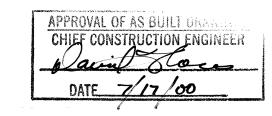
FEBRUARY 25, 1997 CONSTRUCTION DOCUMENTS CLASS II CONSTRUCTION

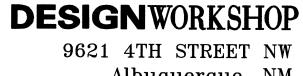
NEW SOCCER FIELD AT BULLHEAD PARK

INDEX OF DRAWINGS

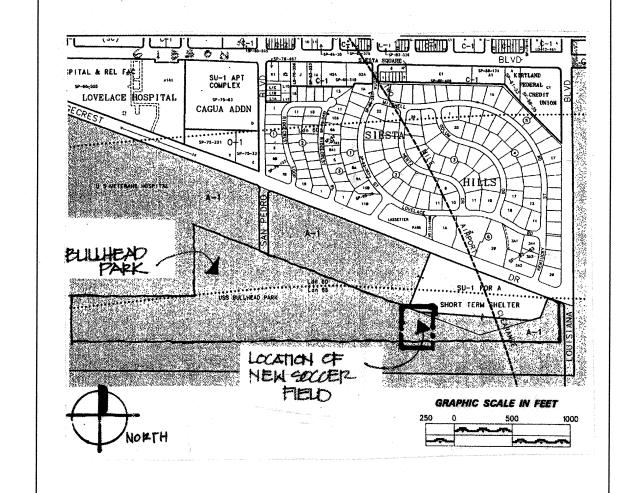
TITLE	SHEET NO.
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DEMOLITION PLAN	2 OF 6
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LAYOUT AND PLANTING PLAN	4 OF 6
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DETAIL SHEET	6 OF 6



