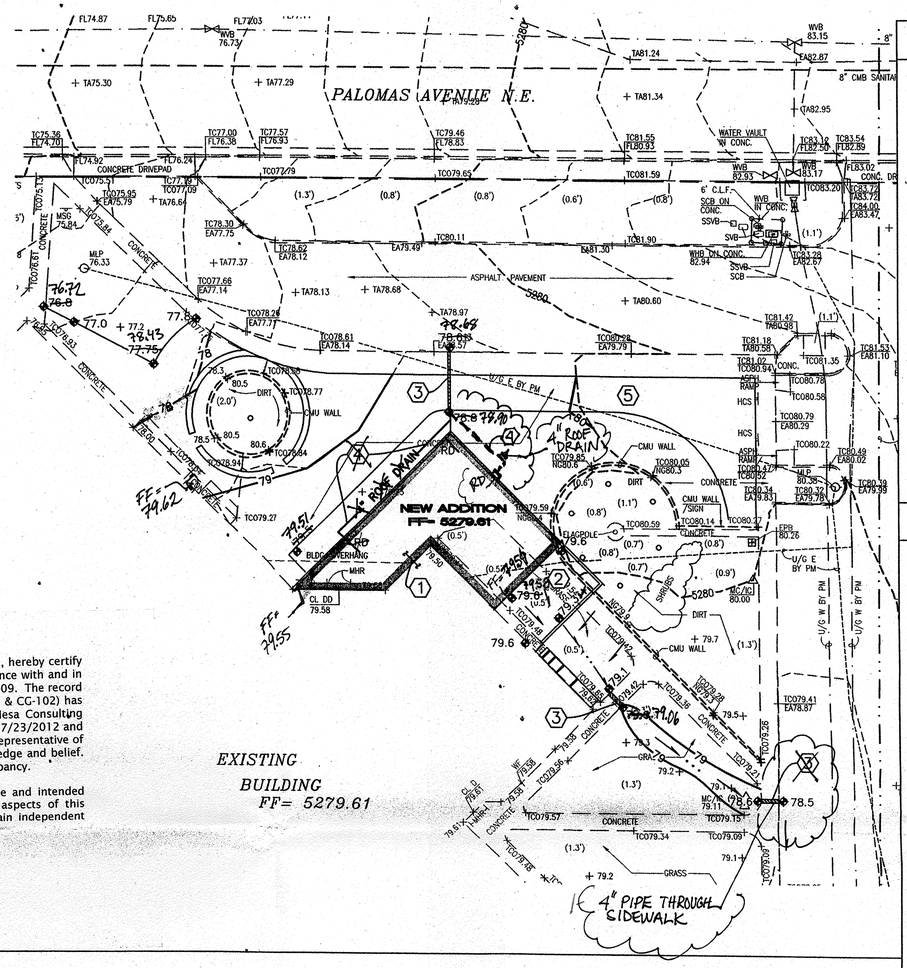
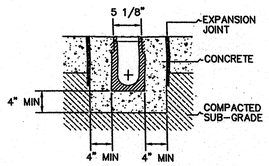




ACO–DRAIN K100S SIDEWALK TRENCH DRAIN (O.A.E.) WITH PEDESTRIAN GRATE. INSTALL PER MANUFACTURER'S SPECIFICATIONS. (BUILT IN 0.6% SLOPE).

SIDEWALK TRENCH DRAIN

N.T.S.

DRAINAGE CERTIFICATION

I, Asa Nilsson-Weber, NMPE 17631, of the firm Isaacson & Arfman, P.A., 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 12/15/2009. The record information edited onto the original design documents (Sheets CG-101 & CG-102) has been obtained by Charles G. Cala, NMPS 11184, of the firm High Mesa Consulting Group. I further certify that I have personally visited the project site on 7/23/2012 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 building occupancy.

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.

Asa Nilsson-Weber — NMPE 17631

7-23-12
Date

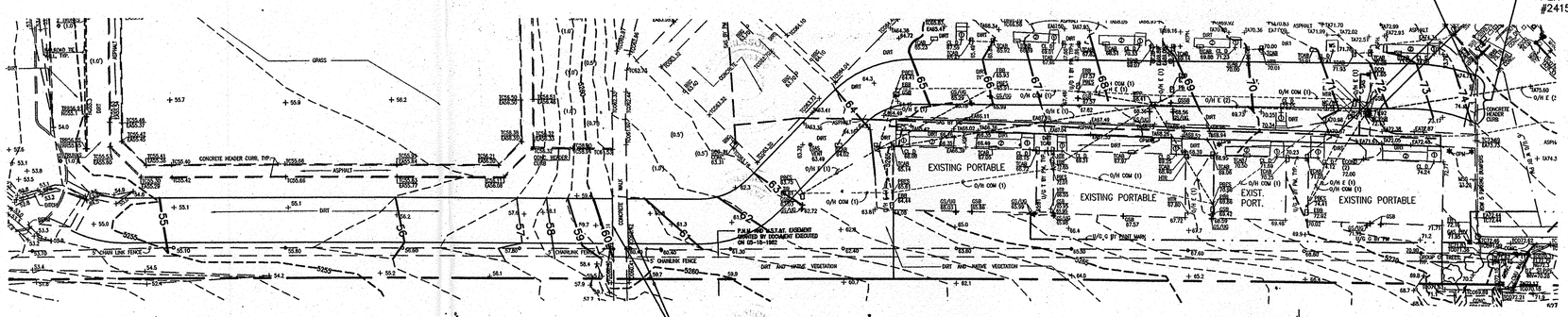
ASA M. NILSSON-WEBER — NEW MEXICO — 17631 — LICENSED PROFESSIONAL ENGINEER

KEYED NOTES

1. MATCH EXISTING FINISH FLOOR ELEVATION FOR BUILDING ADDITION.
2. SLOPE NEW PATIO AREA AS SHOWN TO DRAIN TO OPENING (6" HIGH X 16" WIDE) AT GRADE.
3. BUILD NEW SIDEWALK DRAIN AS SHOWN.
4. RUN NEW 4" ROOF DRAIN LINE AS SHOWN TO DAYLIGHT (AT NORTH BUILDING CORNER) TO SIDEWALK TRENCH DRAIN.
5. INSTALL NEW CONCRETE FLATWORK BY MATCHING EXISTING SIDEWALK GRADE AND SLOPING AT 2% (¼" PER FOOT) TO DRAIN TO THE NORTH.

LEGEND

FF= 79.61	FINISHED FLOOR ELEVATION
———	EXISTING CONTOUR
—52—	PROPOSED CONTOUR
◆ 78.3	PROPOSED SPOT ELEVATION
→	FLOW ARROW
RD	ROOF DRAIN



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1705 CG–101.dwg May 26,2009

ASA M. NILSSON-WEBER — NEW MEXICO — 17631 — LICENSED PROFESSIONAL ENGINEER — 12-15-09

Westwork
ARCHITECTS
2403 SAN MATEO, N.E. SUITE-B
ALBUQUERQUE, NEW MEXICO 87110
505.884.5252 FAX• 505.213.0002

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ELECTRICAL: Mosher Enterprises, Inc.
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505.822.5474 - Fax

E. G. ROSS ELEMENTARY ADMINISTRATIVE ADDITION

DRAWING SUBMITTAL:

1	12/05/08	DESIGN DEVELOPMENT
2	04/03/09	50% REVIEW SUBMITTAL
2	05/05/09	95% REVIEW SUBMITTAL

PROJECT NO:

CAD DWG FILE:

DRAWN BY:

SHEET TITLE

GRADING & DRAINAGE PLAN

CG-102

PROJECT DATA

LEGAL DESCRIPTION:
LOT 4–A, BLOCK 12, TRACT A, UNIT A,
NORTH ALBUQUERQUE ACRES.

AREA: 11.18 ACRES
CONSTRUCTION LIMITS: 0.83 ACRES

BENCHMARK:
ACS ALUMINUM DISK "17–D18" LOCATED IN TOP OF BRIDGE ABUTMENT AT THE INTERSECTION OF SAN PEDRO DR. N.E. AND THE SOUTH DOMINGO BACA CHANNEL.
ELEVATION = 5236.57 (MSLD – 1929)

FLOOD ZONE DESIGNATION:
FEMA MAP PANEL 137, INDICATES THIS SITE IS WITHIN ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 500 YR FLOOD PLAIN.

EXISTING CONDITIONS:
THE EDMUND G. ROSS ELEMENTARY SCHOOL SITE IS PRESENTLY DEVELOPED WITH ONE PERMANENT AND TEN PORTABLE BUILDINGS, PAVED PARKING AREAS, PAVED BUS DROP–OFF AREA, GRASS AND SAND PLAY AREAS. SITE RUNOFF DISCHARGES BOTH TO PALOMAS AVENUE N.E. TO THE NORTH AND TO THE DOMINGO BACA ARROYO TO THE SOUTH.

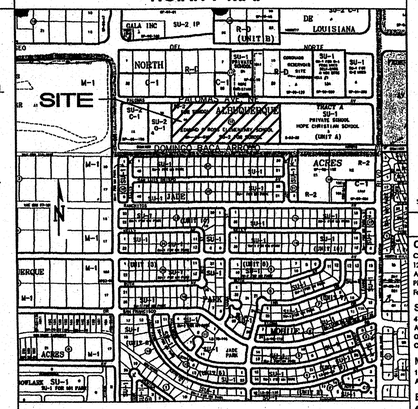
EXISTING HYDROLOGY:
PRECIPITATION ZONE: 2
LAND TREATMENT: 20% B, 22% C & 58% D
Q_{100-6} = (2.28)(.13) + (3.14)(.14) + (4.70)(.37) = 2.5 CFS

PROPOSED CONDITIONS:
ONE PORTABLE BUILDING IS TO BE REPLACED BY AN 11,900 SF KINDERGARTEN ADDITION TO THE EXISTING BUILDING. ADDITIONAL WALKWAYS AND A TRICYCLE TRACK ARE ALSO INCLUDED. THE NEW BUILDING CONSTRUCTION IS PROPOSED IN AN AREA THAT IS LARGELY ASPHALT PAVED. SITE RUNOFF WILL INCREASE ONLY SLIGHTLY AS FOLLOWS:

PROPOSED HYDROLOGY:
LAND TREATMENT: 10% B, 11% C, 79% D
Q_{100-6} = (2.28)(.06) + (3.14)(.07) + (4.70)(.51) = 2.8 CFS

THE PROPOSED CONSTRUCTION INTERCEPTS APPROXIMATELY 9,000 SF OF EXISTING ROOF RUNOFF. THIS RUNOFF PRESENTLY RUNS THROUGH A SAND PLAY AREA AND DISCHARGES TO PALOMAS AVENUE NE. THE PROPOSED 8–INCH STORM DRAIN ROUTES THIS RUNOFF PLUS THE PROPOSED ROOF RUNOFF TO THE DOMINGO BACA ARROYO.

VICINITY MAP



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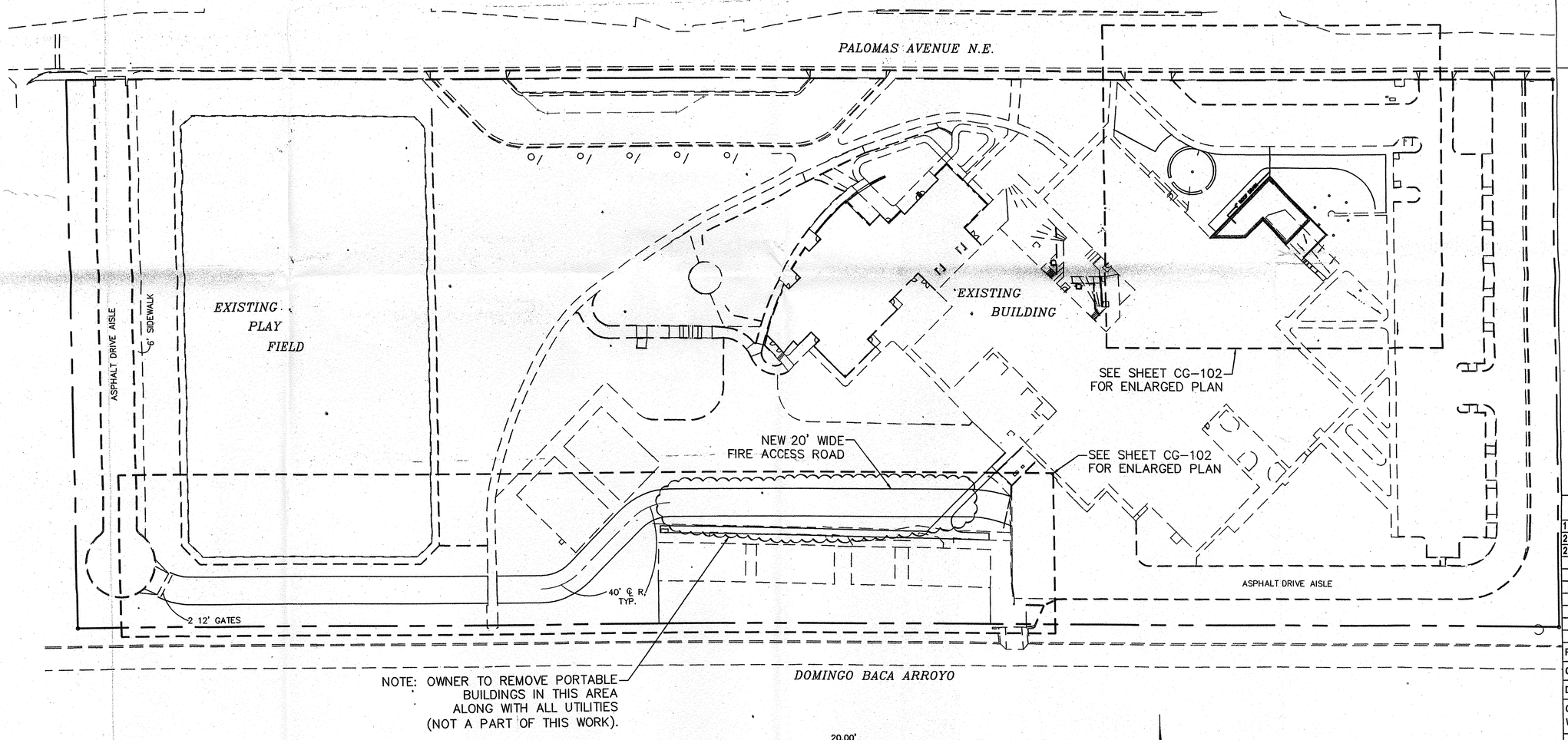

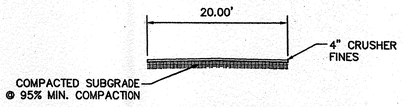

FIRE ACCESS ROAD
SCALE: 1"=10'

0 20 40 80 120
SCALE 1"=40'

