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HYDROLOGY REPORT  
NEW MULTI-PURPOSE BUILDING  
for ST THERESE CATHOLIC SCHOOL

date: 6-11-19
drawn by: MEC
checked by: VAM
revisions:

C-100

project no. 18-050

GENERAL NOTES:

- EXISTING TOPOGRAPHIC DATA SHOWN ON THESE PLANS WAS PROVIDED BY SANDIA LAND SURVEYING LLC. MILLER ENGINEERING CONSULTANTS HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS INFORMATION.
- ACS STA 6-615 THE STATION IS LOCATED 2.2 MILES NORTH OF DOWNTOWN ALBUQUERQUE AT THE INTERSECTION OF CANDELARIA ROAD AND THE BNSF RAILROAD TRACKS. TO REACH THE STATION FROM THE INTERSECTION OF CANDELARIA ROAD AND I-25 NE, TRAVEL WEST ON CANDELARIA ROAD 0.8 MILES TO THE EAST SIDE OF THE BNSF RAILROAD TRACKS AND THE STATION ON THE RIGHT. THE STATION MARK IS A CITY OF ALBUQUERQUE SURVEY CONTROL 3" BRASS DISC STAMPED "6-615 1979" SET IN A TRAFFIC SIGNAL BOX 0.6 FEET BELOW THE SURFACE OF THE GROUND ELEV. 4975.35 (NAVD 1988)
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES DURING THE CONSTRUCTION PHASE.
- CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE CITY OF ALBUQUERQUE, PRIOR TO ANY GRADING OR CONSTRUCTION.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- ALL EMBANKMENTS SHALL BE PLACED AND COMPACTED IN LIFTS OF MAXIMUM OF 8". THE EMBANKMENTS SHALL BE WETTED AND COMPACTED TO 95% OPTIMUM DENSITY PER ASTM D1557 AND 95% UNDER ALL STRUCTURES INCLUDING DRIVEWAYS AND PARKING LOTS.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.
- THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE X (500 YEAR) DESIGNATING AREAS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD PLANE ACCORDING TO THE FLOOD INSURANCE RATE MAP, ALBUQUERQUE, NEW MEXICO AND UNINCORPORATED AREAS PER MAP NO 35001C 0332G.
- ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE STORM DRAINAGE REGULATIONS. ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE "GRADING AND DRAINAGE DESIGN REQUIREMENTS AND POLICIES FOR LAND DEVELOPMENT."
- THE OWNER, CONTRACTOR AND/OR BUILDER SHALL COMPLY WITH ALL APPROPRIATE LOCAL, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
- THE CONTRACTOR SHALL TAKE ALL APPROPRIATE AND REASONABLE MEASURES TO PREVENT SEDIMENT OR POLLUTANT LADEN STORM WATER FROM EXITING THE SITE DURING CONSTRUCTION. STORMWATER MAY BE DISCHARGED IN A MANNER, WHICH COMPLIES WITH THE APPROVED GRADING AND DRAINAGE PLAN.
- THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO PREVENT THE MOVEMENT OF CONSTRUCTION RELATED SEDIMENT, DUST, MUD, POLLUTANTS, DEBRIS, WASTE, ETC FROM THE SITE BY WIND, STORM FLOW OR ANY OTHER METHOD EXCLUDING THE INTENTIONAL, LEGAL TRANSPORTATION OF SAME IN A MANNER ACCEPTABLE BY THE CITY.
- THE CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE THE AREAS SHOWN AS "SLOPE LIMITS" ON THE GRADING AND DRAINAGE PLAN.
- SEE ARCHITECTURAL DRAWINGS FOR SIDEWALK AND HANDICAPPED RAMPS, DETAILS AROUND THE BUILDING.
- THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE ANY SPOT ELEVATIONS ON THE GRADING AND DRAINAGE PLAN WHICH APPEAR TO BE AMBIGUOUS OR DO NOT MEET THE INTENT OF THE GRADING AND DRAINAGE PLAN.
- THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DOES NOT MEET ADA ACCESSIBILITY REQUIREMENTS. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%, ALL SIDEWALKS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5.0%, AND ALL RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 15:1.
- ALL SIDEWALKS AND CONCRETE FLATWORK SHALL HAVE A MINIMUM OF 0.5% SLOPE. CONTRACTOR SHALL CONTACT PROJECT ENGINEER IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DO NOT MEET THIS REQUIREMENT.
- THE CONTRACTOR SHALL SUBMIT MATERIAL SUBMITTALS, CUT SHEETS AND SHOP DRAWINGS FOR ALL CIVIL RELATED ITEMS FOR REVIEW PRIOR TO CONSTRUCTION.
- THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS (UPDATE 8, AMENDMENT 1)
- ALL EXISTING MANHOLES, VALVES AND METERS SHALL BE ADJUSTED TO NEW FINISH GRADE.

