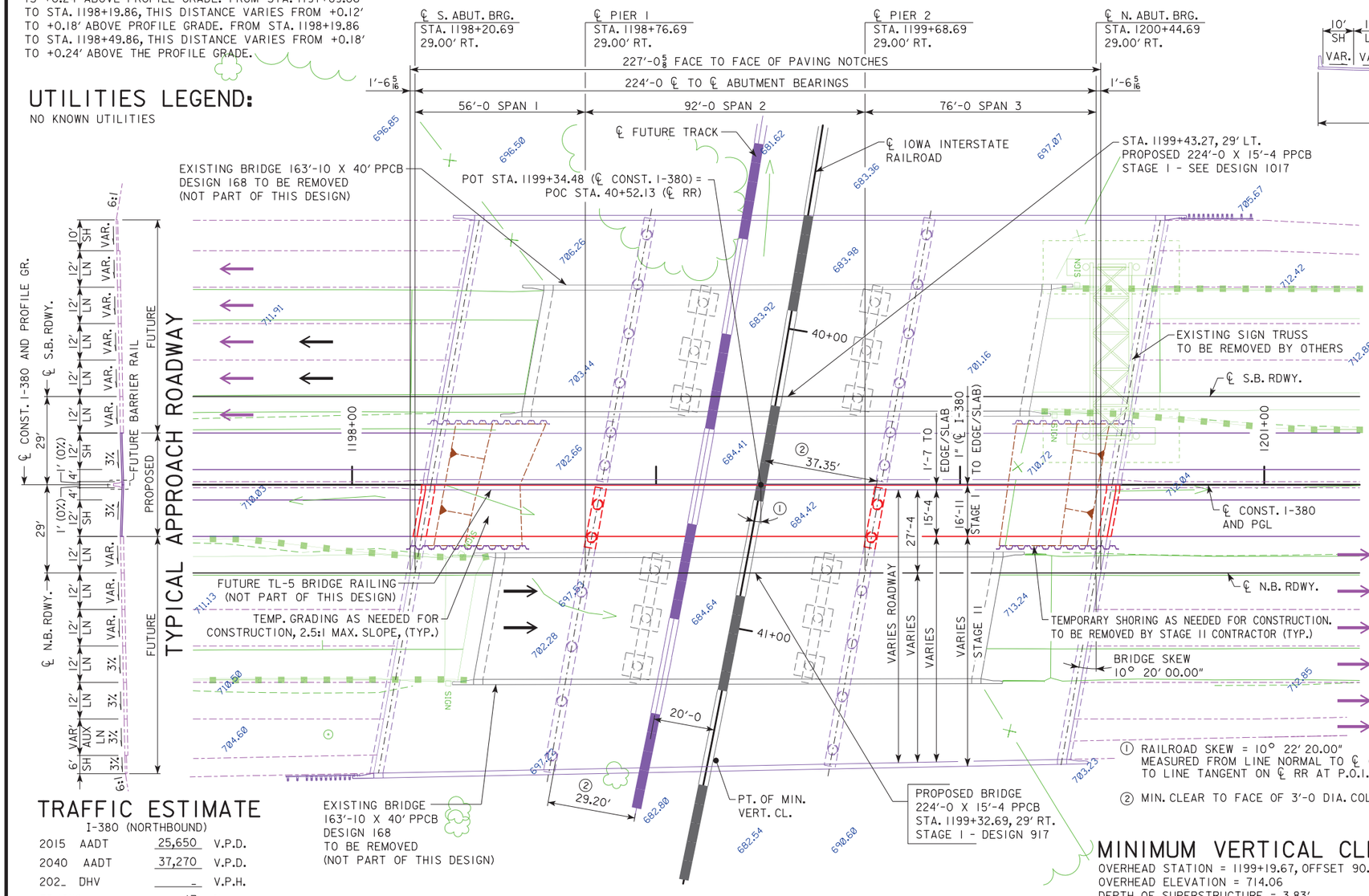
I-380
PI STA. 1191+13.06
Δ = 22° 38' 40.61" (RT)
T = 655.54'
L = 1293.98'
E = 64.98'
R = 3274.04'
e = 5.2%
l = 312'
x = 150'
PC STA. 1184+57.52
PT STA. 1197+51.50

CURVE DATA

RAILROAD
PI STA. 46+75.67
Δ = 30° 52' 29.31" (RT)
T = 1582.21'
L = 3087.48'
E = 214.45'
R = 5729.58'
SC STA. 30+93.46
CS STA. 61+80.94

UTILITIES LEGEND:

NO KNOWN UTILITIES



SITUATION PLAN

TRAFFIC ESTIMATE

I-380 (NORTHBOUND)

2015 AADT	25,650	V.P.D.
2040 AADT	37,270	V.P.D.
202_ DHV	_	V.P.H.
TRUCKS	17	%
TOTAL DESIGN ESALs	_	

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 1199+19.67, OFFSET 90.69' RT.
OVERHEAD ELEVATION = 714.06
DEPTH OF SUPERSTRUCTURE = 3.83'
UNDERPASS STATION = 41+43.96, OFFSET 2.53' LT.
UNDERPASS ELEVATION = 686.08
MINIMUM VERTICAL CLEARANCE = 24.15'

LOCATION

N.B. I-380 OVER IOWA INTERSTATE RR
T-80N R-7W
SECTION 27
CLEAR CREEK TOWNSHIP
JOHNSON COUNTY
FHWA NO. 60039I
BRIDGE MAINT. NO. 5200.7R380
FRA NO. 608011W
LATITUDE 41.703630°
LONGITUDE -91.642006°

PRELIMINARY

DESIGN FOR 10° 20' 00.00" SKEW (LA)

224'-0 X 15'-4 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE I

56'-0, 76'-0 END SPANS (BTB BEAM) 92'-0 CENTER SPAN

SITUATION PLAN

STATION 1199+32.69, 29' RIGHT ℄ CONST. I-380

JUNE 2018

JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. 30864 DESIGN NO. 917

DESIGN TEAM PARSONS | JOHNSON COUNTY | PROJECT NUMBER IM-080-6(342)239--13-52 | SHEET NUMBER

6/6/2018 10:07:43 AM untitled pw:\\VANVA01PWINT01.parsons.com:Iowa State\Documents\IA I-380 Bridge Replacements\03 - Sheet\TS & L\STR_52080235.dgn TSL_52_0917_1 11x17_pdf.pltcfg

BENCH MARK NO. 570 STA. 1198+34.501 65.02 RT. FD. DOT BUTTON SE. WING BR. ELEV. 714.922

TOP OF RAIL ELEVATION

STATION	CENTER/TRACK	LEFT RAIL	RIGHT RAIL
30+52.00	684.53	-----	-----
30+76.71	684.52	-----	-----
30+99.74	684.51	-----	-----
31+28.06	684.51	-----	-----
31+54.66	684.50	-----	-----
31+80.91	684.53	-----	-----
32+14.24	684.50	-----	-----
32+42.63	684.54	-----	-----
32+83.18	684.60	-----	-----
33+07.75	684.60	-----	-----
33+38.14	684.65	-----	-----
33+72.99	684.68	-----	-----
33+99.73	684.73	-----	-----
34+24.99	684.73	-----	-----
34+25.20	684.73	-----	-----
34+42.02	684.75	-----	-----
34+70.11	684.74	-----	-----
34+98.51	684.80	-----	-----
35+23.21	684.81	-----	-----
35+47.40	684.83	-----	-----
35+71.11	684.85	-----	-----
35+97.20	684.88	-----	-----
36+22.04	684.91	-----	-----
36+48.68	684.97	-----	-----
36+73.07	684.94	-----	-----
36+97.87	685.03	-----	-----
37+24.35	685.03	-----	-----
37+49.05	685.06	-----	-----
37+73.97	685.09	-----	-----
38+02.32	685.15	-----	-----
38+28.48	685.16	-----	-----
38+56.86	685.17	-----	-----
38+81.84	685.27	685.94	685.84
39+10.34	685.28	685.95	685.86
39+32.97	685.32	685.99	685.91
39+59.63	685.38	686.04	685.95
39+86.34	685.45	686.09	686.02
40+10.64	685.47	686.13	686.05
40+35.17	685.42	686.08	686.02
40+62.23	685.46	686.11	686.06

