

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

December 17, 2019

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

RE: **International District Library**
7667 Central NE
Grading and Drainage Plan Stamp Date: 12/11/19
Hydrology File: K19D005

Dear Mr. Means,

Based on the submittal received on 12/12/19, this project is approved for Building Permit.

PO Box 1293

Prior to Certificate of Occupancy (For Information):

Albuquerque

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.
2. The public work order will need to be closed out and accepted by the City, unless a financial guarantee has been posted.

NM 87103

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

www.cabq.gov

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services









































































GENERAL NOTES

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR APPROVED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS—PUBLIC WORKS CONSTRUCTION—1986—UPDATE NO. 9.
- 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.
- UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, REVIEW OF AVAILABLE ABCWUA AND CITY OF ALBUQUERQUE RECORD DRAWINGS AND DISTRIBUTION MAPS AND UTILITY LINE-SPOTS PROVIDED BY HIGH MESA CONSULTING GROUP (2018.017.1). IN ADDITION, UTILITY LINE-SPOTS WERE REQUESTED VIA THE NEW MEXICO ONE CALL SERVICE (TICKET NO. 18MA160146). 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.
- 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.
- 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.
- ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE OR PER COA STANDARD DRAWING 2465, WHICHEVER IS MORE STRINGENT.
- TACK COAT REQUIREMENTS SHALL BE DETERMINED DURING CONSTRUCTION BY THE PROJECT ENGINEER.
- SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
- IF CURB IS DEPRESSIONED FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.
- ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL COORDINATE WITH THE WATER AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUTOFF REQUESTS MUST BE MADE ONLINE AT http://www.abcwua.org/Water_Shut_off_and_Turn_on_Procedures.aspx.
- CONTRACTOR SHALL NOTIFY THE CITY SURVEYOR NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATION 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. REFER TO SECTION 4.4 OF THE SPECIFICATIONS.
- SEVEN (7) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. CONTRACTOR MUST REFER TO SECTION 19 OF THE STANDARD SPECIFICATION FOR TRAFFIC CONTROL.
- TWO WEEKS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHOULD NOTIFY THE TRANSIT DEPARTMENT OF ANY IMPACT THE PROPOSED PROJECT WILL HAVE ON THE TRANSIT SYSTEM SUCH AS CAUSING DETOUR, OR CAUSE THE CLOSING OR RELOCATION OF A BUS STOP. THE CONTACT PERSON IS DOUGLAS GOFF, OFFICE PHONE 505-724-3137, CELL PHONE 505-206-0151, AND EMAIL dgoff@cabq.gov.
- ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED STRIPING BY CONTRACTOR TO EXISTING LOCATION OR AS INDICATED BY THIS PLAN SET.
- 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.
- ANY WORK OCCURRING WITHIN AN ARTERIAL ROADWAY MAY REQUIRE TWENTY-FOUR HOUR CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
- WHEN APPLICABLE, CONTRACTOR SHALL, ON BEHALF OF THE OWNER AND OPERATORS, SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL CONSTRUCTION SIGNING UNTIL THE PROJECT HAS BEEN ACCEPTED BY THE CITY OF ALBUQUERQUE.
- ALL FILL SHALL BE CLEAN, FREE FROM VEGETATION, DEBRIS, AND OTHER DELETERIOUS MATERIALS, AND SHALL NOT BE CONTAMINATED WITH HYDROCARBONS OR OTHER CHEMICAL CONTAMINANTS.
- CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR EARTHWORK REQUIREMENTS, AS APPLICABLE.
- CONTRACTOR SHALL TEST SUBGRADE R-VALUE PRIOR TO CONSTRUCTION. IN THE EVENT THE R-VALUE IS LESS THAN 50, CONTRACTOR SHALL REMOVE 2 FT. OF SUBGRADE MATERIAL AND IMPORT SUITABLE MATERIAL WITH R-VALUE 50 OR GREATER.

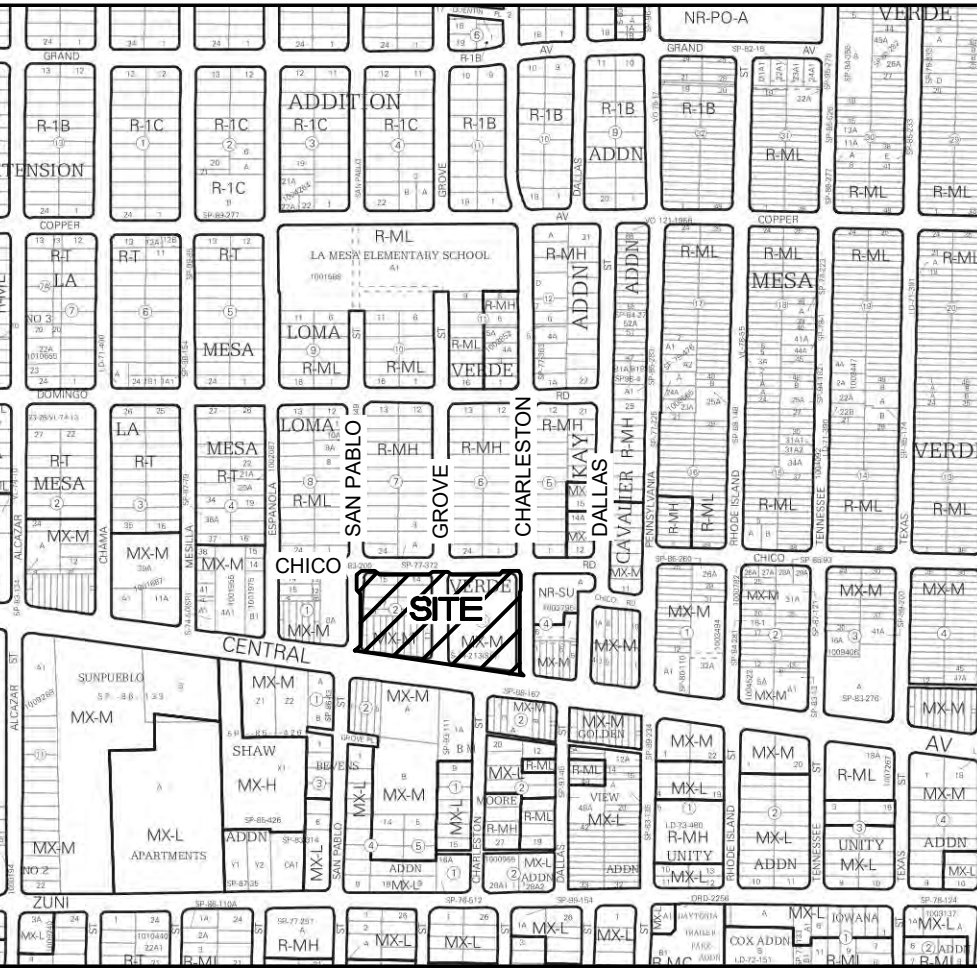
CONSTRUCTION NOTES

- 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.
- 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 ABCWUA AND CITY OF ALBUQUERQUE RECORD DRAWINGS AND DISTRIBUTION MAPS AND UTILITY LINE-SPOTS PROVIDED BY HIGH MESA CONSULTING GROUP (2018.017.1). IN ADDITION, 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.
- BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
- CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT AND/OR STRUCTURAL FOR EARTHWORK REQUIREMENTS, AS APPLICABLE
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

