CLIFF BECHTEL AND ASSOCIATES, LLC ENGINEERING AND PROJECT MANAGEMENT

July 15, 2022

The Town of Woodside 2955 Woodside Road Woodside, CA 94062

RE: Initial Submittal for Improvements and Expansion at Robert's Center, 3044 – 6062 Woodside Road, Woodside, CA

To whom it may concern,

Attached with the Planning Application package are Civil Plans associated with the proposed improvements and expansion of the Roberts Center parking lot. Plans have been prepared in accordance the requirements of the Town, County and State.

Per recent discussions with the Town and subsequent email from Sage Schaan, I have prepared the following project narrative for Civil Engineering Plans to assist in processing and answer several of requested items listed in Sage's email.

Project Scope

The proposed project intent is to repair, restore and overlay the existing parking surfaces, in conjunction with developing an outdoor dinning area, in front of the main building. In addition, the project is proposing to expand the existing parking, to the north, into an existing vacant field. Site grading will be required and installation of a Gabion Basket Rock wall to develop the additional parking spaces.

The expansion of parking will result in the increase of 17,950 square feet of new paved area. The improvement plans include a 800 square foot Bio Treatment Area to meet Storm Water Quality Requirements and a 48-ionch diameter detention Tank System to offset the impervious surface increases. Calculations are attached.

Parking Layout

We perform a preliminary parking lot review at the beginning of the design development of the parking lot. We found that only 9 of the existing parking space met the Town Standard of a 9' x 20' parking stall. In fact, many of the existing stalls were measured to be 8'-6" or less and less than 18' in length. The current handicap parking stalls were found to have compliance issues and all stalls were recommended to be replaced and redesigned.

The proposed parking lot is proposed to have 195 stalls, with the following breakdown:

<u>Quantity</u>
90
49
46
3
2
5

The proposed parking lot will add 40 Town Standard stalls and upgraded all other stalls to meet a minimum size of 8 $\frac{1}{2}$ x 18'. The stalls that are less than 9-foot wide have been proposed to be designated as "compact" on the plans. However, most jurisdictions consider 8 $\frac{1}{2}$ " x 18' to be a Standard Stall and 8' x 16' to be a compact stall (See Standard Design Guidelines for Menlo Park and Redwood City attached).

Grading

The proposed project will result in approximately 3,000 cubic yards of cut, which will be off hauled. The limited area of the project site and desire to retain all existing trees outside the limits of work require this material to be disposed of off-site.

It is my hope that the above information, in combination with the attached materials meets with your approvals and the Planning Process can proceed. Please give me a call if you have any further questions.

Sincerely,

lifford Becktel

Clifford Bechtel, Clifford Bechtel & Associates



Parking stalls in a single or two car garage should have minimum dimensions of 10' x 20' each. The back up area should be a 4. minimum of 24' for an 8 foot garage door.

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Transportation Division	APPROVED-
CITY OF MENLO PARK	Transportation Manager
PARKING AREA DESIGN GUIDELINES	DATE: 3125/516

1



NOTES:

- 1. One in every eight accessible spaces, but not less than one, shall be served by an access aisle 8 feet wide and shall be designated van accessible.
- 2. Each accessible parking space shall be identified by a permanent reflectorized sign adjacent to and visible from each space. The sign shall contain a profile view of a wheelchair with occupant in white on a dark blue background. The sign shall not be smaller than 70 square inches and when in a path of travel shall be posted at a minimum height of 7 feet above finished grade (see figure 4).
- 3. Care should be taken to avoid creating an undulating sidewalk when there are more than two Handicap spaces in a row-

REQUIRED NUMBER OF DISABLED SPACES

naces but not less than one				
sle 8 feet wide and shall be	Total Number of Parking Spaces in Lot or Garage	Minimum Required Number of Spaces		
	1 to 25	1		
shall be identified by a permanent ad visible from each space.	26 to 50	2		
view of a wheelchair with	51 to 75	51 to 75 3		
e background. The sign shall not a path of	76 to 100	4		
num height of 7 feet above	ght of 7 feet above 101 to 150			
	151 to 200	6		
creating an undulating sidewalk	201 to 300	7		
Handicap spaces in a row-	301 to 400	8		
	401 to 500	9		
	501 to 1000	*		
	1001 & over	**		
	* Two pe	rcent of total		
*	** Twenty plus one for each 10	00, or fraction thereof over 10		
Trananarta	tion Divici	APPROVED.		
Transporta				
CITY OF N	Transportation Manag			
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HANDICAP PARKING DESIGN GUIDELINES

3/28/26

CITY OF REDWOOD CITY DESIGN STANDARDS

PART IV - DRIVEWAYS AND OFF-STREET PARKING AND LOADING FACILITIES

A. Driveways

Driveways, which are defined as any approach to or from a street over and upon an adjacent gutter, curb or sidewalk. The following requirements are derived from Ordinance No. 1998, Chapter 29 of the Municipal Code:

- 1. All driveway approaches shall conform to the City's Standard Details.
- 2. No driveway approach to off-street parking spaces shall be constructed which does not serve a garage, carport or garage space to the rear of the building setback line established by the Zoning Ordinance; provided, that a single driveway approach may be constructed to serve a vacant or unimproved lot.
- 3. For residential driveways, a driveway approach serving a single garage, carport or garage space shall not exceed 15 feet in width, measured from top of curb to top of curb; driveway approaches serving garages, carports or garage spaces for two motor vehicles shall not exceed 26 feet in width, and driveway approaches serving garages, carports or garage spaces for three or more motor vehicles shall not exceed 33 feet in width measured between the top of curbs at curb cuts.
- 4. For commercial driveways, the maximum driveway approach width is 33 feet between top of curbs at curb cuts. Driveway approach width shall match the existing driveway width beyond the sidewalk.
- 5. In no event shall the total width of all driveway approaches serving any parcel exceed sixty percent (60%) of the street frontage of the parcel.
- 6. There shall be twenty-two feet or a multiple thereof between driveway approaches on the same parcel; provided, that the City Engineer may approve a distance between driveway approaches which is not a multiple of twenty-two feet if he finds that the total number of parking spaces available on the street adjacent to the parcel is not reduced by allowing such other distance.
- 7. No driveway approach shall be located within thirty inches (30") of any traffic signal, electrolier, fire hydrant, pedestrian crosswalk, curb inlet, or any other public improvement or facility of a similar nature.
- 8. All driveway approaches, whether on an improved or an unimproved street, shall be constructed to the established grade for that street at the right-of-way line. In the event no grade has been established for the street on which the driveway or driveway approach is to be constructed, such driveway or driveway approach shall be constructed to a grade at the right-of-way to be approved by the City Engineer.

- 9. Driveway ramps up or down to elevated or depressed parking lots or garages shall start at a point 3 feet beyond the right-of-way line, and shall have a grade no steeper than 20%, with a 6 feet long vertical curve located at the grade break (See<u>Attachment "D-3").</u>
- 10. Long, dead end driveways or private access roads shall be provided with fire truck turnouts which may take the shape of a "hammerhead" at the end or as "shunts" on the intermediate turnouts. The maximum spacing in turnouts shall be 150 feet. Minimum outside turning radius shall be 45 feet; maximum inside radius shall be 22 feet; minimum straight section shall be 35 feet; minimum driveway width shall be 23 feet. (See attachment "P").
- B. Parking Lots and Off-Street Parking and Loading Facilities
 - 1. Consult the City's Zoning Ordinance, Chapter 30, for the schedule of the required number and type of parking spaces for each kind of development.
 - 2. Grading and paving requirements shall conform to Part III, "Street Design Criteria."
 - 3. The horizontal layout shall be as shown on <u>Attachment "E"</u>. Parking lots shall be landscaped and permanently maintained by the property owner, per the City's Zoning Ordinance.
 - Parking lots and off-site parking and loading facilities shall be designed so that vehicles can enter or exit without backing across public sidewalks or rights-ofway. The turning radius of design vehicles shall be as shown on <u>Attachment</u> <u>"D-3".</u>
 - 5. Compact stalls are allowed up to the maximum ratio allowed by Ordinance. Compact stalls must be permanently painted "Compact."
 - 6. The location of compact parking shall be subject to approval by the City Engineer.
 - 7. Parking facilities, except those in residential areas with four or less stalls, shall include a turn around area satisfactory to the City Engineer.
 - 8. Parking stalls at the end of rows abutting walls, fences, or other continuous fixed object shall have an additional width of 1.0 feet.
 - Parking stalls next to fences, walls, sidewalks, landscapes or structures shall contain wheel stops, curbs or other protective devices. Where a stall is adjacent to a landscaped median, a 12 inch wide concrete curb or mowband shall be used for passenger ingress and egress.
 - 10. Parking stalls shall be clearly striped or marked.

