

Sub-basin F contains a small area west of the existing Burger King restaurant the flows west into Carlisle Boulevard. Runoff from this Sub-basin is collected in the Carlisle Boulevard storm drain system. The hydrologic data table below depicts in further detail each sub-basin and its characteristics.

TABLE 3.1.1 – HYDROLOGIC DATA - EXISTING

HYDROLOGIC DATA - EXISTING						
SUB-BASIN	AREA (AC)	LAND USE PERCENTAGES				Q100
		A	B	C	D	
A	2.20	0%	0%	0%	100%	10.3
B	0.96	0%	0%	0%	100%	4.5
C	2.47	0%	8%	8%	84%	10.8
D	4.35	0%	4%	4%	92%	19.7
E	0.54	0%	0%	0%	100%	2.6
F	0.20	0%	0%	0%	100%	1.0
TOTAL	10.72					48.9

3.2 PROPOSED CONDITIONS

The proposed site development is to renovate the existing buildings and parking lot and add both commercial and retail pads along the Carlisle Boulevard property frontage. Under the proposed condition, approximately 87% of the site will consist of impervious area and 13% will be landscaped. The total flow generated by the proposed development is 47.6 cfs. Therefore, the discharge from the proposed site is less than the existing condition. The property has been split into five proposed sub-basins. Appendix B shows the proposed sub-basin boundaries for the site.

Sub-basin 1 consists of the northwest corner of the property and is made up of parking area, the existing Burger King restaurant, and a new commercial pad. In general, the sub-basin slopes from southeast to northwest. Runoff is collected in a proposed drop inlet in the new parking lot which discharges into a storm drain that will connect to the existing drop inlet, which is the location that this area is currently discharging to. The existing flow that reaches this inlet is 10.3 cfs while the proposed flow is 9.3 cfs.

Sub-basin 2A and 2B contain the roof drainage for the eastern half of the larger building and the truck dock area and drive aisle located east and north of the building. Sub-basin 2A drains directly to the existing drop inlet at the northeast corner of the property. Sub-basin 2B collects to the low point in front of the dumpster. The low point area in front of the dumpster will not be modified so that flows that reach this area continue to match the existing drainage pattern at that location.. The proposed flow from Sub-basin 2A is 4.4 cfs. The flow generated by Sub-basin 2B is 10.9 cfs, therefore, 5.45 cfs discharges east and 5.45 cfs flows north into Sub-basin 2A. The total proposed flow discharging to the existing drop inlet is 9.85 cfs. The total proposed flow discharging to the eastern property is 5.45 cfs. Therefore, the flow rate discharging through the wall opening and to the existing drop inlet is not increased

Sub-basins 3, 4, and 5 consist of the southwest corner of the property, which contains a majority of the parking lot and the roof drainage from the western half of the larger building as well as two new retail pads. Sub-basins 3 and 5 free discharge from the site through two new driveways. Sub-basin 4 is

collected in a drop inlet toward the northwest corner of the Sub-basin. These three Sub-basins all discharge to the existing storm drain system in Carlisle Boulevard. The existing flow that reaches the Carlisle storm drain under existing conditions is 23.3 cfs while the proposed flow is 23.0 cfs.

The hydrologic data table below depicts in further detail each sub-basin and its characteristics.


TABLE 3.2.1 – HYDROLOGIC DATA - PROPOSED

HYDROLOGIC DATA - PROPOSED						
SUB-BASIN	AREA (AC)	LAND USE PERCENTAGES				Q100
		A	B	C	D	
1	2.10	0%	6%	6%	87%	9.3
2A	0.99	0%	6%	6%	87%	4.4
2B	2.45	0%	6%	6%	87%	10.9
3	1.56	0%	6%	6%	87%	6.9
4	2.47	0%	6%	6%	87%	11.0
5	1.14	0%	6%	6%	87%	5.1
TOTAL	10.71					47.6

The total required water quality volume for the site is 11,512 cubic feet. The owner has elected to pay the fee in lieu for any required stormwater quality volume not provided in on-site ponds. More details regarding water quality will be provided at Building Permit review.


4.0 CONCLUSION

This drainage report is prepared in support of the new development for Tracts A and B. The existing buildings and parking area will be renovated and new commercial and retail pads will be added. The proposed conditions closely match the current conditions of the existing property. The hydrologic calculations are included in Appendix C.



APPENDIX A

EXISTING SUB-BASINS



Interstate 40



SUB-BASIN C

SUB-BASIN B

SUB-BASIN A

SUB-BASIN D

SUB-BASIN E

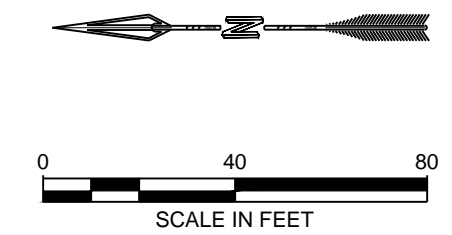
SUB-BASIN F

Remaining Portion of Tract "A"
437,931 Sq. Ft.
10.0535 Acres

Remaining Portion of Tract "B"
28,958 Sq. Ft.
0.6648 Acres

Indian School Road NE

2100 Carlisle Boulevard NE



EXISTING SUB-BASINS



RESPEC

5971 JEFFERSON STREET SUITE 101
ALBUQUERQUE, NEW MEXICO 87109
WATER & NATURAL RESOURCES
WWW.RESPEC.COM 505.253.9718



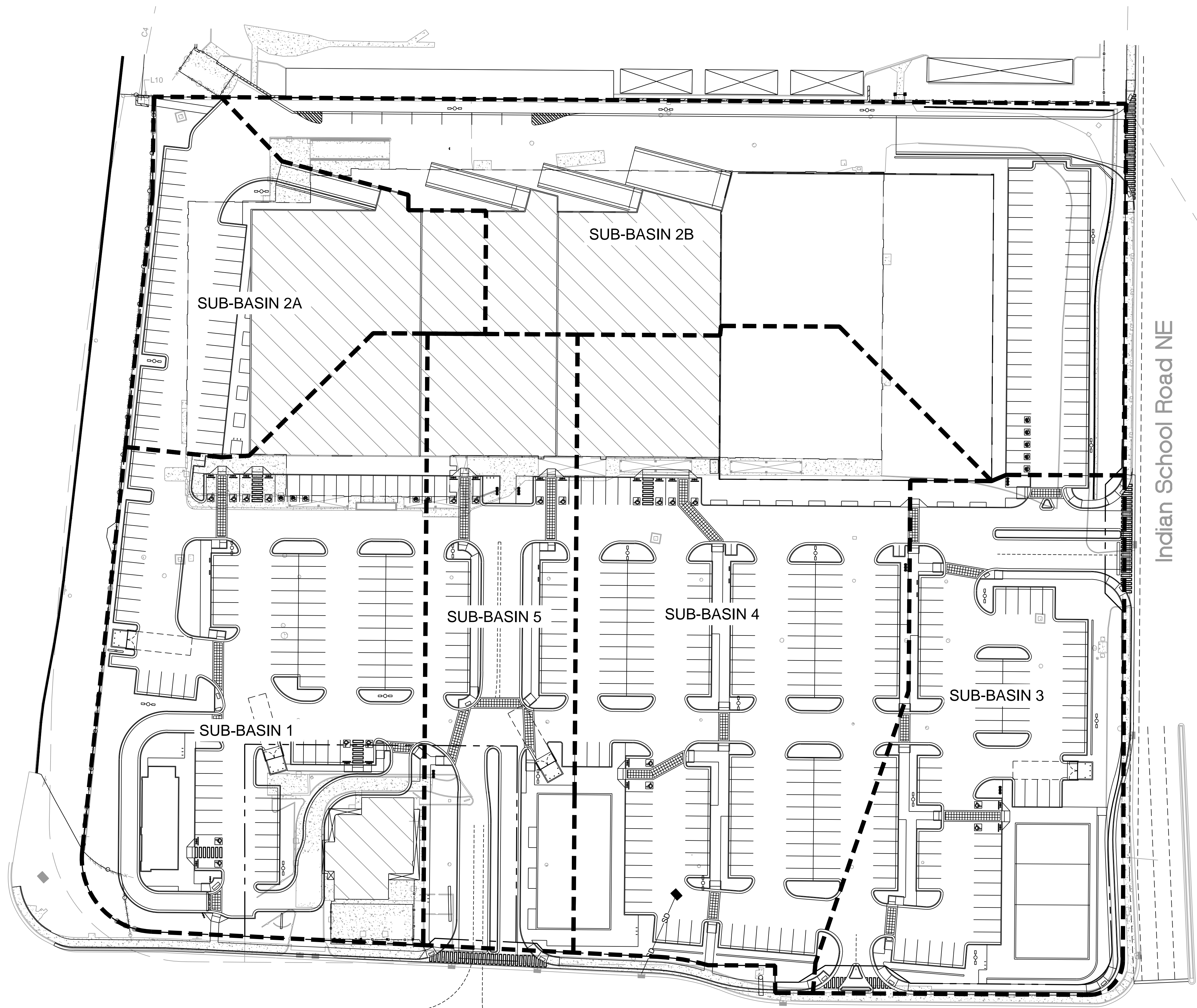
APPENDIX B

PROPOSED SUB-BASINS



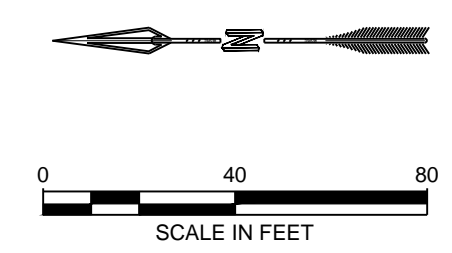
NAME: L:\Active Projects\03738 Modulus Carlisle Marketplace3_DWG\Sheets\03738 Drainage.dwg PLOT DATE: Dec 03, 2019 12:01pm