LEGEND

ARV	WATER AIR RELEASE VALVE	
ASPH	ASPHALT	
BOH	BUILDING OVERHANG	
C	COMMUNICATION	
C&G	CURB AND GUTTER	
C/P/M	COMMUNICATION BY PAINT MARK	
CC	CONCRETE CURB	
CCND	COMMUNICATION CONDUIT	
CCP	CONCRETE CYLINDER PIPE	
CDP	CONCRETE DRIVE PAD	
CI	CONCRETE ISLAND	
CHC	CONCRETE HEADER CURB	
CLF	CHAINLINK FENCE	
CONC	CONCRETE	
CSW	CONCRETE SIDEWALK	
E/P/M	ELECTRIC BY PAINT MARK	
EA	EDGE OF ASPHALT	
ECND	ELECTRIC CONDUIT	
FH	FIRE HYDRANT	
FL	FLOWLINE	
G/P/M	GAS BY PAINT MARK	
GA	GATE	
GRV	GRAVEL	
GW	GUY WIRE	
HC	HANDICAP PARKING SPACE	
HCS	HANDICAP SIGN	
INV	INVERT ELEVATION	
LSD	LANDSCAPE DIVIDER	
MCG	MEDIAN CURB AND GUTTER	
MED	MEDIAN	
MH	MANHOLE	
MLP	METAL LIGHT POLE	
MS	METAL SIGN	
MTC	METAL TRASH CAN	
OHC(2)	OVERHEAD COMMUNICATION (# OF LINES)	
OHE(2)	OVERHEAD ELECTRIC (# OF LINES)	
PI	PAINTED ISLAND	
PS	PARKING STRIPE	
PVC	POLYVINYL CHLORIDE	
SAS	SANITARY SEWER	
SGP	STEEL GUARD POST	
SP	STEEL POLE	
STB	STOP BAR	
SW	SIDEWALK	
SWC	SIDEWALK CULVERT	
TA	TOP OF ASPHALT	
TC	TOP OF CURB	
TCO	TOP OF CONCRETE	
TRC	TRASH CAN	
TS	TRAFFIC SIGN	
TYP	TYPICAL	
VC	VALLEY CUTTER	
VCP	VITRIFIED CLAY PIPE	
VRT	VERTICAL RAILROAD TIES	
WCR	WHEELCHAIR RAMP	
WL/PM	WATERLINE BY PAINT MARK	
WL/RCD	WATERLINE BY RECORD DRAWING	
WMB	WATER METER BOX	
WPP	WOOD POWER POLE	
WPP/C	WOOD POWER POLE WITH CONDUIT	
WPP/L	WOOD POWER POLE WITH STREET LIGHT	
WVB	WATER VALVE BOX	
WS	WHEEL STOP	
*	PAINTED UTILITY MARKER	
1.2"	DIAMETER OF TREE	
	DECIDUOUS TREE	
	SMALL DECIDUOUS TREE	
	CONIFEROUS TREE	
	SMALL CONIFEROUS TREE	
	SHRUB	
	YUCCA	
	LANDSCAPE ROCK/BOULDER	

EXISTING STORM DRAIN MANHOLE
PROPOSED STORM DRAIN MANHOLE
EXISTING FIRE HYDRANT
PROPOSED FIRE HYDRANT
EXISTING SANITARY SEWER MAN HOLE
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 STORM DRAIN
PROPOSED STORM DRAIN
EXISTING WATER LINE
PROPOSED WATER LINE
EXISTING SANITARY SEWER LINE
PROPOSED SANITARY SEWER LINE
EXISTING FIRE LINE
PROPOSED FIRE LINE
EXISTING POST INDICATOR VALVE
PROPOSED POST INDICATOR VALVE
INVERT
TOP OF ASPHALT PAVEMENT
TOP OF CURB
TOP OF GRATE
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
EXISTING FLOWLINE
PROPOSED FLOWLINE
EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING DIRECTION OF FLOW
PROPOSED DIRECTION OF FLOW
RIGHT OF WAY LINE
PUBLIC EASEMENT LINE
HIGH POINT / DIVIDE
PROPOSED CONCRETE PAVING
PROPOSED ASPHALT PAVING



VICINITY MAP
SCALE: 1" = 750'

K19



F.I.R.M.

PANEL 354 &
358 OF 825
DATE 08-16-2012

SCALE: 1" = 500'

LEGAL DESCRIPTION

THE REPLAT OF BLOCK 2 OF LOMA VERDE, ALBUQUERQUE, NEW MEXICO AND THE REPLAT OF BLOCK 3 OF LOMA VERDE, ALBUQUERQUE

PROJECT BENCHMARK

AN AGRS BRASS DISK STAMPED "7-K19", SET IN A CONCRETE CYLINDER, ON THE NOSE OF THE ISLAND EAST OF THE INTERSECTION OF CENTRAL AVENUE AND LOUISIANA BOULEVARD.
ELEVATION = 5325.99 FEET (NAVD 1988)

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

A MAG NAIL IN ASPHALT PAVEMENT, AS SHOWN ON SHEET C101.
ELEVATION = 5350.56 FEET (NAVD 1988)

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

A MAG NAIL W/WASHER STAMPED "CARTESIAN SURVEYS PLS 14271" ALSO BEING THE NORTHWEST PROPERTY CORNER OF BLOCK 2, AS SHOWN ON SHEET C101.
ELEVATION = 5346.72 FEET (NAVD 1988)

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

A MAG NAIL W/WASHER STAMPED "CARTESIAN SURVEYS PLS 14271" ALSO BEING THE NORTHWEST PROPERTY CORNER OF BLOCK 3, AS SHOWN ON SHEET C101.
ELEVATION = 5350.44 FEET (NAVD 1988)

TEMPORARY BENCHMARK #4 (T.B.M.)

A MAG NAIL W/WASHER STAMPED "CARTESIAN SURVEYS PLS 14271" ALSO BEING THE SOUTHEAST PROPERTY CORNER OF BLOCK 3, AS SHOWN ON SHEET C101.
ELEVATION = 5353.79 FEET (NAVD 1988)

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

A MAG NAIL W/WASHER STAMPED "CARTESIAN SURVEYS PLS 14271" ALSO BEING THE SOUTHEAST PROPERTY CORNER OF BLOCK 3, AS SHOWN ON SHEET C101.
ELEVATION = 5354.48 FEET (NAVD 1988)

INDEX OF DRAWINGS

C001	VICINITY MAP, LEGEND, TBM's, INDEX OF DRAWINGS AND GENERAL NOTES
C002	DRAINAGE PLAN AND CALCULATIONS
C100	SITE PAVING AND HORIZONTAL CONTROL PLAN
C101	GRADING PLAN
C102	SITE PAVING SECTIONS AND DETAILS
C103	SITE DRAINAGE DETAILS
C104	WATER AND SANITARY SEWER PLAN
C105	WATER AND SANITARY SEWER SECTIONS AND DETAILS



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HIGH MESA Consulting Group
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Phone: 505.345.4250 • Fax: 505.345.4254 • www.highmesacg.com

NO.	ISSUE	DATE
PROJECT	CITY OF ALBUQUERQUE	SCALE 1" = 30'
INTERNATIONAL DISTRICT LIBRARY (IDL)	RMKM PROJECT NO. 9225.74 COA 1706 RMKM	
7667 CENTRAL AVE NE	PROJECT MANAGER PM	
	MODELED BY RMKM	
SHEET TITLE VICINITY MAP, LEGEND, TBM'S, INDEX OF DRAWINGS AND GENERAL NOTES		
DESIGN PHASE 100% CONSTRUCTION DOCUMENTS 11 DECEMBER, 2019		
SHEET NUMBER		
		12/11/2019



File Name: P:\data\2017\2017.066.1\15\G170661_DesignMaster.dwg - C002 Plot Date: 12/11/19 Plot Time: 08:57

DRAINAGE PLAN

I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS SITE IS LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF CENTRAL AVENUE NE AND SAN PABLO STREET NE IN ALBUQUERQUE, NEW MEXICO. THIS PROJECT REPRESENTS A REDEVELOPMENT OF A PREVIOUSLY DEVELOPED SITE WITHIN AN INFILL AREA. THE EXISTING SITE 'CARAVAN CLUB' BUILDING IMPROVEMENTS HAVE BEEN COMPLETELY DEMOLISHED AND REMOVED (BY SEPARATE 2018 PROJECT) RESULTING IN A GENERALLY OPEN SITE WITH PAVED AND UNPAVED SURFACES AND MINIMAL LANDSCAPING. THE PROPOSED DEVELOPMENT FOR THE SITE IS TO CONSTRUCT A NEW PUBLIC LIBRARY WITH ASSOCIATED PAVED PARKING AND COURTYARD IMPROVEMENTS, AS WELL AS ASSOCIATED NEW LANDSCAPING WITHIN THE WESTERN PORTION OF THE SITE. THE EASTERN PORTION OF THE SITE WILL REMAIN UNDEVELOPED AT THIS TIME AND THERE ARE TENTATIVE PLANS FOR THE CITY AND AMAFCA TO DEVELOP IT AS A PUBLIC DRAINAGE FACILITY TO HELP ALLEVIATE DOWNSTREAM FLOODING.

THIS DRAINAGE PLAN ADDRESSES THE DRAINAGE CONCEPTS AND IMPROVEMENTS PROPOSED FOR DEVELOPMENT OF THE NEW LIBRARY SITE, AS WELL AS THE PROPOSED ONSITE STORMWATER WATER HARVESTING / FIRST FLUSH CAPTURE REQUIRED TO PARTIALLY MEET THE DEVELOPED 100-YEAR STORM EVENT DISCHARGE AND FIRST FLUSH REQUIREMENTS BY THE CITY OF ALBUQUERQUE. THIS PLAN IS SUBMITTED IN SUPPORT OF BUILDING PERMIT APPROVAL BY THE CITY OF ALBUQUERQUE. A PREVIOUS SUBMITTAL ADDRESSED THE VACATION, REPLAT, AND WORK ORDER ASPECTS OF THE PROJECT.

II. PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SITE IS BOUNDED BY CENTRAL AVENUE TO THE SOUTH, SAN PABLO STREET NE TO THE WEST, CHICO ROAD NE TO THE NORTH, AND CHARLESTON STREET NE TO THE EAST. THE SITE CONSISTS OF TWO LOTS (BLOCKS 2 AND 3, LOMA VERDE SUBDIVISION), AND GROVE STREET NE, WHICH CURRENTLY BISECTS THE SITE. A SEPARATE, CONCURRENT PLATTING ACTION IS IN PROGRESS TO VACATE GROVE STREET RIGHT-OF-WAY AND COMBINE THE SITE INTO ONE LOT. ALL PERIMETER STREETS REFERENCED ABOVE ARE FULLY DEVELOPED PUBLIC STREETS WITH CURB AND GUTTER AND SIDEWALKS. THIS SITE IS OWNED AND OPERATED BY THE CITY OF ALBUQUERQUE, AS INDICATED BY PANELS 354 AND 358 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, DATED AUGUST 16, 2012, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THE SITE DOES LIE IMMEDIATELY ADJACENT TO A ZONE 'A' DESIGNATED FLOOD HAZARD ZONE ASSOCIATED WITH THE CHICO ROAD NE PUBLIC RIGHT OF WAY, WHERE THE 1% ANNUAL CHANCE FLOOD DISCHARGE IS CONTAINED WITHIN THE PUBLIC RIGHT OF WAY. THE SITE IS CURRENTLY PERMITTED FREE DISCHARGE TO THE ADJACENT PUBLIC STREETS BASED ON HISTORIC CONDITIONS AND PREVIOUSLY APPROVED PLANS.

III. BACKGROUND DOCUMENTS & RESEARCH

THE PREPARATION OF THIS PLAN RELIED UPON THE FOLLOWING DOCUMENTS:

- TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP (NMPS 11184) DATED 04/30/2018. THIS REFERENCED SURVEY PROVIDES THE BASIS FOR THE EXISTING CONDITIONS OF THE SITE.
- SITE DRAINAGE PLAN PREPARED BY CONSULTANTS, INC. NMPE 6653, DATED OCTOBER, 1979. THIS REFERENCED DRAINAGE PLAN CONTINUED THE APPROVED EXISTING DRAINAGE CONCEPT OF DISCHARGE OF EXISTING RUNOFF FROM THE SITE TO THE ADJACENT PUBLIC STREETS.
- SITE DEMOLITION PLAN PREPARED BY CHERRY-SEE PEAKS ARCHITECTURE AND TETSUDO ENGINEERING (NMPE 23914), DATED JUNE 19, 2017. THIS REFERENCED PLAN DEMOLISHED ALL EXISTING BUILDINGS ON THE TWO PROJECT LOTS AND REMOVAL OF ALL EXISTING UTILITY SERVICES TO THE EXISTING PROPERTY BOUNDARIES. PORTIONS OF THE PAVED PARKING LOT WERE REMOVED DURING THE DEMOLITION; HOWEVER, THE MAJORITY OF THE PAVED PARKING STILL REMAINS BASED ON THE 2018 SURVEY REFERENCED ABOVE.

IV. EXISTING CONDITIONS

THE PROJECT SITE CONSISTS OF TWO EXISTING LOTS (BLOCKS 2 AND 3, LOMA VERDE) SEPARATED BY GROVE STREET. THE WEST LOT IS MOSTLY PAVED PARKING LOT, WITH UNPAVED DIRT AND GRAVEL PORTIONS WHERE THE PREVIOUS 'CARAVAN CLUB' BUILDING AND ASSOCIATED UTILITIES WERE DEMOLISHED IN 2018. MINIMAL LANDSCAPED AREAS ARE LOCATED ON THE SOUTH SIDE OF THE SITE. THE EASTERN PORTION IS SIMILAR, WITH A SMALL UNPAVED PATCH AT THE LOCATION A PREVIOUS BUILDING WAS DEMOLISHED IN 2018. BOTH LOTS GENERALLY SHEET FLOW FROM EAST TO WEST, WITH A SLIGHT CROWN IN THE CENTER OF BOTH LOTS. THE WEST LOT PRIMARILY FREE DISCHARGES STORMWATER RUNOFF OVER THE PUBLIC SIDEWALKS OR THROUGH EXISTING DRIVEPADS INTO SAN PABLO STREET NE TO THE WEST, WITH PORTIONS DISCHARGING TO CHICO ROAD NE TO THE NORTH AND CENTRAL AVE TO THE SOUTH. THE EAST LOT PRIMARILY FREE DISCHARGES STORMWATER RUNOFF OVER THE PUBLIC SIDEWALKS OR THROUGH EXISTING DRIVEPADS INTO GROVE STREET NE, WITH PORTIONS DISCHARGING TO CHICO ROAD NE TO THE NORTH AND CENTRAL AVE TO THE SOUTH. THERE ARE NO ONSITE PONDING IMPROVEMENTS ON EITHER LOT.

GROVE STREET IS A FULLY DEVELOPED PUBLIC STREET WITH CURB AND GUTTER AND SIDEWALK ON BOTH SIDES. THE EXISTING STREET EXTENDS NORTH AND SOUTH, CONNECTING CHICO ROAD NE TO THE NORTH TO CENTRAL AVE TO THE SOUTH. GROVE STREET ACCEPTS FREE DISCHARGE OF STORMWATER RUNOFF FROM THE EAST LOT (BLOCK 3, LOMA VERDE). A HIGH POINT IN THE STREET IS LOCATED APPROXIMATELY HALFWAY BETWEEN THE TWO ROADS, RESULTING IN A SPLIT OF THE RUNOFF WITHIN GROVE STREET TO BOTH CHICO ROAD NE AND CENTRAL AVE.

THERE ARE NO APPARENT OFFSITE FLOWS IMPACTING THE EXISTING SITE. OFFSITE FLOWS ARE CONTAINED AND CONVEYED AROUND THE SITE TO THE EAST, NORTH, AND SOUTH WITHIN THE ADJACENT, FULLY DEVELOPED PUBLIC RIGHTS-OF-WAY OF CHICO ROAD NE, CHARLESTON ROAD NE, AND CENTRAL AVE. SAN PABLO STREET TO THE WEST IS TOPOGRAPHICALLY LOWER THAN THE SITE.

V. DEVELOPED CONDITIONS

THE PROPOSED DEVELOPED CONDITIONS FOR THIS SITE CONSIST A NEW LIBRARY BUILDING, PAVED PARKING LOT, AND ASSOCIATED PAVED PEDESTRIAN AND LANDSCAPING IMPROVEMENTS IN THE WESTERN PORTION OF THE SITE. THE EXISTING STREET IS PROPOSED TO BE VACATED BY CONCURRENT VACATION AND PLATTING ACTION, WHICH WILL FACILITATE THE COMPLETE REMOVAL OF THE EXISTING STREET IMPROVEMENTS. DEVELOPMENT OF THE EASTERN PORTION OF THE SITE (BLOCK 3, LOMA VERDE) IS UNDER DISCUSSION AND COORDINATION BETWEEN THE CITY OF ALBUQUERQUE AND AMAFCA; THIS PORTION OF THE SITE IS ANTICIPATED TO BE DEVELOPED AT A LATER DATE PENDING RESOLUTION OF THOSE COORDINATION EFFORTS.

THE PROPOSED LIBRARY DEVELOPMENT IMPROVEMENTS INCLUDE DEPRESSED PARKING ISLANDS AND PONDING AREAS INTENDED FOR WATER HARVESTING AND CAPTURE OF SITE RUNOFF. THESE LANDSCAPED AREAS WILL RESULT IN AN OVERALL DECREASE IN IMPERVIOUS AREA FROM THE EXISTING CONDITION, AND CALCULATIONS INCLUDED HEREWITH DEMONSTRATE AN OVERALL DECREASE IN DEVELOPED RUNOFF GENERATED DURING A 100-YEAR, 6 HOUR STORM EVENT.

THE SITE IS DIVIDED INTO TWO SEPARATE DRAINAGE BASINS. BASIN A IS THE WESTERN PORTION TO BE DEVELOPED BY THIS PLAN, AND BASIN B IS THE EASTERN PORTION TO BE DEVELOPED AT A FUTURE DATE. BASIN A IS FURTHER SUBDIVIDED INTO BASIN A-1 AND BASIN A-2. BASIN A-1 CONSISTS OF THE PARKING LOT AND PORTIONS OF THE BUILDING THAT DISCHARGE THERETO, AND BASIN A-2 CONSISTS OF THE REMAINDER OF THE BUILDING, THE FRONT ENTRY COURTYARD, AND THE NEW ACCESS ROAD TO CENTRAL AVENUE.

BASIN A-1 DRAINS FROM EAST TO WEST ACROSS THE NEW PARKING LOT, AND DISCHARGES TO SEVERAL PONDING AREAS WITHIN THE PARKING LOT ISLANDS AND AT THE NORTHWEST CORNER OF THE SITE. DESIGNED TO CAPTURE THE MINOR INCREASE IN DEVELOPED RUNOFF (ΔV100 = 440 CF; VPOND = 2,016 CF) FROM THE NEW PARKING LOT AND NORTH PORTION OF THE BUILDING. THESE PONDING AREAS ARE ALSO SIZED TO CAPTURE AND TREAT THE FIRST FLUSH OF RUNOFF (VFF = 1,380 CF; VPOND = 2,016 CF)) GENERATED BY THIS SUB-BASIN.

BASIN A-2 CONSISTS OF THE BUILDING, ENTRY COURTYARD, AND CENTRAL AVENUE ACCESS ROAD. THIS SUB-BASIN DISCHARGES TO THE SOUTH AND WEST (CENTRAL AVE AND SAN PABLO STREET). THIS SUB-BASIN INCLUDES SEVERAL DEPRESSED AREAS OF LANDSCAPING, BUT THEY ARE NEGLIGIBLE IN SIZE AND WILL NOT COLLECT SIGNIFICANT AMOUNTS OF RUNOFF FROM THIS SUB-BASIN. A STORM WATER FEATURE / CISTERN LOCATED NEAR THE SOUTHWEST CORNER OF THE NEW BUILDING IS PROPOSED TO COLLECT A PORTION OF THE ROOF RUNOFF, BUT AS THIS FEATURE IS AN ALTERNATE TO THE BASE BID, THE CAPACITY OF THIS STORMWATER COLLECTION FEATURE IS NOT INCLUDED IN THE CALCULATIONS FOR THIS SITE. CALCULATIONS REFERENCED HEREWITH DEMONSTRATE THAT THE DEVELOPED CONDITION FOR BASIN A-2 WILL RESULT IN A MINOR DECREASE (ΔV100 = 690 CF) OF STORMWATER RUNOFF VOLUME GENERATED, THEREFORE PONDING IS NOT REQUIRED FOR THE 100 YEAR STORM EVENT. ON-SITE WATER HARVESTING / PONDING OPPORTUNITIES IN BASIN A-2 ARE VERY LIMITED RESULTING FROM THE BUILDING PROXIMITY TO THE ADJACENT PUBLIC STREETS; THEREFORE THE FIRST FLUSH GENERATED BY BASIN A-2 (VFF = 1,270 CF) WILL FREE DISCHARGE DIRECTLY TO THE PUBLIC RIGHT OF WAYS ALONG CENTRAL AVENUE AND SAN PABLO STREET.

BASIN B WILL NOT BE DEVELOPED AS PART OF THIS PLAN, PENDING FUTURE SITE DEVELOPMENT. THIS PLAN PROPOSES TO CONSTRUCT A TEMPORARY RETENTION POND AT THE WEST END OF BASIN B IN ORDER TO CAPTURE THE RUNOFF GENERATED BY BASIN B AND PREVENT IT FROM DRAINING ONTO THE NEWLY DEVELOPED BASIN A LIBRARY IMPROVEMENTS. CALCULATIONS INCLUDED HEREWITH DEMONSTRATE THAT THE POND CAPACITY IS SIZED TO CAPTURE THE 100 YEAR STORM EVENT GENERATED BY BASIN B.

AS NOTED ABOVE, THERE ARE NO APPARENT OFFSITE FLOWS IMPACTING THE SITE.

VI. CALCULATIONS

CALCULATIONS ANALYZING THE EXISTING AND PROPOSED DEVELOPED CONDITIONS FOR THE 100 YEAR, 6-HOUR RAINFALL EVENT HAVE BEEN PREPARED FOR EACH DRAINAGE BASIN. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS DEMONSTRATED BY THESE CALCULATIONS, THE PROPOSED DEVELOPMENT WILL RESULT IN AN OVERALL DECREASE IN PEAK RATE AND VOLUME OF RUNOFF GENERATED BY THE SITE (1.0 CFS AND 2,060 CF OF REDUCTION). CALCULATIONS FOR THE PROPOSED ONSITE DETENTION PONDS, PREPARED USING THE AVERAGE END-AREA METHOD, DEMONSTRATE THAT THE ONSITE PONDING CAPACITY IS SIZED TO CONTAIN THE FIRST FLUSH OF RUNOFF IN BASIN A-1, AND THE 100 YEAR STORM RUNOFF GENERATED BY BASIN B.

VIII. CONCLUSIONS

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

- THIS DRAINAGE PLAN ADDRESSES THE LIBRARY IMPROVEMENTS FOR THE WESTERN PORTION OF THE SITE; FUTURE DEVELOPMENT FOR THE EASTERN PORTION OF THE SITE WILL REQUIRE SEPARATE SUBMITTAL.
- THE PROPOSED IMPROVEMENTS WILL CONTINUE TO DRAIN TO THE ADJACENT PUBLIC STREETS, HOWEVER THE DEVELOPED WESTERN PORTION OF THE SITE WILL BE PRIMARILY TO SAN PABLO STREET NE AND CENTRAL AVE; THE DISCHARGE OF DEVELOPED RUNOFF TO CHICO ROAD NE WILL BE NEGLIGIBLE.
- THE PROPOSED IMPROVEMENTS WILL MAINTAIN THE STATUS QUO FOR THE SITE OF FREE DISCHARGE AFTER THE ON-SITE STORMWATER RETENTION/CAPTURE AREAS ARE INITIALLY FILLED TO THEIR CAPACITY. THE PROPOSED IMPROVEMENTS WILL RESULT IN A DECREASE IN THE PEAK RATE OF RUNOFF AND VOLUME DRAINING TO THE PUBLIC RIGHT-OF-WAY DUE TO THE DECREASE IN IMPERVIOUS LAND TREATMENT AND THE ADDITION OF SEVERAL RETENTION AREAS.
- THE PROPOSED DEVELOPMENT WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM DRAINAGE CONDITIONS.
- WHILE WATER HARVESTING / POND AREAS WILL CAPTURE AND TREAT THE FIRST FLUSH FROM BASIN A-1, THE FIRST FLUSH FROM BASIN A-2 WILL NOT BE CAPTURED ONSITE DUE TO SITE CONSTRAINTS PROHIBITING ADEQUATE WATER HARVESTING OPPORTUNITIES. THEREFORE, 1,270 CF OF FIRST FLUSH WILL FREE DISCHARGE TO THE CITY RIGHT OF WAY. IT SHOULD BE NOTED THAT IF A CISTERN PROPOSED IN BASIN A-2 AS AN ALTERNATE IS SELECTED BY THE CITY FOR CONSTRUCTION, THIS WILL BE USED TO CAPTURE THE FIRST FLUSH RUNOFF FROM THE NEW BUILDING TO THE MAXIMUM EXTENT PRACTICABLE.

CALCULATIONS

I. SITE CHARACTERISTICS

A. PRECIPITATION ZONE =	3
B. $P_{100,6HR} = P_{360} =$	2.60 IN
C. TOTAL PROJECT AREA (A_T) =	208,826 SF 4.79 AC

D. LAND TREATMENTS

EXISTING LAND TREATMENT			DEVELOPED LAND TREATMENT		
BASIN A-1	59,120 SF 1.36 AC		BASIN A-1	59,120 SF 1.36 AC	
LAND TREATMENT	AREA (SF/AC)	%	LAND TREATMENT	AREA (SF/AC)	%
A			A		
B			B		
C	15,470 SF 0.36 AC	26%	C	10,440 SF 0.24 AC	18%
D	43,650 SF 1.00 AC	74%	D	48,680 SF 1.12 AC	82%
BASIN A-2	59,175 SF 1.36 AC		BASIN A-2	59,175 SF 1.36 AC	
LAND TREATMENT	AREA (SF/AC)	%	LAND TREATMENT	AREA (SF/AC)	%
A			A		
B			B		
C	6,536 SF 0.15 AC	11%	C	14,450 SF 0.33 AC	24%
D	52,640 SF 1.21 AC	89%	D	44,725 SF 1.03 AC	76%
BASIN B	90,455 SF 2.08 AC		BASIN B	90,455 SF 2.08 AC	
LAND TREATMENT	AREA (SF/AC)	%	LAND TREATMENT	AREA (SF/AC)	%
A			A		
B			B		
C	7,460 SF 0.17 AC	8%	C	28,160 SF 0.65 AC	31%
D	82,995 SF 1.91 AC	92%	D	62,295 SF 1.43 AC	69%

II. HYDROLOGY

A. EXISTING CONDITION 100 YEAR STORM

1. BASIN A-1	
a. VOLUME 100-YR. 6-HR	
$WTE = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D) / A_T$ $\Rightarrow (0.66 \cdot 0.00) + (0.92 \cdot 0.00) + (1.29 \cdot 0.36) + (2.36 \cdot 1.00) / 1.36 =$	2.08 IN
$V_{100,6HR} = (E_W / 12) \cdot A_T \Rightarrow (2.08 / 12) \cdot 1.36 =$	0.2352 AC-FT = 10,250 CF
b. PEAK DISCHARGE 100-YR	
$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$ $\Rightarrow (1.87 \cdot 0.00) + (2.60 \cdot 0.00) + (3.45 \cdot 0.36) + (5.02 \cdot 1.00) =$	6.3 CFS

2. BASIN A-2	
a. VOLUME 100-YR. 6-HR	
$WTE = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D) / A_T$ $\Rightarrow (0.66 \cdot 0.00) + (0.92 \cdot 0.00) + (1.29 \cdot 0.15) + (2.36 \cdot 1.21) / 1.36 =$	2.24 IN
$V_{100,6HR} = (E_W / 12) \cdot A_T \Rightarrow (2.24 / 12) \cdot 1.36 =$	0.2536 AC-FT = 11,050 CF
b. PEAK DISCHARGE 100-YR	
$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$ $\Rightarrow (1.87 \cdot 0.00) + (2.60 \cdot 0.00) + (3.45 \cdot 0.15) + (5.02 \cdot 1.21) =$	6.6 CFS

4. BASIN B	
a. VOLUME 100-YR. 6-HR	
$WTE = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D) / A_T$ $\Rightarrow (0.66 \cdot 0.00) + (0.92 \cdot 0.00) + (1.29 \cdot 0.17) + (2.36 \cdot 1.91) / 2.08 =$	2.27 IN
$V_{100,6HR} = (E_W / 12) \cdot A_T \Rightarrow (2.27 / 12) \cdot 2.08 =$	0.3928 AC-FT = 17,110 CF
b. PEAK DISCHARGE 100-YR	
$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$ $\Rightarrow (1.87 \cdot 0.00) + (2.60 \cdot 0.00) + (3.45 \cdot 0.17) + (5.02 \cdot 1.91) =$	10.2 CFS

B. DEVELOPED CONDITION 100 YEAR STORM

1. BASIN A-1	
a. VOLUME 100-YR. 6-HR	
$WTE = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D) / A_T$ $\Rightarrow (0.66 \cdot 0.00) + (0.92 \cdot 0.00) + (1.29 \cdot 0.24) + (2.36 \cdot 1.12) / 1.36 =$	2.17 IN
$V_{100,6HR} = (E_W / 12) \cdot A_T \Rightarrow (2.17 / 12) \cdot 1.36 =$	0.2454 AC-FT = 10,690 CF
b. FIRST FLUSH VOLUME	
$V_{FF} = ((P_{FF} - I_A D) / 12) \cdot A_D$ $\Rightarrow ((0.44 - 0.10) / 12) \cdot (1.12) =$	0.0317 AC-FT = 1,380 CF

c. PEAK DISCHARGE 100-YR	
$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$ $\Rightarrow (1.87 \cdot 0.00) + (2.60 \cdot 0.00) + (3.45 \cdot 0.24) + (5.02 \cdot 1.12) =$	6.4 CFS
d. POND VOLUME CAPACITY	
$POND_1 + POND_2 + POND_3 + POND_4 + POND_5$ $\Rightarrow 1150 CF + 626 CF + 80 CF + 80 CF + 80 CF =$	2,016 CF
$\Rightarrow V_{POND TOTAL} = 2,016 CF > V_{FF} = 1,380 CF$	

2. BASIN A-2	
a. VOLUME 100-YR. 6-HR	
$WTE = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D) / A_T$ $\Rightarrow (0.66 \cdot 0.00) + (0.92 \cdot 0.00) + (1.29 \cdot 0.33) + (2.36 \cdot 1.03) / 1.36 =$	2.10 IN
$V_{100,6HR} = (E_W / 12) \cdot A_T \Rightarrow (2.10 / 12) \cdot 1.36 =$	0.2377 AC-FT = 10,360 CF
b. FIRST FLUSH VOLUME	
$V_{FF} = ((P_{FF} - I_A D) / 12) \cdot A_D$ $\Rightarrow ((0.44 - 0.10) / 12) \cdot (1.03) =$	0.0291 AC-FT = 1,270 CF
- NEGLIGIBLE WATER HARVESTING / FIRST FLUSH DISHARGE CAPTURED IN BASIN A-2; 1,270 CF OF FIRST FLUSH DISCHARGES TO CENTRAL AVENUE RIGHT OF WAY	

c. PEAK DISCHARGE 100-YR	
$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$ $\Rightarrow (1.87 \cdot 0.00) + (2.60 \cdot 0.00) + (3.45 \cdot 0.33) + (5.02 \cdot 1.03) =$	6.3 CFS

d. STORM DRAIN PIPE FLOW RATE CAPACITY (HGL / EGL)						
STORM DRAIN	Q _{100 DEV}	DIA	SLOPE	HGL	VEL	EGL
A (SE COURTYARD SD)	1 CFS	8"	0.7%	6.5'	3.3	8.5"
B (S BLDG SD)	1.2 CFS	8"	4%	4"	6.9	12.9"
C (SW BLDG SD)	1.0 CFS	6"	3%	3.5'	5.1	8.3"
D (NW BLDG SD)	0.8 CFS	8"	5%	3"	6.7	11.4"

e. 12" PUBLIC SIDEWALK CULVERT CAPACITY (@ 1% DEPTH)	
$Q = 1.486 / n \cdot A \cdot R^{2/3} \cdot S^{1/2}$ $n = 0.013$ $A = 0.67 SF$ $R = 0.29 FT$ $S = 0.015 FT/FT$ $Q = 4.1 CFS$	

