City of Puyallup Traffic Scoping Worksheet

PROJECT INFORMATION

Project Title: Dos Lagos Apartments – Parcel "B" Date: 12/28/2022

Applicant Name: Alex Kang Telephone Number: 714-337-2073

Project Description: 6 EV Charging Stations Year of Occupancy: 2025

Project Location: PN: 041910-6024 & -6025 Parcel Size: 0.46-acres

Proposed Number of Access Point(s): 1 Existing Number of Access Point(s): 1

Land Use	Quantity	ITE Land Use Code	Average Daily Trips	AM Peak Hour Trips*	PM Peak Hour Trips*
Existing Use(s)					
Undeveloped	-	-	-	-	-
Proposed Use(s)					
Custom Trip Gen (See Attached Memo)	6 EV Charging Stations	N/A	25**	N/A	2.5
Net New Trips					
Traffic Impact Fees: Net New PM Peak Hour Trips x $4,500 = $11,250					

* The project trips shall be rounded to the nearest tenth.
* The project trips shall be estimated using the ITE's *Trip Generation*, 11th Edition.
* Trip generation regression equations shall be used when the R^2 value is 0.70 or greater.
* For land uses that do not exist within the ITE's *Trip Generation*, actual field data shall be collected from three local facilities that have similar characteristics to the proposal.
* For single-family units and offices and specialty retail smaller than 30,000 SF, use ITE's *Trip Generation*, 10th Edition, average rate.

**PM peak hour trips multiplied by 10.

Identify all intersections that will be affected by 25 new project peak hour trips or more:

1. None 4. _____
2. _____ 5. _____
3. _____ 6. _____

Prepared by: Traffic Engineer: Aaron Van Aken Telephone Number: 253-770-1401

Address: 1011 E Main Suite 453, Puyallup, WA 98371 avanaken@heathtraffic.com

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TIS ☐ TAS ☐ TAIS ☐ No Further Work Required ☐

Checklist (Please make sure you have included the following information):

☒ Completed Worksheet ☒ Attach Site Plan ☒ Attach Trip Assignment ☒ Attach Trip Distribution

☒ Mail or hand deliver to 333 South Meridian, Puyallup, WA 98371 or e-mail to standle@ci.puyallup.wa.us

PROJECT SCOPING INFORMATION – December 28, 2022

Project Title:	Dos Lagos Apartments - Parcel “B”
Project Description:	6 EV Vehicle Charging Stations
Address:	212 39th Avenue SE
Parcel(s):	041910 -6024 & -6025

Trip Generation:

Trip generation is typically derived using the Institute of Transportation Engineering Manual, *Trip Generation.* However, no applicable land use code in the 11th Edition manual was identified for electric vehicle charging stations. Therefore, a sample site trip generation analysis of several existing EV charging station sites was performed to provide a more accurate forecast, per city of Puyallup comments. Three existing EV charging sites were sampled in terms of PM peak hour vehicular demands that were considered similar in nature and operation to that of the proposed Parcel “B”. The three locations have been discussed and approved by the City of Puyallup. The sampled EV charging locations are listed and described below.

A. EVgo Charging Station
   Address: 1112 S M St, Tacoma, WA 98405
   Charging Station Capacity: 4 stalls
   Date Sampled: 11/22/2022 and 11/23/2022

B. Electrify America Charging Station
   Address: 1401 Galaxy Dr NE, Lacey, WA 98516
   Charging Station Capacity: 6 stalls
   Date Sampled: 12/6/2022 and 12/7/2022

C. Tesla Supercharger
   Address: 655 Sleater-Kinney Rd SE, Lacey, WA 98503
   Charging Station Capacity: 12 stalls
   Date Sampled: 12/6/2022 and 12/7/2022

Data collection at each sample site was gathered via physical field counts and consisted of tracking each inbound/outbound movement. Counts were performed over a two-hour period between 4:00-6:00 PM. The one-hour reflecting the highest observed total inbound and outbound movements was then used for calculations and is considered the "peak hour." Table 1 below outlines PM peak hour trip generation and derived inbound and outbound trip rates for each respective sample site. Local trip generation count data for each sample site has been attached to this report.

