City of Albuquerque

February 28, 2000

Kim Kemper, P. E.,
Kemper-Vaughn Consulitng Engineers,
3700 Coors Rd. N.W.
Albuquerque, New Mexico 87120

Re: Site Plan submittal for building permit approval for Integrated Technologies Corp., 4801 Hardware Drive N.E., [G17/ D077], Engineer's Stamp dated 1/14/2000.

F

Dear Mr. Kemper,

The location referenced above must go to the D.R.B. for site plan review because it is in a C-2/(SC) zoned parcel. I had not recognized this until the end of the review for T.C.L. approval. Please accept my apologies for not realizing this from the beginning. If the accompanying comments and the mark up are addressed prior to D.R.B. your review should be quick and easy.

Again, I hope you can forgive my error. Thank you, and if you have any further questions please call my office at 924-3620.

Sincerely,

Mike Zamora,
Commercial Plan Checker

cc:
Hydrology File
Office File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 29, 2000

Kim R. Kemper, P.E.
Kemper-Vaughan Consulting Engineers
3700 Coors Road NW Suite C
Albuquerque, NM 87120

RE: INTEGRATED TECHNOLOGIES CORP. (F17-D77). ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY APPROVAL. ENGINEER'S STAMP DATED SEPTEMBER 19, 2000.

Dear Mr.Kemper:

Based on the information provided on your September 19, 2000 submittal, the above referenced project is approved for Certificate of Occupancy.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Whitney Reierson
File

City of Albuquerque

February 16, 2000

Kim R. Kemper, P.E.
Kemper-Vaughn Consulting Engineers
3700 Coors Rd. NW
Albuquerque, NM 87120

RE: GRADING AND DRAINAGE PLAN FOR **INTEGRATED TECHNOLOGIES**
SUBMITTED FOR BUILDING PERMIT APPROVAL **(F-17/D077)**

Dear Mr. Kemper,

Based upon the information provided in your February 15, 2000, submittal, the project, referred to above, is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit is required for construction within the city right-of-way. A copy of this approval letter must be on hand when applying for the excavation permit.

Prior to release of the Certificate of Occupancy, an Engineer Certification, per the DPM checklist, will be required.

If you have any questions, please call me at 924-3988.

Sincerely,

Stuart Reeder, P.E.

Stuart Reeder, P.E.
Hydrology Division

xc: Pam Lujan, Permits
Whitney Reierson
File

INTEGRATED TECHNOLOGIES CORP.

GRADING PLAN & DRAINAGE PLAN

January 12, 2000

Prepared for:

Dura Bilt Product, Inc.

4808 Jefferson N.E.

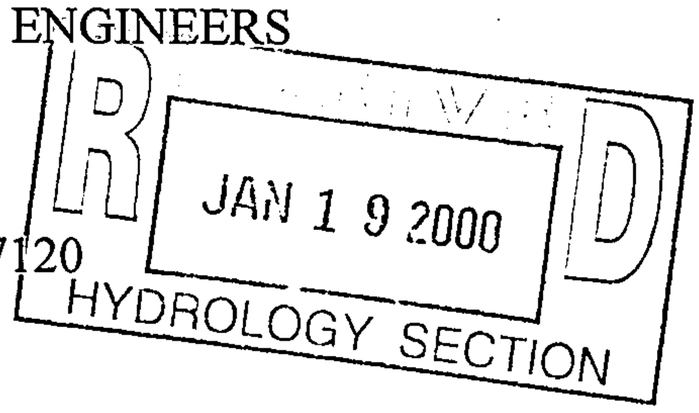
Albuquerque, New Mexico 87109

Prepared by:

KEMPER-VAUGHAN CONSULTING ENGINEERS

3700 Coors Road NW

Albuquerque, New Mexico 87120



LEGAL DESCRIPTION

Lot 4, Block G, Cashway Materials, Inc., Allwoods Subdivsion.

RELATED DRAINAGE FILES

F17-D70 – Grading and Drainage Plan for Subdivision
F17-D70A – Grading and Drainage Plan for Building Permit, Lot 1, Block G.

DRAINAGE PLAN

This site is located on the northwest corner of Lumber Ave. and Hardware Drive in northeast Albuquerque (just off Jefferson and McLeod). The proposed improvements include the construction of a new office/warehouse and related parking and landscaping. Attached is a copy of panel 139 of the 1996 FIRM map. As shown, this site does not lie within a designated flood hazard area.

This site is part of a four lot subdivision completed in 1997. A grading and drainage plan for the subdivision is on file at the City, file F17-D70. The subdivision plan created an easement along the west property line across Lots 2, 3 and 4. The intent of the subdivision plan was is to have a portion of Lot 1, all of Lots 2 & 3, and a portion of Lot 4 drain through a constructed swale within the easement, exiting the site at the southwest corner into Lumber Ave. According to the plan Lot 1 was to contribute 2.0 cfs to the easement, Lot 2 & 3 were projected to contribute 6.6 cfs and Lot 4, the subject parcel, developed flows were estimated at 6.4 cfs. This meant that the total flows entering Lot 4 from the north were estimated at 15.2 cfs. In 1998 Lot 1 was developed and the swale along the rear of the properties was constructed. A grading and drainage plan is on file at the City for this project, file F17-D70A. This plan detailed the swale construction and calculated the swale capacity at 20.4 cfs. The grading and drainage plan for building permit on Lot 1 actually discharges 3.25 cfs to the constructed swale. Using the predetermined developed flows for Lots 2 & 3 and adding the actual flow from Lot 1 results in a projected flow entering the subject Lot of 16.45 cfs.

The proposed project incorporates gated parking within the drainage easement. The plan includes constructing a "channel" within the asphalt to convey the current and future flows from the Lots to the north. This "channel" is detailed on the grading plan and calculations are attached showing the projected capacity of this flow path. Also attached are drainage calculations for the subject property and a concrete rundown located at the south entrance. Approximately 35% of this site will drain directly to Lumber through the south driveway. The balance of the site will drain to the drainage easement and then to Lumber Ave.

ZONE X

BRENDA

LEJANO

HARDWARE DRIVE

SITE

LUMBER AVENUE

BOGAN AVENUE

LUMBER AVENUE

100-YEAR FLOOD CONFINED TO CONSTRUCTED CHANNEL

ZONE A

STREET

HOSPITAL LOOP

ZONE X

35

BOULEVARD

JEFFERSON

ZONE AO
(DEPTH 1)

T11N

T10N

MONTGOMERY

BO

ZONE AO
(DEPTH 1)

DRIVE

ZONE AO
(DEPTH 2)

HENDRIX

STREET

MONROE

MATEO

MADEIRA

HOMESTEAD ROAD

DOUGLAS

MACARTHUR

ROAD

GOODRICH

AVENUE

2

STREET

SAN

HILTON

AVENUE

Hahn

MONROE

VAN BUREN STREET

DELAMAR

AVENUE

Arroyo

ZONE X

ZONE A

SAN AND

RECEIVED

JAN 19 2000

HYDROLOGY SECTION

PLACE

MADEIRA

ORTIZ COURT

PALOMAS DRIVE

AVENUE

PONDEROSA

ZONE AO

TOTAL SITE AREA = 1.488 ac. **INTEGRATED TECHNOLOGIES CORPORATION**

DRAINAGE ZONE 2
PRECIPITATION: 360 = 2.35 in.
1140 = 2.75 in.
10day = 3.95 in.

	EXCESS PRECIPITATION:	PEAK DISCHARGE:	
TREATMENT A	0.53 in.	1.56	cfs/ac.
TREATMENT B	0.78 in.	2.28	cfs/ac.
TREATMENT C	1.13 in.	3.14	cfs/ac.
TREATMENT D	2.12 in.	4.70	cfs/ac.

	EXISTING CONDITIONS: AREA	PROPOSED CONDITIONS: AREA
TREATMENT A	0.00 ac.	0.00 ac.
TREATMENT B	0.05 ac.	0.16 ac.
TREATMENT C	1.44 ac.	0.00 ac.
TREATMENT D	0.00 ac.	1.33 ac.

