CONSTRUCTION PLANS FOR

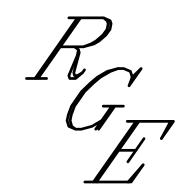
CHELWOOD APARTMENTS

PAVING AND UTILITY IMPROVEMENTS

THE CITY OF ALBUQUERQUE & ABCWUA

NEW MEXICO

SEPTEMBER 2019



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- 6. ALLEY PAVING IMPROVEMENTS PLAN AND PROFILE 2
- 7. MASTER UTILITY PLAN

OENIEDAI NOTEO

- 1. ALL WORK DETAILED ON THESE PLANS, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION THROUGH UPDATE #9, AND WILL BE REFERRED TO HEREIN AS "STANDARD SPECIFICATIONS".
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- 3. CONTRACTOR SHALL ASSUME THE SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER AND ENGINEER FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR
- 4. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY PIGHT OF WAY
- 5. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION ENGINEER (OR PROJECT MANAGER) NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. ONLY THE CITY SURVEYOR SHALL REPLACE SURVEY MONUMENTS. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO STANDARD SPECIFICATIONS SECTION 4.4.
- 6. EXISTING UTILITY LINE LOCATIONS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990) FOR LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL THEN EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL PERTINENT EXISTING UTILITIES AND/OR OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. CONTRACTOR SHALL THEN COORDINATE RELOCATION OF UTILITY LINES WITH UTILITY COMPANIES AS REQUIRED. ANY DAMAGE CAUSED BY FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY EXISTING UTILITIES IS THE FULL RESPONSIBILITY OF THE CONTRACTOR.
- 7. CONTRACTOR SHALL ASSIST THE ENGINEER/INSPECTOR IN THE RECORDING OF DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE PREPARATION OF "AS BUILT" DRAWINGS. CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
- 8. CONTRACTOR SHALL ASSUME FINANCIAL RESPONSIBILITY FOR ANY DAMAGE TO EXISTING PAVEMENT, PAVEMENT MARKINGS, SIGNAGE, CURB AND GUTTER, HANDICAP RAMPS, AND SIDEWALK DURING CONSTRUCTION APART FROM THOSE SECTIONS INDICATED ON THE PLANS, AND SHALL REPAIR OR REPLACE, PER THE STANDARD SPECIFICATIONS, ANY SUCH
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
- 10. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND MAINTAIN ALL CONSTRUCTION SIGNING UNTIL THE PROJECT HAS BEEN ACCEPTED BY THE CITY AND OTHER JURISDICTIONAL AUTHORITIES WHERE APPLICABLE.
- 11. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS SHOWN. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING ANY SUCH COSTS INCURRED.
- 12. REMOVALS SHALL BE DISPOSED OF OFF-SITE AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

water & Sewer

- 13. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
 EXISTING VALVES AND MANHOLES SHALL NOT BE BURIED OR PAVED OVER BUT RIMS SHALL
 BE ADJUSTED TO MATCH NEW GRADE PER COA STANDARD DRAWINGS 2460 AND 2461.
- 14. MANHOLE RIMS, FIRE HYDRANT ELEVATIONS, AND FLANGE ELEVATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY AND ADJUST TO FINAL PAVEMENT OR SURFACE GRADES.
- 15. THE CONTRACTOR SHALL COORDINATE WITH THE WATER AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUTOFF REQUESTS MUST BE MADE ONLINE AT http://abcwua.org/water_shut_off_and_turn_on_procedures.aspx
- 16. PROPOSED WATERLINE MATERIALS SHALL BE PVC PIPE MEETING AWWA C-900: DR18 REQUIREMENTS (6" 12") OR DUCTILE IRON PIPE MEETING AWWA C-150 REQUIREMENTS (6" -
- 17. ALL WATERLINE FITTINGS, VALVES, BENDS, TEES, CROSSES AND APPURTENANCES SHALL HAVE RESTRAINED JOINTS UNLESS OTHERWISE NOTED ON THE PLANS. THE JOINT RESTRAINT REQUIREMENTS SHOULD BE DELINEATED WITHIN A JOINT RESTRAINT TABLE.
- 18. ALL SANITARY SEWER LINE STATIONING REFERS TO SANITARY SEWER CENTERLINE STATIONING. EXCEPT WHEN PROFILED WITHIN A PROPOSED OR EXISTING STREET, WHERE STREET STATIONING SHALL GOVERN.
- 19. ALL FINAL BACKFILL FOR TRENCHES SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY PER ASTM D-1557 AND AS DIRECTED BY STANDARD SPECIFICATIONS SECTION 701.14.2 AND STANDARD DRAWING NUMBER 2465.
- 20. ELECTRONIC MARKER SPHERES (EMS) WILL BE PLACED ACCORDING TO THE CITY OF ALBUQUERQUE SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #9. THE CONTRACTOR SHALL INSTALL A 4" X 4" X5' POST AND EMS AT THE END OF EACH SANITARY SEWER SERVICE.
- 21. TRACER WIRE SHALL BE INCLUDED FOR ALL PUBLIC WATER AND SEWER MAINS AND FOR WATER SERVICES IN ACCORDANCE WITH WATER AUTHORITY DETAILS.
- 22. CONTRACTOR SHALL PROVIDE THE PROPOSED HYDRO TESTING PLANS TO THE WUA INSPECTORS FOR APPROVAL PRIOR TO BEGINNING TESTING OPERATIONS.
- 23. AT UTILITY CROSSINGS, WHERE LESS THAN 18" OF VERTICAL SEPARATION FROM STORM DRAIN PIPING OR STRUCTURES IS PROPOSED, LEAN FILL CONSTRUCTION (PER SECTION 207 OF THE STANDARD SPECIFICATIONS) SHALL BE USED TO PROTECT THE WATER OR SEWER LINE. LEAN FILL SHALL EXTEND A PERPENDICULAR DISTANCE OF 5 FEET ON EACH SIDE OF THE STORM PIPE OR STRUCTURE.
- 24. ALL DESIGNS AND CONSTRUCTION OF ANY UNDERGROUND UTILITIES SHALL COMPLY WITH ADMINISTRATIVE INSTRUCTION NO. 9 FOR WORK NEARBY OR AFFECTING SAN JUAN CHAMA TRANSMISSION LINES AND APPURTENANCES. INFORMATION SHALL BE PROVIDED TO THE WATER AUTHORITY ONE (1) MONTH IN ADVANCE OF THE CONSTRUCTION START DATE. INFORMATION CAN BE FOUND AT HITTE!//WWW ABCOULT OF ORGANIZATION SHILT OFF AND TITEN ON PROCEDURES ASPY.

HTTP://WWW.ABCWUA.ORG/WATER SHUT OFF AND TURN ON PROCEDURES.ASPX http://www.abcwua.org/water SHUT OFF AND TURN ON PROCEDURES.ASPX>

TRANSPORTATION

- 25. ANY STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH THERMO-PLASTIC REFLECTORIZED PAVEMENT MARKING BY CONTRACTOR TO THE SAME
- LOCATION AS EXISTING OR AS INDICATED BY THIS PLAN SET.

 26. REMOVAL OF EXISTING CURB & GUTTER AND SIDEWALKS SHALL BE TO THE NEAREST
- JOINT.
 27. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS
 OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR
- MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.

 28. CURB AND GUTTER, SIDEWALKS, AND DRIVE PADS SHALL MATCH THE LINE AND GRADE OF ABUTTING EXISTING AREAS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE PROJECT
- ENGINEER.
 29. THE SUBGRADE PREP SHALL EXTEND ONE FOOT BEYOND THE FREE EDGE OF NEW CURB AND GUTTER AND SIDEWALK.
- 30. CONTRACTOR TO TEST SUBGRADE R-VALUE PRIOR TO CONSTRUCTION. IN THE EVENT THE R-VALUE IS LESS THAN 50, REMOVE 2 FEET OF SUBGRADE MATERIAL AND IMPORT MATERIAL WITH R-VALUE GREATER THAN 50 OR CONTACT THE ENGINEER IMMEDIATELY SO THE PAVEMENT SECTION CAN BE MODIFIED.

