CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



October 4, 2018

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

RE: NW K Thru 8 Prototype School 9601 Tierra Pintada Blvd NW Permanent C.O. - Accepted Engineer's Certification Dated 10/01/18 Engineer's Stamp Date: 11/17/17 Hydrology File: J08D003A

PO Box 1293 Dear Mr. Means:

Based on the Certification received 10/01/18 and site visit on 10/03/18, this certification is approved in support of Permanent Release of Occupancy by Hydrology.

Albuquerque

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov .

NM 87103

Sincerely,

www.cabq.gov

Renée C. Brissette, P.E. CFM Senior Engineer, Hydrology Planning Department

Renée C. Brissette



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title:	Building Permit #	: Hydrology File #:			
		Work Order#:			
Legal Description:					
City Address:					
Applicant:		Contact:			
Address:					
Phone#:	Fax#:	E-mail:			
Other Contact:		Contact:			
Address:					
Phone#:	Fax#:	E-mail:			
TYPE OF DEVELOPMENT: PLAT	(# of lots) Rl	ESIDENCE DRB SITE ADMIN SITE			
IS THIS A RESUBMITTAL? Yes	No				
DEPARTMENT TRANSPORTATION	HYDROL	OGY/DRAINAGE			
Check all that Apply:		TYPE OF APPROVAL/ACCEPTANCE SOUGHT: BUILDING PERMIT APPROVAL CERTIFICATE OF OCCUPANCY			
TYPE OF SUBMITTAL: ENGINEER/ARCHITECT CERTIFICATION	_				
PAD CERTIFICATION	_	PRELIMINARY PLAT APPROVAL			
CONCEPTUAL G & D PLAN GRADING PLAN	_	SITE PLAN FOR SUB'D APPROVAL			
GRADING FLAN DRAINAGE REPORT	_	SITE PLAN FOR BLDG. PERMIT APPROVAL			
DRAINAGE MASTER PLAN	_	FINAL PLAT APPROVAL			
FLOODPLAIN DEVELOPMENT PERMIT	APPLIC	SIA/ RELEASE OF FINANCIAL GUARANTEE			
ELEVATION CERTIFICATE	_	FOUNDATION PERMIT APPROVAL			
CLOMR/LOMR		GRADING PERMIT APPROVAL			
TRAFFIC CIRCULATION LAYOUT (TCI	_	SO-19 APPROVAL			
TRAFFIC IMPACT STUDY (TIS)	_	PAVING PERMIT APPROVAL			
STREET LIGHT LAYOUT	_	GRADING/ PAD CERTIFICATION			
OTHER (SPECIFY)	<u> </u>	WORK ORDER APPROVAL			
PRE-DESIGN MEETING?	_	CLOMR/LOMR			
	_	FLOODPLAIN DEVELOPMENT PERMIT			
	_	OTHER (SPECIFY)			
DATE SUBMITTED:	By:				
COA STAFF:	ELECTRONIC SUBM	ITTAL RECEIVED:			

FEE PAID:_____

II. PROJECT DESCRIPTION

AS SHOWN BY ZONE ATLAS PAGES H-7/8 & J-7/8 LOCATED HEREON. THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE NORTHWEST MESA AREA AT THE NORTHWEST CORNER OF THE INTERSECTION OF TIERRA PINTADA BLVD NW AND ARROYO VISTA BLVD NW. THE SITE IS CURRENTLY UNDEVELOPED. THE CURRENT LEGAL DESCRIPTION IS TRACT N-1. WATERSHED SUBDIVISION, ALBUQUERQUE, NEW MEXICO. AS SHOWN BY PANEL 307 OF 825 THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY. NEW MEXICO. UPDATED TO REFLECT A LOMR ASSOCIATED WITH THE AFOREMENTIONED DIVERSION CHANNEL EFFECTIVE JANUARY 02, 2015, THE SITE IS INTERSECTED BY A ZONE AE FLOOD HAZARD CONTAINED WITHIN THE LADERA DAM 9 DIVERSION AMAFCA CHANNEL. THIS DIVERSION IS LOCATED UPSTREAM OF THE PROPOSED CONSTRUCTION. III. BACKGROUND DOCUMENTS

DRAINAGE PLAN, THIS 1ST PHASE OF CONSTRUCTION IS A NEW ALBUQUERQUE PUBLIC SCHOOLS (APS) PRE-K TO 8TH GRADE SCHOOL THAT INCLUDES DRAINAGE INFRASTRUCTURE SIZED FOR FULL BUILDOUT OF

SUBSEQUENT SCHOOL FACILITIES ON THE SAME TRACT WITH INTERIM DRAINAGE IMPROVEMENTS THAT WILL ACCOMMODATE FUTURE PHASES. ALL PROPOSED INFRASTRUCTURE WILL BE PRIVATE AND MAINTAINED BY

APS. THIS PLAN IS SUBMITTED FOR ROUGH GRADING AND BUILDING PERMIT APPROVALS. THERE IS NO NEW PUBLIC INFRASTRUCTURE PROPOSED BY THIS PROJECT.

ESTABLISHED ALLOWABLE DISCHARGES FROM THE APS SCHOOL SITE TO THE ADJACENT RIGHTS OF WAY AND DOWNSTREAM PUBLIC DRAINAGE FACILITIES.

THE SITE WAS PLANNED AND PLATTED BY WESTERN ALBUQUERQUE LAND HOLDING LLC (WAHL) FOR SALE TO APS FOR THE PURPOSE OF BUILDING SCHOOL FACILITIES FOR THE COMMUNITY. WAHL CONSTRUCTED THE SURROUNDING PUBLIC INFRASTRUCTURE AS A CONDITION OF PLATTING. NO NEW PLATTING OR PUBLIC DRAINAGE INFRASTRUCTURE IS PROPOSED BY APS. THE DEVELOPMENT OF THE SITE WILL FOLLOW DRAINAGE REPORTS THAT WERE PREPARED BY BHI FOR WAHL TO SUPPORT THE SUBSEQUENT SITE DEVELOPMENT BY APS. THE FOLLOWING DOCUMENTS WERE USED IN THE PREPARATION OF THIS SUBMITTAL: I) BOUNDARY, TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 01/08/16. THIS SURVEY DOCUMENT THE EXISTING CONDITIONS FOR THE SITE.

MASTER DRAINAGE PLAN FOR APS NORTHWEST EDUCATION PREPARED BY HIGH MESA CONSULTING GROUP, NMPE 13676, DATED 08/25/2016. THIS MASTER DRAINAGE PLAN FOLLOWED AND REFINED THE DRAINAGE REQUIREMENTS ESTABLISHED BY PREVIOUS APPROVED PLANS FOR THE OVERALL TRACT, INCLUDING ALLOWABLE DISCHARGES, OFFSITE FLOWS, AND LAND TREATMENTS FOR. DETAILED HYDROLOGIC AND HYDRAULIC CALCULATIONS AND ANALYSIS INCLUDED THEREIN SUPPORT THIS SPECIFIC DEVELOPMENT AS PART OF A LARGER OVERALL DEVELOPMENT OF THIS TRACT BY APS WITH FUTURE PHASES. THIS MASTER DRAINAGE PLAN REFERENCED THE FOLLOWING DOCUMENTS:

3) DRAINAGE ANALYSIS REPORT FOR LADERA DAM 5 AND DAM 9 ARROYOS: APS PROJECTS, PREPARED BY BOHANNAN HUSTON, NMPE CRAIG W. HOOVER DATED APRIL 6TH, 2012. THIS DRAINAGE REPORT WAS PREPARED TO PROVIDE THE FOUNDATION FOR THE DESIGN FOR DRAINAGE FACILITIES REQUIRED IN CONJUNCTION WITH DEVELOPMENT OF THE APS STADIUM AND SCHOOL SITES THAT WERE PREVIOUSLY IDENTIFIED. BY BHI'S 2011 WEST I-40 DMP UPDATE. THIS DRAINAGE REPORT BUILT UPON AND MODIFIED THE PROPOSED BASIN DISCHARGE LIMITATIONS FOUND IN THE APS PROJECT DRAINAGE IMPROVEMENTS SECTION OF THE 2011 WEST I-40 DMP UPDATE.

5) DRAINAGE MANAGEMENT PLAN FOR PULTE @ MIREHAVEN PHASE 20R THE MIREHAVEN MASTER PLANNED COMMUNITY (TRACT N-2-D OF THE WATERSHED SUBDIVISION), PREPARED BY BOHANNAN HUSTON, NMPE 16244, DATED JANUARY 15, 2016. THE DRAINAGE REPORT WAS PREPARED TO PROVIDE THE OVERALL DRAINAGE MASTER PLAN FOR ADJACENT TRACT N-2-D AND INCLUDED IDENTIFIED REQUIREMENTS FOR DRAINAGE TO PROPOSED MIREHAVEN PARKWAY.

4) DRAINAGE ANALYSIS REPORT FOR ARROYO VISTA BLVD & TIERRA PINTADA BLVD, PREPARED BY BOHANNAN HUSTON, NMPE 13685 & 20010, DATED APRIL 6TH, 2012. THE DRAINAGE REPORT SUPPORTED

THE DESIGN AND CONSTRUCTION OF ARROYO VISTA AND TIERRA PINTADA ALONG WITH THE ASSOCIATED STORM DRAINAGE INFRASTRUCTURE THAT WAS CONSTRUCTED WITH THAT PROJECT. THIS REPORT

IV. EXISTING AND RECORD MASTER PLAN CONDITIONS

PLEASE REFER TO THE APS NORTHWEST EDUCATION CORRIDOR MASTER DRAINAGE PLAN (REFERENCE 2) FOR A SUMMARY OF EXISTING UNDEVELOPED AND MASTER PLANNED CONDITIONS ESTABLISHED BY PREVIOUS PLANS (REFERENCES 3-5).

