PRELIMINARY WASTEWATER MASTER PLAN

Scottsdale Collective

Entertainment/Canal Districts
Scottsdale, AZ 85251

PRELIMINARY Basis of Design Report

- ☐ ACCEPTED
- ☑ ACCEPTED AS NOTED
- ☐ REVISE AND RESUBMIT

CITY OF SCOTTSDALE
SCOTTSDALE WATER
9379 E San Salvador Dr.
Scottsdale, AZ 85258

Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission.
For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY ldillon DATE 9/10/2020

BY ldillon DATE 8/31/2020

Address comments on resubmittal:
1) Minor cleanup and clarification throughout
2) Detail and discuss what will be done to with the existing east-west 8" VCP sewer in Camelback.
3) Currently herein the City Center plans to cut off sewer for proposed On the Waterfront development. This is not acceptable without a proposed alternative scenario to provide an alternate connection. Please provide additional information and description of this to confirm understanding and properly stipulate. Address items detailed in separate 8/25/2020 email correspondence.
4) Clarify and detail that the new 12-inch main will require reconfiguration or replacement of existing service connections. Describe or note what will be done. It looks like there are 4 existing lateral connections.

Prepared For:

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Project Number: 200409

Date: June 26, 2020 (Zoning)
Revision Date: August 7, 2020 (Zoning Resubmittal)

Case No.: 9-ZN-2020; 1-II-2020 Plan Check No.: TBD

Policy and Design Related Issues:

3. Sewer BOD, V2, LDillon 8/31/2020, **= comments added 9/10/2020

a. ** The City Center building extension is dependent on sewer service rerouting to Shoeman and extension of sewer on Shoeman. Regarding offsite properties on Shoeman impacted by proposed City Center layout:

i. **STIPULATION:** The Collective/ Collection shall relocate any laterals and make any necessary plumbing modifications to the impacted parcels to maintain continuous sewer service.

ii. **STIPULATION:** In the final BOD the Collective/Collection shall provide written concurrence with all impacted property owners, or official reps, confirming who will be responsible for revising respective already approved plans or otherwise responsible for necessary coordination items related to sewer and service lateral modifications.

iii. **STIPULATION:** Provide documentable written confirmation from Marquee Engineer that the extended Shoeman sewer will not conflict with the current Marquee design.

iv. **STPULATION:** Complete design and analysis of Shoeman sewer extension. Sewer extension required will be 190 feet of 8" SDR35. Either vertically realign necessary water lines (currently shown for 20", 8") or at each crossing concrete encase both water and sewer lines within 10ft where vertical clearance is between 1-2ft. Crossings shall only be made in the middle of the water main pipe segment.

b. ** Regarding the new sewer design on Camelback:

i. **STIPULATION:** The design shall allow for reasonable third party oversizing of the new Camelback sewer prior to either final BOD approval or plan approvals. Oversizing of the Camelback sewer will be pursued by the City and/or by any potential future development that will need to connect to the new sewer (particularly the NWC of Brown and Shoeman).

ii. **STIPULATION**: The design depth of the new Camelback sewer shall accommodate connection of potential future redevelopment north of Shoeman and west of Brown and north of Indian Plaza between Brown and 75th St.

c. ** **STIPULATION:** Public sewer to be rerouted for Maya Hotel

d. ** **STIPULATION:** The existing sewer on south side of Camelback shall be removed. A new 12" sewer shall be installed from City Center project to 75th Street.

e. ** **STIPULATION:** A payment in-lieu of construction payment for the proportional capacity exceedance for the existing Camelback sewer from 75th Street to Miller Rd shall be made to the City. This shall be finalized and documented within the final BOD report. Payment shall be made prior to issuance of construction permits.

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1. INTRODUCTION

1.1 SUMMARY OF PROPOSED DEVELOPMENT:

The report presents a wastewater infrastructure analysis for redevelopment of three areas within the City of Scottsdale located south and east of the Camelback Road / Scottsdale Road intersection. Development options for the three sites include high density residential, resort hotel, restaurant, fitness/spa and pool facilities. Only the option for each site producing the greatest demand is presented within the body of this report for Zoning review and approval. It is likely that demands developed during final site design will be less than those shown herein.

Previously approved redevelopments (entitled capacity) relative to this report include Safari II, Blue Sky, Waterview and the DC Hotel. Wastewater flow from a future phase of the Caesars development located at the southwest corner of Highland and Scottsdale Road is yet to be entitled.

The intent of this Preliminary Master Plan is to a) discuss the proposed sewer infrastructure required to provide service to the following three redevelopments, and b) along with those entitled developments noted above, address their combined impact on the 15-inch Camelback Road sewer trunk line and existing sewer lines within the Entertainment District.

A. City Center is a six-story residential development located adjacent to the intersection within the Arizona Canal District and will replace an existing commercial/office building.
B. The Maya Hotel is a 12-story residential development located in the Entertainment District east of Buckboard Trail between Indian Plaza and Shoeman Lane.
C. The Mint is a 9-story residential and retail development located south of Camelback Road and west of Civic Center Plaza.

Refer to **FIGURE 1** for a Vicinity Map and **Figure 2,** highlighting the projects noted above.

1.2 LEGAL DESCRIPTIONS AND AREA:

Each of the three Master Planned areas consist of multiple land parcels lying within Section 23, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Scottsdale, Arizona.

A. City Center: Parcels 173-41-016B, -017A, -015A and -021A, 173-41-005, and 173-41-004 consisting of 118,880 square feet or 2.729 acres, more or less.
B. The Maya: Parcels 173-41-260, -182 and -183 consisting of 16,292 square feet or 0.374 acres, more or less.
C. The Mint: Parcels 173-41-216, -149 thru -153, -119A and 173-40-123 consisting of 56,986 square feet or 1.308 acres, more or less.

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2. DESIGN DOCUMENTATION

2.1 DESIGN COMPLIANCE:

Preparation of this report has been done in accordance with requirements of the City of Scottsdale Design Standards & Policies Manual (DS&PM) 2018 [1], direction from the City of Scottdale Water Resources Department and requirements of Maricopa County Environmental Health Department. Design flow calculations for the proposed sewer infrastructure are all based on the DS+PM recommendations in Section 7-1.403.

3. EXISTING CONDITIONS

3.1 EXISTING ZONING & LAND USE:

Existing zoning across the three parcels includes C-3 DO and P-C-2/P-3 DO with land uses varying from commercial office, retail, restaurant and entertainment. This project proposes rezoning.

3.2 EXISTING TOPOGRAPHY, VEGETATION AND LANDFORM FEATURES:

This area of Scottsdale is relatively flat with minor grades sloping to the Indian Bend Wash approximately one-half mile to the east. All three parcels have been previously developed with buildings and pavement covering most of the properties and minor site landscaping typical of the downtown vicinity.

Refer to **FIGURE 3** for an aerial of the overall project existing conditions.

3.3 EXISTING UTILITIES:

A 15-inch PVC sewer trunk line flows east under the westbound Camelback traffic lanes to a 24-inch trunk line in Miller Road. A 12-inch VCP sewer line parallels the 15-inch pipe, crossing under the Arizona Canal, and connecting with it north of the W Hotel. At that location both lines appear to be on the north side of a 144-inch storm drain and a 16-inch water line. The storm drain transitions to a 9.5' x 11' reinforced box culvert just west of Saddleback Trail. Refer to **FIGURE 4** for COS Q-S Maps 17-45 and 18-45.

Wastewater generated in the Entertainment District is largely directed to an 8-inch collection system that flows south and does not contribute to the 15-inch Camelback Road trunk line. This area discharges to a 24-inch sewer line in Miller Road via a 12-inch line along 6th Avenue, this serves the Mint East. Exceptions to the Entertainment District include a row of lots fronting Camelback Road between Buckboard and Saddlebag Trail that have a separate 8-inch line connecting to the 15-inch line and service lines to a few commercial lots (including the Mint West and DC Hotel) east of 75th Street. The City Center and neighboring developments discharge to the existing 8-inch VCP line running west to east along the site. The line connects to an 8-inch PVC that flows north to south along Brown Avenue. The 8-inch line connects to the existing 8-inch line to Shoeman Lane and turns south along Buckboard to Indian School Road, and ultimately, discharges to Miller Road.

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Refer to **FIGURE 4** for City Sewer Q-S Maps 17-45 and 18-45.

4. PROPOSED METHODOLOGY

4.1 FLOW ROUTING:

This report proposes that wastewater generated by two of the proposed sites (City Center and The Mint) along with wastewater generated by the approved offsite developments (Safari Phase II, Blue Sky, Waterview and the DC Hotel) be evaluated for their capacity impacts to the 15-inch line in Camelback Road. Wastewater generated by the proposed Maya site will be taken south into the Entertainment District's collection system and east in a 12-inch line along 6th Avenue to Miller Road where that system connects to a 24-inch line.

4.2 EXISTING PEAK FLOWS:

Camelback Road 15-inch sewer:

This report will utilize an existing 540 gpm peak flow in the 15-inch line just west of Miller Road based on the City's calibrated wastewater model. For reference, two manholes on this line were monitored in August 2018 for the Waterview project and resulted in a peak flow rate of 703 gpm at 74th Street. Those results are included in **APPENDIX I**. Updated monitoring of the 15-inch line is not being proposed with this Master Plan as the effects of the COVID-19 pandemic have significantly reduced commercial flows.

Entertainment District sewer system:

Existing wastewater flow to the 12-inch line in 6th Avenue at Miller Road has been evaluated using the provided peak flow based on the city model for this area. This results in an existing peak flow of 190 gpm. Present sewer monitoring at this location is also not feasible due to several business closures resulting from the COVID-19 pandemic.

4.3 SEWER EVALUATION APPROACH:

Proposed methodology for this master plan will include utilizing the City's calibrated model flows and adding:

a) the DS+PM based flows for City Center, The Mint and The Maya,

b) the DS+PM based flows for Safari Phase II, Blue Sky, Water View and the DC Hotel prorated up to 10% relative to the distance from the intersection of Camelback and Miller Roads (see **Appendix III**), and

c) a 50% credit for the sum of pool backwash flows from the projects shown in paragraphs a) and b) above relative to their discharge points or 100 gpm, whichever is less.

100gpm is min backwash flow, or 50% of proposed pools in basin which is then subject to attenuation adjustment

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5. SANITARY SYSTEM COMPUTATIONS

5.1 SEWER FLOW DEMANDS:

Table 1 shows the DS+PM unit demand criteria.

TABLE 1 - COS DS+PM DESIGN CRITERIA

Land Use	Unit Demand (gpd)	Unit	Design Peaking Factor
High Density Residential	140	per unit	4.5
Resort Hotel	380	per room	4.5
Restaurant	1.2	per sq. ft.	6
Office	0.4	per sq. ft.	3
Commercial/Retail	0.5	per sq. ft.	3
Fitness/Spa	0.8	per sq. ft.	3.5
Pool Backwash	144,000	per day	1

Tables 2 through 4 show the site options for City Center, the Mint and The Maya resulting in the greatest flow.

TABLE 2 - SEWER DEMAND CALCULATIONS - Parcel A (City Center)

	Units or Area (sq. ft.)	Unit Demand (gpd)	Avg. Day Demand (gpd)	Avg. Day Demand (gpm)	Peak Hour (gpm)
High Density Residential	146	140	20,440.0	14.2	63.9
Resort Hotel	214	380	81,320.0	56.5	254.1
Restaurant	41,109	1.2	49,330.8	34.3	205.5
Office					
Commercial/Retail					
Fitness/Spa					
			SUBTOTAL	**104.9**	**523.5**
Pool Backwash			144,000.0	100.0	100.0
		TOTAL DEMANDS:	**295,090.8**	**204.9**	**623.5**

TABLE 3A: SEWER DEMAND CALCULATIONS - Parcel B (The Mint - West Tower)

	Units or Area (sq. ft.)	Unit Demand (gpd)	Avg. Day Demand (gpd)	Avg. Day Demand (gpm)	Peak Hour (gpm)
High Density Residential					
Resort Hotel					
Restaurant	13,881	1.2	16,657.2	11.6	69.4
Office					
Commercial/Retail					
Fitness/Spa					
			SUBTOTAL	**11.6**	**69.4**
Pool Backwash					
		TOTAL DEMANDS:	**16,657.2**	**11.6**	**69.4**

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TABLE 3B: SEWER DEMAND CALCULATIONS - Parcel B (The Mint - East Tower)

	Units or Area (sq. ft.)	Unit Demand (gpd)	Avg. Day Demand (gpd)	Avg. Day Demand (gpm)	Peak Hour (gpm)
High Density Residential					
Resort Hotel	116	380	44,080.0	30.6	137.8
Restaurant	14,135	1.2	16,962.0	11.8	70.7
Office					
Commercial/Retail					
Fitness/Spa					
			SUBTOTAL	**42.4**	**208.4**
Pool Backwash			144,000.0	100.0	100.0
		TOTAL DEMANDS:	**205,042.0**	**142.4**	**308.4**

TABLE 4: SEWER DEMAND CALCULATIONS - Parcel C (The Maya)

	Units or Area (sq. ft.)	Unit Demand (gpd)	Avg. Day Demand (gpd)	Avg. Day Demand (gpm)	Peak Hour (gpm)
High Density Residential					
Resort Hotel	161	380	61,180.0	42.5	191.2
Restaurant	10,440	1.2	12,528.0	8.7	39.2
Office					
Commercial/Retail					
Fitness/Spa	1,120	0.8	896.0	0.6	2.8
			SUBTOTAL	**51.8**	**233.1**
Pool Backwash			144,000.0	100.0	100.0
		TOTAL DEMANDS:	**218,604.0**	**151.8**	**333.1**

The available flow information for the offsite (entitled Safarii II, Blue Sky, Water View and DC Hotel) developments was provided by the City and is summarized in Table 5.

TABLE 5 - OFFSITE ENTITLED DEVELOPMENTS (planned or under construction)

Development	Peak Sewer Demand (gpm)	Pool Backwash Rate (gpm)	Total Demand (gpm)
Safari Phase II	70	100	170
Blue Sky	750	150	900
Waterview	448	100	548
DC Hotel	184	0	184
Total Flow	1452	350	1802

Allowed adjustments for the pool backwash rates and demands based on relative distance from the Camelback/Miller Road point of analysis (entitled developments only) are described and shown in Section 5.2 below.

5.2 FLOW CALCULATIONS TO THE CAMELBACK AND MILLER ROADS INTERSECTION:

Scottsdale Collective proposes to discharge the proposed City Center, the Mint Hotel, and existing flows south of Camelback Road to a proposed 12-inch sewer line. Future developments, Safari Phase II, Blue Sky, and Waterview will discharge to the existing 15-inch running along Camelback Road.

Referring to **APPENDIX III**, the City has allowed a slight reduction of wastewater demand for Safari II, Blue Sky, and Waterview based on their relative distance from a point of analysis. Additionally, the total pool backwash from those projects along with the pool backwash from the

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100gpm is min backwash flow, or 50% of proposed pools in basin which is then subject to attenuation adjustment

West of 75th or @ Camelback and Miller?? Section title is to Camelback and Miller. Clarify

Scottsdale Collective project can be reduced based on 50% of the total proposed backwash of the projects shown or 100 gpm, whichever is less.

Per the following tables, the peak flows, without pool backwash, at the intersection of Camelback and Miller Roads with the construction of the 15-inch parallel pipe are:

Table 6 - EXISTING 15" WEST OF 75TH ST OFFSITE FLOW AT CAMELBACK AND MILLER ROAD

Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Prorated Demand Factor (%)	Prorated Demand (gpm)
Safari Phase II	70	0.65	93	65
Blue Sky	750	0.55	94	705
Waterview	448	0.27	97	435
Existing Flow (2)	540	N/A	100	540
Total Flows	1808			1745

what is ref point? Add keynote

Table 7 - PROPOSED 12" WEST OF 75TH ST OFFSITE FLOW AT CAMELBACK AND MILLER ROAD

Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Prorated Demand Factor (%)	Prorated Demand (gpm)
City Center	524	N/A	100	524
The Mint (west)	69	N/A	100	69
The Mint (east)	208	N/A	100	208
The W and Existing Flow (2)	25	N/A	100	25
Total Flows	826.4			826

Notes: (1) Pool backwash demand reduced to 50% for multiple pools
(2) Existing offsite flow provided by the COS Water Resources Department
*Analysis east of 75th Street not included

OK but need to address as in-lieu payment for proportional share of capacity exceedance

Calculated peak flows at the intersection of 75th Street and Camelback Road with pool backwash are the following:

Table 8 - EXISTING 15" WEST OF 75TH ST OFFSITE FLOW AT CAMELBACK AND MILLER ROAD W/POOL BACKWASH

Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Pool Allowance (gpm) (1)	Prorated Demand Factor (%)	Prorated Demand (gpm)
Safari Phase II	70	0.65	100	93	158
Blue Sky	750	0.55	100	94	799
Waterview	448	0.27	0	97	435
Existing Flow (2)	540	N/A	0	100	540
Total Flows	1808		200		1932

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OK but need to address as in-lieu payment for proportional share of capacity exceedance

Table 9 - PROPOSED 12" WEST OF 75TH ST OFFSITE FLOW AT CAMELBACK AND MILLER ROAD W/POOL					
Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Pool Allowance (gpm) (1)	Prorated Demand Factor (%)	Prorated Demand (gpm)
City Center	524	N/A	100	100	624
The Mint (west)	69	N/A	0	100	69
The Mint (east)	208	N/A	0	100	208
The W and Existing Flow (2)	25	N/A	0	100	25
Total Flows	826.4		100		926

Notes: (1) Pool backwash demand reduced to 50% for multiple pools

(2) Existing offsite flow provided by the COS Water Resources Department

*Analysis east of 75th Street not included

*Wastewater from a future phase of the Caesars Hotel will discharge to a 10-inch line located in Scottsdale Road 10-inch pipe connecting to the existing 12-inch line in Camelback Road.

5.3 FLOW CALCULATIONS TO 6th AVENUE THROUGH THE ENTERTAINMENT DISTRICT:

The Maya proposed to take its' wastewater south through the Entertainment District to an existing 12-inch pipe in 6th Avenue where it will connect to the existing 24-inch trunk line in Miller Road.

Table 10 - PRORATED OFFSITE FLOW AT 6TH AVENUE AND MILLER ROAD				
Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Prorated Demand Factor (%)	Prorated Demand (gpm)
The Maya	70	0.50	95	67
Existing Flow (2)	190	N/A	100	190
Total Flows	260			257

Table 11 - PRORATED OFFSITE FLOW AT 6TH AVENUE AND MILLER ROAD					
Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Pool Allowance (gpm) (1)	Prorated Demand Factor (%)	Prorated Demand (gpm)
The Maya	70	0.50	100	95	162
Existing Flow (2)	190	N/A	0	100	190
Total Flows	260		100		352

Notes: (1) Pool backwash demand reduced to 50% for multiple pools

(2) Existing offsite flow provided by the COS Water Resources Department

5.4 VARIANCE FROM STATED DESIGN FLOWS:

No variance to the DS+PM requirements is being requested with this Master Plan for the proposed three projects. Adjustments to demands shown are per direction of city staff.

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5.5 SEWER SYSTEM ANALYSIS (OFF-SITE):

Based on the evaluation described below, Scottsdale Collective proposes to construct a new 12-inch sewer along the south side of Scottsdale Road between Buckboard Trail and 75th Street (see **Figure 5**). The proposed 12-inch sewer line along Camelback Road will run parallel, and south of the existing 12-inch pipe, located north of City Center. The proposed 12-inch will replace a portion of the existing 8-inch sewer line, north of the proposed The Mint building (west). The proposed 12-inch will continue to run east and will cross over the existing storm box at 75th Street and connect to the existing 15-inch sewer line. A service line to the DC Hotel may be reconnected to the existing 15-inch sewer.

yes, why is this stated?

A. Camelback Road 15-inch Sewer

Per Tables 6 and 8 the peak flow at the intersection of Camelback and 75th Street with the construction of the new 12-inch parallel pipe is:

a) 1,745 gpm without the allowed pool backwash rate and
b) 1,932 gpm including the allowed pool backwash rate

Hydraulic calculations provided in **APPENDIX II** indicate 2,427 gpm is available for the existing 15-inch (S=1.00%) at a pipe d/D = 0.70 and 2,833 gpm available at d/D = 0.80. The full flow capacity of the pipe is 3119 gpm. ✓

B. Camelback Road 12-inch Sewer

Per Table 7 and 9 the peak flow at the intersection of Camelback and 75th Street with the construction of the new 12-inch parallel pipe is:

d/D limit=0.65 for 12" and less. Qmax= 858gpm (still ok)

a) 826 gpm without the allowed pool backwash rate and
b) 926 gpm including the allowed pool backwash rate

Hydraulic calculations provided in **APPENDIX II** indicate 946 gpm is available for the proposed 12-inch (S=0.50%) at a pipe d/D = 0.70 and 1,105 gpm available at d/D = 0.80. The full flow capacity of the pipe is 1,131 gpm. ✓

Based on the previous hydraulic calculations discussed, the existing 15-inch and proposed 12-inch are capable of conveying the calculated flows.

C. Camelback Road Existing 15-inch Reach East of 75TH ST

The existing 15" reach east of 75th St to Miller Rd, will be reaching close to capacity. As such, an additional in-lieu payment would be required for the fair proportional share of the capacity exceedance over this reach. Refer to tables 12 and 13 for peak flow calculations the existing 15" reach.

Including in-lieu for the proportional share of the capacity exceedance cost ✓

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Table 12 - EXISTING 15" REACH EAST OF 75TH ST OFFSITE FLOW AT CAMELBACK AND MILLER

Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Prorated Demand Factor (%)	Prorated Demand (gpm)
Safari Phase II	70	0.80	92	64
Blue Sky	750	0.70	93	698
Waterview	448	0.35	96	430
DC Hotel	184	0.15	98	180
City Center	524	N/A	100	524
The Mint (west)	69	N/A	100	69
The Mint (east)	208	N/A	100	208
Existing Flow (2)	540	N/A	100	540
Total Flows	2793.4			2714

should be same as Table 5

Table 13 - EXISTING 15" EAST OF 75TH ST OFFSITE FLOW AT CAMELBACK AND MILLER ROAD W/ POOL BACKWASH

Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Pool Allowance (gpm) (1)	Prorated Demand Factor (%)	Prorated Demand (gpm)
Safari Phase II	70	0.80	100	92	156
Blue Sky	750	0.70	100	93	791
Waterview	448	0.35	0	96	430
DC Hotel	184	0.15	0	98	180
City Center	524	N/A	100	100	624
The Mint (west)	69	N/A	0	100	69
The Mint (east)	208	N/A	0	100	208
Existing Flow (2)	540	N/A	50	100	590
Total Flows	2793.4		350		3049

should be 150

should be 100

a) 2,714 gpm without the allowed pool backwash rate and
b) 3,049 gpm including the allowed pool backwash rate

2699gpm proposed (exceedance=272gpm)

Hydraulic calculations provided in **APPENDIX II** indicate 2,427 gpm is available for the existing 15-inch (S=1.00%) at a pipe d/D = 0.70 and 2,833 gpm available at d/D = 0.80. The full flow capacity of the pipe is 3119 gpm.

3049gpm proposed (exceedance=216gpm)

Based on the calculations provided above, the existing 15-inch reach exceeds the d/D=0.70 and d/d=0.80, as such an in-lieu payment will be required.

In-lieu shall be based on peak exceedance under normal peak d/D conditions i.e. not peak w/ pool backwash

D. 6th Avenue 12-inch Sewer

Per Table 7, the peak flow at the intersection of 6th Avenue and Miller Roads is:

a) 257gpm without the allowed pool backwash rate and
b) 352 gpm including the allowed pool backwash rate

Hydraulic calculations provided in **APPENDIX II** indicate a 998 gpm available flow at a pipe d/D = 0.65 and 1289 gpm available at d/D = 0.80. The full flow capacity of the pipe is 1418 gpm.

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5.6 SEWER SYSTEM ANALYSIS (ON-SITE SERVICES):

Preliminary utility exhibits for the three sites are included as **Appendix IV**. City Center and The Mint will require 10" and 6" service lines, respectively, at a minimum 0.005 ft/ft slope.

City Center will connect directly to the new 12" sewer in Camelback Road fronting that site. A proposed alley abandonment will remove the sewer west of the Upton Condominium parcel, the sewer line east of Upton Condominium is to remain in place along with the dedicated utility easement. The furthest east adjacent parcel, APN 173-41-002, will continue to discharge to the existing 8-inch sewer line. This will require a vacant parcel located at the northeast corner of Scottsdale Road and Shoeman Lane to connect to an existing 8" sewer in Shoeman Lane. That pipe will need to be inspected and surveyed for location and condition. The proposed Upton Condominiums will also connect their future development to the existing 8-inch sewer line along Shoeman Lane.

The west and east Mint buildings will connect directly to the new 12-inch sewer in Camelback Road fronting that site.

The Maya proposes a connection to the south to the existing collection system within the Entertainment District. The Maya will require a 6" service line at a minimum 0.01 ft/ft and with a proposed alley abandonment will need to relocate an existing 8-inch sewer. Refer to **FIGURE 5** for the proposed sewer relocation.

The Maya proposes to abandon an alley east of the site and will need to reroute an existing 8" sewer. Refer to **FIGURES 5 and 6** for the proposed reroute.

All unused existing sewer service lines to these sites will be removed to their respective mains per City requirements.

5.7 MAINTENANCE RESPONSIBILITIES:

The proposed building service connections for City Center and The Mint will be private and maintained by the building owners. The proposed 12-inch sewer and relocated 8-inch sewer will be part of the public system owned and maintained by the City of Scottsdale. The Maya service connection to the new 8-inch sewer pipe will be private. Grease interceptors will be provided for all restaurant facilities and be maintained by the property owners.

6. SUMMARY

change to "may be required", could be another in-lieu

6.1 SUMMARY OF PROPOSED IMPROVEMENTS:

By Scottsdale Collective constructing a parallel 12-inch line along the south side of Camelback Road 15" between Scottsdale Road and 75th Street, additional capacity will be provided meeting the demands of City Center and The Mint. A future extension of this line by others between 75th Street and Miller Road will be required prior to the construction of either Blue Sky or Caesars Phase II.

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The Maya, being approximately 400 feet south of Camelback Road will connect to the available local sewer infrastructure. The proposed alley abandonment will require rerouting a section of sewer along Indian Plaza.

6.2 PROJECT SCHEDULE:

No timeline has presently been documented for the construction of each Parcel. It is anticipated as each Parcel develops, all related sewer service and main lines will be constructed in a single phase.

7. SUPPORTING MAPS

7.1 UTILITY PLANS

Preliminary utility exhibits are provided in **APPENDIX IV.**

8. REFERENCES

1. City of Scottsdale Sewer Quarter Section number 17-45
2. City of Scottsdale Design Standards & Policies Manual, 2018 (Chapter 7 – Wastewater)
3. City of Scottsdale 2012 Water Reuse Master Plan Update, Table 2.4 and Table 2.5

9-ZN-2020
08/11/20

FIGURES

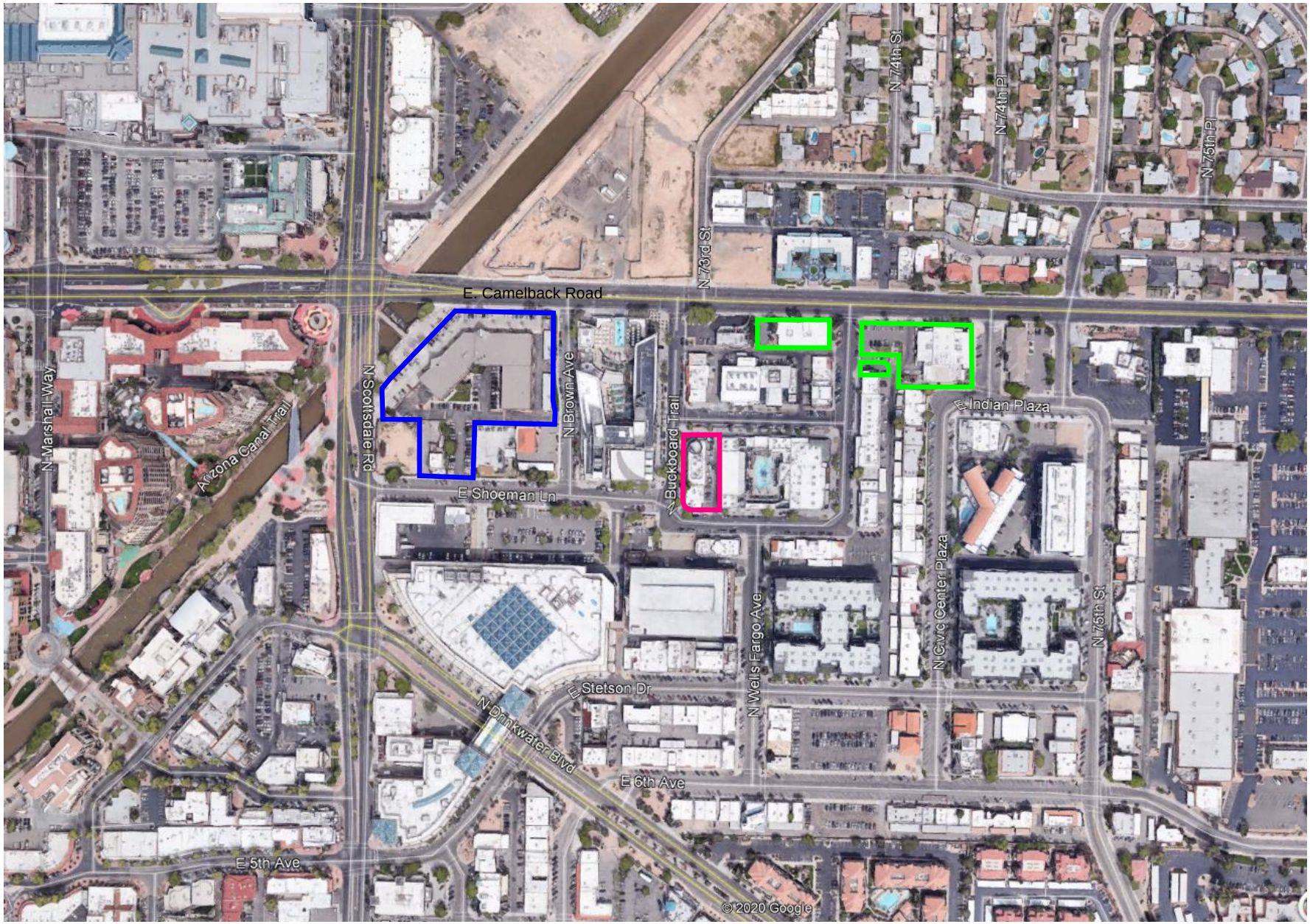


Figure 1- Vicinity Map

NORTH

SCALE: N.T.S

City Center
The Mint
Maya Hotel

9-ZN-2020
08/11/20

Approved Development
2 – Safari, Phase II
3 – Blue Sky
4 – Waterview
5 – DC Hotel
Proposed Development
A – City Center
B – Maya
C - The Mint
Future Development
X – Caesars Phase II

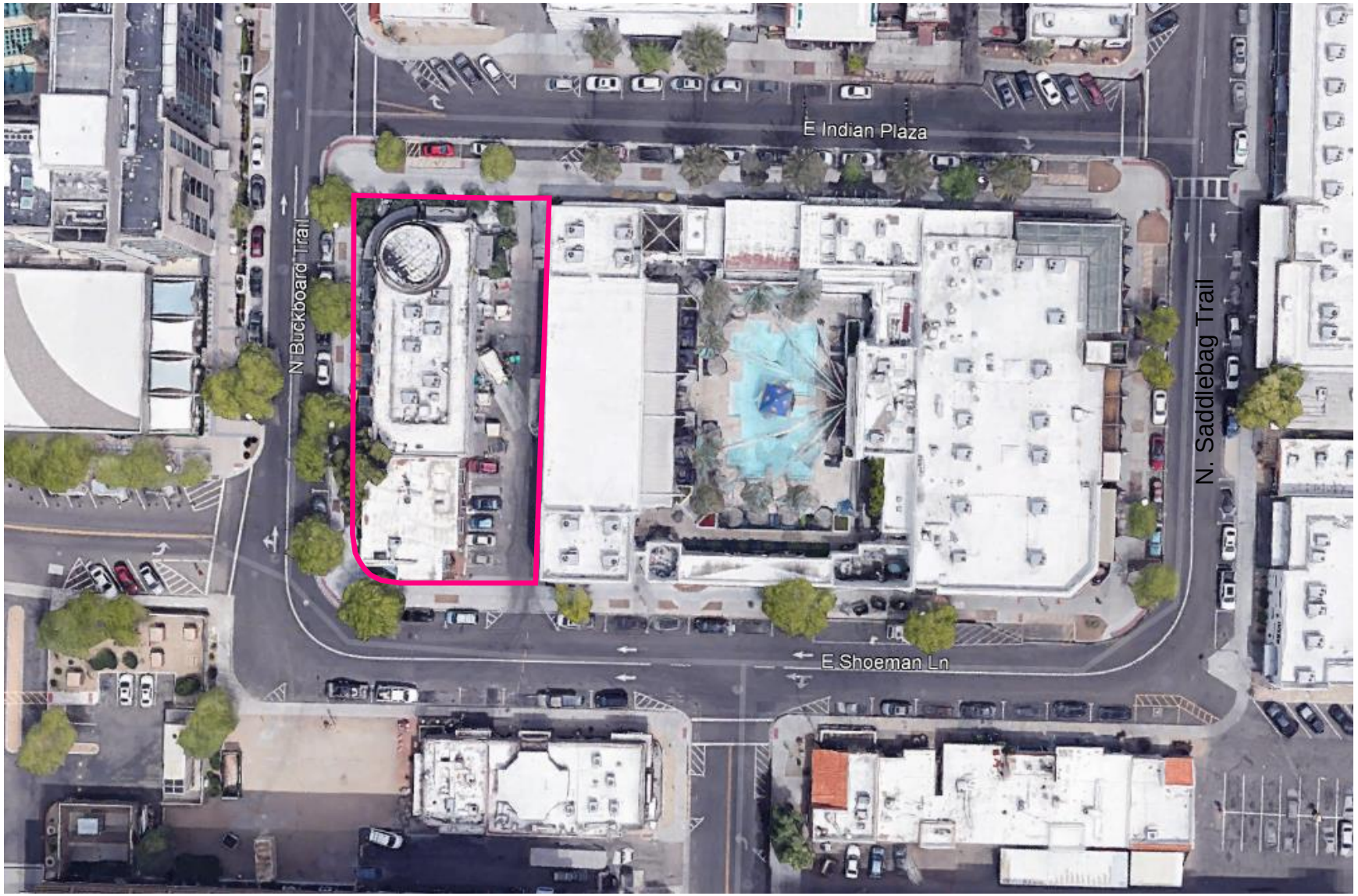
FIGURE 2 – Local Projects, Approved or Proposed

NORTH

SCALE: N.T.S

Figure 3A- Aerial Map
City Center

9-ZN-2020
08/11/20

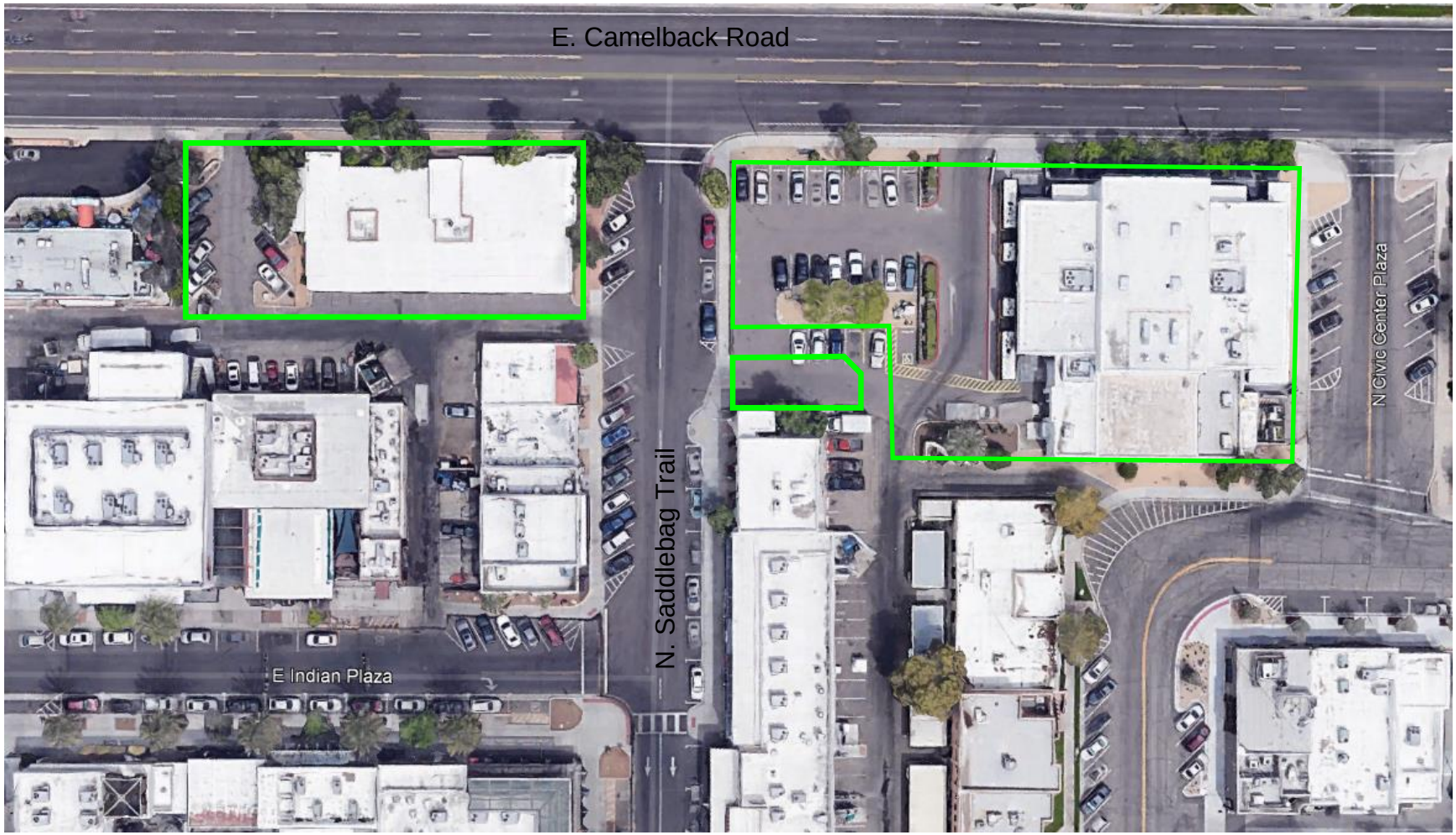


NORTH

SCALE: N.T.S

Figure 3B- Aerial Map
Maya Hotel

9-ZN-2020
08/11/20

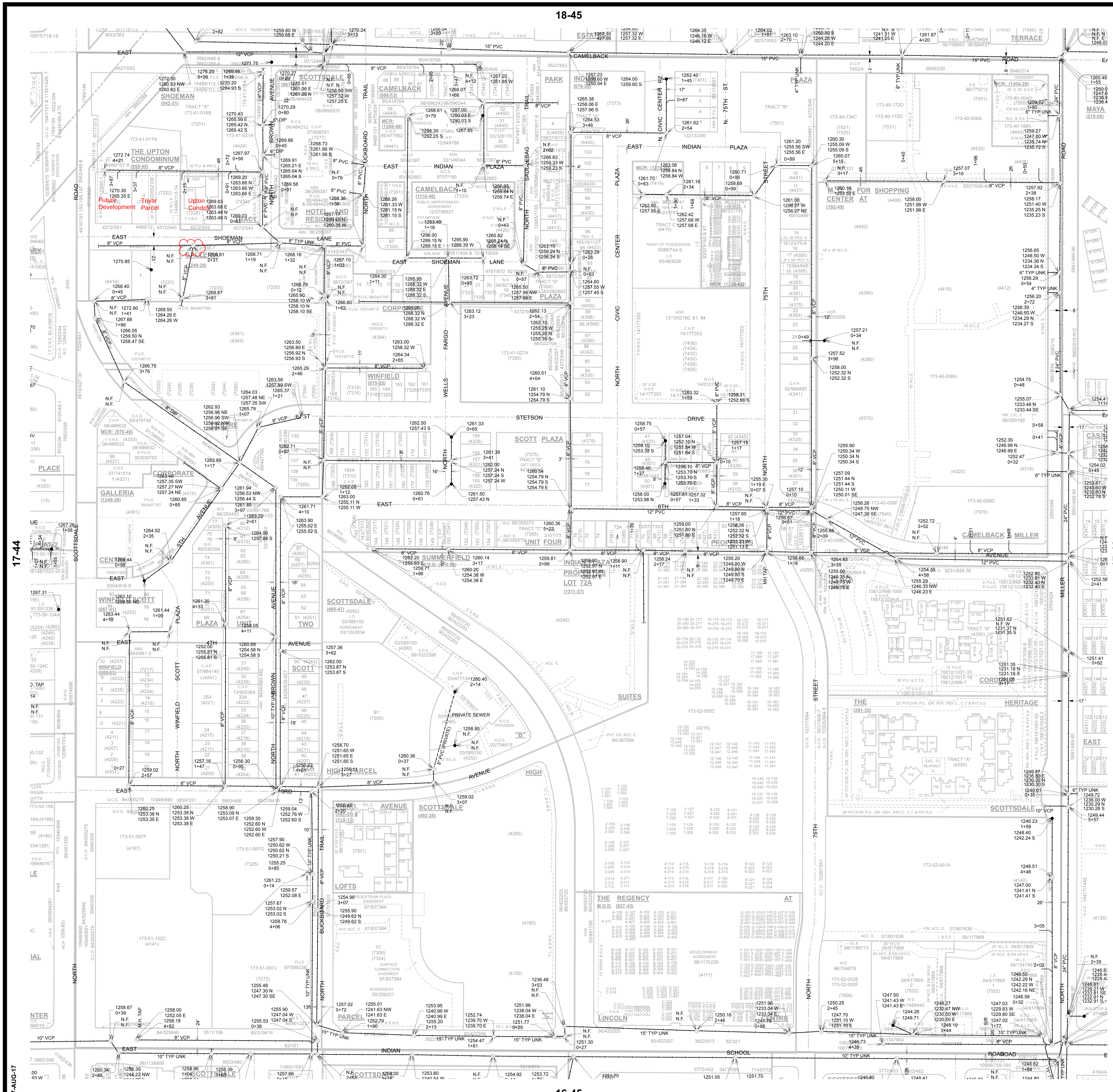


NORTH

SCALE: N.T.S

Figure 3C- Aerial Map
The Mint

9-ZN-2020
08/11/20



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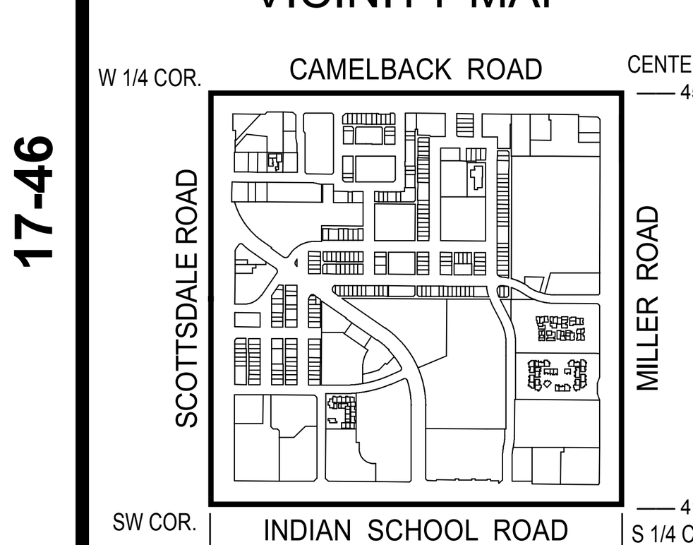
LEGEND:

- Cleanout
- Lift Station
- Manhole
- Non-GPS Point
- Plug
- Sewer Service Point
- Sewer Tap Point
- Sewer Valve
- Treatment Plant
- Sewer Main - Gravity
- Sewer Main - Force
- Sewer Main - Private

VICINITY MAP



NORTH

SCALE: 1" = 100'

0 50 100 200

The map scale of 1" = 100' is based on a full size print of 30" x 36"

SEWER

QUARTER SECTION MAP

17-45

SW 1/4 SEC. 23 T2N R4E

FIGURE 4

CITY OF SCOTTSDALE

SCOTTSDALE GEOGRAPHIC INFORMATION SYSTEMS

3629 North Drinkwater Boulevard
Scottsdale, Arizona 85251

N O T I C E

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THE CITY OF SCOTTSDALE

27-AUG-17

9-ZN-2020
08/11/20

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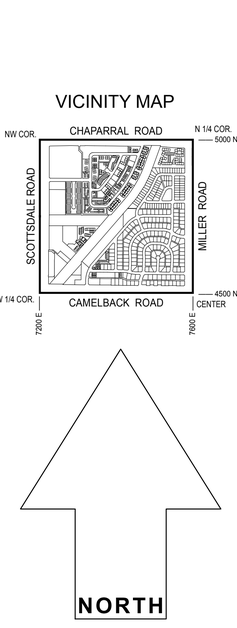
LEGEND:

- Cleanout
- Lift Station (LS)
- Manhole (M.H.)
- Non-GPS Point
- Plug
- Sewer Service Point
- Sewer Tap Point
- Sewer Valve
- Treatment Plant
- Sewer Main - Gravity
- Sewer Main - Force (Force)
- Sewer Main - Private

VICINITY MAP



SEWER

QUARTER SECTION MAP

18-45

NW 1/4 SEC. 23 T2N R4E

FIGURE 4

CITY OF SCOTTSDALE
SCOTTSDALE GEOGRAPHIC INFORMATION SYSTEMS
3629 North Drinkwater Boulevard
Scottsdale, Arizona 85251

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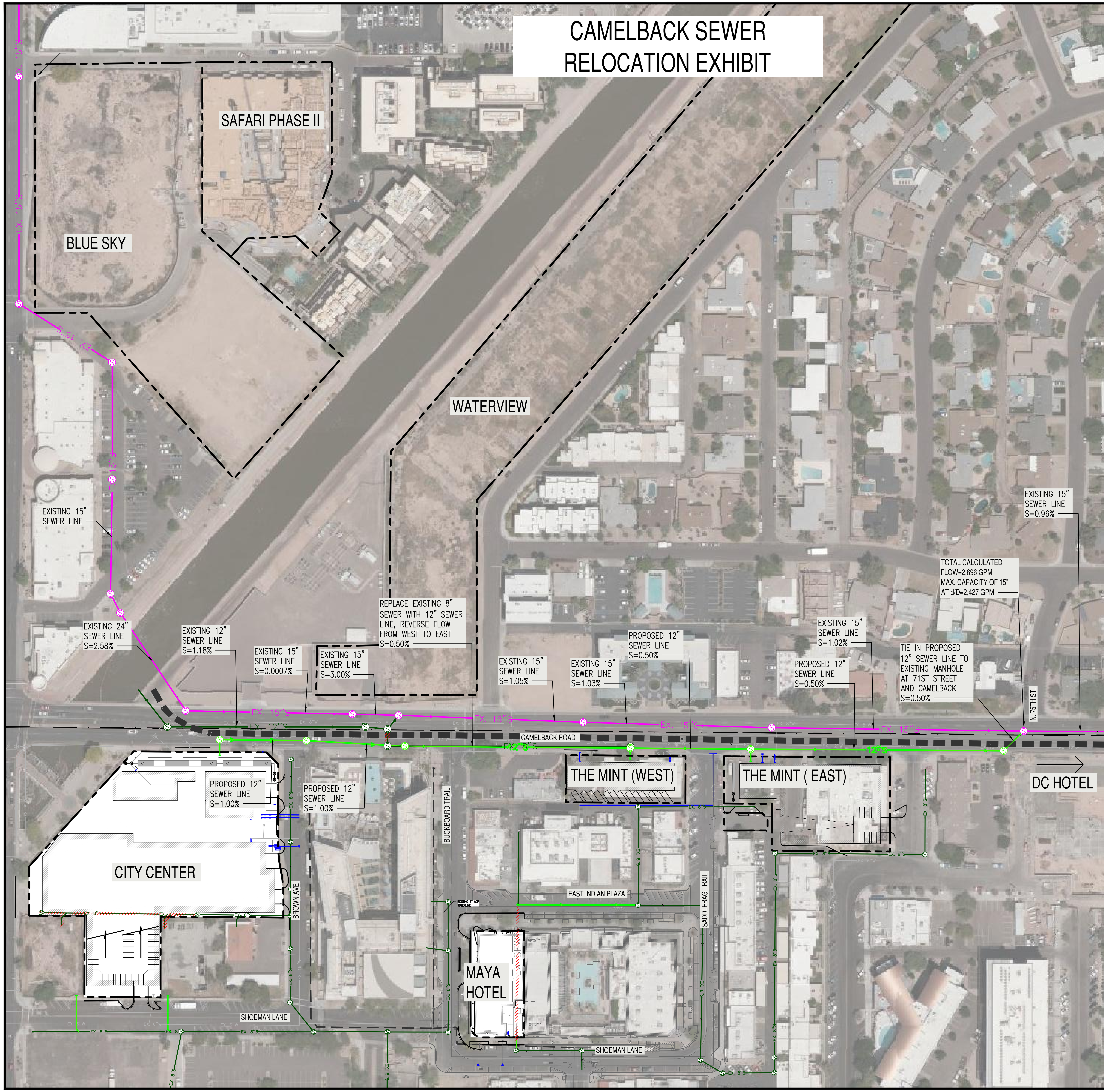
THE CITY OF SCOTTSDALE

02-FEB-20
9-ZN-2020
08/17/20

CAMELBACK SEWER RELOCATION EXHIBIT



EXISTING LEGEND

EX. S	SEWER LINE A
EX. S	SEWER LINE
EX. W	WATER LINE
IRR	IRRIGATION LINE
	STORM DRAIN LINE
CB	CATCH BASIN
S	SEWER MANHOLE
D	STORM MANHOLE
WV	WATER VALVE
WMB	WATER METER BOX
EB	ELECTRIC CABINET

PROPOSED LEGEND:

	PROPERTY LINE
X"W	WATER LINE
X"S	SEWER LINE
S	SEWER MANHOLE
	SEWER LINE ABANDONMENT

Table 8 - EXISTING 15" WEST OF 75TH ST OFFSITE FLOW AT CAMELBACK AND MILLER ROAD W/POOL BACKWASH					
Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Pool Allowance (gpm) (1)	Prorated Demand Factor (%)	Prorated Demand (gpm)
Safari Phase II	70	0.65	100	93	158
Blue Sky	750	0.55	100	94	799
Waterview	448	0.27	0	97	435
Existing Flow (2)	540	N/A	0	100	540
Total Flows	1808		200		1932

Table 9 - PROPOSED 12" WEST OF 75TH ST OFFSITE FLOW AT CAMELBACK AND MILLER ROAD W/POOL BACKWASH					
Development	Peak Flow (gpm)	Distance From Monitored MH (mi)	Pool Allowance (gpm) (1)	Prorated Demand Factor (%)	Prorated Demand (gpm)
City Center	524	N/A	100	100	624
The Mint (west)	69	N/A	0	100	69
The Mint (east)	208	N/A	0	100	208
The W and Existing Flow (2)	25	N/A	0	100	25
Total Flows	826.4		100		926

NORTH

SCALE: 1" = 60'

0' 60' 120' 180'

SUSTAINABILITY ENGINEERING GROUP

SEG

8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW. AZSEG.COM TEL. 480.588.7226 FAX 480.259.3534

Call at least two full working days before you begin excavation.
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

PROJECT: SCOTTSDALE COLLECTIVE

LOCATION

DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 07/24/2020

ISSUED FOR: PRELIMINARY REVIEW

REVISION NO.: DATE:

JOB NO.: 200226

SHEET TITLE: FIGURE 5

SHEET NO.:

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9-ZN-2020
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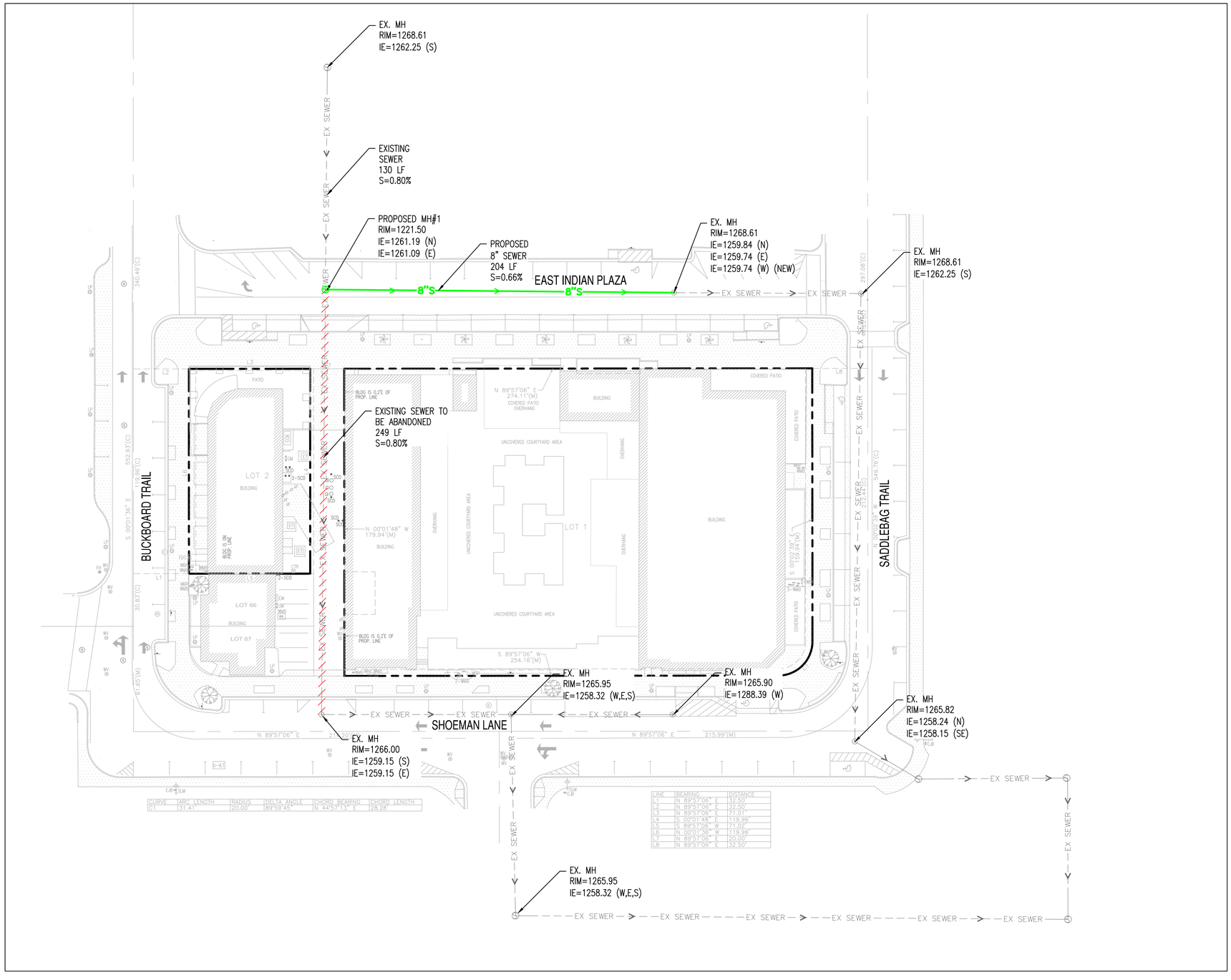
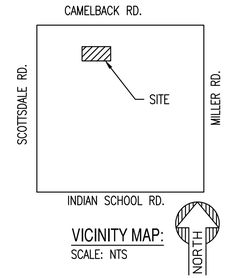
MAYA HOTEL
SEWER LINE RELOCATION EXHIBIT