SITE LOCATION

THE ST. THERESE CATHOLIC SCHOOL PROPERTY IS LOCATED WITHIN THE CITY OF ALBUQUERQUE, NEW MEXICO AND CAN BE ACCESSED BY TRAVELING WEST ON CANDELARIA BLVD TO 4TH STREET, SOUTH ON 4TH STREET TO SHOPSHIRE, AND LEFT ON SHOPSHIRE ROAD (SEE VICINITY MAP ABOVE).

EXISTING ON SITE CONDITIONS

THE SITE AREA IS APPROXIMATELY 140' X 140' AND IS LOCATED ON THE CAMPUS OF THE ST. THERESE SCHOOL. THE SITE CONSISTS OF 0.45 ACRES AND IS CURRENTLY DEVELOPED WITH LANDSCAPING AND SMALL OUTBUILDINGS. THE SITE GENERALLY SLOPES TO THE SOUTHWEST WITH AN AVERAGE SLOPE OF 1%. THE HYDROLOGY CALCULATIONS FOR EXISTING CONDITIONS CAN BE FOUND ON THIS SHEET.

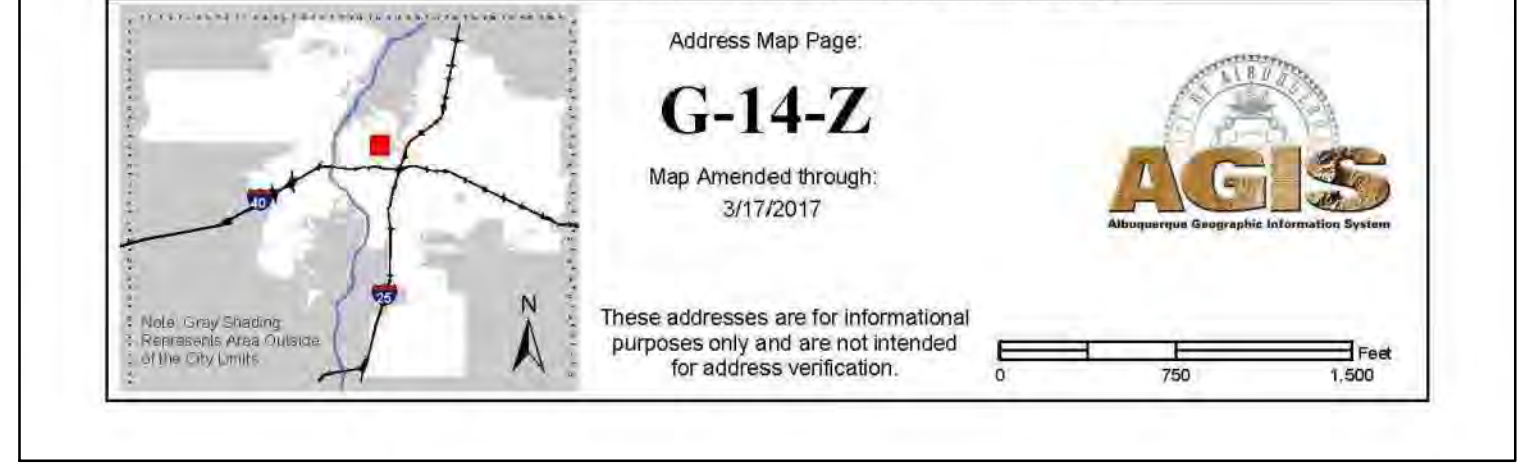
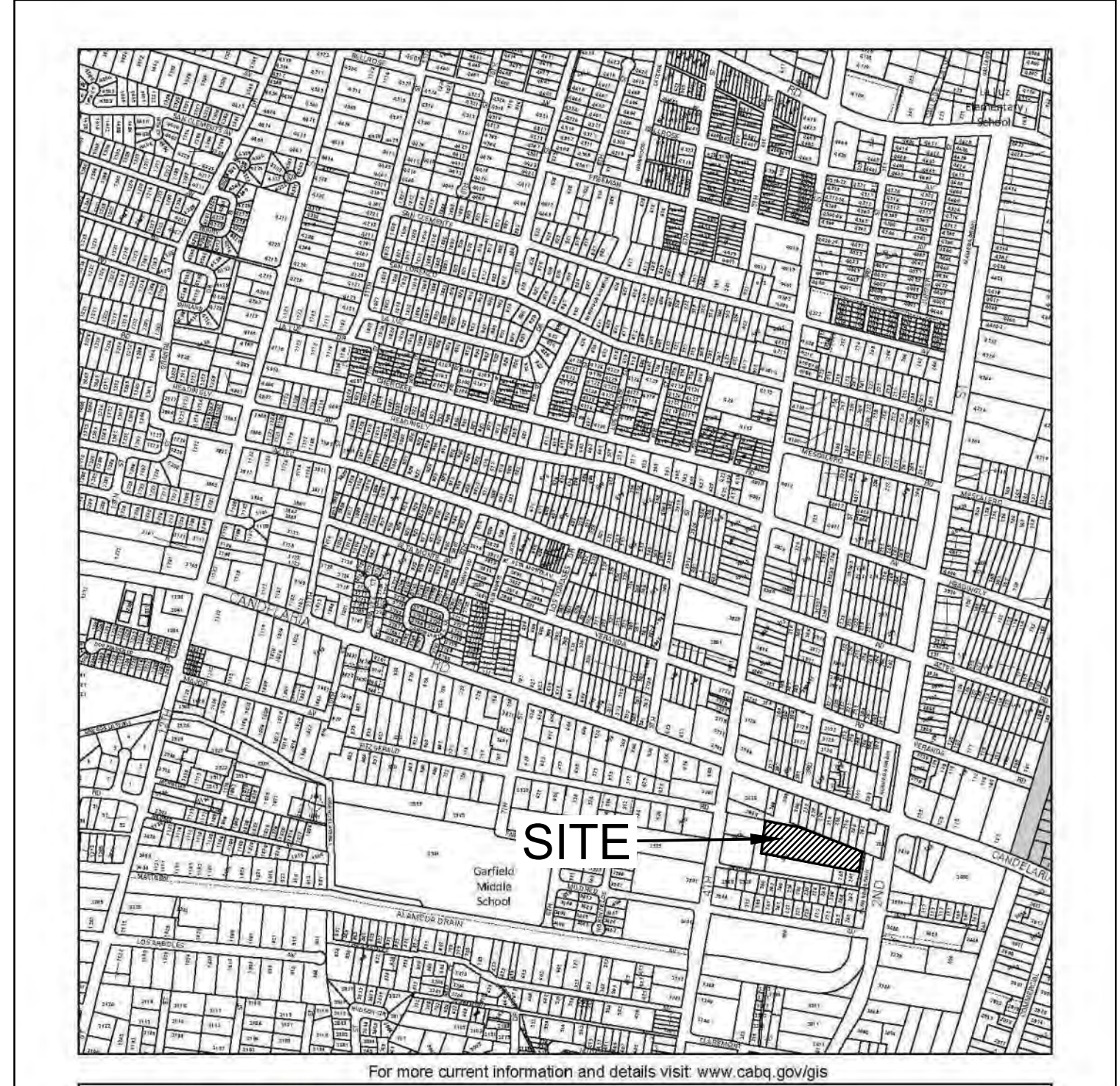
PROPOSED CONDITIONS

