## CITY OF ALBUQUERQUE

*Hydrology Section Planning Department* David S. Campbell, Director



Timothy M. Keller, Mayor

March 27, 2018

Åsa Weber Isaacson & Arfman, P.A. 128 Monroe St NE Albuquerque, NM 87108

#### RE: Anderson Heights Unit 5 Park Engineer's Stamp Date: 3/12/2018 Hydrology File: N08D006C1

Dear Ms. Weber:

Based on the information provided in the submittal received on 3/12/2018 the abovereferenced Grading and Drainage Plan cannot be approved for Grading Permit until the following comments are addressed.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

1. A Public Sidewalk Easement must be recorded to contain the Sidewalks around the Perimeter of the site where they are located outside of the public Right of Way. The original notarized easement, covenant, and request for release of covenant must be submitted to Madeline Carruthers along with a \$25 check payable to Bernalillo County for the recording fees for each document to be recorded.

2. The Public Right of way and any other property lines and easements must be clearly indicated on the G&D Plan. The Sidewalk easement in note 1 above must be shown and labeled on the Grading and Drainage Plan along with the recording information.

3. Typical sections should also show cross slopes from the curb to the back of walk (not just in key note) and add the dimensions from the curb to the sidewalk and the width of the sidewalk on the Grading and Drainage Plan.

If you have any questions, please contact me at 924-3986 or jhughes@cabq.gov.

Sincerely, INALLIE

James D. Hughes Principal Engineer, Planning Dept. Development Review Services



ISAACSON & ARFMAN, P.A.

**Consulting Engineering Associates** 

Thomas O. Isaacson, PE(RET.) & LS(RET.) . Fred C. Arfman, PE . Åsa Nilsson-Weber, PE

March 8, 2018

James D. Hughes Principal Engineer, Hydrology Development Review Services - City of Albuquerque

#### RE: Anderson Heights Unit 5 Park (N08D006C1) -Updated Grading and Drainage Plan

Dear Mr. Hughes,

Included with this letter is one copy of the revised Grading and Drainage Plan submittal for the above referenced project. Revisions were made in response to your review letter dated January 24, 2018. The numbered responses below correspond directly with your numbered review comments.

- A Public Sidewalk Easement is being coordinated by the project Architect and Surveyor to address the perimeter sidewalks that are located outside of the public right-of-way. The original notarized easement will be submitted to Madeline Carruthers along with a \$25 check payable to Bernalillo County for the recording fee.
- 2. Sheet 2 notes that Wilson & Co. provided the topographic survey and Rio Grande Surveying provided the property boundary and easement information tied to the topographic survey. These have been added to the plan.
- 3. Sections through the property showing existing and proposed grade, existing and proposed improvements and the property line for each side of the park have been added. No existing foundations, retaining walls, stable slopes or other structures will be endangered except those that are to be demolished as part of the construction. The existing grades along the east side wall will be matched.
- 4. A note was added to the plan stating that an Excavation Permit is required for all work in the public right-of-way.

Please contact me or Åsa Nilsson-Weber, Project Engineer if you have any questions or comments.

Sincerely, Isaacson & Arfman, PA

#### Bryan Bobrick

Bryan J. Bobrick Project Manager



### City of Albuquerque

Planning Department Development & Building Services Division DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title:	Building Permit #:	City Drainage #:						
DRB#: EPC#:		Work Order#:						
Legal Description:								
City Address:								
Engineering Firm:		Contact:						
Address:								
Phone#: Fax#:		E-mail:						
Owner:		Contact:						
Address:								
Phone#: Fax#:		E-mail:						
Architect:		Contact:						
Address:								
Phone#: Fax#:		E-mail:						
Other Contact:		Contact:						
Address:								
Phone#: Fax#:		E-mail:						
MS4/ EROSION & SEDIMENT CONTROL		E OF OCCUPANCY						
MS4/ EROSION & SEDIMENT CONTROL	0							
TYPE OF SUBMITTAL:	PRELIMINAL	RY PLAT APPROVAL						
ENGINEER ARCHITECT CERTIFICATION	SITE PLAN I	FOR SUB'D APPROVAL						
CONCEPTUAL G & D PLAN		FOR BLDG. PERMIT APPROVAL						
X GRADING PLAN	FINAL PLAT							
DRAINAGE MASTER PLAN		SIA/ RELEASE OF FINANCIAL GUARANTEE FOUNDATION PERMIT APPROVAL						
DRAINAGE REPORT	<u> </u>	ERMIT APPROVAL						
CLOMR/LOMR	SO-19 APPR							
		RMIT APPROVAL						
TRAFFIC CIRCULATION LAYOUT (TCL)		AD CERTIFICATION						
TRAFFIC IMPACT STUDY (TIS)	WORK ORDE	R APPROVAL						
EROSION & SEDIMENT CONTROL PLAN (ESC)	CLOMR/LON	ЛR						
OTHER (SPECIFY)	PRE-DESIGN	MEETING						
		ECIFY)						
IS THIS A RESUBMITTAL?: X Yes No								
	0							
DATE SUBMITTED: March 12, 2018 By:								

