DRAWINGS

SMBG BRYAN, LLC. MIDTOWN PARK MOVIE BOWL GRILL

BRYAN, TEXAS

PROJECT LOCATION

JUNE 2023

Walker Partners engineers * surveyors

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FOR REVIEW ONLY

PRELIMINARY FOR REVIEW ONLY

GENERAL NOTES:

FIELD LOCATIONS.

- 1. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF BRYAN STANDARD TECHNICAL SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC INFRASTRUCTURE CONSTRUCTION," LATEST EDITION.
- 2. FOR SLOPES OR TRENCHES GREATER THAN FIVE (5) FEET IN DEPTH, ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SPECIFICATION SECTION 31 23 15 - TRENCH SAFETY SYSTEMS.
- 3. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE ENGINEER. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROCESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES. BEFORE EXCAVATIONS ARE BEGUN, THE FOLLOWING ENTITIES SHALL BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND
- GAS, TELEPHONE, ELECTRIC, FIBER OPTIC: CALL TEXAS 811 AT 800-344-8377
- STORM SEWER, WATER, & SANITARY SEWER: CALL CITY OF BRYAN AT 979-209-5900
- 4. CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR, AT NO ADDITIONAL COST TO
- 5. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL KNOWN EXISTING UTILITIES WHICH WILL EITHER BE CONNECTED TO, ADJACENT, OR CROSSED, IF THERE ARE ANY CONFLICTS BETWEEN PROPOSED AND EXISTING UTILITIES, OR IF THE EXISTING UTILITIES ARE IN ANY WAY DIFFERENT FROM WHAT IS SHOWN ON THE DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION. THE CONTRACTOR SHALL WORK WITH THE ENGINEER IN RESOLVING SUCH CONFLICTS BEFORE PROCEEDING WITH WORK.
- 6. CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK
- 7. WHEN UNLOCATED OR INCORRECTLY LOCATED UNDERGROUND PIPING, OR A BREAK LOCATED IN THE LINE, OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING WORK OPERATIONS, NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.
- 8. THROUGHOUT THE CONSTRUCTION, AND AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL ENSURE THAT DRAINAGE OF STORM WATER RUNOFF IS NOT BLOCKED OR OBSTRUCTED.
- 9. CONTRACTOR SHALL INSTALL 2—INCH DIAMETER BY 36—INCH LONG CAPPED PVC PIPE VERTICALLY, WITH TWO (2) FEET OF SURVEYOR'S RIBBON ATTACHED, AT END OF ALL PIPE AND CONDUIT STUBS. TOP OF PIPE MARKER TO BE NOT LESS THAN 12 INCHES ABOVE THE FINISHED GRADE.
- A. WHITE RIBBON PROPOSED EXCAVATION
- B. PINK RIBBON TEMPORARY SURVEY MARKINGS
- C. RED RIBBON ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES
- D. YELLOW RIBBON GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS
- E. ORANGE RIBBON COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT
- F. BLUE RIBBON POTABLE WATER
- G. PURPLE RIBBON RECLAIMED WATER, IRRIGATION AND SLURRY LINES H. GREEN RIBBON - SEWERS AND DRAIN LINES
- 10.EXISTING PAVEMENT, INCLUDING SIDEWALKS AND DRIVEWAYS, SHALL BE SAWED TO A SMOOTH STRAIGHT LINE AT ALL CONSTRUCTION LIMITS.
- 11. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS TO THE ENGINEER IN ACCORDANCE WITH SPECIFICATION SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS.
- 12. ANY EXISTING PAVEMENT DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE DRAWINGS AND/OR SPECIFICATIONS TO MATCH, OR EXCEED, EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- 13. CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING DRIVEWAYS AT ALL
- 14. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED CONSTRUCTION PERMITS PRIOR TO COMMENCING WORK AND IN ACCORDANCE WITH SPECIFICATION SECTION 01 10 00 - SUMMARY. THE OWNER IS RESPONSIBLE FOR PERMIT
- 15. ANY DAMAGE TO EXISTING STRUCTURES (I.E., FENCES, WALLS, R.O.W. MONUMENTS, SIGNS, CULVERTS, AND CONCRETE APRONS, ETC.) DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE. REPLACEMENT MATERIALS SHALL MATCH EXISTING. ALL REPAIRS MUST BE APPROVED BY ENGINEER.
- 16. CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AT ALL TIMES FREE FROM TRASH, LITTER, BLOWING DEBRIS, AND SILT RUNOFF IN ACCORDANCE WITH SPECIFICATION SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS.
- 17.CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE SANITATION FACILITIES FOR ITS EMPLOYEES AND SUB-CONTRACTORS IN ACCORDANCE WITH SPECIFICATION SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROL.

ENVIRONMENTAL NOTES:

- 1. A STORMWATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE PREPARED IN ACCORDANCE WITH SPECIFICATION SECTION 31 25 12 - STORMWATER POLLUTION PREVENTION.
- 2. ALL DISTURBED AREAS SHALL BE RESTORED AND CONTRACTOR SHALL REVEGETATE ALL EXPOSED CUT & FILL AREAS UPON COMPLETION OF CONSTRUCTION. THE SEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 32 92 23 - SODDING.
- 3. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS THAT THE SCOPE OF WORK INCLUDES CLEARING, AND EROSION CONTROL REQUIRED FOR CONSTRUCTION. THE CONTRACTOR SHALL REMOVE ONLY TREES SO INDICATED, PLUS TREES SMALLER THAN 8" AS REQUIRED TO ENABLE CONSTRUCTION. REVEGETATION AND ENVIRONMENTAL RESTORATION IS INCLUDED IN THE SCOPE OF WORK.
- 4. EROSION CONTROL CONSTRUCTION SEQUENCE:
- A. CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCE AND INSTALL EROSION/SEDIMENTATION CONTROLS PRIOR TO BEGINNING OF ANY CLEARING OR EXCAVATION ACTIVITIES.

- B. BEGIN CLEARING FOLLOWED BY CONSTRUCTION ACTIVITIES. PERFORM ALL CLEARING AT START OF PROJECT. INSPECT AND RESTORE EROSION CONTROL DEVICES THROUGHOUT CONSTRUCTION PROJECT ACTIVITY.
- C. ALL TOPSOIL EXCAVATED SHALL BE STOCKPILED SEPARATELY IN A DESIGNATED AREA. UPON COMPLETION OF BACKFILL, TOPSOIL SHALL BE REPLACED OVER DISTURBED AREAS.
- D. AFTER ACCEPTANCE OF REVEGETATION BY ENGINEER. CONTRACTOR SHALL REMOVE TEMPORARY EROSION/SEDIMENTATION CONTROLS.
- 5. INSTALL SILT FENCE, WHERE APPLICABLE.
- 6. WHERE SILT FENCING CROSSES UTILITY TRENCH EXCAVATIONS, EROSION CONTROLS SHALL BE TEMPORARILY REMOVED DURING TRENCHING AND PIPE INSTALLATION AND REPLACED IMMEDIATELY UPON COMPLETION OF TRENCH BACKFILLING.
- 7. IF ANY ENVIRONMENTALLY SENSITIVE FEATURE IS DISCOVERED DURING CONSTRUCTION, ALL CONSTRUCTION ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY AND THE ENGINEER MUST BE NOTIFIED IMMEDIATELY.
- 8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES.
- 9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER EROSION AND SEDIMENTATION CONTROLS IN ACCORDANCE WITH SPECIFICATION SECTION 31 23 16 -

<u>SAFETY NOTES:</u>

EXCAVATION.

- 1. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- 2. ELECTRICAL LINES MAY BE LOCATED CLOSE TO THE PROJECT AREA. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE STATE LAW (VERNON'S ANNOTATED TEXAS STATUTES, ARTICLE 1436(c)) CONCERNING OPERATION IN THE VICINITY OF ELECTRICAL LINES & THE NEED FOR EFFECTIVE PRECAUTIONARY MEASURES. IT IS A VIOLATION OF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS TO OPERATE EQUIPMENT IN SUCH A MANNER THAT PERSONS OR EQUIPMENT COME WITHIN TEN FEET OF AN ENERGIZED ELECTRIC LINE. SUCH REGULATIONS ARE ENFORCED BY OSHA, FEDERAL LAWS. TEXAS CODE ANNOTATED 1990, HEALTH AND SAFETY CODES, SUBSECTION 752.001 ET.SEQ. V.A.T.S. WAS ENACTED FOR THE PURPOSE OF ENSURING THE SAFETY OF PERSONS ENGAGED IN ACTIVITIES WITHIN PROXIMITY OF OVERHEAD LINES. THE LAW PROHIBITS ANY FUNCTION OR ACTIVITY WHERE IT IS POSSIBLE FOR THE PERSON PERFORMING SUCH ACTIVITY TO COME WITHIN SIX FEET OF AN OVERHEAD POWER LINE. THE LAW ALSO FORBIDS ANY PART OF ANY TOOL, EQUIPMENT, MACHINERY OR MATERIAL USED BY SUCH PERSON TO BE BROUGHT WITHIN SIX FEET OF ANY OVERHEAD LINE DURING THE PERFORMANCE OF SUCH ACTIVITY. IN ADDITION, THE LAW PROHIBITS OPERATION OF EQUIPMENT OR MACHINES WITHIN TEN FEET OF ANY OVERHEAD POWER LINE UNLESS CONTACT WITH SUCH LINE HAS BEEN EFFECTIVELY GUARDED AGAINST PURSUANT TO THE PROVISIONS OF THE LAW. VIOLATORS OF THE LAW ARE SUBJECT TO A FINE OR INCARCERATION OR BOTH, IN ADDITION TO CIVIL LIABILITY.
- 3. WHEN WORKING IN OR ADJACENT TO PUBLIC RIGHT—OF—WAY, CONTRACTOR WILL BE RESPONSIBLE FOR ERECTING AND MAINTAINING ALL BARRICADES, FLAGGERS, SIGNS AND OTHER DEVICES NECESSARY TO PROTECT THE PUBLIC AND MAINTAIN TRAFFIC FLOW. IT IS THE CONTRACTORS' RESPONSIBILITY TO FURNISH AND MAINTAIN ALL NECESSARY WARNING AND SAFETY DEVICES (FLASHING LIGHTS, FLAG MEN, BARRICADES, SIGNS, ETC.), AS REQUIRED TO ENSURE TRAFFIC SAFETY AND TO PROTECT THE PUBLIC SAFETY AND HEALTH. NO LANE CLOSURES WILL BE PERMITTED AND CONTRACTOR SHALL MAINTAIN TRAFFIC FLOW AT ALL TIMES IN EXISTING ROADWAYS.
- 4. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATION. ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.
- 5. IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS. WHEN EMPLOYEES ARE REQUIRED TO BE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
- 6. TRENCH SAFETY SYSTEMS ARE INCLUDED AS A SEPARATE PAY ITEM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH ENGINEERING DESIGN, INSTALLATION, & MAINTENANCE OF THE SAFETY SYSTEMS IN ACCORDANCE WITH THE TRENCH SAFETY ENGINEER'S DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL SUBMIT FOR REVIEW A PROJECT SPECIFIC TRENCH SAFETY SYSTEM DESIGNED BY A STATE OF TEXAS REGISTERED PROFESSIONAL ENGINEER. THE DESIGN SHALL BE SUBMITTED TO THE OWNER PRIOR TO CONSTRUCTION FOR SUBSTANTIATION OF DESIGN BY REGISTERED ENGINEER, AND FOR RECORDS OF OWNER'S FIELD REPRESENTATIVE.
- 7. THE WALLS AND FACES OF ALL EXCAVATIONS IN WHICH EMPLOYEES ARE EXPOSED TO DANGER FROM MOVING GROUND SHALL BE GUARDED BY A SHORING SYSTEM, OR SOME EQUIVALENT MEANS.
- 8. IN EXCAVATIONS WHICH CONTRACTOR'S EMPLOYEES MAY BE REQUIRED TO ENTER. EXCAVATED MATERIAL SHALL BE EFFECTIVELY STORED AND RETAINED AT LEAST 3 FEET OR MORE FROM THE EDGE OF THE OPEN TRENCH.
- 9. DIVERSION DIKES, DITCHES, OR OTHER SUITABLE MEANS SHALL BE USED TO PREVENT SURFACE WATER FROM ENTERING AN EXCAVATION. WATER SHALL NOT BE ALLOWED TO ACCUMULATE IN AN EXCAVATION. CONTRACTOR SHALL FOLLOW OSHA REQUIREMENTS FOR TRENCH SAFETY, INCLUDING DEWATERING AS NEEDED. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN EFFECTIVE DEWATERING MEASURES. DEWATERING SHALL BE ACCOMPLISHED AT NO ADDED PAY.
- 10. BANKS MORE THAN 5 FEET HIGH SHALL BE SHORED, LAID BACK TO A STABLE SLOPE. OR SOME OTHER EQUIVALENT MEANS OF PROTECTION SHALL BE PROVIDED WHERE EMPLOYEES MAY BE EXPOSED TO MOVING GROUNDS OR CAVE-INS.
- 11. SIDES OF TRENCHES 5 FEET OR MORE IN DEPTH SHALL BE SHORED OR OTHERWISE SUPPORTED.

PUBLIC WATER UTILITY DISTRIBUTION SYSTEM NOTES:

- 1. ALL PUBLIC WATER UTILITY DISTRIBUTION SYSTEM IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE CITY OF BRYAN TECHNICAL SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC INFRASTRUCTURE.
- 2. THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE ENGINEER PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO ANY WATER SHUT OFF OR TURN ON THAT WILL AFFECT A PUBLIC WATER SYSTEM (PWS).

3. 72 HOURS NOTICE SHALL BE REQUIRED FOR SCHEDULED WATERLINE SHUT-

- 4. THE CONTRACTOR SHALL CONTACT THE CITY OF BRYAN WATER SERVICES 48
- HOURS PRIOR TO CONNECTING TO EXISTING WATERLINES. 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND

- REPLACEMENT OF ALL EXISTING PAVEMENTS, CURBS, DRIVEWAYS, SIDEWALKS, GRAVEL ROADWAYS. PIPE CULVERTS. CULVERT HEADWALLS. FENCES. BILLBOARDS AND MISCELLANEOUS ITEMS WHERE REQUIRED TO COMPLETE THE
- 6. THERE IS NO PAY ITEM FOR DEWATERING AND NO SEPARATE PAYMENT WILL BE MADE FOR DEWATERING. ANY DEWATERING OF THE TRENCH REQUIRED IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCIDENTAL TO THE BID ITEM FOR WHICH IT PERTAINS.
- 7. CLOSED TRENCHES WITHIN THE ROADWAY LIMITS SHALL BE MADE SUITABLE FOR TRAFFIC USE DURING THE NON—WORKING HOURS. IN THE AREA OF THE TRENCH REMAINING OPEN, THE CONTRACTOR SHALL PROVIDE TWO TRAFFIC LANES (24 FT.), OR PORTIONS THEREOF, AND TRAFFIC CONTROL DEVICES IN SUCH A MANNER AS TO PROVIDE SAFE TRAFFIC CONDITIONS. WHERE TRAFFIC LANES ARE PROVIDED OUTSIDE OF THE EXISTING ROADWAY, AN ALL-WEATHER ROADWAY SUITABLE FOR SAFE TRAFFIC OPERATION SHALL BE PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ALL-WEATHER ROADWAY AT ALL TIMES IN A SATISFACTORY CONDITION ACCEPTABLE TO THE OWNER.
- 8. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL EXISTING CONNECTIONS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING CONNECTIONS IN THE FIELD.
- 9. WHERE NEW WATER SERVICES ARE INSTALLED UNDER EXISTING CURB AND GUTTER, THE CONTRACTOR WILL HAVE THE FOLLOWING OPTIONS:

A. REMOVE AND REPLACE ADEQUATE AMOUNT OF CURB AND GUTTER.

- B. PLACE FLOWABLE BACKFILL BENEATH THE EXISTING CURB AND GUTTER.
- 11. ALL D.I.P. FITTINGS SHALL BE NEW AND SHALL BE NORTH AMERICAN FABRICATED. NO FOREIGN FITTINGS SHALL BE ALLOWED.
- 12.THE CONTRACTOR SHALL BE AWARE THAT CONNECTING TO EXISTING UTILITY LINES OR TERMINATING EXISTING LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS, AND ALL UTILITY TIE-INS MUST BE COORDINATED WITH AND APPROVED BY THE ENGINEER PRIOR TO BEGINNING WORK.
- 13. THE CONTRACTOR IS NOT AUTHORIZED TO OPEN OR CLOSE WATER VALVES WITH HIS OWN PERSONNEL. THE CONTRACTOR SHALL COORDINATE SUCH WORK EFFORT WITH THE CITY OF BRYAN WATER SERVICES OWNER AND/OR ENGINEER.
- 14.THE CONTRACTOR SHALL OBTAIN A TEMPORARY CONSTRUCTION WATER METER WITH A BACKFLOW PREVENTION DEVICE FROM THE PWS OWNER. THE WATER CONSUMPTION, DEPOSIT, REPAIR COSTS, ETC., SHALL BE CONSIDERED SUBSIDIARY TO THE CONSTRUCTION OF THE WATER UTILITY DISTRIBUTION
- 15. ALL WATERLINES ARE TO BE HYDROSTATICALLY TESTED BY THE CONTRACTOR IN ACCORDANCE WITH SPECIFICATION SECTION 33 11 10 — HYDROSTATIC
- 16. COMPLETED WATERLINES SHALL BE DISINFECTED IN ACCORDANCE WITH SPECIFICATION SECTION 33 13 00 - DISINFECTION LINES.
- 17.THE CONTRACTOR SHALL PROVIDE NO LESS THAN 48 HOURS NOTICE PRIOR TO PERFORMING DISINFECTION (CHLORINATION), DECHLORINATION, OR PRESSURE TESTING.
- 18. ALL WATER LINES SHALL BE COMPLETE IN PLACE INCLUDING ALL BENDS, THRUST BLOCKS, FITTINGS, SERVICES AND APPURTENANCES BEFORE PRESSURE TESTING.
- 19. ADJUSTMENT OF WATER METERS, VALVES, MANHOLES, IRRIGATION SYSTEMS, AND ANY OTHER PUBLIC OR PRIVATE UTILITY, ETC. ARE NOT SEPARATE PAY ITEMS. THE PRICE OF THE ADJUSTMENT SHALL BE SUBSIDIARY TO THE CONSTRUCTION OF VARIOUS BID ITEMS.

SPECIAL PUBLIC WATER UTILITY DISTRIBUTION NOTES:

- 1. THE PROPOSED 6—INCH FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PRESSURE PIPE (D.I.P.) IN ACCORDANCE WITH SPECIFICATION SECTION 33 11 13 — PUBLIC WATER DISTRIBUTION PIPING, WITH A MINIMUM RATED WORKING PRESSURE OF **350** PSI, UNLESS NOTED OTHERWISE.
- 2. ALL D.I.P. SHALL BE ENCASED IN POLYETHYLENE SHEETING (POLY-WRAPPED) AS PER AWWA C105 (ANSI A21.5) AND IN ACCORDANCE WITH SPECIFICATION SECTION 33 11 13 — PUBLIC WATER DISTRIBUTION PIPING.
- 3. THE PROPOSED 4-INCH THRU 8-INCH WATERLINES SHALL BE PVC WATER PIPE, AWWA C-900 CLASS 200 (DR-14) IN ACCORDANCE WITH SPECIFICATION SECTION 33 11 13 - PUBLIC WATER DISTRIBUTION PIPING, UNLESS NOTED OTHERWISE.
- 4. INSTALLATION OF ALL WATER PIPE SHALL BE BACKFILLED USING CEMENT STABILIZED SAND EMBEDMENT PER THE TECHNICAL SPECIFICATIONS AND DETAILS SHOWN HEREIN.
- 5. WATER SERVICES 2-INCH AND SMALLER SHALL BE AS FOLLOWS: • CITY MAINTAINED - TYPE K SOFT COPPER TUBING IN ACCORDANCE WITH SPECIFICATION SECTION 33 12 13 - WATER SERVICE CONNECTIONS. • OWNER MAINTAINED — PER TABLE 605.3 OF THE PLUMBING CODE.

TCEQ WATERLINE LOCATION NOTES:

- 1. WHEN NEW POTABLE WATER DISTRIBUTION LINES ARE CONSTRUCTED. THEY SHALL BE INSTALLED NO CLOSER THAN NINE FEET IN ALL DIRECTIONS TO WASTEWATER COLLECTION FACILITIES. ALL SEPARATION DISTANCES SHALL BE MEASURED FROM THE OUTSIDE SURFACE OF EACH OF THE RESPECTIVE PIECES.
- 2. POTABLE WATER DISTRIBUTION LINES AND WASTEWATER MAINS OR LATERALS THAT FORM PARALLEL UTILITY LINES SHALL BE INSTALLED IN SEPARATE TRENCHES.
- 3. NO PHYSICAL CONNECTION SHALL BE MADE BETWEEN A DRINKING WATER SUPPLY AND A SEWER LINE. ANY APPURTENANCE SHALL BE DESIGNED AND CONSTRUCTED SO AS TO PREVENT ANY POSSIBILITY OF SEWAGE ENTERING THE DRINKING WATER SYSTEM.
- 4. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING CRITERIA SHALL APPLY.

NEW WATERLINE INSTALLATION — PARALLEL LINES.

- 1. WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING, NON-PRESSURE OR PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE LICENSED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS IS ABLE TO DETERMINE THAT THE EXISTING WASTEWATER MAIN OR LATERAL IS NOT LEAKING. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE EXISTING WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE EXISTING WASTEWATER MAIN OR LATERAL. EVERY EFFORT SHALL BE EXERTED NOT TO DISTURB THE BEDDING AND BACKFILL OF THE EXISTING WASTEWATER MAIN OR LATERAL
- 2. WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING PRESSURE RATED WASTEWATER MAIN OR LATERAL AND IT CANNOT BE DETERMINED BY THE LICENSED PROFESSIONAL ENGINEER IF THE EXISTING LINE IS LEAKING, THE EXISTING WASTEWATER MAIN OR LATERAL SHALL BE REPLACED WITH AT LEAST 150 PSI PRESSURE RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE NEW WASTEWATER LINE,

- MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE REPLACED WASTEWATER MAIN OR LATERAL.
- 3. WHERE A NEW POTABLE WATERLINE PARALLELS A NEW WASTEWATER MAIN, THE WASTEWATER MAIN OR LATERAL SHALL BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL MEASURED VERTICALLY. AND AT LEAST FOUR FEET AWAY. MEASURED HORIZONTALLY, FROM THE WASTEWATER MAIN OR LATERAL.

NEW WATERLINE INSTALLATION - CROSSING LINES.

- 1. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE. THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL IS DISTURBED OR SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
- 2. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
- 3. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE STANDARD PIPE SEGMENT LENGTH OF THE WASTEWATER MAIN OR LATERAL IS AT LEAST 18 FEET, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (VI) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
- 4. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL AND A STANDARD LENGTH OF THE WASTEWATER PIPE IS LESS THAN 18 FEET IN LENGTH, THE POTABLE WATER PIPE SEGMENT SHALL BE CENTERED OVER THE WASTEWATER LINE. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM WITH ONE OF THE FOLLOWING OPTIONS.
- 5. WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED. THE WASTEWATER MAIN OR LATERAL SHALL BE LOCATED BELOW THE *WATERLINE*.
- 6. ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WASTEWATER MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON-SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED. THE WASTEWATER LINE SHALL BE LOCATED BELOW THE WATERLINE.
- 7. WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN OR LATERAL THE WATERLINE SHALL BE ENCASED AS DESCRIBED FOR WASTEWATER MAINS OR LATERALS IN SUBCLAUSE (II) OF THIS CLAUSE OR CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL SHALL BE PROVIDED. BOTH THE WATERLINE AND WASTEWATER MAIN OR LATERAL MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.
- 8. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (VI) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
- 9. WATERLINE AND WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SEPARATION. THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT.
- 10.LOCATION OF FIRE HYDRANTS. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.

REV. DESCRIPTION DATE



SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

PROJECT NOTES

PRELIMINARY FOR REVIEW ONLY THIS DOCUMENT IS

RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF PROFESSIONAL ENGINEER DAVID P. SMITH ON THE DATE SHOWN ON THE DATE STAMP. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

DPS 4-01167 DRAWING NO. C001

RAM

LCS

LCS, HBS, CPM

PUBLIC SANITARY UTILITY SEWERAGE SYSTEM NOTES:

1. ALL PUBLIC SANITARY UTILITY SYSTEM CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BRYAN TECHNICAL SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC INFRASTRUCTURE.

SPECIAL PUBLIC SANITARY UTILITY SEWERAGE SYSTEM NOTES:

- 1. SANITARY SEWER PIPE, UNLESS OTHERWISE SPECIFIED ON THE PLANS, SHALL BE PVC SDR-26 (ASTM D3034) USING BEDDING, EMBEDMENT, AND BACKFILL PER THE TECHNICAL SPECIFICATIONS AND DETAILS SHOWN HEREIN.
- 2. AN "S" SHALL BE STAMPED ON THE FACE OF CURB AT THE LOCATION OF EACH SANITARY SEWER SERVICE.
- 3. ALL SANITARY SEWER ADAPTERS REQUIRED TO CONNECT TO EXISTING SANITARY SEWERS ARE INCIDENTAL TO THE BID ITEM FOR SANITARY SEWER PIPE.
- 4. ALL STREET AND ROADWAY BORES TO BE DRY BORES AS SPECIFIED IN THE
- 5. INSTALLATION OF ALL SANITARY SEWER PIPE SHALL BE BACKFILLED USING CEMENT STABILIZED SAND EMBEDMENT PER THE TECHNICAL SPECIFICATIONS AND DETAILS SHOWN HEREIN.

PAVING CONSTRUCTION NOTES:

TECHNICAL SPECIFICATIONS.

- 1. WHEN THE TOP OF CURB ELEVATION OR BOTTOM OF PAVEMENT SLAB IS ABOVE NATURAL GROUND, THE PAVING CONTRACTOR SHALL BACKFILL FROM THE NATURAL GROUND TO TOP OF CURB IN LAYERS NOT EXCEEDING 8 INCHES IN DEPTH AND EACH LAYER COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY AND SHALL FILL FROM CURB TO RIGHT-OF-WAY.
- 2. PAVING CONTRACTOR SHALL PROTECT WATER, SEWER, AND DRAINAGE FACILITIES; AND WILL REPLACE AT HIS EXPENSE ANY FACILITIES DAMAGED DURING PAVING OPERATIONS. ALL MANHOLES AND VALVES FALLING WITHIN PAVEMENT AREA SHALL BE ADJUSTED TO FINISHED GRADE BY PAVING CONTRACTOR WITHOUT THE USE OF BLOCKOUTS WHEN DIRECTED BY OWNER (WITH NO SEPARATE PAY).
- 3. PAVING SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
- 4. EXISTING PAVEMENT, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED AT NO COST TO THE OWNER.
- 5. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.
- 6. ALL ROAD WIDTHS, CURB RADII, AND CURB ALIGNMENT SHOWN INDICATE BACK OF CURB. ALL CURB ELEVATIONS ARE TO "TOP OF CURB" UNLESS NOTED OTHERWISE.
- 7. AREAS TO RECEIVE FILL SHALL BE STRIPPED 6 INCHES, SCARIFIED, AND COMPACTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS PRIOR TO FILL
- 8. SUBGRADE FOR SIDEWALKS AND FLATWORK ADJACENT TO BUILDINGS SHOULD MEET OR EXCEED RECOMMENDATIONS IN GEOTECHNICAL ENGINEERING REPORT PREPARED BY INTERTEK PSI, DATED FEBRUARY 15, 2021.

