CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

October 26, 2020

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM 87108

RE: Luninaria Senior Community
Grading and Drainage Plan
Engineer's Stamp Date: 10/01/20
Hydrology File: L21D023

Dear Mr. Arfman:

Based upon the information provided in your submittal received 10/05/2020, the Grading and Drainage Plan is approved for Building Permit.

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.

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.

Also, please provide the Drainage Covenant for the stormwater quality ponds per Article 6-15(C) of the DPM prior to Permanent Release of Occupancy. There is a recording fee ($25, payable to Bernalillo County). Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996). Due to COVID-19, please follow the instructions:

Either email a pdf copy of the executed drainage covenant and the exhibit to clabadie@cabq.gov or either mail or drop off the originals. Please mail the $25.00 recording fee check made payable to Bernalillo County to:

Planning Dept./DRC
Attn: Charlotte LaBadie
600 2nd St. NW, Ste. 400
ABQ, NM, 87102

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

If you drop off the originals, there is a drop box outside the building labeled DRC. Once approved and recorded, Charlotte will email you a copy.

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

Sincerely,

Renée C. Brissette

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

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Luminaria Senior Community Building Permit #: _____ Hydrology File #: L-21D023

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

Legal Description: Tract 'C' Video Addition, Albuquerque, Bernalillo County, New Mexico

City Address: _____

Applicant: Isaacson & Arfman, Inc. Contact: Fred C. Arfman or Bryan J. Bobrick

Address: 128 Monroe Street NE - Albuquerque, NM 87108

Phone#: (505) 268-8828 Fax#: _____ E-mail: freda@iacivil.com bryanb@iacivil.com

Owner: _____ Contact: _____

Address: _____

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

TYPE OF SUBMITTAL: _____ PLAT (___# OF LOTS) ____ RESIDENCE ____ DRB SITE __X__ ADMIN SITE

IS THIS A RESUBMITTAL?: __X__ Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION __X__ HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
__X__ GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

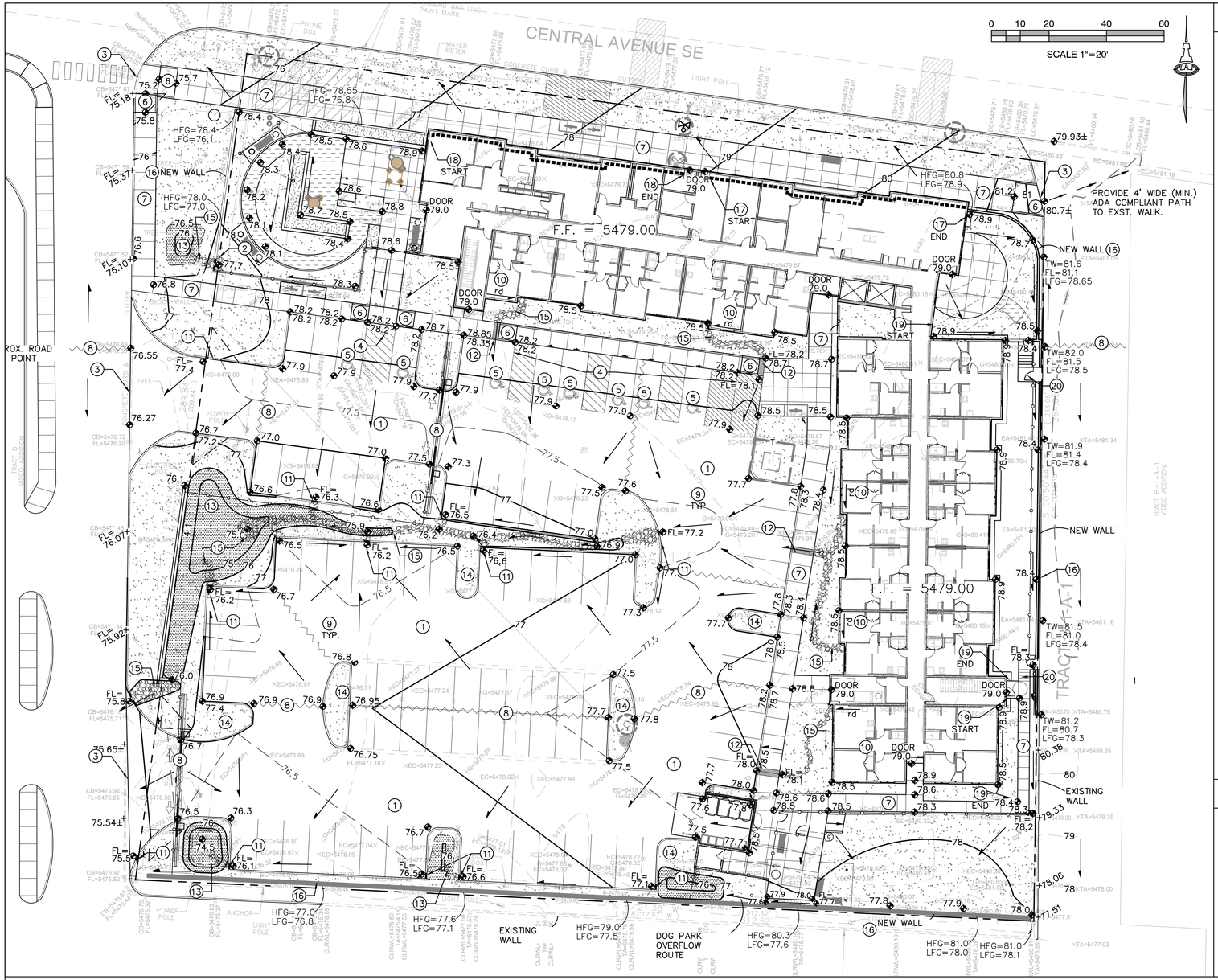
TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

__X__ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY
____ 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
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR
____ FLOODPLAIN DEVELOPMENT PERMIT
____ OTHER (SPECIFY) _____

DATE SUBMITTED: October 1, 2020 By: Fred C. Arfman

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



KEYED NOTES

1. NEW PAVING AT ELEVATIONS SHOWN. SEE PAVING PLAN FOR MATERIAL, EXTENTS, JOINTS AND PAVING SECTIONS.
2. TWO 1' WIDE X 6" HIGH WALL OPENINGS AT FLOWLINE ELEVATION SHOWN.
3. PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT.
4. TOP OF ASPHALT TO BE FLUSH WITH TOP OF CONCRETE WALK THIS AREA FOR ADA ACCESS.
5. ADA COMPLIANT PARKING AREA.
6. CONSTRUCT ADA COMPLIANT 1:12 MAX. SLOPE ADA COMPLIANT ACCESS RAMP.
7. CONSTRUCT ADA COMPLIANT PEDESTRIAN WALK AT ELEVATIONS SHOWN.
8. HIGH POINT / GRADE BREAK LOCATION.
9. 0.5' DESIGN CONTOURS ARE SHOWN DASHED WHERE NECESSARY TO CLARIFY GRADING CONCEPT.
10. CONCENTRATED ROOF DISCHARGE DIRECTION.
11. PROVIDE 24" WIDE OPENING IN CURB TO PASS FLOW.
12. CONSTRUCT 18" WIDE COVERED CONCRETE SIDEWALK CULVERT PER COA STD. DWG. 2236.
13. CONSTRUCT 18" MAX. DEPTH STORMWATER QUALITY RETENTION POND AT ELEVATIONS SHOWN. STORMWATER QUALITY PONDING VOLUMES MAY BE VERIFIED AS PART OF AS-BUILT CERTIFICATION. PONDS WHICH DO NOT PROVIDE THE REQUIRED VOLUME WILL BE CORRECTED AT CONTRACTOR'S EXPENSE.
14. DEPRESS LANDSCAPING IN FOR GENERAL WATER HARVESTING. NOTE: NO WATER HARVESTING SHALL OCCUR WITHIN 10'OF ANY BUILDING.
15. INSTALL ANGULAR ROCK EROSION PROTECTION TO LIMITS HATCHED.
16. CONSTRUCT GARDEN RETAINING WALL(S) (RETAINING < 36') TO ACHIEVE GRADE DIFFERENCE SHOWN. HFG = GRADE ON HIGH SIDE OF WALL; LFG = GRADE ON LOW SIDE OF WALL. STRUCTURAL DESIGN TO BE PROVIDED BY WALL CONTRACTOR.
17. BUILDING RETAINING STEMWALL REQUIRED TO ACHIEVE GRADES SHOWN. SEE ARCHITECTURAL / STRUCTURAL PLANS.
18. BUILDING EXTENDED STEMWALL REQUIRED TO ACHIEVE GRADES SHOWN. SEE ARCHITECTURAL / STRUCTURAL PLANS.
19. CONSTRUCT CONCRETE APRON PER DETAIL ON CG-501.
20. METAL FIRE ACCESS STEPS – OPEN BELOW FOR DRAINAGE. SEE ARCHITECTURAL.