 31. AT ALL PAVEMENT REMOVAL AND REPLACEMENTS, SAW-CUT EDGES SHALL BE STRAIGHT
- AND CLEAN, AND LONGITUDINAL JOINTS SHALL NOT BE PLACED WITHIN WHEEL PATHS. PATCHES SHALL BE REGULAR AND SQUARE OR RECTANGULAR, WITH FOUR STRAIGHT SIDES. FINISHED PAVEMENT SURFACE SHALL BE FLUSH WITH EXISTING PAVEMENT SURFACE, WITH NO SPILLOVER OF ASPHALT OR TACK COAT. CARE MUST BE TAKEN TO AVOID DAMAGING THE INTEGRITY OR APPEARANCE OF SURROUNDING PAVEMENTS; IF DAMAGED, THE ENTIRE SURFACE PATCH MUST BE EXPANDED TO COVER DAMAGES.
- 32. CONTRACTOR WILL ENSURE THE ASPHALT HAS A SMOOTH, UNIFORM EDGE WHEN REMOVING AND REPLACING CURB AND GUTTER. IF THE ASPHALT EDGE IS NOT SMOOTH AND UNIFORM, CONTRACTOR WILL SAW CUT AND REPLACE A ONE-FOOT STRIP OF ASPHALT ALONG THE FULL SECTION BEING REPLACED; REFER TO C.O.A. STANDARD DRAWING # 2465 WITH THE APPROPRIATE PAVING SECTION BASED ON ROADWAY CLASSIFICATION.

Hydrology

- 33. ALL STORM DRAINS SHALL BE RCP CLASS III UNLESS OTHERWISE NOTED ON THE PLANS.
- 34. RCP SHALL BE INSTALLED SO THAT THE JOINT GAP AT THE HOME POSITION SHALL CONFORM TO THE APPROVED MANUFACTURER'S RECOMMENDATION. MANUFACTURER'S RECOMMENDED JOINT GAP TOLERANCES FOR EACH PIPE SIZE AND TYPE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF PIPE. RCP JOINTS SHALL NOT BE GROUTED UNLESS DIRECTED BY THE ENGINEER AND WITH CITY APPROVAL.

OTHER COMMON NOTES

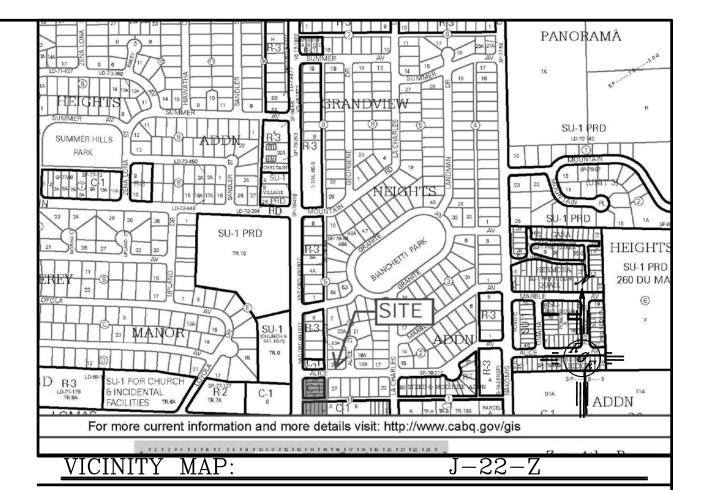
- 35. ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE ACCOMPLISHED IN ACCORDANCE WITH OSHA 29CFR 1926.650 SUBPART P.
- 36. WHEN DISTURBING MORE THAN 1/4 ACRES, CONTRACTOR SHALL SECURE A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.
- 37. IN ADVANCE OF CONSTRUCTION, CONTRACTOR SHALL DETERMINE IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC. ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION TO CONSTRUCTION OPERATIONS IS EVIDENT, CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION. ANY COST ASSOCIATED WITH THIS EFFORT SHALL BE THE RESPONSIBILITY OF CONTRACTOR.
- 38. PNM WILL PROVIDE AT NO COST TO THE CITY OR THE CONTRACTOR THE REQUIRED PERSONNEL FOR INSPECTION OR OBSERVATION DEEMED NECESSARY BY PNM WHILE THE CONTRACTOR IS EXPOSING PNM'S CABLES. HOWEVER, THE CONTRACTOR SHALL BE CHARGED THE TOTAL COST ASSOCIATED WITH REPAIRS TO ANY DAMAGED CABLES OR FOR ANY COST ASSOCIATED WITH SUPPORTING OR RELOCATING THE POLES AND CABLES DURING CONSTRUCTION.
- 39. CONTRACTOR SHALL SUPPORT AND PROTECT ALL EXISTING, UNDERGROUND UTILITY LINES WHICH BECOME EXPOSED DURING CONSTRUCTION. PAYMENT FOR SUPPORTING WORK SHALL BE INCIDENTAL TO WATERLINE AND/OR SEWER LINE COSTS.
- 40. CONTRACTOR IS TO SUPPORT, PROTECT, AND MAINTAIN THE INTEGRITY OF ALL UNDERGROUND TELEPHONE, ELECTRIC CABLES AND CABLE TELEVISION UTILITIES AT NO ADDITIONAL COST TO THE OWNER. CABLE IS TO BE SUPPORTED AT A MAXIMUM SPACING OF FIFTEEN (15) FEET. CONTRACTOR SHALL COORDINATE WITH AND MAKE NECESSARY PAYMENT (IF ANY) TO UTILITY OWNER FOR DE-ENERGIZATION OF CABLES OR SUPPORT OF CABLES BY THE UTILITY OWNER.
- 41. CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR PRIVATE ROADWAY EASEMENTS TO PREVENT ANY EXCAVATED MATERIAL BEING WASHED DOWN THE STREET OR INTO ANY PUBLIC DRAINAGE FACILITY.
- 42. CONTRACTOR SHALL CONDUCT ALL WORK IN A MANNER WHICH WILL MINIMIZE INTERFERENCE WITH LOCAL TRAFFIC.
- 43. ALL EXISTING SIGNS, MARKERS, DELINEATORS, ETC., WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED, STORED AND RE-SET BY THE CONTRACTOR.
- 44. DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL AND UNSUITABLE MATERIAL SHALL BE ARRANGED BY THE CONTRACTOR IN COMPLIANCE WITH ALL APPLICABLE ENVIRONMENTAL REGULATIONS. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR COSTS ASSOCIATED WITH OBTAINING A DISPOSAL SITE AND HAUL THERETO.
- 45. IF CULTURAL RESOURCES, SUCH AS HISTORIC OR PREHISTORIC ARTIFACTS, OR HUMAN REMAINS ARE DISCOVERED DURING EXCAVATION OR CONSTRUCTION, WORK SHALL CEASE AND THE CONSTRUCTION ENGINEER SHALL NOTIFY THE COUNTY OFFICE OF THE MEDICAL EXAMINER AT (505) 272-3053. IF THE MEDICAL EXAMINER DETERMINES THAT HUMAN REMAINS ARE NOT PRESENT, THE CONSTRUCTION ENGINEER SHALL NOTIFY THE STATE HISTORIC PRESERVATION OFFICER (SHPO) AT 827-6320.