FOR INFORMATION ONLY



Albuquerque, NM 87114 (Tel.) 505.890.1815 (Fax) 505.890.1817



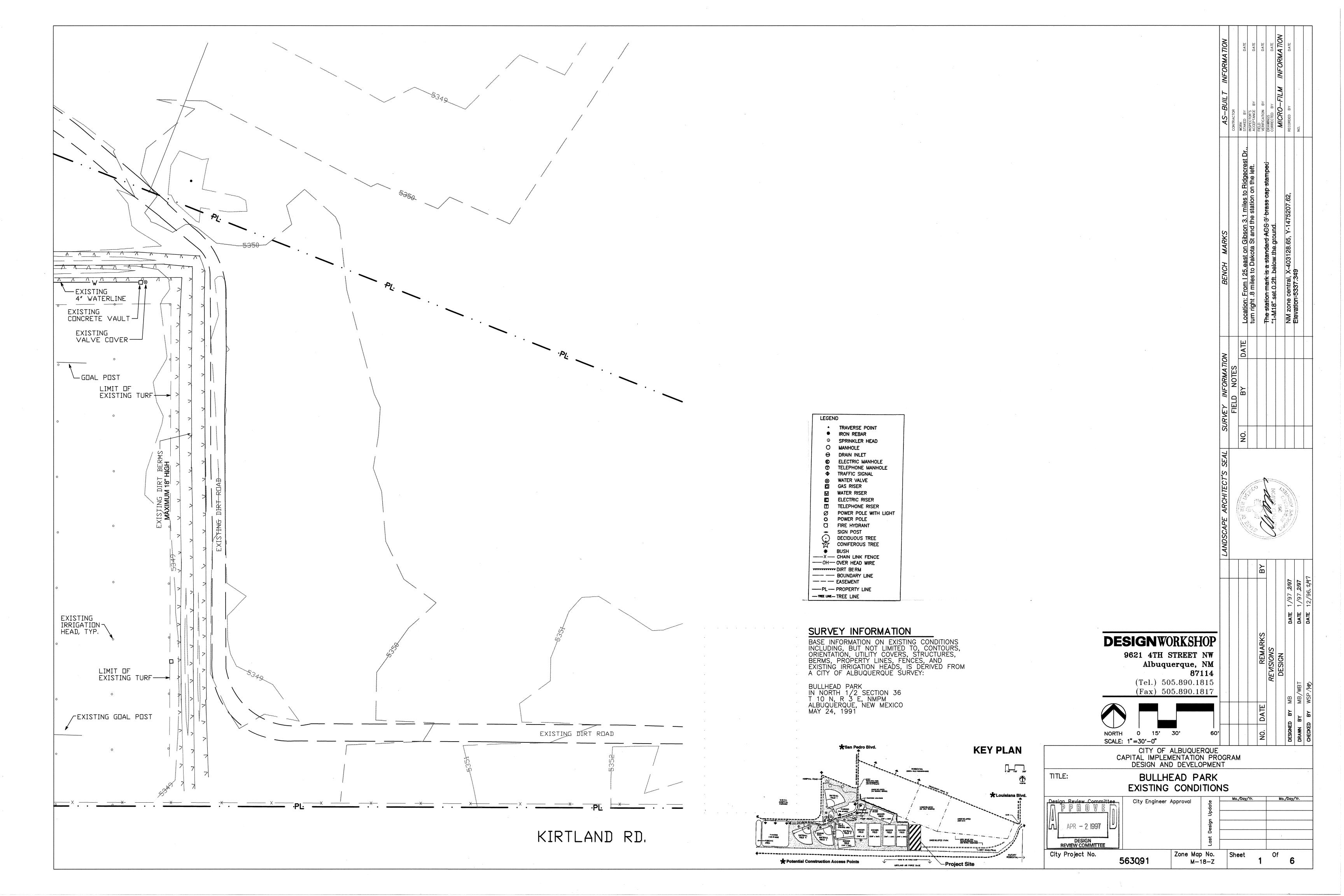
VICINITY MAP

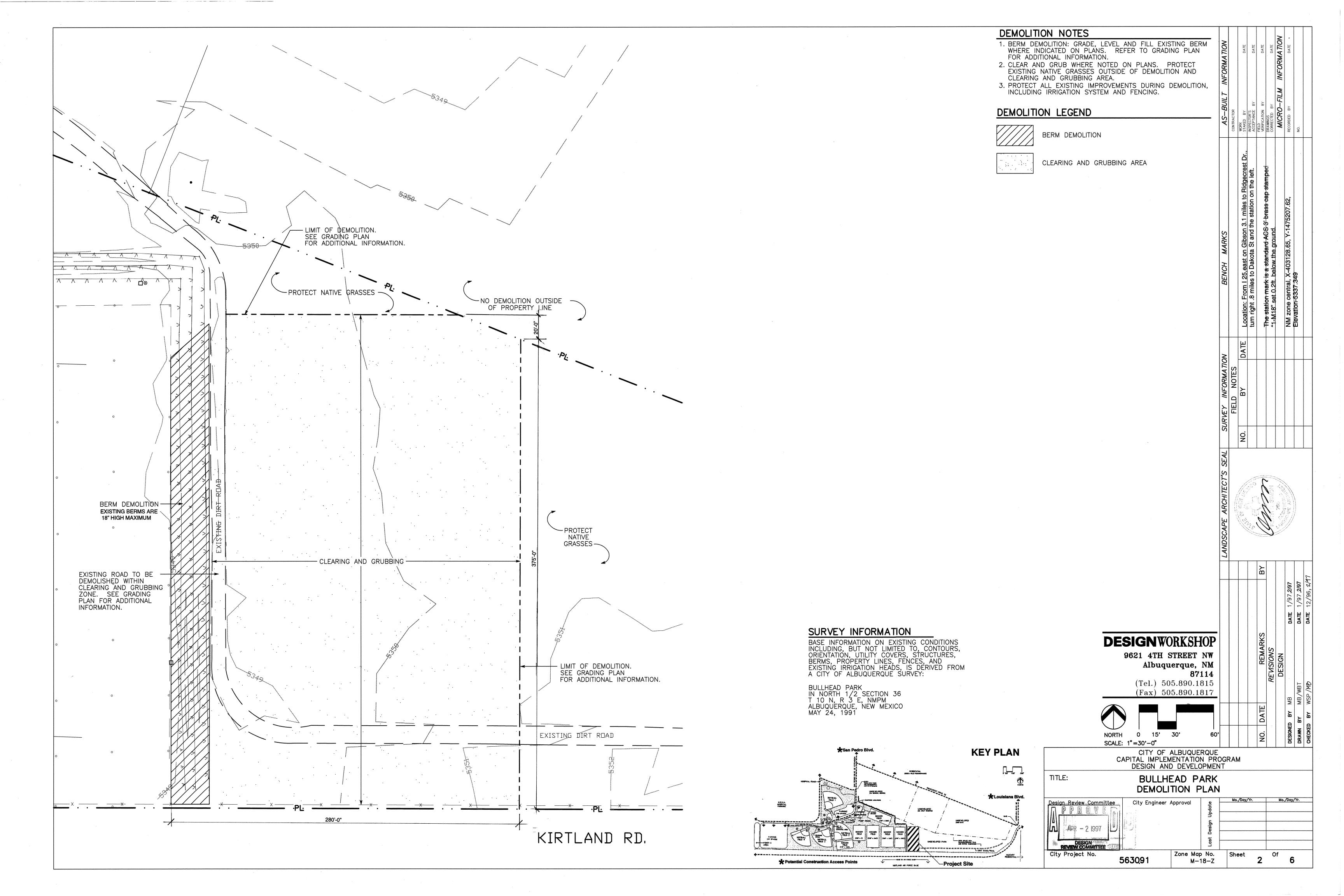
ZONE MAP #M-18-Z

