

CITY OF ALBUQUERQUE

Planning Department
Suzanne Lubar, Director



Mayor Richard J. Berry

February 13, 2017

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

Re:

McMahon Market Place New Shell Building
5708 McMahon Blvd. NW
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 6-30-16 (A11D001E)
Certification dated: 2-6-17

DOLIC

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Dear Mr. Arfinan,

Based upon the information provided in your submittal received 2/6/2017, the above referenced Certification received is acceptable for the release of permanent Certificate of Occupancy by Hydrology.

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

Sincerely,

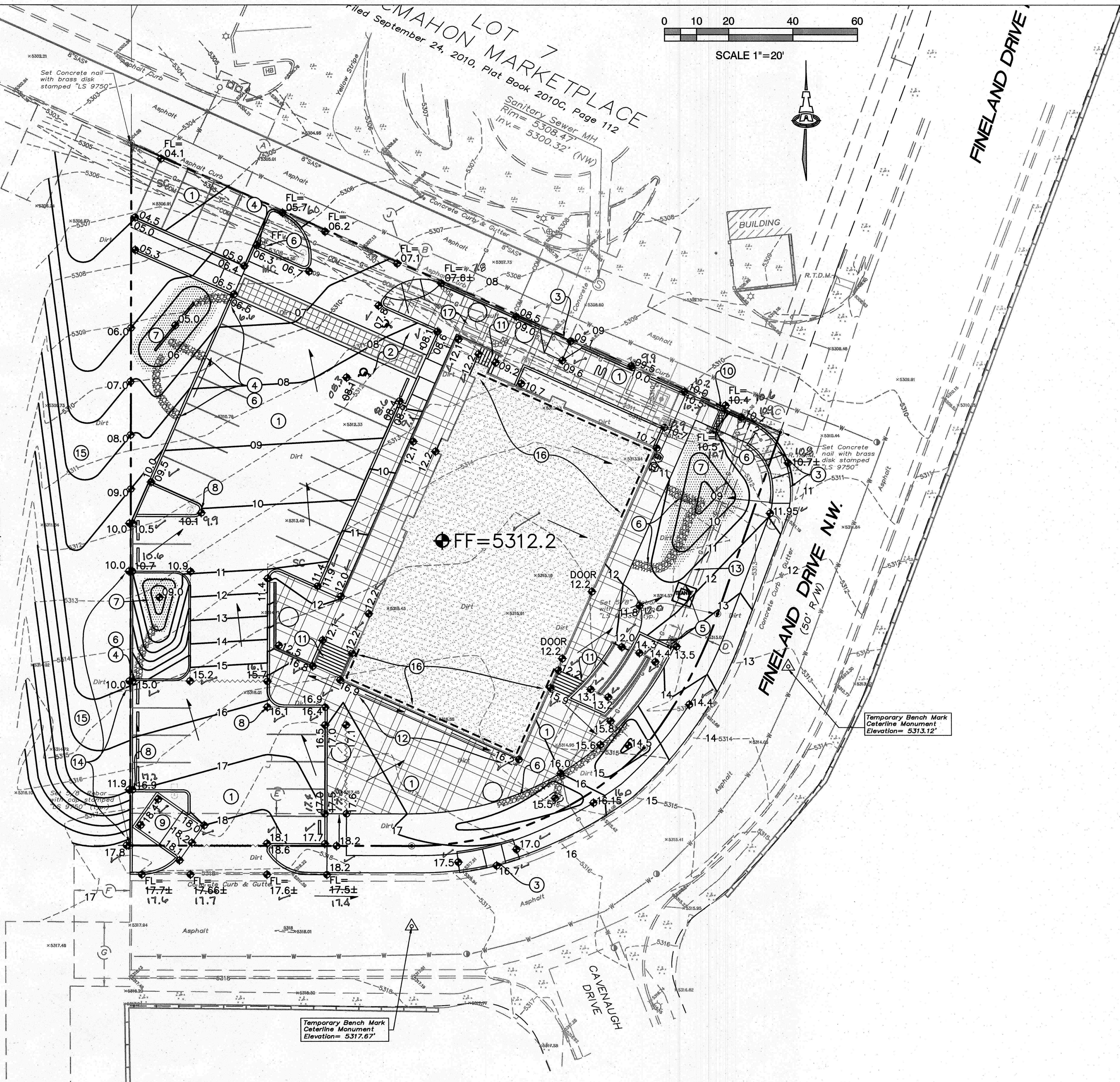
Shahab Biazar, P.E.
City Engineer, Planning Dept.
Development Review Services

TE/SB

C: email, Cordova, Camille C.; Miranda, Rachel; Sandoval, Darlene M.; Blocker, Lois

FUTURE BUILDING
MASTER PLAN F.F.
ELEVATION = 5305.5
ADD 2.7' FOR DATUM CHANGE
F.F. ELEVATION 5308.2

LOT 9
McMAHON MARKETPLACE
Filed September 24, 2010, Plat Book 2010C, Page 112



DRAINAGE CERTIFICATION

I, Fred C. Arfman, PE, NMPE No. 7322, of the firm Isaacson & Arfman, PA, hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intent of the approved plan dated June 30, 2016. The record information edited onto the original design document has been obtained by Lorenzo (Larry) Dominguez, NMPS No. 10461, of the firm East Mountain Surveying Co. I further certify that I have personally visited the project site on Jan. 10, 2017 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for **Permanent Certificate of Occupancy**.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the grading and drainage aspects of this project. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

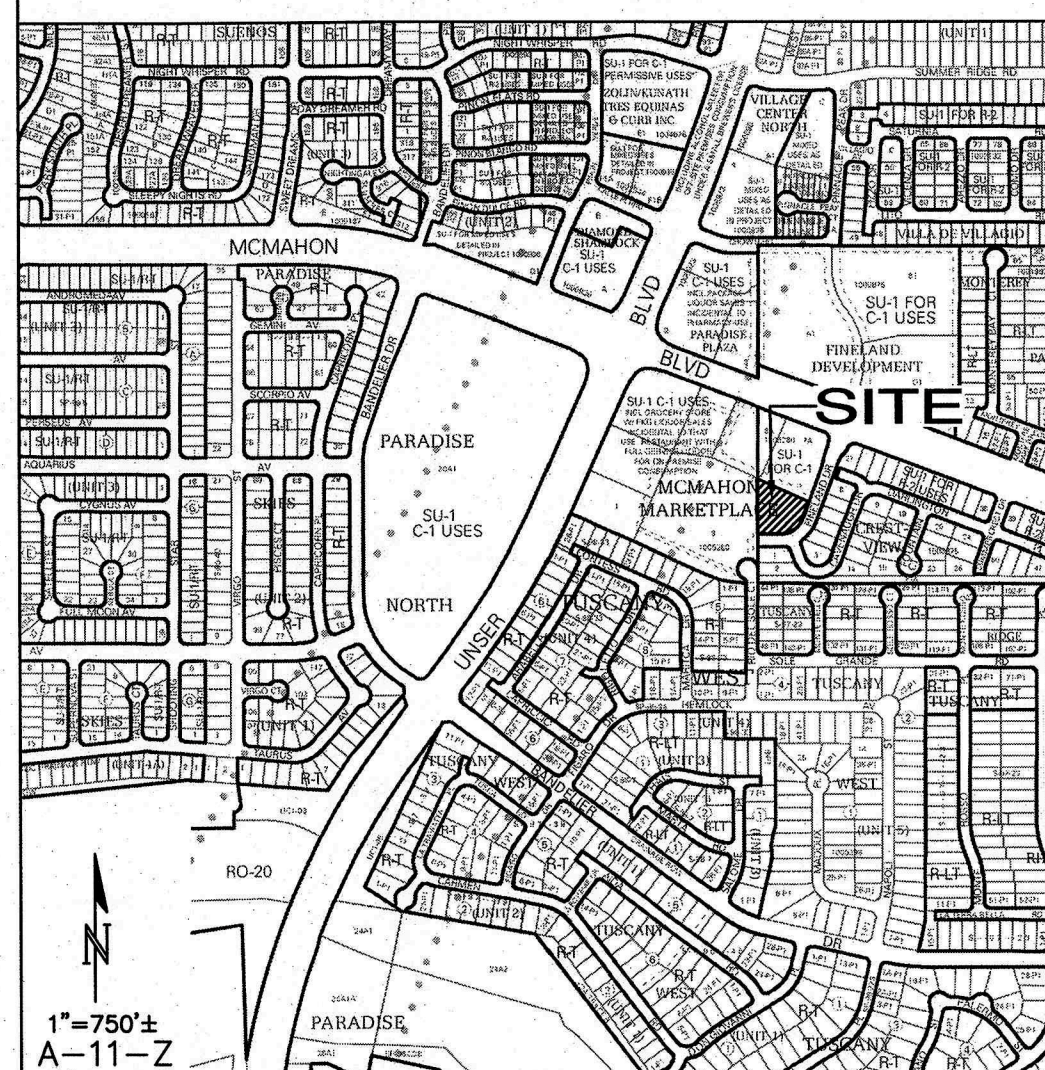
Fred C. Arfman
Fred C. Arfman
February 06, 2017
Date



LEGEND

- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR (1' INCREMENT)
- PROPOSED CONTOUR (0.1' INCREMENT)
- PROPOSED SPOT ELEVATION
- FLOW ARROW
- FINISH FLOOR ELEVATION
- PROPOSED GRADE BREAK
- PROPOSED FIRST FLUSH RETENTION PONDING AREA
- PERCOLATION TRENCH
- LIMITS OF EROSION CONTROL

VICINITY MAP



KEYED NOTES

- UNDERLINED TEXT REFERENCES DETAILS PROVIDED ON CG-2
- CONSTRUCT PROPOSED PAVING / WALKS / CURB AND GUTTER TO ELEVATIONS SHOWN. SEE PAVING PLAN FOR PAVEMENT MATERIAL, EXTENTS, SECTIONS, PARKING LAYOUT, DIMENSIONS, STRIPING, ETC.
 - CONSTRUCT HC PARKING AREA TO ADA STANDARDS. MAX. 2% SLOPE IN ANY DIRECTION.
 - CONSTRUCT HANDICAP ACCESS RAMP TO ADA STANDARDS. MAX. 1:12 SLOPE. MAX. 2% CROSS-SLOPE. SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION.
 - PROVIDE 12" WIDE CURB OPENING AT FLOWLINE SHOWN TO PASS DISCHARGE INTO AND OUT OF 'FIRST FLUSH' RETENTION PONDING AREAS. SEE DETAIL SHEET CG-2.
 - PROVIDE TWO 4" PIPES THROUGH WALL AT LOW POINT TO DRAIN RAMP.
 - INSTALL ROCK EROSION PROTECTION AT CURB OPENING INLET / OUTLET, EDGE PROTECTION AND WITHIN FLOWLINES CARRYING CONCENTRATED FLOW (3' WIDE). LIMITS HATCHED PER LEGEND. SEE DETAIL SHEET CG-2.
 - DOT HATCHED AREA REPRESENTS EXTENTS OF 'FIRST FLUSH' RETENTION PONDING. CONSTRUCT TO ELEVATIONS SHOWN.
 - NOTE: TO ENSURE READABILITY, NOT ALL PAVEMENT SPOT ELEVATIONS SHOW ADJACENT TOP OF CURB / TOP OF WALK. TEXT SHOWN WITHIN FLOWLINE REPRESENTS FLOWLINE ELEVATION. ADD 0.5' TYPICAL FOR TOP OF ADJACENT CURB OR WALK ELEVATIONS.
 - CONSTRUCT NEW CONCRETE DUMPSTER PAD AND ENCLOSURE AT ELEVATIONS SHOWN.
 - CONSTRUCT 18" WIDE (BOTTOM WIDTH) COVERED SIDEWALK CULVERT PER C.O.A. STD. DWG. 2236. SEE DETAIL SHEET CG-2 FOR ADDITIONAL CONSTRUCTION DETAILS.
 - CONSTRUCT STEPS AND RAMPS TO ACHIEVE GRADE TRANSITION SHOWN. SEE ARCHITECTURAL FOR DETAILS.
 - CONSTRUCT 2.0' WIDE X 0.5' DEPRESSED CONCRETE ALLEY GUTTER INTEGRATED WITH PLAZA ADJACENT TO BUILDING TO DIRECT SURFACE DISCHARGE EAST.
 - EXISTING GAS LINE THIS AREA TO BE RELOCATED. SEE CU-101 FOR ADDITIONAL INFORMATION.
 - CONSTRUCT RETAINING WALL ALONG WEST PROPERTY LINE TO ACHIEVE GRADE TRANSITIONS SHOWN. GRADES PROVIDED EACH SIDE REFLECT FINISH GRADES. SEE ARCHITECTURAL FOR INFORMATION RE: STRUCTURAL DESIGN, ADDITIONAL WALL HEIGHT, CONSTRUCTION DETAILS, ETC.
 - GRADE ADJACENT PROPERTY TO ELEVATIONS SHOWN. PERMISSION TO GRADE WILL BE PROVIDED TO COA HYDROLOGY PRIOR TO APPROVAL FOR BUILDING PERMIT.
 - CONSTRUCT RETAINING / DEEPENED STEM WALL THIS AREA. SEE ARCHITECTURAL.
 - COORDINATE WITH UTILITY COMPANY TO ADJUST VAULT LID TO FINAL GRADE.

CONSTRUCTION STAKING / LAYOUT

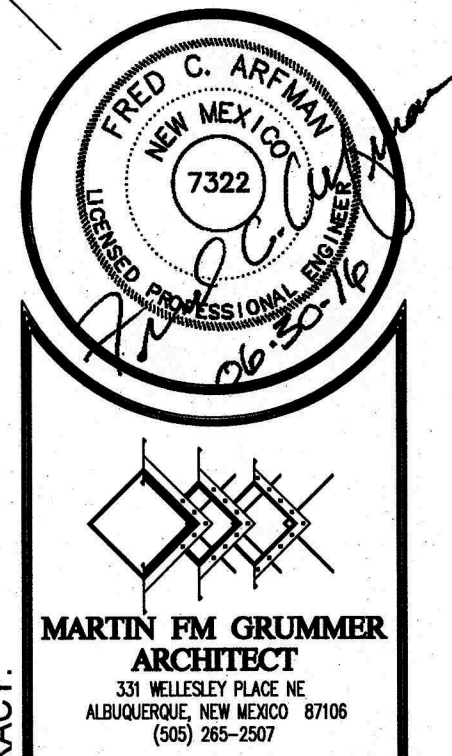
TO FACILITATE ACCURACY IN CONSTRUCTION STAKING, UPON WRITTEN REQUEST FROM THE CONTRACTOR, A FILE CONTAINING THE ELECTRONIC DATA COMPRISING THE SITE DEVELOPMENT DRAWINGS WILL BE FORWARDED TO THE LICENSED LAND SURVEYOR TO PERFORM CONSTRUCTION STAKING FOR GRADING AND UTILITIES.

SEPARATE APPROVAL FROM THE PROJECT ARCHITECT TO USE ELECTRONIC DATA TO PERFORM CONSTRUCTION STAKING FOR BUILDING AND PAVING WILL BE REQUIRED.

ALL SITE CONSTRUCTION LAYOUT MUST BE PERFORMED BY A LICENSED SURVEYOR USING ELECTRONIC DATA PROVIDED IN AUTOCAD DWG (CURRENT VERSION) BY ISAACSON & ARFMAN, P.A. CONTACT PROJECT CIVIL ENGINEER AT (505)-268-8842

IN ORDER TO MAINTAIN THE INTEGRITY OF HORIZONTAL AND VERTICAL CONTROL FOR THE SITE, THE SURVEYOR EMPLOYED BY THE CONTRACTOR TO PERFORM CONSTRUCTION LAYOUT STAKING SHALL SET AND PROTECT ADDITIONAL TRAVERSE POINTS OUTSIDE THE AREAS OF CONSTRUCTION ACTIVITY.

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com
2169 CG-101.dwg Jun 30, 2016



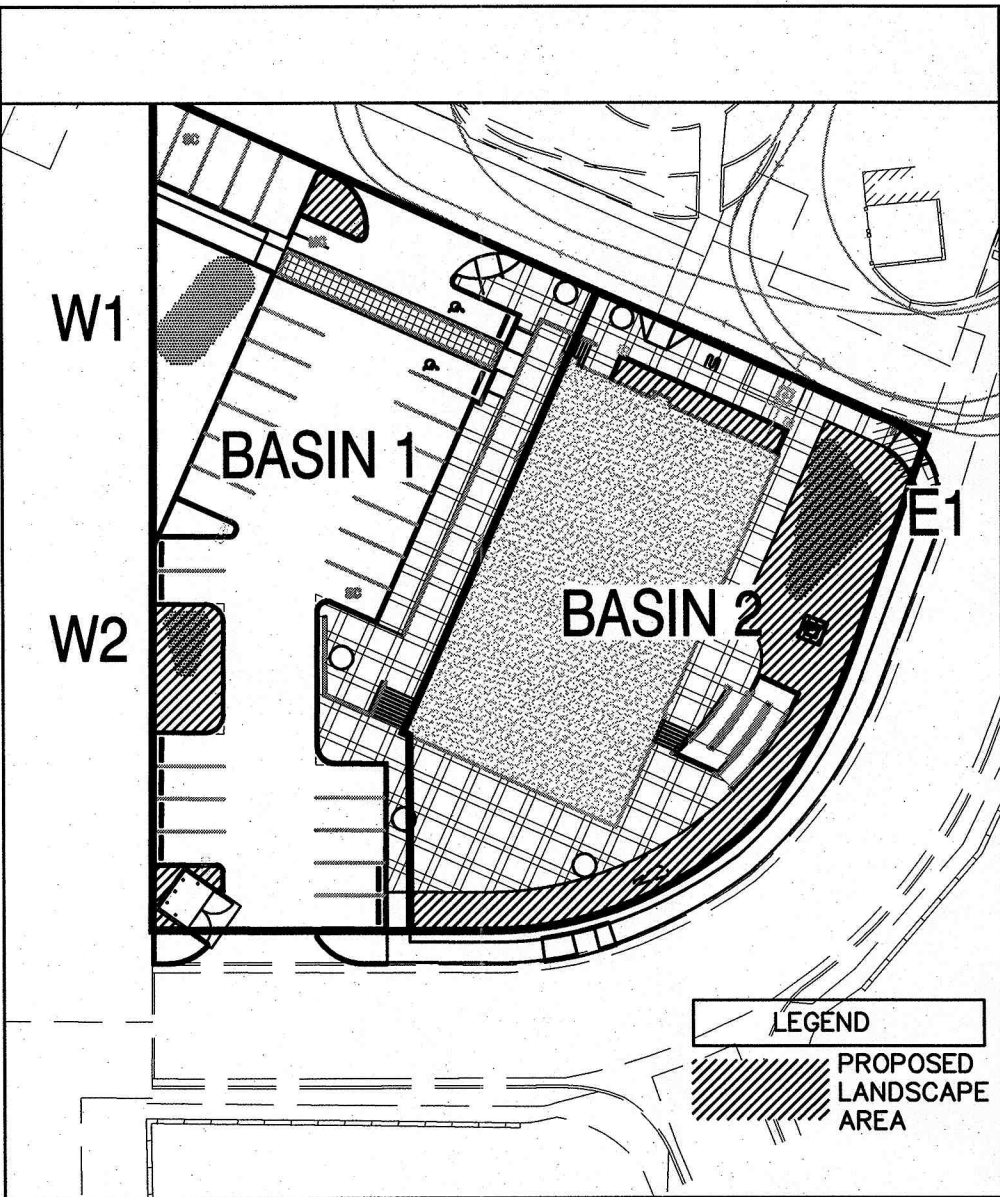
McMAHON MARKET PLACE
NEW SHELL BUILDING
5708 McMAHON BLVD NW
ALBUQUERQUE, NM 87114
GRADING & DRAINAGE PLAN

DATE:
30 JUNE 2016
DRAWN BY:
BUB
CHECKED BY:
FCA
VERIFIED BY:

REVISIONS

NO.	DESCRIPTION	DATE

SHEET NO:
CG-1



FIRST FLUSH RETENTION		
POND W1		
Contour	Area	Volume
5306.50	436	
5305.00	10	335 CF
TOTAL VOL.		335 CF
POND W2		
Contour	Area	Volume
5310.50	156	
5309.00	30	140 CF
TOTAL VOL.		140 CF
POND E1		
Contour	Area	Volume
5310.50	590	
5309.00	35	469 CF
TOTAL VOL.		469 CF

ON-SITE DRAINAGE BASINS		
THE FULLY DEVELOPED PROPERTY WILL DISCHARGE 3.0 CFS DURING A 100-YEAR 6-HOUR STORM.		
WEST BASIN: APPROXIMATELY 1.6 CFS WILL DISCHARGE FROM THE PROPOSED PARKING ARE TO THE WEST FIRST FLUSH RETENTION PONDS. AFTER THE REQUIRED FIRST FLUSH VOLUME IS RETAINED, THE BASIN WILL FREE DISCHARGE TO THE NORTH ACCESS ROAD.		
EAST BASIN: APPROXIMATELY 1.4 CFS WILL DISCHARGE FROM THE PROPOSED BUILDING ROOF AND SOUTH / EAST PLAZA TO THE EAST FIRST FLUSH RETENTION POND SITUATED WITHIN THE LANDSCAPING. AFTER THE REQUIRED FIRST FLUSH VOLUME IS RETAINED, THE BASIN WILL FREE DISCAHRGE TO THE NORTH ACCESS ROAD.		
BASIN NO.	DESCRIPTION	WEST SIDE
1		
Area of basin flows =	16905 SF	0.4 Ac.
The following calculations are based on Treatment areas as shown in table to the right		
Sub-basin Weighted Excess Precipitation (see formula above)		
Weighted E = 1.81 in.		
Sub-basin Volume of Runoff (see formula above)		
V ₃₆₀ = 2546 CF		
Sub-basin Peak Discharge Rate: (see formula above)		
Q _p = 1.6 cfs		
LAND TREATMENT		
A = 0%		
B = 5%		
C = 10%		
D = 85%		
FIRST FLUSH VOL.		
407 CF		
BASIN NO.	DESCRIPTION	EAST SIDE
2		
Area of basin flows =	14480 SF	0.3 Ac.
The following calculations are based on Treatment areas as shown in table to the right		
Sub-basin Weighted Excess Precipitation (see formula above)		
Weighted E = 1.81 in.		
Sub-basin Volume of Runoff (see formula above)		
V ₃₆₀ = 2180 CF		
Sub-basin Peak Discharge Rate: (see formula above)		
Q _p = 1.4 cfs		
LAND TREATMENT		
A = 0%		
B = 5%		
C = 10%		
D = 85%		
FIRST FLUSH VOL.		
349 CF		