GENERAL NOTES USED SELECTIVELY, BASED ON SCOPE OF WORK:

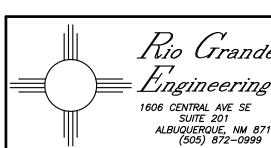
- 46. WORK AFFECTING ARTERIAL ROADWAYS MAY REQUIRE TWENTY-FOUR-HOUR CONSTRUCTION.
- 47. TWO WEEKS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHOULD NOTIFY THE TRANSIT DEPARTMENT OF ANY IMPACT THE PROPOSED PROJECT WILL HAVE ON THE TRANSIT SYSTEM SUCH AS CAUSING A DETOUR, OR CAUSE THE CLOSING OR RELOCATION OF A BUS STOP. THE CONTACT PERSON IS DOUGLAS GOFF, OFFICE PHONE 505-724-3137, CELL PHONE 505-206-0151, AND E-MAIL DGOFF@CABQ.GOV < MAILTO:DGOFF@CABQ.GOV >.
- 48. STREET NAME SIGNS, REGULATORY SIGNAGE, AND ANY NECESSARY STRIPING ON PRIVATE STREETS ARE THE DEVELOPER'S RESPONSIBILITY.
- 49. IN ALL AREAS WHERE PUBLIC STREETS OR INFRASTRUCTURE ARE TO BE CONSTRUCTED OVER FILLS, THE GEOTECHNICAL ENGINEER SHALL CERTIFY THAT PLACEMENT, COMPACTION, AND ALL OTHER WORK HAS BEEN COMPLETED IN ACCORDANCE WITH COA SPECIFICATION SECTION 204. SAID CERTIFICATION, ALONG WITH SUPPORTING TESTING DOCUMENTATION, SHALL BE PROVIDED TO THE CONSTRUCTION ENGINEER PRIOR TO OR AT THE PRE-CONSTRUCTION CONFERENCE BEFORE WORK ORDER CONSTRUCTION.

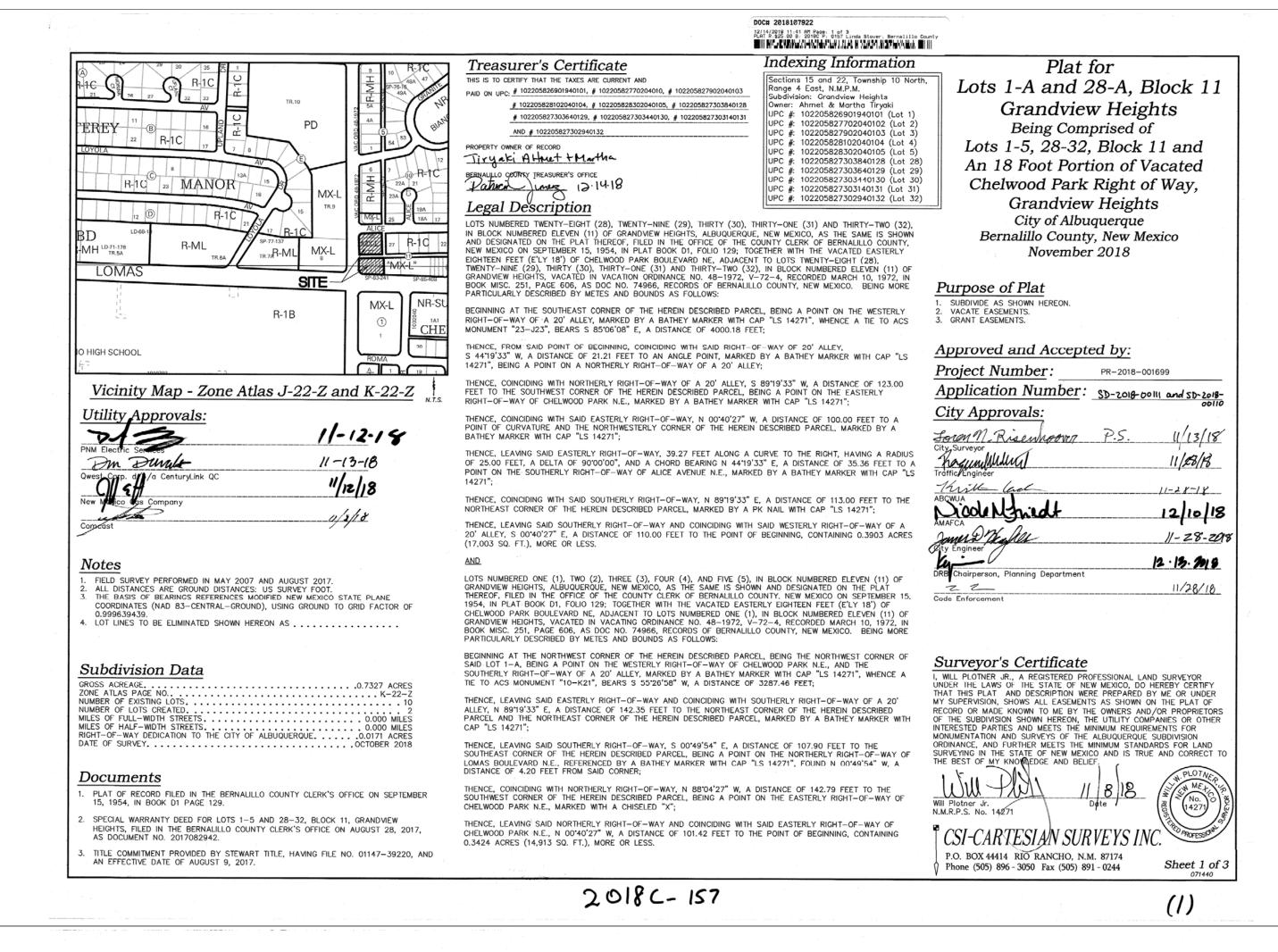
 SEVEN (7) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL SUBMIT
- TO DMD, CONSTRUCTION COORDINATION DIVISION, A DETAILED CONSTRUCTION SCHEDULE.

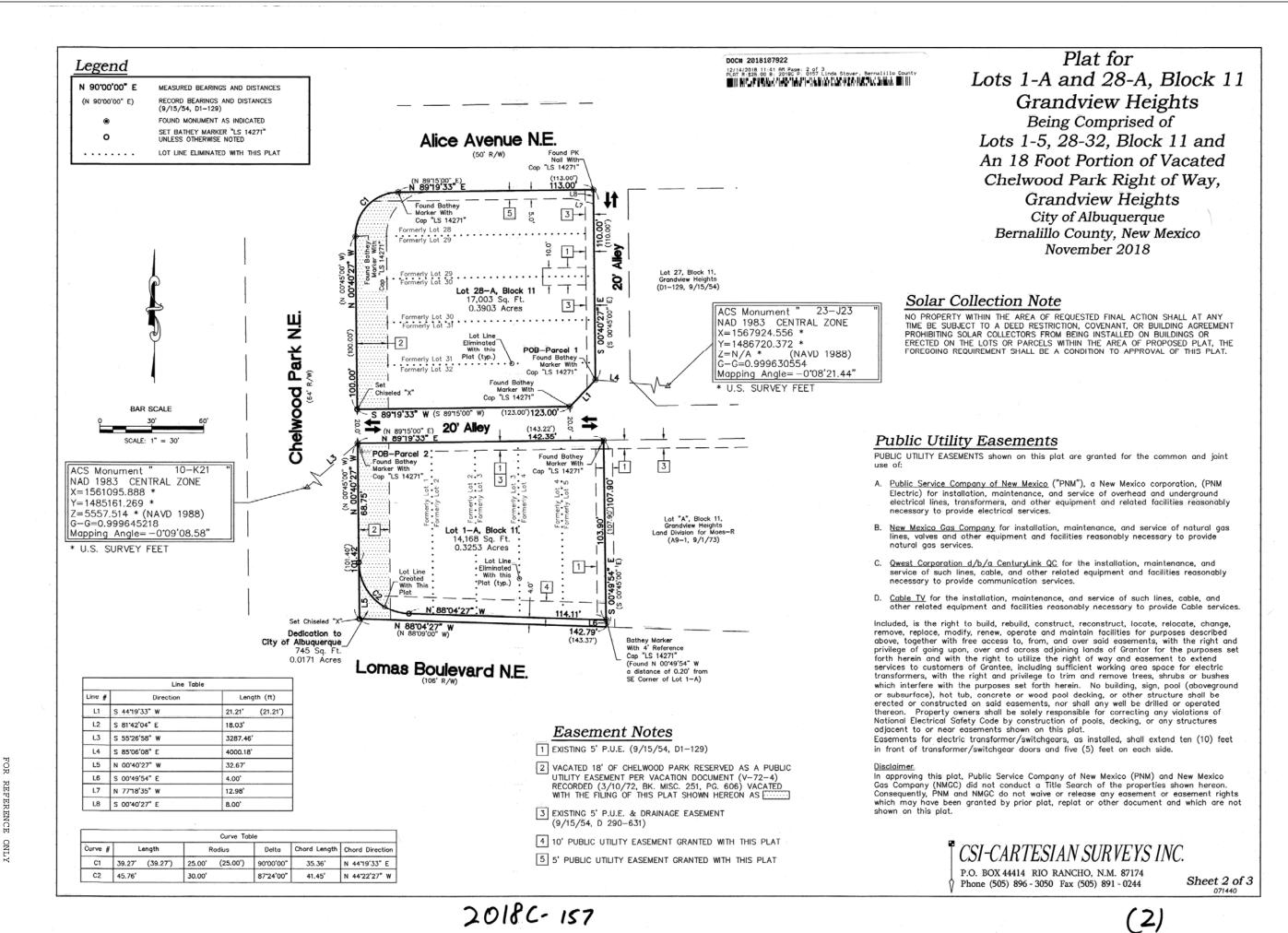
FIVE (5) WORKING DAYS PRIOR TO CONSTRUCTION, CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE DMD, CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO SECTION 19 OF STANDARD SPECIFICATIONS. PERMIT REQUESTS MAY BE DENIED OR DELAYED DUE TO CONFLICTS WITH OTHER PROJECTS IN THE AREA.

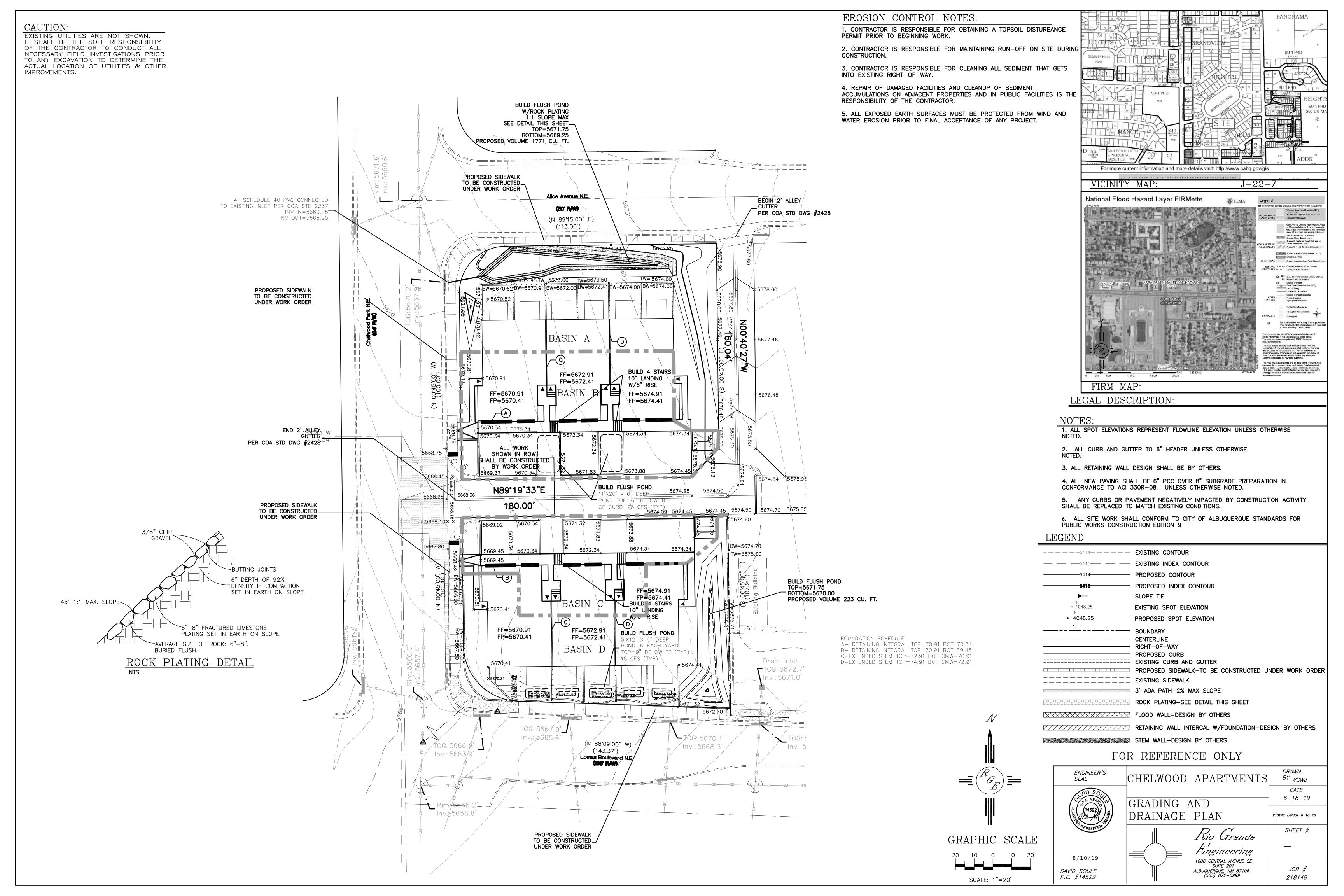


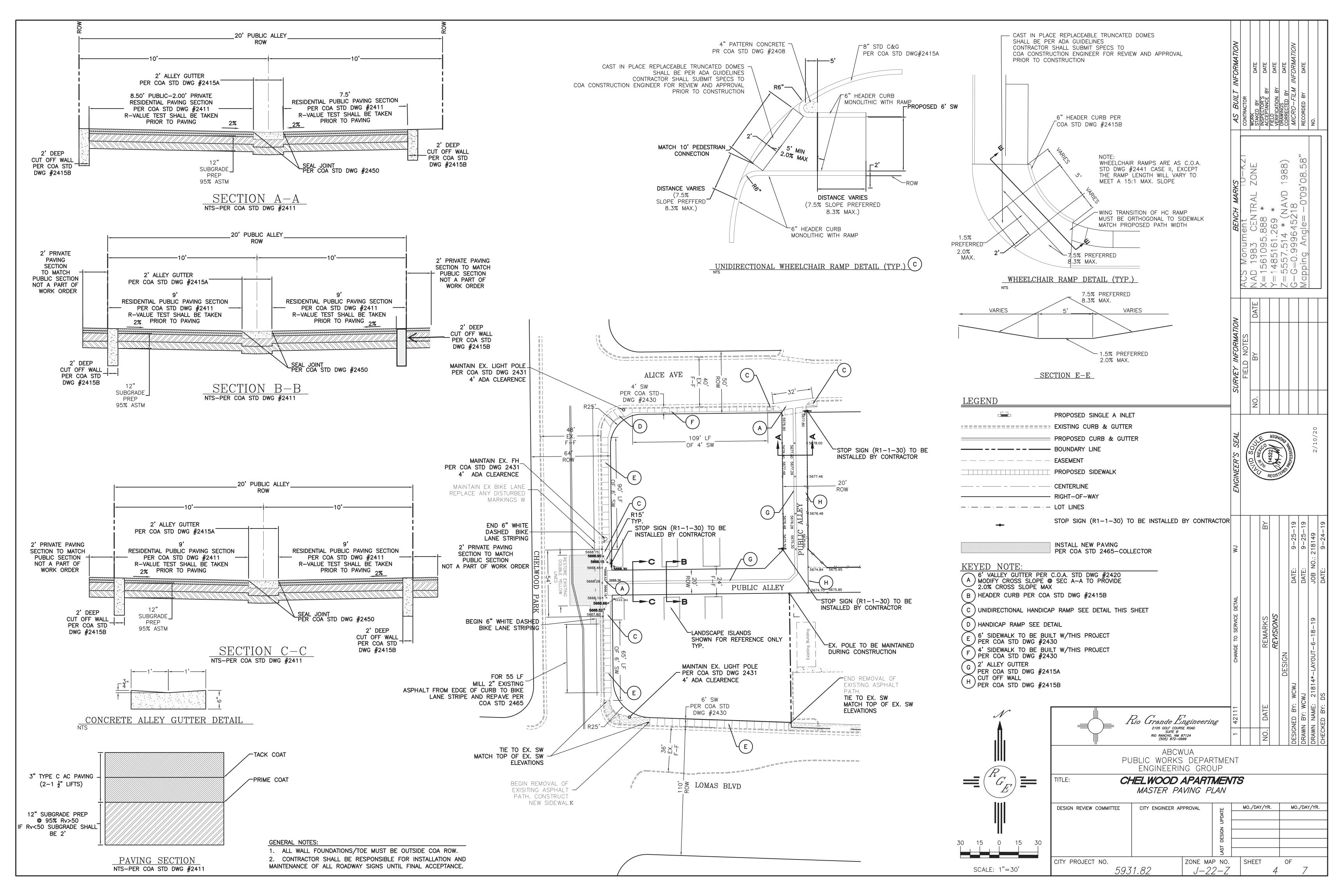
DATE DATF REV | SHEETS | CITY ENGINEER USER DEPT DATE USER DEPT. ENGINEERS STAMP & SIGNATURE **APPROVALS** ENGINEER ********** APPROVED FOR CONSTRUCTION DRC Chairman **Fransportation** Hydrology ABCWUA Constr. Mngmt Constr. Coord. Date City Engineer |Water/Wastewate SHEET 1 **OF 7** 2/10/20 CITY PROJECT NO.

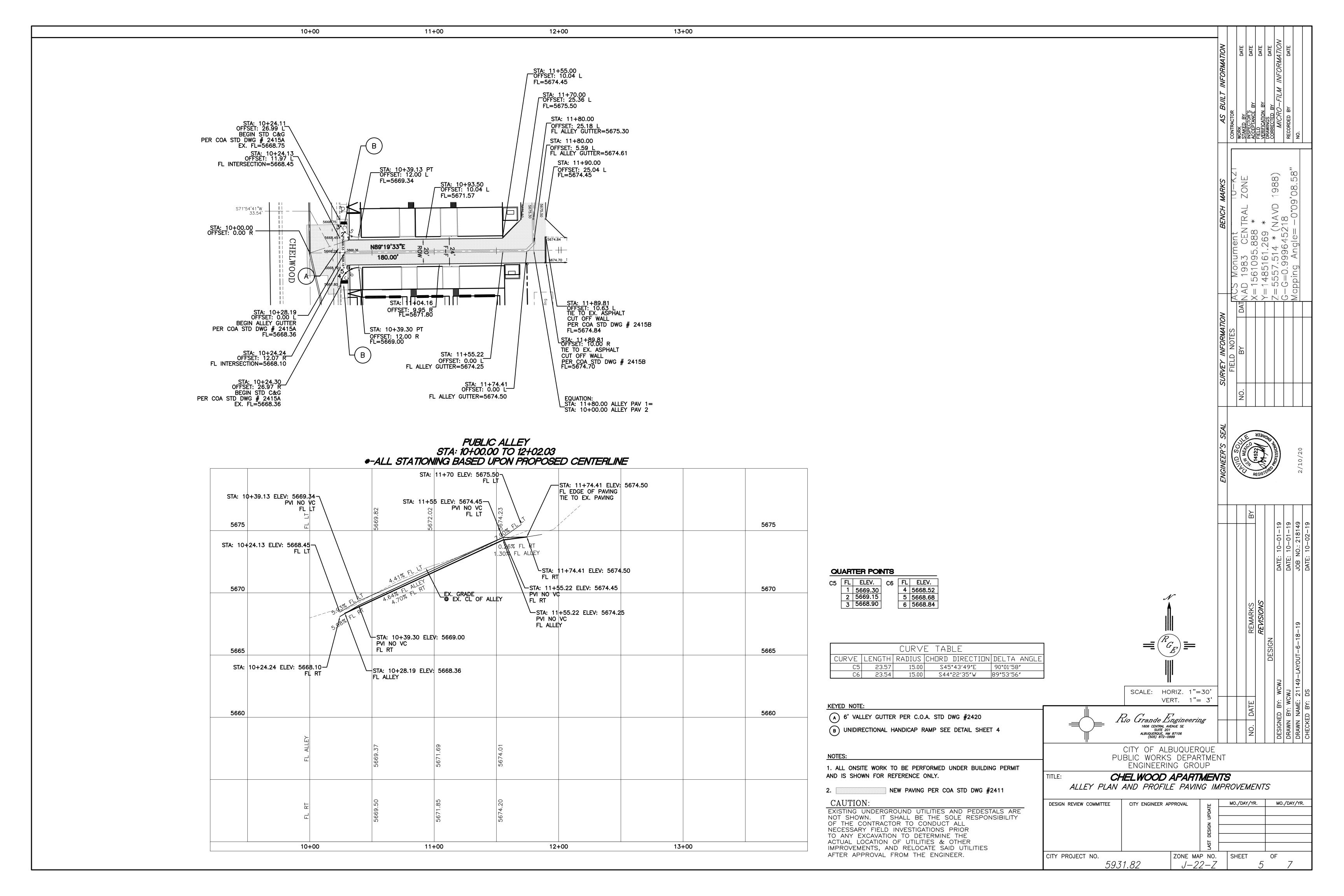


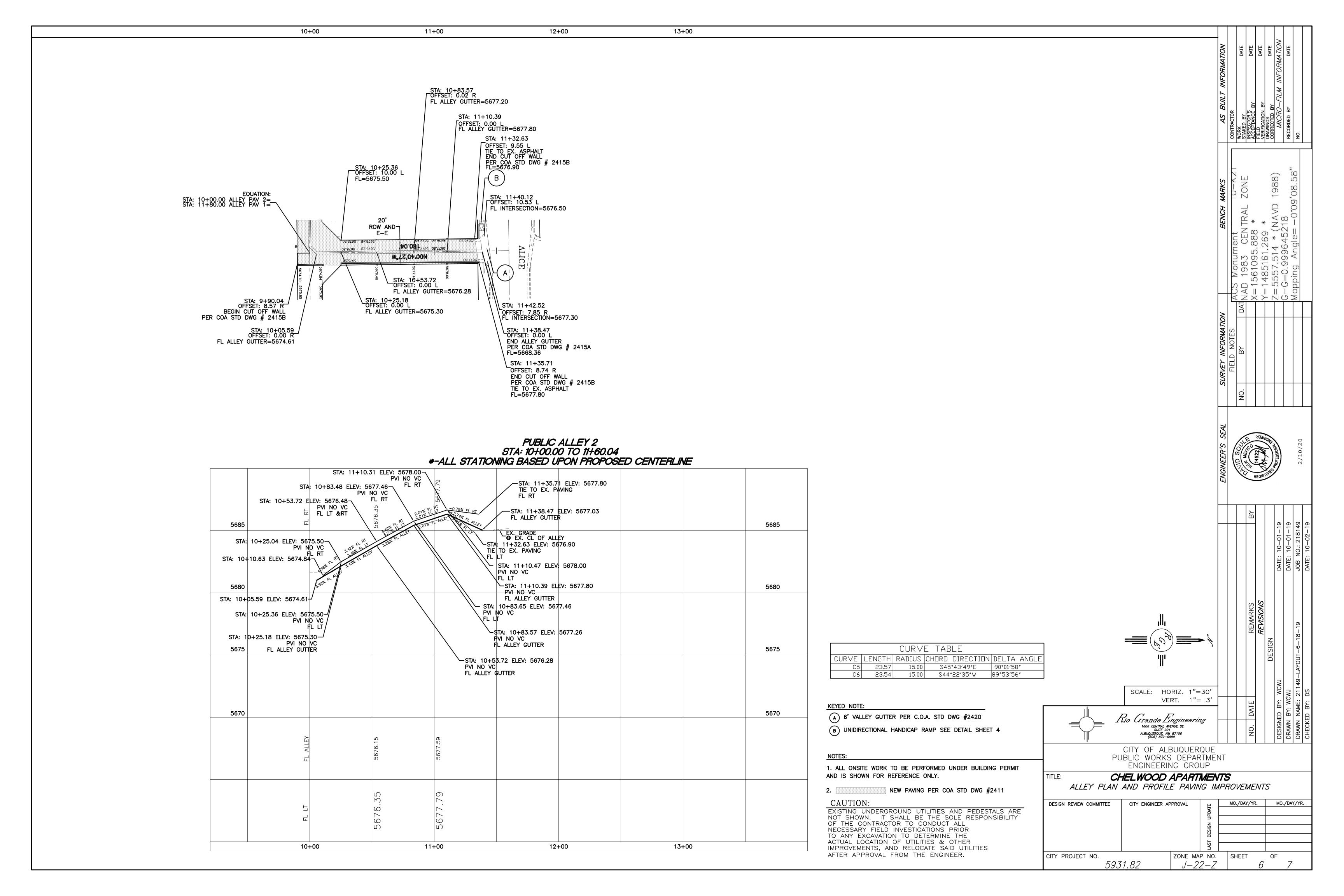












WATER & SEWER

- 13. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING. EXISTING VALVES AND MANHOLES SHALL NOT BE BURIED OR PAVED OVER BUT RIMS SHALL BE ADJUSTED TO MATCH NEW GRADE PER COA STANDARD DRAWINGS 2460 AND 2461.
- 14. MANHOLE RIMS. FIRE HYDRANT ELEVATIONS, AND FLANGE ELEVATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY AND ADJUST TO FINAL PAVEMENT OR SURFACE GRADES.
- 15. THE CONTRACTOR SHALL COORDINATE WITH THE WATER AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUTOFF REQUESTS MUST BE MADE ONLINE AT

<HTTP://ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES.ASPX>

- 16. PROPOSED WATERLINE MATERIALS SHALL BE PVC PIPE MEETING AWWA C-900: DR18 REQUIREMENTS (6" - 12") OR DUCTILE IRON PIPE MEETING AWWA C-150 REQUIREMENTS (6" - 48"),
- 17. ALL WATERLINE FITTINGS, VALVES, BENDS, TEES, CROSSES AND APPURTENANCES SHALL HAVE RESTRAINED JOINTS UNLESS OTHERWISE NOTED ON THE PLANS. THE JOINT RESTRAINT REQUIREMENTS SHOULD BE DELINEATED WITHIN A JOINT RESTRAINT TABLE.
- 18. ALL SANITARY SEWER LINE STATIONING REFERS TO SANITARY SEWER CENTERLINE STATIONING. EXCEPT WHEN PROFILED WITHIN A PROPOSED OR EXISTING STREET, WHERE STREET STATIONING SHALL GOVERN.
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- 21. TRACER WIRE SHALL BE INCLUDED FOR ALL PUBLIC WATER AND SEWER MAINS AND FOR WATER SERVICES IN ACCORDANCE WITH WATER **AUTHORITY DETAILS.**
- 22. CONTRACTOR SHALL PROVIDE THE PROPOSED HYDRO TESTING PLANS TO THE WUA INSPECTORS FOR APPROVAL PRIOR TO BEGINNING TESTING OPERATIONS.
