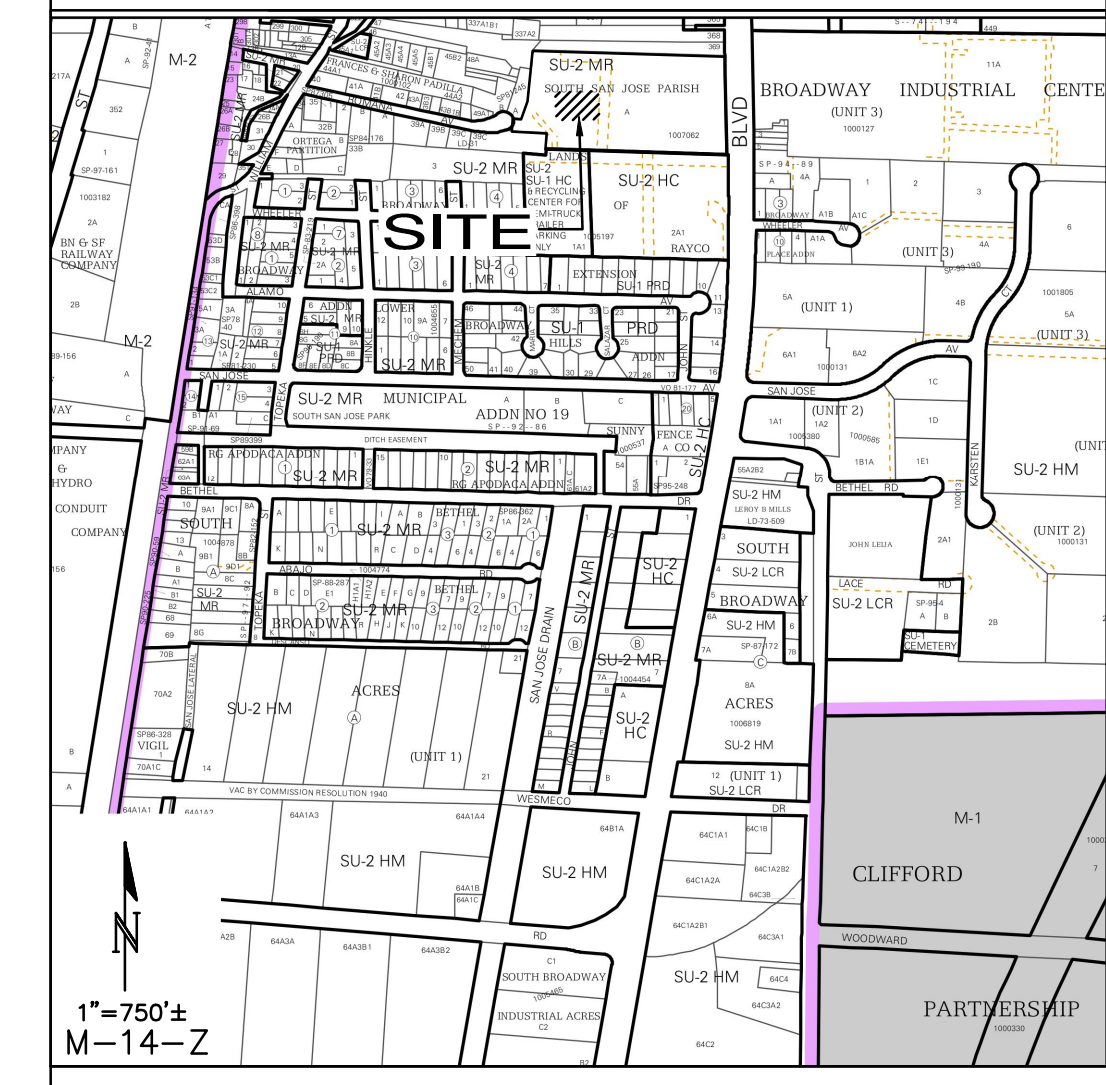


**VICINITY MAP**



**PROJECT DATA**

**PROPERTY:** THE SITE IS A DEVELOPED SU-2 PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP M-14. THE SITE IS BOUND TO THE EAST BY BROADWAY BLVD., TO THE WEST, NORTH AND SOUTH BY DEVELOPED RESIDENTIAL PROPERTY.

