GREYHAWK SUBDIVISION NO. 8

GENERAL

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE SPECIFICATIONS AND/OR REQUIREMENTS OF THE CITY OF KUNA PUBLIC WORKS DEPARTMENT, THE ADA COUNTY HIGHWAY DISTRICT, AND/OR THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPWC -LATEST EDITION).
2. A PRE-CONSTRUCTION CONFERENCE WILL BE HELD AT LEAST 48 HOURS PRIOR TO START OF WORK. ALL PROJECT RELATED CONTRACTORS, SUBCONTRACTORS AND/OR UTILITY CONTRACTORS SHOULD BE PRESENT.
3. THE CONTRACTOR SHALL NOTIFY THE CITY OF KUNA WHEN SHUTTING DOWN A JOB FOR ANY REASON AND PROVIDE 48 HOURS NOTICE BEFORE RESTARTING WORK.
4. WHERE IT IS NECESSARY FOR A NON-POTABLE WATER LINE AND A POTABLE WATER LINE TO CROSS EACH OTHER AND THE NON-POTABLE LINE IS LESS THAN 18" BELOW OR ABOVE THE WATER MAIN, THE NON-POTABLE WATER LINE SHALL BE CONSTRUCTED WITH POTABLE WATER DR18 PIPE FOR A MINIMUM OF TEN (10) FEET ON EITHER SIDE OF THE POTABLE WATER PIPELINE WITH A SINGLE TWENTY (20) FOOT SECTION OF DR18 WATER PIPE CENTERED ON THE CROSSING. PRESSURE SEWER MAINS SHALL BE NO CLOSER THAN 18 INCHES FROM POTABLE MAINS. IN LIEU OF CONSTRUCTING OR RECONSTRUCTING, THE NON-POTABLE WATER LINE TO CONFORM TO WATER MAIN STANDARDS, THE POTABLE WATER LINE MAY BE PROTECTED BY A SLEEVING MATERIAL ACCEPTABLE TO THE DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) FOR A DISTANCE OF TEN (10) HORIZONTAL FEET ON BOTH SIDES OF CROSSING.
5. CONTRACTOR(S) SHALL REMOVE ALL OBSTRUCTIONS, ABOVE AND BELOW GROUND, AS REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THIS SHALL INCLUDE CLEARING AND GRUBBING WHICH CONSISTS OF CLEARING THE GROUND SURFACE OF ALL TREES, STUMPS, BRUSH, UNDERGROWTH, HEDGES, HEAVY GROWTH OF GRASS OR WEEDS, FENCE STRUCTURES, DEBRIS, RUBBISH AND MATERIALS WHICH, IN THE OPINION OF THE ENGINEER, ARE UNSUITABLE FOR THE FOUNDATION OF PAVEMENTS.
6. ALL MATERIAL(S) NOT SUITABLE FOR FUTURE USE ON SITE SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.
7. SURVEY CONTROL POINTS WHICH ARE CRITICAL TO THE CONSTRUCTION OF THE PROJECT ARE TO BE LOCATED WITHIN THE LIMITS OF WORK. THE CONTRACTOR SHALL PROTECT THE POINTS IN PLACE.
8. SURVEY CONTROL MONUMENTS SHALL BE PRESERVED, SET, AND/OR RESTORED IN ACCORDANCE WITH IDAHO CODE 50-1303.
9. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL REPLACEMENT DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.
10. ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, TRENCH SHORING, SAFETY DEVICES AND TRAFFIC CONTROL WITHIN AND AROUND THE CONSTRUCTION AREA.
11. EXISTING A.C. PAVEMENT SHALL BE CUT TO A NEAT, STRAIGHT LINE PARALLEL OR PERPENDICULAR TO THE STREET CENTERLINE AND THE EXPOSED EDGE SHALL BE TACKED WITH EMULSION PRIOR TO PAVING.
12. ALL MATERIALS FURNISHED ON OR FOR THE PROJECT MUST MEET THE MINIMUM REQUIREMENTS OF THE APPROVING AGENCIES OR AS SET FORTH HEREIN, WHICHEVER IS MORE RESTRICTIVE.
13. CONTRACTORS MUST FURNISH PROOF THAT ALL MATERIALS INSTALLED ON THE PROJECT MEET THE REQUIREMENTS OF ITEM #12 AT THE REQUEST OF THE AGENCY AND/OR THE ENGINEER.
14. ALL CONTRACTORS WORKING WITHIN THE PUBLIC ROAD RIGHT-OF-WAY ARE REQUIRED TO SECURE A RIGHT- OF-WAY PERMIT FROM ACHD AT LEAST 24 HOURS PRIOR TO ANY CONSTRUCTION.
15. ALL COSTS OF RETESTING FOR PREVIOUSLY FAILED TESTS SHALL BE BORNE BY THE CONTRACTOR.
16. ALL COSTS TO THE CONTRACTOR INCURRED IN CORRECTING DEFICIENT WORK SHALL BE TO THE CONTRACTORS ACCOUNT. FAILURE TO CORRECT SUCH WORK WILL BE CAUSE FOR A STOP WORK ORDER AND POSSIBLE TERMINATION.
17. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CURBS, GUTTERS, STORM DRAINS, CHANNEL CROSSINGS AND SEWER ELEVATIONS OR INVERTS PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE ENGINEER WHEN ELEVATIONS OR INVERTS DO NOT MATCH PROJECT DRAWINGS.
18. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
19. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY NECESSARY NPDES PERMITS, SUBMITTING NOTICE OF INTENT (NOI) TO DISCHARGE STORM WATER, AND PREPARING A POLLUTION PREVENTION PLAN (PPP) IN ACCORDANCE WITH ENVIRONMENTAL PROTECTION AGENCY (EPA) REGULATIONS. CONTACT THE EPA AT (208) 378-5746 FOR THE REQUIRED INFORMATION. SAID PERMIT SHALL BE PRESENTED TO THE ENGINEER AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
20. ALL UTILITIES, INCLUDING SERVICE LINES, WITHIN STREET TRAVEL WAYS SHALL BE IN PLACE PRIOR TO CURB, GUTTER, SIDEWALK AND STREET CONSTRUCTION.
21. PIPE CONTRACTOR SHALL REPLACE ALL PAVEMENT AND CONCRETE REMOVED FOR THE INSTALLATION OF WATER, SEWER, OR IRRIGATION PIPE. ALL PAVEMENT SHALL BE REPLACED WITHIN SEVEN (7) CALENDAR DAYS FROM THE TIME THE PAVEMENT AND/OR CONCRETE IS REMOVED. CONCRETE AND PAVEMENT SHALL BE REPLACED PER ISPWC AND ACHD STANDARDS.
22. NO PAVING SHALL OCCUR UNTIL THE CONTRACTOR OBTAINS WRITTEN APPROVAL OF ALL INSTALLED WATER, SEWER, AND PRESSURE IRRIGATION FACILITIES FROM THE CITY OF KUNA.
23. IN AREAS WHERE ROCK EXCAVATION IS REQUIRED ALL BLASTING SHALL OCCUR PRIOR TO THE INSTALLATION OF ANY SEWER MAINS, WATER MAINS, PRESSURE IRRIGATION MAINS AND/OR SERVICE LINE CROSSINGS. BLASTING IN THE PROXIMITY OF EXISTING UTILITIES MAY BE PERFORMED AS LONG AS THE HORIZONTAL DISTANCE FROM THE EXISTING UTILITY IS EQUAL TO OR GREATER THAN THE EXCAVATION DEPTH FROM THE EXISTING UTILITY OR FIFTEEN (15) FEET, WHICHEVER IS GREATER. THE CONTRACTOR PERFORMING THE BLASTING SHALL BE RESPONSIBLE FOR ANY/ALL DAMAGE TO ANY/ALL EXISTING UTILITIES.
24. THE DEVELOPER IS REQUIRED TO RETAIN A QUALIFIED REGISTERED ENGINEER TO PERFORM INSPECTION SERVICES DURING CONSTRUCTION. THE ENGINEER SHALL FURNISH WRITTEN CERTIFICATION LETTER TO THE CITY OF KUNA THAT THE PROJECT WAS COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. COPIES OF ALL AIR TESTS, DEFLECTION TESTS, PRESSURE TESTS, AND BACTERIOLOGICAL TEST RESULTS SHALL BE FURNISHED WITH THE CERTIFICATION LETTER.
25. THE CITY OF KUNA WILL PROVIDE PERIODIC INSPECTION AND OBSERVE TESTING FOR AN EIGHT (8) HOUR DAY, FROM 8:00 A.M. TO 5:00 P.M., FOR A FORTY (40) HOUR WORK WEEK. THE CONTRACTOR SHALL REIMBURSE THE CITY AT RATES ESTABLISHED BY THE CITY FOR INSPECTIONS EXCEEDING THE NORMAL WORK WEEK, INCLUDING LEGAL HOLIDAYS. OVERTIME INSPECTION RATES AND A LIST OF LEGAL HOLIDAYS CAN BE OBTAINED FROM THE CITY PUBLIC WORKS DEPARTMENT.
26. ALL PLANS USED FOR CONSTRUCTION SHALL BEAR THE CITY OF KUNA (CITY) "APPROVED FOR CONSTRUCTION" STAMP. THE DEVELOPER OR HIS ENGINEER SHALL DELIVER THE ORIGINAL DRAWINGS TO THE CITY ENGINEER FOR APPLICATION OF THE APPROVAL STAMP FOLLOWING APPROVAL BY ALL OTHER AGENCIES AND PRIOR TO PRINTING THE FINAL PLAN SETS FOR CONSTRUCTION. COPIES OF AGENCY APPROVAL LETTERS SHALL BE SUBMITTED WITH THE ORIGINAL DRAWINGS TO RECEIVE THE APPROVAL STAMP. ALL PLANS PRINTED "FOR CONSTRUCTION" SHALL BE PRINTED ON A PALE-YELLOW PAPER. THREE (3) COMPLETE SETS OF FINAL CONSTRUCTION PLANS FOR THE WATER, SEWER, PRESSURE IRRIGATION AND ROADWAY IMPROVEMENTS SHALL BE FURNISHED TO THE CITY BEFORE BEGINNING CONSTRUCTION. USE OF ANY PLANS WITHOUT THE KUNA "APPROVED FOR CONSTRUCTION" STAMP WILL BE CAUSE FOR A CITY ORIGINATED STOP WORK ORDER. ANY MODIFICATIONS DURING CONSTRUCTION MUST BE APPROVED IN WRITING BY THE CITY.
27. WHEN CONSTRUCTION IS SATISFACTORILY COMPLETED, CLEANED AND TESTED AND AFTER ALL OTHER UTILITIES ARE INSTALLED THE DEVELOPER SHALL REQUEST A CITY OF KUNA FINAL ACCEPTANCE INSPECTION. AT A MINIMUM, THE FINAL ACCEPTANCE INSPECTION SHALL INCLUDE:
   a. CLEAN ALL SEWER MAINLINES
   b. DEFLECTION TEST THE SEWER MAINLINE
   c. VISUALLY INSPECT EACH MANHOLE
   d. WITNESS SEWER MAINLINE AIR PRESSURE TEST
   e. WITNESS WATER MAINLINE PRESSURE TEST
   f. WITNESS PRESSURE IRRIGATION PRESSURE TEST
   g. CLEAN AND TELEVISE ALL SEWER MAIN LINES
   h. VISUAL INSPECTION OF THE SEWER MAINS
   i. PROVIDE A DVD OF ALL SEWER MAIN VISUAL INSPECTION