Table 1: PM Peak Hour Trip Generation Rates

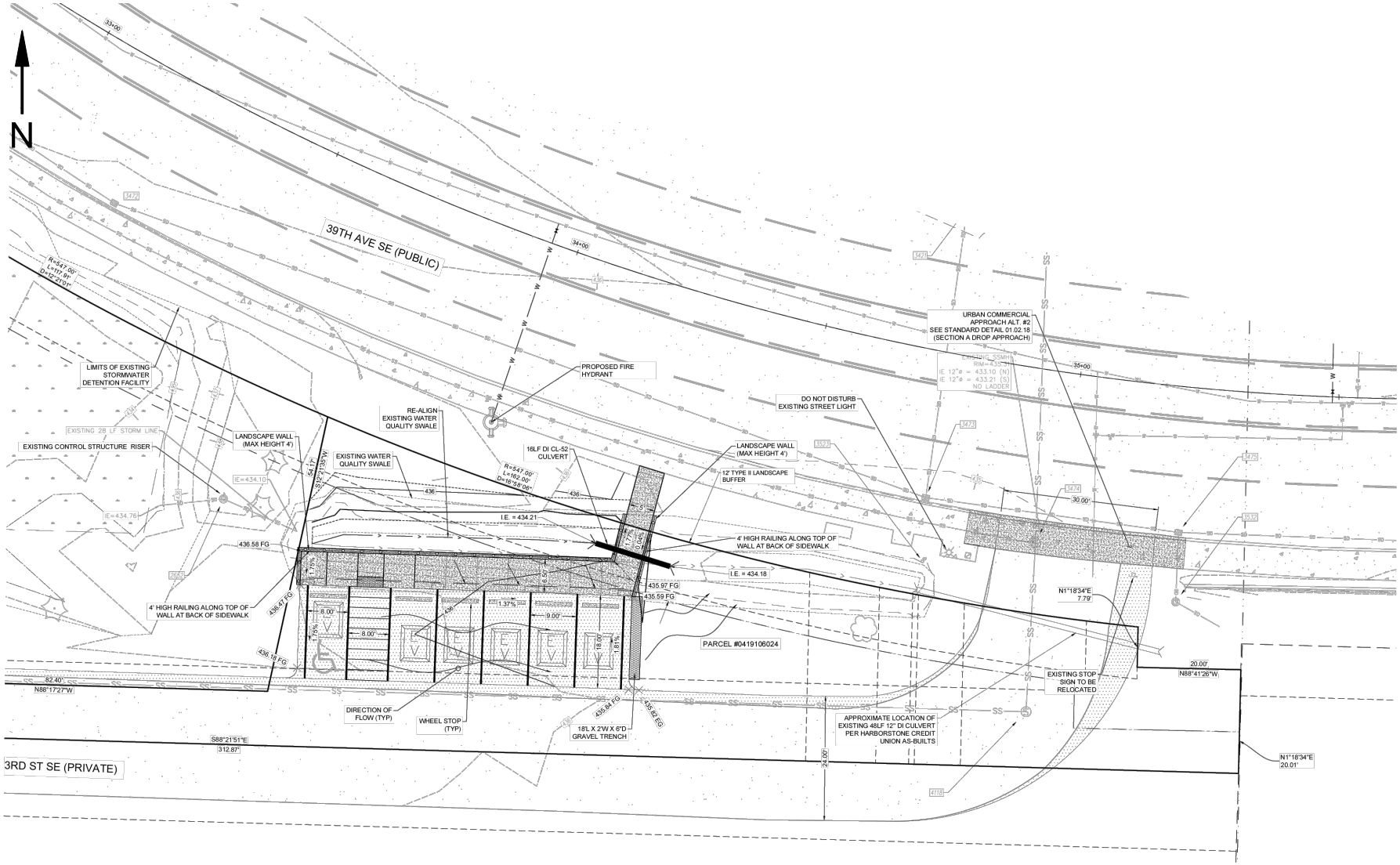
Sample Site	Date	PM Peak Hour			Size EV Stalls	Rate (trips per stall)		
		In	Out	Total		In	Out	Total
EVgo Charging Station	11/22/2022	1	2	**3**	4	0.25	0.50	**0.75**
	11/23/2022	1	1	**2**		0.25	0.25	**0.50**
Electrify America	12/6/2022	1	2	**3**	6	0.17	0.33	**0.50**
	12/7/2022	4	2	**6**		0.67	0.33	**1.0**
Tesla Supercharger	12/6/2022	6	4	**10**	12	0.50	0.33	**0.83**
	12/7/2022	10	7	**17**		0.83	0.58	**1.42**
				Average Trip Rates		**0.45**	**0.38**	**0.83**