EXISTING EXCESS PRECIPITATION:

Weighted E = (0.53)x(0.00)+(0.78)x(0.05)+(1.13)x(1.44)+(2.12)x(0.00)/ 1.49 ac.
= 1.12 in.
V100-360 = (1.12)x(1.49)/ 12 = 0.138850 ac-ft = 6048 cf

EXISTING PEAK DISCHARGE:

Q100 = (1.56)x(0.00)+(2.28)x(0.05)+(3.14)x(1.44)+(4.70)x(0.00)= 4.64 cfs

PROPOSED EXCESS PRECIPITATION:

Weighted E = (0.53)x(0.00)+(0.78)x(0.16)+(1.13)x(0.00)+(2.12)x(1.33)/ 1.49 ac.
= 1.98 in.
V100-360 = (1.98)x(1.49)/ 12.0 = 0.245367 ac-ft = 10688 cf

V100-1440 = (0.25)+(1.33)x(2.75 - 2.35)/ 12 = 0.289700 ac-ft = 12619 cf

V100-10day = (0.25)+(1.33)x(3.95 - 2.35)/ 12 = 0.422700 ac-ft = 18413 cf

PROPOSED PEAK DISCHARGE:

Q100 = (1.56)x(0.00)+(2.28)x(0.16)+(3.14)x(0.00)+(4.70)x(1.33)= 6.62 cfs

TRAPEZOIDAL CHANNEL ANALYSIS
RATING CURVE COMPUTATION

January 12, 2000
INTEGRATED TECHNOLOGIES CORP.
DRAINAGE EASEMENT THRU PARKING
AT WEST PROPERTY LINE

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PROGRAM INPUT DATA:

DESCRIPTION	VALUE
Channel Bottom Slope (feet per foot)	0.0050
Manning`s Roughness Coefficient (n-value)	0.0130
Channel Side Slope - Left Side (horizontal/vertical)	0.02
Channel Side Slope - Right Side (horizontal/vertical)	20.00
Channel Bottom Width (feet)	7.5

==========

PROGRAM RESULTS:

Depth (ft)	Flow Rate (cfs)	Velocity (fps)	Froude Number	Velocity Head(ft)	Energy Head(ft)	Flow Area (sq ft)	Top Width (ft)
0.1	1.4	1.61	0.946	0.040	0.140	0.9	9.5
0.2	4.6	2.41	1.043	0.090	0.290	1.9	11.5
0.3	9.5	3.02	1.101	0.141	0.441	3.2	13.5
0.4	16.3	3.53	1.144	0.194	0.594	4.6	15.5
0.5	25.0	3.99	1.177	0.247	0.747	6.3	17.5

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TRAPEZOIDAL CHANNEL ANALYSIS
RATING CURVE COMPUTATION

January 12, 2000
ITEGRATED TECHNOLOGIES CORP
CONCRETE RUNDOWN AT
SOUTH DRIVEWAY

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PROGRAM INPUT DATA:

DESCRIPTION	VALUE
Channel Bottom Slope (feet per foot)	0.0800
Manning`s Roughness Coefficient (n-value)	0.0130
Channel Side Slope - Left Side (horizontal/vertical)	0.02
Channel Side Slope - Right Side (horizontal/vertical)	0.02
Channel Bottom Width (feet)	2.0

==========

PROGRAM RESULTS:

Depth (ft)	Flow Rate (cfs)	Velocity (fps)	Froude Number	Velocity Head(ft)	Energy Head(ft)	Flow Area (sq ft)	Top Width (ft)
0.1	1.3	6.54	3.647	0.664	0.764	0.2	2.0
0.2	3.9	9.80	3.867	1.493	1.693	0.4	2.0
0.3	7.3	12.19	3.927	2.307	2.607	0.6	2.0
0.4	11.3	14.06	3.926	3.071	3.471	0.8	2.0
0.5	15.7	15.59	3.896	3.776	4.276	1.0	2.0

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City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 9, 2000

Kim R. Kemper, P.E.
Kemper-Vaughn Consulting Engineers
3700 Coors Rd., NW, Suite C
Albuquerque, NM 87120

RE: GRADING AND DRAINAGE PLAN FOR INTEGRATED TECHNOLOGIES (F-17/D077)

Dear Mr. Kemper,

I have reviewed your submittal for the project referred to above. The only problem I find with the grading and drainage plan is the concrete rundown located on the east side of the south driveway. The design of this structure presents a hazard for pedestrian traffic. Please use the City standard sidewalk culvert instead. Installation of the standard sidewalk culvert is done under the SO 19, which will require you to submit an extra copy of the grading and drainage plan with a signature block for sign-off by Hydrology and Streets, another City standard.

If you have any questions, please call me at 924-3988.

Sincerely,

Stuart Reeder, P.E.

Stuart Reeder, P.E.
Hydrology Division

xc: File