ISAACSON & ARFMAN, P.A.
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1705 CG–101.dwg May 28,2009

E. G. ROSS ELEMENTARY ADMINISTRATIVE ADDITION

DRAWING SUBMITTAL:

1	12/05/08	DESIGN DEVELOPMENT
2	04/03/09	50% REVIEW SUBMITTAL
2	05/05/09	95% REVIEW SUBMITTAL

PROJECT NO:
CAD DWG FILE:
DRAWN BY:

SHEET TITLE
GRADING & DRAINAGE PLAN
OVERALL SITE

CG–101

PROJECT DATA

LEGAL DESCRIPTION:
LOT 4-A, BLOCK 12, TRACT A, UNIT A,
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BENCHMARK:
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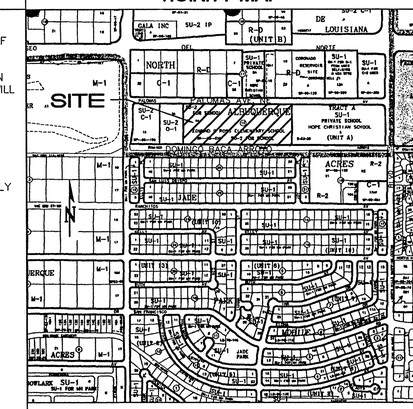
VICINITY MAP



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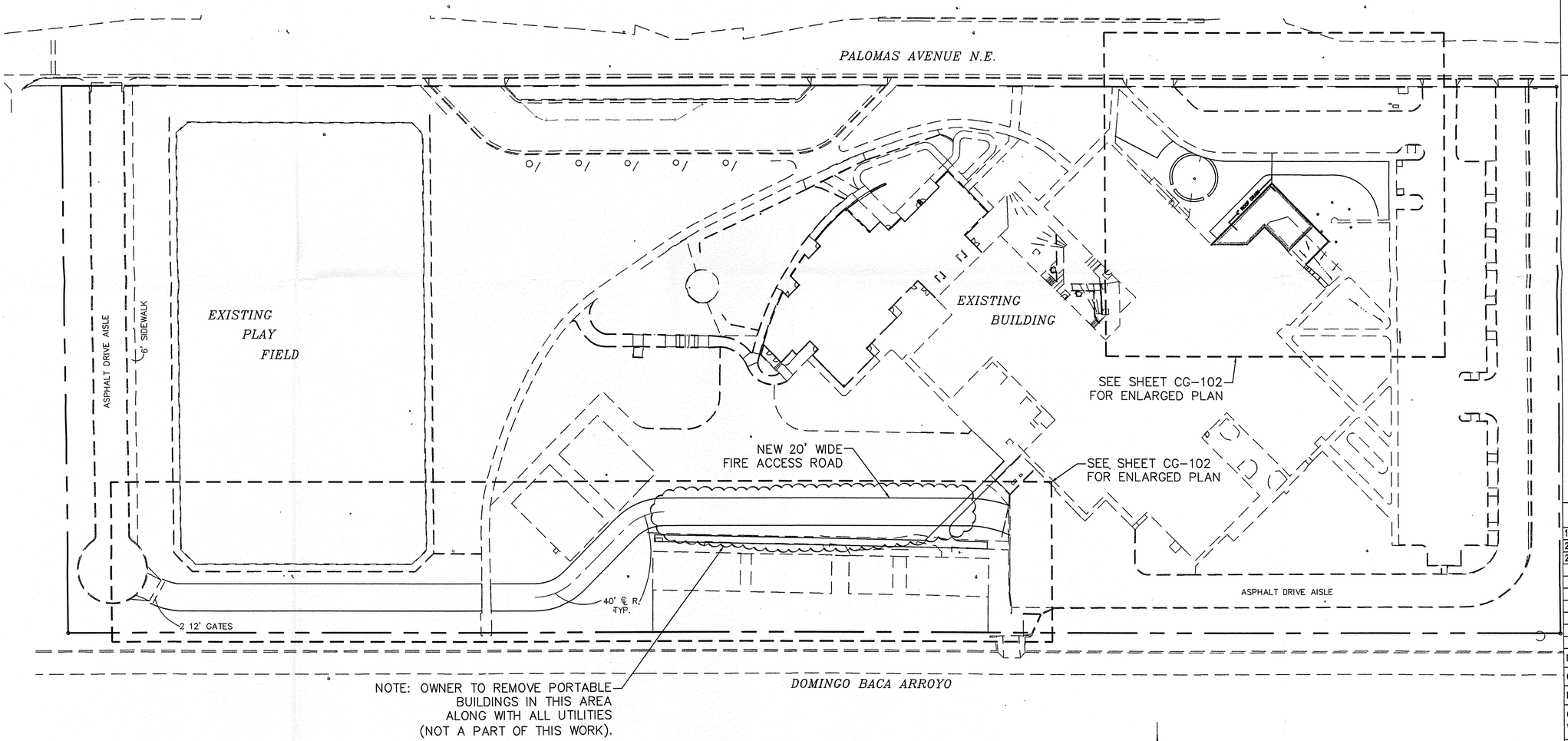
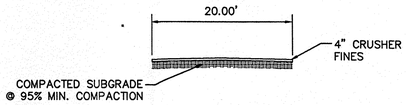
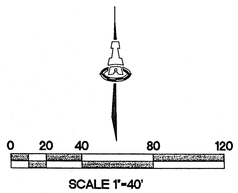


NOTE: OWNER TO REMOVE PORTABLE BUILDINGS IN THIS AREA ALONG WITH ALL UTILITIES (NOT A PART OF THIS WORK).



FIRE ACCESS ROAD
SCALE: 1"=10'



SCALE 1"=40'

E. G. ROSS ELEMENTARY ADMINISTRATIVE ADDITION

DRAWING SUBMITTAL:

1	12/05/08	DESIGN DEVELOPMENT
2	04/03/09	50% REVIEW SUBMITTAL
2	05/05/09	95% REVIEW SUBMITTAL

PROJECT NO:
CAD DWG FILE:
DRAWN BY:

SHEET TITLE

GRADING & DRAINAGE PLAN
OVERALL SITE

ISAACSON & ARFMAN, P.A.
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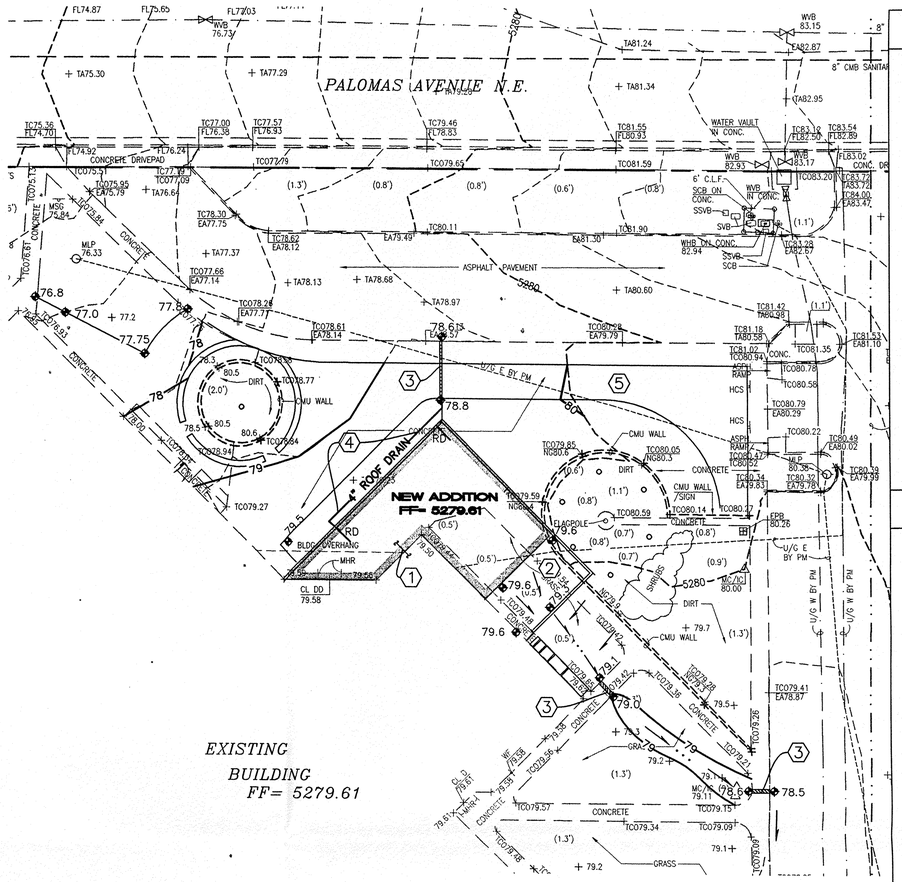
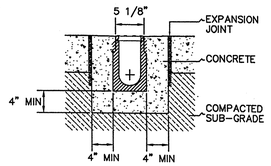
Albuquerque, New Mexico 87108
Ph. 505-268-8828 Fax. 505-268-2632
1705 CG-101.dwg May 26,2009

CG-101



0 10 20 40 60

SCALE 1"=20'



ACO-DRAIN K100S SIDEWALK TRENCH DRAIN (O.A.E.) WITH PEDESTRIAN GRATE. INSTALL PER MANUFACTURER'S SPECIFICATIONS. (BUILT IN 0.6% SLOPE).

SIDEWALK TRENCH DRAIN

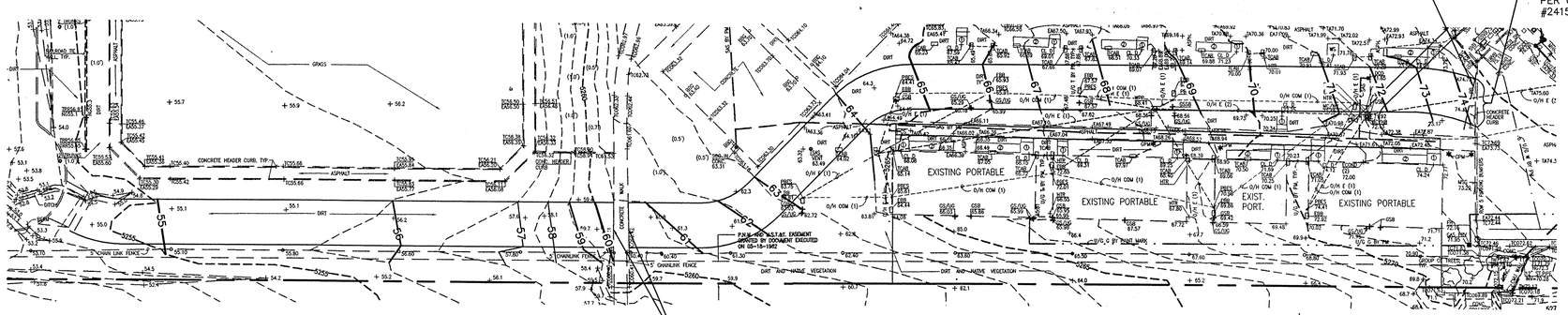
N.T.S.

KEYED NOTES

1. MATCH EXISTING FINISH FLOOR ELEVATION FOR BUILDING ADDITION.
2. SLOPE NEW PATIO AREA AS SHOWN TO DRAIN TO OPENING (6" HIGH X 16" WIDE) AT GRADE.
3. BUILD NEW SIDEWALK DRAIN AS SHOWN.
4. RUN NEW 4" ROOF DRAIN LINE AS SHOWN TO DAYLIGHT (AT NORTH BUILDING CORNER) TO SIDEWALK TRENCH DRAIN.
5. INSTALL NEW CONCRETE FLATWORK BY MATCHING EXISTING SIDEWALK GRADE AND SLOPING AT 2% (¼" PER FOOT) TO DRAIN TO THE NORTH.

LEGEND

FF= 79.61	FINISHED FLOOR ELEVATION
	EXISTING CONTOUR
—52—	PROPOSED CONTOUR
78.3	PROPOSED SPOT ELEVATION
	FLOW ARROW
RD	ROOF DRAIN



NOTE: NEW SURFACE OF 20' FIRELANE TO MATCH FLUSH WITH EXISTING CONCRETE WALK.

0 15 30 60 90

SCALE 1"=30'

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E. G. ROSS ELEMENTARY ADMINISTRATIVE ADDITION

DRAWING SUBMITTAL:

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2	04/03/09	50% REVIEW SUBMITTAL
2	05/05/09	95% REVIEW SUBMITTAL

PROJECT NO:

CAD DWG FILE:

DRAWN BY:

SHEET TITLE

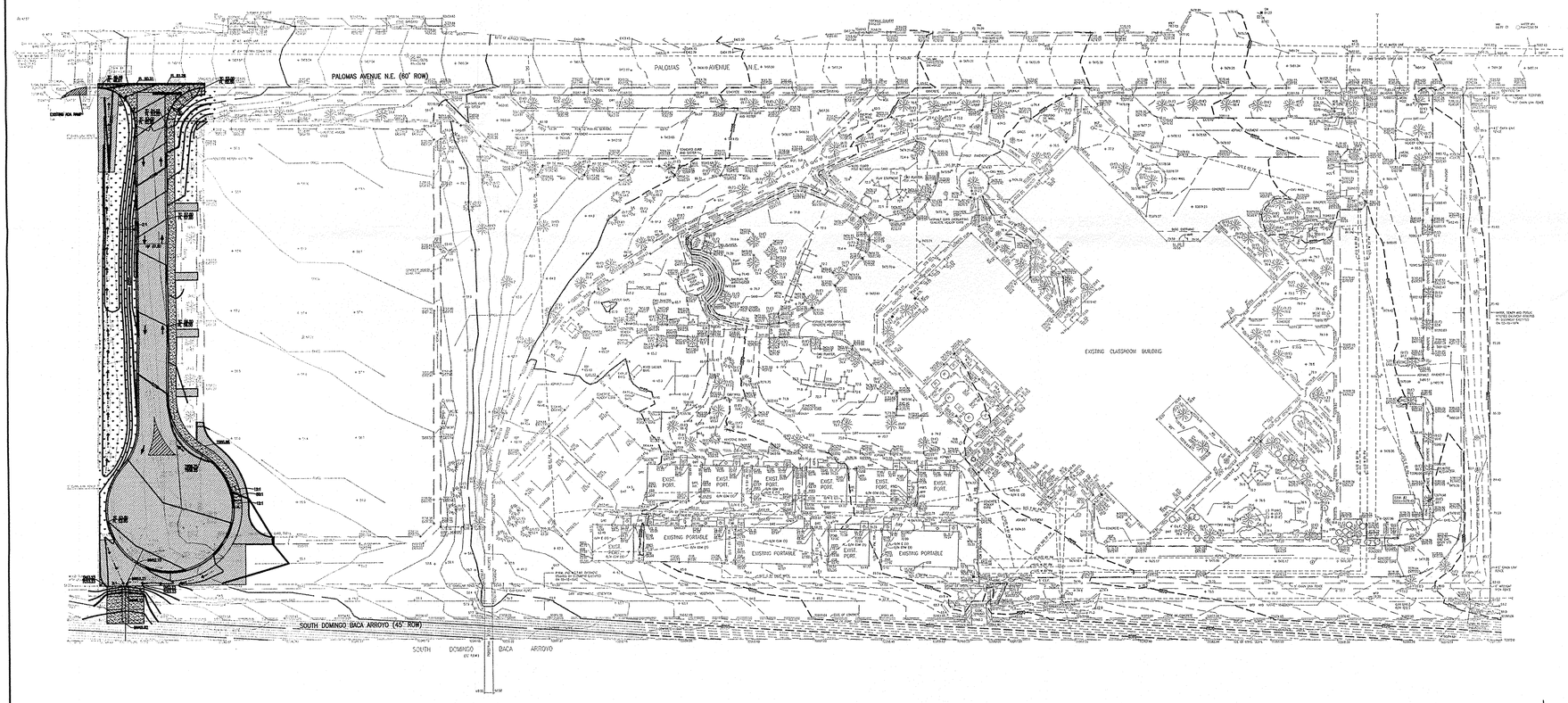
GRADING & DRAINAGE PLAN

CG-102

SEE PHOTO 'A' THIS SHEET.

