



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 apritchard **DATE** 1/29/2024

**WASTEWATER COLLECTION SYSTEM
CONCEPT BASIS OF DESIGN REPORT
FOR
FAIRMONT SCOTTSDALE PRINCESS
CONFERENCE CENTER & EVENT LAWN**

November 22, 2023
W/P# 215310 30

Provide the timing of the phasing for this project as follows:

The Phasing Plan indicates that the Sunset Casitas (under 38-DR-2022 Fairmont Sunset Villas and Bungalows) will be constructed prior to the Event Lawn and Conference Center. During a 11/6/2023 meeting with representatives of the Princess, the Conference Center and Event Lawn is to be constructed in advance of the Sunset Villas and Bungalows.

Wastewater from ONLY the Conference Center and Event Lawn project is permitted to be discharged to the City of Scottsdale wastewater collection system prior to completion and County acceptance of new sewer infrastructure from north of Scottsdale Road and Mayo Blvd to the North Pumpback. This infrastructure is needed to accommodate increased flows from the following development cases/plans. No new flows from the following will be permitted to be discharged to the existing sewer until construction and County acceptance of the new sewer:

- 5-ZN-2015#2 Fairmont Scottsdale Princess Hotel Master Plan Update (Italian Restaurant, Roasterie Restaurant, New Guest Wing)

- 38-DR-2022 Fairmont Scottsdale Princess Sunset Villas and Bungalows

The Princess Resort will be responsible for repayment (via payback agreements) of proportional design and construction costs for new sewer infrastructure required to convey flows as noted previous. The segments of new wastewater infrastructure that are impacted by this development are as follows:

- From the Scottsdale Rd diversion at Mayo Blvd to the intersection of Mayo Blvd and Miller Rd
- From the intersection of the Mayo Blvd and Miller Rd, south along Miller Rd, across Princess Blvd to Princess Dr,
- South/southeast along Princess Dr to City owned property west of and parallel to Hayden Rd
- South to the TPC golf courses
- East through the TPC golf courses (parallel to the existing sewer) to Pima Rd alignment.

A portion of the overall project costs will be reduced by the allocated funding for two 2021 Wastewater Infrastructure Improvement Plan projects (WW IIP-004 and WW IIP-005). The Princess Resort will be responsible for repayment of proportional costs of the new sewer from Scottsdale Rd and Mayo Blvd to the North Pumpback station under a reimbursement agreement.

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EXHIBITS

EXHIBIT 1 Vicinity Map

EXHIBIT 2 Wastewater Exhibit

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EXPIRES 06-30-25

1.0 INTRODUCTION

The Fairmont Scottsdale Princess Conference Center & Event Lawn (Site) is a proposed commercial building as well as event space. This Site is on approximately 10.95 acres of two (2) parcels with an approximate area of 44.4 acres of the Fairmont Scottsdale Princess in the City of Scottsdale (APN#215-08-693 & 215-08-695). The project will include hardscape, landscape, parking, and utility improvements to support the development. The Site is located approximately 1,300-feet to the east of Scottsdale Road and 50-feet north of East Hacienda Way within Section 35, Township 4 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona. Refer to Exhibit 1 – *Vicinity Map* for the project location. The existing property, currently zoned C-2, is primarily developed with buildings, parking lots, pools, sidewalks, and a variety of landscaping (desert and grass).

The design criteria used to estimate wastewater demands and evaluate system hydraulics are based on Wood, Patel & Associates, Inc's (WOODPATEL's) understanding of the requirements listed in the *City of Scottsdale Design Standards and Policies Manual, 2018*.

The following is a summary of the design criteria utilized:

Average Day Wastewater Demand, Commercial/Retail:	0.5 gpd / sf
Average Day Wastewater Demand, Restaurant:	1.2 gpd / sf
Peak Factor, Commercial/Retail:	3.5
Peak Factor, Restaurant:	6.0
Minimum Mean Full Flow Velocity:	2.50 fps
Maximum Peak Full Flow Velocity:	10.0 fps
<u>Maximum Peak Flow d/D Ratio (12-inch diameter or less sewers):</u>	<u>d/D = 0.65</u>

Abbreviations: gpd = gallons per day; fps = feet per second; P = population/1,000

2.0 EXISTING WASTEWATER INFRASTRUCTURE

2.1 Existing Utility System Conditions

The existing wastewater infrastructure adjacent to the Site includes an existing public 18-inch sewer main within Cottage Terrace. In addition, there is an existing private 8-inch sewer line which connects to the main line within Cottage Terrace that runs east within Hacienda Way. Please refer to Exhibit 2 – *Wastewater Exhibit* for a depiction of the existing wastewater infrastructure surrounding the Site.

3.0 PROPOSED WASTEWATER INFRASTRUCTURE

3.1 Proposed Wastewater Conditions

Through the analysis of the proposed Site the proposed wastewater infrastructure is sized to convey the calculated wastewater flows to the existing public 18-inch wastewater main within Cottage Terrace. The proposed infrastructure includes a proposed realignment of the existing private 8-inch sewer main along Hacienda Way, a proposed 6-inch sewer service from the southwest corner of the building to the proposed private 8-inch service realignment, and a proposed 6-inch service from the west side of the

building to the existing public 18-inch main within Cottage Terrace. Refer to Exhibit 2 – *Wastewater Exhibit*.

3.2 Modeling and Results

Demands for the Site include only the square footage of the Conference Center as the Event Lawn will not be used simultaneously with the equivalent space in the Conference Center or existing Palomino Ballroom. If a weather-related incident forces guests using the Event Lawn to relocate indoors, the equivalent space required for those guests will already be available for them in the Conference Center or existing Palomino Ballroom and the Event Lawn will no longer be in use.

Based on the current City of Scottsdale design criteria, the projected average-day flow for the proposed Site is calculated to be 51,099 gallons per day (gpd), or 35.5 gallon per minute (gpm). The peak flow is projected to be 164,771 gpd, or 114.4 gpm. Monitoring data of the private 8-inch sewer within Hacienda Way was received on November 4, 2022, from Western Environmental of 59,456 gpd or 41.3 gpm. The total flow within the private system is calculated to be 19,819 gpd and 59,456 gpd for the average day and peak flows, respectively. Refer to Appendix A – *Wastewater Demand Calculations* for calculations. The proposed sewer slopes, projected flow velocities, and pipe flow capacities with the current flows are summarized on the attached spreadsheet.

4.0 CONCLUSIONS

Based on our wastewater collection system analysis for the proposed Site, the following conclusions are made:

1. The design criteria used to estimate wastewater flows and evaluate system hydraulics are based on WOODPATEL's understanding of the published City of Scottsdale Design Standards and Policies Manual, 2018.
2. The projected average-day flow for the proposed Site contributing to the sewer system is calculated to be 51,099 gallons per day (gpd), or 35.5 gallon per minute (gpm).
3. The projected peak flow for the proposed Site contributing to the sewer system is calculated to be 164,771 gpd, or 114.4 gpm.
4. Maximum d/D value projected with the addition of the Site for the south outfall is 0.36, meeting standard.
5. Maximum d/D value projected with the addition of the Site for the west outfall is 0.19, meeting standard.
6. Monitoring data received of 19,819 gpd and 59,456 gpd for the average day and peak flows, respectively, show available capacity within the existing private 8-inch line within Hacienda Way.

5.0 REFERENCES

1. City of Scottsdale Design Standards and Policies Manual, 2018

APPENDIX A – WASTEWATER DEMAND CALCULATIONS



TABLE 1
WASTEWATER DESIGN CRITERIA

Project Fairmont Scottsdale Princess - Conference Center & Event Lawn
Location Scottsdale AZ
Project Number 215319.30
Project Engineer Andrew J. Sanchez
References City of Scottsdale Design Standards and Policies Manual (2018)

WASTEWATER DEMANDS			
LAND USE	AVERAGE DAILY DEMAND (ADD)		POPULATION¹
	VALUE	UNITS	
Commercial/Retail	0.50	gpd/sf	0.005 Persons per sf
Office	0.40	gpd/sf	0.004 Persons per sf
Restaurant	1.20	gpd/sf	0.012 Persons per sf
High Density Condominiums	140	gpd/DU	1.4 Persons per DU
School: without Cafeteria	30	gpd/Student	0.3 Persons per Student
School: with Cafeteria	50	gpd/Student	0.5 Persons per Student
Resort Hotel	380	gpd/Room	3.8 Persons per Room
Cultural	0.1	gpd/sf	0.001 Persons per sf
Fitness Center/Spa/ Health Club	0.8	gpd/sf	0.008 Persons per sf

HYDRAULIC MODELING CRITERIA	
DESCRIPTION	VALUE²
PEAK FLOW	
Peak Flow = Peaking Factor (PF) x ADD	
Commercial/Retail	3.0
Fitness Center/Spa/Health Club	3.5
High Density Condominium	4.5
Restaurant	6.0
Resort Hotel	4.5
Clubhouse for Subdivision Golf Course	4.5
HYDRAULICS	
Minimum Pipe Diameter (in)	6
Manning's "n" value	0.013
Maximum d/D ratio at peak flow	0.65

PIPE SIZE	MEAN VELOCITY²		DESIGN SLOPE²	
	(in)	Minimum (ft/sec)	Maximum (ft/sec)	Minimum (%)
8	2.5	10.0	0.380	6.980
10	2.5	10.0	0.306	5.121
12	2.5	10.0	0.256	3.919

Notes

1. Per Arizona Administrative Code, Title 18, Chapter 9
2. Per City of Scottsdale Design Standards and Policies Manual (2018)



TABLE 2
EXISTING CONDITIONS WASTEWATER MODEL
(WESTERN TOWN & PALOMINO BALLROOM)

Project Fairmont Scottsdale Princess - Conference Center & Event Lawn
Location Scottsdale AZ
Project Number 215319.30
Project Engineer Andrew J. Sanchez
References City of Scottsdale Design Standards and Policies Manual (2018)
 Arizona Administrative Code, Title 18, Chapter 9

FROM NODE	TO NODE	SEWER NODE ADD (GPD)	PEAKING FACTOR	PEAK FLOW (GPD)	TOTAL PEAK FLOW (GPD)	TOTAL PEAK FLOW (GPM)
Outfall 1 West						
Conference Center	Outfall	--	--	--	--	--
Total Outfall 1		--	--	--	--	--

Outfall 2 South						
SSMH #1	SSMH #2	19,819	3.0	59,456	59,456	41.3
SSMH #2	SSMH #3	--	--	--	59,456	41.3
SSMH #2	SSMH #3	--	--	--	59,456	41.3
SSMH #3	EX. SSMH #21	--	--	--	59,456	41.3
Total Outfall 2		19,819		59,456		



TABLE 3
PROPOSED PEAK FLOW CONDITIONS

Project Fairmont Scottsdale Princess - Conference Center & Event Lawn
Location Scottsdale AZ
Project Number 215319.30
Project Engineer Andrew J. Sanchez
References City of Scottsdale Design Standards and Policies Manual (2018)
 Arizona Administrative Code, Title 18, Chapter 9

FROM NODE	TO NODE	Restaurant (sf)	Commercial (Retail/Mall) (sf)	SEWER NODE ADD (GPD)	PEAKING FACTOR	PEAK FLOW (GPD)	TOTAL PEAK FLOW (GPD)	TOTAL PEAK FLOW (GPM)
Outfall 1 West								
Conference Center	Outfall		47,179	23,646*	3.0	70,825*	70,825	49.2
Total Outfall 1			47,179	23,646		70,825		
Outfall 2 South								
SSMH #1	SSMH #2	--	--	--	--	--	--	--
SSMH #2	SSMH #3	3,219.0	--	3,863	6.0	23,177	23,177	16.1
SSMH #2	SSMH #3	--	47,179	23,589	3.0	70,768	93,945	65.2
SSMH #3	EX. SSMH #21	--	--	--	--	--	93,945	65.2
Total Outfall 2		3,219	47,179	27,452		93,945		

* Additional fountain wastewater demand calculated by City of Scottsdale Development Water Demand Exhibit.

TABLE 4
FULL BUILD OUT CONDITION
WASTEWATER MODEL

Project Fairmont Scottsdale Princess - Conference Center & Event Lawn
Location Scottsdale AZ
Project Number 215319.30
Project Engineer Andrew J. Sanchez
References City of Scottsdale Design Standards and Policies Manual (2018)
 Arizona Administrative Code, Title 18, Chapter 9

FROM NODE	TO NODE	SEWER PEAK FLOW (GPD)	TOTAL PEAK FLOW (GPD)	TOTAL PEAK FLOW (GPM)
Outfall 1 West				
Conference Center	Outfall	70,825	70,825	49.2
Total Outfall 1		70,825		

Outfall 2 South				
SSMH #1	SSMH #2	59,456	59,456	41.3
SSMH #2	SSMH #3	23,177	82,633	57.4
SSMH #2	SSMH #3	70,768	153,401	106.5
SSMH #3	EX. SSMH #21	--	153,401	106.5
Total Outfall 2		153,401		



TABLE 5
FULL BUILD OUT WASTEWATER CAPACITY

Project Fairmont Scottsdale Princess - Conference Center & Event Lawn
Location Scottsdale AZ
Project Number 215319.30
Project Engineer Andrew J. Sanchez
References City of Scottsdale Design Standards and Policies Manual (2018)
 ADEQ Bulletin No. 11

FROM NODE	PIPE SIZE (in)	MODELED PIPE SLOPE (ft/ft)	PIPE CAPACITY (FULL)		PEAK FLOW		d/D	MEAN VELOCITY (at d/D=0.70) (ft/sec)	SURPLUS CAPACITY (gpd)	PERCENT OF CAPACITY (%)
			(gpd)	(gpm)	(gpd)	(gpm)				
Outfall 1 West										
Conference Center	8	0.0143	936,535	650	70,825	49.2	0.19	4.6	865,710	7.6%
Outfall 2 South										
SSMH #1	8	0.0050	553,785	385	59,456	41.3	0.22	2.7	494,329	10.7%
SSMH #2	8	0.0050	553,785	385	82,633	57.4	0.26	2.7	471,152	14.9%
SSMH #2	8	0.0050	553,785	385	153,401	106.5	0.36	2.7	400,384	27.7%
SSMH #3	8	0.0200	1,107,570	769	153,401	106.5	0.25	5.4	954,169	13.9%

**APPENDIX B – FAIRMONT SCOTTSDALE PRINCESS CONFERENCE CENTER & EVENT LAWN
IMPROVEMENT PLANS BY WOOD, PATEL & ASSOCIATES, INC., DATED
NOVEMBER 22, 2023**

ENGINEER'S NOTES

- MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION INCLUDING LATEST REVISION AND CURRENT SUPPLEMENTALS THEREOF PER THE LOCAL TOWN OR CITY) ARE INCORPORATED INTO THIS PLAN IN THEIR ENTIRETY.
- ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION COVERED BY THIS PLAN SHALL BE IN ACCORDANCE WITH THE M.A.G. STANDARD SPECIFICATIONS AND DETAILS AND CURRENT SUPPLEMENTALS THEREOF PER THE LOCAL CITY OR TOWN UNLESS SPECIFIED OTHERWISE IN THESE PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENTS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH ALL REQUIRED STANDARD SPECIFICATIONS, DETAILS AND SUPPLEMENTALS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE IN THE CONTRACT.
- THE CONTRACTOR IS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS APPLICABLE TO THE CONSTRUCTION COVERED BY THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE ALL WORK COVERED BY THIS PLAN.
- THE QUANTITIES AND SITE CONDITIONS DEPICTED IN THESE PLANS ARE FOR GENERAL INFORMATIONAL PURPOSES ONLY AND MIGHT NOT REFLECT ACTUAL QUANTITIES AND SITE CONDITIONS. CONTRACTORS SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
- A REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THEIR CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL CALL 48 HOURS IN ADVANCE FOR BLUE STAKE (1-800-STAKE-IT) PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION AFFECTING UTILITIES AND THE COORDINATION OF ANY NECESSARY UTILITY RELOCATION WORK.
- ALL PAVING, GRADING, EXCAVATION, TRENCHING, PIPE BEDDING, CUT FILL AND BACKFILL SHALL COMPLY WITH THE RECOMMENDATIONS SET FORTH IN THE SOILS (GEOTECHNICAL) REPORT FOR THIS PROJECT IN ADDITION TO THE REFERENCED REQUIRED SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL BE AWARE THAT CERTAIN UTILITIES REQUIRE PROPER ATTENTION AND CAREFUL PLANNING DURING SITE CONSTRUCTION. PLEASE NOTE THAT UTILITIES ON THESE PLANS MAY NOT EXHIBIT THE FULL PROTECTIVE COVER REQUIRED DURING THE SUBGRADE PREPARATION PHASE OF THE CONSTRUCTION. IN SUCH INSTANCES, THE CONTRACTOR SHALL PROVIDE ADDITIONAL PROTECTION (SUCH AS RAMPING) OR INCREASED PIPE STRENGTH TO PROVIDE THE NECESSARY PROTECTION REQUIRED TO PREVENT DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL HOLD THE ENGINEER HARMLESS IN ALL CASES FOR DAMAGES TO UTILITIES WHERE INADEQUATE PROTECTIVE MEASURES OCCUR.
- THE CONTRACTOR IS TO VERIFY THE LOCATION AND THE ELEVATIONS OF ALL EXISTING UTILITIES AT POINTS OF TIE-IN PRIOR TO COMMENCING ANY NEW CONSTRUCTION. SHOULD ANY LOCATION OR ELEVATION DIFFER FROM THAT SHOWN ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S AGENT.
- CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS AND SITE LAYOUT WITH ARCHITECT'S FINAL SITE PLAN AND FINAL BUILDING DIMENSIONS BEFORE STARTING WORK. REPORT DISCREPANCIES TO OWNER'S AGENT.
- COORDINATION BETWEEN ALL PARTIES IS ESSENTIAL PART OF CONTRACT.
- CONTRACTOR IS RESPONSIBLE FOR PROJECT AND SITE CONDITIONS, AND TO WORK WITH WEATHER CONDITIONS AS THE PROJECT SITE MAY BE LOCATED IN A FLOOD PRONE AREA AND SUBJECT TO FLOODING AND ITS HAZARDS.
- THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING, PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER, OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS, ELEVATIONS, CONDITION, OR PAVEMENT CROSS-SLOPE DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIGN INTENT REFLECTED ON THESE PLANS NOT ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE UTILITY CROSSINGS AT CULVERT CROSSINGS BEFORE STARTING WORK ON CULVERT. COORDINATE WITH OWNER REPRESENTATIVE. VERIFY UTILITY LINES AND/OR CONDUITS ARE IN PLACE BEFORE STARTING CULVERT WORK.
- CONSTRUCT RETENTION BASIN AS SHOWN. CONTRACTOR TO SCARIFY BOTTOM OF BASIN TWO FEET DEEP AND NOT ALLOW COMPACTION OVER 80%.
- THIS PROJECT REQUIRES A REGULAR ONGOING MAINTENANCE PROGRAM FOR THE DESIGNED DRAINAGE SYSTEM(S) TO PRESERVE THE DESIGN INTEGRITY AND THE ABILITY TO PERFORM ITS OPERATIONAL INTENT. FAILURE TO PROVIDE MAINTENANCE WILL JEOPARDIZE THE DRAINAGE SYSTEM(S) PERFORMANCE AND MAY LEAD TO ITS INABILITY TO PERFORM PROPERLY AND/OR CAUSE DAMAGE ELSEWHERE IN THE PROJECT.
- SEWER LINES DESIGNED IN PROFILE AND PUBLIC WATER LINES ARE REQUIRED TO BE ASBUILT AND THE INSTALLATION AND TESTING WITNESSED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODES R18-9-E301 "4.01 GENERAL PERMIT: SEWAGE COLLECTIONS SYSTEMS" AND R18-5-507 AND 508 "APPROVAL OF CONSTRUCTION" AND "RECORD DRAWINGS", RESPECTIVELY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY OWNER 72 HOURS IN ADVANCE WHEN THOSE SYSTEMS ARE READY TO BE WITNESSED.
- THE WORK PRODUCT PRESENTED IS BELIEVED TO BE COMPLIANT WITH THE INTENT OF THE CURRENT AMERICANS DISABILITIES ACT (ADA) REQUIREMENTS AS INTERPRETED BY THE REVIEWING AGENCY(S). IF CONSTRUCTION OF THE PROJECT IS DELAYED, THIS WORK PRODUCT SHOULD BE UPDATED TO ACCOUNT FOR ANY RELEVANT ADA UPDATES BEFORE CONSTRUCTION BEGINS.
- LOWEST FLOOR (LF) REFERS TO EITHER FLOOR/SLAB ELEVATION OR TOP OF BASEMENT SLAB. LF ELEVATIONS ON THE GRADING AND DRAINAGE PLANS FOR RESIDENTIAL UNITS REFLECT SLAB ON GRADE CONDITIONS AND CANNOT BE LOWERED WITHOUT AGENCY APPROVAL IN LOCATIONS WHERE 'SPECIAL FLOOD HAZARD AREAS' EXIST. IN NON-FLOOD HAZARD LOCATIONS, TO ENSURE THAT ADEQUATE RESIDENTIAL LOT DRAINAGE CAN BE ACHIEVED, A PROFESSIONAL ENGINEER SHOULD BE CONSULTED IF THE LF FOR THE SLAB IS PROPOSED TO BE LOWERED, OR IF A BASEMENT IS TO BE CONSTRUCTED.

PARCEL DESCRIPTION

PARCEL NO. 1:
(HOTEL PARCEL)
LOT 3 AND A PORTION OF LOT 2, OF FAIRMONT SCOTTSDALE PRINCESS, ACCORDING TO BOOK 1104 OF MAPS, PAGE 3, RECORDS OF MARICOPA COUNTY, ARIZONA, TOGETHER WITH A PART OF THE SOUTHWEST QUARTER OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, ALL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTH ONE-QUARTER CORNER OF SECTION 35;
THENCE NORTH 00 DEGREES 08 MINUTES 41 SECONDS EAST ALONG THE NORTH-SOUTH MIDSECTION LINE OF SECTION 35, 1206.58 FEET TO THE POINT OF BEGINNING;
THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 111.62 FEET;
THENCE NORTH 05 DEGREES 04 MINUTES 10 SECONDS WEST, 34.51 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE EAST HAVING A RADIUS OF 75.00 FEET;
THENCE NORTHERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 60 DEGREES 29 MINUTES 58 SECONDS, 79.19 FEET TO A POINT OF REVERSE CURVATURE WITH A CURVE CONCAVE SOUTHWEST HAVING A RADIUS OF 75.00 FEET;
THENCE NORTHEASTERLY, NORTHERLY AND SOUTHWESTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 168 DEGREES 47 MINUTES 48 SECONDS, 220.95 FEET;
THENCE SOUTH 66 DEGREES 38 MINUTES 00 SECONDS WEST, 521.45 FEET;
THENCE NORTH 07 DEGREES 07 MINUTES 02 SECONDS WEST, 47.49 FEET;
THENCE NORTH 88 DEGREES 18 MINUTES 25 SECONDS WEST, 29.86 FEET;
THENCE NORTH 58 DEGREES 07 MINUTES 53 SECONDS WEST, 43.04 FEET;
THENCE NORTH 26 DEGREES 47 MINUTES 27 SECONDS WEST, 26.35 FEET;
THENCE NORTH 83 DEGREES 46 MINUTES 19 SECONDS WEST, 39.13 FEET;
THENCE NORTH 27 DEGREES 44 MINUTES 13 SECONDS WEST, 177.75 FEET;
THENCE NORTH 89 DEGREES 49 MINUTES 06 SECONDS WEST, 103.52 FEET;
THENCE SOUTH 00 DEGREES 01 MINUTES 45 SECONDS WEST, 18.00 FEET;
THENCE NORTH 89 DEGREES 49 MINUTES 06 SECONDS WEST, 377.78 FEET;
THENCE NORTH 00 DEGREES 01 MINUTE 45 SECONDS EAST, 756.50 FEET;
THENCE NORTH 78 DEGREES 51 MINUTES 20 SECONDS EAST, 4.33 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTH HAVING A RADIUS OF 250.00 FEET;
THENCE EASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 51 DEGREES 43 MINUTES 26 SECONDS, 225.69 FEET;
THENCE SOUTH 49 DEGREES 25 MINUTES 14 SECONDS EAST, 59.77 FEET;
THENCE NORTH 40 DEGREES 34 MINUTES 36 SECONDS EAST, 352.13 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHEAST HAVING A RADIUS OF 100.00 FEET;
THENCE NORTHEASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 49 DEGREES 35 MINUTES 38 SECONDS, 86.56 FEET;
THENCE SOUTH 89 DEGREES 49 MINUTES 46 SECONDS EAST, 385.35 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE EAST HAVING A RADIUS OF 500.00 FEET, AND A RADIAL BEARING TO THE BEGINNING OF SOUTH 73 DEGREES 52 MINUTES 17 SECONDS WEST;
THENCE NORTHERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 16 DEGREES 17 MINUTES 57 SECONDS, 142.24 FEET;
THENCE SOUTH 89 DEGREES 49 MINUTES 46 SECONDS EAST, 55.5 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE NORTHEAST HAVING A RADIUS OF 444.50 FEET AND A RADIAL BEARING TO THE BEGINNING OF NORTH 89 DEGREES 46 MINUTES 46 SECONDS WEST;
THENCE SOUTHEASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 75 DEGREES 09 MINUTES 12 SECONDS, 583.04 FEET;
THENCE SOUTH 74 DEGREES 58 MINUTES 57 SECONDS EAST, 6.41 FEET TO THE NORTH-SOUTH MIDSECTION LINE OF SECTION 35;
THENCE SOUTH 00 DEGREES 08 MINUTES 41 SECONDS WEST, ALONG THE MIDSECTION LINE, 57.42 FEET;
THENCE SOUTH 74 DEGREES 58 MINUTES 57 SECONDS EAST, 337.32 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHWEST HAVING A RADIUS OF 300.00 FEET;
THENCE SOUTHEASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 35 DEGREES 25 MINUTES 14 SECONDS, 185.46 FEET;
THENCE SOUTH 39 DEGREES 33 MINUTES 43 SECONDS EAST, 125.23 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHEAST HAVING A RADIUS OF 1000.00 FEET;
THENCE SOUTHEASTERLY ALONG THE CURVE THROUGH A CENTRAL ANGLE OF 11 DEGREES 27 MINUTES 33 SECONDS, 200.00 FEET;
THENCE SOUTH 38 DEGREES 58 MINUTES 44 SECONDS WEST, 55.50 FEET;
THENCE SOUTH 16 DEGREES 17 MINUTES 23 SECONDS WEST, 211.79 FEET;
THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 270.00 FEET;
THENCE SOUTH 00 DEGREES 08 MINUTES 41 SECONDS WEST, 208.40 FEET;
THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 148.26 FEET;
THENCE SOUTH 00 DEGREES 08 MINUTES 41 SECONDS WEST, 14.66 FEET;
THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 67.83 FEET;
THENCE NORTH 00 DEGREES 08 MINUTES 41 SECONDS EAST, 10.06 FEET;
THENCE NORTH 89 DEGREES 51 MINUTES 19 SECONDS WEST, 122.29 FEET TO THE POINT OF BEGINNING; EXCEPT ONE-HALF OF ALL OIL AND MINERAL RIGHTS AS RESERVED IN DOCKET 124, PAGE 39, RECORDS OF MARICOPA COUNTY, ARIZONA; AND EXCEPT ALL OIL, GAS, OTHER HYDROCARBON SUBSTANCES, HELIUM OR OTHER SUBSTANCES OF A GASEOUS NATURE, COAL, METALS, MINERALS, FOSSILS, FERTILIZER OF EVERY NAME AND DESCRIPTION, AND EXCEPT ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIIONABLE MATERIALS WHETHER OR NOT OF COMMERCIAL VALUE, AS SET FORTH IN SECTION 37-231, ARIZONA REVISED STATUTES.

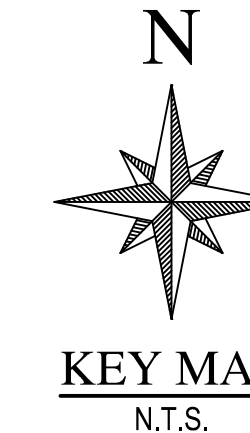
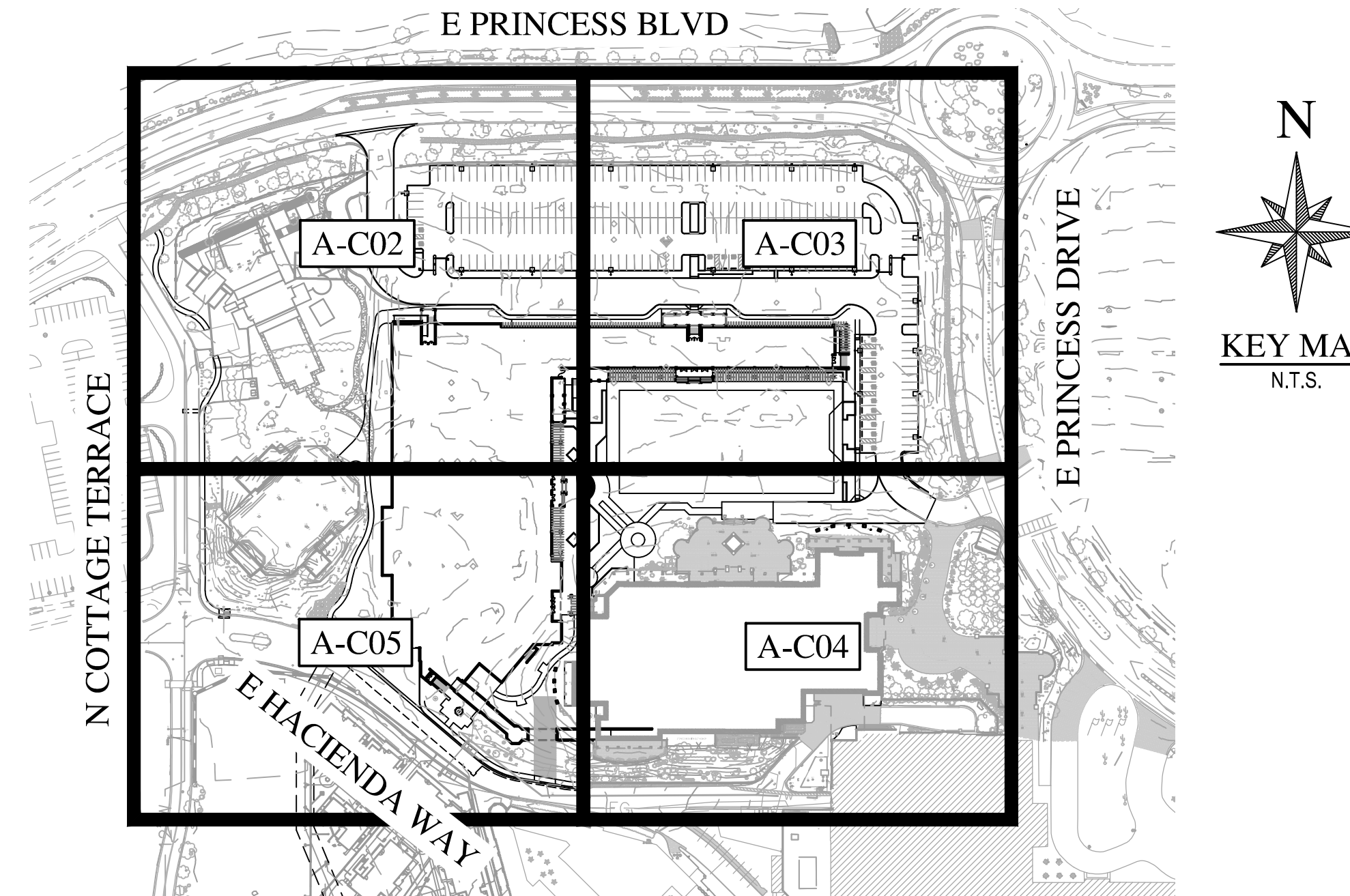
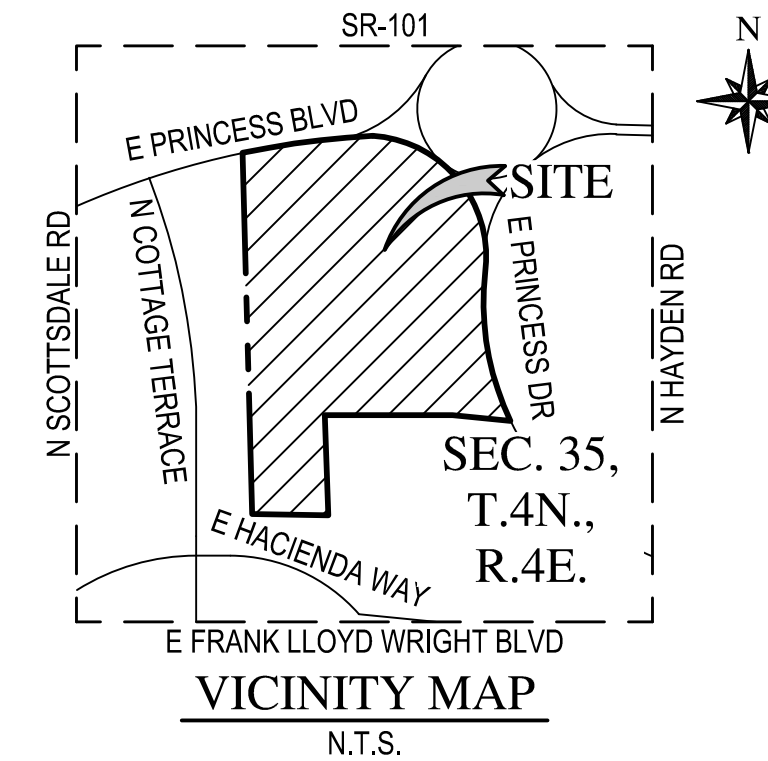
PARCEL NO. 7:
A NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS AND UTILITIES BY OR PURSUANT TO THAT CERTAIN "RECIPROCAL EASEMENT AGREEMENT, CONSTRUCTION AND MAINTENANCE AGREEMENT, AND COVENANTS, CONDITIONS AND RESTRICTIONS" DATED APRIL 19, 2006 AND RECORDED APRIL 19, 2006 IN RECORDING NO. 20060523599, RECORDS OF MARICOPA COUNTY, ARIZONA.

PARCEL NO. 9:
A NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS BY OR PURSUANT TO THAT CERTAIN "MASTER DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR SCOTTSDALE PRINCESS/EAGLE" DATED AUGUST 19, 1986, AND RECORDED AUGUST 20, 1986 IN RECORDING NO. 86-444862, RECORDS OF MARICOPA COUNTY, ARIZONA.

FAIRMONT SCOTTSDALE PRINCESS CONFERENCE CENTER

CONCEPT GRADING, DRAINAGE, WATER & SEWER SCOTTSDALE, ARIZONA

A PORTION OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



OWNER / DEVELOPER

STRATEGIC HOTELS & RESORTS
150 NORTH RIVERSIDE PLAZA, SUITE 4270
CHICAGO, IL 60606
CONTACT: TIMOTHY TAYLOR
PHONE: (312) 658-6038

ENGINEER

WOOD, PATEL & ASSOCIATES, INC.
2051 WEST NORTHERN AVENUE, SUITE 100
PHOENIX, ARIZONA 85021
CONTACT: DARIN MOORE, P.E.
PHONE: (602) 335-8500
FAX: (602) 335-8580

ARCHITECT

KOLLIN ALTOMARE ARCHITECTS
4265 E. CONANT STREET, SUITE 101
LONG BEACH, CA 90808
CONTACT: PAUL ALTOMARE
PHONE: (562) 597-8760

PROJECT SITE DATA

ASSESSOR PARCEL NUMBER(S):
215-08-003C
PROJECT SITE ADDRESS:
7575 E PRINCESS BLVD
SCOTTSDALE, ARIZONA 85255
PROJECT SITE AREA(S):
NET AREA = 17.0 AC
DISTURBED AREA = 8.1± AC
ZONING:
C2

SHEET INDEX

A-C01	COVER SHEET
A-C02	CONCEPT GRADING, DRAINAGE, WATER, & SEWER
A-C03	CONCEPT GRADING, DRAINAGE, WATER, & SEWER
A-C04	CONCEPT GRADING, DRAINAGE, WATER, & SEWER
A-C05	CONCEPT GRADING, DRAINAGE, WATER, & SEWER

**FINISH FLOOR
ELEVATION CALCULATION**

HAG = 1557.26
LAG = 1551.12
FF=1561.26
RFD=1559.26
ALL ELECTROMECHANICAL EQUIPMENT
SHALL BE ELEVATED TO RFD ELEVATION

FEMA FIRM NOTE (ZONE AO)

ACCORDING TO FEMA FLOOD INSURANCE RATE MAPPING, THE SUBJECT PROPERTY IS LOCATED IN 'SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD' "ZONE AO". ZONE AO IS DESCRIBED AS: "FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETERMINED."

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM	INDEX DATE	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
04013C	1320	L	10/16/2013	07/20/2021	AO	1

BENCHMARK

CITY OF SCOTTSDALE BRASS CAP FLUSH 450± NORTH OF PRINCESS DRIVE ON SCOTTSDALE ROAD, BEING THE WEST QUARTER CORNER OF SECTION 35, TOWNSHIP 4 NORTH, RANGE 4 EAST.
CITY OF SCOTTSDALE DATUM, NAVD88 DATUM
ELEVATION=1553.22'

I HEREBY CERTIFY THAT ALL ELEVATIONS REPRESENTED ON THIS PLAN ARE BASED ON NAVD 1988, MCDOT, AND MEET THE FEMA BENCHMARK MAINTENANCE (BMM) CRITERIA.

ENGINEER'S CERTIFICATION

ENGINEER'S CERTIFICATION: THE LOWEST FLOOR ELEVATION(S) AND/OR FLOOD PROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE-HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE REVISED CODE, CHAPTER 37-FLOODPLAIN AND STORMWATER REGULATIONS.

Darin L. Moore
ENGINEER SIGNATURE
11/22/2023
DATE

EXISTING SURVEY		PROPOSED GRADING, DRAINAGE & PAVING		ABBREVIATIONS	
---	RIGHT OF WAY	---	STORM DRAIN PIPE	A.E.	ACCESS EASEMENT
---	PROPERTY LINE	---	STORM DRAIN CATCH BASIN	PVT.	PRIVATE
---	ROAD CENTERLINE	---	DRYWELL	SMH	SEWER MANHOLE
---	EASEMENT	---	PROPOSED FIRELINE, WATER & SEWER	E.J.B.	ELECTRICAL JUNCTION BOX
---	SURVEY MARKER	---	WATER LINE	S.L.	STREET LIGHT
---	GAS LINE	---	WATER LINE FITTINGS	INV.	INVERT ELEVATION
---	SEWER LINE	---	BACKFLOW PREVENTION DEVICE	I.V.B.	IRRIGATION VALVE BOX
---	WATER LINE	---	WATER VALVE	LFF.	LOWEST FINISHED FLOOR ELEVATION
---	CURB	---	WATER VALVE	W.V.	WATER VALVE
---	SIDEWALK	---	WATER VALVE		
---	VEGETATION	---	WATER VALVE		
---	SEWER MANHOLE	---	WATER VALVE		
---	JUNCTION BOX/RISER	---	WATER VALVE		
---	WATER VALVE	---	WATER VALVE		
---	STREET LIGHT	---	WATER VALVE		

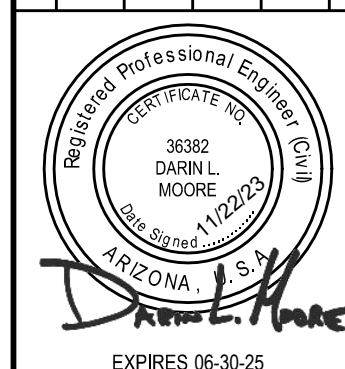


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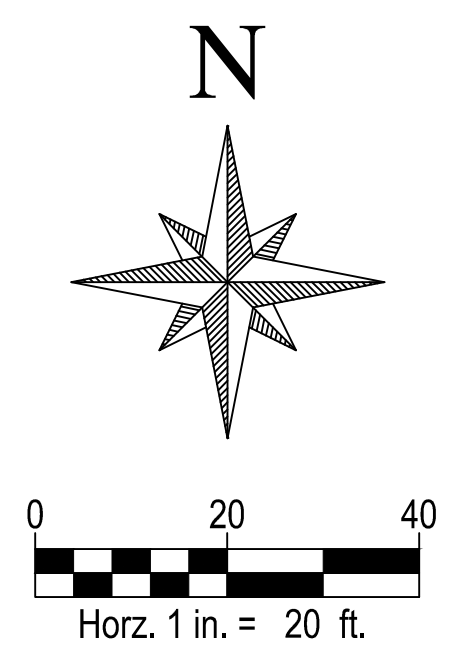
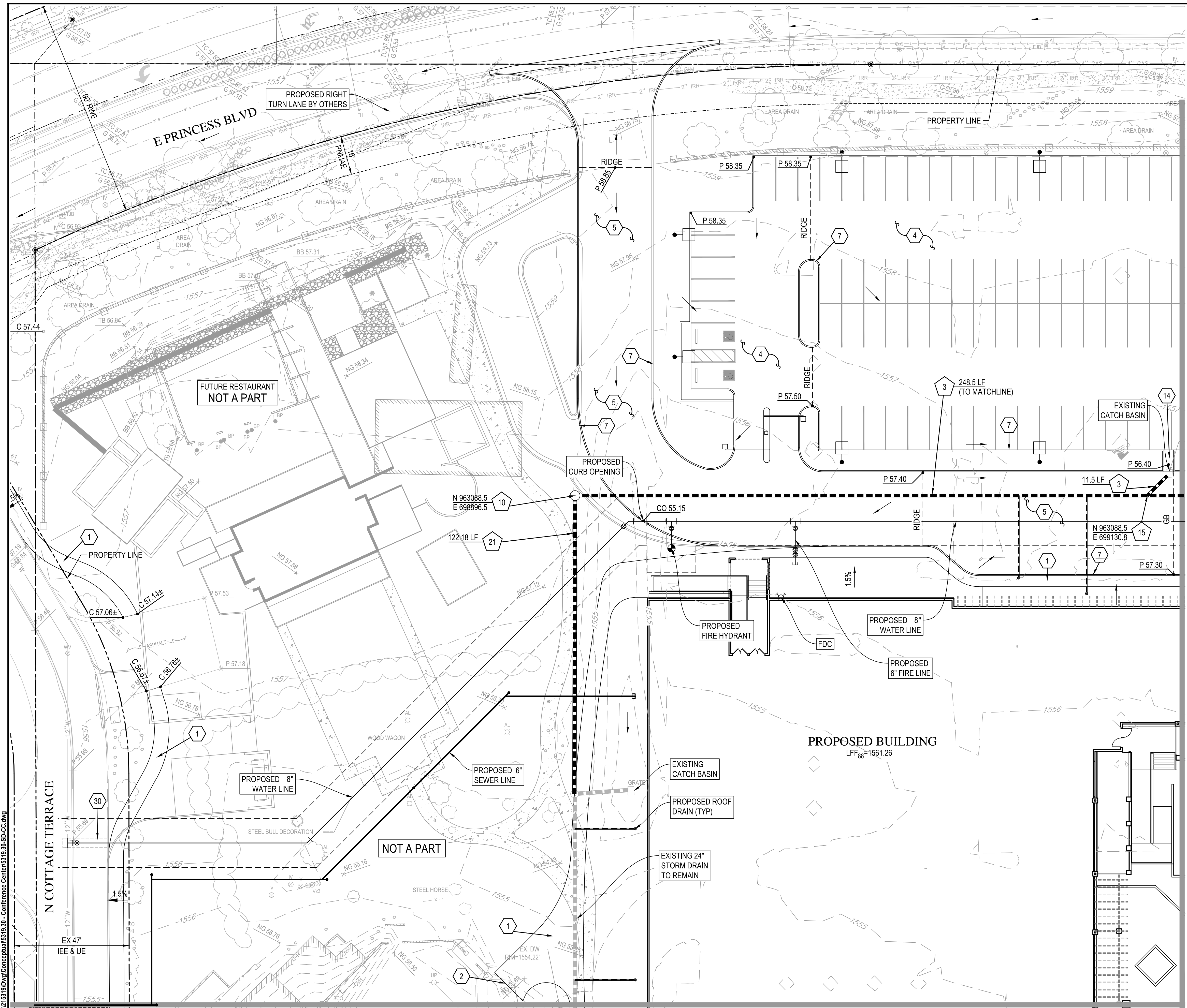
FAIRMONT SCOTTSDALE PRINCESS
CONFERENCE CENTER
CONCEPT GRADING, DRAINAGE,
WATER & SEWER
SCOTTSDALE, ARIZONA
COVER SHEET

DATE	DESCRIPTION	REV



SCALE (HORIZ.) N/A
SCALE (VERT.) N/A
DATE 11/22/2023
JOB NUMBER 21519.30
SHEET
A-C01 OF 5

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PAVING NOTES

- 1 CONSTRUCT SIDEWALK PER M.A.G. STD. DET. 230. SEE LANDSCAPE PLANS FOR COLOR & FINISH.
- 2 MATCH EXISTING ELEVATIONS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 4 INSTALL LIGHT DUTY PAVEMENT, 3" A.C. PAVEMENT OVER 7" A.B.C. PER GEOTECHNICAL REPORT.
- 5 INSTALL HEAVY DUTY PAVEMENT, 3" A.C. PAVEMENT OVER 11" A.B.C. PER GEOTECHNICAL REPORT.
- 7 CONSTRUCT 6" SINGLE CURB PER MAG STD. DET. 222, TYPE A.
- 14 CONSTRUCT SIDEWALK SCUPPER PER M.A.G. STD. DETAIL 206-1.
- 29 REMOVE & REPLACE EXISTING PAVEMENT FOR UTILITY CONSTRUCTION PER M.A.G. STD. DETAIL 200-1.
- 30 SAWCUT, REMOVE & REPLACE EXISTING SINGLE CURB, CURB & GUTTER, AND CONCRETE SIDEWALK FOR PROPOSED UTILITY CONSTRUCTION TO THE NEAREST JOINT OF THE LIMITS SHOWN.

STORM DRAIN NOTES

- 3 INSTALL 15" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
- 10 CONSTRUCT STORM DRAIN MANHOLE PER M.A.G. STD. DETAIL 520 & 522 WHERE NECESSARY, CONTRACTOR TO ROTATE COVER TO PREVENT CONFLICT WITH ADJACENT SIDEWALK.
- 15 INSTALL WYE, SIZE PER ADJOINING PIPE DIAMETER.
- 21 INSTALL 18" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.

- NOTE:**
- 1. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
 - 2. CONTRACTOR TO VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE ROAD MEETS OR EXCEEDS THE 83,000 LB REQUIREMENT.
 - 3. REFER TO SHEET A-C01 FOR HAG, LAG, AND RFD ELEVATION INFORMATION.

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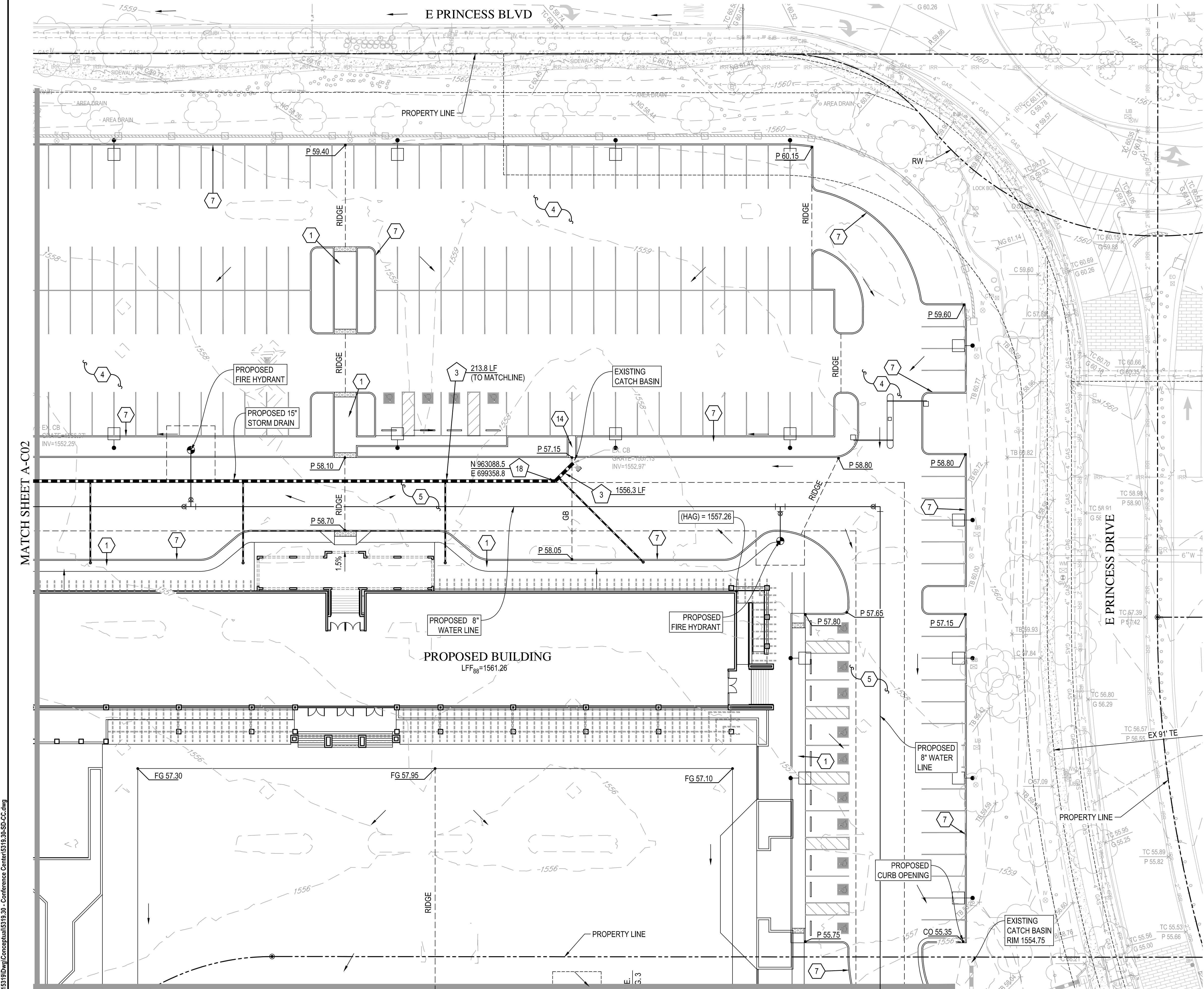
FAIRMONT SCOTTSDALE PRINCESS CONFERENCE CENTER
CONCEPT GRADING, DRAINAGE, WATER & SEWER
SCOTTSDALE, ARIZONA
 CONCEPT GRADING, DRAINAGE, WATER, & SEWER

REV	DESCRIPTION	DATE



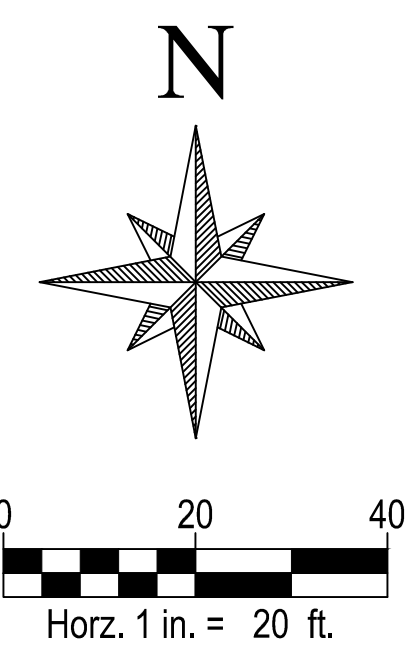
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 SCALE (VERT.) N/A
 DATE 11/22/2023
 JOB NUMBER 215319.30
 SHEET A-C02 OF 5

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MATCH SHEET A-C02

MATCH SHEET A-C04



PAVING NOTES

- 1 CONSTRUCT SIDEWALK PER M.A.G. STD. DET. 230. SEE LANDSCAPE PLANS FOR COLOR & FINISH.
- 4 INSTALL LIGHT DUTY PAVEMENT, 3" A.C. PAVEMENT OVER 7" A.B.C. PER GEOTECHNICAL REPORT.
- 5 INSTALL HEAVY DUTY PAVEMENT, 3" A.C. PAVEMENT OVER 11" A.B.C. PER GEOTECHNICAL REPORT.
- 7 CONSTRUCT 6" SINGLE CURB PER MAG STD. DET. 222, TYPE A.
- 14 CONSTRUCT SIDEWALK SCUPPER PER M.A.G. STD. DETAIL 206-1.

STORM DRAIN NOTES

- 3 INSTALL 15" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
- 18 INSTALL BEND. SIZE PER ADJOINING PIPE DIAMETER. ANGLE PER PLAN.

- NOTE:**
1. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
 2. CONTRACTOR TO VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE ROAD MEETS OR EXCEEDS THE 83,000 LB REQUIREMENT.
 3. REFER TO SHEET A-C01 FOR HAG, LAG, AND RFD ELEVATION INFORMATION.



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 SCOTTSDALE, ARIZONA
 CONCEPT GRADING, DRAINAGE, WATER, & SEWER

REV	DESCRIPTION	DATE

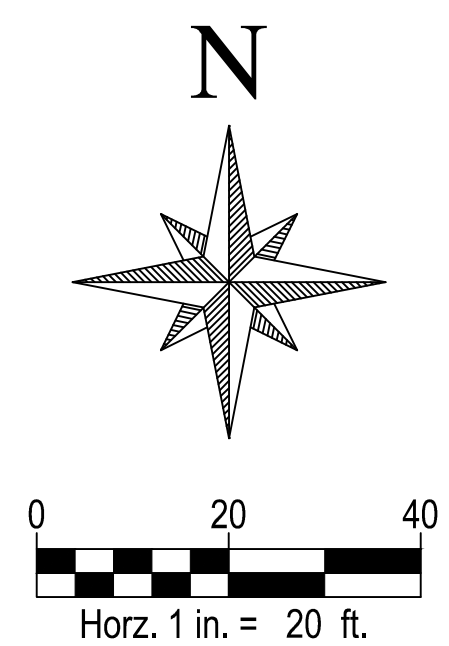
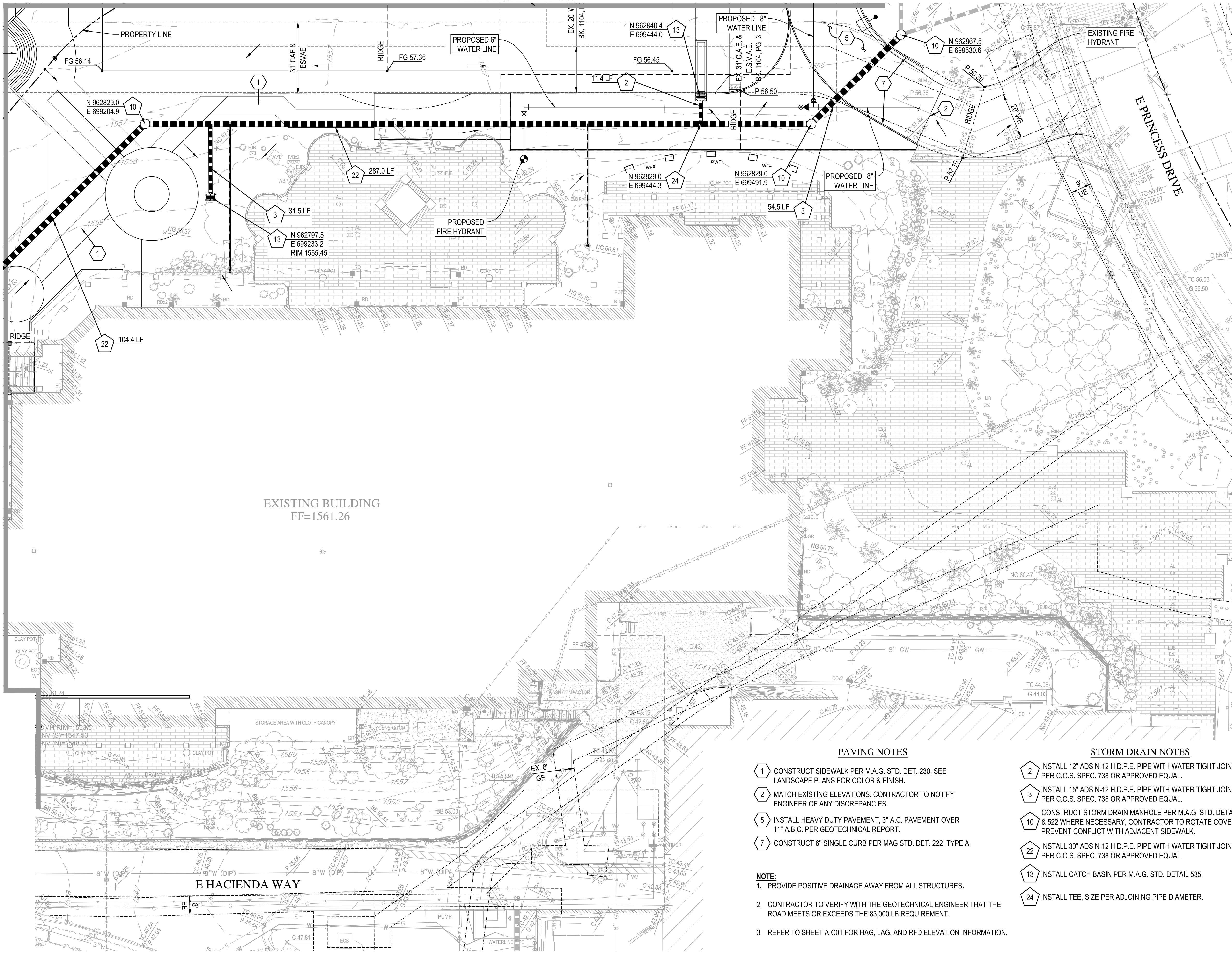


SCALE (HORIZ.) 1" = 20'
 SCALE (VERT.) N/A
 DATE 11/22/2023
 JOB NUMBER 215319.30
 SHEET
 A-C03 OF 5

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CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: JRS

MATCH SHEET A-C03



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Call at least two full working days before you begin excavation.
ARIZONA811
 Arizona Blue Stakes, Inc.
 Dial 8-1-1 or 1-800-541-4747
 In Maricopa County (602) 953-1100

**FAIRMONT SCOTTSDALE PRINCESS
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 CONCEPT GRADING, DRAINAGE,
 WATER & SEWER
 SCOTTSDALE, ARIZONA
 CONCEPT GRADING, DRAINAGE, WATER, & SEWER

REV	DATE	DESCRIPTION

Professional Engineer
 36382
 DARRIN L. MOORE
 11/22/2023
 ARIZONA
 EXPIRES 06-30-25

SCALE (HORIZ.) 1" = 20'
 SCALE (VERT.) N/A
 DATE 11/22/2023
 JOB NUMBER 215319.30
 SHEET A-C04 OF 5

- PAVING NOTES**
- 1 CONSTRUCT SIDEWALK PER M.A.G. STD. DET. 230. SEE LANDSCAPE PLANS FOR COLOR & FINISH.
 - 2 MATCH EXISTING ELEVATIONS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - 5 INSTALL HEAVY DUTY PAVEMENT, 3" A.C. PAVEMENT OVER 11" A.B.C. PER GEOTECHNICAL REPORT.
 - 7 CONSTRUCT 6" SINGLE CURB PER MAG STD. DET. 222, TYPE A.
- NOTE:**
1. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
 2. CONTRACTOR TO VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE ROAD MEETS OR EXCEEDS THE 83,000 LB REQUIREMENT.
 3. REFER TO SHEET A-C01 FOR HAG, LAG, AND RFD ELEVATION INFORMATION.

- STORM DRAIN NOTES**
- 2 INSTALL 12" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
 - 3 INSTALL 15" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
 - 10 CONSTRUCT STORM DRAIN MANHOLE PER M.A.G. STD. DETAIL 520 & 522 WHERE NECESSARY. CONTRACTOR TO ROTATE COVER TO PREVENT CONFLICT WITH ADJACENT SIDEWALK.
 - 22 INSTALL 30" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
 - 13 INSTALL CATCH BASIN PER M.A.G. STD. DETAIL 535.
 - 24 INSTALL TEE, SIZE PER ADJOINING PIPE DIAMETER.

MATCH SHEET A-C05

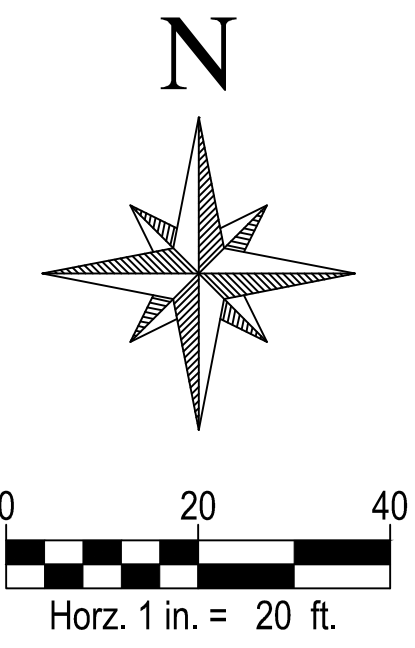
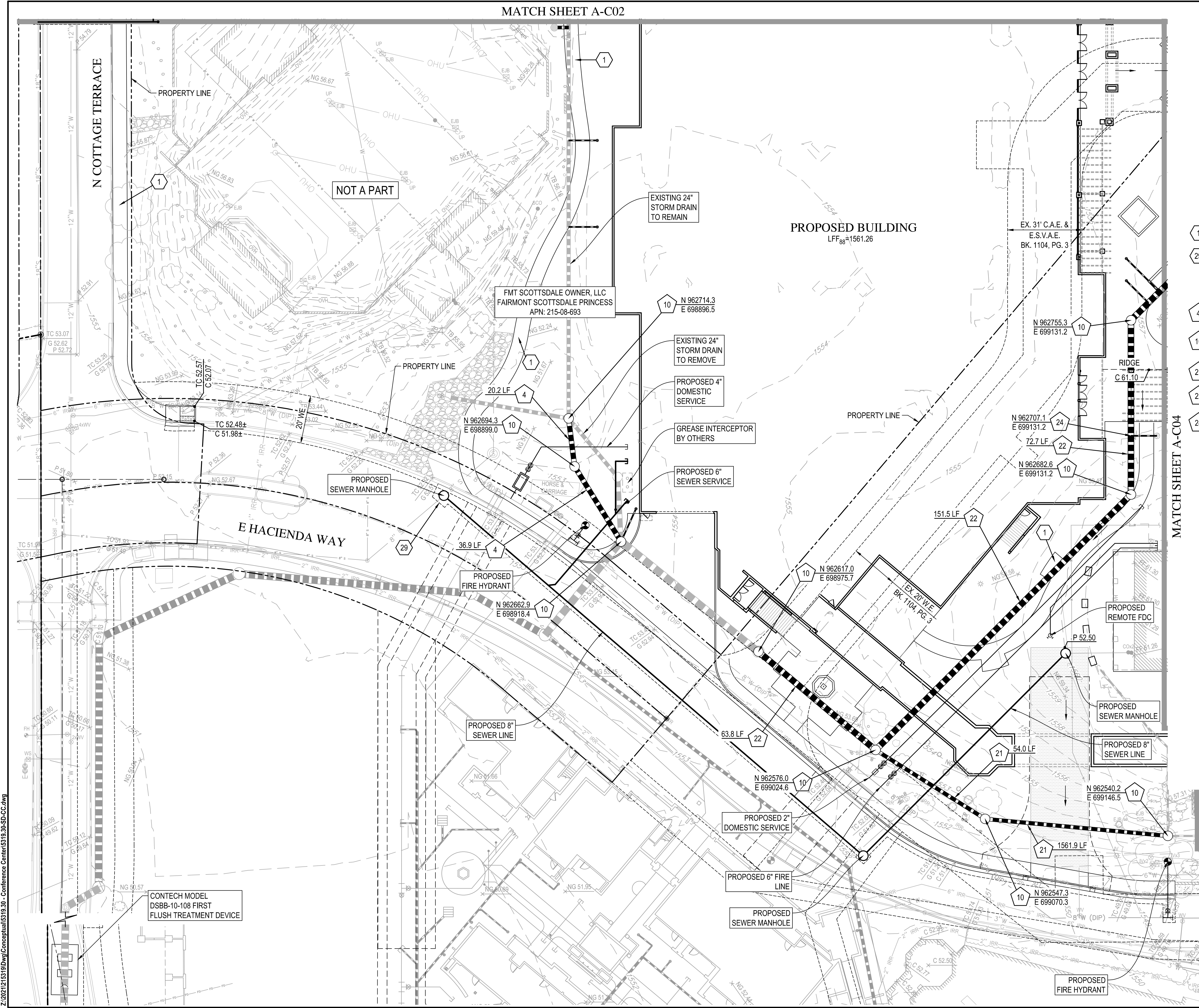
EXISTING BUILDING
FF=1561.26

E HACIENDA WAY

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CHECKED BY: DM DESIGNED BY: RS DRAFTED BY: JRS

MATCH SHEET A-C02



PAVING NOTES

- 1 CONSTRUCT SIDEWALK PER M.A.G. STD. DET. 230. SEE LANDSCAPE PLANS FOR COLOR & FINISH.
- 29 REMOVE & REPLACE EXISTING PAVEMENT FOR UTILITY CONSTRUCTION PER M.A.G. STD. DETAIL 200-1.

STORM DRAIN NOTES

- 4 INSTALL 24" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
- 10 CONSTRUCT STORM DRAIN MANHOLE PER M.A.G. STD. DETAIL 520 & 522 WHERE NECESSARY, CONTRACTOR TO ROTATE COVER TO PREVENT CONFLICT WITH ADJACENT SIDEWALK.
- 21 INSTALL 18" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
- 22 INSTALL 30" ADS N-12 H.D.P.E. PIPE WITH WATER TIGHT JOINTS PER C.O.S. SPEC. 738 OR APPROVED EQUAL.
- 24 INSTALL TEE. SIZE PER ADJOINING PIPE DIAMETER.

MATCH SHEET A-C04



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CONCEPT GRADING, DRAINAGE, WATER, & SEWER

REV	DATE	DESCRIPTION



- NOTE:
1. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
 2. CONTRACTOR TO VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE ROAD MEETS OR EXCEEDS THE 83,000 LB REQUIREMENT.
 3. REFER TO SHEET A-C01 FOR HAG, LAG, AND RFD ELEVATION INFORMATION.

SCALE (HORIZ.) 1" = 20'
SCALE (VERT.) N/A
DATE 11/22/2023
JOB NUMBER 215319.30
SHEET A-C05 OF 5

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APPENDIX C – CITY OF SCOTTSDALE DEVELOPMENT WATER DEMAND EXHIBIT

INSTRUCTIONS

INPUT DEVELOPMENT NAME, CASE NUMBER, AND QUANTITY VALUES TO DETERMINE TOTAL AVERAGE DAILY WATER USE PER THE 2018 DESIGN STANDARDS AND POLICY MANUAL (DS7PM) CHAPTER 6 USING GALLONS PER DAY (GPD) VALUES FROM FIGURE 6-1.2

TABLE 1: QUANTITY INPUT TABLE FOR THE DEVELOPMENT

FAIRMONT SCOTTSDALE PRINCESS

WATER USE DEVELOPMENT TYPE/CATEGORY	AVERAGE UNIT WATER USE PER DS&PM CH. 6 (GPD/UNIT)	INPUT APPLICABLE QUANTITY FOR DEVELOPMENT IN THIS COLUMN	NUMERICAL UNIT	TOTAL AVERAGE WATER USE (GPD)	NOTES
Category: Residential/ Commerical Residential/ Hotel					
< 2 DU/ac	485.6	-	DU	-	Community pool demands not included here. Refer to separate category.
2 – 2.9 DU/ac	470.4	-	DU	-	
3 – 7.9 DU/ac	248.2	-	DU	-	
8 – 11.9 DU/ac	227.6	-	DU	-	
12 – 22 DU/ac	227.6	-	DU	-	
High Density Condominium (condo)	185.3	-	DU	-	
Resort Hotel	446.3	198	ROOM	88,367	Includes site amenities such as 1 "standard" restaurant w/ associated dedicated kitchen, laundry service, landscaping, fountains, and 1 medium capacity pool. Large event venues/kitchens or multiple/large pools and multiple restaurants are not included.
Category: Commerical/ Other					
Restaurant	1.3	29,719	FT2	38,635	
Commercial/Retail	0.80	94,357	FT2	75,486	
Commerical High Rise	0.60	-	FT2	-	per IBC highrise is at or over 75 feet to highest finished floor
Office	0.60	-	FT2	-	
Institutional	1,340	-	ACRE	-	
Industrial	1,027	-	ACRE	-	
Research and Development	1,284	-	ACRE	-	
Category: Special Use Areas					
Natural Area Open Space	-	-	ACRE	-	Zero water demand
Developed Open Space - Parks	1,786	-	ACRE	-	
Developed Open Space- Golf Course	4,285	-	ACRE	-	
Category: Evaporation from Swimming Pools/Spas, Cooling, Turf Area Irrigation, Other Outdoor Consumptive Uses					
Extra large pool (60k to 100k gallons)	274	-	EA	-	Annual mean ETo = 74.75 in as collected by AZ Met. Kc = 1.1. Average pool size of 400 sq. ft. loses 20,490 gallons per year, or 51.23 gallons per sq ft, not including backwashing or leaks, per AMWUA calculator.
Large pool (above 30k to 60k gallons)	154	-	EA	-	
Medium pool (15k to 30k gallons)	75	-	EA	-	
Small pool or spa (under 15k gallons)	51	3	EA	154	
Total Bermuda Turf Area	0.10	4,885	FT2	468	1 sq ft of non-overseeded turf at 60% efficiency with increased Kc is 35 gallons per sq ft per year, per AMWUA calculator.
Total Overseeded Turf Area	0.02	-	FT2	-	1 sq ft of overseeded turf at 60% efficiency with increased Kc is 9 gallons per sq ft per year, per AMWUA calculator.
Evaporative Cooling/ Cooling Towers	-	-	TOTAL COOLING TONNAGE	-	Baed on 1.50 cycles of concentration and average annual daily utilization of 68%. Water use is linear with respect to total cooling capacity tonnage. Based on US Dept of Energy Efficiency and Renewable Energy data.
Category: Filter Backwash Flows & Make-up Water from Pools & Spas (rapid sand filters)					
Extra large pool (60k to 100k gallons)	229	-	EA	-	Based on once per 7 day backwash @ 50,100, and 150gpm, respectively for each size pool category for 8 minute duration. Quantity values used from pool input values above.
Large pool (above 30k to 60k gallons)	171	-	EA	-	
Medium pool (15k to 30k gallons)	114	-	EA	-	
Small pool or spa (under 15k gallons)	57	3	EA	171	

A. TOTAL AVERAGE DAILY WATER USE FOR THIS DEVELOPMENT **203,282** GPD

NOTES:
 GPD=GALLONS PER DAY, DU=DWELLING UNITS, FT2=SQUARE FEET, AC=ACRE, EA=EACH UNIT, ETo=EVAPOTRANSPIRATION, Kc=CROP COEFFICIENT, AZMET=ARIZONA METEOROLOGICAL NETWORK, AMWUA=ARIZONA MUNICIPAL WATER USERS ASSOCIATION
 NONE OF THE VALUES OR CALCULATIONS HEREIN ARE INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES AND PEAKING FACTORS.

INSTRUCTIONS

IDENTIFY WATER CONSERVATION MEASURES ABOVE THOSE REQUIRED BY CITY CODE THAT THE DEVELOPMENT(S) PROPOSE TO IMPLEMENT. ENTER AN "X" FOR EACH PROPOSED MEASURE.

TABLE 2: APPROVED SUPPLEMENTAL WATER CONSERVATION MEASURES		
FAIRMONT SCOTTSDALE PRINCESS		
PROPOSED FOR THIS DEVELOPMENT (ENTER "X")	MEASURE	DESCRIPTION
	1. Submetering	Multi-family and mixed-use developments SUBMETER UNITS for leak detection and for occupants ability to manage their own water use
	2. No outdoor water features	Decorative water features outdoors can be a source of water use that is not functional
	3. Indoor water features submetered	Water features have proven to be a source of leaks. Submetering that is capable of alerts to the building monitoring system greatly reduce water waste
x	4. Limitation on functional turf grass	Functional grass turf are areas used for congregation of large number of people and should be limited to up to 10% of the landscapable area
	5. Limitations on artificial turf	Artificial turf is a large source of heat especially during summer months.
	6. Landscaped Rainwater harvesting	Earthworks, such as berms and basins, are encouraged to promote passive rainwater harvesting for planned plants and trees
	7. Cooling tower controllers with monitoring technology	Arizona high evapotranspiration rates, cooling towers use significantly more water here than in other states. Monitory systems can optimize this water use.
	8. Pools and splashpads submeters with monitoring technology	Pools and splashpad can be a source of leaks. Submetering that is capable of alerts to the building monitoring system greatly reduce water waste. Timers on Splash pads
<p>NOTES: Greywater systems and large areas of artificial turf are not recommended by water conservation. This list represents water conservation measures that the conservation office has approved and has shown to provide proven water savings.</p>		
TABLE INPUT VALUES LAST UPDATED:		11/29/2023

Water Demand Exhibit Summary

FAIRMONT SCOTTSDALE PRINCESS

1. Total Estimated Water Use per Day on a Sustainable Basis (gallons per day, gpd)

203,282 gpd

2. Net Water (NW) / Consumptive Use (gallons per day, gpd)

41,698 gpd

3. Proposed Water Conservation Measures Above Those Required By City Code

	1. Submetering	NOT PROPOSED
	2. No outdoor water features	NOT PROPOSED
	3. Indoor water features submetered	NOT PROPOSED
X	4. Limitation on functional turf grass	Functional grass turf are areas used for congregation of large number of people and should be limited to up to 10% of the landscapable area
	5. Limitations on artificial turf	NOT PROPOSED
	6. Landscaped Rainwater harvesting	NOT PROPOSED
	7. Cooling tower controllers with monitoring technology	NOT PROPOSED
	8. Pools and splashpads submeters with monitoring technology	NOT PROPOSED

4. Annual Economic Value of the Development on a per Gallon of Use Basis (Applies to Commercial or Mixed Use, To be Completed by City)

1. Major City Revenues \$/1,000 gallons

2. Total Annual Output Impact \$/1,000 gallons

TABLE 4: WATER USE SUMMARY

FAIRMONT SCOTTSDALE PRINCESS

WATER USE SUMMARY FOR THE DEVELOPMENT

USE CATEGORY	AMOUNT	UNITS	% OF TOTAL USE	CALCULATION NOTES
A. TOTAL DAILY AVERAGE WATER USE	203,282	GPD	100.0%	A=B+C, C=D+E, F=B+D
B. OUTDOOR CONSUMPTIVE USE	21,861	GPD	10.8%	
C. TOTAL INDOOR USE	181,421	GPD	89.2%	
D. INDOOR CONSUMPTIVE USE	19,837	GPD	9.8%	
E. WASTEWATER TO SEWER	161,584	GPD	79.5%	
F. TOTAL CONSUMPTIVE USE (NET USE)	41,698	GPD	20.5%	

NOTES:
 GPD=GALLONS PER DAY
 ALL VALUES ARE FOR AVERAGE WATER USE ANALYSIS ONLY. THIS CALCULATION IS NOT INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES, PEAKING FACTORS, AND DESIGN REQUIREMENTS.

TOTAL AVERAGE WATER USE (GALLONS PER DAY, GPD)

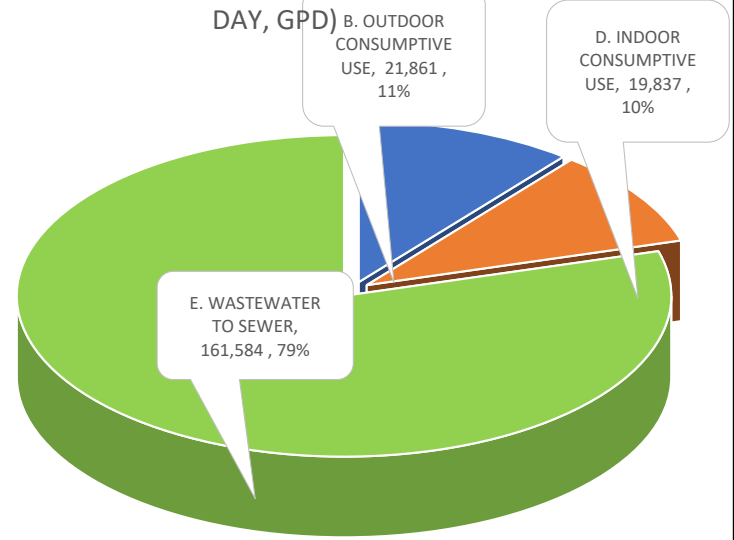


TABLE INPUT VALUES LAST UPDATED: 11/29/2023

TABLE 5: DETAILED WATER USE BREAKDOWN FOR THE DEVELOPMENT

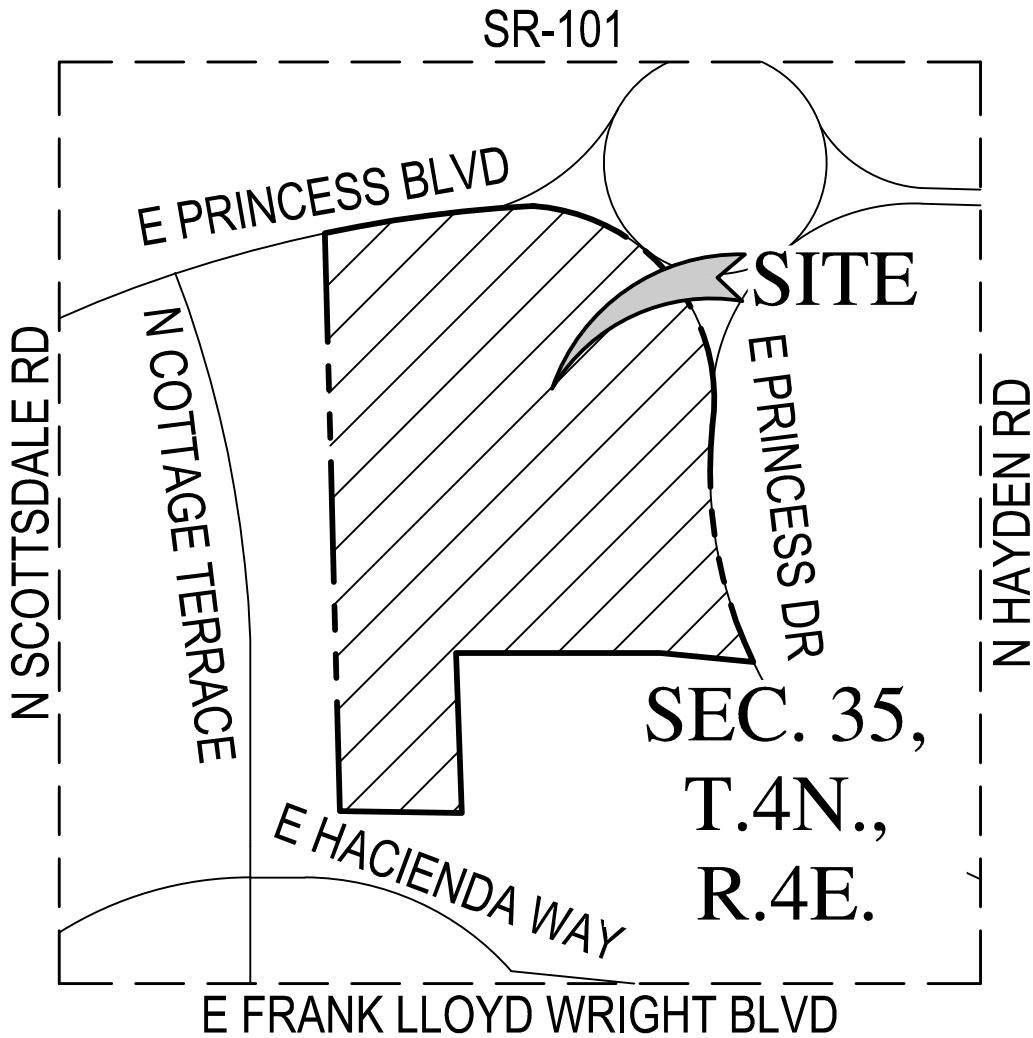
FAIRMONT SCOTTSDALE PRINCESS

TO RIGHT: WATER USE ALLOCATION- --->		B. AVERAGE OUTDOOR CONSUMPTIVE WATER USE ⁽¹⁾			C. AVERAGE INDOOR TOTAL WATER USE ⁽¹⁾			D. AVERAGE INDOOR CONSUMPTIVE WATER USE ⁽²⁾			E. AVERAGE WASTEWATER FLOWS TO SEWER ⁽³⁾		
BELOW: WATER USE DEVELOPMENT TYPE/CATEGORY	A. TOTAL AVERAGE WATER USE (GPD)	UNIT OUTDOOR CONSUMPTIVE WATER USE (GPD/UNIT)	OUTDOOR CONSUMPTIVE USE (GPD)	OUTDOOR CONSUMPTIVE USE (% OF TOTAL USE)	UNIT TOTAL INDOOR WATER USE (GPD/UNIT)	INDOOR TOTAL USE (GPD)	INDOOR TOTAL USE (% OF TOTAL USE)	UNIT CONSUMPTIVE INDOOR WATER USE (GPD/UNIT)	INDOOR CONSUMPTIVE USE (GPD)	INDOOR CONSUMPTIVE USE (% OF TOTAL USE)	WASTEWATER FLOW (GPD/UNIT)	WASTEWATER FLOW (GPD)	WASTEWATER (% OF TOTAL USE)
		Category: Residential/ Commerical Residential/ Hotel											
< 2 DU/ac	-	276.7	-	0.0%	208.9	-	0.0%	20.9	-	0.0%	188	-	0.0%
2 – 2.9 DU/ac	-	276.7	-	0.0%	193.7	-	0.0%	19.4	-	0.0%	174	-	0.0%
3 – 7.9 DU/ac	-	72.3	-	0.0%	175.9	-	0.0%	17.6	-	0.0%	158	-	0.0%
8 – 11.9 DU/ac	-	72.3	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
12 – 22 DU/ac	-	72.3	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
High Density Condominium (condo)	-	30.0	-	0.0%	155.3	-	0.0%	15.5	-	0.0%	140	-	0.0%
Resort Hotel	88,367	44.6	8,831	4.3%	401.7	79,536.6	39.1%	32.1	6,362.9	3.1%	370	73,174	36.0%
Category: Commerical/ Other													
Restaurant	38,635	0.10	2,972	1.5%	1.20	35,662.8	17.5%	0.12	3,566.3	1.8%	1.08	32,097	15.8%
Commercial/Retail	75,486	0.10	9,436	4.6%	0.70	66,049.9	32.5%	0.11	9,907.5	4.9%	0.60	56,142	27.6%
Commerical High Rise	-	0.10	-	0.0%	0.50	-	0.0%	0.05	-	0.0%	0.45	-	0.0%
Office	-	0.10	-	0.0%	0.50	-	0.0%	0.05	-	0.0%	0.45	-	0.0%
Institutional	-	670	-	0.0%	670.0	-	0.0%	100.50	-	0.0%	569.50	-	0.0%
Industrial	-	154	-	0.0%	873.0	-	0.0%	130.95	-	0.0%	742.05	-	0.0%
Research and Development	-	192	-	0.0%	1,092.0	-	0.0%	163.80	-	0.0%	928.20	-	0.0%
Category: Special Use Areas													
Natural Area Open Space	-	-	-	0.0%							-	-	0.0%
Developed Open Space - Parks	-	1,786	-	0.0%							-	-	0.0%
Developed Open Space- Golf Course	-	4,285	-	0.0%							-	-	0.0%
Category: Evaporation from Swimming Pools/Spas, Cooling, Turf Area Irrigation, Other Outdoor Consumptive Uses													
Extra large pool (60k to 100k gallons)	-	274	-	0.0%							-	-	0.0%
Large pool (above 30k to 60k gallons)	-	154	-	0.0%							-	-	0.0%
Medium pool (15k to 30k gallons)	-	75	-	0.0%							-	-	0.0%
Small pool or spa (under 15k gallons)	154	51	154	0.1%							-	-	0.0%
Total Bermuda Turf Area	468	0.10	468	0.2%							-	-	0.0%
Total Overseeded Turf Area	-	0.02	-	0.0%							-	-	0.0%
Evaporative Cooling/ Cooling Towers	-	-	-	0.0%							-	-	0.0%
Category: Filter Backwash Flows & Make-up Water from Pools & Spas (rapid sand filters)													
Extra large pool (60k to 100k gallons)	-				228.6	-	0.0%				229	-	0.0%
Large pool (above 30k to 60k gallons)	-				171.4	-	0.0%				171	-	0.0%
Medium pool (15k to 30k gallons)	-				114.3	-	0.0%				114	-	0.0%
Small pool or spa (under 15k gallons)	171				57.1	171.4	0.1%				57	171	0.1%
TOTALS		203,282	21,861	10.8%	181,421	89.2%	19,837	9.8%	161,584	79.5%			

F. TOTAL CONSUMPTIVE/NET WATER USE FOR THIS DEVELOPMENT (B. + D.) 41,698 GPD 20.5% OF TOTAL USE

NOTES:
 (1) PER 2018 DS&PM CHAPTER 6, FIGURE 6-1.2
 (2) VARIES FROM 8% TO 15%, TYPICALLY 10%
 (3) WASTEWATER FLOWS TO SEWER ARE CALCULATED AS C. MINUS D.
 GPD=GALLONS PER DAY, DU=DWELLING UNIT, FT2=SQUARE FEET, AC=ACRE, EA=EACH UNIT
 NONE OF THE VALUES OR CALCULATIONS HEREIN ARE INTENDED TO BE USED FOR INFRASTRUCTURE DESIGN, PEAK FLOW DETERMINATION, OR SYSTEM CAPACITY ANALYSIS. FOR THESE PURPOSES REFER TO CH.6 & 7 OF THE CITY'S DESIGN STANDARDS AND POLICY MANUAL FOR THE RESPECTIVE DESIGN VALUES AND PEAKING FACTORS.

EXHIBIT 1 – VICINITY MAP



SITE

**SEC. 35,
T.4N.,
R.4E.**

VICINITY MAP

N.T.S.

**NOT
FOR
CONSTRUCTION
OR RECORDING**

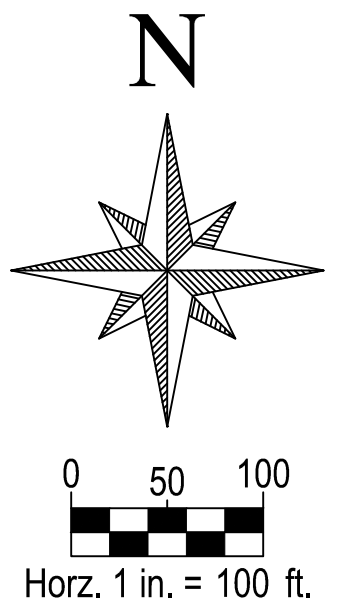
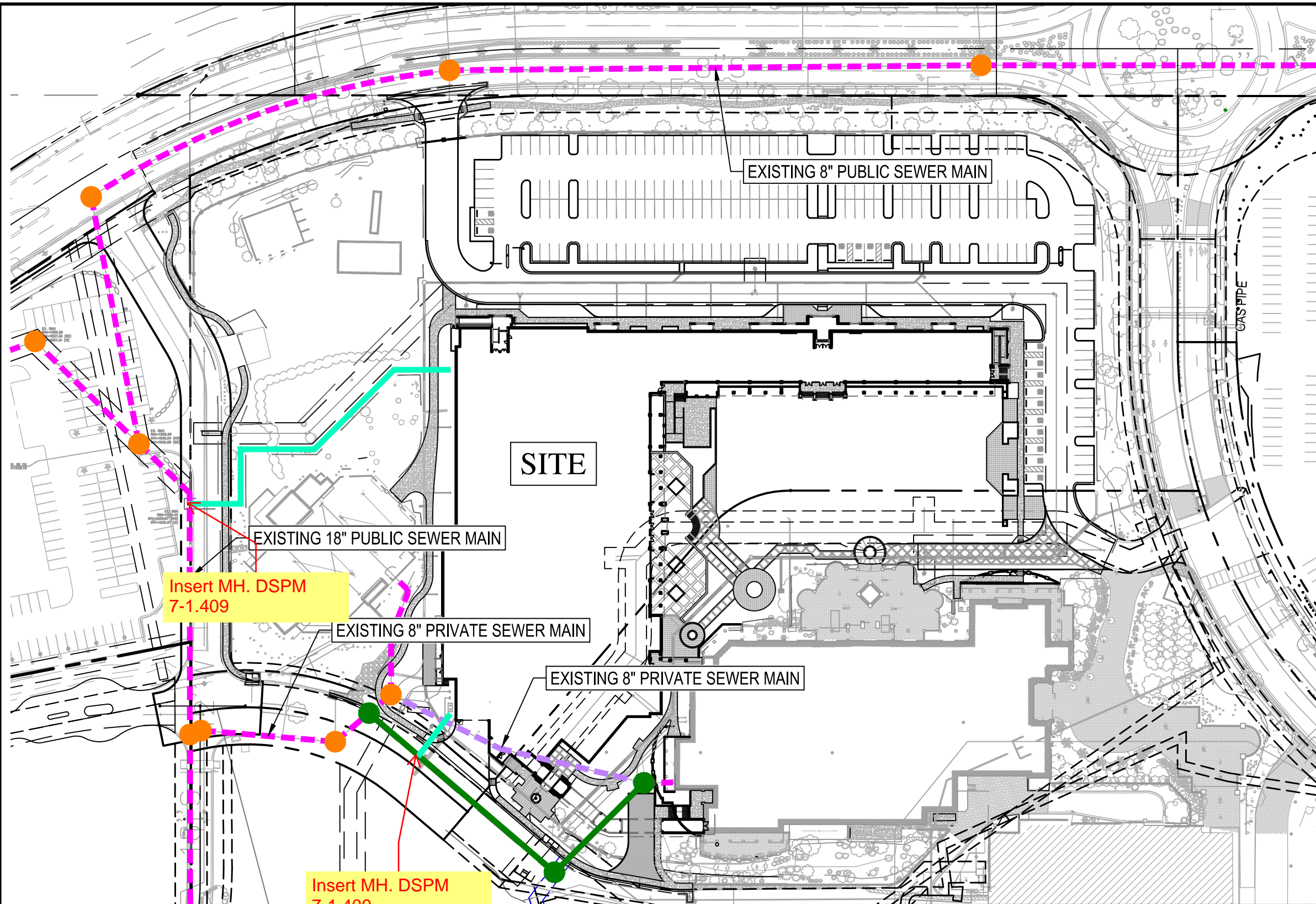


FAIRMONT SCOTTSDALE PRINCESS








**CONFERENCE CENTER & EVENT
LAWN VICINITY MAP EXHIBIT**

DATE	11/22/2023	SCALE	N.T.S	SHEET	1 OF 1
JOB NO.	215319	DESIGN	AJS	CHECK	AJS
		DRAWN	DLH	RFI #	

EXHIBIT 2 – WASTEWATER EXHIBIT



LEGEND

-  EXISTING SEWER TO BE REMOVED
-  EXISTING SEWER
-  PROPOSED 6" SEWER SERVICE
-  PROPOSED 8" SEWER MAIN
-  PROPERTY BOUNDARY
-  EXISTING SEWER MANHOLE
-  PROPOSED SEWER MANHOLE

Insert MH. DSPM
7-1.409

Insert MH. DSPM
7-1.409

**NOT
FOR
CONSTRUCTION
OR RECORDING**



FAIRMONT SCOTTSDALE PRINCESS			
CONFERENCE CENTER & EVENT LAWN WASTEWATER EXHIBIT 2			
DATE	11/22/2023	SCALE	1" = 100'
SHEET	1 OF 1	DESIGN	AJS
JOB NO.	215319.30	DRAWN	AJS

Z:\2021\215319\Project Support\Reports\Rezoning\Conference Center & Event Lawn\Sewer BOD\Exhibits\EXH2-Sewer Layout.dwg