

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTH-

4. DAYS REMOVE ALL SEDIMENT MUD, CONSTRUCTION DEBRIS OR OTHER POTENTIAL POLLUTANTS FROM THE PROJECT AREA TO PREVENT ANY FURTHER RELEASE OF POLLUTANTS. RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PROPERLY STORED OR REMOVED FROM THE PROJECT AREA.
5. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED BY THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARD IN CHAPTER 24.05.010 LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
6. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. EXCEPTION: TEMPORARY STABILIZATION OF A STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NV0100000, SECTION II.A.1.
7. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSTALL ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE EMISSIONS AND EXIT LOCATIONS AND ARE DUMPS WEEKLY, AND SHALL MAINTAIN THEM THROUGHOUT THE CONSTRUCTION PERIOD. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS REQUIRED BY THE DISTURBANCE ACTIVITY. THE PLAN MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO Nevada STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NV0100000, SECTION II.A.12.
8. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTIPOD STORM EVENT, WHICHEVER IS LATER. SEDIMENT SHALL BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

GENERAL NOTES

1. IN THE EVENT OF NATURAL GAS EMERGENCIES CALL 911 AND 1-877-860-6020
2. THERE SHALL BE A MINIMUM HORIZONTAL AND VERTICAL CLEARANCE OF 12-INCHES BETWEEN NATURAL GAS FACILITIES AND ANY OVERHEAD POWER LINES AND STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRIC
3. FOR VALVE ADJUSTMENT CALL 762-688-6107 48 HOURS PRIOR TO CONSTRUCTION.
4. IN THE EVENT OF NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND/OR STRUCTURES CONTACT 762-365-2099

CAUTION: HIGH PRESSURE GAS

CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION

SOUTHWEST GAS APPROVAL

Pamela Kennedy
SOUTHWEST GAS CORPORATION

3-21-19
DATE

LEGAL DESCRIPTION

ALL GOVERNMENT LOTS 21, 22, 23 AND 26 OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.
CONTAINING 20.47 ACRES, MORE OR LESS

BENCHMARK

BENCHMARK NUMBER: 6LV9018W4

RIVET AND PLATE IN TOP OF CURB IN THE NORTHEAST CORNER OF FARM ROAD AND

ELEVATION = 2856.716 FEET, 870.729 METERS
DATUM = NAVD 88

PER THE CITY OF LAS VEGAS BENCHMARK WEBSITE ON MAY 17, 2018

BASIS OF BEARINGS

NORTH 00°19'04" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHWEST QUARTER (SW1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 127, PAGE 24 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA

DEVIATIONS FROM STANDARDS

NONE

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS, ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "C" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYETHYLENE (PE) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT COMPLY TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL REPAIRS. IN LINE "T" SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. MAIN LINES SHALL BE PROTECTED IN ACCORDANCE WITH LVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT # 136145 (REVISED 08/01/2017)

- NO WORK SHALL BEGIN UNTIL THE WATER PLANTS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVMD. FOLLOWING WATER PLANT APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVMD COMMUNICATION SUPPORT CENTER (258-7177) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR FUTURE INSPECTIONS. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVMD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
 - ALL WORK SHALL CONFORM TO LVVMD STANDARD PLANS, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
 - ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFICE IMPROVEMENT, CLARK COUNTY AREA.
 - A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVMD.
 - ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVMD APPROVED SERVICE SADDLES.
 - ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
 - ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, WALKWAY CURBS.
 - ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
 - ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE AN ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
 - THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVMD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802. TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
 - ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 314.01, AND APPROVED BY THE LVVMD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
 - ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVMD APPROVED PRODUCTS LIST FOR NEW CONSTRUCTIONS, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS BY SUBMITTING SHOP DRAWINGS.
 - TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.
 - THE INSTALLATION OF LVVMD MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSIGNED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVMD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF AN APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.
 - ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ABUTTING A PUBLIC RIGHT-OF-WAY, IF DISTURBED BY THE LVVMD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVMD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVMD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVMD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.
- IS NO LEAD COMPLIANCE NOTE**
- TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS BRASS PRODUCTS PROPOSED TO BE USED OR INSTALLED AS NEW MUST BE INSTALLED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEAD PRODUCT MAY NOT BE REUSED.

GRADING NOTES

1. INDICATED GRADES OTHER THAN T.C., F.G. & GUTTER F.L. ARE ROUGH GRADES.
2. THE ROUGH GRADING PLANS SHALL BE ON THE JOB SITE AT ALL TIMES. THE ROUGH GRADING SHALL BE FINISHED IN CONFORMANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS. THE GRADING QUANTITIES ARE BASED ON THE ELEVATION AND DETAILS SHOWN ON THE PLANS. ANY DEVIATIONS FROM THE PLANS WILL RESULT IN QUANTITY CHANGES.
3. CARE SHALL BE EXERCISED IN GRADING CORNER LOTS.
4. ROUGH PAD ELEVATIONS SHALL BE GRADED TO WITHIN 0.1' OF THE PAD ELEVATIONS SHOWN ON THE PLANS. WHEN GRADING IS COMPLETE PER THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE LOTS CAN BE INSPECTED. AT THAT TIME THE ENGINEER SHALL ALSO DECIDE IF ANY ADDITIONAL DITCHES OR BERMS ARE REQUIRED. THE CONTRACTOR IS REQUESTED NOT TO REMOVE ANY OF HIS ROUGH GRADING EQUIPMENT UNTIL HE RECEIVES GRADING APPROVAL FROM THE ENGINEER.
5. SOILS REPORT PREPARED BY ANGLE ENGINEERING, PROJECT NO. 26214-1, DATED 06/06/2018.
6. EARTHWORK QUANTITIES (RAW):
 - CUT = 44,425 CUBIC YARDS
 - FILL = 35,369 CUBIC YARDS
- A) THE ABOVE QUANTITIES DO NOT REFLECT LOSSES DUE TO SUBSIDENCE OR SHRINKAGE.
- B) THE ABOVE QUANTITIES DO REFLECT USING NATURAL MATERIAL IN LIEU OF TYPE I GRAVEL BASE MATERIAL FOR SUBGRADATIONS.
- C) THE ABOVE QUANTITIES DO NOT REFLECT ANY EARTHWORK WHICH MAY BE REQUIRED BY THE ENGINEER TO CONSTRUCT ADDITIONAL PROTECTIVE DITCHES OR BERMS NOT SHOWN ON THESE DRAWINGS.

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE

2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
 3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR ALL INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [CFC 105.7.12]
 4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS SHALL BE MAINTAINED TO THE CONFINEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [CFC 3510, 3312]
 5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [CFC 507.3.7.3]
 6. ALL UNDERGROUND INSPECTIONS, PRESSURE, AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE DONE BY THE FIRE HYDRANTS AND FIRE LINES CENTER. CENTER LOADING IS ACCEPTABLE FOR ALL HYDRO TEST WITH PRIOR FIRE PREVENTION APPROVAL. [CFC 106.3]
 7. ALL ON-SITE UNDERGROUND WATER MAINS AND MAINS SHALL BE U.L. LISTED, A.W.W.A APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [CFC 507.21, NFPA 24]
 8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [CFC 507]
 9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [CFC 507.5.7.1]
 10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [CFC 507]
 11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [CFC 1102]
 - RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
 - COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
 12. WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED, PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT 100 FEET SPACING TO PROVIDE PROTECTION FOR TRANSPORTATION HAZARDS, WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC CONTOUR OF MORE THAN 10 FEET, FIRE HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACING AT 500 FT ON AN ALTERNATING BASIS. [CFC 1102.8]
 13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERMETER OF THE RADIUS OF THE CUL-DE-SAC.
 14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [CFC 1102.12]
 15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [CFC 1102.4]
 16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [CFC 1102.7]
 17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [CFC 1102.6]
 18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS A 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD. IN CASES INSTALLED ON A SINGLE SYSTEM SECTION, CUTOFF VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [CFC 1104]
 19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [CFC 503.2.3]
 20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROAD SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FEET PRIOR TO AND AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [CFC 503.2.7, 503.2.8]
 21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FEET OUTSIDE AND 28 FEET INSIDE TURNING RADIUS. [CFC 503.2.4]
 22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL BE NOT LESS THAN 13 FT 6 INCH. [CFC 503.2.1]
 23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 FT. FLOW LINE TO FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES. NOT LESS THAN 32 FT FLOW LINE TO FLOW LINE, WHERE PARKING IS PERMITTED ONLY ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD. IN CASES THAT ARE LESS THAN 40 FT, THE FLOW LINE TO FLOW LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE, FIRE LINES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [CFC 503.2.11]
 24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THE DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [CFC 503.1.1]
 25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELING UNITS, ROADS WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. [CFC 503.12]
 26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LINES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. [CFC 503.2.9]
 27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FEET ALONG THE DESIGNATED FIRE LANE. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO ADVISE TRAVELING TRAFFIC OF THE DESIGNATED FIRE LANE. SIGNS SHALL BE PLACED ON THE ROADWAY LEVEL, THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [CFC 503.3]
 28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SDA SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CFC 503.6 AND CFC APPENDIX M.
- ## 2.5 CITY OF LAS VEGAS GRADING NOTES
1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
 2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THE PROJECT AND TO MAINTAIN THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
 3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION, ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FACILITIES OR UTILITIES AND/OR

2.5 CITY OF LAS VEGAS GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADE AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION, ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE PROPERTY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICED:

	HORIZONTAL	VERTICAL COMPACTION	
A. PAVEMENT AREA SUBGRADE	0.1"	+0.0 TO -0.1'	SEE SOILS REPORT
B. ENGINEERED FILL	0.5"	+0.1 TO -0.1'	SEE SOILS REPORT
7. COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.
8. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
9. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
10. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND ACCESSIBLE CONDITION. DEBRIS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
11. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

UTILITY LOCATION NOTE TO CONTRACTOR

EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG: 1 (800) 227-2600; SOUTHWEST GAS CORPORATION: 702-400-1789 (STANDBY CONTACT NUMBER)

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM

1. CLARK COUNTY AREA NEVADA*, LATEST ISSUE, THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REvised EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS FOR WORK IN THE SUMMERLIN AREA," AND ANY AVAILABLE APPLICABLE ORDINANCES AND ORDINANCES OF THE CITY OF LAS VEGAS, THE UNIFORM BUILDING CODE, AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
 2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CITY PLANS LIBRARY ARE APPROVED AND THE LOCATION OF ANY OTHER UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING OVERHEAD UTILITY LINES. THE CONTRACTOR SHALL PROPERLY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
 3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
 4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
 5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGN TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
 6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
 7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTENDED-TYPE CURB.
 8. AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE UP OF ALL GUTTERS AFTER COMPACTION. EXCEPT AT SIDEWALK RAMPS AND CROSS OUTTERS.
 9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
 10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY THE INSPECTOR.
 11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
 12. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SOLS REPORT AS PREPARED BY ANGLE ENGINEERING, REPORT #6521A-1, 05/08/2018 APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
 13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD. A CITY OF LAS VEGAS ENGINEER'S REVIEW OF LOCATION PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
 14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
 15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APPROACHES, ROWLINES, AND CROSS OUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
- WALL NOTES:**
16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONS; FLOOD CONTROL, AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
 17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITH THE CITY RIGHT-OF-WAY.
 18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE LIDS, AND OTHER CATCH BASINS TO BE FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
 19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF DOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
 20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC., THE CONTRACTOR SHALL SECURE A WRITTEN ORDER FROM THE SANITARY SEWER AND STORM DRAIN TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
 21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY UDOV INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF THE PUMP/ER METER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN, AND WHERE APPLICABLE, THE LOCATION OF THE SANITARY SEWER RIGHT-OF-WAY, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE LOCAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAP(S) MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSTIONAL CERTAINIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATION ELECTRONIC COMMA (S) MUST BE USED FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCEPTED. THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
 22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST ADDITION.
 23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

1. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" LATEST EDITION.

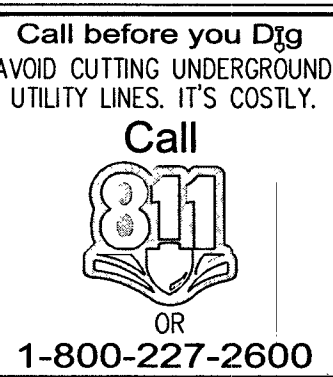
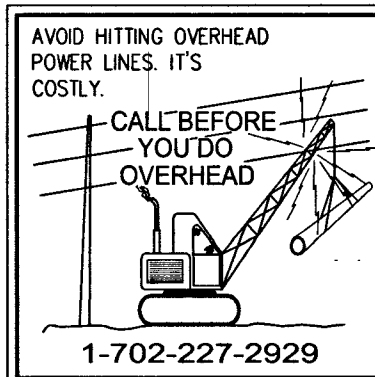
1. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
2. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL ADVANCE WARNING SIGNS THROUGHOUT THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A GUARDRAIL IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
3. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCOURED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THE WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
4. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR REPLACEMENT OF EXISTING PUBLIC TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS AND PLANS. THE CONTRACTOR SHALL PROVIDE THE PUBLIC TRAFFIC PAVEMENT MARKING CLASS B REFLECTIVE SHEETING OR APPROVED EQUIV. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 300 SERIES 1160 OR APPROVED EQUIVALENT. ALL TRAFFIC SIGNS SHALL HAVE 300 SERIES 1160 OR APPROVED EQUIVALENT 1160 ANTI-GRABITATIVE PROTECTIVE OVERLAY FILM. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED. PLANS, ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
6. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET OF ANY PROPOSED SIGN OR THE SIGNS ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE SIGNPOST AND THE STANDARD SIGN SHALL BE ELIMINATED.
7. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FULL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC TO ENTER THE PORTIONS OF THE ROUTES BEING IMPROVED HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
8. STREET SIGNS AND STOPS SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR INDEPENDENT STAND-ALONE SIGNS.
9. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC DEVICES AND FLAGGERS TO INSURE PROTECTION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC TO ENTER THE PORTIONS OF THE ROUTES BEING IMPROVED HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
11. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE 8-828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL AND CONSTRUCTION DIVISION DEFERRING ANY ADJUSTMENTS TO THE FINAL PAYMENT MARKINGS AND SIGNAGE. WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND SIGNAGE. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
12. ANY WORK WITHIN 30' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS OTHERWISE DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
13. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FROM THE TRAFFIC ENGINEERING DIVISION REGARDING ANY ADJUSTMENTS TO THE FINAL PAYMENT MARKINGS AND SIGNAGE. WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND SIGNAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
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2.4 CITY OF LAS VEGAS STREETLIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLAN, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFT-SITE AND THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION'S UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFT-SITE REVISIONS, CLARK COUNTY AREA, NEVADA) (USD), LATEST VERSION.
2. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CVL WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ANY UTILITIES FIELD VISIT.
3. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUTTS ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE U.S.
4. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623.02(1).
5. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. 10B AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623.02(2) OF THE USB PRIOR TO BACKFILLING AND FINAL INSPECTION.
6. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 320A, WHEN POLE IS INSTALLED BEHIND SIDEWALK AND SHALL AT LEAST SERVE AS AN OBSTACLE TO STREET LIGHTING POLES.
7. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION, PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARED.
8. SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE MAIN CENTER OF THE CIRCUIT. SERVICE POINT SHALL BE SHOWN ON THE PLANS.
9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS OR/POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED. AT NO EXPENSE TO THE CITY OF LAS VEGAS.
10. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136145 FIRST APPROVED DATE: 4-16-19
LVWMD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM



107V.5104

[illegible]

SPECIAL NOTE

IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED WHICH IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY OF LAS VEGAS DEPT. OF PUBLIC WORKS. TEMPORARY CONSTRUCTION ITEMS INCLUDE: PAVEMENT TRANSITIONS, PROTECTIVE DITCHES AND BERMS, ROAD SIGNS AND BARRICADES, ETC.

NOTICE TO CONTRACTOR

-QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE INTENDED TO ILLUSTRATE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES INVOLVED.

-EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG.
(800) 227-2600

QUANTITIES		PRIVATE	PUBLIC	
DRAINAGE				
1.	5.0" TYPE "CM2" DROP INLET	EA	-	2
2.	18" ROP CLASS III STORM DRAIN	LF	-	43
3.	2.0' CONCRETE U-CHANNEL	EA	-	430
4.	SIDEWALK UNDERDRAIN	LF	-	1
5.				
6.				
7.				
SEWER SYSTEM				
1.	4" PVC SEWER LATERAL (PRIVATE)	LF	1,619	-
2.	8" PVC SEWER PIPE (PUBLIC)	LF	-	2,820
3.	STANDARD 48" SEWER MANHOLE (PUBLIC)	EA	-	12
4.	8" PVC C900 PIPE (PUBLIC)	LF	-	317
5.	BACKWATER VALVE (PRIVATE)	EA	22	-
6.				
7.				
WATER SYSTEM				
1.	FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40	EA	-	6
2.	6" PVC WATER PIPE (CLASS 150)	LF	-	78
3.	8" PVC WATER PIPE (CLASS 150)	LF	-	3,318
4.	8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	-	6
5.	8" X 6" TEE PER UDACS PLATE NO. 31	EA	-	6
6.	8" X 8" TEE PER UDACS PLATE NO. 31	EA	-	5
7.	8" 90 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	1
8.	CAP AND 2" BLOW-OFF ASSEMBLY W/CAP PER UDACS PLATE NO. 36	EA	-	3
9.	1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1	EA	-	22
10.	1" COPPER SERVICE W/ 3/4" METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	-	2
11.	1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 3	EA	-	37
12.	8" X 10" TEE PER UDACS PLATE NO. 31	EA	-	1
13.	45° VERTICAL BEND PER UDACS PLATE NO. 31	EA	-	6
14.	8" DIP WATER PIPE (CLASS 150)	LF	-	264
15.	10" DIP WATER PIPE	LF	-	22
16.	10" X 8" TAPPING SLEEVE W/ 8" TAPPING VALVE PER UDACS 30, 34, 39, AND SECTION 2.24.01A	EA	-	1
17.				
18.				
19.				
STREET IMPROVEMENTS				
1.	4" A.C. PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE	SY	-	3,900
2.	3" A.C. PAVEMENT OVER 9" TYPE II AGGREGATE BASE	SY	-	74
3.	2" A.C. PAVEMENT OVER 4" TYPE II AGGREGATE BASE	SY	11,589	-
4.	STANDARD 24" TYPE "L" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	-	1,307
5.	STANDARD 30" TYPE "ROLL" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	6,131	-
6.	STANDARD "A" TYPE CURB PER CCAUSD NO. 219	LF	232	-
7.	5' WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	20,298	-
8.	ADA SIDEWALK RAMPS	EA	12	-
9.	CROSS GUTTER	SF	2,319	-
10.				
11.				
12.				
TRAFFIC SIGNALS				
1.	30" STOP SIGN WITH POST (R1-1)	EA	5	-
2.	9" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	10	-
3.	BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	5	-
4.	36" STOP SIGN WITH POST (R1-1)	EA	1	-
5.	12" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	2	-
6.	18" TYPE A "NO PARKING FIRE LANE" SIGN	EA	6	-
7.				
8.				
9.				
10.				
DRY UTILITIES				
1.	250W LED LUMINAIRE STREET LIGHT W/ DECORATIVE POLE	EA	-	6
2.	1-1/4" PVC STREET LIGHT CONDUIT WITH (2) #4 AND (1) #8 CONDUCTORS	LF	-	1,012
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.		Call before you Dig AND/OR CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
	Call before you UnderGround 1-702-432-5300 FREEMAN & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)	Call  OR 1-800-227-2600

[illegible]



SEE SHEET G-3 FOR CONTINUATION

SEE SHEET G-2 FOR CONTINUATION

PRIVATE STREET NOTE
ALL PRIVATE STREETS ARE PUBLIC DRAINAGE AND UTILITY EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

SURVEY NOTE
OWNER RESPONSIBLE TO PROVIDE SURVEY MONUMENTATION AS SHOWN AND TO REPLACE ALL SURVEY MONUMENTATION DAMAGED, DISTURBED, DESTROYED, OR OBTAINED DURING CONSTRUCTION.

ELEVATION NOTE
ADD 2800 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (E. 01.00 REPRESENTS 2801.00).

SOILS REPORT
SOILS REPORT BY ANGLE ENGINEERING
PROJECT NO. 28214-1 DATED 06/06/2018

EARTHWORKS
EARTHWORK QUANTITIES (RAW):
CUT= 44,425 CU YDS
FILL= 36,989 CU YDS
EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

DISCLAIMER NOTE
1) EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGES OF PAVEMENTS OR PROTECTED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

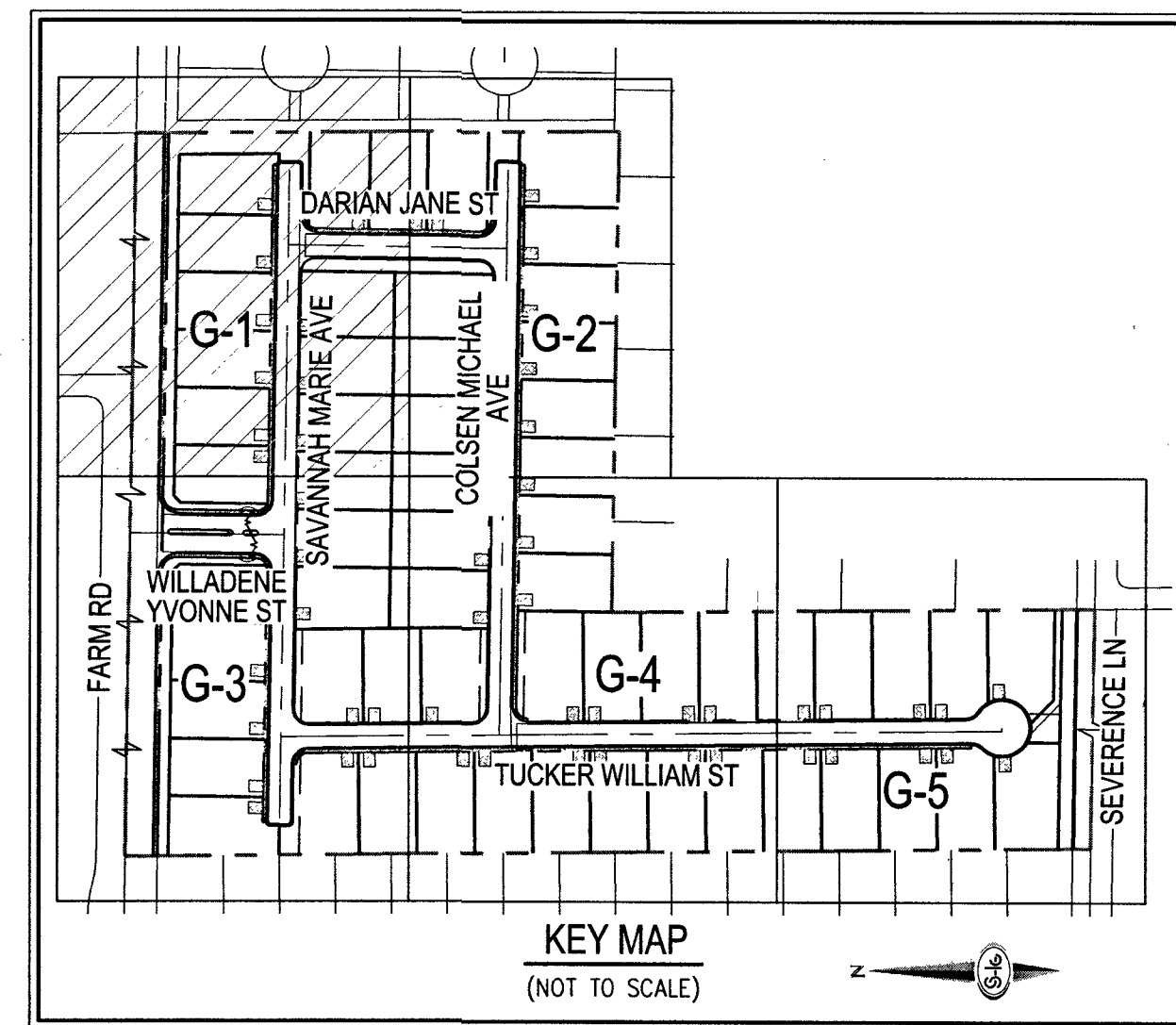
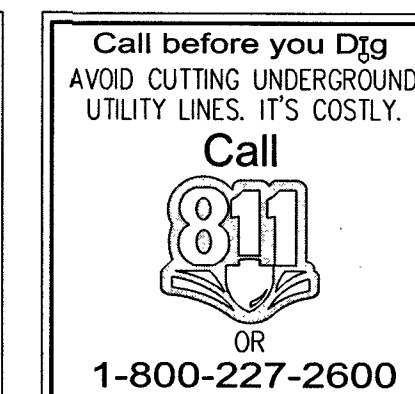
GRADING NOTES
1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLENISHING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
10. CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS, AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY; SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

FLOOD ZONE
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 3200037456 & 3200037502, DATED SEPTEMBER 27, 2002. A ZONE 'X' (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.



- GRADING NOTES**
1. INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
 2. INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
 3. INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
 4. CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
 5. CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
 6. CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
 7. CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
 8. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
 9. CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
 10. CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
 11. SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
 12. INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
 13. INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
 14. INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
 15. INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWERED WITH BATTERY BACK-UP AND AN ALARM
 16. INSTALL DEPRESSION CURB PER DETAIL 43 ON SHEET D-2
 17. INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
 18. EXISTING POWER POLE TO REMAIN
 19. INSTALL EQUESTRIAN TRAIL
 20. INSTALL RECREATIONAL FENCE
 21. EXISTING WROUGHT IRON FENCE TO BE REMOVED
 22. INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
 23. INSTALL 2.0' CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
 24. EXISTING 36" RCP SD PER CLV #1074803
 25. EXISTING 18" CLASS III RCP SD LATERAL PER CLV #1074803
 26. EXISTING DROP INLET PER CLV #1074803
 27. CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
 28. INSTALL 18" RCP STORM DRAIN LATERAL
 29. INSTALL 5.0' TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
 30. EXISTING 48" STORM DRAIN MANHOLE PER CLV #1074803
 31. INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
 32. CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
 33. REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

QUANTITIES		PRIVATE	PUBLIC
DRAINAGE			
1. 5.0' TYPE "CM2" DROP INLET	EA	-	2
2. 18" RCP CLASS III STORM DRAIN	LF	-	43
3. 2.0' CONCRETE U-CHANNEL	LF	-	430

FLOOD CERTIFICATION
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY 055035 ON FILE AT CITY OF LAS VEGAS AND CCPW PW18-18325 FOR THE SUBJECT PROJECT.
KEVIN M. BROSS, P.E. 024572 8/2/19

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300

RICHMOND AMERICAN HOMES
FARM HUALAPAI
GRADING PLAN I

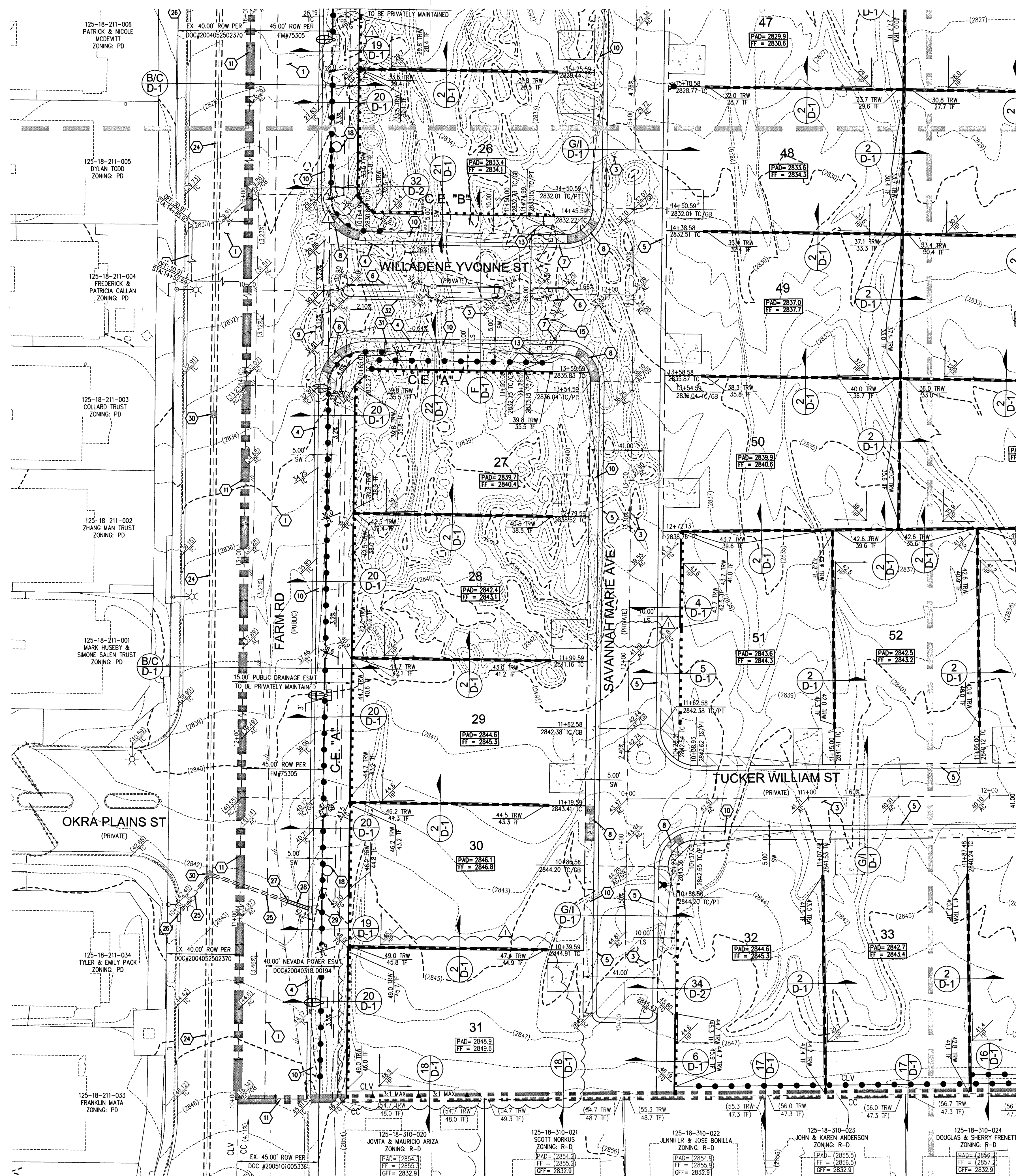
DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517

KEVIN M. BROSS
Exp. 12/31/2020
CIVIL
Professional Seal No. 24572

G-1
SHEET 4 OF 42
L18-02739

\\vob1517\buffalo\farm\hualapai\csh1517.dwg 8/1/2019 3:35 PM Rhonda Miller

SEE SHEET G-1 FOR CONTINUATION



SEE SHEET G-4 FOR CONTINUATION

PRIVATE STREET NOTE

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SURVEY NOTE

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ELEVATION NOTE

ADD 2800 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2801.00)

SOILS REPORT

SOILS REPORT BY ANGLE ENGINEERING PROJECT NO. 26214-1 DATED 06/06/2018

EARTHWORKS

EARTHWORK QUANTITIES (RAW): CUT= 44,425 CU YDS FILL= 36,989 CU YDS

EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

DISCLAIMER NOTE

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GRADING NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
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- MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
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- CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

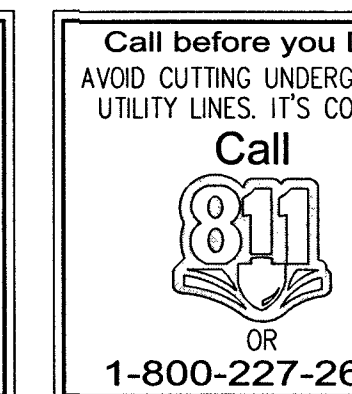
LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

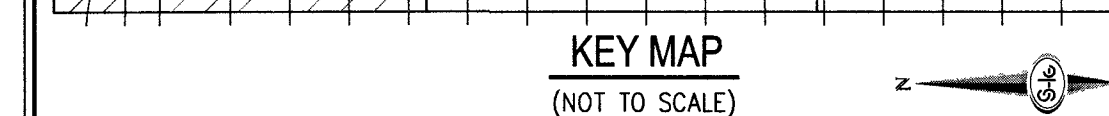
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FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 320031745E & 320031750E, DATED SEPTEMBER 27, 2002. ZONE "X" (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.



CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES



GRADING NOTES

- INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
- CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- CONSTRUCT 10' TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE I
- CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 238
- CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
- SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
- INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
- INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
- INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
- INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICITY WITH BATTERY BACK-UP AND AN LOOP
- INSTALL DEPRESSIONED CURB PER DETAIL 43 ON SHEET D-2
- INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- EXISTING POWER POLE TO REMAIN
- INSTALL EQUESTRIAN TRAIL
- INSTALL RECREATIONAL FENCE
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- EXISTING 36" RCP SD PER CLV #1074803
- EXISTING 18" CLASS III RCP SD LATERAL PER CLV #1074803
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- CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
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- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

QUANTITIES

	PRIVATE	PUBLIC
DRAINAGE		
1. 5.0' TYPE "CM2" DROP INLET	EA -	2
2. 18" RCP CLASS III STORM DRAIN	LF -	43
3. 2.0' CONCRETE U-CHANNEL	LF -	430

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY 055035 ON FILE AT CITY OF LAS VEGAS AND CCPW FW18-18325 FOR THE SUBJECT PROJECT.

KEVIN M. BROSS, P.E. 024572 8/2/19 DATE



DATE	BY	APP	DATE	NO.	DESCRIPTION

DATE	BY	APP	DATE	NO.	DESCRIPTION

DATE	BY	APP	DATE	NO.	DESCRIPTION

DATE	BY	APP	DATE	NO.	DESCRIPTION

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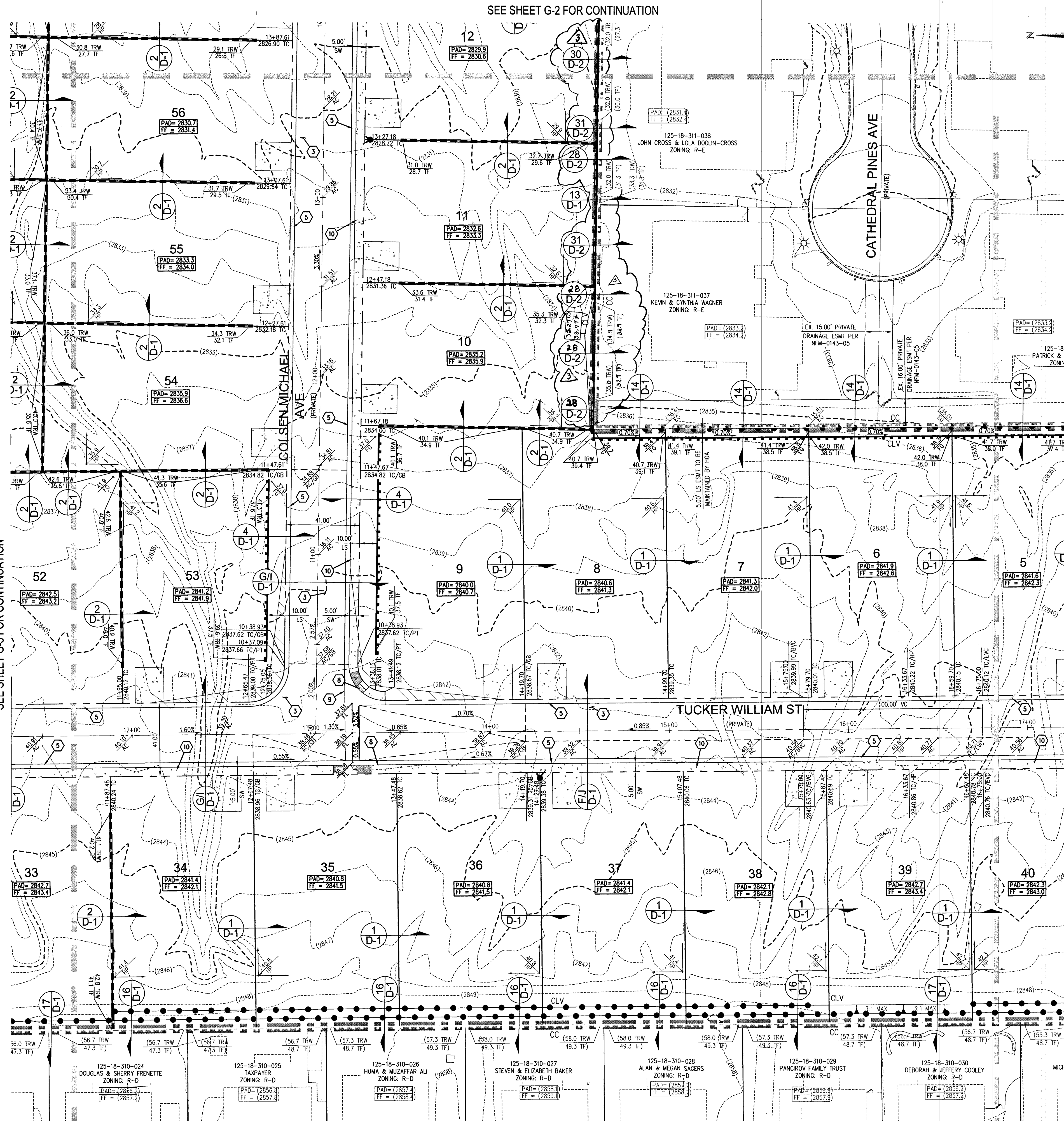
DATE	BY	APP	DATE	NO.	DESCRIPTION

DATE	BY	APP	DATE	NO.	DESCRIPTION

L18-02739

L:\vch167\buffalo farm.dwg (improvements) 3/21/2019 11:10 AM Lokeila, Abad

SEE SHEET G-3 FOR CONTINUATION



SEE SHEET G-5 FOR CONTINUATION

PRIVATE STREET NOTE
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SURVEY NOTE
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SOILS REPORT
SOILS REPORT BY ANGLE ENGINEERING
PROJECT NO. 26214-1 DATED 06/06/2018

EARTHWORKS
EARTHWORK QUANTITIES (RAW):
CUT: 44,425 CU YDS
FILL: 36,989 CU YDS
EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

DISCLAIMER NOTE
1) EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED UP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

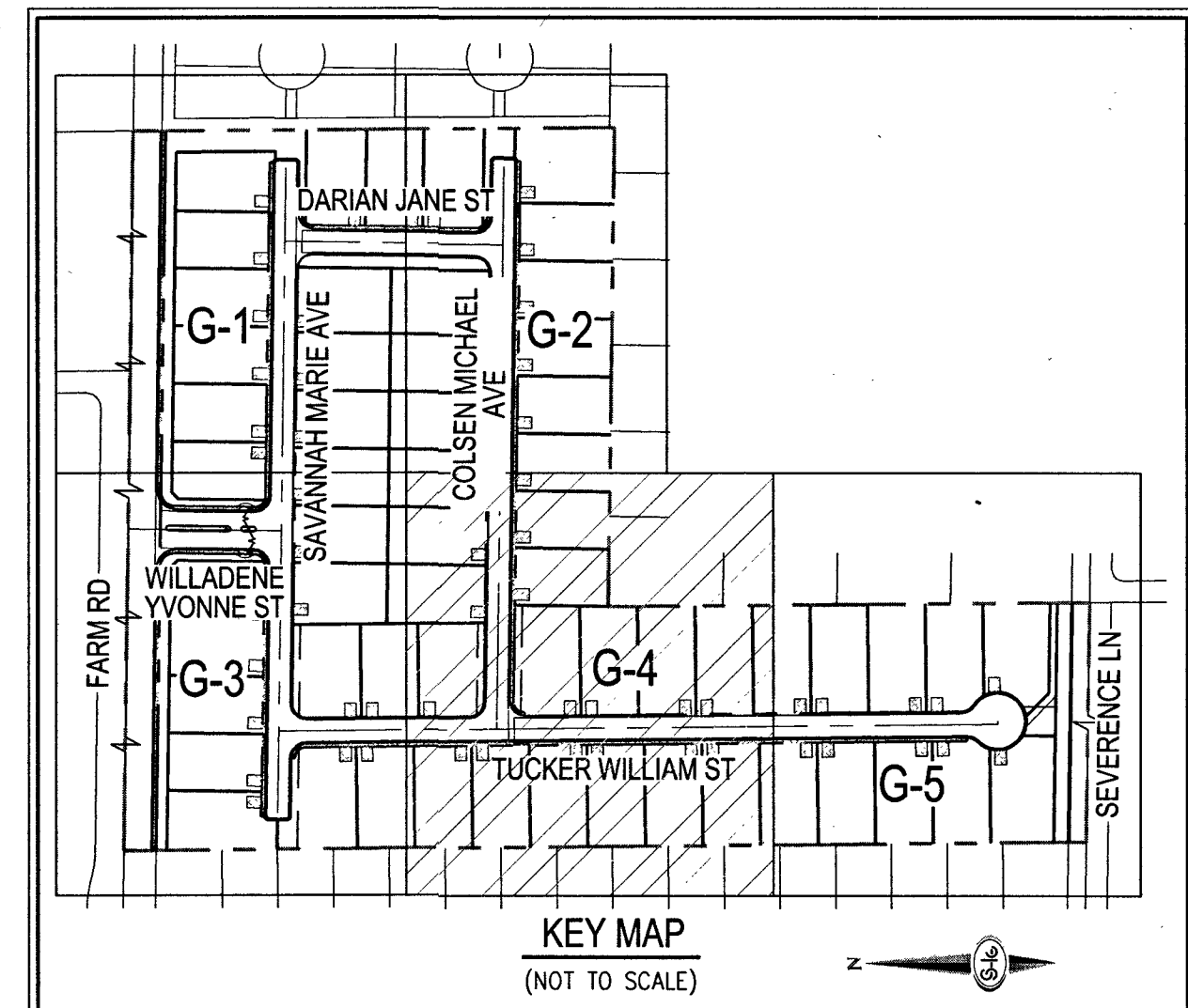
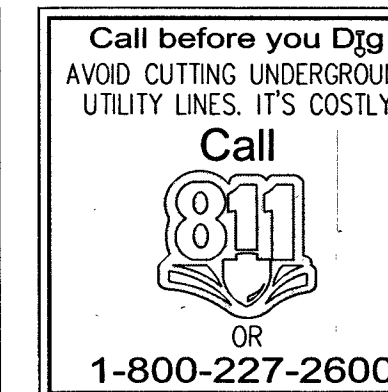
GRADING NOTES
1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM SECTION SLOPES NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLENISHING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
10. CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE, OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

FLOOD ZONE
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1745E & 32003C1750E, DATED SEPTEMBER 27, 2002. A ZONE "X" (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.



- GRADING NOTES**
- 1) INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
 - 2) INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
 - 3) INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
 - 4) CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
 - 5) CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
 - 6) CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
 - 7) 10' TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
 - 8) CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
 - 9) CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
 - 10) CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
 - 11) SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
 - 12) INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
 - 13) INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
 - 14) INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
 - 15) INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWERED WITH BATTERY BACK-UP AND AN ALARM
 - 16) INSTALL DEPRESSIONED CURB PER DETAIL 43 ON SHEET D-2
 - 17) INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
 - 18) EXISTING POWER POLE TO REMAIN
 - 19) INSTALL EQUESTRIAN TRAIL
 - 20) INSTALL RECREATIONAL FENCE
 - 21) EXISTING WROUGHT IRON FENCE TO BE REMOVED
 - 22) INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
 - 23) INSTALL 2.0' CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
 - 24) EXISTING 36" RCP SD PER CLV #107Y4803
 - 25) EXISTING 18" CLASS II RCP SD LATERAL PER CLV #107Y4803
 - 26) EXISTING DROP INLET PER CLV #107Y4803
 - 27) CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
 - 28) INSTALL 18" RCP STORM DRAIN LATERAL
 - 29) INSTALL 5.0' TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
 - 30) EXISTING 48" STORM DRAIN MANHOLE PER CLV #107Y4803
 - 31) INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
 - 32) CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
 - 33) REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

QUANTITIES		PRIVATE	PUBLIC
DRAINAGE			
1. 5.0' TYPE "CM2" DROP INLET	EA	-	2
2. 18" RCP CLASS II STORM DRAIN	LF	-	43
3. 2.0' CONCRETE U-CHANNEL	LF	-	430

FLOOD CERTIFICATION
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY 055035 ON FILE AT CITY OF LAS VEGAS AND CCPW PW18-18325 FOR THE SUBJECT PROJECT.
KEVIN W. BROSS, P.E. 024572 3/21/19 DATE

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

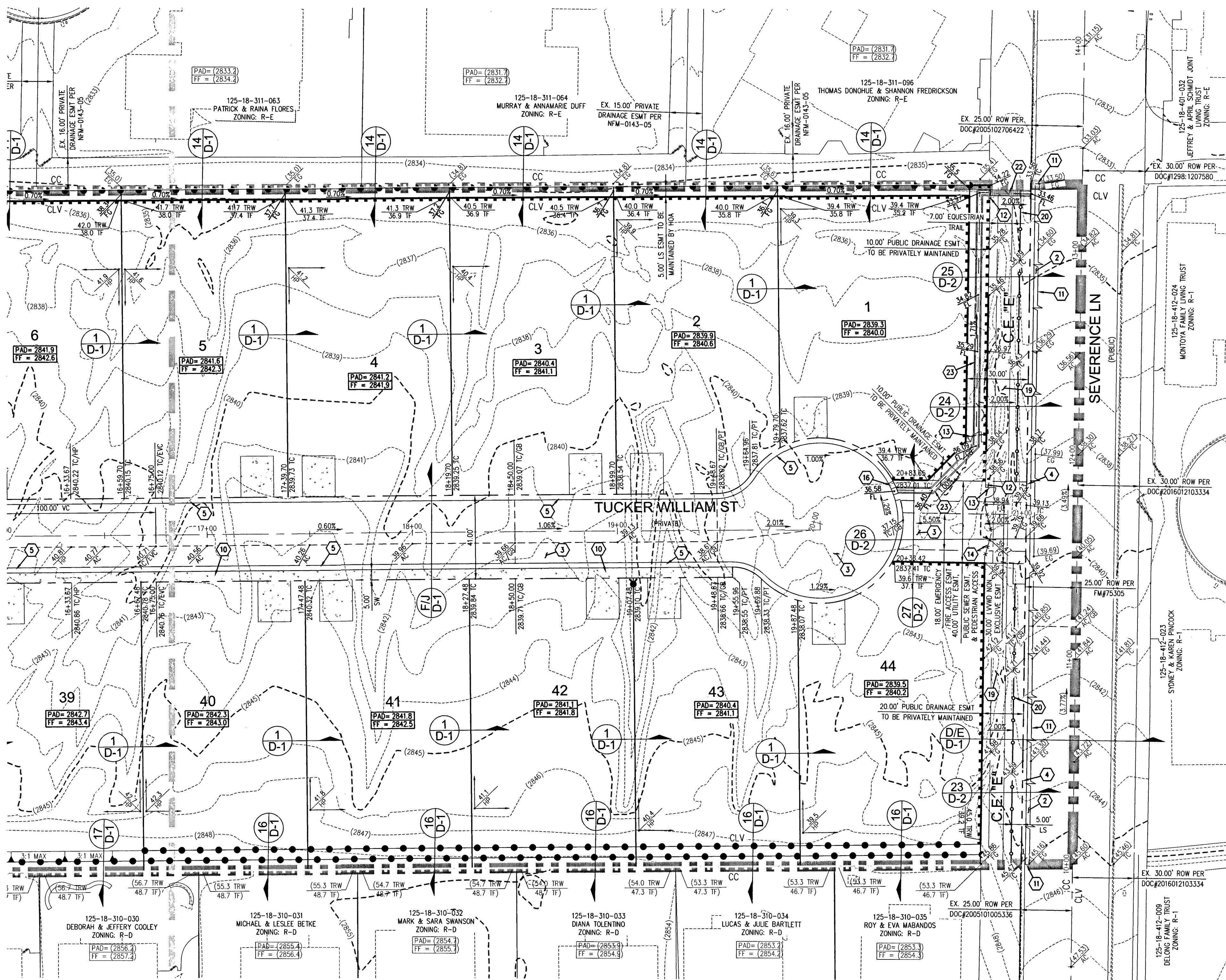
SLATER HANIFAN GROUP
LAS VEGAS, NEVADA

RICHMOND AMERICAN HOMES
FARM HUALAPAI
GRADING PLAN IV

DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517

G-4
SHEET 7 OF 34
L18-02739

SEE SHEET G-4 FOR CONTINUATION



PRIVATE STREET NOTE
ALL PRIVATE STREETS ARE PUBLIC DRAINAGE AND UTILITY EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

SURVEY NOTE
OWNER RESPONSIBLE TO PROVIDE SURVEY MONUMENTATION AS SHOWN AND TO REPLACE ALL SURVEY MONUMENTATION DAMAGED, DISTURBED, DESTROYED, OR OBSCURED DURING CONSTRUCTION.

ELEVATION NOTE
ADD 2800 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2801.00)

SOILS REPORT
SOILS REPORT BY ANGLE ENGINEERING
PROJECT NO. 26214-1 DATED 06/06/2018

EARTHWORKS
EARTHWORK QUANTITIES (RAW):
CUT= 44,425 CU YDS
FILL= 36,969 CU YDS
EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

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GRADING NOTES

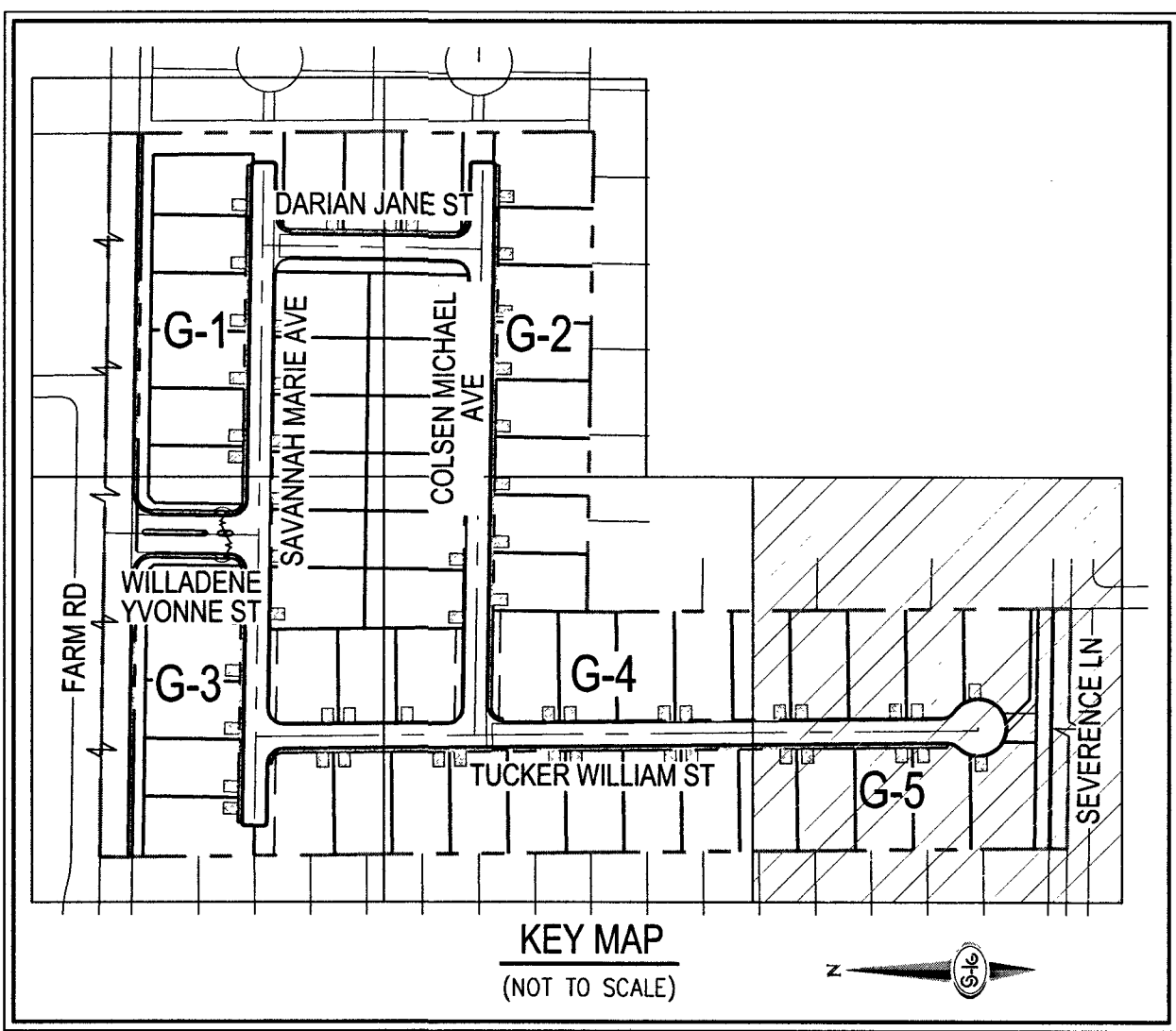
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- CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
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- CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
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- EXISTING POWER POLE TO REMAIN
- INSTALL EQUESTRIAN TRAIL
- INSTALL RECREATIONAL FENCE
- EXISTING WROUGHT IRON FENCE TO BE REMOVED
- INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- INSTALL 2.0" CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- EXISTING 36" RCP SD PER CLV #1074803
- INSTALL 18" CLASS III RCP SD LATERAL PER CLV #1074803
- EXISTING DROP INLET PER CLV #1074803
- CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- INSTALL 18" RCP STORM DRAIN LATERAL
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- INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

QUANTITIES		PRIVATE	PUBLIC
DRAINAGE			
1. 5.0" TYPE "CM2" DROP INLET	EA	-	2
2. 18" RCP CLASS III STORM DRAIN	LF	-	43
3. 2.0" CONCRETE U-CHANNEL	LF	-	430

FLOOD CERTIFICATION
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY D55035 ON FILE AT CITY OF LAS VEGAS AND CCPW PW18-18325 FOR THE SUBJECT PROJECT.

22 3/21/19
KEVIN M. BROSS, P.E. 024572 DATE

FAST
Call before you dig
Underground
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929