DESIGN MEETS OR EXCEEDS REDWOOD CITY STANDARDS

11. Clearly marked handicapped spaces shall be provided in each parking facility

12. All parking spaces shall have a uniform dimension of 8-1/2' x 18', in a manner provided by the Zoning Ordinance.

C. Sidewalk Repair Criteria

- 1. The City Engineer or his designated representative, may require concrete, curb and gutter, sidewalks, or driveways to be repaired during review of plans submitted for Building Permit or Construction Permit.
- 2. Concrete repair may be performed by issuance of a <u>Sidewalk Permit</u>; if in the opinion of the Engineer, the work is minor in nature and involves generally less than \$1,000.00 worth of construction, such Sidewalk Permits are issued at the counter and administered by the Building and Inspection Division.
- 3. Major concrete repair, if in the opinion of the City Engineer requires a Construction Permit issued by Engineering and Construction, including the posting of bonds and insurance as stipulated in the application.
- 4. The concrete work is deemed in need of repair if any one of the following conditions prevail:
 - a. The vertical displacement in two adjoining sections of concrete exceeds 1/2";
 - b. The horizontal displacement between two adjoining sections exceeds 5/8";
 - c. The rise in grade exceeds 4" over a horizontal length of 4'; and
 - d. The drop in grade exceeds 3" over a horizontal distance of 4'.
 - e. Spalling in excess of ³/₄" depth.

CLIFFORD BECHTEL AND ASSOCIATES Project Management & Engineering

Project:	Roberts Center
Project No.	2022784
Ву:	<u>LB</u> Date: <u>T/15/22</u>
Chkd By:	Date
Sheet No	of

CURRENT PARKING LOT IS ENTIRELY ASPHALT WHICH DRAINS 76 THE WEST, TOWARD REDWOOD LREEK. A PORTION OF THE EXISTING PARKING LOT IS COLLECTED AND DIRECTED to AN EXISTING FILTERING AND DETENTION FACILITY. THE EXPANDED PARKING AREA OF 17, 950 SF HAS BEEN DESIGNED TO COLCECT THE NEW ASPHALT AREA AND OUTFALL AT A NEW BIO TREATMENT AREA, THE BID AREA DIRECTS RUNORE TO THE PROPOSED DETENTION TANK. THE DETENTION TANK HAS A LOW FLOW RELEASE DIRECTED TO THE EXISTING FILTERING & DETENTIONS FACILITY

NPDES STORM WATER CONTROL CALCULATIONS

- NOAA, 25yr Q= CLA = (0,9-0.3)(1.27)(17950/43560) = 0.3140 cfs VTO STORE = 0,3140 cfs (60 s/m) (60 m/hr) (hr) = 1,130,4 cf, voids Vproject = 2x (5x5x3) 0.35 + (800 × 0.5) x (12.56) (60) BUBBLE PITS BID TANK = 1.206,1 cf > 1,130,4 cf OK CONT,



Precipitation Frequency Data Server

NOAA Atlas 14, Volume 6, Version 2 Location name: Redwood City, California, USA* Latitude: 37.4296°, Longitude: -122.2548° Elevation: 362.21 ft**