Interstate 40



Indian School Road NE

2100 Carlisle Boulevard NE




PROPOSED SUB-BASINS




RESPEC

5971 JEFFERSON STREET SUITE 101
 ALBUQUERQUE, NEW MEXICO 87109
 WATER & NATURAL RESOURCES
 WWW.RESPEC.COM 505.253.9718



APPENDIX C

HYDROLOGY CALCULATIONS



Hydrology Calculations

The following calculations are based on Albuquerque's Development Process Manual, Section 22.2

Existing Conditions

Runoff Rate:

Treatment Type Areas

Subbasin	Area _A (ac)	Area _B (ac)	Area _C (ac)	Area _D (ac)	Total (ac)
A	0.00	0.00	0.00	2.20	2.20
B	0.00	0.00	0.00	0.96	0.96
C	0.00	0.19	0.19	2.09	2.47
D	0.00	0.19	0.19	3.97	4.35
E	0.00	0.00	0.00	0.54	0.54
F	0.00	0.00	0.00	0.20	0.20
Total	0.00	0.38	0.38	9.96	10.72

Peak Discharge values based on Zone 2 from Table A-9

$$Q_A = 1.56 \text{ cfs/ac}$$

$$Q_B = 2.28 \text{ cfs/ac}$$

$$Q_C = 3.14 \text{ cfs/ac}$$

$$Q_D = 4.70 \text{ cfs/ac}$$

Peak Discharge calculation for a 100-yr, 24-hr storm event from equation A-10

Subbasin	Discharge (cfs)
A	10.3
B	4.5
C	10.8
D	19.7
E	2.6
F	1.0
Total	48.9

Proposed Conditions

Runoff Rate:

Treatment Type Areas

Subbasin	Area _A (ac)	Area _B (ac)	Area _C (ac)	Area _D (ac)	Total (ac)
1	0.00	0.14	0.14	1.83	2.10
2A	0.00	0.06	0.06	0.86	0.99
2B	0.00	0.16	0.16	2.13	2.45
3	0.00	0.10	0.10	1.36	1.56
4	0.00	0.16	0.16	2.15	2.47
5	0.00	0.07	0.07	0.99	1.14
Total	0.00	0.69	0.69	9.33	10.71

Peak Discharge values based on Zone 2 from Table A-9

$$Q_A = 1.56 \text{ cfs/ac}$$

$$Q_B = 2.28 \text{ cfs/ac}$$

$$Q_C = 3.14 \text{ cfs/ac}$$

$$Q_D = 4.70 \text{ cfs/ac}$$

Peak Discharge calculation for a 100-yr, 24-hr storm event from equation A-10

Subbasin	Discharge (cfs)
1	9.3
2A	4.4
2B	10.9
3	6.9
4	11.0
5	5.1
Total	47.6

Water Quality:

Required Water Quality volume for first flush of 0.34"

Subbasin	Volume (cu. ft.)
1	2,260
2A	1,061
2B	2,629
3	1,679
4	2,656
5	1,227
Total	11,512

RESPEC.COM

TRACTS A & B, CARLISLE & INDIAN SCHOOL SUBDIVISION
 PROPOSED NAME OF PLAT AND/OR SITE DEVELOPMENT PLAN
 TRACTS A & B, CARLISLE & INDIAN SCHOOL SUBDIVISION
 EXISTING LEGAL DESCRIPTION PRIOR TO PLATTING ACTION

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This Listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non-essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and agent/owner. If such approvals are obtained, these revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of project acceptance and close out by the City.

Financially Guaranteed	Constructed Under	Size	Type of Improvement	Location	From	To	Construction Certification	
							Inspector	City Crst Engineer
<input type="checkbox"/>	<input type="checkbox"/>	PAVING	100' RIGHT TURN LANE PLUS TRANSITION AND STRIPING W/PCC CURB & GUTTER	INDIAN SCHOOL RD	CARLISLE BLVD	100' EAST	/	/
<input type="checkbox"/>	<input type="checkbox"/>	11' EDGE -F	TRAFFIC SIGNAL RELOCATION	NE CORNER OF CARLISLE / INDIAN SCHOL INTERSECTION			/	/
<input type="checkbox"/>	<input type="checkbox"/>	6' WIDTH	PCC SIDEWALK ALONG TURN LANE	INDIAN SCHOOL RD	CARLISLE BLVD	100' EAST	/	/
<input type="checkbox"/>	<input type="checkbox"/>	6' WIDTH	BIKE LANE WITH NEW STRIPING AND ASPHALT REMOVAL / REPLACEMENT AS NEEDED	CARLISLE BLVD	NORTH PROPERTY BOUNDARY	SOUTH PROPERTY BOUNDARY	/	/
<input type="checkbox"/>	<input type="checkbox"/>		EXISTING NORTHBOUND RIGHT TURN LANE STRIPING MODIFICATIONS AS NEEDED	CARLISLE BLVD	NORTH PROPERTY BOUNDARY	APPROXIMATELY 500' SOUTH	/	/
<input type="checkbox"/>	<input type="checkbox"/>		CURB & GUTTER AND SIDEWALK REMOVAL / REPLACEMENT AS NEEDED DUE TO ROADWAY PAVEMENT WIDENING	CARLISLE BLVD	NORTH PROPERTY BOUNDARY	SOUTH PROPERTY BOUNDARY	/	/
<input type="checkbox"/>	<input type="checkbox"/>		REFURBISH CROSS-WALKS AND STOP BAR STRIPING	INDIAN SCHOOL RD AND CARLISLE BLVD INTERSECTION			/	/
<input type="checkbox"/>	<input type="checkbox"/>		DETECTABLE WARNING SURFACES	INDIAN SCHOOL RD AND CARLISLE BLVD INTERSECTION			/	/
<input type="checkbox"/>	<input type="checkbox"/>		NEW CONDUIT AND WIRING FOR TRAFFIC SIGNAL RELOCATION	NE CORNER OF INDIAN SCHOOL RD AND CARLISLE BLVD INTERSECTION			/	/