TOP OF RAIL ELEVATION

STATION	CENTER/TRACK	LEFT RAIL	RIGHT RAIL
40+88.72	685.51	686.14	686.09
41+15.18	685.44	686.09	686.03
41+39.77	685.43	686.09	686.02
41+66.25	685.39	686.05	685.99
41+92.79	685.39	686.06	685.96
42+19.15	685.45	686.12	686.03
42+42.20	685.50	-----	-----
42+68.48	685.52	-----	-----
42+95.22	685.60	-----	-----
43+19.92	685.63	-----	-----
43+47.64	685.71	-----	-----
43+75.82	685.78	-----	-----
43+99.03	685.79	-----	-----
44+21.90	685.79	-----	-----
44+45.94	685.87	-----	-----
44+46.38	685.89	-----	-----
44+71.21	685.96	-----	-----
44+97.43	686.02	-----	-----
45+23.82	686.09	-----	-----
45+50.73	686.14	-----	-----
45+78.68	686.26	-----	-----
46+05.51	686.32	-----	-----
46+37.80	686.38	-----	-----
46+38.57	686.37	-----	-----
46+54.34	686.42	-----	-----
46+85.26	686.51	-----	-----
47+16.34	686.53	-----	-----
47+37.75	686.60	-----	-----
47+60.37	686.69	-----	-----
47+88.72	686.84	-----	-----
48+17.12	686.96	-----	-----
48+46.23	687.08	-----	-----
48+77.78	687.20	-----	-----
49+04.19	687.33	-----	-----
49+32.54	687.44	-----	-----
49+60.25	687.50	-----	-----
49+85.58	687.61	-----	-----
50+16.06	687.72	-----	-----
50+46.19	687.77	-----	-----

PRELIMINARY

DESIGN FOR 10° 20′ 00.00″ SKEW (LA)

224′-0 X 15′-4 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE I

56′-0, 76′-0 END SPANS (BTB BEAM) 92′-0 CENTER SPAN

SITUATION PLAN

STATION 1199+32.69, 29′ RIGHT ℄ CONST. I-380

JUNE 2018

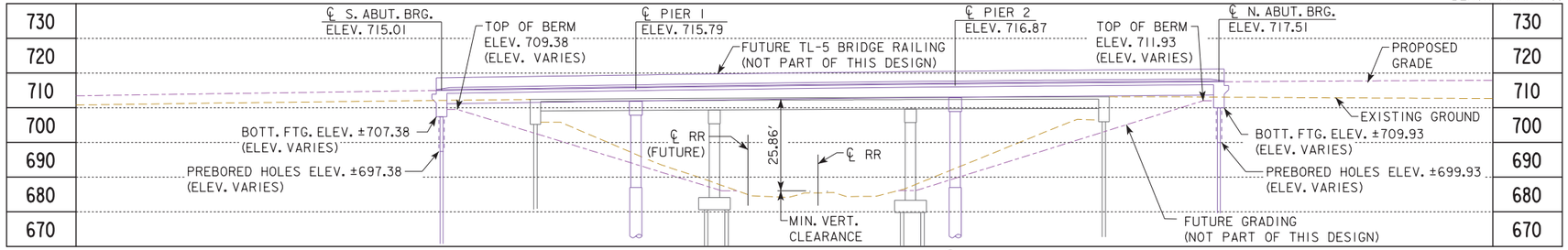
JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. 30864 DESIGN NO. 917

DESIGN TEAM PARSONS | JOHNSON COUNTY | PROJECT NUMBER IM-080-6(342)239--13-52 | SHEET NUMBER

BENCH MARK NO. 571 STA. 1200+34.418 65.35 LT. CUT"X" NW. WING SB. BRIDGE ELEV. 715.783



LONGITUDINAL SECTION ALONG ℄ S.B. ROADWAY

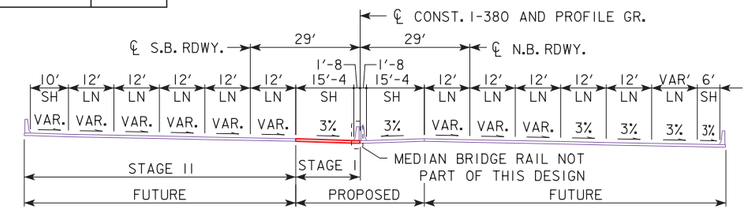
(LONGITUDINAL SECTION THROUGH STAGE II CONSTRUCTION)

NOTE: TO ACCOUNT FOR CROSS SLOPE, THE TOP OF BRIDGE DECK AT CENTERLINE S.B. ROADWAY NORTH OF STA. 1198+49.86 IS +0.72' ABOVE PROFILE GRADE. FROM STA. 1198+19.86 TO STA. 1198+49.86, THIS DISTANCE VARIES FROM +0.78' TO +0.72' ABOVE THE PROFILE GRADE.

