

Appendix I

Traffic Memoranda



I1 Lyon Communities Traffic Analysis

April 27, 2015

Mr. Ignacio Ochoa
Interim City Traffic Engineer
City of Long Beach
333 W. Ocean Blvd., 10th Floor
Long Beach, CA 90802

Subject: Lyon Communities, Wetlands Restoration Project Synergy Oil Field/Pumpkin Patch

Dear Ignacio:

Thank you for meeting with us on March 16, 2015 to discuss Lyon Communities wetlands restoration project and the relocation of the oil production activities from the Synergy Oil Field to a seven (7) acre site located at 6701 E. Pacific Coast Highway that is referred to as the "Pumpkin Patch." The proposed project includes the development of the Pumpkin Patch to include a 17,000 square foot warehouse that will contain approximately 12,000 square feet of warehouse floor area and 5,000 square feet of administrative support services. The warehouse component will house replacement parts for the oil well equipment and will not be accessed on a regular basis like a typical warehouse facility. On the Synergy Oil Field property the existing office building will be converted to an interpretive center that will provide visitors with information pertaining to the wetlands and associated restoration project.

To determine if the proposed project will impact the adjacent roadways and intersections a traffic analysis will be prepared. As discussed at the meeting, the following parameters will be used to conduct the analysis:

Project:

- 17,000 square foot warehouse (5,000 SF office and 12,000 SF warehouse)
- Interpretive center with trails (passive park)

Trip Generation Rate (ITE 9th Edition):

- Warehouse (150)
 - ADT = 3.56/1,000 SF
 - AM = 0.30/1,000 SF
 - PM = 0.32/1,000SF
- Interpretive Center/Trails: no trip generation rate available. City, County, State and regional Parks not applicable.

Develop Interpretive Center/Trails Trip Generation Rate:

- Recommend conducting counts at two of the following locations
 - IRWD site: Irvine, California
 - Back Bay: Newport Beach California
 - Bolsa Chica State Park, Huntington Beach, California
- Conduct counts on two weekdays (6:30 AM – 8:30 AM and 4:30 PM – 6:30 PM)
- Saturday 10:00 AM – 2:00 PM

Trip Generation:

- ADT = 61
- AM Peak Hour = 5 (4 in/1 out)
- PM Peak Hour = 5 (1 in/4 out)

Study Area, Primary Intersections:

- PCH/Studebaker
- PCH/2nd Street
- 2nd Street/Shopkeeper

Secondary Intersections:

- 2nd Street/Westminster/Studebaker
- PCH/Loynes
- PCH/1st Street
- Northbound 7th Street Off-Ramp/Studebaker
- Seal Beach Boulevard/Westminster

Study Periods:

- Tuesday - Thursday (6:30 AM – 8:30 AM and 4:30 PM – 6:30 PM)
- Saturday (10:00 AM – 2:00 PM)

Count Days:

- Prior to Memorial Day and end of school year.
- Between Memorial Day and July 4th.

Analysis:

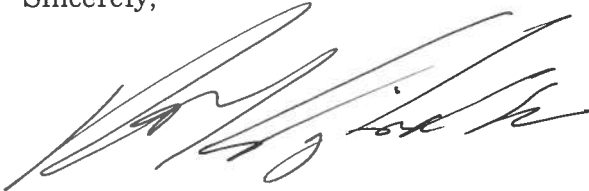
- Existing and Existing plus project (ICU methodology)

The traffic analysis will be prepared based on the above methodology and will be submitted to the City for review. We are available to meet with you to discuss the above methodology or any aspect of the preparation of the subsequent traffic analysis.

Mr. Ignacio Ochoa
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Ignacio, we look forward to working with you and staff on the unique project. Please call me if you have any questions regarding the above.

Sincerely,

A handwritten signature in black ink, appearing to read 'Peter K. Pirzadeh', with a stylized flourish at the end.

Peter K. Pirzadeh, P.E.
Principal
On behalf of Lyon Communities

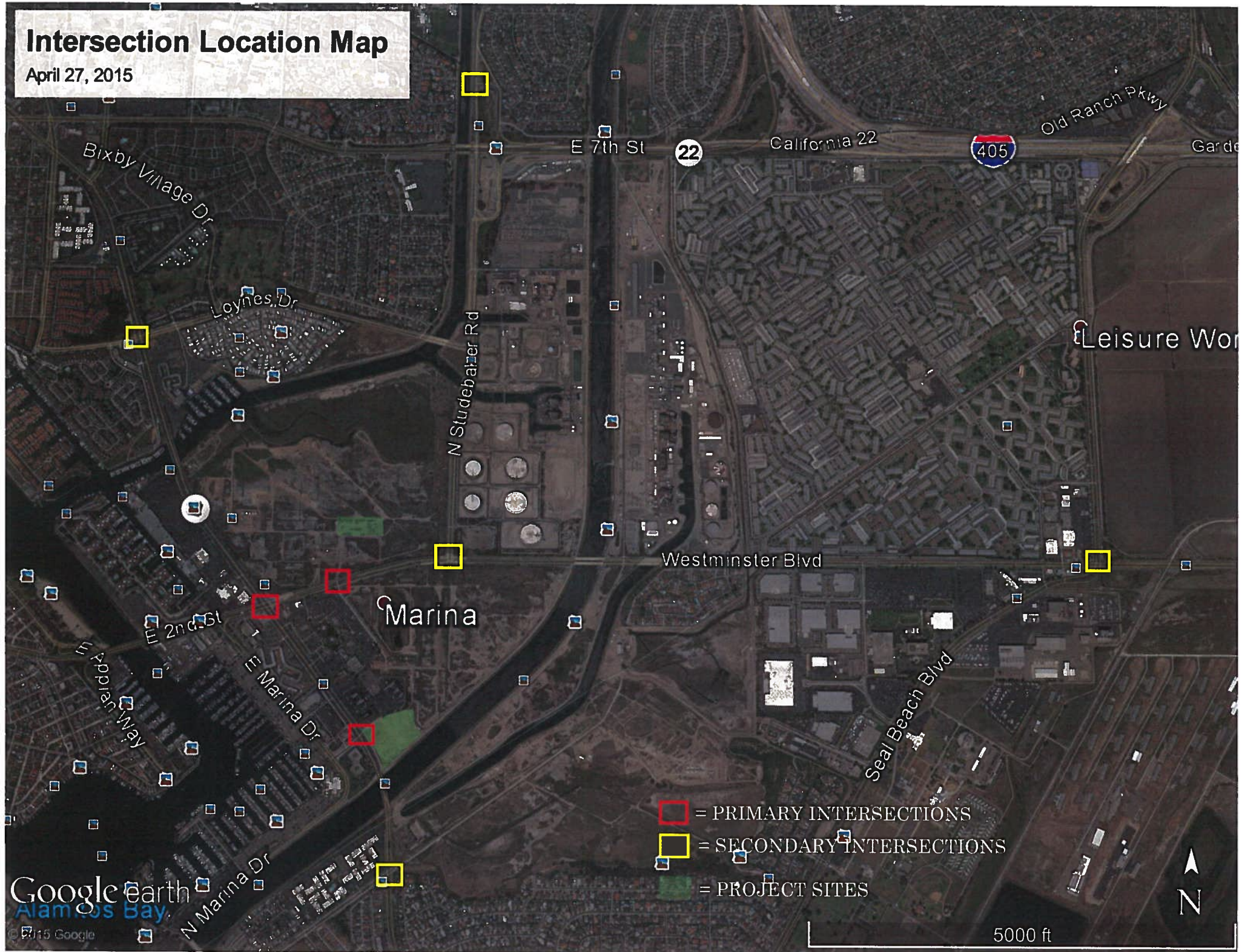
Attachment

c: Peter Zak, Lyon Communities
Susan Hori, Manatt, Phelps, & Phillips, LLC
Mike Murchison, Murchison Consulting
Amy Bodek, Long Beach Redevelopment Agency

PAI 14321(1)-PumpkinPatch-04272105-1Ochoa-TraffAnalysisMethodology-ltr.psk

Intersection Location Map

April 27, 2015



I2 Construction Phase Traffic Generation

MEMORANDUM

To: Ken Coulter
 NCA Real estate

Distribution:

From: Peter S. Kolibaba *psk*

Date: June 27, 2016

Subject: Pumpkin Patch, Construction Phase Traffic Generation

Per your request, we have calculated the amount of traffic that could be generated by the construction phase for the Pumpkin Patch oil and gas facility. There are three primary components that will potentially add temporary daily trips to the adjacent roadway network during the initial 24 month construction phase on the Pumpkin Patch, LCWA and Synergy (wetlands restoration) sites. Although the construction phase is expected to take 24 months the Estimated Construction Schedule shows that the activities associated with the project are occurring throughout the 24 month period. At no time are all of the construction activities occurring at the same time, see Attachment 1. However, for the purpose of calculating the expected trip generation for the project it is assumed as a worst-case scenario that all of the related construction activities are occurring simultaneously and, that the maximum number of workers and trucks are being utilized.

