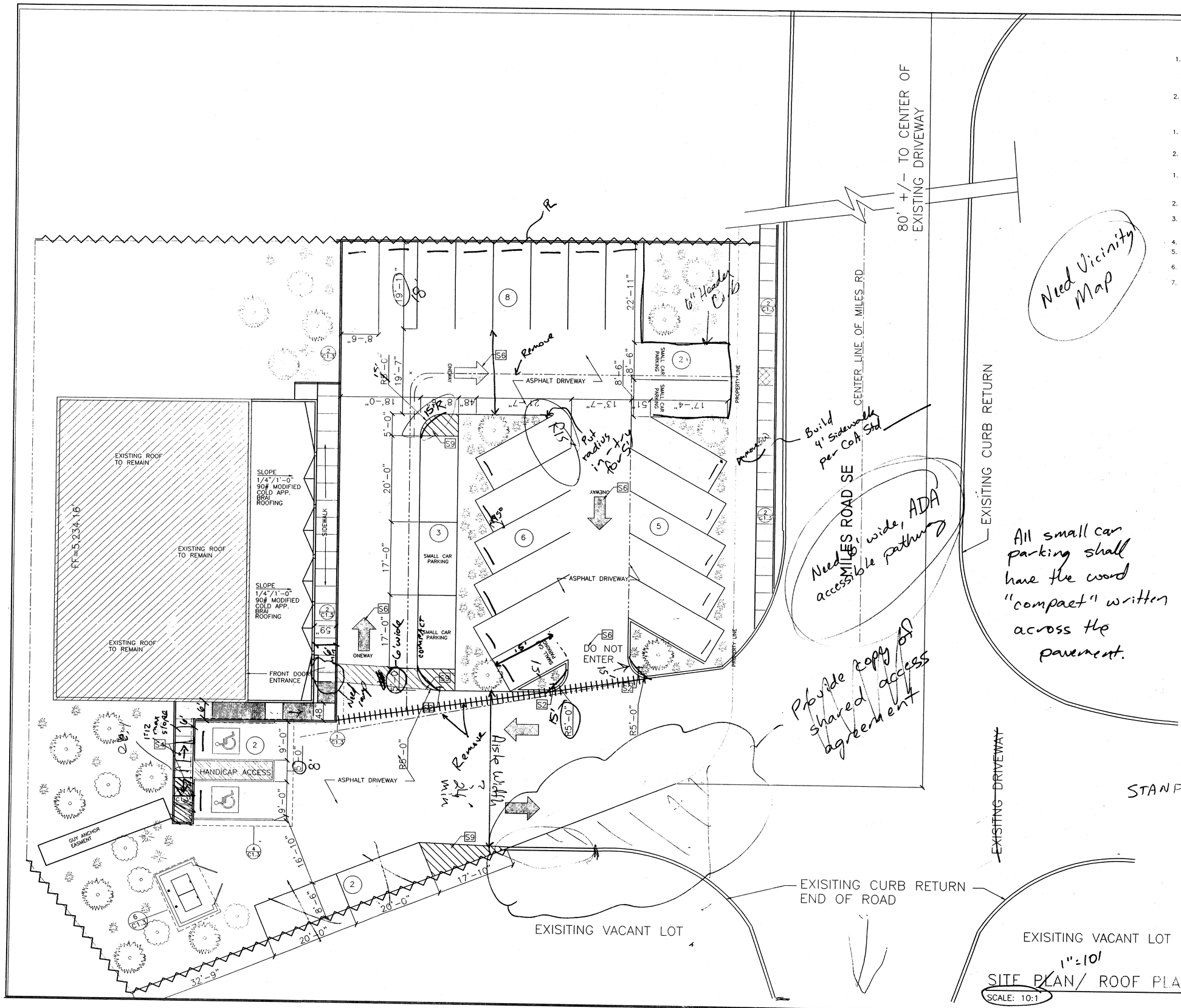


SITE PLAN / ROOF PLAN

SCALE: 10:1

1" = 10'

1 / A5

SITE PLAN NOTES:

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN STRICT COMPLIANCE WITH ALL PROVISIONS OF APPLICABLE BLDG. CODES INCL. BUT NOT LIM. TO; U.B.C., U.P.C., U.M.C., & N.E.C. CODE COMPLIANCE SHALL BE THE RESPONSIBILITY OF THE SUBCON. IN CASE OF CONFLICT BETWEEN THE DWGS. & APPLICABLE CODES OR CONFLICT WITHIN THE DWGS. THE MOST STRINGENT REQUIREMENT SHALL APPLY.
2. CONTRACTORS SHALL PROVIDE A SAFE & CLEAN WORK ENVIRONMENT AT ALL TIMES. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A CLEAN & SAFE WORK AREA.

ROOF NOTES

1. PROVIDE GALV. MTL. ROOF JACKS AND STORM COLLARS @ ALL MECH. EQUIP. PENETRATIONS (I.E. EXHAUST FANS, GAS VENTS, COMBUSTION AIR, ETC). ALL CURBS, JACKS, ETC. TO BE 8" MIN. ABOVE ROOF.
2. ALL SLOPES AND CRICKETS TO BE FORMED WITH 7/16" O.S.B AND 2 X WOOD

SITE NOTES

1. SOILS COMPACTION @ CONSTRUCTION AREA SHALL BE:
   FOOTINGS TO 95% COMPACTION
   UNDER SLABS TO 90% COMPACTION
   DRIVEWAY TO 90% COMPACTION
2. BACKFILL SHALL BE PLACED IN 8" LAYERS AND EACH LAYER SHALL BE COMPACTED
3. FINISH GRADES TO BE 6" BELOW TOP OF SLAB OR TOP OF BLOCK WHICHEVER IS HIGHER. SLOPE ALL FIN. GRADES @ MIN. 1/4"/FT. AWAY FROM ALL EXTERIOR SURFACES OF THE BUILDING.
4. VERIFY ALL EXISTING CONDITIONS IN THE FIELD.
5. WORK REVISED (FINISH GRADES) EVENLY AND SMOOTHLY INTO EXISTING GRADE @ EDGES OF GRADING AREAS.
6. PROTECT FOR DAMAGE ALL EXISTING VEGETATION BEYOND IMMEDIATE CONSTRUCTION AREA.
7. SITE UTILITIES– CONTRACTOR TO PROVIDE UNDERGROUND UTILITIES (POWER, GAS, PHONE, CABLE TV, WATER) FROM EXISTING LOCATIONS VERIFY TRENCH LOCATION PRIOR TO DIGGING. AVOID ALL EXISTING TREES

SHEET INDEX

SQUARE FOOTAGES

EXISTING HEATED	2306
EXISTING PATIO	805
NEW HEATED ADDITION	895
LOT SIZE	1/2 ACRE

PARKING CALCULATIONS

SMALL CAR PARKING	5
REGULAR CAR PARKING	21
HANDICAP CAR PARKING	1
HANDICAP VAN PARKING	1
TOTAL PARKING SPACES	28

PARKING PROVIDED

LANDSCAPE LEGEND

- RUSSIAN OLIVE
- DESERT WILLOW
- YUCCA
- CHAMISA

NOTE:
ALL PLANTS WILL BE A MINIMUM SIZE OF 5 GALLONS

ALL PLANTS WILL BE MAINTAINED BY OWNER VIA A AUTOMATIC DRIP SYSTEM WHERE POSSIBLE

TREES SHALL BE 20'–0" O.C. (MAX.)

