CITY OF ALBUQUERQUE

September 1, 2016

J. Graeme Means, PE
High Mesa Consulting Group
6010 –B Midway Park Blvd NE
Albuquerque, NM 87109

Re: MacArthur ES Courtyard Drain
1100 Douglas MacArther Rd NW
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 5/18/2016 (F14D038)
Certification dated: 8-29-16

Dear Mr. Means,

Based on the Certification received 8/31/2016, the site is acceptable for release of Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3982 or Totten Elliott at 924-3982.

Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Department
Development and Review Services

TE/AC
C: email, Cordova, Camille C.; Miranda, Rachel; Sandoval, Darlene M.; Lois Blocker

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

DESIGN GRADING LEGEND:

INV	INVERT
TA	TOP OF ASPHALT PAVEMENT
TC	TOP OF CURB
TG	TOP OF GRATE
+ 20.05	EXISTING SPOT ELEVATION
⊗ 14.00	PROPOSED SPOT ELEVATION
	EXISTING FLOWLINE
	PROPOSED FLOWLINE
—4920—	EXISTING CONTOUR
—20—	PROPOSED CONTOUR
	EXISTING DIRECTION OF FLOW
	PROPOSED DIRECTION OF FLOW
	RIGHT OF WAY LINE
	PUBLIC EASEMENT LINE
	HIGH POINT / DIVIDE
	PROPOSED CONCRETE

D4 VICINITY MAP F-14

SCALE: 1" = 750'

D5 FIRM 119 of 825

SCALE: 1" = 500'

September 26, 2008

WRIGHT AND HAMMER ARCHITECTS

1735 ALISO DRIVE, NE
ALBUQUERQUE, N.M. 87110
505-266-6764

WRIGHT AND HAMMER ARCHITECTS

CONTACT INFORMATION:
DENISE HAMMER, PROJECT ARCHITECT
1735 ALISO DRIVE, NE
ALBUQUERQUE, NM 87110
505-266-6764
Denise@WrightandHammer.com

LEGAL DESCRIPTION

A TRACT OF LAND LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

BENCHMARKS

PROJECT BENCHMARK

ACS 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 17-F13", EPOXIED ON TOP OF THE CONCRETE CURB RETURN, IN THE ENE QUADRANT OF THE INTERSECTION OF GRIEGOS ROAD AND GUADALUPE TRAIL N.W.
ELEVATION = 4973.334 FEET (NAVD 1988)

TEMPORARY BENCHMARK (T.B.M.) #1

A #5 REBAR WITH CAP STAMPED "HMCG CONTROL NMPS 11184", AS SHOWN ON THIS SHEET.
ELEVATION = 4975.05 FEET (NAVD 1988)

TEMPORARY BENCHMARK (T.B.M.) #2

A P.K. NAIL IN ASPHALT PAVEMENT, AS SHOWN ON THIS SHEET.
ELEVATION = 4975.10 FEET (NAVD 1988)

TEMPORARY BENCHMARK (T.B.M.) #3

USC&GS BRASS DISK STAMPED "DOUGLAS 1969", SET IN CONCRETE POST 0.1' ABOVE GROUND, ON THE WEST SIDE OF THE DOUGLAS MACARTHUR ELEMENTARY SCHOOL AS SHOWN ON THIS SHEET.
ELEVATION = 4975.134 FEET (NAVD 1988)

DESIGN SURVEY NOTE:

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON A UNRECORDED BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 01/21/2010 (2008.194.4). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING NMPS 11184, DATED 01/21/2010 (2008.194.4).

J. GRAEME MEANS
NEW MEXICO
13676
REGISTERED PROFESSIONAL ENGINEER

10/31/13 05/18/16
07/14/15 08/29/16

HIGH MESA Consulting Group

6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 FAX: 505.345.4254
www.highmesacg.com

BOARD OF EDUCATION
ALBUQUERQUE MUNICIPAL SCHOOL DISTRICT NO. 12
6400 Uptown Blvd. NE
Suite 600-W
Albuquerque, NM 87110

MacARTHUR ELEMENTARY SCHOOL

KINDERGARTEN ADDITION
•
CAFETERIA ADDITION & IMPROVEMENTS
•
RE-ROOFING

OWNER'S CONTACT:
MYRON JOHNSON, ARCHITECT
FACILITIES DESIGN & CONSTRUCTION
915 OAK STREET, SE
ALBUQUERQUE, NM 87106
505-848-8811

MARK	DATE	DESCRIPTION
4	08/16	ENG. CERTIFICATION
3	05/16	ADDED COURTYARD DRAIN
2	07/15	ENGINEER'S CERTIFICATION
1	01/15	PAVING TO BUS ROAD
	11/1/13	ISSUE DATE

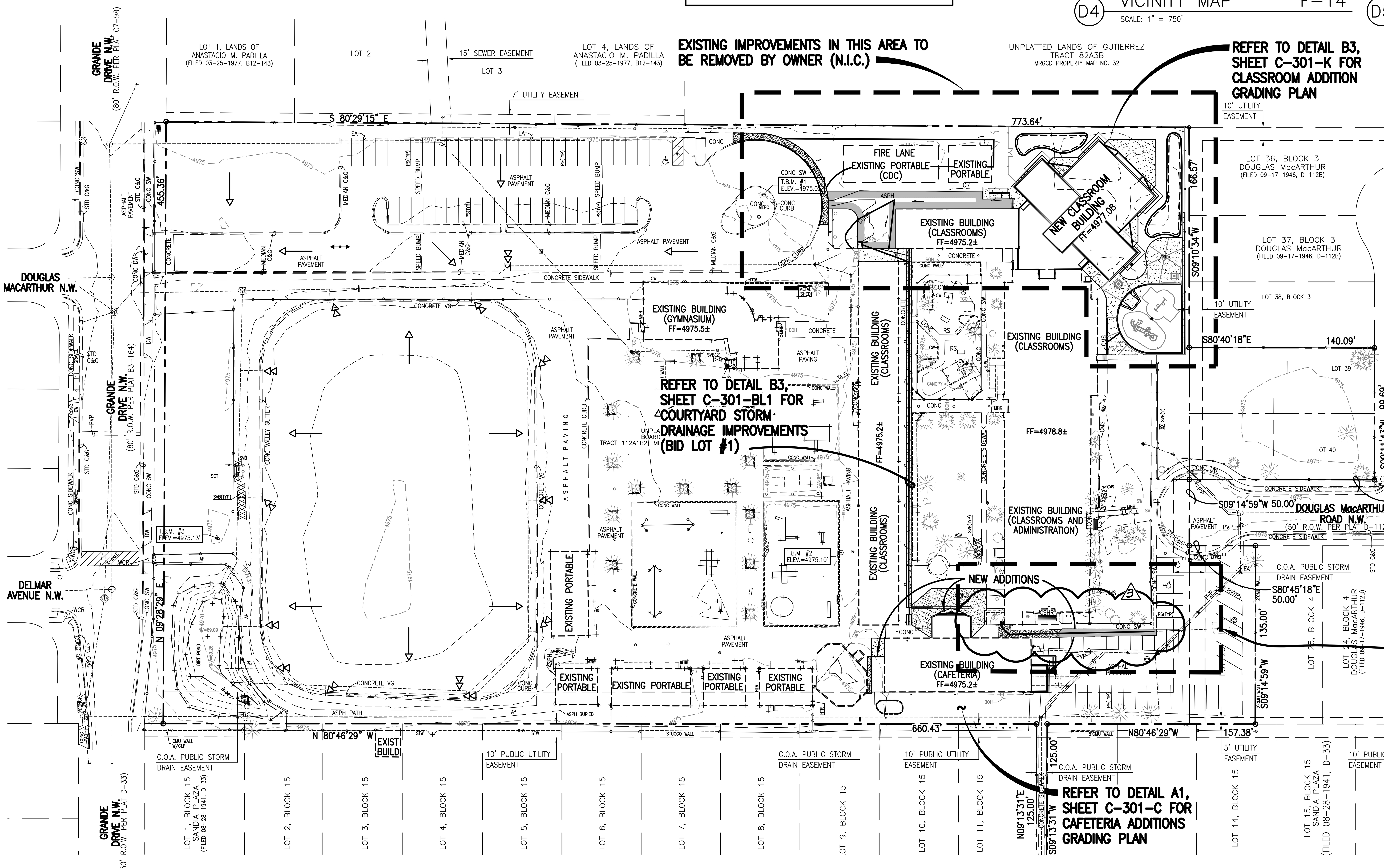
ISSUE INFORMATION

PROJECT NO.: 0303.001.40105

COPYRIGHT
WRIGHT & HAMMER ARCHITECTS 2013

KINDERGARTEN

OVERALL GRADING SITE PLAN



SCALE: 1" = 40'

A1 OVERALL GRADING SITE PLAN

SCALE: 1" = 40'

2015.181.7
~~2014.183.1~~
~~2010.030.1~~

C-101

DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS PROJECT, LOCATED IN THE NORTH VALLEY OF THE ALBUQUERQUE METROPOLITAN AREA, REPRESENTS A MODIFICATION TO AN EXISTING ELEMENTARY SCHOOL SITE WITHIN AN INFILL AREA. THE PURPOSE OF THIS PROJECT IS TO PROVIDE IMPROVED DRAINAGE TO THE EXISTING COURTYARD, CONSTRUCT NEW ADDITIONS TO THE EXISTING CAFETERIA BUILDING, AND CONSTRUCT A NEW KINDERGARTEN CLASSROOM BUILDING ADDITION. THE DRAINAGE CONCEPT WILL BE TO MAINTAIN THE EXISTING DRAINAGE PATTERNS OF THE SITE AND RETAIN ANY INCREASE IN DEVELOPED RUNOFF GENERATED ONSITE.