Call before you dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

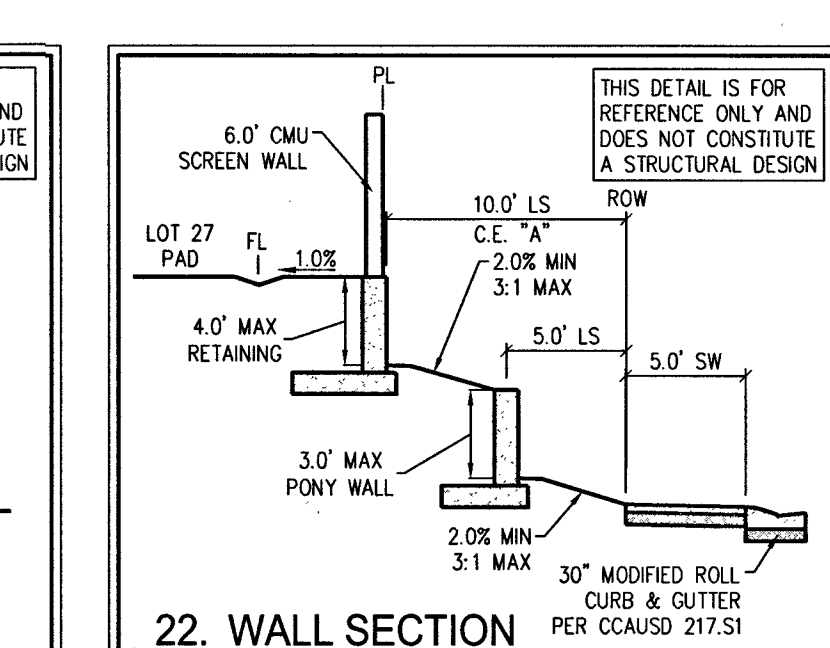
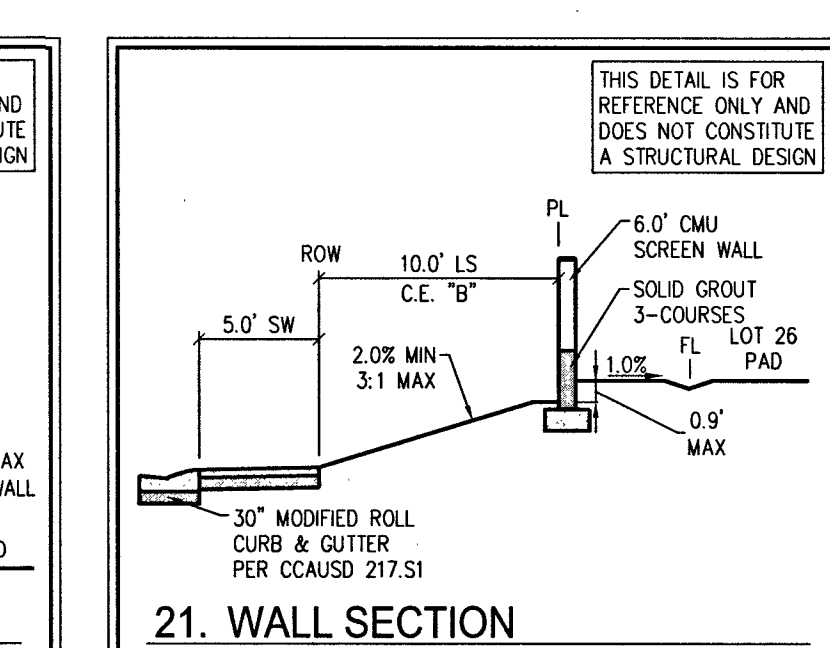
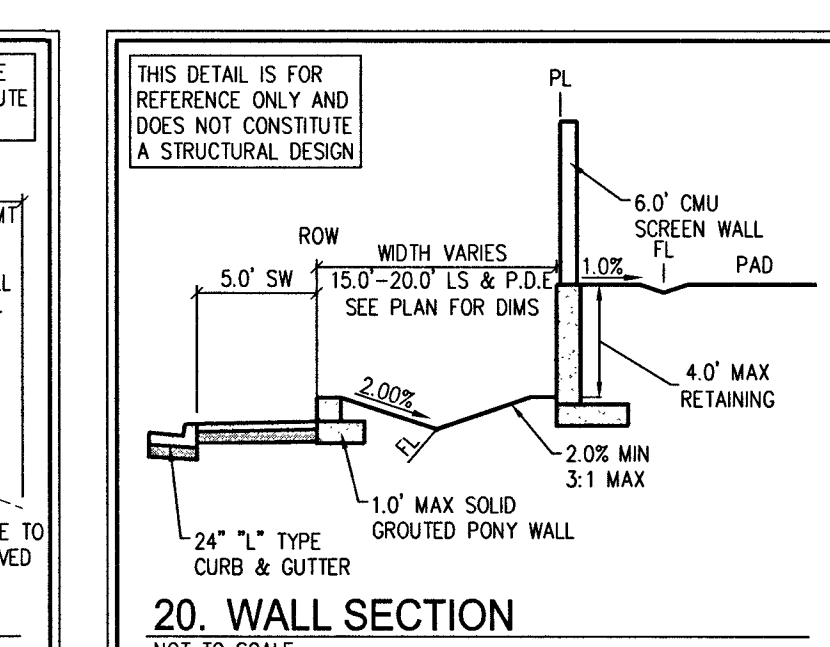
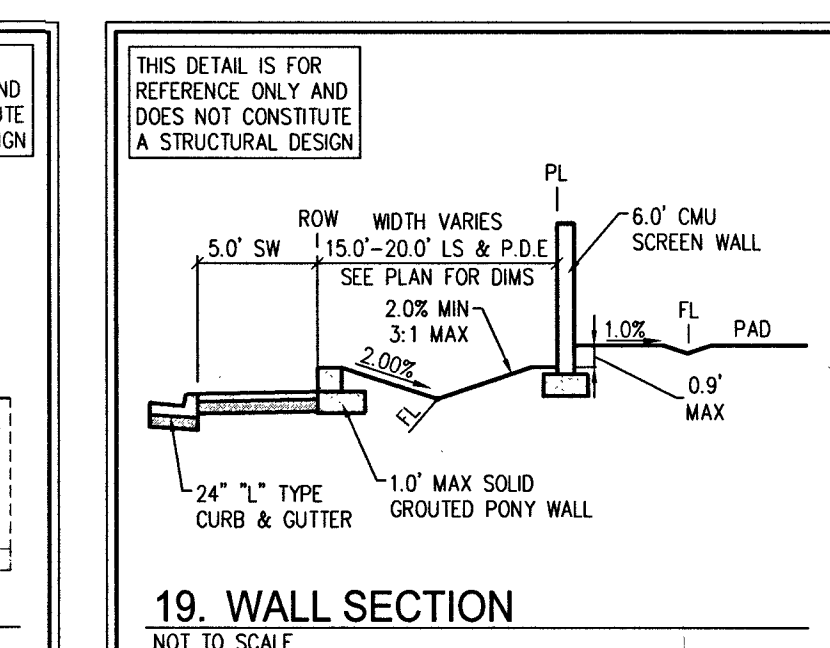
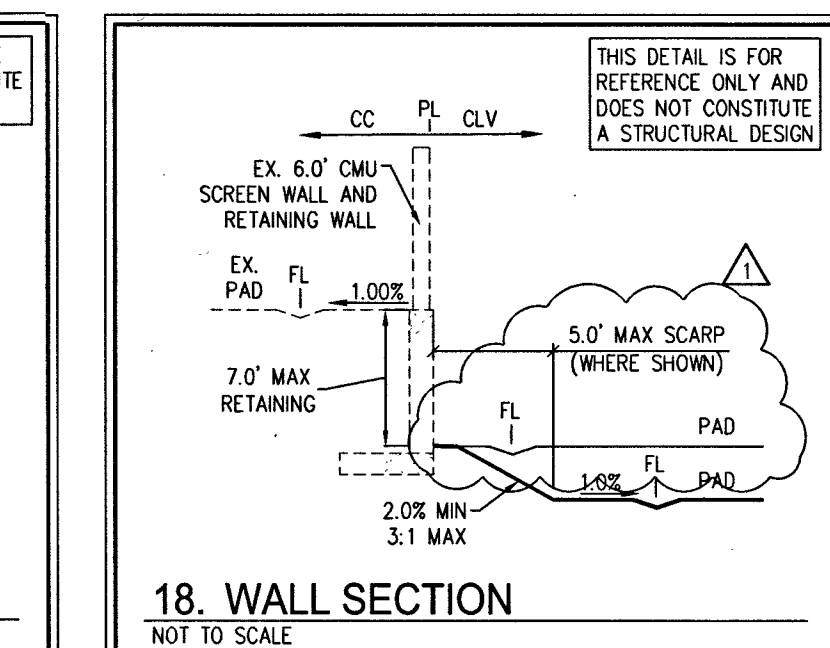
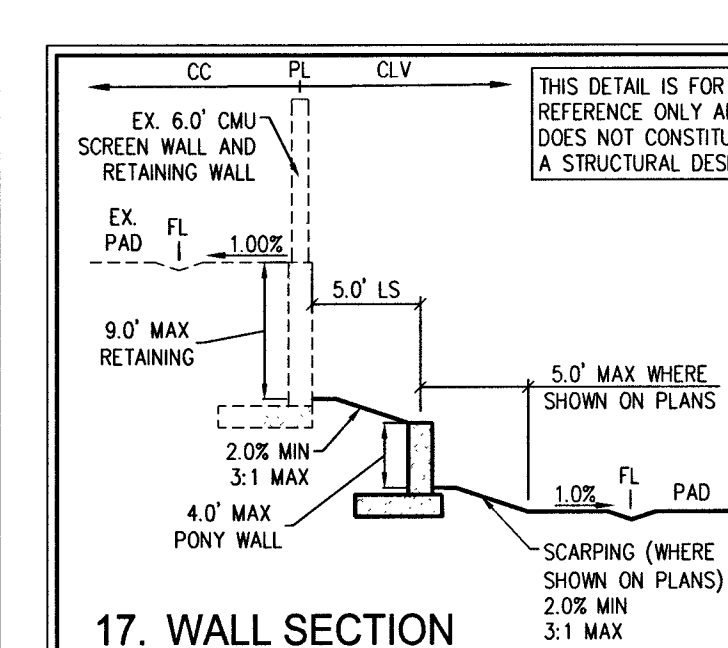
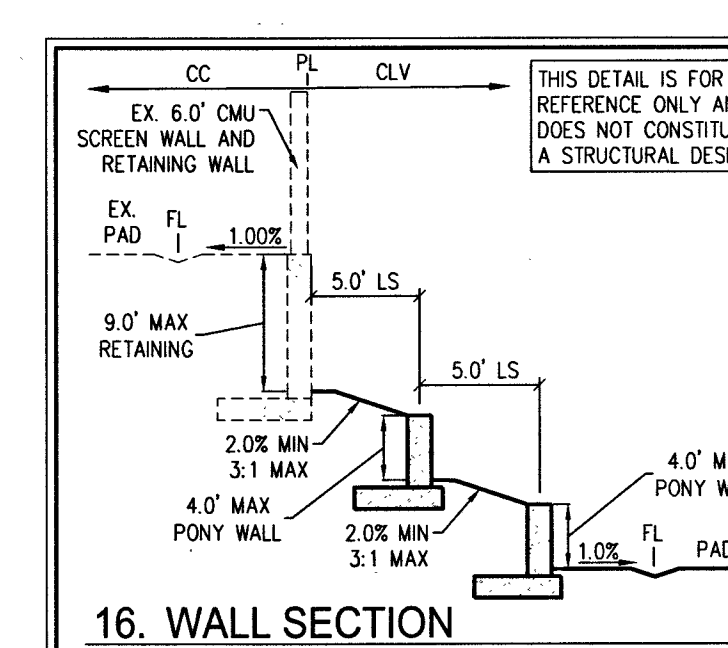
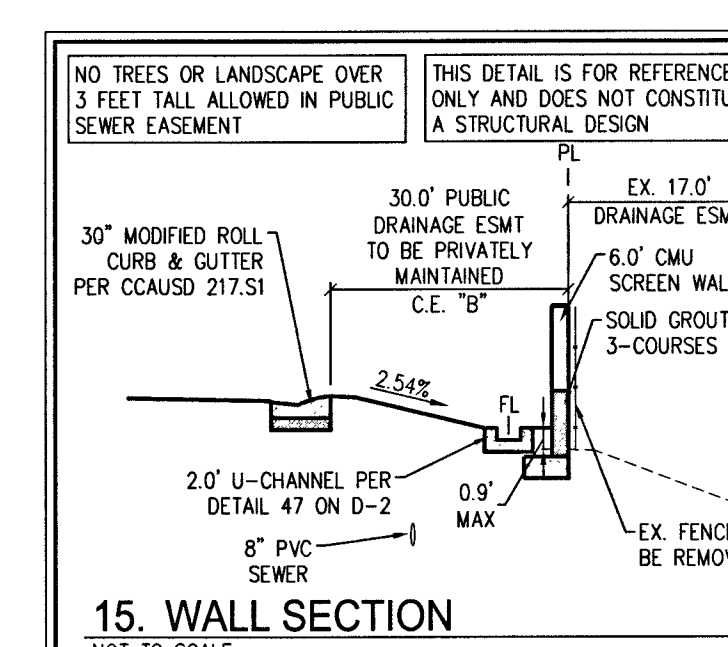
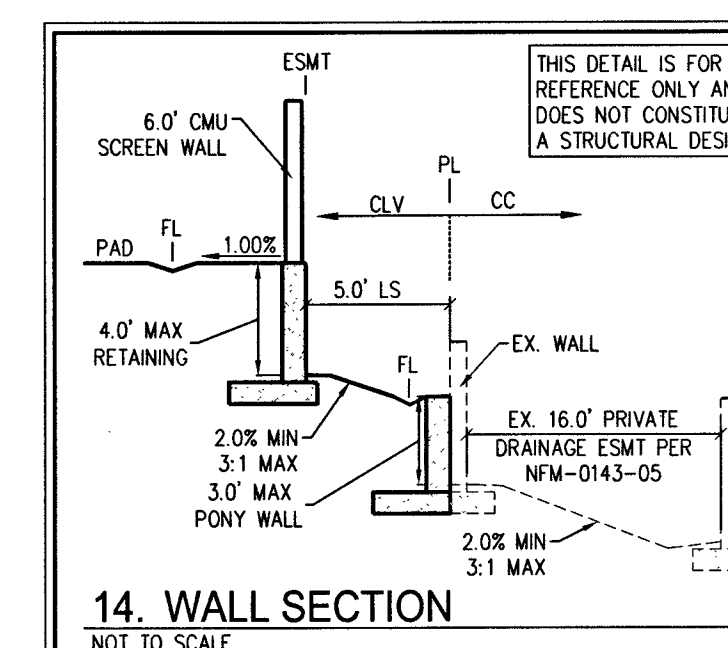
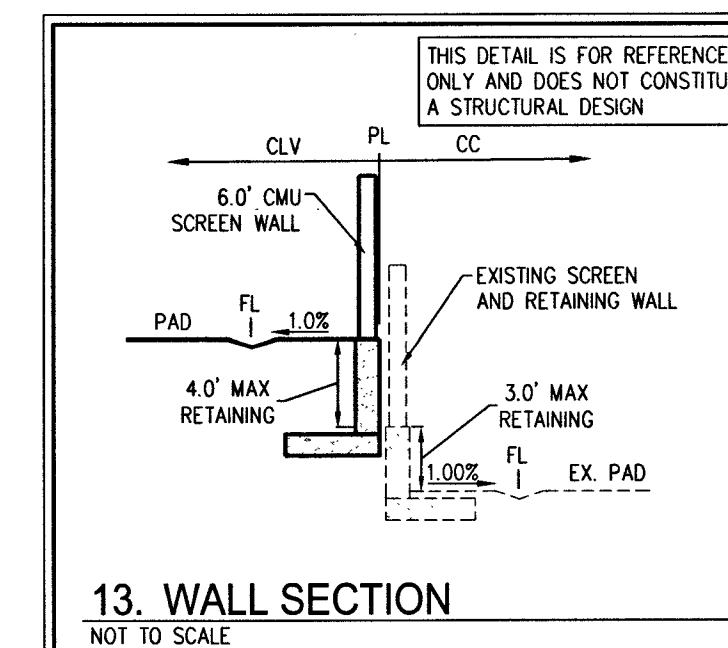
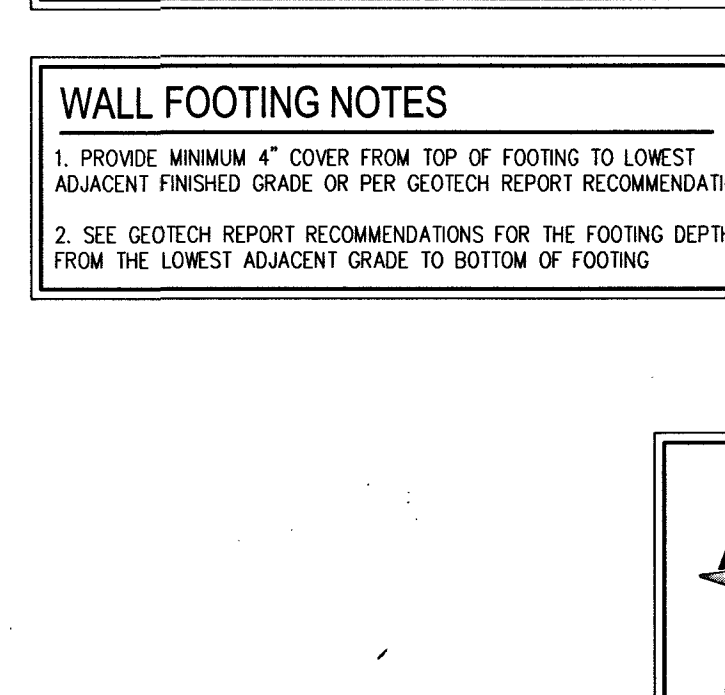
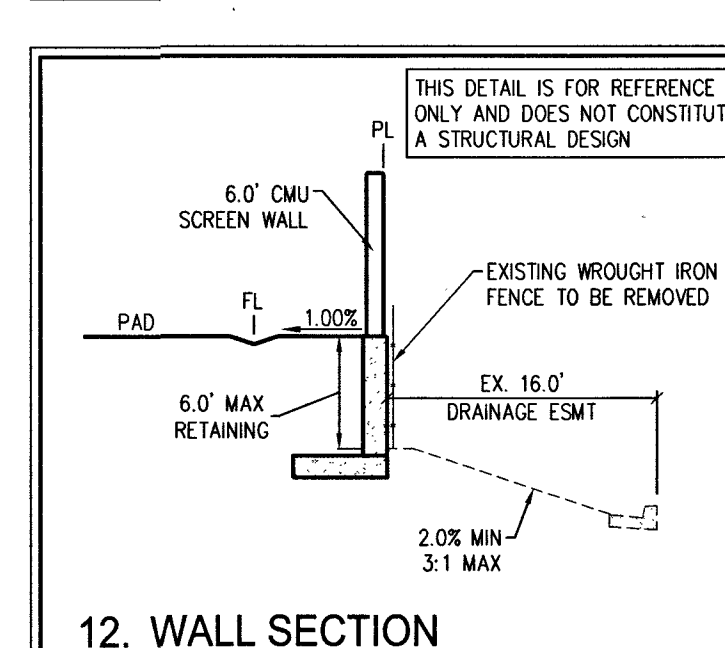
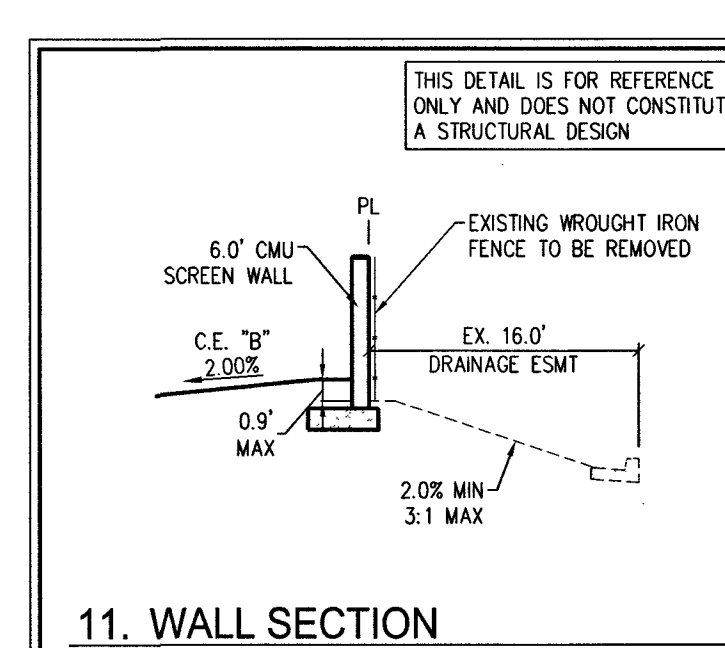
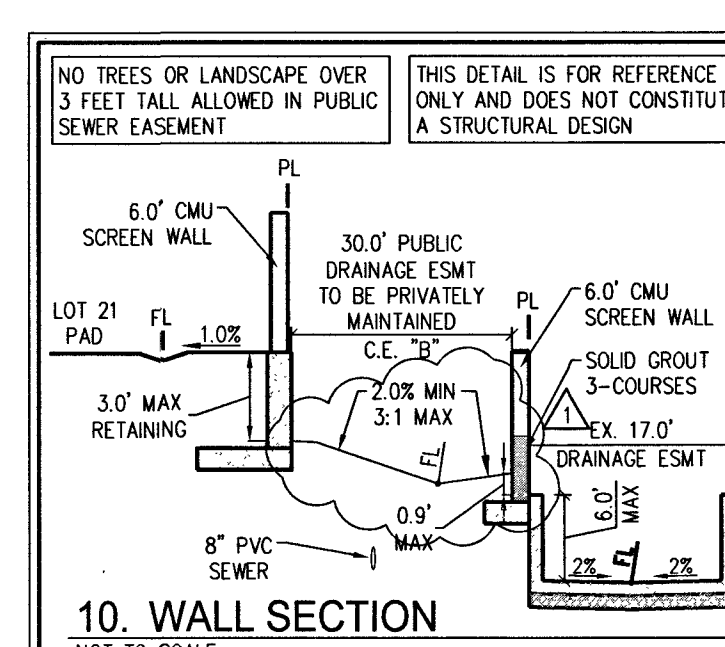
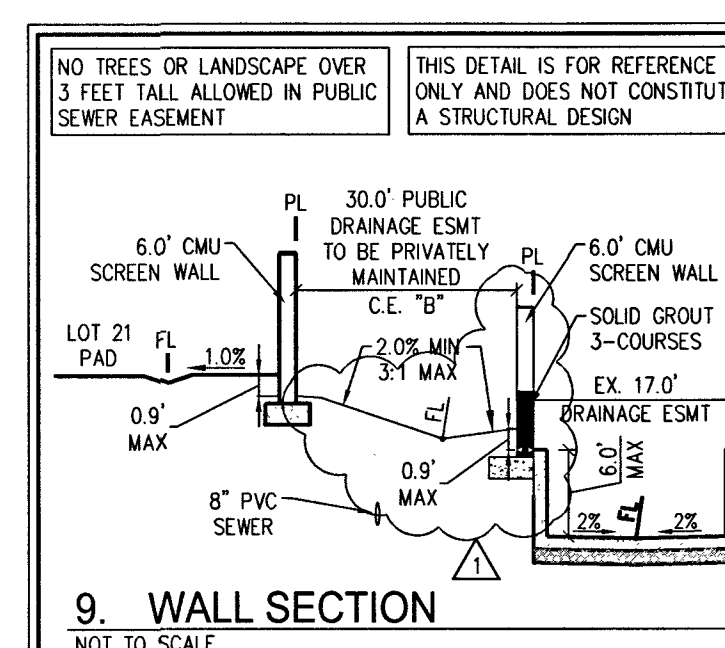
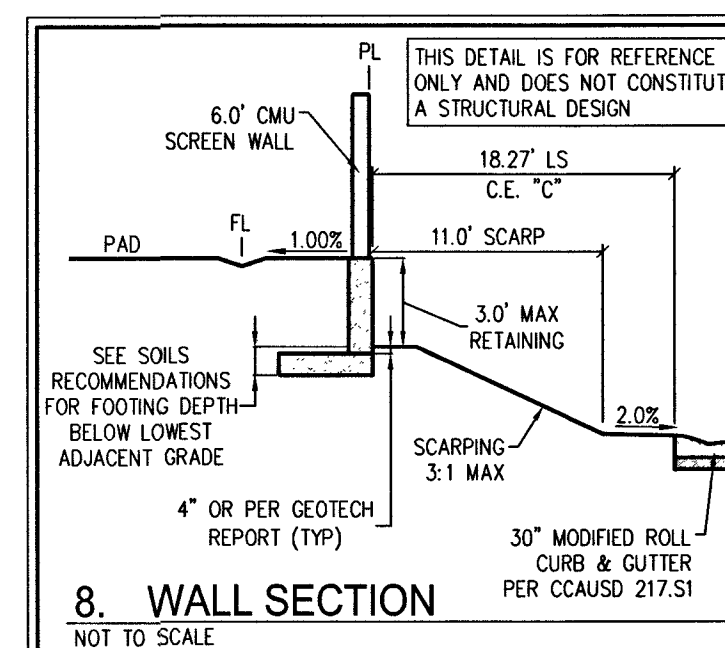
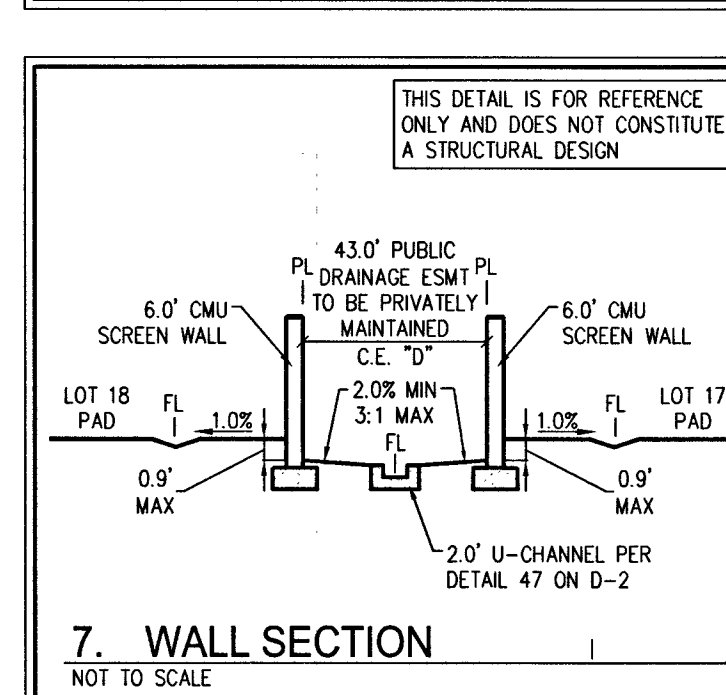
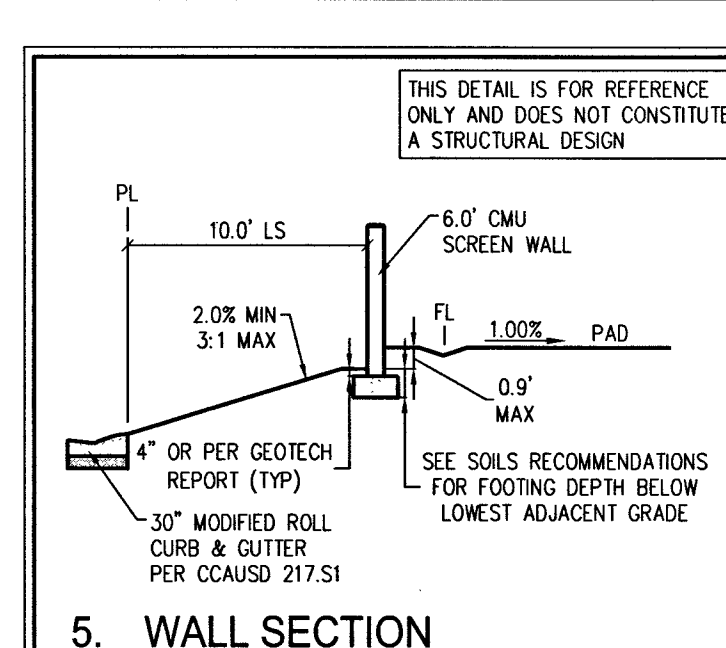
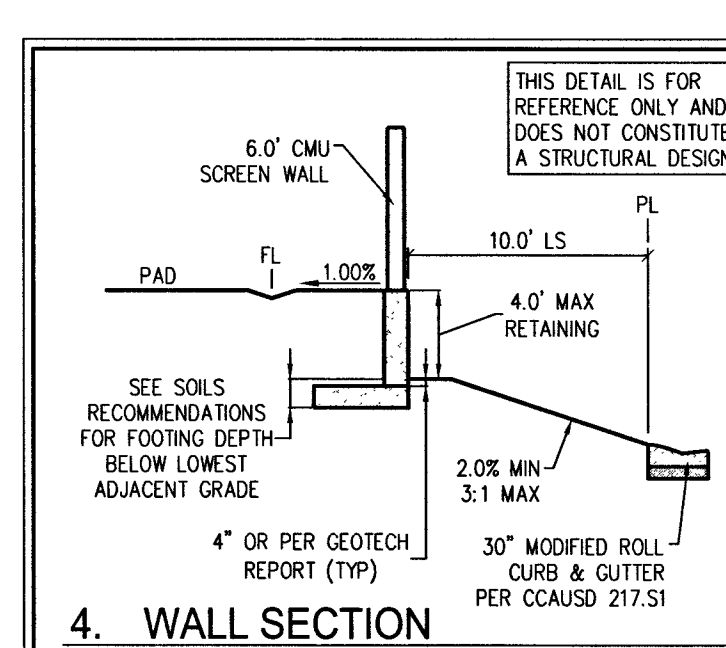
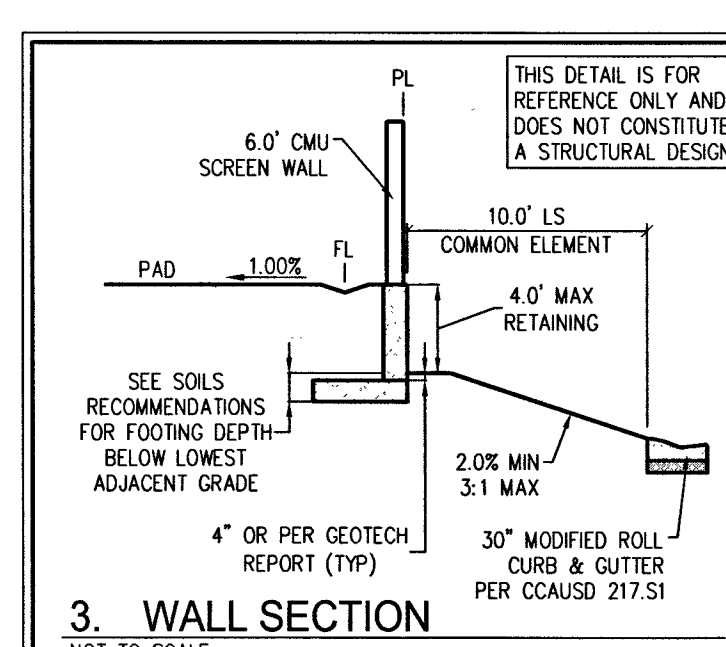
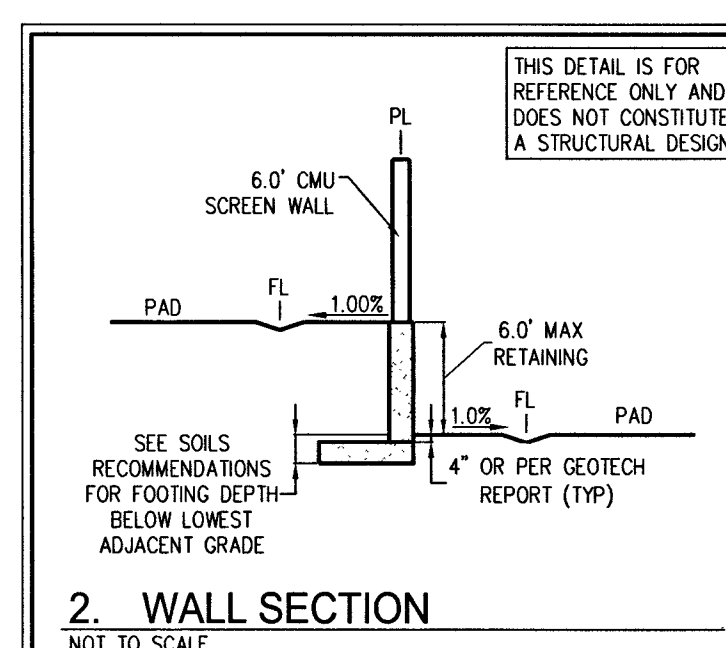
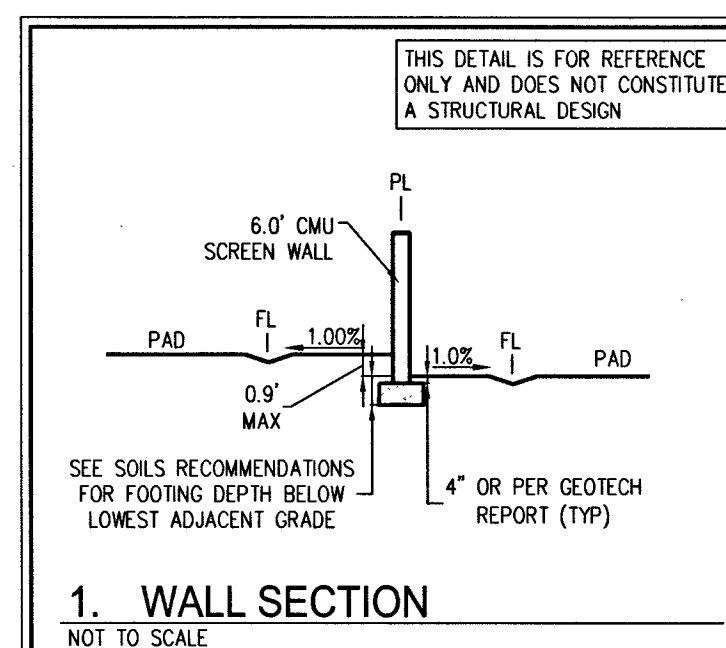
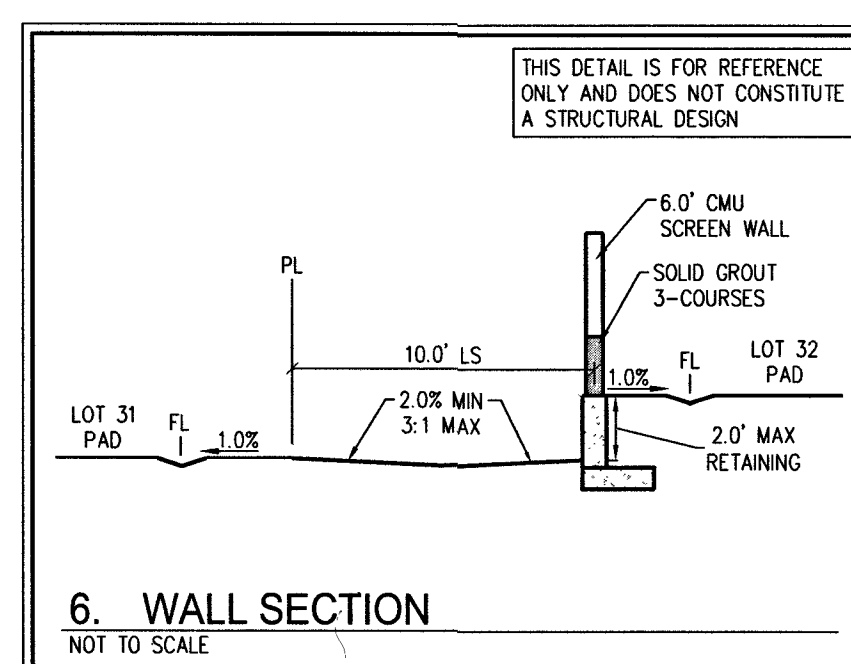
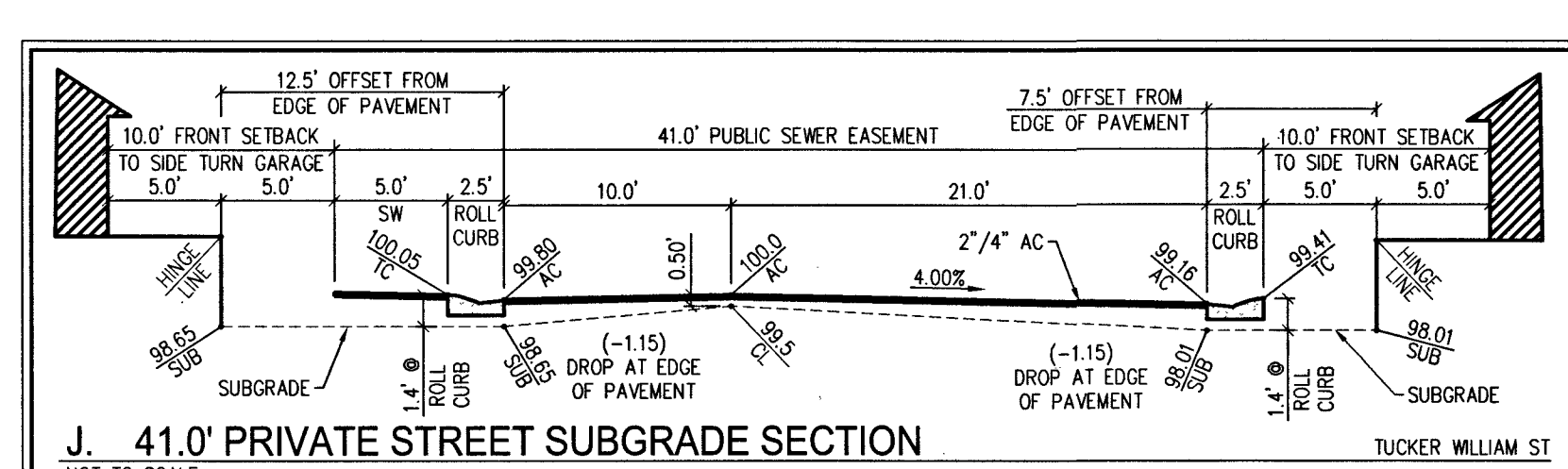
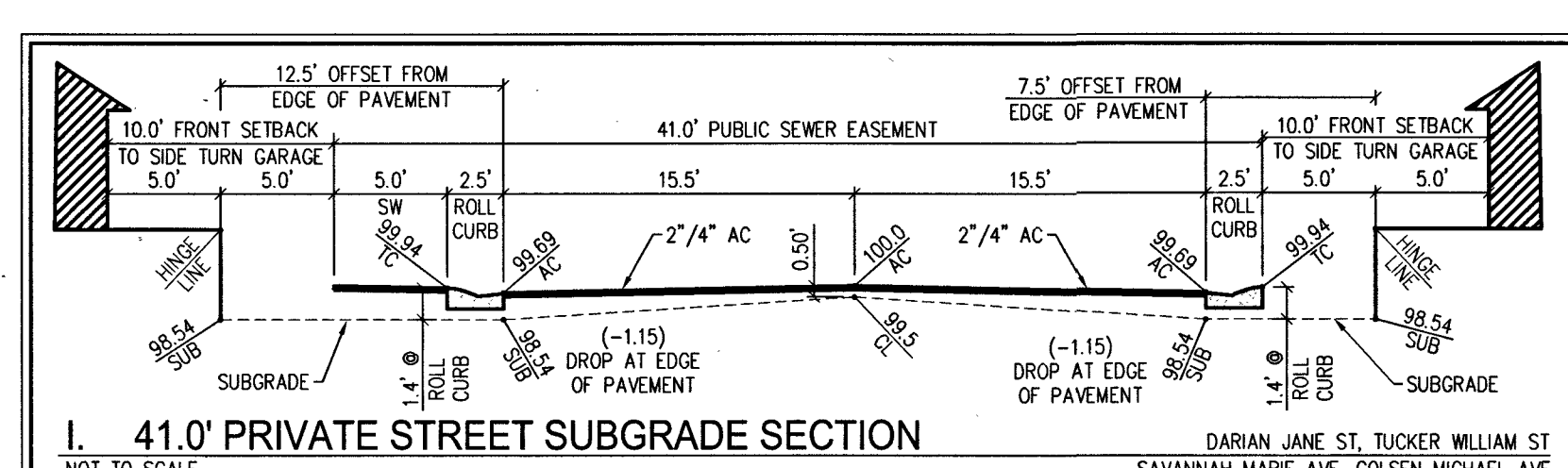
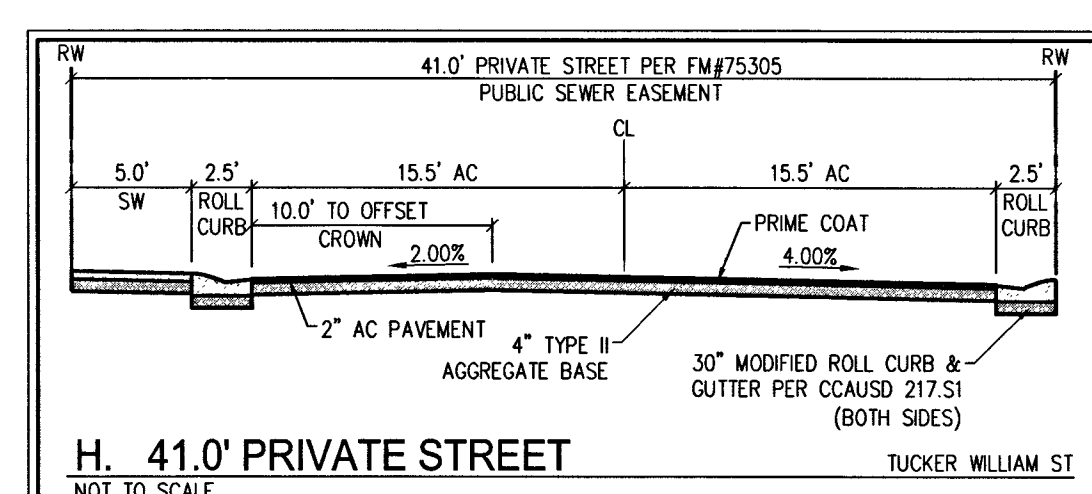
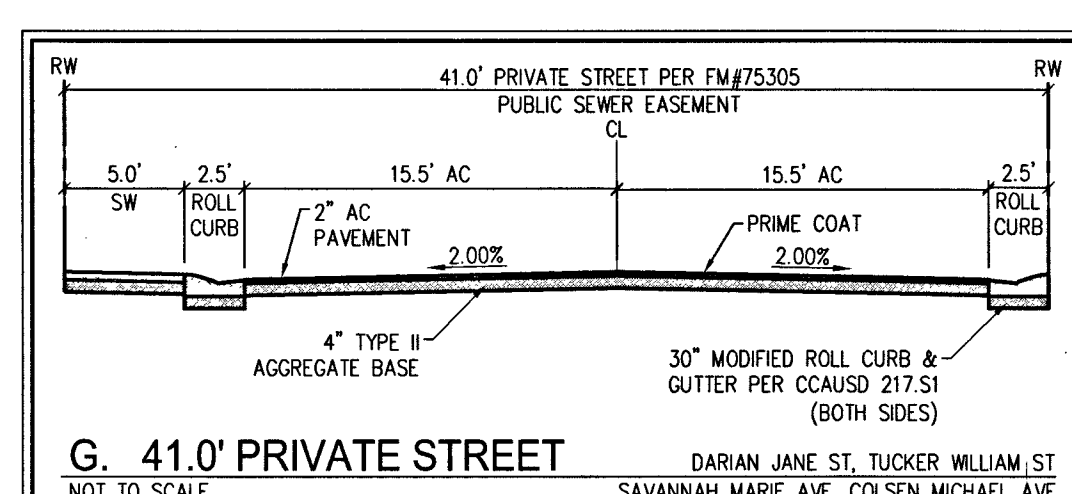
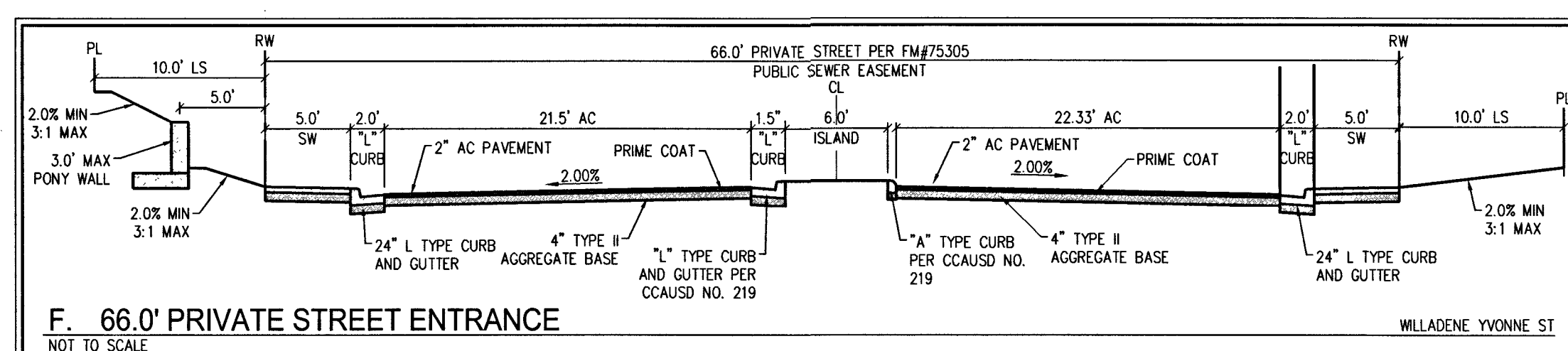
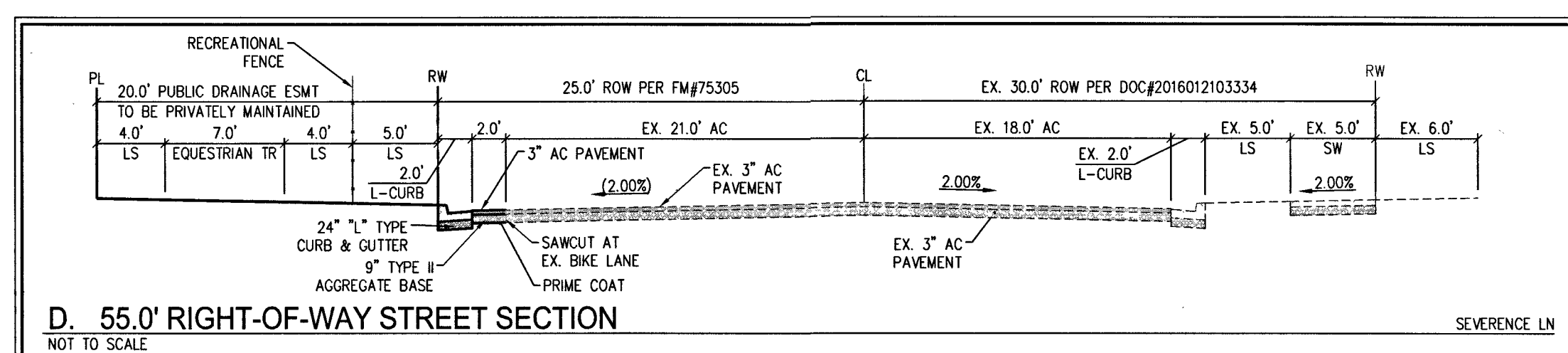
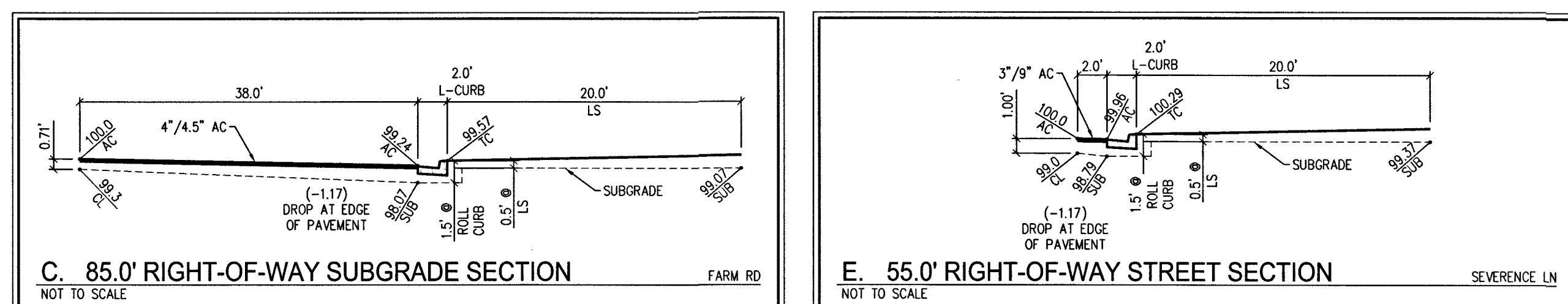
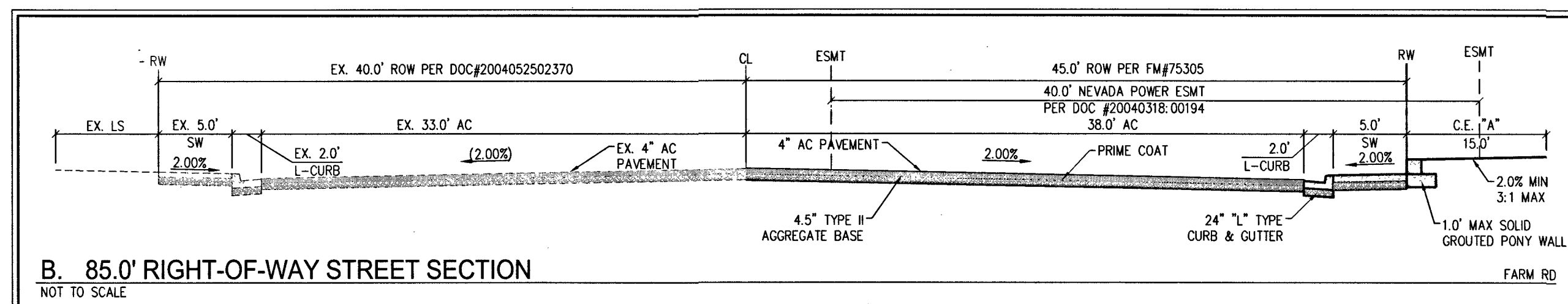
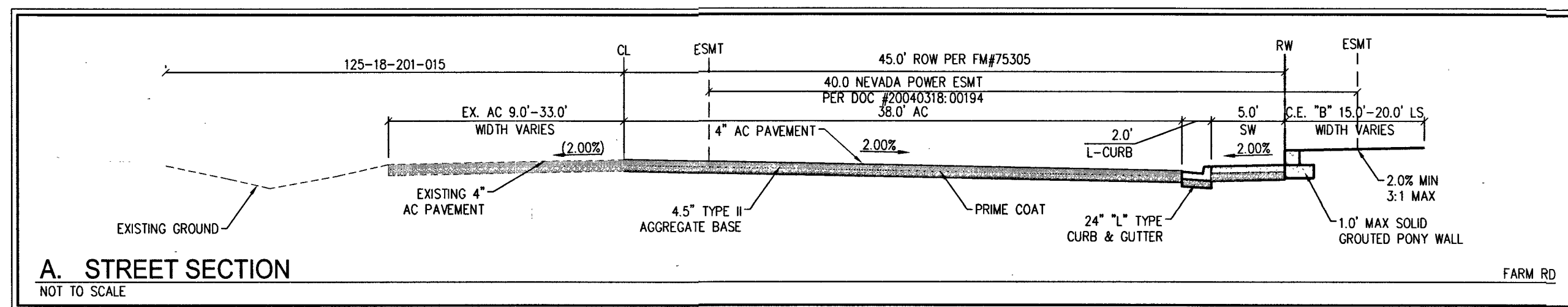
SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

RICHMOND AMERICAN HOMES
FARM HUALAPAI
GRADING PLAN V

DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517

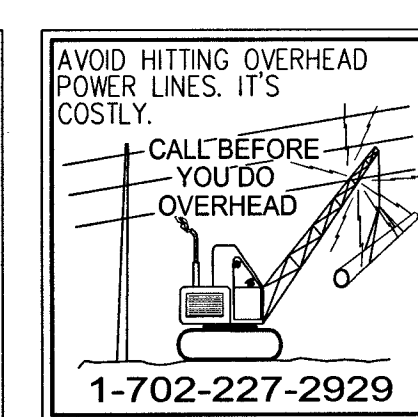
KEVIN M. BROSS
Exp. 12/31/2020
CIVIL
No. 24572
3/21/19

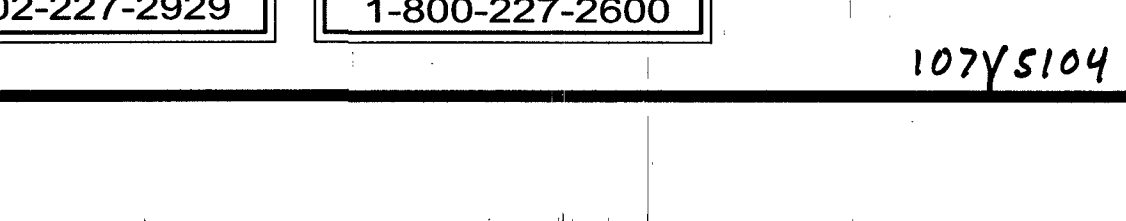
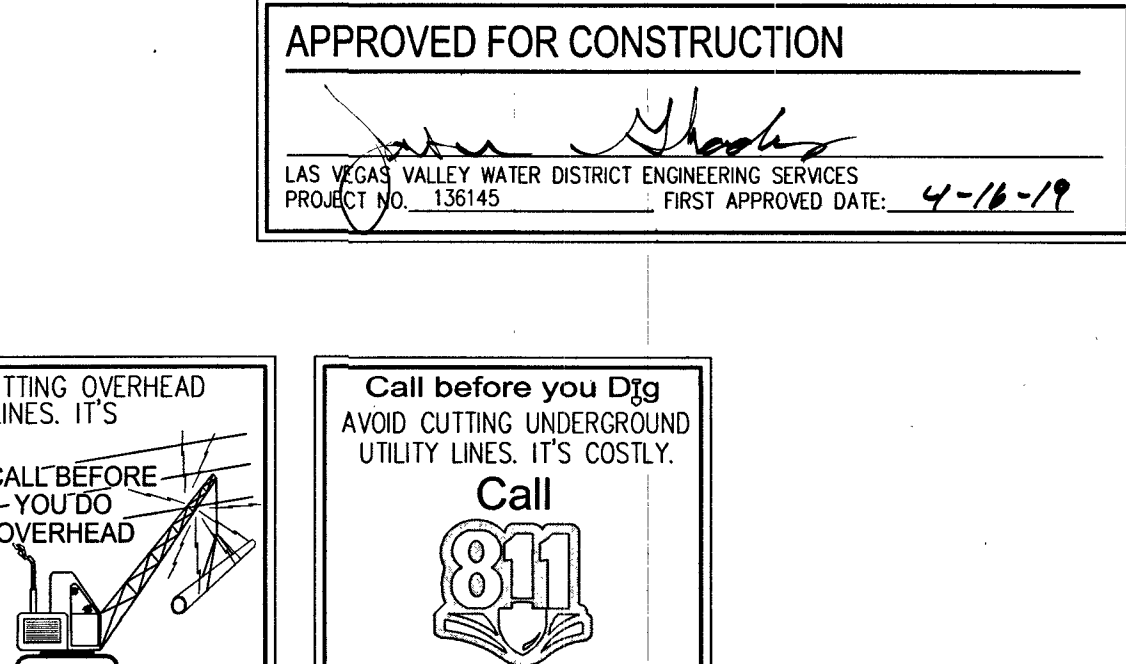
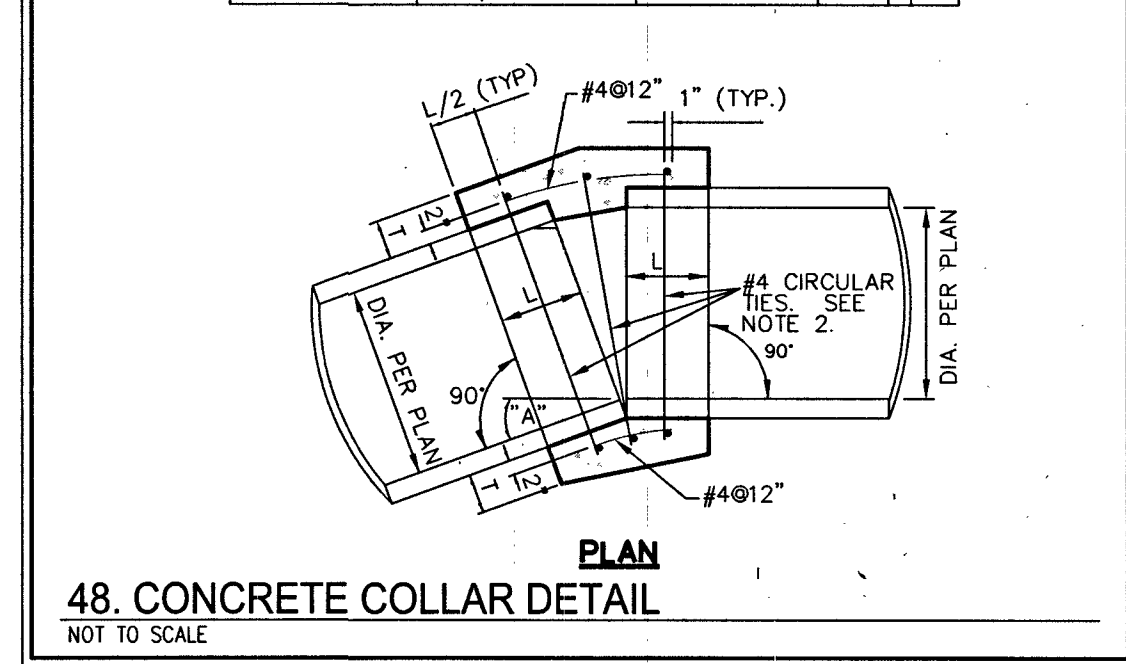
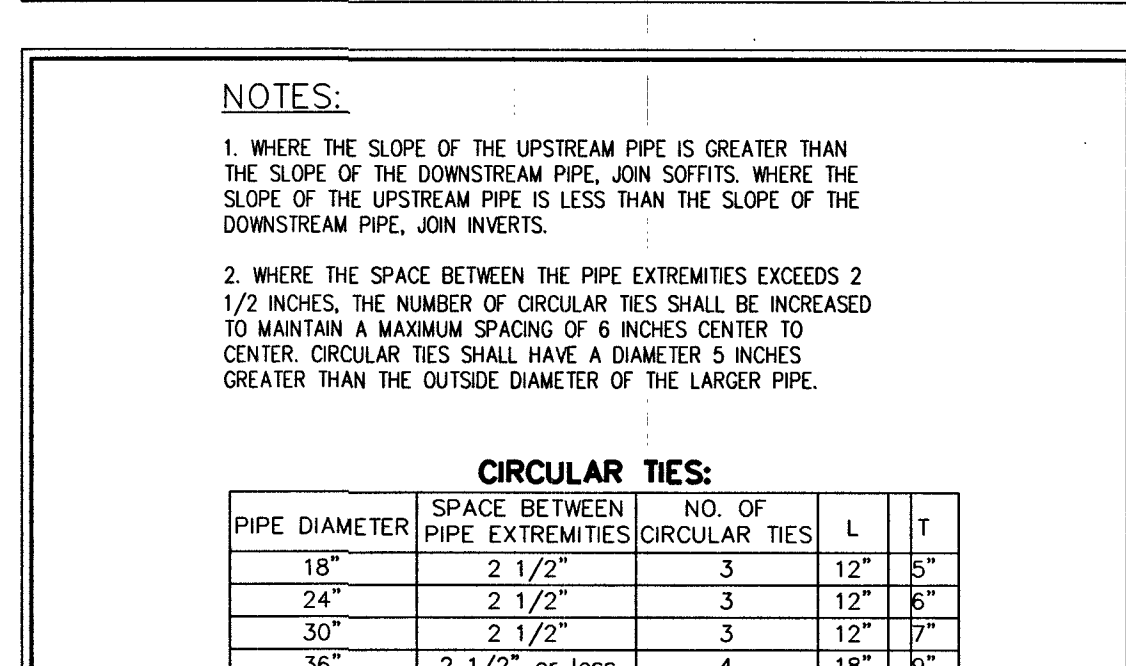
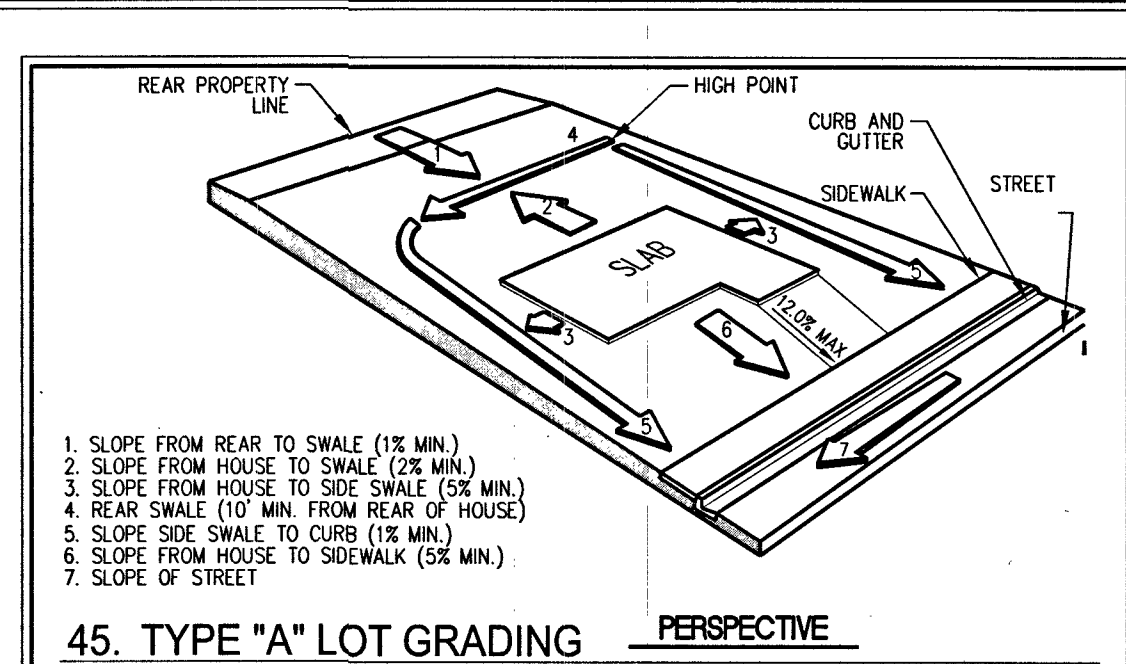
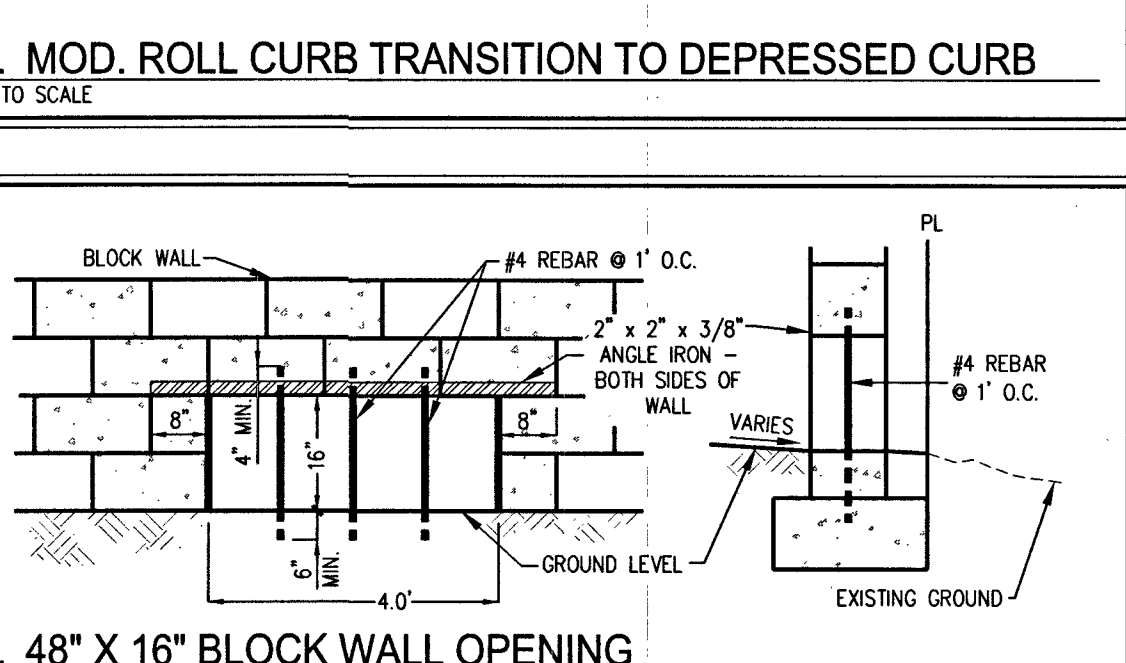
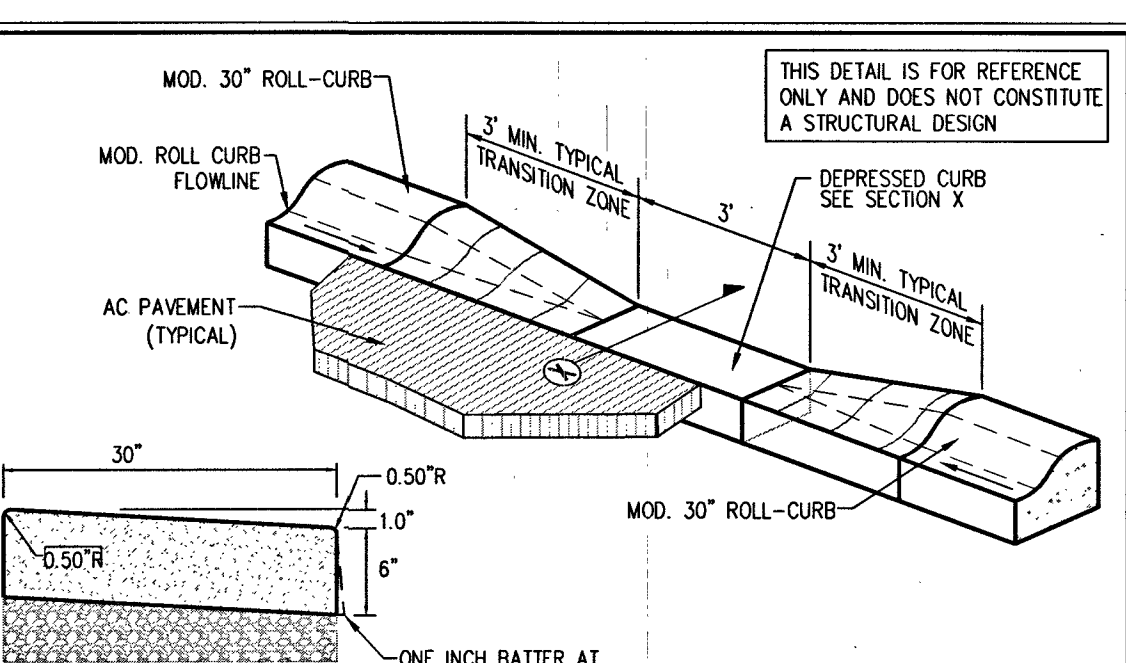
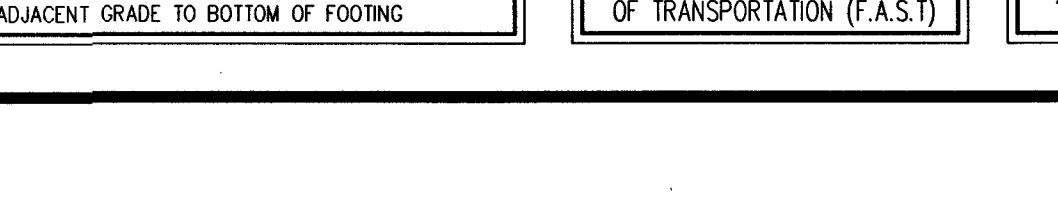
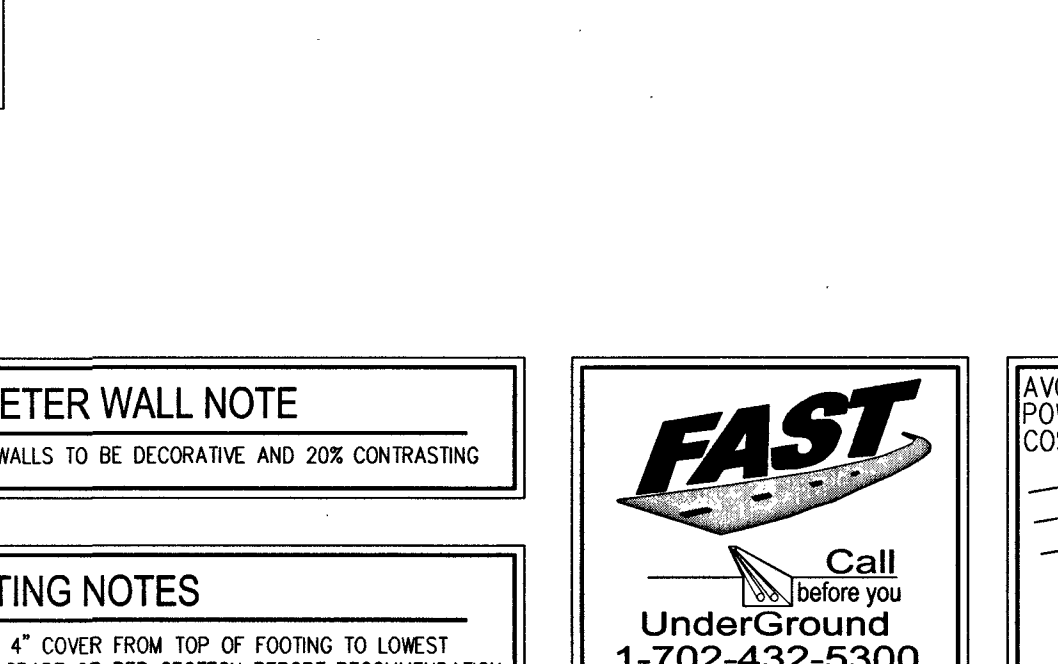
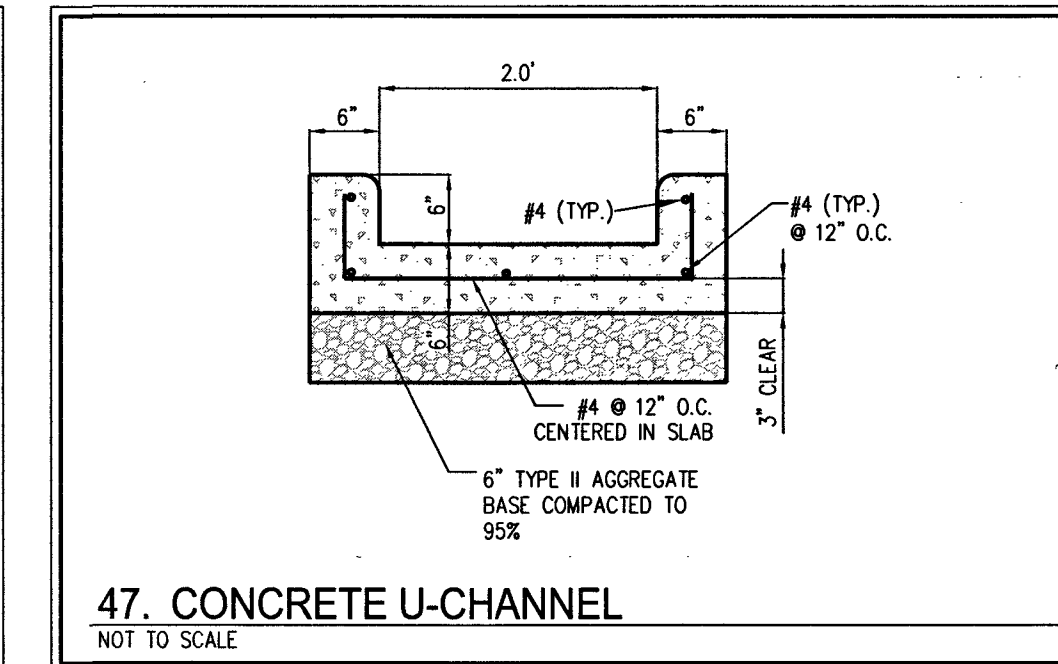
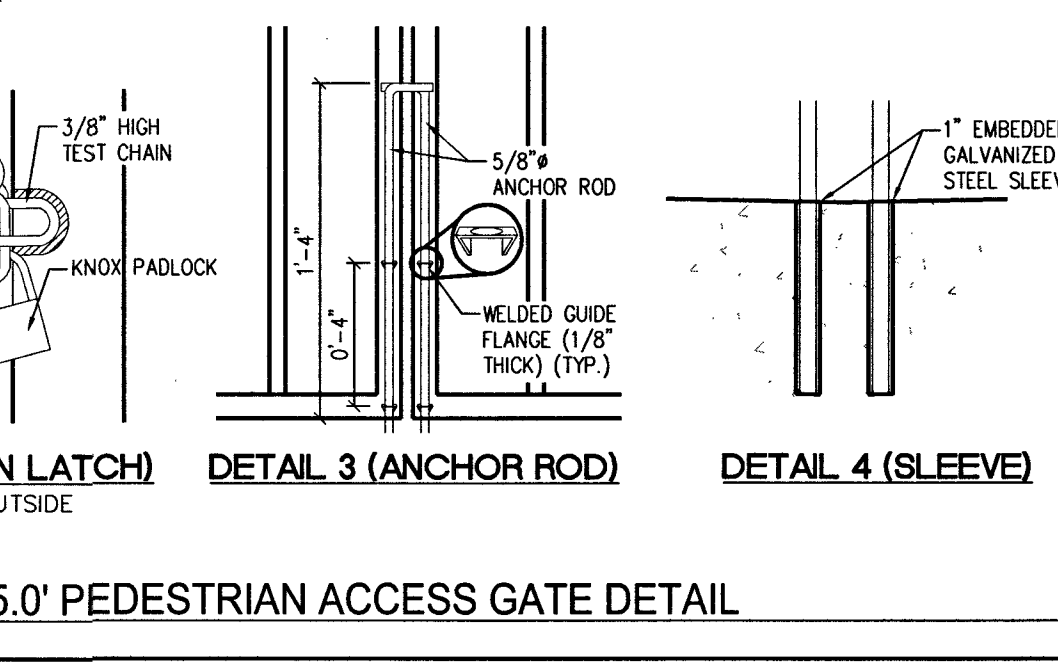
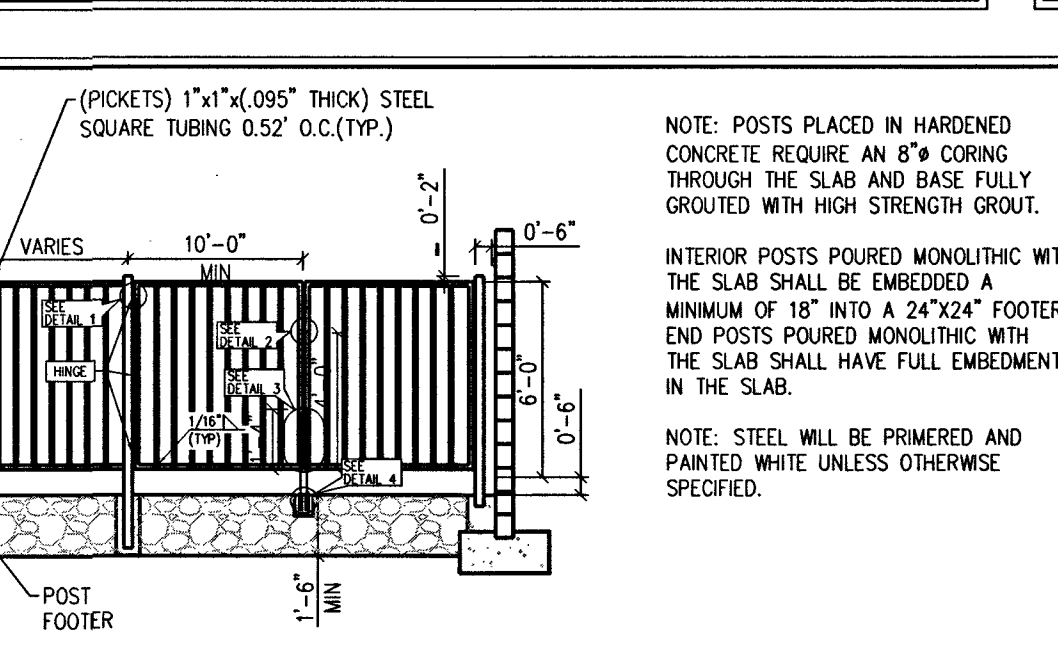
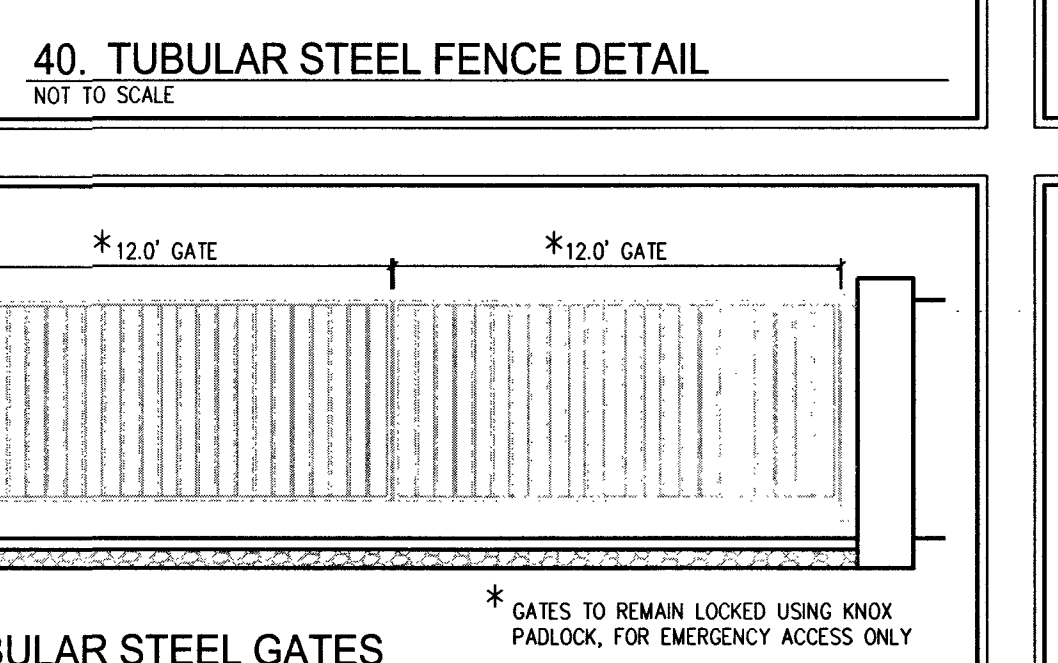
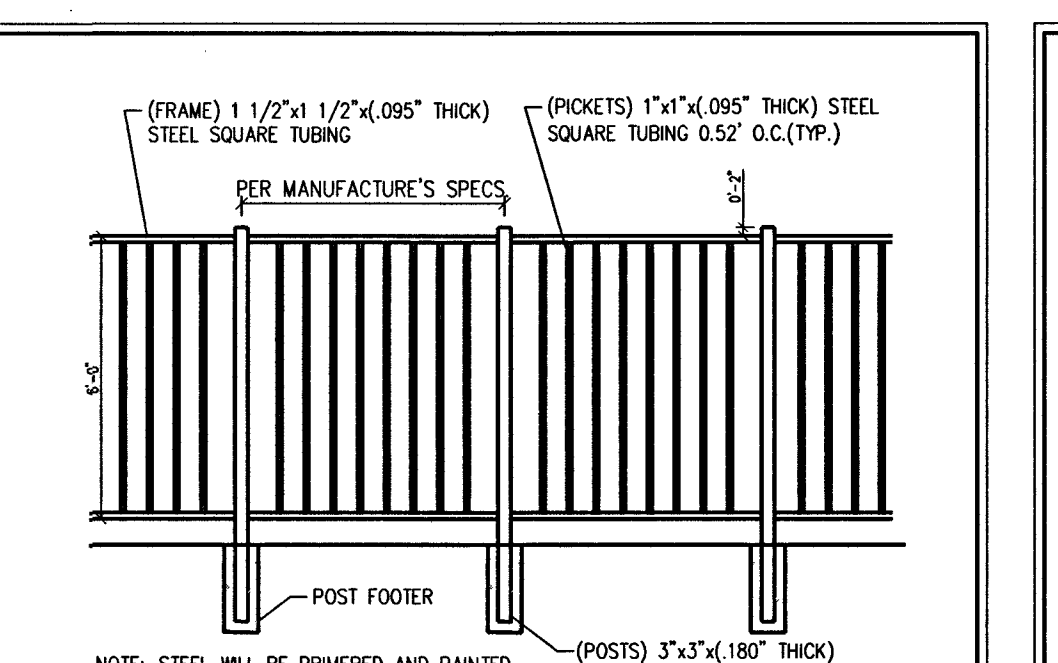
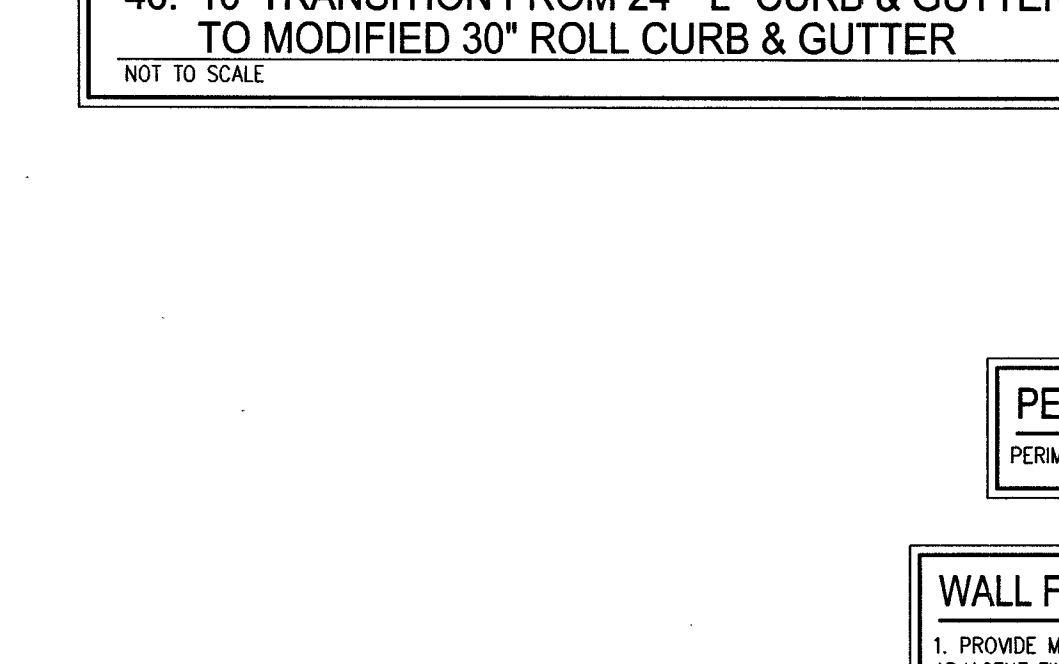
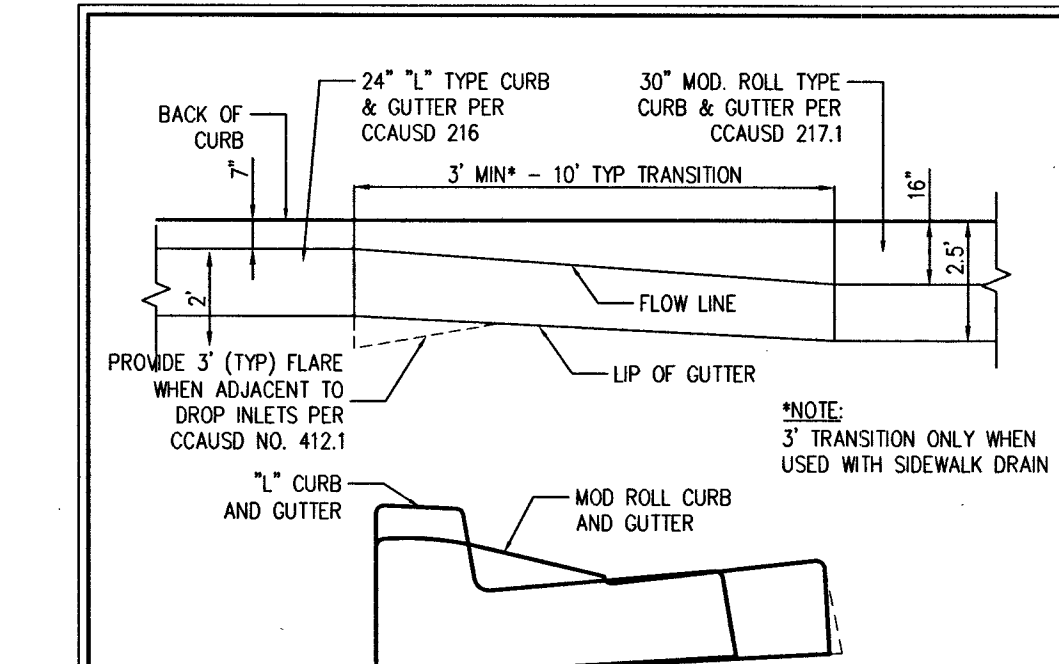
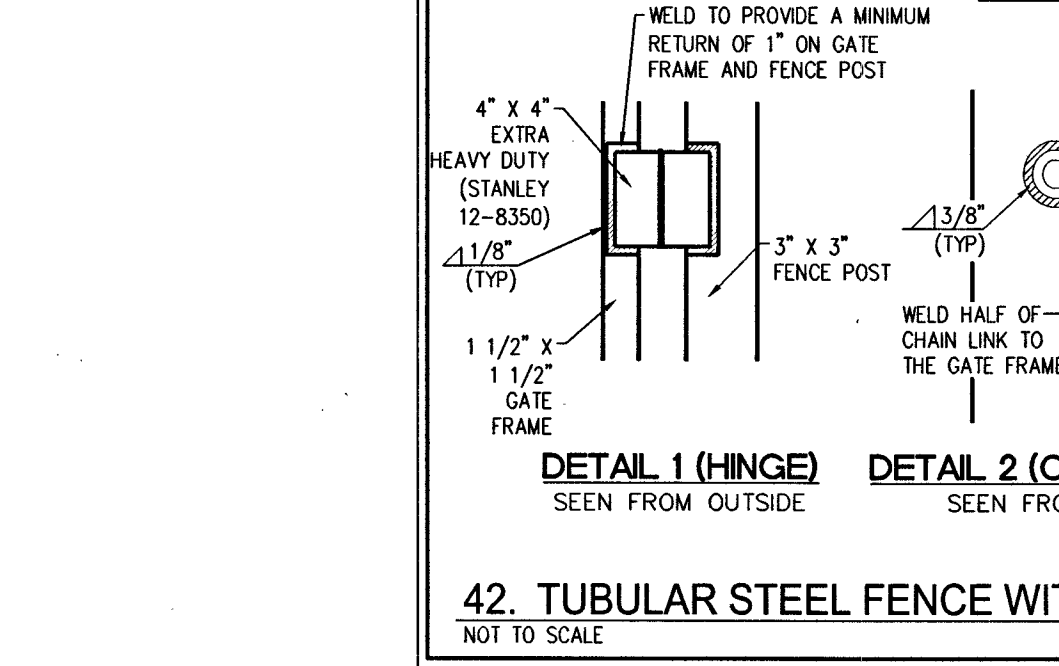
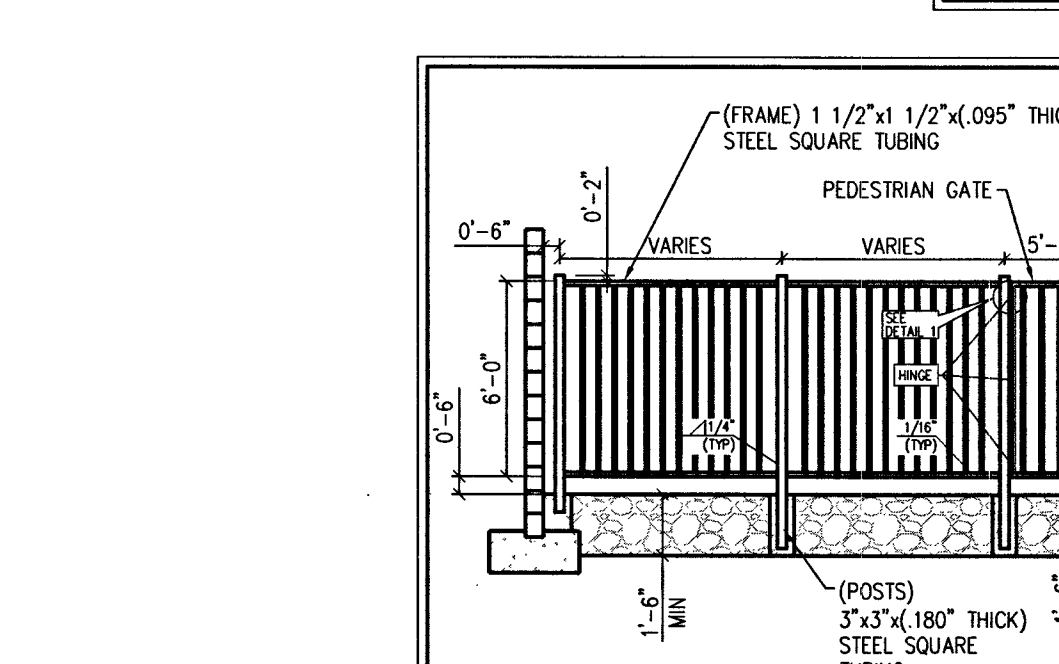
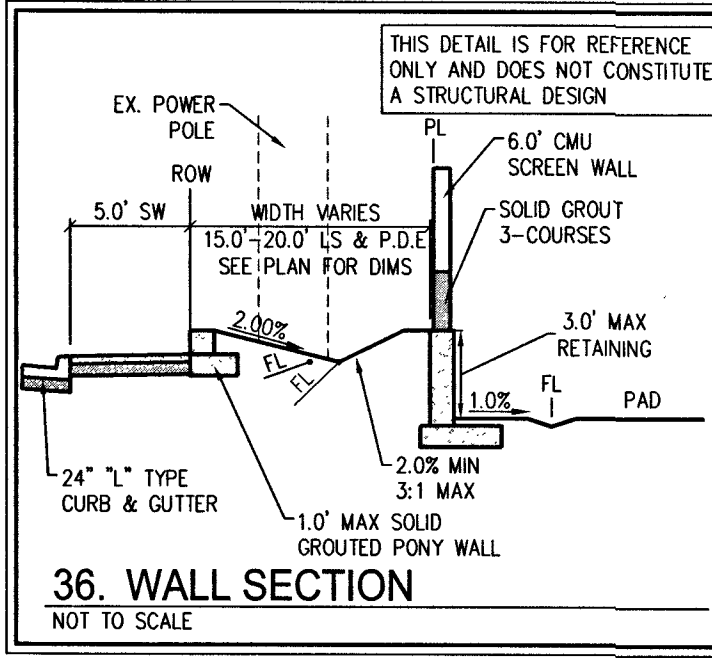
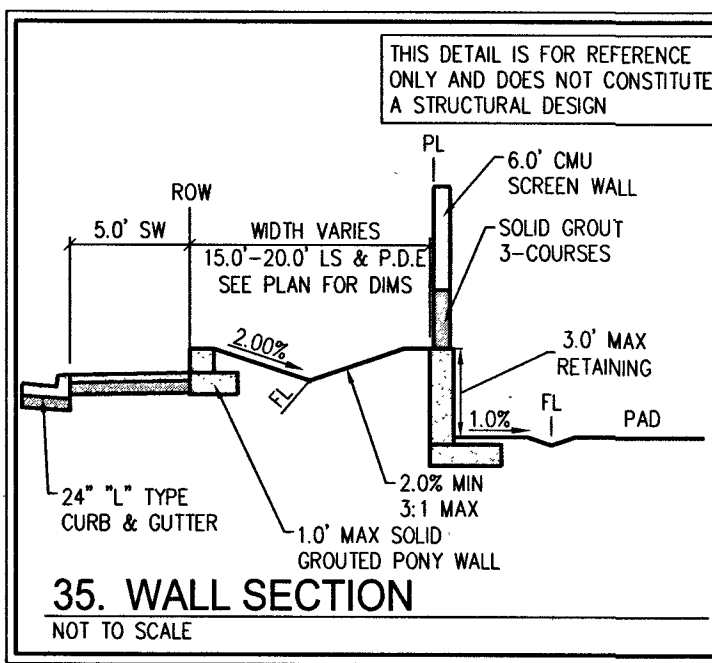
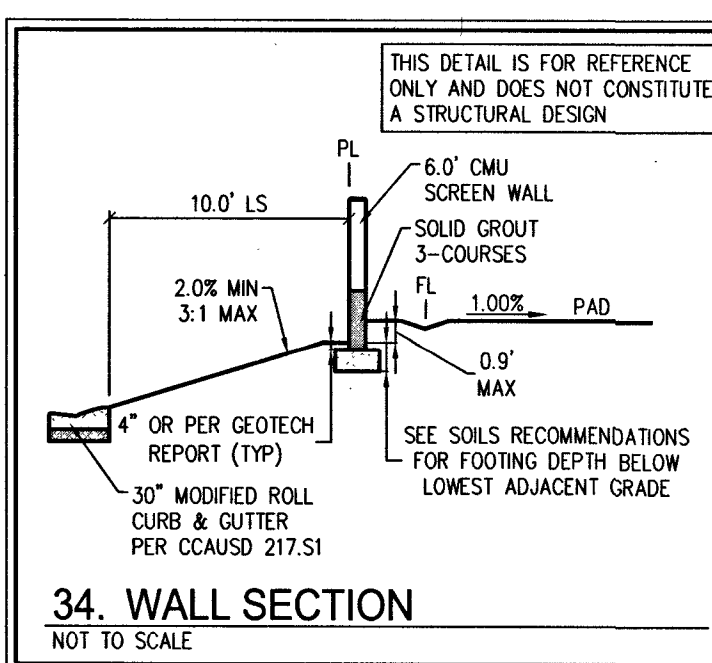
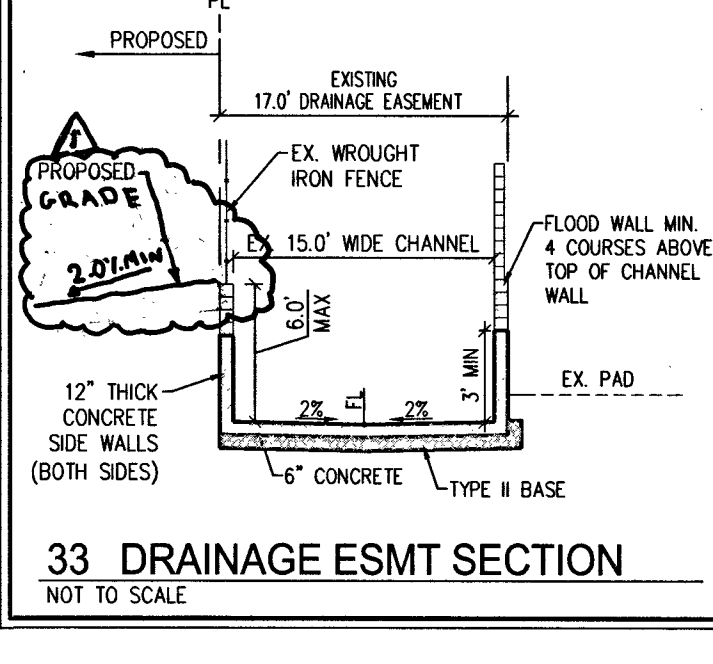
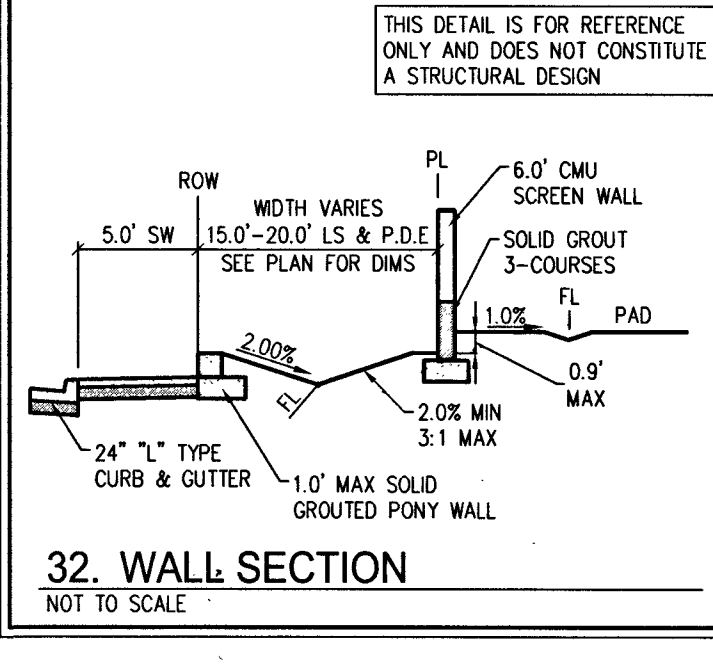
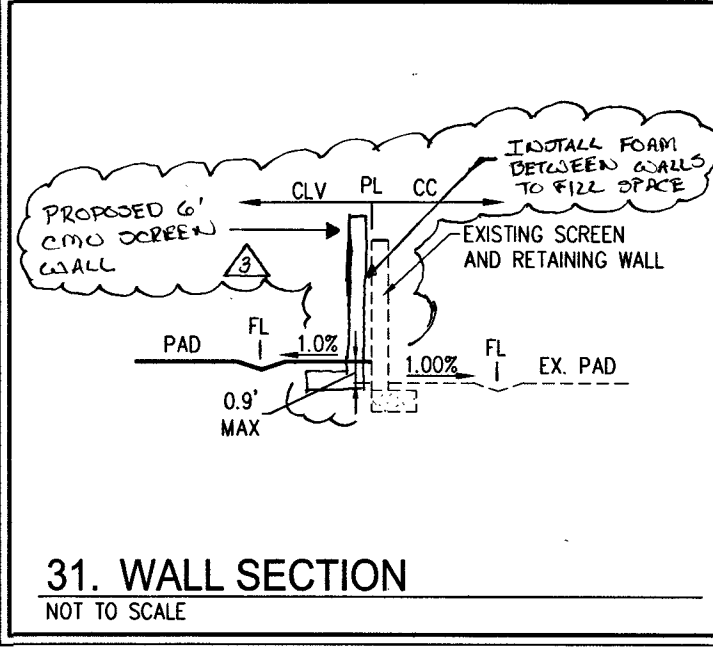
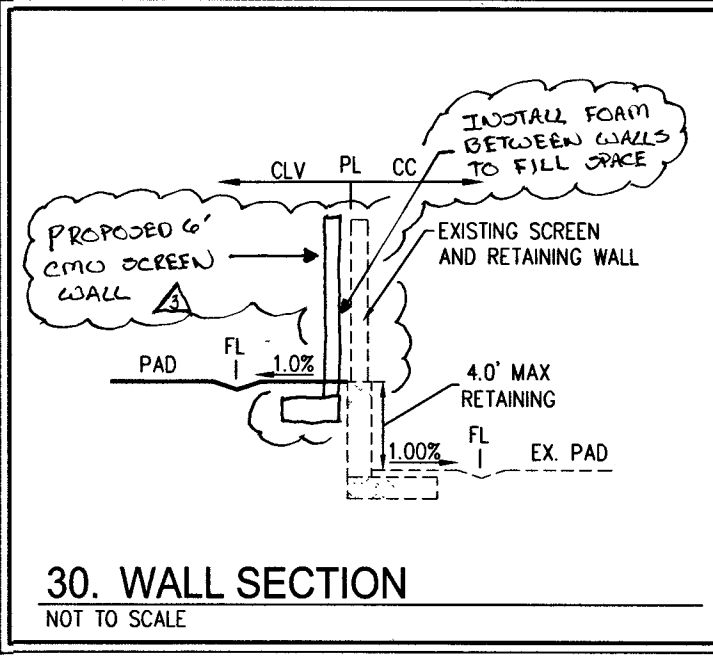
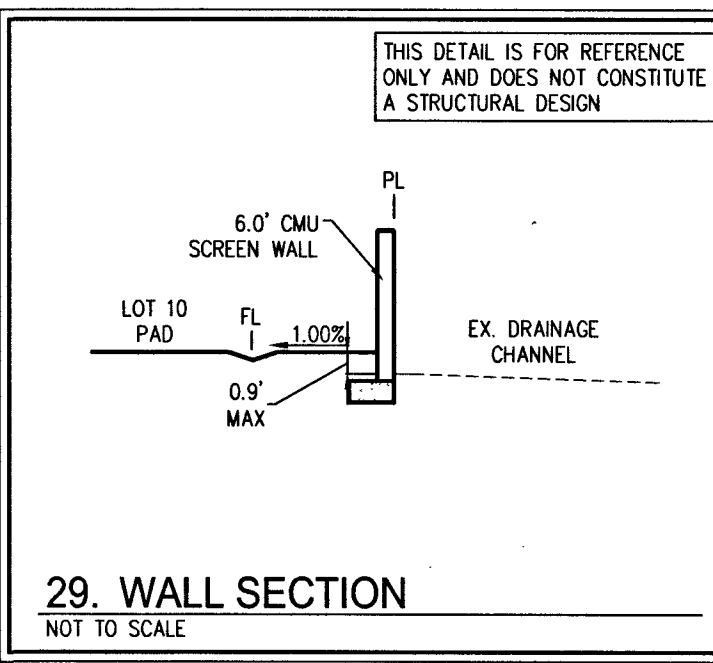
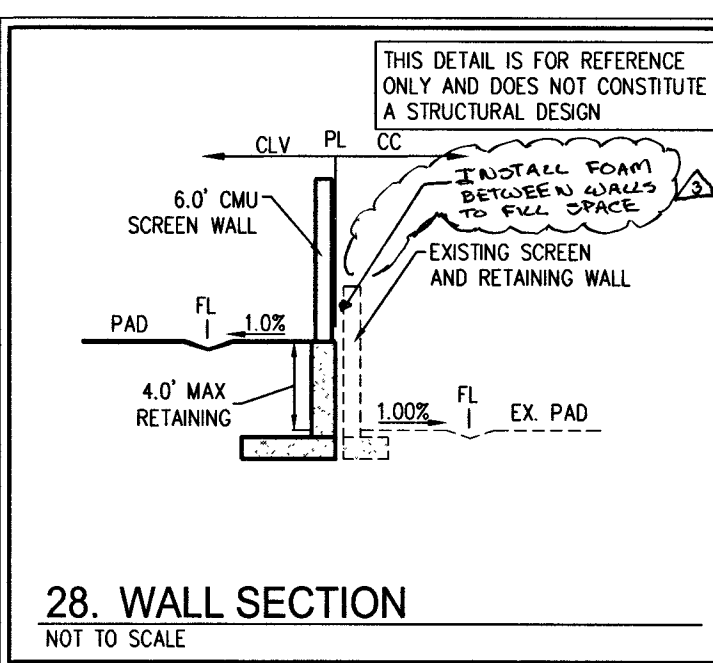
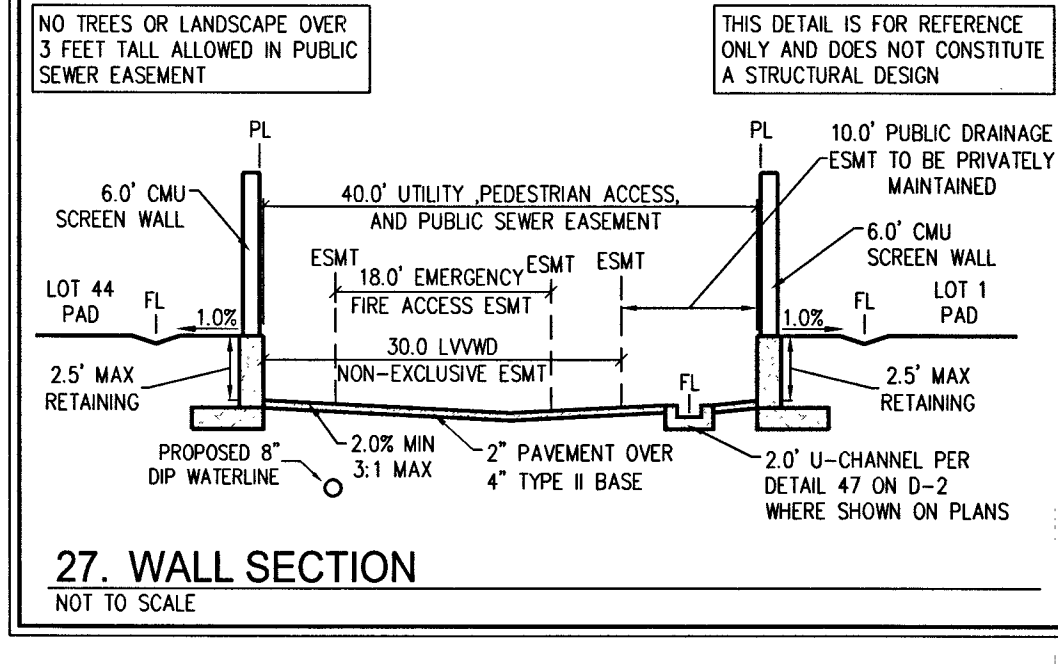
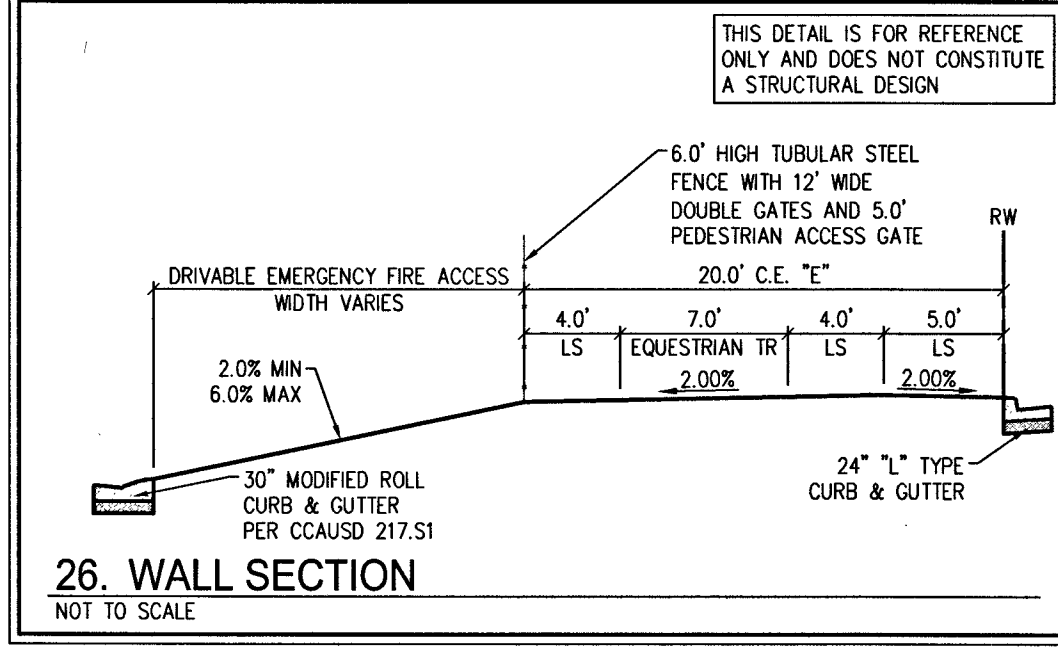
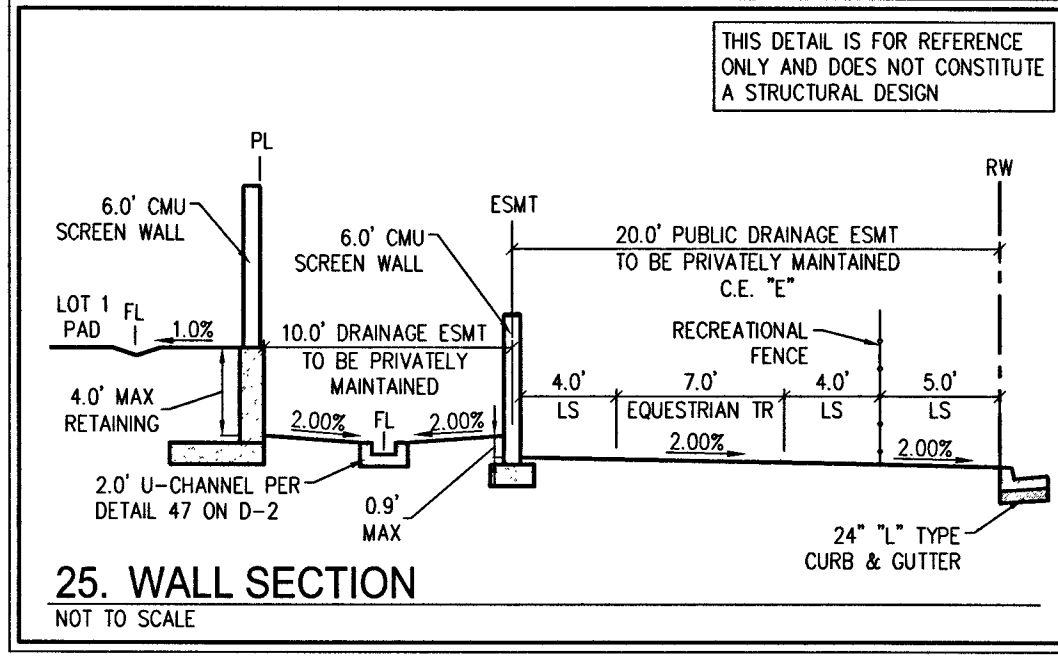
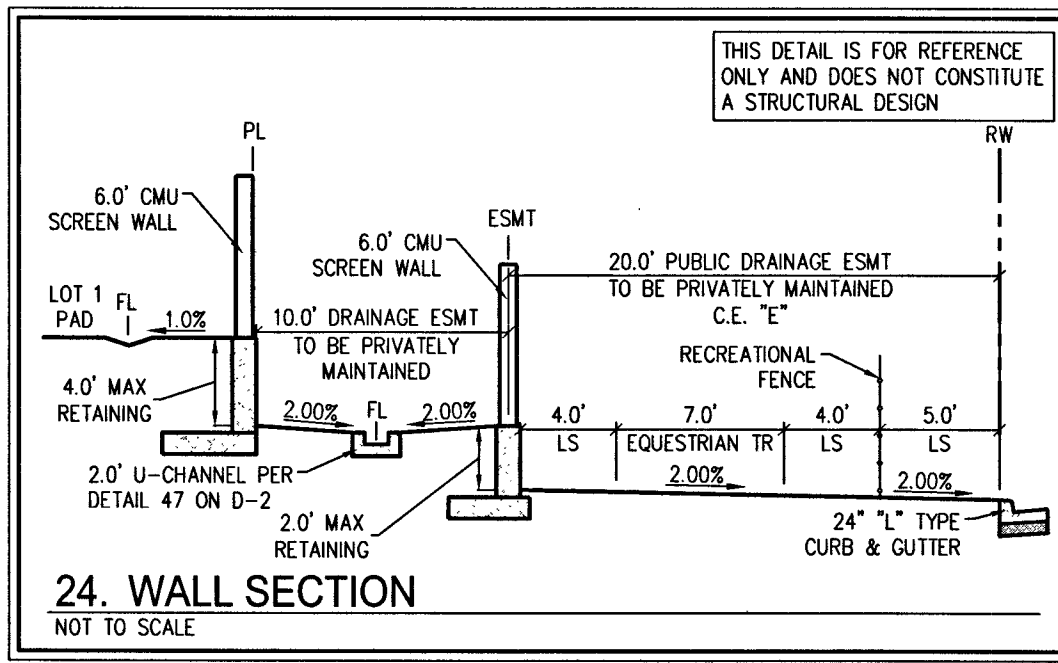
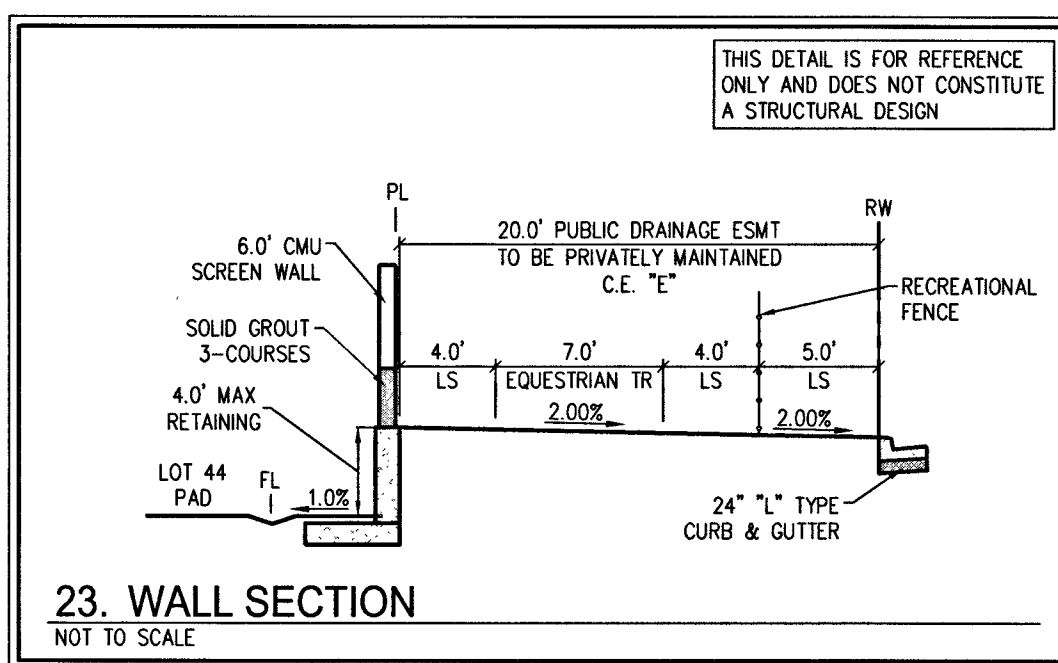
G-5
SHEET 8 OF 34
L18-02739



WALL FOOTING NOTES

PERIMETER WALL NOTE
PERIMETER WALLS TO BE DECORATIVE AND 20% CONTRASTING





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a Westwood team
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PERIMETER WALL NOTE
PERIMETER WALLS TO BE DECORATIVE AND 20% CONTRASTING

WALL FOOTING NOTES
1. PROVIDE MINIMUM 4" COVER FROM TOP OF FOOTING TO LOWEST ADJACENT FINISHED GRADE OR PER GEOTECH REPORT RECOMMENDATION
2. SEE GEOTECH REPORT RECOMMENDATIONS FOR THE FOOTING DEPTH FROM THE LOWEST ADJACENT GRADE TO BOTTOM OF FOOTING

FAST
Call before you Dig
Underground
1-702-432-5300
FREEMAN & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call
811
OR
1-800-227-2600

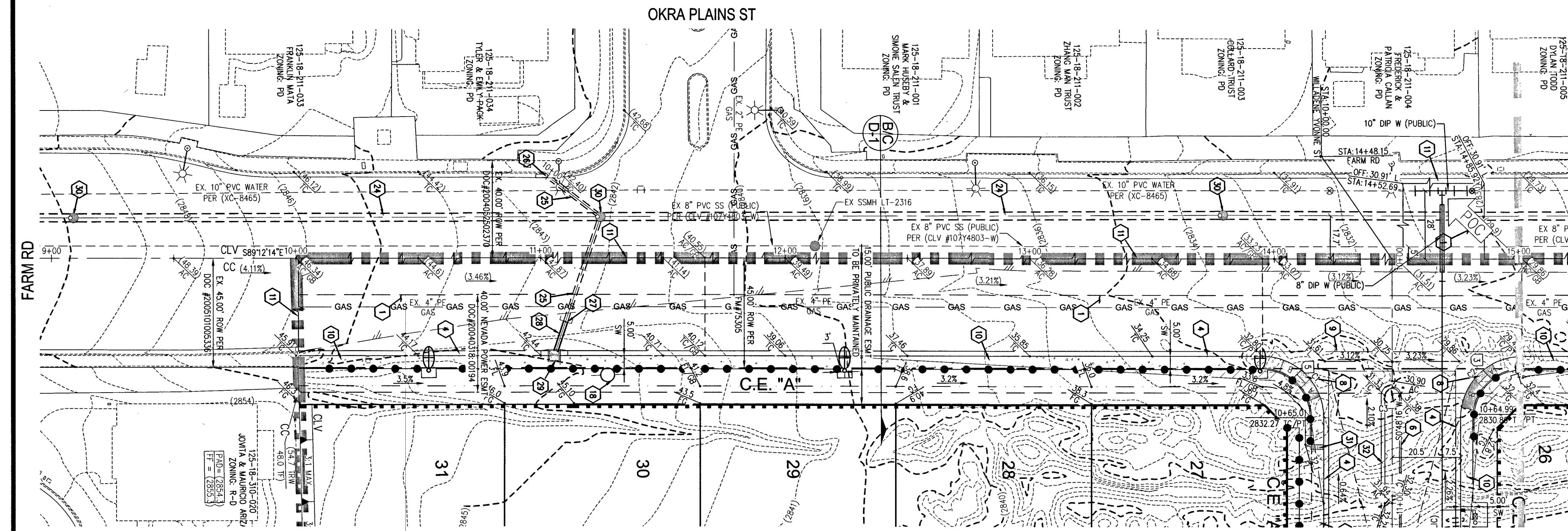
APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 138142 FIRST APPROVED DATE: 4-18-19

ENGINEER
KEVIN M. BROSS
Exp. 12/31/2020
CIVIL
Professional No. 24517

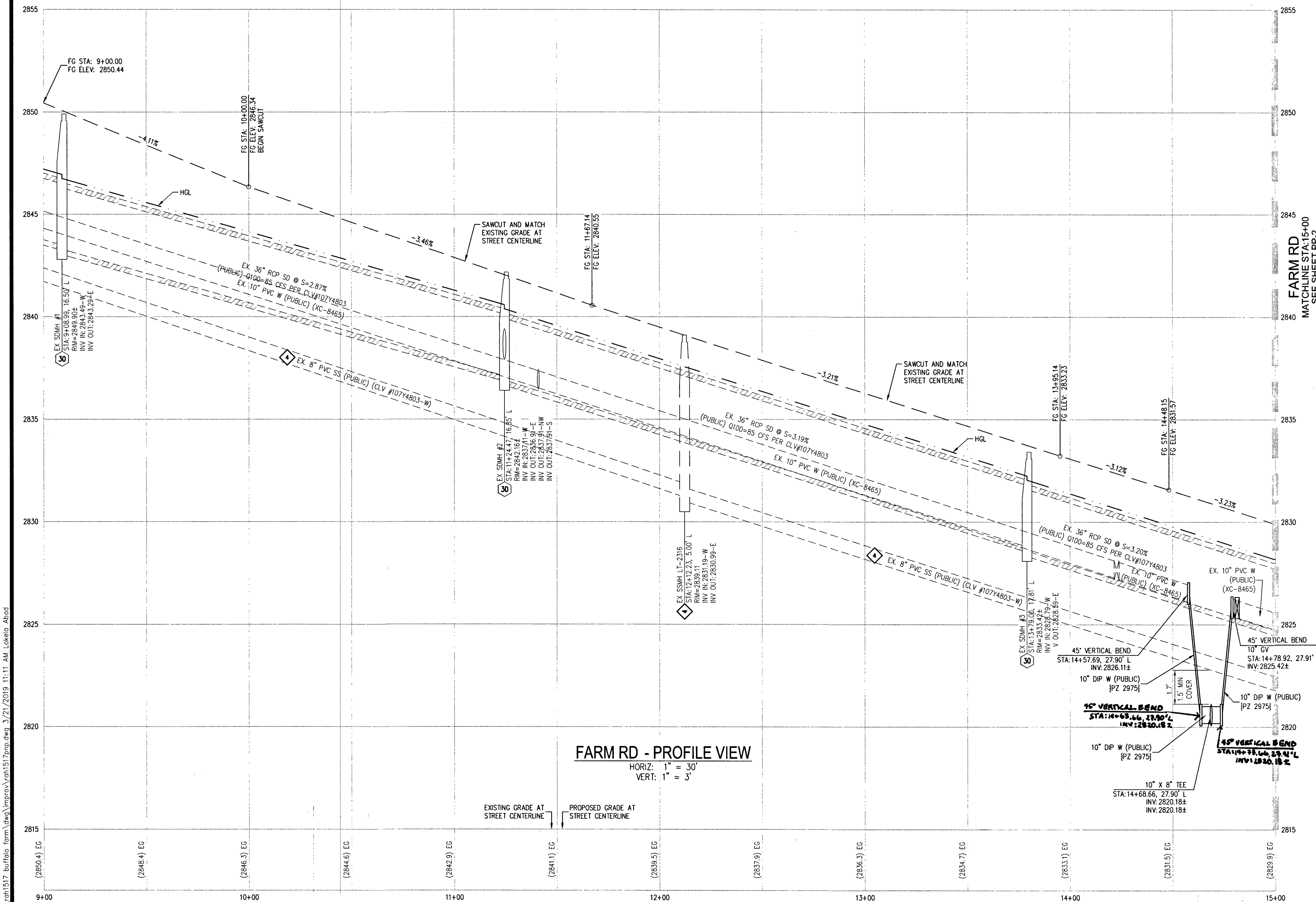
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SHEET 10 OF 43
L18-02739

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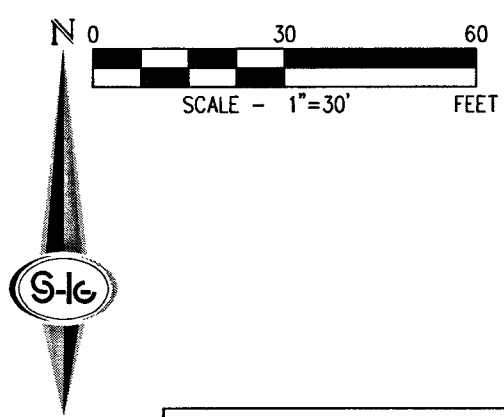
PROJ: 138142A QS: 125-18-SW



FARM RD - PLAN VIEW
(PUBLIC)



SEE SHEET PP-2 FOR CONTINUATION



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C1	39.27'	25.00'	90°00'30"	25.00'
C2	39.27'	25.00'	89°59'30"	25.00'
C3	9.42'	3.00'	180°00'00"	INFINITY

RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE %	"A" (FT)	"B" (FT)	"C" (FT)
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO 2	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	

DISCLAIMER NOTE

- EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED TOP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

GRADING NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
- MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
- ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLETING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
- NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
- CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

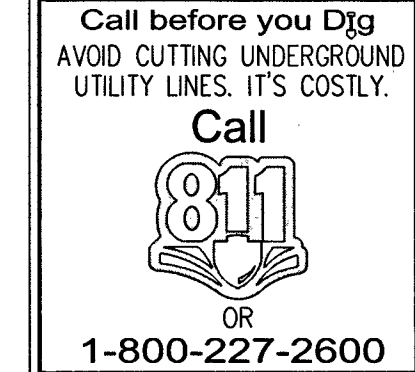
WATER NOTES

- WATER MAIN JOINT DEFLECTION (PVC 4" - 24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
- APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY (RPP) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENTS(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
- ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
- FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
- INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
- THE LVWD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
- CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPEARANCES ARE AVAILABLE.
- DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

APPROVED FOR CONSTRUCTION

[Signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136145 FIRST APPROVED DATE: 4-11-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM



CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES

GRADING NOTES

- INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
- CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
- CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
- CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
- SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
- INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
- INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
- INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
- INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWERED WITH BATTERY BACK-UP AND A/V LOOP
- INSTALL DEEPRESSED CURB PER DETAIL 43 ON SHEET D-2
- INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- EXISTING POWER POLE TO REMAIN
- INSTALL EQUESTRIAN TRAIL
- INSTALL RECREATIONAL FENCE
- EXISTING WROUGHT IRON FENCE TO BE REMOVED
- INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- INSTALL 20" CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- EXISTING 36" RCP SD PER CLV #107Y4803
- INSTALL 18" CLASS III RCP SD LATERAL PER CLV #107Y4803
- EXISTING DROP INLET PER CLV #107Y4803
- CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- INSTALL 18" RCP STORM DRAIN LATERAL
- INSTALL 5.0" TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
- EXISTING 48" STORM DRAIN MANHOLE PER CLV #107Y4803
- INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

SEWER CONSTRUCTION NOTES

- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
- INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
- PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
- FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
- INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16.8.B
- INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-4, SD-9, AND SD-13 "B" WITH 24" SINGLE LID
- INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, SD-23 AND SD-25

SOUTHWEST GAS APPROVAL

[Signature]
SOUTHWEST GAS CORPORATION DATE: 3-21-19

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216 LAS VEGAS, NV 89118
PHONE (702) 284-5500 FAX (702) 284-5599



DATE	BY	APP.	DESCRIPTION

NO.	DESCRIPTION

NO.	DESCRIPTION

NO.	DESCRIPTION

NO.	DESCRIPTION

NO.	DESCRIPTION

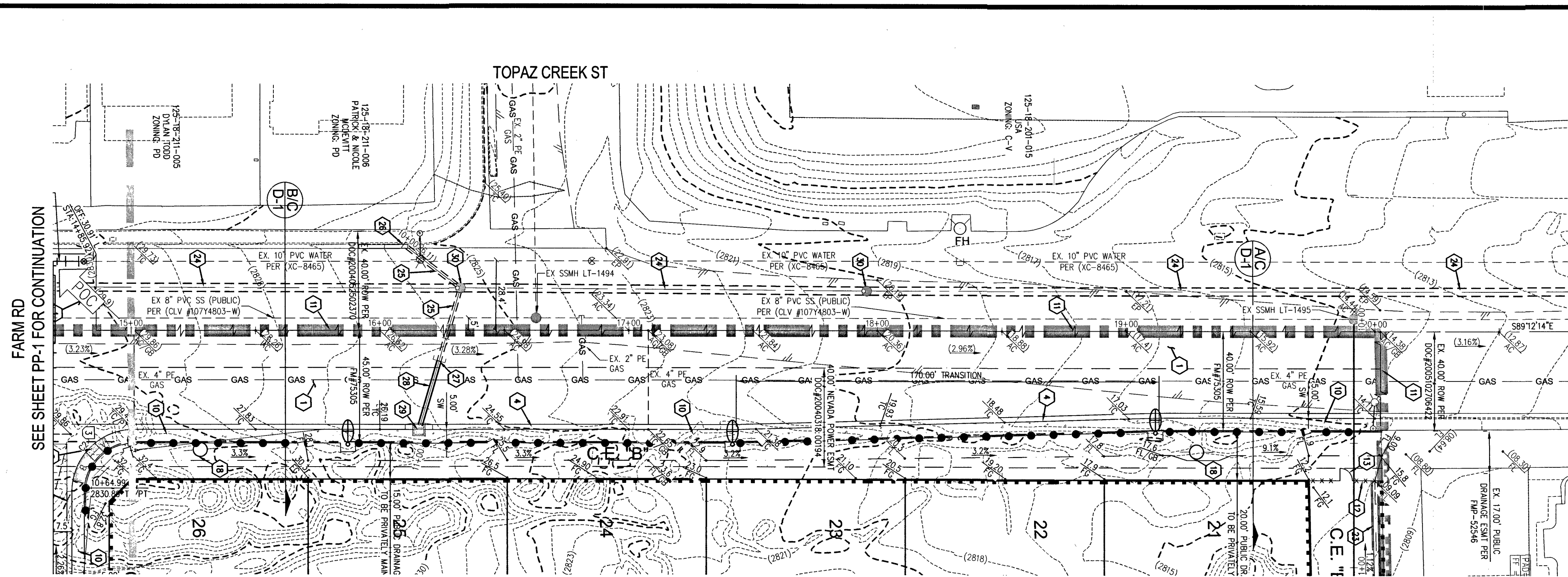
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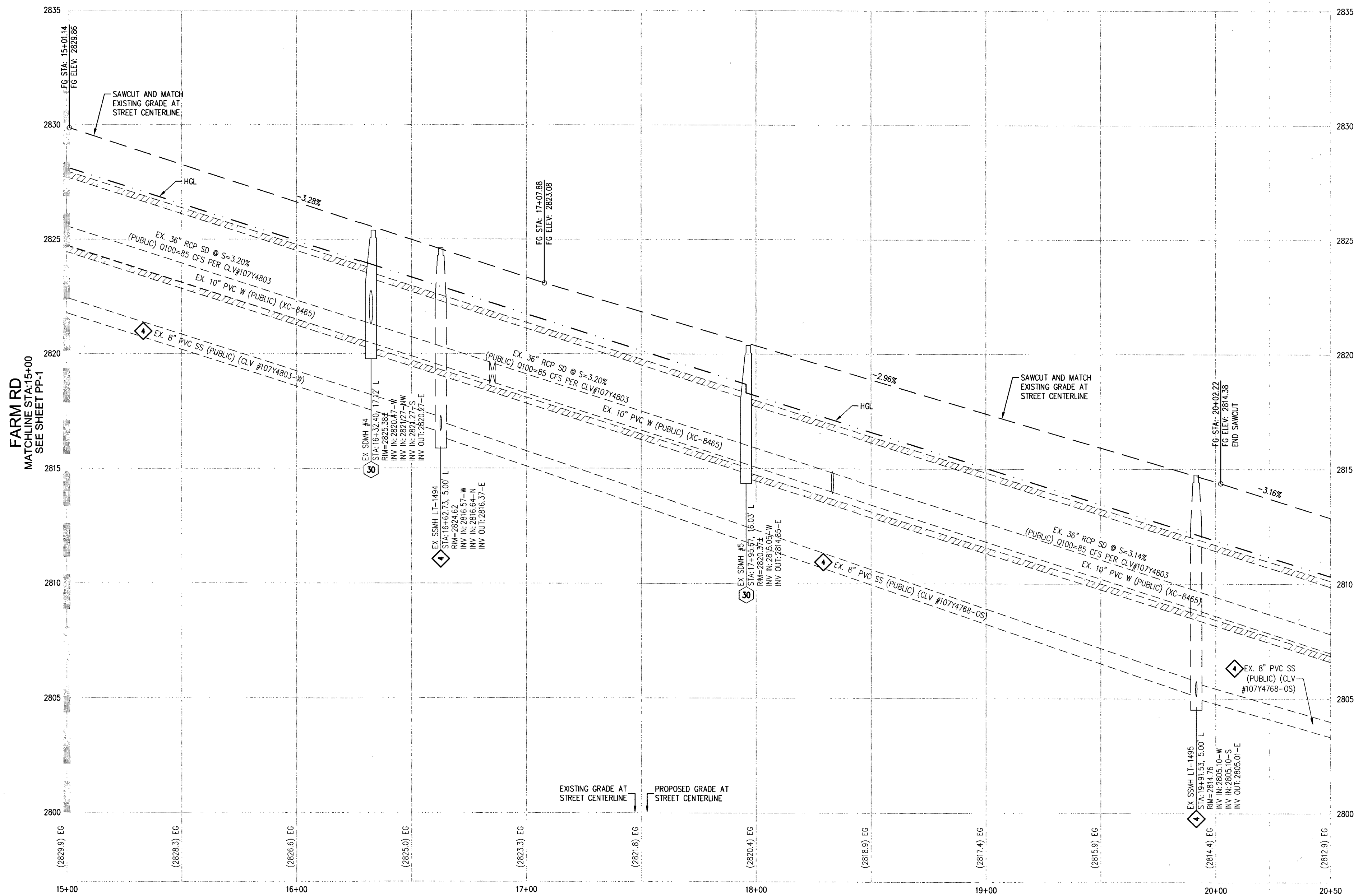
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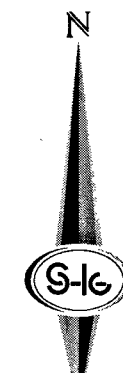
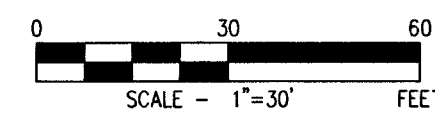
107V5104



FARM RD - PLAN VIEW
(PUBLIC)



FARM RD - PROFILE VIEW
HORIZ: 1" = 30'
VERT: 1" = 3'



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C2	39.27	25.00'	89°59'30"	25.00'

RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE %	"A" (F)	"B" (F)	"C" (F)
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO -1	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	

DISCLAIMER NOTE

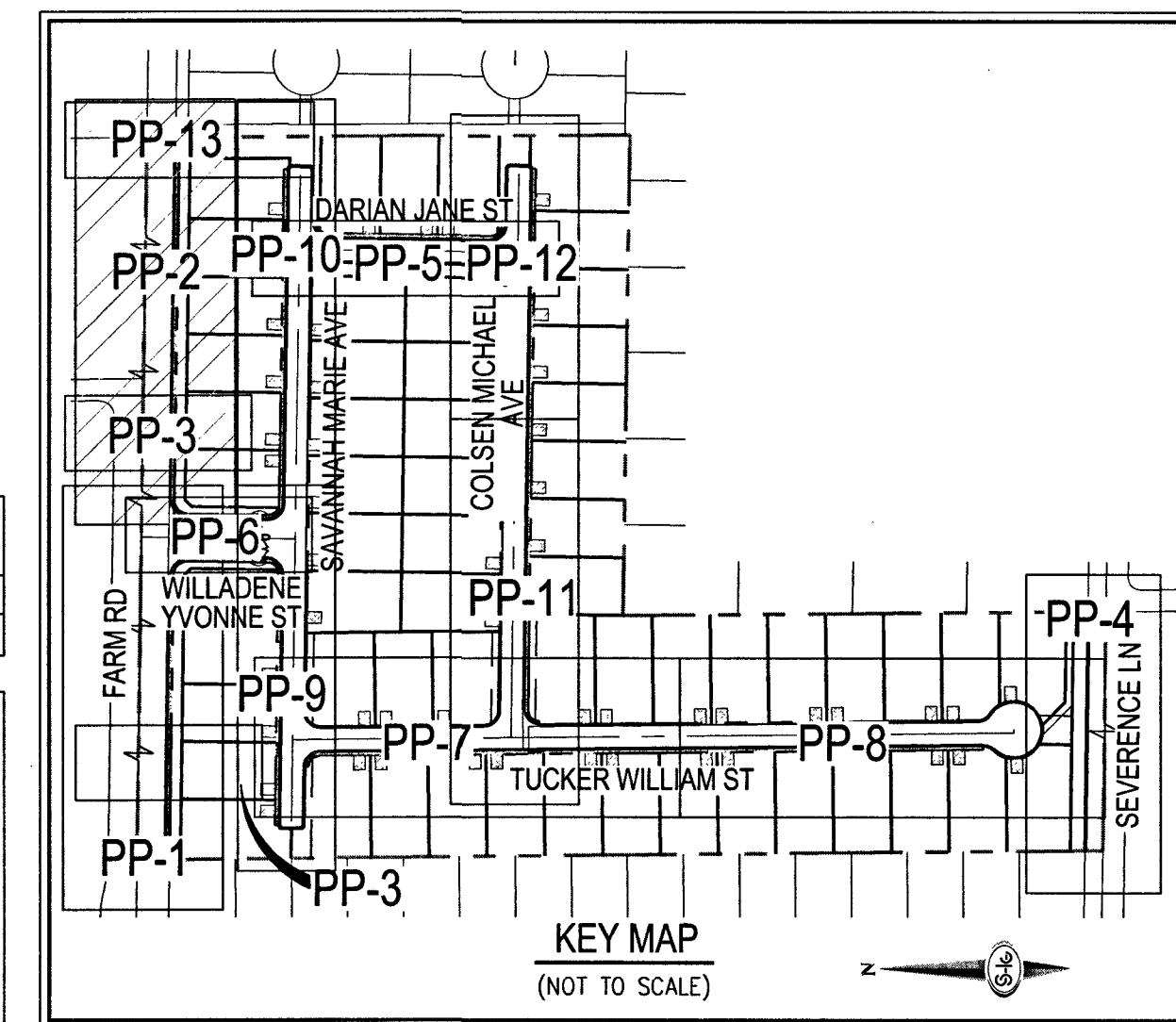
- EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED UP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

GRADING NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
- MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
- ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLENISHING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
- NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
- CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

WATER NOTES

- WATER MAIN JOINT DEFLECTION (PVC 4" - 24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
- REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 1"
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EXISTING(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
- ALL SEWER/STORM DRAIN CROSSINGS WATER LINES MUST CONFORM TO SECTION 2.2.2 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
- FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
- INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
- THE LVWD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
- CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
- DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.



