

DRAINAGE PLAN

THE FOLLOWING ITEMS CONCERNING A 14 LOT SUBDIVISION KNOWN AS TRUMBULL VILLAGE SUBDIVISION, LOCATED IN EXISTING PLATTED LOTS 7, 8, 9, 10, 11 & 12, BLOCK 27, EMIL MANN ADDITION, ALBUQUERQUE, NEW MEXICO, GRADING AND DRAINAGE PLAN ARE CONTAINED HEREON:

1. DRAINAGE CALCULATIONS
2. VICINITY MAP (L-19)
3. FLOOD INSURANCE RATE MAP 35001C0358D

EXISTING CONDITIONS

AS SHOWN BY THE VICINITY MAP, THE SITE IS BOUNDED ON THE WEST BY DALLAS STREET SE, ON THE EAST BY PENNSYLVANIA STREET SE, AND ON THE SOUTH BY SOUTHERN AVENUE SE AND ON THE NORTH BY LOT 6, BLOCK 27, EMIL MANN ADDITION, (SEE ATTACHED VICINITY MAP (L-19)). THE PARCEL'S EXISTING LEGAL DESCRIPTION OF LOTS 7, 8, 9, 10, 11 & 12, BLOCK 27, EMIL MANN ADDITION, WILL BE REPLATED AS PART OF THIS DEVELOPMENT CONSISTING OF LOTS 1-14. THIS SITE CONTAINS APPROXIMATELY 1.12ACRES.

EXISTING LOTS 7 AND 8 HAVE BEEN UNDEVELOPED IN THE PAST AND APPEAR TO BE HUMAN COMPACTED LOTS WITH MINIMAL VEGETATION BASED ON 1999 AERIAL PHOTOGRAPHS. LOTS 9 AND 10 CONSISTED OF A LARGE BUILDING THAT OCCUPIED AT LEAST 50% OF THE LOT AREA BASED ON THE 1999 AERIAL PHOTOGRAPHS (THIS BUILDING NO LONGER EXIST ON THIS SITE). LOTS 11 AND 12 CONSISTED OF EXISTING ASPHALT PAVING THAT OCCUPIED APPROXIMATELY 100% OF THE LOT AREA BASED ON THE 1999 AERIAL PHOTOGRAPHS (ASPHALT PAVING IS EXISTING ON THIS SITE).

THE CALCULATIONS IDENTIFY ONE DRAINAGE BASIN FOR THIS EXISTING SITE SINCE ALL DRAINAGE FLOWS SHEETFLOW INTO DALLAS STREET SE.

THE MAJORITY OF THE SITE DOES NOT LIE WITHIN A DESIGNATED 100 YEAR FLOODPLAIN; HOWEVER, THE NORTHEAST CORNER OF THIS DEVELOPMENT ALONG PENNSYLVANIA STREET HAS A DESIGNATED 100-YEAR FLOODPLAIN PER FIRM MAP 35001C0358D

PROPOSED CONDITIONS

AS SHOWN BY THE PLAN, THE PROJECT CONSISTS OF A SUBDIVISION WITH 14 NEW RESIDENTIAL LOTS EACH LOT WILL CONSIST OF A RESIDENTIAL HOME AND A DETACHED GARAGE. THE PLAN WILL ALSO CONSIST OF PATIOS, SIDEWALKS, DRIVEWAYS AND LANDSCAPING FOR EACH LOT AND IS TO BE PROVIDED PER CITY ZONING REQUIREMENTS.

THE PLAN ALSO SHOWS PROPOSED ELEVATIONS REQUIRED TO PROPERLY DRAIN EACH THE NEW HOMES AND GARAGES WITHIN EACH LOT. ALL DRIVEWAYS AT THE RIGHT-OF-WAY ARE TO BE PAVED WITH CONCRETE. ALL PORTIONS OF THE DRIVEWAY ON THE LOT ARE TO BE PAVED WITH BASE COURSE. THIS DRAINAGE ANALYSIS WILL BASE THIS DRIVEWAY ON ASPHALT IN CASE AN UPGRADE OF ASPHALT PAVING IS USED.