THIS SUBMITTAL IS MADE IN SUPPORT OF BUILDING PERMIT WITHIN THE JURISDICTION OF THE CITY OF ALBUQUERQUE.

II. PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SCHOOL SITE IS LOCATED NEAR THE INTERSECTION OF DOUGLAS MACARTHUR NW AND GRANDE DRIVE NW. THE PROPERTY IS UNPLATTED. AS SHOWN BY PANEL 119 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, SEPTEMBER 26, 2008, THIS SITE LIES WITHIN A DESIGNATED ZONE X FLOOD HAZARD ZONE, AN AREA OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS LESS THAN 1 FOOT.

III. BACKGROUND DOCUMENTS

THE PREPARATION OF THIS PLAN RELIED UPON THE FOLLOWING DOCUMENTS:

- TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING GROUP (NMPS 11184) DATED 01-21-2010. THIS REFERENCED SURVEY PROVIDES THE BASIS FOR THE EXISTING CONDITIONS OF THE PROJECT SITE.
- GRADING AND DRAINAGE PLAN FOR DOUGLAS MACARTHUR SCHOOL PREPARED BY WILSON & COMPANY, DATED 06-17-1994. THIS PLAN SUPPORTED CONSTRUCTION OF THE MINI-GYMNASIUM AND PAVED BUS DROP OFF LOOP (NOW EXISTING) AND IDENTIFIED THE DRAINAGE BASINS 101, 102, AND 103 FOR THE SITE. THE PROPOSED IMPROVEMENTS LIE WITHIN BASIN 101 AND 102 OF THE 1994 PLAN.

IV. EXISTING CONDITIONS

THE PROPOSED PROJECT SITE INCLUDES THREE AREAS OF CONSTRUCTION, ALL WITHIN THE EASTERN PORTION OF THE SITE. THESE AREAS ARE 1) THE CAFETERIA BUILDING, 2) THE EXISTING COURTYARD, AND 3) THE EXISTING PLAYGROUND AND CLASSROOM PORTABLES AREA AT THE NORTHEAST CORNER OF THE SITE. THE ENTIRE SITE IS GENERALLY FLAT WITH MINIMAL TOPOGRAPHY, EXHIBITING POORLY DEFINED DRAINAGE PATTERNS.

RUNOFF FROM THE EXISTING CAFETERIA BUILDING LACKS WELL DEFINED DRAINAGE AS THE SITE IS GENERALLY FLAT. OVERFLOW APPEARS TO SHEET FLOW IN A WESTERLY DIRECTION TO ULTIMATELY DRAIN TO AN EXISTING DETENTION POND AT THE SOUTHWEST CORNER OF THE SCHOOL SITE THAT DISCHARGES TO THE EXISTING PUBLIC STORM DRAIN WITHIN GRANDE DRIVE NW.

THE EXISTING COURTYARD GRADUALLY SLOPES FROM EAST TO WEST, SHEET FLOWING RUNOFF TOWARD THE EXISTING BUILDING AND CAUSING FLOODING OF THE EXISTING BUILDING ENTRANCES. AN EXISTING STORM INLET LIES AT THE NORTHWEST CORNER OF THE MAIN CLASSROOM BUILDING; THIS INLET COLLECTS OVERFLOW RUNOFF FROM THE COURTYARD, AS WELL AS SURFACE FLOWS FROM THE NORTHEAST PORTABLE CLASSROOMS. RUNOFF THAT DRAINS TO THIS INLET IS CONVEYED VIA PRIVATE STORM DRAIN TO ULTIMATELY DISCHARGE TO A PUBLIC STORM DRAIN IN GRANDE DRIVE NW.

RUNOFF GENERATED WITHIN THE NORTHEAST PLAYGROUND APPEARS TO POND IN A LOW POINT IN THIS AREA, WITH OVERFLOW SHEETFLOWING TO THE SOUTHEAST TO AN ONSITE LOW AREA IMMEDIATELY NORTH OF DOUGLAS MACARTHUR ROAD NW; THIS AREA ULTIMATELY OVERFLOWS TO THE PUBLIC STROM DRAIN WITHIN DOUGLAS MACARTHUR ROAD NW.

THERE ARE NO OFFSITE FLOWS IMPACTING THE PROJECT; THE AREAS SURROUNDING THE SCHOOL EXHIBIT PARALLEL TOPOGRAPHY TO THE SCHOOL SITE AND THEREFORE DO NOT CONTRIBUTE OFFSITE FLOWS.

V. DEVELOPED CONDITIONS

THE PROPOSED CONSTRUCTION INCLUDES THREE AREAS: 1) BUILDING ADDITIONS TO THE CAFETERIA BUILDING, 2) DRAINAGE IMPROVEMENTS TO THE COURTYARD, AND 3) A NEW KINDERGARTEN CLASSROOM BUILDING ADDITION AND GRAVEL FIRE LANE AT THE NORTHEAST CORNER OF THE SITE.

THE SMALL ADDITIONS TO THE EXISTING CAFETERIA BUILDING WILL REPLACE IMPERVIOUS PAVEMENT WITH IMPERVIOUS BUILDING. NO CALCULATIONS WERE PREPARED FOR THIS AREA AS THERE IS NO INCREASE IN RUNOFF GENERATED BY THIS DEVELOPMENT. RUNOFF WILL CONTINUE TO DRAIN AWAY FROM THE BUILDING ON PAVED SURFACES.

THE DRAINAGE IMPROVEMENTS TO THE EXISTING COURTYARD CONSIST OF THE REMOVAL AND REPLACEMENT OF A PORTION OF THE EXISTING SIDEWALK WITH THE INCLUSION OF A NEW TRENCH DRAIN. THE NEW TRENCH DRAIN WILL INTERCEPT AND COLLECT THE EXISTING RUNOFF THAT CURRENTLY FLOODS THE EXISTING BUILDING ENTRANCES. RUNOFF COLLECTED WITHIN THE TRENCH DRAIN WILL BE CONVEYED VIA PRIVATE STORM DRAIN EXTENSION TO THE EXISTING STORM INLET AT THE NORTHWEST CORNER OF THE EXISTING BUILDING, AND ULTIMATELY DISCHARGED TO THE PUBLIC STORM DRAIN IN GRANDE DRIVE NW. NO CALCULATIONS WERE PREPARED FOR THIS AREA AS THERE IS NO INCREASE IN RUNOFF GENERATED BY THIS DEVELOPMENT.

A NEW KINDERGARTEN CLASSROOM BUILDING ADDITION AND GRAVEL FIRE LANE WILL REPLACE THE EXISTING PORTABLE CLASSROOMS AND PLAYGROUND LOCATED AT THE NORTHEAST CORNER OF THE SCHOOL SITE. THESE IMPROVEMENTS WILL RESULT IN A MINIMAL INCREASE IN DEVELOPED RUNOFF GENERATED BY THE SITE. TWO SHALLOW (6" +/-) WATER HARVESTING AREAS TO THE NORTHWEST AND EAST OF THE NEW ADDITION ARE SIZED TO RETAIN THE INCREASE IN RUNOFF GENERATED BY THE SITE. IN ADDITION, A NEW CURB AND GUTTER IS PROPOSED ALONG THE EASTERN EDGE OF THE SCHOOL SITE TO PROVIDE POSITIVE DRAINAGE OF OVERFLOW RUNOFF. THE CURB AND GUTTER WILL CONVEY OVERFLOW RUNOFF SOUTH TO THE EXISTING LOW AREA NORTH OF DOUGLAS MACARTHUR ROAD NW, MAINTAINING THE EXISTING DRAINAGE PATTERNS ALREADY ESTABLISHED FOR THIS AREA OF THE SITE.

VI. GRADING PLAN

THE GRADING PLAN SHOWS 1.) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS, 2.) THE LIMIT AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS, AND 3.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED GRADING AND DRAINAGE IMPROVEMENTS WILL MAINTAIN AND IMPROVE THE CURRENT DRAINAGE PATTERNS FOR THE SITE, RETAINING ONSITE ANY INCREASE IN DEVELOPED RUNOFF GENERATED BY THE IMPROVEMENTS.

VII. CALCULATIONS

CALCULATIONS ANALYZING THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT HAVE BEEN PREPARED FOR THE PORTION OF THE SITE AFFECTED BY THE NEW KINDERGARTEN CLASSROOM ADDITION BUILDING AND FIRE LANE IMPROVEMENTS. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. IN ADDITION, THE AVERAGE END-AREA METHOD HAS BEEN USED TO QUANTIFY THE VOLUME OF RUNOFF RETAINED WITHIN THE PROPOSED WATER HARVESTING AREAS. AS DEMONSTRATED BY THESE CALCULATIONS, THE PROPOSED IMPROVEMENTS WILL RESULT IN A MINIMAL INCREASE IN PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED BY THIS PROJECT, WHICH WILL BE MITIGATED BY THE RETENTION OF THE INCREASE WITHIN THE NEW WATER HARVESTING AREAS.