SPECIAL PAVING NOTES:

1. PAVEMENT SECTION(S) SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON, DATED APRIL 21, 2023, AS SUMMARIZED BELOW AND AS INDICATED ON DRAWINGS:

STREET	LIME—TREATED SUBGRADE DEPTH (IN)	CEMENT— TREATED BASE THICKNESS (IN)	P.C. CONCRETE PAVING THICKNESS (IN)
PARKING & DRIVES	6	N/A	5
COMPACTOR PAD	6	N/A	8
FIRE LANES	6	N/A	6

STORM SEWER CONSTRUCTION NOTES:

- 1. CONTRACTOR SHALL PROVIDE 6" MINIMUM CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACKSLOPE DRAINAGE SYSTEMS DISTURBED AS A RESULT OF HIS WORK.
- 3. ALL DITCHES SHALL BE REGRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED AND ALL DISTURBED AREAS SHALL BE REGRADED, SEEDED, AND FERTILIZED WITHIN 10 WORKING DAYS OF EACH OCCURRENCE.

SPECIAL STORM SEWER NOTES:

1. STORM SEWER GRAVITY PIPE, UNLESS OTHERWISE SPECIFIED ON THE PLANS, SHALL BE CONTECH A-2000 PVC (ASTM F949) OR EQUAL WITHIN NON STRUCTURAL BACKFILL AREA AND REINFORCED CONCRETE PIPE MEETING B/CS UNIFIED SPECIFICATION 33 40 02 SHALL BE PLACED IN STRUCTURAL BACKFILL AREAS. ALL STORM PIPE SHALL BE BACKFILLED USING CEMENT STABILIZED SAND EMBEDMENT PER THE TECHNICAL SPECIFICATIONS AND DETAILS SHOWN HEREIN.

REINFORCED CONCRETE NOTES:

- 2. ALL CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-83) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301-84), BY THE AMERICAN CONCRETE
- 3. CEMENT SHALL CONFORM TO ASTM C150, TYPE I, OR TYPE II, UNLESS SPECIFIED OTHERWISE.
- 4. AGGREGATES SHALL CONFORM TO ASTM C33 FOR NORMAL WEIGHT AGGREGATE. THE MAXIMUM SIZE OF AGGREGATE SHALL BE 1.5," UNLESS SPECIFIED OTHERWISE.
- 5. MIXING WATER SHALL BE CLEAN AND FREE FROM INJURIOUS AMOUNTS OF OILS. ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS, AND OTHER DELETERIOUS SUBSTANCES.
- 6. AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260. OTHER ADMIXTURES TO MODIFY WORKABILITY, HARDNESS, OR OTHER CHARACTERISTICS SHALL NOT BE USED. CALCIUM CHLORIDE SHALL NOT BE USED UNDER ANY CIRCUMSTANCES.
- ALL REINFORCEMENT SHALL BE OF DOMESTIC MANUFACTURE AND SHALL CONFORM TO ACI 318-83, AND SHALL BE FREE FROM LOOSE FLAKY RUST, LOOSE SCALE, MUD, OIL, OR OTHER COATINGS THAT WILL PREVENT OR REDUCE THE BOND. ALL REINFORCING STEEL SHALL HAVE A MINIMUM 60,000 PSI YIELD STRESS AND CONFORM TO ASTM A615 GRADE 60 DEFORMED REINFORCING BARS. REINFORCEMENT SHALL BE PLACED IN CONFORMANCE WITH ACI 318-83, CHAPTER 7, AND AS SHOWN ON THE PLANS. DETAILING OF CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI PUBLICATION 315.
- 8. ALL CONCRETE SHALL MEET THE QUALITY REQUIREMENTS SPECIFIED IN THE TECHNICAL SPECIFICATIONS.
- 9. DIMENSIONS SHOWN ARE TO OUTSIDE OF REBAR.
- 10. CAST IN PLACE CONCRETE SHALL STRICTLY ADHERE TO THE PROPORTIONS ESTABLISHED IN DESIGN MIXES, CONSISTING OF THE ACTUAL MATERIALS TO BE USED DURING CONSTRUCTION, FOR STRENGTHS AND USES INTENDED. THESE DESIGN MIXES ARE TO BE PREPARED BY A QUALIFIED LABORATORY, AND THE MATERIALS AND TEST RESULTS ARE TO BE APPROVED BY THE ENGINEER PRIOR TO USE.

- 11. CONTRACTOR SHALL VERIFY THE PRESENCE, LOCATION AND SIZE OF ALL OPENINGS AND SLAB DEPRESSIONS AND EMBEDMENTS PRIOR TO PLACING CONCRETE. NO OPENINGS SHALL BE PERMITTED THROUGH BEAMS, JOISTS, OR COLUMNS UNLESS NOTED OTHERWISE ON PLANS AND/OR APPROVED BY THE ENGINEER.
- 12. PROPER ACCESSORIES AND SUPPORTS ARE TO BE USED AS NOTED AND APPROVED ON THE SHOP DRAWINGS. PROVIDE GALVANIZED OR PLASTIC COATED CHAIRS AND BAR SUPPORTS AT SOFFITS OF ALL EXPOSED MEMBERS. ALL REINFORCING TO BE SECURELY AND ACCURATELY HELD IN POSITION.
- 13. PROVIDE ¾" CHAMFER ON ALL EXPOSED CORNERS OF CONCRETE.
- 14. CAPSULE ANCHORS SHALL BE PARABOUND CAPSULE SYSTEM BY HILTI OR APPROVED EQUAL.
- 15. ALL ANCHOR BOLTS SHALL BE 316 STAINLESS STEEL UNLESS NOTED OTHERWISE.

DEMOLITION NOTES:

- 1. FOLLOWING APPROPRIATE SAFETY PROCEDURES, DEMOLISH EXISTING FACILITIES AS SHOWN ON THE PLANS. PROTECTION OF PUBLIC AND PRIVATE PROPERTY AND SAFE DISPOSITION OF SPOIL MATERIAL IS INCLUDED IN THIS ITEM.
- 2. CONTRACTOR SHALL SUBMIT FOR APPROVAL TO ENGINEER AND THE OWNER A DEMOLITION PLAN INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- A. METHODS, EQUIPMENT AND SEQUENCE OF OPERATION.
- B. CREDENTIALS OF INDIVIDUALS PERFORMING DEMOLITION OPERATIONS, INCLUDING SUBCONTRACTORS.
- C. SAFETY MEASURES TO PROTECT WORKERS, PERSONNEL, AND THE PUBLIC.
- D. SAFETY MEASURES TO PROTECT ADJACENT PROPERTIES, LANDSCAPING,
- E. ASBESTOS OR OTHER HAZARDOUS MATERIAL ABATEMENT PLAN, UNLESS SUCH PLAN IS PROVIDED BY THE OWNER.
- F. STORAGE, REMOVAL AND DISPOSAL OF SPOIL MATERIAL.

IMPROVEMENTS TO REMAIN OR PUBLIC RIGHTS-OF-WAY.

- G. EROSION CONTROL MEASURES, INCLUDING NPDES PROCEDURES AND REGULATIONS.
- H. POLLUTION AND AIR QUALITY CONTROL MEASURES (DUST CONTROL, ETC.).
- I. HEALTH DEPARTMENT NOTICE.
- J. UTILITY COORDINATION WITH ALL AFFECTED UTILITIES, INCLUDING LOCATION OF FACILITIES, PROTECTION DURING DEMOLITION, DAMAGE REPAIRS AND DISRUPTION OF SERVICE).
- 3. THE PROJECT SITE SHALL BE CLEANED DAILY. DEBRIS, RUBBISH AND CONTRACTORS SALVAGED MATERIAL SHALL BE REMOVED PROMPTLY.
- 4. ALL SPOIL MATERIAL REMAINING AFTER OWNER SALVAGE IS COMPLETE AND RESULTING FROM DEMOLITION OPERATIONS BECOMES THE PROPERTY OF THE CONTRACTOR. APPROPRIATE DISPOSAL OF SPOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT HIS EXPENSE. OWNER WILL PROVIDE LIST OF ITEMS TO BE SALVAGED.

CONSTRUCTION WITHIN TXDOT RIGHT-OF-WAY:

- 1. TXDOT'S SPECIFICATIONS:
- A. RIGHT-OF-WAY SHALL BE RESTORED TO ITS ORIGINAL CONDITION, INCLUDING, BUT NOT LIMITED TO. THE RE-ESTABLISHMENT OF GRASSES AND/OR WILDFLOWERS. WORK IN OR AROUND LARGE WOODY VEGETATION OR A CONCENTRATION OF WOODY VEGETATION SHALL BE DONE IN SUCH A MANNER AS TO NOT DAMAGE THE VEGETATION. BEFORE CONSTRUCTION IS STARTED, A SATISFACTORY MUTUAL ARRANGEMENT SHALL BE REACHED BETWEEN THE TEXAS DEPARTMENT OF TRANSPORTATION, THE UTILITY AGENT AND THE CONTRACTOR CONCERNING VEGETATION MANAGEMENT REQUIREMENTS.
- B. UPON COMPLETION OF THE INSTALLATION, A FINAL INSPECTION SHALL BE MADE BY THE TEXAS DEPARTMENT OF TRANSPORTATION.
- 2. TRENCH EXCAVATIONS AND PIT LOCATIONS
- A. GENERAL NO DIRT FROM A TRENCH OR PIT EXCAVATION SHALL BE PLACED. ON THE ROADWAY OR SHOULDERS. ALL EQUIPMENT AND STOCKPILED DIRT SHALL MEET THE SAFETY CLEAR ZONE DISTANCES LISTED BELOW OR HAVE ADEQUATE BARRICADES AND WARNING DEVICES TO PROTECT THE TRAVELING PUBLIC.
- TOPSOIL SHALL BE KEPT SEPARATE FROM THE OTHER EXCAVATION MATERIAL, AND REPLACED IN ACCORDANCE WITH "SPECIFICATIONS FOR BACKFILL."
- B. ALL PITS AND TRENCHES SHALL BE KEPT DRY AND FREE FROM STANDING WATER. IF ANY TRENCHES AND OR PITS ARE LEFT OPEN FOR EXTENDED PERIODS OF TIME WITHOUT A CONTINUOUS PROGRESSION OF WORK, THE UTILITY WILL BE REQUIRED TO BACKFILL THE TRENCHES AND/OR PITS.
- C. IN ALL EXCAVATIONS WHERE SLOUGHING IS LIKELY TO OCCUR, SHORING SHALL BE UTILIZED TO PREVENT DAMAGE TO THE HIGHWAY STRUCTURE(S). THE UTILITY AGENCY OF CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRENCH EXCAVATION PROTECTION AS REQUIRED BY PROVISIONS OF PART 1926. SUBPART P— EXCAVATIONS, TRENCHING, AND SHORING OF OSHA STANDARDS.
- D. TRENCHING LONGITUDINAL INSTALLATIONS MUST BE PLACED AS NEAR A UNIFORM ALIGNMENT TO THE RIGHT-OF-WAY LINE AS POSSIBLE. THIS OPERATION MAY BE DONE BY A TRENCHING MACHINE OR BACKHOE. IF A UNIFORM ALIGNMENT CANNOT BE MAINTAINED BY USING A TRENCHING MACHINE, THE TXDOT INSPECTOR CAN REQUIRE THE USE OF A BACKHOE MACHINE TO OBTAIN A MORE UNIFORM ALIGNMENT.
- E. SAFETY CLEAR ZONE DISTANCES CLEAR ZONE DISTANCES REQUIRED FOR TRENCH EXCAVATIONS, STOCKPILES, AND BORE PIT LOCATIONS AS FOLLOWS:

FOR UNCURBED HIGHWAYS:

- 1) THIRTY (30) FEET FROM EDGE OF PAVEMENT OF HIGH SPEED (OVER 40 MPH), HIGH VOLUME (OVER 750 VEHICLES PER DAY) HIGHWAYS.
- 2) SIXTEEN (16) FEET FROM THE EDGE OF PAVEMENT OF HIGH-SPEED, LOW VOLUME (LESS THAN 750 VEHICLES PER DAY) HIGHWAYS.
- 3) SIXTEEN (16) FEET FROM RAMPS.
- 4) TEN (10) FEET FOR LOW-SPEED (40 MPH OR LESS) HIGHWAYS.
- 5) TEN (10) FEET FOR ANY INTERSECTING SIDE STREETS.
- FOR CURBED HIGHWAYS:
- 1) THIRTY (30) FEET FROM EDGE OF PAVEMENT OF HIGH SPEED (OVER 40 MPH), HIGH VOLUME (OVER 750 VEHICLES PER DAY) HIGHWAYS.
- 2) FIVE (5) FEET FROM THE BACK OF CURB, PLUS ANY ADDITIONAL DISTANCE TO CLEAR EXISTING SIDEWALKS, OF LOW SPEED (40 MPH OR LESS)
- 3) FIVE (5) FEET FROM BACK OF CURB FOR ANY INTERSECTING SIDE STREETS.
- 3. GENERAL CONDITIONS
- A. ALL EXISTING UTILITIES MUST BE LOCATED AND MARKED, AND THE PROPOSED LINE ROUTE MUST BE STAKED AND APPROVED PRIOR TO ANY INSTALLATION. PROPOSED LINE MUST FOLLOW THE ALIGNMENT OF AND BE WITHIN FIVE FEET (5') OF THE STATE RIGHT-OF-WAY LINE, EXISTING UTILITIES PERMITTING.

- TXDOT IS NOT RESPONSIBLE FOR ANY STAKING OF RIGHT-OF-WAY. INSTALLATION OF PROPOSED CROSSINGS AT INTERSECTIONS WITH TRAFFIC LIGHT SYSTEMS OF ANY TYPE MUST FIRST BE CLEARED WITH THE DISTRICT TRAFFIC SIGNAL SERVICE DEPARTMENT (254-867-2807). THIS WOULD INCLUDE AREAS WITH SAFETY LIGHTING.
- B. HIGHWAY LANE SURFACES AND PAVED SHOULDERS MUST BE KEPT FREE OF MUD AND OTHER DEBRIS AT ALL TIMES. OVERHANGING BRUSH AND/OR TREE LIMBS ENCOUNTERED IN YOUR PREVIOUSLY APPROVED ROUTE MUST BE NEATLY PRUNED AND IN ACCEPTABLE MANNER TO TXDOT, AND THE TRIMMINGS DISPOSED OF. IF LARGE DESIRABLE TREES OR A ROW OR THICKET OF SMALLER TREES OR BRUSH LIES IN THE PATH OF YOUR ROUTE, THEY MUST BE NEGOTIATED BY DIRECTIONAL BORING UNDERNEATH AT A DEPTH SO AS NOT TO DAMAGE THE ROOT SYSTEM. "SKIRTING AROUND" OR CHANGING THE ALIGNMENT OF THE PIPELINE INSTALLATION TO AVOID THIS TYPE OF VEGETATION WILL NOT BE ALLOWED.
- C. ANY PROPOSED FIELD CHANGES OR MODIFICATIONS DUE TO UNFORESEEN CIRCUMSTANCES MUST BE APPROVED PRIOR TO ANY INSTALLATION.
- D. AFTER THE INSTALLATION OF PIPELINE IS COMPLETE, A THOROUGH CLEANUP OF THE RIGHT-OF-WAY IS REQUIRED. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, COMPACTION AND LEVELING OF TRENCH LINE AND BORE SITES, REMOVAL OF ALL COARSE ROCK BROUGHT TO THE SURFACE, AND THE SMOOTHING OF ANY AND ALL RUTTING OF THE RIGHT-OF-WAY CREATED AS A RESULT OF INSTALLATION.
- 4. SPECIAL PROVISIONS ATTACHED TO AND PART OF THIS PERMIT
- A. THE PERMIT APPLICANT SHALL INSURE THAT THE CONTRACTOR'S AGENTS (EMPLOYEES, CONTRACTORS AND SUBCONTRACTORS) ARE COVERED BY COMMERCIAL GENERAL LIABILITY INSURANCE, TEXAS BUSINESS AUTOMOBILE INSURANCE AND WORKER'S COMPENSATION INSURANCE IN THE AMOUNTS SHOWN ON TXDOT FORM NO. 1560. THE TXDOT ENGINEER AT HIS/HER DISCRETION MAY REQUIRE PROOF OF INSURANCE (COMPLETED TXDOT FORM NO. 1560) PRIOR TO THE APPROVAL OF THE PERMIT.
- B. NOTIFICATION OF AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO STARTING CONSTRUCTION OF UTILITY INSTALLATION IS REQUIRED. FAILURE TO COMPLY MAY RESULT IN A SHUTDOWN OF THE PROJECT. THE INSTALLATION CREW AND/OR CONTRACTOR MUST HAVE AN APPROVED COMPLETE COPY OF THIS PERMIT IN THEIR POSSESSION AT THE JOBSITE.
- C. PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR'S REPRESENTATIVE WILL BE REQUIRED TO MEET WITH TXDOT'S AREA ENGINEERS OFFICE IN ADVANCE OF ANY OPERATIONS TO DISCUSS THE TRAFFIC CONTROL PLAN (SIGNING, BARRICADES, ETC.), THE ESTIMATED TIME OF COMPLETION, CLEAN-UP, AND

<u>GRADING NOTES:</u>

- 1. VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES. MINOR ADJUSTMENT TO FINISH GRADE TO ACCOMPLISH SPOT DRAINAGE IS ACCEPTABLE, IF NECESSARY, UPON PRIOR APPROVAL OF THE ENGINEER.
- 2. ALL FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO IMPORTING AND/OR PLACING AND COMPACTING.

TRAFFIC CONTROL NOTES:

FINAL INSPECTION.

- 1. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL. A TRAFFIC CONTROL PLAN MUST BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.
- 2. TRAFFIC CONTROL SHALL CONFORM TO APPLICABLE REQUIREMENTS OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND <u>HIGHWAYS</u> (THE LATEST EDITION). ADEQUATE SIGNS, BARRICADES, FLAG PERSONNEL, ETC. SHALL BE ERECTED AND MAINTAINED IN COMPLETE COMPLIANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL
- 3. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS. WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE <u>TEXAS MANUAL OF UNIFORM</u> TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (THE LATEST EDITION).
- 4. ALL PAVEMENT MARKINGS, MAKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR <u>CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES</u> AND <u>THE TEXAS</u> MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (THE LATEST EDITIONS).

EARTHWORK:

- 1. EXCESS MATERIAL RESULTING FROM EXCAVATION OPERATIONS IS THE PROPERTY OF THE CONTRACTOR. APPROPRIATE DISPOSAL SHALL BE AT THE CONTRACTOR'S
- 2. ALL EXCAVATION SHALL BE PERFORMED AS DIRECTED IN THE DRAWINGS AND IN COMPLIANCE WITH OSHA STANDARDS.
- 3. DATA ON SUBSURFACE CONDITIONS IS AVAILABLE TO THE CONTRACTOR FROM THE OWNER UPON REQUEST. THE OWNER MAKES NO WARRANTY AS TO THE CORRECTNESS OF THESE REPORTS. THE CONTRACTOR MAY, AT HIS OWN EXPENSE, PERFORM ADDITIONAL TEST BORINGS.
- 4. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL AFFECTED UTILITY COMPANIES. THIS SHALL INCLUDE LOCATION OF FACILITIES, PROTECTION DURING CONSTRUCTION, DAMAGE REPAIRS AND DISRUPTION OF SERVICE.
- 5. THE EXCAVATION IS UNCLASSIFIED, AND CONTRACTOR SHALL PERFORM EXCAVATION TO THE ELEVATIONS INDICATED IN THE PLANS, REGARDLESS OF CHARACTER OF MATERIAL, WITH NO ADDITIONAL COMPENSATION FROM THE
- 6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING BARRICADES REQUIRED TO WARN AND/OR PREVENT ACCESS TO CONSTRUCTION AREA.
- 7. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ADJACENT FACILITIES FROM DAMAGE. 8. OVER-EXCAVATION IS NONCOMPENSABLE, AND SHALL BE BACKFILLED AND

10. EXCAVATED MATERIAL SHALL BE STOCKPILED WHERE DIRECTED IN THE PLANS.

STOCKPILE SHALL BE MAINTAINED IN COMPLIANCE WITH ALL RELEVANT POLLUTION

COMPACTED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE

- 9. CONTRACTOR SHALL PROVIDE ALL LABOR AND EQUIPMENT NECESSARY TO PROPERLY DEWATER EXCAVATION AREAS - AS REQUIRED.
- PREVENTION PLANS. 11. CONSTRUCTION AREAS SHALL BE STRIPPED OF ALL EXISTING PAVEMENT MATERIALS, CURBS, EXISTING FILL MATERIAL, ETC. ROOTS OF TREES, IF PRESENT IN LANDSCAPE PORTIONS, TO BE REMOVED WITHIN CONSTRUCTION AREAS SHOULD BE GRUBBED TO FULL DEPTHS. REMNANTS OF FOUNDATION UNITS FROM EXISTING STRUCTURES, IF ANY, TO BE DEMOLISHED SHOULD BE REMOVED TO A MINIMUM DEPTH OF 24 INCHES BELOW FINAL SUBGRADE

- ELEVATION. ALL UTILITIES FROM PREVIOUS SITE DEVELOPMENT THAT ARE PLANNED TO BE ABANDONED SHOULD BE COMPLETELY REMOVED FROM WITHIN THE PROPOSED BUILDING AREAS, UNLESS OTHERWISE NOTED. ONCE FINAL SUBGRADE ELEVATION HAS BEEN ACHIEVED, EXPOSED SOIL SUBGRADE AREAS SHOULD BE CAREFULLY PROOFROLLED WITH A 15—TON ROLLER OR EQUIVALENT EQUIPMENT TO DETECT WEAK ZONES. WEAK AREAS DETECTED DURING PROOFROLLING, AS WELL AS ZONES CONTAINING DEBRIS OR ORGANICS AND VOIDS RESULTING FROM REMOVAL OF TREE ROOTS, FILL SOILS, FOUNDATION REMNANTS, UTILITIES, ETC., SHOULD BE REMOVED AND REPLACED WITH SOILS EXHIBITING SIMILAR CLASSIFICATION, MOISTURE CONTENT, AND DENSITY AS THE ADJACENT IN-SITU SOILS. PROPER SITE DRAINAGE SHOULD BE MAINTAINED DURING CONSTRUCTION SO THAT PONDING OF SURFACE RUNOFF DOES NOT OCCUR AND CAUSE CONSTRUCTION DELAYS AND/OR INHIBIT SITE ACCESS.
- 12. PRIOR TO ANY FILLING OPERATIONS, SAMPLES OF THE PROPOSED BORROW (IMPORTED) MATERIALS SHALL BE OBTAINED FOR SPECIFICATION COMPLIANCE AND LABORATORY MOISTURE—DENSITY TESTING. THE TESTS WILL PROVIDE A BASIS FOR EVALUATION OF FILL COMPACTION BY IN-PLACE DENSITY TESTING. A GEOTECHNICAL ENGINEER SHALL PERFORM IN-PLACE DENSITY TESTS DURING THE FILLING OPERATIONS TO VERIFY THAT SPECIFIED LEVELS OF COMPACTION ARE BEING ATTAINED.

SPECIAL EARTHWORK NOTES:

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- 1. ALL SUBSOIL MATERIAL IMPORTED FOR THE CIVIL SITEWORK SHALL BE SUBSOIL TYPE S1 (SELECT FILL OR SELECT BORROW) IN ACCORDANCE WITH SPECIFICATION SECTION 31 05 13 - SOILS FOR EARTHWORK.
- 2. ALL MATERIAL IMPORTED FOR FILL BENEATH THE BUILDING STRUCTURE SHALL BE SPECIFIED BY THE STRUCTURAL ENGINEER.

BRYAN TEXAS UTILITIES (BTU) NOTES:

1. PLEASE CONTACT BTU LINE DESIGN AT 821-5770 120 DAYS BEFORE POWER IS NEEDED TO BEGIN THE PROCESS OF OBTAINING POWER TO THE SITE. PLEASE PROVIDE A DETAILED LOAD ANALYSIS, AS WELL AS THE SERVICE REQUIREMENTS (VOLTAGE, AMPS, SINGLE PHASE VS THREE PHASE) AT THIS TIME.

SUDDENLINK/ALTICE COMMUNICATIONS NOTES:

1. PLEASE CONTACT DAN AUGSBERGER, SR. SUPERVISOR — OPS, CONSTRUCTION AT SUDDENLINK BRYAN, TX OFFICE AT 979-204-8263 OR DAN.AUGSBERGER@ALTICETECHSERVICESUSA.COM TO PLAN/CONSTRUCT NEW PHONE, VIDEO AND DATA COMMUNICATIONS SERVICE.

FRONTIER COMMUNICATIONS NOTES:

1. PLEASE CONTACT CASSANDRA HAMMOND WITH FRONTIER COMMUNICATIONS AT 979-599-6879 OR AT CASSANDRA.HAMMOND@FTR.COM TO SET UP OR INSTALL SERVICES AT THIS LOCATION.

> REV. DESCRIPTION DATE



MIDTOWN PARK M-B-G

SMBG BRYAN, LLC

PROJECT NOTES

PRELIMINARY

FOR REVIEW ONLY THIS DOCUMENT IS RELEASED FOR THE PURPOSE

OF INTERIM REVIEW UNDER THE AUTHORITY OF PROFESSIONAL ENGINEER DAVID P. SMITH ON THE DATE SHOWN ON THE DATE STAMP. IT IS NOT TO BE USED FOR CONSTRUCTION. BIDDING, OR PERMIT PURPOSES.

