

LAKE HAVASU CITY, ARIZONA  
2025 WATER MAIN REPLACEMENT PROJECT

CITY PROJECT NO. PW-25-108037-500678

| Sheet List Table |                                           |                   |
|------------------|-------------------------------------------|-------------------|
| Sheet Number     | Sheet Title                               | Sheet Description |
| 01               | COVER SHEET                               | GN01              |
| 02               | GENERAL NOTES                             | GN02              |
| 03               | SEGMENT LOCATOR MAP & PROJECT CONTROL     | GN03              |
| 04               | INCA LANE WATERLINE PLAN & PROFILE        | WL01              |
| 05               | SOUTHWIND PLACE WATERLINE PLAN & PROFILE  | WL02              |
| 06               | INDIAN PIPE LANE WATERLINE PLAN & PROFILE | WL03              |
| 07               | INDIAN PIPE LANE WATERLINE PLAN & PROFILE | WL04              |
| 08               | SCOUT DRIVE WATERLINE PLAN & PROFILE      | WL05              |
| 09               | PONY PLACE WATERLINE PLAN & PROFILE       | WL06              |
| 10               | PONY LANE WATERLINE PLAN & PROFILE        | WL07              |
| 11               | PONY LANE WATERLINE PLAN & PROFILE        | WL08              |
| 12               | RANGO PLACE WATERLINE PLAN & PROFILE      | WL09              |
| 13               | RANGO COURT WATERLINE PLAN & PROFILE      | WL10              |
| 14               | RANGO COURT WATERLINE PLAN & PROFILE      | WL11              |
| 15               | SERENIDAD VEREDA WATERLINE PLAN & PROFILE | WL12              |
| 16               | PLAZA DEL SOL WATERLINE PLAN & PROFILE    | WL13              |
| 17               | WOOD LANE WATERLINE PLAN & PROFILE        | WL14              |
| 18               | WOOD LANE WATERLINE PLAN & PROFILE        | WL15              |
| 19               | WOOD LANE WATERLINE PLAN & PROFILE        | WL16              |
| 20               | WOOD LANE WATERLINE PLAN & PROFILE        | WL17              |
| 21               | SOUTHWIND AVENUE WATERLINE PLAN & PROFILE | WL18              |
| 22               | SOUTHWIND AVENUE WATERLINE PLAN & PROFILE | WL19              |
| 23               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL20              |
| 24               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL21              |
| 25               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL22              |
| 26               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL23              |
| 27               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL24              |
| 28               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL25              |
| 29               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL26              |
| 30               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL27              |
| 31               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL28              |
| 32               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL29              |
| 33               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL30              |
| 34               | ACOMA BOULEVARD WATERLINE PLAN & PROFILE  | WL31              |
| 35               | DETAILS                                   | DT01              |
| 36               | DETAILS                                   | DT02              |
| 37               | DETAILS                                   | DT03              |



PREPARED BY:

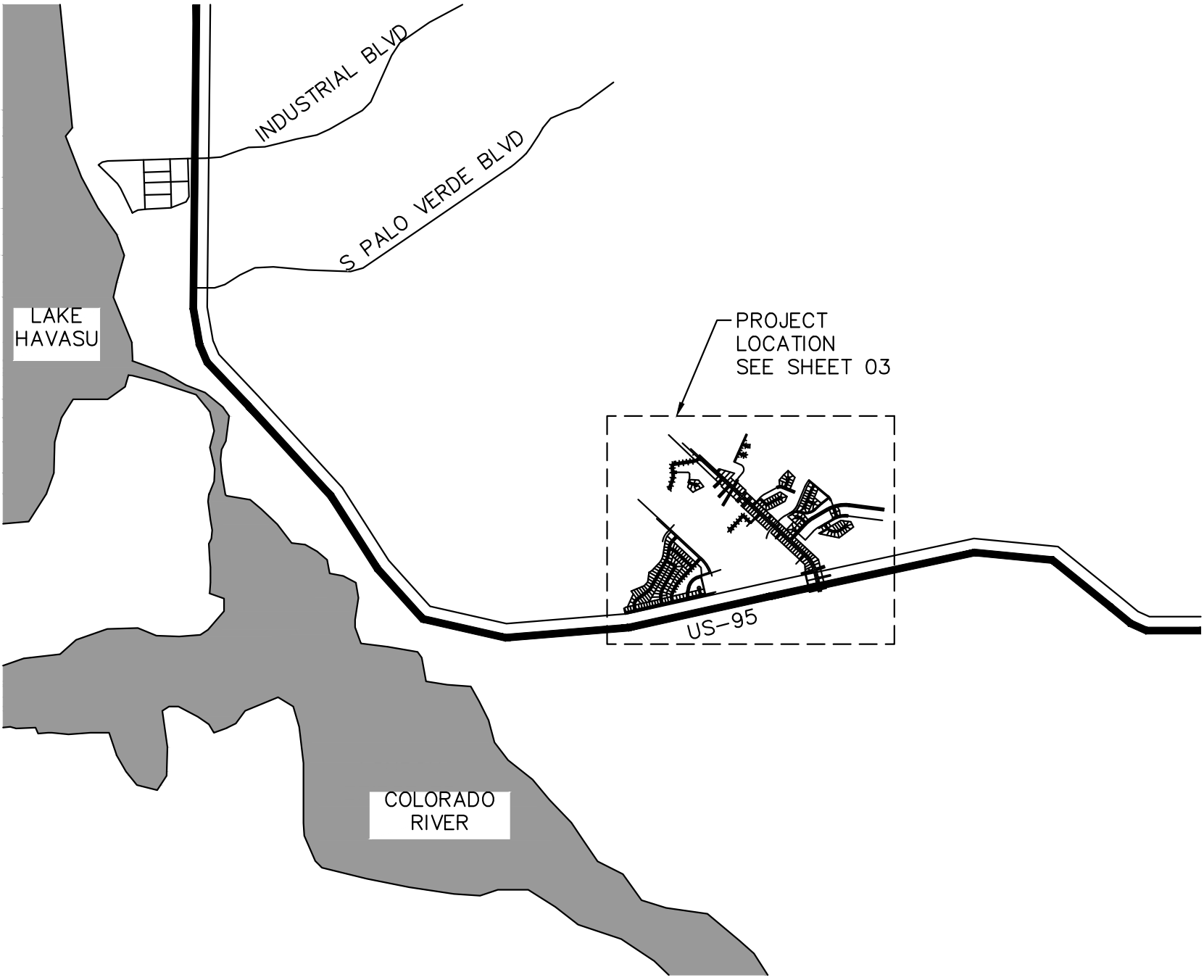
Kimley»Horn

CITY OFFICIALS

|                       |                |
|-----------------------|----------------|
| MAYOR                 | CAL SHEEHY     |
| VICE MAYOR            | MICHELE LIN    |
| COUNCIL MEMBER        | CAMERON MOSES  |
| COUNCIL MEMBER        | JENI COKE      |
| COUNCIL MEMBER        | DAVID DIAZ     |
| COUNCIL MEMBER        | JIM DOLAN      |
| COUNCIL MEMBER        | NANCY CAMPBELL |
| CITY MANAGER          | JESS KNUDSON   |
| PUBLIC WORKS DIRECTOR | RON FOGGIN     |
| PROJECT MANAGER       | BRENT CUMMINGS |

PROJECT ENGINEER

KIMLEY-HORN  
1661 EAST CAMELBACK ROAD  
SUITE 400  
PHOENIX, AZ 85016  
PHONE: (602) 944-5500  
CONTACT: CRAIG WENGER, P.E.



LOCATION MAP  
SCALE: N.T.S.

UTILITY CONTACTS

|                                         |                             |
|-----------------------------------------|-----------------------------|
| LAKE HAVASU CITY<br>(WASTEWATER)        | (928) 855-3999              |
| LAKE HAVASU CITY<br>(WATER)             | (928) 855-2618              |
| SUDDENLINK                              | (928) 855-9855              |
| FRONTIER COMMUNICATION                  | (928) 358-1977              |
| UNISOURCE ENERGY SERVICES<br>(GAS)      | (928) 226-2269              |
| UNISOURCE ENERGY SERVICES<br>(ELECTRIC) | (928) 505-7030              |
| ALLO FIBER<br>(FIBER)                   | (928) 899-3300<br>OPTION #2 |

RECORD DRAWING CERTIFICATION

I HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THIS PROJECT HAS BEEN COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND REFERENCED STANDARDS, EXCEPT AS SHOWN HEREON; THAT THESE AS-BUILT PLANS REFLECT THE POSITION OF CONSTRUCTED IMPROVEMENTS BASED ON FIELD MEASUREMENTS; AND THAT THE MATERIALS USED IN CONSTRUCTION ARE AS SHOWN BASED ON FIELD OBSERVATION AND TEST RESULTS.

THIS CERTIFICATION DOES NOT WARRANT MATERIALS, WORKMANSHIP, METHODS OF CONSTRUCTION, OR OTHER ITEMS AFFECTING THE WARRANTY OF THIS PROJECT, TO LAKE HAVASU CITY. USERS OF THIS INFORMATION ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ACTUAL CONDITIONS.

REGISTERED PROFESSIONAL ENGINEER (CIVIL) \_\_\_\_\_ DATE \_\_\_\_\_

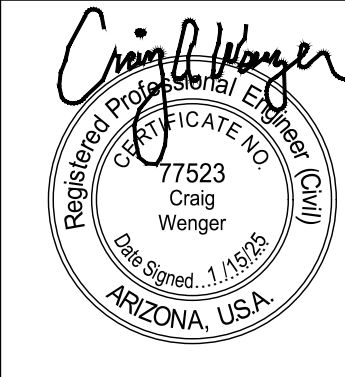


| DATE | REVISIONS / SUBMISSIONS | NO. | # | # | # | # |
|------|-------------------------|-----|---|---|---|---|
|      |                         |     |   |   |   |   |

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg. scale:  | 1" = 20' |

COVER SHEET



Sheet Number:

GN01

Sheet 01 of 37



k:\phx\_utility\Projects\191245020-lhc\_replacements - phase 2\CAD\plan sheets\191245020\_GN01.dwg 6/30/2025 10:11 AM SMITH, MEGAN

GENERAL NOTES

1. ALL WATER UTILITY CONSTRUCTION TO CONFORM TO AAC R18-5-502 AND AAC R18-4-119 WATER SYSTEM STANDARDS, ADEQ BULLETIN 10, LAKE HAVASU CITY STANDARDS AND SPECIFICATIONS, MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) STANDARD SPECIFICATIONS AND DETAILS UNLESS SPECIFICALLY MODIFIED ON THE PLANS.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO STARTING WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO STARTING WORK.
4. THE ENGINEER SHALL BE NOTIFIED A MINIMUM OF 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION.
5. ANY WORK PERFORMED WITHOUT THE KNOWLEDGE AND APPROVAL BY THE ENGINEER AND/OR ALL WORK MATERIAL NOT IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
6. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT AND SIDEWALKS (NEW AND EXISTING) HAVE BEEN SWEEPED CLEAN OF ALL DIRT AND DEBRIS.
7. ALL QUANTITIES SHOWN ON PLANS ARE APPROXIMATE, ARE NOT VERIFIED BY THE ENGINEER, AND ARE FURNISHED SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THEY DO NOT NECESSARILY CORRESPOND TO BID SCHEDULE ITEMS. PAYMENT WILL BE BASED ON BID SCHEDULE ITEMS. THE CONTRACTOR SHALL NOT BE RELIEVED OF HIS RESPONSIBILITY FOR INDEPENDENTLY ESTIMATING WORK QUANTITIES PRIOR TO BIDDING.
8. BACKFILL COMPACTION SHALL BE PER MAG 301, UNLESS OTHERWISE NOTED. SUBGRADE PREPARATION SHALL MEET THE LHC STANDARD SPECIFICATION SECTION 02600.
9. REMOVAL OF STRUCTURES AND OBSTRUCTIONS AS NECESSARY TO COMPLETE THE WORK, OTHER THAN SPECIFICALLY SCHEDULED IN THE BID, IS INCIDENTAL TO THE CONTRACT. NO SEPARATE MEASUREMENT OF PAYMENT FOR UNSCHEDULED REMOVAL ITEMS WILL BE MADE.
10. CONSTRUCTION STAKING SHALL BE BY THE CONTRACTOR'S SURVEYOR WITH CONTROL PROVIDED BY THE DESIGN ENGINEER WHO STAMPED THE PLANS.
11. THE LAKE HAVASU CITY MAY ORDER ANY OR ALL WORKMANSHIP AND MATERIALS TO BE TESTED ACCORDING TO APPLICABLE STANDARDS.
12. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REWORK AND/OR REMOVAL AND REPLACEMENT OF ALL MATERIALS AND/OR WORKMANSHIP REPRESENTED BY A FAILING TEST.
13. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS OF TESTING AND QUALITY ASSURANCE/QUALITY CONTROL AS DELINEATED IN THE CITY'S PROJECT SPECIFICATIONS. THE COST OF TESTING IS INCIDENTAL TO EACH ITEM OF WORK. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE COST OF ANY CITY INSPECTION AND CITY INSPECTION TIME IF THE CONTRACTOR'S WORK IS BEING PERFORMED IN OVERTIME, AT NIGHT, OR ON WEEKENDS.
14. APPROVAL OF A PORTION OF THE WORK IN PROGRESS DOES NOT GUARANTEE ITS FINAL ACCEPTANCE. TESTING AND EVALUATION MAY CONTINUE UNTIL WRITTEN FINAL ACCEPTANCE OF A COMPLETE AND WORKABLE UNIT.
15. THE LAKE HAVASU CITY MAY SUSPEND THE WORK BY WRITTEN NOTICE WHEN, IN ITS JUDGEMENT, PROGRESS IS UNSATISFACTORY, WORK BEING DONE IS UNAUTHORIZED OR DEFECTIVE, WEATHER CONDITIONS ARE UNSUITABLE, OR THERE IS A DANGER TO THE PUBLIC HEALTH OR SAFETY.
16. CLEARING AND GRUBBING IS CONSIDERED INCIDENTAL TO THE WORK UNLESS SEPARATELY IDENTIFIED IN THE BID SCHEDULE. NO SEPARATE MEASUREMENT OF OR PAYMENT FOR CLEARING, GRUBBING, AND TREE REMOVAL WILL BE MADE. THE SITE OF ALL EXCAVATION, EMBANKMENTS, AND FILLS SHALL FIRST BE CLEARED OF STUMPS, TRASH, WEEDS, RUBBISH, AND LOOSE BOULDERS WHICH SHALL BE REMOVED AND DISPOSED OF. THE CONTRACTOR MUST SATISFY HIMSELF REGARDING THE CHARACTER AND AMOUNT OF LOAM, CLAY, SAND, QUICKSAND, HARDPAN, GRAVEL, ROCK, WATER, AND ALL OTHER MATERIAL TO BE ENCOUNTERED AND WORK TO BE PERFORMED.
17. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED ON FIELD DATA AND MAP RECORDS. THE CONTRACTOR SHALL CONTACT 1-800-STAKE-IT PRIOR TO ANY CONSTRUCTION ACTIVITY TO VERIFY THE ACTUAL LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL DETERMINE WHICH UTILITIES DO NOT PARTICIPATE IN 1-800-STAKE-IT AND CONTACT THEM DIRECTLY TO VERIFY THE LOCATION OF THOSE UTILITIES. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONTRACTOR'S OPERATION SHALL BE REPORTED TO THE UTILITY OWNER IMMEDIATELY AND REPAIRED OR REPLACED AT NO COST TO THE CITY. IN CASES WHEN THE EXISTING UTILITIES ARE NOT AS DEPICED ON THE PLANS SOME MINOR DEVIATION TO THE PROPOSED ALIGNMENT MAY BE ALLOWED TO MAINTAIN MINIMUM SEPARATION DISTANCES BETWEEN UTILITIES. ANY PROPOSED CHANGES TO THE ALIGNMENT MUST BE SUBMITTED TO THE CITY'S REPRESENTATIVE FOR REVIEW. NO CHANGES WILL BE ALLOWED WITHOUT PRIOR APPROVAL.
18. THE CONTRACTOR SHALL LIMIT THE WORK AREA TO PUBLIC RIGHT-OF-WAY AND PERMANENT EASEMENTS AS SHOWN FOR CONSTRUCTION OF THE PROJECT. TEMPORARY CONSTRUCTION EASEMENTS EXIST AS SHOWN AND INDICATED IN THE PLANS.
19. CONTRACTOR SHALL OBTAIN ANY ADDITIONAL TEMPORARY EASEMENTS OR USE AGREEMENTS THAT ARE DEEMED NECESSARY FOR CONSTRUCTION AT NO ADDITIONAL COST TO THE CITY. COPIES OF ALL CONTRACTOR OBTAINED EASEMENTS AND USE AGREEMENTS SHALL BE PROVIDED TO THE CITY'S REPRESENTATIVE PRIOR TO THE UTILIZATION OF THE SITE.
20. THE CONTRACTOR SHALL GRADE AND RESURFACE ALL AREAS DISTURBED BY CONSTRUCTION, INCLUDING LANDSCAPE ROCK, IN ACCORDANCE WITH THE SPECIFICATIONS AND TO A CONDITION EQUAL TO, OR BETTER THAN, THE PRE-CONSTRUCTION CONDITION.
21. THE CONTRACTOR SHALL PROTECT ALL CONCRETE STRUCTURES TO REMAIN. ALL CONCRETE REPLACEMENT SHALL BE FROM JOINT TO JOINT (WALLS, SIDEWALK) AND SHALL BE REPLACED WITH 4000 PSI CONCRETE. ALL DAMAGED CONCRETE PANELS MUST BE REPLACED AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
22. THE CONTRACTOR SHALL PROVIDE PROTECTION TO PREVENT UNDERMINING OR DAMAGING THE STRUCTURAL INTEGRITY OF ALL FENCES, MAILBOXES, RETAINING WALLS, STREET SIGNS, OTHER UTILITY POLES, OR OTHER PRIVATE OR PUBLIC IMPROVEMENTS WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER OR OWNING UTILITY AS NECESSARY TO PROVIDE TEMPORARY SUPPORT, OR PROTECTION DURING CONSTRUCTION WORK, AND SHALL NEATLY REMOVE AND PROMPTLY REPLACE NON UTILITY IMPROVEMENTS WITHOUT UNDUE DISRUPTION. THE COST OF ALL SUCH PROTECTION, REMOVAL, AND REPLACEMENT REQUIRED TO COMPLETE THE PROJECT SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
23. THE CONTRACTOR SHALL REMOVE ALL FENCING, ASPHALT AND CONCRETE ROADS AND DRIVEWAYS, CURB AND GUTTER, RIP-RAP, DRAINAGE CULVERTS AND ASSOCIATED APPURTENANCES AS REQUIRED FOR CONSTRUCTION PURPOSES. ALL ITEMS DAMAGED OR REMOVED SHALL BE RESTORED IN ACCORDANCE WITH THE SPECIFICATION TO A CONDITION EQUAL TO, OR BETTER THAN, THEIR CONDITION PRIOR TO THE START OF THE PROJECT. ITEMS OF WORK NOT SPECIFICALLY INCLUDED IN THE MEASUREMENTS AND PAYMENT SECTION OF THE SPECIFICATIONS SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.
24. IT IS NOT THE INTENTION OF THE SPECIFICATIONS TO SUPERSEDE ANY FEDERAL, STATE OR LOCAL LAWS, REGULATIONS AND/OR ORDINANCES; THEY SHALL GOVERN IN ALL INSTANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SHOW A GOOD FAITH EFFORT AND TO PROTECT ALL EXISTING UTILITY TIES AND STRUCTURES AND TO ABIDE BY ALL FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES IN THIS RESPECT.
25. THE CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS ON PRIVATE PROPERTY. ALL ITEMS DAMAGED OR REMOVED SHALL BE RESTORED IN ACCORDANCE WITH THE SPECIFICATION TO A CONDITION EQUAL TO, OR BETTER THAN, THEIR CONDITION PRIOR TO THE START OF THE PROJECT.
26. PROPERTY LINES SHOWN ON DRAWINGS ARE APPROXIMATE.
27. CONTRACTOR SHALL NOT PLACE ANY WASTE OR FILL MATERIAL ON ANY PRIVATE PROPERTY WITHOUT PRIOR WRITTEN AGREEMENT WITH THE PROPERTY OWNER.
28. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS AS WELL AS THE LATEST ADDITION OF MAG STANDARDS AND DETAILS AND THE LHC ENGINEERING SPECIFICATIONS.
29. SHOULD REMOVAL BE REQUIRED, ACP SHALL BE REMOVED AT THE NEAREST JOINT. REMOVAL AND DISPOSAL SHALL BE IN ACCORDANCE WITH ADEQ REGULATIONS.
30. ALL FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT UNLESS OTHERWISE SPECIFIED USING JOINT RESTRAINT TABLE.
31. PAVEMENT REPAIR WIDTH SHALL BE IN ACCORDANCE WITH LHC DETAIL NO. 200. PAVEMENT REPAIR MATERIAL SHALL MATCH THE EXISTING PAVEMENT MATERIAL AND THICKNESS SHALL BE IN ACCORDANCE WITH LHC DETAIL NO. 200.

32. CONTRACTOR SHALL PROTECT, REPLACE, OR RECONNECT ALL UNDERGROUND IRRIGATION SYSTEMS ENCOUNTERED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR COST ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF DAMAGED IRRIGATION SYSTEMS.
33. CONTRACTOR SHALL RECONNECT ALL WATER METER AND IRRIGATION SERVICES ON LINES SET TO BE ABANDONED WITH CONSTRUCTION. NOT ALL METERS OR IRRIGATION CONNECTIONS ARE SHOWN ON THE CONSTRUCTION PLANS AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD CONFIRM AND RECONNECT ANY ADDITIONAL EXISTING WATER METERS AND IRRIGATION METERS NOT SHOWN ON THE PLANS. THE COST FOR ALL NECESSARY RECONNECTIONS SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS. NEW SERVICE SIZE SHALL BE IN LIKE SIZE TO THE EXISTING SERVICE LINE.
34. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN ACCESS TO ALL PARCELS AT ALL TIMES.
35. EXISTING WATER ALIGNMENTS ARE FROM CITY GIS AND MAY NOT REFLECT ACTUAL LOCATIONS.
36. EXISTING WASTEWATER ELEVATIONS ARE NOT FIELD DATA VERIFIED, THEY ARE FROM THE CITY GIS. CONTRACTOR SHALL NOTIFY THE ENGINEER SHALL ANY ELEVATION DISCREPANCIES EXIST.
37. EXISTING SERVICE LINES SHALL BE ABANDONED IN PLACE OR REMOVED (IF NECESSARY) AND REPLACED WITH MUNICIPEX PIPING. COST FOR REMOVING SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
38. FULLY RESTRAIN JOINTS SHALL BE PROVIDED BY THE CONTRACTOR FOR EXTENSION OF THE LATERAL TO FIRE HYDRANT.
39. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TRAFFIC CONTROL PLANS AS PART OF THE SUBMITTAL REVIEW REQUEST TO THE ENGINEER FOR APPROVAL NO LATER THAN 15 CALENDAR DAYS PRIOR TO THE PLANNED CONSTRUCTION IN THE AREA OF THE WORK, EXCEPT IN EMERGENCIES. ALL TRAFFIC CONTROL DEVICES SHALL BE WELL MAINTAINED AND COMPLY WITH ALL PERFORMANCE REQUIREMENTS WITHIN THE MUTCD AND THE LATEST REVISIONS THEREOF. NO STREET IS TO BE CLOSED, RESTRICTED, OR CONSTRUCTED UPON UNTIL A TRAFFIC PLAN IS APPROVED. CONTRACTOR SHALL MAINTAIN A MINIMUM ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES OR AS NOTED IN THE SPECIFICATIONS.
40. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE STEPS TO MAINTAIN CONTINUOUS UTILITY SERVICE TO RESIDENTS AND BUSINESSES WITHIN THE PROJECT AREA. MANY EXISTING WATER AND GAS LINES ARE MORE THAN 30 YEARS OLD, PROPOSED METHOD OF CROSSING AND/OR SUPPORT OF UTILITIES SHALL BE APPROVED BY UTILITY OWNER IN ADVANCE OF WORK. MANY LOCAL WATER LINES ARE CONSTRUCTED OF ASBESTOS CEMENT. GAS LINES ARE REPORTED TO BE BRITTLE, SO CLOSE COORDINATION WITH THE UTILITY OWNER'S WILL BE NECESSARY TO AVOID DAMAGE. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
41. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO PREVENT EROSION OF MATERIAL FROM THE WORK AREA AND DEPOSITION OF SEDIMENTS INTO WATER COURSES OR DRAINAGE SWALES. THE CONTRACTOR SHALL SUBMIT AN EROSION CONTROL PLAN PRIOR TO THE START OF ANY EXCAVATION. ALL EROSION AND SEDIMENT CONTROL WORK SHALL BE INCIDENTAL TO THE OTHER PAY ITEMS.
42. ALL STREET CENTERLINES HAVE EXISTING PINS AT THE INTERSECTION OF THE STREET CENTERLINES AND SHALL BE PROTECTED IN PLACED. IF A PIN IS DISTURBED OR REMOVED, THE CONTRACTOR SHALL ARRANGE AND PAY FOR AN ARIZONA REGISTERED LAND SURVEYOR TO DETERMINE THE COORDINATES FOR EACH PIN PRIOR TO CONSTRUCTION AND TO REPLACE THE PINS WITH 412" X 3 8" MAG NAIL WITH WASHER AND SURVEYOR INFORMATION STAMPED ON WASHER TO THE SAME LOCATION AFTER RESURFACING. ALL REQUIRED SURVEY WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE SUBSIDIARY TO OTHER PAY ITEMS.
43. EXISTING WATER VALVES AND MANHOLES HAVE AN 8-INCH THICK CONCRETE COLLAR AT THE PAVEMENT SURFACE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL NEW CONCRETE COLLARS ON NEW MANHOLES AND VALVE BOXES, ALL EXISTING VALVE BOXES AND MANHOLES THAT ARE DISTURBED DURING CONSTRUCTION, AND WHERE THE NEW ASPHALT SURFACE IS PLACED TO AN ELEVATION HIGHER THAN EXISTING VALVE BOX OR MANHOLE COVER. THIS ITEM OF WORK IS SUBSIDIARY TO OTHER PAY ITEMS. ALL VALVE BOXES WITHIN THE DISTURBED PROJECT AREA SHALL BE ADJUSTED IN ACCORDANCE WITH MAG DETAIL 391-1.
44. ALL PIPE, FITTINGS, FIRE HYDRANTS & OTHER APPURTENANCES IN DIRECT CONTACT WITH POTABLE WATER SHALL BE NATIONAL SANITATION FOUNDATION (NSF) 61 CERTIFIED. PLASTIC PIPE SHALL BEAR THE NSF SEAL FOR POTABLE WATER USE (NSF-PW).
45. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW THE MINIMUM COVER SHOWN WITH EXCEPTION TO THE LOCATIONS WHERE CONNECTING TO EXISTING MAIN LINE. ANY CHANGES MUST BE APPROVED BY ENGINEER. MINIMUM COVER SHALL MEET LHC STANDARDS.
46. IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODE, SECTION R18-5-502, "MINIMUM DESIGN CRITERIA", WATER AND SEWER MAINS SHALL BE SEPARATED IN ORDER TO PROTECT PUBLIC WATER SYSTEMS FROM POSSIBLE CONTAMINATION. ALL DISTANCES ARE MEASURED PERPENDICULARLY FROM THE OUTSIDE OF THE SEWER MAIN TO THE OUTSIDE OF THE WATER MAIN. SEPARATION REQUIREMENTS ARE AS FOLLOWS:

46.1. A WATER MAIN SHALL NOT BE PLACED:

46.1.1. WITHIN 6 FEET, HORIZONTAL DISTANCE, AND BELOW 2 FEET, VERTICAL DISTANCE, ABOVE THE TOP OF A SEWER MAIN UNLESS EXTRA PROTECTION IS PROVIDED. EXTRA PROTECTION SHALL CONSIST OF CONSTRUCTING THE SEWER MAIN WITH MECHANICAL JOINT DUCTILE IRON PIPE WITH SLIP-JOINT DUCTILE IRON PIPE IF JOINT RESTRAINT IS PROVIDED. ALTERNATE EXTRA PROTECTION SHALL CONSIST OF ENCASING BOTH THE WATER AND SEWER MAINS IN AT LEAST 6 INCHES OF CONCRETE FOR AT LEAST 10 FEET BEYOND THE AREA OF COVERED BY THE SUBSECTION (C)(1)(a).

46.1.2. WITHIN 2 FEET HORIZONTALLY AND 2 FEET BELOW THE SEWER MAIN.

46.1.3. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND MANHOLES SHALL BE 6 FEET, MEASURED FROM THE CENTER OF THE MANHOLE.
- 46.2. THE MINIMUM SEPARATION BETWEEN FORCE MAINS OR PRESSURE SEWER AND WATER MAINS SHALL BE 2 FEET VERTICALLY AND 6 FEET HORIZONTALLY UNDER ALL CONDITIONS. WHERE A SEWER FORCE MAIN CROSSES ABOVE OR LESS THAN 6 FEET BELOW A WATER LINE, THE SEWER MAIN SHALL BE ENCASED IN A T LEAST 6 INCHES OF CONCRETE OR CONSTRUCTED USING MECHANICAL JOINT DUCTILE IRON PIPE FOR 10 FEET ON EITHER SIDE OF THE WATER MAIN.
47. CONTRACTOR SHALL PERFORM ALL TESTING (INCLUDING PRESSURE TESTING) AND DISINFECTING OF THE WATER LINES PER THE CITY OF LAKE HAVASU SPECIFICATION 02550 AND THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) REGULATIONS IN BULLETIN NO. 8.
48. EXISTING WHARFS (SEE IMAGE) ARE TO BE REMOVED. COST SHALL BE INCIDENTAL TO ABANDONMENT OF WATER LINES.



ACRONYM / ABBREVIATION

|       |                       |        |                                     |          |                      |
|-------|-----------------------|--------|-------------------------------------|----------|----------------------|
| A     | ABANDONED             | H      | HEIGHT                              | RT       | RIGHT                |
| AB    | AGGREGATE BASE        | INV    | INVERT                              | R        | RADIUS               |
| ABC   | AGGREGATE BASE COURSE | LI     | LANDSCAPE ISLAND                    | R/W      | RIGHT-OF-WAY         |
| AC    | ASPHALTIC CONCRETE    | LT     | LEFT                                | RDWY     | ROADWAY              |
| BP    | BEGIN PROJECT         | LF     | LINEAR FEET                         | SHT      | SHEET                |
| C     | CONCRETE              | M.A.G. | MARICOPA ASSOCIATION OF GOVERNMENTS | SM       | SURVEY MARKER        |
| CL    | CENTERLINE            |        |                                     | SS       | SANITARY SEWER       |
| CST   | CONSTRUCTION          | MH     | MANHOLE                             | ST       | STREET               |
| COMM  | COMMUNICATION         | MIN    | MINIMUM                             | STA      | STATION              |
| DET   | DETAIL                | N      | NORTHING                            | STD      | STANDARD             |
| DP    | DRIVE PATH            | NO     | NUMBER                              | STRUCT   | STRUCTURAL           |
| E     | EASTING               | OHE    | OVERHEAD ELECTRIC                   | SIDEWALK | SW                   |
| EA    | EACH                  | P      | PAVEMENT                            | TBC      | TOP OF CURB          |
| EOP   | EDGE OF PAVEMENT      | PC     | POINT OF CURVE                      | TELE     | TELEPHONE            |
| ELEV  | ELEVATION             | PCC    | PORTLAND CEMENT CONCRETE            | TEMP     | TEMPORARY            |
| EP    | END PROJECT           | PI     | POINT OF INTERSECTION               | TOP      | TOP OF PIPE          |
| ESMT  | EASEMENT              | POB    | POINT OF BEGINNING                  | TYP      | TYPICAL              |
| EXIST | EXISTING              | POE    | POINT OF ENDING                     | UGE      | UNDERGROUND ELECTRIC |
| FC    | FACE OF CURB          | PROP   | PROPERTY                            |          |                      |
| FH    | FIRE HYDRANT          | PT     | POINT OF TANGENCY                   |          |                      |
| FL    | FLOW LINE             | QC     | QUAD CITY                           |          |                      |
| FT.   | FEET                  |        |                                     |          |                      |

LEGEND

|  |                                     |                                                                                                                                                                                           |                                                                        |
|--|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
|  | EXISTING CONTOUR                    |                                                                                                                                                                                           | EXISTING JUNCTION BOX                                                  |
|  | EXISTING WATER LINE                 |                                                                                                                                                                                           | EXISTING WATER VALVE                                                   |
|  | EXISTING STORM DRAIN                |                                                                                                                                                                                           | EXISTING FIRE HYDRANT                                                  |
|  | EXISTING SANITARY SEWER LINE        |                                                                                                                                                                                           | EXISTING MANHOLE                                                       |
|  | EXISTING OVERHEAD ELECTRIC          |                                                                                                                                                                                           | EXISTING ELECTRIC POLE                                                 |
|  | EXISTING TELEPHONE LINE             |                                                                                                                                                                                           | EXISTING SIGN                                                          |
|  | EXISTING UNDERGROUND ELECTRIC       |                                                                                                                                                                                           | SURVEY BENCHMARK                                                       |
|  | EXISTING GAS LINE                   |                                                                                                                                                                                           | EXISTING WATER METER                                                   |
|  | EXISTING UNDERGROUND TELEPHONE LINE |                                                                                                                                                                                           | EXISTING IRRIGATION CONTROL VALVE                                      |
|  | EXISTING FIBER OPTIC LINE           |                                                                                                                                                                                           | PROPOSED WATER VALVE                                                   |
|  | EXISTING CHAIN LINK FENCE           | INSTALL SADDLE AND SERVICE ASSEMBLY IN LIKE SIZE PER LHC STD. DTL. 301 & 303. CONNECT TO EXISTING METER OR VALVE. REPLACE EXISTING SERVICE LINE IN FULL WITH NEW MUNICIPEX SERVICE LINE.* |                                                                        |
|  | EXISTING BARBED WIRE FENCE          |                                                                                                                                                                                           |                                                                        |
|  | EXISTING WALL                       |                                                                                                                                                                                           | PROPOSED FIRE HYDRANT                                                  |
|  | PROPERTY LINE, R.O.W.               |                                                                                                                                                                                           | PROPOSED COMBINATION AIR/VACUUM VALVE & BLOW-OFF PER LHC STD. DTL. 310 |
|  | PROPOSED WATER LINE                 |                                                                                                                                                                                           |                                                                        |
|  | ABANDON EXISTING WATER LINE         |                                                                                                                                                                                           |                                                                        |

\*NOTE: CONTRACTOR SHALL RECONNECT ALL WATER METER AND IRRIGATION SERVICES ON LINES SET TO BE ABANDONED WITH CONSTRUCTION. NOT ALL METERS OR IRRIGATION CONNECTIONS MAY BE SHOWN ON THE CONSTRUCTION PLANS AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD CONFIRM AND RECONNECT ANY ADDITIONAL EXISTING WATER METERS AND IRRIGATION METERS NOT SHOWN ON THE PLANS. THE COST FOR ALL NECESSARY RECONNECTIONS SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS. NEW SERVICE SIZE SHALL BE IN LIKE SIZE TO THE EXISTING SERVICE LINE.

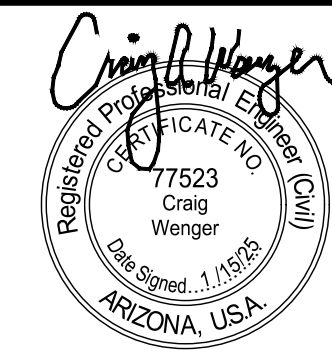


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS |   |   |   |   |
| DATE                    |   |   |   |   |

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg. scale:  | 1" = 20' |

GENERAL NOTES



Kimley»Horn

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

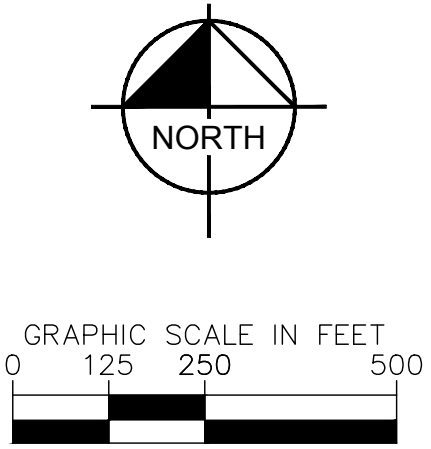
Sheet Number:

GN02

Sheet 02 of 37



k:\pnh\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_LM01.dwg 6/30/2025 10:12 AM SMITH, MEGAN



BASIS OF HORIZONTAL CONTROL

BASIS OF HORIZONTAL CONTROL:  
JOB SETTINGS:  
HORIZONTAL DATUM – NAD83 (CORS96)  
PROJECTION – ARIZONA STATE PLANE WEST (SPC AZ WEST)  
LINEAR UNITS – US FOOT  
COORDINATE – GROUND  
GEOID – GEOID 2012BU ZONE 5

LOCAL PROJECT CONTROL:  
DESCRIPTION – CONTROL POINT NO. 16:  
CENTERLINE RADIUS POINT OF WOOD LANE.  
N: 1260544.382  
E: 530553.119  
ELEV: 672.17

BASIS OF BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM ARIZONA STATE PLANE COORDINATE ZONE CENTRAL. PROJECT WAS ADJUSTED GRID TO GROUND BASED POINT 16 AS THE ORIGIN POINT WITH A COMBINED SCALE FACTOR OF 1.000041446029 AND ZERO ROTATION.