LEGEND

- EXISTING CONTOUR
- 5478.21 EXISTING SPOT ELEVATION
- 77 PROPOSED 1.0' CONTOUR
- 77.5 PROPOSED 0.5' CONTOUR
- 77.0 PROPOSED SPOT ELEVATION
- FLOW DIRECTION
- FF = 5479.00 FINISH FLOOR ELEVATION
- rd ROOF DISCHARGE DIRECTION
- HIGH POINT / GRADE BREAK

VICINITY MAP L-21

PROJECT DATA

PROPERTY: THE SITE IS FULLY DEVELOPED COMMERCIAL PROPERTY LOCATED WITHIN COA VICINITY MAP B-13. THE SITE IS BOUND TO THE EAST, SOUTH AND WEST BY COMMERCIAL PROPERTY (HOME DEPOT), AND TO THE NORTH BY CENTRAL AVE. NE.

PROPOSED IMPROVEMENTS: THE PROPERTY WAS PREVIOUSLY A MOBILE HOME PARK WITH COMMUNITY CENTER, PAVED PARKING AND ASSOCIATED SITE IMPROVEMENTS. THE PROPOSED IMPROVEMENTS INCLUDE CONSTRUCTION OF MULTI-FAMILY HOUSING WITH ASSOCIATED ASPHALT PAVED ACCESS, PARKING, AND LANDSCAPING.

LEGAL: TRACT "C" VIDEO ADDITION, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

BENCHMARK: ELEVATIONS ARE BASED ON CITY OF ALBUQUERUQUE STATION No. 5-K20", HAVING AN ELEVATION OF 5429.99, NAVD 1988.

OFF-SITE: MINOR OFF-SITE DRAINAGE FROM THE EAST DRIVE WILL BE REDIRECTED SOUTH.

FLOOD HAZARD: PER F.E.M.A. FLOOD MAP #35001C0359G, EFF: 9/26/2008, THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.

DRAINAGE PLAN CONCEPT:

THIS PROPERTY IS INCLUDED AS 'PHASE III' IN THE APPROVED HOME DEPOT DRAINAGE REPORT DATED APRIL 28, 1994 (L21/D45) PREPARED BY TIERRA WEST. THE TRACT FALLS WITHIN DRAINAGE BASIN B DESIGNATED TO DRAIN TO THE EXISTING HOME DEPOT PARKING LOT DETENTION POND #1 WITH ORIFICE CONTROLLED DISCHARGE TO THE PUBLIC STORM DRAIN SYSTEM IN EUBANK BLVD. THE TOTAL PROPERTY (16.38 ACRES) HAS A FULLY DEVELOPED RUNOFF OF 78.16 CFS OR 4.77 CFS/ACRE.

TRACT C IS 1.879 ACRES * 4.77 CFS/ACRE = 9.0 CFS ALLOWABLE DISCHARGE. BASED ON CONCEPTUAL CALCULATIONS, THE PROPERTY WITH ANTICIPATED LAND TREATMENT RATIO OF 0%A,10%B,10%C,80%D WILL GENERATE 8.7 CFS DURING THE 100-YEAR 6-HOUR DESIGN STORM < 9.0 CFS ALLOWABLE.

POND #1 WATER SURFACE ELEVATION = 5467.75 (1929 DATUM) = APPROX. 5470.45 BASED ON 2.7' ADJUSTMENT TO 1988 DATUM.

THE PLAT INCLUDES THE FOLLOWING REGARDING CROSS-LOT DRAINAGE: "THE OWNER OF TRACT B1 AND THE OWNER OF TRACTS C AND D EACH GRANT TO THE OTHER RECIPROCAL EASEMENTS FOR STORM DRAINAGE FLOWS ON AND OVER TRACT B1 FOR THE BENEFIT OF TRACTS C AND D AND ON AND OVER TRACTS C AND D FOR THE BENEFIT OF TRACT B1."