V. PROPOSED PHASE 1 CONDITIONS (SHEET CG-101)

DRAIN STUB INSTALLED FOR FUTURE DEVELOPMENT OF THIS AREA.

THE FIRST PHASE OF CONSTRUCTION IS THE PRE-K THROUGH 8 SCHOOL AT THE EASTERN END OF THE SITE WHICH WILL ALSO INCLUDE DRAINAGE INFRASTRUCTURE TO ACCOMMODATE FUTURE UPSTREAM DEVELOPMENT AND THE INTERIM CONDITION. THE CITY OF ALBUQUERQUE FIRST FLUSH REQUIREMENT FOR THE PHASE 1 CONSTRUCTION WILL BE MET BY PONDING WITH A PROPOSED DETENTION / WATER QUALITY POND LOCATED AT THE EAST END OF THE SITE. THE POND IS DESIGNED TO RETAIN 65,550 CF WHICH IS GREATER THAN THE REQUIRED FIRST FLUSH REQUIREMENT VOLUME OF 19,800 CF FOR THIS PROJECT AND ALSO GREATER THAN THE 2-YEAR VOLUME TO MEET LEED REQUIREMENT OF SS6.1 OF 49,920 CF. DEPRESSED LANDSCAPING WILL ALSO BE USED WERE POSSIBLE TO CAPTURE RUNOFF THROUGHOUT THE SITE AS A BEST PRACTICE.

BASIN L9.1B — THIS BASIN WILL BE DIVIDED INTO 4 SUB-BASINS AS SHOWN ON SHEET CG-101. A PORTION OF THIS BASIN WILL BE DEVELOPED WITH THE NEW PRE-K TO 8 SCHOOL. DEVELOPMENT WILL INCLUDE A NEW SCHOOL BUILDING, LANDSCAPING, PAVED ROADS AND OTHER SITE IMPROVEMENTS. THE OFFSITE PORTION OF THIS BASIN WILL REMAIN UNAFFECTED BY PHASE 1 CONSTRUCTION AND WILL BE ACCEPTED. COLLECTED. AND RELEASED INTO THE NEW PRIVATE STORM DRAIN SYSTEM. THE NEW STORM DRAIN SYSTEM IS DESIGNED TO HANDLE THE FUTURE CONDITIONS FOR THIS SITE AND WILL DRAIN TO A NEW DETENTION POND LOCATED AT THE EAST END OF THE SITE IN BASIN L9.2B.

SUB-BASIN L9.1B -OFFSITE- THIS BASIN CONSISTS OF 29.6 ACRES OF PETROGLYPH NATIONAL PARK LOCATED TO THE NORTH OF THE SITE. THE BASIN WILL CONTINUE TO DRAIN INTO THE APS SITE, SUB BASIN L9.1B-1, BY A NATURAL ARROYO WITH AN UNDEVELOPED PEAK 100-YEAR DISCHARGE OF 57.7 CFS.

SUB-BASIN L9.1B -1- THIS SUB-BASIN WILL REMAIN UNDEVELOPED AND WILL CONTAIN A NEW SEDIMENT/COLLECTION POND SIZED TO COLLECT AND CONVEY OFFSITE FLOWS FROM ITSELF AND SUB-BASIN 19.18—OFFSITE. THE POND OUTLET (AP—1) WILL BE SET 2 FEET ABOVE THE POND BOTTOM TO PREVENT SEDIMENT FROM ENTERING THE NEW STORM DRAIN AND TO GIVE APS TIME TO PERFORM POND. MAINTENANCE AS NEEDED IN THE FUTURE. AS SHOWN BY THE CALCULATIONS HEREON, THE STORAGE CAPACITY BELOW THE OUTLET IS SIZED TO RETAIN IN EXCESS OF 2 YEARS OF SEDIMENT DELIVERY BASED UPON THE RATE OF 0.71 AC-FT PER SQUARE MILE PER YEAR AS ESTABLISHED BY REFERENCE 3. THIS STRATEGY WILL BE USED THROUGHOUT THE SITE.

SUB-BASIN L9.1B -2- THIS SUB-BASIN WILL CONTAIN A NEW BASE COURSE PARKING LOT AND ROADWAY FOR NATIONAL PARK ACCESS THAT DRAINS FROM NORTHWEST TO SOUTHEAST TO A NEW SEDIMENT/COLLECTION POND SIZED TO COLLECT AND CONVEY DEVELOPED FLOWS AND CONVEY THEM INTO THE NEW PRIVATE ON-SITE DRAINAGE SYSTEM AT AP-2. THE POND OUTLET WILL BE SET 2 FEET ABOVE THE POND BOTTOM TO PREVENT SEDIMENT FROM ENTERING THE NEW STORM DRAIN AND TO GIVE APS TIME TO PERFORM POND MAINTENANCE AS NEEDED IN THE FUTURE.

SUB-BASIN L9.1B -3- THIS SUB-BASIN WILL CONTAIN A PORTION OF THE NEW SCHOOL BUILDING, BUS AND FIRE LANE, CONCRETE SIDEWALKS, AND LANDSCAPING. THE RUNOFF FROM THIS AREA WILL BE COLLECTED BY ROOF DRAINS AND STORM INLETS INTO THE NEW PRIVATE STORM DRAINAGE SYSTEM. THE NEW SYSTEM WILL CONVEY THE DEVELOPED RUNOFF FROM THIS SUB-BASIN AND THE UPSTREAM BASINS INTO THE NEW WATER QUALITY / DETENTION POND LOCATED IN BASIN L9.2B.

BASIN L9.2A - THIS SUB-BASIN WILL BE DIVIDED INTO 6 SUB-BASINS AS SHOWN ON SHEET MDP-103. A PORTION OF THIS BASIN WILL BE DEVELOPED WITH THE NEW PRE-K TO 8 SCHOOL. DEVELOPMENT WILL INCLUDE A NEW SCHOOL BUILDING, LANDSCAPING, PAVED ROADS, OTHER SITE IMPROVEMENTS, AND PERMANENT AND TEMPORARY DRAINAGE IMPROVEMENTS, TEMPORARY SEDIMENT/COLLECTION PONDS WILL BE CONSTRUCTED AT THE WEST LIMITS OF CONSTRUCTION TO INTERCEPT EXISTING FLOWS FROM UPSTREAM UNDEVELOPED SUB-BASINS. THE POND OUTLETS WILL BE SET 2 FEET ABOVE THE POND BOTTOMS TO PREVENT SEDIMENT FROM ENTERING THE NEW STORM DRAIN AND TO GIVE APS TIME TO PERFORM POND MAINTENANCE AS NEEDED IN THE FUTURE. THE TEMPORARY PONDS WILL RELEASE INTO THE NEW DRAINAGE SYSTEM THAT WILL CONVEY FLOW WEST TO THE EXISTING 'S-1' STRUCTURE AND THE DETENTION POND LOCATED AT THE END OF THE SITE. THE PIPE OUTLETS INSTALLED AT EACH TEMPORARY POND WILL BE SIZED TO HANDLE FUTURE DEVELOPED CONDITIONS FLOW RATES.

SUB-BASIN L9.2A -1- THERE WILL BE NO MAJOR DEVELOPMENT IN THIS SUB-BASIN. THIS SUB-BASIN WILL CONTINUE TO FLOW FROM WEST TO EAST AND CONTINUE TO ACCEPT OFFSITE FLOWS FROM THE NORTH. A TEMPORARY POND WILL BE CONSTRUCTED AT THE EAST END OF THE SUB-BASIN TO COLLECT EXISTING FLOWS THAT WILL BE BLOCKED FROM FOLLOWING EXISTING DRAINAGE PATTERNS BY THE NEW BUS ROAD, AND RELEASE THEM INTO THE NEW PRIVATE DRAINAGE SYSTEM (AP-6). THE POND OUTLET WILL BE SET 2 FEET ABOVE THE POND BOTTOM TO PREVENT SEDIMENT FROM ENTERING THE NEW STORM DRAIN AND TO GIVE APS TIME TO PERFORM POND MAINTENANCE AS NEEDED IN THE FUTURE. THE POND OUTLET WILL BE A 30" STUB-OUT DESIGNED TO HANDLE FUTURE SUB-BASIN DEVELOPMENT. SUB-BASIN L9.2A -2 THERE WILL BE NO MAJOR DEVELOPMENT IN THIS SUB-BASIN. THIS SUB-BASIN WILL CONTINUE TO FLOW FROM WEST TO EAST. A TEMPORARY POND WILL BE CONSTRUCTED AT THE EAST

END OF THE SUB-BASIN TO COLLECT EXISTING FLOWS THAT WILL BE BLOCKED FROM FOLLOWING EXISTING DRAINAGE PATTERNS BY THE NEW BUS ROAD, AND RELEASE THEM INTO THE NEW PRIVATE DRAINAGE

SYSTEM (AP-5). THE POND OUTLET WILL BE SET 2 FEET ABOVE THE POND BOTTOM TO PREVENT SEDIMENT FROM ENTERING THE NEW STORM DRAIN AND TO GIVE APS TIME TO PERFORM POND MAINTENANCE AS NEEDED IN THE FUTURE. THE POND OUTLET WILL BE A 48" STUB-OUT DESIGNED TO HANDLE FUTURE SUB-BASIN DEVELOPMENT. SUB-BASIN L9.2A -3- THERE WILL BE NO MAJOR DEVELOPMENT IN THIS SUB-BASIN. THIS SUB-BASIN WILL CONTINUE TO FLOW FROM WEST TO EAST. A SEDIMENT / COLLECTION POND WILL BE CONSTRUCTED AT THE EAST END OF THE SUB-BASIN TO COLLECT EXISTING FLOWS THAT WILL BE BLOCKED FROM FOLLOWING EXISTING DRAINAGE PATTERNS BY THE NEW BUS ROAD. AND RELEASE THEM INTO THE NEW PRIVATE

DRAINAGE SYSTEM. THE POND OUTLET WILL BE SET 2 FEET ABOVE THE POND BOTTOM TO PREVENT SEDIMENT FROM ENTERING THE NEW STORM DRAIN AND TO GIVE APS TIME TO PERFORM POND MAINTENANCE AS NEEDED IN THE FUTURE. THE POND OUTLET WILL BE AN 18" LINE DESIGNED TO HANDLE EXISTING AND FUTURE SUB-BASIN DEVELOPMENT OR MODIFICATIONS SUB-BASIN L9.2A -4- THERE WILL BE NO MAJOR DEVELOPMENT IN THIS SUB-BASIN. THIS SUB-BASIN WILL CONTINUE TO FLOW FROM WEST TO EAST. A SEDIMENT / COLLECTION POND WILL BE CONSTRUCTED AT THE EAST END OF THE SUB-BASIN TO COLLECT EXISTING FLOWS THAT WILL BE BLOCKED FROM FOLLOWING EXISTING DRAINAGE PATTERNS BY THE NEW BUS ROAD, AND RELEASE THEM INTO THE NEW PRIVATE

DRAINAGE SYSTEM. THE POND OUTLET WILL BE SET 2 FEET ABOVE THE POND BOTTOM TO PREVENT SEDIMENT FROM ENTERING THE NEW STORM DRAIN AND TO GIVE APS TIME TO PERFORM POND MAINTENANCE

AS NEEDED IN THE FUTURE. THE POND OUTLET WILL BE A 24" LINE DESIGNED TO HANDLE EXISTING AND FUTURE SUB-BASIN DEVELOPMENT OR MODIFICATIONS. SUB-BASIN L9.2A -5- THERE IS NO PROPOSED MAJOR DEVELOPMENT FOR THIS BASIN. THIS SUB-BASIN WILL CONTINUE TO DRAIN FROM WEST TO EAST AND INTO THE EXISTING GRADED CHANNEL THAT RUNS ALONG TIERRA PINTADA BLVD NW. THE EXISTING CHANNEL WILL DISCHARGE INTO A NEW INLET STRUCTURE THAT WILL CONNECT TO THE NEW PRIVATE STORM DRAIN SYSTEM LOCATED IN L9.2A-6 (AP-11). THIS BASIN WILL CONTINUE TO ACCEPT FLOWS FROM THE ADJACENT BASIN L7.1A WHICH ALSO CURRENTLY DRAINS TO STRUCTURE S-1. AS PART OF THIS PHASE 1 OF CONSTRUCTION, THERE WILL BE 24" STORM

SUB-BASIN L9.2A -6- THIS SUB-BASIN INCLUDES A SOUTH SECTION OF THE NEW SCHOOL BUILDING, A LARGE PORTION OF THE BUS ACCESS LOOP, STUDENT DROP-OFF, AND FIRE LANES, NEW PAVED PARKING LOTS, AND LANDSCAPING. THE RUNOFF GENERATED BY THIS SUB-BASIN WILL BE COLLECTED BY NEW ROOF DRAINS AND STORM INLETS AND INTRODUCED INTO THE NEW STORM DRAIN SYSTEM AT NUMEROUS LOCATIONS. THE NEW SYSTEM WILL BE SIZED TO HANDLE THE FUTURE DEVELOPED CONDITION OF THE UPSTREAM BASINS. AS DESCRIBED ABOVE, BASIN L9.2A CURRENTLY DISCHARGES TO EXISTING DRAINAGE STRUCTURE S-1 WHICH HAS AN ALLOWABLE DISCHARGE OF 106 CFS WHICH IS MUCH LESS THAN THE DEVELOPED CONDITION AT THIS POINT. AS DESCRIBED BY THE BHI REPORTS, FLOW MUST BE DIVIDED AT THIS LOCATION WITH RUNOFF EXCEEDING 106 CFS BEING DIVERTED TO THE NORTHEAST TO STRUCTURE S-2. IN ORDER TO MEET THIS REQUIREMENT A NEW STORM DRAIN MANHOLE WILL BE CONSTRUCTED TO SPLIT FLOWS BETWEEN THE STRUCTURE S-1 OUTFALL AND THE PROPOSED WATER QUALITY/DETENTION POND IN BASIN L9.2B. TO MEET LEED WATER QUALITY/QUANTITY AND COA FIRST FLUSH REQUIREMENTS, THE OUTLET PIPE TO THE NORTHEAST FROM THE SPLITTER MANHOLE TO THE POND WILL BE SET AT AN ELEVATION BELOW THAT OF THE SECONDARY OUTLET TO STRUCTURE S-1 TO ENSURE THAT THE FIRST FLUSH AND LEED WATER QUALITY VOLUME WILL ALL GO TO THE POND AND THERE WILL ONLY BE A DISCHARGE OF UNTREATED RUNOFF TO STRUCTURE S-1 FOR LARGER EVENTS. IN THIS INTERIM PHASE 1 CONDITION

SUB-BASIN L9.2B - THIS SUB-BASIN WILL CONTAIN A NEW TRACK AND ATHLETIC FIELD AND A NEW DETENTION POND AND WILL CONTINUE TO DRAIN FROM WEST TO EAST. THE NEW DETENTION/WATER QUALITY POND IS DESIGNED TO RETAIN 65,550 CF WHICH IS GREATER THAN THE 49,920 CF GENERATED BY THE PROPOSED 2 YR STORM TO MEET LEED REQUIREMENT SS6.1, AND ALSO EXCEEDS THE 19,800 CF COA FIRST FLUSH REQUIREMENT FOR BOTH PHASE 1 AND THE 53,010 CF REQUIREMENT FOR FULL BUILDOUT. THE POND WILL RECEIVE FLOWS FROM BASINS L9.1B, L9.2A, L7.1A AND L12.19D/20A. THE POND WILL HAVE A RAISED OUTLET WITH A PEAK DISCHARGE OF 101.9 CFS TO EXISTING STRUCTURE S-2 WHICH IS LESS THAN THE ALLOWABLE DISCHARGE RATE OF 215.2 CFS INDICATED IN THE ABOVE REFERENCED DRAINAGE REPORTS.

THE SPLITTER MANHOLE WILL SEND 53.0 CFS (HALF OF THE ALLOWABLE) TO STRUCTURE S-1 AND 94.6 CFS TO THE WATER QUALITY/DETENTION POND.

BASIN L12.19D/20A - THIS BASIN WILL INCLUDE A NEW BASE COURSE ROADWAY AND PARKING LOT FOR NATIONAL PARK ACCESS. THE BASIN WILL CONTINUE TO DRAIN FROM WEST TO EAST AND BE COLLECTED BY A NEW INLET AND BE CONVEYED TO THE WATER QUALITY/DETENTION POND LOCATED IN BASIN L9.2B. RUNOFF WILL NO LONGER FLOW OFF SITE AS REQUIRED BY THE BHI MIREHAVEN REPORT (REFERENCE 5) BASIN UD.4A — THIS BASIN WILL HAVE A NEW BUS ROAD CONSTRUCTED CROSSING THROUGH IT BUT OTHERWISE REMAIN UNAFFECTED BY PHASE 1 CONDITION. THIS BASIN WILL CONTINUE TO DRAIN SOUTH TO ARROYO VISTA BLVD.

BASIN L7.1A - THERE IS NO PROPOSED DEVELOPMENT WITHIN THIS BASIN IN PHASE 1 AND, AND IT WILL CONTINUE TO DRAIN FROM WEST TO EAST INTO AN UNLINED GRADED CHANNEL THAT CONTINUES NORTHEAST INTO SUB-BASIN L-9.2A-5 AND TO AP-11.

IN ADDITION TO THE PROPOSED PHASE 1 ON-SITE APS DEVELOPMENT, THIS PLAN RECOGNIZES THE PROPOSED DEVELOPMENT BY PULTE HOMES INCLUDING PROPOSED MIREHAVEN PARKWAY ALONG THE NORTHEAST SIDE OF THE SITE THAT INCLUDES A STORM DRAIN THAT WILL ALSO DISCHARGE INTO STRUCTURE S-2 WITH A PEAK DEVELOPED FLOW RATE OF 37.7 CFS (SEE REFERENCE 5). THE PROPOSED APS DISCHARGE TO STRUCTURE S-2 WILL ALLOW CONNECTION IN THE FUTURE BY PULTE AND TAKES THIS DISCHARGE INTO ACCOUNT WITH RESPECT TO THE ALLOWABLE DISCHARGE TO STRUCTURE S-2. A STUB WILL BE PROVIDED FOR THIS FUTURE CONNECTION.

VI. CALCULATIONS

THE CALCULATIONS SUMMARIZED HEREON ANALYZE BOTH PHASE 1 AND FUTURE CONDITIONS FOR THE 100-YR, 6-HR STORM EVENT. THE PROGRAM AHYMO HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED AND TO MODEL THE DETENTION POND ROUTING. AS SHOWN BY THE SUMMARY, THERE WILL BE AN INCREASE IN THE PEAK RATE AND VOLUME OF DISCHARGE FROM THE OVERALL SITE ATTRIBUTABLE TO NEW DEVELOPMENT, AND THAT THE FULLY DEVELOPED DISCHARGE RATE WILL NOT EXCEED THE ALLOWABLE DISCHARGE RATES DEFINED IN THE BHI REPORTS AND REFINED BY THE APS NORTHWEST EDUCATION MASTERPLAN. THE AHYMO MODEL IS CONSERVATIVE IN THAT ALL BASINS WERE ADDED TOGETHER WITHOUT ROUTING STORM DRAIN FLOWS, AND ALL BASINS WERE CONSERVATIVELY MODELED WITHOUT TAKING INTO ACCOUNT TIMES OF CONCENTRATION FOR SIZE AND LENGTH. ACTUAL PEAK DISCHARGES ARE EXPECTED TO BE LOWER THAN THOSE MODELED.

PROPOSED PRIVATE STORM DRAIN CAPACITIES SUMMARIZED ON THE TABLES HEREON WERE ANALYZED USING FLOWMASTER V6.0 TO CALCULATE NORMAL DEPTH CAPACITIES USING MANNING'S EQUATION FOR GRAVITY FLOWS. THESE CALCULATIONS ARE CONSERVATIVE AS ALL NONE OF THE SYSTEMS RELY UPON PRESSURE FLOW WHICH TYPICALLY ALLOW FOR HIGHER FLOW RATES. AS DEMONSTRATED BY THE SUMMARY. THE PROPOSED STORM DRAIN SYSTEM HAS ADEQUATE CAPACITY TO CONVEY THE 100-YEAR RUNOFF IN BOTH THE PHASE 1 AND FUTURE CONDITIONS. FLOWMASTER AND AHYMO WERE ALSO USED TO CALCULATE THE CONTROLLED RATE OF DISCHARGE AT STRUCTURES S1 AND S2 IN BOTH THE PHASE 1 AND FUTURE CONDITIONS.

GRATED INLET CAPACITIES WERE CALCULATED USING EQUATION 4-27 FOR GRATE INLETS OPERATING AS AN ORIFICE USING THE METHODOLOGY FROM FHWA-SA-96-078, URBAN DRAINAGE DESIGN MANUAL HYDRAULIC ENGINEERING CIRCULAR NO. 22 (HEC-22). GRATE CAPACITIES WERE DETERMINED USING A CONSERVATIVE CLOGGING FACTOR OF 50%. VII. CONCLUSION

THE ANALYSIS AND EVALUATION CONTAINED HEREIN SUPPORTS THE PHASED DEVELOPMENT OF THE FIRST PHASE OF APS NW EDUCATION CORRIDOR WITH DISCHARGE OF DEVELOPED RUNOFF TO EXISTING DOWNSTREAM PUBLIC DRAINAGE STRUCTURES SIZED FOR THE DEVELOPED DISCHARGE AT RATES LESS THAN ALLOWABLE. THE DEVELOPMENT WILL RESULT IN AN INCREASE IN PEAK RATE AND VOLUME OF RUNOFF FOR THE OVERALL SITE BUT NOT EXCEED THE ALLOWABLE DISCHARGE RATES DETERMINED BY THE BHI AND HMCG REPORTS. C.O.A. FIRST FLUSH REQUIREMENTS WILL BE MET BY PONDING ON SITE.

- I. THE PROPOSED DEVELOPMENT RESULTS IN AN INCREASE IN PEAK DISCHARGE AND VOLUME OF RUNOFF. THE PEAK DISCHARGE RATE DOES NOT EXCEED THE ALLOWABLE DISCHARGE RATE FOR THIS SITE.
- THE FIRST FLUSH REQUIREMENT FOR THE ENTIRE SITE WILL BE MET BY PONDING. SEDIMENT WILL BE CONTROLLED BY VARIOUS PONDING AREA ON SITE.
- THE PROPOSED DEVELOPMENT WILL NOT ADVERSELY AFFECT IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM DRAINAGE CONDITIONS. 6. OFFSITE FLOWS WILL NOT BE BLOCKED OR ALTERED.

Drainag	ge Basin	Hydrologic	Chai	racteristics	Table
	ADEA (AC)	LAND TREATMENTS (COA	D D M	VOLUME OF DUNOFFICE)	DEAK DISCHARCE

RAINAGE BASIN	AREA (AC)	LAND TREATMENTS (COA D.P.M)			D.P.M)	VOLUME OF RUNOFF(CF)	PEAK DISCHARGE (CFS)
	DEVELOPED	DEVELOPED(%)				DEVELOPED	DEVELOPED
	DEVELOPED	Α	В	С	D	100 YR	100 YR
L9.2A-1	17.2	78	22	0	0	32,757	32.3
L9.2A-2	12.6	97	3	0	0	28,706	23.3
L9.2A-3	2.8	70	15	15	0	7,100	5.6
L9.2A-4	6.0	70	15	15	0	15,377	12.1
L9.2A-5	6.7	95	5	0	0	15,333	11.8
L9.2A-6	13.9	0	46	46	8	90,474	54.9
L9.1B-1	2.7	0	47	47	6	16,683	13.1
L9.1B-2	2.7	0	40	40	20	12,327	9.0
L9.1B-3	5.4	0	18	18	64	32,060	20.1
L9.2B	7.7	0	43	42	15	32,409	24.2
L12.9/D20A	2.7	0	43	43	14	10,716	8.1
L7.1A	3.5	-	-	-	-	13,634	5.5
UD.4A	6.1	-	-	-	-	26,441	11.7
L9.1BOFF	29.6	=	=	-	H)	-	57.7
TOTAL	119.5	-	-	ī	-	334,018	289.3

ACCEPTABLE AS-IS.

AS-BUILT SLOPES AND CAPACITIES WERE RECALCULATED BASE

ON THE AS-BUILT CONDITIONS. THREE OF THE STORM DRAINS HAD

AN AS-BUILT CAPACITY LESS THAN THE REQUIRED FLOW FOR THE

FULLY DEVELOPED CONDITION OF THE APS PROPERTY. THESE

THE STORM DRAIN SYSTEM CAPACITY FOR THE SITE WAS DESIG

THAN REQUIRED. THE THIRD PIPE (SD2I) IS STILL I CFS SHORT,

HOWEVER IT IS AT A DOWNSTREAM SEGMENT OF THE SD SYSTEM

MHERE PEAKS WERE CONSERVATIVELY ADDED WITHOUT TIMING A

ROUTING CONSIDERATIONS. WHEN THESE FACTORS ARE TAKEN INTO

ACCOUNT, THE STORM DRAIN WILL FUNCTION AS DESIGNED UNDER

FULLY DEVELOPED CONDITION: Q = 147 CFS REQUIRED

FULLY DEVELOPED CONDITION: Q = 196.4 CFS REQUIRED

FULLY DEVELOPED CONDITION: Q = 225.4 CFS REQUIRED

AS-BUILT CAPACITY: Q=240.4 (MAX DISCHARGE) > 225.4 CFS

AS-BUILT CAPACITY: Q=156.8 (MAX DISCHARGE) > 147 CFS

AS-BUILT CAPACITY: Q= 145.8 (PIPE RUNNING FULL)

AS-BUILT CAPACITY: Q= 181.7 (PIPE RUNNING FULL)

AS-BUILT CAPACITY: Q= 223.4 (PIPE RUNNING FULL)

AS-BUILT CAPACITY: Q=195.6° (MAX DISCHARGE)

GRAVITY FLOW. SEE SUMMARY OF MAX DISCHARGE CALCULATIONS

TO RUN AT FULL DEPTH GRAVITY FLOW TO BE CONSERVATIVE. "WH

THE MAXIMUM PIPE CAPACITY IS CALCULATED AT 94% OF THE PIPI

THREE PIPES (SDIO & SD 41) HAVE A CAPACITY THAT IS GREATER

HEIGHT, THE VALUE IS HIGHER. UNDER THIS CONDITION, TWO OF THI

STORM DRAINS WERE ANALYZED FURTHER AND DETERMINED TO

AS PART OF THE GRADING CERTIFICATION, THE STORM DRAIN SAG GRATE INLET CAPACITIES HEC-22, EQUATION 4-27; $Q = CA(2gd)^{0.5}$ C= 0.67, g=32.2, d=DEPTH (FT), A = CLEAR OPENING AREA

CITY GRATE AREA = 4.56 SF (CLEAR) ASSUME 50% CLOGGED; NET AREA = 2.28 SF; USE 2.28

INLET CAPACITY PER GRATE DEPTH (FT) | FLOW (CFS) 12.3 1.5 15.0 2.0 17.3 2.5 19.4 3.0 4.0 22.0

5.0

CALCULATIONS

AP-1; $Q_{100} = 70.8 \text{ CFS}$ DEPTH = 2.5 FT (WSL 11.5)NEED 70.8/19.4 = 3.65; USE 4 INLETS (QUADRUPLE "D")

24.5

AP-2; $Q_{100} = 9.0 \text{ CFS}$ USE 1 INLET (SINGLE "D")

AP-5; $Q_{100} = 23.3$ CFS DEPTH = 1.5 FT (WSL 08.0)NEED 23.3/15.0 = 1.6; USE 2 INLETS (DOUBLE "D")

AP-6; $Q_{100} = 32.3$ CFS DEPTH = 1.5 FT (WSL 11.0)NEED 32.3/15.0=2.2; USE 3 INLETS (TRIPLE "D")

AP-7; $Q_{100} = 5.8 \text{ CFS}$ USE 1 INLET (SINGLE "D")

AP-8; $Q_{100} = 12.1 \text{ CFS}$ USE 1 INLET (SINGLE "D")

POND INFLOW Q_{100} = 216.9 CFS

-100					
BASIN L9.2B QUINTUPLE INLET STRUCTURE					
WSL ABOVE	QUINTUPLE	WSL ABOVE	48" PIPE		
TOP OF GRATE	GRATE	CENTROID	CAPACITY		
	CAPACITY	OF OUTLET	(ORIFICE		
	(CONTROLLING)	PIPE	EQN)		
DEPTH (FT)	FLOW (CFS)	DEPTH(FT)	FLOW CFS		
1.0	61.5	3.7	116.3		
2.0	86.5	4.7	131.0		
3.0	106	5.7	144		
4.0	110	6.7	156.5		
5.0	122.5	7.7	167.8		

Q₁₀₀ = 101.9 CFS AFTER ROUTING THROUGH POND WITH AHYMO

Note: WSL = 56 at Top of Grate GRATE CAPACITY CONTROLS

POND OUTFLOW:

6 YEARS OF SEDIMENT STORAGE

AVERAGE ANNUAL SEDIMENT YIELD: 0.71 AC-FT/ SQUARE MILE/YEAR L9.2A-1- AREA= 0.02695 SQ MI; 0.71 X 0.02695 = 0.0191 AC-FT/YR OF SEDIMENT SEDIMENT POND RETENTION VOLUME = 0.11 AC-FT (AVERAGE END AREA METHOD)

L9.2A-2- AREA= 0.02071 SQ MI; 0.71 X 0.02071 = 0.0147 AC-FT/YR OF SEDIMENT SEDIMENT POND RETENTION VOLUME = 0.50 AC-FT (AVERAGE END AREA METHOD) 34.0 YEARS OF SEDIMENT STORAGE

L9.2A-3- AREA= 0.00436 SQ MI; 0.71 X 0.00436 = 0.0031 AC-FT/YR OF SEDIMENT SEDIMENT POND RETENTION VOLUME = 0.21 AC-FT (AVERAGE END AREA METHOD) 67.7 YEARS OF SEDIMENT STORAGE

L9.2A-4- AREA= 0.009408 SQ MI; 0.71 X 0.009408 = 0.0067 AC-FT/YR OF SEDIMENT SEDIMENT POND RETENTION VOLUME = 0.36 AC-FT (AVERAGE END AREA METHOD) 53.7 YEARS OF SEDIMENT STORAGE

L9.1B-1-AREA = 0.009408 SQ MI; 0.71 X 0.00422 = 0.0030 AC-FT/YR OF SEDIMENTSEDIMENT POND RETENTION VOLUME = 0.085 AC-FT 2.3 YEARS OF SEDIMENT STORAGE

ENGINEER'S CERTIFICATION - PERMANENT C.O.

PROJECT HAS BEEN CONSTRUCTED, GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 11/17/2016. THE SUPPLEMENTAL RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT WAS OBTAINED 8-21-18 AND 9-25-18 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

THE CERTIFICATION FOR TEMPORARY CERTIFICATE OF OCCUPANCY DATED 06-26-18 IDENTIFIED FIVE ITEMS REQUIRED FOR PERMANENT CERTIFICATE OF OCCUPANCY. THEY HAVE BEEN ADDRESSED AS FOLLOWS: 1) THE TOP OF BERM FOR THE NORTHWEST SEDIMENT/FLOW COLLECTION POND (AP-1) WAS RAISED TO MEET

2)THE EAST END OF THE MAIN DETENTION POND WAS RAISED TO MEET THE DESIGNED FREEBOARD REQUIREMENT OF THIS PROJECT AND THE FUTURE CONDITIONS OF SITE AT DESIGNED.

DESIGNED FREEBOARD REQUIREMENT.



L9.1B OFFSITE - AREA= 0.0463 SQ MI; 0.71 X 0.0463 = 0.033 AC-FT/YR OF SEDIMENT

ENGINEER'S - CERTIFICATION TEMPORARY C.O.

I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM HIGH MESA CONSULTING GROUP HEREBY CERTIFY THAT THIS PROJECT HAS BEEN CONSTRUCTED, GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 11/17/2016 WITH EXCEPTIONS THAT NEED TO BE CORRECTED PRIOR TO ISSUANCE OF PERMANENT CERTIFICATE OF OCCUPANCY. THESE EXCEPTIONS DO NOT IMPACT THE SITE TO THE EXTENT THAT A TEMPORARY CERTIFICATE OF OCCUPANCY SHOULD BE WITHHELD, AND ARE DESCRIBED AND EXPLAINED BY THE

THE FOLLOWING DEVIATIONS WERE NOTED AND WILL REQUIRE CORRECTION PRIOR TO ENGINEER'S FINAL CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY:

1) THE STORM INLET IN THE NORTHWEST SEDIMENT/FLOW COLLECTION POND (AP-1) WAS CONSTRUCTED 0.5 FT HIGHER THAN PLAN. AND THE POND DOES NOT HAVE THE REQUIRED TOP OP BERM/CONTAINMENT ELEVATIONS ON THE EAST SIDE TO CONTAIN A 100-YEAR EVENT WITH THE DESIGNED SAFETY MARGIN/FREEBOARD. AS DEMONSTRATED BY THE ATTACHED ANALYSIS, THE POND WILL BE ABLE TO ACCOMMODATE THE REQUIRED FLOW RATE WITH 0.2 FT OF FREEBOARD (CONSERVATIVELY INCLUDING A 50% CLOGGING FACTOR) IN THE CURRENT CONDITION AND DOES NOT PRESENT AN IMMINENT HAZARD THAT WOULD PRECLUDE TEMPORARY CERTIFICATION. THE FREEBOARD CONDITION AND/OR THE GRATE ELEVATION MUST BE CORRECTED AND VERIFIED PRIOR TO FINAL CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY. SEE SHEET CG-102 AND ATTACHED SUPPORTING INFORMATION.

2) THE MAIN DETENTION POND LOCATED AT THE EAST END OF THE SITE DOES NOT HAVE THE REQUIRED TOP OF BERM/CONTAINMENT ELEVATIONS ON THE EAST SIDE TO CONTAIN THE FUTURE CONDITIONS 100-YEAR EVENT WITH THE DESIGNED SAFETY MARGIN/FREEBOARD. AS DEMONSTRATED BY THE ATTACHED ANALYSIS, THE POND WILL BE ABLE TO ACCOMMODATE THE REQUIRED FLOW RATE WITH 1.4 FT OF FREEBOARD (CONSERVATIVELY INCLUDING A 50% CLOGGING FACTOR) IN THE CURRENT (INTERIM) CONDITION AND DOES NOT PRESENT AN IMMINENT HAZARD THAT WOULD PRECLUDE TEMPORARY CERTIFICATION. THE FREEBOARD CONDITION AND/OR THE GRATE ELEVATION MUST BE CORRECTED AND VERIFIED PRIOR TO FINAL CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY. SEE SHEET CG-103 AND ATTACHED SUPPORTING INFORMATION.

3) THE NEW GRATED LID MANHOLE LOCATED AT THE POND OUTFALL STORM DRAIN CONNECTION TO THE PRE-EXISTING OUTLET PIPE WAS CONSTRUCTED 1 FT BELOW THE DESIGN ELEVATION. THE INTENT WAS TO HAVE THE RIM SET 1 FT ABOVE GRADE TO ALLOW FOR SEDIMENT COLLECTION AROUND THE MANHOLE WITHOUT ALLOWING SEDIMENT TO ENTER THE GRATE. IN LIEU OF RAISING THE RIM, THE SURROUNDING GRADE SHALL BE CUT DOWN TO MEET THE INTENT. THIS CONDITION MUST BE CORRECTED AND VERIFIED PRIOR TO FINAL CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY.

4) THE EAST PLAY FIELD WAS UNDER CONSTRUCTION AT THE TIME OF CERTIFICATION AND NEEDS TO BE COMPLETED AND VERIFIED PRIOR TO FINAL CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY. SEE SHEET CG-103.

5) THE STORM INLET IN THE SOUTHWEST SEDIMENT/FLOW COLLECTION POND WAS CONSTRUCTED 1.1 FT HIGHER THAN PLAN (IT SHOULD BE NOTED THAT A 0.5 FT INCREASE WAS AUTHORIZED DURING CONSTRUCTION), AND THE POND DOES NOT HAVE THE REQUIRED TOP OF POND ELEVATIONS ON THE EAST SIDE TO CONTAIN A 100-YEAR EVENT. THE POND WILL ACCOMMODATE THE REQUIRED FLOW RATE WITH 0.2 FT OF FREEBOARD AND A CLOGGING FACTOR OF 50%. AND DOES NOT PRESENT AN IMMINENT HAZARD THAT WOULD PRECLUDE TEMPORARY CERTIFICATION. THIS CONDITION MUST BE CORRECTED AND VERIFIED PRIOR TO FINAL CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY. SEE SHEET CG-104 AND ATTACHED SUPPORTING INFORMATION.

UPON CORRECTION OF THE PRECEDING ITEMS. A FOLLOW UP VERIFICATION AND CERTIFICATION WILL BE PROVIDED FOR PERMANENT CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT WAS OBTAINED 05/30/18 TO 06/05/18 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 TEMPORARY CERTIFICATE OF OCCUPANCY FOR THE SITE AND DOES NOT REPRESENT A CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY.

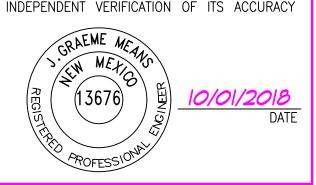
THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THIS CERTIFICATION DOES NOT ADDRESS ADA COMPLIANCE WHICH IS BEYOND THE SCOPE OF GRADING AND DRAINAGE. THOSE RELYING ON THIS RECORD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





3)THE SEDIMENT POND BOTTOM AROUND THE NEW GRATED LID MANHOLE LOCATED AT THE POND OUTFALL STORM DRAIN CONNECTION TO THE PRE-EXISTING OUTLET PIPE WAS LOWERED TO ALLOW FOR SEDIMENT COLLECTION AS DESIGNED. 4) THE EAST PLAY FIELD CONSTRUCTION THAT WAS IN PROGRESS DURING PREVIOUS CERTIFICATION HAS BEEN

5)THE TOP OF BERM IN THE SOUTHWEST SEDIMENT/FLOW COLLECTION POND WAS RAISED TO MEET THE



I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM HIGH MESA CONSULTING GROUP HEREBY CERTIFY THAT THIS SUBMITTED TO SUPPORT A PERMANENT CERTIFICATE OF OCCUPANCY.

THE DESIGNED FREEBOARD REQUIREMENT.

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.



EXISTING FLOWLINE PROPOSED FLOWLINE EXISTING CONTOUR *- -* 5195*-- -*

LEGEND

ASPH

C/PM

CONC

MED

SD/PM

SD/FRD

 $\mathsf{X}\mathsf{-WALK}$

SD# DIAMETER(IN) SLOPE(FT/FT) CAPACITY(CFS) Q_{100 YR*} Q_{100 YR*}

0.018

0.013

0.008

0.042

0.026

0.052

0.086

24.9

64.1

64.1

85.0

N/A

85.0

1.0

1.7

99.9

1.1

13.0

147.6

10.6

94.6

101.9 (

107.9

196.4

204.8

1 1

WATER AIR RELEASE VALVE

CONCRETE MEDIAN CURB AND GUTTER

COMMUNICATION BY PAINT MARK

BARBED WIRE FENCE

COMMUNICATION BOX

CONCRETE DRIVE PAD

COMMUNICATIONS MANHOLE

COMMUNICATIONS PULLBOX

CONCRETE SIDEWALK

DUCTILE IRON PIPE

EDGE OF ASPHALT

ELECTRIC CABINET

ELECTRIC METER

ELECTRIC PANEL

FIRE HYDRANT

FLOWLINE

GAS SERVICE

GAS VALVE

MEDIAN

MANHOLE

METAL POLE

METAL SIGN

RIVER ROCK SANITARY SEWER

STORM DRAIN

SILT FENCE

ELECTRIC PULLBOX

GAS BY PAINT MARK

GAS LOCATION MARKER

HIGH DENSITY POLYETHLENE

IRRIGATION CONTROL TIMER

IRRIGATION CONTROL VALVE

INVERT ELEVATION

LANDSCAPE DIVIDER

METAL LIGHT POLE

PAINTED ISLAND

IRRIGATION VALVE BOX

PATTERNED CONCRETE

REINFORCED CONCRETE PIPE

STORM DRAIN BY PAINT MARK

STD C&G CONCRETE STANDARD CURB AND GUTTER

STORM DRAIN BY RECORD DRAWING

SANITARY SEWER FROM RECORD DRAWING

POLYVINYL CHLORIDE

STORM DRAIN INLET

SINGLE WHITE STRIPE

TOP OF ASPHALT

TOP OF CONCRETE

WHEELCHAIR RAMP

WATERLINE HOTBOX

PAINTED CROSSWALK

PAINTED UTILITY MARKER

SMALL DECIDUOUS TREE

SMALL CONIFEROUS TREE

LANDSCAPE ROCK/BOULDER

EXISTING SPOT ELEVATION

TOP OF CURB

TOP OF GRATE TRAFFIC LIGHT

TRAFFIC SIGN

WATERI INF

WATER VAULT WATER VALVE BOX

SMALL SHRUB

TOP OF CURB

TOP OF GRATE

YUCCA

TRAFFIC BY PAINT MARK

TRAFFIC CONTROL CABINET

WATERLINE BY PAINT MARK

WATERLINE BY RECORD DRAWING

ELECTRIC TRANSFORMER

ELECTRIC BOX

DASHED WHITE STRIPE

ELECTRIC BY PAINT MARK

COMMUNICATIONS RISER

CHAINLINK FENCE

CONCRETE

COMMUNICATION

ASPHALT

——90— Proposed contour EXISTING DIRECTION OF FLOW PROPOSED DIRECTION OF FLOW —————— RIGHT OF WAY LINI

– — — PUBLIC EASEMENT LINE --+-- HIGH POINT / DIVIDE EXISTING STORM DRAIN MANHOLE EXISTING FIRE HYDRANT

PROPOSED FIRE HYDRANT EXISTING SANITARY SEWER MAN HOLE EXISTING VALVE BOX PROPOSED VALVE BOX

EXISTING DOUBLE CLEANOUT PROPOSED DOUBLE CLEANOUT EXISTING SINGLE CLEANOUT PROPOSED SINGLE CLEANOUT EXISTING WATER SERVICE

PROPOSED WATER SERVICE EXISTING WATER LINE ---SAS--- **EXISTING SANITARY SEWER LINE** PROPOSED SANITARY SEWER LINE

----F----EXISTING FIRE LINE PROPOSED FIRE LINE ---₽ं4----EXISTING POST INDICATOR VALVE PROPOSED POST INDICATOR VALVE

PROPOSED CONCRETE PROPOSED AGGREGATE BASE COURSE

PROPOSED ASPHALT PAVING

PROPOSED COBBLES

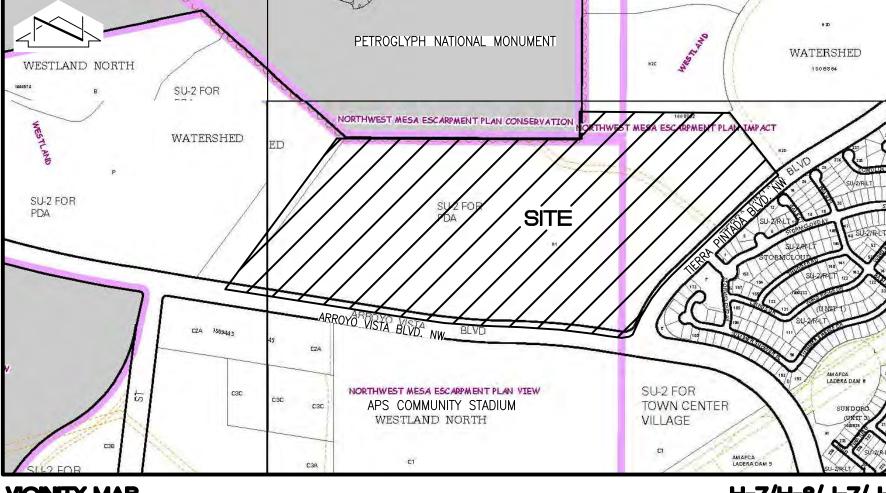
SHEET DESCRIPTION

DRAINAGE PLAN, CALCULATIONS, VICINITY MAP AND GENERAL NOTES CS-101 BUILDING LOCATION PLAN CG-101 OVERALL GRADING SITE PLAN CG-102 GRADING PLAN NW CG-103 GRADING PLAN NE CG-104 GRADING PLAN SW

INDEX OF DRAWINGS

CG-105 GRADING PLAN SE CP-101 PAVING PLAN NORTH CP-102 PAVING PLAN SOUTH CU-101 WATER. SANITARY SEWER AND NATURAL GAS SITE PLAN

CG-301 GRADING AND DRAINAGE SECTIONS AND DETAILS CP-301 PAVING SECTIONS AND DETAILS CU-301 WATER AND SANITARY SEWER SECTIONS AND



H-7/H-8/J-7/J-8 VICINITY MAP COINCIDENT WIT CORPORATE LIMITS LAND GRANT PETR H NATIONAL MONUMENT Bernalillo County ZEVIOED **Unincorporated Areas**

LEGAL DESCRIPTION

TRACT N-1, WATERSHED SUBDIVISION, ALBUQUERQUE, NEW MEXICO

BENCHMARKS

PROJECT BENCHMARK

USC&GS SURVEY CONTROL BRASS DISC STAMPED "REWARD 1969", SET IN A CONCRETE POST 0.3 FEET ABOVE GROUND APPROXIMATELY 600 FEET NORTHWEST OF THE I-40 AND 98TH STREET N.W. INTERCHANGE ELEVATION = 5319.688 FEET (NAVD 1988)

TEMPORARY BENCHMARK #1 (T.B.M.) A #5 REBAR WITH CAP STAMPED "HMCG CONTROL NMPS 11184" SET IN DIRT JUST SOUTH OF A JUNCTION OF FOUR DIRT ROADS NEAR THE NORTHERN BOUNDARY, AS

SHOWN ON SHEET CG-101 ELEVATION = 5465.52 FEET (NAVD 1988)TEMPORARY BENCHMARK #2 (T.B.M.)

OF PAVEMENT ON ARROYO VISTA BLVD. NW, NOT SHOWN. ELEVATION = 5484.66 FEET (NAVD 1988)

TEMPORARY BENCHMARK #3 (T.B.M.) A #5 REBAR WITH CAP STAMPED "HMCG CONTROL NMPS 11184" SET IN DIRT AT THE NORTHWEST INTERSECTION OF ARROYO VISTA BLVD. NW AND TIERRA PINTADA BLVD. NW. AS SHOWN ON SHEET CG-101, CP-101, AND CP-102.

A MAG NAIL IN JOINT ON NORTHERN TOP OF CONCRETE CURB NEAR THE WEST END

GENERAL NOTES:

ELEVATION = 5376.19 FEET (NAVD 1988)

ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - 1987, PUBLISHED BY THE NEW MEXICO CHAPTER AMERICAN PUBLIC WORKS ASSOCIATION. (REVISED 12/06) TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC SCHOOLS.

UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, CITY OF ALBUQUERQUE AND ABCWUA DISTRIBUTION MAPS, SCHOOL FILES OF THE ALBUQUERQUE PUBLIC SCHOOLS FACILITIES, DESIGN AND CONSTRUCTION, AND UTILITY LINE—SPOTS PROVIDED BY ONPOINT UTILITY LOCATING SERVICES, FIELD DESIGNATION REPORT DATED 05-05-2015. IN ADDITION, UTILITY LINE-SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NOS. 2015191272, 2015191283 AND 2015191289). 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 B OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH I, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NO BE ĆOMPLETE, THEREFORE. MAKES NO REPRESENTATIÓN PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THÉREFORE. TH CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE. PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA O THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRAĆTOR IS FÚLLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY I 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. SHOULD A CONFLICT EXIST BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY FOR ALL PARTIES. 5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION.

ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. 8. 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. CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO ENSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE ENGINEER. WHEN A CHANGE IS MADE IN THE FINISHED LEVATION OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED

. ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, LATEST EDITION. . IF THE REMOVAL OF EXISTING CURB AND GUTTER, SIDEWALK, AND/OR PAVING IS REQUIRED, THE CONTRACTOR SHALL SAWCUT AND/OR REMOVE I THE NEAREST JOINT. WHEN ABUTTING NEW PAVEMENT TO EXISTING, THE CONTRACTOR SHALL CUT BACK THE EXISTING PAVING TO A STRAIGHT LINE IN ORDER TO REMOVE ANY BROKEN OR CRACKED PAVEMENT. CURB AND GUTTER AND/OR PAVEMENT SHOWN AS EXISTING AND NOT TO BE REMOVED UNDER THIS CONTRACT AND WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL (CONTAMINATED OR OTHERWISE), ASPHALTIC PAVING, CONCRETE PAVING, ETC. SHALL BE

OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE. . A BORROW SITE FOR IMPORT MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A BORROW SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE. 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY OBTAINING THE REQUIRED COMPACTION. THE CONTRACTOR SHALL SELECT AND US METHODS WHICH SHALL NOT BE INJURIOUS OR DAMAGING TO THE EXISTING FACILITIES AND STRUCTURES WHICH SURROUND THE WORK AREAS. . THE CONTRACTOR SHALL CONFINE HIS WORK WITHIN THE CONSTRUCTION LIMITS IN ORDER TO PRESERVE THE EXISTING IMPROVEMENTS AND SO AS

NOT TO INTERFERE WITH THE OPERATIONS OF THE EXISTING FACILITIES. 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND/OR INSTALL PIPE SO AS TO NOT EXCEED RIGHT—OF—WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES OR IMPROVEMENTS. THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE. 18. ALL DIMENSIONS AND RADII OF CURB, CURB RETURNS, AND WALLS ARE SHOWN TO THE FACE OF CURB AND/OR WALL.

19. THE CONTRACTOR SHALL NOTIFY THE OWNER 48 HOURS PRIOR TO STRIPING SO THAT LAYOUT CAN BE VERIFIED O. 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. . WHEN APPLICABLE, CONTRACTOR SHALL SECURE, ON BEHALF OF THE OWNER AND OPERATORS, "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.

HYDROCARBONS OR OTHER CHEMICAL CONTAMINANTS. 3. ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% ASTM D-1557 UNLESS A GREATER COMPACTION REQUIREMENT IS OTHERWISE SPECIFIED. 24. CAUTION: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P-EXCAVATIONS.

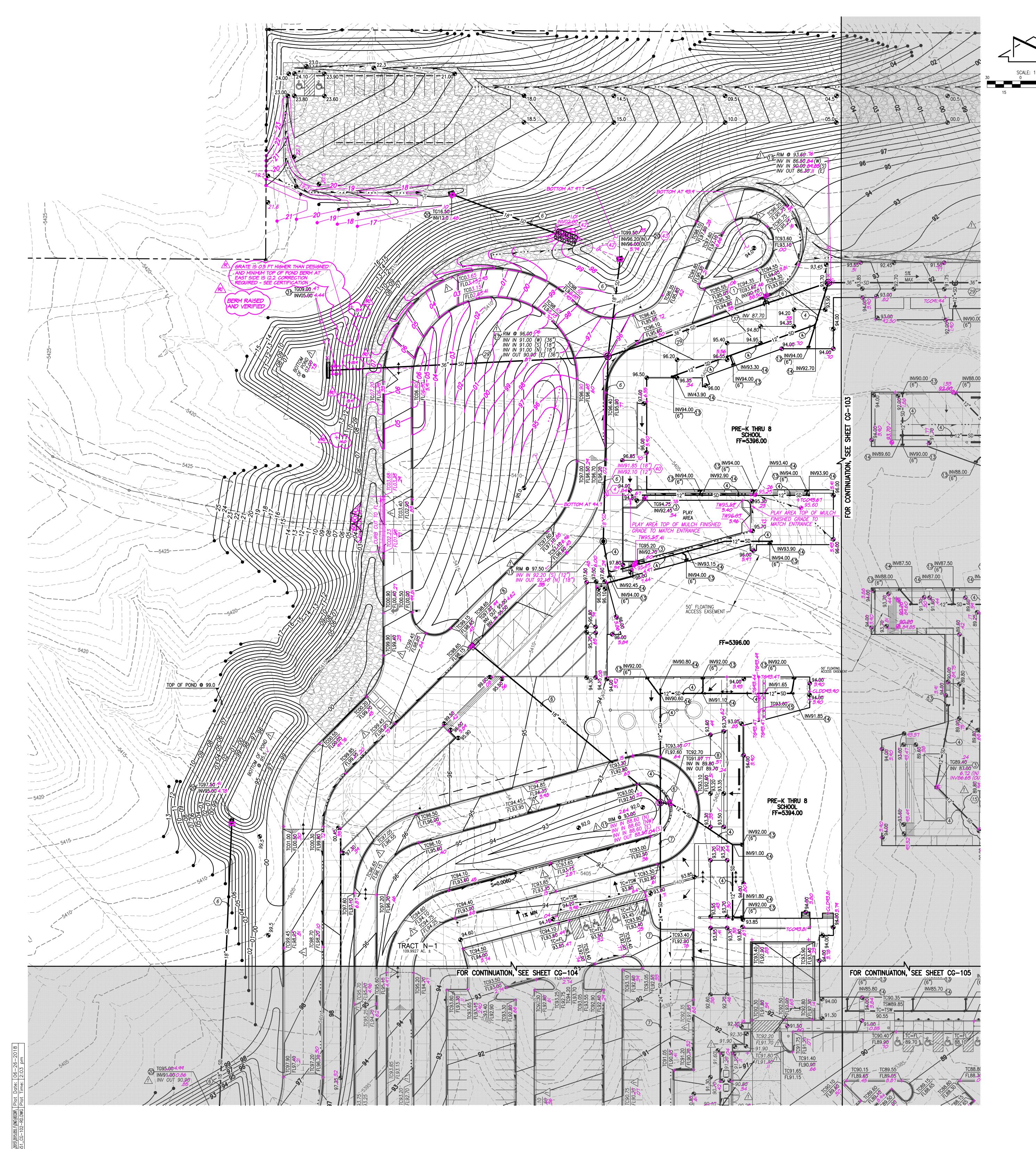
. ALL FILL SHALL BE CLEAN, FREE FROM VEGETATION, DEBRIS, AND OTHER DELETERIOUS MATERIALS, AND SHALL NOT BE CONTAMINATED WITH



DRAINAGE PLAN, CALCULATIONS 2015.055.1 VICINITY MAP, AND GENERAL NOTES



• 6010-B MIDWAY PARK BLVD. NE



KEYED NOTES (APPLY TO SHEETS $CG-10\dot{2} - CG-105)$

(1) CONSTRUCT SINGLE "C" INLET PER STD DWG 2205, SHEET CG-301 CONSTRUCT TRENCH DRAIN PER TYPICAL SECTION & DETAILS, SHEET CG-301 CONSTRUCT 24" STORM INLET PER TYPICAL SECTION, SHEET CG-301 INSTALL 12" HDPE (SMOOTH INTERIOR) STORM DRAIN CONSTRUCT SINGLE "D" STORM INLET PER STD DWG 2206, SHEET CG-301 INSTALL 18" HDPE (SMOOTH DIAMETER) STORM DRAIN INSTALL 24" HDPE (SMOOTH DIAMETER) STORM DRAIN

CONSTRUCT SINGLE "A" STORM INLET PER STD DWG 2201, SHEET CG-301 INSTALL STRAW BARRIER PER TYPICAL SECTION AND DETAIL, SHEET CG-301 (10) CONSTRUCT DOUBLE "C" STORM INLET PER STD DWG 2205, SHEET CG-301

SHEET CG-301 (12) NOT USED (13) CONNECT SITE DRAIN TO BUILDING ROOF DRAIN, SIZE AND INVERT AS NOTED.

(1) CONSTRUCT 4' DIA STORM DRAIN MANHOLE PER STD DWG 2101,

REFER TO PLUMBING PLANS FOR CONTINUATION AND VERIFY CONNECTION POINT PRIOR TO INSTALLATION OF SITE LINES. 14 INSTALL COMBINATION BEND/WYE WITH SINGLE CLEANOUT TO GRADE WITH CONCRETE PAD PER DETAIL, SHEET CU-301

(15) CONNECT TRENCH DRAIN TO SITE DRAIN. (16) INSTALL 30" HDPE (SMOOTH INTERIOR) STORM DRAIN

17 INSTALL 6' DIAMETER STORM DRAIN MANHOLE PER STD DWG 2101, SHEET CG-301 (18) CONSTRUCT PARKING LOT RUNDOWN PER TYPICAL SECTION, SHEET CP-301.

20) CONSTRUCT SINGLE "D" INLET PER STD DWG 2205, SHEET CG-301 21) CONSTRUCT TRIPLE "D" INLET PER STD DWG 2205, SHEET CG-301

2) INSTALL 10' LONG 24" HDPE STUB WITH CAP 23 Install 36" Prefabricated HDPE end Section.

(24) INSTALL 42" HDPE (SMOOTH INTERIOR) STORM DRAIN

NINSTALL 18' LONG \times 10' WIDE WIRE TIED RIP—RAP APRON (18" THICK, TYPE M) PER RIP—RAP ENERGY DISSIPATOR, SHEET CG-301(26) CONSTRUCT 6" DIAMETER PVC REVERSE INCLINE PORTS ON TRIPLE "D"

INLET PER TYPICAL DETAIL, SHEET CG-301 (27) INSTALL 48" HDPE (SMOOTH INTERIOR) STORM DRAIN 28 INSTALL 48" PREFABRICATED HDPE END SECTION. INSTALL 36" HDPE (SMOOTH INTERIOR) STORM DRAIN

ONSTRUCT DOUBLE "D" INLET PER STD DWG 2205, SHEET CG-301 CONSTRUCT QUADRUPLE "D" INLET PER STD DWG 2205, SHEET CG-301

INSTALL 18" TO 48" HDPE TEE INSTALL 10' HDPE STUBOUT, S=0.0080 (34) INSTALL 48"x24" HDPE TEE

(19) INSTALL 12"x36" HDPE TEE

(35) CONSTRUCT 8' DIAMETER STORM DRAIN MANHOLE PER STD. DWG. 2101,

(36) CONSTRUCT QUINTUPLE "D" INLET PER STD DWG 2205, SHEET CG-301 INSTALL 18" x 36" HDPE TEE

INSTALL 15' LONG x10' WIDE WIRE TIED RIP—RAP APRON (18" THICK, TYPE M) PER NMAPWA STD DWG 2270. $1 \sqrt{39}$ REFUSE AREA DRAIN TO SANITARY SYSTEM, SEE SHEET CU-101

(40) INSTALL 12"x18" HDPE TEE

(42) REMOVE AND DISPOSE OF EXISTING 18" STORM DRAIN LINE.

(43) FILL EXISTING 18" (IN) STORM DRAIN OPENING WITH CONCRETE.

CONSTRUCTION NOTES:

. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC

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.

. 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. . ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN

ACCORDANCE WITH APPLICABLE NMAPWA STANDARDS AND PROCEDURES. 5. UTILITY INFORMATION SHOWN HEREON S BASED UPON ONSITE SURFACE EVIDENCE CITY OF ALBUQUERQUE AND ABCWUA DISTRIBUTION MAPS, SCHOOL FILES OF THE ALBUQUERQUE PUBLIC SCHOOLS FACILITIES, DESIGN AND CONSTRUCTION, AND UTILITY LINE—SPOTS PROVIDED BY ONPOINT UTILITY LOCATING SERVICES, FIEL DESIGNATION REPORT DATED 05-05-2015. IN ADDITION, UTILITY LINE-SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NOS. 2015191272 2015191283 AND 2015191289). UTILITY LINES THAT APPEAR ON THESE DRAWINGS 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 THEREFORE. 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 OF THESE LINES AND FACILITIES. S. 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. GRADES SHOWN HEREON ARE FINISHED GRADES AFTER INSTALLATION OF LANDSCAPING AND GRAVEL OR MULCH. REFER TO LANDSCAPING PLANS FOR DEPTHS TO SOIL SUBGRADE IN LANDSCAPED AREAS. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT. 8. BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.

9. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

10. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS

EROSION & SEDIMENT

SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

CONTROL MEASURES: . THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES 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

3. SPOILS FROM THE PROJECT SHALL NOT BE DEPOSITED OR STORED IN THE STREET OR ROADWAY. 4. SPOILS SHALL BE STAGED ON THE UPSTREAM SIDE OF TRENCHES WHEN

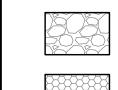
TRENCHING IS REQUIRED. . THE CONTRACTOR SHALL CLEAN AND REMOVE ALL FUGITIVE DUST, SOIL AND DEBRIS RESULTING FROM THIS PROJECT FROM THE STREET AT THE END OF EACH DAY

3. CONTRACTOR SHALL LEAVE THE AREA IMMEDIATELY BEHIND THE CURB DEPRESSED TO CONTAIN NUISANCE FLOWS AND SEDIMENT. . CONCRETE TRUCKS SHALL BE SENT BACK TO THE PLANT FOR WASHING; THE WASHING OF CONCRETE TRUCKS SHALL NOT BE PERMITTED WITHIN THE PUBLIC

8. 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. 9. UNLESS FINAL STABILIZATION IS OTHERWISE PROVIDED FOR, ANY AREAS OF EXCESS

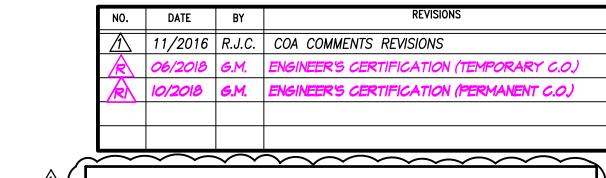
DISTURBANCE (TRAFFIC ACCESS, STORAGE YARD, EXCAVATED MATERIAL, ETC.) SHALL BE RE—SEEDED ACCORDING TO CITY OF ALBUQUERQUE SPECIFICATION 1012 "MISCELLANEOUS SEEDING". THIS WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE. 10.PROTECT EXISTING STORM DRAIN FACILITIES FROM SEDIMENT AS REQUIRED.

LEGEND



PROPOSED AGGREGATE BASE COURSE

PROPOSED 2"-4" BASALT COBBLES (BY APS LANDSCAPE CONTRACTOR, N.I.C.)



SURVEY NOTE:

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY.
THE BOUNDARY, TOPOGRAPHIC & UTILITY SURVEY INFORMATION DEPICTED BY
THIS PLAN IS BASED UPON THE BOUNDARY, TOPOGRAPHIC AND UTILITY
SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED
01/08/2016 (2014.181.9). ITALICIZED BOUNDARY INFORMATION DEPICTED BY
THIS PLAN IS BASED UPON PLAT OF PULTE @ MIREHAVEN PHASE 2A
PREPARED BY BOHANNAN HUSTON, NMPS 16469, RECORDED 05/20/2016



2017.181.8 2015.055.1

GRADING PLAN NW

912 ROMA AVE NW | ALBUQUERQUE, NM 87102 P | 505.764.8306 F | 505.764.2879

RECORD DRAWING LEGEND

RECORD INFORMATION (VERIFIED BY ENGINEER,

RECORD INFORMATION FROM AS-BUILT SURVEY RECORD INFORMATION FROM AS-BUILT SURVEY

RECORD INFORMATION FROM AS-BUILT SURVEY

RECORD DRAWING

FOR CERTIFICATION, SEE SHEET C-001

----97 --- FIELD DESIGN GRADING MODIFICATIONS (NOT AS-BUILT SURVEY DATA)

