

#### MASTER GRADING/ DRAINAGE PLAN

THE FOLLOWING ITEMS CONCERNING (654 55TH STREET S.W.) LOTS (361-A-361-F, REPLAT OF LOTS 361-363 RIO GRANDE HEIGHTS ADDITION, BERNALILLO COUNTY, ALBUQUERQUE, NEW MEXICO) ARE CONTAINED HEREON.

#### EXISTING CONDITIONS

AS SHOWN BY THE VICINITY MAP, THE SITE CONTAINS 0.344 ACRES MORE OR LESS, AND IS LOCATED NORTH OF THE INTERSECTION OF DOLORES S.W. AND 55TH STREET S.W. ON THE EAST SIDE OF 55TH STREET S.W. CURRENTLY THERE IS A TOWNHOUSE UNDER CONSTRUCTION ON THE PROPOSED LOT 361-A. PROPOSED LOTS 361-B THROUGH 361-F ARE VACANT WITH THE TERRAIN SLOPING FROM EAST TO WEST. THERE ARE NO OFF-SITE FLOWS ENTERING THE SITES FROM ANY DIRECTION. ACCORDING TO THE FLOOD INSURANCE RATE MAPS, PANEL 0329E, REVISED NOVEMBER 19, 2003, THIS SITE IS NOT LOCATED WITHIN A DESIGNATED FLOOD ZONE.

#### PROPOSED CONDITIONS

AS SHOWN BY THE GRADING/DRAINAGE PLAN, THE PROJECT WILL CONSIST OF SIX TOWNHOUSES TOTALING 8,514 SQ. FT. ALONG WITH FRONT CONCRETE DRIVEPADS AND ASSOCIATED LANDSCAPED AREAS. THE MASTER GRADING/DRAINAGE PLAN PROPOSES TO DRAIN ALL THE DEVELOPED RUN-OFF TO THE WEST AND ONTO 55TH STREET S.W. VIA THE PROPOSED DRIVEPADS. THIS SITE IS AN IN-FILL SITE WITH DEVELOPMENT ALREADY ALL AROUND. EACH LOT WILL BE A STAND ALONE PROJECT. EACH LOT WILL GENERATE AN INCREASE OF 0.05 CFS. THE CALCULATIONS CONTAINED HEREON, ANALYZE BOTH THE EXISTING AND THE DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40 ACRES AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME II, DESIGN CRITERIA DATED 1997, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME GENERATED.

#### NOTE TO CONTRACTOR:

1. An excavation/construction permit will be required before beginning any work within the City right-of-way. Approved copy of this plan must be submitted at the time of application for permit.
2. All work detailed in this plan to be performed, except as otherwise stated or provided herein, shall be constructed in accordance with City of Albuquerque Standard Specification for Public Works Construction.
3. Two working days prior to any excavation, contractor must contact line locating Services (760-1990) for locating existing sub-surface utilities.
4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all potential constructions; should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay to the subject project.
5. Backfill compaction shall be according to commercial use or soils report(s) recommendations.
6. All work on this project shall be performed in accordance with applicable Federal, State and local laws, rules and regulations concerning construction safety and health.
7. Maintenance of this facilities shall be the responsibility of the owner of the property it serves.

#### EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT OF STORM RUN-OFF DURING CONSTRUCTION. HE SHALL ASSURE THAT THE FOLLOWING MEASURES ARE:
  - A) ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY TEMPORARY BERM, DITCH, SHALES, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUN-OFF FROM LEAVING THE SITE AND ENTERING ADJACENT PROPERTY.
  - B) ADJACENT PUBLIC RIGHT-OF-WAY SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUN-OFF FROM THE SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER THE PUBLIC STREETS.
2. THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY OR ALL SEDIMENT WITHIN THE PUBLIC STREETS THAT HAVE BEEN EXPOSED FROM THE SITE AND DEPOSITED THERE.

PROJECT AREA = 0.05739 ac.  
MASTER DRAINAGE FOR PLAN FOR ABEL ARAGON TOWNHOUSES

PRECIPITATION: 360 = 2.35 in.  
1440 = 2.75 in.  
10day = 3.95 in.

|             | EXCESS PRECIPITATION: | PEAK DISCHARGE: |
|-------------|-----------------------|-----------------|
| TREATMENT A | 0.53 in.              | 1.56 cfs/ac.    |
| TREATMENT B | 0.78 in.              | 2.28 cfs/ac.    |
| TREATMENT C | 1.13 in.              | 3.14 cfs/ac.    |
| TREATMENT D | 2.12 in.              | 4.70 cfs/ac.    |

|             | EXISTING CONDITIONS: | PROPOSED CONDITIONS: |
|-------------|----------------------|----------------------|
| TREATMENT A | 0 ac.                | 0 ac.                |
| TREATMENT B | 0 ac.                | 0.02116 ac.          |
| TREATMENT C | 0.05739 ac.          | 0 ac.                |
| TREATMENT D | 0 ac.                | 0.03623 ac.          |

#### EXISTING EXCESS PRECIPITATION:

Weighted E =  $(0.53 \times 0.00) + (0.78 \times 0.00) + (1.13 \times 0.06) + (2.12 \times 0.00) / 0.06$  ac = 1.13 in.  
 $V_{100-360} = (1.13 \times 0.06) / 12 = 0.005404$  ac-ft = 235 CF

#### EXISTING PEAK DISCHARGE:

$Q_{100} = (1.56 \times 0.00) + (2.28 \times 0.00) + (3.14 \times 0.06) + (4.70 \times 0.00) = 0.18$  CFS

#### PROPOSED EXCESS PRECIPITATION:

Weighted E =  $(0.53 \times 0.00) + (0.78 \times 0.02) + (1.13 \times 0.00) + (2.12 \times 0.04) / 0.06$  ac = 1.63 in.  
 $V_{100-360} = (1.63 \times 0.06) / 12.0 = 0.007776$  ac-ft = 339 CF

$V_{100-1440} = (0.01 \times 0.04 \times 2.75 - 2.35) / 12 = 0.008984$  ac-ft = 391 CF

$V_{100-10day} = (0.01 \times 0.04 \times 3.95 - 2.35) / 12 = 0.012607$  ac-ft = 549 CF

#### PROPOSED PEAK DISCHARGE:

$Q_{100} = (1.56 \times 0.00) + (2.28 \times 0.02) + (3.14 \times 0.00) + (4.70 \times 0.04) = 0.23$  CFS cfs

INCREASE: 0.23 CFS - 0.18 CFS = 0.05 CFS

TOTAL CFS FOR THE SIX LOTS 1.38 CFS  
TOTAL CFS INCREASE FOR THE SIX LOTS 0.30 CFS

#### LEGAL DESCRIPTION

LOTS NUMBERED 361-A THRU 361-F  
RIO GRANDE HEIGHTS ADDITION  
BERNALILLO COUNTY, ALBUQUERQUE  
NEW MEXICO.

#### BENCHMARK:

ELEVATIONS ARE BASED ON CITY OF  
ALBUQUERQUE STATION No. "NM-45-4A",  
HAVING AN ELEVATION OF 5005.70 NAVD 1988  
LOCATED AT THE INTERSECTION OF BRIDGE BLVD. AND TOWER RD.S.W

DOLORES DRIVE  
(60' R.O.W.)

Note: Rough Grading  
must be included  
in I.L.

T.B.M. CENTER SAS MANHOLE  
ELEVATION: 5013.29

N 15°06'00" W  
6.57'

## GRADING & DRAINAGE PLAN

#### SYMBOL LEGEND

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- DESIGN CONTOUR
- PROPOSED SPOT ELEVATION
- PROPERTY LINE
- EASEMENT LINE
- FLOW DIRECTION
- EXISTING SPOT ELEVATION
- DOWN SPOUT

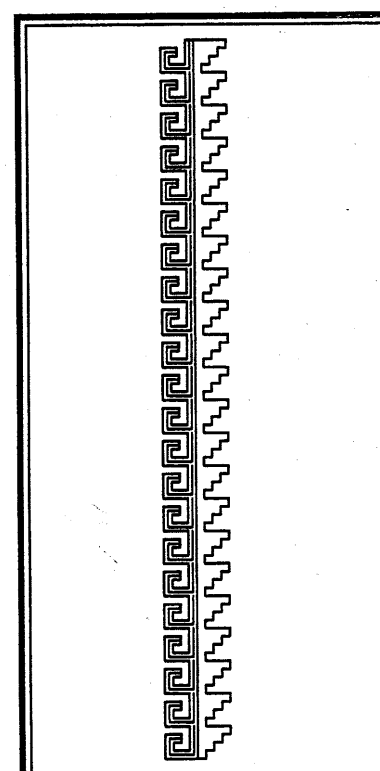
#### ABBREVIATION LEGEND

- TOP OF CONC PAD
- TOP OF CURB
- TOP OF ASPHALT
- TOP OF BERM
- FINISHED GRADE
- FINISHED FLOOR
- BDC = BACK OF CURB
- DC = DRIVECUT
- DI = DRAINAGE INLET
- EA = EDGE OF ASPHALT
- EC = EDGE OF CONCRETE
- FL = FLOW LINE
- FP = FENCE POST
- G = GROUND
- HP = HIGH POINT



|           |               |
|-----------|---------------|
| JOB NO:   | XXXXXX        |
| DATE:     | FEBRUARY 2006 |
| REVISIONS |               |
|           |               |
|           |               |
|           |               |

Sheet Title  
**MASTER GRADING & DRAINAGE PLAN**  
Drawn By: HTH & BUM  
Checked By: ES



Job Title  
MASTER DRAINAGE PLAN FOR  
ABEL ARAGON TOWNHOMES  
55TH STREET S.W.  
ALBUQUERQUE, NEW MEXICO

SHEET NO.  
GD