4. BASIN B	
a. VOLUME 100-YR. 6-HR	
$WTE = (E_A \cdot A_A + E_B \cdot A_B + E_C \cdot A_C + E_D \cdot A_D) / A_T$ $\Rightarrow (0.66 \cdot 0.00) + (0.92 \cdot 0.00) + (1.29 \cdot 0.65) + (2.36 \cdot 1.43) / 2.08 =$	2.03 IN
$V_{100,6HR} = (E_W / 12) \cdot A_T \Rightarrow (2.03 / 12) \cdot 2.08 =$	0.3513 AC-FT = 15,300 CF
b. FIRST FLUSH VOLUME	
$V_{FF} = ((P_{FF} - I_A D) / 12) \cdot A_D$ $\Rightarrow ((0.44 - 0.10) / 12) \cdot (1.43) =$	0.0405 AC-FT = 1,770 CF

c. PEAK DISCHARGE 100-YR	
$Q_{100} = Q_A \cdot A_A + Q_B \cdot A_B + Q_C \cdot A_C + Q_D \cdot A_D$ $\Rightarrow (1.87 \cdot 0.00) + (2.60 \cdot 0.00) + (3.45 \cdot 0.65) + (5.02 \cdot 1.43) =$	9.4 CFS

d. POND VOLUME CAPACITY	
POND ₆ = 18,150 CF > V ₁₀₀ = 15,300 CF	

C. COMPARISON 100 YEAR STORM

1.	<u>BASIN A-1</u>			
	a. <u>VOLUME 100-YR. 6+HR</u>	$\Delta V_{100, 6\text{ HR}} = 10690 - 10250 =$	<u>440 CF</u>	(INCREASE)
	b. <u>PEAK DISCHARGE 100-YR</u>	$\Delta Q_{100} = 6.4 - 6.3 =$	<u>0.1 CFS</u>	(INCREASE)
2.	<u>BASIN A-2</u>			
	a. <u>VOLUME 100-YR. 6+HR</u>	$\Delta V_{100, 6\text{ HR}} = 10360 - 11050 =$	<u>-690 CF</u>	(DECREASE)
	b. <u>PEAK DISCHARGE 100-YR</u>	$\Delta Q_{100} = 6.3 - 6.6 =$	<u>-0.3 CFS</u>	(DECREASE)
4.	<u>BASIN B</u>			
	a. <u>VOLUME 100-YR. 6+HR</u>	$\Delta V_{100, 6\text{ HR}} = 15300 - 17110 =$	<u>-1,810 CF</u>	(DECREASE)
	b. <u>PEAK DISCHARGE 100-YR</u>	$\Delta Q_{100} = 9.4 - 10.2 =$	<u>-0.8 CFS</u>	(DECREASE)
5.	<u>OVERALL SITE</u>			
	a. <u>VOLUME 100-YR. 6+HR</u>	$\Delta V_{100, 6\text{ HR}} = 36,350 - 38,410$	<u>-2060 CF</u>	(DECREASE)
	b. <u>PEAK DISCHARGE 100-YR</u>	$\Delta Q_{100} = 22.1 - 23.1$	<u>-1.0 CFS</u>	(DECREASE)



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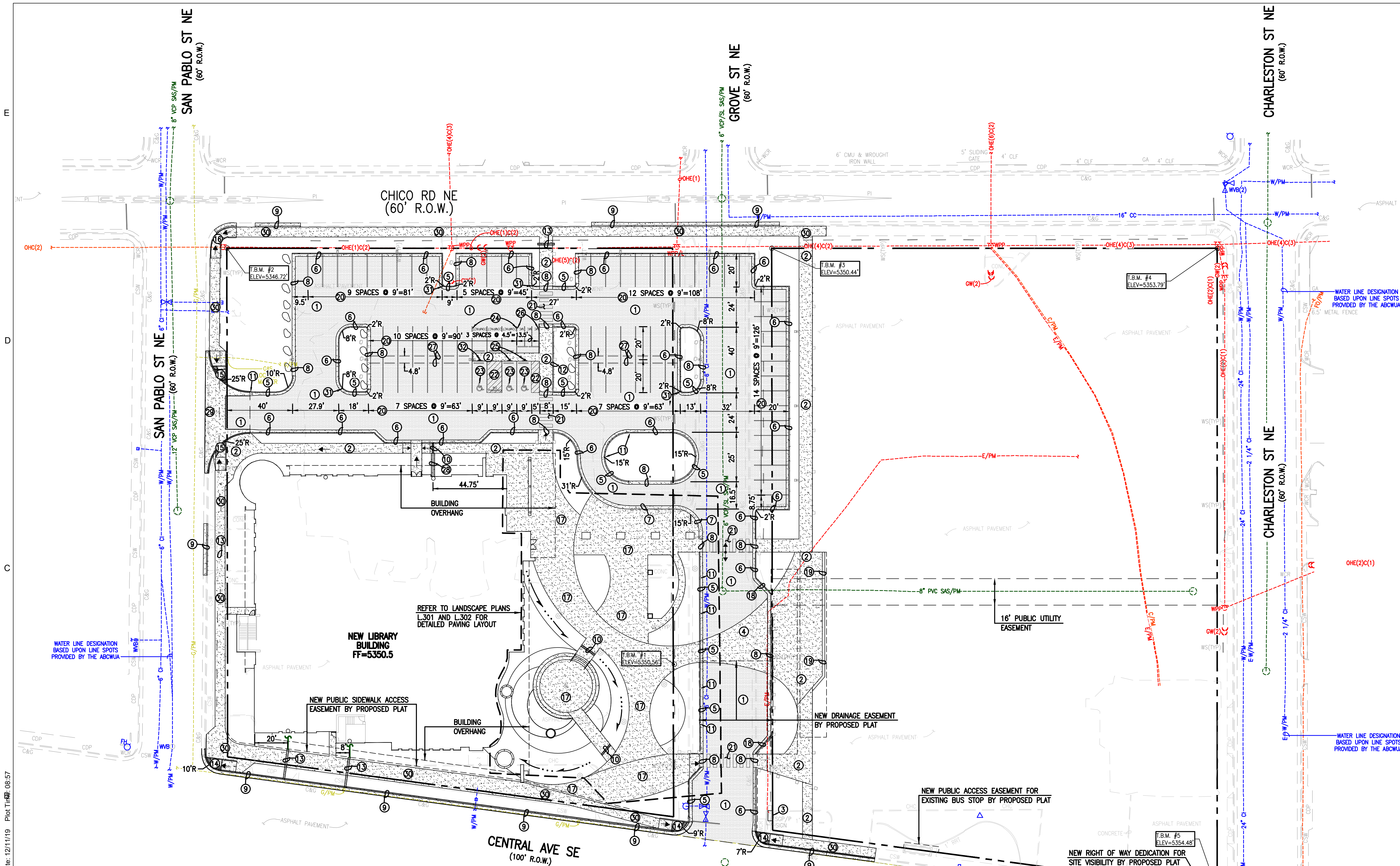