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_

А.	ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE STANDARDS APPLY.	Н.	CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVE SHALL ONLY OBSTRUCT DESIGNATED TRAFFIC LANES IF BARRICADING PERMITS HAVE BEEN OBTAINED.
В.	THE CONTRACTOR SHALL ABIDE BY ALL STATE, LOCAL, AND FEDERAL LAWS, CODES, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA REQUIREMENTS.		THE CONTRACTOR SHALL MAINTAIN ALL BARRICADING AN SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL BARRICADING AT THE END AND BEGIN PAVEMENT GRADES IN MARKED HANDICAPPED PARKING
C.	ALL SUBGRADE, OVEREXCAVATION, BACKFILL, AND FILL SHALL BE PLACED AND / OR COMPACTED PER THE GEOTECHNICAL REPORT AND CITY OF ALBUQUERQUE SPECIFICATIONS.	0.	EXCEED 2.0% IN ANY DIRECTION. FOR ALL ACCESSIBLE I ALLOWABLE CROSS SLOPE IS 2.0% AND MAXIMUM LONGI WITHOUT RAMP IS 5.0%. FOLLOW ALL ADA ACCESSIBILIT' CITY CODES, WHICHEVER IS MORE STRINGENT.
D.	COORDINATE WORK WITH SITE PLAN, PAVING PLAN, DEMOLITION PLAN, AND LANDSCAPE PLAN.	к.	ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE LEGALLY DISPOSED OF OFFSITE.
E.	IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE LANDSCAPE ARCHITECT AND VERIFY THE INTENT BEFORE PROCEEDING.	L.	PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REI FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONC TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MA CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND
F.	CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK.		EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MATERIAL THICKNESSES.
G.	CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM	м.	MAXIMUM UNPROTECTED SLOPES SHALL BE 4:1.
	THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION.	N.	EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMAT MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY O WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CO

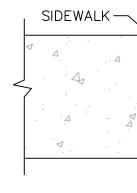
Area of basin flows =

BASIN NO.

BASIN NO. Area of basin flows =

SHALLOW DEPRESSED LANDSCAPING WILL BE CONSTRUCTED AROUND THE PERIMETER OF THE PARK WITH A MAIN PONDING AREA PROVIDED WITHIN THE NORTHEAST PORTION. THESE AREAS WILL HARVEST STORMWATER AND PROVIDE FIRST FLUSH VOLUME. THE TOTAL VOLUME REQUIRED = 148 CF (BASIN 1) + 99 CF (BASIN 2) = 247 CF