100-YEAR 6-HOUR STORM CALCULATIONS		
CALCULATIONS: 2169 LOT 8, MCMAHON MARKETPLACE : June 28, 2016		
Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan. 1993		
ON-SITE		
AREA OF SITE:	31384.98 SF	0.7
100-year, 6-hour		
DEVELOPED FLOWS:		
Treatment SF	%	
Area A = 7846.245	25%	
Area B = 10984.743	35%	
Area C = 12553.992	40%	
Area D = 0	0%	
Total Area = 31384.98	100%	
Treatment SF	%	Precip. Zone 1
Area A = 0	0%	E _A = 0.44
Area B = 1569	5%	E _B = 0.67
Area C = 3138	10%	E _C = 0.99
Area D = 26677	85%	E _D = 1.97
Total Area = 31384.98	100%	
On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)		
Weighted E = 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 = 0.74 in.	Developed E = 1.81 in.	
On-Site Volume of Runoff: V ₃₆₀ = E* A / 12		
Historic V ₃₆₀ = 1937 CF	Developed V ₃₆₀ = 4726 CF	
On-Site Peak Discharge Rate: Q _p = Q ₃₆₀ A _A + Q ₃₆₀ A _B + Q ₃₆₀ A _C + Q ₃₆₀ A _D / 43,560		
For Precipitation Zone 1		
Q ₃₆₀ A = 1.29	Q ₃₆₀ C = 2.87	
Q ₃₆₀ B = 2.03	Q ₃₆₀ D = 4.37	
Historic Q _p = 1.6 CFS	Developed Q _p = 3.0 CFS	

PROJECT DATA

PROPERTY: THE SITE IS AN UNDEVELOPED COMMERCIAL PROPERTY WITHIN C.O.A. VICINITY MAP A-11. THE SITE IS BOUND TO THE EAST AND SOUTH BY FINELAND DR. NW, AND TO THE WEST AND NORTH BY MCMAHON MARKETPLACE LOTS AND ACCESS DRIVES.

SITE AREA: 0.7205 ACRES

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE A MULTI-UNIT RETAIL BUILDING, PAVED PARKING, PEDESTRIAN WALKS, DRAINAGE IMPROVEMENTS, AND LANDSCAPING.

LEGAL: LOT 8 MCMAHON MARKETPLACE, CITY OF ALBUQUERQUE, NEW MEXICO.

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY MONUMENT "9-A11", ELEVATION = 5301.647 (NAVD 1988)

OFF-SITE: NO OFF-SITE DRAINAGE WILL IMPACT THIS PROPERTY.

FLOOD HAZARD: PROPERTY IS LOCATED WITHIN ZONE X, DESIGNATING AREAS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD PLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP, BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS MAP NO. 35001C0104H, MAP REVISED AUGUST 16, 2012.

DRAINAGE PLAN CONCEPT: THIS SITE IS ANALYZED AS PART OF THE MCMAHON MARKETPLACE DRAINAGE MANAGEMENT PLAN (DMP) DATED 05/07/10 PREPARED BY BOHANNAN-HUSTON INC. THE SITE IS CURRENTLY UNDEVELOPED BUT SOME GRADING OCCURRED AS PART OF THE ACCESS ROAD CONSTRUCTION. THE SITE FALLS WITHIN DRAINAGE BASIN G WHICH IS PERMITTED FREE DISCHARGE BASED ON A FULLY DEVELOPED CONDITION (0% A; 5% B; 10% C; 85% D).