   ALL TESTING SHALL BE PROVIDED AND PAID FOR BY THE DEVELOPER.
28. THE CITY HAS THE RIGHT TO INSPECT THE WORK AT ANY TIME DURING CONSTRUCTION. ANY WORK THAT DOES NOT CONFORM TO THE APPROVED PLANS AND SPECIFICATIONS SHALL BE REJECTED.
29. THE DEVELOPER SHALL GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR FOLLOWING ACCEPTANCE BY THE CITY. THIS GUARANTEE SHALL COVER ALL DAMAGE TO THE CITY UTILITY SYSTEMS OF ANY KIND.
30. DEVELOPER SHALL NOTIFY ALL PURCHASERS OF LOTS, AND THEIR CONTRACTORS, THAT CITY UTILITY SYSTEMS HAVE BEEN ACCEPTED BY THE CITY. ANY DAMAGE TO THESE SYSTEMS DURING HOME CONSTRUCTION *SHALL BE BILLED DIRECTLY TO THE OWNER OF RECORD* AT THE TIME THE DAMAGE IS FOUND.
31. THE DEVELOPER SHALL FURNISH RECORD DRAWINGS TO THE CITY OF KUNA AS FOLLOWS: ONE (1) SET OF ELECTRONIC DRAWINGS ON CD IN PDF FORMAT, AND TWO (2) 24 X 36 SETS ON WHITE PAPER BEFORE FINAL PLAT OR WITHIN 30 DAYS OF FINAL ACCEPTANCE.

ROADWAY

1. ALL CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE CURRENT EDITION OF THE ISPWC AND THE ACHD SUPPLEMENTAL SPECIFICATIONS. NO EXCEPTIONS TO DISTRICT POLICY, STANDARDS, AND THE ISPWC WILL BE ALLOWED UNLESS SPECIFICALLY AND PREVIOUSLY APPROVED IN WRITING BY THE DISTRICT.
2. WHEN DISCREPANCIES OCCUR BETWEEN PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. UNTIMELY NOTIFICATION SHALL NEGATE ANY CONTRACTORS CLAIM FOR ADDITIONAL COMPENSATION.
3. INSPECTION OF WORK WITHIN THE RIGHT-OF-WAYS SHALL BE BY THE ADA COUNTY HIGHWAY DISTRICT AND THE OWNER'S ENGINEER. CONTACT ACHD INSPECTION SERVICES AT 387-6284 TO SCHEDULE INSPECTIONS. 48 HOUR ADVANCED NOTICE IS REQUIRED.
4. ALL TOPS OF VALVE BOXES AND SEWER MANHOLES SHALL BE SET FLUSH WITH THE SLOPE OF THE FINISHED STREET GRADES. THE ROADWAY CONTRACTOR SHALL INSTALL AND ADJUST ALL SPACERS, GRADE RINGS, MANHOLE RINGS AND LIDS.
5. EXISTING A.C. PAVEMENT SHALL BE CUT TO A NEAT STRAIGHT LINE (2' MINIMUM CUT BACK) PARALLEL OR PERPENDICULAR TO THE STREET CENTERLINE AND THE EXPOSED EDGE SHALL BE TACKED WITH EMULSION PRIOR TO PAVING.
6. ALL COSTS OF RETESTING FOR PREVIOUSLY FAILED TESTS SHALL BE BACKCHARGED TO THE CONTRACTOR BY THE OWNER.
7. ALL COSTS TO THE CONTRACTOR INCURRED IN CORRECTING DEFICIENT WORK SHALL BE TO THE CONTRACTORS ACCOUNT. FAILURE TO CORRECT SUCH WORK WILL BE CAUSE FOR A STOP WORK ORDER AND POSSIBLE TERMINATION.
8. ALL STORM DRAINAGE APPURTENANCES SHALL BE INSPECTED AND CERTIFIED BY ADA COUNTY HIGHWAY DISTRICT.
9. ALL WATER VALVES WILL BE PLACED SO AS NOT TO CONFLICT WITH ANY CONCRETE CURB, GUTTER, VALLEY GUTTER, AND SIDEWALK IMPROVEMENTS.
10. ALL WATER METERS ARE TO BE LOCATED OUTSIDE THE ROAD RIGHT-OF-WAY. ALL FIRE HYDRANTS ARE TO BE LOCATED WITHIN THE ROAD RIGHT-OF-WAY. THERE MUST BE AT LEAST A ONE (1) FOOT SEPARATION BETWEEN BACK OF SIDEWALK (OR CURB IF NO SIDEWALK) AND THE LEADING EDGE OF ANY FIRE HYDRANT.
11. OVER EXCAVATION AND ADDITIONAL GRANULAR BACKFILL MAY BE REQUIRED IN HIGH GROUNDWATER AREAS WHICH ARE TO BE DETERMINED BY THE FIELD INSPECTOR.
13. ALL MATERIAL PLACED AS FILL OR BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SECTION 306 OF THE CURRENT EDITION OF ADA COUNTY HIGHWAY DISTRICT STANDARD SPECIFICATIONS.
14. ROADWAY CONSTRUCTION WILL MEET SPECIFIC DETAILS AND REQUIREMENTS OF THE FOLLOWING IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION STANDARD DRAWINGS: (CURRENT EDITION)
   1. STREET SECTION, ACHD SUPPLEMENTAL DRAWING NO. SD-801, AND SECTIONS AS SHOWN ON ROADWAY DETAIL SHEET.
   2. ASPHALT REPAIR FOR STREET CUTS. ISPWC DRAWINGS SD-301, ACHD SD-303, ACHD SD-806
   3. 4.0' CONCRETE VALLEY GUTTER, ACHD SUPPLEMENTAL DRAWING NO. SD-708.
   4. VERTICAL AND ROLLED CURB AND GUTTER, ACHD SUPPLEMENTAL DRAWING NO. SD-701 AND SD-702.
   5. HANDICAP PEDESTRIAN RAMP, DRAWING NO. SD-712A, SD-712G AND SD-712C.
   6. DETECTABLE WARNING TRUNCATED DOMES TO BE CAST INTO THE CONCRETE (ADHESIVE MATS NOT ALLOWED) AND COLORED TRAFFIC YELLOW, DRAWING NO. SD-712.
   7. SIDEWALKS, ACHD SUPPLEMENTAL DRAWING NO. SD-709.
   9. MONITORING WELLS PER ACHD STORMWATER DESIGN GUIDELINES DETAIL 7.
   10. SAND AND GREASE TRAP PER ACHD STORMWATER DESIGN GUIDELINES BMP-01.
   11. DRAINAGE POND PER ACHD STORMWATER DESIGN GUIDELINES BMP-02.
15. PRIOR TO PLACEMENT OF ANY PAVEMENT MARKINGS CONTACT ACHD INSPECTION FOR VERIFICATION OF COMPLIANCE WITH POLICY AND EXISTING PAVEMENT MARKINGS.
16. FOR SUBDIVISION SIGN INSTALLATION: OUTSIDE INSTALLERS MUST BE BONDED WITH ACHD AND OBTAIN A NO-CHARGE RIGHT-OF-WAY PERMIT.

WATER

1. THE WATER SYSTEM SHALL BE CONSTRUCTED TO CONFORM WITH STANDARDS SET FORTH IN THE "IDAHO RULES FOR PUBLIC DRINKING WATER SYSTEMS", THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPWC LATEST EDITION) AND THE CITY OF KUNA STANDARDS.
2. CONTRACTOR SHALL NOTIFY OWNER'S ENGINEER AND THE CITY OF KUNA FORTY-EIGHT (48) HOURS BEFORE INITIAL CONSTRUCTION BEGINS AND SHALL REQUEST THE CITY OF KUNA INSPECTION OF WATER LINES AND APPURTENANCES TWENTY-FOUR (24) HOURS IN ADVANCE OF BACKFILLING.
3. CONTRACTOR SHALL PREVENT THE ENTRY OF ANIMALS, DIRT AND OTHER FOREIGN MATTER INTO PIPES AND SHALL NOT LEAVE ANY OPEN PIPE END AT ANY TIME WHEN ABSENT FROM THE WORK SITE.
4. ALL WATER MAINS SHALL BE PVC CONFORMING TO THE PROVISIONS OF AWWA C-900 DR 18 (235 PSI) OR CLASS 150 CEMENT MORTAR LINED DUCTILE IRON CONFORMING TO AWWA C-151. ALL FITTINGS SHALL BE DUCTILE IRON CONFORMING TO AWWA C-110.
5. MINIMUM DEPTH FOR ALL WATER MAINS SHALL BE FOUR (4) FEET FROM FINISHED GRADE TO TOP OF PIPE.
6. AFTER INSTALLATION OF WATER MAINS, TRENCHES SHALL BE COMPACTED TO 95% OF MAXIMUM PROCTOR DENSITY.
7. ALL MAIN LINE WATER VALVES SHALL BE RESILIENT WEDGE VALVES FOR WATER SUPPLY SERVICE CONFORMING TO ANSI/AWWA C-509. ACCEPTABLE VALVES ARE MUELLER MODEL A-2360 AND A-2361 OR CLOW MODEL 2639 AND 2640. ANY OTHERS MUST BE EXPLICITLY APPROVED BY THE CITY ENGINEER.
8. ALL WATER VALVES SHALL BE FURNISHED WITH A STANDARD CAST IRON 5-1/4 INCH DIAMETER 3-PIECE ADJUSTABLE VALVE BOX. THE CAST IRON COVER SHALL BE DESIGNED TO SLIP INSIDE THE TOP BELL AND SHALL BE MARKED WITH THE WORD "WATER" AS AN INTEGRAL PART OF THE COVER. A CONCRETE COLLAR SHALL BE REQUIRED WHEN LOCATED IN PAVEMENT.
9. ALL TEES, PLUGS, BENDS, AND OTHER LOCATIONS WHERE UNBALANCED FORCES EXIST, SHALL BE SECURED AND ANCHORED BY SUITABLE THRUST BLOCKING AS SHOWN ON SD-403 (ISPWC).
10. NO. 12 DIRECT BURIAL TRACER WIRE SHALL BE TAPED TO THE CROWN OF WATER MAINS AND SERVICE LINES. THE TRACER WIRE SHALL BE LOOPED FROM THE MAIN LINE TO EACH SERVICE VAULT ALONG THE SERVICE PIPE AND BACK TO THE MAIN LINE. THE TRACER WIRE SHALL BE ACCESSIBLE AT ALL VALVE BOXES AND SHALL BE EXTENDED ALONG THE OUTSIDE OF THE LOWER PORTION OF THE VALVE BOX AND ALONG THE INSIDE OF THE UPPER PORTION. WIRE SHALL BE TAPED TO GATE VALVES SO IT IS ACCESSIBLE FROM ABOVE WITHOUT INTERFERING WITH VALVE OPERATION. AN ELECTRICAL CONTINUITY TEST SHALL BE CONDUCTED BEFORE PAVING TO VERIFY THE TRACER WIRE'S INTEGRITY.
11. ALL WATER MAINLINES SHALL BE LEAK-TESTED, FLUSHED AND DISINFECTED AFTER INSTALLATION OF ALL UTILITIES, BEFORE PAVING AND BEFORE CONNECTING TO THE SYSTEM. THE DISTRIBUTION SYSTEM SHALL BE PRESSURE TESTED TO 150 PSI MINIMUM OR IN ACCORDANCE WITH SECTION 401 OF THE ISPWC.
12. WATER MAINLINES SHALL BE DISINFECTED ACCORDING TO SECTION 401 OF THE ISPWC AND THEN FLUSHED. THE DISINFECTION AND FINAL FLUSHING PROCEDURE SHALL BE TESTED TO DETERMINE IF THE APPROPRIATE MINIMUM CHLORINE RESIDUALS HAVE BEEN MET.
13. EACH METER SETTER SHALL BE OPENED TO VERIFY THAT THE CORPORATION STOP IS OPEN AND THE SERVICE IS OPERABLE BEFORE PAVING. EACH VALVE AND HYDRANT SHALL BE OPERATED TO ENSURE IT IS FUNCTIONAL BEFORE PAVING. A CITY OF KUNA REPRESENTATIVE SHALL OBSERVE THE TESTING.
14. ALL INSTALLED WATER LINES SHALL BE DISINFECTED IN ACCORDANCE WITH DIVISION 400 OF THE ISPWC SPECIFICATIONS AND PASS THE REQUIRED BACTERIOLOGICAL TEST BEFORE BEING PUT INTO SERVICE. CONTRACTOR SHALL PROVIDE REPORTS FROM A CERTIFIED LABORATORY OF THE BACTERIA SAMPLES SHOWING THAT THE WATER LINES HAVE PASSED BACTERIA SAFETY REQUIREMENTS. A CITY OF KUNA REPRESENTATIVE SHALL OBSERVE THE SAMPLE EVENT.
15. THE CONTRACTOR MAY PRESSURE TEST ALL WATER LINES AFTER DISINFECTION AND FLUSHING BUT PRIOR TO INSTALLATION OF OTHER UTILITIES. AFTER ALL UTILITIES ARE INSTALLED AND PRIOR TO PAVING THE CONTRACTOR SHALL PERFORM A FINAL PRESSURE TEST WITH CITY PERSONNEL IN ATTENDANCE. THE CONTRACTOR SHALL FURNISH ALL PERSONNEL AND EQUIPMENT NECESSARY TO CONDUCT THE TEST.
16. CONTRACTOR SHALL FIELD VERIFY ALL VALVE BOX LID ELEVATIONS TO ENSURE THAT LID ELEVATIONS MATCH FINAL STREET GRADE, AND ALL METER LID ELEVATIONS MATCH SIDEWALK ELEVATIONS.
17. VALVES, FLANGED OR M.J., SHALL BE LOCATED IN THE STREET UNLESS EXPLICITLY APPROVED BY THE CITY ENGINEER. ALL GATE VALVES SHALL BE SET AS CLOSE (FLANGE CONNECTED) AS POSSIBLE TO MAIN LINE FITTINGS. ALL WATER METERS AND FIRE HYDRANTS SHALL BE LOCATED OUT OF THE ROAD RIGHT-OF-WAY. THERE MUST BE AT LEAST ONE (1) FOOT SEPARATION BETWEEN BACK OF SIDEWALK (OR CURB IF NO SIDEWALK) AND THE LEADING EDGE OF ANY FIRE HYDRANT.
18. WATER SERVICE LINES SHALL BE PLACED IN A FOUR (4) INCH DIAMETER SCHEDULE 80 WATER CLASS PIPE WHEREVER THE SERVICE LINE CROSSES A STREET DRAINAGE SEEPAGE BED.
19. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER SERVICE TO ALL EXISTING WATER USERS AFFECTED BY CONSTRUCTION.
20. THE CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING SERVICE CONNECTIONS WITH AN 8 FOOT 2" X 4" BOARD PAINTED BLUE.
21. CONTRACTOR SHALL STAMP OR STENCIL THE SIDEWALK AT THE POINT WHERE THE WATER SERVICE CROSSES UNDER THE SIDEWALK.
22. THE PAVING CONTRACTOR SHALL SET WATER VALVE RISERS IN CONCRETE COLLARS PER ISPWC STANDARD DRAWING SD-406.
23. ALL FIRE HYDRANTS SHALL BE DRY BARREL CONFORMING TO AWWA C-502, INSTALLED PER ISPWC SECTION 403 AND ISPWC DWG SD-404. FIRE HYDRANTS SHALL HAVE A FIVE (5) FOOT SETTING MINIMUM, 150 PSI WORKING PRESSURE, ONE 4-1/2 INCH DIAMETER NATIONAL STANDARD PUMPER NOZZLE WITH STORZ FITTING, AND TWO 2-1/2 INCH DIAMETER NATIONAL STANDARD THREAD FIRE HOSE NOZZLES. THE VALVE OPERATOR SHALL OPEN COUNTER CLOCKWISE. THE HYDRANT SHALL BE EQUIPPED WITH A DRAIN THAT OPENS WHEN THE HYDRANT IS CLOSED; AND A SIX (6) INCH FLANGED BY MECHANICAL JOINT RESILIENT WEDGE VALVE ATTACHED DIRECTLY TO THE WATER MAIN LINE TEE. FIRE HYDRANTS SHALL BE CLOW MEDALLION, WATEROUS PACER 100, OR MUELLER A423. NO OTHERS WILL BE ACCEPTED. MAXIMUM HYDRANT SPACING SHALL BE 450 FEET. HYDRANT LOCATIONS SHALL BE APPROVED IN WRITING BY THE KUNA RURAL FIRE DEPARTMENT AND SUBMITTED WITH THE CONSTRUCTION PLANS FOR FINAL REVIEW AND APPROVAL BY THE CITY ENGINEER.
24. INDIVIDUAL ONE (1)-INCH WATER SERVICES SHALL BE INSTALLED FOR EACH CONNECTION FROM A SINGLE OR DUAL METER VAULT. THE ONE (1)-INCH WATER SERVICE FOR EACH CONNECTION SHALL BE EXTENDED A MINIMUM OF 10-FEET ON THE HOUSE SIDE OF THE METER, OR AS REQUIRED TO EXTEND PAST OTHER UTILITIES LOCATED WITHIN THE 10-FOOT UTILITY EASEMENT. WATER METERS SHALL BE FURNISHED AND INSTALLED BY THE CITY OF KUNA. EXCEPT AS NOTED BELOW, SERVICE DETAILS SHALL BE AS NOTED IN ISPWC DWG SD-401. EACH SERVICE LEG SHALL BE PROVIDED WITH 18-INCH TALL ¾-INCH COPPER METER SETTER, CURB STOP, LOCKABLE SHUTOFF VALVE AND CHECK VALVE, 20-INCH DIAMETER BY 36-INCH TALL INSULATED METER BOX AS MANUFACTURED BY "MID-STATES PLASTICS, INC." (OR APROVED EQUAL), AND A CAST IRON FRAME AND COVER TAPPED WITH A 1-INCH DIAMETER RECESSED HOLE FOR THE CITY AUTOREAD METER SENSOR AS APPROVED BY THE CITY. WHERE PRACTICAL, METER BOXES SHALL BE LOCATED ON THE NORTH OR EAST SIDE OF THE PROPERTY, OR IN CASE OF DUAL WATER SERVICE, ON THE NORTH OR EAST SIDE OF THE COMMON PROPERTY LOT LINE. THE CENTERLINE OF THE METER SETTER SHALL BE LOCATED 18-INCHES BELOW FINISH GRADE. METERS SHALL BE PLACED 18-INCHES INSIDE THE PROPERTY LINE AND 18-INCHES AWAY FROM THE SIDE LOT LINE.
25. MULTIPLE TAPS IN THE SAME PIPE JOINT SHALL BE STAGGERED AND SHALL BE SEPARATED BY A MINIMUM OF ONE (1) FOOT.
26. ALL PIPE, WATER MAIN LINES, AND SERVICES SHALL BE BEDDED WITH TYPE I OR TYPE II BEDDING. IN AREAS OF ROCK EXCAVATION, BEDDING SHALL BE SIX (6) INCHES BELOW THE BOTTOM OF PIPE.

SEWER

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPWC) – LATEST EDITION, THE CITY OF KUNA'S PUBLIC WORKS DEPARTMENT STANDARDS AND/OR THE ADA COUNTY HIGHWAY DISTRICT (ACHD) MODIFICATIONS TO THE ISPWC.
2. FINAL APPROVAL AND ACCEPTANCE OF ALL SEWER CONSTRUCTION WILL BE BY THE CITY OF KUNA.
3. ALL SEWER PIPE AND FITTINGS 4 INCH THROUGH 15 INCH DIAMETER SHALL BE POLYVINYL CHLORIDE (PVC) CONFORMING TO ASTM D-3034, SDR-35. SEWER PIPE AND FITTINGSSIZES 18 INCH THROUGH 36 INCH DIAMETER SHALL BE PVC CONFORMING TO ASTM F 679. PRESSURE SEWER PIPE SHALL CONFORM TO AWWA C900 PVC, DR 18 (235 PSI).
4. SEWER CONSTRUCTION INSPECTIONS WILL BE PERFORMED BY THE OWNER'S ENGINEER OR DESIGNATED REPRESENTATIVE. THE OWNER'S ENGINEER'S DECISIONS SHALL BE FINAL. SUCH APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PERFORMING THE WORK IN AN ACCEPTABLE MANNER, IN CONFORMANCE WITH THE APPROVED MASTER PLAN, CONTRACT DRAWINGS, AND ASSOCIATED SPECIFICATIONS.
5. AFTER SEWER SERVICE STUB OUTS ARE INSTALLED AND MARKED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE CITY ENGINEER FOR INSPECTION SO THAT ANY DESTRUCTION OF SEWER SERVICE STUB OUTS IS NOT BACKCHARGED TO SEWER CONTRACTOR.
6. BEFORE FINAL ACCEPTANCE, AFTER ALL UTILITIES ARE INSTALLED AND PRIOR TO PAVING, TESTING SHALL BE CONDUCTED. THE CONTRACTOR SHALL CONTACT OWNERS' ENGINEER AND THE CITY OF KUNA A MINIMUM OF 24 HOURS PRIOR TO TESTING. ALL INSTALLED SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH DIVISION 500 OF THE ISPWC SPECIFICATIONS. A REPRESENTATIVE OF THE CITY MUST OBSERVE THE TESTING. TESTING SHALL INCLUDE AIR PRESSURE TESTING, DEFLECTION TESTING, SURVEY INVERT ELEVATIONS AND VISUAL INSPECTION USING A CLOSED-CIRCUIT TELEVISION (CCTV) CAMERA. A COPY (TAPE/DVD) OF THE VISUAL INSPECTION SHALL BE PROVIDED TO THE CITY OF KUNA BEFORE FINAL ACCEPTANCE OF THE SEWER LINE. ALL SEWER LINES SHALL BE CLEANED BEFORE DEFLECTION TESTING AND CCTV CAMERA INSPECTIONS.
7. ALL MANHOLES SHALL BE CONSTRUCTED WATER TIGHT AND WITH THE TOP OF CONE LOCATED WITHIN TWELVE (12) INCHES OF FINISHED GRADE. THE SEWER CONTRACTOR SHALL SUPPLY ALL LID ASSEMBLIES AND THE REQUIRED NUMBER OF RISER AND GRADE RINGS. THE SEWER CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF THE TOP OF EXISTING AND CONSTRUCTED MANHOLE CONES TO ASSURE THAT ALL RING ELEVATIONS MATCH FINAL STREET GRADES. EACH OF THE GRADE RINGS SHALL BE SET IN A BED OF NON-SHRINK GROUT OR MORTAR AND TROWELED SMOOTH WITH THE INSIDE OF THE MANHOLE. THE NON-SHRINK GROUT SHALL ALSO BE APPLIED BETWEEN THE METAL FRAME AND GRADE RINGS. STACKING OF THE GRADE RINGS AND FRAME WITHOUT NON-SHRINK GROUT OR MORTAR WILL NOT BE ALLOWED.
8. THE PAVING CONTRACTOR SHALL SET THE GRADE RINGS AND POUR THE CONCRETE COLLARS PER STANDARD DRAWING NO. SD-508. THE PAVING CONTRACTOR SHALL CONTACT ACHD 24 HOURS PRIOR TO POURING CONCRETE COLLARS.
9. SERVICE STUB OUTS SHALL BE LOCATED AT THE POINTS SHOWN ON THE DRAWINGS OR AS MARKED BY THE ENGINEER IN THE FIELD. SEWER SERVICE STUB OUTS BEGINNING AT A MANHOLE ARE GENERALLY NOT ALLOWED, BUT WHEN UNAVOIDABLE IN THE OPINION OF THE CITY ENGINEER, THE TOP OF THE FOUR (4) INCH SERVICE LINE PIPESHALL MATCH THE TOP OF THE MAINLINE PIPE. SEWER SERVICE MARKERS SHALL BE IN PLACE FOR FINAL INSPECTION. SIDEWALKS ARE TO BE STAMPED OR STENCILED WHERE SERVICES CROSS THE SIDEWALK.
10. GROUNDWATER LEVELS SHALL BE MAINTAINED BELOW THE BOTTOM OF THE TRENCH DURING PIPE LAYING AND JOINING OPERATIONS.
11. TRENCH BACKFILL ABOVE THE PIPE ZONE SHALL BE INSPECTED BY ACHD OR BY THE OWNER'S ENGINEER IN ACCORDANCE WITH THE LATEST EDITION OF THE "CONSTRUCTION QUALITY ASSURANCE MANUAL". COMPACTION TESTS ARE REQUIRED IN THE BACKFILL ABOVE THE PIPE ZONE, WITHIN PUBLIC RIGHT-OF-WAY, ACCORDING TO ACHD REQUIREMENTS.DENSITY TEST RESULTS SHALL BE SUBMITTED TO THE CITY OF KUNA AND ACHD PRIOR TO FINAL ACCEPTANCE.
12. ALL STATIONING SHALL BE REFERENCED TO THE GRAVITY SEWER CENTERLINE.
13. SEWER SERVICE LINES SHALL BE INSTALLED PRIOR TO STREET IMPROVEMENTS.
14. THE HORIZONTAL SEPARATION OF POTABLE WATER AND SEWER MAINS SHALL BE A MINIMUM OF TEN (10) FEET FROM PIPE EDGE TO PIPE EDGE. PRESSURE SEWER MAINS SHALL CROSS NO CLOSER THAN 18 INCHES FROM POTABLE WATER MAINS.
15. SEWER CONSTRUCTION SHALL MEET THE SPECIFIC DETAILS AND REQUIREMENTS OF THE FOLLOWING STANDARD DRAWINGS AND ACCOMPANYING SPECIFICATIONS FOUND IN "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION" AND ACHD STANDARD DRAWINGS:
   1.1. STANDARD MANHOLE – TYPE A, DRAWING NO. SD-501 AND SD-501A.
   1.2. STANDARD SHALLOW MANHOLE – DRAWING NO. SD-505.
   1.3. MANHOLE COLLAR DETAIL – DRAWING NO. SD-508.
   1.4. MANHOLE COVER AND FRAME – DRAWING NO. SD-507.
   1.5. STANDARD SEWER SERVICE LINE – DRAWNG NO. SD-511 & SD-511A.
   1.6. SEWER SERVICE MARKER – DRAWING NO. SD-512.
16. SEWER MAIN MANHOLES SHALL BE CONSTRUCTED AT ALL CHANGES IN PIPE GRADE, ALL CHANGES IN PIPE SIZE, ALL CHANGES IN PIPE ALIGNMENT, ALL PIPE INTERSECTIONS AND AT THE TERMINATION OF ALL MAIN LINES. TEMPORARY SEWER CLEANOUTS MAY BE INSTALLED AT THE TERMINATION OF STUB MAIN LINES LESS THAN 150 FEET IN LENGTH, BUT IN SUCH INSTANCES, PROVISION MUST BE MADE FOR THE CITY TO CHECK OR CONFIRM THE INSTALLED GRADE BEFORE THE MAIN LINE IS BACKFILLED.
17. THE CONTRACTOR SHALL LEAVE THE EXCAVATION FOR THE UPSTREAM END OF ALL SERVICE LINES OPEN TO ALLOW ON SITE VERIFICATION OF THE INVERT ELEVATIONS AND SLOPES BY THE CITY'S INSPECTOR. THE CONTRACTOR SHALL NOT BACKFILL THE ENDS OF SERVICE LINES UNTIL THE CONTRACTOR HAS OBTAINED APPROVAL FROM THE CITY OF KUNA'S INSPECTOR OR OTHER ARRANGEMENTS HAVE BEEN MADE FOR THE VERIFICATION OF SERVICE LINE INVERT ELEVATIONS AND SLOPES.
18. THE CONTRACTOR SHALL INSTALL A REMOVABLE PLUG IN THE DOWN STREAM SIDE OF THE EXISTING MANHOLE WHERE THE NEW CONNECTION WILL BE MADE. THE PLUG SHALL REMAIN IN PLACE UNTIL FINAL ACCEPTANCE OF THE SEWER PROJECT.
19. ALL PIPE, MAINS, AND SERVICES SHALL BE BEDDED WITH TYPE I BEDDING. IN AREAS OF ROCK EXCAVATION, PIPE BEDDING SHALL BE SIX (6) INCHES THICK.
20. PRIOR TO CONNECTING TO THE EXISTING SEWER SYSTEM, WHERE THE CONNECTION IS MADE BETWEEN MANHOLES AND THE EXISTING SERVICES, ALL SEWER MAINS AND SERVICES MUST BE AIR TESTED.

PRESSURE IRRIGATION

1. ALL DESIGN AND CONSTRUCTION OF PRESSURE IRRIGATION DISTRIBUTION FACILITIES SHALL CONFORM TO THE CITY OF KUNA DESIGN AND CONSTRUCTION STANDARDS FOR PRESSURE IRRIGATION FACILITIES, "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION-LATEST EDITION" (ISPWC), IDAHO STATE PLUMBING CODE, FEDERAL AND STATE LAWS, AND WHERE APPLICABLE, RELEVANT WATER AND SEWER DESIGN AND CONSTRUCTION STANDARDS. COPIES OF THE CITY OF KUNA REQUIREMENTS MAY BE OBTAINED FROM THE CITY ENGINEER.
2. ALL NEW DEVELOPMENT WITHIN THE CITY OF KUNA SHALL INSTALL SEPARATE IRRIGATION SYSTEMS CONSISTING OF IRRIGATION MAINS AND INDIVIDUAL SERVICE CONNECTIONS TO EACH LOT. ANY CONNECTION TO THE CITY OF KUNA MUNICIPAL WATER (POTABLE) SYSTEM FOR IRRIGATION PURPOSES MUST BE APPROVED BY THE CITY ENGINEER, IS LIMITED TO LANDSCAPED COMMON AREAS ONLY, IS LIMITED IN TIME OF USE TO SHOULDER WATER SEASON ONLY AND SHALL BE THROUGH AN APPROVED SINGLE METERED CONNECTION EQUIPPED WITH A REDUCED PRESSURE BACKFLOW PREVENTION DEVICE. IF MULTIPLE CONNECTIONS ARE REQUIRED TO PROVIDE SERVICE TO MULTIPLE COMMON AREAS, EACH CONNECTION SHALL BE METERED AND EQUIPPED WITH A REDUCED PRESSURE BACKFLOW PREVENTION Device. ALL BACKFLOW PREVENTION DEVICES SHALL CONFORM TO IDAPA 58.01.08.900.02, AWWA CSLL AND REQUIREMENTS OF THE IDAHO DEPARTMENT OF HEALTH AND WELFARE- DIVISION OF ENVIRONMENTAL QUALITY.
3. BACKFLOW PROTECTION: A REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY (WATTS REGULATOR SERIES 009 OR APPROVED EQUAL) SHALL BE INSTALLED FOR A CONNECTION TO THE POTABLE WATER SYSTEM. THIS INSTALLATION MAY BE USED FOR LANDSCAPING AND OTHER PUBLIC USE AREAS BUT IS NOT APPROVED AS A DEVELOPMENT SYSTEM CONNECTION TO THE POTABLE WATER SYSTEM (SEE NOTE 2).
4. WATER RIGHTS: THE RIGHT TO USE WATER RIGHTS FROM LAND CONNECTING TO THE PRESSURE IRRIGATION SYSTEM SHALL BE TRANSFERRED TO THE CITY PRESSURE IRRIGATION SYSTEM. THE LAND OWNER SHALL FURNISH THE CITY WITH A LETTER REQUESTING THAT THEIR IRRIGATION RIGHTS BE POOLED FOR DELIVERY PURPOSES AS DEFINED IN IDAHO STATE CODE (I.S.C.) 50-1805A TO THE BENEFIT OF THE CITY IRRIGATION SYSTEM AT THE TIME OF FINAL PLAT APPLICATION OR CONNECTION TO THE SYSTEM.
5. LINE DIAMETER: THE MINIMUM DISTRIBUTION LINE DIAMETER IS 4 INCHES. ALL RESIDENTIAL DEVELOPMENTS, AND SOME COMMERCIAL DEVELOPMENTS, WHEN DIRECTED BY THE CITY ENGINEER, SHALL PROVIDE A LARGER DIAMETER PERIMETER DISTRIBUTION LOOP LINE ADJACENT TO THE DEVELOPMENT BOUNDARIESSET IN A TEN FOOT WIDE EASEMENT (OR RIGHT-OF-WAY IF AVAILABLE), ACCORDING TO THE FOLLOWING SCHEDULE: A) TEN LOTS OR LESS – MAY BE WAIVED AT THE DISCRETION OF THE CITY ENGINEER; B) TWENTY FIVE LOTS OR LESS --- 4 INCH DIAMETER; C) EIGHTY LOTS OR LESS –6 INCH DIAMETER; D) TWO HUNDRED LOTS OR LESS – 8 INCH DIAMETER; E) MORE THAN TWO HUNDRED LOTS --- MULTIPLE LOOPS AS DIRECTED BY THE CITY ENGINEER. INTERNAL DISTRIBUTION MAINS MUST BE LOOPED, EXCEPT FOR END LATERALS WHICH SERVICE 10 HOMES OR LESS. THE CITY ENGINEER MAY DIRECT THAT SOME INTERNAL MAINS ARE LARGER DIAMETER TO ENSURE ADEQUATE SUPPLY TO ALL PARTS OF THE CONNECTING PROPERTY.
6. A MINIMUM OF two MAIN LINE CONNECTIONS SHALL BE PROVIDED FOR ALL SUBDIVISIONS OVER 25 LOTS. THE MINIMUM MAIN LINE SIZE OF THE CONNECTION SHALL BE ONE PIPE SIZE LARGER THAN THE SMALLER CONNECTED DISTRIBUTION MAIN, UNLESS APPROVED OTHERWISE BY THE CITY ENGINEER.
7. IRRIGATION MAIN MUST BE DESIGNED FOR AN AVERAGE DEMAND OF 7.5 GALLONS PER MINUTE PER RESIDENTIAL LOT WHILE PROVIDING AT LEAST 15 GPM TO THE LOWEST PRESSURE SERVICE BASED UPON A 1-INCH RISER, AND MAIN LINE PRESSURE OF 60 PSI AT THE CONNECTION POINT TO THE CITY IRRIGATION DISTRIBUTION SYSTEM SUPPLY.
8. THE CITY SUPPLY SYSTEM WILL BE DESIGNED USING A MAXIMUM LOT SIZE OF 10,000 SQUARE FEET, NORMAL OPERATING RANGE OF 50-70 PSI, 7.5 GALLONS PER MINUTE PER LOT PEAK HOUR DEMAND, AND ALTERNATE DAY USE (15 GPM DELIVERY RATE TO LOT PEAK HOUR DEMAND). IRRIGATION SPRINKLER SYSTEMS ON EACH LOT SHALL BE LIMITED TO A DEMAND OF 15 GPM, EXCEPT THAT FLOW RATES FOR LOTS GREATER THAN 10,000 SQUARE FEET MAY BE PROPORTIONALLY INCREASED BASED UPON ACTUAL LOT SIZE.
9. WHEN PRESSURE IRRIGATION LINES ARE INSTALLED IN LANDS THAT ARE NOT YET FINAL PLATTED, MAINS WILL BE INSTALLED IN THE 10 FOOT UTILITY EASEMENT LOCATED ADJACENT TO SUBDIVISION BOUNDARIES AND RIGHT—OF — WAY. ADEQUATELY SIZED PVC CASINGS SHALL BE INSTALLED UNDER EACH DRIVE AND NEW ROADWAYS WHERE FUTURE MAINS WILL BE REQUIRED.
10. LOT SERVICE REQUIREMENTS SHALL BE AS FOLLOWS:

LOT SIZE S.F.	IRRIGATION RISERS
0—14,000	ONE 1"
14,000 — 26,000	TWO 1" OR ONE 1.5"
26,000+	TO BE DETERMINED BY CITY ENGINEER

11. PIPE DEPTH: MINIMUM BURIAL DEPTH FOR ALL IRRIGATION MAINS NOT WITHIN ROADWAYS SHALL BE THREE (3) FEET FROM FINISH GRADE TO THE TOP OF PIPE IF THE PIPE IS FREE DRAINING. UNDER ROADWAYS OR IN AREAS WHERE THE PIPE IS NOT FREE-DRAINING, A MINIMUM OF FOUR (4) FEET OF COVER SHALL BE REQUIRED FROM Finish GRADE.
12. PRESSURE IRRIGATION MAIN LINE PIPING SHALL BE CONSTRUCTED OF POLYVINYL CHLORIDE (PVC), DR21 (200 PSI), CONFORMING TO ASTM D2241, FOR PIPES 3 INCH DIAMETER AND LARGER, AND SCHEDULE 40, CONFORMING TO ASTM D2466 FOR PIPES 2.5 INCH DIAMETER AND SMALLER– ALL JOINTS ON PIPE 3 INCH AND LARGER SHALL BE RUBBER GASKETED.
13. ALL PLASTIC PIPE SHALL BE INSTALLED WITH A #12 DIRECT BURIAL TRACER WIRE PLACED AND TAPED ALONG THE CROWN OF THE PRESSURE IRRIGATION MAINLINE. THE TRACER WIRE SHALL BE LOOPED FROM THE MAINLINE TO EACH SERVICE BOX ALONG THE SERVICE PIPE AND BACK TO THE MAINLINE. THE TRACER WIRE SHALL BE ACCESSIBLE AT ALL VALVE BOXES AND SHALL BE EXTENDED ALONG THE OUTSIDE OF THE LOWER PORTION OF THE VALVE BOX AND ALONG THE INSIDE OF THE UPPER PORTION. AN ELECTRICAL CONTINUITY TEST SHALL BE CONDUCTED BEFORE PAVING TO PROVE INTEGRITY OF THE TRACER WIRE. ALL PIPE SHALL BE CLEARLY MARKED WITH TYPE, CLASS AND/OR THICKNESS AS APPLICABLE. LETTERING SHALL BE LEGIBLE AND PERMANENT UNDER NORMAL CONDITIONS OF HANDLING AND STORAGE.
14. ALL FITTINGS SHALL BE CAST IRON, DUCTILE IRON, PVC, BRASS OR STAINLESS STEEL, AND SHALL HAVE A MINIMUM PRESSURE RATING EQUAL TO 200 PSI OR GREATER. ALL FITTINGS FOUR 4 INCHES AND LARGER SHALL BE DUCTILE IRON WITH FLANGED OR MECHANICAL JOINTS. THRUST BLOCKS OR OTHER CITY ENGINEER APPROVED RESTRAINTS SHALL BE PROVIDED AT CHANGES OF DIRECTION.
15. VALVES UP TO 3 INCH DIAMETER SHALL BE RISING STEM, SOLID DOUBLE WEDGE DISC, SCREW BONNET, WITH HAND WHEELS. THE VALVE BODY, BONNET, DISC AND STEM SHALL BE BRONZE. VALVE BOXES FOR SIZES UP TO 3 INCHES SHALL BE 4 INCH DIAMETER PVC OR ABS PIPE WITH A FEMALE ADAPTER, AND THREADED PLUG WITH SQUARE NUT.
16. VALVES 3 INCH DIAMETER AND LARGER SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO THE REQUIREMENTS OF ANSI/AWWA C509, WITH MECHANICAL OR FLANGED JOINTS AND 2 INCH SQUARE OPERATING NUT. ACCEPTABLE VALVES ARE MUELLER MODEL A-2360 AND A-2361 OR CLOW MODEL 2639 AND 2640. ANY OTHERS MUST BE EXPLICITLY APPROVED BY THE CITY ENGINEER. VALVE BOXES FOR VALVES 3 INCH DIAMETER AND LARGER SHALL BE STANDARD CAST IRON 5 1/4 INCH DIAMETER ADJUSTABLE VALVE BOX.
17. ALL IRRIGATION MAINLINES SHALL BE INSTALLED SUCH THAT THEY AUTOMATICALLY VENT AIR DURING FILLING AND DRAINING. AUTOMATIC AIR/VACUUM RELIEF VALVES SHALL BE INSTALLED AT ALL HIGH POINTS IN THE SYSTEM AND IN LOCATIONS DETERMINED BY THE CITY ENGINEER AS DETAILED IN CITY OF KUNA STANDARD DRAWING IRRIG 01. IN LIEU OF AUTOMATIC VENTS, THE CONTRACTOR MAY INSTALL SERVICES WITH THE TAP ON TOP OF THE MAIN AT THE HIGH POINT WITH THE SERVICE LINE LAID LEVEL OR RISING TO THE SERVICE BOX AND THE AIR RELEASE SERVICES CLEARLY IDENTIFIED ON THE PROJECT DRAWINGS.
18. VALVES FOR STREET CROSSINGS SHALL BE PLACED WITHIN 2 FEET OF THE BACK EDGE OF SIDEWALK.
19. ALL IRRIGATION PIPE SHALL BE INSTALLED WITH FINDER TAPE. TAPE SHALL BE TWO (2) INCHES WIDE, PURPLE IN COLOR, WITH THE WORDS "DANGER-UNSAFE WATER" OR "NON-POTABLE WATER" CLEARLY MARKED ALONG THE LENGTH OF THE TAPE. TAPE SHALL BE PLACED BETWEEN SIX (6) INCHES BELOW THE SURFACE AND SIXTEEN (16) INCHES ABOVE THE TOP OF THE PIPE.
20. INDIVIDUAL IRRIGATION SERVICES SHALL BE INSTALLED FOR EACH LOT AS OUTLINED ABOVE IN ITEM 10. THE IRRIGATION SERVICE SHALL BE CONSTRUCTED AS DETAILED IN THE CITY OF KUNA STANDARD DRAWINGS IRRIG-02-1 AND IRRIG-02-2. EACH SERVICE SHALL BE EQUIPPED WITH A METAL OR PLASTIC TAG WITH "NON-POTABLE WATER-DO NOT DRINK".
21. ALL IRRIGATION MAINS, FOUR (4) INCH DIAMETER AND SMALLER, SHALL BE DESIGNED TO FREELY DRAIN AT THE END OF THE IRRIGATION SEASON. "FREELY DRAIN" MEANS TO DRAIN BY GRAVITY INTO A DRAINAGE SWALE, DRAINAGE POND, DRAINAGE DITCH OR ADEQUATELY SIZED DRY WELL. THE DRAIN SYSTEM SHALL INCLUDE MANUALLY OPERATED VALVES AS DETAILED IN CITY OF KUNA STANDARD DRAWING IRRIG-03, UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE CITY ENGINEER. DRAINS SHALL BE LOCATED IN COMMON AREAS, ALONG PATHWAYS OR STREET FRONTAGES.
22. ALL INSTALLED IRRIGATION SYSTEMS SHALL BE PRESSURE TESTED FOR LEAKAGE IN ACCORDANCE WITH SECTION 401 OF THE ISPWC SPECIFICATIONS FOLLOWING INSTALLATION OF ALL UTILITIES AND BEFORE PAVING. TEST WATER SHALL BE POTABLE WATER FROM THE MUNICIPAL WATER SYSTEM. IF AIR RELEASE SERVICES ARE RELIED ON, THE SERVICE SHALL BE OPENED TO BLEED OFF TRAPPED AIR AND THEN CLOSED FOR THE TEST. TESTING SHALL BE OBSERVED BY A REPRESENTATIVE OF THE CITY. UPON SUCCESSFULLY PASSING THE FINAL PRESSURE TEST THE IRRIGATION SYSTEM SHALL BE DRAINED.
23. ALL PIPE, MAINS AND SERVICES, SHALL BE BEDDED WITH TYPE I OR TYPE III BEDDING. IN AREAS OF ROCK EXCAVATION BEDDING BELOW THE BOTTOM OF PIPE SHALL BE SIX (6) INCHES THICK.
24. THE DEVELOPER SHALL SUBMIT COMPLETE PLANS AND SPECIFICATIONS TO THE CITY ENGINEER FOR REVIEW AND APPROVAL BEFORE BEGINNING CONSTRUCTION. EACH DEVELOPMENT IS REQUIRED TO CONSTRUCT ITS PROPORTIONATE SHARE OF THE MAJOR DISTRIBUTION NETWORK (10 & 12—INCH TRUNK LINES) AS DEFINED IN THE PRESSURE IRRIGATION SYSTEM MASTER PLAN. A DEVELOPMENT'S PROPORTIONATE SHARE OF TRUNK LINES IS THIRTYTHREE LINEAL (33) FEET PER DEVELOPMENT ACRE, BEYOND WHICH A PORTION OF THE COST MAY BE REIMBURSABLE CONSISTENT WITH ADOPTED CITY POLICIES.
25. AT THE OPTION OF THE CITY, AND AS A CONDITION OF DEVELOPMENT, ANY DEVELOPMENT CONSISTING OF SEVENTYFIVE (75) OR MORE ACRES MAY BE REQUIRED TO MAKE LAND AVAILABLE FOR PURCHASE BY THE CITY, WITHIN THE DEVELOPMENT, FOR INSTALLATION OF AN IRRIGATION PUMP STATION AND/OR STORAGE POND. THE LANDS' COST SHALL BE THE DEVELOPER'S RAW LAND COST, PLUS COST OF STREET FRONTAGE IMPROVEMENTS, COST OF UTILITIES CROSSING THE PARCEL, AND THE COST OF POWER SUPPLY OVER SIZING.
26. THE DEVELOPER SHALL NOTIFY ALL LOT PURCHASERS THAT THERE MUST BE NO INTERCONNECTION BETWEEN THE PRESSURE IRRIGATION SYSTEM AND HOUSE PLUMBING. OUTSIDE HOUSE FAUCETS MUST ONLY BE CONNECTED TO THE MUNICIPAL POTABLE WATER SYSTEM THROUGH THE HOUSE SERVICE CONNECTION.

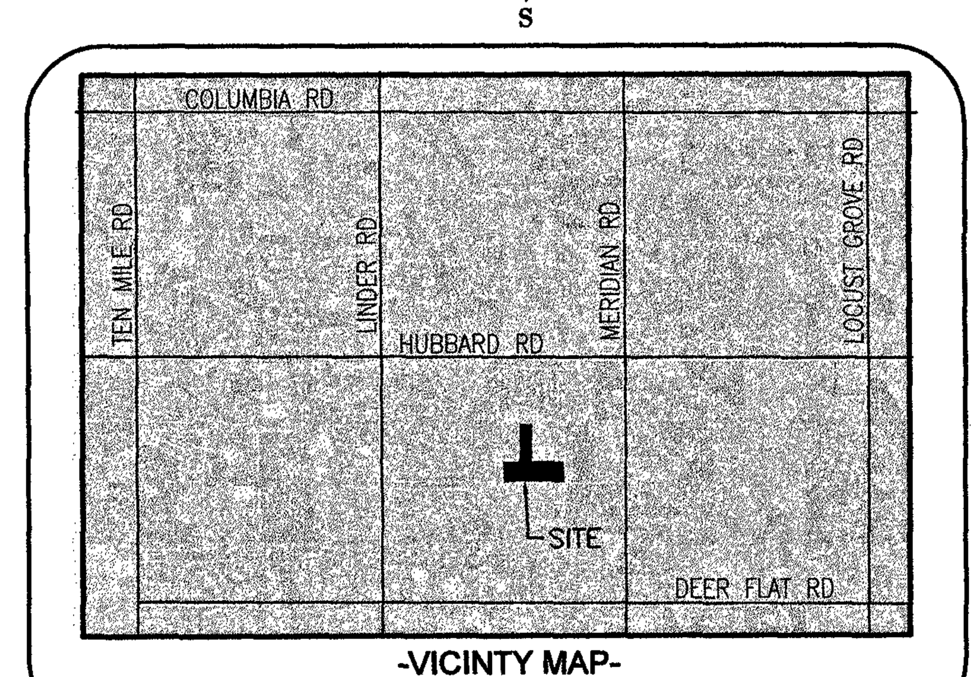
ACHD STANDARD REQUIREMENTS

1. THE ENGINEER OF RECORD CERTIFIES THAT THE PLANS ARE PREPARED INSUBSTANTIAL CONFORMANCE WITH THE ACHD POLICY AND STANDARDS IN EFFECT AT THE TIME OF PREPARATION. THE ENGINEER ACKNOWLEDGES THAT ACHD ASSUMES NO LIABILITY FOR ERRORS OR DEFICIENCIES IN THE DESIGN. ALL VARIANCES FROM ACHD POLICY SHALL BE APPROVED IN WRITING. THE FOLLOWING VARIANCES, LISTED BY DATE AND SHORT, DESCRIPTION, WERE APPROVED FOR THE PROJECT: ______NONE______ DATE______

______ DATE______

PAVEMENT REPAIR AND UTILITY WORK

1. ALL ASPHALT MATCH LINES FOR PAVEMENT REPAIR SHALL BE PARALLEL TO THE CENTERLINE OF THE STREET AND INCLUDE ANY AREA DAMAGED BY EQUIPMENT DURING TRENCHING OPERATIONS.
2. IF THE CUMULATIVE DAMAGED PAVEMENT AREA EXCEEDS 50% OF THE TOTAL ROAD SURFACE, CONTRACTOR SHALL REPLACE THE ENTIRE ROADWAY SURFACE.
3. CONTRACTOR SHALL REPLACE THE PAVEMENT SURFACE TO ENSURE MATCH LINE DOES NOT FALL WITHIN THE WHEEL PATH OF A LANE. MATCH LINE SHALL ONLY FALL IN THE CENTER OF EDGE OF A TRAVEL LANE.
4. FLOWABLE FILL OR IMPORTED MATERIAL MAY BE REQUIRED IF THE NATIVE TRENCH MATERIAL IS DEEMED UNSUITABLE BY ACHD INSPECTOR, DOES NOT MEET COMPACTION STANDARDS OR TIME IS A CRITICAL FACTOR.



-VICINITY MAP-
NTS

- SHEET INDEX -

C1.0 LEGEND, GENERAL NOTES & VICINITY MAP
C2.0 FINAL PLAT
C2.1 FINAL PLAT
C2.2 STREET LIGHT PLAN
C3.0 STREET PLAN AND PROFILE - N. DESTINY AVE.
C3.1 STREET PLAN AND PROFILE - GREENVILLE / BRUSH CREEK.
C3.2 STREET PLAN AND PROFILE - BRUSH CREEK.
C3.3 STREET PLAN AND PROFILE - ELK CREEK / HOSE GULCH.
C3.4 STREET PLAN AND PROFILE - KAY ST FRONTAGE.
C3.5 STREET PLAN AND PROFILE - ARDELL ST FRONTAGE.
C3.6 STREET AND DRAINAGE DETAILS
C4.0 MASTER UTILITY PLAN
C4.1 SEWER LINE C & WATER PLAN AND PROFILE
C4.2 SEWER LINE C & WATER PLAN AND PROFILE
C4.3 SEWER LINE A & B & WATER PLAN AND PROFILE
C4.4 SEWER LINE D & E & WATER PLAN AND PROFILE
C5.0 GRADING PLAN
C6.0 GRAVITY IRRIGATION PLAN AND PROFILE
C6.1 PRESSURE IRRIGATION PLAN

APPLICANT / DEVELOPER

HUBBLE HOMES LLC
701 S. ALLEN ST.
MERIDIAN, IDAHO 83642
(208) 695-2400

APPROVED BY CITY OF KUNA ENGINEER
[signature] 22 June 2018

SIGNATURE ______ DATE ______

Plans Are Accepted For Public Street Construction

By stamping and signing the improvement plans, the Registered Engineer ensures the District that the plans conform to all District policies and standards. Variances or waivers must be specifically and previously approved by the District in writing. Acceptance of the improvement plans by the District does not relieve the Registered Engineer of these responsibilities.

BY [signature] DATE 6/14/18
ADA COUNTY HIGHWAY DISTRICT

NAVD 1988 DATUM

BEFORE DIGGING, CALL DIGLINE AT 1-800-342-1585

REVISIONS:
1. ACHD REVIEW COMMENTS 4/6/18.
2. CITY OF KUNA COMMENTS 4/6/18.
3. CITY OF KUNA COMMENTS 6/06/18.

GREYHAWK SUBDIVISION NO. 8
SECTION 13, T.2N., R.1W., B.M.
KUNA, ADA COUNTY, IDAHO

COVER SHEET,
VICINITY MAP AND
NOTES

CK ENGINEERING
1300 E. STATE ST., SUITE 102
EAGLE, ID 83616
PHONE 208-639-1992

DRAWN BY: SJ
CHECKED BY: CSK
DATE: 06/06/18
FILE: 100-GHB-COVER.DWG
DIR: D:\HUBBLE\GREYHAWK SUBDIVISION\GH8 CK DWG

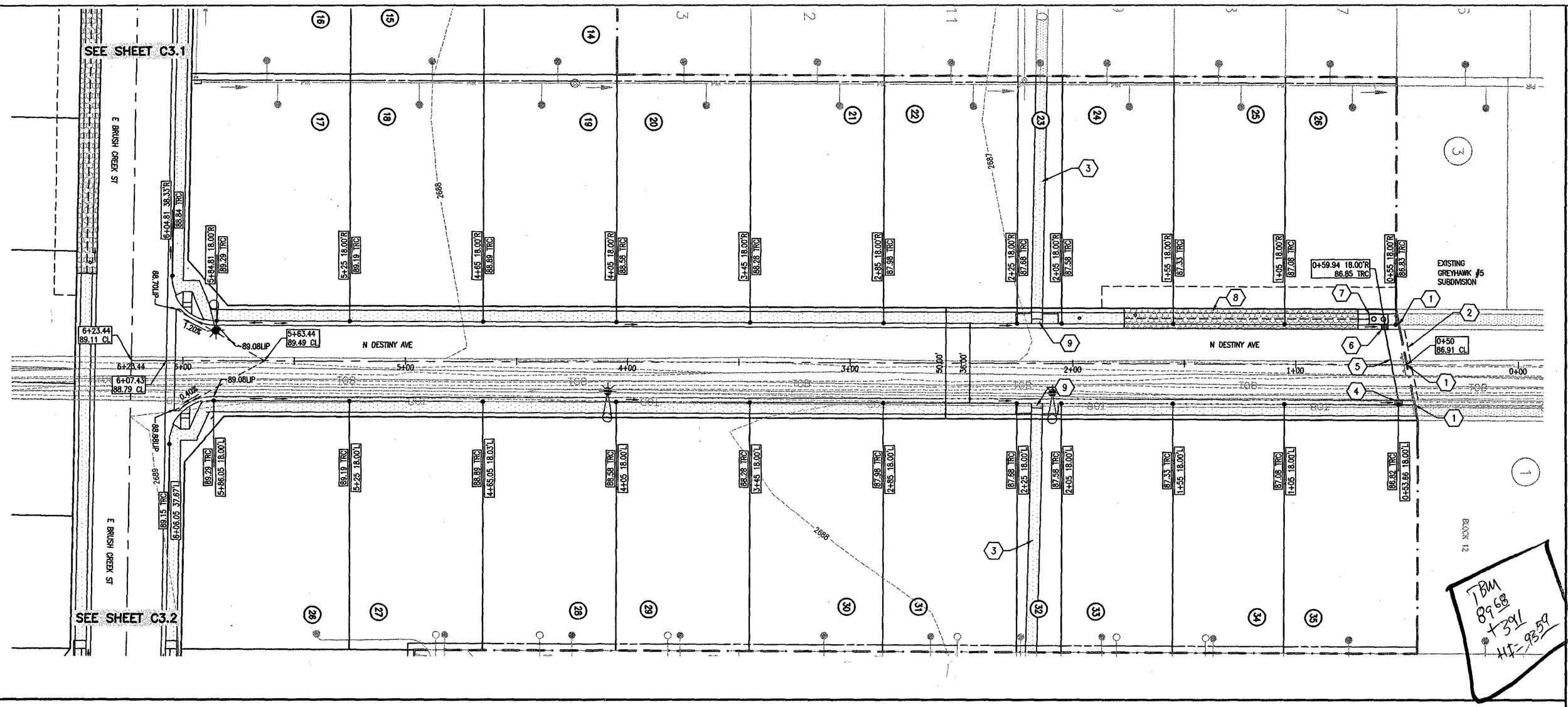
PROFESSIONAL ENGINEER REGISTERED 9412 6/06/18 STATE OF IDAHO CHAD S. KINKELA

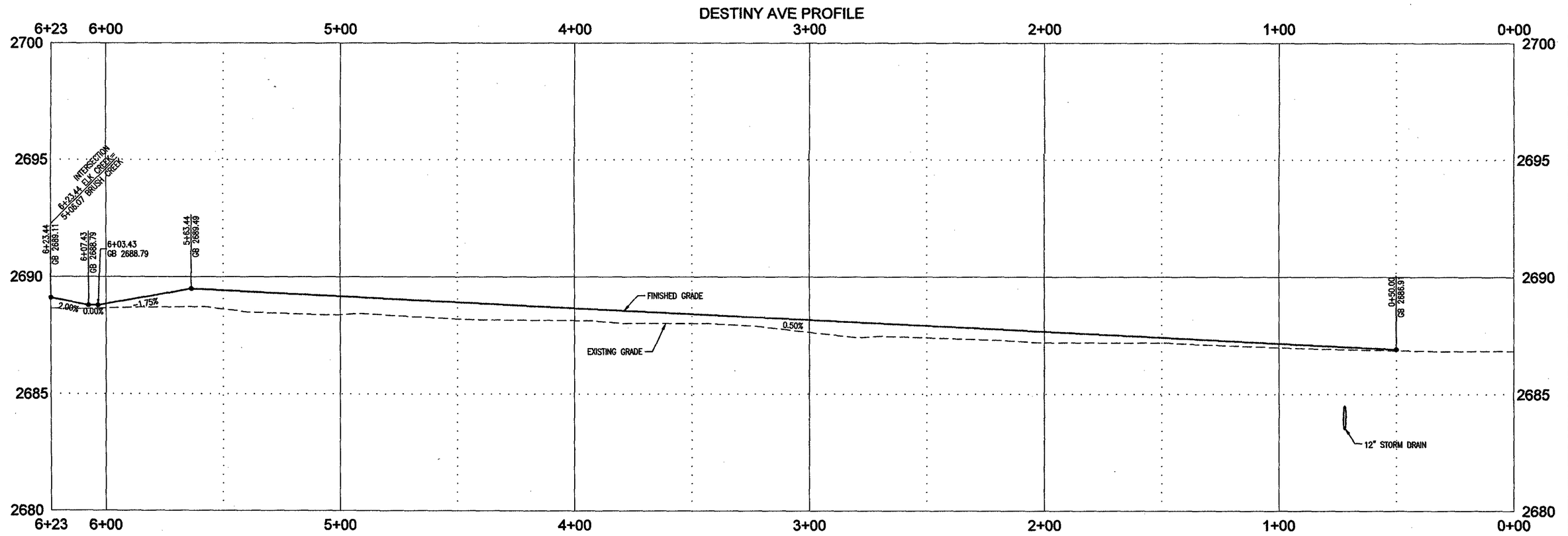
SHEET
C1.0

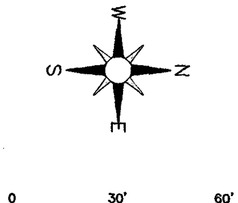
Greyhawk Sub #8 Asbuits

SUB 11-8-18

RECEIVED
JUN 13 2018
ACHD DEV SVC







0 30' 60'

SCALE 1" = 30'

STREET LEGEND

- VALLEY GUTTER PER I.S.P.W.C SD-708
- PEDESTRIAN RAMP PER I.S.P.W.C. SD-712 AND SD-712A.
- PEDESTRIAN RAMP PER I.S.P.W.C. SD-712 AND SD-712A.
- TYPE 1 & TYPE 2 STREET LIGHTS. SEE SHEET C8.0 FOR LOCATIONS

KEYNOTES

1. CONNECT TO EXISTING ROAD, CURB, GUTTER, AND SIDEWALK. ELEVATIONS ARE CALCULATED AND BASED OFF OF RECORD DRAWING INFORMATION. CONTRACTOR TO FIELD VERIFY ELEVATIONS AT CONNECTIONS TO EXISTING FACILITIES. IF DISCREPANCIES OCCUR, CONTRACTOR TO CONTACT ENGINEER OF RECORD AS SOON AS POSSIBLE.
2. SAWCUT EXISTING ASPHALT MINIMUM OF 2 FEET INTO EXISTING RD. SAW CUT PER ISPWC AND ACHD SUPPLEMENTAL STANDARDS SD-301, SD-303, AND SD-806.
3. INSTALL SIDEWALK PER ISPWC AND ACHD SUPPLEMENTAL STANDARD DRAWING SD-709
4. INSTALL CATCH BASIN #1 PER ISPWC AND ACHD SUPPLEMENTAL DRAWING SD-604A TYPE IV. TBC 2686.82'. 12" [redacted] OUT=2683.65 (Q_{25}=1.05 CFS, Q_{100}=1.38 CFS).
5. [redacted] 12.5 LF @ 12" C-900 @ 0.24%. ~~1.5%~~
6. INSTALL CATCH BASIN #2 PER ISPWC AND ACHD SUPPLEMENTAL DRAWING SD-604A TYPE IV. TBC 2686.85'. 12" [redacted] =2683.9" (Q_{25}=1.03 CFS, Q_{100}=1.35 CFS).
7. INSTALL 1000gal SAND/GREASE TRAP #1 PER ACHD BMP-01 SEE DETAIL ON SHEET C3.7.
8. INSTALL SEEPAGE TRENCH #1 9'Wx11'Dx105'L SEE DETAIL ON SHEET C3.7.
9. INSTALL MID-BLOCK PEDESTRIAN RAMP PER ISPWC AND ACHD SUPPLEMENTAL DRAWING SD-712D
10. INSTALL MONITORING WELL PER ACHD SUPPLEMENTAL DRAWINGS SD-627

NOTE:

1.) ABANDONED BUILDING, TEST PITS, OR WATERWAYS LOCATED WITHIN THE CURRENT OR FUTURE RIGHT OF WAY SHALL BE RE-EXCAVATED TO NATIVE MATERIAL AND SHALL BE BACKFILLED WITH STRUCTURAL FILL PER ISPWC SPECIFICATION, PROVIDE SOILS DATA TO VERIFY NATIVE MATERIAL MEETS THE REQUIREMENTS FOR ENGINEERED FILL PER ISPWC SPECIFICATIONS AND A COPY OF THE COMPACTION TESTS.

2.) ALL PEDESTRIAN FACILITIES SHALL HAVE A MAXIMUM CROSS SLOPE OF LESS THAN 2% WITHOUT DEVIATION. ALL PEDESTRIAN RAMPS SHALL HAVE TRUNCATED DOMES PER ACHD SUPPLEMENTAL STANDARD DRAWING SD-712. DOMES SHALL BE RIGID INSERTS WET-SET INTO THE CONCRETE (CONCRETE STAMP AND ADHESIVE MATS NOT ALLOWED) AND SHALL BE COLORED 'TRAFFIC YELLOW'

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BY _____ DATE 6/14/18

ADA COUNTY HIGHWAY DISTRICT

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REVISIONS:
1. ACHD REVIEW COMMENTS 4/6/18.

GREYHAWK SUBDIVISION NO. 8
SECTION 13, T.2N., R.1W., B.M.
KUNA, ADA COUNTY, IDAHO

DESTINY AVE PLAN AND PROFILE

CK ENGINEERING
1300 E. STATE ST., SUITE 102
EAGLE, ID 83616
PHONE 208-639-1992

DRAWN BY: SJ
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DATE: 04/12/18
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