EXISTING BUILDING

rare _ rare _ save _

LEGEND TOP OF ASPHALT TOP OF CURB FLOWLINE EXISTING SPOT ELEVATION **6**9.32 PROPOSED SPOT ELEVATION EXISTING CONTOUR PROPOSED CONTOUR — — — PROPORTY LINE EXISTING FENCE DIRECTION OF FLOW PROPOSED ASPHALT PAVING

PROPOSED CONCRETE

TC59.67 FL59.01

SITE CHARACTERISTICS

- 1. PRECIPITATION ZONE =
- 2. $P_{6,100} = P_{360} = 2.35 \text{ IN}.$
- 3. TOTAL AREA $(A_T) = 21,750 \text{ SF}/0.50 \text{ AC}$
- 4. EXISTING LAND TREATMENT TREATMENT AREA (SF/AC) 7,900/0.18
- 13,850/0.32 5. DEVELOPED LAND TREATMENT

AREA (SF/AC) 1,260/0.03 20,490/0.47

EXISTING CONDITION

TREATMENT

1. VOLUME

- $E^{M} = (E^{A}A^{A} + E^{B}A^{B} + E^{C}A^{C} + E^{D}A^{D})/A^{L}$
- $E_W = [(1.13)(0.18) + (2.12)(0.32)]/0.50 = 1.76 \text{ IN}.$
- $V_{100} = (E_W/12)A_T$
- $V_{100} = (1.76/12)0.50 = 0.0735 \text{ AC.FT.}; 3,200 \text{ CF}$
- 2. PEAK DISCHARGE
- $Q_D = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_p = Q_{100} = (3.14)(0.18)+(4.70)(0.32) = 2.1 CFS$ DEVELOPED CONDITION

VOLUME

- $E^{M} = (E^{A}A^{A} + E^{B}A^{B} + E^{C}A^{C} + E^{D}A^{D})/A^{L}$
- $E_W = [(0.78)(0.03) + (2.12)(0.47)]/0.50 = 2.04 \text{ IN}.$
- $V_{100} = (E_W/12)A_T$
- $V_{100} = (2.04/12)0.50 = 0.0850 \text{ AC.FT.}; 3,700 \text{ CF}$
- 2. PEAK DISCHARGE
 - $Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
- $Q_p = Q_{100} = (2.28)(0.03)+(4.70)(0.47) = 2.3 CFS$
- 3. SIDEWALK CULVERT CAPACITY
- $Q = CLH^{3/2}$ (WEIR EQUATION)
 - C = 2.6L = 2'
 - H = 0.67'

THEN Q_{CAPACITY} = 2.8 CFS > Q₁₀₀

COMPARISON

- 1. $\triangle V_{100} = 3,270 3,200 = 70 \text{ CF} = 0.0016 \text{ AC.FT.}$ (INCREASE)
- 2. $\Delta Q_{100} = 2.3 2.1 = 0.2$ CFS (INCREASE)

LEGAL DESCRIPTION:

Lot Numbered One (1) of McKnight street Plat, a subdivision of Tract BZ-A-2-A-1-A, M.R.G.C.D. Map 36, Albuquerque, New Mexico, as the same is shown and designated on Plat thereof, filed in the office of the County Clerk of Bernalillo County, New Mexico on December 8, 1969 in Volume A2, Folio 185.

PROJECT BENCHMARK

A SQUARE "" CHISELED ON TOP OF A CONCRETE CURB @ THE NINE CURB RETURN LOCATED @ THE INTERSECTION OF 4TH ST. N.W. AND HAINES AVE. N.W. IN THE N.E. QUADRANT OF THE INTERSECTION (ALB. B.M. 2-H14) ELEV.=4960.29 FT (M.S.L.D.)

T.B.M.