14

4-01167 DRAWING NO. C002

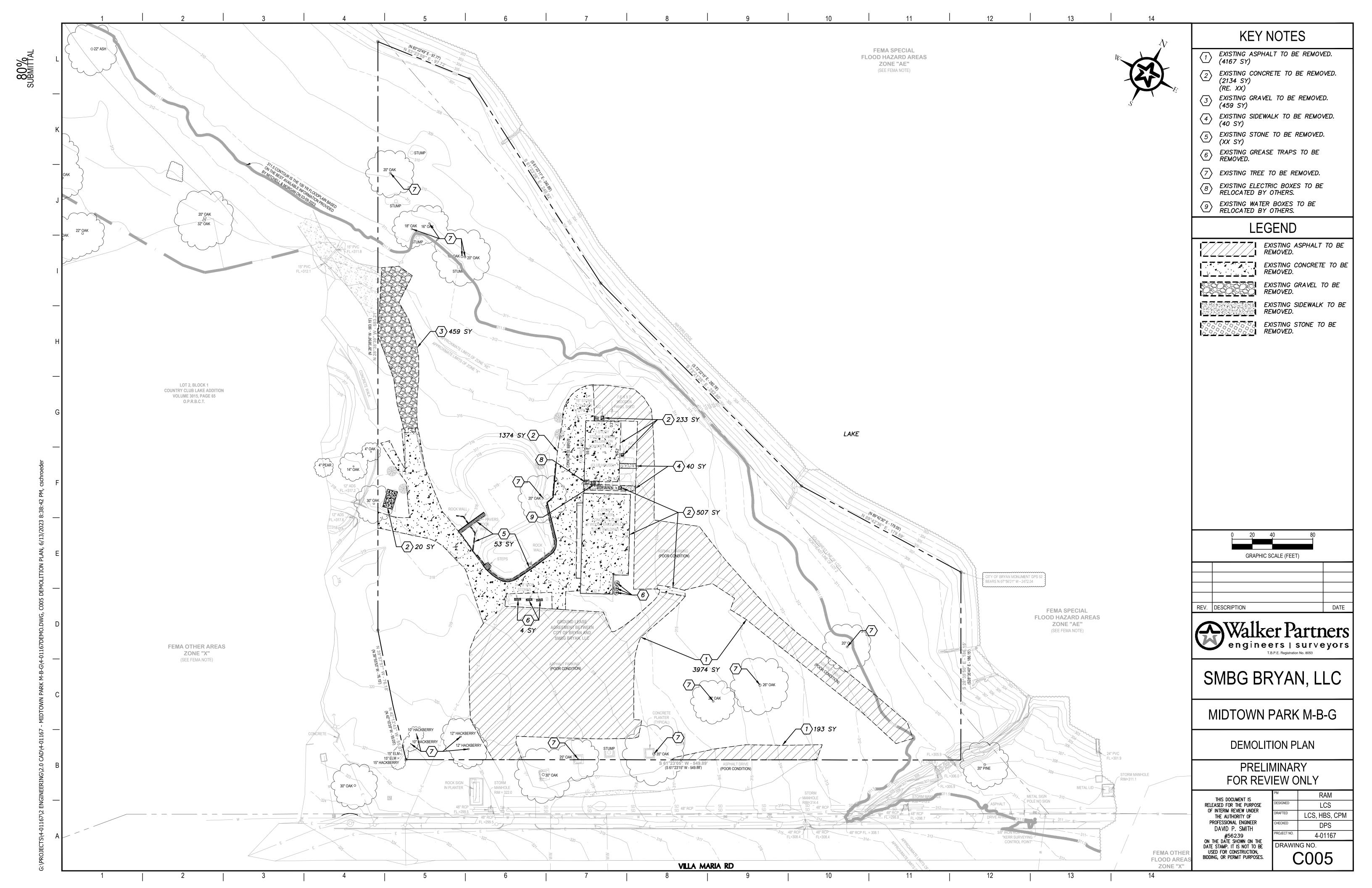
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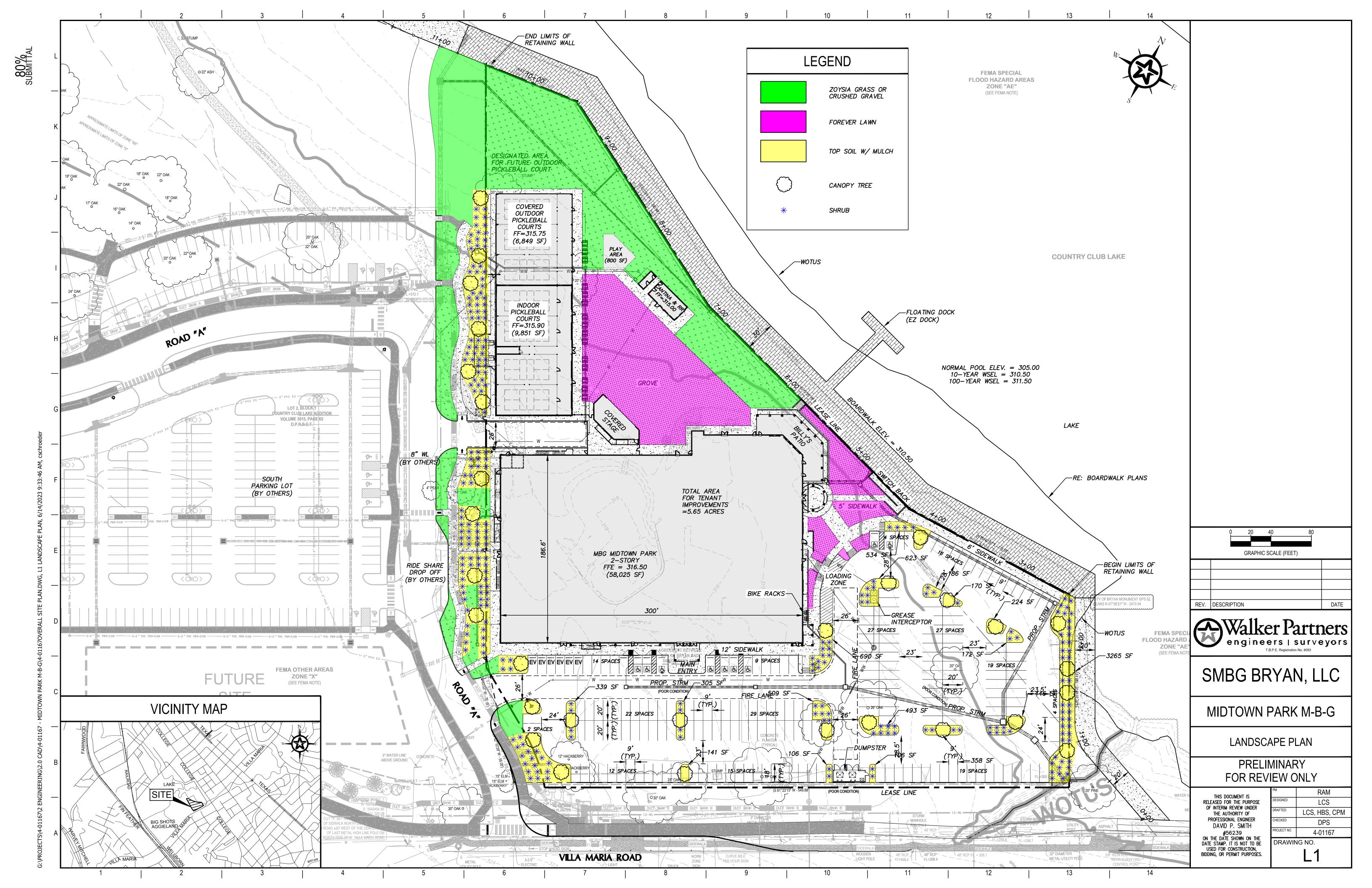
LCS

LCS, HBS, CPM

DPS

10 11 12 MATERIALS LEGEND 80% JBMITTAL TBM CEMENT TREATED BASE ACRYLONITRILE - BUTADIENE - STYRENE ID INSIDE DIAMETER SOUTH BORE LOCATION ASPHALTIC CONCRETE SCHEDULE INCH SD SF APPROX APPROXIMATE STORM DRAIN INCL INCLUDE (D) (ING) TELEVISION RISER AUTOMATIC FLUSH VALVE AIR RELEASE VALVE INSL INSULATION OR INSULATED SQUARE FOOT CRUSHED LIMESTONE SHT SIM SPEC SQ STA ASBESTOS CEMENT PIPE ACP INV SHEET INVERT CLEANOUT GATE VALVE ALTALTERNATE IRON PIPE OR IRON PIN SIMILAR AMERICAN WIRE GAGE **SPECIFICATION** FIRE HYDRANT CHECK VALVE COURSE AGGREGATE SQUARE STATION GAS METER STD STR PLUG VALVE STANDARD JOINT BEG STRUCTURAL GATE VALVE **GRAVEL** BUTTERFLY VALVE BLIND FLANGE BF **STRM** STORM BFV BUTTERFLY VALVE SW SIDEWALK IRON PIPE FOUND QUICK DISCONNECT COUPLER BASELINE **SWBT** SOUTHWESTERN BELL TELEPHONE CO. KILOVOLT BENCH MARK SY SQUARE YARD **TOPSOIL** IRON ROD FOUND CAPPED END OR PLUGGED END BC BACK OF CURB SYM SYMMETRICAL BOTTOM OF WALL BWSYS SYSTEM IRON ROD SET BLIND FLANGE LENGTH EARTH (COMPACTED) LOW POINT LIGHT POLE **──**□**──** REDUCER OR INCREASER CATV CABLE TV LINEAR FOOT TEMPORARY BENCHMARK CATCH BASIN CB TEL LIP OF GUTTER TELEPHONE MONUMENT FOUND BACKFLOW PREVENTOR CENTER TO CENTER **TEMP TEMPORARY** LIME-STABILIZED SUBGRADE EARTH (UNDISTURBED) CUBIC FEET PER SECOND CFS THK THICK MONUMENT SET CIP AIR VACUUM AND AIR RELEASE ASSEMBLY CAST IRON PIPE TOP OF BANK (BERM) CONTROL JOINT TOP OF CURB SET 60D NAIL GRATE INLET CONCRETE CENTER LINE TOP OF GRATE CRUSHED LIMESTONE BASE MATERIAL TOP OF PAVEMENT MATERIAL MANHOLE CLRCLEAR MAX TYP MAXIMUM **TYPICAL** BLOW-OFF ASSEMBLY CLEANOUT CO **MBGF** METAL BEAM GAURD FENCE TW TOP OF WALL MAILBOX SAND CORRUGATED METAL PIPE CMP MED CENTRIFUGAL OR TURBINE PUMP OR FAN MEDIUM CONC CONCRETE МН MANHOLE PANEL MARKER CONSTRUCT, CONSTRUCTION CONST MIN MINIMUM CONT CONTINUOUS MISC **ASPHALT MISCELLANEOUS** UNDERGROUND ELECTRIC CABLE POWER POLE FIRE HYDRANT & VALVE CTB CEMENT TREATED BASE M&M MEET AND MATCH UNO UNLESS NOTED OTHERWISE CVCHECK VALVE MO MOTOR OPERATED WATER METER CLEANOUT TO GRADE CY CUBIC YARD MP **MIDPOINT** RIP-RAP CURB AND GUTTER WATER VALVE MANHOLE VELOCITY NORTH VC VERTICAL CURVE NORMALLY CLOSED **VERT** PROPOSED SPOT ELEVATION VERTICAL MASONRY NOT FIELD VERIFIED TELEPHONE RISER DRAINAGE AREA NATURAL GROUND DE DRAINAGE EASEMENT NTS NOT TO SCALE JUNCTION BOX TRAVERSE POINT STEEL DOUBLE NIC NOT IN CONTRACT DET DETAIL NO NORMALLY OPEN WATERLINE GUY WIRE DIADIAMETER CURB INLET DUCTILE IRON DI W/0 WITHOUT SHRUB **ALUMINUM** DUCTILE IRON PIPE DIP WATER METER DN DOWN ON CENTER WSEL WATER SURFACE ELEVATION _____ x ____ NEW FENCE DRIVEWAY DWOD OUTSIDE DIAMETER TREE WEIGHT DWGDRAWING OHEW OVERHEAD ELECTRIC WIRE GRATING WELDED WIRE FABRIC OPNG **OPENING** WASTE WATER OPPOSITE EAST OCEW ON CENTER EACH WAY CHECKERED PLATE EDGE OF PAVEMENT EACH EACH FACE **ELEVATION** POINT OF CURVATURE OR PORTLAND CEMENT GROUT EXPANSION JOINT PGL PROPOSED GRADE LINE **ENGR ENGINEER** POINT OF INTERSECTION **EQUAL** PROPERTY LINE BRICK END RETURN POINT OF BEGINNING CIVIL SYMBOLS EACH WAY POWER POLE **EXCAVATE** POINT OF REVERSE CURVATURE EXP JT EXPANSION JOINT POUNDS PER SQUARE INCH N.T.S. EXISTING POINT OF TANGENCY PUBLIC UTILITY EASEMENT PUE EX. EDGE OF PAVEMENT PVC POLYVINYL CHLORIDE OR POINT OF VERTICAL CURVATURE POINT OF VERTICAL INFLECTION PVIPROPERTY LINE FIRE HYDRANT PAVEMENT PVMT FINISHED FLOOR ELEVATION POINT OF VERTICAL TANGENCY PVTROAD CENTERLINE FINISHED GRADE POINT OF COMPOUND CURVATURE FLOWLINE EX. RAILROAD FORCE MAIN SECTION IDENTIFICATION FIBER OPTIC CABLE EX. FENCE FACE OF CURB FLOW RATE, CUBIC FEET PER SECOND FINISHED GRADE WASTEWATER LINE FΤ FEET OR FOOT FIRE HYDRANT EX. WATER LINE RADIUS REV. DESCRIPTION RIGHT OF WAY A1 SECTION NUMBER
C400 DRAWING ON WHICH EX. UNDERGROUND TELEVISION LINE _____ U-TV ____ RCP REINFORCED CONCRETE PIPE — DRAWING ON WHICH Walker Partners engineers | surveyors GAS LINE RDEX. AERIAL TELEVISION LINE SECTION APPEARS GA **GAUGE** REF REFERENCE OR REFER GALV **GALVANIZED** REINFORCE OR REINFORCED REINF EX. UNDERGROUND TELEPHONE LINE ——— U-T ——— GRND GROUND REQD REQUIRED GATE VALVE GVREV REVISION EX. ABOVE GROUND TELEPHONE LINE RT RIGHT RADIUS POINT EX. STORM DRAIN SMBG BRYAN, LLC DETAIL IDENTIFICATION HEADWALL EX. GASLINE HIGH POINT OR HORSE POWER HYDRAULIC GRADE LINE EX. FORCEMAIN HORIZONTAL HORIZ HEAD WATER HWA1 —— DETAIL NUMBER
C400 —— DRAWING ON WHICH ———123——— EX. CONTOUR LINE MIDTOWN PARK M-B-G HOT MIXED ASPHALTIC CONCRETE DETAIL IS SHOWN EX. CONCRETE LEGENDS, ABBREVIATIONS, & SYMBOLS EX. GRAVEL A1 —— ELEVATION MARKER — DRAWING ON WHICH **PRELIMINARY** ELEV. IS SHOWN FOR REVIEW ONLY EX. BUILDING RAMTHIS DOCUMENT IS LCS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER LCS, HBS, CPM THE AUTHORITY OF PROFESSIONAL ENGINEER DPS DAVID P. SMITH **A8** 4-01167 #56239 ON THE DATE SHOWN ON THE DATE STAMP. IT IS NOT TO BE **ABBREVIATIONS** SURVEY MASTER LEGEND GENERAL SYMBOLS DRAWING NO. USED FOR CONSTRUCTION, C003 BIDDING, OR PERMIT PURPOSES. N.T.S. N.T.S. N.T.S.







Line Table START (N,E) LINE # BEARING DISTANCE END (N,E) 0218429.70, 3545438.35 (10218453.93, 3545475.02 | S61° 23′ 15″W | 122.50 | (10218529.83, 3545576.57) (10218471.17<mark>, 3</mark>545469.03) 11.50 (10218537.73, 3545591.05) (10218532.23, 3545580.96) 31.12 (10218538.27, 3545629.63) 15.06 (10218555.57, 3545623.62 S28° 34' 28"E . 10218542.34, 3545630.83 L10 | S61° 25' 32"W | 18.00 | (10218571.11, 3545652.17, (10218562.50, 3545636.36) S61° 25' 32"W 54.50 (10218599.57, 3545704.42) (10218573.50, 3545656.56) N28° 34' 28"W 4.07 (10218411.41, 3545468.79) . 10218414.88, 3545470.91) N31° 19' 29"E (10218429.02, 3545485.73 *15.05* (10218425.20, 3545505.7 , 10218417.99, 3545492.50 L16 | S28° 36' 46"E | 19.00 | (10218417.99, 3545492.50) (10218401.32, 3545501.59) 15.00 (10218401.32, 3545501.59) (10218408.50, 3545514.76) L18 | S28° 36′ 45″E 15.01 (10218394.14, 3545559.61) 10218380.96<mark>,</mark> 3545566.80 109.00 (10218380.96, 3545566.80) 15.01 (10218433.16, 3545662.49 15.01 (10218450.17, 3545662.33 , 10218436.99, 3545669.52 L22 N61° 23' 15"E | 136.00 | (10218436.99, 3545669.52) (10218502.12, 3545788.91) 30.00 (10218445.98, 3545526.21) (10218419.64**,** 3545540.58) *33.00* (10218422.63, *3*545549.20 . 10218451.60, 3545533.40 ′10218470.52, 3545636.99_/ *33.00* (10218499.49, *3545621.18*) (10218474.35, 3545644.01 (10218503.32, 3545628.21)

		CUF	RVE TABLE	
CURVE #	LENGTH	RADIUS	DELTA	CHORD
C1	18.40	60.50	017° 25′ 45″	S52° 40' 22"W - 18.33
C2	4.71	3.00	090° 00' 00"	S16° 23' 15"W - 4.24
C3	4.71	3.00	090° 00' 00"	N73° 36' 45"W — 4.24
C4	4.71	3.00	089° 57' 43"	S16° 24' 23"W - 4.24
C5	4.71	3.00	090' 00' 00"	N73° 34° 28″W - 4.24
C6	20.73	39.50	030° 03′ 46″	N46° 21' 22"E - 20.49
C7	14.92	9.50	090' 00' 00"	S73° 36' 45"E — 13.44
C8	4.71	3.00	090' 00' 00"	S16° 23' 15"W - 4.24
C9	4.71	3.00	090° 00' 01"	S73° 36' 46"E – 4.24
C10	39.27	25.00	090' 00' 00"	S73° 36' 45"E – 35.36
C11	4.71	3.00	090' 00' 00"	S73° 36' 45"E – 4.24
C12	4.71	3.00	090' 00' 00"	N16° 23' 15"E - 4.24
C13	4.71	3.00	090' 00' 00"	S73° 36' 45"E – 4.24
C14	7.07	4.50	090' 00' 00"	S73° 36' 45"E – 6.36
C15	7.07	4.50	090' 00' 00"	S16° 23' 15"W - 6.36
C16	4.71	3.00	090' 00' 00"	N73° 36° 45″W — 4.24
C17	4.71	3.00	090' 00' 00"	N16° 23' 15"E - 4.24
C18	4.71	3.00	090' 00' 00"	S73° 36' 45"E – 4.24
C19	4.71	3.00	090' 00' 00"	S16° 23° 15″W - 4.24
C20	4.71	3.00	090' 00' 00"	N73° 36' 45"W - 4.24
C21	4.71	3.00	090° 00' 00"	N16° 23' 15"E - 4.24

LINE AND CURVE TABLE (SHEET C100)

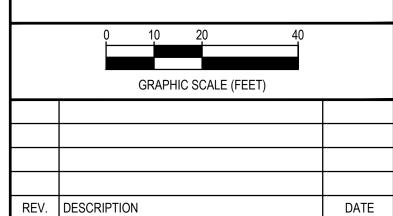
			Line Table	
LINE #	BEARING	DISTANCE	START (N,E)	END (N,E)
L84	N28° 38' 56"W	5.49	(10218641.86, 3545296.04)	(10218646.67, 3545293.41)
L85	N28° 38′ 56″W	5.49	(10218646.65, 3545304.81)	(10218651.47, 3545302.18)
L86	S61° 21' 04"W	118.80	(10218703.41, 3545409.75)	(10218646.45, 3545305.49)
L87	N28° 38' 56"W	27.00	(10218679.72, 3545422.69)	(10218703.41, 3545409.75)
L88	N61° 21′ 04″E	118.81	(10218622.76, 3545318.43)	(10218679.72, 3545422.69)
L89	N28° 38′ 56″W	5.49	(10218617.26, 3545320.86)	(10218622.08, 3545318.23)
1.90	528° 38' 56"F	5.49	(10218617.28, 3545309.45)	(10218612.47, 3545312.09)

	CURVE TABLE									
CURVE #	CURVE # LENGTH RADIUS DELTA CHORD									
C67	0.79	0.50	090' 00' 00"	N16° 21' 04"E - 0.71						
C68	0.79	0.50	090' 00' 00"	N73° 38' 56"W - 0.71						
C69	0.79	0.50	090' 00' 00"	N16° 21' 04"E - 0.71						
C70	0.79	0.50	090° 00′ 00″	S73° 38′ 56″E – 0.71						

Line Table										
LINE #	BEARING	DISTANCE	START (N,E)	END (N,E)						
L27	S28° 36' 45"E	25.68	(10218640.78, 3545720.10)	(10218618.24, 3545732.40,						
L28	N61° 23' 15"E	9.00	(10218637.67, 3545708.13)	(10218641.98, 3545716.03)						
L29	S28° 36′ 45"E	29.03	(10218663.16, 3545694.23)	(10218637.67, 3545708.13						
L30	N77° 45' 08"W	9.09	(10218704.66, 3545699.43)	(10218706.59, 3545690.54						
L31	S27° 32' 33"W	3.87	(10218720.44, 3545708.58)	(10218717.01, 3545706.80)						
L32	S28° 36' 45"E	15.00	(10218741.36, 3545707.42)	(10218728.19, 3545714.60)						
L33	S61° 23' 15"W	8.50	(10218745.43, 3545714.88)	(10218741.36, 3545707.42)						
L34	S61° 23' 15"W	28.50	(10218762.43, 3545746.04)	(10218748.78, 3545721.02)						
L35	N28° 36′ 45″W	15.00	(10218749.26, 3545753.23)	(10218762.43, 3545746.04						
L36	S00° 17′ 30″E	17.30	(10218770.47, 3545761.08)	(10218753.17, 3545761.17)						
L37	S89° 42' 30"W	145.00	(10218771.21, 3545906.08)	(10218770.47, 3545761.08,						
L38	N00° 17′ 30″W	18.18	(10218753.03, 3545906.17)	(10218771.21, 3545906.08)						
L39	N28° 36′ 45″W	6.27	(10218745.15, 3545909.79)	(10218750.66, 3545906.78)						
L40	N73° 35' 40"W	4.66	(10218739.27, 3545919.91)	(10218740.59, 3545915.44)						
L41	N28° 36' 45"W	100.13	(10218646.57, 3545973.82)	(10218734.47, 3545925.87						
L42	N16° 24' 20"E	6.81	(10218632.42, 3545972.70)	(10218638.96, 3545974.63						
L43	N28° 36′ 45″W	19.64	(10218607.95, 3545982.88)	(10218625.19, 3545973.48)						
L44	N61° 22' 09"E	172.00	(10218525.53, 3545831.91)	(10218607.95, 3545982.88						
L45	S28° 36′ 45″E	15.56	(10218539.19, 3545824.46)	(10218525.53, 3545831.91)						
L46	N28° 36' 45"W	15.56	(10218522.66, 3545826.65)	(10218536.31, 3545819.20)						
L47	S28° 36' 45"E	15.56	(10218518.59, 3545786.73)	(10218504.93, 3545794.18,						
 L48	N28° 36' 45"W	15.50	(10218502.12, 3545788.91)	(10218515.73, 3545781.49)						
L49	N28° 36' 45"W	16.00	(10218550.09. 3545747.36)	(10218564.14, 3545739.70,						
			(10218562.32, 3545762.47)	,						
L50	S28° 36′ 06″E	20.50	,	(10218544.32, 3545772.28 ₁ (10218554.40, 3545755.25						
L51	N28° 36' 45"W	17.00	(10218539.48, 3545763.39)	,						
L52	S61° 23' 15"W	8.99	(10218554.40, 3545755.25)	(10218550.09, 3545747.36)						
L53	N61° 23' 15"E	15.00	(10218704.63, 3545738.24)	(10218711.82, 3545751.41)						
L54	S61° 23' 15"W	17.00	(10218704.19, 3545757.28)	(10218696.05, 3545742.35)						
L55	S28° 36′ 45″E	18.00	(10218696.05, 3545742.35)	(10218680.25, 3545750.97)						
L56	S61° 23' 15"W	16.00	(10218680.25, 3545750.97)	(10218672.59, 3545736.93						
L59	S89° 42' 30"W	13.28	(10218723.67, 3545799.12)	(10218723.60, 3545785.84)						
L60	NOO* 17' 30"W	6.89	(10218716.79, 3545799.15)	(10218723.67, 3545799.12)						
L61	N61° 23' 15"E	12.79	(10218710.66, 3545787.92)	(10218716.79, 3545799.15)						
L62	NOO* 17' 30"W	5.44	(10218718.25, 3545803.15)	(10218723.69, 3545803.12)						
L63	N28° 36' 45"W	8.37	(10218710.90, 3545807.16)	(10218718.25, 3545803.15)						
L64	S61° 23' 33"W	16.50	(10218718.80, 3545821.64)	(10218710.90, 3545807.16)						
L65	N89° 42' 30"E	17.16	(10218723.69, 3545803.12)	(10218723.78, 3545820.28						
L66	N89° 42' 30"E	14.20	(10218723.87, 3545857.46)	(10218723.94, 3545871.66)						
L67	S00° 17' 30"E	8.60	(10218723.94, 3545871.66)	(10218715.34, 3545871.71)						
L68	S61° 23' 15"W	12.79	(10218715.34, 3545871.71)	(10218709.21, 3545860.48)						
L69	N28° 36′ 45″W	6.91	(10218710.41, 3545856.41)	(10218716.47, 3545853.10)						
L70	NOO* 17' 30"W	7.16	(10218716.80, 3545875.70)	(10218723.96, 3545875.66						
L71	N89° 42' 30"E	4.90	(10218723.96, 3545875.66)	(10218723.98, 3545880.56)						
L72	S61° 23' 15"W	13.80	(10218716.06, 3545891.83)	(10218709.45, 3545879.71)						
L73	N28° 36′ 45″W	8.37	(10218709.45, 3545879.71)	(10218716.80, 3545875.70)						
L74	S61° 23' 15"W	17.00	(10218637.46, 3545918.98)	(10218629.32, 3545904.06)						
L75	S28° 36′ 45″E	9.00	(10218645.36, 3545914.67)	(10218637.46, 3545918.98)						
L76	S61° 23' 15"W	15.40	(10218652.74, 3545928.19)	(10218645.36, 3545914.67)						
L77	N61° 23' 15"E	14.00	(10218621.93, 3545910.37)	(10218628.63, 3545922.66)						

	Line Table										
LINE #	BEARING	DISTANCE	START (N,E)	END (N,E)							
L79	N61° 23' 15"E	19.00	(10218591.76, 3545855.06)	(10218600.86, 3545871.74)							
L80	N61° 23' 15"E	16.39	(10218576.72, 3545788.79)	(10218584.56, 3545803.17)							
L81	S28° 36′ 45"E	9.00	(10218584.56, 3545803.17)	(10218576.66, 3545807.48)							
L82	N61° 23' 15"E	17.00	(10218576.66, 3545807.48)	(10218584.80, 3545822.40)							
L83	S61° 23′ 15"W	19.39	(10218575.48, 3545825.21)	(10218566.19, 3545808.19)							

CURVE # LENGTH RADIUS DELTA CHORD										
C22	33.00	21.00	090° 02' 17"	S16° 24' 23"W - 29.71						
C23	4.71	3.00	090° 00' 00"	S73° 36′ 45″E - 4.24						
C24	18.22	70.50	014° 48' 18"	S15° 27′ 32″E — 18.17						
C25	16.05	70.50	013° 02' 50"	S06' 38' 13"W - 16.02						
C26	4.55	3.00	086° 50' 31"	N58° 49′ 37″E — 4.12						
C27	0.71	0.50	080° 58′ 47″	N23° 42′ 31″W — 0.65						
C28	3.35	6.00	031° 57' 37"	S45° 24′ 26″W - 3.30						
C29	4.71	3.00	090' 00' 00"	S16° 23' 15"W - 4.24						
C30	4.71	3.00	090' 00' 00"	N73° 36′ 45″W — 4.24						
C31	5.38	5.00	061° 40′ 45″	S30° 32′ 52″W — 5.13						
C33	7.85	10.00	044° 58' 55"	N51° 06′ 13″W — 7.65						
C34	7.86	10.00	045° 01' 05"	N06° 06′ 13″W — 7.66						
C35	7.46	9.50	045° 01' 05"	N06° 06′ 13″W — 7.27						
C36	3.93	2.50	090' 00' 00"	S73° 36′ 45″E – 3.54						
C37	3.93	2.50	090' 00' 00"	N16° 23' 15"E — 3.54						
C38	3.93	2.50	090' 00' 00"	S73° 36′ 45″E — 3.54						
C39	3.93	2.50	090' 00' 00"	N16° 23′ 15″E – 3.54						
C40	4.71	3.00	090' 00' 00"	N73° 36′ 45″W — 4.24						
C41	4.71	3.00	090' 00' 00"	N16° 23′ 15″E – 4.24						
C42	24.35	15.50	090' 00' 39"	S73' 36' 26"E - 21.92						
C43	4.71	3.00	089° 59' 21"	S16° 23′ 34″W - 4.24						
C44	4.71	3.00	090' 00' 00"	N73° 36′ 45″W — 4.24						
C45	30.63	19.50	090' 00' 00"	N16° 23′ 15″E – 27.58						
C46	7.07	4.50	090° 00' 00"	S73° 36' 45"E - 6.36						
C47	4.71	3.00	090° 00' 00"	S16° 23′ 15″W - 4.24						
C48	10.33	5.00	118° 19' 15"	S30° 32′ 52″W - 8.59						
C49	4.71	3.00	090' 00' 00"	S73° 36' 45"E - 4.24						
C50	3.93	2.50	090° 00' 11"	S16° 23' 07"W - 3.54						
C51	10.33	5.00	118° 19' 15"	N30° 32′ 52″E — 8.59						
C52	4.71	3.00	090' 00' 00"	N73° 36′ 45″W - 4.24						
C53	12.32	19.50	036° 12' 09"	S72° 11' 26"E - 12.12						
C54	5.04	2.50	115° 28' 36"	S03° 38′ 57″W - 4.23						
C55	5.51	3.00	105° 18' 25"	N65° 57′ 33″W - 4.77						
C56	26.07	20.00	074° 41' 35"	N24° 02′ 27″E – 24.27						
C57	7.85	5.00	090' 00' 00"	S73° 36′ 45″E – 7.07						
C58	4.71	3.00	090' 00' 00"	S16° 23' 15"W - 4.24						
C59	4.71	3.00	090' 00' 00"	N73° 36′ 45″W — 4.24						
C60	7.85	5.00	090' 00' 00"	N16° 23′ 15″E — 7.07						
C61	7.85	5.00	090' 00' 00"	S73° 36′ 45″E — 7.07						
C62	4.71	3.00	090° 00' 00"	S16° 23' 15"W - 4.24						
C63	4.71	3.00	090' 00' 00"	S73° 36' 45"E – 4.24						
C64	7.85	5.00	090' 00' 00"	S16° 23' 15"W - 7.07						
C65	23.56	15.00	090* 00' 39"	N73° 36′ 26″W — 21.22						
C66	4.71	3.00	089° 59' 21"	N16° 23′ 34″E – 4.24						





SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

DIMENSION CONTROL PLAN

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LCS, HBS, CPM 4-01167

LINE AND CURVE TABLE (SHEET C102)

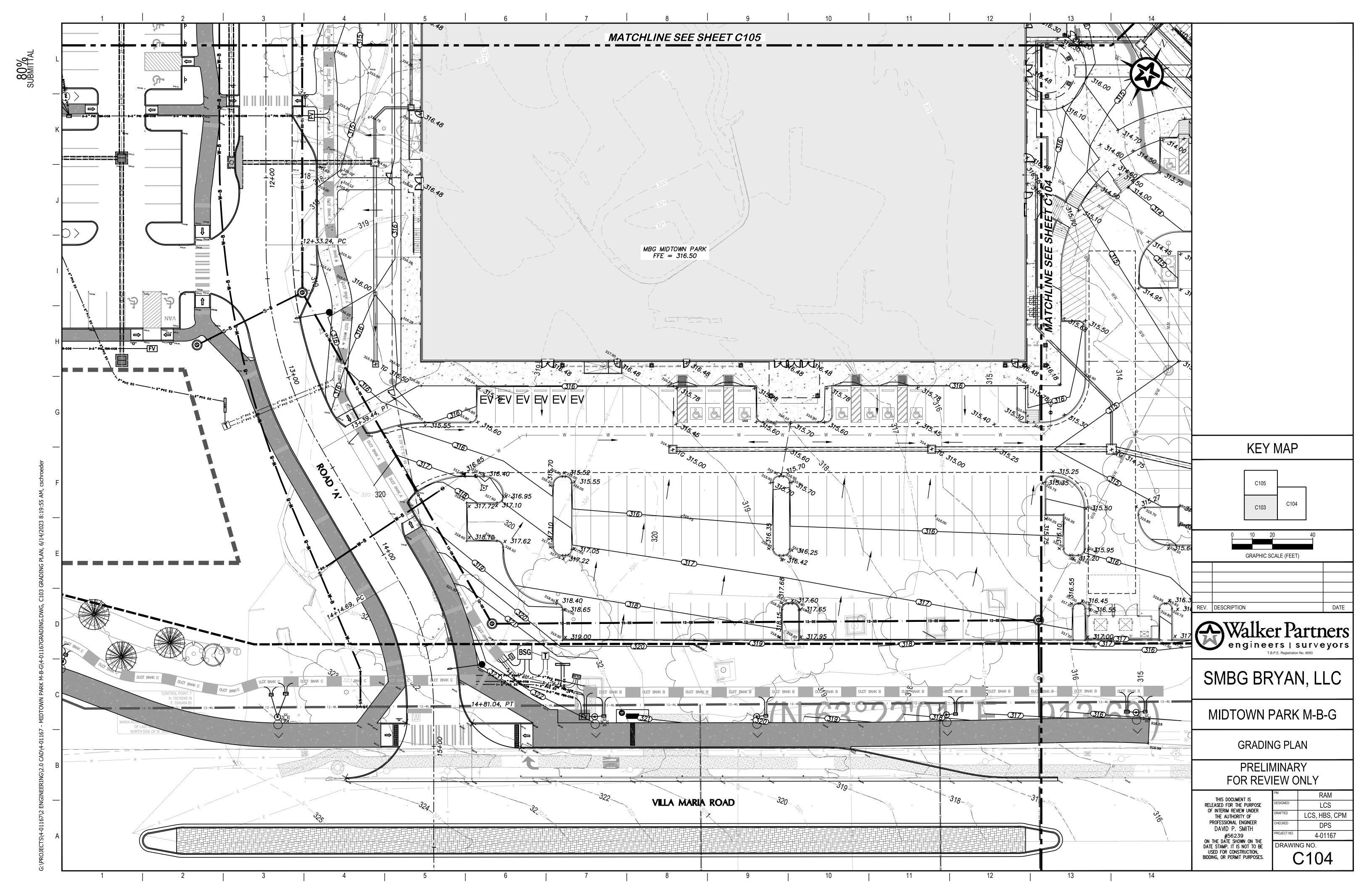
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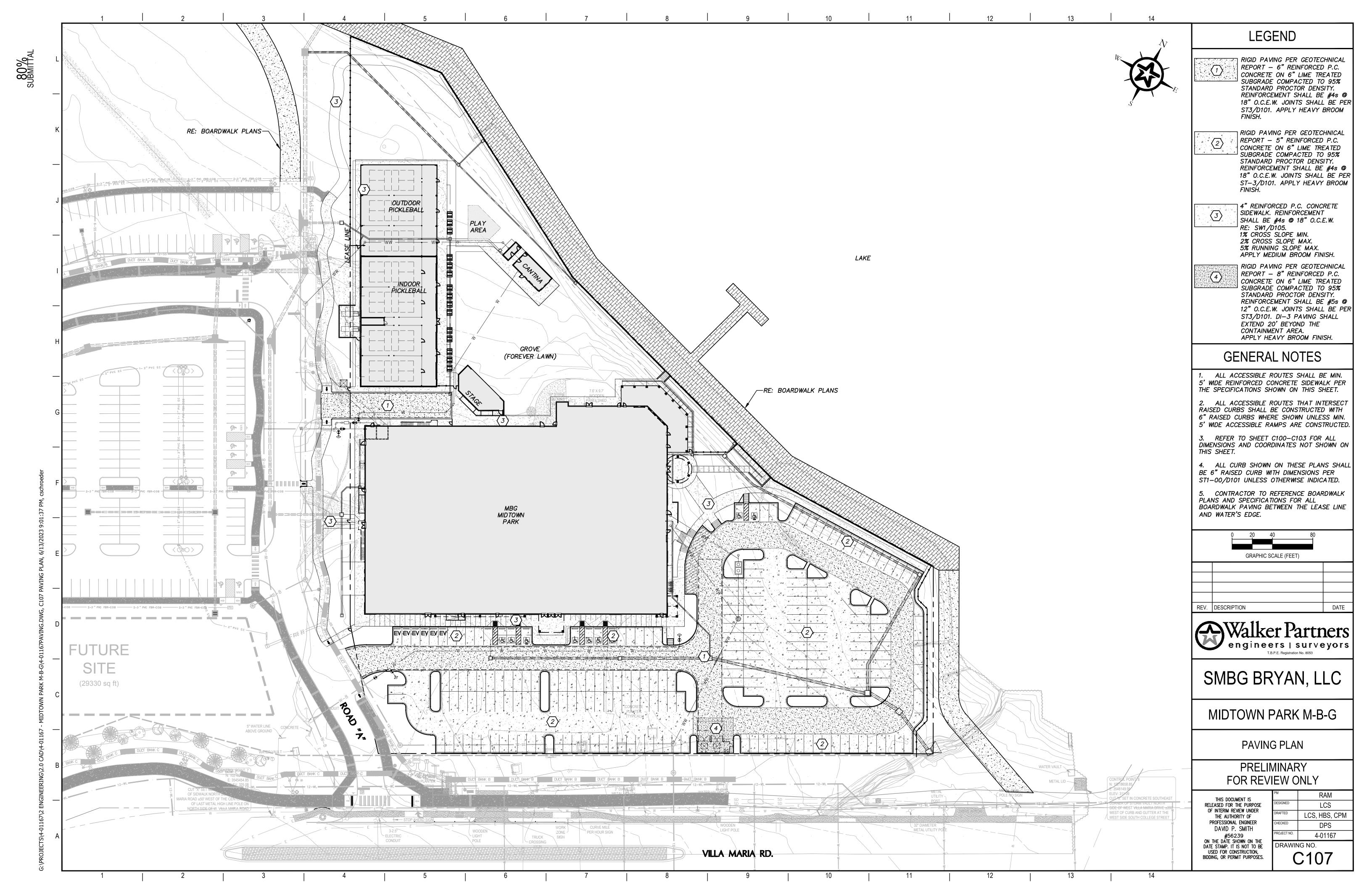
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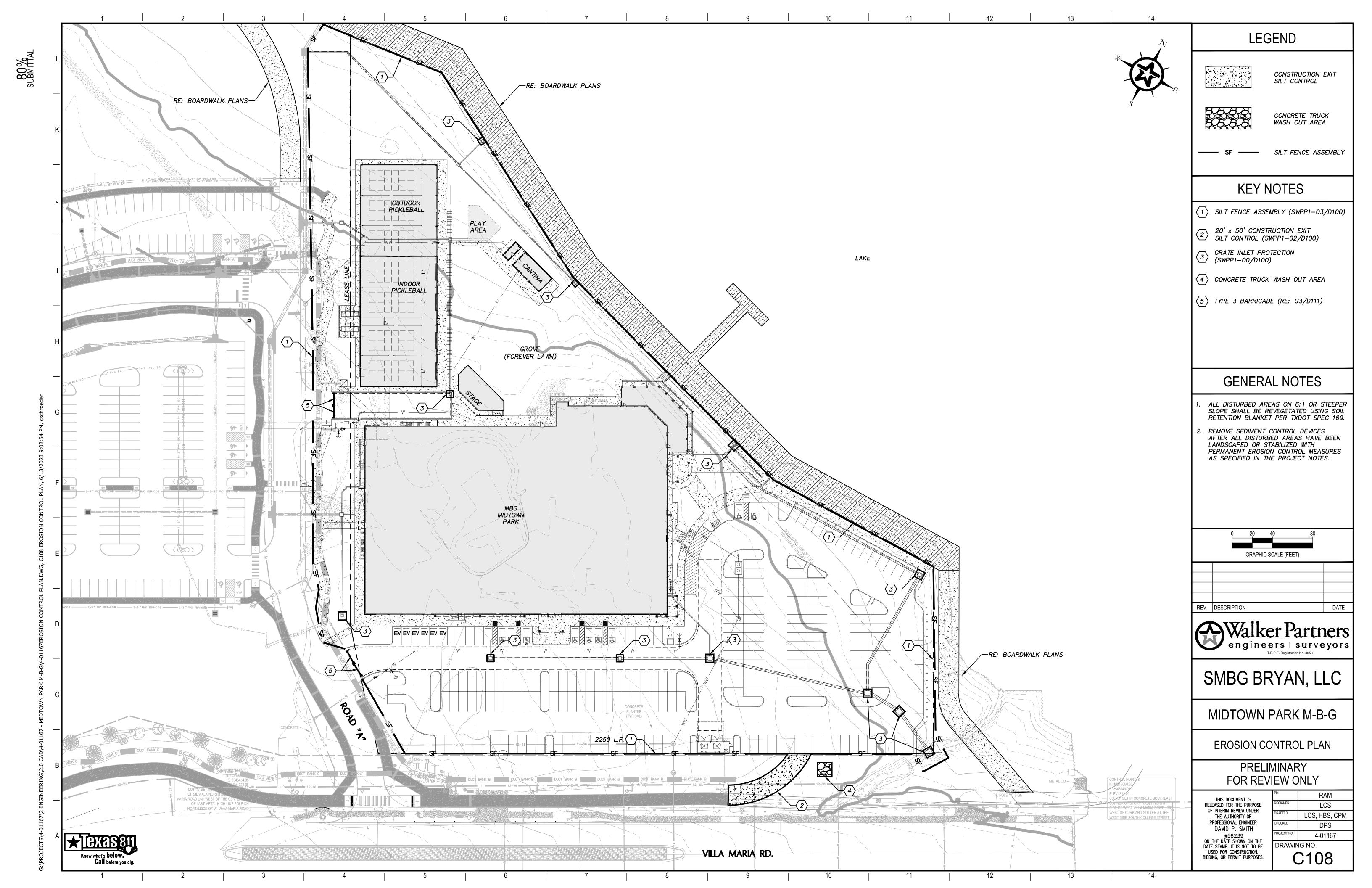
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(10218607.07, 3545863.22) (10218599.17, 3545848.74)

DRAWING NO. C103







Storm	Line ID	lada+ID	Line	Pipe Flow	Line	Line Size	Clara (0/)	Full Flow Pipe	Velocity
System	Line ID	Inlet ID	Length (ft)	(cfs)	Туре	(in)	Slope (%)	Capacity (cfs)	(ft/s)
	P1-A2g	I1-A2g	45.33	28.40	RCP	30	0.75	35.52	7.24
	P2-A2g	12-A2f	32.59	25.45	RCP	30	0.50	29.00	5.91
	P3-A2f	RCP BEND 1	26.21	8.62	RCP	24	1.00	15.41	6.54
	P4-A2f	I4-A2d	101.63	8.62	RCP	24	0.50	15.41	4.63
	P5-A2d	RCP BEND 2	186.29	3.16	RCP	18	0.50	5.06	3.82
	P6-A2	JB1-A2d	38.39	3.16	RCP	18	0.50	5.06	3.82
A2	Roof 1a-A2	JB1-A2d	78.75	1.89	PVC	12	1.00	2.43	4.12
	Roof 1b-A2	JB1-A2d	125.27	1.67	PVC	12	1.00	2.43	4.12
	P7-A2e	13-A2e	13.15	0.23	PVC	12	1.00	1.75	2.98
	P8-A2f	15-A2c	155.75	13.98	RCP	24	1.00	15.4	6.54
	Roof 2-A2	15-A2c	149.24	1.88	PVC	12	0.75	2.10	3.57
	P9-A2c	16-A2b	85.61	9.92	RCP	24	0.75	13.34	5.66
	P10-A2b	17-A2a	125.25	5.74	RCP	18	0.68	5.90	4.45
B1	ROOF B1	JB2-B1	87.88	2.93	PVC	12	1.5	2.97	5.05
D1	P11-B1	I8-B1	97	5.86	PVC	18	0.75	6.20	4.68
	ROOF A1b1	I9-A1e	140.87	1.3	PVC	12	0.75	2.10	3.62
	P14-C1a	JB3-C1b	151.57	1.9	PVC	12	0.75	2.10	3.62
	ROOF A1c	JB3-C1b	67.81	0.17	PVC	8	0.75	0.71	2.72
A1	ROOF A1d1	JB3-C1b	53.24	0.55	PVC	8	0.75	0.71	2.72
	ROOF A1d2	P12-A1e	46.86	0.55	PVC	8	0.75	0.71	2.72
	P13-A1d	RCP BEND 3	79.5	2.45	PVC	15	1.25	4.41	5.20
	P12-A1e	I9-A1e	29.50	4.30	PVC	15	1.25	4.41	5.20
	P18-C1c	JB2-C1c	192.34	3.11	PVC	12	1.75	3.21	5.45
C1	P17-C1c	JB2-C1c	37.5	1.38	PVC	12	0.75	2.13	3.62
CI	P16-C1c	RCP BEND 4	125.85	4.59	PVC	15	1.50	4.83	5.70
	P15-C1c	JB-(BO)	38.92	4.59	PVC	15	1.50	4.83	5.70

DR/	AINAGE AREA	OR SUB-AREA		RETURN PERIOD (ANNUAL EXCEEDANCE PROBABILITY, AEP)										
			2-YEAR DE	SIGN STORM (50% AEP)	10-YEAR D	ESIGN STORM	(10% AEP)	100-YEAR	DESIGN STORM	(1% AEP)			
I.D.	AREA (A), ACRES	TIME OF CONCENTRATION (T _c), MINUTES	C _{wt}	INTENSITY (i ₂) IN/HR	PEAK RUNOFF (Q ₂) CFS	C _{wt}	INTENSITY (i ₁₀) IN/HR	PEAK RUNOFF (Q ₁₀) CFS	C _{wt}	INTENSITY (i ₁₀₀) IN/HR	PEAK RUNOFF (Q ₁₀₀) CFS			
A1a	0.11	10	0.95	6.33	0.66	0.95	8.63	0.90	0.95	11.6	1.2			
A1b	0.31	10	0.97	6.33	1.90	0.97	8.63	2.60	0.97	11.6	3.5			
A1c	0.02	10	0.97	6.33	0.12	0.97	8.63	0.17	0.97	11.6	0.2			
A1d	0.13	10	0.97	6.33	0.80	0.97	8.63	1.09	0.97	11.6	1.4			
A1e	0.05	10	0.4	6.33	0.13	0.4	8.63	0.17	0.4	11.6	0.2			
A1f	0.23	10	0.35	6.33	0.51	0.35	8.63	0.70	0.35	11.6	0.9			
A2a	0.7	10	0.95	6.33	4.21	0.95	8.63	5.74	0.95	11.6	7.7			
A2b	0.51	10	0.95	6.33	3.07	0.95	8.63	4.18	0.95	11.6	5.6			
A2c	0.49	10	0.96	6.33	2.98	0.96	8.63	4.06	0.96	11.6	5.4			
A2d	1.08	10	0.9	6.33	6.15	0.9	8.63	8.39	0.9	11.6	11.			
A2e	0.06	10	0.45	6.33	0.17	0.45	8.63	0.23	0.45	11.6	0.3			
A2f	0.34	10	0.97	6.33	2.09	0.97	8.63	2.85	0.97	11.6	3.8			
A2g	0.36	10	0.95	6.33	2.16	0.95	8.63	2.95	0.95	11.6	3.9			
C1a	0.47	10	0.5	6.33	1.49	0.5	8.63	2.03	0.5	11.6	2.7			
C1b	0.25	10	0.5	6.33	0.79	0.5	8.63	1.08	0.5	11.6	1.4			
C1c	0.41	10.2	0.42	6.27	1.08	0.42	8.56	1.47	0.42	11.5	1.9			

PEAK STORM WATER RUNOFF PIPE FLOW CAPACITIES

DRAINAGE HYDRAULIC AREA ID FLOW PATH			OVERLAND SHEET FLOW ($t_{t_{overland}}$)				SHALLOW CONCENTRATED FLOW $(t_{t_{shallow\ conc}})$				CHANNELIZED FLOW $(t_{t_{channel}})$			T_{c}		
	From	То	N	L	S	t_t	L	S	Surface	V	t_t	L	V	t_t	ΔT_c	$\sum T_c$
				(ft)	(ft/ft)	(min)	(ft)	(ft/ft)	(P or U)	(ft/s)	(min)	(ft)	(ft/s)	(min)	(min)	(min)
A1a			-	-	-	-	48.3	0.015	Paved	2	0.3	21	3	0.1	0.4	10.00
A1b			-	-	-	-	_	-		-	-	41.3	4	0.2	0.2	10.00
A1c			-	-	-	-	_	-		-	-1	18	4	0.1	0.1	10.00
A1d			-	-	ı	-	_	_		-	1	40.9	4	0.2	0.2	10.00
A1e			0.02	23.80	0.02	1.6	32.4	0.015	Unpaved	2	0.3	-	-	-	1.8	10.00
A1f			0.4	14.80	0.02	4.7	38.1	0.02	Unpaved	2	0.3	_	-	-	5.0	10.00
A2a							146.3	0.02	Paved	3	0.8	52.4	4	0.2	1.1	10.00
A2b			0.02	90	0.03	2.5	62.9	0.02	Paved	3	0.4	29.7	4	0.1	3.0	10.00
A2c			-	_	_	-	197	0.02	Paved	3	1.1	12.8	4	0.1	1.2	10.00
A2d			-	-	-	-	357	0.02	Paved	3	2.1	37	4	0.2	2.2	10.00
A2e			0.02	14	0.02	1.1	15.3	0.03	Unpaved	3	0.1	11.3	4	0.0	1.3	10.00
A2f	_		0.02	100.40	0.02	2.9	115	0.02	Paved	3	0.7	18.7	4	0.1	3.6	10.00
A2g			0.02	90.90	0.02	2.7	61.5	0.02	Paved	3	0.4	52.9	4	0.2	3.3	10.00
C1a			0.05	56	0.02	3.3	81.4	0.015	Unpaved	2	0.7	35.8	4	0.1	4.2	10.00
C1b			0.1	50	0.02	4.4	37.6	0.03	Unpaved	3	0.2	25.4	4	0.1	4.7	10.00
C1c			0.35	79	0.02	9.8	51.6	0.02	Unpayed	2	0.4	12.9	4	0.1	10.2	10.20

	Ar	ea A1(M-B	B-G Building a	nd Parking Lo	t Flows)	
Inlet	Size (ft.)	Slope (%)	Peak (cfs)	Capt. (cfs)	Bypass (cfs)	Efficiency (%)
17-A2a	3'x3'	2.50	5.74	5.74	0	100
16-A2b	3'x3'	2.50	4.18	4.18	0	100
15-A2c	4'x4'	2.00	4.06	4.06	0	100
I4-A2d	3'x3'	2.50	8.39	8.39	0	100
I3-A2e	2'x2'	2.00	0.23	0.23	0	100
I2-A2f	5'x5'	2.50	2.85	2.85	0	100
I1-A2g	5'x5'	2.50	2.95	2.95	0	100
	Area A	\2 (Flows to	Mitchell & N	Morgan Draina	age System)	
Inlet	Size (ft.)	Slope (%)	Peak (cfs)	Capt. (cfs)	Bypass (cfs)	Efficiency (%)
18-B1	2'x2'	3.00	5.86	5.86	0	100
I9-A1e	3'x3'	2.50	4.30	4.30	0	100
Area C1 (Grove/Stag	ge Area Flo	ws to Mitche	ll & Morgan J	unction Box n	ear Outfall)
Inlet	Size (ft.)	Slope (%)	Peak (cfs)	Capt. (cfs)	Bypass (cfs)	Efficiency (%)
I10-C1a	2'x2'	2.00	0.90	0.90	0	100
I11-C1a	2'x2'	2.50	2.03	2.03	0	100
I12-C1c	2'x2'	2.00	1.38	1.38	0	100

Walker Partners
engineers | surveyors

T.B.P.E. Registration No. 8053

SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

DRAINAGE CALCULATIONS

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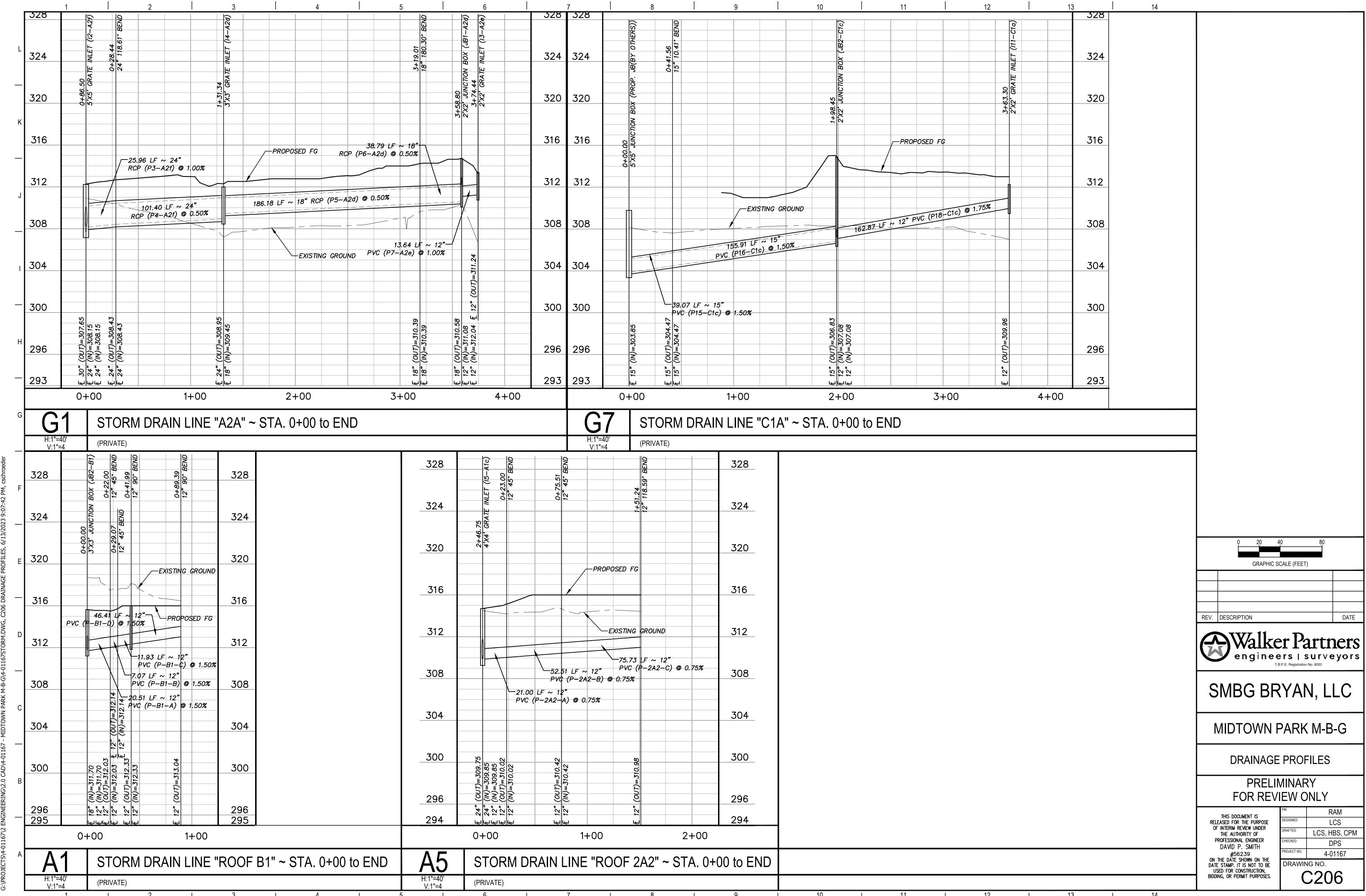
RAM

TIME OF CONCENTRATION CALCULATIONS

A9 INLET FLOW CAPACITIES

(PRIVATE)





