

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

March 17, 2020

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

**RE: COA Palo Duro Senior Fitness Center Addition
3351 Monroe St. NE
Grading & Drainage Plan
Engineer's Stamp Date: 02/21/20
Hydrology File: G17D019B**

Dear Mr. Means:

PO Box 1293

Based upon the information provided in your submittal received 02/21/2020, the Grading & Drainage Plan is approved for Building Permit.

Albuquerque

Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter. Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

NM 87103

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

www.cabq.gov

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

Sincerely,

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

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS DRAINAGE PLAN ADDRESSES THE DRAINAGE CONCEPTS AND IMPROVEMENTS PROPOSED FOR THE NEW BUILDING ADDITION, INCLUDING THE PROPOSED ONSITE STORMWATER WATER HARVESTING AREA POND DESIGNED TO CAPTURE THE FIRST FLUSH STORM EVENT FROM THE DEVELOPED 100-YEAR 24-HOUR STORM EVENT DISCHARGE. THIS PLAN IS SUBMITTED IN SUPPORT OF BUILDING PERMIT APPROVAL BY THE CITY OF ALBUQUERQUE.

II. PROJECT DESCRIPTION

THE EXISTING PROJECT SITE CURRENTLY EXHIBITS FREE DISCHARGE TO THE PAVED ROADWAY IMMEDIATELY TO THE EAST; STORMWATER RUNOFF WITHIN THIS ROADWAY DRAINS NORTH AND WEST TO ULTIMATELY OUTFALL TO COMANCHE ROAD NE. THE PROPOSED IMPROVEMENTS WILL PROVIDE ONSITE WATER HARVESTING TO CAPTURE AND MANAGE THE FIRST FLUSH RUNOFF FROM THE NEW DEVELOPED IMPROVEMENTS.

III. BACKGROUND DOCUMENTS & RESEARCH

- PARTIAL TOPOGRAPHIC AND UTILITY SURVEYS PREPARED BY HIGH MESA CONSULTING GROUP (NMPS 15075) DATED 04/25/2019. THIS REFERENCED SURVEY PROVIDES THE BASIS FOR THE EXISTING CONDITIONS OF THE SITE.
- 2004 PALO DURO SENIOR FITNESS CENTER GRADING AND DRAINAGE PLAN PREPARED BY JEFF MORTENSEN AND ASSOCIATES, NMPE 8547 DATED 01-29-2004 AND CERTIFIED 03-27-2005. THE 2004 PLAN WAS PREPARED FOR THE ORIGINAL SENIOR FITNESS CENTER BUILDING CONSTRUCTION. PER THE 2004 PLAN, THE PALO DURO SENIOR FITNESS CENTER IS ALLOWED FREE DISCHARGE OF RUNOFF TO THE SURROUNDING FULLY DEVELOPED MCKINLEY MIDDLE SCHOOL SITE, WITH ULTIMATE OUTFALL TO COMANCHE ROAD NE. NO PONDING WAS REQUIRED IN THE 2004 PLAN.
- MASTER DRAINAGE PLAN FOR THE MCKINLEY COMMUNITY CENTER PREPARED BY BORDENAVE DESIGNS, NMPE 5110 DATED 03-20-1997 WHICH ADDRESSED PHASING FOR THE COMMUNITY CENTER AND ITS APPURTENANCES. PER THE 1997 PLAN, THE PALO DURO SENIOR FITNESS CENTER IS LOCATED IN BASIN C OF THE 1997 MASTER PLAN, RUNOFF GENERATED BY THIS BASIN DRAINS WEST AND NORTH THROUGH THE MCKINLEY MIDDLE SCHOOL SITE TO ULTIMATELY FREE DISCHARGE TO COMANCHE ROAD NE. NO PONDING WAS PROPOSED IN ANY OF THE PHASES INDICATED BY THE 1997 PLAN.

IV. EXISTING CONDITIONS

THERE ARE NO EXISTING OFFSITE FLOWS IMPACTING THE PROJECT SITE. THE SURROUNDING DEVELOPED IMPROVEMENTS ARE GENERALLY TOPOGRAPHICALLY EQUAL OR LOWER THAN THE PROJECT SITE, AND THUS DO NOT CONTRIBUTE OFFSITE FLOWS.

