

ATTACHMENT 6
Project Team Meeting Minutes (11-02-07)



Architecture

Engineering

Construction

MEETING MINUTES

Project: US31 – University/Chestnut Intersections, Item No. 3-131.00
 (Statewide Roadway Design)
Purpose: Project Team Meeting, Review VISSIM Analysis/Simulations
Place: KYTC, District 3, Bowling Green, Kentucky
Meeting Date: November 2, 2007
Prepared By: Bob Gustafson
In Attendance:

Steve James	KYTC, D-3
Jim Hudson	KYTC, D-3
Jeff Moore	KYTC, D-3
Scott Pedigo	KYTC, D-3
Keirsten Jagers	KYTC, D-3
Jeremy Lukat	Qk4
Andy Gilley	Qk4
Bob Gustafson	Qk4

This meeting was scheduled to provide the project team the opportunity to review the VISSIM simulations and delay analysis for the considered alternatives prior to meeting with local officials and completion of this study. Qk4 presented the simulations and provided the delay analysis for the following:

1. Existing Configuration (2007)
2. No-Build (2027)
3. Alternate 1 (2027) – Add Exclusive Right Turn Lane (US31 SB to University WB) and include an additional thru lanes on US31 SB with merge area south of the intersection with University
4. Alternate 2 (2027) – Relocate Chestnut to the north to gain more separation with the University Intersection (Chestnut non-signalized)
5. Alternate 3 (2027) – Relocate Chestnut to the north (Chestnut non-signalized) plus improvements described in Alternative 1
6. Alternate 4 (2027) – Alternative 3 (Signalized)
7. Alternate 5 (2027) – Dual Roundabouts at University and Chestnut
8. Alternate 6 (2027) – Single Roundabout at Chestnut

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After review of the simulations and delay analysis the project team had the following comments (Delay Analysis included as Attachment 1):

- Alternative 1 provides a significant reduction in delays as compared to No-Build. This alternative should be fairly inexpensive and could be implemented as an interim improvement if a more extensive Alternative is ultimately recommended. This alternative will be carried forward.
- Alternative 2 was deemed ineffective by the project team and will be removed from further consideration.
- Alternative 3 provides a significant reduction in delay as compared to Alternative 1 alone. The project team recommended Alternative 3 be carried forward and for the consultant to add an alternative, Alternative 3A, that would investigate moving relocated Chestnut slightly south to avoid the sinkhole. This may involve the taking of a residence. Both of these alternatives will be analyzed with and without signals at Chestnut.
- Alternative 4 was recommended to be removed from further consideration.
- Alternative 5, while deemed confusing and undesirable by the project team, will be carried forward since this alternative was thought to be a viable alternative by local officials.
- Alternative 6 was deemed ineffective by the project team and to be removed from further consideration.

Qk4 will now advance the investigation of Alternative 1, Alternative 3, Alternative 3A and Alternative 5. The following will be prepared for presentation to the MPO in December 2007:

- Refined VISSIM simulations and analysis for each alternative
- Construction cost estimates
- Approximate property lines and owners from tax maps
- Right of Way impacts
- Graphics on boards for each alternative

Other items discussed by the Project Team:

- Investigate poor sight lines at US 31 - University/Loving Intersection
- Evaluate coordination with existing pedestrian facilities
- Qk4 will contact Jeff Lashlee at the City to see if they have any information on the sinkhole that is located north of Chestnut and west of US 31W.

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After the Project Team Meeting, Qk4 staff visited the project site. The two photos below are of the sinkhole near the project location. As you can see there has been a structure constructed over the sinkhole which does not exhibit an open throat.



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END OF MINUTES

REG/cw

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ATTACHMENT 6A
VISSIM Delay Analysis for MPO
Meeting (12-17-07)

SUMMARY OF VISSIM ANALYSIS

WARREN COUNTY US 31 - UNIVERSITY DR – CHESTNUT ST INTERSECTION ANALYSIS

Item No. 3-130.00

December 2007

Prepared for:

**Commonwealth of Kentucky
Transportation Cabinet**

Prepared by:



