



Sept. 25, 2017

Philip Clark
Clark Consulting Engineers
19 Ryan Road
Edgewood, NM 87015

RE: **Premier M.H Display Yard**
Grading Plan
Engineer's Stamp Date 9/15/17
Hydrology File: M14D012C2

Dear Mr. Clark:

Based on the information provided in the submittal received on 9/19//17 the above-referenced Grading Plan cannot be approved for Building Permit until the following are addressed:

1. The hydrology presented on this plan is difficult to follow. The plan must clearly show that the pond serves both lots. One Basin map is required showing both onsite and offsite basins and the hydrology calculations for all basins must be put into a single easy to read format. The note on the pond and the "Grading and Drainage Plan" notes should both state clearly that the pond serves both lots 1-A-1 and 1-A-2. The impervious cover of the adjacent lot should be changed in the Grading and Drainage Plan notes to reflect the maximum impervious cover allowed on that lot including roof drainage from temporary mobile buildings.
2. Under "Calculations" the "Existing Conditions" section should identify the existing pond. Specifically it should state "the existing pond was designed to retain 18900 cf., the 100 year 10 day runoff from both lots 1A-1 and 1A-2.
3. Provide a copy of the Landscaping Plan by Hilltop that is referenced in the "Project Data" section to justify the use of lawn, land treatment B, in the "Calculations" section. If there is not a landscape plan then delete the reference in the Project Data section in the bottom right corner of the sheet and use only treatments C and D in the hydrology calculations.
4. Under "Calculations- Developed Conditions" present the hydrology for both onsite and offsite basins. Add a note stating that "Prior to placing more impervious cover on the lots than assumed in the calculations, the pond volume must be increased accordingly. Impervious cover includes the area of the retention pond, the area of the

asphalt and concrete paving, and the area of the roofs of the temporarily placed manufactured buildings. Failure to increase the volume in advance of placing increased cover on either lot will constitute a violation of the Drainage Covenant, in which case the City may construct increased pond volume and lien the property for the costs."

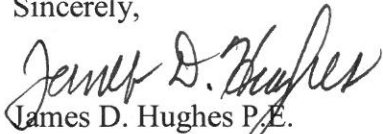
5. The spot elevations along the south property line must be lower so that slope between the curb and right of way does not exceed 2%.
6. Provide pond wall design calculations stamped and signed by a NMPE. Hydrology will review the calculations since this is a drainage structure, but the wall will also require a separate building permit. Hydrostatic forces should be assumed to act on the underside of the footing. A core trench of impervious material is needed to prevent seepage under the footing. The drainage wall must be extended to higher ground on the ends. The wall material should be changed to concrete instead of block.
7. Hydraulic calculations must be added to the plan for the emergency overflow spillway.
8. Show the existing curb on lot 1-A-2, and specify location and length of opening in the curb to allow passage of the peak 100 year flow rate and provide hydraulic calculations for the opening. Extend the swale limits all of the way to the opening in the existing curb.
9. Offsite basins, lot 1A-2, must be clearly shown on the plan (or on a separate basin map) using a base map that includes property lines contours, and all storm drains, roads, C&G, ditches, and berms as necessary to support the chosen location of the basin boundaries. Flow arrows should be shown on the map indicating concentrated flow paths especially at the point of discharge from each of the basins. Reference to the previously approved plan for Lot 1A-2 should remain on the plan, but this plan must stand on its own and include all calculations.
10. Provide a recorded private cross lot drainage easement/agreement on Lot 1-A-1 for the benefit of the owner of Lot 1-A-2 that includes specific maintenance responsibility. Who is responsible for the maintenance? The owner of lot 1-A-1 only? or both lot owners 50:50?)
11. Provide a recorded Drainage Covenant for the new pond. Show the outline of the pond on the plan and use a Xerox copy of the plan for the exhibit to the covenant. Label the pond volume and 100-year 10 day elevation and state that the pond

provides Retention for both Lots 1-A-1 and 1-A-2 on the exhibit. Submit the Drainage Covenant to Madeline Carruthers along with a Check for 25\$ payable to the City of Albuquerque.

12. Provide written approval (an encroachment agreement) from PNM for the work in their easement. Also show the existing easement on the plan.
13. Provide written authorization from the owners of lot 1-A-2 to remove their wall and the inlet.
14. Provide a cross lot access agreement between lots 1-A-1 and 1-A-2.
15. An approved ESC Plan is required for this site.

If you have any questions, I can be contacted at 924-3986 or jhughes@cabq.gov.