VICINITY MAP:
SCALE: NTS

EXISTING LEGEND

PROPERTY LINE

EX SEWER — EXISTING SEWER LINE

PROPOSED LEGEND

PROPOSED SEWER

SEWER LINE ABANDONEMENT

NORTH

0' 30' 60' 90'

SCALE: 1" = 30'

FIGURE 6

9-ZN-2020
06/11/20

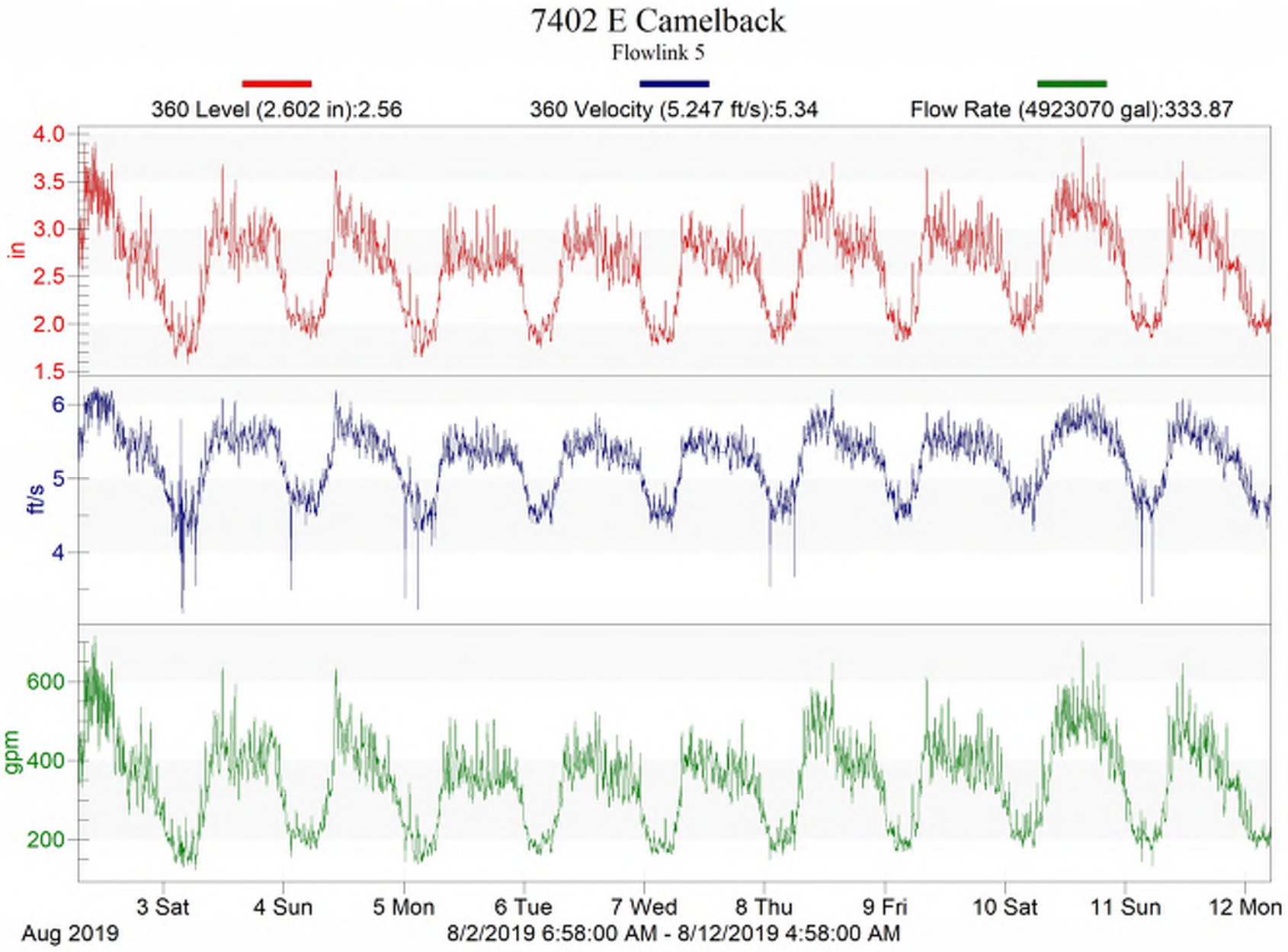
APPENDICIES

I. Camelback Sewer Monitoring
II. Bentley FlowMaster® Calculations
III. 2020-04-23 Memo from COS Water Resources
IV. Sewer Surveys

Site Name	7402 E Camelback	7402 E Camelback	7402 E Camelback	7402 E Camelback	7402 E Camelback				
Isco Quantity	Velocity	Min/Max	Velocity	Min/Max	Flow Rate	Min/Max	Flow Rate	Min/Max	Volume
Label	Min Velocity	Min/Max	Peak Velocity	Min/Max	Min Flow Rate	Min/Max	Peak Flow Rate	Min/Max	Total Flow
Units	ft/s	Date/Time	ft/s	Date/Time	gpm	Date/Time	gpm	Date/Time	gal
Resolution	0.1	N/A	0.1	N/A	0.1	N/A	0.1	N/A	0.1
Significant Digits	0	N/A	0	N/A	0	N/A	0	N/A	0
8/3/2019 0:00	3.178	3:54:00 AM	6.097	11:46:00 AM	123.787	6:26:00 AM	635.133	11:48:00 AM	482219
8/4/2019 0:00	3.493	1:30:00 AM	6.201	10:28:00 AM	155.448	1:30:00 AM	634.564	10:28:00 AM	481137
8/5/2019 0:00	3.228	2:52:00 AM	5.834	2:34:00 PM	138.016	2:52:00 AM	509.935	9:12:00 AM	452016
8/6/2019 0:00	4.367	5:30:00 AM	5.891	2:20:00 PM	160.268	3:22:00 AM	523.528	2:20:00 PM	463678
8/7/2019 0:00	4.278	5:24:00 AM	5.729	7:32:00 PM	162.497	1:36:00 AM	503.092	7:34:00 PM	460544
8/8/2019 0:00	3.534	1:06:00 AM	6.209	1:28:00 PM	149.764	1:06:00 AM	647.476	1:30:00 PM	520023
8/9/2019 0:00	4.383	2:36:00 AM	5.926	12:38:00 PM	169.704	3:36:00 AM	610.986	8:20:00 AM	500622
8/10/2019 0:00	4.288	5:38:00 AM	6.154	6:32:00 PM	179.502	3:26:00 AM	703.678	3:28:00 PM	561301
8/11/2019 0:00	3.314	3:18:00 AM	6.085	11:22:00 AM	134.766	5:28:00 AM	646.798	11:22:00 AM	494046
8/12/2019 0:00	4.326	4:20:00 AM	5.181	12:58:00 AM	175.513	2:06:00 AM	300.694	12:56:00 AM	107374

APPENDIX I

9-ZN-2020
08/11/20



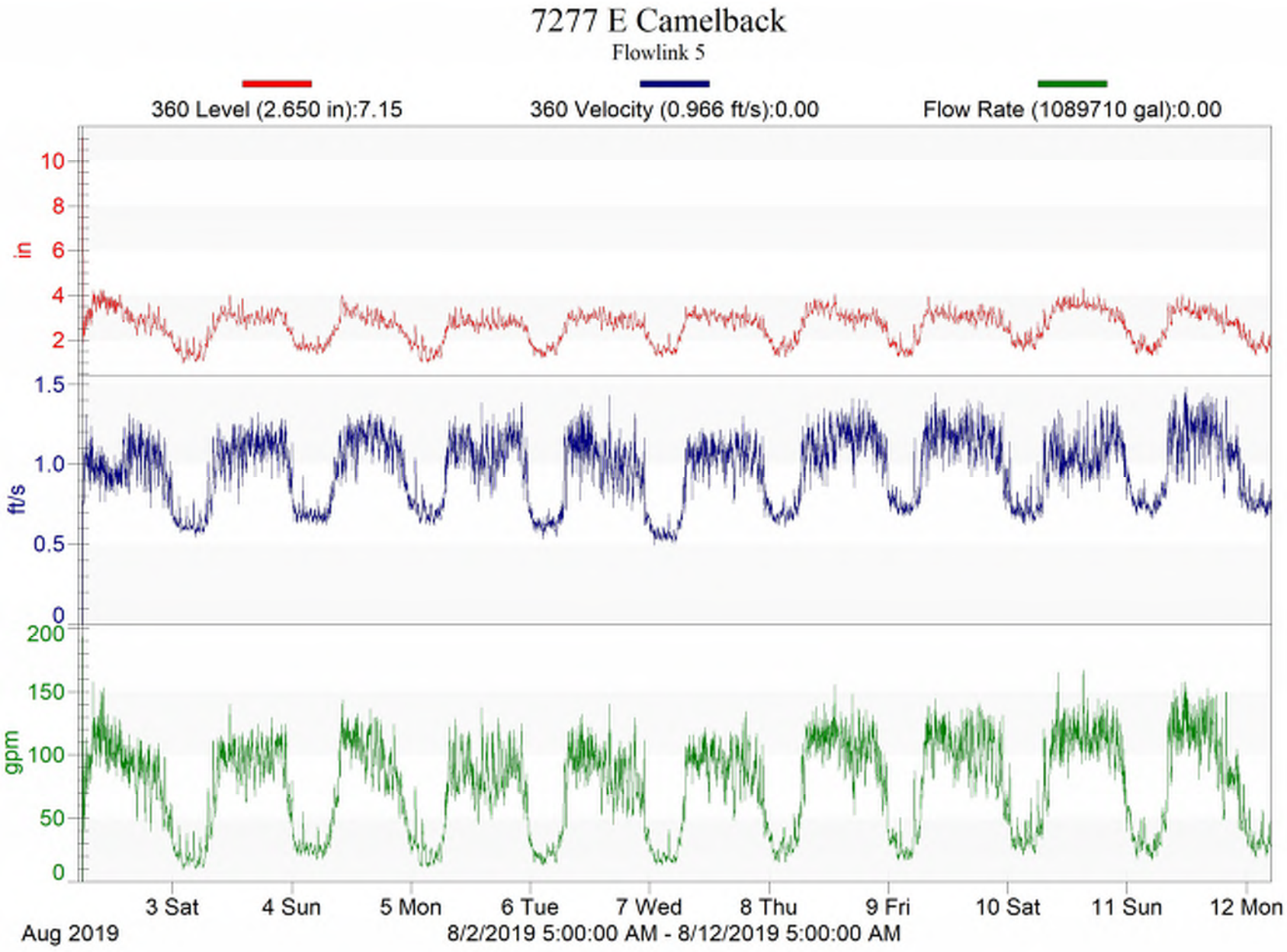
APPENDIX I

9-ZN-2020
08/11/20

Site Name	7277 E Camelback	7277 E Camelback	7277 E Camelback	7277 E Camelback	7277 E Camelback				
Isco Quantity	Velocity	Min/Max	Velocity	Min/Max	Flow Rate	Min/Max	Flow Rate	Min/Max	Volume
Label	Min Velocity	Min/Max	Peak Velocity	Min/Max	Min Flow Rate	Min/Max	Peak Flow Rate	Min/Max	Total Flow
Units	ft/s	Date/Time	ft/s	Date/Time	gpm	Date/Time	gpm	Date/Time	gal
Resolution	0.1	N/A	0.1	N/A	0.1	N/A	0.1	N/A	0.1
Significant Digits	0	N/A	0	N/A	0	N/A	0	N/A	0
8/3/2019 0:00	0.543	4:34:00 AM	1.322	5:10:00 PM	9.51	2:12:00 AM	140.096	11:30:00 AM	102108
8/4/2019 0:00	0.618	6:56:00 AM	1.332	3:46:00 PM	17.154	5:04:00 AM	143.818	10:14:00 AM	101127
8/5/2019 0:00	0.616	4:42:00 AM	1.387	10:10:00 PM	10.959	3:18:00 AM	137.644	2:16:00 PM	96922.1
8/6/2019 0:00	0.532	2:34:00 AM	1.429	3:48:00 PM	13.099	2:34:00 AM	140.233	3:48:00 PM	97206.4
8/7/2019 0:00	0.496	12:52:00 AM	1.301	6:48:00 PM	13.007	2:30:00 AM	134.45	7:18:00 PM	100952
8/8/2019 0:00	0.607	3:18:00 AM	1.411	4:48:00 PM	15.14	3:20:00 AM	155.711	1:14:00 PM	121226
8/9/2019 0:00	0.674	3:10:00 AM	1.444	9:24:00 AM	16.633	1:56:00 AM	144.611	9:24:00 AM	120365
8/10/2019 0:00	0.624	3:26:00 AM	1.399	4:00:00 PM	21.07	3:10:00 AM	167.371	3:16:00 PM	126226
8/11/2019 0:00	0.662	5:00:00 AM	1.481	11:56:00 AM	16.827	5:00:00 AM	157.926	11:48:00 AM	116034
8/12/2019 0:00	0.665	3:50:00 AM	0.929	12:38:00 AM	18.552	2:00:00 AM	58.321	12:44:00 AM	15276.3

APPENDIX I

9-ZN-2020
08/11/20



APPENDIX I

9-ZN-2020
08/11/20

15" Sewer at .01 ft/ft, d/D=0.7

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	10.50	in
Diameter	15	in

Results

Discharge	2427.3	gal/min
Flow Area	0.92	ft²
Wetted Perimeter	2.48	ft
Hydraulic Radius	4.44	in
Top Width	1.15	ft
Critical Depth	0.94	ft
Percent Full	70.0	%
Critical Slope	0.00832	ft/ft
Velocity	5.89	ft/s
Velocity Head	0.54	ft
Specific Energy	1.41	ft
Froude Number	1.16	
Maximum Discharge	3118.69	gal/min
Discharge Full	2899.2	gal/min
Slope Full	0.00701	ft/ft
Flow Type	SuperCritical	

15" CAMELBACK SEWER
W/O POOL BACKWASH

APPENDIX II

15" Sewer at .01 ft/ft, d/D=0.8

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

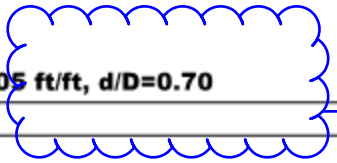
Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	12.00	in
Diameter	15	in

Results

Discharge	2833.9	gal/min
Flow Area	1.05	ft²
Wetted Perimeter	2.77	ft
Hydraulic Radius	4.56	in
Top Width	1.00	ft
Critical Depth	1.01	ft
Percent Full	80.0	%
Critical Slope	0.00974	ft/ft
Velocity	6.00	ft/s
Velocity Head	0.56	ft
Specific Energy	1.56	ft
Froude Number	1.03	
Maximum Discharge	3118.69	gal/min
Discharge Full	2899.2	gal/min
Slope Full	0.00955	ft/ft
Flow Type	SuperCritical	

15" CAMELBACK SEWER
W/ POOL BACKWASH

APPENDIX II



should be 0.65

12" Sewer at 0.005 ft/ft, d/D=0.70

Project Description	
Friction Method	Manning Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.013
Channel Slope	0.005 ft/ft
Normal Depth	8.4 in
Diameter	12.0 in
Results	
Discharge	946.64 gpm
Flow Area	0.6 ft²
Wetted Perimeter	2.0 ft
Hydraulic Radius	3.6 in
Top Width	0.92 ft
Critical Depth	7.4 in
Percent Full	70.0 %
Critical Slope	0.007 ft/ft
Velocity	3.59 ft/s
Velocity Head	0.20 ft
Specific Energy	0.90 ft
Froude Number	0.791
Maximum Discharge	1,216.27 gpm
Discharge Full	1,130.67 gpm
Slope Full	0.004 ft/ft
Flow Type	Subcritical
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	70.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	8.4 in
Critical Depth	7.4 in
Channel Slope	0.005 ft/ft
Critical Slope	0.007 ft/ft

12" PROPOSED CAMELBACK SEWER W/O POOL BACKWASH

12" Sewer at 0.005 ft/ft, d/D=0.80

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data	
Roughness Coefficient	0.013
Channel Slope	0.005 ft/ft
Normal Depth	9.6 in
Diameter	12.0 in

Results	
Discharge	1,105.19 gpm
Flow Area	0.7 ft²
Wetted Perimeter	2.2 ft
Hydraulic Radius	3.7 in
Top Width	0.80 ft
Critical Depth	8.1 in
Percent Full	80.0 %
Critical Slope	0.008 ft/ft
Velocity	3.66 ft/s
Velocity Head	0.21 ft
Specific Energy	1.01 ft
Froude Number	0.702
Maximum Discharge	1,216.27 gpm
Discharge Full	1,130.67 gpm
Slope Full	0.005 ft/ft
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	70.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	9.6 in
Critical Depth	8.1 in
Channel Slope	0.005 ft/ft
Critical Slope	0.008 ft/ft

12" PROPOSED CAMELBACK SEWER W/O POOL BACKWASH

12" Sewer at 0.005 ft/ft, d/D=1.0

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data	
Roughness Coefficient	0.013
Channel Slope	0.005 ft/ft
Normal Depth	12.0 in
Diameter	12.0 in

Results	
Discharge	1,130.67 gpm
Flow Area	0.8 ft²
Wetted Perimeter	3.1 ft
Hydraulic Radius	3.0 in
Top Width	0.00 ft
Critical Depth	8.2 in
Percent Full	100.0 %
Critical Slope	0.008 ft/ft
Velocity	3.21 ft/s
Velocity Head	0.16 ft
Specific Energy	1.16 ft
Froude Number	(N/A)
Maximum Discharge	1,216.27 gpm
Discharge Full	1,130.67 gpm
Slope Full	0.005 ft/ft
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	70.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	12.0 in
Critical Depth	8.2 in
Channel Slope	0.005 ft/ft
Critical Slope	0.008 ft/ft