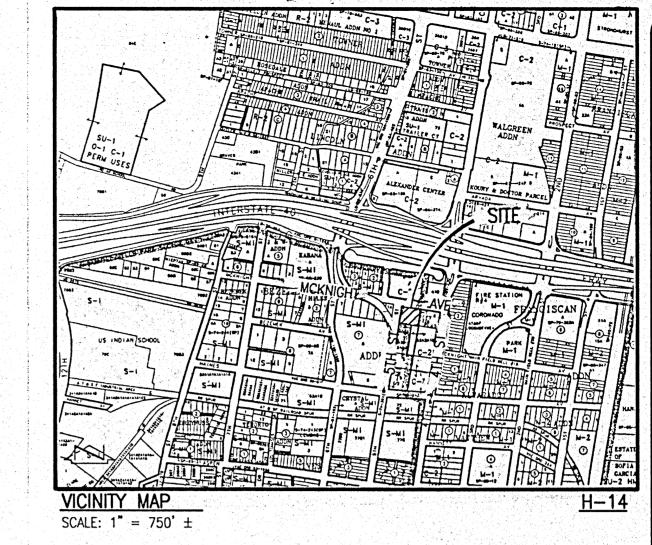
TOP OF CONCRETE CURB @ THE E.S.E. RETURN ELEV. = 4960.82 FT (M.S.L.D.) INTERSECTION OF 4TH ST. N.W. AND HAINES AVE. N.W.

CONSTRUCTION NOTES:

- 1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED
- 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 CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- 5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY. AND THE INFORMATION MAY BE INCOMPLETE. OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE. THEREFORE. MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE. PIPELINE. OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
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- 7. BACKFILL COMPACTION SHALL BE ACCORDING TO COMMERCIAL USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- 9. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

EROSION CONTROL MEASURES:

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
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- THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.



DRAINAGE PLAN

ARCHITECT 5 - BULDERS

GATES,

PATRICK

CAGY SECTION

Date: 5/22/98 Project No.41292 Drawn by: DLM Checked by: JGM

Sheet No.:

ARCHITECTS

ASSOCIATE

THE FOLLOWING ITEMS CONCERNING THE ELECTRICAL PRODUCTS ADDITION DRAINAGE PLAN ARE CONTAINED HEREON:

> VICINITY MAP GRADING PLAN CALCULATIONS

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF FIFTH STREET N.W. AND MCKNIGHT AVENUE N.W. THE SITE IS CURRENTLY DEVELOPED COMMERCIALLY. THE PROPOSED IMPROVEMENTS TO THIS SITE INCLUDE A RELATIVELY SMALL BUILDING ADDITION WITHIN AN ALREADY PAVED AREA, THE ADDITION OF APPROXIMATELY 6600 SF OF PAVING IN AN AREA THAT ALREADY EXISTS AS COMPACTED GRAVEL, AND ASSOCIATED LANDSCAPING AREAS.

AS SHOWN BY PANEL 332 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY F.E.M.A. FOR BERNALILLO COUNTY, NEW MEXICO DATED SEPTEMBER 20, 1996, THIS SITE DOES NOT LIE WITHIN A DESIGNATED 100-YEAR FLOOD HAZARD ZONE. THE PRESENCE OF A DOWNSTREAM STORM DRAIN HAS BEEN IDENTIFIED DURING A PREVIOUS SUBMITTAL FOR THIS SITE. THIS SUBMITTAL RESULTED IN AN APPROVED GRADING AND DRAINAGE PLAN FOR THE EXISTING IMPROVEMENTS LOCATED ON THIS SITE (H14-D36). BECAUSE OF THE PRESENCE OF THE EXISTING 10" RCP STORM DRAIN SYSTEM IN FIFTH STREET N.W., FREE DISCHARGE OF RUNOFF WAS PREVIOUSLY PERMITTED. DUE TO THE NEGLIGIBLE INCREASE IN RUNOFF) JUN 5 1998 ATTRIBUTED TO THE PROPOSED IMPROVEMENTS, AND DUE TO THE FACT THAT THESE -PROPOSED IMPROVEMENTS CONSIST ONLY OF MODIFICATIONS TO AN EXISTING SITE WHICH LIES WITHIN AN INFILL AREA, THE FREE DISCHARGE OF RUNOFF FROM THIS SITE L

