

PROJECT DATA

PROPERTY: THE SITE IS A DEVELOPED LITTLE LEAGUE PARK PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP K-21. THE SITE IS BOUND TO THE EAST BY JUAN TABO BLVD., AND TO THE NORTH, WEST AND SOUTH BY DEVELOPED PROPERTY.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE ASPHALT PAVED ACCESS AND PARKING, WITH ASSOCIATED LANDSCAPING AND DRAINAGE IMPROVEMENTS.

LEGAL: DALE BELLAMAH / MILE HIGH LITTLE LEAGUE PARK, ALBUQUERQUE, NM

ADDRESS: 725 JUAN TABO BLVD. NE

BENCHMARK: ELEVATION = THE ELEVATIONS SHOWN HERON ARE REFERRED TO NAVD 88, AND HAVE BEEN ADJUSTED TO THE CITY OF ALBUQUERQUE BENCHMARK "20-K22" (PUBLISHED ELEVATION USED FOR "20-K22" = 5569.607').

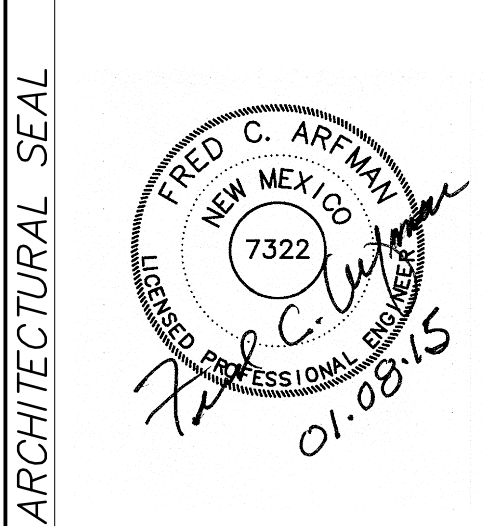
OFF-SITE: NO OFF-SITE DRAINAGE IMPACTS THIS PROPERTY.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP NUMBER 35001C0359G, EFFECTIVE ON 09/26/2008, THE SITE IS LOCATED WITHIN FLOODZONE "X" DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.

DRAINAGE PLAN CONCEPT: FIRST FLUSH RETENTION BASINS WILL BE CONSTRUCTED THROUGHOUT THE PROPERTY. A NEW STORM DRAIN SYSTEM WILL BE INSTALLED TO COLLECT RUNOFF FROM A PORTION OF THE NEW PAVEMENT AND ROUTE IT THROUGH THE PROPERTY TO REDUCE EROSION. THE STORM DRAIN WILL DISCHARGE INTO A SHALLOW WATER HARVESTING BASIN WHICH WILL OVERFLOW INTO THE HISTORIC DRAINAGE SWALES TO FOLLOW EXISTING FLOWPATHS. OVERALL PROPERTY RUNOFF WILL CONTINUE TO BE CARRIED TO THE SOUTHWEST CORNER OF THE PROPERTY TO ENTER THE EXISTING DRAINAGE EASEMENT WHICH DISCHARGES FLOW TO MILDRED STREET NE. THE ADDITION OF STORMWATER RETENTION PONDS AND DEPRESSED LANDSCAPING WILL HELP TO REDUCE THE OVERALL DISCHARGE FROM THE PROPERTY.

AS-BUILT INFORMATION	
CONTRACTOR	DATE
WORKS BY	DATE
INSPECTOR'S ACCEPTANCE BY	DATE
VERIFICATION BY	DATE
DRAWINGS BY	DATE
MICRO-FILM INFORMATION	NO.

SURVEY INFORMATION	
FIELD NOTES	DATE
NO.	BY



REVISIONS	
NO.	DATE
REMARKS	
NO.	DATE
BY	DATE

- KEYED NOTES**
- THESE KEYED NOTES ARE FOR USE ON GRADING AND DRAINAGE PLANS (NORTH AND SOUTH)
- NEW PEDESTRIAN WALK AT ELEVATIONS SHOWN. ALL WALKS TO BE ADA ACCESSIBLE (5% MAX SLOPE, 2% MAX CROSS-SLOPE).
 - SLOPES WITHIN HANDICAP PARKING AREA TO MEET ADA REQUIREMENTS. MAX. SLOPE = 2% IN ANY DIRECTION.
 - NEW PAVED PARKING WITH CONCRETE CURB AND GUTTER AT ELEVATIONS SHOWN.
 - CONSTRUCT SHALLOW (12" DEPTH) FIRST FLUSH RETENTION POND THIS LOCATION. INSTALL ANGULAR ROCK TO DEFINE PERIMETER.
 - CONSTRUCT ANGULAR ROCK LINED STILLING BASIN.
 - GRADE TRANSITION SLOPES TO ACHIEVE GRADE DIFFERENCES SHOWN. MAXIMUM SLOPE = 5:1. SEE LANDSCAPE PLANS.
 - CONSTRUCT CONCRETE HEADWALL AT NEW STORM DRAIN OUTLET. SEE DRAINAGE DETAIL SHEET.
 - INSTALL PERCOLATION PIT THIS AREA. SEE DRAINAGE DETAIL SHEET.
 - 1' WIDE (BOTTOM WIDTH) 'U' SHAPED CONCRETE CHANNEL THROUGH PARKING ISLAND TO PASS FLOW.
 - PROVIDE 2' WIDE OPENING IN CURB TO PASS CONCENTRATED FLOW
 - NEW 1.0' WIDE CONCRETE SIDEWALK CULVERT AT RIM/FLOWLINE ELEVATIONS SHOWN PER C.O.A. STD. DWG. 2236.
 - INSTALL STORM DRAIN SYSTEM THIS AREA. SEE DRAINAGE DETAIL SHEET FOR SIZES / SLOPES / INLET INFORMATION.
 - EXISTING STORM DRAIN SWALES DIRECT ALL SITE DISCHARGE TO EXISTING DRAINAGE CHANNEL AT SOUTHWEST CORNER OF PROPERTY.
 - CONSTRUCT NEW CONCRETE DUMPSTER PAD.

- LEGEND**
- EXISTING CONTOUR (1' INCREMENTS)
 - FLOW DIRECTION
 - PROPOSED CONTOUR (1' INCREMENTS)
 - PROPOSED EROSION CONTROL
 - PROPOSED STORM DRAIN

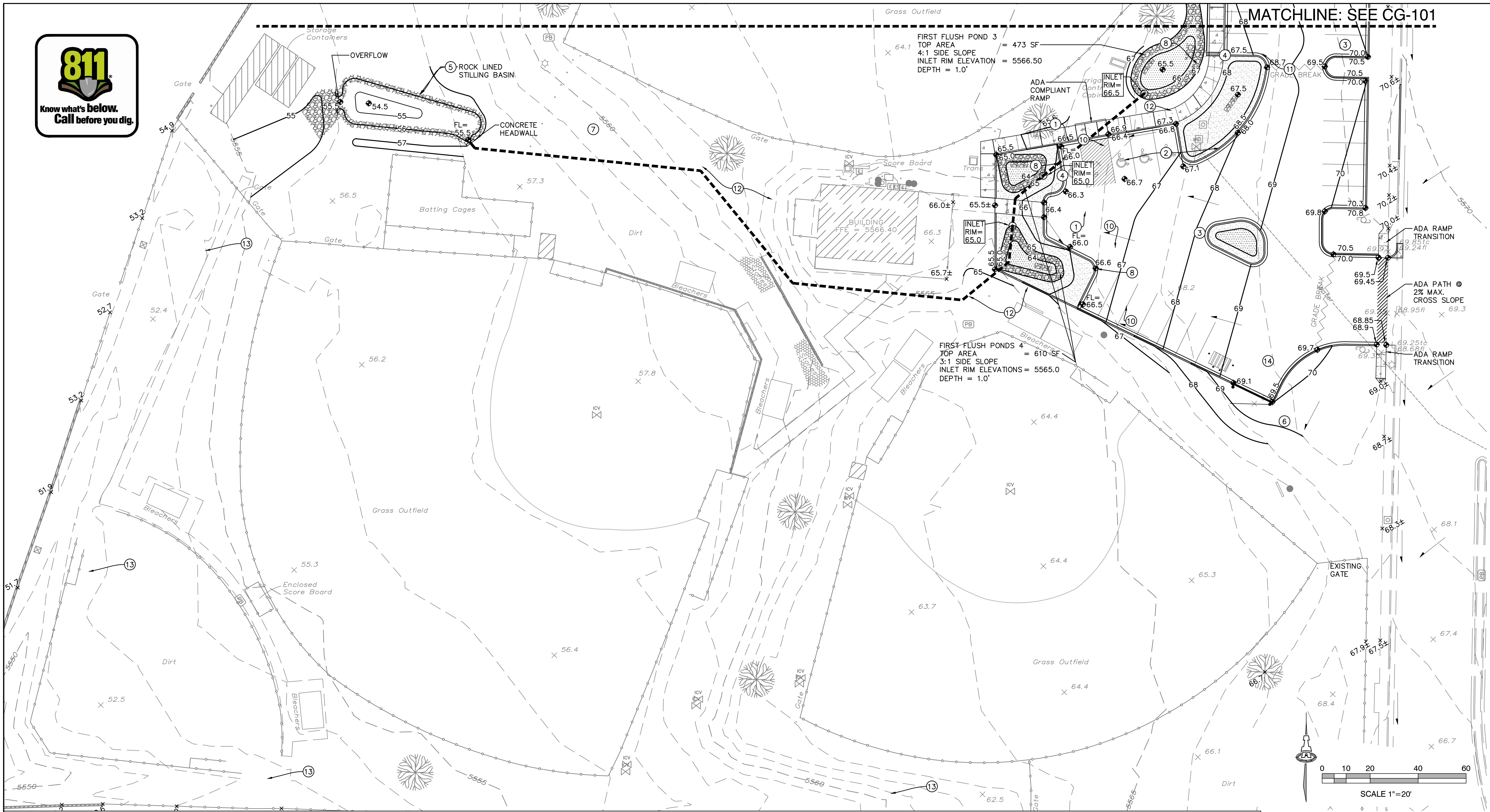
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CITY OF ALBUQUERQUE
STRATEGIC PLANNING AND DESIGN
PARKS AND RECREATION DEPARTMENT

MILE HIGH LITTLE LEAGUE SITE IMPROVEMENTS
GRADING AND DRAINAGE PLAN - NORTH

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
City Project No. 902202	Zone Map No. K-21	Sheet 4	Of 11	



