

VICINITY MAP
NOT TO SCALE

(50% DESIGN)
KAHLE DRIVE
COMPLETE STREET RECONSTRUCTION PROJECT
STATELINE, DOUGLAS COUNTY, NEVADA
EIP# 01.01.01.0115



DOUGLAS COUNTY ENGINEER

SIGNATURE _____ DATE _____

OLIVER PARK GENERAL IMPROVEMENT DISTRICT

SIGNATURE _____ DATE _____

KINGSBURY GENERAL IMPROVEMENT DISTRICT (KGID)

SIGNATURE _____ DATE _____

SEWER:
DOUGLAS COUNTY, LAKE TAHOE SEWER
AUTHORITY
391 US-50,
ZEPHYR COVE, NV 89448
775-588-3558

WATER:
KINGSBURY GENERAL IMPROVEMENT DISTRICT
255 KINGSBURY DRIVE SUITE A
STATELINE, NV 89449
775-588-3548
775-588-3541 (FAX)

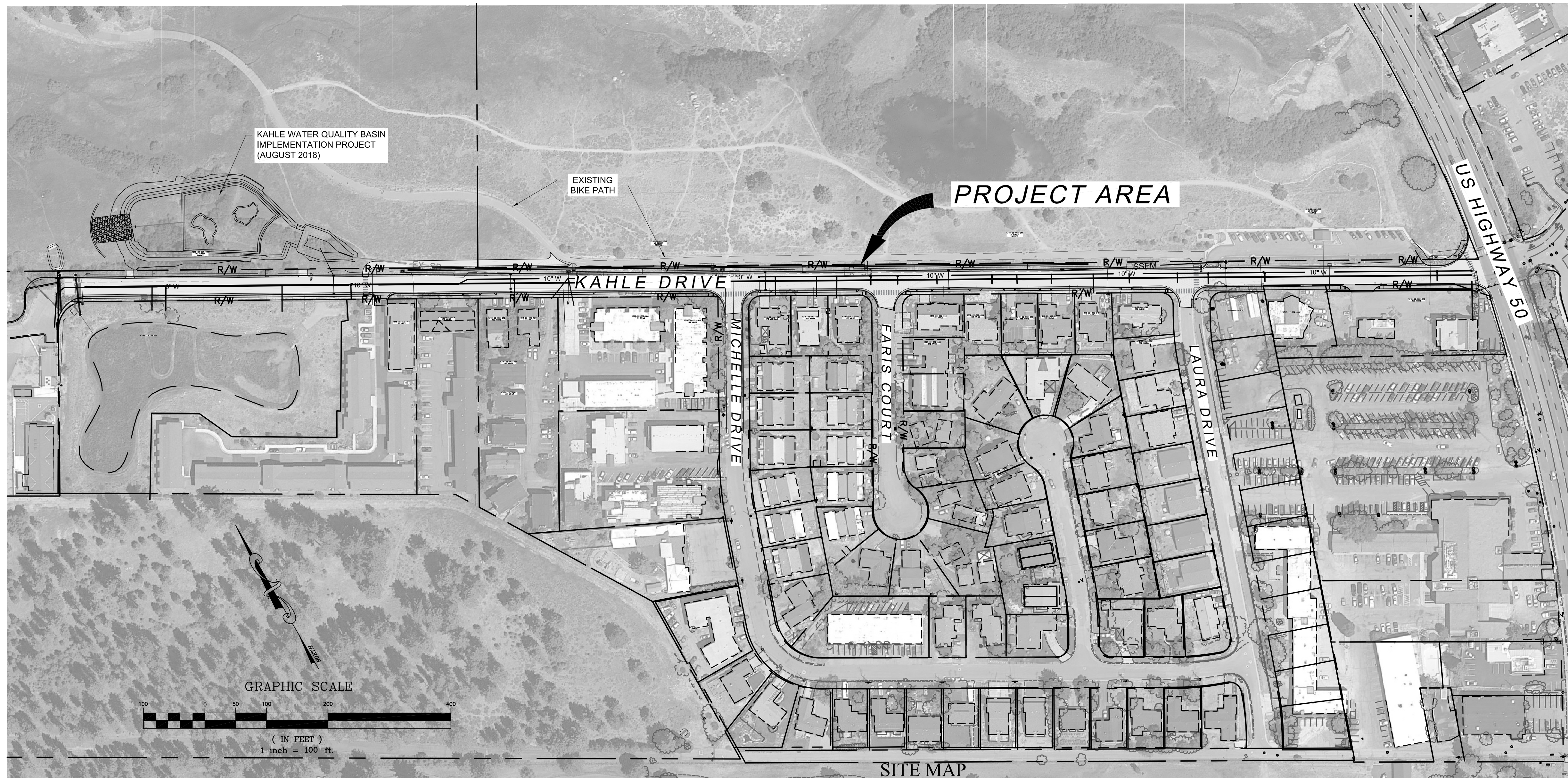
FIRE PROTECTION:
TAHOE DOUGLAS FIRE PROTECTION DISTRICT
193 ELKS POINT RD,
ZEPHYR COVE, NV 89448
775-588-3591

POWER:
NV ENERGY
6100 NEIL ROAD
RENO, NV 89511
775-834-4444

GAS:
SOUTHWEST GAS CORPORATION
400 EAGLE STATION LANE
CARSON CITY, NV 89701
775-882-2126

CABLE:
CHARTER COMMUNICATIONS
9335 PROTOTYPE DRIVE
RENO, NV 89521-8992
775-850-1291

TELEPHONE:
FRONTIER / VERIZON
1520 CHURCH STREET
GARDNERVILLE, NV 89410
775-781-2325



SITE MAP

1" = 100'

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KAHLE DRIVE
COMPLETE STREET RECONSTRUCTION PROJECT
STATELINE, DOUGLAS COUNTY, NEVADA

NEVADA TAHOE CONSERVATION DISTRICT
400 DORLA COURT
ZEPHYR COVE NEVADA 89448

Revisions:

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Sheet Title:
**TITLE
SHEET**

Project: **KAHLE DRIVE**
Drawn By: **JGP**
Checked By: **DLH**
Scale: **AS NOTED**
Date: **APRIL 2019**

Sheet Number:
C1.0

GENERAL NOTES:

- ALL WORK AND MATERIALS SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (‘ORANGE BOOK’). ANY WORK OR MATERIALS NOT IN CONFORMANCE WITH THESE SPECIFICATIONS AND DETAILS, AND NOT APPROVED BY THE ENGINEER PRIOR, ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTOR.
- ONE WEEK PRIOR TO THE COMMENCEMENT OF ANY WORK, CONSTRUCTION OR INSTALLATIONS ASSOCIATED WITH THIS PERMIT, THE PERMITTEE SHALL NOTIFY THE DOUGLAS COUNTY INSPECTOR AT (775) 782-6237 OF INTENT TO BEGIN AND REQUESTS/SCHEDULE PRECONSTRUCTION MEETING AT THE PROJECT SITE WITH DOUGLAS COUNTY CONSTRUCTION INSPECTOR. FAILURE TO PROVIDE PROPER INSPECTION NOTIFICATION AS DESCRIBED ABOVE SHALL RESULT IN THIS PERMIT BECOMING INVALID AND WORK BEING STOPPED.
- CONTRACTOR'S SHALL COMPLY WITH THE REQUIREMENTS TO OBTAIN THE NECESSARY SITE IMPROVEMENT PERMITS AND SHALL COMPLY WITH THE SITE IMPROVEMENT PERMIT CONDITIONS AS FOUND ON THE BACK OF THE PERMIT FORM.
- THE APPROVED PLAN, PERMIT AND INSPECTION RECORD MUST BE ON THE JOB SITE AT ALL TIMES.
- DOUGLAS COUNTY PARKS AND RECREATION, COMMUNICATIONS, AND SHERIFF'S OFFICE IS NOT REPRESENTED BY USA DIG. WHEN THE CONTRACTOR EXCAVATES NEAR OR ADJACENT TO ANY PUBLIC FACILITY, THE CONTRACTOR SHALL CONTACT THE ADMINISTRATOR OF APPLICABLE DEPARTMENT AT PHONE NUMBER SHOWN ON CONTRACTOR WEBSITE TO REQUEST ASSISTANCE IN LOCATING THEIR UNDERGROUND FACILITIES. THIS REQUIREMENT MAY ALSO APPLY TO ANY OTHER COUNTY FACILITY/PROPERTY.
- THE CONTRACTOR SHALL OBTAIN A SURFACE AREA DISTURBANCE PERMIT FROM THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SHALL COMPLY WITH ITS REQUIREMENTS FOR DUST CONTROL ON ALL APPLICABLE PROJECTS.
- THE ENGINEER HEREBY CERTIFIES AS EVIDENCED BY A PROFESSIONAL SEAL AND SIGNATURE, THAT ALL AFFECTED UTILITY COMPANIES BOTH PUBLIC AND PRIVATE HAVE BEEN CONTACTED, ALL EXISTING AND/OR PROPOSED UTILITY LINES AND OTHER RELATED INFORMATION HAVE BEEN TRANSFERRED ONTO THESE PLANS TO THE BEST OF ENGINEER'S KNOWLEDGE AND BASED ON INFORMATION FROM THE UTILITY COMPANY. THE ENGINEER ALSO HEREBY CERTIFIES THAT ALL EXISTING AND/OR PROPOSED PUBLIC RIGHT-OF-WAY AND EASEMENTS HAVE BEEN CORRECTLY PLOTTED AND SHOWN.
- THE ENGINEER, OR LAND SURVEYOR OF RECORD SHALL CERTIFY UPON COMPLETION OF CONSTRUCTION THAT ALL PUBLIC IMPROVEMENTS (WATER AND SEWER UTILITIES, STORM DRAINAGE, CONCRETE, PAVING, STREET LIGHTS, ETC.) HAVE BEEN INSTALLED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE APPROVED PLANS, ANY CHANGES SHALL BE REFLECTED ON ‘AS-BUILT’/RECORD DRAWINGS PROVIDED BY THE ENGINEER TO THE COUNTY'S ENGINEERING DIVISION.
- THE REGISTERED ENGINEER OR LAND SURVEYOR SHALL CERTIFY THAT THE MINIMUM HORIZONTAL AND VERTICAL SEPARATIONS BETWEEN UTILITIES WITHIN PUBLIC RIGHT-OF-WAY AND EASEMENTS HAVE BEEN MAINTAINED AS REQUIRED BY LAW OR POLICY.
- THE OWNER IS RESPONSIBLE FOR ARRANGING THE RELOCATION OR REMOVAL OF ALL UTILITIES OR FACILITIES THAT RE IN CONFLICT WITH THE PROPOSED PUBLIC IMPROVEMENTS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ALL UTILITIES, POWER POLES, IRRIGATION DRY-UPS, RESET REMOVALS BY OTHERS, ETC.
- THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO EXCAVATION. CALL 811 FOR USA DIG A MINIMUM TWO WORKING DAYS PRIOR TO COMMENCING WORK.
- CONTRACTORS SHALL COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AND BARRICADING PER APPROVED TRAFFIC CONTROL PLANS.
- IF A FIRE HYDRANT IS NEEDED TO OBTAIN CONSTRUCTION WATER, THE CONTRACTOR SHALL OBTAIN A FIRE HYDRANT METER FROM DOUGLAS COUNTY PUBLIC WORKS OR APPLICABLE WATER PURVEYOR AND PAY ALL APPLICABLE FEES AND CHARGES.
- IF DURING THE CONSTRUCTION OF A PUBLIC FACILITY, THE CONTRACTOR FAILS TO OR IS UNABLE TO COMPLY WITH A REQUEST TO THE ENGINEERING INSPECTOR, AND IT IS NECESSARY FOR COUNTY FORCES TO DO WORK THAT IS NORMALLY THE CONTRACTOR'S RESPONSIBILITY, THE COUNTY SHALL BE JUSTIFIED IN BILLING THE CONTRACTOR. EACH INCIDENT REQUIRING WORK BY COUNTY FORCES SHALL BE COVERED BY A SEPARATE BILLING AT THE CURRENT APPLICABLE RATES.
- THE CONTRACTOR IS ADVISED THAT DAMAGE TO PUBLIC SERVICES OR SYSTEMS AS A RESULT OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AND INSPECTED BY THE ENGINEERING INSPECTOR. UNLESS OTHERWISE APPROVED BY THE COUNTY, ALL REPAIRS SHALL BE DONE WITHIN 24 HOURS. THE CONTRACTOR IS ADVISED THAT ANY COSTS RELATED TO REPAIR OR REPLACEMENT OF DAMAGED PUBLIC UTILITIES OR SYSTEMS AS A RESULT OF CONTRACTOR'S ACTIVITIES SHALL BE PAID BY THE CONTRACTOR.
- RELOCATION AND/OR ABANDONMENT OF SEWER, WATER OR GAS APPURTENANCES SHALL CONFORM TO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AS ADOPTED BY DOUGLAS COUNTY. KGID, OLIVER PARK GID, NDOT AND/OR TRPA REQUIREMENTS FOR THE THIS PROJECT.

GENERAL WATER UTILITY NOTES:

- UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THE PLANS, HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CALL UNDERGROUND SERVICES ALERT, USA, AT (1-800-227-2600) AT LEAST TWO WORKING DAYS PRIOR TO ANY EXCAVATION.
- LOCATE ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE NEW WORK IN ADVANCE SO AS TO ALLOW ADJUSTMENT, REALIGNMENT AND/OR REDESIGN OF THE NEW WORK AROUND THE EXISTING UTILITY AND/OR STRUCTURE. UTILITY LINES WHICH CONFLICT WITH THE NEW WORK SHALL BE REROUTED AS REQUIRED AFTER UTILITY AGENCY APPROVALS ARE OBTAINED. TEMPORARY REROUTES SHALL BE MADE PERMANENT AFTER ALL NEW WORK HAS BEEN COMPLETED IN ACCORDANCE WITH APPLICABLE STANDARDS. REROUTING OF WATER LINES SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS.
- AT NO TIME SHALL THE CONTRACTOR CLOSE OFF ANY UTILITY, OPEN ANY VALVE, OR TAKE ANY OTHER ACTION WHICH WOULD AFFECT THE OPERATION OF THE EXISTING SYSTEM. ONLY AUTHORIZED UTILITY PERSONNEL ARE ALLOWED TO OPERATE VALVES OR OTHER WATER SYSTEM COMPONENTS. APPROPRIATE ADVANCE APPROVAL BY THE UTILITY COMPANY IS REQUIRED PRIOR TO THE INTERRUPTION OF THE EXISTING WATER SYSTEM. CONTACT KINGSBURY G.I.D. AT (775) 782-4215.
- THE CONTRACTOR SHALL UTILIZE EVERY MEANS POSSIBLE TO MINIMIZE WATER SERVICE OUTAGES TO CUSTOMERS. THE CONTRACTOR SHALL NOTIFY CUSTOMERS OF PLANNED WATER OUTAGES AT LEAST 24 HOURS PRIOR TO AN OUTAGE. THE NOTICE SHALL INCLUDE THAT OUTAGES WILL BE OUT DURING THE DAY BETWEEN 8:00 AM AND 4:00 PM AND NAME AND PHONE NUMBER OF CONTRACTOR FOR QUESTIONS AND CONCERNS. IF WATER SERVICE IS INTERRUPTED FOR A PERIOD OF TIME GREATER THAN 9:00 AM TO 4:00 PM, THE CONTRACTOR SHALL PROVIDE BOTTLED DRINKING WATER TO THE UTILITY CUSTOMERS AT A LOCATION CONVENIENT TO THE CUSTOMERS AFFECTED, AND AS APPROVED BY THE OWNER. ALL NOTICES SHALL BE POSTED ON NOTICE BOARDS AND PLACED FACING TRAFFIC AT ALL STREET ENTRANCES TO THE PROPOSED WORK AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT THE INTEGRITY OF EXISTING WATER LINES DURING CONSTRUCTION UNTIL THE POINT WHICH THE NEW WATER LINES ARE PLACED INTO SERVICE AND THE OLD LINES ARE ABANDONED IN PLACE. IN SOME CASES THE CONTRACTOR MAY BE REQUIRED TO INSTALL TEMPORARY SERVICE LINES TO MAINTAIN SERVICE TO UTILITY CUSTOMERS.
- PROVIDE ALL MISCELLANEOUS PIPE, FITTINGS, AND APPURTENANCES AS REQUIRED TO COMPLETE THE UTILITY WORK AS SHOWN.
- TRENCH EXCAVATION AND BACKFILL SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02315. THE CONTRACTOR SHALL BE RESPONSIBLE OR ALL EXCAVATION AND SHORING PROCEDURES. PIPE PLACEMENT SHALL BE BY OPEN TRENCH UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE PLAN OR BY APPROVED ALTERNATIVE. SHORING, BRACING, AND SHEETING SHALL BE AS SET FORTH IN THE RULES, ORDERS, AND REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA).
- THE MAXIMUM LENGTH OF OPEN TRENCH AT ANY ONE LOCATION IS NOT TO EXCEED 200 FEET, PROVIDED THAT ALL PROPER BARRICADES AND SAFETY PROCEDURES HAVE BEEN ADDRESSED. THE TRENCH IS CONSIDERED TO BE OPEN UNTIL BACKFILL IS COMPLETED TO ADJACENT FINISHED GRADE ELEVATION.
- COMPLETE BACKFILL OF TRENCH IN STREET RIGHT OF WAY AT THE END OF EACH WORKDAY. USE TEMPORARY PATCH MATERIAL OR STEEL PLATES WHERE REQUIRED. FURNISH AND INSTALL TRENCH BRACING AND STEEL PLATES WHERE REQUIRED. PROVIDE SAFE AND CONVENIENT VEHICULAR AND PEDESTRIAN PASSAGE ACROSS TRENCHES WHERE REQUIRED. MAINTAIN ACCESS TO EMERGENCY FACILITIES AT ALL TIMES.
- MISCELLANEOUS UTILITY CONDUIT, NOT OTHERWISE DETAILED, SHALL BE BEDDED IN CLASS A PIPE BEDDING AS SPECIFIED IN SSPWC SECTION 200.03. THE MAXIMUM LOOSE LIFT THICKNESS SHALL BE 6 INCHES.

MISCELLANEOUS WATER PIPE SHALL BE POLYVINYL CHLORIDE (PVC), AWWA, C900, PER SSPWC SECTION 203.00. FITTINGS, VALVES, AND APPURTENANCES SHALL MEET AWWA SPECIFICATIONS. WATER PIPE, FITTINGS AND APPURTENANCES SHALL BE INSTALLED PER APPLICABLE PARTS OF SSPWC SECTIONS 305.00 AND 307.00. DUCTILE IRON PIPELINES MUST BE PRESSURE AND LEAK TESTED ACCORDING TO AWWA STANDARD C900 AND PVC PIPELINES MUST BE PRESSURE TESTED ACCORDING TO AWWA STANDARD C905 PER NAC 445A.6745 (7). FOR OTHER MATERIALS, THE PIPELINES MUST BE PRESSURE TESTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PER NAC 445A.6715 (7)(c).

- ALL WATER MAINS SHALL BE CLASS 235 (DR 18), OR 305 (DR 14) C900 PVC, AS SPECIFIED ON THE PLANS. ALL WATER SERVICES 2" OR LESS SHALL BE IPS PE PIPE; SERVICES 3" OR GREATER SHALL BE CLASS 235, C900 PVC OR AS SPECIFIED ON THE PLANS.
- ALL WATER MAINS SHALL BE TESTED FOR PRESSURE AND LEAKAGE PER AWWA C605.
- BACTERIOLOGICAL TESTING FOR POTABLE WATER LINE CONSTRUCTION SHALL BE PERFORMED PER AWWA C651. KGID SHALL BE RESPONSIBLE FOR PERFORMING AND FUNDING UP TO TWO BACTERIOLOGICAL TESTS PER RUN OF PIPE CONSTRUCTED, IF MORE THAN TWO, THE COST SHALL BE PLACED UPON THE CONTRACTOR.
- ALL BURIED IRON PIPE, FITTINGS, AND VALVES SHALL BE WRAPPED WITH POLYETHYLENE PIPE WRAP IN ACCORDANCE WITH AWWA C105, METHOD A.
- NOTIFY THE FIRE DEPARTMENT OF FIRE HYDRANTS AFFECTED DURING CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH ALL CROSSING DETAILS ON SHEET D3 TO MEET NAC 445A.6715 THROUGH NAC 445A.6718, POTHOLE AS REQUIRED.
- PER NAC 445A.367146 (6), WATER MAIN MUST NOT BE PLACED INTO SERVICE AFTER ITS INITIAL CONSTRUCTION UNTIL:

- THE WATER MAIN HAS BEEN DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651.
- THE DISPOSAL OF ANY SPENT CHLORINE SOLUTIONS MUST BE COORDINATED WITH NDEP'S BUREAU OF WATER POLLUTION CONTROL (BWPC).
- ANALYSES OF THE WATER MAIN WHICH INDICATE THAT THE WATER MEETS PRIMARY DRINKING WATER STANDARDS FOR COLIFORM BACTERIA (ABSENT OF COLIFORM BACTERIA) HAVE BEEN OBTAINED AND REPORTED TO BSDW, PER AWWA STANDARD C651. TWO SETS OF CONSECUTIVE SAMPLES MUST BE TAKEN AT LEAST 24 HOURS APART FROM EVERY 1200 FEET OF MAIN, AT THE END OF THE LINE, AND FROM EACH BRANCH.

- FOR THE PURPOSE OF QUANTITY TAKE-OFFS, 6" VALVES SHOWN ON FIRE HYDRANT LATERALS WILL BE INCLUDED IN THE FIRE HYDRANT ASSEMBLY QUANTITY.
- PIPELINE DEPTHS SHALL BE INSTALLED PER PLAN TO AVOID ADDITIONAL HIGHLIGHTS IN THE WATERLINE AND TO SUPPORT AIR RELIEF VALVE LOCATIONS SHOWN IN THE PLANS.
- CONTRACTOR TO REPLACE ALL WATER SERVICE LATERALS ENCOUNTERED FROM WATERMAIN AND CONNECT TO EXISTING METER PIT PER DETAILS A/D2 AND B/D2. WATER SERVICE SEPARATIONS SHALL BE ADDRESSED PER DETAIL C/D3.
- ANY BENDS, TEES, CROSSES, ETC, WILL REQUIRE THE USE OF RESTRAINED JOINTS. REFER TO DETAIL E/D3. THRUST BLOCKS (F/D3) MAY ONLY BE USED FOR EXISTING TEES OR CROSSES THAT NEW WATERLINE TIES INTO. OWNER MUST APPROVE ALL APPLICATIONS OF THRUST BLOCKS.
- ALL EXISTING FIRE HYDRANTS NOT BEING RECONNECTED INTO NEW WATERLINE SHALL BE REMOVED. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO WHICH REMOVED EXISTING FIRE HYDRANTS ARE TO BE KEPT FOR PARTS.
- CONTRACTOR SHALL VERIFY CONSTRUCTION METHODS AND OVERALL JOB APPROACH WITH OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL SEAL ANY OPENINGS IN UNFINISHED PIPING OR APPURTENANCES AT THE END OF EACH WORKING DAY IN SUCH A MANNER AS TO PREVENT THE ENTRY OF BIRDS, OTHER ANIMALS, DIRT, TRENCH WATER, AND OTHER SOURCES OF POLLUTION OR CONTAMINATION.
- ALL RADIUS OF CURVATURE (BOTH HORIZONTAL AND VERTICAL) OF THE WATER MAIN SHALL BE INSTALLED WITHIN THE MANUFACTURER'S RECOMMENDATIONS, IF CURVATURE IS EXCEEDED, CONTRACTOR SHALL INSTALL THE APPROPRIATE STANDARD ANGLE FITTINGS INSTEAD OF DEFLECTING JOINTS OR BENDING THE PIPE EXCESSIVELY. CURVATURES AT OR NEAR MANUFACTURER'S RECOMMENDATIONS HAVE BEEN IDENTIFIED ON PLANS - ALL OTHER CURVATURES NOT LABELED ARE WITHIN MANUFACTURER'S RECOMMENDATIONS AS DESIGNED.
- ALL PE TUBING SHALL BE INSTALLED PER AWWA STANDARD C901.

ACCESS NOTES:

- IF LOCAL JURISDICTION SPECIFICALLY APPROVES USE OF DUCTILE OR GRAY IRON PIPING MATERIALS, THEY SHALL BE MANUFACTURED IN ACCORDANCE WITH THE FOLLOWING MINIMUM AWWA STANDARDS: C-151 PRESSURE CLASS 350, ALL DUCTILE IRON PIPE, VALVES, FITTINGS AND APPURTENANCES SHALL BE SEAL COATED WITH POLY WRAP. ALL FITTINGS SHALL BE 250 PSI MINIMUM PRESSURE RATING.
- IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES EXISTING AND APPROVED, THE SANITARY LINE SHALL BE ENCASED IN A POLY-WRAPPED STEEL, CASING ALLOWABLE PIPE PRODUCTS ARE PVC SDR 25 OR SDR 35 PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATER SERVICE MECHANICAL JOINTS FOR AT LEAST 10 FEET ON EACH SIDE OF THE CROSSING. THE MINIMUM CLEARANCE BETWEEN PROPERLY MITIGATED LINES IS 6 INCHES. IF A POTABLE WATER MAIN WILL CROSS ABOVE A NON-POTABLE LINE BY AT LEAST 18 INCHES OR BELOW BY ANY DEPTH, BOTH LINES REQUIRE PROTECTION. CONTRACTOR SHALL MEET REQUIREMENTS OF ANSI A21.10 OR ANSI A21.11 / MOST CURRENT NAC 445A.6715 - NAC 445A.6718.
- DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.

WATER NOTES (CONTINUED)

- ALL INSTALLATION AND MATERIALS SHALL CONFORM TO DOUGLAS COUNTY SPECIFICATIONS OR OTHER OFFICIALLY ADOPTED STANDARDS. WATER SERVICE LINES DOWNSTREAM OF METERS 1" AND SMALLER SHALL BE TYPE K COPPER; 2" AND LARGER MAY BE TYPE K COPPER OR PVC. FIRE RIGID AND SERVICE LINES ABOVE 4 INCH DIAMETER AND LINES IN RIGHT-OF-WAY SHALL BE PVC C900. MINIMUM DR18. IF DUCTILE IRON IS APPROVED FOR USE BY DOUGLAS COUNTY, CONFORM TO AWWA C-151 PRESSURE CLASS 350. ALL PIPE AND FITTINGS PROPOSED OR INSTALLED SHALL BEAR A NSF (NATIONAL SANITARY FOUNDATION) STAMP OR SEAL AFFIXED TO THE MATERIAL AND MUST BE THIRD PARTY CERTIFIED AS LEAD FREE. INSTALLATION OF ALL PIPE, FITTINGS, VALVES AND SERVICES, INCLUDING TESTING AND DISINFECTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE GOVERNING JURISDICTION.
- ALL WATER MAINS, VALVES, FIRE HYDRANTS, AND APPURTENANCES SHALL BE INSTALLED TESTED AND APPROVED PRIOR TO PAVING. THE NEVADA STATE FIRE MARSHAL DIVISION SHALL INSPECT AND APPROVE ALL ON-SITE IMPROVEMENTS FOR WATER LINES SERVICING FIRE HYDRANTS AND SPRINKLER/STANDPIPE SYSTEMS.
- ALL BACKFLOW DEVICES MUST BE USC AND NSF LISTED AND CERTIFIED AS LEAD FREE.
- BEFORE THE PIPING IS FLUSHED, DISINFECTED OR SAMPLED FOR WATER QUALITY ANALYSIS, DUCTILE IRON PIPING SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA STANDARD C600, AS ADOPTED BY REFERENCE NAC 445A.663. PVC PIPING SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA STANDARD C605, AS ADOPTED BY REFERENCE 445A.663. ANY OTHER MATERIAL SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE DISTRICT BOARD OF HEALTH REFERENCE NAC 445A.67146(7). THE KGID WILL PERFORM ALL OPERATION OF EXISTING WATER VALVES. ANY OTHER OPERATION OF ISOLATION VALVES IS NOT PERMITTED BY ANY OTHER PARTY.
- EXISTING WATER SHALL REMAIN IN SERVICE WITH NO INTERRUPTIONS, UNLESS OTHERWISE PREDETERMINED WITH PURVEYOR AND AFFECTED CUSTOMER.

GENERAL UTILITY NOTES

IF LOCAL JURISDICTION SPECIFICALLY APPROVES USE OF DUCTILE OR GRAY IRON PIPING MATERIALS, THEY SHALL BE MANUFACTURED IN ACCORDANCE WITH THE FOLLOWING MINIMUM AWWA STANDARDS: C-151 PRESSURE CLASS 350, ALL DUCTILE IRON PIPE, VALVES, FITTINGS AND APPURTENANCES SHALL BE SEAL COATED WITH POLY WRAP. ALL FITTINGS SHALL BE 250 PSI MINIMUM PRESSURE RATING.

IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES EXISTING AND APPROVED, THE SANITARY LINE SHALL BE ENCASED IN A POLY-WRAPPED STEEL, CASING ALLOWABLE PIPE PRODUCTS ARE PVC SDR 25 OR SDR 35 PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATER SERVICE MECHANICAL JOINTS FOR AT LEAST 10 FEET ON EACH SIDE OF THE CROSSING. THE MINIMUM CLEARANCE BETWEEN PROPERLY MITIGATED LINES IS 6 INCHES. IF A POTABLE WATER MAIN WILL CROSS ABOVE A NON-POTABLE LINE BY AT LEAST 18 INCHES OR BELOW BY ANY DEPTH, BOTH LINES REQUIRE PROTECTION. CONTRACTOR SHALL MEET REQUIREMENTS OF ANSI A21.10 OR ANSI A21.11 / MOST CURRENT NAC 445A.6715 - NAC 445A.6718.

DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.

PUBLIC STREET/RIGHT-OF-WAY IMPROVEMENT NOTES:

- ALL FRAMES, COVERS, VALVE BOXES, MANHOLES, ETC., SHALL BE INSTALLED OR ADJUSTED TO FINISH GRADE AFTER PLACING OF ASPHALTIC SURFACE COURSE BY THE CONTRACTOR, IN ACCORDANCE WITH THE LATEST DOUGLAS COUNTY STANDARD DETAILS.
- IF THE STREET PAVING CONTRACTOR IS HEREBY NOTIFIED THAT IN THE EVENT THAT THE ACCEPTANCE OF THE PUBLIC STREET PAVING IS DELAYED, SIX MONTHS OR MORE AFTER THE PAYMENT IS INSTALLED, THE PERMITTEE/CONTRACTOR SHALL APPLY A SEAL COAT TO THE PAVEMENT. TYPE OF MATERIAL AND RATE OF APPLICATION WILL BE DIRECTED BY THE DOUGLAS COUNTY ENGINEERING DEPARTMENT.
- A STANDARD RESIDENTIAL DRIVEWAY APPROACH SHALL BE CONSTRUCTED TO A MAXIMUM WIDTH OF 24 FEET UNLESS SPECIAL APPROVAL HAS BEEN OBTAINED.

SANITARY SEWER NOTES:

- CONTRACTOR SHALL VERIFY ALL INVERT ELEVATIONS BEFORE PROCEEDING WITH UTILITY TRENCHING. STEPS SHALL NOT BE INSTALLED WITHIN THE MANHOLE.
- ALL SEWER MAINS AND LATERALS IN THE RIGHT-OF-WAY/EASEMENT SHALL BE PVC OR HDPE UNLESS OTHERWISE NOTED.
- FLEXIBLE TRANSITION COUPLINGS MAY BE USED WHEN CONNECTING SEWER MAINS TO EXISTING SEWER MAINS, PER SEWER UTILITY APPROVAL.
- SEWER MANHOLE MARKERS SHALL BE INSTALLED WHEN MANHOLES ARE LOCATED OUTSIDE OF THE PAVED SURFACE. SEWER MANHOLE MARKERS SHALL BE GREEN CARSONITE UTILITY MARKERS 5'-2" WITH MANHOLE DECAL (688-MH) OR APPROVED EQUAL. PLACE MARKERS WITHIN EASEMENT IN CLOSE PROXIMITY TO MANHOLE OR AS DIRECTED BY THE SEWER UTILITY.
- THE CONTRACTOR SHALL INSTALL A PLUG AT THE POINT OF EXTENSION OF A SEWER MAIN PRIOR TO THE START OF CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL ALL LINES HAVE BEEN INSPECTED, TESTED, CLEANED, FLUSHED, AND ACCEPTED BY THE SEWER UTILITY.
- SEWER LINES SHALL BE TESTED PER SECTION 336.03.07 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AN AIR PRESSURE TEST AND ALIGNMENT PER THE DOUGLAS COUNTY DESIGN CRITERIA AND STANDARDS, AND A DEFLECTION TEST PER SECTION 336.03.09 OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION SHALL BE PERFORMED ON ALL SEWER LINES.
- ALL SEWER MAINS SHALL HAVE A COLOR TELEVISION INSPECTION PRIOR TO ACCEPTANCE BY THE SEWER UTILITY AND PRIOR TO PAVING.

STORM DRAIN NOTES:

- MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION.
- PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MINIMUM COMPRESSIVE STRENGTH @ 28 DAY, (CURB AND GUTTER TRANSITION ONLY), ALL LICENSED PORTLAND CEMENT SHALL HAVE A MINIMUM PERCENT RATIO OF 0.45, AIR ENTRAINMENT 6%+1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SECTION 202.
- REINFORCING STEEL SHALL BE GRADE 40 AND 1.5 INCHES MINIMUM CLEAR COVER.
- ALL STORM DRAIN PIPE AND STRUCTURES SHALL BE CLEANED OF SEDIMENT AND DEBRIS PRIOR TO ISSUANCE OF A NOTICE OF COMPLETION OR CERTIFICATE OF OCCUPANCY. FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT, WITH MINIMAL GAPS. AS APPROVED BY THE STORM DRAIN UTILITY, PRECAST MANHOLES SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS RAM-NEK OR APPROVED EQUAL PER MANUFACTURER'S RECOMMENDATIONS.
- MANHOLES LOCATED OUTSIDE PAVED AREAS SHALL REQUIRE ALL WEATHER ACCESS ROADWAY CONSISTING OF 6 INCHES TYPE 2, CLASS B AGGREGATE BASE (CONFORMING TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SECTION 200.01.02) AND STORM DRAIN MANHOLE MARKERS BE INSTALLED. STORM DRAIN MANHOLE MARKERS SHALL BE GREEN CARSONITE UTILITY MARKER (CUM 375), 5'-2" WITH DECAL READING "STORM DRAIN MANHOLE". PLACE MARKERS ON EASEMENT LINE NEAREST TO MANHOLE OR AS DIRECTED BY STORM DRAIN UTILITY.
- GRATES SHALL BE PLACED OUTSIDE OF THE ADA TRAVELED WAY. GRATE OPENINGS SHALL NOT EXCEED 0.5 INCHES IN WIDTH OR 4 INCHES IN LENGTH. GRATES SHALL BE TRAFFIC RATED AND ADA COMPLIANT.

GRADING GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, OSHA REQUIREMENTS FOR EXCAVATION, AND SPECIAL REQUIREMENTS OF THE PERMIT. VIOLATIONS WILL RESULT IN THE STOPPAGE OF ALL WORK UNTIL THE VIOLATION IS CORRECTED.
- NO WORK SHALL BE STARTED WITHOUT FIRST NOTIFYING THE COUNTY ENGINEERING INSPECTOR AT (775) 782-6237 AT LEAST 2 WORKING DAYS BEFORE WORK IS COMMENCED.
- SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL, OR AS DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE COUNTY.
- ALL GRADING SHALL BE IN ACCORDANCE WITH THE APPROVED GEOTECHNICAL REPORT DATED DECEMBER 15, 2015.
- FILLS SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION."
- THE ENGINEER OF RECORD SHALL PROVIDE THE COUNTY AND ALL OTHER APPROPRIATE ENTITIES WITH COPIES OF ALL TEST RESULTS ON A WEEKLY BASIS AND A BOUND REPORT OF THE TEST RESULTS AND INSPECTION REPORTS, ARRANGED IN CHRONOLOGICAL ORDER, AT THE COMPLETION OF THE PROJECT. THE ENGINEER OF RECORD SHALL PROVIDE THE COUNTY WITH AN OPINION REGARDING THE CONSTRUCTION.
- FILL AREAS SHALL BE CLEARED OF ALL VEGETATION AND DEBRIS, SCARIFIED, AND BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO THE PLACING OF FILL.
- PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION OF IMPROVEMENTS.
- STREET SHALL BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY, AND IN ACCORDANCE WITH THE AIR QUALITY PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION WHEN REQUIRED.
- ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS. ALL OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STORMWATER DISCHARGE PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION.
- ALL CESSPOOLS, SEPTIC TANKS, ETC., TO BE ABANDONED SHALL BE FILLED OR REMOVED IN ACCORDANCE WITH THE STATE OF NEVADA STANDARDS AND CERTIFIED BY THE ENGINEER OF RECORD.
- EXISTING WELLS TO BE ABANDONED SHALL BE CAPPED IN ACCORDANCE WITH THE STATE OF NEVADA DIVISION OF WATER RESOURCES REGULATIONS FOR WATER WELL AND RELATED DRILLING.
- THE DEVELOPER'S ENGINEER OR SURVEYOR SHALL SET GRADE STAKES FOR ALL DRAINAGE DEVICES AND THE CONTRACTOR SHALL OBTAIN INSPECTION BEFORE PLACING CONCRETE.
- FINISHED GRADING WILL BE COMPLETED AND APPROVED, AND SLOPE PLANTING AND IRRIGATION SYSTEMS INSTALLED BEFORE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
- NO ROCK OR SIMILAR MATERIAL GREATER THAN 4" IN DIAMETER SHALL BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE GEOTECHNICAL ENGINEER IN ADVANCE AND APPROVED BY THE COUNTY.
- IN THE EVENT OF CHANGES ARISING DURING CONSTRUCTION, THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR REVIEW AND APPROVAL BY THE COUNTY. NO CHANGES IN THE DESIGN WILL BE PERMITTED UNLESS WRITTEN APPROVAL IS GIVEN BY THE COUNTY.
- EROSION CONTROL:
 - IN CASE OF EMERGENCY CALL CONTRACTOR OR ENGINEER.
 - A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT APPROVED LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES.
 - AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING FACILITIES, GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED.
 - FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
 - A SIX-FOOT HIGH PERIMETER FENCE OR A 24-HOUR GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF THE WATER IN A FACILITY EXCEEDS 18 INCHES.
 - STORMWATER SHALL BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY AND IN ACCORDANCE WITH THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION STORMWATER PERMIT.
 - CONTRACTOR SHALL PLACE HYDROSEEDING WITH TEMPORARY IRRIGATION ON ALL CUT AND FILL SLOPES AND ALL OTHER DISTURBED AREAS UNLESS OTHERWISE DIRECTED BY DOUGLAS COUNTY.

STAGING AND STOCKPILING NOTES:

- STAGING AND STOCKPILE AREAS SHALL BE LIMITED ONLY TO APPROVED AREAS AS DETERMINED BY THE ENGINEER.
- STAGING AND STOCKPILE AREAS SHALL BE PROTECTED WITH TEMPORARY BMPs AS OUTLINED IN THE MOST CURRENT TRPA HANDBOOK OF BEST MANAGEMENT PRACTICES. MATERIALS, AS WELL AS TIMING AND METHODS OF INSTALLATION, MAINTENANCE AND REMOVAL, MUST COMPLY WITH THE RECOMMENDATIONS OUTLINED IN THE HANDBOOK.
- TEMPORARY CONSTRUCTION STAGING BMPs INCLUDE, BUT ARE NOT LIMITED TO:
 - CONSTRUCTION BOUNDARY FENCING
 - VEGETATION PROTECTION
 - VEHICLE INGRESS/EGRESS MANAGEMENT
 - EROSION AND SEDIMENT CONTROL:
 - SIDEWALKKEEPING
 - DRAIN INLET PROTECTION
 - FIBER ROLLS
 - SILT FENCE
 - EROSION CONTROL BLANKET
 - HYDROMULCH, TACKIFIER AND SOIL BINDER
- MINIMUM REQUIREMENTS FOR TEMPORARY CONSTRUCTION STAGING BMPs ARE SHOWN, CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MAINTAINING AND REMOVING TEMPORARY CONSTRUCTION STAGING BMPs TO THE SATISFACTION OF THE TRPA INSPECTOR.
- UPON COMPLETION OF PROJECT, ALL STAGING AND STOCKPILE AREAS SHALL BE RESTORED TO PRE-PROJECT CONDITIONS.
- ANY AREAS DISTURBED WITHIN OR OUTSIDE THE PROJECT BOUNDARY SHALL BE REVEGETATED IN ACCORDANCE WITH THE TRPA HANDBOOK OF BEST MANAGEMENT PRACTICES AND TO THE SATISFACTION OF THE TRPA INSPECTOR.

TRPA NOTES:

- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE TRPA PERMIT.
- ALL EXISTING DISTURBED AREAS IN THE PROJECT AREA, AND AREAS DISTURBED BY CONSTRUCTION ACTIVITY, SHALL BE REVEGETATED WITH VEGETATION SPECIES IN ACCORDANCE WITH THE TRPA HANDBOOK OF BEST MANAGEMENT PRACTICES.
- TEMPORARY AND PERMANENT BMPs AS SHOWN ON THESE PLANS WILL BE INSTALLED AND MAINTAINED BY CONTRACTOR IN ACCORDANCE WITH THE TRPA HANDBOOK OF BEST MANAGEMENT PRACTICES AND TO THE SATISFACTION OF THE ENGINEER AND THE TRPA INSPECTOR.
- DUST SHALL BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE STATE AND TRPA.
- CONTRACTOR SHALL MINIMIZE THE AMOUNT OF DISTURBANCE IN NATIVE AREAS FOR COMPLETION OF WORK. IF ADDITIONAL NATIVE AREAS ARE DISTURBED, ADDITIONAL BMPs WILL BE REQUIRED.

DEWATERING NOTES:

- DEWATERING CAN BE ACCOMPLISHED BY RECOMMENDATIONS MADE BY WELSH HAGEN ASSOCIATES. ADDITIONAL DEWATERING IS NOT ANTICIPATED DURING THE CONSTRUCTION OF THIS PROJECT. IF STAGING OR STOCKPILE AREAS ARE ENCOUNTERED AT THE BOTTOM OF THE EXCAVATION DURING CONSTRUCTION, THE CONTRACTOR SHALL CONSTRUCT COLLECTION SUMPS THAT ARE APPROXIMATELY 24" DEEP BY 36" LONG AND PROVIDE ALL NECESSARY PUMPING AND APPURTENANCES REQUIRED TO KEEP FREE OF STANDING WATER. A SUBMERSIBLE PUMP OR SUCTION HOSE SHALL BE PLACED IN THE SUMP AND FILLED WITH 2" DRAIN RIGID COVERED WITH FILTER FABRIC. THE PUMP SHALL BE OPERATED TO MAINTAIN THE GROUNDWATER LEVEL BELOW THE BOTTOM OF THE TRENCH UNTIL THE BEDDING AND BACKFILL TO 1' ABOVE THE GROUNDWATER IS COMPLETED EXCEPT IN THE AREA OF THE SUMP. THE SUMP SUCTION HOSE SHALL BE REMOVED AND THE AREA OF THE SUMP IMMEDIATELY BACKFILLED BEFORE THE GROUNDWATER LEVEL RISES. FREQUENCY OF THE SUMPS ALONG THE TRENCH LENGTH SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE RATE OF WATER ENCOUNTERED. MEANS AND METHODS OF CONSTRUCTION ARE THE CONTRACTORS SOLE RESPONSIBILITY.
- DEWATERING WATER SHALL BE DISPOSED IN ACCORDANCE WITH ALL LOCAL AND FEDERAL REGULATIONS. ADDITIONAL PERMITS AND PLANS MAY APPLY.

ABBREVIATIONS

NOT ALL ABBREVIATIONS LISTED ARE USED IN THESE PLANS

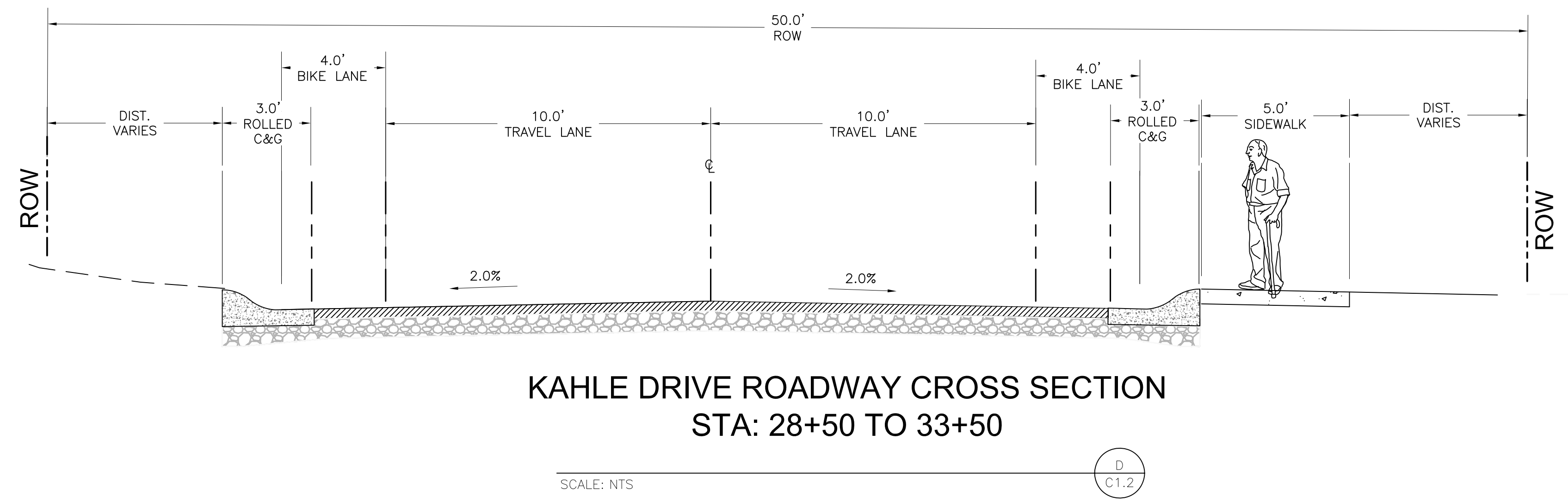
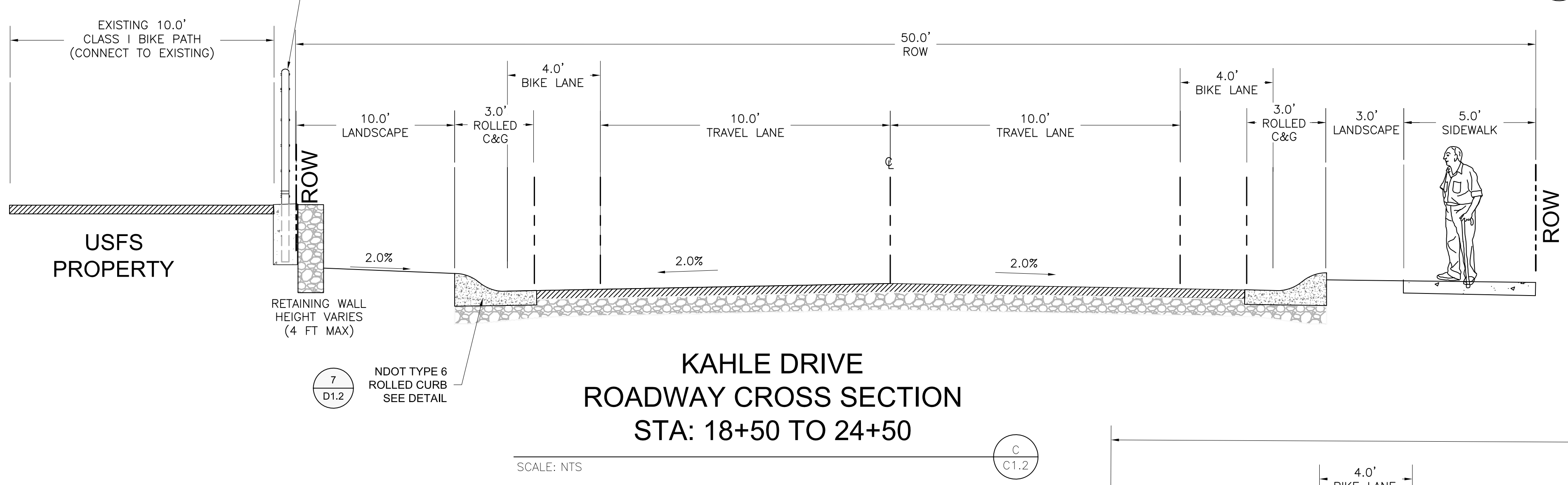
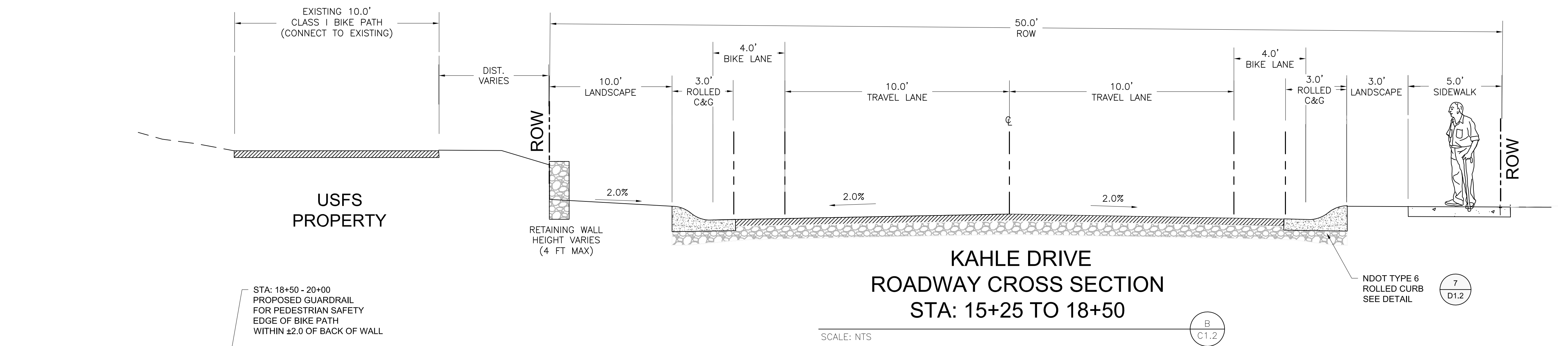
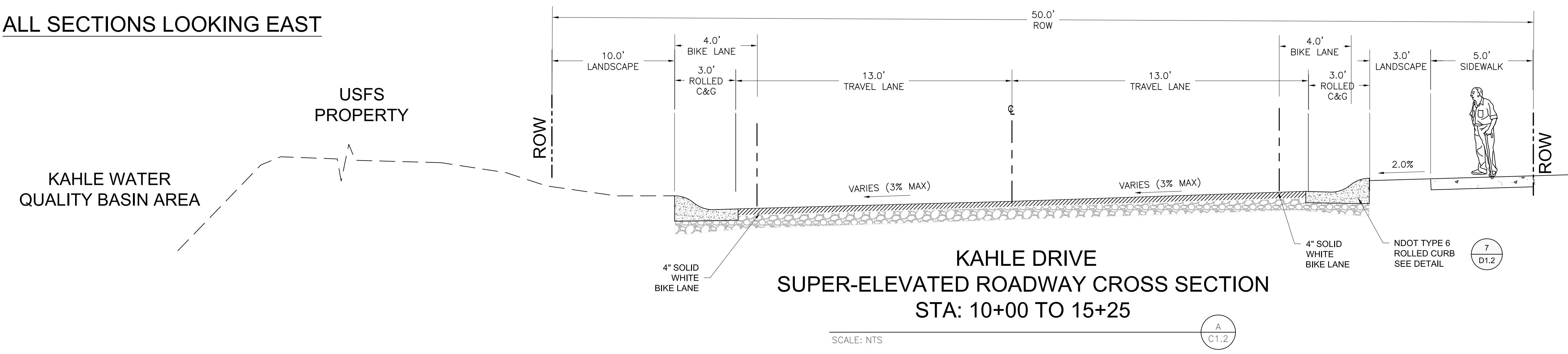
A.B.	AGGREGATE BASE
A.C.	ACRE
AC	ASPHALT CONCRETE
@	AT
APPROX.	APPROXIMATE
AVG.	AVERAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
B/C	BEGIN CURVE
C&G	CURB AND GUTTER
CATV	CABLE TELEVISION
C.B.	CATCH BASIN
CL	CENTERLINE
CLR.	CLEAR
CO.	CLEAN OUT
COM.	COMMUNICATION
CONST.	CONSTRUCT
CF	CUBIC FEET
CMP	CORRUGATED METAL PIPE
CY	CUBIC YARD
D.G.	DECOMPOSED GRANITE
FL	FLANGE COUPLER ADAPTER
F	EAST
D/C	DEEP DYNAMIC COMPACTION
DI	DROP INLET
DIA.	DIAMETER
DR	DRAWING
DWG	DRAWING
DW, DWY	DRIVEWAY
EA.	EACH
EAE	EMERGENCY ACCESS EASEMENT
EASE.	EASEMENT
E	EAST
ELEC	ELECTRIC
EP	EDGE OF PAVEMENT
ELEV.	ELEVATION
EC	END CURVE
EX., EXIST.	EXISTING
F.G.	FINISH GRADE
FI	FIRE HYDRANT
FL	FLANGE COUPLER ADAPTER
F.E.S.	FLARED END SECTION
FL	FLOWLINE
FLG	FLANGED
FT.	FOOT, FEET
FOOTING	FOOTING
FV	FLUSH VALVE
°	DEGREE
G	GAS
GB	GRADE BREAK
GDPE	HIGH DENSITY POLYETHYLENE
HDPE-NP	NON-PERFORATED HIGH DENSITY POLYETHYLENE
HDPE-P	PERFORATED HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
HOR., HORIZ.	HORIZONTAL
IN.	INCH
INT., INTX.	INTERSECTION
IR	INVERT ELEVATION
IRR.	IRRIGATION
JT	JOINT TRENCH
KGID	KINGSBURY GENERAL IMPROVEMENT DISTRICT
LTL	LEFT
LEN.	LENGTH
LF	LINEAR FEET
LP	LOW POINT
LS	LUMP SUM
MAX	MAXIMUM
M.D.D.	MAXIMUM DRY DENSITY
MJ	MECHANICAL JOINT
M	MILE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
N	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NUM.	NUMBER
O.C.	ON CENTER
O.G.	ORIGINAL GRADE
OH(E/T)	OVERHEAD ELECTRIC OR TELEPHONE LINES
PT.	PORTLAND CEMENT, PT. COMPOUND CURVE,
PCC	POINT OF CURVATURE
PC	POINT OF INFLECTION
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
POC	POINT ON CURVE
POS	POSITIVE
PRC	POINT OF REVERSE CURVE
PRE	PRIVATE ROAD EASEMENT
P.S.I.	POUNDS PER SQUARE INCH
PL	PROPERTY LINE
PO	PUSH ON
P.U.E.	PUBLIC UTILITY EASEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REVEG	REVEGETATION
RHGD	ROUND HILL GENERAL IMPROVEMENT DISTRICT
RT/R	RIGHT-OF-WAY
R/W, ROW	RIGHT-OF-WAY
SS	SANITARY SEWER, STAINLESS STEEL
SSCO.	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
S	SLOPE
	SOUTH
SF	SQUARE FOOT/FEET
SQ. FT.	SQUARE FOOT/FEET
SDT	SHEET
SY	SQUARE YARD
STD.	STANDARD
SDR	STANDARD DIMENSION RATIO
SSPWC	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
STA	STATION
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
TC	TOP BACK OF CURB
TC	TOP OF CURB
TELE	TOP OF WALL
TW	TOP OF WALL
TPP.	TYPICAL
UGT	UNDERGROUND ELECTRIC LINES
UGT	UNDERGROUND TELEPHONE LINES
VC	VERTICAL CURVE
VG	VALLEY GUTTER
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INFLECTION
VPT	VERTICAL POINT OF TANGENT
W	WATER
WL	WATERLINE
W	WEST
W	WATER
WM	WATER METER

PROPOSED LEGEND:

12+00	CONSTRUCTION CONTROL LINE/CENTER LINE
SS	SANITARY SEWER MAIN
SSFM	SANITARY SEWER FORCEMAIN
W	WATERMAIN
SD	STORM DRAIN
X	FENCE
CONSTRUCTION BARRIER FENCE	
DRAINAGE SIDEWALKALE	
GRADE BREAK	
SEWER CLEANOUT	
WATER METER	
TREE REMOVAL, TYP	
MAJOR CONTOUR LINE	
MINOR CONTOUR LINE	
PROPOSED EASEMENT	
PROPOSED EDGE OF PAVEMENT	

EXISTING LEGEND:

ALL SECTIONS LOOKING EAST



KAHLE DRIVE
COMPLETE STREET RECONSTRUCTION PROJECT
STATELINE, DOUGLAS COUNTY, NEVADA

NEVADA TAHOE CONSERVATION DISTRICT
400 DORLA COURT
ZEPHYR COVE NEVADA 89448

Revisions:

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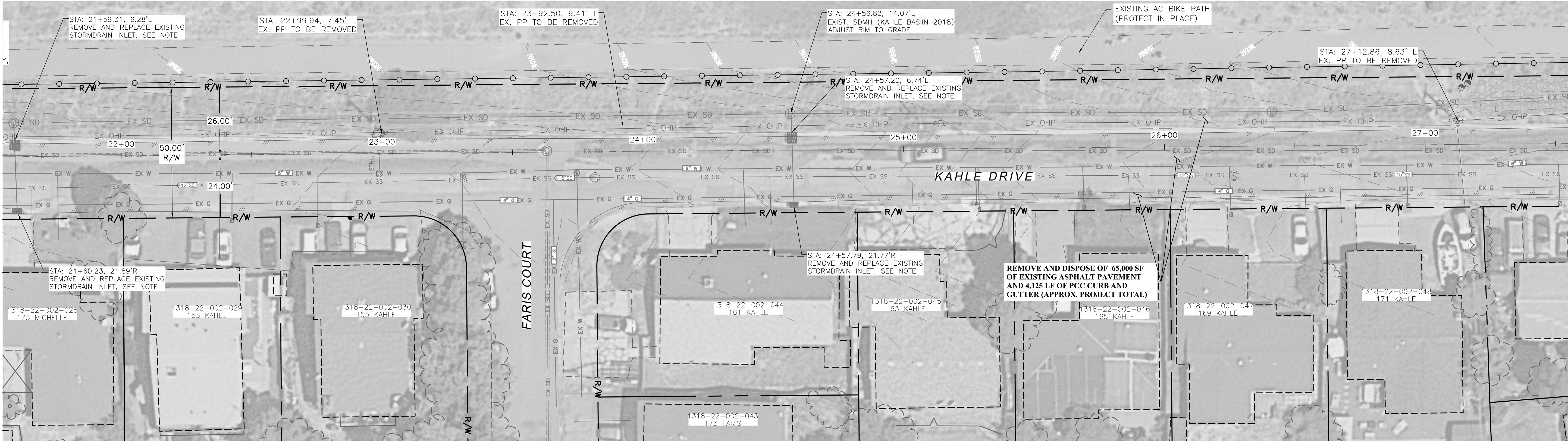
KAHLE DRIVE
ROADWAY
SECTIONS

Project:	KAHLE DRIVE
Drawn By:	JGP
Checked By:	DLH
Scale:	AS NOTED
Date:	APRIL 2019

Sheet Number:

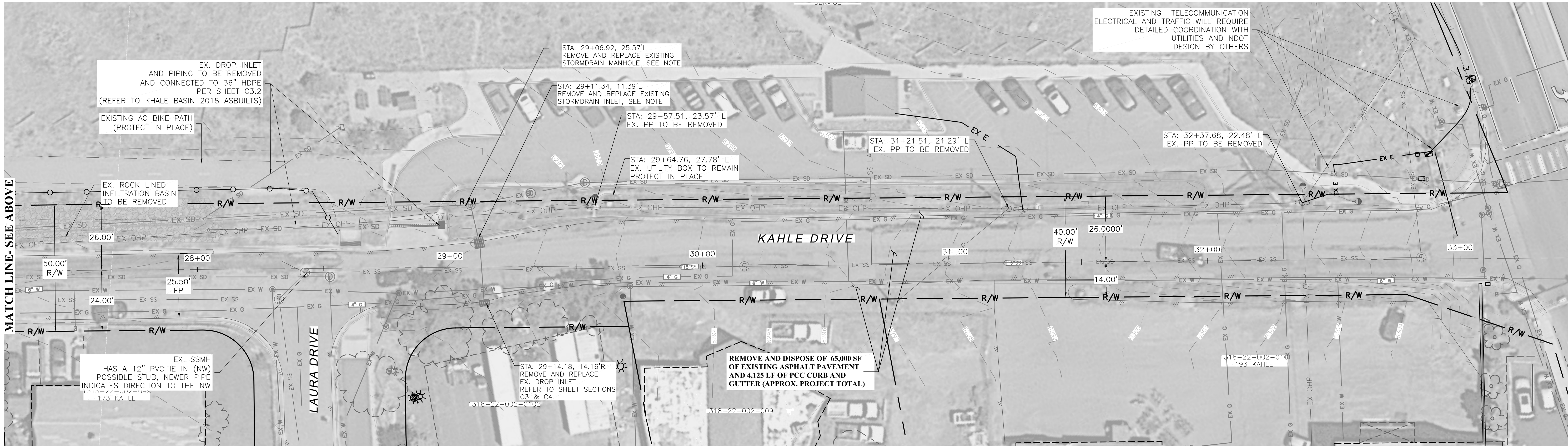
C1.2

MATCH LINE - SEE SHEET C2.1



MATCH LINE - SEE BELOW

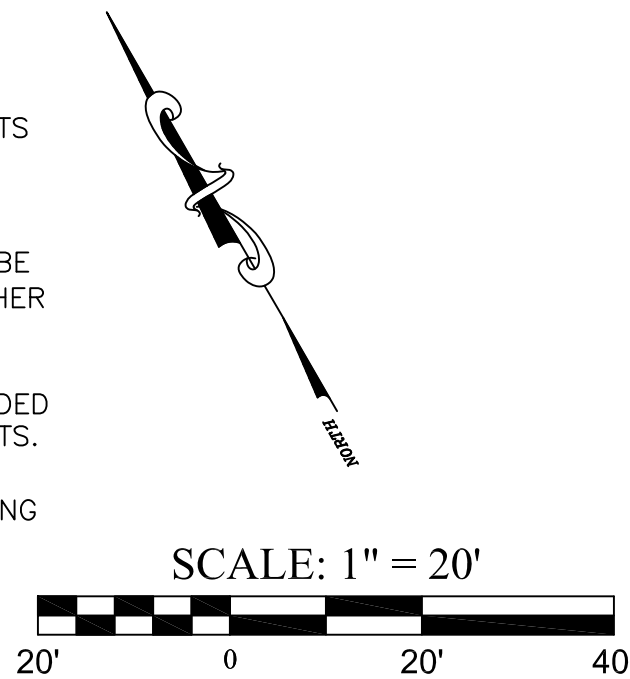
MATCH LINE - SEE ABOVE



NOTES:

- AREAS OF THE PROJECT SPECIFIC TO THIS ' ** ' DESIGNATION REQUIRE FURTHER FIELD VERIFICATION TO DETERMINE CONNECTIVITY TO EITHER THE STORMDRAIN SYSTEM AT THE LOWER KAHLE BASIN. THESE STORMDRAIN FACILITIES CONDITION AND CONNECTIVITY ARE UNKNOWN AND HAVE NO RECORD INFORMATION IDENTIFYING CONVEYANCE CAPACITY. DURING PEAK RUNOFF AND SEASONAL SNOW MELT, THE AREA AND DRAINS ARE FULLY INUNDATED. CONTRACTOR SHALL ESTABLISH ALL NECESSARY PERMITS AND EQUIPMENT FOR DEWATERING AS GROUNDWATER CAN BE ENCOUNTERED. UPON INVESTIGATION, THE ENGINEER SHALL DETERMINE THE COARSE OF ACTION FOR EITHER ABANDONMENT AND/OR REPLACEMENT OF THESE SPECIFIC ITEMS IN KIND IN THE GENERAL VICINITY.
- AT ALL TIMES, UNLESS OTHERWISE SCHEDULED OR NOTED, OPERATION AND ACCESS TO COUNTY FACILITIES, INCLUDING BUT NOT LIMITED TO, KGID TREATMENT FACILITY, TAHOE BEACH CLUB, THE STATELINE PIKEWAY, RESIDENTIAL DWELLINGS, AND BUSINESSES SHALL BE KEPT FREE OF OBSTRUCTION DURING CONSTRUCTION. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL NOTIFY ENTITIES A MINIMUM OF 48 HOURS PRIOR TO RESTRICTED ACCESSSES. ADEQUATE TIMING AND ADVERTISEMENTS SHALL BE IMPLEMENTED IN PHASES DURING THE PROJECT.
- BMPS SHALL ADHERE TO TRPA, NDEP AND DOUGLAS COUNTY STANDARDS. CONVEYANCE OF STORMWATER AND STORMWATER FACILITIES SHALL BE PROTECTED AT ALL TIMES, UNLESS UNDER CONSTRUCTION AT THAT TIME. SPECIFIC STORMWATER CONVEYANCE TO SPECIFIC STORM INLETS WILL BE FOR

- DEMOLITION AND/OR REMOVAL OF OVERHEAD ELECTRICAL, TELECOMMUNICATIONS AND CABLE FACILITIES SHALL BE COORDINATED WITH UTILITY COMPANIES. DISCONNECTS AND TEMPORARY OUTAGES SHALL BE LIMITED. PLACEMENT OF TEMPORARY FACILITIES SHALL BE COORDINATED WITH THE COUNTY, KGID, ENGINEER, AND UTILITY COMPANIES.
- UNLESS OTHERWISE NOTED, DEMOLITION ITEMS AND QUANTITIES ARE PER SHEET. REMOVAL AND REPLACEMENT OF ADDITIONAL FACILITIES FOR PUBLIC WATER MAY BE REQUIRED FOR CONTINUATION OF SERVICE. TEMPORARY FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE TO UTILITY COMPANIES SPECIFICATIONS AND/OR ANY OTHER ENTITY REQUIREMENTS.
- ADJUSTING TO GRADE OR RECONSTRUCTION OF EXISTING SURFACE APPURTENANCES (e.g. UTILITIES LIDS, MANHOLES, VALVE BOXES, VAULTS, ETC.) SHALL BE INCLUDED IN THE WORK. COMMERCIAL AND RESIDENTIAL DRIVEWAY APRONS, SIDEWALKS AND PEDESTRIAN ACCESS SHALL BE CONSTRUCTED TO MEET ADA MINIMUM REQUIREMENTS.
- MINIMUM DEPTH OF COVER STRICTLY APPLYING TO WATER WITH A 42" MIN. COVER. SPECIFIC CONSTRUCTION AREAS WILL REQUIRE SPECIAL CROSSINGS FOR TRENCHING WHERE OTHER UTILITIES REQUIREMENTS MAY DIFFER.



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Revisions:

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Sheet Title:

KAHLE DRIVE
EX. SITE DEMO &
BMP PLAN
STA: 21+50 - 33+50

Project: KAHLE DRIVE

Drawn By: JGP

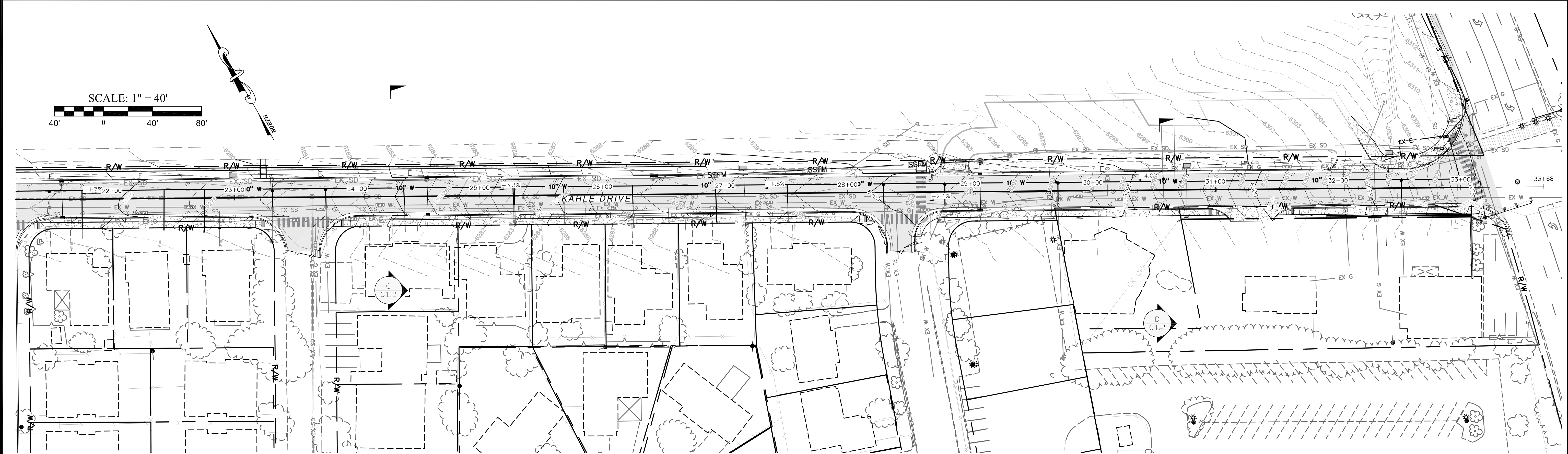
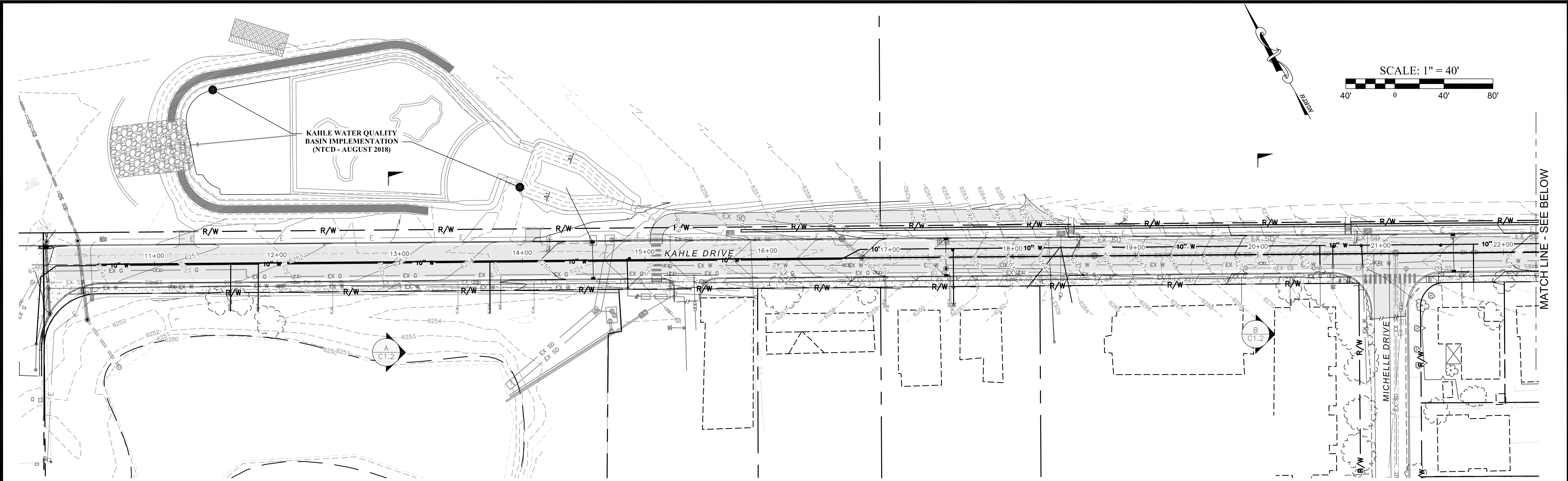
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Scale: AS NOTED

Date: APRIL 2019

Sheet Number:

C2.2



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
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Totals						

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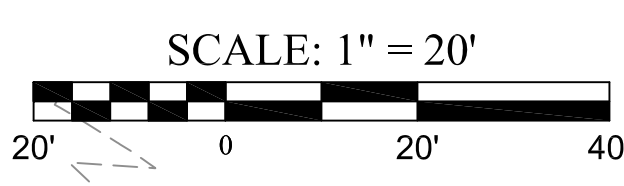
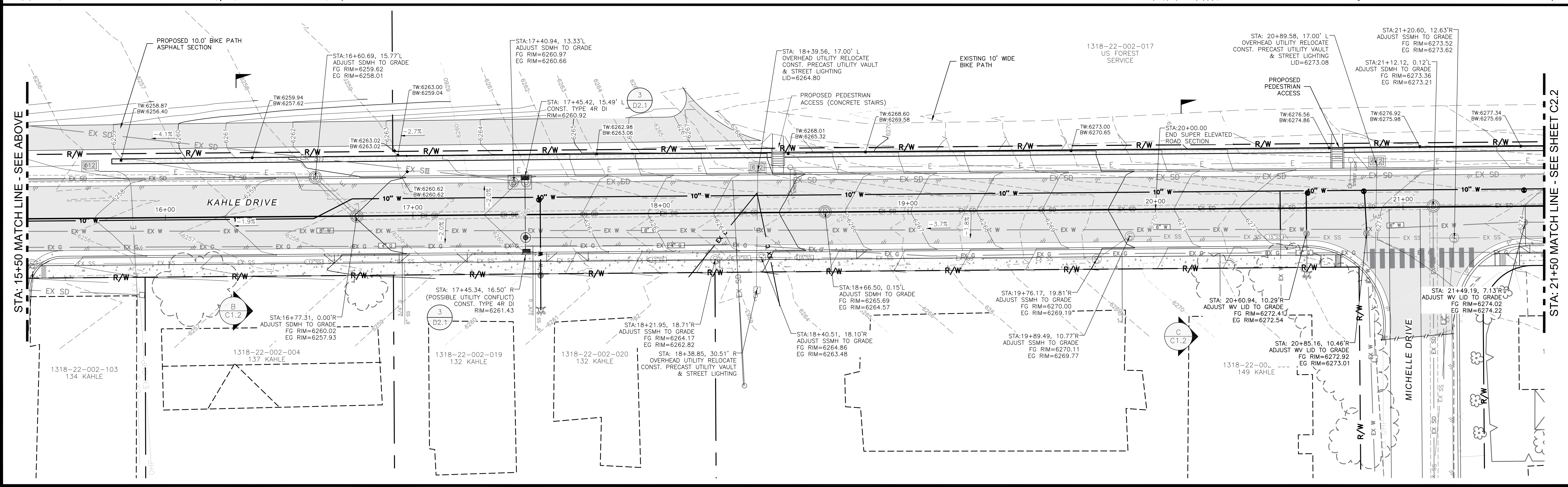
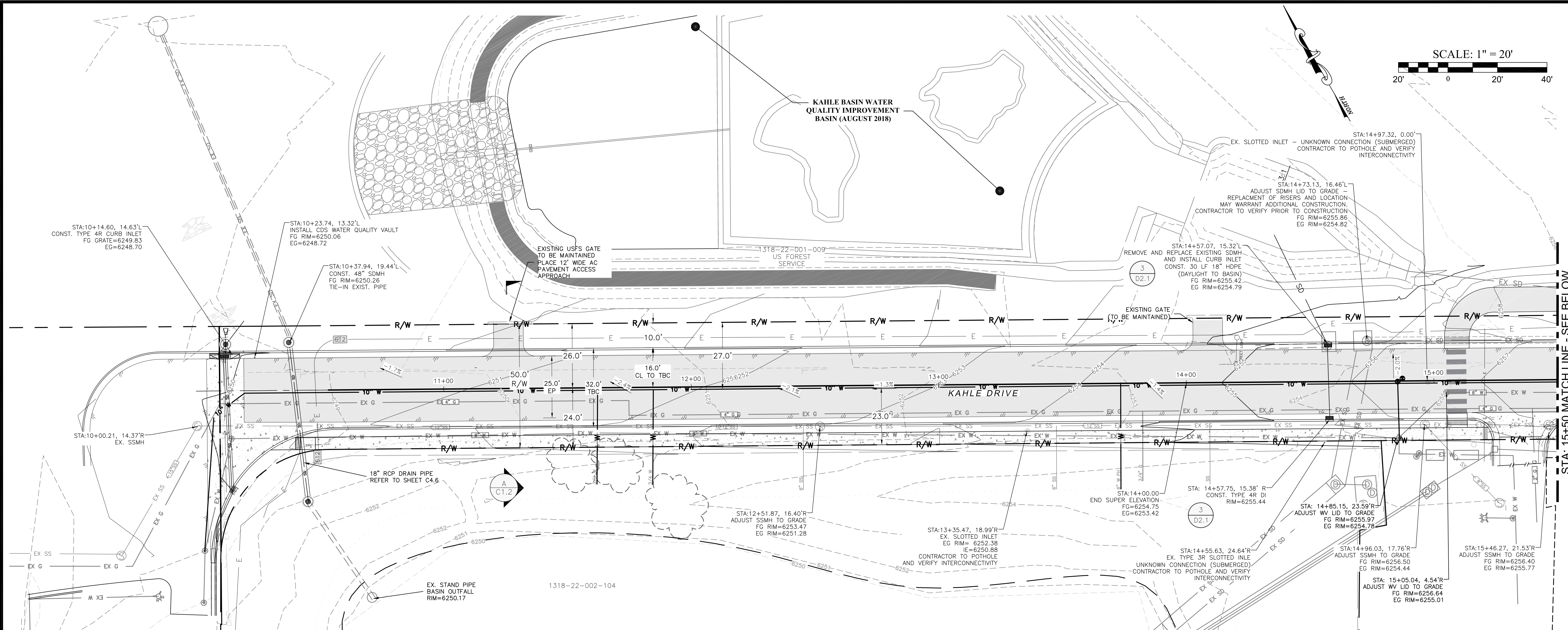
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Sheet Title:

OVERALL SITE &
GRADING PLAN

Project: KAHLE DRIVE
Drawn By: JGP
Checked By: DLH
Scale: AS NOTED
Date: APRIL 2019
Sheet Number:

C3.0



KAHLE DRIVE
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Sheet Title:

KAHLE DRIVE
GRADING PLAN
STA: 10+00-21+50

Project:

KAHLE DRIVE

Drawn By:

JGP

Checked By:

DLH

Scale:

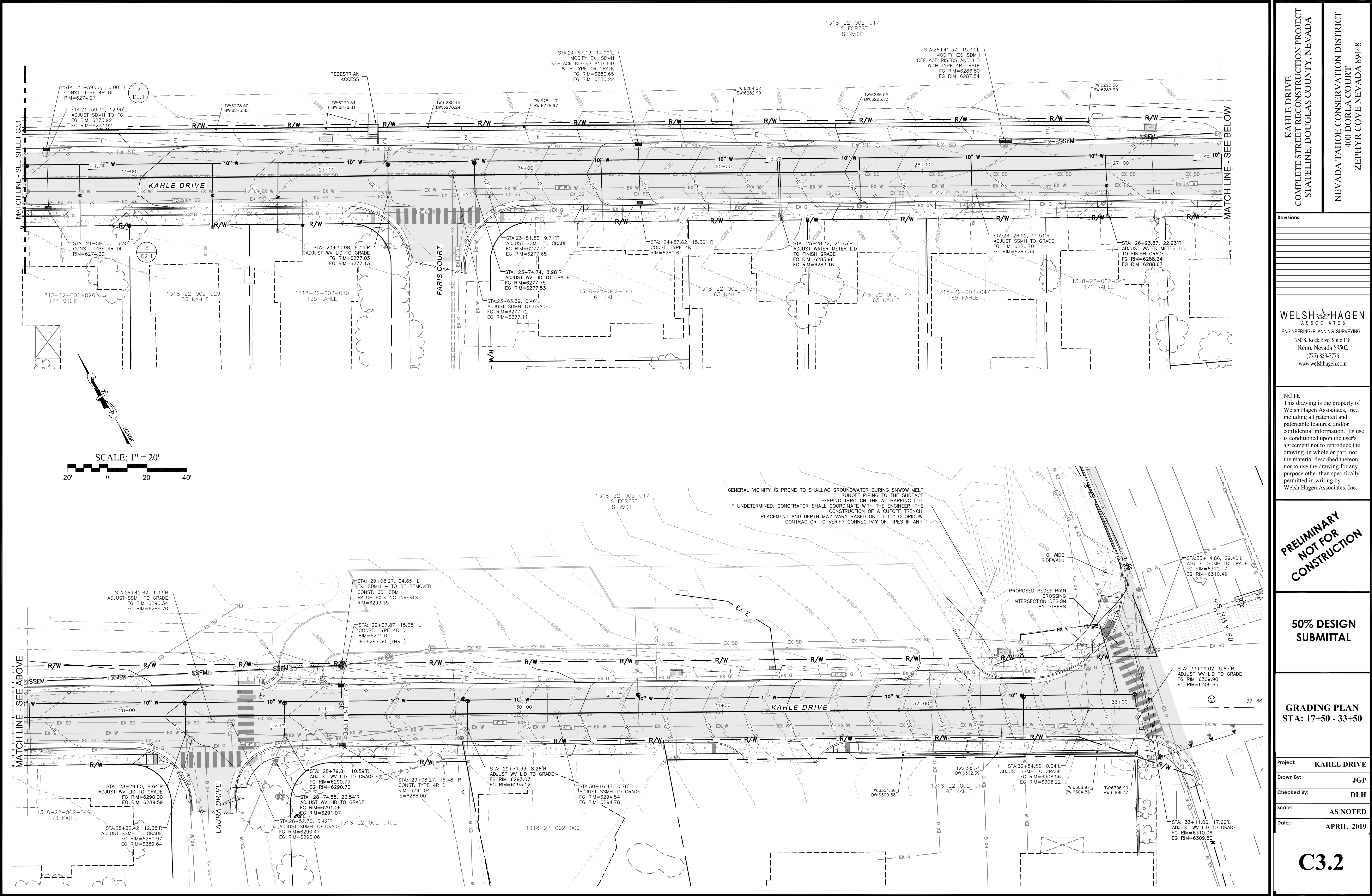
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Date:

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Sheet Number:

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GRADING PLAN
STA: 17+50 - 33+50

Project: KAHLE DRIVE

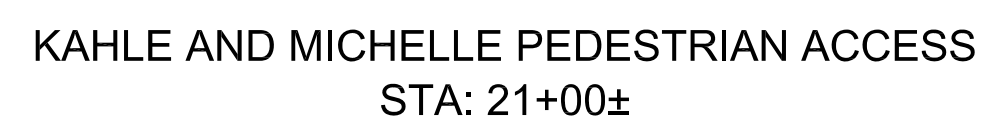
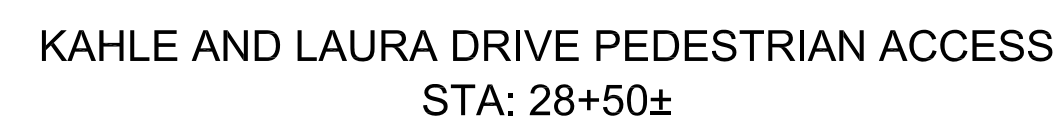
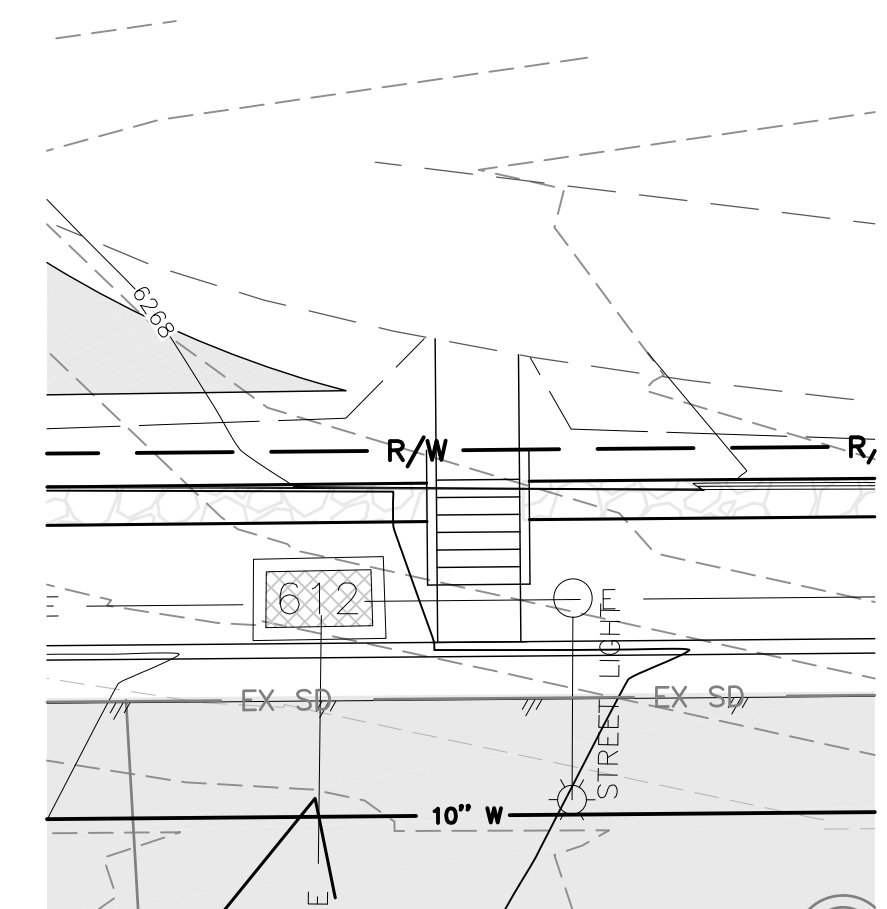
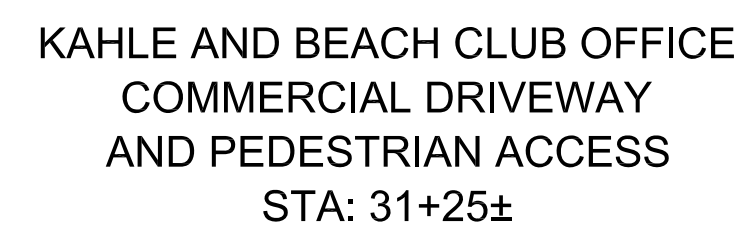
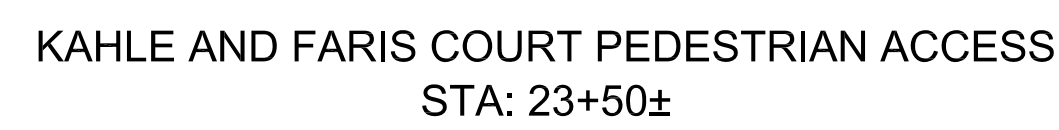
Drawn By: JGP

Checked By: DLH

Scale: AS NOTED

Date: APRIL 2019

C3.2



KAHLE DRIVE
COMPLETE STREET RECONSTRUCTION PROJECT
STATELINE, DOUGLAS COUNTY, NEVADA

400 DORLA COURT
ZEPHYR COVE NEVADA 89448

Revisions:

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Sheet Title:

**GRADING PLAN - ST
INTX
STREET
INTERSECTION
DETAILED
GRADING**

Subject: **KAHLE DRIVE**

Drawn By: **JGP**

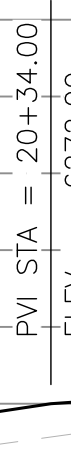
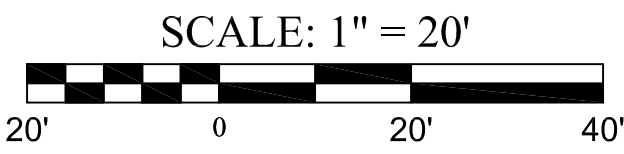
Checked By: **DLH**

Scale: **AS NOTED**

ate: **APRIL 2019**

Sheet Number:

C3.3



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Sheet Title:

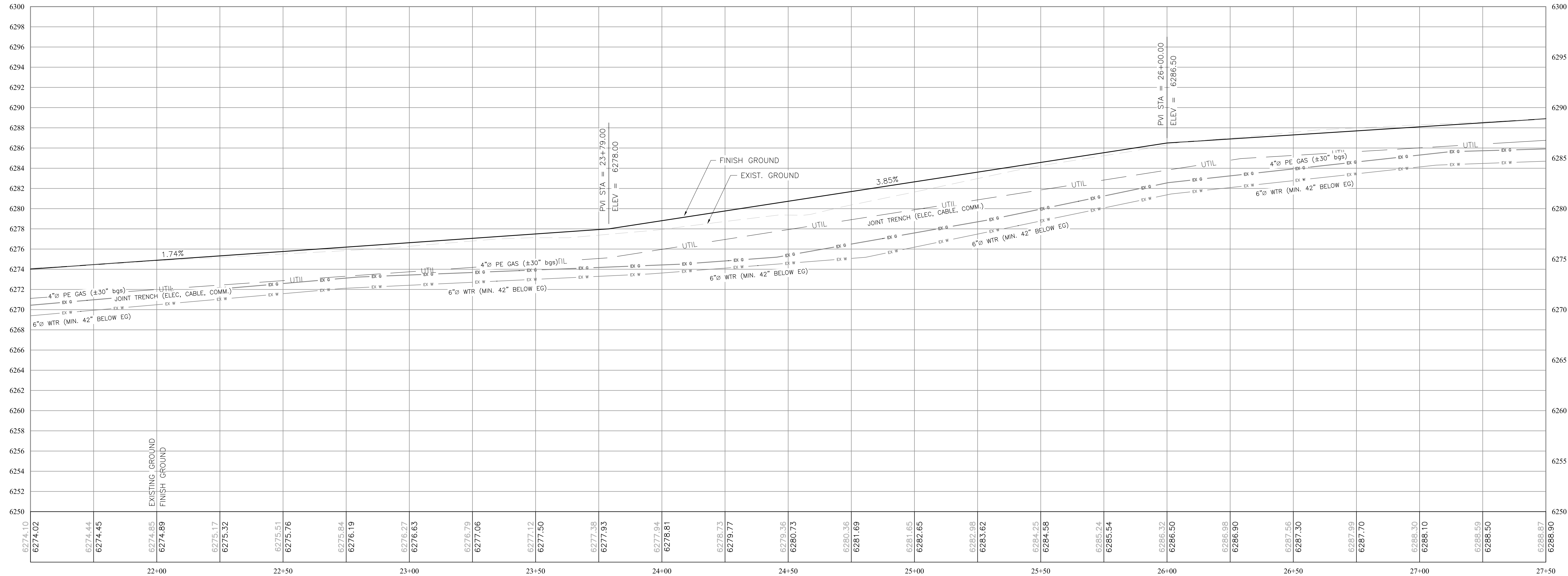
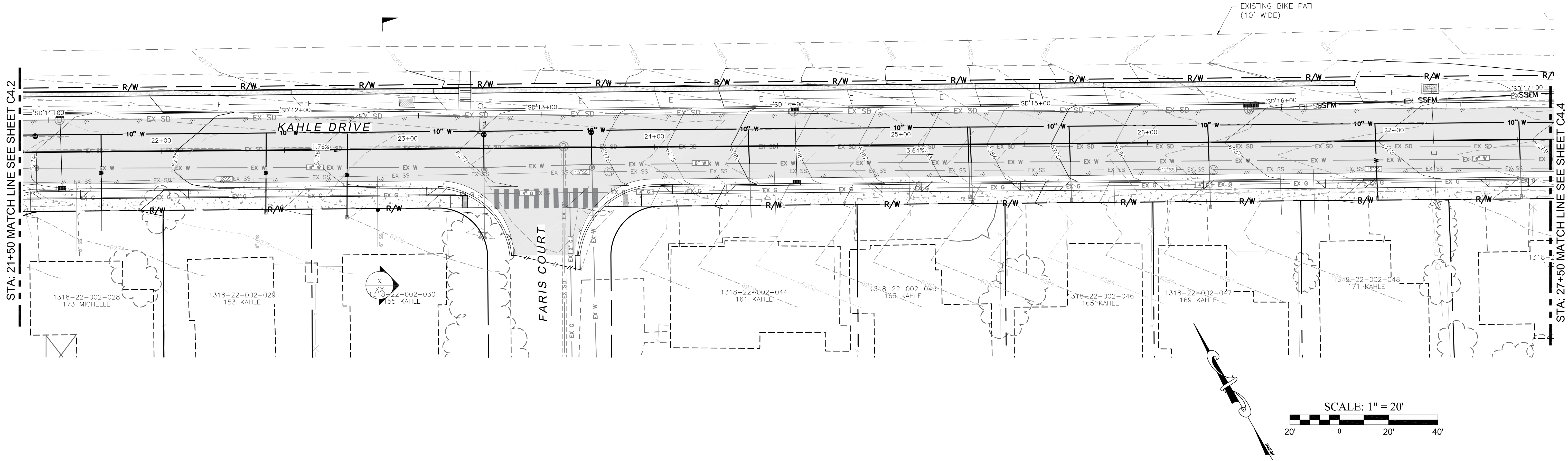
**KAHLE DRIVE
PLAN & PROFILE
STA: 15+50 - 21+50**

Sheet Number:

C4.2

STA: 21+50 MATCH LINE SEE SHEET C4.2

STA: 27+50 MATCH LINE SEE SHEET C4.4



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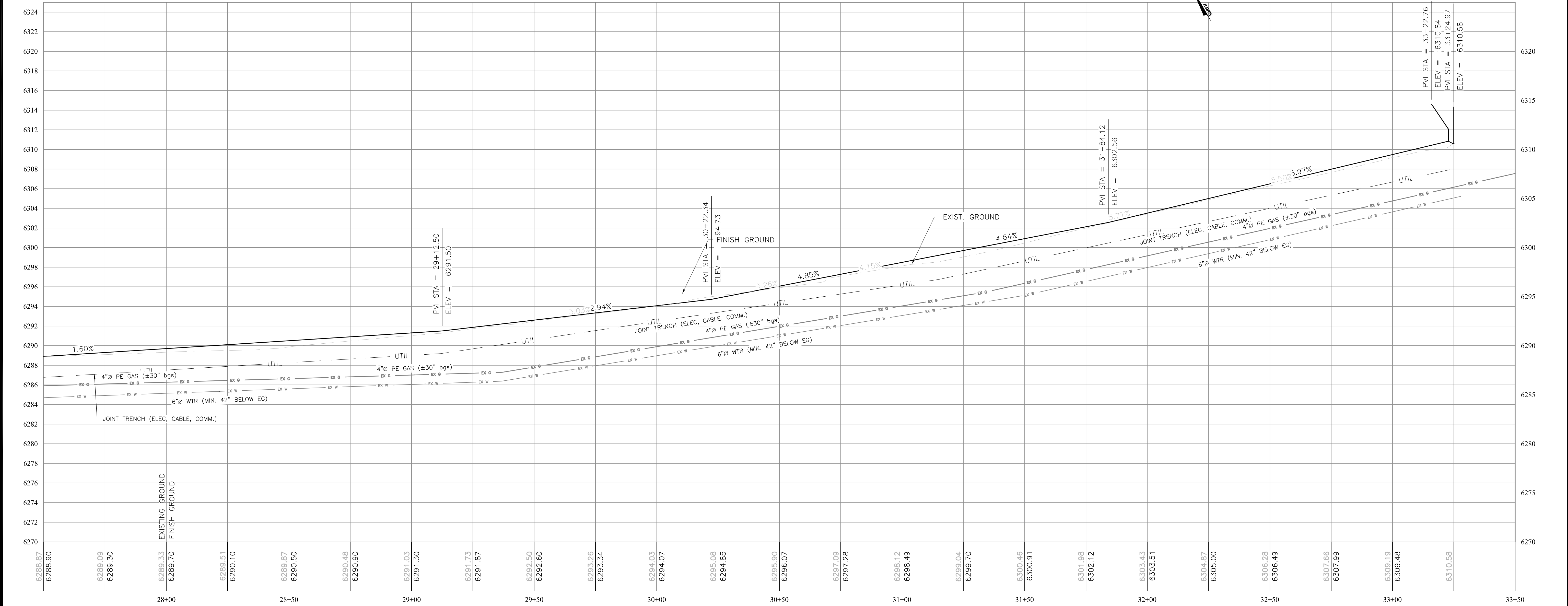
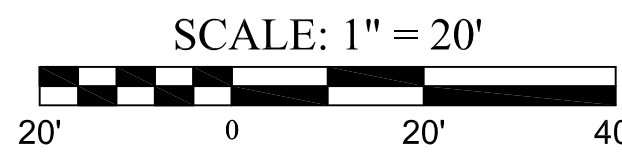
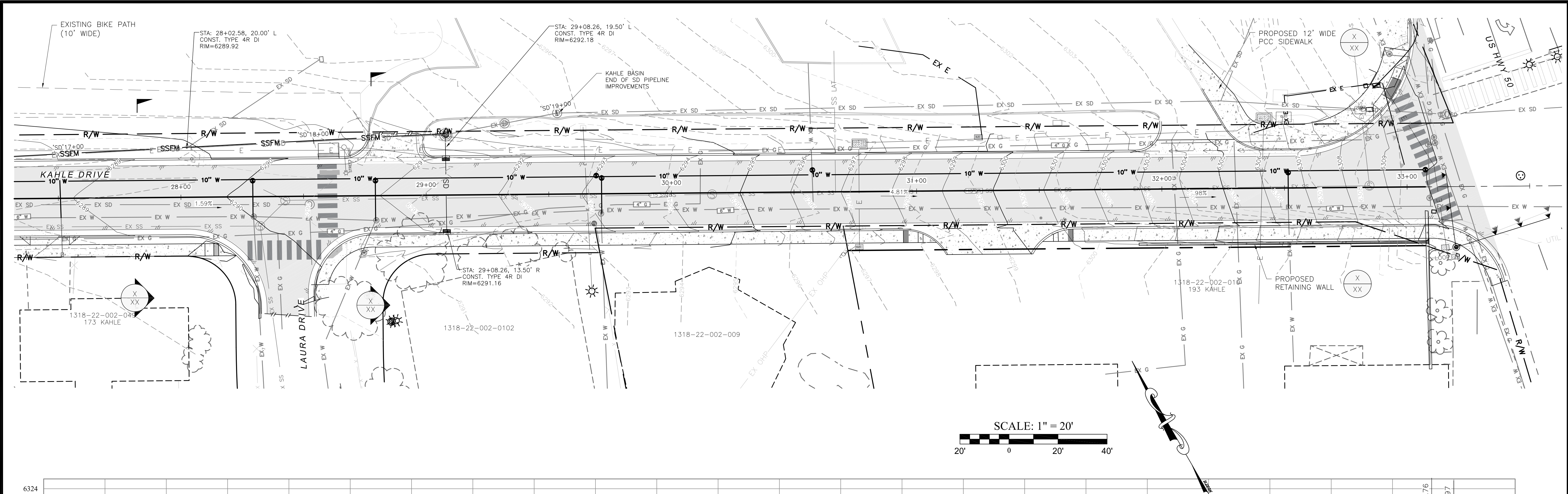
50% DESIGN
SUBMITTAL

Sheet Title:

KAHLE DRIVE
PLAN & PROFILE
STA: 21+50 - 27+50

Project: KAHLE DRIVE
Drawn By: JGP
Checked By: DLH
Scale: AS NOTED
Date: APRIL 2019
Sheet Number:

C4.3



KAHLE DRIVE

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Sheet Title:

KAHLE DRIVE PLAN & PROFILE

STA: 26+50 - 33+50

Project:

KAHLE DRIVE

Drawn By:

JGP

Checked By:

DLH

Scale:

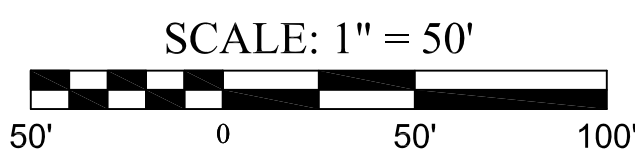
AS NOTED

Date:

APRIL 2019

Sheet Number:

C4.4

[illegible]

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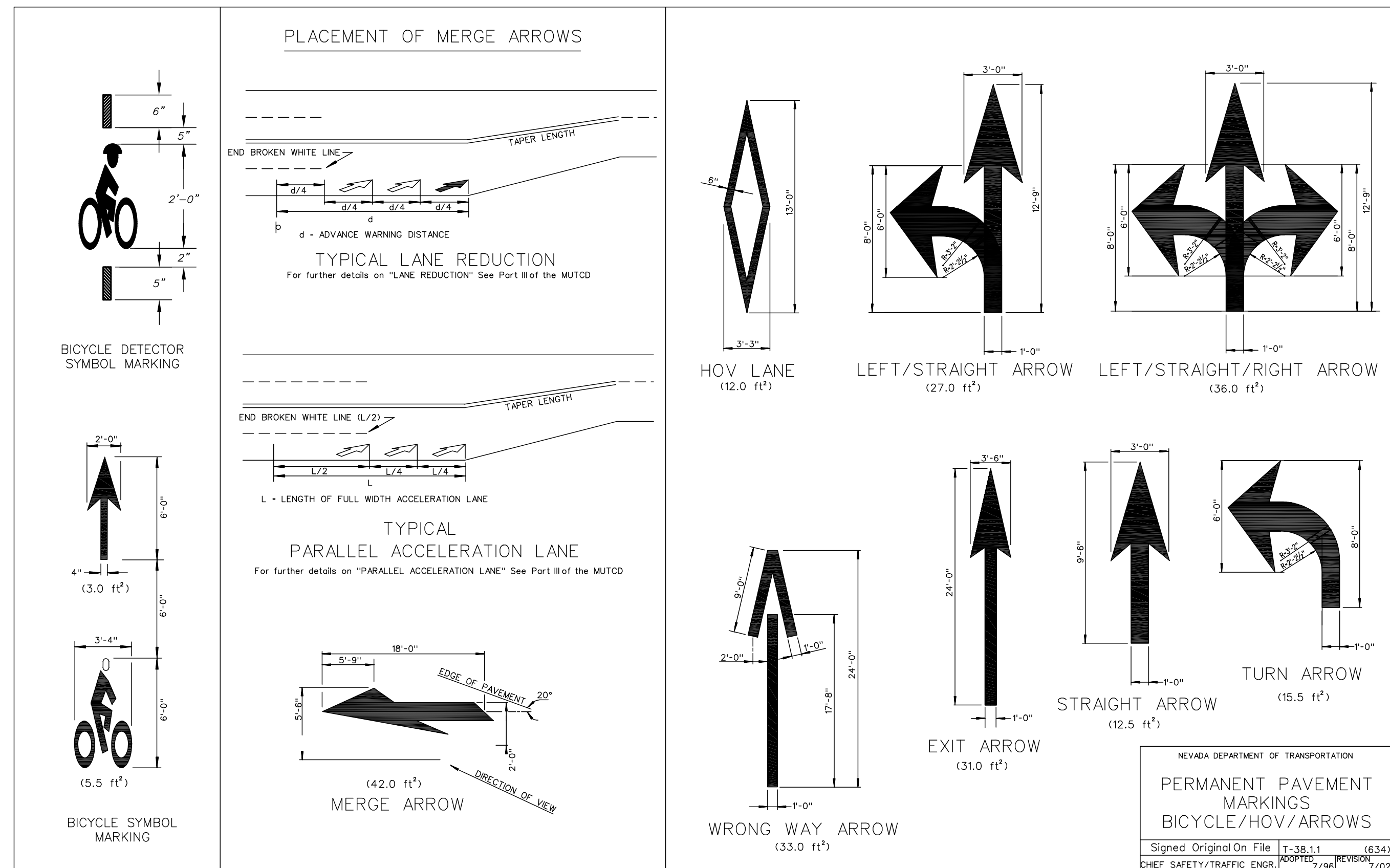
Sheet Title:

**NUCLEAR PLAN &
ANALYTICAL**

Project:	KAHLE DRIVE
Drawn By:	JG
Checked By:	DL
Scale:	AS NOTED
Date:	APRIL 2011
Sheet Number:	

C4.5

T-89

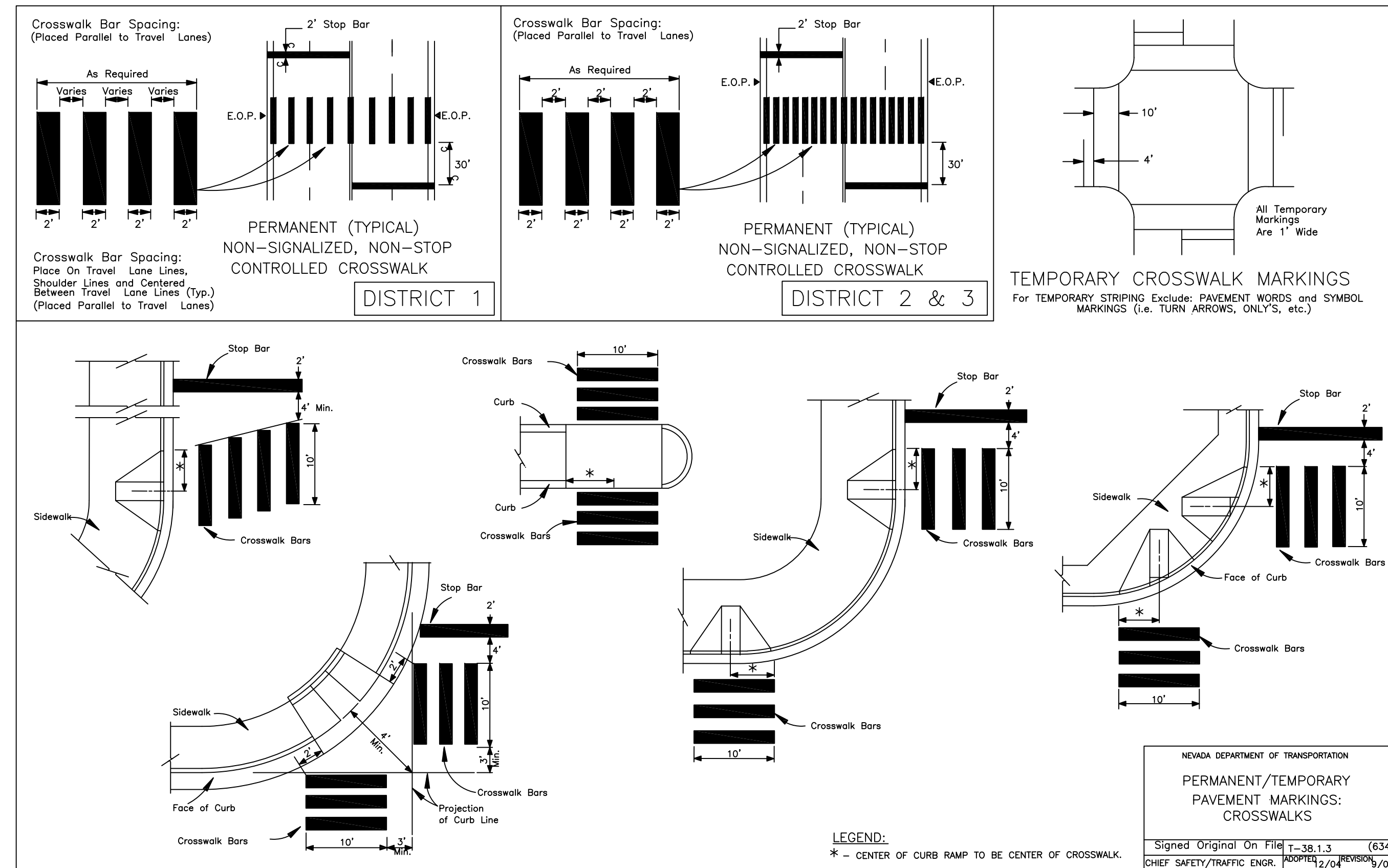


PAVEMENT MARKINGS DETAIL

NTS

1

T-89

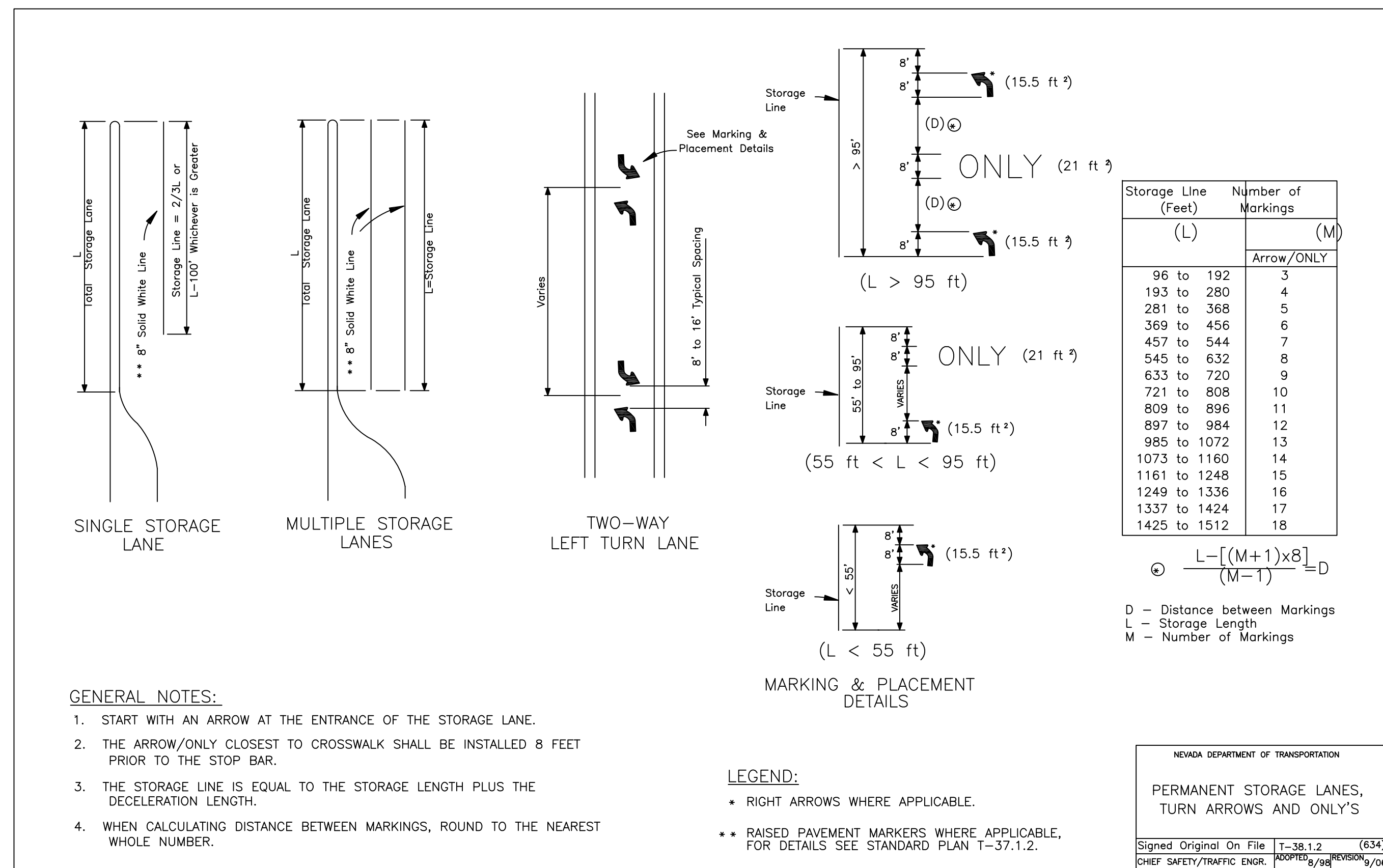


PAVEMENT MARKINGS CROSSWALK DETAIL

NTS

2

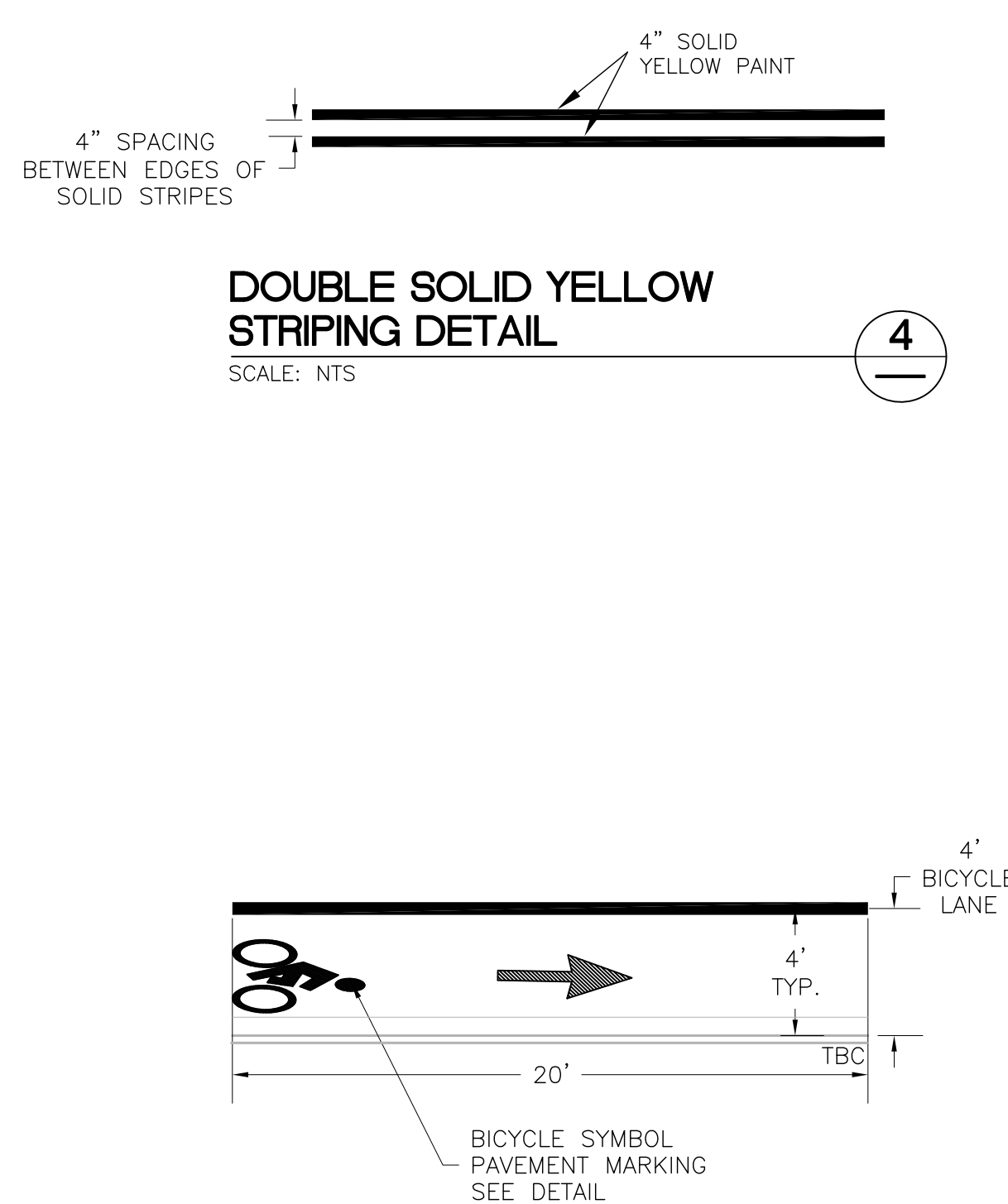
T-90



STORAGE LANES DETAIL

NTS

3



BICYCLE LANE STRIPING DETAIL

SCALE: NTS

1

BROKEN WHITE STRIPING DETAIL

SCALE: NTS

10

'STOP' SYMBOL MARKING

SCALE: NTS

7

'ONLY' SYMBOL MARKING

SCALE: NTS

8

DOTTED WHITE STRIPING DETAIL

SCALE: NTS

9

KAHLE DRIVE
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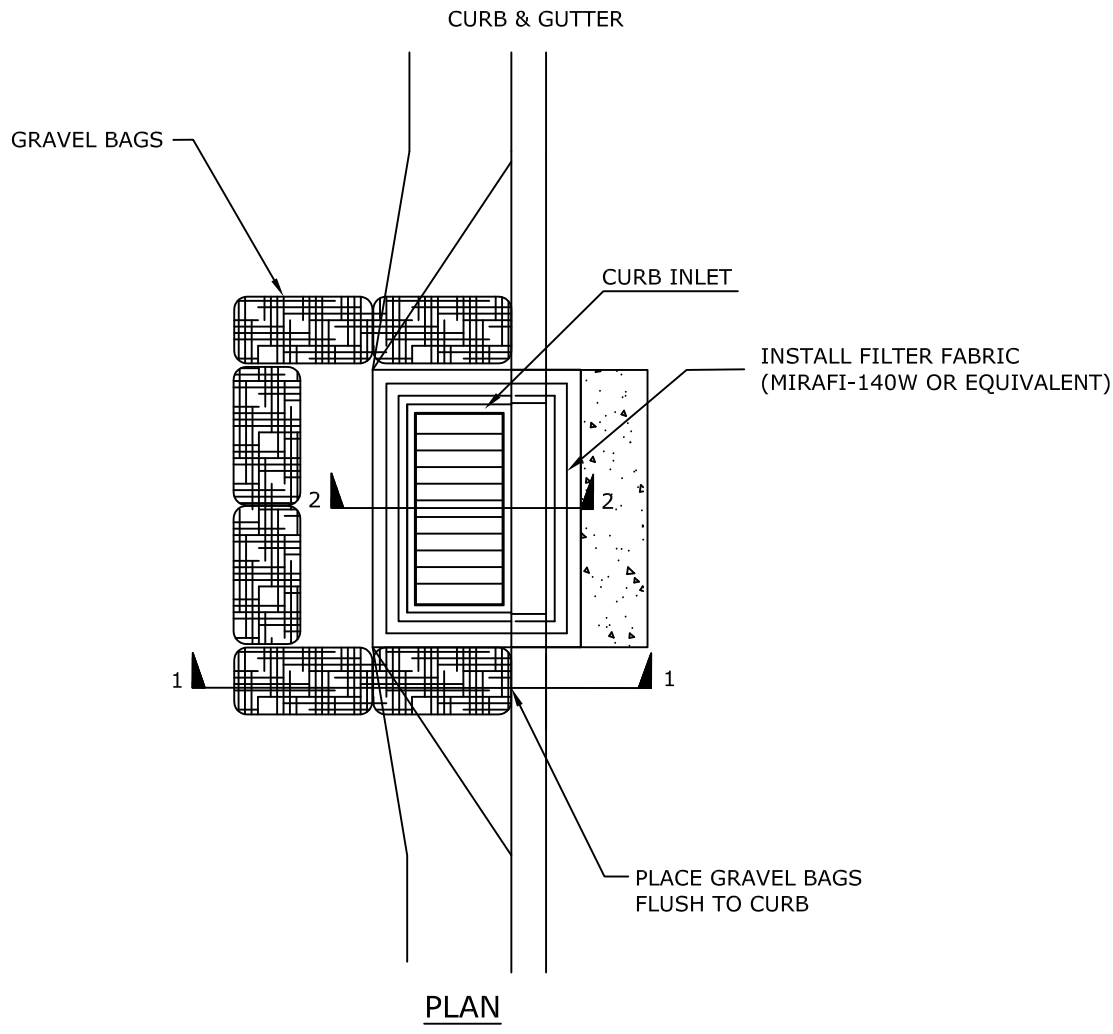
Sheet Title:

**STRIPING DETAILS
STANDARD
DETAILS**

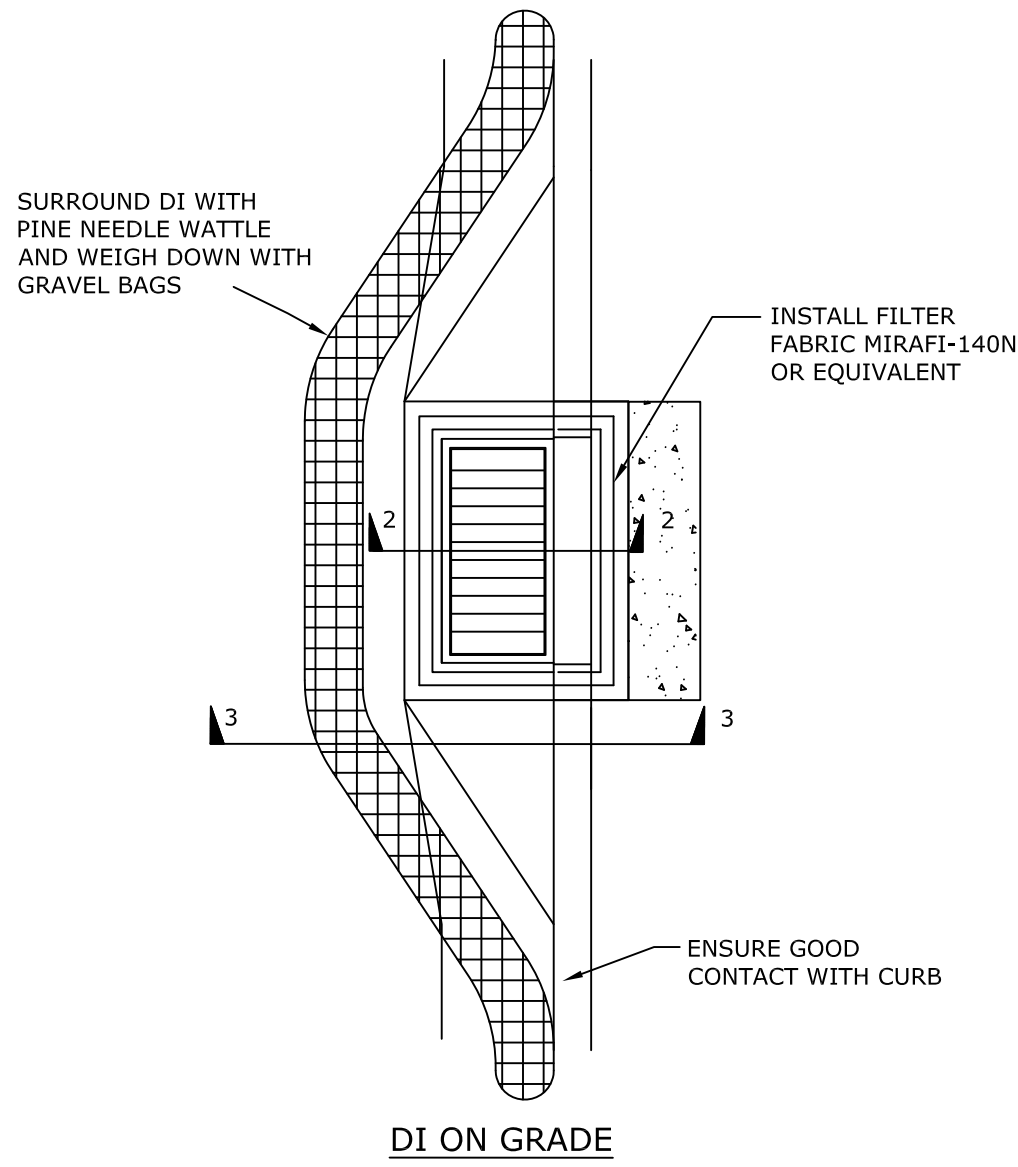
Project: **KAHLE DRIVE**Drawn By: **JGP**Checked By: **DLH**Scale: **AS NOTED**Date: **APRIL 2019**

Sheet Number:

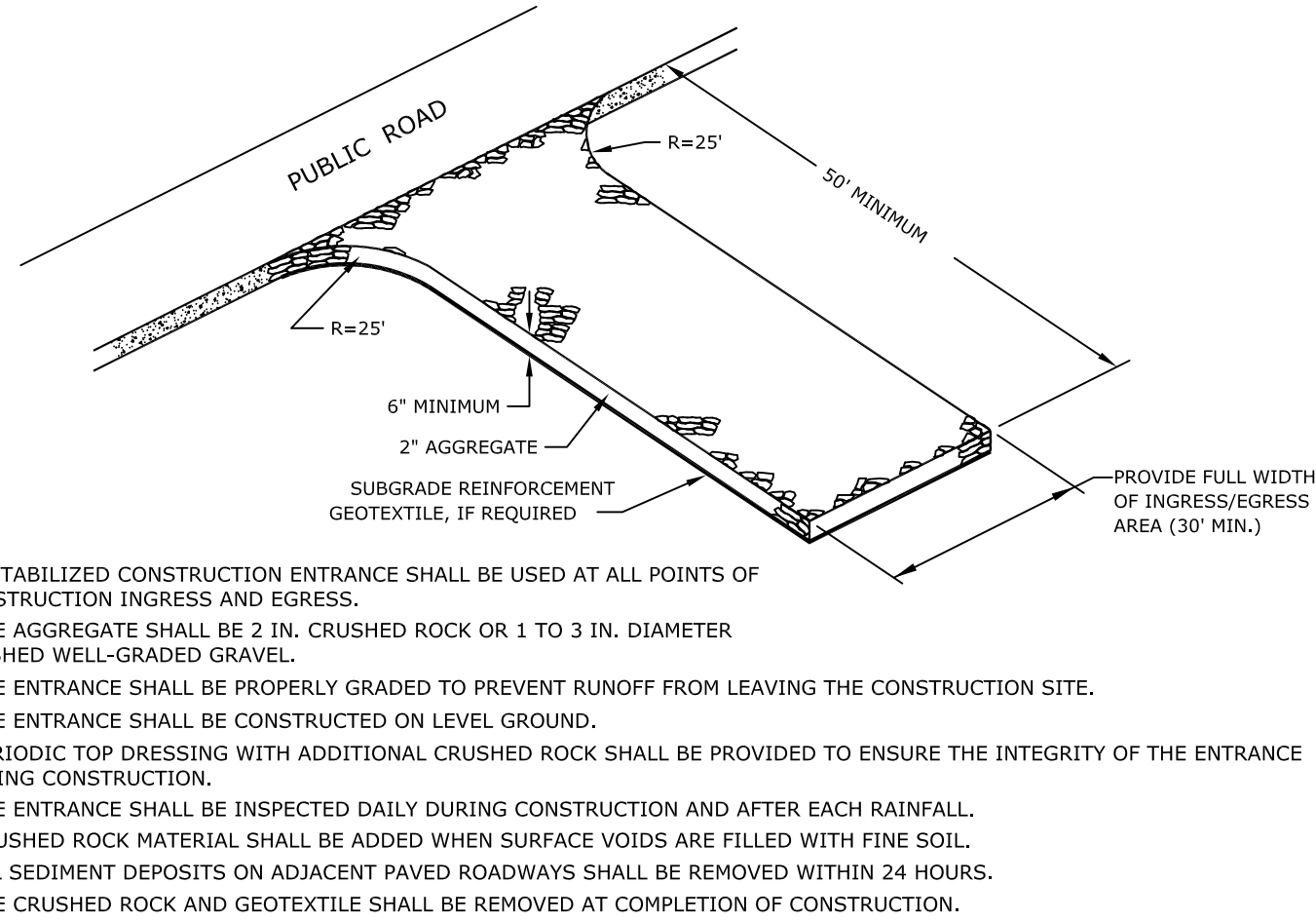
C5.2



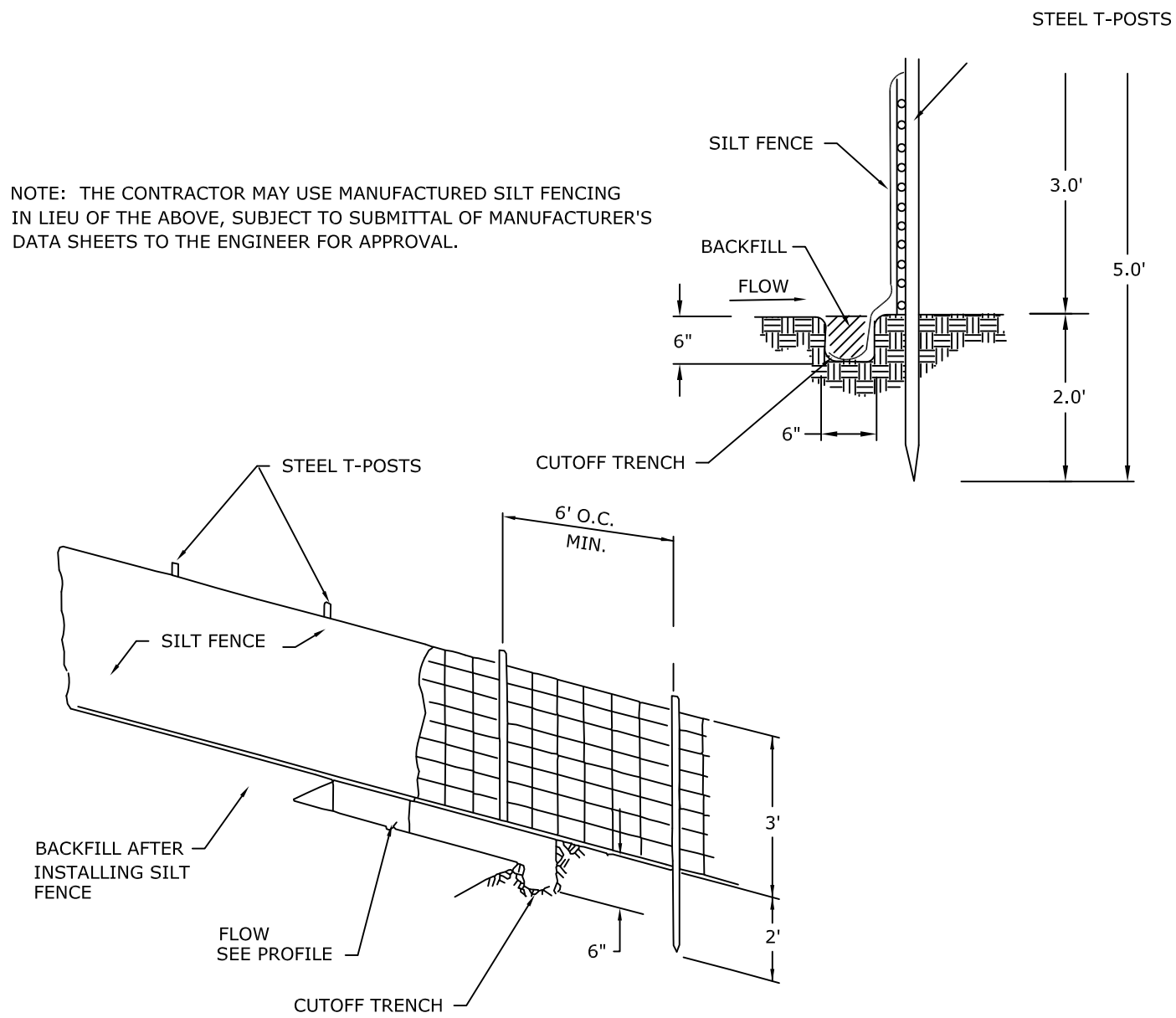
DROP INLET PROTECTION 1 D1.0



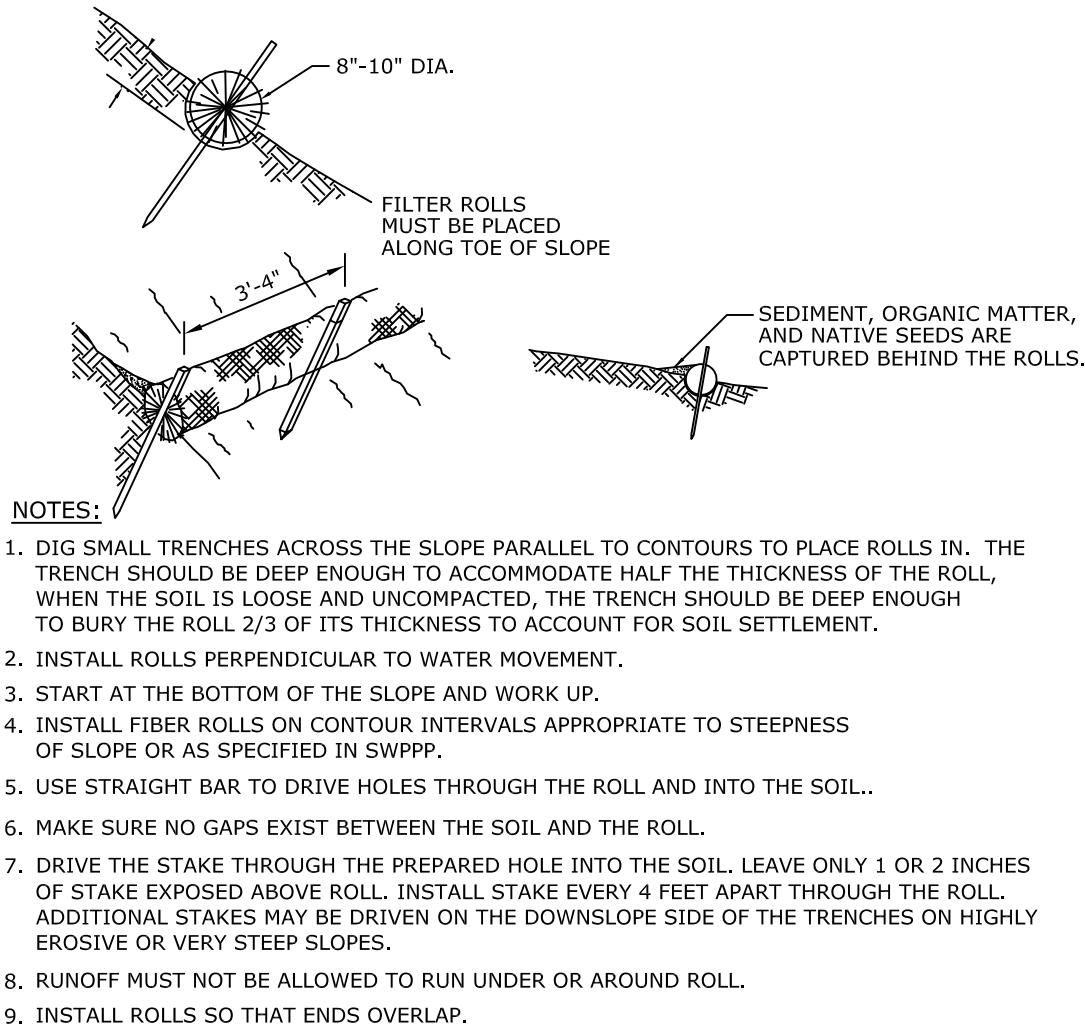
DROP INLET PROTECTION 2 D1.0 C104



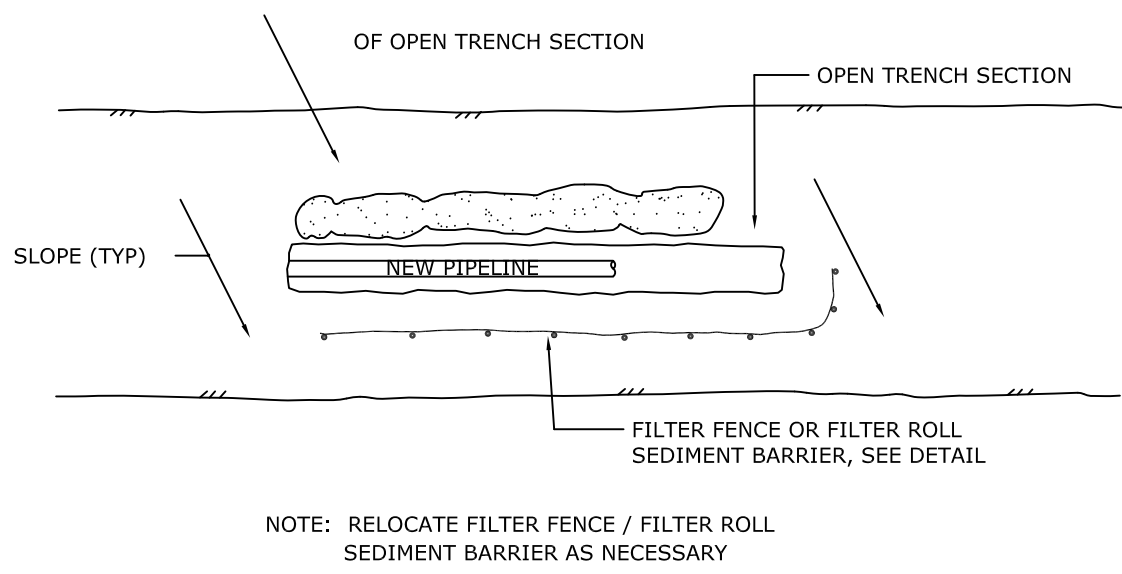
CONSTRUCTION ENTRANCE 5 D1.0 C108



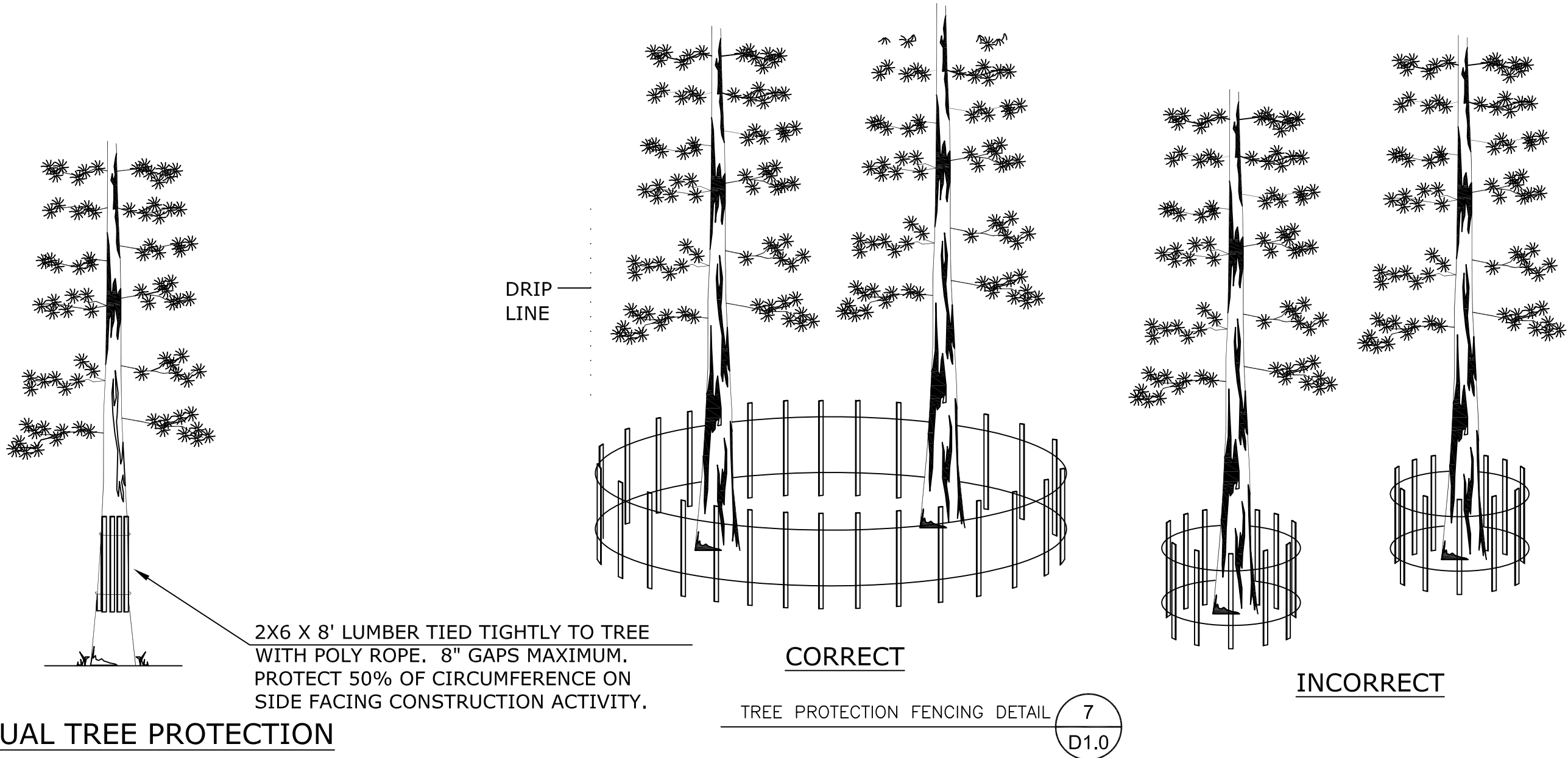
SILT FENCE 6 D1.0 C109



FIBER ROLL DETAIL 3 D1.0 C105



TYPICAL OPEN TRENCH SECTION 4 D1.0 C107



INDIVIDUAL TREE PROTECTION 7 D1.0

KAHLE DRIVE
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STATELINE, DOUGLAS COUNTY, NEVADA
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Sheet Title:

BMP DETAILS

Project: KAHLE DRIVE

Drawn By: JGP

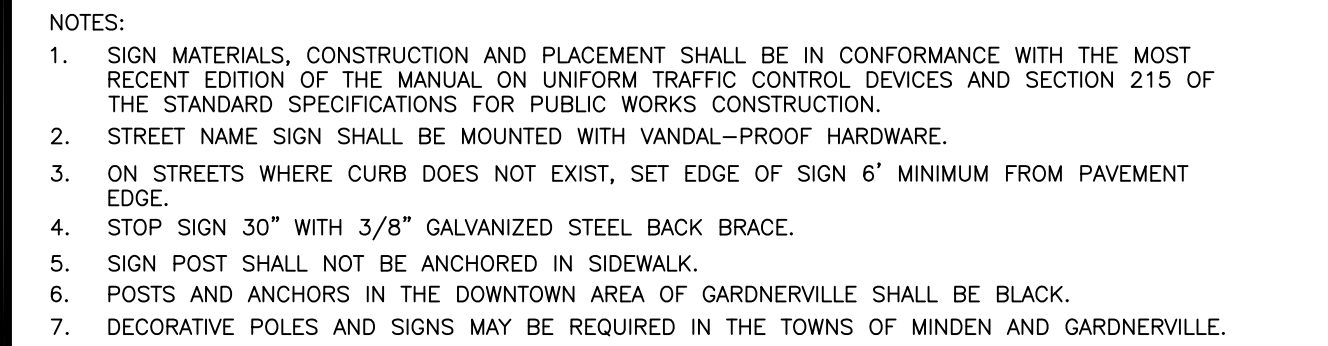
Checked By: DLH

Scale: AS NOTED

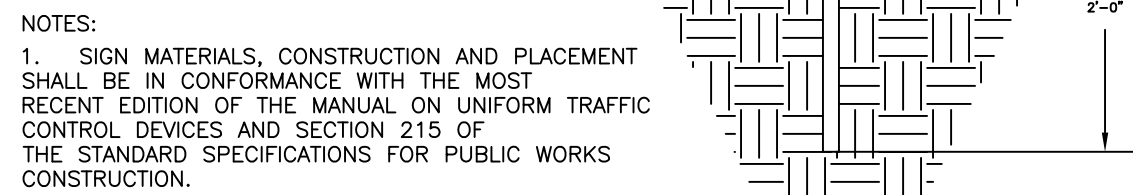
Date: APRIL 2019

Sheet Number:

D1.0



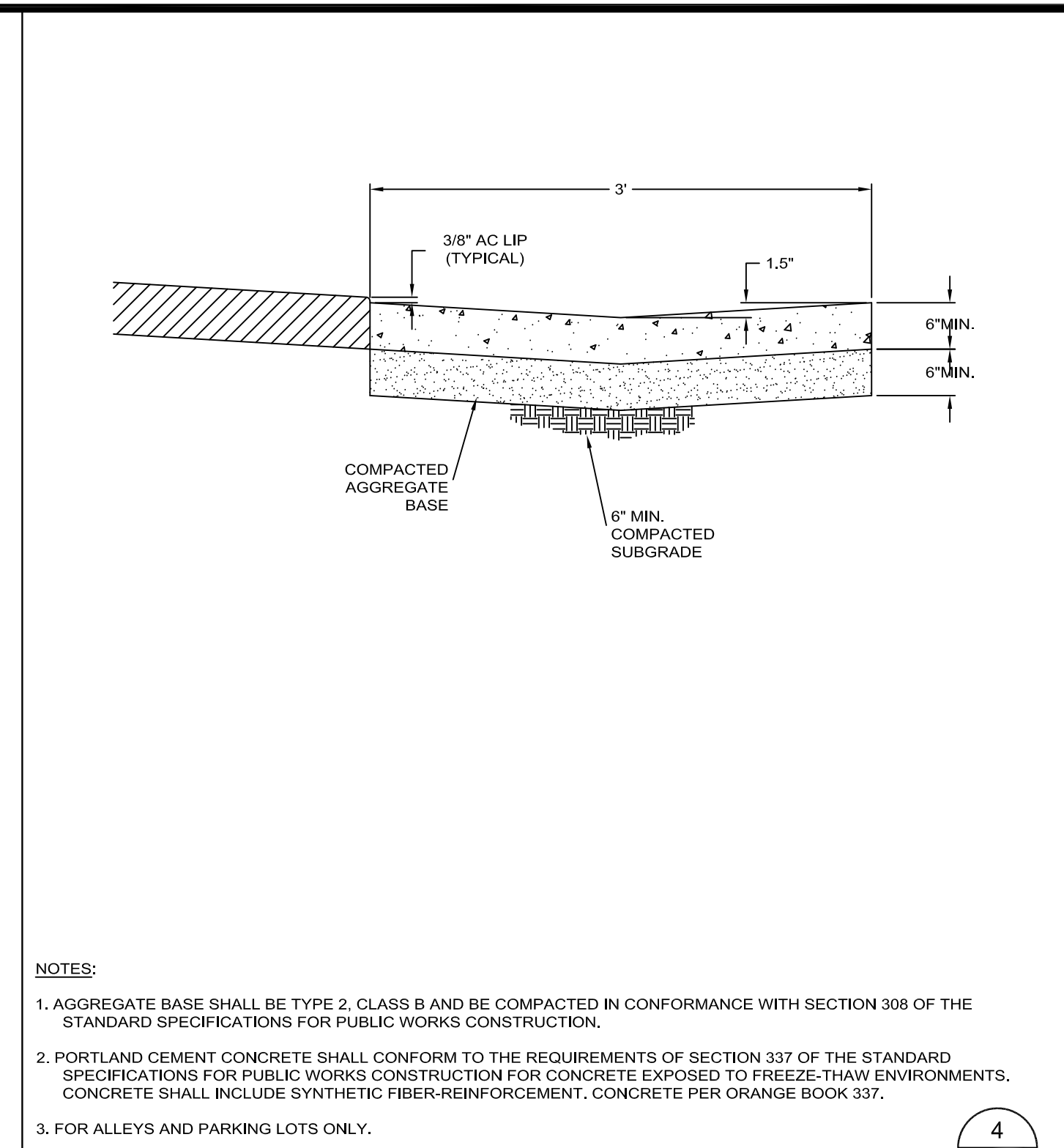
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
			<div style="text-align: center;">  </div>	DOUGLAS COUNTY
				DATE: 6/07/200
				DWG: DC A09



NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION:
1	Notes	1/94 vp	HANDI-CAP SIGN DETAIL	
2	Corr "U"	2/94 vp		
3	Save As W-3.dwg	10/01vp		
4	updated adt	12/05sw		



NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION:
1	Notes	1/94 vp	NO PARKING SIGN DETAIL	
2	Corr "U"	2/94 vp		
3	Save As W-3.dwg	10/01vp		
4	updated adt	12/05sw		



NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			PCC VALLEY GUTTER (ALLEYS)	DATE: JULY 2017
				DWG: A09

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COMPLETE STREET RECONSTRUCTION PROJECT
STATELINE, DOUGLAS COUNTY, NEVADA

NEVADA TAHOE CONSERVATION DISTRICT
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Sheet Title:

STANDARD DETAILS

SIGNAGE & LIGHTING

Project: KAHLE DRIVE

Drawn By: JGP

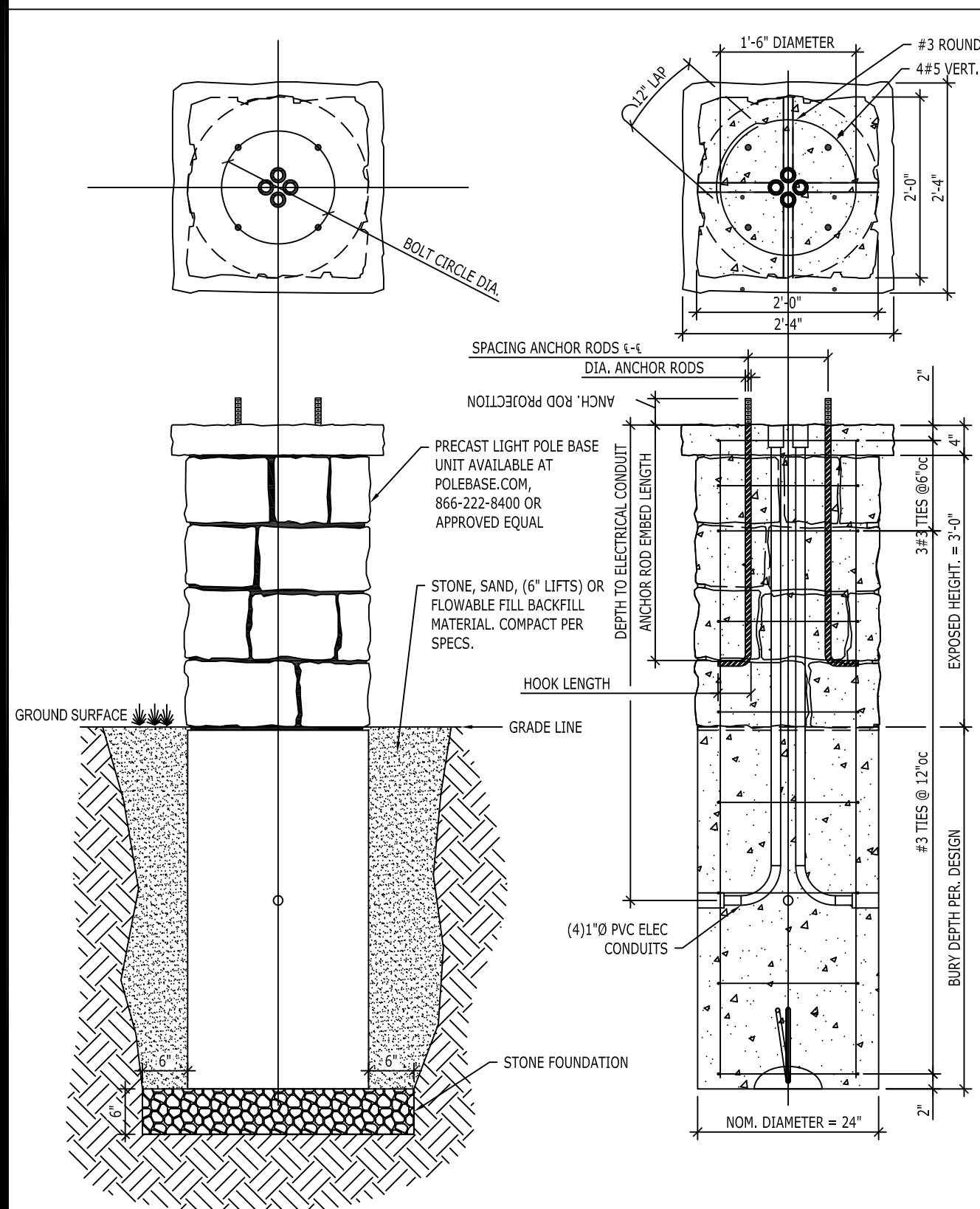
Checked By: **DLH**

Scale: AS NOTED

Date: APRIL 2019

Sheet Number:

D1.2



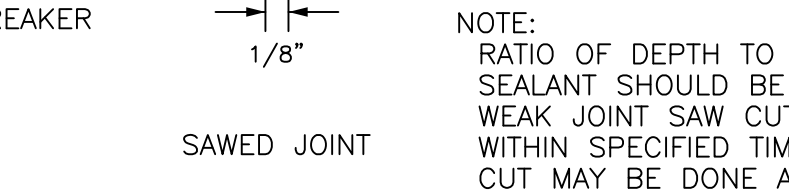
24in. LEDGESTONE
PRECAST LIGHT POLE BASE UNIT



STREET LIGHT

NTS

5
D1.2



NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION DOUGLAS COUNTY
			<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <h1>PCC JOINTING DETAILS</h1> </div> <div style="text-align: center;">  </div> </div>	DATE: 6/07/2007
				DWG: DC A20



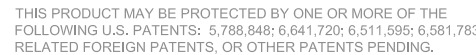
TYPICAL SECTION (NDOT TYPE 6)

C&G NOTES:

1. WHERE EXISTING CROSS SLOPE IS LESS THAN 2% OR SLOPING AWAY FROM ROADSIDE DITCH, PAVE DITCH AT 2% SLOPE
2. WHERE POSSIBLE, PAVING JOINTS IN ROADWAY ARE NOT ALLOWED IN WHEEL PATHS.
3. MATCH EXISTING STRIPING THROUGH LIMITS OF PATCH AREA
4. A TRAVEL LANE SHALL BE MAINTAINED. TRENCH EXCAVATION INCLUDING SHIELD AND SHORING SYSTEMS SHALL COMPLY WITH CURRENT OSHA SAFETY REGULATIONS, FEDERAL REGISTER 29 CFR, PART 1926, SUBPART P.
5. ALL MATING SURFACES SHALL BE TACK COATED PRIOR TO PAVING (NO DIRECT PAYMENT).
6. PREPARE SUBGRADE 6" MIN PER NDOT STANDARD SPECIFICATION SECTION 302

NDOT ROW CURB AND GUTTER INSTALLATION 7
D1.2

D1.2



Technical drawing of the Contech E3 sensor head. The device is circular with a central label that reads "CONTECH" and "www.contechE3.com". The label is surrounded by a textured circular area. Six mounting holes are arranged in a hexagonal pattern around the central area. The drawing includes dimension lines and labels for the mounting holes, indicating a diameter of 10mm and a distance of 10mm between the centers of adjacent holes. The overall diameter of the device is 100mm.

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO **HS20** LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO **M306** AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES

- A. ANY SUB-BASE, BACKFILL DEPTHI, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
- C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
- E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069

800-338-1122 513-645-7000 513-645-7993 FAX

<h2 style="text-align: center; margin: 0;">SITE SPECIFIC</h2> <h2 style="text-align: center; margin: 0;">DATA REQUIREMENTS</h2>			
STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS OR L/s)			
PEAK FLOW RATE (CFS OR L/s)			
RETURN PERIOD OF PEAK FLOW (YRS)			
SCREEN APERTURE (2400 OR 4700)			
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
RIM ELEVATION			
WATER FLOTATION BALLAST	WIDTH	HEIGHT	
NOTES/SPECIAL REQUIREMENTS: <div style="text-align: center; margin-top: 10px;"> SEASONAL HIGH GROUND WATER ELEVATION 3' BELOW FINISHED SURFACE </div>			
* PER ENGINEER OF RECORD			

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Sheet Title

STANDARD DETAILS STORMDRAIN

Project: **KAHLE DRIVE**

Drawn By: **JG**

Checked By:	DL
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Scale: AS NOTED

Date: **APRIL 201**

Sheet Number:

D2.2