The items listed below are on the CCIP and approved for Impact Fee credits. Signatures from the Impact Fee Administrator and the City User Department is required prior to DRB approval of this listing. The items listed below are subject to the standard SIA requirements.

Financially Guaranteed DRC #	Constructed Under DRC #	Size	Type of Improvement	Location	From	To	Construction Certification		
							Inspector	Private P.E.	City Cnst Engineer
							/	/	/
							/	/	/

Approval of Creditable Items: _____

Impact Fee Administrator Signature _____ Date _____

Approval of Creditable Items: _____

City User Dept. Signature _____ Date _____

NOTES

If the site is located in a floodplain, then the financial guarantee will not be released until the LOMR is approved by FEMA.
 Street lights per City requirements.

1 Coordinate with Traffic Operations on recommended adjusted Signal Timing as needed prior to Work Order Acceptance.

2 NMDOT acceptance is pending which may require additional infrastructure and amendment to the infrastructure list.

3

AGENT / OWNER _____ **DEVELOPMENT REVIEW BOARD MEMBER APPROVALS**

JEREMY SHELL
 NAME (print)

RESPEC

FIRM

SIGNATURE - date

DRB CHAIR - date

TRANSPORTATION DEVELOPMENT - date

UTILITY DEVELOPMENT - date

CITY ENGINEER - date

PARKS & RECREATION - date

AMAFCA - date

CODE ENFORCEMENT - date

_____ - date

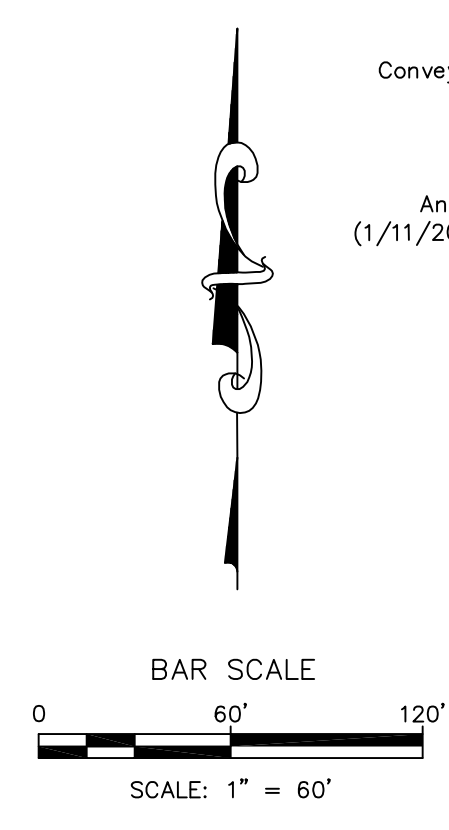
DESIGN REVIEW COMMITTEE REVISIONS

REVISION	DATE	DRC CHAIR	USER DEPARTMENT	AGENT / OWNER

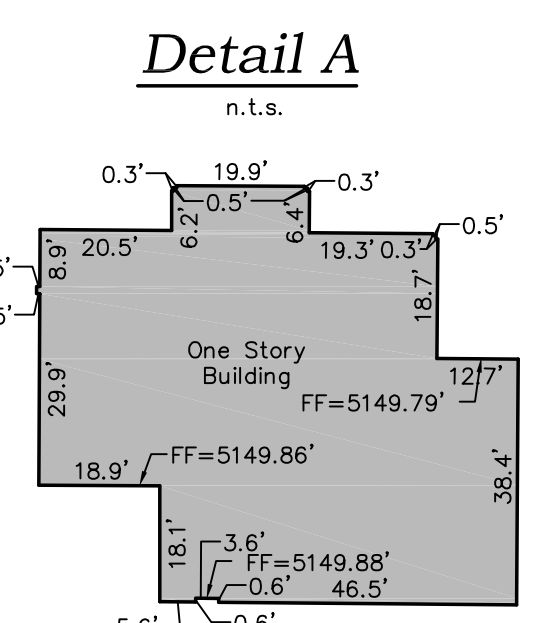
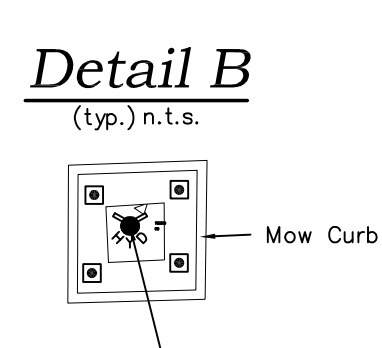
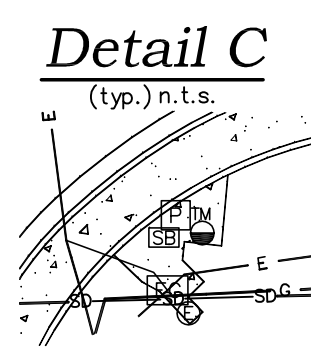
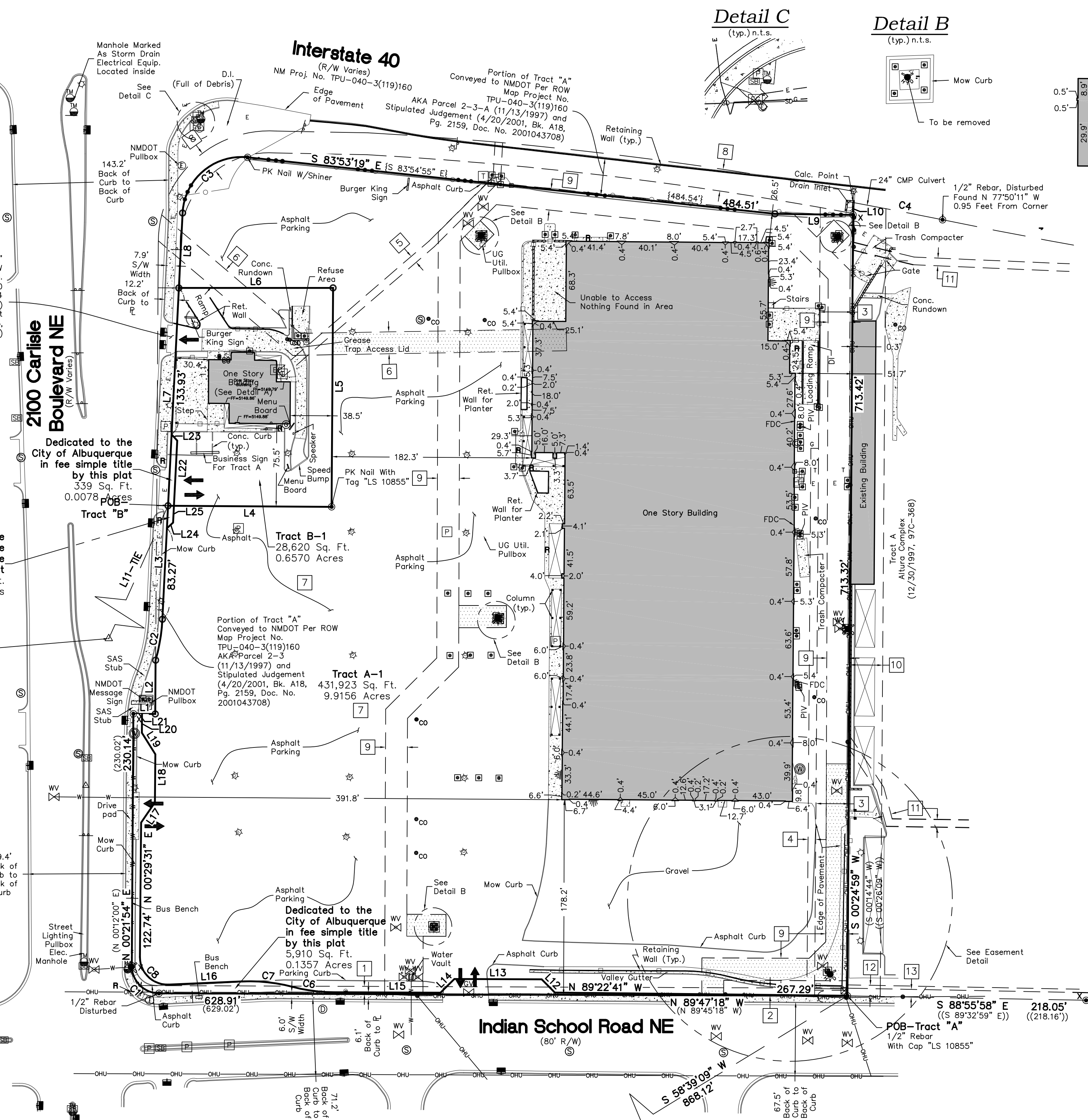
Legend

- N 90°00'00" E MEASURED BEARINGS AND DISTANCES
- (N 90°00'00" E) RECORD BEARINGS AND DISTANCES PER PLAT (3/3/1994, 94C-65)
- ((N 90°00'00" E)) RECORD BEARINGS AND DISTANCES PER PLAT (12/30/1997, 97C-368)
- IN 90°00'00" E RECORD BEARINGS AND DISTANCES PER NMDOT MAP PROJECT NO. TPU-140-3(119)160 DATED 11/13/1997
- [N 90°00'00" E] RECORD BEARINGS AND DISTANCES PER DEED (4/4/2001, BK. A17, PG. 6150, DOC. NO. 2001037685)
- FOUND MONUMENT AS INDICATED
- FOUND CHISELED "X"
- X SET PK NAIL WITH TAG "LS 14271" UNLESS OTHERWISE NOTED
- ▭ COVERED AREA
- ▭ CONCRETE
- ▭ UTILITY PEDESTAL
- ▭ METAL FENCE
- ▭ BLOCK WALL
- ▭ CHAINLINK FENCE
- ▭ BOLLARD
- OVERHEAD UTILITY LINE
- UTILITY POLE
- ANCHOR
- PULL BOX
- LIGHT POLE
- ELECTRIC METER
- TRANSFORMER
- ELECTRIC CABINET
- SIGNAL BOX
- TRAFFIC MAST
- GAS METER
- GAS VALVE
- TELEPHONE MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- ROOF DRAIN
- SANITARY SEWER MANHOLE
- SAS CLEANOUT
- IRRIGATION BOX
- STORM DRAIN MANHOLE
- STORM DRAIN INLET
- SIGN
- CURB CUT/INDICATION OF ACCESS TO ROADWAY
- FDC FIRE DEPARTMENT CONNECTION
- PIV POST INDICATOR VALVE
- ACCESS CONTROL LINE PER NMDOT MAP PROJECT NO. TPU-140-3(119)160 DATED 11/13/1997
- R RAMP

THIS SHEET SHOWS EXISTING IMPROVEMENTS WITH DEDICATION, EASEMENTS, AND VACATED EASEMENTS.



ACS Monument "12-J16"
NAD 1983 CENTRAL ZONE
X=1534440.644*
Y=1492190.324*
Z=5160.901* (NAVD 1988)
G-G=0.999669892
Mapping Angle=-0°12'13.45"