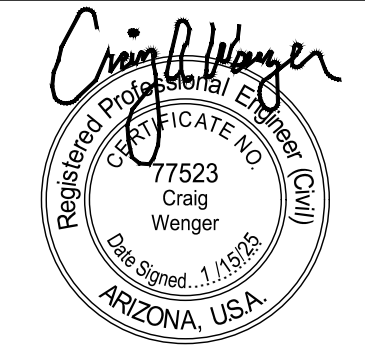


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS |   |   |   |   |
| DATE                    |   |   |   |   |

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg. scale:  | 1" = 20' |

SEGMENT LOCATOR MAP &  
PROJECT CONTROL



Sheet Number:

GN03

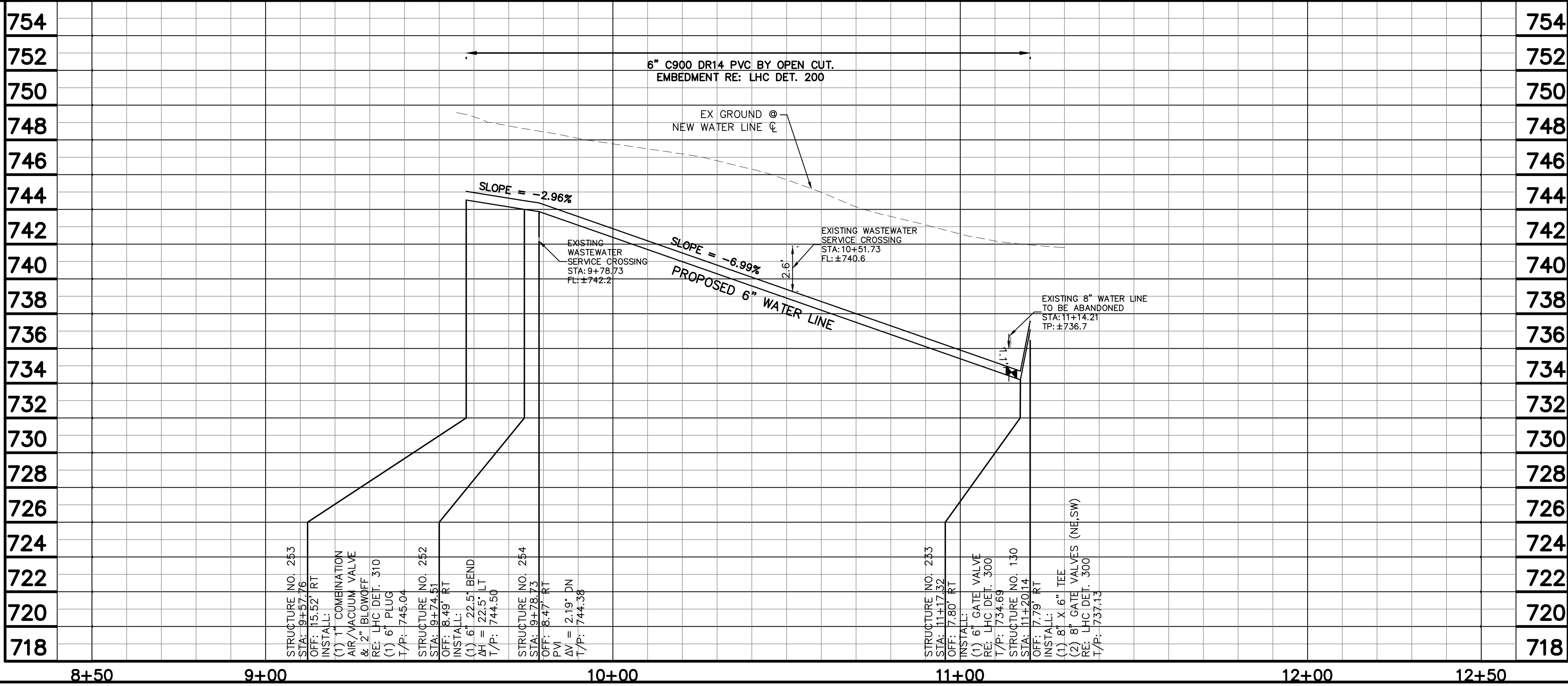
Sheet 03 of 37



Kimley»Horn

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



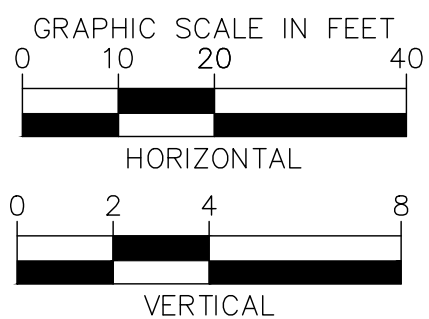


| WATER CONSTRUCTION NOTES |                                                                                                                                                                                 |                                |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                     | STATION OFFSET                 |
| 130                      | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NE,SW)<br>RE: LHC DET. 300<br>INV 8" IN: 736.46<br>INV 8" OUT: 736.46<br>INV 6" OUT: 737.08<br>N: 1259060.81<br>E: 534283.34 | STA: 11+20.14<br>OFF: 7.79' RT |
| 233                      | INSTALL:<br>(1) 6" GATE VALVE<br>RE: LHC DET. 300<br>INV 6" IN: 734.19<br>INV 6" OUT: 734.19<br>N: 1259062.79<br>E: 534281.32                                                   | STA: 11+17.32<br>OFF: 7.80' RT |
| 252                      | INSTALL:<br>(1) 6" 22.5" BEND<br>ΔH = 22.5' LT<br>INV 6" IN: 744.00<br>INV 6" OUT: 744.00<br>N: 1259162.61<br>E: 534179.18                                                      | STA: 9+74.51<br>OFF: 8.49' RT  |
| 253                      | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>(1) 6" PLUG<br>INV 6" IN: 744.54<br>N: 1259169.36<br>E: 534162.33                     | STA: 9+57.76<br>OFF: 15.52' RT |
| 254                      | PVI<br>ΔV = 2.19' DN<br>INV 6" IN: 743.88<br>INV 6" OUT: 743.88<br>N: 1259159.65<br>E: 534182.20                                                                                | STA: 9+78.73<br>OFF: 8.47' RT  |

| REMOVAL AND ABANDONMENT NOTES |                                      |
|-------------------------------|--------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                          |
| R-1                           | ±136 LF 4" WATER<br>LINE ABANDONMENT |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.
- SEE SHEET 21-22 FOR WORK ON SOUTHWIND AVENUE.



**Kimley»Horn**

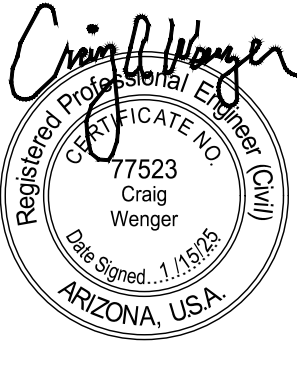
© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| DESIGNED BY: | SMM      |
| DRAWN BY:    | JAP      |
| CHECKED BY:  | CAW      |
| DATE:        | 01/2025  |
| DWG. SCALE:  | 1" = 20' |

**INCA LANE WATERLINE  
PLAN & PROFILE**



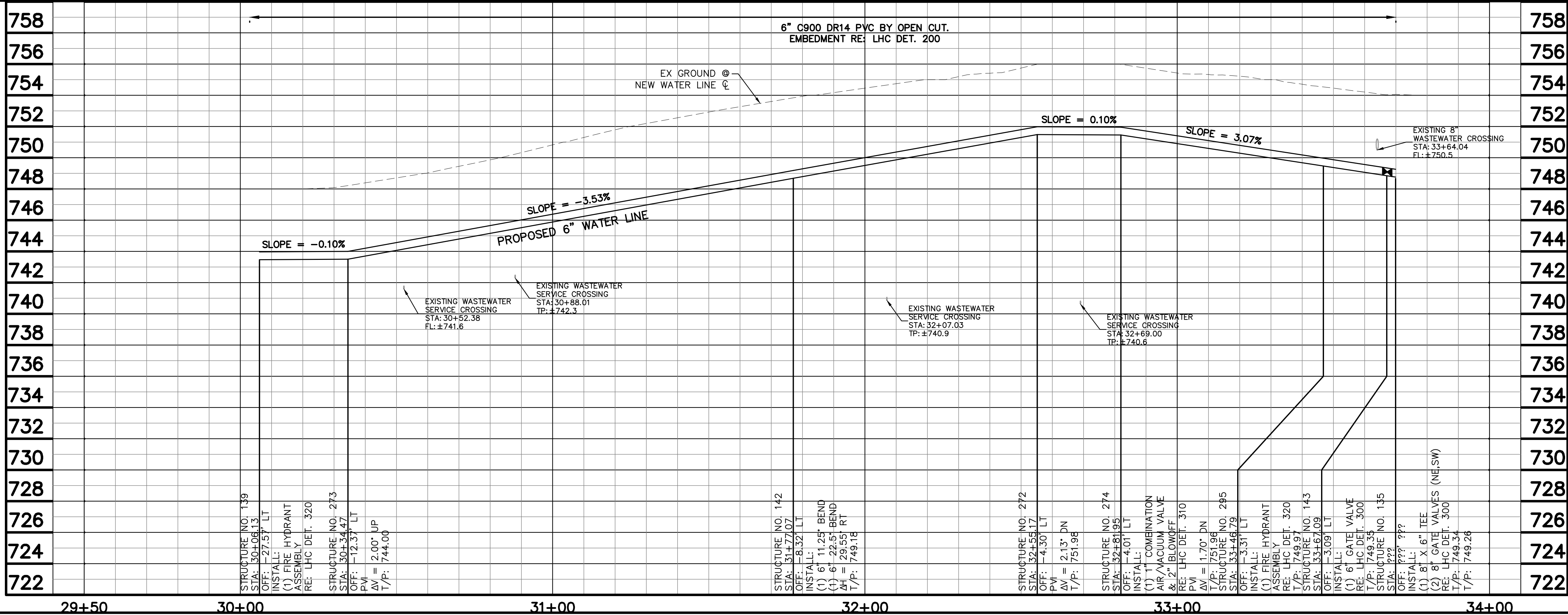
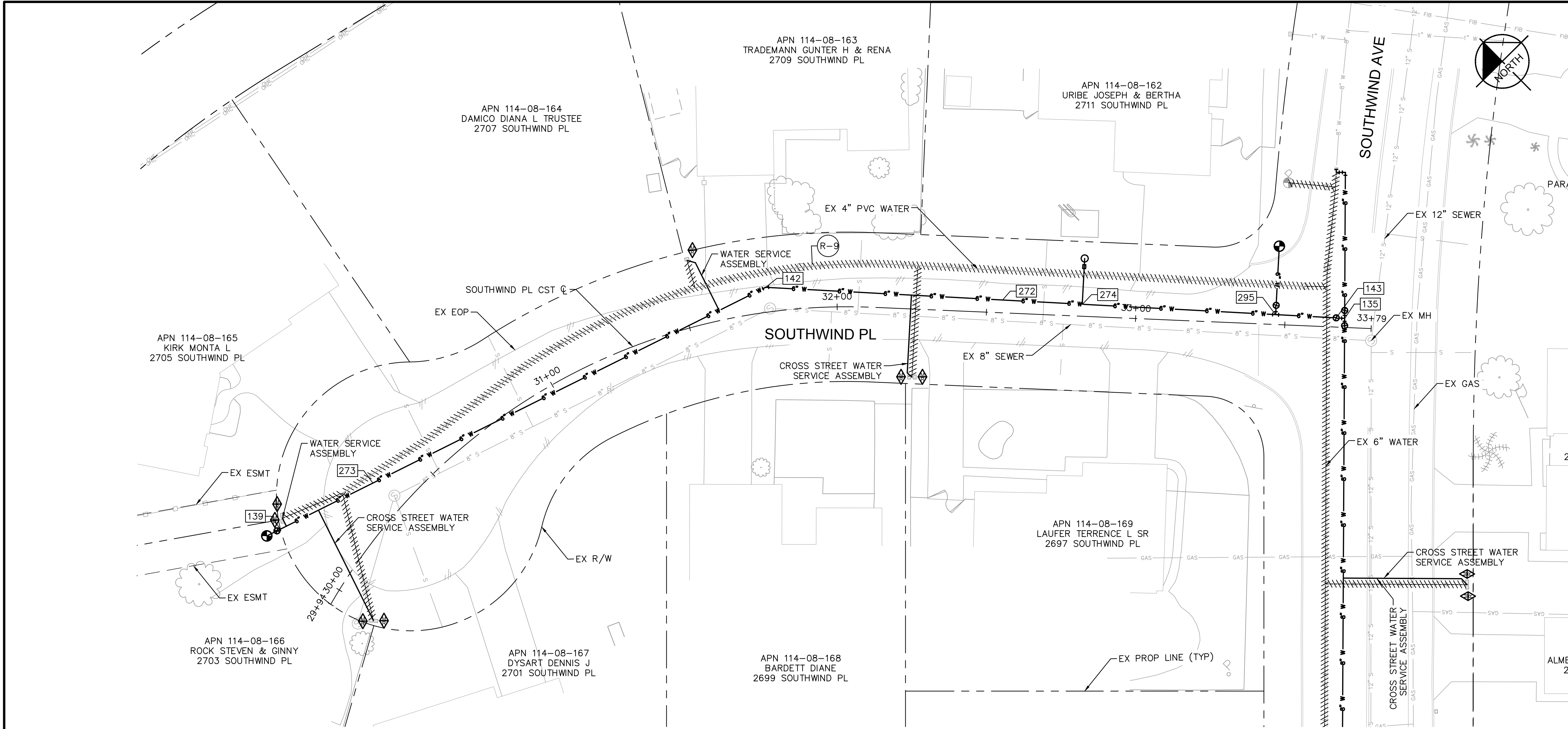
Sheet Number:

**WL01**

Sheet 04 of 37



k:\phx\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_WL04.dwg 6/30/2025 10:37 AM SMITH, MEGAN

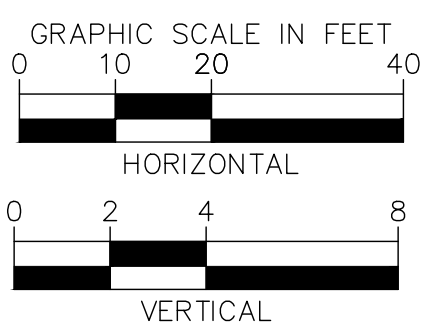


| WATER CONSTRUCTION NOTES |                                                                                                                                                                                                    |                                  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                                        | STATION OFFSET                   |
| 135                      | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NE,SW)<br>RE: LHC DET. 300<br>INV 8" IN: 748.67<br>INV 6" IN: 748.76<br>INV 8" OUT: 748.67<br>N: 1259337.76<br>E: 534549.39                     | STA: 33+69.92<br>OFF: -3.06'     |
| 139                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" OUT: 743.47<br>N: 1259527.79<br>E: 534246.20                                                                                | STA: 30+06.13<br>OFF: -27.57' LT |
| 142                      | INSTALL:<br>(1) 6" 11.25' BEND<br>(1) 6" 22.5' BEND<br>$\Delta H = 29.55'$ RT<br>INV 6" IN: 748.68<br>INV 6" OUT: 748.68<br>N: 1259471.31<br>E: 534418.69                                          | STA: 31+77.07<br>OFF: -8.32' LT  |
| 143                      | INSTALL:<br>(1) 6" GATE VALVE<br>RE: LHC DET. 300<br>INV 6" IN: 748.85<br>INV 6" OUT: 748.85<br>N: 1259329.86<br>E: 534547.48                                                                      | STA: 33+67.09<br>OFF: -3.09' LT  |
| 272                      | PVI<br>$\Delta V = 2.13'$ DN<br>INV 6" IN: 751.48<br>INV 6" OUT: 751.48<br>N: 1259412.62<br>E: 534472.13                                                                                           | STA: 32+55.17<br>OFF: -4.30' LT  |
| 273                      | PVI<br>$\Delta V = 2.00'$ UP<br>INV 6" IN: 743.50<br>INV 6" OUT: 743.50<br>N: 1259517.01<br>E: 534279.11                                                                                           | STA: 30+34.47<br>OFF: -12.37' LT |
| 274                      | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>PVI<br>$\Delta V = 1.70'$ DN<br>INV 6" IN: 751.46<br>INV 6" OUT: 751.46<br>N: 1259392.81<br>E: 534490.16 | STA: 32+81.95<br>OFF: -4.01' LT  |
| 295                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 749.47<br>INV 6" OUT: 749.47<br>N: 1259344.86<br>E: 534533.82                                                           | STA: 33+46.79<br>OFF: -3.31' LT  |

| REMOVAL AND ABANDONMENT NOTES |                                           |
|-------------------------------|-------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                               |
| R-9                           | $\pm 350$ LF 4" WATER<br>LINE ABANDONMENT |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.
- SEE SHEET 21-22 FOR WORK ON SOUTHWIND AVENUE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| DESIGNED BY: | SMM      |
| DRAWN BY:    | JAP      |
| CHECKED BY:  | CAW      |
| DATE:        | 01/2025  |
| DWG. SCALE:  | 1" = 20' |

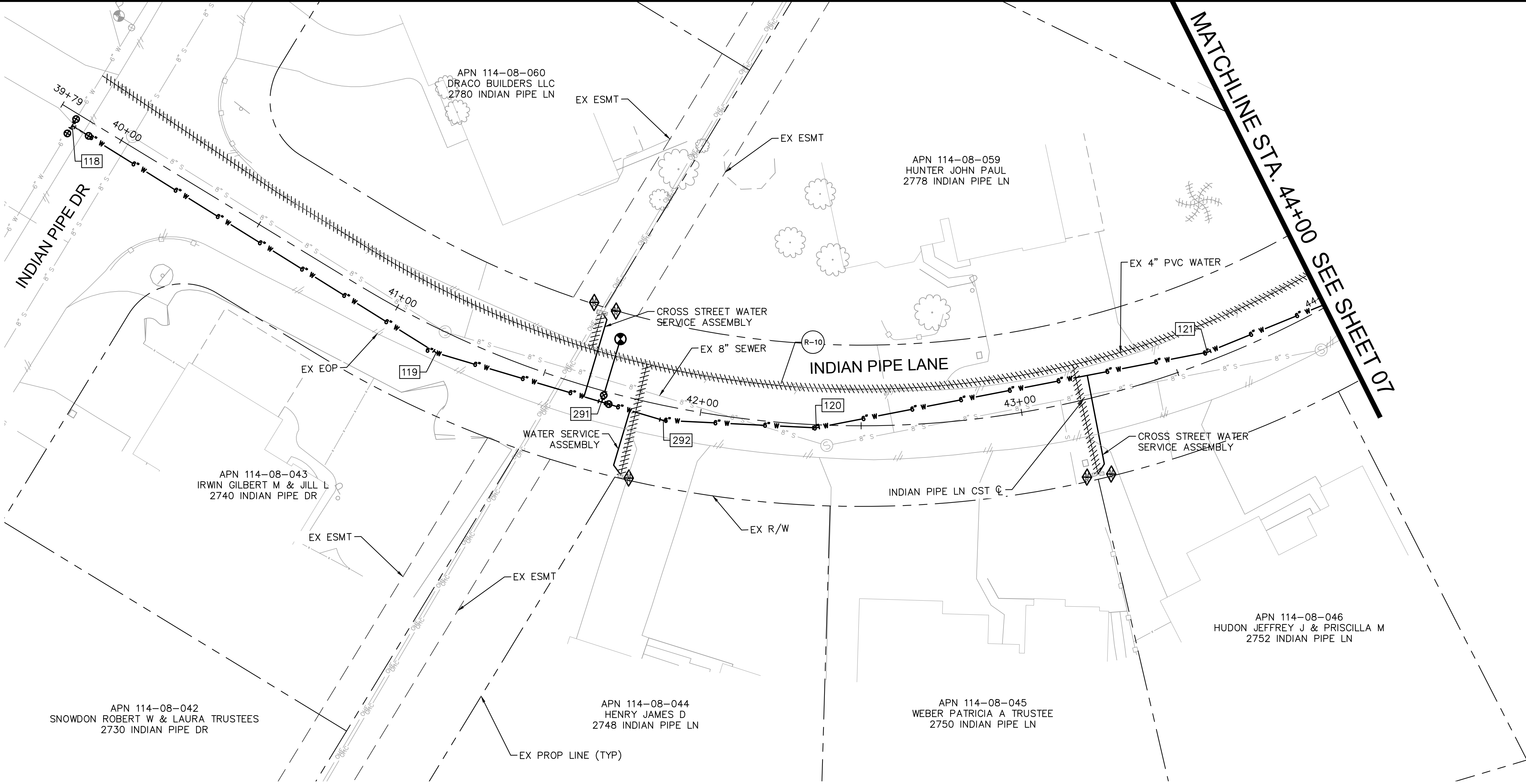
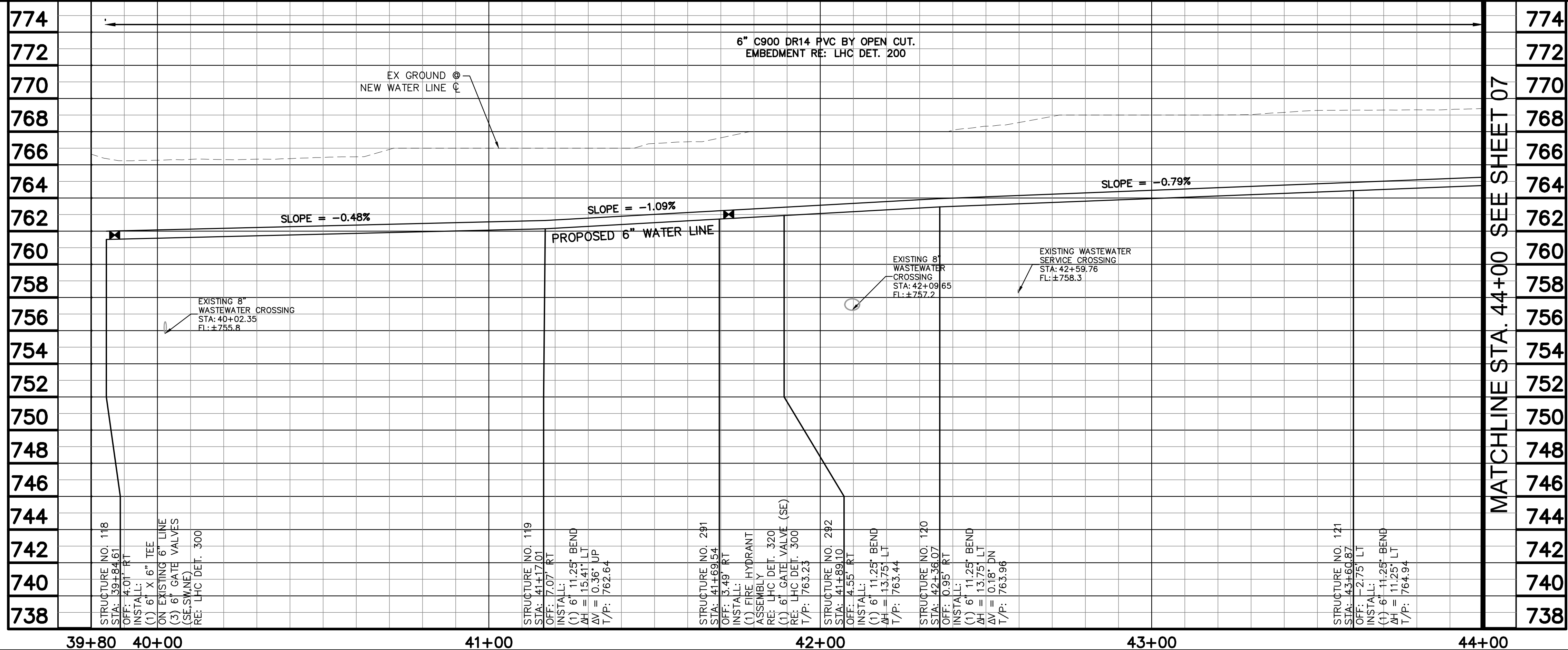
SOUTHWIND PLACE  
WATERLINE PLAN &  
PROFILE

Sheet Number:  
**WL02**

Sheet 05 of 37



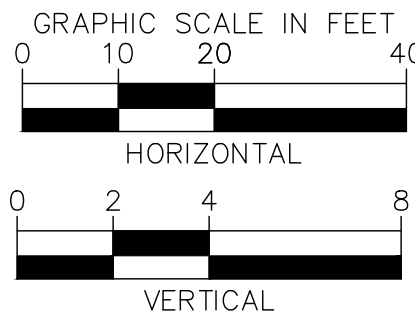
k:\pnh\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_WL05.dwg 6/30/2025 10:49 AM SMITH, MEGAN



| WATER CONSTRUCTION NOTES |                                                                                                                                                                                        |                                 |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                            | STATION OFFSET                  |
| 118                      | INSTALL:<br>(1) 6" X 6" TEE<br>ON EXISTING 6" LINE<br>(3) 6" GATE VALVES<br>(SE,SW,NE)<br>RE: LHC DET. 300<br>INV 6" OUT: 761.50<br>N: 1259298.26<br>E: 535076.11                      | STA: 39+84.61<br>OFF: 4.01' RT  |
| 119                      | INSTALL:<br>(1) 6" 11.25' BEND<br>$\Delta H = 15.41'$ LT<br>$\Delta V = 0.36'$ UP<br>INV 6" IN: 762.14<br>INV 6" OUT: 762.14<br>N: 1259180.73<br>E: 535138.56                          | STA: 41+17.01<br>OFF: 7.07' RT  |
| 120                      | INSTALL:<br>(1) 6" 11.25' BEND<br>$\Delta H = 13.75'$ LT<br>$\Delta V = 0.18'$ DN<br>INV 6" IN: 763.46<br>INV 6" OUT: 763.46<br>N: 1259101.68<br>E: 535228.85                          | STA: 42+36.07<br>OFF: 0.95' RT  |
| 121                      | INSTALL:<br>(1) 6" 11.25' BEND<br>$\Delta H = 11.25'$ LT<br>INV 6" IN: 764.44<br>INV 6" OUT: 764.44<br>N: 1259061.24<br>E: 535345.63                                                   | STA: 43+60.87<br>OFF: -2.75' LT |
| 291                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>(1) 6" GATE VALVE (SE)<br>RE: LHC DET. 300<br>INV 6" IN: 762.73<br>INV 6" OUT: 762.73<br>N: 1259141.86<br>E: 535175.32 | STA: 41+69.54<br>OFF: 3.49' RT  |
| 292                      | INSTALL:<br>(1) 6" 11.25' BEND<br>$\Delta H = 13.75'$ LT<br>INV 6" IN: 762.94<br>INV 6" OUT: 762.94<br>N: 1259127.44<br>E: 535188.95                                                   | STA: 41+89.10<br>OFF: 4.55' RT  |

| REMOVAL AND ABANDONMENT NOTES |                                      |
|-------------------------------|--------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                          |
| R-10                          | ±452 LF 4" WATER<br>LINE ABANDONMENT |

- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



| DATE                    | - | - | - | - |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS | - | - | - | - |
| NO.                     | # | # | # | # |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

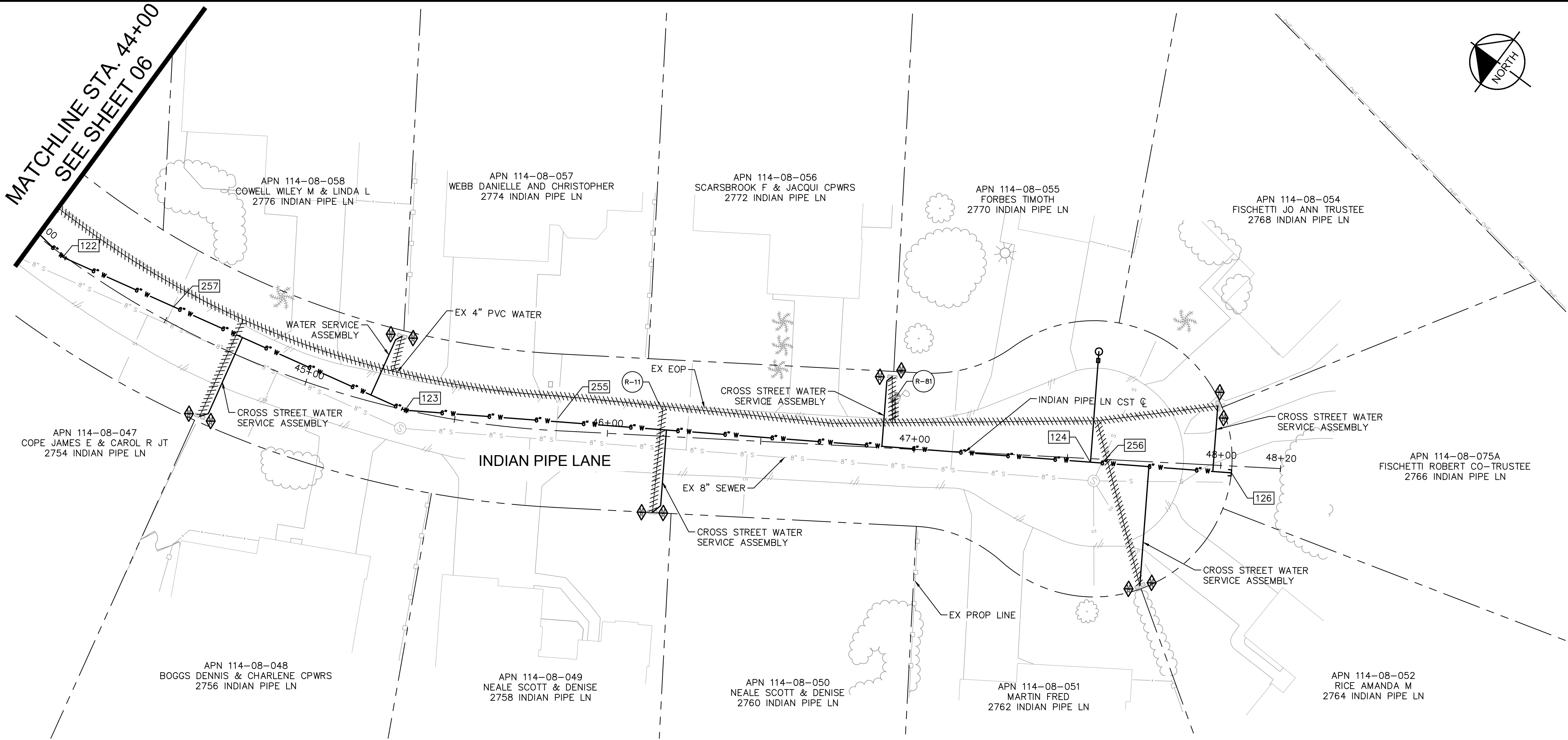
**INDIAN PIPE LANE  
WATERLINE PLAN &  
PROFILE**



Sheet Number:  
**WL03**

Sheet 06 of 37



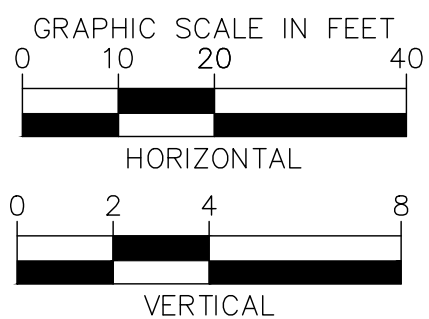


| WATER CONSTRUCTION NOTES |                                                                                                                                                                    |                                 |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                        | STATION OFFSET                  |
| 122                      | INSTALL:<br>(1) 6" 22.5' BEND<br>$\Delta H = 20.43'$ LT<br>INV 6" IN: 764.84<br>INV 6" OUT: 764.84<br>N: 1259034.44<br>E: 535394.90                                | STA: 44+10.74<br>OFF: 0.52' RT  |
| 123                      | INSTALL:<br>(1) 6" 22.5' BEND<br>$\Delta H = 19.77'$ LT<br>INV 6" IN: 766.46<br>INV 6" OUT: 766.46<br>N: 1259081.01<br>E: 535514.01                                | STA: 45+33.50<br>OFF: 0.10' RT  |
| 124                      | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>INV 6" IN: 772.46<br>INV 6" OUT: 772.46<br>N: 1259200.82<br>E: 535703.20 | STA: 47+57.60<br>OFF: 1.15' RT  |
| 126                      | INSTALL:<br>(1) 2" END OF LINE<br>BLOW-OFF ASSEMBLY<br>RE: LHC DET. 314<br>INV 6" IN: 774.50<br>INV 6" OUT: 774.50<br>N: 1259225.43<br>E: 535742.06                | STA: 48+03.59<br>OFF: 2.23' RT  |
| 255                      | PVI<br>$\Delta V = 0.81'$ UP<br>INV 6" IN: 767.25<br>INV 6" OUT: 767.25<br>N: 1259108.49<br>E: 535555.53                                                           | STA: 45+83.51<br>OFF: -3.91' LT |
| 256                      | PVI<br>$\Delta V = 0.90'$ UP<br>INV 6" IN: 772.57<br>INV 6" OUT: 772.57<br>N: 1259202.75<br>E: 535706.25                                                           | STA: 47+61.20<br>OFF: 1.24' RT  |
| 257                      | PVI<br>$\Delta V = 0.45'$ UP<br>INV 6" IN: 765.15<br>INV 6" OUT: 765.15<br>N: 1259063.05<br>E: 535433.50                                                           | STA: 44+50.23<br>OFF: -5.10' LT |

| REMOVAL AND ABANDONMENT NOTES |                                                                                |
|-------------------------------|--------------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                                    |
| R-11                          | $\pm 304$ LF 4" WATER<br>LINE ABANDONMENT                                      |
| R-81                          | REMOVE EXISTING FIRE<br>HYDRANT AND APPURTENANCES<br>PER LHC TECH. SPEC. 02550 |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

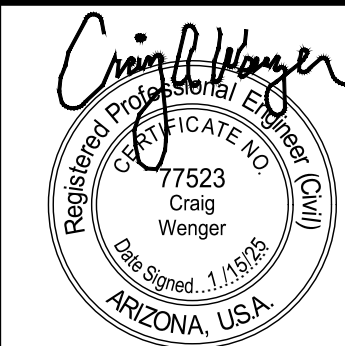


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| DATE                    |   |   |   |   |
| REVISIONS / SUBMISSIONS |   |   |   |   |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

**INDIAN PIPE LANE  
WATERLINE PLAN &  
PROFILE**

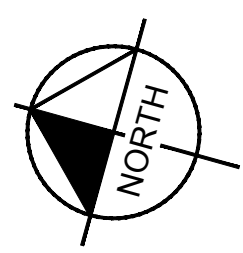
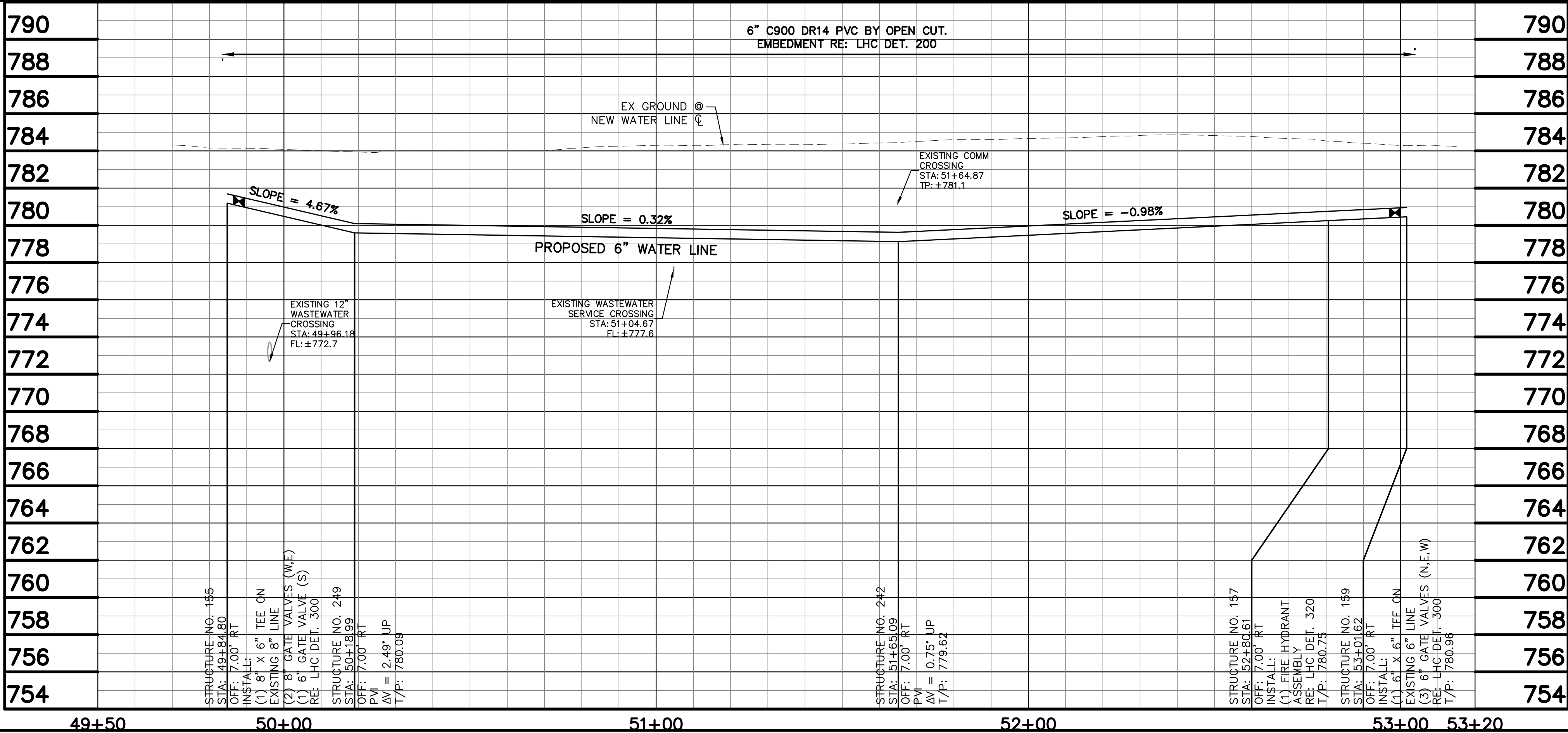


Sheet Number:

**WL04**

Sheet 07 of 37

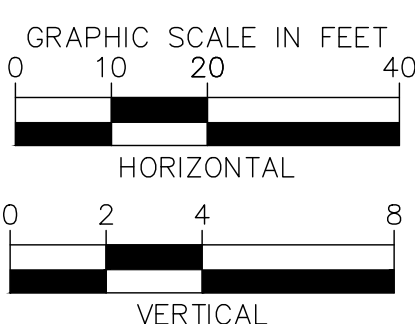




| WATER CONSTRUCTION NOTES |                                                                                                                                                                                 |                                |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                     | STATION OFFSET                 |
| 155                      | INSTALL:<br>(1) 8" X 6" TEE ON EXISTING 8" LINE<br>(2) 8" GATE VALVES (W,E)<br>(1) 8" GATE VALVE (S)<br>RE: LHC DET. 300<br>INV 6" OUT: 781.19<br>N: 1259784.63<br>E: 535348.20 | STA: 49+84.80<br>OFF: 7.00' RT |
| 157                      | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 780.25<br>INV 6" OUT: 780.25<br>N: 1259502.38<br>E: 535436.74                                           | STA: 52+80.61<br>OFF: 7.00' RT |
| 159                      | INSTALL:<br>(1) 6" X 6" TEE ON EXISTING 6" LINE<br>(3) 6" GATE VALVES (N,E,W)<br>RE: LHC DET. 300<br>INV 6" IN: 780.46<br>INV 6" OUT: 780.46<br>N: 1259482.33<br>E: 535443.03   | STA: 53+01.62<br>OFF: 7.00' RT |
| 242                      | PVI<br>ΔV = 0.75' UP<br>INV 6" IN: 779.12<br>INV 6" OUT: 779.12<br>N: 1259612.61<br>E: 535402.16                                                                                | STA: 51+65.09<br>OFF: 7.00' RT |
| 249                      | PVI<br>ΔV = 2.49' UP<br>INV 6" IN: 779.59<br>INV 6" OUT: 779.59<br>N: 1259752.00<br>E: 535358.43                                                                                | STA: 50+18.99<br>OFF: 7.00' RT |

| REMOVAL AND ABANDONMENT NOTES |                                   |
|-------------------------------|-----------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                       |
| R-2                           | ±317 LF 4" WATER LINE ABANDONMENT |

- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS |   |   |   |   |
| DATE                    |   |   |   |   |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