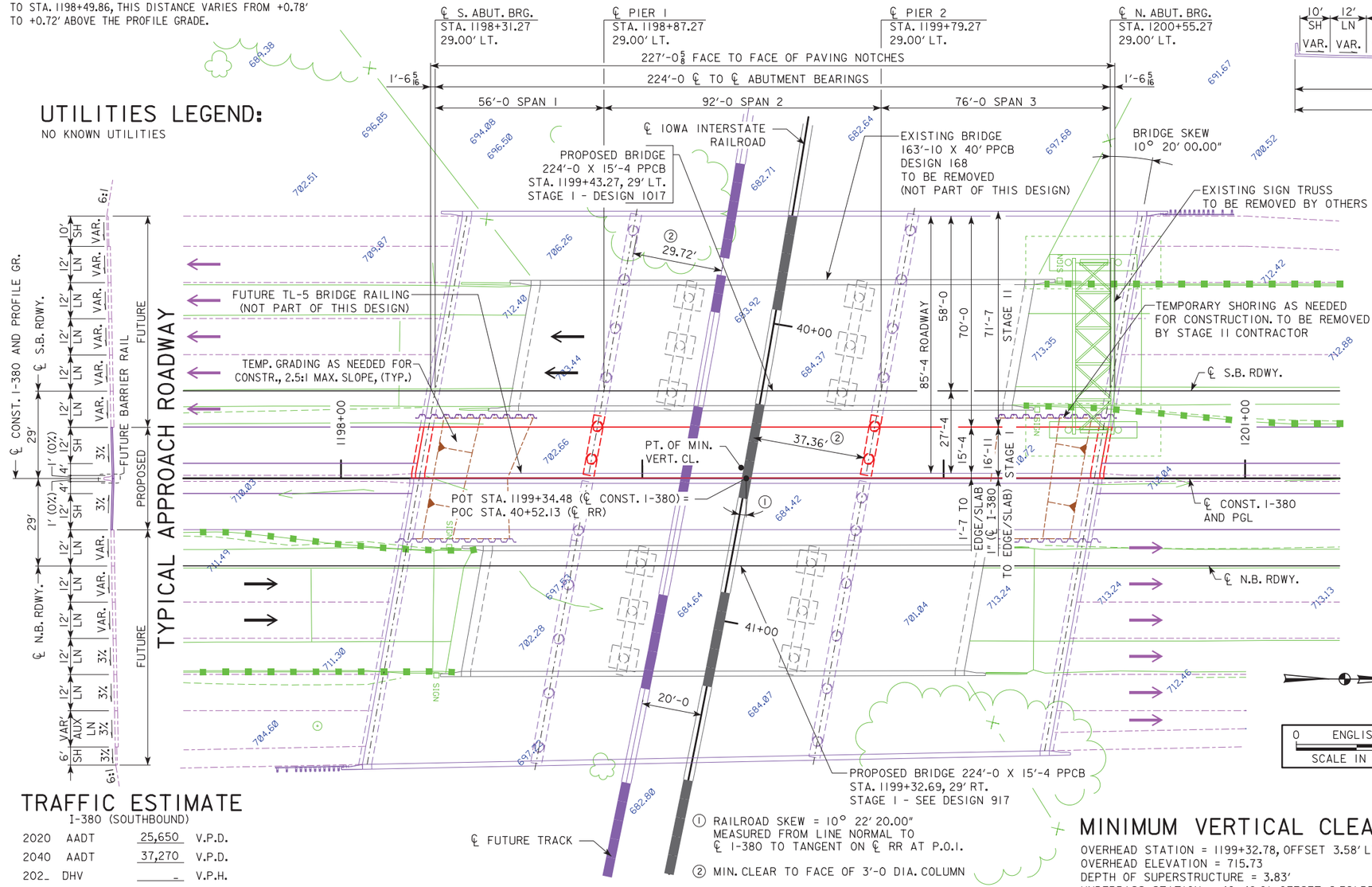
+2.4997% -1.1734%

VPI STA. = 1200+60.00
VPI ELEV. = 721.00
VC = 910'

PROPOSED PROFILE GRADE I-380



TYPICAL BRIDGE SECTION



SITUATION PLAN

NOTES:
TL-5 MEDIAN BRIDGE BARRIER RAIL TO BE CONSTRUCTED WITH A FUTURE DESIGN.

STAGE I OF NB BRIDGE (SEPARATE DESIGN) TO BE CONSTRUCTED WITH THIS DESIGN. SLOTTED DRAIN REQUIRED IN THE 2" GAP.

BULB TEE B BEAMS AND FRAME PIERS WITH DRILLED SHAFT FOUNDATION.

SUPERELEVATION TRANSITION OCCURS ON THE BRIDGE SOUTH OF STA. 1198+49.86.

BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN.

BOTTOM OF ABUTMENT FOOTINGS ARE SLOPED. ABUTMENT SLOPES TO BE CONFIRMED DURING FINAL DESIGN.

BERM SLOPE LOCATION TABLE IS NOT REQUIRED FOR STAGE I CONSTRUCTION.

SEE DESIGN SHEET 2 FOR TOP OF RAIL ELEVATIONS.

CURVE DATA

I-380
PI STA. 1191+13.06
Δ = 22° 38' 40.61" (RT)
T = 655.54'
L = 1293.98'
E = 64.98'
R = 3274.04'
e = 5.2%
l = 312'
x = 150'
PC STA. 1184+57.52
PT STA. 1197+51.50

CURVE DATA

RAILROAD
PI STA. 46+75.67
Δ = 30° 52' 29.31" (RT)
T = 1582.21'
L = 3087.48'
E = 214.45'
R = 5729.58'
SC STA. 30+93.46
CS STA. 61+80.94

LOCATION

S.B. I-380 OVER IOWA INTERSTATE RR
T-80N R-7W
SECTION 27
CLEAR CREEK TOWNSHIP
JOHNSON COUNTY
FHWA NO. 600401
BRIDGE MAINT. NO. 5200.7L380
FRA NO. 608011W
LATITUDE 41.703659°
LONGITUDE -91.642218°

TRAFFIC ESTIMATE

I-380 (SOUTHBOUND)

2020	AADT	25,650	V.P.D.
2040	AADT	37,270	V.P.D.
202_	DHV	_	V.P.H.
TRUCKS		17	%
TOTAL DESIGN ESALs		_	

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 1199+32.78, OFFSET 3.58' LT.
OVERHEAD ELEVATION = 715.73
DEPTH OF SUPERSTRUCTURE = 3.83'
UNDERPASS STATION = 40+48.91, OFFSET 2.32' RT.
UNDERPASS ELEVATION = 686.04
MINIMUM VERTICAL CLEARANCE = 25.86'

PRELIMINARY

DESIGN FOR 10° 20' SKEW (LA)

224'-0 X 15'-4 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE I

56'-0, 76'-0 END SPANS (BTB BEAM) 92'-0 CENTER SPAN

SITUATION PLAN

STATION 1199+43.27, 29' LEFT ℄ CONST. I-380

JUNE 2018

JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. 30864 DESIGN NO. 1017

DESIGN TEAM PARSONS | JOHNSON COUNTY | PROJECT NUMBER IM-080-6(342)239--13-52 | SHEET NUMBER

BENCH MARK NO. 571 STA. 11200+34.418 65.35 LT. CUT"X" NW. WING SB. BRIDGE ELEV. 715.783

TOP OF RAIL ELEVATION

STATION	CENTER/TRACK	LEFT RAIL	RIGHT RAIL
30+52.00	684.53	-----	-----
30+76.71	684.52	-----	-----
30+99.74	684.51	-----	-----
31+28.06	684.51	-----	-----
31+54.66	684.50	-----	-----
31+80.91	684.53	-----	-----
32+14.24	684.50	-----	-----
32+42.63	684.54	-----	-----
32+83.18	684.60	-----	-----
33+07.75	684.60	-----	-----
33+38.14	684.65	-----	-----
33+72.99	684.68	-----	-----
33+99.73	684.73	-----	-----
34+24.99	684.73	-----	-----
34+25.20	684.73	-----	-----
34+42.02	684.75	-----	-----
34+70.11	684.74	-----	-----
34+98.51	684.80	-----	-----
35+23.21	684.81	-----	-----
35+47.40	684.83	-----	-----
35+71.11	684.85	-----	-----
35+97.20	684.88	-----	-----
36+22.04	684.91	-----	-----
36+48.68	684.97	-----	-----
36+73.07	684.94	-----	-----
36+97.87	685.03	-----	-----
37+24.35	685.03	-----	-----
37+49.05	685.06	-----	-----
37+73.97	685.09	-----	-----
38+02.32	685.15	-----	-----
38+28.48	685.16	-----	-----
38+56.86	685.17	-----	-----
38+81.84	685.27	685.94	685.84
39+10.34	685.28	685.95	685.86
39+32.97	685.32	685.99	685.91
39+59.63	685.38	686.04	685.95
39+86.34	685.45	686.09	686.02
40+10.64	685.47	686.13	686.05
40+35.17	685.42	686.08	686.02
40+62.23	685.46	686.11	686.06