- 23. AT UTILITY CROSSINGS, WHERE LESS THAN 18" OF VERTICAL SEPARATION FROM STORM DRAIN PIPING OR STRUCTURES IS PROPOSED, LEAN FILL CONSTRUCTION (PER SECTION 207 OF THE STANDARD SPECIFICATIONS) SHALL BE USED TO PROTECT THE WATER OR SEWER LINE. LEAN FILL SHALL EXTEND A PERPENDICULAR DISTANCE OF 5 FEET ON EACH SIDE OF THE STORM PIPE OR STRUCTURE.
- SHALL COMPLY WITH ADMINISTRATIVE INSTRUCTION NO. 9 FOR WORK NEARBY OR AFFECTING SAN JUAN CHAMA TRANSMISSION LINES AND APPURTENANCES. INFORMATION SHALL BE PROVIDED TO THE WATER AUTHORITY ONE (1) MONTH IN ADVANCE OF THE CONSTRUCTION START DATE. INFORMATION CAN BE FOUND AT

HTTP://WWW.ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES.ASPX <HTTP://WWW.ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES.ASPX>

THE FOLLOWING TABLES WERE CREATED USING EBAA IRON INC. SOFTWARE FOR RESTRAINING JOINTS WITH THESE CRITERIA:

DEPTH OF BURY: 3.0' MINIMUM SAFETY FACTOR: 1.5 TO 1

PIPE MATERIAL:

GM/SM-SILTY GRAVEL/SILTY SAND, GRAVEL-SAND MIXTURES TEST PRESSURE: 150 PSI

TRENCH TYPE 4: PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO 1/8 PIPE DIAMETER, 4" MINIMUM; BACKFILL COMPACTED TO TOP OF PIPE.

THESE LENGTHS WILL BE AFFECTED IF THE TYPE OF MATERIAL, GREATER DEPTH OF BURY, ETC. CHANGES. THESE MUST BE RECALCULATED BY THE DESIGN ENGINEER PRIOR TO

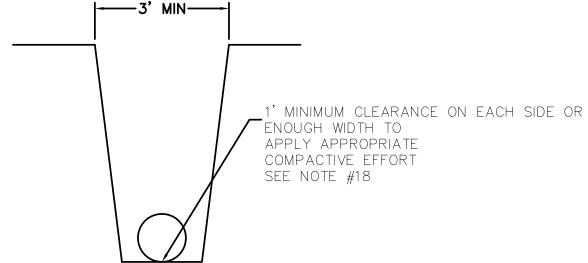
RESTRAINED JOINT LENGTHS FOR TEES*							
SIZE	LENGTH ALONG RUN**						
	5'	4'	3'	2'	1'	0,	
12x12x12	75	80	86	91	97	102	
12x12x10	54	61	67	74	80	87	
12x12x8	32	40	48	56	64	72	
12x12x6	2	12	23	34	45	55	
12x12x4	1	1	1	8	24	39	
10x10x10	60	65	74	76	81	87	
10x10x8	39	45	52	59	66	72	
10x10x6	11	20	29	38	46	55	
10x10x4	1	1	1	14	26	39	
8x8x8	46	51	57	62	67	72	
8x8x6	21	28	34	41	48	55	
8x8x4	1	1	9	19	29	39	
6x6x6	29	34	40	45	50	55	
8x8x4	1	9	16	24	32	39	

*RESTRAINTS ONLY PLACED ON THE BRANCH **LENGTH ALONG RUN REFERS TO THE LENGTH OF PIPE ON FITHER SIDE OF THE TEE REFORE THE NEXT JOINT