* source: ESRI Maps ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.168 (0.147-0.195)	0.210 (0.183-0.243)	0.264 (0.229-0.308)	0.310 (0.266-0.364)	0.372 (0.307-0.454)	0.420 (0.339-0.526)	0.470 (0.368-0.605)	0.522 (0.396-0.694)	0.594 (0.430-0.829)	0.652 (0.454-0.947)
10-min	0.241 (0.210-0.279)	0.300 (0.262-0.348)	0.379 (0.329-0.441)	0.444 (0.382-0.521)	0.533 (0.440-0.651)	0.602 (0.486-0.754)	0.673 (0.528-0.867)	0.748 (0.568-0.995)	0.852 (0.617-1.19)	0.935 (0.650-1.36)
15-min	0.291 (0.254-0.337)	0.363 (0.316-0.421)	0.458 (0.398-0.533)	0.537 (0.461-0.630)	0.644 (0.533-0.787)	0.728 (0.587-0.911)	0.814 (0.639-1.05)	0.905 (0.687-1.20)	1.03 (0.746-1.44)	1.13 (0.787-1.64)
30-min	0.407 (0.355-0.471)	0.507 (0.442-0.588)	0.640 (0.555-0.744)	0.749 (0.644-0.880)	0.899 (0.744-1.10)	1.02 (0.820-1.27)	1.14 (0.892-1.46)	1.26 (0.959-1.68)	1.44 (1.04-2.01)	1.58 (1.10-2.29)
60-min	0.575 (0.501-0.666)	0.717 (0.624-0.832)	0.904 (0.785-1.05)	1.06 (0.911-1.24)	1.27 (1.05-1.55)	1.44 (1.16-1.80)	1.61 (1.26-2.07)	1.79 (1.36-2.38)	2.03 (1.47-2.84)	2.23 (1.55-3.24)
2-hr	0.842 (0.734-0.975)	1.04 (0.909-1.21)	1.31 (1.14-1.52)	1.53 (1.31-1.80)	1.83 (1.51-2.23)	2.06 (1.66-2.58)	2.30 (1.80-2.96)	2.55 (1.94-3.39)	2.90 (2.10-4.04)	3.17 (2.21-4.60)
3-hr	1.06 (0.928-1.23)	1.32 (1.15-1.53)	1.65 (1.44-1.93)	1.93 (1.66-2.27)	2.31 (1.91-2.82)	2.60 (2.10-3.26)	2.90 (2.28-3.74)	3.22 (2.44-4.28)	3.65 (2.64-5.10)	4.00 (2.78-5.80)
6-hr	1.52 (1.33-1.76)	1.89 (1.65-2.19)	2.38 (2.07-2.78)	2.79 (2.40-3.28)	3.34 (2.77-4.09)	3.78 (3.05-4.73)	4.22 (3.31-5.44)	4.68 (3.56-6.23)	5.32 (3.85-7.42)	5.82 (4.05-8.46)
12-hr	2.00 (1.74-2.32)	2.53 (2.20-2.93)	3.23 (2.80-3.76)	3.80 (3.27-4.47)	4.60 (3.80-5.62)	5.22 (4.21-6.53)	5.86 (4.59-7.54)	6.53 (4.95-8.68)	7.45 (5.39-10.4)	8.18 (5.69-11.9)
24-hr	2.44 (2.23-2.72)	3.13 (2.86-3.49)	4.05 (3.69-4.53)	4.81 (4.35-5.42)	5.85 (5.15-6.79)	6.67 (5.77-7.88)	7.51 (6.36-9.06)	8.39 (6.93-10.4)	9.61 (7.66-12.3)	10.6 (8.17-13.9)
2-day	3.18 (2.90-3.54)	4.10 (3.75-4.58)	5.32 (4.85-5.96)	6.33 (5.73-7.13)	7.70 (6.77-8.93)	8.76 (7.57-10.3)	9.85 (8.34-11.9)	11.0 (9.07-13.6)	12.5 (9.99-16.1)	13.8 (10.6-18.2)
3-day	3.68 (3.36-4.10)	4.75 (4.34-5.31)	6.16 (5.62-6.90)	7.31 (6.62-8.24)	8.88 (7.82-10.3)	10.1 (8.73-11.9)	11.3 (9.59-13.7)	12.6 (10.4-15.6)	14.4 (11.4-18.4)	15.7 (12.2-20.8)
4-day	4.08 (3.73-4.55)	5.27 (4.82-5.89)	6.82 (6.22-7.64)	8.08 (7.32-9.11)	9.80 (8.63-11.4)	11.1 (9.62-13.1)	12.5 (10.6-15.0)	13.9 (11.5-17.1)	15.8 (12.6-20.2)	17.2 (13.3-22.7)
7-day	5.15 (4.71-5.74)	6.59 (6.02-7.36)	8.46 (7.71-9.47)	9.98 (9.03-11.3)	12.0 (10.6-14.0)	13.6 (11.8-16.1)	15.2 (12.9-18.4)	16.9 (13.9-20.8)	19.1 (15.2-24.5)	20.9 (16.1-27.6)
10-day	5.77 (5.27-6.43)	7.36 (6.72-8.22)	9.40 (8.57-10.5)	11.1 (10.0-12.5)	13.3 (11.7-15.4)	15.0 (13.0-17.7)	16.7 (14.2-20.2)	18.5 (15.3-22.9)	20.9 (16.7-26.8)	22.8 (17.6-30.1)
20-day	7.36 (6.73-8.21)	9.40 (8.59-10.5)	12.0 (10.9-13.4)	14.1 (12.7-15.8)	16.8 (14.8-19.5)	18.8 (16.3-22.2)	20.9 (17.7-25.2)	22.9 (18.9-28.3)	25.7 (20.5-32.9)	27.8 (21.5-36.7)
30-day	8.80 (8.05-9.82)	11.3 (10.3-12.6)	14.4 (13.1-16.1)	16.8 (15.2-18.9)	19.9 (17.6-23.1)	22.3 (19.3-26.3)	24.6 (20.8-29.7)	26.9 (22.2-33.2)	30.0 (23.9-38.4)	32.3 (25.0-42.6)
45-day	10.9 (9.96-12.2)	14.0 (12.8-15.6)	17.7 (16.2-19.9)	20.6 (18.7-23.3)	24.4 (21.4-28.3)	27.1 (23.4-32.0)	29.7 (25.1-35.8)	32.3 (26.7-39.9)	35.7 (28.5-45.8)	38.3 (29.6-50.5)
60-day	13.2 (12.0-14.7)	16.8 (15.4-18.8)	21.3 (19.4-23.8)	24.7 (22.3-27.8)	29.0 (25.5-33.6)	32.0 (27.7-37.8)	35.0 (29.6-42.2)	37.9 (31.3-46.8)	41.6 (33.2-53.3)	44.4 (34.3-58.6)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical