

Appendix E – Design Data for Recommended Alternatives

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Neal Road (Crossing No. 735 202E, Milepost H 50.20)

Neal Road Grade Separation

Design Criteria	Existing Condition	Grade Separation
Classification	Local Street	Local Street
Terrain Type	Existing	Rolling
Posted Speed	35 mph	35 mph
Design Speed	40 mph	40 mph
Max. Superelevation	Existing	0.04
Minimum Horiz. Radius	Existing	533 ft
Maximum Grade	Existing	10%
Sag/Crest K Values	Existing	64 / 44
Minimum Vert. Clearance	N/A	24'3"

Impact Category	Grade Separation
Assumed bridge depth	5'
Bridge over freeway length	0'
Grade separation bridge length	121'
Total bridge structure length	121'
Proposed roadway (existing location)	1,435'
Proposed roadway (new location)	531'
Rail impact length	0'
Commercial impacts	0
Residential impacts	2
Local street network impacted	Yes
Detour needed for construction	Yes

Neal Road Median Replacement and Widening

Design Criteria	Existing Condition
Classification	Local Street
Posted Speed	35 mph
Design Speed	40 mph
Minimum Horiz. Radius	Existing
Maximum Grade	Existing
Sag/Crest K Values	Existing

N. Lasalle Street (Crossing No. 735 205A, Milepost H 52.04)

N. Lasalle Street Grade Separation

Design Criteria	Existing Condition	Grade Separation
Classification	Local Street	Local Street
Terrain Type	Existing	Rolling
Posted Speed	35 mph	25 mph
Design Speed	40 mph	30 mph
Max. Superelevation	Existing	0.04
Minimum Horiz. Radius	Existing	250 ft
Maximum Grade	Existing	10%
Sag/Crest K Values	Existing	37 / 19
Minimum Vert. Clearance	N/A	15'

Impact Category	Grade Separation
Assumed bridge depth	5'
Grade separation bridge length	81'
Total bridge structure length	81'
Proposed roadway (existing location)	950'
Proposed roadway (new location)	990'
Rail impact length	0'
Commercial impacts	4
Residential impacts	0
Local street network impacted	Yes
Detour needed for construction	Yes

Blackwell/Corcoran Street (Crossing No. 735 229N, Milepost 55.09) & Mangum Street (Crossing No. 735 231P, Milepost H 55.14)

Blackwell Street Grade Separation

Design Criteria	Existing Condition	Grade Separation
Classification	Local Street	Local Street
Terrain Type	Existing	Rolling
Posted Speed	35 mph	25 mph
Design Speed	40 mph	30 mph
Max. Superelevation	Existing	0.04
Minimum Horiz. Radius	Existing	250 ft
Maximum Grade	Existing	10%
Sag/Crest K Values	Existing	37 / 19
Minimum Vert. Clearance	N/A	15'

Mangum Street Grade Separation

Design Criteria	Existing Condition	Grade Separation
Classification	Local Street	Principal Arterial
Terrain Type	Existing	Rolling
Posted Speed	35 mph	25 mph
Design Speed	40 mph	30 mph
Max. Superelevation	Existing	0.08
Minimum Horiz. Radius	Existing	214 ft
Maximum Grade	Existing	9%
Sag/Crest K Values	Existing	37 / 19
Minimum Vert. Clearance	N/A	16'6"

Blackwell Street/Mangum Street Grade Separation

Impact Category	Grade Separation under Rail
Assumed bridge depth	5'
Bridge over freeway length	0'
Grade separation bridge length	296'
Total bridge structure length	296'
Proposed roadway (existing location)	3,135'
Proposed roadway (new location)	0'
Rail impact length	2,847'
Commercial impacts	0
Residential impacts	0
Local street network impacted	No
Detour needed for construction	Yes

Fayetteville Street (Crossing No. 910 605Y, Milepost H 55.50)

Fayetteville Street Grade Separation and Rail Realignment

Design Criteria	Existing Condition	Grade Separation
Classification	Minor Arterial	Minor Arterial
Terrain Type	Existing	Rolling
Posted Speed	35 mph	25 mph
Design Speed	40 mph	30 mph
Max. Superelevation	Existing	0.08
Minimum Horiz. Radius	Existing	214 ft
Maximum Grade	Existing	9%
Sag/Crest K Values	Existing	37 / 19
Minimum Vert. Clearance	N/A	24'3"

