

MEMORANDUM

Date: January 12, 2021

Project #: 24935

To: Bryce Bishop
City of Salem
555 Liberty Street SE, Room 325
Salem, Oregon 973091-3513

From: Diego Arguea, PE

Project: Sustainable Fairview Development

Subject: Addendum to *Sustainable Fairview* Element of Phase II

This memorandum presents a modification to the December 2018 trip generation addendum for the Phase II development of the Sustainable Fairview Development Plan. *The December 2018 memorandum is included in Appendix "A."*

This memorandum documents a decrease in single-family homes and an increase in townhomes and apartments from those assumptions documented in the December 2018 trip generation memorandum. This memorandum also documents proposed decreases in office space and retail. As part of the cumulative trip generation tracking, this memorandum also accounts for the trip generation associated with the previously approved *Fairview Woods Addendum (March 2018)*, which was never built nor are there plans to build in the future. This component of the planned development previously accounted for 135 daily trips and these have been removed from the net calculation.

The changes proposed do not result in trip generation that would trigger the next transportation improvement as documented in the Area Facilities Plan (included as *Appendix "B"*). As such, no further transportation analysis is required. Additional details about the historical and revised trip generation estimates are provided herein.

HISTORICAL TRIP GENERATION

The following historical trip generation information is provided for context and the proposed modifications are presented following this section.

The Pringle Creek Community development (Phase I) generated 1,770 net new daily trips and did not trigger any off-site transportation improvements according to the Area Facilities Plan (*Appendix "B"*).

Phase II of the development which includes *Fairview Hills*¹ and *Sustainable Fairview*² were analyzed together in a trip generation memorandum prepared in February 2012, resulting in approximately 5,190 additional net new daily trips, triggering two off-site transportation improvements based on the Area Facilities Plan. This was revised in the March 2016 analysis and the daily trips increased from 5,190 to 6,290. This was further revised as documented in the December 2018 memorandum; however, the trip generation remained consistent at 6,290 daily trips and no further analysis was prepared (as documented in *Appendix "A"*). Phase III of the development, *Fairview Addition West*, was estimated to generate approximately 3,210 additional net new daily trips, and was found to trigger one additional off-site transportation improvements in the Area Facilities Plan.

Finally, most recently (March 2018), the *Fairview Woods Addendum to Fairview Addition West* added 135 additional daily trips. This addition was not found to trigger any additional mitigations in the Area Facilities Plan. As described above, however, these trips have been removed from this analysis as this development is no longer considered part of the Master Plan.

Prior to the proposed changes to *Sustainable Fairview* documented in this memorandum, the total cumulative daily trip generation had been documented as 11,405 daily trips. As described previously, this historical trip generation is included in the December 2018 memorandum in *Appendix "A."*

A history of the *Sustainable Fairview* addenda and proposed current revision is provided in Table 1 below.

Table 1. Historical and Proposed Land Uses – Sustainable Fairview Element of Phase II

Land Use	Years			
	2009	March 2016	December 2018	Current Proposal
Private School	500 Students	35 Students	35 Students	35 Students
Office	50,000 SF	60,000 SF	57,000 SF	50,000 SF
Commercial	20,000 SF	30,000 SF	27,000 SF	20,000 SF
City Park	5 acres	28 acres	28 acres	28 acres
Single-family residential	--	100 homes	100 homes	73 homes
Apartments	--	100 units	180 units	357 units
Townhomes	--	80 units	15 units	28 units
Resulting Daily Trips	5,190	6,290	6,290	6,820

SF: Square Feet

As summarized in Table 1, the current proposal is expected to increase the number of previously vested trips for the *Sustainable Fairview* element of Phase II by approximately 530 weekday daily trips. As

¹ Documented in a letter, together with Sustainable Fairview, in February 2012.

² Originally prepared in 2009 but not documented in a letter until February 2012.

described further in the report, the additional trips do not trigger additional transportation improvements as documented in the Area Facilities Plan. Additional details of the trip generation and applicability of the Area Facilities Plan are included in the following sections.

