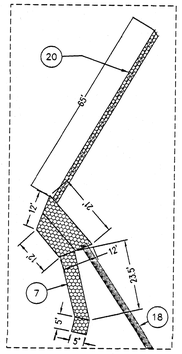
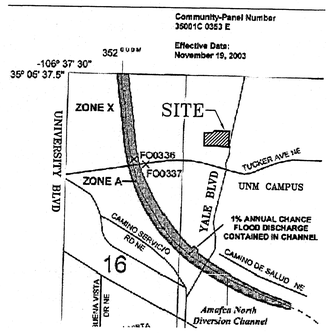
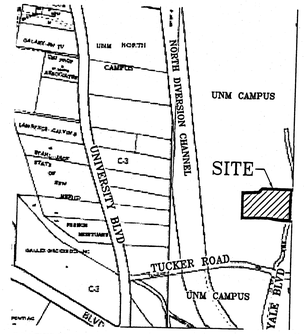


RIP RAP RUNDOWNS
SCALE: 1" = 20'



F.I.R.M. MAP PAN-353
NOT TO SCALE



VICINITY MAP J-15-Z
NOT TO SCALE

EXISTING ON-SITE CONDITIONS

THE PROJECT SITE IS CURRENTLY UNDEVELOPED AND CONSISTS OF NATIVE GRASSES. THE PROJECT SITE SLOPES IN A WESTERLY DIRECTION AT APPROXIMATELY 2%. THE TOTAL AREA OF THE SITE IS 1.15 ACRES. THE LAND TREATMENTS ARE CATEGORIZED AS:
A=100%, B=0%, C=0% AND D=0%.
OFFSITE FLOWS HAVE CREATED A NATURAL ARROYO LOCATED THROUGH THE NORTHERN PORTION OF THE SITE. ALL SITE FLOWS DISCHARGE TO THE NATURAL ARROYO.

PROPOSED DEVELOPMENT

THE PROPOSED PROJECT WILL BE A NEW BUILDING ADDITION WITH APPROXIMATELY 6271 S.F. THE TOTAL AREA OF THE PROPOSED IMPROVEMENTS ARE ESTIMATED AT 1.15 ACRES. THE PROPOSED PARKING LOT WILL CONSIST OF A CONCRETE STANDARD CURB & GUTTER PERIMETER, HEADER CURB AND NEW ASPHALT PAVED SURFACE WITH CONCRETE VALLEY GUTTER AS REQUIRED TO PROVIDE POSITIVE DRAINAGE IN PAVED AREAS. THE PARKING LOT AREA AS WELL AS RUNOFF FROM THE NEW BUILDING WILL DRAIN NORTH AND WEST TO THE NEW 6424 CUBIC FOOT RETENTION POND LOCATED AT THE NORTHWEST CORNER OF THE PROPERTY. THE EAST SIDE OF THE PROPERTY AS WELL AS RUNOFF FROM OFFSITE OS-1 WILL DRAIN ALONG THE SOUTH SIDE OF THE PROPERTY TO A DROP INLET.
THE NEW PARKING LOT WILL DRAIN TO THE NORTH INTO THE NEW RETENTION POND. THE LAND TREATMENTS UNDER PROPOSED CONDITIONS ARE CATEGORIZED AS: A=0%, B=17%, C=16% AND D=67%.

STORMWATER ROUTING

AS PREVIOUSLY MENTIONED, ALL SITE RUNOFF DISCHARGES INTO A PROPOSED DETENTION POND, WHICH HAS BEEN SIZED FOR THE INCREASED VOLUME DUE TO THE DEVELOPMENT OF THE SITE DURING THE 100-YEAR, 24-HOUR EVENT. AN EMERGENCY SPILLWAY HAS BEEN PROVIDED TO SAFELY CONVEY THE 100-YEAR, 24-HOUR PEAK DISCHARGE OF 4.64 CUBIC FEET PER SECOND (CFS).

OFFSITE FLOWS

THIS PROJECT SITE DOES RECEIVE OFFSITE FLOWS FROM BASIN OS-1, AT THE EASTERN BOUNDARY OF THE THE PROPERTY. THE ENTIRE SITE IS ELEVATED BECAUSE OF THE FINISH FLOOR ELEVATION OF THE BUILDING ADDITION AND HAS CREATED WATER BLOCK. ALL OFFSITE RUNOFF WILL BE COLLECTED IN A DOUBLE "D" DRAINAGE INLET AND A PROPOSED 24" STORM DRAIN PIPE TO ITS NATURAL ARROYO OUTFALL LOCATION. FLOWS FROM BASIN OS-2 DO NO IMPACT THE PROPOSED SITE AND DISCHARGE DOWN THE EXISTING GRAVEL DRIVEWAY NORTH OF THE SITE AND TO THE NATURAL ARROYO WEST OF THE PROJECT SITE.

DRAINAGE DATA

HYDROLOGY

Percipitation Zone 2 - 100-year Storm — P(360) = 2.35 in — P(1440) = 2.75 in

Basin	Basin Area (Ac)	Land Treatment Factors (Acres) A	B	C	D	Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
Existing Conditions									
Site	1.15	1.15	0.00	0.00	0.00	0.53	0.051	0.051	1.79
OS-1	2.41	0.00	0.00	0.77	1.64	1.80	0.362	0.417	10.13
OS-2	0.86	0.00	0.00	0.39	0.47	1.67	0.120	0.135	3.43
Proposed Conditions									
Site	1.15	0.00	0.20	0.18	0.77	1.73	0.166	0.192	4.64
Total	1.15						0.166	0.192	4.64

Percipitation Zone 2 - 10-year Storm — P(360) = 1.56 in — P(1440) = 1.83 in

Basin	Basin Area (Ac)	Land Treatment Factors (Acres) A	B	C	D	Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
Existing Conditions									
Site	1.15	1.15	0.00	0.00	0.00	0.13	0.012	0.012	0.44
OS-1	2.41	0.00	0.00	0.77	1.64	1.08	0.217	0.253	6.47
OS-2	0.86	0.00	0.00	0.39	0.47	0.97	0.069	0.080	2.14
Proposed Conditions									
Site	1.15	0.00	0.20	0.18	0.77	1.03	0.098	0.116	2.92
Total	1.15						0.098	0.116	2.92

POND VOLUME REQUIRED
$\Delta V_{100\text{-}24}$ = (0.192 AF - 0.051AF) 43560 CF/AF = 6141.96 CF

POND VOLUME PROVIDED			
Area	Elevations	Increment Vol	Volume
1,003.05	5146.0	0.00	0.00
1,774.81	5147.0	1,388.93	1,388.93
2,585.68	5148.0	2,180.25	3,569.18
3,429.22	5149.0	3,007.45	6,576.63
3,863.09	5149.5	1,823.08	8,399.70

TOP OF POND = 5149.50
TOP OF SPILLWAY = 5149.00

GENERAL NOTES:

1. AS OF MARCH 10, 2003, THE USPA REQUIRES NPDES PERMIT COVERAGE FOR STORM WATER DISCHARGES FROM CONSTRUCTION PROJECTS (COMMON PLANS OF DEVELOPMENT) THAT WILL RESULT IN THE DISTURBANCE (OR RE-DISTURBANCE) OF ONE OR MORE ACRES, INCLUDING EXPANSIONS OF TOTAL LAND AREA.
THE DEVELOPER SHOULD BE MADE AWARE THAT THE USEPA REQUIRES THAT ALL "OPERATORS" (SEE FEDERAL REGISTER/VOL. 63, NO. 128 / MONDAY, JULY 6, 1999 PG 36509) OBTAIN NPDES PERMIT COVERAGE FOR CONSTRUCTION PROJECTS. GENERALLY THIS MEANS THAT AT LEAST TWO PARTIES WILL REQUIRE PERMIT COVERAGE. THE OWNER/DEVELOPER OF THIS CONSTRUCTION PROJECT WHO HAS OPERATIONAL CONTROL OVER THE PROJECT SPECIFICATIONS, THE GENERAL CONTRACTOR WHO HAS DAY-TO-DAY OPERATIONAL CONTROL OF THOSE ACTIVITIES AT THE SITE, WHICH ARE NECESSARY TO ENSURE COMPLIANCE WITH THE STORM WATER POLLUTION PLAN AND OTHER CONDITIONS, AND POSSIBLY OTHER "OPERATORS" THAT WILL REQUIRE APPROPRIATE NPDES PERMIT COVERAGE FOR THIS PROJECT.
2. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
3. CONTRACTOR SHALL OBTAIN A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO ANY GRADING OR CONSTRUCTION.
4. TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260-1990 FOR LOCATION OR EXISTING UTILITIES.
5. BACKFILL AND COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.
7. ALL CONCRETE SHALL BE A MINIMUM OF 3000 P.S.I.
8. PROJECT BENCHMARK; ACS 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 12-J15", EPOXIED ON TOP OF THE EAST END OF CONCRETE RETAINING WALL, AT THE NORTH PROPERTY LINE OF ADDRESS 1131 UNIVERSITY BOULEVARD, WEST OF THE WEST BACK OF CURB LINE OF UNIVERSITY BOULEVARD.
ELEVATION = 5106.82 FEET (NGVD 1929)
9. ALL EXISTING TOPOGRAPHIC DATA SHOWN ON THESE PLANS HAS BEEN PROVIDED BY NCA ARCHITECTS. MILLER ENGINEERING CONSULTANTS HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS INFORMATION.
10. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.
11. ALL PAVEMENT, BASE COURSE AND SUBGRADE PREPARATION THICKNESS SHALL BE PROVIDED BY THE SOILS ENGINEER FOR THIS PROJECT.
12. ALL DISTURBED AREA SHALL RECEIVE CLASS "A" SEEDING IN ACCORDANCE WITH THE NMDOT BLUE BOOK. ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL RECEIVE A LANDSCAPE FABRIC WITH 3 INCHES OF GRAVEL MULCH.
13. ALL HDPE STORM DRAIN PIPE MUST HAVE WATER TIGHT JOINTS.

KEYED NOTES:

1. STANDARD CURB & GUTTER PER DETAIL ON SHEET C-102.
2. CONCRETE HEADER CURB PER COA STD DWG 2415B.
3. STORM DRAIN INLET PER COA STD DWG 2206.
GRATE=47.10, INV=43.10.
N=388,934.42, E=1,489,510.20 CENTER OF GRATE.
4. STORM DRAIN MANHOLE TYPE "E", PER COA STD DWG 2102.
RIM=50.82, INV (IN)=42.59, INV (OUT)=42.49
N=388,899.03, E=1,489,699.53
WITH COVER PER COA STD DWG 2110.
5. SLOPE GRADING BEYOND CURB TO BE 3:1, UNLESS OTHERWISE NOTED. SEE GENERAL NOTE 12.
6. HANDICAP RAMP AND HANDICAP SIGNS PER ARCHITECTURAL PLANS.
7. RIPRAP (ENCLOSED) TYPE "A", PER COA STD DWG 2270.
SEE DETAIL SECTION A-A, SHEET C-102.
8. RIPRAP (LOOSE) TYPE "B", PER COA STD DWG 2270.
9. CONCRETE RUNDOWN PER COA STD DWG 2260 AND 2261.
10. CONCRETE VALLEY GUTTERS, 2' WIDE PER COA STD 2415A (ALLEY GUTTER). 110.52 LF AND 133.02LF
11. DIRT SWALES TO BE 3' WIDE MINIMUM, WITH A 6" DEEP FLOWLINE.
12. 18" WIDE CURB CUT.
13. MATCH EXISTING
14. CONCRETE SIDEWALK PATTERN, SEE ARCHITECTURAL PLANS.
15. LANDSCAPE AREA, SEE ARCHITECTURAL PLANS.
16. APPROXIMATE LOCATION OF PROPOSED LEASE PROPERTY LINE.
17. 24" HDPE STORM DRAIN PIPE. SLOPE=1.00%, 92.43 LF
18. 24" HDPE STORM DRAIN PIPE. SLOPE=1.00%, 64.77 LF
OUTLET - N=388,927.80, E=1,489,756.44, INV=5141.60
19. DIRECT FLOW FROM SWALE IN THIS AREA TO PROPOSED DOUBLE "D" DROP INLET.
20. 2.5' WIDE RIPRAP RUNDOWN 54.20 LF. SEE KEYED NOTE 8 AND DETAIL SHEET D-1.
21. 12' WIDE OPENING, SIDEWALK CULVERT PER COA STD DWG 2236 WITH A STEEL PLATE.

RECEIVED
APR 03 2007
HYDROLOGY SECTION

MILLER ENGINEERING CONSULTANTS
Engineers Planners

NCA
ARCHITECTS - PLANNERS - AIA
1306 RIO GRANDE BLVD NW
ALBUQUERQUE, NM 87104
505-266-6400 505-268-6954 FAX
WWW.NCA-ARCHITECTS.COM

ARCHITECT

CONSULTANT

CAROLYN A. MILLER
NEW MEXICO
14507
4/4/07
PROFESSIONAL ENGINEER

PROJECT TITLE:
RONALD McDONALD HOUSE PHASE II EXPANSION
ALBUQUERQUE NEW MEXICO

REVISIONS:

MK	DATE	DESCRIPTION

DRAWN BY: | CHECKED BY:

PROJECT NUMBER:
A05.16

DATE:
MARCH 2007

SHEET TITLE:

SHEET NO:
C-101

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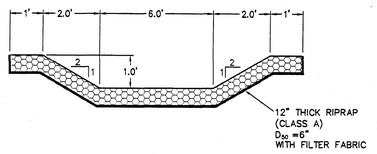
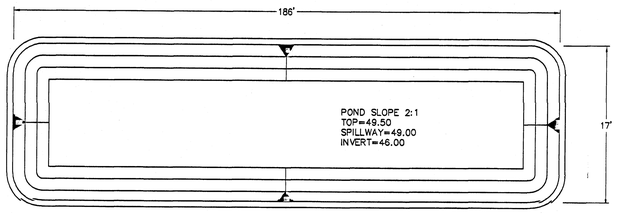


RIP RAP RUNDOWN CROSS SECTION A-A
SCALE: NONE



TYPICAL POND DETAIL
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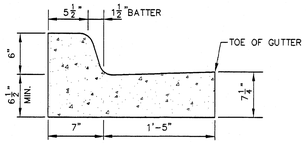
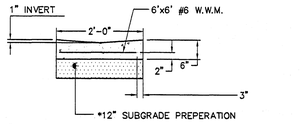
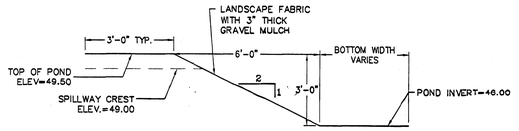


6" CONCRETE CURB AND GUTTER DETAIL
SCALE: NONE



* 12" SUBGRADE PREPERATION SHALL BE CONSIDERED INCIDENTAL TO CONCRETE VALLEY GUTTER - 6"x24" AND NO SEPERATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THE WORK

6"x24" CONCRETE VALLEY GUTTER DETAIL
SCALE: NONE



POND TYPICAL SECTION
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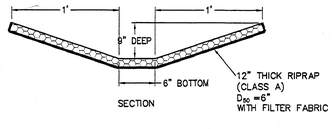
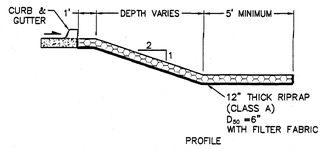
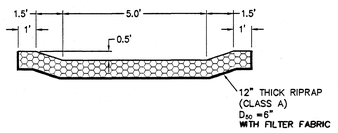
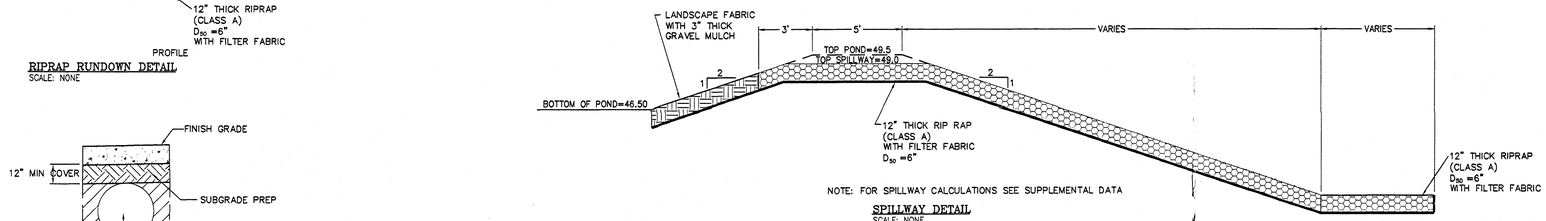




RIPRAP RUNDOWN DETAIL
SCALE: NONE

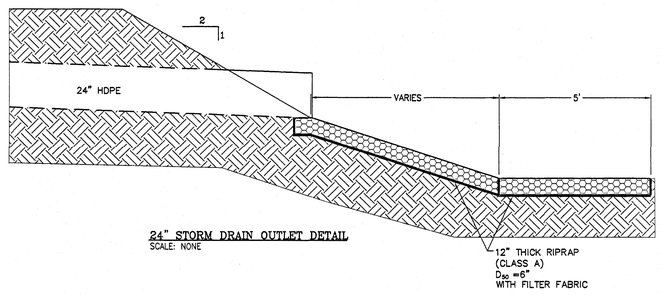




NOTE: FOR SPILLWAY CALCULATIONS SEE SUPPLEMENTAL DATA

SPILLWAY DETAIL
SCALE: NONE

TYPICAL CULVERT INSTALLATION SECTION
SCALE: NONE



24" STORM DRAIN OUTLET DETAIL
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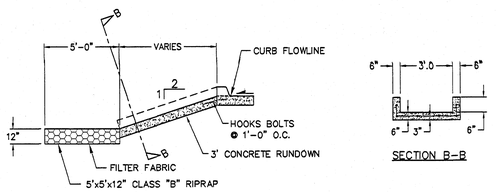

CONCRETE RUNDOWN DETAIL
SCALE: NONE

SECTION B-B

MILLER ENGINEERING CONSULTANTS
Engineers • Planners
3500 COMANCHE, NE
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ALBUQUERQUE, NM 87107
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WWW.NCA-ARCHITECTS.COM

ARCHITECT

CONSULTANT

KERWIN A. MILLER
NEW MEXICO
14507
REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE

RONALD McDONALD HOUSE PHASE II EXPANSION

ALBUQUERQUE NEW MEXICO

REVISIONS

MK	DATE	DESCRIPTION

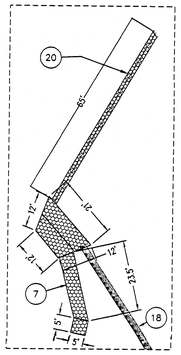
DRAWN BY: CHECKED BY:

PROJECT NUMBER:
A05.16

DATE:
MARCH 2007

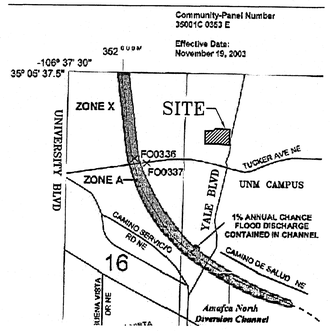
SHEET TITLE:

SHEET NO:
C-102

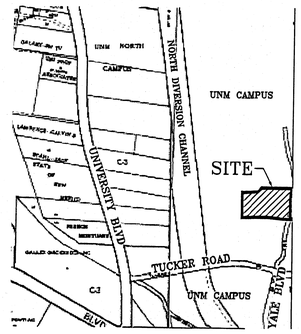


RIP RAP RUNDOWNS
SCALE: 1" = 20'

20 10 0 20 30 40
SCALE: 1" = 20'
ONE (1') FOOT CONTOUR INTERVAL



F.I.R.M. MAP PAN-353
NOT TO SCALE



VICINITY MAP J-15-Z
NOT TO SCALE

EXISTING ON-SITE CONDITIONS

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A=100%, B=0%, C=0% AND D=0%.
OFFSITE FLOWS HAVE CREATED A NATURAL ARROYO LOCATED THROUGH THE NORTHERN PORTION OF THE SITE. ALL SITE FLOWS DISCHARGE TO THE NATURAL ARROYO.

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OFFSITE FLOWS

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DRAINAGE DATA

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OS-2	0.86	0.00	0.00	0.39	0.47	1.67	0.120	0.135	3.43
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Site	1.15	0.00	0.20	0.18	0.77	1.73	0.166	0.192	4.64
Total	**1.15**						**0.166**	**0.192**	**4.64**

Percipitation Zone 2 - 10-year Storm P(360) = 1.56 in P(1440) = 1.83 in

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Existing Conditions									
Site	1.15	1.15	0.00	0.00	0.00	0.13	0.012	0.012	0.44
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OS-2	0.86	0.00	0.00	0.39	0.47	0.97	0.069	0.080	2.14
Proposed Conditions									
Site	1.15	0.00	0.20	0.18	0.77	1.03	0.098	0.116	2.92
Total	**1.15**						**0.098**	**0.116**	**2.92**

POND VOLUME REQUIRED
$\Delta V_{100\text{-}24}$ = (0.192 AF - 0.051AF) 43560 CF/AF = 6141.96 CF

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1,774.81	5147.0	1,388.93	1,388.93
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3,429.22	5149.0	3,007.45	6,576.63
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GENERAL NOTES:

1. AS OF MARCH 10, 2003, THE USPA REQUIRES NPDES PERMIT COVERAGE FOR STORM WATER DISCHARGES FROM CONSTRUCTION PROJECTS (COMMON PLANS OF DEVELOPMENT) THAT WILL RESULT IN THE DISTRUBANCE (OR RE-DISTURBANCE) OF ONE OR MORE ACRES, INCLUDING EXPANSIONS OF TOTAL LAND AREA.
THE DEVELOPER SHOULD BE MADE AWARE THAT THE USEPA REQUIRES THAT ALL "OPERATORS" (SEE FEDERAL REGISTER/VOL. 63, NO. 128 / MONDAY, JULY 6, 1998 PG 36505) OBTAIN NPDES PERMIT COVERAGE FOR CONSTRUCTION PROJECTS. GENERALLY THIS MEANS THAT AT LEAST TWO PARTIES WILL OBTAIN PERMIT COVERAGE. THE OWNER/DEVELOPER OF THIS CONSTRUCTION PROJECT WHO HAS OPERATIONAL CONTROL OVER THE PROJECT SPECIFICATIONS, THE GENERAL CONTRACTOR WHO HAS DAY-TO-DAY OPERATIONAL CONTROL OF THOSE ACTIVITIES AT THE SITE, WHICH ARE NECESSARY TO ENSURE COMPLIANCE WITH THE STORM WATER POLLUTION PLAN AND OTHER CONDITIONS, AND POSSIBLY OTHER "OPERATORS" THAT WILL REQUIRE APPROPRIATE NPDES PERMIT COVERAGE FOR THIS PROJECT.
2. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
3. CONTRACTOR SHALL OBTAIN A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO ANY GRADING OR CONSTRUCTION.
4. TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260-1990 FOR LOCATION OR EXISTING UTILITIES.
5. BACKFILL AND COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.
7. ALL CONCRETE SHALL BE A MINIMUM OF 3000 P.S.I.
8. PROJECT BENCHMARK; ACS 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 12-J15", EPOXIED ON TOP OF THE EAST END OF CONCRETE RETAINING WALL, AT THE NORTH PROPERTY LINE OF ADDRESS 1131 UNIVERSITY BOULEVARD, WEST OF THE WEST BACK OF CURB LINE OF UNIVERSITY BOULEVARD,
ELEVATION = 5106.82 FEET (NGVD 1929)
9. ALL EXISTING TOPOGRAPHIC DATA SHOWN ON THESE PLANS HAS BEEN PROVIDED BY NCA ARCHITECTS. MILLER ENGINEERING CONSULTANTS HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS INFORMATION.
10. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.
11. ALL PAVEMENT, BASE COURSE AND SUBGRADE PREPARATION THICKNESS SHALL BE PROVIDED BY THE SOILS ENGINEER FOR THIS PROJECT.
12. ALL DISTURBED AREA SHALL RECEIVE CLASS "A" SEEDING IN ACCORDANCE WITH THE NMDOT BLUE BOOK. ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL RECEIVE A LANDSCAPE FABRIC WITH 3 INCHES OF GRAVEL MULCH.
13. ALL HDPE STORM DRAIN PIPE MUST HAVE WATER TIGHT JOINTS.

KEYED NOTES:

1. STANDARD CURB & GUTTER PER DETAIL ON SHEET C-102.
2. CONCRETE HEADER CURB PER COA STD DWG 2415B.
3. STORM DRAIN INLET PER COA STD DWG 2206.
GRATE=47.10, INV=43.10.
N=388,934.42, E=1,489,610.20 CENTER OF GRATE.
4. STORM DRAIN MANHOLE TYPE "E", PER COA STD DWG 2102.
RIM=50.82, INV (IN)=42.59, INV (OUT)=42.49
N=388,899.03, E=1,489,699.53
WITH COVER PER COA STD DWG 2110.
5. SLOPE GRADING BEYOND CURB TO BE 3:1, UNLESS OTHERWISE NOTED. SEE GENERAL NOTE 12.
6. HANDICAP RAMP AND HANDICAP SIGNS PER ARCHITECTURAL PLANS.
7. RIPRAP (ENCLOSED) TYPE "A", PER COA STD DWG 2270.
SEE DETAIL SECTION A-A, SHEET C-102.
8. RIPRAP (LOOSE) TYPE "B", PER COA STD DWG 2270.
9. CONCRETE RUNDOWN PER COA STD DWG 2260 AND 2261.
10. CONCRETE VALLEY GUTTERS, 2' WIDE PER COA STD 2415A (ALLEY GUTTER). 110.52 LF AND 133.02LF
11. DIRT SWALES TO BE 3' WIDE MINIMUM, WITH A 6" DEEP FLOWLINE.
12. 18" WIDE CURB CUT.
13. MATCH EXISTING
14. CONCRETE SIDEWALK PATTERN, SEE ARCHITECTURAL PLANS.
15. LANDSCAPE AREA, SEE ARCHITECTURAL PLANS.
16. APPROXIMATE LOCATION OF PROPOSED LEASE PROPERTY LINE.
17. 24" HDPE STORM DRAIN PIPE. SLOPE=1.00%, 92.43 LF
18. 24" HDPE STORM DRAIN PIPE. SLOPE=1.00%, 64.77 LF
OUTLET - N=388,927.80, E=1,489,756.44, INV=5141.60
19. DIRECT FLOW FROM SWALE IN THIS AREA TO PROPOSED DOUBLE "D" DROP INLET.
20. 2.5' WIDE RIPRAP RUNDOWN 54.20 LF. SEE KEYED NOTE 8 AND DETAIL SHEET D-1.
21. 12" WIDE OPENING, SIDEWALK CULVERT PER COA STD DWG 2236 WITH A STEEL PLATE.

RECEIVED
APR 03 2007
HYDROLOGY SECTION

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Engineers Planners

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WWW.NCA-ARCHITECTS.COM

ARCHITECT

CONSULTANT

KEVIN A. MILLER
NEW MEXICO
14507
REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE:
RONALD McDONALD HOUSE PHASE II EXPANSION
ALBUQUERQUE NEW MEXICO

REVISIONS:

MK	DATE	DESCRIPTION

DRAWN BY: CHECKED BY:

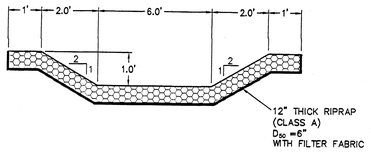
PROJECT NUMBER:
A05.16

DATE:
MARCH 2007

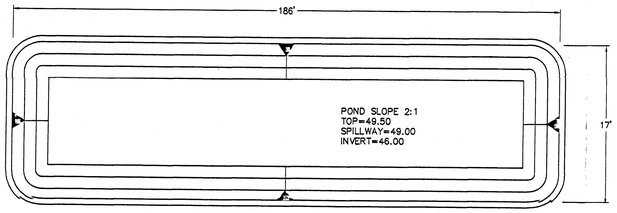
SHEET TITLE:

SHEET NO:
C-101

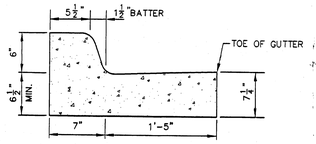
T:\Clients\NCA\Ronald McDonald\ACAD\DWG\07-003 GD.dwg, GRADING & DRAINAGE, 4/2/2007 8:03:04 AM, tsatz



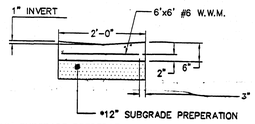
RIP RAP RUNDOWN CROSS SECTION A-A
SCALE: NONE



TYPICAL POND DETAIL
SCALE: NONE

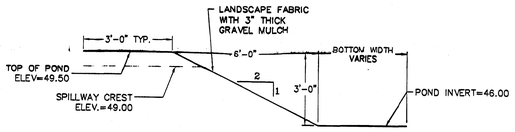


6" CONCRETE CURB AND GUTTER DETAIL
SCALE: NONE

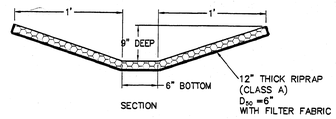


* 12" SUBGRADE PREPERATION SHALL BE CONSIDERED INCIDENTAL TO CONCRETE VALLEY GUTTER - 6"x24" AND NO SEPERATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THE WORK

6"x24" CONCRETE VALLEY GUTTER DETAIL
SCALE: NONE



POND TYPICAL SECTION
SCALE: NONE



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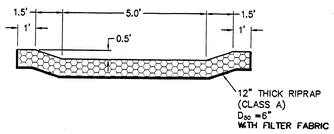
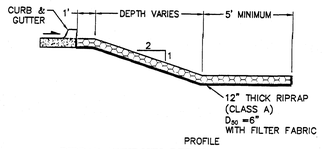
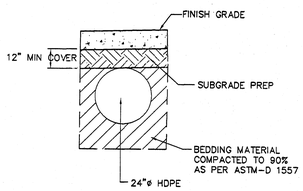


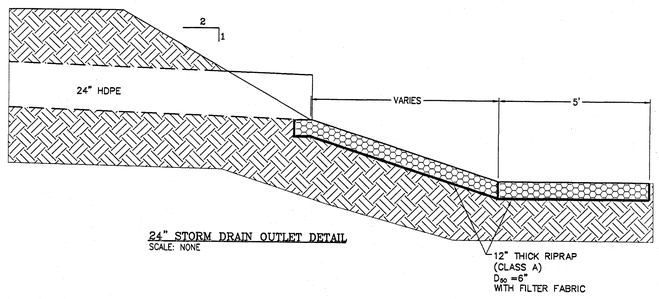


PROFILE

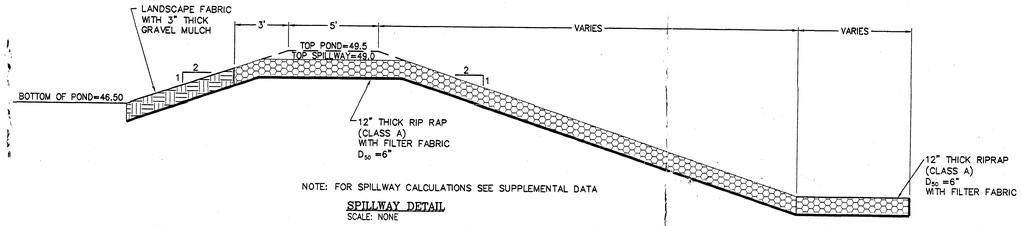
RIPRAP RUNDOWN DETAIL
SCALE: NONE



TYPICAL CULVERT INSTALLATION SECTION
SCALE: NONE

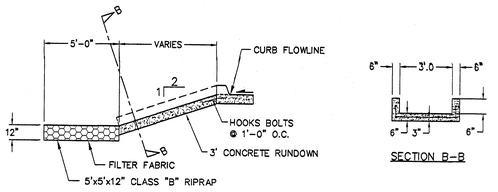


24" STORM DRAIN OUTLET DETAIL
SCALE: NONE



NOTE: FOR SPILLWAY CALCULATIONS SEE SUPPLEMENTAL DATA

SPILLWAY DETAIL
SCALE: NONE



CONCRETE RUNDOWN DETAIL
SCALE: NONE

SECTION B-B

NCA
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1306 RIO GRANDE BLVD NW
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ARCHITECT

CONSULTANT

KERWYN A. MILLER
NEW MEXICO
14507
REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE

RONALD McDONALD HOUSE PHASE II EXPANSION

ALBUQUERQUE
NEW MEXICO

REVISIONS

MK	DATE	DESCRIPTION

DRAWN BY: CHECKED BY:

PROJECT NUMBER:
A05.16

DATE:
MARCH 2007

SHEET TITLE:

SHEET NO:
C-102

MILLER ENGINEERING CONSULTANTS
Engineers + Planners
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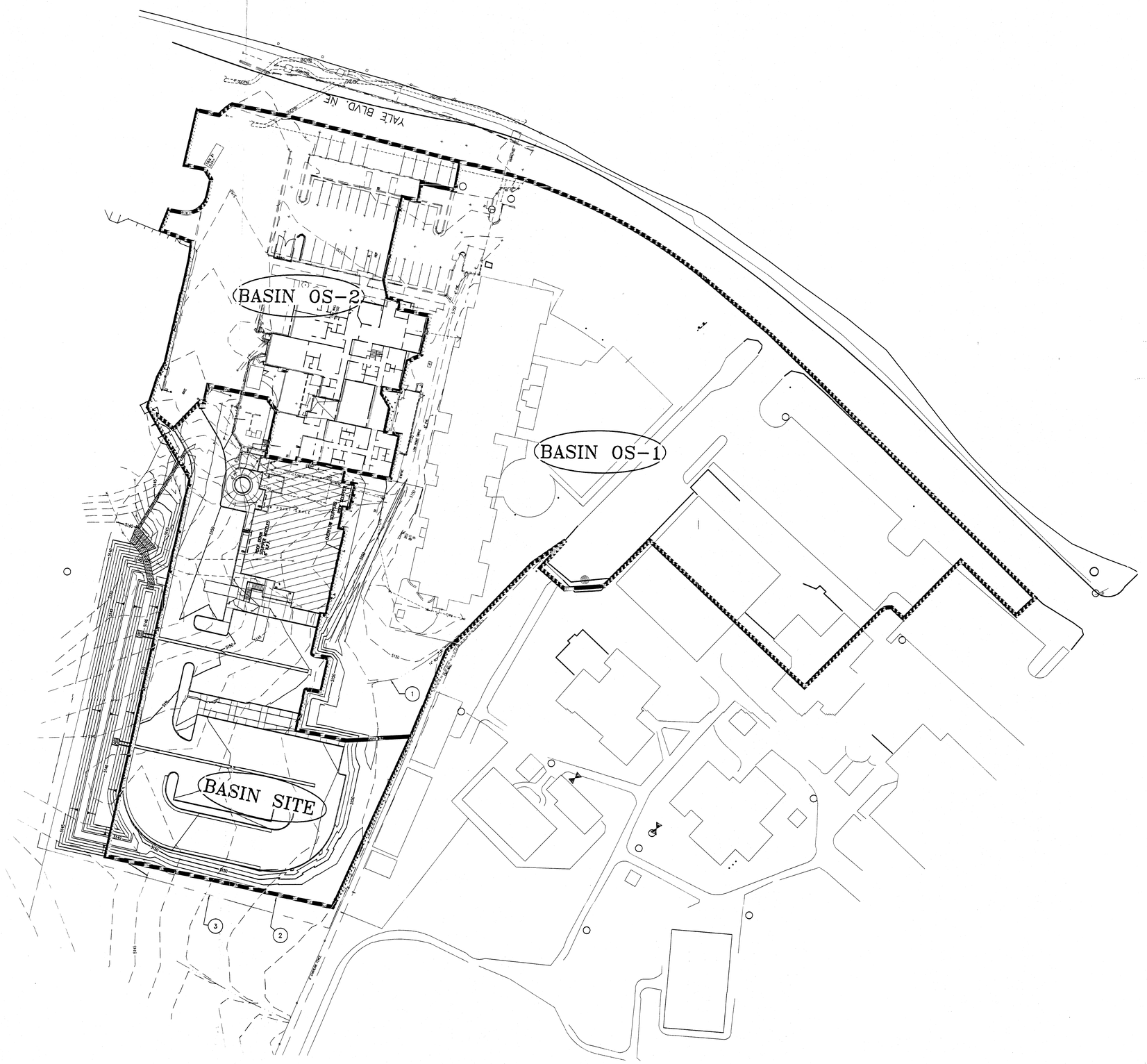


NOTE:

OFFSITE BASINS ARE DELINEATED BASED ON SITE VISITS AND U.N.M. BASE MAPPING.

1. EXISTING FLOWLINE.
2. BASIN DELINEATIONS.
3. APPROXIMATE PROPOSED LEASE LIMITS.

DRAINAGE DATA

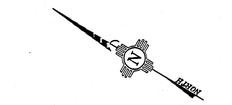
HYDROLOGY

Perciptation Zone 2 - 100-year Storm — P(360) = 2.35 in — P(1440) = 2.75 in

Basin	Basin Area (Ac)	Land Treatment Factors (Acres) A	B	C	D	Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
Existing Conditions									
Site	1.15	1.15	0.00	0.00	0.00	0.53	0.051	0.051	1.70
OS-1	2.41	0.00	0.00	0.77	1.64	1.80	0.362	0.417	10.13
OS-2	0.86	0.00	0.00	0.39	0.47	1.67	0.120	0.135	3.43
Proposed Conditions									
Site	1.15	0.15	0.05	0.18	0.77	1.70	0.163	0.189	4.53
Total	**1.15**						**0.163**	**0.189**	**4.53**

Perciptation Zone 2 - 10-year Storm — P(360) = 1.56 in — P(1440) = 1.83 in

Basin	Basin Area (Ac)	Land Treatment Factors (Acres) A	B	C	D	Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
Existing Conditions									
Site	1.15	1.15	0.00	0.00	0.00	0.13	0.012	0.012	0.44
OS-1	2.41	0.00	0.00	0.77	1.64	1.08	0.217	0.253	6.47
OS-2	0.86	0.00	0.00	0.39	0.47	0.97	0.069	0.080	2.14
Proposed Conditions									
Site	1.15	0.15	0.05	0.18	0.77	1.01	0.097	0.114	2.83
Total	**1.15**						**0.097**	**0.114**	**2.83**



20 10 0 20 30 40

SCALE: 1" = 20'
ONE (1') FOOT CONTOUR INTERVAL

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ARCHITECT

CONSULTANT

MELVYN A. MILLER
NEW MEXICO
14507
REGISTERED PROFESSIONAL ENGINEER
3/1/07

PROJECT TITLE:

RONALD McDONALD HOUSE PHASE II EXPANSION

ALBUQUERQUE NEW MEXICO

REVISIONS:

MK	DATE	DESCRIPTION

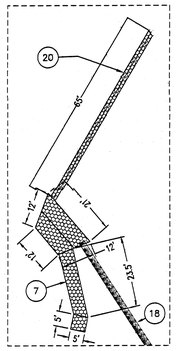
DRAWN BY: TAS
CHECKED BY: VAM

PROJECT NUMBER: A05.16

DATE: MARCH 2007

SHEET TITLE:

SHEET NO.: C-103



RIP RAP RUNDOWNS

SCALE: 1" = 20'

20 10 0 20 30 40

SCALE: 1" = 20'

ONE (1') FOOT CONTOUR INTERVAL

(3) FIRM MAP?

EXISTING ON-SITE CONDITIONS

THE PROJECT SITE IS CURRENTLY UNDEVELOPED AND CONSISTS OF NATIVE GRASSES. THE PROJECT SITE SLOPES IN A WESTERLY DIRECTION AT APPROXIMATELY 2% THE TOTAL AREA OF THE SITE IS 1.07 ACRES. THE LAND TREATMENTS ARE CATEGORIZED AS:
100% A, 0% B, 0% C AND 0% D. OFFSITE FLOWS HAVE CREATED A NATURAL ARROYO LOCATED THROUGH THE NORTHERN PORTION OF THE SITE. ALL SITE FLOWS DISCHARGE TO THE NATURAL ARROYO.

PROPOSED DEVELOPMENT

THE PROPOSED PROJECT WILL BE A NEW BUILDING ADDITION WITH APPROXIMATELY 6271 S.F. THE TOTAL AREA OF THE PROPOSED IMPROVEMENTS ARE ESTIMATED AT 1.07 ACRES. THE PROPOSED PARKING LOT WILL CONSIST OF A CONCRETE STANDARD CURB & GUTTER PERIMETER, HEADER CURB AND NEW ASPHALT PAVED SURFACE WITH CONCRETE VALLEY GUTTER AS REQUIRED TO PROVIDE POSITIVE DRAINAGE IN PAVED AREAS. THE PARKING LOT AREA AS WELL AS RUNOFF FROM THE NEW BUILDING WILL DRAIN NORTH AND WEST TO THE NEW 6424 CUBIC FOOT RETENTION POND LOCATED AT THE NORTHWEST CORNER OF THE PROPERTY. THE EAST SIDE OF THE PROPERTY AS WELL AS RUNOFF FROM OFFSITE OS-1 WILL DRAIN ALONG THE SOUTH SIDE OF THE PROPERTY TO A DROP INLET.
THE NEW PARKING LOT WILL DRAIN TO THE NORTH INTO THE NEW RETENTION POND. THE LAND TREATMENTS UNDER PROPOSED CONDITIONS ARE CATEGORIZED AS: 15% A, 0% B, 16% C AND 77% D.

(1) E = 11590

STORMWATER ROUTING

AS PREVIOUSLY MENTIONED, ALL SITE RUNOFF DISCHARGES INTO A PROPOSED RETENTION POND, WHICH HAS BEEN SIZED FOR THE INCREASED VOLUME DUE TO THE DEVELOPMENT OF THE SITE DURING THE 100-YEAR, 6-HOUR STORM EVENT. AN EMERGENCY SPILLWAY HAS BEEN PROVIDED TO SAFELY CONVEY THE 100-YEAR, 6-HOUR PEAK DISCHARGE OF 4.53 CUBIC FEET PER SECOND (CFS).

OFFSITE FLOWS

THIS PROJECT SITE DOES RECEIVE OFFSITE FLOWS FROM BASIN OS-1, AT THE EASTERN BOUNDARY OF THE THE PROPERTY. THE ENTIRE SITE IS ELEVATED BECAUSE OF THE FINISH FLOOR ELEVATION OF THE BUILDING ADDITION AND HAS CREATED WATER BLOCK. ALL OFFSITE RUNOFF WILL BE COLLECTED IN A DOUBLE "D" DRAINAGE INLET AND A PROPOSED 24" STORM DRAIN PIPE TO ITS NATURAL ARROYO OUTFALL LOCATION. FLOWS FROM BASIN OS-2 DO NO IMPACT THE PROPOSED SITE AND DISCHARGE DOWN THE EXISTING GRAVEL DRIVEWAY NORTH OF THE SITE AND TO THE NATURAL ARROYO WEST OF THE PROJECT SITE.

DRAINAGE DATA

HYDROLOGY

Percipitation Zone 2 - 100-year Storm P(360) = 2.35 in P(1440) = 2.75 in

Basin	Basin Area (Ac)	Land Treatment Factors (Acres) A	B	C	D	Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
Existing Conditions									
Site	1.15	1.15	0.00	0.00	0.00	0.53	0.051	0.051	1.79
OS-1	2.41	0.00	0.00	0.77	1.64	1.80	0.362	0.417	10.73
OS-2	0.86	0.00	0.00	0.39	0.47	1.67	0.120	0.135	3.43
Proposed Conditions									
Site	1.15	0.15	0.05	0.18	0.77	1.70	0.163	0.189	4.53
Total	1.15						0.163	0.189	4.53

Percipitation Zone 2 - 10-year Storm P(360) = 1.56 in P(1440) = 1.83 in

Basin	Basin Area (Ac)	Land Treatment Factors (Acres) A	B	C	D	Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
Existing Conditions									
Site	1.15	1.15	0.00	0.00	0.00	0.13	0.012	0.012	0.44
OS-1	2.41	0.00	0.00	0.77	1.64	1.08	0.217	0.253	6.47
OS-2	0.86	0.00	0.00	0.39	0.47	0.97	0.069	0.080	2.14
Proposed Conditions									
Site	1.15	0.15	0.05	0.18	0.77	1.01	0.097	0.114	2.83
Total	1.15						0.097	0.114	2.83

POND VOLUME REQUIRED
$\Delta V_{100\text{-}24}$ = (0.189 AF - 0.051AF) 43560 CF/AF = 6011.26 CF

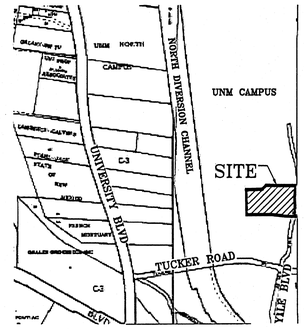
POND VOLUME PROVIDED			
Area	Elevations	Increment Vol	Volume
1,003.05	5146.0	0.00	0.00
1,774.81	5147.0	1,388.93	1,388.93
2,585.68	5148.0	2,180.25	3,569.18
3,429.22	5149.0	3,007.45	6,576.63
3,863.09	5149.5	1,823.08	8,399.70

TOP OF POND = 5149.50
TOP OF SPILLWAY = 5149.00

(2) WHICH IS IT

(4) 2416 A = 8" CURB NOT 6" GIVE DETAIL

(7) NO 'A' TRIM



VICINITY MAP J-15-Z

NOT TO SCALE

GENERAL NOTES:

1. AS OF MARCH 10, 2003, THE USPA REQUIRES NPDES PERMIT COVERAGE FOR STORM WATER DISCHARGES FROM CONSTRUCTION PROJECTS (COMMON PLANS OF DEVELOPMENT) THAT WILL RESULT IN THE DISTRUBANCE (OR RE-DISTURBANCE) OF ONE OR MORE ACRES, INCLUDING EXPANSIONS OF TOTAL LAND AREA. THE DEVELOPER SHOULD BE MADE AWARE THAT THE USEPA REQUIRES THAT ALL "OPERATORS" (SEE FEDERAL REGISTER/VOL. 63, NO. 128 / MONDAY, JULY 6, 1999 PG 36509) OBTAIN NPDES PERMIT COVERAGE FOR CONSTRUCTION PROJECTS. GENERALLY THIS MEANS THAT AT LEAST TWO PARTIES WILL REQUIRE PERMIT COVERAGE. THE OWNER/DEVELOPER OF THIS CONSTRUCTION PROJECT WHO HAS OPERATIONAL CONTROL OVER THE PROJECT SPECIFICATIONS, THE GENERAL CONTRACTOR WHO HAS DAY-TO-DAY OPERATIONAL CONTROL OF THOSE ACTIVITIES AT THE SITE, WHICH ARE NECESSARY TO ENSURE COMPLIANCE WITH THE STORM WATER POLLUTION PLAN AND OTHER CONDITIONS, AND POSSIBLY OTHER "OPERATORS" THAT WILL REQUIRE APPROPRIATE NPDES PERMIT COVERAGE FOR THIS PROJECT.

2. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

3. CONTRACTOR SHALL OBTAIN A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO ANY GRADING OR CONSTRUCTION.

4. TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260-1990 FOR LOCATION OR EXISTING UTILITIES.

5. BACKFILL AND COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.

6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.

7. ALL CONCRETE SHALL BE A MINIMUM OF 3000 P.S.I.

8. PROJECT BENCHMARK TBM #1 IS A #4 REBAR LOCATED ON THE NORTH PROPERTY CORNER.
NORTHING = 389,177.67
EASTING = 1,489,856.54
ELEVATION = 5150.62 FEET (NGVD=1929)

(6) REF PERMANENT TBM

9. ALL EXISTING TOPOGRAPHIC DATA SHOWN ON THESE PLANS HAS BEEN PROVIDED BY NCA ARCHITECTS. MILLER ENGINEERING CONSULTANTS HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS INFORMATION.

10. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.

11. ALL PAVEMENT, BASE COURSE AND SUBGRADE PREPARATION THICKNESS SHALL BE PROVIDED BY THE SOILS ENGINEER FOR THIS PROJECT.

12. ALL DISTURBED AREA SHALL RECEIVE CLASS "A" SEEDING IN ACCORDANCE WITH THE NMDOT BLUE BOOK. ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL RECEIVE A LANDSCAPE FABRIC WITH 3 INCHES OF GRAVEL MULCH.

13. ALL HDPE STORM DRAIN PIPE MUST HAVE WATER TIGHT JOINTS.

KEYED NOTES:

1. STANDARD CURB & GUTTER PER COA STD DWG 2415B.
2. CONCRETE HEADER CURB PER COA STD DWG 2415A.
3. STORM DRAIN INLET PER COA STD DWG 2106.
GRATE=47.10, INV=43.10.
N=388,934.42, E=1,489,610.20 CENTER OF GRATE.
4. STORM DRAIN MANHOLE TYPE "E", PER COA STD DWG 2102.
RIM=50.82, INV (IN)=42.59, INV (OUT)=42.49
N=388,899.03, E=1,489,899.53
WITH COVER PER COA STD DWG 2110.
5. SLOPE GRADING BEYOND CURB TO BE 3:1, UNLESS OTHERWISE NOTED. SEE GENERAL NOTE 12.
6. HANDICAP RAMP AND HANDICAP SIGNS PER ARCHITECTURAL PLANS.
7. RIPRAP (ENCLOSED) TYPE "A", PER COA STD DWG 2270.
SEE DETAIL SECTION A-A, SHEET C-102.
8. RIPRAP (LOOSE) TYPE "B", PER COA STD DWG 2270.
9. CONCRETE RUNDOWN PER COA STD DWG 2260 AND 2261.
10. CONCRETE VALLEY GUTTERS, 2' WIDE PER COA STD 2415A (ALLEY GUTTER). 110.52 LF AND 133.02LF
11. DIRT SWALES TO BE 3' WIDE MINIMUM, WITH A 6" DEEP FLOWLINE.
12. 18" WIDE CURB CUT.
13. MATCH EXISTING
14. CONCRETE SIDEWALK PATTERN, SEE ARCHITECTURAL PLANS.
15. LANDSCAPE AREA, SEE ARCHITECTURAL PLANS.
16. APPROXIMATE LOCATION OF PROPOSED LEASE PROPERTY LINE.
17. 24" HDPE STORM DRAIN PIPE. SLOPE=1.00%, 92.43 LF
18. 24" HDPE STORM DRAIN PIPE. SLOPE=1.00%, 64.77 LF
OUTLET - N=388,927.80, E=1,489,756.44, INV=5141.60
19. DIRECT FLOW FROM SWALE IN THIS AREA TO PROPOSED DOUBLE "D" DROP INLET.
20. 2.5' WIDE RIPRAP RUNDOWN 54.20 LF. SEE KEYED NOTE 8 AND DETAIL SHEET D-1.
21. 12" WIDE OPENING, SIDEWALK CULVERT PER COA STD DWG 2236 WITH 6" STEEL PLATE.

(9A) REVERSE

(5) NO SUCH THING AS 2106

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HYDROLOGY SECTION

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PROJECT TITLE

RONALD McDONALD HOUSE PHASE II EXPANSION

TBM

ALBUQUERQUE NEW MEXICO

REVISIONS

MK	DATE	DESCRIPTION

DRAWN BY	CHECKED BY
TAS	VAM

PROJECT NUMBER: A05.16

DATE: MARCH 2007

SHEET TITLE:

SHEET NO: C-101

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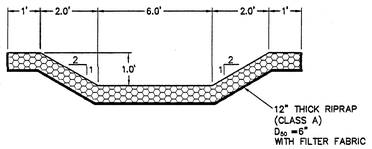
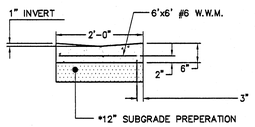
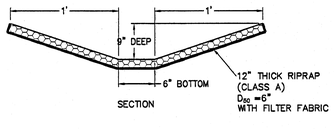


RIP RAP RUNDOWN CROSS SECTION A-A
SCALE: NONE



* 12" SUBGRADE PREPERATION SHALL BE CONSIDERED INCIDENTAL TO CONCRETE VALLEY GUTTER - 6"x24" AND NO SEPERATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THE WORK

6"x24" CONCRETE VALLEY GUTTER DETAIL
SCALE: NONE



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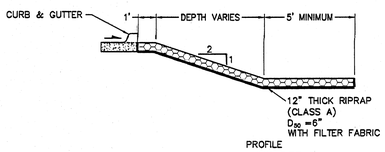
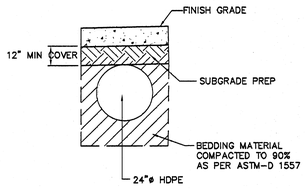
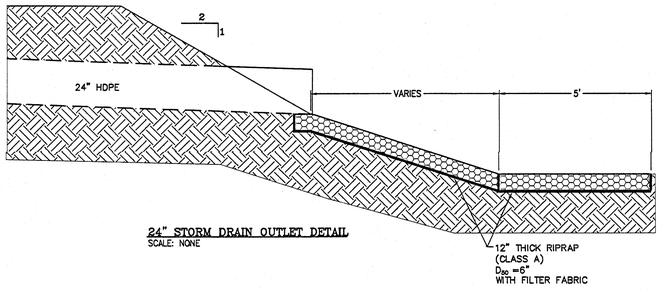


PROFILE

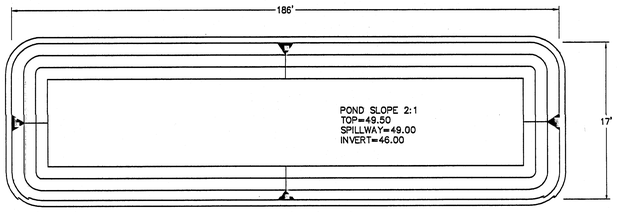
RIPRAP RUNDOWN DETAIL
SCALE: NONE



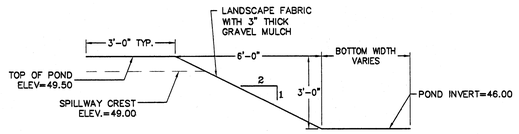
TYPICAL CULVERT INSTALLATION SECTION
SCALE: NONE



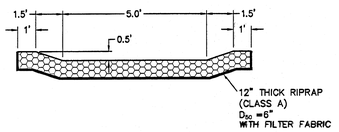
24" STORM DRAIN OUTLET DETAIL
SCALE: NONE

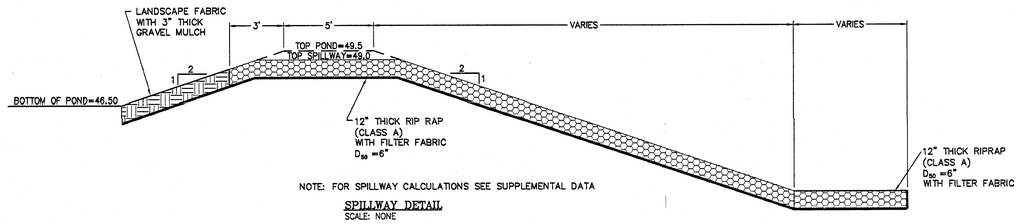


TYPICAL POND DETAIL
SCALE: NONE



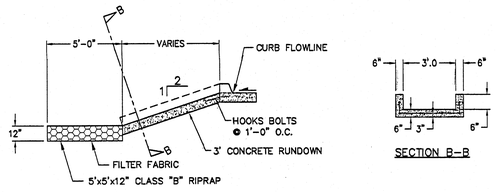
POND TYPICAL SECTION
SCALE: NONE





NOTE: FOR SPILLWAY CALCULATIONS SEE SUPPLEMENTAL DATA

SPILLWAY DETAIL
SCALE: NONE



CONCRETE RUNDOWN DETAIL
SCALE: NONE

SECTION B-B

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REVISIONS

MK	DATE	DESCRIPTION

DRAWN BY: TAS CHECKED BY: VAM

PROJECT NUMBER: A05.16

DATE: MARCH 2007

SHEET TITLE:

SHEET NO: C-102