**PROPOSED IMPROVEMENTS:** THE PROPOSED IMPROVEMENTS INCLUDE A NEW MULTIPURPOSE BUILDING WITH ASSOCIATED PAVED ACCESS, PARKING, AND LANDSCAPING IMPROVEMENTS.

**LEGAL:** TRACT A, SOUTH SAN JOSE PARISH.

**ADDRESS:** 2401 BROADWAY S.E., CITY OF ALBUQUERQUE

**BENCHMARK:** ACS STA. 8-M14, SQUARE CHISELED ON CONC. MEDIAN CURB IN BROADWAY BLVD. APPROX. 690 FT. SOUTH OF BETHEL AVENUE ELEV. 4938.40 (NGVD29)

**OFF-SITE FLOW:** NO OFF-SITE DRAINAGE AFFECTS THIS PROPERTY.

**FLOOD HAZARD:** PER BERNAILLO COUNTY FIRM MAP #108, THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.

**DRAINAGE PLAN CONCEPT:** THE SITE WILL CONTINUE TO DRAIN WEST TO THE EXISTING DETENTION / DESILTATION POND LOCATED AT THE SOUTHWEST CORNER OF THE PROPERTY. FLOW THEN ENTERS THE EXISTING MECHEM STORM DRAIN SYSTEM INSTALLED IN 2005 (C.O.A. PROJECT #682602) AND IS ROUTED TO AN EXISTING OFF-SITE STORMWATER DETENTION AREA WEST OF THE SITE. FLOW IN EXCESS OF STORM DRAIN CAPACITY WILL CONTINUE TO OVERFLOW TO ROMANA STREET AT EXISTING OVERFLOW STRUCTURE.

**ENGINEER:** FRED C. ARFMAN: NMPE 7322  
ISAACSON & ARFMAN, PA  
128 MONROE NE 87108  
505-268-8828

**SURVEYOR:** RUSS P. HUGG: NMPS NO. 9750  
SURV-TEK, INC  
9384 VALLEY VIEW DRIVE, NW 87114  
505-897-3366

**LEGEND**

- 4955' EXISTING SPOT ELEVATION
- - - 4955' EXISTING CONTOUR
- - - 57' PROPOSED CONTOUR (1' INCREMENT)
- ◆ 58.0 PROPOSED SPOT ELEVATION
- FLOW ARROW
- ~ ELEVATION GRADE BREAK
- ▲ EXTERIOR DOOR
- ROCK EROSION PROTECTION

**KEYED NOTES**

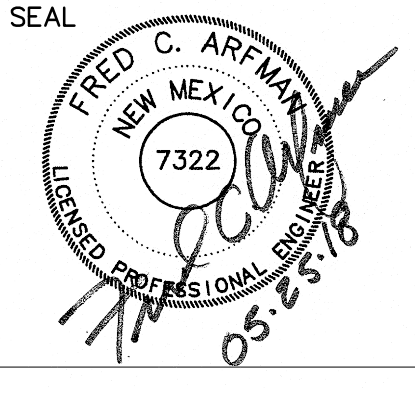
1. CONSTRUCT STORM WATER QUALITY POND AT ELEVATIONS SHOWN. INSTALL 1" WIDE X 8" DEEP ROCK EROSION PROTECTION TO DEFINE PERIMETER. SLOPE AT 5:1
2. REMOVE & REPLACE EXISTING PCC CONCRETE TO TRANSITION SMOOTHLY. COORDINATE WITH ARCHITECT.
3. INSTALL PRECAST CONCRETE OR GROUTED ROCK SPLASH PAD WHERE ROOF DISCHARGES TO UNPAVED AREAS. OWNER TO PROVIDE ADDITIONAL EROSION PROTECTION AS NEEDED.
4. PROVIDE SMOOTH TRANSITION TO EXISTING GRADES SHOWN.
5. INSTALL 4" AVG. DIA. X 8" DEEP ROCK EROSION PROTECTION TO LIMITS SHOWN WITH HATCH. SEE DETAIL ON CG-501.
6. CONSTRUCT COMPACTED BASE COURSE PARKING AT ELEVATIONS SHOWN. SEE ARCHITECTURAL FOR MATERIAL AND DETAIL.
7. TEMPORARY WATER HARVESTING BASIN PROVIDED AT SITE LOWPOINT TO LIMIT REGRADING OF EXISTING BASE COURSE PARKING. PROVIDE OVERFLOW ELEVATION AS SHOWN. AS SITE DEVELOPS TO THE NORTH, THIS AREA WILL BE REGRADED TO DRAIN WEST.