VIII. CONCLUSIONS

THE FOLLOWING CONCLUSIONS HAVE BEEN ESTABLISHED AS A RESULT OF THE EVALUATIONS CONTAINED HEREIN:

1. THE PROPOSED IMPROVEMENTS WILL MAINTAIN OR IMPROVE THE EXISTING DRAINAGE PATTERNS OF THIS PORTION OF THE EXISTING ELEMENTARY SCHOOL SITE.
2. THE PROPOSED IMPROVEMENTS TO THE CAFETERIA AND COURTYARD WILL REPLACE EXISTING IMPERVIOUS LAND TREATMENT WITH NEW IMPERVIOUS LAND TREATMENT, MAINTAINING THE EXISTING VOLUME AND PEAK RATE OF DISCHARGE GENERATED BY THESE AREAS.
3. THE PROPOSED IMPROVEMENTS TO THE KINDERGARTEN CLASSROOM ADDITION WILL RESULT IN A MINIMAL INCREASE IN VOLUME AND PEAK RATE OF DISCHARGE GENERATED BY THIS AREA.
4. THE PROPOSED WATER HARVESTING AREAS ARE SIZED TO RETAIN THE INCREASE IN VOLUME OF RUNOFF GENERATED BY THE KINDERGARTEN CLASSROOM ADDITION.
5. THE PROPOSED IMPROVEMENTS WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM DRAINAGE CONDITIONS.

2 MACARTHUR ES 2016 COURTYARD DRAIN

AS A FOLLOW-UP TO THE RECENTLY COMPLETED KINDERGARTEN AND CAFETERIA ADDITION PROJECTS, A NEW STORM DRAIN SERVING THE COURTYARD AREA IS PROPOSED TO PROTECT THE MECHANICAL ROOM AND CAFETERIA BUILDING FROM FLOODING ATTRIBUTABLE TO PRE-EXISTING ROOF DRAINAGE FROM THE MAIN CLASSROOM BUILDING. THE DOOR TO THE MECHANICAL ROOM IS SET BELOW THE SURROUNDING AREA, AND ROOF DRAINAGE THAT DISCHARGES TO GRADE IMMEDIATELY NEXT TO THE DOOR RE-ENTERS THE BUILDING. ALSO, LARGE RAINFALL EVENTS IN THE SUMMER OF 2015 OVERWHELMED THE NEW TRENCH DRAIN RESULTING IN WATER ENTERING THE NEW CAFETERIA ADDITION.

A NEW STORM INLET IS PROPOSED WITH A GRATE ELEVATION BELOW THE MECHANICAL ROOM DOOR. A NEW 12" STORM DRAIN WILL BE CONSTRUCTED UNDER THE COVERED WALKWAY THAT LEADS TO THE EAST PARKING AREA, WITH A CONNECTION TO AN EXISTING ON-SITE STORM DRAIN MANHOLE. THIS PLAN IS SUBMITTED AS A REVISION TO THE PREVIOUSLY APPROVED AND CERTIFIED PLAN.

File Path: P:\WA\2015 APS\2015.181.7\DWG\R4\
File Name: 151817_C-102-R4.DWG | Plot Date: 08-29-2016 | Plot Time: 10:40 am

CALCULATIONS

I. SITE CHARACTERISTICS

A. PRECIPITATION ZONE = 2

B. $P_{6,100} = P_{360}$ = 2.35

C. TOTAL PROJECT AREA (A_T) = 27,280 SF / 0.63 AC

D. LAND TREATMENTS

1. EXISTING LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
A		
B	10,000 / 0.23	36
C	6,620 / 0.15	24
D	10,660 / 0.25	40

2. DEVELOPED LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
A		
B		
C	13,880 / 0.32	51
D	13,400 / 0.31	49

II. HYDROLOGY

A. EXISTING CONDITION

a. VOLUME

$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$

E_W = ((0.00*0.53) + (0.23*0.78) + (0.15*1.13) + (0.25*2.12))/0.63 = 1.40 IN

$V_{100} = (E_W/12)A_T$ = (1.40/12)0.63 = 0.0732 AC-FT = 3,170 CF

b. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100}$ = ((0.00*1.56) + (0.23*2.28) + (0.15*3.14) + (0.25*4.7)) = 2.2 CFS