ALL LIGHTING SHALL BE CONTAINED WITHIN PROPERTY

LANDSCAPE AREAS AND BUFFERS TO HAVE A MIN. OF 75% ORGANIC COVERAGE AT MATURITY, NOT TO INCLUDE TREE CANOPY

LANDSCAPE BUFFER TO BE 10'–0" FROM FRONT SETBACK. TRESS SHALL BE 20'–0" O.C. MAX AND GROUND SHALL BE DROUGHT TOLERTANT GRASS

LANDSCAPE TO BE A MIN. OF 15% COVERAGE OF PAVED AREA SQUARE FOOTAGE

SIGN LEGEND

S1	ENTRANCE ONLY
S2	DO NOT ENTER
S3	ONE WAY
S4	HANDICAP PARKING
S5	STOP SIGN
S6	ONEWAY ARROW WHITE PAINT
S7	CROSS WALK WHITE PAINT
S8	H.C. ACCESS & PARKING BLUE PAINT
S9	NO PARKING STRIPE WHITE PAINT NO PARKING TEXT RED PAINT

DRAWN BY:
CHRIS ARCHULETA
DRAFTING SERVICES
PHONE: (505) 771-1067
EMAIL: CADRAFTS@AOL.COM

CHURCH ADDITION
ISLETA CHURCH
2424 MILES ROAD
ALBUQUERQUE, NEW MEXICO

SITE PLAN

03/29/08

Revisions	
Date:	No:

Scale: –

Project Number:
File:
Date:

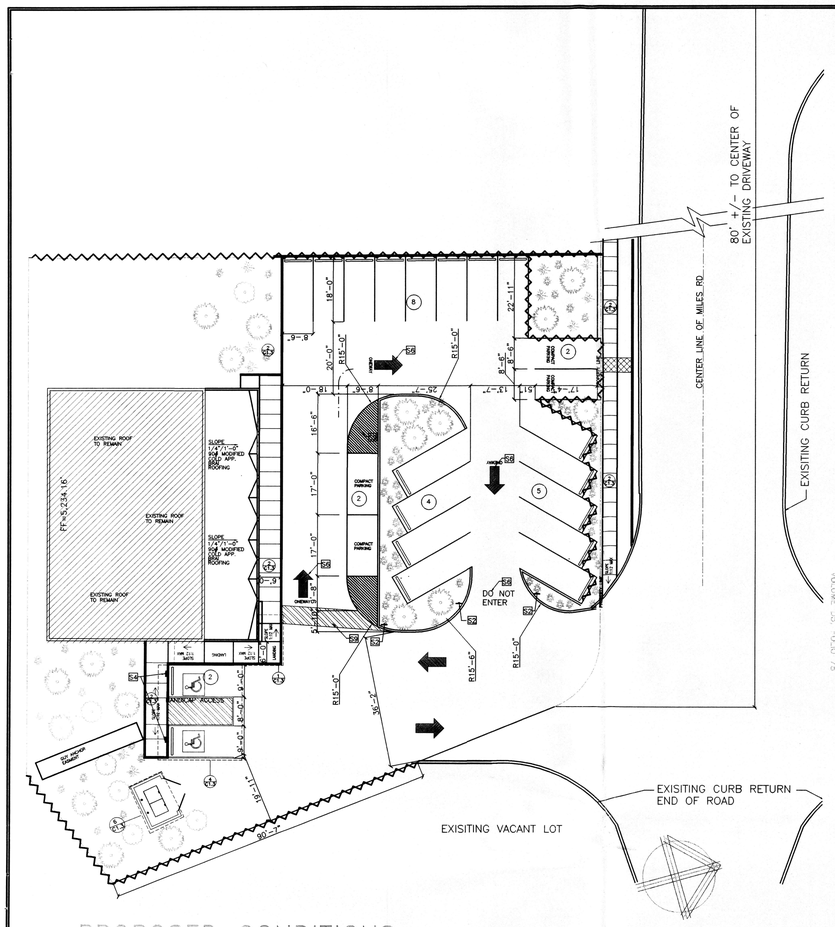
Sheet:

C1.2

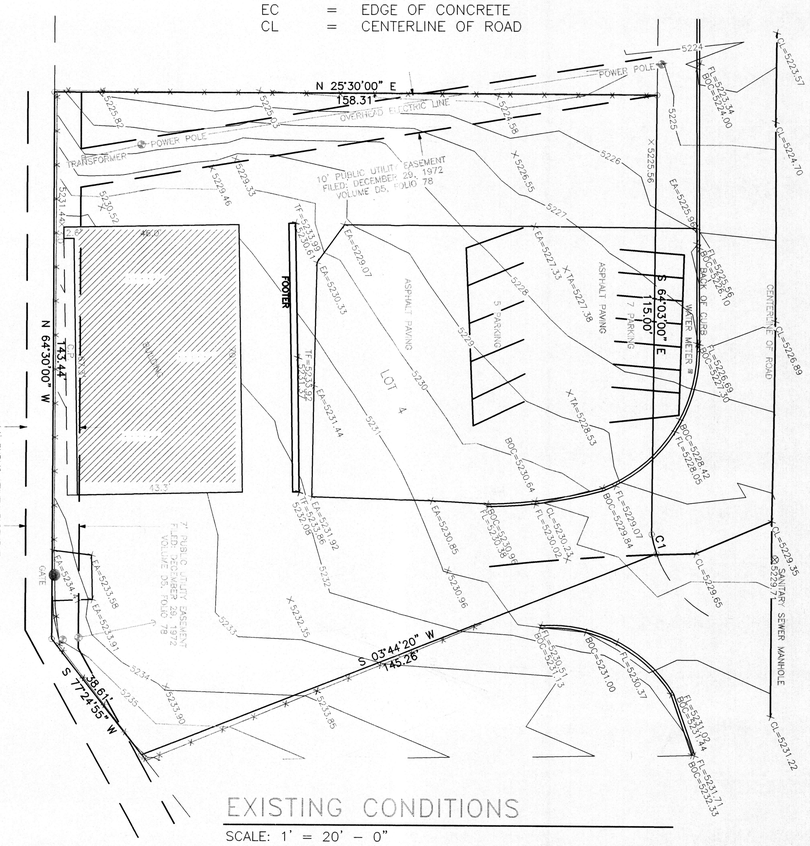
PLAT OF TOPOGRAPHY
OF
LOT 4, BLOCK 1
AIRPORT INDUSTRIAL PARK
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
SEPTEMBER, 2007