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NO.	ISSUE	DATE
PROJECT	CITY OF ALBUQUERQUE	SCALE 1" = 30'
INTERNATIONAL DISTRICT LIBRARY (IDL)	RMKM PROJECT NO. 9225.74 COA 1706 RMKM	
	PROJECT MANAGER PM	
7667 CENTRAL AVE NE	MODELED BY RMKM	
SHEET TITLE DRAINAGE PLAN AND CALCULATIONS	DESIGN PHASE 100% CONSTRUCTION DOCUMENTS 11 DECEMBER, 2019	SHEET NUMBER
		12/11/2019



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File Name: P:\data\2017\20170661\ENGIN70661_DesignMaster.dwg - C100 Plot Date: 12/11/19 Plot Title: 08:57

CONSTRUCTION NOTES

SEE SHEET C001 FOR CONSTRUCTION NOTES

LEGEND

SEE SHEET C001 FOR LEGEND

NOTE:

THIS IS NOT A BOUNDARY SURVEY OR A RIGHT OF WAY SURVEY. APPARENT PROPERTY CORNERS, RIGHT OF WAY LINES OR PROPERTY LINES AS SHOWN ARE DERIVED FROM A BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 04/30/2018 (2018.017.1). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE "TOPOGRAPHIC AND UTILITY SURVEY" PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 04/30/2018 (2018.017.1).

KEYED NOTES

- CONSTRUCT 3" RESIDENTIAL ASPHALT PAVEMENT PER COA STD. DWG 2400
- CONSTRUCT 4" CONCRETE SIDEWALK PER COA STD. DWG 2430
- EXISTING SIGN TO REMAIN
- CONSTRUCT 6" REINFORCED CONCRETE PAVEMENT PER TYPICAL SECTION, SHEET C102
- CONSTRUCT 6" STANDARD CURB AND GUTTER PER TYPICAL SECTION, SHEET C102
- CONSTRUCT 6" DEPRESSION CURB AND GUTTER PER TYPICAL SECTION, SHEET C102
- CONSTRUCT MOUNTABLE CURB AND GUTTER PER TYPICAL SECTION, SHEET C102
- CONSTRUCT FLUSH CURB AND GUTTER PER TYPICAL SECTION, SHEET C102
- NEW 8" CITY STANDARD CURB AND GUTTER PER COA STD. DWG 2415A (BY SEPARATE WORK ORDER)
- CONSTRUCT 12" SIDEWALK CULVERT PER TYPICAL SECTION, SHEET C102
- CONSTRUCT 12" CURB OPENING PER TYPICAL SECTION, SHEET C102
- CONSTRUCT 6" HEADER CURB PER COA STD. DWG 2415B
- NEW 12" SIDEWALK CULVERT PER COA STD. DWG 2236, EXTEND 1' BEYOND BACK OF SIDEWALK (BY SEPARATE WORK ORDER)
- NEW UNIDIRECTIONAL SIDEWALK ACCESS RAMP PER COA STD. DWG 2430 (BY SEPARATE WORK ORDER)
- NEW UNIDIRECTIONAL PRIVATE ENTRANCE SIDEWALK ACCESS RAMP PER COA STD. DWG 2426 (BY SEPARATE WORK ORDER)
- NEW MULTIDIRECTIONAL SIDEWALK ACCESS RAMP PER COA STD. DWG 2430 (BY SEPARATE WORK ORDER)
- FOR FRONT ENTRY/COURTYARD/AMPHITHEATER SITE LAYOUT, SEE LANDSCAPING PLANS, SHEETS L.301 AND L.302
- TRANSITION FROM 6" TO FLUSH CURB
- CONCRETE SEAT WALL, SEE ARCHITECTURAL PLAN
- PAINT 4" WIDE PAVEMENT STRIPE WITH WHITE TRAFFIC PAINT, MIN. 2 COATS
- PAINT 12"x8" CROSSWALK MARKINGS @ 24" C-C, WITH WHITE TRAFFIC PAINT, MIN. 2 COATS
- PAINT 4" WIDE CROSSHATCH PAVEMENT MARKING @ 45', 4" C-C, WITH BLUE TRAFFIC PAINT, MIN. 2 COATS; STENCIL "NO PARKING" @ END OF AISLE
- PAINT TYP. ADA ACCESSIBLE PARKING SYMBOL WITH BLUE TRAFFIC PAINT, MIN. 2 COATS
- STENCIL "COMPACT" WITH WHITE TRAFFIC PAINT, MIN. 2 COATS
- INSTALL ACCESSIBLE PARKING SIGN WITH STANDARD "VIOLATORS WILL BE TOWED" PLACARD, TYP.
- STENCIL "MC" @ MOTORCYCLE SPACES WITH WHITE TRAFFIC PAINT, MIN. 2 COATS
- INSTALL 6" CONCRETE WHEEL STOPS PER TYP. SECTION, SHEET C102
- CONSTRUCT 12" ROUNDUP PER TYP. SECTION, SHEET C103
- NEW 24' PRIVATE ENTRANCE PER COA STD. DWG 2426 (BY SEPARATE WORK ORDER)
- NEW PUBLIC 4" CONCRETE SIDEWALK PER COA STD. DWG 2430 (BY SEPARATE WORK ORDER)
- TRANSITION FROM STANDARD TO DEPRESSION CURB
- INSTALL ACCESSIBLE PARKING SIGN WITH "VAN ACCESSIBLE" PLACARD AND STANDARD "VIOLATORS WILL BE TOWED" PLACARD

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

A MAG NAIL IN ASPHALT PAVEMENT, AS SHOWN ON THIS SHEET. ELEVATION = 5350.56 FEET (NAVD 1988)

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

A MAG NAIL W/WASHER STAMPED "CARTESIAN SURVEYS PLS 14271" ALSO BEING THE NORTH WEST PROPERTY CORNER OF BLOCK 2, AS SHOWN ON THIS SHEET. ELEVATION = 5346.72 FEET (NAVD 1988)

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

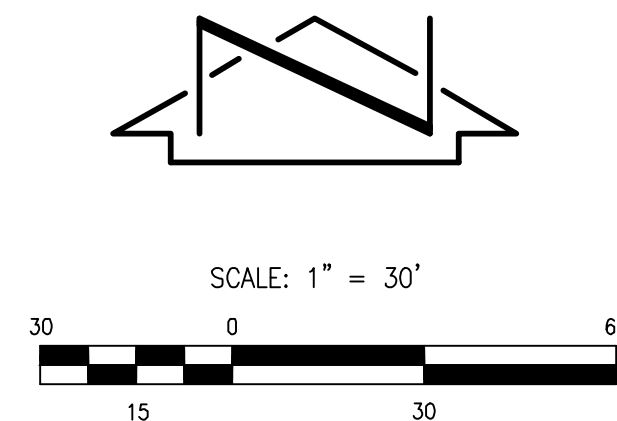
A MAG NAIL W/WASHER STAMPED "CARTESIAN SURVEYS PLS 14271" ALSO BEING THE NORTH WEST PROPERTY CORNER OF BLOCK 3, AS SHOWN ON THIS SHEET. ELEVATION = 5350.44 FEET (NAVD 1988)

TEMPORARY BENCHMARK #4 (T.B.M.)