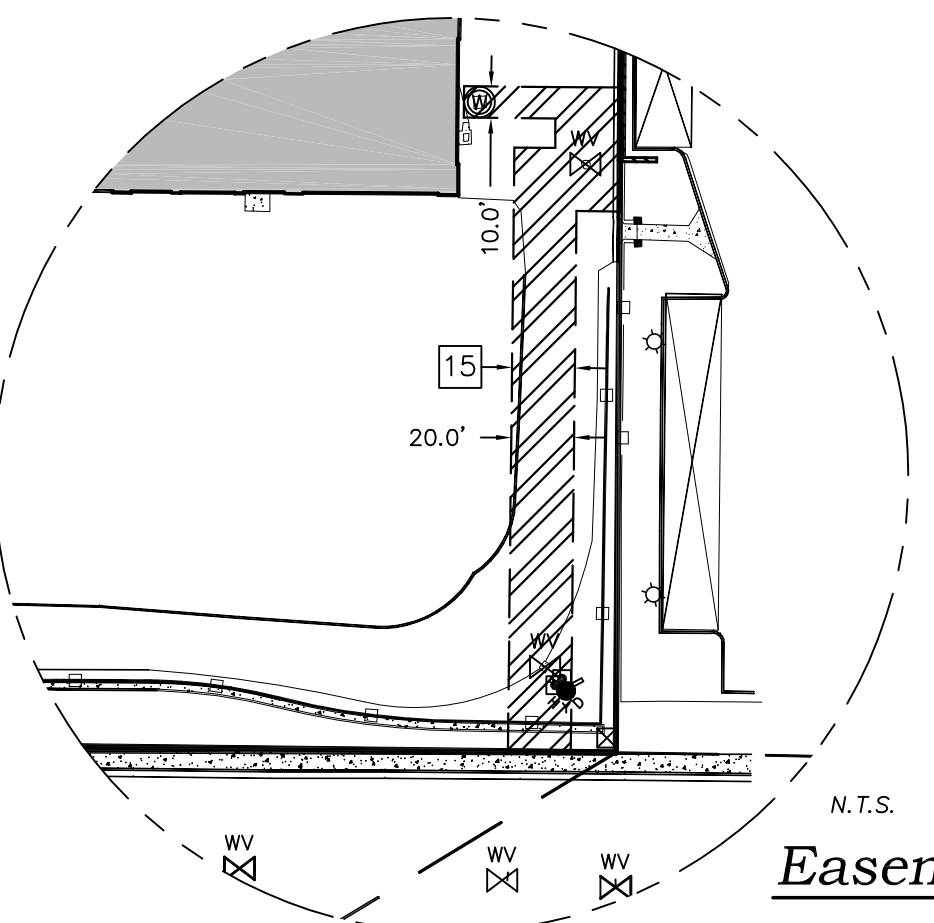


Easement Notes

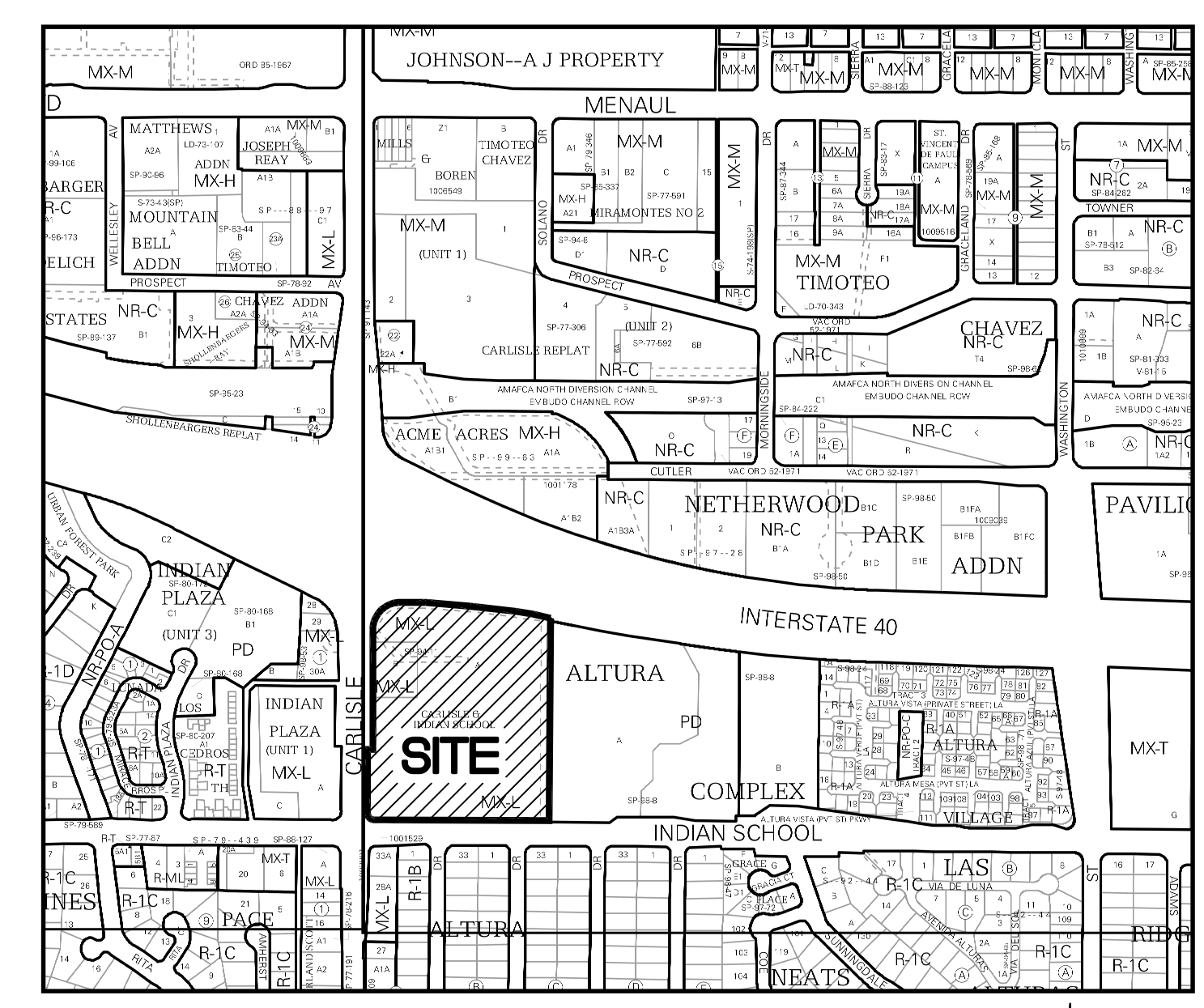
- 1 EXISTING 7' PNM EASEMENT (12/29/1969, BK. MISC. 159, PG. 619) AND AS SHOWN ON PLAT (3/3/1994, 94C-65)
- 2 EXISTING 5' X 58.5' P.U.E. (6/6/1966, D-805, FOLIO 492-493) AND AS SHOWN ON PLAT (3/3/1994, 94C-65)
- 3 WEST 1/2 OF VACATED SOLANO AVENUE NE RETAINED AS P.U.E. PER VACATION ORDINANCE #2742 DATED 10/12/1965 AND AS SHOWN ON PLAT (3/3/1994, 94C-65)
- 4 EXISTING 7' X 500' P.U.E. (6/6/1966, BK. D805, PG. 492-493) AND AS SHOWN ON PLAT (3/3/1994, 94C-65)
- 5 EXISTING 7' UNDERGROUND PNM EASEMENT (3/3/1994, 94C-65)
- 6 EXISTING 20' UTILITY EASEMENT (3/3/1994, 94C-65) PORTION TO BE VACATED SHOWN HEREON AS [Symbol]
- 7 EXISTING PERMANENT MUTUAL NON-EXCLUSIVE RECIPROCAL INGRESS, EGRESS AND CROSS-PARKING EASEMENT ACROSS TRACTS A AND B FOR THE USE OF PARKING AREAS, DRIVEWAYS, COMMON UTILITIES AND OTHER COMMON AREAS PER PARKING AGREEMENT (3/16/1971, BK. MISC. 208, PG. 117), RE-RECORDED (12/21/1971, BK. MISC. 241, PG. 404) AND AGREEMENT AND DECLARATION OF EASEMENT AND COVENANTS (8/23/2000, BK. A9, PG. 2693), BLANKET IN NATURE
- 8 EXISTING 20' PERPETUAL P.U.E. AND RIGHT-OF-WAY EASEMENT (11/8/1965, BK. D-790, PG. 7-9) AND AS SHOWN ON PLAT (3/3/1994, 94C-65)
- 9 EXISTING 20' PERMANENT PUBLIC WATERLINE EASEMENT (8/30/2001, BK. A24, PG. 647, DOC. NO. 2001102359) PORTIONS TO BE VACATED BY PLATTING ACTION SHOWN HEREON AS [Symbol]
- 10 EAST 1/2 OF VACATED SOLANO AVENUE NE RETAINED AS P.U.E. PER VACATION ORDINANCE #2742 DATED 10/12/1965
- 11 EXISTING 7' PRIVATE PNM AND US WEST COMMUNICATIONS EASEMENT FOR TRACT A, ALTURA COMPLEX (3/24/1980, BK. 761, PAGE 543, DOC. NO. 8017867)
- 12 EXISTING 10' P.U.E. (12/30/1997, 97C-368)
- 13 EXISTING 7' P.U.E. (3/23/1972, BK. MISC. 253, PG. 556-558) AND AS SHOWN ON PLAT (12/30/1997, 97C-368)
- 14 INTENTIONALLY OMITTED
- 15 PUBLIC WATERLINE EASEMENT GRANTED TO ABCWJA WITH FILING OF THIS PLAT SHOWN HEREON AS [Symbol]