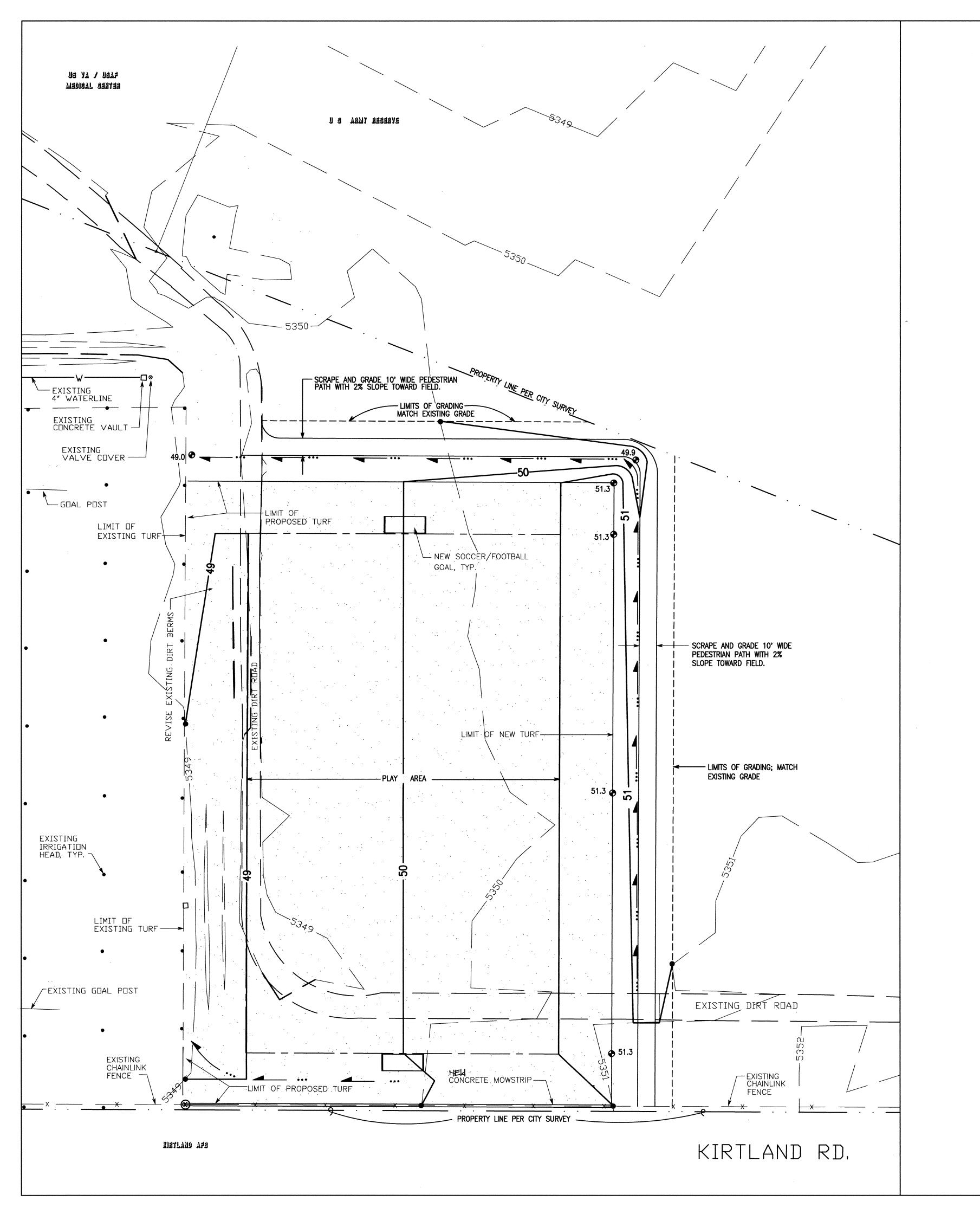
ALL WORK TO BE IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS, 1986 EDITION (AS UPDATED WITH REVISION #6), OR PER ATTACHED SPECIFICATIONS.