THE 4 NEW LOTS AT THE NORTHEAST CORNER OF THE PROPOSED SUBDIVISION THAT ARE ADJACENT TO PENNSYLVANIA BOULEVARD AND PARTIALLY WITHIN THE 100-YEAR FLOODPLAIN WILL REQUIRE THAT THE FINISH FLOOR BE ELEVATED A MINIMUM OF TWO FEET ABOVE THE CURB FLOWLINE. THIS SHOULD PROVIDE A ONE FOOT OF FREEBOARD FLOODPROOFING ABOVE THE DESIGNATED 100-YEAR FLOODPLAIN.

THE CALCULATIONS WILL IDENTIFY TWO DRAINAGE BASINS FOR THE DEVELOPMENT. DRAINAGE BASIN "A" WILL DRAIN INTO PENNSYLVANIA STREET SE AND DRAINAGE BASIN "B" WILL DRAIN INTO DALLAS STREET SE.

THE CALCULATIONS WHICH APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6 HOUR RAINFALL RUNOFF FOR PEAK FLOWS AND STORM DURATION FOR VOLUME REQUIREMENTS. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS AS SET FORTH IN THE REVISION OF SECTION 22.7 HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993. THIS D.P.M. PROCEDURE IS USED FOR ANALYZING ONSITE FLOWS.

DOWNSTREAM CAPACITY

SINCE THIS SITE IS AN INFILL SITE AND THIS SITE WAS PREVIOUSLY DEVELOPED THIS NEW SUBDIVISION SHOULD HAVE MINIMAL IMPACT TO DOWNSTREAM CAPACITY.

OFFSITE FLOWS

IT DOES NOT APPEAR THAT OFFSITE FLOWS SHOULD IMPACT THE SITE AND FINISH FLOOR ELEVATIONS WILL BE SET AT LEAST 1.5 FEET ABOVE THE CURB FLOWLINE FOR EACH NEW LOT, THE EXCEPTION TO THIS IS THE 4 NEW LOTS AT THE NORTHEAST CORNER OF THE PROPOSED SUBDIVISION THAT ARE ADJACENT TO PENNSYLVANIA BOULEVARD. THESE LOTS ARE PARTIALLY WITHIN THE 100-YEAR FLOODPLAIN AND WILL REQUIRE THAT THE FINISH FLOOR BE ELEVATED A MINIMUM OF TWO FEET ABOVE THE CURB FLOWLINE. THIS SHOULD PROVIDE A ONE FOOT OF FREEBOARD FLOODPROOFING ABOVE THE DESIGNATED 100-YEAR FLOODPLAIN TO MINIMIZE OFFSITE FLOW IMPACTS.

EROSION CONTROL

THE CONTRACTOR WILL BE REQUIRED TO PROVIDE SILT FENCES AROUND THE PROPOSED CONSTRUCTION AREAS AT THE BACK OF EXISTING SIDEWALK IN ORDER TO MINIMIZE SEDIMENT INTO THE PUBLIC ROADWAYS.

CONTRACT WILL ALSO BE REQUIRED TO PROTECT EXISTING INLETS ADJACENT TO THE SITE WITH SEDIMENT CONTROL MEASURES IN ORDER TO MINIMIZE SEDIMENT FROM ENTERING THESE INLETS.

DRAINAGE CALCULATIONS

1. PRECIPITATION ZONE=3

2. DESIGN STORM = DEPTH (INCHES) AT 100-YEAR STORM

6-HOUR = 2.60 INCHES
24-HOUR = 3.10 INCHES
10 DAY = 4.90 INCHES

3. PEAK DISCHARGE (CFS/ACRE) FOR 100-YEAR, ZONE 2, TABLE A-9:

Q = 1.87 CFS/ACRE SOIL UNCOMPACTED "A"
Q = 2.60 CFS/ACRE LANDSCAPED "B"
Q = 3.45 CFS/AC COMPACTED SOIL "C"
Q = 5.02 CFS/ACRE IMPERVIOUS AREA "D"
FOR WATERSHEDS LESS THAN OR EQUAL TO 40 ACRES

4. EXCESS PRECIPITATION, E (INCHES), 6 HOUR STORM, ZONE 2, TABLE A-8:

E = 0.66 INCHES SOIL UNCOMPACTED "A"
E = 0.92 INCHES LANDSCAPED "B"
E = 1.29 INCHES COMPACTED SOIL "C"
E = 2.36 INCHES IMPERVIOUS AREA "D"

