

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

April 29, 2025

Verlyn Miller, P.E.  
Miller Engineering Consultants, Inc  
3500 Comanche NE Bldg. F  
Albuquerque, NM 87107

**RE: ABQ Biopark SHARC  
2601 Central Ave NW  
Grading and Drainage Plans  
Engineer's Stamp Date: 3/25/25  
Hydrology File: J12D004  
Case # HYDR-2025-00125**

Dear Mr. Miller:

PO Box 1293

Albuquerque

NM 87103

[www.cabq.gov](http://www.cabq.gov)

Based upon the information provided in your submittal received 04/29/2025, the Grading & Drainage Plans **are approved** for Building Permit and Grading Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

**PRIOR TO CERTIFICATE OF OCCUPANCY:**

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, [jhughes@cabq.gov](mailto:jhughes@cabq.gov), 505-924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 505-924-3314 or [amontoya@cabq.gov](mailto:amontoya@cabq.gov).

Sincerely,

Anthony Montoya, Jr., P.E., CFM  
Senior Engineer, Hydrology  
Planning Department, Development Review Services



## GENERAL NOTES

1. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185--WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT.
2. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE CONSTRUCTION LIMITS OF THIS PROJECT AND WILL BE RESPONSIBLE FOR ANY PRIVATE AGREEMENTS NECESSARY TO EXECUTE THIS CONTRACT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS EQUIPMENT TO PUBLIC OR PRIVATE PROPERTY.
3. DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE CONSTRUCTION ENGINEER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES 48 HOURS BEFORE COMMENCING WORK IN THE AREAS NEAR UNDERGROUND UTILITY LINES. CONTRACTOR SHALL NOT INTERFERE WITH UTILITY LINE OPERATION AND SHALL COORDINATE ALL WORK AFFECTING EXISTING UTILITIES WITH THE APPROPRIATE AUTHORITY FOR EACH UTILITY, AND THE ENGINEER SHALL BE PROMPTLY NOTIFIED OF ANY PROBLEMS OR CONFLICTS ENCOUNTERED. ALL UTILITY WORK PERTAINING TO THIS PROJECT (NEW WORK AND/OR RELOCATIONS AND REPAIRS) SHALL BE COORDINATED AND PERFORMED BY THE GENERAL CONTRACTOR. THE CONTRACTOR SHALL PAY FOR ALL PUBLIC AND PRIVATE UTILITY LOCATING SERVICES.
5. TOPOGRAPHIC DATA, BENCHMARKS, REFERENCE POINTS, P.I.'S, STRUCTURE TIES, AND ALL OTHER MISCELLANEOUS SURVEY INFORMATION WAS OBTAINED FROM PREVIOUS FIELD SURVEYS. IT IS ENTIRELY POSSIBLE THAT THESE POINTS MAY NO LONGER EXIST IN THE FIELD. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO REESTABLISH ANY MISSING BENCH MARKS, REFERENCE POINTS, OR P.I.'S REQUIRED FOR CONSTRUCTION OF THIS PROJECT AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL VERIFY BETWEEN ADJACENT REFERENCE POINTS, BENCH MARKS, AND P.I.'S PRIOR TO THEIR USE IN CONSTRUCTING THIS PROJECT TO ASSURE THE INTEGRITY OF EACH POINT.
6. CONTRACTOR SHALL COORDINATE SITE ACCESS AND STAGING AREA WITH OWNER.
7. THE CONTRACTOR SHALL USE CAUTION AT ALL EXISTING STRUCTURES INCLUDING ALL UNREINFORCED MASONRY WALLS, BUILDINGS, FENCES ETC.. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO ANY STRUCTURES, DRIVEWAYS, LIGHT FIXTURES, AND WATER METERS, ETC. AND SHALL REPAIR THE DAMAGES AT HIS OWN EXPENSE.
8. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE SPECIFICATIONS AND STANDARD DRAWINGS. ALL UTILITY WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH ABCWA STANDARD DRAWINGS AND SPECIFICATIONS.
9. THE CONTRACTOR SHALL DETERMINE AND COMPLY WITH ALL APPROPRIATE LOCAL, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
10. WHEN ABUTTING NEW ASPHALT TO EXISTING ASPHALT, SAW CUT EXISTING ASPHALT TO A NEAT STRAIGHT LINE TO MATCH NEW ASPHALT.
11. DURING THE CONSTRUCTION OF THIS PROJECT, SOME OVERHEAD AND/OR UNDERGROUND UTILITY ADJUSTMENTS MAY HAVE TO BE ACCOMPLISHED CONCURRENTLY BY THE UTILITY OWNERS (CITY AND/OR PRIVATELY OWNED). THE CONTRACTOR SHALL COORDINATE AND ADVISE THE UTILITY OWNERS, ALLOWING ENOUGH TIME SO THAT THE REQUIRED UTILITY ADJUSTMENTS DO NOT IMPEDE THE CONTRACTOR'S WORK. THE CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS, INCONVENIENCE, OR DAMAGE SUSTAINED DUE TO ANY INTERFERENCE FROM SAID UTILITY APPURTENANCES. ALL UTILITY WORK PERTAINING TO THIS PROJECT (NEW WORK AND/OR RELOCATIONS AND REPAIRS) SHALL BE COORDINATED AND PERFORMED BY THE GENERAL CONTRACTOR.
12. AS OF MARCH 10, 2003, THE USEPA REQUIRES NPDES PERMIT COVERAGE FOR STORM WATER DISCHARGES FROM CONSTRUCTION PROJECTS (COMMON PLANS OF DEVELOPMENT) THAT WILL RESULT IN THE DISTURBANCE (OR RE-DISTURBANCE) OF ONE OR MORE ACRES, INCLUDING EXPANSIONS OF TOTAL LAND AREA. THE DEVELOPER SHOULD BE MADE AWARE THAT THE USEPA REQUIRES THAT ALL "OPERATORS" (SEE FEDERAL REGISTER/VOL. 63, NO. 128 / MONDAY, JULY 6, 1999 PG 36509) OBTAIN NPDES PERMIT COVERAGE FOR CONSTRUCTION PROJECTS. GENERALLY THIS MEANS THAT AT LEAST TWO PARTIES WILL REQUIRE PERMIT COVERAGE. THE OWNER/DEVELOPER OF THIS CONSTRUCTION PROJECT WHO HAS OPERATIONAL CONTROL OVER THE PROJECT SPECIFICATIONS, THE GENERAL CONTRACTOR WHO HAS DAY-TO-DAY OPERATIONAL CONTROL OF THOSE ACTIVITIES AT THE SITE, WHICH ARE NECESSARY TO ENSURE COMPLIANCE WITH THE STORM WATER POLLUTION PLAN AND OTHER CONDITIONS, AND POSSIBLY OTHER "OPERATORS" THAT WILL REQUIRE APPROPRIATE NPDES PERMIT COVERAGE FOR THIS PROJECT. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR DEVELOPING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) DOCUMENT FOR THE PROJECT AND PROVIDING, BUILDING, MANAGING AND MAINTAINING ALL BEST MANAGEMENT PRACTICES (BMP'S) AND TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SPECIFIED IN THE SWPPP DOCUMENT.
13. ALL ASPHALT PAVED SURFACES SHALL HAVE A MINIMUM SLOPE OF 1.00%. THE CONTRACTOR SHALL FIELD VERIFY AND NOTIFY THE PROJECT ENGINEER IF ANY ASPHALT PAVED SURFACES SLOPES ARE LESS THAN 1.00% PRIOR TO CONSTRUCTION..
14. ACCESS TO DELIVERING AND RECEIVING AREAS SHALL BE KEPT OPEN AT ALL TIMES. ANY ACCESS CLOSURE MUST BE SCHEDULED WITH THE PROPERTY OWNERS AT LEAST 48 HOURS IN ADVANCE AND APPROVED BY THE OWNER, PROJECT ARCHITECT AND THE PROJECT ENGINEER.
15. MAINTENANCE OF DRAINAGE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.
16. ALL EXISTING TOPOGRAPHIC DATA SHOWN ON THESE PLANS HAS BEEN OBTAINED FROM A TOPOGRAPHIC SURVEY PROVIDED BY WILSON & COMPANY. MILLER ENGINEERING CONSULTANTS HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THIS INFORMATION.
17. THE CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTALS ON ALL CIVIL RELATED ITEMS FOR REVIEW PRIOR TO CONSTRUCTION.
18. DURING THE CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY TEMPORARY DRAINAGE MEASURES NECESSARY TO SAFELY CONVEY STORM WATER RUNOFF. ANY DAMAGES TO PUBLIC OR PRIVATE PROPERTY OR IMPROVEMENTS CONSTRUCTED BY THE CONTRACTOR RESULTING FROM STORM WATER FLOWS IN THE PROJECT VICINITY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
19. WHEN ABUTTING NEW CONCRETE TO EXISTING CONCRETE, SAW CUT EXISTING CONCRETE TO A NEAT STRAIGHT LINE TO MATCH NEW CONCRETE DEPTH.
20. THE CONTRACTOR SHALL DEVELOP THE TRAFFIC CONTROL PLAN AND SHALL PROVIDE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES AND CONSTRUCTION SIGNING IN ACCORDANCE WITH THE "MUTCD" (LATEST EDITION) DURING THE CONSTRUCTION PERIOD (WORKING AND NON-WORKING HOURS). ANY NECESSARY DEVIATION FROM THE "MUTCD" SHALL HAVE PRIOR APPROVAL OF THE PROJECT ENGINEER OR CONSTRUCTION INSPECTOR. THE CONTRACTOR SHALL SUBMIT A COPY OF THE PROPOSED TRAFFIC CONTROL PLAN TO THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. THIS PLAN SHALL SATISFY THE REQUIREMENTS FOR PUBLIC SAFETY AND TRAVELING PUBLIC AS WELL AS THE REQUIREMENTS OF "MUTCD" AND SHALL BE REVISED AS NECESSARY TO MEET THE REQUIREMENTS DURING THE CONSTRUCTION PERIOD. THE SECTIONS OF ROADWAY WHICH ARE OPEN TO TRAFFIC SHALL BE KEPT IN GOOD RIDING CONDITION AND CLEAR OF HAZARDS TO TRAFFIC. THE SAFETY AND COMFORT OF THE TRAVELING PUBLIC AND ACCESS TO RESIDENCES AND OTHER TURNOUTS SHALL BE OF PRIMARY CONSIDERATION.
21. THE CONTRACTOR SHALL HAUL AND DISPOSE OF ALL CONCRETE RUBBLE AND OTHER REMOVALS TO AN ENVIRONMENTALLY SUITABLE LOCATION.
22. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING EXISTING ASPHALT PAVING. ANY DAMAGE TO THE ASPHALT DUE TO CONSTRUCTION ACTIVITY WILL BE REPAIRED BY THE CONTRACTOR AT OWN EXPENSE.
23. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE ANY SPOT ELEVATIONS ON THE GRADING AND DRAINAGE PLAN WHICH APPEAR TO BE AMBIGUOUS OR DO NOT MEET THE INTENT OF THE GRADING AND DRAINAGE PLAN.
24. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DOES NOT MEET ADA ACCESSIBILITY REQUIREMENTS. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%, AND ALL RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 12:1. ALL SIDEWALKS AND CONCRETE FLATWORK SHALL HAVE A MINIMUM OF 0.5% SLOPE. CONTRACTOR SHALL FIELD VERIFY AND NOTIFY THE PROJECT ENGINEER IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DO NOT MEET THESE REQUIREMENTS PRIOR TO CONSTRUCTION.

25. THE OWNER WILL HAVE A CERTIFIED TESTING LAB PERFORM ACCEPTANCE TESTING TO INCLUDE ALL NECESSARY COMPACTION TESTING AND MATERIAL TESTING FOR ALL FILL MATERIAL, SUBGRADE PREPARATION, BASE COURSE, HMA, AND CONCRETE WITH THE FREQUENCIES PROVIDED BELOW. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING THESE TESTS WITH THE OWNER'S ACCEPTANCE TESTING LAB. THE CONTRACTOR MAY CHOOSE TO PERFORM HIS OWN QUALITY CONTROL TESTING BY A SEPARATE INDEPENDENT LAB DURING CONSTRUCTION FOR HIS OWN PURPOSES.

### ACCEPTANCE TESTING BY THE OWNER:

MATERIAL AND DENSITY TESTING BY THE OWNER WILL BE PERFORMED AT THE FOLLOWING FREQUENCIES:

HOT MIX ASPHALT (HMA) PAVING: HMA SAMPLING WILL BE CONDUCTED AT A RATE OF ONE FOR EACH DAY OF PAVING. THREE CORES SAMPLES SHALL BE TAKEN FOR EACH DAY OF PAVING. ACCEPTANCE TESTING FOR DENSITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 416. HOT MIX ASPHALT SAMPLING ACCEPTANCE TESTING SHALL BE CONDUCTED AT A RATE OF ONE SAMPLE PER DAY OF PAVING.

BASE COURSE: BASE COURSE SAMPLING WILL BE AT A RATE OF ONE SAMPLE PER SOURCE. DENSITIES TESTING WILL BE CONDUCTED WITH A NUCLEAR DENSOMETER AT A RATE OF ONE TEST PER 200 SY.

SUBGRADE: DENSITIES TESTING WILL BE CONDUCTED WITH A NUCLEAR DENSOMETER AT A RATE OF ONE TEST PER 200 SY.

SITE CONCRETE: SITE CONCRETE WILL BE TESTED BY COLLECTING THREE CONCRETE SPECIMENS FOR EVERY 10 CY OF CONCRETE. THE SPECIMENS WILL BE USED FOR THE 7 DAY BREAK AND 30 DAY BREAK RESPECTIVELY.

THE CONTRACTOR MAY CONDUCT QUALITY CONTROL TESTING AT THE CONTRACTOR'S SOLE EXPENSE.

26. ALL BASE COURSE SHALL CONSIST OF A TYPE I BASE COURSE MATERIAL.

27. THE HMA MIX DESIGN FOR THIS PROJECT SHALL MATCH THE NMDOT SP IV MIX DESIGN REQUIREMENTS.

28. THE CONTRACTOR WILL BE RESPONSIBLE FOR RECORDING ALL CHANGES OR REVISIONS FROM THESE CONSTRUCTION DRAWINGS THAT TAKE PLACE DURING CONSTRUCTION. THESE CHANGES OR REVISIONS SHALL BE NOTED ON AS BUILT DRAWINGS THAT WILL BE PROVIDED TO THE PROJECT ARCHITECT UPON COMPLETION OF THE PROJECT. AS-BUILTS MUST BE SUBMITTED IN AN ELECTRONIC FORMAT ACCEPTABLE TO THE OWNER AND ARCHITECT.

29. POTHOLING: THE CONTRACTOR SHALL BE REQUIRED TO POTHOLE ALL EXISTING UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND REPORT THE FINDINGS OF THE POTHOLING RESULTS TO THE ARCHITECT AND ENGINEER PRIOR TO CONSTRUCTION.