COMPLETELY COVER SCREW



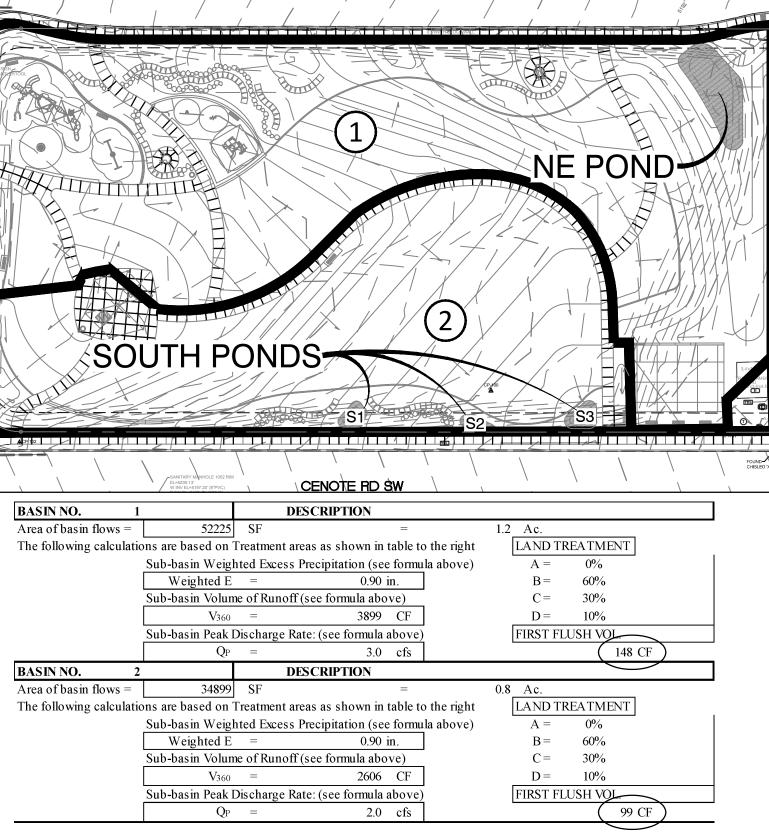


- IVEWAYS. EQUIPMENT APPROPRIATE
- AND CONSTRUCTION IFY THE PROPER GINNING OF EACH DAY. G AREAS SHALL NOT
- ROUTES, MAXIMUM NGITUDINAL SLOPE LITY GUIDELINES OR
- BE CLEARED AND
- REPRESENT TOP OF NCRETE BUILDING PAD, MATERIAL, ETC.). DETERMINE MINUS FINISH
- ATE MANNER ONLY AND OR MAY NOT EXIST CONTACT NM-811 FOR

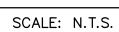
- UTILITY LINE SPOTS TWO WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.
- O. A CURRENT STORMWATER CONTROL PERMIT, INCLUDING AN EROSION SEDIMENT CONTROL PLAN (E.S.C.) FOR EROSION AND SEDIMENT CONTROL IS REQUIRED FOR ALL CONSTRUCTION, DEMOLITION CLEARING, AND GRADING OPERATIONS THAT DISTURB THE SOIL ON ONE ACRE OR MORE OF LAND. OWNER WILL COORDINATE.
- P. POST-CONSTRUCTION MAINTENANCE FOR STORMWATER FACILITIES WILL BE THE RESPONSIBLITY OF THE FACILITIES OWNER. PERIODIC INSPECTION AND CERTIFICATIONS OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER.
- Q. STORMWATER CONTROL MEASURES SHOWN ON THIS PLAN ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH' (DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.44" OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM).
- R. ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.
- S. PAVING AND ROADWAY GRADES SHALL BE  $\pm 0.1$ ' FROM PLAN ELEVATIONS.

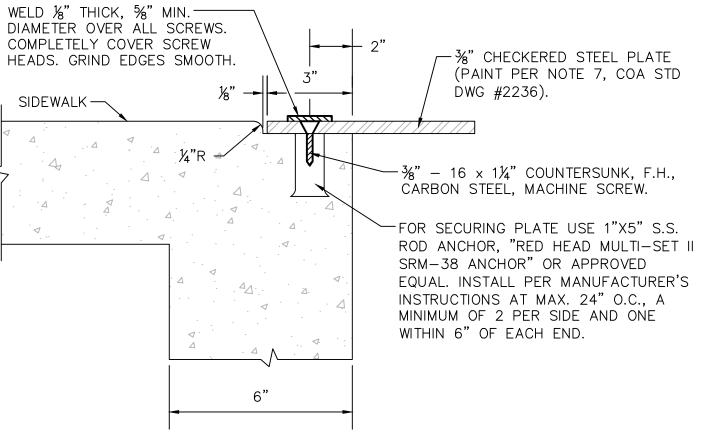
- T. WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOW '±', TRANSITIONS SHALL BE SMOOTH.
- U. ALL EROSION PROTECTION TO BE FRACTURED FACE ROO DEFINED AS 6" AVG. DIA. ANGULAR FACED ROCK PLA 501 NON-WOVEN GEOTEXTILE (O.E.). NOTE: IF OWNER LOOSE ROCK, GROUTED ROCK OR WIRE ENCLOSED ROCK SUBSTITUTED AT ALL AREAS REFERENCING F.F. ROCK OWNER'S OPTION.
- V. CONTRACTOR SHALL COMPLY WITH LOCAL REGULATIONS DISTURBED AREAS. RESEEDING INSPECTION IS NOT INCLU ENGINEER'S CERTIFICATION OF SUBSTANTIAL COMPLIANCE
- W. POND AND STORM DRAIN DESIGN PARAMETERS (TOP O POND, RIMS, INVERTS, PIPE SIZES, AREA OF POND, ETC ADHERED TO.
- ENGINEER RECOMMENDS THAT OWNER MAINTAIN EROSIC Х. ELEMENTS. ENGINEER RECOMMENDS THAT OWNER INSPE AFTER EACH RAINFALL TO IDENTIFY NEW AREAS OF ER ADDITIONAL EROSION PROTECTION AS NEEDED BASED O OCCURRENCES.
- MEASURES REQUIRED FOR EROSION AND SEDIMENT CON Y INCIDENTAL TO THE PROJECT COST.