B. DEVELOPED CONDITION

a. VOLUME

$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$

E_W = ((0.00*0.53) + (0.00*0.78) + (0.32*1.13) + (0.31*2.12))/0.63 = 1.62 IN

$V_{100} = (E_W/12)A_T$ = (1.62/12)0.63 = 0.0849 AC-FT = 3,680 CF

b. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100}$ = ((0.00*1.56) + (0.00*2.28) + (0.32*3.14) + (0.31*4.7)) = 2.5 CFS

c. WATER HARVESTING RETENTION PONDING (AVERAGE END-AREA METHOD)

i. NORTHWEST WATER HARVESTING AREA

ELEV	AREA (SF)	VOLUME (CF)	Σ VOLUME (CF)
4975.5	460		
		280	280
4976	660		

ii. EAST WATER HARVESTING AREA

ELEV	AREA (SF)	VOLUME (CF)	Σ VOLUME (CF)
4975.5	840		
		490	490
4976	1120		

iii. TOTAL RETENTION CAPACITY

V_{POND} = 280 + 490 = 770 CF

C. COMPARISON

a. VOLUME

ΔV_{100} = 3680 - 3170 = 510 CF (INCREASE)

b. PEAK DISCHARGE

ΔQ_{100} = 2.5 - 2.2 = 0.3 CFS (INCREASE)

c. RETENTION CAPACITY VS INCREASE IN VOLUME GENERATED

V_{POND} = 770 CF > ΔV_{100} = 510 CF; THEREFORE DECREASE IN RUNOFF DISCHARGED

ENGINEER'S DRAINAGE CERTIFICATION

I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM HIGH MESA CONSULTING GROUP HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 05/18/2016. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT WAS OBTAINED 08/15/2016 BY HIGH MESA CONSULTING GROUP UNDER THE DIRECTION OF CHARLES G. CALA, JR, NMPS 11184, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

THIS CERTIFICATION IS SUBMITTED TO SUPPORT A RECOMMENDATION FOR PERMANENT CERTIFICATE OF OCCUPANCY FOR THE NEW CAFETERIA AND TO DOCUMENT COMPLETION OF THE IMPROVEMENTS FOR THE OWNER. THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THIS CERTIFICATION DOES NOT ADDRESS ADA COMPLIANCE WHICH IS BEYOND THE SCOPE OF GRADING AND DRAINAGE. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

J. GRAEME MEANS, NMPE 13676

08/29/2016
DATE

J. GRAEME MEANS NEW MEXICO 13676 REGISTERED PROFESSIONAL ENGINEER

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC SCHOOLS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. *UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE AND UTILITY LINE-SPOTS WITH TEST HOLES PROVIDED BY ONPOINT UTILITY LOCATING SERVICES, SITE UTILITY REPORT DATED MAY 03, 2013 AND TEST HOLE REPORT DATED MAY 09, 2013. UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE 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. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.*
6. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN.ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.

WRIGHT AND HAMMER ARCHITECTS
1735 ALISO DRIVE, NE
ALBUQUERQUE, NM 87110
505-266-6764

WRIGHT AND HAMMER ARCHITECTS

CONTACT INFORMATION:
DENISE HAMMER, PROJECT ARCHITECT
1735 ALISO DRIVE, NE
ALBUQUERQUE, NM 87110
505-266-6764
Denise@WrightandHammer.com

J. GRAEME MEANS NEW MEXICO 13676 REGISTERED PROFESSIONAL ENGINEER

10/31/13	05/18/16
07/14/15	08/24/16

HIGH MESA Consulting Group
6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 FAX: 505.345.4254
www.highmesacg.com

BOARD OF EDUCATION
ALBUQUERQUE MUNICIPAL SCHOOL DISTRICT NO. 12
6400 Uptown Blvd. NE
Suite 600-W
Albuquerque, NM 87110

MacARTHUR ELEMENTARY SCHOOL

KINDERGARTEN ADDITION
•
CAFETERIA ADDITION & IMPROVEMENTS
•
RE-ROOFING

OWNER'S CONTACT:
MYRON JOHNSON, ARCHITECT
FACILITIES DESIGN & CONSTRUCTION
915 OAK STREET, SE
ALBUQUERQUE, NM 87106
505-848-8811

MARK	DATE	DESCRIPTION
4	08/16	ENG. CERTIFICATION
3	05/16	ADDED COURTYARD DRAIN
2	07/15	ENGINEER'S CERTIFICATION
1	01/15	NO CHANGE THIS SHEET
	11/1/13	ISSUE DATE