Fayetteville Street Grade Separation and Rail Realignment

Impact Category	Grade Separation
Assumed bridge depth	5'
Bridge over roadway length	185'
Grade separation bridge length	151'
Total bridge structure length	336'
Proposed roadway (existing location)	2,377'
Proposed roadway (new location)	0'
Rail impact length	3,532'
Commercial impacts	10
Residential impacts	0
Local street network impacted	Yes
Detour needed for construction	Yes

Briggs Avenue

Briggs Avenue Grade Separation

Design Criteria	Existing Condition	Grade Separation
Classification	Local Street	Local Street
Terrain Type	Existing	Rolling
Posted Speed	45 mph	35 mph
Design Speed	50 mph	40 mph
Max. Superelevation	Existing	0.04
Minimum Horiz. Radius	Existing	533 ft
Maximum Grade	Existing	10%
Sag/Crest K Values	Existing	64 / 44
Minimum Vert. Clearance	N/A	24'3"

Impact Category	Grade Separation
Assumed bridge depth	5'
Bridge over freeway length	210'
Grade separation bridge length	289'
Total bridge structure length	499'
Proposed roadway (existing location)	480'
Proposed roadway (new location)	1,009'
Rail impact length	0'
Commercial impacts	3
Residential impacts	1
Local street network impacted	Yes
Detour needed for construction	Yes

Glover Road (Crossing No. 734 735L, Milepost H 58.98)

Glover Road Grade Separation

Design Criteria	Existing Condition	Grade Separation and Rail Realignment
Classification	Local Street	Local Street
Terrain Type	Existing	Rolling
Posted Speed	35 mph	35 mph
Design Speed	40 mph	40 mph
Max. Superelevation	Existing	0.04
Minimum Horiz. Radius	Existing	533 ft
Maximum Grade	Existing	10%
Sag/Crest K Values	Existing	64 / 44
Minimum Vert. Clearance	N/A	24'3"

Glover Road Grade Separation

Impact Category	Grade Separation and Rail Realignment
Assumed bridge depth	5'
Bridge over freeway length	0'
Grade separation bridge length	279'
Total bridge structure length	279'
Proposed roadway (existing location)	634'
Proposed roadway (new location)	15,346' (2.91 mi)
Rail impact length	6,986' (1.32 mi)
Commercial impacts	4
Residential impacts	29
Local street network impacted	Yes
Detour needed for construction	Yes

Ellis Road (East) (Crossing No. 734 737A, Milepost H 60.27)

Ellis Road (East) Grade Separation

Design Criteria	Existing Condition	Grade Separation
Classification	Local Street	Local Street
Terrain Type	Existing	Rolling
Posted Speed	45 mph	35 mph
Design Speed	50 mph	40 mph
Max. Superelevation	Existing	0.04
Minimum Horiz. Radius	Existing	533 ft
Maximum Grade	Existing	10%
Sag/Crest K Values	Existing	64 / 44
Minimum Vert. Clearance	N/A	24'3"

Impact Category	Grade Separation
Assumed bridge depth	5'
Bridge over freeway length	0'
Grade separation bridge length	182'
Total bridge structure length	182'
Proposed roadway (existing location)	273'
Proposed roadway (new location)	1,402'
Rail impact length	0' (Assuming prior realignment)
Commercial impacts	1
Residential impacts	1
Local street network impacted	No
Detour needed for construction	Yes

Cornwallis Road (Crossing No. 734 742W, Milepost H 62.93)

Cornwallis Road/Miami Boulevard Grade Separation

Design Criteria	Existing Condition	Grade Separation
Classification	Minor Arterial	Minor Arterial
Terrain Type	Existing	Rolling
Posted Speed	45 mph	35 mph
Design Speed	50 mph	40 mph
Max. Superelevation	Existing	0.08
Minimum Horiz. Radius	Existing	444 ft
Maximum Grade	Existing	8%
Sag/Crest K Values	Existing	64 / 44
Minimum Vert. Clearance	N/A	16'6"

Impact Category	Grade Separation
Assumed bridge depth	5'
Grade separation bridge length	127'
Total bridge structure length	127'
Proposed roadway (existing location)	2,282'
Proposed roadway (new location)	0'
Rail impact length	0'
Commercial impacts	0
Residential impacts	0
Local street network impacted	No
Detour needed for construction	Yes