GRADING NOTES

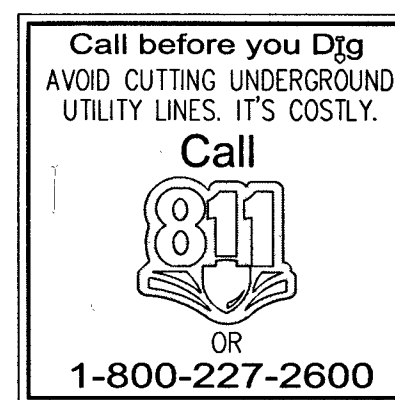
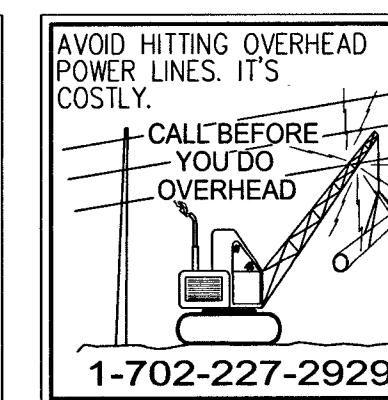
- INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
- CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
- CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
- CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
- SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
- INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
- INSTALL 5' PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
- INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
- INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWER WITH BATTERY BACK-UP AND AW LOOP
- INSTALL DEPRESSURE CURB PER DETAIL 43 ON SHEET D-2
- INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- EXISTING POWER POLE TO REMAIN
- INSTALL EQUESTRIAN TRAIL
- INSTALL RECREATIONAL FENCE
- EXISTING WROUGHT IRON FENCE TO BE REMOVED
- INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- INSTALL 2.0" CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- EXISTING 36" RCP SD PER CLV #107Y4803
- EXISTING 18" CLASS III RCP SD LATERAL PER CLV #107Y4803
- EXISTING DROP INLET PER CLV #107Y4803
- CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- INSTALL 18" RCP STORM DRAIN LATERAL
- INSTALL 5.0" TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
- EXISTING 48" STORM DRAIN MANHOLE PER CLV #107Y4803
- INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

SEWER CONSTRUCTION NOTES

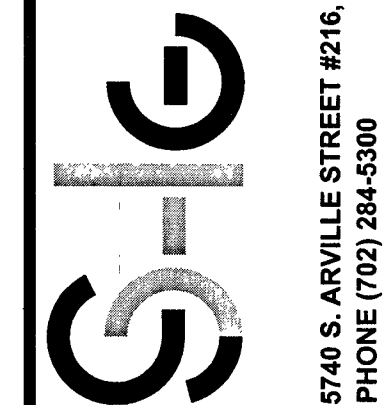
- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
- INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
- PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
- FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
- INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16.8.B
- INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
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SOUTHWEST GAS APPROVAL

Paula Kennedy 3-21-19
SOUTHWEST GAS CORPORATION DATE



SLATER
HANIFAN
GROUP
a Westwood team
5740 S. ARVILLE STREET #216 LAS VEGAS, NV 89118
PHONE (702) 284-5500 FAX (702) 284-5399



DATE: BY: APP. DATE: DESCRIPTION: NO. LAS VEGAS, NEVADA

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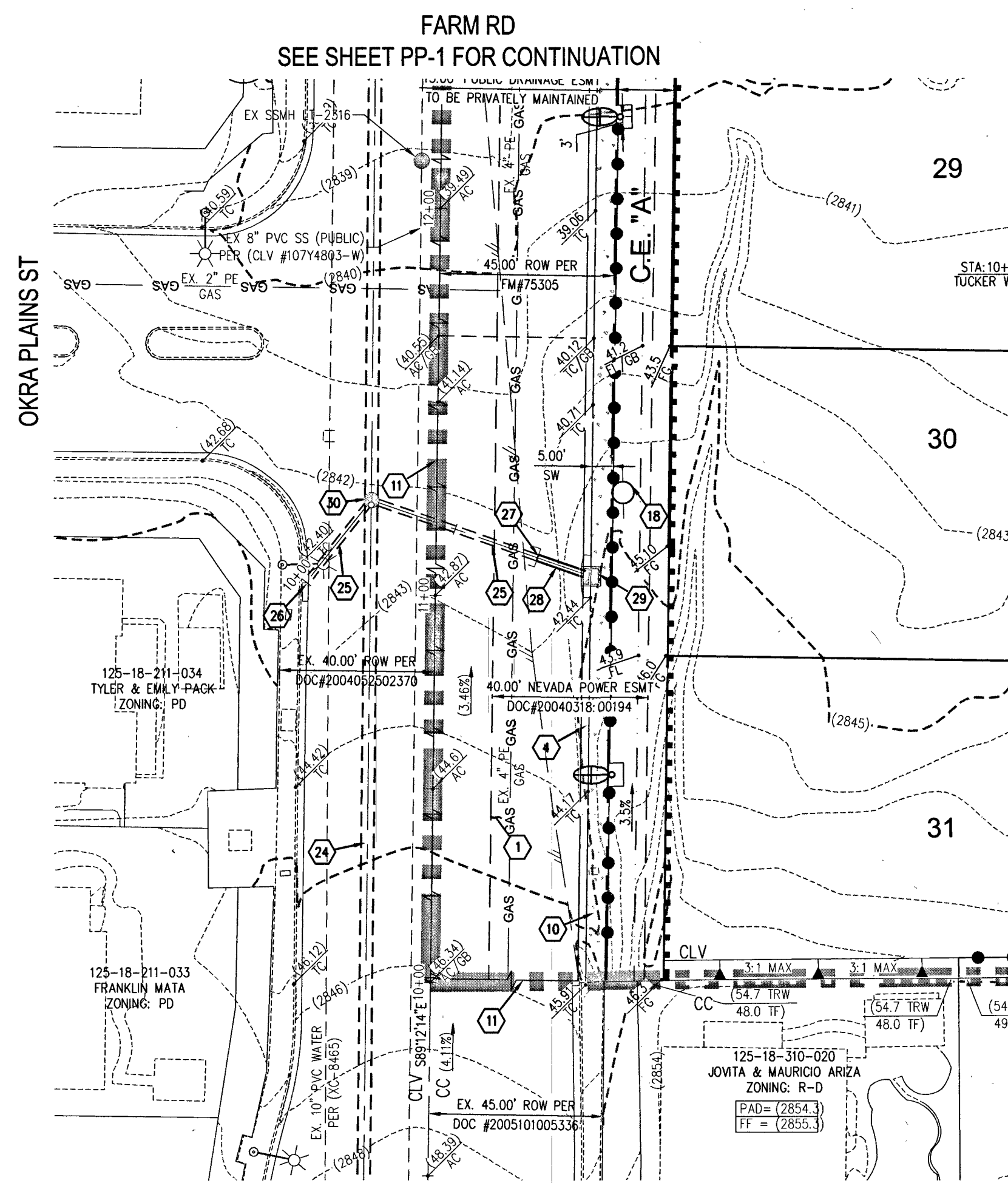
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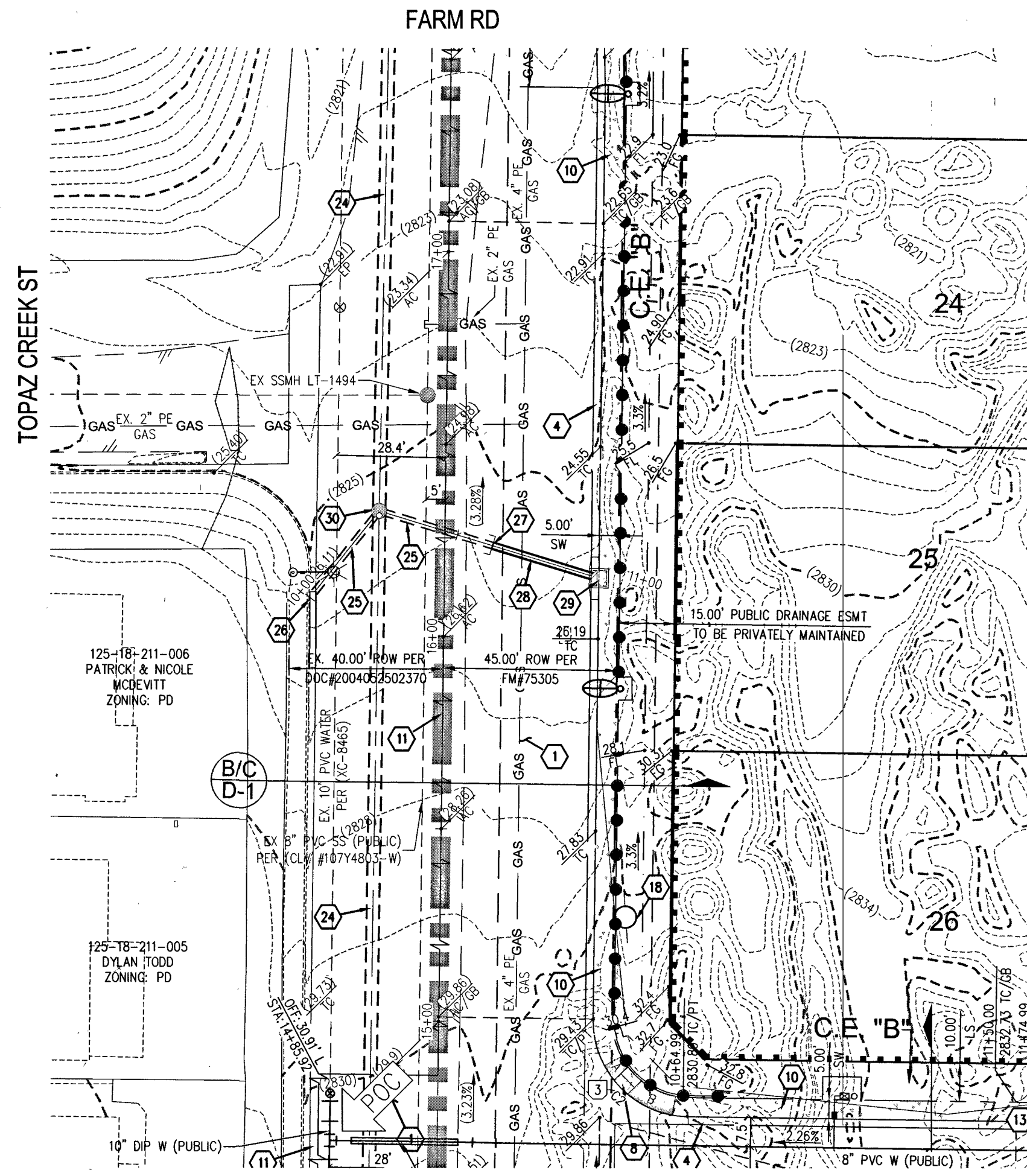
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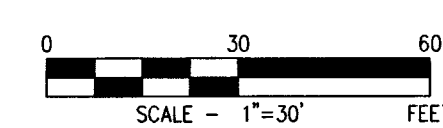
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WEST STORM DRAIN LATERAL - PLAN VIEW



EAST STORM DRAIN LATERAL - PLAN VIEW



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C2	39.27'	25.00'	89°59'30"	25.00'

RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE %	"A" (FT)	"B" (FT)	"C" (FT)
1	-6 TO -5.01	4.5'	21.5'	
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5	-2 TO 2	8.0'	8.0'	
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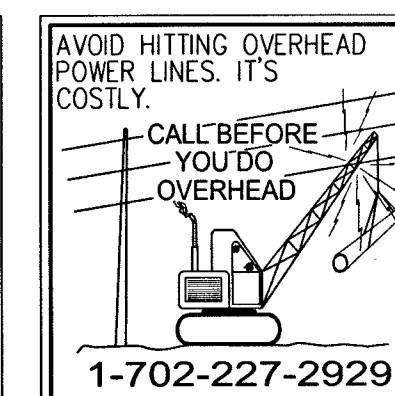
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- INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
- CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE I
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- INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
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- INSTALL DEEPRESSED CURB PER DETAIL 43 ON SHEET D-2
- INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- EXISTING POWER POLE TO REMAIN
- INSTALL EQUESTRIAN TRAIL
- INSTALL RECREATIONAL FENCE
- EXISTING WROUGHT IRON FENCE TO BE REMOVED
- INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- INSTALL 2.0" CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- EXISTING 36" RCP SD PER CLV #1074803
- EXISTING 18" CLASS III RCP SD LATERAL PER CLV #1074803
- EXISTING DROP INLET PER CLV #1074803
- CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- INSTALL 18" RCP STORM DRAIN LATERAL
- INSTALL 5.0" TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
- EXISTING 48" STORM DRAIN MANHOLE PER CLV #1074803
- INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

SEWER CONSTRUCTION NOTES

- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
- INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
- PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
- FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
- INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16.8.8
- INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-4, SD-9, AND SD-13 "B" WITH 24" SINGLE LID
- INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, SD-23 AND SD-25

SOUTHWEST GAS APPROVAL

Patricia Kennedy 3-21-19
SOUTHWEST GAS CORPORATION DATE



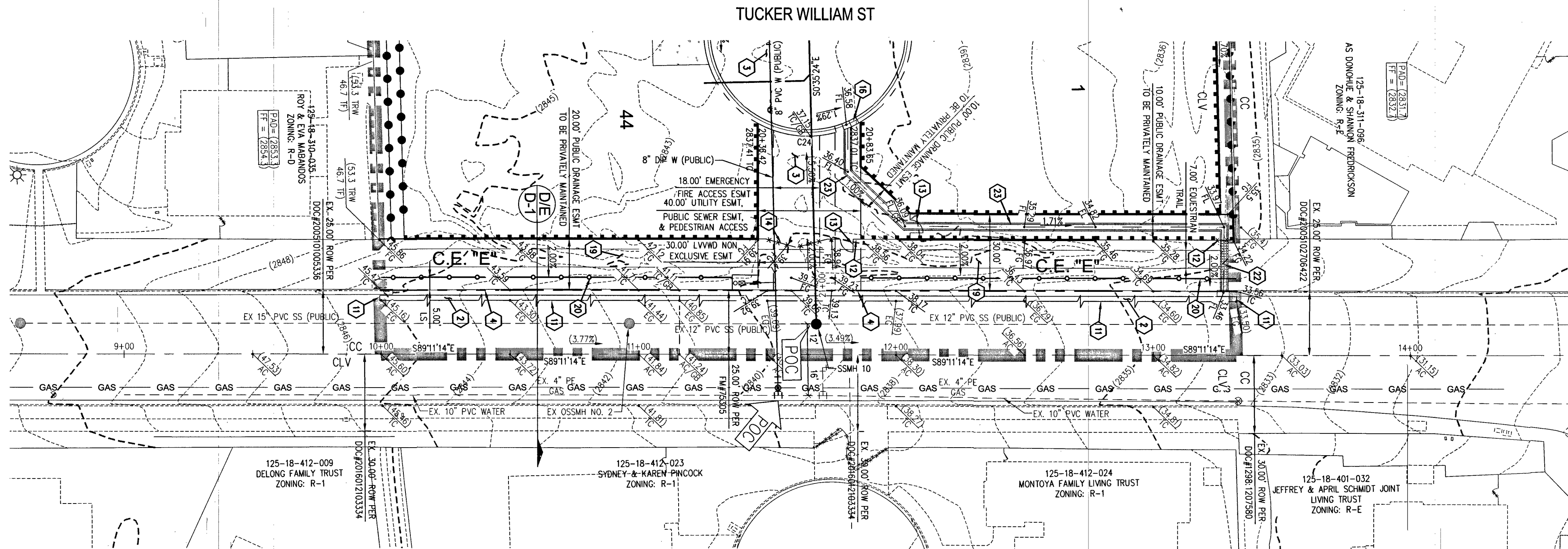
SLATER HANIFAN GROUP
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5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300

RICHMOND AMERICAN HOMES
FARM HUALAPAI

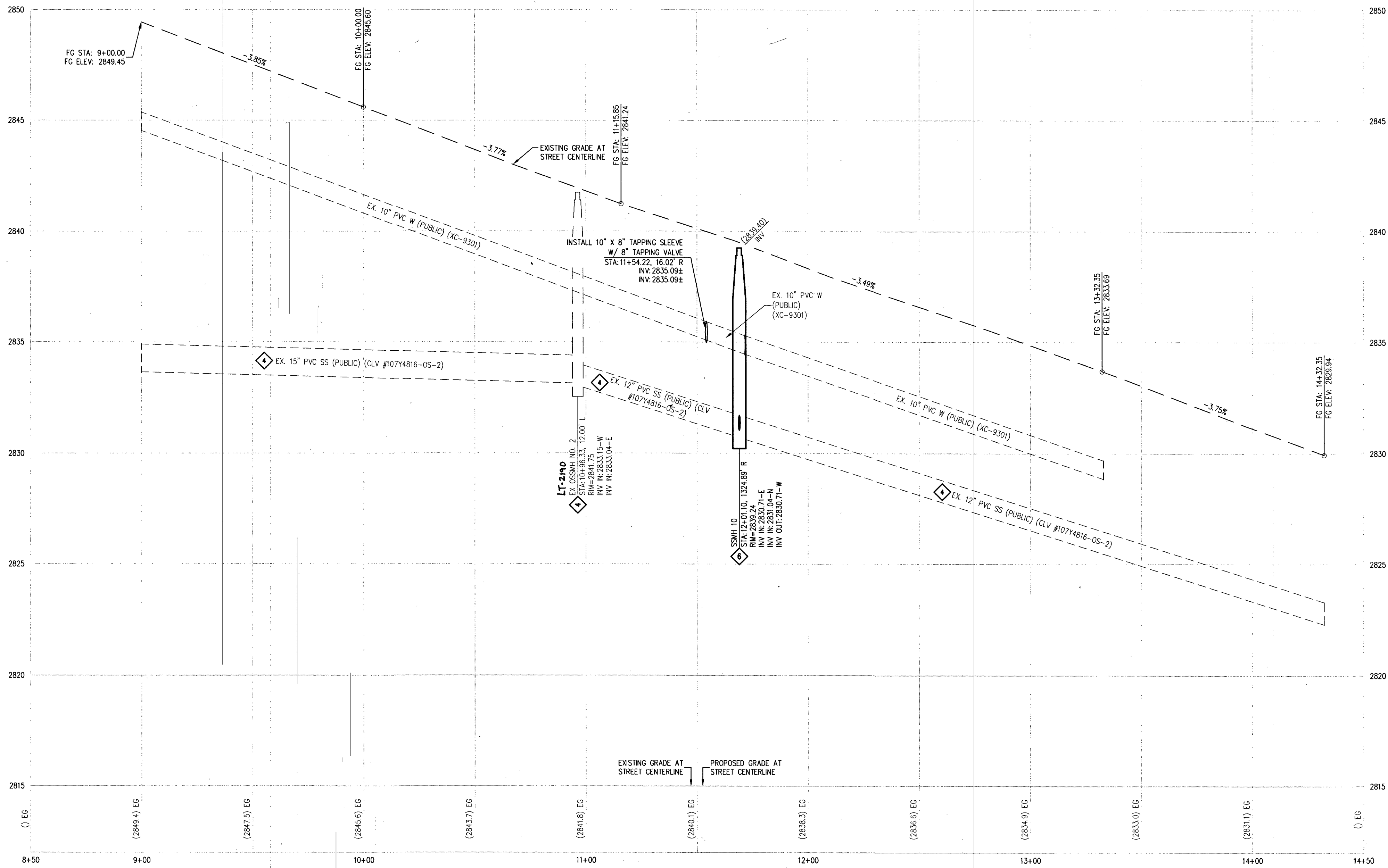
DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517

ENGINEER
KEVIN M. BROSS
Exp. 12/31/2020
CIVIL
No. 24571
2/20/19

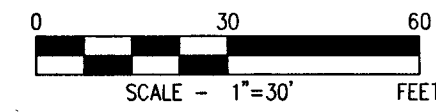
PP-3
SHEET 13 OF 34
L18-02739



SEVERENCE LN - PLAN VIEW
(PUBLIC)



SEVERENCE LN - PROFILE VIEW
HORIZ: 1" = 30'
VERT: 1" = 3'



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C24	199.48'	40.50'	282°12'09"	32.68'

RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE %	"A" (FT)	"B" (FT)	"C" (FT)
1	-6.10 -5.01	4.5'	21.5'	
2	-5.10 -4.01	4.5'	15.0'	
3	-4.10 -3.01	4.5'	12.0'	
4	-3.10 -2.01	4.5'	9.5'	
5	-2.10 -1.01	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	

DISCLAIMER NOTE

- EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

GRADING NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
- MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
- ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT ALL IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLETING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
- NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
- CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

WATER NOTES

- WATER MAIN JOINT DEFLECTION (PVC 4" - 24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
- REDUCED PRESSURE PRINCIPLE ASSEMBLY (RPP)
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED TO THE START OF CONSTRUCTION.
- ALL SEWER/ STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
- FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALKS.
- INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
- THE LVWD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPED CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRAIL SHUTDOWN.
- CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
- DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136145 FIRST APPROVED DATE: 4-18-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM



SOUTHWEST GAS APPROVAL

DATE: 3-21-19

SOUTHWEST GAS CORPORATION

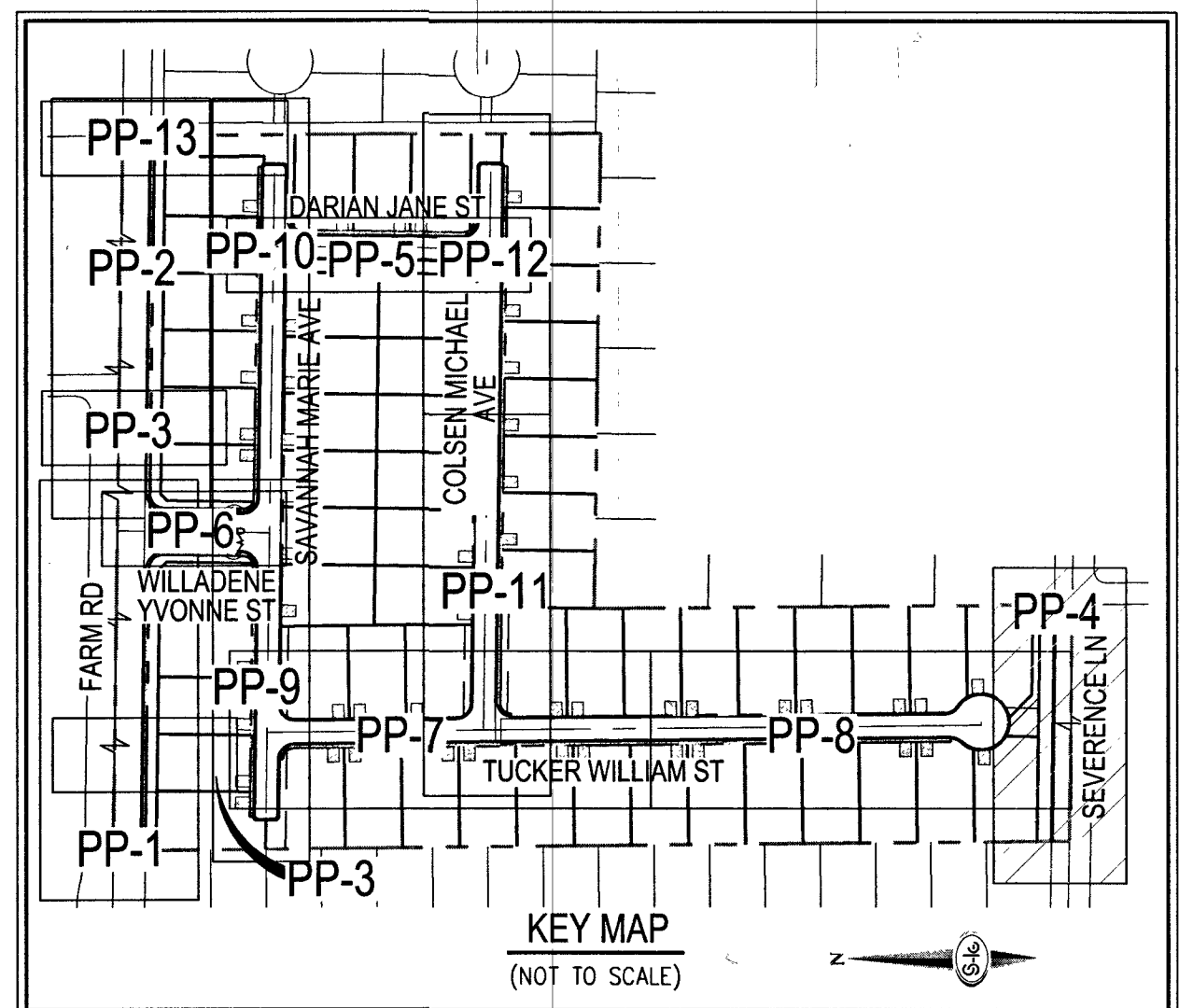


GRADING NOTES

- INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
- CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
- CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
- CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
- SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
- INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
- INSTALL 5' PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
- INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
- INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWER WITH BATTERY BACK-UP AND AM LOOP
- INSTALL DEEPRESSED CURB PER DETAIL 43 ON SHEET D-2
- INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- EXISTING POWER POLE TO REMAIN
- INSTALL EQUESTRIAN TRAIL
- INSTALL RECREATIONAL FENCE
- EXISTING WROUGHT IRON FENCE TO BE REMOVED
- INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- INSTALL 2.0' CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- EXISTING 36" RCP SD PER CLV #107Y4803
- EXISTING 18" CLASS III RCP SD LATERAL PER CLV #107Y4803
- EXISTING DROP INLET PER CLV #107Y4803
- CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- INSTALL 18" RCP STORM DRAIN LATERAL
- INSTALL 5.0' TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
- EXISTING 48" STORM DRAIN MANHOLE PER CLV #107Y4803
- INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

SEWER CONSTRUCTION NOTES

- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-18, SD-4 AND SD-9 WITH 24" SINGLE LID
- INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
- PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
- FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
- INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16.8.B
- INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-4, SD-9, AND SD-13 18" WITH 24" SINGLE LID
- INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, SD-23 AND SD-25



SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399



DATE: 3/18/19
BY: EMH
APP: KMB
DESCRIPTION: SEVERENCE LN

NO. 136145

LAS VEGAS, NEVADA

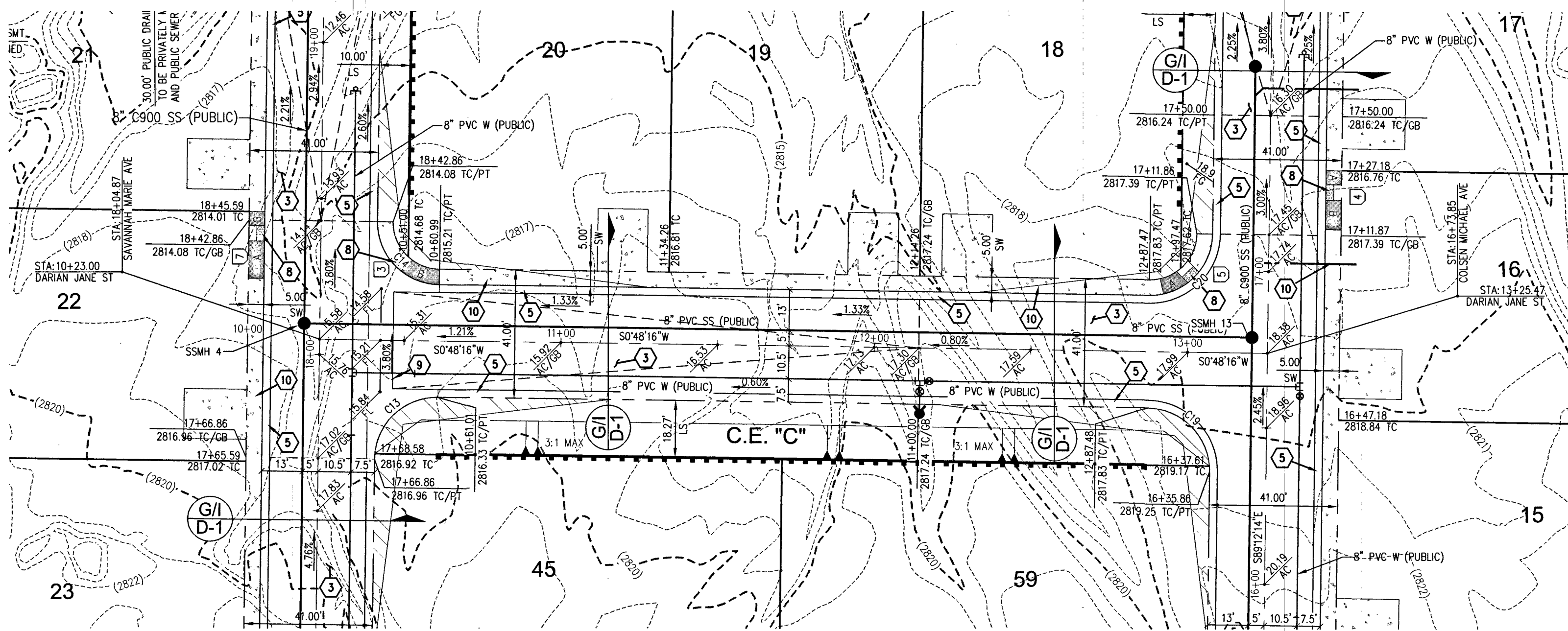
RICHMOND AMERICAN HOMES
FARM HUALAPAI
PLAN AND PROFILE - SEVERENCE LANE

DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517

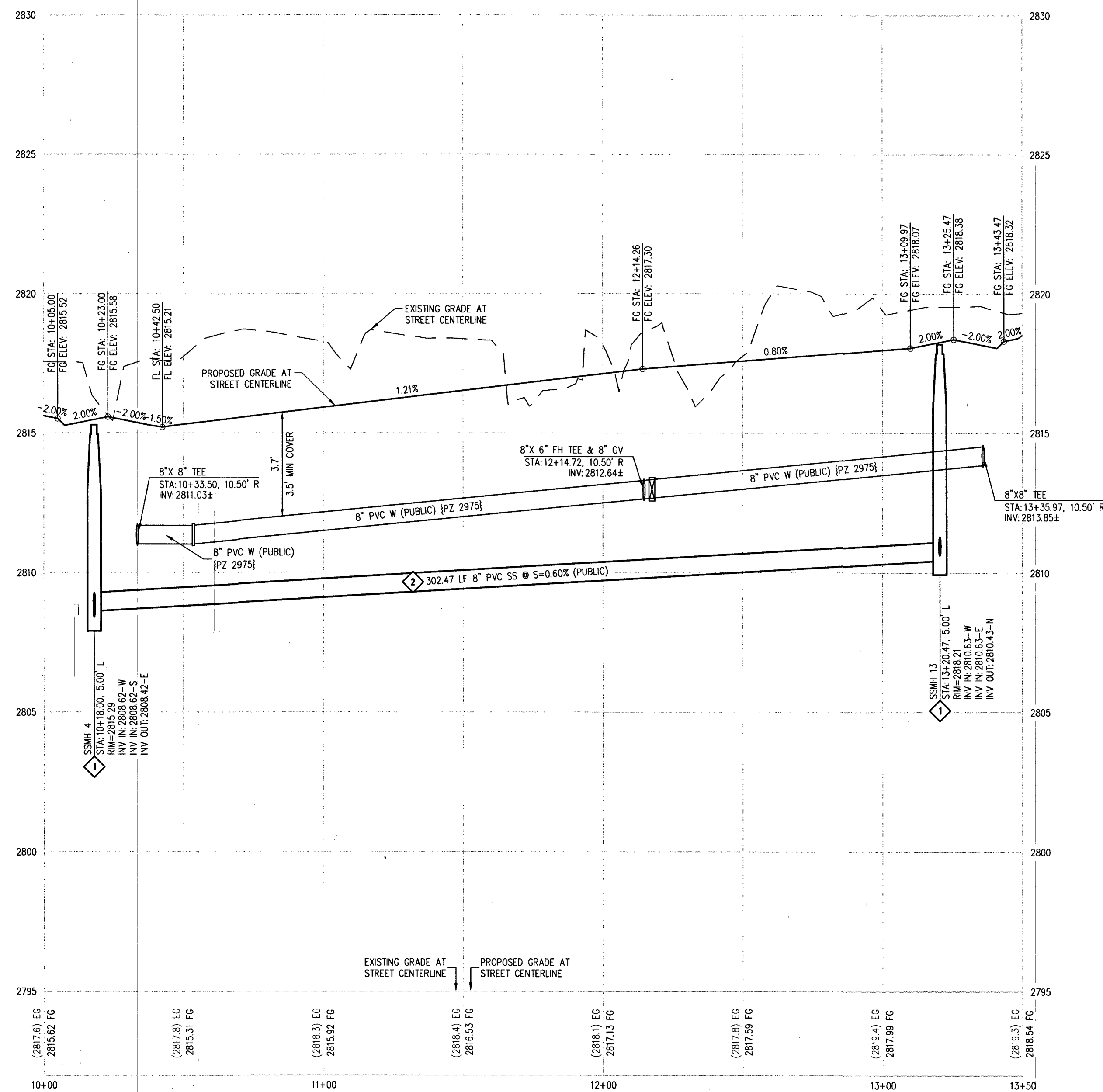
ENGINEER
KEVIN M. BROSS
Exp. 12/31/2020
CIVIL
No. 24571 KVP

PP-4
SHEET 14 OF 34
L18-02739

107VS104

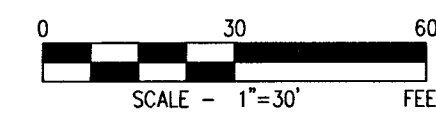


DARIAN JANE ST - PLAN VIEW
(PRIVATE)



DARIAN JANE ST - PROFILE VIEW

HORIZ: 1" = 30'
VERT: 1" = 3'



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C13	31.42'	20.00'	90°00'30"	20.00'
C14	23.96'	15.00'	89°59'30"	15.00'
C19	31.41'	20.00'	89°59'30"	20.00'
C20	31.42'	20.00'	90°00'30"	20.00'

RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE %	"A" (FT)	"B" (FT)	"C" (FT)
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO 2	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	

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- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED UP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

GRADING NOTES

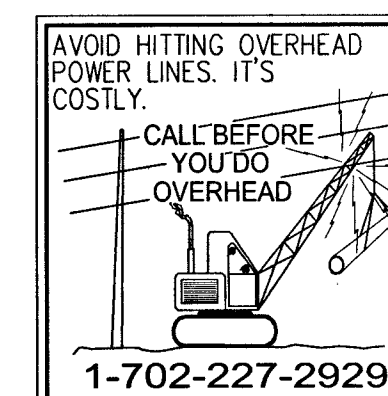
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- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SMPPP.
- MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
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- NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.
- CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

WATER NOTES

- WATER MAIN JOINT DEFLECTION (PVC 4" - 24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
- REDUCED PRESSURE PRINCIPLE ASSEMBLY (1" - 1")
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
- ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM DRAIN CROSSINGS AND CLEARANCES.
- FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
- INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
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- DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES. PRIOR TO COMMENCING CONSTRUCTION, NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136145 FIRST APPROVED DATE: 4-1-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PS RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM



CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES

GRADING NOTES

- INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217
- CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 3
- CONSTRUCT 8" GROSS CURB OVER CCAUSD NO. 228
- CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
- SAW CUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
- INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
- INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
- INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
- INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWER WITH BATTERY BACK-UP AND A.V. LOOP
- INSTALL DEPRESSED CURB PER DETAIL 43 ON SHEET D-2
- INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- EXISTING POWER POLE TO REMAIN
- INSTALL EQUESTRIAN TRAIL
- INSTALL RECREATIONAL FENCE
- EXISTING WROUGHT IRON FENCE TO BE REMOVED
- INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- INSTALL 2' CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- EXISTING 36" RCP SD PER CLV #107Y4803
- EXISTING 18" CLASS III RCP SD LATERAL PER CLV #107Y4803
- EXISTING DROP INLET PER CLV #107Y4803
- CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- INSTALL 18" RCP STORM DRAIN LATERAL
- INSTALL 5.0" TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
- EXISTING 48" STORM DRAIN MANHOLE PER CLV #107Y4803
- INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

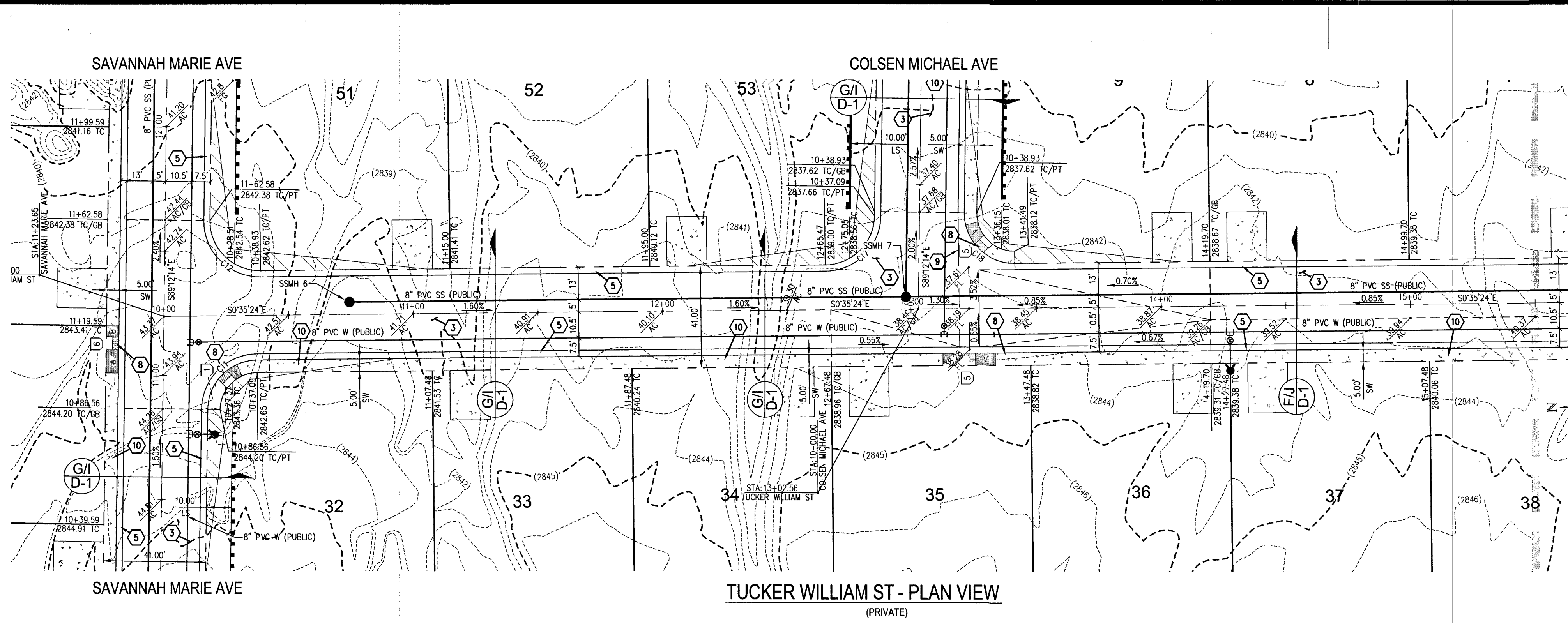
SEWER CONSTRUCTION NOTES

- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
- INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
- PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
- FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
- INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16.8.B
- INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
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- INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, SD-23 AND SD-25

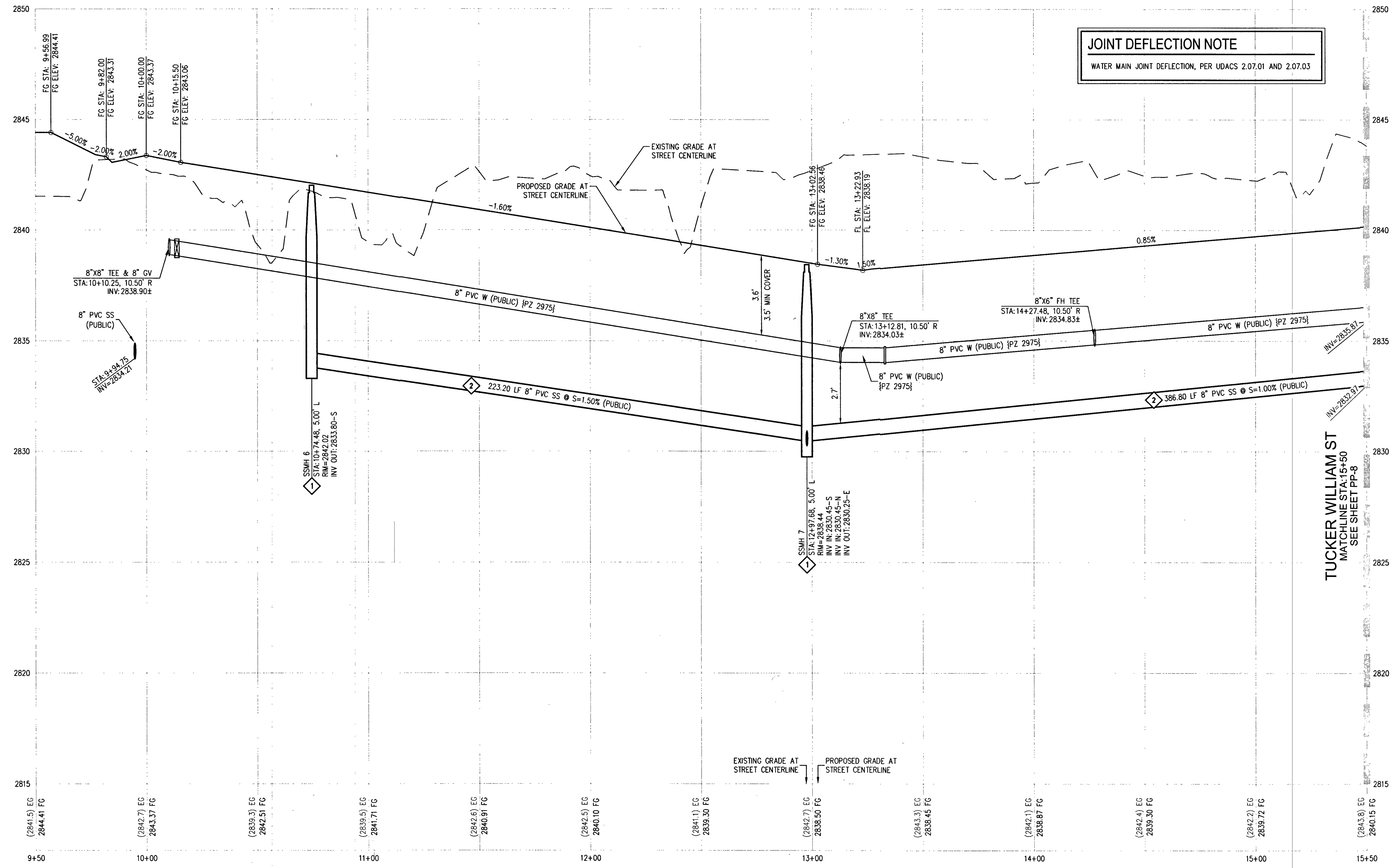
SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

RICHMOND AMERICAN HOMES
FARM HUALAPAI

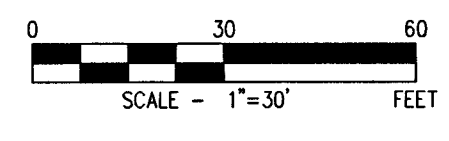
DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517
PP-5
SHEET 15 OF 34
L18-02739



TUCKER WILLIAM ST - PLAN VIEW
(PRIVATE)



TUCKER WILLIAM ST - PROFILE VIEW
HORIZ: 1" = 30'
VERT: 1" = 3'



TUCKER WILLIAM ST
SEE SHEET PP-8 FOR CONTINUATION

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C11	30.93'	20.00'	88°36'50"	19.52'
C12	31.90'	20.00'	91°23'10"	20.49'
C17	30.93'	20.00'	88°36'50"	19.52'
C18	31.90'	20.00'	91°23'10"	20.49'

RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE %	"B" TO "A" (FT)	"A" (FT) MIN.	"B" (FT) MIN.
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO 2	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	

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GRADING NOTES

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- MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
- ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLENISHING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
- NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
- CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

WATER NOTES

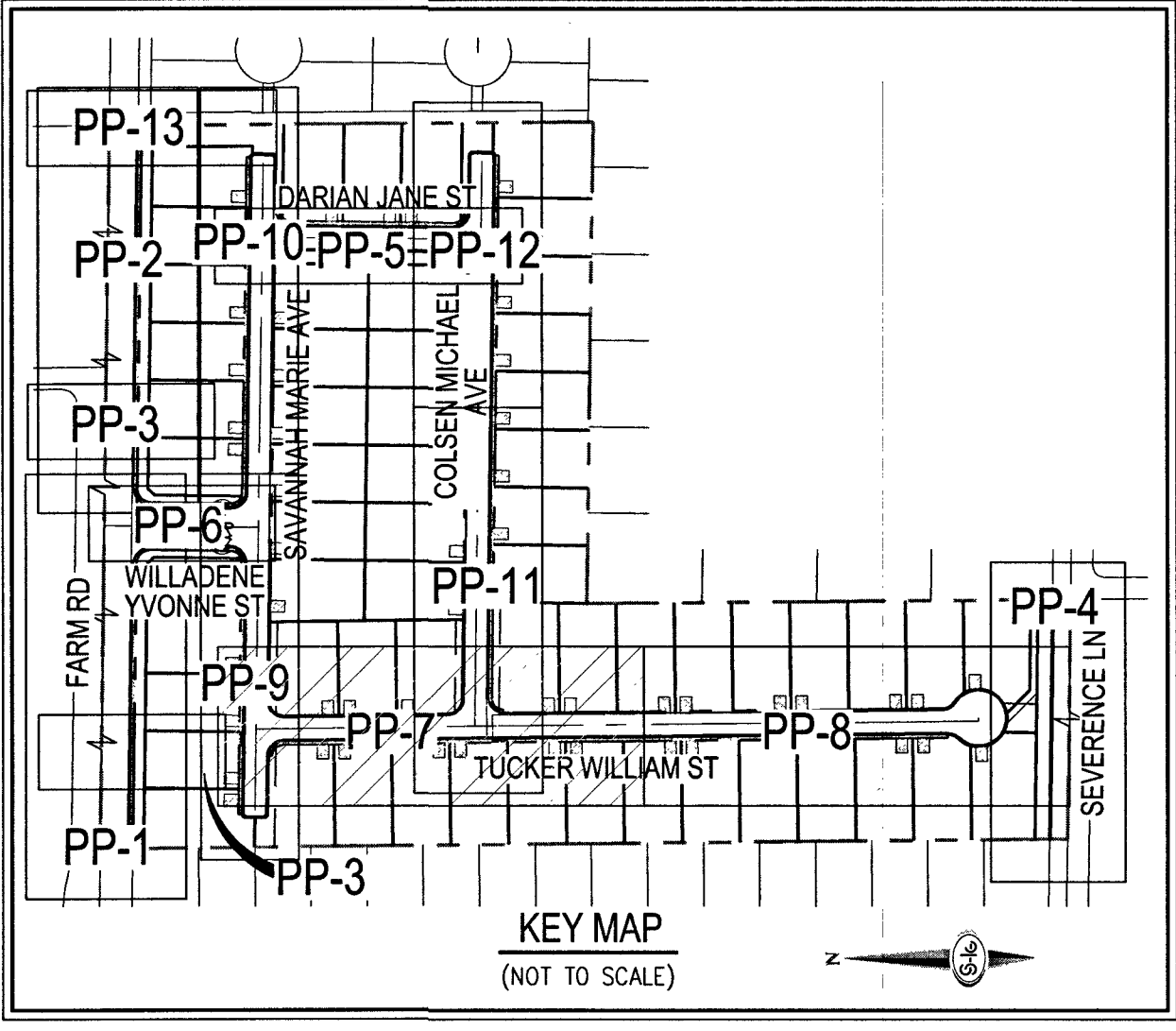
- WATER MAIN JOINT DEFLECTION (PVC 4" - 24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
- REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 1"
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENTS TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
- ALL SEWER/STORM DRAIN CROSSINGS WATER LINES MUST CONFORM TO SECTION 2.2.2 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
- FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
- INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
- THE LVWD CANNOT GUARANTEE A WATER TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
- CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
- DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

APPROVED FOR CONSTRUCTION
James M. Shook
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136145 FIRST APPROVED DATE: 4-4-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM

FAST
Call before you dig
UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929

Call before you dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600



- GRADING NOTES**
- INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
 - INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
 - INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
 - CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
 - CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
 - CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
 - CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
 - CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
 - CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
 - CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
 - SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
 - INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
 - INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
 - INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
 - INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWERED WITH BATTERY BACK-UP AND A/V LOOP
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 - INSTALL EQUESTRIAN TRAIL
 - INSTALL RECREATIONAL FENCE
 - INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
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 - EXISTING 18" CLASS III RCP SD LATERAL PER CLV #107Y4803
 - EXISTING DROP INLET PER CLV #107Y4803
 - CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
 - INSTALL 18" RCP STORM DRAIN LATERAL
 - INSTALL 5.0" TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
 - EXISTING 48" STORM DRAIN MANHOLE PER CLV #107Y4803
 - INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
 - CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
 - REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

- SEWER CONSTRUCTION NOTES**
- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
 - INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
 - INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
 - PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
 - FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
 - INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16.8.8
 - INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
 - INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-4, SD-9, AND SD-13 "B" WITH 24" SINGLE LID
 - INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, SD-23 AND SD-25

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

RICHMOND AMERICAN HOMES
FARM HUALAPAI
PLAN AND PROFILE - TUCKER WILLIAM STREET I

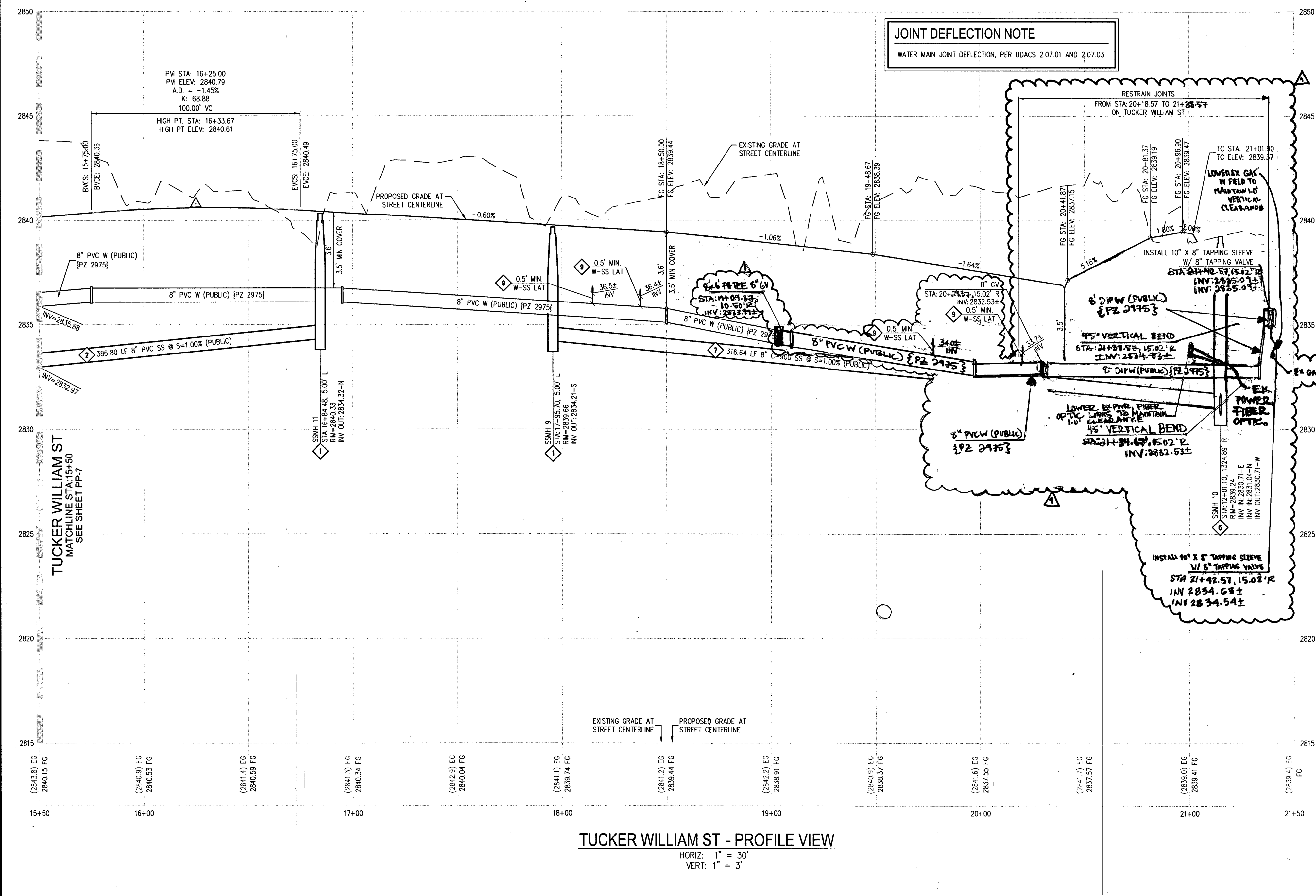
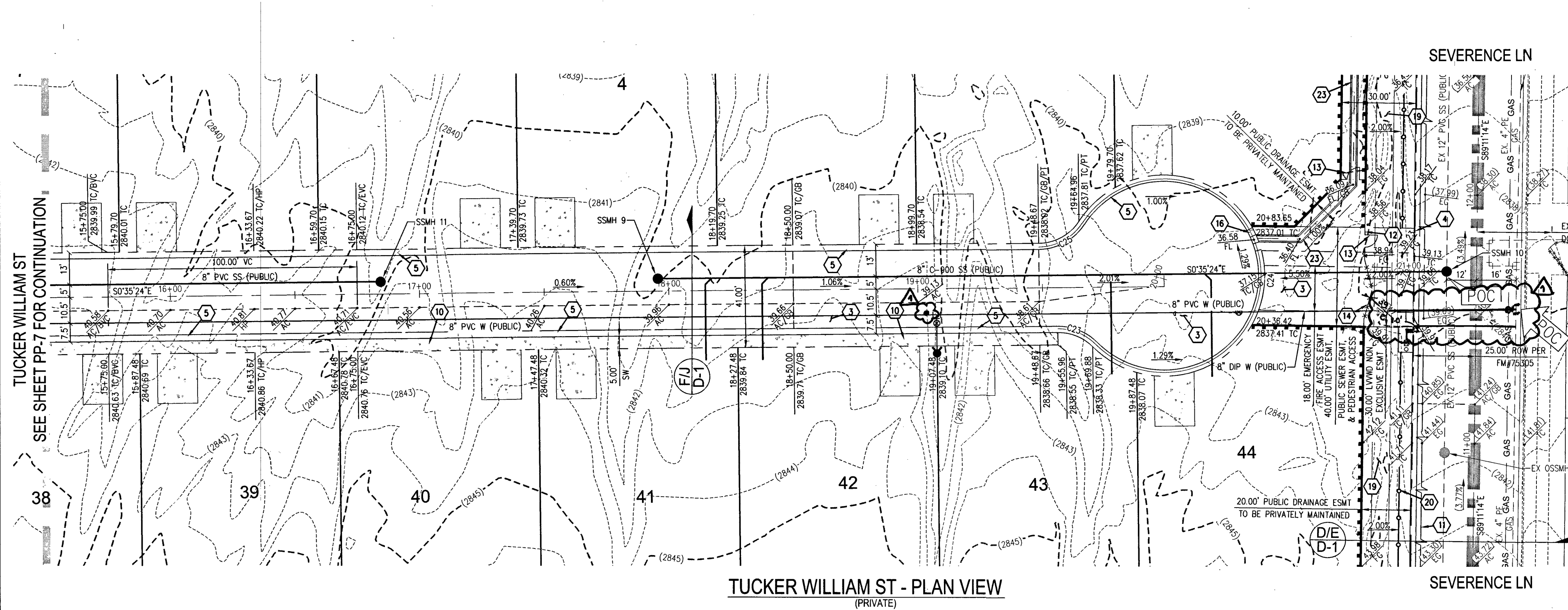
SIB 1188
R001

DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517

3/21/19
KEVIN M. BROSS
Exp. 12/31/2026
CIVIL
No. 24572-KV
PP-7
SHEET 17 OF 34
L18-02739

I:\Vet1517_burford_form.dwg (Vet1517) 3/21/2019 11:14 AM Lokele Abad

PROJ: 136145A QS: 125-18-SW



SEVERENCE LN

SCALE - 1"=30' FEET

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT
C23	15.50'	19.50'	45°32'57"	8.19'
C24	199.48'	40.50'	282°12'09"	32.68'
C25	19.28'	19.50'	56°39'12"	10.51'

RAMP TRANSITION LENGTHS

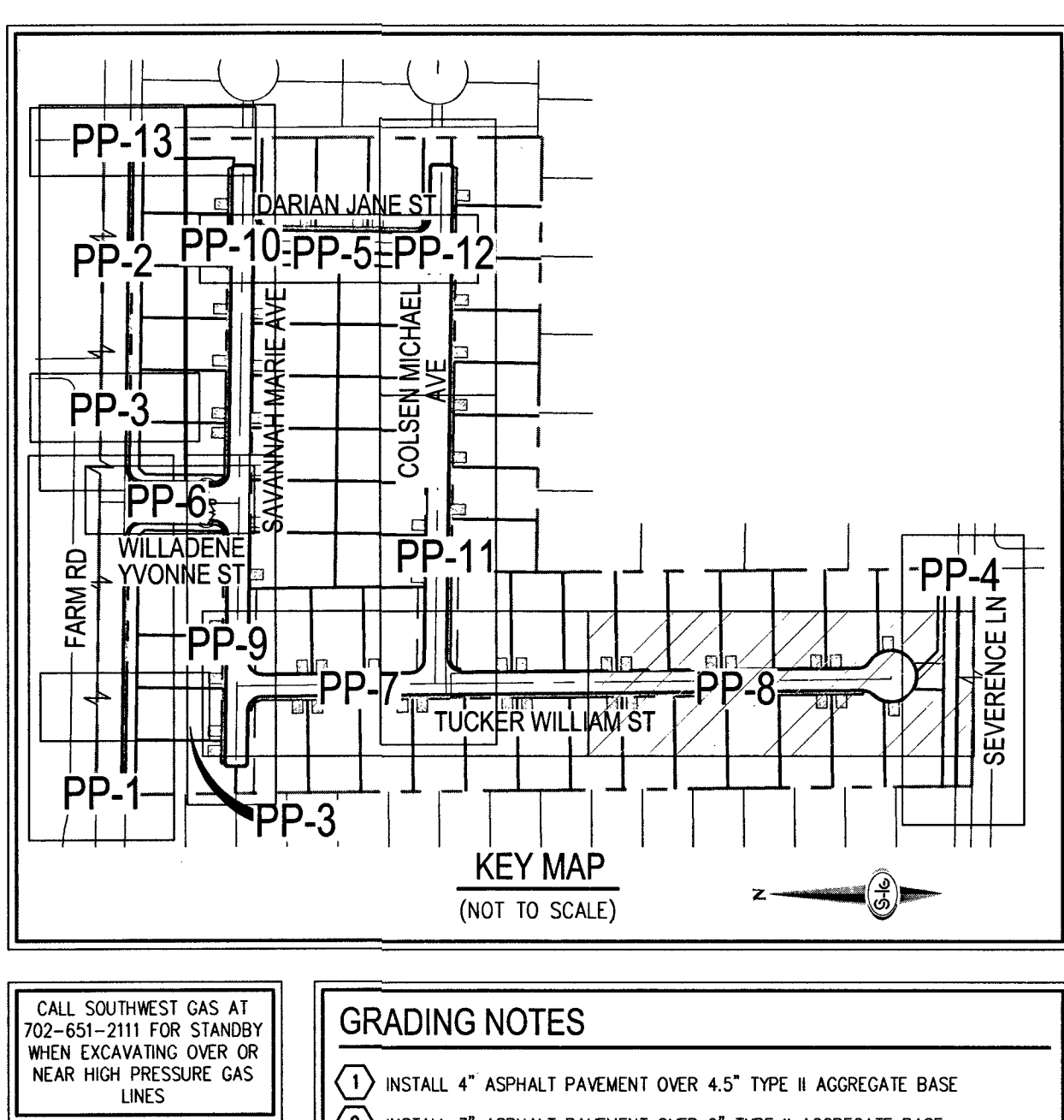
RAMP NO.	GRADE %	"A" (F)	"B" (F)	"C" (F)
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO 2	8.0'	6.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	

KEY MAP (NOT TO SCALE)

DISCLAIMER NOTE

GRADING NOTES

WATER NOTES



- GRADING NOTES
- 1) INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
 - 2) INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
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 - 7) CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
 - 8) CONSTRUCT SIDEWALK RAMP USING ANTI-SLIP TRUNCATED DUMPS OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
 - 9) CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
 - 10) CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
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 - 12) INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
 - 13) INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
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 - 16) INSTALL DEEPER CURB PER DETAIL 43 ON SHEET D-2
 - 17) INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
 - 18) EXISTING POWER POLE TO REMAIN
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 - 20) INSTALL RECREATIONAL FENCE
 - 21) EXISTING WROUGHT IRON FENCE TO BE REMOVED
 - 22) INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
 - 23) INSTALL 2.0' CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
 - 24) EXISTING 36" RCP SD PER CLV #1074803
 - 25) EXISTING 18" CLASS III RCP SD LATERAL PER CLV #1074803
 - 26) EXISTING DROP INLET PER CLV #1074803
 - 27) CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
 - 28) INSTALL 18" RCP STORM DRAIN LATERAL
 - 29) INSTALL 5.0' TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
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- 1) INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
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 - 7) INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
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 - 9) INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, SD-23 AND SD-25

APPROVED FOR CONSTRUCTION

James M. Hanks

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136145 FIRST APPROVED DATE: 4-18-19

LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM

SOUTHWEST GAS APPROVAL

Quelley Kennedy 3-21-19

SOUTHWEST GAS CORPORATION DATE

FAST

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1-702-227-2929

Call before you Dig

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

Call 811

OR 1-800-227-2600

SLATER HANIFAN GROUP

a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 284-5300 FAX (702) 284-5399

RICHMOND AMERICAN HOMES

FARM HUALAPAI

PLAN AND PROFILE - TUCKER WILLIAM STREET II

DATE: 3/18/19

DRAFTER: EMH

DESIGNER: EMH

CHECKED: KMB

PROJECT NO. RAH1517

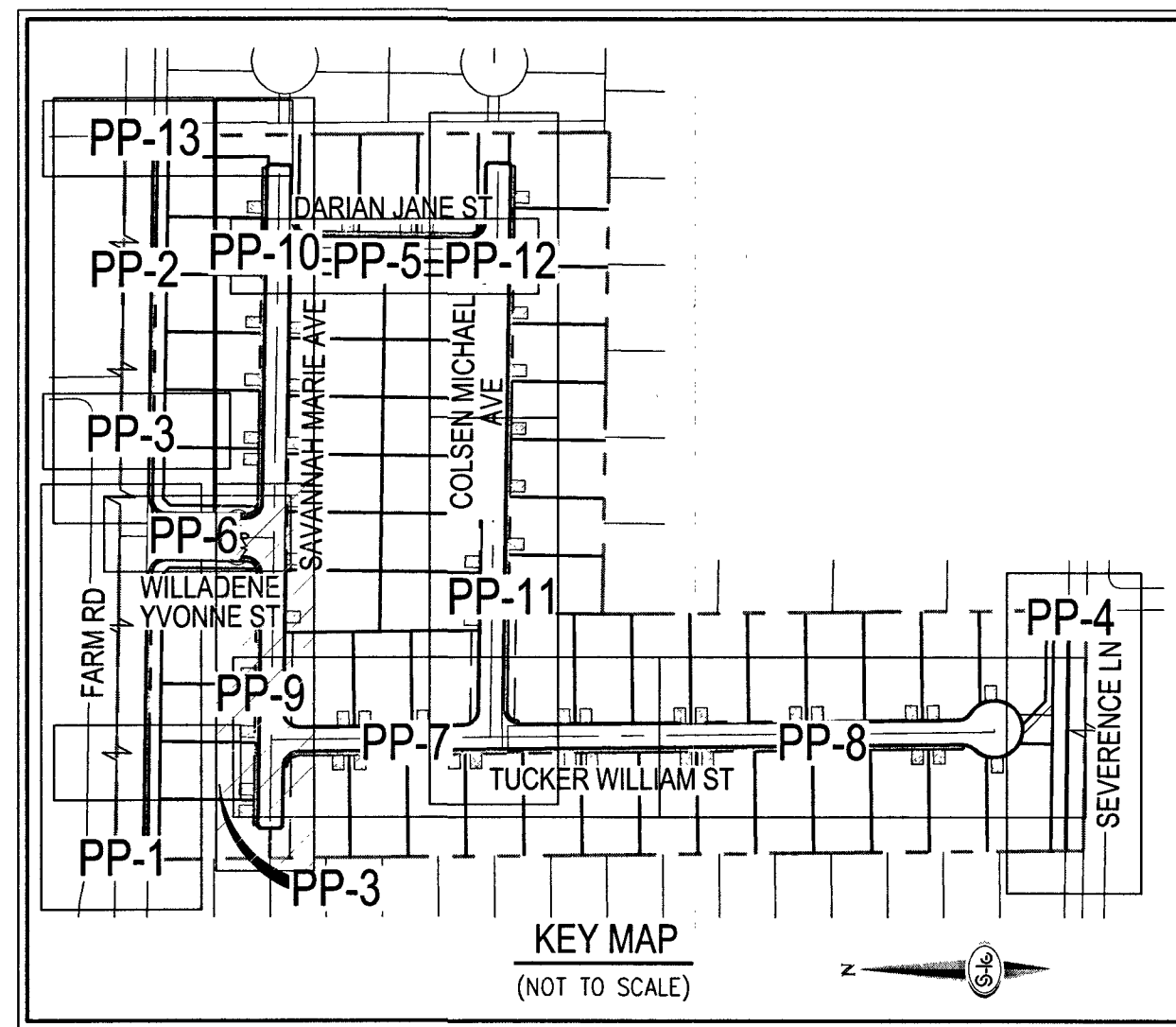
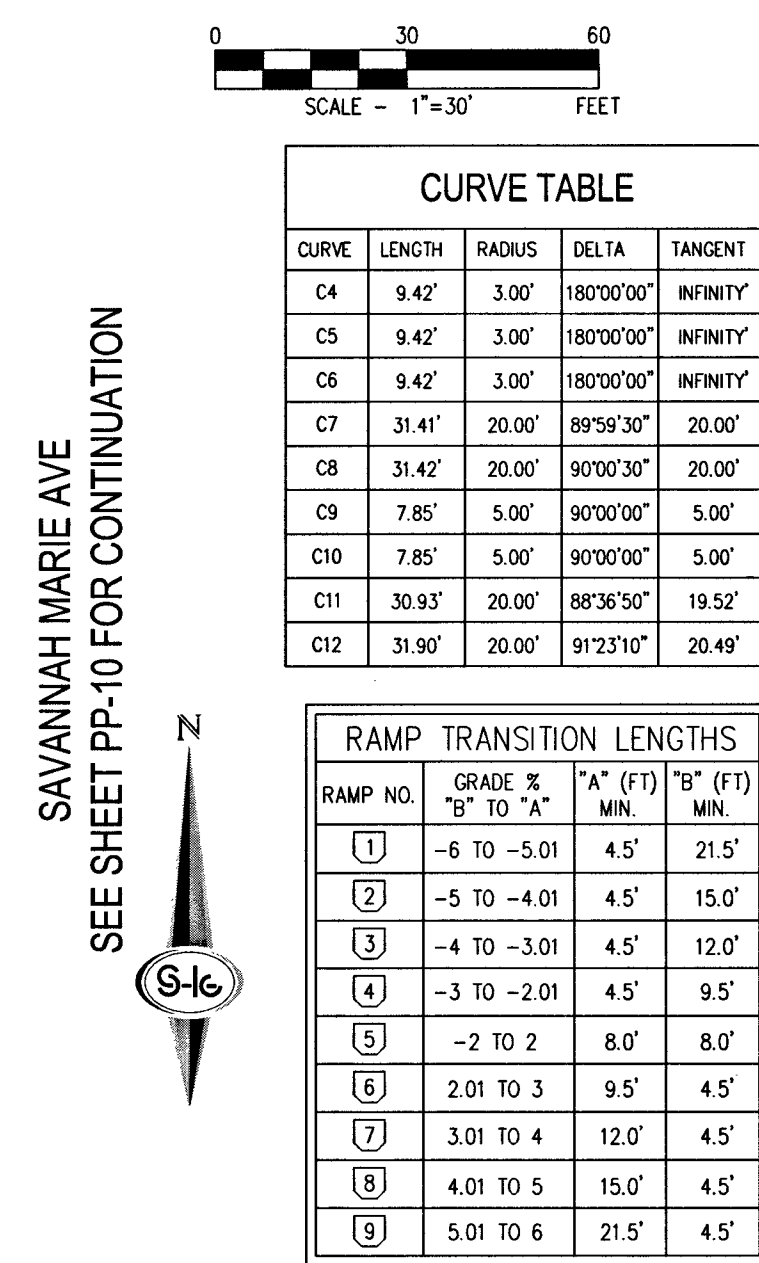
PP-8

SHEET 18 OF 42

1075104

L18-02739

PROJ: 136145A QS: 125-18-SW



CURVE	LENGTH	RADIUS	DELTA	TANGENT
C4	9.42'	3.00'	180°00'00"	INFINITY
C5	9.42'	3.00'	180°00'00"	INFINITY
C6	9.42'	3.00'	180°00'00"	INFINITY
C7	31.41'	20.00'	89°59'30"	20.00'
C8	31.42'	20.00'	90°00'30"	20.00'
C9	7.85'	5.00'	90°00'00"	5.00'
C10	7.85'	5.00'	90°00'00"	5.00'
C11	30.33'	20.00'	88°35'50"	19.52'
C12	31.90'	20.00'	91°23'10"	20.49'

RAMP		TRANSITION LENGTHS	
RAMP NO.	GRADE % "B" TO "A"	"A" (F) MIN.	"B" (F) MIN.
1	-6 TO -5.01	4.5'	21.5'
2	-5 TO -4.01	4.5'	15.0'
3	-4 TO -3.01	4.5'	12.0'
4	-3 TO -2.01	4.5'	9.5'
5	-2 TO 2	8.0'	8.0'
6	2.01 TO 3	9.5'	4.5'
7	3.01 TO 4	12.0'	
8	4.01 TO 5	15.0'	4.5'
9	5.01 TO 6	21.5'	4.5'