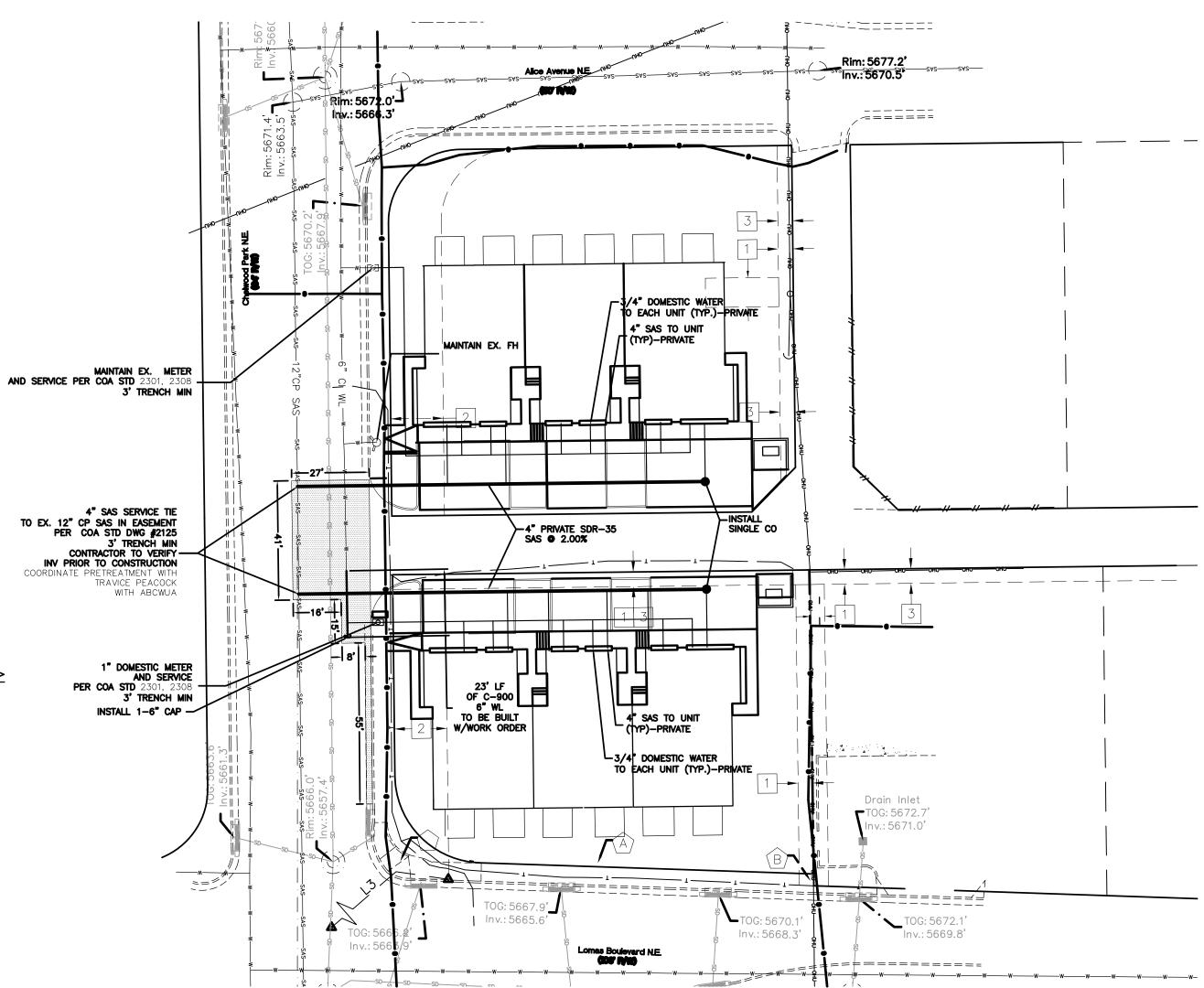
ETHER SIDE OF THE TEE BEFORE THE NEXT JOINT.						
RESTRAINED JOINT LENGTHS FOR HORIZ BENDS, VALVES, AND DEAD ENDS (EACH						
SIZE		VALVES				
SIZE	90°	45°	22-1/2	11-1/4°	DEAD END	
12	37	15	8	4	102	
10	31	13	7	4	87	
8	27	11	6	3	72	
6	20	9	4	2	55	
4	15	6	3	2	39	

Easement Notes

- A FIVE FOOT (5') UTILITY EASEMENT, AND INCIDENTAL PURPOSES THERETO, 1-RESERVED ALONG THE EASTERLY LOT LINE OF THE INSURED PREMISES, AS SHOWN ON THE RECORDED PLAT, RECORDED IN PLAT BOOK D1, PAGE 129, RECORDS OF BERNALILLO COUNTY, NEW MEXICO. (AS TO LOT 5).
- 2-EASEMENTS AFFECTING THE EASTERLY EIGHTEEN FEET (E'LY 18') OF THE RIGHT OF WAY OF CHELWOOD PARK BOULEVARD OF THE INSURED PREMISES AS RESERVED BY THE CITY OF ALBUQUERQUE FOR EXISTING UTILITIES, WHETHER MUNICIPALLY OWNED OR PRIVATELY OWNED, WHICH MAY BE NECESSARY FOR PUBLIC USE AND BENEFIT, IN VACATING ORDINANCE NO. 48-1972 (V-72-4) ADOPTED FEBRUARY 2 8. 1972. RECORDED MARCH 10. 1972. IN BOOK MISC. 251. PAGE 606. AS DOC. NO. 74966, RECORDS OF BERNALILLO COUNTY, NEW MEXICO.
- A FIVE FOOT (5') UTILITY AND DRAINAGE EASEMENT, AND INCIDENTAL PURPOSES THERETO, RESERVED ALONG THE REAR LOT LINES OF THE INSURED PREMISES, AS RESERVED IN THE PROTECTIVE COVENANTS RECORDED SEPTEMBER 15, 1954, IN BOOK D 290, PAGE 631, RECORDS OF BERNALILLO COUNTY NEW MEXICO.



WATER AND SEWER TRENCH DETAIL



THE FOLLOWING TABLES WERE CREATED USING EBAA IRON INC. SOFTWARE FOR RESTRAINING JOINTS WITH THESE CRITERIA:

DEPTH OF BURY: 3.0' MINIMUM

SAFETY FACTOR: 1.5 TO 1 PIPE MATERIAL:

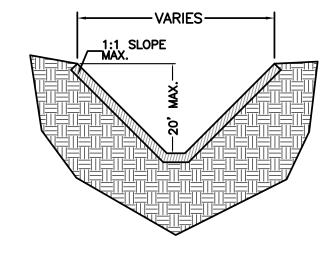
GM/SM-SILTY GRAVEL/SILTY SAND, GRAVEL-SAND MIXTURES TEST PRESSURE: 150 PSI TRENCH TYPE 4: PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO

TÓ TOP OF PIPE.