Table 1				
Estimated Average Daily Traffic				
Activity	No. of Workers	No. of One-Way Truck Trips	ADT	
			Workers(2)	Trucks
Grading (1)				
(2)Pumpkin Patch/LCWA	NA	13	NA	26
Synergy (Wetlands Restoration)	NA	20	NA	40
Facilities Construction Labor Force	100	NA	200	NA
Ancillary Vehicles	NA	40	NA	80
Pipeline Construction	30	25	60	50
Pipeline Demolition	10	NA	20	NA
Pipe Handling	20	20	40	40
Sub-Totals	160	118	320	236
Maximum ADT				556

(1) Truck trips for Pumpkin Patch/LCWA and Synergy were calculated as follows:

(a) 19,000 CY export, 10 CY dump trucks, four month grading operation; $19,000/10 = 1,900$ trips x 2 = 3,800 trips/86 working days = 44 trips/day AVG.

(b) 17,000 CY export, 10 CY dump trucks, six month grading operation; $17,000/10 = 1,700$ trips x 2 = 3,400 trips/129 working days = 26 trips/day AVG.

(2) To estimate ADT, number of workers was multiplied by 2.

It should be noted that the grading operation on the Synergy site for the wetlands restoration will be completed during the first six months of the initial two year construction schedule.

As shown in Table 1, if all of the construction activities were occurring simultaneously approximately 556 average daily trips could be generated by the construction labor force and ancillary vehicles. However, as the Estimated Construction Schedule shows in Attachment 1 it is unlikely that the estimated number of daily trips will be realized during the two year construction schedule at any given time.

The actual drilling and operations phase that consists of drilling the actual wells, re-drilling old wells and the continued operation of the wells will not commence until after the initial two year construction phase is completed. During the oil drilling operation one well will be drilled on each site, Pumpkin Patch and LCWA. Each well will take between two and three months to complete. During the drilling operation there will be approximately 20-30 drilling personnel per site that will generate between 40 and 60 ADT. Also, there will be ancillary truck traffic to support each well. It is expected that each new well site will average between 13 and 18 trips per day per site. Assuming the trips identified are one-way trips the ancillary truck traffic will generate between 26 and 36 trips for each well per day.

Assuming that all components of the project will be in operation simultaneously the initial construction phase could generate approximately 556 daily trips. However, the Estimated Construction Schedule shows that at no time during the initial two year construction schedule will all of the work activities will be in operation at the same time thereby reducing the maximum number of daily trips that could be on the adjacent roadway network on a given day during construction.

Attachment

Table 1: Estimated Construction Schedule Summary																							
Location & Activities		Duration (weeks)	Month #		Month #																		
			Start	End	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
LCWA Long Beach		83																					
Demolition / Site Preparation	15	1	4																				
Well Cellar & Piping Installation	34	2	10																				
Process Area Installation	60	4	18																				
Corridor Piping & Duct Banks	12	7	10																				
Substations, VFDs, & Load Centers	20	8	12																				
Perimeter Wall Installation	20	15	19																				
Site Finishing & Punchlist	6	18	19																				
Pumpkin Patch Long Beach		79																					
Demolition / Site Preparation	15	1	3																				
Well Cellar & Piping Installation	44	3	13																				
Substation, VFDs, & Load Centers	18	4	8																				
Process Area Installation	40	4	13																				
Office Building Installation	20	10	15																				
Warehouse Installation	20	13	17																				
Corridor Piping & Duct Banks	45	13	16																				
Site Finishing & Punchlist	12	16	18																				

Note:

- Given the various steps during the construction process, the Project conservatively assumes that delivery of raw materials or equipment may occur throughout the construction period.
- Recouple and tie-ins to existing lines.
- Assumes sites clear of underground obstructions
- Assumes on-call availability of contractors, labor, and associated materials
- Assumes no major site remediation for contaminated materials

I3 Construction Trip Generation Summary

To: Michael Di Sano, NCA

Distribution: Ken Coulter, NCA
Peter K. Pirzadeh, PAI

From: Peter S. Kolibaba *psk*

Date: June 16, 2017

Subject: Pumpkin Patch, Construction Trip Generation Summary

Section 2.3.1 Off-Site Traffic Noise in the Noise Analysis for the Los Cerritos Wetlands Oil Consolidation and Restoration Project references 200-trips per day being generated by the Pumpkin Patch site. The 200 daily trips being generated by the site is a conservative average, which is higher than the trip generation that can be expected for various stages of the development the site during construction, or after construction has been completed and the warehouse is occupied and oil production activities have commenced at the site.