SURVEYOR: ANTHONY L. HARRIS, N.M.P.S.#11463
THE SURVEY OFFICE, LLC
333 LOMAS BOULEVARD N.E.
ALBUQUERQUE, NM, 87102
(505) 998-0303

ENGINEER: FRED C. ARFMAN, N.M.P.E. #7322
ISAACSON & ARFMAN, INC.
128 MONROE N.E.
ALBUQUERQUE, NM, 87108
(505) 268-8828

ADA COMPLIANCE

SIDEWALK(S) AND RAMP(S): TARGET CROSS SLOPE = 1% TO 1.5%. CROSS SLOPE SHALL NOT EXCEED 2%

ACCESSIBLE RAMP(S): TARGET LONGITUDINAL SLOPE = 7% LONGITUDINAL SLOPE SHALL NOT EXCEED 12:1 (8.3%).

ACCESSIBLE PARKING: TARGET SLOPE = 1% TO 1.5%. SLOPE SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION

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Civil Engineering Consultants
128 Monroe Street NE
Albuquerque, NM 87108
505-268-8828 | www.iacivil.com

2374.CG-101
10/1/2020

FRED C. ARFMAN
NEW MEXICO
7322
LICENSED PROFESSIONAL ENGINEER
10.01.20

Engineer

LUMINARIA SENIOR COMMUNITY
10600 CENTRAL AVE SE
ALBUQUERQUE, NM 87123

100% CONSTRUCTION DOCUMENTS

PROJECT STATUS:	90% CONSTRUCTION DOCUMENTS
PROJECT NUMBER:	19-0058
IA PROJECT NUMBER:	2374
DRAWN BY:	BJB
CHECKED BY:	FCA
DATE:	10/1/2020

REVISIONS

No	Date

SHEET TITLE

Grading & Drainage Plan

SHEET NUMBER

CG-101

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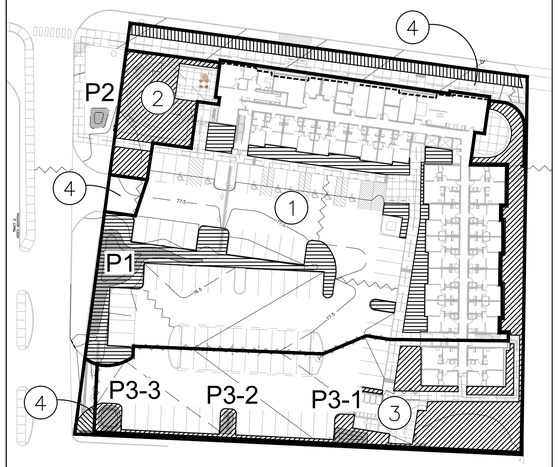
DRAINAGE BASIN & LANDSCAPE AREAS



CALCULATIONS: Luminaria Senior Living : 23-Sep-2020

Based on City of Albuquerque DMP, Article 6-2 Hydrology dated June 26, 2020

100-YEAR, 6-HOUR CALCULATIONS

AREA OF SITE: 81829 SF = 1.8785 ACRE

100-year, 6-hour

HISTORIC FLOWS:		Treatment SF	%	DEVELOPED FLOWS:		Treatment SF	%	EXCESS PRECIP: Precip. Zone 3
Area A	=	0	0%	Area A	=	0	0%	E_A = 0.67
Area B	=	4091	5%	Area B	=	16366	20%	E_B = 0.86
Area C	=	45006	55%	Area C	=	0	0%	E_C = 1.09
Area D	=	32732	40%	Area D	=	65463	80%	E_D = 2.58
Total Area	=	81829	100%	Total Area	=	81829	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 = 1.67 in.	Developed E = 2.24 in.

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

Historic V_{360} = 11419 CF	Developed V_{360} = 15247 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 3

Q_{pA}	=	1.84	Q_{pC}	=	3.17
Q_{pB}	=	2.49	Q_{pD}	=	4.49
Historic Q_p	=	6.9 CFS	Developed Q_p	=	7.7 CFS

BASIN NO. 1		DESCRIPTION		Drains to SQ Pond P1
Area of basin flows =	47350	SF	=	1.09 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:		
Weighted E	=	2.33 in.
Sub-basin Volume of Runoff:		
V_{360}	=	9180 CF
Sub-basin Peak Discharge Rate:		
Q_P	=	4.6 cfs

LAND TREATMENT	
A =	0%
B =	14.7%
C =	0%
D =	85.3%
Stormwater Quality Volume	
875	CF

BASIN NO. 2		DESCRIPTION		Drains to SQ Pond P2
Area of basin flows =	4399	SF	=	0.10 Ac.
The following calculatic	23			