THE GRADING PLAN SHOWS: 1) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'0" INTERVALS, 2) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS. 3) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 4) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE SITE DRAINS FROM EAST TO WEST TO FIFTH STREET N.W. THE PLAN ALSO SHOWS THAT THE PROPOSED IMPROVEMENTS CONSIST OF A BUILDING ADDITION, A NEW ASPHALT PARKING AREA, AND ASSOCIATED LANDSCAPING IMPROVEMENTS. THE RUNOFF FROM THE NEW PAVED AREA WILL DISCHARGE VIA A SIDEWALK CULVERT TO FIFTH STREET N.W. FROM THIS POINT, THE RUNOFF WILL FLOW TO THE SOUTH AND ENTER THE AFOREMENTIONED STORM DRAIN SYSTEM. BECAUSE NO FLOODING HAS BEEN IDENTIFIED IN THE ADJACENT STREETS, NO OFFSITE FLOWS ARE ANTICIPATED FROM THE NORTH OR WEST SIDES OF THE SITE. THE SITE TO THE SOUTH OF THIS PROJECT IS SITUATED TOPOGRAPHICALLY LOWER AND THEREFORE WILL NOT CONTRIBUTE ANY RUNOFF. THE SITE TO THE EAST SHEDS ITS WATER IN A NORTHERLY AND SOUTHERLY TREND, THEREFORE, IT DOES NOT CONTRIBUTE ANY APPRECIABLE RUNOFF TO THIS SITE.

THE CALCULATIONS WHICH APPEAR HEREON ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS. AS SET FORTH IN THE REVISION OF SECTION 22.2. HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. THE ANALYSIS OF THE SIDEWALK CULVERT CAPACITY HAS BEEN ANALYZED BASED UPON THE WEIR EQUATION. NO CALCULATIONS HAVE BEEN PERFORMED FOR THE OFFSITE FLOW BECAUSE THE CONTRIBUTING AREA IS ANTICIPATED TO BE FAR LESS THAN THIS SITE AND THEREFORE ANY POSSIBLE OFFSITE FLOW WOULD BE LESS THAN ONE CFS IN MAGNITUDE.



APPROVALS	NAME	DATE
A.C.E./DESIGN		
INSPECTOR		
A.C.E./FIELD		

JEFF MORTENSEN & ASSOCIATES, INC. 6010-B MIDWAY PARK BLVD. N.E. ALBUQUERQUE | NEW MEXICO 87109 ENGINEERS SURVEYORS (505) 345-4250

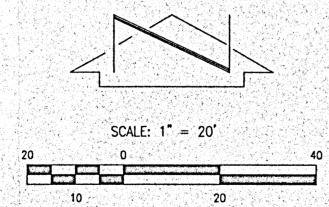
36

EXIST. CURB CUT - TO REMAIN CULVERT TO REMAIN TC60.82 FL60.20 LANDSCAPING FL60.11 F 61.42 + 60.60 + 61.29 REMOVE EXISTING - PAVING; REPLACE -WITH LANDSCAPING EXISTING BUILDING ----FF=4961.44 DRAINAGE, TYP. 61.51 **NEW ADDITION** ASPHALT OVERLAY-/FF=4961.44 LANDSCAPING -LIMITS OF ASPHALT PAVING **NEW ASPHALT PAVING** EXIST. GAS CONSTRUCT 24 VA SIDEWALK CULVERT PER C.O.A. STD. DWG. 2236 TANK INLET-EXIST. POWER POLE WITH YARD LIGHT -- EXIST. POWER POLE S=0.0050 W/ LIGHT 60.80 150.00 59.96 FL59.12 - EXIST'G GAS PUMP UNDERGROUND SECURITY EXIST. 6' CHAINLINK-SYSTEM CABLE (SHALLOW BURY) FENCE TO REMAIN EXISTING BUILDING

McKNIGHT AVE.

LEGEND TOP OF ASPHALT TOP OF CURB FLOWLINE : EXISTING SPOT ELEVATION + 61.25 PROPOSED SPOT ELEVATION PROPOSED CONTOUR EXISTING FENCE DIRECTION OF FLOW PROPOSED ASPHALT PAVING PROPOSED CONCRETE

TC59.67 FL59.01



AS-BUILT LEGEND

\$ 51.50 \ AS BUILT = AS DESIGNED +51.5053 AS BUILT ELEVATION

JEFF MORTENSEN & ASSOCIATES, INC. 6010-B MIDWAY PARK BLVD. N.E. ALBUQUERQUE | NEW MEXICO 87109 ENGINEERS I SURVEYORS (505) 345-4250

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 $V_{100} = (2.04/12)0.50 = 0.0850$ AC.FT.; 3,700 CF

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3. SIDEWALK CULVERT CAPACITY

 $Q = CLH^{3/2}$ (WEIR EQUATION)

WHERE: C = 2.6L = 2'

H = 0.67'

THEN Q_{CAPACITY} = 2.8 CFS > Q₁₀₀

COMPARISON

- 1. $\Delta V_{100} = 3,270 3,200 = 70 \text{ CF} = 0.0016 \text{ AC.FT. (INCREASE)}$
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EROSION CONTROL MEASURES:

DRAINAGE CERTIFICATION

AS INDICATED BY THE AS-BUILT INFORMATION SHOWN HEREON, THIS SITE HAS BEEN

GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING

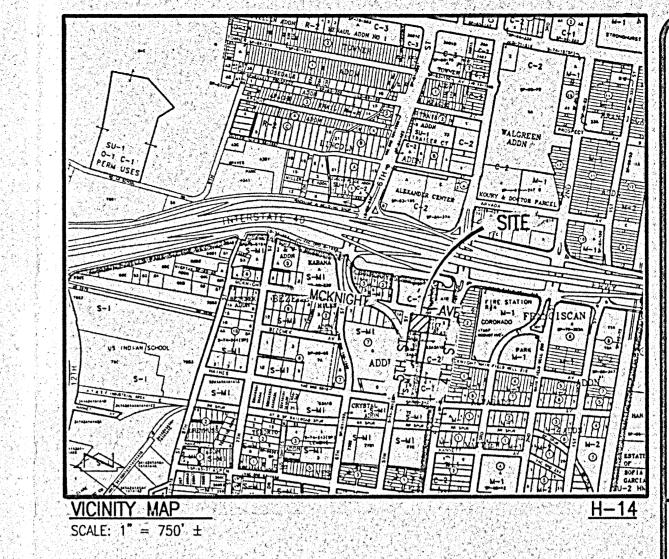
AND DRAINAGE PLAN. THIS CERTIFICATION EVALUATES GRADING AND DRAINAGE ISSUES ONLY AND DOES NOT ADDRESS COMPLIANCE WITH A.D.A. GUIDELINES. IT IS

BASED UPON THIS EVALUATION OF AS-CONSTRUCTED CONDITIONS THAT ISSUANCE OF A PERMANENT CERTIFICATE OF OCCUPANCY IS HEREBY RECOMMENDED. THE AS-BUILT

INFORMATION SHOWN HEREON HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

02-04-99

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DRAINAGE PLAN

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THE GRADING PLAN SHOWS: 1) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'0" INTERVALS. 2) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 3) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 4) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE SITE DRAINS FROM EAST TO WEST TO FIFTH STREET N.W. THE PLAN ALSO SHOWS THAT THE PROPOSED IMPROVEMENTS CONSIST OF A BUILDING ADDITION, A NEW ASPHALT PARKING AREA, AND ASSOCIATED LANDSCAPING IMPROVEMENTS. THE RUNOFF FROM THE NEW PAVED AREA WILL DISCHARGE VIA A SIDEWALK CULVERT TO FIFTH STREET N.W. FROM THIS POINT. THE RUNOFF WILL FLOW TO THE SOUTH AND ENTER THE AFOREMENTIONED STORM DRAIN SYSTEM. BECAUSE NO FLOODING HAS BEEN IDENTIFIED IN THE ADJACENT STREETS, NO OFFSITE FLOWS ARE ANTICIPATED FROM THE NORTH OR WEST SIDES OF THE SITE. THE SITE TO THE SOUTH OF THIS PROJECT IS SITUATED TOPOGRAPHICALLY LOWER AND THEREFORE WILL NOT CONTRIBUTE ANY RUNOFF. THE SITE TO THE EAST SHEDS ITS WATER IN A NORTHERLY AND SOUTHERLY TREND, THEREFORE, IT DOES NOT CONTRIBUTE ANY APPRECIABLE RUNOFF TO THIS SITE.

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8,	APPROVALS	NAME	DATE
	A.C.E./DESIGN		
À	INSPECTOR		
	Ą.C.E./FIELD		

Sheet No.:

ARCHITECT

PATRICK

Project No.41292