SEE PHOTO 'B' THIS SHEET.

SEE PHOTO 'C' THIS SHEET.



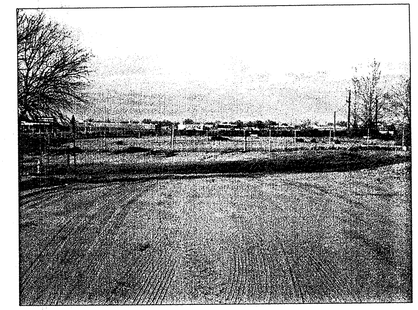


PHOTO 'A' LOOKING NORTH AT DIRT LOT ACROSS PROPOSED ROADWAY FOR BUS DROP=OFF/PICK-UP LANE

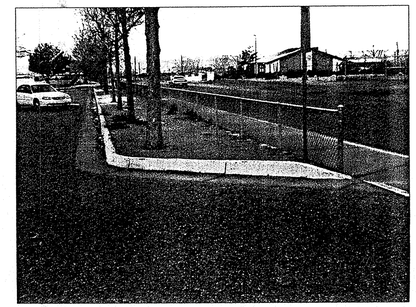


PHOTO 'B' CHURCH NORTH OF PROPOSED ROADWAY FOR BUS DROP-OFF/PICK-UP LANE

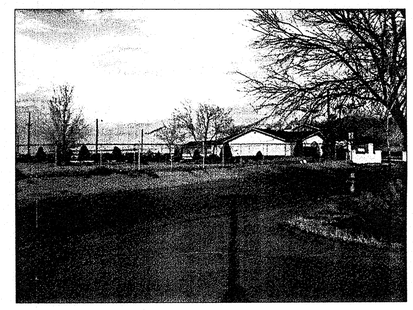


PHOTO 'C' BUILDINGS ACROSS E.G. ROSS ELEMENTARY SCHOOL MAIN BUILDING

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

N

WILSON & COMPANY
2600 THE AMERICAN ROAD S.E.
SUITE 100
RIO RANCHO, NEW MEXICO
87124
(505) 898-8021

WCEA #X4218060
JAN 2005

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

E. G. ROSS ELEMENTARY SCHOOL OVERALL SITE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of
754381	D-18	3	8

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

BENCH MARKS

AN ACS 1 3/4" ALUMINUM DISK STAMPED "ACA BM, 17-D18" IN TOP OF ABRIDGE ABUTMENT AT THE INTERSECTION OF SAN PEDRO DR. N.E. AND THE SOUTH DOMINGO BACA CHANNEL.
ELEVATION = 5236.57 FEET
(M.S.L.D.-1929)

AS-BUILT INFORMATION

		DATE
CONTRACTOR		
WORK STAKED BY		
INSPECTOR'S ACCEPTANCE BY		
FIELD VERIFICATION BY		
DRAWINGS CORRECTED BY		

MICRO-FILM INFORMATION

RECORDED BY DATE

NO.

ENGINEER'S SEAL

JOHN A. TELLEZ
NEW MEXICO
LICENSED PROFESSIONAL ENGINEER
1/6/05

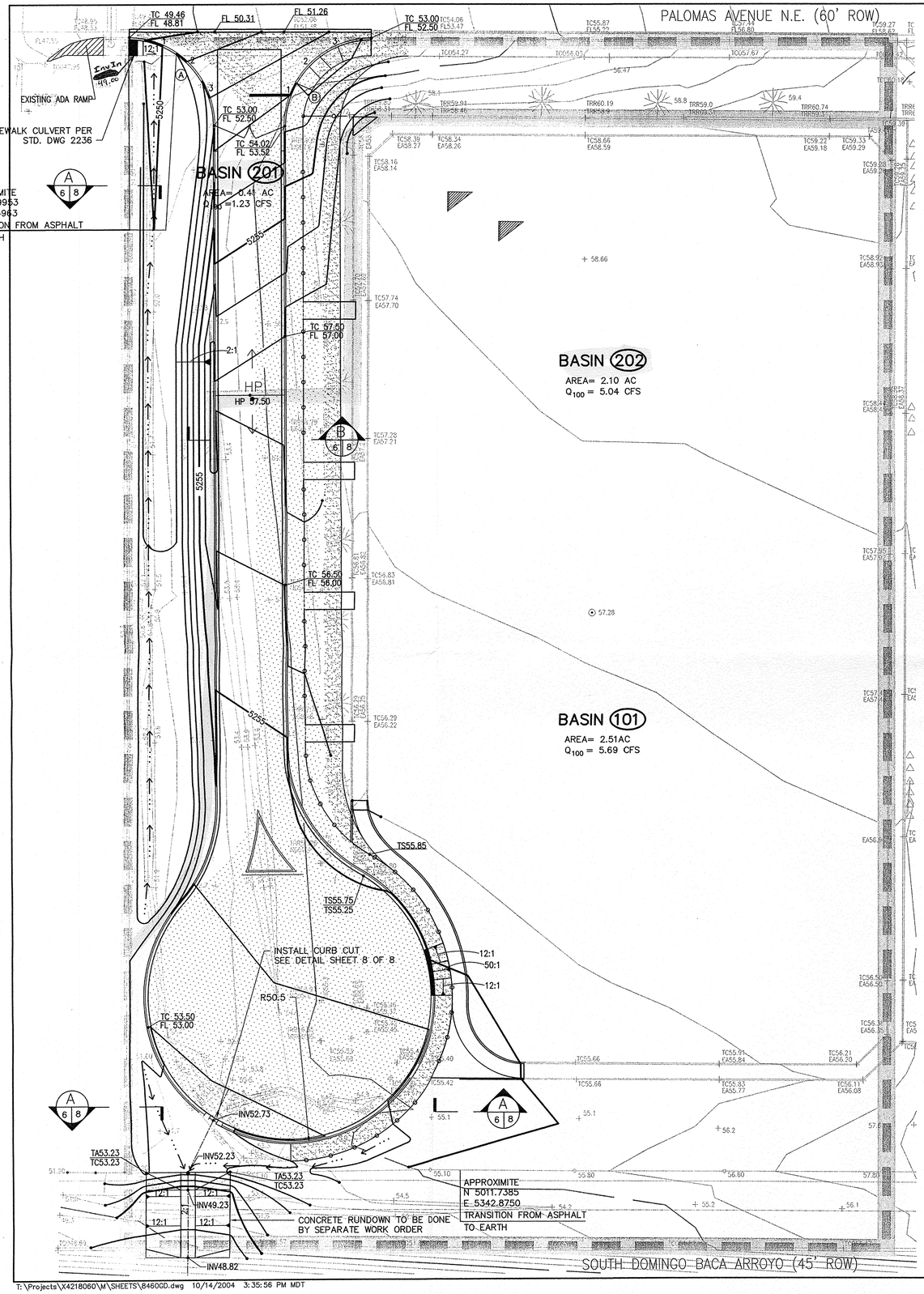
NO.	DATE	REMARKS	BY

REVISIONS

WILSON & COMPANY, ENGINEERS & ARCHITECTS

DESIGNED BY	JAT	DATE JAN 2005
DRAWN BY	AJM	DATE -
CHECKED BY	MJI	DATE Jr.

T:\Projects\X4218060\M\SHEETS\84600S.dwg 1/4/2005 4:44:28 PM MST



LEGEND

- EXISTING INDEX CONTOUR (5070)
- EXISTING INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR (5740)
- PROPOSED INTERMEDIATE CONTOUR
- EXISTING SPOT ELEVATION (+ 5359.15)
- PROPOSED FLOW LINE
- PROPERTY LINE
- EXISTING BASIN BOUNDARY
- PROPOSED BASIN BOUNDARY
- BASIN 101 — EXISTING BASIN
- BASIN 201 — PROPOSED BASIN
- EXISTING TREE
- EXISTING CHAINLINK FENCE
- PROPOSED CHAINLINK FENCE
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- 2" GRAVEL MULCH
- HP — HIGH POINT
- INTENDED FLOW DIRECTION

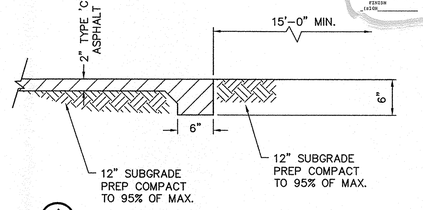
CURB RETURN DATA

Ⓐ	TC	FL
1	50.35	49.73
2	–	50.66
3	52.12	51.56

△ =89°–05'–38"
L = 45.87'
R = 29.50'
T = 29.04'

Ⓑ	TC	FL
1	53.77	53.27
2	–	53.01
3	53.26	52.76

△ =90°–17'–59"
L = 46.49'
R = 29.50'
T = 29.65'



Ⓐ SCALE: 1"= 1'

BENCH MARK

AN ACS 1 3/4" ALUMINUM DISK STAMPED "ACA BM, 17–D18" IN TOP OF THE BRIDGE ABUTMENT AT THE INTERSECTION OF SAN PEDRO DR. N.E. AND THE SOUTH DOMINGO BACA CHANNEL.
ELEVATION = 5236.57 FEET (M.S.L.D. – 1929)

TEMPORARY BENCH MARK

T.B.M. #1 A SQUARE '□' CHISELED AT THE TOP BACK OF CURB NEAR THE NORTHWEST PROPERTY CORNER.
ELEVATION = 5249.63 FEET (M.S.L.D.– 1929)

T.B.M. #2 A SQUARE '□' CHISELED AT THE TOP BACK OF CURB NEAR THE BUILDING.
ELEVATION = 5279.43 FEET (M.S.L.D.– 1929)
SOUTHEAST CORNER OF THE PARKING LOT LOCATED EAST OF THE CLASSROOM

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

E.G. ROSS ELEMENTARY SCHOOL

Pick-Up/Drop-Off Bus Loop Lane

Drainage Report

Location: 6700 Palomas Ave. NE, Albuquerque, New Mexico 87102.

Methodology: Section 22.2 of the City of Albuquerque DPM was followed to calculate the design volume. The Arid-lands Hydrologic Model (AHYMO_97), distributed by Anderson Hydro was used to perform the hydrologic model. The 100-year 6-hour return frequency storm was used as the basis of this analysis.

Existing Conditions: The existing topography slopes NE to SW and NW between 1% to 7%. The Soil Survey of Sandoval County Area, New Mexico designates the existing earth as Embudo-Tijeras complex. The Embudo soil is in drainagways and depressions, and the Tijeras soil is on low ridges in narrow undulations. The Tijeras soil has the profile described as representative of the Tijeras series. On both soils, runoff is medium and the hazard of water erosion is moderate. The Embudo part of this unit is subject to flooding. Control of moisure is required for proper compaction.

Proposed Conditions: The purpose of this Grading & Drainage Plan is to secure a rough grading permit. Improvements will constist of a pick-up/drop-off bus loop lane. The land condition will be altered. The land treatments used for AHYMO are as follows. Basin 101 has an area of 2.5 Ac. Basin 101 consists of 1.76 Ac of Type B, 0.50Ac of Type C, and 0.25Ac of Type D land treatments. Type B accounts mostly for the grassed areas. Type C accounts for soil compacted by human activity. Type D accounts for the exsting sections of asphalt. Basins 201 has an area of 0.41 Ac. Developed conditions for Basin 201 consists of 0.12 Ac of landscaped areas, type B, 0.12 AC of soil compacted human actitiy, type C, and 0.17 Ac for asphalt, type D. Basin 202 has an area of 2.10 Ac. Developed conditons for Basin 202 are 1.47 Ac will be type B land treatment, this will accounts for the landscaped areas. For areas such as compacted soil, 0.21 Ac will be type C land treatment. The remaining 0.42 Ac were accounted for as type D land treatment.

Hydrologic Analysis Post-development flows are determined based on the post-development watershed boundary. Proposed grading does not alter the watershed boundry. Therefore the post-development watershed boundry remains at approximately 2.51 acres.

Known: Basin 101 Q_p = 5.69 ft^3/s V_{100} = 0.163 Ac-ft
Basin 201 Q_p = 1.23 ft^3/s V_{100} = 0.041 Ac-ft
Basin 202 Q_p = 5.04 ft^3/s V_{100} = 0.154 Ac-ft

Conclusions: Basins 201 will have a free discharge of Q_p = 1.23 ft^3/s to Palomas Ave. There are existing dowstream storm drain inlets at the intersection of Palomas Ave. and San Perdro Dr. that will capture, convey, and ultimately discharge flow into the Doming Baca Arroyo. Domingo Baca Arroyo is located on the south side of the site. Basin 202 will have a free discharge of Q_p = 5.04 ft^3/s to a proposed concrete rundown which will capture, convey, and discharge into the Domingo Baca Arroyo. The pick-up/drop-off bus loop lane improvement only increases discharge by 0.58 ft^3/s which does not significantly impact the Domingo Baca Arroyo.

```
AHYMO Results
_ja16.666
   AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -                    - VERSION: 1997.02e      RUN DATE (MON/DAY/YR) =11/02/2004
   INPUT FILE = T:\Projects\X4218060\AHYMO\120104.hvt                                   USER NO.= AHYMO-1-P0SA0206000-AM

                                                                                                                  CFS      RAIN =   1
                                  FROM   TO                   PEAK      RUNOFF    TIME TO    PER
CONSUMD      HYDROGRAPH  ID   ID    AREA    DISCHARGE   VOLUME   (INCHES)  PEAK    ACRE     NOTATION
             IDENTIFICATION  NO.  NO.   (SQ MI)   (CFS)     (AC-FT)                (HOURS)
START                                                                                          TIME=    .00
 11/04/04
RAINFALL  TYPE= 1                                                                              RAIN=   2.150
 *****************************************************************************
SUBBASIN HYD                                                                                   PK EF =  1.00
 *1 BASIN 101 - UNDEVELOPED CONDITIONS
COMPUTE NM HYD          101.00    -    1    .00392     5.69     .163     .37761   1.500   2.266 PER IMP=  10.00
 *2 BASIN 201, - DEVELOPED CONDITIONS
COMPUTE NM HYD          201.00    -    2    .00063     1.23     .041    1.19996   1.500   3.035 PER IMP=  40.00
 *3 BASIN 202 - DEVELOPED CONDITIONS
COMPUTE NM HYD          202.00    -    3    .00328     5.04     .154     .88171   1.500   2.403 PER IMP=  20.00
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_ja16.666
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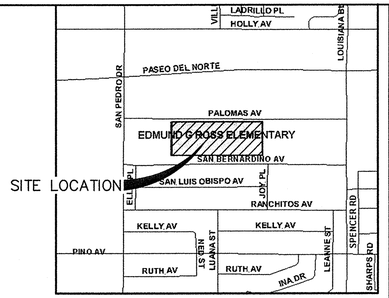
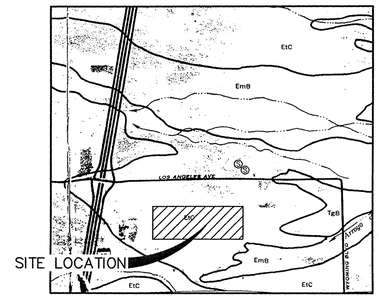
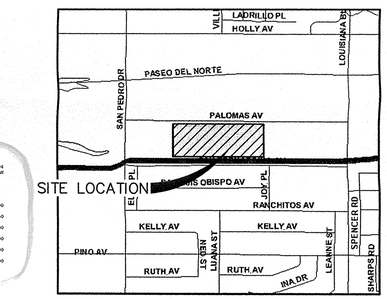


LOCATION MAP
ZONE ATLAS MAP NO. D–18



SOILS MAP
REFERENCE: SCS BERNALILLO COUNTY SOIL SURVEY SHEET NO. 11



FLOOD INSURANCE MAP
REFERENCE: FLOOD INSURANCE STUDY PANEL 137

LEGAL DESCRIPTION

LOT 4–A, BLOCK 12, TRACT A, UNIT A, NORTH ALBUQUERQUE ACRES, ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALLILLO COUNTY, NEW MEXICO ON AUGUST 12, 1988, BOOK C37, PAGE 34.

WCEA #X4218060
JAN 2005

WILSON & COMPANY
2600 THE AMERICAN ROAD S.E.
SUITE 100
RIO RANCHO, NEW MEXICO
87124
(505) 898–8021

AS–BUILT INFORMATION

CONTRACTOR		DATE
WORK STAKED BY		DATE
INSPECTOR'S ACCEPTANCE BY		DATE
FIELD VERIFICATION BY		DATE
DRAWINGS CORRECTED BY		DATE

MICRO–FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
AN ACS 1 3/4" ALUMINUM DISK STAMPED "ACA BM, 17–D18" IN TOP OF ABRIDGE ABUTMENT AT THE INTERSECTION OF SAN PEDRO DR. N.E. AND THE SOUTH DOMINGO BACA CHANNEL.
ELEVATION = 5236.57 FEET (M.S.L.D.–1929)

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
		REVISIONS	

WILSON & COMPANY, ENGINEERS & ARCHITECTS			
DESIGNED BY	JAT	DATE	JAN 2005
DRAWN BY	AJM	DATE	JAN 2005
CHECKED BY	MJI	DATE	JAN 2005

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

E. G. ROSS ELEMENTARY SCHOOL GRADING & DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of
754381	D–18	6	8

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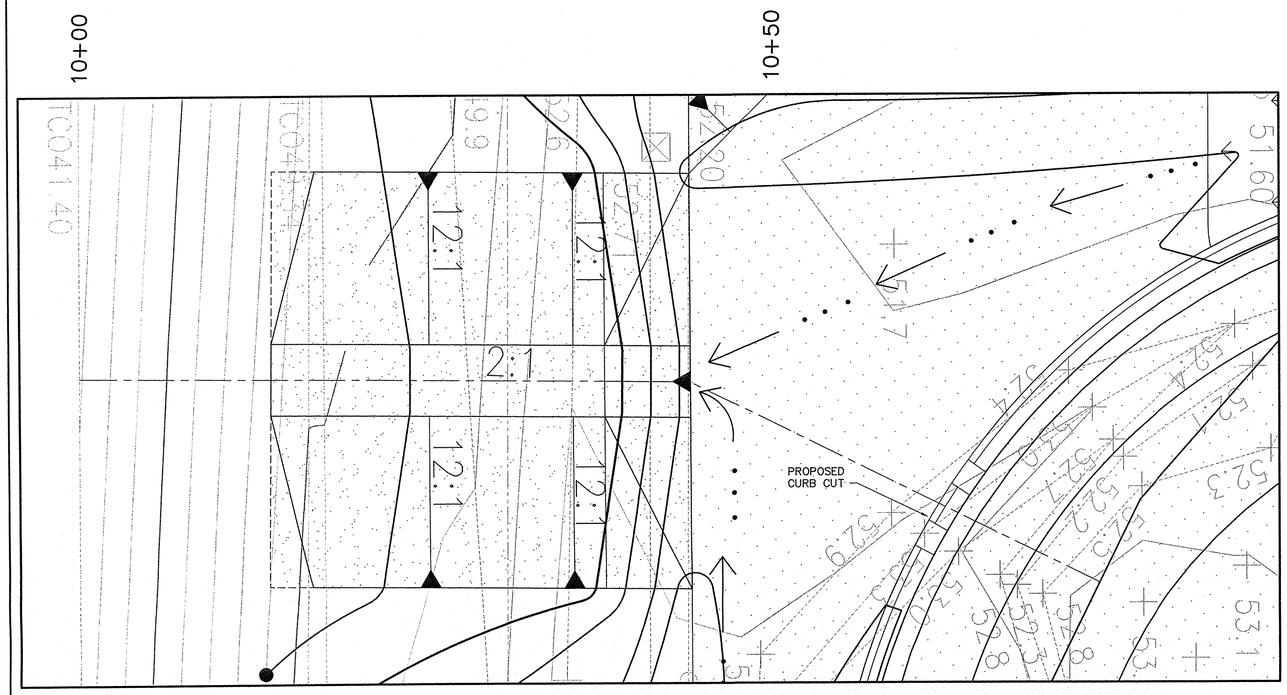
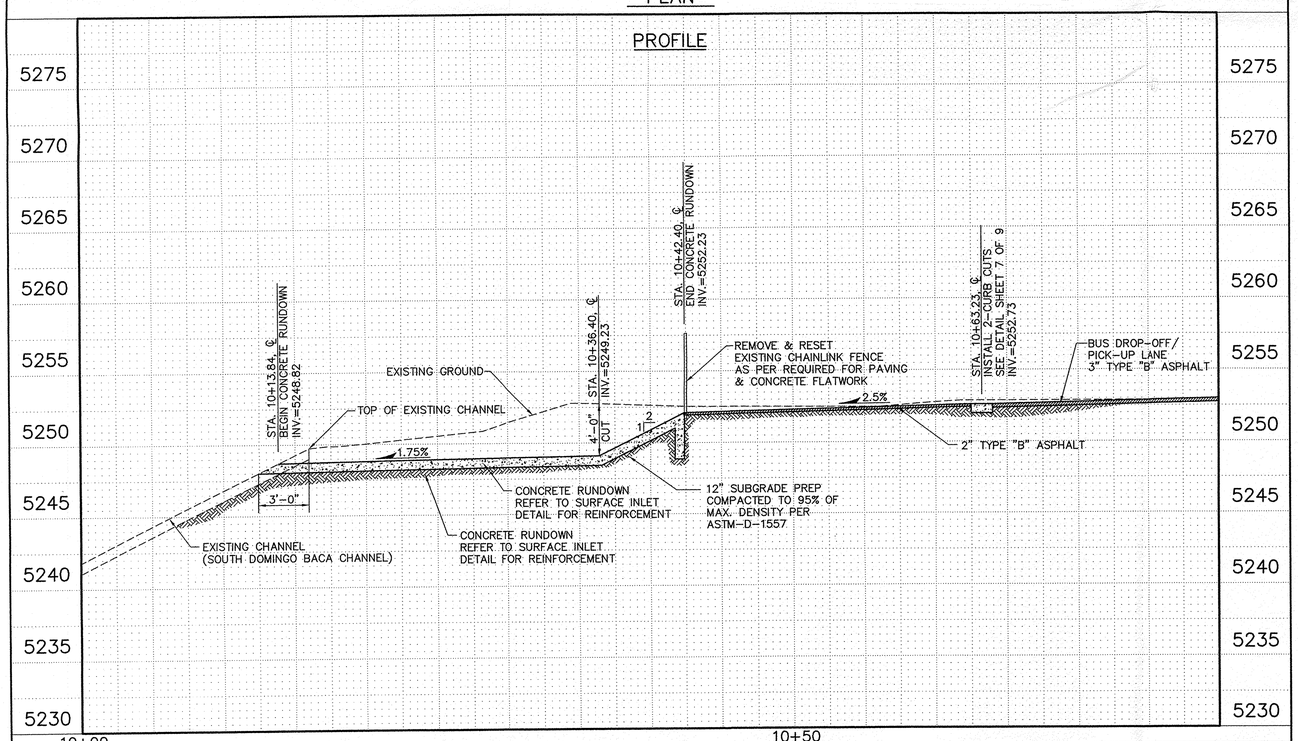


SOUTH DOMINGO BACA ARROYO

PLAN

SCALE:
HORIZ: 1" = 5'
VERT: 1" = 5'



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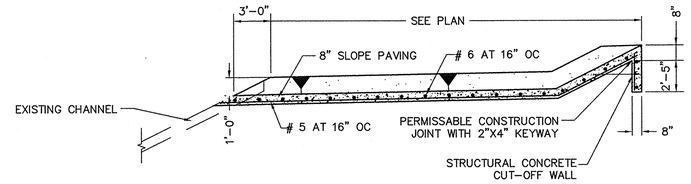

SECTION A – A

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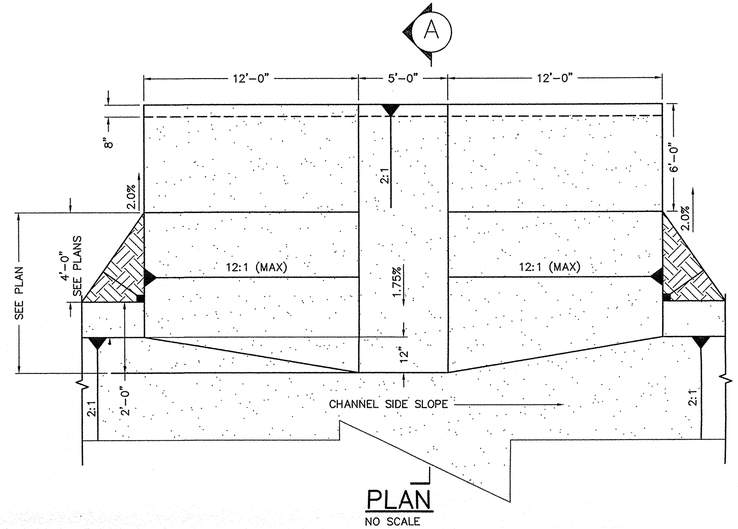
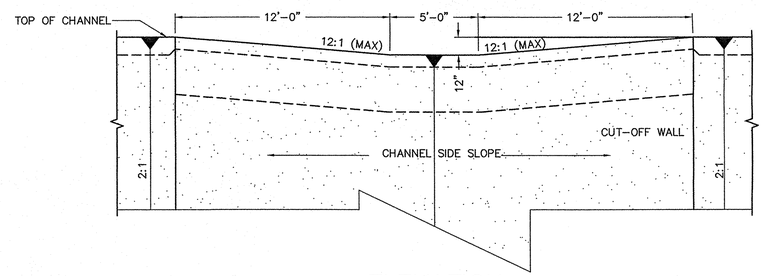


PLAN

NO SCALE



ELEVATION

NO SCALE

AS-BUILT INFORMATION

CONTRACTOR
WORK STAKED BY
DATE
INSPECTOR'S ACCEPTANCE BY
DATE
FIELD VERIFICATION BY
DATE
DRAWINGS CORRECTED BY
DATE
MICRO-FILM INFORMATION
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ELEVATION = 5236.57 FEET
(M.S.L.D.-1929)

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

JOHN A. TELLEZ
NEW MEXICO
LICENSED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS	BY

REVISIONS

WILSON & COMPANY, ENGINEERS & ARCHITECTS

DESIGNED BY JAT DATE JAN 2005
DRAWN BY AJM DATE JAN 2005
CHECKED BY MJI DATE JAN 2005

WILSON & COMPANY
2600 THE AMERICAN ROAD S.E.
SUITE 100
RIO RANCHO, NEW MEXICO
87124
(505) 898-8021

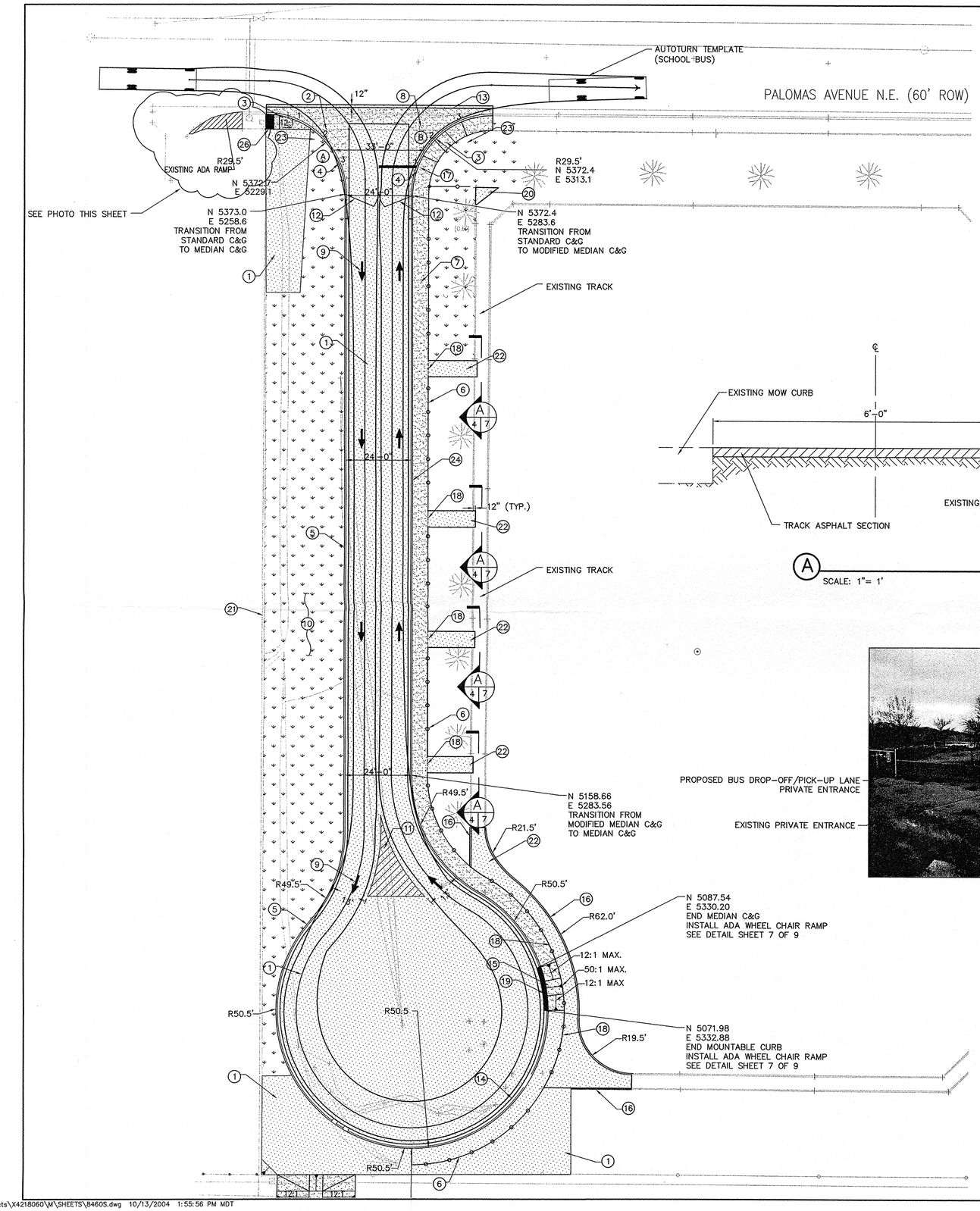
WCEA #X4218060
JAN 2005

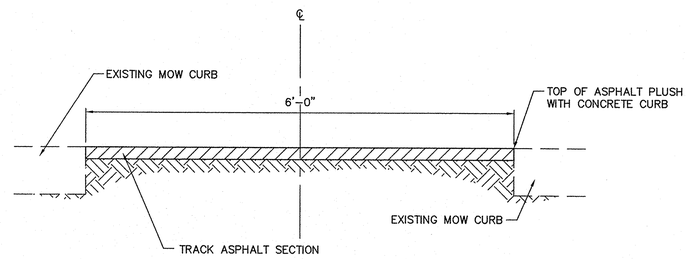
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

E. G. ROSS ELEMENTARY SCHOOL
PLAN & PROFILE
SOUTH DOMINGO BACA ARROYO

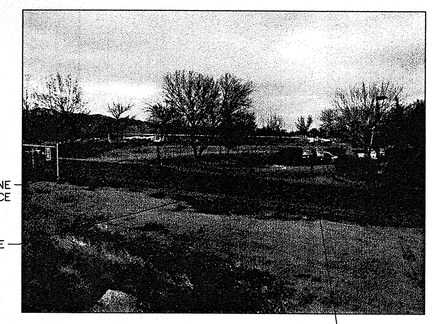
Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of
754381	D-18	7	8



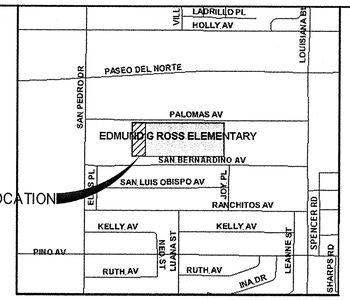


A SCALE: 1"= 1'



LEGEND

- EXISTING TREE
- EXISTING CHAINLINK FENCE
- PROPOSED CHAINLINK FENCE
- PERMANENT STRIPING
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- 2" GRAVEL MULCH

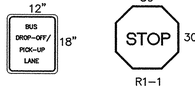


LOCATION MAP

ZONE ATLAS MAP NO. D-18

KEYED NOTES

1. PROPOSED 3" ASPHALT. SEE DETAIL SHEET 8 OF 8.
2. INSTALL PRIVATE ENTRANCE PER STD. DWG. 2426.
3. INSTALL HANDICAP RAMPS. PER STD. DWG. 2441, CASE I.
4. INSTALL STANDARD CURB & GUTTER. PER STD. DWG. 2415A.
5. INSTALL MEDIAN CURB & GUTTER PER STD. DWG. 2415B.
6. INSTALL 5'-0" CHAINLINK FENCE.
7. INSTALL 6'-6" SIDEWALK.
8. 12" WHITE STOP BAR (2-COAT APPLICATION).
9. WHITE TRAFFIC ARROW (36" H).
10. 2" GRAVEL MULCH.
11. 4" SOLID YELLOW STRIPE (2-COAT APPLICATION).
12. INSTALL REMOVED CHAINLINK GATE W/ APS LOCK. LOCATE GATE AT CURB RETURN.
13. 12" WIDE STRIP ASPHALT PATCH. MATCH EXISTING TYPICAL. PER STD. DWG 2465.
14. INSTALL MOUNTABLE CURB. PER STD. DWG. 2415A. SEE DETAIL SHEET 8 OF 8.
15. INSTALL HANDICAP RAMPS PER STD. DWG 2441, CASE 1.
16. INSTALL CONCRETE MOW CURB. SEE DETAIL SHEET 8 OF 8
17. INSTALL "STOP" SIGN. SEE DETAIL THIS SHEET. MOUNT ON BREAKAWAY POST PER MUTCD.
18. INSTALL 6'-0" OPENING. SEE DETAIL SHEET 8 OF 8.
19. PAINT ADA WHEELCHAIR RAMP ADA BLUE (2-COAT APPLICATION).
20. RESTORE EXISTING ASPHALT TRACK AND MOW CURB FOLLOWING FINAL GRADING OPERATION.
21. EXISTING CHAINLIK FENCE TO REMAIN.
22. PROPOSED 2" ASPHALT, SEE DETAIL SHEET 8 OF 8.
23. INSTALL "BUSES DROP-OFF/PICK-UP LANE" SIGN. SEE DETAIL THIS SHEET. MOUNT ON BREAKAWAY POST PER MUTCD.
24. INSTALL MODIFIED MEDIAN CURB & GUTTER. SEE DETAILS SHEET 8 OF 8.
25. INSTALL CONCRETE RUNDOWN. SEE DETAILS SHEET 7 OF 8.
26. INSTALL SIDEWALK CULVERT PER STD. DWG 2236.



R1-1

TRAFFIC CIRCULATION LAYOUT APPROVED

Signed 1/24/05 Date

CURB RETURN DATA

		TC	FL
A	1	50.35	49.73
	2	–	50.66
	3	52.12	51.56

Δ =89°-05'-38"
L = 45.87'
R = 29.50'
T = 29.04'

		TC	FL
B	1	53.77	53.27
	2	–	53.01
	3	53.26	52.76

Δ =90°-17'-59"
L = 46.49'
R = 29.50'
T = 29.65'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

N

WILSON & COMPANY
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WCEA #X4218060
JAN 2005

AS-BUILT INFORMATION

CONTRACTOR
WORK STAKED BY DATE
WORK INSPECTED BY DATE
ACCEPTANCE BY DATE
FIELD VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

AN ACS 1 3/4" ALUMINUM DISK STAMPED "ACA BM, 17-D18" IN TOP OF ABRIDGE ABUTMENT AT THE INTERSECTION OF SAN PEDRO DR. N.E. AND THE SOUTH DOMINGO BACA CHANNEL.
ELEVATION = 5236.57 FEET
(M.S.L.D.-1929)

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

JOHN A. TELLEZ NEW MEXICO LICENSED PROFESSIONAL ENGINEER 14278

NO.	DATE	REMARKS	BY
		REVISIONS	

WILSON & COMPANY, ENGINEERS & ARCHITECTS

DESIGNED BY JAT DATE JAN 2005
DRAWN BY AJM DATE JAN 2005
CHECKED BY MJI DATE JAN 20.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

E. G. ROSS ELEMENTARY SCHOOL TRAFFIC CIRCULATION LAYOUT

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

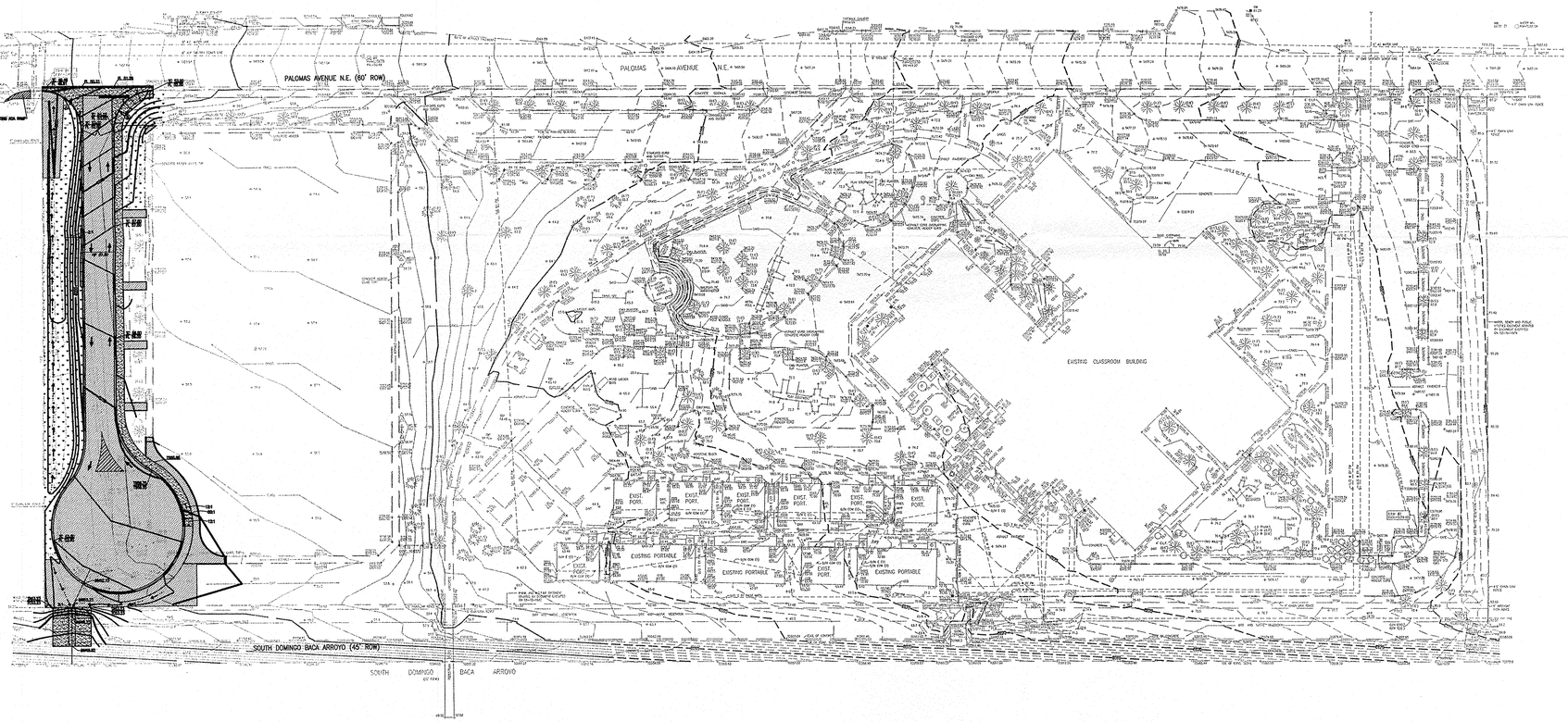
City Project No.	Zone Map No.	Sheet	Of
754381	D-18	5	8

T:\Projects\X4218060\M\SHEETS\8460S.dwg 10/13/2004 1:55:56 PM MDT

SEE PHOTO 'A' THIS SHEET.

SEE PHOTO 'B' THIS SHEET.

SEE PHOTO 'C' THIS SHEET.



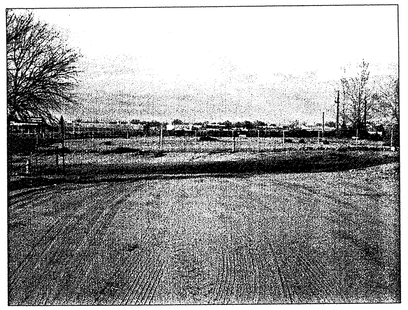


PHOTO 'A' LOOKING NORTH AT DIRT LOT ACROSS PROPOSED ROADWAY FOR BUS DROP=OFF/PICK-UP LANE

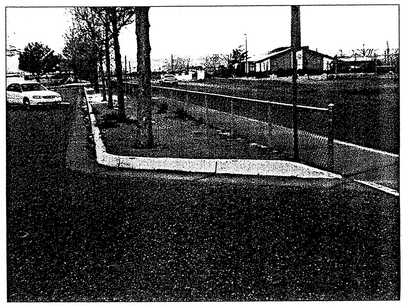


PHOTO 'B' CHURCH NORTH OF PROPOSED ROADWAY FOR BUS DROP-OFF/PICK-UP LANE

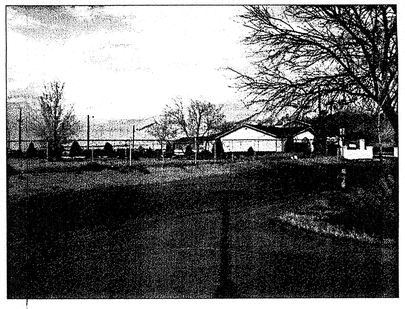


PHOTO 'C' BUILDINGS ACROSS E.G. ROSS ELEMENTARY SCHOOL MAIN BUILDING

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

N

WILSON & COMPANY
2600 THE AMERICAN ROAD S.E.
SUITE 100
RIO RANCHO, NEW MEXICO
87124
(505) 898-8021

WCEA #X4218060
JAN 2005

NO.	DATE	REMARKS	BY
		REVISIONS	

WILSON & COMPANY, ENGINEERS & ARCHITECTS

		DATE
DESIGNED BY	JAT	JAN 2005
DRAWN BY	AJM	JAN 2005
CHECKED BY	MJB	JAN 2005

AS-BUILT INFORMATION

CONTRACTOR		
WORK STAKED BY		DATE
INSPECTOR'S ACCEPTANCE BY		DATE
FIELD VERIFICATION BY		DATE
DRAWINGS CORRECTED BY		DATE

MICRO-FILM INFORMATION

RECORDED BY	DATE
NO.	

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ELEVATION = 5236.57 FEET
(M.S.L.D.-1929)

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

JOHN A. TELLEZ
NEW MEXICO
LICENSED PROFESSIONAL ENGINEER
11/4/04

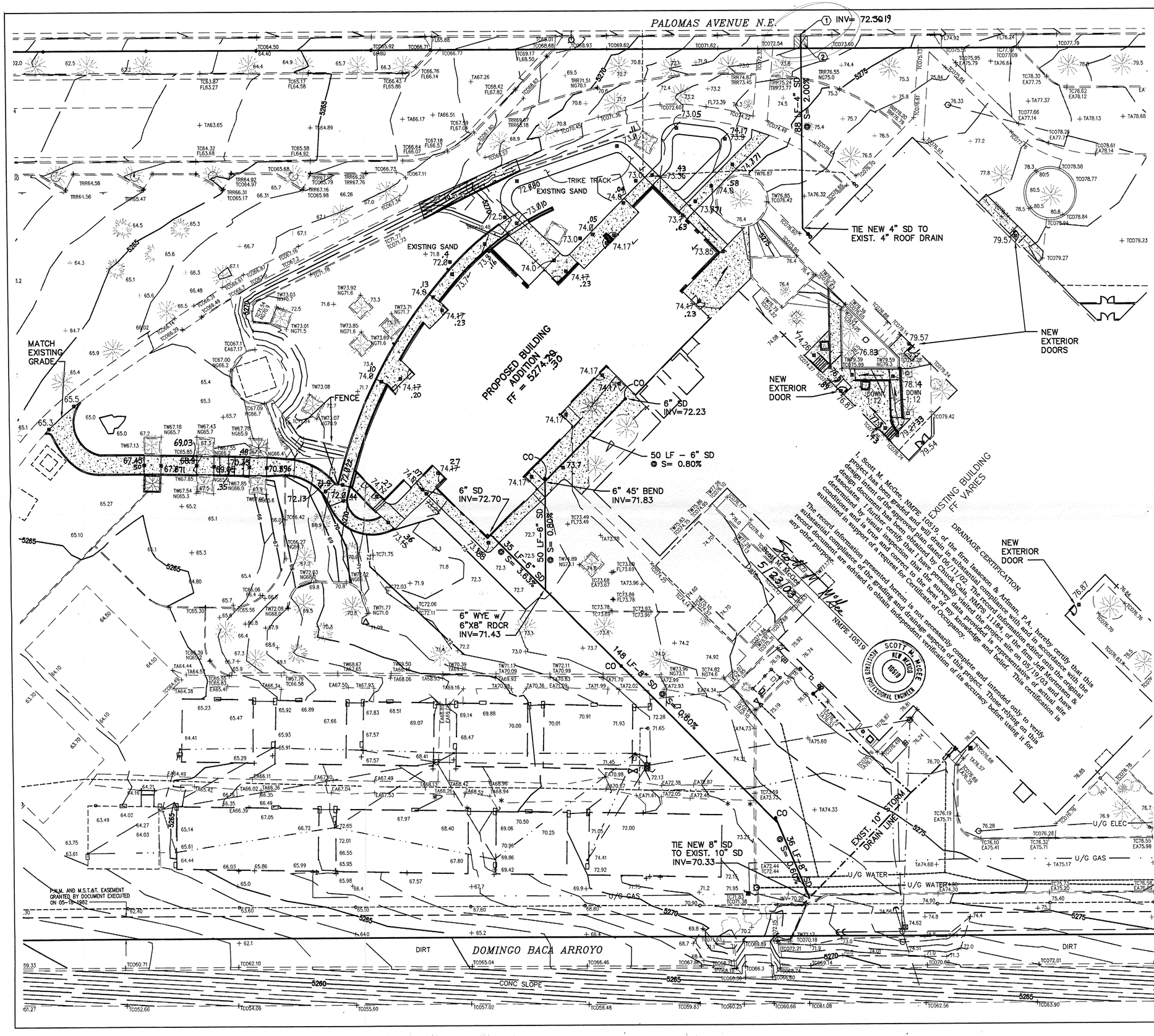
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

E. G. ROSS ELEMENTARY SCHOOL OVERALL SITE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of
754381	D-18	3	8

T:\Projects\X4218060\M\SHEETS\8460DS.dwg 1/4/2005 4:44:28 PM MST



PUBLIC R.O.W. CONSTRUCTION NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREIN, BE CONSTRUCTED IN ACCORDANCE WITH "CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS PUBLIC WORKS CONSTRUCTION 1988."
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE, 260–1990, FOR LOCATION OF EXISTING LINES.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
4. BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE (RESIDENTIAL).
5. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
6. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT–OF–WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.

APPROVALS	NAME	DATE
HYDROLOGY		
INSPECTOR		
A.C.E./FIELD		
PERMIT NO.	MAP NO. D–18	

1. Scott M. McGee, NMPE 10519, of the firm Isaacson & Arfman, P.A. 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 06/11/02. The record information presented hereon is not necessarily complete and intended only to verify design document has been obtained by Chuck Cala, NMPS 11184, of the firm Jack Mortensen & Associates. It has been determined by visual inspection that I have personally visited the project site on 05/19/03 and have determined by visual inspection that I have personally visited the project site on 05/19/03 and have determined further that the grading and drainage aspects of this project, those relying on this 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 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.

Scott M. McGee 5/23/03
Date
NMPE 10519
SCOTT M. McGEE NEW MEXICO 10519 PROFESSIONAL ENGINEER

KEYED NOTES:

1. BUILD 4" SD LINE THRU EXIST. CURB PER COA STD DWG #2235. INV= 72.30
2. REMOVE, DISPOSE & REPLACE 4.0 SY CONC. SIDEWALK PER COA STD DWG #2430.

LEGEND

– –5200– –	EXISTING CONTOUR
—52—	PROPOSED CONTOUR
◆78.3	PROPOSED SPOT ELEVATION
→	FLOW ARROW
INV=70.33	INVERT ELEVATION
▨	SIDEWALK CULVERT
TC=81.95 FL=81.45	TOP OF CURB ELEVATION FLOWLINE
—o— CO	CLEAN OUT TO GRADE
X 74.13	AS - BUILT ELEVATION

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico
194GRD.DWGanw (view 2) 6/11/02

ARCHITECT

SCOTT M. McGEE NEW MEXICO 10519 LICENSED PROFESSIONAL ENGINEER
6/11/02

ENGINEER

KINDERGARTEN CLASSROOM ADDITION
E.G. ROSS ELEMENTARY SCHOOL
6700 PALOMAS AVE. NE, ALBUQUERQUE, NEW MEXICO

EDITH CHERRY / D. JAMES SEE ARCHITECTS
220 A GOLD AVE. SW. ALBUQUERQUE, NEW MEXICO, 87102 505 842-1278

TITLE OF SHEET
GRADING & DRAINAGE PLAN

RECEIVED MAY 23 2003 HYDROLOGY SECTION

DATE

REVISIONS

SHEET NUMBER
C-1
7 OF 60

LEGAL DESCRIPTION:
LOT 4–A, BLOCK 12, TRACT A, UNIT A,
NORTH ALBUQUERQUE ACRES.

AREA: 11.18 ACRES
CONSTRUCTION LIMITS: 0.83 ACRES (240'X150')

PROJECT LIMITS: 27,650 SF (0.635 ACRES)

BENCHMARK:
ACS ALUMINUM DISK "17–D18" LOCATED IN TOP OF BRIDGE ABUTMENT AT THE INTERSECTION OF SAN PEDRO DR. N.E. AND THE SOUTH DOMINGO BACA CHANNEL.
ELEVATION = 5236.57 (MSLD – 1929)

FLOOD ZONE DESIGNATION:
FEMA MAP PANEL 137, INDICATES THIS SITE IS WITHIN ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 500 YR FLOOD PLAIN.

EXISTING CONDITIONS:
THE EDMUND G. ROSS ELEMENTARY SCHOOL SITE IS PRESENTLY DEVELOPED WITH ONE PERMANENT AND TEN PORTABLE BUILDINGS, PAVED PARKING AREAS, PAVED BUS DROP–OFF AREA, GRASS AND SAND PLAY AREAS. SITE RUNOFF DISCHARGES BOTH TO PALOMAS AVENUE N.E. TO THE NORTH AND TO THE DOMINGO BACA ARROYO TO THE SOUTH.

EXISTING HYDROLOGY:
PRECIPITATION ZONE: 2
LAND TREATMENT: 20% B, 22% C & 58% D
Q_{100-6} = (2.28)(.13) + (3.14)(.14) + (4.70)(.37) = 2.5 CFS

PROPOSED CONDITIONS:
ONE PORTABLE BUILDING IS TO BE REPLACED BY AN 11,900 SF KINDERGARTEN ADDITION TO THE EXISTING BUILDING. ADDITIONAL WALKWAYS AND A TRICYCLE TRACK ARE ALSO INCLUDED. THE NEW BUILDING CONSTRUCTION IS PROPOSED IN AN AREA THAT IS LARGELY ASPHALT PAVED. SITE RUNOFF WILL INCREASE ONLY SLIGHTLY AS FOLLOWS:

PROPOSED HYDROLOGY:
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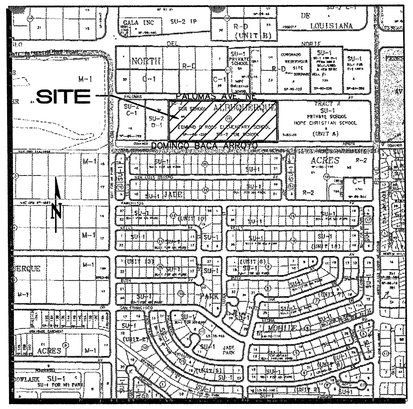
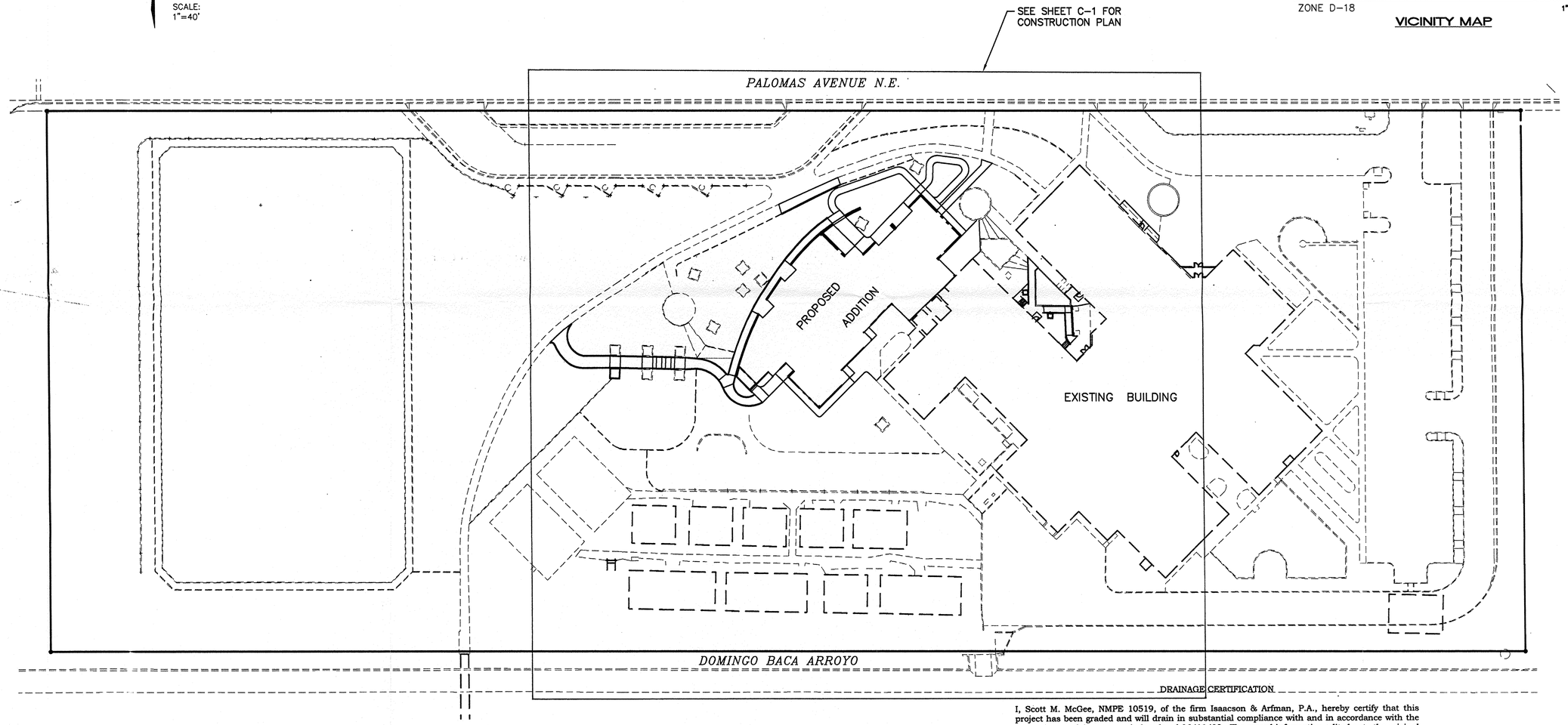


VICINITY MAP

SCALE:
1"=40'



E.G. ROSS ELEMENTARY SCHOOL

SCALE: 1"=40'

DRAINAGE CERTIFICATION

I, Scott M. McGee, NMPE 10519, of the firm Isaacson & Arfman, P.A., 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 06/11/02. The record information edited onto the original design document has been obtained by Chuck Cala, NMPS 11184, of the firm Jeff Mortensen & Associates. I further certify that I have personally visited the project site on 05/19/03 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 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.

Scott M McGee
Scott M. McGee NMPE 10519

5/23/03
Date

SCOTT M. McGEE NEW MEXICO 10519 REGISTERED PROFESSIONAL ENGINEER

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico
194GRD.DWGanw (view1) 6/11/02

ARCHITECT

SCOTT M. McGEE NEW MEXICO 10519 REGISTERED PROFESSIONAL ENGINEER 6/11/02

ENGINEER

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6700 PALOMAS AVE. NE, ALBUQUERQUE, NEW MEXICO

EDITH CHERRY / D. JAMES SEE ARCHITECTS
220 A GOLD AVE. SW. ALBUQUERQUE, NEW MEXICO, 87102 505 842–1278

TITLE OF SHEET

GRADING & DRAINAGE INFORMATION SHEET

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RECEIVED MAY 23 2003 HYDROLOGY SECTION

REVISIONS

SHEET NUMBER

C-0

6 OF 60

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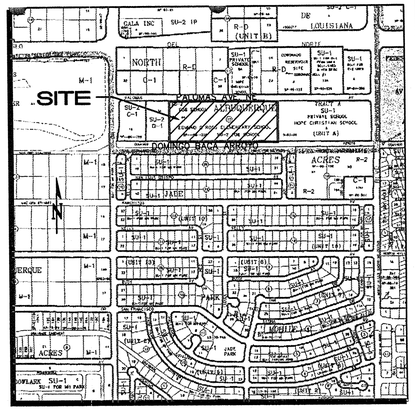
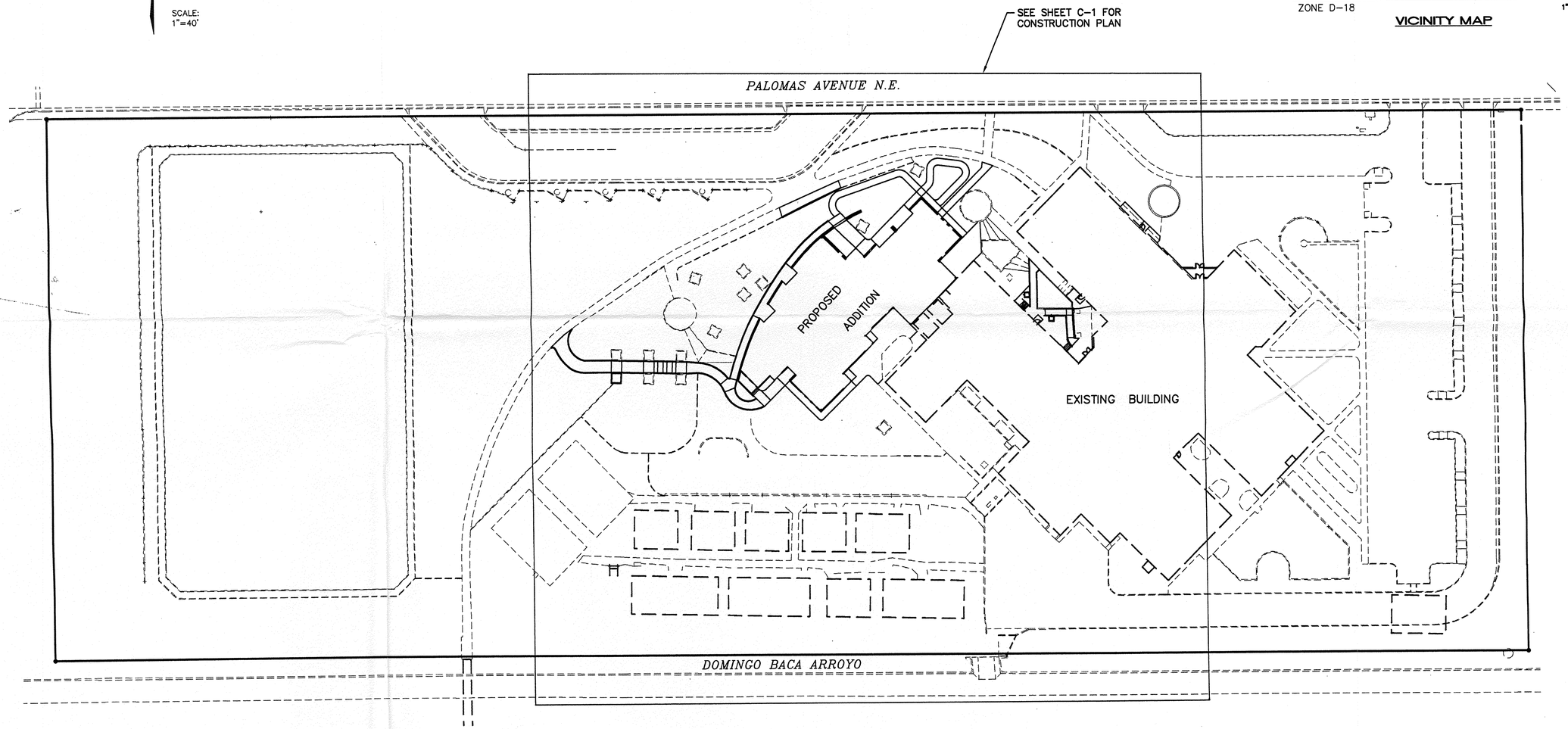


VICINITY MAP

SCALE:
1"=40'



E.G. ROSS ELEMENTARY SCHOOL

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ISAACSON & ARFMAN, P.A.
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128 Monroe Street N.E.
Albuquerque New Mexico
194GRD.DWGcnw (view1) 6/11/02

ARCHITECT

SCOTT M. McGEE
NEW MEXICO
10519
LICENSED PROFESSIONAL ARCHITECT
6/11/02

ENGINEER

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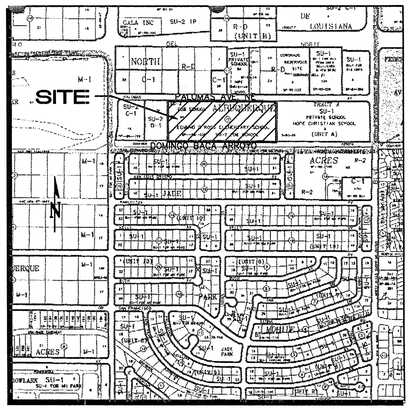
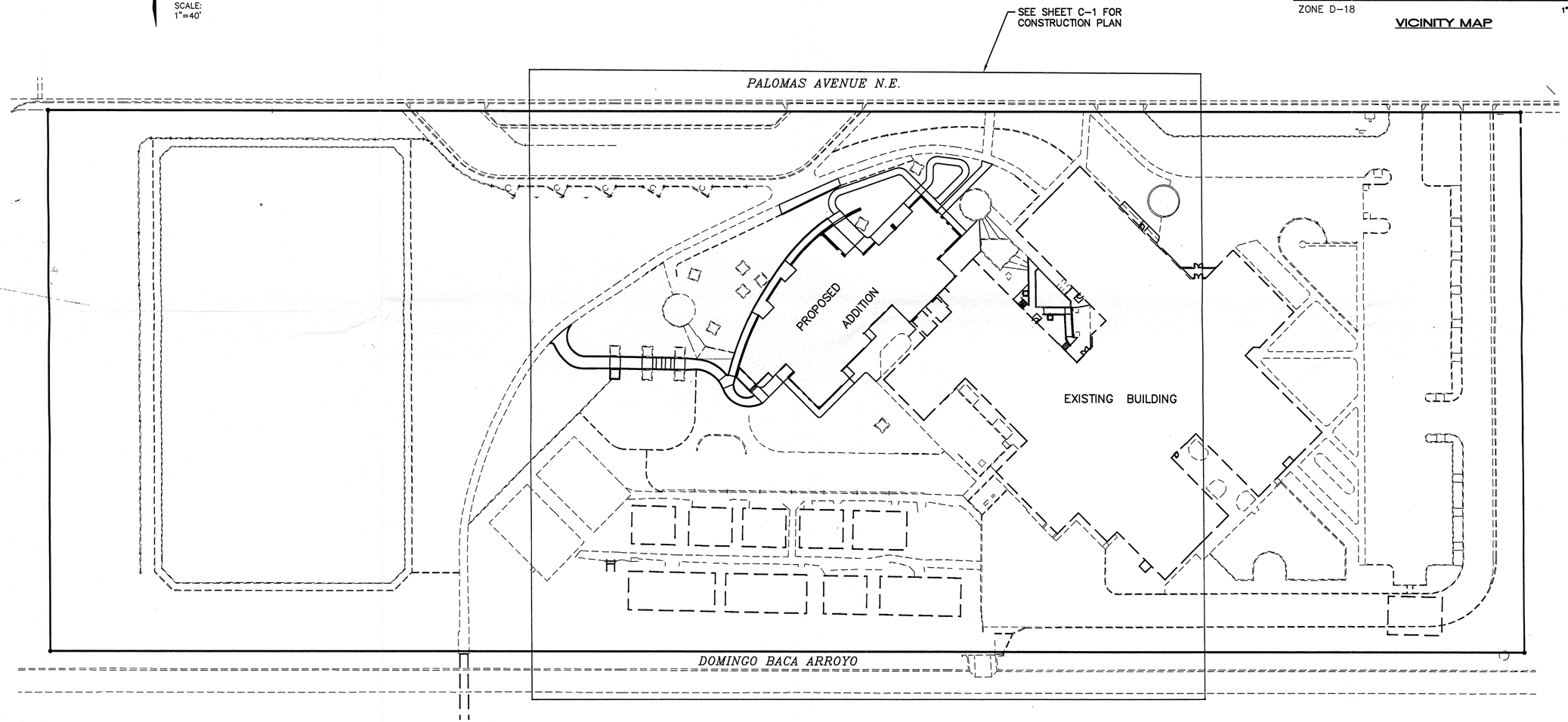


VICINITY MAP

SCALE: 1"=40'



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128 Monroe Street N.E.
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194GRD.DWGanw (view1) 6/11/02

ARCHITECT

ENGINEER

SCOTT M. McGEE NEW MEXICO 10519 PROFESSIONAL ENGINEER 6/11/02

KINDERGARTEN CLASSROOM ADDITION
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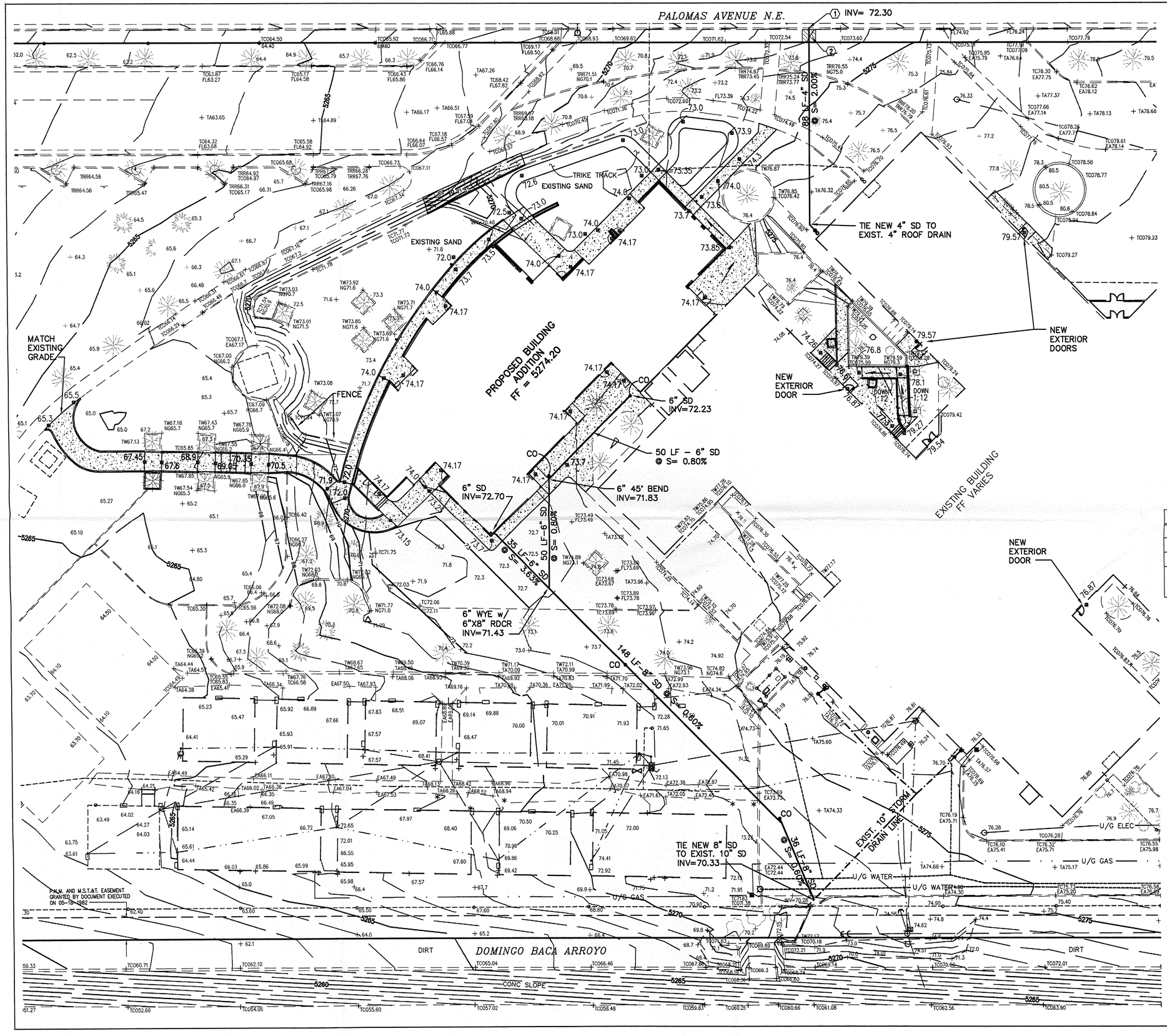

PUBLIC R.O.W. CONSTRUCTION NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREIN, BE CONSTRUCTED IN ACCORDANCE WITH "CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS PUBLIC WORKS CONSTRUCTION 1988."
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE, 260-1990, FOR LOCATION OF EXISTING LINES.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
4. BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE (RESIDENTIAL).
5. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
6. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.

APPROVALS	NAME	DATE
HYDROLOGY		
INSPECTOR		
A.C.E./FIELD		
PERMIT NO.	MAP NO. D-18	

KEYED NOTES:

1. BUILD 4" SD LINE THRU EXIST. CURB PER COA STD DWG #2235. INV= 72.30
2. REMOVE, DISPOSE & REPLACE 4.0 SY CONC. SIDEWALK PER COA STD DWG #2430.

LEGEND

5200	EXISTING CONTOUR
52	PROPOSED CONTOUR
78.3	PROPOSED SPOT ELEVATION
	FLOW ARROW
INV=70.33	INVERT ELEVATION
	SIDEWALK CULVERT
TC=81.95 / FL=81.45	TOP OF CURB / FLOWLINE ELEVATION
CO	CLEAN OUT TO GRADE

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194GRD.DWGanw (view 2) 6/11/02

ARCHITECT

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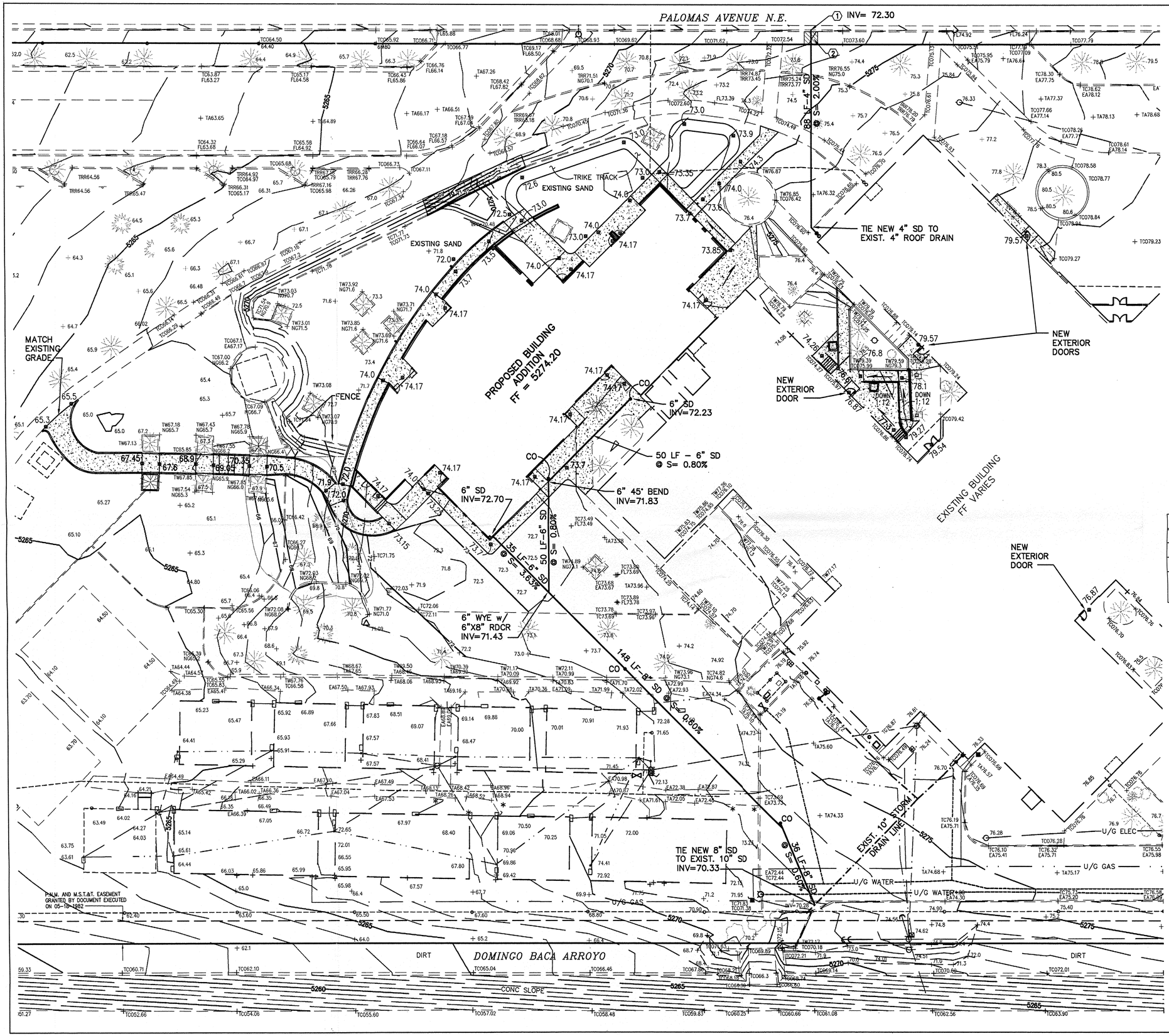

SCALE: 1"=20'

20 15 10 5 0 20 40 FEET

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HYDROLOGY		
INSPECTOR		
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194GRD.DWGanw (view 2) 6/11/02

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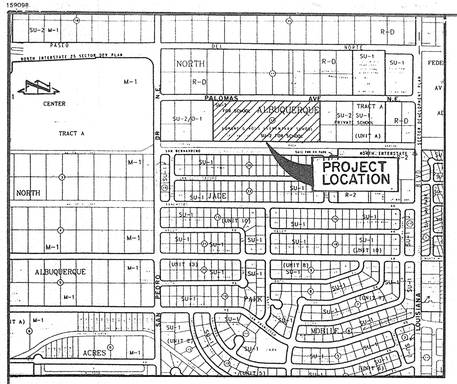
159098



VICINITY MAP
SCALE: 1" = 750'

D-18

LEGEND

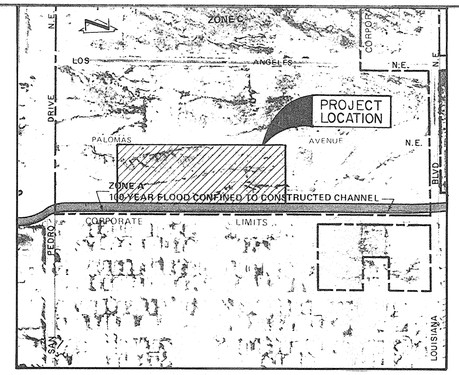
- PROPOSED SPOT ELEVATION
- 5240 EXISTING CONTOUR
- 53 PROPOSED CONTOUR
- PROPOSED ASPHALT
- PROPOSED CONCRETE

LEGAL DESCRIPTION

LOT 4A, BLOCK 12, NORTH ALBUQUERQUE ACRES AND TRACT A, UNIT A.

T.B.M.

T.B.M. = PROJECT BENCH MARK



F.I.R.M. MAP
SCALE: 1" = 500'

PANEL 10 OF 50

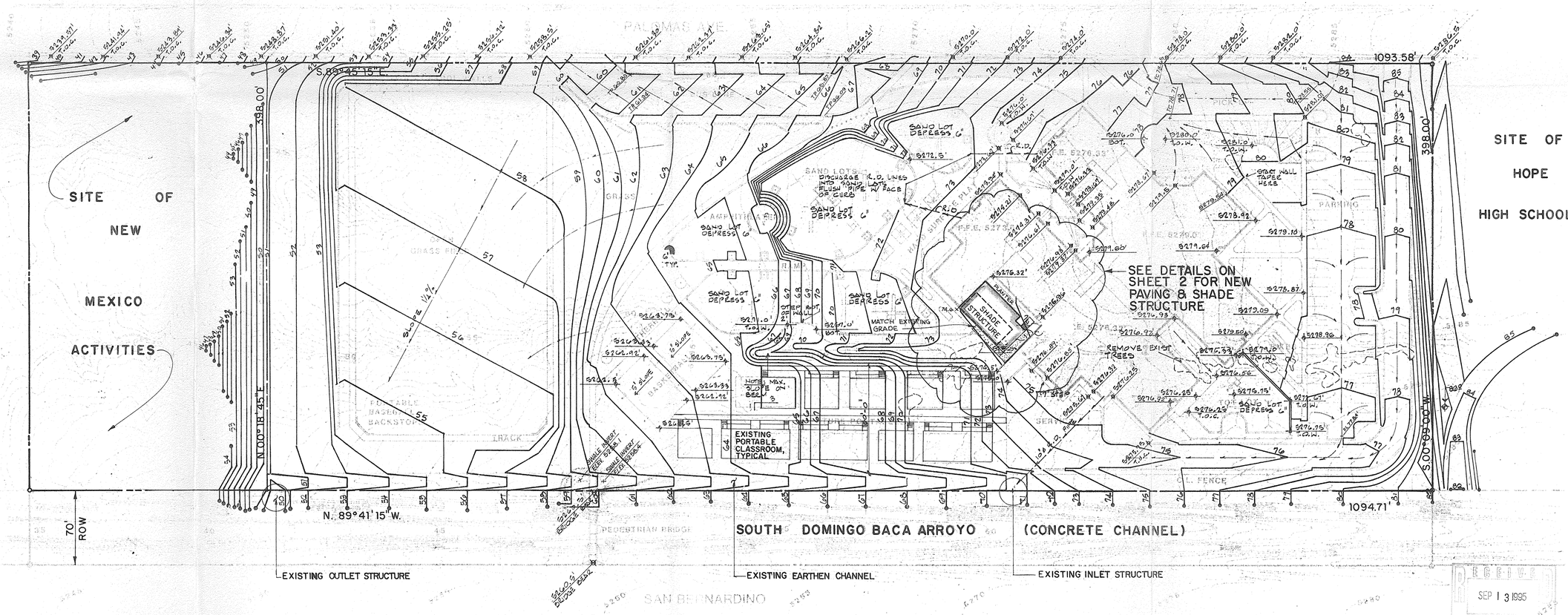
JEFFREY A. MORTENSEN
NEW MEXICO
8547
REGISTERED PROFESSIONAL ENGINEER

9-13-95

SCALE: 1" = 50'

B.M. 5235.63' (M.S.L.D.)

PROJECT BENCH MARK: A STANDARD A.C.S. BRASS TABLET STAMPED "II-D18-1978" SET IN THE TOP OF A CONCRETE POST FLUSH WITH THE GROUND AT THE SOUTHEAST CORNER OF THE INTERSECTION OF SAN PEDRO BLVD.,N.E. AND LOS ANGLES AVE.,N.E.



RECEIVED
SEP 13 1995
HYDROLOGY

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

DRAINAGE PLAN

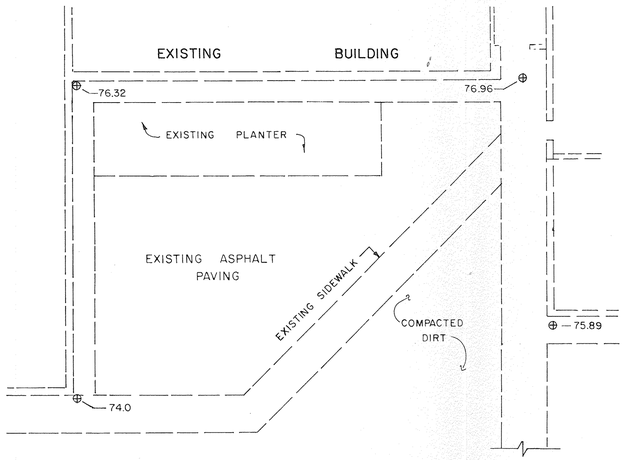
EDMUND G. ROSS ELEMENTARY SCHOOL

DESIGNED BY	J.G.M.
DRAWN BY	J.E.W.
APPROVED BY	J.G.M.

NO.	DATE	BY	REVISIONS

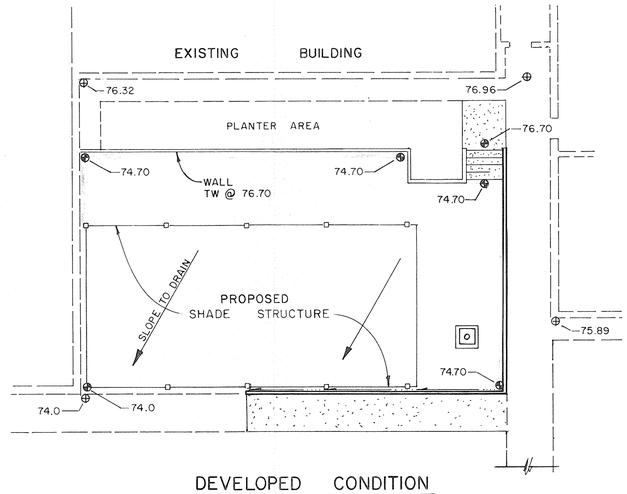
JOB NO.	10524
DATE	09/1995
SHEET	1 OF 2

159098



EXISTING CONDITION

SCALE: 1" = 10'



DEVELOPED CONDITION

SCALE: 1" = 10'

CALCULATIONS

Site Characteristics

1. Precipitation Zone = 3
2. $P_{6,100} = P_{360} = 2.60$
3. Total Area (A_T) = 3,350 sf/0.077 ac
4. Existing Land Treatment

Treatment	Area (sf/ac)	%
B	400/0.009	12
C	610/0.014	18
D	2,340/0.054	70

5. Developed Land Treatment

Treatment	Area (sf/ac)	%
B	390/0.009	12
D	2,960/0.068	88

Existing Condition

1. Volume

$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$
$E_w = [(0.92)(0.009) + (1.29)(0.014) + (2.36)(0.054)]/0.077 = 2.00$ in
$V_{100} = (E_w/12)A_T$
$V_{100} = (2.00/12)(0.077) = 0.0128$ ac ft = 560 cf

2. Peak Discharge

$Q_p = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D$
$Q_p = Q_{100} = (2.60)(0.009) + (3.45)(0.014) + (5.02)(0.054) = 0.34$ cfs

Developed Condition

1. Volume

$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$
$E_w = [(0.92)(0.009) + (2.36)(0.068)]/0.077 = 2.19$ in
$V_{100} = (E_w/12)A_T$
$V_{100} = (2.19/12)(0.077) = 0.0141$ ac ft = 610 cf

2. Peak Discharge

$Q_p = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D$
$Q_p = Q_{100} = (2.60)(0.009) + (5.02)(0.068) = 0.36$ cfs

Comparison

1. $\Delta V_{100} = 610 - 560 = 50$ cf (increase)
2. $\Delta Q_{100} = 0.36 - 0.34 = 0.02$ cfs (increase)

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

9/13/95

Drainage Plan

The following information concerning the Edmund G. Ross Elementary School Drainage Plan is contained hereon:

1. Vicinity Map
2. Floodplain Map
3. Composite Grading & Drainage Plan
4. Drainage Plan Text

As shown by the Vicinity Map, the site is located on the south side of Palomas Ave. N.E. between San Pedro Drive and Louisiana Ave. At present, the site is developed as an A.P.S. Elementary School site. Palomas Ave. is an improved public City right-of-way. The South Domingo Baca Arroyo lies along the south side of the site and is also improved.

As shown by panel 10 of 50 of the National Flood Insurance Program, Flood Insurance Rate Maps for the City of Albuquerque, this site does not lie within a designated Flood Hazard Zone. The South Domingo Baca Channel has been designated as a 100-year flood zone with the "flood confined to constructed channel." This facility outfalls to the AMAFCA North Diversion Channel, which is located farther to the west. The South Domingo Baca Channel is the outfall for this site.

The Grading and Drainage Plan is based upon the existing plan of record for the initial construction. At present, the site drains from northeast to southwest and outfalls to the South Domingo Baca Channel as stated above. The proposed construction consists of the installation of a shade structure, the location of which is shown on the plan. The shade structure will occupy area which is mostly impervious (paved) with some compacted dirt and landscaping. Because of this, the hydrologic characteristics of the site will be very slightly impacted as the amount of impervious and pervious areas will be slightly altered.

As shown by the Calculations, an increase of 0.02 cfs will be observed for the 100-year rainfall event. Due to the insignificant increase in runoff, no mitigative efforts are proposed. The Calculations shown hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The procedure for the 40-acre and smaller basins, as set forth in the revisions 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 the volume of runoff generated. As shown by the Calculations, an increase of 0.02 cfs is to be expected. Because the proposed improvements consist of modifications to an existing site within an infill area which lies within close proximity to the South Domingo Baca Channel, the continued free discharge from this site is appropriate.

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SHADE STRUCTURE DETAILS AND CALCULATIONS

EDMUND G. ROSS ELEMENTARY SCHOOL

DESIGNED BY J.G.M.
DRAWN BY J.E.W.
APPROVED BY J.G.M.

NO.	DATE	BY	REVISIONS

JOB NO. 10524
DATE 09/1995
SHEET 2 OF 2