328 328 328 80% SUBMITTAL 324 324 324

320 320 320 320 -41.19 LF ~ 12" PVC (P-1BA2-A) @ 0.73% -PROPOSED FG 316 316 316 316 _EXISTING GROUND 28.83 LF ~ 12" \(\text{PVC (P 1AA2=C)} \(\text{0} \) 1.00% 312 312 312 38.97 LF ~ 12" PVC (P-1BA2-C) @ 1.00% →43.36 LF ~ 12" PVC (P-1BA2-B) @ 1.00% 29.68 LF ~ 12"

PVC (P-1AA2-B) @ 1.00%

PVC (P-1AA2-B) @ 1.00%

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19.10" 308 308 308 EXISTING GROUND 304 304 304 f_L 12" (OUT)=313.21 f_L 12" (IN)=313.21 300 300 300 296 295 296 295 296 295 296 295 0+00 1+00 2+00 0+00 1+00 G G5 STORM DRAIN LINE "ROOF 1B-A2" ~ STA. 0+00 to END STORM DRAIN LINE "ROOF 1A-A2" ~ STA. 0+00 to END (PRIVATE) (PRIVATE)

> GRAPHIC SCALE (FEET) REV. DESCRIPTION



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MIDTOWN PARK M-B-G

DRAINAGE PROFILES

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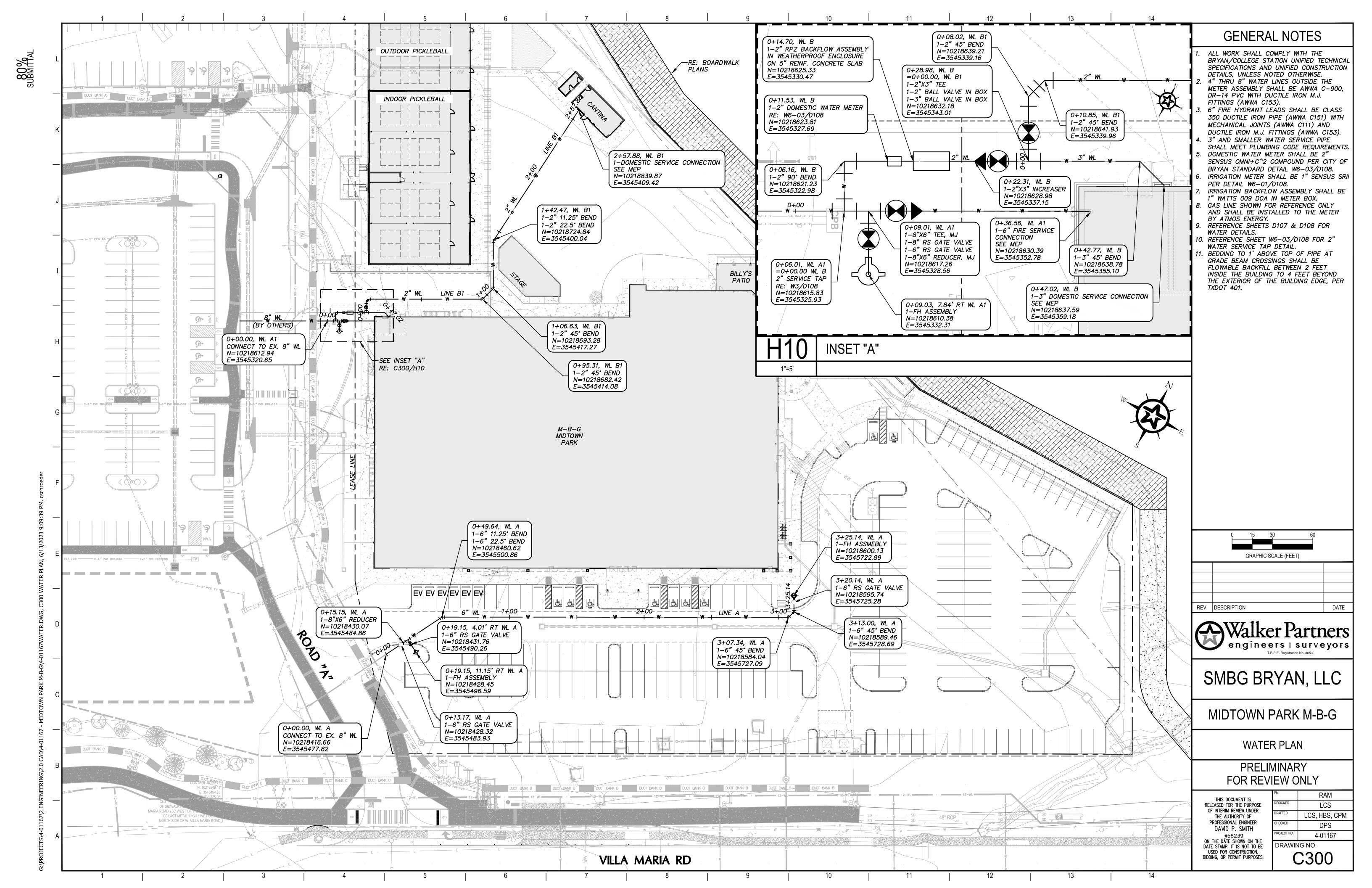
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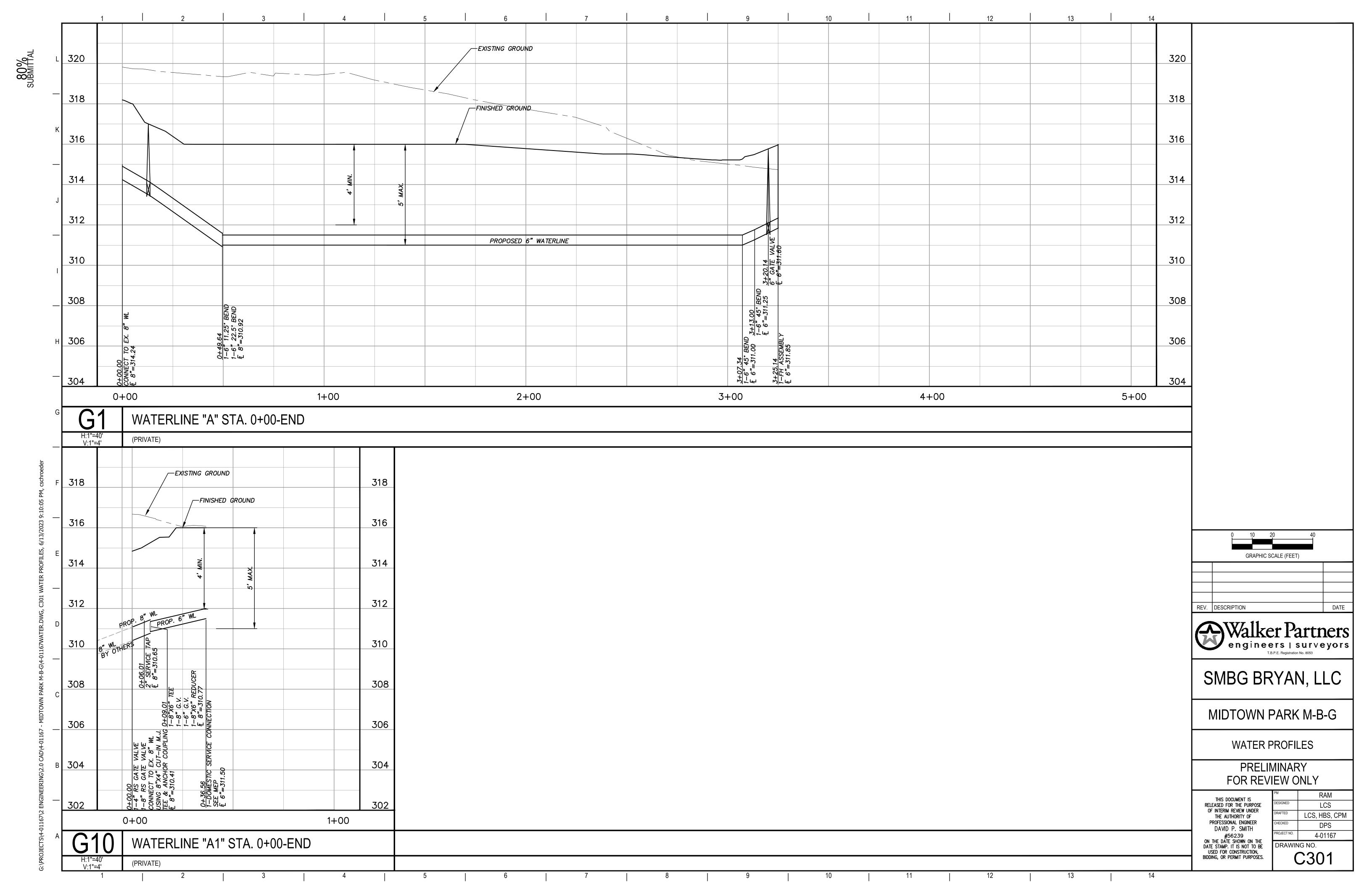
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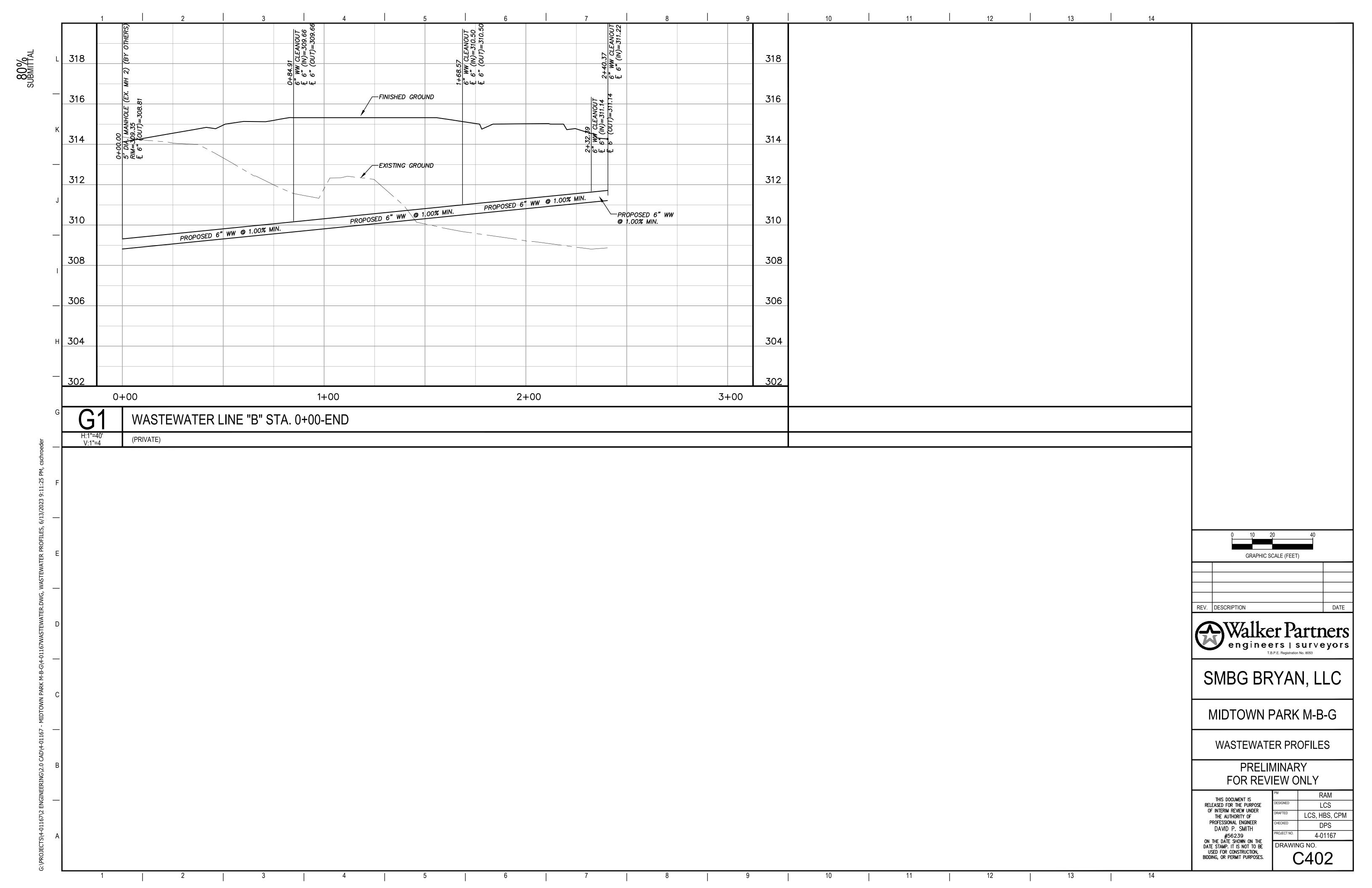
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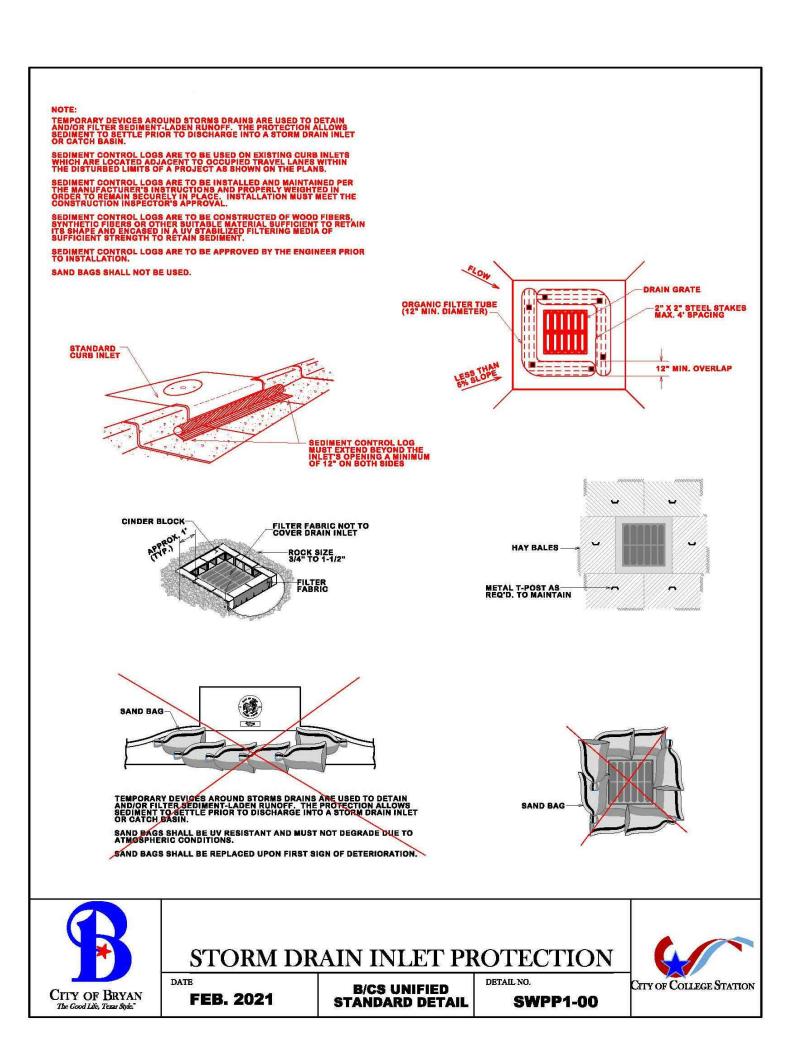
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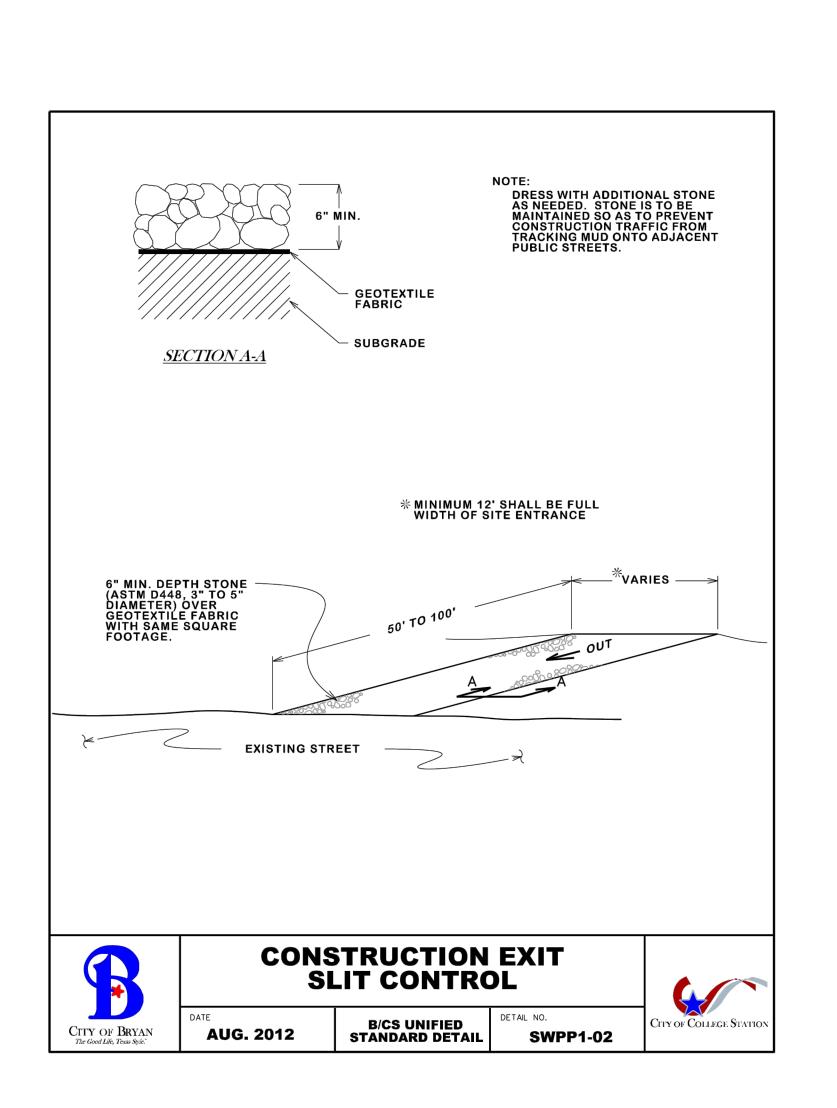
C207

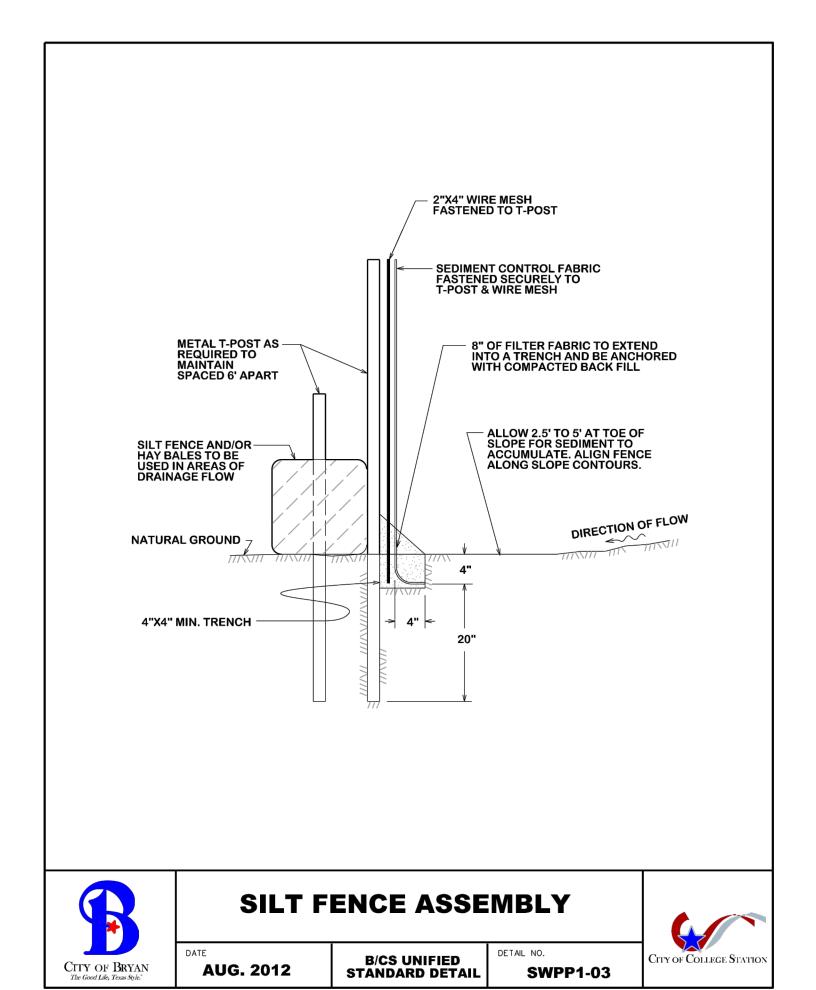


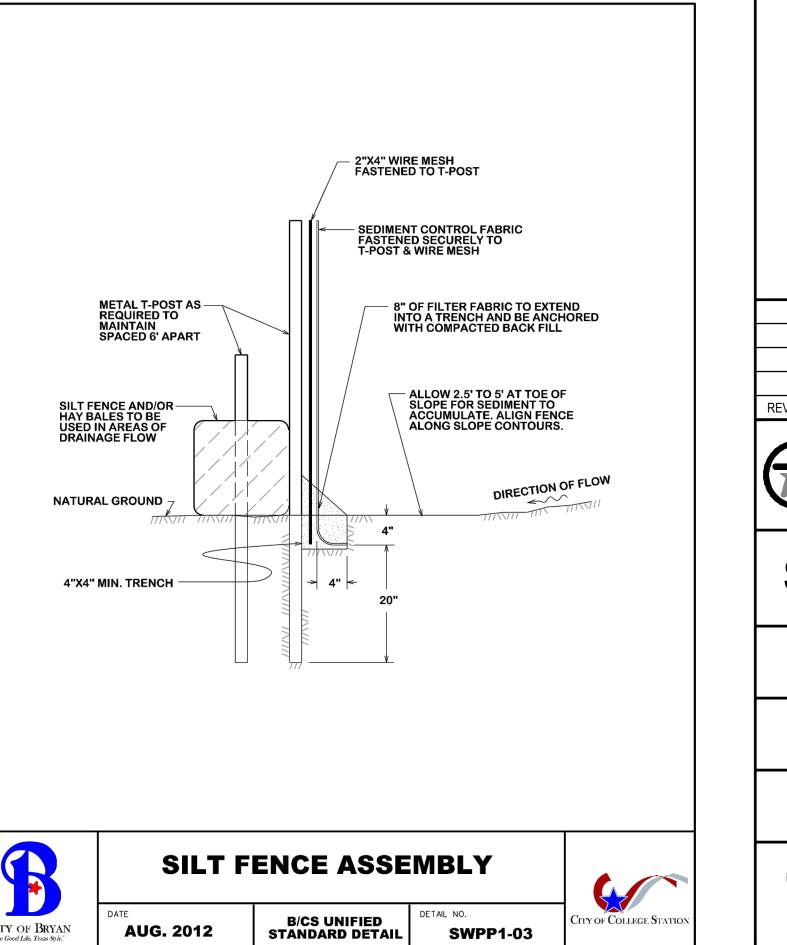


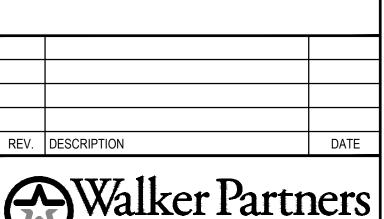














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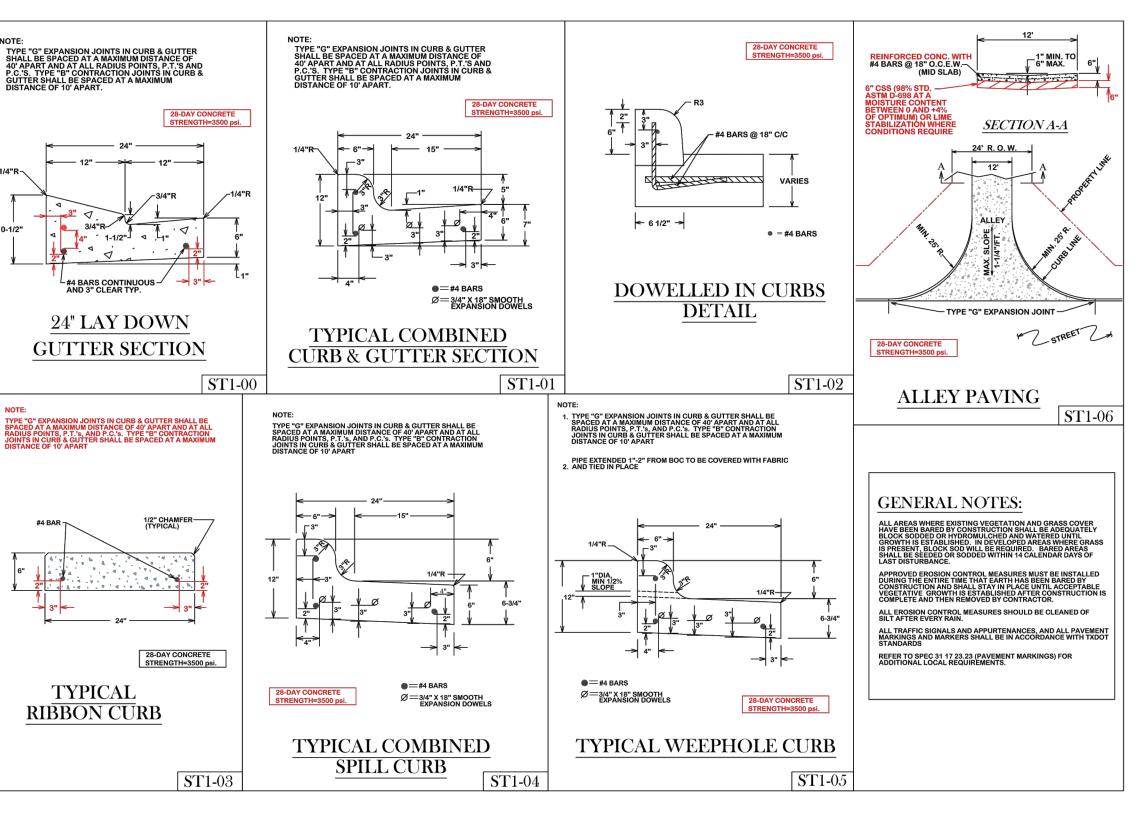
MIDTOWN PARK M-B-G

