CITY OF ALBUQUERQUE

Planning Department
Suzanne Lubar, Director

Mayor Richard J. Berry

January 14, 2016

Fred C. Arfman, P.E.
Isaacson & Arfman, PA
128 Monroe St NE
Albuquerque, NM 87108

Re: Hodgin Elementary School-Kindergarten Addition
3801 Morningside Dr. NE
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 5-31-13 (G17D037)
Certification dated: 1-12-16

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Dear Mr. Arfman,

Based upon the information provided in your submittal received 1/13/2016, the above referenced Certification received is acceptable for the release of permanent Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3686 or Totten Elliott at 924-3982.

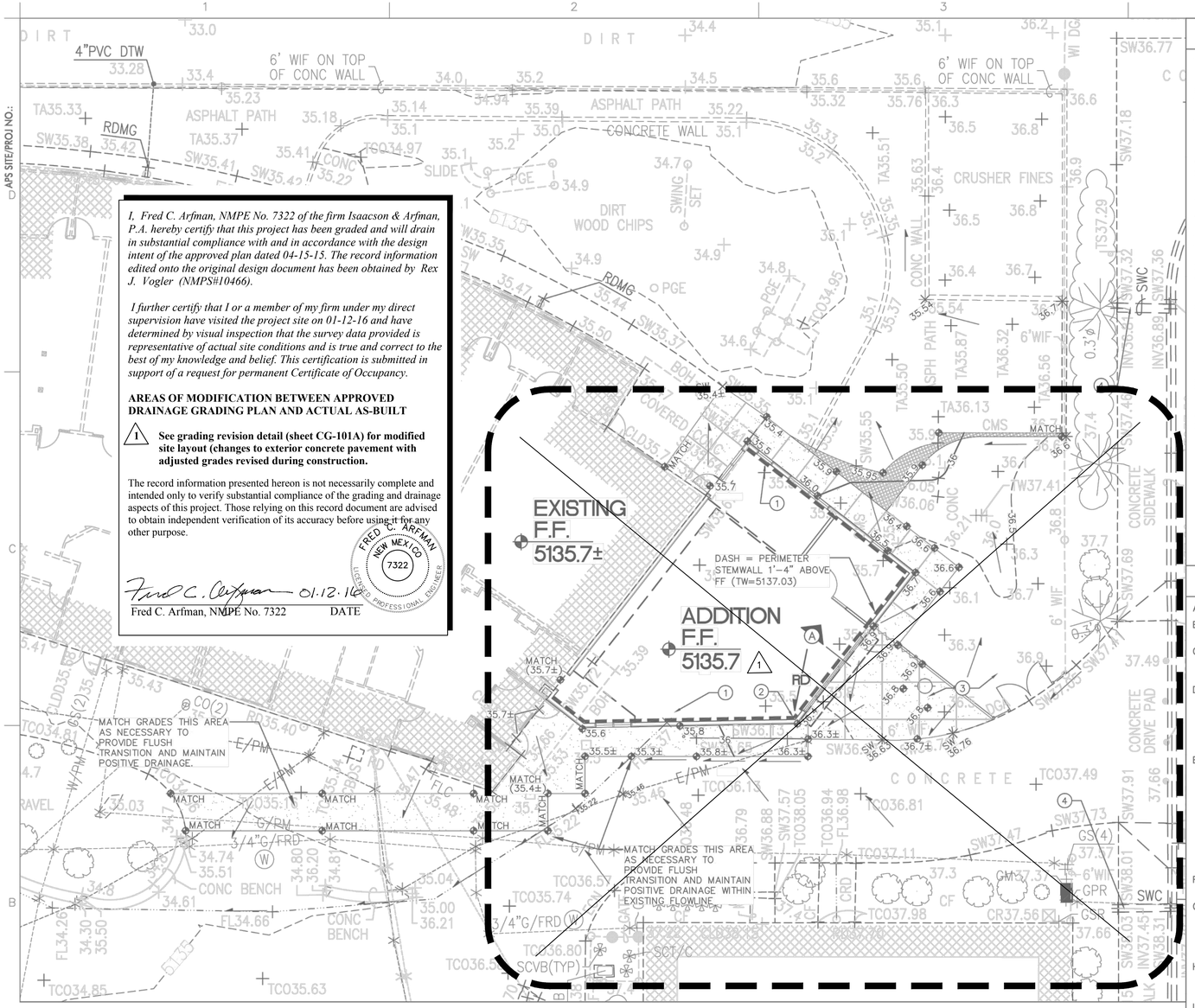
Sincerely,

Shahab Biazar, P.E.
City Engineer, Planning Dept.
Development Review Services

TE/SB
C: email, Cordova, Camille C.; Miranda, Rachel; Sandoval, Darlene M.; Barreras, Gary S.; Blocker, Lois

0273.4002.31101

APS SITE/PROJ NO.:



GRADING AND DRAINAGE PLAN – KINDERGARTEN

SCALE: 1" = 10'-0"

0 5 10 20'

I, Fred C. Arfman, NMPE No. 7322 of the firm Isaacson & Arfman, P.A. hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intent of the approved plan dated 04-15-15. The record information edited onto the original design document has been obtained by Rex J. Vogler (NMPS#10466).

I further certify that I or a member of my firm under my direct supervision have visited the project site on 01-12-16 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for permanent Certificate of Occupancy.

AREAS OF MODIFICATION BETWEEN APPROVED DRAINAGE GRADING PLAN AND ACTUAL AS-BUILT

1 **See grading revision detail (sheet CG-101A) for modified site layout (changes to exterior concrete pavement with adjusted grades revised during construction.**

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. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

FRED C. ARFMAN NEW MEXICO 7322 LICENSED PROFESSIONAL ENGINEER

01.12.16

Fred C. Arfman, NMPE No. 7322 DATE

PROJECT INFORMATION

PROPERTY: THE SITE IS A DEVELOPED APS SCHOOL PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP G–17. THE SITE IS BOUND TO THE EAST BY MORNINGSIDE DRIVE, TO THE WEST BY HERMOSA ST. NE., AND TO THE NORTH AND SOUTH BY DEVELOPED RESIDENTIAL PROPERTIES.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE AN APPROXIMATELY 1500 SF ADDITION TO THE EXISTING KINDERGARTEN BUILDING WITH ASSOCIATED PAVEMENT AND LANDSCAPING. IN ADDITION, LONG TERM DRAINAGE PROBLEMS WITHIN TWO ENCLOSED COURTYARDS WILL BE ADDRESSED (SHEETS CG–201 AND CG–202)

LEGAL: TRACT A, HODGIN ELEM. SCHOOL, ALBUQUERQUE, NM

ADDRESS: 3801 MORNINGSIDE DRIVE NORTHEAST, 87110

BENCHMARK: SEE TOPOGRAPHIC SURVEY FOR TEMPORARY BENCHMARK INFORMATION.

OFF–SITE: NO OFF–SITE FLOW IMPACTS THIS PORTION OF THE APS PROPERTY.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #138, THE SITE IS WITHIN AN AREA DESIGNATED AS 'ZONE X' "AREAS DETERMINED TO BE OUTSIDE 500–YEAR FLOODPLAIN.

DRAINAGE PLAN CONCEPT: THE ENTIRETY OF THE HODGIN ELEMENTARY SCHOOL PROPERTY DRAINS TO AN EXISTING SPORTS FIELD / TEMPORARY POND CONSTRUCTED AS PART OF 2001 SITE IMPROVEMENTS. THIS POND INCLUDES OUTLET CONTROL STRUCTURES TO LIMIT RELEASE OF DISCHARGE TO HERMOSA ST. THE PROPOSED IMPROVEMENT WILL REPLACE EXISTING IMPERMEABLE PAVEMENT AND COMPACTED EARTH RESULTING IN AN INSIGNIFICANT INCREASE DISCHARGE TO THE POND (SEE CALCULATIONS THIS SHEET).

GENERAL NOTES

A. COORDINATE WORK WITH SITE PLAN AND DEMOLITION PLAN.

B. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.

C. ALL SUBGRADE, OVEREXCAVATION, AND FILL SHALL BE PLACED AND / OR COMPACTED PER THE GEOTECHNICAL REPORT AND CITY OF ALBUQUERQUE SPECIFICATIONS.

D. FINAL GRADES SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.

E. EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CONTACT NM–811 FOR UTILITY LINE SPOTS TWO WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. 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.

F. ADJUST RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES, TYPICAL.

G. ALL NEW PAVEMENT SURFACES SHALL BE CONSTRUCTED WITH POSITIVE SLOPE AWAY FROM BUILDINGS AND POSITIVE SLOPE TOWARD EXISTING AND/OR PROPOSED DRAINAGE PATHS. WHERE NEW GRADES ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH AND LEVEL.