# DRAINAGE BASINS



# FIRST FLUSH CALCULATIONS





**COVERED SIDEWALK CULVERT** 

MODIFIED SECTION B-B FROM C.O.A. STD. DWG. #2236

#### DRAINAGE CALCULATIO ALCULATIONS: 2207 Andarson Heights Dark + 1

		CALCULA	<b>FION</b>	S: 2207 - Anderso	n Hei	ghts Park : 1	11-2
Based on Draina	age De	sign Criteria for	City of	f Albuquerque Section	on 22.2	, DPM, Vol 2,	date
				ON-SIT	E		
AREA OF SITE	Ξ:			87124	SF	=	,
				100-year, 6-hour			
HISTORIC FI	LOWS	:		<b>DEVELOPED</b> FL	OWS:	, ,	
		Treatment SF	%	-		Treatment SI	7
Area A	=	0	0%	Area A	=	0	(
Area B	=	0	0%	Area B	=	52275	6
Area C	=	87124	100%	Area C	=	26137	3
Area D	=	0	0%	Area D	=	8712	1
Total Area	=	87124	100%	Total Area	=	87124	1(
		0.00	•	$A_A + A_B + A$	-		<u> </u>
Historic E	=	0.99	1 <b>n</b> .	Developed E	=	0.9	0 in
On-Site Volume	of Ru	noff: V360 =		E*A / 12			
Historic V <sub>360</sub>	=	7188	CF	Developed V <sub>360</sub>	=	650	5 (
On-Site Peak D For Precipitation		the Rate: $Qp = Q$	Q <sub>pA</sub> A <sub>A</sub> +	Q <sub>pB</sub> A <sub>B</sub> +Q <sub>pC</sub> A <sub>C</sub> +Q <sub>pE</sub>	A <sub>D</sub> / 4	.3,560	
$Q_{pA}$	=	1.29		Q <sub>pC</sub>	=	2.87	
$Q_{pB}$	=	2.03		$Q_{pD}$	=	4.37	
Historic Q <sub>p</sub>	=	5.7	CFS	Developed Q <sub>p</sub>	=	5.	0 0
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	NE P	OND		
Contour	Area	Volume		
5192.00	1023			
5191.50	415	360 CF		
TOTAL V	'OL.	<b>360</b> CF		
BASIN 1 REQUIRED FIRST FLUSH = 148 CF				
SOUTH POND S1				
Contour	Area	Volume		
5201.00	141			
5200.50	48	47 CF		

	SOUTH	POND S2
Contour	Area	Volume
5198.00	111	
5197.50	23	34 CF
TOTAL VOL.		<b>34</b> CF

**47** CF

TOTAL VOL.