CALL SOUTHWEST GAS AT
702-651-2111 FOR STANDBY
WHEN EXCAVATING OVER OR
NEAR HIGH PRESSURE GAS
LINES

GRADING NOTES

- 1 INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- 2 INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- 3 INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
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- 6 CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- 7 CONSTRUCT 10' TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- 8 CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCHED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
- 9 CONSTRUCT 8' CROSS CURB PER CCAUSD NO. 228
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- 25 EXISTING 18" CLASS II RCP SD LATERAL PER CLV #J074803
- 26 EXISTING DROP INLET PER CLV #J074803
- 27 CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- 28 INSTALL 18" RCP STORM DRAIN LATERAL
- 29 INSTALL 5.0" TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
- 30 EXISTING 48" STORM DRAIN MANHOLE PER CLV #J074803
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- 2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED LINE OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

GRADING NOTES

1. FINAL GRASSES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH HCB 2012, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE REQUIREMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
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9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTY WITHIN THE SIGHT VISIBILITY ZONES.
10. CURB FLOW LINE LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

WATER NOTES

1. WATER MAIN JUNCTION DEFLECTION (ENC. 4" - 24")
PUMP MAIN SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE 1/8" PER FEET PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UOACS 2.07.01 AND 2.07.02.
2. FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
3. REDUCED PRESSURE PRINCIPLE ASSEMBLY (1" - 14")
REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UOACS. THE UOACS REQUIRE NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE DISTRICT. BLOCK VALVES SHALL BE INSTALLED AND MAINTAINED IN THE OPEN POSITION AROUND THE OUTSIDE OF THE EASEMENTS TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
4. ALL SEWER/ STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UOACS) FOR POTABLE AND STORM MAIN CROSSINGS.
5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
6. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UOACS 2.04.01 AND 2.04.02.
7. THE LYVINGD CANNOT GUARANTEE A WATERIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING WATER MAINS ARE REQUIRED. THE EXISTING PROPERTY OWNER SHALL BE RESPONSIBLE IF IT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPED CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TIRAL SHUTDOWN.
8. THE DISTRICT IS NOT RESPONSIBLE FOR THE EXISTING PROPERTY OWNER'S SCHEDULES OR ANY OTHER APPEARANCES ARE AVAILABLE.
9. THE EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO WARRANTY IS MADE BY THE DISTRICT AS TO THE ACCURACY OF THE UTILITY LOCATIONS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

APPROVED FOR CONSTRUCTION


LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136145 FIRST APPROVED DATE: 4-16-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM



AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

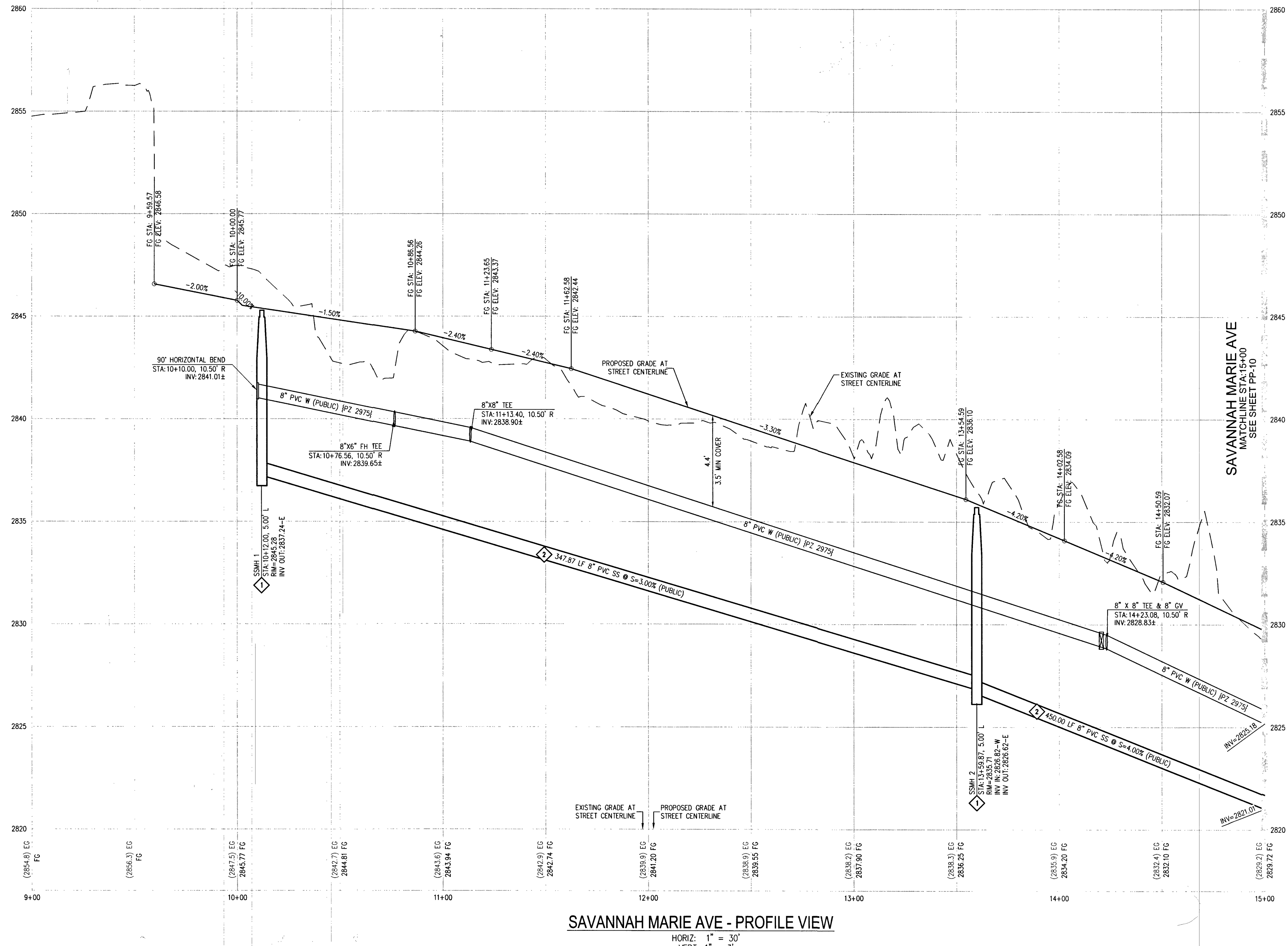
Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call

811

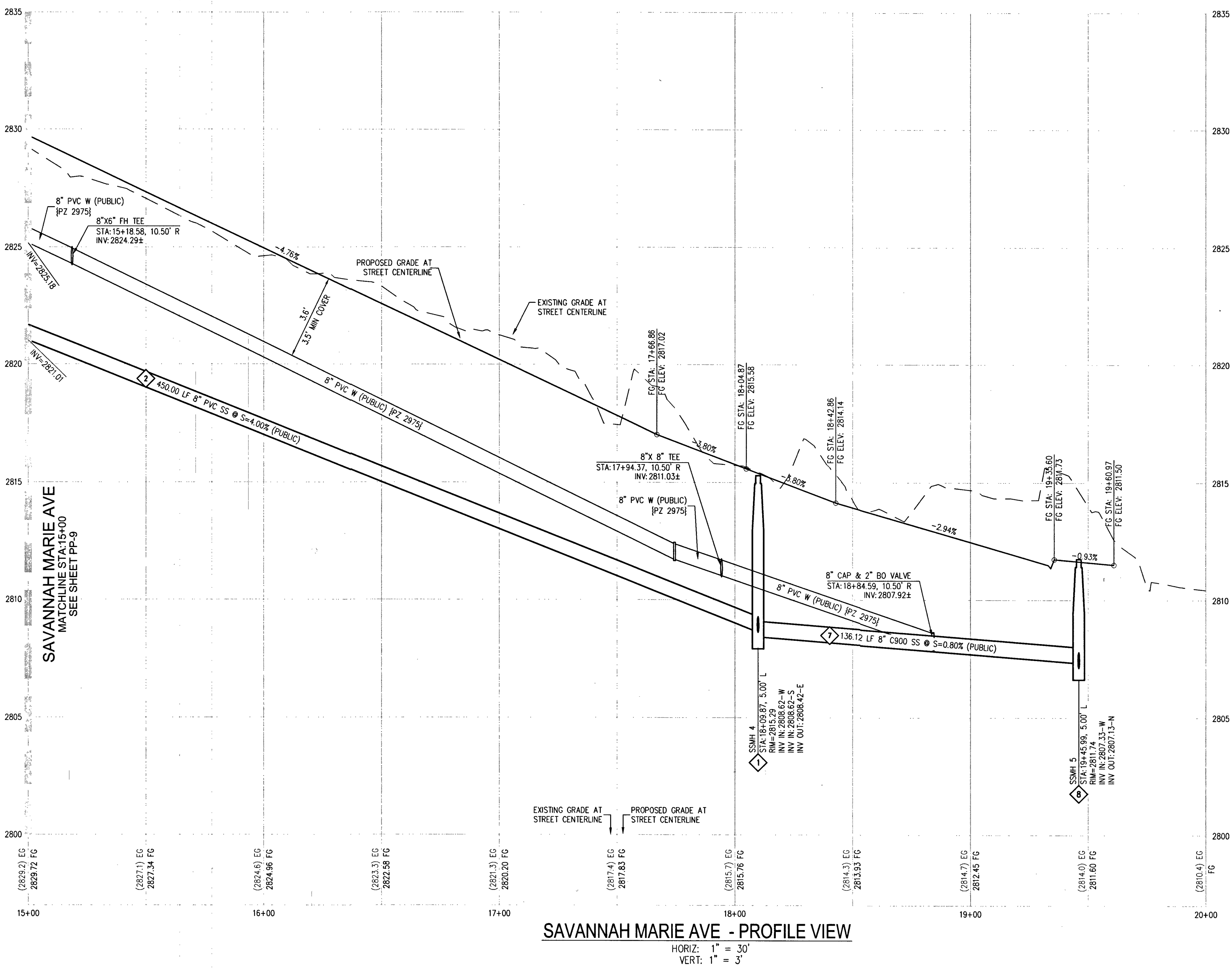
OR

1-800-227-2600

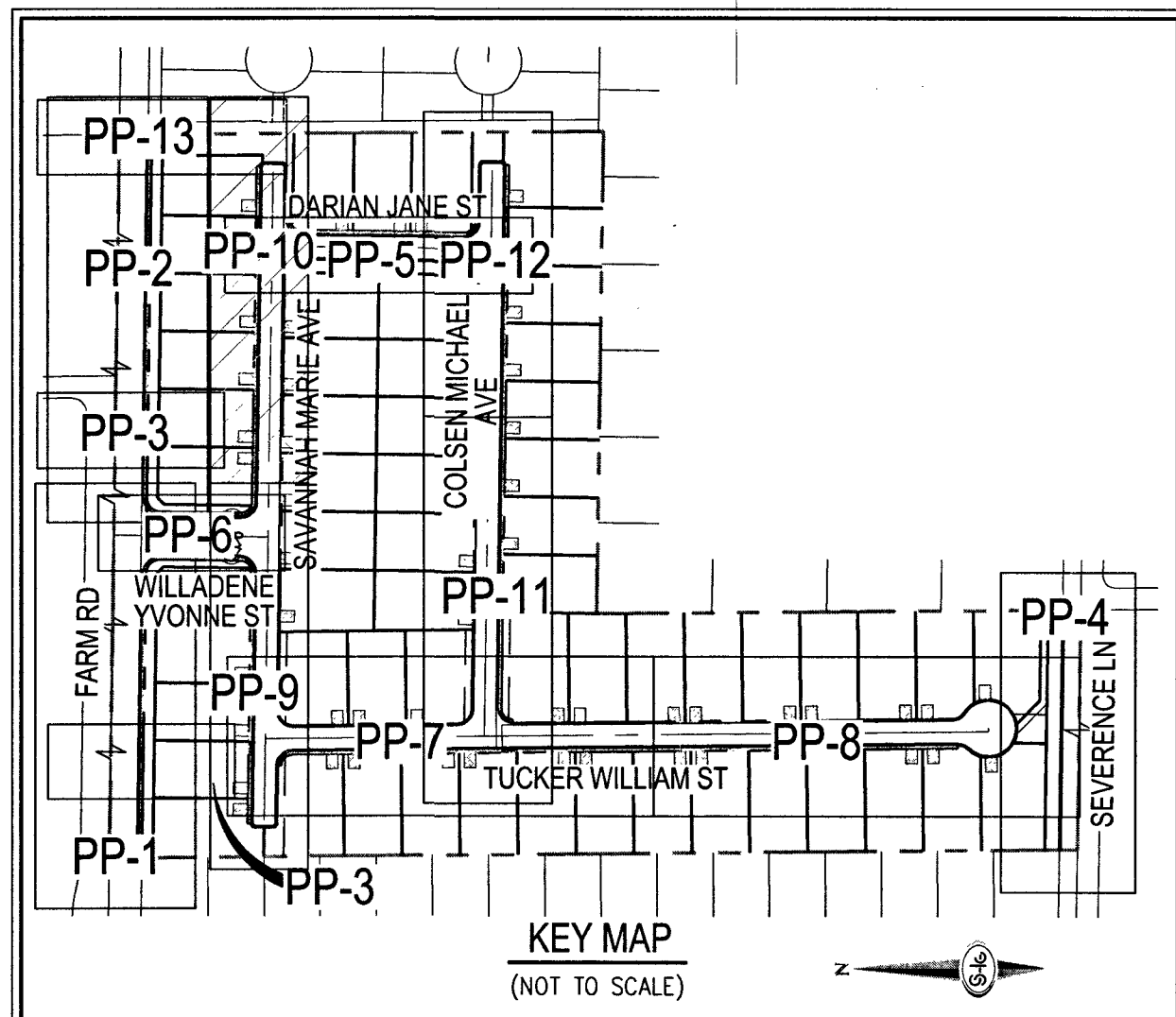


SAVANNAH MARIE AVE - PROFILE VIEW

HORIZ: 1" = 30'
VERT: 1" = 3'



RAMP TRANSITION LENGTHS			
RAMP NO.	GRADE % "B" TO "A"	"A" (F) MIN.	"B" (F) MIN.
1	-6 TO -5.01	4.5'	21.5'
2	-5 TO -4.01	4.5'	15.0'
3	-4 TO -3.01	4.5'	12.0'
4	-3 TO -2.01	4.5'	9.5'
5	-2 TO 2	8.0'	8.0'
6	2.01 TO 3	9.5'	4.5'
7	3.01 TO 4	12.0'	4.5'
8	4.01 TO 5	15.0'	4.5'
9	5.01 TO 6	21.5'	4.5'



- ## WATER NOTES
1. **WATER MAIN JOINT DEFLECTION (FWD. 4" - 24")**
 DEFLECTION SHALL BE LIMITED TO 1/4" ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADII OF CURVATURE OF 1,150 FEET. PER UDCAS 2.07.01 AND 2.07.02.
 ALL JOINTS IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
 2. **REDUCED PRESSURE PRINCIPLE ASSEMBLY (1" - 1")**
 APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDCAS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE CITY OF BLOOMINGTON. ALL REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE CONSTRUCTION OF THE STRUCTURE.
 3. ALL SEWER / STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UTILITY DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDCAS) FOR THE CITY OF BLOOMINGTON. ALL CROSSINGS SHALL BE CLEARLY MARKED.
 4. FITTINGS SHALL NOT FALL UNDER CURBS, OUTLETS OR SIDEWALK.
 5. ALL EXISTING WATER MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELEVATION FITTING PER UDCAS PLATE NO. 15.
 6. THE LANDOWNER CANNOT GUARANTEE A WATERTIGHT SITUATION WHERE CONNECTIONS OR REPAIRS TO EXISTING WATER LINES ARE REQUIRED. THE LANDOWNER SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDIE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRENK SHUTDOWN. THE LANDOWNER MUST BE PREPARED TO ENSURE FUGITIVE SHUTDOWN AT ALL TIMES. IN THE EVENT NO OTHER APPEARANCES ARE AVAILABLE.
 7. ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

- # GRADING NOTES
- 1 INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
 - 2 INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
 - 3 INSTALL 2" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
 - 4 CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
 - 5 CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
 - 6 CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
 - 7 CONSTRUCT 10' TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
 - 8 CONSTRUCT SIDEWALK RAMPS USING ANCHOR TILE TRUNCATED DOWNS OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
 - 9 CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
 - 10 CONSTRUCT 5" WIDE SIDEWALK IMPROVEMENT PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
 - 11 SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
 - 12 INSTALL 6" HIGH INDUSTRIAL STEEL FENCE PER DETAIL 40 ON SHEET D-2
 - 13 INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
 - 14 INSTALL 12" MINIMUM WALL DOUBLE GATES PER DETAIL 41 ON SHEET D-2
 - 15 INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWERED WITH BATTERY BACK-UP AND AW LOOP
 - 16 INSTALL DEPRESSIONED CURB PER DETAIL 43 ON SHEET D-2
 - 17 INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
 - 18 EXISTING POWER POLE TO REMAIN
 - 19 INSTALL EQUESTRIAN TRAIL
 - 20 INSTALL RECREATIONAL FENCE
 - 21 EXISTING WROUGHT IRON FENCE TO BE REMOVED
 - 22 INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
 - 23 INSTALL 2.0" CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
 - 24 EXISTING 36" RCP SD PER CLV #J0774803
 - 25 EXISTING 18" CLASS III RCP SD LATERAL PER CLV #J0774803
 - 26 EXISTING DROP INLET PER CLV #J0774803
 - 27 CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
 - 28 INSTALL 18" RCP STORM DRAIN LATERAL
 - 29 INSTALL 5.0" TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
 - 30 EXISTING 48" STORM DRAIN MANHOLE PER CLV #J0774803
 - 31 INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
 - 32 CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
 - 33 REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

- ## SEWER CONSTRUCTION NOTES
1. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4 & SD-9 WITH 24" SINGLE LID
 2. INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
 3. INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
 4. PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
 5. FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
 6. INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16.8.B
 7. INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
 8. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-4, SD-9, & SD-13 "B" WITH 24" SINGLE LID
 9. INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, SD-23 AND SD-25

APPROVED FOR CONSTRUCTION


LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136145 FIRST APPROVED DATE: 4-16-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM



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SLATER
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a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

[illegible]

RICHMOND
AMERICAN HOMES

FARM HUALAPAI

PROFILE - SAVANNAH MARIE AVENUE II

PLAN AND PROFILE - SAVANNAH MARIE AVENUE II

DATE:	3/18/19
DRAWN BY:	EMH
CHECKED BY:	KMB
PROJECT NO.	RAH1517



3/21/19

PP-10

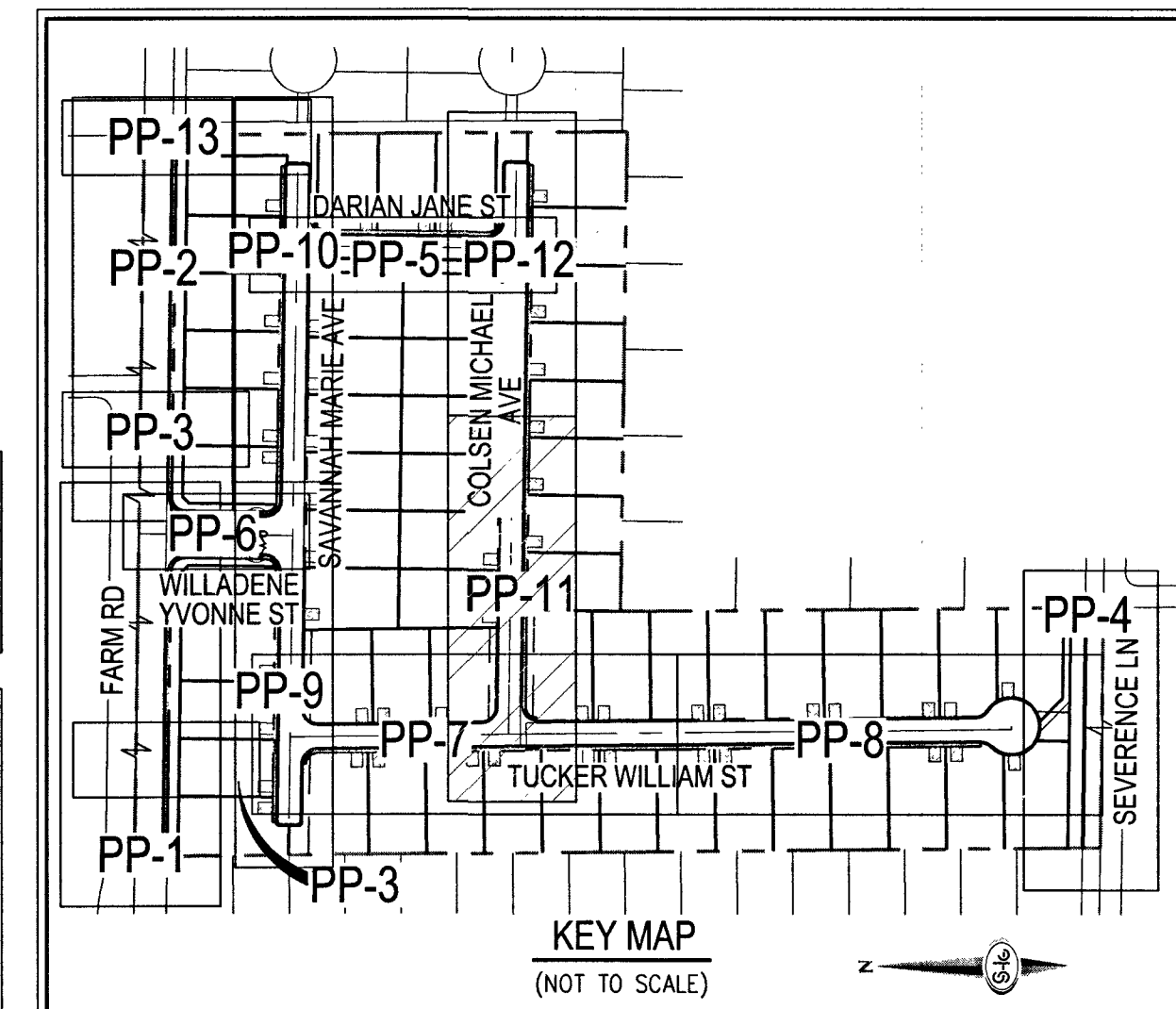
SHEET 20 OF 34

L18-02739

PROJ#:136145A QS:125-18-SW



RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE % "B" TO "A"	"A" (F) MIN.	"B" (F) MIN.	"B" (F) MIN.
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
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6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	



CALL SOUTHWEST GAS AT
702-651-2111 FOR STANDARDS
WHEN EXCAVATING OVER OR
NEAR HIGH PRESSURE GAS
LINES

GRADING NOTES

- 1) INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- 2) INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- 3) INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- 4) CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- 5) CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
- 6) CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- 7) CONSTRUCT 10' TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- 8) CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
- 9) CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
- 10) CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
- 11) SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
- 12) INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
- 13) INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
- 14) INSTALL 12" MINIMUM W/AL WITH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
- 15) INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWERED WITH BATTERY BACK-UP AND AM LOOP
- 16) INSTALL DEPRESSIONED CURB PER DETAIL 43 ON SHEET D-2
- 17) INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- 18) EXISTING POWER POLE TO REMAIN
- 19) INSTALL EQUESTRIAN TRAIL
- 20) INSTALL RECREATIONAL FENCE
- 21) EXISTING WROUGHT IRON FENCE TO BE REMOVED
- 22) INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- 23) INSTALL 2.0" CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- 24) EXISTING 36" RCP SD PER CLV #107Y4803
- 25) EXISTING 18" CLASS III RCP SD LATERAL PER CLV #107Y4803
- 26) EXISTING DRAIN INLET PER CLV #107Y4803
- 27) CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- 28) INSTALL 18" RCP STORM DRAIN LATERAL
- 29) INSTALL 5.0' TYPE "CM2" DRAIN INLET PER CCAUSD NO. 412.1 AND 421
- 30) EXISTING 48" STORM DRAIN MANHOLE PER CLV #107Y4803
- 31) INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
- 32) CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- 33) REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

SEWER CONSTRUCTION NOTES

- | | |
|---|--|
| 1 | INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B SD-1C AND SD-1D WITH 24" SINGLE LID |
| 2 | INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17 |
| 3 | INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25 |
| 4 | PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS |
| 5 | FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER |
| 6 | INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16.8.B |
| 7 | INSTALL 8" CS80 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17 |
| 8 | INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-4, SD-9 AND SD-13 "B" WITH 24" SINGLE LID |
| 9 | INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22 SD-23 AND SD-25 |

DISCLAIMER NOTE

- 1) EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- 2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SARCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED CURB LINE PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

GRADING NOTES

1. FINAL GRASSES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.1.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION; CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLACING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY TRIANGLES.
10. CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

WATER NOTES

4. **WATER MAIN JOINT DEFLECTION (PVC 4" - 24")**
PVC PIPE SHALL BE DEFLECTED AT THE JOINT UNTIL THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, FOR FITTINGS SEE SECTION 2207.00. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DIRECTION OF DEFLECTION FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, ITDCS SHALL BE RESPONSIBLE FOR THE PROPER DIRECTION OF DEFLECTION.
5. **REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 1"**
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS (UDACS 18 AND 19) TO PROVIDE A SERVICE REQUIRING BACKFLOW PREVENTION. THE REDUCED PRESSURE PRINCIPLE ASSEMBLY SHALL BE SUCCESSFULLY TESTED BY THE LWVMD. ANY BLOCK VALVE OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED TO ALLOW THE OUTSIDE OF THE REDUCED PRESSURE PRINCIPLE ASSEMBLY TO BE DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
6. **STORM DRAIN CROSSEING WATER LINES MUST CONFORM TO SECTION 222 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSEING AND CLEARANCES.**
7. **FITTINGS SHALL NOT FAIL UNDER CURBS, OR AT THE SIDEWALK.**
8. **INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS 18 AND 19.**
9. **THE LWVMD CANNOT GUARANTEE A WATERIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT ARE AVAILABLE TO THE PROJECT AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN ADEQUATE COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.**
10. **THE CONTRACTOR SHALL BE RESPONSIBLE FOR SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APURTANCES ARE AVAILABLE.**
11. **DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER SHALL BE RESPONSIBLE FOR THE SHOWN UTILITIES.**

APPROVED FOR CONSTRUCTION

[Signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICE

PROJECT NO. 136145 FIRST APPROVED DATE: 4-16-19
LWWO APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM

FAST

Call before you UnderGround

1-702-432-5300

FREWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

CALL BEFORE
YOU DO
OVERHEAD

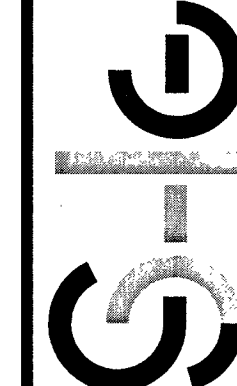
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811

OR
1-800-227-2600

**SLATER
HANFAN
GROUP**
a Westwood team
LAS VEGAS, NV 89118
FAX (702) 284-5399



5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

DESCRIPTION	DATE	BY	APP. DATE	APP.
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LAS VEGAS, NEVADA NO.



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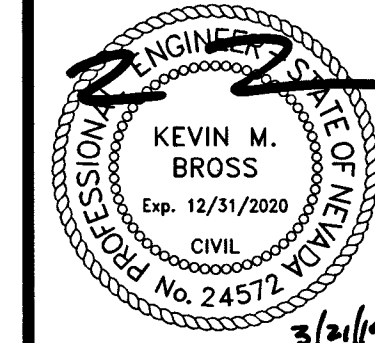
DATE: 3/18/19

DRAFTER: EMH

DESIGNER: EMH

CHECKED: KMB

PROJECT NO.
RAH151



PP-11

SHEET 21 OF 34

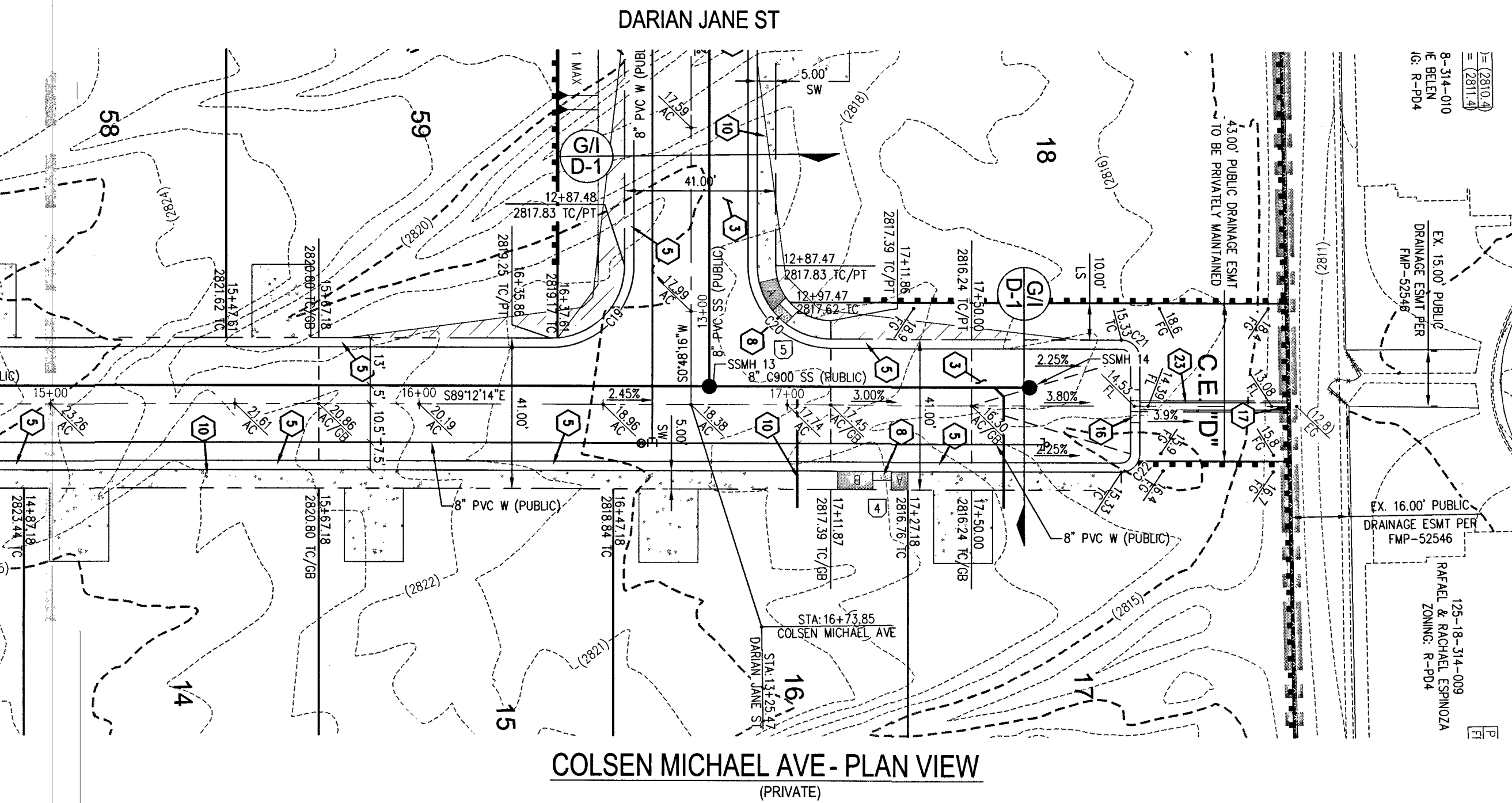
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PROJ#:136145A QS:125-18-SW

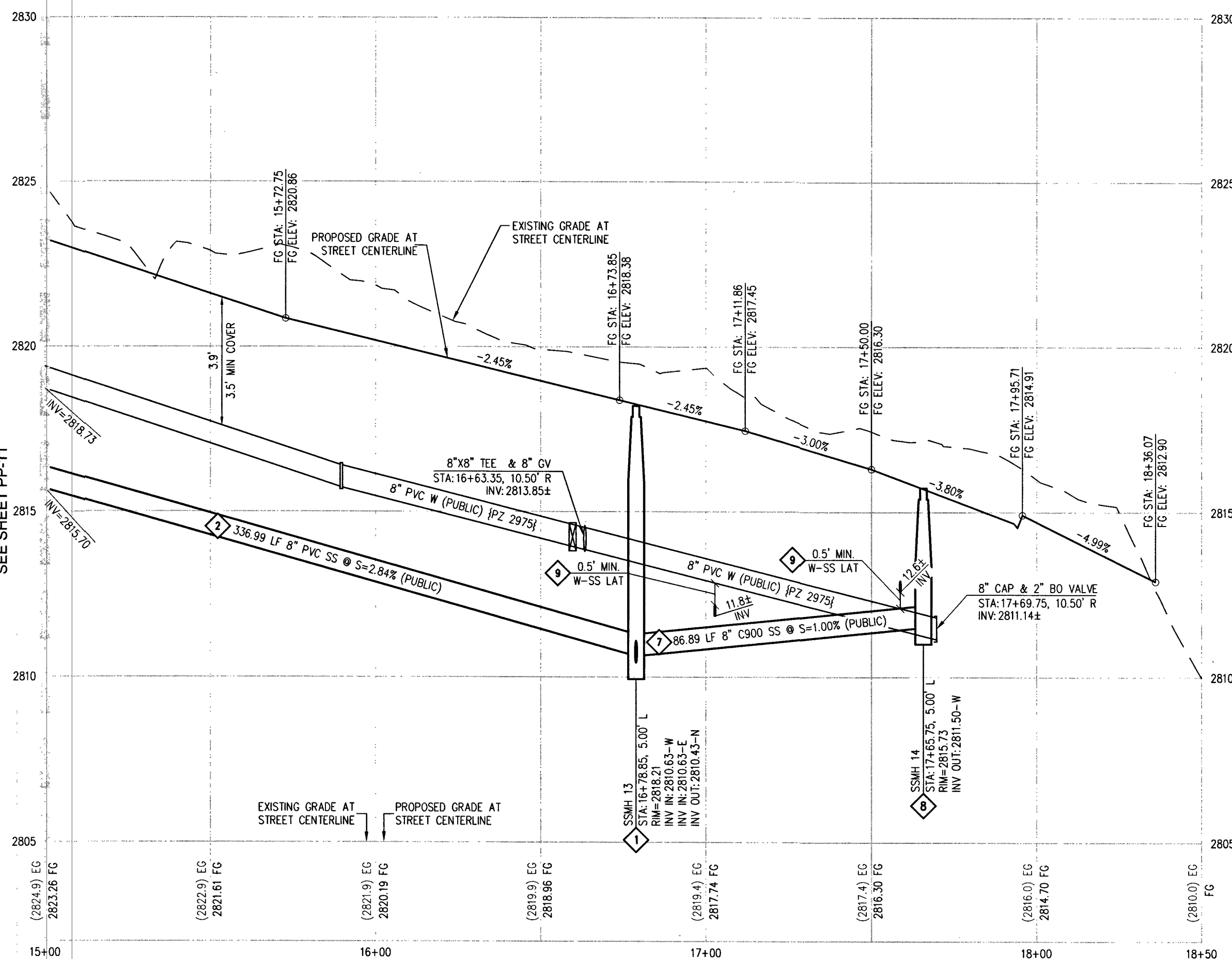
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COLSEN MICHAEL AVE
SEE SHEET PP-11 FOR CONTINUATION

COLSEN MICHAEL AVE
MATCHLINE STA:15+00
SEE SHEET PP-11



COLSEN MICHAEL AVE - PLAN VIEW
(PRIVATE)



COLSEN MICHAEL AVE - PROFILE VIEW

HORIZ: 1" = 30'
VERT: 1" = 3'

0 30 60
SCALE = 1"=30' FEET

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C19	31.41'	20.00'	89°59'30"	20.00'
C20	31.42'	20.00'	90°00'31"	20.00'
C21	7.85'	5.00'	90°00'00"	5.00'
C22	7.85'	5.00'	90°00'00"	5.00'

RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE %	"A" (FT)	"B" (FT)	"C" (FT)
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO 2	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
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9	5.01 TO 6	21.5'	4.5'	

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- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED UP OR CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

GRADING NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
- MAXIMUM/MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
- ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES TO BE CORRECTED PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLETING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
- NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.
- CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

WATER NOTES

- WATER MAIN JOINT DEFLECTION (PVC, 4" - 24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
- REDUCED PRESSURE PRINCIPLE ASSEMBLY (1" - 1")
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT STAFF ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
- ALL SEWER/STORM DRAIN CROSSINGS WATER LINES MUST CONFORM TO SECTION 2.2.2 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
- FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
- INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
- THE LVWD CANNOT GUARANTEE A WATER TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPED CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APURTANCES ARE AVAILABLE.
- DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

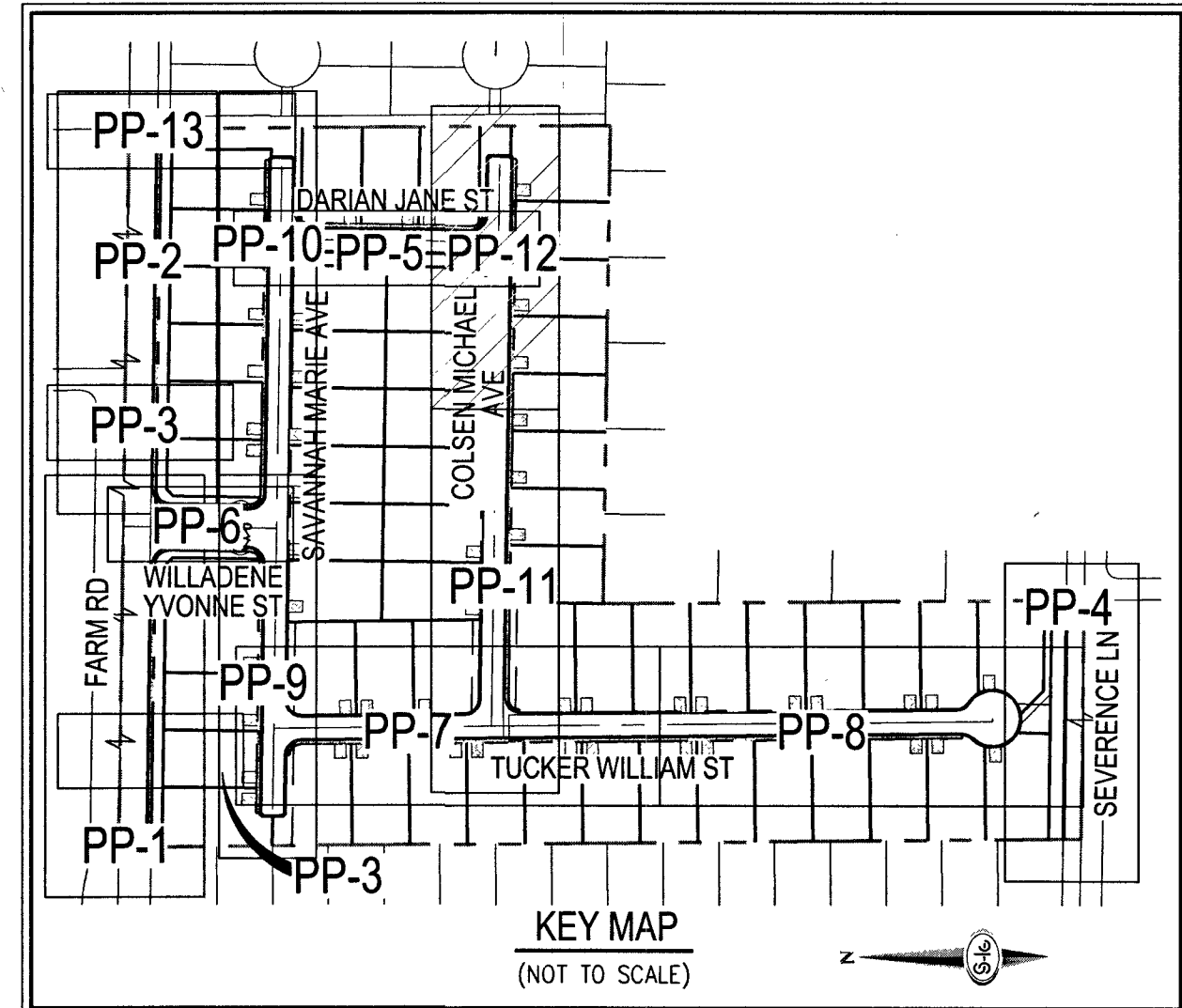
APPROVED FOR CONSTRUCTION

[Signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136145 FIRST APPROVED DATE: 4-11-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW _____ GPM



CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES



KEY MAP
(NOT TO SCALE)

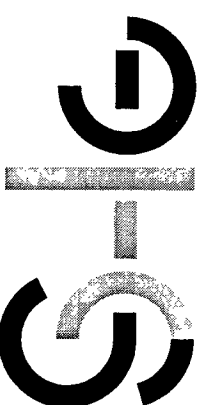
GRADING NOTES

- INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
- CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- CONSTRUCT 10" TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1
- CONSTRUCT 8" GROSS GUTTER PER CCAUSD NO. 228
- CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD NO. 234 (4" THICK W/ 5" TYPE II AGGREGATE BASE)
- SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
- INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
- INSTALL 5' PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
- INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
- INSTALL 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWER WITH BATTERY BACK-UP AND A.V. LOOP
- INSTALL DEPRESSED CURB PER DETAIL 43 ON SHEET D-2
- INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- EXISTING POWER POLE TO REMAIN
- INSTALL EQUESTRIAN TRAIL
- INSTALL RECREATIONAL FENCE
- EXISTING WROUGHT IRON FENCE TO BE REMOVED
- INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- INSTALL 20" CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- EXISTING 36" RCP SD PER CLV #107Y4803
- EXISTING 18" CLASS III RCP SD LATERAL PER CLV #107Y4803
- EXISTING DROP INLET PER CLV #107Y4803
- CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- INSTALL 18" RCP STORM DRAIN LATERAL
- INSTALL 5.0" TYPE "CM2" DROP INLET PER CCAUSD NO. 412.1 AND 421
- EXISTING 48" STORM DRAIN MANHOLE PER CLV #107Y4803
- INSTALL SIDEWALK UNDERDRAIN PER CCAUSD NO. 236
- CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- REMOVE EXISTING CHANNEL WALL AT U-CHANNEL OUTLET

SEWER CONSTRUCTION NOTES

- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
- INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
- PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
- FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
- INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWCS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWCS 3.16-B-B
- INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-4, SD-9, AND SD-13 "B" WITH 24" SINGLE LID
- INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWCS SD-17, SD-22, SD-23 AND SD-25

SLATER
HANIFAN
GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399



DATE	BY	APP.	DATE

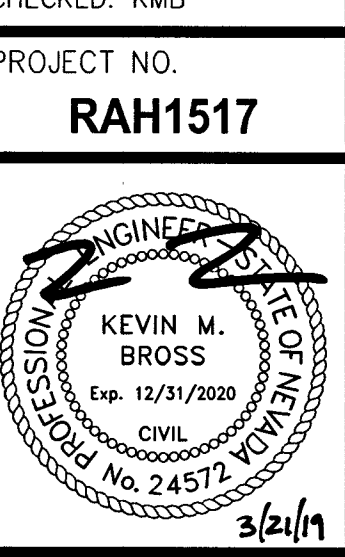
DESCRIPTION	NO.

LAS VEGAS, NEVADA

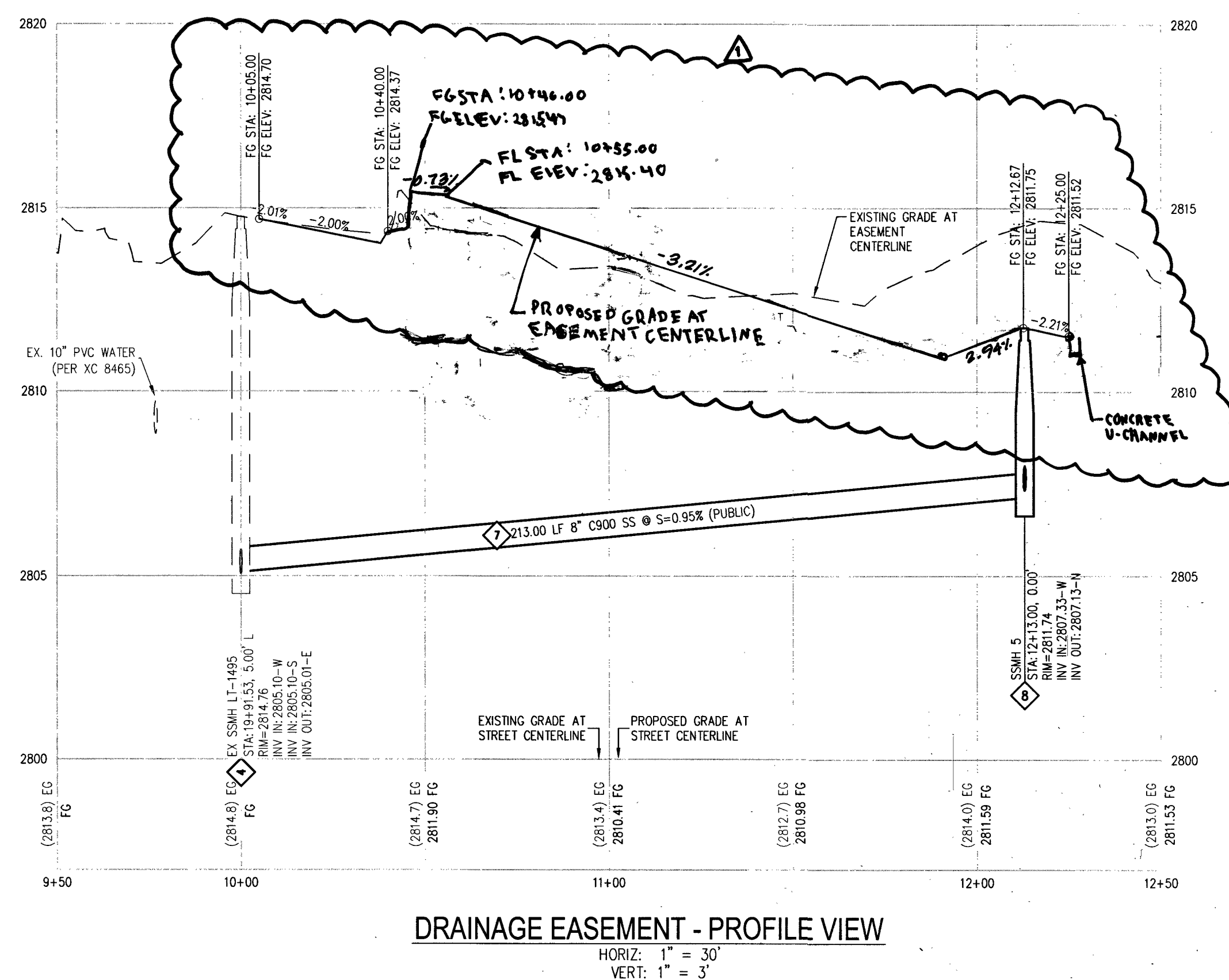
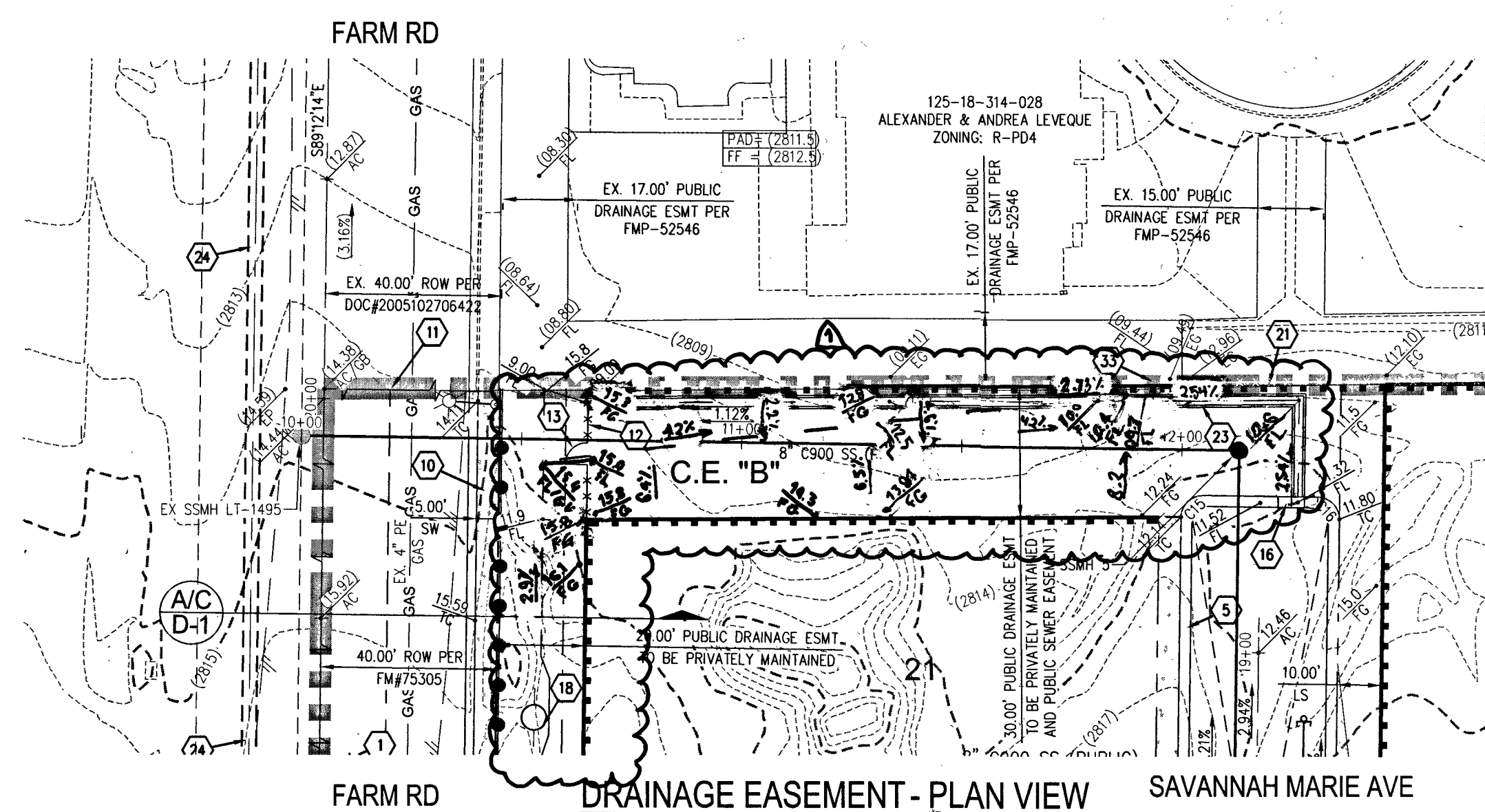
RICHMOND
AMERICAN HOMES
FARM HUALAPAI

DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517

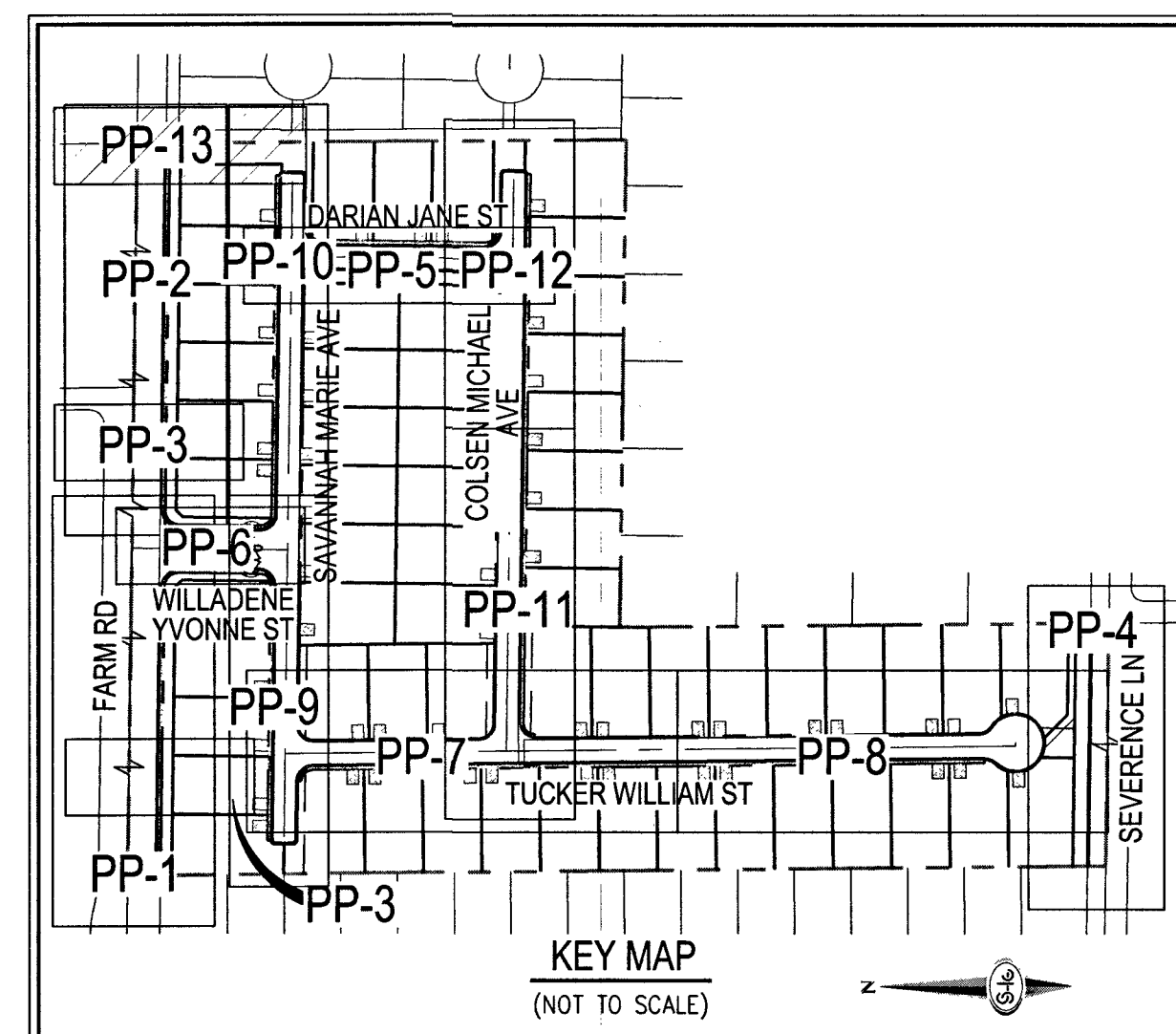
PP-12
SHEET 22 OF 34
L18-02739



107V5104



RAMP TRANSITION LENGTHS			
RAMP NO.	GRADE % "B" TO "A"	A' (FT) MIN.	B' (FT) MIN.
1	-6 TO -5.01	4.5'	21.5'
2	-5 TO -4.01	4.5'	15.0'
3	-4 TO -3.01	4.5'	12.0'
4	-3 TO -2.01	4.5'	9.5'
5	-2 TO 2	8.0'	8.0'
6	2.01 TO 3	9.5'	4.5'
7	3.01 TO 4	12.0'	4.5'
8	4.01 TO 5	15.0'	4.5'
9	5.01 TO 6	21.5'	4.5'



DISCLAIMER NOTE

- 1) EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- 2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

GRADING NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWMP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLENISHING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT TRIANGLE OF ANY STOP SIGN.
10. CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST TO THE CITY.

WATER NOTES

4. WATER MAIN JOINT DEFLECTION (IJC-47 - 24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS SECTION 2.1.0.7.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTING SHALL BE USED.
5. REDUCED PRESSURE PRINCIPLE ASSEMBLY (1" - 1")
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS SECTION 2.1.0.7.02. A SERVICE-REQUIRING BACKFLOW PREVENTION UNIT, THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LWVMD, ANY BLOCK WALL OR OTHER EXCESS MATERIAL SHALL BE DESIGNED AND CONSTRUCTED TO PROVIDE AN OUTSIDE ACCESS TO THE REDUCED PRESSURE PRINCIPLE ASSEMBLY ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
6. WATER MAIN CROSSING WATER LINES MUST CONFORM TO SECTION 2.2.2 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
7. FITTINGS SHALL NOT FALL UNDER THE SIDEWALK OR SIDEWALK SLOPE.
8. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELEVATION FITTING PER UDACS SECTION 2.1.0.7.02.
9. THE LWVMD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT ARE AVAILABLE TO COMPLETE THE SHUTDOWN PRIOR TO THE START OF THE SHUTDOWN. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TYPICAL SHUTDOWN.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPEARANCES ARE AVAILABLE.
11. DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTING UTILITY LOCATIONS SHOWN IN ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER SHALL BE RESPONSIBLE FOR THE SHUTDOWN IN THEIR PROPER LOCATION.

GRADING NOTES

- (1) INSTALL 4" ASPHALT PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE
- (2) INSTALL 3" ASPHALT PAVEMENT OVER 9" TYPE II AGGREGATE BASE
- (3) INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- (4) CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216
- (5) CONSTRUCT 30" ROLL CURB AND GUTTER PER CCAUSD NO. 217.1
- (6) CONSTRUCT "A" TYPE CURB PER CCAUSD NO. 219
- (7) CONSTRUCT 10' TRANSITION FROM ROLLED CURB TO "L" TYPE CURB PER DETAIL 46 SHEET D-2
- (8) CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD CASE 1
- (9) CONSTRUCT 8" GROSS GUTTER PER CCAUSD NO. 228
- (10) CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234 (* THICK W/ 5" TYPE II AGGREGATE BASE)
- (11) SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503 & 500.2
- (12) INSTALL 6" HIGH TUBULAR STEEL FENCE PER DETAIL 40 ON SHEET D-2
- (13) INSTALL 5" PEDESTRIAN ACCESS GATE PER DETAIL 42 ON SHEET D-2
- (14) INSTALL 12" MINIMUM WIDTH DOUBLE GATES PER DETAIL 41 ON SHEET D-2
- (15) CONSTRUCT 6" HIGH WROUGHT IRON FENCE WITH VEHICLE GATE ELECTRICALLY-POWERED WITH BATTERY BACK-UP AND AVI LOOP
- (16) INSTALL DERESSED CURB PER DETAIL 43 ON SHEET D-2
- (17) INSTALL BLOCK WALL OPENING PER DETAIL 44 ON SHEET D-2
- (18) EXISTING POWER POLE TO REMAIN
- (19) INSTALL EQUESTRIAN TRAIL
- (20) INSTALL RECREATIONAL FENCE
- (21) EXISTING WROUGHT IRON FENCE TO BE REMOVED
- (22) INSTALL METAL PLATE OVER CONCRETE U-CHANNEL AT EQUESTRIAN TRAIL
- (23) INSTALL 20" CONCRETE U-CHANNEL PER DETAIL 47 ON SHEET D-2
- (24) EXISTING 36" RCP SD PER DETAIL 47 @ J074803
- (25) EXISTING 18" CLASS III RCP SD LATERAL PER CLV J0774803
- (26) EXISTING DROD INLET PER CLV J0774803
- (27) CONNECT TO EXISTING STORM DRAIN LATERAL AND INSTALL CONCRETE COLLAR PER DETAIL 48 ON SHEET D-2
- (28) INSTALL 18" RCP STORM DRAIN LATERAL
- (29) INSTALL 5.0" TYPE "CM2" DROD INLET PER CCAUSD NO. 412.1 AND 421
- (30) EXISTING 48" STORM DRAIN MANHOLE PER CLV J0774803
- (31) INSTALL SIDEWALK UNDERDRAN PER CCAUSD NO. 236
- (32) CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 219
- (33) REMOVE EXISTING CHAIN WALL AT U-CHANNEL OUTLET

SEWER CONSTRUCTION NOTES

- | | |
|---|---|
| 1 | INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID |
| 2 | INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWS SD-15 AND SD-17. |
| 3 | INSTALL 4" PVC SEWER LATERAL PER DCSWS SD-22 AND SD-25 |
| 4 | PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS |
| 5 | FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER |
| 6 | INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWS SD-4, SD-7 AND SD-9 // CORROSION PROTECTION PER DCSWS 3.16.68 |
| 7 | INSTALL 8" C900 SEWER PIPE (PUBLIC) PER DCSWS SD-15 AND SD-17 |
| 8 | INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWS SD-4, SD-9, AND SD-13 "B" WITH 24" SINGLE LID |
| 9 | INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWS SD-17, SD-22 SD-23 AND SD-25 |

SOUTHWEST GAS APPROVAL

Pamela Kennedy 3-21-19
SOUTHWEST GAS CORPORATION DATE



107V5104

S-E GROUP
a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

[illegible]

NT



RICHMOND
AMERICAN HOMES
FARM HUALAPAI

FARM HUALAPAI

PLAN AND PROFILE - DRAINAGE EASEMENT

DATE: 3/18/19

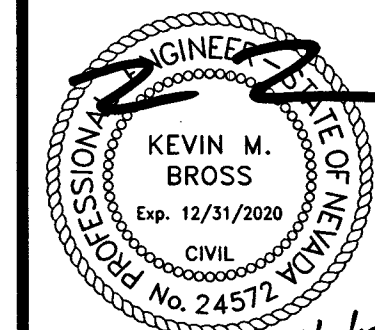
DRAFTER: EMH

DESIGNER: EMH

CHECKED: KMB

PROJECT NO.

RAH1517



PP-13

SHEET 23 OF 24

L18-02739

P:\Veh1517_bufiled_form_data\maprova\rah1517.mxd, 3/18/2019 4:47 PM, Labels Added



LEGEND

- BOUNDARY LINE
- LVWD PHASE 1 CONSTRUCTION
- ROADWAY CENTERLINE
- RIGHT-OF-WAY
- PRIVATE RIGHT-OF-WAY
- LOT LINE
- PROPOSED CURB AND GUTTER
- FUTURE CURB AND GUTTER
- WATER PIPE FITTING
- WATER GATE VALVE
- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- SANITARY SEWER FLOW DIRECTION
- WATER POINT OF CONNECTION
- SEWER POINT OF CONNECTION
- 100W STREETLIGHT
- PRESSURE REDUCING VALVE
- BACKWATER VALVE

SEE SHEET C-3 FOR ABBREVIATIONS AND QUANTITIES

DISCLAIMER NOTES

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

BENCHMARK

BENCHMARK NUMBER: 6LV9018W4
RIVET AND PLATE IN TOP OF CURB IN THE NORTHEAST CORNER OF FARM ROAD AND HUALAPAI WAY.
ELEVATION = 2856.716 FEET, 870.729 METERS
DATUM = NAVD 88
PER THE CITY OF LAS VEGAS BENCHMARK WEBSITE ON MAY 17, 2018.

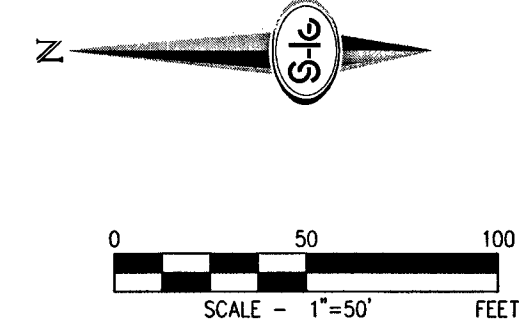
BASIS OF BEARINGS

NORTH 00°19'04" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHWEST QUARTER (SW1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 127, PAGE 24 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

FIRE FLOW CALCULATIONS

FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
AUTOMATIC FIRE SPRINKLERS	YES
SQUARE FOOTAGE (LIVABLE)	<5000
SQUARE FOOTAGE (TOTAL)	<6200
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	<35
NO OF STORIES INCLUDING BASEMENT	NO
HIGH PILED COMBUSTIBLE STORAGE	NO
NO OF HYDRANTS INSTALLED	6



FIRE SPRINKLER NOTE

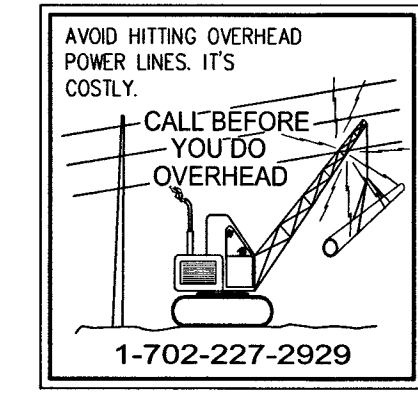
FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO THE MASTER TOWEL. NO EXCEPTIONS ALLOWED.

WATER PRESSURE ZONE NOTE

ALL LOTS ARE SERVED FROM THE PVC WATER MAIN IN THE 2975 W.P.Z.

TYP. WATER METER SUMMARY TABLE

1. 1" NEW SERVICE W/ 3/4" DUAL ANGLE METER PER UDACS PLATE NO. 1	22
2. 1" NEW SERVICE W/ 3/4" DUAL ANGLE METER PER UDACS PLATE NO. 3	37
3. 3/4" IRRIGATION METER	2



LAS VEGAS FIRE AND RESCUE FIRE DEPARTMENT APPROVED

BY: *[Signature]* 3/19/19

APPROVAL OF THESE PLANS SHALL NOT BE CONSIDERED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

SOUTHWEST GAS APPROVAL

BY: *[Signature]* 3-21-19

SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION

BY: *[Signature]*

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT No. 136145 FIRST APPROVED DATE 4-16-19

LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

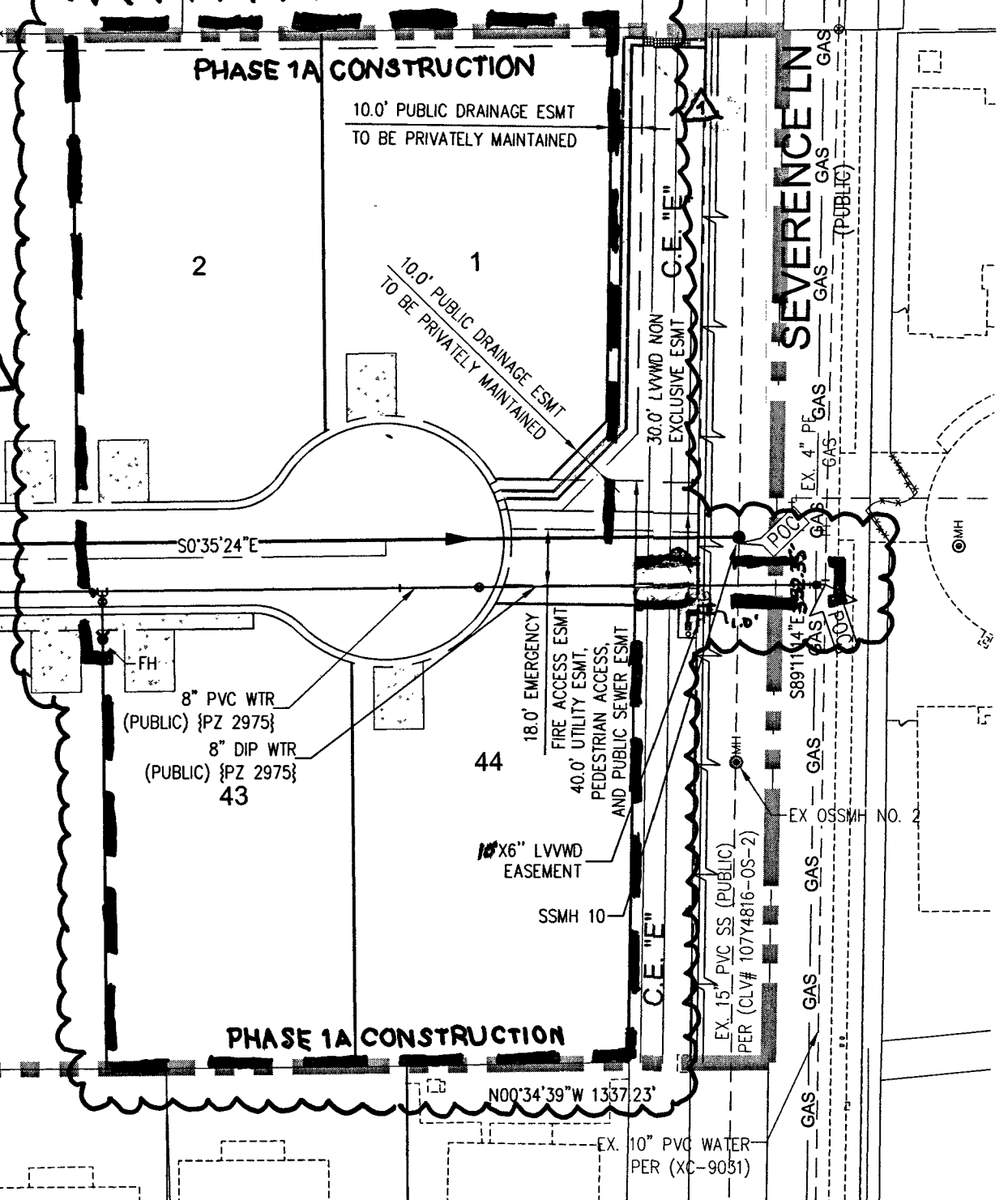
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 28 GPM

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS

59 UNITS X 250 GPD/UNIT = 14,750 GPD = 0.01475 MGD

TOTAL PEAK FLOW = 0.01475 X 3.54 (PEAK FACTOR) = 0.05222 MGD

TOTAL PEAK WET-WEATHER FLOW = 0.05222 MGD X 1.25 = 0.06527 MGD



SLATER HANIFAN GROUP

a Westwood Team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 284-5300 FAX (702) 284-5399

RAH1517

PROJECT NO.

DATE: 3/18/19

DRAWN: EMH

DESIGNED: EMH

CHECKED: KMB

PROJECT NO.

RAH1517

KEVIN M. BROSS

Exp. 12/31/2020

CIVIL ENGINEER

No. 24572

3/18/19

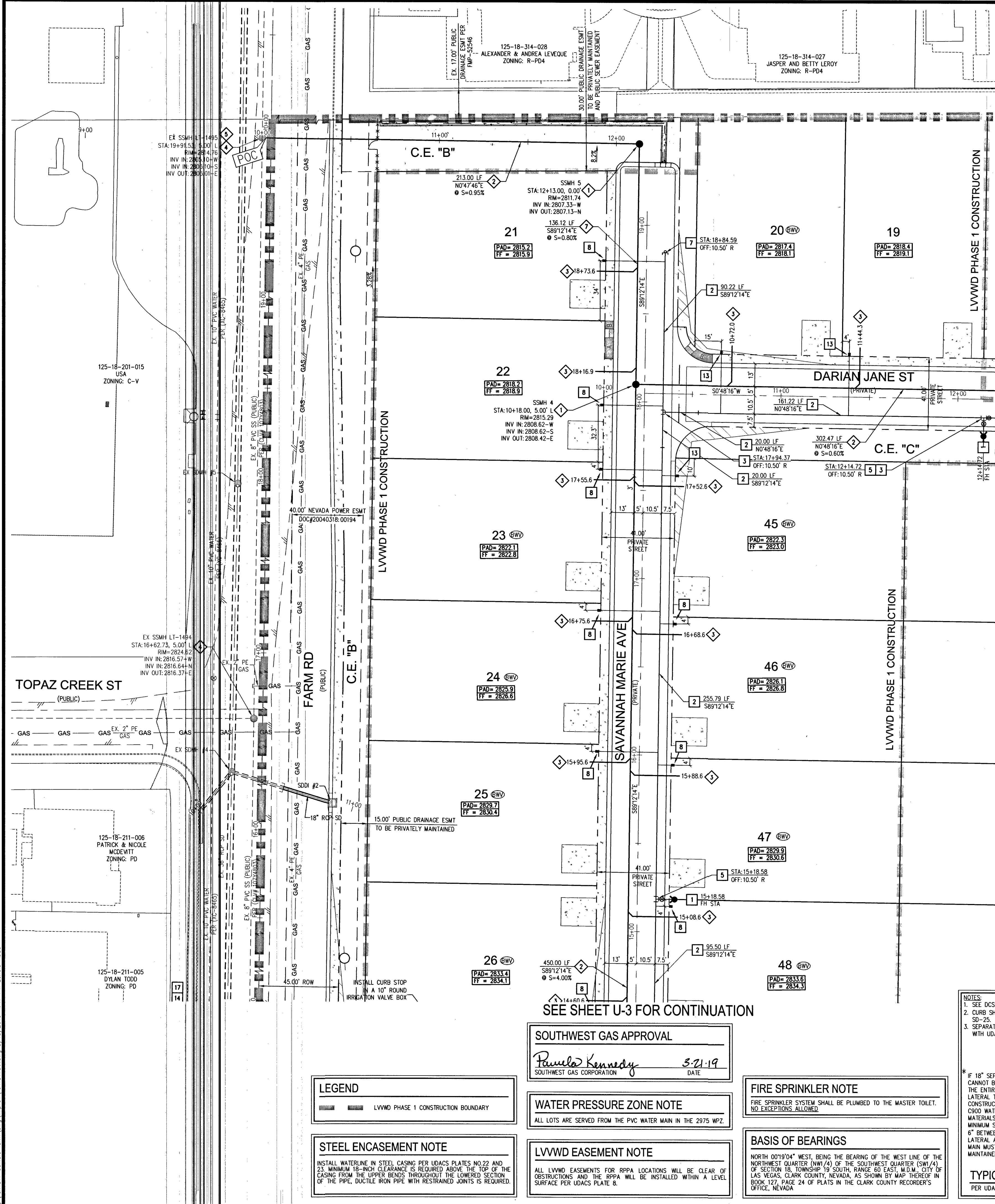
MU-1

SHEET 24 OF 42

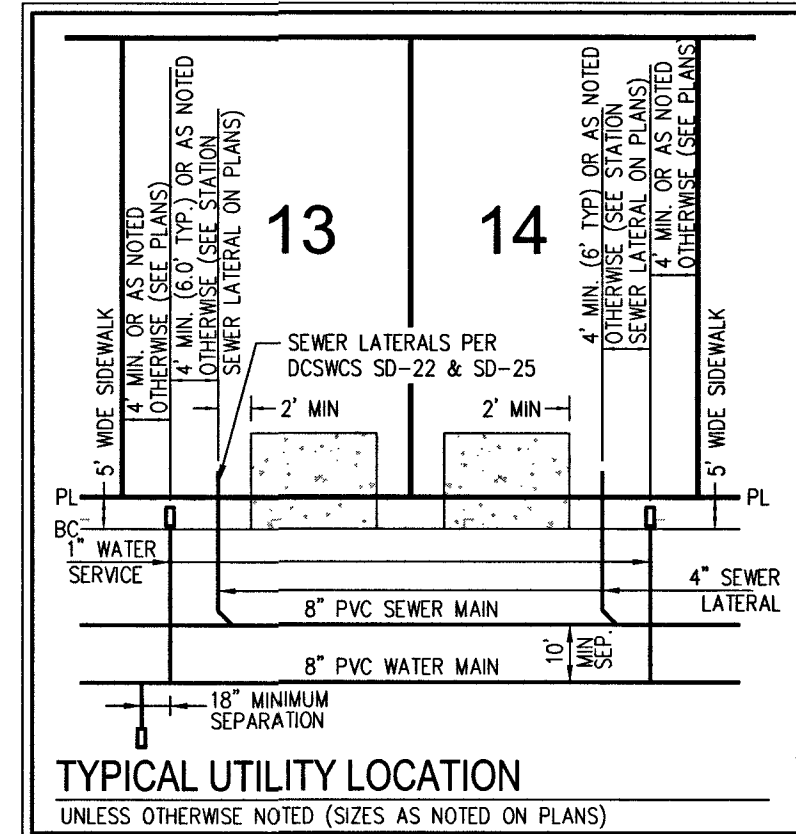
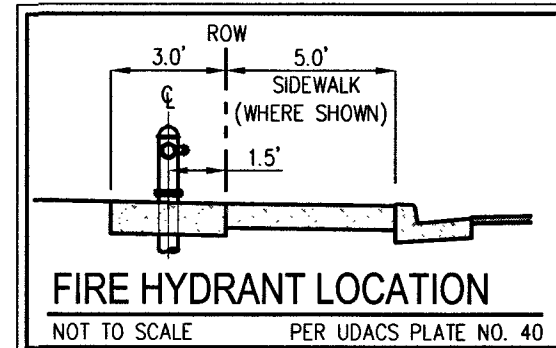
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107Y5104

PROJECT: 136145A QS: 125-18-SW



SEE SHEET U-2 FOR CONTINUATION



FIRE FLOW CALCULATIONS

FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
AUTOMATIC FIRE SPRINKLERS	YES
SQUARE FOOTAGE (LIVABLE)	<5000
SQUARE FOOTAGE (TOTAL)	<6200
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	<4
NO OF STORIES INCLUDING BASEMENT	2
HIGH PILED COMBUSTIBLE STORAGE	NO
NO OF HYDRANTS INSTALLED	6

BENCHMARK

BENCHMARK NUMBER: 6L9018W4

RIVET AND PLATE IN TOP OF CURB IN THE NORTHEAST CORNER OF FARM ROAD AND HUALAPAI WAY.

ELEVATION = 2856.716 FEET, 870.729 METERS

DATUM = NAVD 88

PER THE CITY OF LAS VEGAS BENCHMARK WEBSITE ON MAY 17, 2018

APPROVED FOR CONSTRUCTION

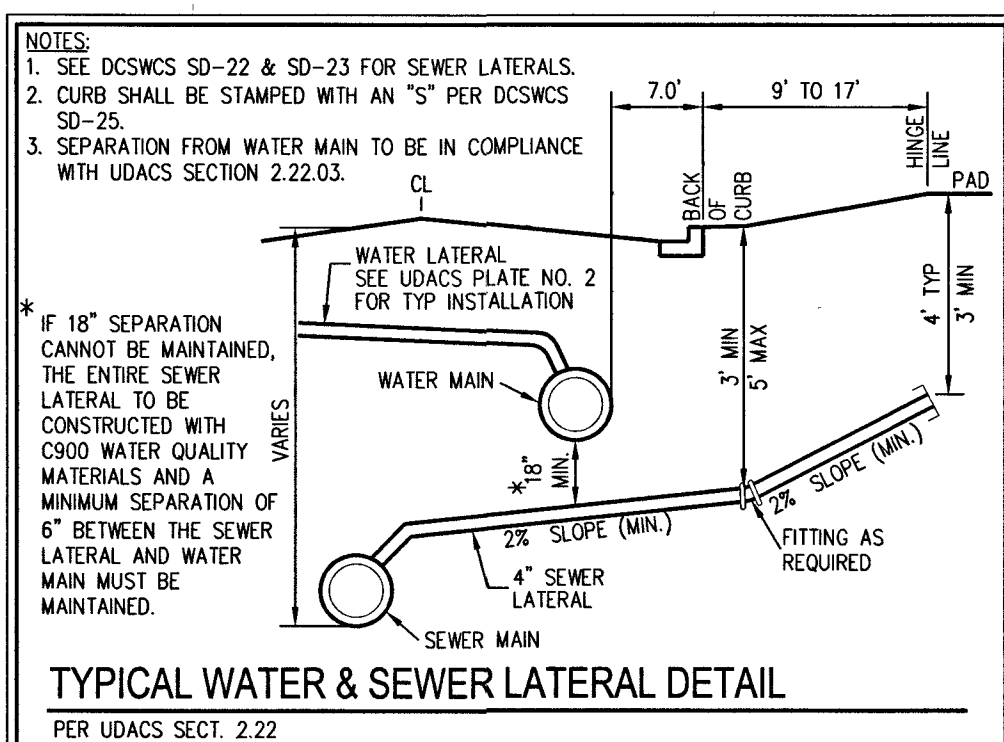
James Shook

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136145, FIRST APPROVED DATE: 4-18-19

LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

MAXIMUM AVAILABLE FIRE SPRINKLER FLOW = 26 GPM



- WATER NOTES**
1. INSTALL FIRE HYDRANT ASSEMBLY W/ 6" GATE VALVE PER UDACS PLATE NO. 40
 2. INSTALL 8" PVC WATER PIPE [2975 WP2]
 3. INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
 4. INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31
 5. INSTALL 8" X 6" TEE PER UDACS PLATE NO. 31
 6. INSTALL HORIZONTAL 90° BEND PER UDACS PLATE NO. 31
 7. INSTALL CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36
 8. INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1
 9. INSTALL 10" X 8" TAPPING SLEEVE WITH 8" TAPPING VALVE PER UDACS PLATE NO. 30, 34, 39 AND SECTION 2.24.01A
 10. FIELD VERIFY LOCATION AND CONNECT TO EXISTING WATER
 11. INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8. SEE 'DETAIL A' ON SHEET U-4
 12. INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8. SEE 'DETAIL A' ON SHEET U-5
 13. INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 3
 14. INSTALL 45° VERTICAL BEND PER UDACS PLATE NO. 31
 15. INSTALL 8" DIP WATER PIPE [2975 WP2]
 16. INSTALL 10" DIP WATER PIPE [2975 WP2]
 17. INSTALL 10" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
 18. INSTALL 10" X 8" TEE PER UDACS PLATE NO. 31
 19. INSTALL STEEL ENCASMENT FOR WATER LINE PER UDACS 2.22.02B.01B, PLATE NO. 22 & 23. SEE STEEL ENCASMENT NOTE ON SHEET U-3

- SEWER CONSTRUCTION NOTES**
1. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
 2. INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWS SD-15 AND SD-17
 3. INSTALL 4" PVC SEWER LATERAL PER DCSWS SD-22 AND SD-25
 4. PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
 5. FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
 6. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWS 316.6.9
 7. INSTALL 8" C-900 SEWER PIPE (PUBLIC) PER DCSWS SD-15 AND SD-17
 8. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWS SD-4, SD-9, AND SD-13 "B" WITH 24" SINGLE LID
 9. INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWS SD-17, SD-22, SD-23 AND SD-25

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS

59 UNITS X 250 GPD/UNIT = 14,750 GPD = 0.01475 MGD

TOTAL PEAK FLOW = 0.01475 X 3.54 (PEAK FACTOR) = 0.05222 MGD

TOTAL PEAK WET-WEATHER FLOW = 0.05222 MGD X 1.25 = 0.06527 MGD

DISCLAIMER NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

FAST

Call before you Dig

UnderGround

1-702-432-5300

FREEMAN & ASSOCIATES, INC.

1-702-227-2929

- WATER NOTES**
1. WATER MAIN JOINT DEFLECTION (PVC 4" - 24")
 2. ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02
 3. FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED
 4. REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
 5. ALL SEWER/ STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
 6. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
 7. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
 8. THE LVWD CANNOT GUARANTEE A WATER TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPROVE CONSTRUCTION AT ALL TIMES.
 9. COORDINATION WITH INTERESTED AGENCIES, DIVISIONS MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPOINTMENTS ARE AVAILABLE.
 10. CONTROLLED LOW STRENGTH MATERIAL (CLSM) PROTECT WATERLINES IN PLACE WHEREVER A WATERLINE IS ABOVE A STORM DRAIN OR SEWER WHERE COMPACTION REQUIREMENTS UNDER A WATERLINE CANNOT BE MET. BACKFILL TRENCH WITH CLASS 1 CONTROLLED LOW STRENGTH MATERIAL (CLSM) TO THE SPRINGLINE OF THE WATERLINE. THIS REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY. ADDITIONAL HEALTH REGULATIONS MAY APPLY PER UDACS 2.22
 11. ANNUAL SPACE BETWEEN PIPE AND CASING SHALL BE FILLED WITH BACKFILL REQUIREMENTS.
 12. INSTALL WATERLINE IS STEEL CASING PER UDACS PLATE NO. 21 AND 23. MINIMUM 18-INCH CLEARANCE IS REQUIRED ABOVE THE TOP OF PIPE. DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED. IN ADDITION, THRUST BLOCKS ARE TO BE INSTALLED AT THE UPPER BENDS.

- GENERAL NOTES**
1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
 2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
 3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
 4. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
 5. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CLARK COUNTY BUILDING DEPARTMENT.
 6. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLETING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
 7. NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES, AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPED MEDIANS.
 8. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR OTHER ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN INSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.01.02.

LAS VEGAS FIRE AND RESCUE FIRE DEPARTMENT

APPROVED

Paul Shook 3/6/19

BY APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS, FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

Call before you Dig

UnderGround

1-702-432-5300

FREEMAN & ASSOCIATES, INC.

1-702-227-2929

SLATER HANIFAN GROUP

a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 384-5300

RICHMOND AMERICAN HOMES

FARM HUALAPAI

UTILITY PLAN I

DATE: 3/18/19

DRAWN: EMH

DESIGNER: EMH

CHECKED: KMB

PROJECT NO. RAH1517

U-1

SHEET 25 OF 34

107VS104

L18-02739

\\nas117\build\form\Draw\Improvement\1510\Draw 3/18/2019 4:47 PM cskia.dwg

SEE SHEET U-1 FOR CONTINUATION

SEE SHEET U-4 FOR CONTINUATION

LEGEND

LVVWD PHASE 1 CONSTRUCTION BOUNDARY

WATER PRESSURE ZONE NOTE

ALL LOTS ARE SERVED FROM THE PVC WATER MAIN IN THE 2975 WPZ.

LVVWD EASEMENT NOTE

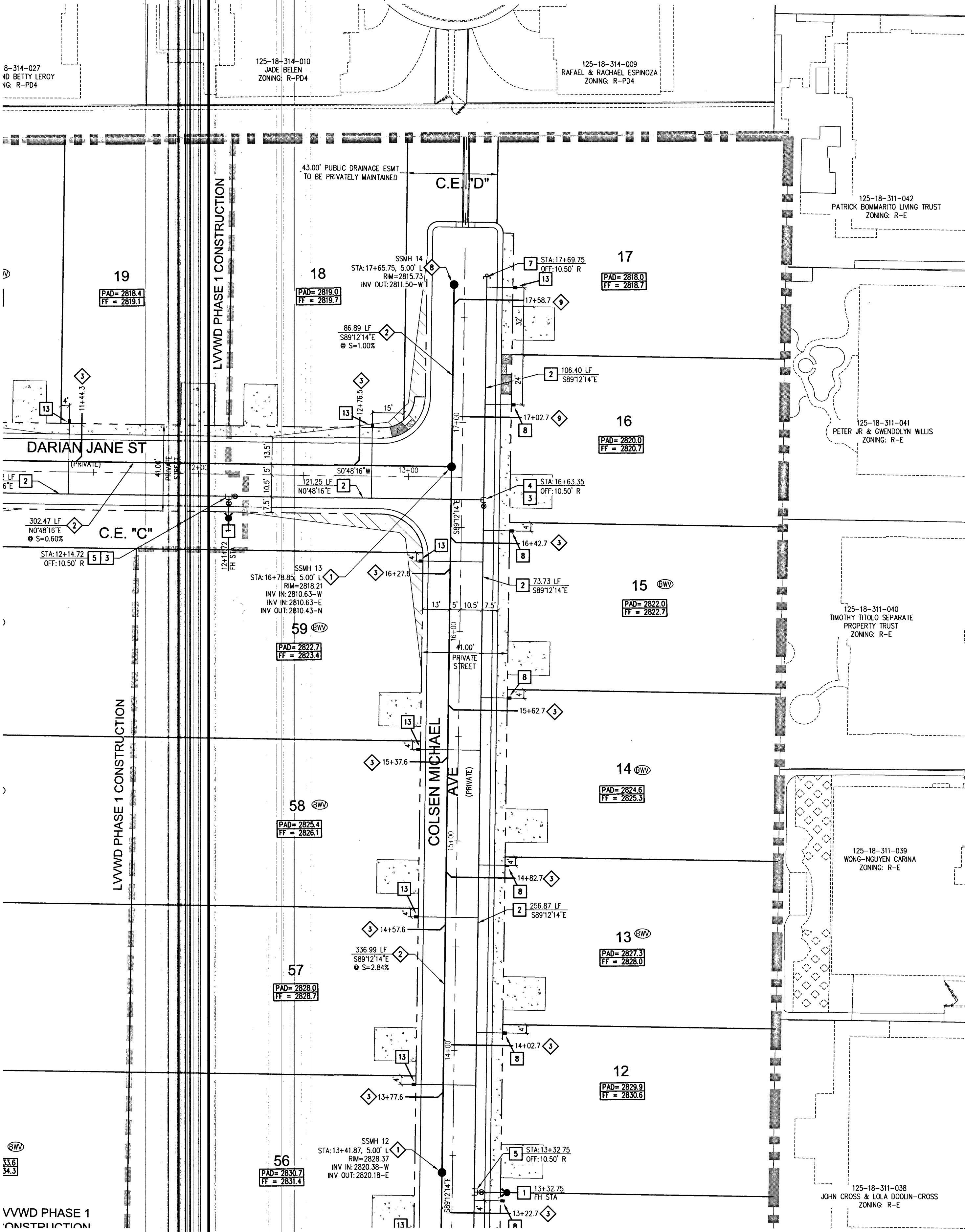
ALL LVVWD EASEMENTS FOR RPPA LOCATIONS WILL BE CLEAR OF OBSTRUCTIONS AND THE RPPA WILL BE INSTALLED WITHIN A LEVEL SURFACE PER UDACS PLATE B.

FIRE SPRINKLER NOTE

FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

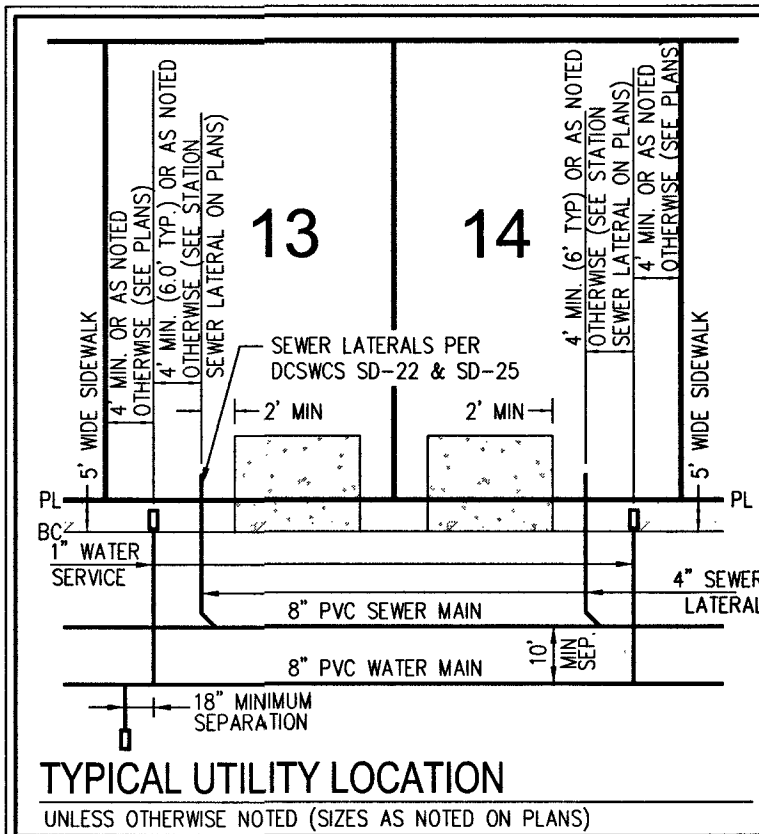
BASIS OF BEARINGS

NORTH 00°19'04" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHWEST QUARTER (SW1/4) OF SECTION 18, TOWNSHIP 18 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 127, PAGE 24 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.



FIRE HYDRANT LOCATION

NOT TO SCALE PER UDACS PLATE NO. 40



FIRE FLOW CALCULATIONS

FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

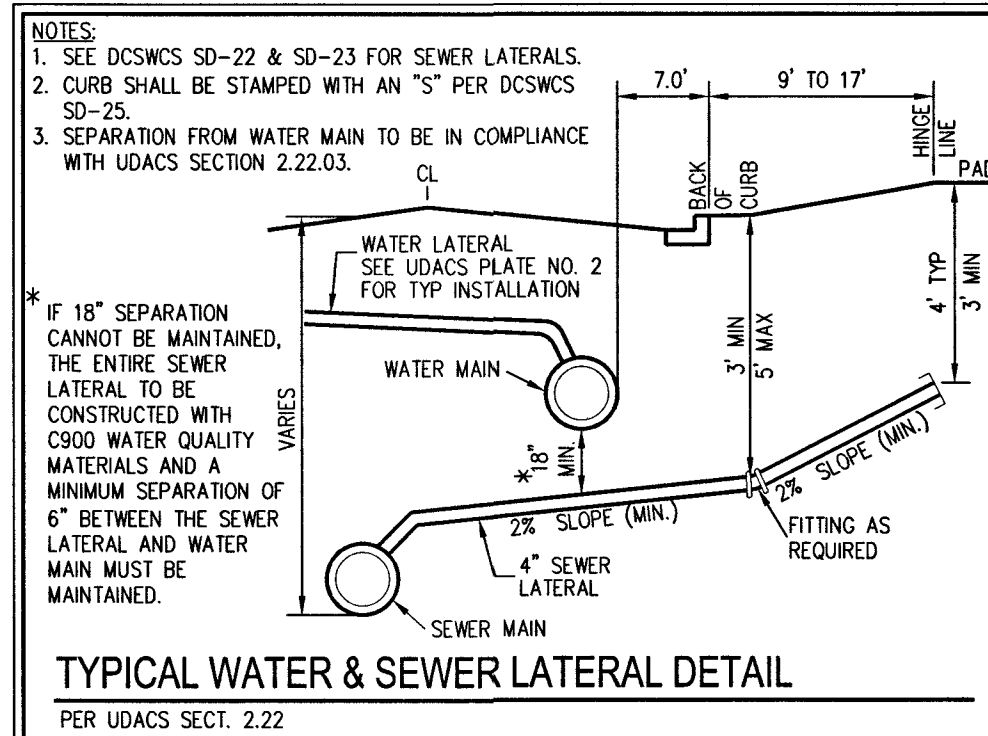
USE/OCCUPANCY	TYPE	TYPE
TYPE OF CONSTRUCTION (IBC)	TYPE	TYPE
AUTOMATIC FIRE SPRINKLERS	YES	YES
SQUARE FOOTAGE (LIVABLE)	<5000	<5000
SQUARE FOOTAGE (TOTAL)	<6200	<6200
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A	N/A
BUILDING HEIGHT	<4	<4
NO OF STORIES INCLUDING BASEMENT	2	2
HIGH PILED COMBUSTIBLE STORAGE	NO	NO
NO OF HYDRANTS INSTALLED	8	8

BENCHMARK

BENCHMARK NUMBER: 6LVS018W4
RIVET AND PLATE IN TOP OF CURB IN THE NORTHEAST CORNER OF FARM ROAD AND HUALAPAI WAY.
ELEVATION = 2856.716 FEET, 870.729 METERS
DATUM = NAVD 88
PER THE CITY OF LAS VEGAS BENCHMARK WEBSITE ON MAY 17, 2018

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 126145, FIRST APPROVED DATE 4-16-19
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 28 GPM



WATER NOTES

- INSTALL FIRE HYDRANT ASSEMBLY W/ 6" GATE VALVE PER UDACS PLATE NO. 40
- INSTALL 8" PVC WATER PIPE [2975 WPZ]
- INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
- INSTALL 8" x 8" TEE PER UDACS PLATE NO. 31
- INSTALL 8" x 6" TEE PER UDACS PLATE NO. 31
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- INSTALL CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36
- INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1
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- FIELD VERIFY LOCATION AND CONNECT TO EXISTING WATER
- INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8. SEE "DETAIL A" ON SHEET U-5
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- INSTALL STEEL ENCASMENT FOR WATER LINE PER UDACS 2.22.02(B.300), PLATE NO. 22 & 23. SEE STEEL ENCASMENT NOTE ON SHEET U-3

SEWER CONSTRUCTION NOTES

- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-14, SD-18, SD-4 AND SD-9 WITH 24" SINGLE LID
- INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 AND SD-25
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- INSTALL 8" CS90 SEWER PIPE (PUBLIC) PER DCSWCS SD-15 AND SD-17
- INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS SD-4, SD-8, AND SD-13 "B" WITH 24" SINGLE LID
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59 UNITS X 250 GPD/UNIT = 14,750 GPD = 0.01475 MGD
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TOTAL PEAK WET-WEATHER FLOW = 0.05222 MGD X 1.25 = 0.06527 MGD

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WATER NOTES

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PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET. PER UDACS 2.07.01 AND 2.07.02
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APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
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- ANNUAL SPACE BETWEEN PIPE AND CASING SHALL BE FILLED WITH CLASS 1 CLSM. SEE UDACS PLATES 17 AND 19, FOR BEDDING AND BACKFILL REQUIREMENTS.
- INSTALL WATERLINE IS STEEL CASING PER UDACS PLATE NO. 21 AND 23. MINIMUM 18-INCH CLEARANCE IS REQUIRED ABOVE THE TOP OF PIPE. DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED. IN ADDITION, THRUST BLOCKS ARE TO BE INSTALLED AT THE UPPER BENDS.

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LAS VEGAS FIRE AND RESCUE FIRE DEPARTMENT

APPROVED

BY: *[Signature]* 3/18/19
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS, FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.



SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 384-5300
FAX (702) 384-5399

RICHMOND AMERICAN HOMES
FARM HUALAPAI
UTILITY PLAN II

DATE	BY	APP	DESCRIPTION
3/18/19	EMH		DRAWN
	EMH		DESIGNED
	KMB		CHECKED
			PROJECT NO. RAH1517
			U-2
			SHEET 26 OF 34
			L18-02739

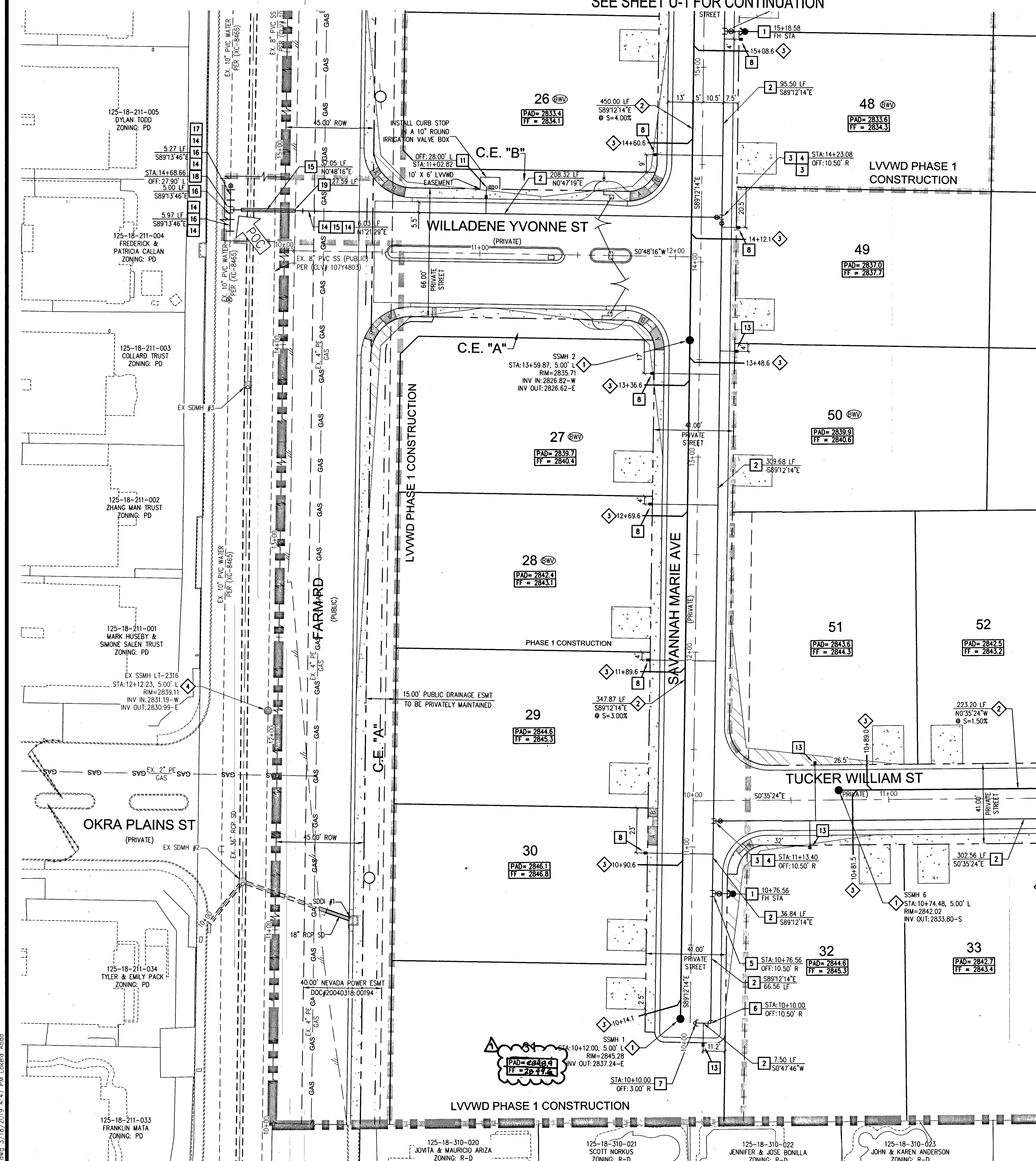
107VS104

U-2

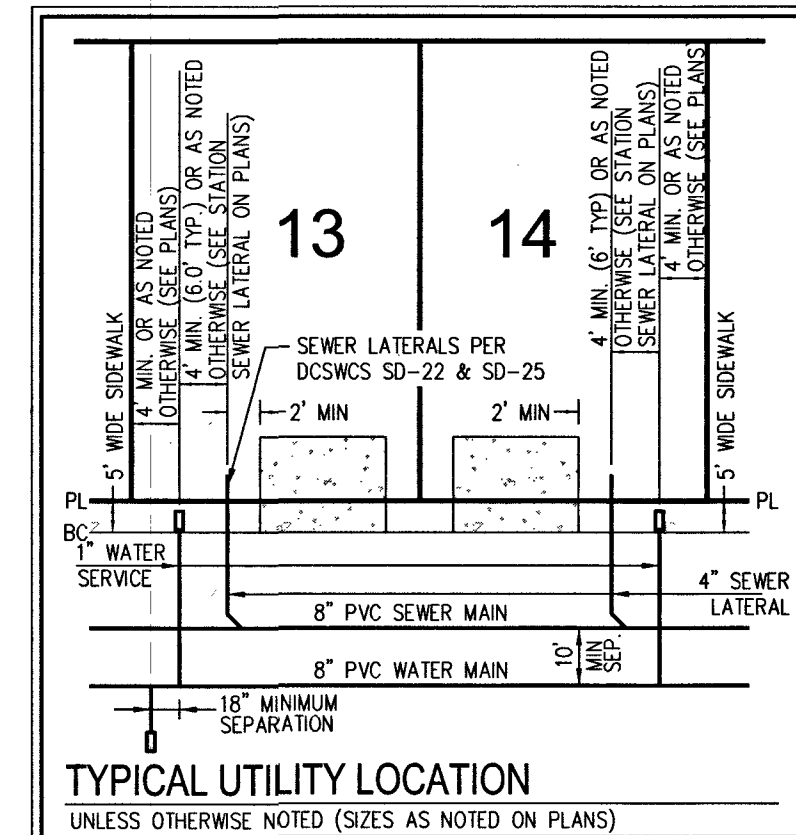
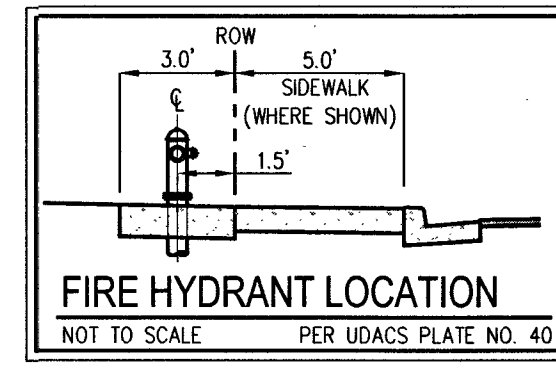
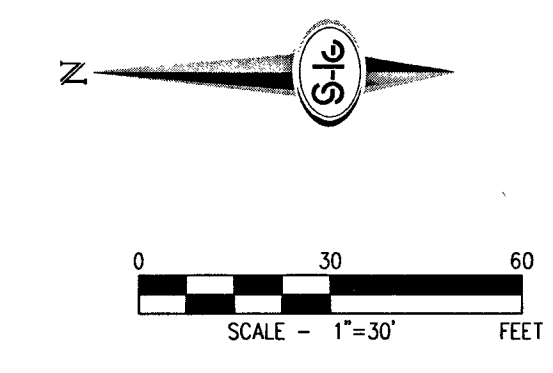
18-02739

PROJ: 18-02739

SEE SHEET U-1 FOR CONTINUATION



SEE SHEET U-4 FOR CONTINUATION



FIRE FLOW CALCULATIONS

FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

USE/OCCUPANCY	TYPE OF CONSTRUCTION (IBC)	TYPE V-B
AUTOMATIC FIRE SPRINKLERS	TYPE V-B	YES
SQUARE FOOTAGE (LIVABLE)		<5000
SQUARE FOOTAGE (TOTAL)		<6200
LARGEST AREA BETWEEN 4 HOUR WALLS		N/A
BUILDING HEIGHT		<35
NO OF STORIES INCLUDING BASEMENT		2
HIGH PILED COMBUSTIBLE STORAGE		NO
NO OF HYDRANTS INSTALLED		6

BENCHMARK

BENCHMARK NUMBER: BLV9018W

RIVET AND PLATE IN TOP OF CURB IN THE NORTHEAST CORNER OF FARM ROAD AND HUALAPAI WAY.

ELEVATION = 2856.71 FEET, 870.729 METERS

DATUM = NAVD 88

PER THE CITY OF LAS VEGAS BENCHMARK WEBSITE ON MAY 17, 2018

APPROVED FOR CONSTRUCTION

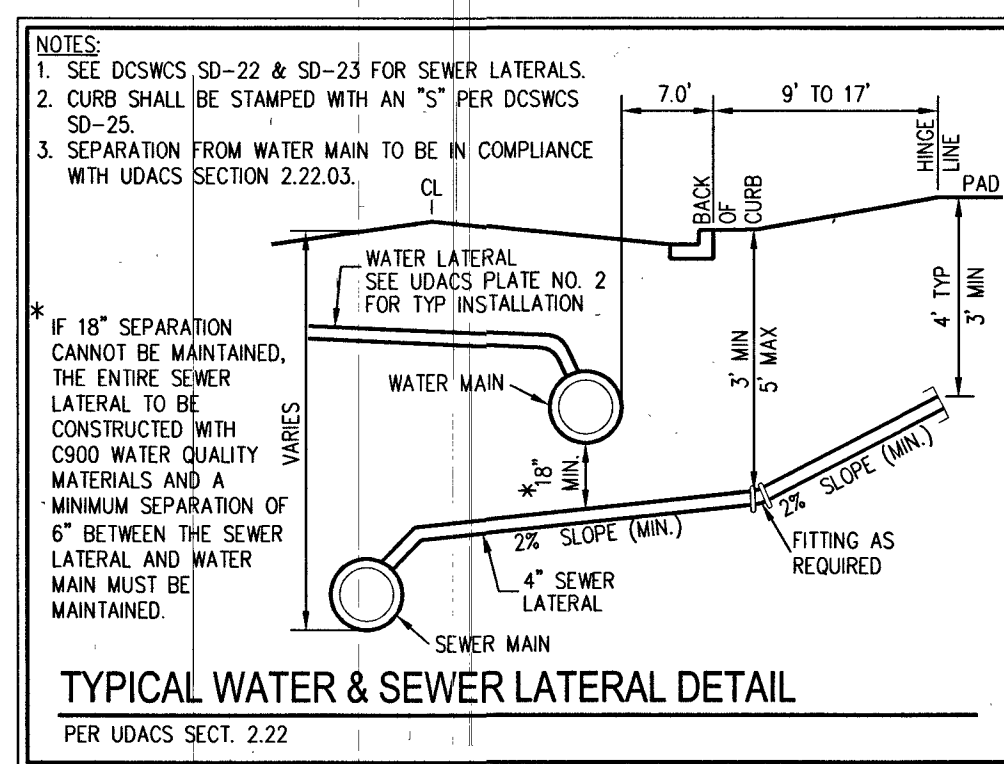
[Signature]

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136145, FIRST APPROVED DATE 4-16-19

LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

MAXIMUM AVAILABLE FIRE SPRINKLER FLOW = 26 GPM



- WATER NOTES**
1. INSTALL FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40
 2. INSTALL 8" PVC WATER PIPE [2975 WP2]
 3. INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
 4. INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31
 5. INSTALL 8" X 6" TEE PER UDACS PLATE NO. 31
 6. INSTALL HORIZONTAL 90° BEND PER UDACS PLATE NO. 31
 7. INSTALL CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36
 8. INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1
 9. INSTALL 10" X 8" TAPPING SLEEVE WITH 8" TAPPING VALVE PER UDACS PLATE NO. 30, 34, 39 AND SECTION 2.24.01A
 10. FIELD VERIFY LOCATION AND CONNECT TO EXISTING WATER
 11. INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8. SEE 'DETAIL A' ON SHEET U-4
 12. INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8. SEE 'DETAIL A' ON SHEET U-5
 13. INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 3
 14. INSTALL 45° VERTICAL BEND PER UDACS PLATE NO. 31
 15. INSTALL 8" DIP WATER PIPE [2975 WP2]
 16. INSTALL 10" DIP WATER PIPE [2975 WP2]
 17. INSTALL 10" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
 18. INSTALL 10" X 8" TEE PER UDACS PLATE NO. 31
 19. INSTALL STEEL ENCASUREMENT FOR WATER LINE PER UDACS 2.22.02(B.30), PLATE NO. 22 & 23. SEE STEEL ENCASUREMENT NOTE ON SHEET U-3

- SEWER CONSTRUCTION NOTES**
1. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWS SD-1A, SD-1B, SD-4 AND SD-9 WITH 24" SINGLE LID
 2. INSTALL 8" SANITARY SEWER PIPE (PUBLIC) PER DCSWS SD-15 AND SD-17
 3. INSTALL 4" PVC SEWER LATERAL PER DCSWS SD-22 AND SD-25
 4. PROTECT SEWER APPURTENANCES IN PLACE. REF. PLANS FOR DETAILS
 5. FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
 6. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BASE PER DCSWS SD-4, SD-7 AND SD-9 W/ CORROSION PROTECTION PER DCSWS 3.16.8.B
 7. INSTALL 8" GOOD SEWER PIPE (PUBLIC) PER DCSWS SD-15 AND SD-17
 8. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWS SD-4, SD-9, AND SD-13 "B" WITH 24" SINGLE LID
 9. INSTALL 4" C-900 PVC SANITARY SEWER LATERAL PER DCSWS SD-17, SD-22, SD-23 AND SD-25

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS

59 UNITS X 250 GPD/UNIT = 14,750 GPD = 0.01475 MGD
TOTAL PEAK FLOW = 0.01475 X 3.54 (PEAK FACTOR) = 0.05222 MGD
TOTAL PEAK WET-WEATHER FLOW = 0.05222 MGD X 1.25 = 0.06527 MGD

DISCLAIMER NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

FAST

Call before you Dig

UnderGround

1-702-432-5300

Freeway & Arterial System of Transportation (F.A.S.T.)

1-702-227-2929

- WATER NOTES**
1. WATER MAIN JOINT DEFLECTION (PVC 4" - 24")
 2. REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
 3. ALL SEWER / STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
 4. FITTINGS SHALL NOT FALL UNDER CURBS, OUTLETS OR SIDEWALKS.
 5. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
 6. THE LVVWD CANNOT GUARANTEE A WATER TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRENCH SHUTDOWN.
 7. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
 8. CONTROLLED LOW STRENGTH MATERIAL (CLSM) PROTECT WATERLINES IN PLACE WHEREVER A WATERLINE IS ABOVE A STORM DRAIN OR SEWER WHERE COMPACTION REQUIREMENTS UNDER A WATERLINE CANNOT BE MET. BACKFILL TRENCH WITH CLASS 1 CONTROLLED LOW STRENGTH MATERIAL (CLSM) TO THE SPRINGLINE OF THE WATERLINE. THIS REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY. ADDITIONAL HEALTH REGULATIONS MAY APPLY PER UDACS 2.22.
 9. ANNUAL SPACE BETWEEN PIPE AND CASING SHALL BE FILLED WITH CLASS 1 CLSM. SEE UDACS PLATES 17 AND 19, FOR BEDDING AND BACKFILL REQUIREMENTS.
 10. INSTALL WATERLINE IS STEEL CASING PER UDACS PLATE NO. 21 AND 23. MINIMUM 18-INCH CLEARANCE IS REQUIRED ABOVE THE TOP OF PIPE, DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED. IN ADDITION, THRUST BLOCKS ARE TO BE INSTALLED AT THE UPPER BENDS.

- GENERAL NOTES**
1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
 2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
 3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
 4. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
 5. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CLARK COUNTY BUILDING DEPARTMENT.
 6. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE, DURING CONSTRUCTION, ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLACING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
 7. NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPED MEDIANS.
 8. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.01.02.

LAS VEGAS FIRE AND RESCUE FIRE DEPARTMENT

APPROVED

[Signature] 3/18/19

BY: APPROVAL OF THESE PLANS SHALL NOT BE CONSIDERED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

Call before you Dig

Call

811

OR

1-800-227-2600

STEEL ENCASEMENT NOTE

INSTALL WATERLINE IN STEEL CASING PER UDACS PLATES NO.22 AND 23. MINIMUM 18-INCH CLEARANCE IS REQUIRED ABOVE THE TOP OF THE CASING FROM THE UPPER BENDS THROUGHOUT THE LOWERED SECTION OF THE PIPE, DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED.

LEGEND

— LVVWD PHASE 1 CONSTRUCTION BOUNDARY

SOUTHWEST GAS APPROVAL

[Signature] 3-21-19

SOUTHWEST GAS CORPORATION

WATER PRESSURE ZONE NOTE

ALL LOTS ARE SERVED FROM THE PVC WATER MAIN IN THE 2975 WP2.

LVVWD EASEMENT NOTE

ALL LVVWD EASEMENTS FOR RPPA LOCATIONS WILL BE CLEAR OF OBSTRUCTIONS AND THE RPPA WILL BE INSTALLED WITHIN A LEVEL SURFACE PER UDACS PLATE 8.

FIRE SPRINKLER NOTE

FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

BASIS OF BEARINGS

NORTH 00°19'04" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHWEST QUARTER (SW1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M. CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 127, PAGE 24 OF PLATS IN THE CLARK COUNTY RECORDERS' OFFICE, NEVADA

SLATER HANIFAN GROUP

a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 384-5300 FAX (702) 384-5399

DATE: 3/18/19

DRAWN: EMH

DESIGNED: EMH

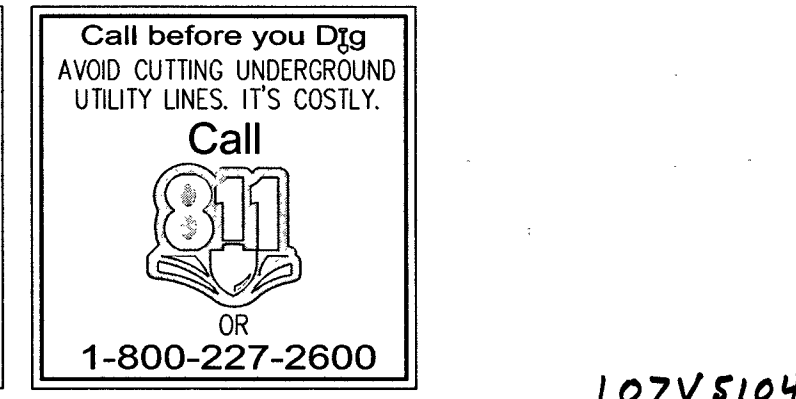
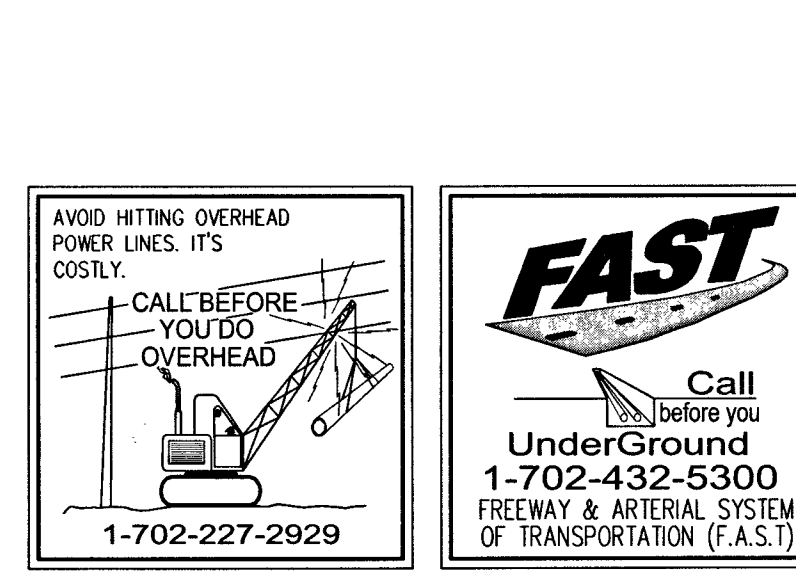
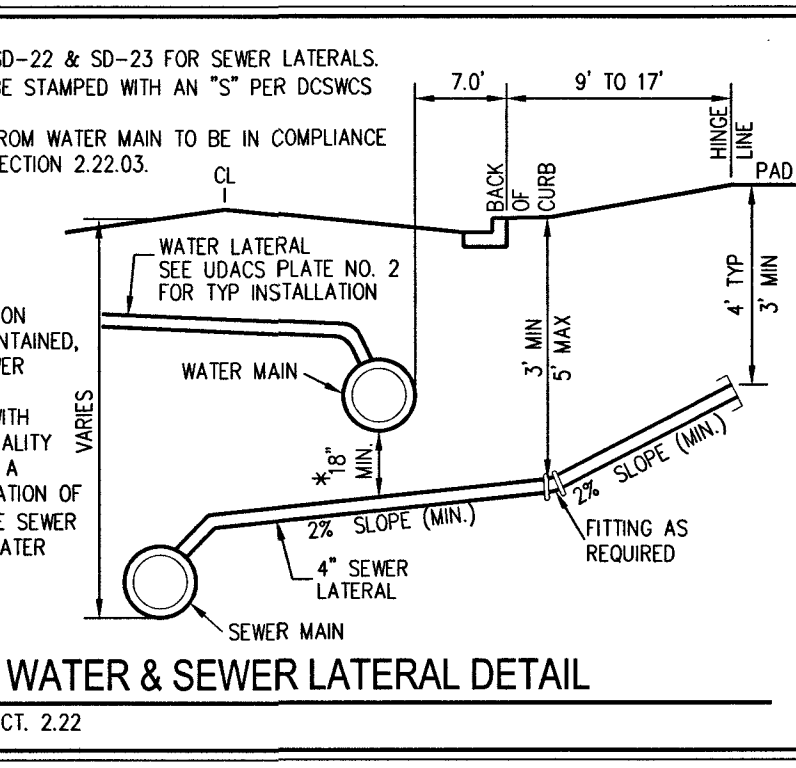
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PROJECT NO. RAH1517

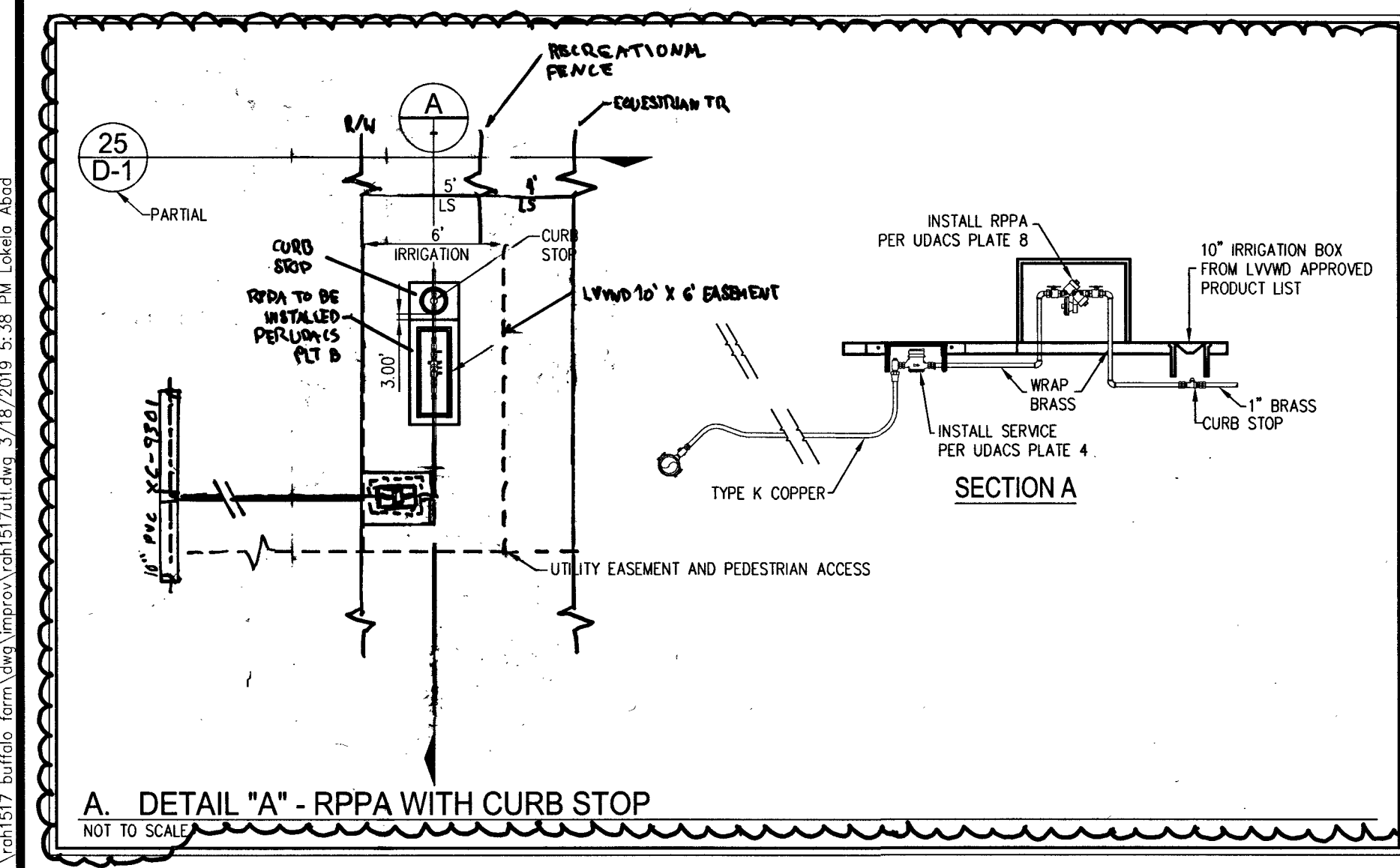
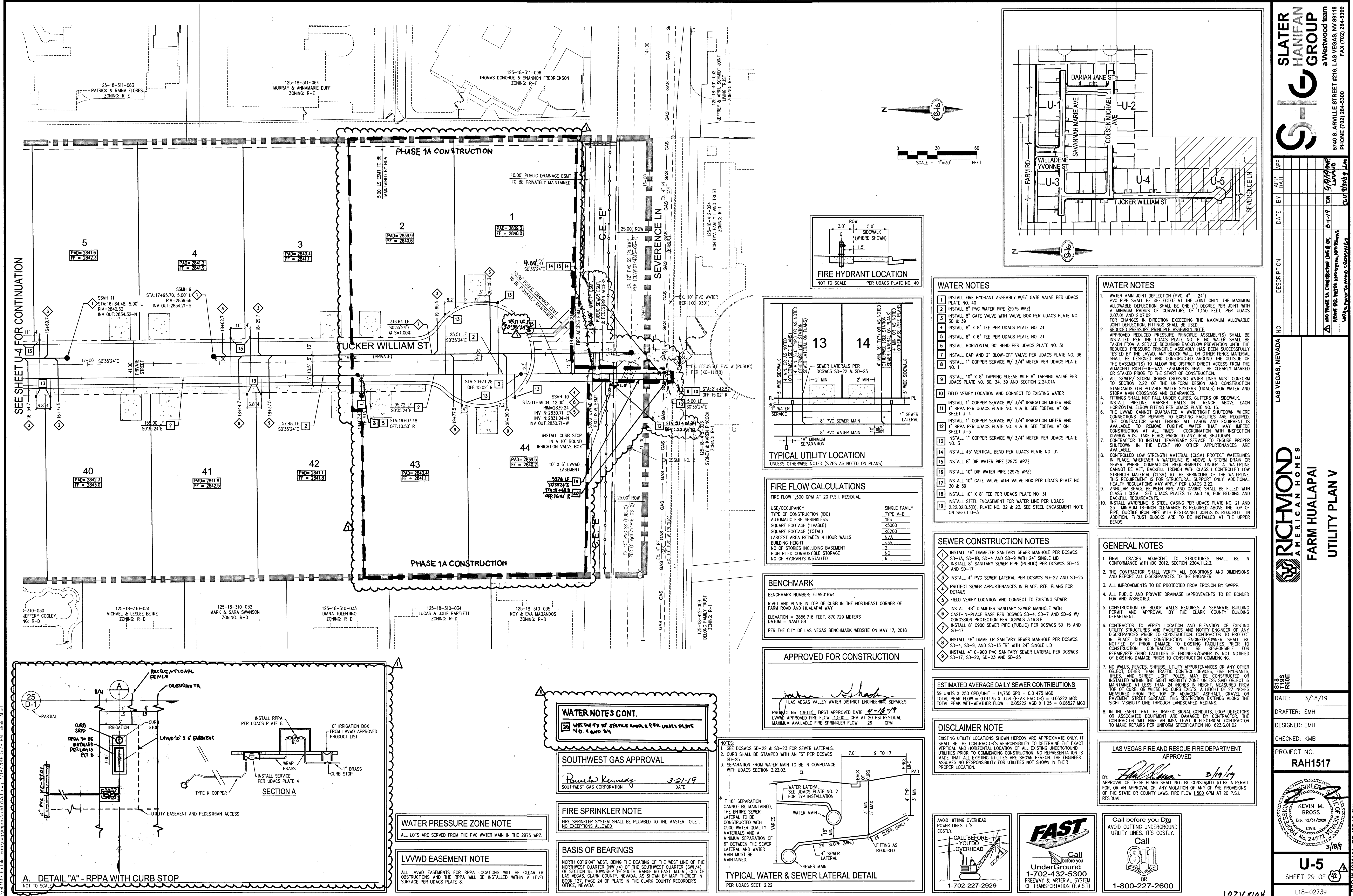
U-3

SHEET 27 OF 42

107Y5104 L18-02739



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WATER PRESSURE ZONE NOTE
ALL LOTS ARE SERVED FROM THE PVC WATER MAIN IN THE 2975 W.P.Z.

LVVWD EASEMENT NOTE
ALL LVVWD EASEMENTS FOR RPPA LOCATIONS WILL BE CLEAR OF OBSTRUCTIONS AND THE RPPA WILL BE INSTALLED WITHIN A LEVEL SURFACE PER UDACS PLATE 8.

WATER NOTES CONT.
20. 1/2\"/>

SOUTHWEST GAS APPROVAL
Pamela Kennedy 3-21-19
SOUTHWEST GAS CORPORATION DATE

FIRE SPRINKLER NOTE
FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

BASIS OF BEARINGS
NORTH 001904° WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHWEST QUARTER (SW1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, N.M.P., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 120, PAGE 24 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

WATER NOTES CONT.
21. 1/2\"/>

SOUTHWEST GAS APPROVAL
Pamela Kennedy 3-21-19
SOUTHWEST GAS CORPORATION DATE

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FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

BASIS OF BEARINGS
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WATER NOTES

1. INSTALL FIRE HYDRANT ASSEMBLY W/6\"/>
2. INSTALL 8\"/>
3. INSTALL 8\"/>
4. INSTALL 8\"/>
5. INSTALL 8\"/>
6. INSTALL HORIZONTAL 90° BEND PER UDACS PLATE NO. 31
7. INSTALL CAP AND 2\"/>
8. INSTALL 1\"/>
9. INSTALL 10\"/>
10. FIELD VERIFY LOCATION AND CONNECT TO EXISTING WATER
11. INSTALL 1\"/>
12. INSTALL 1\"/>
13. INSTALL 1\"/>
14. INSTALL 45° VERTICAL BEND PER UDACS PLATE NO. 31
15. INSTALL 8\"/>
16. INSTALL 10\"/>
17. INSTALL 10\"/>
18. INSTALL 10\"/>
19. INSTALL STEEL ENCASMENT FOR WATER LINE PER UDACS 2.22.02(B.30). PLATE NO. 22 & 23. SEE STEEL ENCASMENT NOTE ON SHEET U-3

SEWER CONSTRUCTION NOTES

1. INSTALL 48\"/>
2. INSTALL 8\"/>
3. INSTALL 4\"/>
4. FIELD VERIFY LOCATION AND CONNECT TO EXISTING SEWER
5. INSTALL 48\"/>
6. INSTALL 48\"/>
7. INSTALL 8\"/>
8. INSTALL 48\"/>
9. INSTALL 4\"/>

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS
59 UNITS X 250 GPD/UNIT = 14,750 GPD = 0.01475 MGD
TOTAL PEAK FLOW = 0.01475 X 3.54 (PEAK FACTOR) = 0.05222 MGD
TOTAL PEAK WET-WEATHER FLOW = 0.05222 MGD X 1.25 = 0.06527 MGD

DISCLAIMER NOTE
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LAS VEGAS FIRE AND RESCUE FIRE DEPARTMENT APPROVED
3/19/19

FAST
Call before you Dig
Underground
1-702-432-5300
FIREWAY ARTISAN SYSTEM OF TRANSPORTATION (F.A.S.T.)
1-702-227-2929

WATER NOTES

1. WATER MAIN JOINT DEFLECTION (PVC 4\"/>
2. REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
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4. FITTINGS SHALL NOT FALL UNDER CURBS, OUTTERS OR SIDEWALKS. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
5. THE LVVWD CANNOT GUARANTEE A WATER TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPED CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
6. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPOINTMENTS ARE AVAILABLE.
7. CONTROLLED LOW STRENGTH MATERIAL (CLSM) PROTECT WATERLINES IN PLACE WHEREVER A WATERLINE IS ABOVE A STORM DRAIN OR SEWER WHERE COMPACTION REQUIREMENTS UNDER A WATERLINE CANNOT BE MET. BACKFILL TRENCH WITH CLASS I CONTROLLED LOW STRENGTH MATERIAL (CLSM) TO THE SPRINGLINE OF THE WATERLINE. THIS REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY. ADDITIONAL HEALTH REGULATIONS MAY APPLY PER UDACS 2.22.
8. ANNUAL SPACE BETWEEN PIPE AND CASING SHALL BE FILLED WITH CLASS I CLSM. SEE UDACS PLATES 17 AND 19. FOR BEDDING AND BACKFILL REQUIREMENTS.
9. INSTALL WATERLINE IS STEEL CASING PER UDACS PLATE NO. 21 AND 13. MINIMUM 18-INCH CLEARANCE IS REQUIRED ABOVE THE TOP OF PIPE. DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED. IN ADDITION, THRUST BLOCKS ARE TO BE INSTALLED AT THE UPPER BENDS.

GENERAL NOTES

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8. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN INSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER INSPECTION SPECIFICATION NO. 623.C1.02 RESIDUAL.