30. THE PROJECT SHALL CONFORM TO ALL OF THE REQUIREMENTS AND RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT FOR THIS PROJECT. ALL AGGREGATES AND SUITABLE MATERIAL MUST BE OBTAINED FROM COMMERCIAL SOURCES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING A SUITABLE SOURCE MEETING ALL REQUIREMENTS OF THIS CONTRACT. FOR MINIMUM REQUIREMENTS REFER TO THE GEOTECHNICAL EVALUATION REPORT PREPARED BY WSP USA ENVIRONMENT & INFRASTRUCTURE INC., ALBUQUERQUE NM, PROJECT NO. US-EI-6867.7461, DATED JANUARY 9, 2025.

31. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND VISIBLE UTILITY FEATURES WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL REPORT TO THE ENGINEER ANY VISIBLE FEATURES THAT MAY NOT APPEAR ON THE TOPOGRAPHIC SURVEY SO THAT ANY ADJUSTMENTS MAY BE MADE TO THE INTENT OF THE DESIGN. THE CONTRACTOR SHALL ALSO FIELD VERIFY EXISTING ELEVATION WHERE NEW CONSTRUCTION IS CONNECTING TO EXISTING CONSTRUCTION SO THAT PROPOSED ELEVATION AND SLOPE CHANGE MAY BE ADDRESSED AS NEEDED.

32. THE CONTRACTOR SHALL REFER TO THE ARCHITECT'S DEMO PLANS FOR REMOVAL AND DISPOSAL OF ALL EXISTING INFRASTRUCTURE WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN WATER AND IRRIGATION SERVICE TO THE CAMPUS AT ALL TIMES DURING CONSTRUCTION.

33. ALL WELDED WIRE FABRIC SHALL CONSIST OF A 6X6 W1.4XW1.4.

34. ALL SIDEWALKS SHALL HAVE CONSTRUCTION CONTROL JOINTS SPACED EVERY 5 FEET AND EXPANSION JOINTS SPACED EVERY 30 FEET.

35. WHEN TAPPING INTO THE EXISTING SEWER MAIN TO INSTALL THE NEW SEWER MANHOLE THE CONTRACTOR SHALL PROVIDE THE NECESSARY BYPASS PUMPING (AS WELL AS OTHER MEAN AND METHODS NECESSARY) SO THAT SERVICE IS MAINTAINED AND NOT INTERRUPTED.

36. CONTRACTOR SHALL TAKE PRECAUTIONS AS NECESSARY TO PROTECT FROM DAMAGING EXISTING UTILITY LINES, WALKS, LANDSCAPING, ETC. WHICH WILL REMAIN AS PART OF THE FINAL SYSTEM. EXTRA CARE MUST BE GIVEN TO PRESERVING EXISTING IRRIGATION LINES AND LANDSCAPING. CONTRACTOR SHALL REPAIR AND/OR RESTORE THESE ITEMS AS REQUIRED TO PRE-CONSTRUCTION CONDITION AT THERE OWN EXPENSE.

37. BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT:

THE BIDDER HAS CAREFULLY EXAMINED THE PROJECT SITE AND AREA OF WORK, AND THAT FROM HIS OWN INVESTIGATIONS, HE HAS SATISFIED HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, AND THE CHARACTER QUALITY AND QUANTITIES OF MATERIALS AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR PERFORMANCE OF THE WORK, THE GENERAL AND LOCAL CONDITIONS AND OTHER ITEMS WHICH MAY IN ANY WAY AFFECT THE WORK OR ITS PERFORMANCE. NO ADDITIONAL COST SHALL ACCRUE TO THE OWNER AS A LACK OF SUCH FIELD VERIFICATIONS.

THE GENERAL CONTRACTOR AND/OR SUBCONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL TRADES AND ALL OTHER SUBCONTRACTORS ON THE JOB. IT SHALL BE THEIR RESPONSIBILITY TO SEE THAT ALL ASPECTS OF THE WORK BE FULLY UNDERSTOOD BY ALL PERSONS PERFORMING ANY PART OF THE WORK. NO ADDITIONAL COST SHALL ACCRUE TO THE OWNER AS RESULT OF ANY LACK OF SUCH COORDINATION OR UNDERSTANDING.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ESTIMATING QUANTITIES AND MATERIALS. COORDINATION BETWEEN LANDSCAPE AND CIVIL DRAWINGS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IF ANY IRREGULARITIES ARE DISCOVERED, BRING THIS TO THE ATTENTION OF THE ARCHITECT PRIOR TO BID SUBMISSION.

38. ALL WATER LINES SHALL HAVE A 36" MINIMUM BURY.

39. THE CONTRACTOR SHALL PLACE EMD DEVICES AT THE END OF ALL UTILITY SERVICE LINE SUB-OUTS SO THAT THE OWNER CAN EASILY LOCATE THEM IN FUTURE PHASES.

40. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL ON THE SITE DURING THE DURATION OF CONSTRUCTION, PARTICULARLY WITH THE GRADING WORK TO BE ACCOMPLISHED ON THIS PROJECT.

41. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.

42. THE CONTRACTOR SHALL NOTIFY THE PROJECT ARCHITECT AND PROJECT ENGINEER OF ANY CONFLICT WITH SITE UTILITIES OR FEATURES AND OBTAIN A RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.

43. CONTRACTOR SHALL TAKE PRECAUTIONS AS NECESSARY TO PROTECT FROM DAMAGING EXISTING UTILITY LINES, WALKS, LANDSCAPING, ETC. WHICH WILL REMAIN AS PART OF THE FINAL SYSTEM. CONTRACTOR SHALL REPAIR AND/OR RESTORE THESE ITEMS AS REQUIRED TO PRE-CONSTRUCTION CONDITION.

44. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND OBTAINING ALL NECESSARY PERMITS AS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT.

45. INSTALLATION OF ALL PIPE FITTINGS, ANGLES, BENDS, WYES, TEES ETC. REQUIRED TO INSTALL THE WATERLINE AND SANITARY SEWER LINE WILL BE CONSIDERED INCIDENTAL TO THE WATERLINE AND SANITARY SEWER LINE ITEM AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THIS WORK.

46. IF THE CONTRACTOR INADVERTENTLY DAMAGES AN EXISTING OR PROPOSED UTILITY DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR THE DAMAGED UTILITY IN ACCORDANCE WITH THE SPECIFICATIONS AS THE CONTRACTOR'S EXPENSE AND AT NO EXPENSE TO THE OWNER.

47. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DOES NOT MEET ADA ACCESSIBILITY REQUIREMENTS. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 1.95%. ALL SIDEWALKS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 4.95% AND ALL RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 16:1.

48. ALL SIDEWALKS AND CONCRETE FLATWORK SHALL HAVE A MINIMUM OF 0.5% SLOPE. CONTRACTOR SHALL CONTACT PROJECT ENGINEER IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DO NOT MEET THIS REQUIREMENT.

49. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY COMPACTION TESTING, QUALITY ASSURANCE TESTING AND ANY OTHER TESTING REQUIRED ON CIVIL RELATED ITEMS AS OUTLINED IN THE SPECIFICATIONS.

50. ALL LOCATIONS WHERE NEW CONSTRUCTION CONNECTS TO EXISTING CONCRETE OR PAVEMENT CONTRACTOR SHALL VERIFY EXISTING SPOT ELEVATIONS SHOWN ON PLANS. IF THERE IS A CONFLICT NOTIFY PROJECT ARCHITECT AND ENGINEER TO CLARIFY DIFFERENCE.

51. ALL STORM DRAIN PIPE SHALL BE DOUBLE WALL HDPE STORM DRAIN PIPE WITH WATER TIGHT JOINTS. ALL PVC STORM DRAIN PIPE SHALL BE INSTALLED PER THE MANUFACTURERS RECOMMENDATIONS AND SHALL HAVE WATERTIGHT JOINTS.

52. ALL STORM DRAIN PIPE, INLETS AND RELATED APPURTENANCES SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

53. CONTRACTOR SHALL VERIFY ALL PIPE LENGTHS, SLOPES AND LOCATIONS PRIOR TO INSTALLATION WITH THE PROJECT ENGINEER.

54. CONNECTIONS TO DISSIMILAR PIPING SHALL BE WITH FITTINGS RECOMMENDED BY MANUFACTURERS.

55. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION EFFORTS (AN ASSOCIATED COSTS) FOR ALL UTILITY WORK ON THIS PROJECT.

56. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE ANY CONFLICTS BETWEEN EXISTING OR PROPOSED UTILITIES ON THIS PROJECT PRIOR TO CONSTRUCTION.

57. THE CONTRACTOR WILL BE RESPONSIBLE FOR RECORDING ALL CHANGES OR REVISIONS FROM THESE CONSTRUCTION DRAWINGS THAT TAKE PLACE DURING CONSTRUCTION. THESE CHANGES OR REVISIONS SHALL BE NOTED ON AS BUILT DRAWINGS THAT WILL BE PROVIDED TO THE PROJECT ARCHITECT UPON COMPLETION OF THE PROJECT.

58. THE CONTRACTOR SHALL SUBMIT A JOINT PATTERN PLAN FOR THE CONCRETE PAVING ON THE PROJECT. THE JOINT PATTERNS SHALL HAVE A PLAN FOR ALL CONTROL JOINTS AND EXPANSION JOINTS REQUIRED FOR THE CONCRETE PAVING. THE PLAN SHALL FOLLOW THE GUIDANCE AND RECOMMENDATIONS BY ACI 330.

59. THE CONTRACTOR SHALL SUBMIT A SEED MIX DESIGN TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO STARTING THE SEEDING ON THE PROJECT. THE SEED MIX DESIGN SHALL BE A SEED MIX RECOMMENDED BY NRCS FIELD OFFICE REPRESENTATIVE APPROPRIATE FOR PROJECT LOCATION.

ALL DISTURBED AREAS, NOT ADDRESSED BY ARCHITECTURAL LANDSCAPE PLAN WITH SLOPES OF LESS THAN 3:1 SHALL RECEIVE CLASS "A" SEEDING. ANY SLOPES THAT ARE 3:1 OR STEEPER SLOPES SHALL RECEIVE STEEP SLOPE SEEDING. THE STEEP SLOPE SEEDING SHALL CONSIST OF SEEDING IN CONJUNCTION WITH A 100% COCONUT FIBER BLEND EROSION BLANKET (NORTH AMERICAN GREEN C125) OR APPROVED EQUAL. ALL MATERIALS, EQUIPMENT AND LABOR ASSOCIATED WITH THE PROPER CONSTRUCTION OF THE STEEP SLOPE SEEDING WILL BE CONSIDERED INCIDENTAL AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THIS MATERIAL OR WORK. THE COCONUT FIBER EROSION BLANKET AND ASSOCIATED SEEDING SHALL BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE PROJECT ENGINEER PRIOR TO CONSTRUCTION.

## WATER AND SANITARY SEWER UTILITY GENERAL NOTES

- A. AT AREAS OF CUTTING AND TRENCHING AT EXISTING ASPHALT SURFACES FOR NEW WORK, THE CONTRACTOR SHALL PATCH AND REPAIR DAMAGED ASPHALT TO MATCH EXISTING ADJACENT SURFACES
- B. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICT W/ SITE UTILITIES OR FEATURES AND OBTAIN RESOLUTION PRIOR TO PROCEEDING WITH THE WORK
- C. CONTRACTOR SHALL COORDINATE SITE ACCESS AND STAGING AREA WITH OWNER/ARCHITECT
- D. CONTRACTOR SHALL TAKE PRECAUTIONS AS NECESSARY TO PROTECT FROM DAMAGING EXISTING UTILITY LINES, WALKS, LANDSCAPING, ETC. WHICH WILL REMAIN AS PART OF THE FINAL SYSTEM. CONTRACTOR SHALL REPAIR AND/OR RESTORE THESE ITEMS AS REQUIRED TO PRE-CONSTRUCTION CONDITION
- E. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- F. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ON ANY UTILITY CONSTRUCTION AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.
- G. CONTRACTOR SHALL ADHERE TO THE N.M.A.P.W.A. (AMERICAN PUBLIC WORKS ASSOCIATION) NEW MEXICO CHAPTER, AND THE SPECIFICATIONS IN THE PROJECT MANUAL UNLESS OTHERWISE STATED FOR WATER AND SANITARY SEWER UTILITY WORK.
- H. IF THERE IS A CONFLICT BETWEEN PROPOSED SEWER SERVICE, STORM DRAIN AND WATER SERVICE LINES, THE CONTRACTOR SHALL ADJUST THE WATER SERVICES AS NECESSARY TO COMPLETE THE WORK. 10' MINIMUM SEPARATION BETWEEN THE WATER AND SEWER PIPES.
- I. THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL IDENTIFY, LOCATE AND REMOVE ALL SUPERFLUOUS UTILITIES AND ASSOCIATED CONDUITS AND APPURTENANCES ACCORDING TO THE INDICATIONS OF THIS DRAWING. REFER TO LEGEND AND DRAWING TO INTERPRET EXTENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES 48 HOURS BEFORE COMMENCING WORK IN THE AREAS NEAR UNDERGROUND UTILITY LINES. CONTRACTOR SHALL NOT INTERFERE WITH UTILITY LINE OPERATION AND SHALL COORDINATE ALL WORK AFFECTING EXISTING UTILITIES WITH THE APPROPRIATE AUTHORITY FOR EACH UTILITY, AND THE SCHOOL SHALL BE PROMPTLY NOTIFIED OF ANY PROBLEMS OR CONFLICTS ANTICIPATED OR ENCOUNTERED.
- J. DURING THE CONSTRUCTION OF THIS PROJECT, SOME OVERHEAD AND/OR UNDERGROUND UTILITY ADJUSTMENTS MAY HAVE TO BE ACCOMPLISHED CONCURRENTLY BY THE UTILITY OWNERS (COUNTY AND/OR PRIVATELY OWNED). THE CONTRACTOR SHALL COORDINATE AND ADVISE THE UTILITY OWNERS, ALLOWING ENOUGH TIME SO THAT THE REQUIRED UTILITY ADJUSTMENTS DO NOT IMPEDE THE CONTRACTOR'S WORK. THE CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS, INCONVENIENCE, OR DAMAGE SUSTAINED DUE TO ANY INTERFERENCE FROM SAID UTILITY APPURTENANCES.
- K. ALL WATER LINE PIPE LESS THAN 4 INCHES SHALL BE SCHEDULE 80 PVC AND ALL PIPES GREATER THAN OR EQUAL TO 4 INCHES SHALL BE C-900 PVC.
- L. ALL SANITARY SEWER PIPE SHALL BE SDR-35 PVC.
- M. THE CONTRACTOR SHALL COORDINATE WITH CITY OF ALBUQUERQUE UTILITIES DEPARTMENT FOR ALL NEW UTILITY INSTALLATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INSTALL ALL UTILITIES IN ACCORDANCE WITH CITY OF ALBUQUERQUE REQUIREMENTS.
- N. ALL WATERLINES SHALL BE FLUSHED, DISINFECTED, AND TESTED IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION (AWWA) SPECIFICATION. ALL FIRE LINES SHALL BE FLUSHED, DISINFECTED, AND TESTED IN ACCORDANCE WITH THE NFPA CODES AND REGULATIONS.
- O. SEE GENERAL NOTES ON SITE UTILITY SHEET.

## CIVIL DRAWING INDEX

SHEET No.	SHEET TITLE
CG-001	GENERAL NOTES, CIVIL DRAWING INDEX
C-100	HYDROLOGY PLAN
C-101	GRADING AND DRAINAGE PLAN
C-102	SITE UTILITY PLAN
C-501	MISCELLANEOUS DETAILS
C-502	MISCELLANEOUS DETAILS

21. THE CONTRACTOR SHALL HAUL AND DISPOSE OF ALL CONCRETE RUBBLE AND OTHER REMOVALS TO AN ENVIRONMENTALLY SUITABLE LOCATION.

22. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING EXISTING ASPHALT PAVING. ANY DAMAGE TO THE ASPHALT DUE TO CONSTRUCTION ACTIVITY WILL BE REPAIRED BY THE CONTRACTOR AT OWN EXPENSE.

23. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE ANY SPOT ELEVATIONS ON THE GRADING AND DRAINAGE PLAN WHICH APPEAR TO BE AMBIGUOUS OR DO NOT MEET THE INTENT OF THE GRADING AND DRAINAGE PLAN.

24. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DOES NOT MEET ADA ACCESSIBILITY REQUIREMENTS. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%, AND ALL RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 12:1. ALL SIDEWALKS AND CONCRETE FLATWORK SHALL HAVE A MINIMUM OF 0.5% SLOPE. CONTRACTOR SHALL FIELD VERIFY AND NOTIFY THE PROJECT ENGINEER IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DO NOT MEET THESE REQUIREMENTS PRIOR TO CONSTRUCTION.



1306 RIO GRANDE BLVD NW  
ALBUQUERQUE, NM 87104  
505-255-6400 505-268-6954 FAX  
WWW.NCA-ARCHITECTS.COM

ARCHITECT

CONSULTANT



PROJECT TITLE

**ALBUQUERQUE  
BIOPARK SHARC  
(Science Health  
and Aquatic  
Research  
Center)**

ALBUQUERQUE  
NEW MEXICO

REVISIONS:

NO	DATE	DESCRIPTION
1	4-22-25	CITY COMMENTS
2	4-29-25	CITY COMMENTS

MK DATE DESCRIPTION

DRAWN BY: CHECKED BY:

MEC VAM

PROJECT NUMBER:

A24.02

DATE:

APRIL 24, 2025

SHEET TITLE:

**GENERAL NOTES AND  
INDEX TO DRAWINGS**

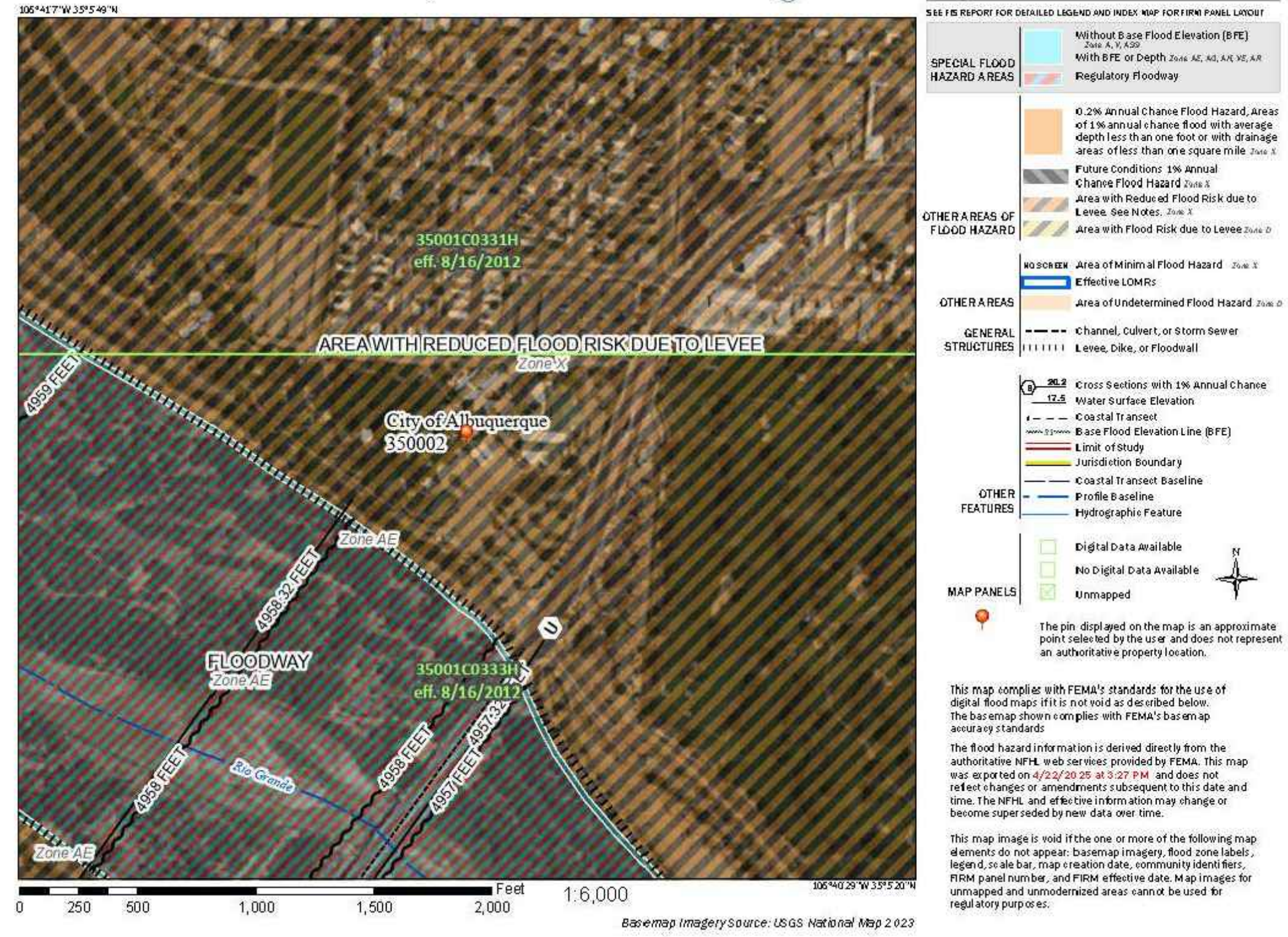
SHEET NO:

**CG-001**

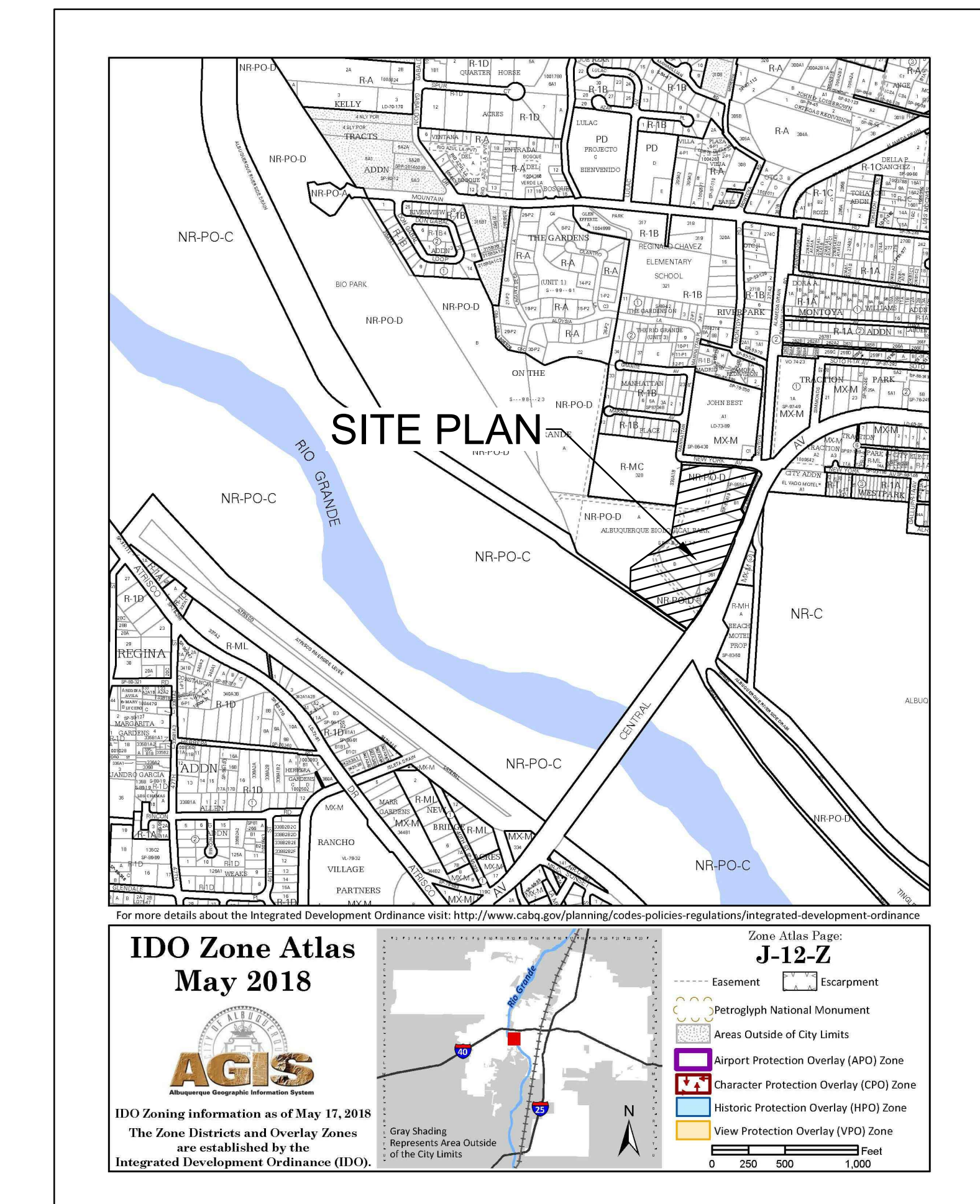




National Flood Hazard Layer FIRMette



A1 FLOOD ZONE MAP  
FLOOD ZONE MAP: 35001C0331H



C1 VICINITY MAP  
ZONE ATLAS MAP H-17-C

LEGAL DESCRIPTION

TRACT A PLAT OF TRS A & B ALBUQUERQUE BIOLOGICAL PARK CONT 16.5910 AC M/L

DRAINAGE REPORT:

SITE LOCATION

The proposed project is located on a small 0.68-acre site located on the grounds of the City of Albuquerque's Bio Park Aquarium. The Bio Park Aquarium is located west of central and south of New York Street and can be accessed from Nery York Street (see vicinity map this sheet).

EXISTING CONDITIONS

The existing site is estimated at 0.68 acres and is currently partially developed with landscaping and other various natural features. The site is relatively flat. The site lies within A Zone X floodplain as indicated on the 100-year FEMA map on this sheet. Discharge from the site is contained on site withing low lying natural areas.

PROPOSED CONDITIONS

The proposed project will consist of a new Share Tank building to be added to the existing Bio Park Aquarium Building. The site will also have a new asphalt-paved driveway and paved courtyard area and other natural landscaping around the perimeter of the building. The site has been divided into two drainage basins, Basin A and B. Basin A consists of the new building, which will discharge directly to water harvest area #1. Basin B is the new paved driveway area and courtyard area, which will discharge directly to water harvest area #2.

CONCLUSIONS

When fully developed as indicated on the grading and drainage plan, runoff from the new building and paved areas will discharge to two water harvest ponds to address the City's storm water quality volume requirement. Water harvest area #1 and #2 both have more volume than the total volume that is required for storm water quality.

GENERAL NOTES:

- EXISTING TOPOGRAPHIC SURVEY PERFORMED AND COMPILED BY WILSON & COMPANY, ALBUQUERQUE, NEW MEXICO JANUARY, 2023. MILLER ENGINEERING CONSULTANTS HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS INFORMATION.
- PROJECT BENCHMARK IS A NATIONAL GEODETIC SURVEY (NGS) A 3" BWH BRASS DISC SET IN CONCRETE FLUSH WITH THE GROUND, STAMPED "6-K13, 1976", IN THE NORTHWEST QUADRANT OF INTERSECTION CENTRAL AVE. AND TINGLEY DRIVE SOUTHWEST, TRAVEL SOUTH ON TINGLEY DR. 1 MILE TO ALCALDE PLACE. ELEVATION = 4,959.62 FEET (NAVD 88 VERTICAL DATUM).
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES DURING THE CONSTRUCTION PHASE.
- CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE CITY OF ALBUQUERQUE, PRIOR TO ANY GRADING OR CONSTRUCTION.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- ALL EMBANKMENTS SHALL BE PLACED AND COMPACTED IN LIFTS OF MAXIMUM OF 8". THE EMBANKMENTS SHALL BE WETTED AND COMPACTED TO 95% OPTIMUM DENSITY PER ASTM D1557 AND 95% UNDER ALL STRUCTURES INCLUDING DRIVEWAYS AND PARKING LOTS.
- THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE STORM DRAINAGE REGULATIONS. ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE "GRADING AND DRAINAGE DESIGN REQUIREMENTS AND POLICIES FOR LAND DEVELOPMENT."
- THE OWNER, CONTRACTOR AND/OR BUILDER SHALL COMPLY WITH ALL APPROPRIATE LOCAL, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
- THE CONTRACTOR SHALL TAKE ALL APPROPRIATE AND REASONABLE MEASURES TO PREVENT SEDIMENT OR POLLUTANT LADEN STORM WATER FROM EXITING THE SITE DURING CONSTRUCTION. STORMWATER MAY BE DISCHARGED IN A MANNER, WHICH COMPLIES WITH THE APPROVED GRADING AND DRAINAGE PLAN.
- THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO PREVENT THE MOVEMENT OF CONSTRUCTION RELATED SEDIMENT, DUST, MUD, POLLUTANTS, DEBRIS, WASTE, ETC FROM THE SITE BY WIND, STORM FLOW OR ANY OTHER METHOD EXCLUDING THE INTENTIONAL, LEGAL TRANSPORTATION OF SAME IN A MANNER ACCEPTABLE BY THE CITY.
- THE CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE THE AREAS SHOWN AS "SLOPE LIMITS" ON THE GRADING AND DRAINAGE PLAN.
- SEE ARCHITECTURAL DRAWINGS FOR SIDEWALK AND HANDICAPPED RAMPS, DETAILS AROUND THE BUILDING.
- THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE ANY SPOT ELEVATIONS ON THE GRADING AND DRAINAGE PLAN WHICH APPEAR TO BE AMBIGUOUS OR DO NOT MEET THE INTENT OF THE GRADING AND DRAINAGE PLAN.
- THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DOES NOT MEET ADA ACCESSIBILITY REQUIREMENTS. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%, ALL SIDEWALKS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5.0%, AND ALL RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 15:1.
- ALL SIDEWALKS AND CONCRETE FLATWORK SHALL HAVE A MINIMUM OF 0.5% SLOPE. CONTRACTOR SHALL CONTACT PROJECT ENGINEER IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DO NOT MEET THIS REQUIREMENT.
- THE CONTRACTOR SHALL SUBMIT MATERIAL SUBMITTALS, CUT SHEETS AND SHOP DRAWINGS FOR ALL CIVIL RELATED ITEMS FOR REVIEW PRIOR TO CONSTRUCTION.
- THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 EDITION OF THE NEW MEXICO STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION (GRAY BOOK). ALL UTILITY WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN PUBLIC WORKS ASSOCIATION, NEW MEXICO CHAPTER, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- ALL EXISTING MANHOLES, VALVES AND METERS SHALL BE ADJUSTED TO NEW FINISH GRADE.
- THE CONTRACTOR SHALL SUBMIT A SEED MIX DESIGN TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO STARTING THE SEEDING ON THE PROJECT. THE SEED MIX DESIGN SHALL BE A SEED MIX RECOMMENDED BY NRCS FIELD OFFICE REPRESENTATIVE APPROPRIATE FOR PROJECT LOCATION.

ALL DISTURBED AREAS, NOT ADDRESSED BY ARCHITECTURAL LANDSCAPE PLAN WITH SLOPES OF LESS THAN 3:1 SHALL RECEIVE CLASS "A" SEEDING. ANY SLOPES THAT ARE 3:1 OR STEEPER SLOPES SHALL RECEIVE STEEP SLOPE SEEDING. THE STEEP SLOPE SEEDING SHALL CONSIST OF SEEDING IN CONJUNCTION WITH A 100% COCONUT FIBER BLEND EROSION BLANKET (NORTH AMERICAN GREEN C125) OR APPROVED EQUAL.

DRAINAGE DATA

Precipitation Zone 2 - 100-year Storm		P(360) = 2.29 in		P(1440) = 2.59 in					
Basin	Area (Ac)	Land Treatment Factors				Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
		A	B	C	D				
<b>Existing Conditions</b>									
Site	0.680	0.000	0.000	0.580	0.100	1.221	0.069	0.07	2.20
<b>Total</b>	<b>0.680</b>							<b>0.07</b>	<b>2.20</b>
<b>Proposed Conditions</b>									
A	0.520	0.000	0.000	0.270	0.250	1.66	0.072	0.08	1.91
B	0.160	0.000	0.000	0.000	0.160	2.33	0.031	0.04	0.69
<b>Total</b>	<b>0.680</b>							<b>0.08</b>	<b>1.91</b>

WATER HARVEST AREA #1

WHA #1			
Pond Rating Table			
Side Slope			
Elev. (ft)	Area (sq ft)	Volume (cf)	Cum Volume (cf)
53	922	0	0
54	1450	1186.000	1186.000
55	3542	2496.000	3682.000
56	6515	5028.500	8710.500

WATER HARVEST AREA #2

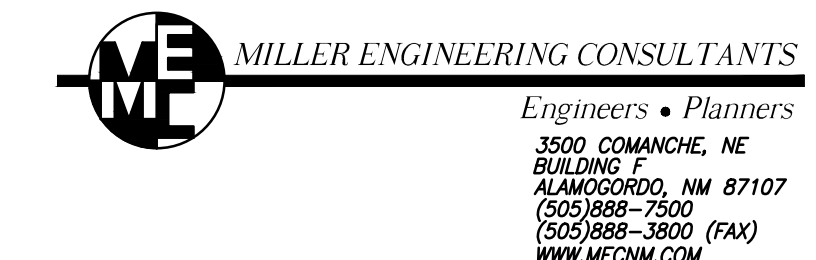
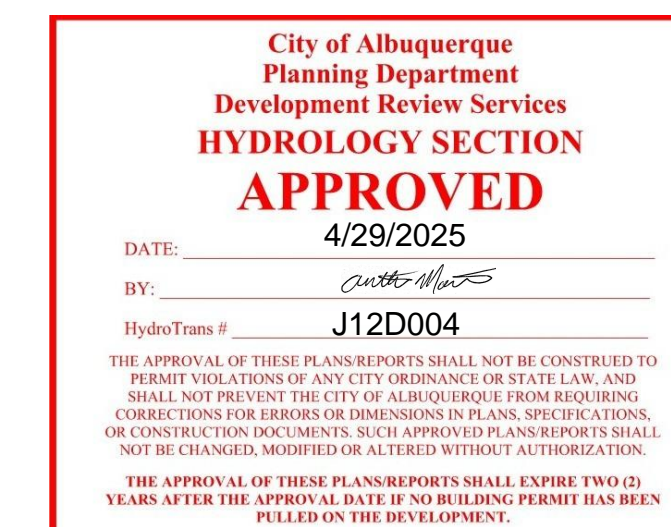
WHA #2			
Pond Rating Table			
Side Slope			
Elev. (ft)	Area (sq ft)	Volume (cf)	Cum Volume (cf)
55	500	0	0
56	525	512.500	512.500

STORM WATER QUALITY CALCULATIONS

SWQV (BASIN A) = (0.42"/12 \* 10,890 SF) = 382 CUBIC FEET

STORM WATER QUALITY CALCULATIONS

SWQV (BASIN B) = (0.42"/12 \* 6,970 SF) = 244 CUBIC FEET



1306 RIO GRANDE BLVD NW  
ALBUQUERQUE, NM 87104  
505-255-6400 505-268-6954 FAX  
WWW.NCA-ARCHITECTS.COM

ARCHITECT

CONSULTANT



PROJECT TITLE

**ALBUQUERQUE BIOPARK SHARC (Science Health and Aquatic Research Center)**

ALBUQUERQUE NEW MEXICO

REVISIONS:

MK	DATE	DESCRIPTION
1	4-22-25	CITY COMMENTS
1	4-29-25	CITY COMMENTS

DRAWN BY: MEC CHECKED BY: VAM

PROJECT NUMBER: A24.02

DATE: APRIL 24, 2025

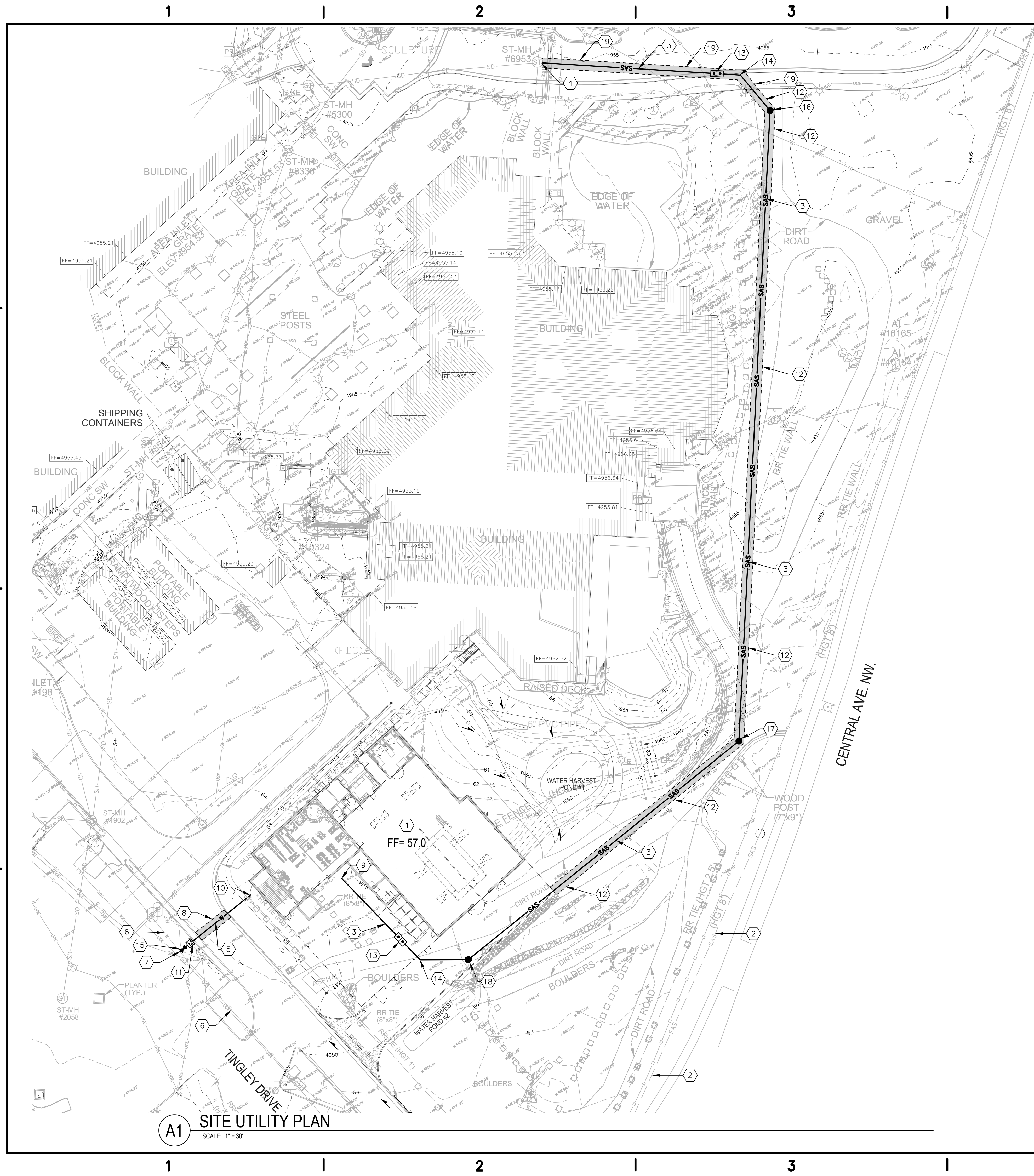
SHEET TITLE: HYDROLOGY SHEET

SHEET NO: C-100







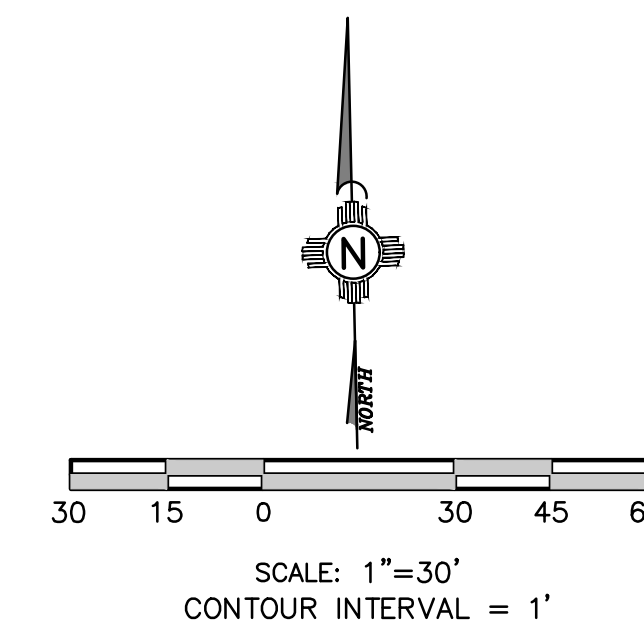


**LEGEND:**

- W — NEW WATER LINE
- - - W - - - EXISTING WATER LINE
- - - SAS - - - PROPOSED SANITARY SEWER LINE
- - - SAS - - - EXISTING SANITARY SEWER LINE
- NEW FIRE HYDRANT
- EXISTING FIRE HYDRANT
- EXISTING SAS MANHOLE
- NEW WATER METER
- NEW POST INDICATOR VALVE
- PROPOSED SAS MANHOLE
- - - SD - - - EXISTING SD LINE
- - - SD - - - PROPOSED SD LINE
- EXISTING SD MANHOLE
- PROPOSED SD MANHOLE
- PROPOSED GATE VALVE
- PROPOSED CLEANOUTS
- BFP PROPOSED BACK FLOW PREVENTER

**KEYED NOTES:**

1. PROPOSED BUILDING FF= 57.0. SEE ARCHITECTURAL PLANS FOR DETAILS.
2. EXISTING 10" CONCRETE SANITARY SEWER MAIN.
3. NEW 830' LF OF NEW 8" SANITARY SEWER LINE AT 0.6% MIN. SLOPE. PROVIDE FITTINGS AS NECESSARY SEE DETAIL SHEET C-501.
4. EXISTING SANITARY SEWER MANHOLE ST-MH#6953 RIM ELEV. (EX.)=54.84, NORTH INV.(EX.)=45.89, WEST INV.(EX.)=45.99, SOUTH INV.(EX.)=46.32 PENETRATE WITH NEW 8" SEWER LINE AND REFORM AND REGROUT INVERT TO ALLOW FOR FLOW FROM NEW 8" SEWER LINE. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND INVERT ELEVATION PRIOR TO CONSTRUCTION. INV.(NEW 8")=46.35
5. NEW 2" DIAMETER DOMESTIC WATER SERVICE LINE.
6. EXISTING 10" DI WATER LINE.
7. CONNECT NEW 2" DIAMETER DOMESTIC WATER LINE TO EXISTING 10" DI WATER LINE PER COA STD. DWG #2301.
8. SAW CUT, EXISTING ASPHALT TO CLEAN STRAIGHT EDGE. REMOVE, DISPOSE AND REPLACE EXISTING ASPHALT AS NECESSARY TO INSTALL WATER LINE. MATCH EXISTING ASPHALT SECTION OF ASPHALT, BASE COURSE AND SUBGRADE PREP. (6' MAX. WIDTH). PER COA STD. DWG #2465.
9. POINT OF CONNECTION OF NEW 8" SANITARY SEWER TO NEW BUILDING, SEE PLUMBING PLANS FOR CONTINUATION. INV.(8")=51.50
10. POINT OF CONNECTION OF NEW 2" DOMESTIC WATER LINE TO BUILDING, SEE PLUMBING PLANS FOR CONTINUATION.
11. NEW 2" WATER METER PER COA STD. DWG #2363.
12. REMOVE AND REPLACE EXISTING ROAD SURFACING AND LANDSCAPING AS NEEDED FOR INSTALLATION OF NEW 8" SEWER MAIN..
13. NEW DOUBLE SANITARY SEWER CLEANOUTS SEE DETAIL SHEET C-501.
14. NEW 45.0' SANITARY SEWER BEND.
15. NEW 2" WATER VALVE PER COA STD. DRAWING NO. 2326.
16. NEW 4" DIAMETER SANITARY SEWER MANHOLE TYPE "E" PER COA STD. DRAWING NO. 2102, 2110, AND 2118. CONTRACTOR SHALL FIELD VERIFY LOCATION AND INVERT ELEVATION PRIOR TO CONSTRUCTION. INV.(IN)=47.25, INV.(OUT)=47.20 (FIELD VERIFY).
17. NEW 4" DIAMETER SANITARY SEWER MANHOLE TYPE "E" PER COA STD. DRAWING NO. 2102, 2110, AND 2118. CONTRACTOR SHALL FIELD VERIFY LOCATION AND INVERT ELEVATION PRIOR TO CONSTRUCTION. INV.(IN)=49.60, INV.(OUT)=49.55 (FIELD VERIFY).
18. NEW 4" DIAMETER SANITARY SEWER MANHOLE TYPE "C" PER COA STD. DRAWING NO. 2101, 2110, AND 2118. CONTRACTOR SHALL FIELD VERIFY LOCATION AND INVERT ELEVATION PRIOR TO CONSTRUCTION. INV.(IN)=50.90, INV.(OUT)=50.85 (FIELD VERIFY).
19. SAW CUT, EXISTING ASPHALT, SIDEWALK, CURB AND GUTTER TO CLEAN STRAIGHT EDGE AND REMOVE AND REPLACE AS NECESSARY TO INSTALL NEW SEWER MAIN. MATCH EXISTING ASPHALT SECTION OF ASPHALT, BASE COURSE AND SUBGRADE PREP. (6' MAX. WIDTH). PER COA STD. DWG #2465.



**NCA**  
ARCHITECTS - PLANNERS - AIA

1306 RIO GRANDE BLVD NW  
ALBUQUERQUE, NM 87104  
505-255-6400 505-268-6954 FAX  
WWW.NCA-ARCHITECTS.COM

ARCHITECT

CONSULTANT



PROJECT TITLE

**ALBUQUERQUE BIOPARK SHARC (Science Health and Aquatic Research Center)**

**ALBUQUERQUE NEW MEXICO**

**REVISIONS:**

NO	DATE	DESCRIPTION
1	4-22-25	CITY COMMENTS

MK	DATE	DESCRIPTION

DRAWN BY: MEC CHECKED BY: VAM

PROJECT NUMBER: A24.02

DATE: APRIL 24, 2025

SHEET TITLE:

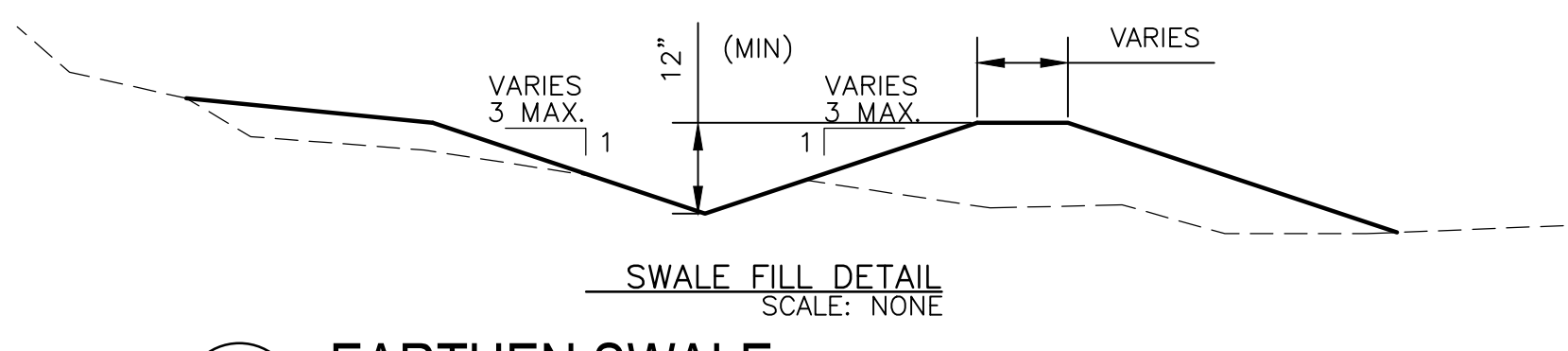
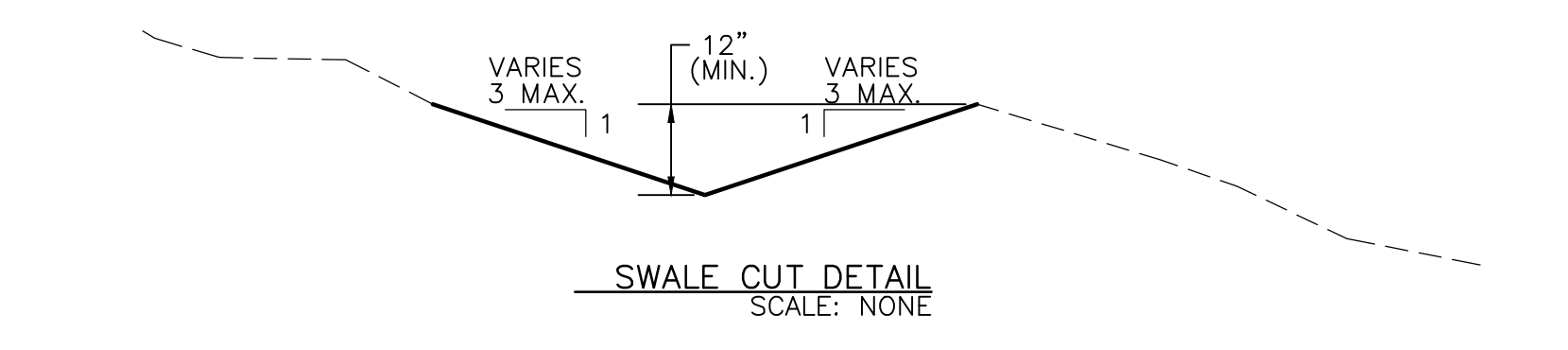
**SITE UTILITY PLAN**

SHEET NO:

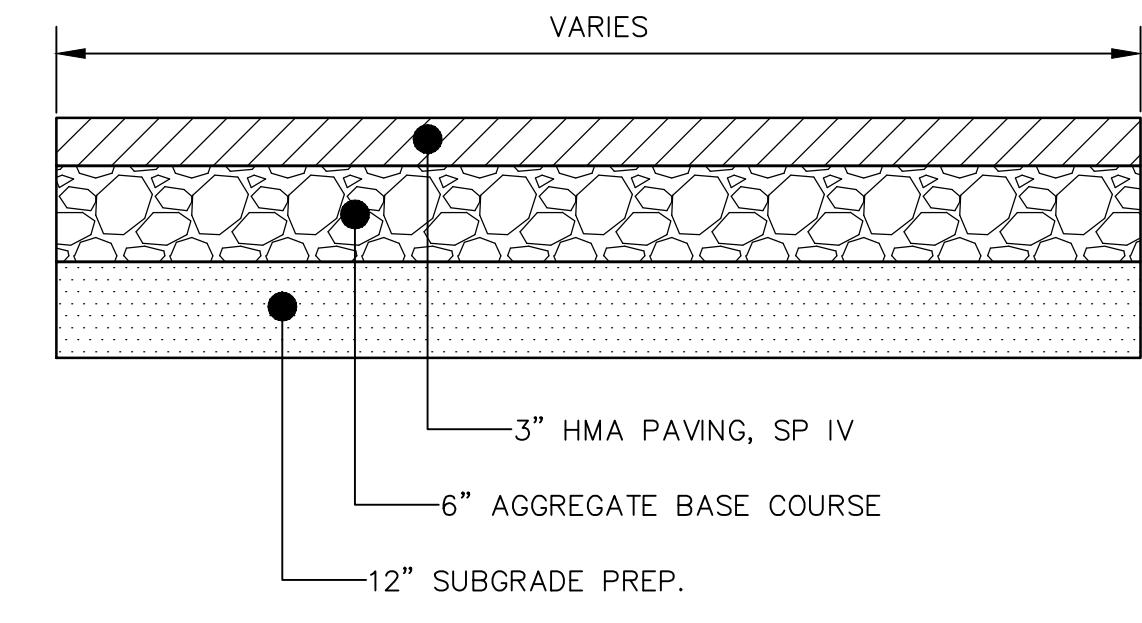
**C-102**

T:\Clients\NCA\SHARC\_TANK\CAD\SHARCSHEETS\C-102\_OA\_SITE UTILITY PLAN\_031825.dwg, 4/24/2025 9:51:16 AM, 1:1

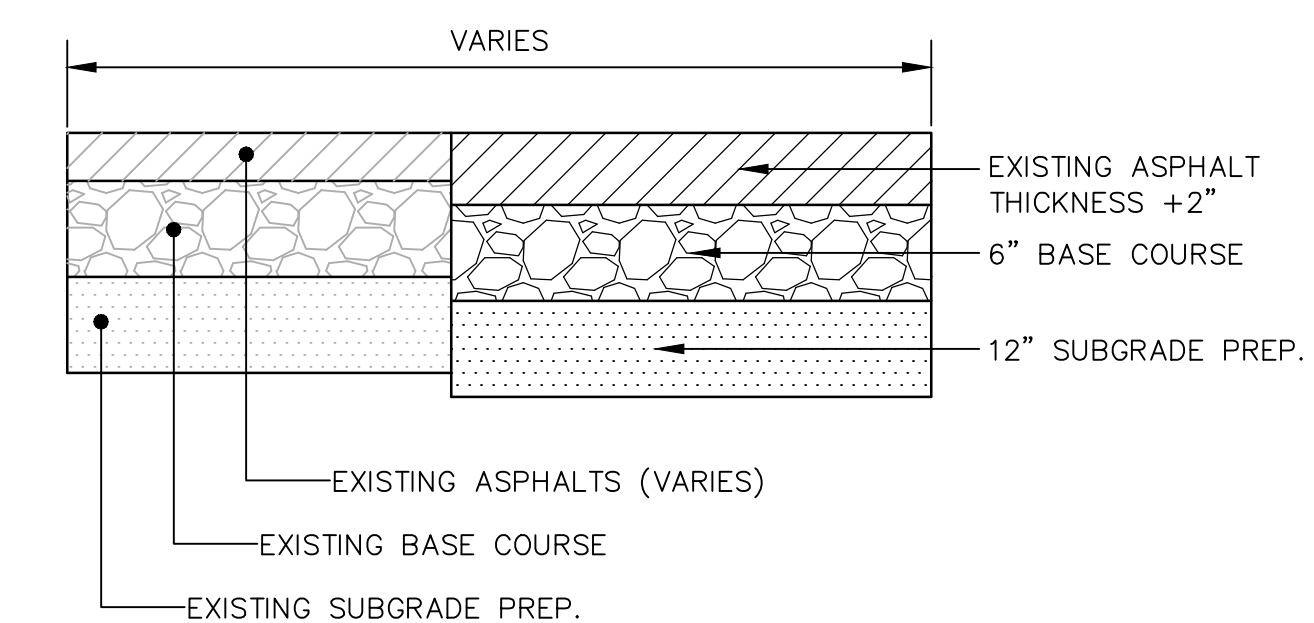




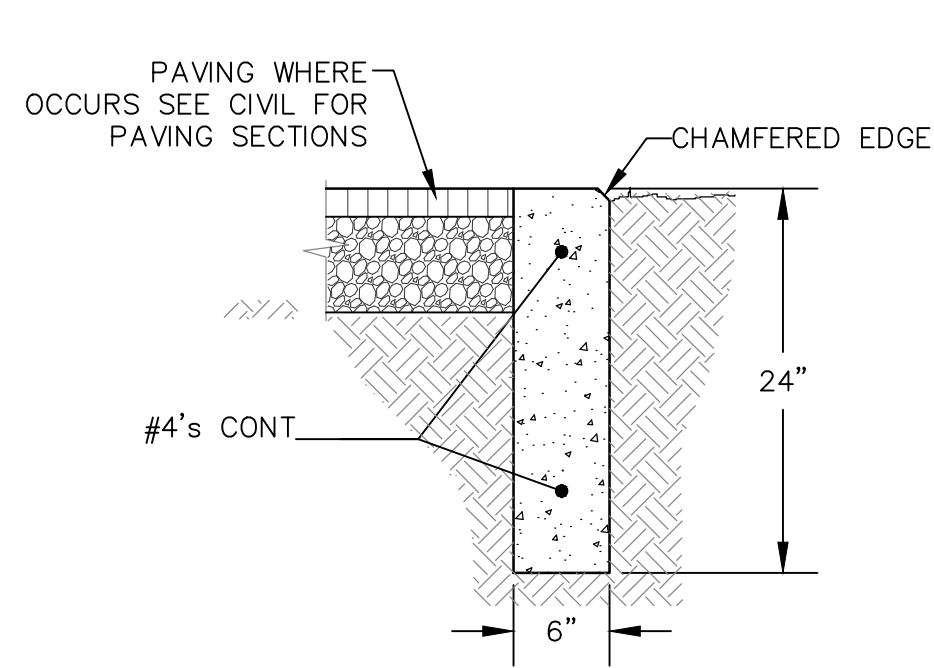
**C4** EARTHEN SWALE  
SCALE: NOT TO SCALE



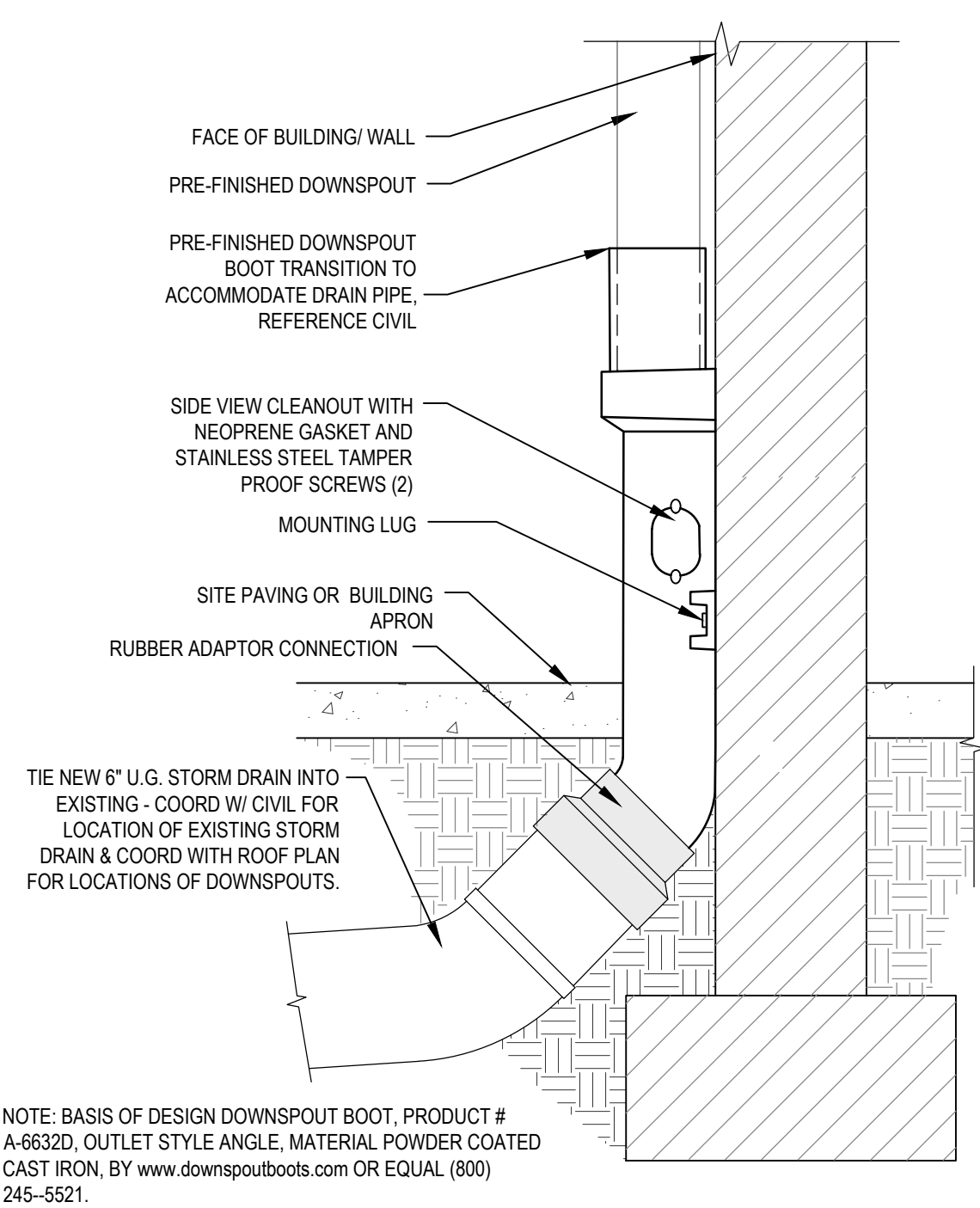
**C1** TYPICAL LIGHT DUTY ASPHALT PAVING DETAIL  
SCALE: NOT TO SCALE



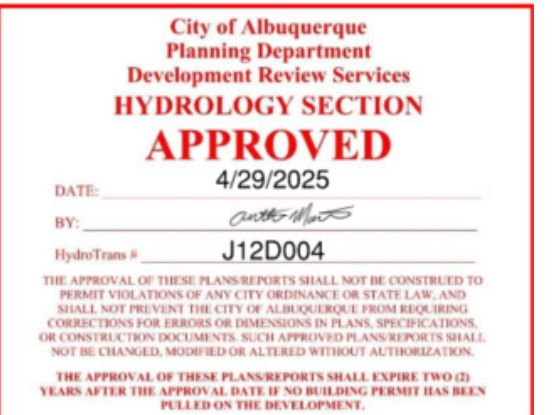
**C2** TYPICAL ASPHALT PATCH SECTION  
SCALE: NOT TO SCALE



**C3** FLUSH CURB DETAIL  
SCALE: NONE



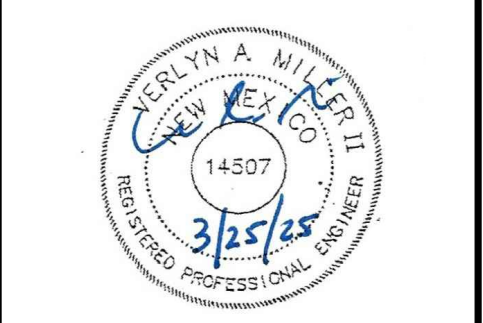
**C4** DOWNSPOUT DETAIL  
SCALE: NOT TO SCALE



1306 RIO GRANDE BLVD NW  
ALBUQUERQUE, NM 87104  
505-255-6400 505-268-6954 FAX  
WWW.NCA-ARCHITECTS.COM

ARCHITECT

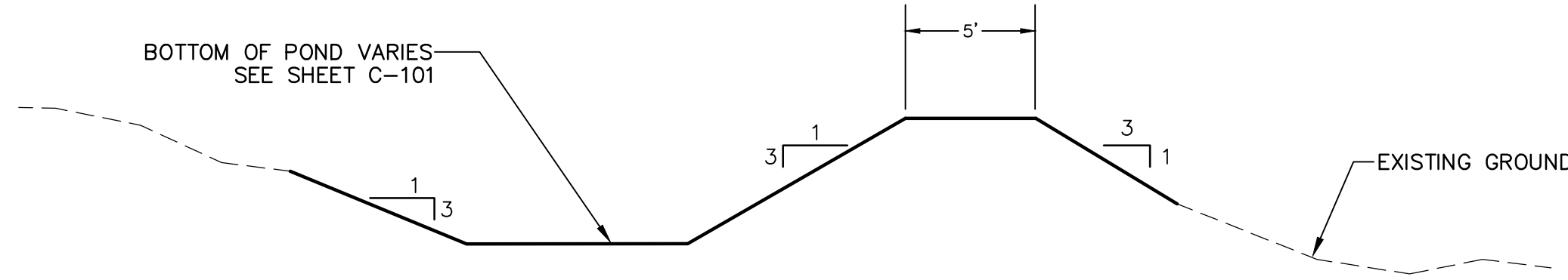
CONSULTANT



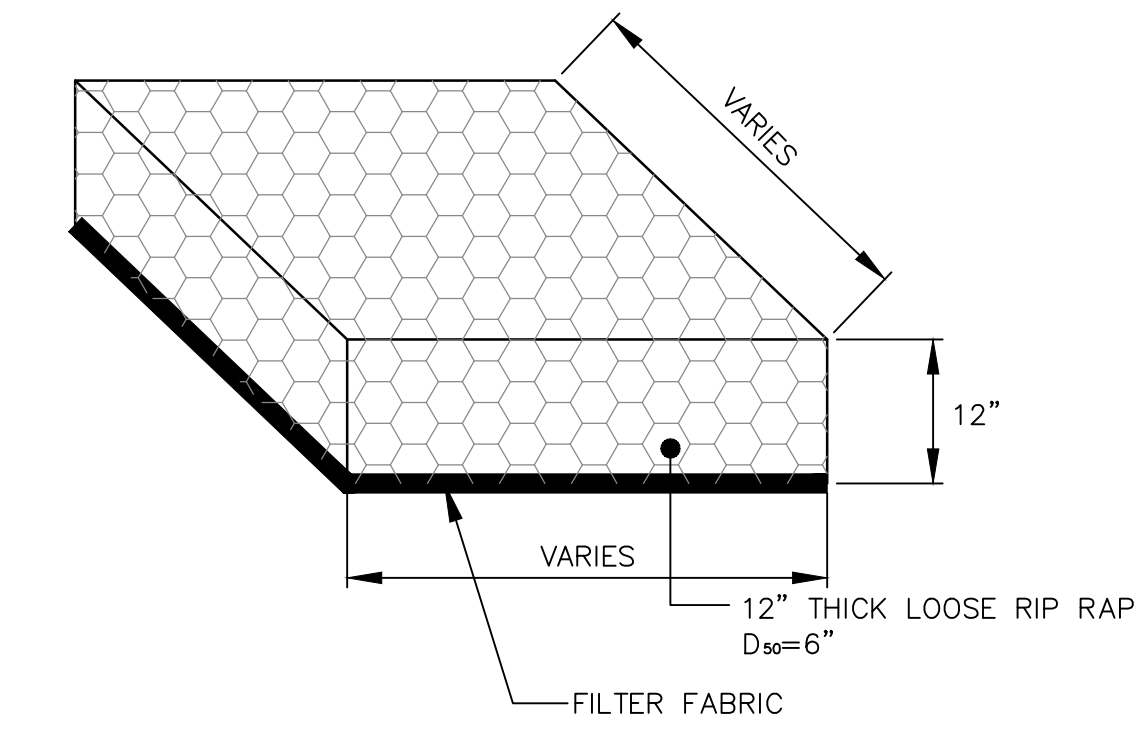
PROJECT TITLE

**ALBUQUERQUE BIOPARK SHARC (Science Health and Aquatic Research Center)**

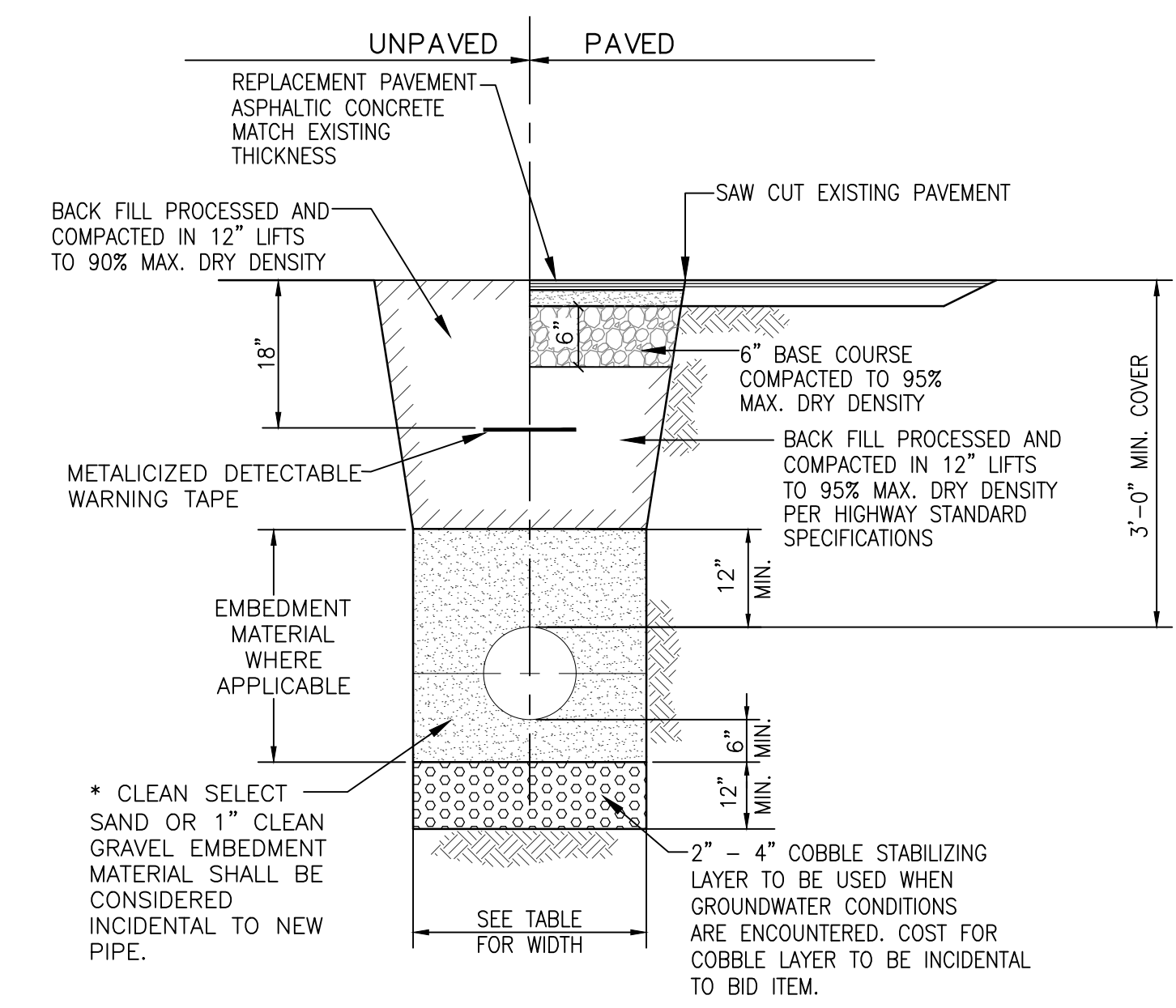
ALBUQUERQUE NEW MEXICO



**B2** TYPICAL WATER HARVEST AREA SECTION  
SCALE: NOT TO SCALE



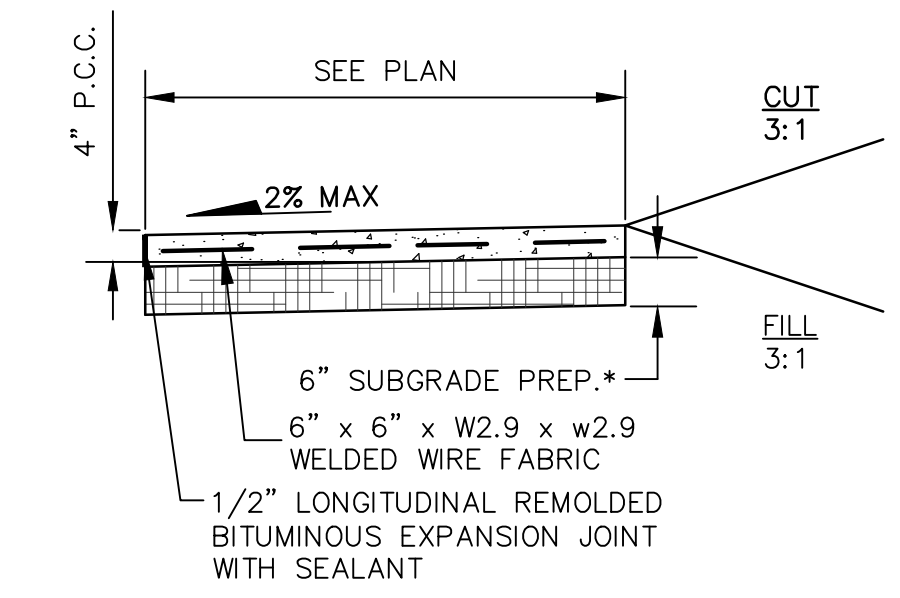
**B4** CLASS 'B' RIP RAP PAD DETAIL  
SCALE: NOT TO SCALE  
SEE PLANS FOR SHAPE AND DIMENSIONS



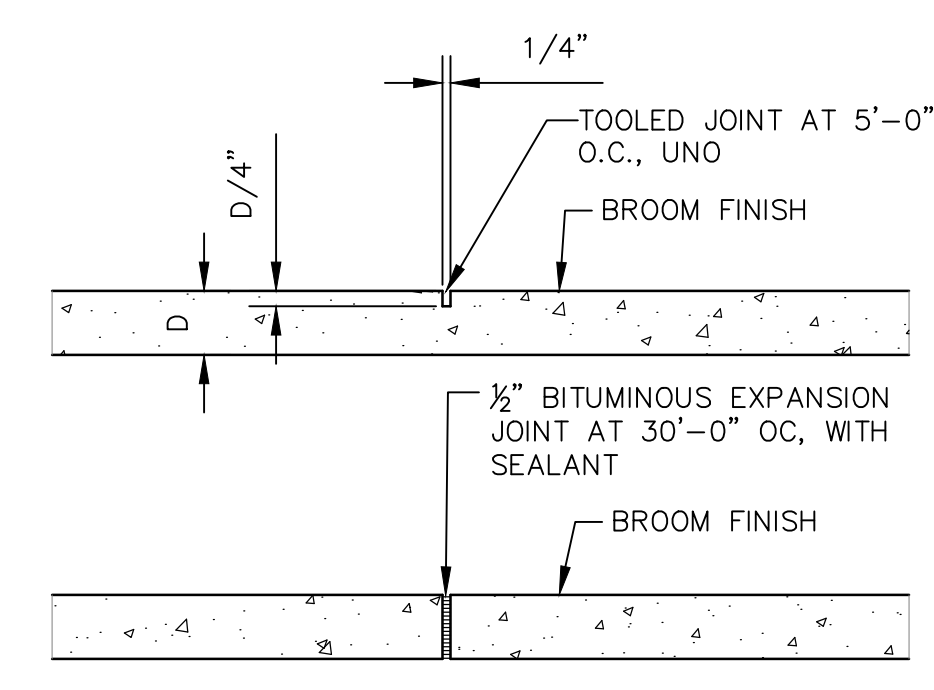
**A1** TRENCH SECTION  
SCALE: NOT TO SCALE

PIPE Ø	MIN WIDTH	MAX WIDTH	SIEVE SIZE	% PASSED
4"	1'-4"	2'-4"	1"	100
6"	1'-6"	2'-6"	* 200	0-20
8"	1'-8"	2'-8"		
12"	2'-0"	3'-0"		
14"	2'-4"	3'-4"		

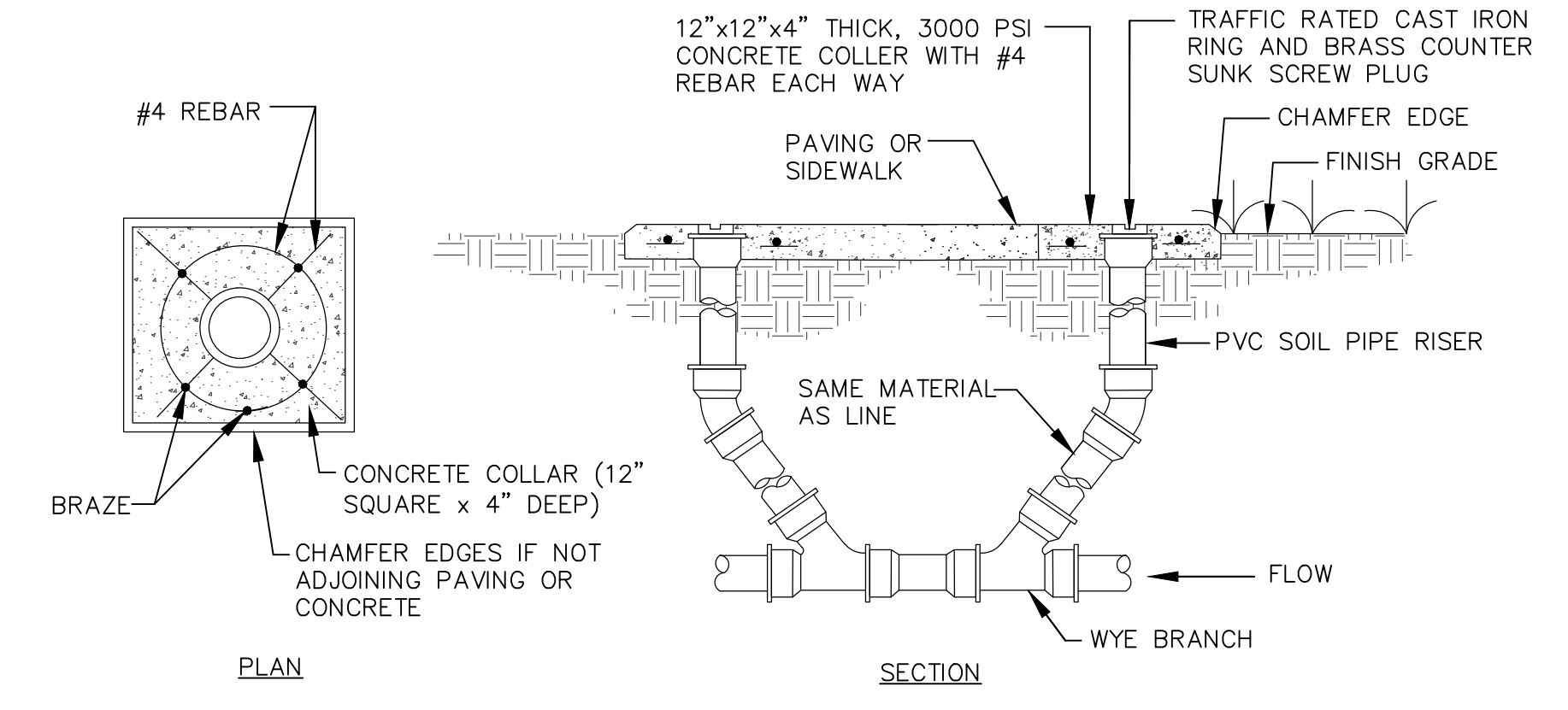
\* PIPE EMBEDMENT MATERIAL GRADATION



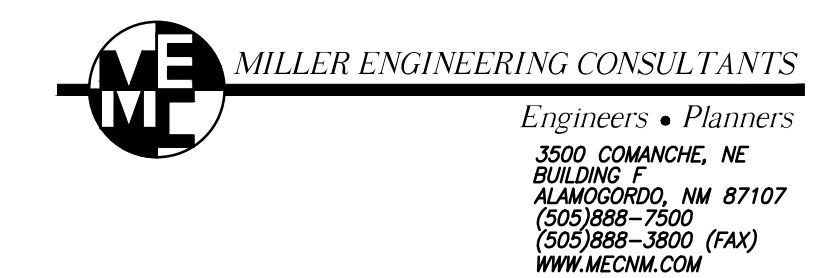
**A2** TYPICAL SIDEWALK SECTION  
SCALE: NOT TO SCALE



**A3** CONCRETE SIDEWALK JOINTS  
SCALE: NOT TO SCALE  
NOTE: CONCRETE JOINT PATTERNS SHALL BE SUBMITTED BY CONTRACTOR FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.



**A4** TYPICAL DOUBLE CLEANOUT TO GRADE DETAIL  
SCALE: NOT TO SCALE



REVISIONS:

NO.	DATE	CITY	COMMENTS
1	4-22-25		

MK DATE DESCRIPTION

DRAWN BY: MEC CHECKED BY: VAM

PROJECT NUMBER: A24.02

DATE: APRIL 24, 2025

SHEET TITLE: MISCELLANEOUS DETAILS

SHEET NO:

**C-501**



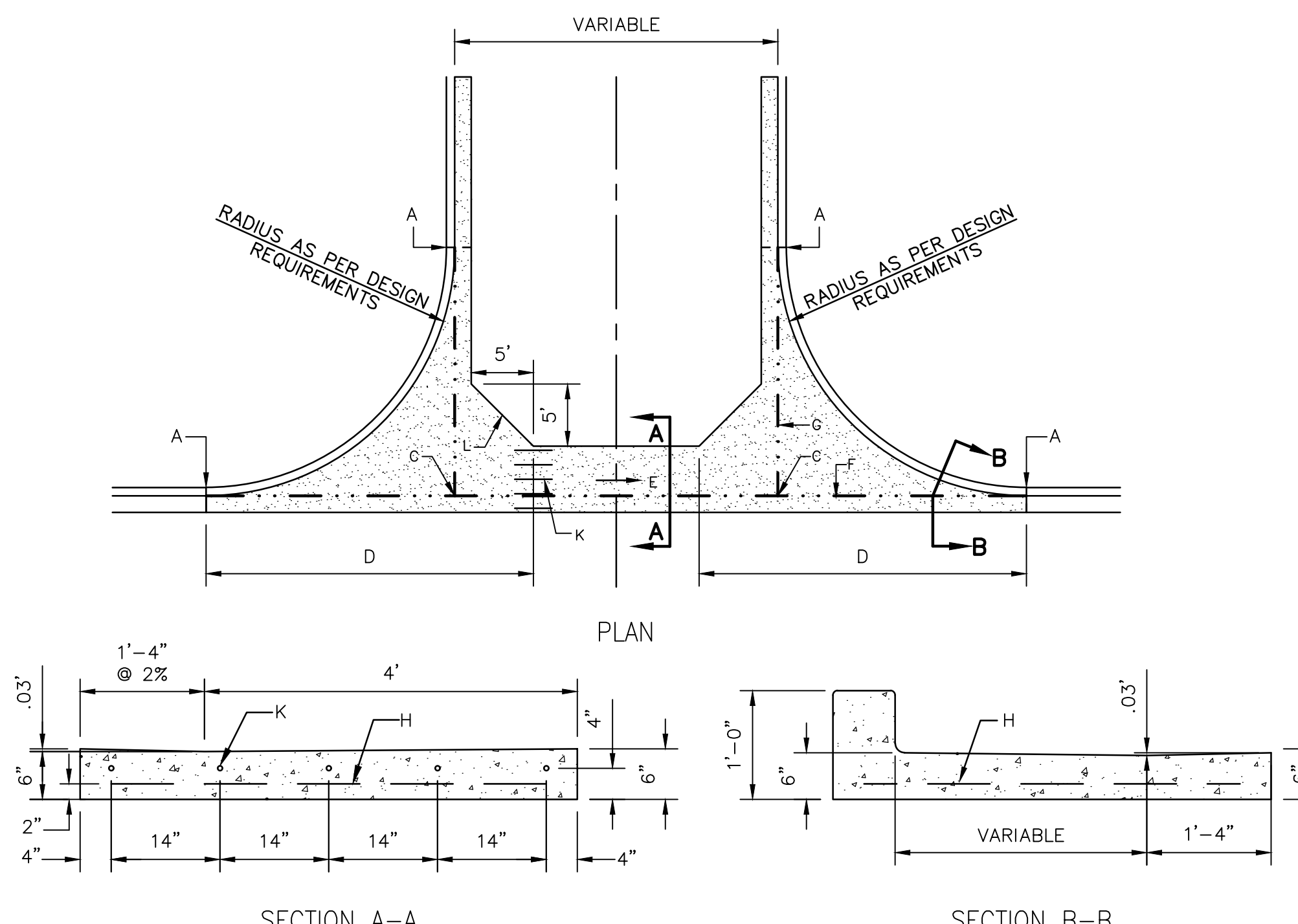
**REDUCER**

RESTRAIN EITHER L <sub>S</sub> OR L <sub>L</sub> LENGTH	(L <sub>S</sub> ) L SMALL or (L <sub>L</sub> ) L LARGE	
	UNOBSTRUCTED STRAIGHT RUN LENGTH, FEET RESTRAINED	LARGE SIDE RESTRAINED LENGTH, FEET
6" x 4"	42	28
8" x 4"	39	30
8" x 6"	39	30
10" x 6"	87	53
10" x 8"	36	29
12" x 8"	81	54
12" x 10"	36	30
14" x 10"	78	55

**GATE VALVES**

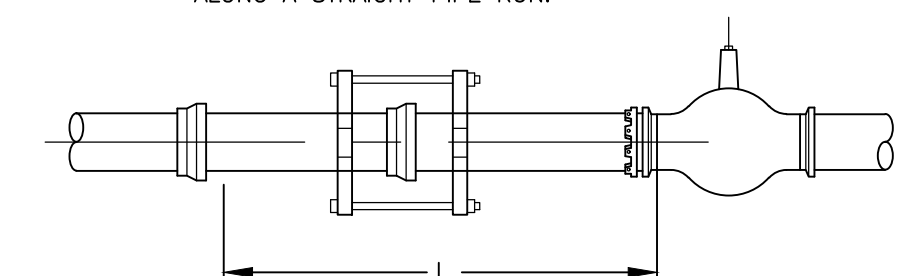
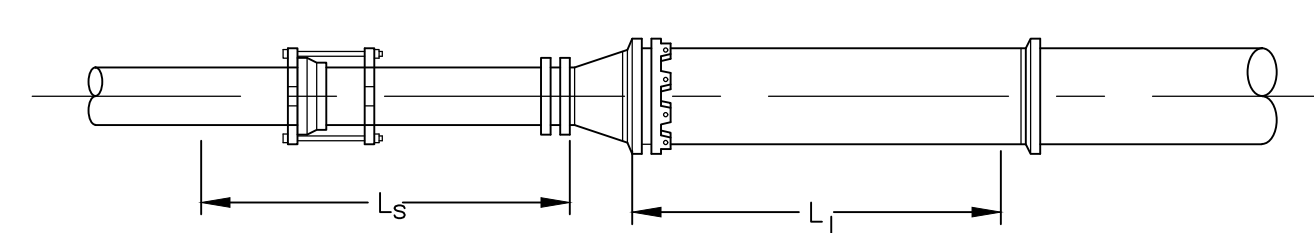
LINE SIZE	RESTRAINED LENGTH L, BOTH SIDES OF VALVE, FEET
4"	39
6"	55
8"	72
10"	86
12"	102
14"	116

THESE LENGTHS MAY BE USED WHERE ENOUGH NEW PIPE EXISTS TO INSTALL THE RESTRAINT JOINTS ALONG A STRAIGHT PIPE RUN.



**C3 CONCRETE PAVING VALLEY GUTTER AND RETURNS**  
SCALE: NOT TO SCALE

- GENERAL NOTES:**
- DESIGN ELEVATIONS TO BE GIVEN AT EACH END OF THE CURB RETURN (TOP OF CURB ELEV.) AND AT INTERSECTIONS OF PROJECTED FLOWLINES (FLOWLINE ELEV.).
  - ON UPSTREAM AND DOWNSTREAM ENDS OF THE INTERSECTION, VALLEY GUTTER CONSTRUCTION SHALL EXTEND TO THE END OF RETURNS.
  - THE VALLEY GUTTER TO BE REINFORCED WITH 6"x6"xNo. 6 GA. WIRE MESH.
  - INVERT OF VALLEY GUTTER TO EXTEND FROM FLOWLINE OF UPSTREAM CURB RETURN TO FLOWLINE OF DOWNSTREAM CURB RETURN.
  - CURB FLOWLINE AND TOP OF CURB ELEV. SHOWN IN THE BOX TO CORRESPOND TO QUARTERPOINTS INDICATED ON THE CURB RETURN IN THE CLOCKWISE DIRECTION.
  - DENOTES 1/2" EXPANSION JOINT.
  - FOR NEW CONSTRUCTION, VALLEY GUTTER SHALL BE CONSTRUCTED PRIOR TO ADJACENT PAVEMENT. ASPHALT CONCRETE SHALL BE INSTALLED MONOLITHICALLY TO MEET NEW VALLEY GUTTER.
  - PRIOR TO CONSTRUCTION OF NEW VALLEY GUTTER ON EXISTING ACCEPTED STREETS, PAVEMENT SHALL BE REMOVED AS SHOWN ON PLANS.
- CONSTRUCTION NOTES:**
- END OF CURB RETURN, SEE NOTE 1.
  - FOR RAMP DETAILS SEE SHEET C-505
  - INTERSECTION OF FLOWLINES, SEE NOTE 1.
  - SURFACE AND CURB TO BE MONOLITHIC.
  - DIRECTION OF FLOW.
  - FLOWLINE.
  - PROJECTED FLOWLINE OF 0.03' INVERT, SEE NOTE 2.
  - 6"x6"x No. 6 GA. WIRE MESH.
  - NO. 4 REBARS 3'-0" LONG @ 14" O.C.
  - FILLET AS PER PLAN.