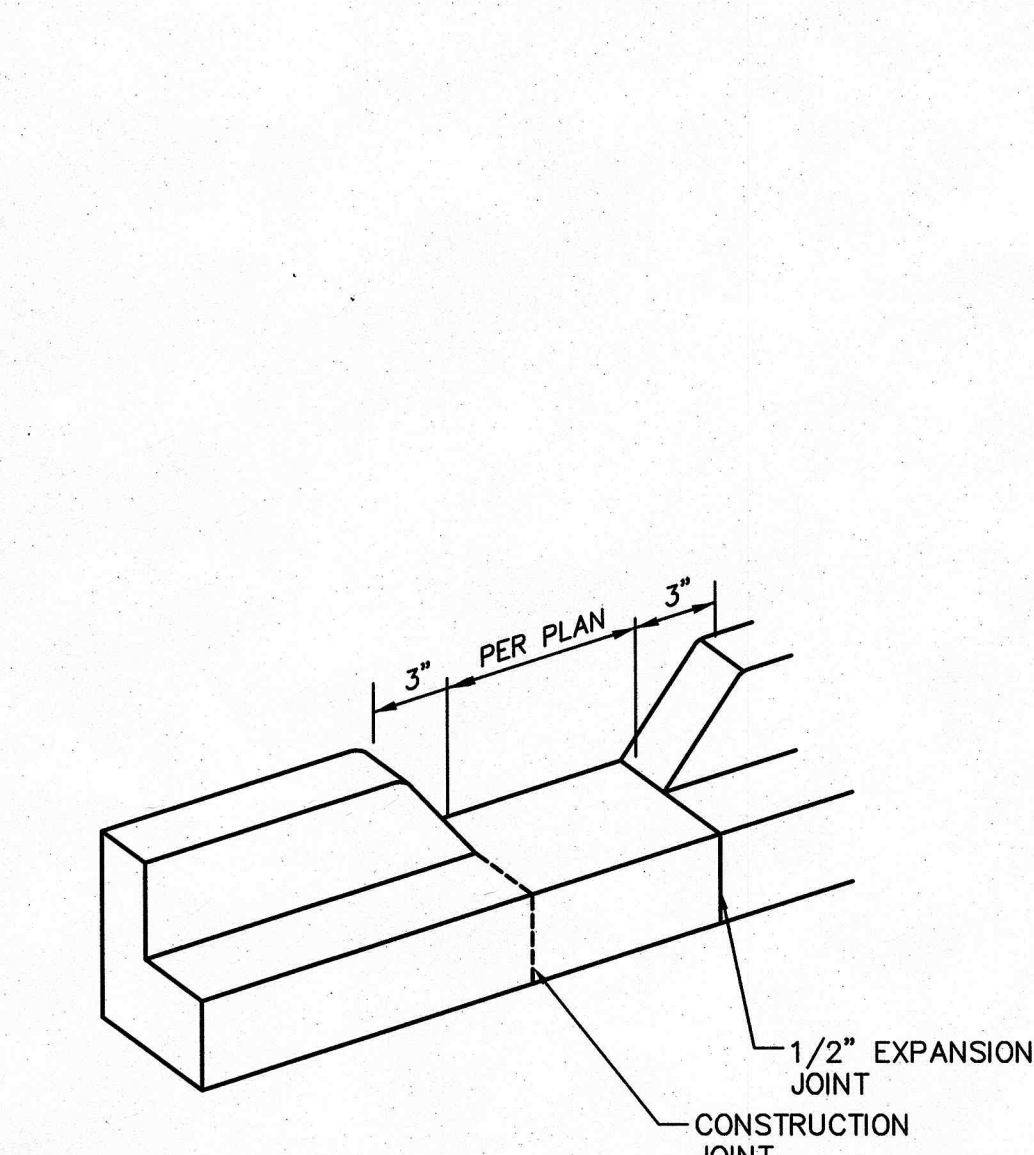
THE PROPERTY WILL FREE DISCHARGE AFTER FIRST FLUSH RETENTION IS ACHIEVED.

STORMWATER CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF "FIRST FLUSH" DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.34" [0.44" LESS 0.1" FOR INITIAL ABSTRACTION] OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM.

FIRST FLUSH RETENTION PONDS WILL BE CONSTRUCTED WITHIN THE LANDSCAPE AREAS AS DESIGNATED BY DOT HATCH. STORM WATER FROM THE IMPERVIOUS AREAS SHALL BE DIRECTED TO THESE PONDS. STORMWATER WILL THEN FREE DISCHARGE TO THE NORTH ACCESS ROAD

ENGINEER: FRED C. ARFMAN, NMPE 7322
ISAACSON & ARFMAN, PA
128 MONROE NE, 87111
TELEPHONE: (505) 268-8828

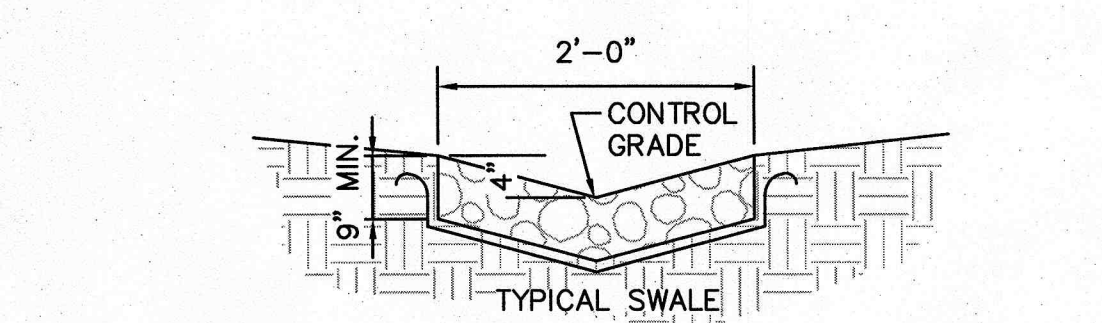
SURVEYOR: RUSS P. HUGG, NMPS NO. 9750
SURV-TEK, INC.
9384 VALLEY VIEW DR. NW, 87114
TELEPHONE: (505) 897-3366