FIRST FLUSH POND		
Contour	Area	Volume
4952.00	517	321 CF
4951.00	124	
TOTAL VOL.		321 CF

2625 Pennsylvania St NE, Suite 600  
Albuquerque, NM 87110  
tel (505) 293-1477

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architects@soleilwest.com www.soleilwest.com



**ISAACSON & ARFMAN, P.A.**  
Consulting Engineering Associates  
128 Monroe Street N.E.  
Albuquerque, New Mexico 87108  
Ph. 505-268-8828 www.iaacv.com

**PROJECT NAME**  
SAN JOSÉ CATHOLIC CHURCH  
PARISH HALL

SAN JOSÉ CATHOLIC CHURCH  
2401 BROADWAY BLVD SE  
ALBUQUERQUE, NM 87102

MARK	DATE	DESCRIPTION

PROJECT NUMBER: IA2270  
DRAWN BY: BJB  
CHECKED BY: FCA  
ISSUE DATE: 05-25-18

**GRADING AND DRAINAGE PLAN**

SHEET NUMBER: CG-101

GENERAL NOTES

- A. 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.
- B. NO WORK SHALL BE PERFORMED WITHOUT THE APPROPRIATE PERMITS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION, OR PRIOR TO OCCUPANCY, AS APPROPRIATE.
- C. 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 OWNER.
- D. CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK. CONTRACTOR SHALL REGULARLY UPDATE OWNER REGARDING THE STATUS OF THE INSPECTIONS.
- E. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- F. FIVE WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NM811 (811) FOR LOCATION OF EXISTING UTILITIES.
- G. ALL SITE PREPARATION, GRADING OPERATIONS, FOUNDATION CONSTRUCTION, AND PAVEMENT INSTALLATION WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, WHICH WILL BE PROVIDED BY THE OWNER.
- H. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.
- I. VIBRATORY COMPACTION SHALL NOT BE USED OVER IN-PLACE UTILITIES.
- J. ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.
- K. CONTRACTOR SHALL COMPLY WITH LOCAL REGULATIONS FOR RESEEDING OF DISTURBED AREAS.
- L. GRADING SHALL BE PERFORMED AT THE ELEVATIONS SHOWN ON THIS PLAN.
- M. PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.
- N. IF THE SITE IS SMALL ENOUGH NOT TO REQUIRE A SWPPP/NPDES PERMIT (LESS THAN ONE ACRE), THE CONTRACTOR SHALL STILL BE RESPONSIBLE FOR USING EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PUBLIC RIGHT-OF-WAY.
- O. MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.
- P. ALL NEW PAVEMENT SURFACES SHALL BE CONSTRUCTED WITH POSITIVE SLOPE AWAY FROM BUILDINGS AND POSITIVE SLOPE TOWARD EXISTING AND/OR PROPOSED DRAINAGE PATHS. PAVING AND ROADWAY GRADES SHALL BE ±0.1" FROM PLAN ELEVATIONS. BUILDING PAD ELEVATION SHALL BE ±0.05' FROM PLAN ELEVATION.
- Q. PAVEMENT GRADES IN MARKED HANDICAPPED PARKING AREAS SHALL NOT EXCEED 2.0% IN ANY DIRECTION. FOR ALL ACCESSIBLE ROUTES, MAXIMUM ALLOWABLE CROSS SLOPE IS 2.0% AND MAXIMUM LONGITUDINAL SLOPE WITHOUT RAMP IS 5.0%. FOLLOW ALL ADA ACCESSIBILITY GUIDELINES OR CITY CODES, WHICHEVER IS MORE STRINGENT.
- R. ALL EROSION PROTECTION TO BE INSTALLED AS 4" AVG. DIA. ANGULAR FACED ROCK (F.F. ROCK) PLACED OVER GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.).
- S. SIDESLOPES STEEPER THAN 3:1 BUT LESS THAN 2:1 MUST HAVE PERMANENT EROSION PROTECTION INSTALLED, TYPICAL. NO SLOPE SHALL BE STEEPER THAN 2:1.
- T. POND DESIGN PARAMETERS AND STORMWATER CONTROL MEASURES SHOWN ON THIS PLAN (TOP OF POND, BOTTOM OF POND, SIZE OF ORIFICE, AREA OF POND, ETC.) TO BE STRICTLY ADHERED TO FOR CERTIFICATION PURPOSES.
- U. POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES OWNER. PERIODIC INSPECTION AND CERTIFICATIONS OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.
- V. FOR ENGINEER'S CERTIFICATION OF SUBSTANTIAL COMPLIANCE (FOR CERTIFICATE OF OCCUPANCY) CONTRACTOR SHALL PROVIDE AN AUTOCAD FORMAT AS-BUILT SURVEY PREPARED BY A LICENSED SURVEYOR WHICH INCLUDES:
  - AS-BUILT SPOT ELEVATIONS AT EACH DESIGN SPOT ELEVATION SHOWN ON THE APPROVED PLAN;
  - TOP AND BOTTOM ELEVATIONS AS REQUIRED TO DEFINE THE PERIMETER OF PONDS (TO BE USED BY ENGINEER TO CALCULATE AS-BUILT VOLUME PROVIDED);
  - POND OVERFLOW ELEVATIONS
  - ALL CONSTRUCTION, INCLUDING DRAIN INLETS, PIPES AND PONDS SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLAN IN ORDER TO RECEIVE ENGINEER'S CERTIFICATION.
- W. GRADING OF FIRST FLUSH RETENTION BASINS WILL BE INSPECTED AS PART OF ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY.