H. ALL ROOF DRAIN DISCHARGE AND SITE DRAINAGE SWALES WITHIN NON–PAVED AREAS SHALL BE PAVED (GROUTED COBBLE OR CONCRETE) PER A.P.S. STANDARDS.

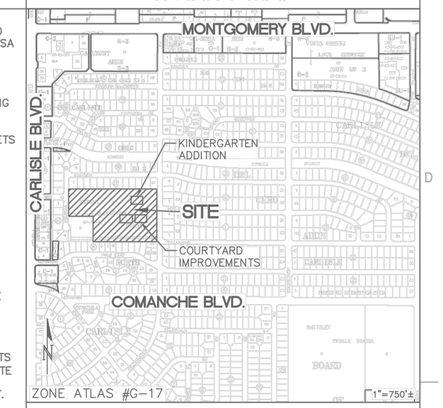
I. ALL COBBLE EROSION PROTECTION TO BE 6" AVG. DIA. ROUNDED ROCK EMBEDDED IN CONCRETE PER A.P.S. STANDARDS. NO LOOSE COBBLE SWALES OR EROSION PROTECTION SHALL BE ALLOWED ON A.P.S. DISTRICT PROPERTIES.

J. ALL STORM DRAIN INLETS WITHIN NON–PAVED AREAS SHALL INCLUDE AN 18" WIDE (MINIMUM) GROUTED COBBLE APRON IN ADDITION TO THE STANDARD CONCRETE APRON.

K. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE MONTHLY AND AFTER EACH RAINFALL TO IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.

L. ENGINEER'S CERTIFICATION CANNOT BE PROVIDED UNTIL ALL SITE WORK IS COMPLETE AND EROSION PROTECTION IS INSTALLED PER PLAN. TEMPORARY CERTIFICATES OF OCCUPANCY ARE NO LONGER PROVIDED

VICINITY MAP



KEYED NOTES

1. CONSTRUCT RETAINING STEMWALL AT ELEVATIONS SHOWN. SEE SECTION A THIS SHEET FOR ADDITIONAL INFORMATION..
2. CONCENTRATED ROOF DISCHARGE TO PAVEMENT THIS AREA. SEE ARCHITECTURAL.
3. REGRADE UNPAVED AREA TO CLEARLY DEFINE DRAINAGE TO NORTH AND SOUTH @ MIN. 1% SLOPE.
4. EXISTING PARKING LOT DRAINAGE ENTERS SCHOOL AREA AT EXISTING SIDEWALK CULVERT. DO NOT BLOCK OR ALTER IN ANY WAY THAT MAY PREVENT DISCHARGE FROM PASSING.

LEGEND

36.7 +	EXISTING SPOT ELEVATION
—36—	PROPOSED CONTOUR (1' INTERVALS)
– –36.5– – –	PROPOSED CONTOUR (0.5' INTERVALS)
◆37.5	PROPOSED SPOT ELEVATION
◆37.5± ◆MATCH	PROPOSED SPOT ELEVATION AT EXISTING INFRASTRUCTURE TO MATCH
→	FLOW ARROW
F.F.=5135.7	FINISH FLOOR ELEVATION

CALCULATIONS: Hodgin Elementary - K Add'n : 4/30/2013

Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 5420 SF = 0.1

100-year, 6-hour

HISTORIC FLOWS:	Treatment SF	%	DEVELOPED FLOWS:	Treatment SF	%	EXCESS PRECIP: Precip. Zone 2
Area A =	0	0%	Area A =	0	0%	E_A = 0.53
Area B =	0	0%	Area B =	0	0%	E_B = 0.78
Area C =	2818.4	52%	Area C =	1192	22%	E_C = 1.13
Area D =	2601.6	48%	Area D =	4228	78%	E_D = 2.12
Total Area =	5420	100%	Total Area =	5420	100%	

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

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

Historic E =	1.61	in.	Developed E =	1.90	in.