**THRUST RESTRAINT GENERAL NOTES**

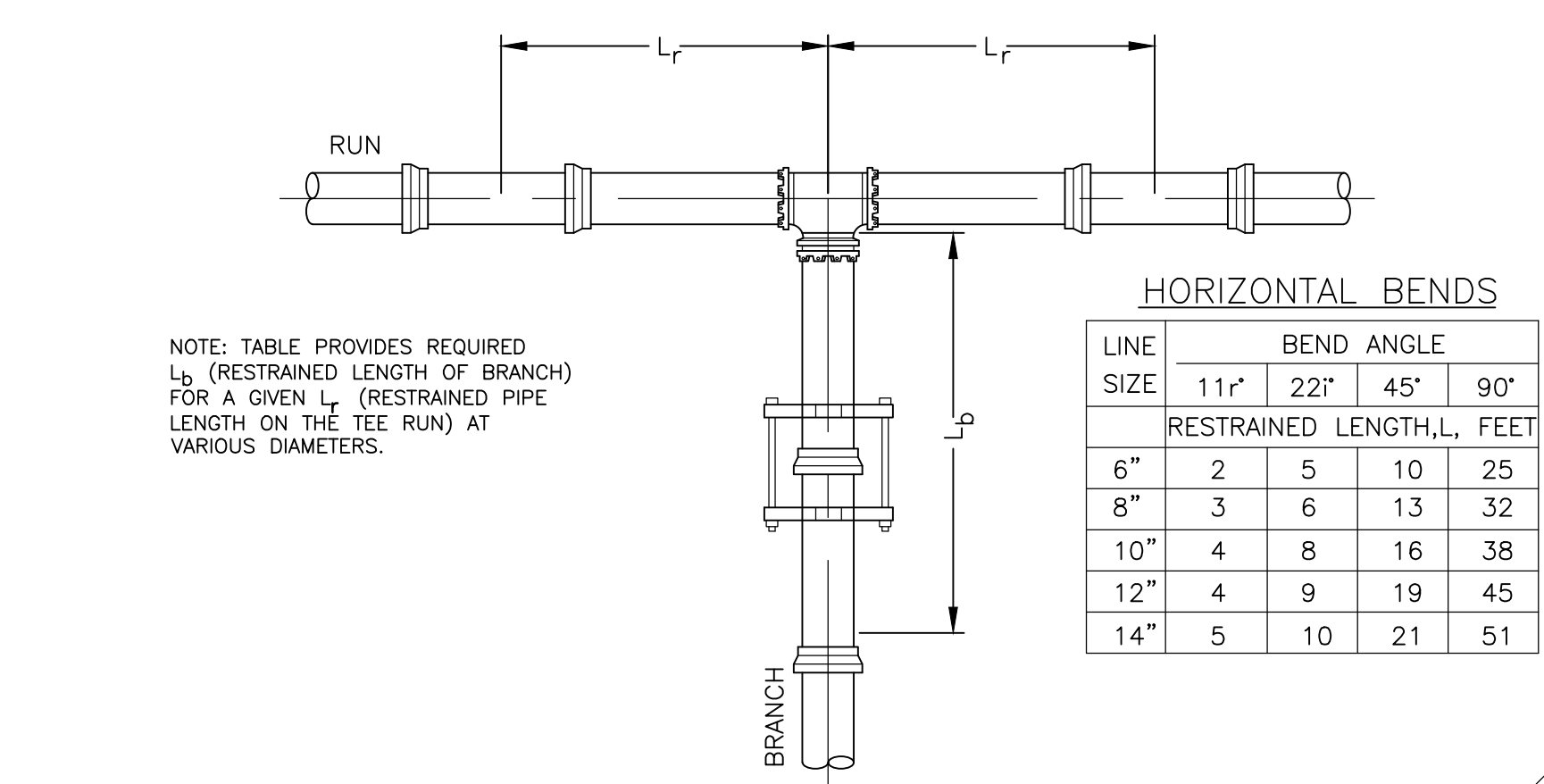
- RESTRAINED PIPE LENGTHS FOR PVC USING EBAA IRON THRUST RESTRAINING SYSTEM.
- LENGTHS MAY OVERLAP TO DETERMINE GREATEST RESTRAINT LENGTH IN ANY ONE DIRECTION.
- CONTRACTOR SHALL MINIMIZE NUMBERS OF RESTRAINED JOINTS REQUIRED BY USING 20' LONG SECTIONS OF PIPE WITHIN THE RESTRAINED LENGTH WHERE POSSIBLE. DIVIDE LENGTH BY 20 AND TRUNCATE DECIMAL PORTION OF NUMBER TO DETERMINE THE NUMBER OF REQUIRED RESTRAINED JOINTS.
- SPECIAL CONSIDERATION MAY BE NEEDED TO MEET CERTAIN FIELD CONDITIONS.
- RESTRAINT LENGTHS MAY EXTEND INTO EXISTING WATER MAINS, REQUIRING RESTRAINED FITTINGS TO BE PLACED AT EXISTING WATERLINE JOINTS FOR THE LENGTH SPECIFIED IN THE TABLES ON THIS SHEET.
- CONCRETE BLOCKING, PER COA STANDARD DRAWING 2320, SHALL BE USED IN LIEU OF RESTRAINED JOINTS AT ALL CAPS. DESIGN ASSUMPTIONS:

SAFETY FACTOR: 1.5  
PRESSURE: 150 PSI  
SOIL TYPE: GM & SM - SILTY GRAVELS AND SILTY SANDS  
PIPE: PVC  
TRENCH TYPE: 3 (PIPE BEDDED IN 4 INCHES MINIMUM LOOSE SOIL. BACKFILL LIGHTLY CONSOLIDATED TO TOP OF THE PIPE.)

**TEES**

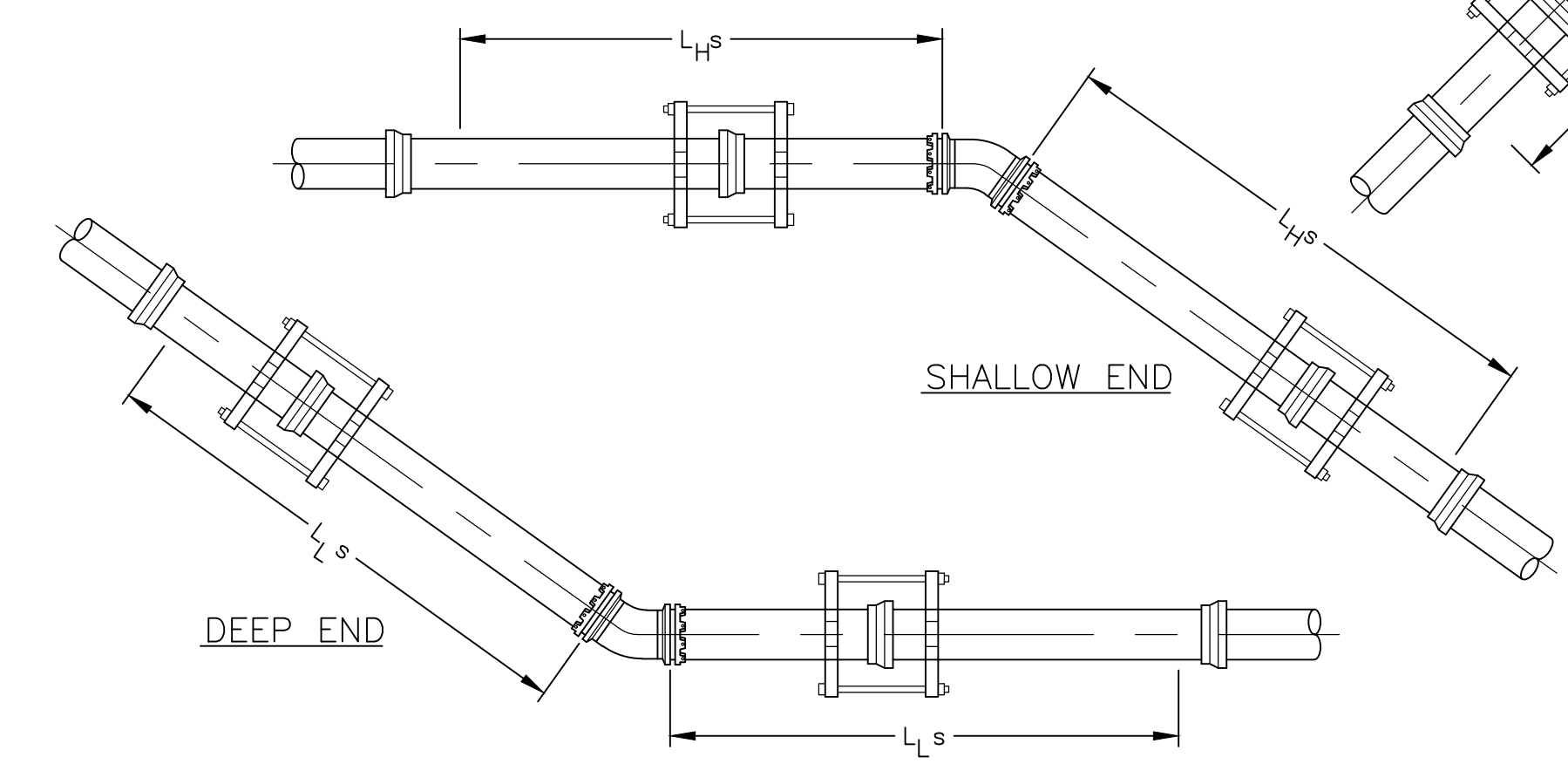
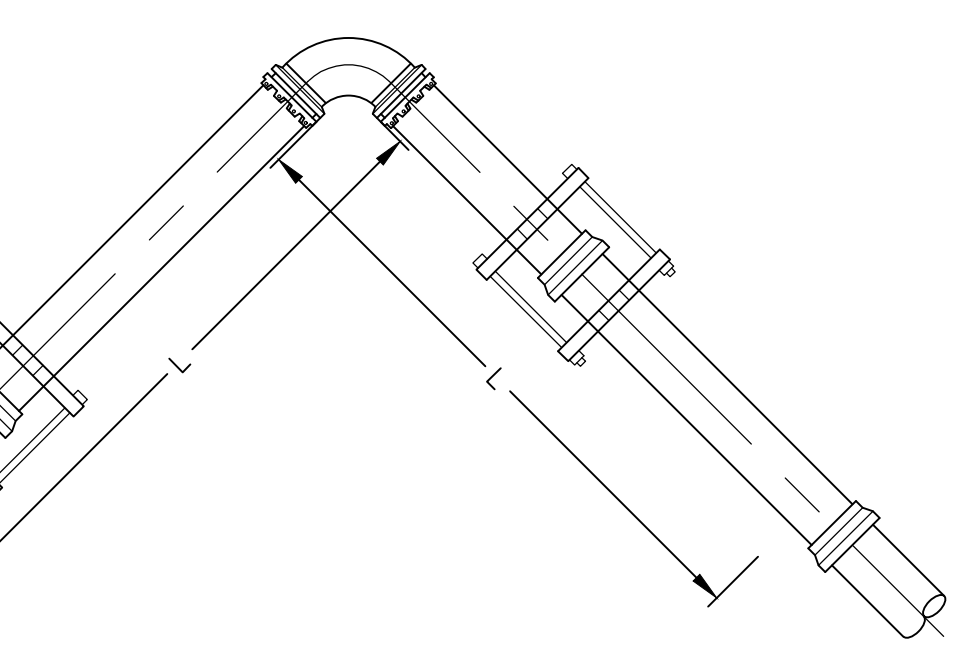
LINE SIZE	BRANCH SIZE 6"				BRANCH SIZE 8"				BRANCH SIZE 10"				BRANCH SIZE 12"			
	L <sub>r</sub> =5'	L <sub>r</sub> =10'	L <sub>r</sub> =15'	L <sub>r</sub> =20'	L <sub>r</sub> =5'	L <sub>r</sub> =10'	L <sub>r</sub> =15'	L <sub>r</sub> =20'	L <sub>r</sub> =5'	L <sub>r</sub> =10'	L <sub>r</sub> =15'	L <sub>r</sub> =20'	L <sub>r</sub> =5'	L <sub>r</sub> =10'	L <sub>r</sub> =15'	L <sub>r</sub> =20'
6"	36	18	FJO	FJO	58	44	30	16	75	64	53	41	-	-	-	-
8"	30	6	FJO	FJO	53	35	16	FJO	71	56	42	27	-	-	-	-
10"	24	FJO	FJO	FJO	48	24	1	FJO	67	48	29	10	86	70	54	38
12"	17	FJO	FJO	FJO	43	14	FJO	FJO	63	40	17	FJO	83	63	44	25
14"	FJO	FJO	FJO	FJO	21	FJO	FJO	FJO	39	12	FJO	FJO	56	33	11	FJO

FJO: RESTRAINT REQUIRED AT FITTING JOINT ONLY



**HORIZONTAL BENDS**

LINE SIZE	BEND ANGLE			
	11°	22°	45°	90°
6"	2	5	10	25
8"	3	6	13	32
10"	4	8	16	38
12"	4	9	19	45
14"	5	10	21	51



**VERTICAL OFFSETS**

ADDITIONAL DESIGN PARAMETERS  
SHALLOW END DEPTH = 3.0'  
DEEP END DEPTH = 6.0'

LINE SIZE	RESTRAINED LENGTH			
	22° BEND		45° BEND	
	DEEP END L <sub>S</sub> , FEET	SHALLOW END L <sub>H</sub> , FEET	DEEP END L <sub>S</sub> , FEET	SHALLOW END L <sub>H</sub> , FEET
6"	3	11	5	23
8"	3	14	7	30
10"	4	17	8	36
12"	5	20	10	42
14"	5	23	11	48

**A1 PIPE RESTRAINT LENGTHS**  
SCALE: NOT TO SCALE

**NCA**  
ARCHITECTS - PLANNERS - AIA

1306 RIO GRANDE BLVD NW  
ALBUQUERQUE, NM 87104  
505-255-6400 505-268-6954 FAX  
WWW.NCA-ARCHITECTS.COM

**ARCHITECT**

**CONSULTANT**

**PROJECT TITLE**

**ALBUQUERQUE BIOPARK SHARC (Science Health and Aquatic Research Center)**

**ALBUQUERQUE NEW MEXICO**

**REVISIONS:**

NO.	DATE	CITY	COMMENTS
1	4-22-25	CITY	COMMENTS

**MK DATE DESCRIPTION**

**DRAWN BY: CHECKED BY:**

MEC VAM

**PROJECT NUMBER:**

A24.02

**DATE:**

APRIL 24, 2025

**SHEET TITLE:**

**MISCELLANEOUS DETAILS**

**SHEET NO:**

**C-502**

City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
DATE: 4/29/2025  
BY: [Signature]  
J12D004

**MEC** MILLER ENGINEERING CONSULTANTS  
Engineers • Planners  
3500 COMANCHE, NE  
ALAMOGORDO, NM 87117  
(505) 888-7500  
(505) 888-3800 (FAX)  
WWW.MECNM.COM

T:\Clients\NCA\SHARC\TANK\CAD\DETAILS\C-501\_MISC\_DETAILS\_010925.dwg, 4/24/2025 9:57:36 AM, 1:1