CALCULATIONS

STORMWATER CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF FIRST FLUSH DEFINED AS THE 90TH PERCENTILE STORM [LESS INITIAL ABSTRACTION] OR 0.34" OF STORMWATER WHICH DISCHARGES FROM IMPERVIOUS SURFACES. STORM WATER FROM THE IMPERVIOUS AREAS SHALL BE DIRECTED TO STORMWATER QUALITY VOLUME BASINS.

**CALCULATIONS: SAN JOSE CATHOLIC CHURCH - PERISH HALL :**  
Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol.2, dated Jan., 1993

ON-SITE			
AREA OF SITE:	30870	SF	= 0.7

HISTORIC FLOWS:		DEVELOPED FLOWS:		EXCESS PRECIP:	
	Treatment SF	%		Treatment SF	%
Area A	0	0%	Area A	0	0%
Area B	7717.5	25%	Area B	6174	20%
Area C	23152.5	75%	Area C	16052	52%
Area D	0	0%	Area D	8644	28%
Total Area	30870	100%	Total Area	30870	100%

100-year, 6-hour Precip. Zone 2

EA = 0.53  
EB = 0.78  
EC = 1.13  
ED = 2.12

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted E} = \frac{E_A A_A + E_B A_B + E_C A_C + E_D A_D}{A_A + A_B + A_C + A_D}$$

Historic E	=	1.04 in.	Developed E	=	1.34 in.
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On-Site Volume of Runoff: V<sub>360</sub> = E\*A / 12

Historic V <sub>360</sub>	=	2682 CF	Developed V <sub>360</sub>	=	3440 CF
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On-Site Peak Discharge Rate: Q<sub>p</sub> = 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>pD</sub>A<sub>D</sub> / 43,560

