

STARBUCKS AT ACADEMY AND TRAMWAY
Master Grading & Drainage
Drainage Report

Site Location: The Starbucks will be located just west of the intersection of Tramway Boulevard and Academy Road. The proposed development will be a new building with civil site improvements. These improvements include a parking lot which will include paving, curb & gutter, and sidewalk.

Methodology: Section 22.2 of City of Albuquerque DPM was followed to calculate the design volume. The charts and formulas in Part A were followed using the 100-year frequency 6-hour rainfall as the design storm. The site is located in Zone 4 as determined from Table A-1. The total storm volume was calculated as per section A.5. The peak discharge was calculated as per section A.6.

Existing Conditions: The drainage from the site flows in an east to west direction parallel to Academy Road. Basin 101 encompasses the entire site.

Existing volumetric runoff and peak discharge quantities are as shown below:

Table 1 - Existing Conditions						
Basin	Area (ac)	A (%)	B (%)	C (%)	D (%)	Q _{peak} (cfs)
101	0.48	0	0	75	25	0.070
Total	0.48			75	25	0.070

Table 1 - provides a breakdown of existing volumetric runoff and peak discharge of the site.

Proposed Conditions: The proposed improvements keep the flow direction in an east to west flow. The proposed basin remained the same as the existing. Basin 201 will continue to drain into existing parking lot.

Proposed volumetric runoff and peak discharge quantities are as shown below:

Table 1 - Proposed Conditions						
Basin	Area (ac)	A (%)	B (%)	C (%)	D (%)	Q _{peak} (cfs)
201	0.48	0	0	10	90	0.09
Total	0.48			10	90	0.09

Table 1 - provides a breakdown of existing volumetric runoff and peak discharge of the site.

Conclusion: In conclusion, comparing existing conditions to proposed there will be an increase of approximately 0.438 cfs or 22% more drainage into the existing parking lot. The increase in peak discharge will not significantly impact the flow into downstream structures.

GRADING NOTES:

- CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. ANY COSTS INCURRED FOR REPAIRS SHALL BE THE COST OF THE CONTRACTOR.
- EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED TO THE ELEVATIONS, AND IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN ON THIS PLAN.
- THIS PLAN IS FOR THE EXCAVATION, PLACEMENT AND COMPACTION OF NATURAL EARTH MATERIALS AND THE CONSTRUCTION OF REQUIRED RETAINING WALLS ONLY.
- PAVING AND ROADWAY GRADES SHALL BE +.05 FOOT FROM SHOWN PLAN ELEVATIONS.
- PADS SHALL NOT VARY FROM A TRUE HORIZONTAL PLANE BY MORE THAN +0.1 FOOT AT ANY POINT. THIS TRUE PLANE SHALL NOT VARY FROM THE SHOWN PAD ELEVATION BY +0.2 FOOT, UNLESS PERMITTED BY OWNER.
- CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL REGULATION WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS AND GRADING OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS AND INSPECTION APPROVALS NECESSARY FOR THE CONSTRUCTION OF THESE FACILITIES AND ALL GRADING OPERATIONS.
- THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
- ALL RIM ELEVATIONS FOR SANITARY SEWER AND STORM DRAIN MANHOLES ARE APPROXIMATE ONLY. RIMS SHALL BE ADJUSTED FLUSH TO GRADE AT FINAL PAVING.
- BOULDERS, GREATER THAN 3' IN DIAMETER, EXCAVATED DURING GRADING ACTIVITIES SHALL BE STOCKPILED AND DISPOSED OF AT THE DISCRETION OF THE OWNER.
- UNLESS OTHERWISE SHOWN, DRAINAGE SWALES SHALL HAVE A MINIMUM 1% SLOPE IN THE DIRECTION OF FLOW.

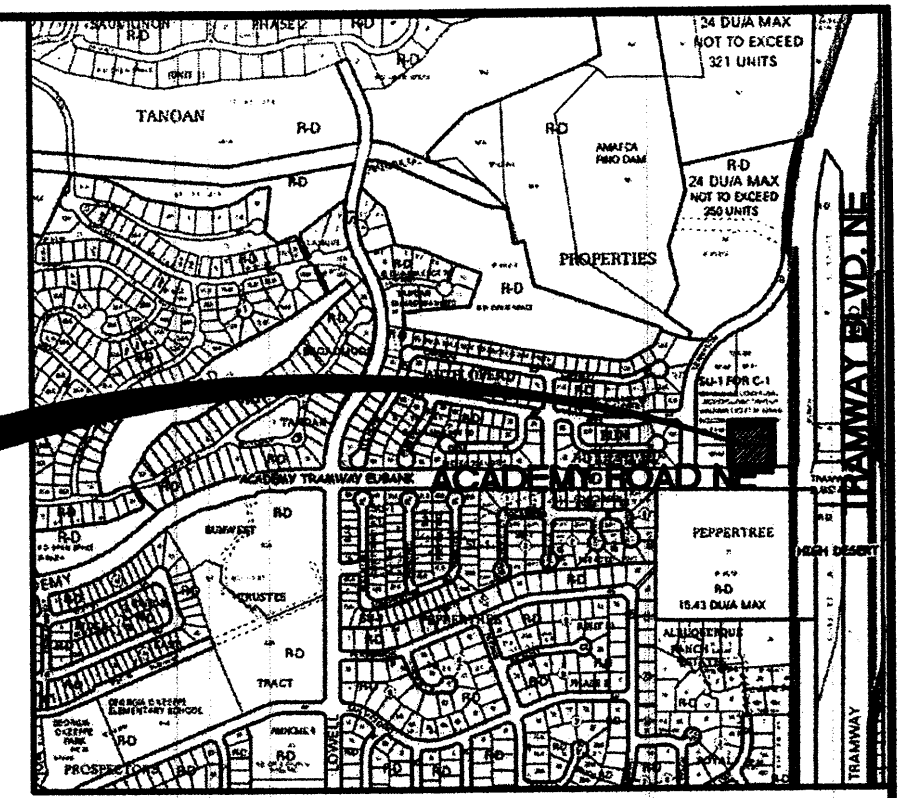
- PROVISIONS FOR STABILIZING SLOPES 3:1 OR STEEPER: WHERE 3:1 OR STEEPER SLOPES EXIST, SLOPES SHALL BE STABILIZED WITH NON-WIRE ENCLOSED CLASS A RIPRAP. SUBGRADE SHALL BE COMPACTED TO 90% MIN PER ASTM D-1557. INSTALL WEED BARRIER BETWEEN RIPRAP AND SUBGRADE. RIPRAP SHALL BE SIMILAR TO EXISTING XERISCAPE COLOR & TEXTURE.

LEGEND

- SPRINKLER CONTROL BOX
- TRAFFIC SIGN
- WATER VALVE
- SANITARY SEWER MANHOLE
- SIGNAL LIGHT JUNCTION BOX
- DECIDUOUS TREE
- WATER METER
- MULTI POST SIGN
- FIRE HYDRANT
- SPRINKLER HEAD
- ELECTRIC BOX
- LIGHT POLE
- TELEPHONE PEDESTAL
- UNDERGROUND TELEPHONE
- UNDERGROUND ELECTRIC
- GROUND
- ASPHALT
- CONC.
- CONTROL POINT
- SPOT ELEVATION
- PROPOSED 3" ASPHALT
- PROPOSED 4" PCC
- PROPOSED RETAINING WALL
- INTENDED DIRECTION OF FLOW
- PROPOSED TOP OF CURB ELEVATION
- PROPOSED FLOW LINE ELEVATION
- PROPOSED BOTTOM OF STEP ELEVATION
- PROPOSED TOP OF STEP ELEVATION
- EXISTING BASIN DESIGNATION
- PROPOSED BASIN DESIGNATION
- EXISTING BASIN BOUNDARY
- PROPOSED BASIN BOUNDARY
- BREAKLINE
- PROPOSED HIGH POINT ELEVATION

SHEET KEY NOTES

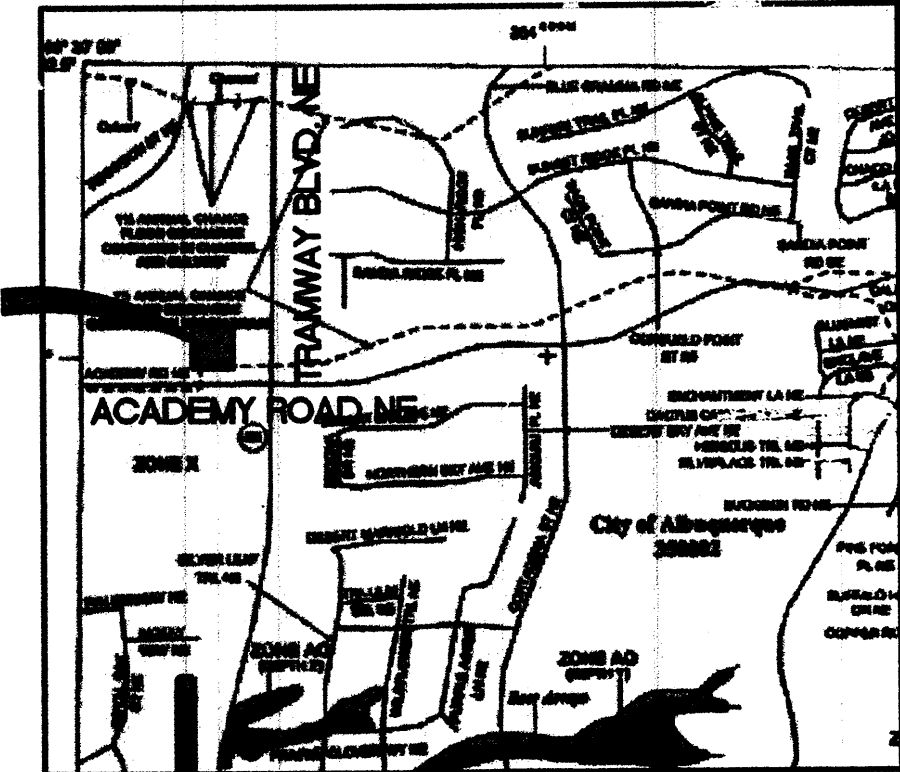
- 24" SIDEWALK CULVERT W/STEEL PLATE TOP PER COA STD DWG 2236
- THERMOPLASTIC 4' H TRAFFIC MARKER (TYP)
- COLOR PATTERNED PCC. REFER TO ARCHITECTS DRAWINGS
- INSTALL 4" # CONCRETE FILLED STATIONARY STEEL BOLLARDS SEE DETAIL SHEET C-501
- EXISTING LIGHT FIXTURE & POLE TO REMAIN
- INSTALL 2-12" CURB CUTS FOR DRAINAGE PASSAGE
- INSTALL CURB & GUTTER OPENING. SEE DETAIL SHEET C-501



LOCATION MAP
ZONE ATLAS MAP NO. E-22-Z



SOILS MAP
REFERENCE: SCS BERNALILLO COUNTY SOIL SURVEY
SHEET NO. 22



FLOOD INSURANCE MAP
REFERENCE: FLOOD INSURANCE STUDY
PANEL 35001C0163

DRAINAGE CERT W/SURVEY WORK BY OTHERS
12/28/01

"DRAINAGE CERTIFICATION"

I, MARIO G. JUAREZ-INFANTE, NMPE 15340, OF THE FIRM WILSON & COMPANY, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 04/26/07. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY FREESTON E. HALL, SURVEY FIRM, NMPS 10022, OF THE FIRM HALL SURVEYING. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON OCTOBER 10, 2007 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

NO SEPARATE CORRECTIONS OR DEFICIENCIES DETERMINED.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

Mario G. Juarez-Infante, NMPE 15340
DATE 11/19/07

APPROVED BY THE EXECUTIVE COMMITTEE ON 4/26/07

LEGAL DESCRIPTION

LOTS 1 THRU 12 RINCON DEL RIO ADDITION

BENCH MARK

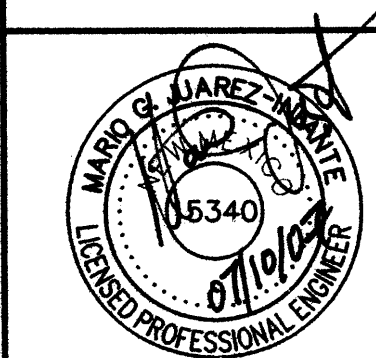
A STANDARD BRASS USC&GS BRASS TABLET STAMPED "TUMBLE 1969" SET IN CONCRETE PROJECTING 0.2 FEET ABOVE THE GROUND, LOCATED ON SAN ANTONIO DRIVE APPROXIMATELY 500 FEET NORTHWEST OF THE INTERSECTION OF TENNYSON STREET AND SAN ANTONIO DRIVE.

**CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP**

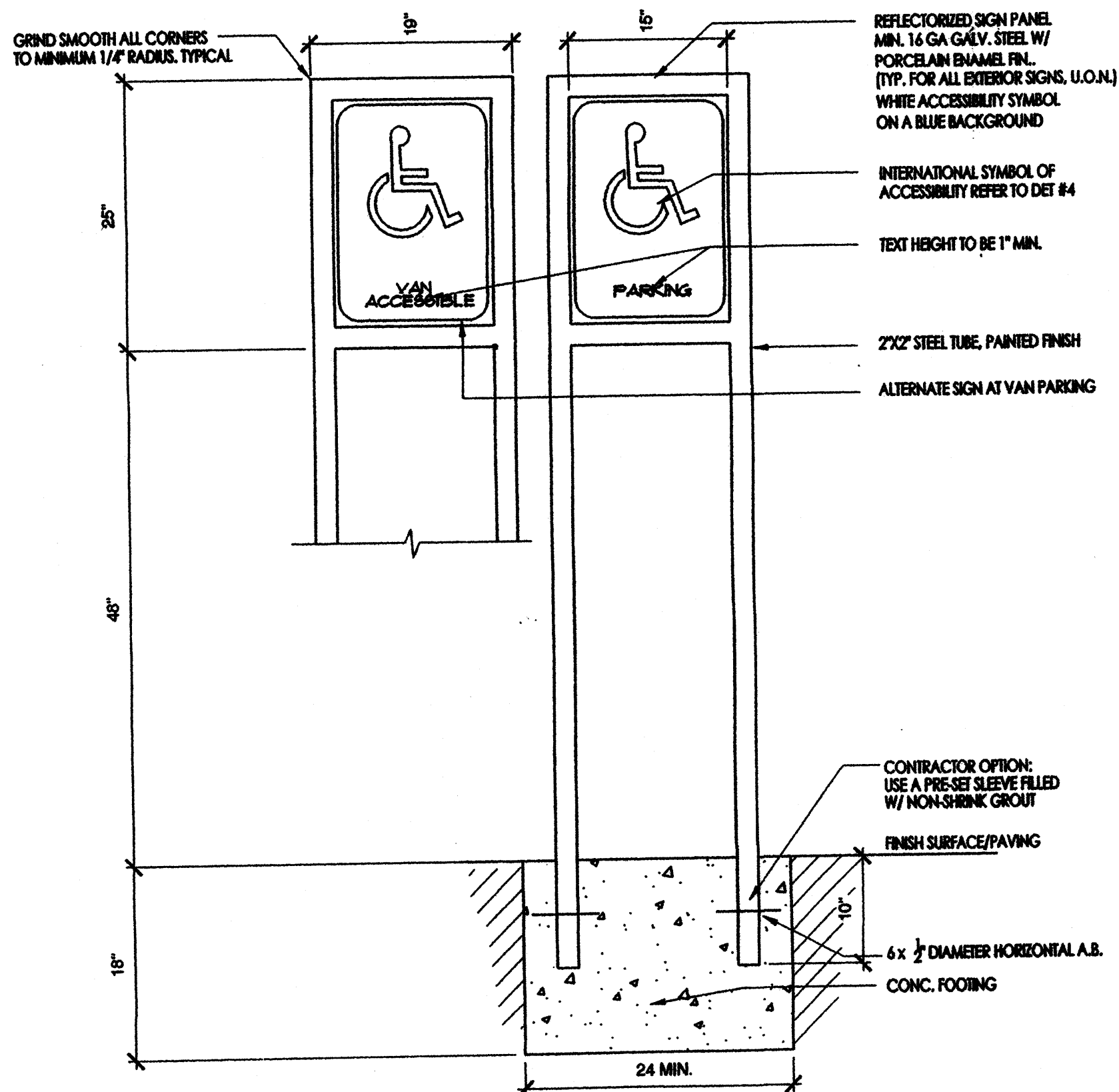
**STARBUCKS AT ACADEMY
AND TRAMWAY**

**GRADING & DRAINAGE
PLAN**

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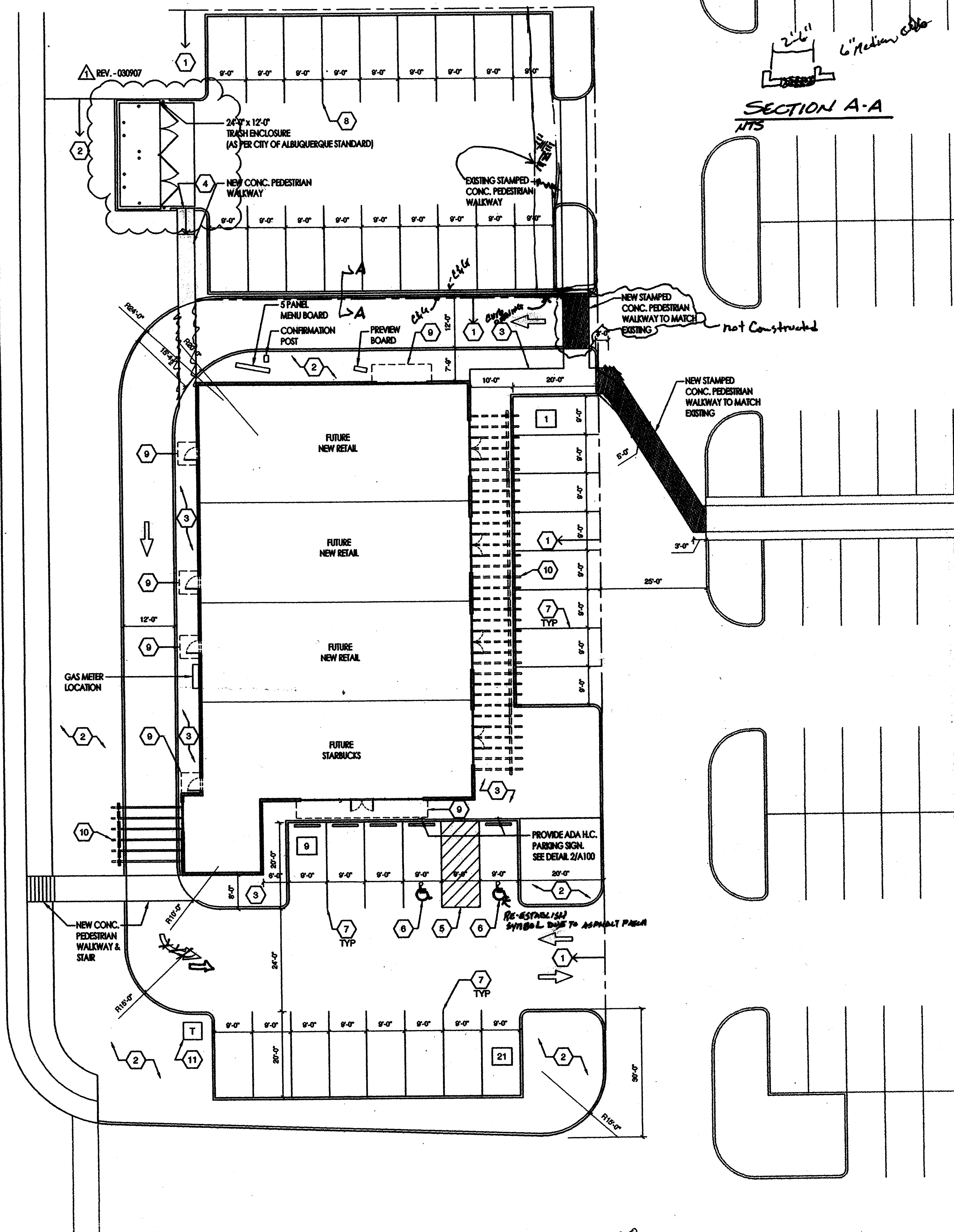


REVISION	NO.	DATE	REMARKS	BY
	1	3/12/07	REVISED REFUSE & WALL	MJI
	2	4/2/07	ADDRESS COA COMMENTS	MJI
DESIGN	MJI	WCEA NO. 0660014100	DATE	FEB 2007
DRAWN	AJM	PROJECT NO.	SHEET NO.	
CHECK	MJI	N/A	C-101	