LEGEND

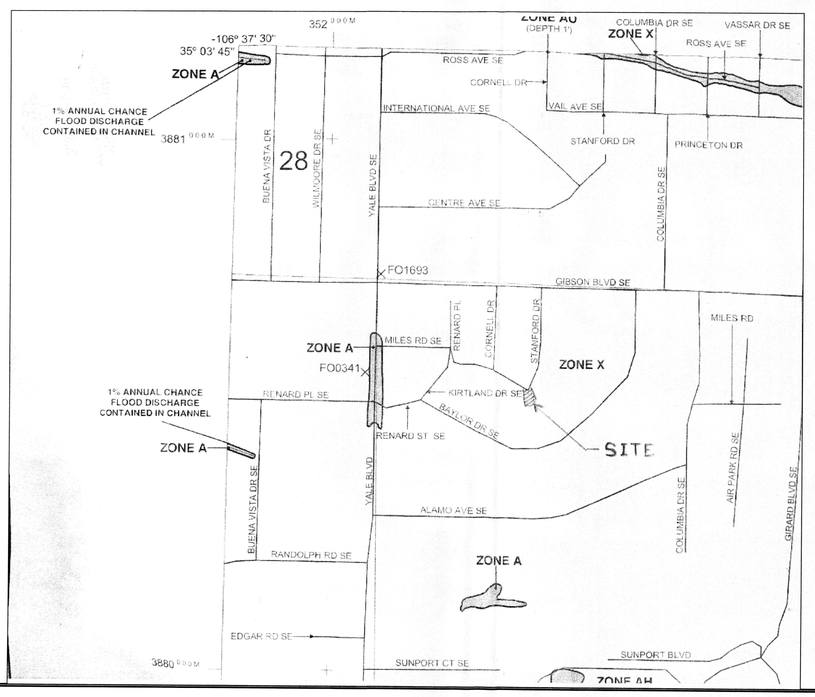
BOC	=	BACK OF CURB
TF	=	TOP OF FOOTER
TA	=	TOP OF ASPHALT
EA	=	EDGE OF ASPHALT
EC	=	EDGE OF CONCRETE
CL	=	CENTERLINE OF ROAD

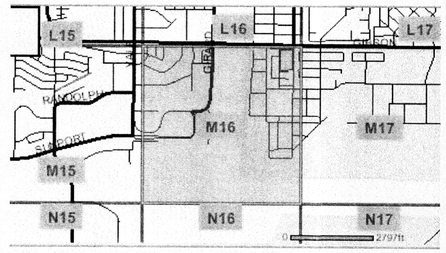


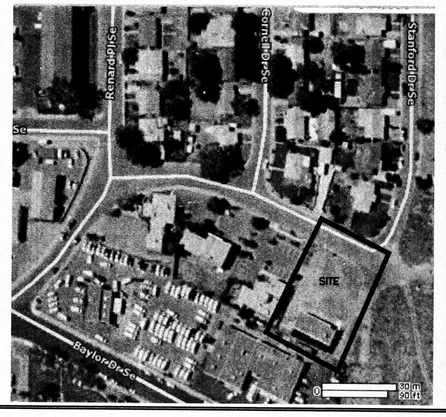
PROPOSED CONDITIONS
SCALE: 1' = 20' - 0"

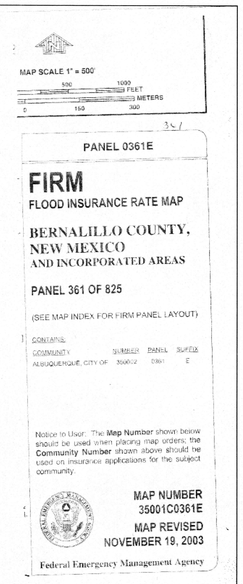


EXISTING CONDITIONS
SCALE: 1' = 20' - 0"









LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	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.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- (A)——(A) Cross section line
- (23)- - - -(23) Transect line
- 45° 02' 08", -93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4989000M — 1000-meter Universal Transverse Mercator grid values, zone 13
- ML5610 — Bench mark (see explanation in Notes to Users section of this FIRM panel)

35° 37.5"
35° 03' 45"

PAMPAS PL SE

CITY OF ALBUQUERQUE BUILDING & SAFETY
NOV 1 0 2005
PLAN CHECK SECTION

DRAWN BY:
CHRIS ARCHULETA
DRAFTING SERVICES
PHONE: (505) 771-1067
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CHURCH ADDITION
ISLETA CHURCH
2424 MILES ROAD
ALBURQUERQUE, NEW MEXICO

SITE PLAN

04/18/08

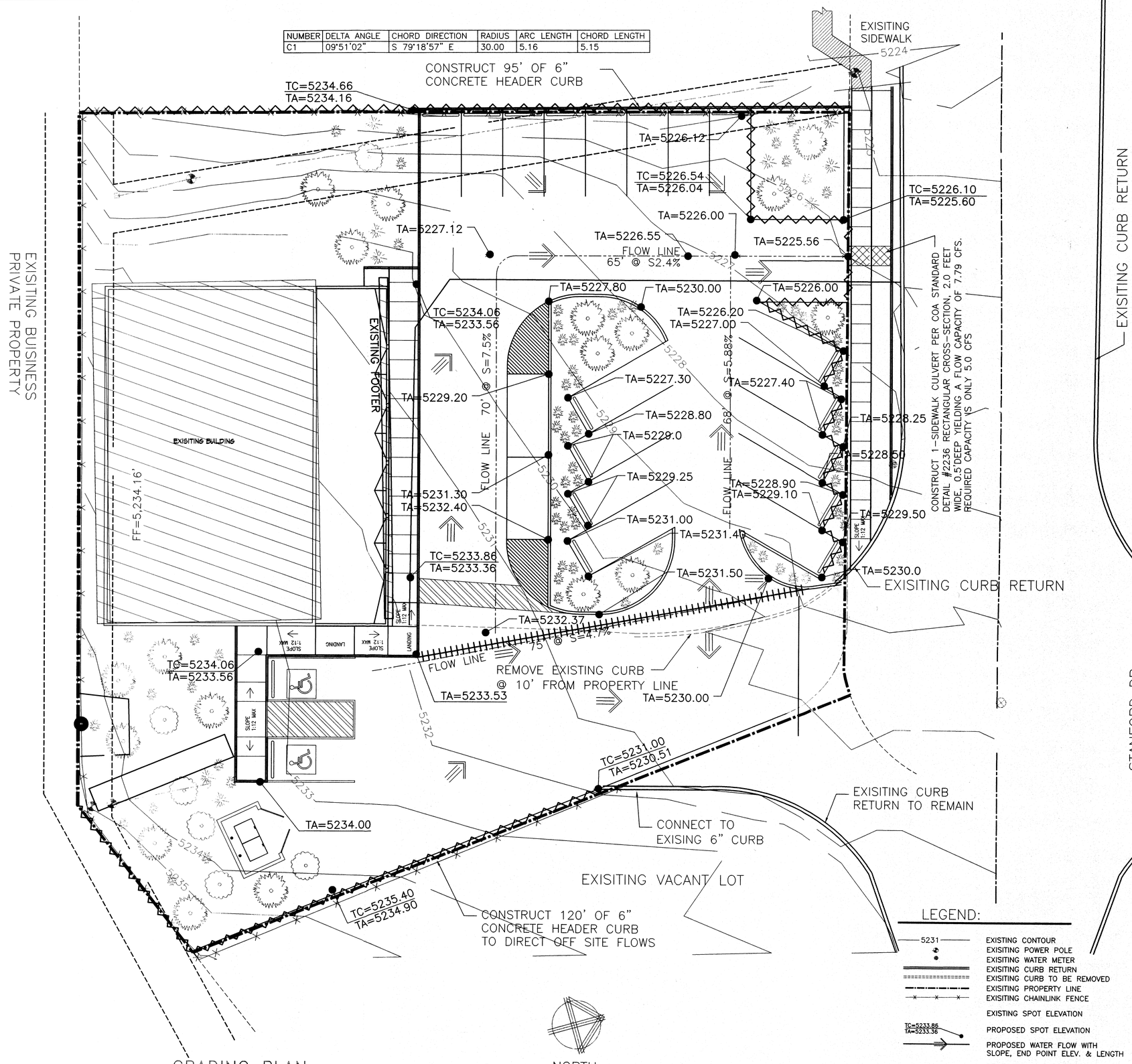
Revisions	
Date:	No:

Scale: -

Project Number:
File:
Date:

Sheet:
C1

NUMBER	DELTA ANGLE	CHORD DIRECTION	RADIUS	ARC LENGTH	CHORD LENGTH
C1	09°51'02"	S 79°18'57" E	30.00	5.16	5.15



GRADING PLAN

SCALE: 1" = 10' - 0"

LEGEND:

- 5231 — EXISTING CONTOUR
- EXISITING POWER POLE
- EXISITING WATER METER
- EXISITING CURB RETURN
- EXISITING CURB TO BE REMOVED
- EXISITING PROPERTY LINE
- EXISITING CHAINLINK FENCE
- EXISTING SPOT ELEVATION
- TC=5233.86 TA=5233.36 — PROPOSED SPOT ELEVATION
- PROPOSED WATER FLOW WITH SLOPE, END POINT ELEV. & LENGTH
- PROPOSED 6" HEADER WALL TO ADDRESS OFF SITE WATER FLOW (PROPOSED)
- PROPOSED CURB RETURN
- GRADE BREAK

~~DPM. INTRO PREPARED BY: A. MARIA~~

ISLETA CHURCH OF CHRIST
IGLESIA DE CRISTO, 2424 MILES RD. SE
LOT 4, BLOCK 1, AIRPORT INDUSTRIAL PARK
BERNALILLO COUNTY ZONE ATLAS NO. M16

THE FOLLOWING ARE CALCULATIONS IN ACCORDANCE WITH CITY OF ALBUQUERQUE'S DEVELOPMENT PROCESS MANUAL (DPM), VOLUME (V) SECTION 22.2 IN REFERENCE TO A DRAINAGE REPORT SUBMITTAL. THE REFERENCED SITE IS LOCATED ON A 0.5 AC. LOT. THE REFERENCED SITE IS ALSO LOCATED WITHIN ZONE "X" ACCORDING TO FIRM (FLOOD INSURANCE RATE MAP) PANEL 361 OF 825, MAP NUMBER 35001C0361E, REVISED NOVEMBER 19, 2003. ZONE "X" AREAS ARE REGIONS DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR STORM) ANNUAL CHANCE FLOODPLAIN.
DPM DESIGN STORM WILL BE 100-YEAR, 6-HOUR. "LAND TREATMENT" IS IMPERVIOUS OF WHICH VALUES OF AREAS WERE TAKEN FROM AN AUTOCAD DRAWING. V_{360} AND V_{10DAY} ARE DETERMINED USING THE CRITERIA DICTATED IN THE DPM AND WITH A PRECIPITATION ZONE 2 (DPM TABLE A-1). LAND TREATMENT "C" IS DEFINED AS, "SOIL COMPACTED BY HUMAN ACTIVITY. MINIMAL VEGETATION. UNPAVED PARKING, ROADS, TRAILS. MOST VACANT LOTS. GRAVEL OR ROCK ON PLASTIC (DESERT LANDSCAPING). IRRIGATED LAWNS AND PARKS WITH SLOPES GREATER THAN 10%. NATIVE GRASSES, WEEDS AND SHRUBS, AND SOIL UNCOMPACTED BY HUMAN ACTIVITY WITH SLOPES AT 20% OR GREATER. NATIVE GRASS, WEED AND SHRUB AREAS WITH CLAY OR CLAY LOAM SOILS AND OTHERS SOILS OF VERY LOW PERMEABILITY."
EXISTING CONDITIONS:(REFERENCING THE AUTOCAD DRAWING SHOWN BELOW):43,560 FT^2=1.0 AC.
GENERAL NOTES:
1. CONTOUR INTERVAL IS ONE (1) FOOT.
2. ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION NO. "24-L16", HAVING AN ELEVATION OF 5188.642.
3. UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT. INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS EXACT LOCATION AND/OR DEPTH PRIOR TO EXCAVATION OR DESIGN CONSIDERATIONS.
4. THIS IS NOT A BOUNDARY SURVEY. BEARINGS AND DISTANCES SHOWN ARE FOR REFERENCE ONLY.

Project: Isleta Church of Christ - Iglesia de Cristo
Development Process Manual (DPM), Design Criteria 2, Albuquerque, NM

Existing Conditions: (referencing the AutoCAD drawing for area measurements) 43,560 ft^2 = 1.0 ac.

Where:

* The lot size is (ac.) =	21,780.00 (ft^2)	0.5 (ac.)	
* The existing church footage is =	2,233.87 (ft^2)	0.0512826 (ac.)	
* Total existing asphalt area is =	7,560.54 (ft^2)	0.1735661 (ac.)	Σ_A(ac.) = 0.5 √
* Total existing pervious area is =	11,985.58 (ft^2)	0.2751511 (ac.)	

Proposed Conditions: (referencing the AutoCAD drawing for area measurements) 43,560 ft^2 = 1.0 ac.

Where:

* The lot size is (ac.) =	21,780.00 (ft^2)	0.5 (ac.)
* The proposed church footage is =	1,123.20 (ft^2)	0.0257851 (ac.)
* Total proposed pervious area is =	5,379.05 (ft^2)	0.123486 (ac.)
* Total proposed impervious area =	13,043.88 (ft^2)	0.29945 (ac.)

TABLE A-4. LAND TREATMENTS

Treatment	Land Condition
A	Soil not compacted by human activity with 0 to 10 percent slopes. Native grasses, weeds and shrubs in typical densities with minimal disturbance to grading, ground cover and infiltration capacity.
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes greater than 10 percent and less than 20 percent.
C	Soil compacted by human activity. Minimal vegetation. Unpaved parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes at 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D.
D	Impervious areas, pavement and roofs

Most watersheds contain a mix of land treatments. To determine proportional treatments, measure respective subareas. In lieu of specific measurement for treatment D, the areal percentages in TABLE A-5 may be employed.

TABLE A-2. DEPTH (INCHES) AT 100 YEAR STORM

Zone	P_{6c}	P_{6m}	P_{24c}	P_{24m}	P_{10day}
1	1.87	2.20	2.66	3.12	3.67
2	2.01	2.35	2.75	3.30	3.95
3	2.14	2.60	3.10	3.95	4.90
4	2.23	2.90	3.65	4.70	5.95

Note:
* Text in red are input values
* Text in blue are calculated values
* Text in green are unit values

TABLE A-8. EXCESS PRECIPITATION, E (INCHES) - 6 HOUR STORM

Zone	Treatment 100-YR. [5-YR., 10-YR.] A	B	C	D
1	0.44 [0.00, 0.08]	0.67 [0.01, 0.22]	0.99 [0.12, 0.44]	1.97 [0.72, 1.24]
2	0.53 [0.00, 0.13]	0.78 [0.02, 0.29]	1.13 [0.13, 0.52]	2.12 [0.79, 1.34]
3	0.66 [0.00, 0.19]	0.92 [0.04, 0.34]	1.29 [0.20, 0.62]	2.38 [0.86, 1.50]
4	0.80 [0.02, 0.28]	1.08 [0.11, 0.46]	1.46 [0.27, 0.73]	2.64 [1.01, 1.69]

TABLE A-9. PEAK DISCHARGE (CFS/ACRE)

Zone	Treatment 100-YR. [2-YR., 10-YR.] A	B	C	D
1	1.29 [0.03, 0.34]	2.02 [0.03, 0.76]	2.87 [0.47, 1.49]	4.37 [1.69, 2.89]
2	1.56 [0.03, 0.38]	2.38 [0.08, 0.95]	3.14 [0.60, 1.71]	4.70 [1.86, 3.14]
3	1.87 [0.05, 0.58]	2.80 [0.21, 1.19]	3.45 [0.78, 2.00]	5.02 [2.04, 3.39]
4	2.20 [0.05, 0.87]	2.92 [0.38, 1.45]	3.73 [1.00, 2.26]	5.25 [2.17, 3.51]

DPM Excess Precipitation (E-inches), Table A-8, 6-hour storm, 100-year, Zone 2,

E_C(in.) = 1.13
P_{10day}(in.)= 3.95
P_{360}(in.) = 2.35
E_D(in.) = 2.12

Equation A-9, for the 10-day storm: $V_{10day} = V_{360}+A_C*(P_{10day}-P_{360})/12$ =

The unknown in this equation is V_{360} and to calculate this value use Equation A-6:
$V_{360} = (E*A_T)/12$ =

For ***Existing Conditions*** calculate a "Weighted E", Equation A-5

E (in.) = $(E_AA_A+E_BA_B+E_CA_C+E_DA_D) / (A_A+A_B+A_C+A_D)$ = 1.5752
V_{360}(ac.ft.)= 0.065633
V_{10day}(ac.ft.) 0.072471

For ***Proposed Conditions*** calculate a "Weighted E", Equation A-5

E (in.) = $(E_AA_A+E_BA_B+E_CA_C+E_DA_D) / (A_A+A_B+A_C+A_D)$ = 1.8755
V_{360}(ac.ft.)= 0.078146
V_{10day}(ac.ft.) 0.128348

Therefore, the amount that would be retained is the difference: 0.0558766 (acft)
2,433.98 (ft^3)

Due to the very steep grades, limited surface areas, maximized number of parking spaces, and expected high flow velocities with such steep grades, a variance for the proposed pond construction is requested. No pond is needed.

TABLE A-10. PEAK INTENSITY (INHR at t = 0.2 hrs*)

Zone	Intensity 100-YR. [2-YR., 10-YR.]
1	4.70 [1.84, 3.14]
2	5.05 [2.04, 3.41]
3	5.38 [2.21, 3.65]
4	5.61 [2.34, 3.83]

TABLE A-11. RATIONAL METHOD COEFFICIENT, C

Zone	Treatment 100-YR. [2-YR., 10-YR.] A	B	C	D
1	0.27 [0.00, 0.08]	0.41 [0.01, 0.24]	0.65 [0.26, 0.47]	0.93 [0.92, 0.92]
2	0.31 [0.00, 0.11]	0.45 [0.04, 0.28]	0.67 [0.30, 0.50]	0.93 [0.93, 0.92]
3	0.35 [0.00, 0.16]	0.49 [0.11, 0.35]	0.69 [0.35, 0.51]	0.93 [0.92, 0.93]
4	0.39 [0.02, 0.23]	0.52 [0.16, 0.38]	0.68 [0.40, 0.59]	0.94 [0.93, 0.93]

Once again, using the DPM, the design storm will be 100-year, 6-hour storm. The basin is less than 40 acres, therefore, the rational method will be used.
* Peak intensity, I, using DPM Table A-10, Zone 2, 100-year is (in/hr): 5.05
* Rational Method Coefficient, using "C" values from DPM Table A-11 Zone 2, 100-year, C_D= 0.93 and C_C = 0.62

For ***Existing Conditions Q_{100}*** is: $Q_{100} = C_CI_2A_C + C_DI_2A_D$ = 1.92 (cfs)

For ***Proposed Conditions Q_{100}*** is: $Q_{100} = C_CI_2A_C + C_DI_2A_D$ = 2.15 (cfs)

The ***resulting*** increase in peak discharge 'Q_{100}' for the site is = 0.24 (cfs)

DRAWN BY:
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PHONE: (505) 771-9067
EMAIL: CADRAFTS@AOL.COM