8" Pipe at 0.0033 ft/ft; d/D=0.8

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00330	ft/ft
Normal Depth	6.40	in
Diameter	8	in

Results

Discharge	304.5	gal/min
Flow Area	0.30	ft²
Wetted Perimeter	1.48	ft
Hydraulic Radius	2.43	in
Top Width	0.53	ft
Critical Depth	0.39	ft
Percent Full	80.0	%
Critical Slope	0.00765	ft/ft
Velocity	2.27	ft/s
Velocity Head	0.08	ft
Specific Energy	0.61	ft
Froude Number	0.53	
Maximum Discharge	335.14	gal/min
Discharge Full	311.6	gal/min
Slope Full	0.00315	ft/ft
Flow Type	SubCritical	

8" ENTERTAINMENT DISTRICT
SEWER W/ POOL BACKWASH

APPENDIX II

12" Sewer at .0068 ft/ft; d/D= 0.65

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00680	ft/ft
Normal Depth	7.80	in
Diameter	12	in

Results

Discharge	997.4	gal/min
Flow Area	0.54	ft²
Wetted Perimeter	1.88	ft
Hydraulic Radius	3.46	in
Top Width	0.95	ft
Critical Depth	0.64	ft
Percent Full	65.0	%
Critical Slope	0.00719	ft/ft
Velocity	4.11	ft/s
Velocity Head	0.26	ft
Specific Energy	0.91	ft
Froude Number	0.96	
Maximum Discharge	1418.40	gal/min
Discharge Full	1318.6	gal/min
Slope Full	0.00389	ft/ft
Flow Type	SubCritical	

12" 6TH AVENUE SEWER

W/O POOL BACKWASH

APPENDIX II

12"Sewer at .0068 ft/ft; d/D=0.8

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00680	ft/ft
Normal Depth	9.60	in
Diameter	12	in

Results

Discharge	1288.9	gal/min
Flow Area	0.67	ft²
Wetted Perimeter	2.21	ft
Hydraulic Radius	3.65	in
Top Width	0.80	ft
Critical Depth	0.73	ft
Percent Full	80.0	%
Critical Slope	0.00843	ft/ft
Velocity	4.26	ft/s
Velocity Head	0.28	ft
Specific Energy	1.08	ft
Froude Number	0.82	
Maximum Discharge	1418.40	gal/min
Discharge Full	1318.6	gal/min
Slope Full	0.00650	ft/ft
Flow Type	SubCritical	

12" 6TH AVENUE SEWER
W/ POOL BACKWASH

APPENDIX II

8" Sewer at .0052 ft/ft; d/D=0.65

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00520	ft/ft
Normal Depth	5.20	in
Diameter	8	in

Results

Discharge	295.8	gal/min
Flow Area	0.24	ft²
Wetted Perimeter	1.25	ft
Hydraulic Radius	2.31	in
Top Width	0.64	ft
Critical Depth	0.38	ft
Percent Full	65.0	%
Critical Slope	0.00757	ft/ft
Velocity	2.74	ft/s
Velocity Head	0.12	ft
Specific Energy	0.55	ft
Froude Number	0.79	
Maximum Discharge	420.70	gal/min
Discharge Full	391.1	gal/min
Slope Full	0.00298	ft/ft
Flow Type	SubCritical	

8" MAYA RELOCATED SEWER
W/O POOL BACKWASH

APPENDIX II

12" Sewer at 0.01 ft/ft; d/D = 0.65

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	7.80	in
Diameter	15	in

Results

Discharge	1548.5	gal/min
Flow Area	0.64	ft²
Wetted Perimeter	2.01	ft
Hydraulic Radius	3.84	in
Top Width	1.25	ft
Critical Depth	0.75	ft
Percent Full	52.0	%
Critical Slope	0.00633	ft/ft
Velocity	5.35	ft/s
Velocity Head	0.44	ft
Specific Energy	1.09	ft
Froude Number	1.31	
Maximum Discharge	3118.69	gal/min
Discharge Full	2899.2	gal/min
Slope Full	0.00285	ft/ft
Flow Type	SuperCritical	

12" CAMELBACK ROAD
PARALLEL SEWER W/O POOL
BACKWASH

APPENDIX II

12" Sewer at 0.01 ft/ft; d/D = 0.8

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	9.60	in
Diameter	15	in

Results

Discharge	2144.6	gal/min
Flow Area	0.83	ft²
Wetted Perimeter	2.32	ft
Hydraulic Radius	4.29	in
Top Width	1.20	ft
Critical Depth	0.89	ft
Percent Full	64.0	%
Critical Slope	0.00755	ft/ft
Velocity	5.76	ft/s
Velocity Head	0.52	ft
Specific Energy	1.32	ft
Froude Number	1.22	
Maximum Discharge	3118.69	gal/min
Discharge Full	2899.2	gal/min
Slope Full	0.00547	ft/ft
Flow Type	SuperCritical	

12" CAMELBACK ROAD
PARALLEL SEWER W/ POOL
BACKWASH

APPENDIX II

From: Dillon, Levi
To: Doug Mann
Cc: Ali Fakih
Subject: RE: Stockdale Collective Master Plan
Date: Thursday, April 23, 2020 7:04:13 PM
Attachments: image003.png
image004.png
image005.png

[EXTERNAL EMAIL]

Doug, here is some additional guidance on sewer analysis. -Levi

Additional guidance on sewer flow capacity analysis:

1. If clear outliers on flow monitoring data to be used are present, make the case with Water Resources and obtain approval to use an alternate peak from the data. Sometimes using a percentile of the flow data is a valid method for filtering out outliers.
2. 50% of the total pool backwash flows for all developments pending construction or case approval within the sewer basin being analyzed should be applied at the most upstream applicable point(s) in the analysis reach (Safari and Bluesky in this case)
3. d/D max can be 0.80 with pool backwash flows incorporated as these are short-term conditions (but accommodations for I&I still need to be made so this is a firm upper limit)
4. d/D max without pool backwash flows should adhere to DS&PM (0.65/0.70) unless approved otherwise by Water Resources…some accommodations are sometimes made with d/D max where I&I potential is low i.e. basin area, geometry, and topography; and build-out conditions in the basin are apparent.(likely not applicable in this case)
5. Pending development flow peaking factors for approved but pending developments (but not including the subject development) can be reduced in direct linear proportion to their distance from the critical point of hydraulic analysis . **A maximum peaking factor reduction of 10% at 5,280ft and further can be applied** e.g. a PF of 4.5 would become 4.05 at a mile or more out, or 4.28 at half-a mile out.
    - This is intended to address some attenuation on short-term peak flows originating in pending projects some distance away.
    - This reduction only applies to approved developments that are not yet discharging flows to the collection system but need to be addressed in the current capacity analysis.
    - The distance to the development should be the edge of the parcel at the furthest upstream point.
    - If a reach has equal critical hydraulic conditions the point of beginning measurement for distance is the most downstream point of the reach.

From: Dillon, Levi
Sent: Thursday, April 23, 2020 2:33 PM
To: Doug Mann <doug@azseg.com>
Cc: Ali Fakih <ALI@azseg.com>
Subject: RE: Stockdale Collective Master Plan

Please remove Ceasar's flow from Camelback analysis. including Macerich flows was an error in the Atwell (Waterview) report caused in-part by a last-minute decision by Macerich to not include the analysis of Phase 2 in their submittal. The capacity for the hotel is approved but it goes to Goldwater. Thanks, Levi

EXECUTIVE SUMMARY

This report presents details of future developments that are yet to be master planned with respect to wastewater infrastructure. This information is provided for reference only.
This report is intended to present and analyze the necessary water and sewer infrastructure for the hotel portion only. This revised Basis of Design (BOD) report will be for the Caesar's Republic Scottsdale, a hotel development on Lot 2 of Scottsdale Fashion Square Amended (BK 1201, PG 8). The report will address the City comments dated July 18, 2019 & January 15, 2020, and will provide a summary of the sanitary sewer analysis for the proposed hotel.

In the future, the ultimate build-out for Lot 2 will consist of the Caesar's Republic Scottsdale, 2- four story 287,500 square foot office buildings, and 2-one story 10,000 square foot restaurants. At the time of the future build-out, a separate BOD report will be required when an application for a design review on the remaining portion of Lot 2 is presented to the City of Scottsdale.

From: Doug Mann <doug@azseg.com>
Sent: Thursday, April 23, 2020 1:36 PM
To: Dillon, Levi <LDillon@Scottsdaleaz.gov>
Cc: Ali Fakih <ALI@azseg.com>
Subject: RE: Stockdale Collective Master Plan

⚠External Email: Please use caution if opening links or attachments!

So the Master Plan will contain the following tables for your comment. Scottsdale Collective has multiple scenarios for each area so I evaluated a max/min flow in Tables 5 and 6.
My flows for the three proposed sites are per DS+PM. The 5 offsite entitled developments are close to the numbers you provided below. Doug

---

From: Dillon, Levi <LDillon@Scottsdaleaz.gov>
Sent: Thursday, April 23, 2020 1:05 PM
To: Doug Mann <doug@azseg.com>
Cc: Ali Fakih <ALI@azseg.com>
Subject: RE: Stockdale Collective Master Plan

[EXTERNAL EMAIL]

Doug, please give me a call to discuss further. While we want to be accurate and have assurance that any infrastructure modifications are justified, we also need to make sure that there is a consistent approach in analysis. While using average water meter data and DS&PM peaking factors could be technically valid it is not the standard analysis approach outlined in DS&PM. It would be interesting to see how it compares, but I cannot allow conclusions to be based on this approach at this time.

Given the following flows into Camelback lets discuss how you're thinking the analysis will proceed along with the conclusions for The Collective:

1. Existing flow peak 703gpm
2. Safari II: 170gpm (includes 100gpm of pool backwash)
3. Don and Charlie's Hotel/Restaurant: 184gpm (no pool backwash*)
4. Waterview Hotel and Residential: 548gpm (includes 100gpm of pool backwash)
5. Bluesky (Phase 1 and 2): 750gpm (no pool backwash*)
6. Total flow: 2,355gpm

7. Resultant d/D: 0.69 with 15" sewer @ 1% (at point east/downstream of Don and Charlie's)

*Only 50% of the total basin pool backwash needs to be accounted for with capacity analysis i.e. 200gpm

Thanks,

Levi C. Dillon, P.E. | *Sr. Water Resources Engineer*

SCOTTSDALE WATER

"Water Sustainability through Stewardship, Innovation and People"

Contact Info
Direct: (480) 312-5319
Main office: (480) 312-5685
Fax: (480) 312-5615
Mailing/Office Address
Water Resources Administration
9379 E. San Salvador Dr.
Scottsdale, AZ. 85258

Sending me an attachment over 5MB? Please use the link below:
https://securemail.scottsdaleaz.gov/dropbox/ldillon@scottsdaleaz.gov

---

From: Dillon, Levi
Sent: Thursday, April 23, 2020 8:46 AM
To: Doug Mann <doug@azseg.com>
Cc: Ali Fakih <ALI@azseg.com>
Subject: RE: Stockdale Collective Master Plan

I'll give you a call around 10am. This data won't be hard to get just want to discuss a few things. Thanks, Levi

---

From: Doug Mann <doug@azseg.com>
Sent: Thursday, April 23, 2020 8:42 AM
To: Dillon, Levi <LDillon@Scottsdaleaz.gov>
Cc: Ali Fakih <ALI@azseg.com>
Subject: RE: Stockdale Collective Master Plan

⚠ **External Email: Please use caution if opening links or attachments!**

Hi Levi – it's Thursday. I'm at work. We need to your expert direction on this. Please call. Doug

---

From: Doug Mann
Sent: Friday, April 17, 2020 1:42 PM
To: Dillon, Levi <LDillon@Scottsdaleaz.gov>
Cc: Ali Fakih <ALI@azseg.com>
Subject: Stockdale Collective Master Plan

Hey Levi – as you recall, the Waterview Report concluded that additional flow from Blue Sky would exceed the city's d/D criteria on the 15" Camelback sewer.

So, it is obvious the three projects Stockdale Partners are master planning will not help this situation by using the DS+PM unit demands.

I propose we do a sanity check here and look at the yearly metered demands from Camelview Optima as that project is high-end residential and nearly fully occupied. Stockdale's product appears to have some similar residential component. For resort hotel land use, we can evaluate the metered demands for the W Hotel vs. the DS+PM. . If you can provide me the monthly metered demands for 2019 and pull the two design reports, I can evaluate the data and make a recommendation to go forward.

As it stands now, the Camelback sewer needs to be 18" or a relief sewer provided. Also beware that is a large box culvert under Camelback and any further pipe construction would be difficult, deep and costly.
Thanks for any assistance you can provide and have a good weekend.

Douglas L. Mann
Senior Project Manager

SEG

8280 E. Gelding Dr., Suite 101,
Scottsdale, AZ 85260
480.588.7226

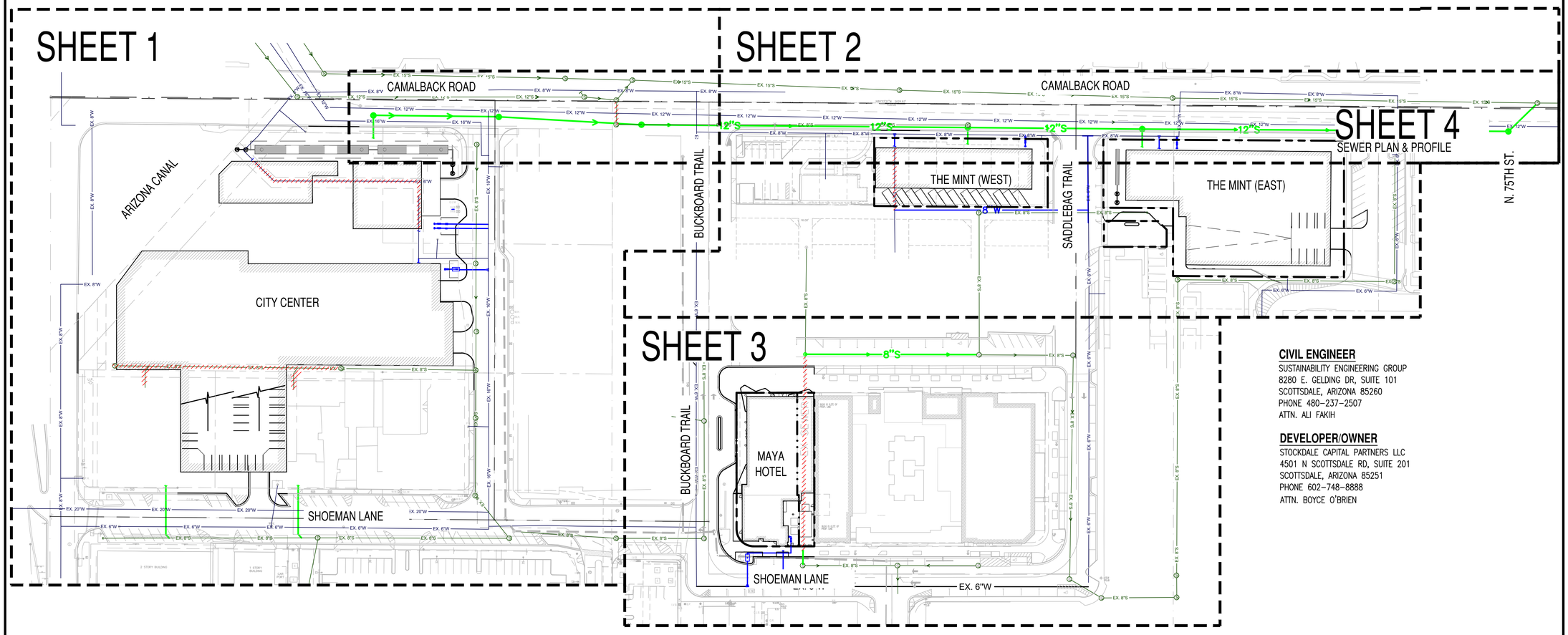
D 480.237.2537
M 480.265.5349
doug@azseg.com

"LEEDing and Developing Smart Projects"

APPENDIX III

SHEET UPDATED 9/10/20, SEE LAST PAGES OF REPORT

OVERALL
UTILITY EXHIBIT & KEY MAP



NOTE:

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2. MANHOLES 3 THROUGH 7 RIMS HAS BEEN SET BASED ON QUARTER SECTION MAP.
3. EXISTING MANHOLE AT THE CONNECTION POINT INVERTS AND RIM WAS SET BASED ON QUARTER SECTION MAP.

EXISTING LEGEND

EX. S	SEWER LINE
EX. W	WATER LINE
IRR	IRRIGATION LINE
	STORM DRAIN LINE
CB	CATCH BASIN
S	SEWER MANHOLE
D	STORM MANHOLE
WV	WATER VALVE
WMB	WATER METER BOX
ECB	ELECTRIC CABINET

PROPOSED LEGEND:

	PROPERTY LINE
X"W	WATER LINE
X"S	SEWER LINE
WM	WATER METER
	GATE VALVE
	T.S.V.B.&C.
	BACK FLOW PREVENTER
	CAP
S	SEWER MANHOLE
	WATER/SEWER LINE ABANDONMENT

NORTH

OVERALL UTILITY EXHIBIT & KEY MAP

0' 60' 120' 180'

SCALE: 1" = 60'

CIVIL ENGINEER
SUSTAINABILITY ENGINEERING GROUP
8280 E. GELDING DR, SUITE 101
SCOTTSDALE, ARIZONA 85260
PHONE 480-237-2507
ATTN. ALI FAKIH

DEVELOPER/OWNER
STOCKDALE CAPITAL PARTNERS LLC
4501 N SCOTTSDALE RD, SUITE 201
SCOTTSDALE, ARIZONA 85251
PHONE 602-748-8888
ATTN. BOYCE O'BRIEN

PRELIMINARY
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CONSTRUCTION

SUSTAINABILITY ENGINEERING GROUP
SEG
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW. AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

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In Maricopa County: (602) 263-1100

PROJECT: SCOTTSDALE COLLECTIVE
LOCATION

DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 08/07/2020
ISSUED FOR: ZONING

REVISION NO.:	DATE:
1	
2	
3	
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JOB NO.: 200226

SHEET TITLE: UTILITY EXHIBIT KEY MAP

SHEET NO.:

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9-ZN-2020
08/11/20

SHEET UPDATED 9/10/20, SEE LAST PAGES OF REPORT

CITY CENTER
PRELIMINARY UTILITY EXHIBIT

CAMELBACK ROAD

SSMH RIM=1272.30 INV=1263.53 N INV=1263.64 E INV=1263.41 S

SSMH INV=1260.04 NW INV=1260.00 E

PROPOSED NEW 12" SEWER LINE @1.00%

EXISTING 16" D.I.P. WATER LINE

EXISTING 8" A.C.P. WATER LINE

144" R.C.P. STORM LINE

SSMH INV=1259.80 W INV=1259.68 E

SSMH INV=1259.63 W INV=1259.63 E INV=1259.71 NW

SSMH RIM=1271.00 INV=1261.11 S INV=1258.60 W N.F. NE

SSMH INV=1258.50 SW INV=1257.32 W INV=1257.25 E

EXISTING 8" V.C.P LINE AND MANHOLE TO BE REMOVED

MH-3 RIM=1270.69 IE=1261.26 W IE=1261.16 E

EXISTING 8" V.C.P SEWER LINE TO BE REPLACED WITH 15" SEWER LINE

MATCHLINE REFER TO SHEET 2

BUCKBOARD TRAIL

EXISTING FIRE HYDRANT

PROPOSED BUILDING FIRE CONNECTION

14.95' U.U.E.

MH-1 RIM=1275.87 IE=1264.50 W IE=1264.60 S

MH-2 RIM=1272.17 IE=1263.03 W IE=1262.93 E

PROPOSED NEW 12" SEWER LINE @1.00%

SSMH RIM=1270.51 INV=1261.36 E INV=1261.26 N

EXISTING FIRE HYDRANT

PROPOSED SEWER SERVICE CONNECTION

EXISTING 8" C.I.P. WATER LINE

EXISTING 6" A.C.P. WATER LINE TO BE REMOVED

12' WATER EASEMENT TO BE ABANDONED

PROPOSED IRRIGATION WATER METER

PROPOSED 2" SERVICE WATER METER

PROPOSED BUILDING FIRE CONNECTION

EXISTING FIRE HYDRANT

PROPOSED 3" SERVICE WATER METER

EXISTING 8" V.C.P SEWER LINE

Need to provide required coordination information on this.

10' U.U.E.

SSMH RIM=1272.58 INV=1266.09

EXISTING 8" V.C.P SEWER LINE TO BE REMOVED

SSMH RIM=1269.64 INV=1263.53 N INV=1263.64 E INV=1263.41 S

16' P.U.E. & IRRIGATION EASEMENT

EXISTING 8" V.C.P SEWER LINE

BROWN AVE

EXISTING 16" D.I.P. WATER LINE

EXISTING 18" HDPE STORM LINE

SCOTTSDALE ROAD

EXISTING SEWER SERVICE LINE TO BE ABANDONED

5' U.E.

APN: 173-41-006A

33' R.O.W.

7' ROAD WAY & P.U.E

PROPOSED SERVICE RELOCATION PER ON THE WATERFRONT CIVIL IMPROVEMENT PLANS CASE NO. 59-DR-2014#2

20' P.U.E.

EXISTING SEWER SERVICE LINE TO BE ABANDONED

UPTON CONDOMINIUM APN: 173-41-323

APN: 173-41-002

EXISTING FIRE HYDRANT

5' P.U.E

EXISTING FIRE HYDRANT

PROPOSED NEW LOCATION FOR SEWER SERVICE CONNECTION

1' V.N.E

SSMH RIM=1269.25 INV=1262.86 N INV=1262.44 SE

EXISTING FIRE HYDRANT

EXISTING 20" D.I.P. WATER LINE

SHOEMAN LANE

EXISTING 6" A.C.P. WATER LINE

SSMH RIM=1270.03 INV=1263.18 S INV=1262.91 E&W

EXISTING 8" V.C.P SEWER LINE

SSMH RIM=1268.65 INV=1261.62 NW INV=1261.16 E&W

MATCHLINE REFER TO SHEET 3

NOTE:

1. MANHOLES 1 AND 2 RIMS HAS BEEN SET BASED ON THE SURVEY RECEIVED FROM MLC SERVICES,LLC.
2. MANHOLES 3 THROUGH 7 RIMS HAS BEEN SET BASED ON QUARTER SECTION MAP.
3. EXISTING MANHOLE AT THE CONNECTION POINT INVERTS AND RIM WAS SET BASED ON QUARTER SECTION MAP.

EXISTING LEGEND

- EX. S — SEWER LINE
- EX. W — WATER LINE
- IRR — IRRIGATION LINE
- STORM DRAIN LINE
- CB — CATCH BASIN
- S — SEWER MANHOLE
- D — STORM MANHOLE
- WV — WATER VALVE
- WMB — WATER METER BOX
- ECB — ELECTRIC CABINET

PROPOSED LEGEND:

- PROPERTY LINE
- X"W — WATER LINE
- X"S — SEWER LINE
- WM — WATER METER
- GATE VALVE
- T.S.V.B.&C.
- BACK FLOW PREVENTER
- CAP
- SEWER MANHOLE
- WATER/SEWER LINE ABANDONMENT

NORTH

CITY CENTER

0' 30' 60' 90'

SCALE: 1" = 30'

SUSTAINABILITY ENGINEERING GROUP
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW. AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

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PROJECT: CITY CENTER
LOCATION: NWC SCOTTSDALE RD & CAMELBACK RD

DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 07/24/2020

ISSUED FOR: PRELIMINARY REVIEW

REVISION NO.:	DATE:
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JOB NO.: 200226

SHEET TITLE: UTILITY EXHIBIT

SHEET NO.: 1

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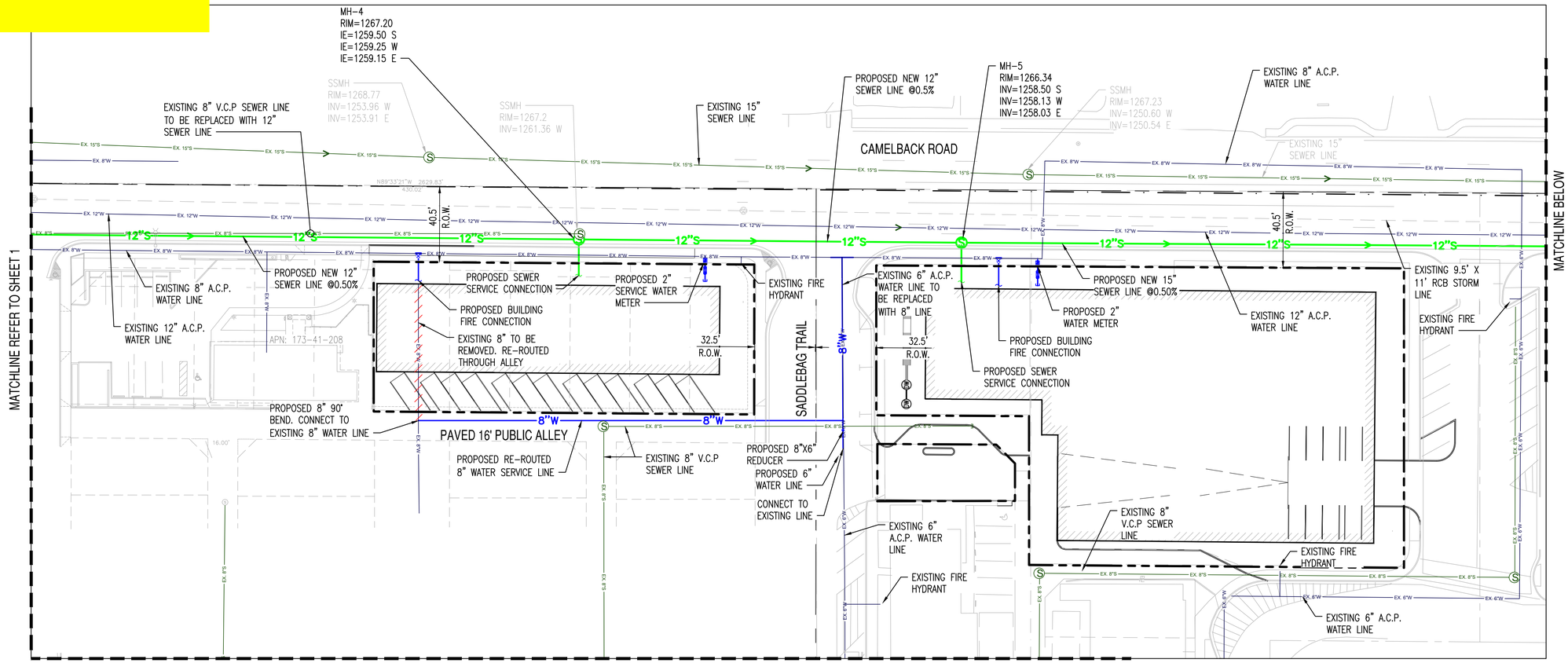
LOCATION: Z:\SHARED\PROJECTS\NELSEN PARTNERS\MASTER PLAN-SCOTTSDALE-200409\11 CAD (SEG)\11.2 ENTITLEMENT-PLANNING\UTILITY EXHIBIT.DWG SAVED BY: TADAMON.MOHAMMED DATE: 9-IN-2020 08/11/20

SHEET UPDATED 9/10/20, SEE LAST PAGES OF REPORT

THE MINT
PRELIMINARY UTILITY EXHIBIT



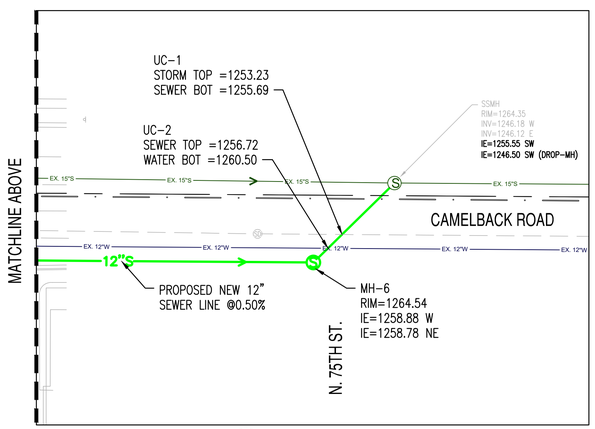
MATCHLINE REFER TO SHEET 3

NORTH

THE MINT

0' 30' 60' 90'

SCALE: 1" = 30'



NORTH

PLAN VIEW

0' 30' 60' 90'

SCALE: 1" = 30'

NOTE:

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EX. W	WATER LINE
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	STORM DRAIN LINE
CB	CATCH BASIN
S	SEWER MANHOLE
D	STORM MANHOLE
WV	WATER VALVE
WMB	WATER METER BOX
ECB	ELECTRIC CABINET

PROPOSED LEGEND:

	PROPERTY LINE
X"W	WATER LINE
X"S	SEWER LINE
WM	WATER METER
	GATE VALVE
	T.S.V.B.&C.
	BACK FLOW PREVENTER
	CAP
S	SEWER MANHOLE
	WATER/SEWER LINE ABANDONMENT

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CONSTRUCTION

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WWW.AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

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In Maricopa County: (602) 263-1100

PROJECT	LOCATION
THE MINT	CAMELBACK RD & SADDLEBAG TRAIL

DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 08/07/2020

ISSUED FOR: PRELIMINARY REVIEW

REVISION NO.:	DATE:
1	
2	
3	
4	

JOB NO.: 200226

SHEET TITLE: UTILITY EXHIBIT

SHEET NO.: 2

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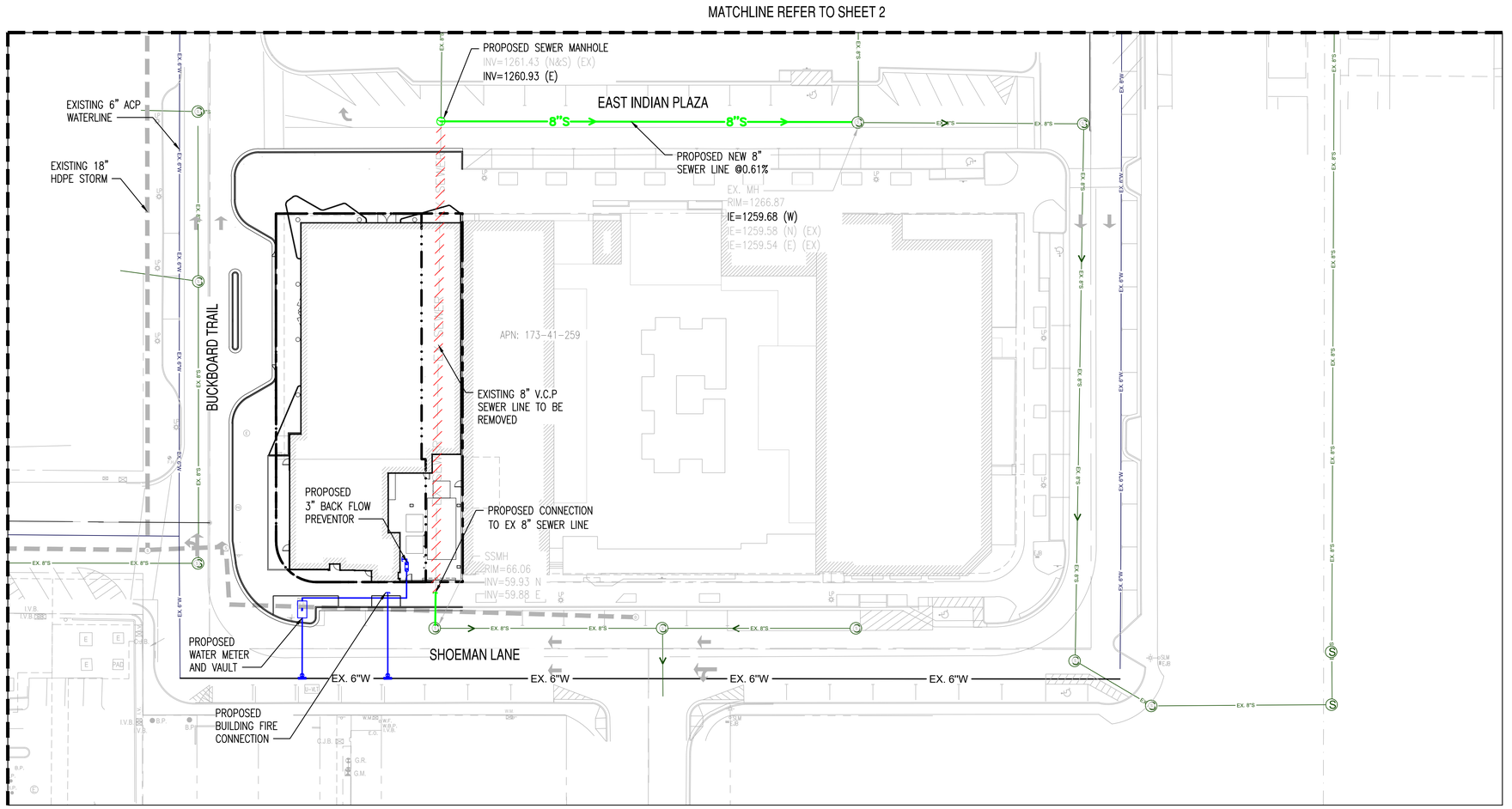
9-ZN-2020
08/11/20

SHEET UPDATED 9/10/20, SEE LAST PAGES OF REPORT

MAYA HOTEL
PRELIMINARY UTILITY EXHIBIT



EXISTING LEGEND

EX. S	SEWER LINE
EX. W	WATER LINE
IRR	IRRIGATION LINE
	STORM DRAIN LINE
CB	CATCH BASIN
S	SEWER MANHOLE
D	STORM MANHOLE
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PROPOSED LEGEND:

	PROPERTY LINE
X"W	WATER LINE
X"S	SEWER LINE
WM	WATER METER
	GATE VALVE
	T.S.V.B.&C.
	BACK FLOW PREVENTER
	CAP
S	SEWER MANHOLE
	WATER/SEWER LINE ABANDONMENT

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NORTH

MAYA HOTEL

0' 30' 60' 90'

SCALE: 1" = 30'

PRELIMINARY
NOT FOR
CONSTRUCTION

SEG SUSTAINABILITY ENGINEERING GROUP
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

Call at least two full working days before you begin excavation.
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

PROJECT: MAYA HOTEL
LOCATION: NWC EAST INDIAN PLAZA & BUCKBOARD TRAIL

DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 08/07/2020

ISSUED FOR: PRELIMINARY REVIEW

REVISION NO.:	DATE:
1	
2	
3	
4	

JOB NO.: 200226

SHEET TITLE: UTILITY EXHIBIT

SHEET NO.: 3

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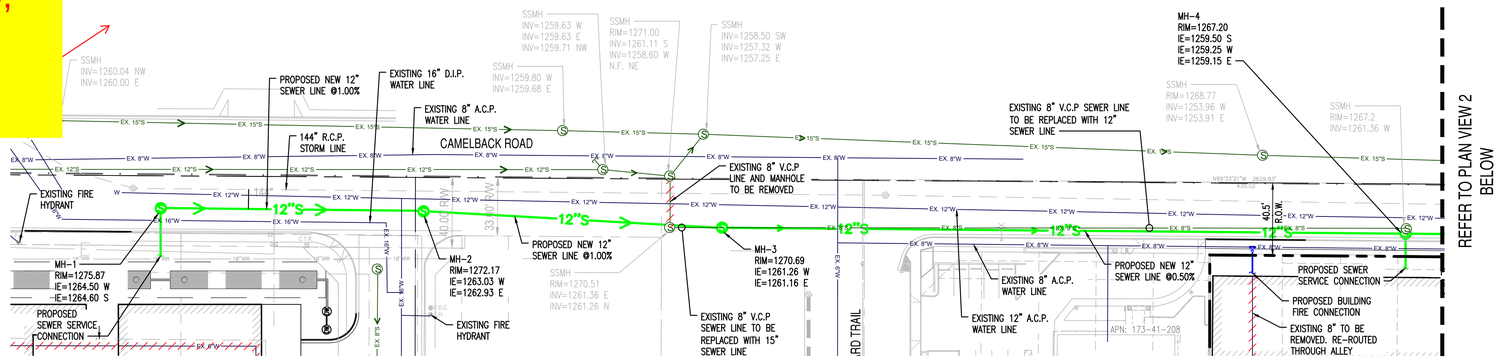
9-ZN-2020
08/17/20

SHEET UPDATED 9/10/20, SEE LAST PAGES OF REPORT

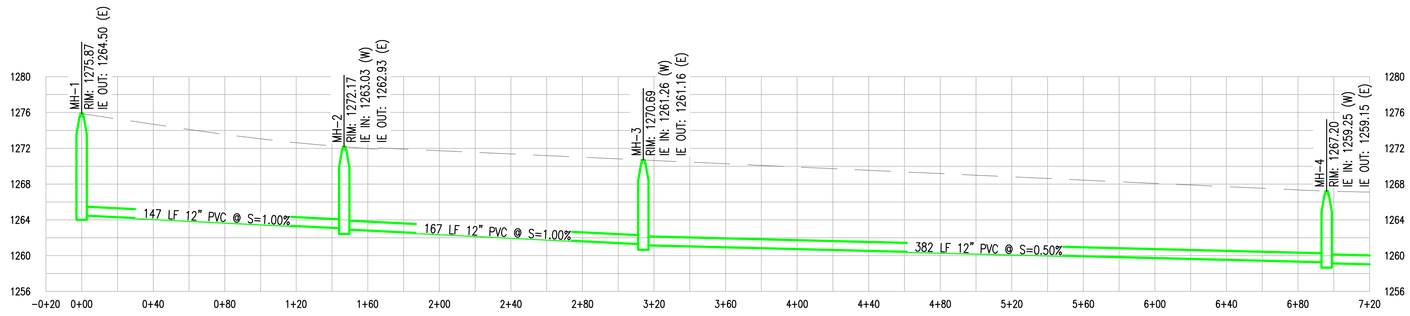


NORTH

SEWER PLAN VIEW 1

0' 40' 80' 120'

SCALE: 1" = 40'



SEWER PROFILE VIEW 1

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

NOTE:

1. MANHOLES 1 AND 2 RIMS HAS BEEN SET BASED ON THE SURVEY RECEIVED FROM MLC SERVICES,LLC.
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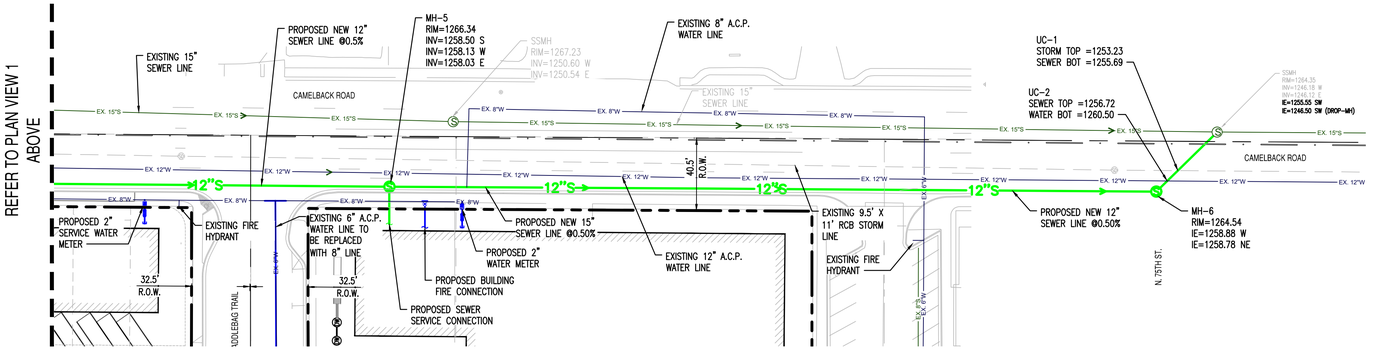
3. EXISTING MANHOLE AT THE CONNECTION POINT INVERTS AND RIM WAS SET BASED ON QUARTER SECTION MAP.

EXISTING LEGEND

- EX. S — SEWER LINE
- EX. W — WATER LINE
- IRR — IRRIGATION LINE
- STORM DRAIN LINE
- CB — CATCH BASIN
- S — SEWER MANHOLE
- D — STORM MANHOLE
- WV — WATER VALVE
- WMB — WATER METER BOX
- ECB — ELECTRIC CABINET

PROPOSED LEGEND:

- PROPERTY LINE
- X"W — WATER LINE
- X"S — SEWER LINE
- WM — WATER METER
- GATE VALVE
- T.S.V.B.&C.
- BACK FLOW PREVENTER
- CAP
- S — SEWER MANHOLE
- WATER/SEWER LINE ABANDONMENT

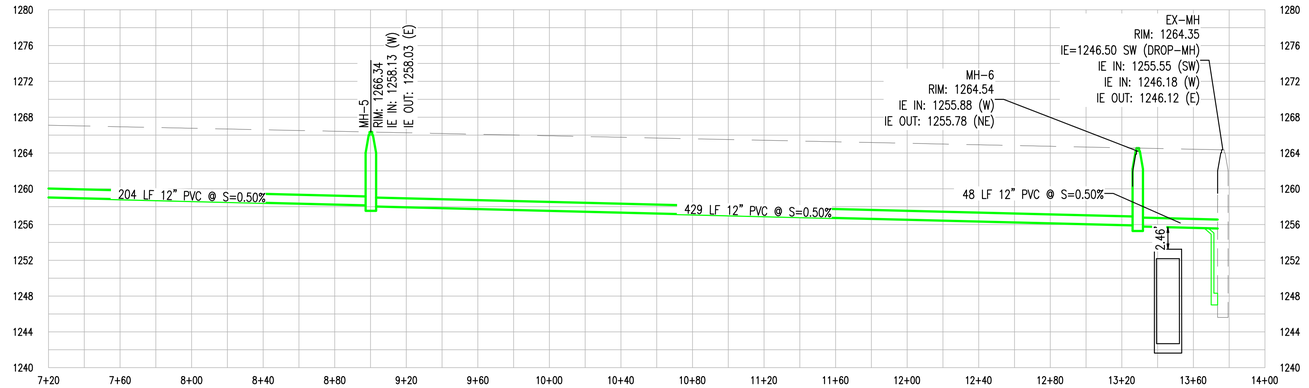


NORTH

SEWER PLAN VIEW 2

0' 40' 80' 120'

SCALE: 1" = 40'



SEWER PROFILE VIEW 2

HORIZONTAL SCALE: 1" = 40'
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PROJECT: MAYA HOTEL

LOCATION: NWC EAST INDIAN PLAZA & BUCKBOARD TRAIL

DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 08/07/2020

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JOB NO.: 200226

SHEET TITLE: PROPOSED SEWER PLAN & PROFILE

SHEET NO.: 4

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9-ZN-2020 08/11/20

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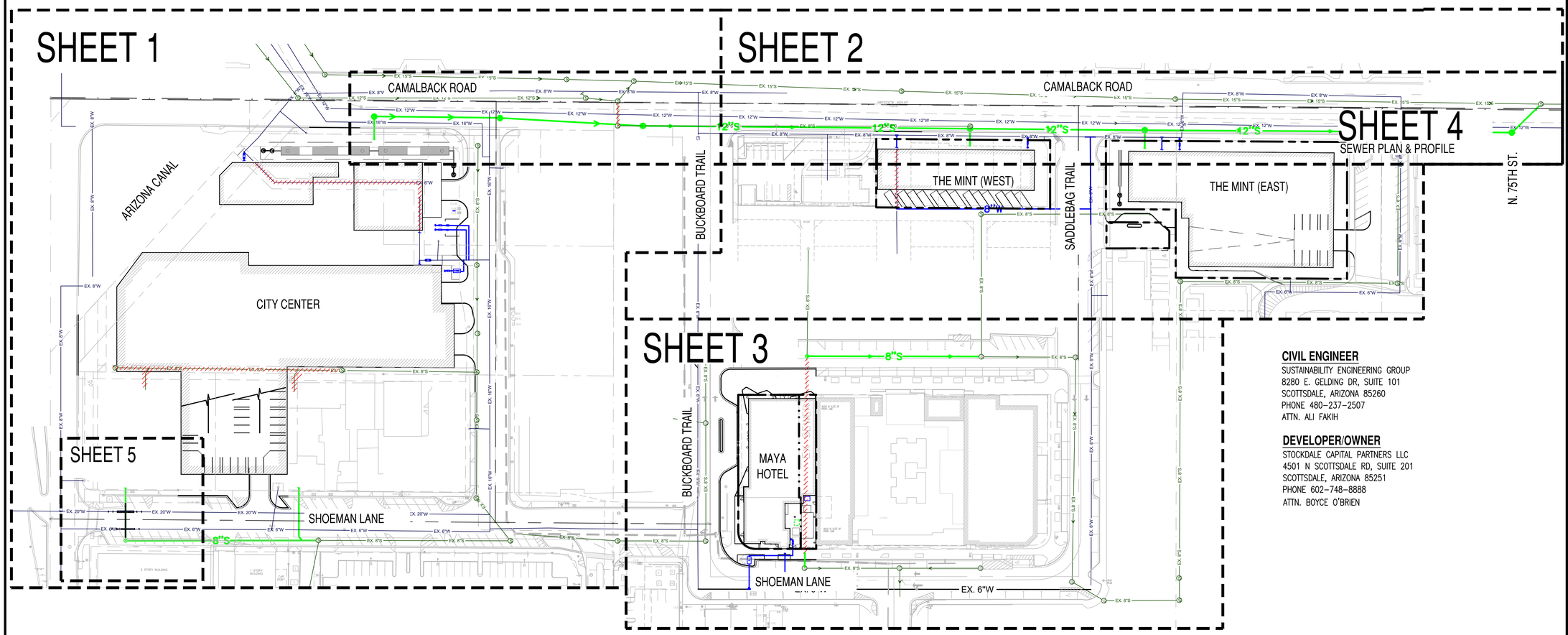
OVERALL UTILITY EXHIBIT & KEY MAP



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	CAP
S	SEWER MANHOLE
	WATER/SEWER LINE ABANDONMENT

NORTH

OVERALL UTILITY EXHIBIT & KEY MAP

0' 60' 120' 180'

SCALE: 1" = 60'

CIVIL ENGINEER
SUSTAINABILITY ENGINEERING GROUP
8280 E. GELDING DR, SUITE 101
SCOTTSDALE, ARIZONA 85260
PHONE 480-237-2507
ATTN. ALI FAKIH

DEVELOPER/OWNER
STOCKDALE CAPITAL PARTNERS LLC
4501 N SCOTTSDALE RD, SUITE 201
SCOTTSDALE, ARIZONA 85251
PHONE 602-748-8888
ATTN. BOYCE O'BRIEN

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PROJECT: SCOTTSDALE COLLECTIVE
LOCATION:

DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 08/07/2020
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SHEET TITLE: UTILITY EXHIBIT KEY MAP

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CITY CENTER
PRELIMINARY UTILITY EXHIBIT

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* FIRE LINE TO STAY CONNECTED CONTINUOUSLY BETWEEN CAMELBACK ROAD AND BROWN AVE THROUGH INTERNAL NETWORK IN THE BUILDING.

CAMELBACK ROAD

SSMH
INV=1260.04 NW
INV=1260.00 E

SSMH
INV=1263.64 E
INV=1263.41 S

PROPOSED NEW 12" SEWER LINE @1.00%

EXISTING 16" D.I.P. WATER LINE

EXISTING 8" A.C.P. WATER LINE

144" R.C.P. STORM LINE

SSMH
INV=1259.63 W
INV=1259.63 E
INV=1259.71 NW

SSMH
INV=1259.80 W
INV=1259.68 E

SSMH
RIM=1271.00
INV=1261.11 S
INV=1258.60 W
N.F. NE

SSMH
INV=1258.50 SW
INV=1257.32 W
INV=1257.26 E

Existing hydrants not shown, new hydrants not shown. Looping through the City Center site will be required (Current site has).

EXISTING 8" V.C.P LINE AND MANHOLE TO BE REMOVED

EXISTING FIRE HYDRANT

BACKFLOW PREVENTION ASSEMBLY

*PROPOSED BUILDING FIRE CONNECTION

14.95' U.U.E.

MH-1
RIM=1275.87
IE=1264.50 W
IE=1264.60 S

PROPOSED SEWER SERVICE CONNECTION

MH-2
RIM=1272.17
IE=1263.03 W
IE=1262.93 E

PROPOSED NEW 12" SEWER LINE @1.00%

SSMH
RIM=1270.51
INV=1261.36 E
INV=1261.26 N

MH-3
RIM=1270.69
IE=1261.26 W
IE=1261.16 E

EXISTING 8" V.C.P SEWER LINE TO BE REPLACED WITH 12" SEWER LINE

EX SEWER SERVICE CONNECTION TO TIE TO NEW PEOPOSED SEWER

EXISTING 8" C.I.P. WATER LINE

This City Center building extension is dependent on sewer service rerouting to Shoeman and extension of sewer on Shoeman.

Provide documentable written concurrence with On the Waterfront and Marquee owners, or official reps, on who will be responsible for revising respective already approved plans or otherwise responsible for necessary coordination items related to this modification. Describe necessary and proposed coordination.
iii.

Provide documentable written confirmation from Marquee Engineer that the extended Shoeman sewer will not conflict with the current design.

EXISTING 6" A.C.P. WATER LINE TO BE REMOVED

12' WATER EASEMENT TO BE ABANDONED

PROPOSED 2" SERVICE WATER METER

PROPOSED 1" IRRIGATION WATER METER

EXISTING FIRE HYDRANT

Within the final BOD provide analysis showing that 6" will be adequate.

*PROPOSED BUILDING FIRE CONNECTION

BACKFLOW PREVENTION ASSEMBLY

PROPOSED 3" SERVICE WATER METER

EXISTING 8" V.C.P SEWER LINE

EXISTING 16" D.I.P. WATER LINE

EXISTING 18" HDPE STORM LINE

BUCKBOARD TRAIL

MATCHLINE REFER TO SHEET 2

This connection/reroute of lateral is pending and dependent on this property owners formal agreement to this. The Collective/ Collection will have to relocate this lateral and make any necessary plumbing modification s to the impacted parcel to maintain sewer service.

10' U.U.E.

SSMH
RIM=1272.58
INV=1266.09

EXISTING 8" V.C.P SEWER LINE TO BE REMOVED

SSMH
RIM=1269.64
INV=1263.53 N
INV=1263.64 E
INV=1263.41 S

16' P.U.E. & IRRIGATION EASEMENT

EXISTING 8" V.C.P SEWER LINE

SCOTTSDALE ROAD

EXISTING SEWER SERVICE LINE TO BE ABANDONED

5' U.E.

APN: 173-41-006A

20' P.U.E.

EXISTING SEWER SERVICE LINE TO BE ABANDONED

UPTON CONDOMINIUM
APN: 173-41-323

APN: 173-41-002

EXISTING FIRE HYDRANT

BROWN AVE

The design shall allow for reasonable third party oversizing of the new Camelback sewer prior to either final BOD approval or plan approvals. Oversizing of the Camelback sewer will be pursued by the City and/or by any potential future development that will need to connect to the new sewer (particularly the NWC of Brown and Shoeman).

The design depth of the new Camelback sewer shall accomodate connection of potential future redevelopment north of Shoeman and west of Brown and north of Indian Plaza between Brown and 75th St.

33' R.O.W.

7' ROAD WAY & P.U.E

PROPOSED SERVICE RELOCATION PER ON THE WATERFRONT CIVIL IMPROVEMENT PLANS CASE NO. 59-DR-2014#2 IE=1269.27

EXISTING FIRE HYDRANT

PROPOSED NEW LOCATION FOR SEWER SERVICE CONNECTION

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SSMH
RIM=1269.25
INV=1262.86 N
INV=1262.44 SE

EXISTING 20" D.I.P. WATER LINE

SHOEMAN LANE

CONCRETE ENCASEMENT PER M.A.G. STD. DET. 404-3.

MH-7
RIM=1273.21
IE=1268.66 6" N
IE=1263.82' 8" E

EXISTING 6" A.C.P. WATER LINE

PROPOSED NEW 8" SEWER LINE @0.70%

SSMH
RIM=1270.03
INV=1263.18 S
INV=1262.91 E&W

EXISTING 8" V.C.P SEWER LINE

SSMH
RIM=1268.65
INV=1261.62 NW
INV=1261.16 E&W

SHEET 5

MATCHLINE REFER TO SHEET 3

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NORTH

CITY CENTER

0' 30' 60' 90'

SCALE: 1" = 30'

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PROJECT	LOCATION
CITY CENTER	NWC SCOTTSDALE RD & CAMELBACK RD

DRAWN	KA	04/28/2020
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PROJ. MGR.	AF	

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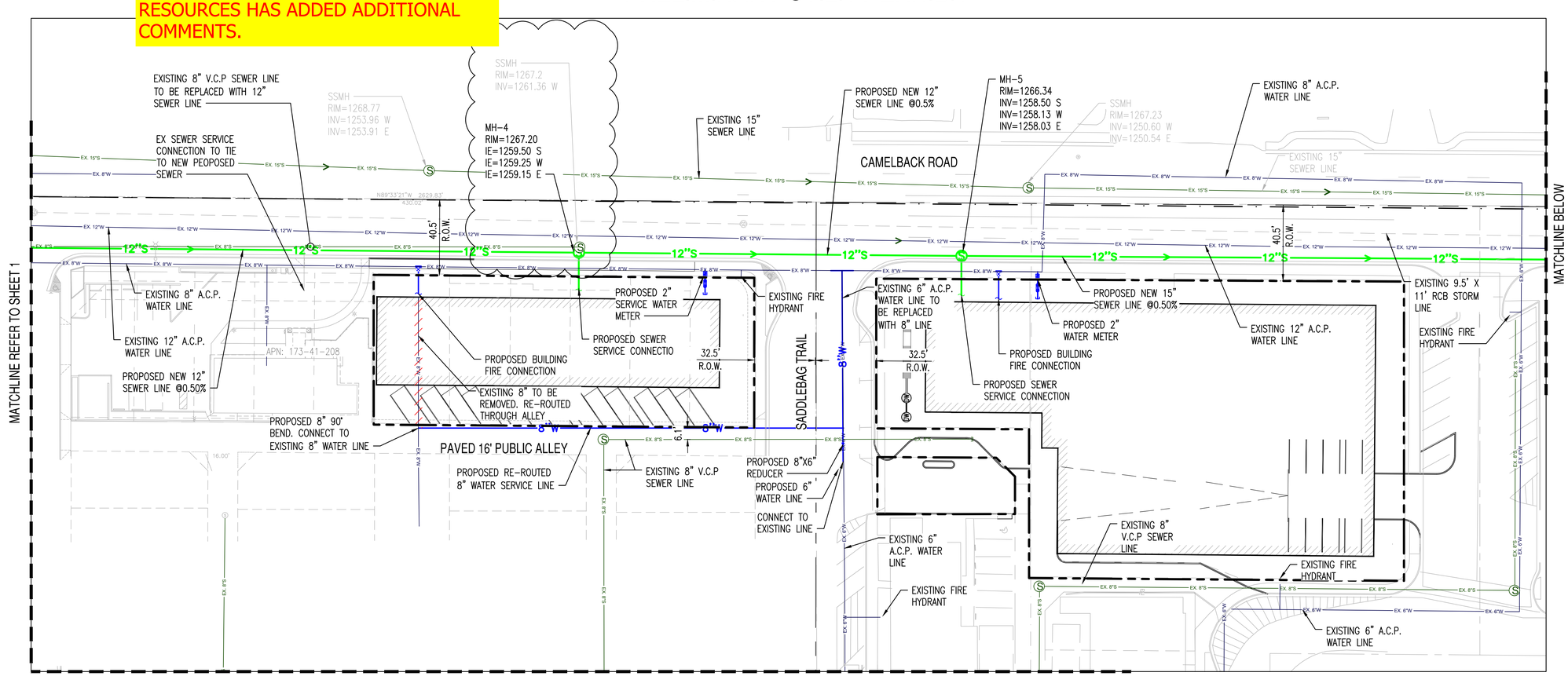
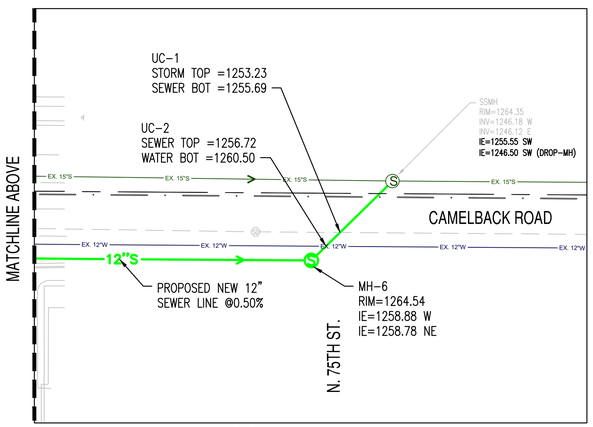
THE MINT
PRELIMINARY UTILITY EXHIBIT





PLAN VIEW
SCALE: 1" = 30'

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PROJECT	THE MINT
LOCATION	CAMELBACK RD & SADDLEBAG TRAIL

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MAYA HOTEL
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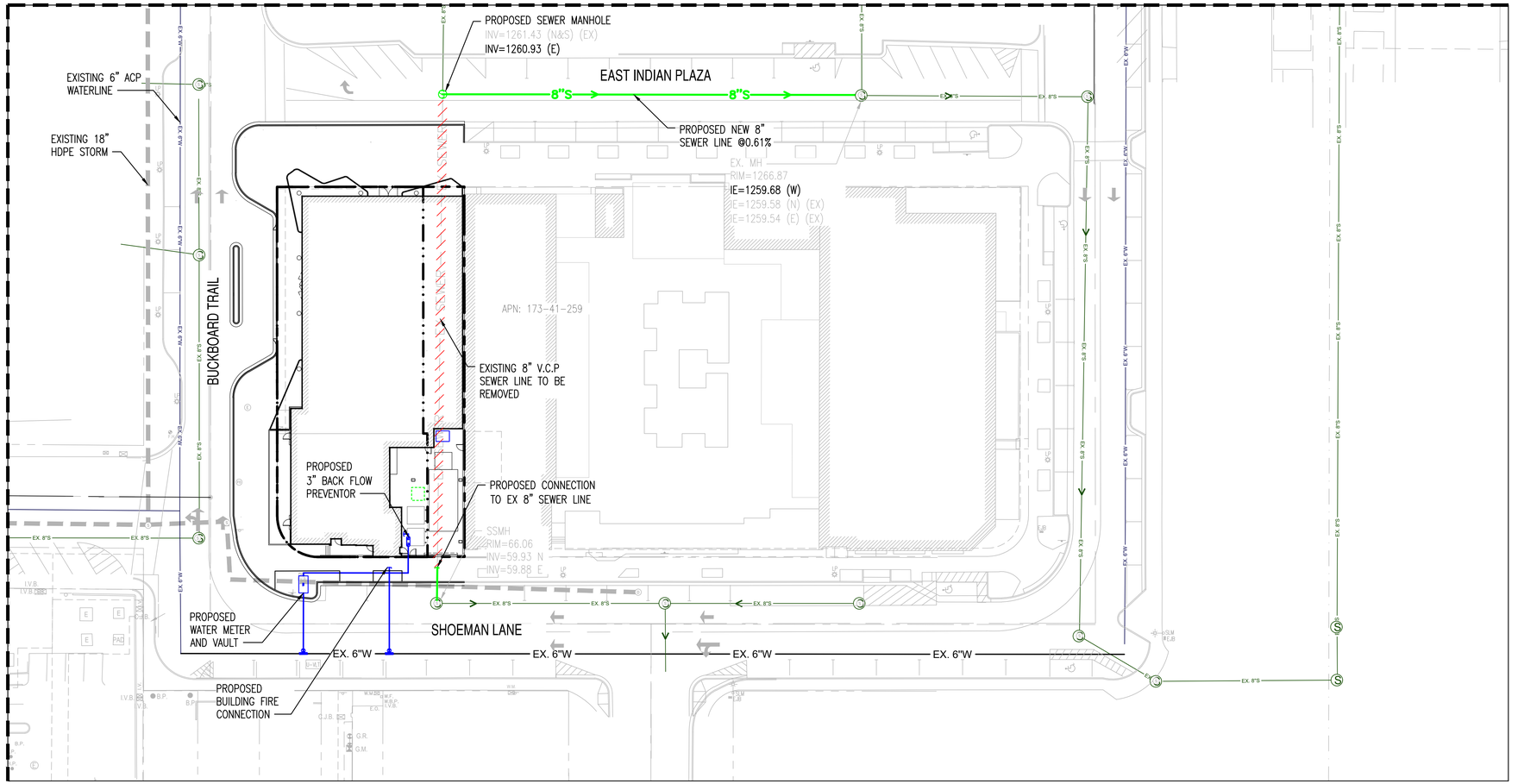

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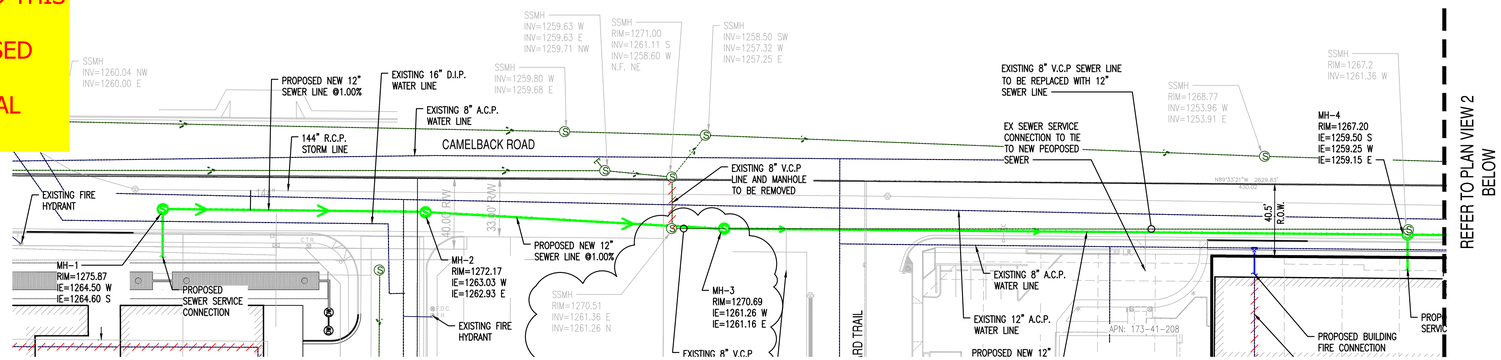
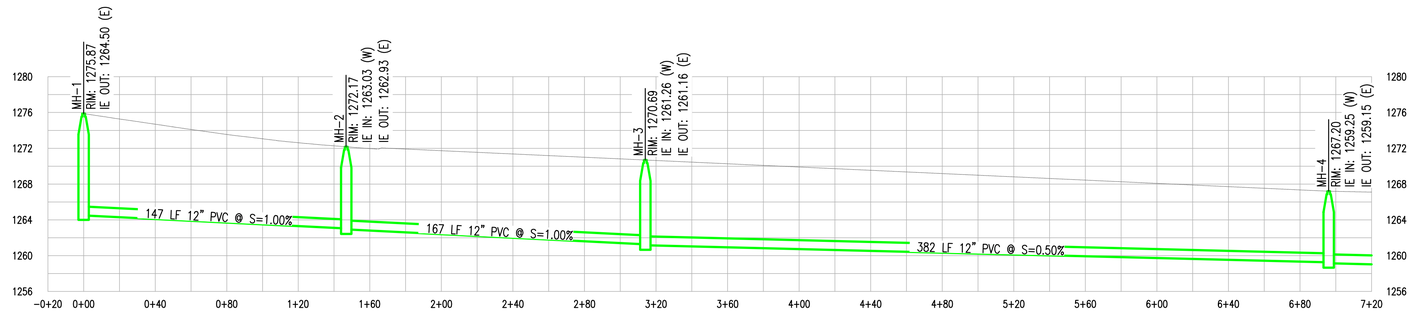


NORTH

SEWER PLAN VIEW 1

0' 40' 80' 120'

SCALE: 1" = 40'



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VERTICAL SCALE: 1" = 4'

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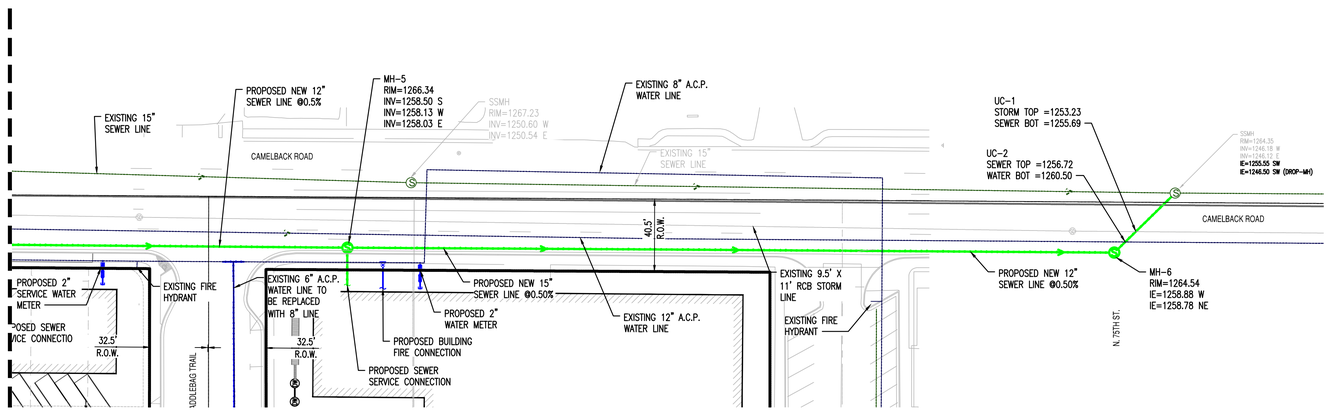
- PROPERTY LINE
- X"W — WATER LINE
- X"S — SEWER LINE
- WM — WATER METER
- GATE VALVE
- T.S.V.B.&C.
- BACK FLOW PREVENTER
- CAP
- S — SEWER MANHOLE
- WATER/SEWER LINE ABANDONMENT

REFER TO PLAN VIEW 1 ABOVE

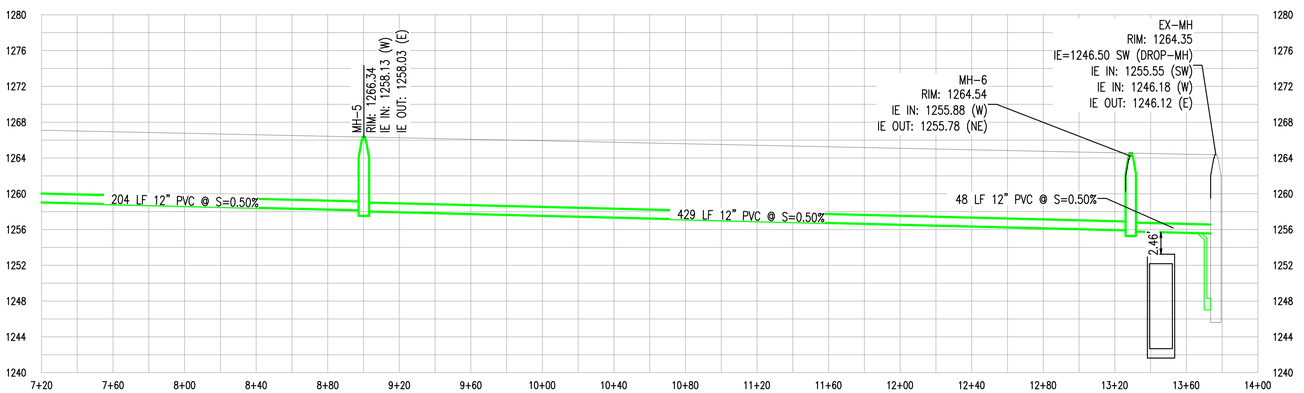


NORTH

SEWER PLAN VIEW 2

0' 40' 80' 120'

SCALE: 1" = 40'



SEWER PROFILE VIEW 2

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

PRELIMINARY
NOT FOR
CONSTRUCTION

SEG SUSTAINABILITY ENGINEERING GROUP
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW.AZSEG.COM TEL. 480.588.7226 FAX. 480.259.3534

Call at least two full working days before you begin excavation.
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

PROJECT: MAYA HOTEL
LOCATION: NWC EAST INDIAN PLAZA & BUCKBOARD TRAIL

DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 08/07/2020

ISSUED FOR: PRELIMINARY REVIEW

REVISION NO.:	DATE:
1	
2	
3	
4	

JOB NO.: 200226

SHEET TITLE: PROPOSED SEWER PLAN & PROFILE

SHEET NO.: 4

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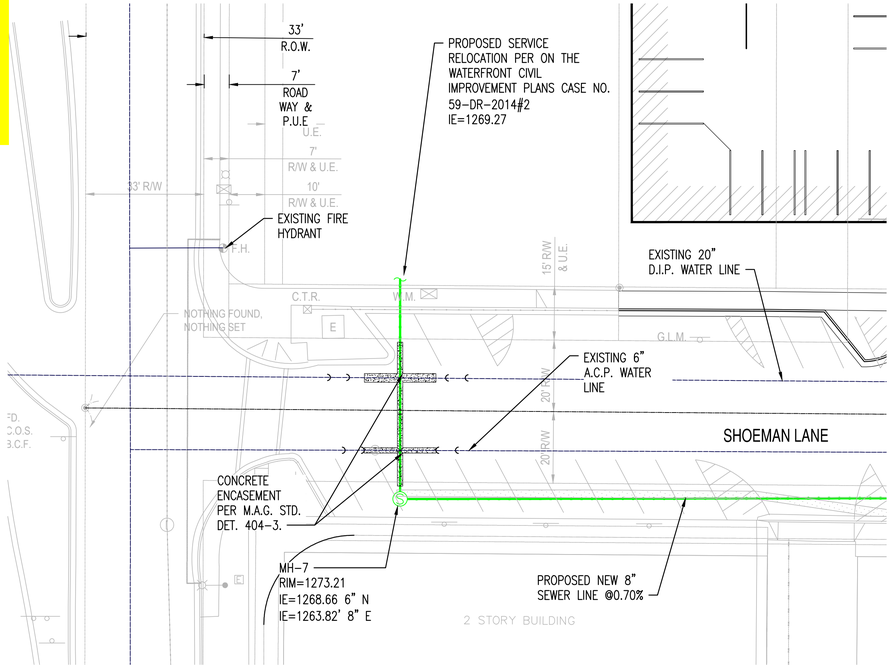
LOCATION: Z:\SHARED\PROJECTS\NELSEN PARTNERS\MASTER PLAN-SCOTTSDALE-200409\11 CAD (SEG)\11.2 ENTITLEMENT-PLANNING\UTILITY EXHIBIT.DWG SAVED BY: TADAMON.MOHAMMED DATE: 9/9/2020

WATER RESOURCES: SEG PROVIDED THIS REVISED SHEET ON 9/10/2020. ANY PREVIOUS COMMENT NOT ADDRESSED ARE STILL APPLICABLE. WATER RESOURCES HAS ADDED ADDITIONAL COMMENTS.



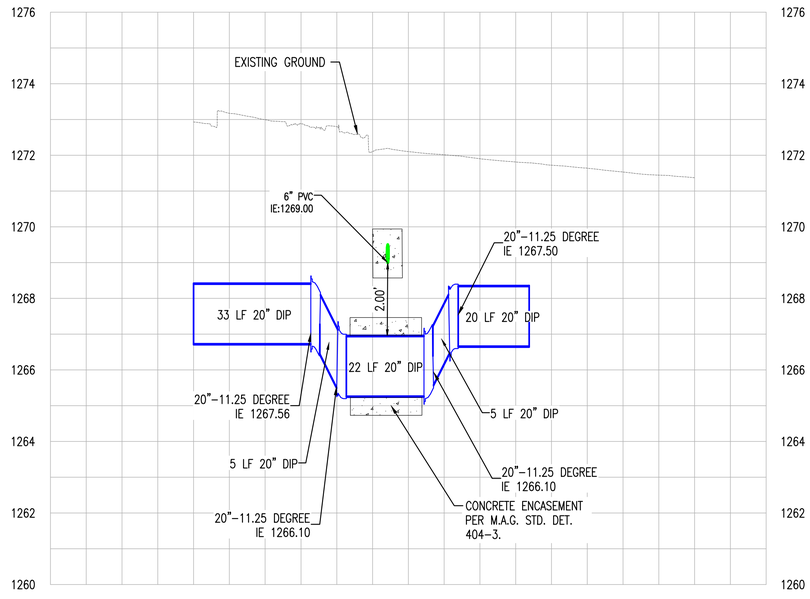
NOTE:
REQUIRES VERTICAL REALIGNMENT PER MAG STD. DET. 370. PROVIDE 2' MINIMUM CLEAR SEPARATION WITH CONCRETE ENCASEMENT PER MAG STD. DET. 404-3 & MAG SPECIFICATION 610.5.

WATER CROSSING 1

0' 20' 40' 60'

SCALE: 1" = 20'

NORTH



WATER CROSSING 1

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

PRELIMINARY
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PROJECT: MAYA HOTEL
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DRAWN	KA	04/28/2020
DESIGNED	KA	04/28/2020
QC	SC	
QA	AF	
PROJ. MGR.	AF	

DATE: 08/07/2020
ISSUED FOR: PRELIMINARY REVIEW

REVISION NO.:	DATE:
1	
2	
3	
4	

JOB NO.: 200226

SHEET TITLE: WATER CROSSING

SHEET NO.: 5

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