Sub-basin Weighted Excess Precipitation:		
Weighted E	=	1.05 in.
Sub-basin Volume of Runoff:		
V_{360}	=	385 CF
Sub-basin Peak Discharge Rate:		
Q_P	=	0.3 cfs

LAND TREATMENT	
A =	0%
B =	89%
C =	0%
D =	11%
Stormwater Quality Volume	
10	CF

BASIN NO. 3		DESCRIPTION		Drains to SQ Pond P3
Area of basin flows =	23081	SF	=	0.53 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:		
Weighted E	=	2.04 in.
Sub-basin Volume of Runoff:		
V_{360}	=	3924 CF
Sub-basin Peak Discharge Rate:		
Q_P	=	2.0 cfs

LAND TREATMENT	
A =	0%
B =	31.4%
C =	0%
D =	68.6%
Stormwater Quality Volume	
343	CF

BASIN NO. 4		DESCRIPTION		Free Discharge - No SQ Pond
Area of basin flows =	6999	SF	=	0.16 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:		
Weighted E	=	1.87 in.
Sub-basin Volume of Runoff:		
V_{360}	=	1089 CF
Sub-basin Peak Discharge Rate:		
Q_P	=	0.6 cfs

LAND TREATMENT	
A =	0%
B =	41.4%
C =	0%
D =	59%
Stormwater Quality Volume	
89	CF

STORMWATER QUALITY

STORMWATER QUALITY (SQ) CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF 'FIRST FLUSH'.

BECAUSE THIS PROPERTY WAS PREVIOUSLY FULLY DEVELOPED, THE REQUIRED FIRST FLUSH RETENTION VOLUME = 0.26" * TYPE 'D' AREA: 0.26/12 * (60,799 SF) = 1,317 CF. .

THE BASIN CALCULATIONS AT LEFT PROVIDE THE IMPERVIOUS AREA, REQUIRED STORMWATER QUALITY (SQ) VOLUME TO BE PONDED AS FOLLOWS:

BASIN 1 875 CF REQUIRED – DRAINS TO POND P1
937 CF PROVIDED

BASIN 2 10 CF REQUIRED – DRAINS TO POND P2
50 CF PROVIDED

BASIN 3 343 CF REQUIRED – DRAINS TO PONDS P3–1, P3–2, P3–3
443 CF PROVIDED

BASIN 4 89 CF REQUIRED – REQUEST IN–LIEU–OF PAYMENT

A DRAINAGE COVENANT WILL BE REQUIRED FOR THE STORMWATER QUALITY FIRST FLUSH PONDS PRIOR TO CERTIFICATE OF OCCUPANCY APPROVAL.

STORMWATER QUALITY P1

Contour	Area	Volume
5476.0	1393	
5475.0	480	937 CF
POND VOLUME =		**937** CF

STORMWATER QUALITY P2

Contour	Area	Volume
5476.5	160	
5476.0	40	50 CF
POND VOLUME =		**50** CF

STORMWATER QUALITY P3-1

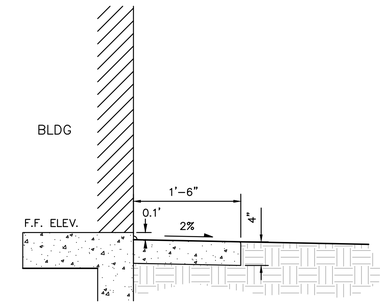
Contour	Area	Volume
5377.1	220	
5376.0	45	146 CF
POND VOLUME =		**146** CF

STORMWATER QUALITY P3-2

Contour	Area	Volume
5476.5	120	
5476.0	9	32 CF
POND VOLUME =		**32** CF

STORMWATER QUALITY P3-3

Contour	Area	Volume
5476.0	240	
5474.5	100	255 CF
POND VOLUME =		**255** CF



GENERAL NOTES

1. SEALED CONTRACTION / CONTROL JOINTS @ 6' MAX.
2. 1/2" SEALED EXPANSION JOINTS 36' O.C.
3. 3/8" RADII AT ALL EXPOSED EDGES.
4. PROVIDE 1" EXPANSION JOINT MATERIAL (FULL DEPTH) WITH SEALANT AT SURFACE BETWEEN BLDG. AND CONCRETE APRON.

CONCRETE APRON AT BUILDING

SCALE: N.T.S.

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REVISIONS

No	Date

SHEET TITLE

Grading & Drainage Details & Calculations

SHEET NUMBER

CG-501