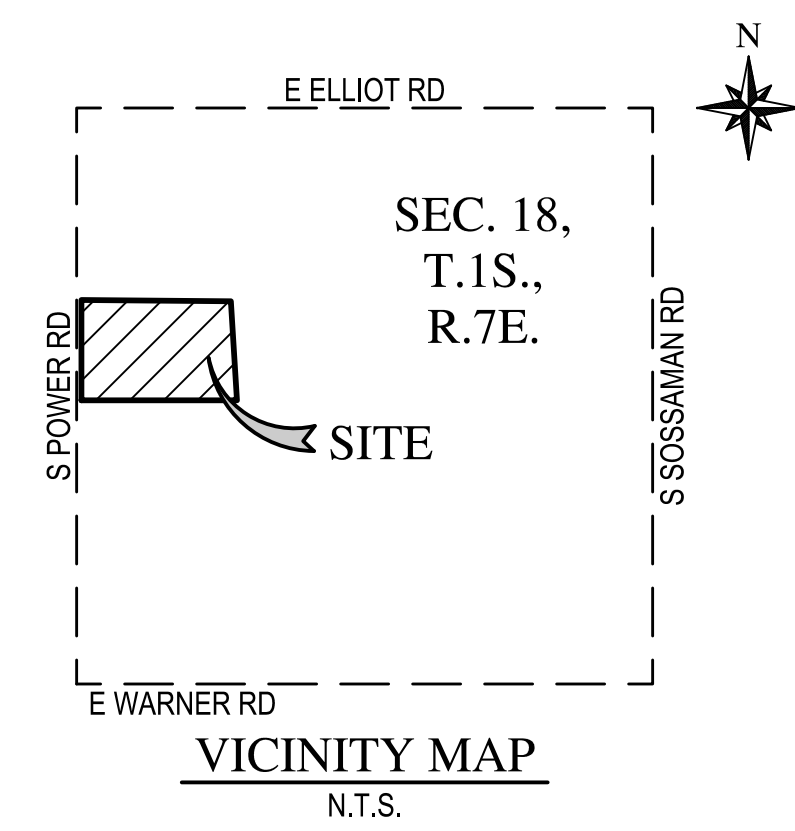


POWER 42
PRELIMINARY GRADING, DRAINAGE, WATER & SEWER PLAN
MESA, ARIZONA

A PORTION OF SECTION 18, TOWNSHIP 1 SOUTH, RANGE 7 EAST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

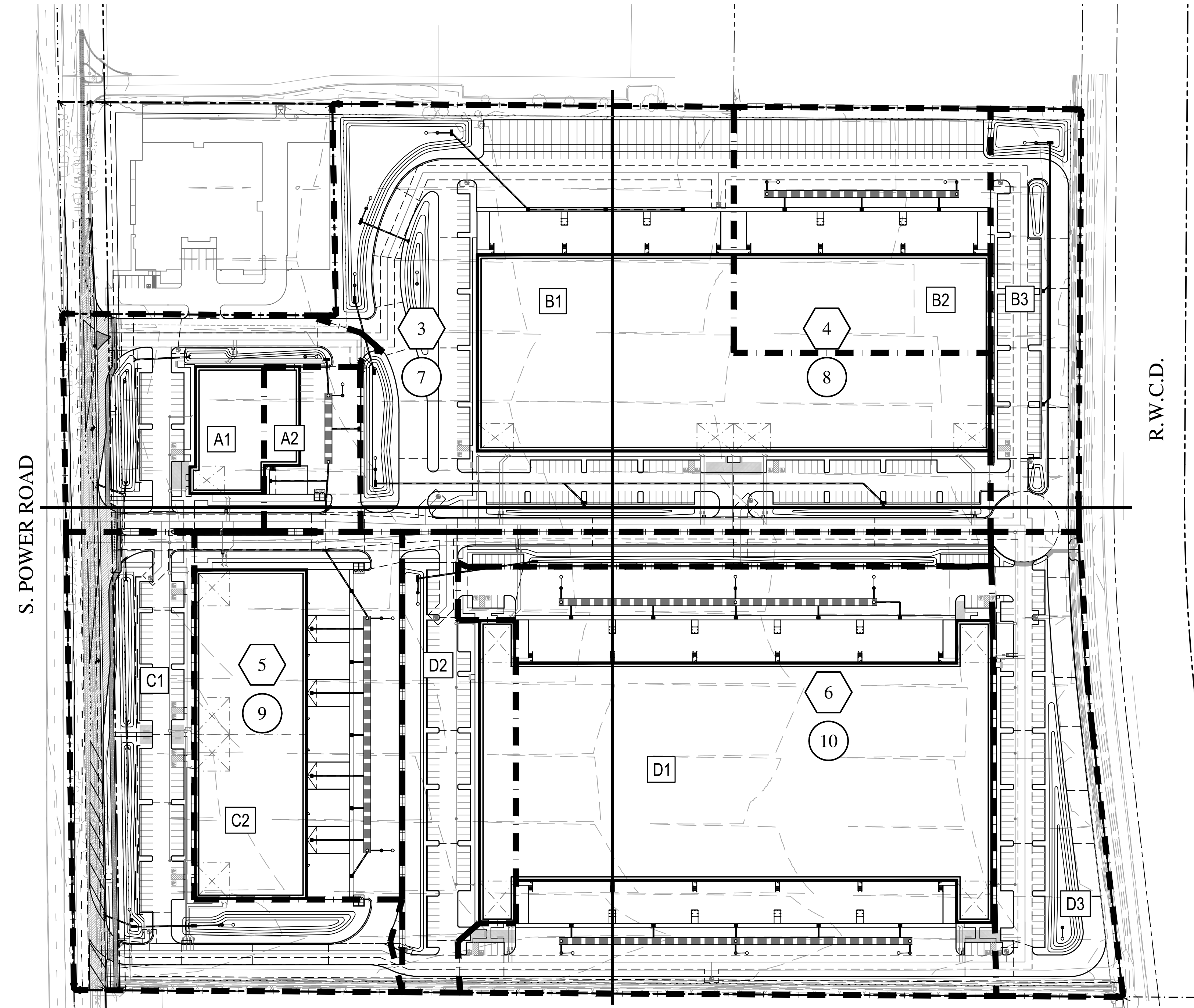


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SHEET INDEX

SHEET 1	COVER SHEET
SHEET 2	NOTES
SHEET 3-6	PRELIMINARY GRADING & DRAINAGE PLAN
SHEET 7-10	PRELIMINARY WATER & SEWER PLAN

BASIS OF BEARING

NATIONAL GEODETIC SURVEY (NGS) GEODETIC NORTH BASED ON:

THE HORIZONTAL DATUM FOR THIS SURVEY IS BASED ON INFORMATION OBTAINED FROM THE MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION (MCDOT) GEODETIC DENSIFICATION AND CADASTRAL SURVEY (GDACS) WEBSITE WWW.MCDOT.MARICOPA.GOV, UNDER THE SURVEY INFORMATION LINK ON NOVEMBER 18, 2020.

PROJECTION	ARIZONA CENTRAL ZONE, NAD 83, (EPOCH 1992)
DATUM	GRS-80
UNITS	INTERNATIONAL FEET
GEOID MODEL	GEOID 2018A

CONTROL POINT	529
PID	BB8223
LATITUDE	33°21'03.34365"N
LONGITUDE	111°40'55.30533"W
ELLIPSOID HEIGHT	1234.527 (INTERNATIONAL FEET)
DESCRIPTION	BRASS CAP IN CONCRETE

MODIFIED TO GROUND AT GRID N: 852522.607, E: 770044.765, USING A SCALE FACTOR OF 1.0001561680.

HORIZONTAL ADJUSTMENT	NONE
HORIZONTAL ROTATION	NONE

BENCHMARK

THE VERTICAL DATUM FOR THIS SURVEY IS BASED ON A NAIL WITH TAG ON IRRIGATION STRUCTURE, LOCATED ON THE EAST SIDE OF POWER ROAD BETWEEN WARNER ROAD AND ELLIOT ROAD, HAVING AN ELEVATION OF 1325.67', CITY OF MESA NAVD 88 DATUM.

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF SUBDIVIDING 2 EXISTING PARCELS INTO 4 NEW LOTS EACH WITH A PROPOSED DOCK-HIGH INDUSTRIAL BUILDING. THE PROJECT WILL INCLUDE GRADING, DRAINAGE, PAVING, UTILITY, HARDSCAPE AND LANDSCAPE IMPROVEMENTS TO SUPPORT THE 4 NEW LOTS.