For Precipitation Zone 2

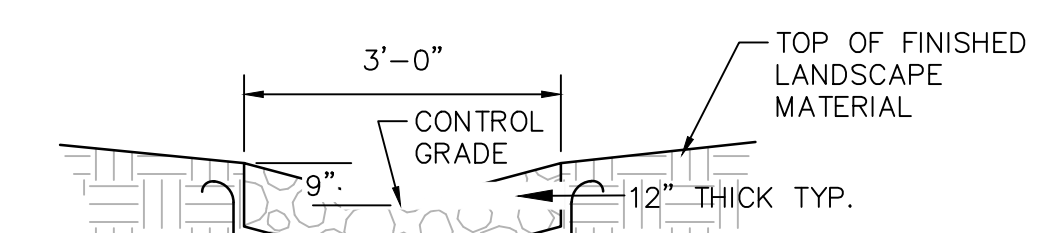
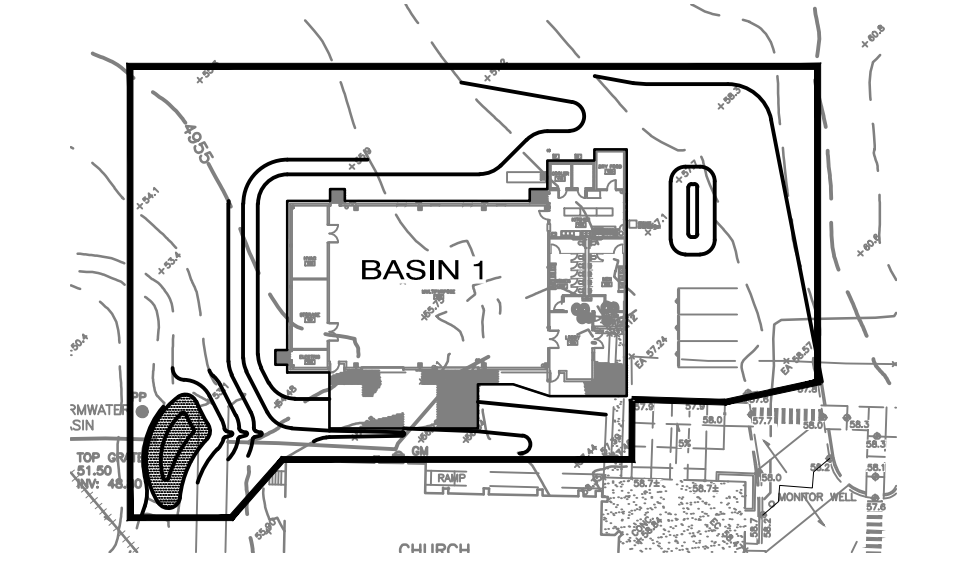
Q <sub>pA</sub>	=	1.56	Q <sub>pC</sub>	=	3.14
Q <sub>pB</sub>	=	2.28	Q <sub>pD</sub>	=	4.70

Historic Q <sub>p</sub>	=	2.1 CFS	Developed Q <sub>p</sub>	=	2.4 CFS
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FIRST FLUSH POND		
Contour	Area	Volume
4952.00	517	321 CF
4951.00	124	
TOTAL VOL.		321 CF

REQUIRED FIRST FLUSH VOLUME = 8644 SF \* 0.34" / 12 = 245 CF

BASIN MAP:



- VARY FRACTURED FACE ROCK SIZE BETWEEN 2" AND 6" DIA. (AVG.=4").
- PLACE GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.) BENEATH ALL EROSION PROTECTION.

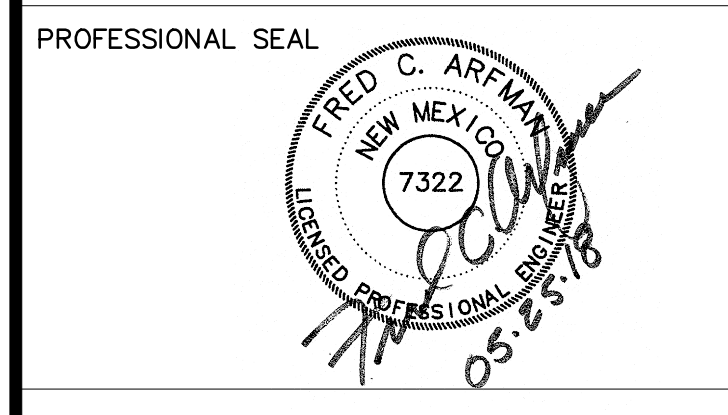
CONSTRUCT ALL SWALES AND FRACTURED FACE ROCK EROSION PROTECTION BELOW ADJACENT GRADE TO ENSURE RUNOFF CAN BE CAPTURED AND CONVEYED PROPERLY

FRACTURED FACE ROCK SWALE

2625 Pennsylvania St NE, Suite 600  
Albuquerque, NM 87110  
tel (505) 293-1477

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architects@soleilwest.com www.soleilwest.com

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**ISAACSON & ARFMAN, P.A.**  
Consulting Engineering Associates  
128 Monroe Street N.E.  
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Ph. 505-268-8828 www.iacivil.com

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**GRADING AND DRAINAGE  
NOTES AND DETAILS**

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