Line #	Direction	Length (ft)
L1	S 89°37'03" E (S 89°48'00" E)	20.00'(20.00')
L2	N 00°22'32" E (N 00°12'00" E) [N 00°21'12" E]	49.19'
L3	N 02°50'41" E [N 02°49'02" E]	103.83'[104.10']
L4	S 89°36'56" E (S 89°47'59" E) [S 89°47'53" E]	149.44'[149.57']
L5	N 00°22'57" E (N 00°12'00" E) [N 00°21'00" E]	200.00'[200.00'] [200.00']
L6	S 89°58'50" W (N 89°47'59" W) [N 89°47'53" W]	140.89'[140.97']
L7	N 02°50'41" E [N 02°49'02" E] [N 02°39'44" E]	199.19'[200.08'] [200.18']
L8	N 02°50'41" E [N 02°49'02" E]	68.57'[67.42']
L9	S 89°14'36" E [S 89°16'12" E]	71.42' [71.41']
L10	N 00°25'51" E [N 00°25'51" E] [(N 00°26'09" E)]	11.24' [(10.19')]
L11	S 07°38'42" W	907.37'
L12	N 44°47'18" W	17.05'
L13	N 89°47'18" W	79.85'
L14	S 45°12'42" W	17.78'
L15	N 89°47'18" W	97.34'
L16	S 87°34'03" W	67.30'
L17	N 34°30'56" E	22.36'
L18	N 00°29'31" E	44.06'
L19	N 32°16'20" W	23.12'
L20	N 00°29'31" E	17.29'
L21	S 89°37'03" E	7.90'
L22	S 02°50'41" W	59.60'
L23	N 42°09'19" W	7.67'
L24	N 47°50'41" E	7.67'
L25	S 02°50'41" W	15.37'

Curve #	Length	Radius	Delta	Chord Length	Chord Direction
C1	39.34' (39.25')	25.00' (25.00')	90°09'12"	35.40'	N 44°42'42" W
C2	37.92' [37.92']	165.88' [165.88']	13°05'52"	37.84'	N 09°23'36" E
C3	87.53' [87.54']	53.77' [53.77']	93°16'01"	78.18'	S 49°28'41" W
C4	84.01' ((84.15'))	3474.98' ((3495.17'))	1°23'07"	84.01'	S 79°04'24" E
C5	392.05' ((392.31'))	5803.04' ((5802.85'))	3°52'15"	391.97'	S 80°22'17" E
C6	38.05'	150.00'	14°32'06"	37.95'	S 82°31'16" E
C7	46.77'	156.00'	17°10'44"	46.60'	N 83°50'35" W
C8	40.55'	25.00'	92°55'28"	36.25'	S 45°58'13" E



ACS Monument "12-J16"
NAD 1983 CENTRAL ZONE
X=1534440.644
Y=1492190.324
Z=5160.901 (NAVD 1988)
G-G=0.999669892
Mapping Angle=-0°12'13.45"



Vicinity Map-Zone Atlas H-17-Z

THE PURPOSE OF THIS SKETCH PLAT IS DEDICATE RIGHT OF WAY, GRANT EASEMENT(S), AND VACATE EASEMENT(S) AS SHOWN HEREON.

CSI-CARTESIAN SURVEYS INC.
P.O. BOX 44414 RIO RANCHO, N.M. 87174
Phone (505) 896-3050 Fax (505) 891-0244
wplotnerj@gmail.com