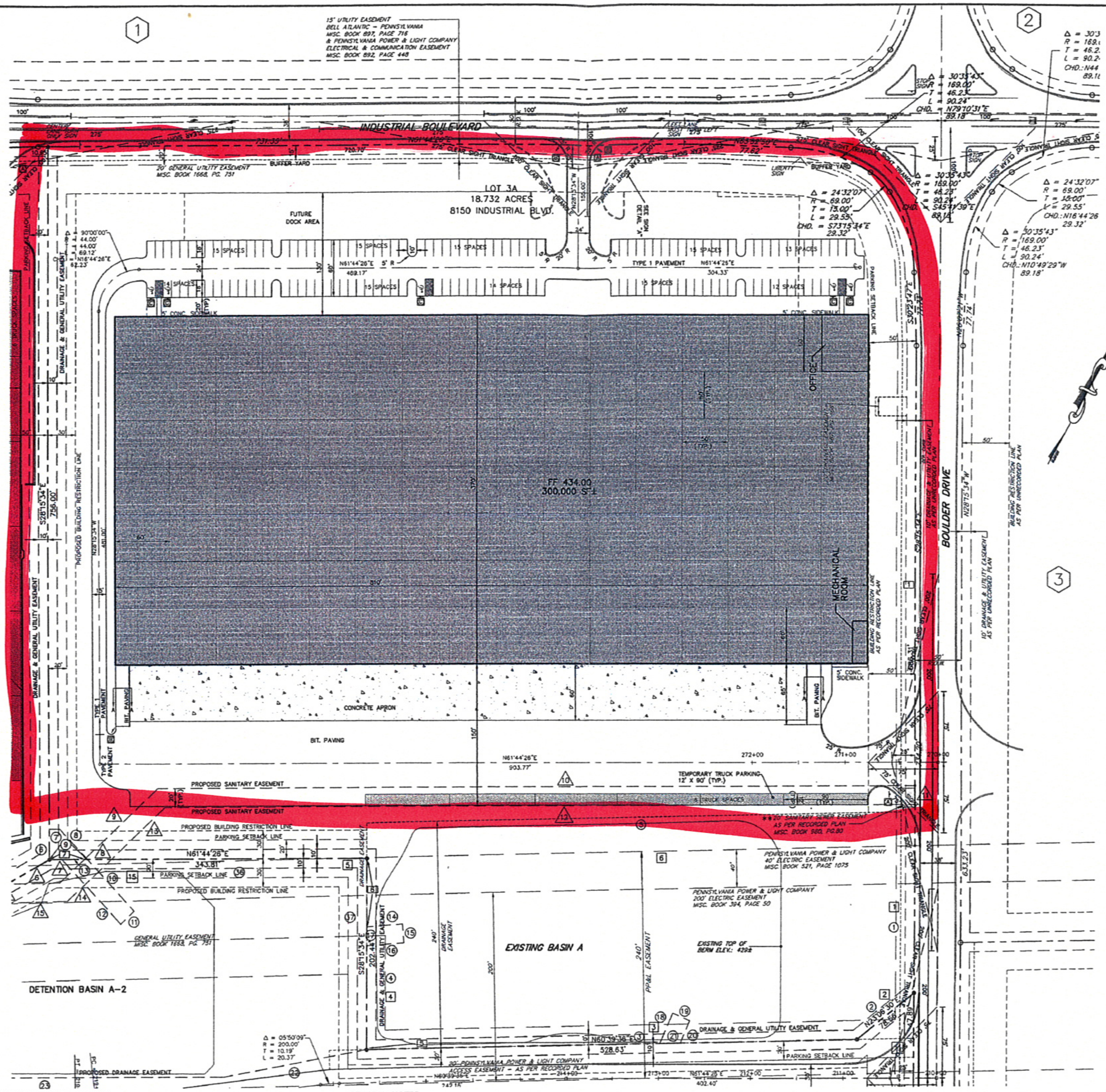
Site 5: Boulder Business Center Site Plan

8150 Industrial

SUMMARY OF STORMWATER FLOWS

RATIONAL METHOD – SITE Tc

			STORM FREQUENCIES 2	10	25	100
			PEAK FLOWS (cfs)			
PRE-DEV. SITE AREA A		(1)	53.3	74.1	100.0	123.2
SITE NO IMPACT		(2)	1.7	2.4	3.1	3.8
UPSTREAM NO IMPACT		(3)	14.2	19.7	25.9	31.9
TOTAL PRE-DEV	(1)+(2)+(3)	(4)	69.2	96.2	128.9	158.9
MAX ALLOWABLE FLOWS						
50% RELEASE RATE IMPACT	(1)*0.5	(5)	26.6	37.1	50.0	61.6
100 % NO IMPACT	((2)+(3))*1	(6)	15.9	22.1	29.0	35.7
TOTAL ALLOWABLE FLOWS	(5)+(6)	(7)	42.5	59.1	78.9	97.3
SINCE ALL HYDROGRAPHS IN THE PRE-DEVELOPMENT CONDITION HAVE THE SAME TIME OF CONCENTRATION (re: ACT 167 PROCEDURES), THE PEAK FLOWS ARE OCCURRING AT THE SAME TIME AND CAN BE ADDED DIRECTLY						
POST-DEV. SITE BYPASS		(8)	11.8	16.4	21.7	26.7
POND OUTFALL ALLOWED	=(7)-(8)	(9)	30.7	42.7	57.3	70.7
BASIN A2 POND IN	A2+A3		78.7	109.3	143.5	176.4
POND OUT	TO BASIN A		12.2	18.3	38.6	62.9
WATER SURFACE ELEVATION			434.9	436.5	437.5	438.4
BASIN A POND IN	A+A2+A3		52.3	69.8	89.4	115.0
POND OUT		(10)	6.4	11.8	15.5	21.3
WATER SURFACE ELEVATION			424.4	425.4	426.4	428.1
COMPOSITE POST-DEV.	(8)&(10)	(11)	13.3	18.0	23.4	28.5
COMPOSITE IS THE COMBINATION OF THE BYPASS HYDROGRAPH AND THE ROUTED HYDROGRAPHS USING THE SAME Tc VALUE. (8) & (and) (10). The hydrographs do not peak simultaneously.						
REQUIRED REDUCTION IN FLOWS WITH A 50% RELEASE RATE	(1)-(5)	(12)	26.6	37.1	50.0	61.6
SUPPLEMENTAL REDUCTION IN FLOWS OVER THE 50% RELEASE RATE	(7)-(11)	(13)	29.2	41.1	55.6	68.8
TOTAL REDUCTION IN FLOW RATES	=(12)+(13)	(14)	55.9	78.2	105.5	130.4
CONTROLLED RELEASE RATE INCLUDING UPSTREAM AREAS	(14)/(4)	(15)	19%	19%	18%	18%



NOTES:

1. PROPERTY MARKERS (IRON PINS) SHALL BE SET AT ALL INDIVIDUAL LOT CORNERS.
2. ANTICIPATED TRAFFIC PROJECTIONS AND COMPARISON TO THE TRAFFIC STUDY FOR LEHIGH VALLEY WEST II SHALL BE SUBMITTED AS PART OF THE CONDITIONAL USE SUBMISSION. CONDITIONAL USE SUBMISSION SHALL COMPLY WITH ORDINANCE 2000-4, ZO SECTION 603.A, C, & D FOR A LOUNGE TO ACCOMMODATE TRACTOR/TRAILER OPERATORS AND TRUCK PARKING SPACES FOR EACH REQUIRED LOUNGE SEAT.
3. DEVELOPMENT OF THE SUBDIVIDED LOTS SHALL REQUIRE SEPARATE LAND DEVELOPMENT APPROVAL BY UPPER MACUNGIE TOWNSHIP.
4. WETLANDS HAVE BEEN DETERMINED NOT TO EXIST ON THE TRACT BY AN ENVIRONMENTAL SURVEY PERFORMED BY DELVAL SOIL AND ENVIRONMENTAL CONSULTANTS.
5. TOPOGRAPHIC SURVEY BASED ON PLANS BY G.E. PIDCOCK TITLED "LEHIGH VALLEY WEST/2, INDUSTRIAL SUBDIVISION AND DATED OCT. 23, 1997, AND LAST REVISED JULY 24, 1998.
6. LOT 5B BOUNDARY BASED ON ALTA SURVEY BY BARRY ISETT & ASSOCIATES TITLED "SURVEY PLAN, LEHIGH VALLEY WEST 2 INDUSTRIAL PARK-LOT 5B", DATED JUNE 25, 1999, AND LAST REVISED JULY 2, 1999.
7. LIMITED UTILITY LOCATION VERIFICATION AND EXISTING FEATURES VERIFIED BY BARRY ISETT AND ASSOCIATES ON MAY 26, 2000.
8. LOCATION OF UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. PRIOR TO ANY CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS. IF THERE ARE CONFLICTS WITH THIS PLAN, THE ENGINEER/ ARCHITECT SHALL BE NOTIFIED BEFORE COMMENCING CONSTRUCTION. CONTRACTOR'S INVESTIGATION SHALL INCLUDE, BUT NOT BE LIMITED TO, LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES AND CLEARANCES AT CROSSINGS. TEST HOLES MAY BE NECESSARY. COMMENCEMENT OF CONSTRUCTION SHALL CONSTITUTE ACCEPTANCE BY THE CONTRACTOR OF THIS PLAN, CONDITIONS AND CONSEQUENCES THEREOF. RESULTS OF FINDINGS MAY NECESSITATE ADJUSTMENTS TO THIS PLAN.
9. CONSTRUCTION TO CONFORM TO THE UPPER MACUNGIE TOWNSHIP SUBDIVISION AND ZONING SPECIFICATIONS.
10. ALL ELEVATIONS ARE BASED ON NGVD 1929 DATUM.
11. SIGHT TRIANGLE AREAS SHALL BE GRADED AND KEPT FREE OF SIGHT OBSTRUCTIONS BETWEEN A HEIGHT OF 2 AND 7 FEET, INCLUDING STRUCTURES, NON-TRANSPARENT FENCES, VEGETATION AND SIGNS.
12. LOTS ARE SUBJECT TO THE PROTECTIVE COVENANTS OF THE LEHIGH VALLEY WEST-2 INDUSTRIAL PARK.
13. MAINTENANCE OF THE STREET AND PERIMETER TREES WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
14. ACCESS IS GRANTED TO UPPER MACUNGIE TOWNSHIP AUTHORITY AND ITS ASSIGNS TO THE MONITOR MANHOLES LVWS9E, LVWS11B, & LVWS11H, FOR THE PURPOSES OF MONITORING FLOW AND STRENGTHS OF SEWER.

ENGINEER'S CERTIFICATION

I, TERRY P. DEGROOT, P.E., LICENSE NO. 44255-E, DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE INFORMATION CONTAINED IN THE ACCOMPANYING PLANS, SPECIFICATIONS AND REPORTS HAS BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE, IS TRUE AND CORRECT IN ALL DETAILS.

TERRY P. DEGROOT, P.E. DATE

UPPER MACUNGIE TOWNSHIP

REVIEWED, __________ BY THE PLANNING COMMISSION OF UPPER MACUNGIE TOWNSHIP.

SECRETARY – OWEN BASTIAN CHAIRMAN – JAMES R. MILLER

APPROVED, __________ BY THE BOARD OF SUPERVISORS OF UPPER MACUNGIE TOWNSHIP.

SECRETARY – THOMAS GORR CHAIRMAN – PORTER KRISHER

LEHIGH VALLEY PLANNING COMMISSION

THIS PLAN WAS REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION.

__________, 19___.

PLANNER

RECORDER OF DEEDS

PLAN RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF LEHIGH COUNTY, PENNSYLVANIA, IN MAP BOOK VOLUME ______, PAGE ______, ON THE ______ DAY OF __________ 19 ____.

OWNER'S CERTIFICATION

WE THE EQUITABLE OWNERS OF LIBERTY PROPERTY TRUST BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT WE ARE THE SOLE OWNERS OF THIS PROPERTY IN PEACEFUL POSSESSION OF THE SAME AND THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE THEREOF AND ALSO WE HEREBY DEDICATE ALL PUBLIC IMPROVEMENTS SHOWN ON THIS PLAN FOR PUBLIC USE. IN ADDITION, WE CERTIFY THAT SURVEY MONUMENTS INDICATED ON THIS PLAN WILL BE PLACED UPON COMPLETION OF GRADING.

LIBERTY PROPERTY LIMITED PARTNERSHIP BY ITS SOLE GENERAL PARTNER, LIBERTY PROPERTY TRUST, BY ROBERT L. KIEL, SENIOR V.P. & REGIONAL DIRECTOR

SWORN AND SUBSCRIBED BEFORE ME THIS ______ DAY OF __________, 19____.

MY COMMISSION EXPIRES ON ______ DAY OF __________, 19____.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THE ABOVE PLAN AND SURVEY TO BE CORRECT IN ALL ITS DETAILS.

DALE E. JUDD, P.E., P.L.S.

FILENAME: T:\LAND PROJECTS\04799\DWG\4799J08.DWG

SANITARY SEWER EASEMENT

	BEARING	DISTANCE
9	N18°42'00"E	109.61'
10	N61°38'40"E	815.75'
11	S28°15'34"E	20.00'
12	S61°38'40"W	807.85'
13	S18°42'00"W	60.32'
8	S61°44'26"W	29.30'

TIES INTO PROPERTY CORNER

1	S28°15'34"E	466.72'
7	N61°44'26"E	37.85'

PP&L EASEMENT

	BEARING	DISTANCE
1	S28°15'34"E	155.86'
2	S23°06'30"W	78.55'
3	S60°39'36"W	528.63'
4	N28°15'34"W	202.44'
5	N61°44'26"E	36.14'
6	N60°36'11"E	628.16'

STORMWATER EASEMENTS

	BEARING	DISTANCE
14	N57°21'34"E	38.31'
15	S32°38'26"E	20.00'
16	S57°21'34"W	39.64'
17	N28°15'34"W	20.05'
18	N04°51'12"W	34.81'
19	N85°08'48"E	20.00'
20	S04°51'12"E	25.71'
21	S60°39'36"W	21.98'

TIES INTO PROPERTY CORNER

6	S28°15'34"E	72.69'
5	N60°39'36"E	315.46'

LOT 3B THROUGH 3A

	BEARING	DISTANCE
6	N28°15'34"W	32.25'
7	N61°44'26"E	11.10'
8	S70°54'40"E	43.85'
9	S61°44'26"W	40.80'

EXISTING BASIN

	BEARING	DISTANCE
1	S28°15'34"E	203.87'
2	S23°06'30"W	59.35'
3	S60°39'36"W	528.63'
4	N28°15'34"W	240.05'
5	N60°39'36"E	575.00'

GENERAL NOTES

1. ALL PUBLIC IMPROVEMENTS PROPOSED ON THIS PLAN WILL REQUIRE CONSTRUCTION INSPECTION BY KCE PERSONNEL ON BEHALF OF UMT AND UMTA. THIS WOULD INCLUDE THE DETENTION BASIN, SANITARY SEWER, LANDSCAPING, AND DRIVEWAY CONSTRUCTION WITHIN THE RIGHT OF WAY.
2. THE CENTERLINE OF THE ACCESS ROAD OR DRIVEWAY FOR NON-RESIDENTIAL SUBDIVISIONS SHOULD BE LOCATED NO CLOSER THAN 300 FEET FROM AN ADJACENT STREET INTERSECTION WHEN EITHER STREET IS AN ARTERIAL STREET. WITHIN THE RIGHT-OF-WAY.

   DISTANCE FROM LOT 3A ENTRANCE TO BOULDER DRIVE ℄ = 390.60 FT.
3. CONSTRUCTION SHOP DRAWINGS – RETAINING WALL.

   * SHOP DRAWINGS WILL BE PROVIDED TO THE UPPER MACUNGIE TOWNSHIP FOR REVIEW AND APPROVAL. ALLOW A MINIMUM OF 30 DAYS FOR REVIEW.

STORMWATER NOTE:

IT SHALL BE THE RESPONSIBILITY OF THE OWNER OF LOT 3A FOR THE MAINTENANCE OF DRAINAGE STRUCTURES, SWALES AND APPURTENANCES LOCATED ON ITS PROPERTY.

IN THE EVENT THAT THE PROPERTY OWNER FAILS TO PROPERLY MAINTAIN SAID STRUCTURES, SWALES, AND APPURTENANCES, AFTER NOTIFICATION TO SUCH PROPERTY OWNERS BY THE TOWNSHIP, IT IS AUTHORIZED TO ENTER UPON THE PROPERTY TO PERFORM SUCH MAINTENANCE AND THEREAFTER RECOVER THE COST OF PERFORMING SUCH SERVICE FROM THE PROPERTY OWNER. IN ORDER TO ENFORCE THE RECOVERY OF SUCH COST OF SERVICE, THE TOWNSHIP SHALL HAVE THE RIGHT TO FILE A MUNICIPAL LIEN AGAINST SUCH PROPERTY AND THEREAFTER TO EXERCISE ITS REMEDIES IN ACCORDANCE WITH THE SECOND CLASS TOWNSHIP CODE.

STORMWATER EASEMENTS:

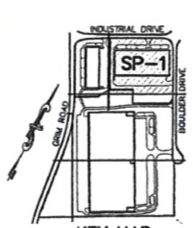
THE OWNER OF LOT 3A SHALL PERMIT THE OWNER OF LOT 3B TO CONVEY STORMWATER FLOWS THROUGH LOT 3A IN THE STORMWATER EASEMENT AS SHOWN ON THE PLAN IN THE SOUTHWESTERN CORNER OF LOT 3A. THE OWNER OF LOT 3B SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE STORMWATER LINE THROUGH LOT 3A. ANY DISTURBANCE CAUSED BY MAINTENANCE OR REPAIR OF THE LOT 3A STORMWATER PIPE AND MANHOLE SHALL BE RESTORED TO ORIGINAL CONDITION BY THE OWNER OF LOT 3B.

SEE MEF-1 FOR ADJOINERS

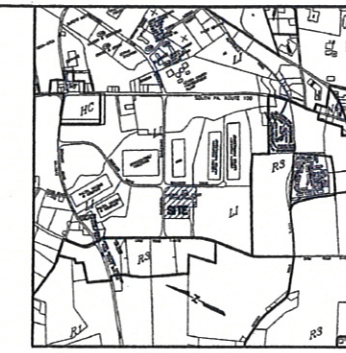
DATUM: NGVD

BENCHMARK: SQUARE CHISELED IN THE NORTHEAST END OF THE TOP OF A CONCRETE STORM SEWER INLET, LOCATED ALONG THE SOUTHEASTERLY LOT LINE OF LOT #5B, APPROX. 635 FEET FROM THE CENTER OF REALIGNED GRIM ROAD T-478C. ELEVATION 472.30

BENCHMARK ELEVATIONS TO BE ADJUSTED IN THE FIELD TO RAISE THE ELEVATIONS ON LOTS 3A & 3B BY 0.9' AND ON LOT 5B BY 0.4'.



KEY MAP



LOCATION MAP

SCALE: 1" = 2000'

ZONING DATA

DISTRICT: LI – LIGHT INDUSTRIAL PARK DISTRICT

PROPOSED USE: WAREHOUSE/DISTRIBUTION (CONDITIONAL USE)

MINIMUM LOT AREA: 87,000 S.F.
10 ACRES (MISC. BOOK 875, PAGE 1004)

MINIMUM LOT WIDTH: 150 FT. @ FRONT YARD SETBACK

MAXIMUM BUILDING COVERAGE: 40%

MAXIMUM IMPERVIOUS COVERAGE: 75%

BUILDING SETBACKS:
- FRONT: 50 FT.
- SIDE: 30 FT. (EACH 2 SIDES)
- REAR: 30 FT.
- YARD ADJACENT TO PUBLIC STREET: 50 FT.
- YARD ADJACENT TO RESIDENTIAL LOT LINE: 150 FT.

HEIGHT LIMIT: 35 FT.
(2 1/2 TIMES THE DISTANCE FROM THE BUILDING LINE TO THE STREET RIGHT-OF-WAY, MISC. BOOK 875, PAGE 1004)
PRINCIPAL – 50 FT., 4 STORIES
ACCESSORY – 50 FT., 1 STORY

PARKING SETBACKS:
- EXISTING STREET RIGHT-OF-WAY: 50'
- OTHER LOT LINES: 20'
- WALL OF BUILDING: 5'

BUFFER YARD:
15 FT. (EXPRESSWAY, ARTERIAL OR COLLECTOR STREETS)

SITE DATA

OWNER/DEVELOPER:
LIBERTY PROPERTY LIMITED PARTNERSHIP
LEHIGH VALLEY CORPORATE CENTER
1510 VALLEY CENTER PARKWAY
SUITE 240
BETHLEHEM, PA 18017
(610) 867-9100

DEED REFERENCE: DBV 1668, PG. 751
TAX MAP: J8 BLOCK 10 LOT 11
MAP BOOK: 38 PAGES: 78 THROUGH 82
LOT AREA: 18.732 ACRES

PROPOSED BUILDING COVERAGE: 36.8%

TOTAL IMPERVIOUS: 67.8%
(INCLUDES FUTURE DOCK AREA)

REQUIRED PARKING:
1 SPACE/1.2 EMPLOYEES, PLUS 1 SPACE/10 MANAGERS ON SITE

	LOT #3A
1 SPACE/1.2 EMPLOYEE	135
1 SPACE/MANAGER	8
TOTAL (INCLUDES HANDICAPPED SPACES)	143 (5 HP)

TRUCK DOCKING SPACES: 56
TEMPORARY TRUCK PARKING: 6

SEWER: PUBLIC 2 EDU (ESTIMATED) – MONITORING MANHOLE PROVIDED
WATER: PUBLIC

EXISTING COVENANTS

LOT 3
ACT 515, VOL. 531, PG. 633 – DATED JANUARY 26,1987
ACT 515, VOL. 531, PG. 642 – DATED JANUARY 26,1987
ACT 515, VOL. 531, PG. 941 – DATED JANUARY 26,1987

DECLARATION OF RESTRICTIONS & RESPONSIBILITIES RECORDED IN MISC. BOOK 875, PG. 1004 – DATED FEBRUARY 13, 1998

DECLARATION OF COVENANTS RECORDED IN MISC. BOOK 394, PG. 50 DATED JUNE 6, 1991

WAIVERS REQUESTED

1. SALDO SECTION 633.31 – MAXIMUM DRIVEWAY WIDTH TO PERMIT A 24' AND 40' DRIVEWAYS WITH ENTRANCE RADII OF 75' ON EACH SIDE OF BOTH DRIVEWAYS. THIS IS IN EXCESS OF THE 30' MAXIMUM ALLOWED BY ORDINANCE.
2. SALDO SECTION 691.314 – THE SITE GRADING IN EXCESS OF 3:1 SLOPES. TO PERMIT SLOPES TO A MAXIMUM OF 2:1. ALL 2:1 SLOPES TO BE PLANTED WITH CROWNVETCH TO STABILIZE SOILS.
3. SALDO SECTIONS 1041.8 & 1073 – TREE PLANTING REQUIREMENTS. TO PERMIT THE PLACEMENT OF 184 TREE CREDITS AS SHOWN ON LL-1. LARGER TREE SPECIMENS ARE PROPOSED TO OFFSET THE LOWER TREE COUNT. ORDINANCE REQUIRES 301 TREE CREDITS.

SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	QUANTITY	DESCRIPTION
A	R1-1	30"X30"	2	STOP
B	R5-2	30"X30"	3	NO TRUCKS
C	R7-8	12"X18"	5	HANDICAP PARKING

SIGHT TRIANGLES:

SALDO 100' (COLLECTOR), 75' (LOCAL)
ZONING 25' FROM RIGHT-OF-WAY
275' ALONG ℄ COLLECTOR

ROAD CLASSIFICATION:

BOULDER DRIVE: LOCAL ROAD
INDUSTRIAL BOULEVARD: COLLECTOR
GRIM ROAD: COLLECTOR

LEGEND

NAME
UTILITY POLE
OVERHEAD TELEPHONE
OVERHEAD ELECTRIC
UNDERGROUND TELEPHONE
UNDERGROUND ELECTRIC
SANITARY LINE
SANITARY CLEAN OUT
WATER MAIN, VALVE, & FIRE HYDRANT
GAS MAIN & VALVE
PROPOSED STORM LINE
EXISTING STORM LINE
CENTERLINE
EASEMENT LINE
BUILDING RESTRICTION LINE
RIGHT-OF-WAY-(ULT. & LEGAL)
ADJOINERS/LOT LINES
BOUNDARY
CURBING
EXISTING CONTOUR
PROPOSED CONTOUR
SPOT GRADE
SIGN
EXISTING DECIDUOUS TREE
EXISTING EVERGREEN TREE
EXISTING SHRUBS / HEDGE ROW / TREELINE
PROPOSED TREE
EXISTING BUILDING
PROPOSED BUILDING
STABILIZED GRASS
℄ CENTERLINE
℞ PROPERTY LINE
BIT. BITUMINOUS
(TYP.) TYPICAL
PROPOSED MONUMENT

NOTE:
VERTICAL TEXT INDICATES PROPOSED FEATURES
SLANTED TEXT INDICATES EXISTING FEATURES

SCALE: 1"=50'

REVISIONS	DATE	BY
1. REVISED LIGHTING/LANDSCAPING	8/11/00	KRVA
2. TOWNSHIP/LCA COMMENTS	8/30/00	KRVA
3. LANDSCAPING REVISIONS	9/20/00	KRVA
4. TOWNSHIP COMMENTS	9/27/00	KRVA
5. TOWNSHIP COMMENTS	10/26/00	KRVA
6. TOWNSHIP COMMENTS	12/8/00	KRVA
7. FINAL PLAN	1/22/01	KRVA

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER TERRY P. DEGROOT No. 44255-E

BARRY ISETT & ASSOCIATES, INC.
Consulting Engineers & Surveyors
Trexlertown, PA 18087-0147
610 · 398 · 0904

SITE DEVELOPMENT PLAN
for
BOULDER BUSINESS CENTER – LOT 3A
UPPER MACUNGIE TOWNSHIP
LEHIGH COUNTY, PA

DATE: 7/17/00	DSGN.: JOM
SCALE: 1" = 50'	CHK.: JNR
DRAWN: KRVA	APPRD.: TPD
JOB: 04799.20	P. MGR.: TPD

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SHEET: 4 OF 21

SP-1

F.B. 179, PG. 1