TOP OF RAIL ELEVATION

STATION	CENTER/TRACK	LEFT RAIL	RIGHT RAIL
40+88.72	685.51	686.14	686.09
41+15.18	685.44	686.09	686.03
41+39.77	685.43	686.09	686.02
41+66.25	685.39	686.05	685.99
41+92.79	685.39	686.06	685.96
42+19.15	685.45	686.12	686.03
42+42.20	685.50	-----	-----
42+68.48	685.52	-----	-----
42+95.22	685.60	-----	-----
43+19.92	685.63	-----	-----
43+47.64	685.71	-----	-----
43+75.82	685.78	-----	-----
43+99.03	685.79	-----	-----
44+21.90	685.79	-----	-----
44+45.94	685.87	-----	-----
44+46.38	685.89	-----	-----
44+71.21	685.96	-----	-----
44+97.43	686.02	-----	-----
45+23.82	686.09	-----	-----
45+50.73	686.14	-----	-----
45+78.68	686.26	-----	-----
46+05.51	686.32	-----	-----
46+37.80	686.38	-----	-----
46+38.57	686.37	-----	-----
46+54.34	686.42	-----	-----
46+85.26	686.51	-----	-----
47+16.34	686.53	-----	-----
47+37.75	686.60	-----	-----
47+60.37	686.69	-----	-----
47+88.72	686.84	-----	-----
48+17.12	686.96	-----	-----
48+46.23	687.08	-----	-----
48+77.78	687.20	-----	-----
49+04.19	687.33	-----	-----
49+32.54	687.44	-----	-----
49+60.25	687.50	-----	-----
49+85.58	687.61	-----	-----
50+16.06	687.72	-----	-----
50+46.19	687.77	-----	-----

PRELIMINARY

DESIGN FOR 10° 20′ SKEW (LA)

224′-0 X 15′-4 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE I

56′-0, 76′-0 END SPANS (BTB BEAM) 92′-0 CENTER SPAN

SITUATION PLAN

STATION 1199+43.27, 29′ LEFT ℄ CONST. I-380

JUNE 2018

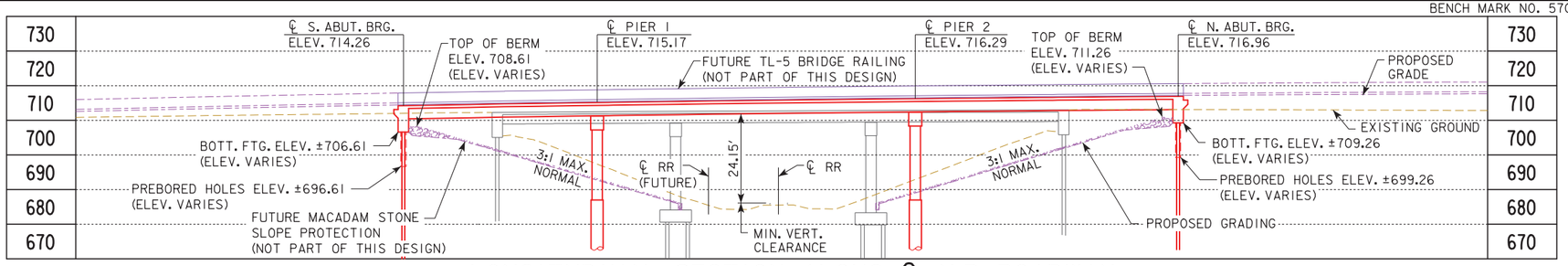
JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. 30864 DESIGN NO. 1017

DESIGN TEAM PARSONS | JOHNSON COUNTY | PROJECT NUMBER IM-080-6(342)239--13-52 | SHEET NUMBER

BENCH MARK NO. 570 STA. 1198+34.501 65.02 RT. FD.DOT BUTTON SE. WING BR. ELEV. 714.922

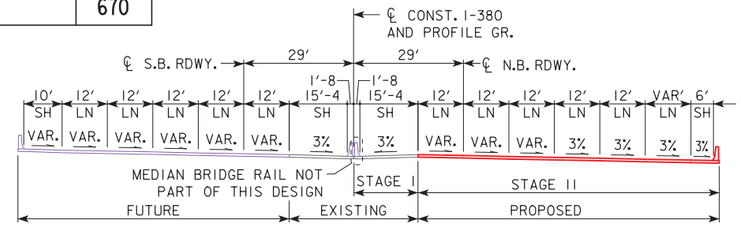


LONGITUDINAL SECTION ALONG ℄ N.B. ROADWAY

+2.4997% -1.1734%

VPI STA. = 1200+60.00
VPI ELEV. = 721.00
VC = 910'

