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January 14, 2013

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From: William Popp, Jr.
Senior Transportation Engineer
William Popp Associates

Subject: Pacific Clean – Elk Heights Organics Processing Facility
Re: Trip Generation Analysis (UPDATE 1)

The following memorandum was prepared to identify the proposed land use and operations for Pacific Clean's Elk Heights Integrated Organics Process Facility as well as identify the daily and PM peak hour volumes on the surrounding roadway network.

Project Description

In general, the facility will treat organic materials brought in from the greater King County area, and then those materials will be purchased and delivered to various agricultural areas as new topsoil compost. The site is located at 8860 Thorp Prairie Road in the Cle Elum area of Kittitas County.

Organic material delivered to the site (delivered feedstock) will be delivered via truck-and-trailer at an assumed constant rate 24 hours per day, 7 days a week, for a total of approximately 350 days per year accounting for holidays.

Suitable topsoil compost for agricultural use (delivered product) will be hauled away from the site to the end user with trucks assumed to be of similar size as those trucks

The trip generation assumptions for the import of organic material and the export of topsoil compost are shown in Table 1 below. These trips reflect truck trips only.

Table 1
Trip Generation – Truck Trips

Description	Import Material ^a		Export Material ^a		units
	Initial Ph	Buildout Ph	Initial Ph	Buildout Ph	
Truck Capacity ^b	17	17	17	17	tons
Annual Delivery	160,000	320,000	64,000	128,000	tons
	9,412	18,824	3,765	7,529	trucks / yr
Delivery Hours	24	24	10	10	# of hrs / day; 8am to 6pm for export
Days per Week	7	7	6	6	
Months per Year ^c	12	12	6	6	
Avg # of Days	350	350	157	157	days per year
Daily Delivery ^d	27	54	24	48	trucks per day
Hourly Delivery ^e	1.1	2.2	2.4	4.8	trucks per hour
TRIP GENERATION					
Inbound Daily	27	54	24	48	trucks per day
Outbound Daily	27	54	24	48	trucks per day
Bothways	54	108	48	96	
Inbound Peak Hour	1.1	2.2	2.4	4.8	trucks per hour
Outbound Peak Hour	1.1	2.2	2.4	4.8	trucks per hour
Bothways	2.2	4.4	4.8	9.6	

^a Import material = delivered feedstock. Export material = delivered product.

^b All trucks assumed to be 17 ton capacity for weight of content (truck and trailer). Import trucks are 35 tons entering and 18 exiting. Export trucks are 18 tons entering and 35 tons exiting.

^c Import delivery assumed to be constant throughout the year. Export assumed 3 months in spring and 3 months in fall. Constant haul rates.

^d Trucks per day delivering material or exporting material.

^e Hourly delivery and haul away, assume constant rate given the number of hours facility is open per day.

According to the information shown in Table 1, the facility is estimated to generate 102 truck trips per day (51 in and 51 out) during peak periods (Spring and Fall seasons) at for the Initial Phase: 54 trucks trips per day associated with importing material year round

(27 loaded entering, and 27 empty exiting), and 48 truck trips associated with export of material during peak seasons (24 entering empty, and 24 exiting loaded). Assuming a constant rate of arrival and departure of trucks, the hourly volume of truck trips is estimated to be about 7 trucks per hour (3 entering and 4 exiting for rounding). This equates to approximately 2 truck trips per hour associated with importing of material year round, and 5 truck trips associated with export of material during the peak two seasons.

For the estimated Buildout Phase, as shown in Table 1, the facility is estimated to generate 204 truck trips per day (102 in and 102 out) during peak periods (Spring and Fall seasons): 108 trucks trips per day associated with importing material year round (54 loaded entering, and 54 empty exiting), and 96 truck trips associated with export of material during peak seasons (48 entering empty, and 48 exiting loaded). Assuming a constant rate of arrival and departure of trucks, the hourly volume of truck trips is estimated to be about 14 trucks per hour (7 entering and 7 exiting for rounding). This equates to approximately 4 truck trips per hour associated with importing of material year round, and 10 truck trips associated with export of material during peak seasons.