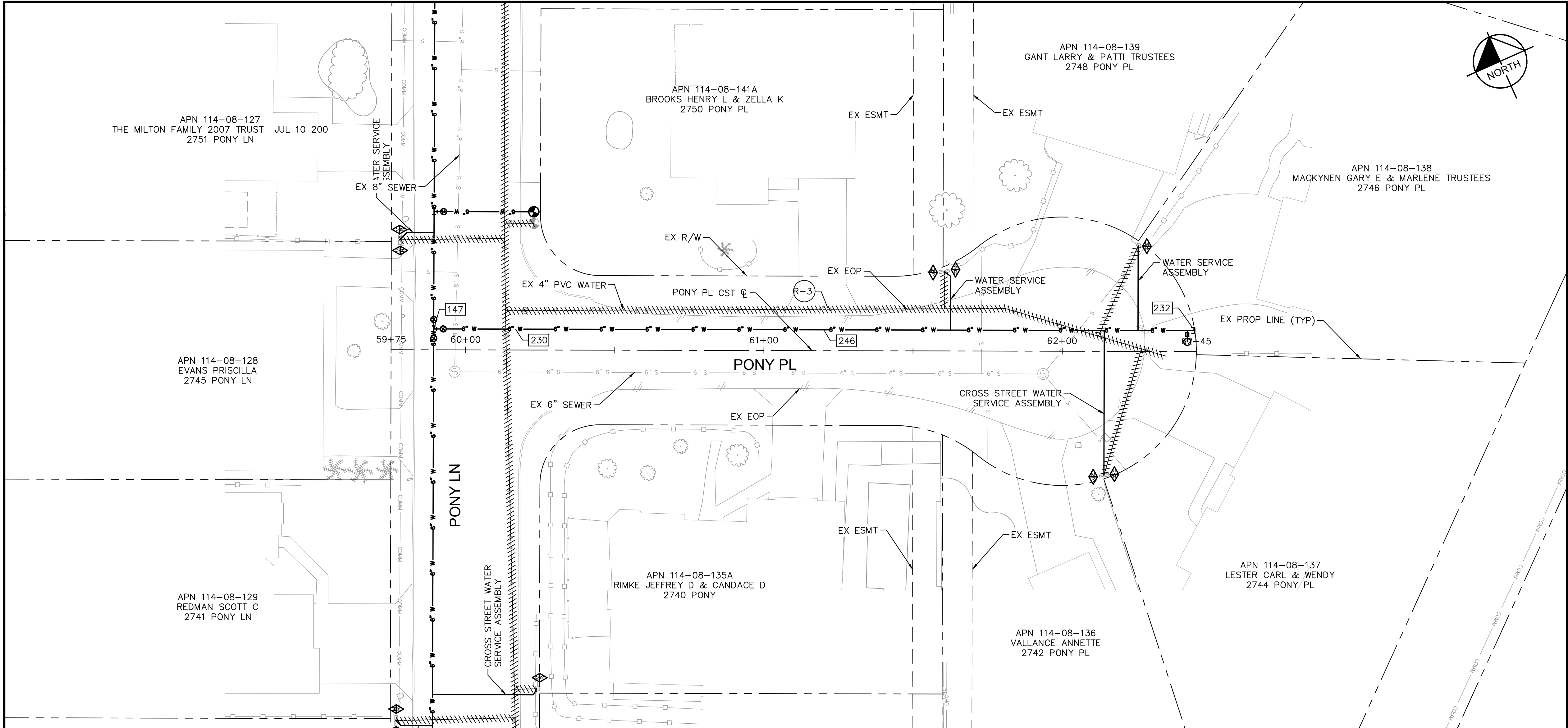
**SCOUT DRIVE WATERLINE  
PLAN & PROFILE**

Sheet Number:  
**WL05**

Sheet 08 of 37



k:\pnh\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_WL08.dwg 6/30/2025 11:27 AM SMITH, MEGAN



| WATER CONSTRUCTION NOTES |                                                                                                                                                              |                                 |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                  | STATION OFFSET                  |
| 147                      | INSTALL:<br>(1) 6" X 6" TEE<br>(3) 6" GATE VALVES (SW,NE,SE)<br>RE: LHC DET. 300<br>INV 6" IN: 765.15<br>INV 6" OUT: 765.15<br>N: 1259977.97<br>E: 534597.09 | STA: 59+89.28<br>OFF: -7.00'    |
| 230                      | PVI<br>$\Delta V = 0.60'$ DN<br>INV 6" IN: 766.48<br>INV 6" OUT: 766.48<br>N: 1259966.79<br>E: 534622.02                                                     | STA: 60+16.61<br>OFF: -7.00' LT |
| 232                      | INSTALL:<br>(1) 1" COMBINATION AIR/VACUUM VALVE & 2" BLOWOFF<br>RE: LHC DET. 310<br>(1) 6" PLUG<br>INV 6" IN: 771.80<br>N: 1259873.51<br>E: 534829.89        | STA: 62+44.45<br>OFF: -7.00' LT |
| 246                      | PVI<br>$\Delta V = 1.54'$ DN<br>INV 6" IN: 770.41<br>INV 6" OUT: 770.41<br>N: 1259924.46<br>E: 534716.35                                                     | STA: 61+20.00<br>OFF: -7.00' LT |

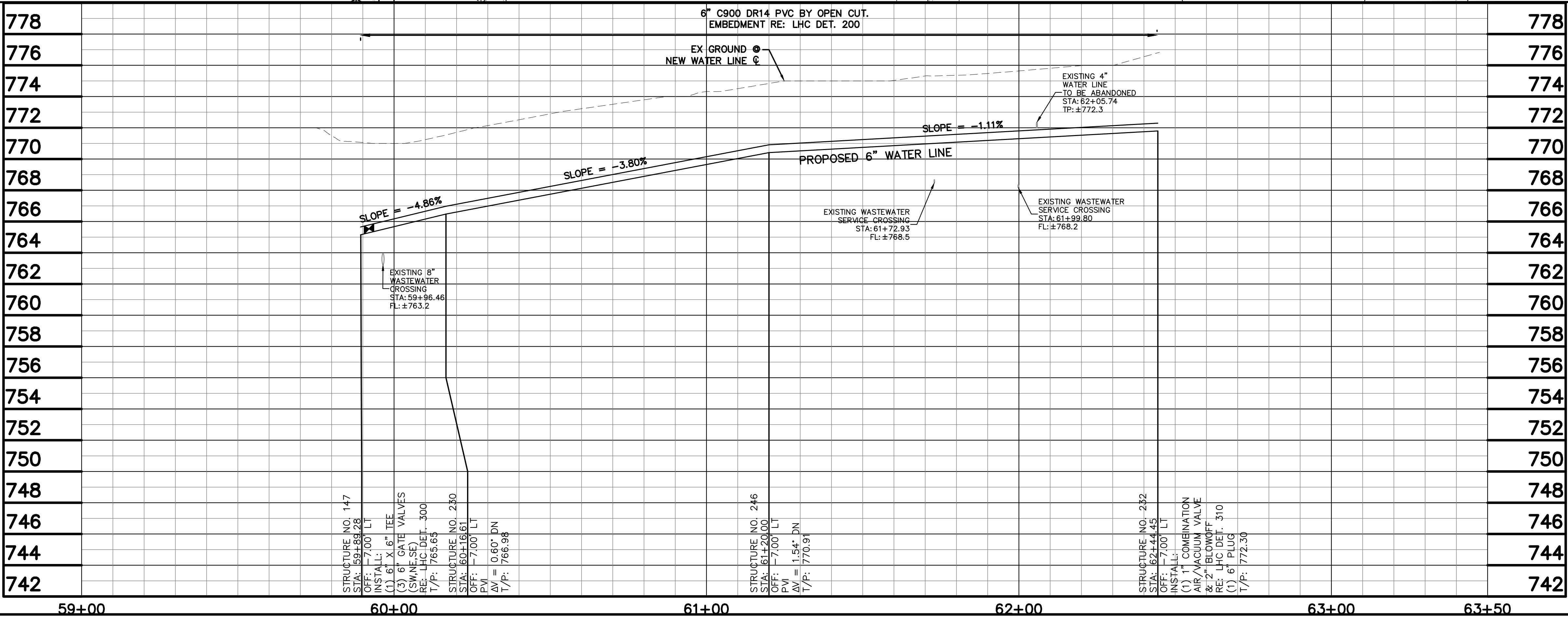
| REMOVAL AND ABANDONMENT NOTES |                                   |
|-------------------------------|-----------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                       |
| R-3                           | ±224 LF 4" WATER LINE ABANDONMENT |



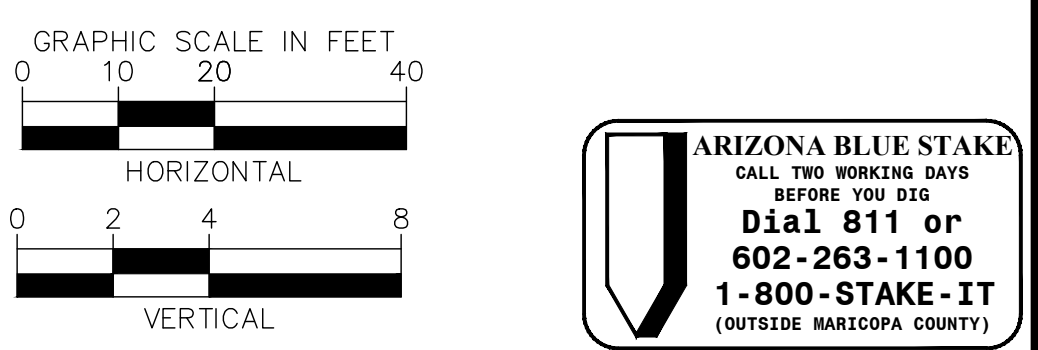
| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| DATE                    | - | - | - | - |
| REVISIONS / SUBMISSIONS | - | - | - | - |

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |



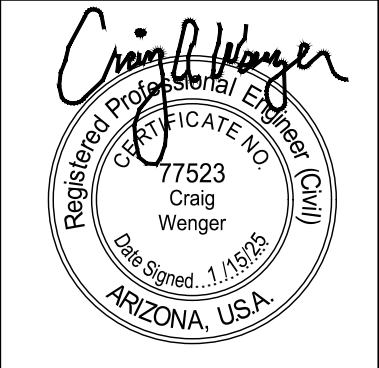
- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.
  - SEE SHEET 10-11 FOR WORK ON PONY LANE.



Kimley»Horn

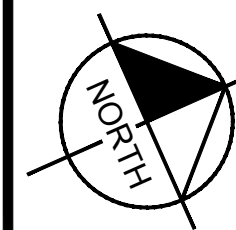
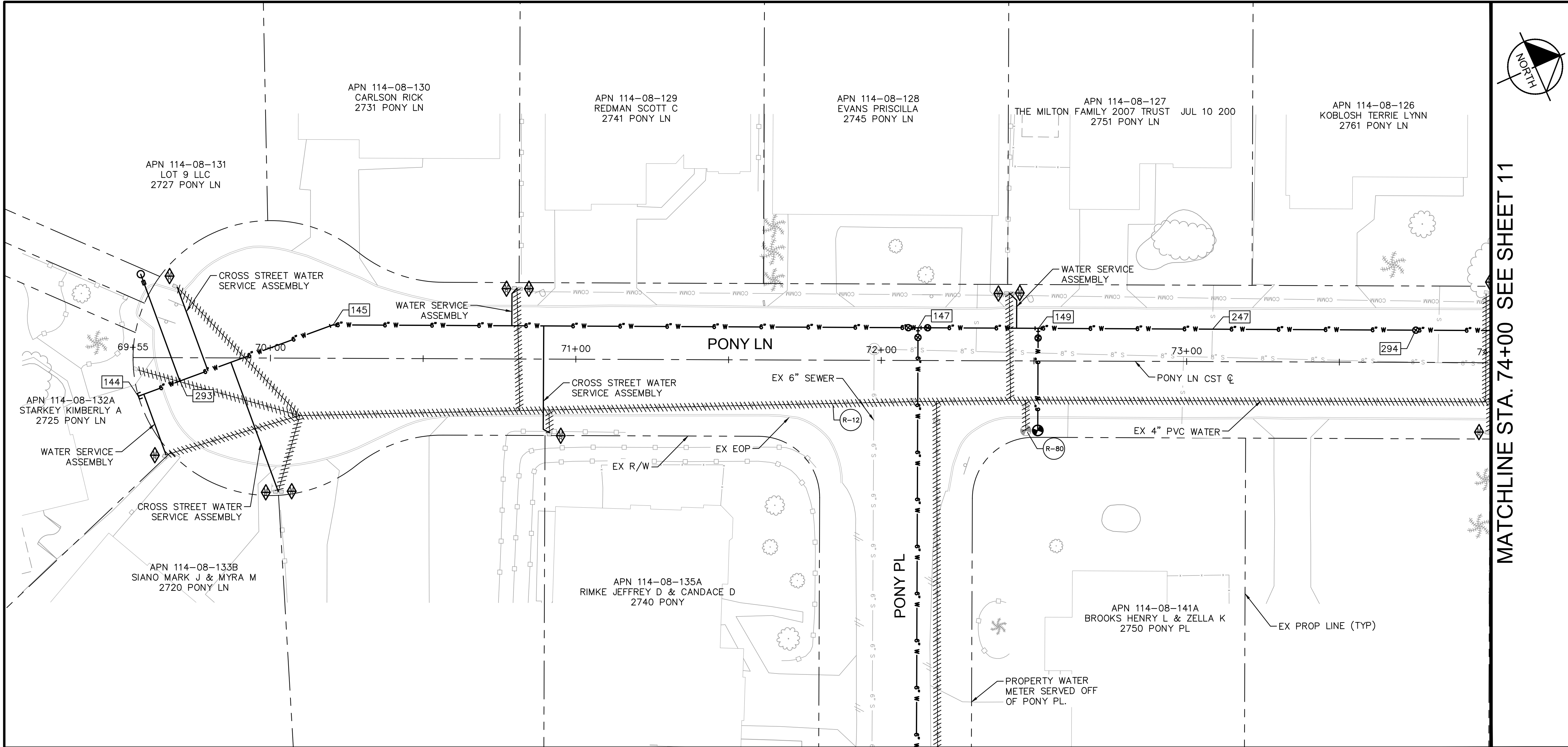
© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

PONY LANE WATERLINE  
PLAN & PROFILE



Sheet Number:  
WL06  
Sheet 09 of 37



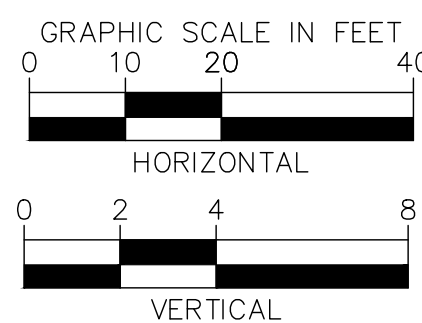


MATCHLINE STA. 74+00 SEE SHEET 11

| WATER CONSTRUCTION NOTES |                                                                                                                                                                                    |                                  |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                        | STATION OFFSET                   |
| 144                      | INSTALL:<br>(1) 6" PLUG<br>INV 6" OUT: 757.53<br>N: 1258735.59<br>E: 534513.94                                                                                                     | STA: 69+56.81<br>OFF: 12.65' RT  |
| 145                      | INSTALL:<br>(1) 6" 22.5' BEND<br>$\Delta H = 20.40'$ RT<br>INV 6" IN: 759.53<br>INV 6" OUT: 759.53<br>N: 1259803.28<br>E: 534518.46                                                | STA: 70+20.43<br>OFF: -10.94' LT |
| 147                      | INSTALL:<br>(1) 6" X 6" TEE<br>(3) 6" GATE VALVES (SW,NE,SE)<br>RE: LHC DET. 300<br>INV 6" IN: 765.15<br>INV 6" OUT: 765.15<br>INV 6" OUT: 765.15<br>N: 1259977.97<br>E: 534597.09 | STA: 72+12.00<br>OFF: -10.72' LT |
| 149                      | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 766.31<br>INV 6" OUT: 766.31<br>N: 1260013.84<br>E: 534613.23                                              | STA: 72+51.33<br>OFF: -10.67' LT |
| 247                      | PV<br>$\Delta V = 0.55'$ DN<br>INV 6" IN: 767.98<br>INV 6" OUT: 767.98<br>N: 1260065.89<br>E: 534636.66                                                                            | STA: 73+08.41<br>OFF: -10.61' LT |
| 293                      | INSTALL:<br>(1) 1" COMBINATION AIR/VACUUM VALVE & 2" BLOWOFF<br>RE: LHC DET. 310<br>INV 6" IN: 757.96<br>INV 6" OUT: 757.96<br>N: 1259750.00<br>E: 534514.90                       | STA: 69+70.36<br>OFF: 7.63' RT   |
| 294                      | INSTALL:<br>(1) 6" GATE VALVE<br>RE: LHC DET. 300<br>INV 6" IN: 769.32<br>INV 6" OUT: 769.32<br>N: 1260126.61<br>E: 534663.98                                                      | STA: 73+75.00<br>OFF: -10.54' LT |

| REMOVAL AND ABANDONMENT NOTES |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                              |
| R-12                          | ±441 LF 4" WATER LINE ABANDONMENT                                        |
| R-80                          | REMOVE EXISTING FIRE HYDRANT AND APPURTENANCES PER LHC TECH. SPEC. 02550 |

- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.
  - SEE SHEET 09 FOR WORK ON PONY PLACE



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

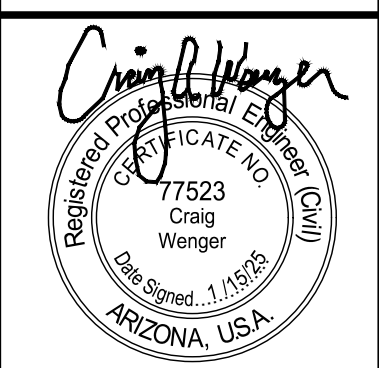


| DATE                    |   |   |   |   |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS |   |   |   |   |
| NO.                     | # | # | # | # |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

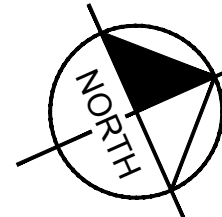
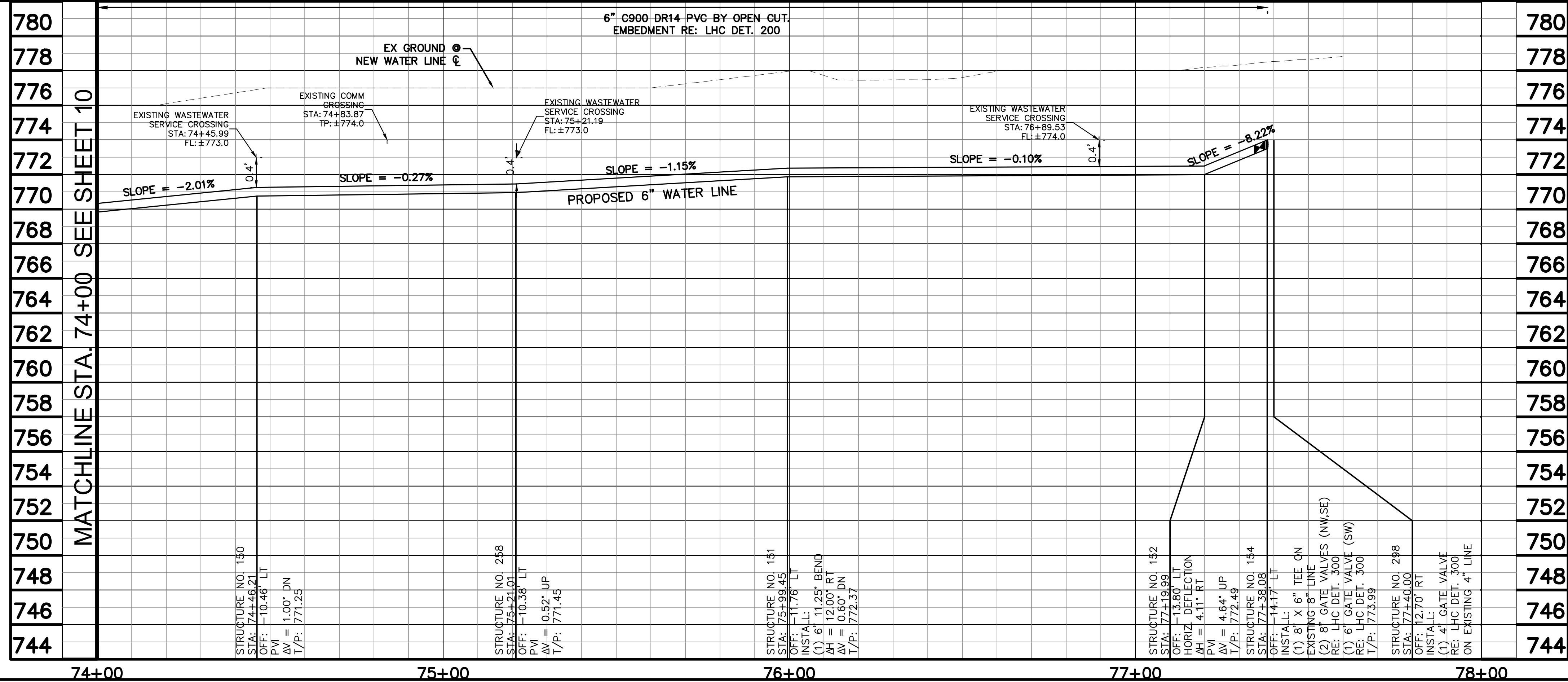
**PONY LANE WATERLINE  
PLAN & PROFILE**



Sheet Number:  
**WL07**

Sheet 10 of 37





| REMOVAL AND ABANDONMENT NOTES |                                   |
|-------------------------------|-----------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                       |
| R-13                          | ±284 LF 4" WATER LINE ABANDONMENT |

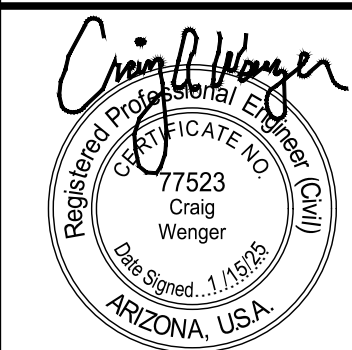
1. CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
2. WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
3. CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
4. CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Draw scale:  | 1" = 20' |

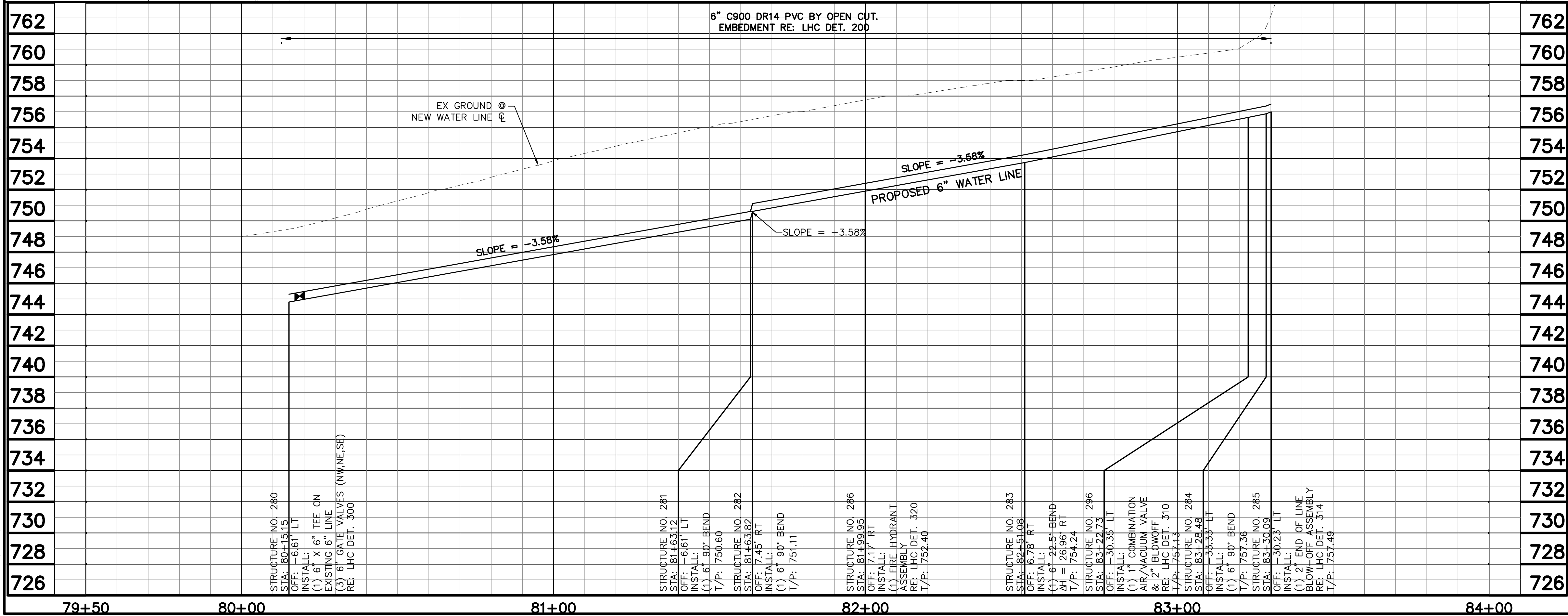
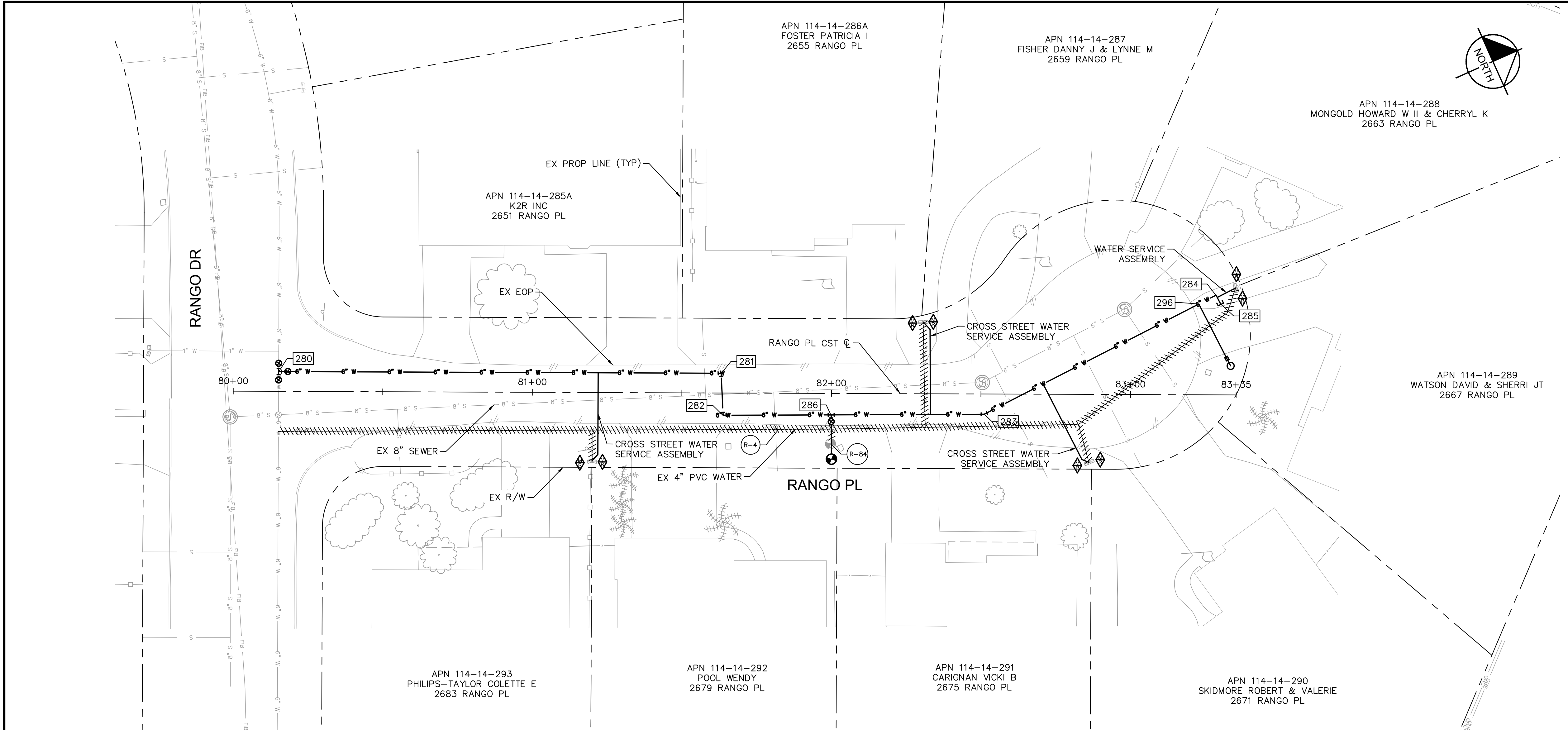
## PONY LANE WATERLINE PLAN & PROFILE



Sheet 11 of 37



k:\phx\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_WL1.dwg 6/30/2025 12:04 PM SMITH, MEGAN

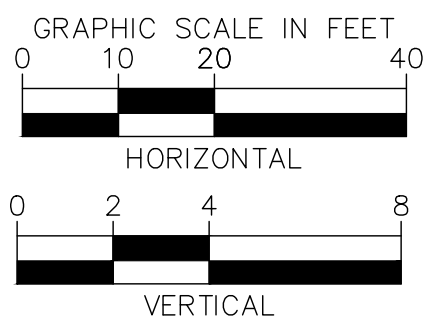


| WATER CONSTRUCTION NOTES |                                                                                                                                                                    |                                  |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                        | STATION OFFSE                    |
| 280                      | INSTALL:<br>(1) 6" X 6" TEE ON<br>EXISTING 6" LINE<br>(3) 6" GATE VALVES (NW,NE,SE)<br>RE: LHC DET. 300<br>INV 6" OUT: 744.80<br>N: 1260372.32<br>E: 533972.58     | STA: 80+15.15<br>OFF: -6.61' LT  |
| 281                      | INSTALL:<br>(1) 6" 90° BEND<br>INV 6" IN: 750.10<br>INV 6" OUT: 750.10<br>N: 1260507.32<br>E: 534033.16                                                            | STA: 81+63.12<br>OFF: -6.61' LT  |
| 282                      | INSTALL:<br>(1) 6" 90° BEND<br>INV 6" IN: 750.61<br>INV 6" OUT: 750.61<br>N: 1260502.20<br>E: 534046.27                                                            | STA: 81+63.82<br>OFF: 7.45' RT   |
| 283                      | INSTALL:<br>(1) 6" 22.5° BEND<br>DH = 26.96' RT<br>INV 6" IN: 753.74<br>INV 6" OUT: 753.74<br>N: 1260582.09<br>E: 534081.39                                        | STA: 82+51.08<br>OFF: 6.78' RT   |
| 284                      | INSTALL:<br>(1) 6" 90° BEND<br>INV 6" IN: 756.86<br>INV 6" OUT: 756.86<br>N: 1260669.14<br>E: 534076.48                                                            | STA: 83+28.48<br>OFF: -33.33' LT |
| 285                      | INSTALL:<br>(1) 2" END OF LINE<br>BLOW-OFF ASSEMBLY<br>RE: LHC DET. 314<br>INV 6" IN: 756.99<br>INV 6" OUT: 756.99<br>N: 1260669.33<br>E: 534079.97                | STA: 83+30.09<br>OFF: -30.23' LT |
| 286                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 751.90<br>INV 6" OUT: 751.90<br>N: 1260535.28<br>E: 534060.81                           | STA: 81+99.95<br>OFF: 7.17' RT   |
| 296                      | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>INV 6" IN: 756.63<br>INV 6" OUT: 756.63<br>N: 1260662.67<br>E: 534076.84 | STA: 83+22.73<br>OFF: -30.35' LT |

| REMOVAL AND ABANDONMENT NOTES |                                                                                |
|-------------------------------|--------------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                                    |
| R-4                           | ±327 LF 4" WATER LINE<br>ABANDONMENT                                           |
| R-84                          | REMOVE EXISTING FIRE<br>HYDRANT AND APPURTENANCES<br>PER LHC TECH. SPEC. 02550 |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



Kimley»Horn

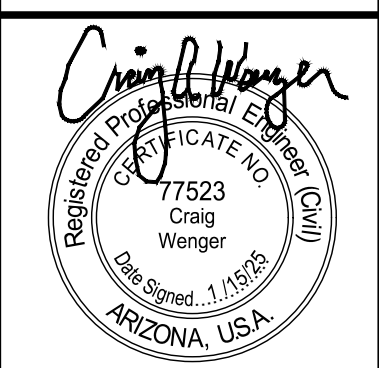
© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

RANGO PLACE WATERLINE  
PLAN & PROFILE



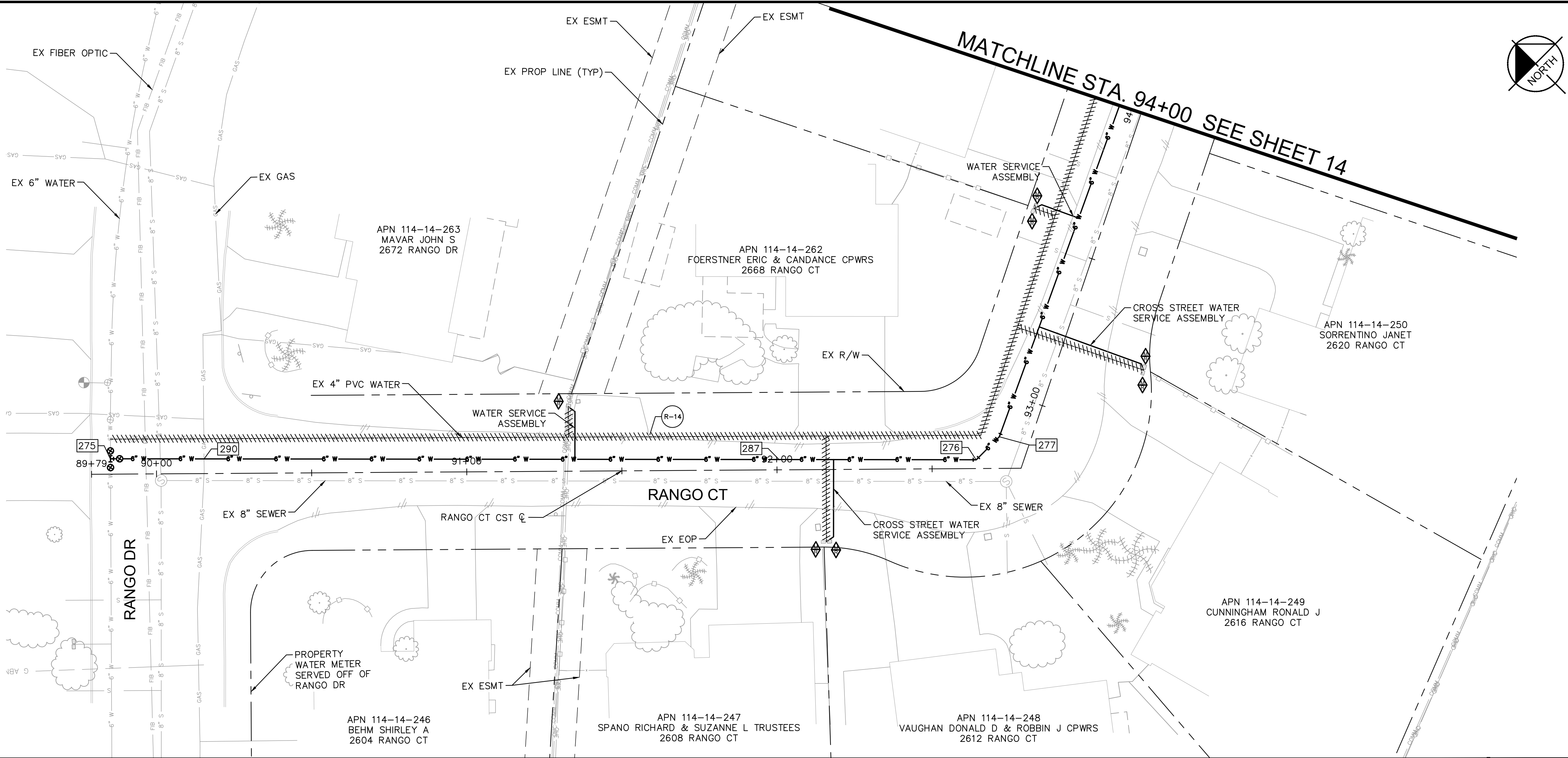
Sheet Number:  
WL09  
Sheet 12 of 37



SMITH, MEGAN

6/30/2025 12:17 PM

k:\pnh\_utility\Projects\191245020-lhc\_replacements - phase 2\CAD\plan sheets\191245020\_WL12.dwg



| WATER CONSTRUCTION NOTES |                                                                                                                                                             |                                 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                 | STATION OFFSET                  |
| 275                      | INSTALL:<br>(1) 6" X 6" TEE ON EXISTING 6" LINE<br>(3) 6" GATE VALVES (SE,SW,NE)<br>RE: LHC DET. 300<br>INV 6" OUT: 721.48<br>N: 1260097.50<br>E: 533229.72 | STA: 89+85.20<br>OFF: -4.96' LT |
| 276                      | INSTALL:<br>(1) 6" 45° BEND<br>ΔH = 45.00' LT<br>INV 6" IN: 732.77<br>INV 6" OUT: 732.77<br>N: 1259899.99<br>E: 533426.86                                   | STA: 92+64.26<br>OFF: -2.84' LT |
| 277                      | INSTALL:<br>(1) 6" 22.5° BEND<br>ΔH = 25.13' LT<br>INV 6" IN: 733.15<br>INV 6" OUT: 733.15<br>N: 1259899.98<br>E: 533437.35                                 | STA: 92+86.05<br>OFF: -9.89' LT |
| 287                      | PV<br>ΔV = 1.07' DN<br>INV 6" IN: 730.47<br>INV 6" OUT: 730.47<br>N: 1259944.93<br>E: 533382.00                                                             | STA: 92+00.76<br>OFF: -3.32' LT |
| 290                      | PV<br>ΔV = 4.75' UP<br>INV 6" IN: 720.58<br>INV 6" OUT: 720.58<br>N: 1260076.20<br>E: 533250.98                                                             | STA: 90+15.29<br>OFF: -4.73' LT |

| REMOVAL AND ABANDONMENT NOTES |                                   |
|-------------------------------|-----------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                       |
| R-14                          | ±396 LF 4" WATER LINE ABANDONMENT |

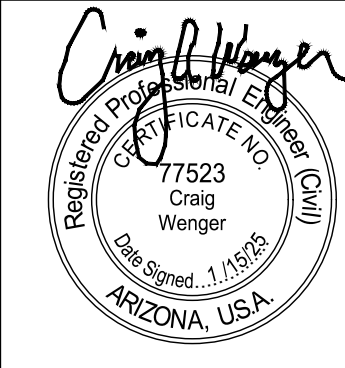


| NO. | REVISIONS / SUBMISSIONS | DATE |
|-----|-------------------------|------|
| #   | #                       | #    |
| #   | #                       | #    |
| #   | #                       | #    |
| #   | #                       | #    |

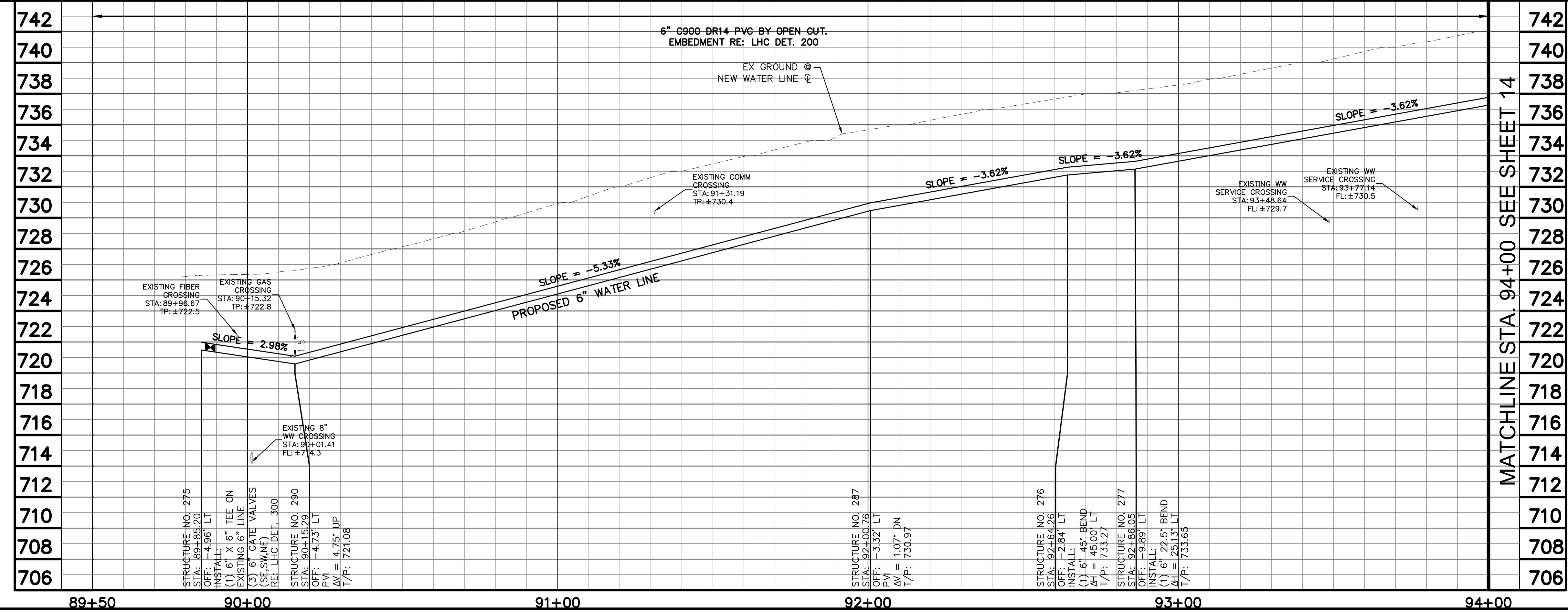
**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

**RANGO COURT WATERLINE  
PLAN & PROFILE**



Sheet Number:  
**WL10**  
Sheet 13 of 37



- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.

**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



MATCHLINE STA. 94+00 SEE SHEET 13

MATCHLINE STA. 94+00 SEE SHEET 13

94+00

95+00

96+00

97+00

98+00

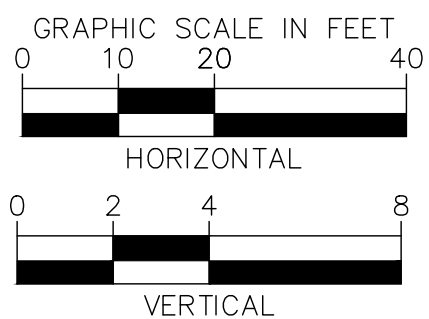
98+50

| WATER CONSTRUCTION NOTES |                                                                                                                                                                                   |                                  |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                       | STATION OFFSET                   |
| 278                      | INSTALL:<br>(1) 6" 11.25' BEND<br>ΔH = 10.08' LT<br>INV 6" IN: 744.95<br>INV 6" OUT: 744.95<br>N: 1260090.48<br>E: 533831.77                                                      | STA: 97+24.05<br>OFF: -5.66' LT  |
| 279                      | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>(1) 6" PLUG<br>INV 6" IN: 745.54<br>INV 6" OUT: 745.54<br>N: 1260107.14<br>E: 533854.37 | STA: 97+51.69<br>OFF: -10.57' LT |
| 288                      | PVI<br>ΔV = 0.78' DN<br>INV 6" IN: 739.37<br>INV 6" OUT: 739.37<br>N: 1259972.82<br>E: 533593.05                                                                                  | STA: 94+57.91<br>OFF: -6.11' LT  |
| 289                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 738.83<br>INV 6" OUT: 738.83<br>N: 1259966.59<br>E: 533579.72                                          | STA: 94+43.20<br>OFF: -6.43' LT  |
| 297                      | HORIZ. DEFLECTION<br>ΔH = 1.26' LT<br>INV 6" IN: 739.80<br>INV 6" OUT: 739.80<br>N: 1259981.54<br>E: 533611.67                                                                    | STA: 94+78.46<br>OFF: -5.66' LT  |

| REMOVAL AND ABANDONMENT NOTES |                                                                                |
|-------------------------------|--------------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                                    |
| R-15                          | ±354 LF 4" WATER<br>LINE ABANDONMENT                                           |
| R-88                          | REMOVE EXISTING FIRE<br>HYDRANT AND APPURTENANCES<br>PER LHC TECH. SPEC. 02550 |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



Kimley»Horn

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

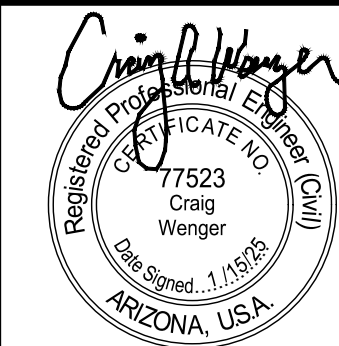


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| DATE                    | - | - | - | - |
| REVISIONS / SUBMISSIONS | - | - | - | - |

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

RANGO COURT WATERLINE  
PLAN & PROFILE



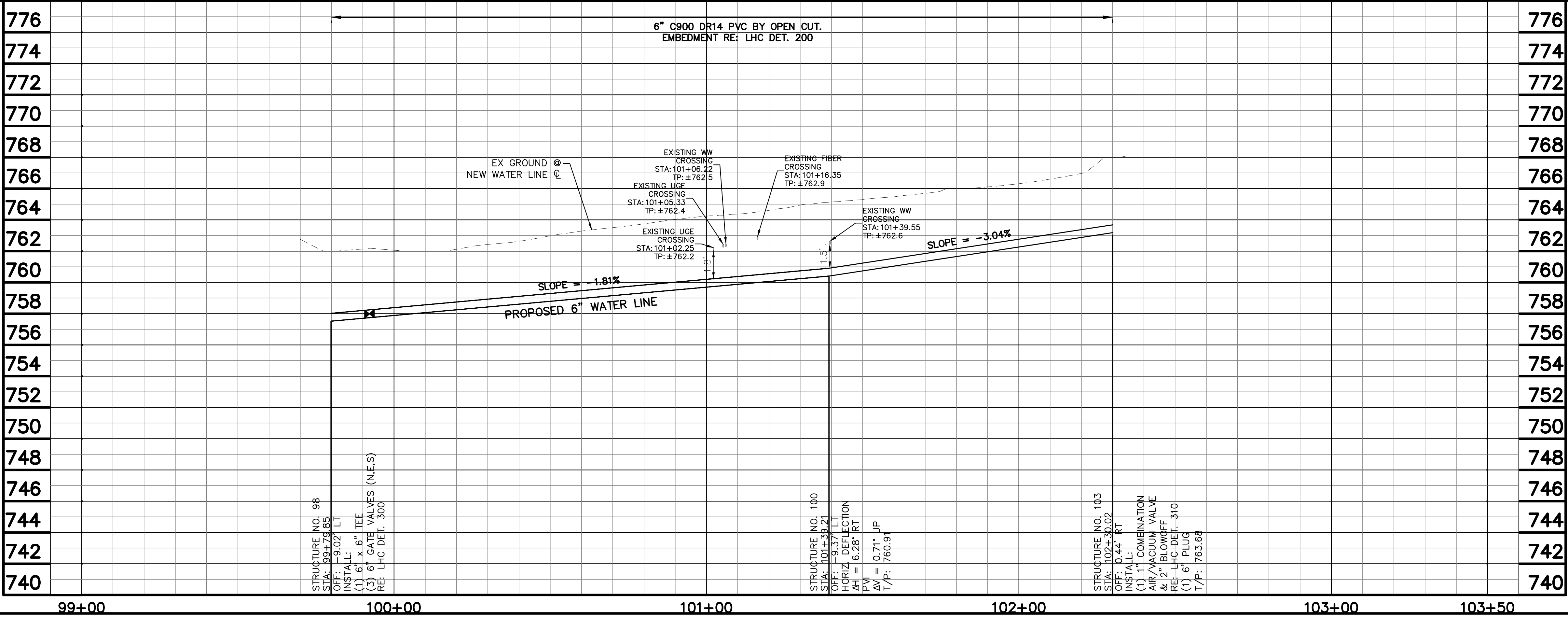
Sheet Number:

WL11

Sheet 14 of 37



k:\pnh\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_WL14.dwg 6/30/2025 12:39 PM SMITH, MEGAN



APN 105-18-017  
VISNAW PAUL D & LINDA M TRUSTEES  
2721 VIA PALMA

APN 105-18-016  
SAADEH SAADEH A & SANA A CPWRS  
2711 VIA PALMA

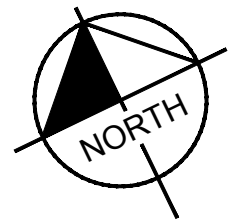
APN 105-18-015  
CHAVEZ RICHARD P  
2701 VIA PALMA

APN 105-18-026  
LYNCH JASON & JULIE  
2720 VIA PALMA

APN 105-18-027  
PELTIER-WALL DIANE  
2718 SERENIDAD VEREDA

APN 105-18-040  
PARTAIN MICHAEL E  
2700 VIA PALMA

APN 105-18-041  
ROTH THOMAS E & LAURA M  
2714 SERENIDAD VEREDA



#### WATER CONSTRUCTION NOTES

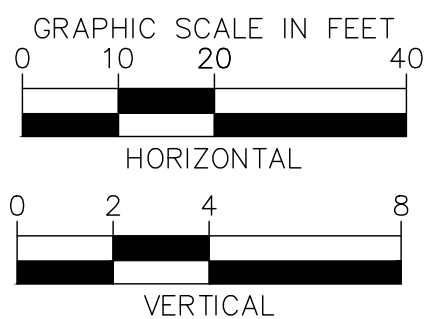
| STRUCTURE NO. | DESCRIPTION                                                                                                                                                 | STATION OFFSET                   |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 98            | INSTALL:<br>(1) 6" X 6" TEE<br>(3) 6" GATE VALVES (N,E,S)<br>RE: LHC DET. 300<br>INV 6" OUT: 757.52<br>N: 1261680.69<br>E: 532759.71                        | STA: 99+79.85<br>OFF: -9.02' LT  |
| 100           | HORIZ. DEFLECTION<br>$\Delta H = 6.28'$ RT<br>PVI<br>$\Delta V = 0.71'$ UP<br>INV 6" IN: 760.41<br>INV 6" OUT: 760.41<br>N: 1261611.77<br>E: 532903.40      | STA: 101+39.21<br>OFF: -9.37' LT |
| 103           | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>(1) 6" PLUG<br>INV 6" IN: 763.18<br>N: 1261563.48<br>E: 532980.93 | STA: 102+30.02<br>OFF: 0.44' RT  |

#### REMOVAL AND ABANDONMENT NOTES

| STRUCTURE NO. | DESCRIPTION                          |
|---------------|--------------------------------------|
| R-5           | ±251 LF 4" WATER LINE<br>ABANDONMENT |

#### NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

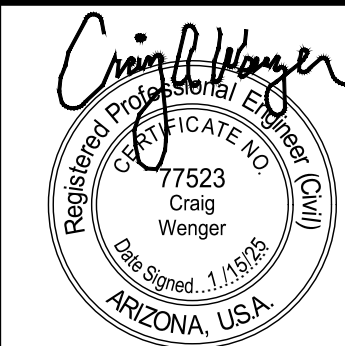


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS |   |   |   |   |
| DATE                    |   |   |   |   |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

**SERENIDAD VEREDA**  
WATERLINE PLAN & PROFILE

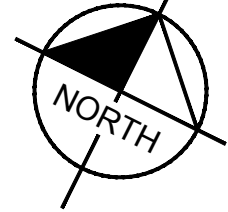
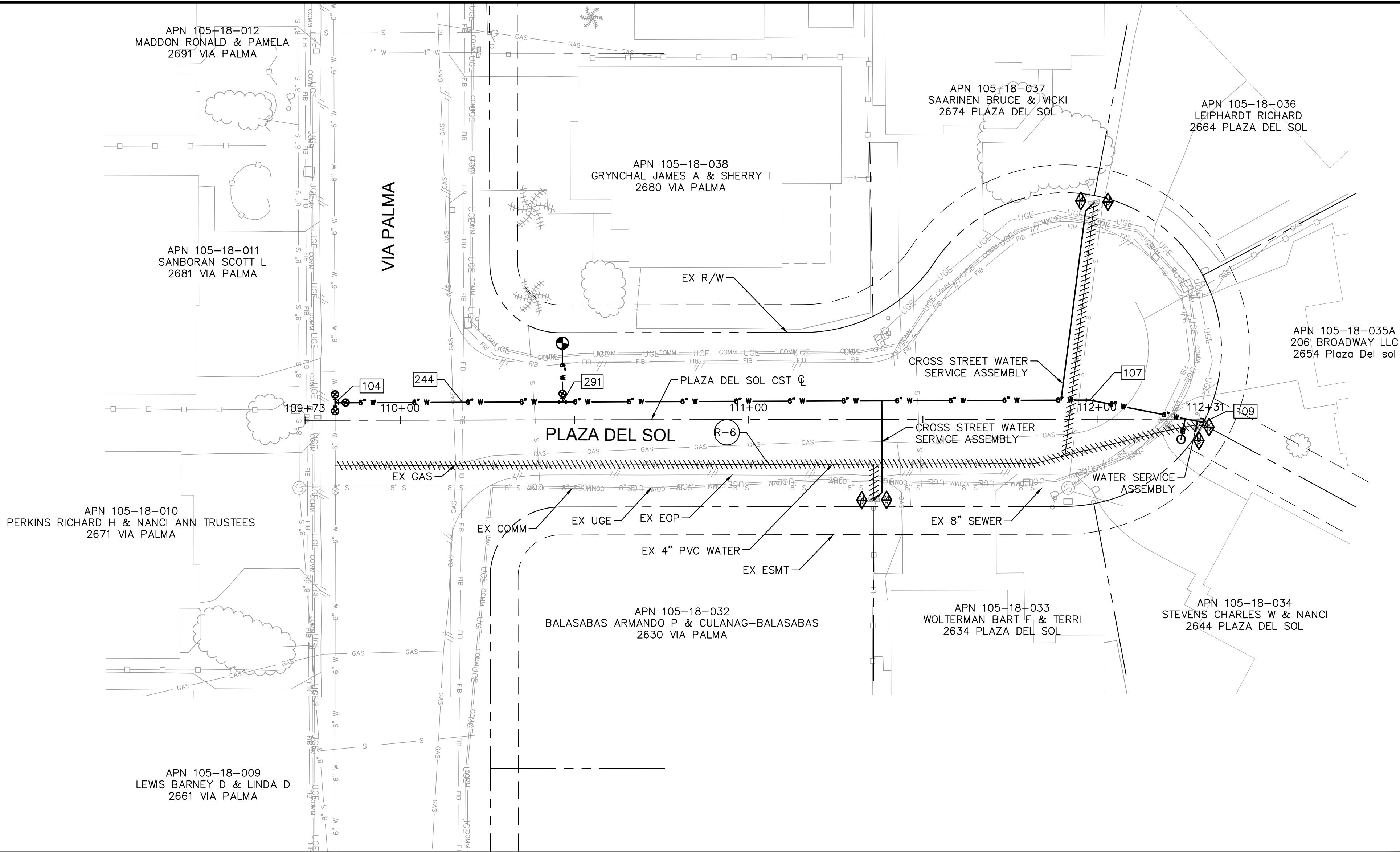


Sheet Number:

WL12

Sheet 15 of 37





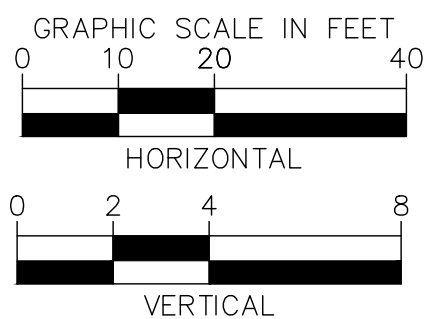
| WATER CONSTRUCTION NOTES |                                                                                                                                                             |                                  |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                 | STATION OFFSET                   |
| 104                      | INSTALL:<br>(1) 6" X 6" TEE<br>(3) 6" GATE VALVES (N,E,S)<br>RE: LHC DET. 300<br>INV 6" OUT: 746.02<br>N: 1261424.60<br>E: 532636.89                        | STA: 109+81.28<br>OFF: -5.00' LT |
| 107                      | INSTALL:<br>(1) 11.25' BEND<br>$\Delta H = 11.29'$ RT<br>INV 6" IN: 748.84<br>INV 6" OUT: 748.84<br>N: 1261330.93<br>E: 532632.18                           | STA: 111+97.88<br>OFF: -5.48' LT |
| 109                      | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>(1) 6" PLUG<br>INV 6" IN: 749.54<br>N: 1261310.93<br>E: 532658.80 | STA: 112+30.55<br>OFF: 0.97' RT  |
| 244                      | PVI<br>$\Delta V = 2.69'$ UP<br>INV 6" IN: 745.07<br>INV 6" OUT: 745.07<br>N: 1261408.76<br>E: 532669.91                                                    | STA: 110+17.91<br>OFF: -5.08' LT |
| 291                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 745.67<br>INV 6" OUT: 745.67<br>N: 1261396.36<br>E: 532695.76                    | STA: 110+46.58<br>OFF: -5.14' LT |

REMOVAL AND ABANDONMENT NOTES

| STRUCTURE NO. | DESCRIPTION                          |
|---------------|--------------------------------------|
| R-6           | ±239 LF 4" WATER LINE<br>ABANDONMENT |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

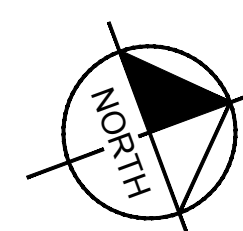
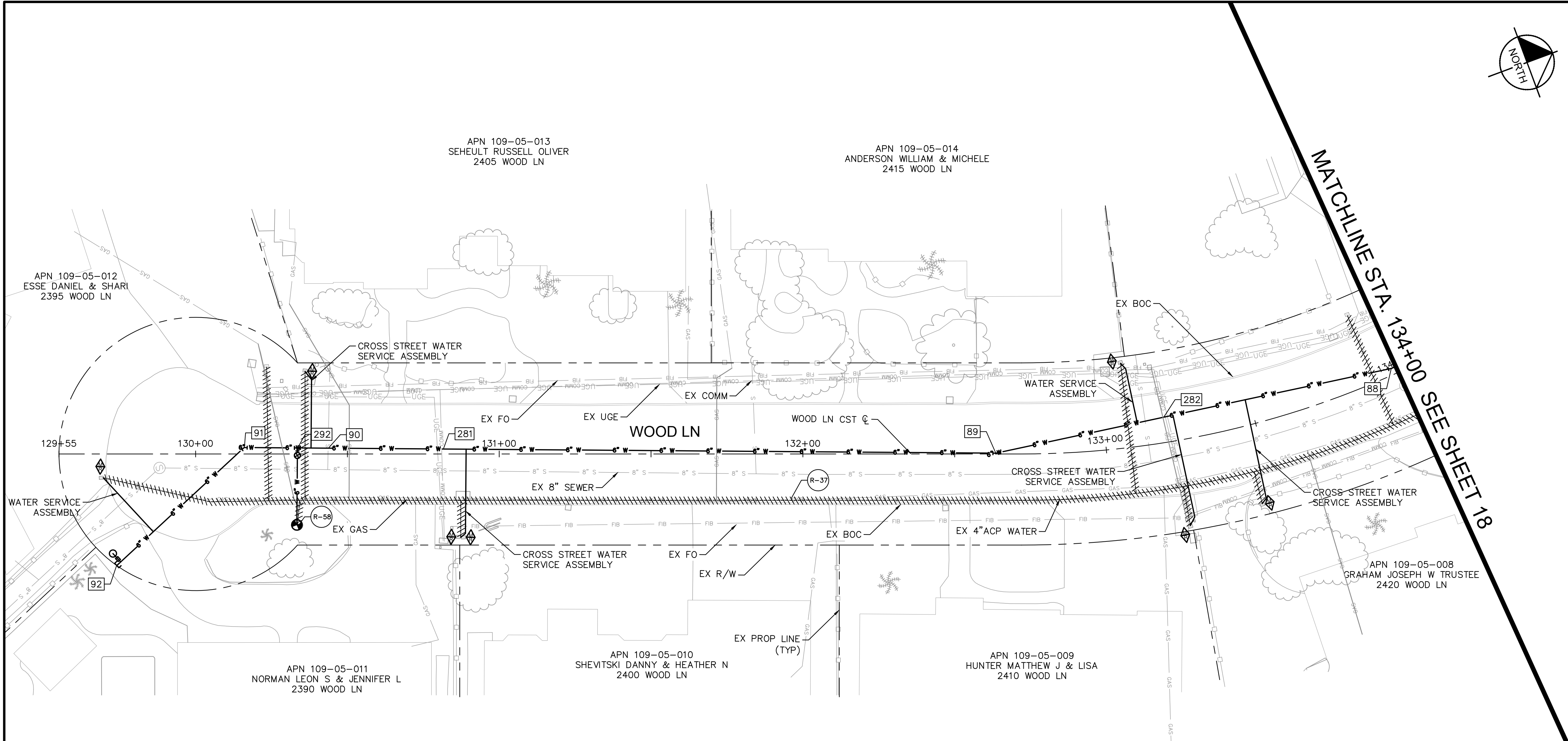
PLAZA DEL SOL WATERLINE  
PLAN & PROFILE

CRAG WENGER  
REGISTERED PROFESSIONAL ENGINEER  
LICENSE NO. 77523  
STATE OF ARIZONA

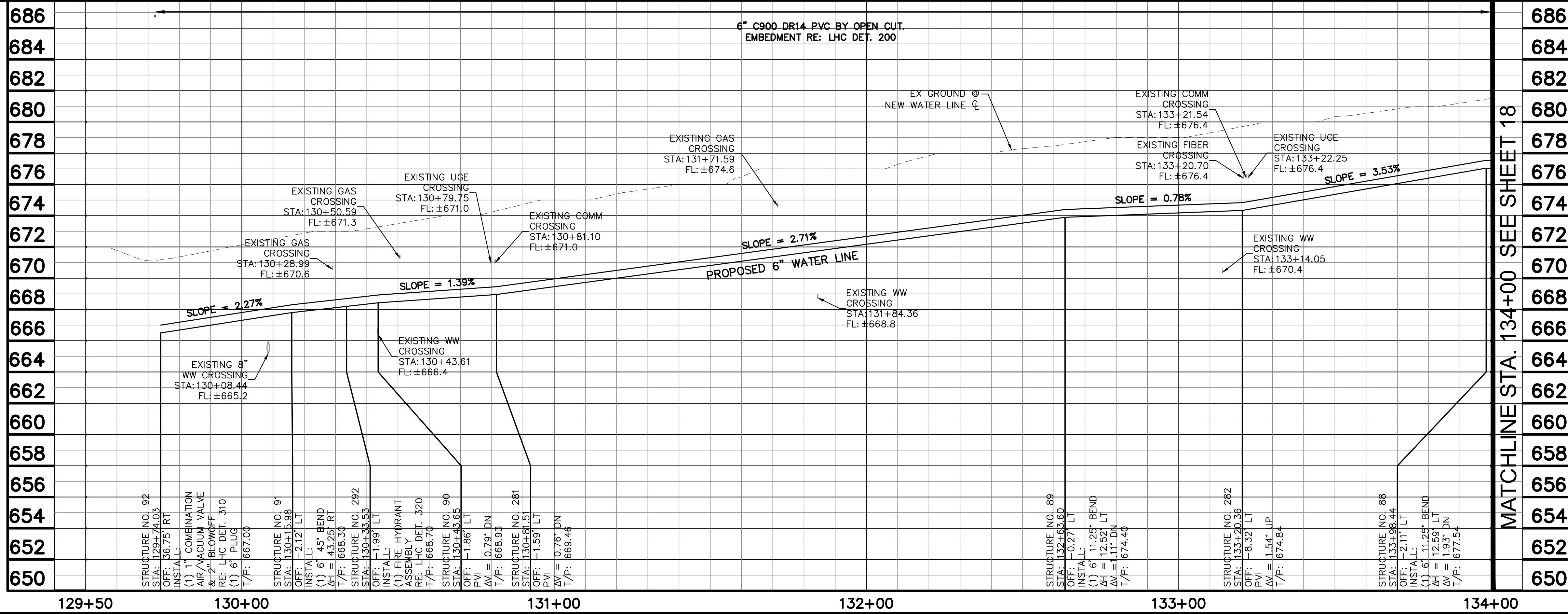
Sheet Number:  
**WL13**  
Sheet 16 of 37



k:\phx\_utility\Projects\191245020-lhc replacements - phase 2\CD\plan sheets\191245020\_WL17.dwg 6/30/2025 12:48 PM SMITH, MEGAN

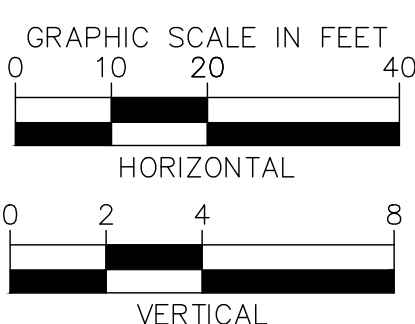


| WATER CONSTRUCTION NOTES |                                                                                                                                                             |                                  |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                 | STATION OFFSET                   |
| 88                       | INSTALL:<br>(1) 6" 11.25' BEND<br>ΔH = 12.59' LT<br>ΔV = 1.93' DN<br>INV 6" IN: 677.04<br>INV 6" OUT: 677.04<br>N: 1260923.68<br>E: 530663.11               | STA: 133+98.44<br>OFF: -2.11' LT |
| 89                       | INSTALL:<br>(1) 6" 11.25' BEND<br>ΔH = 12.52' LT<br>ΔV = 1.11' DN<br>INV 6" IN: 673.90<br>INV 6" OUT: 673.90<br>N: 1260791.82<br>E: 530644.14               | STA: 132+63.60<br>OFF: -0.27' LT |
| 90                       | PVI<br>ΔV = 0.79' DN<br>INV 6" IN: 668.43<br>INV 6" OUT: 668.43<br>N: 1260586.05<br>E: 530566.42                                                            | STA: 130+43.65<br>OFF: -1.86' LT |
| 91                       | INSTALL:<br>(1) 6" 45' BEND<br>ΔH = 43.25' RT<br>INV 6" IN: 667.80<br>INV 6" OUT: 667.80<br>N: 1260560.19<br>E: 530556.59                                   | STA: 130+15.98<br>OFF: -2.12' LT |
| 92                       | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>(1) 6" PLUG<br>INV 6" IN: 666.50<br>N: 1260507.36<br>E: 530578.51 | STA: 129+74.03<br>OFF: 36.75' RT |
| 281                      | PVI<br>ΔV = 0.76' DN<br>INV 6" IN: 668.96<br>INV 6" OUT: 668.96<br>N: 1260621.47<br>E: 530579.80                                                            | STA: 130+81.51<br>OFF: -1.59' LT |
| 282                      | PVI<br>ΔV = 1.54' UP<br>INV 6" IN: 674.34<br>INV 6" OUT: 674.34<br>N: 1260847.71<br>E: 530652.18                                                            | STA: 133+20.36<br>OFF: -8.32' LT |
| 292                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 668.20<br>INV 6" OUT: 668.20<br>N: 1260576.60<br>E: 530562.79                    | STA: 130+33.53<br>OFF: -1.99' LT |



| REMOVAL AND ABANDONMENT NOTES |                                                                                |
|-------------------------------|--------------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                                    |
| R-37                          | ±438 LF 4" WATER LINE<br>ABANDONMENT                                           |
| R-58                          | REMOVE EXISTING FIRE<br>HYDRANT AND APPURTENANCES<br>PER LHC TECH. SPEC. 02550 |

- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

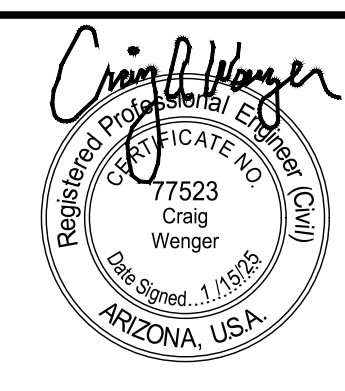


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| DATE                    | - | - | - | - |
| REVISIONS / SUBMISSIONS | - | - | - | - |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

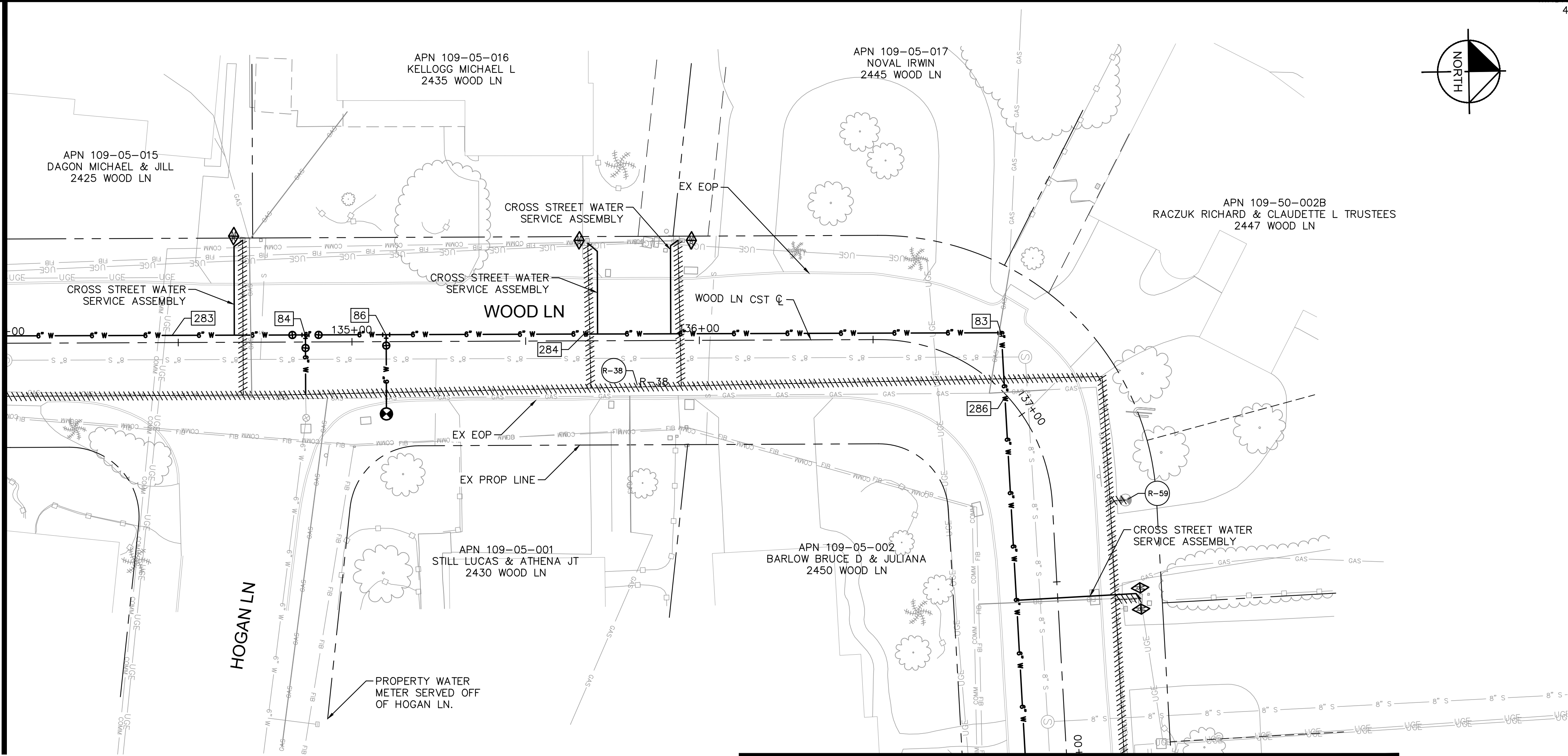
**WOOD LAKE WATERLINE  
PLAN & PROFILE**



Sheet Number:  
**WL14**  
Sheet 17 of 37



MATCHLINE STA. 134+00 SEE SHEET 17



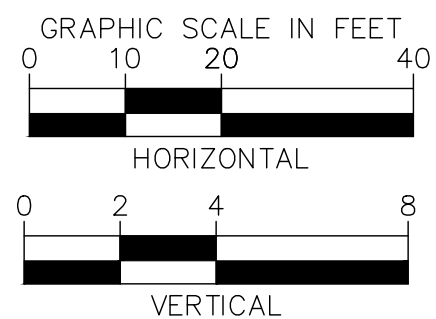
MATCHLINE STA. 138+00 SEE SHEET 19

| WATER CONSTRUCTION NOTES |                                                                                                                                                                                                                                 |                                   |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                                                                     | STATION OFFSET                    |
| 83                       | INSTALL:<br>(1) 6" 90° BEND<br>INV 6" IN: 676.50<br>INV 6" OUT: 676.50<br>N: 1261211.30<br>E: 530640.96                                                                                                                         | STA: 136+81.48<br>OFF: -12.79' LT |
| 84                       | INSTALL:<br>(1) 6" X 6" TEE<br>(3) 6" GATE VALVES (N.E.S)<br>RE: LHC DET. 300<br>± 17 LF 6" WATER<br>LINE (E). CONNECT TO<br>EXISTING 6" WATER LINE<br>INV 6" IN: 677.38<br>INV 6" OUT: 677.38<br>N: 1261011.58<br>E: 530656.34 | STA: 134+86.62<br>OFF: -2.03' LT  |
| 86                       | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 677.55<br>INV 6" OUT: 677.55<br>N: 1261034.75<br>E: 530654.56                                                                                        | STA: 135+09.86<br>OFF: -2.01' LT  |
| 283                      | PVI<br>ΔV = 0.36' UP<br>INV 6" IN: 677.09<br>INV 6" OUT: 677.09<br>N: 1260973.26<br>E: 530659.29                                                                                                                                | STA: 134+48.19<br>OFF: -2.07' LT  |
| 284                      | PVI<br>ΔV = 1.19' DN<br>INV 6" IN: 677.97<br>INV 6" OUT: 677.97<br>N: 1261091.55<br>E: 530650.18                                                                                                                                | STA: 135+66.83<br>OFF: -1.95' LT  |
| 286                      | PVI<br>ΔV = 2.17' UP<br>INV 6" IN: 676.27<br>INV 6" OUT: 676.27<br>N: 1261213.72<br>E: 530659.46                                                                                                                                | STA: 136+93.08<br>OFF: 0.72' RT   |

| REMOVAL AND ABANDONMENT NOTES |                                                                                |
|-------------------------------|--------------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                                    |
| R-38                          | ±426 LF 4" WATER LINE<br>ABANDONMENT                                           |
| R-59                          | REMOVE EXISTING FIRE<br>HYDRANT AND APPURTENANCES<br>PER LHC TECH. SPEC. 02550 |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

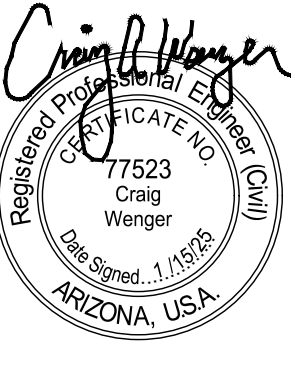
© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

WOOD LAKE WATERLINE  
PLAN & PROFILE



Sheet Number:  
**WL15**  
Sheet 18 of 37



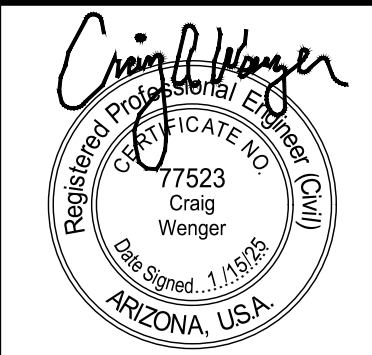


| REMOVAL AND ABANDONMENT NOTES |                                      |
|-------------------------------|--------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                          |
| R-39                          | ±448 LF 4" WATER LINE<br>ABANDONMENT |

**LAKE HAVASU CITY**  
**2025 WATERMAIN**  
**REPLACEMENT PROJECT**  
**CITY PROJECT NO. PW-25-108037-500678**

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

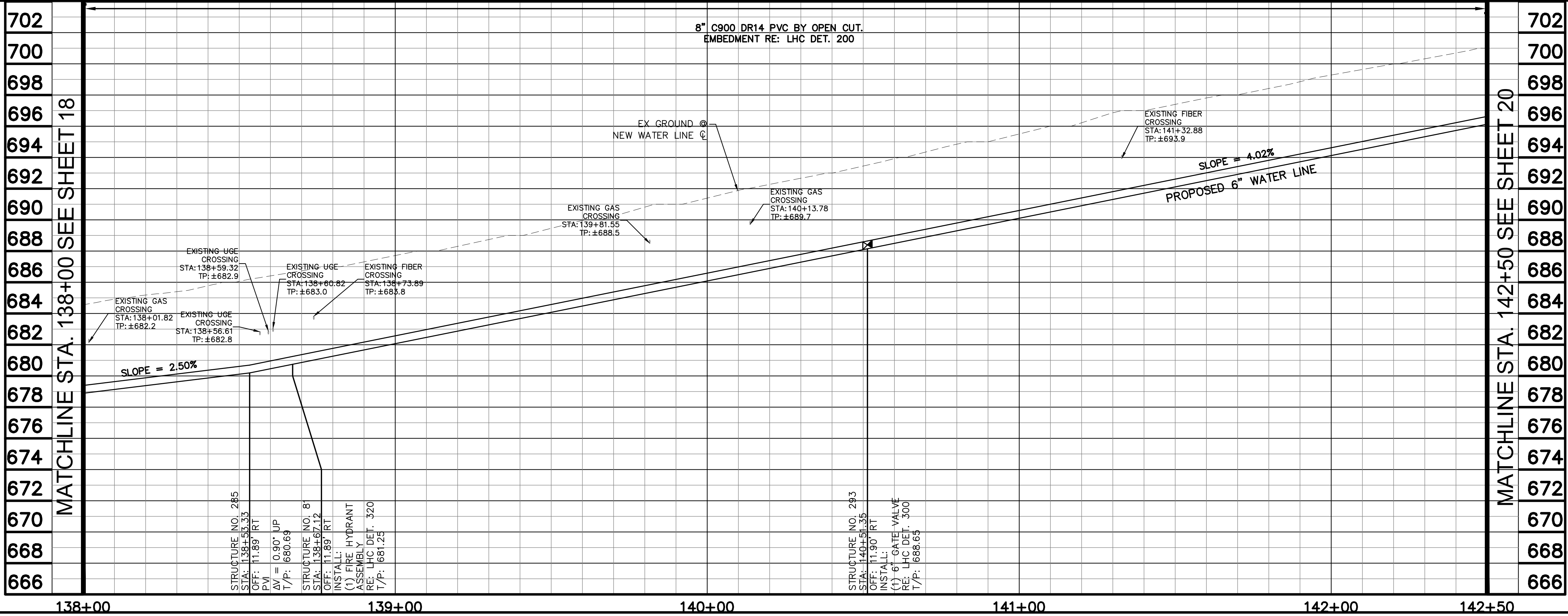
1. CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
2. WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
3. CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
4. CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



# Kimley»»Horn

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

Sheet 19 of 37

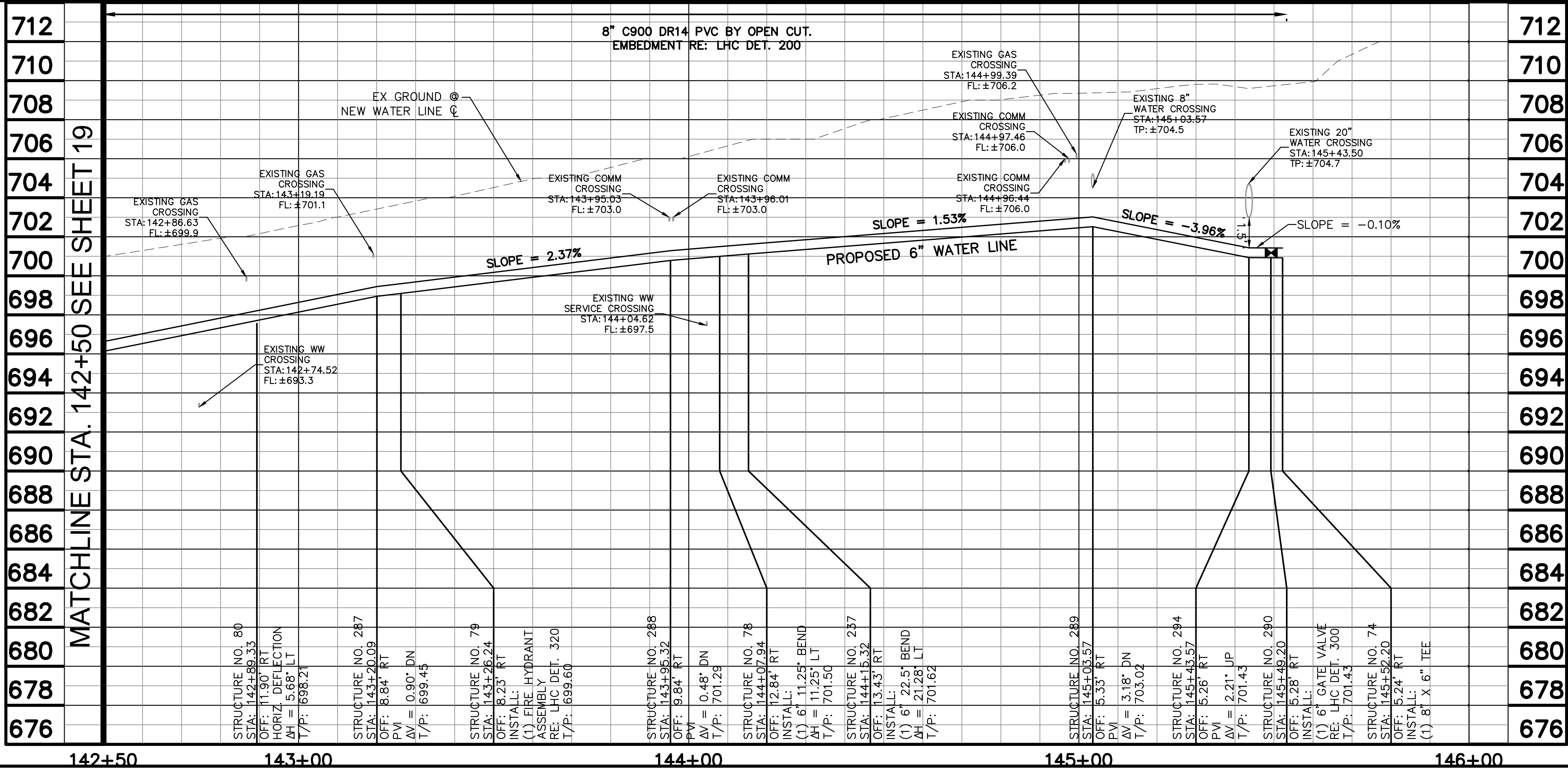
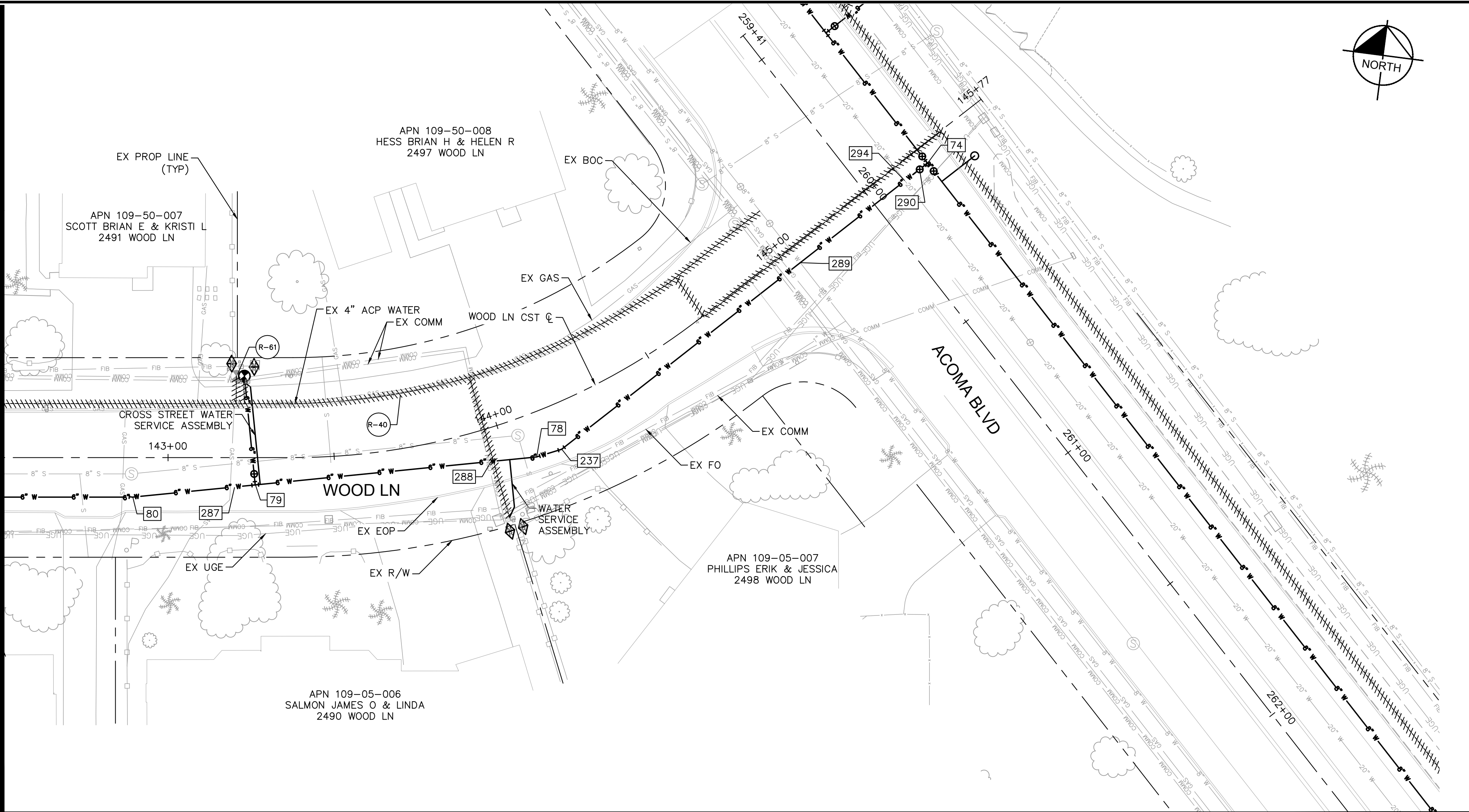




k:\pdx\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_WL20.dwg 6/30/2025 1:09 PM SMITH, MEGAN

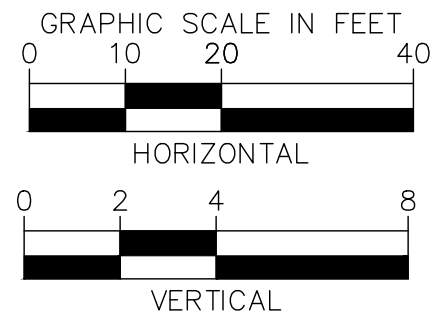
- NOTES:
1. CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  2. WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  3. CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  4. CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.
  5. SEE SHEET 23-34 FOR WORK ON ACOMA BOULEVARD.

MATCHLINE STA. 142+50 SEE SHEET 19



| WATER CONSTRUCTION NOTES |                                                                                                                                       |                                  |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                           | STATION OFFSET                   |
| 74                       | INSTALL:<br>(1) 8" X 6" TEE<br>INV 6" OUT: 700.92<br>N: 1261421.42<br>E: 531471.81                                                    | STA: 145+52.20<br>OFF: 5.24' RT  |
| 78                       | INSTALL:<br>(1) 6" 11.25' BEND<br>ΔH = 11.25' LT<br>INV 6" IN: 701.00<br>INV 6" OUT: 701.00<br>N: 1261318.45<br>E: 531366.61          | STA: 144+07.94<br>OFF: 12.84' RT |
| 79                       | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 6" IN: 699.10<br>INV 6" OUT: 699.10<br>N: 1261299.11<br>E: 531283.73 | STA: 143+26.24<br>OFF: 8.23' RT  |
| 80                       | HORIZ. DEFLECTION<br>ΔH = 5.68' LT<br>INV 6" IN: 697.71<br>INV 6" OUT: 697.71<br>N: 1261290.68<br>E: 531247.61                        | STA: 142+89.33<br>OFF: 11.90' RT |
| 237                      | INSTALL:<br>(1) 6" 22.5' BEND<br>ΔH = 21.28' LT<br>INV 6" IN: 701.12<br>INV 6" OUT: 701.12<br>N: 1261321.70<br>E: 531373.79           | STA: 144+15.32<br>OFF: 13.43' RT |
| 287                      | PVI<br>ΔV = 0.90' DN<br>INV 6" IN: 698.95<br>INV 6" OUT: 698.95<br>N: 1261297.71<br>E: 531277.72                                      | STA: 143+20.09<br>OFF: 8.84' RT  |
| 288                      | PVI<br>ΔV = 0.48' DN<br>INV 6" IN: 700.79<br>INV 6" OUT: 700.79<br>N: 1261315.34<br>E: 531353.30                                      | STA: 143+95.32<br>OFF: 9.84' RT  |
| 289                      | PVI<br>ΔV = 3.18' DN<br>INV 6" IN: 702.52<br>INV 6" OUT: 702.52<br>N: 1261386.74<br>E: 531437.72                                      | STA: 145+03.57<br>OFF: 5.33' RT  |
| 290                      | INSTALL:<br>(1) 6" GATE VALVE<br>RE: LHC DET. 300<br>INV 6" IN: 700.93<br>INV 6" OUT: 700.93<br>N: 1261419.25<br>E: 531469.73         | STA: 145+49.20<br>OFF: 5.28' RT  |
| 294                      | PVI<br>ΔV = 2.21' UP<br>INV 6" IN: 700.93<br>INV 6" OUT: 700.93<br>N: 1261415.26<br>E: 531465.76                                      | STA: 145+43.57<br>OFF: 5.26' RT  |

| REMOVAL AND ABANDONMENT NOTES |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                              |
| R-40                          | ±243 LF 4" WATER LINE ABANDONMENT                                        |
| R-61                          | REMOVE EXISTING FIRE HYDRANT AND APPURTENANCES PER LHC TECH. SPEC. 02550 |



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

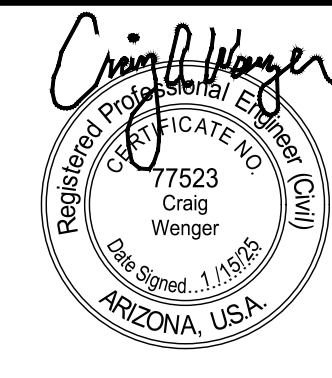


| NO. | REVISIONS / SUBMISSIONS | DATE |
|-----|-------------------------|------|
| #   |                         |      |
| #   |                         |      |
| #   |                         |      |
| #   |                         |      |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

**WOOD LAKE WATERLINE  
PLAN & PROFILE**

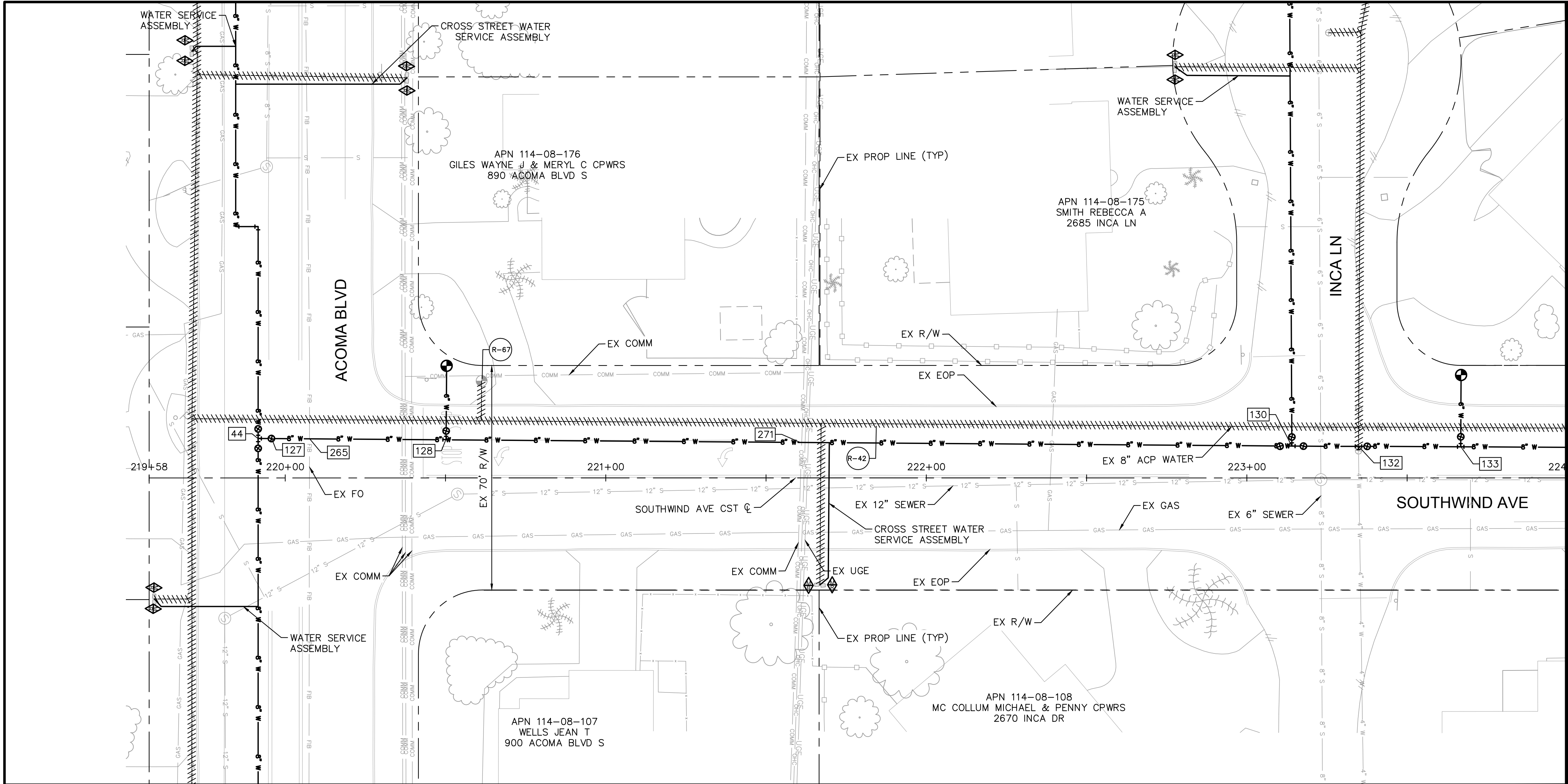


Sheet Number:

WL17

Sheet 20 of 37





MATCHLINE STA. 224+00 SEE SHEET 22

| WATER CONSTRUCTION NOTES |                                                                                                                                                                                                    |                                   |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                                        | STATION OFFSET                    |
| 44                       | INSTALL:<br>(1) 8" X 8" TEE<br>RE: LHC DET. 300<br>INV 8" OUT: 727.12<br>N: 1258832.93<br>E: 534055.14                                                                                             | STA: 219+91.56<br>OFF: -12.32' LT |
| 127                      | INSTALL:<br>(1) 8" GATE VALVE<br>RE: LHC DET. 300<br>INV 8" IN: 727.12<br>INV 8" OUT: 727.12<br>N: 1258835.86<br>E: 534058.07                                                                      | STA: 219+95.69<br>OFF: -12.29' LT |
| 128                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 728.37<br>INV 8" OUT: 728.37<br>N: 1258874.37<br>E: 534096.63                                                           | STA: 220+50.19<br>OFF: -11.89' LT |
| 130                      | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NE,SW)<br>RE: LHC DET. 300<br>INV 8" IN: 736.46<br>INV 8" OUT: 736.46<br>INV 6" OUT: 737.08<br>N: 1259060.81<br>E: 534283.34                    | STA: 223+14.04<br>OFF: -9.95' LT  |
| 132                      | INSTALL:<br>(1) 8" X 4" TEE<br>(1) 8" GATE VALVE (NE)<br>RE: LHC DET. 300<br>CONNECT TO EXISTING<br>4" WATER LINE (SE)<br>INV 8" IN: 737.14<br>INV 8" OUT: 737.14<br>N: 1259075.55<br>E: 534298.01 | STA: 223+34.84<br>OFF: -9.85' LT  |
| 133                      | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 738.17<br>INV 8" OUT: 738.17<br>N: 1259098.15<br>E: 534320.50                                                           | STA: 223+66.71<br>OFF: -9.72' LT  |
| 265                      | PVI<br>$\Delta V = 1.57'$ UP<br>INV 8" IN: 727.14<br>INV 8" OUT: 727.14<br>N: 1258844.25<br>E: 534066.48                                                                                           | STA: 220+07.57<br>OFF: -12.21' LT |
| 271                      | PVI<br>$\Delta V = 0.23'$ UP<br>INV 8" IN: 731.49<br>INV 8" OUT: 731.49<br>N: 1258952.48<br>E: 534174.85                                                                                           | STA: 221+60.73<br>OFF: -11.08' LT |

LAKE HAVASU CITY

2025 WATERMAIN

REPLACEMENT PROJECT

CITY PROJECT NO. PW-25-108037-500678

DESIGNED BY: SVMM

DRAWN BY: JAP

CHECKED BY: CAW

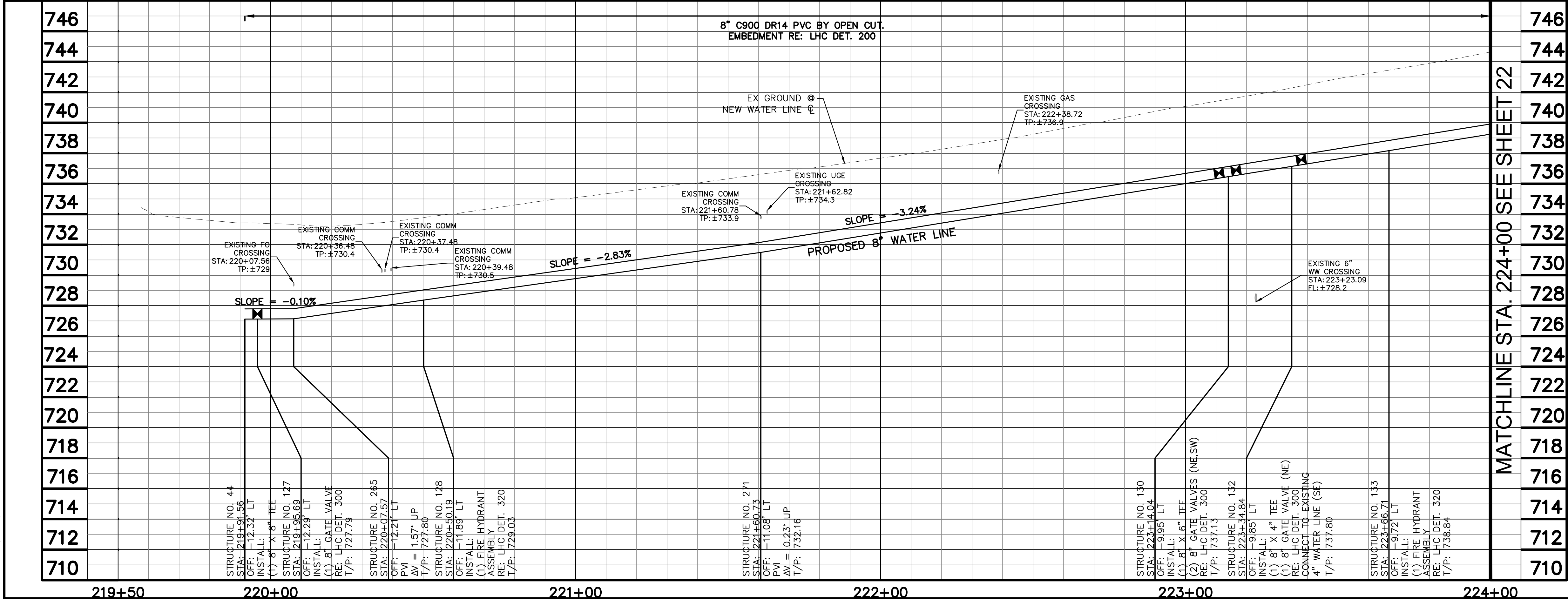
DATE: 01/2025

DWG SCALE: 1" = 20'

SOUTHWIND AVENUE  
WATERLINE PLAN & PROFILE

Sheet Number:  
**WL18**

Sheet 21 of 37



MATCHLINE STA. 224+00 SEE SHEET 22

REMOVAL AND ABANDONMENT NOTES

| STRUCTURE NO. | DESCRIPTION                                                                    |
|---------------|--------------------------------------------------------------------------------|
| R-42          | ±429 LF 8" WATER LINE<br>ABANDONMENT                                           |
| R-67          | REMOVE EXISTING FIRE<br>HYDRANT AND APPURTENANCES<br>PER LHC TECH. SPEC. 02550 |

NOTES:

1. CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.

2. WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.

3. CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.

4. CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.

5. SEE SHEET 23-34 FOR WORK ON ACOMA BLVD

GRAPHIC SCALE IN FEET

0 10 20 40

HORIZONTAL

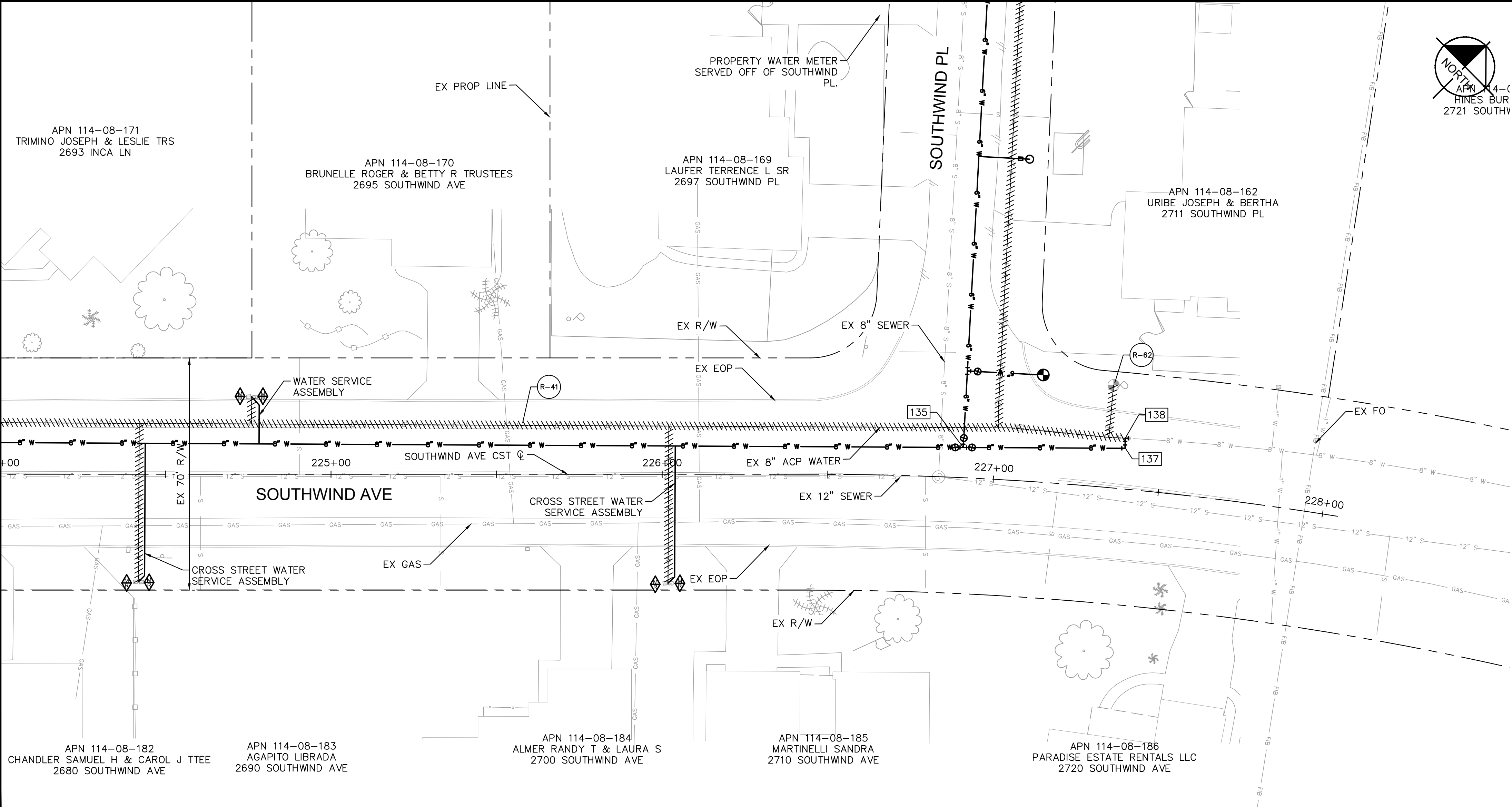
0 2 4 8

VERTICAL



k:\phx\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_WL36.dwg 6/30/2025 1:16 PM SMITH, MEGAN

MATCHLINE STA. 224+00 SEE SHEET 21



| WATER CONSTRUCTION NOTES |                                                                                                                                                           |                |                 |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                               | STATION        | OFFSET          |
| 135                      | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NE,SW)<br>RE: LHC DET. 300<br>INV 8" IN: 748.67<br>INV 8" OUT: 748.76<br>N: 1259327.76<br>E: 534549.39 | STA: 226+90.52 | OFF: -9.12' LT  |
| 137                      | INSTALL:<br>(1) 8" 90° BEND<br>INV 8" IN: 750.26<br>INV 8" OUT: 750.26<br>N: 1259362.37<br>E: 534583.89                                                   | STA: 227+38.78 | OFF: -12.27' LT |
| 138                      | INSTALL:<br>(1) 8" 90° BEND<br>CONNECT TO EXISTING<br>8" WATER LINE (NE)<br>INV 8" IN: 750.36<br>N: 1259364.50<br>E: 534581.71                            | STA: 227+38.48 | OFF: -15.31' LT |

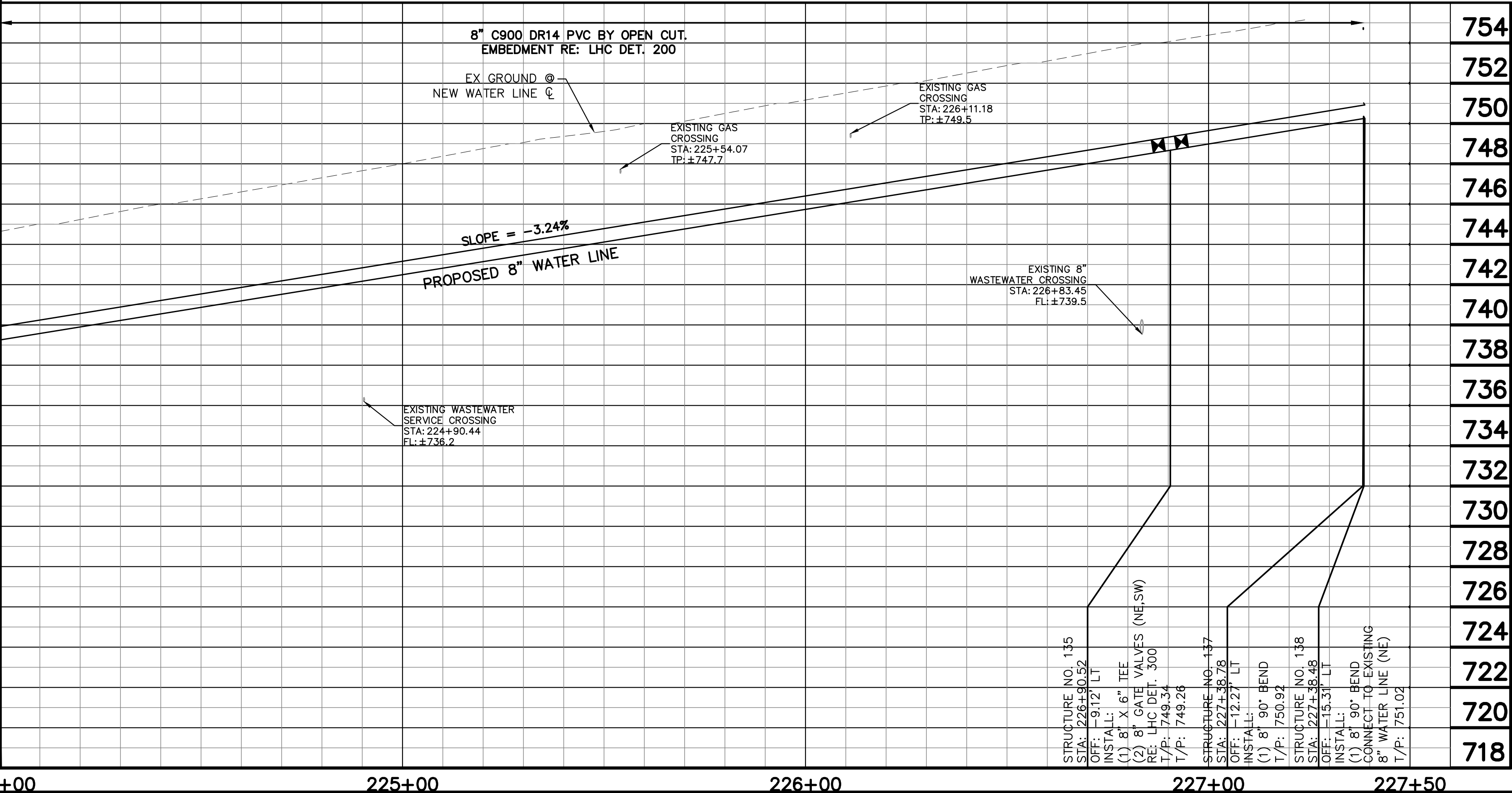
| REMOVAL AND ABANDONMENT NOTES |                                                                                |
|-------------------------------|--------------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                                    |
| R-41                          | ±340 LF 8" WATER LINE<br>ABANDONMENT                                           |
| R-62                          | REMOVE EXISTING FIRE<br>HYDRANT AND APPERTENANCES<br>PER LHC TECH. SPEC. 02550 |



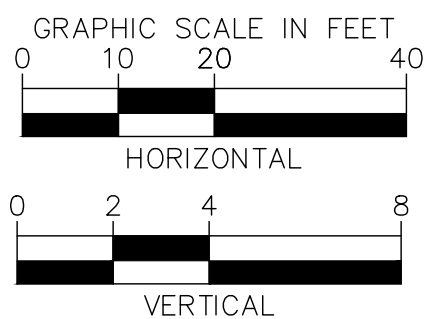
LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|                         |   |   |   |   |
|-------------------------|---|---|---|---|
| NO.                     | # | # | # | # |
| REVISIONS / SUBMISSIONS |   |   |   |   |
| DATE                    |   |   |   |   |

MATCHLINE STA. 224+00 SEE SHEET 21



- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.
  - SEE SHEET 05 FOR WORK ON SOUTHWIND PLACE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

**SOUTHWIND AVENUE  
WATERLINE PLAN & PROFILE**

Sheet Number:  
**WL19**

Sheet 22 of 37

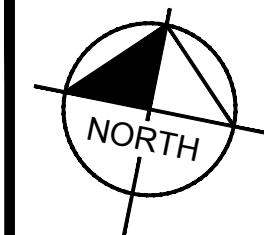






MATCHLINE STA. 264+50 SEE SHEET 23

MATCHLINE STA. 264+50 SEE SHEET 23



MATCHLINE STA. 269+00 SEE SHEET 25

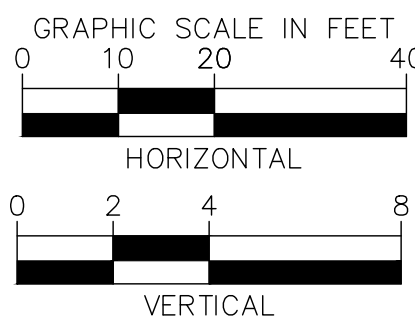
MATCHLINE STA. 269+00 SEE SHEET 25

| WATER CONSTRUCTION NOTES |                                                                                                                                                                                                                                                |                                   |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                                                                                    | STATION OFFSET                    |
| 70                       | PVI<br>ΔV = 1.29' UP<br>INV 8" IN: 703.48<br>INV 8" OUT: 703.48<br>N: 1260994.95<br>E: 531904.00                                                                                                                                               | STA: 266+12.42<br>OFF: -20.18' LT |
| 246                      | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 703.44<br>INV 8" OUT: 703.44<br>N: 1261105.63<br>E: 531791.83                                                                                                          | STA: 264+54.83<br>OFF: -20.19' LT |
| 247                      | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NW,SE)<br>(1) 6" GATE VALVE (NE)<br>RE: LHC DET. 300<br>±11 LF 6" WATER LINE (NE), CONNECT TO EXISTING 6" WATER<br>INV 8" IN: 706.90<br>INV 8" OUT: 706.90<br>N: 1260893.07<br>E: 532007.24 | STA: 267+57.46<br>OFF: -20.17' LT |
| 248                      | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 710.15<br>INV 8" OUT: 710.15<br>N: 1260822.10<br>E: 532079.16                                                                                                          | STA: 268+58.51<br>OFF: -20.17' LT |
| 253                      | PVI<br>ΔV = 1.30' UP<br>INV 8" IN: 703.33<br>INV 8" OUT: 703.33<br>N: 1261102.12<br>E: 531795.38                                                                                                                                               | STA: 264+59.83<br>OFF: -20.19' LT |
| 269                      | PVI<br>ΔV = 1.03' UP<br>INV 8" IN: 708.13<br>INV 8" OUT: 708.13<br>N: 1260856.37<br>E: 532044.43                                                                                                                                               | STA: 268+09.72<br>OFF: -20.17' LT |

| REMOVAL AND ABANDONMENT NOTES |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                              |
| R-44                          | ±450 LF 8" WATER LINE ABANDONMENT                                        |
| R-63                          | REMOVE EXISTING FIRE HYDRANT AND APPURTENANCES PER LHC TECH. SPEC. 02550 |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

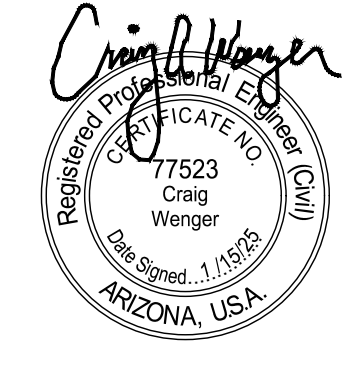


| DATE                    |   |   |   |   |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS |   |   |   |   |
| NO.                     | # | # | # | # |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

**ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE**



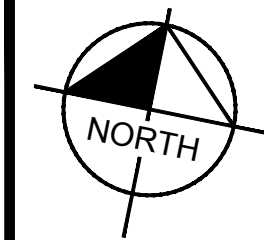
Sheet Number:  
**WL21**

Sheet 24 of 37



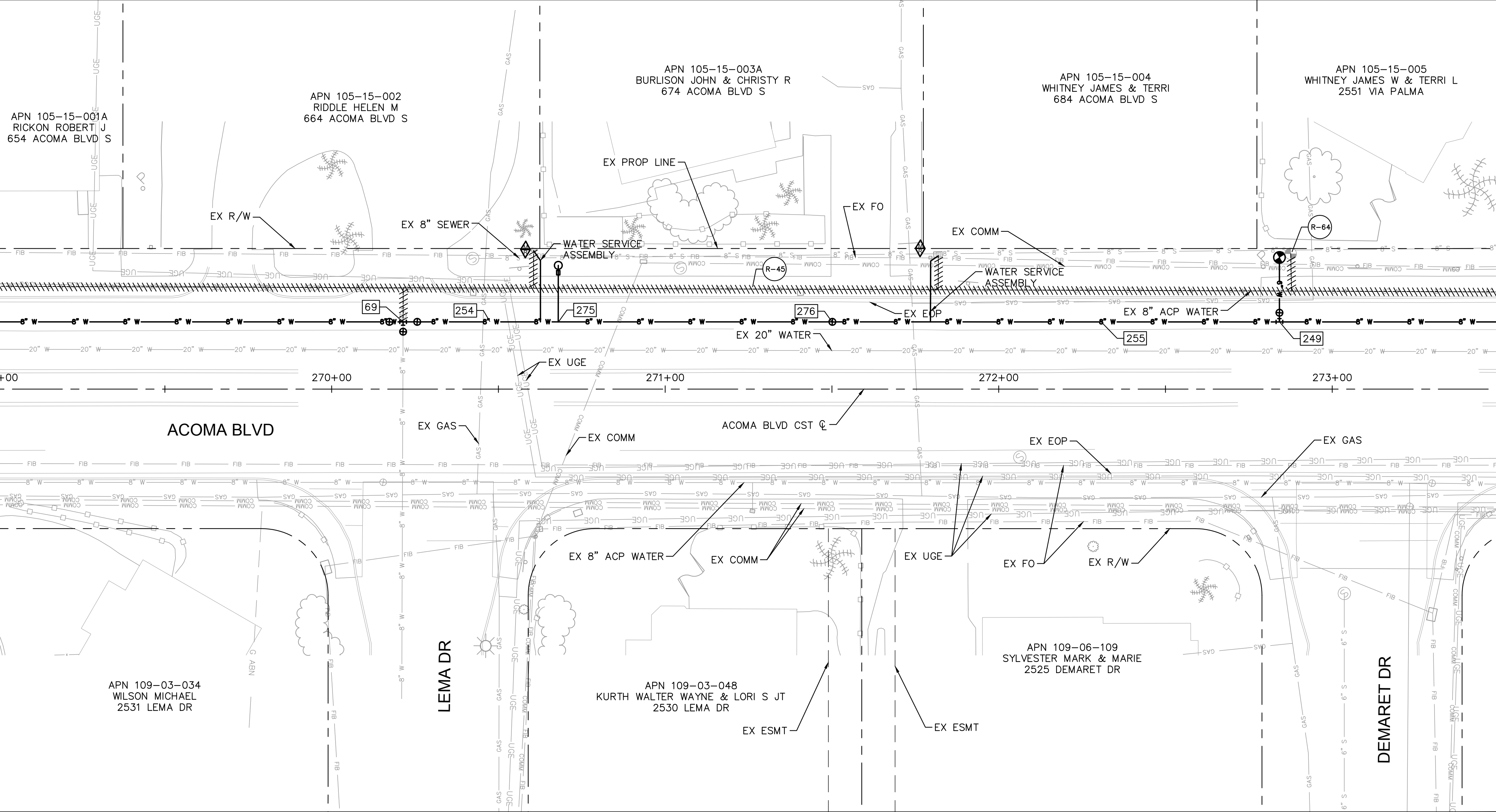
MATCHLINE STA. 269+00 SEE SHEET 24

MATCHLINE STA. 269+00 SEE SHEET 24



MATCHLINE STA. 273+50 SEE SHEET 26

MATCHLINE STA. 273+50 SEE SHEET 26

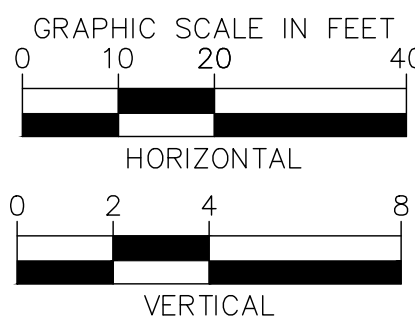


| WATER CONSTRUCTION NOTES |                                                                                                                                                              |                                   |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                  | STATION OFFSET                    |
| 69                       | INSTALL:<br>(1) 8" X 8" TEE<br>(3) 8" GATE VALVES (NW,SE,SW)<br>RE: LHC DET. 300<br>INV 8" IN: 716.91<br>INV 8" OUT: 716.91<br>N: 1260707.67<br>E: 532195.13 | STA: 270+21.42<br>OFF: -20.16' LT |
| 249                      | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 716.15<br>INV 8" OUT: 716.15<br>N: 1260523.13<br>E: 532382.15                        | STA: 272+84.16<br>OFF: -20.15' LT |
| 254                      | PVI<br>ΔV = 2.32' DN<br>INV 8" IN: 717.99<br>INV 8" OUT: 717.99<br>N: 1260659.30<br>E: 532213.75                                                             | STA: 270+47.58<br>OFF: -20.16' LT |
| 255                      | PVI<br>ΔV = 2.23' DN<br>INV 8" IN: 718.18<br>INV 8" OUT: 718.18<br>N: 1260560.70<br>E: 532344.07                                                             | STA: 272+30.67<br>OFF: -20.15' LT |
| 275                      | INSTALL:<br>(1) 1" COMBINATION AIR/VACUUM VALVE & 2" BLOWOFF<br>RE: LHC DET. 310<br>INV 8" IN: 718.01<br>INV 8" OUT: 718.01<br>N: 1260675.00<br>E: 532228.24 | STA: 270+67.94<br>OFF: -20.16' LT |
| 276                      | INSTALL:<br>(1) 8" GATE VALVE<br>RE: LHC DET. 300<br>INV 8" IN: 718.10<br>INV 8" OUT: 718.10<br>N: 1260617.28<br>E: 532286.73                                | STA: 271+50.12<br>OFF: -20.15' LT |

| REMOVAL AND ABANDONMENT NOTES |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                              |
| R-45                          | ±450 LF 8" WATER LINE ABANDONMENT                                        |
| R-64                          | REMOVE EXISTING FIRE HYDRANT AND APPURTENANCES PER LHC TECH. SPEC. 02550 |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

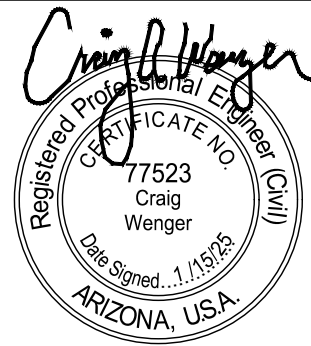


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| DATE                    | - | - | - | - |
| REVISIONS / SUBMISSIONS | - | - | - | - |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

**ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE**



Sheet Number:

WL22

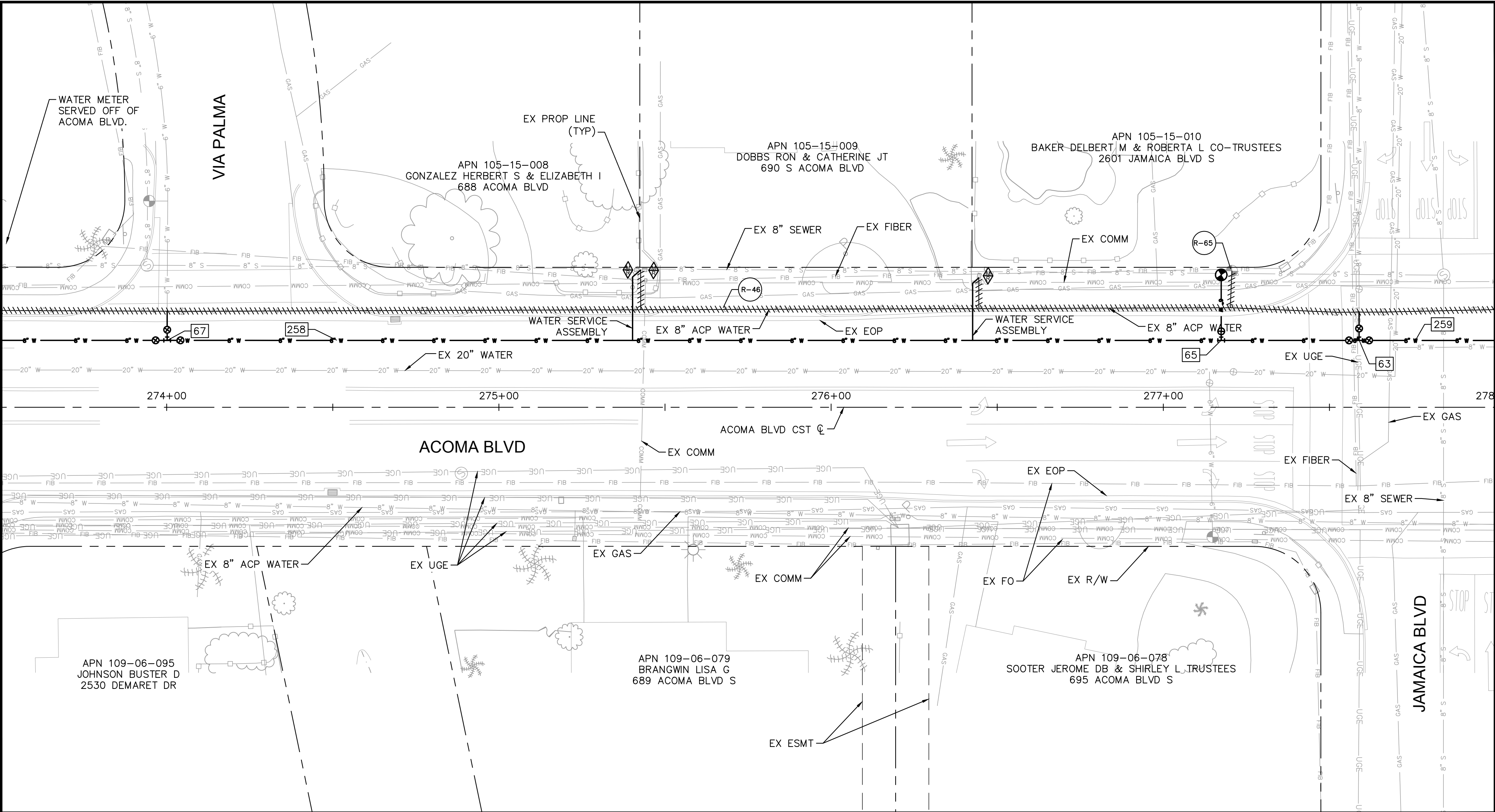
Sheet 25 of 37



MATCHLINE STA. 273+50 SEE SHEET 25

MATCHLINE STA. 273+50 SEE SHEET 25

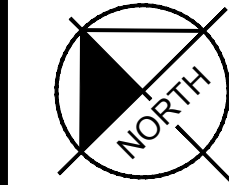
273+50 274+00 275+00 276+00 277+00 278+00



MATCHLINE STA. 278+00 SEE SHEET 27

MATCHLINE STA. 278+00 SEE SHEET 27

278+00



| WATER CONSTRUCTION NOTES |                                                                                                                                                                                                                                               |                                   |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                                                                                   | STATION OFFSET                    |
| 63                       | INSTALL:<br>(1) 8" X 8" TEE<br>(3) 8" GATE VALVES (NW,SE,NE)<br>RE: LHC DET. 300<br>±9 LF 8" WATER LINE (NE). CONNECT TO EXISTING 8" WATER<br>INV 8" IN: 703.16<br>INV 8" OUT: 703.16<br>N: 1260189.67<br>E: 532720.07                        | STA: 277+58.91<br>OFF: -20.12' LT |
| 65                       | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 704.06<br>INV 8" OUT: 704.06<br>N: 1260218.82<br>E: 532690.53                                                                                                         | STA: 277+17.41<br>OFF: -20.12' LT |
| 67                       | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NW,SE)<br>(1) 6" GATE VALVE (NE)<br>RE: LHC DET. 300<br>±9 LF 6" WATER LINE (NE). CONNECT TO EXISTING 6" WATER<br>INV 8" IN: 711.75<br>INV 8" OUT: 711.75<br>N: 1260441.65<br>E: 532464.71 | STA: 274+00.16<br>OFF: -20.14' LT |
| 258                      | PV<br>ΔV = 0.93' UP<br>INV 8" IN: 709.81<br>INV 8" OUT: 709.81<br>N: 1260405.70<br>E: 532501.15                                                                                                                                               | STA: 274+51.35<br>OFF: -20.14' LT |
| 259                      | PV<br>ΔV = 1.04' UP<br>INV 8" IN: 702.80<br>INV 8" OUT: 702.80<br>N: 1260177.80<br>E: 532732.11                                                                                                                                               | STA: 277+75.82<br>OFF: -20.12' LT |

| REMOVAL AND ABANDONMENT NOTES |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                              |
| R-46                          | ±450 LF 8" WATER LINE ABANDONMENT                                        |
| R-65                          | REMOVE EXISTING FIRE HYDRANT AND APPURTENANCES PER LHC TECH. SPEC. 02550 |

- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.

GRAPHIC SCALE IN FEET  
HORIZONTAL  
0 10 20 40  
VERTICAL  
0 2 4 8

ARIZONA BLUE STAKE  
CALL TWO WORKING DAYS BEFORE YOU DIG  
Dial 811 or 602-263-1100  
1-800-STAKE-IT  
(OUTSIDE MARICOPA COUNTY)

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

Sheet Number:  
WL23  
Sheet 26 of 37

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

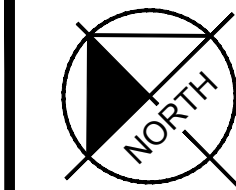
Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE

Sheet Number:  
WL23  
Sheet 26 of 37



MATCHLINE STA. 278+00 SEE SHEET 26



MATCHLINE STA. 282+50 SEE SHEET 28

WATER CONSTRUCTION NOTES

| STRUCTURE NO. | DESCRIPTION                                                                                                                                                                                                                                    | STATION        | OFFSET          |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|
| 59            | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 708.40<br>INV 8" OUT: 708.40<br>N: 1259902.56<br>E: 533011.03                                                                                                          | STA: 281+67.68 | OFF: -20.10' LT |
| 60            | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NW,SE)<br>(1) 6" GATE VALVE (NE)<br>RE: LHC DET. 300<br>±10 LF 6" WATER LINE (NE), CONNECT TO EXISTING 6" WATER<br>INV 8" IN: 709.02<br>INV 8" OUT: 709.02<br>N: 1259889.80<br>E: 533023.97 | STA: 281+85.85 | OFF: -20.10' LT |
| 260           | INSTALL:<br>(1) 8" 45" VERT. BEND<br>ΔV = 44.90' DN<br>INV 8" IN: 702.15<br>INV 8" OUT: 702.15<br>N: 1260042.72<br>E: 532868.99                                                                                                                | STA: 279+68.13 | OFF: -20.11' LT |
| 261           | INSTALL:<br>(1) 8" 45" VERT. BEND<br>ΔV = 44.97' UP<br>INV 8" IN: 700.65<br>INV 8" OUT: 700.65<br>N: 1259994.47<br>E: 532917.89                                                                                                                | STA: 280+36.83 | OFF: -20.11' LT |
| 270           | PV<br>ΔV = 1.54' UP<br>INV 8" IN: 709.54<br>INV 8" OUT: 709.54<br>N: 1259879.05<br>E: 533034.86                                                                                                                                                | STA: 282+01.16 | OFF: -20.10' LT |
| 271           | BEGIN 16" STEEL CASING BY BORE PER LHC SPEC. 02445<br>INSTALL:<br>(1) 8" GATE VALVE (NW)<br>RE: LHC DET. 300<br>INV 8" IN: 700.60<br>INV 8" OUT: 700.60<br>N: 1260030.13<br>E: 532881.76                                                       | STA: 279+86.06 | OFF: -20.11' LT |
| 272           | END 16" STEEL CASING BY BORE PER LHC SPEC. 02445<br>INSTALL:<br>(1) 8" GATE VALVE (SE)<br>RE: LHC DET. 300<br>INV 8" IN: 700.63<br>INV 8" OUT: 700.63<br>N: 1260008.34<br>E: 532903.84                                                         | STA: 280+17.08 | OFF: -20.11' LT |
| 277           | INSTALL:<br>(1) 8" 45" VERT. BEND<br>ΔV = 45.03' UP<br>INV 8" IN: 700.58<br>INV 8" OUT: 700.58<br>N: 1260041.63<br>E: 532870.10                                                                                                                | STA: 279+69.69 | OFF: -20.11' LT |
| 278           | INSTALL:<br>(1) 8" 45" VERT. BEND<br>ΔV = 44.01' DN<br>INV 8" IN: 704.09<br>INV 8" OUT: 704.09<br>N: 1259992.06<br>E: 532920.34                                                                                                                | STA: 280+40.26 | OFF: -20.11' LT |

REMOVAL AND ABANDONMENT NOTES

| STRUCTURE NO. | DESCRIPTION                       |
|---------------|-----------------------------------|
| R-47          | ±450 LF 8" WATER LINE ABANDONMENT |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.

**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| DATE                    | - | - | - | - |
| REVISIONS / SUBMISSIONS | - | - | - | - |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

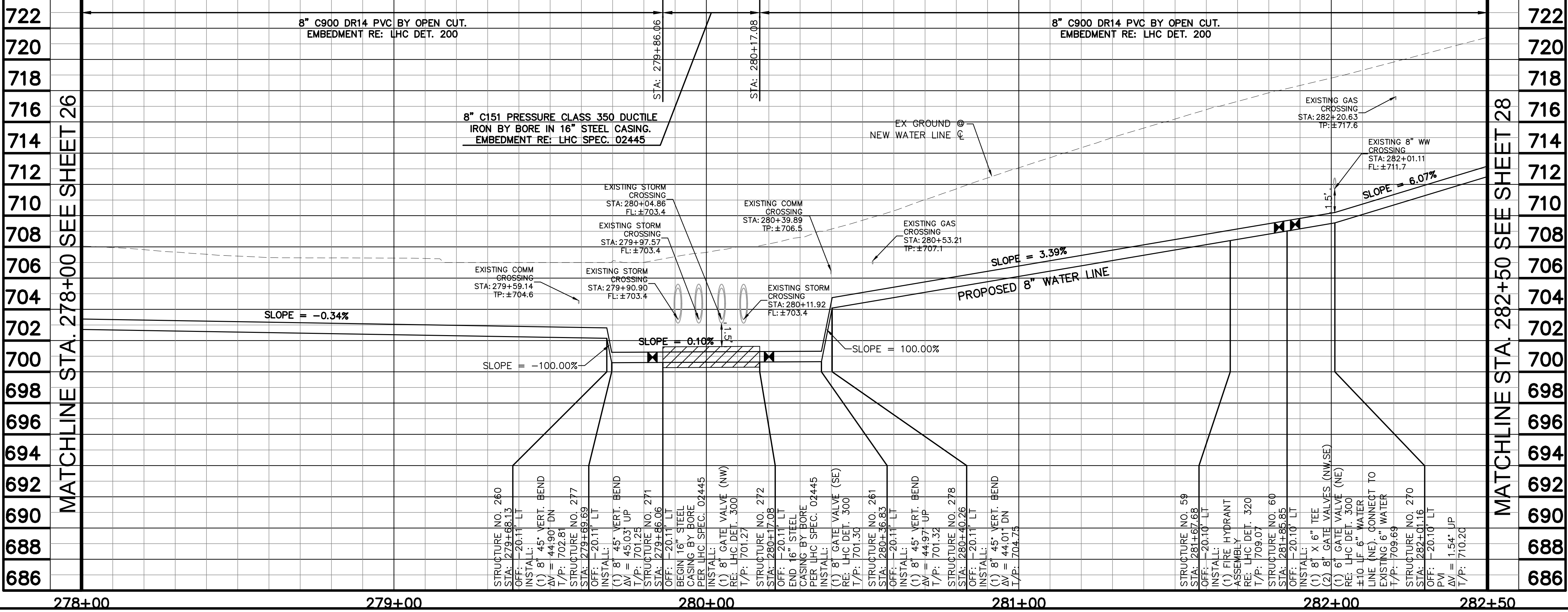
**ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE**



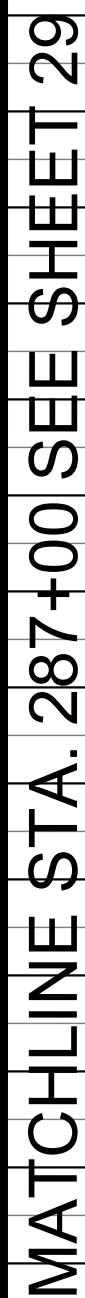
Sheet Number:

WL24

Sheet 27 of 37



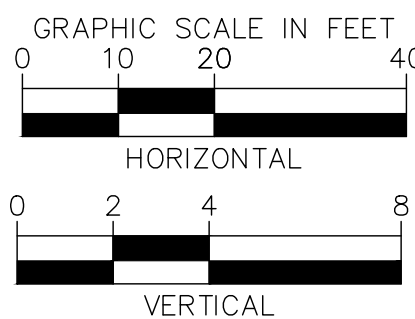




| REMOVAL AND ABANDONMENT NOTES ○ |                                                                                |
|---------------------------------|--------------------------------------------------------------------------------|
| STRUCTURE NO.                   | DESCRIPTION                                                                    |
| R-48                            | ±450 LF 8" WATER LINE<br>ABANDONMENT                                           |
| R-66                            | REMOVE EXISTING FIRE<br>HYDRANT AND APPURTENANCES<br>PER LHC TECH. SPEC. 02550 |

NOTES:

1. CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
2. WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
3. CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
4. CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



# Kimley»»Horn

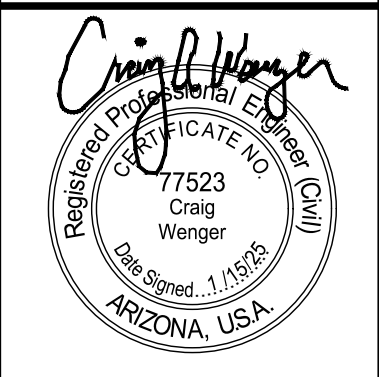
© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

| NO. | REVISIONS / SUBMISSIONS | DATE |
|-----|-------------------------|------|
| #   | -                       | -    |
| #   | -                       | -    |
| #   | -                       | -    |
| #   | -                       | -    |

**LAKE HAVASU CITY**  
**2025 WATERMAIN**  
**REPLACEMENT PROJECT**  
**CITY PROJECT NO. PW-25-108037-500678**

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

## ACOMA BOULEVARD WATERLINE PLAN & PROFILE



Sheet Number:  
**WL25**  
Sheet 28 of 37



k:\pnh\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_WL59.dwg 6/30/2025 2:14 PM SMITH, MEGAN

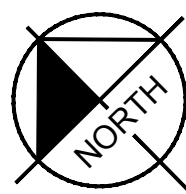
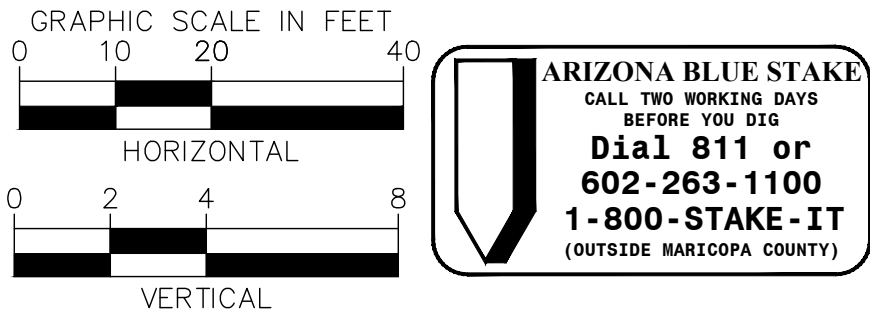
MATCHLINE STA. 287+00 SEE SHEET 28

MATCHLINE STA. 287+00 SEE SHEET 28

MATCHLINE STA. 291+50 SEE SHEET 30

MATCHLINE STA. 291+50 SEE SHEET 30

| STRUCTURE NO. | DESCRIPTION                       |
|---------------|-----------------------------------|
| R-49          | ±510 LF 8" WATER LINE ABANDONMENT |



WATER CONSTRUCTION NOTES

| STRUCTURE NO. | DESCRIPTION                                                                                                                                                                                                                                   | STATION OFFSET                    |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 51            | INSTALL:<br>(1) 8" 90° BEND<br>INV 8" IN: 715.90<br>INV 8" OUT: 715.90<br>N: 1259219.70<br>E: 533653.22                                                                                                                                       | STA: 291+04.41<br>OFF: 14.94' RT  |
| 52            | INSTALL:<br>(1) 8" 90° BEND<br>INV 8" IN: 714.71<br>INV 8" OUT: 714.71<br>N: 1259244.62<br>E: 533677.80                                                                                                                                       | STA: 291+04.42<br>OFF: -20.06' LT |
| 53            | PVI<br>ΔV = 1.88' UP<br>INV 8" IN: 714.21<br>INV 8" OUT: 714.21<br>N: 1259255.00<br>E: 533667.28                                                                                                                                              | STA: 290+89.63<br>OFF: -20.06' LT |
| 55            | INSTALL:<br>(1) 8" X 6" TEE<br>(1) 8" GATE VALVE (NW,SE)<br>(1) 6" GATE VALVE (NE)<br>RE: LHC DET. 300<br>±10 LF 6" WATER LINE (NE). CONNECT TO EXISTING 6" WATER<br>INV 8" IN: 720.12<br>INV 8" OUT: 720.12<br>N: 1259454.65<br>E: 533464.95 | STA: 288+05.39<br>OFF: -20.07' LT |
| 250           | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 719.97<br>INV 8" OUT: 719.97<br>N: 1259447.40<br>E: 533472.30                                                                                             | STA: 288+15.71<br>OFF: -20.07' LT |
| 263           | INSTALL:<br>(1) 8" 45° VERT. BEND<br>ΔV = 44.97' UP<br>INV 8" IN: 716.38<br>INV 8" OUT: 716.38<br>N: 1259414.68<br>E: 533505.46                                                                                                               | STA: 288+62.30<br>OFF: -20.07' LT |
| 273           | END 16" STEEL CASING BY BORE PER LHC SPEC. 02445<br>INSTALL:<br>(1) 8" GATE VALVE (SE)<br>RE: LHC DET. 300<br>INV 8" IN: 714.21<br>INV 8" OUT: 714.21<br>N: 1259258.51<br>E: 533663.72                                                        | STA: 290+84.63<br>OFF: -20.06' LT |
| 274           | BEGIN 16" STEEL CASING BY BORE PER LHC SPEC. 02445<br>INSTALL:<br>(1) 8" GATE VALVE (NW)<br>RE: LHC DET. 300<br>INV 8" IN: 714.15<br>INV 8" OUT: 714.15<br>N: 1259299.64<br>E: 533622.05                                                      | STA: 290+26.08<br>OFF: -20.06' LT |
| 279           | INSTALL:<br>(1) 8" 45° VERT. BEND<br>ΔV = 44.56' DN<br>INV 8" IN: 719.30<br>INV 8" OUT: 719.30<br>N: 1259416.73<br>E: 533503.38                                                                                                               | STA: 288+59.38<br>OFF: -20.07' LT |
| 300           | INSTALL:<br>(1) 8" 45° VERT. BEND<br>ΔV = 45.03' UP<br>INV 8" IN: 714.14<br>INV 8" OUT: 714.14<br>N: 1259309.06<br>E: 533612.50                                                                                                               | STA: 290+12.67<br>OFF: -20.06' LT |
| 301           | INSTALL:<br>(1) 8" 45° VERT. BEND<br>ΔV = 44.97' DN<br>INV 8" IN: 716.23<br>INV 8" OUT: 716.23<br>N: 1259310.53<br>E: 533611.00                                                                                                               | STA: 290+10.57<br>OFF: -20.06' LT |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.

**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

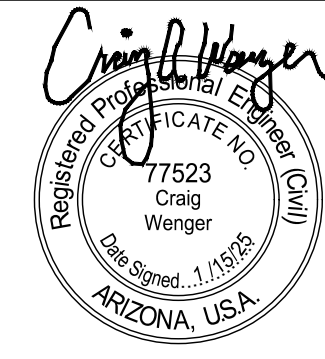


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| DATE                    |   |   |   |   |
| REVISIONS / SUBMISSIONS |   |   |   |   |

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

**ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE**

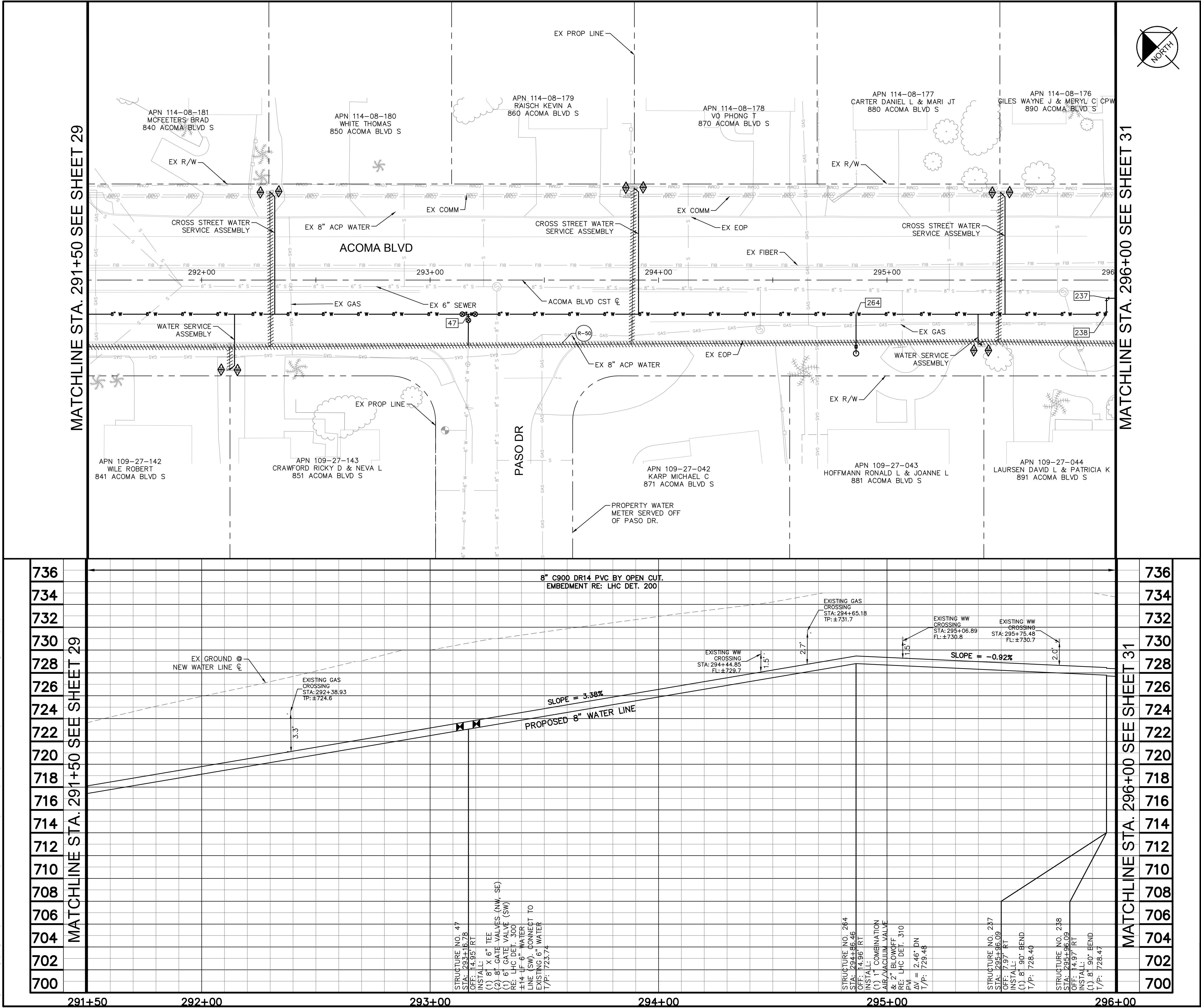


Sheet Number:

WL26

Sheet 29 of 37





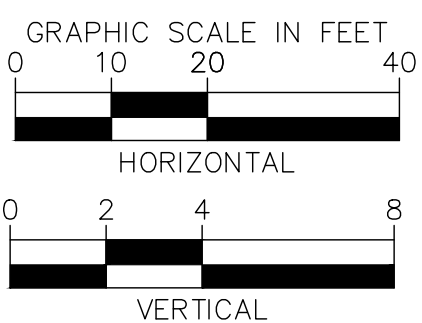
| WATER CONSTRUCTION NOTES |                                                                                                                                                                                                                                                       |                                  |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                                                                                           | STATION OFFSET                   |
| 47                       | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NW, SE)<br>(1) 6" GATE VALVE (SW)<br>RE: LHC DET. 300<br>±14 LF 6" WATER<br>LINE (SW). CONNECT TO<br>EXISTING 6" WATER<br>INV 8" IN: 723.08<br>INV 8" OUT: 723.08<br>N: 1259070.54<br>E: 533804.38 | STA: 293+16.78<br>OFF: 14.95' RT |
| 237                      | INSTALL:<br>(1) 8" 90° BEND<br>INV 8" IN: 727.74<br>INV 8" OUT: 727.74<br>N: 1258879.34<br>E: 534008.11                                                                                                                                               | STA: 295+96.09<br>OFF: 7.97' RT  |
| 238                      | INSTALL:<br>(1) 8" 90° BEND<br>INV 8" IN: 727.80<br>INV 8" OUT: 727.80<br>N: 1258874.36<br>E: 534003.19                                                                                                                                               | STA: 295+96.09<br>OFF: 14.97' RT |
| 264                      | INSTALL:<br>(1) 1" COMBINATION<br>AIR/VACUUM VALVE<br>& 2" BLOWOFF<br>RE: LHC DET. 310<br>PVI<br>ΔV = 2.46' DN<br>INV 8" IN: 728.81<br>INV 8" OUT: 728.81<br>N: 1258951.36<br>E: 533925.16                                                            | STA: 294+86.46<br>OFF: 14.96' RT |

REMOVAL AND ABANDONMENT NOTES

| STRUCTURE NO. | DESCRIPTION                          |
|---------------|--------------------------------------|
| R-50          | ±450 LF 8" WATER LINE<br>ABANDONMENT |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

Designed by: SWM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

**ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE**

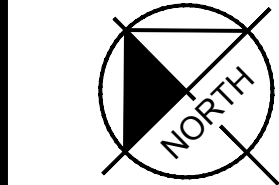
Sheet Number:  
**WL27**

Sheet 30 of 37



MATCHLINE STA. 296+00 SEE SHEET 30

MATCHLINE STA. 296+00 SEE SHEET 30



MATCHLINE STA. 300+50 SEE SHEET 32

MATCHLINE STA. 300+50 SEE SHEET 32

| WATER CONSTRUCTION NOTES |                                                                                                                                                           |                                 |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                               | STATION OFFSET                  |
| 44                       | INSTALL:<br>(1) 8" X 8" TEE<br>(2) 8" GATE VALVES (NW,SE)<br>RE: LHC DET. 300<br>INV 8" IN: 727.12<br>INV 8" OUT: 727.12<br>N: 1258832.93<br>E: 534055.14 | STA: 296+62.16<br>OFF: 7.97' RT |
| 267                      | PVI<br>ΔV = 0.25' UP<br>INV 8" IN: 724.46<br>INV 8" OUT: 724.46<br>N: 1258630.61<br>E: 534260.18                                                          | STA: 299+50.22<br>OFF: 7.98' RT |

| REMOVAL AND ABANDONMENT NOTES |                                      |
|-------------------------------|--------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                          |
| R-51                          | ±450 LF 8" WATER LINE<br>ABANDONMENT |

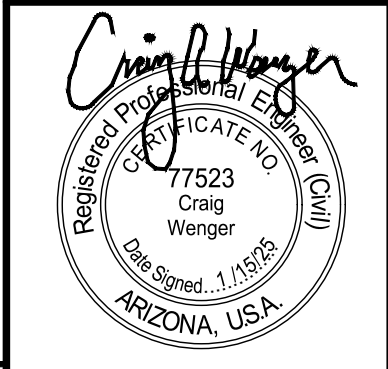


| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS |   |   |   |   |
| DATE                    |   |   |   |   |

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

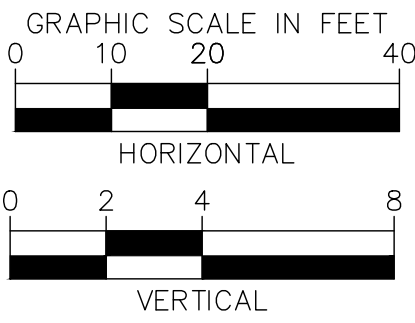
|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE



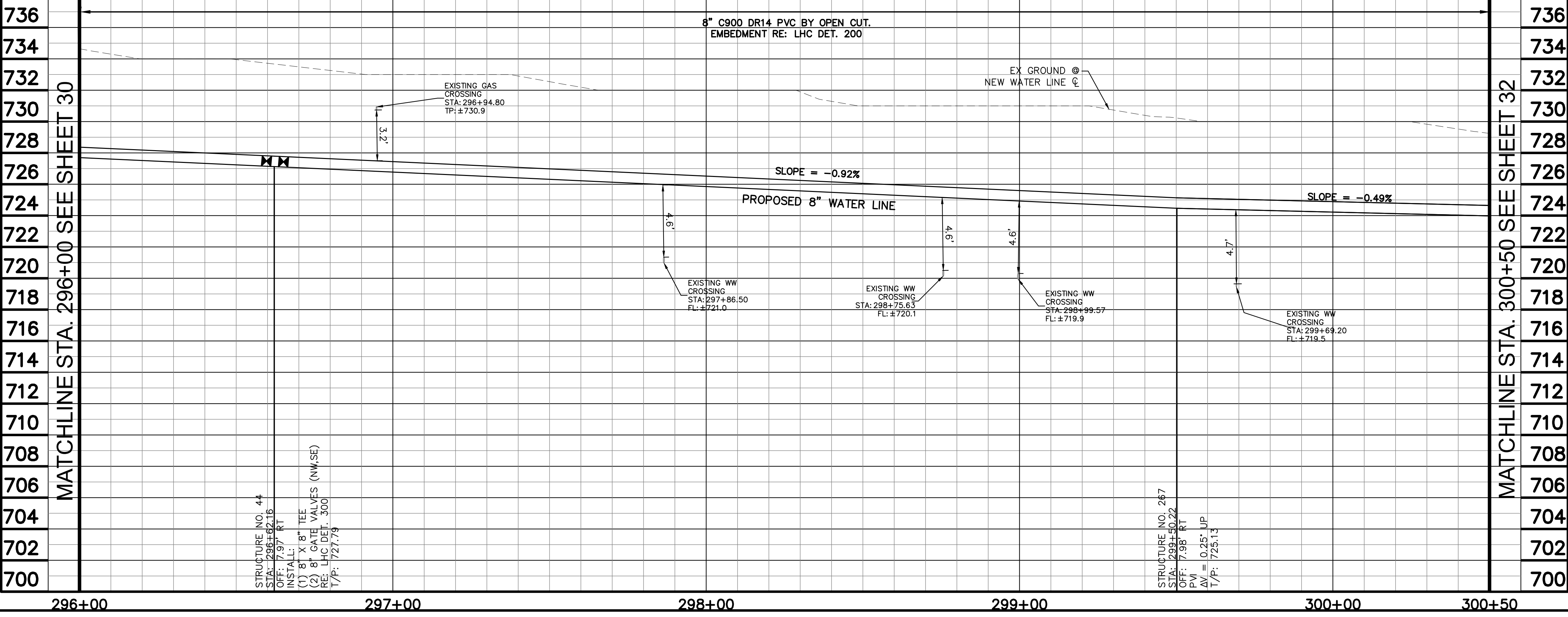
Sheet Number:  
WL28  
Sheet 31 of 37

- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.
  - SEE SHEET 21-22 FOR WORK ON SOUTHWIND AVENUE.

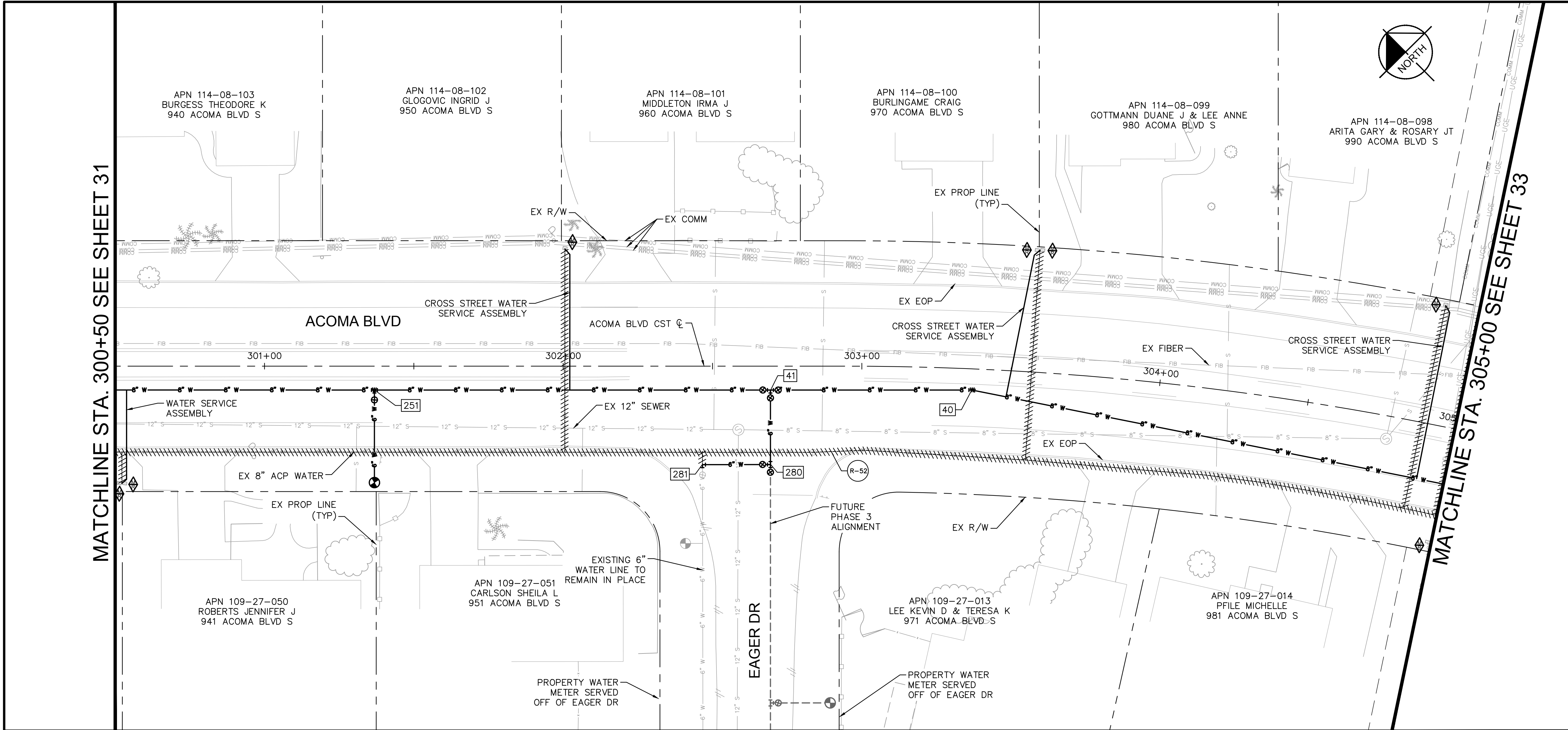


Kimley»Horn

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



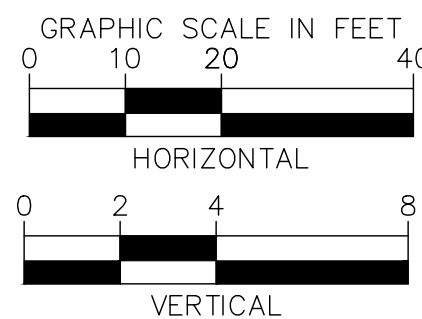




| WATER CONSTRUCTION NOTES |                                                                                                                                                                                                                 |                |                |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                                                     | STATION        | OFFSET         |
| 40                       | INSTALL:<br>(1) 8" 11.25' BEND<br>$\Delta H = 11.27'$ RT<br>INV 8" IN: 722.59<br>INV 8" OUT: 722.59<br>N: 1258359.04<br>E: 534535.39                                                                            | STA: 303+37.17 | OFF: 7.09' RT  |
| 41                       | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (NW,SE)<br>(1) 6" GATE VALVE (SW)<br>RE: LHC DET. 300<br>25 LF 6" WATER LINE (SW)<br>INV 8" IN: 722.91<br>INV 8" OUT: 722.91<br>N: 1258406.42<br>E: 534487.38 | STA: 302+69.41 | OFF: 8.00' RT  |
| 251                      | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 723.56<br>INV 8" OUT: 723.56<br>N: 1258499.55<br>E: 534393.00                                                                           | STA: 301+36.81 | OFF: 7.99' RT  |
| 280                      | INSTALL:<br>(1) 6" X 6" TEE<br>(2) 6" GATE VALVES (NW,SW)<br>RE: LHC DET. 300<br>23 LF 6" WATER LINE (NW)<br>N: 1258388.66<br>E: 534469.85                                                                      | STA: 302+69.40 | OFF: 32.95' RT |
| 281                      | INSTALL:<br>(1) 6" 90° BEND<br>CONNECT TO EXIST 6" WATER LINE<br>N: 1258404.62<br>E: 534453.62                                                                                                                  | STA: 302+46.64 | OFF: 32.99' RT |

| REMOVAL AND ABANDONMENT NOTES |                                   |
|-------------------------------|-----------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                       |
| R-52                          | ±444 LF 8" WATER LINE ABANDONMENT |

- NOTES:
- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
  - WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
  - CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
  - CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

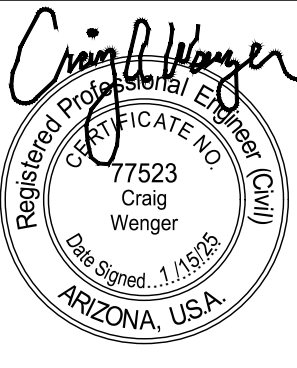
© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

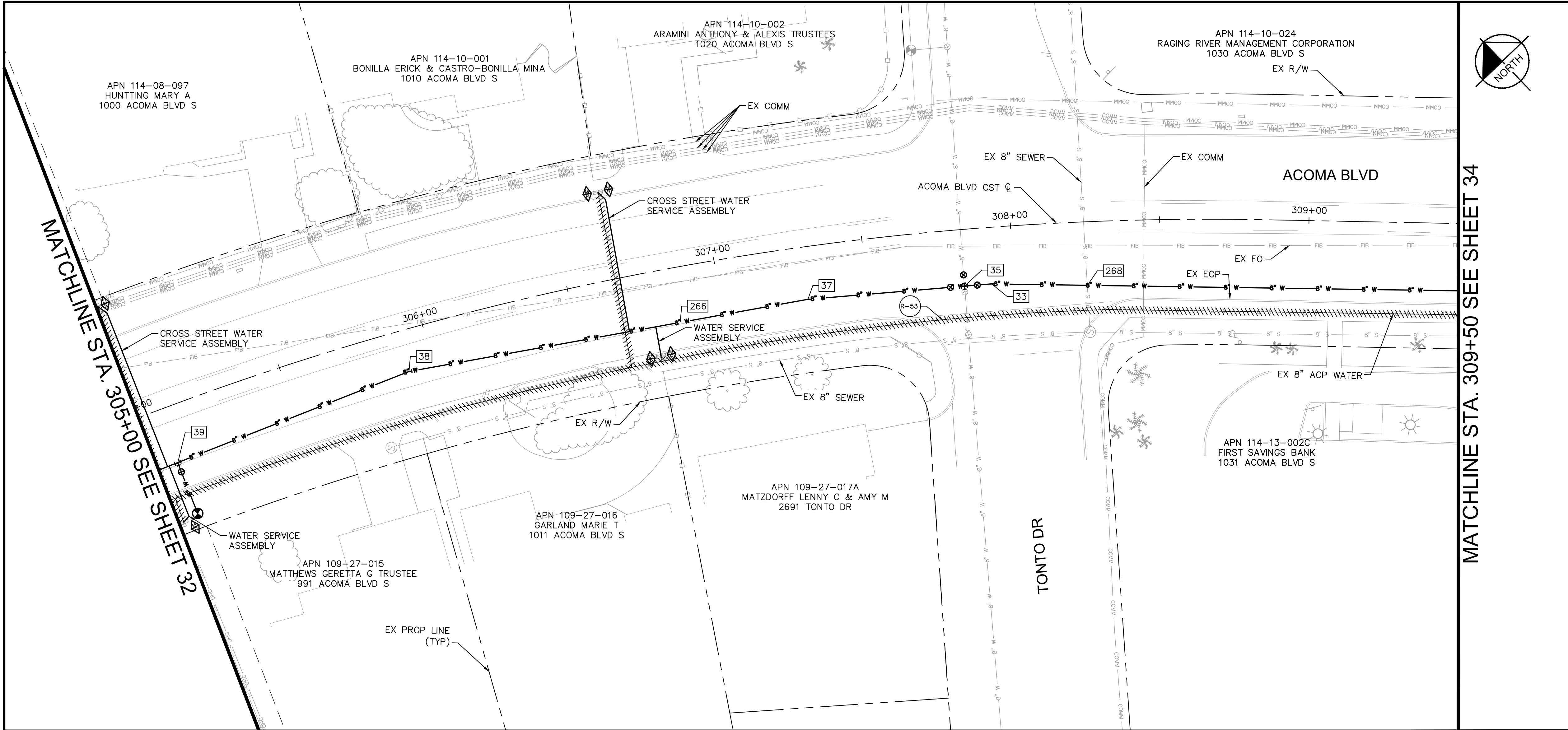
Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE



Sheet Number:  
**WL29**  
Sheet 32 of 37





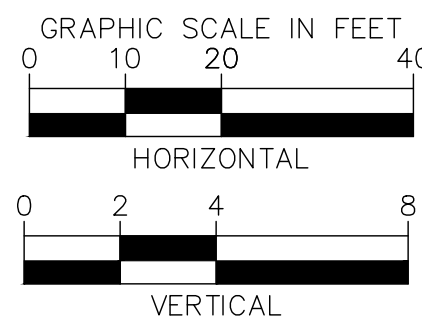
MATCHLINE STA. 309+50 SEE SHEET 34

| WATER CONSTRUCTION NOTES |                                                                                                                                                                   |                                  |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                       | STATION OFFSET                   |
| 33                       | HORIZ. DEFLECTION<br>ΔH = 5.7' RT<br>INV 8" IN: 717.67<br>INV 8" OUT: 717.67<br>N: 1257967.30<br>E: 534747.30                                                     | STA: 307+92.19<br>OFF: 18.94' RT |
| 35                       | INSTALL:<br>(1) 8" X 8" CROSS<br>(3) 8" GATE VALVES<br>(NE,NW,SE)<br>RE: LHC DET. 300<br>INV 8" IN: 717.95<br>INV 8" OUT: 717.95<br>N: 1257975.99<br>E: 534744.58 | STA: 307+82.91<br>OFF: 18.99' RT |
| 37                       | HORIZ. DEFLECTION<br>ΔH = 5.4' RT<br>INV 8" IN: 719.58<br>INV 8" OUT: 719.58<br>N: 1258026.21<br>E: 534728.83                                                     | STA: 307+29.32<br>OFF: 17.59' RT |
| 38                       | INSTALL:<br>(1) 8" 11.25' BEND<br>ΔH = 11.25' RT<br>INV 8" IN: 721.37<br>INV 8" OUT: 721.37<br>N: 1258151.27<br>E: 534676.11                                      | STA: 305+91.37<br>OFF: 13.90' RT |
| 39                       | INSTALL:<br>(1) FIRE HYDRANT<br>ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 721.77<br>INV 8" OUT: 721.77<br>N: 1258220.14<br>E: 534629.47                          | STA: 305+06.93<br>OFF: 18.72' RT |
| 266                      | PVI<br>ΔV = 1.46' DN<br>INV 8" IN: 720.92<br>INV 8" OUT: 720.92<br>N: 1258066.24<br>E: 534711.95                                                                  | STA: 306+85.08<br>OFF: 18.45' RT |
| 268                      | PVI<br>ΔV = 0.54' UP<br>INV 8" IN: 716.67<br>INV 8" OUT: 716.67<br>N: 1257935.88<br>E: 534753.84                                                                  | STA: 308+24.86<br>OFF: 21.28' RT |

| REMOVAL AND ABANDONMENT NOTES |                                      |
|-------------------------------|--------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                          |
| R-53                          | ±439 LF 8" WATER LINE<br>ABANDONMENT |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM



**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

**ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE**

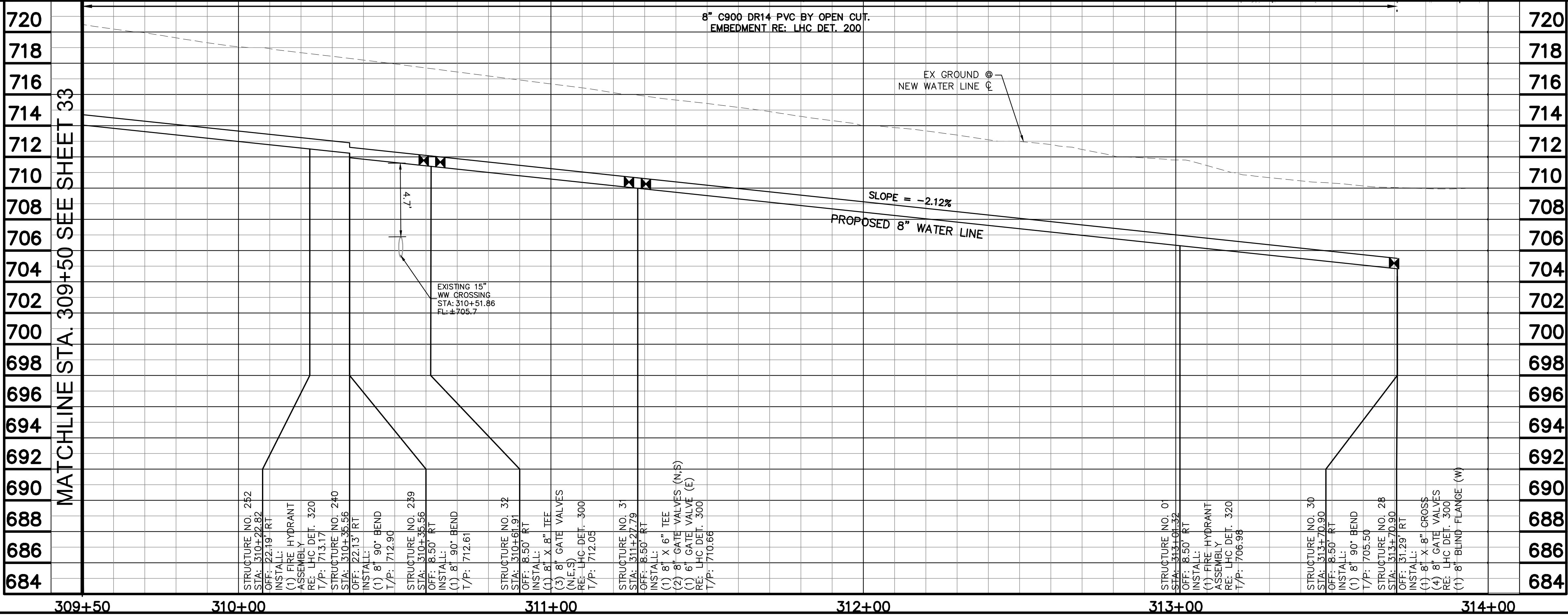


Sheet Number:

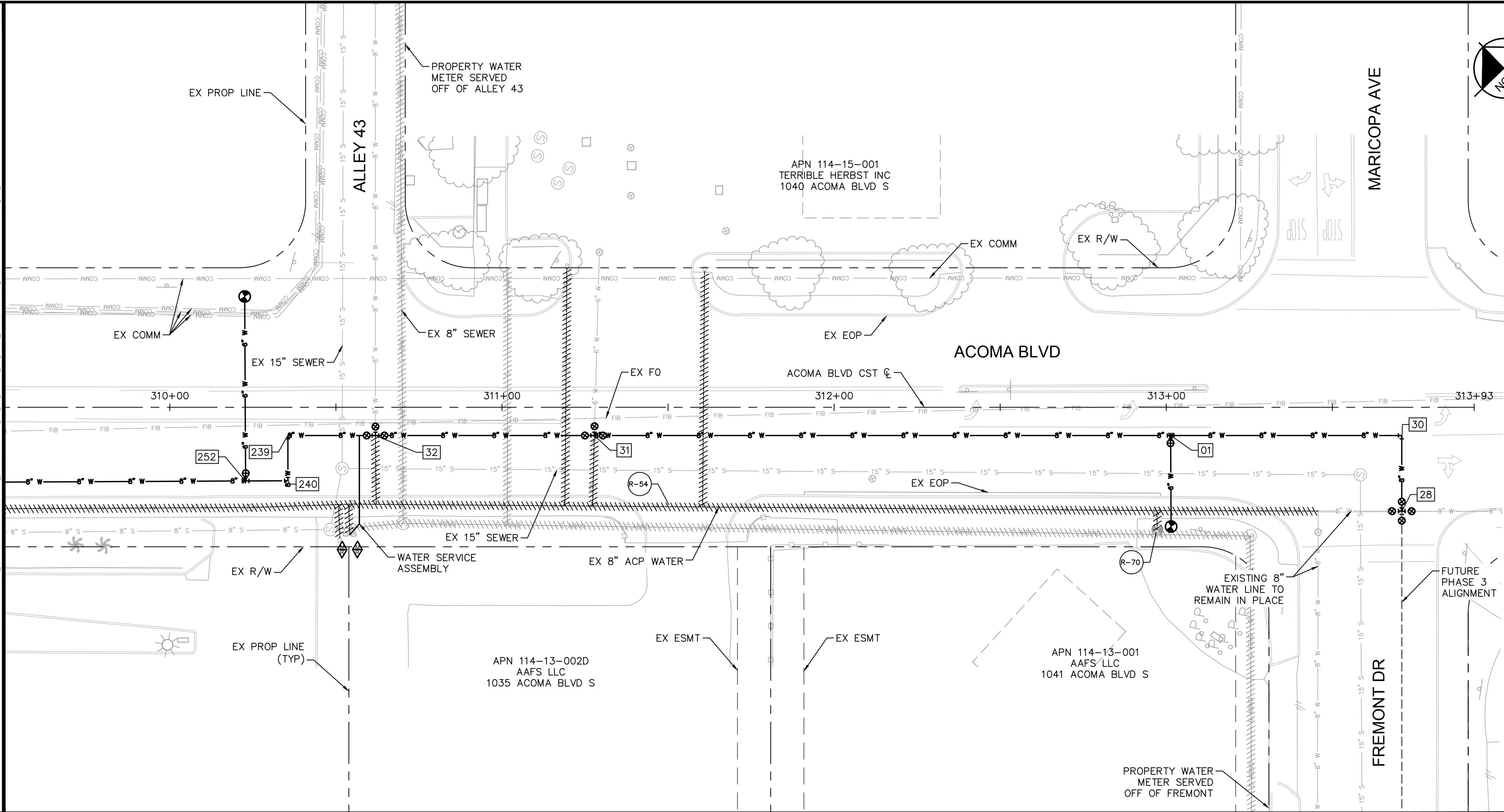
WL30

Sheet 33 of 37





MATCHLINE STA. 309+50 SEE SHEET 33

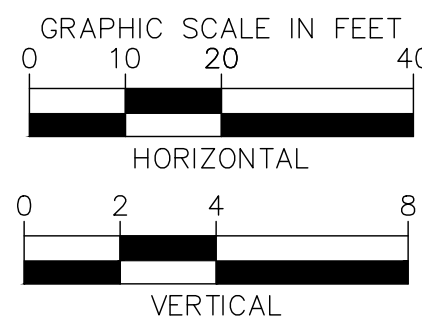


| WATER CONSTRUCTION NOTES |                                                                                                                                                                                  |                                  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STRUCTURE NO.            | DESCRIPTION                                                                                                                                                                      | STATION OFFSET                   |
| 01                       | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 706.31<br>INV 8" OUT: 706.31<br>N: 1257473.17<br>E: 534862.66                                            | STA: 313+01.32<br>OFF: 8.50' RT  |
| 28                       | INSTALL:<br>(1) 8" X 8" CROSS<br>(4) 8" GATE VALVES<br>RE: LHC DET. 300<br>(1) 8" BLIND FLANGE (W)<br>INV 8" OUT: 704.35<br>N: 1257400.44<br>E: 534854.16                        | STA: 313+70.90<br>OFF: 31.29' RT |
| 30                       | INSTALL:<br>(1) 8" 90° BEND<br>INV 8" IN: 704.83<br>INV 8" OUT: 704.83<br>N: 1257404.98<br>E: 534876.50                                                                          | STA: 313+70.90<br>OFF: 8.50' RT  |
| 31                       | INSTALL:<br>(1) 8" X 6" TEE<br>(2) 8" GATE VALVES (N,S)<br>(1) 6" GATE VALVE (E)<br>RE: LHC DET. 300<br>INV 8" IN: 709.99<br>INV 8" OUT: 709.99<br>N: 1257643.23<br>E: 534828.15 | STA: 311+27.79<br>OFF: 8.50' RT  |
| 32                       | INSTALL:<br>(1) 8" X 8" TEE<br>(3) 8" GATE VALVES (N,E,S)<br>RE: LHC DET. 300<br>INV 8" IN: 711.39<br>INV 8" OUT: 711.39<br>N: 1257707.79<br>E: 534815.05                        | STA: 310+61.91<br>OFF: 8.50' RT  |
| 239                      | INSTALL:<br>(1) 8" 90° BEND<br>INV 8" IN: 711.95<br>INV 8" OUT: 711.95<br>N: 1257733.62<br>E: 534809.81                                                                          | STA: 310+35.56<br>OFF: 8.50' RT  |
| 240                      | INSTALL:<br>(1) 8" 90° BEND<br>INV 8" IN: 712.23<br>INV 8" OUT: 712.23<br>N: 1257730.91<br>E: 534796.45                                                                          | STA: 310+35.56<br>OFF: 22.13' RT |
| 252                      | INSTALL:<br>(1) FIRE HYDRANT ASSEMBLY<br>RE: LHC DET. 320<br>INV 8" IN: 712.50<br>INV 8" OUT: 712.50<br>N: 1257743.39<br>E: 534793.86                                            | STA: 310+22.82<br>OFF: 22.19' RT |

| REMOVAL AND ABANDONMENT NOTES |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| STRUCTURE NO.                 | DESCRIPTION                                                              |
| R-54                          | ±396 LF 8" WATER LINE ABANDONMENT                                        |
| R-70                          | REMOVE EXISTING FIRE HYDRANT AND APPERTENANCES PER LHC TECH. SPEC. 02550 |

NOTES:

- CONTRACTOR SHALL POTHOLE AND TAKE ALL REASONABLE EFFORT AND ACTION TO SATISFY HIMSELF ON THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ADJUSTMENTS REQUIRED TO CONNECT TO EXISTING MAINS SHOWN AT DIFFERENT ELEVATIONS THAN IN PLANS.
- WATERLINE SHALL BE INSTALLED AT THE ELEVATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN MINIMUM COVER PER CITY STANDARDS.
- CONTRACTOR SHALL PLACE FLOWABLE FILL IN AREAS OF PUBLIC UTILITY MAIN CROSSINGS WHERE APPROPRIATE COMPACTION CANNOT BE MET.
- CONTRACTOR TO POTHOLE ANY/ALL POINTS OF CONNECTION FOR ALIGNMENT AND GRADE. CONTRACTOR SHALL BEAR ALL COSTS OF FITTINGS NOT SHOWN IN PLANS REQUIRED TO MAKE GRADE.



Kimley»Horn

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

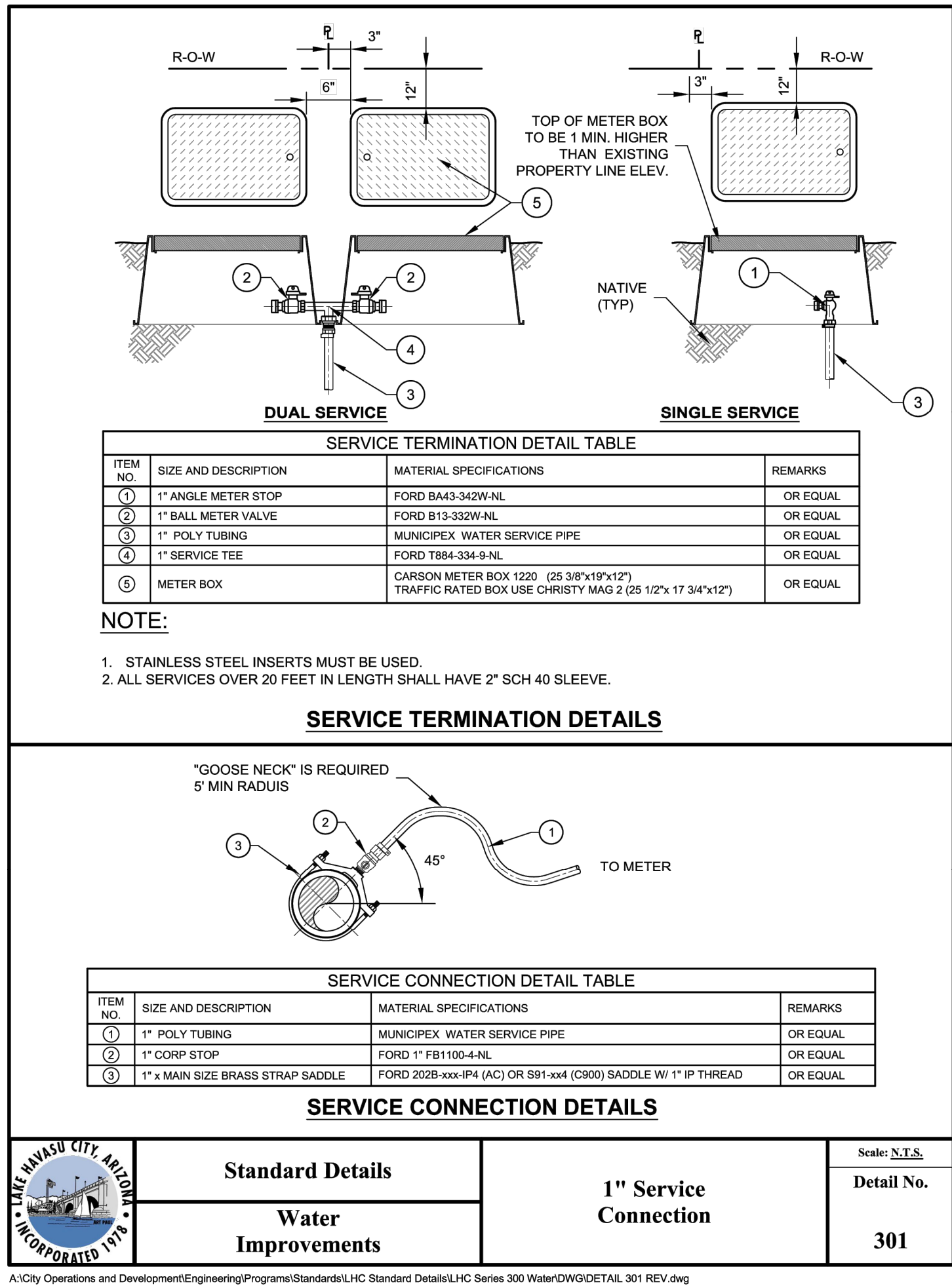
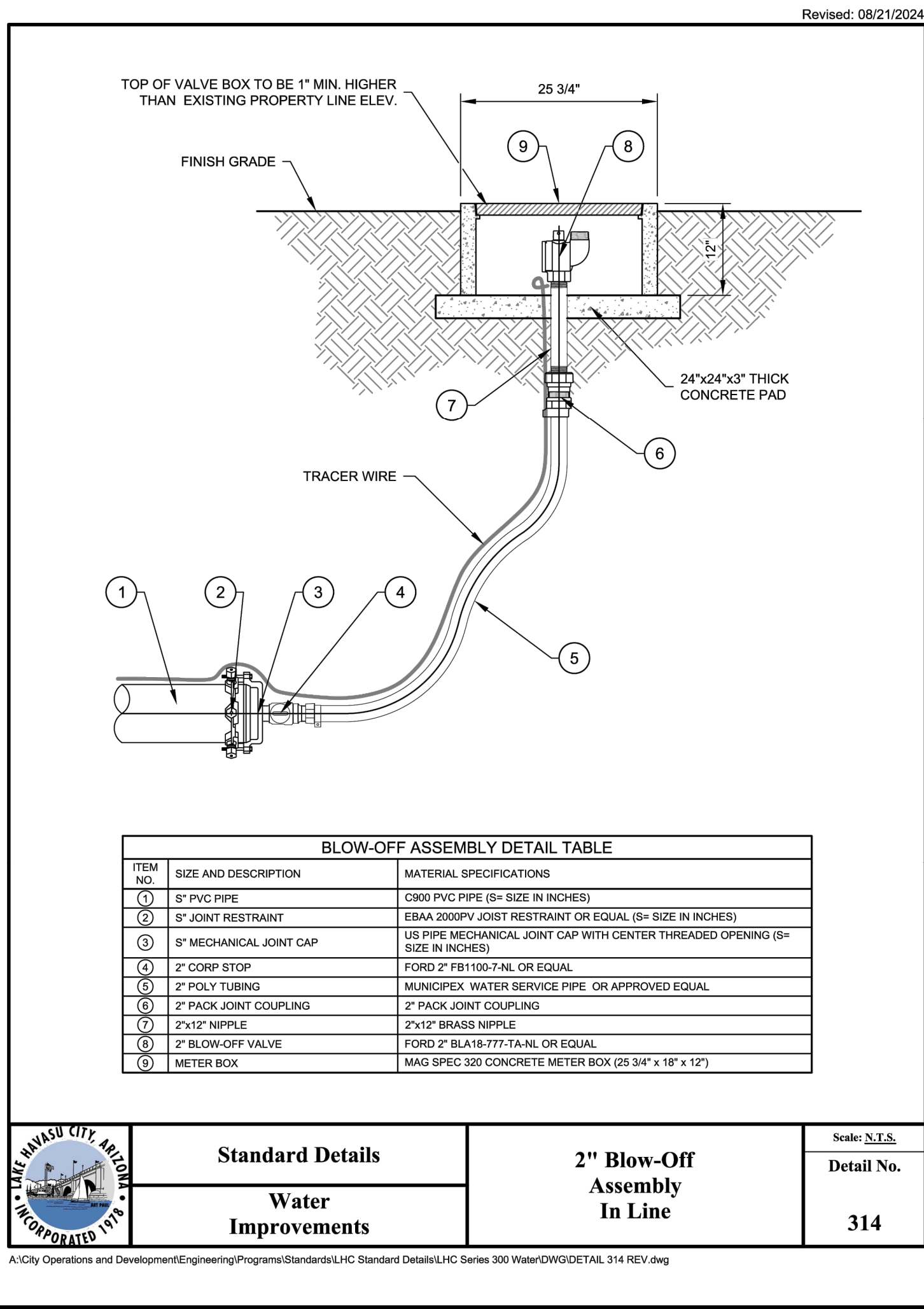
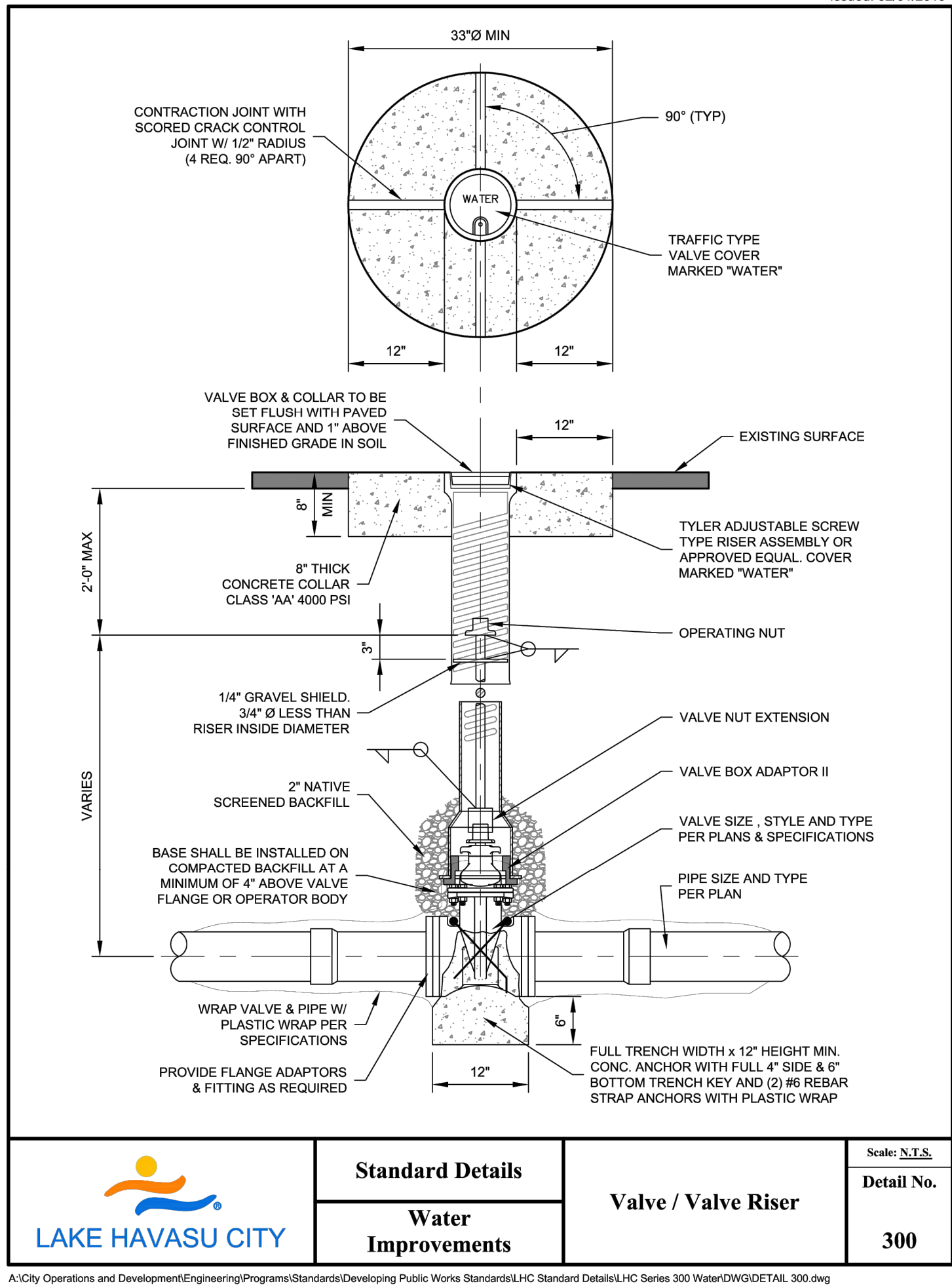
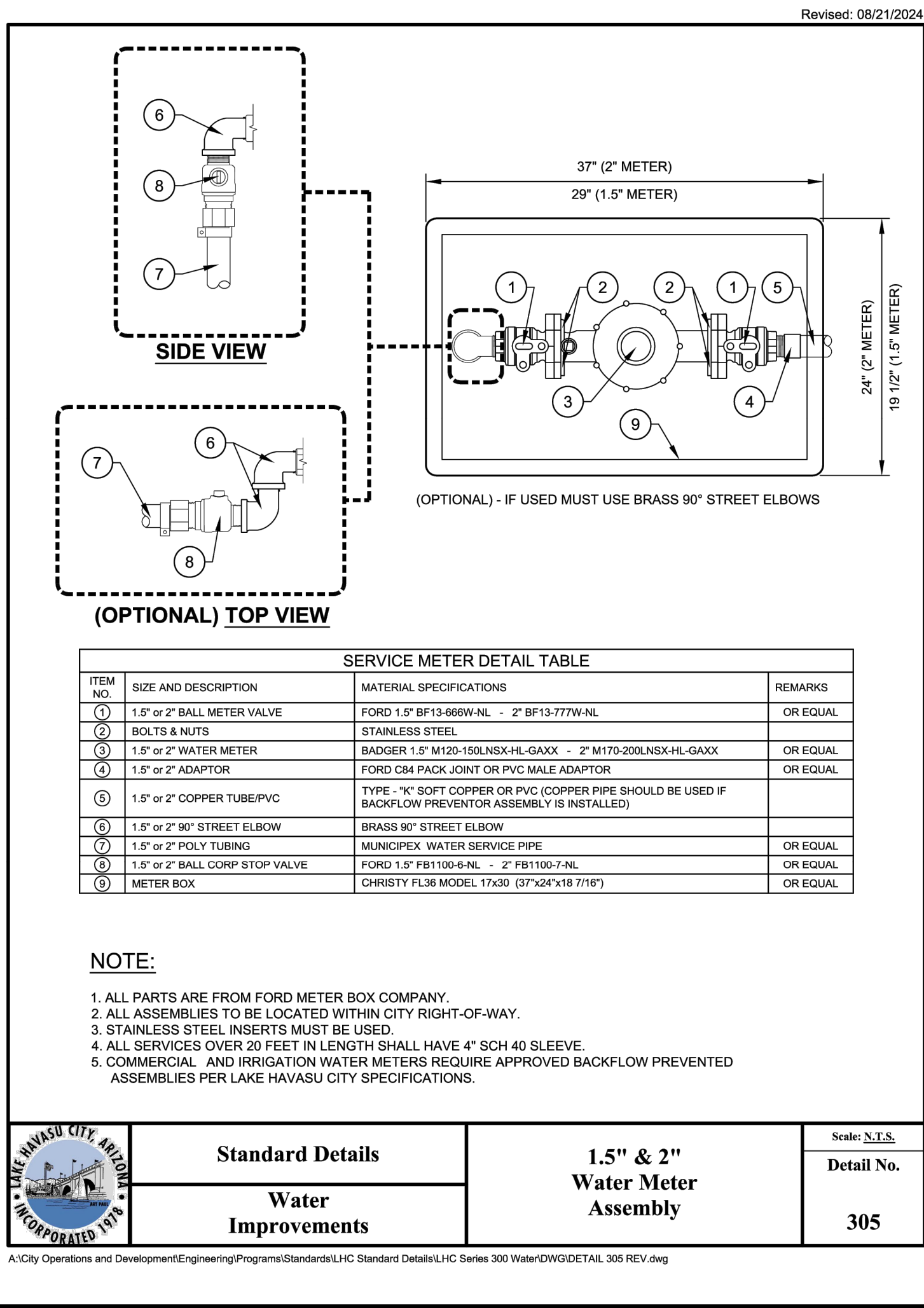
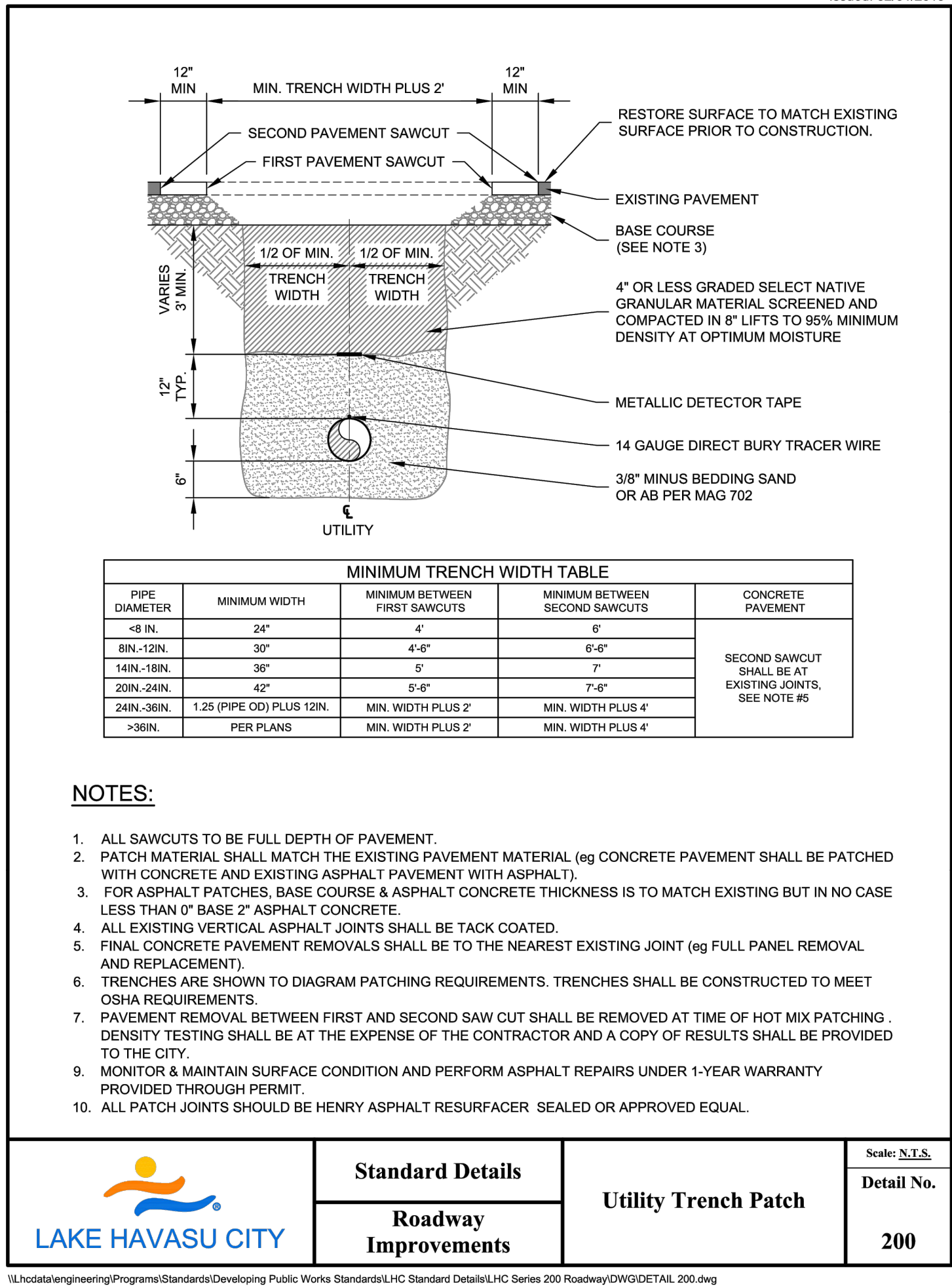
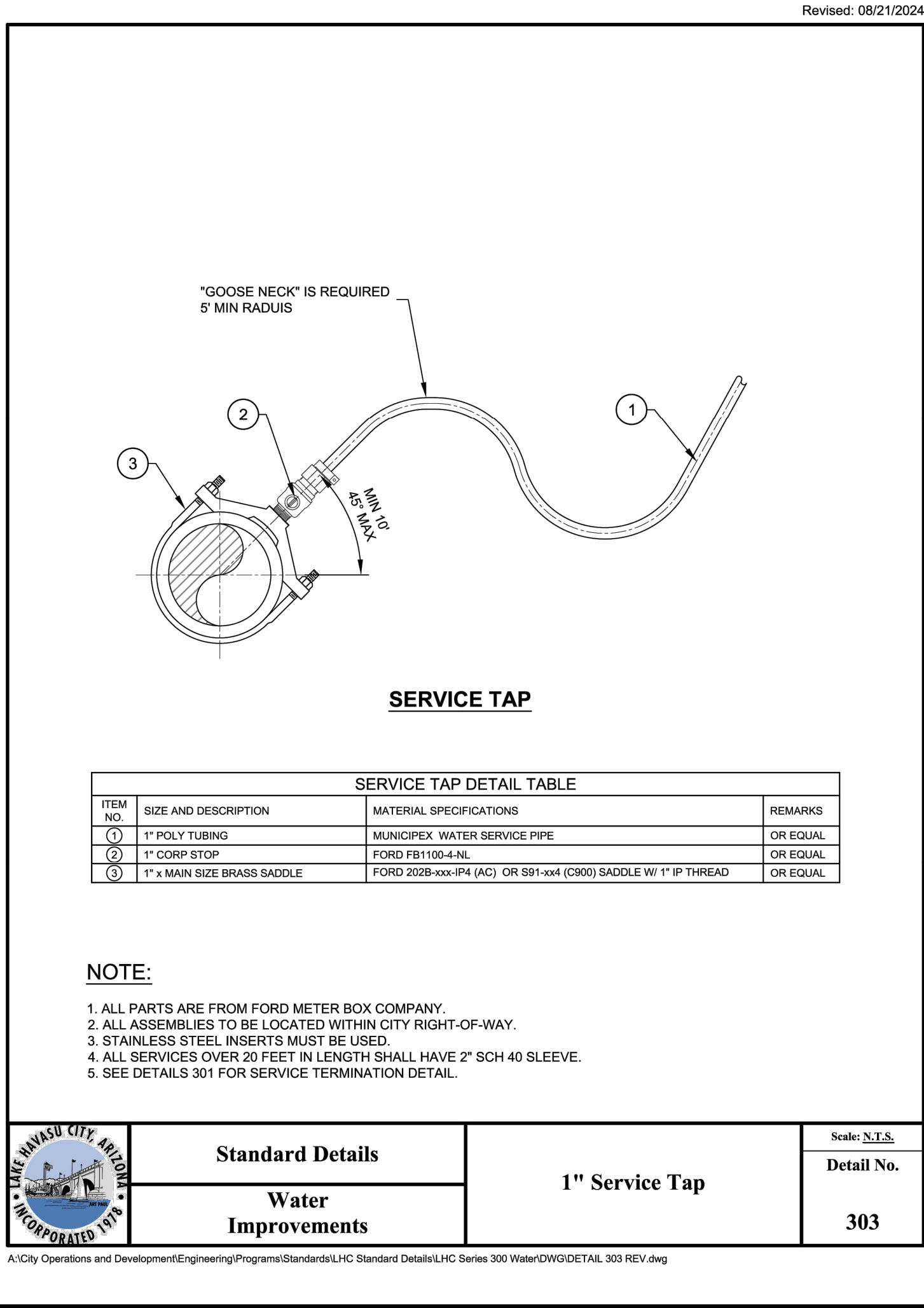
Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

ACOMA BOULEVARD  
WATERLINE PLAN &  
PROFILE

Sheet Number:  
WL31  
Sheet 34 of 37



k:\phx\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_DT01.dwg 6/30/2025 3:10 PM SMITH, MEGAN



NOTES:

- THE MUNICIPEX SHALL BE CTS (COPPER TUBE SIZE), IN LIKE SIZE TO THE EXISTING SERVICE LINE BEING REPLACED.
- CONNECTIONS OF THE MUNICIPEX WILL INCLUDE A STAINLESS STEEL FORD TUBING INSERT #52 TO REINFORCE THE POLY TUBING.
- 1" CROSS STREET SERVICES (LONG SIDE) SHALL BE IN 2" SCHEDULE 40 PVC CONDUIT. 1 1/2" AND 2" CROSS STREET SERVICES SHALL BE IN 4" SCHEDULE 40 PVC CONDUIT.
- IN ALL PLACES WHERE POLYETHYLENE PIPE IS CALLED FOR IN THE CITY STANDARDS, MUNICIPEX PIPE SHALL BE USED COMPLIANT WITH AWWA C904. FORD ULTA-TITE CONNECTIONS ARE TO ALSO BE USED IN CONNECTING THE MUNICIPEX WITH THE VARIOUS FITTINGS IN THE DETAILS.

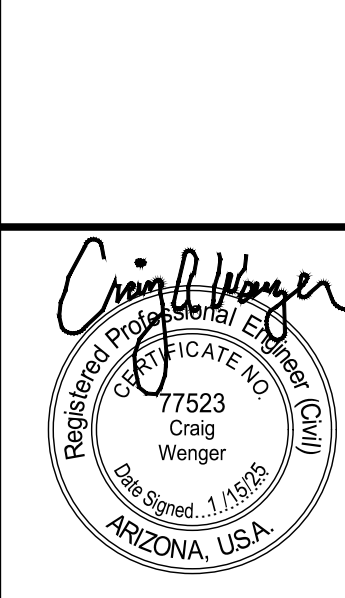


| DATE                    | I | I | I | I |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS | I | I | I | I |
| NO.                     | # | # | # | # |

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg scale:   | 1" = 20' |

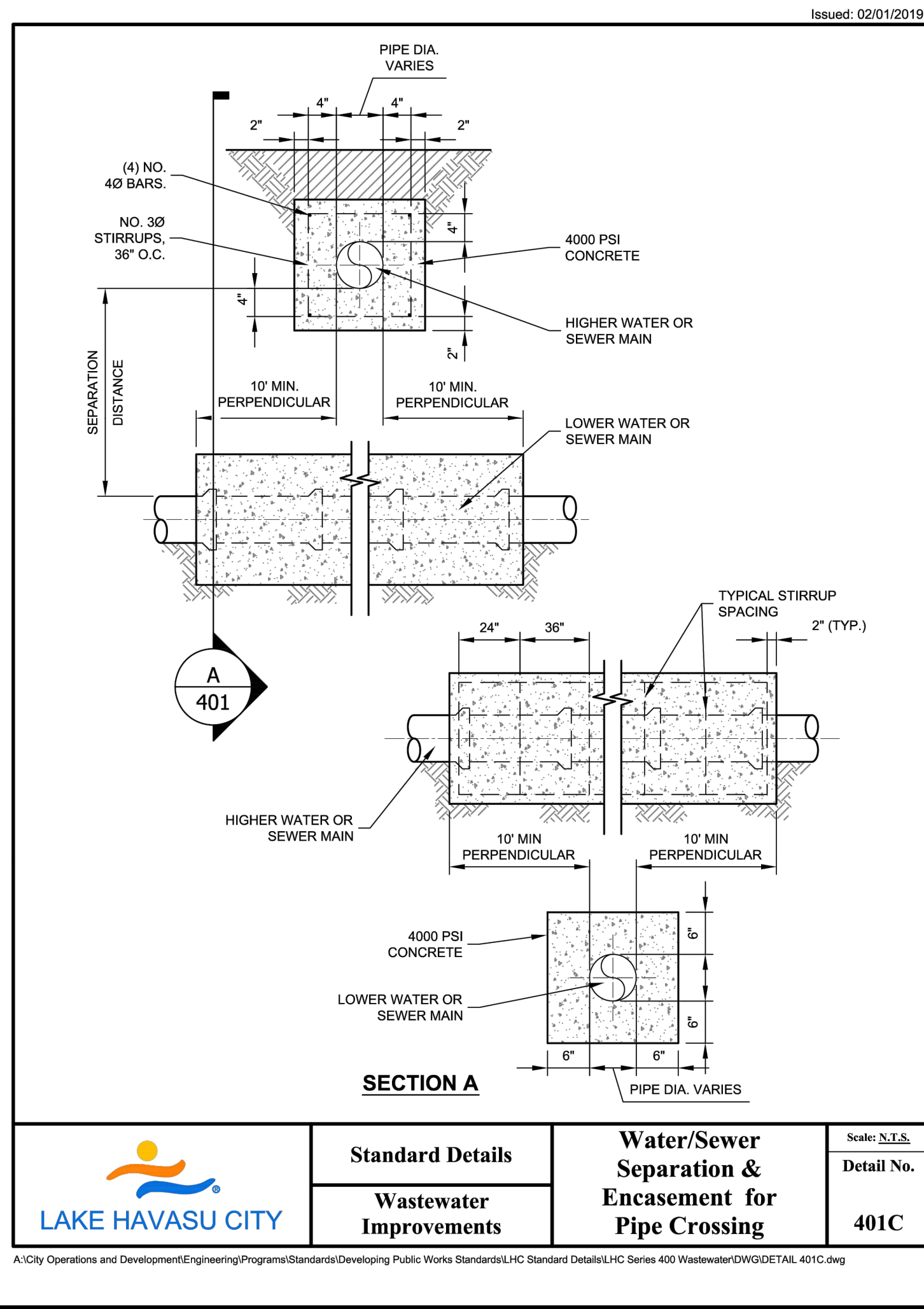
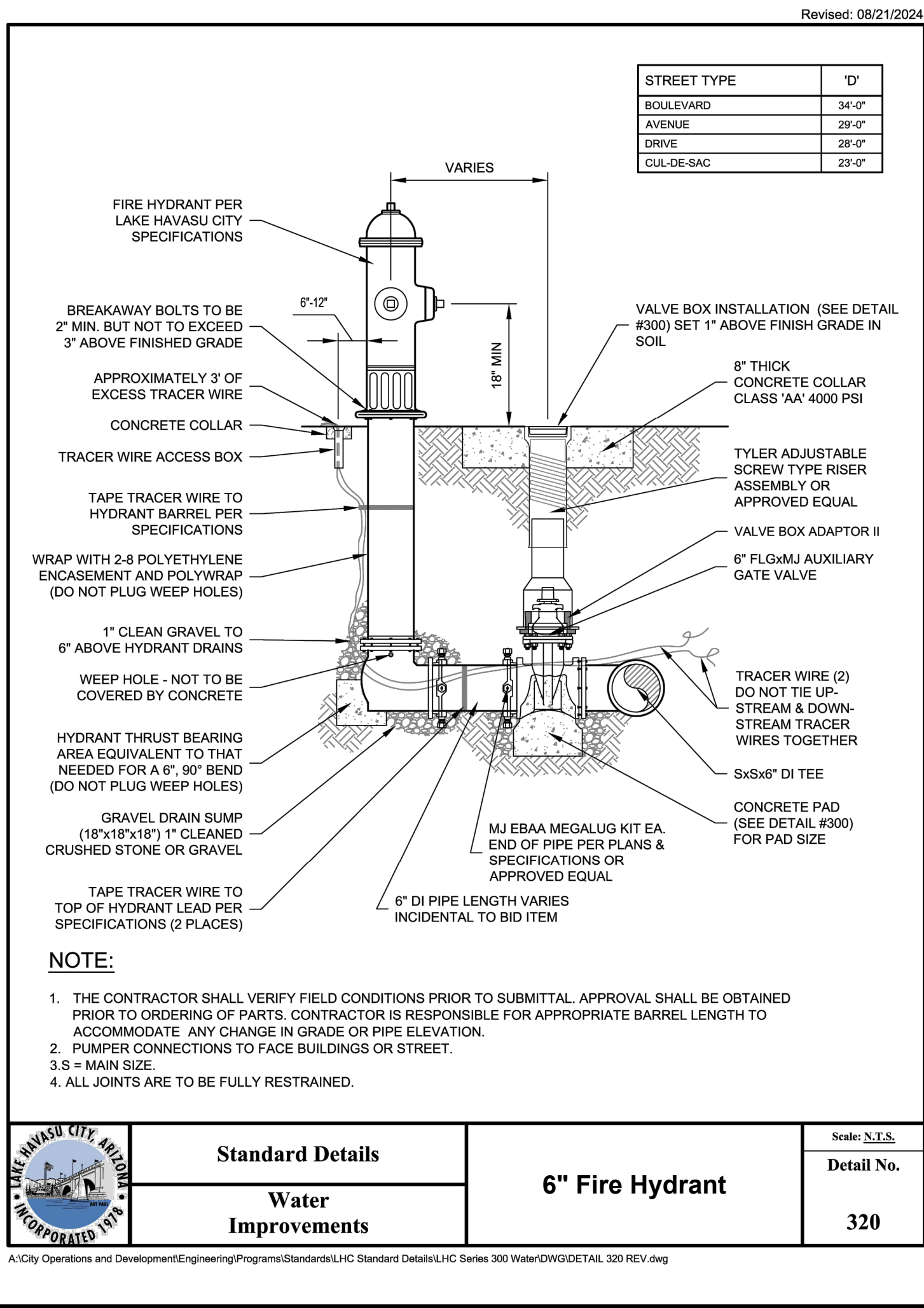
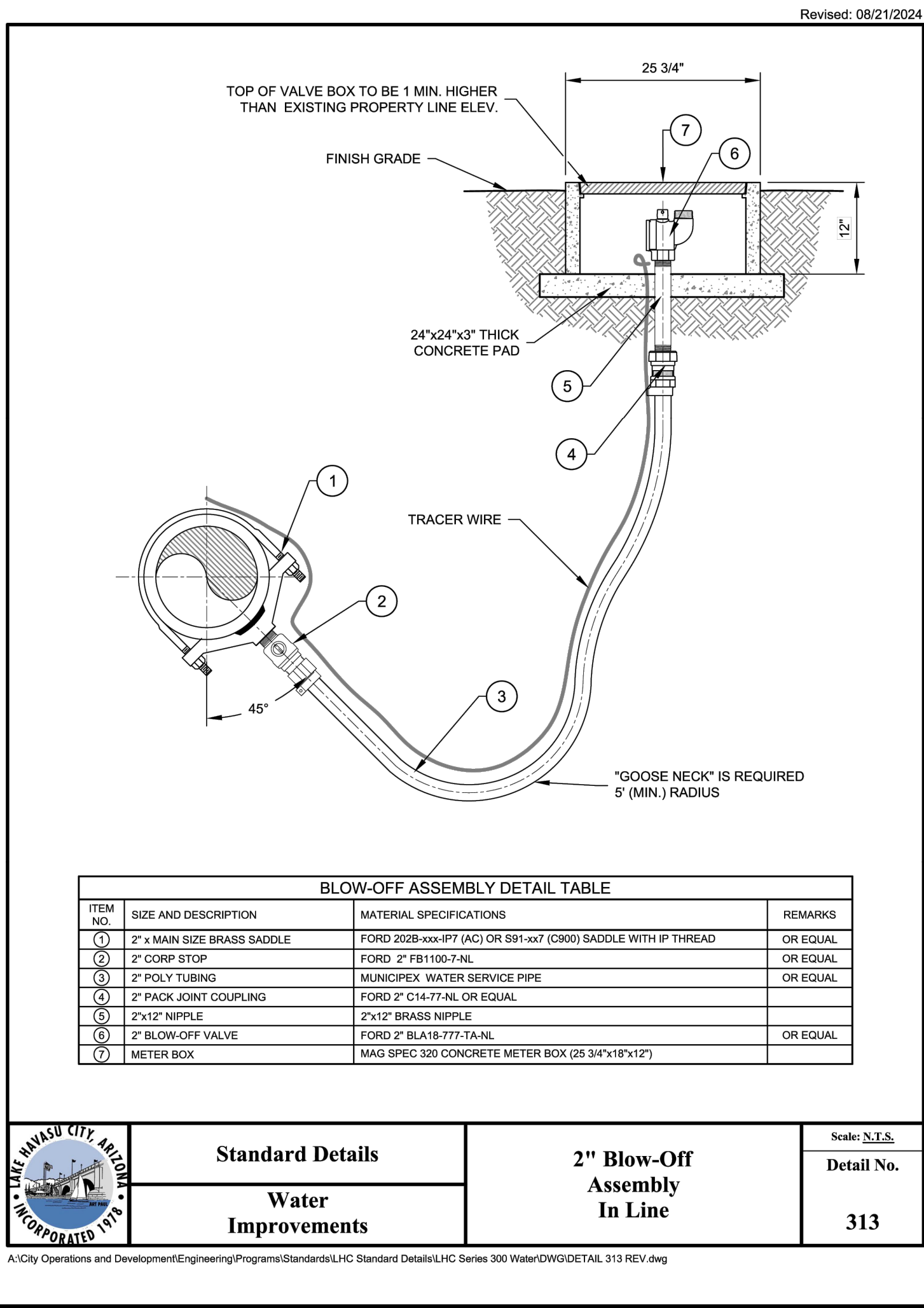
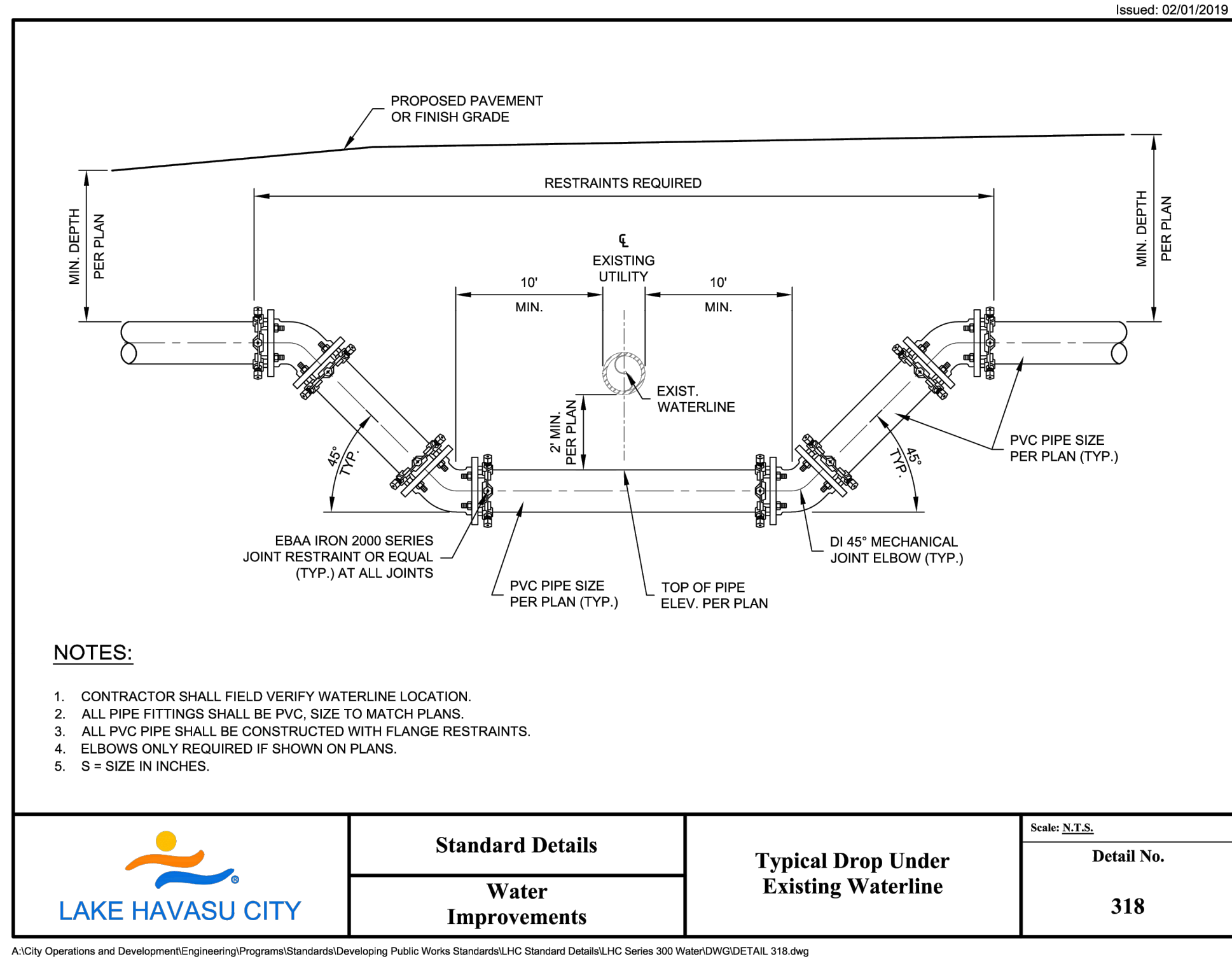
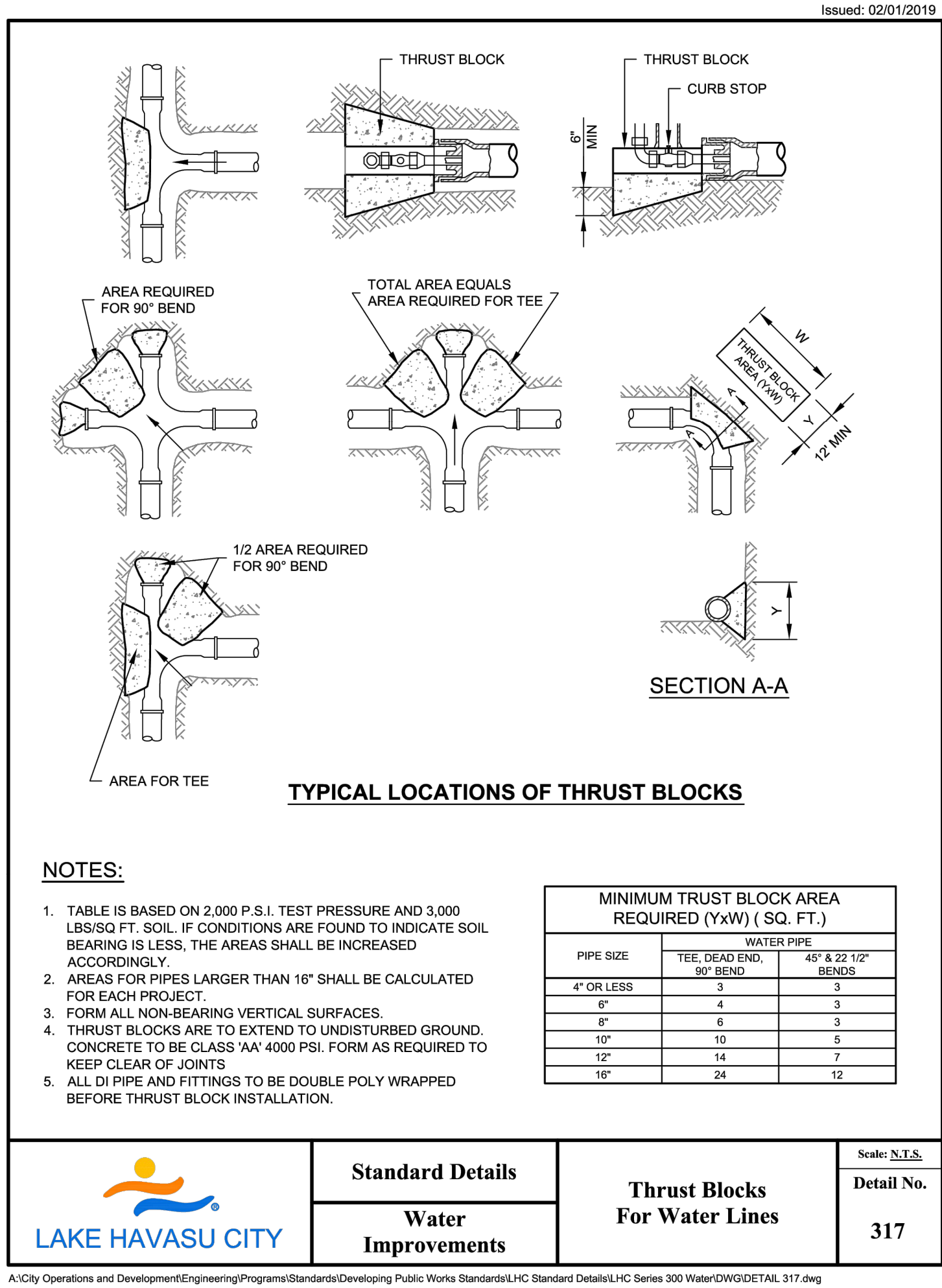
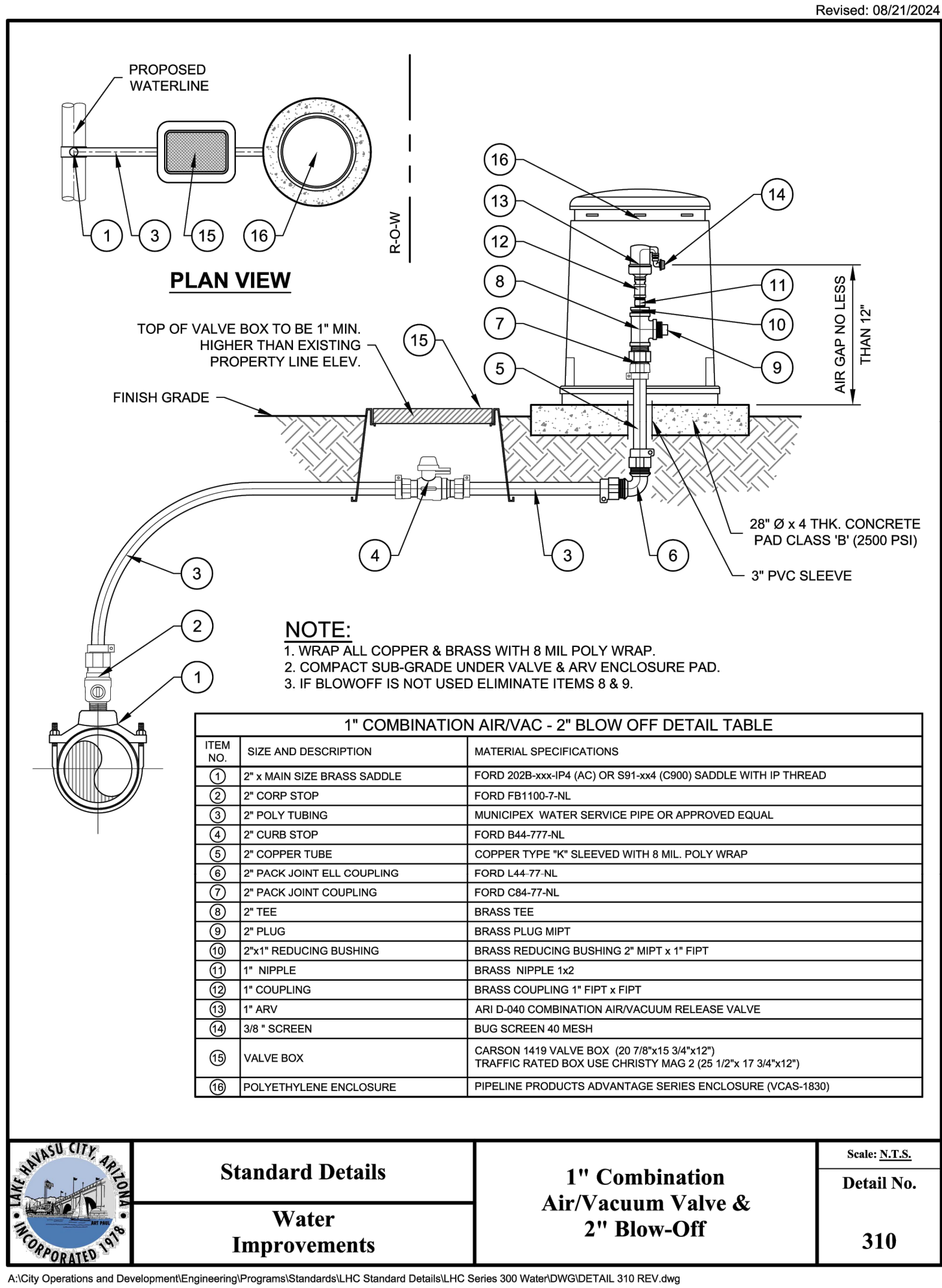
DETAILS



Kimley»Horn

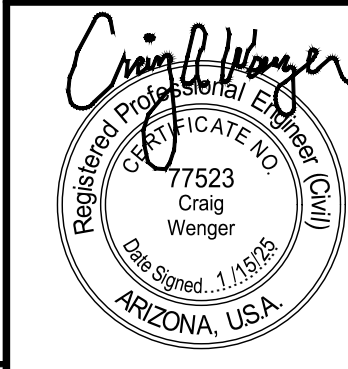
© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM





- NOTES:**
1. THE MUNICIPEX SHALL BE CTS (COPPER TUBE SIZE), IN LIKE SIZE TO THE EXISTING SERVICE LINE BEING REPLACED.
  2. CONNECTIONS OF THE MUNICIPEX WILL INCLUDE A STAINLESS STEEL FORD TUBING INSERT #52 TO REINFORCE THE POLY TUBING.
  3. 1" CROSS STREET SERVICES (LONG SIDE) SHALL BE IN 2" SCHEDULE 40 PVC CONDUIT. 1 1/2" AND 2" CROSS STREET SERVICES SHALL BE IN 4" SCHEDULE 40 PVC CONDUIT.
  4. IN ALL PLACES WHERE POLYETHYLENE PIPE IS CALLED FOR IN THE CITY STANDARDS, MUNICIPEX PIPE SHALL BE USED COMPLIANT WITH AWWA C904. FORD ULTA-TITE CONNECTIONS ARE TO ALSO BE USED IN CONNECTING THE MUNICIPEX WITH THE VARIOUS FITTINGS IN THE DETAILS.

DETAILS



**Kimley»Horn**

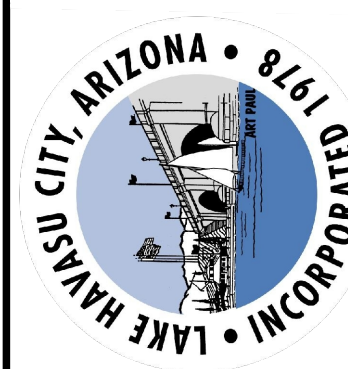
© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM

Sheet Number:  
**DT02**  
Sheet 36 of 37

**LAKE HAVASU CITY**  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

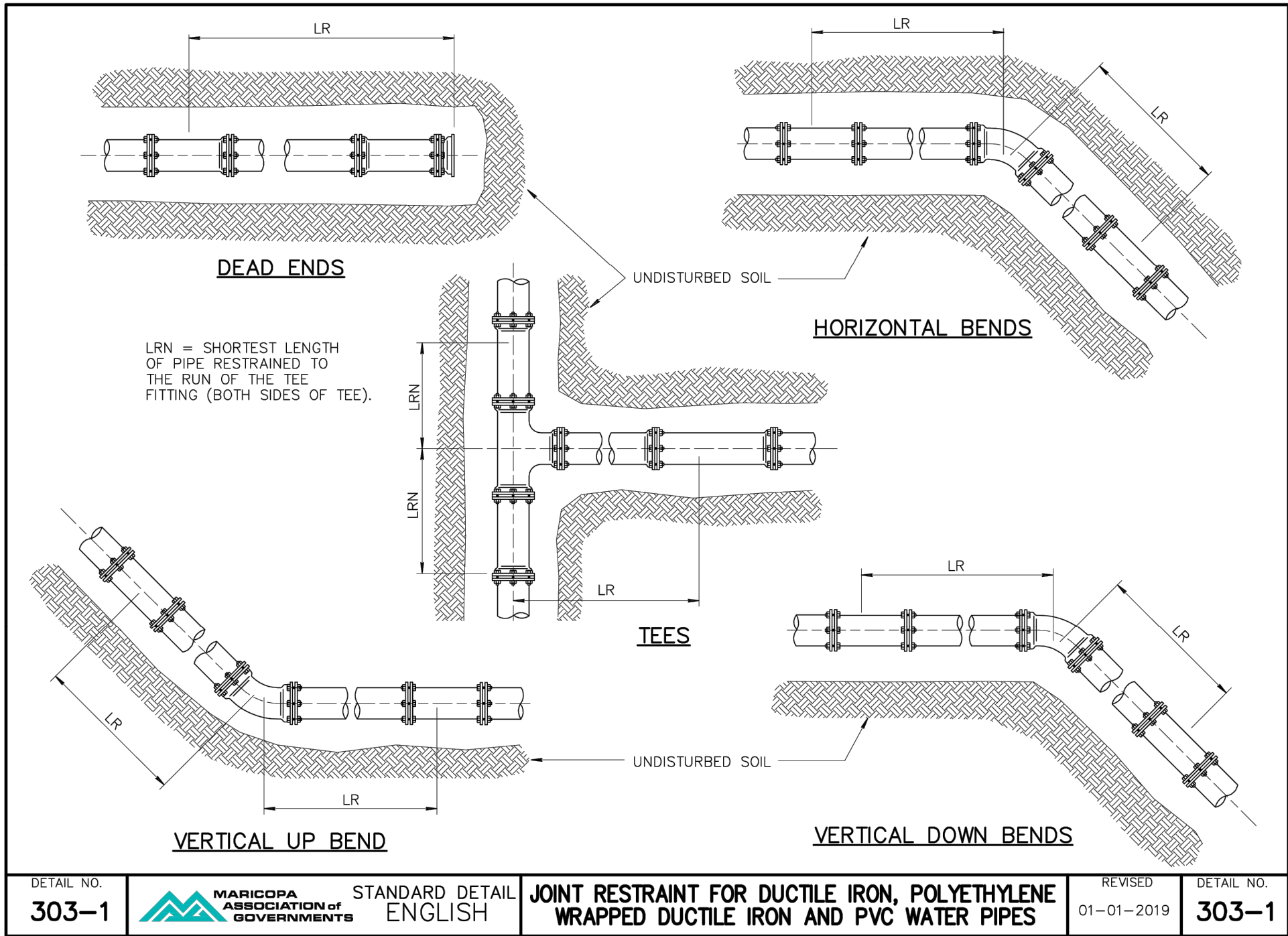
Designed by: SVM  
Drawn by: JAP  
Checked by: CAW  
Date: 01/2025  
Dwg scale: 1" = 20'

| NO.                     | # | # | # | # |
|-------------------------|---|---|---|---|
| REVISIONS / SUBMISSIONS |   |   |   |   |
| DATE                    |   |   |   |   |





k:\phx\_utility\Projects\191245020-lhc replacements - phase 2\CAD\plan sheets\191245020\_DT01.dwg 6/30/2025 3:11 PM SMITH, MEGAN



| RESTRAINED LENGTHS, LR, FOR DUCTILE IRON PIPE |                  |         |           |         |           |                   |    |                   |    |                       |    |           |
|-----------------------------------------------|------------------|---------|-----------|---------|-----------|-------------------|----|-------------------|----|-----------------------|----|-----------|
| NOMINAL PIPE SIZE INCHES                      | HORIZONTAL BENDS |         |           | TEES    |           | VERTICAL OFFSETS  |    |                   |    |                       |    | DEAD ENDS |
|                                               |                  |         |           |         |           | 90° BEND FITTINGS |    | 45° BEND FITTINGS |    | 22-1/2° BEND FITTINGS |    |           |
|                                               | DOWN BEND        | UP BEND | DOWN BEND | UP BEND | DOWN BEND | UP BEND           |    |                   |    |                       |    |           |
| 4                                             | 18               | 7       | 4         | 30      | 8         | 31                | 18 | 13                | 7  | 6                     | 3  | 31        |
| 6                                             | 25               | 10      | 5         | 43      | 20        | 44                | 25 | 18                | 10 | 9                     | 5  | 44        |
| 8                                             | 32               | 13      | 6         | 56      | 34        | 58                | 32 | 24                | 13 | 11                    | 6  | 58        |
| 10                                            | 38               | 16      | 8         | 68      | 45        | 69                | 38 | 29                | 16 | 14                    | 8  | 69        |
| 12                                            | 45               | 19      | 9         | 80      | 57        | 81                | 45 | 34                | 19 | 16                    | 9  | 81        |
| 14                                            | 51               | 21      | 10        | 91      | 68        | 92                | 51 | 38                | 21 | 18                    | 10 | 92        |
| 16                                            | 57               | 24      | 11        | 103     | 79        | 104               | 57 | 43                | 24 | 21                    | 11 | 104       |
| 18                                            | 62               | 26      | 12        | 113     | 90        | 115               | 62 | 48                | 26 | 23                    | 12 | 115       |
| 20                                            | 68               | 28      | 14        | 125     | 100       | 126               | 68 | 52                | 28 | 25                    | 14 | 126       |
| 24                                            | 79               | 33      | 16        | 145     | 121       | 147               | 79 | 61                | 33 | 29                    | 16 | 147       |

| RESTRAINED LENGTHS, LR, FOR DUCTILE IRON WITH POLYETHYLENE WRAP AND PVC PIPE |                  |         |           |         |           |                   |     |                   |    |                       |    |           |
|------------------------------------------------------------------------------|------------------|---------|-----------|---------|-----------|-------------------|-----|-------------------|----|-----------------------|----|-----------|
| NOMINAL PIPE SIZE INCHES                                                     | HORIZONTAL BENDS |         |           | TEES    |           | VERTICAL OFFSETS  |     |                   |    |                       |    | DEAD ENDS |
|                                                                              |                  |         |           |         |           | 90° BEND FITTINGS |     | 45° BEND FITTINGS |    | 22-1/2° BEND FITTINGS |    |           |
|                                                                              | DOWN BEND        | UP BEND | DOWN BEND | UP BEND | DOWN BEND | UP BEND           |     |                   |    |                       |    |           |
| 4                                                                            | 26               | 11      | 5         | 69      | 18        | 72                | 26  | 30                | 11 | 14                    | 5  | 72        |
| 6                                                                            | 36               | 15      | 7         | 99      | 47        | 102               | 36  | 42                | 15 | 20                    | 7  | 102       |
| 8                                                                            | 47               | 19      | 9         | 130     | 78        | 133               | 47  | 55                | 19 | 26                    | 9  | 133       |
| 10                                                                           | 56               | 23      | 11        | 157     | 103       | 159               | 56  | 66                | 23 | 32                    | 11 | 159       |
| 12                                                                           | 65               | 27      | 13        | 185     | 131       | 187               | 65  | 77                | 27 | 37                    | 13 | 187       |
| 14                                                                           | 74               | 31      | 15        | 211     | 156       | 214               | 74  | 89                | 31 | 42                    | 15 | 214       |
| 16                                                                           | 82               | 34      | 16        | 238     | 183       | 241               | 82  | 100               | 34 | 48                    | 16 | 241       |
| 18                                                                           | 90               | 37      | 18        | 263     | 207       | 266               | 90  | 110               | 38 | 53                    | 18 | 266       |
| 20                                                                           | 98               | 41      | 20        | 289     | 233       | 292               | 98  | 121               | 41 | 58                    | 20 | 292       |
| 24                                                                           | 113              | 47      | 22        | 337     | 280       | 340               | 113 | 141               | 47 | 68                    | 22 | 340       |

NOTES:

1. ALL JOINTS WITHIN THE SPECIFIED LENGTH LR MUST BE RESTRAINED. ALL LENGTHS ARE GIVEN IN FEET.

2. THE MAXIMUM TEST PRESSURE SHALL NOT EXCEED 200 PSI

3. THE MINIMUM DEPTH OF BURY SHALL BE 3' TO TOP OF PIPE.

4. RESTRAINED LENGTHS MAY BE REDUCED WHEN SUPPORTED BY ENGINEERING CALCULATIONS.

DETAIL NO. 303-2

MARICOPA ASSOCIATION OF GOVERNMENTS

STANDARD DETAIL ENGLISH

JOINT RESTRAINT FOR DUCTILE IRON, POLYETHYLENE WRAPPED DUCTILE IRON AND PVC WATER PIPES

REVISED 01-01-2019

DETAIL NO. 303-2

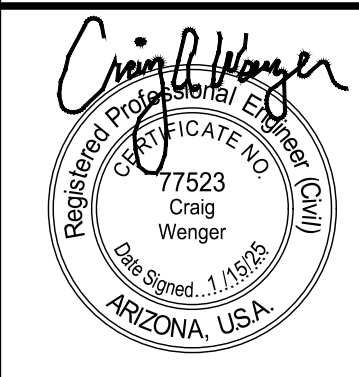


| NO. | REVISIONS / SUBMISSIONS | DATE |
|-----|-------------------------|------|
| #   |                         |      |
| #   |                         |      |
| #   |                         |      |
| #   |                         |      |

LAKE HAVASU CITY  
2025 WATERMAIN  
REPLACEMENT PROJECT  
CITY PROJECT NO. PW-25-108037-500678

|              |          |
|--------------|----------|
| Designed by: | SMM      |
| Drawn by:    | JAP      |
| Checked by:  | CAW      |
| Date:        | 01/2025  |
| Dwg. scale:  | 1" = 20' |

DETAILS



|                |
|----------------|
| Sheet Number:  |
| DT03           |
| Sheet 37 of 37 |

**Kimley»Horn**

© 2025 KIMLEY-HORN & ASSOCIATES, INC.  
1661 E CAMELBACK RD #400, PHOENIX, ARIZONA 85016  
PHONE: 602-944-5500 | WWW.KIMLEY-HORN.COM