THE PROPOSED PROJECT WILL CONSIST OF A NEW 4680 SF BUILDING WITH ASSOCIATED PATIOS AREAS AND CONCRETE SIDEWALKS (SEE SHEET C-101). THE SITE WILL BE GRADED WITH SWALES AROUND THE PERIMETER OF THE BUILDING TO PROMOTE POSITIVE DRAINAGE AWAY FROM THE NEW BUILDING FOUNDATION. THE PERIMETER SWALES WILL DISCHARGE TO THREE NEW WATER HARVEST AREAS LOCATED ON THE SITE. THE HYDROLOGY CALCULATIONS FOR PROPOSED CONDITIONS ARE LOCATED ON THIS SHEET.

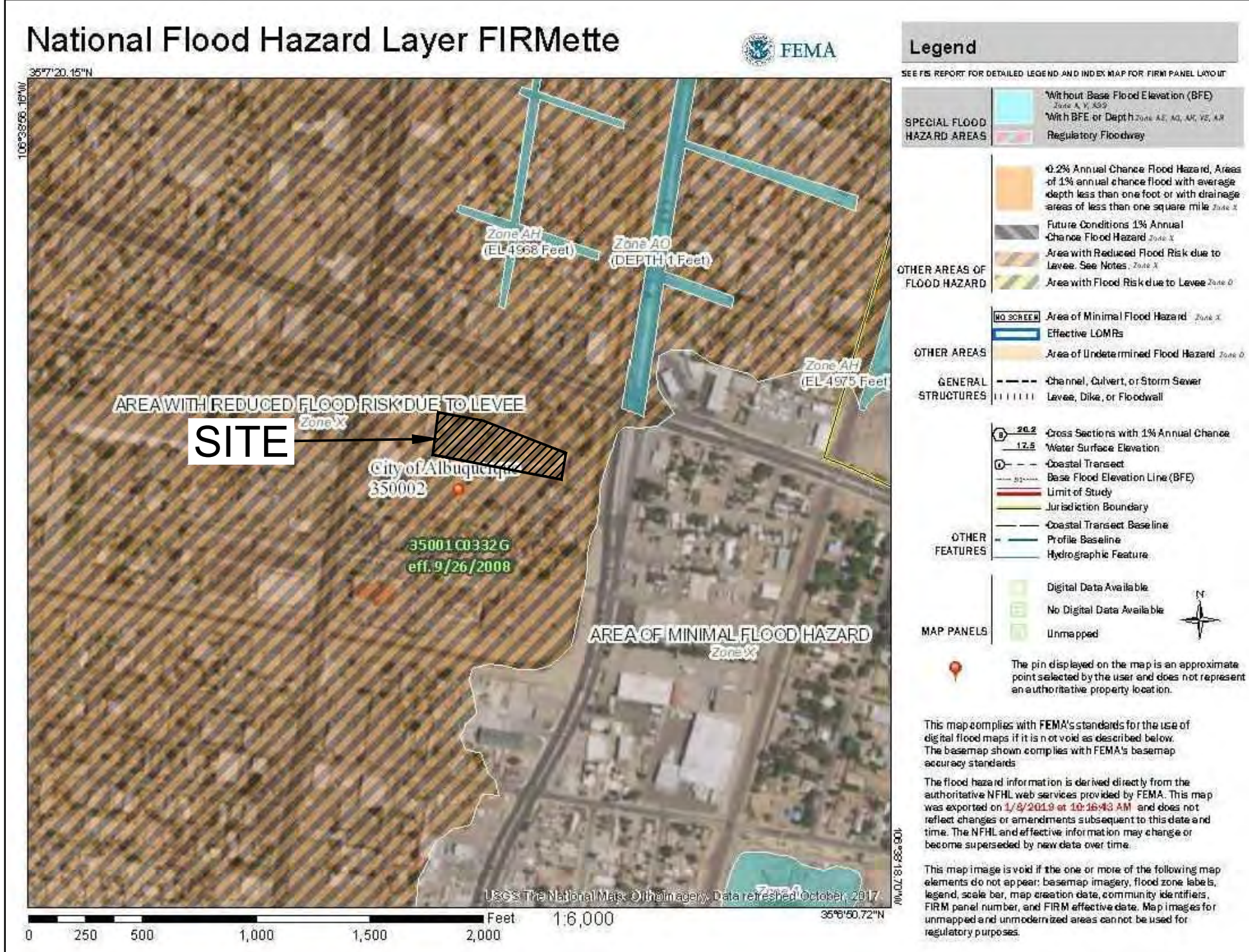
STORM WATER RUNOFF FROM THIS SITE WILL BE MANAGED WITH A SERIES OF WATER HARVEST FEATURES LOCATED ON THE SITE THAT WILL PROVIDE ADEQUATE STORAGE FOR THE FIRST FLUSH AND FOR THE INCREASE IN STORM WATER RUNOFF FROM THE SITE. THE PROPOSED WATER HARVEST PONDS OVERFLOW BACK IN TO THE EXISTING PARKING LOT AREA AND ITS HISTORICAL FLOW PATH BEFORE DISCHARGING INTO SHOPSHIRE ROAD. THE RETENTION VOLUME CALCULATIONS FOR THE WATER HARVEST AREAS ARE CONTAINED ON THIS SHEET.

CONCLUSION

WHEN FULLY DEVELOPED, THE SITE AS INDICATED ON THE SITE DEVELOPMENT PLAN, WILL GENERATE AN INCREASE IN RUNOFF OF 0.23 CFS AND .018 ACRE -FEET DURING THE 100-YEAR, 24 HOUR EVENT. THE HYDROLOGY SUMMARY TABLE ON THIS SHEET CONTAINS A SUMMARY OF EXISTING, PROPOSED, AND INCREASED FLOW RATES AND VOLUMES FOR THE SITE. THE POND VALUE TABLE ON THIS SHEET ALSO DEMONSTRATES THE TOTAL RETENTION VOLUME PROVIDED BY THE THREE WATER HARVEST PONDS. THIS PLAN PROVIDES A TOTAL PROPOSED RETENTION VOLUME OF 0.032 ACRE -FEET OR 1377 CF UNDER FULLY DEVELOPED CONDITIONS.



B1 VICINITY MAP  
SCALE: NOT TO SCALE



A1 FLOOD ZONE MAP  
FLOOD ZONE MAP: 35001C0332G

WATER HARVEST AREA 1 proposed

Pond Rating Table			
Side Slope			
Elev. (ft)	Area (sq ft)	Volume (ac-ft)	Cum Volume (ac-ft)
68.3	700	0.000	0.000
68.8	990	422.500	422.500

WATER HARVEST AREA 2 proposed

Pond Rating Table			
Side Slope			
Depth (ft)	Area (sq ft)	Volume (ac-ft)	Cum Volume (ac-ft)
67.5	700	0.000	0.000
68.5	990	845.000	845.000

WATER HARVEST AREA 3 proposed

Pond Rating Table			
Side Slope			
Depth (ft)	Area (sq ft)	Volume (ac-ft)	Cum Volume (ac-ft)
68.5	144	0.000	0.000
69	297	110.250	110.250

Precipitation Zone 2 - 100-year Stom P(360) = 2.33 in P(1440) = 2.75 in

Basin	Area (Ac)	Land Treatment Factors				Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)	V(100-10 day) (af)
		A	B	C	D					
Existing Conditions										
Site	0.450	0.000	0.000	0.450	0.000	1.130	0.042	0.042	1.413	0.042
<b>Total</b>	<b>0.450</b>						<b>0.042</b>	<b>1.413</b>		<b>0.042</b>
Proposed Conditions										
Site	0.450	0.000	0.000	0.300	0.150	1.46	0.055	0.060	1.647	0.075
<b>Total</b>	<b>0.450</b>						<b>0.060</b>	<b>1.647</b>		<b>0.075</b>

FIRST FLUSH CALCULATIONS

BASIN A  
 $VFF = (0.34 \text{ IN} * 6,543 \text{ SF}) =$   
 $VFF = 185 \text{ CF}$   
 $VOLUME PROVIDED = 1377 \text{ CF}$

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PSFA PROJECT NO. XXX-XXX

B

A

D

C

B

A

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