V. DEVELOPED CONDITIONS

THE PROPOSED DETENTION POND WILL BE SIZED (6,400 CF) TO CAPTURE AND RETAIN IN EXCESS OF THE INCREASE IN DEVELOPED 24-HOUR, 100-YEAR STORMWATER RUNOFF VOLUME GENERATED BY THE NEW PHASE 1 SITE IMPROVEMENTS (4,650 CF). THIS DETENTION POND VOLUME EXCEEDS THE 4,500 CF REQUIRED VOLUME FROM THE 1985 TERRAIN MANAGEMENT PLAN. AN OVERFLOW SPILLWAY WILL RELEASE ANY REMAINING RUNOFF IN EXCESS OF THE STORAGE CAPACITY AND DISCHARGE TO THE HISTORIC OUTFALL OF PARAGON ROAD TO THE SOUTH. THESE IMPROVEMENTS WILL ELIMINATE THE DISCHARGE OF DEVELOPED RUNOFF FROM THE PROJECT SITE ONTO THE SITE TO THE WEST.

AS NOTED IN THE EXISTING CONDITIONS, THERE ARE NO OFFSITE FLOWS THAT IMPACT THE PROJECT SITE; THE PROPOSED IMPROVEMENTS WILL NOT CHANGE THIS CONDITION.

VI. CALCULATIONS

VIII. CONCLUSIONS

1. THIS DRAINAGE PLAN ADDRESSES THE DEVELOPED IMPROVEMENTS FOR THE NEW BUILDING ADDITION AND THE ASSOCIATED PAVED AND LANDSCAPED IMPROVEMENTS WITHIN AN EXISTING FULLY DEVELOPED INFILL AREA.
2. THE PROPOSED IMPROVEMENTS WILL RESULT IN A MINIMAL INCREASE IN THE PEAK RATE OF RUNOFF (0.1 CFS) AND VOLUME GENERATED (210 CF) BY THE PROJECT SITE DUE TO THE INCREASE IN IMPERVIOUS LAND TREATMENT.
3. A NEW STORMWATER QUALITY WATER HARVESTING AREA IS PROPOSED BY THIS PROJECT. THIS WATER HARVESTING AREA WILL BE SIZED (120 CF) TO CAPTURE AND MANAGE THE 80 CF OF FIRST FLUSH STORMWATER GENERATED BY THE NEW BUILDING AND ASSOCIATED IMPERVIOUS IMPROVEMENTS.
4. THE PROPOSED DEVELOPMENT WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM FLOW CONDITIONS. PROPOSED GRADING AND DRAINAGE IMPROVEMENTS WILL CONVEY ANY OVERFLOW FROM THE STORMWATER QUALITY WATER HARVESTING AREA NORTHEAST TO THE PRIVATE PAVED ROAD OUTFALL VIA A NEW SIDEWALK CULVERT. RUNOFF WILL CONTINUE TO DRAIN THROUGH THE MCKINLEY MIDDLE SCHOOL PROPERTY TO ULTIMATELY OUTFALL TO COMANCHE ROAD NE.

I. SITE CHARACTERISTICS

EXISTING LAND TREATMENT				DEVELOPED LAND TREATMENT			
BASIN: EXIST				BASIN: PHASE 1			
2,840 SF				2,840 SF			
0.07 AC				0.07 AC			
LAND TREATMENT	AREA (SF/AC)	%		LAND TREATMENT	AREA (SF/AC)	%	
A				A			
B				B			
C	2,560 SF 0.06 AC	90%		C			
D	280 SF 0.01 AC	10%		D	2,840 SF 0.07 AC	100%	

II. HYDROLOGY

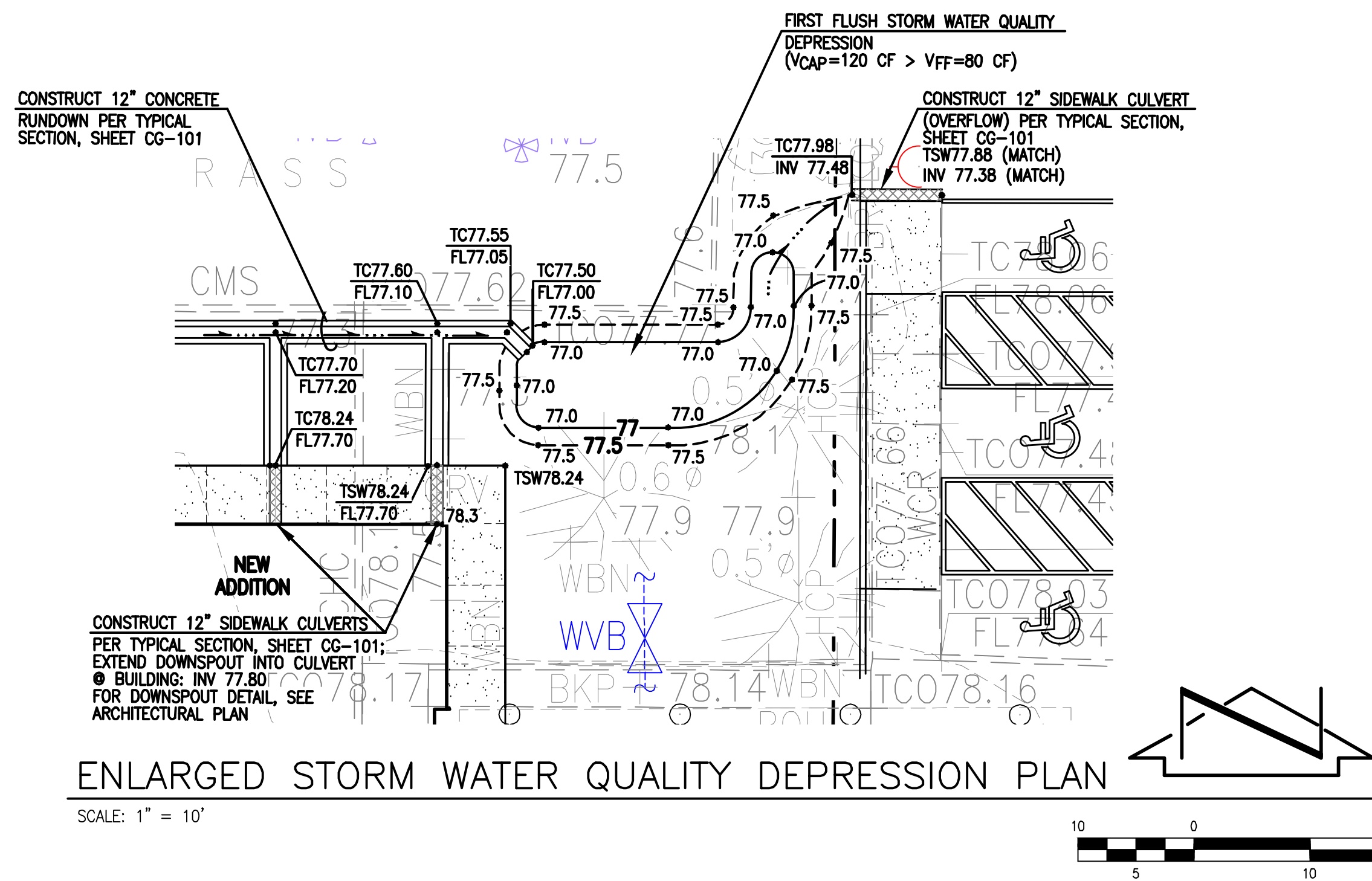
A. EXISTING CONDITION 100 YEAR STORM

B. DEVELOPED CONDITION 100 YEAR STORM

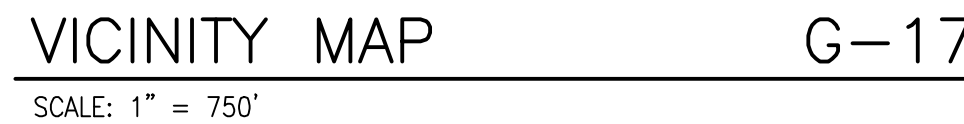
C. COMPARISON 100 YEAR STORM

$$\Delta Q_{100} = 0.3 - 0.2 = 0.1$$

D. STORM WATER QUALITY DEPRESSION VOLUME

$$V_{CAP} = 120 \text{ CF} > V_{FF} = 80 \text{ CF}$$


AP	ASPHALT PAVEMENT
BK/P	BRICK PATH
BOH	BUILDING OVERHANG
BR	BIKE RACK
C&G	CURB AND GUTTER
C/P/M	COMMUNICATION LINE BY PAINT MARK
CSC	CORNER BUILDING COLUMN
CC	CONCRETE CURB
CF	LANDSCAPING CRUSHER FINES
CHC	CONCRETE HEADER CURB
CLD	CENTERLINE DOOR
CLF	CHAIN LINK FENCE
CMH	COMMUNICATION MANHOLE
CMU	COMMUNICATION RISER
CMU	CONCRETE MASONRY WALL
CONC	CONCRETE
CONC	COMMUNICATION PULLBOX
CSW	CONCRETE SIDEWALK
DLE	DOLE CLEANOUT
E/P/M	ELECTRIC LINE BY PAINT MARK
EA	EDGE OF ASPHALT
EDS	ELECTRIC DISCONNECT SWITCH
EM	ELECTRIC METER
EO	ELECTRIC OUTLET
EPB	ELECTRIC PULLBOX
FO	FLOWLINE
FO	FENCE OPENING
FO/P/M	FIBER OPTIC LINE BY PAINT MARK
G/P/M	GAS LINE BY PAINT MARK
GM	GAS METER
GRV	LANDSCAPING GRAVEL
GS	GAS SERVICE
GT	GATE
GTS	GATE STOP POST
HCP	HANDICAPPED PARKING SIGN
LSD	LANDSCAPING DIVIDE
MLP	METAL LIGHT POLE WITH 2' DIAMETER CONCRETE BASE
MTG	DOUBLE METAL TUBE GATE
PI	PAINTED PARKING LOT ISLAND
PS	PAINTED PARKING STRIPE
SAS/P/M	SANITARY SEWER BY PAINT MARK
SGP	STEEL GUARD POST
SP	STEEL POLE
TC	TOP OF CURB
TCN	TOP OF CONCRETE
TRN	ELECTRIC TRANSFORMER
TV/PM	COMCAST CABLE LINE BY PAINT MARK
TV/CAB	COMCAST CABINET
TW	TOP OF WALL
TYP	TYPICAL
VG	CONCRETE VALLEY GUTTER
WBN	COMPOSITE WOOD BENCH
WCR	CONCRETE WHEELCHAIR RAMP
WF	PAINTED UTILITY FAUCET
	OUTDOOR WATER MARKER

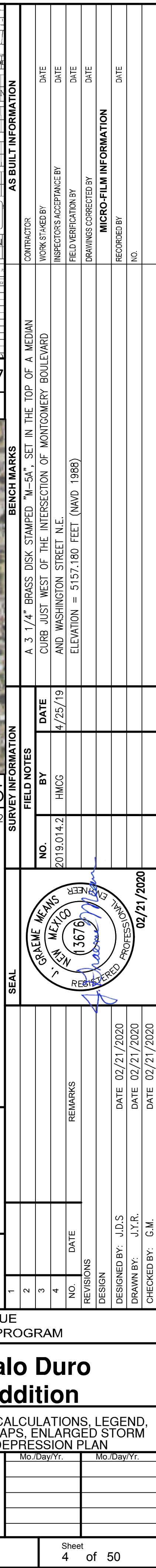


SCALE: 1" = 500' DATE: 08-16-2012

PROJECT BENCHMARK

TEMPORARY BENCHMARK #5 (T.B.M.)