Table 2
Trip Generation – Passenger Car/Truck Trips (Staff)

Description	Plant Staff		comments/units
	Initial Ph	Buildout Ph	
Total Employees	11	18	plant input output doubles
Absentee rate	0%	0%	
Shifts	1	1	8am to 6pm
Days per Week	6	6	
early arrival (60%) ^a	7	11	7am to 9am
late arrival (40%) ^b	4	7	9am to 11am
early departure (40%)	4	7	3pm to 5pm
late departure (60%)	7	11	5pm to 7pm
TRIP GENERATION			
Trips per Day	22	36	Daily trips (in&out)
AM Peak	7	11	enter (assume 0 exit)
PM Peak	7	11	exit (assume 0 enter)

^a Assume 60% of staff arrive early and leave late, and 40% of staff arrive late and leave early.

As shown in Table 2, the facility is estimated to generate 36 passenger vehicle trips per day. This is assumed to be constant throughout the year; however, it is likely that during the winter and summer seasons the number of staff might be slightly less. Assuming 60% of staff arrive early and leave late, it is estimated that the peak hourly volume would be 11 vehicles (all entering) during the morning commute peak and 11 trips (all exiting) during the evening commute peak.

A summary of trip generation for the facility is shown in Table 3.

Table 3
Trip Generation Totals for Site ^a

Description	Initial Phase			Buildout Phase		
	In	Out	Total	In	Out	Total
Trucks per Day	51	51	102	102	102	204
Trucks per Hour ^b	3	4	7	7	7	14
Passenger Vehicles per Day	11	11	22	18	18	36
Passenger Vehicles per Hour ^c	0	7	7	0	11	11
Total Trips per Day	62	62	124	120	120	240
Total Trips per Hour ^c	3	11	14	7	18	25

^a See Table 1 and 2 for details.

^b hourly rate assumed to be constant during the hours of opening.

^c Reflects the average weekday PM peak hour. The AM peak hour volume assumed to be the same but with in and out volumes reversed.

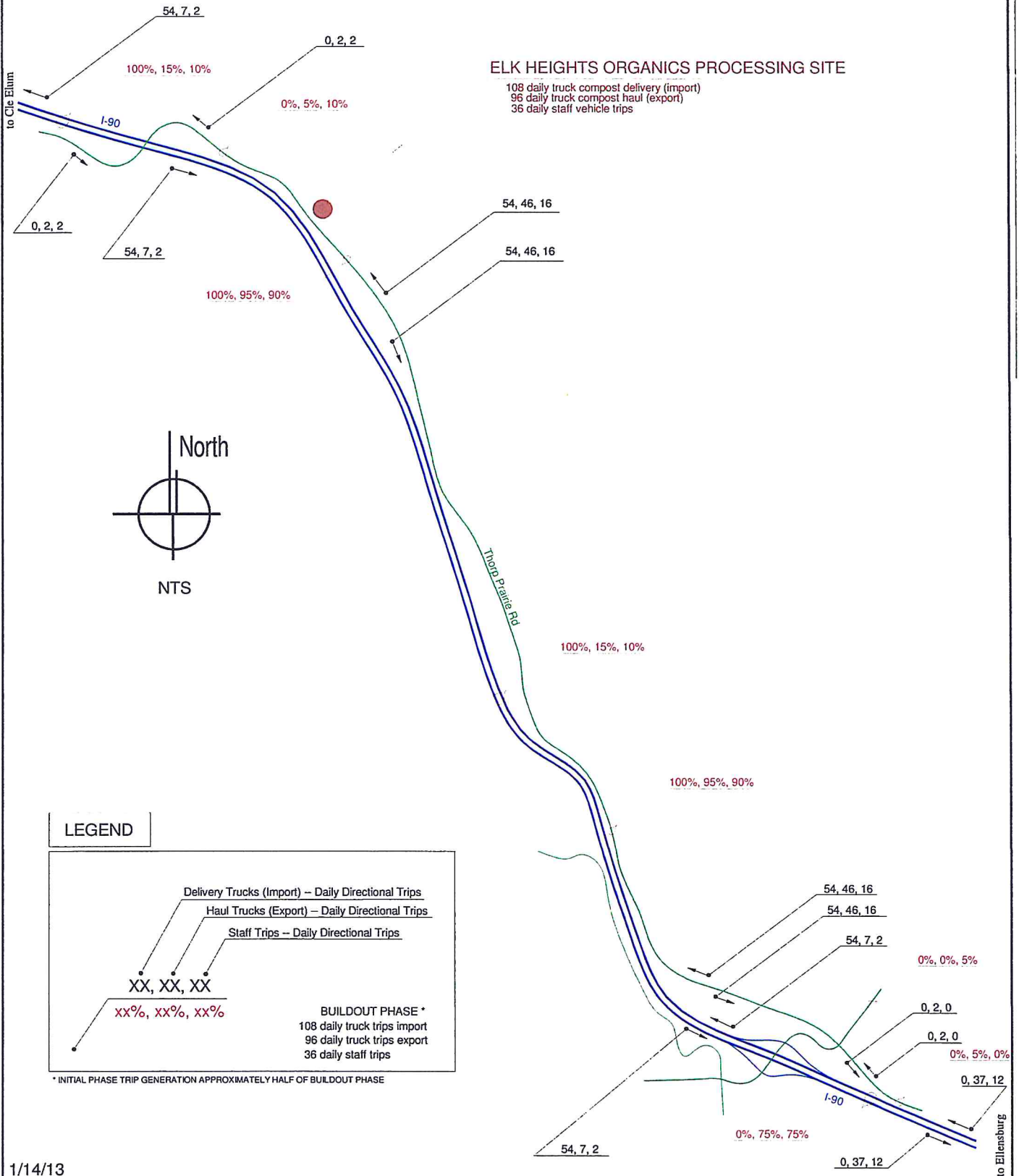
As shown in Table 3, the Elk Heights Integrated Organics Processing Facility is estimated to generate 124 daily and 14 peak hour trips during the Initial Phase of development, and 240 daily and 25 peak hour trips during the Buildout Phase. Of course as noted above, these volumes reflect peak seasonal conditions for spring and fall. During the summer and winter months, it is estimated that the trip generation will be 40% less. It is also estimated that approximately 80% of the trips will be truck trips.