5. PRE-EXISTING CONDITIONS ONSITE PER 1999 AERIAL PHOTOGRAPH:

EXISTING TOTAL AREA OF SITE = 1.12ACRES
EXISTING LOTS 7 AND 8 AREA = 0.37ACRES, 100% TYPE "C" - COMPACTED
EXISTING LOTS 9 AND 10 AREA = 0.37ACRES, 50% TYPE "C" - COMPACTED AND 50% TYPE "D" - IMPERVIOUS
EXISTING LOTS 11 AND 12 AREA = 0.37ACRES, 100% TYPE "D" - IMPERVIOUS

TREATMENT	AREA(ACRES)
A	0
B	0
C	0.37 + 0.5(0.37) = 0.56AC
D	0.5(0.37) + 0.37 = 0.56AC

Q(EXISTING-6HR) = (3.45 X 0.56) + (5.02 X 0.56)
= 4.74CFS (6HR) EXISTING ONSITE FLOW INTO DALLAS STREET SE
V(EXISTING-6HR) = ((1.29 X 0.56) + (2.36 X 0.56))/ 12
= 0.17AC-FT = 7.420CF EXISTING ONSITE VOLUME INTO DALLAS STREET SE

6. PROPOSED CONDITIONS ONSITE:

BASIN "A", TOTAL AREA = 0.56ACRES INTO PENNSYLVANIA STREET SE
0.56AC/7LOTS = 0.08AC PER LOT
TYPE (TREATMENT "D") = (1240SF) HOUSE ROOF AREA + (428SF) GARAGE + (44SF)SDWK + (730SF)DRVY = 2.442SF = 0.06AC PER LOT
50% (TREATMENT "B") = (0.08 - 0.06)/2 = 0.01AC PER LOT
50% (TREATMENT "C") = (0.08 - 0.06)/2 = 0.01AC PER LOT
TREATMENT AREA(ACRES)
A 0
B 0.01 X 7LOTS = 0.07AC
C 0.01 X 7LOTS = 0.07AC
D 0.06 X 7LOTS = 0.42AC

Q(PROPOSED) = (2.60 X 0.07) + (3.45 X 0.07) + (5.02 X 0.42)
= 2.53CFS (6HR) PROPOSED ONSITE FLOW INTO PENNSYLVANIA SE

V(EXISTING-6HR) = (0.92 X 0.07) + (1.29 X 0.07) + (2.36 X 0.42))/ 12
= 0.10AC-FT = 4.160CF PROPOSED VOLUME INTO PENNSYLVANIA SE

BASIN "B", TOTAL AREA = 0.56ACRES INTO DALLAS STREET SE
0.56AC/7LOTS = 0.08AC PER LOT
TYPE (TREATMENT "D") = (1240SF) HOUSE ROOF AREA + (428SF) GARAGE + (44SF)SDWK + (730SF)DRVY = 2.442SF = 0.06AC PER LOT
50% (TREATMENT "B") = (0.08 - 0.06)/2 = 0.01AC PER LOT
50% (TREATMENT "C") = (0.08 - 0.06)/2 = 0.01AC PER LOT
TREATMENT AREA(ACRES)
A 0
B 0.01 X 7LOTS = 0.07AC
C 0.01 X 7LOTS = 0.07AC
D 0.06 X 7LOTS = 0.42AC

Q(PROPOSED) = (2.60 X 0.07) + (3.45 X 0.07) + (5.02 X 0.42)
= 2.53CFS (6HR) PROPOSED ONSITE FLOW INTO DALLAS STREET SE

V(EXISTING-6HR) = (0.92 X 0.07) + (1.29 X 0.07) + (2.36 X 0.42))/ 12
= 0.10AC-FT = 4.160CF PROPOSED VOLUME INTO DALLAS STREET SE

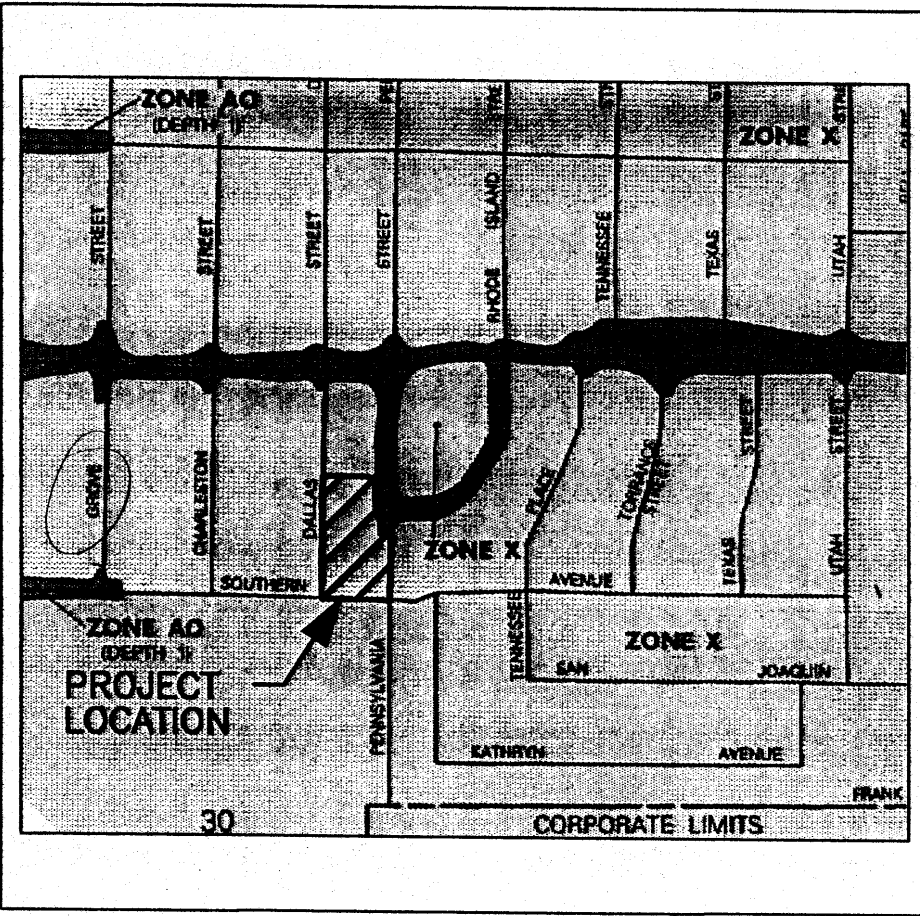
7. IMPACT OF THIS DEVELOPMENT ON DOWNSTREAM CAPACITY NORTH ON DALLAS STREET AND PENNSYLVANIA STREET AND ULTIMATELY INTO THE TRUMBULL STREET SE

Q(EXISTING) = 0CFS (6HR) EXISTING ONSITE FLOW INTO PENNSYLVANIA STREET SE
Q(PROPOSED) = 2.53CFS PROPOSED ONSITE FLOW INTO PENNSYLVANIA STREET SE
FLOW INCREASE = 2.53CFS - 0CFS = 2.53CFS PROPOSED INCREASE OF FLOW INTO PENNSYLVANIA STREET SE AND NORTH INTO TRUMBULL STREET SE. EXISTING FLOWS FROM DALLAS STREET FLOW NORTH INTO TRUMBULL STREET SE. MINIMAL IMPACT TO FLOWS INTO TRUMBULL STREET SE.

Q(EXISTING) = 4.74CFS (6HR) EXISTING ONSITE FLOW INTO DALLS STREET SE
Q(PROPOSED) = 2.53CFS PROPOSED ONSITE FLOW INTO DALLAS STREET SE

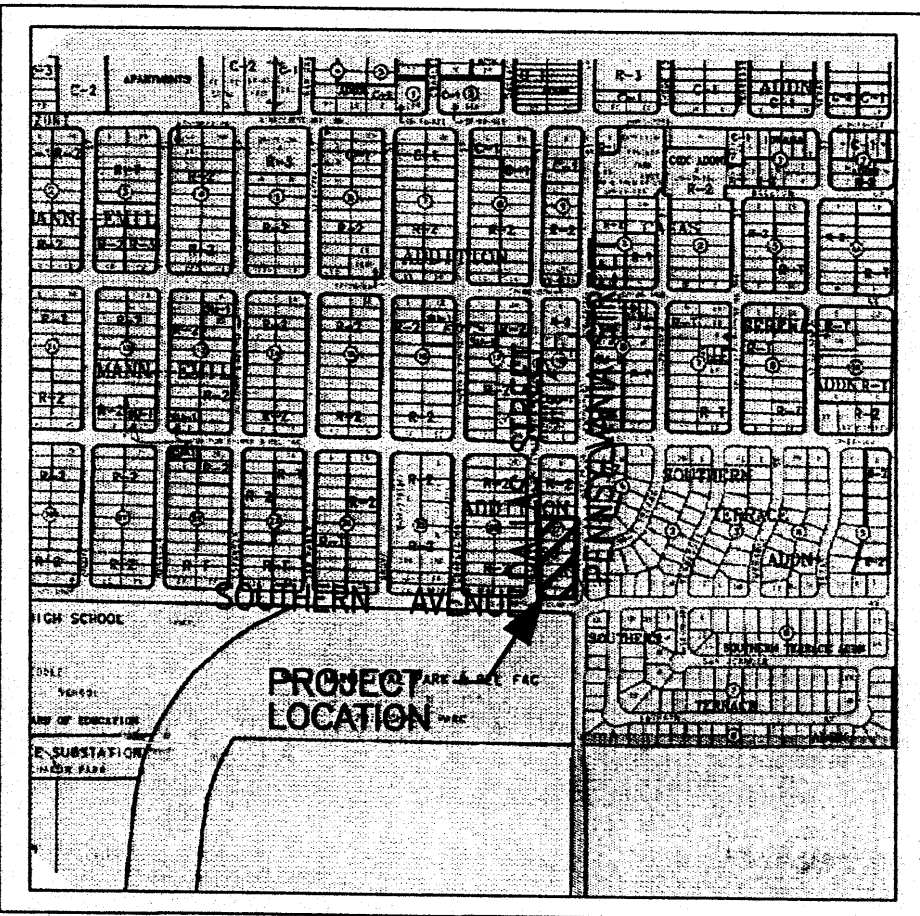
FLOW INCREASE/DECREASE = 2.53CFS - 4.74CFS = 2.21CFS
PROPOSED DECREASE OF FLOW INTO DALLAS STREET SE AND NORTH INTO TRUMBULL STREET SE.

NET INCREASE OF FLOWS FROM THIS DEVELOPMENT ULTIMATELY INTO TRUMBULL STREET SE = 4.74 CFS - 5.06CFS = **0.32CFS INCREASE OF FLOW DUE TO THIS DEVELOPMENT RESULTING IN MINIMAL IMPACT TO DOWNSTREAM IMPACT TO TRUMBULL STREET SE.**



FIRM MAP 35001C0358D

SCALE: N.T.S.



VICINITY MAP L-19

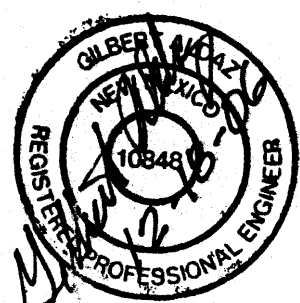
SCALE: N.T.S.