Accounting for all sample sites, an average trip rate was calculated to be 0.83 trips per EV charging stall with a ~54 percent inbound and ~46 percent outbound split. Table 2 below applies the derived average trip rates to the proposed Dos Lagos Apartments – Parcel "B" project comprising 6 EV stalls.

Table 2: Project PM Peak Hour Trip Generation

Land Use	# Of Charging Stalls	PM Peak-Hour Trips		
		Inbound (Rate 0.45)	Outbound (Rate 0.38)	Total (Rate 0.83)
EV Charging Stations	6	2.7	2.3	**5.0**
Pass-By Reduction (50%)		1.3	1.2	**2.5**
New Primary Trips		1.4	1.1	**2.5**

According to the local trip generation study, the 6 EV charging stalls are anticipated to generate a site total of 5 PM peak hour trips (~3 inbound / ~2 outbound). However, it should be noted that observations of all existing sample sites indicated that the EV charging stations were utilized in an ancillary fashion. The vast majority of all EV charging trips were observed to be in the form of pass-by, with the main trip purpose being associated with a different on-site land use (i.e.: shopping center, grocery store, etc.). As such, a pass-by reduction of 50% is proposed to be applied to all Parcel "B" project-generated trips, which is considered conservative based off field observations. With said pass-by reduction, Parcel "C" is anticipated to yield 2.5 trips during the critical PM peak hour. The full 5 PM peak hour trip generation was utilized for trip distribution purposes within the TIA.

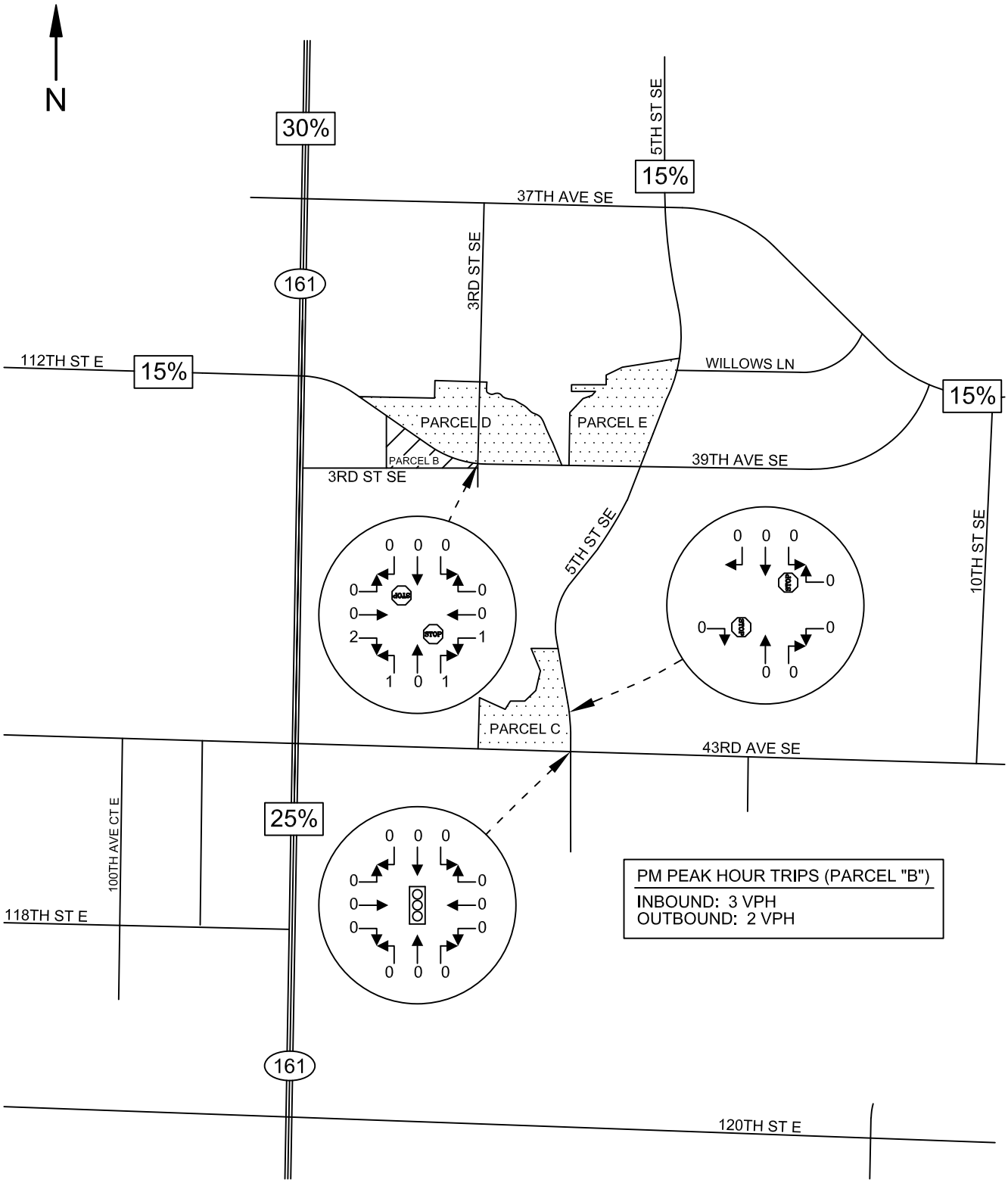


HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

DOS LAGOS APARTMENTS - PARCEL "B"

SITE PLAN
FIGURE 1



HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

DOS LAGOS APARTMENTS - PARCEL "B"

PARCEL "B" PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT
FIGURE 2

Project File #: 4506
Project Name: Dos Lagos EV Study
Sample Parameters: 3 locations; 2 days each
Study Timeframe: 4:00 PM to 6:00 PM

EVgo Charging Station - 4 Stalls
Address: 1112 S M St, Tacoma, WA 98405
(Safeway Parking lot)

Day 1: 11/22/2022		Day 2: 11/23/2022	
4:07 In	**5:08 Out**	**5:10 In**	**5:21 Out**
5:15 In	**5:39 Out**		
2 in	2 Out	1 in	1 out

Peak Hour begins at 5:00 PM
3 PM peak hour trips (1 In/2 Out)

Peak Hour begins at 5:00 PM
2 PM peak hour trips (1 In/1 Out)

Electrify America Charging Station - 6 Stalls
Address: 1401 Galaxy Dr NE, Lacey, WA 98516
(Walmart Parking Lot)

Day 1: 12/6/2022		Day 2: 12/7/2022	
4:25 In	**5:15 Out**	Pre-peak	**4:37 Out**
4:59 In	**5:14 Out**	**4:35 In**	**5:09 Out**
5:46 In	-	**4:42 In**	5:39 Out
		5:18 In	-
		5:29 In	-
3 in	2 out	4 In	3 Out

Peak Hour begins at 4:45 PM
3 PM peak hour trips (1 In/2 Out)

Peak Hour begins at 4:30 PM
6 PM peak hour trips (4 In/2 Out)

Tesla Supercharger - 12 Stalls
Address: 655 SleaterKinney Rd SE, Lacey, WA 98503
(Shopping Center)

Day 1: 12/6/2022		Day 2: 12/7/2022	
Pre-Peak	4:01 Out	Pre-Peak	4:16 Out
Pre-Peak	4:05 Out	Pre-Peak	4:19 Out
Pre-Peak	4:07 Out	Pre-Peak	4:24 Out
Pre-Peak	**4:52 Out**	4:13 In	4:39 Out
4:30 In	**4:53 Out**	4:20 In	**5:24 Out**
4:48 In	**5:11 Out**	4:26 In	**5:09 Out**
4:49 in	**5:10 Out**	**5:02 In**	**5:27 Out**
5:09 In	5:56 Out	**5:05 In**	**5:28 Out**
5:16 In	5:46 Out	**5:18 In**	**5:29 Out**
5:21 In	5: 57 Out	**5:19 In**	**5:58 Out**
5:48 In	-	**5:22 In**	-
		5:30 in	**5:38 Out**
		5:33 in	-
		5:44 In	-
		5:48 In	-
		5:59 in	-
7 In	10 Out	13 In	11 Out

Peak Hour begins at 4:30 PM
10 PM peak hour trips (6 In/4 Out)

Peak Hour begins at 5:00 PM
17 PM peak hour trips (10 In/7 Out)

Evgo Charging Station Trip Rates (Site 1)						
Day	Peak Hour	Stall Count	Inbound Trips	Inbound Trip Rate	Outbound Trips	Outbound Trip Rate
Day 1	5:00-6:00 PM	4	1	0.25	2	0.5
Day 2	5:00-6:00 PM	4	1	0.25	1	0.25

Electrify America Charging Station Trip Rates (Site 2)						
Day	Peak Hour	Stall Count	Inbound Trips	Inbound Trip Rate	Outbound Trips	Outbound Trip Rate
Day 1	4:45-5:45 PM	6	1	0.17	2	0.33
Day 2	4:30-5:30 PM	6	4	0.67	2	0.33

Tesla Supercharger Trip Rates (Site 3)						
Day	Peak Hour	Stall Count	Inbound Trips	Inbound Trip Rate	Outbound Trips	Outbound Trip Rate
Day 1	4:30-5:30 PM	12	6	0.50	4	0.33
Day 2	5:00-6:00 PM	12	10	0.83	7	0.58

Average Trip Rates				
Site	**Day**	**Inbound**	**Outbound**	**Total**
1	1	0.25	0.5	0.75
	2	0.25	0.25	0.50
2	1	0.17	0.33	0.50
	2	0.67	0.33	1.00
3	1	0.50	0.33	0.83
	2	0.83	0.58	1.41
	Average	**0.45**	**0.39**	**0.83**

Average Trip Rates Applied to Project		
Proposed # of charging stalls	Inbound Trips	Outbound Trips
6	**2.7**	**2.3**

DOS LAGOS - LOT B

PRELIMINARY STORM, SEWER, & WATER PLANS

A PORTION OF THE NW ¼ OF THE NW ¼ OF SECTION 10, TOWNSHIP 19 N, RANGE 4 E, W.M.
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON

GRAPHIC SCALE
10 0 5 10 20 40
1 INCH = 10 FEET

APPROVED

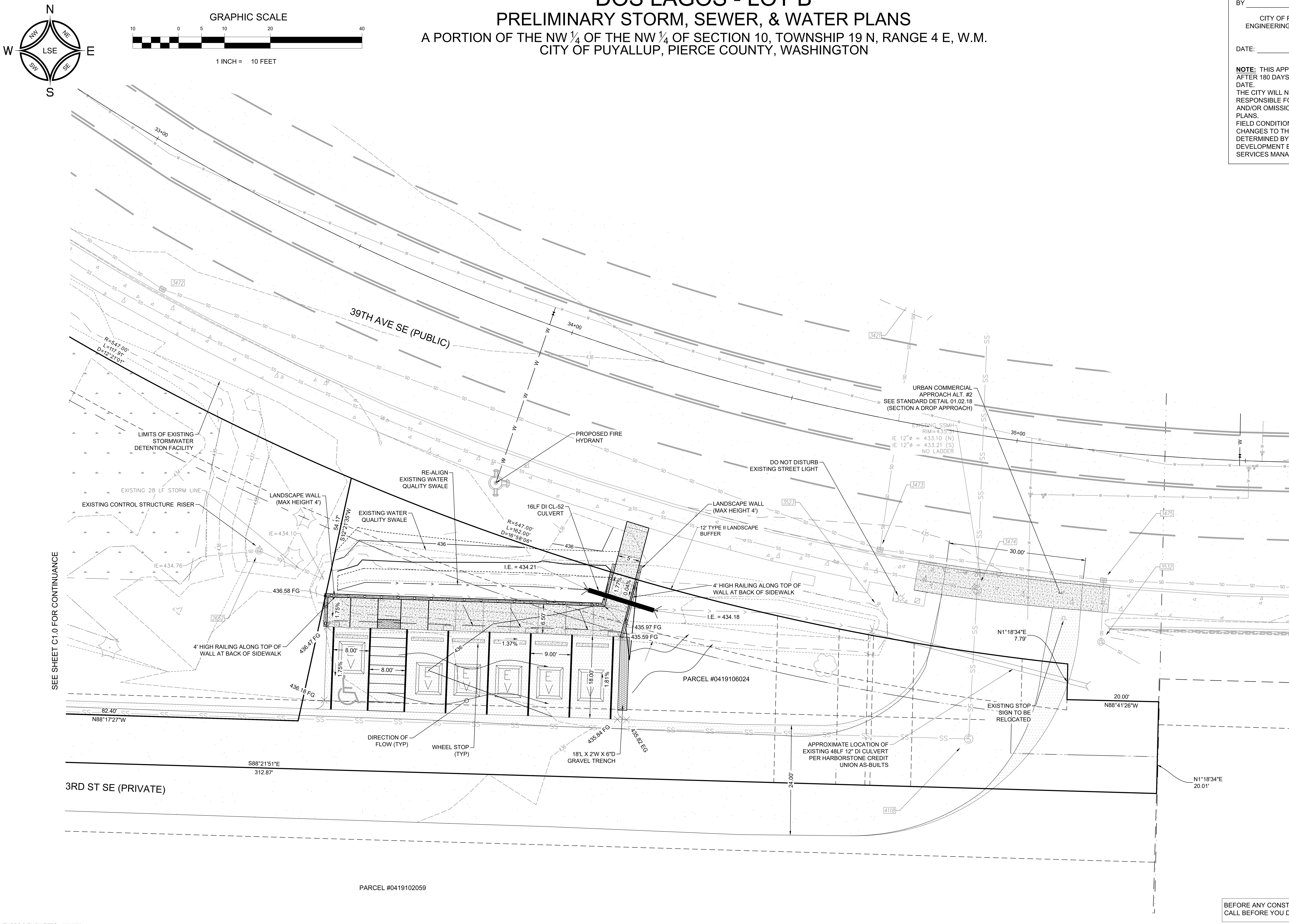
BY ______________________

CITY OF PUYALLUP
ENGINEERING DEPARTMENT

DATE: ________________

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING SERVICES MANAGER.

12/12/2022
STEVE THEODORE NELSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER



BEFORE ANY CONSTRUCTION CONTACT:
CALL BEFORE YOU DIG @ 1-800-424-5555

REVISION / DATE
1 2 3 4 5 6 7 8 9 10

JOB NO. 12696
DATE: 12/12/2022
DESIGNED BY: MDD
DRAWN BY: MDD
CHECKED BY: STN
APPROVED BY: STN

SURVEYING
ENGINEERING
GEOLOGY
SEPTIC DESIGN
GPS
GIS MAPPING

LEROY
LEROY SURVEYORS & ENGINEERS
P.O. Box 740, Puyallup, Washington 98371
(253) 848-6608 Fax: (253) 840-4140
www.lseinc.com

Preliminary Grading, Storm, and Utilities

DOS LAGOS - LOT B
PRELIMINARY STORM, SEWER, &WATER PLANS
Dos Lagos Asset, LLC / Bryan & Alex Kang
810 E. Pico Blvd, Unit B24
Los Angeles, CA 90021
Phone: (213) 614-8887

DRAWING
C1.2
SHEET 03
OF 03

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