DRAINAGE STATEMENT

PLEASE REFER TO SHEET 2 FOR DRAINAGE STATEMENT.

RETENTION CALCULATIONS

PLEASE REFER TO SHEET 2 FOR RETENTION CALCULATIONS.

LEGEND

PLEASE REFER TO SHEET 2 FOR LEGEND AND LIST OF ABBREVIATIONS.

OWNER / DEVELOPER

NORTHERN EQUITIES GROUP
39000 COUNTRY CLUB DRIVE
FARMINGTON HILLS, MI 48331
CONTACT: MATTHEW S. SOSIN
PHONE: (248) 848-6400
FAX: (248) 848-6700

ENGINEER

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

ARCHITECT

WARE MALCOMB
2777 EAST CAMELBACK ROAD, SUITE 325
PHOENIX, ARIZONA 85016
CONTACT: DOUGLAS GULLO
PHONE: (480) 767-1001

LANDSCAPE ARCHITECT

GILMORE PLANNING & LANDSCAPE ARCHITECTURE
2211 NORTH 7TH STREET
PHOENIX, ARIZONA 85006
CONTACT: JACK GILMORE
PHONE: (602) 266-5622

PROJECT SITE DATA

ASSESSOR PARCEL NUMBER(S):
304-17-009C, 304-17-008X
PROJECT SITE ADDRESS:
SOUTH POWER ROAD
MESA, ARIZONA
PROJECT SITE AREA(S):
GROSS AREA= 39.18 AC
EX. NET AREA = 39.18 AC
PROP. NET AREA = 37.75 AC
(AFTER R/W DEDICATION)
DISTURBED AREA = 38± AC
ZONING:
LI

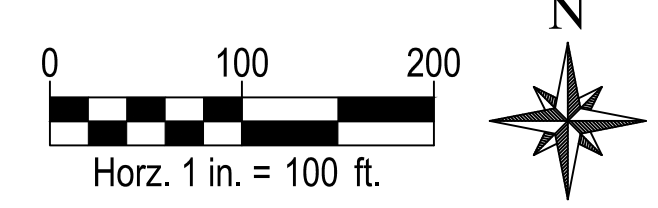
PUBLIC UTILITIES

WATER	CITY OF MESA
SEWER	CITY OF MESA
ELECTRIC	SAL RIVER PROJECT
TELEPHONE	CENTURYLINK
NATURAL GAS	SOUTHWEST GAS
CABLE TV	COX COMMUNICATIONS

INDEX MAP LEGEND

	PRELIMINARY GRADING & DRAINAGE
	PRELIMINARY WATER & SEWER

INDEX MAP / PRELIMINARY DRAINAGE MAP



DRAINAGE MAP LEGEND

	DRAINAGE AREA BOUNDARY
	DRAINAGE AREA ID

POWER 42
PRELIMINARY GRADING, DRAINAGE,
WATER & SEWER PLAN
MESA, ARIZONA
COVER SHEET

REV	DESCRIPTION	DATE

Professional Engineer Seal for Derek C. Nichols, License No. 61601, State of Arizona. The seal is circular with the text 'REGISTERED PROFESSIONAL ENGINEER' around the perimeter and 'DEREK C. NICHOLS' in the center. Below the seal, it says 'EXPIRES 03-31-22'.

