GENERAL NOTES

A. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE STANDARDS APPLY.

B. THE CONTRACTOR SHALL ABIDE BY ALL STATE, LOCAL, AND FEDERAL LAWS, CODES, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA REQUIREMENTS.

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

D. COORDINATE WORK WITH SITE PLAN, , DEMOLITION PLAN, AND LANDSCAPE PLAN.

E. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE LANDSCAPE ARCHITECT AND VERIFY THE INTENT BEFORE PROCEEDING.

F. CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK.

G. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

H. CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS. EQUIPMENT SHALL ONLY OBSTRUCT DESIGNATED TRAFFIC LANES IF APPROPRIATE BARRICADING PERMITS HAVE BEEN OBTAINED.

I. THE CONTRACTOR SHALL MAINTAIN ALL BARRICADING AND CONSTRUCTION SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

J. FOR ALL ACCESSIBLE ROUTES, MAXIMUM ALLOWABLE CROSS SLOPE IS 2.0% AND MAXIMUM LONGITUDINAL SLOPE WITHOUT RAMP IS 5.0%. FOLLOW ALL ADA ACCESSIBILITY GUIDELINES OR CITY CODES, WHICHEVER IS MORE STRINGENT.

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

L. PROPOSED SPOT AND CONTOUR ELEVATIONS 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.

M. MAXIMUM UNPROTECTED SLOPES SHALL BE 6:1.

N. 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.

O. A CURRENT STORMWATER CONTROL PERMIT, INCLUDING AN EROSION SEDIMENT CONTROL PLAN (E.S.C.) FOR EROSION AND SEDIMENT CONTROL IS REQUIRED FOR ALL CONSTRUCTION, DEMOLITION CLEARING, AND GRADING OPERATIONS THAT DISTURB THE SOIL ON ONE ACRE OR MORE OF LAND. OWNER WILL COORDINATE.

P. POST-CONSTRUCTION MAINTENANCE FOR STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES OWNER.

Q. STORMWATER CONTROL MEASURES SHOWN ON THIS PLAN ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH' (DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.44" OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM).

R. ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.

S. PAVING AND ROADWAY GRADES SHALL BE ±0.1' FROM PLAN ELEVATIONS.

T. WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH.

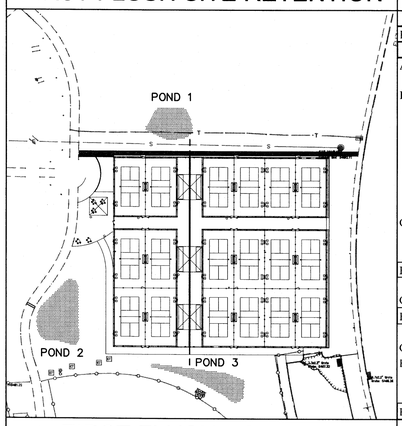
U. ALL EROSION PROTECTION TO BE FRACTURED FACE ROCK (F.F. ROCK) DEFINED AS 6" AVG. DIA. (4" TO 8") ANGULAR FACED ROCK PLACED OVER GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.).

V. CONTRACTOR SHALL COMPLY WITH LOCAL REGULATIONS FOR RESEEDING OF DISTURBED AREAS. RESEEDING INSPECTION IS NOT INCLUDED AS PART OF ENGINEER'S CERTIFICATION OF SUBSTANTIAL COMPLIANCE.

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

X. MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.

FIRST FLUSH SITE RETENTION



CALCULATIONS

CALCULATIONS: 2133 MANZANO MESA PICKLEBALL COURTS : FEB. 1, 2016

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

ON-SITE

AREA OF SITE TO BE DISTURBED: 98685 SF = 2.3

100-year, 6-hour

HISTORIC FLOWS:		Treatment SF	%	DEVELOPED FLOWS:		Treatment SF	%	EXCESS PRECIP: Precip. Zone 4
Area A	=	0	0%	Area A	=	0	0%	E_A = 0.80
Area B	=	49342.5	50%	Area B	=	19737	20%	E_B = 1.08
Area C	=	49342.5	50%	Area C	=	19737	20%	E_C = 1.46
Area D	=	0	0%	Area D	=	59211	60%	E_D = 2.64
Total Area	=	98685	100%	Total Area	=	98685	100%	

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

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	=	1.27 in.	Developed E	=	2.09 in.	

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

Historic V_{360}	=	10444 CF	Developed V_{360}	=	17204 CF

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

For Precipitation Zone 4

Q_{pA}	=	2.20	Q_{pC}	=	3.73
Q_{pB}	=	2.92	Q_{pD}	=	5.25
Historic Q_p	=	7.5 CFS	Developed Q_p	=	10.1 CFS

FIRST FLUSH VOLUMES

REQUIRED FIRST FLUSH RETENTION POND VOLUME = 1678 CF

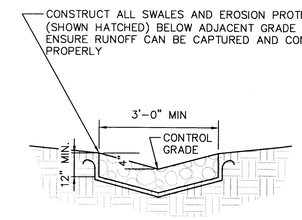
RETENTION POND 1 VOLUME = 730 CF
RETENTION POND 2 VOLUME = 1225 CF
RETENTION POND 3 VOLUME = 790 CF

PROVIDED FIRST FLUSH RETENTION POND VOLUME = 2745 CF

CALCULATIONS

IMPERVIOUS AREA			FIRST FLUSH REQUIREMENT
Area of basin flows =	59211 SF	= 1.4 Ac.	
The following calculations are based on Treatment areas as shown in table to the right			LAND TREATMENT
Sub-basin Weighted Excess Precipitation (see formula above)			A = 0%
Weighted E =	2.64 in.		B = 0%
Sub-basin Volume of Runoff (see formula above)			C = 0%
V_{360} =	13026 CF		D = 100%
Sub-basin Peak Discharge Rate: (see formula above)			FIRST FLUSH VOL.
Q_P =	7.1 cfs		1678 CF

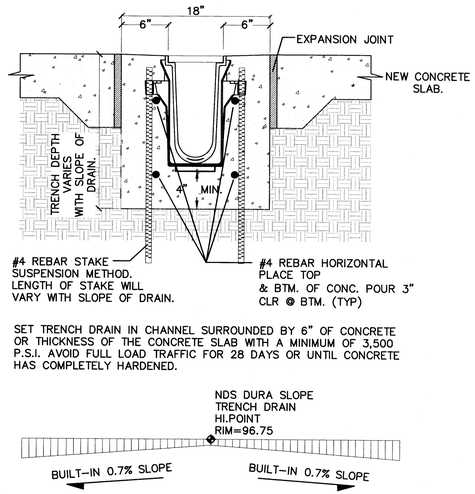
1.4 Ac (City Proj. so no ESC)
Total = 2.3 Ac
Free



- VARY ANGULAR FACE ROCK SIZE BETWEEN 4" AND 8" DIA. (AVG.=6")
- PLACE GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.) BENEATH ALL EROSION PROTECTION

ANGULAR ROCK SWALE / EROSION PROTECTION

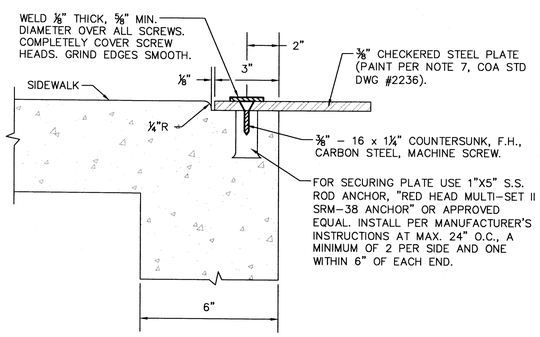
SCALE: N.T.S.



TRENCH DRAIN

NDS DURASLOPE PRE-SLOPED TRENCH DRAIN SYSTEM WITH BUILT-IN 0.7% SLOPE. INSTALL FOR CLASS 'C' LOADS PER MANUFACTURER'S SPECIFICATIONS AND DETAILS.

SCALE: N.T.S.



COVERED SIDEWALK CULVERT

MODIFIED SECTION B-B FROM C.O.A. STD. DWG. #2236

SCALE: N.T.S.

RECEIVED
FEB 02 2016
LAND DEVELOPMENT SECTION

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com
2133 CG-101.dwg Feb 01,2016

MRWM
LANDSCAPE ARCHITECTS
Morrow Reardon Wilkinson Miller, Ltd.
mrwmla.com 505 268 2266

NO.	DATE	REVISIONS	BY
		REMARKS	
		DESIGNED BY: B.B	DATE 1/29/16
		DRAWN BY: B.B	DATE 1/29/16
		CHECKED BY: F.C.A	DATE 1/29/16

CITY OF ALBUQUERQUE
STRATEGIC PLANNING AND DESIGN
PARKS AND RECREATION DEPARTMENT

MANZANO MESA PARK
PICKLEBALL COURTS
GRADING & DRAINAGE DETAILS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet
575197	L-21	CG-501

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS

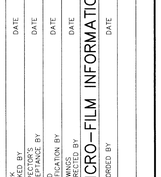
Description: An aluminum disc stamped "B-L22 1990" located on the east side of Tramway Boulevard in the nose of the median of Central Avenue. NAVD 1988
Elevation Datum: 5668.036

AS-BUILT INFORMATION

CONTRACTOR
WORK STAKED BY: DATE
INSPECTIONS PERFORMED BY: DATE
FIELD VERIFICATION BY: DATE
DRAWINGS CORRECTED BY: DATE

MICRO-FILM INFORMATION
RECORDED BY: DATE
NO.