LAS VEGAS FIRE AND RESCUE FIRE DEPARTMENT APPROVED
3/19/19

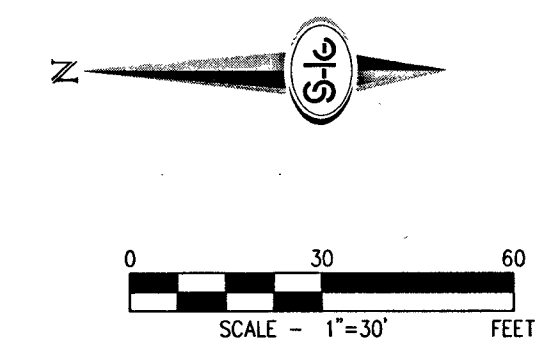
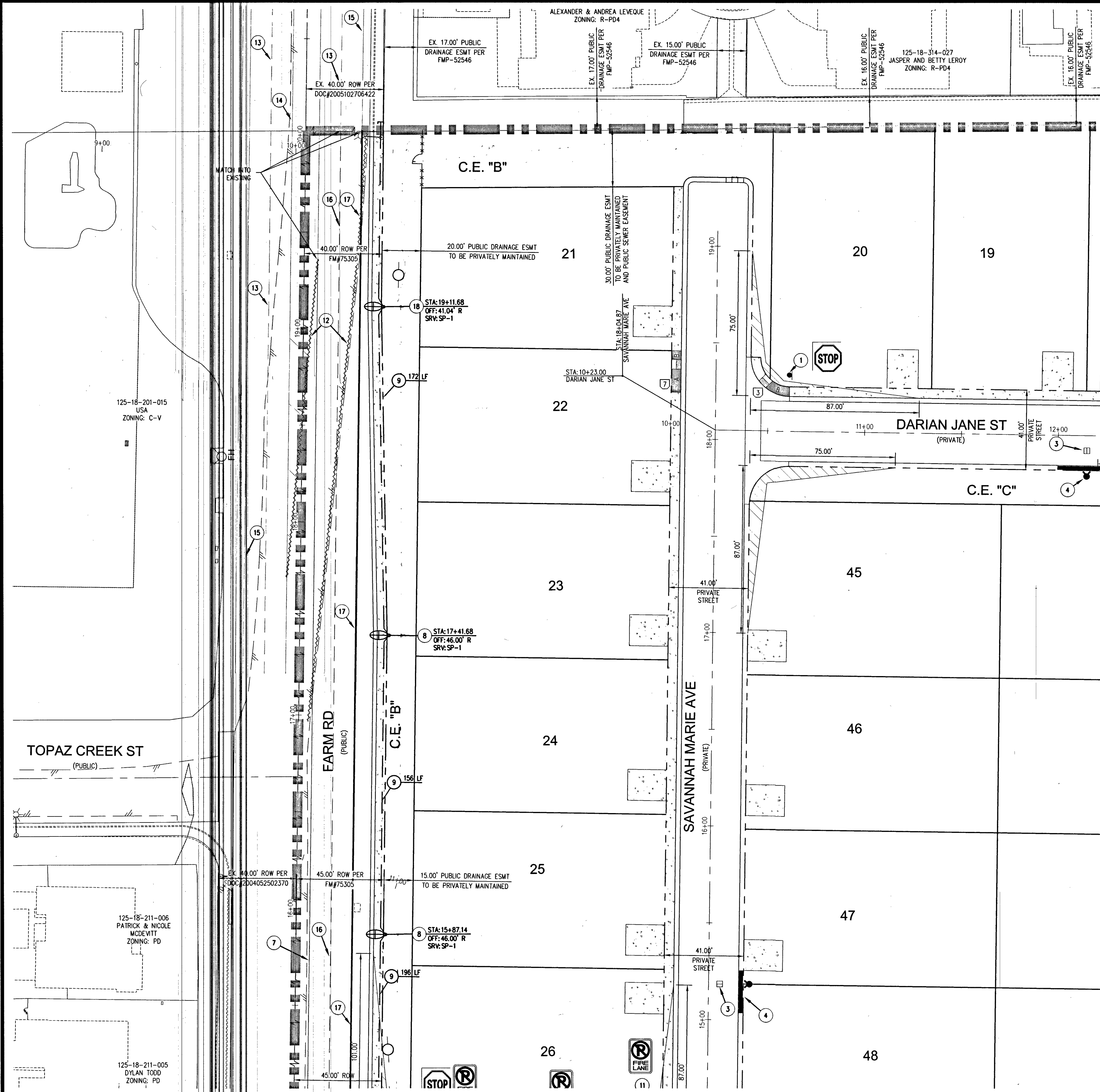
FAST
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1-702-227-2929

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

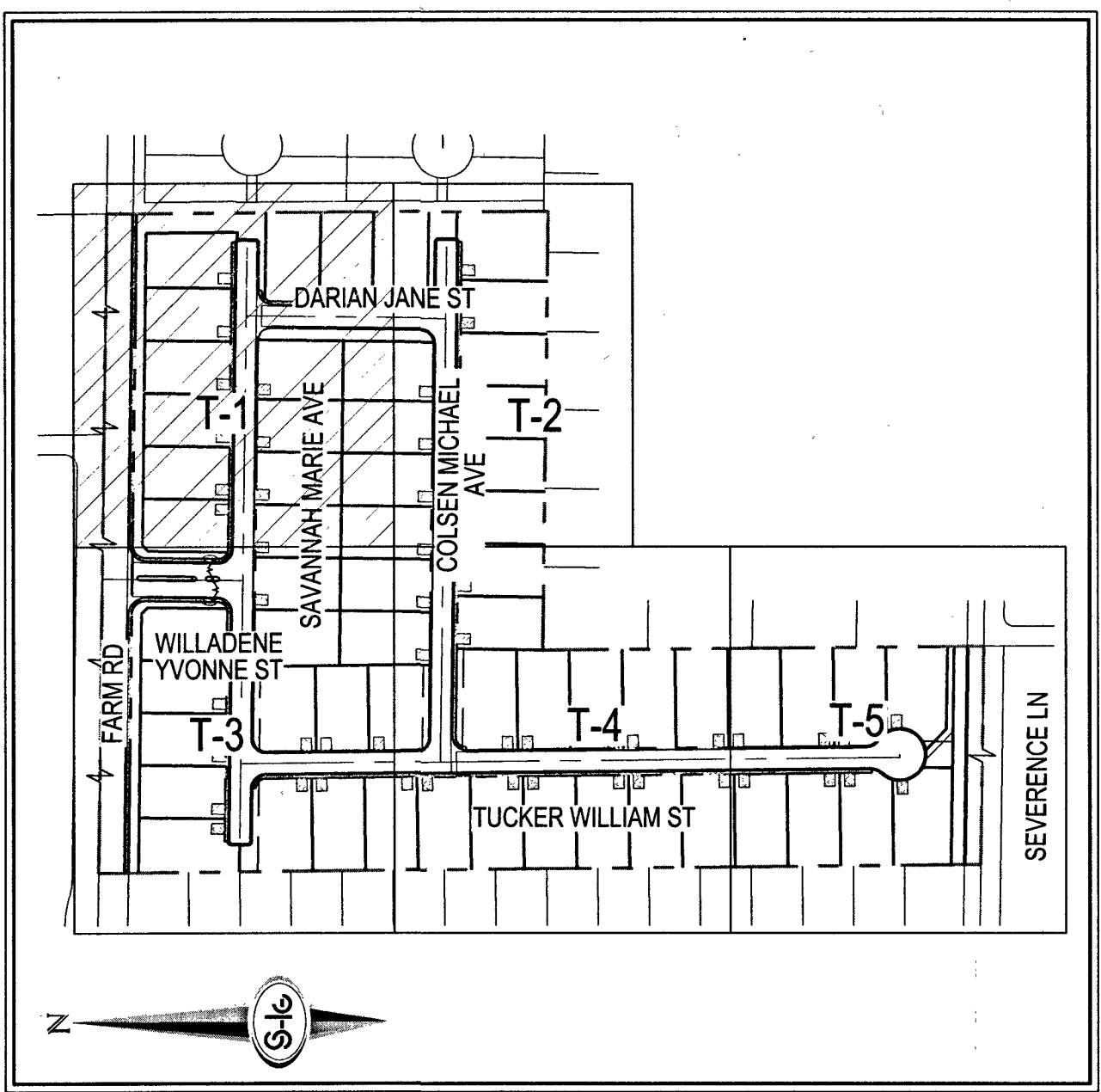
RICHMOND AMERICAN HOMES
FARM HUALAPAI
UTILITY PLAN V

DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517
U-5
SHEET 29 OF 42
L18-02739

107Y5104

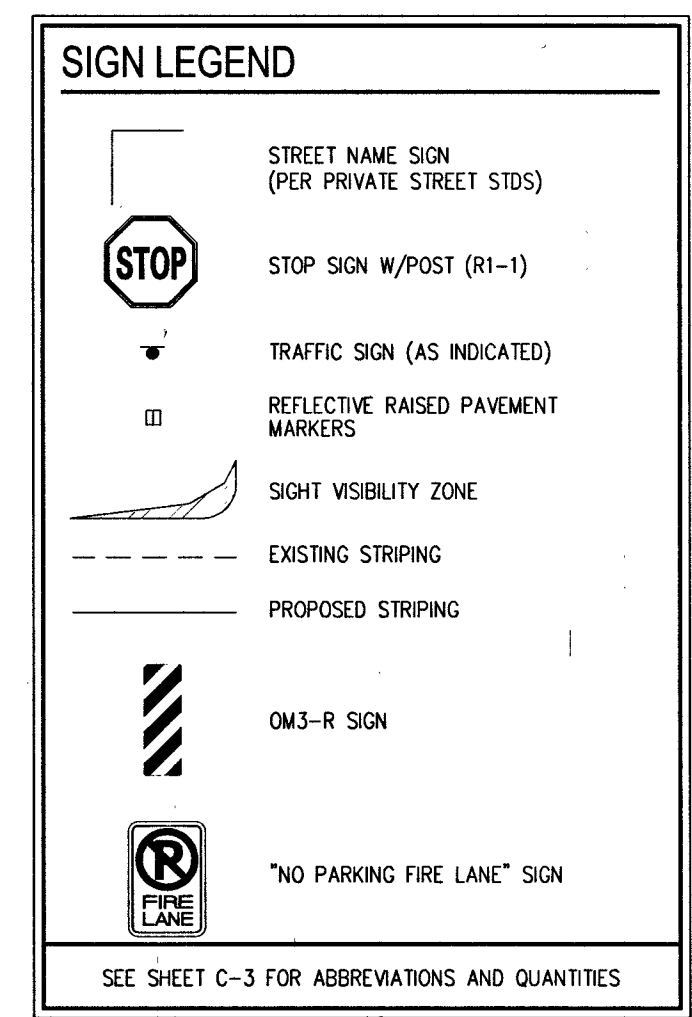


RAMP TRANSITION LENGTHS				
RAMP NO.	GRADE %	"A" (FT)	"B" (FT)	"C" (FT)
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO -1.01	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	



STREETLIGHT CIRCUIT CAPACITY FOR CIRCUIT "SP1"	
IS THERE AN EXISTING SERVICE PEDESTAL IN THE FIELD (NOT PROPOSED) ADJACENT TO THIS PROPERTY THAT MIGHT BE ABLE TO BE USED TO POWER THIS PROJECT'S STREETLIGHTS? (CIRCLE)	YES
CONTACT CLARK COUNTY TRAFFIC OPERATIONS AT 455-6000 TO PERFORM CIRCUIT CAPACITY VERIFICATION.	
NO	INSTALL A NEW PEDESTAL.
SERVICE PEDESTAL LOCATION: SOUTHEAST CORNER OF FARM ROAD AND HUALAPAI WAY	
CLARK COUNTY (COMPLETE IF EXISTING SERVICE)	
DATE OF CAPACITY VERIFICATION	1/28/19
PERSON WHO DID THE VERIFICATION	MARC OLSON
ENGINEER OF THE OFFSITE PLANS	
PERSON WHO DID THE CALCULATIONS	LOKELA ABAD
CONSULTING ENGINEERING FIRM	SLATER HANIFAN GROUP
CAPACITY CALCULATIONS	
1 CIRCUIT CAPACITY	60 AMPS
2 MAXIMUM CONTINUOUS CURRENT DRAW (80%)	48 AMPS
3 EXISTING CIRCUIT LOAD (ENTER 0 IF NEW)	13.3 AMPS
4 AVAILABLE (2 MINUS 3)	34.7 AMPS
PROPOSED LUMINAIRE LOAD TO CIRCUIT:	
5 0 NUMBER OF 100 WATT STILTS @ 1.0 AMPS/EA	- AMPS
6 6 NUMBER OF 250 WATT STILTS @ 1.5 AMPS/EA	9 AMPS
7 TOTAL PROPOSED ADDITIONAL LOAD (5 PLUS 6)	9 AMPS
REMAINING AVAILABLE LOAD (4 MINUS 7)	25.7 AMPS

- TRAFFIC NOTES**
- INSTALL 30" STOP SIGN (R1-1) AND TWO (2) 9" STREET NAME SIGNS (D3-1) (PRIVATELY MAINTAINED)
 - INSTALL 36" STOP SIGN (R1-1) AND TWO (2) 12" STREET NAME SIGNS (D3-1) (PRIVATELY MAINTAINED)
 - INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER
 - PAINT CURB RED (1" EACH SIDE OF FIRE HYDRANT FOR A TOTAL OF 30", CURB LENGTH PERMITTING)
 - INSTALL MEDIAN NOSE MARKINGS PER CCAUSD NO. 248
 - EXISTING SIGN TO BE REMOVED
 - INSTALL TYPE II CENTERLINE PER CCAUSD NO. 244
 - INSTALL LED STREET LIGHT "OPL" FOR 85' R/W PER CCAUSD #320.53 & #314 W/ FOUNDATION PER CCAUSD #320 & #321
 - INSTALL 1-1/4" STREET LIGHT CONDUIT W/ (2) #4 NEUTRAL & #6 GND. AVOIDING FIRE HYDRANTS WHERE NEEDED
 - PAINT CURB RED PER IFC 503.3 AND GENERAL NOTE #27
 - INSTALL 18" TYPE A "NO PARKING FIRE LANE" PER IFC 503.3
 - EXISTING STRIPING TO BE OBLITERATED
 - EXISTING TYPE II LANE LINE PER L17-00976
 - EXISTING TYPE II CENTERLINE PER L17-00976
 - EXISTING 6" SOLID WHITE LINE PER L17-00976
 - INSTALL TYPE IV LANE LINE PER CCAUSD NO. 244.1
 - INSTALL 6" SOLID WHITE LINE PER CCAUSD NO. 244.9
 - INSTALL LED STREET LIGHT "OPL" FOR 80' R/W PER CCAUSD #320.53 & #314 W/ FOUNDATION PER CCAUSD #320 & #321
 - FIELD VERIFY AND CONNECT TO EX. CONDUIT



BASIS OF BEARINGS

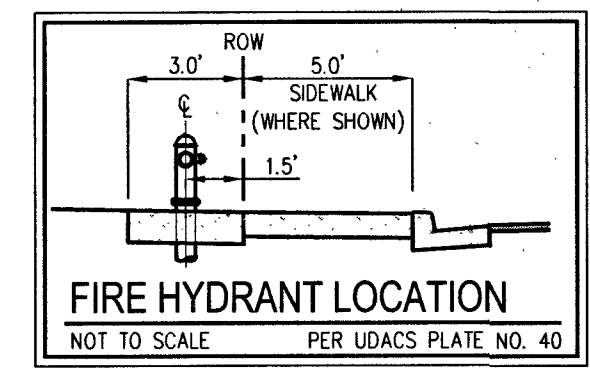
NORTH 001°19'04" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHWEST QUARTER (SW1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREON IN BOOK 127, PAGE 24 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA

BENCHMARK

BENCHMARK NUMBER: 6LV9018W4
RIVET AND PLATE IN TOP OF CURB IN THE NORTHEAST CORNER OF FARM ROAD AND HUALAPAI WAY.
ELEVATION = 2856.716 FEET, 870.729 METERS
DATUM = NAVD 88
PER THE CITY OF LAS VEGAS BENCHMARK WEBSITE ON MAY 17, 2018

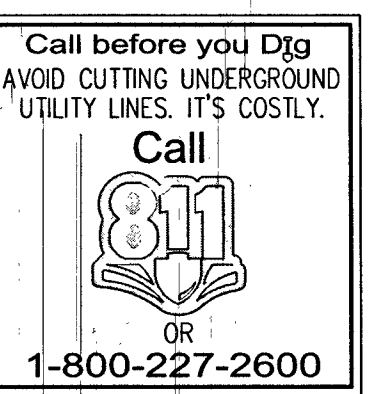
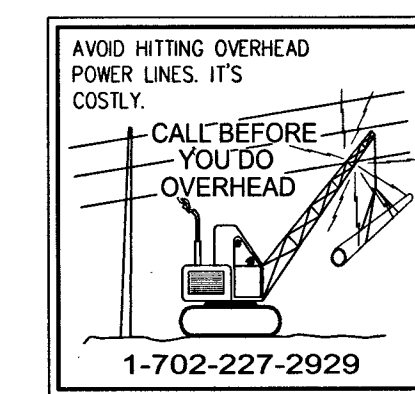
LAS VEGAS FIRE AND RESCUE FIRE DEPARTMENT
APPROVED
BY: *[Signature]* 3/18/19
APPROVAL OF THESE PLANS SHALL NOT BE CONSIDERED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS, FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

- TRAFFIC GENERAL NOTES**
- REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS), UNDER CITY OF LAS VEGAS JURISDICTION, THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITIES TO CLARK COUNTY'S SATISFACTION. ALL MATERIAL USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.
 - IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.01.02
 - ALL SEWER / STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
 - THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SENSER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
 - FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.



SEE SHEET T-2 FOR CONTINUATION

SEE SHEET T-3 FOR CONTINUATION



SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

RICHMOND AMERICAN HOMES
FARM HUALAPAI
TRAFFIC PLAN I

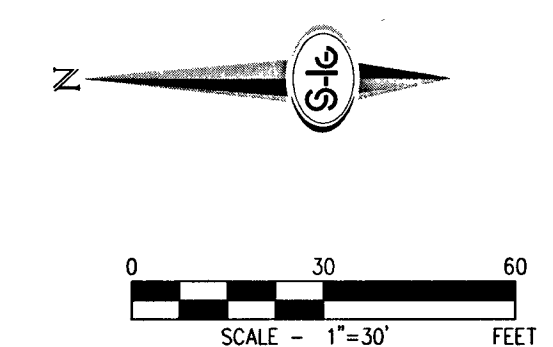
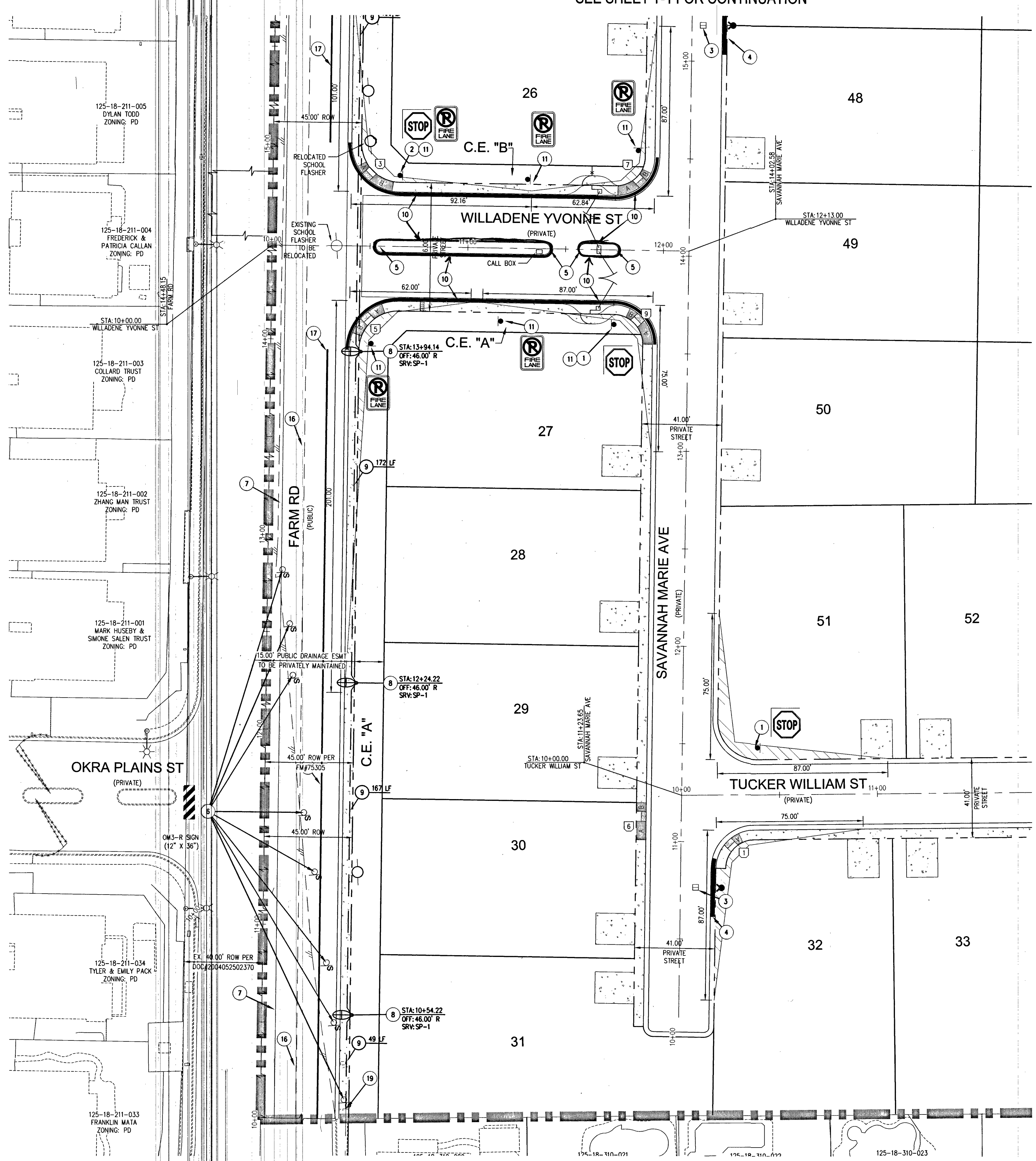
DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO. RAH1517

ENGINEER
KEVIN M. BROSS
Exp. 12/31/2020
CIVIL
No. 24572
3/18/19

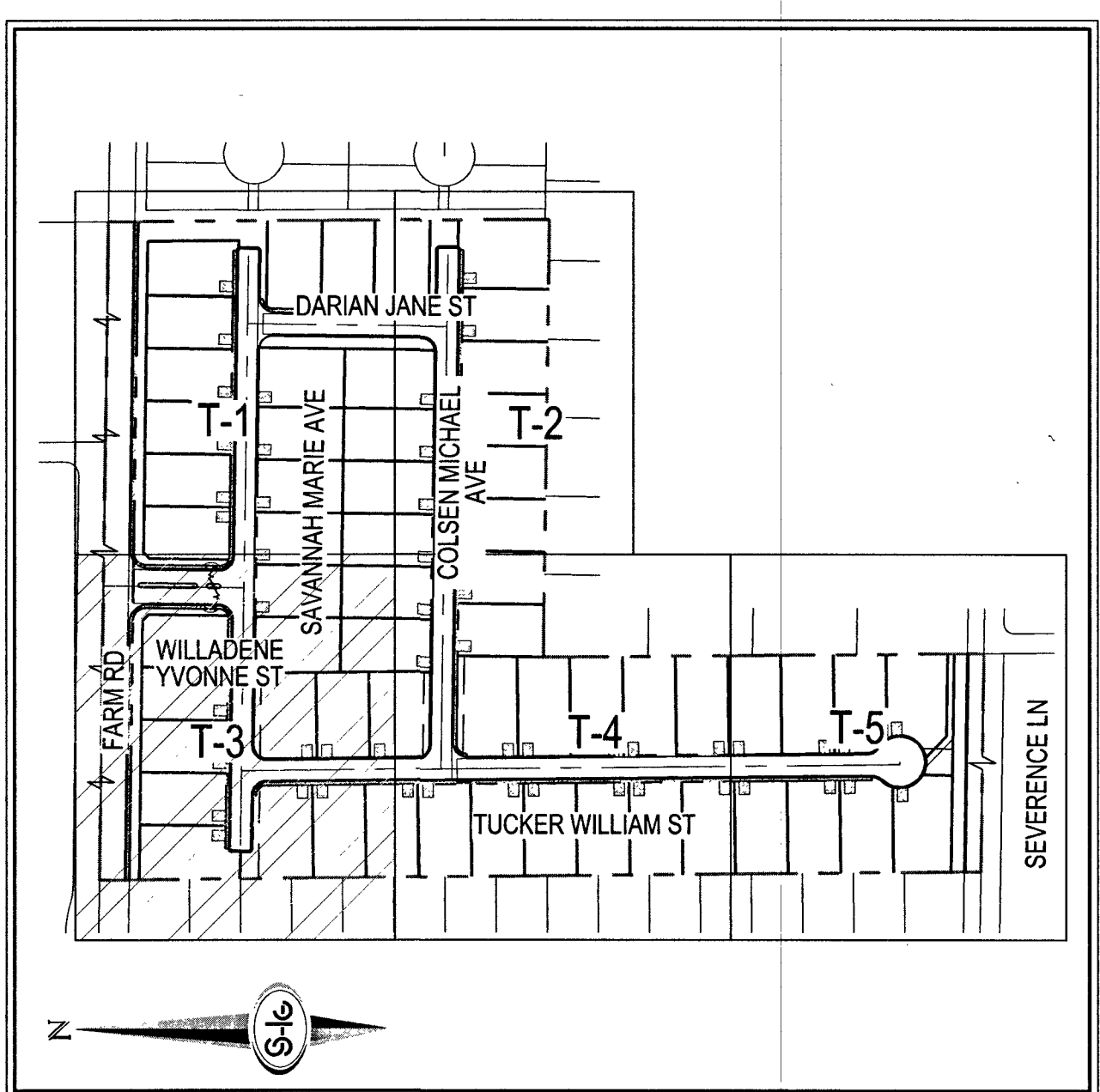
T-1
SHEET 30 OF 34
L18-02739

\\vms157\buffalo\form\des\impro\veh1517\trf.dwg 3/19/2019 8:10 AM Lokela Abad

SEE SHEET T-4 FOR CONTINUATION



RAMP TRANSITION LENGTHS			
RAMP NO.	GRADE % "B" TO "A"	"A" (FT) MIN.	"B" (FT) MIN.
1	-6 TO -5.01	4.5'	21.5'
2	-5 TO -4.01	4.5'	15.0'
3	-4 TO -3.01	4.5'	12.0'
4	-3 TO -2.01	4.5'	9.0'
5	-2 TO 2	8.0'	8.0'
6	2.01 TO 3	9.5'	4.5'
7	3.01 TO 4	12.0'	4.5'
8	4.01 TO 5	15.0'	4.5'
9	5.01 TO 6	21.5'	4.5'



- 1) INSTALL 30" STOP SIGN (R1-1) AND TWO (2) 9" STREET NAME SIGNS (D3-1) (PRIVATELY MAINTAINED)
- 2) INSTALL 36" STOP SIGN (R1-1) AND TWO (2) 12" STREET NAME SIGNS (D3-1) (PRIVATELY MAINTAINED)
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- 5) INSTALL MEDIAN NOSE MARKINGS PER CCAUSD NO. 248
- 6) EXISTING SIGN TO BE REMOVED
- 7) INSTALL TYPE II CENTRELINE PER CCAUSD NO. 244
- 8) INSTALL LED STREET LIGHT "OPL" FOR 80' R/W PER CCAUSD 4300.S3 & E34 W/ FOUNDATION PER CCAUSD #320 & #321
- 9) INSTALL 1-1/4" STREET LIGHT CONDUIT W/ (2) #4 ALUMINUM JB COND. AVOIDING FIRE HYDRANTS WHERE NEEDED
- 10) PAINT CURB RED PER IFC 503.3 AND GENERAL NOTE #27
- 11) INSTALL 18" TYPE A "NO PARKING FIRE LANE" PER IFC 503.3.1
- 12) EXISTING STRIPING TO BE OBLITERATED
- 13) EXISTING TYPE IV LANE LINE PER L17-00976
- 14) EXISTING TYPE II CENTRELLINE PER L17-00976
- 15) EXISTING 6" SOLID WHITE LINE PER L17-00976
- 16) INSTALL TYPE I IV LANE LINE PER CCAUSD NO. 244.1
- 17) INSTALL 6" SOLID WHITE LINE PER CCAUSD NO. 244.9
- 18) INSTALL LED STREET LIGHT "OPL" FOR 80' R/W PER CCAUSD 4300.S3 & E34 W/ FOUNDATION PER CCAUSD #320 & #321
- 19) FIELD VERIFY AND CONNECT TO EX. CONDUIT

- | | |
|---|---|
|  | STREET NAME SIGN
(PER PRIVATE STREET STDS) |
|  | STOP SIGN W/POST (R1-1) |
|  | TRAFFIC SIGN (AS INDICATED) |
|  | REFLECTIVE RAISED PAVEMENT
MARKERS |
|  | SIGHT VISIBILITY ZONE |
|  | EXISTING STRIPING |
|  | PROPOSED STRIPING |
|  | OM3-R SIGN |
|  | "NO PARKING FIRE LANE" SIGN |
| SEE SHEET C-3 FOR ABBREVIATIONS AND QUANTITIES | |

NORTH 00°19'04" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHWEST QUARTER (SW1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 127, PAGE 24 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA

BENCHMARK NUMBER: 6LV9018W4

RIVET AND PLATE IN TOP OF CURB IN THE NORTHEAST
CORNER OF FARM ROAD AND HUALAPAI WAY.

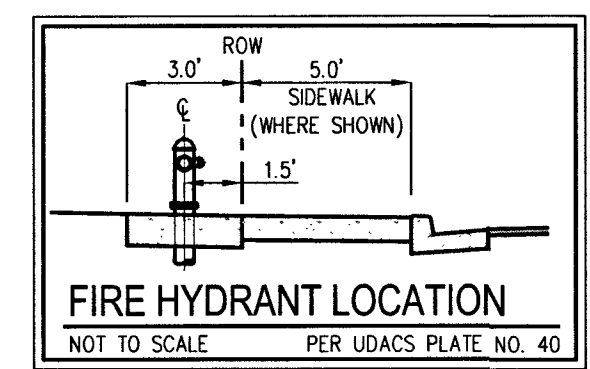
ELEVATION = 2856.716 FEET, 870.729 METERS
DATUM = NAVD 88

PER THE CITY OF LAS VEGAS BENCHMARK WEBSITE ON MAY
17, 2018

APPROVED

BY: *Paul Lam* 3/19/19

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POWER LINES. IT'S
COSTLY.

CALL BEFORE
YOU DO
OVERHEAD

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FAST

Call before you
UnderGround
1-702-432-5300
FREWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
OR
1-800-227-2600

S-I-G
SLATER
HANIFAN
GROUP
a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

[illegible]

RICHMOND
AMERICAN HOMES

FARM HUALAPAI

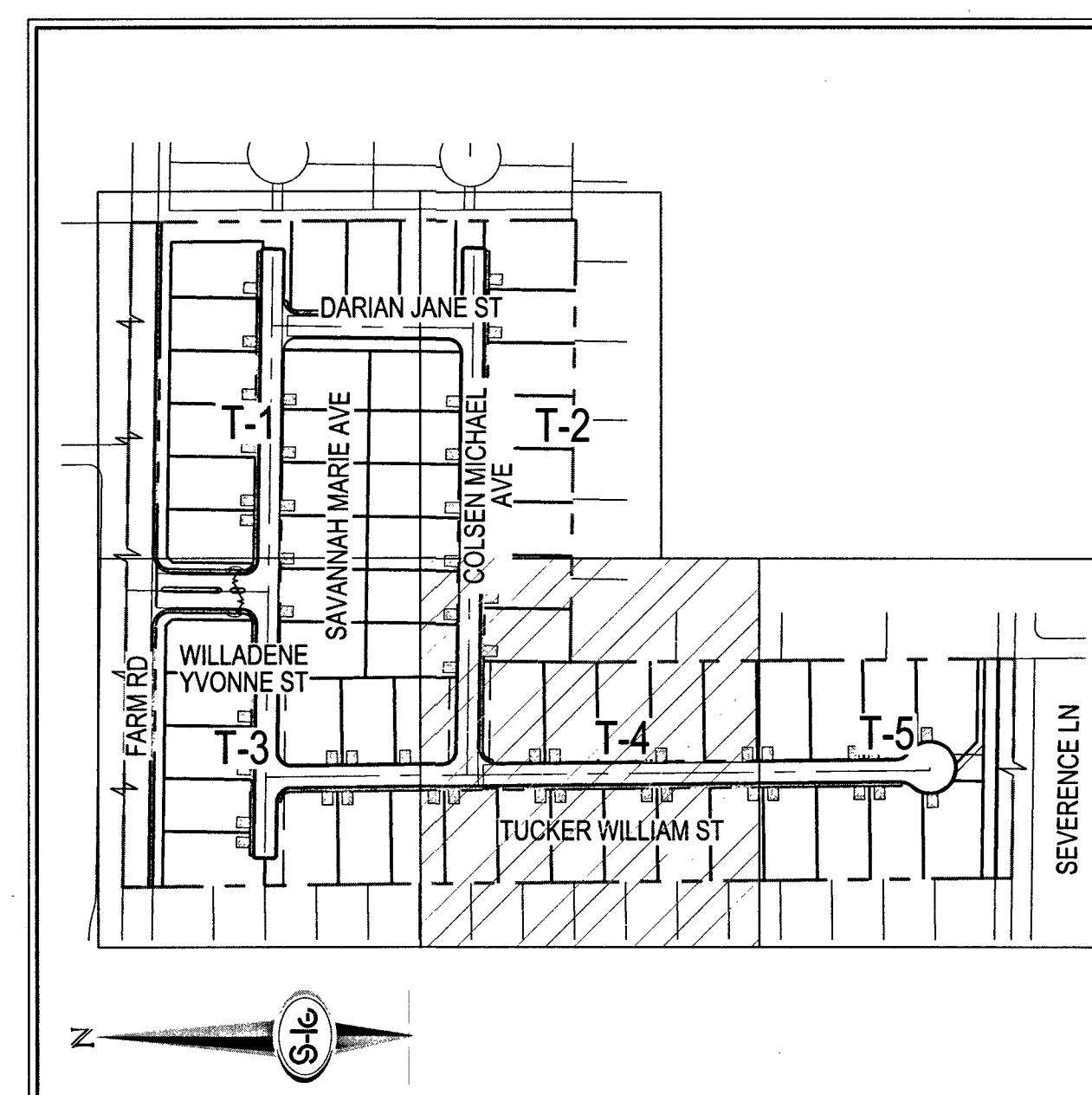
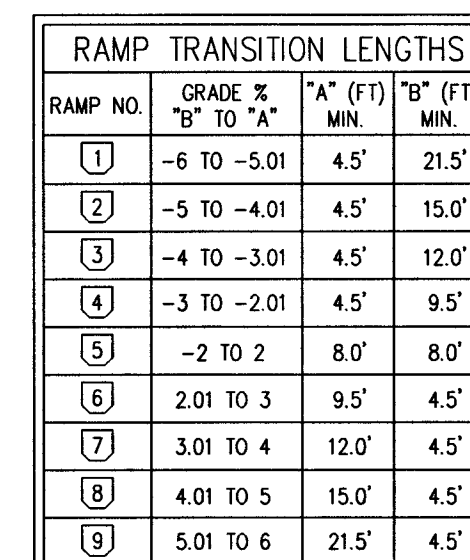
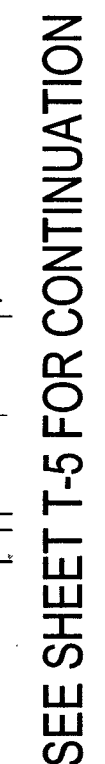
TRAFFIC PLAN III

DATE:	3/18/19
DRAFTER:	EMH
DESIGNER:	EMH
CHECKED:	KMB
PROJECT NO.	
RAH1517	

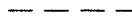
T-3
SHEET 32 OF 34
L18-02739

107V5104

SEE SHEET T-3 FOR CONTINUATION



1. INSTALL 30" STOP SIGN (R1-1) AND TWO (2) 9" STREET NAME SIGNS (D3-1) (PRIVATELY MAINTAINED)
2. INSTALL 36" STOP SIGN (R1-1) AND TWO (2) 12" STREET NAME SIGNS (D3-1) (PRIVATELY MAINTAINED)
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5. INSTALL MEDIAN NOSE MARKINGS PER C.O. 248
6. EXISTING SIGN TO BE REMOVED
7. INSTALL TYPE II CENTERLINE PER C.O. 244
8. INSTALL LED STREET LIGHT "QPL" FOR 80' R/W PER C.ASD #200.53 & #314 W/ FOUNDATION PER C.ASD #350 & #321
9. INSTALL 1-1/4" STREET LIGHT CONDUIT W/ (2) #4 AND (1) #6 GND. AVOIDING FIRE HYDRANTS WHERE #4
10. PAINT CURB RED PER F.C. 503.3 AND GENERAL NOTE #27
11. INSTALL 18" TYPE "A" NO PARKING FIRE LANE" PER F.C. 503.31
12. EXISTING STRIPING TO BE OBLITERATED
13. EXISTING TYPE IV LANE LINE PER L17-00976
14. EXISTING TYPE II CENTERLINE PER L17-00976
15. EXISTING 6" SOLID WHITE LINE PER L17-00976
16. INSTALL TYPE IV LANE LINE PER C.O. 244.1
17. INSTALL 6" SOLID WHITE LINE PER C.ASD NO. 244.9
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19. FIELD VERIFY AND CONNECT TO EX CONDUIT

	STREET NAME SIGN (PER PRIVATE STREET STDS)
	STOP SIGN W/POST (R1-1)
	TRAFFIC SIGN (AS INDICATED)
	REFLECTIVE RAISED PAVEMENT MARKERS
	SIGHT VISIBILITY ZONE
	EXISTING STRIPING
	PROPOSED STRIPING
	OM3-R SIGN
	"NO PARKING FIRE LANE" SIGN

SEE SHEET C-3 FOR ABBREVIATIONS AND QUANTITIES

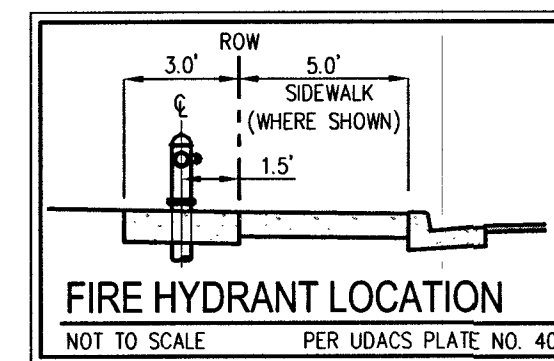
NORTH 00°19'04" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHWEST QUARTER (SW1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 127, PAGE 24 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA

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ELEVATION = 2856.716 FEET, 870.729 METERS
DATUM = NAVD 88
PER THE CITY OF LAS VEGAS BENCHMARK WEBSITE ON MAY
17, 2018

APPROVED

BY: San Juan 3/19/14

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Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
OR
1-800-227-2600

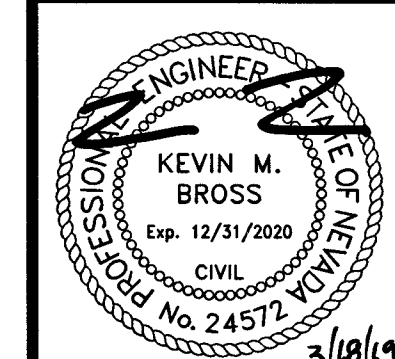
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RICHMOND
AMERICAN HOMES

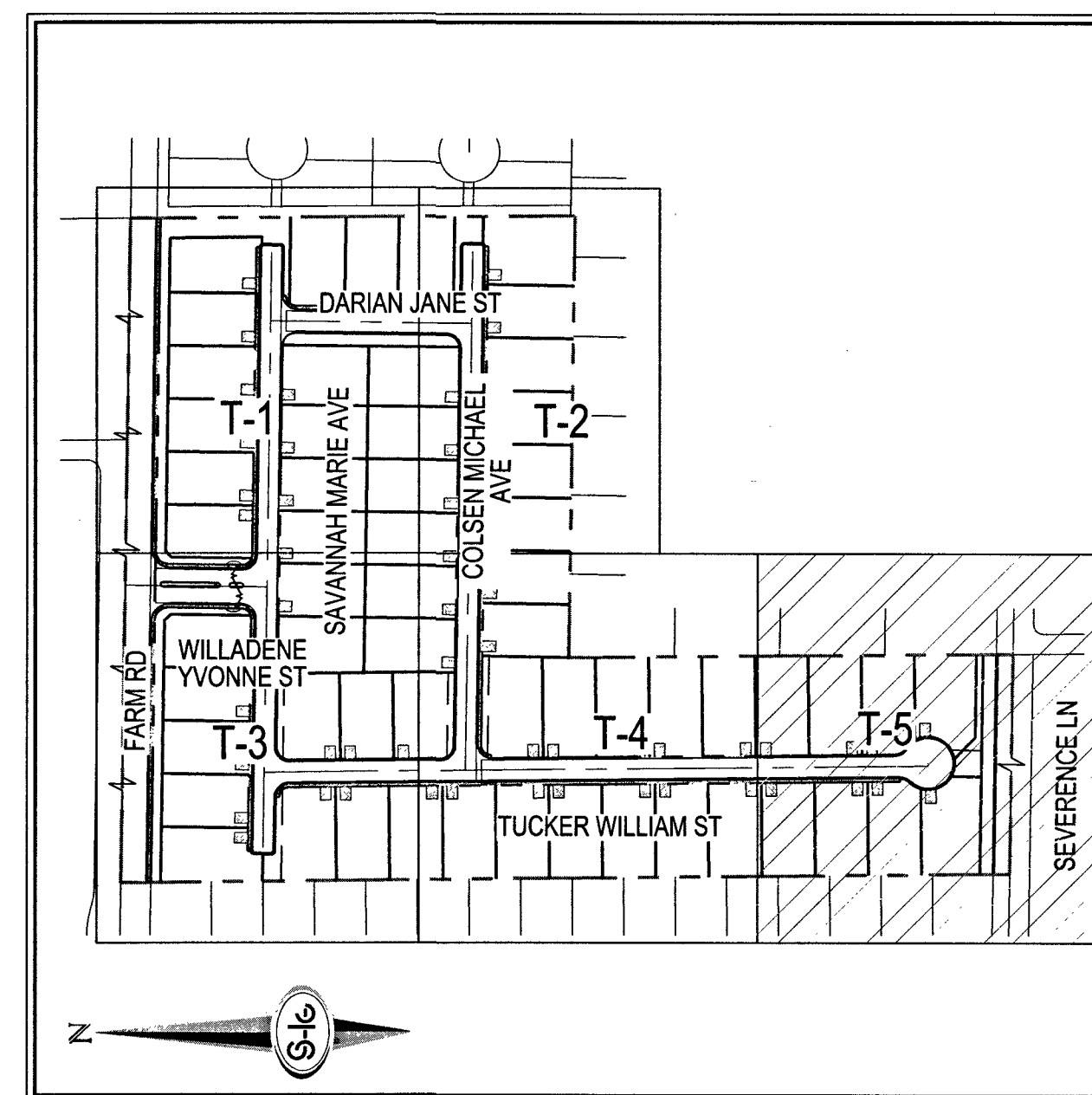
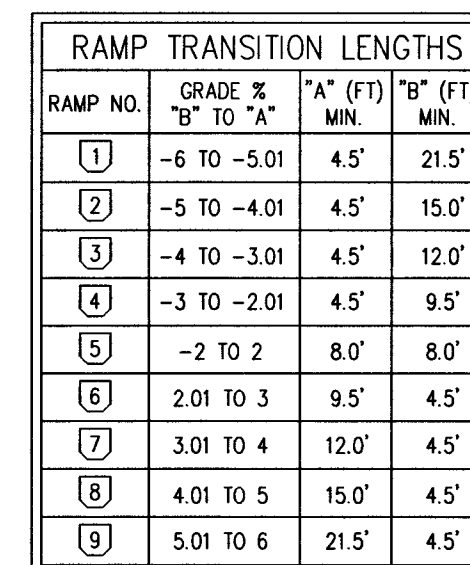
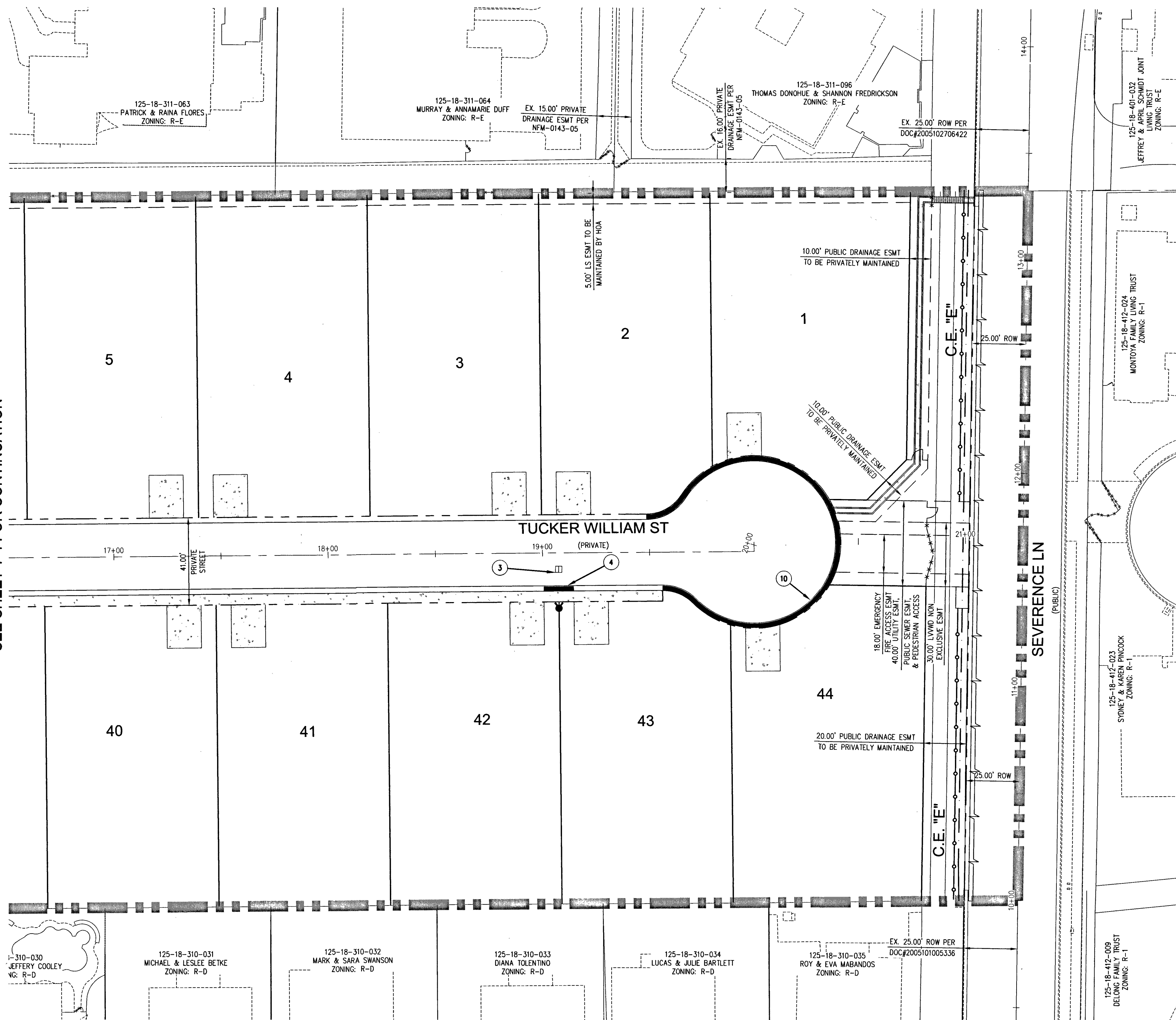
FARM HUALAPAI
TRAFFIC PLAN IV

S18 T19S R00E	
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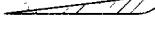
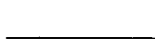
DATE:	3/18/19
DRAFTER:	EMH
DESIGNER:	EMH
CHECKED:	KMB
PROJECT NO.	
RAH1517	



T-4
SHEET 33 OF 34



- 1 INSTALL 30" STOP SIGN (R1-1) AND TWO (2) 9" STREET NAME SIGNS (D3-1) (PRIVATELY MAINTAINED)
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- 6 EXISTING SIGN TO BE REMOVED
- 7 INSTALL TYPE II CENTERLINE PER CCAUSD NO. 244
INSTALL LED STREET LIGHT "Opl" FOR 85' R/W PER CCAUSD #300.53 & #314 W/ FOUNDATION PER CCAUSD #320 & #321
- 8 INSTALL 1"-1/4" STREET LIGHT CONDUIT W/ (2) #4 AND (1) #8 GND. AVOIDING FIRE HYDRANTS WHERE NEEDED
- 9 PAINT CURB RED PER CFI 503.3 AND GENERAL NOTE #27
- 10 INSTALL 18" TYPE "A" NO PARKING FIRE LANE" PER CFI 503.3.1
- 11 EXISTING STRIPING TO BE OBLITERATED
- 12 EXISTING TYPE IV LANE LINE PER L17-00976
- 13 EXISTING TYPE II CENTERLINE PER L17-00976
- 14 EXISTING 6" SOLID WHITE LINE PER L17-00976
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- 17 INSTALL LED STREET LIGHT "Opl" FOR 80' R/W PER CCAUSD #300.53 & #314 W/ FOUNDATION PER CCAUSD #320 & #321
- 18 FIELD VERIFY AND CONNECT TO EX. CONDUIT

- | | |
|--|---|
|  | STREET NAME SIGN
(PER PRIVATE STREET STDS) |
|  | STOP SIGN W/POST (R1-1) |
|  | TRAFFIC SIGN (AS INDICATED) |
|  | REFLECTIVE RAISED PAVEMENT
MARKERS |
|  | SIGHT VISIBILITY ZONE |
|  | EXISTING STRIPING |
|  | PROPOSED STRIPING |
|  | OM3-R SIGN |
|  | "NO PARKING FIRE LANE" SIGN |

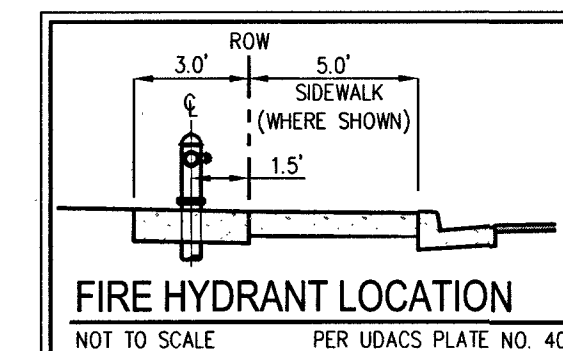
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17, 2018

APPROVED

BY: [Signature] 3/19/19

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FAST
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FREWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)

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AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call

OR
1-800-227-2600

[illegible]

RICHMOND
AMERICAN HOMES

FARM HUALAPAI
TRAFFIC PLAN V

LAS VEGAS, NEVADA

S18 T19S R60E	
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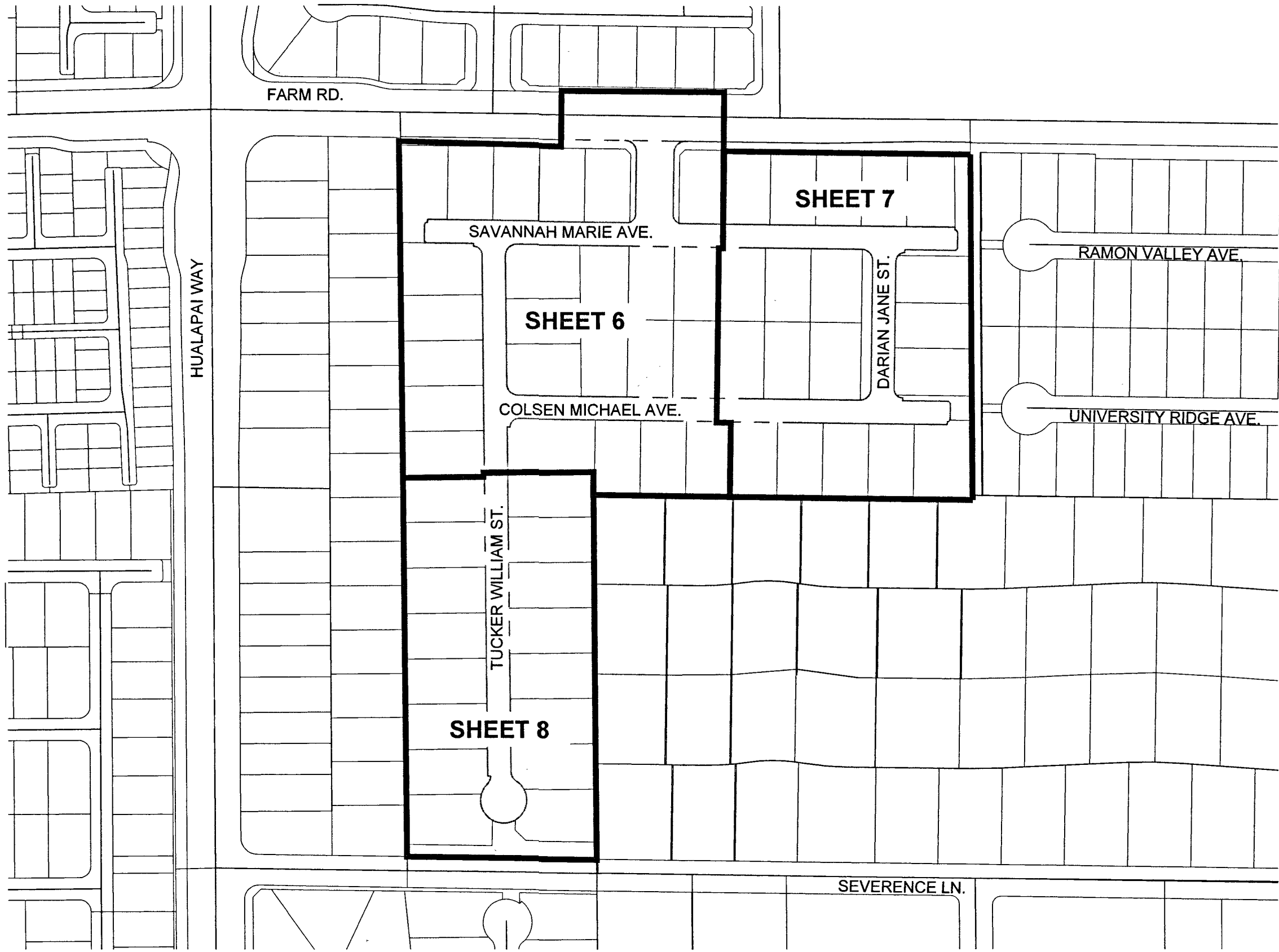
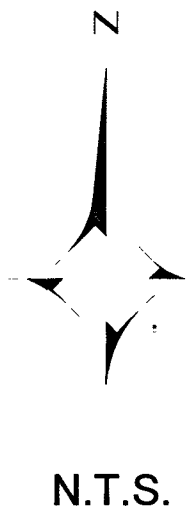
DATE: 3/18/19
DRAFTER: EMH
DESIGNER: EMH
CHECKED: KMB
PROJECT NO.
RAH1517

T-5
SHEET 34 OF 34

p:\rah1517 buffalo farm\dwg\improv\rah1517rf.dwg 3/18/2019 5:36 PM Lokela Abad

LEGEND

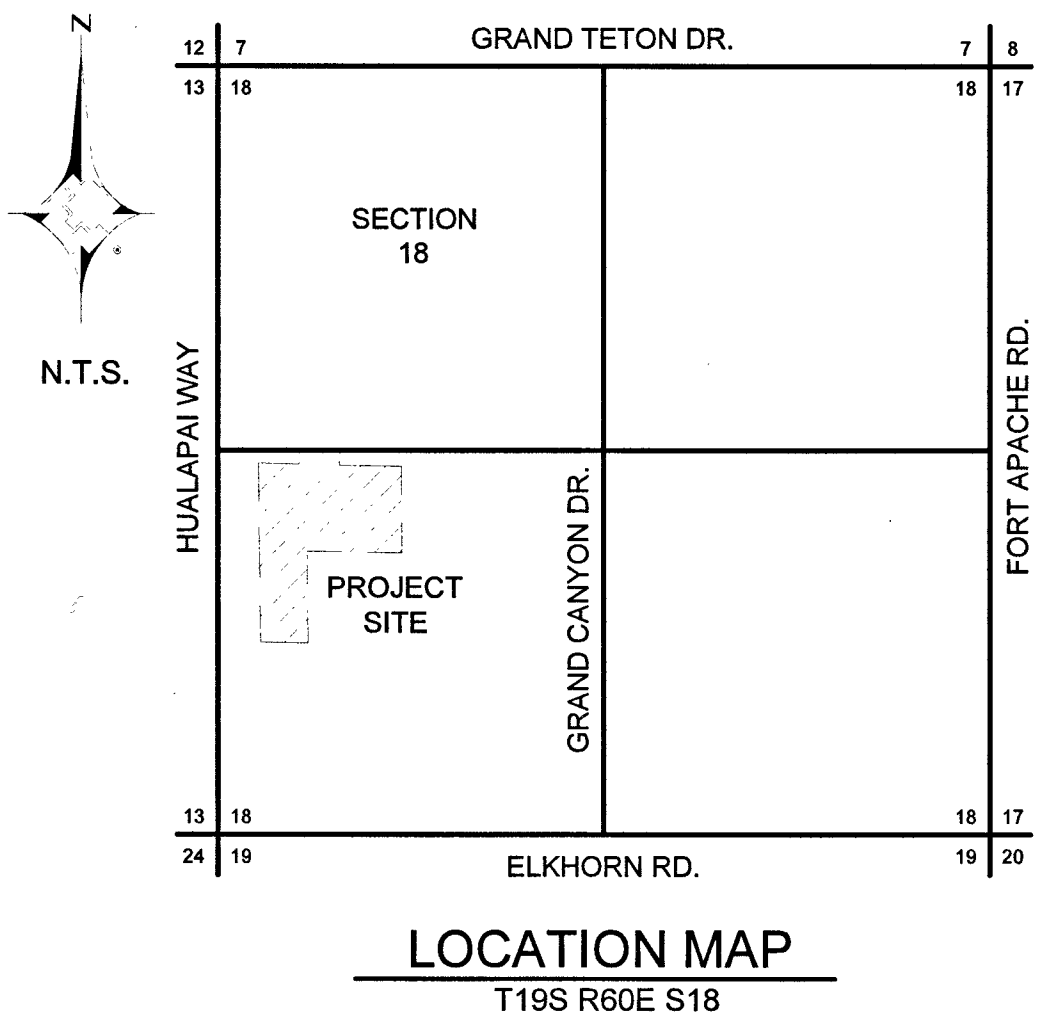
EXISTING GAS MAIN	
EXISTING GAS SERVICE	
GAS LINE TO BE ABANDONED	
STEEL RISER	
ANODELESS RISER	
GASLIGHT	
GAS VALVE	
EXCESS FLOW VALVE	
RELIEF VALVE	
COUPLINGS	
BOND OVER	
TEST POINT	
INSULATOR	
REGULATOR STATION	
RECTIFIER	
ANODE	
SCADA	
METER SET ASSEMBLY	
PURGE POINT	
BRANCH,CVT,LINE STOPPER	
GAS LINE TO BE ABANDONED	
PROPOSED GAS MAIN	
PROPOSED GAS SERVICE	
EXISTING EASEMENT	
ROW LINE	
PROPERTY LINE	
STREET CENTERLINE	
EDGE OF PAVEMENT	
CABLE LINE - UNDERGROUND	
ELECTRIC - OVERHEAD	
ELECTRIC - UNDERGROUND	
FIBER OPTIC - UNDERGROUND	
PHONE - OVERHEAD	
PHONE - UNDERGROUND	
RECLAIMED WATER	
SEWER	
STORMWATER	
WATER	
UTILITY PEDESTALS	
FIRE HYDRANT	
MANHOLE	
WATER VALVE	
SURVEY MONUMENT	
POWER POLE	
GAS FLOW ARROW	



SHEET INDEX MAP

SHEET INDEX

- 1 COVERSHEET
- 2 SIGNATURE SHEET
- 3-5 NOTES AND STANDARD DETAILS
- 6-8 PLAN SHEET



City of Las Vegas

Total footage located in Public ROW 18'

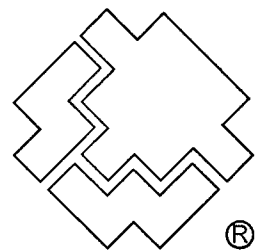
APPROVED FOR CONSTRUCTION

THIS APPROVAL IS FOR WORK IN CLV R/W OR CLV EASEMENTS ONLY. OBTAINING PERMISSION OR EASEMENTS FOR WORK SHOWN ON PRIVATE PROPERTY IS THE RESPONSIBILITY OF THE UTILITY.

Approval Date



Know what's below.
Call before you dig.