SCALE (HORIZ.) N/A
SCALE (VERT.) N/A
DATE 03/08/2021
JOB NUMBER 205098
SHEET 1 OF 10



COMPOSITE WEIGHTED "C"
FACTOR CALCULATIONS
100 YEAR



RETENTION VOLUME REQUIRED
100 YEAR, 2-HOUR VOLUME



RETENTION VOLUME PROVIDED
ON-SITE RETENTION

Project Power 42
Location Mesa AZ
Project Number 205098
Project Engineer Derek Nichols, PE

Project Power 42
Location Mesa AZ
Project Number 205098
Project Engineer Derek Nichols, PE

Project Power 42
Location Mesa AZ
Project Number 205098
Project Engineer Derek Nichols, PE

Drainage Subbasin ID	Area	Landscape Area	Pavement/Roof Area	100 YR Runoff Coefficient
(Description/ID)	(sf)	%	"C"	"C"
A1	96,833	25%	0.50	0.95
A2	31,904	8%	0.50	0.92
B1	423,329	24%	0.50	0.95
B2	126,390	5%	0.50	0.95
B3	75,842	41%	0.50	0.95
C1	152,961	42%	0.50	0.95
C2	153,463	5%	0.50	0.95
D1	401,045	8%	0.50	0.95
D2	124,462	39%	0.50	0.95
D3	121,171	33%	0.50	0.95

Rainfall Depth "P" = 2.20 inches

Drainage Area ID	Retention Basin ID	Drainage Area "A" (sf)	100 YR Runoff Coefficient "C"	C*A	Required Retention (cf)
A1	A1.1+A1.2	96833	0.84	81098	14868
A2	A2.1	31904	0.91	29160	5346
B1	B1.1 to B1.5	423329	0.84	356443	65348
B2	B2.1	126390	0.93	117227	21492
B3	B3.1+B3.2+B3.3	75842	0.77	58057	10644
C1	C1.1+C1.2+C1.3	152961	0.76	116403	21341
C2	C2.1	153463	0.93	142337	26095
D1	D1.1+D1.2	401045	0.91	366555	67202
D2	D2.1+D2.2	124462	0.77	96396	17673
D3	D3.1	121171	0.80	97119	17805
TOTAL		1707400			267812

Drainage Area ID	Retention Basin ID	Contour Interval (ft)	Bottom Elevation (ft)	Top Elevation (ft)	Bottom Area (sf)	Top Area (sf)	Volume (cf)	Cumulative Volume (cf)	Basin Volume Provided (cf)	Drainage Area Volume Provided (cf)	Drainage Area Volume Required (cf)	Vp/Vr %
A1	A1.1	1.0	1,319.5	1,320.5	964	1,876	1,220	1,220	8,036	12,314	14,868	83%
A2	A2.1	1.0	1,320.5	1,321.5	1,876	3,367	2,622	3,842	4,279	7,854	5,346	147%
B1	B1.1	1.0	1,320.5	1,321.5	13,862	17,086	15,474	27,790	46,554	73,344	65,348	112%
B2	B2.1	1.0	1,320.5	1,321.5	10,770	13,862	12,316	12,316	21,598	21,598	21,492	100%
B3	B3.1	1.0	1,323.0	1,324.0	2,321	3,345	2,833	2,833	11,934	13,305	10,644	125%
C1	C1.1	1.0	1,319.5	1,320.5	917	2,595	1,756	1,756	4,952	23,479	21,341	110%
C2	C2.1	1.0	1,320.5	1,321.5	319	2,418	1,369	1,369	26,311	26,311	26,095	101%
D1	D1.1	1.0	1,320.5	1,321.5	2,418	4,749	3,584	4,952	35,343	74,613	67,202	111%
D2	D2.1	1.0	1,325.0	1,326.0	2,420	7,240	4,830	4,830	39,270	18,763	17,673	106%
D3	D3.1	1.0	1,324.0	1,325.0	3,787	6,326	5,057	7,941	15,771	15,771	17,805	89%
TOTAL									287,351	267,812	267,812	107%

LEGEND	
EXISTING SURVEY	PROPOSED GRADING, DRAINAGE & PAVING
SECTION LINE	MAJOR CONTOUR
RIGHT OF WAY	MINOR CONTOUR
PROPERTY LINE	SPOT ELEVATIONS
ROAD CENTERLINE	STORM DRAIN PIPE
EASEMENT	STORM DRAIN CATCH BASIN
SURVEY MARKER	SLOPE ARROW
UG ELECTRIC (BURIED CABLE)	GRADE BREAK/RIDGE
UG ELECTRIC (CONDUIT)	RIP RAP
UG ELECTRIC (DUCT BANK)	WALL ELEVATION
OVERHEAD ELECTRIC	ROOF DRAIN/DRAIN ARROW
OVERHEAD TELEPHONE	DRYWELL
UG TELEPHONE	SITE ULTIMATE OUTFALL LOCATION & ELEVATION
CABLE TELEVISION	WALL
OVERHEAD CABLE TELEVISION	CONCRETE SIDEWALK
TELEPHONE DUCT BANK	CONCRETE PAVEMENT
BARBED WIRE FENCE	LIGHT DUTY ASPHALT PAVEMENT
CHAIN LINK FENCE	HEAVY DUTY ASPHALT PAVEMENT
WOOD FENCE	STREET/PARKING LIGHT
BLOCK WALL	
GAS LINE	
SEWER LINE	
STORM DRAIN PIPE	
IRRIGATION LINE	
WATER LINE	
CURB	
SIDEWALK	
MAJOR CONTOUR	
MINOR CONTOUR	
VEGETATION	
BUILDING	
SEWER MANHOLE	
STORM DRAIN MANHOLE	
TELEPHONE MANHOLE	
SPOT ELEVATION	
SIGN	
JUNCTION BOX/RISER	
FIRE HYDRANT	
WATER VALVE	
STREET/PARKING LIGHT	
UTILITY POLE	
CATCH BASIN	

ABBREVIATIONS					
A.E.	ACCESS EASEMENT	GB	GRADE BREAK	S.E.	SEWER EASEMENT
A.L.	AREA LIGHT	G.M.	GAS METER	S.J.B.	STREET LIGHT JUNCTION BOX
ARV	AIR RELEASE VALVE	G.S.	GAS SERVICE	S.L.	STREET LIGHT
BB	BOTTOM OF BANK	G.T.	GREASE TRAP	S.L.E.	SLOPE EASEMENT
BC	BACK OF CURB	G.V.	GAS VALVE	S.L.M.	STREET LIGHT MAST ARM
BF	BOTTOM OF FOOTING ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE	SMH	SEWER MANHOLE
B.P.	BARRIER POST	HWE	HIGH WATER ELEVATION	SS	SEWER SERVICE
BSL	BUILDING SETBACK LINE	INV	INVERT ELEVATION	STA	STATION
BW	BOTTOM OF WALL ELEVATION	I.V.	IRRIGATION VALVE	S.V.E.	SIGHT VISIBILITY EASEMENT
C	CONCRETE ELEVATION	I.V.B.	IRRIGATION VALVE BOX	S.V.T.	SIGHT VISIBILITY TRIANGLE
C.B.	CATCH BASIN	L.E.	LANDSCAPE EASEMENT	S.W.E.	SIDEWALK EASEMENT
CF	CUBIC FEET	LF	LINEAR FEET	TB	TOP OF BANK
C.J.B.	CABLE TV JUNCTION BOX	LFF	LOWEST FINISHED FLOOR ELEVATION	TC	TOP OF CURB
CL	CENTER LINE	M.U.E.	MULTI-USE EASEMENT	TF	TOP OF FOOTING ELEVATION
C.O.	CLEAN OUT	NG	NATURAL GROUND ELEVATION	T.J.B.	TELEPHONE JUNCTION BOX
CO	CURB OPENING	P	PAVEMENT ELEVATION	TRW	TOP OF RETAINING WALL ELEVATION
C.T.R.	CABLE TV RISER	PAD	FINISHED PAD ELEVATION	TW	TOP OF WALL ELEVATION
D.E.	DRAINAGE EASEMENT	P.A.E.	PRIVATE ACCESS EASEMENT	U.E.	UTILITY EASEMENT
DG	DECOMPOSED GRANITE	P.D.E.	PRIVATE DRAINAGE EASEMENT	UG	UNDERGROUND
DIP	DUCTILE IRON PIPE	P.L.	PARKING LIGHT	U.P.	UTILITY POLE
D.W.	DRYWELL	PL	PROPERTY LINE	VCP	VITRIFIED CLAY PIPE
EE	ELECTRICAL EASEMENT	P.M.	PARKING METER	VG	VALLEY GUTTER
E.M.	ELECTRICAL METER	P.P.	POWER POLE	Vp	VOLUME PROVIDED
E.O.	ELECTRICAL OUTLET	P.U.F.E.	PUBLIC UTILITY AND FACILITY EASEMENT	Va	VOLUME REQUIRED
E.S.V.A.E.	EMERGENCY VEHICLE ACCESS EASEMENT	R.D.	ROOF DRAIN	W.B.O.	WATER BLOW OFF
FF	FINISHED FLOOR	RIM	RIM ELEVATION	WE	WATER EASEMENT
FG	FINISHED GROUND	R/W	RIGHT-OF-WAY	W.F.	WATER FAUCET
FH	FIRE HYDRANT	S	SLOPE	WO	WALL OPENING
FT/FT	FOOT PER FOOT	SD	STORM DRAIN	W.S.	WATER SERVICE
FL	FLOW LINE ELEVATION	S.D.E.	STORM DRAIN EASEMENT	WSE	WATER SURFACE ELEVATION
G	GUTTER ELEVATION	SDMH	STORM DRAIN MANHOLE	W&S.E.	WATER & SEWER EASEMENT

DRAINAGE STATEMENT

- THE PROJECT SITE IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA.
- THE EXISTING SITE RECEIVES OFFSITE FLOW FROM THE ADJACENT HALF-STREET OF POWER ROAD.
- THE PROJECT WILL PROVIDED RETENTION FOR ALL ONSITE AREAS AS WELL AS THE ADJACENT HALF-STREET OF POWER ROAD.
- RETENTION WILL BE PROVIDED FOR THE 100-YEAR, 2-HOUR STORM EVENT.
- EXTREME STORM OUTFALLS THE SITE AT THE SOUTHWEST CORNER OF THE SITE INTO POWER ROAD AT THE ELEVATION OF 1322.0±.

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

MAP NUMBER	COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
04013C	040048	2760	L	10/16/2013	X	N/A

FEMA FIRM NOTE (ZONE X)

ACCORDING TO FEMA FLOOD INSURANCE RATE MAPPING, THE SUBJECT PROPERTY IS LOCATED IN "OTHER AREAS" "ZONE X". ZONE X IS DESCRIBED AS: "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN."

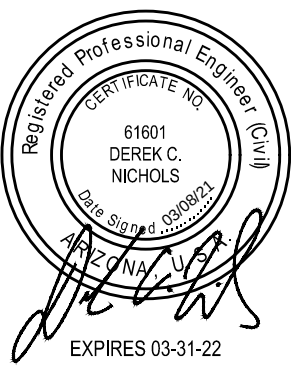


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MESA, ARIZONA
NOTES

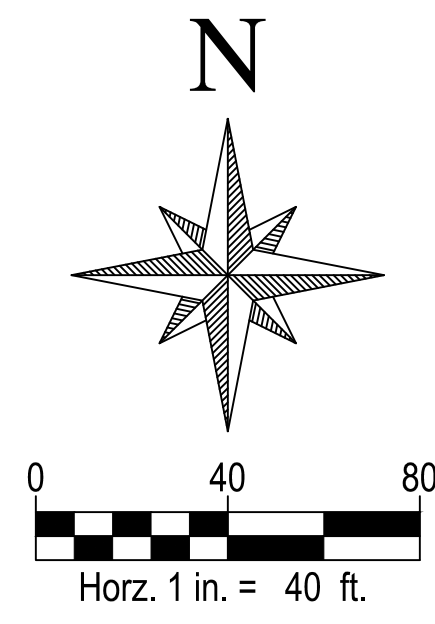
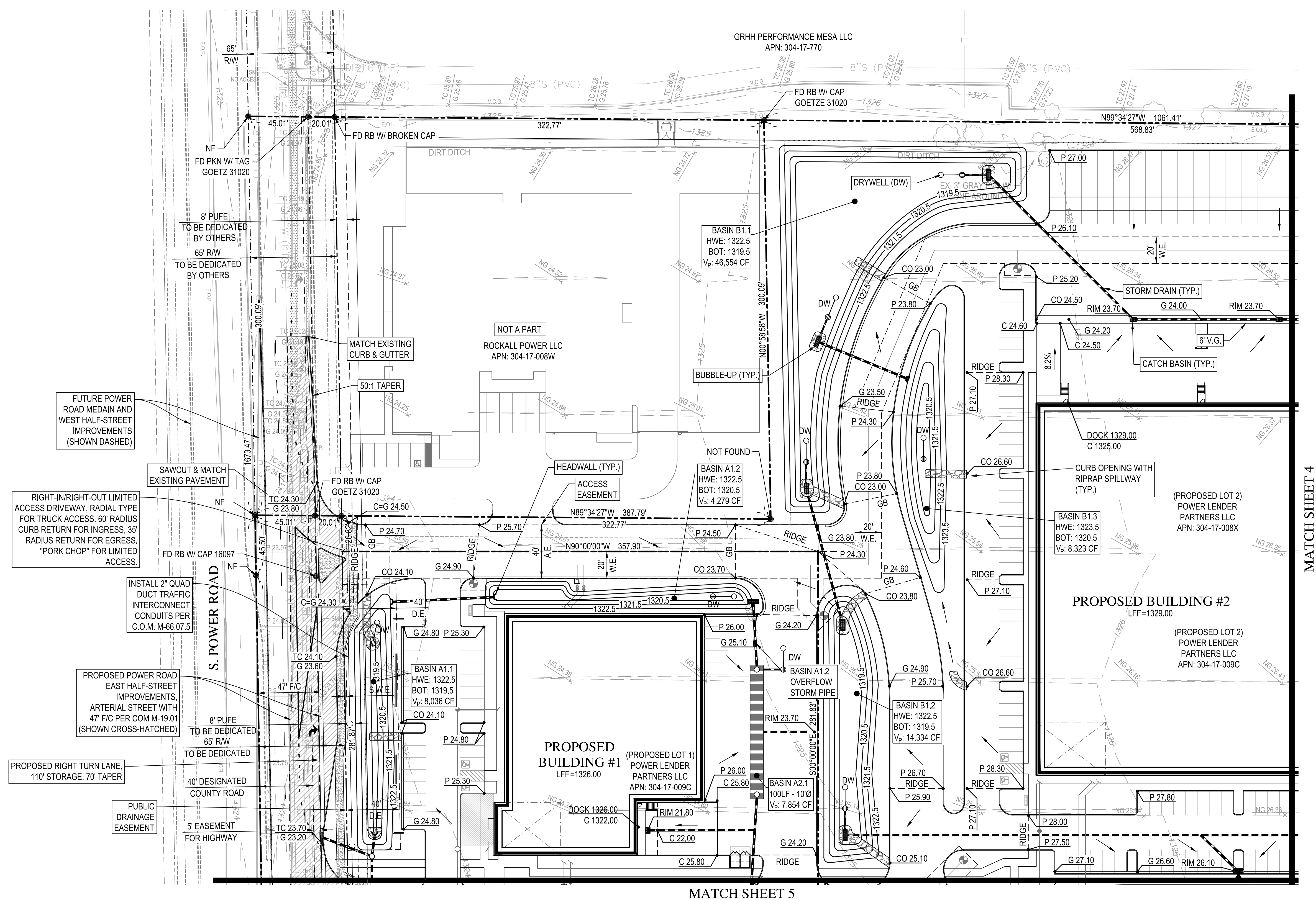
DATE				
DESCRIPTION				
REV				



SCALE (HORIZ.) N/A
SCALE (VERT.) N/A
DATE 03/08/2021
JOB NUMBER 205098
SHEET 2 OF 10

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POWER 42

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WATER & SEWER PLAN**

MESA, ARIZONA

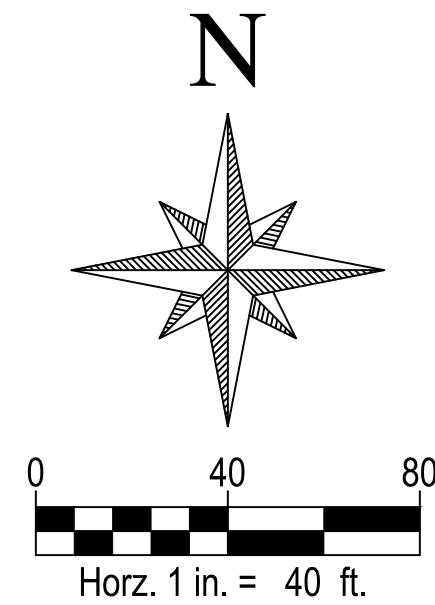
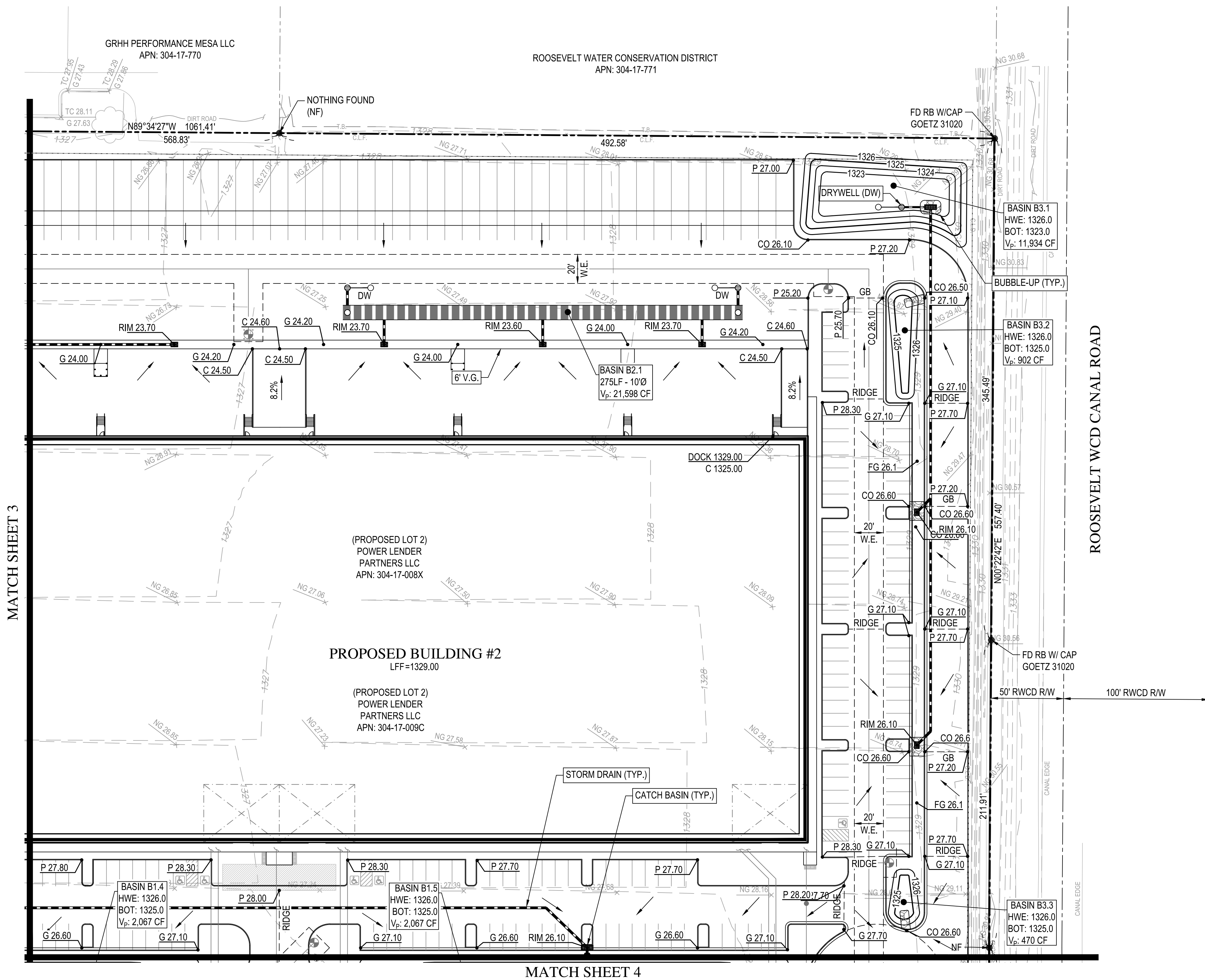
GRADING & DRAINAGE PLAN

REV	DESCRIPTION	DATE

SCALE (HORIZ.) 1" = 40'
SCALE (VERT.) N/A
DATE 03/08/2021
JOB NUMBER 205098
SHEET 3 OF 10

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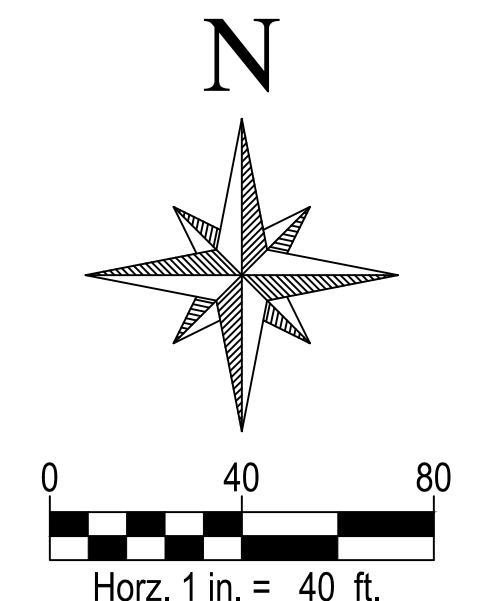
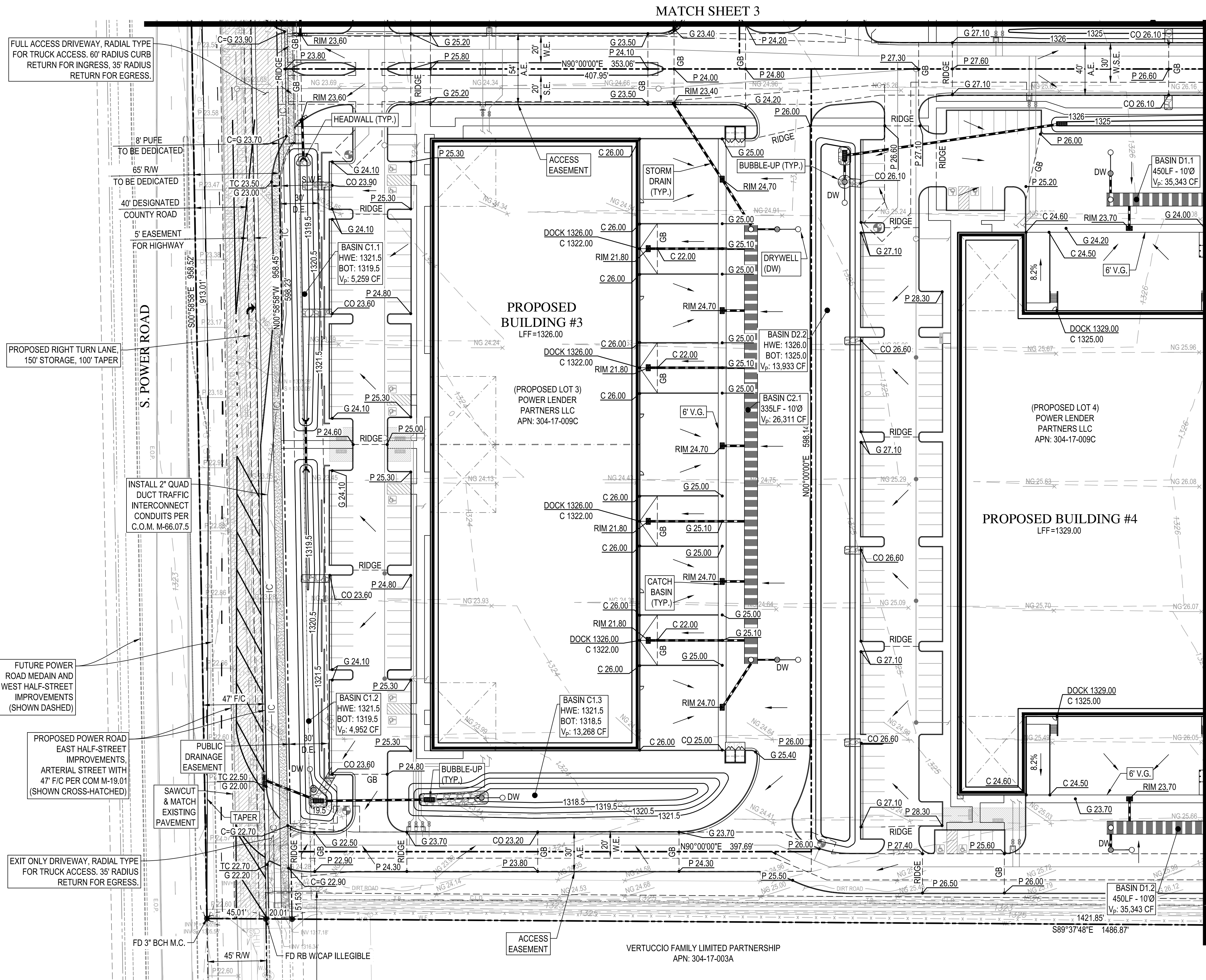
POWER 42
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WATER & SEWER PLAN**
MESA, ARIZONA
GRADING & DRAINAGE PLAN

REV	DESCRIPTION	DATE

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DATE 03/08/2021
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SHEET 4 OF 10

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POWER 42

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MESA, ARIZONA

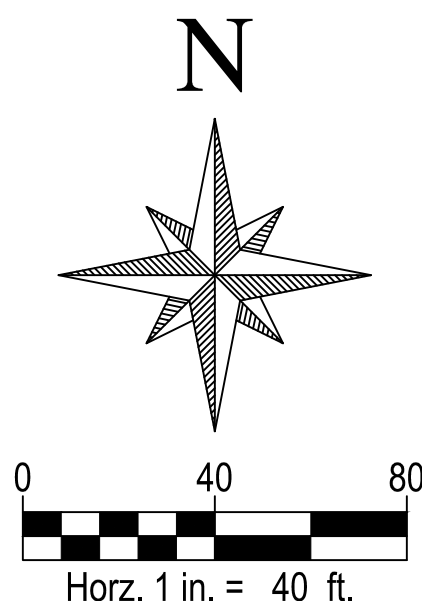
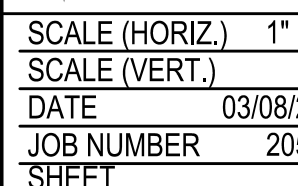
GRADING & DRAINAGE PLAN

REV	DESCRIPTION	DATE

REGISTERED PROFESSIONAL ENGINEER
DEREK C. NICHOLS
No. 61001
State of Arizona
EXPIRES 03-31-22

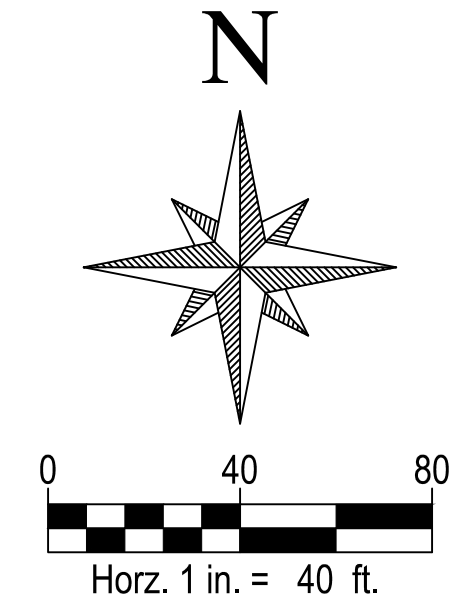
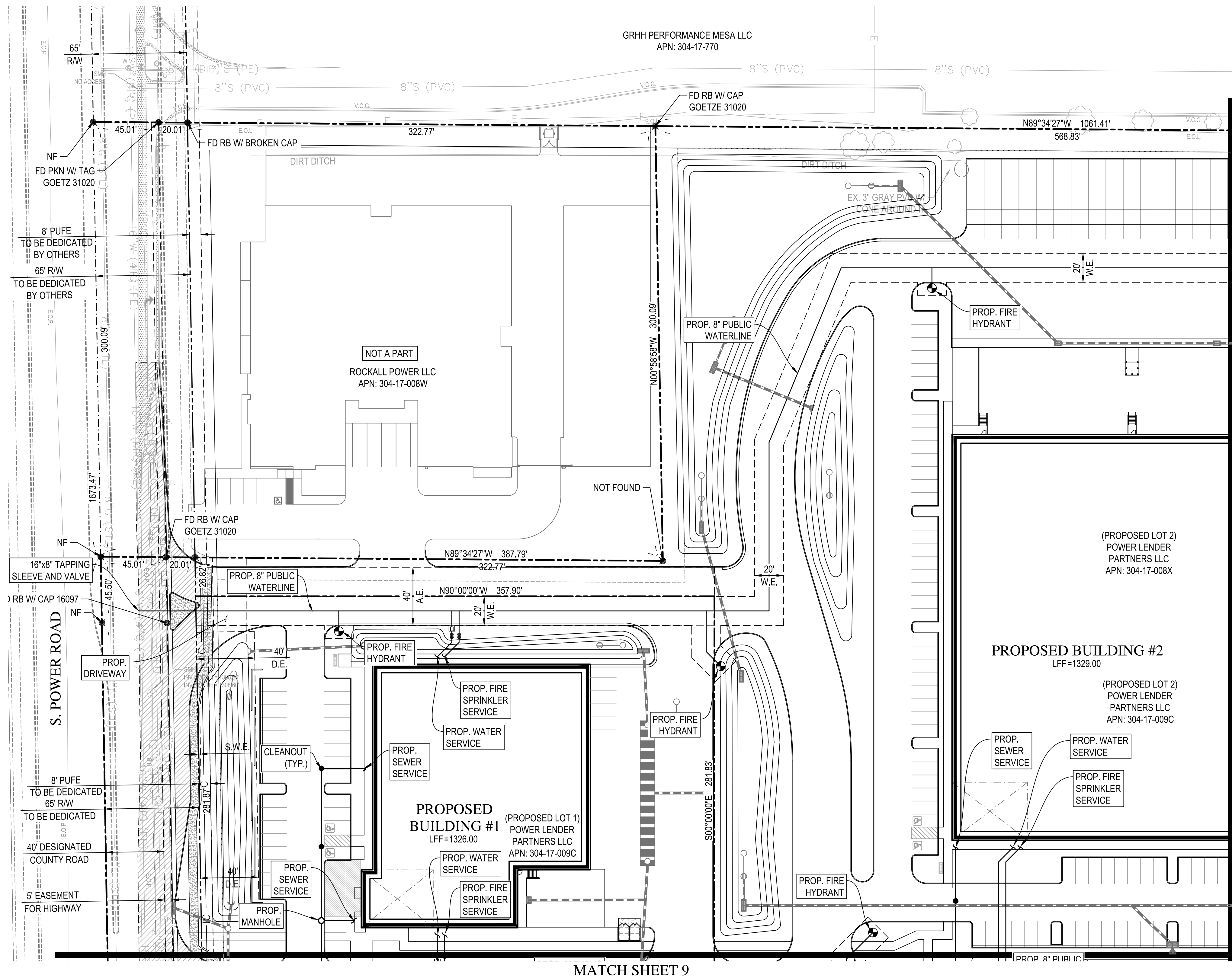
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SCALE (VERT.) N/A
DATE 03/08/2021
JOB NUMBER 205098
SHEET 5 OF 10

REV	DESCRIPTION	DATE



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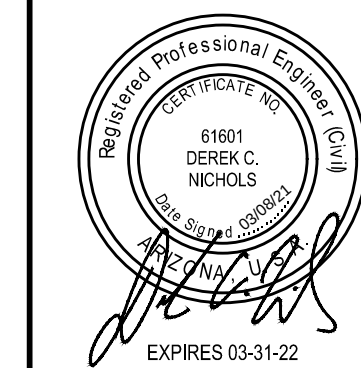


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REV	DESCRIPTION	DATE



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SHEET 7 OF 10

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