- THE WATER SYSTEMS DIVISION (857-8200) SHALL BE NOTIFIED (5) FIVE WORKING DAYS IN ADVANCE OF ANY WORK WHICH MAY AFFECT EXISTING PUBLIC WATER FACILITIES. THE CONTRACTOR SHALL ALSO COORDINATE FOR VALVE OPERATION FOR WATER SHUTOFF
- (3) THREE WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. REFER TO SECTION 19 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS. (2) TWO WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768–2551) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL CONTACT NEW MEXICO ONE CALL SYSTEM PHONE: 260—1990, TO LOCATE UNDERGROUND UTILITIES 2 WORK DAYS PRIOR TO BEGINNING EXCAVATION.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, UNLESS NOTED OTHERWISE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL EXISTING IMPROVEMENTS ARE TO REMAIN, UNLESS SPECIFICALLY NOTED TO BE REMOVED. CONTRACTOR SHALL REPAIR ANY CONTRACTOR—CAUSED DAMAGE, AS DETERMINED BY THE ENGINEER TO EXISTING IMPROVEMENTS TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CHECK ALL DIMENSIONS, HORIZONTAL AND VERTICAL, AND SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CONFLICT CAN BE RESOLVED WITH THE MINIMUM AMOUNT OF DELAY.
- FOR PURPOSES OF THIS PROJECT THE TERM ENGINEER SHALL REFER TO EITHER THE OWNER'S EMPLOYEE OR THE LANDSCAPE ARCHITECT RESPONSIBLE FOR CONSTRUCTION INSPECTION OF THE PROJECT.
- ◆ ALL REFERENCES TO COMPACTED BACKFILL OR COMPACTED SUBGRADE SHALL MEAN SOIL COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7 DAYS PRIOR TO STARTING WORK, IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY OF ALBUQUERQUE SURVEY SECTION. WHEN A CHANGE IS MADE IN THE FINISH ELEVATION OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMINENT SURVEY MONUMENT IS LOCATED, CONTRAGTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO NEW GRADE, UNLESS OTHERWISE SPECIFIED.

CITY ENGINEER REV. SHEETS DATE USER DEPARTMENT DATE USER DEPARTMENT LANDSCAPE ARCHITECT'S SEAL | APPROVALS DATE | ********** ransportation Water/Wastewate Hydrology C.I.P. Constr. Mngmt. Sheet IA0f 6 City Project Number 5630.91 COVER SHEET







CALCULATIONS

Site Characteristics

1. Precipitation Zone = 2

2. $P_{6,100} = P_{360} = 2.35$ in.