Sincerely,



James D. Hughes P.E.
Principal Engineer, Planning Dept.
Development Review Services



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 1/2016)

Project Title: _____ **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Applicant: CLARK CONSULTING ENGINEERS **Contact:** Philip Clark

Address: 19 Ryan Road Edgewood, NM 87015

Phone#: 281.2444 **Fax#:** _____ **E-mail:** CCEalbq@aol.com

Other Contact: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
- ☐ TRAFFIC/ TRANSPORTATION
- ☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ AS-BUILT CERTIFICATION
- ☐ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ DRAINAGE MASTER PLAN
- ☐ DRAINAGE REPORT
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ TRAFFIC IMPACT STUDY (TIS)
- ☐ NEIGHBORHOOD IMPACT ASSESMENT (NIA)
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ OTHER (SPECIFY) _____

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ GRADING/ESC PERMIT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ SITE PLAN FOR SUB'D APPROVAL
- ☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ SO-19 APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ GRADING/ PAD CERTIFICATION
- ☐ WORK ORDER APPROVAL
- ☐ CLOMR/LOMR

PRE-DESIGN MEETING?

☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☐ Yes ☐ No

DATE SUBMITTED: _____ **By:** _____

COA STAFF: _____ **ELECTRONIC SUBMITTAL RECEIVED:** _____

FEE RECEIVED: _____

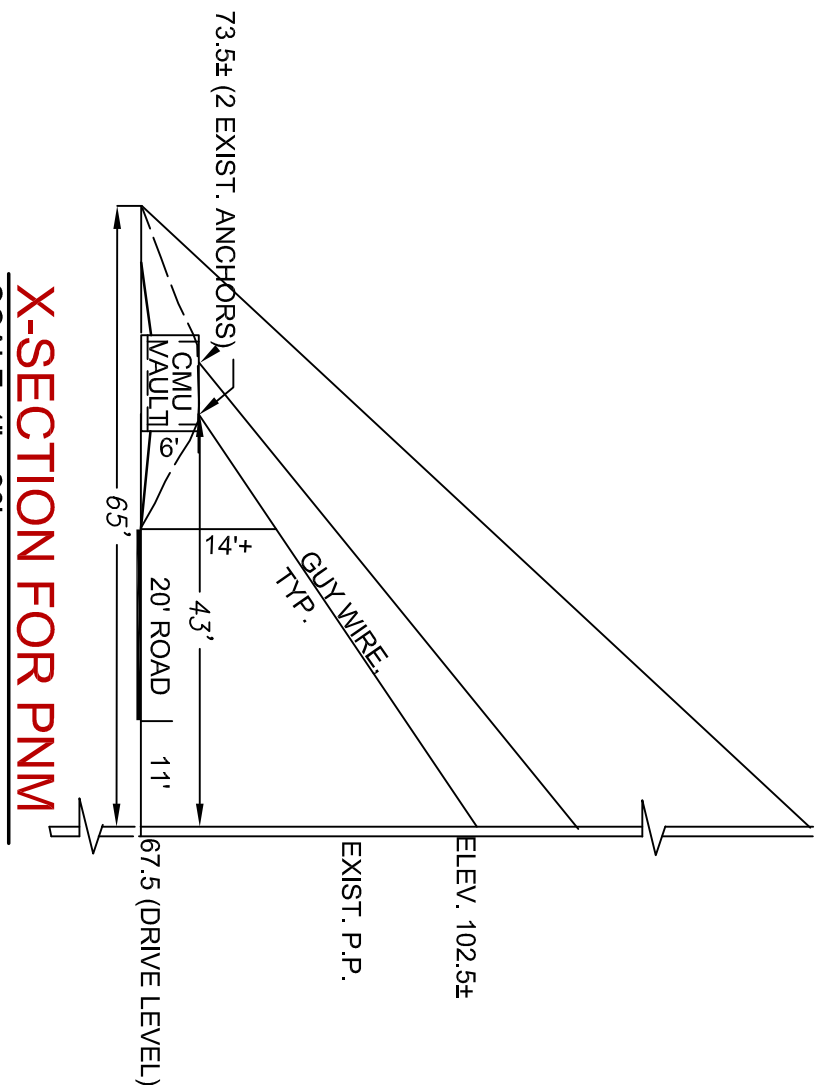
GRADING & DRAINAGE PLAN

THE COMMERCIAL RETAIL PROJECT LOCATED IN THE BROADWAY INDUSTRIAL CENTRE OF ALBUQUERQUE, APPROXIMATELY 2 MILES SOUTH OF THE DOWNTOWN CORE OF ALBUQUERQUE, NM, THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE DRAIN PLAN SHOWS A FORMERLY GRADDED LOT, AS PART OF THE APPROVED MASTER DRAINAGE PLAN FOR BROADWAY INDUSTRIAL PARK, THAT PLAN REQUIRES TEMPORARY RETENTION PONDS UNTIL ABOVE-GROUND DRAINAGE FACILITIES ARE CONSTRUCTED. ADDITIONALLY, THIS PLAN SHOWS:

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORAGE OF SOLID WASTE, TO PREVENT THE RELEASE OF SOLID WASTE TO THE GROUND SURFACE AND GROUND, AND ESSENTIALLY MAINTAINING THE TEMPORARY RETENTION POND REQUIREMENTS ESTABLISHED BY THE DRAGAGE MASTER PLAN. THIS SITE IS REQUIRED TO CONTINUE TO STORE THE 10-DAY RETENTION VOLUME FROM BOTH SUBJECT LOT AND LOT 14-2 WHICH IS ADJACENT ON THE EAST. THE EXISTING HIGHWAYS, RETAIL AND OFFICE OF PREMIER M.H. IS ALSO OWNED BY SUBJECT OWNER. REFERENCE COA HYDROL. M-14/001201.

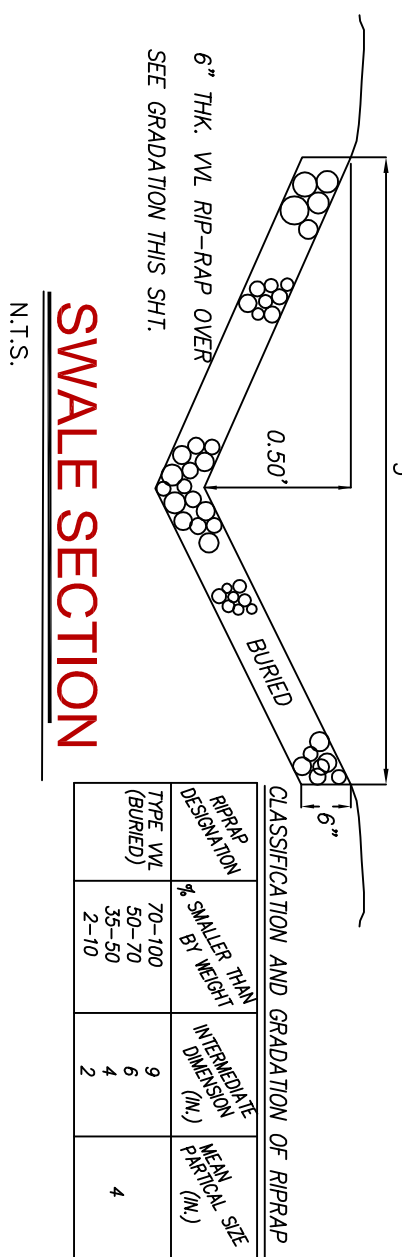
SAN JOSE, AVE & EVEL AVE ON THE NORTH AND SOUTH ARE PAVED WITH CURB AND GUTTER, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE CURRENTLY CONTAINS EXISTING PAVED DRIVEWAYS, DRIVEWAYS, AND SIDEWALKS. THE PROPOSED CONSTRUCTION OF LOT FROM BOUNDARY TO LOT FROM BOUNDARY WILL BE IMPROVED ONLY MINIMAL PAVING (DRIVEPAD, CONSTR-N) IS PROPOSED WITHIN THE CITY R.O.W. THE CURRENT POND WILL BE RELOCATED SINCE DOWNSSTREAM IMPROVEMENTS HAVE NOT BEEN PROVIDED WITH DEVELOPMENT. ACCORDING TO THE CITY, AMFACA HAS PROGRAMMING FUNDS IN-PLACE FOR 2018, HOWEVER CONSTRUCTION HAS NOT BEEN SCHEDULED AT THIS TIME. THE SITE IS NOT IMPACTED ADVERSELY BY THE PROPOSED CONSTRUCTION. THE PROPOSED CONSTRUCTION OF THE 0.66 ACRE SITE TO THE EAST IS CONNECTED TO THE NEW RETENTION POND, AND IS INCLUDED IN THE CALCULATIONS. ADDITIONALLY, SUBJECT PROPERTY IS NOT ADJACENT TO A FLOOD HAZARD ZONE. AS SHOWN ON FIRM PANEL, 35007C0342. Scale: 1" = 20'

Scale: 1" = 20'



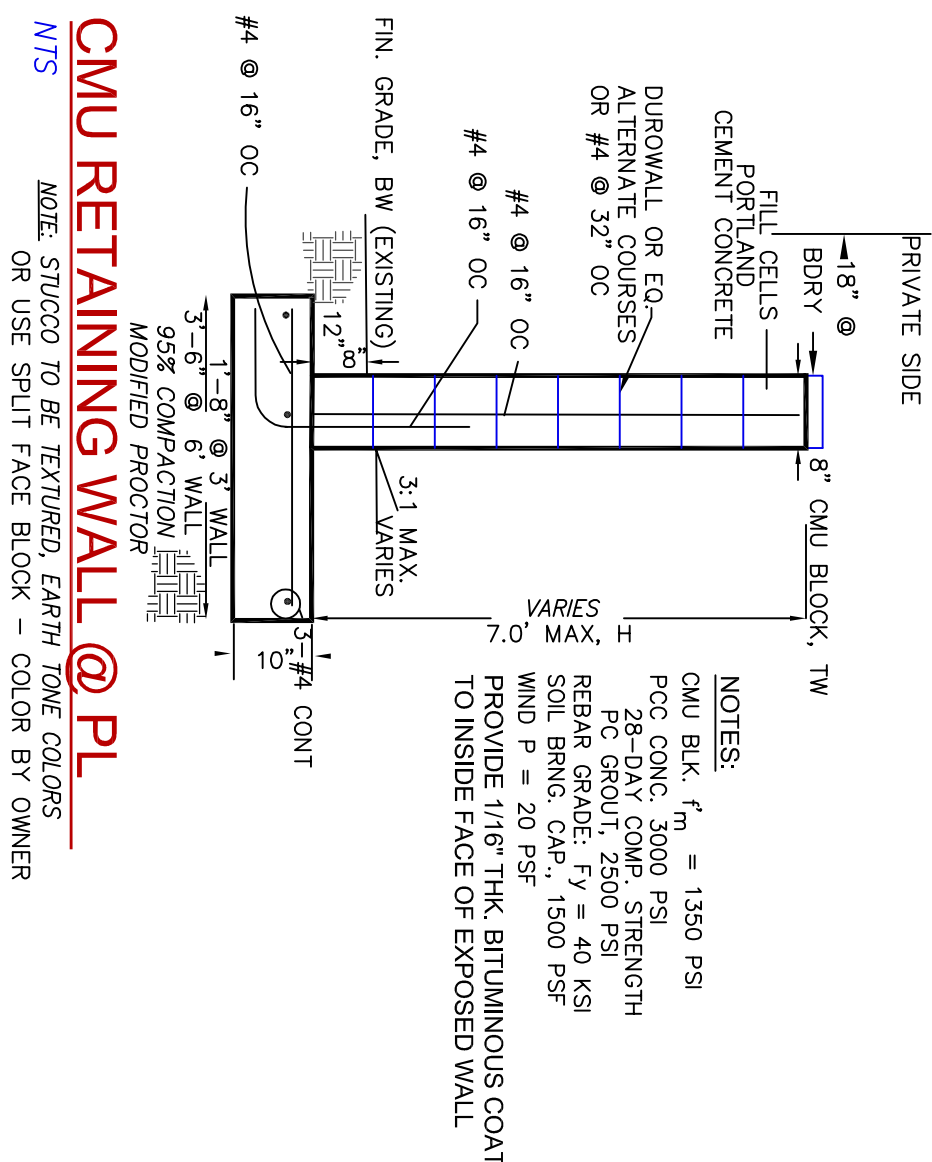
X-SECTION FOR PNM
SCALE: 1" = 20'

SCALE: 1 - 20



SWALE SECTION

N.T.S



CMU RETAINING WALL @ PL

NOTE: STUCCO TO BE TEXTURED, EARTH TONE COLORS
OR USE SPLIT FACE BLOCK - COLOR BY OWNER

CALCULATIONS

DESIGN CRITERIA

HYDROLOGICAL METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE, ADOPTED BY THE COUNTY OF BERNALILLO DISCHARGE RATE: $C = 0.024 \times A$ AREA: Peak Discharge Q_p (CFS) = 12 Minutes
 PLOT DISCHARGE: $Q_p = \text{VOLUME} \times \text{Weighted } \frac{1}{\text{Area}} \times \text{TC}$
 DESIGN STORM: $100\text{-YEAR}/6\text{-HOUR}$, $10\text{-YEAR}/6\text{-HOUR}$ [] = 10 YEAR VALUES
 TOTAL AREA = 1.0 ACRES, WHERE EXCESS PRECIP. 'C' = 1.13 in. [0.52]
 PEAK DISCHARGE: $Q_{100} = 31 \text{ CFS } [1.1]$ WHERE UNIT PEAK DISCHARGE 'Q' = CFS/Ac [1.7]
 THEREFORE: VOLUME $100 = 41.02 \text{ cu ft } [1.889]$

EXISTING CONDITIONS

TOTAL AREA = 1.0 ACRES, WHERE EXCESS PRECIP. $C' = 1.13$ in. [0.52]
PEAK DISCHARGE, $Q_{100} = 3.1$ CFS [1.7] WHERE UNIT PEAK DISCHARGE $q' = 3.1$ CFS/AC. [1.7]
THEREFORE: VOLUME $100 = 4102$ CF [1898]

DEVELOPED CONDITIONS

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

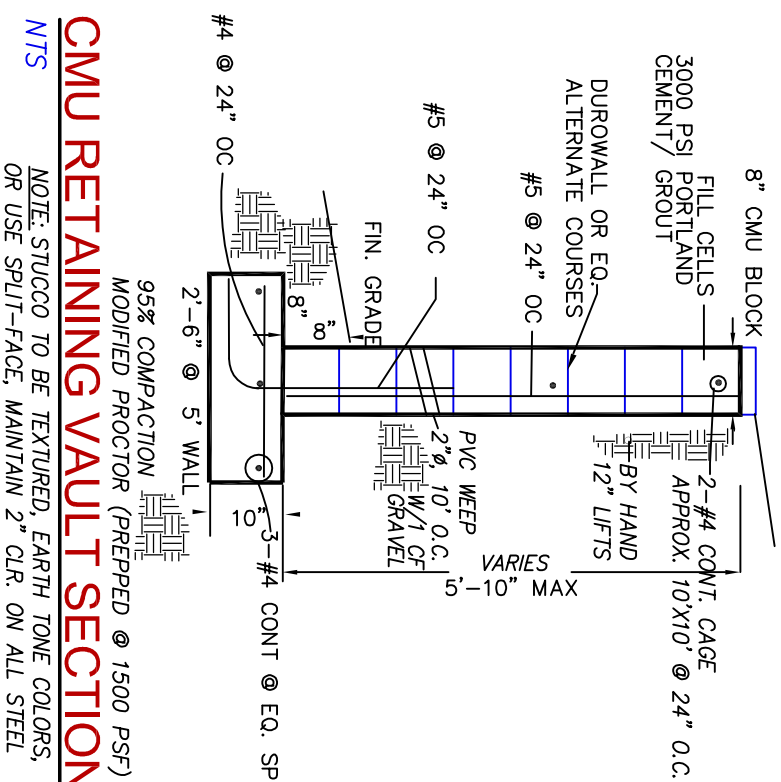
AREA	LAND TREATM'T	Q	Peak	E
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UNDEVELOPED	0.00 Ac.(0%)	A	1.56[0.38]	0.53[0.13]
LANDSCAPING	0.15 Ac.(15%)	B	2.28[0.95]	0.78[0.28]
GRAVEL & COMPACTED SOIL	0.52 Ac.(50%)	C	3.14[1.71]	1.13[0.52]
ROOF - PAVEMENT	0.33 Ac.(33%)	D	4.70[3.14]	2.12[1.34]
	1.0 Ac.			

THEREFORE: E Weighted = 1.41 ln[x,x] &
Q100 = 3.5 CFS VOLUME 100 = 5120 CF
Q10 = 2 CFS

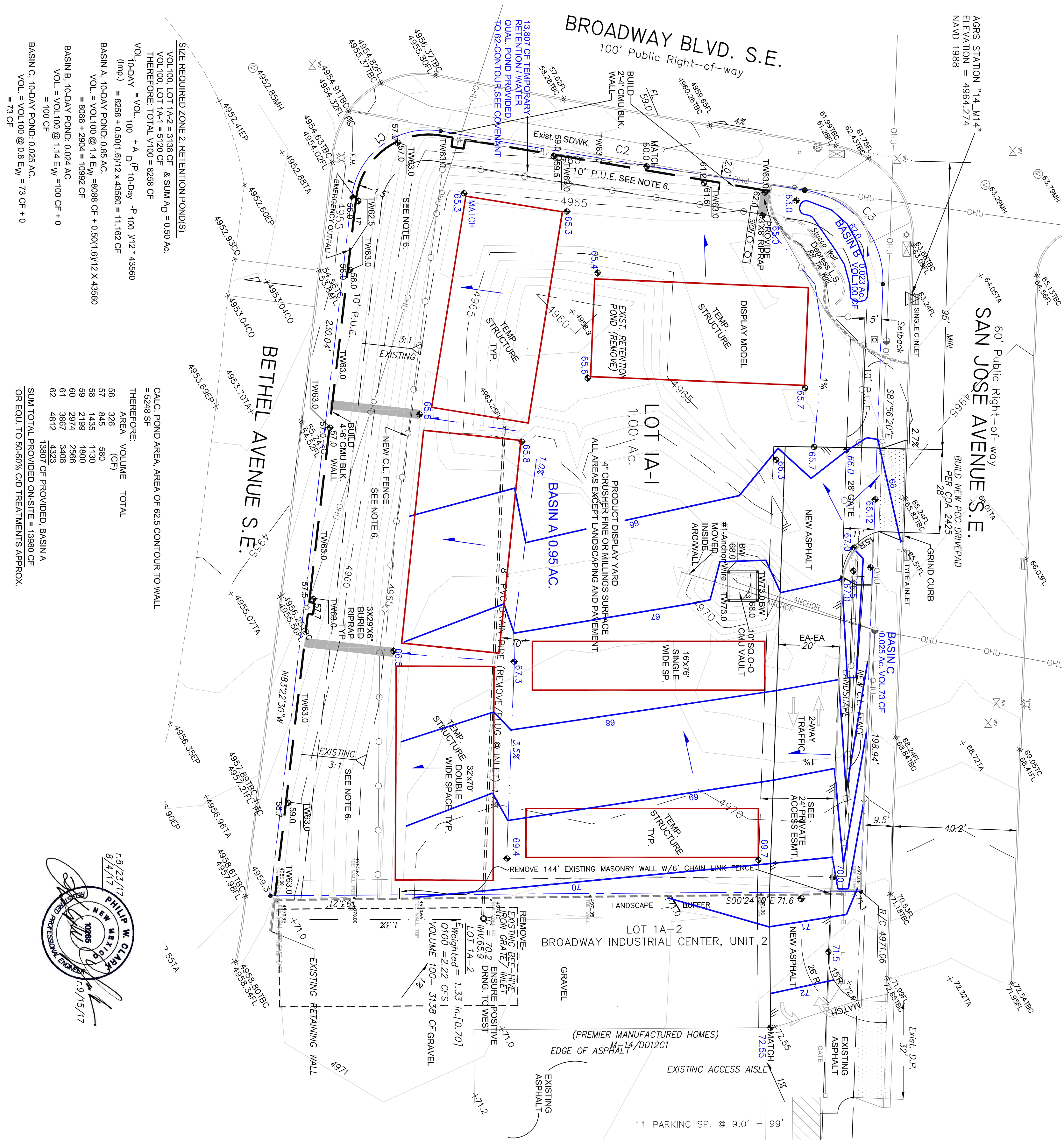
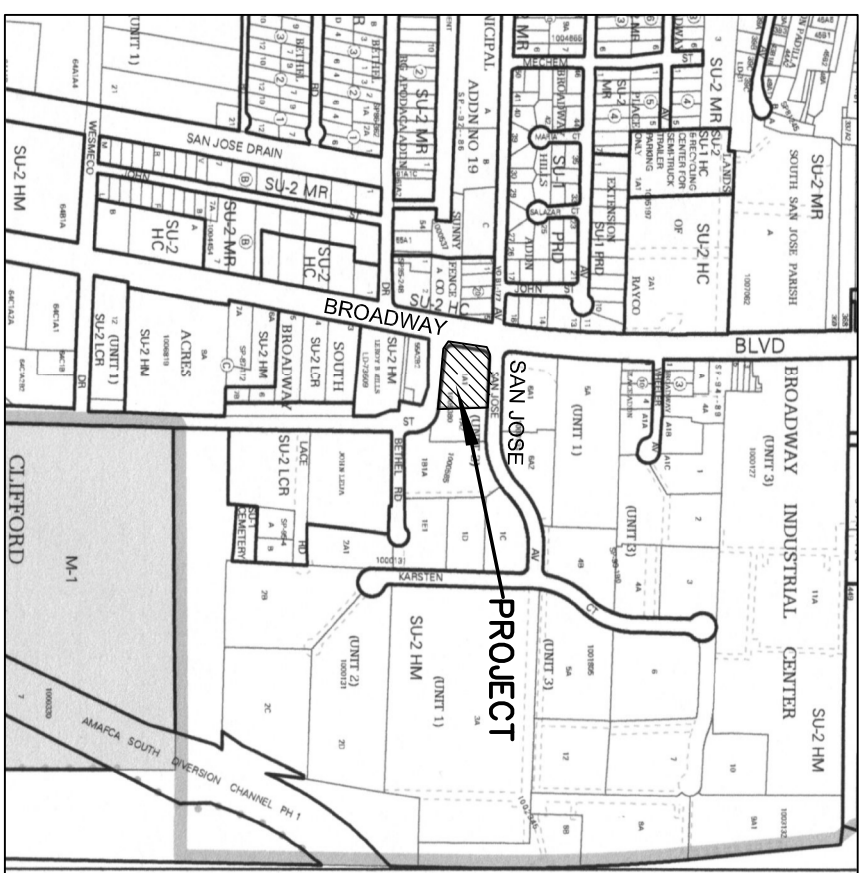
RECOMMEND : 1.) ROUTE DEVELOPED RUNOFF THROUGH EXISTING/UPGRADED SOFT LANDSCAPING INCLUDING DEPRESSED LANDSCAPING

2.) WATER QUALITY POND SHALL RETAIN THE "FIRST FLUSH" VOLUME OF:
0.34 INCHES X IMPERVIOUS AREA (SF)/12 (FROM LOT 1A-2) +
0.34¹/12 X 0.33 AC. X 43560 SF = 407 CF (FROM LOT 1A-1)
0.17 AC. X 0.34¹/12 X 43560 SF = 210 CF (LOT 1A-2)
] = 620 CF TOTAL



CMU RETAINING VAULT SECTION

NOTE: STUCCO TO BE TEXTURED, EARTH TONE COLORS.
OR USE SPILT-FACE, MAINTAIN 2" CLR. ON ALL STEEL

VICINITY MAP
ZONE M-14

1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 1986, 9TH UPDATE.
2. AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY R.O.W. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
3. 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.
4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL. ASPHALT PARKING AREA SHALL DRAIN DIRECTLY TO NEW CURB CUT OR SDK CULVERT
5. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEGMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
6. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUQ. SPEC. 1012. NATIVE SEED MIX.
7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION:
3% HORIZONTAL TO 1 VERTICAL, 3:1.

LEGEND

EXIST. SPOT ELEVATION	+24.0
EXIST. CONTOUR	10
NEW SPOT ELEVATION	+ 24.0
NEW CONTOUR	12
NEW SHALE	
DRAINAGE DIRECTION, EXISTING	
TOP OF CURB, EXISTING	TC
FLOWLINE	FL
EXISTING POWER POLE	O
FACE OF CURB/FACE OF CURB	F-F

PROJECT DATA

LEGAL DESCRIPTION
LOT 14-1, BROADWAY INDUSTRIAL CENTER, UNIT 2
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
AREA OF SITE: 1.0, 0.85 AC. DISTURBED
ZONING: SU-2 IHM (MANUFACTURING)
MINIMUM SETBACKS: 5' FRONT AND SIDE LINES

PROVIDED AND EXISTING FOR OFFICE ON ADJACENT LOT 14-2, 11 SPACES

LANDSCAPE REQUIREMENTS

SEE PROFESSIONAL LANDSCAPE PLAN PROVIDED BY HILLTOP LANDSCAPE ARCHITECTS & CONTRACTORS.

SOLID WASTE - REFUSE COLLECTION

ROLL-OFF SERVICE AND/OR AGREEMENT PROVIDED BY SOLID WASTE DEPT. FOR OFFICE FROM LOT A1-2 (ADJACENT ON THE EAST)

PROJECT BENCHMARK

TOP OF AGES MONUMENT AT THE PROJECT NORTHWEST CORNER / ESE CLUB RETURN MSL ELEVATION = 484.27'. SEE PLAN.

TOPOGRAPHIC DESIGN SURVEY

PROVIDED BY ALPHA PRO SURVEYING, LLC, DATED FEBRUARY 2015

L.P. #0868, GARY E. GRITSKO.



Edgewood, New Mexico 87015
 Fax: (505) 281-2444

DATE	REVISION	LOT 14-1, BROADWAY INDUSTRIAL CENTER, UNIT 2 ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
9/5/17	1. (2) "	
8/24/17	ADD D.I. HYDROLOGICAL COMMENTS TO	
8/14/17	COMMENTS TO	

**2700 BROADWAY BLVD., SE
A PREMIER DEVELOPMENT
Site - Grading &
Drainage Plan**

DESIGNED BY: PWC	DRAWN BY: CCE	SUB #: 00000000-2
CHECKED BY: PWC	DATE: JUNE2017	FILE #: G/D

1 OF 1



19 Ryan Road
Edgewood, New Mexico 87015
CCEalbz@aol.com

Tele: (505) 281-2444

Cell: (505) 264-6042

September 18, 2017

James D. Hughes, PE
Hydrology Dev. Section
City of Albuquerque
P.O. Box 1293
Albuq., NM 87103

RE: COA M14/ D012C2 – Premier M.H. Display Yard

Dear Mr. Hughes:

I have addressed your comments directly on another revised plan. Please reconsider the following in order to justify our developed E(weighted) values, especially response 2, which again addresses your last letter and email responses that stated "...an estimate of the maximum that will exist on the lot at any time".

