

Wastewater Study Final Basis of Design Report
For
4242 N SCOTTSDALE ROAD SCOTTSDALE 85251

New Bar and Restaurant

October 28, 2024

FINAL Basis of Design Report

APPROVED

APPROVED AS NOTED

REVISE AND RESUBMIT



Disclaimer: If approved; the approval is granted under the condition that the final construction documents submitted for city review will match the information herein. Any subsequent changes in the water or sewer design that materially impact design criteria or standards will require re-analysis, re-submittal, and approval of a revised basis of design report prior to the plan review submission.; this approval is not a guarantee of construction document acceptance. For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY Levi Dillon

DATE 12/2/2024

Prepared for
City of Scottsdale

Address comments below and herein within the submitted plans:

- 1) Confirm grease interceptor is acceptable with plan review staff. DS&PM 7-1.411 E. Avoid locating grease interceptor in parking garages, streets and under public parking spaces.
- 2) Existing sewer service must be 6-inch minimum or replaced with 6-inch DS&PM 7-1.409
- 3) Indicate cleanouts on submitted plans.
- 4) The service line connection to the public sewer should be 6-inch minimum and per MAG detail 440-3
- 5) City GIS shows two sewer taps. Abandon one by cutting and capping at property line. DS&PM 7-1.409 Where the use of a stubbed-out line is not feasible, the existing line shall be abandoned and permanently capped at the property or easement line.



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1.0 Introduction

Project Description and Location

The 4242 N. Scottsdale Road project is a proposed 0.32 net acre bar/restaurant project located at the southwest corner the intersection of 5th Avenue and Scottsdale Road in Scottsdale, Arizona. The site is further described as a portion of Section 22, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County Arizona. The site is identified as assessor's parcel numbers: 173-50-126 and 173-50-127. The purpose of this report is to provide an analysis of the wastewater services for the proposed development. The proposed development consists of a building with the City of Scottsdale land use type of restaurant (7,543 sf).

The site will consist of a bar/restaurant and surface paved parking. Please refer to the overall site wastewater plan in **Appendix B**.

This site will connect to an existing 8" VCP sewer line located in the alley adjacent to the property located on the northwest corner.

The purpose of this report is to satisfy the City of Scottsdale engineering design requirements for a restaurant and to provide sewer calculations for review and approval by City of Scottsdale Water Resources.

This report has been prepared to meet the requirements of the City of Scottsdale, the Maricopa County Environmental Services Department (MCESD), the Arizona Administrative Code (AAC), and the Arizona Department of Environmental Quality (ADEQ).

2.0 Wastewater Study – Basis of Design

Existing Utilities

The current site zoning is C-2/P-3 DO. The site currently consists of two buildings that will be maintained for the bar/restaurant development. There is currently an existing parking lot on the east side of the south building which will be replaced with patio and shaded landscape area. There is an existing 8" VCP sewer main located in the alley, west of the development.

Proposed Improvements

The proposed site plan for the development is shown in **Appendix B**. The sewer needs for the 4242 N. Scottsdale Road bar/restaurant are shown below. The proposed sewer building connection will run at a minimum of 1.0% and will be 6" in diameter.

Calculations for estimated average day and peak demands for the development are as follows:

B. Commercial and Industrial

Wastewater flows for uses other than those listed below shall be based upon known regional or accepted engineering reference sources approved by the Water Resources Department.

AVERAGE DAY SEWER DEMANDS		
Land Use	Demand	Peaking Factor
Commercial/Retail	0.5 per sq. ft.	3
Office	0.4 per sq. ft.	3
Restaurant	1.2 per sq. ft.	6
High Density Condominium	140 per room	4.5
Resort Hotel (includes site amenities)	380 per room	4.5
School: without cafeteria	30 per student	6
School: with cafeteria	50 per student	6
Cultural	0.1 per sq. ft.	3

FIGURE 7.1-2 AVERAGE DAY SEWER DEMAND IN GALLONS

PROPOSED WASTEWATER DEMAND CALCULATIONS					
BUILDING	GROSS SQUIRE FOOTAGE	UNIT DEMAND (PER SF)	Total Avg Day Demand (GPD)	Total Peak Day Demand (GPD)	Total Peak Day Demand (GPM)
Bar/Restaurant	11,203	1.2	13,444	80,662	28.01

56gpm

Conversion = 28.01 gpm = 0.062 cfs

The capacity for the 6-inch sewer main is 0.56 cfs which is adequate to service the proposed bar/restaurant.

3.0 Conclusions

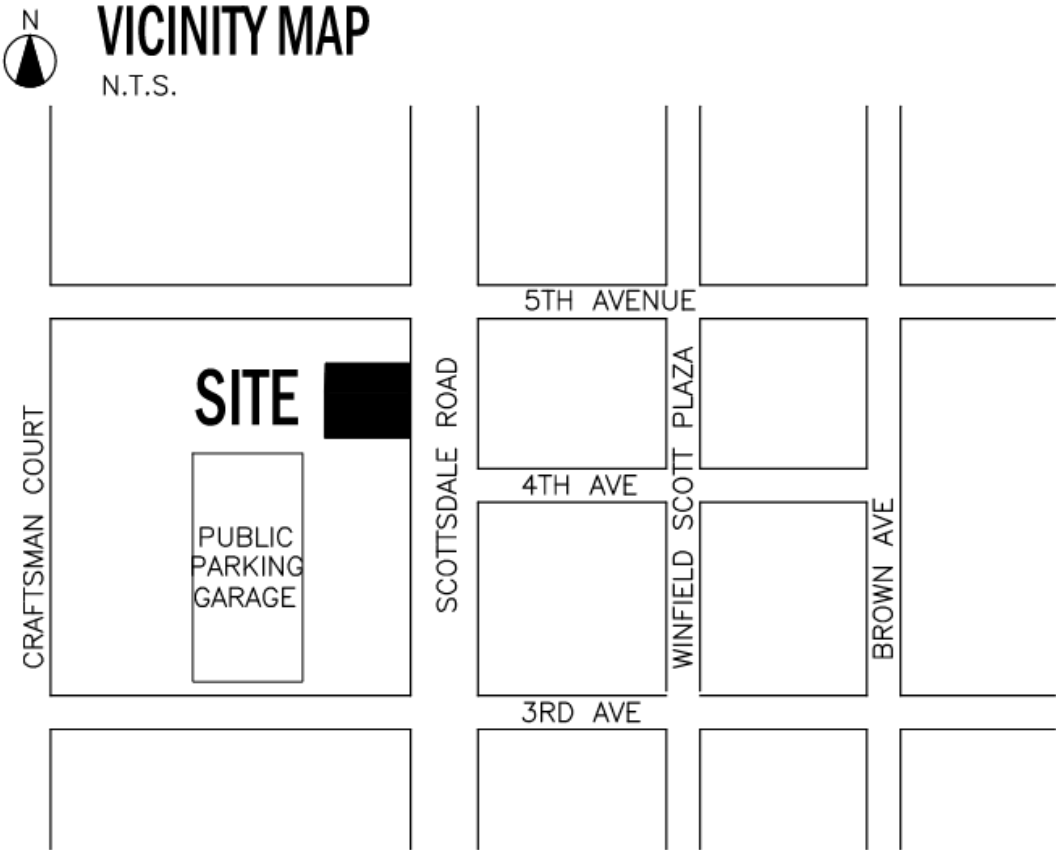
The building sanitary service will be provided from the 6" connection shown in Appendix B. The connection will have adequate capacity to service the proposed development as shown in Appendix A.

The existing 8" VCP sewer main has capacity to handle the additional flows that will be created from this development.

All City of Scottsdale design standards and policies have been met in the design of the proposed sewer system to service the site.

The project will begin construction in early 2025 with completion targeted for mid to late 2025.

EXHIBIT 1 – VICINITY MAP



Appendix A

6" Sanitary Full Flow Capacity & Velocity



Channel Report

4242 Scottsdale Road

Channel 1

CIRCULAR PIPE

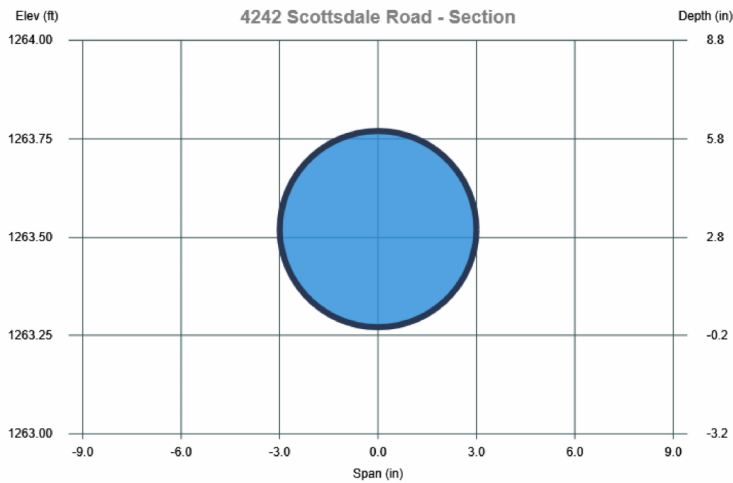
Diameter = 6.0 in
 Invert Elevation = 1263.27 ft
 Pipe Slope = 1.000 %
 Manning's n = 0.013

DISCHARGE

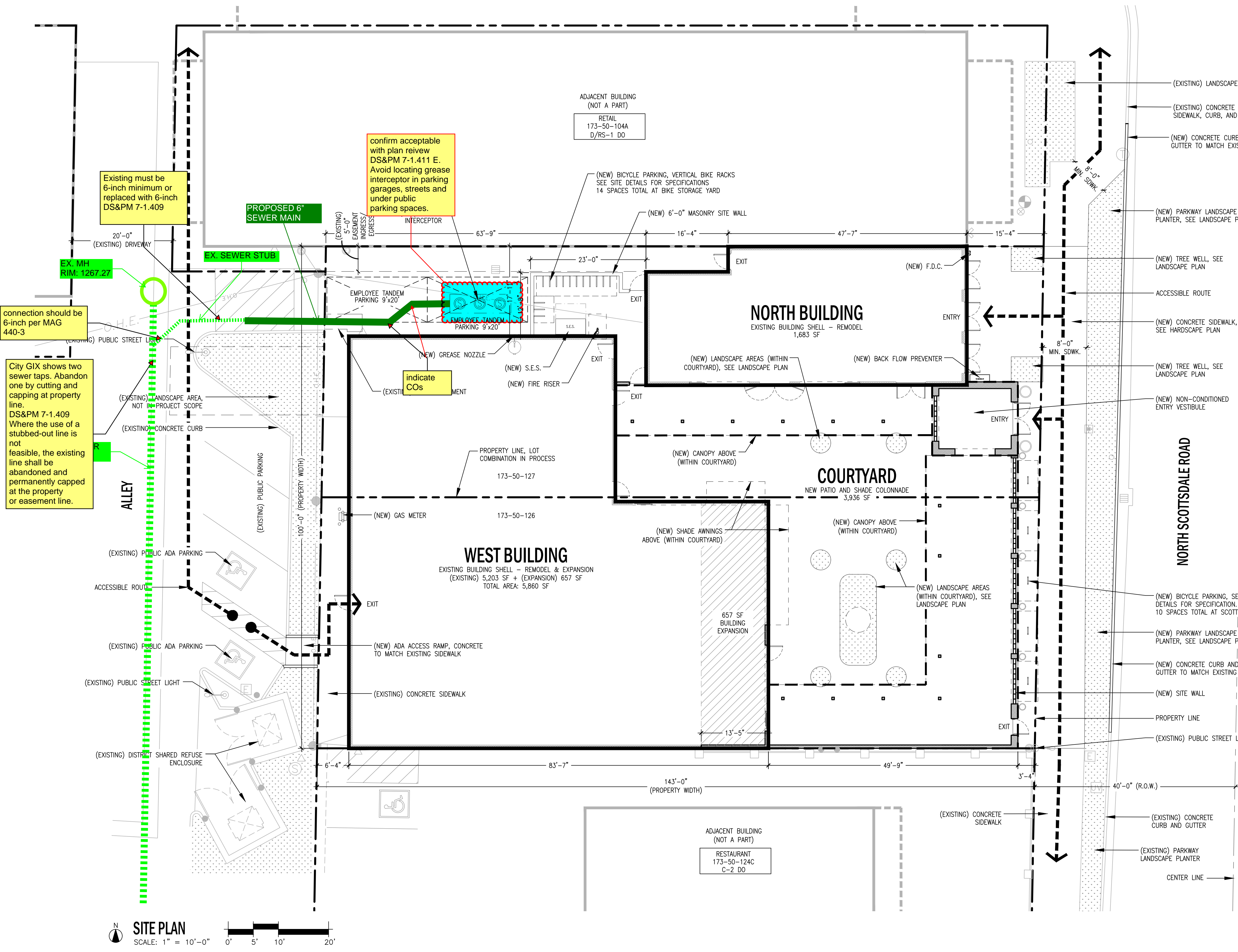
Method = Known Depth
 known Depth = 0.50 ft

CALCULATION SAMPLE

Flow	Depth	Area	Velocity	WP	n-value	Crit Depth	HGL	EGL	Max Shear	Top Width
(cfs)	(in)	(sqft)	(ft/s)	(ft)		(in)	(ft)	(ft)	(lb/sqft)	(ft)
0.56	6.0	0.20	2.86	1.57	0.013	4.7	1263.8	1263.90	0.31	0.00



Appendix B
Site Utility Plan



PROJECT DATA

ZONING: C-2/P-3 DO
 APN: 173-50-126 & 173-50-127
 OCCUPANCY TYPE: ASSEMBLY (A-2), BAR/RESTAURANT
 BUILDING HEIGHT: 66'-0"
 ALLOWED: 22'-0"
 EXISTING TO REMAIN

SITE AREA: ± 13,940 SF = 0.32 ACRES
NET:

BUILDING AREAS:
 WEST BUILDING (EXISTING) 5,203 SF
 WEST BUILDING (EXPANSION) 657 SF
 NORTH BUILDING (EXISTING) 1,683 SF
 7,543 SF

PATIO AREA:
 RESTAURANT PATIO (NEW) 3,936 SF

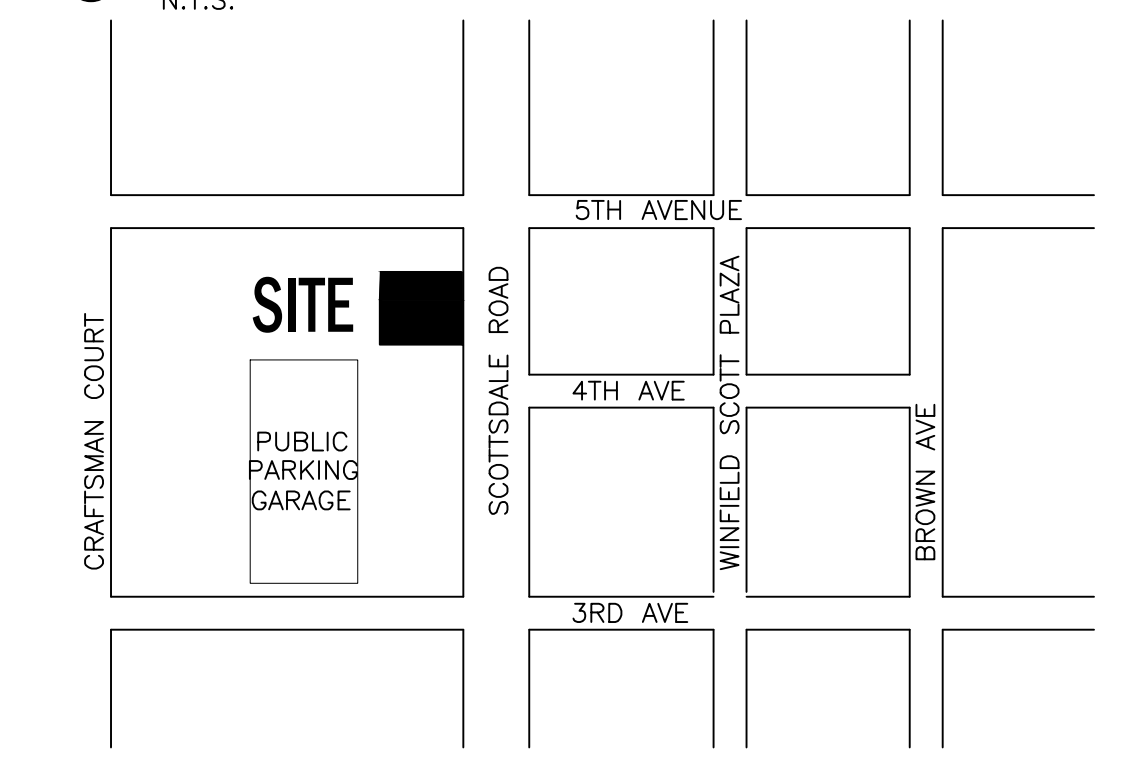
LOT COVERAGE:
 7,543 SF / 13,940 SF 54 %
 MAX ALLOWED 60 %

PARKING REQUIRED:
 RESTAURANT (7,543 - 1,896 B.O.H.) SF/300 19 SPACES
 RESTAURANT PATIO (3,936 SF - 500)/350 10 SPACES
 TOTAL REQUIRED 29 SPACES

PARKING PROVIDED:
 ON-SITE PARKING: (TANDEM VALET) 2 SPACES
 IN LIEU PARKING: 5 SPACES
 BIKE PARKING CREDIT (24 BIKE PARKING / 8) 3 SPACES
 BIKE SHOWER CREDIT 2 SPACES
 IMPROVEMENT DISTRICT CREDIT 17.5 SPACES
 TOTAL PROVIDED: 29.5 SPACES

BIKE PARKING PROVIDED: 24 SPACES

VICINITY MAP
N.T.S.



GENERAL SITE NOTES

- ALL ROOF DRAINS TO BE INTERNAL TO THE BUILDING.
- PROJECT TO MEET CITY OF SCOTTSDALE NOISE ORDINANCE. ALL SPEAKERS TO FACE DOWNWARDS.
- WINDOWS AND DOORS TO BE RECESSED. SEE SITE DETAILS FOR MORE INFORMATION.
- ALL LIGHTING TO MEET CITY OF SCOTTSDALE ORDINANCE. SEE SITE LIGHTING AND PHOTOMETRIC PLANS.
- APPROVAL OF PUBLIC IMPROVEMENTS IN THE RIGHT OF WAY TO BE COMPLETED PRIOR TO OBTAINING A BUILDING PERMIT.
- LOT COMBINATION TO BE APART OF SEPARATE SUBMITTAL.

SITE PLAN
SCALE: 1" = 10'-0"

4242 SCOTTSDALE RD.

BUILDING REMODEL, EXPANSION, & ADAPTIVE REUSE
 SCOTTSDALE, ARIZONA
 FOR: JOCQUE CONCEPTS

DESIGN REVIEW
SITE PLAN
v.02A

CASE #: 574-PA-2024
2024 . 11 . 08