CHURCH ADDITION
ISLETA CHURCH
2424 MILES ROAD
ALBUQUERQUE, NEW MEXICO

GRADING & DRAINAGE PLAN

JAMES W. LEMON
09/18/08

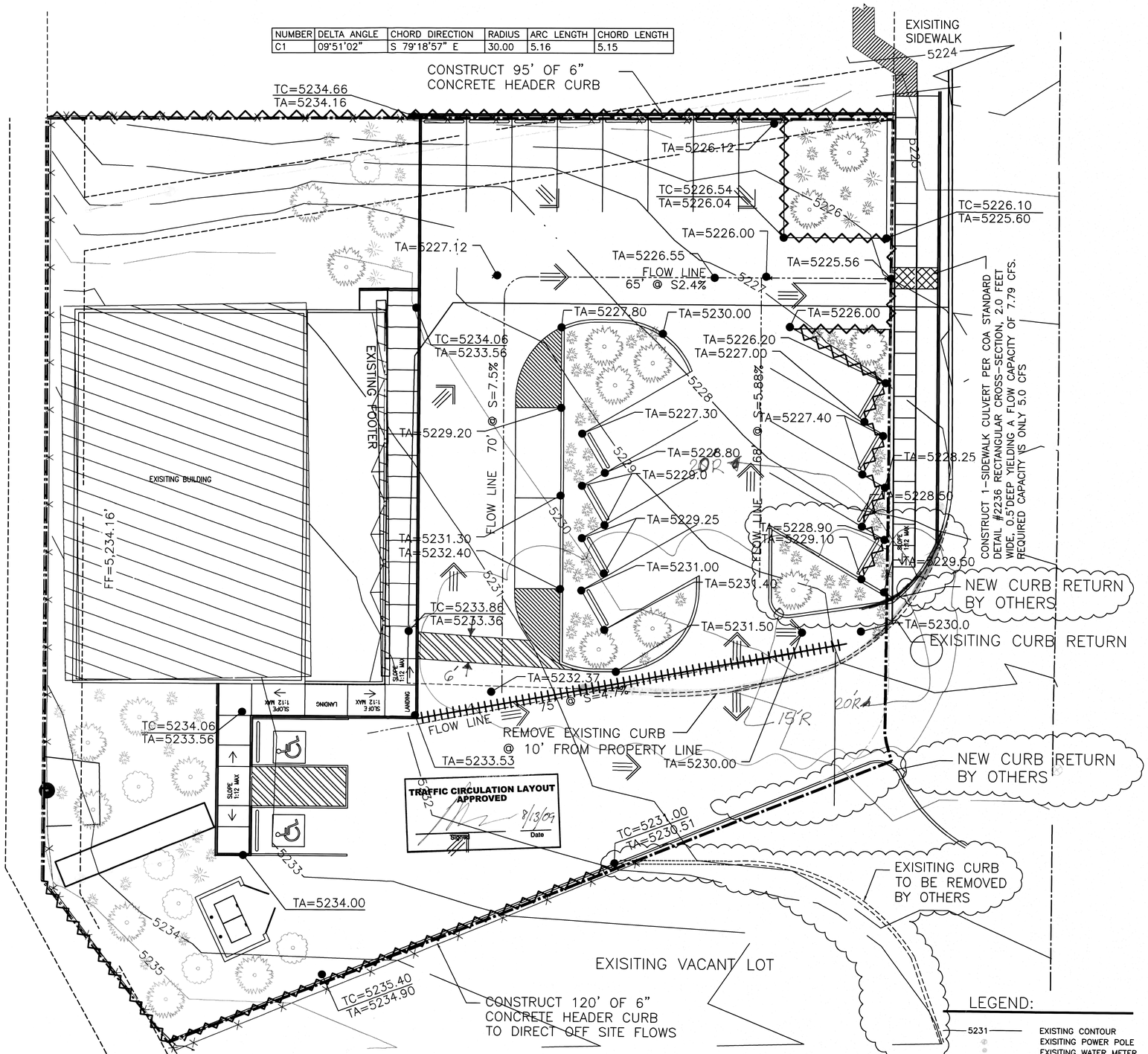
Revisions	
Date:	No:

Scale: -

Project Number:
File:
Date:

Sheet:
C2

NUMBER	DELTA ANGLE	CHORD DIRECTION	RADIUS	ARC LENGTH	CHORD LENGTH
C1	09°51'02"	S 79°18'57" E	30.00	5.16	5.15



GRADING PLAN

SCALE: 1" = 10' - 0"

NORTH

LEGEND:

- 5231 — EXISTING CONTOUR
- EXISITING POWER POLE
- EXISITING WATER METER
- EXISITING CURB RETURN
- EXISITING CURB TO BE REMOVED
- EXISITING PROPERTY LINE
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- PROPOSED 6" HEADER WALL TO ADDRESS OFF SITE WATER FLOW (PROPOSED)
- PROPOSED CURB RETURN
- GRADE BREAK

DPM_INTRO PREPARED BY: A. NUERA

ISLETA CHURCH OF CHRIST
IGLESIA DE CRISTO, 2424 MILES RD. SE
LOT 4, BLOCK 1, AIRPORT INDUSTRIAL PARK
BERNALILLO COUNTY ZONE ATLAS NO. M16

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1. CONTOUR INTERVAL IS ONE (1) FOOT.
2. ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION NO. "24-L16", HAVING AN ELEVATION OF 5188.642.
3. UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT. INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS EXACT LOCATION AND/OR DEPTH PRIOR TO EXCAVATION OR DESIGN CONSIDERATIONS.
4. THIS IS NOT A BOUNDARY SURVEY. BEARINGS AND DISTANCES SHOWN ARE FOR REFERENCE ONLY.

Project: Isleta Church of Christ - Iglesia de Cristo
Development Process Manual (DPM), Design Criteria 2, Albuquerque, NM

Existing Conditions: (referencing the AutoCAD drawing for area measurements) 43,560 ft^2 = 1.0 ac.

Where:

* The lot size is (ac.) =	21,780.00 (ft^2)	0.5	(ac.)	
* The existing church footage is =	2,233.87 (ft^2)	0.0512826	(ac.)	
* Total existing asphalt area is =	7,560.54 (ft^2)	0.1735661	(ac.)	
* Total existing pervious area is =	11,985.58 (ft^2)	0.2751511	(ac.)	

Σ_A (ac.) = 0.5 √

Proposed Conditions: (referencing the AutoCAD drawing for area measurements) 43,560 ft^2 = 1.0 ac.

Where:

* The lot size is (ac.) =	21,780.00 (ft^2)	0.5	(ac.)
* The proposed church footage is =	1,123.20 (ft^2)	0.0257851	(ac.)
* Total proposed pervious area is =	5,379.05 (ft^2)	0.123486	(ac.)
* Total proposed impervious area =	13,043.88 (ft^2)	0.29945	(ac.)

TABLE A-4. LAND TREATMENTS

Treatment	Land Condition
A	Soil uncompacted by human activity with 0 to 10 percent slopes. Native grasses, weeds and shrubs in typical densities with minimal disturbance to grading, ground cover and infiltration capacity.
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes greater than 10 percent and less than 20 percent
C	Soil compacted by human activity. Minimal vegetation. Unpaved parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes at 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D.
D	Impervious areas, pavement and roofs

Most watersheds contain a mix of land treatments. To determine proportional treatments, measure respective subareas. In lieu of specific measurement for treatment D, the areal percentages in TABLE A-5 may be employed

TABLE A-2. DEPTH (INCHES) AT 100-YEAR STORM

Zone	P_{6H}	P_{6H6}	P_{24H}	P_{10day}	P_{360yr}
1	1.87	2.20	2.66	3.12	3.67
2	2.01	2.35	2.75	3.30	3.93
3	2.14	2.60	3.10	3.95	4.90
4	2.23	2.90	3.65	4.70	5.93

Note:
Text in red are input values
Text in blue are calculated values
Text in green are unit values

TABLE A-8. EXCESS PRECIPITATION, E (INCHES). 6 HOUR STORM

Zone	Treatment 100-YR [2-YR, 10-YR]			
	A	B	C	D
1	0.44 [0.00, 0.08]	0.67 [0.01, 0.22]	0.99 [0.12, 0.44]	1.97 [0.72, 1.24]
2	0.53 [0.00, 0.13]	0.78 [0.02, 0.28]	1.13 [0.13, 0.52]	2.12 [0.79, 1.34]
3	0.66 [0.00, 0.19]	0.92 [0.04, 0.36]	1.29 [0.20, 0.62]	2.36 [0.89, 1.50]
4	0.80 [0.02, 0.28]	1.08 [0.11, 0.46]	1.46 [0.27, 0.73]	2.64 [1.01, 1.69]

TABLE A-9. PEAK DISCHARGE (CFS/ACRE)

Zone	Treatment 100-YR [2-YR, 10-YR]			
	A	B	C	D
1	1.29 [0.00, 0.24]	2.03 [0.03, 0.76]	2.87 [0.47, 1.49]	4.37 [1.69, 2.89]
2	1.56 [0.00, 0.38]	2.28 [0.08, 0.95]	3.14 [0.60, 1.71]	4.70 [1.86, 3.14]
3	1.87 [0.00, 0.58]	2.60 [0.21,1.19]	3.45 [0.78, 2.00]	5.02 [2.04, 3.39]
4	2.20 [0.05, 0.87]	2.92 [0.38, 1.45]	3.73 [1.00, 2.26]	5.25 [2.17, 3.57]

DPM Excess Precipitation (E-inches), Table A-8, 6-hour storm, 100-year, Zone 2,

E_C(in.) = 1.13
P_{10day}(in.)= 3.95
P_{360} (in.) = 2.35
E_D (in.) = 2.12

Equation A-9, for the 10-day storm: $V_{10day} = V_{360}+A_C*(P_{10day}-P_{360})/12$ =

The unknown in this equation is V_{360} and to calculate this value use Equation A-6:

$V_{360} = (E*A_T)/12$ =

For ***Existing Conditions*** calculate a "Weighted E", Equation A-5

E (in.) = $(E_A A_A+E_B A_B+E_C A_C+E_D A_D) / (A_A+A_B+A_C+A_D)$ = 1.5752
V_{360}(ac.ft.)= 0.065633
V_{10day}(ac.ft.) 0.072471

For ***Proposed Conditions*** calculate a "Weighted E", Equation A-5

E (in.) = $(E_A A_A+E_B A_B+E_C A_C+E_D A_D) / (A_A+A_B+A_C+A_D)$ = 1.8755
V_{360}(ac.ft.)= 0.078146
V_{10day}(ac.ft.) 0.128348

Therefore, the amount that would be retained is the difference: 0.0558766 (acft)
2,433.98 (ft^3)

Due to the very steep grades, limited surface areas, maximized number of parking spaces, and expected high flow velocities with such steep grades, a variance for the proposed pond construction is requested. No pond is needed.

TABLE A-10. PEAK INTENSITY (INHR at t_c = 0.2 hour)

Zone	Intensity 100-YR [2-YR, 10-YR]
1	4.70 [1.84, 3.14]
2	5.05 [2.04, 3.41]
3	5.38 [2.21, 3.65]
4	5.65 [2.34, 3.83]

TABLE A-11. RATIONAL METHOD COEFFICIENT, C

Zone	Treatment 100-YR [2-YR, 10-YR]			
	A	B	C	D
1	0.27 [0.00, 0.08]	0.43 [0.00, 0.24]	0.61 [0.26, 0.47]	0.93 [0.76, 0.92]
2	0.31 [0.00, 0.11]	0.48 [0.04, 0.28]	0.65 [0.30, 0.50]	0.93 [0.76, 0.92]
3	0.35 [0.00, 0.14]	0.48 [0.08, 0.33]	0.64 [0.35, 0.53]	0.93 [0.76, 0.92]
4	0.39 [0.02, 0.19]	0.52 [0.14, 0.38]	0.65 [0.40, 0.56]	0.94 [0.77, 0.92]

Once again, using the DPM, the design storm will be 100-year, 6-hour storm. The basin is less than 40 acres, therefore, the rational method will be used.

* Peak intensity, I, using DPM Table A-10, Zone 2, 100-year is (in/hr): 5.05
* Rational Method Coefficient, using "C" values from DPM Table A-11
  Zone 2, 100-year, C_D= 0.93 and C_C = 0.62

For ***Existing Conditions*** Q_{100} *is:* $Q_{100} = C_C I_2 A_C + C_D I_2 A_D$ = 1.92 (cfs)

For ***Proposed Conditions*** Q_{100} *is:* $Q_{100} = C_C I_2 A_C + C_D I_2 A_D$ = 2.15 (cfs)

The ***resulting*** increase in peak discharge 'Q_{100}' for the site is = 0.24 (cfs)

JAMES W. LEWIS
NEW MEXICO
10/09
08/11/09
REGISTERED PROFESSIONAL ENGINEER

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CHURCH ADDITION
ISLETA CHURCH
2424 MILES ROAD
ALBUQUERQUE, NEW MEXICO

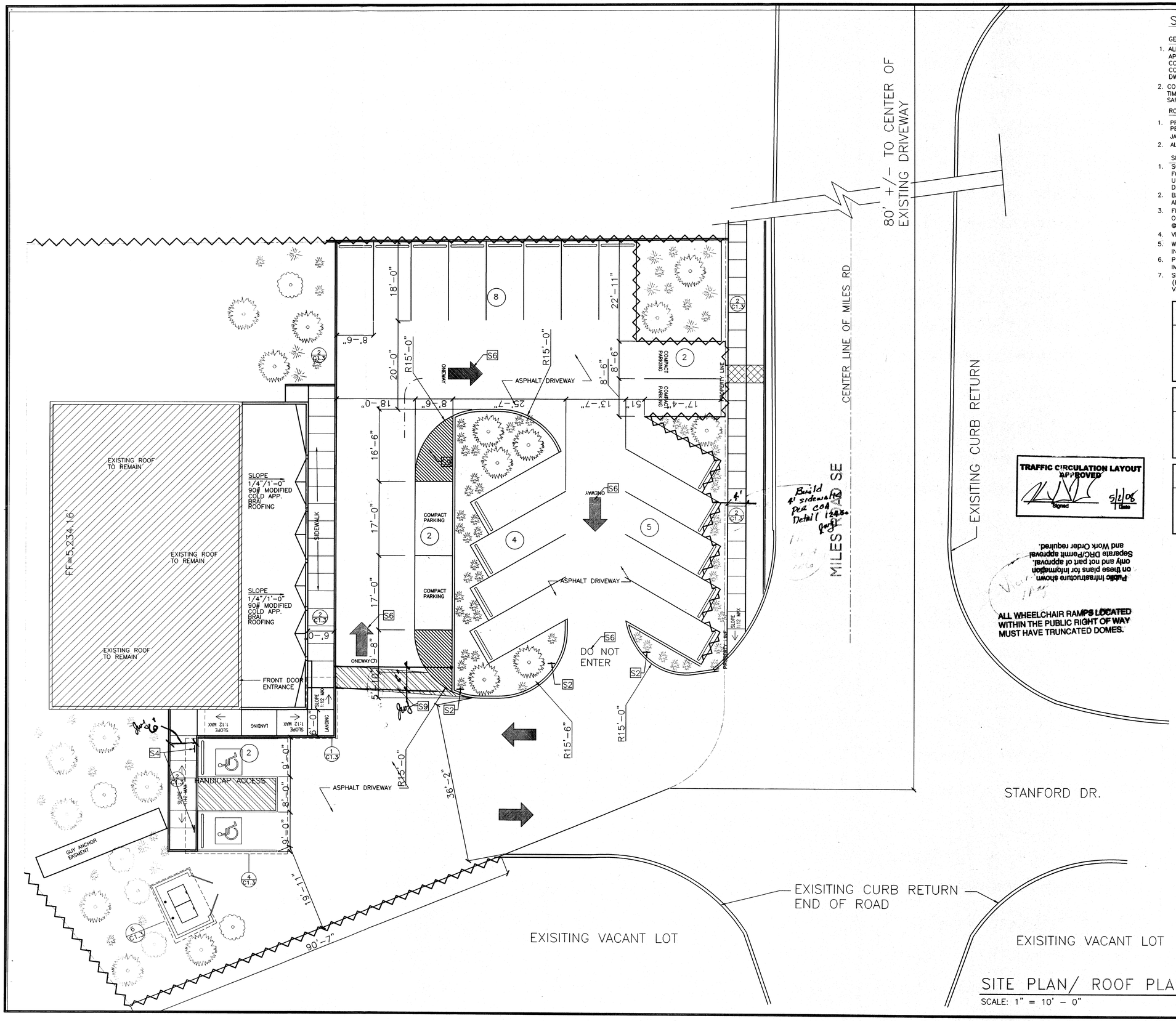
GRADING & DRAINAGE PLAN
(REVISED CURB CUT)

Revisions	
Date:	No:
08/12/09	

Scale: -

Project Number:
File:
Date:

Sheet:
C2



SITE PLAN/ ROOF PLAN

SCALE: 1" = 10' - 0"

1 / A5

SITE PLAN NOTES:

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN STRICT COMPLIANCE WITH ALL PROVISIONS OF APPLICABLE BLDG. CODES INCL. BUT NOT LIM. TO; U.B.C., U.P.C., U.M.C., & N.E.C. CODE COMPLIANCE SHALL BE THE RESPONSIBILITY OF THE SUBCON. IN CASE OF CONFLICT BETWEEN THE DWGS. & APPLICABLE CODES OR CONFLICT WITHIN THE DWGS. THE MOST STRINGENT REQUIREMENT SHALL APPLY.
2. CONTRACTORS SHALL PROVIDE A SAFE & CLEAN WORK ENVIRONMENT AT ALL TIMES. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A CLEAN & SAFE WORK AREA.

ROOF NOTES

1. PROVIDE GALV. MTL. ROOF JACKS AND STORM COLLARS @ ALL MECH. EQUIP. PENETRATIONS (I.E. EXHAUST FANS, GAS VENTS, COMBUSTION AIR, ETC). ALL CURBS, JACKS, ETC. TO BE 8" MIN. ABOVE ROOF.
2. ALL SLOPES AND CRICKETS TO BE FORMED WITH 7/16" O.S.B AND 2 X WOOD

SITE NOTES

1. SOILS COMPACTION @ CONSTRUCTION AREA SHALL BE:
   FOOTINGS TO 95% COMPACTION
   UNDER SLABS TO 90% COMPACTION
   DRIVEWAY TO 90% COMPACTION
2. BACKFILL SHALL BE PLACED IN 8" LAYERS AND EACH LAYER SHALL BE COMPACTED
3. FINISH GRADES TO BE 6" BELOW TOP OF SLAB OR TOP OF BLOCK WHICHEVER IS HIGHER. SLOPE ALL FIN. GRADES @ MIN. 1/4"/FT. AWAY FROM ALL EXTERIOR SURFACES OF THE BUILDING.
4. VERIFY ALL EXISTING CONDITIONS IN THE FIELD.
5. WORK REVISED (FINISH GRADES) EVENLY AND SMOOTHLY INTO EXISTING GRADE @ EDGES OF GRADING AREAS.
6. PROTECT FOR DAMAGE ALL EXISTING VEGETATION BEYOND IMMEDIATE CONSTRUCTION AREA.
7. SITE UTILITIES– CONTRACTOR TO PROVIDE UNDERGROUND UTILITIES (POWER, GAS, PHONE, CABLE TV, WATER) FROM EXISTING LOCATIONS VERIFY TRENCH LOCATION PRIOR TO DIGGING. AVOID ALL EXISTING TREES

SHEET INDEX

SQUARE FOOTAGES

EXISTING HEATED	2306
EXISTING PATIO	805
NEW HEATED ADDITION	895
LOT SIZE	1/2 ACRE

PARKING CALCULATIONS

SMALL CAR PARKING	4
REGULAR CAR PARKING	17
HANDICAP CAR PARKING	1
HANDICAP VAN PARKING	1
TOTAL PARKING SPACES	23

LANDSCAPE LEGEND

- RUSSIAN OLIVE
- DESERT WILLOW
- YUCCA
- CHAMISA

NOTE:
ALL PLANTS WILL BE A MINIMUM SIZE OF 5 GALLONS

ALL PLANTS WILL BE MAINTAINED BY OWNER VIA A AUTOMATIC DRIP SYSTEM WHERE POSSIBLE

TREES SHALL BE 20'-0" O.C. (MAX.)

ALL LIGHTING SHALL BE CONTAINED WITHIN PROPERTY

LANDSCAPE AREAS AND BUFFERS TO HAVE A MIN. OF 75% ORGANIC COVERAGE AT MATURITY, NOT TO INCLUDE TREE CANOPY

LANDSCAPE BUFFER TO BE 10"–0" FROM FRONT SETBACK. TRESS SHALL BE 20'–0" O.C. MAX AND GROUND SHALL BE DROUGHT TOLERTANT GRASS

LANDSCAPE TO BE A MIN. OF 15% COVERAGE OF PAVED AREA SQUARE FOOTAGE

SIGN LEGEND

S1	ENTRANCE ONLY
S2	DO NOT ENTER
S3	ONE WAY
S4	HANDICAP PARKING
S5	STOP SIGN
S6	ONEWAY ARROW WHITE PAINT
S7	CROSS WALK WHITE PAINT
S8	H.C. ACCESS & PARKING BLUE PAINT
S9	NO PARKING STRIPE WHITE PAINT NO PARKING TEXT RED PAINT

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CHURCH ADDITION
ISLETA CHURCH
2424 MILES ROAD
ALBUQUERQUE, NEW MEXICO

SITE PLAN

JAMES W. LEWIS
08/12/08

Revisions	
Date:	No:

Scale: –

Project Number:
File:
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Sheet:
C1.2