Respectfully, this clause is subjective, and future impacts cannot be budgeted into the project at this time. If future development increases the measured improvements relative to land treatments as shown, a revised and updated plan will be submitted for approval.

1. The aerial photography you said that you used for the adjacent owner's lot (A1-2) is misleading (see your letter's fourth comment). The entire rear and west sideyards are gravel. The land treatment 'D' remains as approved for that lot at 26% or 0.17 acres. In addition, LT 'B' is accurately quantified and inclusive of the depressed landscaping areas on that plan, please ref: M14-D012C1.

2. I do not agree that table A-5 should be used in order to establish impervious LT 'D' in this case since specific measurements and land use intensity can and are determined with a specific site plan. Table A-5 is typically used in a broader sense when actually level 3 site planning have not been determined - such as in Sector Plans, and/or Master planning, which is not the case here. In fact, Table A-4 states..."To Determine proportional treatments, measure respective sub-areas. In lieu of specific measurement for treatment D, the areal percentages in Table A-5 may be employed".

3. Thirdly, and lastly - both a proportion of treatments B and C have been used in the community for new professional , native grasses, flowers, and shrubs - especially practicable in depressed landscaping and/or harvesting areas. Also, treatment B can be considered in loose gravel areas on slopes < 1% in uncompacted low activity areas by storing runoff in interstitial cavities, thereby again reducing runoff. Additionally, treatment B, historically at City Hydrology has been applied to retention - detention pond surface areas.

In summary of the land treatment discussion - I believe the Eweighted values for the eastern lot of 1.33 inches as approved, and 1.41 inches for the subject lot are in order, and are based on accurately calculated proposed conditions. Please call me to discuss, or preferably confirm these above responses.

The following briefly addresses the first 11 comments of your Sept. 4th letter, in the order received:

1. The verbiage clarifications that you offered have been added. Thank you.
2. Existing Condition calcs. are relative, and offers current info / conditions today.
3. The maximum TC has been changed to 12 mins. However, you and I know from decades of experience that if Kirpich was applied to this site, 10 mins. is more realistic.
4. Please see opening LT discussion above, primarily # 3 as to treatment values for ponds. The calcs for the actual improvements shown remain on the plan, however, the Basin A main pond provides the 10-day volume for a 50-50 percent split of LTs C & D, respectively + 1' freeboard.
5. The SWQ calc. should remain on the plan, because it may not be obvious to, say another reviewer. I.e. EPA enforcement etc....
6. We are not regrading the existing slope so proposed contours are not germane, and have added grade elevations on each side of the pond wall. Thanks. It is my professional opinion that average-end-areas of each contour increment lends realistic results for volume provided. (ie. From 62.5 to

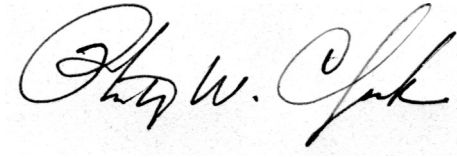
56.0), which I have recalced @ 16,322 C.F. A table is provided, and closely mirrors your conic equ. values. I did notice your area-take offs were a bit on the light side.

7. Comply, and have added Section, specs, and bituminous call-out in order to provide waterproofing of inside face of wall.
8. Comply, and have used weir eq. to size emergency spillway at approx. $L = 17'..@$ natural outfall
9. Concur – deleted the face of curb dimension statement. Thank you. Added call-out to remove the bee-hive inlet. Revisiting the existing contours should note that the existing positive drainage patterns will be to the west.
10. The approved drainage basin to the east for lot A1-2 encompassed the entire lot, therefore, the estimated off-site basin is 0.65 acres, and not necessary to be repeated / reiterated, nor shown. The resulting run-off values of that approved plan are called-out at the common boundary in order to assist in review, and referenced by M14/D012C2.

Thank you for considering this response, and should you have any questions please give me a call.

Regards,
Phil

===

A handwritten signature in black ink, appearing to read "Philip W. Clark". The signature is fluid and cursive, with the first name "Philip" being the most prominent part.

Philip W. Clark, PE

Clark Consulting Engineers

Designing to Shape the Future

o/f: 505.281.2444 c/t: 505.264.6042