The assignment of daily trips is shown in Attachment 1 and the assignment of PM peak hour trips is shown in Attachment 2. It is important to note these trips correspond with Table 3 and reflect spring and fall seasons. The exporting of material (haul trucks) is anticipated to only occur during spring and fall seasons.

I believe that this analysis should address your needs pertaining to the trip generation adjustments for the subject project. Please call me at (425) 401-2124 if you have any questions.

ELK HEIGHTS ORGANICS PROCESSING SITE

108 daily truck compost delivery (import)
 96 daily truck compost haul (export)
 36 daily staff vehicle trips



LEGEND

Delivery Trucks (Import) – Daily Directional Trips
 Haul Trucks (Export) – Daily Directional Trips
 Staff Trips – Daily Directional Trips

XX, XX, XX
 xx%, xx%, xx%

BUILDOUT PHASE*
 108 daily truck trips import
 96 daily truck trips export
 36 daily staff trips

* INITIAL PHASE TRIP GENERATION APPROXIMATELY HALF OF BUILDOUT PHASE

1/14/13

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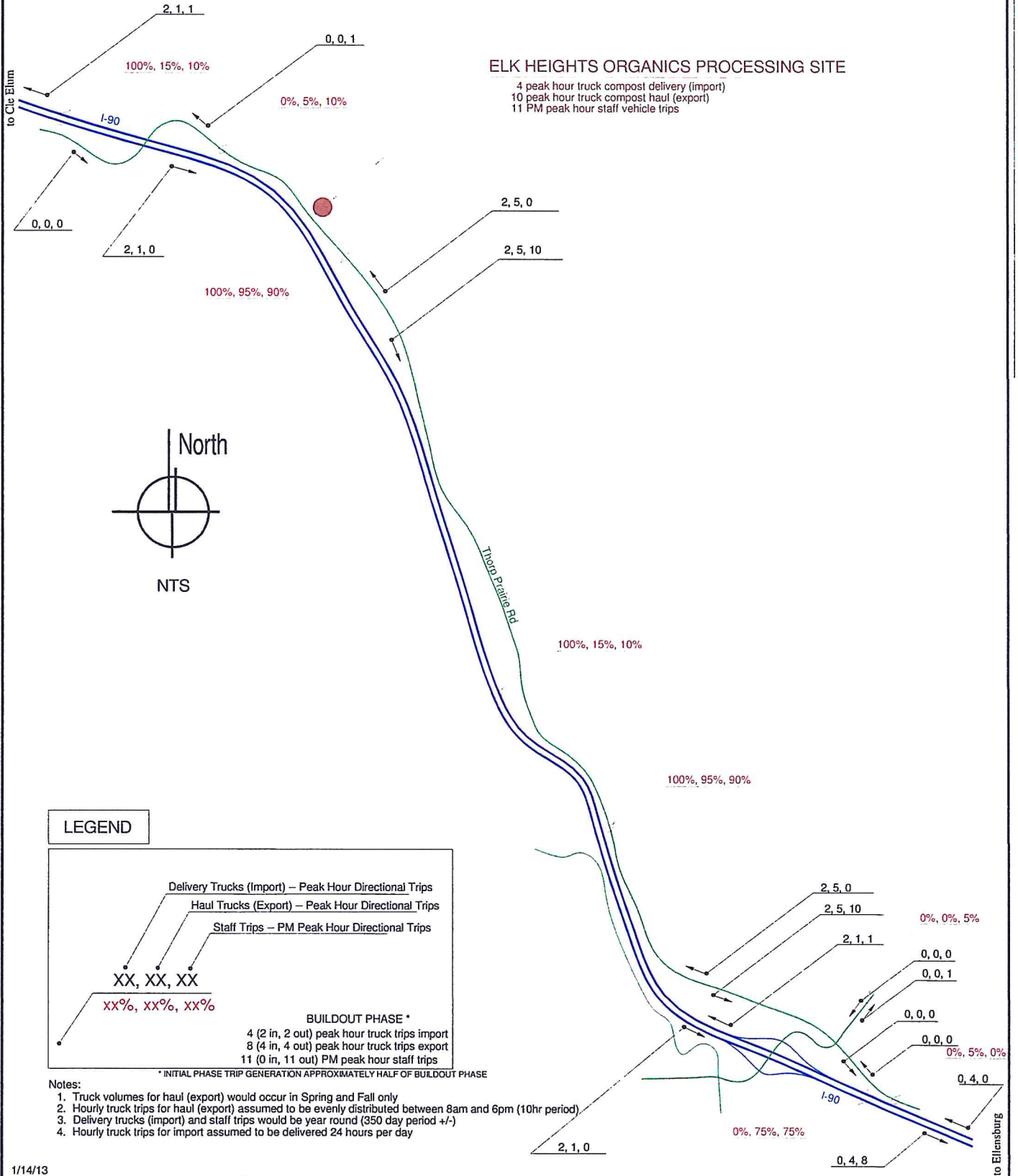
PROJECT DAILY TRIP ASSIGNMENT BUILDOUT PHASE