GENERAL NOTES

- A. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE STANDARDS APPLY.
- B. THE CONTRACTOR SHALL ABIDE BY ALL STATE, LOCAL, AND FEDERAL LAWS, CODES, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA REQUIREMENTS.
- C. ALL SUBGRADE, OVEREXCAVATION, BACKFILL, AND FILL SHALL BE PLACED AND / OR COMPACTED PER THE GEOTECHNICAL REPORT AND CITY OF ALBUQUERQUE SPECIFICATIONS.
- D. COORDINATE WORK WITH SITE PLAN, PAVING PLAN, DEMOLITION PLAN, AND LANDSCAPE PLAN.
- E. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE LANDSCAPE ARCHITECT AND VERIFY THE INTENT BEFORE PROCEEDING.
- F. CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK.
- G. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- H. CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS, EQUIPMENT SHALL ONLY OBSTRUCT DESIGNATED TRAFFIC LANES IF APPROPRIATE BARRICADING PERMITS HAVE BEEN OBTAINED.
- I. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN THAT CONFORMS TO THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN BARRICADING PERMITS FROM THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION WORK ON / ADJACENT TO EXISTING STREETS.
- J. THE CONTRACTOR SHALL MAINTAIN ALL BARRICADING AND CONSTRUCTION SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
- K. PAVEMENT GRADES IN MARKED HANDICAPPED PARKING AREAS SHALL NOT EXCEED 2.0% IN ANY DIRECTION. FOR ALL ACCESSIBLE ROUTES, MAXIMUM ALLOWABLE CROSS SLOPE IS 2.0% AND MAXIMUM LONGITUDINAL SLOPE WITHOUT RAMP IS 5.0%. FOLLOW ALL ADA ACCESSIBILITY GUIDELINES OR CITY CODES, WHICHEVER IS MORE STRINGENT.
- L. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.
- M. PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.
- N. MAXIMUM UNPROTECTED SLOPES SHALL BE 4:1.
- O. EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CONTACT NM-811 FOR UTILITY LINE SPOTS TWO WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.
- P. A CURRENT STORMWATER CONTROL PERMIT, INCLUDING AN EROSION SEDIMENT CONTROL PLAN (E.S.C.) FOR EROSION AND SEDIMENT CONTROL IS REQUIRED FOR ALL CONSTRUCTION, DEMOLITION, CLEARING, AND GRADING OPERATIONS THAT DISTURB THE SOIL ON ONE ACRE OR MORE OF LAND. OWNER WILL COORDINATE.
- Q. POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES OWNER. PERIODIC INSPECTION AND CERTIFICATIONS OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER.
- R. STORMWATER CONTROL MEASURES SHOWN ON THIS PLAN ARE REQUIRED TO PROVIDE MANAGEMENT OF "FIRST FLUSH" (DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.44" OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM).
- S. ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.
- T. PAVING AND ROADWAY GRADES SHALL BE $\pm 0.1'$ FROM PLAN ELEVATIONS.
- U. WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH.
- V. ALL EROSION PROTECTION TO BE FRACTURED FACE ROCK (F.F. ROCK) DEFINED AS 6" AVG. DIA. ANGULAR FACED ROCK PLACED OVER GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.). NOTE: IF OWNER DOES NOT WANT LOOSE ROCK, GROUTED ROCK OR WIRE ENCLOSED ROCK MAY BE SUBSTITUTED AT ALL AREAS REFERENCING F.F. ROCK EROSION PROTECTION. OWNER'S OPTION.
- W. SIDESLOPES STEEPER THAN 5:1 MUST HAVE PERMANENT EROSION CONTROL (F.F. ROCK) INSTALLED, TYPICAL. NO SLOPE SHALL BE STEEPER THAN 3:1.
- X. CONTRACTOR SHALL COMPLY WITH LOCAL REGULATIONS FOR RESEEDING OF DISTURBED AREAS. RESEEDING INSPECTION IS NOT INCLUDED AS PART OF ENGINEER'S CERTIFICATION OF SUBSTANTIAL COMPLIANCE.
- Y. POND AND STORM DRAIN DESIGN PARAMETERS (TOP OF POND, BOTTOM OF POND, RIMS, INVERTS, PIPE SIZES, AREA OF POND, ETC.) TO BE STRICTLY ADHERED TO FOR CERTIFICATION PURPOSES.
- Z. ENGINEER RECOMMENDS THAT OWNER MAINTAIN EROSION PROTECTION ELEMENTS. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.
- AA. MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.
- AB. IF THE SITE IS SMALL ENOUGH NOT TO REQUIRE A SWPPP/NPDES PERMIT (LESS THAN ONE ACRE), THE CONTRACTOR SHALL STILL BE RESPONSIBLE FOR USING EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PUBLIC RIGHT-OF-WAY.