Architecture Engineering Construction

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ATTACHMENT 6A

COMPARISON OF ALTERNATIVES

SUMMARY OF AM PEAK HOUR DELAYS

From	To	Existing	No Build	Alt 1	Alt 3	Alt 3A	Alt 5
Northbound US 31	Eastbound Loving	13	30	26	13	15	24
Northbound US 31	Northbound US 31	20	32	25	17	13	44
Northbound US 31	Northbound Chestnut	32	48	42	19	19	54
Northbound US 31	Westbound University	26	68	47	53	32	55
Westbound Loving	Northbound US 31	21	34	34	11	9	6
Westbound Loving	Northbound Chestnut	37	42	35	37	12	9
Westbound Loving	Westbound University	20	22	22	21	17	19
Westbound Loving	Southbound US 31	22	26	17	16	15	28
Southbound US 31	Northbound Chestnut	1	1	1	2	1	7
Southbound US 31	Westbound University	10	9	7	10	1	14
Southbound US 31	Southbound US 31	28	34	21	22	35	18
Southbound US 31	Eastbound Loving	62	44	39	31	21	16
Southbound Chestnut	Westbound University	16	17	16	12	8	5
Southbound Chestnut	Southbound US 31	24	33	18	15	14	7
Southbound Chestnut	Eastbound Loving	15	16	17	31	16	18
Southbound Chestnut	Northbound US 31	19	23	23	12	18	4
Eastbound University	Southbound US 31	24	23	20	21	19	1
Eastbound University	Eastbound Loving	19	23	19	33	20	4
Eastbound University	Northbound US 31	27	28	35	41	26	9
Eastbound University	Northbound Chestnut	41	52	51	52	32	9

SUMMARY OF PM PEAK HOUR DELAYS

From	To	Existing	No Build	Alt 1	Alt 3	Alt 3A	Alt 5
Northbound US 31	Eastbound Loving	18	55	51	40	52	7
Northbound US 31	Northbound US 31	24	56	54	39	46	7
Northbound US 31	Northbound Chestnut	43	86	87	58	63	66
Northbound US 31	Westbound University	53	136	130	116	83	49
Westbound Loving	Northbound US 31	28	41	28	19	30	14
Westbound Loving	Northbound Chestnut	44	38	52	25	70	3
Westbound Loving	Westbound University	26	29	22	31	29	18
Westbound Loving	Southbound US 31	14	19	15	6	22	21
Southbound US 31	Northbound Chestnut	120	218	3	1	15	95
Southbound US 31	Westbound University	196	294	15	1	27	135
Southbound US 31	Southbound US 31	186	275	45	52	59	216
Southbound US 31	Eastbound Loving	198	269	50	30	69	221
Southbound Chestnut	Westbound University	280	672	63	46	52	47
Southbound Chestnut	Southbound US 31	302	619	56	30	89	60
Southbound Chestnut	Eastbound Loving	236	425	71	66	99	49
Southbound Chestnut	Northbound US 31	46	356	27	23	34	39
Eastbound University	Southbound US 31	36	32	42	10	50	6
Eastbound University	Eastbound Loving	36	37	39	75	46	95
Eastbound University	Northbound US 31	75	144	133	133	80	118
Eastbound University	Northbound Chestnut	73	156	146	114	107	125

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EXISTING ROADWAY NETWORK EXISTING TRAFFIC



Existing Summary of Delays

From	To	AM Peak	PM Peak
Northbound US 31	Eastbound Loving	13	18
Northbound US 31	Northbound US 31	20	24
Northbound US 31	Northbound Chestnut	32	43
Northbound US 31	Westbound University	26	53
Westbound Loving	Northbound US 31	21	28
Westbound Loving	Northbound Chestnut	37	44
Westbound Loving	Westbound University	20	26
Westbound Loving	Southbound US 31	22	14
Southbound US 31	Northbound Chestnut	1	120
Southbound US 31	Westbound University	10	196
Southbound US 31	Southbound US 31	28	186
Southbound US 31	Eastbound Loving	62	198
Southbound Chestnut	Westbound University	16	280
Southbound Chestnut	Southbound US 31	24	302
Southbound Chestnut	Eastbound Loving	15	236
Southbound Chestnut	Northbound US 31	19	46
Eastbound University	Southbound US 31	24	36
Eastbound University	Eastbound Loving	19	36
Eastbound University	Northbound US 31	27	75
Eastbound University	Northbound Chestnut	41	73