PROPOSED PROFILE GRADE I-380

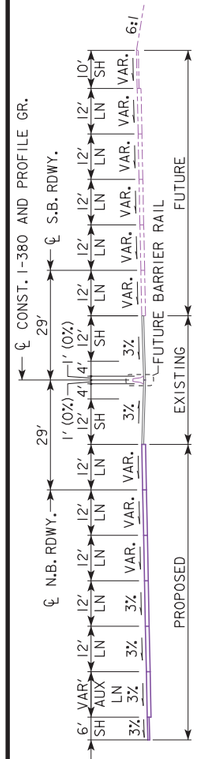


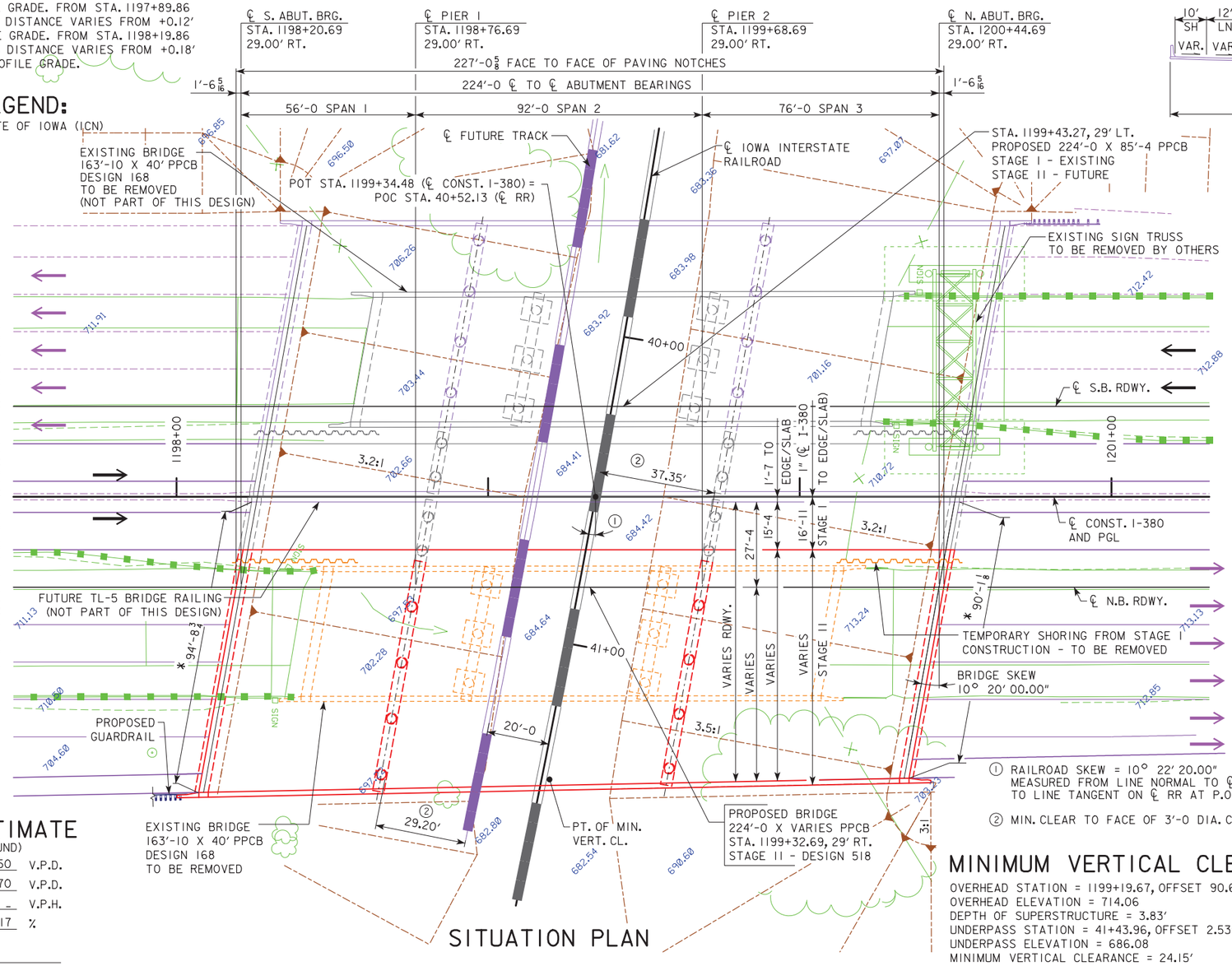
TYPICAL BRIDGE SECTION

NOTE: TO ACCOUNT FOR CROSS SLOPE, THE TOP OF BRIDGE DECK AT CENTERLINE N.B. ROADWAY NORTH OF STA. 1198+49.86 IS +0.24' ABOVE PROFILE GRADE. FROM STA. 1197+89.86 TO STA. 1198+19.86, THIS DISTANCE VARIES FROM +0.12' TO +0.18' ABOVE PROFILE GRADE. FROM STA. 1198+19.86 TO STA. 1198+49.86, THIS DISTANCE VARIES FROM +0.18' TO +0.24' ABOVE THE PROFILE GRADE.

UTILITIES LEGEND:

FO - FIBER OPTIC - STATE OF IOWA (ICN)





SITUATION PLAN

① RAILROAD SKEW = 10° 22' 20.00" MEASURED FROM LINE NORMAL TO ℄ CONST. I-380 TO LINE TANGENT ON ℄ RR AT P.O.I.

② MIN. CLEAR TO FACE OF 3'-0 DIA. COLUMN

NOTES:
TL-5 MEDIAN BRIDGE RAIL TO BE CONSTRUCTED WITH A FUTURE DESIGN.

BULB TEE B BEAMS AND FRAME PIERS WITH DRILLED SHAFT FOUNDATION.

SUPERELEVATION TRANSITION OCCURS ON THE BRIDGE SOUTH OF STA. 1198+49.86.

MACADAM STONE SLOPE PROTECTION FOR BOTH BRIDGES TO BE INSTALLED WITH THE S.B. BRIDGE STAGE II CONSTRUCTION.

BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN.

BOTTOM OF ABUTMENT FOOTINGS ARE SLOPED. ABUTMENT SLOPES TO BE CONFIRMED DURING FINAL DESIGN.

SEE DESIGN SHEET 2 FOR TOP OF RAIL ELEVATIONS.

* ROADWAY WIDTH ALONG END OF DECK

CURVE DATA

I-380
PI STA. 1191+13.06
Δ = 22° 38' 40.61" (RT)
T = 655.54'
L = 1293.98'
E = 64.98'
R = 3274.04'
e = 5.2%
l = 312'
x = 150'
PC STA. 1184+57.52
PT STA. 1197+51.50

CURVE DATA

RAILROAD
PI STA. 46+75.67
Δ = 30° 52' 29.31" (RT)
T = 1582.21'
L = 3087.48'
E = 214.45'
R = 5729.58'
SC STA. 30+93.46
CS STA. 61+80.94

TRAFFIC ESTIMATE

I-380 (NORTHBOUND)

2020 AADT	25,650	V.P.D.
2040 AADT	37,270	V.P.D.
202_ DHV	_	V.P.H.
TRUCKS	17	%
TOTAL DESIGN ESALs	_	

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 1199+19.67, OFFSET 90.69' RT.
OVERHEAD ELEVATION = 714.06
DEPTH OF SUPERSTRUCTURE = 3.83'
UNDERPASS STATION = 41+43.96, OFFSET 2.53' LT.
UNDERPASS ELEVATION = 686.08
MINIMUM VERTICAL CLEARANCE = 24.15'

LOCATION

N.B. I-380 OVER IOWA INTERSTATE RR
T-80N R-7W
SECTION 27
CLEAR CREEK TOWNSHIP
JOHNSON COUNTY
FHWA NO. 600391
BRIDGE MAINT. NO. 5200.7R380
FRA NO. 608011W
LATITUDE 41.703630°
LONGITUDE -91.642006°

N

0 ENGLISH 40
SCALE IN FEET

PRELIMINARY

DESIGN FOR 10° 20' 00.00" SKEW (LA)

224'-0 X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II

56'-0, 76'-0 END SPANS (BTB BEAM) 92'-0 CENTER SPAN

SITUATION PLAN

STATION 1199+32.69, 29' RIGHT ℄ CONST. I-380

JUNE 2018

JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 3 FILE NO. 30864 DESIGN NO. 518

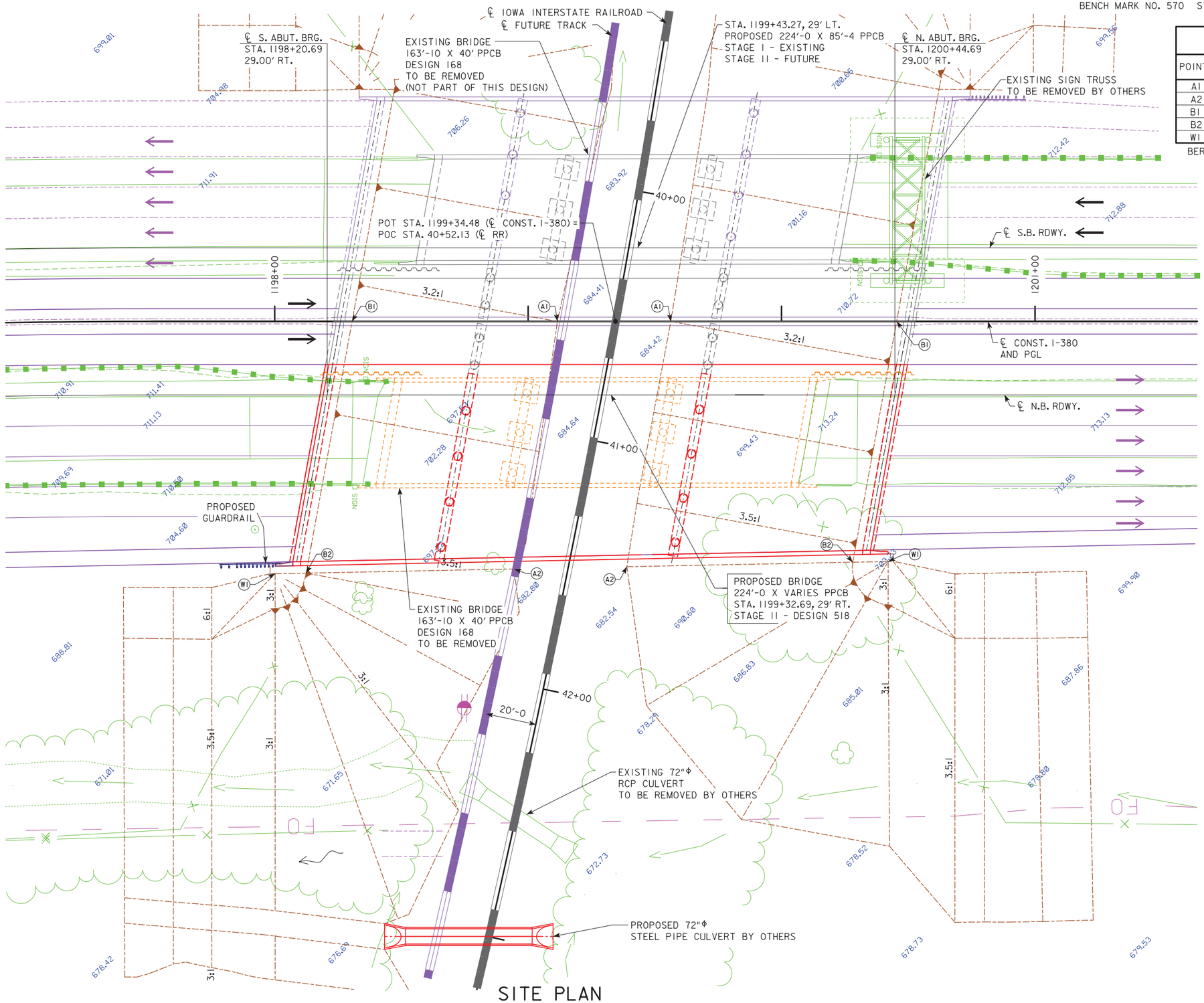
DESIGN TEAM PARSONS | JOHNSON COUNTY | PROJECT NUMBER IM-080-6(343)239--13-52 | SHEET NUMBER

BENCH MARK NO. 570 STA. 1198+34.501 65.02 RT. FD.DOT BUTTON SE. WING BR. ELEV. 714.922

BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	1199+11.55	0.00′	686.19	1199+56.30	0.00′	684.13
A2	1198+94.56	97.69′ RT	684.0	1199+38.95	96.81′ RT	686.0
B1	1198+30.55	0.00′	709.49	1200+45.40	0.00′	712.01
B2	1198+12.44	99.34′ RT	706.49	1200+28.08	95.02′ RT	709.54
W1	1198+00.25	99.58′ RT	711.79	1200+42.13	94.74′ RT	715.13

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE



SITE PLAN

N

0 ENGLISH 40
SCALE IN FEET

PRELIMINARY

DESIGN FOR 10° 20′ 00.00" SKEW (LA)

224′-0 X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II

56′-0, 76′-0 END SPANS (BTB BEAM) 92′-0 CENTER SPAN

SITUATION PLAN - SITE

STATION 1199+32.69, 29′ RIGHT ℄ CONST. I-380

JUNE 2018

JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 3 FILE NO. 30864 DESIGN NO. 518

DESIGN TEAM PARSONS | JOHNSON COUNTY | PROJECT NUMBER IM-080-6(343)239--13-52 | SHEET NUMBER

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BENCH MARK NO. 570 STA. 1198+34.501 65.02 RT. FD.DOT BUTTON SE. WING BR. ELEV. 714.922

TOP OF RAIL ELEVATION

STATION	CENTER/TRACK	LEFT RAIL	RIGHT RAIL
30+52.00	684.53	-----	-----
30+76.71	684.52	-----	-----
30+99.74	684.51	-----	-----
31+28.06	684.51	-----	-----
31+54.66	684.50	-----	-----
31+80.91	684.53	-----	-----
32+14.24	684.50	-----	-----
32+42.63	684.54	-----	-----
32+83.18	684.60	-----	-----
33+07.75	684.60	-----	-----
33+38.14	684.65	-----	-----
33+72.99	684.68	-----	-----
33+99.73	684.73	-----	-----
34+24.99	684.73	-----	-----
34+25.20	684.73	-----	-----
34+42.02	684.75	-----	-----
34+70.11	684.74	-----	-----
34+98.51	684.80	-----	-----
35+23.21	684.81	-----	-----
35+47.40	684.83	-----	-----
35+71.11	684.85	-----	-----
35+97.20	684.88	-----	-----
36+22.04	684.91	-----	-----
36+48.68	684.97	-----	-----
36+73.07	684.94	-----	-----
36+97.87	685.03	-----	-----
37+24.35	685.03	-----	-----
37+49.05	685.06	-----	-----
37+73.97	685.09	-----	-----
38+02.32	685.15	-----	-----
38+28.48	685.16	-----	-----
38+56.86	685.17	-----	-----
38+81.84	685.27	685.94	685.84
39+10.34	685.28	685.95	685.86
39+32.97	685.32	685.99	685.91
39+59.63	685.38	686.04	685.95
39+86.34	685.45	686.09	686.02
40+10.64	685.47	686.13	686.05
40+35.17	685.42	686.08	686.02
40+62.23	685.46	686.11	686.06

TOP OF RAIL ELEVATION

STATION	CENTER/TRACK	LEFT RAIL	RIGHT RAIL
40+88.72	685.51	686.14	686.09
41+15.18	685.44	686.09	686.03
41+39.77	685.43	686.09	686.02
41+66.25	685.39	686.05	685.99
41+92.79	685.39	686.06	685.96
42+19.15	685.45	686.12	686.03
42+42.20	685.50	-----	-----
42+68.48	685.52	-----	-----
42+95.22	685.60	-----	-----
43+19.92	685.63	-----	-----
43+47.64	685.71	-----	-----
43+75.82	685.78	-----	-----
43+99.03	685.79	-----	-----
44+21.90	685.79	-----	-----
44+45.94	685.87	-----	-----
44+46.38	685.89	-----	-----
44+71.21	685.96	-----	-----
44+97.43	686.02	-----	-----
45+23.82	686.09	-----	-----
45+50.73	686.14	-----	-----
45+78.68	686.26	-----	-----
46+05.51	686.32	-----	-----
46+37.80	686.38	-----	-----
46+38.57	686.37	-----	-----
46+54.34	686.42	-----	-----
46+85.26	686.51	-----	-----
47+16.34	686.53	-----	-----
47+37.75	686.60	-----	-----
47+60.37	686.69	-----	-----
47+88.72	686.84	-----	-----
48+17.12	686.96	-----	-----
48+46.23	687.08	-----	-----
48+77.78	687.20	-----	-----
49+04.19	687.33	-----	-----
49+32.54	687.44	-----	-----
49+60.25	687.50	-----	-----
49+85.58	687.61	-----	-----
50+16.06	687.72	-----	-----
50+46.19	687.77	-----	-----

PRELIMINARY

DESIGN FOR 10° 20′ 00.00″ SKEW (LA)

224′-0 X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II

56′-0, 76′-0 END SPANS (BTB BEAM) 92′-0 CENTER SPAN

SITUATION PLAN

STATION 1199+32.69, 29′ RIGHT ℄ CONST. I-380

JUNE 2018

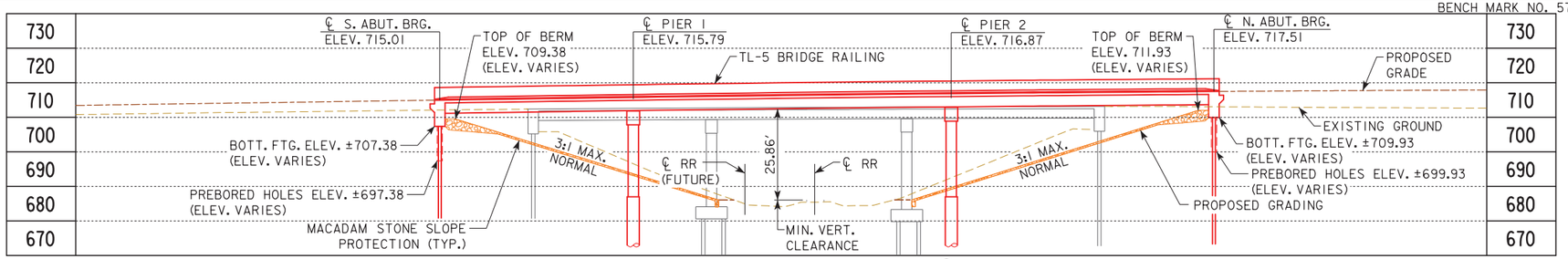
JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 3 OF 3 FILE NO. 30864 DESIGN NO. 518

DESIGN TEAM **PARSONS** | JOHNSON COUNTY | PROJECT NUMBER IM-080-6(343)239--13-52 | SHEET NUMBER

BENCH MARK NO. 571 STA. 11200+34.418 65.35 LT. CUT"X" NW. WING SB. BRIDGE ELEV. 715.783



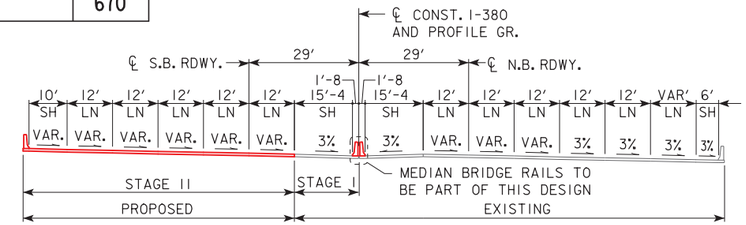
LONGITUDINAL SECTION ALONG ℄ S.B. ROADWAY

NOTE: TO ACCOUNT FOR CROSS SLOPE, THE TOP OF BRIDGE DECK AT CENTERLINE S.B. ROADWAY NORTH OF STA. 1198+49.86 IS +0.72' ABOVE PROFILE GRADE. FROM STA. 1198+19.86 TO STA. 1198+49.86, THIS DISTANCE VARIES FROM +0.78' TO +0.72' ABOVE THE PROFILE GRADE.

+2.4997% -1.1734%

VPI STA. = 1200+60.00
VPI ELEV. = 721.00
VC = 910'

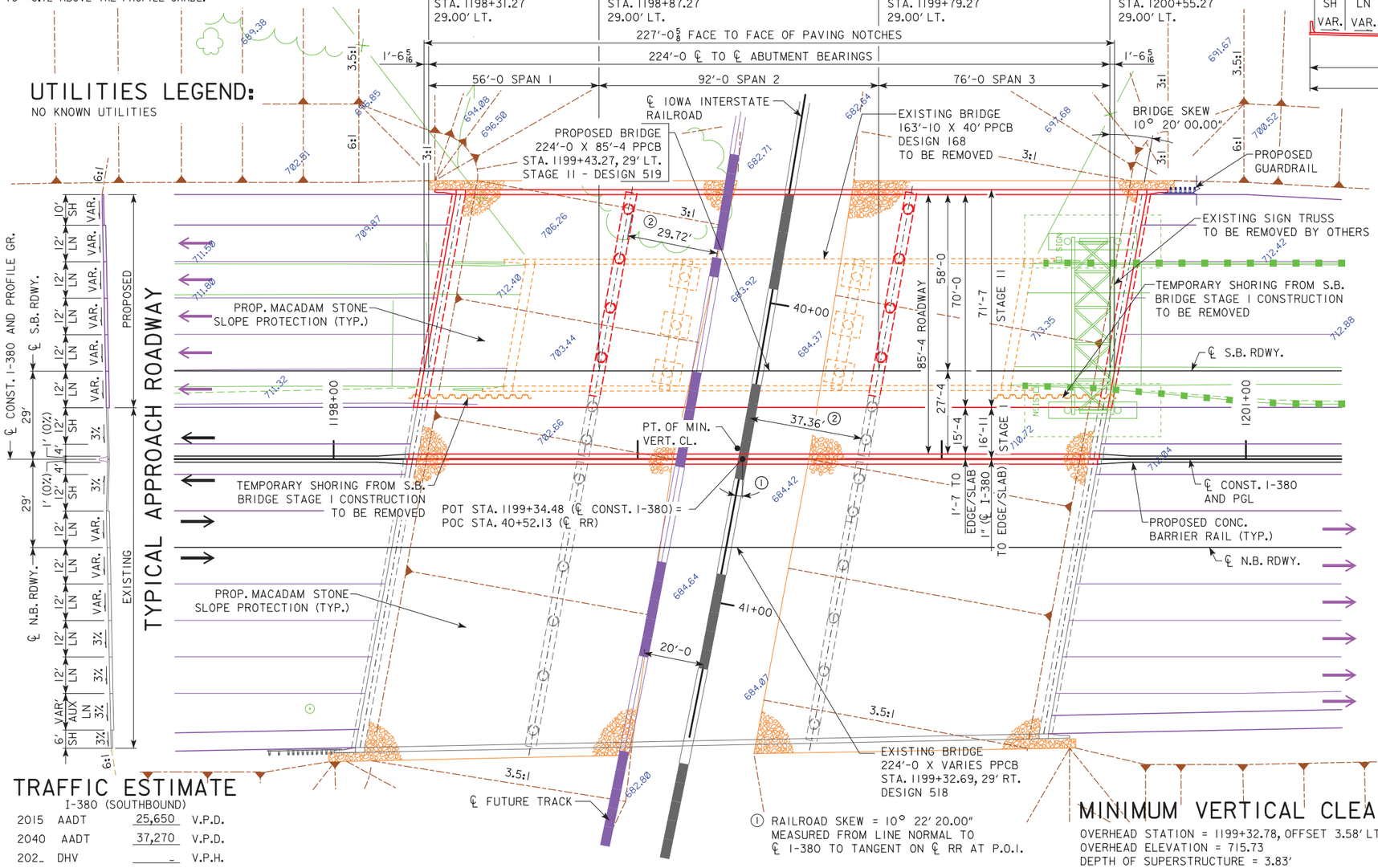
PROPOSED PROFILE GRADE I-380



TYPICAL BRIDGE SECTION

UTILITIES LEGEND:

NO KNOWN UTILITIES



SITUATION PLAN

TRAFFIC ESTIMATE

I-380 (SOUTHBOUND)

2015 AADT	25,650	V.P.D.
2040 AADT	37,270	V.P.D.
202_ DHV	_	V.P.H.
TRUCKS	17	%
TOTAL DESIGN ESALs	_	

NOTES:
TL-5 MEDIAN BRIDGE RAIL ON BOTH BRIDGES TO BE CONSTRUCTED WITH THIS DESIGN.

MACADAM STONE SLOPE PROTECTION FOR BOTH BRIDGES TO BE INSTALLED WITH THIS DESIGN.

BULB TEE B BEAMS AND FRAME PIERS WITH DRILLED SHAFT FOUNDATION.

SUPERELEVATION TRANSITION OCCURS ON THE BRIDGE SOUTH OF STA. 1198+49.86.

BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN.

BOTTOM OF ABUTMENT FOOTINGS ARE SLOPED. ABUTMENT SLOPES TO BE CONFIRMED DURING FINAL DESIGN.

SEE DESIGN SHEET 2 FOR TOP OF RAIL ELEVATIONS.

CURVE DATA

I-380
PI STA. 1191+13.06
Δ = 22° 38' 40.61" (RT)
T = 655.54'
L = 1293.98'
E = 64.98'
R = 3274.04'
e = 5.2%
l = 312'
x = 150'
PC STA. 1184+57.52
PT STA. 1197+51.50

CURVE DATA

RAILROAD
PI STA. 46+75.67
Δ = 30° 52' 29.31" (RT)
T = 1582.21'
L = 3087.48'
E = 214.45'
R = 5729.58'
SC STA. 30+93.46
CS STA. 61+80.94

LOCATION

S.B. I-380 OVER IOWA INTERSTATE RR
T-80N R-7W
SECTION 27
CLEAR CREEK TOWNSHIP
JOHNSON COUNTY
FHWA NO. 600401
BRIDGE MAINT. NO. 5200.7L380
FRA NO. 608011W
LATITUDE 41.703659°
LONGITUDE -91.642218°

N

0 ENGLISH 40
SCALE IN FEET

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 1199+32.78, OFFSET 3.58' LT.
OVERHEAD ELEVATION = 715.73
DEPTH OF SUPERSTRUCTURE = 3.83'
UNDERPASS STATION = 40+48.91, OFFSET 2.32' RT.
UNDERPASS ELEVATION = 686.04
MINIMUM VERTICAL CLEARANCE = 25.86'

PRELIMINARY

DESIGN FOR 10° 20' SKEW (LA)

224'-0 X 85'-4 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II

56'-0, 76'-0 END SPANS (BTB BEAM) 92'-0 CENTER SPAN

SITUATION PLAN

STATION 1199+43.27, 29' LEFT ℄ CONST. I-380

JUNE 2018

JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 3 FILE NO. 30864 DESIGN NO. 519

DESIGN TEAM PARSONS | JOHNSON COUNTY | PROJECT NUMBER IM-080-6(344)239--13-52 | SHEET NUMBER

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BENCH MARK NO. 571 STA. 11200+34.418 65.35 LT. CUT"X" NW. WING SB. BRIDGE ELEV. 715.783

BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	1199+32.80	91.58' LT	682.83	1199+71.07	91.58' LT	683.56
A2	1199+11.55	0.00'	684.59	1199+56.30	0.00'	684.13
B1	1198+47.25	91.58' LT	710.88	1200+62.10	91.58' LT	713.19
B2	1198+30.55	0.00'	709.49	1200+45.40	0.00'	712.01
W1	1198+33.32	91.58' LT	716.20	1200+74.37	91.58' LT	718.64

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

PROPOSED 60"Φ RCP CULVERT BY OTHERS

EXISTING 60"Φ RCP CULVERT TO BE REMOVED BY OTHERS

℄ FUTURE TRACK

℄ IOWA INTERSTATE RAILROAD

℄ S. ABUT. BRG. STA. 1198+31.27 29.00' LT.

℄ N. ABUT. BRG. STA. 1200+55.27 29.00' LT.

PROPOSED BRIDGE 224'-0 X 85'-4 PPCB STA. 1199+43.27, 29' LT. STAGE II - DESIGN 519

EXISTING BRIDGE 163'-10 X 40' PPCB DESIGN 168 TO BE REMOVED

PROPOSED GUARDRAIL

PROP. MACADAM STONE SLOPE PROTECTION (TYP.)

℄ S.B. RDWY.

℄ N.B. RDWY.

℄ CONST. I-380 AND PGL

PROPOSED CONC. BARRIER RAIL (TYP.)

POT STA. 1199+34.48 (℄ CONST. I-380) = POC STA. 40+52.13 (℄ RR)

EXISTING BRIDGE 224'-0 X VARIES PPCB STA. 1199+32.69, 29' RT. DESIGN 518

EXISTING GRADING FROM N.B. BRIDGE CONSTRUCTION

38+00 40+00 41+00 1198+00 1201+00

20'-0

3.5:1 3:1 6:1

N

0 ENGLISH 40
SCALE IN FEET

SITE PLAN

PRELIMINARY

DESIGN FOR 10° 20' SKEW (LA)

224'-0 X 85'-4 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II

56'-0, 76'-0 END SPANS (BTB BEAM) 92'-0 CENTER SPAN

SITUATION PLAN - SITE

STATION 1199+43.27, 29' LEFT ℄ CONST. I-380 JUNE 2018

JOHNSON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 3 FILE NO. 30864 DESIGN NO. 519

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TOP OF RAIL ELEVATION

STATION	CENTER/TRACK	LEFT RAIL	RIGHT RAIL
30+52.00	684.53	-----	-----
30+76.71	684.52	-----	-----
30+99.74	684.51	-----	-----
31+28.06	684.51	-----	-----
31+54.66	684.50	-----	-----
31+80.91	684.53	-----	-----
32+14.24	684.50	-----	-----
32+42.63	684.54	-----	-----
32+83.18	684.60	-----	-----
33+07.75	684.60	-----	-----
33+38.14	684.65	-----	-----
33+72.99	684.68	-----	-----
33+99.73	684.73	-----	-----
34+24.99	684.73	-----	-----
34+25.20	684.73	-----	-----
34+42.02	684.75	-----	-----
34+70.11	684.74	-----	-----
34+98.51	684.80	-----	-----
35+23.21	684.81	-----	-----
35+47.40	684.83	-----	-----
35+71.11	684.85	-----	-----
35+97.20	684.88	-----	-----
36+22.04	684.91	-----	-----
36+48.68	684.97	-----	-----
36+73.07	684.94	-----	-----
36+97.87	685.03	-----	-----
37+24.35	685.03	-----	-----
37+49.05	685.06	-----	-----
37+73.97	685.09	-----	-----
38+02.32	685.15	-----	-----
38+28.48	685.16	-----	-----
38+56.86	685.17	-----	-----
38+81.84	685.27	685.94	685.84
39+10.34	685.28	685.95	685.86
39+32.97	685.32	685.99	685.91
39+59.63	685.38	686.04	685.95
39+86.34	685.45	686.09	686.02
40+10.64	685.47	686.13	686.05
40+35.17	685.42	686.08	686.02
40+62.23	685.46	686.11	686.06

TOP OF RAIL ELEVATION

STATION	CENTER/TRACK	LEFT RAIL	RIGHT RAIL
40+88.72	685.51	686.14	686.09
41+15.18	685.44	686.09	686.03
41+39.77	685.43	686.09	686.02
41+66.25	685.39	686.05	685.99
41+92.79	685.39	686.06	685.96
42+19.15	685.45	686.12	686.03
42+42.20	685.50	-----	-----
42+68.48	685.52	-----	-----
42+95.22	685.60	-----	-----
43+19.92	685.63	-----	-----
43+47.64	685.71	-----	-----
43+75.82	685.78	-----	-----
43+99.03	685.79	-----	-----
44+21.90	685.79	-----	-----
44+45.94	685.87	-----	-----
44+46.38	685.89	-----	-----
44+71.21	685.96	-----	-----
44+97.43	686.02	-----	-----
45+23.82	686.09	-----	-----
45+50.73	686.14	-----	-----
45+78.68	686.26	-----	-----
46+05.51	686.32	-----	-----
46+37.80	686.38	-----	-----
46+38.57	686.37	-----	-----
46+54.34	686.42	-----	-----
46+85.26	686.51	-----	-----
47+16.34	686.53	-----	-----
47+37.75	686.60	-----	-----
47+60.37	686.69	-----	-----
47+88.72	686.84	-----	-----
48+17.12	686.96	-----	-----
48+46.23	687.08	-----	-----
48+77.78	687.20	-----	-----
49+04.19	687.33	-----	-----
49+32.54	687.44	-----	-----
49+60.25	687.50	-----	-----
49+85.58	687.61	-----	-----
50+16.06	687.72	-----	-----
50+46.19	687.77	-----	-----

PRELIMINARY

DESIGN FOR 10° 20' SKEW (LA)

224'-0 X 85'-4 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - STAGE II

56'-0, 76'-0 END SPANS (BTB BEAM) 92'-0 CENTER SPAN

SITUATION PLAN

STATION 1199+43.27, 29' LEFT ℄ CONST. I-380

JUNE 2018

JOHNSON COUNTY

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DESIGN SHEET NO. 3 OF 3 FILE NO. 30864 DESIGN NO. 519

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