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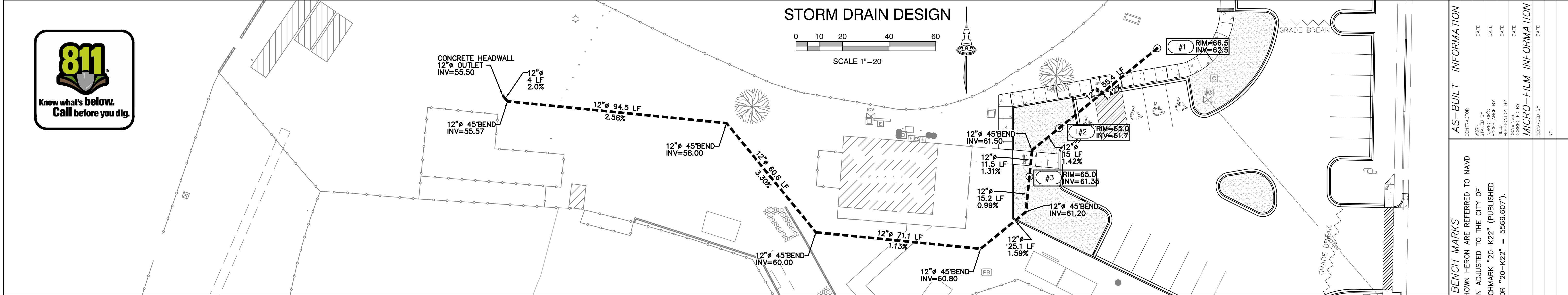
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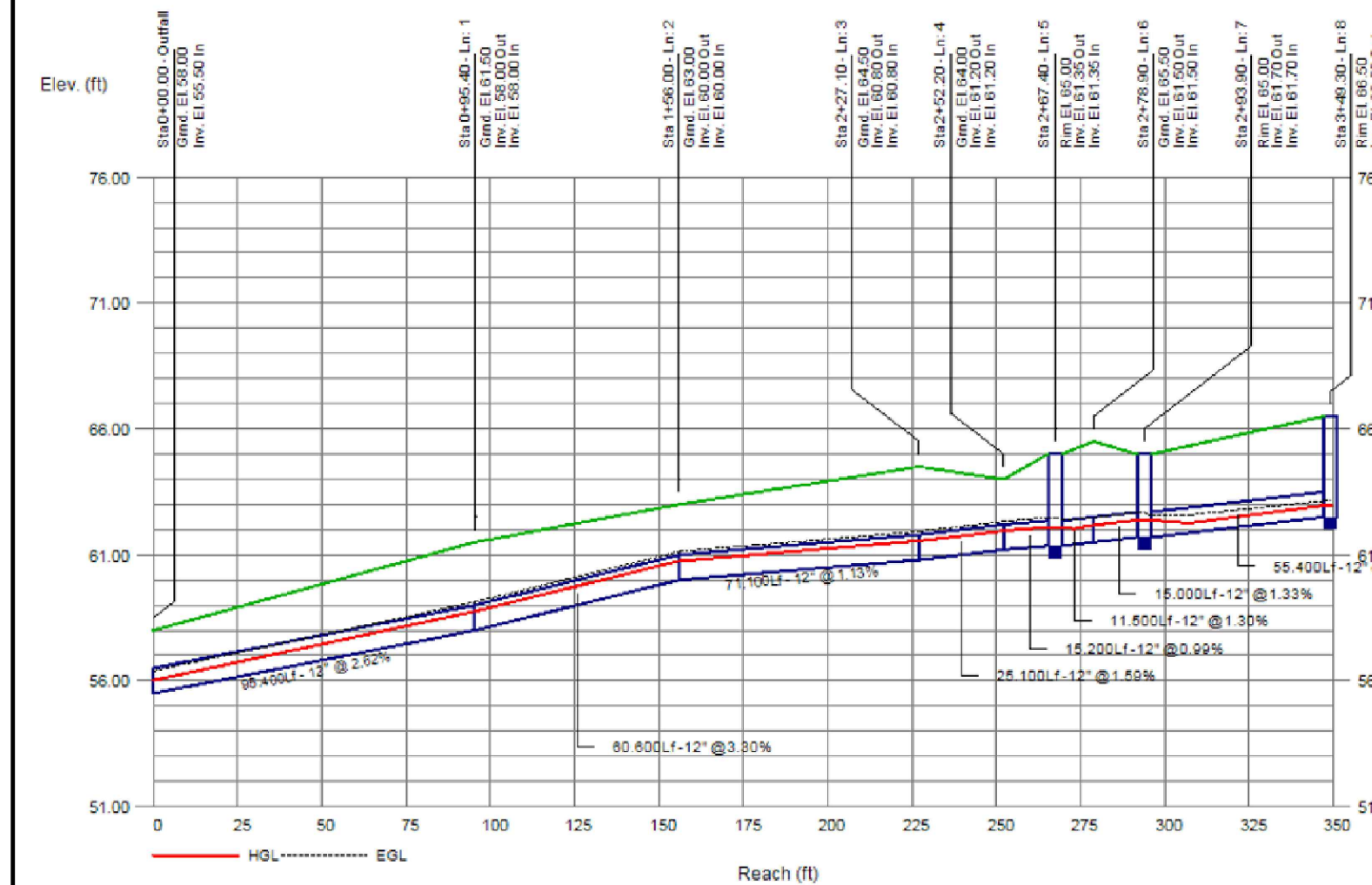
MILE HIGH LITTLE LEAGUE SITE IMPROVEMENTS
DRAINAGE AND GRADING PLAN - SOUTH

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
City Project No.	Zone Map No.	Sheet	Of	
902202	K-21	5		11

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ARCHITECTURAL SEAL		REVISIONS		REMARKS	
CONTRACTOR	WORKS BY	THE ELEVATIONS SHOWN HEREON ARE REFERRED TO NAVD 88, AND HAVE BEEN ADJUSTED TO THE CITY OF ALBUQUERQUE BENCHMARK "20-K22" (PUBLISHED ELEVATION USED FOR "20-K22" = 5569.607').		FIELD NOTES	DATE			NO.	BY	NO.	DATE
DATE	DATE			NO.	DATE						
MICRO-FILM INFORMATION											
RECORDED BY	NO.										