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EXISTING ROADWAY NETWORK FUTURE YEAR TRAFFIC



No-Build Summary of Delays

From	To	AM Peak	PM Peak
Northbound US 31	Eastbound Loving	30	55
Northbound US 31	Northbound US 31	32	56
Northbound US 31	Northbound Chestnut	48	86
Northbound US 31	Westbound University	68	136
Westbound Loving	Northbound US 31	34	41
Westbound Loving	Northbound Chestnut	42	38
Westbound Loving	Westbound University	22	29
Westbound Loving	Southbound US 31	26	19
Southbound US 31	Northbound Chestnut	1	218
Southbound US 31	Westbound University	9	294
Southbound US 31	Southbound US 31	34	275
Southbound US 31	Eastbound Loving	44	269
Southbound Chestnut	Westbound University	17	672
Southbound Chestnut	Southbound US 31	33	619
Southbound Chestnut	Eastbound Loving	16	425
Southbound Chestnut	Northbound US 31	23	356
Eastbound University	Southbound US 31	23	32
Eastbound University	Eastbound Loving	23	37
Eastbound University	Northbound US 31	28	144
Eastbound University	Northbound Chestnut	52	156

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ALTERNATIVE 1 FUTURE YEAR TRAFFIC



Alternative 1 Summary of Delays

From	To	AM Peak	PM Peak
Northbound US 31	Eastbound Loving	26	51
Northbound US 31	Northbound US 31	25	54
Northbound US 31	Northbound Chestnut	42	87
Northbound US 31	Westbound University	47	130
Westbound Loving	Northbound US 31	34	28
Westbound Loving	Northbound Chestnut	35	52
Westbound Loving	Westbound University	22	22
Westbound Loving	Southbound US 31	17	15
Southbound US 31	Northbound Chestnut	1	3
Southbound US 31	Westbound University	7	15
Southbound US 31	Southbound US 31	21	45
Southbound US 31	Eastbound Loving	39	50
Southbound Chestnut	Westbound University	16	63
Southbound Chestnut	Southbound US 31	18	56
Southbound Chestnut	Eastbound Loving	17	71
Southbound Chestnut	Northbound US 31	23	27
Eastbound University	Southbound US 31	20	42
Eastbound University	Eastbound Loving	19	39
Eastbound University	Northbound US 31	35	133
Eastbound University	Northbound Chestnut	51	146

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ALTERNATIVE 3 FUTURE YEAR TRAFFIC



Alternative 3 Summary of Delays

From	To	AM Peak	PM Peak
Northbound US 31	Eastbound Loving	13	40
Northbound US 31	Northbound US 31	17	39
Northbound US 31	Northbound Chestnut	19	58
Northbound US 31	Westbound University	53	116
Westbound Loving	Northbound US 31	11	19
Westbound Loving	Northbound Chestnut	37	25
Westbound Loving	Westbound University	21	31
Westbound Loving	Southbound US 31	16	6
Southbound US 31	Northbound Chestnut	2	1
Southbound US 31	Westbound University	10	1
Southbound US 31	Southbound US 31	22	52
Southbound US 31	Eastbound Loving	31	30
Southbound Chestnut	Westbound University	12	46
Southbound Chestnut	Southbound US 31	15	30
Southbound Chestnut	Eastbound Loving	31	66
Southbound Chestnut	Northbound US 31	12	23
Eastbound University	Southbound US 31	21	10
Eastbound University	Eastbound Loving	33	75
Eastbound University	Northbound US 31	41	133
Eastbound University	Northbound Chestnut	52	114

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ALTERNATIVE 3A FUTURE YEAR TRAFFIC