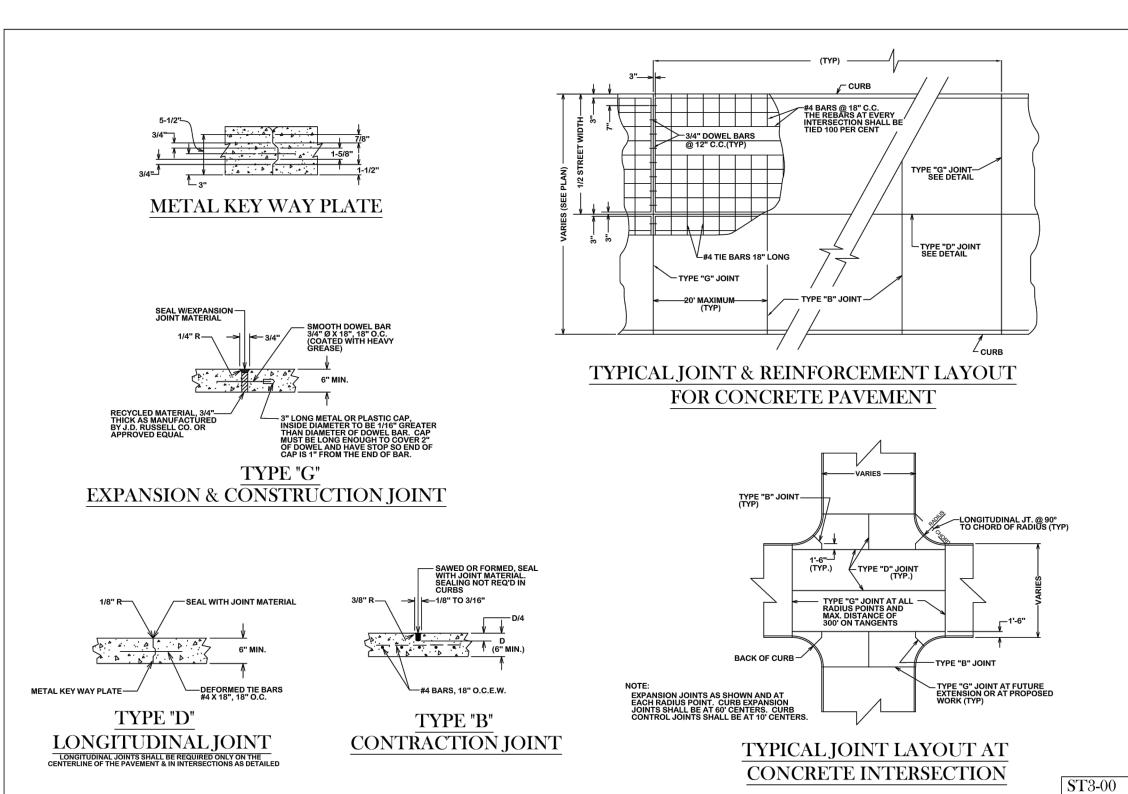
SWPPP DETAILS

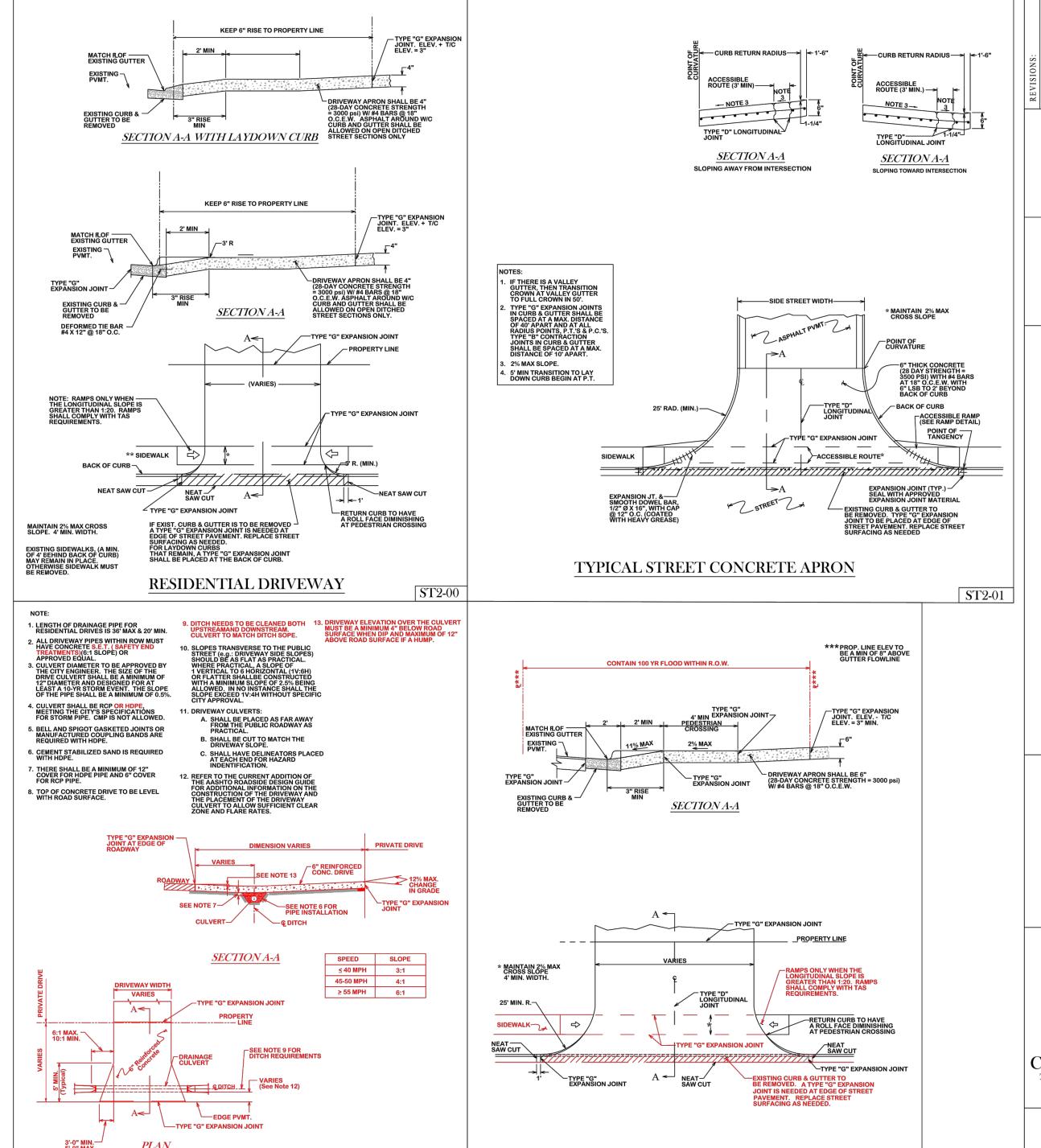
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RAM LCS LCS, HBS, CPM DPS 4-01167 DRAWING NO. D100



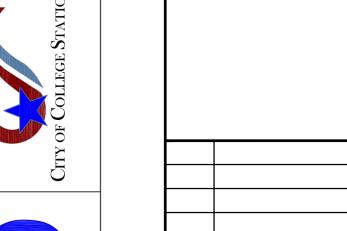




ST2-02

COMMERCIAL DRIVEWAY





REV. DESCRIPTION



DRAWN BY: B.I. DATE: 12/2020 SCALE: NTS APPROVED: W. P. K. FIGURE: STI

SHEET 1 OF 2

ST2-03

STREET DETAILS

Walker Partners

SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

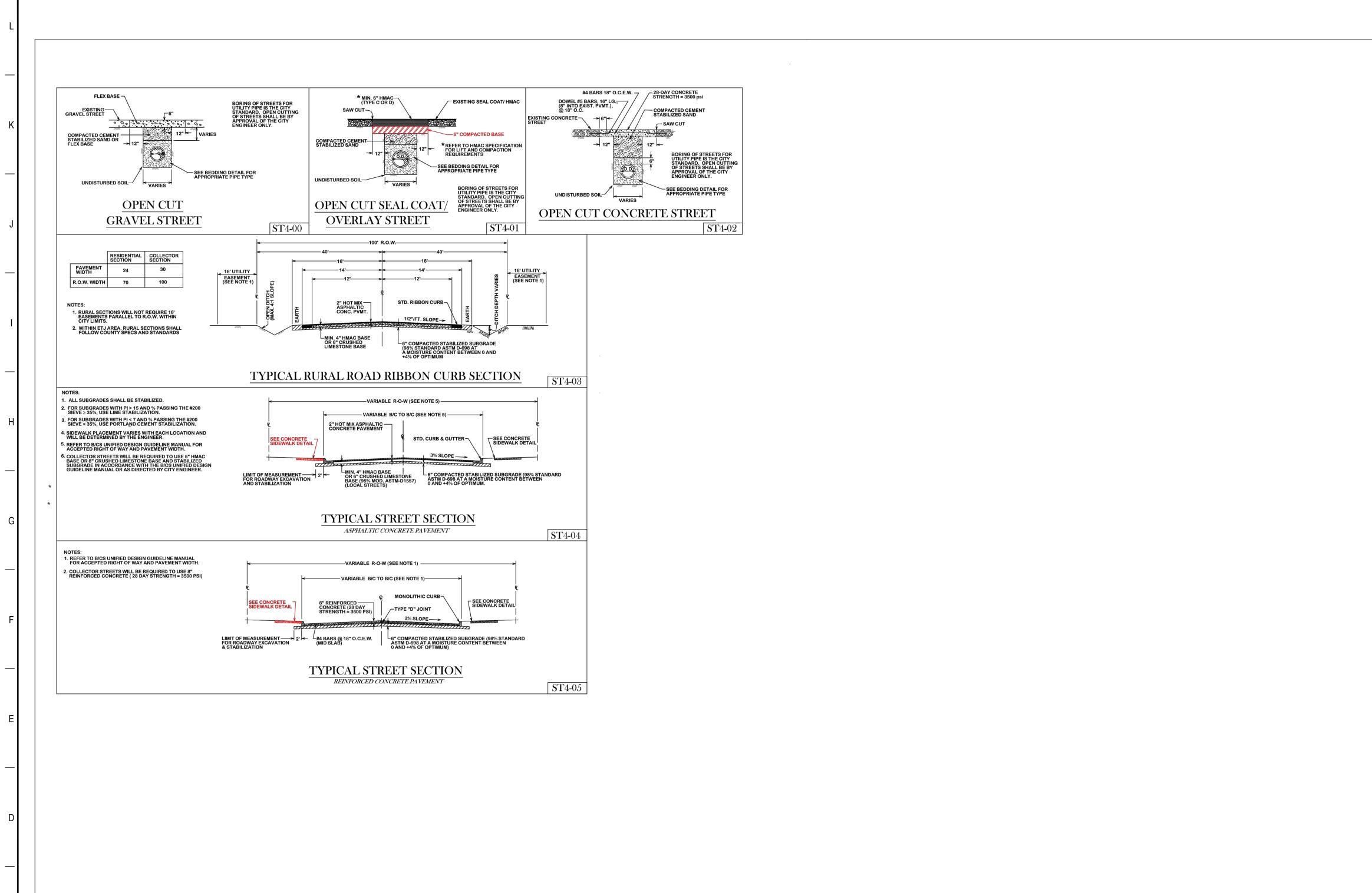
engineers | surveyors

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RAM LCS LCS, HBS, CPM DPS 4-01167 DRAWING NO. D101

TYPICAL DRIVEWAY ENTRANCE WITH CULVERT



DETAILS STATION STREET COLLEGE STANDARD BRYAN

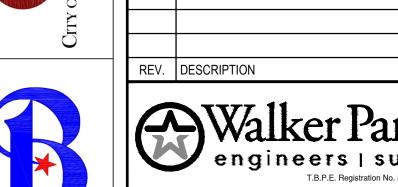
CITY OF BRYAN
The Good Life, Texas Style."

DRAWN BY: B.I.

DATE: 12/2020 SCALE: NTS APPROVED: W. P. K.

FIGURE:

SHEET 2 OF 2



SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

STREET DETAILS

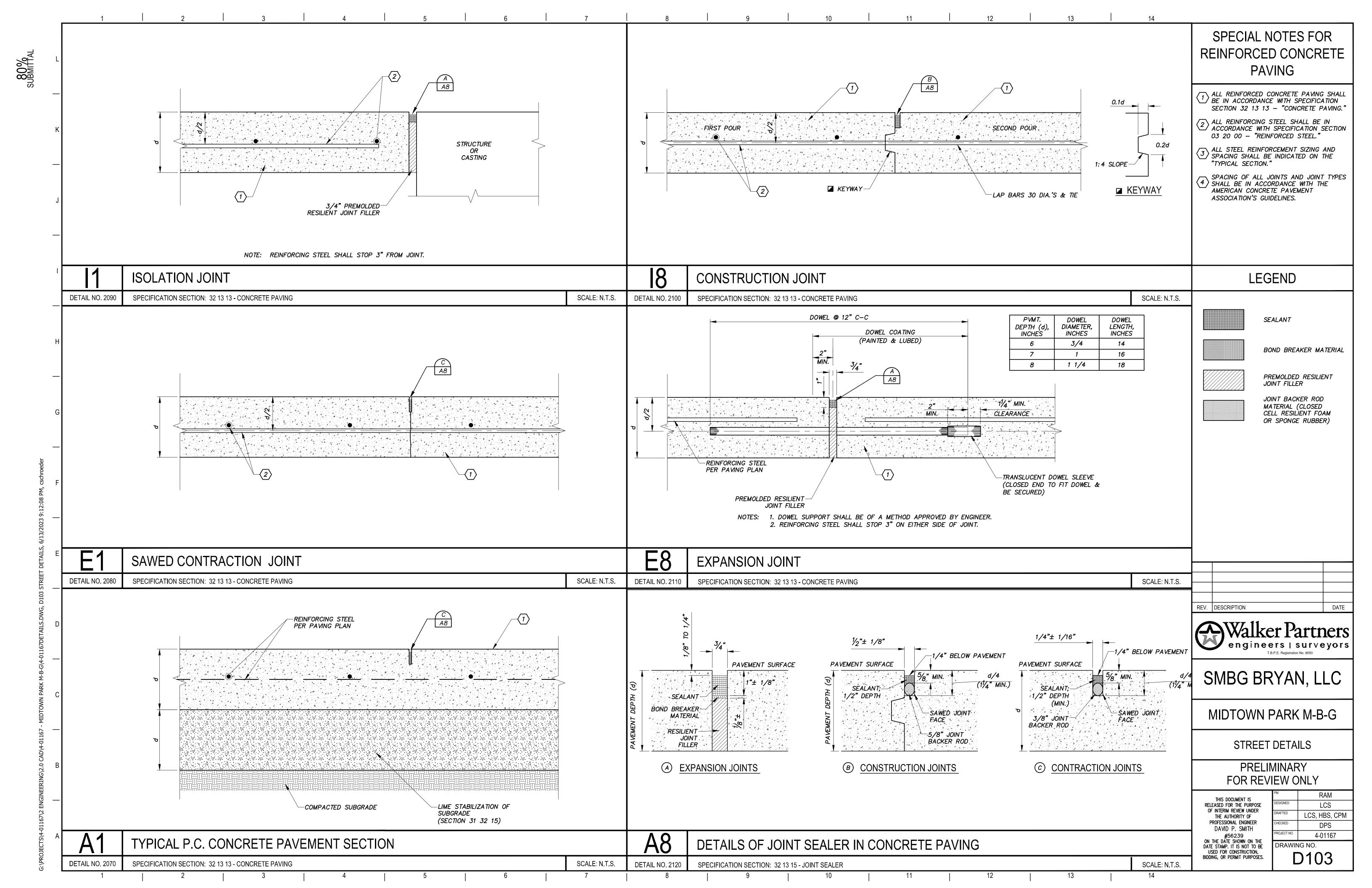
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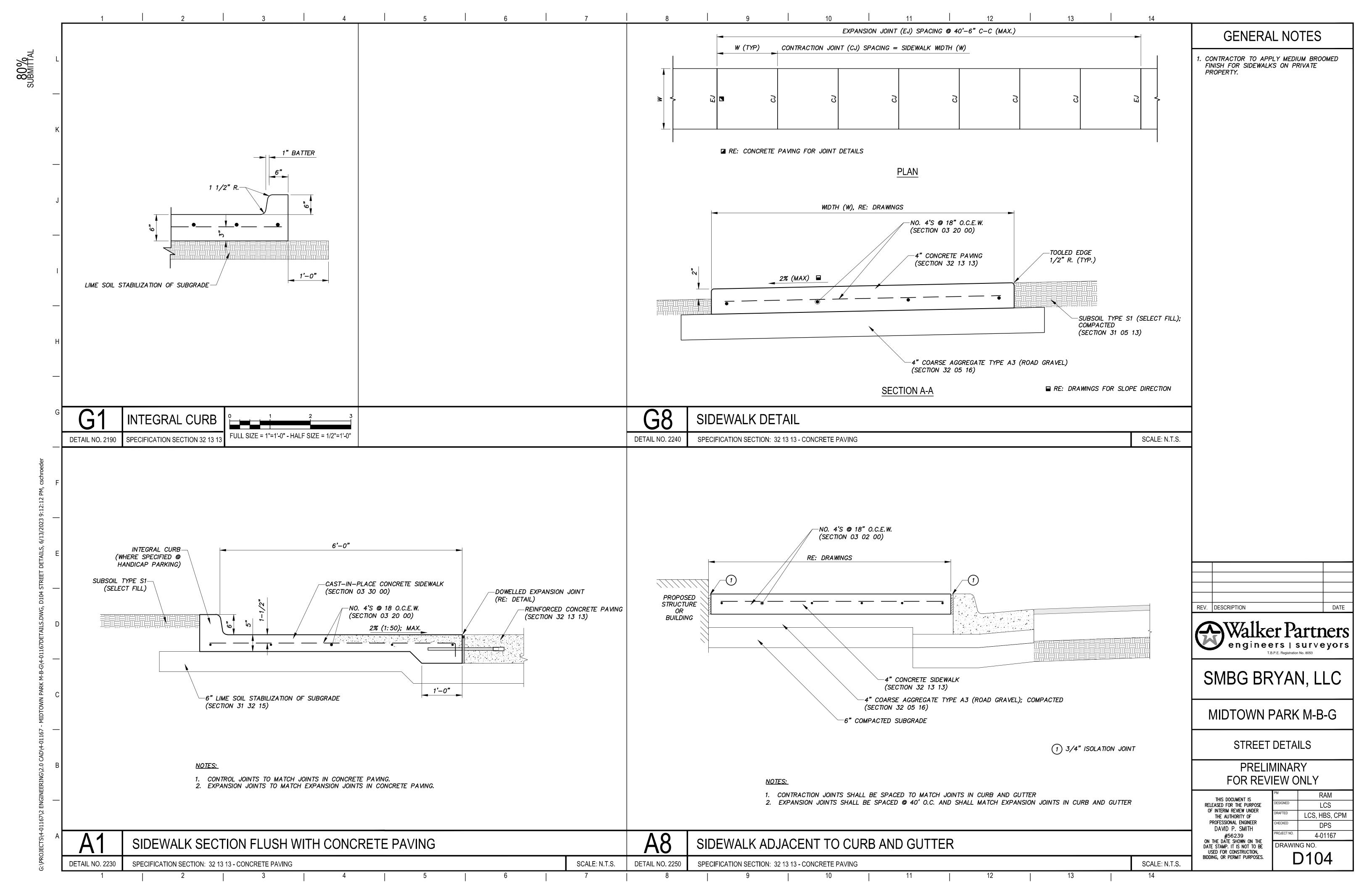
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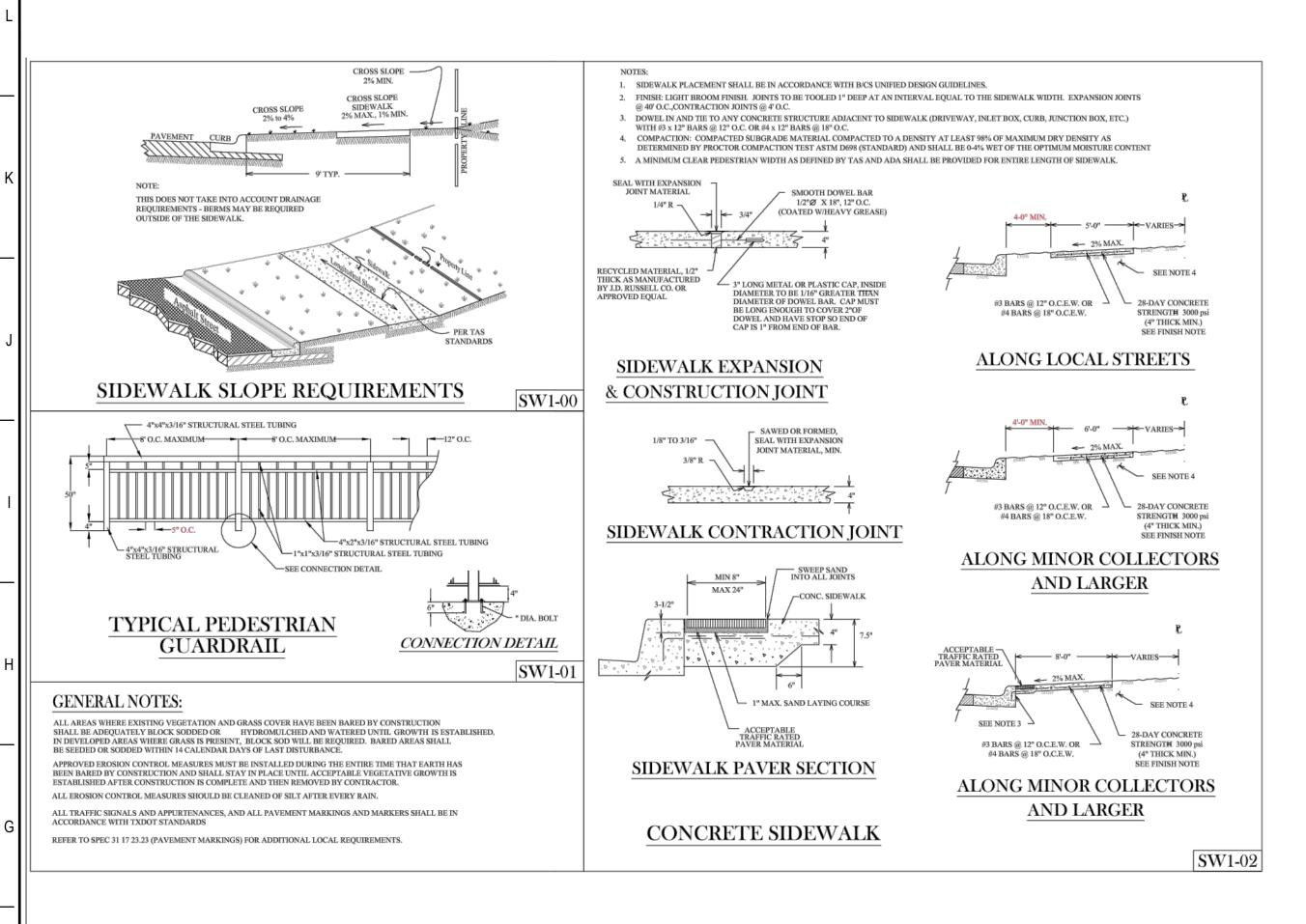
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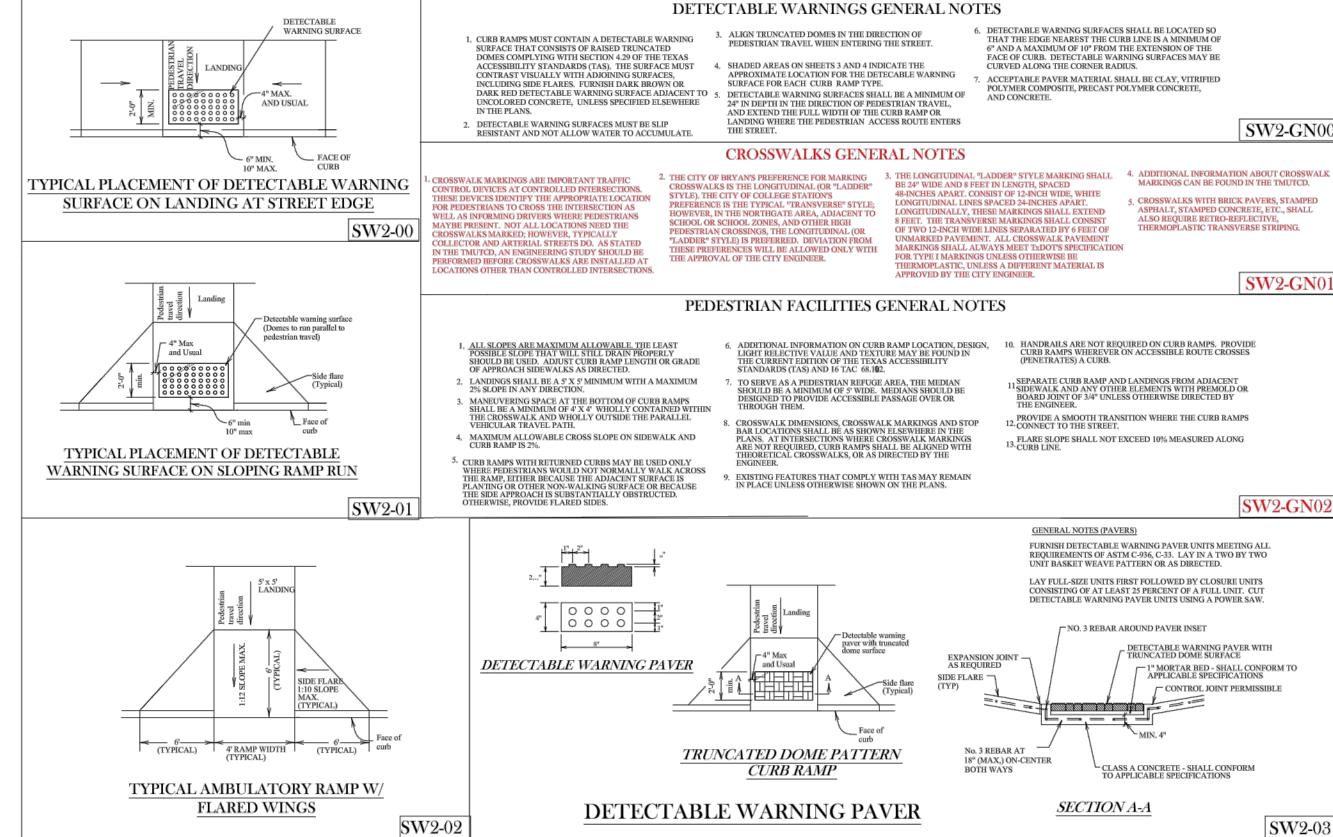
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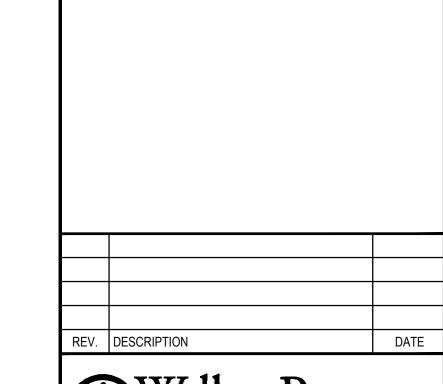
D102











GENERAL NOTES

1. DETECTABLE WARNING PAVERS ARE NOT REQUIRED ON CURB RAMPS ON PRIVATE

PROPERTY.



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MIDTOWN PARK M-B-G

SIDEWALK DETAILS

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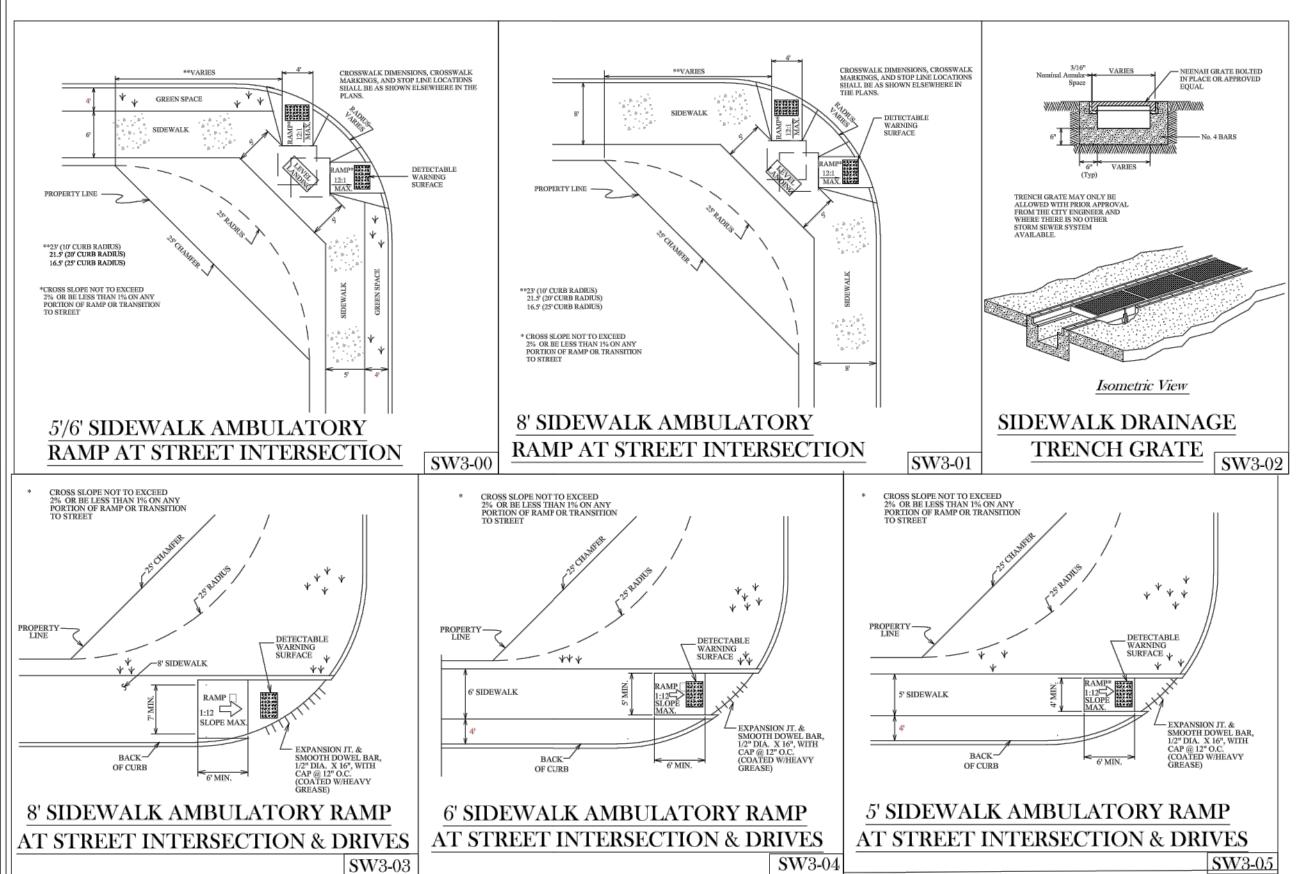
LCS, HBS, CPM
CHECKED DPS
PROJECT NO. 4-01167

DRAWING NO.

D105

RAM

LCS



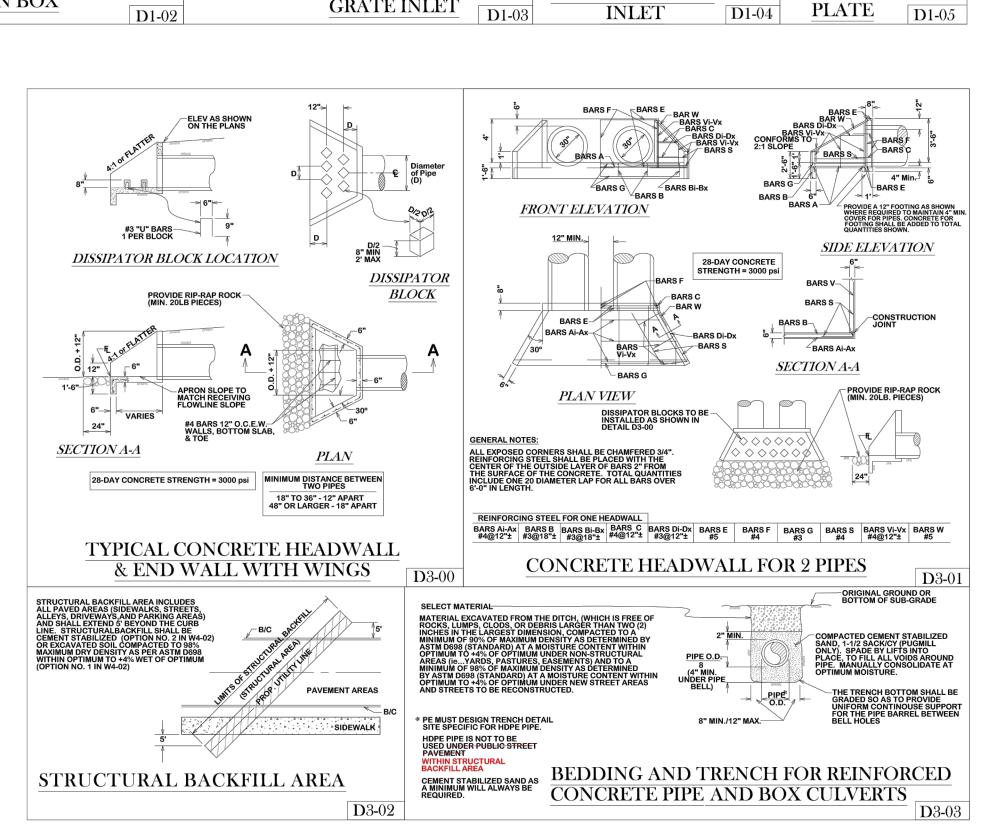
GENERAL NOTES

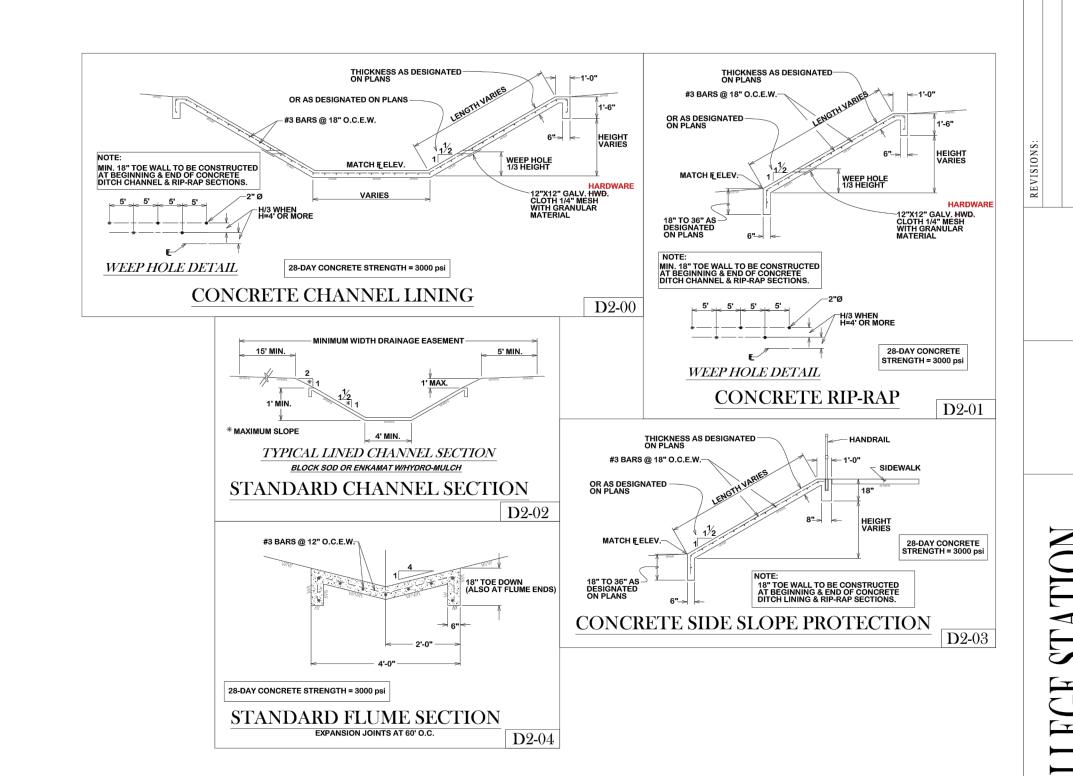
1. RECESSED CURB IS NOT REQUIRED FOR CURB INLETS ON PRIVATE PROPERTY.

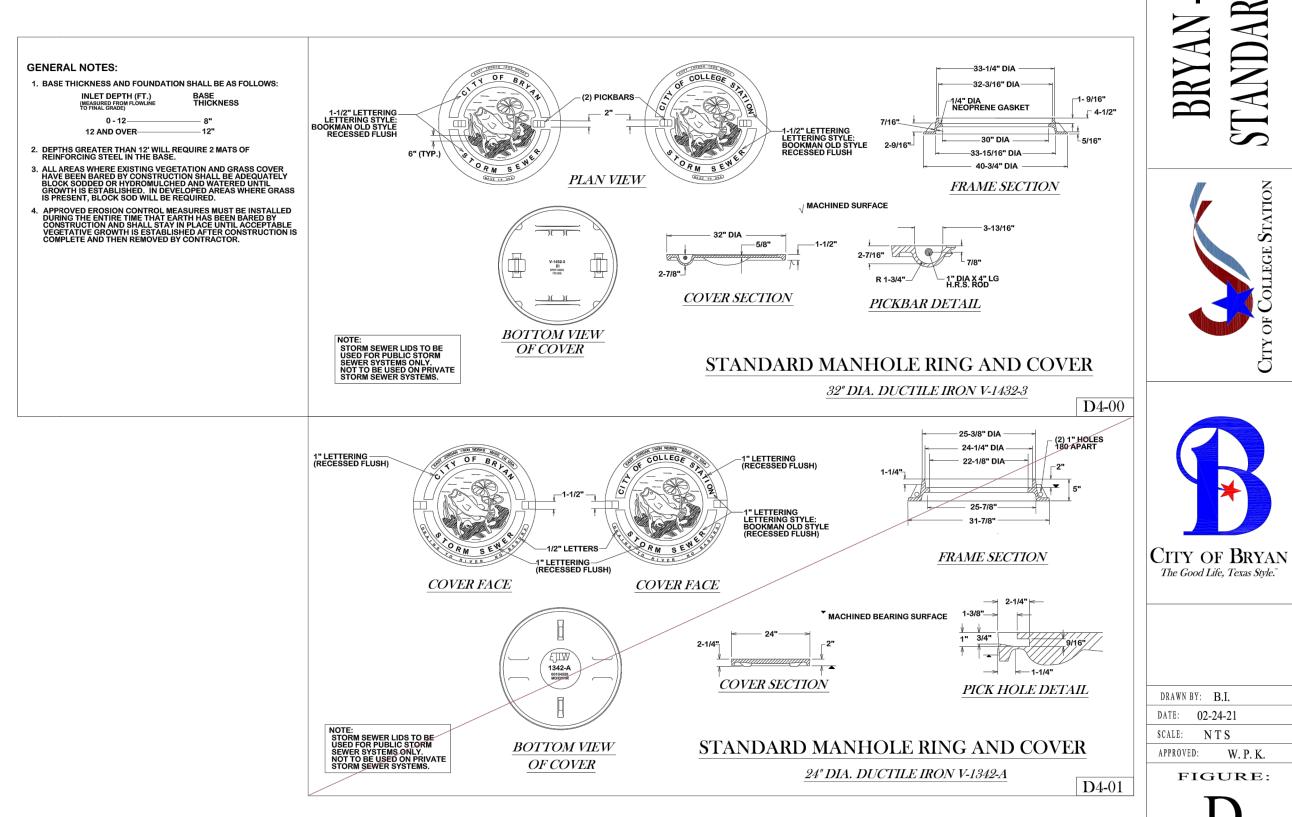
2. STANDARD STORM SEWER MANHOLE COVERS SHALL BE USED IN LIEU OF CITY OF BRYAN MANHOLE COVERS ON PRIVATE PROPERTY.

WARP PAVEMENT SURFACE TO THROAT OF INLET $-\!\!\!/$ PLANTHROAT DETAIL 28-DAY CONCRETE STRENGTH = 3000 psi ─#4 BARS 6" O.C.E.W. \ TOP SLAB **□6" TOP SLAB** -NORMAL GUTTER LINE - DEPRESSED GUTTER LINE → 6" SIDE WALLS SECTION A-A SECTION B-B SECTION A-A SINGLE GRATE INLET SINGLE RECESSED CURB INLET & CURB INLET W/EXTENSION D1-00 $V\!I\!EWA$ -A (2) 3/4" **CROSS SECTION** PLAN6" TOP SLAB 18" TO 36" - 12" APART CITY OF BRYAN

DRAINS TO RIVERS LARGE MOUTH BASS LOGO 3" MIN. EACH SIDE -> SECTION A-A DRAINS TO RIVERS SECTION A-A STORM SEWER BASS LOGO DOUBLE BARREL JUNCTION BOX GRATE INLET









FIGURE

SHEET 1 OF 1

DETAIL

DRAINAGE

JARD

STAND



SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

DRAINAGE DETAILS

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RAM

3. PIPE SIZE SHALL BE 1" OR 2".

I. SIZE OF LINES AND VALVES MAY BE MODIFIED BY THE ENGINEER

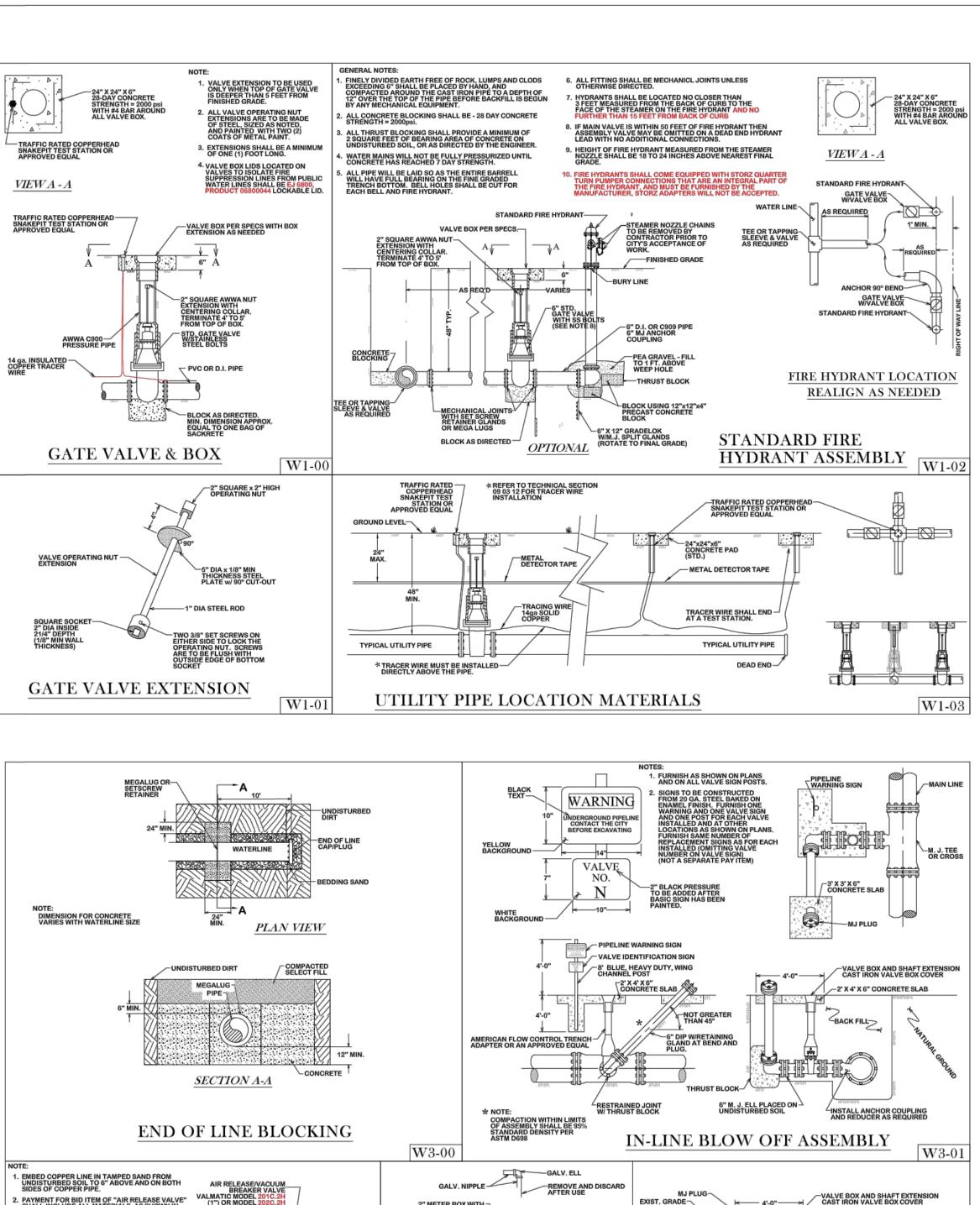
AIR RELEASE VALVE

& VACUUM CHECK VALVE

W3-02

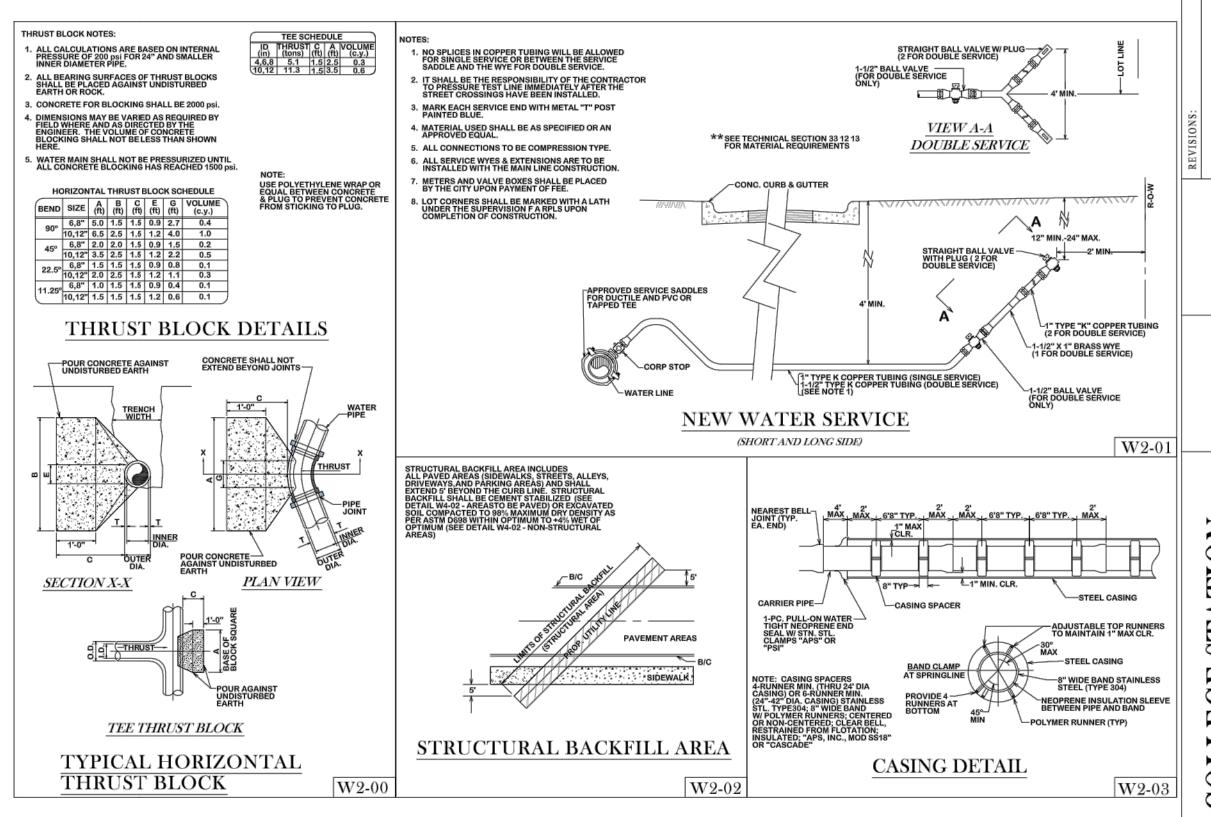
SINGLE BODY COMBINATION

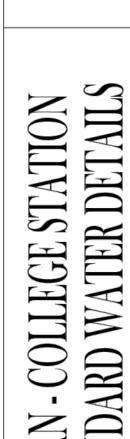
AIR RELEASE VALVE



2" BLOW-OFF RISER

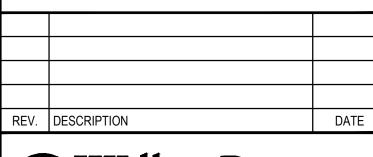
W3-03





GENERAL NOTES

- ALL AREAS WHERE EXISTING VEGETATION AND GRASS COVER HAVE BEEN BARED BY CONSTRUCTION SHALL BE ADEQUATELY BLOCK SODDED OR HYDROMULCHED AND WATERED UNTIL GROWTH IS ESTABLISHED. IN DEVELOPED AREAS WHERE GRASS IS PRESENT, BLOCK SOD WILL BE REQUIRED BARED AREAS SHALL BE SEEDED OR SODDED WITHIN 14 CALENDAR DAYS OF LAST DISTURBANCE.
- 2. APPROVED EROSION CONTROL MEASURES MUST BE INSTALLED DURING THE ENTIRE TIME THAT EARTH HAS BEEN BARED BY CONSTRUCTION AND SHALL STAY IN PLACE UNTIL ACCEPTABLE VEGETABLE GROWTH IS ESTABLISHED AFTER CONSTRUCTION IS COMPLETE AND THEN REMOVED BY
- 3. ALL EROSION CONTROL MEASURES SHOULD
- 4. ESTABLISHMENT OF VEGETATION MAY BE WARRANTY ITEM.





SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

WATER DETAILS

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LCS LCS, HBS, CPM DPS 4-01167 DRAWING NO.

 FOR MORE INFORMATION ON WATER AND SEWER LINE CROSSING SEE CITY STANDARD SPECIFICATION FOR WATER AND SEWER LINE CONSTRUCTION 2. STEEL CASING SHALL BE AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS. 3. DRY BORING PREFERRED, WET BORING ALLOWED ONLY WHEN APPROVED BY THE CITY ENGINEER. 3. DRY BORING IS REQUIRED. WATER LINE -SHOULDER VARIES-3'-0" BELOW DITCH FLOW LINE TYPICAL RURAL STREET CROSSING TYPICAL URBAN CITY STREET CROSSING

W3-04

VALVE BOX AND SHAFT EXTENSION CAST IRON VALVE BOX COVER SCH. 40 GALV. PIPE -2' X 4' X 6" CONCRETE SLAB BRASS BALL VALVE -BRASS THREAD PIPI 4" END OF LINE **BLOW-OFF**

WATER LINE

W4-01

BRY

CITY OF BRYAN
The Good Life, Texas Style."

DRAWN BY: B.I. DATE: 02-24-21 SCALE: NTS APPROVED: W. P. K. FIGURE: SHEET 1 OF 2

PROFESSIONAL ENGINEER

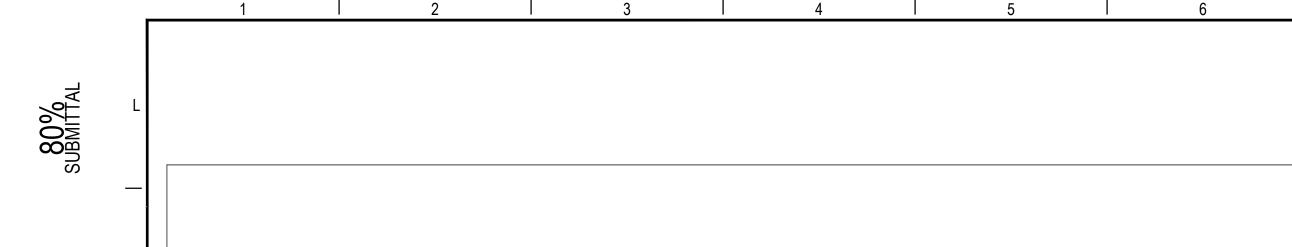
CONTRACTOR.

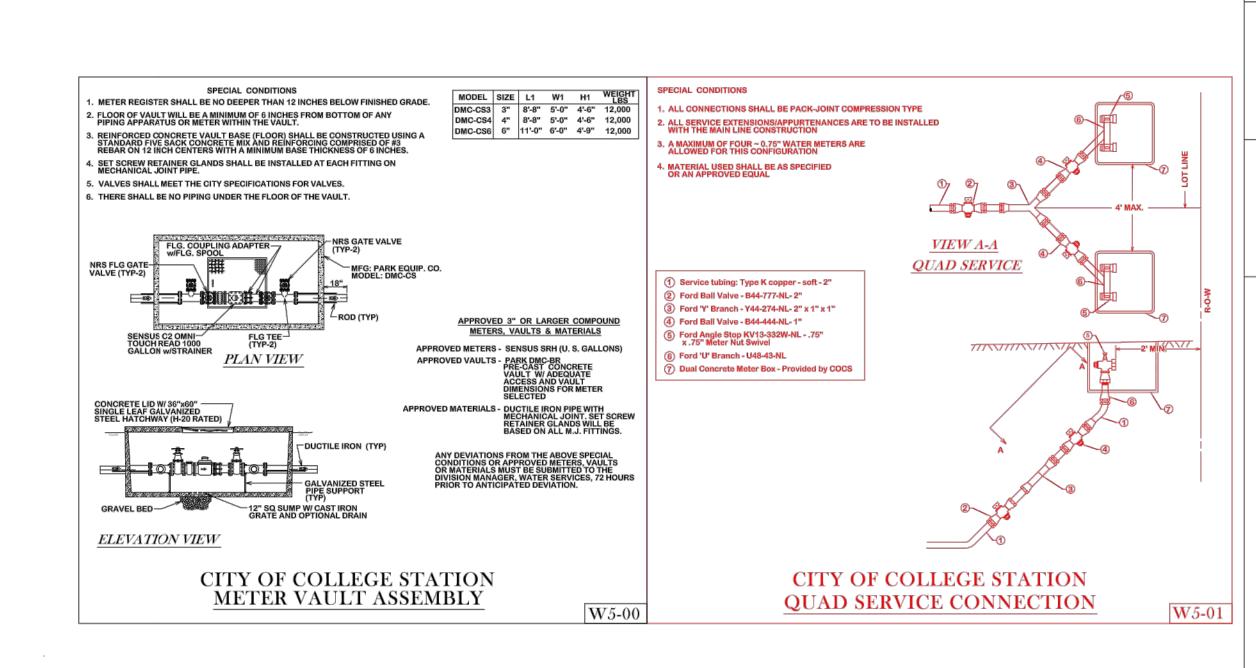
BE CLEANED OF SILT AFTER EVERY RAIN.

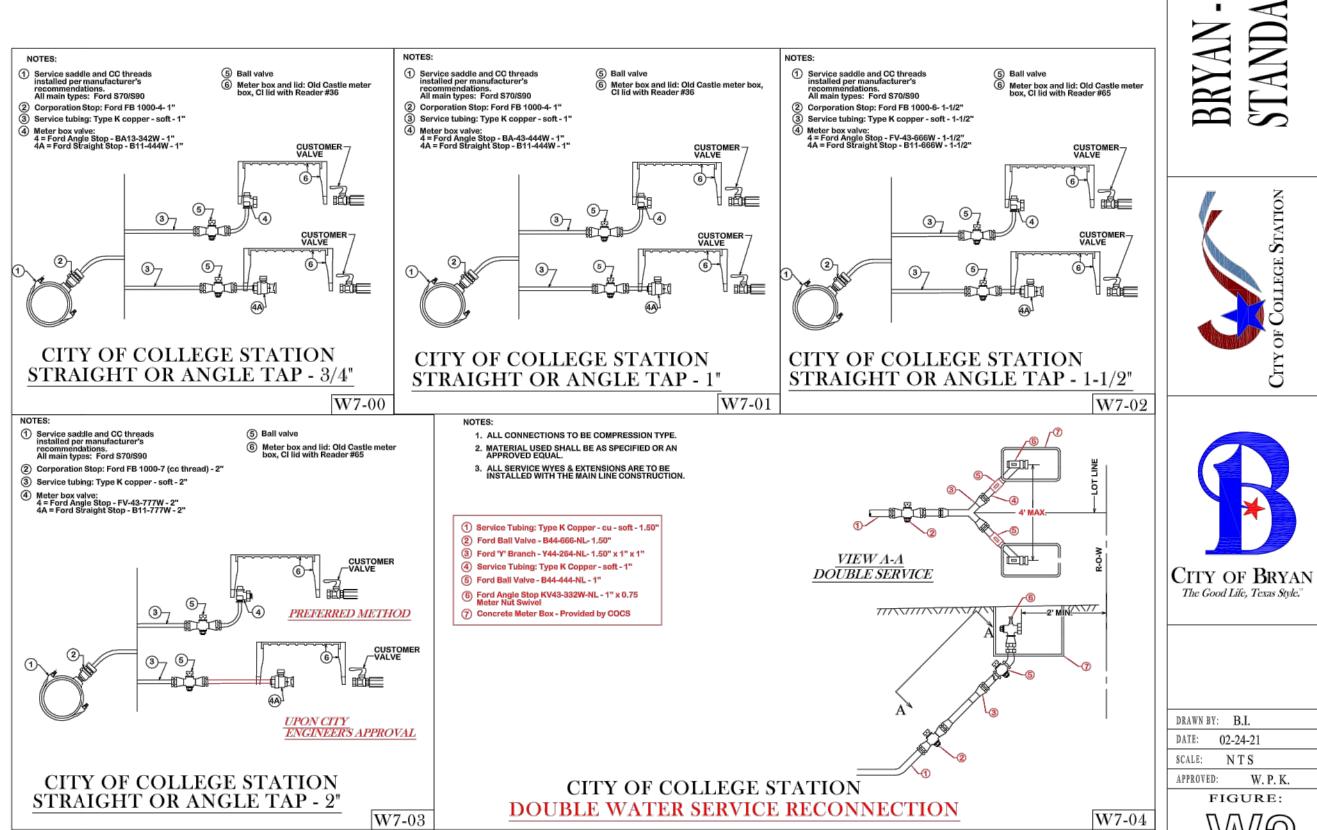
D107

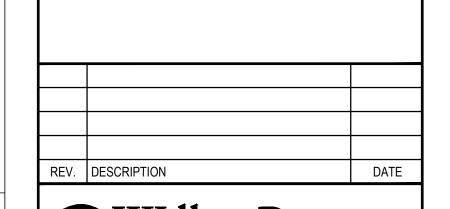
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MIDTOWN PARK M-B-G

WATER DETAILS

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LCS, HBS, CPM 4-01167 DRAWING NO. D108

LCS

1 Service saddle, SS straps, CC threads Installed per manufacturer's recommendations. All main types:
Smith Blair 317 6 Brass bushing IPS - 1" x 3/4") Meter nipple - C38-23-2-5 - 3/4" (8) Meter box and lid: 2) Corporation Stop: Ford FB 1000-4-Q - 1" (2) Corporation Stop: Ford FB 1000-4-Q - 1" Corporation Stop: Ford FB 1000-6-Q - 1-1/2" 3 Service tubing: Type K copper - soft - 1" 3) Service tubing: Type K copper - soft - 1" 3 Service tubing: Type K copper - soft - 1-1/2" Ford male adapter - C84-44-Q - 1" Ford male adapter - C84-44-Q - 1" (4) Ford male adapter - C84-66-Q - 1-1/2" Meter box valve: 5 = Ford Angle Stop - BA-11-444W - 1" 5A = Ford Straight Stop - B11-444W - 1 3 CUSTOMER VALVE 6 Brass all thread I.P.S. - 1-1/2" UPON CITY ENGINEER'S APPROVAL UPON CITY ENGINEER'S APPROVAL CITY OF BRYAN
STRAIGHT OR ANGLE TAP-3/4"
W6-00

CITY OF BRYAN
STRAIGHT OR ANGLE TAP - 1"
W6-01 Meter box valve:
 5 = Ford Angle Stop - BA-11-777W - 2"
 5A = Ford Straight Stop - B11-777W - 2"
 Brass nipple I.P.S. - 2" x 3" 1. ALL CONNECTIONS TO BE COMPRESSION TYPE. MATERIAL USED SHALL BE AS SPECIFIED OR AN APPROVED EQUAL. ② Corporation Stop: Ford FB 1000-7-Q (cc thread) - 2" 7 Meter Flange - CF31-77 - 2" 3 Service tubing: Type K copper - soft - 2" 8 Meter box and lid: 4 Ford male adapter - C84-77-Q - 2" DOUBLE SERVICE ANGLE STOP (SEE DETAILS W6-00 — THRU W6-03) CITY OF BRYAN CITY OF BRYAN
STRAIGHT OR ANGLE TAP - 2" W6-03 WATER SERVICE RECONNECTION

(7) Meter Flange - CF31-66 - 1-1/2" CITY OF BRYAN STRAIGHT OR ANGLE TAP-1-1/2" W6-04

SHEET 2 OF 2

STATION

COLLEGE

ATER

MANHOLE SECTION-MIN. 24" BETWEEN CUT-OUT AND MANHOLE CONE.

FORM SHELF SLOPE AT -1"/FT. NEAT AND SMOOTH.

ALL NEW CONNECTION AT EXISTING MANHOLES SHALL BE BY CORING ONLY MANHOLE BOOTS SHALL BE SIZED SAME AS INCOMING PIPE. CROSS MUST BE A MINIMUM 24" BELOW CONE SECTION. 5 FOOT DIAMETER MANHOLE WILL BE REQUIRED FOR DROPS 12" AND GREATER. BASE #4 BARS, 8" O.C.E.W. -- DEPTHS --CITY OF COLLEGE STATION OUTSIDE DROP MANHOLE ONLY ALLOWED FOR MAIN LINE CONNECTIONS (6° AND LARGER) BACK FILL AROUND MH-SHALL BE AS PER DETAIL S1-02 - NOTE 4 S2-00 SEE PLAN OR PROFILE FOR PIPE SIZE, TYPE AND INVELEV SECTION A - A

TION DET \forall WER LEG H $\overline{0}$ R

AN N BRY

FRAME SECTION

J MACHINED SURFACE

[819mm] —32-1/4" DIA [965mm] —38" DIA

FRAME SECTION

BOTTOM VIEW

GENERAL NOTES

STANDARD SANITARY SEWER MANHOLE COVERS SHALL BE USED IN LIEU OF CITY OF BRYAN MANHOLE COVERS ON PRIVATE PROPERTY.

REV. DESCRIPTION CITY OF BRYAN
The Good Life, Texas Style.

DRAWN BY: B.I.

DATE: 02-24-21

SCALE: NTS

S4-02

APPROVED: W. P. K.

FIGURE:

SHEET 1 OF 3

Walker Partners | engineers | and partners |

SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

SEWER DETAILS

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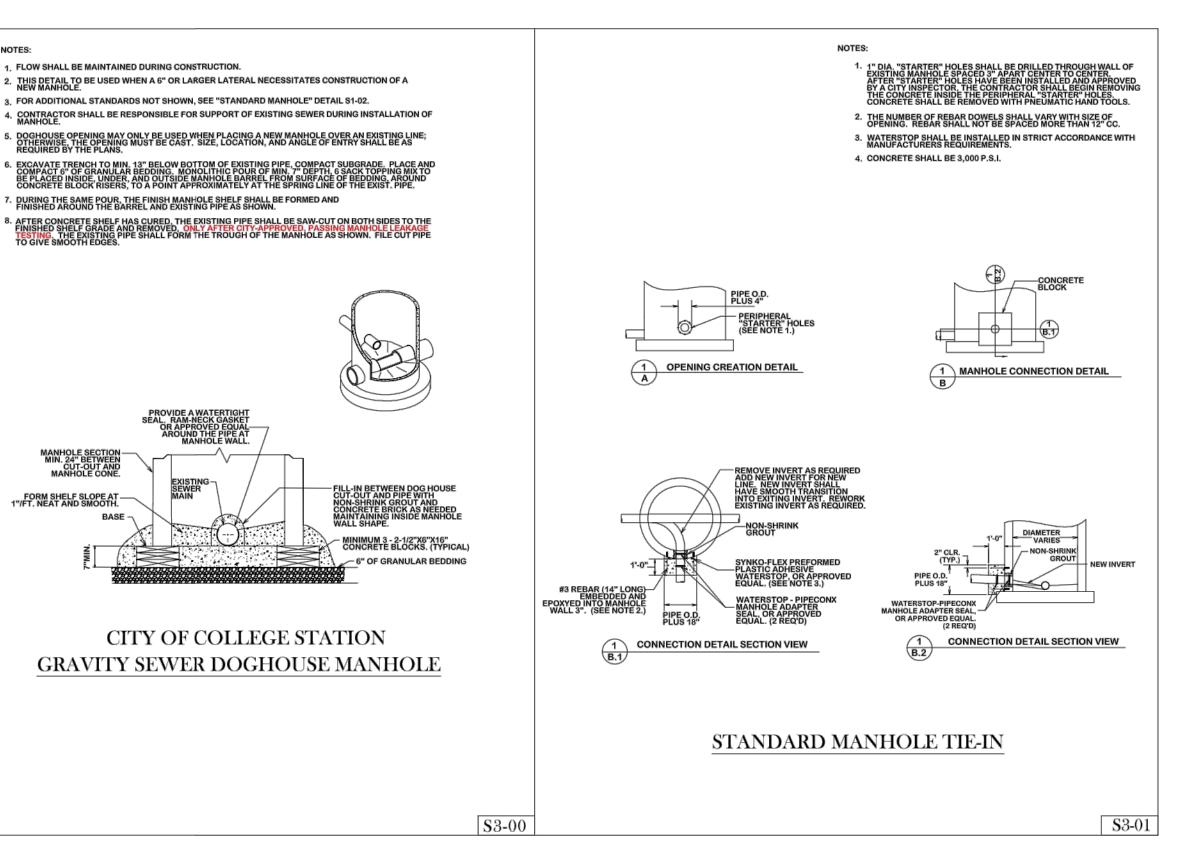
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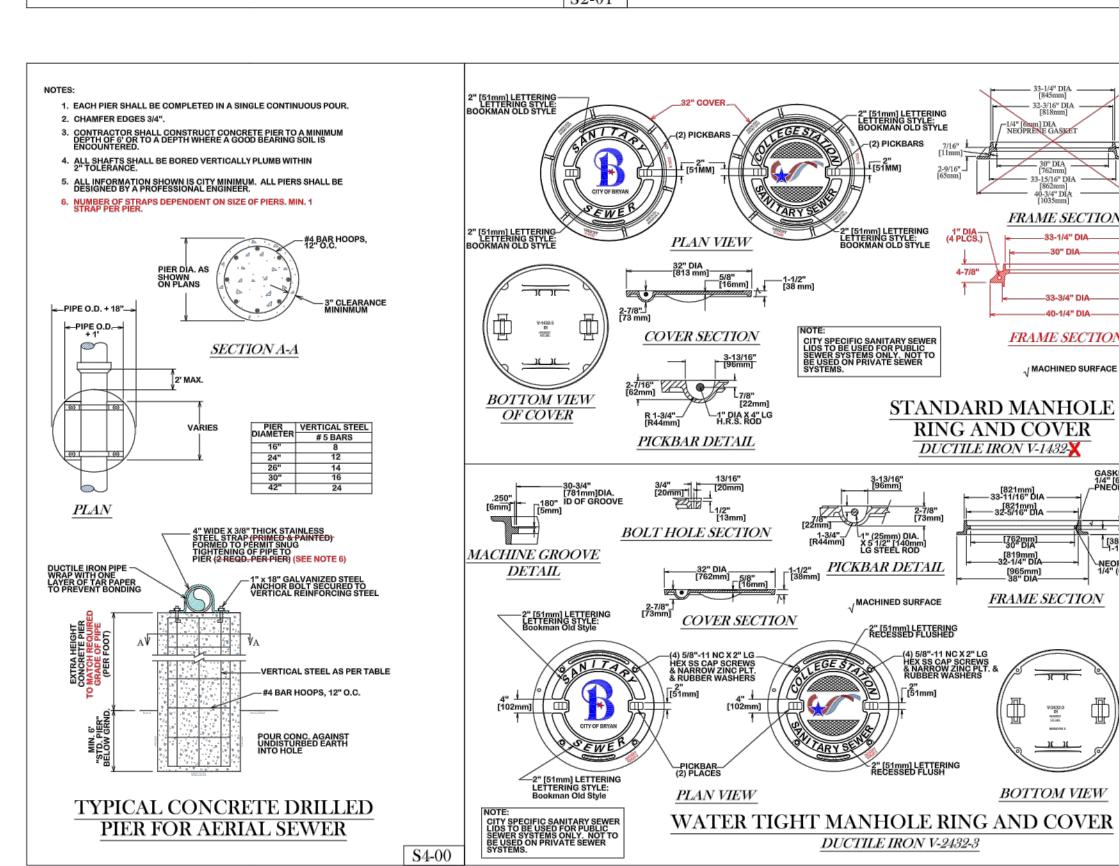
RAM LCS LCS, HBS, CPM DPS 4-01167 DRAWING NO. D109

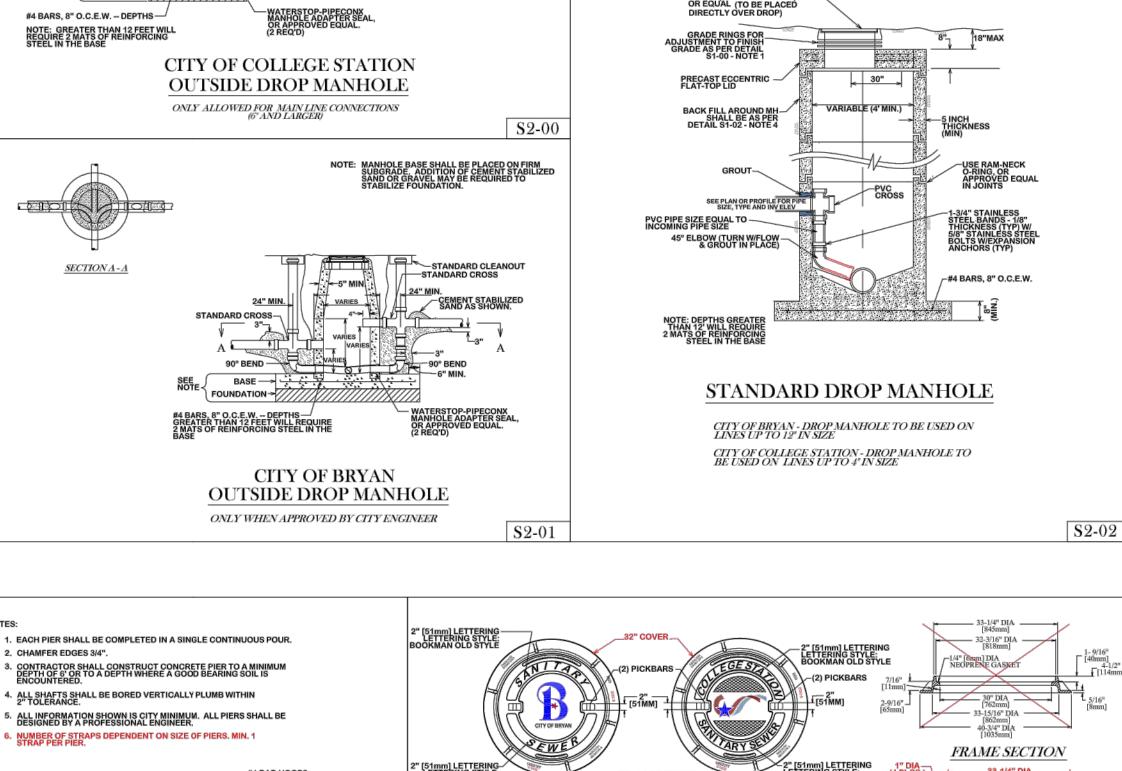
MANHOLE DIA. MAIN SIZE MANHOLE DEPTH (FT.) BASE THICKNESS STD. DUCTILE IRON MANHOLE COVER AND FRAME (30" DIA. OPENING) OR EQUAL 12 AND OVER______12" . MANHOLE LOCATION AND COMPACTION AS FOLLOWS: COMPACTION REQUIREMENT ____ 98 % STANDARD PROCTOR - ASTM D 698 LANDSCAPE AREA 90 % STANDARD PROCTOR - ASTM D 698 8' GREEN, HEAVY DUTY, WING CHANNEL POST BACK FILL AROUND MH — SHALL BE AS PER NOTE 4 ∠#4 BARS, 8" O.C.E.W. NOTE: DEPTHS GREATER THAN 12'
WILL REQUIRE 2 MATS OF
REINFORCING STEEL IN THE BASE. CAST IN PLACE MANHOLE PRE-CAST MANHOLE STANDARD MANHOLE S1-00 A SELECT NATIVE MATERIAL

MATERIAL EXCAVATED FROM THE DITCH, (WHICH IS FREE OF ROCKS, LUMPS, CLODS, OR DEBRIS LARGER THAN TWO (2)
INCHES IN THE LARGEST DIMENSION), COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698 (STANDARD) AT A MOISTURE CONTENT WITHIN OPTIMUM TO +4% OF OPTIMUM UNDER NON-STRUCTURAL AREAS (ie...YARDS, PASTURES, EASEMENTS) (OPTION 1)
AND TO A MINIMUM OF 98% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698 (STANDARD) AT A MOISTURE CONTENT WITHIN OPTIMUM TO +4% OF OPTIMUM UNDER NEW STREET AREAS AND STREETS TO BE RECONSTRUCTED. (OPTION 2) ORIGINAL GROUND OR BOTTOM OF SUBGRADE A SELECT MATERIAL - © CEMENT STABILIZED SAND 8"-12"MAX. ALL BEDDING & INSTALLATION OF PVC PIPE SHALL BE IN ACCORDANCE TO ANSI/AWWA STANDARDS FOR PVC PIPE. 4. COMPACTION SHALL BE ATTAINED BY MECHANICAL TAMPING. 5. ALL TRENCHES SHALL BE BACK FILLED AND TEMPORARY PAVING OR PLANKING PLACED AT THE END OF EACH WORKING DAY. B GRANULAR MATERIAL
MATERIAL SHALL BE BANK RUN RIVER SAND WHICH IS FREE
OF DETRIMENTAL QUANTITIES OF CLAY, DEBRIS, OR ORGANIC
MATERIAL AND WHICH, WHEN TESTED BY STANDARD
LABORATORY METHODS, MEET THE FOLLOWING REQUIREMENTS:
MAXIMUM LIQUID LIMIT

MAXIMUM PLASTICITY INDEX
MAXIMUM PERCENT PASSING NO. 200 SIEVE
MINIMUM PERCENT PASSING NO. 200 SIEVE
MINIMUM PERCENT PASSING 3/4" SIEVE
MOT ADHERE TO FORM A BALL WHEN PRESSED IN THE HAND. *NON-STRUCTURAL* AREAS TO BE PAVED OR STREETS TO BE RECONSTRUCTED © CEMENT STABILIZED SAND BEDDING AND TRENCH FOR DI PIPE & PVC PIPE S1-01







6" CLEAN OUT STACK-DIP OR PVC

1. SANITARY SEWER MANHOLE COVERS MAY BE USED IN LIEU OF CITY OF BRYAN MANHOLE COVERS ON PRIVATE PROPERTY.

GENERAL NOTES

1. ALL MATERIAL SHALL BE ASTM D3034 SDR26 W/ GASKETS 1. ALL MATERIAL SHALL BE ASTM D3034 SDR26 W/ GASKETS 2. SERVICE SHALL BE AS SHALLOW AS POSSIBLE AND STILL SERVICE WHERE A CLEANOUT WILL BE II A TRAFFIC AREA, A CAST IRON TOP HAT WILL BE REQUIRED. 4. A CLEANOUT MUST BE INSTALLED ON EACH SERVICE RECONNECTION AT THE ROW "STANDARD" SERVICE CONNECTIONS APPLY WHEN TRENCH IS LESS THAN 5. "DEEP" SERVICE CONNECTIONS APPLY WHEN TRENCH IS MORE THAN 7" DEEP. Property Line Property Line SERVICE SHALL BE AS SHALLOW AS POSSIBLE AND STILL SERVICE SEE NOTE 3 -PLAN VIEW PLAN VIEW WHERE A CLEANOUT WILL BE IN A TRAFFIC AREA, A CAST IRON TOP HAT WILL BE REQUIRED. ELEVATION VIEW ELEVATION VIEW CITY OF BRYAN CITY OF BRYAN STANDARD SEWER SERVICE CONNECTION STANDARD SEWER SERVICE RE-CONNECTION PLUMBER CONNECTION OR CIP RECONSTRUCTION NEW CONSTRUCTION ONLY S6-00 S6-01

R.O.W. OR PERMANENT EASEMENT LIMIT TO BE LOWERED TO FINAL GRADE AT TIME OF PLUMBER'S TIE-IN SEE NOTE 4 (TYPICAL) SIDEWALK -3.5' MAX. (SEE NOTE 1 AND NOTE 7) -3.5' MAX. (SEE NOTE 1.) PVC (SEE NOTE 4)-**→** 2.0' ← \underline{PLAN} STD. 45° PVC BEND PVC (SEE NOTE 4) ASTM D3034 SDR26 PIPE — WIGASKETS @1.0% MIN. (PIPE IS NOT TO BE PLACED HORIZONTALLY) STD. PVC COUPLING PROFILE CITY OF BRYAN SEWER SERVICE LINE CROSSING S6-00 4" PVC EXTENSIO W/PVC CAP (SEE NOTE 3) R-O-W OR EDGE OF EASEMENT- ALL MATERIAL SHALL BE ASTM D3034 SDR26 W/ GASKETS STD. 45° BEND -SEE NOTE 5 $\underline{\mathit{PLAN}}$

BOTTOM LIP OF CONNECTING PIPE SHALL NOT DIP BELOW CENTERLINE OF MAIN.

STANDARD CONNECTION PROFILE

SANITARY SEWER SERVICE CONNECTION

CITY OF BRYAN

DEEP CONNECTION PROFILE

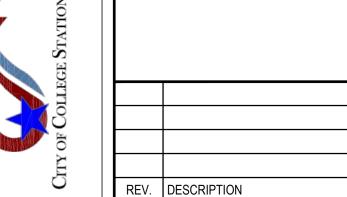
S6-01



STATION DETAILS

COLLEGE

SEWER





DRAWN BY: B.I. DATE: 02-24-21

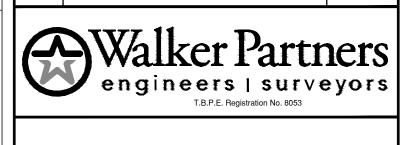
SCALE: NTS

APPROVED: W. P. K.

FIGURE:

\$2

SHEET 2 OF 3



SMBG BRYAN, LLC

MIDTOWN PARK M-B-G

SEWER DETAILS

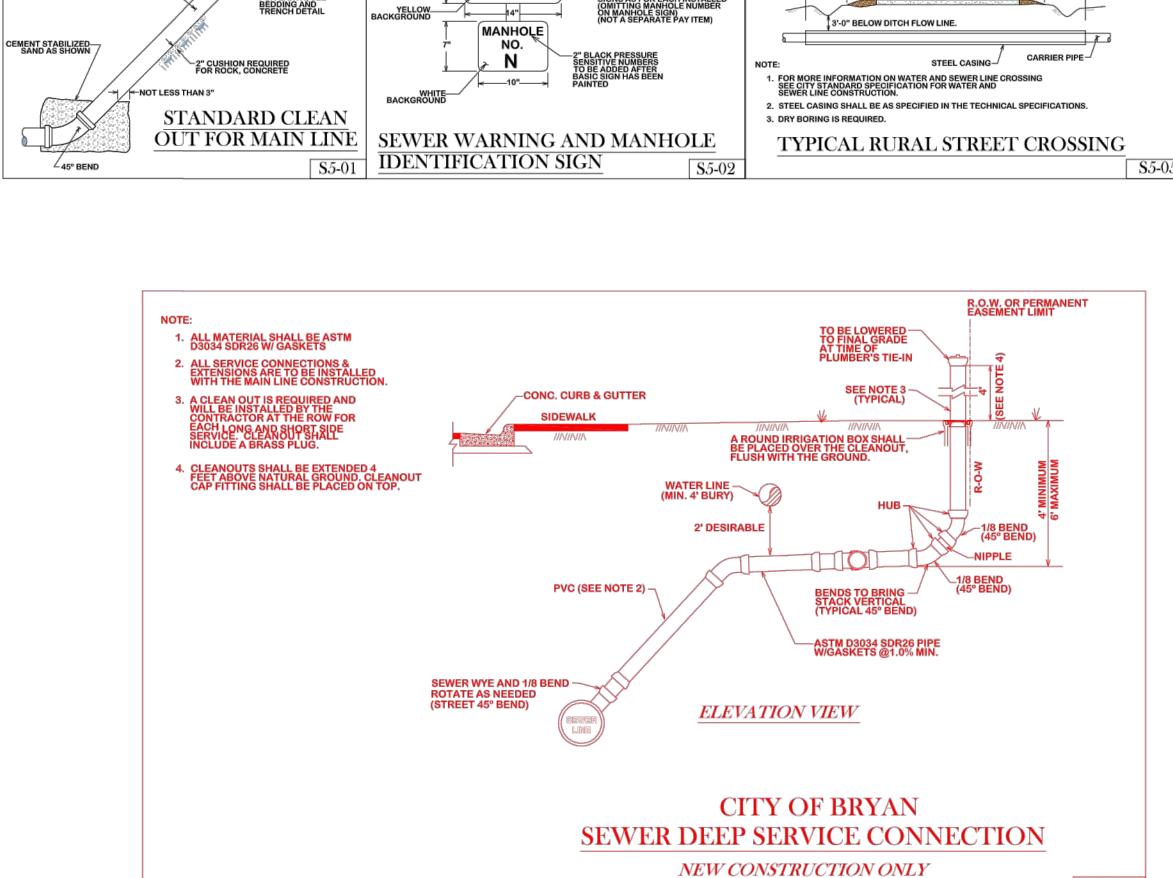
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RAM

LCS



GENERAL NOTES:

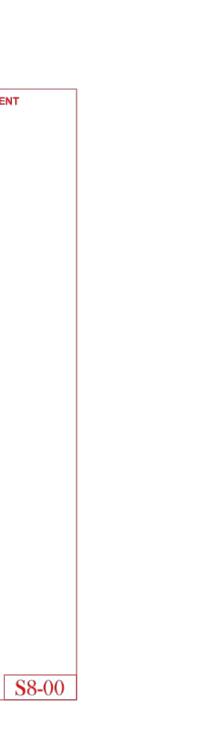
ALL EROSION CONTROL MEASURES SHOULD BE CLEANED OF SILT AFTER

STRUCTURAL

WARNING

BACKFILL AREA

ESTABLISHMENT OF VEGETATION MAY BE A WARRANTY ITEM.



S5-04

CASING DETAIL

2. STEEL CASING SHALL BE AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS.

TYPICAL URBAN CITY STREET CROSSING

3. DRY BORING PREFERRED, WET BORING ALLOWED ONLY WHEN APPROVED BY THE CITY ENGINEER.