	SOUTH POND S3					
Contour	Area	Volume				
5196.00	178					
5195.50	70	62 CF				

TOTAL VOL. 62 CF BASIN 2 REQUIRED FIRST FLUSH = 99 CF BASIN 2 PROVIDED FIRST FLUSH = 143 CF

	PROJECT DATA								$\exists z$
WN AS 'MATCH' OR	PROPERTY: THE SITE IS A PARTIALLY DEVELOPED PARK PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP N-08. THE SITE IS BOUND TO	1ATION		DATE DATE	DATE	DATE			ESIGN 6
OCK (F.F. ROCK) ACED OVER GEOTEX DOES NOT WANT K MAY BE	THE NORTH BY ANTLER TOOL RD SW, TO THE EAST BY FULLY DEVELOPED RESIDENTIAL PROPERTIES, TO THE SOUTH BY CENOTE RD SW AND TO THE WEST BY BEAD ST SW. PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE	INFORM							ON DE 1, 2016
EROSION PROTECTION.	PLAYGROUNDS, GRASS FIELDS, WALKING PATHS, GAME COURTS AND ASSOCIATED LANDSCAPING AND DRAINAGE IMPROVEMENTS.								er 1
S FOR RESEEDING OF LUDED AS PART OF CE.	LEGAL: TRACT M, PLAT FOR ANDERSON HEIGHTS, UNIT 5. ADDRESS: ALBUQUERQUE, NM 87121	S-BU	TRACTOR	WORK STAKED BY INSPECTOR'S		WINGS RECTED BY			ONSTRUC November
F POND, BOTTOM OF C.) TO BE STRICTLY	AREA: 2.0 ACRES OFF-SITE: NO OFF-SITE DRAINAGE IMPACTS THIS PROPERTY.	ASA	CONT	WOR! STAK INSP	FIELD	DRAV CORF			
ON PROTECTION ECT SITE YEARLY AND ROSION AND INSTALL DN ACTUAL	<u>FLOOD HAZARD</u> : PER BERNALILLO COUNTY FIRM MAP NUMBER 35001C0319H, DATED AUGUST 15, 2012, THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.	1		CONTROL CAP			DENNIS		95% C DATE:
NTROL SHALL BE	DRAINAGE PLAN CONCEPT: INITIALLY, DEMOLITION OF THE EXISTING RETAINING WALLS AND APPROXIMATELY 13,000 CY OF EXCESS DIRT WILL BE REMOVED FROM THE PROPERTY. THE PARK WILL BE GRADED TO DIRECT FLOW TO THE NORTH AND SOUTH TO FOLLOW HISTORIC	S		SURVEY	ABOVE GR		Р		
NS	FLOWPATHS. FIRST FLUSH RETENTION BASINS WILL BE CONSTRUCTED ADJACENT TO IMPERMEABLE PAVEMENT. DEPRESSED LANDSCAPING WILL BE PROVIDED THROUGHOUT THE PROPERTY.	MARK		ALUMINUM	FEET /		INTERSECTION		
1-27-2017 ated Jan., 1993	THE ADDITION OF FIRST FLUSH STORMWATER RETENTION PONDS, INCREASED GRASS AREA, SELF PONDING PLAYGROUND AREAS AND	CH			TING 0.2		T OF THE INTE		
2.0	DEPRESSED LANDSCAPING WILL HELP TO REDUCE THE OVERALL DISCHARGE FROM THE PROPERTY. ENGINEER: ÅSA M. NILSSON-WEBER, PE#17631	BEN		<u>п</u> м	ЧЦ	2002".	EAST O		
<b>EXCESS PRECIP:</b> % Precip. Zone 1	ENGINEER: ÅSA M. NILSSON-WEBER, PE#17631 ISAACSON & ARFMAN, PA 128 MONROE ST. NE ALBUQUERQUE N.M., 87108			STATION "1 AL BUQUERQUE	CONCRETE P	-P8 20(	MILES SW A	5	
$\begin{array}{c c} 0\% & E_{\rm A} = 0.44 \\ \hline 60\% & E_{\rm B} = 0.67 \end{array}$	SURVEYOR: WILLIAM D. NEISH, NMPS#21081 WILSON & COMPANY				0	PED "1-	ED 2.2		
$\begin{array}{c} 30\% \\ 10\% \\ \end{array} \qquad E_{\rm C} = 0.99 \\ E_{\rm D} = 1.97 \\ \end{array}$	4900 LONG AVE. NE Albuquerque, n.m. 87109			CONTROL CITY OF		STAMPED	LOCATED		
100%	PROPERTY BOUNDARY PROVIDED AND EASEMENT INFORMATION BY REX VOGLER PS	Z		DATE					PARK
	RIO GRANDE SURVEYING CO.	1 1 TION	S						
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	LANDSCAPE ARCHITECTS Morrow Reardon Wilkinson Miller, Ltd.				DATE	_	DESIGNED BV.		CHECKED BY:
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	CITY OF ALBUQUER STRATEGIC PLANNING AN PARKS AND RECREATION E	ND D	DES		1T				
	Anderson Heights I GRADING NOTES AND DRAINAGI	E CA	4LC		TIC				VINGS
	Design Review Committee City Engineer Approval	Mo	b./Do	ay/Yr.		Mo	o./Day	r/Yr.	AX2 X22
	Design								
	- t c c c c c c c c c c c c c c c c c c c	npda							Ц С Ш С Ш
	City Project No. 612790 Zone Map No. N8		<sup>Sh</sup>	ieet		of	14	4	NAT AT