3. Total Area $(A_T) = 106,000 \text{ sf}/2.43 \text{ ac}$

4. Existing Land Treatment

5. Developed Land Treatment

Treatment

Area (sf/ac) 106,000/2.43

C 10

Area (ef/ac)

Area (sf/ac) 90,500/2.07 15,500/0.36 100

14.8

Existing Condition

Volume

 $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$

 $E_W = (1.13)(2.43)/2.43 = 1.13 \text{ in.}$

 $V_{100} = (E_W/12)A_T$ V = (1.13/12)2

 $V_{100} = (1.13/12)2.43 = 0.23$ ac.ft.; 9,970 cf

2. Peak Discharge

 $Q_{p} = Q_{PA}A_{A} + Q_{PB}A_{B} + Q_{PC}A_{C} + Q_{PD}A_{D}$

 $Q_p = Q_{100} = (3.14)(2.43) = 7.63 \text{ cfs}$

Developed Condition

1. Volume

 $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$

 $E_W = (0.78)(2.07)+(1.13)(0.36)/2.43 = 0.83$ in.

 $V_{100} = (E_W/12)A_T$

 $V_{100} = (0.83/12)2.43 = 0.17 \text{ ac.ft.}; 7,400 \text{ cf}$

2. Peak Discharge

 $Q_{p} = Q_{PA}A_{A} + Q_{PB}A_{B} + Q_{PC}A_{C} + Q_{PD}A_{D}$

 $Q_{\rm p} = Q_{100} = (2.28)(2.07) + (3.14)(0.36) = 5.85 \text{ cfs}$

Comparison

1. $\Delta V_{100} = 9,970 - 7,400 = 2,570 \text{ cf (decrease)}$

2. $\Delta Q_{100} = 7.63 - 5.85 = 1.78$ cfs (decrease)

DRAINAGE PLAN

The following items concerning the Bullhead Park Drainage Plan are contained hereon:

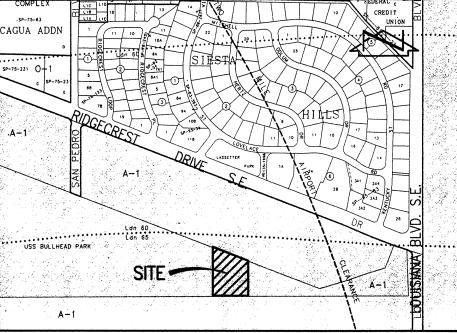
Vicinity Map
 Grading Plan
 Calculations

As shown by the Vicinity Map, the site is located within an existing City park site known as Bullhead Park. Generally, the site lies south of Ridgecrest Drive S.E., between San Pedro Boulevard S.E. and Louisiana Boulevard S.E. The site abuts Kirtland Air Force Base to the south.

As shown by Panel 362 of 828 of the National Flood Insurance Program Flood Insurance Rate Maps published by F.E.M.A. for the County of Bernalillo, New Mexico dated September 20, 1996, this site does not lie within a designated flood hazard zone. Further review of this mapping indicates a downstream flood hazard zone (AO) within Gibson Boulevard S.E. at its intersection with San Pedro Drive S.E. Storm drain improvements have been constructed in this area by the City of Albuquerque to alleviate this flooding situation. The presence of those improvements are not reflected on the above referenced mapping. In recognition of the downstream improvements completed by the City, the continued free discharge of runoff from this site is appropriate.

The Grading Plan shows: 1) existing grades indicated by contours at 1'0" intervals, as provided by the City of Albuquerque Public Works Department Engineering Group Survey Section, 2) proposed grades indicated by spot elevations and contours at 1'0" intervals, 3) the limit and character of the existing improvements, 4) the limit and character of the proposed improvements, and 5) continuity between existing and proposed grades. As shown by this Plan, the proposed improvements consist of the construction of a turfed play area. The turfed play area will replace existing Land Treatment "C" with Land Treatment "B". In response, a decrease in developed runoff from this site is anticipated. This site is bordered on the west by existing Bullhead Park, an on the north by undeveloped lands under Federal Government control. Those lands lie topographically lower than the site, hence do not contribute offsite flows. The site is bounded on the south by Kirtland Air Force Base. As shown by the survey provided by the City, Kirtland Road lies along the south boundary of the site. The topography does not indicate any offsite flows from the south. Furthermore, any flows which may originate to the south will be intercepted by Kirtland Road. Undeveloped portions of Bullhead Park lie to the east of the site running to Louisiana Boulevard S.E. which intercepts offsite flows from the east. The undeveloped portions of Bullhead Park are separated from the developed portions by an existing berm. That berm will be removed as part of this project and the new play area graded for sheet drainage from east to west. Any runoff generated by the new play area will drain via sheetflow onto the existing turf of the park. From this point, runoff will flow via sheetflow toward San Pedro Boulevard S.E. The unturfed "dirt" areas to the east and north of the new play area are graded for concentrated flow with a nonerosive gradient. Any sediment being carried by runoff reaching these flowlines will be trapped due to flat gradients. This will serve to control erosion from this site.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Procedure for 40-acre and Smaller Basins, as set forth in the Revision 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 volume of runoff generated. As shown by these calculations, the proposed improvements will result in a decrease in developed runoff generated by this site. This is due to the fact that areas of Land Treatment "C" will be replaced by area of Land Treatment "B". As indicated above, the free discharge of runoff from this site is appropriate as it is consistent with the existing drainage patterns and due to the fact that downstream flooding conditions have been alleviated and a decrease in runoff is anticipated due to the proposed construction.



VICINITY MAP
SCALE: 1" = 750'±

LEGAL DESCRIPTION

PORTION OF BULLHEAD PARK AS SHOWN ON SURVEY TITLED SAME PREPARED BY CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT, ENGINEERING GROUP, SURVEY SECTION, DATED MAY 24, 1991.

LEGEND

EXISTING CONTOUR
PROPOSED CONTOUR
PROPOSED SPOT ELEVATION
PROPERTY LINE

— X — EXISTING FENCE

CONSTRUCTION NOTES:

1. Two (2) working days prior to any excavation, contractor must contact New Mexico One Call System 260—1990 (Albuquerque Area), 1—800—321—ALERT(2537) (Statewide), for location of existing utilities.

2. Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all potential obstructions. Should a conflict exist, the contractor shall notify the engineer in writing so that the conflict can be resolved with a minimum amount of delay.

3. 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.

4. All construction within public right—of—way shall be performed in accordance with applicable City of Albuquerque Standards and Procedures.

5. If any utility lines, pipelines, or underground utility lines are shown on these drawings, they are shown in an approximate manner only, and such lines may exist where none are shown. If any such existing lines are shown, the location is based upon information provided by the owner of said utility, and the information may be incomplete, or may be obsolete by the time construction commences. The engineer has conducted only preliminary investigation of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines. This investigation is not conclusive, and may not be complete, therefore, makes no representation pertaining thereto, and assumes no responsibility or liability therefor. 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 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.

EROSION CONTROL MEASURES:

1. The contractor shall ensure that no soil erodes from the site into public right—of—way or onto private property.

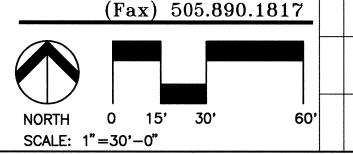
2. The contractor shall promptly clean up any material excavated within the public right—of—way so that the excavated material is not susceptible to being washed down the street.

3. The contractor shall secure "Topsoil Disturbance Permit" prior to beginning construction.

4. Any areas of excess disturbance (traffic access, storage yard excavated material, etc.) shall be re—seeded according to C.O.A. Specification 1012 "Native Grass Seeding". This will be considered incidental to construction, therefore, no separate payment will be made.

DESIGNWORKSHOP
9621 4TH STREET NW

Albuquerque, NM 87114 (Tel.) 505.890.1815 DATE DATE DATE



CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM
DESIGN AND DEVELOPMENT

TITLE:

BULLHEAD PARK
GRADING AND DRAINAGE PLAN

Design Review Committee

City Engineer Approval

PPROVE

City Engineer Approval

Sign

Mo./Day/fr.

Sheet

Of
M-18

Jun

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

961401