SOUTHWEST GAS CORPORATION

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REVISIONS					D_N_VALLEY_W		JOB TYPE		WR NO.		ENGINEER/TECHNICIAN		DAVID FRIEDLANDER		PHONE: (702)365-2203				
										3796565	ACCOUNT REP.		TONY STIPANOV		PHONE: (702)365-2053				
											PROJECT CONTACT		DAVE VON OY		PHONE: (702)379-7577				
											SHEET NO. 1 OF 8		SCALE N.T.S.		DATE 03/27/2019				
NO.				DESCRIPTION	BY	DATE	APPVD.				DWN. BY SEI		CHKD. BY DF		APPVD. BY BWJ				
PERMIT INFORMATION		ISOLATION AREA		LOCATION		ATLAS OR TILE		N/A		FEEDER		RELATED WR NO.S		FARM HUALAPAI					
CITY OF LAS VEGAS		ISO_21_DIST_327		T19S R60E S18		x579y562		SYSTEM MAOP: N/A		TRANS. BY DEF		N/A							
TAX CODE: 02-0200				M.D.M.				SYSTEM MOP: N/A		TRANS > 20%									
L18-02739																107Y5104		Sheet 35 of 42	

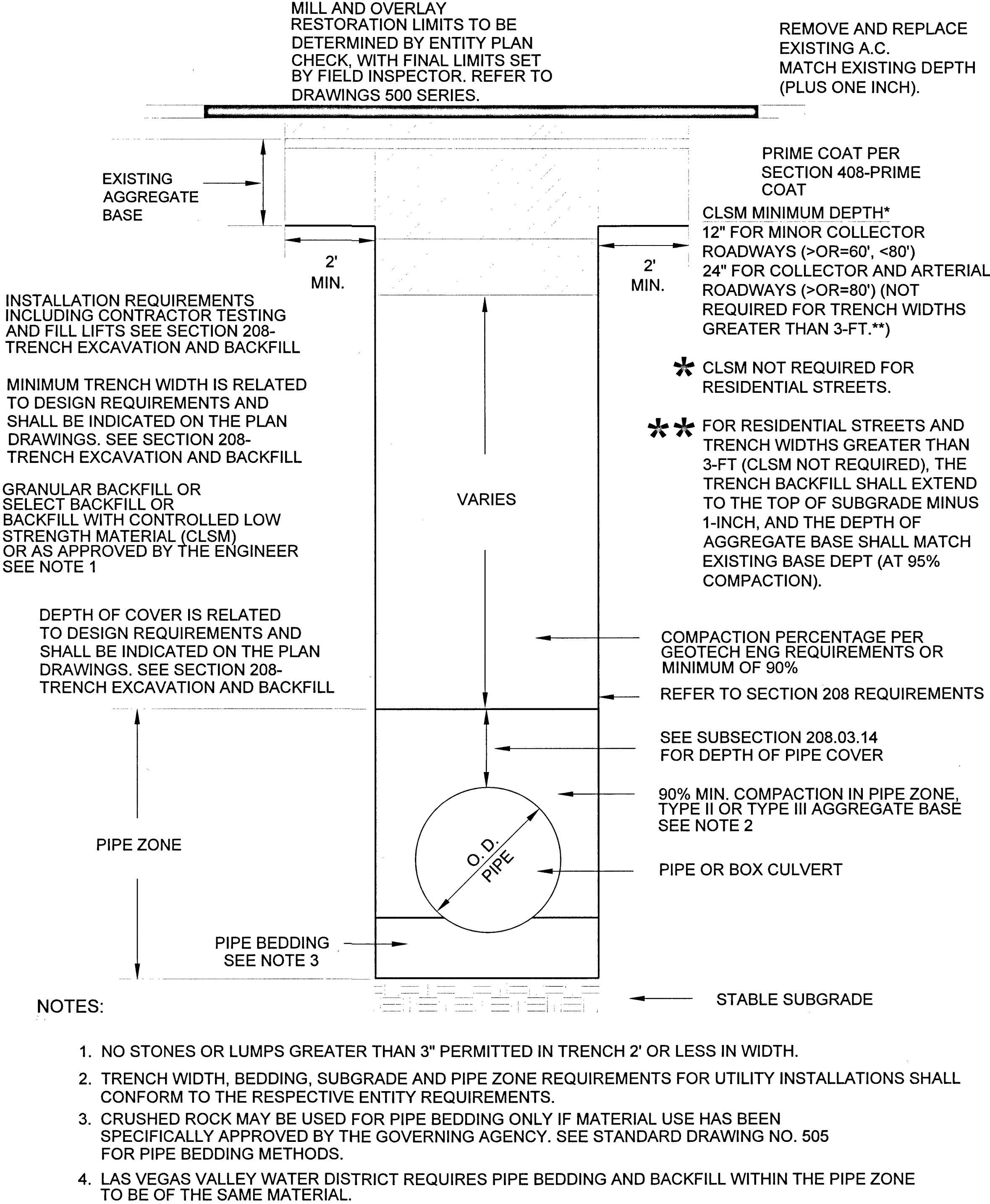
GENERAL NOTES:

1. SUGGESTED GAS LOCATIONS ARE TO CLEAR SUBSTRUCTURES. LOCATE IN FIELD.
2. ALL PIPELINE CONSTRUCTION SHALL CONFORM TO APPLICABLE JURISDICTION SPECIFICATIONS..
3. DO NOT SCALE THIS DRAWING.
4. CHANGE IN PROPOSED MAIN LOCATION MUST BE AUTHORIZED BY SWG ENGINEER PRIOR TO INSTALLATION.
5. GAS MAINS SHALL BE PURGED PER OPERATIONS MANUAL.
6. ALL EXISTING UTILITY LOCATIONS TO BE VERIFIED PRIOR TO START OF CONSTRUCTION.
7. TRENCH IS TO BE EXCAVATED TO THE DEPTH AND WIDTH AS INDICATED ON THE TRENCH DETAIL(S).
8. CONTACT ENGINEERING FOR BYPASS INFORMATION.
9. ALL MAIN TIE-INS REQUIRING TEES ARE TO BE FULL-FLOW TEES UNLESS OTHERWISE STATED..
11. REQUEST FOR SURVEYING AND/OR STAKING WILL BE SUBMITTED TO ENGINEERING 72 HOURS IN ADVANCE, MINIMUM.
12. TRENCHING AND PAVEMENT REPLACEMENT SHALL CONFORM WITH RTC STANDARD 503, 500.5, AND UNIFORM STANDARD SPEC SECTION 208.
13. MINIMUM TEST DURATION REQUIREMENTS AND GUIDELINES FOR MAIN INSTALLATION IN SYSTEMS <60PSIG ARE:

A. MINIMUM TEST DURATION IS 8 HOURS FOR PIPES 1-14-INCHES OR GREATER, WITH FOOTAGES BETWEEN 3,001 FEET AND 10,000 FEET.

B. ALL FOOTAGES GREATER THAN 3,000 FEET REQUIRE A CHART.

C. CONSTRUCTION SHALL CONTACT ENGINEERING FOR MINIMUM TEST DURATIONS IF THE FOOTAGE TO BE TESTED EXCEEDS 10,000 FEET.



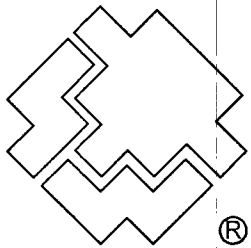
RTC STD DWG 503

ABBREVIATIONS:

AA	ALDYL-A PIPE	NTSB	NATIONAL TRANSPORTATION SAFETY BOARD
ABND	ABANDONED	NTS	NOT TO SCALE
AC	ASPHALTIC CONCRETE	OC	ON CENTER
AC#	ACCELERATED CONSTRUCTION	OD	OUTSIDE DIAMETER
ACP	ASBESTOS CEMENT PIPE	OH	OVERHEAD
APN	ASSESSOR PARCEL NUMBER	OHE	OVERHEAD ELECTRIC
BLVD	BOULEVARD	P	POWER
BM	BENCHMARK	PAOP	POTENTIAL ALLOWABLE OPERATING PRESSURE
BO	BLOW OFF	PCC	PORTLAND CEMENT CONCRETE
BTU	BRITISH THERMAL UNIT	PE	POLYETHYLENE PIPE
CIP	CAST IRON PIPE	PH	POT HOLE
CL	CENTERLINE	PHMSA	PIPELINE & HAZARDOUS MATERIALS SAFETY ADMINISTRATION
CMP	CORRUGATED METAL PIPE	PL	PROPERTY LINE
CP	CATHODIC PROTECTION	PIC	POTENTIAL IMPACT CIRCLE
D	INSIDE DIAMETER	PLS	PRESSURE LIMITING STATION
DDCA	DESIGN DATA COLLECTION APPLICATION	P.O.B	POINT OF BEGINNING
DET	DETAIL	PP	POWER POLE
DIP	DUCTILE IRON PIPE	PROP	PROPOSED
DIA	DIAMETER	PQF	PREQUALIFIED FITTING
DIMP	DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM	PSIG	POUNDS PER SQUARE INCH (GAUGE)
DP	DESIGN PRESSURE	PVC	POLYVINYL CHLORIDE
DWG	DRAWING	PUE	PUBLIC UTILITY EASEMENT
EFV	EXCESS FLOW VALVE	RC	REINFORCED CONCRETE
EG	EXISTING GRADE	RCP	REINFORCED CONCRETE PIPE
ELEC	ELECTRICAL	ROW	RIGHT OF WAY
ELEV	ELEVATION	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
EMS	ELECTRONIC MARKING SYSTEM	SD	STORM DRAIN
E.P	END POINT	SDMH	STORM DRAIN MANHOLE
EPR	ELECTRONIC PRESSURE RECORDERS	SDR	STANDARD DIMENSION RATIO
ESMT	EASEMENT	SF	SQUARE FOOT
EX	EXISTING	SHT	SHEET
FERC	FEDERAL ENERGY REGULATORY COMMISSION	SLSV	SERVICE LINE SHUT-OFF VALVE
FH	FIRE HYDRANT	SMYS	SPECIFIED MAXIMUM YIELD STRENGTH
GIR	GAS INFRASTRUCTURE REPLACEMENT	SS	SANITARY SEWER
GPR	GAS PRESSURE REGULATOR	SST	STAINLESS STEEL
HCA	HIGH CONSEQUENCE AREA	ST	STREET
HDD	HEATING DEGREE DAY	STA	STATION
HDPE	HIGH DENSITY POLYETHYLENE PIPE	STL	STEEL
HP	HIGH PRESSURE	SWG	SOUTHWEST GAS
HOP	HISTORIC OPERATING PRESSURE	TDS	TEST DATA SHEET
HVTT	HIGH VOLUME TAPPING TEE	TEL	TELEPHONE
IN	INCH(ES)	TB	THRUST BLOCK
IPS	IRON PIPE SIZE	TOP	TOP OF PIPE
JT	JOINT TRENCH	TP	TEST POINT
MAOP	MAXIMUM ALLOWABLE OPERATING PRESSURE	TS	TECHNICAL SERVICE NOTE
M&C	MEASUREMENTS & CONTROL	TRIMP	TRANSMISSION INTEGRITY MANAGAMENT PROGRAM
MCFH	THOUSAND CUBIC FEET PER HOUR	TYP	TYPICAL
MH	MANHOLE	U.E.	UTILITY EASEMENT
MOP	MAXIMUM OPERATING PRESSURE	UGE	UNDERGROUND ELECTRIC
MP	MANUFACTURER'S PRESSURE RATING	UOC	UNUSUAL OPERATING CONDITION
MSA	METER SET ASSEMBLY	USD	UNIFORM STANDARD DRAWING
MVP	MAPPING VERIFICATION PROCEDURE	UGT	UNDERGROUND TELEPHONE
NAP	NOT A PART	VCP	VITRIFIED CLAY PIPE
		VERT	VERTICAL
		VG	VALLEY GUTTER
		VSP	VINTAGE STEEL PIPE
		W	WATER
		WMS	WORK MANAGEMENT SYSTEM
		WR	WORK REQUEST
		WT	WALL THICKNESS
		WW	WATER VALVE
		YD	YARD(S)



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SOUTHWEST GAS CORPORATION

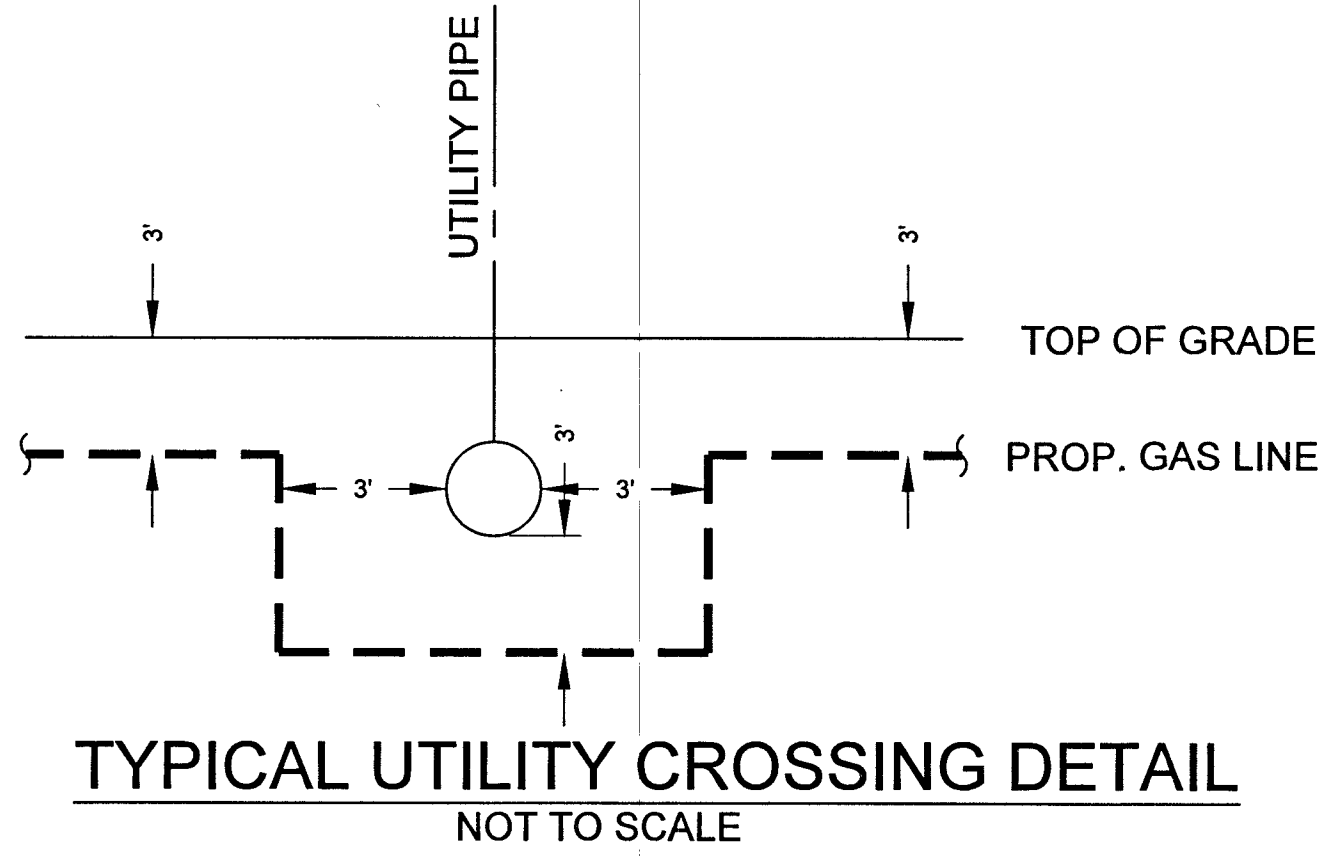
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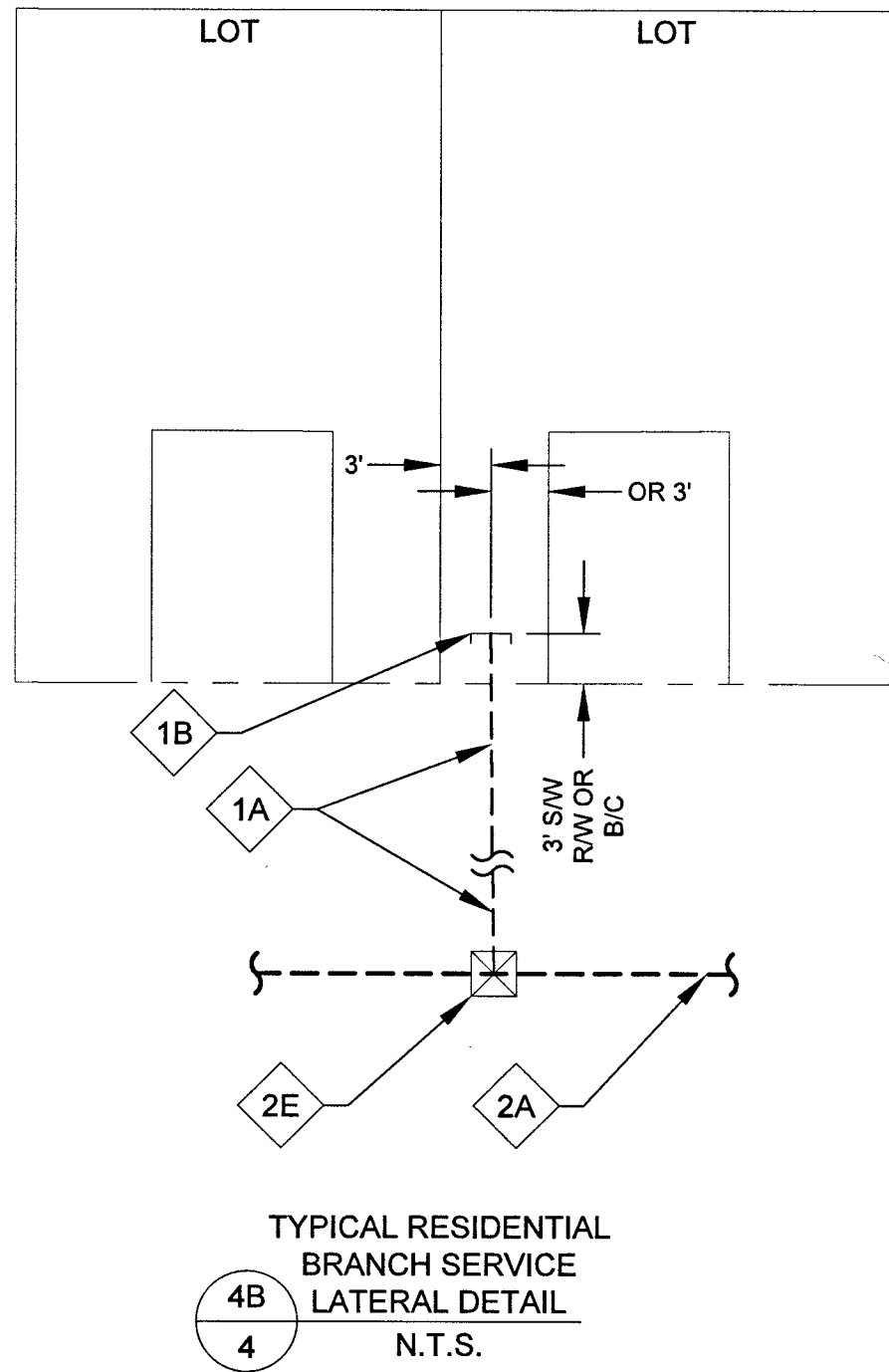
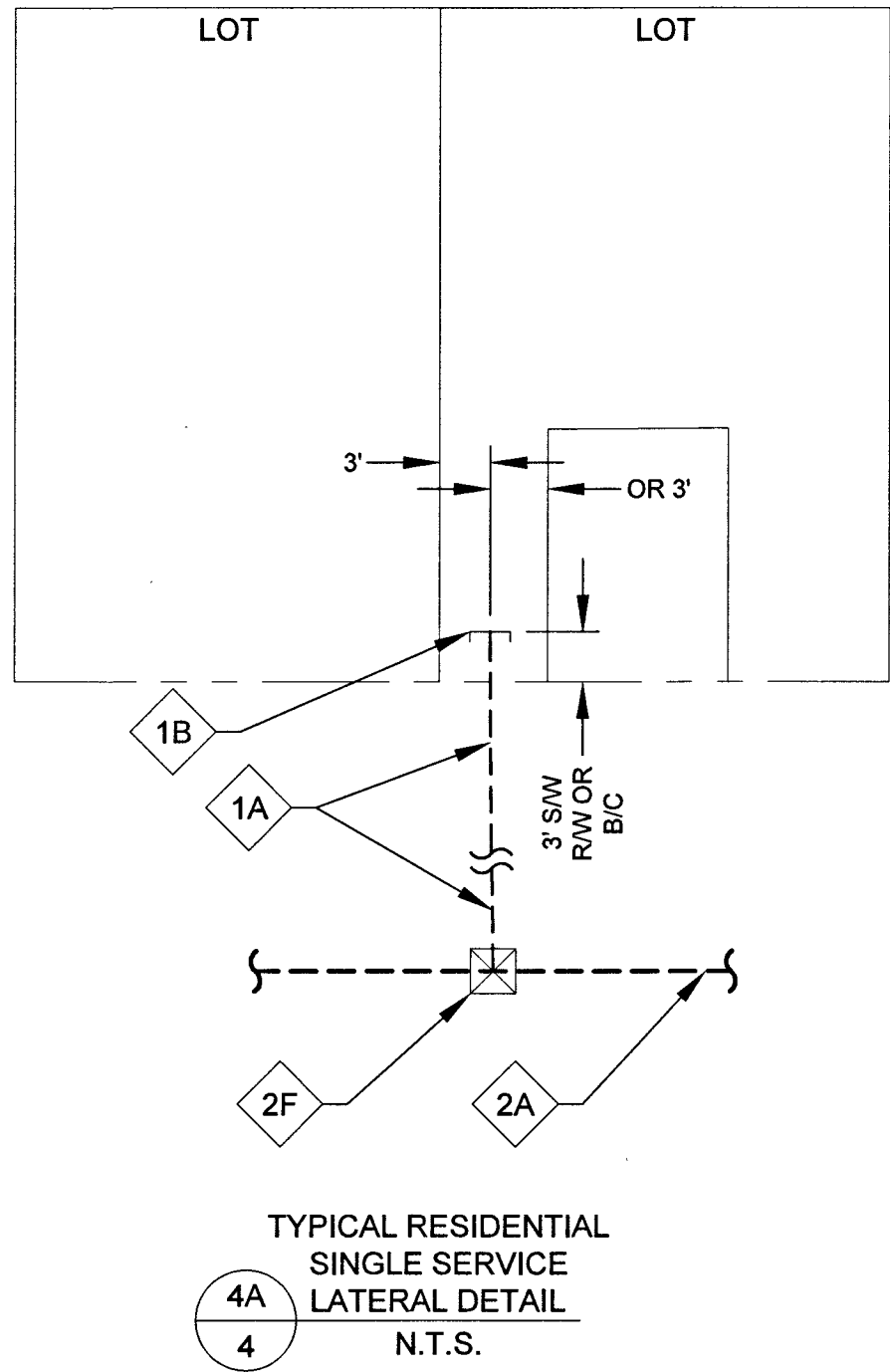
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REVISIONS				
NO.	DESCRIPTION	BY	DATE	APPVD.
PERMIT INFORMATION				
ISOLATION AREA				
LOCATION				
ATLAS OR TILE				
CITY OF LAS VEGAS				
TAX CODE: 02-0200				
ISO_21_DIST_327				
T19S R60E S18				
M.D.M.				
x579y562				

D_N_VALLEY_W		JOB TYPE	WR NO.	ENGINEER/TECHNICIAN	DAVID FRIEDLANDER	PHONE: (702)365-2203
SYSTEM MAOP: 60		HP SERVICE ☐	3796565	ACCOUNT REP.	TONY STIPANOV	PHONE: (702)365-2053
SYSTEM MOP: 55		DISTRIBUTION ☒		PROJECT CONTACT	DAVE VON OY	PHONE: (702)379-7577
N/A		FEEDER ☐	RELATED WR NO.S	SHEET NO.	3 OF 8	SCALE N.T.S.
SYSTEM MAOP: N/A		TRANS. BY DEF ☐		DWN. BY	SEI	DATE 03/27/2019
SYSTEM MOP: N/A		TRANS > 20% ☐	N/A	CHKD. BY	DF	APPVD. BY BWJ
				FARM HUALAPAI		
				L18-02739 107Y5104		
				Sheet 37 of 42		



DESIGN PIPE SUMMARY	
DESIGN QTY.	DESCRIPTION
3,055'	2" PE8100
1,077'	1" PE8100

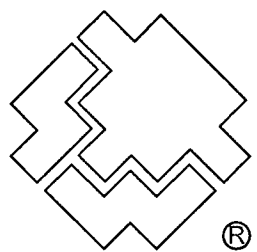


2" DISTRIBUTION MATERIALS LIST						
CODE	DESIGN QTY.	AS-BUILT QTY.	STOCK ID	DESCRIPTION	SEAM	COATING
2A	0'	0'	100-5101	2" PE8100 MAIN	N/A	N/A
2E	13	0'	160-8394	2" X 1" PE TAPPING TEE W/1800 EFV	N/A	N/A
2F	30	0	160-8577	2" X 1" PE TAPPING TEE W/1200 EFV	N/A	N/A

1 1/4" AND BELOW, DISTRIBUTION MATERIALS LIST						
CODE	DESIGN QTY.	AS-BUILT QTY.	STOCK ID	DESCRIPTION	SEAM	COATING
1A	1,077'	0'	101-8526	1" PE SERVICE	N/A	N/A
1B	43	0'	850-8773	1" PE CAP	N/A	N/A



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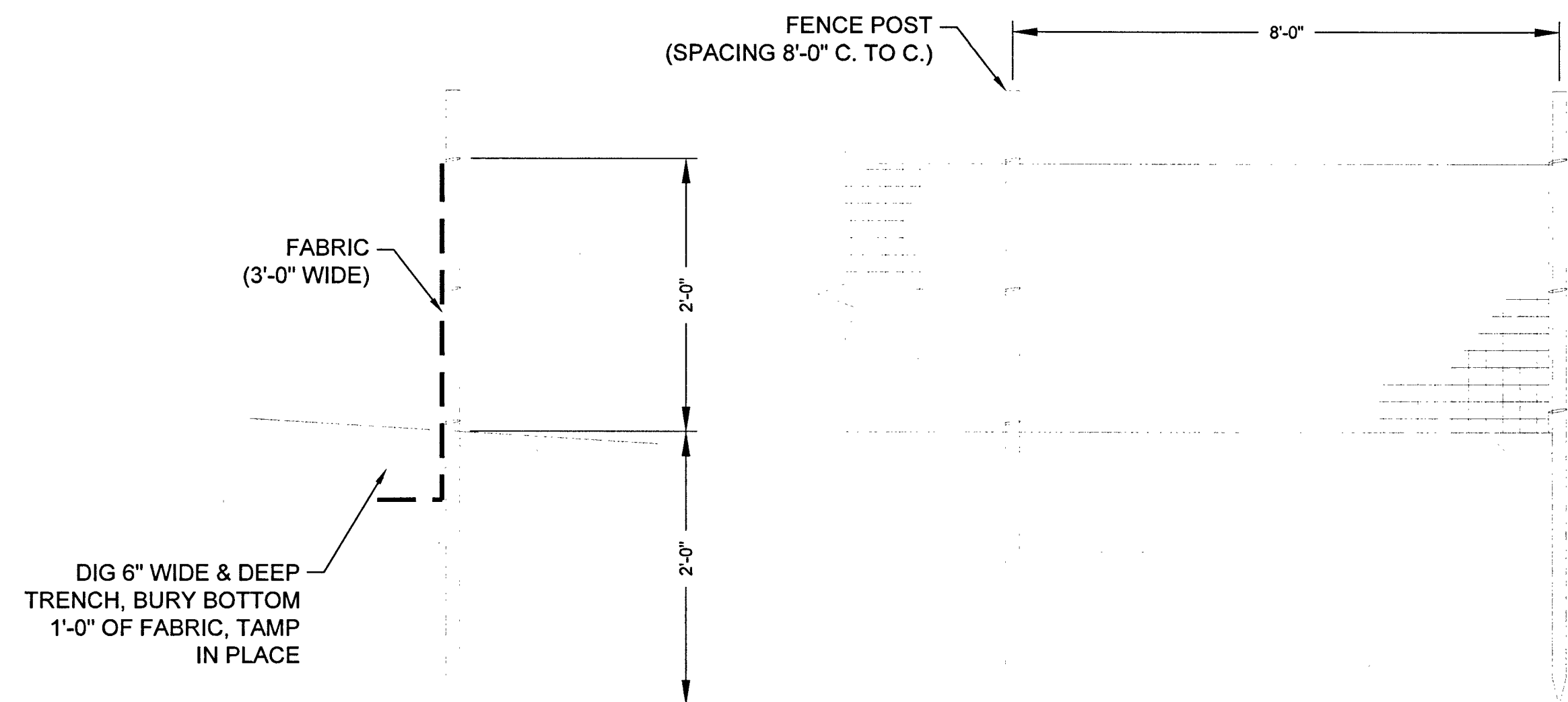
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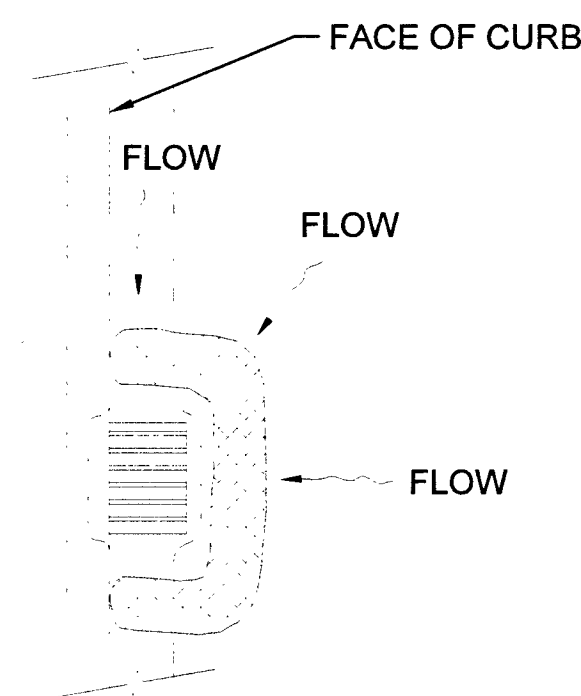
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REVISIONS				D_N_VALLEY_W		JOB TYPE	WR NO.	ENGINEER/TECHNICIAN	DAVID FRIEDLANDER	PHONE: (702)365-2203
				SYSTEM MAOP:	60	HP SERVICE	3796565	ACCOUNT REP.	TONY STIPANOV	PHONE: (702)365-2053
				SYSTEM MOP:	55	DISTRIBUTION		PROJECT CONTACT	DAVE VON OY	PHONE: (702)379-7577
								SHEET NO.	4 OF 8	SCALE N.T.S.
								DWN. BY	SEI	CHKD. BY DF
								APPVD. BY	BWJ	
NO.	DESCRIPTION	BY	DATE	APPVD.	N/A		RELATED WR NO.S	FARM HUALAPAI		
PERMIT INFORMATION		ISOLATION AREA	LOCATION	ATLAS OR TILE			FEEDER			
CITY OF LAS VEGAS		ISO_21_DIST_327	T19S R60E S18	x579y562	SYSTEM MAOP: N/A		TRANS. BY DEF			
TAX CODE: 02-0200			M.D.M.		SYSTEM MOP: N/A		TRANS > 20%			

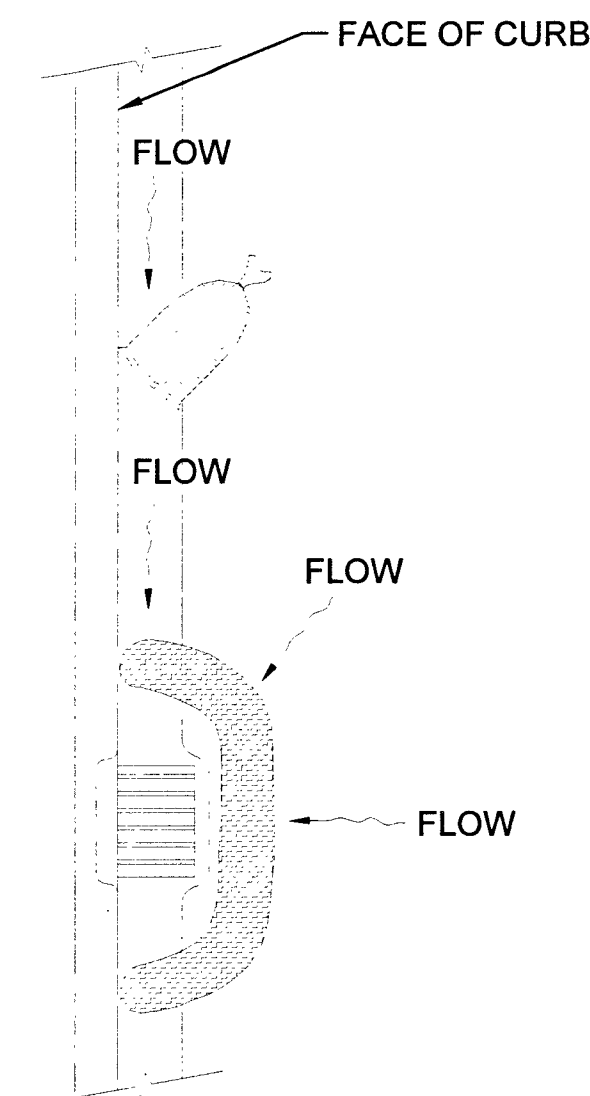
TYPICAL SWPPP BMP DETAILS



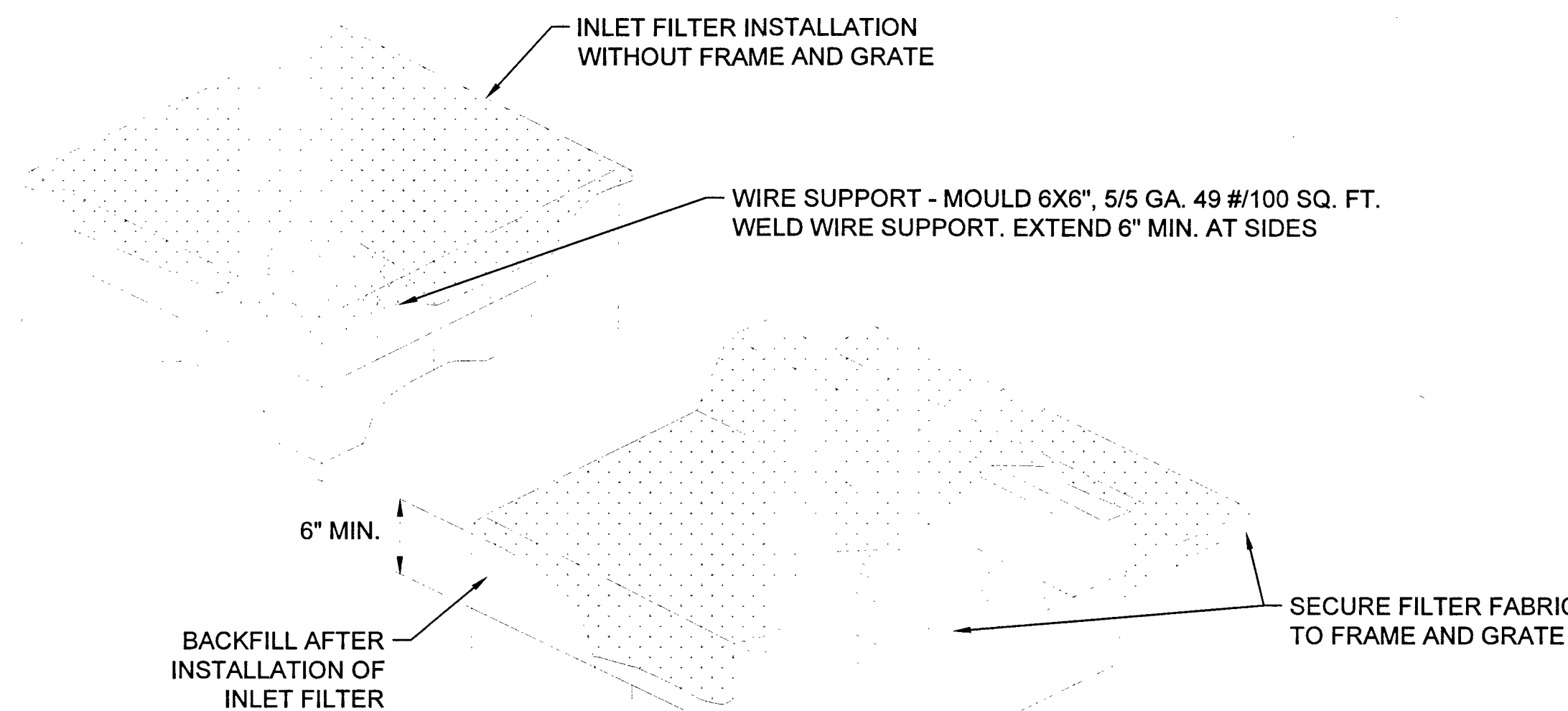
1 SILT FENCE
N.T.S.



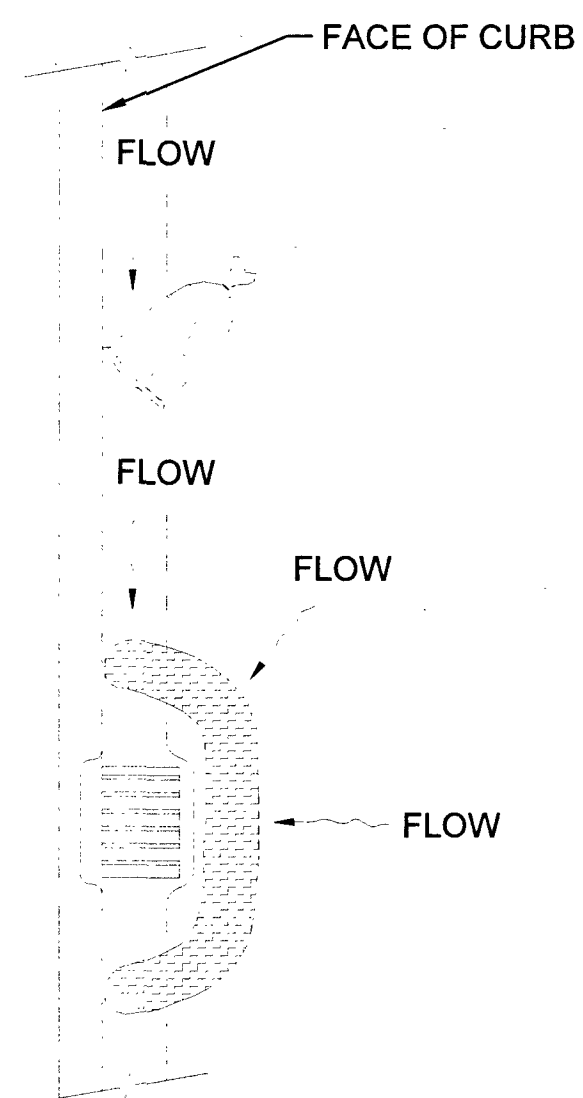
2 FIBER ROLL
N.T.S.



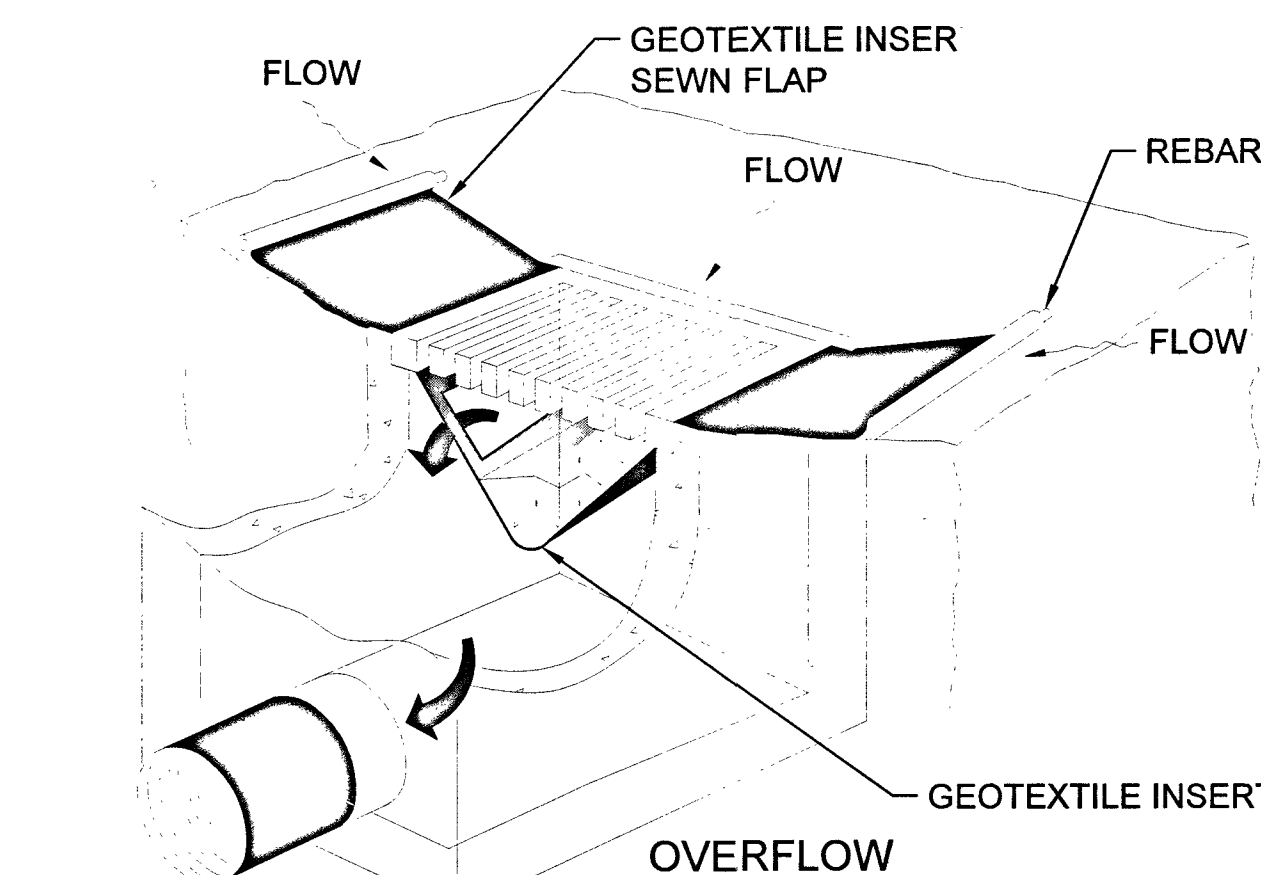
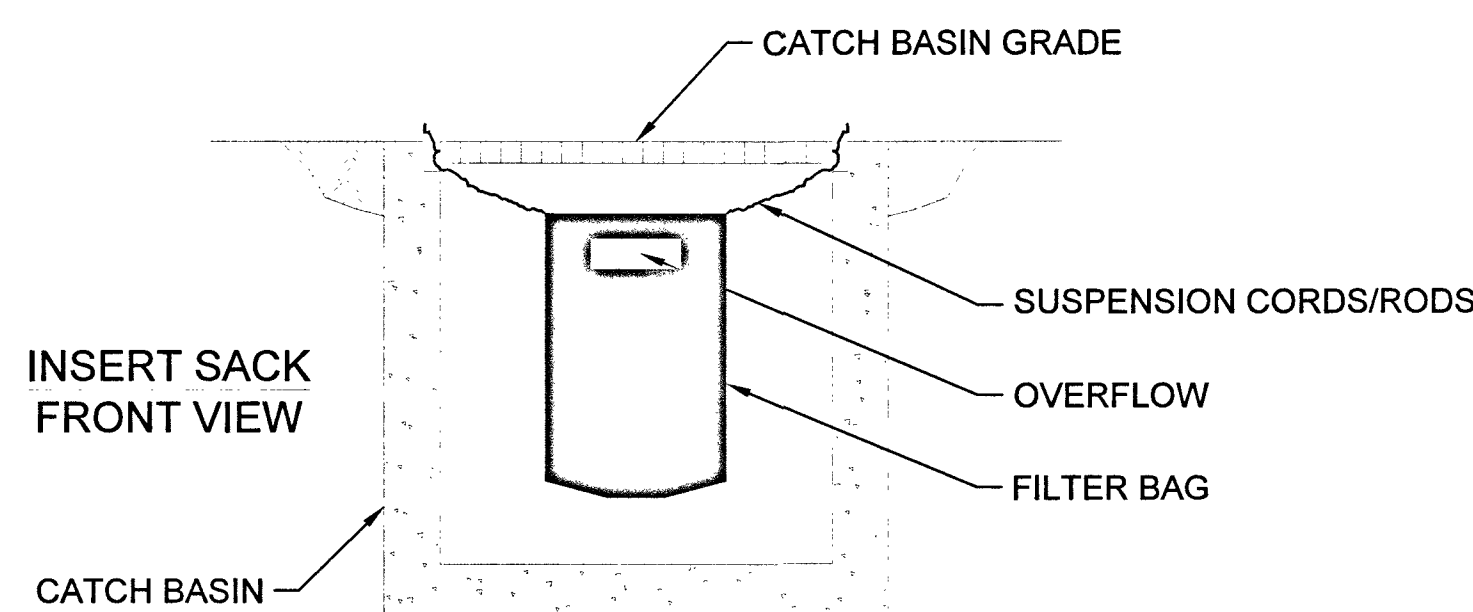
3 SAND BAG/ ROLL
N.T.S.



4 DRAIN
INLET FILTER
N.T.S.



5 GRAVEL
BAG/ ROLL
N.T.S.



NOTE:
RECESSED CURB INLET MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS.
SIZE OF FILTER FABRIC INLET SACK TO BE DETERMINED BY MANUFACTURER.

6 SEDIMENT
FILTER BAG
N.T.S.

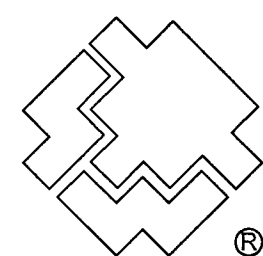
SWPPP NOTES

- SOUTHWEST GAS CORPORATION, IT'S CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL INSTALL ONE OF THE APPROPRIATE BMPS FOR THE PROTECTION OF EXISTING STORM DRAIN INLETS, WITHIN OR SIGNIFICANTLY NEAR ANY IMPROVED RIGHT-OF-WAY, FROM DEBRIS AND SEDIMENT RESULTING FROM CONSTRUCTION OF NATURAL GAS FACILITIES.
- SOUTHWEST GAS CORPORATION, IT'S CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM, USING BEST MANAGEMENT PRACTICES DETAILED ON THIS SHEET.
- ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF SOUTHWEST GAS CORPORATION, IT'S CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE LISTED BMPS ON THIS SHEET DOT NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE CLARK COUNTY CODE - CHAPTER 24.40/STORM SEWER SYSTEM DISCHARGE AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
- ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

- NOTE:
- CONTRACTOR IS TO CLEAN DRAIN INLET FILTER AFTER EVERY STORM.
 - CONTRACTOR IS TO REMOVE FABRIC JUST PRIOR TO PAVING.



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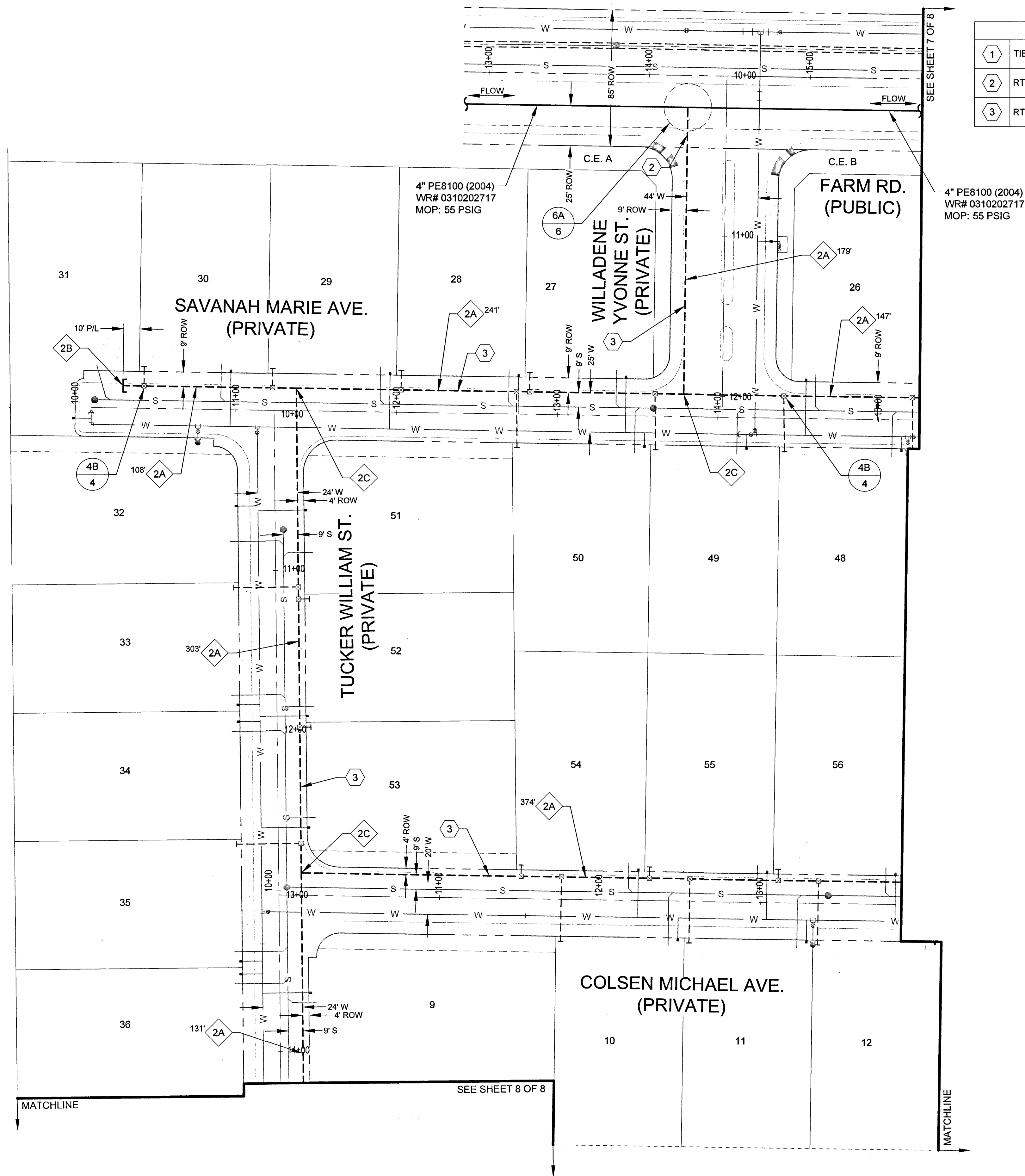
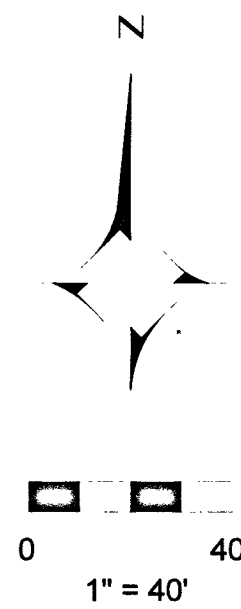
REVISIONS				
NO.	DESCRIPTION	BY	DATE	APPVD.
1	PERMIT INFORMATION			
2	ISOLATION AREA			
3	LOCATION			
4	ATLAS OR TILE			
5	CITY OF LAS VEGAS			
6	TAX CODE: 02-0200			
7	ISO_21_DIST_327			
8	T19S R60E S18			
9	M.D.M.			
10	x579y562			

D_N_VALLEY_W	
SYSTEM MAOP:	60
SYSTEM MOP:	55
N/A	
SYSTEM MAOP:	
SYSTEM MOP:	

JOB TYPE	
HP SERVICE	☐
DISTRIBUTION	☒
FEEDER	☐
TRANS. BY DEF	☐
TRANS > 20%	☐

WR NO.	
3796565	
RELATED WR NO.S	
N/A	

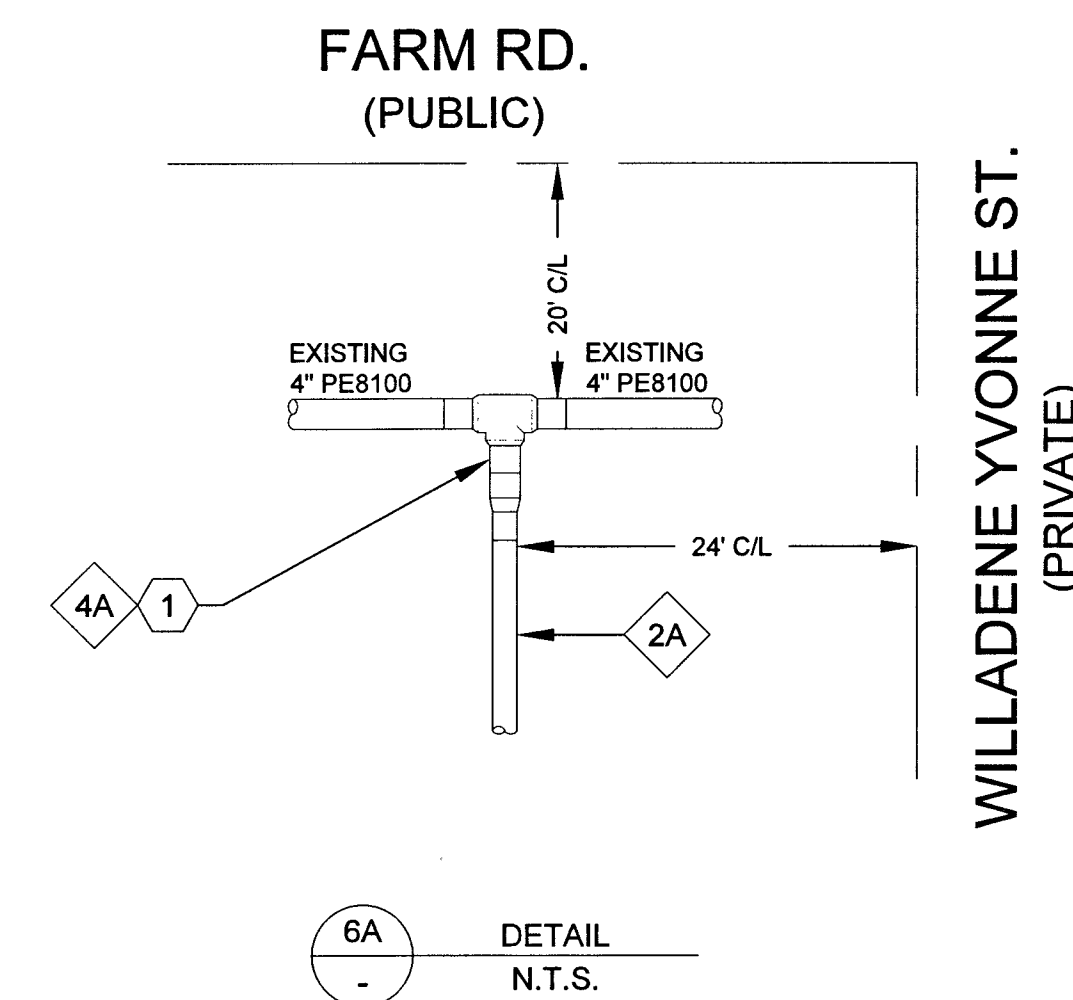
ENGINEER/TECHNICIAN	DAVID FRIEDLANDER	PHONE: (702)365-2203
ACCOUNT REP.	TONY STIPANOV	PHONE: (702)365-2053
PROJECT CONTACT	DAVE VON OY	PHONE: (702)379-7577
SHEET NO.	5 OF 8	SCALE N.T.S.
DWN. BY	SEI	CHKD. BY DF
APPVD. BY	BWJ	
FARM HUALAPAI		
L18-02739	107Y5104	Sheet 39 of 42



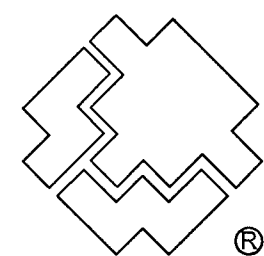
CONSTRUCTION NOTES	
1	TIE NEW 2" PE8100 TO EXISTING 4" PE8100 (2004), SEE DETAIL "6A"
2	RTC STANDARD 500.5, 18' PAVEMENT CUT & REPAIR
3	RTC STANDARD 503

4" DISTRIBUTION MATERIALS LIST					
CODE	DESIGN QTY.	AS-BUILT QTY.	STOCK ID	DESCRIPTION	SEAM COATING
4A	1	0	160-8174	4"X2" PE HIGH VOLUME TAPPING TEE	N/A N/A

2" DISTRIBUTION MATERIALS LIST					
CODE	DESIGN QTY.	AS-BUILT QTY.	STOCK ID	DESCRIPTION	SEAM COATING
2A	1,483'	0'	100-5101	2" PE 8100 PIPE	N/A N/A
2B	1	0	140-3060	2" PE CAP	N/A N/A
2C	3	0	140-3074	2" PE FULL FLOW TEE	N/A N/A



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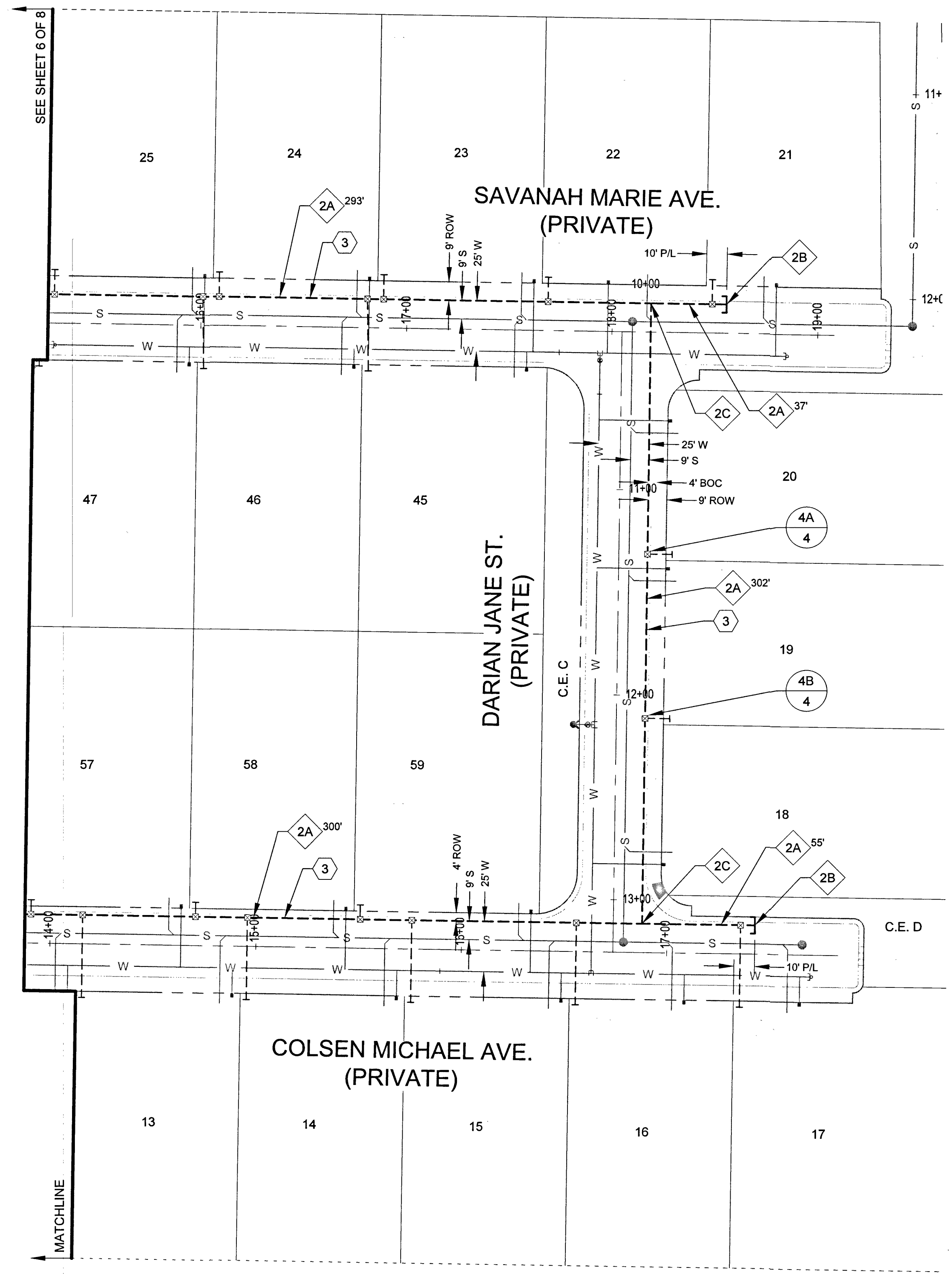
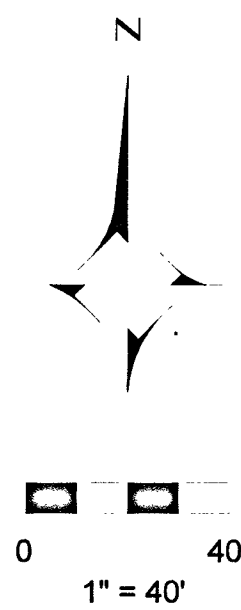
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				SYSTEM MOP: 55	DISTRIBUTION ☒		PROJECT CONTACT DAVE VON OY	PHONE: (702)379-7577
					FEEDER ☐	RELATED WR NO.S	SHEET NO. 6 OF 8	DATE 03/27/2019
					TRANS. BY DEF ☐		SCALE 1" = 40'	APPVD. BY BWJ
					TRANS > 20% ☐		CHKD. BY DF	
PERMIT INFORMATION				N/A		N/A	FARM HUALAPAI	
CITY OF LAS VEGAS		ISOLATION AREA	LOCATION	ATLAS OR TILE	SYSTEM MAOP: N/A			
TAX CODE: 02-0200		ISO_21_DIST_327	T19S R60E S18	x579y562	SYSTEM MOP: N/A			
			M.D.M.					

L18-02739

107Y5104

Sheet 40 of 40



CONSTRUCTION NOTES	
1	TIE NEW 2" PE8100 TO EXISTING 4" PE8100 (2004), SEE DETAIL "6A"
2	RTC STANDARD 500.5
3	RTC STANDARD 503

2" DISTRIBUTION MATERIALS LIST						
CODE	DESIGN QTY.	AS-BUILT QTY.	STOCK ID	DESCRIPTION	SEAM	COATING
2A	987	0	100-5101	2" PE 8100 PIPE	N/A	N/A
2B	2	0	140-3060	2" PE CAP	N/A	N/A
2C	2	0	140-3074	2" PE FULL FLOW TEE	N/A	N/A

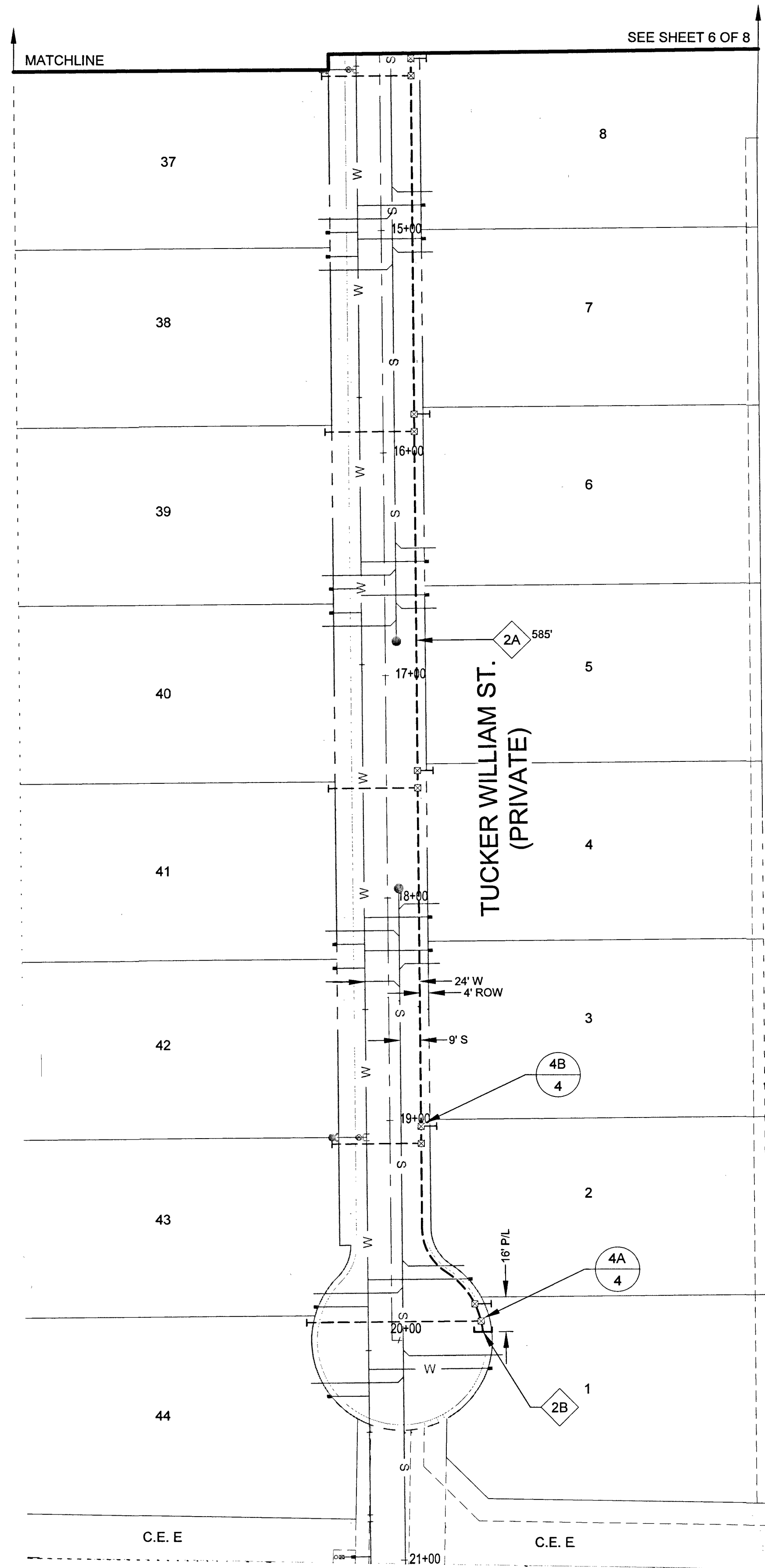
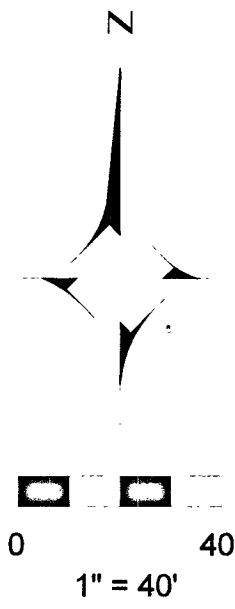


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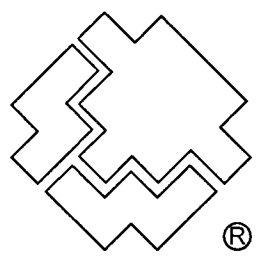
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						SYSTEM MAOP:	60	HP SERVICE	☐	3796565	ACCOUNT REP.	TONY STIPANOV		PHONE: (702)365-2053		
						SYSTEM MOP:	55	DISTRIBUTION	☒		PROJECT CONTACT	DAVE VON OY		PHONE: (702)379-7577		
											SHEET NO.	7 OF 8	SCALE	1" = 40'	DATE	03/27/2019
NO.	DESCRIPTION				BY	DATE	APPVD.				DWN. BY	SEI	CHKD. BY	DF	APPVD. BY	BWJ
PERMIT INFORMATION		ISOLATION AREA	LOCATION	ATLAS OR TILE	N/A		FEEDER		☐	RELATED WR NO.S		FARM HUALAPAI				
CITY OF LAS VEGAS		ISO_21_DIST_327	T19S R60E S18	x579y562	SYSTEM MAOP:	N/A	TRANS. BY DEF		☐	N/A						
TAX CODE: 02-0200			M.D.M.		SYSTEM MOP:	N/A	TRANS > 20%		☐							
L18-02739 107Y5104 Sheet 41 of 42																



CONSTRUCTION NOTES	
3	RTC STANDARD 503

2" DISTRIBUTION MATERIALS LIST						
CODE	DESIGN QTY.	AS-BUILT QTY.	STOCK ID	DESCRIPTION	SEAM	COATING
2A	585'	0'	100-5101	2" PE 8100 PIPE	N/A	N/A
2B	1	0	140-3060	2" PE CAP	N/A	N/A



SOUTHWEST GAS CORPORATION

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REVISIONS						D_N_VALLEY_W		JOB TYPE	WR NO.	ENGINEER/TECHNICIAN	DAVID FRIEDLANDER	PHONE: (702)365-2203				
						SYSTEM MAOP:	60	HP SERVICE	☐	3796565	ACCOUNT REP.	TONY STIPANOV	PHONE: (702)365-2053			
						SYSTEM MOP:	55	DISTRIBUTION	☒		PROJECT CONTACT	DAVE VON OY	PHONE: (702)379-7577			
											SHEET NO.	8 OF 8	SCALE	1" = 40'	DATE	03/27/2019
NO.	DESCRIPTION					BY	DATE	APPVD.			DWN. BY	SEI	CHKD. BY	DF	APPVD. BY	BWJ
PERMIT INFORMATION		ISOLATION AREA	LOCATION	ATLAS OR TILE		N/A		FEEDER		☐	RELATED WR NO.S		FARM HUALAPAI			
CITY OF LAS VEGAS		ISO_21_DIST_327	T19S R60E S18	x579y562		SYSTEM MAOP:	N/A	TRANS. BY DEF		☐	N/A					
TAX CODE: 02-0200						SYSTEM MOP:	N/A	TRANS > 20%		☐						
L18-02739																107Y5104

L18-02739

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