ISSUE INFORMATION

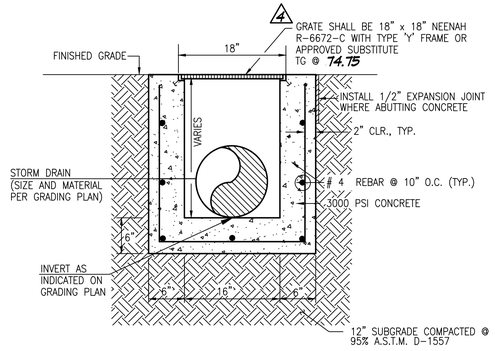
PROJECT NO.: 0303.001.40105

GENERAL

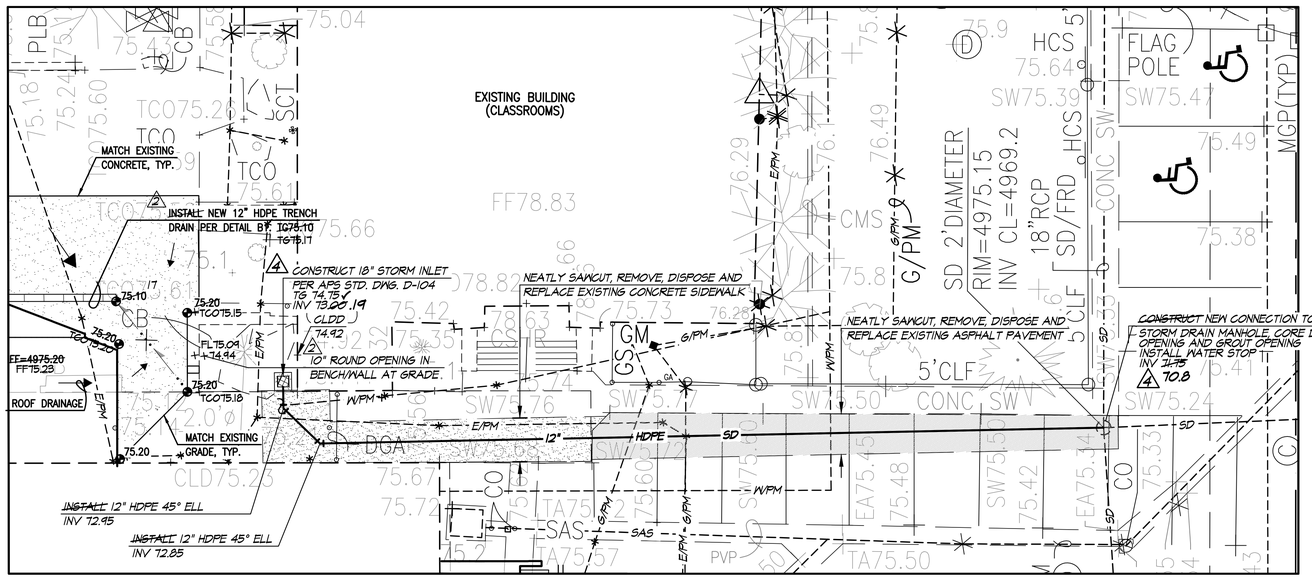
DRAINAGE PLAN AND CALCULATIONS

2015.181.7
~~2014.185.T~~
~~2010.030.T~~

C-102



ALBUQUERQUE PUBLIC SCHOOLS Expect great things!	TYPICAL 18"x18" STORM INLET SECTION	
	DRAWN BY: HMCG	STD DWG:
	REVIEWED BY: APS	D-104
	DATE ISSUED: 01/29/14	
	SCALE: 1" = 1'-0"	



COURTYARD STORM DRAIN

SCALE: 1" = 10'

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC SCHOOLS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. *UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE AND UTILITY LINE-SPOTS WITH TEST HOLES PROVIDED BY ONPOINT UTILITY LOCATING SERVICES, SITE UTILITY REPORT DATED MAY 03, 2013 AND TEST HOLE REPORT DATED MAY 09, 2013. UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE 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. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.*
6. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN.ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.

DESIGN SURVEY NOTE:

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON A UNRECORDED BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 01/21/2010 (2008.194.4). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING NMPS 11184, DATED 01/21/2010 (2008.194.4) *WITH AS-BUILT INFORMATION FROM THE JULY 2015 CERTIFICATION AND SUPPLEMENTAL UTILITY INFORMATION DATED MAY 2013.*

DESIGN DRAINAGE LEGEND:

INV	INVERT
TA	TOP OF ASPHALT PAVEMENT
TC	TOP OF CURB
TG	TOP OF GRATE
	RIGHT OF WAY LINE
	EASEMENT LINE
	PROPOSED TRENCH DRAIN
	PROPOSED CONCRETE
	PROPOSED ASPHALT PAVING

RECORD DRAWING LEGEND

~~CONSTRUCT~~	RECORD INFORMATION (VERIFIED BY ENGINEER)
✓	AS-CONSTRUCTED = AS-DESIGNED (VERIFIED BY AS-BUILT SURVEY)
38.42'	RECORD INFORMATION FROM AS-BUILT SURVEY
+25.2	RECORD INFORMATION FROM AS-BUILT SURVEY
◕ 28,98.92	RECORD INFORMATION FROM AS-BUILT SURVEY