A MAG NAIL W/WASHER STAMPED "CARTESIAN SURVEYS PLS 14271" ALSO BEING THE NORTH EAST PROPERTY CORNER OF BLOCK 3, AS SHOWN ON THIS SHEET. ELEVATION = 5353.79 FEET (NAVD 1988)

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

A MAG NAIL W/WASHER STAMPED "CARTESIAN SURVEYS PLS 14271" ALSO BEING THE SOUTH EAST PROPERTY CORNER OF BLOCK 3, AS SHOWN ON THIS SHEET. ELEVATION = 5354.48 FEET (NAVD 1988)



2017.066.1

C100

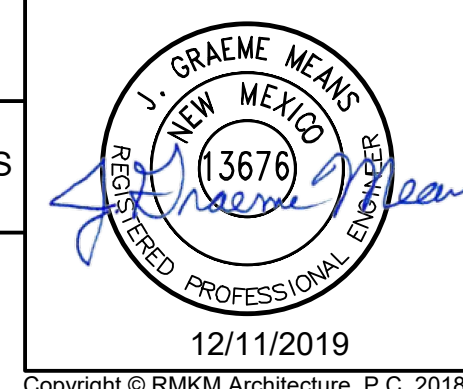


RMKM ARCHITECTURE, PC
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HIGH MESA Consulting Group
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6010-B Midway Park Blvd. NE • Albuquerque, New Mexico 87109
Phone: 505.345.4250 • Fax: 505.345.4254 • www.highmesacg.com

NO.	ISSUE	DATE
PROJECT	CITY OF ALBUQUERQUE	SCALE 1" = 30'
INTERNATIONAL DISTRICT LIBRARY (IDL)	RMKM PROJECT NO. 9225.74 COA 1706 RMKM	
7667 CENTRAL AVE NE	PROJECT MANAGER PM	
	MODELED BY RMKM	
SHEET TITLE	SITE PAVING AND HORIZONTAL CONTROL PLAN	
DESIGN PHASE	100% CONSTRUCTION DOCUMENTS	
11 DECEMBER, 2019		
SHEET NUMBER		
		12/11/2019



CONSTRUCTION NOTES

SEE SHEET C001 FOR CONSTRUCTION NOTES

LEGEND

SEE SHEET C001 FOR LEGEND

NOTE:

THIS IS NOT A BOUNDARY SURVEY OR A RIGHT OF WAY SURVEY. APPARENT PROPERTY CORNERS, RIGHT OF WAY LINES OR PROPERTY LINES AS SHOWN ARE DERIVED FROM A BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 04/30/2018 (2018.017.1). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 04/30/2018 (2018.017.1).

KEYED NOTES

- NEW 24" SIDEWALK CULVERT PER COA STD DWG 2236 (BY SEPARATE WORK ORDER)
- NEW 12" CURB OPENING, SEE SHEET C100
- INSTALL 18" NYLOPLAST STORM INLET PER TYPICAL SECTION, SHEET C104
- INSTALL 24" NYLOPLAST STORM INLET WITH OIL/DEBRIS/WATER SEPARATOR (ENVIROHOOD 583AG041 OR APPROVED SUBSTITUTE), SHEET C104
- INSTALL 8" PVC STORM DRAIN
- CONNECT 8"x8" 90° WYE; CONNECT 8" PVC STORM DRAIN TO BACK OF SIDEWALK CULVERT
- CONSTRUCT 12" NYLOPLAST STORM INLET (BUBBLER) WITH OPEN BOTTOM AND 12" GRAVEL SUMP PER TYP. SECTION, SHEET C103, RIM 45.0, INV 42.0
- INSTALL 6" PVC STORM DRAIN
- NEW SPLASH POND WATER FEATURE (BASE BID), NEW "WATER FEATURE" CISTERN WITH PIPE OUTLET (ALTERNATE #1), SEE LANDSCAPING PLAN
- CONNECT 8" STORM DRAIN TO 8" ROOF DRAIN @ BUILDING, EXTEND 8" STORM DRAIN TO BACK OF SIDEWALK CULVERT
- CONNECT 4" STORM DRAIN TO 4" ROOF DRAIN @ BUILDING, EXTEND 4" STORM DRAIN TO BACK OF SIDEWALK CULVERT
- CONNECT 6" STORM DRAIN TO 6" ROOF DRAIN @ BUILDING, EXTEND 6" STORM DRAIN TO BACK OF SIDEWALK CULVERT
- CONNECT 8" STORM DRAIN TO 8" ROOF DRAIN @ BUILDING, CONSTRUCT DOUBLE CLEANOUTS @ BUILDING
- INSTALL 6" PVC 45° BEND
- CONSTRUCT 12" CONCRETE RUNDOWN PER TYP. SECTION, SHEET C103
- CONSTRUCT 24" SIDEWALK CULVERT PER TYPICAL SECTION, SHEET C103

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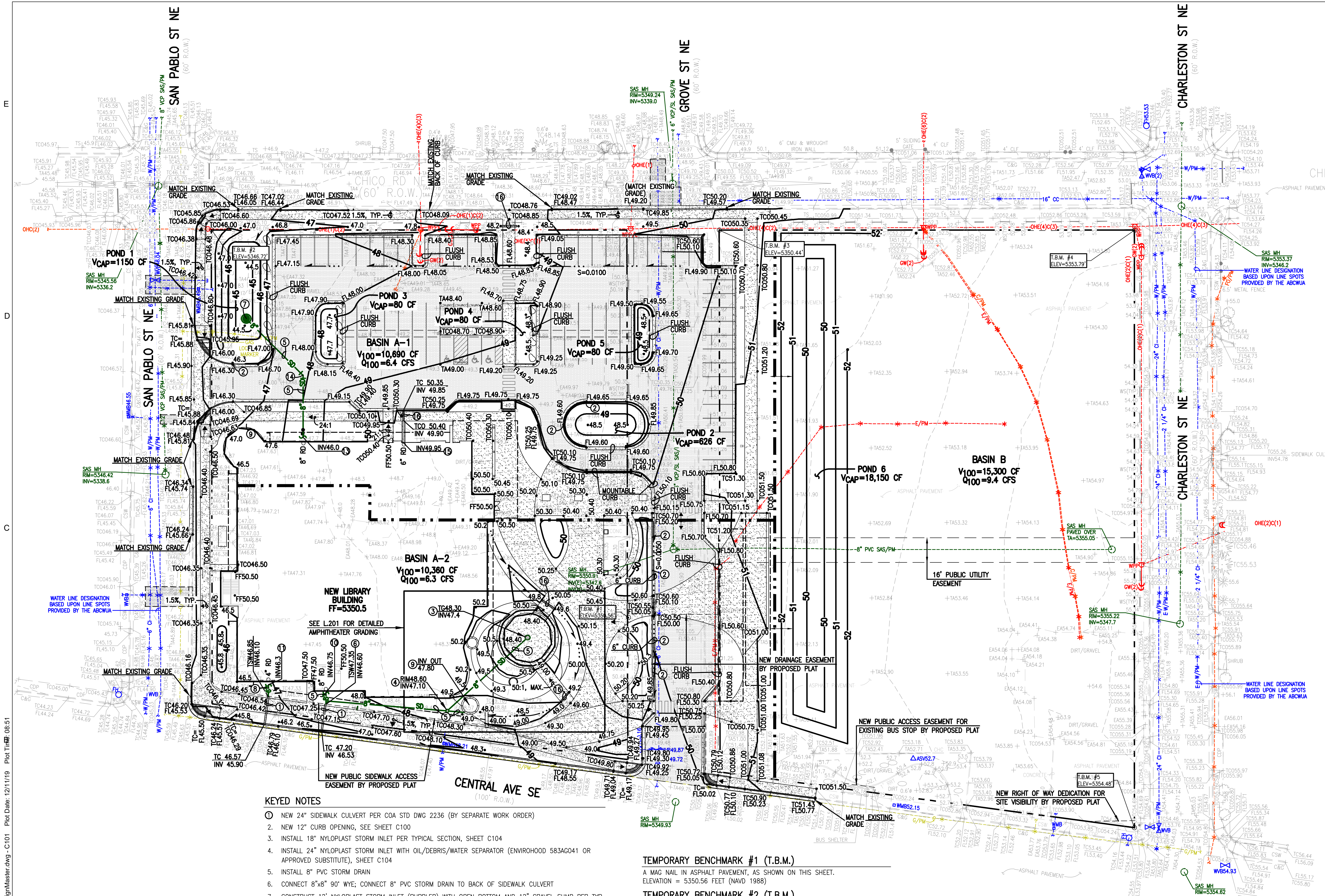
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LIBRARY (IDL)		1706 RMKM
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7667 CENTRAL AVE NE		MODELED BY RMKM
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	11 DECEMBER, 2019	
SHEET NUMBER	C101	