ENGINEER'S SEAL

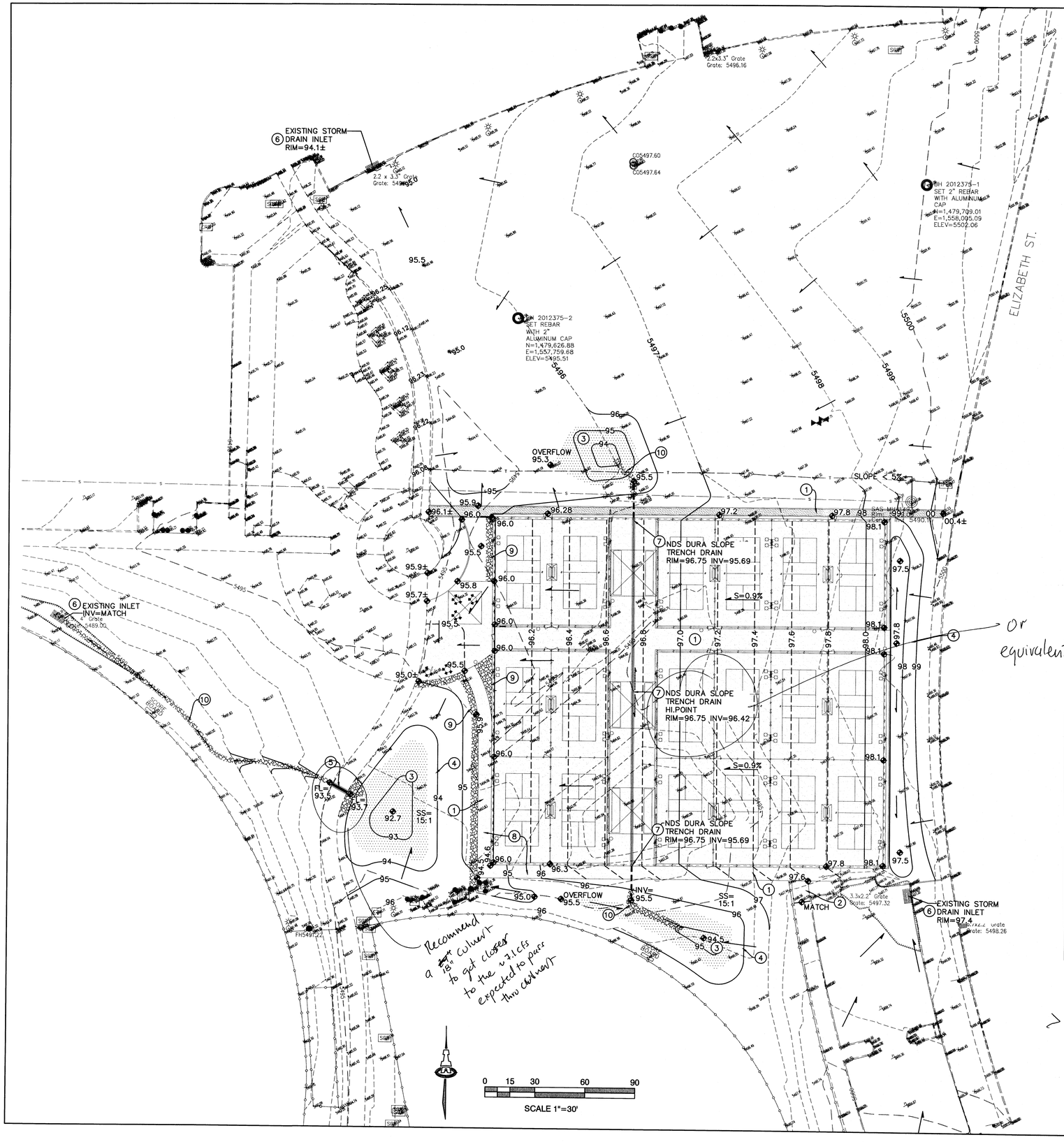


100% FOR CONSTRUCTION
DATE: JANUARY 29, 2016

MANZANO MESA PARK PICKLEBALL COURTS

PROJECT# 575197

RECORD DRAWINGS
DATE: XX/XX/2016



KEYED NOTES

1. CONSTRUCT PEDESTRIAN WALK AT ELEVATIONS SHOWN. ALL WALKS TO BE ADA ACCESSIBLE (5% MAX. SLOPE, 2% MAX. CROSS-SLOPE) UNLESS NOTED.
2. 1:12 ADA COMPLIANT RAMP (MAX. 12' LONG) TO TRANSITION TO EXISTING.
3. GRADE TO ELEVATIONS SHOWN FOR WATER HARVESTING AND FIRST FLUSH RETENTION.
4. TRANSITION SLOPES TO ACHIEVE GRADE DIFFERENCES SHOWN. MAXIMUM SLOPE = 8:1.
5. CONSTRUCT 1.0' WIDE CONCRETE SIDEWALK CULVERT AT RIM/FLOWLINE ELEVATIONS SHOWN PER C.O.A. STD. DWG. 2236. SEE SHEET CG-501 FOR MODIFIED SECTION B-B FROM C.O.A. STD. DWG. #2236.
6. CONTRACTOR TO CLEAN / FLUSH EXISTING STORM DRAIN INLETS.
7. CONSTRUCT NDS DURA-SLOPE TRENCH DRAIN WITH HIGH POINT IN CENTER SLOPING NORTH AND SOUTH. EXTEND OUTLET PIPE BENEATH WALK TO WATER HARVESTING BASINS AS SHOWN. INSTALL ROCK EROSION PROTECTION FROM OUTLET TO LOW POINT. SEE CG-501 FOR ADDITIONAL INFORMATION.
8. SLOPE WALK @ 1:20 MAX. AT ELEVATIONS SHOWN. SEE CONSTRUCTION PLANS FOR GRADE TRANSITION CURB BETWEEN COURT AND WALK.
9. INSTALL ROCK EROSION PROTECTION (AVG. 6"ø X 12" DEEP) TO EXTENTS SHOWN ON PLAN.
10. CONSTRUCT 3' WIDE ROCK LINED SWALE TO EXTENTS SHOWN. SEE CG-501 FOR DETAIL.

LEGEND

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR (1' INCREMENT)
- PROPOSED CONTOUR (< 1' INCREMENT)
- PROPOSED SPOT ELEVATION
- FLOW ARROW
- PROPOSED STORM DRAIN
- LIMITS OF WATER HARVESTING
- PROPOSED EROSION CONTROL LIMITS (6" ANGULAR FRACTURED FACE ROCK)