Attachment 1

Elk Heights
 Organics Processing

ELK HEIGHTS ORGANICS PROCESSING SITE

4 peak hour truck compost delivery (import)
 10 peak hour truck compost haul (export)
 11 PM peak hour staff vehicle trips



LEGEND

- Delivery Trucks (Import) – Peak Hour Directional Trips
- Haul Trucks (Export) – Peak Hour Directional Trips
- Staff Trips – PM Peak Hour Directional Trips

XX, XX, XX
 xx%, xx%, xx%

BUILDOUT PHASE *

- 4 (2 in, 2 out) peak hour truck trips import
- 8 (4 in, 4 out) peak hour truck trips export
- 11 (0 in, 11 out) PM peak hour staff trips

* INITIAL PHASE TRIP GENERATION APPROXIMATELY HALF OF BUILDOUT PHASE

- Notes:
1. Truck volumes for haul (export) would occur in Spring and Fall only
 2. Hourly truck trips for haul (export) assumed to be evenly distributed between 8am and 6pm (10hr period)
 3. Delivery trucks (import) and staff trips would be year round (350 day period +/-)
 4. Hourly truck trips for import assumed to be delivered 24 hours per day

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PROJECT PM PEAK HOUR TRIP ASSIGNMENT BUILDOUT PHASE

Attachment 2

Elk Heights
 Organics Processing