A letter to the Interim City Traffic Engineer dated April 27, 2015 discussed the parameters that would be used to conduct a traffic analysis to determine if the proposed would impact the adjacent roadways. The letter included the trip generation for a 17,000-square foot warehouse on the Pumpkin Patch site. The proposed use was expected to generate 61 daily trips. The restoration project also includes converting the existing office building on the Synergy site to an interpretive center. There is no published trip generation rate available for this type of use and the trip generation rates for a city, county, state, or regional park is not applicable.

To determine the amount of traffic that could be generated during the construction phase of the project a memo dated June 27, 2016 was prepared. The memo addressed the amount of temporary daily trips that could be added to the adjacent roadway network during the initial construction phase on the Pumpkin Patch, LCWA, City, and Synergy (wetlands restoration) sites. The assumptions in the memo also assumed that all the construction activities on the three sites will be occurring simultaneously.

During the initial grading operation on the Pumpkin Patch site, other construction activities on the site such as building construction, well drilling and the daily operation of the well sites may not have commenced. Near the completion of the grading operation other operations will commence such as pipe installation and the construction of the warehouse. During the initial stages of construction, the warehouse will not be generating any trips. There could be some overlap of activities but as each stage of construction winds down there will be a commensurate decrease in the amount of traffic being generated from the

stage of construction. After the site has been prepared that includes the warehouse the process of drilling wells will commence. During the oil drilling phase, it is anticipated that one well will be drilled at a time. Each well will take between two and three months to complete. During the oil drilling phase the warehouse should be occupied. Therefore, the 200 daily trips shown in the noise analysis can be considered a conservative average of the temporary daily trips that could be added to the adjacent roadway network.

There is no published trip generation rate or other empirical information available regarding the trip generation associated with an interpretive center and the trip generation rates for a city, county, state, or regional park identified in the Institute of Traffic Engineers Trip Generation Manual, 9th Edition is not applicable. The 500 trips per day referenced in the report is conservative given that the scope of work during construction is similar to that on the Pumpkin Patch site during the grading and demolition operations.

I4 Pumpkin Patch Trash Removal/Export Trip Generation

MEMORANDUM

To: Michael Di Sano, NCA
Ken Coulter, NCA

Distribution: Peter K. Pirzadeh, PAI

From: Peter S. Kolibaba *PSK*

Date: March 13, 2017

Subject: Pumpkin Patch Trash Removal/Export Trip Generation

Pursuant to your request, we have reviewed the estimate contained in correspondence dated March 8, 2017 from Wilson Mikami Corporation (WMC) for removing the trash from the Pumpkin Patch site and importing dirt to restore the site to accommodate the grading operations for the subsequent development.

Our understanding is that prior to commencement of the grading operation on Pumpkin Patch an existing dump (trash) site needs to be removed. This effort will take place before any construction begins on Pumpkin Patch, LCWA and Synergy (wetlands restoration) sites. Therefore, none of the trips expected to be generated by the trash removal operation will add to the expected Pumpkin Patch construction phase traffic generation.

There are two stages to the work associated with the trash removal. The first stage entails removing approximately 63,000 cubic yards of trash that is comprised of 13,000 cubic yards of "dry" trash and 50,000 cubic yards of "wet" trash. Figures provided by WMC show that the haul trucks can accommodate approximately 35 cubic yards of dry trash. To remove 13,000 cubic yards of dry trash will require 370 truck-loads that equates to a total of 740 trips. The same haul trucks can accommodate 25 cubic yards of wet trash. To remove 50,000 cubic yards of wet trash will require 2,000 truckloads that equates to a total of 4,000 trips. The removal of the trash from the site is expected to take 25 business days. Until the removal operation begins we cannot predict the number of trips carrying dry and wet trash will occur on a given day. Therefore, for the purpose of this analysis we are assuming an average of approximately 95 loads or, 190 daily trips per day to export the trash from the site.

The second stage of the operation entails importing 45,000 cubic yards of dirt. To import 45,000 cubic yards of dirt will require approximately 3,750 truck-loads that equates to a total of 7,500 trips. The import operation is expected to take 20 days and use dump trucks with a 12-cubic yard capacity. Again, until the import operation begins we cannot predict the number of trucks that will access the site on a given day. Therefore, for the purpose of this analysis we are assuming an average of 188 truck-loads or 376 daily trips to import the dirt to the site.

Michael Di Sano
Ken Coulter
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March 13, 2017

Also, the information provided to PAI indicates that there could be a period of approximately 10 days where the export and import operations overlap. During this period, it can be expected that approximately 566 daily trips could occur.

The preliminary information provided shows that during the export operation to remove the trash will generate approximately 190 daily trips. Whereas, during the import operation to bring in the fill will generate approximately 188 daily trips. It has been assumed that the export and import operations could overlap by 10 days that could increase the number of trips being generated to 566 daily trips.