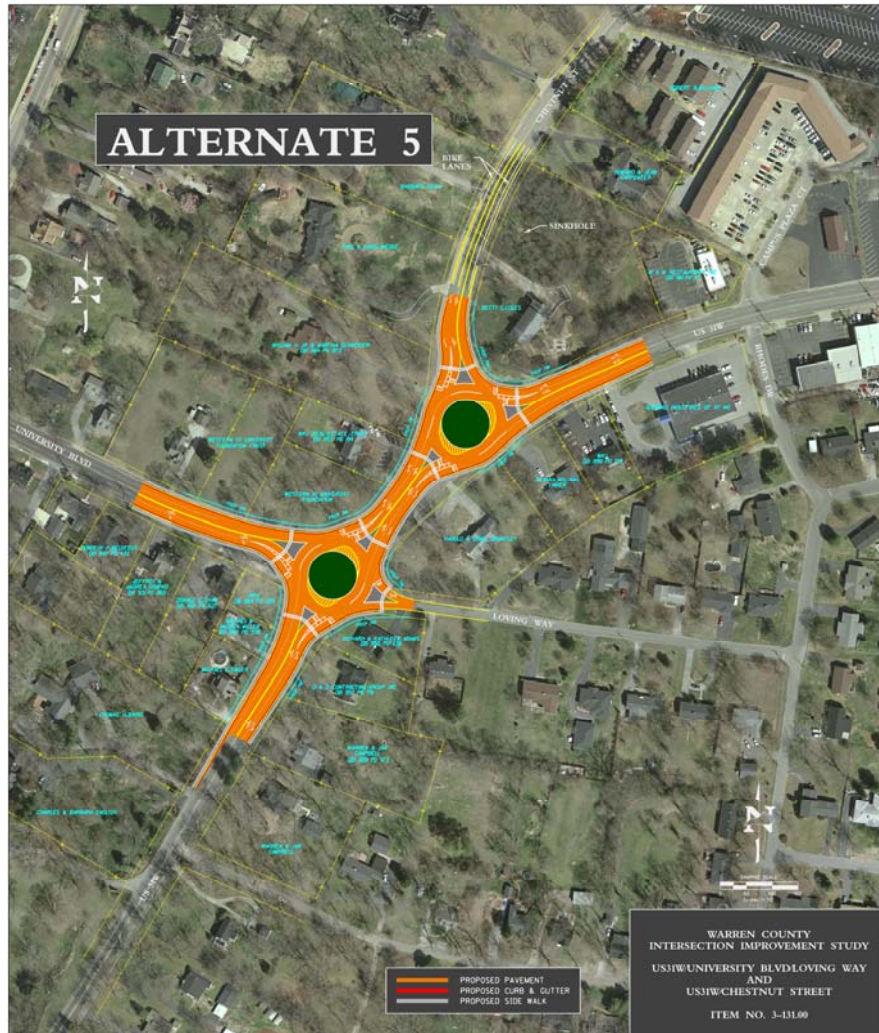


Alternative 3A Summary of Delays

From	To	AM Peak	PM Peak
Northbound US 31	Eastbound Loving	15	52
Northbound US 31	Northbound US 31	13	46
Northbound US 31	Northbound Chestnut	19	63
Northbound US 31	Westbound University	32	83
Westbound Loving	Northbound US 31	9	30
Westbound Loving	Northbound Chestnut	12	70
Westbound Loving	Westbound University	17	29
Westbound Loving	Southbound US 31	15	22
Southbound US 31	Northbound Chestnut	1	15
Southbound US 31	Westbound University	1	27
Southbound US 31	Southbound US 31	35	59
Southbound US 31	Eastbound Loving	21	69
Southbound Chestnut	Westbound University	8	52
Southbound Chestnut	Southbound US 31	14	89
Southbound Chestnut	Eastbound Loving	16	99
Southbound Chestnut	Northbound US 31	18	34
Eastbound University	Southbound US 31	19	50
Eastbound University	Eastbound Loving	20	46
Eastbound University	Northbound US 31	26	80
Eastbound University	Northbound Chestnut	32	107

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ALTERNATIVE 5 FUTURE YEAR TRAFFIC



Alternative 5 Summary of Delays

From	To	AM Peak	PM Peak
Northbound US 31	Eastbound Loving	24	7
Northbound US 31	Northbound US 31	44	7
Northbound US 31	Northbound Chestnut	54	66
Northbound US 31	Westbound University	55	49
Westbound Loving	Northbound US 31	6	14
Westbound Loving	Northbound Chestnut	9	3
Westbound Loving	Westbound University	19	18
Westbound Loving	Southbound US 31	28	21
Southbound US 31	Northbound Chestnut	7	95
Southbound US 31	Westbound University	14	135
Southbound US 31	Southbound US 31	18	216
Southbound US 31	Eastbound Loving	16	221
Southbound Chestnut	Westbound University	5	47
Southbound Chestnut	Southbound US 31	7	60
Southbound Chestnut	Eastbound Loving	18	49
Southbound Chestnut	Northbound US 31	4	39
Eastbound University	Southbound US 31	1	6
Eastbound University	Eastbound Loving	4	95
Eastbound University	Northbound US 31	9	118
Eastbound University	Northbound Chestnut	9	125

ATTACHMENT 7
Plan Layouts of Short-List Alternatives