BASIN NO.	1	DESCRIPTION	TO STORM DRAIN SYSTEM
Area of basin flows =	27366	SF	= 0.6 Ac.
The following calculations are based on Treatment areas as shown in table to the right			AREA DRAINING TO STORM DRAIN SYSTEM = 0.6 ACRES = 3.1 CFS
Sub-basin in Weighted Average Precipitation (see formula above)			
Weighted E = 2.30 in			
Sub-basin Volume of Runoff (see formula above)			
V _{RO} = 5248 CF			
Sub-basin Peak Discharge Rate: (see formula above)			
Q _p = 3.1 cfs			FIRST FLUSH VOL 512 CF



FF POND 1		
Contour	Area	Volume
5560.00	1772	
5559.50	622	599 CF
5559.00	130	188 CF
TOTAL VOL.		787 CF

FF POND 2			
Contour	Area	Volume	
5567.00	882		
5566.00	340	611 CF	
TOTAL VOL.		611 CF	

FF POND 3			
Contour	Area	Volume	
5566.50	473		
5565.00	284	568 CF	
TOTAL VOL.		568 CF	

FF POND 4		
Contour	Area	Volume
5565.00	609	
5564.00	229	419 CF
TOTAL VOL..		419 CF

REQUIRED FIRST FLUSH RETENTION POND VOLUME = 1077 CF
PROVIDED FIRST FLUSH RETENTION POND VOLUME = 2385 CF

Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE				
AREA OF DISTURBED:	65556	SF	=	1.5
	100-year, 6-hour			

HISTORIC FLOWS:

Treatment SF			%	Treatment SF			%	Precip. Zone	4
Area A	=	0	0%	Area A	=	0	0%	E _A	= 0.80
Area B	=	3277.8	5%	Area B	=	13760	21%	E _B	= 1.08
Area C	=	9833.4	15%	Area C	=	13760	21%	E _C	= 1.46
Area D	=	52444.8	80%	Area D	=	38036	58%	E _D	= 2.64
Total Area	=	65556	100%	Total Area	=	65556	100%		

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted E} = \frac{E_A A_A + E_B A_B + E_C A_C + E_D A_D}{A_A + A_B + A_C + A_D}$$

Historic E	=	2.39 in.	Developed E	=	2.06 in.
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On-Site Volume of Runoff: $V_{360} = E \cdot A / 12$

E*A / 12	
Developed V ₃₆₀	= 11280 CF

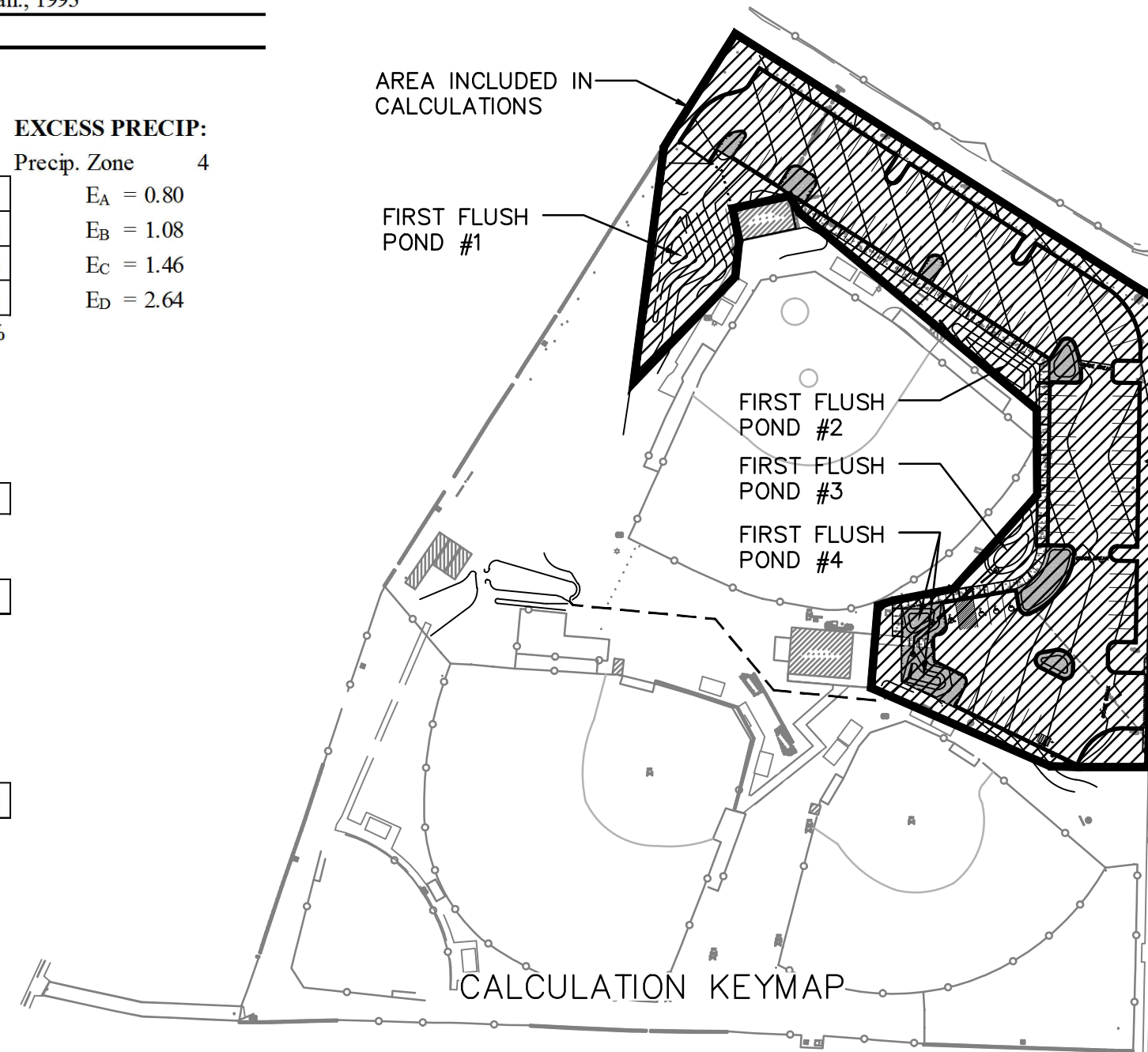
$$\text{On-Site Peak Discharge Rate: } Q_p = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D / 43,560$$