2 ADA H.C. PARKING SIGN DETAIL
1" = 1'-0"

ACADEMY ROAD



1 SITE PLAN
1/16" = 1'-0"

GENERAL NOTES

- CONTRACTOR SHALL PROTECT ALL EXISTING CONDITIONS AND CONSTRUCTION TO REMAIN. ANY DAMAGE CAUSED TO THESE AREAS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. (FINISH TO MATCH WITH ADJACENT SURFACES AT BOTH INTERIOR AND EXTERIOR.)
- CONTRACTOR PERFORMING WORK IN CITY OF ALBUQUERQUE RIGHT OF WAY SHALL BE LICENSED AND BONDED TO PERFORM WORK IN THE CITY OF ALBUQUERQUE RIGHT OF WAY.
- THESE DRAWINGS ARE CREATED FROM DRAWINGS PROVIDED BY THE OWNER. ACTUAL CONDITION MAY VARY. THE GENERAL CONTRACTOR IS TO FIELD VERIFY CONDITION AND DIMENSIONS, PRIOR TO BIDDING AND PROCEEDING WITH WORK. THE GENERAL CONTRACTOR AND THEIR SUB-CONTRACTORS ARE RESPONSIBLE FOR BRINGING QUESTIONS TO THE ARCHITECT FOR CLARIFICATION AND DISCUSSING ANY MODIFICATIONS IF REQUIRED WITH THE ARCHITECT, PRIOR TO COMMENCING WORK.
- REFER TO CIVIL DRAWINGS FOR ASSOCIATED WORK.

KEYED NOTES

- NEW CONSTRUCTION. TIE INTO EXISTING ASPHALT DRIVE. REFER TO CIVIL.
- NEW LANDSCAPE AREA. REFER TO LANDSCAPE PLAN.
- NEW CONCRETE SIDEWALK AND PATIO. REFER TO CIVIL PLANS.
- NEW 6" RAMP UP TO SIDEWALK.
- ADA ACCESSIBLE AISLE. 4" WIDE ADA BLUE DIAGONAL STRIPES.
- 3'-0" x 3'-0" ACCESSIBLE PARKING SIGN WITH INTERNATIONAL SYMBOL OF ACCESSIBILITY.
- 4" WIDE WHITE PARKING SPACE LINES. STALLS TO BE DIMENSIONED PER PLAN.
- RE-CONFIGURE PARKING AREA TO ACCOMMODATE NEW DUMPSTER LOCATION.
- OVERHEAD CANOPY
- SHADE TRELLIS
- NEW TRANSFORMER. REFER TO ELECTRICAL.

PARKING CALCULATION

FUTURE BUILDING:	6454 SqFt - Net Leasable Area
	32 Parking Spaces Required
TOTAL PARKING SPACES REQUIRED:	32 Parking Spaces
TOTAL PARKING SPACES PROVIDED:	39 Parking Spaces

TRAFFIC CERTIFICATION

I, MARIO JUAREZ-INFANTE, NMPE OR NMRA 15340, OF THE FIRM WILSON & COMPANY, HEREBY CERTIFY THAT THIS PROJECT IS IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE DRB, AA OR TCL APPROVED PLAN DATED 03-02-07. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ROBERT MOLINA OF THE FIRM WILSON & COMPANY. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 01-22-2008 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

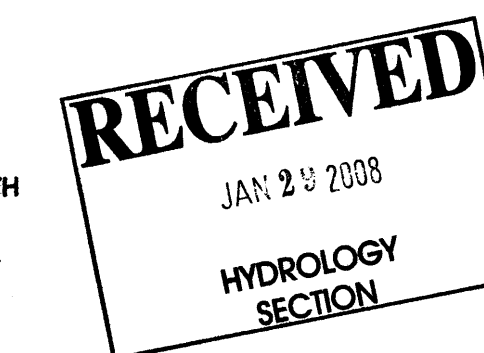
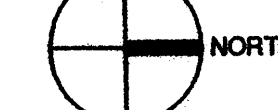
THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE TRAFFIC ASPECTS OF THIS PROJECT. THOSE RELYING ON THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

Signature of Engineer or Architect: *[Signature]* ENGINEER'S STAMP

Date: 01/28/08

01-17-2008
Site inspection late Thursday
Traffic Circulation.
[Signature]

0 8' 16' 32'
SCALE: 1/16" = 1'-0"



DATE: 02.27.07

REVISIONS

NO.	DESCRIPTION

PROJECT NO:

CAD DWG FILE:

DRAWN BY: KM

CHECKED BY:

COPYRIGHT:

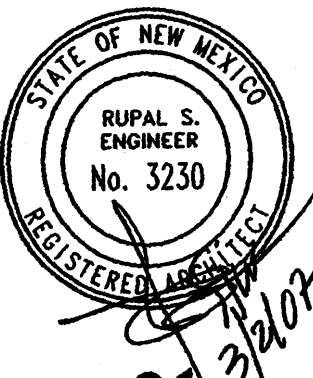
DESIGN PLUS, LLC

SITE PLAN

A100

SHEET ___ OF ___

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ALBUQUERQUE, NM 87107
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TRAMWAY RETAIL CENTER

DESIGN PLUS LLC