THESE LENGTHS WILL BE AFFECTED IF THE TYPE OF MATERIAL GREATER DEPTH OF BURY, ETC. CHANGES. THESE MUST BE RECALCULATED BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

1/8 PIPE DIAMETER, 4" MINIMUM; BACKFILL COMPACTED

RESTRAINED JOINT LENGTHS FOR VERTICAL OFFSETS/BENDS (EACH SIDE)						
•	HORIZONTAL BENDS					
•	90.	45°	22-1/2	11-1/4		
UPPER	DON'T	42	21	11		
LOWER	USE	10	5	3		
UPPER	DON'T	36	14	9		
LOWER	USE	9	8	2		
UPPER	DON'T	30	15	8		
LOWER	USE	7	4	2		
UPPER	DON'T	23	11	6		
LOWER	USE	6	3	2		
UPPER	DON'T	17	8	4		
LOWER	USE	4	2	1		
	VERTICAL OF UPPER LOWER UPPER LOWER UPPER LOWER UPPER LOWER UPPER LOWER UPPER LOWER	VERTICAL OFFSETS/I 90° 90° UPPER LOWER DON'T USE UPPER DON'T USE UPPER DON'T USE	VERTICAL OFFSETS/BENDS HORIZON 90° 45° UPPER LOWER DON'T 42 10 UPPER LOWER DON'T 36 10 UPPER LOWER DON'T 30 10 UPPER LOWER DON'T 30 10 UPPER LOWER DON'T 23 10 UPPER LOWER DON'T 23 10 UPPER LOWER DON'T 17 UPPER LOWER DON'T 17	VERTICAL OFFSETS/BENDS (EACH SIDE) HORIZONTAL BENDS 90° 45° 22-1/2° UPPER LOWER DON'T 42 21 10 5 21 10 5 UPPER LOWER DON'T 36 14 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15		



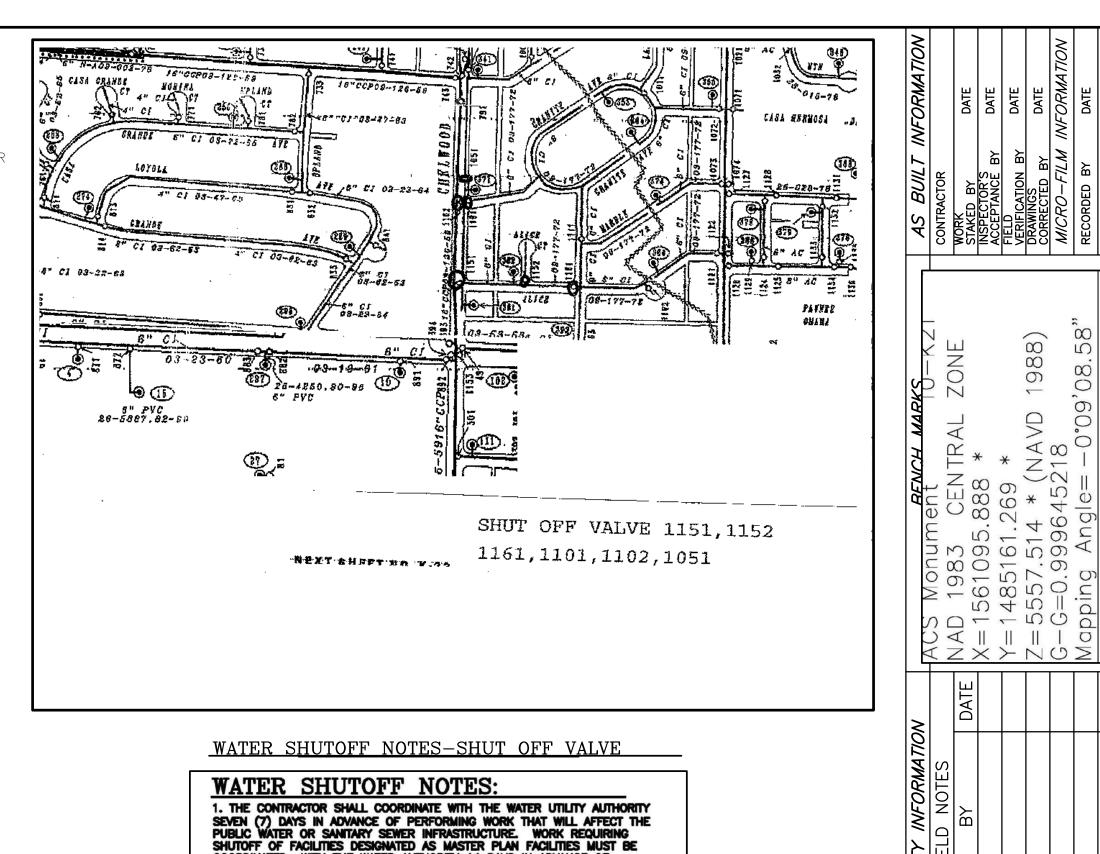
SUPPLEMENTAL TRENCH DETAIL

NTS-PER FIGURE V:2-13 OSHA STANDARD SPECIFICATIONS NOTE: ENTIRE TRENCH PRISM SHALL BE COMPACTED AT 95% ASTM D1557 INCLUDING ALL UTILITY MAIN LINES, WATER METER BOXES AND SERVICES, SAS SERVICES.

LINE TABLE					
LINE	LENGTH	BEARING			
L1	22.70	S01°04′57″E			
La	26.72	N89°18′06″E			
13	26.95	N89°19′04″F			

AT ALL PAVEMENT REMOVAL AND REPLACEMENTS, SAW CUT EDGES SHALL BE STRAIGHT AND CLEAN AND LONGITUDINAL JOINTS SHALL NOT BE PLACED WITHIN WHEEL PATHS. PATCHES SHALL BE REGULAR AND SQUARE OR RECTANGULAR WITH FOUR STRAIGHT SIDES. FINISHED PAVEMENT SURFACE SHALL BE FLUSH WITH EXISTING PAVEMENT SURFACE, WITH NO SPILLOVER OFF ASPHALT OR TACK COAT. CARE MUST BE TAKEN TO AVOID DAMAGING THE INTEGRITY OR APPEARANCE OF SURROUNDING PAVEMENTS, IF DAMAGED, THE ENTIRE SURFACE PATCH MUST BE EXPANDED TO COVER DAMAGES

FOR INFORMATION ONLY: FIRE LINE BACK FLOW PREVENTOR SHALL BE LOCATED INTERIOR TO BUILDING AT FIRE RISER



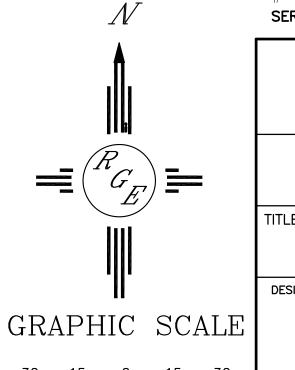
SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED T OPERATE PUBLIC VALVES. SHUT OFF REQUEST MUST BE MADE ONLINE AT HTTP: //ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES. ASPX 2. VALVES SHALL BE OPERATED BY ABCWUA EMPLOYEES ONLY.

LEGEND		
— · — · —EX. 12" SD— · — · EXISTING STORM SEWER LINE		
C EXISTING SAS MANHOLE	SEAL	
——————————————————————————————————————		,
EXISTING VALVE W/BOX	ENGINEER'S	0
EX. 8" WL EXISTING WATER LINE	GINE	15
PROPOSED WATER LINE	EN	
PROPOSED STORM SEWER LINE		
PROPOSED METER		
PROPOSED FIRE HYDRANT		
EXISTING FIRE HYDRANT		
================= EXISTING CURB AND GUTTER	M	

BOUNDARY LINE — RIGHT—OF—WAY $-\cdot -\cdot -\cdot -\cdot -\cdot -\cdot -$ LOT LINES EASEMENT STREET LIGHTS

PROPOSED CURB & GUTTER

CONTRACTOR SHALL REMOVE AND REPLACE PAVING PER COA STD DWG 2465 (COLLECTOR) AVAILABILITY LETTER #180602 SERVICE CONNECTION AGREEMENT #180133



SCALE: 1"=30'

2105 GOLF COURSE ROAD SUITE B RIO RANCHO, NM 87124 (505) 872-0999 ABCWUA PUBLIC WORKS DEPARTMENT ENGINEERING GROUP

CHELWOOD APARTMENT MASTER UTILITY PLAN

Rio Grande L'ngineering

MO./DAY/YR. MO./DAY/YR. DESIGN REVIEW COMMITTEE CITY ENGINEER APPROVAL CITY PROJECT NO. ZONE MAP NO. SHEET OF 5931.82 0F 7

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