A #5 REBAR WITH CAP STAMPED "HMG CONTROL NMPS 11184" SET IN DIRT NEAR THE EAST END OF THE DIRT TRACK, LOCATED IN THE SOUTHWESTERN PORTION OF THE SITE, AS SHOWN ON SHEET CG-101. BENCHMARK WAS BURIED AND WAS RECOVERED ONE-FOOT BELOW GRADE. ELEVATION = 5178.29 FEET (NAVD)



2019.014.3



GRADING PLAN

SCALE: 1" = 20'



SURVEY NOTE:

APPARENT EXISTING PROPERTY CORNERS, RIGHT-OF-WAY LINES, OR PROPERTY LINES AS SHOWN ARE DERIVED FROM PLAT OF RECORD, THE 2013 BOUNDARY SURVEY OF MCKINLEY MIDDLE SCHOOL CONDUCTED BY THIS FIRM, AND THE CENTURYLINK EASEMENT PROVIDED BY APS REAL ESTATE DIRECTOR, AND ARE NOT GUARANTEED OR TO BE RELIED ON FOR THE ESTABLISHMENT OF PROPERTY LINES. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON A PARTIAL TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 04/25/2019 (2019.014.2). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 09/2018 (2017.183.4) AND SUPPLEMENTED BY PARTIAL TOPOGRAPHIC AND UTILITY SURVEY DATED 04/25/2019 (2019.014.2).

HIGH MESA Consulting Group

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2019.014.3

fbot architects

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Albuquerque, NM 87110 FAX: 505.884.5390 WEB: www.fbotarch.com

CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

PROJECT TITLE:
**City of Albuquerque - Palo Duro
Senior Fitness Center Addition**

DRAWING TITLE: CG-101 SHEET TITLE: GRADING PLAN

Design Review Committee

City Engineer Approval

City Project No.
7882

Zone Map No.
G-17

DWG.

Sheet
5 of 50

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 UTILITIES.
- 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 CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, REVIEW OF AVAILABLE RECORD DRAWINGS OF THE ALBUQUERQUE PUBLIC SCHOOLS FACILITIES, DESIGN AND CONSTRUCTION, CITY OF ALBUQUERQUE DISTRIBUTION MAPS AND UTILITY LINE-SPOTS PROVIDED BY HIGH MESA CONSULTING GROUP (2019.014.1). IN ADDITION, UTILITY LINE-SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NUMBER 19AP110100). 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.
- 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.
- THE GRADES INDICATED ON THIS PLAN ARE FINISHED GRADES UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEAVING SUBGRADE AT ELEVATIONS THAT SHALL ACCOMMODATE PROPOSED IMPROVEMENTS AS INDICATED ON THE PLANS INCLUDING, BUT NOT LIMITED TO, SURFACE DRAINAGE STRUCTURES, PAVING AND LANDSCAPING SURFACING.
- 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.
- CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR EARTHWORK REQUIREMENTS, AS APPLICABLE
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

EASEMENT KEYED NOTES

- 10' UTILITY EASEMENT GRANTED BY PLAT D2-120
- 10' PNM AND US WEST COMMUNICATIONS, INC. UNDERGROUND EASEMENT GRANTED BY DOCUMENT FILED 01-07-1999, BOOK 9901, PAGE 2076, DOC. #1999002086
- 10' CENTURYLINK EASEMENTS GRANTED BY DOCUMENT FILED 04-17-2018, DOC. #2018033332