GENERAL NOTES

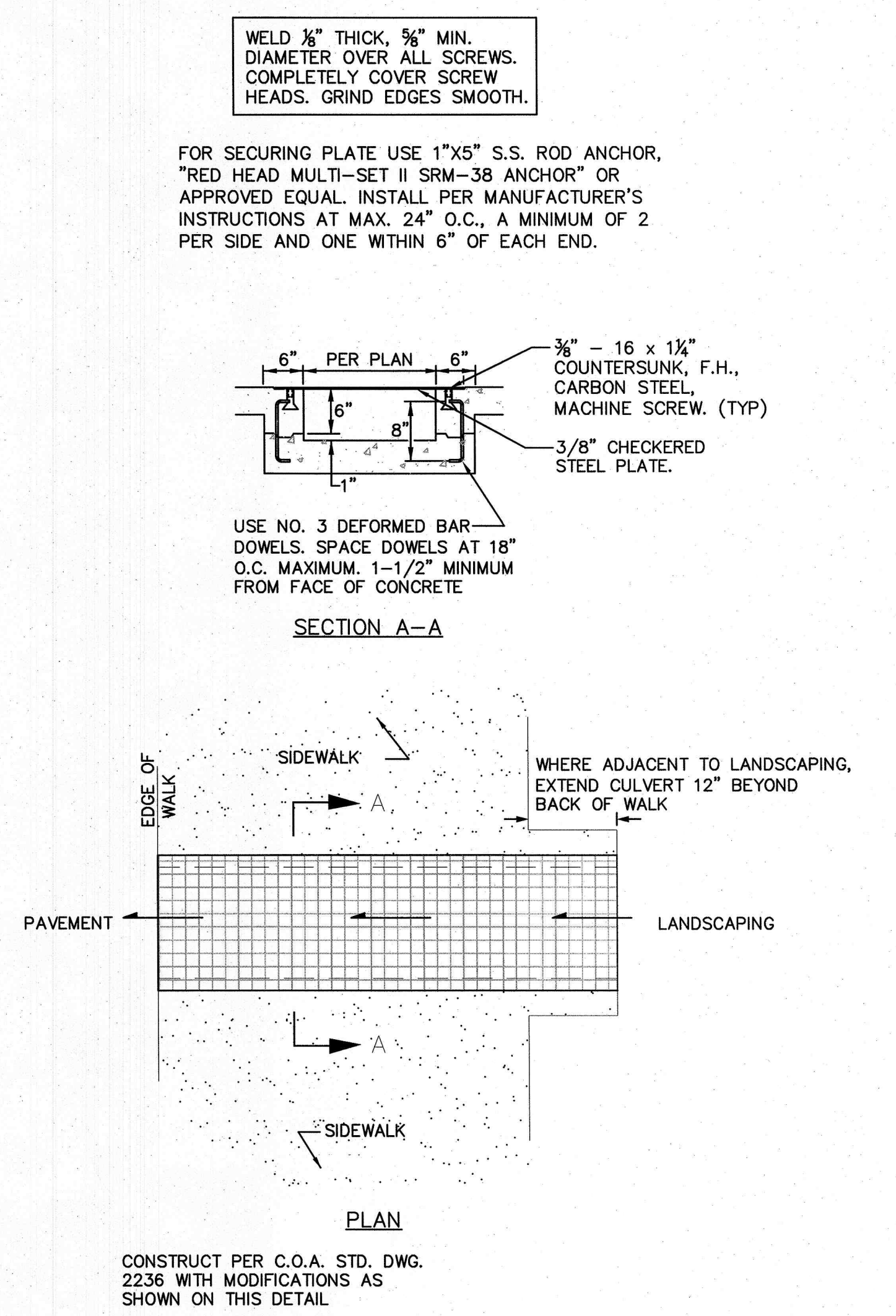
1. EDGES NOT SPECIFICALLY DIMENSIONED SHALL BE SHAPED WITH A 3/8" EDGING TOOL.

- CURB OPENING**
- SCALE: N.T.S.
- VARY ANGULAR FACE ROCK SIZE BETWEEN 3" AND 9" DIA. (AVG.=6")
 - PLACE GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.) BENEATH ALL EROSION PROTECTION
 - CONSTRUCT ALL EROSION PROTECTION INSET INTO (NOT ON TOP OF) GRADE TO ENSURE RUNOFF CAN BE CAPTURED AND CONVEYED PROPERLY



ROCK EROSION PROTECTION

SCALE: N.T.S.



COVERED SIDEWALK CULVERT

SCALE: N.T.S.

ALL DIMENSIONS ARE TO BE FIELD VERIFIED. IF THERE ARE DISCREPANCIES, PLEASE NOTIFY THE ARCHITECT. DRAWING ARE NOT TO BE SCALED. USE DIMENSIONS FOR ACCURACY.

McMAHON MARKET PLACE
NEW SHELL BUILDING
5708 MCMAHON BLVD NW
ALBUQUERQUE, NM 87114

GRADING & DRAINAGE DETAILS

DATE: 30 JUNE 2016
DRAWN BY: BJB
CHECKED BY: FCA
VERIFIED BY:

REVISIONS

SHEET NO:
CG-2

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.iacivil.com
2169 CG-101.dwg Jun 30, 2016