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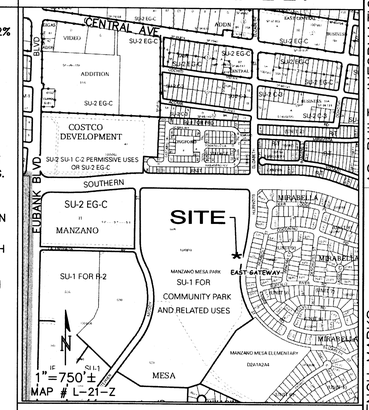
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com
2133 CG-101.dwg Feb 01,2016

VICINITY MAP L-21



PROJECT DATA

PROPERTY: THE SITE IS AN UNDEVELOPED PORTION OF THE MANZANO MESA PARK PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP L-21. THE SITE IS BOUND TO THE EAST BY ELIZABETH ST., AND TO THE NORTH, SOUTH AND WEST BY PARK AMENITIES INCLUDING PLAYGROUND, BALL FIELDS AND ASPHALT PAVED PARKING.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE A GRASS PLAY AREA AND A PICKLEBALL COMPLEX WITH ASSOCIATED PEDESTRIAN ACCESS AND SITE LANDSCAPING.

LEGAL: A PORTION OF MANZANO MESA PARK, BERNALILLO COUNTY, NEW MEXICO.

ADDRESS: 501 ELIZABETH ST SE

OFF-SITE: NO OFFSITE DRAINAGE IMPACTS THE PROPERTY.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #35001C0359G DATED 09-26-2008, THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.

DRAINAGE PLAN CONCEPT:

THE NEW IMPERVIOUS COURTS WILL SHEETFLOW FROM EAST TO WEST. FIRST FLUSH RETENTION POND(S) WILL PROVIDE THE REQUIRED STORAGE WITHIN THE PROPOSED LANDSCAPED AREAS EAST OF THE EXISTING NORTH/SOUTH WALK. A STORM DRAIN INLET WITH RIM ABOVE THE FIRST FLUSH VOLUME WILL COLLECT RUNOFF ROUTE FLOW TO THE EXISTING PUBLIC STORM DRAIN INLET(S) AS SHOWN. STORMWATER WILL THEN PASS TO THE ON-SITE POND LOCATED AT THE SOUTHWEST PORTION OF THE PARK PROPERTY. DEPRESSED WATER HARVESTING BASINS ARE PROPOSED (12"± DEEP) TO ACCEPT MINOR FLOW, UTILIZE FOR LANDSCAPING AND RELEASE EXCESS.

THE MASTER DRAINAGE PLAN FOR MANZANO MESA PARK ACCOUNTS FOR THE FULLY DEVELOPED CONDITIONS.

RECEIVED
FEB 02 2016
LAND DEVELOPMENT SECTION

MRWM
LANDSCAPE ARCHITECTS
Morrow Reardon Wilkinson Miller, Ltd.
mrwmla.com 505 268 2266

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS

AS-BUILT INFORMATION

CONTRACTOR
WORK BY — DATE
INSPECTORS — DATE
ACCEPTANCE BY — DATE
VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE

Description: An aluminum disc stamped "8-L22 1990" located on the east side of Tramway Boulevard in the nose of the median of Central Avenue. NAVD 1988

Elevation Datum: 5668.036

MICRO-FILM INFORMATION
RECORDED BY — DATE
NO.

ENGINEER'S SEAL
FRED C. ARFMAN NEW MEXICO 7322 LICENSED PROFESSIONAL ENGINEER
2-01-16

REVISIONS

NO.	DATE	REMARKS	BY
1	1/29/16		BJB
2	1/29/16		BJB
3	1/29/16		FCA

DESIGNED BY: BJB
DRAWN BY: BJB
CHECKED BY: FCA

CITY OF ALBUQUERQUE
STRATEGIC PLANNING AND DESIGN
PARKS AND RECREATION DEPARTMENT

MANZANO MESA PARK
PICKLEBALL COURTS

GRADING & DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet
575197	L-21	CG-101

100% FOR CONSTRUCTION
DATE: JANUARY 29, 2016

MANZANO MESA PARK PICKLEBALL COURTS

PROJECT# 575197

RECORD DRAWINGS
DATE: XX/XX/2016

M:\PROJECTS\2100-2199\2135\DWGS\135 CG-101.dwg, 2/1/2016 2:59:12 PM, BJB