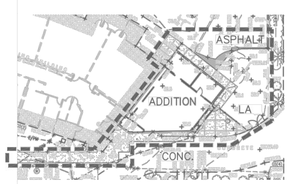
On-Site Volume of Runoff: V360 = E*A / 12

Historic V_{360} =	725	CF	Developed V_{360} =	859	CF

On-Site Peak Discharge Rate: $Q_p = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D$ / 43,560

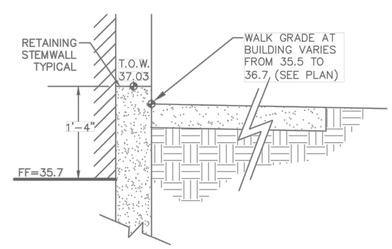
For Precipitation Zone 2

Q_{pA} =	1.56		Q_{pC} =	3.14	
Q_{pB} =	2.28		Q_{pD} =	4.70	
Historic Q_p =	0.48	CFS	Developed Q_p =	0.54	CFS



LIMITS OF CALCULATIONS

DASHED



SECTION A

PERIMETER RETAINING STEMWALL

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designing today designing tomorrow

GTH

GREGORY T. hicks & ASSOCIATES, p.c.
ARCHITECTS • PLANNERS

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ALBUQUERQUE PUBLIC SCHOOLS
Expect Great Things!

FRED C. ARFMAN NEW MEXICO 7322 LICENSED PROFESSIONAL ENGINEER 05-31-13

Albuquerque Public Schools

Hodgin Elementary School Kindergarten Addition and Site Improvements
3801 Morningside Drive NE
Albuquerque, New Mexico 87102

Mark	Date	Description
		FINAL BID SET

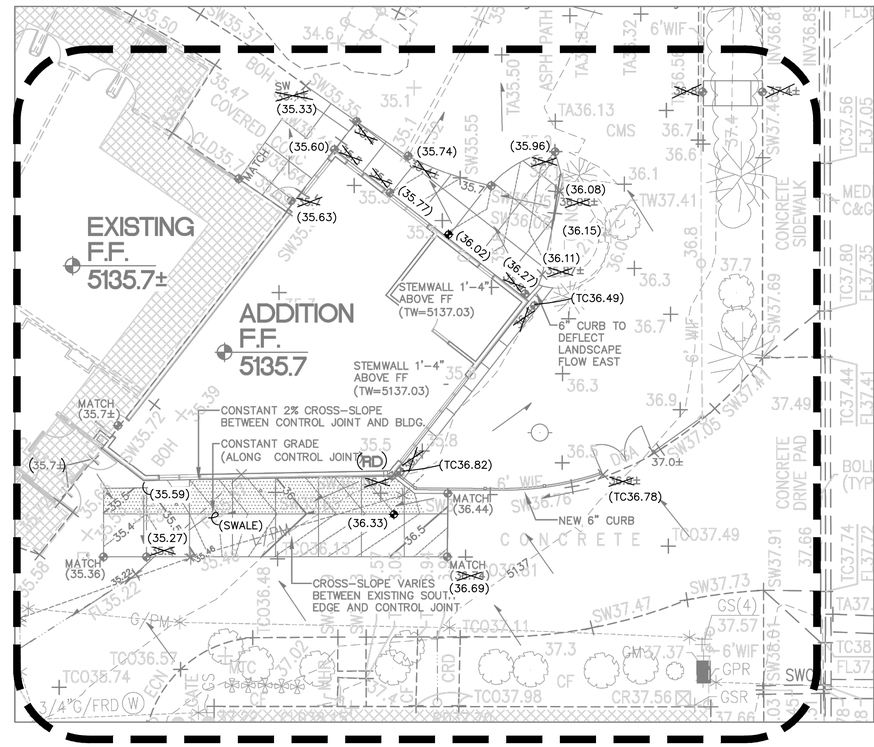
Issue:
GTH Project No.: 0902.03
Owner Project No: 0273.4002.31101

Acad File No.: 090203A201
Date:

Sheet Title:
GRADING AND DRAINAGE PLAN
KINDERGARTEN

Sheet No.:
CG-101
Sheet 3 of 40

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 Fax. 505-268-2632
1773 CG-101.dwg May 30,2013



HODGIN ELEMENTARY SCHOOL GRADING REVISIONS DECEMBER 16, 2015

GRADE REVISIONS PROVIDED TO ADDRESS

- SITE PLAN REVISIONS
- ADA COMPLIANT ACCESSIBLE PATH TO KINDERGARTEN (DOT HATCHED AREA TO BE MAX. 2% CROSS-SLOPE AND 3.34% SLOPE
- IMPROVE SOUTH SIDE DRAINAGE

PROPOSED CONTOUR @ 0.5' INCREMENTS

PROPOSED CONTOUR @ 0.1' INCREMENTS

CG-101A

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1773 CX-CG.dwg Dec 17,2015