REVISED TRIP GENERATION – SUSTAINABLE FAIRVIEW

Kittelson & Associates, Inc. prepared estimates of daily, weekday AM, and weekday PM peak hour vehicle trip ends for the *Sustainable Fairview* component of Phase II of the site development based on empirical observations at similar land uses. These observations are summarized in the standard reference *Trip Generation Manual, 9th Edition*, published by the Institute of Transportation Engineers (Reference 1). This methodology is consistent with previous phases of the Sustainable Fairview Development Plan. Internal trip reductions for each identified land use were based on the mixed-use nature of the proposed development, and the methodology used to calculate the internalization rates are consistent with those in the February 2012 memorandum³. The pass-by reduction is only applicable to the retail component of the development; as such, pass-by trips were deducted from the net external trips generated by the retail use.

As the data represented in the ITE standard reference manual is primarily collected at suburban locations with little or no transit service and minimal pedestrian or bicycle facilities, the cumulative addition of trips generated by ITE rates for all individual land uses likely overestimates the vehicle trip generation of the proposed mixed-use development. To account for the multi-modal aspects of the proposed development, net external trips were reduced by ten percent. This reduction is consistent with the Transportation Planning Rule (TPR, Reference 3) policies and has been accepted by the City of Salem in previous development phases.

After reducing trips further to account for multi-modal nature of the site, net new primary trips were calculated for the site. These are trips that are subject to the maximum thresholds established within the Area Facilities Plan.

Table 2 summarizes the estimated revised site trip generation during a typical weekday as well as during the weekday AM and PM peak hours for the *Sustainable Fairview* part of Phase II of the development. Note that the shaded-out trip generation for Fairview Hills is the same as that originally documented and no modification to Fairview Hills is proposed. All trips in Table 2 have been rounded to the nearest five trips (daily trips rounded to the nearest 10 trips).

³The *Trip Generation Handbook, 2nd Edition*, published by the Institute of Transportation Engineers (Reference 2) provided the data and methods for estimating internal capture and pass-by for mixed-use developments.

Table 2 Phase II (2018 Sustainable Fairview revision) Estimated Trip Generation

Land Use	ITE Code	Size (SF/units)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Fairview Hills (original and unmodified trip generation)									
Apartment Internal Trips (5%)	220	450 units	2,850 (140)	225 (10)	45 (5)	180 (5)	280 (10)	180 (5)	100 (5)
Shopping Center Pass-by Trips (5%)	820	24,000 SF	1,030 (350)	25 (10)	15 (5)	10 (5)	90 (30)	45 (15)	45 (15)
Sustainable Fairview (revised from December 2018)									
Detached Single Family Housing Internal Trips (4%)	210	73	690 (30)	55 (5)	15 0	40 (5)	75 (5)	45 (5)	30 0
Apartment Internal Trips (4%)	220	357	2,290 (90)	180 (5)	35 0	145 (5)	220 (10)	145 (5)	75 (5)
Residential Condo/Townhouse Internal Trips (4%)	230	28	160 (10)	10 0	0 0	10 0	15 0	10 0	5 0
Private School (K-8) Internal Trips (4%)	534	35 students	80 ¹ 0	35 0	20 0	15 0	15 0	5 0	10 0
General Office Internal Trips (4%)	710	50,000 SF	550 (20)	75 (5)	70 (5)	5 0	75 (5)	15 (5)	60 0
Specialty Retail Pass-By (34%) ²	814	20,000 SF	890 (300)	0 0	0 0	0 0	75 (25)	35 (10)	40 (15)
City Park ³ Internal Trips (4%)	411	28 acres	50 0	5 0	5 0	0 0	5 0	0 0	5 0
Total Site-Generated Trips (Fairview Hills + Sustainable Fairview)			8,590	610	205	405	850	480	370
Internal Reduction			(290)	(25)	(10)	(15)	(30)	(20)	(10)
10% TPR Reduction for Multi-Modal			(830)	(60)	(20)	(40)	(80)	(45)	(35)
Pass-by Reduction			(650)	(10)	(5)	(5)	(55)	(25)	(30)
Net New Trips			6,820	515	170	345	685	390	295

¹ Daily trips estimated based on the relationship of p.m. peak hour trips to daily trips of ITE #530 (Elementary School). No daily trip data is available for ITE #534.

² Pass-by rate taken from ITE #820. No pass-by rate is available for ITE #814.

³ No ITE data is provided for a.m. or p.m. peak hours. For typical weekday a.m. and p.m. peak hours, approximately 10% of the daily trip generation is assumed.

As shown in Table 2, the revised development proposal is anticipated to generate approximately 6,820 daily trips. As stated previously, the most recently revised and approved *Sustainable Fairview* (combined with *Fairview Hills*) proposal was estimated to generate 6,290 daily trips. As such, the revised development proposal for the Sustainable Fairview development is expected to result in a daily increase of approximately 530 daily trips.

CUMULATIVE TRIP GENERATION FOR SUSTAINABLE FAIRVIEW MASTER PLAN

The revised trip generation shown in Table 2 was applied to the cumulative total to calculate a new total cumulative trips generated by the proposed land uses. In addition, as described previously, the most recent approvals (March 2018) for the *Fairview Woods Addendum to Fairview Addition West* included 135 daily trips. These trips are not shown in the cumulative total in Table 3 below as a result of this development proposal being removed from the overall Sustainable Fairview Master Plan.

The cumulative trips have been rounded (daily trips were rounded to the nearest ten trips and the hourly trips were rounded to the nearest five trips, consistent with previous updates to the Sustainable Fairview development) and are summarized together with previous phases of development in Table 3 below. For reference, the revised trips are shown in bold text.

Table 3 Cumulative Sustainable Fairview Estimated Trip Generation

Land Use	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Total	In	Out	Total	In	Out
Phase I – September 2005, <i>Pringle Creek</i>	1,770	140	40	100	160	95	65
Phase II –Fairview Hills & Sustainable Fairview (Dec 2020 Revision)	6,820	515	170	345	685	390	295
Phase III – June 2014, <i>Fairview Addition West</i>	3,210	235	60	175	330	205	125
Cumulative Net Total Trips	11,800	890	270	620	1,175	690	485

As stated previously under the Historical Trip Generation section, the previously proposed development total cumulative daily trip generation had been documented as 11,405 daily trips. With the revised proposal for Phase II *Sustainable Fairview*, this estimate increases to 11,800 weekday daily trips.

AREA FACILITIES PLAN

Previous development teams and City of Salem staff collectively developed an Area Facilities Plan for the entire Sustainable Fairview development to identify specific required public improvements and the trigger for each improvement. Based on recent conversations with City staff, the project team understands that the Area Facilities Plan is currently being reevaluated and the original identified improvements may not be applicable, and some improvements may have already been constructed. For consistency with previous trip generation updates, however, the identified Area Facilities Plan improvements that would otherwise be triggered by phased development are identified in Table 4 below.

Table 4 Area Facilities Plan – Anticipated Off-Site Improvements

Required Public Improvement	Trigger (Net New Daily Trips)	Estimated Cost ¹	Estimated Start
<u>Transportation</u> 25th Street SE/Madrona Avenue SE. This improvement calls for Madrona Avenue SE to be realigned with 25 th Street SE and Airway Drive SE realigned with Madrona Avenue SE. The new Madrona Avenue SE/25 th Street SE intersection shall also be signalized. Madrona Avenue SE will be widened to a five-lane cross-section east of the railroad track to 25 th Street SE. Right-of-way acquisition is required and/or included in the cost estimate.	8,000	\$175,000	7/1/2010
<u>Transportation</u> Madrona Avenue/Fairview Industrial Drive SE. This improvement calls for the construction of an additional westbound left-turn lane from Madrona Avenue SE to southbound Fairview Industrial Drive SE. An additional southbound lane on Fairview Industrial Drive SE must also be constructed to receive the dual left-turn lanes, and shall terminate as a southbound right-turn lane at the intersection with Strong Road SE. Costs of right-of-way acquisition is included in the estimate.	12,000	\$2,300,000	9/1/2011

¹ Cost estimates in year 2004 dollars

As shown in Table 4, the most recent public improvement was triggered previously at the 8,000 daily trip trigger. The next transportation improvement is not triggered until the development reaches 12,000 net new daily trips (see *Appendix "B"*). There is thus no change to the mitigation triggers with the revised development as proposed for *Sustainable Fairview* as presented in this memorandum.

We trust this memorandum addresses the revised trip generation associated with the revision of land uses for the *Sustainable Fairview* element of the Phase II development. If you any questions, please call us at (503) 228-5230.

REFERENCES

1. Institute of Transportation Engineers. *Trip Generation*, 9th Edition. 2012.
2. Institute of Transportation Engineers. *Trip Generation Handbook*. 2004.
3. Department of Land Conservation and Development. *Oregon Administrative Rules: Transportation Planning Rule 660-012-0055(6)(a)*.

APPENDICES

Appendix "A" – December 2018 Addendum to *Sustainable Fairview* Element of Phase II

Appendix "B" – Sustainable Fairview Development Area Facilities Plan



Appendix A
December 2018 Addendum to
Sustainable Fairview Element of
Phase II

MEMORANDUM

Date: December 5, 2018

Project #: 23528

To: Bryce Bishop
City of Salem
555 Liberty Street SE, Room 325
Salem, Oregon 973091-3513

From: Diego Arguea, PE, and Brian Dunn, PE

Project: Sustainable Fairview Development

Subject: Addendum to *Sustainable Fairview* Element of Phase II

This memorandum presents a trip generation addendum for the *Sustainable Fairview* element of the Phase II development of the Sustainable Fairview Development Plan.

The most recent memorandum, prepared in August 2018, included the cumulative documentation of trip generation based on the most recent adopted development scenarios for Phases I, II, III (*Fairview Addition West*), and added the *Fairview Woods Addendum to Fairview Addition West*. The August 2018 memorandum is included as *Attachment "A."*

HISTORICAL ADDENDA

This memorandum proposes a modification to the development proposal associated with Phase II of the development, specifically the *Sustainable Fairview* part of Phase II. The original proposal for *Sustainable Fairview* was prepared in 2009 and included the following land uses:

- Private school with 500 students;
- 50,000 square feet of office space;
- 20,000 square feet of specialty retail commercial space; and,
- 5 acres of City Park space.

A revised proposal was prepared and approved in March 2016, and the assumed land use mix is shown below for informational purposes only.

- 100 single-family homes;
- 100 apartment units;

- 80 condominium/townhouse units;
- Private school with 35 students;
- 60,000 square feet of office space;
- 30,000 square feet of specialty retail commercial space; and,
- 28 acres of City Park space.

The above revision (March 2016) resulted in an increase of 1,100 daily trips over the prior 5,190, resulting in a net total daily trips of 6,290 after the June 2014 revision. *The March 2016 memorandum is included in Attachment "B" for reference.*

HISTORICAL TRIP GENERATION

The Pringle Creek Community development (Phase I) generated 1,770 net new daily trips and did not trigger any off-site transportation improvements according to the Area Facilities Plan (*Attachment "C"*). Phase II of the development which includes *Fairview Hills*¹ and *Sustainable Fairview*² were analyzed together in a trip generation memorandum prepared in February 2012, resulting in approximately 5,190 additional net new daily trips, triggering two off-site transportation improvements based on the Area Facilities Plan. This was revised in the March 2016 analysis and the daily trips increased from 5,190 to 6,290

Phase III of the development, *Fairview Addition West*, was estimated to generate approximately 3,210 additional net new daily trips, and was found to trigger one additional off-site transportation improvements in the Area Facilities Plan.

Finally, most recently (March 2018), the *Fairview Woods Addendum to Fairview Addition West* added 135 additional daily trips. This addition was not found to trigger any additional mitigations in the Area Facilities Plan.

Prior to the proposed changes to *Sustainable Fairview* documented in this memorandum, the total cumulative daily trip generation had been documented as 11,405 daily trips. As described previously, this historical trip generation is included in the August 2018 memorandum in *Attachment "A."*

¹ Documented in a letter, together with Sustainable Fairview, in February 2012.

² Originally prepared in 2009 but not documented in a letter until February 2012.

PROPOSED ADDENDUM

The revised land use mix included in this analysis is summarized below.

- 100 single-family homes;
- 180 apartment units;
- 15 condominium/townhouse units;
- Private school with 35 students;
- 57,000 square feet of office space;
- 27,000 square feet of specialty retail commercial space; and,
- 28 acres of City Park space.

This memorandum documents the expected change in trip generation as a result of a modification to the March 2016 plan for *Sustainable Fairview*, and documents which, if any, additional transportation improvements identified in the development's Area Facilities Plan may be triggered as a result.

REVISED TRIP GENERATION – SUSTAINABLE FAIRVIEW

Kittelson & Associates, Inc. prepared estimates of daily, weekday AM, and weekday PM peak hour vehicle trip ends for the *Sustainable Fairview* part of Phase II of the site development based on empirical observations at similar land uses. These observations are summarized in the standard reference *Trip Generation Manual, 9th Edition*, published by the Institute of Transportation Engineers (Reference 1). This methodology is consistent with previous phases of the Sustainable Fairview Development Plan. Internal trip reductions for each identified land use were based on the mixed-use nature of the proposed development, and the methodology used to calculate the internalization rates are consistent with those in the February 2012 memorandum³. The pass-by reduction is only applicable to the retail component of the development; as such, pass-by trips were deducted from the net external trips generated by the retail use.

As the data represented in the ITE standard reference manual is primarily collected at suburban locations with little or no transit service and minimal pedestrian or bicycle facilities, the cumulative addition of trips generated by ITE rates for all individual land uses likely overestimates the vehicle trip generation of the proposed mixed-use development. To account for the multi-modal aspects of the proposed development, net external trips were reduced by ten percent. This reduction is consistent with the Transportation Planning Rule (TPR, Reference 3) policies and has been accepted by the City of Salem in previous development phases.

³The *Trip Generation Handbook, 2nd Edition*, published by the Institute of Transportation Engineers (Reference 2) provided the data and methods for estimating internal capture and pass-by for mixed-use developments.

After reducing trips further to account for multi-modal nature of the site, net new primary trips were calculated for the site. These are trips that are subject to the maximum thresholds established within the Area Facilities Plan.

Table 1 summarizes the estimated revised site trip generation during a typical weekday as well as during the weekday AM and PM peak hours for the *Sustainable Fairview* part of Phase II of the development. Note that the shaded-out trip generation for Fairview Hills is the same as that originally documented and no modification to Fairview Hills is proposed. All trips in Table 1 have been rounded to the nearest five trips (daily trips rounded to the nearest 10 trips).

Table 1 Phase II (2018 Sustainable Fairview revision) Estimated Trip Generation

Land Use	ITE Code	Size (SF/units)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Fairview Hills (original trip generation)									
Apartment Internal Trips (5%)	220	450 units	2,850 (140)	225 (10)	45 (5)	180 (5)	280 (10)	180 (5)	100 (5)
Shopping Center Pass-by Trips (5%)	820	24,000 SF	1,030 (350)	25 (10)	15 (5)	10 (5)	90 (30)	45 (15)	45 (15)
Sustainable Fairview (revised from March 2016)									
Detached Single Family Housing Internal Trips (4%)	210	100	950 (40)	75 (0)	20 (0)	55 (0)	100 (5)	65 (5)	35 (0)
Apartment Internal Trips (4%)	220	180	1,210 (50)	90 (0)	20 (0)	70 (0)	110 (5)	70 (5)	40 (0)
Residential Condo/Townhouse Internal Trips (4%)	230	15	90 (0)	5 (0)	0 (0)	5 (0)	10 (0)	5 (0)	5 (0)
Private School (K-8) Internal Trips (4%)	534	35 students	80 ¹ (0)	35 (0)	20 (0)	15 (0)	15 (0)	5 (0)	10 (0)
General Office Internal Trips (4%)	710	57,000 SF	630 (30)	90 (5)	80 (5)	10 (0)	85 (5)	15 (0)	70 (5)
Specialty Retail Pass-By (34%) ²	814	27,000 SF	1,200 (410)	0 (0)	0 (0)	0 (0)	95 (30)	40 (15)	55 (20)
City Park ³ Internal Trips (4%)	411	28 acres	50 (0)	5 (0)	5 (0)	- (0)	5 (0)	5 (0)	- (0)
Total Site-Generated Trips (Fairview Hills + Sustainable Fairview)			8,090	550	205	345	790	430	360
Internal Reduction			(260)	(15)	(10)	(5)	(25)	(15)	(10)
10% TPR Reduction for Multi-Modal			(780)	(55)	(20)	(35)	(75)	(40)	(35)
Pass-by Reduction			(760)	(10)	(5)	(5)	(65)	(30)	(35)
Net New Trips			6,290	470	170	300	625	345	280

¹ Daily trips estimated based on the relationship of p.m. peak hour trips to daily trips of ITE #530 (Elementary School). No daily trip data is available for ITE #534.

² Pass-by rate taken from ITE #820. No pass-by rate is available for ITE #814.

³ No ITE data is provided for a.m. or p.m. peak hours. For typical weekday a.m. and p.m. peak hours, approximately 10% of the daily trip generation is assumed.

As shown in Table 1, the revised development proposal is anticipated to generate approximately 6,290 net new daily trips. As stated previously, the most recently revised and approved *Sustainable Fairview* (combined with *Fairview Hills*) proposal was also estimated to generate 6,290 daily trips. As such, the revised development proposal for the Sustainable Fairview development is expected to result in no net increase of daily trips.

CUMULATIVE TRIP GENERATION FOR SUSTAINABLE FAIRVIEW MASTER PLAN

The revised trip generation shown in Table 1 was applied to the cumulative total to calculate a new total cumulative trips generated by the proposed land uses. The cumulative trips have been rounded (daily trips were rounded to the nearest ten trips and the hourly trips were rounded to the nearest five trips, consistent with previous updates to the Sustainable Fairview development) and are summarized together with previous phases of development in Table 2 below. For reference, the revised trips are shown in bold text.

Table 2 Cumulative Sustainable Fairview Estimated Trip Generation

Land Use	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Total	In	Out	Total	In	Out
Phase I – September 2005, <i>Pringle Creek</i>	1,770	140	40	100	160	95	65
Phase II – <i>Fairview Hills & Sustainable Fairview</i> (Nov 2018 Revision)	6,290	470	170	300	625	345	280
Phase III – June 2014, <i>Fairview Addition West</i>	3,210	235	60	175	330	205	125
<i>Fairview Woods Refinement Plan</i> (March 2018)	135	10	5	5	15	10	5
Cumulative Net Total Trips	11,405	855	275	580	1,130	655	475

As stated previously under the Historical Trip Generation section, the previously proposed development total cumulative daily trip generation had been documented as 11,405 daily trips. With the revised proposal for Phase II *Sustainable Fairview*, this estimate is estimated to remain the same.

AREA FACILITIES PLAN

Previous development teams and City of Salem staff collectively developed an Area Facilities Plan for the entire Sustainable Fairview development to identify specific required public improvements and the trigger for each improvement. Based on recent conversations with City staff, the project team understands that the Area Facilities Plan is currently being reevaluated and the original identified improvements may not be applicable, and some improvements may have already been constructed. For consistency with previous trip generation updates, however, the identified Area Facilities Plan improvements that would otherwise be triggered by phased development are identified in Table 3 below.

Table 3 Area Facilities Plan – Anticipated Off-Site Improvements

Required Public Improvement	Trigger (Net New Daily Trips)	Estimated Cost ¹	Estimated Start
<u>Transportation</u> 25th Street SE/Madrona Avenue SE. This improvement calls for Madrona Avenue SE to be realigned with 25th Street SE and Airway Drive SE realigned with Madrona Avenue SE. The new Madrona Avenue SE/25th Street SE intersection shall also be signalized. Madrona Avenue SE will be widened to a five-lane cross-section east of the railroad track to 25th Street SE. Right-of-way acquisition is required and/or included in the cost estimate.	8,000	\$175,000	7/1/2010
<u>Transportation</u> Madrona Avenue/Fairview Industrial Drive SE. This improvement calls for the construction of an additional westbound left-turn lane from Madrona Avenue SE to southbound Fairview Industrial Drive SE. An additional southbound lane on Fairview Industrial Drive SE must also be constructed to receive the dual left-turn lanes, and shall terminate as a southbound right-turn lane at the intersection with Strong Road SE. Costs of right-of-way acquisition is included in the estimate.	12,000	\$2,300,000	9/1/2011

¹ Cost estimates in year 2004 dollars

As shown in Table 3, the most recent public improvement was triggered previously at the 8,000 daily trip trigger. The next transportation improvement is not triggered until the development reaches 12,000 net new daily trips (see *Attachment "C"*). There is thus no change to the mitigation triggers with the revised development as proposed for *Sustainable Fairview* as presented in this memorandum.

We trust this memorandum addresses the revised trip generation associated with the revision of land uses for the *Sustainable Fairview* element of the Phase II development. If you any questions, please call us at (503) 228-5230.

REFERENCES

1. Institute of Transportation Engineers. *Trip Generation*, 9th Edition. 2012.
2. Institute of Transportation Engineers. *Trip Generation Handbook*. 2004.
3. Department of Land Conservation and Development. *Oregon Administrative Rules: Transportation Planning Rule 660-012-0055(6)(a)*.

ATTACHMENTS

Attachment "A" – August 2018 Fairview Woods Addendum to Fairview Addition West

Attachment "B" – Addendum to *Sustainable Fairview* Element of Phase II

Attachment "C" – Sustainable Fairview Development Area Facilities Plan



Appendix B
Sustainable Fairview Development
Area Facilities Plan

Area Facilities Plan

Attachment "D"

	Required Public Improvements	Estimated Cost 2004 Dollars	Trigger	Estimated Start
1	Transportation: Battle Creek Road SE/Kuebler Boulevard SE. This improvement calls for the construction of eastbound and westbound right-turn lanes at this intersection. Construction can be accommodated within the existing right-of-way. Traffic signal modifications to allow protected/permitted left-turns and right-turn overlap phasing are also required.	\$300,000.00	2000 total daily vehicle trips (FN 1)	6/1/2006
2	Water: Coburn Pump Station 3,000 GPM S-1 and control building.	\$1,000,000.00	First Floor Construction Above Elevation 278	6/1/2007
3	Transportation: 25th Street SE/Madrona Ave SE. The improvement calls for Madrona Avenue SE to be realigned with 25th Street SE and Airway Drive SE realigned with Madrona Avenue SE. The new Madrona Avenue SE/25th Street SE intersection shall also be signalized. Madrona Avenue SE will be widened to a five-lane cross-section east of the railroad track to 25th Street SE. Right of way acquisition is required and or included in the cost estimate. (FN 2)	\$3,000,000.00	6,000 total daily vehicle trips	6/1/2008
4	Parks: Acquire 5 acre neighborhood park site, within the development.	\$500,000.00	When funds have accumulated	6/1/2010
5	Transportation: Commercial Street SE/Madrona Ave SE. The developer is required to construct a westbound right-turn lane at this intersection. No right-of-way acquisition is required for this improvement.	\$175,000.00	8,000 total daily vehicle trips	7/1/2010
6	Transportation: Madrona Avenue SE/Fairview Industrial Drive SE. This improvement calls for the construction of an additional westbound left-turn lane from Madrona Avenue SE to southbound Fairview Industrial Drive SE. An additional southbound lane on Fairview Industrial Drive SE must also be constructed to receive the dual left-turn lanes, and shall terminate as a southbound right-turn lane at the intersection with Strong Road SE. Costs of right of way acquisition is included in the estimate. (FN 3)	\$2,300,000.00	12,000 total daily vehicle trips	9/1/2011
7	Water: Coburn connecting lines. S-1 Master Plan trunk lines.	\$250,000.00	When funds have accumulated	9/1/2011
8	Water: Coburn Reservoir. S-1 3.2 million gallon concrete reservoir.	\$2,500,000.00	When funds have accumulated	6/1/2012

9 Parks:	Develop neighborhood park on land previously acquired to master plan standards.	\$500,000.00	When funds have accumulated	6/1/2013
10 Transportation:	Battle Creek Road SE/Reed Lane SE. Construction of a signal and a southbound left-turn lane on Battle Creek Road SE is required. Minimal right-of-way is required to accommodate this improvement and acquisition is included in the cost estimate.	\$500,000.00	15,000 total daily vehicle trips	6/1/2013
11 Transportation:	Fairview Industrial Drive SE/Strong Road SE. This improvement calls for the construction of a traffic signal at this intersection. Minimal right-of-way is required to accommodate this improvement and is included in the estimate.	\$350,000.00	15,000 total daily vehicle trips	6/1/2013
12 Transportation:	Traffic Signal at unspecified location on Pringle/Battle Creek.	\$300,000.00	After 15,000 total daily trips and when circumstances warrant the signal	7/1/2013
13 Transportation:	Reed Road SE/Fairview Industrial Drive SE. Restripe the southbound approach and add separate right turn lane (or consider a round about).	\$200,000.00	17,100 total daily vehicle trips	7/1/2013
14 City Administration Fee:		\$314,100.00	Payable after City makes its 60% share payment for Reservoir	9/1/2013
Total:		\$12,189,100.00		

Add Back from City: 60% share of Coburn Reservoir, Pump Station, and connecting lines to be paid from city water revenues.	\$2,250,000.00			7/1/2013
Existing Capacity Payments: Payment to the City CIP account from Phase 1.	\$245,550.00	If funds are available		9/1/2013
Existing Capacity Payments: Payment to the City CIP account from Phase 2.	\$310,467.00	If funds are available		9/1/2013
Existing Capacity Payment: Payment to City CIP accounts from Phase 3.	\$1,831,649.00	If funds are available		11/1/2015
Prior Trip Redevelopment Exemption Value: Payment to SFA for credits from vehicle trips of prior development. (6770 trips at \$190 per trip)	\$1,286,300.00	If funds are available		12/1/2015
Prior Sewer Use Redevelopment Exemption Value: Payment to SFA for prior sewer use.	\$250,000.00			9/1/2016
Total Estimated Repayments/Exemptions		\$3,923,966.00		
Total Estimated City Payment to Account for Reservoir		\$2,250,000.00		

	Supplemental Projects	Estimated Cost in 2004 Dollars	Trigger	Estimated Start
1	Transportation: Pringle Road SE/Ewald Ave SE. install traffic signal.	\$355,000.00	If funds are available	7/1/2016
2	Transportation: Battle Creek SE/Kuebler Boulevard SE. construct north bound and south bound right turn lanes. Protected signal leads added to all intersection approaches.	\$575,000	If funds are available	7/1/2017
3	Transportation: Madrona Avenue SE/Pringle Road SE construct northbound and southbound through lanes.	\$1,250,000	If funds are available	7/1/2018
Total Supplemental Projects		\$2,180,000		

(FN 1) If funds are available in the Trust account prior to the stated Trigger, then the project will be buildt with available funds, ahead of the Trigger. This applies to all Required Public Improvements.

(FN 2) Widening of Madrona Ave SE at 25th Street to five lanes may trigger the need for equipment upgrades, relocations, and/or other improvements to the Southern Pacific railroad crossing located approximately 1,900 feet west of the current 25th Street SE/Madrona Avenue SE intersection. It is unlikely that ODOT Rail would require such modifications due to this improvement. Such modifications are much more likely to be required for the Madrona Avenue SE/Fairview Industrial Drive SE intersection improvement outlined below. Because of these reasons and the preliminary nature of this conceptual design, costs associated with such modifications to the existing railroad crossing are not included in this estimate.

(FN 3) In order to accommodate a second westbound left-turn lane at this intersection, it may be necessary to reconfigure/update the Southern Pacific railroad crossing on Madrona Avenue SE, located approximately 650 feet east of the intersection. Due to the likelihood of ODOT Rail gates, partial reconstruction, and interconnection to prevent possible queue spillbacks over the tracks when a train is approaching would be required in conjunction with this improvement. The cost of work related to the railroad crossing is estimated to be approximately \$500,000, and is included in this cost estimate.