LOTS 1 THROUGH 14
TRUMBULL VILLAGE SUBDIVISION

UTILITY PRECAUTIONS

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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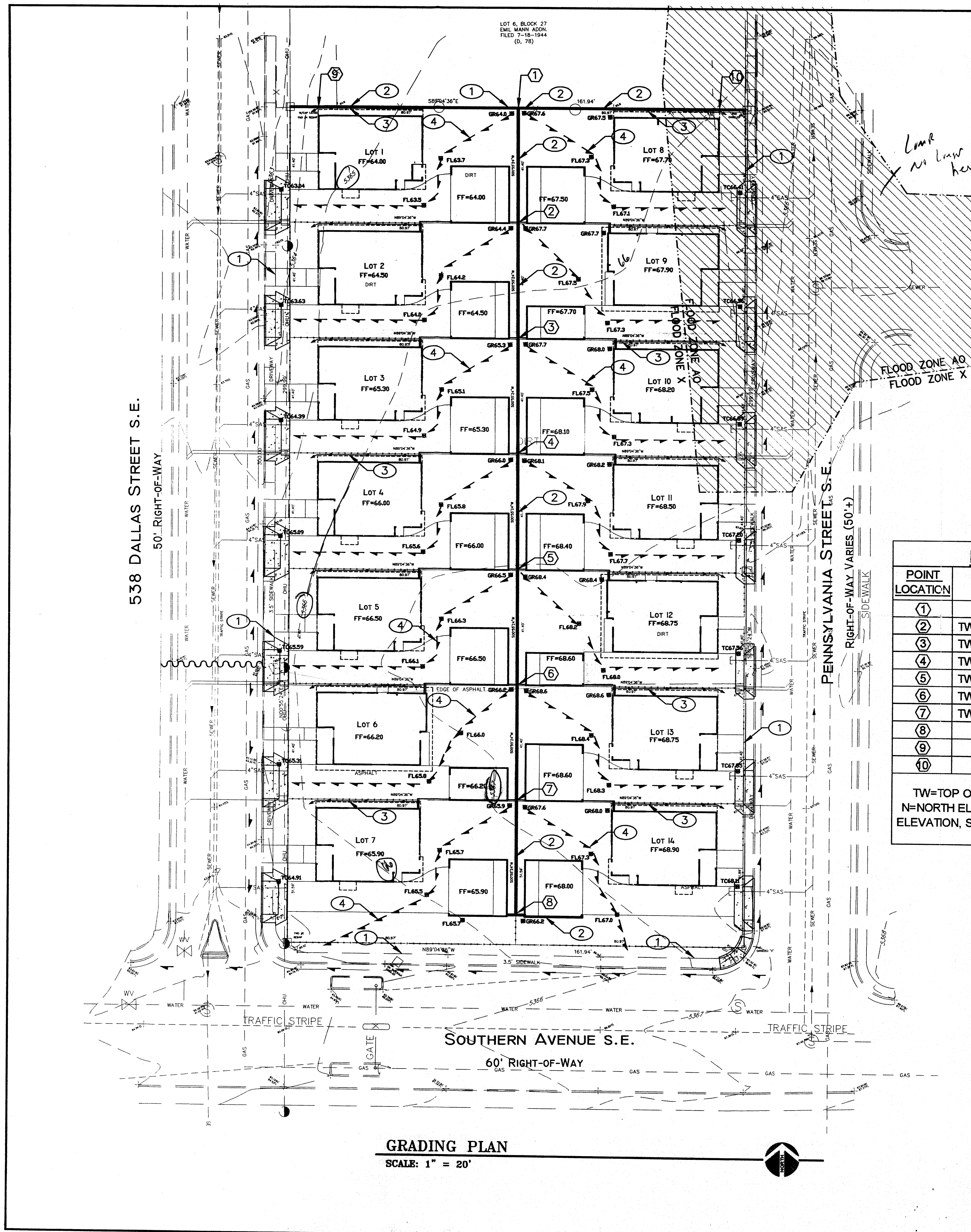
DRAINAGE CALCULATIONS AND DETAILS
TRUMBULL VILLAGE SUBDIVISION
ALBUQUERQUE, NEW MEXICO

Applied Engineering & Surveying, Inc.
1805 BLAIR DRIVE NE
ALBUQUERQUE, NEW MEXICO 87112 PH: (505)237-1456

DATE/REVISIONS:

SHEET NUMBER:

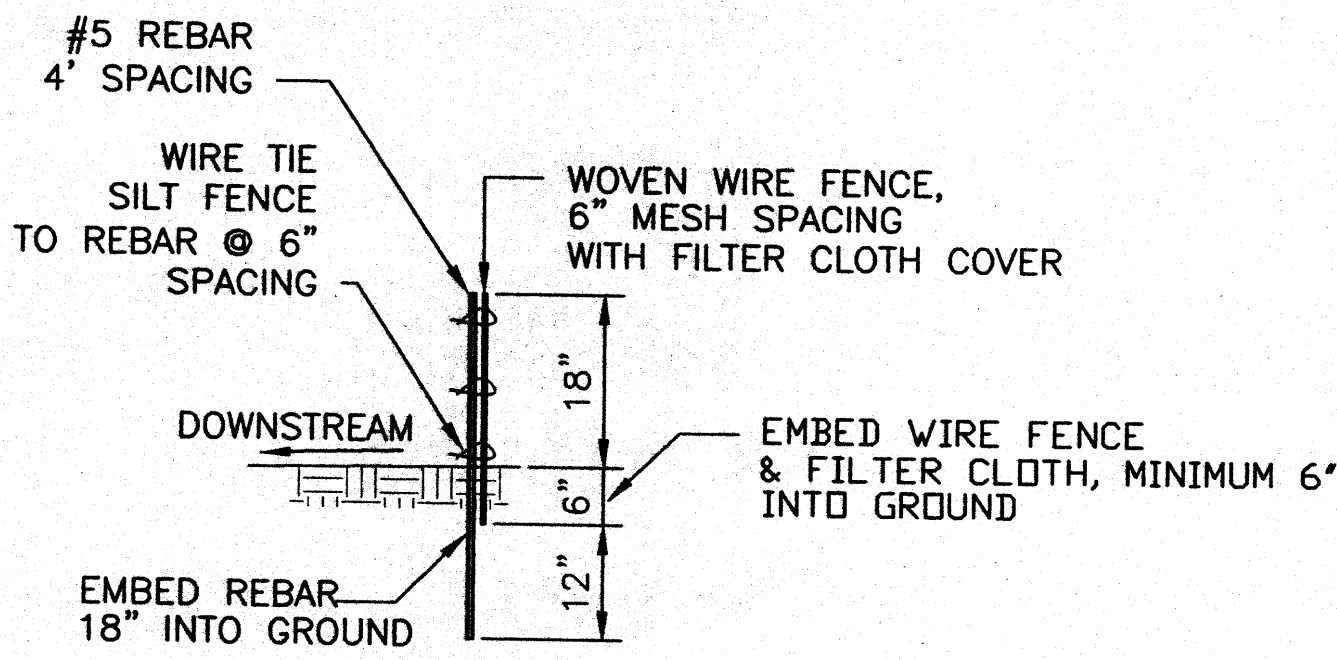
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GRADING PLAN
SCALE: 1" = 20'

RETAINING WALL ELEVATIONS	
POINT LOCATION	ELEVATIONS
①	TW=67.8, BW=65.4N, BW=64.0SW, BW=67.6SE
②	TW=67.8, BW=67.5NE, BW=64.0NW, BW=64.4SW, BW=67.7SE
③	TW=67.8, BW=67.7NE, BW=64.5NW, BW= 65.3SW, BW=67.7SE
④	TW=68.5, BW=68.1NE, BW=65.3NW, BW= 66.0SW, BW=68.1SE
⑤	TW=68.5, BW=68.4NE, BW=66.0NW, BW= 66.5SW, BW=68.4SE
⑥	TW=69.2, BW=68.6NE, BW=66.5NW, BW= 66.2SW, BW=68.6SE
⑦	TW=69.2, BW=68.6NE, BW=66.2NW, BW= 65.9SW, BW=67.1SE
⑧	TW=68.5, BW=67.6NE, BW=65.9NW, BW= 65.9S
⑨	TW=64.6, BW=64.3N, BW=63.7S
⑩	TW=67.8, BW=66.0N, BW=67.3S

TW=TOP OF WALL, BW=BOTTOM OF WALL, S=SOUTH ELEVATION, N=NORTH ELEVATION, NE=NORTHEAST ELEVATION, NW=NORTHWEST ELEVATION, SW=SOUTHWEST ELEVATION, SE=SOUTHEAST ELEVATION



SILT FENCE DETAIL
SCALE: 1/2" = 1'-0"

CONSTRUCTION NOTES:

- 1 PROVIDE SILT FENCE PER DETAIL SHOWN ON THIS SHEET ALONG PERIMETER OF ENTIRE CONSTRUCTION SITE. CONTRACTOR SHALL MAINTAIN SILT FENCE THROUGHOUT CONSTRUCTION UNTIL SUCH TIME THAT FINAL INSPECTION PERFORMED BY CITY OF ALBUQUERQUE OR PERMANENT STABILIZATION HAS BEEN ESTABLISHED.
- 2 CONSTRUCT RETAINING WALL PER GRADES SHOWN.
- 3 PROVIDE ROOF GUTTER ALONG ROOF EDGE TO DRAIN ROOF FLOWS TO FRONT YARD WITH DOWNSPOUT AT FRONT YARD WITH CONCRETE SPLASH BLOCK.
- 4 CONSTRUCT DRAINAGE SWALE TO DIVERT FLOWS FROM BACKYARD TO FRONTYARD PER GRADES SHOWN.

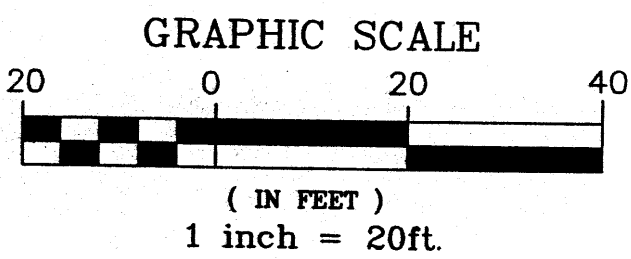
LEGEND	
5360	NEW CONTOUR GRADE
5362	EXISTING CONTOUR GRADE
TC62.50	NEW TOP OF CURB ELEVATION
FL62.00	NEW FLOWLINE OF CURB ELEVATION
TA60.11	NEW TOP OF ASPHALT ELEVATION
TSW61.87	NEW TOP OF SIDEWALK ELEVATION
DRAINAGE SWALE	
	NEW GRADE BREAK
GR56.0	NEW GRADE ELEVATION
FL55.3	FLOWLINE GRADE ELEVATION
TW95.1	NEW TOP OF WALL ELEVATION
BW93.1	NEW BOTTOM OF WALL ELEVATION
TOC93.1	NEW TOP OF CONCRETE ELEVATION

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LOTS 1 THROUGH 14
TRUMBULL VILLAGE SUBDIVISION

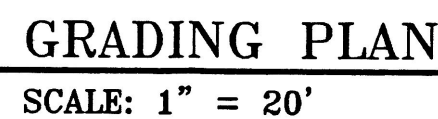
APPROVED FOR ROUGH GRADING:

NAME _____ DATE _____



APPLIED ENGINEERING AND SURVEYING, INC. ENGINEERS AND PLANNERS 1800 Blvd. Drive NE Albuquerque, New Mexico 87112 Phone: (505) 271-1466	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: GRADING PLAN TRUMBULL VILLAGE SUBDIVISION	
Design Review Committee	City Engineer Approval
City Project No. TBD	Zone Map No. A-11
Sheet 1	Of 2

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	THE BASIS OF ELEVATIONS FOR THIS SURVEY IS ACS BENCHMARK 24.19. THE PUBLISHED ELEVATION OF WHICH IS 5339.76. BENCHMARK IS LOCATED AT THE SOUTH RIGHT-OF-WAY OF THE SOUTH END OF CONTINENTAL LOOP SE AT ITS INTERSECTION WITH LOUISIANA BOULEVARD SE.	DATE	NO.	DATE	REMARKS	BY
INSPECTOR'S	DATE					REVISIONS	
ACCEPTANCE BY	DATE					DESIGN	
VERIFICATION BY	DATE						
DRAWINGS	DATE						
CORRECTED BY	DATE						
MICRO-FILM INFORMATION	DATE						
RECORDED BY	DATE						
NO.							



Gilbert Aldaz, NMPE 10848 05-19-08
Date

TW=TOP OF WALL, BW=BOTTOM OF WALL, S=SOUTH ELEVATION,
N=NORTH ELEVATION, NE=NORTHEAST ELEVATION, NW=NORTHWEST
ELEVATION, SW=SOUTHWEST ELEVATION, SE=SOUTHEAST ELEVATION

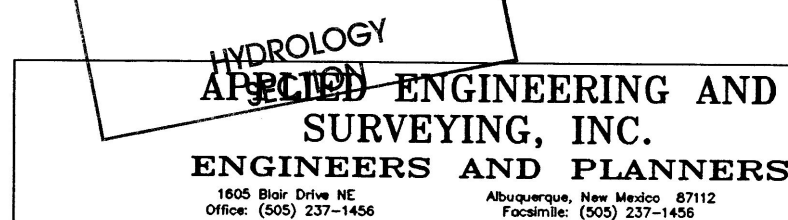
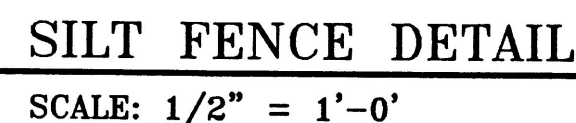
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APPROVED FOR ROUGH GRADING:

NAME _____ DATE _____



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: GRADING PLAN
TRUMBULL VILLAGE SUBDIVISION

Design Review Committee	City Engineer Approval	Lost Design Update	Mo./Day/Yr.	Mo./Day/Yr.	
City Project No.	TBD	Zone Map No.	A-11	Sheet	Of
				1	2