WRIGHT AND HAMMER ARCHITECTS

CONTACT INFORMATION:
DENISE HAMMER, PROJECT ARCHITECT
1735 ALISO DRIVE, NE
ALBUQUERQUE, NM 87110
505-266-6764
Denise@WrightandHammer.com

J. GRAEME MEANS NEW MEXICO 13678 REGISTERED PROFESSIONAL ENGINEER

4 05/18/16
08/29/16

HIGH MESA Consulting Group
6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 FAX: 505.345.4254
www.highmesacg.com

BOARD OF EDUCATION
ALBUQUERQUE MUNICIPAL SCHOOL DISTRICT NO. 12
6400 Uptown Blvd. NE
Suite 600-W
Albuquerque, NM 87110

MacARTHUR ELEMENTARY SCHOOL

KINDERGARTEN ADDITION
•
CAFETERIA ADDITION & IMPROVEMENTS
•
RE-ROOFING

OWNER'S CONTACT:
MYRON JOHNSON, ARCHITECT
FACILITIES DESIGN & CONSTRUCTION
915 OAK STREET, SE
ALBUQUERQUE, NM 87106
505-848-8811

MARK	DATE	DESCRIPTION
4	08/16	ENG. CERTIFICATION
3	05/16	ADDED COURTYARD DRAIN
2	07/15	ENGINEER'S CERTIFICATION
1	01/15	NO CHANGE THIS SHEET
	11/1/13	ISSUE DATE

ISSUE INFORMATION
PROJECT NO.: 0303.001.40105

COURTYARD

ADDED COURTYARD DRAIN

2015.181.7
~~2014.185.T~~
~~2010.030.T~~

C-302-C

File Path:P:\WHA\2015 APS\2015.181.7\DWG\WA | Plot Date: 08-29-2016
File Name:151817_C-302-C_R4.DWG | Plot Time: 10:44 am

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: MacArthur ES Courtyard Drain Building Permit #: _____ City Drainage #: F14/D038

DRB#: N/A EPC#: N/A Work Order#: N/A

Legal Description: Unplatted

City Address: 1100 Douglas MacArthur Rd. NW, Albuquerque, NM 87107

Engineering Firm: High Mesa Consulting Group Contact: Graeme Means

Address: 6010-B Midway Park Blvd. NE, Albuquerque, NM 87109

Phone#: 505-345-4250 Fax#: 505-345-4254 E-mail: gmeans@highmesacg.com

Owner: APS Contact: Myron Johnson

Address: 915 Oak Street SE, Albuerque, NM 87106

Phone#: 505-848-8811 Fax#: 505-246-9200 E-mail: johnson_my@aps.edu

Architect: Wright and Hammer Architects Contact: Denise Hammer

Address: 1735 Aliso Drive NE, Albuqueruque, NM 87110

Phone#: 505-266-6764 Fax#: _____ E-mail: Denise@Wrightand Hammer.com

Other Contact: Altor Construction (Contractor) Contact: Marie Alvidrez

Address: 5215 Edith Blvd NE, Albuquerque, NM 87107

Phone#: 505-341-1551 Fax#: _____ E-mail: mardrez@aol.com

Check all that Apply:

DEPARTMENT:

X HYDROLOGY/ DRAINAGE
_____ TRAFFIC/ TRANSPORTATION
_____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

X ENGINEER/ ARCHITECT CERTIFICATION

_____ CONCEPTUAL G & D PLAN
_____ GRADING PLAN
_____ DRAINAGE MASTER PLAN
_____ DRAINAGE REPORT
_____ CLOMR/LOMR

_____ TRAFFIC CIRCULATION LAYOUT (TCL)
_____ TRAFFIC IMPACT STUDY (TIS)
_____ EROSION & SEDIMENT CONTROL PLAN (ESC)

_____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: _____ Yes X No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

_____ BUILDING PERMIT APPROVAL
X CERTIFICATE OF OCCUPANCY

_____ PRELIMINARY PLAT APPROVAL
_____ SITE PLAN FOR SUB'D APPROVAL
_____ SITE PLAN FOR BLDG. PERMIT APPROVAL
_____ FINAL PLAT APPROVAL
_____ SIA/ RELEASE OF FINANCIAL GUARANTEE
_____ FOUNDATION PERMIT APPROVAL
_____ GRADING PERMIT APPROVAL
_____ SO-19 APPROVAL
_____ PAVING PERMIT APPROVAL
_____ GRADING/ PAD CERTIFICATION
_____ WORK ORDER APPROVAL
_____ CLOMR/LOMR

_____ PRE-DESIGN MEETING
_____ OTHER (SPECIFY) _____

DATE SUBMITTED: 8-31-2016 By: Ryan Curley

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

XC: Myron Johnson (APS)-Mylar & Bond Set