For Precipitation Zone 4

$$Q_{pA} = 2.$$
$$Q_{pC} = 3.73$$

Historic Q_p	=	7.4 CFS	Developed Q_p	=	6.7 CFS
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TOTAL FIRST FLUSH RETENTION VOLUME =
 $(65556 \text{ SF} * 58\% * 0.34" / 12 = 1077 \text{ CF}$



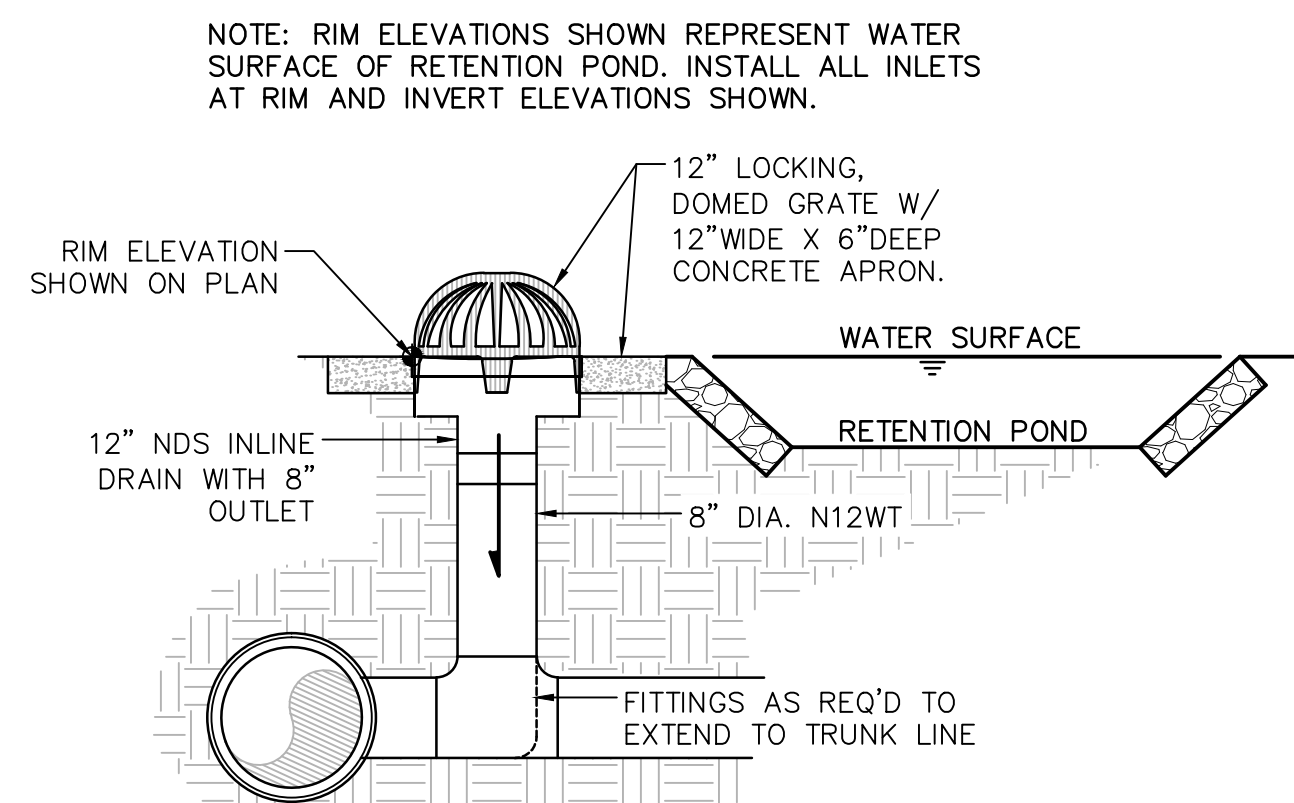
I# **INLINE DRAIN WITH DOME GRATE**

ALL INLETS:

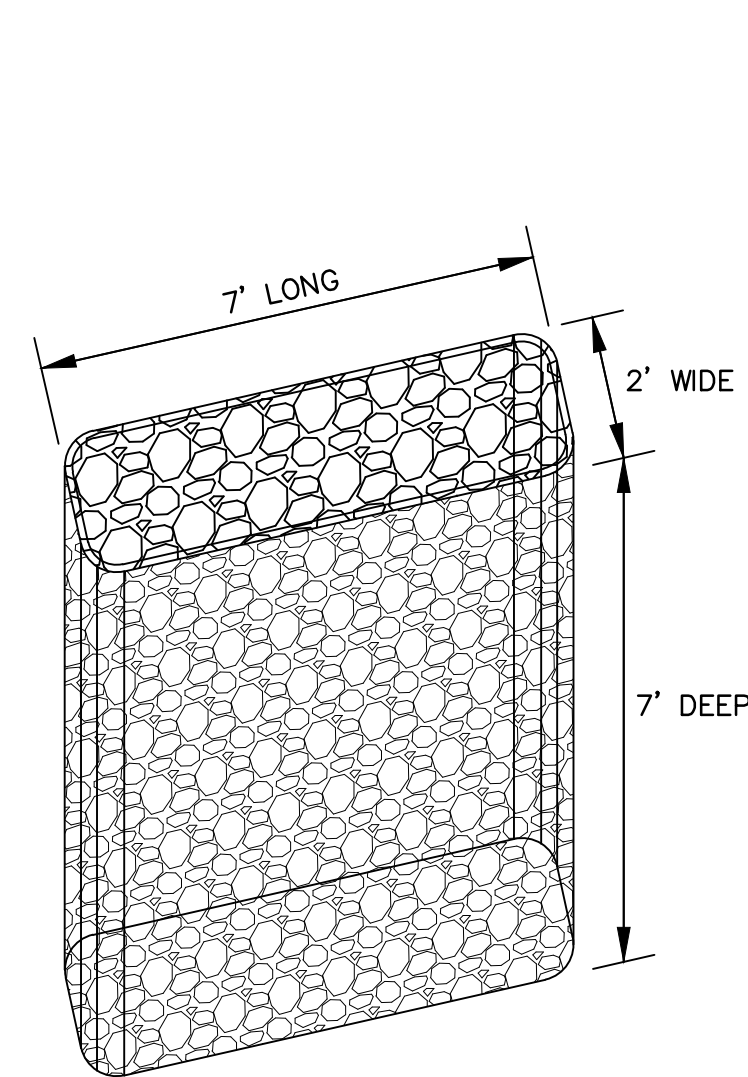
- 12" DIAMETER ADS INLINE DRAIN WITH 8" OUTLET
- 12"Ø LOCKING DOMED GRATE
- 12" WIDE X 6" DEEP CONCRETE COLLAR

NOTE: RIM ELEVATIONS SHOWN REPRESENT WATER SURFACE OF RETENTION POND. INSTALL ALL INLETS

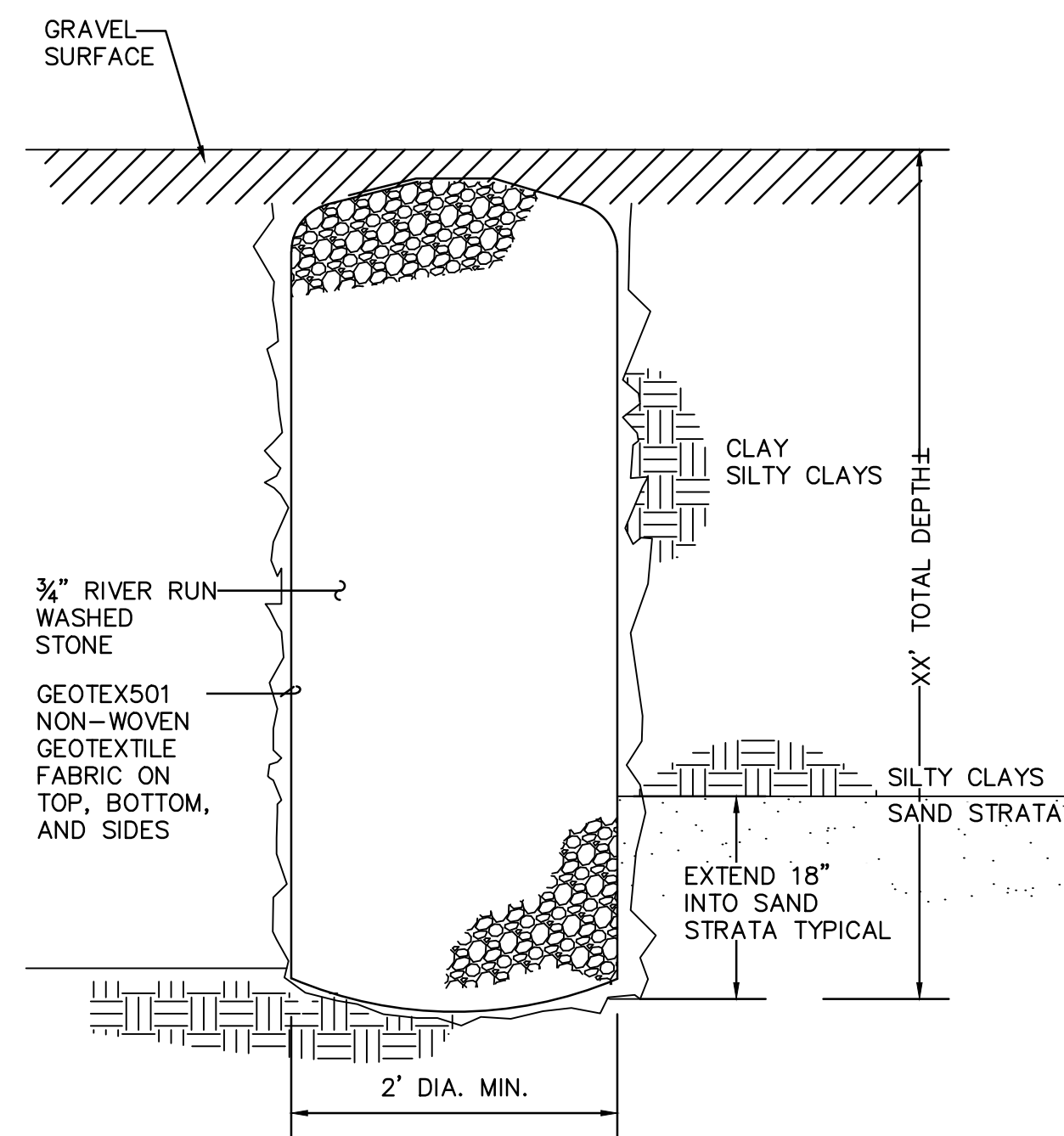
- A. ALL PRIVATE STORM DRAIN LINES AND FITTINGS TO BE ADS N-12WT (WATERTIGHT) UNLESS NOTED.
- B. INSTALL ALL STORM DRAIN INLETS AND PIPE PER MANUFACTURER'S SPECIFICATIONS AND DETAILS.
- C. STORM DRAIN SYSTEM WILL REQUIRE REGULAR MAINTENANCE TO ENSURE PROPER FUNCTIONING DURING STORM EVENTS. ENGINEER RECOMMENDS THAT OWNER PUT IN PLACE INSPECTION AND MAINTENANCE REQUIREMENTS SCHEDULED TO OCCUR MONTHLY AND AFTER EACH STORM EVENT.
- D. NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS ENCOUNTERED DURING CONSTRUCTION.
- E. ALL CONCRETE COLLARS PER COA STD DWG #2461.