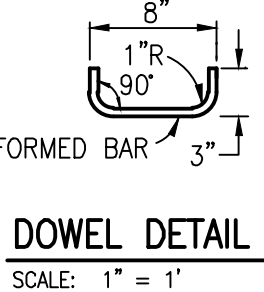
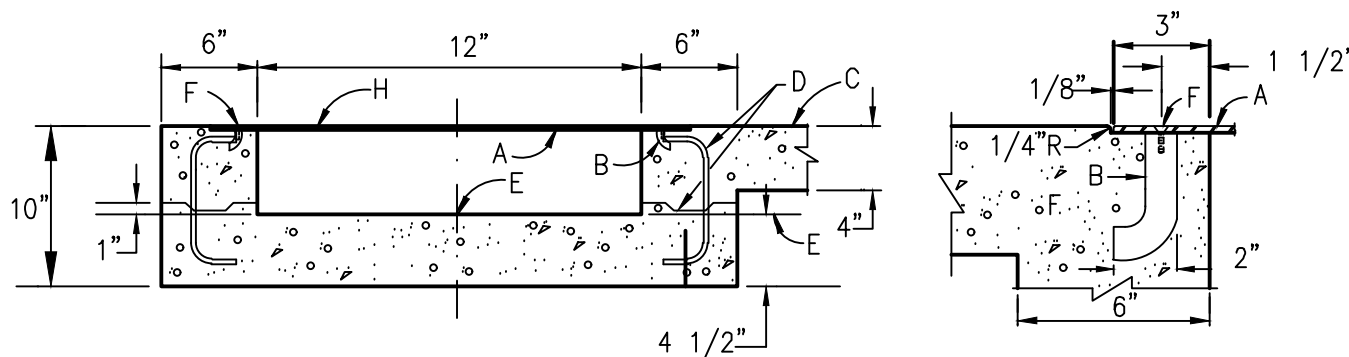
BENCHMARKS

PROJECT BENCHMARK

A 3 1/4" BRASS DISK STAMPED "M-5A" SET IN THE TOP OF A MEDIAN CURB JUST WEST OF THE INTERSECTION OF MONTGOMERY BOULEVARD AND WASHINGTON STREET N.E.
ELEVATION = 5157.180 FEET (NAVD 1988)

TEMPORARY BENCHMARK #5 (T.B.M.)

A #5 REBAR WITH CAP STAMPED "HMC CONTROL NMPS 11184" SET IN DIRT NEAR THE EAST END OF THE DIRT TRACK, LOCATED IN THE SOUTHWESTERN PORTION OF THE SITE, AS SHOWN ON THIS SHEET. BENCHMARK WAS BURIED AND WAS RECOVERED ONE-FOOT BELOW GRADE.
ELEVATION = 5178.29 FEET (NAVD)

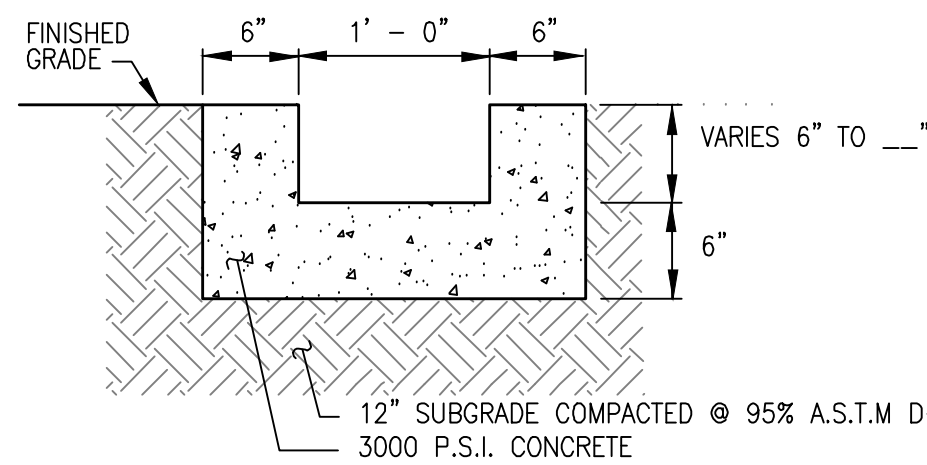


CONSTRUCTION NOTES:

- 3/8" CHECKERED STEEL PLATE.
- ROD ANCHOR 1" x 5"
- SIDEWALK GRADE
- DOWEL AND JOINT, (OPTIONAL).
- GUTTER FLOWLINE ELEV.
- 3/8" x 1" F.H. C'SUNK STAINLESS STEEL MACHINE SCREW.
- NOT USED
- AFTER CLEANING SURFACE OF SCALE, RUST, OILS, ETC., PAINT GRATE WITH ONE SHOP COAT RED OXIDE, TWO FINISH COATS OF ALUMINUM PAINT (AASHTO M 69).

SIDEWALK CULVERT SECTION

SCALE: 1" = 2"



TYPICAL RUNDOWN SECTION

SCALE: 1" = 1"