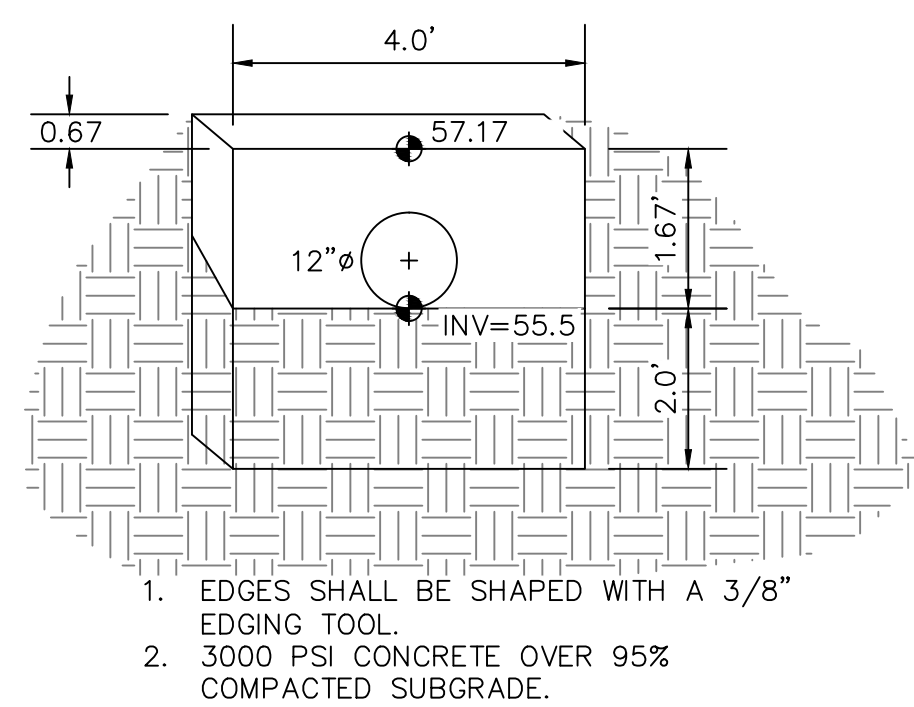
A4 **INLINE DRAIN INLET** I#



B4	PERCOLATION TRENCH
	LOCATE CLAY LAYER BELOW SURFACE GRADE. MAY VARY BASED ON LOCATION OF INFILTRATION PIT.



SCALE: N.T.S.



D3 CONCRETE HEADWALL




 CITY OF ALBUQUERQUE
 STRATEGIC PLANNING AND DESIGN
 PARKS AND RECREATION DEPARTMENT

MILE HIGH LITTLE LEAGUE SITE IMPROVEMENTS DRAINAGE DETAILS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
City Project No. 902202		Zone Map No. K-21	Sheet 6	Of 11

DATE: JANUARY 7, 2015

MILE HIGH LITTLE LEAGUE SITE IMPROVEMENTS

PROJECT# 902202

RECORD DRAWINGS
DATE: