

**SITE DATA**

SITE ADDRESS: LOT 3 - PUBLIX AT WALLBROOK  
ROLESVILLE, NC 27587

PIN: 76667,  
76635

BUILDING AREA: 2,084 GSF BUILDING

EXISTING ZONING: GC-CZ

SITE AREA: 33,092 SF / 0.76 AC

EXISTING USE: VACANT

FUTURE USE: BANK WITH DRIVE THRU

PARKING DATA

BANK PARKING REQUIRED: MAX. 6 SPACES PER 1000 SF OF G.F.A.  
2,084 SF x (6 SPACES/1000 SF) = 13 SPACES

MIN. 2.5 SPACES PER 1000 SF OF G.F.A.  
2,084 SF x (2.5 SPACES/1000 SF) = 6 SPACES

TOTAL PARKING PROVIDED: STANDARD PARKING = 12 SPACES  
ADA PARKING = 1 SPACE  
TOTAL PARKING PROVIDED = 13 SPACES

PARKING SPACE SIZE: 9x 19' MINIMUM

LOADING ZONE: \*NOTE-FINANCIAL INSTITUTIONS DO NOT USE  
LOADING ZONES FOR SECURITY PURPOSES  
DELIVERY TRUCK WILL PARK DIRECTLY IN FRONT  
OF MAIN ENTRANCE.

LANDSCAPE REQUIREMENTS: **REQUIRED**

LANDSCAPE BUFFER - FRONT (S. MAIN ST) = 30'  
LANDSCAPE BUFFER - SIDES = 0'  
LANDSCAPE BUFFER - REAR = 0'

BUILDING REQUIREMENTS: **REQUIRED**

BUILDING SETBACK - FRONT (S. MAIN ST) = 20'  
BUILDING SETBACK - SIDES = 15'  
BUILDING SETBACK - REAR = 35'  
MAXIMUM BUILDING HEIGHT = 35'

FLOOD ZONE:

THE SUBJECT PROPERTY IS LOCATED IN FLOOD ZONE X

\*\*DUMPSTER ENCLOSURE:

REFUSE CONTAINER ON LOT 2 WILL BE SHARED WITH THIS DEVELOPMENT. FIFTH  
THIRD BANK TO COORDINATE WITH THE DEVELOPER FOR A SHARED DUMPSTER  
AGREEMENT.

STORM WATER INFORMATION:

WATER: LOWER NEUSE  
RIVER BASIN: NEUSE  
TREE COVERAGE DATA:

CONSTRUCTION PLANS FOR:

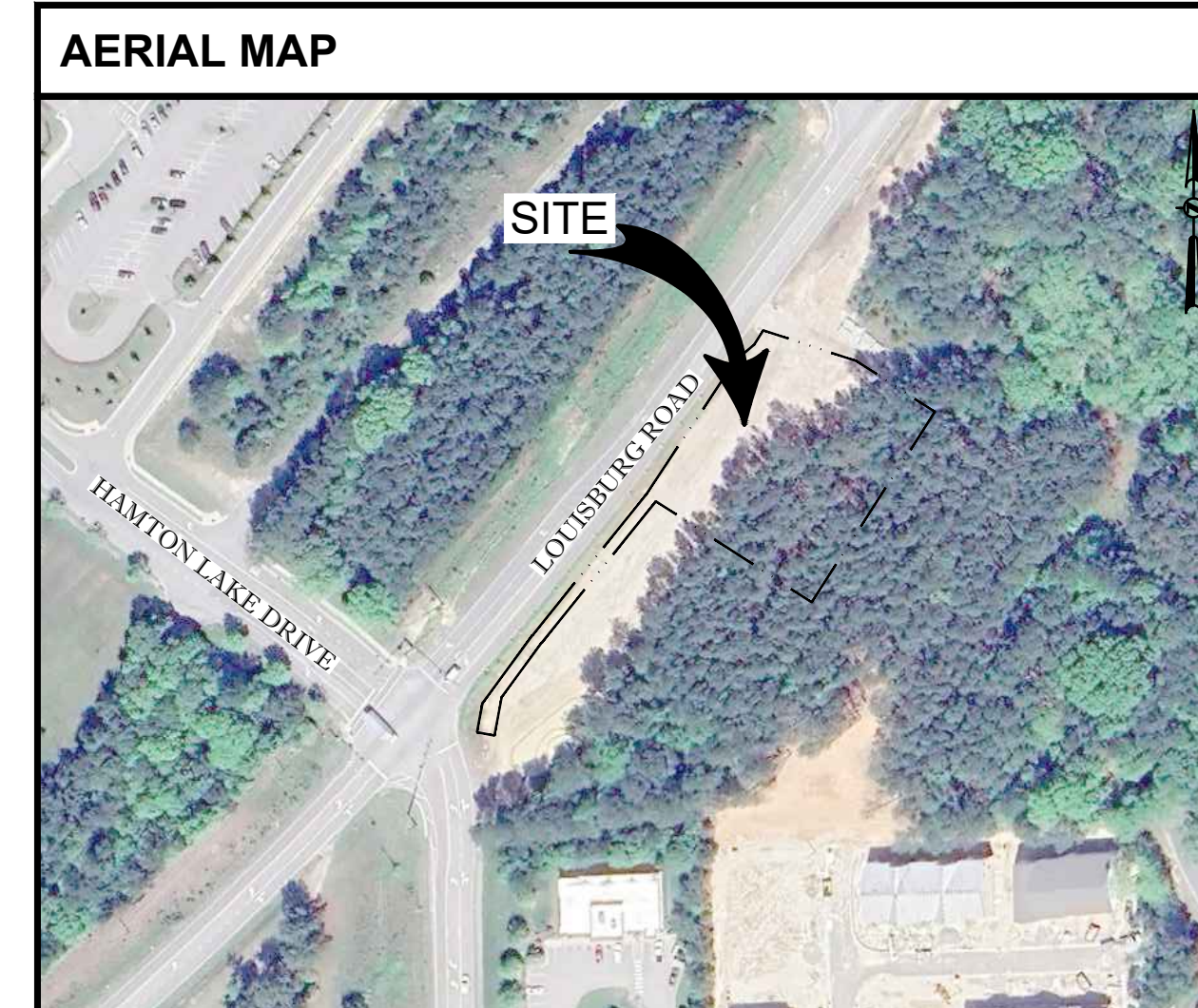
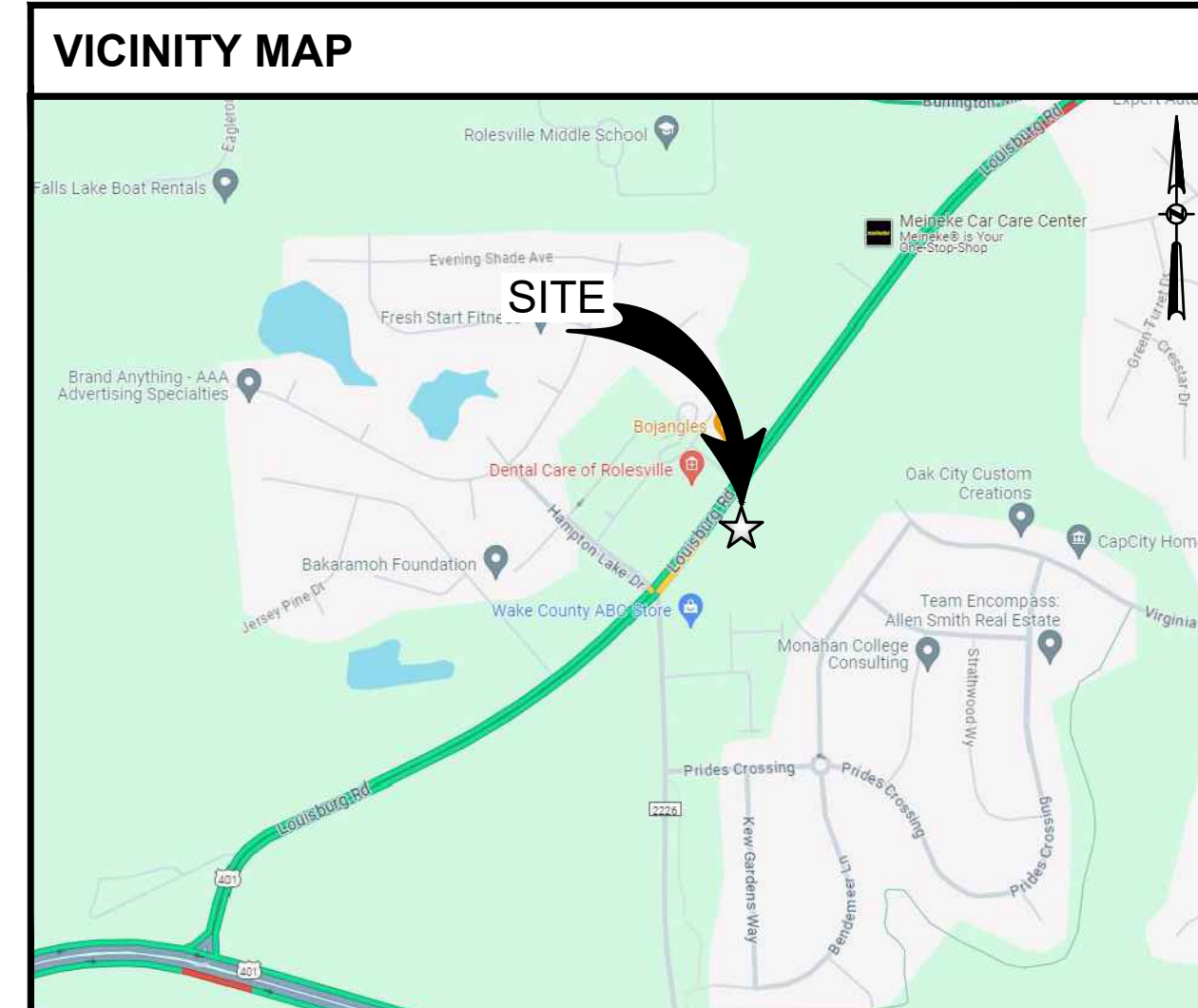


ROLESVILLE WALLBROOK

LOT 3

ROLESVILLE, NORTH CAROLINA 27587

TOWN OF ROLESVILLE PROJECT # SDP-24-07



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**PROJECT TEAM**

PROPERTY OWNER/DEVELOPER: WALLBROOK PLX LLC  
801 EAST BOULEVARD  
CHARLOTTE NC 28203  
PH: (000) 000-0000  
CONTACT:  
EMAIL:

SURVEYORS: GREENBERG FARROW  
1230 PEACHTREE STREET NE  
SUITE 2900  
ATLANTA, GEORGIA 30309  
PH: (770) 422-8181  
CONTACT: RODNEY E. ABNEY JR.  
EMAIL:

CIVIL ENGINEER: INFINITY ENGINEERING GROUP, LLC  
1208 EAST KENNEDY BOULEVARD  
SUITE 230  
TAMPA, FLORIDA 33602  
PH: (813) 434-4770  
CONTACT: NISIT SAPPARKHAO

ARCHITECT: BDG ARCHITECTS  
550 SOUTH CALDWELL STREET  
SUITE 1800  
CHARLOTTE, NORTH CAROLINA 28202  
PH: (704) 981-8951  
CONTACT: JONATHYN REED

**UTILITY PROVIDERS**

ELECTRICAL  
WAKE ELECTRIC MEMBERSHIP  
COOPERATION (WEMC)  
- JIM HAYES, 919-863-6466  
CONTACT: JIM.HAYES@WEMC.COM

GAS:  
DOMINION ENERGY  
- MATT KOEHL, 919-819-0485  
MATTHEWS.KOEHL@DOMINIONENERGY.COM

TELEPHONE/INTERNET  
SPECTRUM / CHARTER  
-TRISTAN DURLING, 919-604-4793,  
TRISTAN.DURLING@CHARTER.COM

- TROY SMITH, 512-485-5080,  
TROY.SMITH@CHARTER.COM  
(RIGHT-OF-ENTRY PERSON)

SOLID WASTE:  
GFL ENVIRONMENTAL INC. - WASTE  
MANAGEMENT & ENVIRONMENTAL  
SERVICES  
- 919-662-7100

PARCEL ID: 1758454702  
WAKE COUNTY, NORTH CAROLINA



INFINITY ENGINEERING  
GROUP, PLLC

1208 East Kennedy Boulevard  
Suite 230  
Tampa, FL 33602  
[p]: 813.434.4770  
[f]: 813.445.4211  
www.ieggroup.net

NC FIRM Certificate No. P-1836

IEG JOB NO. 15-309.00

SITE PERMITTING APPROVAL

Water and Sewer Permits (if applicable)

The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #**       N/A      

The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #**       N/A      

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval \_\_\_\_\_  
Raleigh Water Review Officer \_\_\_\_\_

**EROSION CONTROL, STORMWATER  
AND FLOODPLAIN MANAGEMENT**

**APPROVED**

EROSION CONTROL  S- \_\_\_\_\_

STORMWATER MGMT.  S- \_\_\_\_\_

FLOOD STUDY  S- \_\_\_\_\_

DATE \_\_\_\_\_

ENVIRONMENTAL CONSULTANT SIGNATURE





## GENERAL NOTE

- ALL CONSTRUCTION SHALL BE EXECUTED AS SHOWN ON THESE PLANS. ANY REVISIONS AND/OR DEVIATIONS MUST BE APPROVED BY THE ENGINEER OF RECORD AND MAY RESULT IN ADDITIONAL PERMITTING EFFORTS THROUGH THE RELATED PERMITTING AGENCY. THE CONTRACTOR SHALL ACKNOWLEDGE THAT REVISIONS AND/OR DEVIATIONS MAY RESULT IN ADDITIONAL PERMITTING REQUIREMENTS AND POSSIBLY AFFECT SCHEDULING OF WORK.
- UNLESS OTHERWISE NOTED ON PLANS, OR WITHIN THE PROJECT SPECIFICATIONS, ALL MATERIALS AND CONSTRUCTION ARE TO BE IN ACCORDANCE WITH DESIGN AND CONSTRUCTION STANDARDS OF THE PERMITTING AGENCY HAVING JURISDICTION. THE LOCALLY ADOPTED BUILDING CODE; AND ALL APPLICABLE LOCAL AND STATE CODES AND ORDINANCES.
- PERMITS MAY BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR IS TO ACKNOWLEDGE AND SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR WORK IN THE PUBLIC RIGHT-OF-WAY.
- THIS PARCEL OF LAND MAY BE SUBJECT TO ANY AND ALL RECORDED (AND POSSIBLY UNRECORDED) EASEMENTS, RESTRICTIONS, AND COVENANTS.
- PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR VERIFICATION OF UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. CALL AREA ONE CALL SYSTEM 48 HOURS PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IN A TIMELY MANNER.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS AND BENCHMARKS FROM DISTURBANCE. SURVEY MONUMENTS DISTURBED BY CONSTRUCTION ARE TO BE REPLACED AND ADJUSTED VIA A LAND SURVEYOR REGISTERED IN THE STATE FOR WHICH THE PROJECT IS LOCATED.
- THE CONTRACTOR SHALL COORDINATE WORK EFFORTS WITH THE OWNER TO MINIMIZE TRAFFIC INTERFERENCE AND OPERATIONS OF THE FACILITIES.
- NO BLASTING OR BURNING IS ALLOWED ON THE PROJECT, UNLESS OTHERWISE DIRECTED OR NOTED BY THE ENGINEER.
- IT IS NOT EXPECTED THAT HAZARDOUS MATERIALS WILL BE ENCOUNTERED. HOWEVER IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB; IMMEDIATELY NOTIFY ENGINEER AND OWNER. HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER UNDER A SEPARATE CONTRACT.

## REGULATORY STANDARDS AND REQUIREMENTS

- COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- COMPLY WITH ANSI A10.6, "SAFETY REQUIREMENTS FOR CONSTRUCTION AND DEMOLITION."
- COMPLY WITH NFA 241, "SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS."

## DEMOLITION AND CLEARING

- DEMOLITION AND CLEARING OPERATIONS SHALL CONFORM TO APPLICABLE REGULATIONS RELATING TO ENVIRONMENTAL REQUIREMENTS DISPOSAL OF DEBRIS, BURNING OF DEBRIS ON SITE, AND USE OF HERBICIDES.
- DEMOLITION WASTE SHALL BE DISPOSED OF IN A LEGAL MANNER. REMOVED DEMOLITION WASTE MATERIALS FROM PROJECT SITE AND DISPOSE OF WASTE IN AN EPA-APPROVED LANDFILL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. DO NOT BURY OR BURN DEMOLITION WASTE ON-SITE.
- HISTORIC ITEMS, RELICS, ANTIQUES, AND SIMILAR OBJECTS, INCLUDING, BUT NOT LIMITED TO CORNERSTONES AND THEIR CONTENTS, COMMEMORATIVE PLAQUES AND TABLETS, AND OTHER ITEMS OF INTEREST OF VALUE TO OWNER THAT MAY BE UNCOVERED DURING DEMOLITION REMAIN THE PROPERTY OF THE OWNER.
- ARRANGE DEMOLITION SCHEDULE SO AS NOT TO INTERFERE WITH OWNERS ON-SITE OPERATIONS OR OPERATIONS OF ADJACENT OCCUPIED BUILDINGS.
- CONDUCT BUILDING DEMOLITION AND DEBRIS REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, WALKWAYS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION.
- AUTHORITY FOR PERFORMING SITE CLEARING INDICATED ON PROPERTY ADJOINING OWNER'S PROPERTY MUST BE OBTAINED BY OWNER PRIOR TO COMMENCEMENT OF CLEARING. DO NOT PROCEED WITH WORK ON ADJOINING PROPERTY UNTIL DIRECTED BY ENGINEER.
- PRIOR TO COMMENCEMENT OF DEMOLITION OPERATIONS:
  - VERIFY THAT HAZARDOUS MATERIALS, IF PRESENT, HAVE BEEN REMEDIATED.
  - REVIEW PROJECT RECORD DRAWINGS OF EXISTING BUILDING AND EXISTING SITE IMPROVEMENTS.
  - INVENTORY AND RECORD THE CONDITION OF ITEMS TO BE REMOVED AND SALVAGED. TAKE DIGITAL PHOTOGRAPHS OR VIDEO OF PROJECT SITE AND SURROUNDINGS PROPERTIES, INCLUDING EXISTING ITEMS TO REMAIN DURING CONSTRUCTION OPERATIONS. RECORD CONDITIONS THAT MIGHT BE MISONSTRUED AS DAMAGE CAUSED BY SALVAGE OPERATIONS.
  - CLEAN, PACK, IDENTIFY, AND TRANSPORT SALVAGED ITEMS TO STORAGE AREA DESIGNATED BY OWNER.
  - REMOVE REFRIGERANT FROM THE MECHANICAL EQUIPMENT ACCORDING TO 40 CFR 82 AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
  - COORDINATE ANY ADDITIONAL REQUIREMENTS FOR DEMOLISHING OR RELOCATING SITE MECHANICAL AND ELECTRICAL ITEMS WITH OWNER AND OTHER AUTHORITIES HAVING JURISDICTION.
  - ASSURE THAT ANY REQUIRED INITIAL EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED AND IN WORKING ORDER.
  - LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP-OFF EXISTING UTILITIES SERVING BUILDINGS AND STRUCTURES TO BE DEMOLISHED. CUT AND REMOVE PIPE OR CONDUIT A MINIMUM OF 24 INCHES BELOW GRADE. CAP, VALVE, PLUG AND SEAL REMAINING PORTION OF PIPE OR CONDUIT.
  - DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTION AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING.
- PRIOR TO COMMENCEMENT OF SITE CLEARING OPERATIONS, VERIFY THE FOLLOWING:
  - TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND IN WORKING ORDER.
  - UTILITY LOCATOR SERVICE HAS DETERMINED AND FLAGGED THE LOCATION OF UNDERGROUND UTILITIES.
  - EXISTING SITE IMPROVEMENTS AND UTILITIES TO REMAIN HAVE BEEN PROTECTED.
  - BENCHMARKS AND SURVEY CONTROL POINTS HAVE BEEN PROTECTED FROM DISTURBANCE.
  - TREES AND VEGETATION TO REMAIN (OR TO BE RELOCATED) HAVE BEEN LOCATED AND CLEARLY FLAGGED IN ACCORDANCE WITH TREE PROTECTION AND TRIMMING REQUIREMENTS.
- COORDINATE UTILITY DEMOLITION AND ABANDONMENT WITH UTILITY COMPANY OR AUTHORITY HAVING JURISDICTION.
- IN THE EVENT BUILDINGS IMMEDIATELY ADJACENT TO THE DEMOLITION AREA WILL BE OCCUPIED, CONDUCT SITE DEMOLITION SO OPERATIONS OF OCCUPIED

BUILDINGS WILL NOT BE DISRUPTED. MAINTAIN ACCESS TO AND FROM EXISTING WALKWAYS, EXITS, AND OTHER FACILITIES USED BY OCCUPANTS OF ADJACENT BUILDINGS.

- PROTECT EXISTING FACILITIES AND ADJACENT WALKWAYS, LOADING DOCKS, BUILDING ENTRIES, AND OTHER BUILDING FACILITIES DURING DEMOLITION OPERATIONS. MAINTAIN EXITS FROM EXISTING BUILDINGS.
- ERECT TEMPORARY PROTECTION, SUCH AS WALKS, FENCES, RAILINGS, CANOPIES, AND COVERED PASSAGEWAYS, AS NECESSARY, AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. REMOVE TEMPORARY BARRIERS AND PROTECTIONS WHERE HAZARDOUS NO LONGER EXIST. WHERE OPEN EXCAVATIONS OR OTHER HAZARDOUS CONDITIONS REMAIN, LEAVE TEMPORARY BARRIERS AND PROTECTIONS IN PLACE.
- PROTECT EXISTING UTILITIES FROM DAMAGE DURING DEMOLITION OPERATIONS. MAINTAIN OPERATION OF UTILITY SERVICES TO REMAIN. PROVIDE AT LEAST 72 HOURS' NOTICE TO OCCUPANTS OF AFFECTED BUILDINGS IF SHUTDOWN OF SERVICE IS REQUIRED.
- IF REMOVAL, RELOCATION, OR ABANDONMENT OF UTILITY SERVICES WILL AFFECT ADJACENT OCCUPIED BUILDINGS, MAINTAIN CONTINUITY OF SERVICE TO ADJACENT BUILDINGS BY PROVIDING TEMPORARY UTILITIES THAT BYPASS BUILDINGS AND STRUCTURES TO BE DEMOLISHED. TEMPORARY BYPASS SERVICES SHALL BE PROVIDED IN ACCORDANCE WITH UTILITY COMPANY OR AUTHORITIES HAVING JURISDICTION.
- TEMPORARY SHORING: PROVIDE AND MAINTAIN INTERIOR AND EXTERIOR SHORING BRACING, OR STRUCTURAL SUPPORT TO PRESERVE EXISTING AND PREVENT UNEXPECTED MOVEMENT OR COLLAPSE OF EXISTING IMPROVEMENTS BEING DEMOLISHED. ALL SHORING OPERATIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL AND INSTALLED PER OSHA REQUIREMENTS.
- DEMOLITION OF STRUCTURAL FRAMING MEMBERS SHALL PROCEED SYSTEMATICALLY FROM HIGHER TO LOWER LEVEL. COMPLETE BUILDING DEMOLITION OPERATIONS ABOVE EACH FLOOR OR TIER BEFORE DISTURBING SUPPORTING MEMBERS ON THE NEXT LOWER LEVEL. REMOVE DEBRIS FROM ELEVATED PORTIONS OF THE BUILDING BY CHUTE, HOIST, OR OTHER DEVICE THAT WILL CONVEY DEBRIS TO GRADE LEVEL IN A CONTROLLED DESCENT.

- CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT, AND DEBRIS CAUSED BY BUILDING DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE BUILDING DEMOLITION OPERATIONS BEGAN.

- CLEARING AND GRUBBING:
  - REMOVE OBSTRUCTIONS, TREES, SHRUBS, GRASS, AND OTHER VEGETATION TO PERMIT INSTALLATION OF NEW CONSTRUCTION. DO NOT REMOVE TREES, SHRUBS, AND OTHER VEGETATION INDICATED TO REMAIN OR TO BE RELOCATED.
  - CUT MINOR ROOTS AND BRANCHES OF TREES INDICATED TO REMAIN IN A CLEAN AND CAREFUL MANNER AND ONLY WHERE SUCH ROOTS AND BRANCHES OBSTRUCT INSTALLATION OF NEW CONSTRUCTION.
  - CLEAR UNDERGROUND UTILITIES WITHIN UNDERLYING SUBSOIL.
  - GRIND STUMPS AND REMOVE ROOTS, OBSTRUCTIONS, AND DEBRIS EXTENDING TO A DEPTH BELOW EXPOSED SUBGRADE AS FOLLOWS:
    - FOOTINGS, SLABS ON GRADE AND BOTTOM SLABS OF STRUCTURES: 36 INCHES.
    - ROADS AND PAVEMENT AREAS: 18 INCHES.
    - AREAS TO BE GRASSED OR LANDSCAPED: 8 INCHES.
  - USE ONLY HAND METHODS FOR GRUBBING WITHIN TREE PROTECTION ZONES.
  - CHIP REMOVED TREE BRANCHES AND DISPOSE OF OFF-SITE.
  - UNLESS FURTHER EXCAVATION OF EARTHWORK IS INDICATED, FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL. PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES, AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.

- TOPSOIL STRIPPING:
  - REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
  - STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMIXING WITH UNDERLYING SUBSOIL. REMOVE WASTE MATERIALS, REMOVE SUBSOIL, AND NON-SOIL MATERIALS FROM TOPSOIL, INCLUDING TRASH, DEBRIS, WEEDS, ROOTS, AND OTHER WASTE MATERIALS.
  - STOCKPILE TOPSOIL MATERIALS AWAY FROM SHAPE OF EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL. GRADE AND EDGE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDLOUDDUST. LIMIT HEIGHT OF TOPSOIL STOCKPILES TO 22 INCHES. DO NOT STOCKPILE TOPSOIL WITHIN TREE PROTECTION ZONES. STOCKPILE SURPLUS TOPSOIL TO ALLOW FOR RESPREADING DEEPER TOPSOIL.
- SITE IMPROVEMENTS:
  - REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION. REMOVE SLABS, PAVINGS, CURBS, GUTTERS, AND AGGREGATE BASE AS INDICATED.
  - UNLESS EXISTING FULL-DEPTH JOINTS COINCIDE WITH LINE OF DEMOLITION, NEATLY SAW-CUT LENGTH OF EXISTING PAVEMENT TO REMAIN BEFORE REMOVING EXISTING PAVEMENT. SAWCUT ALL FACES VERTICALLY.
  - PAINT CUT ENDS OF STEEL REINFORCEMENT IN CONCRETE TO REMAIN TO PREVENT CORROSION.

- DISPOSAL:
  - REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS, INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
  - REMOVE AND TRANSPORT DEBRIS AND RUBBISH IN A MANNER THAT WILL PREVENT SPILLAGE ON STREETS OR ADJACENT AREAS. CLEAN UP SPILLAGE FROM STREETS AND ADJACENT AREAS.
  - COMPLY WITH FEDERAL, STATE AND LOCAL HAULING AND DISPOSAL REGULATIONS.
  - SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NON-RECYCLABLE STORES OR STOCKPILE WITHOUT INTERMIXING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.

## TREE PROTECTION AND TRIMMING

- INSTALL TEMPORARY FENCING AROUND TREE PROTECTION ZONES TO PROTECT TREES AND VEGETATION DESIGNATED TO REMAIN FROM CONSTRUCTION DAMAGE. MAINTAIN TEMPORARY FENCING AROUND TREE PROTECTION ZONES. AND REMOVE WHEN CONSTRUCTION IS COMPLETE.
- KEEP TREE PROTECTION ZONES FREE OF WEEDS AND TRASH.
- DO NOT STORE CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL INSIDE TREE PROTECTION ZONE, OR PERMIT VEHICLES OR FOOT TRAFFIC WITHIN TREE PROTECTION ZONE, OR ALLOW FIBERS WITHIN TREE PROTECTION ZONE.
- PROTECT TREE ROOT SYSTEMS FROM THE FOLLOWING:
  - DAMAGE CAUSED BY RUNOFF OR SPILLAGE OF NOXIOUS MATERIALS WHILE MIXING, PLACING, OR STORING CONSTRUCTION MATERIALS;
  - DAMAGE CAUSED BY PONDING, ERODING, OR EXCESSIVE WETTING FROM DEWATERING OPERATIONS.
- UNLESS OTHERWISE INDICATED, DO NOT EXCAVATE WITHIN TREE PROTECTION ZONES. WHERE EXCAVATION FOR NEW CONSTRUCTION IS UNAVOIDABLE, HAND CLEAR AND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS.
- WHERE UTILITY TRENCHES ARE UNAVOIDABLE WITHIN TREE PROTECTION ZONES, TUNNEL UNDER OR AROUND ROOTS BY DRILLING, AND/OR SHORING, PIPE JACKING, OR DIGGING BY HAND. DO NOT CUT MAIN LATERAL ROOTS OR TAPROOTS.
- COORDINATE UTILITY DEMOLITION AND ABANDONMENT WITH UTILITY COMPANY OR AUTHORITY HAVING JURISDICTION.
- IN THE EVENT BUILDINGS IMMEDIATELY ADJACENT TO THE DEMOLITION AREA WILL BE OCCUPIED, CONDUCT SITE DEMOLITION SO OPERATIONS OF OCCUPIED

ARBORIST'S WRITTEN INSTRUCTIONS.

- TREE PRUNING: PRUNE TREES ACCORDING TO ANSI A300 (PART 1), "TREE SURVIVAL AND OTHER WOODY PLANT MAINTENANCE - STANDARD PRACTICES (PRUNING)."

## EROSION AND SEDIMENTATION CONTROL

- PRIOR TO COMMENCEMENT OF ANY CLEARING AND EXCAVATION WITHIN A WORK AREA, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND IN WORKING ORDER.
- PERFORM WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE AND FEDERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION AND SEDIMENT CONTROL FEATURES TO PREVENT AND CONTROL SEDIMENT LAUNCH RUNOFF FROM LEAVING THE CONSTRUCTION AREAS AND ENTERING EXISTING STORMWATER FACILITIES AND SURFACE WATERS. ADDITIONAL MEASURES BEYOND THOSE SHOWN WITHIN THESE PLANS MAY BE NECESSARY DURING CONSTRUCTION, INCLUDING TEMPORARY VEGETATIVE MEASURES AND INSTALLATION OF OTHER SILT TRAPPING MEASURES.
- THE CONTRACTOR IS REQUIRED TO ADJUST THE EROSION AND SEDIMENT CONTROLS AS NECESSARY AND AS SHOWN ON THE DRAWINGS; AND ADD ADDITIONAL CONTROL MEASURES AS REQUIRED TO INSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND SEDIMENT CONTROL REQUIREMENTS.
- ALL BEST MANAGEMENT EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY OPERATIONS, OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST EVERY OTHER WEEK AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR GREATER.
- ALL BEST MANAGEMENT CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.

## EARTHWORK

- IN THE EVENT OF ANY UNFORESEEN CONDITIONS THAT ARE ENCOUNTERED AND NOT COVERED BY THESE NOTES DURING GRADING OPERATIONS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND BACKFILLS WITHIN THE LIMITS OF THIS PROJECT AND RELATED OFF-SITE WORK SO AS TO ESTABLISH THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SPECIFIED WITHIN THE PLANS.
- ADEQUATE SHORING IS TO BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CARVING OF THE EXCAVATION. ALL SHORING AND ASSOCIATED TEMPORARY STRUCTURES SHALL BE DESIGNED BY A LICENSED PROFESSIONAL AND INSTALLED PURSUANT TO OSHA REQUIREMENTS.

SOIL MATERIALS:

- UNSATISFACTORY SOILS CONSIST OF SOIL CLASSIFICATION GROUPS ML, OL, CH, MH, OH, AND PT, OR A COMBINATION OF THESE GROUPS. UNSATISFACTORY SOILS ALSO INCLUDE SATISFACTORY SOILS NOT MAINTAINED WITHIN 3 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION.
- SATISFACTORY SOILS: ASTM D 2487 SOIL CLASSIFICATION GROUPS AS IDENTIFIED ON THE DRAWINGS, OR A COMBINATION OF THESE GROUPS, FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATERIAL.

SUBGRADE INSPECTION:

- PROOF-ROLL SUBGRADE BELOW THE BUILDING SLABS AND PAVEMENTS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT SPOTS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES.
  - COMPLETELY PROOF-ROLL SUBGRADE IN TWO DIRECTIONS, REPEATING PROOF ROLLING IN DIRECTION PERPENDICULAR TO FIRST DIRECTION. LIMIT VEHICLE SPEED TO 3 MPH.
  - PROOF-ROLL WITH A LOADED 10-WHEEL, TANDEM-AXLE DUMP TRUCK WEIGHING NOT LESS THAN 15 TONS.
  - EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS, AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY ENGINEER AND REPLACE WITH COMPACTED BACKFILL OR FILL AS DIRECTED.
- RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES AS DIRECTED BY ENGINEER, WITHOUT ADDITIONAL COMPENSATION.

BACKFILL:

- THE CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN EXCAVATIONS PROMPTLY, BUT NOT BEFORE COMPLETING THE FOLLOWING:
  - CONSTRUCTION BELOW FINISH GRADE INCLUDING, WHERE APPLICABLE, SUBDRAINAGE, DAMP PROOFING, WATERPROOFING, AND PERIMETER INSULATION.
  - SURVEYING LOCATIONS OF UNDERGROUND UTILITIES FOR RECORD DRAWINGS.
  - TESTING AND INSPECTING UNDERGROUND UTILITIES.
  - REMOVING CONCRETE FORMWORK.
  - REMOVING TRASH AND DEBRIS.
  - REMOVING TEMPORARY SHORING AND BRACING, AND SHEETING.
  - INSTALLING PERMANENT OR TEMPORARY HORIZONTAL BRACING ON HORIZONTALLY SUPPORTED WALLS.
- COMPACTION OF SOIL BACKFILLS AND FILLS:
  - CONTRACTOR SHALL PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8-INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4-INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
  - PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.
  - COMPACT SOIL MATERIALS TO NOT LESS THAN THE PLAN SPECIFIED PERCENTAGE OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 OR ASTM D 1557. (SEE CIVIL DETAILS FOR SUMMARY OF TRENCH BACKFILL AND BEDDING MATERIALS AND PLACEMENT SPECIFICATIONS).

GRADING:

- GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO DETAILED/INDICATED CROSS-SECTIONS, LINES, AND ELEVATIONS INDICATED IN PLANS. PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES. CUT OUT SOFT SPOTS, FILL LOW SPOTS, AND TRIM HIGH SPOTS TO COMPLY WITH REQUIRED SURFACE TOLERANCES.
- SITE GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING. FINISH SUBGRADES TO REQUIRED ELEVATIONS WITHIN THE FOLLOWING TOLERANCES:
  - LAWN OR UNPAVED AREAS: PLUS OR MINUS ONE (1) INCH.
  - WALKS: PLUS OR MINUS ONE (1) INCH.
  - PAVEMENTS: PLUS OR MINUS ONE-HALF (1/2) INCH.
  - GRADING INSIDE BUILDING LINES: FINISH SUBGRADE TO A TOLERANCE OF

ONE-HALF (1/2) INCH WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE.

- SUBBASE AND BASE COURSES:
  - PLACE SUBBASE AND BASE COURSE ON SUBGRADES FREE OF MUD, FROST, SNOW, OR ICE.
  - PLACE SUBBASE AND BASE COURSE 6 INCHES OR LESS IN COMPACTED THICKNESS IN A SINGLE LAYER.
  - PLACE SUBBASE AND BASE COURSE EXCEEDING 6 INCHES IN COMPACTED THICKNESS IN LAYERS OF EQUAL THICKNESS, WITH NO COMPACTED LAYER MORE THAN 6 INCHES THICK OR LESS THAN 3 INCHES.
- COMPACT SUBBASE AND BASE COURSE AT OPTIMUM MOISTURE CONTENT TO REQUIRED GRADES, LINES, CROSS SECTIONS, AND THICKNESS ACCORDING TO ASTM D 698 OR ASTM D 1557, AS INDICATED ON THE DRAWING DETAILS.

FIELD QUALITY CONTROL:

- THE TESTING AGENCY WILL INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER. CONTRACTOR SHALL PROCEED WITH SUBSEQUENT EARTHWORK ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS.
- FOOTING SUBGRADE: AT FOOTING SUBGRADES, AT LEAST ONE TEST OF EACH SOIL STRATUM WILL BE PERFORMED TO VERIFY DESIGN BEARING CAPACITIES. SUBSEQUENT VERIFICATION AND APPROVAL OF OTHER FOOTING SUBGRADES MAY BE BASED ON A VISUAL COMPARISON OF SUBGRADE WITH TESTED SUBGRADE WHEN APPROVED BY ENGINEER.
- THE TESTING AGENCY WILL TEST COMPACTION OF SOILS IN PLACE ACCORDING TO ASTM D 1556, ASTM D 2167, ASTM D 2922, AND ASTM D 2937. AS APPLICABLE, TESTS WILL BE PERFORMED AT THE FOLLOWING LOCATIONS AND FREQUENCIES:
  - PAVED AND BUILDING SLAB AREAS: AT SUBGRADE AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST FOR EVERY 10,000 SQ. FT. OR LESS OF PAVED AREA OR BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS.
  - FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 100 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.
  - TRENCH BACKFILL: AT EACH COMPACTED INITIAL AND FINAL BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 150 FEET OR LESS OF TRENCH LENGTH, BUT NO FEWER THAN 2 TESTS.
- IF THE TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
- ALL FIELD QUALITY CONTROL TESTS THAT FAIL TO MEET THE SPECIFIED COMPACTION DENSITY SHALL BE REPORTED TO THE ENGINEER.

## GENERAL UTILITY NOTES

- PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR VERIFICATION OF UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. CALL THE AREA ONE CALL SYSTEM 48 HOURS PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
- THE CONTRACTOR SHALL COORDINATE WORK EFFORTS WITH THE OWNER TO MINIMIZE TRAFFIC INTERFERENCE AND OPERATIONS OF THE FACILITIES.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEYING MONUMENTS AND BENCHMARKS FROM DISTURBANCE. SURVEY MONUMENTS DISTURBED BY CONSTRUCTION ARE TO BE REPLACED AND ADJUSTED VIA A LAND SURVEYOR REGISTERED IN THE STATE FOR WHICH THE PROJECT IS LOCATED.
- EXISTING UTILITIES SHOWN HEREIN ARE BASED ON AVAILABLE RECORDS AND FIELD INVESTIGATIONS. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO EXCAVATION WITHIN WORK AREAS. THE ENGINEER SHALL BE NOTIFIED UPON DISCOVERY OF ANY DISCREPANCIES THAT WILL AFFECT INSTALLATION OF WORK OR DISCOVERY OF UNCHARTED UTILITIES WHICH MAY REQUIRE RELOCATION. NOTIFICATION SHALL BE DONE IN A TIMELY MANNER.
- WHERE APPLICABLE, THE CONTRACTOR SHALL MAINTAIN ALL FENCING, SIGNS, BARRIERS, FLAGMENS, SIGNALS, ETC., FOR ANY OPEN TRENCHES, HOLES OR PITS. ALL TRENCHES, HOLES OR PITS SHALL BE CLOSED OR PROTECTED BY BARRICADES AT THE END OF THE DAY.
- PERMITS MAY BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR IS TO ACKNOWLEDGE AND SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR WORK WITHIN PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS DURING CONSTRUCTION WHICH SHOW THE CONSTRUCTED CONDITIONS OF ALL WORK INSTALLED. SEE "AS-BUILT" REQUIREMENTS FOR ADDITIONAL INFORMATION.
- ALL VALVE BOXES, METER BOXES, VAULTS, CLEANOUTS, HOLE COVERS, FIRE HYDRANTS AND OTHER APPURTENANCES THAT ARE TO REMAIN IN SERVICE WITHIN THE PROJECT AREA SHALL BE ADJUSTED TO CONFORM TO FINISHED GRADE.
- ALL UNDERGROUND UTILITIES MUST BE IN PLACE, TESTED AND INSPECTED AS REQUIRED PRIOR TO BASE AND SURFACE CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES TO DISCONNECT OR REMOVE THEIR FACILITIES PRIOR TO REMOVING OR DEMOLISHING ANY EXISTING STRUCTURES FROM THE SITE.
- ALL UTILITIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING SHOULD BE CONTACTED BY THE CONTRACTOR:
  - GAS
  - TELEPHONE
  - CABLE
  - POWER
  - CITY/COUNTY WATER AND SEWER
  - CITY/COUNTY/STATE TRAFFIC SIGNAL UTILITY (FIBER, HARDWIRE TRAFFIC SIGNAL INTERCONNECT)

- THE CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN EXCAVATIONS PROMPTLY, BUT NOT BEFORE COMPLETING THE FOLLOWING:
  - CONSTRUCTION BELOW FINISH GRADE INCLUDING, WHERE APPLICABLE, SUBDRAINAGE, DAMP PROOFING, WATERPROOFING, AND PERIMETER INSULATION.
  - SURVEYING LOCATIONS OF UNDERGROUND UTILITIES FOR RECORD DRAWINGS.
  - TESTING AND INSPECTING UNDERGROUND UTILITIES.
  - REMOVING CONCRETE FORMWORK.
  - REMOVING TRASH AND DEBRIS.
  - REMOVING TEMPORARY SHORING AND BRACING, AND SHEETING.
  - INSTALLING PERMANENT OR TEMPORARY HORIZONTAL BRACING ON HORIZONTALLY SUPPORTED WALLS.
- COMPACTION OF SOIL BACKFILLS AND FILLS:
  - CONTRACTOR SHALL PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8-INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4-INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
  - PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.
  - COMPACT SOIL MATERIALS TO NOT LESS THAN THE PLAN SPECIFIED PERCENTAGE OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 OR ASTM D 1557. (SEE CIVIL DETAILS FOR SUMMARY OF TRENCH BACKFILL AND BEDDING MATERIALS AND PLACEMENT SPECIFICATIONS).

- COLOR CODE FOR MARKING UNDERGROUND UTILITY LINES  
WHITE - PROPOSED EXCAVATION. PINK - TEMPORARY SURVEY MARKINGS.  
RED - ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES.  
YELLOW - GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS.  
ORANGE - COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT.  
BLUE - POTABLE WATER, PURPLE - RECLAIMED WATER, IRRIGATION AND SLEURRY LINES.  
GREEN - SEWERS AND DRAIN LINES.

## WATER SYSTEM NOTES

- A VERTICAL CLEARANCE OF 18 INCHES SHALL BE MAINTAINED BETWEEN SANITARY SEWERS AND WATER MAINS. IF CLEARANCE CANNOT BE ACHIEVED BY ADJUSTING WATER MAINS THE SANITARY SEWER SHALL BE CONSTRUCTED PER SANITARY NOTE No. 1 BELOW.
- A HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER.
- ALL WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
- ALL WATER SYSTEM WORK SHALL CONFORM WITH LOCAL REGULATORY STANDARDS AND SPECIFICATIONS.
- CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER TO BE RESOLVED BY ADJUSTING THE WATER LINES AS NECESSARY.
- ALL BURIED DUCTILE IRON PIPE SHALL BE CLASS 53 IN ACCORDANCE WITH ANSI A 21.50 (AWWA C150) AND ANSI A 21.51 (AWWA C151) AND PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.6, A 21.8 OR A 21.51 AND SHALL BE MORTAR LINED, STANDARD THICKNESS, AND BITUMINOUS SEALED IN ACCORDANCE WITH ANSI A (AWWA C 104-71).
- ALL BURIED FITTINGS LARGER THAN 2" SHALL BE DUCTILE IRON CLASS 53 IN ACCORDANCE WITH AWWA C-110 WITH A PRESSURE RATING OF 250 PSI. JOINTS SHALL BE MECHANICAL JOINTS IN ACCORDANCE WITH AWWA C-111. FITTINGS SHALL BE CEMENT MORTAR LINED AND COATED IN ACCORDANCE WITH AWWA C-104.
- CONTRACTOR TO INSTALL TEMPORARY BLOW-OFFS AT THE END OF WATER SERVICE LATERALS TO ASSURE ADEQUATE FLUSHING AND DISINFECTION.
- THRUST BLOCKING AND/OR RESTRAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS AND HYDRANTS IN ACCORDANCE WITH AWWA STANDARDS.
- ALL PVC WATER MAINS 4" THROUGH 12" SHALL BE IN ACCORDANCE WITH AWWA C-900. PIPE SHALL BE CLASS 150 AND MEET THE REQUIREMENTS OF SDR 18 IN ACCORDANCE WITH ASTM D-2241, AND COLOR CODED BLUE.  
ALL FITTINGS 3" AND SMALLER SHALL BE CLASS 160 PVC WITH SOLVENT WELDED SLEEVE TYPE JOINTS.
- ALL WATER MAINS AND WATER SERVICES TO BE INSTALLED UNDER ROAD UNDERDRAIN SHALL MAINTAIN 18" SEPARATION.
- MATERIALS AND CONSTRUCTION METHODS FOR WATER DISTRIBUTION SYSTEM SHALL BE IN ACCORDANCE WITH THE LOCAL REGULATORY AGENCY CODES, PLANS, AND SPECIFICATIONS FOR CONSTRUCTION, LATEST REVISION THEREOF AND SUPPLEMENTAL SPECIFICATIONS THERETO. APPROVAL AND CONSTRUCTION OF ALL POTABLE WATER SERVICE MAIN EXTENSIONS AND CONNECTIONS MUST BE COORDINATED THROUGH THE LOCAL REGULATORY AGENCY DEPARTMENT OF PUBLIC UTILITIES.
- ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTS TO BE IN ACCORDANCE WITH WATER DEPARTMENT AND AWWA SPECIFICATIONS. CONTRACTOR TO NOTIFY OWNER'S ENGINEER AND WATER DEPARTMENT INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS.
- CONTRACTOR TO PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING REQUIRED TO OBTAIN CLEARANCE OF DOMESTIC WATER SYSTEM THROUGH LOCAL REGULATORY AGENCIES. COPIES OF ALL BACTERIOLOGICAL TESTS TO BE SUBMITTED TO OWNER'S ENGINEER.

## SANITARY SEWER NOTES

- A HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER.
- ALL SANITARY SEWER MAINS & SERVICE LATERALS SHALL BE CONSTRUCTED OF POLYVINYL CHLORIDE PIPE, SDR 26 AND COLOR CODED GREEN.
- ALL SANITARY SEWER WORK SHALL CONFORM WITH LOCAL REGULATORY STANDARDS AND SPECIFICATIONS.
- PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW WORK TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING CONNECTION POINT AND NOTIFY OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- PVC PIPE AND FITTINGS SHALL CONFORM WITH A.S.T.M. SPECIFICATIONS DESIGNATION D-3034-77C, MA SDR 26. INSTALLATION OF SDR PIPE SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. SPECIFICATION DESIGNATION D2321. ALL SANITARY SEWER PIPELINES SHALL BE SOLID GREEN IN COLOR.
- ALL PVC FORCE MAINS WITHIN PUBLIC RW SHALL BE CLASS 200, SDR 18, WITH MECHANICAL JOINTS, AND HAVE A GREEN MAGNETIC TAPE A MINIMUM OF 3" WIDE, PLACED 24" BELOW THE PROPOSED GRADE. THE PRINT ON THE MAGNETIC TAPE SHOULD READ "FORCE MAIN".
- ALL SANITARY SEWER GRAVITY MAINS OR SANITARY SEWER FORCE MAINS THAT REQUIRE D.I.P. ARE TO BE POLYLINED OR EPOXY LINED.
- ALL SANITARY SEWER COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADING.
- SANITARY SEWERS SHALL HAVE A MINIMUM COVER OF THREE (3) FEET AND SHALL BE INSTALLED ACCOMPANIED BY A METAL TAPE SIMILAR TO "TERRAZET" COLORED GREEN AND LAID ONE FOOT ABOVE THE PIPE.
- ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.
- THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER AND SUBMITTED TO AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
- ALL FORCE MAINS SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES IS CONTRACTOR'S RESPONSIBILITY.

## GEOTECHNICAL NOTE

CONTRACTOR TO REVIEW AND FOLLOW CONSTRUCTION TECHNIQUES OUTLINED IN THE SITE GEOTECHNICAL REPORT.

## STORM DRAINAGE

- UNLESS OTHERWISE SHOWN ON PLANS, ALL PVC PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING:
  - PVC SEWER PIPE AND FITTINGS, NPS 15-INCH AND SMALLER ASTM D 3034, SDR 35, WITH BELL-AND-SPIGOT ENDS FOR GASKETED JOINTS USING ASTM F 477, ELASTOMERIC SEALS.
  - PVC SEWER PIPE AND FITTINGS, NPS 18-INCH AND LARGER: ASTM F 679, T-1 WALL THICKNESS, WITH BELL-AND-SPIGOT ENDS FOR GASKETED JOINTS USING ASTM F 477, ELASTOMERIC SEALS.
  - PIPE JOINTS SHALL BE WATER-TIGHT.
- UNLESS OTHERWISE SHOWN ON THE PLANS, ALL REINFORCED CONCRETE PIPE (RCP) AND FITTINGS SHALL CONFORM TO THE FOLLOWING:
  - ASTM C 76, WITH BELL-AND-SPIGOT OR GROOVE AND TONGUE ENDS AND GASKETED JOINTS WITH ASTM C 443 RUBBER GASKETS.
  - RCP PIPE SHALL BE CLASS III, WALL B.
  - WHEN LOCATED IN TRAFFIC AREAS WITH LESS THAN 2 FEET OF COVER, RCP PIPE SHALL BE CLASS IV, WALL B.
  - WHEN LOCATED UNDER AIRCRAFT RAMPS OR RAILROAD OPERATIONS, RCP PIPE SHALL BE CLASS V, WALL B WITH W-ORING JOINTS.
  - PIPE CLASS SHALL BE CLEARLY "STAMPED" ON EACH SEGMENT OF RCP PIPE DELIVERED TO THE PROJECT.
  - PIPE JOINTS SHALL BE WATER-TIGHT.
- CONTRACTOR SHALL HANDLE AND STORE PIPE, FITTINGS, GASKETS, AND RELATED APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- CONTRACTOR SHALL HANDLE MANHOLES, DROP INLETS, CURB INLETS, PIPE END COMPONENTS AND RELATED APPURTENANCES ACCORDING TO MANUFACTURER'S WRITTEN RIGGING INSTRUCTIONS.
- PVC PLASTIC PIPE AND FITTINGS SHALL NOT BE STORED IN DIRECT SUNLIGHT.
- ALL PIPE, FITTINGS, GASKETS, AND SEALS SHALL BE PROTECTED FROM DIRT AND DAMAGE.
- ALL STORM SEWER LINES SHALL BE TELEVIEWED AND THE VIDEO REPORTS SUBMITTED TO THE ENGINEER FOR REVIEW.
  - VIDEO REPORTS ARE TO BE SUBMITTED ON CD-ROM OR DVD COMPACT DISKS.
  - ALL LINES MUST BE FLUSHED AND CLEANED WITH POTABLE WATER PRIOR TO TELEVIEWING.
  - FOR SUBMERGED SYSTEMS, POND WATER LEVELS SHALL BE LOWERED (PUMPED DOWN) BELOW THE LOWEST PIPE ENTRANCE INVERT.
  - VIDEO REPORTS WILL BE USED TO VIEW THE CONDITION OF THE STORM SEWER PIPE PRIOR TO THE START OF THE WORK. WORKMANSHIP AND CLEANLINESS OF THE INSTALLATION WILL BE CHECKED.

- AS-BUILT SURVEY: THE CONTRACTOR SHALL VERIFY STORM SEWER IMPROVEMENTS ALIGNMENT BY PROVIDING AN "AS-BUILT" SURVEY OF CONSTRUCTED CONDITIONS FROM A LICENSED SURVEYOR REGISTERED IN THE STATE OF PROJECT LOCATION. THE "AS-BUILT" SURVEY SHALL INCLUDE VERTICAL AND HORIZONTAL INFORMATION PERTAINING TO THE INSTALLATION OF THE STORM SEWER SYSTEM PIPING AND STRUCTURES. DATUM ELEVATION AND BENCHMARK LOCATIONS SHALL BE INDICATED. INFORMATION TO BE INCLUDED IS AS FOLLOWS:
  - PIPE TYPE, SIZE, AND INVERT ELEVATIONS.
  - MANHOLE, DROP INLET, CURB INLET, YARD DRAIN, AND POND CONTROL STRUCTURE LOCATIONS WITH ELEVATIONS OF BOTTOM, RIM OR GRATE ELEVATION SHOWN.
  - POND CONTROL STRUCTURES. SHOW INFORMATION ON ALL FLOW CONTROL APPURTENANCES AND OUTLET PIPING.

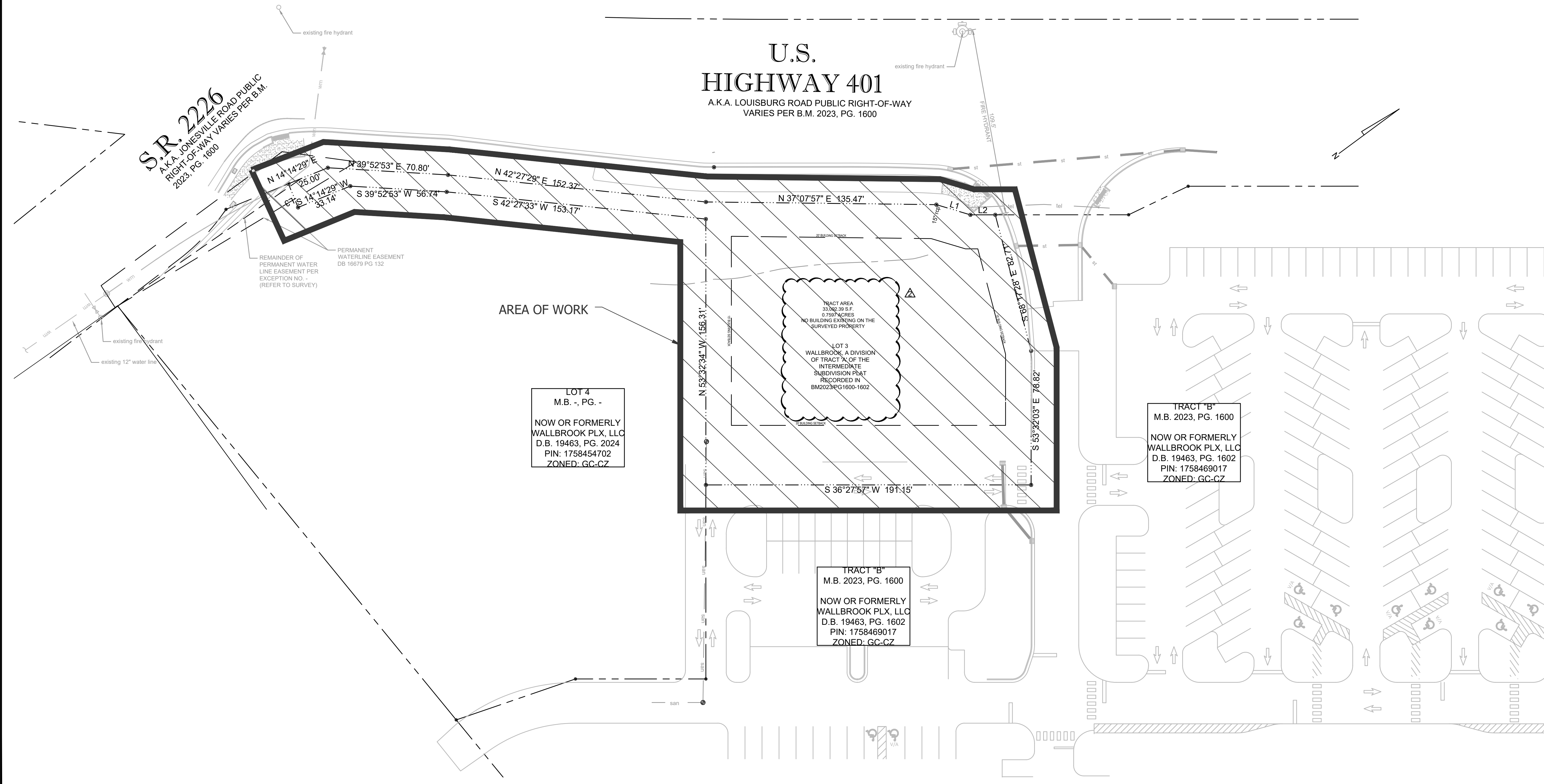
## ASPHALT PAVING

- THE CONTRACTOR IS TO PROVIDE BARRICADES, SIGNS, FLASHERS, AND FLAG PERSONNEL AS NECESSARY TO INSURE THE SAFETY OF WORKERS AND VISITORS. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION IS TO CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES": LATEST EDITION.
- ALL ASPHALT PAVING MATERIALS, WORKMANSHIP, AND INSTALLATION REQUIREMENTS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS OF THE STATE DEPARTMENT OF TRANSPORTATION (D.O.T.) FOR THE STATE IN WHICH THE WORK OCCURS WITH SOME EXCLUSIONS. THE DOT PAVEMENT PROCEDURES AND SAFETY REQUIREMENTS SHALL GENERALLY NOT APPLY.
  - BASE COURSE: FINISH AGGREGATE, FINE AGGREGATE AND MINERAL FILLERS IN ACCORDANCE WITH D.O.T. MATERIAL STANDARDS AND ASSOCIATED CONSTRUCTION SPECIFICATIONS.
  - ASPHALT BINDER, ASPHALT CEMENT, PRIME COAT, AND TACK COAT: IN ACCORDANCE WITH D.O.T. MATERIAL STANDARDS AND ASSOCIATED CONSTRUCTION SPECIFICATIONS.
  - JOINT SEALANT: ASTM 6969R OR AASHTO M 324, TYPE II OR III, HOT APPLIED, SINGLE COMPONENT, POLYMER-MODIFIED BITUMINOUS SEALANT.
  - PAVEMENT-MARKING PAINT: IN ACCORDANCE WITH D.O.T. MATERIAL STANDARDS AND ASSOCIATED CONSTRUCTION SPECIFICATIONS. COLORS AS INDICATED.
- DO NOT APPLY ASPHALT MATERIALS IF SUBGRADE IS FROZEN, WET, OR EXCESSIVELY DAMP. DO NOT APPLY ASPHALT UNTIL THE REQUIRED TIME REQUIRED FOR ADEQUATE CURE. APPLY ONLY AT D.O.T. RECOMMENDED SURFACE TEMPERATURE.
  - INSTALLATION TOLERANCES:
    - PAVEMENT THICKNESS: THE AVERAGE OF THE MEASURED THICKNESS OF THE PAVEMENT LAYERS SHALL MEET OR EXCEED THE REQUIRED THICKNESS FOR THOSE LAYERS, AND THE MINIMUM THICK



**U.S. HIGHWAY 401**  
A.K.A. LOUISBURG ROAD PUBLIC RIGHT-OF-WAY  
VARIES PER B.M. 2023, PG. 1600

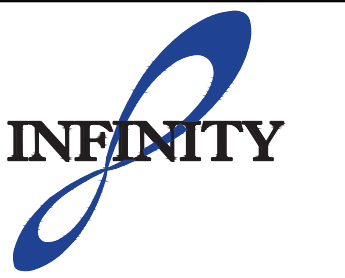
**SR 2226**  
A.K.A. JONESVILLE ROAD PUBLIC  
RIGHT-OF-WAY VARIES PER B.M.  
2023, PG. 1600



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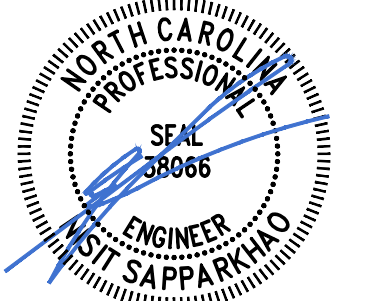


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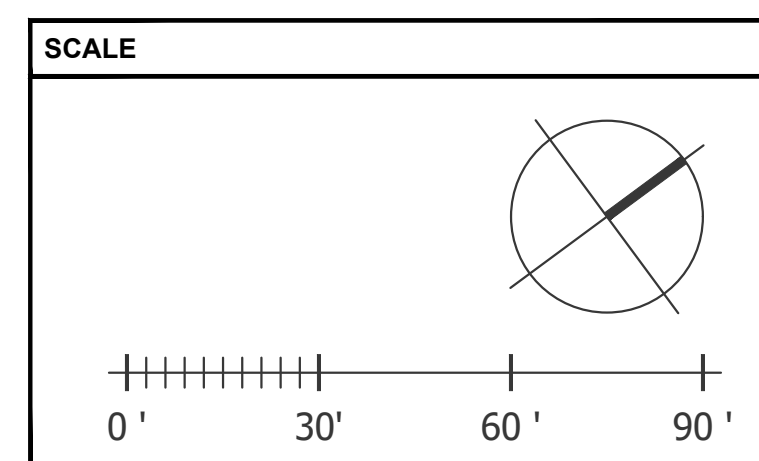


PROJECT INFORMATION BLOCK

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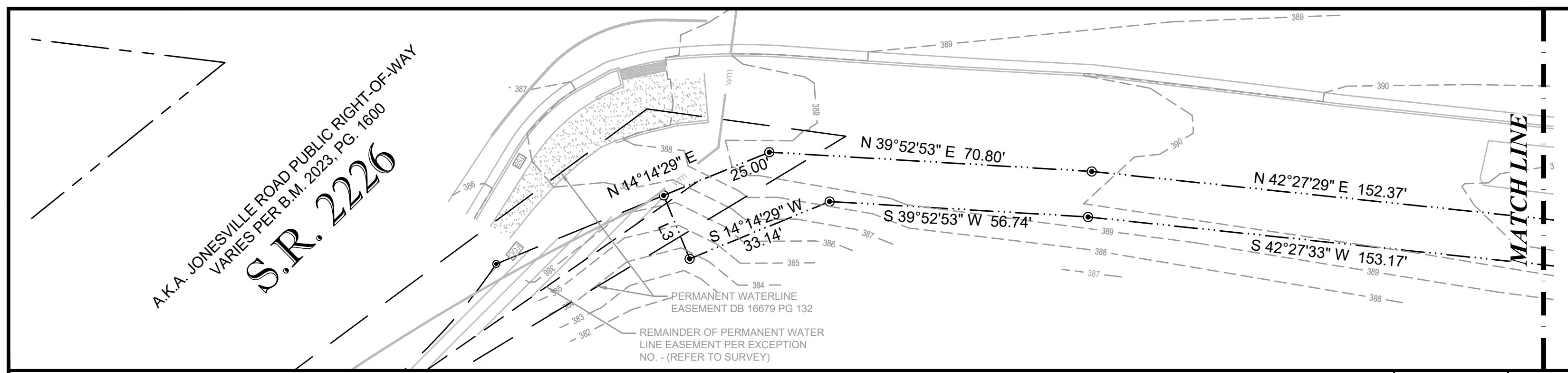
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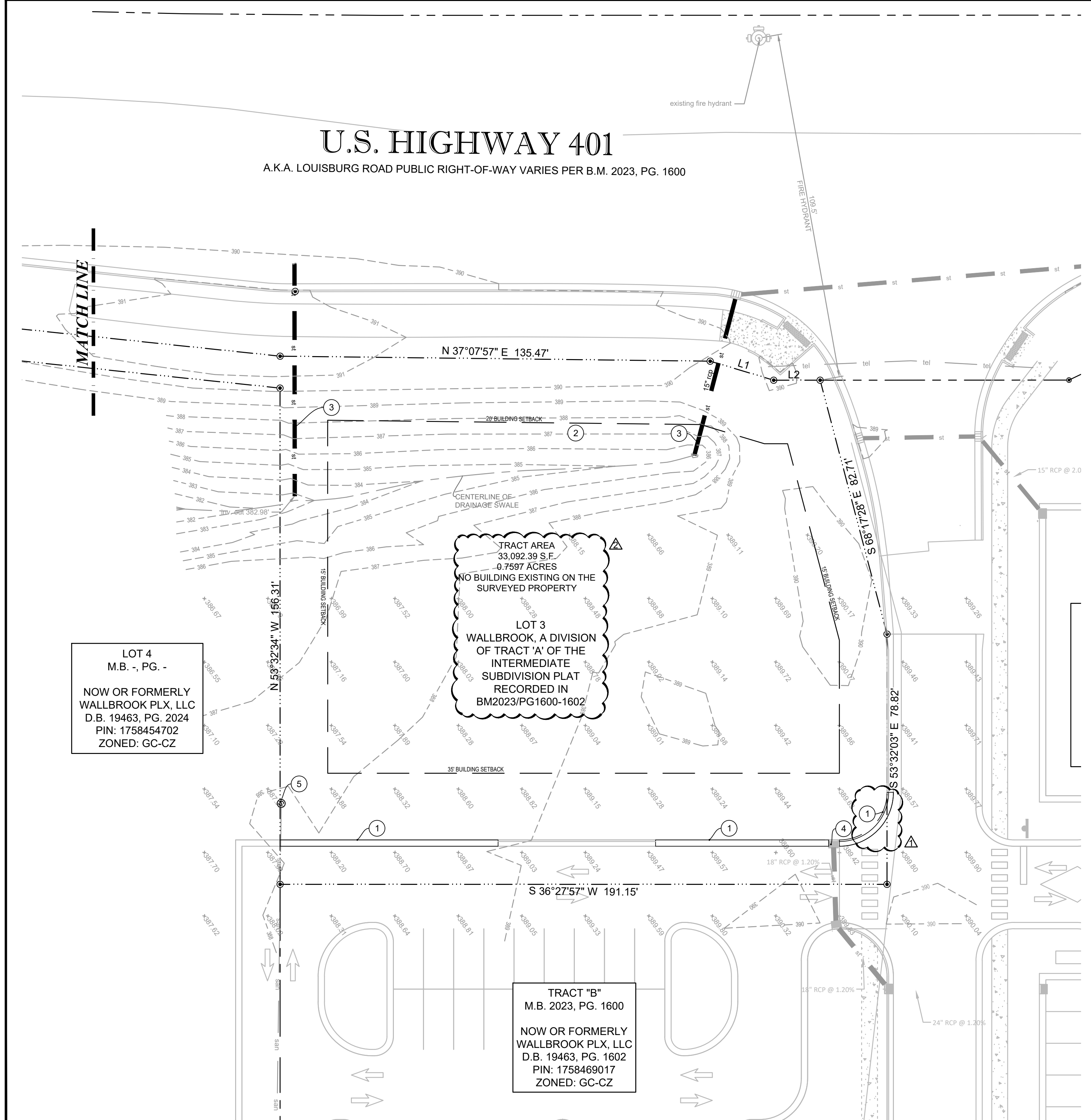
PLAN VIEW

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KEYED NOTES	
①	PORTION OF EXISTING CURB AND GUTTER TO BE SAWCUT / REMOVED.
②	EXISTING STORM DITCH TO BE REGRADED / FILLED BY THE DEVELOPER.
③	EXISTING STORM PIPE TO BE REMOVED BY THE DEVELOPER.
④	EXISTING STORM STRUCTURE TO REMAIN.
⑤	EXISTING SEWER MANHOLE TO REMAIN.

LEGEND	
	PROPERTY LINE
	EXISTING CONCRETE TO REMAIN
	EXISTING TO REMAIN
	EXISTING ASPHALT/CONCRETE TO BE REMOVED
	EXISTING SIDEWALK/CONCRETE TO BE REMOVED
	EXISTING TO BE REMOVED
	TREE BARRIER LINE
	EXISTING TREE TO BE REMOVED
	TREE BARRICADE
	EXISTING GAS
	EXISTING SANITARY
	EXISTING TELEPHONE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD LINE
	EXISTING WATER
	EXISTING CONTOUR
	EXISTING GRADE ELEVATION

DEMOLITION NOTES	
1.	CONTRACTOR TO ESTABLISH AND PROPERLY FLAG PROPERTY LINES PRIOR TO DEMOLITION.
2.	ALL ABOVE AND BELOW GROUND HARDWARE, EQUIPMENT AND MATERIALS TO BE DISPOSED OF IN ACCORDANCE WITH LOCAL MUNICIPALITY REQUIREMENTS.
3.	UTILITIES TO BE PLUGGED SHALL BE FILLED WITH A MINIMUM 1.0 CUBIC FT. OF NON SHRINK GROUT OR AS OTHERWISE APPROVED BY ENGINEER.
4.	TREES SHOWN TO REMAIN SHALL MAINTAIN PROTECTIVE BARRIERS DURING DEMOLITION. THESE BARRIERS SHALL BE IN ACCORDANCE WITH CURRENT LOCAL MUNICIPALITY STANDARDS.
5.	THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.
6.	THE CONTRACTOR SHALL UTILIZE SUITABLE EROSION CONTROL DURING DEMOLITION. SEE "EROSION & SEDIMENT CONTROL DETAILS".
7.	THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND WILL BE RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE REMOVED.
8.	ALL DISTURBED AREA WITH THE RIGHT OF WAY WILL BE RESTORED TO ORIGINAL OR BETTER CONDITION BY GRADING AND SODDING THE AREA DISTURBED.

TREE NOTE:	
CONTRACTOR TO INSTALL TREE BARRICADES SURROUNDING ALL TREES TO REMAIN. IRRIGATE ALL LANDSCAPING AS NEEDED.	



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FIFTH THIRD BANK  
ROLESVILLE WALLBROOK  
LOT 3 - PUBLIX AT WALLBROOK  
ROLESVILLE, NORTH CAROLINA 27587

**INFINITY**  
INFINITY ENGINEERING GROUP, PLLC  
1208 East Kennedy Boulevard  
Suite 230  
Tampa, FL 33602  
Tel: 813.434.4770  
Fax: 813.445.4211  
www.ieggroup.net  
NC Firm Certificate No. P-1836  
IEG Job No. 15-309.00

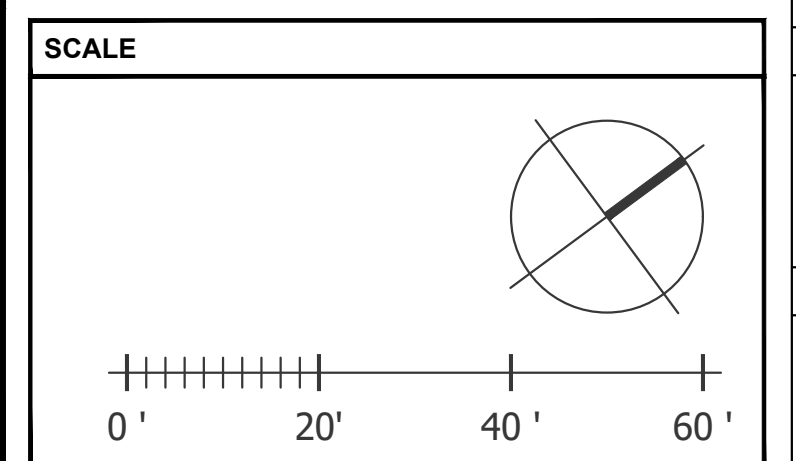
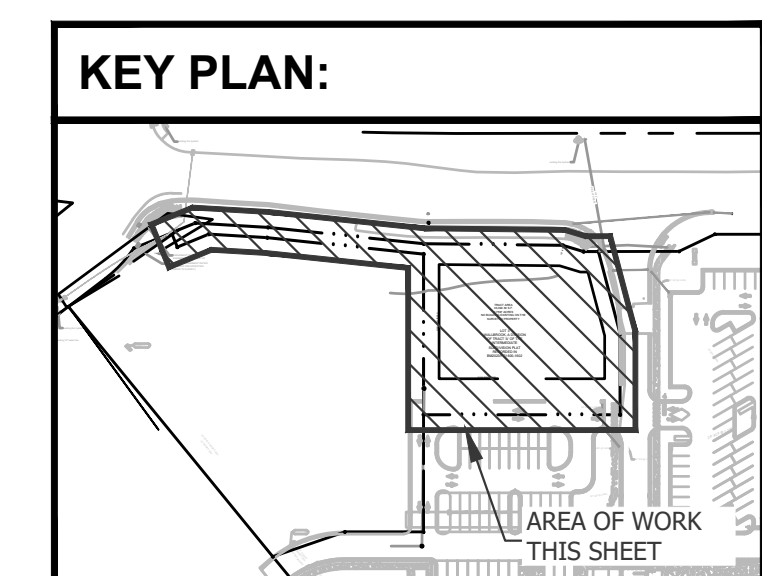
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NC REG. NO. 38066  
01/03/2025  
DATE

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▲		01/03/25	TRC ROUND 2

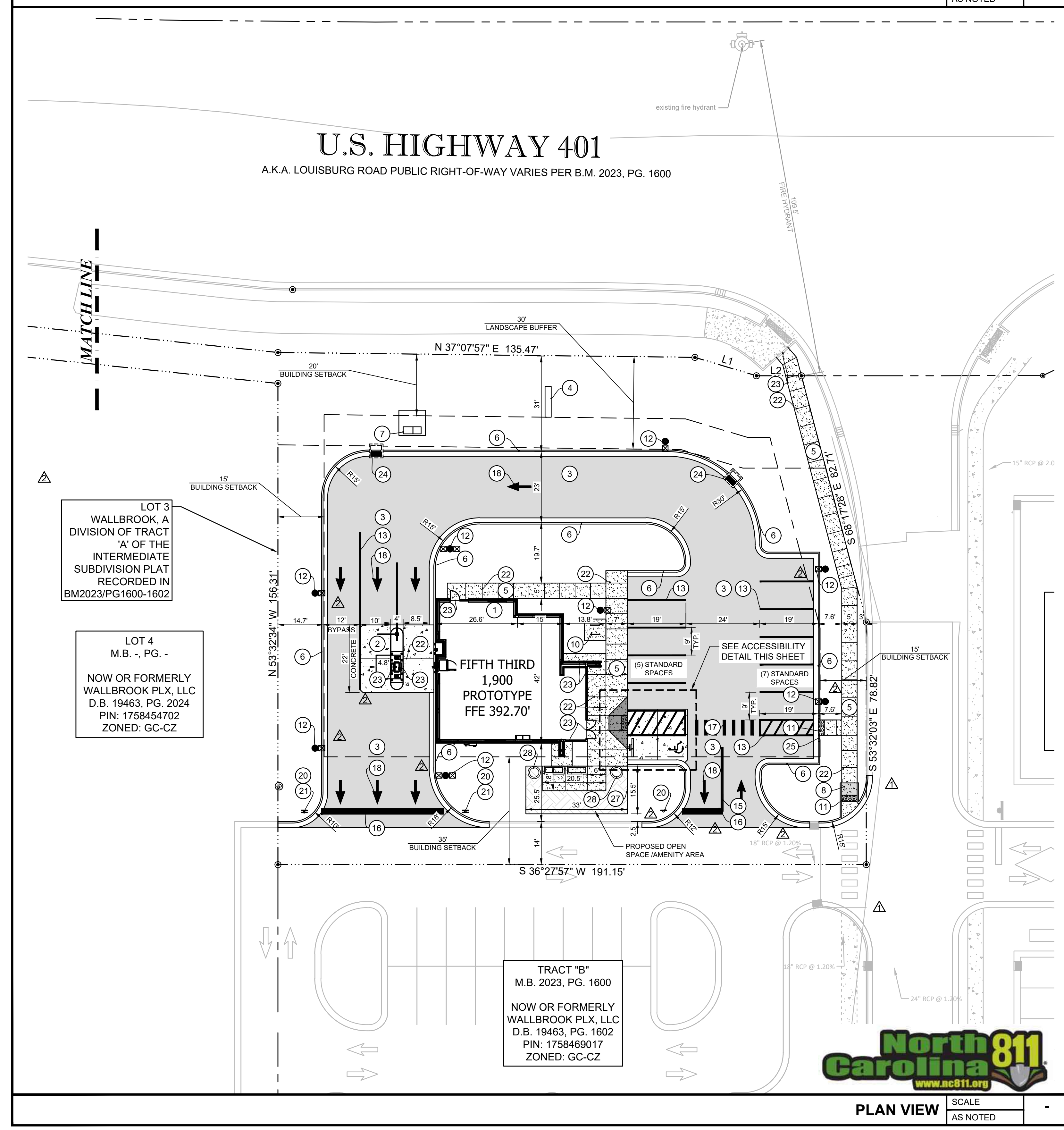
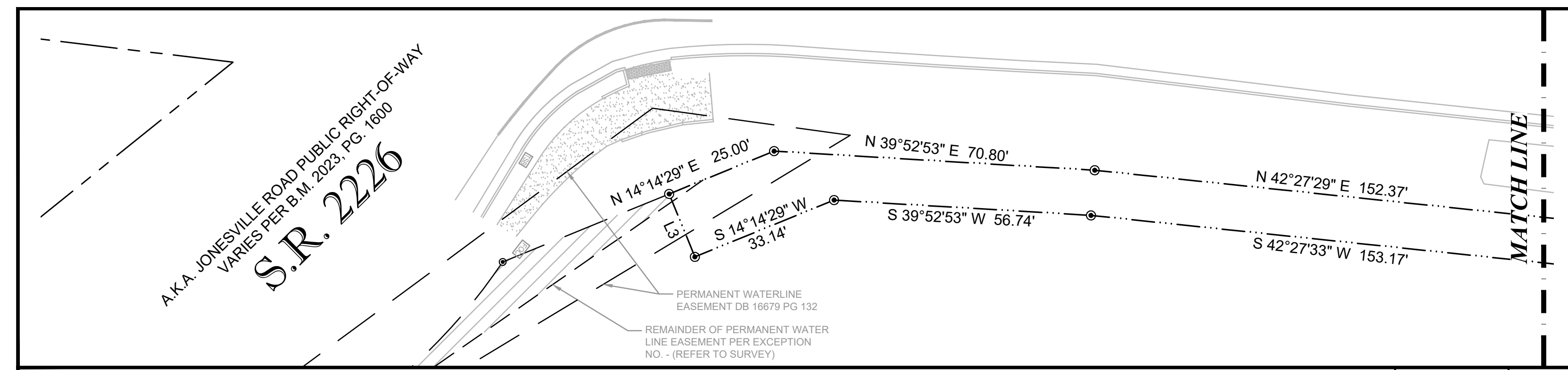
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DEMOLITION PLAN  
SHEET NUMBER  
C01.01

SDP-24-07





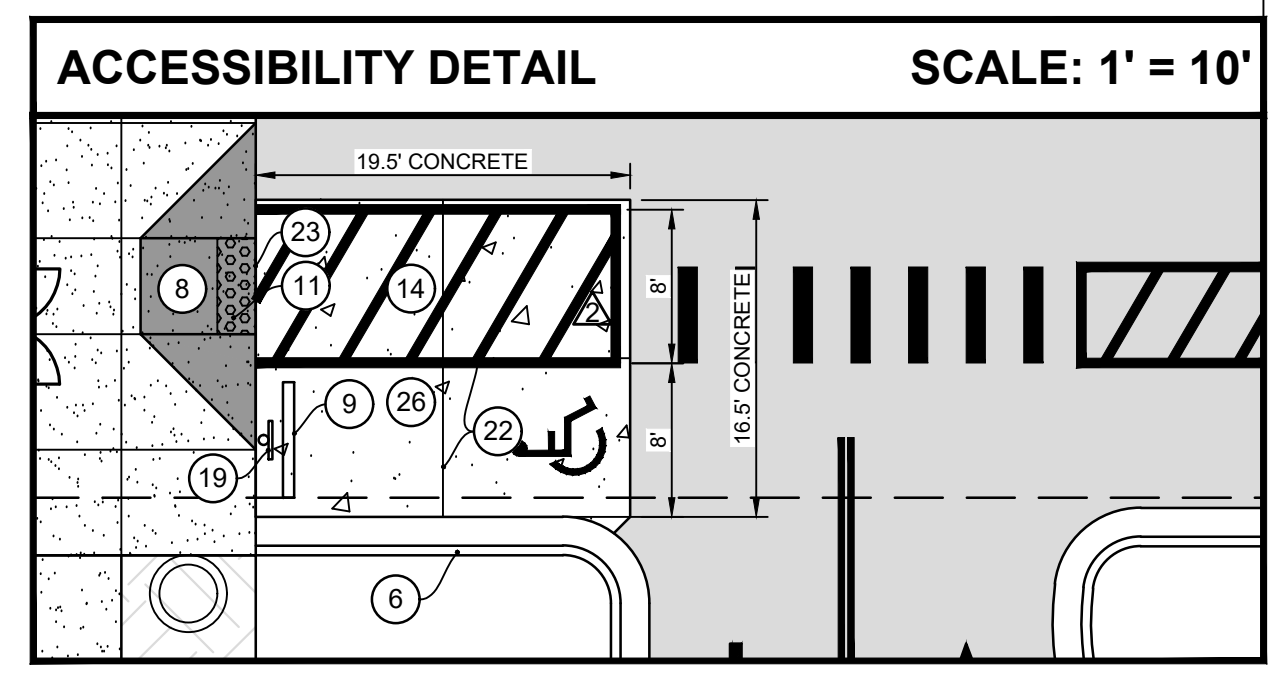


### KEYED NOTES

- 1 NEW BUILDING (SEE ARCHITECTURAL PLANS).
- 2 NEW 6" CONCRETE PAVEMENT. SEE DETAILS, SHEET C05.01.
- 3 NEW ASPHALT PAVEMENT. SEE DETAILS, SHEET C05.01.
- 4 NEW ID SIGN (DESIGNED AND PERMITTED BY OTHERS)
- 5 NEW 4" CONCRETE SIDEWALK. SEE PLAN FOR WIDTH. SEE DETAILS, SHEET C05.01.
- 6 NEW 24" CURB AND GUTTER. SEE DETAILS, SHEET C05.01.
- 7 NEW TRANSFORMER PAD. SEE UTILITY PLAN, SHEET C04.01.
- 8 NEW ADA RAMP. SEE DETAILS, SHEET C05.01 AND C05.02. ▲
- 9 NEW WHEEL STOP. SEE DETAILS, SHEET C05.01.
- 10 NEW FIFTH THIRD BANK STANDARD BICYCLE RACK. SEE DETAILS, SHEET C05.01.
- 11 NEW DETECTABLE WARNING. SEE DETAILS, SHEET C05.01.
- 12 NEW AREA LIGHT POLE. SEE ELECTRICAL SITE PLANS.
- 13 NEW 6-INCH "WHITE" PARKING/AISLE STRIPE (CONTINUOUS PAINT)
- 14 NEW VAN ACCESSIBLE PARKING SPACES AND ACCESS AISLE. SEE DETAILS, SHEET C05.01.
- 15 NEW 6-INCH "DOUBLE YELLOW" LANE STRIPE (CONTINUOUS PAINT).
- 16 NEW 24-INCH "WHITE" STOP BAR (CONTINUOUS PAINT).
- 17 5-FOOT WIDE CROSSWALK, 12-INCH "WHITE" STRIPE @ 36" O.C. (CONTINUOUS PAINT)
- 18 NEW "WHITE" DIRECTIONAL ARROW (CONTINUOUS PAINT).
- 19 NEW ACCESSIBLE PARKING SIGN. SEE DETAILS, SHEET C05.02. (PROVIDED AND INSTALLED BY FIFTH THIRD SIGN VENDOR.)
- 20 NEW 30" R1-1 "STOP" SIGN (TYP. OF 3). SEE DETAILS, SHEET C05.02. (PROVIDED AND INSTALLED BY FIFTH THIRD SIGN VENDOR.)
- 21 NEW 30" R5-1 "DO NOT ENTER" SIGN (TYP. OF 2). SEE DETAILS, SHEET C05.02. (PROVIDED AND INSTALLED BY FIFTH THIRD SIGN VENDOR.)
- 22 NEW CONTROL JOINT. SEE DETAILS, SHEET C05.01.
- 23 NEW EXPANSION JOINT. SEE DETAILS, SHEET C05.01.
- 24 STORMWATER STRUCTURE. SEE STORM PIPING PLAN, SHEET C03.02.
- 25 CURB TRANSITION (TYPICAL). SEE DETAILS, SHEET C05.01.
- 26 NEW 6" BLACK TINTED CONCRETE. SEE DETAILS, SHEET C05.01. ▲▲
- 27 PROPOSED 15.5'x33' (511.5 SF) OPEN SPACE/AMENITY AREA WITH TWO (2) BENCHES AS PER LDO SECTION 6.2.1.D.3.A, TABLE 6.2.1.1. (REFER TO ARCHITECTURAL PLANS FOR MORE INFORMATION); SEE DETAILS, SHEET C05.02.
- 28 PROPOSED TWO (2) LARGE DECORATIVE POTTED PLANTS AS PER LDO SECTION 6.2.1.D.3.A, TABLE 6.2.1.1. (REFER TO ARCHITECTURAL PLANS FOR MORE INFORMATION) SEE DETAILS, SHEET C05.02.

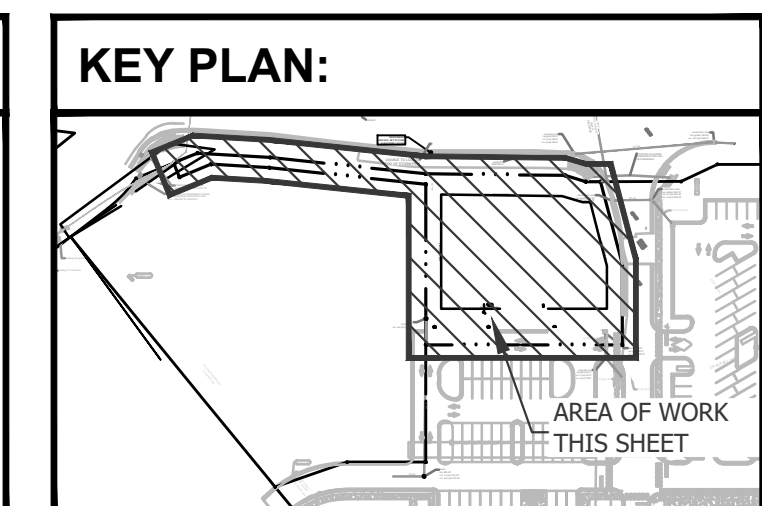
### SITE PLAN GENERAL NOTES

1. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB. BUILDING DIMENSIONS ARE TO FACE OF BUILDING.
2. EXISTING IMPROVEMENTS SHOWN ARE TAKEN FROM THE SURVEY.
3. BUILDING AND SIDEWALK DIMENSIONS ARE TO OUTSIDE EDGE OF WALL.
4. ALL TIES TO THE PROPERTY LINE ARE BASED ON THE SURVEY.
5. ALL CURB RADIUS ARE 3' UNLESS OTHERWISE NOTED



### LANDSCAPE NOTE:

1. CONTRACTOR TO RE-GRADE SURROUNDING GRADE ELEVATION AND RE-SOD AS NEED TO MEET PROPOSED TOP OF SIDEWALK ELEVATIONS.
2. CONTRACTOR SHALL REPLACE ALL DISTURBED LANDSCAPING TO MATCH EXISTING.
3. CONTRACTOR SHALL TIE INTO EXISTING IRRIGATION SYSTEM AND EXTEND NEW DRIP IRRIGATION AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.



### LEGEND

	PROPERTY LINE
	EXISTING TO REMAIN
	EXISTING CONCRETE TO REMAIN
	PROPOSED CONCRETE LESS THAN 6"
	PROPOSED CONCRETE 6" OR GREATER
	NEW ASPHALT PAVEMENT
	PROPOSED AMENITY AREA <span style="float: right;">▲</span>
	SETBACK/BUFFER
	PROPOSED CURB
	PROPOSED CURB AND GUTTER

### SITE DATA

**SITE ADDRESS:** LOT 3 - PUBlix AT WALLBROOK ROLESVILLE, NC 27587

**PIN:** 76667, 76635

**BUILDING AREA:** 2,084 GSF BUILDING

**EXISTING ZONING:** GC-CZ

**SITE AREA:** 33,092 SF / 0.76 AC

**EXISTING USE:** VACANT

**FUTURE USE:** BANK WITH DRIVE THRU

**PARKING DATA**

**BANK PARKING REQUIRED:** MAX. 6 SPACES PER 1000 SF OF G.F.A.  
2,084 SF x (6 SPACES/1000 SF) = 13 SPACES  
MIN. 2.5 SPACES PER 1000 SF OF G.F.A.  
2,084 SF x (2.5 SPACES/1000 SF) = 6 SPACES

**TOTAL PARKING PROVIDED:** STANDARD PARKING = 12 SPACES  
ADA PARKING = 1 SPACE  
TOTAL PARKING PROVIDED = 13 SPACES

**PARKING SPACE SIZE:** 9x 19' MINIMUM

**LOADING ZONE:** \*NOTE-FINANCIAL INSTITUTIONS DO NOT USE LOADING ZONES FOR SECURITY PURPOSES DELIVERY TRUCK WILL PARK DIRECTLY IN FRONT OF MAIN ENTRANCE.

**LANDSCAPE REQUIREMENTS:**

REQUIRED
LANDSCAPE BUFFER - FRONT (S. MAIN ST) = 30'
LANDSCAPE BUFFER - SIDES = 0'
LANDSCAPE BUFFER - REAR = 0'

**BUILDING REQUIREMENTS:**

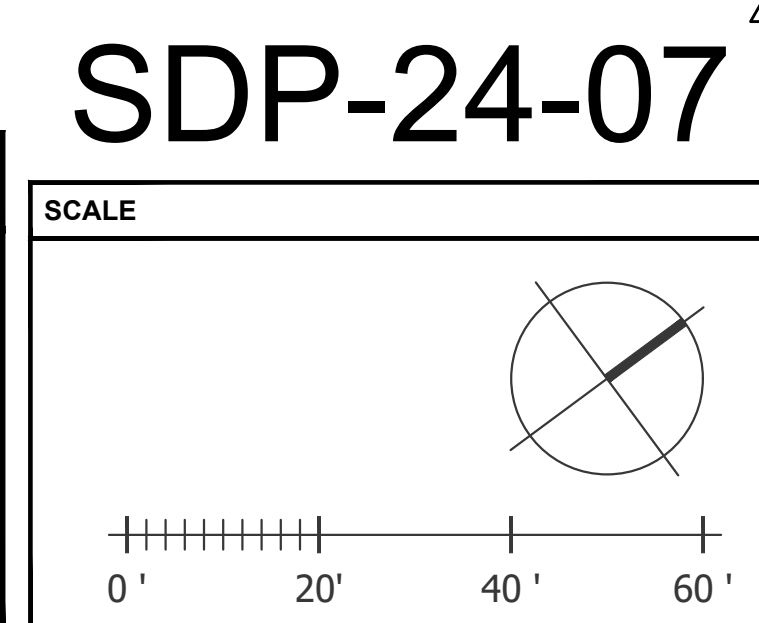
REQUIRED
BUILDING SETBACK - FRONT (S. MAIN ST) = 20'
BUILDING SETBACK - SIDES = 15'
BUILDING SETBACK - REAR = 35'
MAXIMUM BUILDING HEIGHT = 35'

**FLOOD ZONE:**  
THE SUBJECT PROPERTY IS LOCATED IN FLOOD ZONE X

**\*\*DUMPSTER ENCLOSURE:** ▲  
REFUSE CONTAINER ON LOT 2 WILL BE SHARED WITH THIS DEVELOPMENT. FIFTH THIRD BANK TO COORDINATE WITH THE DEVELOPER FOR A SHARED DUMPSTER AGREEMENT.

### PRE VS POST SITE AREAS

	ACRE	S.F.	PERCENT
<b>SITE AREA</b>	0.76	33,092	100.00%
<b>PRE-DEVELOPMENT</b>			
PERVIOUS AREA:	0.69	30,367	92.00%
IMPERVIOUS AREA:	0.06	2,725	8.00%
<b>POST-DEVELOPMENT</b>			
PERVIOUS AREA:	0.34	14,905	45.00%
IMPERVIOUS AREA:	0.42	18,187	55.00%

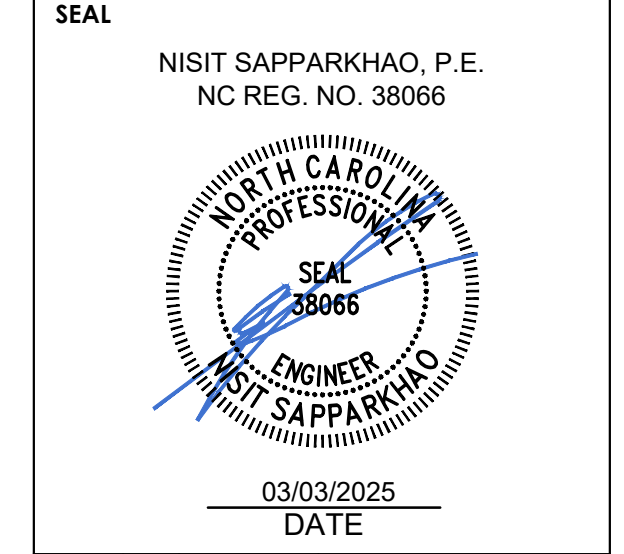
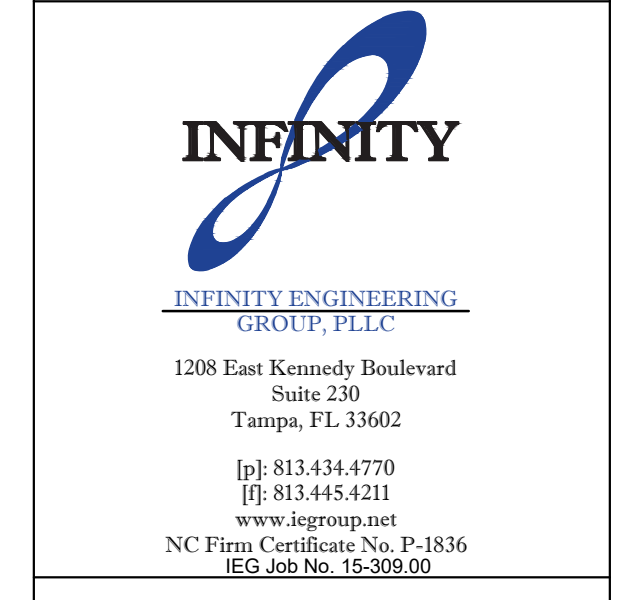


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**FIFTH THIRD BANK**  
 ROLESVILLE WALLBROOK  
 LOT 3 - PUBlix AT WALLBROOK  
 ROLESVILLE, NORTH CAROLINA 27587



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▲		08/16/24	PERMIT SET
▲		10/28/24	TRC ROUND 1
▲		01/03/25	TRC ROUND 2
▲		03/03/25	TRC ROUND 3

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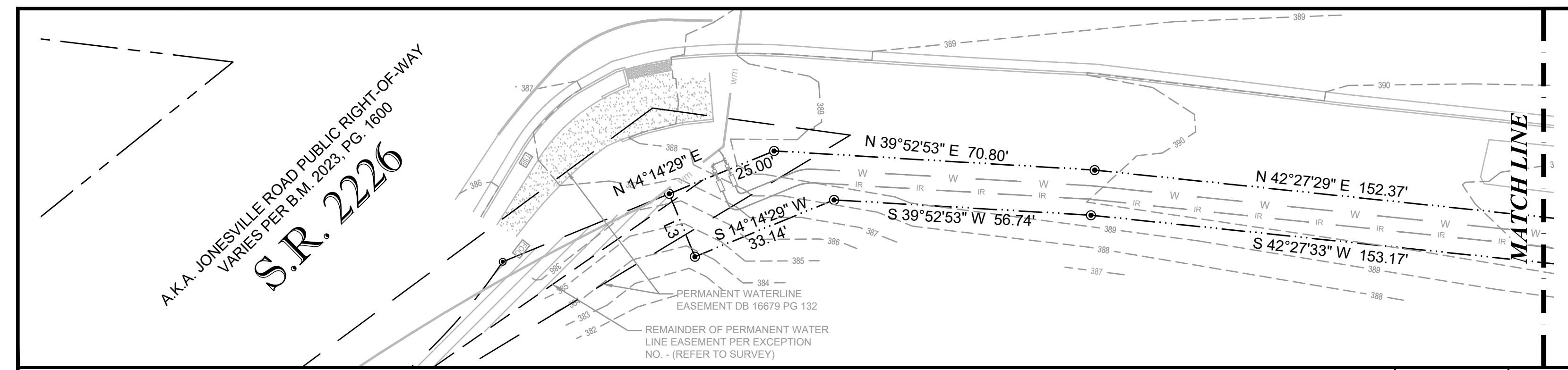
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DRAWN BY:	IEG
CHECKED BY:	DC

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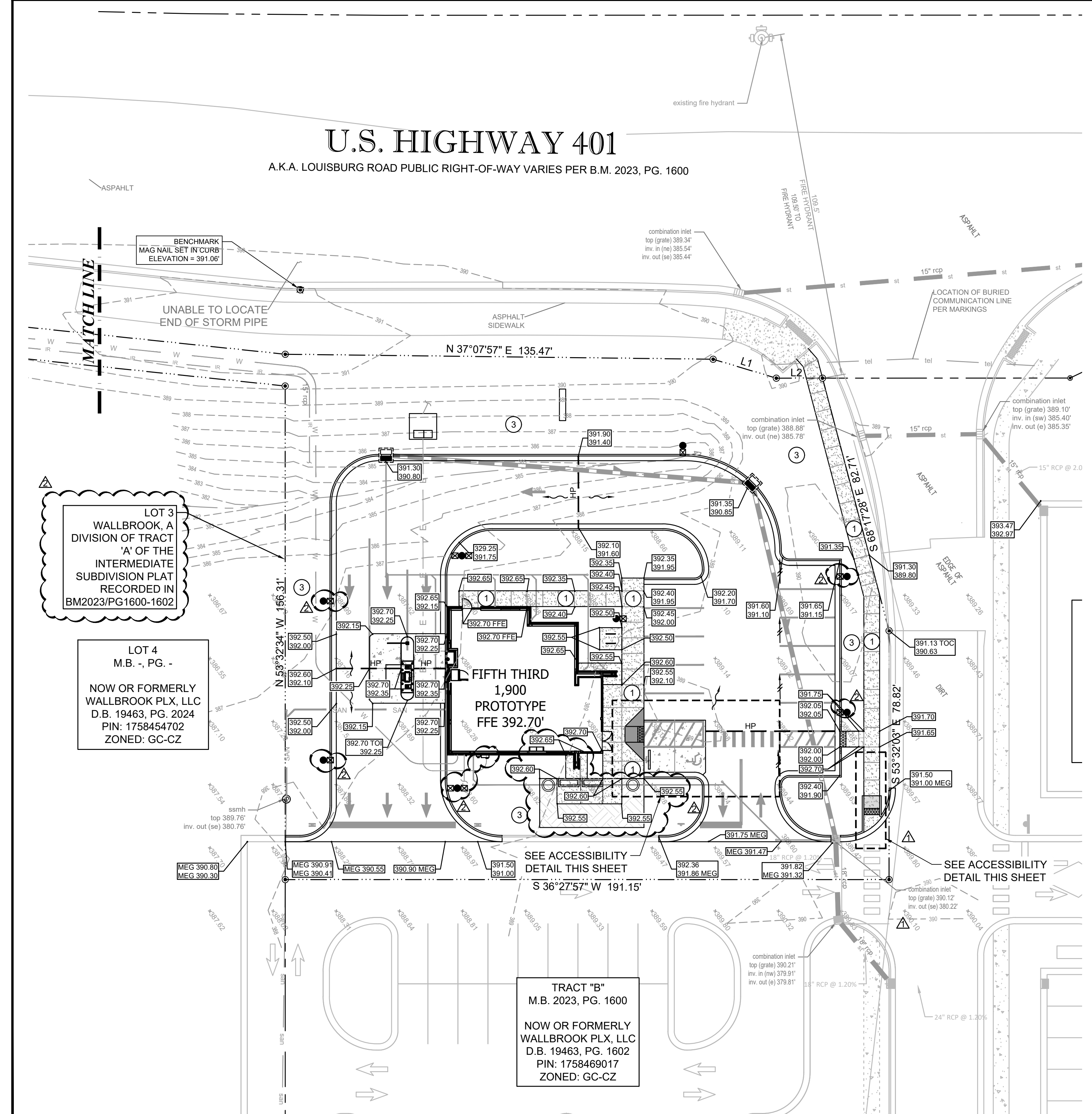
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PLAN VIEW SCALE AS NOTED

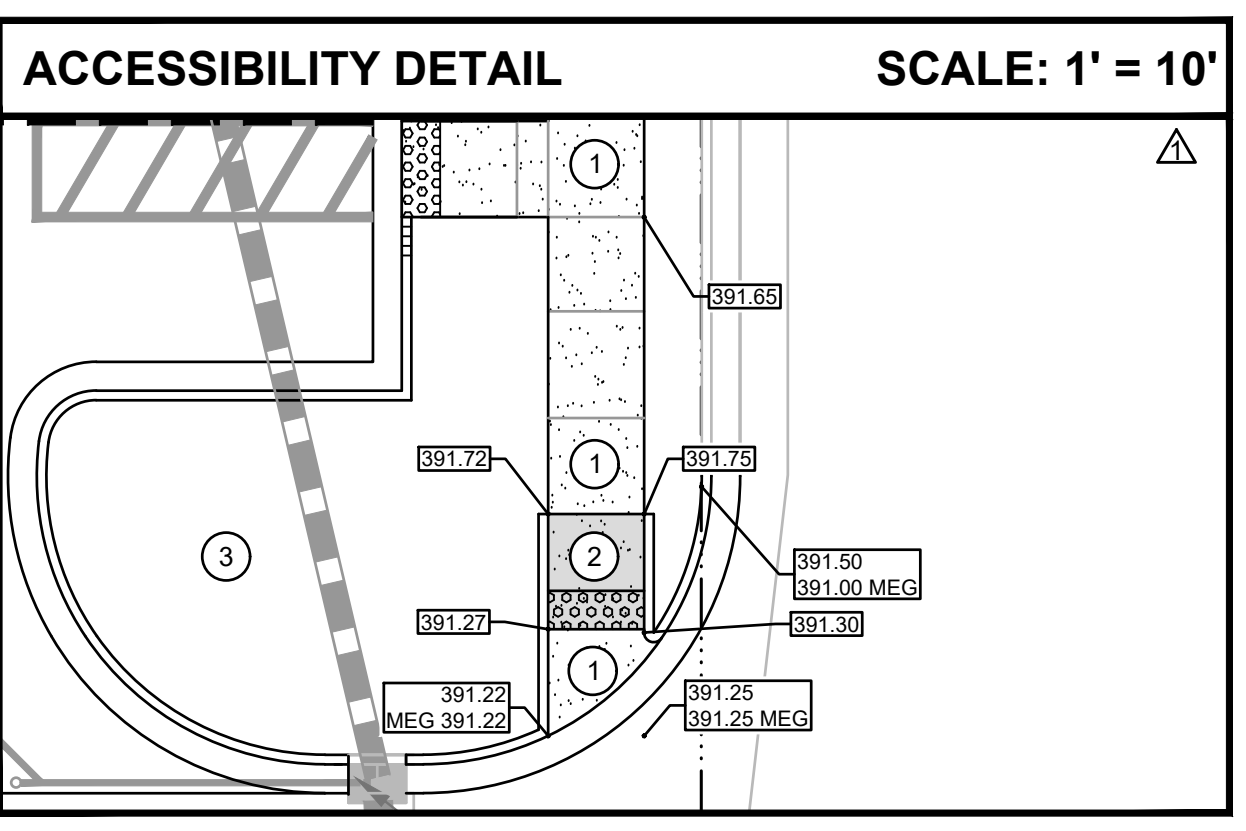
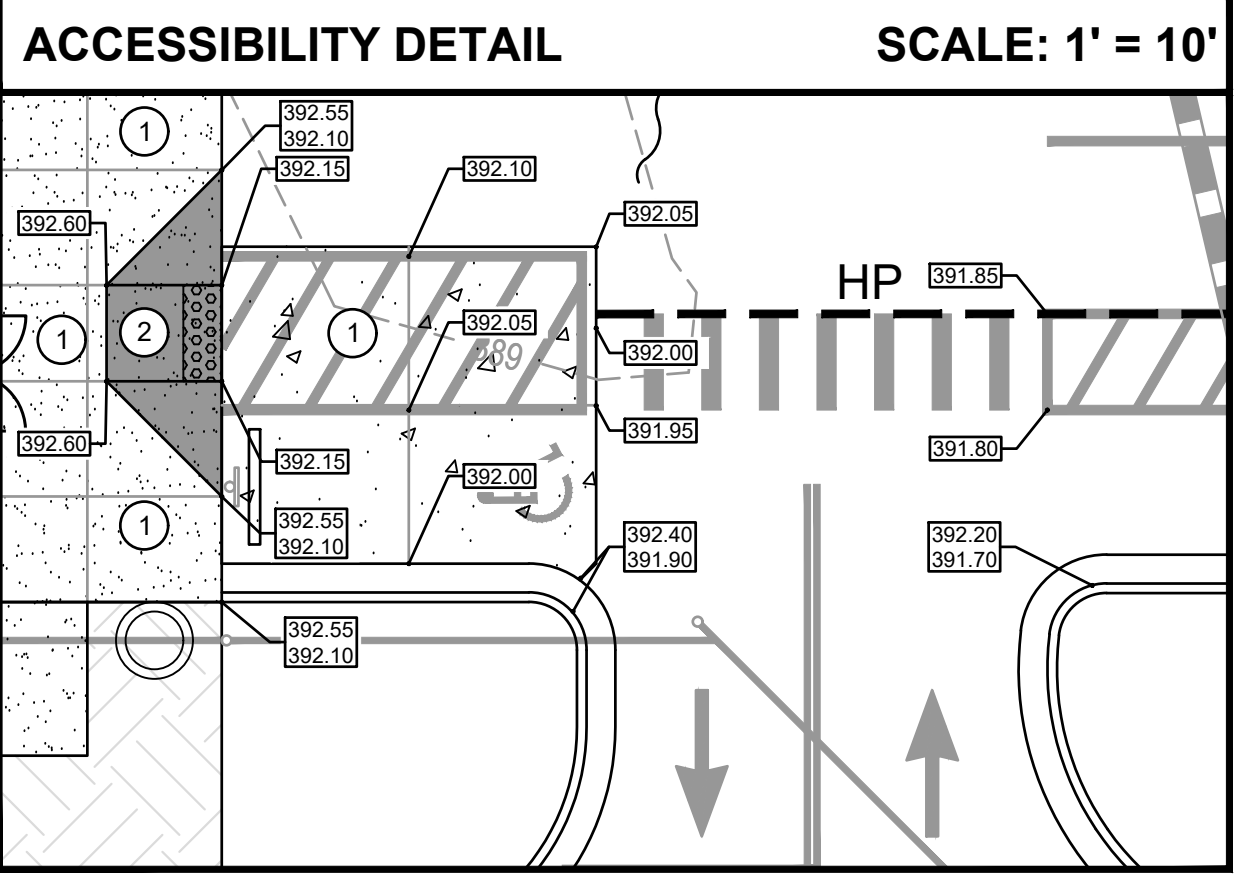


PLAN VIEW SCALE AS NOTED

**KEYED NOTES:**

①	SURFACE SLOPES NOT TO EXCEED 1:48 IN ALL DIRECTIONS.
②	SURFACE SLOPES NOT TO EXCEED 1:48 CROSS SLOPES AND 1:12 RUNNING.
③	RE-GRADE SURROUNDING LANDSCAPING GRADE ELEVATION AND RE-SOD/RE-MULCH AS REQUIRED TO MATCH EXISTING GRADE ELEVATIONS, SLOPES NOT TO EXCEED 4:1.

- ACCESSIBILITY NOTES**
- THE DRAWINGS ARE DESIGNED TO MEET ACCESSIBILITY STANDARDS AT MINIMUM. LOCAL AND STATE REQUIREMENTS OR CODES MAY HAVE ADDITIONAL STANDARDS.
  - ACCESSIBLE PARKING SPACES, SIGNAGE, LOGOS, WHEEL STOPS AND ACCESSIBLE AISLES TO MEET ALL OF THE 2010 ADA STANDARDS REQUIREMENTS - PROVIDE SPACES IN SIZE, QUANTITY AND LOCATIONS REQUIRED BY THE ADA STANDARDS AND APPLICABLE CODES AS DETERMINED BY LOCAL JURISDICTION. PROVIDE A MAXIMUM SLOPE IN EITHER DIRECTION OF 1:48 (1:64 RECOMMENDED).
  - ACCESSIBLE PARKING SIGNAGE ON POST. BOTTOM OF SIGNAGE TO BE MINIMUM 60" ABOVE GRADE. VERIFY ALL REQUIREMENTS WITH ACCESSIBILITY REQUIREMENTS AND LOCAL CODE.
  - CONCRETE WHEEL STOP. ALL ACCESSIBLE SPACES- LOCATE FIXED WHEEL STOP SO AS NOT TO REDUCE THE WIDTH OF THE ADJOINING ACCESSIBLE ROUTE.
  - ACCESSIBLE ROUTE TO PUBLIC RIGHT OF WAY (1 REQUIRED). MAXIMUM RUNNING SLOPE OF 1:20 AND MAXIMUM CROSS SLOPE OF 1:48 (1:64 RECOMMENDED). ALL PAVED SURFACES, CURB RAMPS AND TRANSITIONS ALONG PATH TO MEET ACCESSIBILITY REQUIREMENTS.
  - ACCESSIBLE PATH/WALKWAY TO BE 5'-0" MINIMUM. RUNNING SLOPE 1:20 MAXIMUM. CROSS SLOPE 1:48 MAXIMUM. SLOPE AWAY FROM BUILDING - BROOM FINISH CONCRETE.
  - CURB RAMP TO MEET ALL ACCESSIBILITY REQUIREMENTS. MAXIMUM SLOPE OF RUN 1:12 (1:14 RECOMMENDED). MAXIMUM CRISS SLOPE 1:48 (1:64 RECOMMENDED). REFER TO SITE DETAILS SHEET FOR ADDITIONAL INFORMATION. PROVIDE 36" LONG MINIMUM LANDING AT TOP AND 60" MINIMUM LANDING AT BOTTOM OF RAMP WITH MAXIMUM SLOPE IN EITHER DIRECTION OF LANDING TO BE 1:48 (1:64 RECOMMENDED)
  - SURFACE CONDITIONS AT ACCESSIBLE WALKWAYS AND ACCESSIBLE AREAS (PAVERS SYSTEMS AND/OR CONCRETE SURFACES) SHALL NOT INCLUDE GAPS GREATER THAN 1/2" OR VERTICAL CHANGES AT JOINTS OR BETWEEN UNITS GREATER THAN 1/4" - UNLESS THE OVERALL LEVEL CHANGE DOES NOT EXCEED 1/2" AND THE LEVEL CHANGE IS BEVELED AT 1:2.
  - IT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT THE HANDICAP PARKING SPACES, ACCESSIBLE ROUTES, AND SIDEWALK/CROSSWALKS ARE CONSTRUCTED TO MEET ADA REQUIREMENTS.
  - ANY REQUIREMENTS LISTED ABOVE THAT CAN NOT BE MET SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY. ANYTHING NOT BUILT TO THE ABOVE STANDARDS WILL REQUIRE REMOVAL AND REPLACEMENT OF THE NON COMPLIANT AREAS AT THE GENERAL CONTRACTORS COST.



**LEGEND**

EL	ELEVATION
TYP	TYPICAL
CO	CLEANOUT
IE	INVERT ELEVATION
SE	SUMP ELEVATION
EXISTING ELEVATION	
0.00	PROPOSED PAVEMENT ELEVATION
0.00	TOP OF SIDEWALK/CURB EDGE OF PAVEMENT
49.58	DITCH BOTTOM INLET
	CURB INLET
FFE	FINISH FLOOR ELEVATION
RCP	REINFORCED CONCRETE PIPE
HP	HIGH POINT
MEG	MATCH EXISTING GRADE
TOI	TOP OF ISLAND
DS	BUILDING DOWN SPOUT
12" OR GREATER STORMWATER PIPE	
LESS THAN 12" STORMWATER PIPE	
	PROPOSED SURFACE STORMWATER FLOW
	PROPOSED SWALE STORMWATER FLOW
-389-	EXISTING CONTOUR
-389-	PROPOSED CONTOUR
	DIRECTION OF PIPE FLOW

**CONTROL BENCHMARKS**

THE BASIS OF BEARING USED FOR THIS SURVEY IS N.C. STATE GRID (NAD 83). ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON NAVD 88.

NOTE:  
CONTRACTOR TO ESTABLISH CONTROL BENCHMARKS BEYOND LIMITS OF DEMOLITION PRIOR TO CONSTRUCTION.

**EROSION CONTROL MEASURE NOTE**

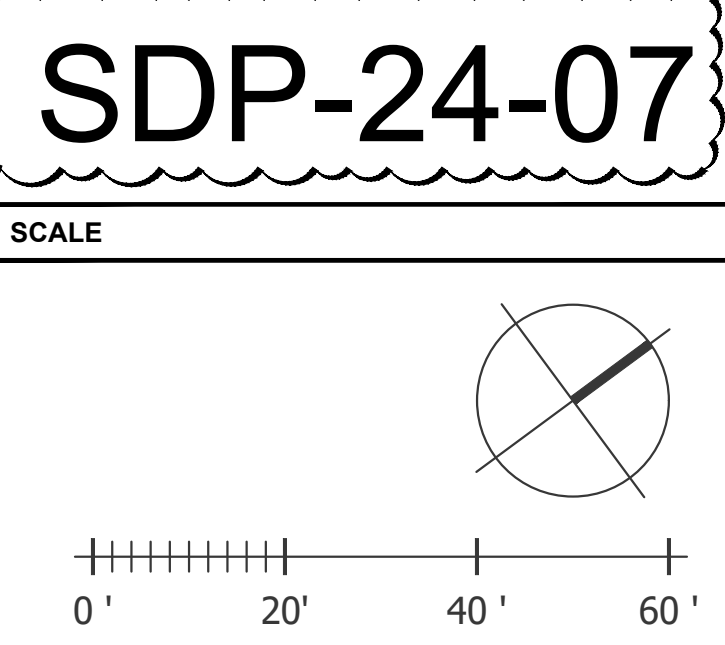
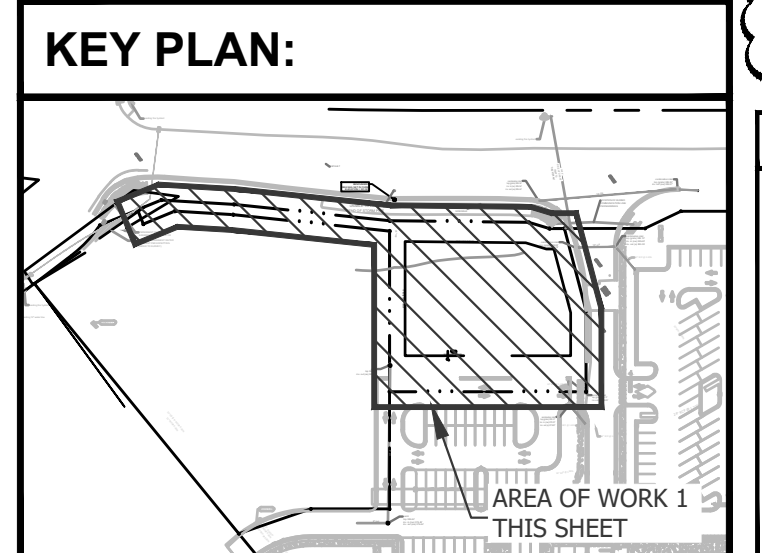
REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED AS NEEDED AND MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS, AND INITIATION OF CIVIL PENALTY PROCEDURES.

**PAVING AND GRADING GENERAL NOTES**

- SEE GENERAL NOTES SHEET FOR EROSION AND SILTATION CONTROL ALONG WITH GENERAL NOTES.
- SEE SITE PLAN SHEET FOR SITE DATA.
- SEE SURVEY FOR TEMPORARY BENCH MARK (TBM) LOCATIONS.
- THE CONTRACTOR SHALL MEET ALL REQUIREMENTS FOR LOCAL MUNICIPALITY AND THE DEPARTMENT OF TRANSPORTATION WITH REGARD TO IMPROVEMENTS WITHIN THEIR RESPECTIVE RIGHTS-OF-WAY.
- ALL DISTURBED AREAS WITHIN RIGHT-OF-WAY TO BE RETURNED TO MATCH EXISTING CONDITION.
- ALL CLEANOUT TOP ELEVATION SHALL MATCH FINISH GRADE ELEVATIONS.
- CONTRACTOR SHALL INSTALL EROSION CONTROL SILT FENCE AROUND THE PERIMETER OF THE SITE AND MUST MAINTAIN THE SILT FENCE IN GOOD REPAIR UNTIL ALL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO ANY CONSTRUCTION IF ANY PROBLEMS OR DISCREPANCIES EXIST.

**GEOTECHNICAL NOTE:**

THE PLACEMENT OF ANY FILL MATERIAL MUST BE CONDUCTED UNDER THE OBSERVATION OF A QUALIFIED LICENSED GEOTECHNICAL ENGINEER AND UPON COMPLETION OF THE EARTHWORK ACTIVITIES THE TOWN MUST BE PROVIDED WITH A FINAL GRADING REPORT THAT INCLUDES THE CORRESPONDING COMPACTION TEST RESULTS AND CERTIFIES THE TYPE OF FILL MATERIAL AND ITS PROPER PLACEMENT.

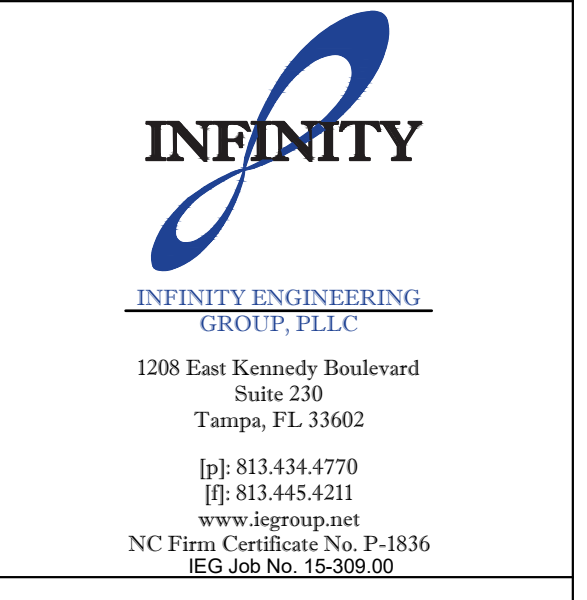


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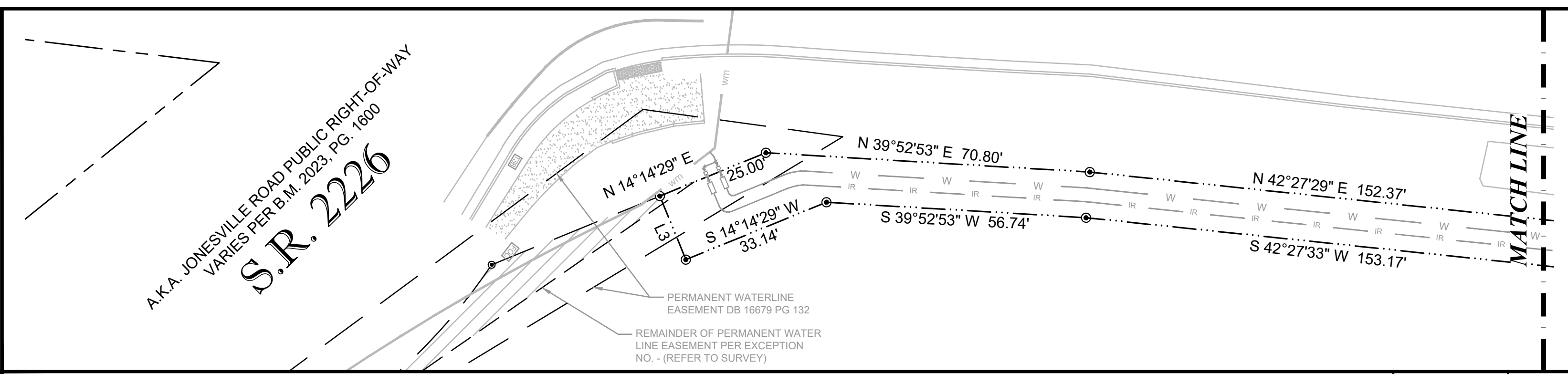
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CHECKED BY:	DC
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SHEET NUMBER	C03.01

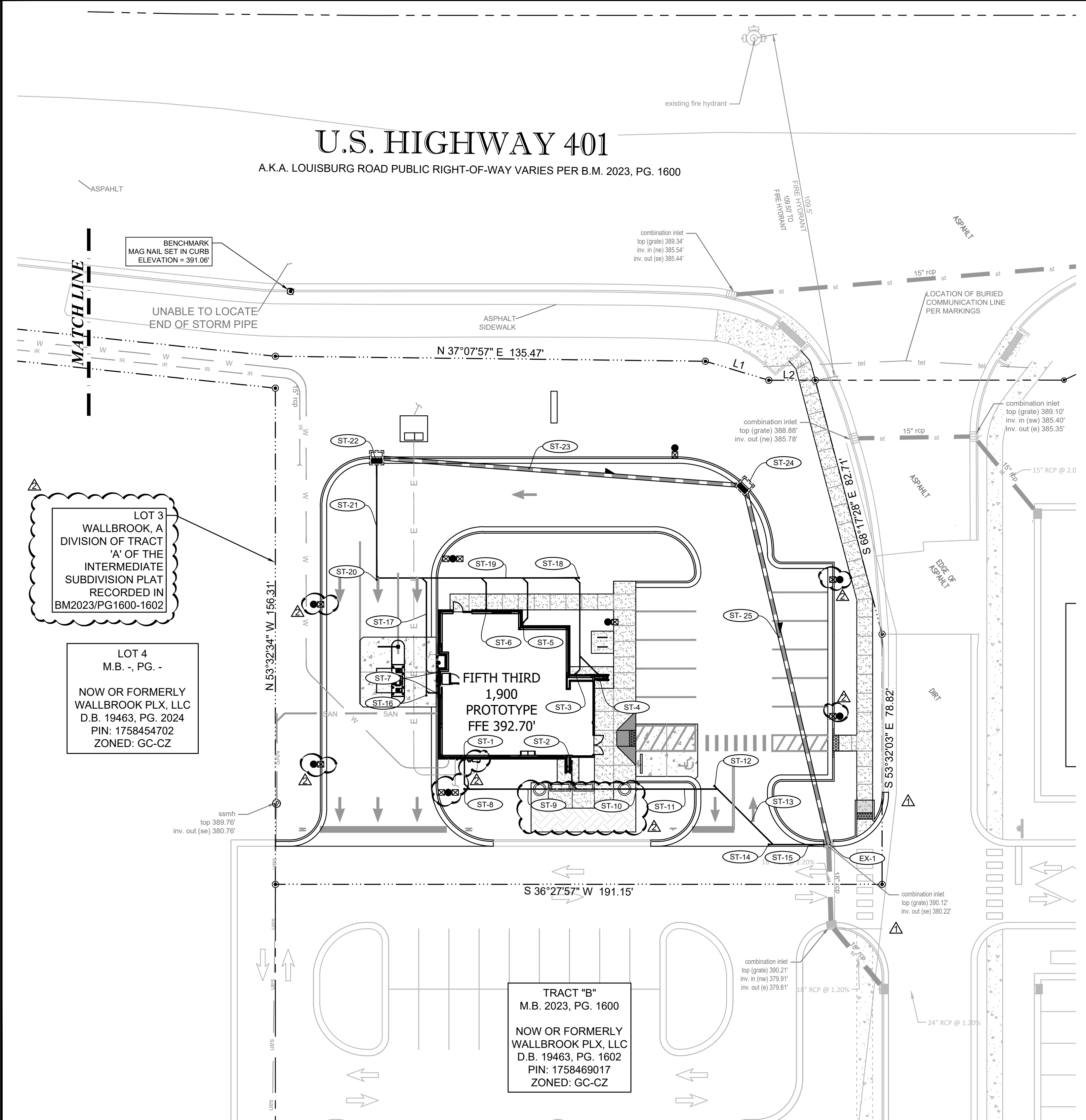




A.K.A. JONESVILLE ROAD PUBLIC RIGHT-OF-WAY VARIES PER B.M. 2023, PG. 1600  
S.R. 2226



PLAN VIEW SCALE AS NOTED



PLAN VIEW SCALE AS NOTED

**EXISTING STORM STRUCTURE/PIPING DATA**

EX-1	EXISTING GRATE TO MATCH EXISTING PROPOSED ELEVATIONS
TOP	= 390.12'
IE (SE) OUT	= 380.22' (EXISTING 18" RCP)
IE (NW) IN	= 383.70' (PROPOSED 15" HDPE)
IE (SW) IN	= 386.60' (PROPOSED 6" PVC)

**STORM STRUCTURE/PIPING DATA**

ST-1	BUILDING DOWNSPOUT AND CLEANOUT TOP ELEVATION TO MATCH PROPOSED GRADE 10 LF OF 4-INCH PVC @ 1.00% MIN. SLOPE. IE = 389.70	ST-11	26 LF OF 6" PVC @ 2.70% SLOPE IE = 387.10
ST-2	BUILDING DOWNSPOUT AND CLEANOUT TOP ELEVATION TO MATCH PROPOSED GRADE 9 LF OF 3-INCH PVC @ 1.00% MIN. SLOPE. IE = 389.70	ST-12	CONSTRUCT CLEANOUT TOP TO BE SET AT GRADE IE = 387.10
ST-3	BUILDING DOWNSPOUT AND CLEANOUT TOP ELEVATION TO MATCH PROPOSED GRADE 31 LF OF 4-INCH PVC @ 1.00% MIN. SLOPE. IE = 389.70	ST-13	26 LF OF 6" PVC @ 1.15% SLOPE IE = 387.10
ST-4	BUILDING DOWNSPOUT AND CLEANOUT TOP ELEVATION TO MATCH PROPOSED GRADE 8 LF OF 3-INCH PVC @ 1.00% MIN. SLOPE. IE = 389.70	ST-14	CONSTRUCT CLEANOUT TOP TO BE SET AT GRADE IE = 386.80
ST-5	BUILDING DOWNSPOUT AND CLEANOUT TOP ELEVATION TO MATCH PROPOSED GRADE 15 LF OF 3-INCH PVC @ 1.00% MIN. SLOPE. IE = 389.70	ST-15	18 LF OF 6" PVC @ 1.11% SLOPE CONNECT TO EX- @ 386.60
ST-6	BUILDING DOWNSPOUT AND CLEANOUT TOP ELEVATION TO MATCH PROPOSED GRADE 10 LF OF 3-INCH PVC @ 1.00% MIN. SLOPE. IE = 389.70	ST-16	CONSTRUCT CLEANOUT TOP TO BE SET AT GRADE IE = 389.65'
ST-7	BUILDING DOWNSPOUT AND CLEANOUT TOP ELEVATION TO MATCH PROPOSED GRADE 4 LF OF 4-INCH PVC @ 1.00% MIN. SLOPE. IE = 389.70	ST-17	38 LF OF 6" PVC @ 1.00% MIN. SLOPE IE = 389.65'
ST-8	CONSTRUCT CLEANOUT TOP TO BE SET AT GRADE IE = 389.50	ST-18	CONSTRUCT CLEANOUT TOP TO BE SET AT GRADE IE = 389.30
ST-9	64 LF OF 6" PVC @ 3.15% SLOPE IE = 387.80'	ST-19	64 LF OF 8" PVC @ 1.00% MIN. SLOPE IE = 387.50'
ST-10	CONSTRUCT CLEANOUT TOP TO BE SET AT GRADE IE = 387.80'	ST-20	CONSTRUCT CLEANOUT TOP TO BE SET AT GRADE IE = 387.50'
		ST-21	38 LF OF 6" PVC @ 1.31% SLOPE IE = 387.50'
		ST-22	CONCRETE CATCH BASIN (DROP INLET) NCDOT INDEX 719-001 TOP = 390.80' IE (NE) OUT = 386.00' (15" HDPE) IE (SE) IN = 387.00' (8" PVC)
		ST-23	116 LF OF 15" HDPE @ 1.00% SLOPE IE = 389.70
		ST-24	CONCRETE CATCH BASIN (DROP INLET) NCDOT INDEX 719-001 TOP = 390.85' IE (SW) IN = 384.85' IE (E) OUT = 384.85'
		ST-25	116 LF OF 15" HDPE @ 1.00% SLOPE IE = 389.70

**LEGEND**

EL	ELEVATION
TYP	TYPICAL
CO	CLEANOUT
IE	INVERT ELEVATION
SE	SUMP ELEVATION
	EXISTING ELEVATION
	DITCH BOTTOM INLET
	CURB INLET
FFE	FINISH FLOOR ELEVATION
RCP	REINFORCED CONCRETE PIPE
ST-23	STORM SEWER STRUCTURE NUMBER
DS	BUILDING DOWN SPOUT
	12" OR GREATER STORMWATER PIPE
	LESS THAN 12" STORMWATER PIPE
	DIRECTION OF PIPE FLOW
- - -	EXISTING CONTOUR
- - -	PROPOSED CONTOUR

**CONTROL BENCHMARKS**

THE BASIS OF BEARING USED FOR THIS SURVEY IS N.C. STATE GRID (NAD 83). ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON NAVD 88.

NOTE:  
CONTRACTOR TO ESTABLISH CONTROL BENCHMARKS BEYOND LIMITS OF DEMOLITION PRIOR TO CONSTRUCTION.

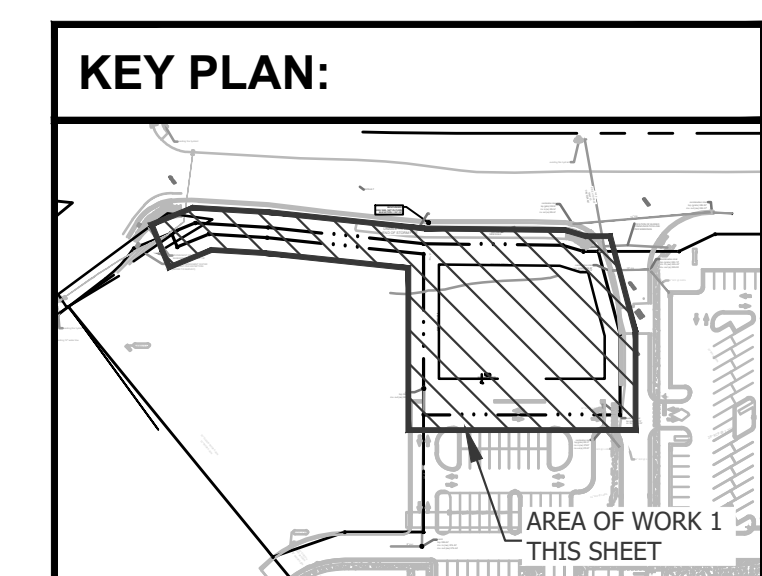
**EROSION CONTROL MEASURE NOTE**

REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED AS NEEDED AND MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS, AND INITIATION OF CIVIL PENALTY PROCEDURES.

- PAVING AND GRADING GENERAL NOTES**
- SEE GENERAL NOTES SHEET FOR EROSION AND SILTATION CONTROL ALONG WITH GENERAL NOTES.
  - SEE SITE PLAN SHEET FOR SITE DATA.
  - SEE SURVEY FOR TEMPORARY BENCH MARK (TBM) LOCATIONS.
  - THE CONTRACTOR SHALL MEET ALL REQUIREMENTS FOR LOCAL MUNICIPALITY AND THE DEPARTMENT OF TRANSPORTATION WITH REGARD TO IMPROVEMENTS WITHIN THEIR RESPECTIVE RIGHTS-OF-WAY.
  - ALL DISTURBED AREAS WITHIN RIGHTS-OF-WAY TO BE RETURNED TO MATCH EXISTING CONDITION.
  - ALL CLEANOUT TOP ELEVATION SHALL MATCH FINISH GRADE ELEVATIONS.
  - CONTRACTOR SHALL INSTALL EROSION CONTROL SILT FENCE AROUND THE PERIMETER OF THE SITE AND MUST MAINTAIN THE SILT FENCE IN GOOD REPAIR UNTIL ALL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED.
  - THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO ANY CONSTRUCTION IF ANY PROBLEMS OR DISCREPANCIES EXIST.

**PRE VS POST SITE AREAS**

	ACRE	S.F.	PERCENT
SITE AREA	0.76	33,092	100.00%
<b>PRE-DEVELOPMENT</b>			
PERVIOUS AREA:	0.69	30,367	92.00%
IMPERVIOUS AREA:	0.06	2,725	8.00%
<b>POST-DEVELOPMENT</b>			
PERVIOUS AREA:	0.34	14,905	45.00%
IMPERVIOUS AREA:	0.42	18,187	55.00%



**SDP-24-07**

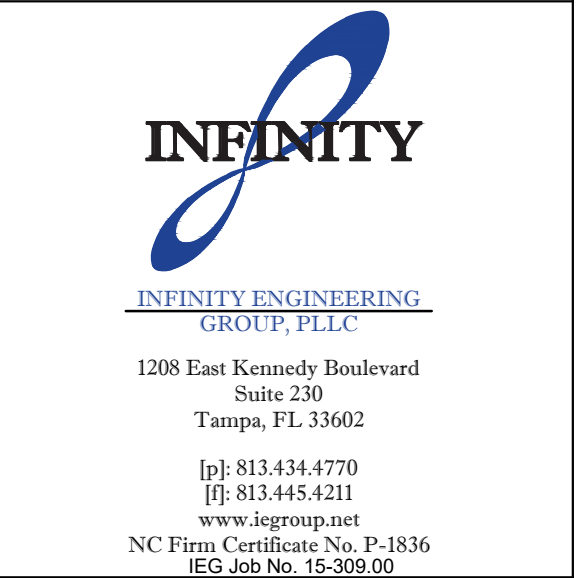
SCALE



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FIFTH THIRD BANK  
ROLESVILLE WALLBROOK  
LOT 3 - PUBLX AT WALLBROOK  
ROLESVILLE, NORTH CAROLINA 27587



SEAL

NISIT SAPPARKHAO, P.E.  
NC REG. NO. 38066

01/03/2025  
DATE

ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		10/28/24	TRC ROUND 1
		01/03/25	TRC ROUND 2

PROJECT INFORMATION BLOCK

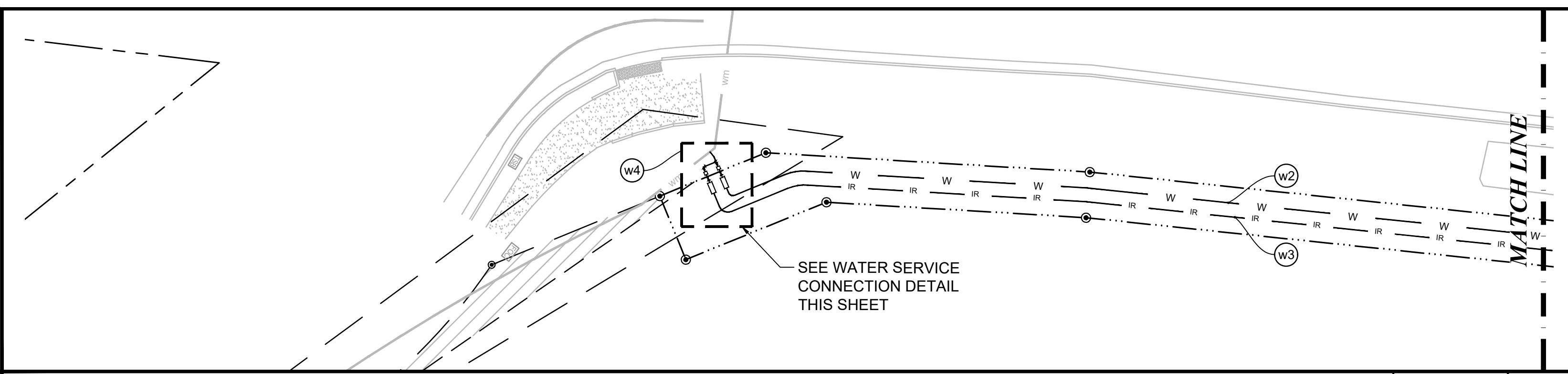
JOB # 230634  
DATE: 08/16/2024  
DRAWN BY: IEG  
CHECKED BY: DC

SHEET TITLE  
STORM PIPING PLAN

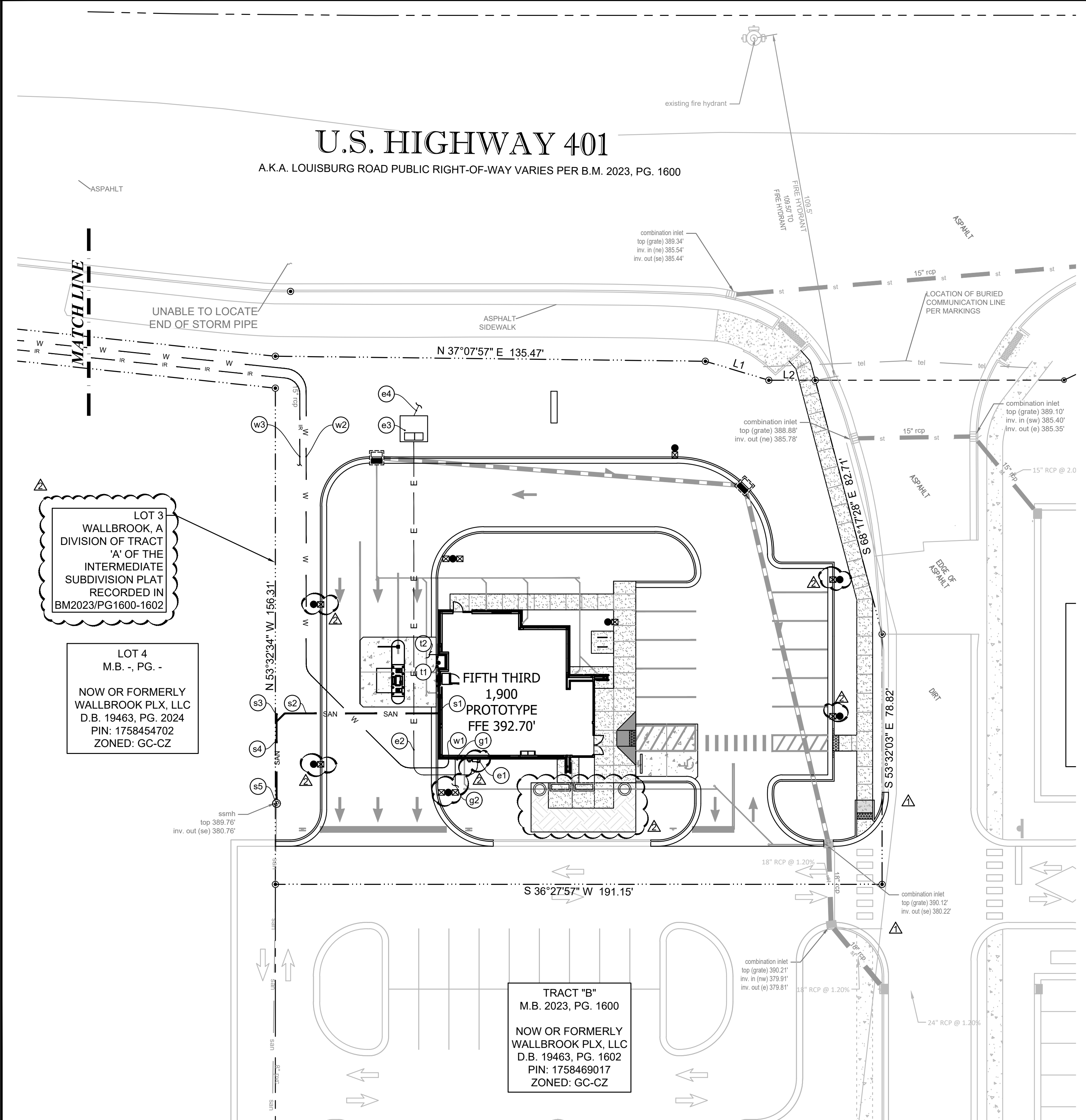
SHEET NUMBER  
C03.02







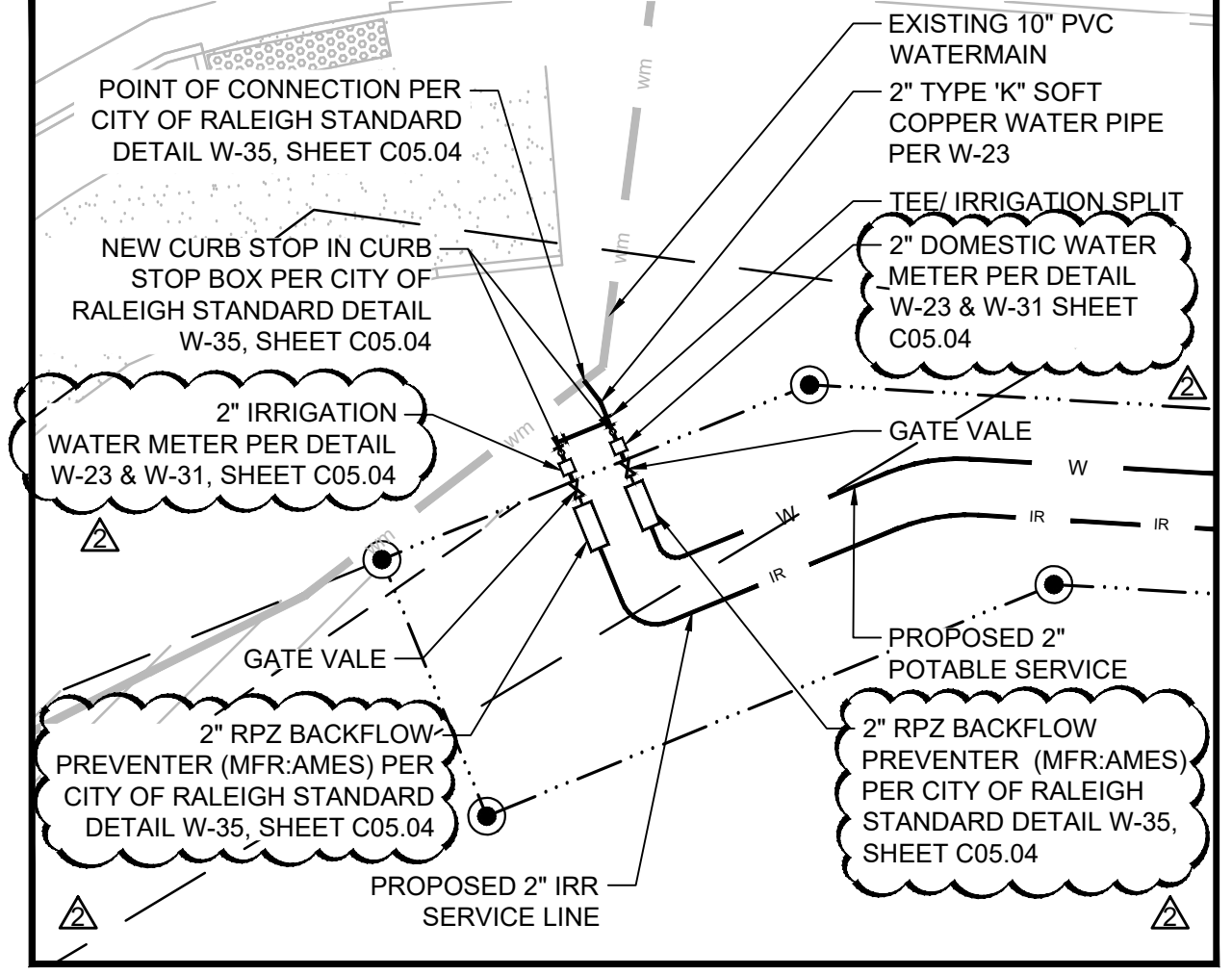
PLAN VIEW SCALE AS NOTED



PLAN VIEW SCALE AS NOTED

UTILITY SYSTEM DATA	
<b>WATER</b>	
W1	POINT OF CONNECTION TO BUILDING WATER CONNECTION.
W2	395 LF OF 2" POLY PIPE WATER SERVICE LATERAL
W3	2" POLY PIPE IRRIGATION WATER SERVICE LATERAL. SEE IRRIGATION PLAN FOR MORE INFORMATION.
W4	SEE SERVICE CONNECTION DETAIL, THIS SHEET
<b>SANITARY</b>	
S1	4-INCH SEWER STUBOUT FROM BUILDING (BY PLUMBING CONTRACTOR). REFER TO BUILDING PLUMBING PLAN FOR EXACT LOCATION. CONSTRUCT SEWER CLEANOUTS. CLEANOUT TOP ELEVATION SHALL MATCH PROPOSED GRADE ELEVATION. IE = 388.70'
S2	52 LF - 6" SDR26 @ 3.50% MINIMUM SLOPE.
S3	CONSTRUCT SEWER CLEANOUT @ IE = 386.90'.
S4	27 LF - 6" SDR26 @ 2.40% MINIMUM SLOPE.
S5	POINT OF CONNECTION. NEW 6" SEWER PIPE TO BE CONNECTED TO EXISTING PRIVATE SEWER MANHOLE @ IE = 386.25. CORE DRILL EXISTING STRUCTURE MANHOLE FOR NEW CONNECTION & SEAL WITH NON-SHRINK GROUT.
<b>ELECTRIC</b>	
E1	MAIN ELECTRIC SERVICE ENTRANCE & DISCONNECT (SEE ARCHITECTURAL PLANS)
E2	UNDERGROUND SECONDARY ELECTRICAL SERVICE. (GC SHALL COORDINATE WITH UTILITY PROVIDER FOR RESPONSIBILITY AND CONSTRUCTION REQUIREMENTS)
E3	NEW PAD MOUNTED TRANSFORMER. SEE ELECTRICAL PLANS. (GC SHALL COORDINATE WITH POWER PROVIDER FOR RESPONSIBILITY AND CONSTRUCTION REQUIREMENTS)
E4	UNDERGROUND PRIMARY ELECTRICAL SERVICE. (GC SHALL COORDINATE WITH POWER PROVIDER FOR RESPONSIBILITY AND CONSTRUCTION REQUIREMENTS)
<b>TELEPHONE</b>	
T1	TELEPHONE/CABLE SERVICE ENTRANCE (SEE ARCHITECTURAL PLANS)
T2	TELEPHONE/CABLE SERVICE ENTRANCE (SEE ARCHITECTURAL PLANS)
<b>GAS</b>	
G1	GAS SERVICE ENTRANCE AND GAS METER (SEE ARCHITECTURAL PLANS)
G2	POINT OF CONNECTION (GC SHALL COORDINATE WITH POWER PROVIDER FOR RESPONSIBILITY AND CONSTRUCTION REQUIREMENTS)

**SERVICE CONNECTION DETAIL 1" = 10'**



**SITE PERMITTING APPROVAL**

**Water and Sewer Permits (if applicable)**  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # N/A

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # N/A

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval \_\_\_\_\_  
 Raleigh Water Review Officer \_\_\_\_\_

LEGEND	
TYP	TYPICAL
H/C	HANDICAP
R	RADIUS
RW	RIGHT-OF-WAY
[Symbol]	PROPOSED CONCRETE 6" OR LESS
[Symbol]	PROPOSED CONCRETE GREATER THAN 6"
[Symbol]	PROPERTY LINE
[Symbol]	PROPOSED SANITARY SERVICE
[Symbol]	PROPOSED GREASE WASTE
[Symbol]	PROPOSED FORCE MAIN
[Symbol]	PROPOSED WATER MAIN
[Symbol]	PROPOSED FIRE MAIN
[Symbol]	PROPOSED ELECTRIC SERVICE
[Symbol]	PROPOSED GAS SERVICE
[Symbol]	PROPOSED TELEPHONE SERVICE
[Symbol]	EXISTING SANITARY PIPE
[Symbol]	EXISTING WATER PIPE
[Symbol]	EXISTING RECLAIM WATER PIPE
[Symbol]	EXISTING UNDERGROUND POWER
[Symbol]	EXISTING OVERHEAD WIRE
[Symbol]	EXISTING GAS LINE
[Symbol]	EXISTING TELEPHONE LINE

**UTILITY NOTES**

- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND ADVISE THE ENGINEER OF RECORD OF ANY CONFLICTS IMMEDIATELY.
- CONTRACTOR SHALL NOTIFY AND COORDINATE WATER SERVICE WITH LOCAL MUNICIPALITIES UTILITIES DEPARTMENT.
- CONTRACTOR SHALL NOTIFY AND COORDINATE SEWER SERVICE WITH LOCAL MUNICIPALITIES UTILITIES DEPARTMENT.
- CONTRACTOR TO COORDINATE INSTALLATION OF ELECTRICAL POWER SERVICE WITH LOCAL ELECTRIC COMPANY.
- CONTRACTOR TO INSTALL PVC CONDUIT FOR TELEPHONE SERVICE (TO PROPERTY LINE) AND COORDINATE INSTALLATION OF SERVICE WITH TELEPHONE OPERATIONS.
- SEE SURVEY FOR LOCATION OF OTHER EXISTING UTILITIES.
- SEE CIVIL SPECIFICATIONS AND REFERENCE DRAWING SHEETS FOR ADDITIONAL UTILITY NOTES.
- ALL ON-SITE PVC WATER SERVICE AFTER METER SHALL BE SCHEDULE 80 OR PRESSURE RATED HDPE (POLY PIPE).
- ALL CROSSINGS OF WATER AND SEWER LINES MUST MAINTAIN PROPER CLEARANCE (SEE CIVIL SPECIFICATIONS AND REFERENCE DRAWING SHEETS).
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE CITY/TOWNS STANDARD CONSTRUCTION AND UTILITY REQUIREMENTS.
- TREES SHALL NOT BE PLANTED WITHIN 10 FEET FROM THE WATER MAIN.
- ALL CLEANOUT TOP ELEVATION SHALL MATCH FINISH GRADE ELEVATIONS.

**ATTENTION CONTRACTORS**

THE CONSTRUCTION CONTRACTOR RESPONSIBLE FOR THE EXTENSION OF WATER, SEWER, AND/OR REUSE, AS APPROVED IN THESE PLANS, IS RESPONSIBLE FOR CONTACTING THE PUBLIC WORKS DEPARTMENT AT (919) 996-2409, AND THE PUBLIC UTILITIES DEPARTMENT AT (919) 996-4540 AT LEAST TWENTY FOUR HOURS PRIOR TO BEGINNING ANY OF THEIR CONSTRUCTION.

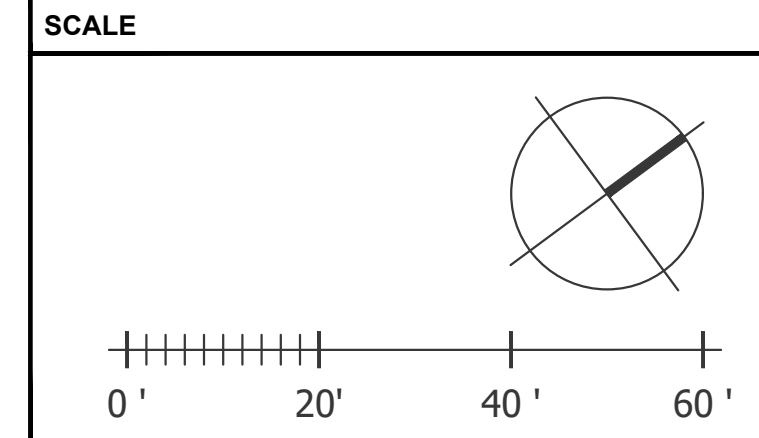
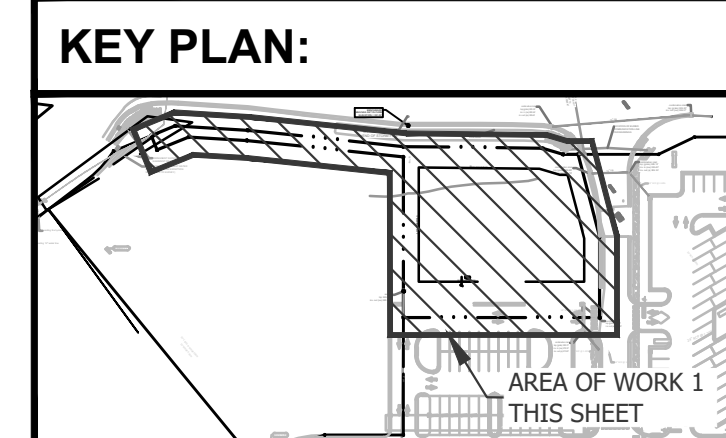
FAILURE TO NOTIFY BOTH CITY DEPARTMENTS IN ADVANCE OF BEGINNING CONSTRUCTION WILL RESULT IN THE ISSUANCE OF MONETARY FINES, AND REQUIRE REINSTALLATION OF ANY WATER OR SEWER FACILITIES NOT INSPECTED AS A RESULT OF THIS NOTIFICATION FAILURE.

FAILURE TO CALL FOR INSPECTION, INSTALL A DOWNSTREAM PLUG, HAVE PERMITTED PLANS ON THE JOBSITE, OR ANY OTHER VIOLATION OF CITY OF RALEIGH STANDARDS WILL RESULT IN A FINE AND POSSIBLE EXCLUSION FROM FUTURE WORK IN THE CITY OF RALEIGH.

**STANDARD UTILITY NOTES**

FOR STANDARD UTILITY NOTES REFERENCE DETAIL SHEET, C05.05.

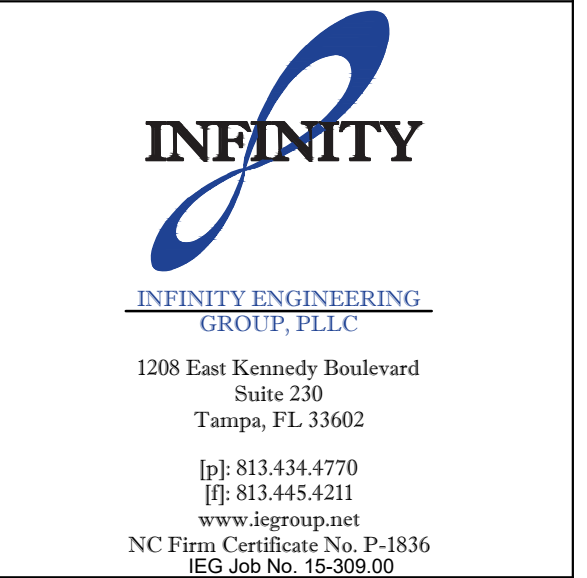
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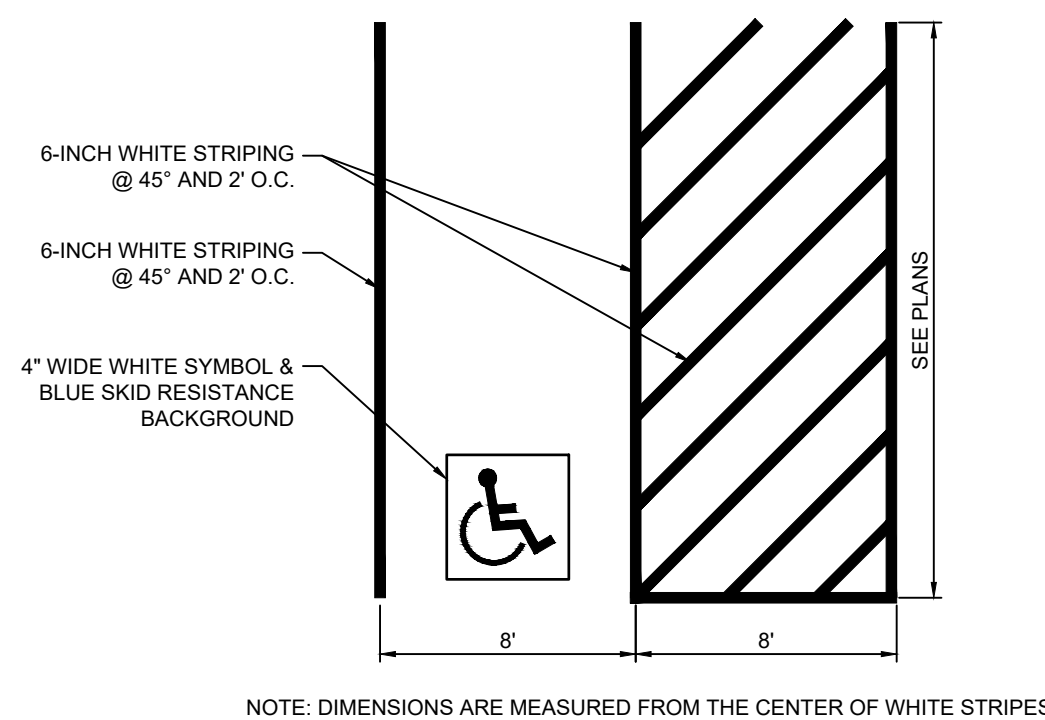
ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		10/28/24	TRC ROUND 1
		01/03/25	TRC ROUND 2

PROJECT INFORMATION BLOCK  
 JOB # 230634  
 DATE: 08/16/2024  
 DRAWN BY: IEG  
 CHECKED BY: DC

SHEET TITLE  
 UTILITY PLAN  
 SHEET NUMBER  
 C04.01

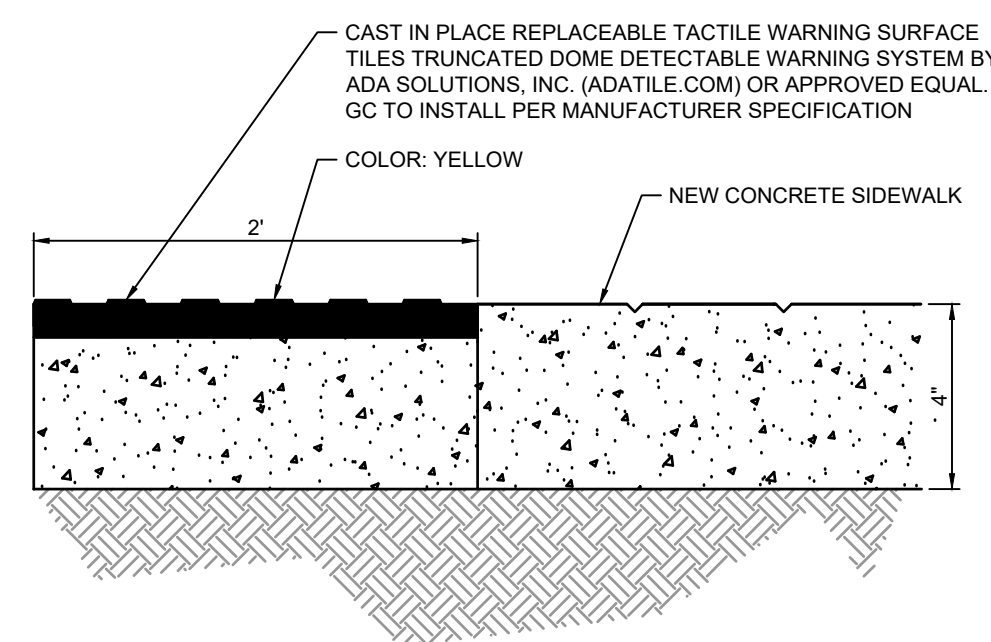






NOTE: DIMENSIONS ARE MEASURED FROM THE CENTER OF WHITE STRIPES

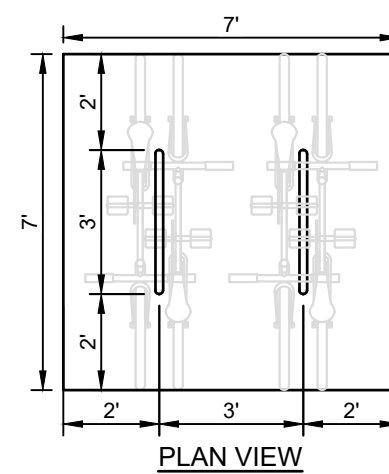
**TYPICAL ACCESSIBLE PARKING STRIPING** SCALE NTS 1



**DETECTABLE WARNING** SCALE NTS 2

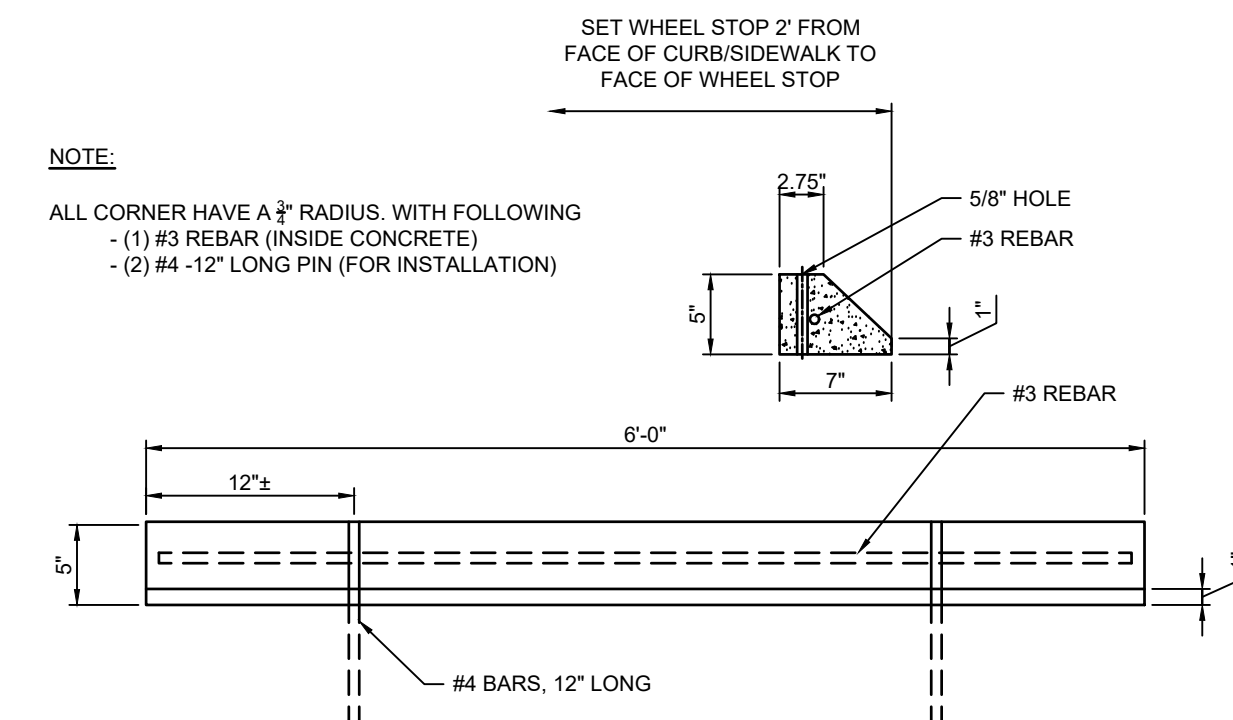


ISOMETRIC



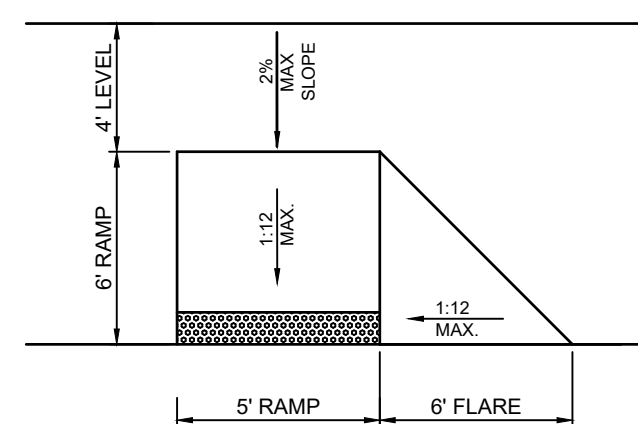
NOTES:  
 MANUFACTURE: WAUSAU TILE INC. BRAND  
 PRODUCT #: MF9024  
 SIZE: 36" x 32.5" H  
 WEIGHT: 81 LB  
 FINISH: ALUMINUM  
 FEATURES: CIRCLE BIKE RACK  
 MOUNTING: SURFACE MOUNT (ASSEMBLY REQUIRED)

**RIBBON BICYCLE RACK** SCALE NTS 3



NOTE:  
 ALL CORNER HAVE A 3" RADIUS, WITH FOLLOWING  
 - (1) #3 REBAR (INSIDE CONCRETE)  
 - (2) #4 -12" LONG PIN (FOR INSTALLATION)

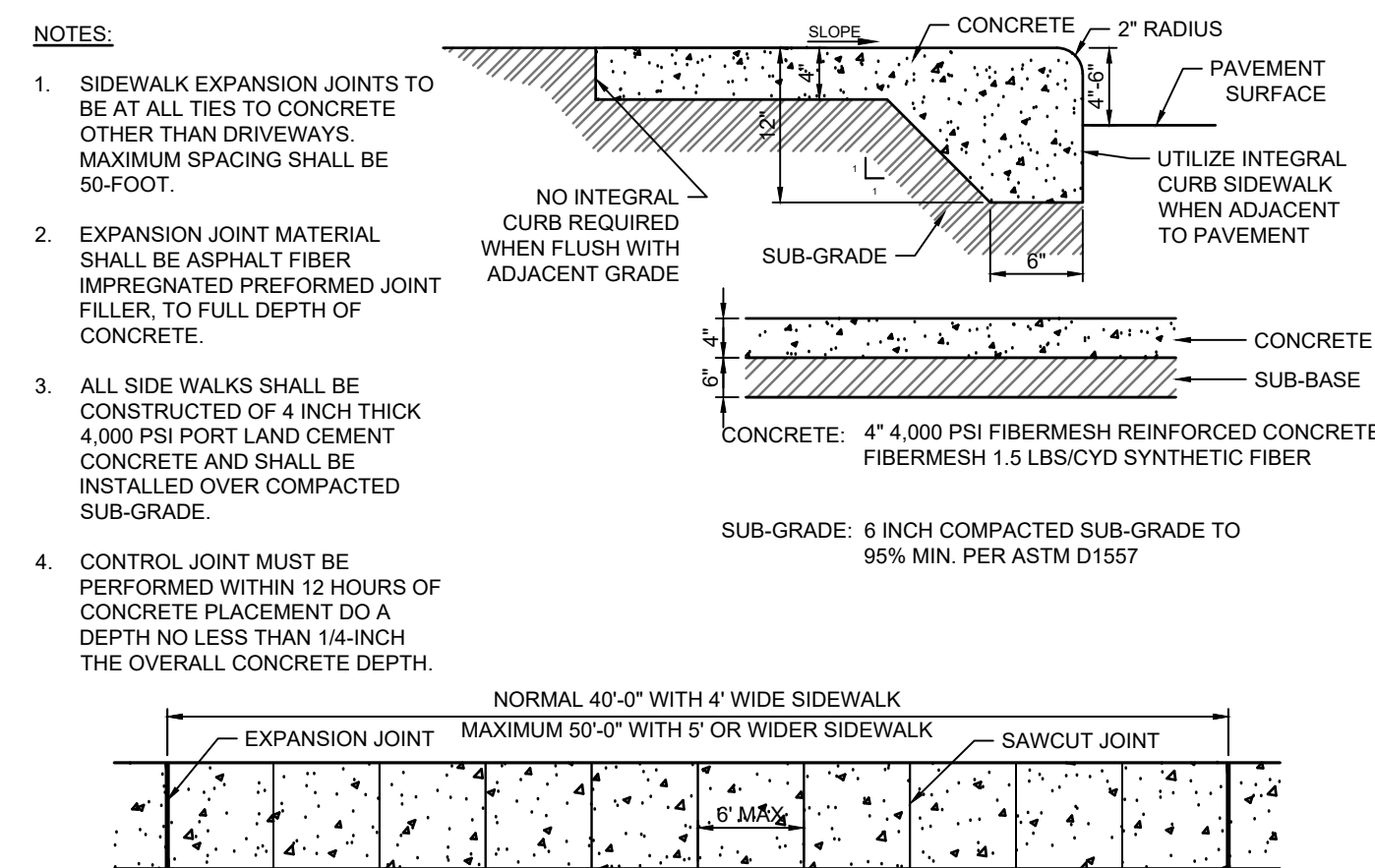
**WHEEL STOP DETAIL** SCALE NTS 4



**ACCESS RAMP CONSTRUCTION NOTES**

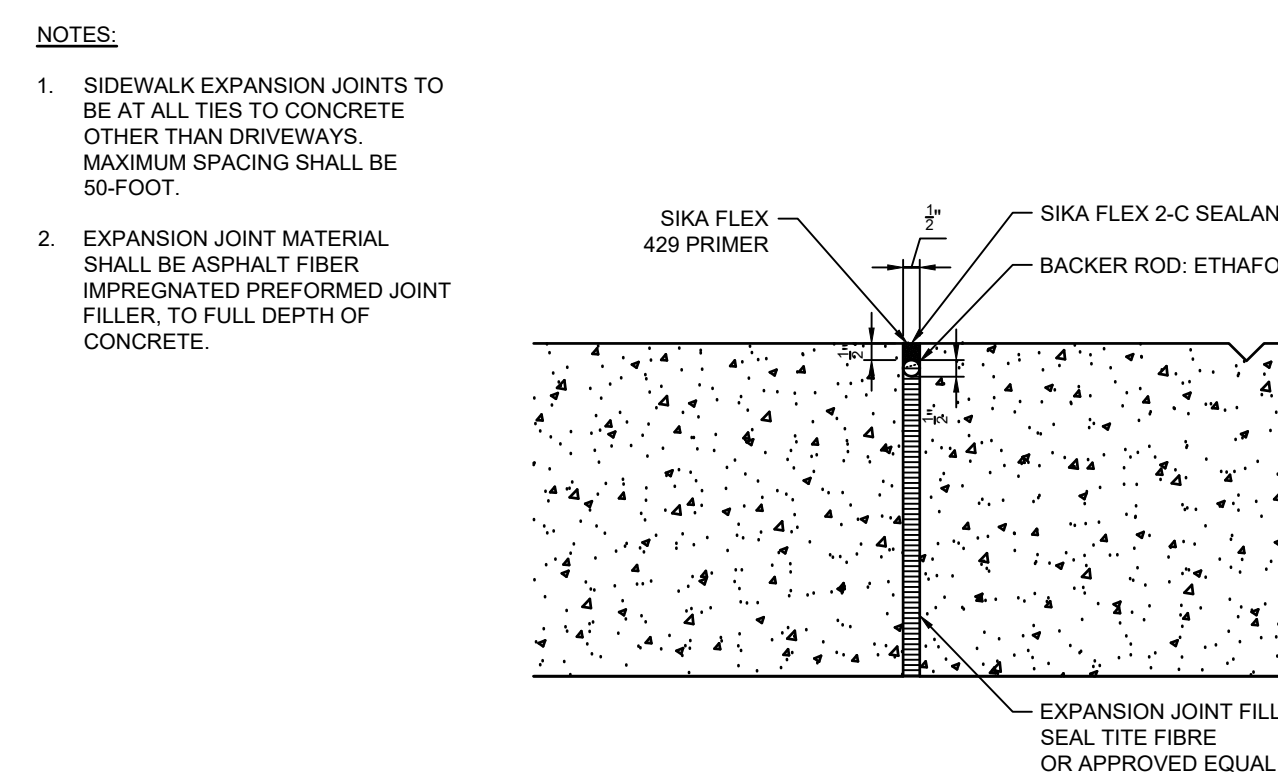
1. THE SURFACE OF THE RAMP SHALL HAVE A TRANSVERSE BROOMED SLIP-RESISTANT SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDE
2. RAMP CONSTRUCTION SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.

**TYPICAL ADA RAMP** SCALE NTS 5



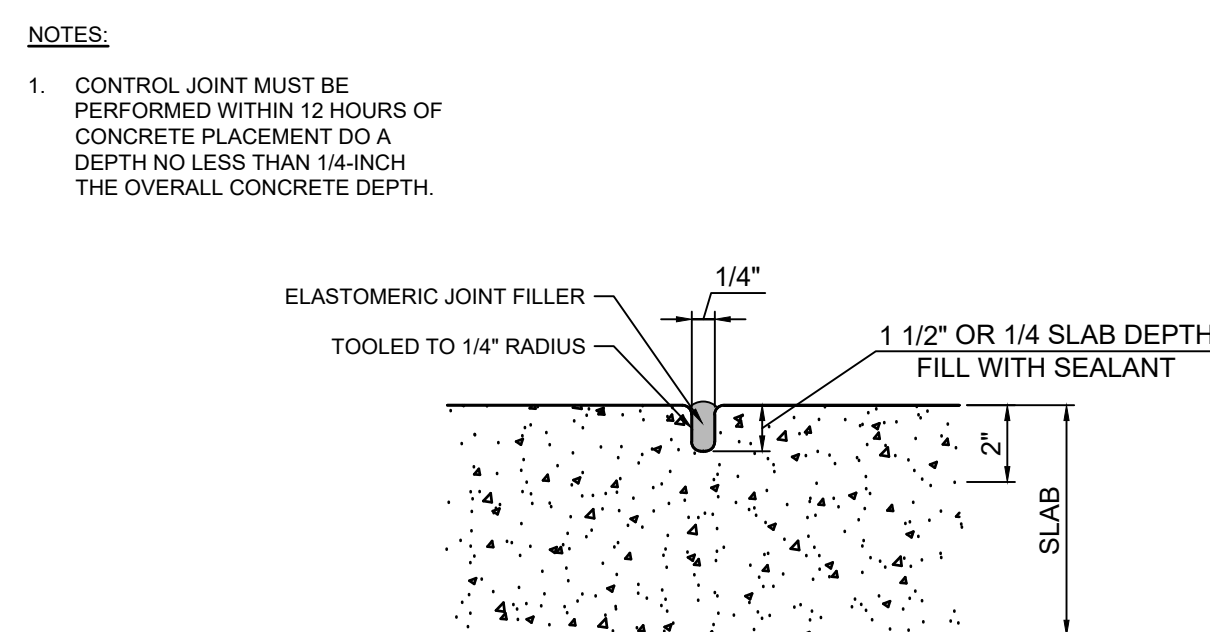
- NOTES:
1. SIDEWALK EXPANSION JOINTS TO BE AT ALL TIES TO CONCRETE OTHER THAN DRIVEWAYS. MAXIMUM SPACING SHALL BE 50'-0".
  2. EXPANSION JOINT MATERIAL SHALL BE ASPHALT FIBER IMPREGNATED PREFORMED JOINT FILLER, TO FULL DEPTH OF CONCRETE.
  3. ALL SIDE WALKS SHALL BE CONSTRUCTED OF 4 INCH THICK 4,000 PSI PORT LAND CEMENT CONCRETE AND SHALL BE INSTALLED OVER COMPACTED SUB-GRADE.
  4. CONTROL JOINT MUST BE PERFORMED WITHIN 12 HOURS OF CONCRETE PLACEMENT TO A DEPTH NO LESS THAN 1/4-INCH THE OVERALL CONCRETE DEPTH.

**SIDEWALK** SCALE NTS 6



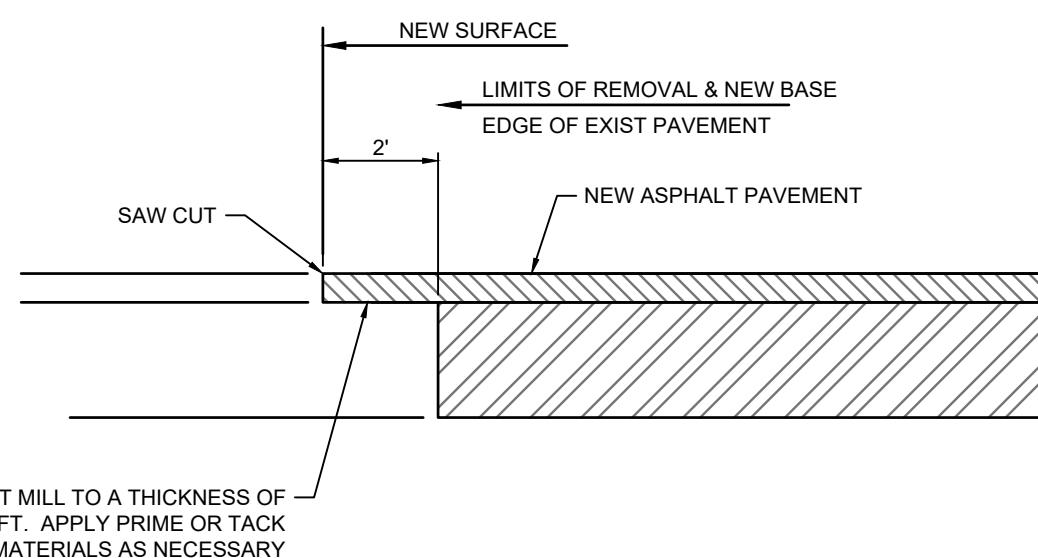
- NOTES:
1. SIDEWALK EXPANSION JOINTS TO BE AT ALL TIES TO CONCRETE OTHER THAN DRIVEWAYS. MAXIMUM SPACING SHALL BE 50'-0".
  2. EXPANSION JOINT MATERIAL SHALL BE ASPHALT FIBER IMPREGNATED PREFORMED JOINT FILLER, TO FULL DEPTH OF CONCRETE.

**EXPANSION JOINT** SCALE NTS 7



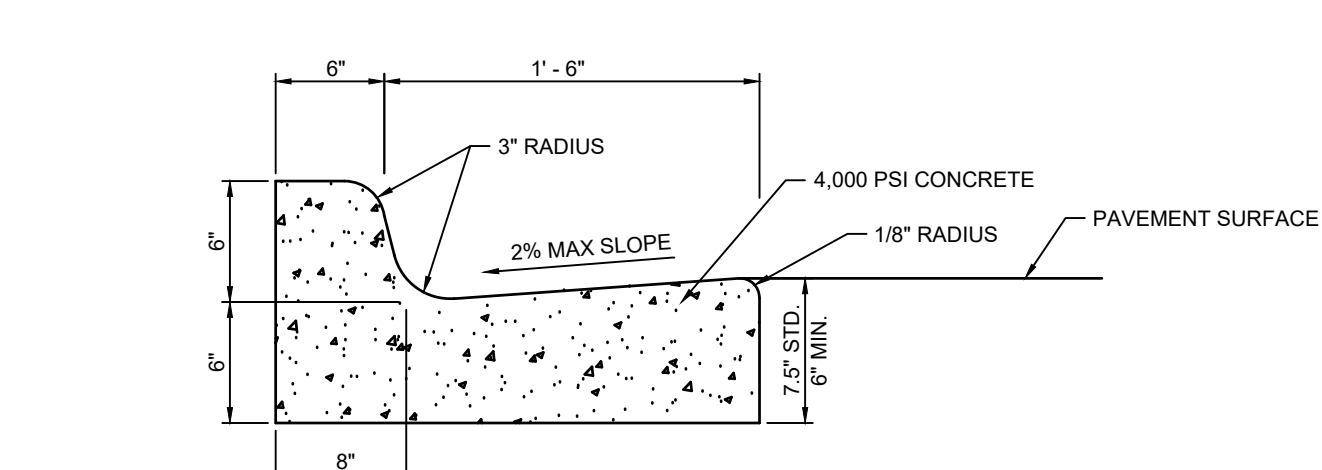
- NOTES:
1. CONTROL JOINT MUST BE PERFORMED WITHIN 12 HOURS OF CONCRETE PLACEMENT TO A DEPTH NO LESS THAN 1/4-INCH THE OVERALL CONCRETE DEPTH.

**SAWCUT CONTROL JOINT** SCALE NTS 8

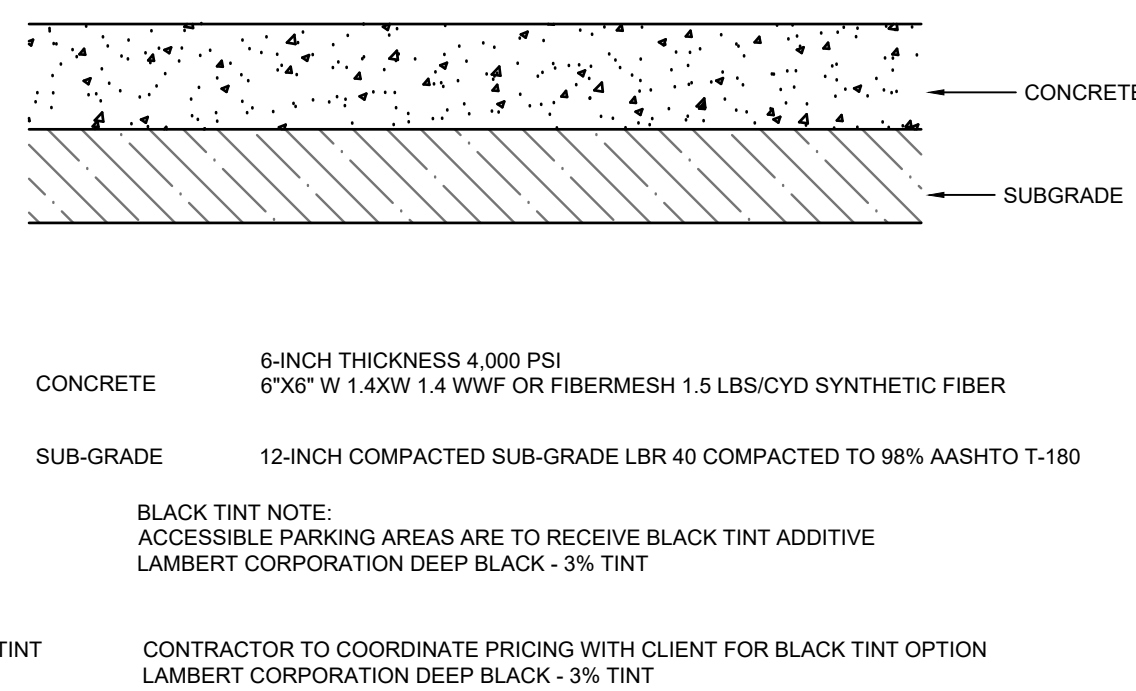


ASPHALT MILL TO A THICKNESS OF FINAL LIFT. APPLY PRIME OR TACK MATERIALS AS NECESSARY

**EXISTING ASPHALT PAVEMENT CONNECTION** SCALE NTS 9

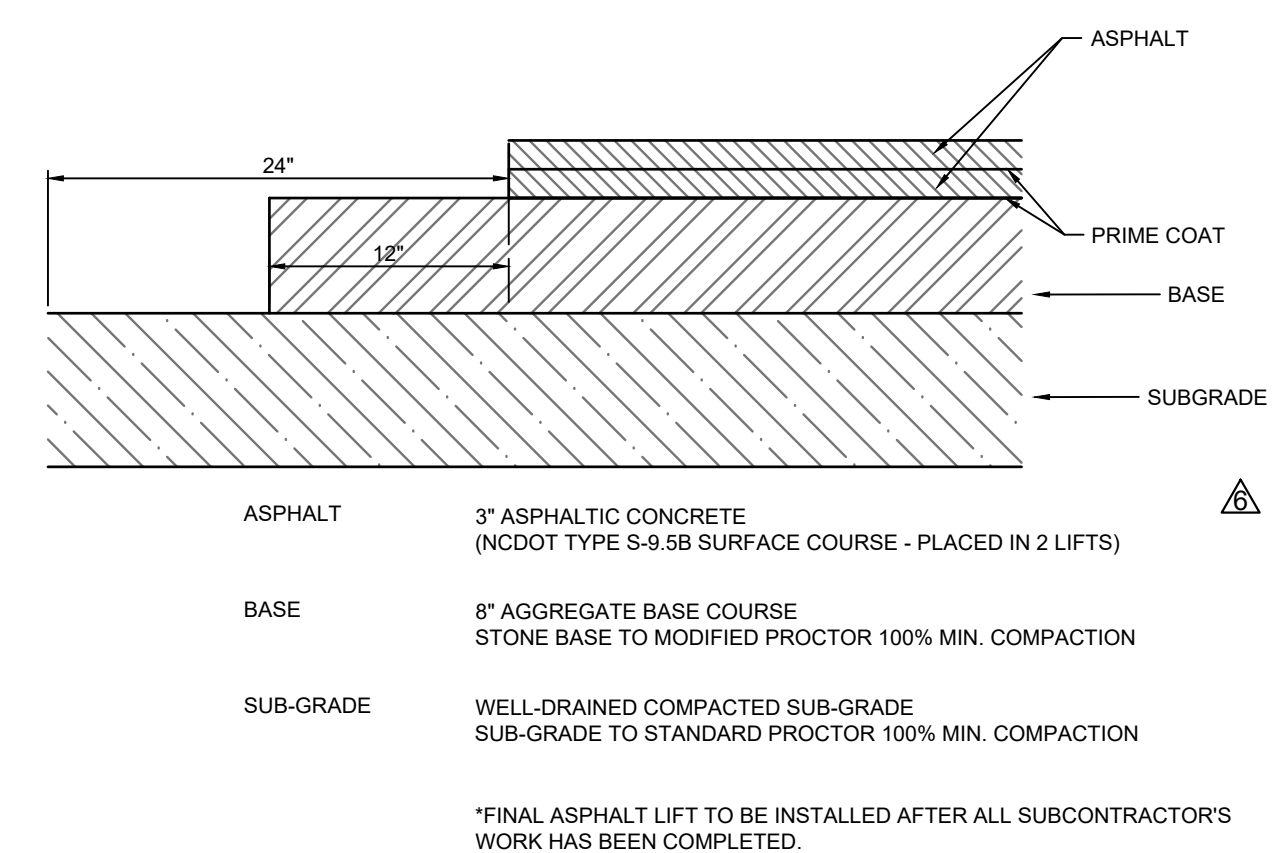


**24" CURB AND GUTTER** SCALE NTS 10



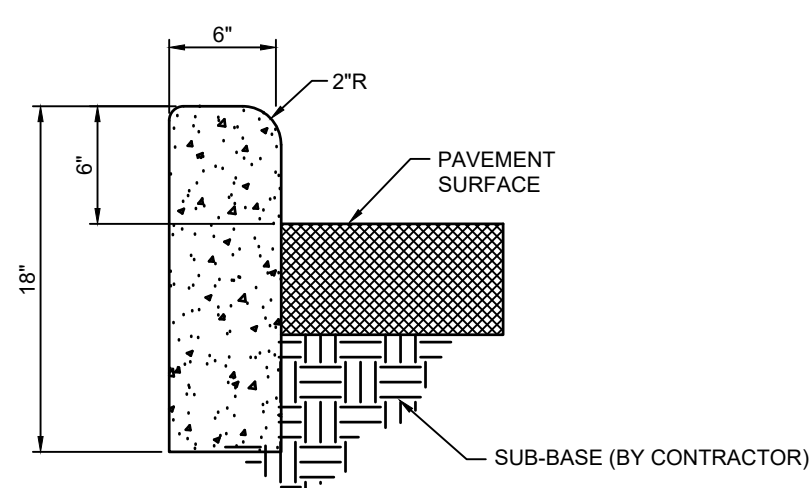
CONCRETE 6-INCH THICKNESS 4,000 PSI 6'X6" W 1.4XW 1.4 WWF OR FIBERMESH 1.5 LBS/CYD SYNTHETIC FIBER  
 SUB-GRADE 12-INCH COMPACTED SUB-GRADE LBR 40 COMPACTED TO 98% AASHTO T-180  
 BLACK TINT NOTE: ACCESSIBLE PARKING AREAS ARE TO RECEIVE BLACK TINT ADDITIVE LAMBERT CORPORATION DEEP BLACK - 3% TINT  
 BLACK TINT CONTRACTOR TO COORDINATE PRICING WITH CLIENT FOR BLACK TINT OPTION LAMBERT CORPORATION DEEP BLACK - 3% TINT

**CONCRETE PAVEMENT** SCALE NTS 11



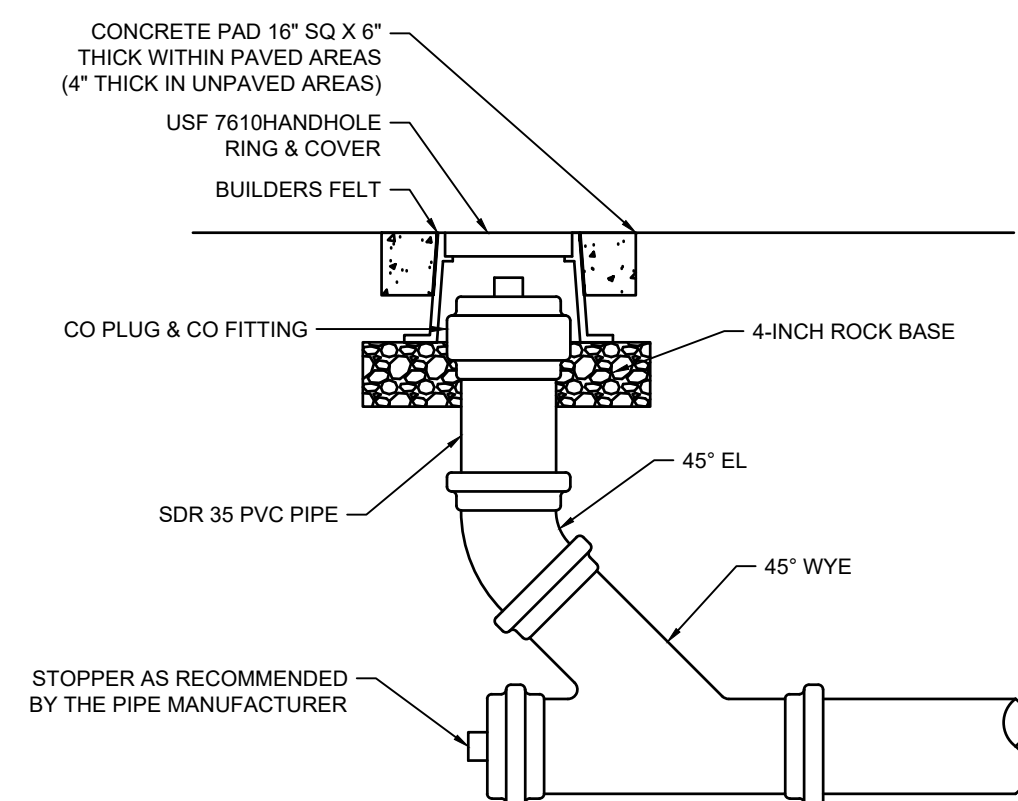
ASPHALT 3" ASPHALTIC CONCRETE (NCDOT TYPE S-9.5B SURFACE COURSE - PLACED IN 2 LIFTS)  
 BASE 6" AGGREGATE BASE COURSE STONE BASE TO MODIFIED PROCTOR 100% MIN. COMPACTION  
 SUB-GRADE WELL-DRAINED COMPACTED SUB-GRADE SUB-GRADE TO STANDARD PROCTOR 100% MIN. COMPACTION  
 \*FINAL ASPHALT LIFT TO BE INSTALLED AFTER ALL SUBCONTRACTOR'S WORK HAS BEEN COMPLETED.

**ASPHALT PAVEMENT** SCALE NTS 12

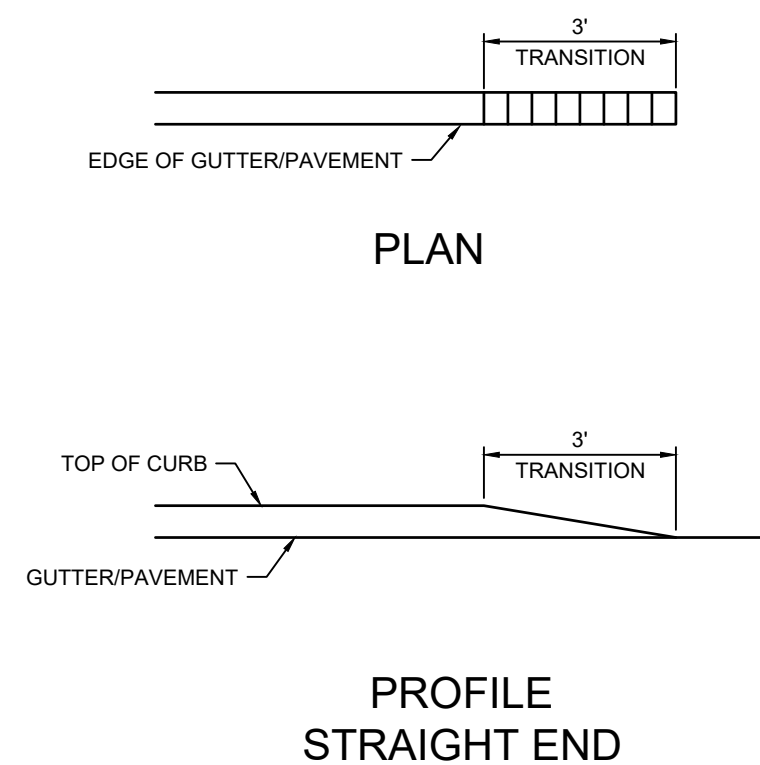


NOTE:  
 TRANSVERSE JOINTS SHALL BE 1/2" FULL DEPTH ASPHALT IMPREGNATED FIBER EXP. JOINT RECESSED 1/4" IN FROM THE FRONT FACE AND TOP OF THE CURB @ 20'-0" MAXIMUM.

**6"x18" CURB** SCALE NTS 13



**CLEANOUT** SCALE NTS 14



**CURB TRANSITION DETAIL** SCALE NTS 15

**SDP-24-07**

ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		01/03/25	TRC ROUND 2

PROJECT INFORMATION BLOCK

JOB #	230634
DATE:	08/16/2024
DRAWN BY:	IEG
CHECKED BY:	DC



### TF4080 Form Round Concrete Planter



**Diameter:** 30" dia.  
**Height:** 17"  
**Weight:** 440 lbs.  
**Material:** Concrete  
**Shape:** Round  
**Anchoring:** Includes (4) 1/2" threaded inserts on bottom for optional anchoring.  
**Reinforcement:** Yes  
**WEATHER:**  
**Drain/Hole:** Ø22 SAND

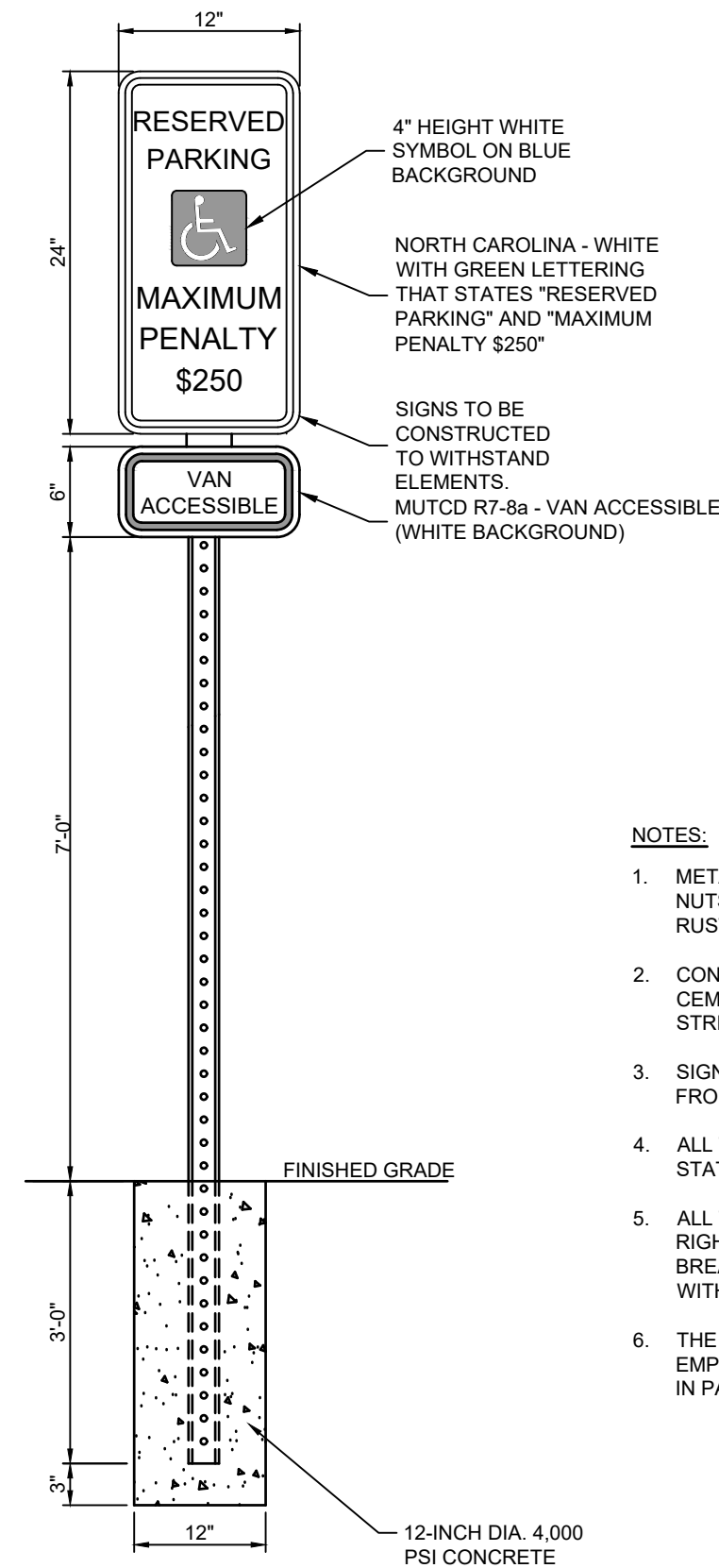
**TF4080 FORM ROUND CONCRETE PLANTER** SCALE NTS **3**

### TF5021 Concrete Bench



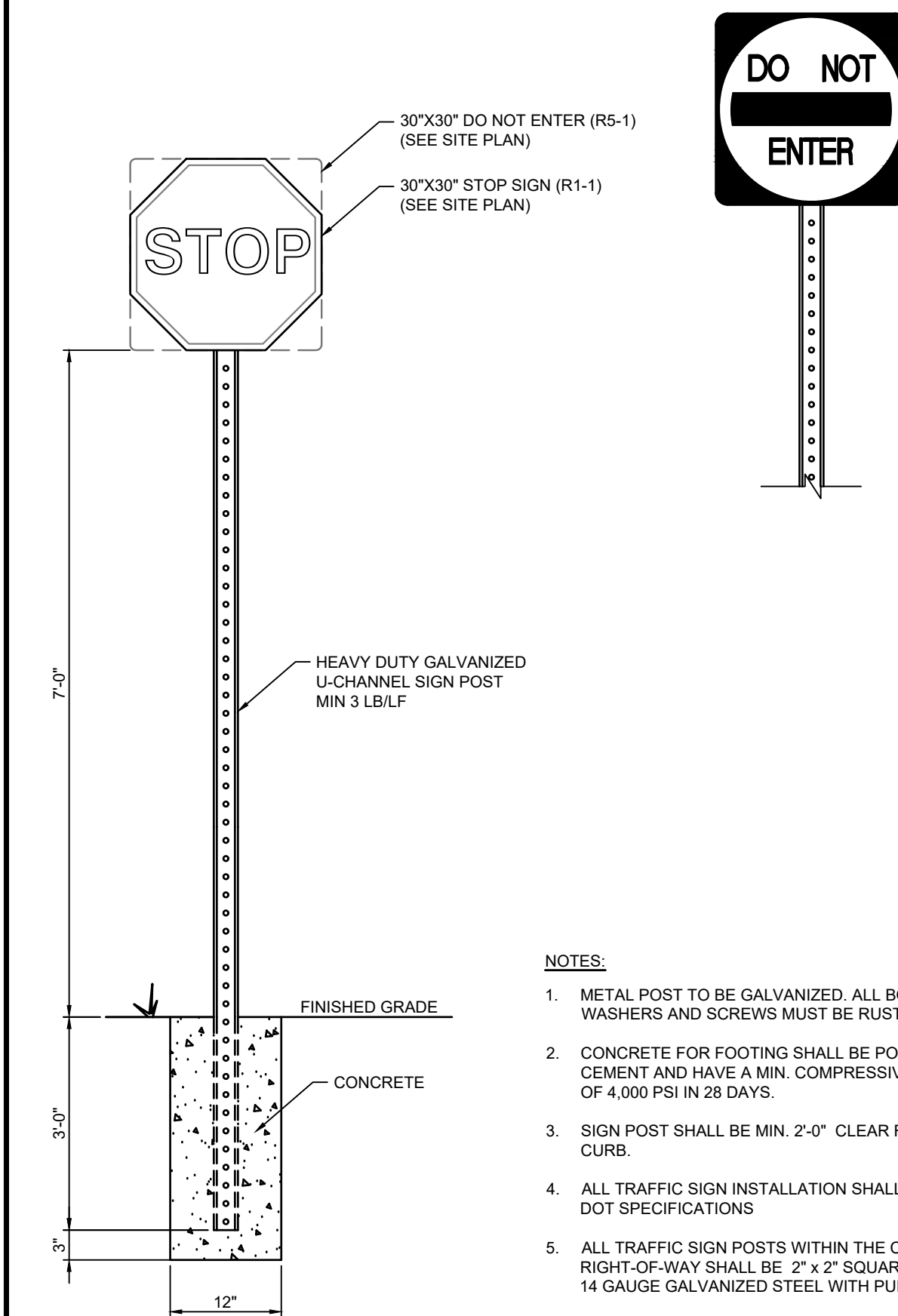
**Length:** 78"  
**Width:** 31"  
**Height:** 19"  
**Weight:** 1700 lbs.  
**Material:** Concrete  
**Shape:** Rectangle  
**Anchoring:** Includes (4) 1/2" threaded inserts on bottom for anchoring.  
**WEATHER:**  
**Drain/Hole:** Ø22 SAND

**TF5021 CONCRETE BENCH** SCALE NTS **4**



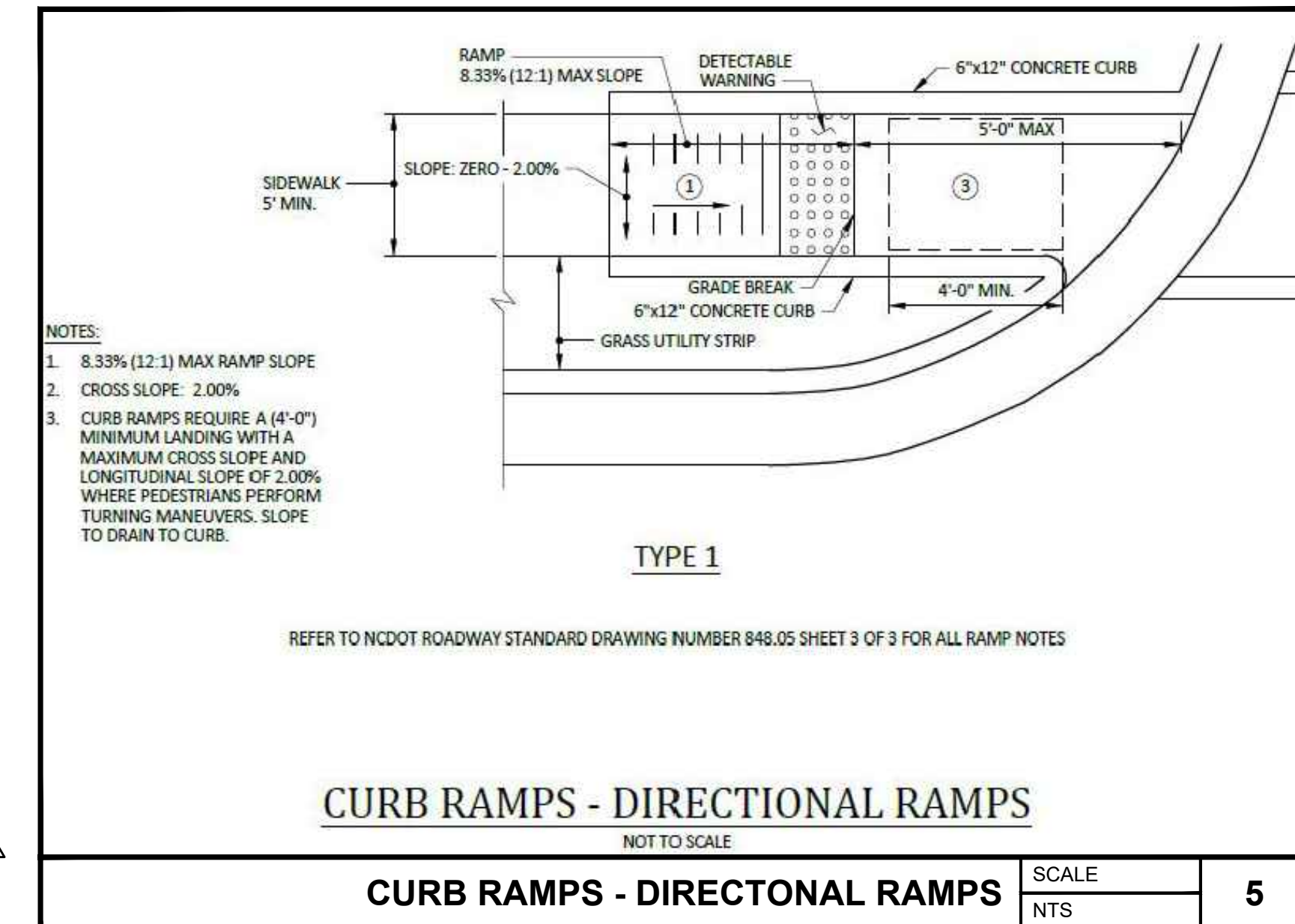
- NOTES:**
- METAL POST TO BE GALVANIZED ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.
  - CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS.
  - SIGN POST SHALL BE MINIMUM 2-FOOT CLEAR FROM BACK OF CURB.
  - ALL TRAFFIC SIGN INSTALLATION SHALL BE PER STATE DOT.
  - ALL TRAFFIC SIGN POSTS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE 2' x 2' SQUARE BREAK-AWAY 14 GAUGE GALVANIZED STEEL WITH PUNCHED HOLES.
  - THE TAPCO V-LOC VS1P-350 SYSTEM SHALL BE EMPLOYED WHERE SIGN POSTS ARE INSTALLED IN PAVED AREAS.

**ACCESSIBLE PARKING SIGN** SCALE NTS **2**



- NOTES:**
- METAL POST TO BE GALVANIZED ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.
  - CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MIN. COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS.
  - SIGN POST SHALL BE MIN. 2'-0" CLEAR FROM BACK OF CURB.
  - ALL TRAFFIC SIGN INSTALLATION SHALL BE PER STATE DOT SPECIFICATIONS.
  - ALL TRAFFIC SIGN POSTS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE 2' x 2' SQUARE BREAK-AWAY 14 GAUGE GALVANIZED STEEL WITH PUNCHED HOLES.
  - THE TAPCO V-LOC VS1P-350 SYSTEM SHALL BE EMPLOYED WHERE SIGN POSTS ARE INSTALLED IN PAVED AREAS.

**MUTCD SIGN(S)** SCALE NTS **1**



- NOTES:**
- 8.33% (12:1) MAX RAMP SLOPE
  - CROSS SLOPE: 2.00%
  - CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

**CURB RAMPS - DIRECTIONAL RAMPS** SCALE NTS **5**



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 1208 East Kennedy Boulevard  
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 (813) 445-4211  
 www.ieggroup.net  
 NC Firm Certificate No. P-1836  
 IEG Job No. 15-309.00

**SEAL**  
 NISIT SAPPARKHAO, P.E.  
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ISSUE	BY	DATE	DESCRIPTION
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**PROJECT INFORMATION BLOCK**

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CHECKED BY:	DC

**SHEET TITLE**

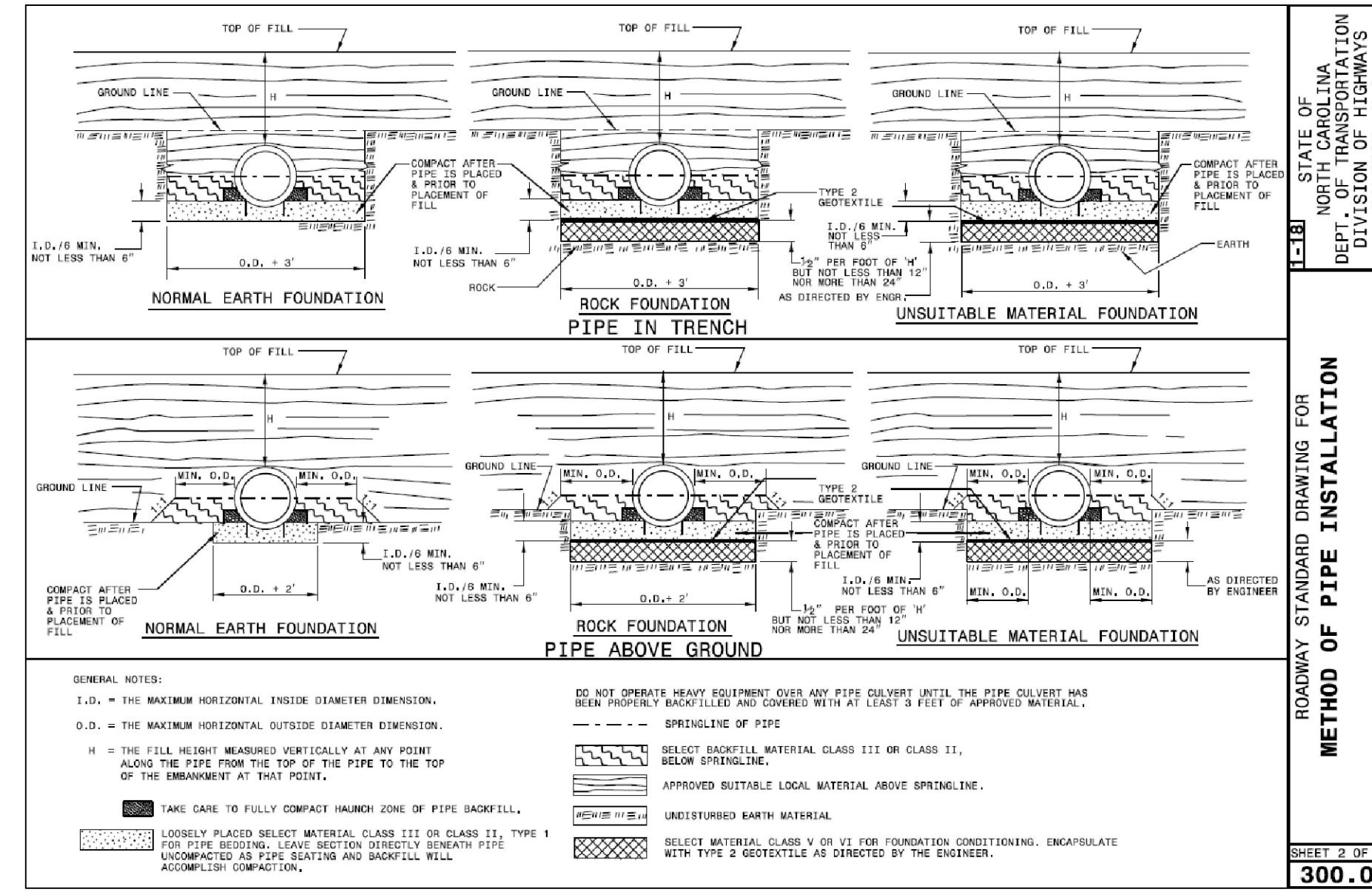
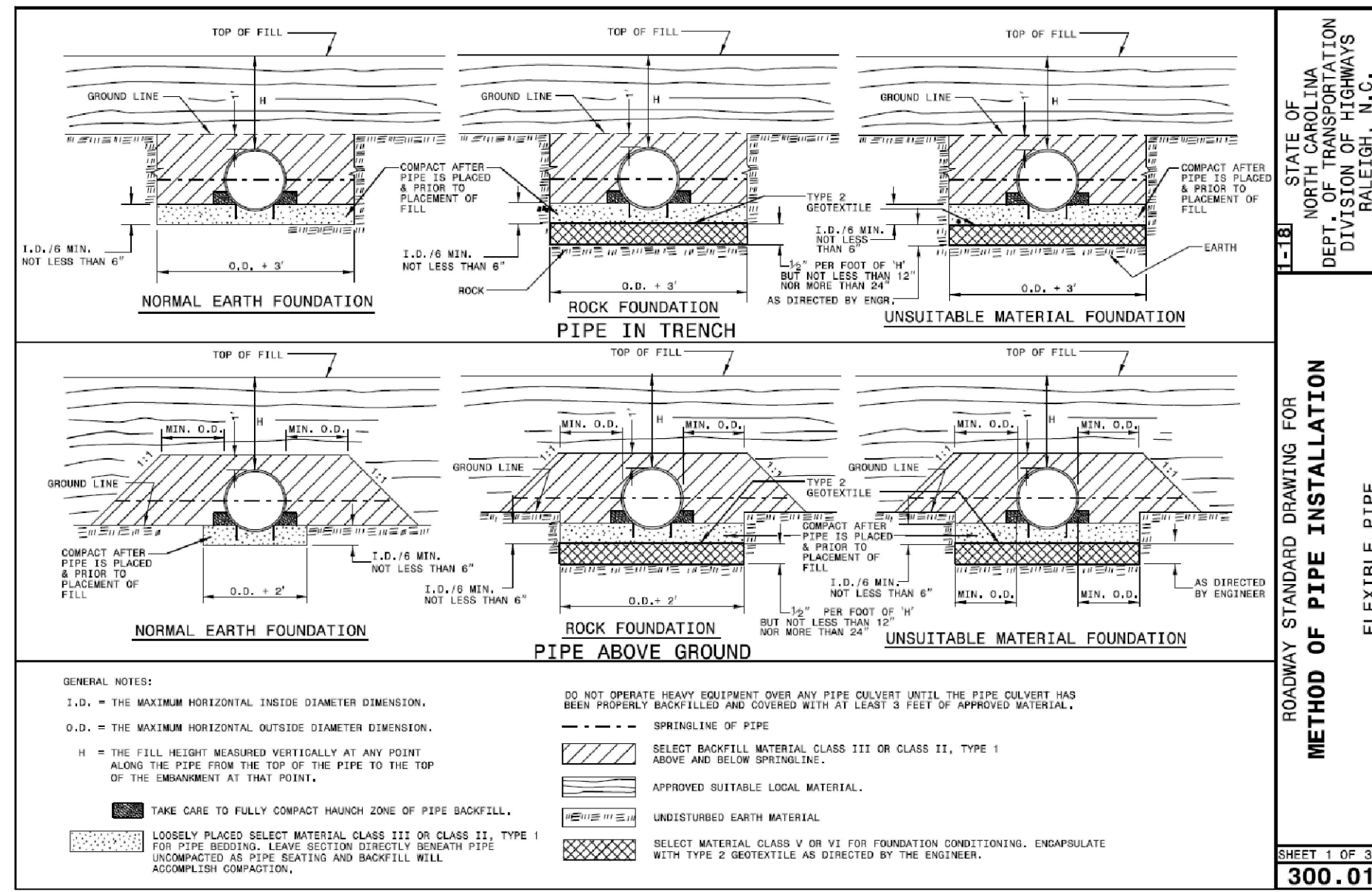
DETAILS

**SHEET NUMBER**

C05.02

**SDP-24-07**





**FLEXIBLE PIPE**

Round Corrugated Steel Pipe 2.25 x 1/4 corrugation **				
Diameter (Inches)	Minimum cover (Inches)	Maximum Height of Cover (feet)		
		(6)	(12)	(18)
12	12	204	206	208
15	12	162	204	204
18	12	135	199	209
21	12	116	148	204
24	12	100	126	178
30	12	79	100	142
36	12	65	83	117
42	12	55	70	100
48	12	48	61	87
54	12	43	54	77
60	12	39	49	71
72	12	33	41	61
78	12	31	39	59
84	12	29	37	57

Round Corrugated Aluminum Pipe 2.25 x 1/4 corrugation **				
Diameter (Inches)	Minimum cover (Inches)	Maximum Height of Cover (feet)		
		(6)	(12)	(18)
12	12	123	185	218
15	12	99	123	174
18	12	81	102	144
21	12	69	87	100
24	12	60	76	108
27	12	54	67	95
30	12	49	60	85
36	12	40	50	71
42	12	34	43	60
48	12	30	38	52
54	12	27	35	48
60	12	25	33	46
66	12	23	31	44
72	12	21	29	42
78	12	20	28	41
84	12	19	27	40

\*\* FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS:  
 HDPE - \* (Minimum fill) 2' for pipe diameters  $\geq 12"$  and  $\leq 60"$   
 \* (Maximum fill) 30' for pipe diameters  $\geq 36"$  and  $\leq 60"$   
 PVC - \* (Minimum fill) 2' for pipe diameters  $\geq 12"$  and  $\leq 36"$   
 \* (Maximum fill) 30' for pipe diameters  $\geq 12"$  and  $\leq 36"$

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS  
 1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

**RIGID PIPE**

RCP - \* (Minimum fill) 1' for Class IV & Class V  
 2' for Class III & Class II  
 \* (Maximum fill) 10' - Class II pipe  
 20' - Class III pipe  
 30' - Class IV pipe  
 40' - Class V pipe

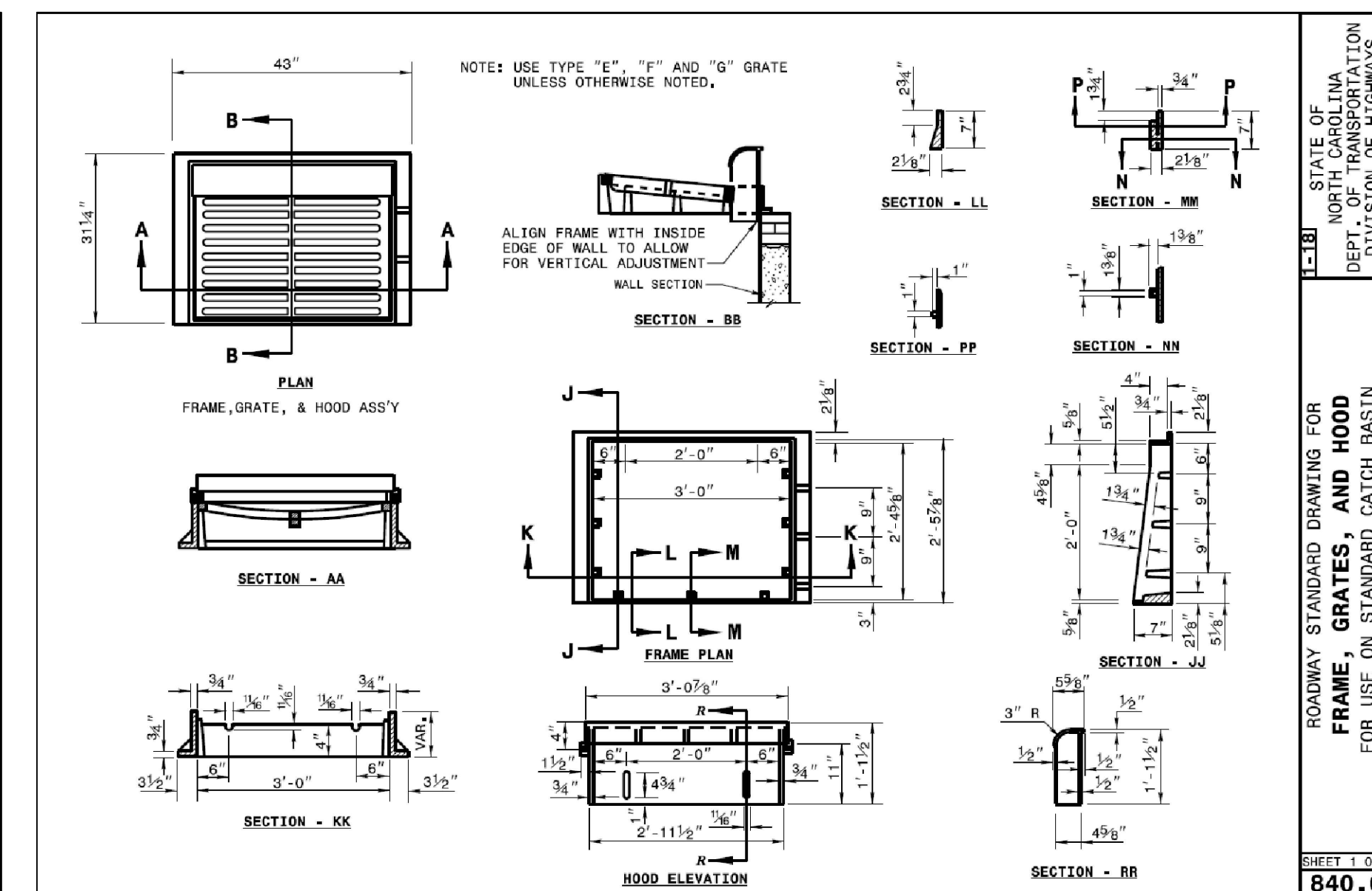
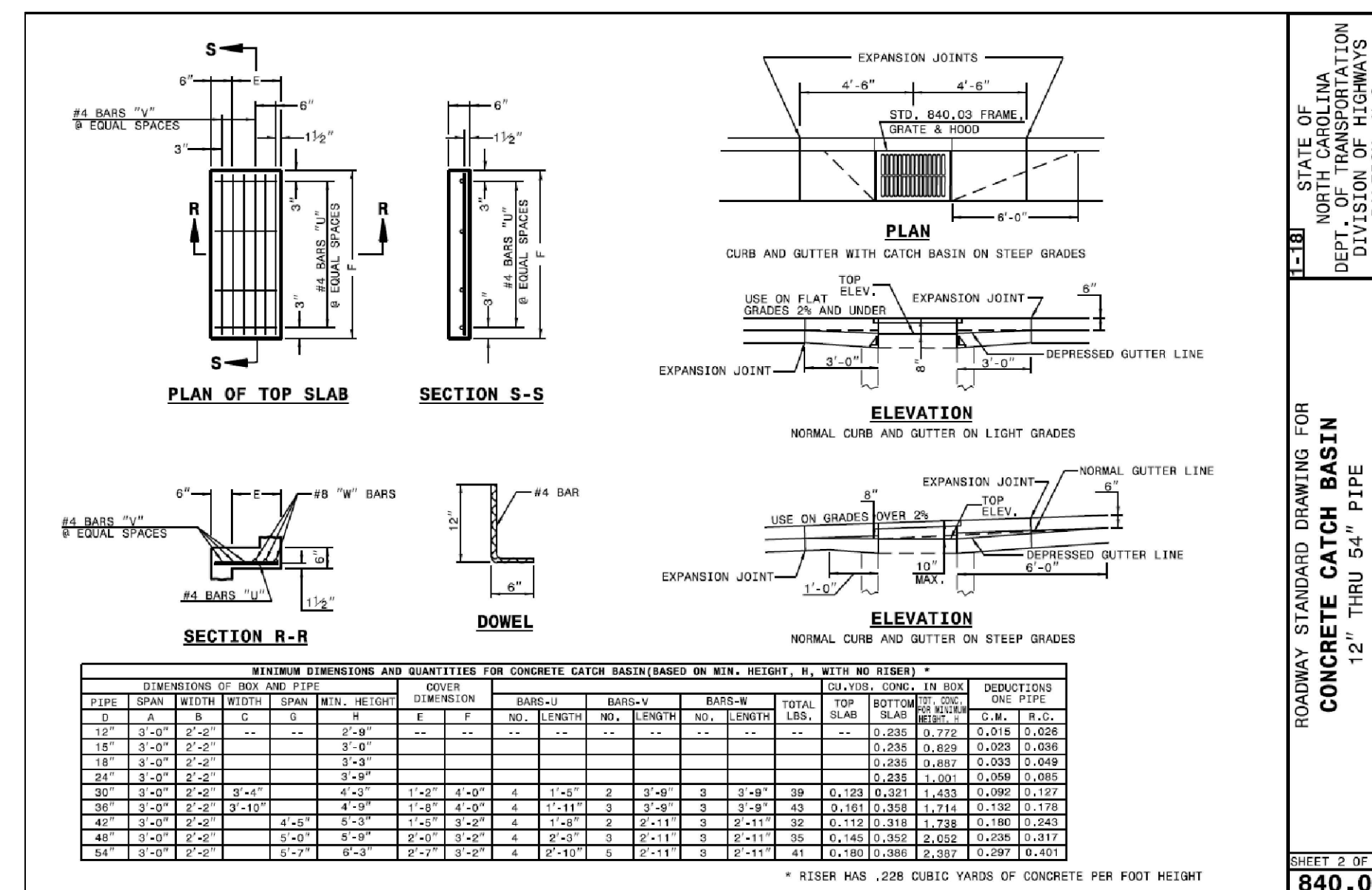
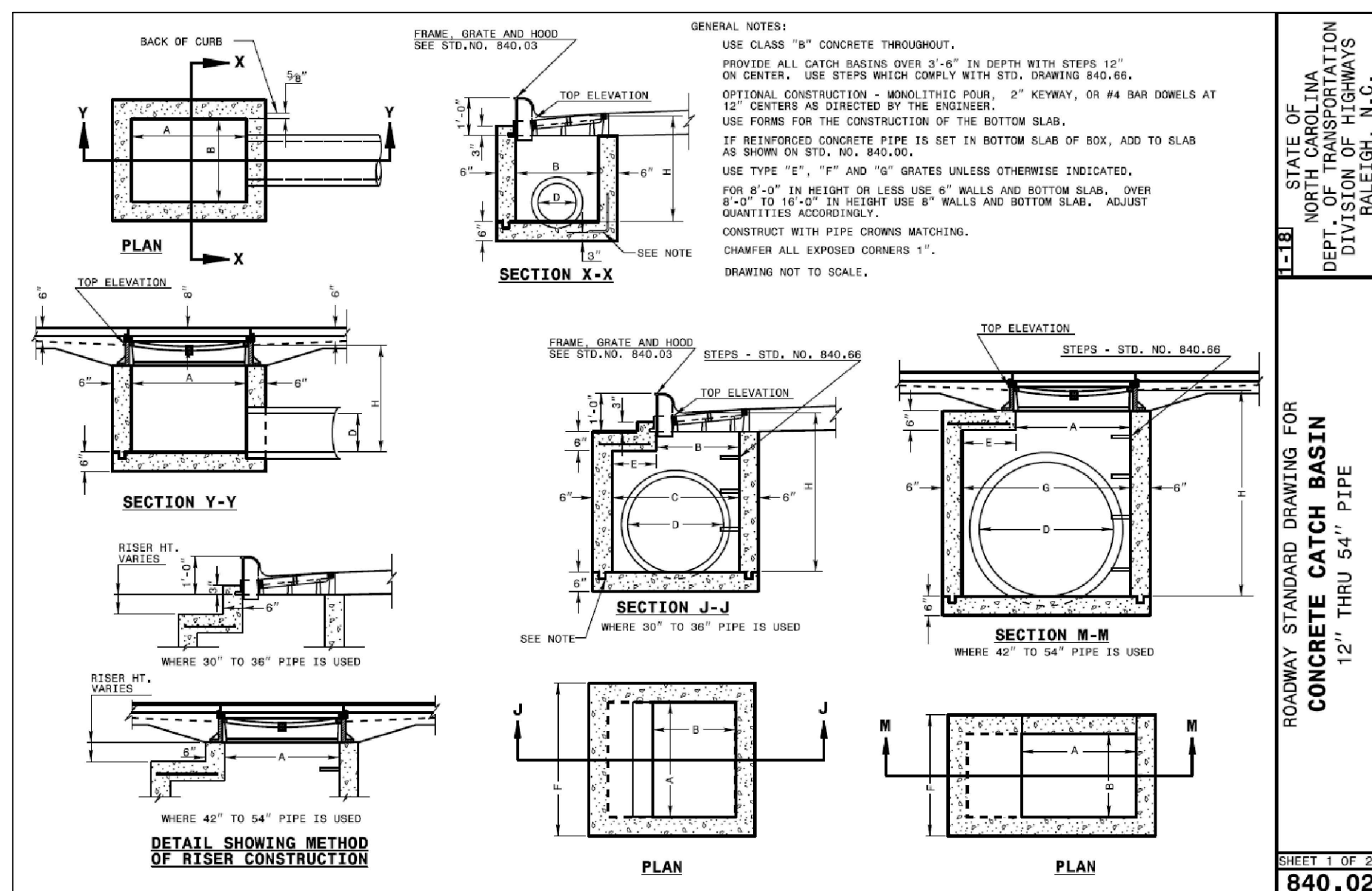
(For fills  $> 40'$  &  $< 80'$  use LRFD Direct (Design Method))

FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS:  
 RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS  
 1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

**SHEET 3 OF 3 300.01**



550 S. Caldwell Street  
 Suite 1800  
 Charlotte, NC 28202

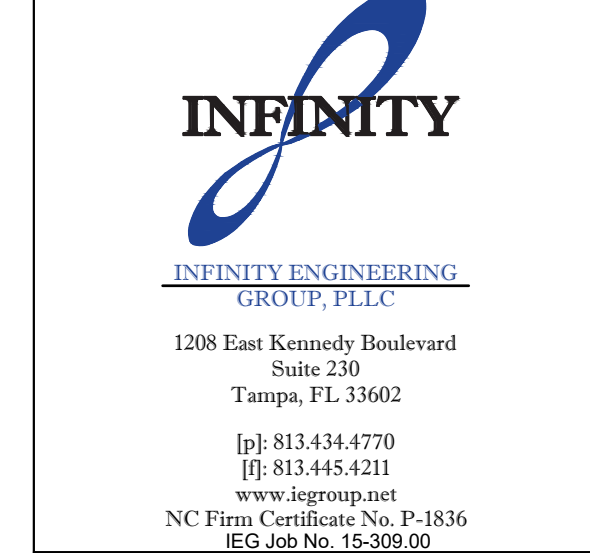
P: 704.981.8951  
 Lic. #1AA-0003590  
 W: www.bdgip.com



**FIFTH THIRD BANK**

ROLESVILLE WALLBROOK

LOT 3 - PUBLX AT WALLBROOK  
 ROLESVILLE, NORTH CAROLINA 27587



SEAL

NISIT SAPPARKHAO, P.E.  
 NC REG. NO. 38066

01/03/2025  
 DATE

ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		01/03/25	TRC ROUND 2

PROJECT INFORMATION BLOCK

JOB # 230634  
 DATE: 08/16/2024  
 DRAWN BY: IEG  
 CHECKED BY: DC

SHEET TITLE

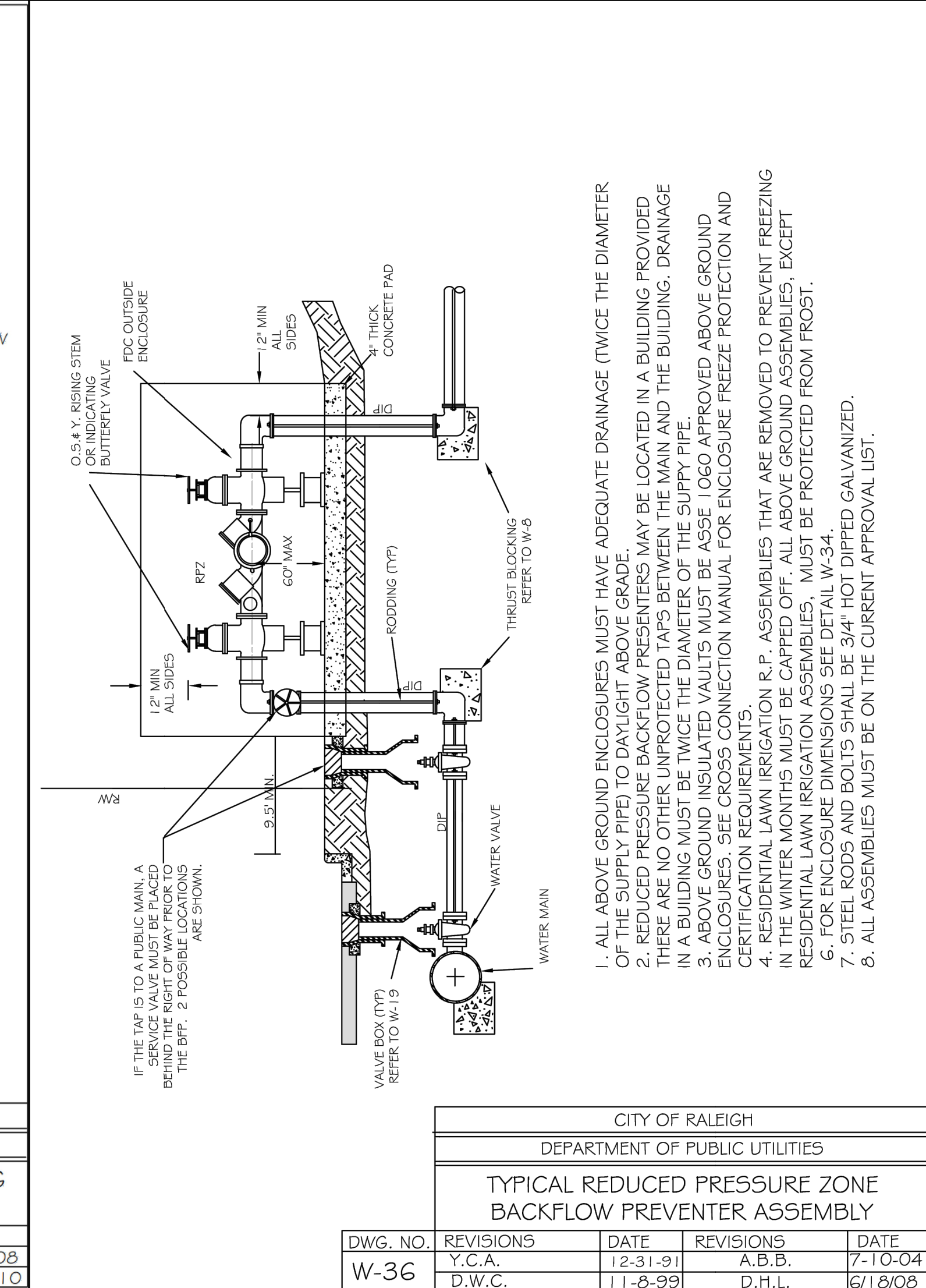
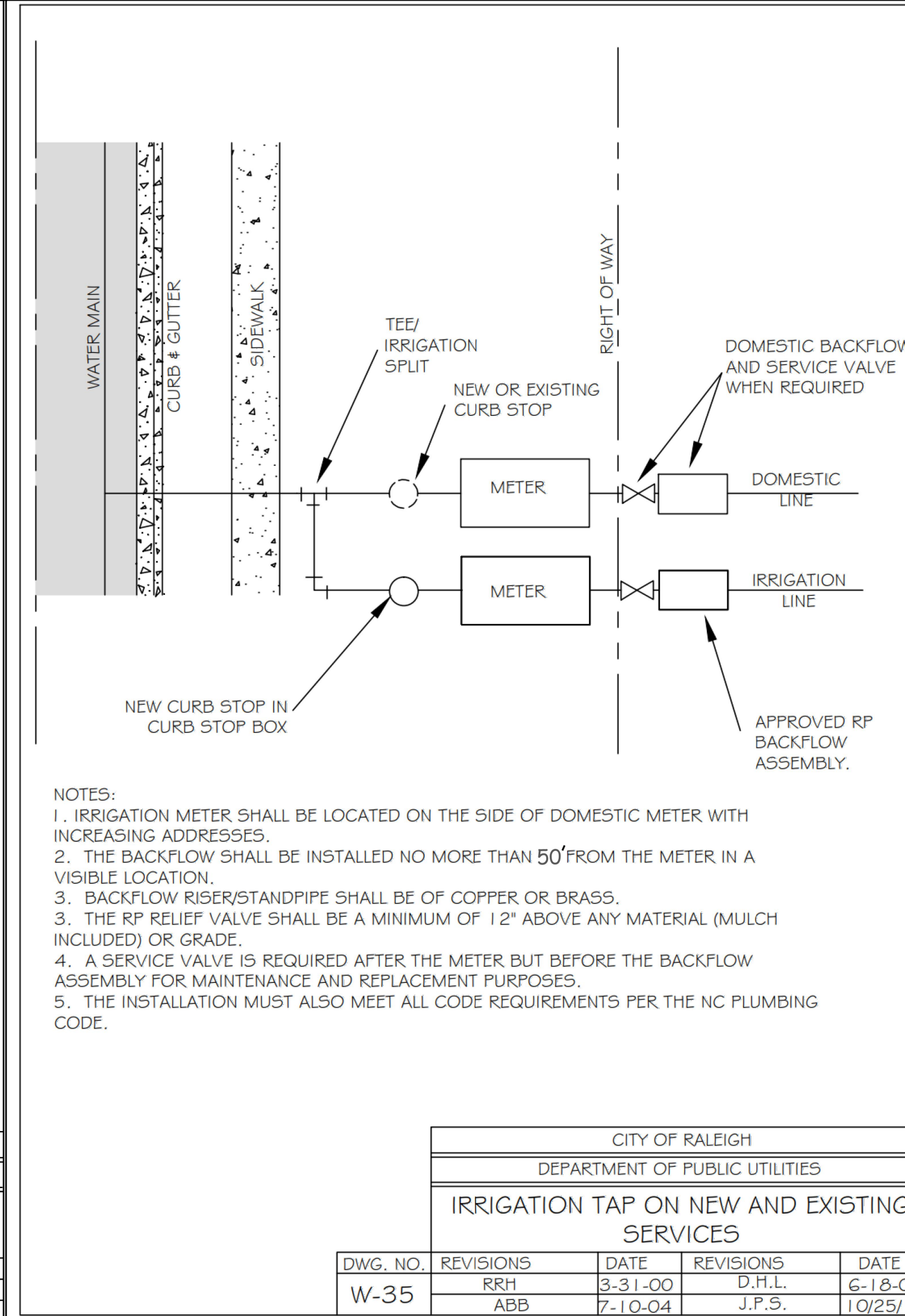
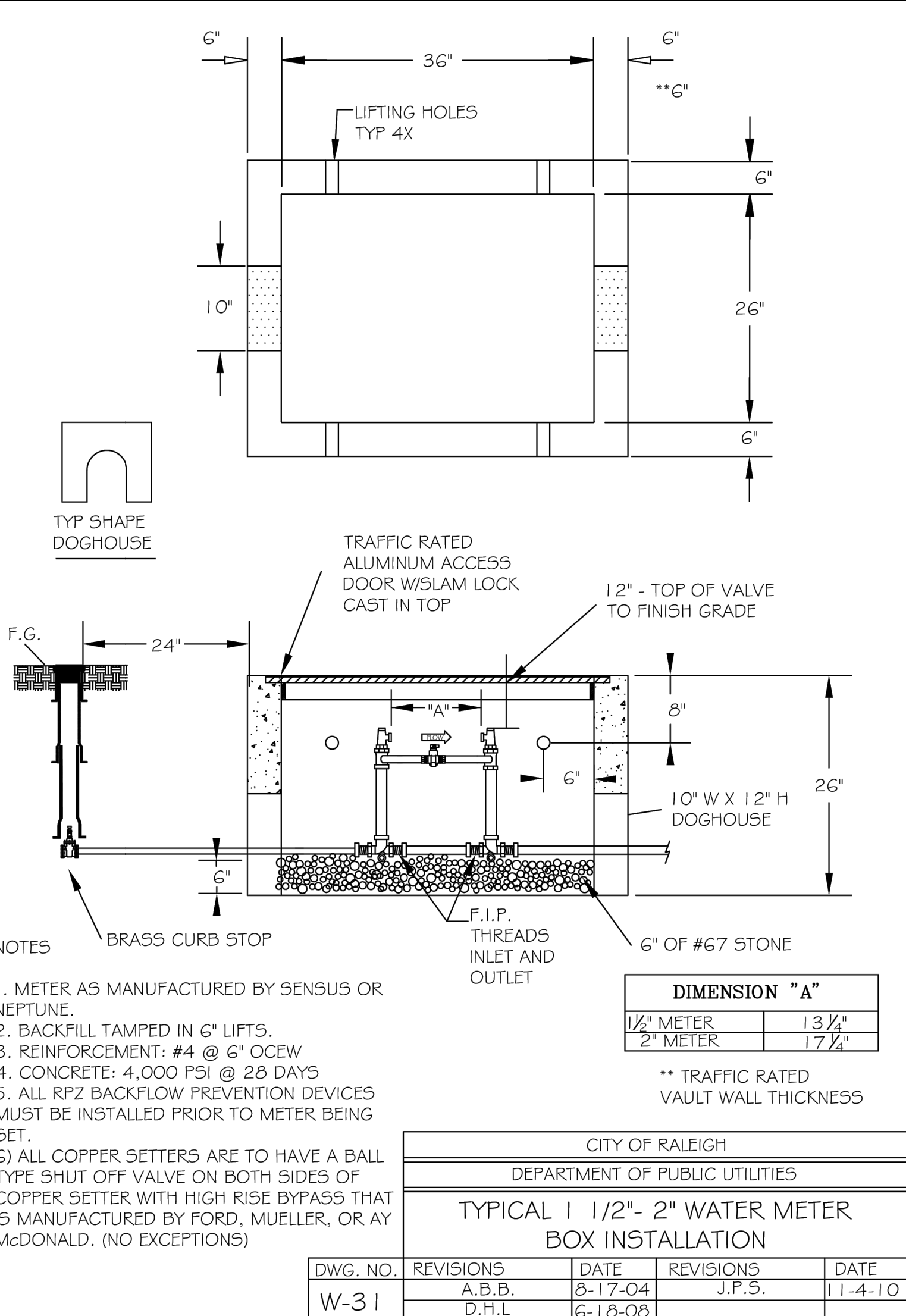
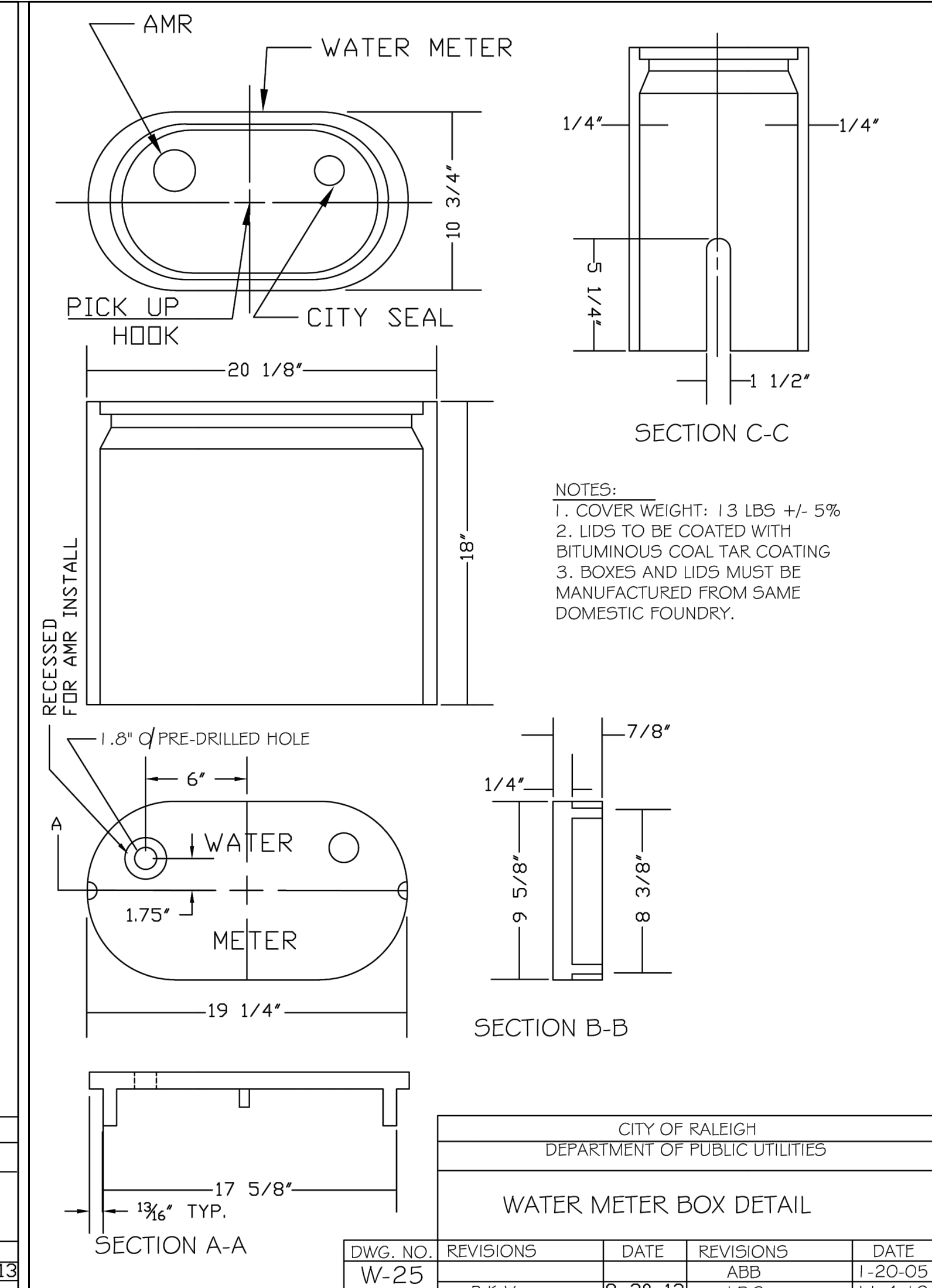
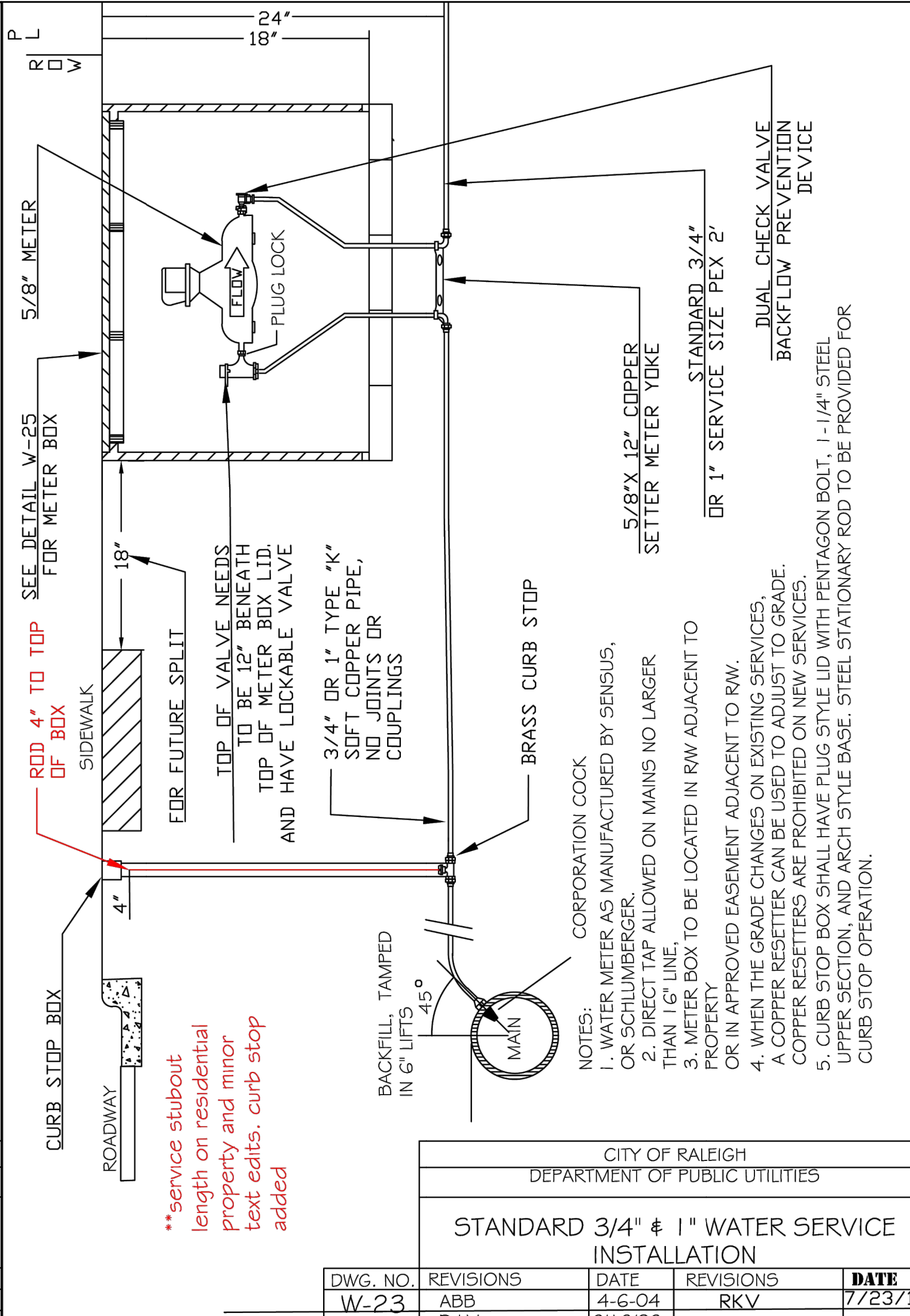
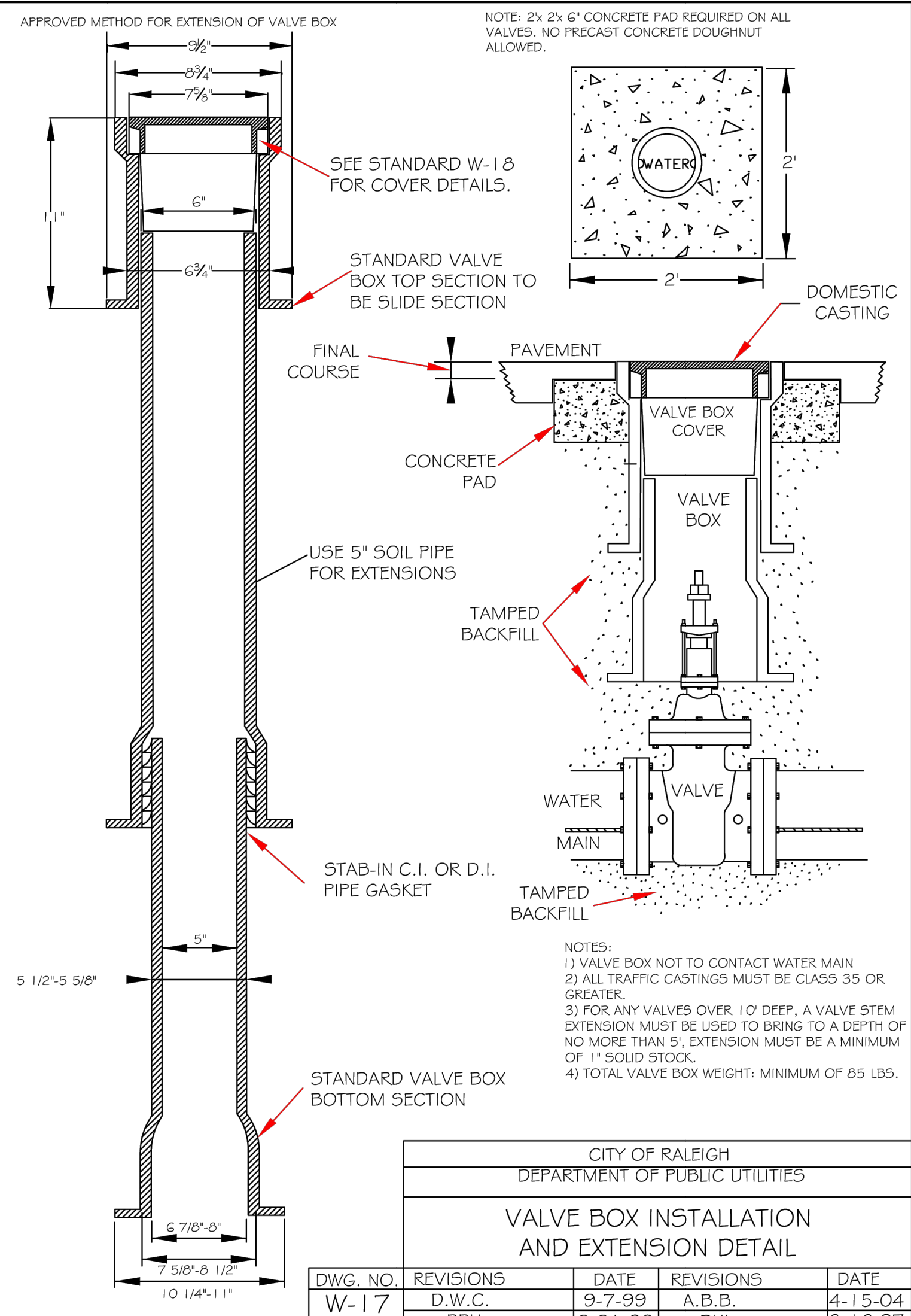
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 DETAILS

SHEET NUMBER

C05.03

SDP-24-07





SDP-24-07

ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		01/03/25	TRC ROUND 2

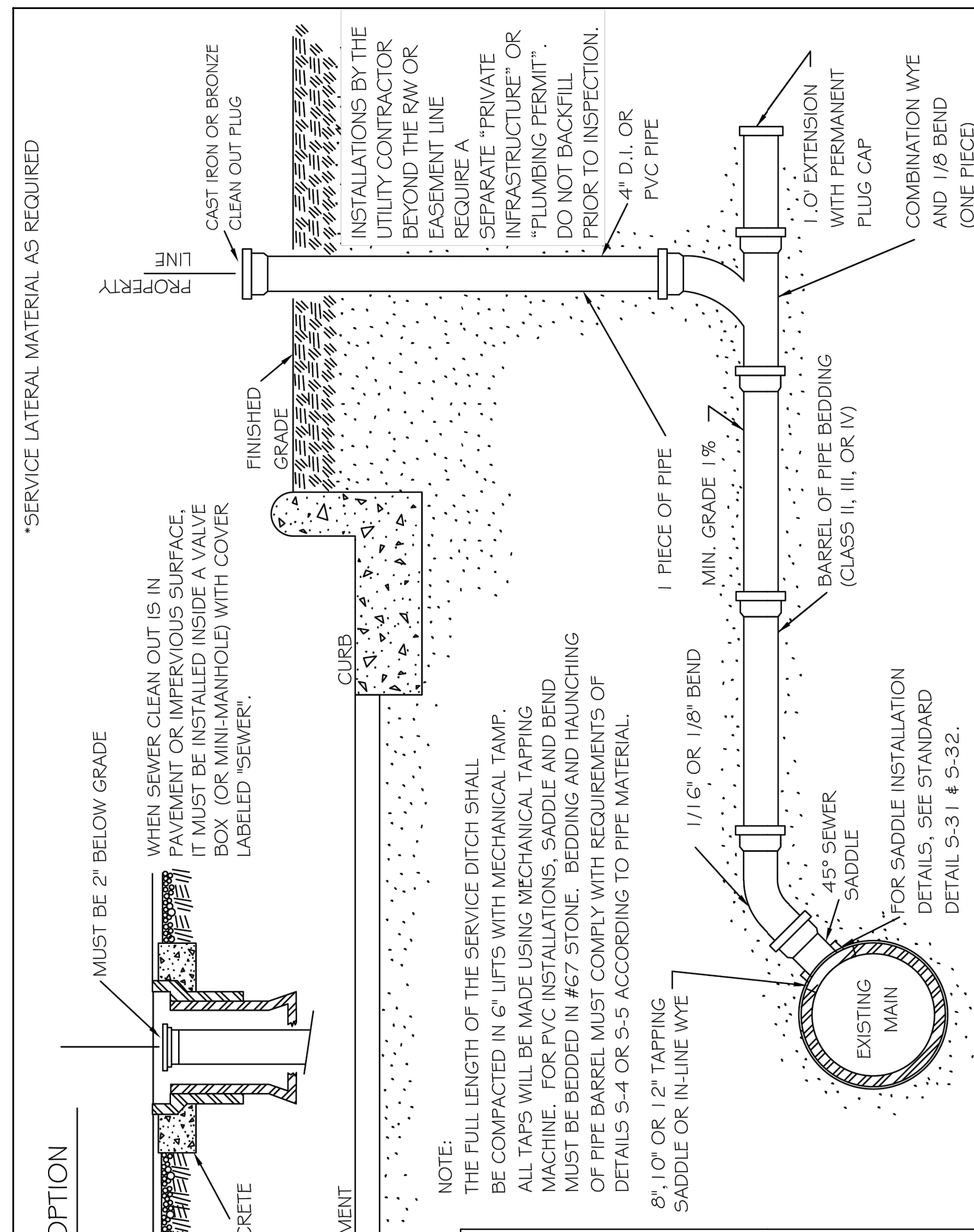
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JOB #	230634
DATE:	08/16/2024
DRAWN BY:	IEG
CHECKED BY:	DC

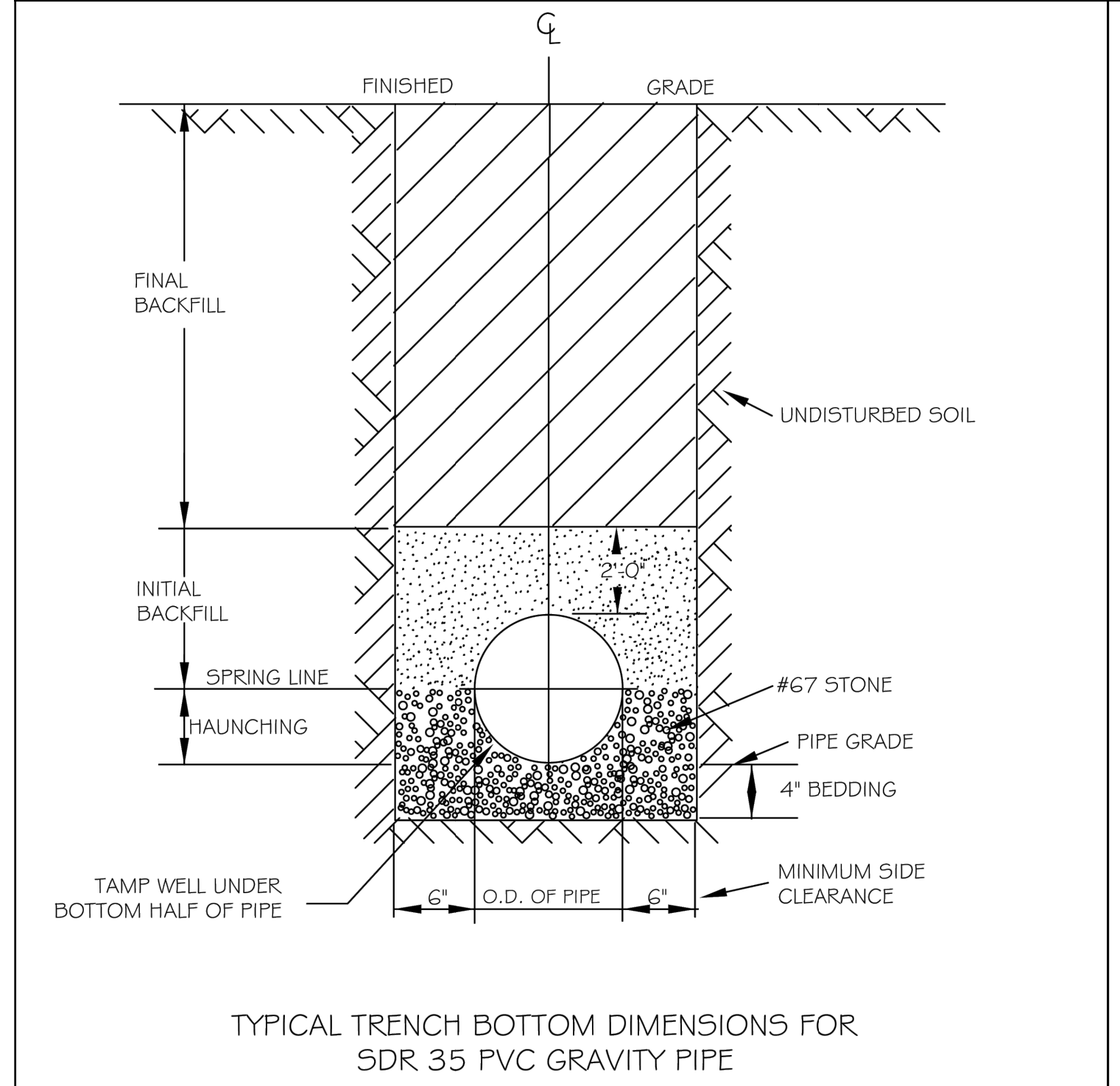


**STANDARD UTILITY NOTES (as applicable):**

- All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
- Utility separation requirements:
  - A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well
  - When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter
  - Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline specifications
  - 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer
  - Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 24" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-41 & S-49)
  - All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required
- Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction
- Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department
- 3.0' minimum cover is required on all water mains & sewer forcemains. 4.0' minimum cover is required on all reuse mains
- It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure
- Install 3/4" copper\* water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. **NOTE:** it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure
- Install 4" PVC\* sewer services @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum
- Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole
- All environmental permits applicable to the project must be obtained from NCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.
- NCDOT / Railroad Easement Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction
- Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the CORPUD FOG Program Coordinator prior to issuance of a Building Permit. Contact Tim Beasley at (919) 996-2334 or [timothy.beasley@raleighnc.gov](mailto:timothy.beasley@raleighnc.gov) for more information
- Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in



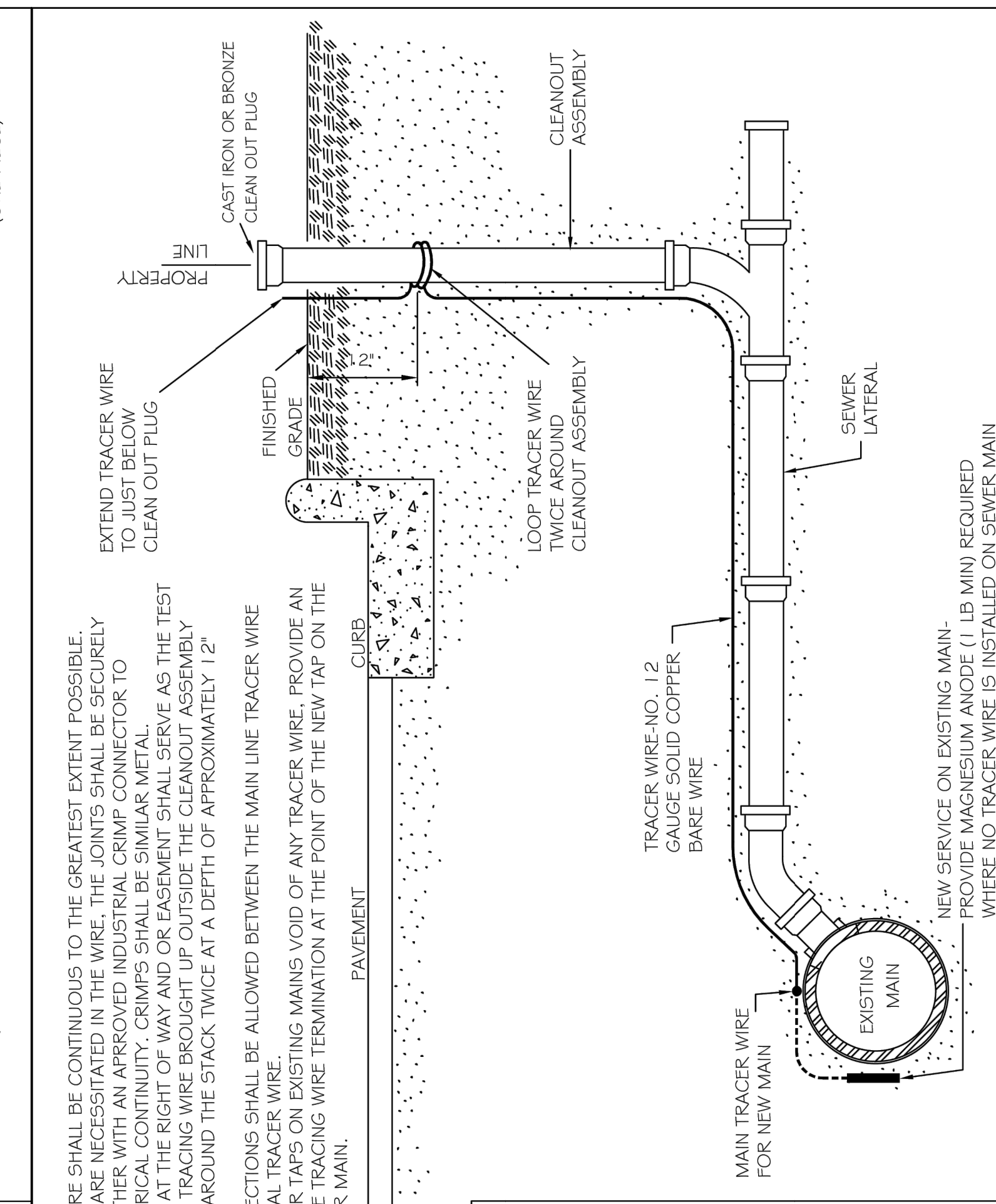
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
TYPICAL SANITARY SEWER LATERAL CONNECTION			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-30	Y.C.A.	6-92	A.B.B.
	RRH	3-30-00	D.H.L.
DATE	DATE	DATE	DATE
4-9-04	6-18-05		



NOTES:

- FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
- NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
- ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
- BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-5	TO NOTES	3-1-87	D.W.C.
		7-2-82	RRH
DATE	DATE	DATE	DATE
9-3-99	3-30-00		



CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
TYPICAL SANITARY SEWER LATERAL TRACER WIRE			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-30A	W.K.D.	9-14	
DATE	DATE	DATE	DATE

SDP-24-07



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FIFTH THIRD BANK  
ROLESVILLE WALLBROOK

LOT 3 - PUBLIX AT WALLBROOK  
ROLESVILLE, NORTH CAROLINA 27587

INFINITY

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www.ieggroup.net  
NC Firm Certificate No. P-1836  
IEG Job No. 15-309.00

SEAL

NISIT SAPPARKHAO, P.E.  
NC REG. NO. 38066

01/03/2025  
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ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
△		10/28/24	TRC ROUND 1
△		01/03/25	TRC ROUND 2

PROJECT INFORMATION BLOCK

JOB # 230634  
DATE: 08/16/2024  
DRAWN BY: IEG  
CHECKED BY: DC

SHEET TITLE

CITY OF RALEIGH  
UTILITY DETAILS

SHEET NUMBER

C05.05



**Seeding Specifications**

NPDES Stormwater Discharge Permit for Construction Activities (NCGO1 - 4/1/19)  
NCDEQ/Division of Energy, Mineral and Land Resources

**SECTION E- GROUND STABILIZATION**

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

**Seedbed Preparation:**

1. Chisel compacted areas and spread topsoil three inches deep over adverse soil conditions, if available.
2. Rip the entire area to six inches deep.
3. Remove all loose rock, roots and other obstructions, leaving surface reasonably smooth and uniform.
4. Apply agricultural lime, fertilizer and superphosphate uniformly and mix with soil (see mixture below).
5. Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared four to six inches deep.
6. Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.
7. Mulch immediately after seeding and anchor mulch.

8. Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be more than 60% damaged, re-establish following the original lime, fertilizer and seeding rates.
9. Consult Wake County Soil & Water or NC State Cooperative Extension on maintenance treatment and fertilization after permanent cover is established.

**Mixture**

Agricultural Limestone	2 tons/acre (3 tons/acre in clay soils)
Fertilizer	1,000 lbs/acre – 10-10-10
Superphosphate	500 lbs/acre – 20% analysis
Mulch	2 tons/acre – small grain straw
Anchor	Asphalt emulsion at 400 gals/acre

**Seeding Schedule**

**For Shoulders, Side Ditches, Slopes (Max 3:1):**

Date	Type	Planting Rate
Aug 15– Nov 1	Tall Fescue	300 lbs/acre
Nov 1– Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1– Apr 15	Tall Fescue	300 lbs/acre
Apr 15– Jun 30	Hulled Common Bermudagrass	25 lbs/acre
Jul 1– Aug 15	Tall Fescue AND Browntop Millet or Sorghum-Sudan Hybrids***	125 lbs/acre (Tall Fescue); 35 lbs/acre (Browntop Millet); 30 lbs/acre (Sorghum-Sudan Hybrids)

**For Shoulders, Side Ditches, Slopes (3:1 to 2:1):**

Date	Type	Planting Rate
Mar 1– Jun 1	Sericea Lespedeza (scarified) and use the following combinations:	50 lbs/acre (Sericea Lespedeza);
Mar 1– Apr 15	Add Tall Fescue	120 lbs/acre
Mar 1– Jun 30	Or add Weeping Love grass	10 lbs/acre
Mar 1– Jun 30	Or add Hulled Common Bermudagrass	25 lbs/acre
Jun 1– Sept 1	Tall Fescue AND Browntop Millet or Sorghum-Sudan Hybrids***	120 lbs/acre (Tall Fescue); 35 lbs/acre (Browntop Millet); 30 lbs/acre (Sorghum-Sudan Hybrids)
Sept 1– Mar 1	Sericea Lespedeza (unhulled – unscarified) AND Tall Fescue	70 lbs/acre (Sericea Lespedeza); 120 lbs/acre (Tall Fescue)
Nov 1– Mar 1	AND Abruzzi Rye	25 lbs/acre

Consult Wake County Soil & Water Conservation District or NC State Cooperative Extension for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those that do well under local conditions; other seeding rate combinations are possible.

\*\*\* TEMPORARY: Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow more than 12" in height before mowing; otherwise, fescue may be shaded out.



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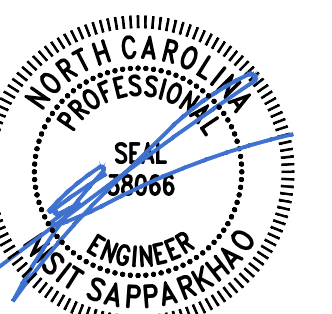
**FIFTH THIRD BANK**  
**ROLESVILLE WALLBROOK**  
 LOT 3 - PUBLIX AT WALLBROOK  
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△		10/28/24	TRC ROUND 1
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**PROJECT INFORMATION BLOCK**

JOB # 230634  
DATE: 08/16/2024  
DRAWN BY: IEG  
CHECKED BY: DC

**SHEET TITLE**


WAKE COUNTY  
SEEDING  
SPECIFICATIONS

**SHEET NUMBER**

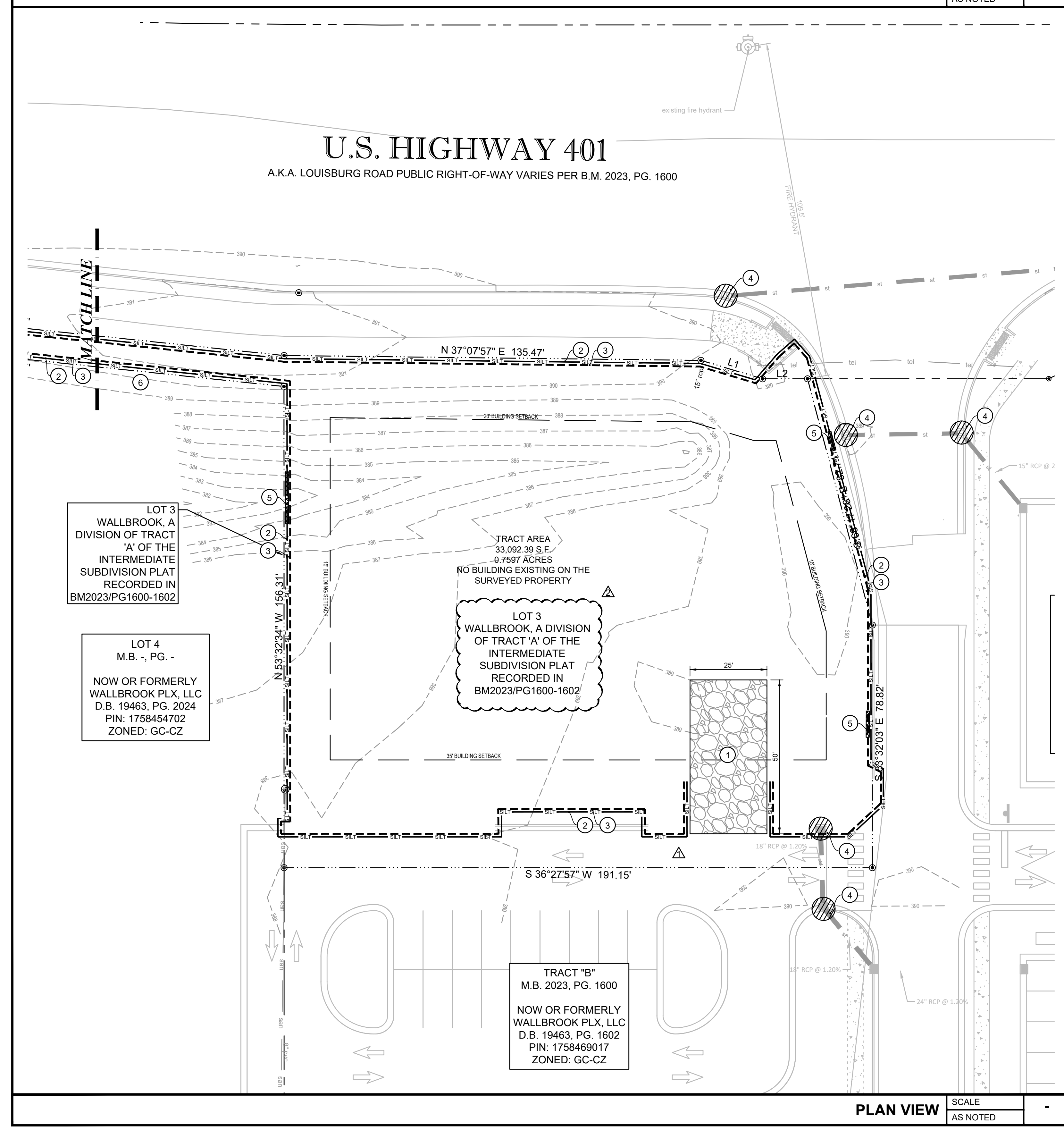
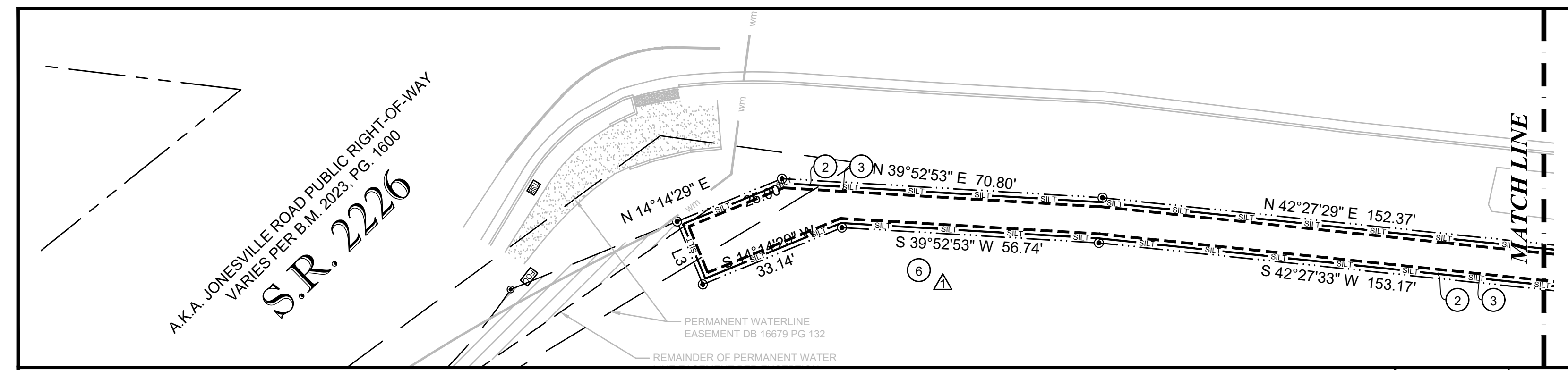
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**SDP-24-07**



OWNER'S REQUIREMENTS		CONTRACTOR'S REQUIREMENTS																																			
SITE DESCRIPTION	GENERAL	STABILIZATION PRACTICES EROSION AND SEDIMENT CONTROLS	OTHER CONTROLS	HAZARDOUS PRODUCTS	MAINTENANCE/INSPECTION PROCEDURES																																
<p>PROJECT NAME AND LOCATION: FIFTH THIRD - ROLESVILLE WALLBROOK</p> <p>PROPERTY OWNER: WALLBROOK PLX LLC 801 EAST BOULEVARD CHARLOTTE NC 28203</p> <p>SITE ADDRESS: LOT 2 ROLESVILLE, NORTH CAROLINA 27587</p> <p>DESCRIPTION: CONSTRUCT NEW BUILDING AND PARKING LOT. MODIFY EXISTING SMS AS REQUIRED TO ACCOMMODATE IMPROVEMENTS PER AUTHORITIES WITH JURISDICTION.</p> <p>SOIL DISTURBING ACTIVITIES WILL INCLUDE: RE-GRADING, CONSTRUCTION OF FACILITY</p> <p>SOILS: SEE SOIL REPORT</p> <p>SITE MAPS: * SEE ATTACHED GRADING PLAN FOR PRE &amp; POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORMWATER DISCHARGE POINTS. * SEE ATTACHED EROSION &amp; TURBIDITY CONTROL PLAN FOR TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS * SEE GENERAL NOTES FOR REQUIREMENTS FOR TEMPORARY AND PERMANENT STABILIZATION.</p> <p>NAME OF RECEIVING WATERS: MASTER POND </p>	<p>THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.</p> <p><b>SEQUENCE OF MAJOR ACTIVITIES</b></p> <p>THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:</p> <ol style="list-style-type: none"> <li>INSTALL STABILIZED CONSTRUCTION ENTRANCE</li> <li>INSTALL SILT FENCES AND HAY BALES AS REQUIRED</li> <li>CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN</li> <li>CONSTRUCT SEDIMENTATION BASIN</li> <li>CONTINUE CLEARING AND GRUBBING</li> <li>STOCK PILE TOP SOIL IF REQUIRED</li> <li>PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED</li> <li>STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE</li> <li>INSTALL STORM SEWER AND IRRIGATION.</li> <li>COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING</li> <li>REMOVE ACCUMULATED SEDIMENT FROM BASINS</li> <li>WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED</li> </ol> <p><b>TIMING OF CONTROLS/MEASURES</b></p> <p>AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENTATION BASINS AND THE EARTH DIKES/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE EROSION &amp; TURBIDITY CONTROL PLAN.</p> <p><b>CONTROLS</b></p> <p>IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.</p> <p><b>SPILL PREVENTION</b></p> <p>MATERIAL MANAGEMENT PRACTICES</p> <p>THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.</p> <p>GOOD HOUSEKEEPING</p> <p>THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.</p> <ul style="list-style-type: none"> <li>* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.</li> <li>* ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.</li> <li>* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.</li> <li>* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.</li> <li>* WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.</li> <li>* MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.</li> <li>* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.</li> </ul>	<ol style="list-style-type: none"> <li>HAY BALE BARRIER: HAY BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> <li>WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.</li> <li>IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.</li> <li>WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.</li> <li>EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF STRAW BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT; IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.</li> </ol> </li> <li>FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> <li>WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.</li> <li>IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.</li> </ol> </li> <li>BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.</li> <li>LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE APPLIED ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE.</li> <li>STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.</li> <li>EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.</li> <li>INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.</li> <li>TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.</li> <li>TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.</li> <li>TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX &amp; AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.</li> <li>TEMPORARY REGRASSING: IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.</li> <li>MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.</li> <li>PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.</li> <li>PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEED AND MULCHED OR SODDED.</li> </ol>	<p>WASTE DISPOSAL</p> <p>WASTE MATERIALS ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.</p> <p>HAZARDOUS WASTE</p> <p>ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.</p> <p>SANITARY WASTE</p> <p>ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.</p> <p>OFFSITE VEHICLE TRACKING</p> <p>A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPULIN.</p> <p><b>INVENTORY FOR POLLUTION PREVENTION PLAN</b></p> <p>THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:</p> <table border="0"> <tr> <td><input type="checkbox"/> Concrete</td> <td><input type="checkbox"/> Fertilizers</td> <td><input type="checkbox"/> Wood</td> </tr> <tr> <td><input type="checkbox"/> Asphalt</td> <td><input type="checkbox"/> Petroleum Based Products</td> <td><input type="checkbox"/> Masonry Blocks</td> </tr> <tr> <td><input type="checkbox"/> Tar</td> <td><input type="checkbox"/> Cleaning Solvents</td> <td><input type="checkbox"/> Roofing Materials</td> </tr> <tr> <td><input type="checkbox"/> Detergents</td> <td><input type="checkbox"/> Paints</td> <td><input type="checkbox"/> Metal Studs</td> </tr> <tr> <td><input type="checkbox"/> _____</td> <td><input type="checkbox"/> _____</td> <td><input type="checkbox"/> _____</td> </tr> </table> <p><b>STRUCTURAL PRACTICES</b></p> <ol style="list-style-type: none"> <li>TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY.</li> <li>TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP SHALL BE INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA. THE FOLLOWING SEDIMENT TRAPS MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION <ul style="list-style-type: none"> <li>DIKE: <ol style="list-style-type: none"> <li>BLOCK &amp; GRAVEL SEDIMENT FILTER - THIS PROTECTION IS APPLICABLE WHERE HEAVY FLOWS AND/OR WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.</li> <li>GRAVEL SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES &amp; UNPROTECTED AREAS.</li> <li>DROP INLET SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (S &lt; 5%) AND WHERE SHEET OR OVERLAND FLOWS (Q &lt; 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS.</li> <li>OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE FLOW COULD CAUSE EROSION &amp; SEDIMENT PROBLEM TO THE RECEIVING WATER BODY. SILT FENCES &amp; HAY BALES ARE TO BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE DISCHARGING STRUCTURE AS SHOWN ON THE OUTLET PROTECTION DETAIL.</li> <li>SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORMWATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.</li> </ol> </li> </ul> </li> </ol>	<input type="checkbox"/> Concrete	<input type="checkbox"/> Fertilizers	<input type="checkbox"/> Wood	<input type="checkbox"/> Asphalt	<input type="checkbox"/> Petroleum Based Products	<input type="checkbox"/> Masonry Blocks	<input type="checkbox"/> Tar	<input type="checkbox"/> Cleaning Solvents	<input type="checkbox"/> Roofing Materials	<input type="checkbox"/> Detergents	<input type="checkbox"/> Paints	<input type="checkbox"/> Metal Studs	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<p>THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.</p> <ul style="list-style-type: none"> <li>* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.</li> <li>* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.</li> <li>* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.</li> </ul> <p>PRODUCT SPECIFIC PRACTICES THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:</p> <p>PETROLEUM PRODUCTS</p> <p>ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>FERTILIZERS</p> <p>FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.</p> <p>PAINTS</p> <p>CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.</p> <p>CONCRETE TRUCKS</p> <p>CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.</p> <p>SPILL CONTROL PRACTICES</p> <p>IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:</p> <p>MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.</p> <p>MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.</p> <p>ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.</p> <p>SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.</p> <p>THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED. THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.</p> <p><b>MAINTENANCE/INSPECTION PROCEDURES</b></p> <p>EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES</p> <p>THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.</p> <ul style="list-style-type: none"> <li>* NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.</li> <li>* ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT. THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER.</li> <li>* ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.</li> <li>* BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.</li> <li>* SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.</li> <li>* DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.</li> </ul>	<p>* THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST.</p> <p>* TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.</p> <p>* A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTOR IS ATTACHED. THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND AND EROSION PLANS, OR STORMWATER MANAGEMENT PLANS. THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.</p> <p>* THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.</p> <p>* PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.</p> <p>NON-STORMWATER DISCHARGES</p> <p>IT IS EXPECTED THAT THE FOLLOWING NON-STORMWATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:</p> <ul style="list-style-type: none"> <li>* WATER FROM WATER LINE FLUSHING</li> <li>* PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).</li> <li>* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).</li> </ul> <p>ALL NON-STORMWATER DISCHARGE WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.</p> <p><b>CONTRACTOR'S CERTIFICATION</b></p> <p>I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND THAT AUTHORIZES THE STORM CONDITIONS OF THE DEP GENERIC PERMIT WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.</p> <table border="1"> <tr> <td rowspan="2">RESPONSIBLE FOR/DUTIES</td> <td>GENERAL CONTRACTOR</td> <td>SUB-CONTRACTOR</td> <td>SUB-CONTRACTOR</td> <td>SUB-CONTRACTOR</td> <td>SUB-CONTRACTOR</td> </tr> <tr> <td>BUSINESS NAME AND ADDRESS OF CONTRACTOR &amp; ALL SUBS</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SIGNATURE</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	RESPONSIBLE FOR/DUTIES	GENERAL CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS					SIGNATURE					
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<p><b>CONTROLS</b></p> <p>THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORMWATER RUN OFF. AN EROSION AND TURBIDITY PLAN HAS BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS RESPONSIBILITY" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.</p> <p>STORMWATER MANAGEMENT</p> <p>STORMWATER DRAINAGE WILL BE PROVIDED BY (DESCRIPTION):</p> <p>MODIFIED COLLECTION, CONVEYANCE, TREATMENT &amp; ATTENUATION SYSTEM FOR THE PROJECT. AREAS WHICH ARE NOT TO BE CONSTRUCTED ON, BUT WILL BE REGRADED SHALL BE STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE, WHEN CONSTRUCTION IS COMPLETE, THE SITE DISCHARGES TO AN UNDERGROUND DETENTION SYSTEM. WHERE PRACTICAL, TEMPORARY SEDIMENT BASINS WILL BE USED TO INTERCEPT SEDIMENT BEFORE ENTERING THE PERMANENT DETENTION BASIN. THE DRY DETENTION SYSTEM IS DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR THIS TYPE OF DEVELOPMENT AT THE TIME IT WAS CONSTRUCTED.</p> <p><b>TIMING OF CONTROLS/MEASURES</b></p> <p>REFER TO " CONTRACTORS RESPONSIBILITY" FOR THE TIMING OF CONTROL MEASURES.</p>	<p><b>SEQUENCE OF MAJOR ACTIVITIES</b></p> <p>THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:</p> <ol style="list-style-type: none"> <li>INSTALL STABILIZED CONSTRUCTION ENTRANCE</li> <li>INSTALL SILT FENCES AND HAY BALES AS REQUIRED</li> <li>CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN</li> <li>CONSTRUCT SEDIMENTATION BASIN</li> <li>CONTINUE CLEARING AND GRUBBING</li> <li>STOCK PILE TOP SOIL IF REQUIRED</li> <li>PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED</li> <li>STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE</li> <li>INSTALL STORM SEWER AND IRRIGATION.</li> <li>COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING</li> <li>REMOVE ACCUMULATED SEDIMENT FROM BASINS</li> <li>WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED</li> </ol> <p><b>TIMING OF CONTROLS/MEASURES</b></p> <p>AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENTATION BASINS AND THE EARTH DIKES/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE EROSION &amp; TURBIDITY CONTROL PLAN.</p> <p><b>CONTROLS</b></p> <p>IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.</p> <p><b>SPILL PREVENTION</b></p> <p>MATERIAL MANAGEMENT PRACTICES</p> <p>THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.</p> <p>GOOD HOUSEKEEPING</p> <p>THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.</p> <ul style="list-style-type: none"> <li>* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.</li> <li>* ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.</li> <li>* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.</li> <li>* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.</li> <li>* WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.</li> <li>* MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.</li> <li>* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.</li> </ul>	<ol style="list-style-type: none"> <li>HAY BALE BARRIER: HAY BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> <li>WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.</li> <li>IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.</li> <li>WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.</li> <li>EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF STRAW BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT; IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.</li> </ol> </li> <li>FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> <li>WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.</li> <li>IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.</li> </ol> </li> <li>BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.</li> <li>LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE APPLIED ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE.</li> <li>STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.</li> <li>EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.</li> <li>INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.</li> <li>TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.</li> <li>TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.</li> <li>TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX &amp; AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.</li> <li>TEMPORARY REGRASSING: IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.</li> <li>MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.</li> <li>PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.</li> <li>PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEED AND MULCHED OR SODDED.</li> </ol>	<p>WASTE DISPOSAL</p> <p>WASTE MATERIALS ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.</p> <p>HAZARDOUS WASTE</p> <p>ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.</p> <p>SANITARY WASTE</p> <p>ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.</p> <p>OFFSITE VEHICLE TRACKING</p> <p>A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPULIN.</p> <p><b>INVENTORY FOR POLLUTION PREVENTION PLAN</b></p> <p>THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:</p> <table border="0"> <tr> <td><input type="checkbox"/> Concrete</td> <td><input type="checkbox"/> Fertilizers</td> <td><input type="checkbox"/> Wood</td> </tr> <tr> <td><input type="checkbox"/> Asphalt</td> <td><input type="checkbox"/> Petroleum Based Products</td> <td><input type="checkbox"/> Masonry Blocks</td> </tr> <tr> <td><input type="checkbox"/> Tar</td> <td><input type="checkbox"/> Cleaning Solvents</td> <td><input type="checkbox"/> Roofing Materials</td> </tr> <tr> <td><input type="checkbox"/> Detergents</td> <td><input type="checkbox"/> Paints</td> <td><input type="checkbox"/> Metal Studs</td> </tr> <tr> <td><input type="checkbox"/> _____</td> <td><input type="checkbox"/> _____</td> <td><input type="checkbox"/> _____</td> </tr> </table> <p><b>STRUCTURAL PRACTICES</b></p> <ol style="list-style-type: none"> <li>TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY.</li> <li>TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP SHALL BE INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA. THE FOLLOWING SEDIMENT TRAPS MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION <ul style="list-style-type: none"> <li>DIKE: <ol style="list-style-type: none"> <li>BLOCK &amp; GRAVEL SEDIMENT FILTER - THIS PROTECTION IS APPLICABLE WHERE HEAVY FLOWS AND/OR WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.</li> <li>GRAVEL SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES &amp; UNPROTECTED AREAS.</li> <li>DROP INLET SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (S &lt; 5%) AND WHERE SHEET OR OVERLAND FLOWS (Q &lt; 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS.</li> <li>OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE FLOW COULD CAUSE EROSION &amp; SEDIMENT PROBLEM TO THE RECEIVING WATER BODY. SILT FENCES &amp; HAY BALES ARE TO BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE DISCHARGING STRUCTURE AS SHOWN ON THE OUTLET PROTECTION DETAIL.</li> <li>SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORMWATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.</li> </ol> </li> </ul> </li> </ol>	<input type="checkbox"/> Concrete	<input type="checkbox"/> Fertilizers	<input type="checkbox"/> Wood	<input type="checkbox"/> Asphalt	<input type="checkbox"/> Petroleum Based Products	<input type="checkbox"/> Masonry Blocks	<input type="checkbox"/> Tar	<input type="checkbox"/> Cleaning Solvents	<input type="checkbox"/> Roofing Materials	<input type="checkbox"/> Detergents	<input type="checkbox"/> Paints	<input type="checkbox"/> Metal Studs	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<p>THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.</p> <ul style="list-style-type: none"> <li>* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.</li> <li>* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.</li> <li>* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.</li> </ul> <p>PRODUCT SPECIFIC PRACTICES THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:</p> <p>PETROLEUM PRODUCTS</p> <p>ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>FERTILIZERS</p> <p>FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.</p> <p>PAINTS</p> <p>CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.</p> <p>CONCRETE TRUCKS</p> <p>CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.</p> <p>SPILL CONTROL PRACTICES</p> <p>IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:</p> <p>MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.</p> <p>MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.</p> <p>ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.</p> <p>SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.</p> <p>THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED. THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.</p> <p><b>MAINTENANCE/INSPECTION PROCEDURES</b></p> <p>EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES</p> <p>THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.</p> <ul style="list-style-type: none"> <li>* NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.</li> <li>* ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT. THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A</li></ul>																		
<input type="checkbox"/> Concrete	<input type="checkbox"/> Fertilizers	<input type="checkbox"/> Wood																																			
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### EROSION CONTROL KEYED NOTES

①	CRUSHED STONE CONSTRUCTION ENTRANCE AND CONCRETE TRUCK WASHOUT AREA
②	SILT FENCE
③	LIMITS OF CONSTRUCTION
④	INLET PROTECTION
⑤	SILT FENCE OUTLET
⑥	A TEMPORARY CONSTRUCTION EASEMENT MAY BE REQUIRED/PROVIDED PRIOR TO CONSTRUCTION. GC TO COORDINATE WITH THE DEVELOPER TO OBTAIN A TEMPORARY CONSTRUCTION EASEMENT AS NEEDED.

### GENERAL NOTES

- ALL MATERIALS INCLUDING FILL STOCKPILES SHALL NOT BE PERMANENTLY LOCATED ON THE UNDEVELOPED AREA OF PROPOSED DEVELOPMENT.
- ALL DISTURBED AREAS OF UNDEVELOPED PROPERTY SHALL BE HYDROMULCHED WITH SEED TO ESTABLISH TURN AND PREVENT SILT RUNOFF INTO THE STREETS.

### STOCKPILES NOTE:

- STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
- STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER
- STOCKPILING MATERIALS ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEPT IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR THE FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

### GENERAL NOTE:

ALL CONSTRUCTION ACTIVITY MUST BE CONDUCTED IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF MORRISVILLE, AND UNLESS SPECIFIED, DEFERS TO THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STANDARD SPECIFICATIONS.

WAKE COUNTY OR JURISDICTIONAL MUNICIPALITY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.

### EROSION CONTROL NOTES

- THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE.
- THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR ENGINEER.
- TOTAL DISTURBED AREA: 0.68 ACRES.
- ALL STORM DRAINAGE PIPES SHALL BE THOROUGHLY FLUSHED OF ALL SEDIMENT FOLLOWING SITE STABILIZATION. INTERIOR FLUSHING OF SYSTEM SHALL BE PERFORMED AS NEEDED TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM. CONTRACTOR IS RESPONSIBLE FOR CAPTURING AND PROPERLY DISPOSING OF ALL SEDIMENT FLUSHED FROM THE EXISTING AND NEW STORM SYSTEM.
- ALL STREETS IN FRONT OF PROJECT WILL BE KEPT CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.
- SEE SHEET L01.01 FOR SEEDING SCHEDULES.
- ADDITIONAL EROSION CONTROL MEASURES NOT SHOWN ON THIS PLAN MAY BE REQUIRED TO INSURE NO SEDIMENT LEAVES THE SITE. THE CONTRACTOR IS EXPECTED TO NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATELY IF THEY FEEL ADDITIONAL MEASURES ARE NEEDED.
- THE CONTRACTOR MUST COMPLY WITH ALL PROVISIONS OF THE NORTH CAROLINA GENERAL STORMWATER PERMIT FOR LAND DISTURBING CONSTRUCTION ACTIVITIES.

### LEGEND

	PROPERTY LINE
	EXISTING CONCRETE TO REMAIN
	EXISTING TO REMAIN SILT FENCE
	SILT FENCE OUTLET
	LIMITS OF CONSTRUCTION
	INLET PROTECTION
	EXISTING CONTOUR
	EXISTING GRADE ELEVATION

### EROSION CONTROL DETAILS

LIMITS OF DISTURBANCE	0.76 ACRES
TOTAL SITE AREA	0.76 ACRES

### SLOPE & SURFACE STABILIZATION

PURSUANT TO G.S. 113A-57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PURSUANT TO G.S. 113A-57(3), PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT. SLOPE EROSION CONTROL MATTING SHALL BE INSTALLED FOR TEMPORARY STABILIZATION DURING THE ESTABLISHMENT OF VEGETATIVE COVER ON ALL STEEP SLOPES (6:1 OR STEEPER). INSTALL MATTING PER MANUFACTURER'S INSTRUCTIONS.

### CONSTRUCTION SEQUENCE

- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL ENGINEER, KARYN PAGEAU AT 919-796-8769. OBTAIN A LAND-DISTURBING PERMIT.
- INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- CALL KARYN PAGEAU AT 919-796-8769 FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL ENGINEER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
- INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
- STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDEED AREAS WITHIN FIFTEEN (15) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION.
- WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL KARYN PAGEAU AT 919-796-8769 FOR AN INSPECTION BY THE ENVIRONMENTAL ENGINEER. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
- WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL ENGINEER, KARYN PAGEAU AT 919-796-8769 OBTAIN A CERTIFICATE OF COMPLETION.



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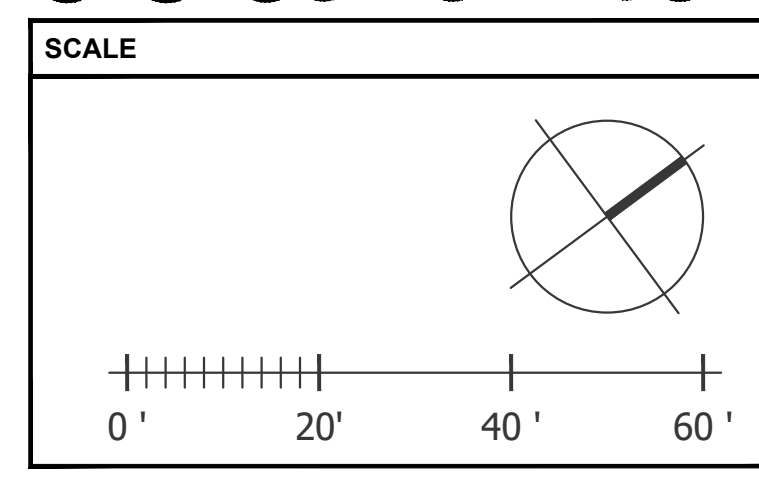
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△		10/28/24	TRC ROUND 1
△		01/03/25	TRC ROUND 2

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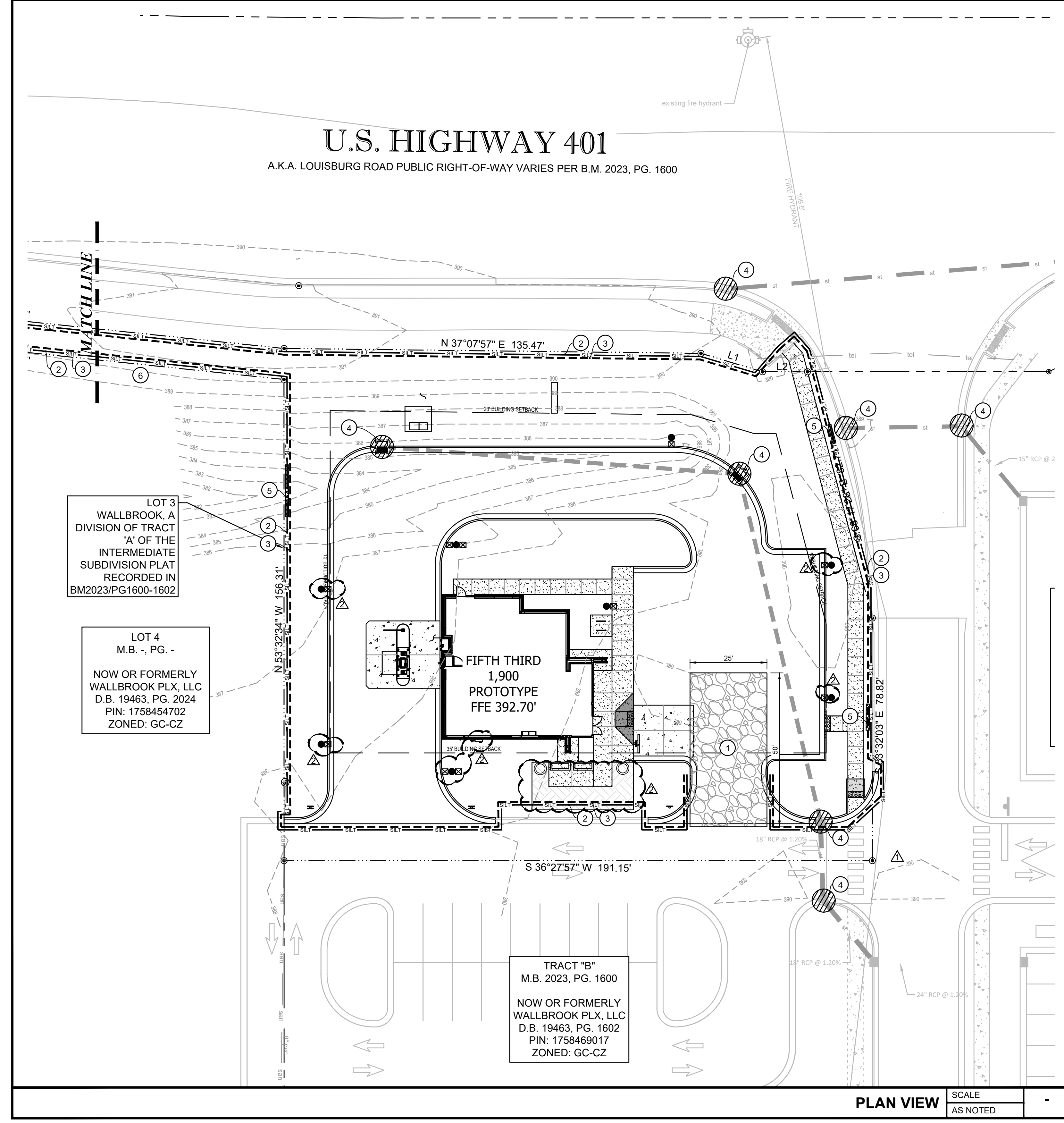
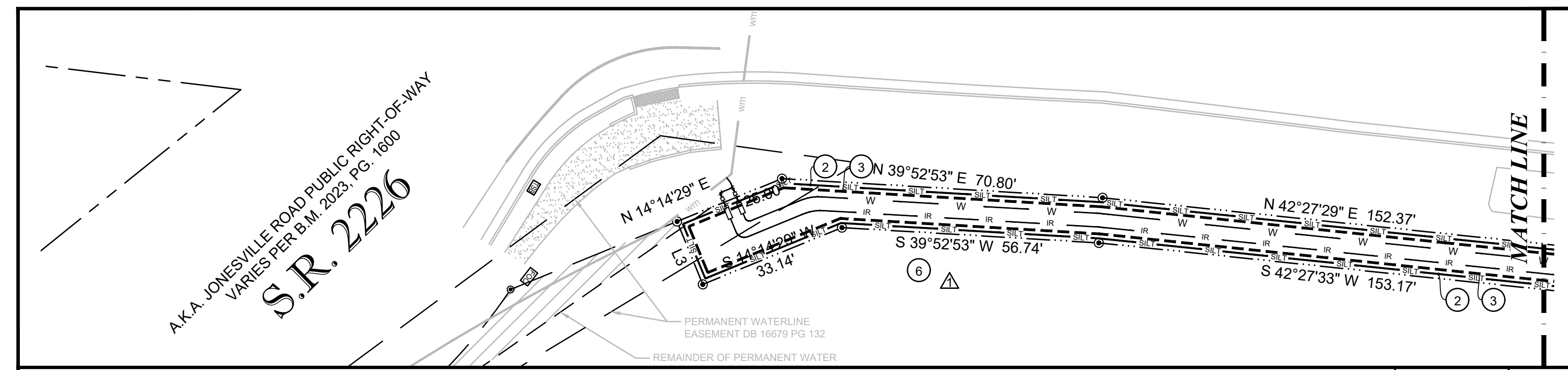
SHEET TITLE  
EROSION CONTROL PLAN PHASE I

SHEET NUMBER  
C06.02

SDP-24-07







### EROSION CONTROL KEYED NOTES

1	CRUSHED STONE CONSTRUCTION ENTRANCE AND CONCRETE TRUCK WASHOUT AREA
2	SILT FENCE
3	LIMITS OF CONSTRUCTION
4	INLET PROTECTION
5	SILT FENCE OUTLET
6	A TEMPORARY CONSTRUCTION EASEMENT MAY BE REQUIRED/PROVIDED PRIOR TO CONSTRUCTION. GC TO COORDINATE WITH THE DEVELOPER TO OBTAIN A TEMPORARY CONSTRUCTION EASEMENT AS NEEDED.

### GENERAL NOTES

- ALL MATERIALS INCLUDING FILL STOCKPILES SHALL NOT BE PERMANENTLY LOCATED ON THE UNDEVELOPED AREA OF PROPOSED DEVELOPMENT.
- ALL DISTURBED AREAS OF UNDEVELOPED PROPERTY SHALL BE HYDROMULCHED WITH SEED TO ESTABLISH TURN AND PREVENT SILT RUNOFF INTO THE STREETS.

- ### EROSION CONTROL NOTES
- THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE.
  - THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR ENGINEER.
  - TOTAL DISTURBED AREA: 0.60 ACRES.
  - ALL STORM DRAINAGE PIPES SHALL BE THOROUGHLY FLUSHED OF ALL SEDIMENT FOLLOWING SITE STABILIZATION. INTERIOR FLUSHING OF THE DRAINAGE SYSTEM, CONTRACTOR IS RESPONSIBLE FOR CAPTURING AND PROPERLY DISPOSING OF ALL SEDIMENT FLUSHED FROM THE EXISTING AND NEW STORM SYSTEM.
  - ALL STREETS IN FRONT OF PROJECT WILL BE KEPT CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.
  - SEE SHEET L01.01 FOR SEEDING SCHEDULES.
  - ADDITIONAL EROSION CONTROL MEASURES NOT SHOWN ON THIS PLAN MAY BE REQUIRED TO INSURE NO SEDIMENT LEAVES THE SITE. THE CONTRACTOR IS EXPECTED TO NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATELY IF THEY FEEL ADDITIONAL MEASURES ARE NEEDED.
  - THE CONTRACTOR MUST COMPLY WITH ALL PROVISIONS OF THE NORTH CAROLINA GENERAL STORMWATER PERMIT FOR LAND DISTURBING CONSTRUCTION ACTIVITIES.

### GENERAL NOTE:

ALL CONSTRUCTION ACTIVITY MUST BE CONDUCTED IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF MORRISVILLE, AND UNLESS SPECIFIED, DEFERS TO THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STANDARD SPECIFICATIONS.

WAKE COUNTY OR JURISDICTIONAL MUNICIPALITY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.

### LEGEND

	PROPERTY LINE
	EXISTING CONCRETE TO REMAIN
	EXISTING TO REMAIN SILT FENCE
	SILT FENCE OUTLET
	LIMITS OF CONSTRUCTION
	INLET PROTECTION
	EXISTING CONTOUR
	EXISTING GRADE ELEVATION

### EROSION CONTROL DETAILS

LIMITS OF DISTURBANCE	0.76 ACRES
TOTAL SITE AREA	0.76 ACRES

### SLOPE & SURFACE STABILIZATION

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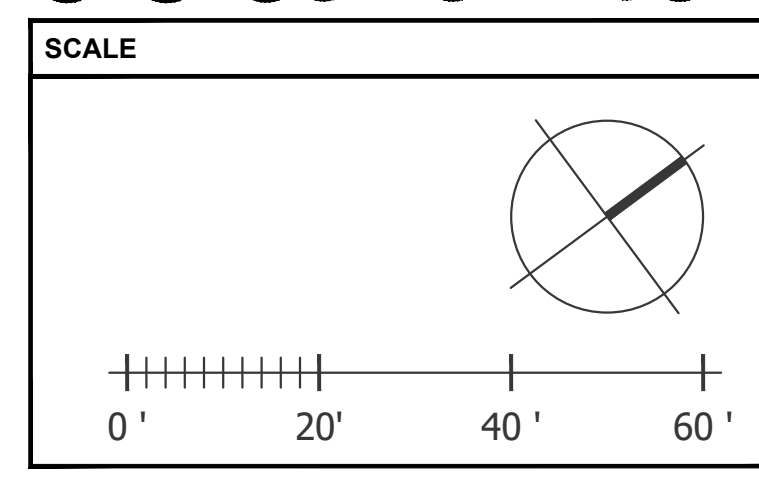
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 PHASE II

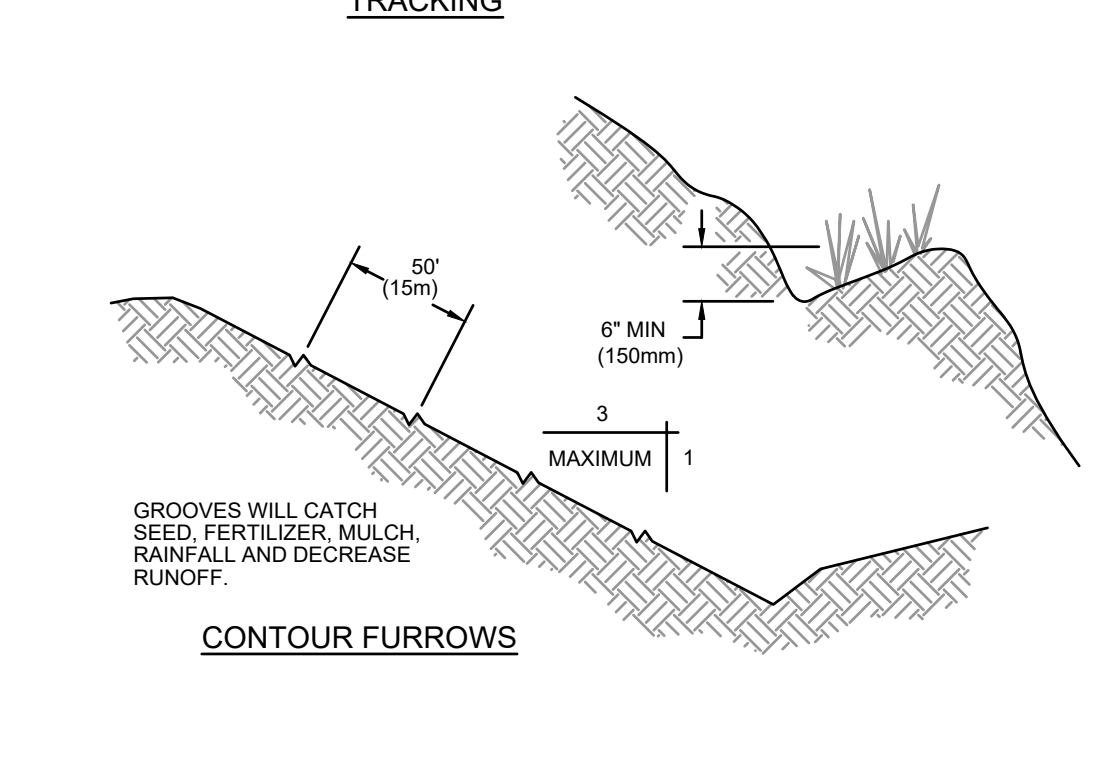
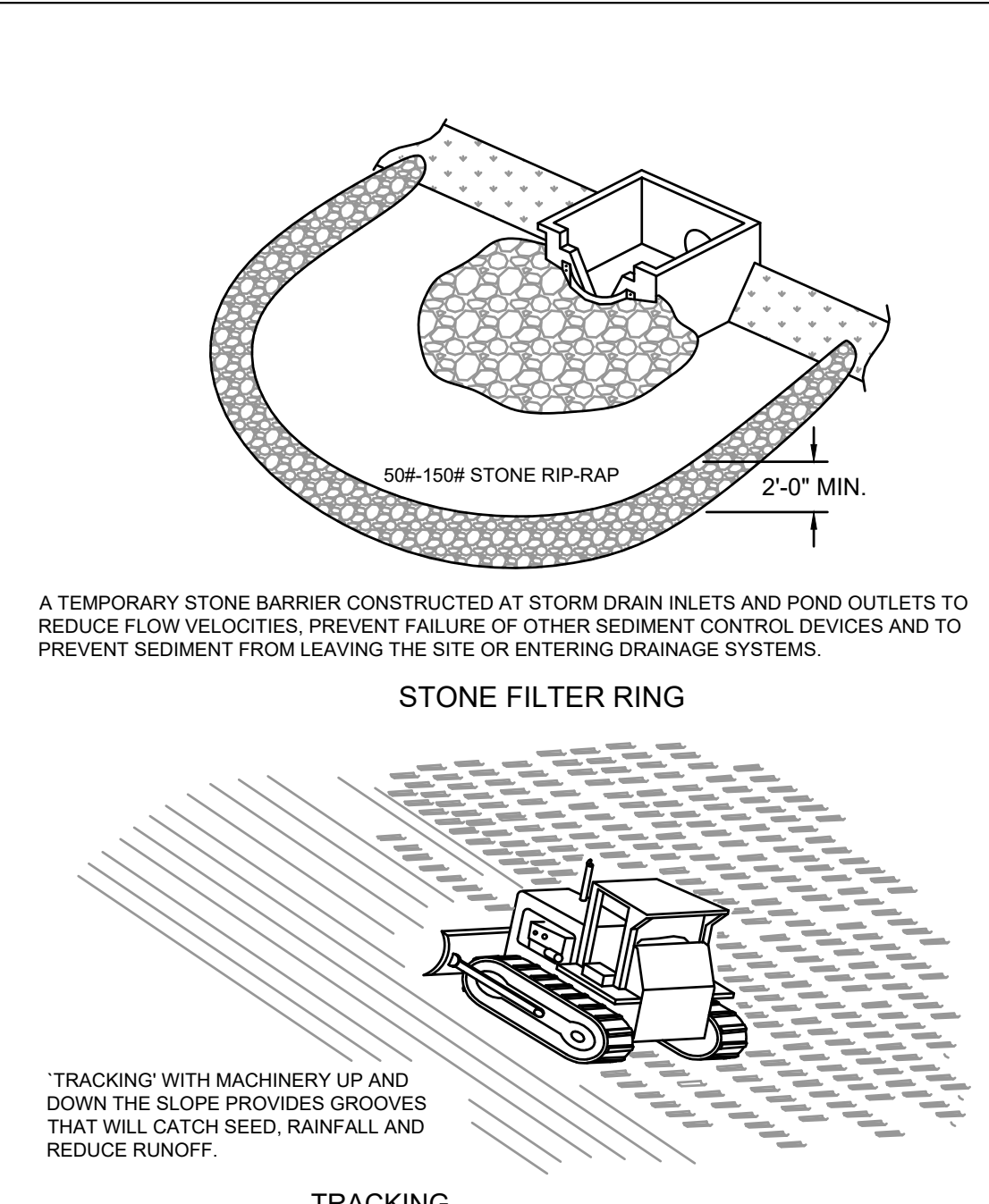
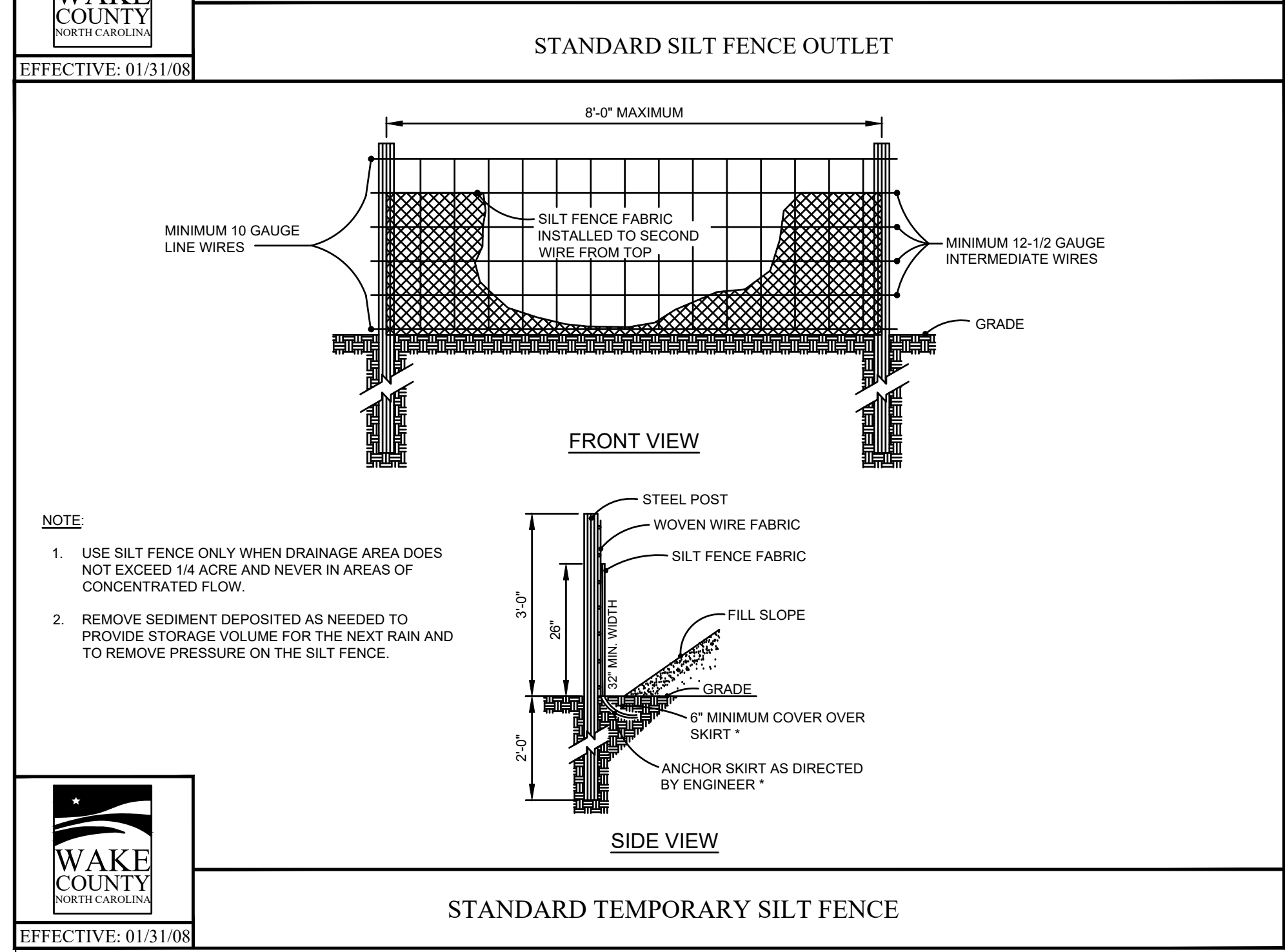
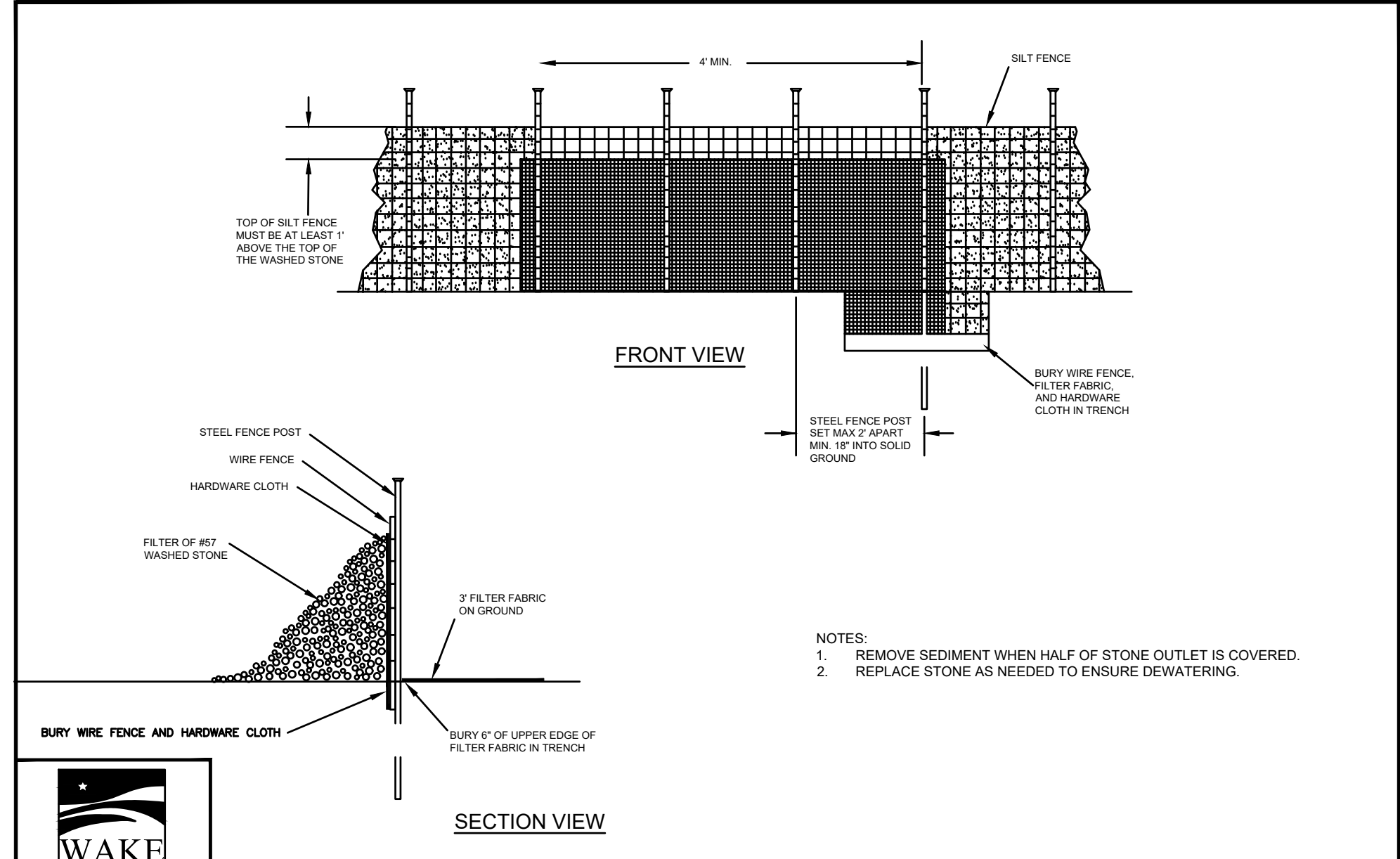
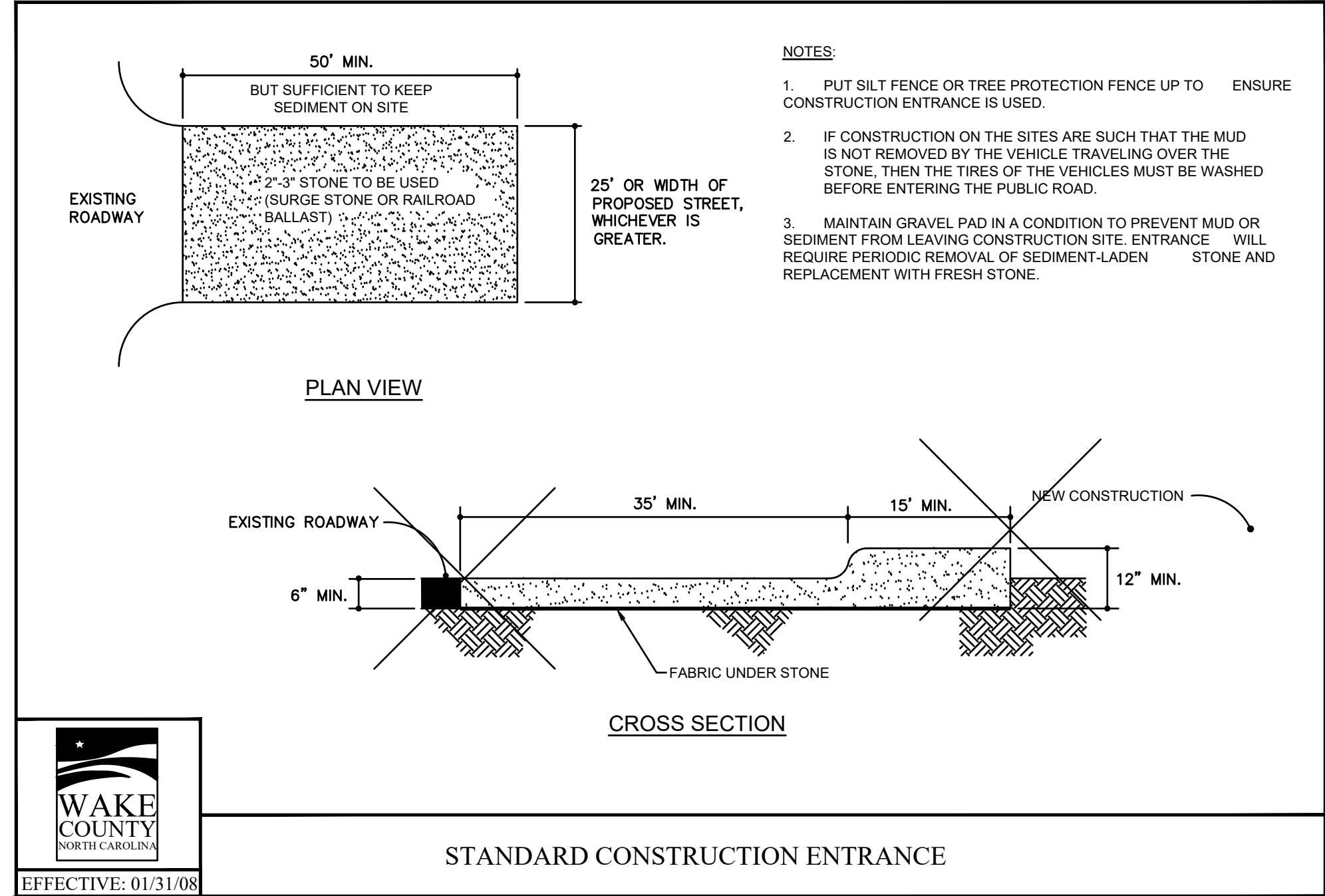
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**SDP-24-07**







**TEMPORARY METHODS**

- MULCHES
- TEMPORARY VEGETATIVE COVER
- SPRAY ON ADHESIVES
- TILLAGE
- IRRIGATION
- BARRIERS
- CALCIUM CHLORIDE

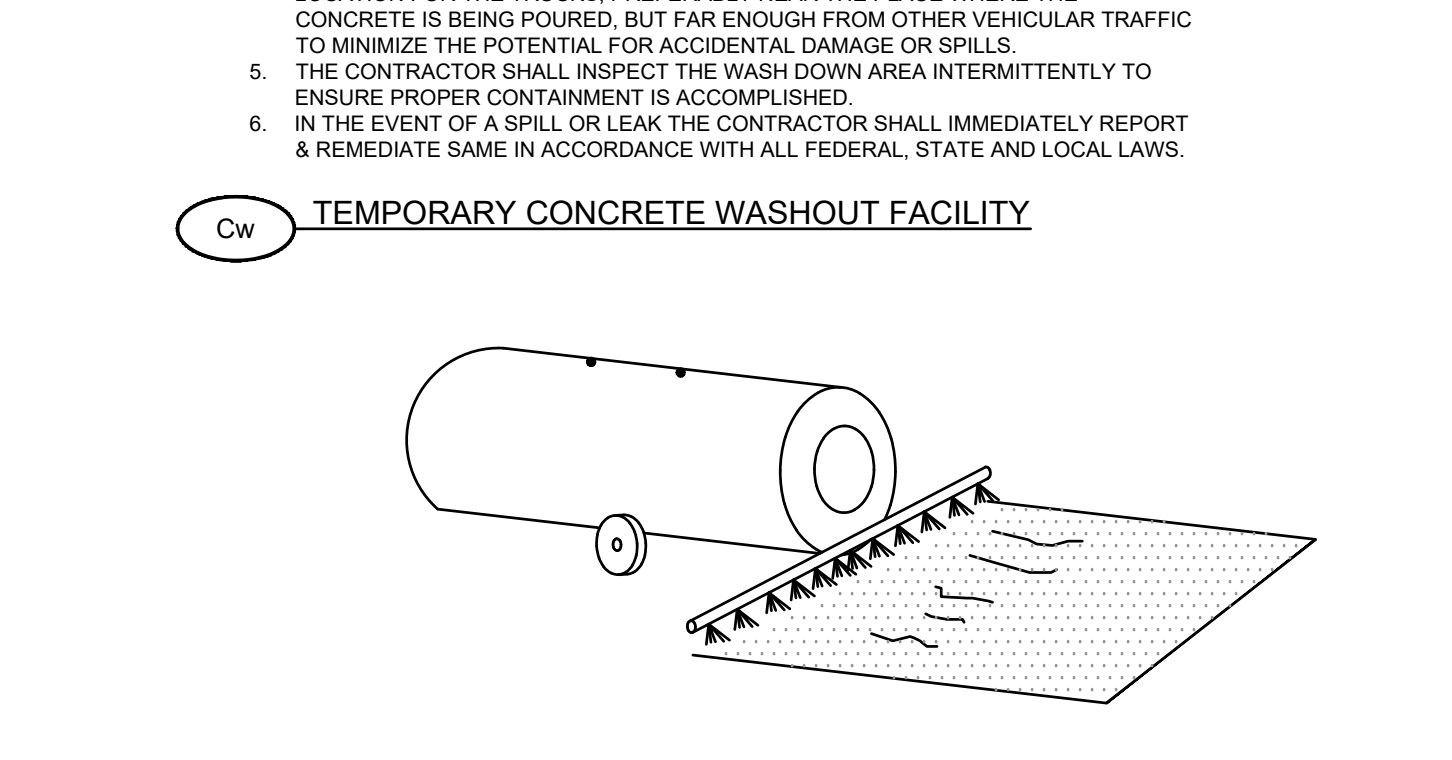
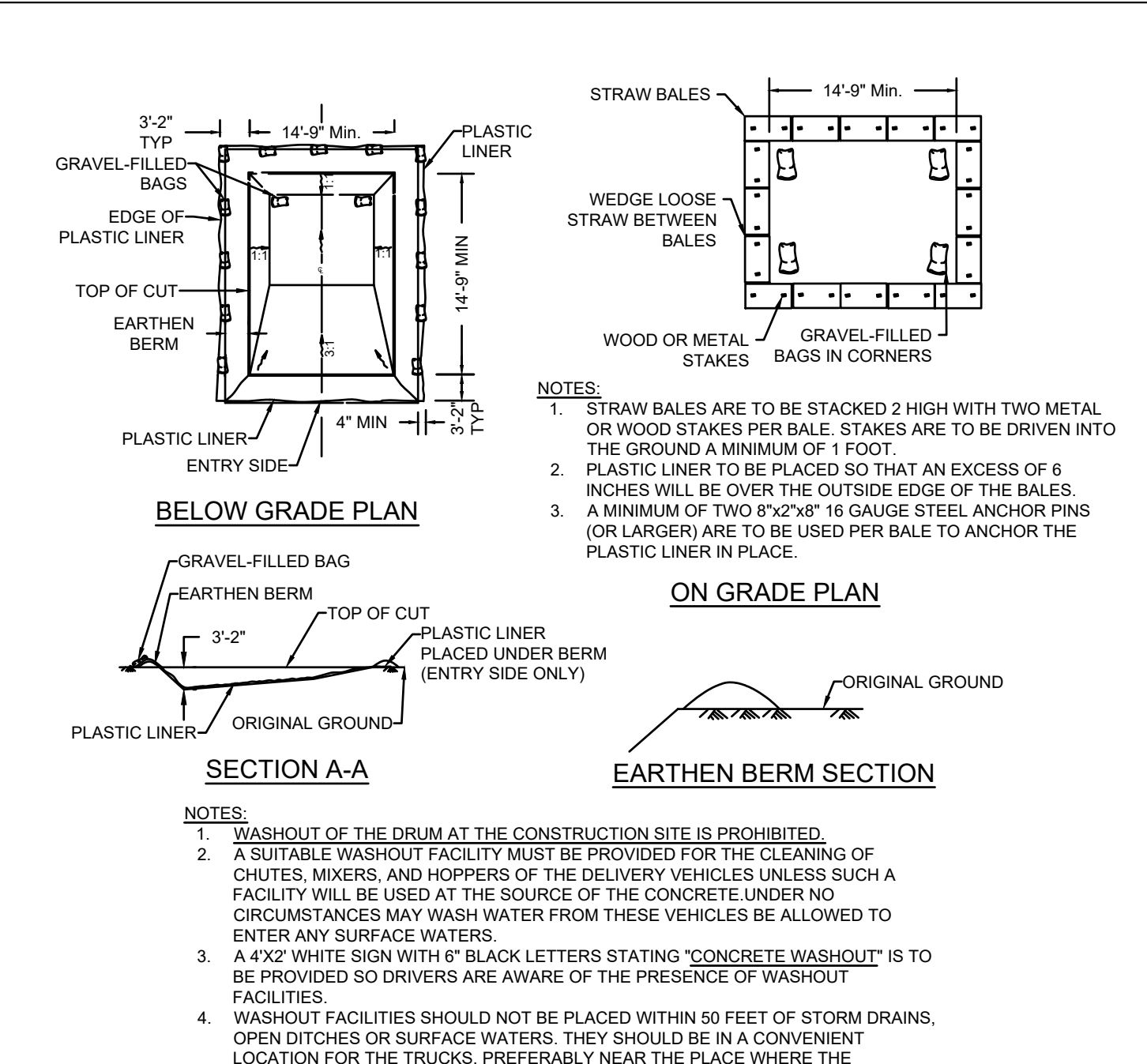
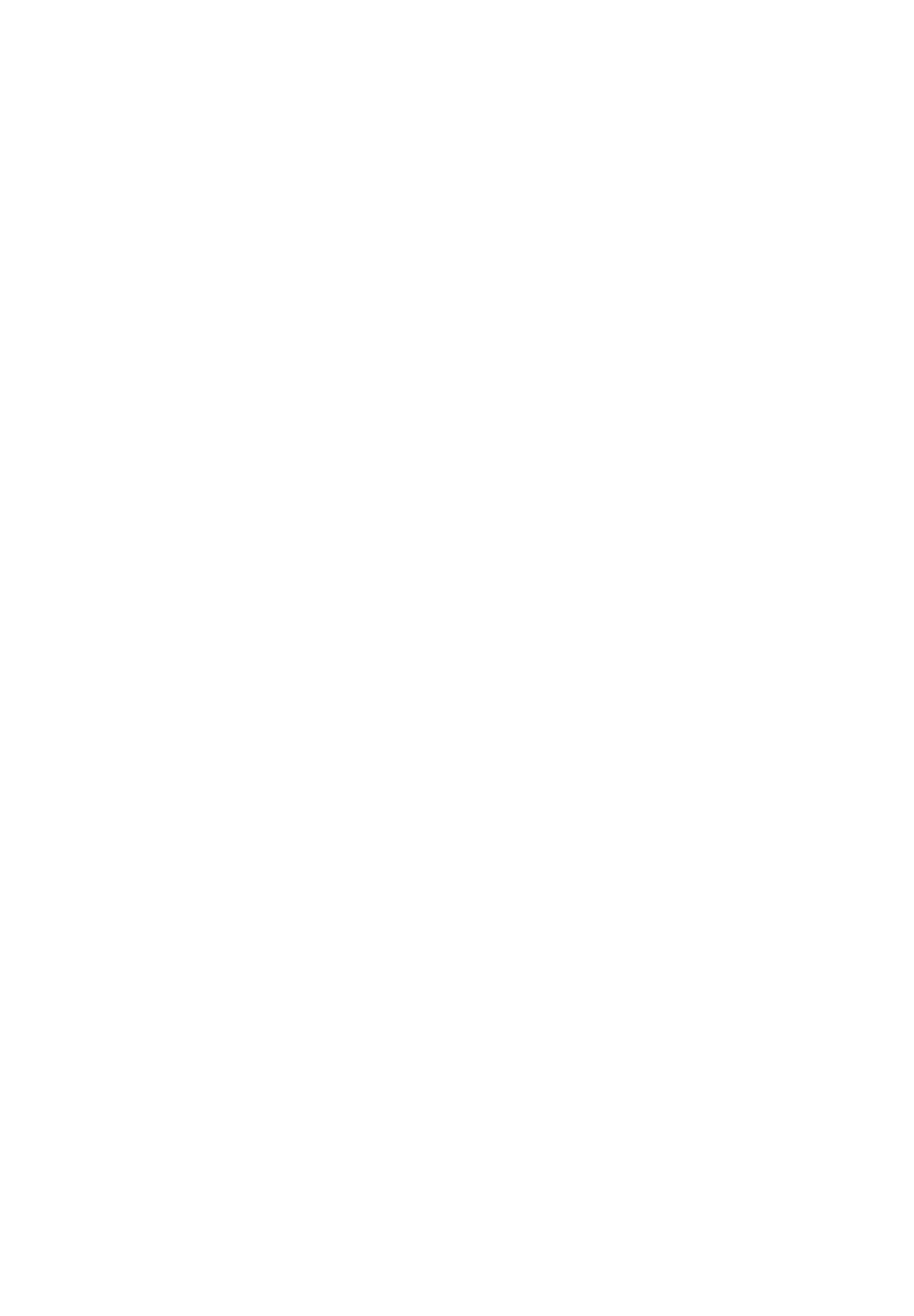
**PERMANENT METHODS**

- PERMANENT VEGETATION
- TOPSOILING
- STONE COVER

**CHEMICAL CONTROL**

ADHESIVE	WATER DILUTION	TYPE OF NOZZLE	APPLICATION RATE (GAL/AC)
ANIOIC ASPHALT EMULSION	7:1*	SPRAY	1200
LATEX EMULSION	12 1/2:1*	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1*	FINE SPRAY	300

\*USE MANUFACTURER'S RECOMMENDATIONS WHEN AVAILABLE



**TEMPORARY METHODS**

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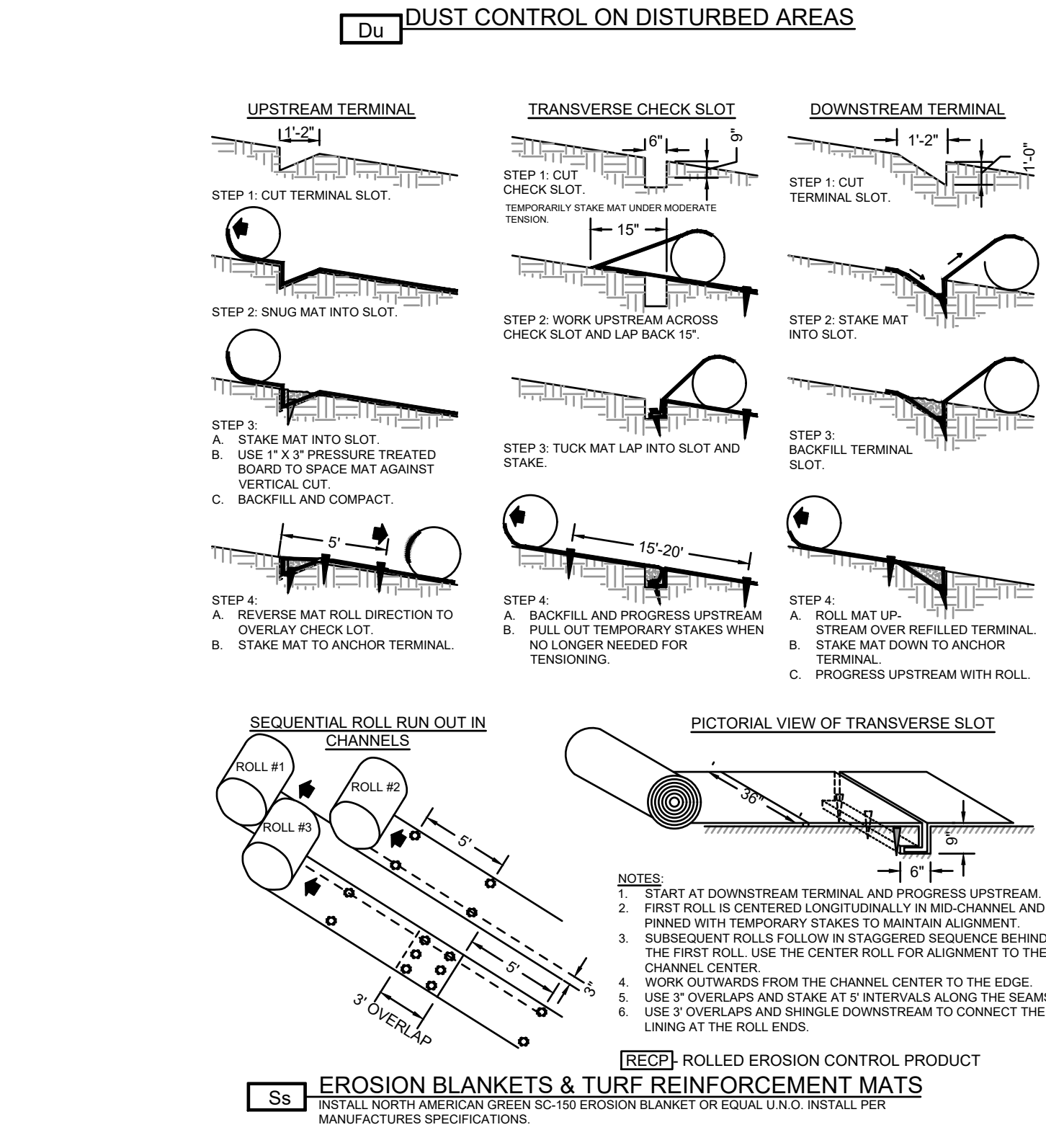
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\*USE MANUFACTURER'S RECOMMENDATIONS WHEN AVAILABLE



**GENERAL NOTES:**

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDITIONAL PROTECTION - ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST MANAGEMENT PRACTICES (BMP) AND MOST CURRENT EROSION AND SEDIMENT CONTROL PRACTICES. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.

**PRE-Construction SITE PROTECTION:**

8. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAIL SHEET FOR TYPICAL CONSTRUCTION.
9. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
10. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
11. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-THIRD (1/3) THE HEIGHT OF THE BARRIER OR INLET. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
12. ALL DISTURBED AREAS ARE TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS, SYNTHETIC BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOIL SOD.

**SITE PROTECTION:**

13. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED PROPERLY. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 6 INCHES. BARRIER IS STAKED, THE EXCAVATED SOIL OR GRAVEL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER. USING WIRE BACKING FOR SUPPORT IS DISCOURAGED DUE TO DISPOSAL PROBLEMS.
14. WATER OR SLURRY USED TO CONTROL DUST SHALL BE RETAINED ON THE SITE AND NOT ALLOWED TO RUN DIRECTLY INTO WATERCOURSE OR STORMWATER CONVEYANCE SYSTEMS.
15. SPECIAL AREAS SHALL BE DESIGNATED AS VEHICLE AND EQUIPMENT WASHING AREAS AND SUCH AREAS SHALL NOT ALLOW RUNOFF TO FLOW DIRECTLY INTO WATERCOURSE OR STORMWATER CONVEYANCE SYSTEMS.
16. SILT FENCE BARRIERS ARE NOT TO BE USED WHERE CONCENTRATED FLOWS OF WATER ARE ANTICIPATED SUCH AS DRAINAGE DITCHES, AROUND INLETS OR ABOVE/ BELOW WHERE CULVERTS DISCHARGE.
17. SYNTHETIC BALES, SANDBAGS OR OTHER APPROVED DEVICE FACED WITH FILTER FABRIC SHALL BE USED IN HIGH VOLUME AREAS TO DECREASE THE RUNOFF VELOCITY AND SHALL BE SECURELY ANCHORED.
18. ALL DEVICES INCLUDING SILT FENCE, FILTER BARRIERS, SYNTHETIC BALES AND/OR SANDBAGS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BARRIERS. END RUNS AND UNDERCUTTING BENEATH BARRIERS.
19. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
20. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

**STORM DRAIN INLET PROTECTION:**

21. FILTER FABRIC SHALL BE LAID OVER INLETS SO THAT THE FABRIC EXTEND A MINIMUM OF 1 FOOT BEYOND EAST SIDE OF THE INLET STRUCTURE. IF MORE THAN ONE STRIP OF FABRIC IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
22. IF STONE FILTERS BECOME CLOGGED WITH SEDIMENT SO THAT THEY NO LONGER ADEQUATELY PERFORM THEIR FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.

**POST-CONSTRUCTION SITE PROTECTION:**

24. ALL DEWATERING, EROSION AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE STABILIZED.
25. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER TEMPORARY BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA IN SUCH A MANNER THAT IT WILL NOT ERODE.
26. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
27. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.



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**FIFTH THIRD BANK**

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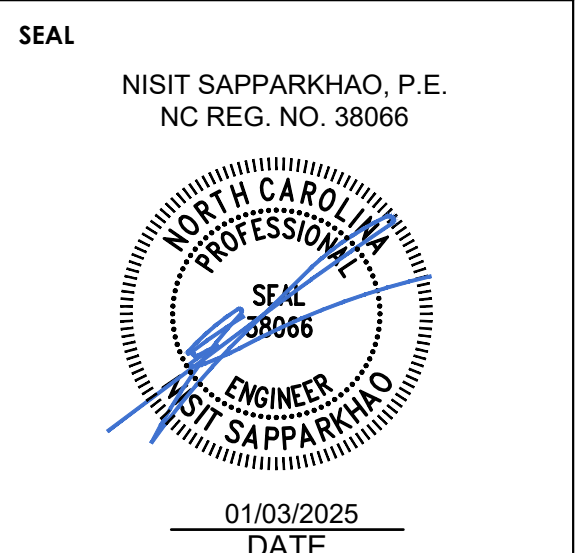
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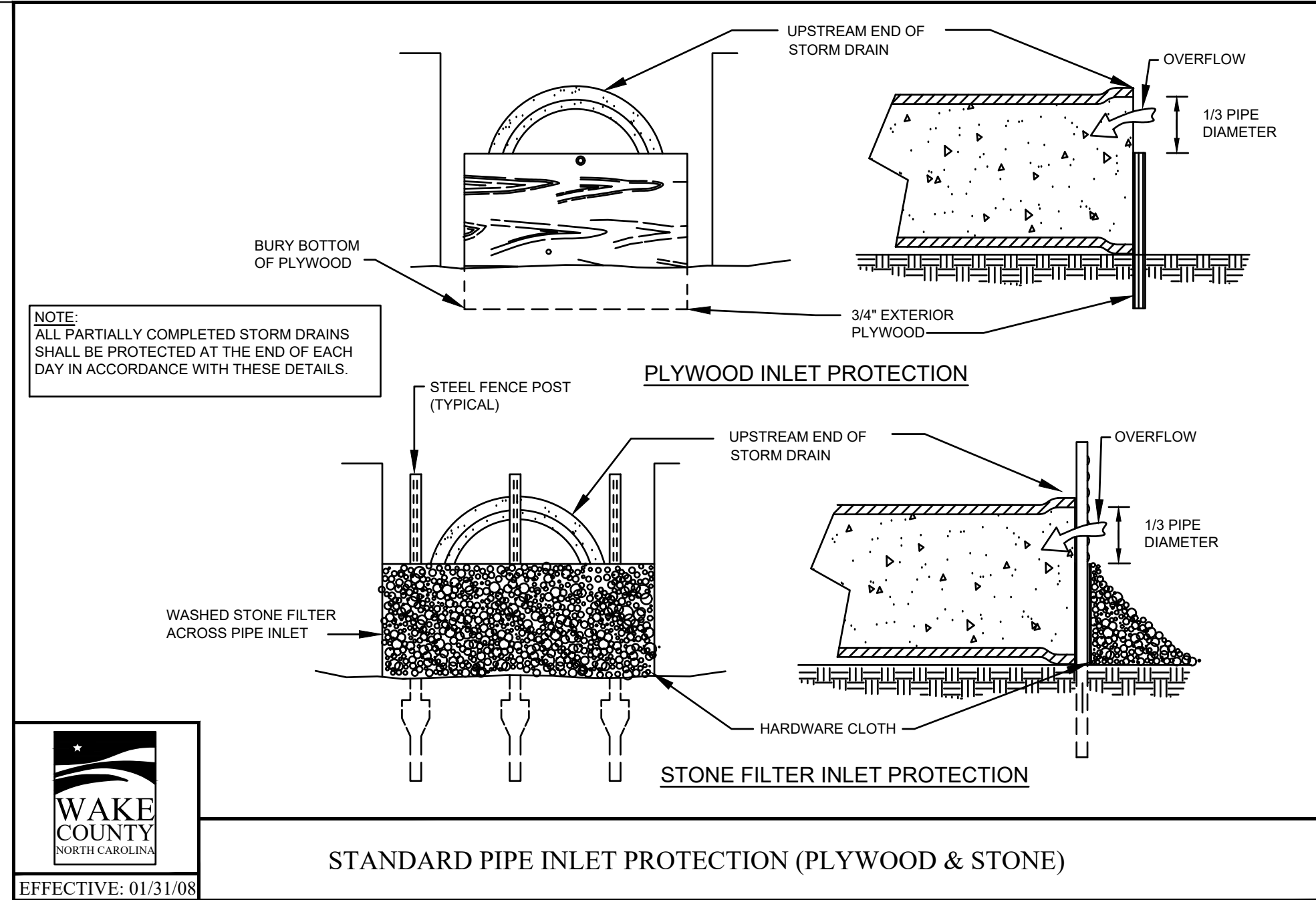
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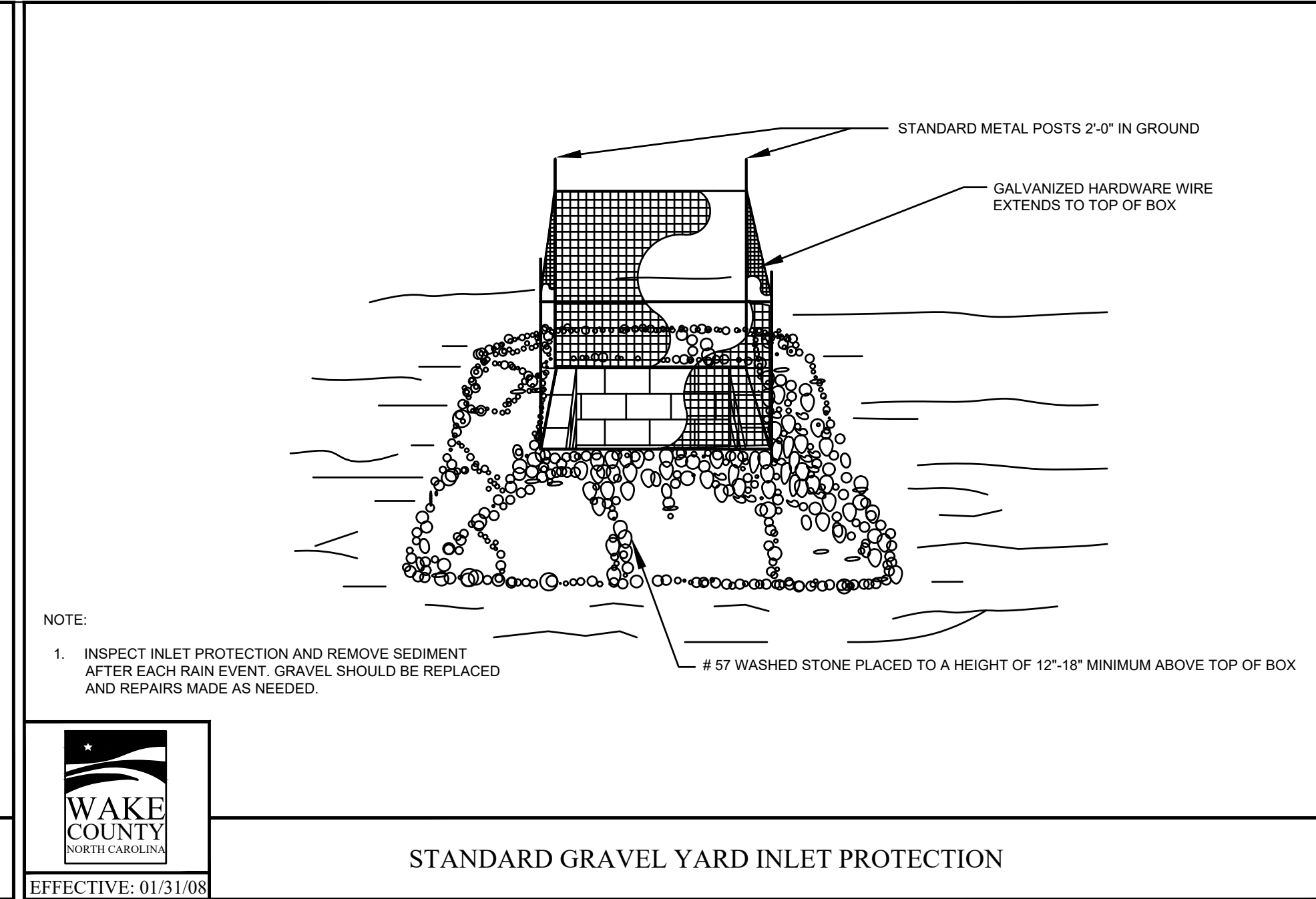
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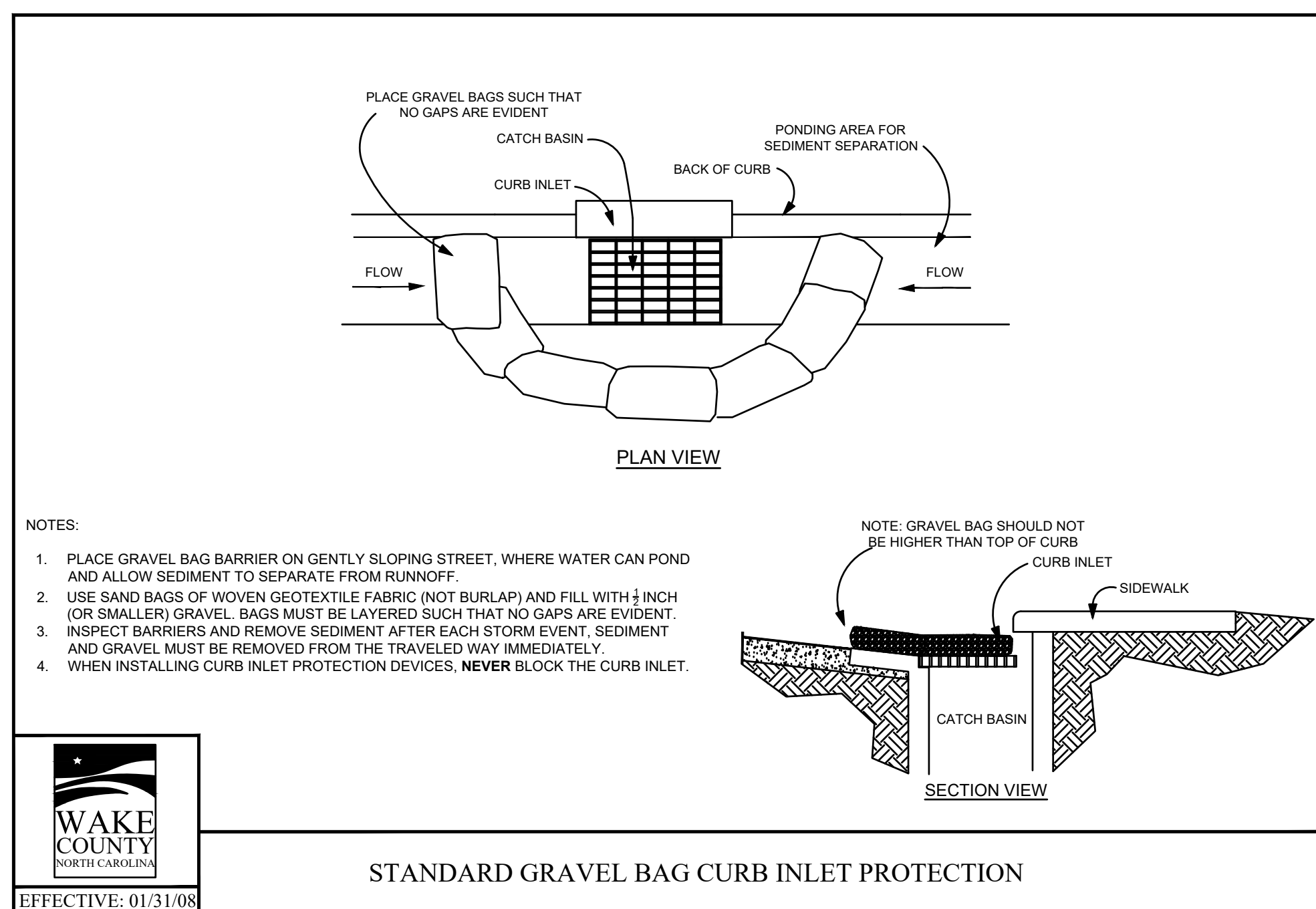
**WAKE COUNTY**  
NORTH CAROLINA  
EFFECTIVE: 01/31/08

STANDARD PIPE INLET PROTECTION (PLYWOOD & STONE)



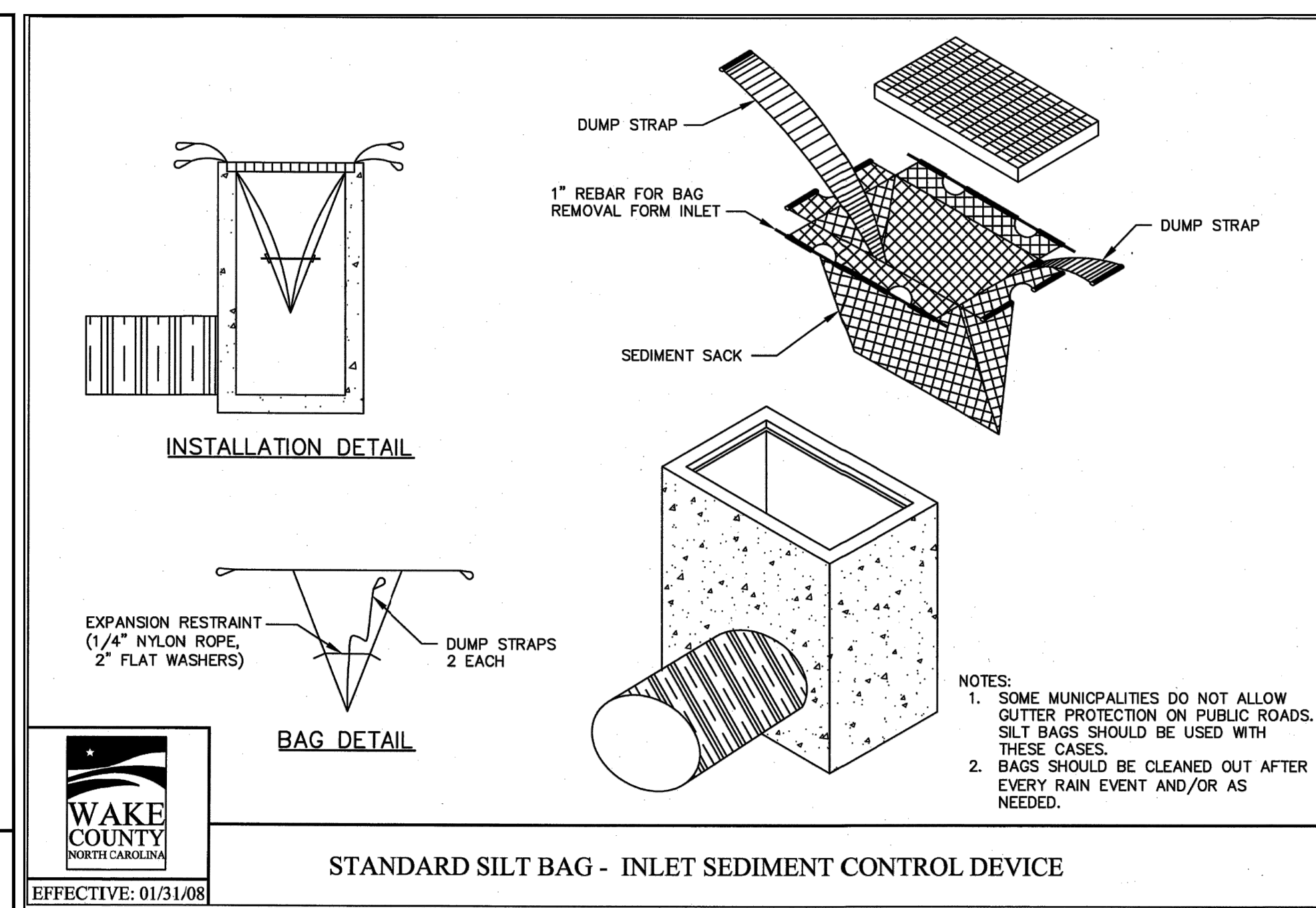
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NORTH CAROLINA  
EFFECTIVE: 01/31/08

STANDARD GRAVEL YARD INLET PROTECTION



**WAKE COUNTY**  
NORTH CAROLINA  
EFFECTIVE: 01/31/08

STANDARD GRAVEL BAG CURB INLET PROTECTION



**WAKE COUNTY**  
NORTH CAROLINA  
EFFECTIVE: 01/31/08

STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE

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Δ		01/03/25	TRC ROUND 2

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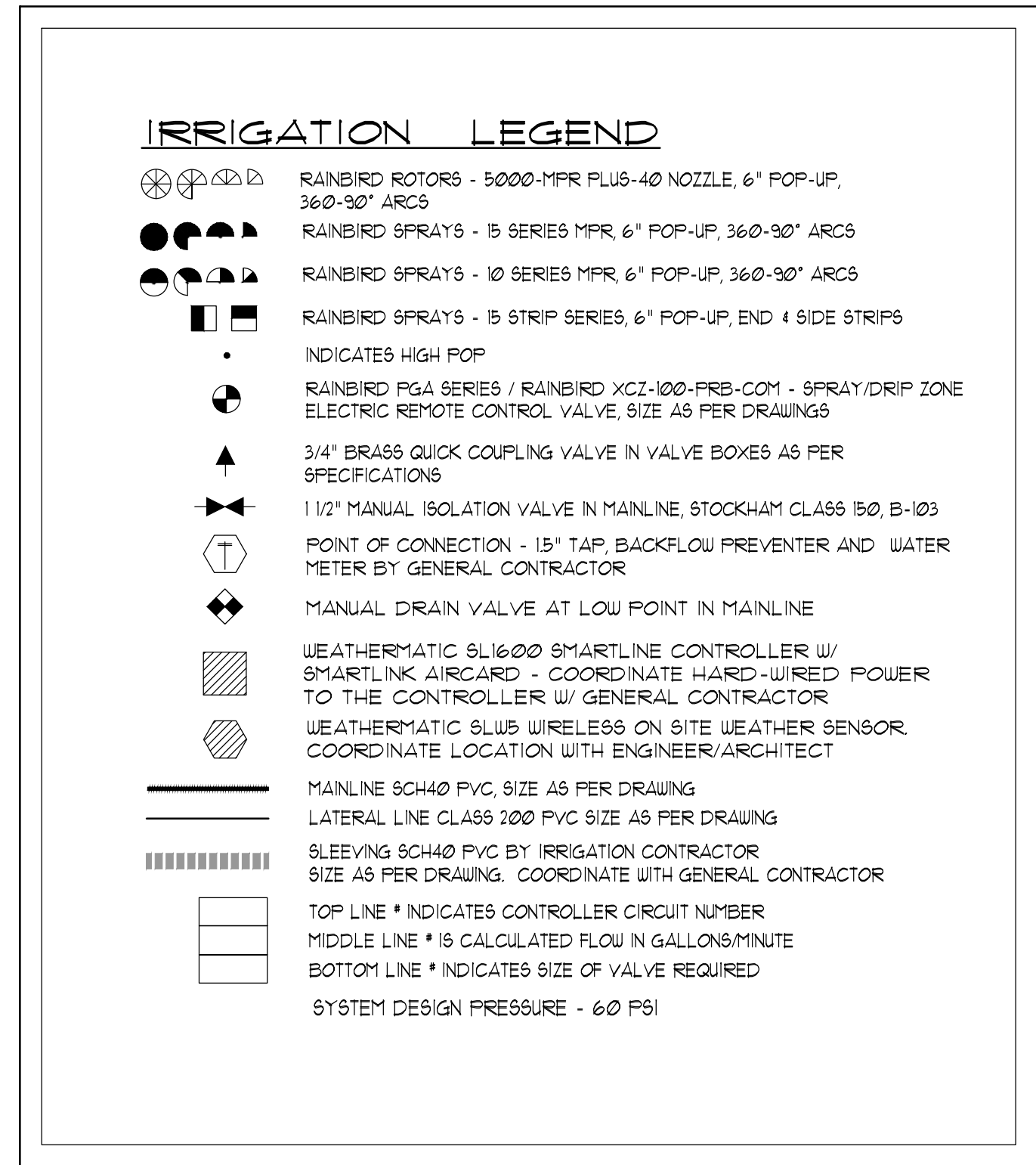
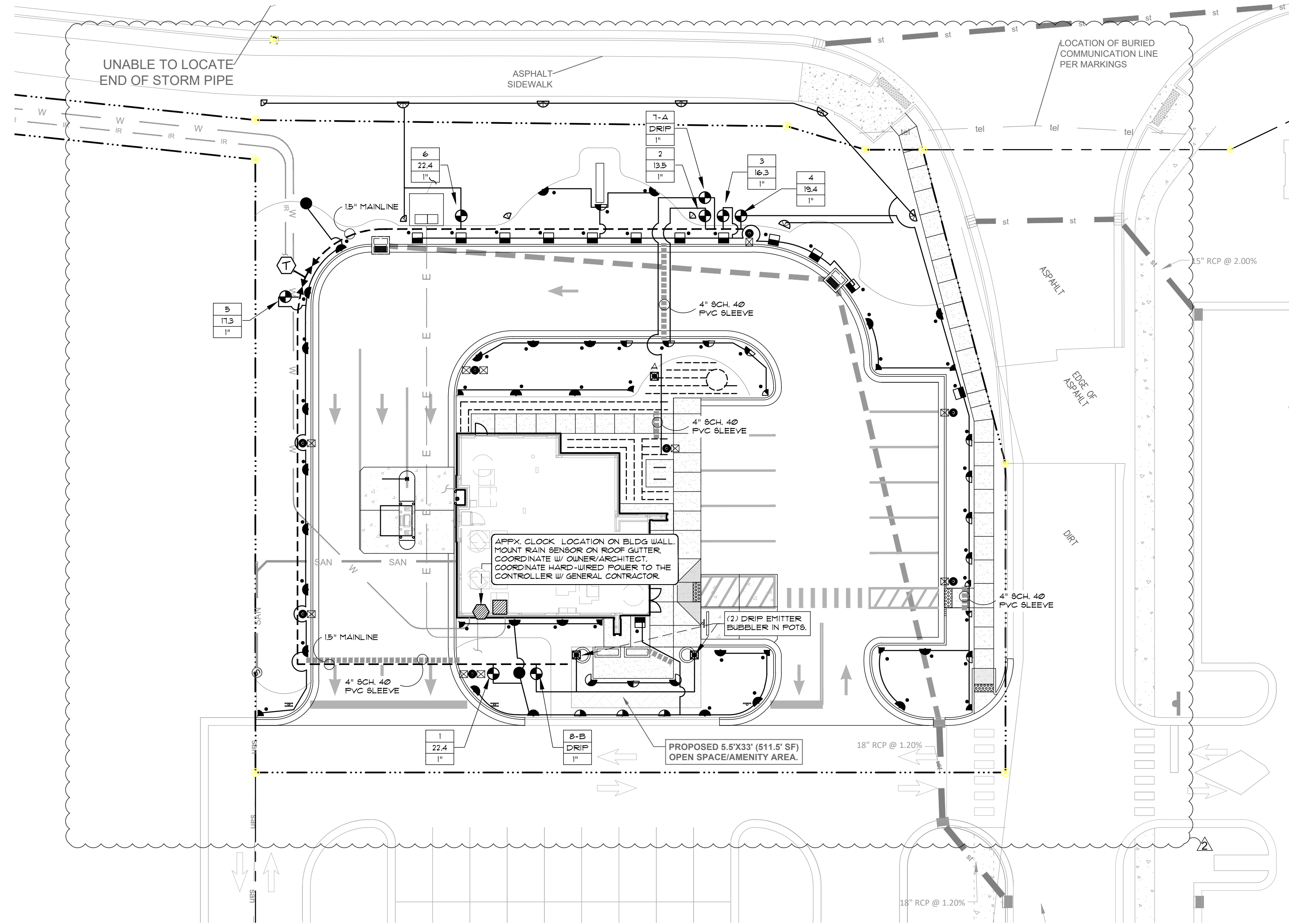
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EROSION AND SEDIMENTATION CONTROL DETAILS  
SHEET NUMBER

C06.05

**SDP-24-07**





NOTES:

- POWER TO CONTROLLER BY ELECTRICAL CONTRACTOR
- USE VARIABLE ARC SPRAY HEADS WHEN NECESSARY
- THERE IS TO BE (2) 4" PVC SLEEVES EACH TIME MAINLINE CROSSES HARDSCAPE:
  - ONE (1) 4" PVC SLEEVE FOR MAINLINE CROSSING
  - ONE (1) 2" PVC SLEEVE FOR WIRING AT MAINLINE CROSSING
- THERE IS TO BE (1) 4" PVC SLEEVE AS REQUIRED FOR ALL LATERAL LINES CROSSING HARDSCAPE.
- ALL EQUIPMENT REQUIRED BUT NOT SPECIFIED ON THE DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR
- VERIFY TAP, IRRIGATION CONTRACTOR TO TEST WATER CONDITIONS AS THEY EXIST, IMMEDIATELY DOWN STREAM FROM TAP. IF THEY DO NOT MEET DESIGN DEMANDS, MATCH PRECIPITATION RATES ON ALL CIRCUITS.
- ALL WORK MUST COMPLY WITH LOCAL CODES.
- NO ELECTRICAL CONNECTIONS SHALL BE MADE IN THE FIELD EXCEPT AT A VALVE CONTROL BOX OR ANOTHER VALVE BOX SPECIFICALLY FOR CONNECTIONS.
- ANY DISCREPANCY BETWEEN THIS SHEET AND OTHERS IN THIS SET MUST BE REFERRED TO THE IRRIGATION CONSULTANT BY THE CONTRACTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- ALL 24 VOLT WIRE SHALL BE #12 UFPL FOR COMMON WIRE, AND #14 UFPL FOR CONTROL WIRES, DIRECT BURIAL, SOLID COPPER.
- CONTRACTOR TO BE RESPONSIBLE FOR PROPER COVERAGE OF AREAS TO BE WATERED, I.E. ADJUST HEADS WITH INSUFFICIENT COVERAGE DUE TO BLOCKAGE BY EXISTING OR PROPOSED SITE FEATURES.
- CONTRACTOR TO REFER TO LANDSCAPE PLAN TO KEEP SPRINKLER EQUIPMENT AND ACCESSORY MATERIAL FROM INTERFERING WITH PROPER PLANTING, I.E. VERIFY ROOTBALL SIZE FOR PLANTING.
- CONTRACTOR SHALL PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION IN VALVE BOX (WRAP AROUND 3/4" PIPE 12 TIMES).
- CONTRACTOR TO UTILIZE APPROPRIATE AUTOMATIC DRAIN DEVICE WHERE LOW HEAD DRAINAGE MAY OCCUR.
- ALL MATERIAL TO BE SUPPLIED BY CONTRACTOR TO OWNER.
  - TWO WRENCHES FOR DISASSEMBLING AND ADJUSTING EACH TYPE OF SPRINKLER HEADS AND VALVE SUPPLIED.
  - TWO KEYS FOR EACH OF THE AUTOMATIC CONTROLLERS.
  - TWO QUICK COUPLER KEYS WITH MATCHING HOSE SUIVELS.
- 24 VOLT WIRE SHALL BE COLOR CODED: COMMON: WHITE, CONTROL: RED.
- CONTRACTOR TO ADD EXTENSION RISER TO POP-UP HEADS WHEN NEEDED FOR PROPER COVERAGE.
- ELECTRIC VALVE CONTROL WIRE TO BE 14 GAUGE MINIMUM, IRRIGATION CONTRACTOR MUST PLACE ONE EXTRA "HOT" WIRE AND ONE EXTRA "COMMON" AT FURTHEST VALVE IN EACH DIRECTION FROM CLOCK.
- ALL MAIN LINES SHALL BE INSTALLED A MAXIMUM OF 2' FROM THE BACK OF CURBS WHERE POSSIBLE. LATERAL LINES SHALL BE INSTALLED LIKEWISE WHERE POSSIBLE.
- DO NOT MAKE SUBSTITUTIONS: IF CONTRACTOR DESIRES TO MAKE SUBSTITUTIONS OF MATERIALS, SUFFICIENT DESCRIPTIVE LITERATURE AND MATERIAL SAMPLES MUST BE FURNISHED TO ESTABLISH THE MATERIAL AS AN EQUAL SUBSTITUTE. IN ADDITION, THE CONTRACTOR MUST STATE HIS REASONS FOR DESIRING SUBSTITUTE MATERIALS. SUBMIT THIS REQUEST AND INFORMATION TO LANDSCAPE ARCHITECT.

IRRIGATION NOTES

- THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THERE ARE OTHER ACTIVE UTILITIES AND SERVICES IN AND AROUND THE SITE. CONTRACTOR IS RESPONSIBLE FOR LOCATING THESE TO AVOID DAMAGE TO THEM.
- THE CONTRACTOR SHALL MAKE ANY NECESSARY ADJUSTMENTS IN THE PROPOSED IRRIGATION SYSTEM TO AVOID ANY DAMAGE TO EXISTING STRUCTURES, PAVING, AND UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ON-SITE UTILITIES, STRUCTURES, OR PAVING RESULTING FROM IRRIGATION CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMING TO ALL CODES AND ORDINANCES RELEVANT TO THE WORK UNDER THIS CONTRACT. ALL WORK, ADJUSTMENTS, AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE AND GUARANTEE, AS REQUIRED, THE TOTAL WORK SHOWN ON THIS PLAN IN ACCORDANCE WITH SPECIFICATIONS, AND ALSO AS PER INSTRUCTIONS OF THE LANDSCAPE ARCHITECT AND THE OWNER.
- THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO ASSURE ADEQUATE INSTALLATION OF THE SYSTEM.
- THE LOCATION OF THE AUTOMATIC CONTROL CLOCK IS GENERALLY INDICATED ON THE DRAWING AND WILL BE SPECIFICALLY LOCATED ON-SITE BY THE LANDSCAPE ARCHITECT OR OWNER.
- LINE LOCATIONS AS INDICATED ON THE PLAN ARE SCHEMATIC. THE CONTRACTOR SHALL LOCATE ALL LINES IN SUCH A WAY AS TO CAUSE THE LEAST CONFLICT WITH THE LOCATION OF PROPOSED PLANT MATERIALS (AS SHOWN ON THE LANDSCAPE PLANTING PLAN) AND OTHER SITE AMENITIES.
- ALL MAIN LINES SHALL BE INSTALLED A MAXIMUM OF 2' FROM THE BACK OF CURBS WHERE POSSIBLE. LATERAL LINES SHALL BE INSTALLED LIKEWISE WHERE POSSIBLE.
- ALL MAINLINES SHALL BE INSTALLED AT A MINIMUM OF 18" DEEP AND ALL LATERAL LINES SHALL BE INSTALLED AT A MINIMUM OF 12" DEEP. ACTUAL HEAD PLACEMENT IN PARKING LOT ISLANDS IS TO BE 18" FROM BACK OF CURB FOR SHRUB PLANTINGS AND 6" FROM BACK OF CURB FOR LAWN.
- THE CONTRACTOR SHALL ADJUST THE RADIUS AND ARC OF EACH HEAD TO MINIMIZE "OVERTHROW" AND TO ELIMINATE "DRY SPOTS".
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPLY AND INSTALLATION OF ADDITIONAL HEADS NEEDED TO COVER "DRY SPOTS" OR SLIGHT VARIATIONS FROM THE PLAN TO THE SITE. THE LOCATION AND ARRANGEMENT OF THESE HEADS SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- THE ELECTRIC SUPPLY WILL BE STUBBED OUT AT THE CONTROL CLOCK LOCATION BY OTHERS. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL CONNECTIONS FROM CONTROL VALVES TO THE CONTROL CLOCK. COORDINATE ELECTRIC SUPPLY WITH GENERAL CONTRACTOR.
- THE ENTIRE SYSTEM SHALL BE UNCONDITIONALLY GUARANTEED BY THE IRRIGATION CONTRACTOR AGAINST ALL DEFECTIVE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE.

SLEEVING NOTES

- THE LOCATION OF SLEEVES, AS SHOWN ON THIS PLAN, ARE SCHEMATIC. THE CONTRACTOR SHALL MAKE ANY ADJUSTMENT NECESSARY TO ACCOMMODATE EXISTING VEGETATION, UTILITIES, NATURAL BARRIERS OR OTHER MAJOR CONSTRUCTION.
- ANY DAMAGE TO EXISTING UTILITIES, STRUCTURES, OR OTHER CONSTRUCTION RESULTING FROM INSTALLATION OF SLEEVES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- WHERE A JOINT BETWEEN PIPE SECTIONS IS NECESSARY, THE INSIDE DIAMETER OF THE PIPE SHALL NOT BE SIGNIFICANTLY REDUCED.
- PVC SLEEVES SHALL BE INSTALLED AT A DEPTH OF AT LEAST 18" BELOW PAVEMENT SURFACE, AND NO DEEPER THAN 24". END OF SLEEVE SHALL EXTEND 12" BEYOND CURB OR PAVEMENT EDGE.
- BACKFILL MATERIAL PLACED AROUND THE SLEEVES SHALL BE FREE OF ROCKS OR OTHER FOREIGN MATTER THAT MAY CAUSE DAMAGE TO THE PIPE.
- THE CONTRACTOR SHALL INSTALL A PVC STUB THAT IS AT LEAST 18" ABOVE GRADE AT EACH END OF THE SLEEVE TO MARK ITS EXACT LOCATION. IRRIGATION SLEEVES SHALL BE INDICATED WITH BLUE RIBBON. ELECTRICAL SLEEVES SHALL BE INDICATED WITH ORANGE RIBBON. SEE SLEEVING DETAIL ONCE THE SLEEVE IS INSTALLED. THE CONTRACTOR SHALL INSTALL A TEMPORARY CAP ON EACH END OF THE PIPE ACCORDING TO THE DETAIL TO PREVENT SOIL OR OTHER DEBRIS FROM ENTERING THE PIPE.
- ALL MODIFICATIONS OF THIS PLAN ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL SUPPLY THE LANDSCAPE ARCHITECT WITH AN "AS-BUILT" PLAN OF THE LOCATION OF ALL SLEEVES PRIOR TO ACCEPTANCE OF WORK.
- ALL PVC SHOULD BE SCH40 PVC PIPE

NOTES:

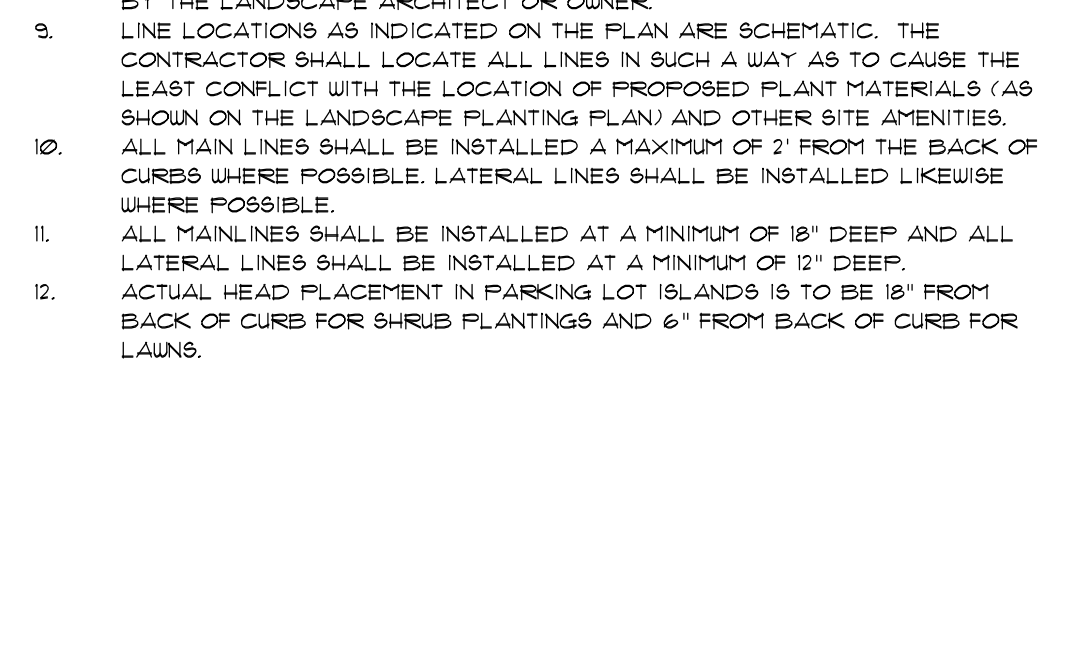
- EXCEPT FOR OBVIOUS CROSSINGS, PIPE IS IN PAVING USE VARIABLE ARC SPRAY HEADS WHEN NECESSARY OR OUTSIDE OF PROPERTY LINE FOR GRAPHIC CLARITY ONLY.
- ALL WORK SHALL BE DONE WITH IN PROPERTY LINES.
- CONTRACTOR SHALL INSTALL AUTOMATIC DRAIN VALVES AT ALL LOW POINTS IN SYSTEM.
- ALL HEADS IN SHRUB BEDS SHALL BE INSTALLED ON 12" RISERS.

COMMISSIONING NOTES:

- TO COMMISSION THE WEATHERMATIC SMART IRRIGATION CONTROLLER PLEASE DO THE FOLLOWING:
- CONFIRM THAT ALL THREE PIECES OF EQUIPMENT (CONTROLLER, WEATHER STATION, AND AIRCARD) ARE PROPERLY INSTALLED.
  - PROVIDE WEATHERMATIC THE AIRCARD NUMBER THAT IS ON THE SIDE OF THE AIRCARD (20-DIGIT LONG NUMBER).
  - WHEN SHARING THIS INFORMATION WITH WEATHERMATIC, YOU SHOULD ALSO NOTE THAT THIS IS A FIFTH THIRD BANK CORPORATE LOCATION AND PROVIDE THE SITE ID NUMBER AND ADDRESS.
- CONTRACTOR TO CONTACT WEATHERMATIC REPRESENTATIVE KELSI VAQUERA WITH ANY QUESTIONS. CONTACT PRIOR TO WORK FOR COORDINATION OF INSTALLATION AND SMART IRRIGATION ACCOUNT ACTIVATION AND COMMISSIONING. KELSI.VAQUERA@WEATHERMATIC.COM OR (316) 516-3625

CONTROLLER NOTES:

- MOUNT CONTROLLER ON THE EXTERIOR OF THE BUILDING PREFERABLY NEAR THE UTILITY ENTRANCE
- MOUNT SENSOR ON THE EVE OF THE BUILDING SO IT HAS A CLEAR VIEW OF THE SKY FOR PROPER RAINFALL DETECTION AND IS AWAY FROM ANY ARTIFICIAL HEAT SOURCES.



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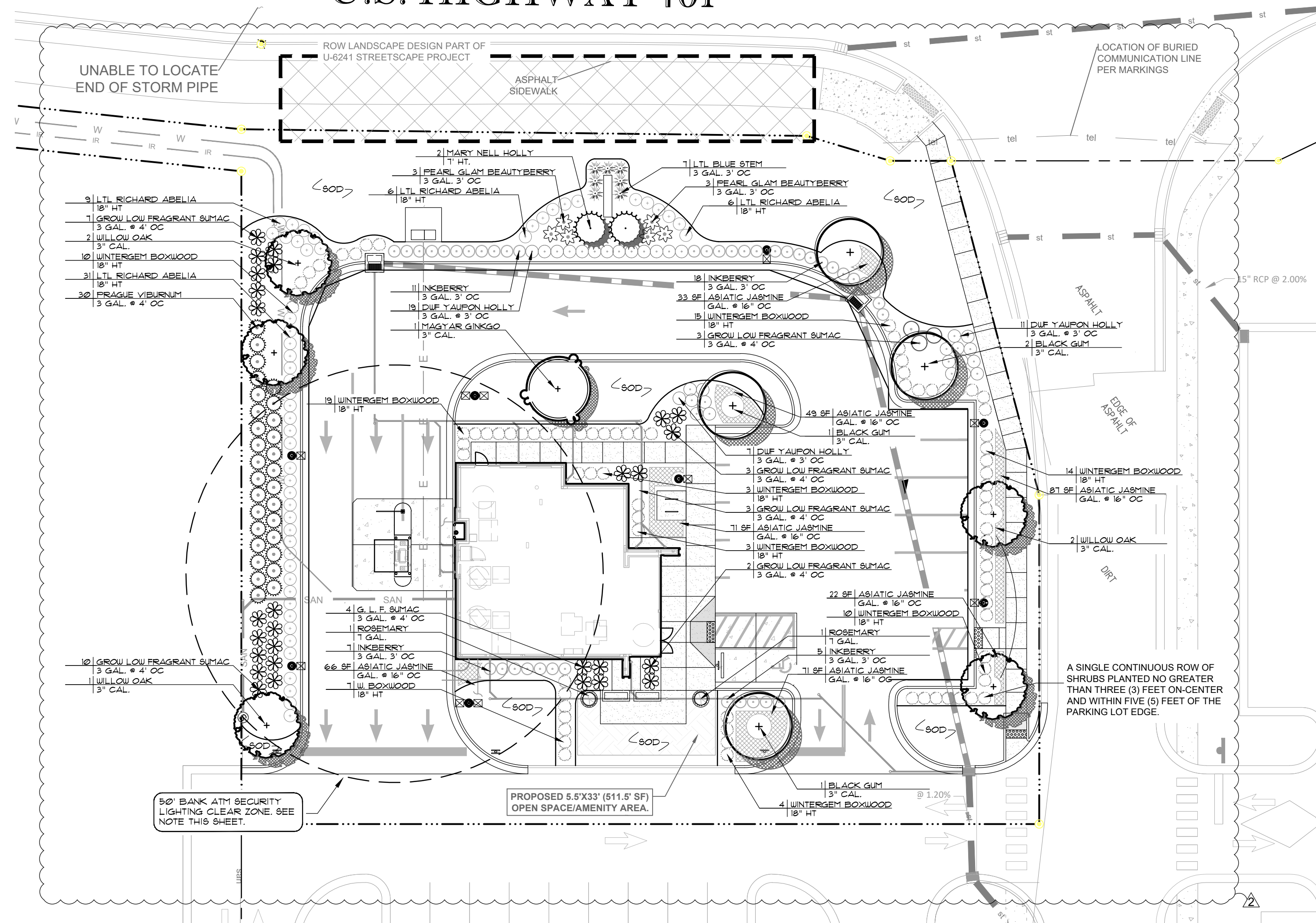
ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		01/03/24	TRC ROUND 2

PROJECT INFORMATION BLOCK	
JOB #	230634
DATE	08/16/2024
DRAWN BY:	JCO
CHECKED BY:	WRJ

IRRIGATION PLAN



U.S. HIGHWAY 401



NOTES:

- IF CONFLICTS EXIST BETWEEN PROPOSED LANDSCAPE AND SITE LIGHTING, UTILITIES OR OTHER LANDSCAPE, CONTRACTOR IS TO CONTACT LANDSCAPE ARCHITECT IMMEDIATELY. ADJUST AS NECESSARY AND COORDINATE WITH LANDSCAPE ARCHITECT WHERE INSTALLED LOCATION OF LIGHTING VARIES FROM PLANS.
- IF SITE CONDITIONS EXIST, SUCH AS LOW AREAS THAT WILL POTENTIALLY HOLD WATER, OR ANY CONDITIONS THAT PROPOSE A THREAT TO THE LONG TERM SURVIVAL OF THE NEW LANDSCAPE, THE LANDSCAPE CONTRACTOR IS TO CONTACT THE LANDSCAPE ARCHITECT FOR CHANGES.
- IF THESE CONDITIONS ARE NOT COORDINATED DURING CONSTRUCTION, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR RELOCATING NEW MATERIAL AT DIRECTIVE OF THE LANDSCAPE ARCHITECT AT TIME OF PUNCH LIST.
- SIGNAGE SHOWN AS SCHEMATIC. IF VARIANCE OCCURS, LANDSCAPE AND IRRIGATION TO BE ADJUSTED TO ACTUAL LOCATION. COORDINATE WITH LANDSCAPE ARCHITECT FOR CHANGES.
- ALL SHRUBS AT FRONT OF PARKING AREAS; CENTER OF PLANT TO BE LOCATED 42" FROM BACK OF CURB.
- ALL SHRUBS ALONG DRIVES OR CURB; CENTER OF PLANT TO BE LOCATED 36" FROM BACK OF CURB.
- CONTRACTOR RESPONSIBLE FOR OFF SITE DISTURBANCE AND REPLACEMENT OF LANDSCAPE / PLANT MATERIAL WITH LIKE KIND.
- IF CONFLICTS EXIST BETWEEN PLANTINGS AND SITE ELEMENTS, CONTRACTOR SHALL COORDINATE TREE PLANTING WITH BUILDING AND MONUMENT SIGNAGE AND COORDINATE ALL ADJUSTMENTS AS NECESSARY TO ELIMINATE ANY CONFLICTS. IF COORDINATION IS NOT MADE WITH ARCHITECT / CDR, CONTRACTOR WILL BE RESPONSIBLE FOR RELOCATION OF MATERIAL AND ADJUSTMENTS AT TIME OF PUNCH LIST AS DIRECTED.
- ALL PLANTING BEDS AND TREE PITS SHALL BE MULCHED WITH A 3" SETTLED LAYER OF SINGLE SHREDDED MULCH - NO NUGGETS. IF WITHIN A DEVELOPMENT REQUIRING PARTICULAR MULCH, CONTRACTOR TO INSTALL AS REQUIRED WITH BANK APPROVAL.

PROJECT WILL BE REVIEWED FOR PLAN CONFORMITY BY LANDSCAPE ARCHITECT. ALL MATERIAL TO BE GRADE A, MEETING NURSERY STANDARDS AND PLANT LIST SPECIFICATIONS. MATERIAL NOT MEETING SPECIFICATIONS OR NOT SUPERIOR QUALITY WILL BE REJECTED AT TIME OF PUNCH LIST AND SUBJECT TO REPLACEMENT BY CONTRACTOR AT HIS OR HER EXPENSE.

ANY LANDSCAPE WITHIN 50 FEET OF THE ATM OR NIGHT DROP SHALL BE NO HIGHER THAN 24" ABOVE GRADE AND SHALL BE MAINTAINED AT THIS HEIGHT THROUGHOUT THE LIFE OF THE PLANT.

**LANDSCAPE CALCULATIONS (SEE SHEET C2.01)**

STREET BUFFER CALCULATION:  
 MAIN ST. LENGTH: 171 LF  
 REQUIRED TREES (1 PER 40 LF):  $171 \div 40 = 4.275$  TREES REQUIRED  
 PROPOSED: 2 STREET TREES + 2 EVERGREEN TREES + 3 REQUIRED TREES TOTAL ...

VEHICULAR USE AREA (VUA) CALCULATIONS:  
 PARKING LOT:  
 REQUIRED CANOPY TREES IN TERMINAL ISLANDS (1 PER ISLAND):  $4 \times 1 = 4$  TREES REQUIRED  
 PROPOSED: 4 TREES TOTAL

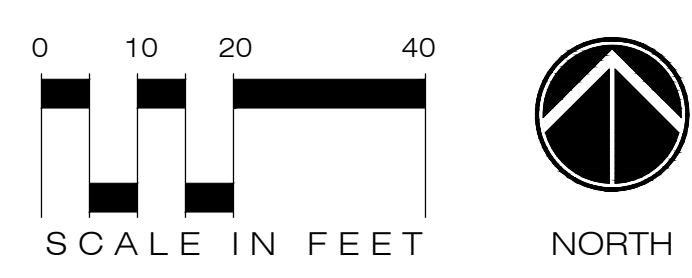
REQUIRED SHRUBS IN PARKING PERIMETER BUFFER (1 PER 3 LF):  $411 \div 3 = 137$  TREES REQUIRED  
 PROPOSED: 148 SHRUBS TOTAL

... THE PLANTING SCHEDULE DOES NOT INCLUDE THE STREET TREES ON MAIN ST WHICH IS PART OF THE U-6241 STREETSCAPE PROJECT, SEE STANTEC LANDSCAPE PLAN L-4 FOR STREET TREE SPECIES. A TOTAL OF 5 TREES SHALL BE PROVIDED ALONG MAIN ST. - 2 TREES MIN. FROM THE U-6241 STREETSCAPE PROJECT AND 3 (2 SHADE TREES AND 1 EVERGREEN TREES) FROM THIS PROJECT.

LANDSCAPING WILL BE COMPLIANT WITH LDO SECTION 6.2.4.4. IN THE PARKING LOT ISLANDS

PLANT SCHEDULE

BOTANICAL NAME	COMMON NAME	GAL	HT	SPREAD	RB/SIZE	SPACING	COMMENTS
<b>TREES</b>							
QUERCUS PHELLOS WILLOW OAK	WILLOW OAK	3"	16'	6'	ANA STANDARD		WELL BRANCHED
GINKGO BILOBA 'MAGYAR'	MAGYAR GINKGO	3"	14'	6'	ANA STANDARD		5' CT - WELL BRANCHED
NYSSA SYLVATICA 'NSUHH'	GREEN GABLE BLK GUM	3"	12'	8'	ANA STANDARD		CENTRAL LEADER
LAGERSTROEMIA X 'NATCHEZ'	NATCHEZ C. MYRTLE	(3) 15"	12'	7'	ANA STANDARD		HT - FULL HEAD
AMELANCHIER X GRANDIFLORA 'A. B.'	A.B. SERVICEBERRY	(5) 15"	10'	6'	ANA STANDARD		5-TRUNK
ILEX 'MARY NELL'	MARY NELL HOLLY	1"	4'		ANA STANDARD		FULL TO GROUND
<b>SHRUBS</b>							
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	24"	20"		3 GAL. @ 3' OC		FULL PLANT
CALLICARPA X 'NCCX2'	PEARL GLAM BEAUTYBERRY	30"	24"		3 GAL. @ 4' OC		FULL PLANT
ILEX GLABRA	INKBERRY HOLLY	20"	18"		3 GAL. @ 3' OC		FULL PLANT
ILEX VOMITORIA 'NANA'	DWARF YAUFON HOLLY	18"	16"		3 GAL. @ 3' OC		FULL PLANT
RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	24"	30"		3 GAL. @ 4' OC		FULL PLANT
VIBURNUM X FRAGENSE	FRAGUE VIBURNUM	24"	24"		3 GAL. @ 4' OC		FULL PLANT
BUXUS MICROPHYLLA VAR. 'JAPONICA WINTER GEM'	WINTER GEM BOXWOOD	18"	16"		3 GAL. @ 3' OC		FULL PLANT
ROSMARINUS OFFICINALIS L.	ROSEMARY	24"	30"		1 GAL.		FULL PLANT
ABELIA X GRANDIFLORA 'LITTLE RICHARD'	LITTLE RICHARD ABELIA	18"	16"		3 GAL. @ 3' OC		FULL PLANT
<b>MISC.</b>							
TRACHELOSPERMUM ASIATICUM	ASIATIC JASMINE	8"	6"		1 GAL. @ 16" OC		FULL PLANT
ZOYSIA JAPONICA	ZOYSIA GRASS SEED						TO MATCH DEVELOPMENT



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SEAL

ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		01/03/24	TRC ROUND 2

PROJECT INFORMATION BLOCK  
 JOB # 230634  
 DATE: 08/16/2024  
 DRAWN BY: JCO  
 CHECKED BY: WRJ

SHEET TITLE  
 LANDSCAPE PLAN  
 SHEET NUMBER  
 L-110



PART 1 – GENERAL

- A. Extent of underground irrigation system is shown on Drawings and in the schedules.
  1. Provide all labor, materials and equipment required by or inferred from Drawings and Specifications to complete the Work of the Section.
  2. Provide additional Work and materials required by local authorities at no extra cost to Owner.
  3. Contractor shall provide all permits, applications, licenses and other qualifications to complete work at no additional cost to owner.
  4. Reference Standards: American Society for Testing and Materials, Annual Book of ASTM Standards, latest edition.
- B. Codes and Standards: Perform Irrigation Work in compliance with applicable requirements of governing authorities having jurisdiction. Notify Landscape Architect in writing of all discrepancies immediately.
- C. Do not make substitutions: If Contractor desires to make substitutions of materials, sufficient descriptive literature and material samples must be furnished to establish the material as an equal substitute. In addition, Contractor must state his reasons for desiring substitute materials. Submit this request and information to L. Architect.
- D. Approval and Selection of Materials and Work: The selection of all materials and execution of all operations required under the Drawings and Specifications is subject to the approval of Owner and Landscape Architect. They have the right to reject any and all materials and any and all Work, which in their opinion does not meet requirements of the Contract Documents at any state of operations. Contractor to remove rejected work and or materials from project site and replace promptly.
- E. "As-Built" Drawings: Any changes in layout and/or arrangements of the proposed irrigation system, or any other differences between proposed system and actual installed conditions are to be recorded by Irrigation Contractor in the form of an "As-Built" Drawing. All drawings are to be clearly and neatly drawn on a Mylar sapia base of original design. With accurate as-built drawn, contractor shall provide electronic PDF copy as part of closeout documents (landscape contractor shall obtain this service thru print house of their choosing). Provide Owner and Landscape Architect with a reproducible Mylar copy of the "As-Built" Drawings and electronic PDF before Work under this Contract will be considered for acceptance. All automatic and manual valves, hose bibs or quick couplers and wire splice shall be shown with actual dimensions to reference points so they may be located easily in the field. Submittal of approved "As-Built" Drawings will preclude any Application for Final Payment by Contractor.
- F. Delivery, Storage and Handling: Deliver material and equipment in such a manner as to not damage parts or decrease the useful life of equipment.
  1. Store materials away from all detrimental elements. Coordinate with General Contractor to secure a safe staging area.
  2. Handle, load, unload, stack and transport materials for irrigation system carefully to avoid damage. Handle pipe in accordance with Manufacturer's recommendations.
- H. Verify Tap: Test water conditions, as they exist immediately down stream from tap: If they do not meet design demands, notify Landscape Architect immediately of existing conditions.
- I. The irrigation system is designed to operate under the following conditions: a minimum of 80 psi of water pressure at tap and at least 60# gpm available water supply. Tie to existing system and verify.
- J. Job Conditions: Insurance on irrigation materials or equipment stored or installed is the responsibility of Irrigation Contractor. Such insurance shall cover fire, theft and vandalism. Should Contractor elect not to provide for such insurance, he will in no way hold Owner responsible for any losses incurred by the aforementioned acts. The Contractor is responsible for all costs incurred in replacing damaged or stolen materials.
  1. Obtain all required permits and pay all required fees, at no additional cost to Owner. Any penalties imposed due to failure to obtain permits or pay fees are the responsibility of the Contractor.
  2. Provide and maintain all passageways, guard fences, warning lights and other protection devices required by local authorities.
  3. Existing site improvements shall be performed in a manner that will avoid possible damage. The Contractor is responsible for any damage of a mechanical nature as well as damage resulting from leaks in irrigation system whether due to negligence or otherwise.
  4. Keep project site clean and orderly at all times during construction.
- K. Sleeves are to be installed by the Irrigation Contractor.
 

Coordination and scheduling for excavation of sleeve ends is the responsibility of the Irrigation Contractor.

  1. Coordinate and schedule all Work with General Contractor.
  2. Damages resulting from irrigation installation to Work of other trades must be repaired at the expense of Contractor in a timely fashion.
  3. Make adjustments to system layout as may be required and requested to provide complete coverage at no additional cost to Owner.
- L. Warranty: All Work for a period of one year, starting on Date of Substantial Completion, against defects in material, equipment, Workmanship and any repair required resulting from leaks or other defects of Workmanship, material or equipment.
  1. Repair unsatisfactory conditions promptly at no cost to Owner.
  2. Owner may make emergency repairs without relieving the Contractor of this warranty obligation.
  3. Irrigation Contractor to repair setting of backfilled trenches occurring during warranty period, including restoration of damaged plants, grading, paving or improvements resulting from setting of trenches or repair operations.
  4. Respond to Owner's request for repair Work within ten days. If not, Owner may proceed with such necessary repairs at Contractor's expense. In addition, Contractor shall be held responsible for replacement of any plant material (tree, shrubs, sod or seed) that becomes damaged or dies due to a lack of water during periods in which irrigation system is inoperable.

PART 1 - PRODUCTS:

- A. Specific requirements concerning the various materials and arrangements which safe to be installed are shown on drawings.
- B. Quality and Size: Material specified by name and/or model number in the Specifications, on the site or detailed drawings are used for the purpose of identification of materials and to insure specific use of that material in the construction of the system. No substitutions will be permitted without approval. (See Substitutions)
  1. Plastic pipe for all main lines is schedule 40 (PVC white lateral), 1 1/2" size and over is Class 200 PVC Type 1120 or 1220 as manufactured Cabot, John-Mansville (or approved equal) unless otherwise specified herein or on the drawings. All pipe, 1" size and less, is Class 160.
  2. PVC pipe is to be continuously marked with Manufacturer's identification, type, class and size and installed with these markings on the top of the pipe.
  3. All fittings should be Schedule 40 PVC Type 1, of domestic manufacture and identified as to pressure rating or schedule.
- C. Solvent Weld: Solvent weld for PVC pipe over 20' length must be installed with standard 20' length sections. Unnecessary joints or couplings are not acceptable.
- D. Risers: Provide threaded Schedule 80 PVC risers. All risers above grade to be either dark gray or black PVC pipe.
- E. Electric Wiring: All 110 volt AC wiring to controller must consist of three wires: one black, one white and one ground. Electrical service to be provided by General Contractor unless otherwise directed by Owner.
  1. All splices in controller wiring shall be waterproofed by using Rainbird "Snap-Tite" wire connectors.
  2. All control wiring shall be 24-volt solid wire U.L. approved for direct burial in ground. Minimum wire size: 14 gauge.
  3. All control wiring and wiring connections from controller to valves shall be included in this contract.
- F. Sprinkler Heads: Provide as indicated on the plan. Heads conform to Manufacturer's specifications concerning radius of throw and volume in gallons per minute at given pressure. All sprinkler heads and hose bibs are to be on triple elbow swing joints.
- G. Automatic Controller: Is to be installed in the location (shown on drawings) identified by owner's representative. The controller location will be accessible as shown on drawing for maintenance. Provide for the possibility of making minor timing adjustments to the controller in the field.

1. Provide controller specified on drawing, fully automatic capability as well as manual operation of the system.
  2. Irrigation Contractor to coordinate sleeve through wall for irrigation controller (with General Contractor). General Contractor to provide power to controller. Coordinate with General Contractor.
  3. Provide controller specified on drawing that operates on a minimum of 110 volts AC power input and is capable of operation of 24-volt AC electric remote control valves, with a reset circuit breaker to protect from overload. Contractor is responsible for connection to 100V AC power to controller.
- H. Stations: Each station shall have a time setting knob that can be set for variable timing in increments from 6 to 60 minutes, or set to omit the station from irrigation cycle.
    1. The controller, Rainbird clock, pedestal mounted. (Refer to plan for station amounts) A master "on-off" switch shall allow the valve power output to be interrupted without affecting the controller.
    2. Controller Construction: The controller must be constructed so that all internal parts are accessible through controller door without disturbing cabinet installation.
  - I. Water Meter: Type approved by local municipality, size shown on drawing.
  - J. Backflow Preventer: To be installed by General Contractor – Reference Civil Plans.
  - K. Pressure Regulator: Provide Wilkins #600 or equal.
  - L. Mastervalue: Rainbird # electric remote control valve w/brass body and bonnet. Valve shall be wired to open and close with each circuit valve. Size based on mainline.
  - M. Valve Boxes: Ametek 12" rectangular valve box with cover or jumbo mechanical box with cover and Ametek 10" round valve box with cover as indicated on drawings. Place a minimum of 6" depth of gravel under each valve box, meter, and pressure regular and backflow preventer box.
  - N. Sleeves: Class 200 PVC Pipe Type 1120 or 1220. Size as indicated on Detail by Irrigation Contractor.
  - O. Hose Bibs: Hose bibs shall have an all cast brass or bronze body. Hose bibs to be 3/4" inside diameter and shall be installed below grade in Ametek 12" x 18" valve boxes. The cover over hose bib boxes shall be clearly marked with "non-potable water".
  - P. Control Valves: Provide Rainbird Electric Remote Control Valve (size as indicated on Plan). Valve to conform to Manufacturer's Specifications concerning performance and at given pressure.
  - Q. Surge Protection Equipment: Provide General Electric Lightning Arrestor #GL 15 CC B 007 for controllers not equipped with primary surge protection.
    1. Provide secondary surge protection installed on the 24V AC valve control wiring for systems controlling 24V AC solenoid operated valves.
    2. The Irrigation Contractor is responsible for determining whether the above mentioned surge protection equipment is provided for in controller as a "built-in" unit or if it must be supplied and installed separately.
  - R. Isolation Valves: Provide all gate valves for isolation purposes allowing full diameter opening when in full open position.
    1. Manually operated valves shall be same size as mainline.
  - S. Automatic Drain Valves: Install at low point for each lateral line "Rainbird 16AP" drain valve in gravel sump 12" x 12" in size and with a minimum of 18" of cover over sump. Miscellaneous System Components: Provide risers, reducers, couplings, adapters, and fittings as necessary to complete irrigation system.

PART 2 - EXECUTION

- A. Provide a competent superintendent and necessary assistants on the job while Work is progress. The Superintendent represents Contractor in all functions and directives given to him by Owner are binding as if given to Contractor in person.
- B. During the installation Landscape Architect may make regular site visits and reject any Work and materials that do not meet the Standards called for in Contract Documents. Rejected work must be promptly corrected and no time extension will be allowed for this reason.
- C. Inspection: Inspect project area prior to start of Work to determine that all site conditions are acceptable for irrigation Work to begin. Inform Landscape Architect of unsuitable conditions. Do not proceed with installation of irrigation system until unsatisfactory conditions have been corrected in a manner acceptable to installer.
- D. Preparation: Flag all existing underground utilities prior to trenching and/or boring operations. Obtain utility locations from Owner and/or General Contractor and Utilize utility locating services when necessary.
- E. Excavation: All excavation is unclassified and includes all materials encountered.
  1. Prior to excavation, remove sod, preserve and replace after backfilling is completed.
  2. After excavation and backfilling is completed, regrade trenched area consistent with surrounding area and re-establish with 100 percent pure of type grass existing. Maintain as necessary for establishment and survival of grass.
  3. Backfill material is to be free from rock, large stones and other unsuitable substances that could damage the pipe or create unusual settling problems. Back fill in 6" layers and tamp after each layer to prevent excessive settling.
  4. Backfill trenches containing plastic pipe when pipe is cool to avoid excessive contraction in cold weather. Such backfilling can be done in early morning hours or pipe may be water cooled prior to backfilling procedures.
  5. Backfill material evenly in lifts not to exceed 6" and compact to 100 percent of maximum density.
  6. Contractor is responsible for establishing compaction in trenches equal to or exceeding overall compaction of paving base. Leave top of trench ready for asphalt by others. Minimum depth of cover of all pipe is as follows:
    - 3/4" - 1" pipe - minimum depth cover is 12"
    - 1 1/2" - 1 1/2" pipe - minimum depth cover is 18".

- F. Sleeving: Location of sleeving shown on plans is schematic. Sleeving Contractor to make adjustments necessary to accommodate existing vegetation, utilities and other existing conditions. Repair of damage to existing utilities, structures or other construction resulting from installation of sleeves is the responsibility of Sleeving Contractor. Verify those installed previous by others. Install PVC sleeves according to detail.
- G. Pipe Joints: Follow Manufacturer's Recommendation.
  1. Solvent weld PVC pipe, assemble according to Manufacturer's Recommendations, using appropriate PVC pipe cleaner/primer and solvent cement.
  2. PVC to metal connection, Work metal connection first then use Teflon pipe fitting 3.
  3. Main line shall be installed according to Manufacturer's Recommendations.
- H. Pipe and Fittings Installation: Install according to Manufacturer's Recommendations including snaking-in of PVC pipe to prevent excessive strain when contracting in cold weather. Solvent weld fittings must conform to Schedule 40 or Schedule 80 PVC dimensions and specifications for solvent weld fittings and as manufactured by Lasco, Inc.
- I. Lateral lines and risers shall be as follows:
  1. Install according to Manufacturer's Recommendations using standard techniques.
  2. Combine lateral lines and main supply lines in common trenches wherever possible with specified minimum depth of coverage over all pipe (see Backfilling).
  3. Install riser such that no excessive movement occurs while sprinkler head is in operation.
  4. Height of risers to be in accordance with planned and existing plant material. Height of all risers is subject to approval of Landscape Architect. Exchange of 4" pipe-up to 12" high pop-in field by Landscape Architect is incidental.
  5. Plug lines immediately upon installation to minimize infiltration of foreign matter.
  6. Flush lateral lines and risers prior to installation of sprinkler heads.
  7. Above ground risers must be dark gray or black in color.
- J. Sprinkler Heads: Low pop-up sprinkler heads shall be installed in such a manner that tip is 1" above finished grade. Where finish grade has not been established, extend a riser a minimum of 12" above existing grade to mark location of head. After finish grade is established, install heads at specified height on trip elbow swing joint, no flex pip will be accepted.
  1. High pop-up heads: High pop-up shrub heads shall have the finished height determined by Landscape Architect.
  2. Backfill around sprinkler head assembly in such a manner that sprinkler head is stabilized so that no lateral motion is exhibited during operation.
  3. Sprinkler Heads on Risers: Sprinkler heads on risers should be maintained on a schedule 80 PVC riser coupled by a Schedule 40 F.I.P.T. coupling (Lasco

- #420007) to polyethylene riser first out of lateral fitting. Height of all heads in bed areas to be determined in the field by Landscape Architect.
- 4. Install control wire in orderly fashion, locate in main line trench. Bundle wires together and tape at 10' intervals. Position wires under main line.
- 5. Allow for contraction of wires by providing looped slack at directional changes in supply line.
- 6. Keep wire splices to a minimum. All splices shall be waterproofed by using "Rainbird Snap-tite" wire connectors. All splice locations to be indicated on "as-built drawings".
- 7. Pass Wires under existing or future paving, construction, etc. through PVC sleeves provided by Irrigation Contractor.

- K. Control Equipment: Install automatic valves and controller according to Manufacturer's Recommendations. Appropriate locations are shown on the drawings.
  - L. Valve Boxes: All valves are to be housed in valve boxes. Install according to Manufacturer's Recommendations and according to details. Position boxes at a height that will not cause them to interfere with maintenance machinery (e.g., mowers) and such that soil and mulch do not wash into the box. Locate all valve boxes within plant bed areas wherever possible.
  - M. Install surge protection equipment on primary (110 VAC) power lines. Connect each surge protect unit to at least on 5/8" diameter by 9' long copper clad grounding electrode driven into the soil to its full depth. Place electrodes no closer than 2' from controller cabinet or any control or power wire. Be consistent in locating ground rods throughout installation with respect to control position and not locations on "As-Built" Drawings.
    1. Ground wire between surge protection device and grounding electrode to be single to control unit. Route ground wire away from power and control wires where possible.
    2. When it is necessary to pass through controller cabinet wall use two #1-70 copper grounding lugs and brass bolt as noted in detailed drawings. Use #NE 5/8" ground rod clamp (single piece and bolt) to make connection between ground rod a minimum of 10". Cover the top of rod and clamp with a Toro #RSO-30 cover with lid at grade level.
    3. Balancing and Adjusting: Balance and adjust the various components of system so that overall operation of the system is most efficient. This includes synchronization of controllers, adjustment to pressure regulators, part circle sprinkler heads and individual station adjustments on controllers. The Contractor has the right to call in the Designer or Owner's Representative to aid in balancing and adjustment of system.
  - N. Operational Testing: Upon completion of irrigation system and after head installation, test entire system for proper operation. Flush all air from system and check components for proper operation.
  - O. "As-Built" Drawings: "As-Built" Drawings are to include locations of all wire splices, valves (automatic and manual) with triangulated measurements to each location as well as any deviations in location of piping and heads as represented by Contract Documents.
  - P. Owner Orientation: Upon completion of Work and final acceptance by Owner and Landscape Architect, Contractor is responsible for orientation of maintenance personnel in the operation, maintenance and repair of system. Furnish copies of all available parts lists, trouble-shooting lists and specification sheets to Owner prior to final payment.
    1. Set initial watering schedules and programming on automatic controllers at the direction of Landscape Architect. Changes in schedules and programming and instructions on how to make such changes are under the responsibility of the Landscape Architect.
  - Q. Winterizing the System: If Owner requires, irrigation piping must be winterized by first blowing system clear of water using compressed air (80 psi minimum) admitted into piping at a quick-coupling valve or hose bib located at a higher elevation on the system piping. Activate individual zones; higher zones first, then proceed successively through the system towards lower elevations. Proceed through all zones twice. The air compressor used to winterize system must have an engine separate from compressor tanks to prevent high temperature air from being injected directly into PVC piping.
  - R. Clean Up: During Irrigation Work, keep project site clean and orderly. Upon completion of Work, clear grounds of debris, superfluous materials and all equipment. Remove from site to the satisfaction of Landscape Architect and Owner.
  - S. Protection: Protect Irrigation Work and materials from damage due to irrigation operations, operations by other contractors, trades and trespassers. Maintain protection until Date of Substantial Completion. Cover all openings into system as it is being installed to prevent obstructions in pipe and breakage, misuse or disfigurement of equipment.
    1. Contractor is responsible for theft of equipment and material at job site before, during and after installation, until Date of Substantial Completion of the Work in total.
  - T. Inspection and Acceptance: Upon completion of Work, notify Landscape Architect and Owner at least three days prior to requested Date of Inspection for Substantial Completion. Prior to contacting Landscape Architect for the purpose of demonstrating all or any part of the system, thoroughly test the system for proper operation and make adjustments and replace any defective parts prior to inspection for Substantial Completion. When inspected irrigation Work does not comply with requirements, replace rejected Work promptly, within two weeks of inspection. In unusual circumstances Owner may grant a longer time period. If such replacements are not completed within time specified, Contractor may be considered to be in default of Contract and Owner may use Contract Retainage to hire other Contractors to finish the Work.
- PART 4- ACCEPTANCE AND GUARANTEE
- A. Substantial Completion: Submit written requests for inspection for Substantial Completion to Landscape Architect at least three days prior to anticipated Date of Inspection and Testing. Substantial Completion cannot be granted, and at the same time no further applications for payment shall be approved for more than 85% of contract until there has first been a walk-through for head coverage. At this time the Landscape Architect or Owner's Representative will prepare a "punch list" that consists of items to be addressed and corrected by Contractor immediately. Depending on the extent of the Work on the "punch list", the Landscape Architect will determine whether Substantial Completion is to be granted at that time or at a later date, pending the completion of the "punch list".
    1. Submit record drawings and maintenance manuals to Landscape Architect with written request for inspection.
    2. Review "punch list" Work jointly with Owner and Landscape Architect for Substantial Completion of total (contract) Work.
    3. Upon satisfactory completion of repairs and replacements and completion of "As-Built" drawings, Landscape Architect and Owner will verify system for Substantial Completion and issue AIA Certificate of Substantial Completion if all items on "punch list" have been completed. If necessary another "punch list" will be written to itemize any deficiencies still existing and will be attached to AIA Certificate. Contractor shall complete all "punch list" items if possible within 30 days while continuing maintenance.
  - B. Date of Substantial Completion: Date of Substantial Completion will constitute beginning Date of One-Year Guarantee. This Date also constitutes the beginning of the warranty responsibilities and acceptance by Owner and Landscape Architect.
    1. Guarantee all Work, products, equipment and materials for one year, beginning at Date of Substantial Completion as per Written letter of notification.
    2. Make good any damage, loss, destruction or failure. Repairs and replacements shall be done promptly and at no additional cost to Owner.
    3. Repair damage to grade, plants and other Work or property as necessary.
    4. If replacement are not acceptable during or at end of Guarantee Period Owner may elect either subsequent replacement or credit. Replacement products shall have a similar one-year guarantee from time of replacement.
    5. Guarantee applies to all unacceptable conditions or losses with exception of those due to acts of nature, vandalism or Owner neglect, as determined by Landscape Architect. Acts of Nature include, but may not be limited to, high winds or hurricane or tornado force, sleet, hail, freezing rain and extreme cold (as determined by Landscape Architect). Contractor agrees to replace losses due to Acts of Nature at fifteen percent (15%) less than original contract price for the damaged Work.
  - C. Final Inspection and Acceptance: One year after the Date of Substantial Completion of Work in total, the Landscape Architect and Owner will inspect Work for Final Acceptance. Upon satisfactory completion of repairs and/or replacements Landscape Architect certifies, in writing, the Final Acceptance of Work.
    1. At the end of Guarantee Period and upon request for inspection, jointly review all guaranteed Work for Final Acceptance.
    2. Submit written request for inspection for Final Acceptance to Landscape Architect at least two weeks prior to anticipated Date of Inspection; include list of Work Substantially Complete and list of Work replaced during Guarantee Period.
    3. Upon completion by Contractor of all required replacements, Owner and Landscape Architect will confirm the Date of Final Acceptance of Work.

End of Section



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 REG Job No. 15-309-00

SEAL

ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		01/03/24	TRC ROUND 2

PROJECT INFORMATION BLOCK

JOB #	230634
DATE	08/16/2024
DRAWN BY:	JCO
CHECKED BY:	WRJ

SHEET TITLE

IRRIGATION SPECIFICATIONS

SHEET NUMBER

GL-010

8118 1ST AVENUE NORTH • BIRMINGHAM, AL 35203  
 PH: (205) 324-4447 FAX: (205) 324-9006  
 WEB: JOHNSON-CO.NET



PART 1 - GENERAL

- A. Extent of the planting is shown on the drawings and in the schedules.
  - (1) Provide all labor, materials and equipment required by or inferred from the Drawings and Specifications to complete the work of this section.
  - (2) Providing, placing, grading topsoil for landscape grading as indicated in the Drawings.
  - (3) Providing and installing trees, shrubs, seeding and solid sod for landscape planting, as per details.
  - (4) To successfully dig existing plants and store them on or off-site during construction for replanting on-site per plans where they will reestablish and thrive.
- B. Specified Maintenance Period, and One-Year Guarantee Period.
- C. Verify plant count from plan, and provide and install all plant material on plan.
- D. All plants shall conform to or surpass minimum quality standards as defined by the American Association of Nurserymen, current edition of American Standards for Nursery Stock published by American Association of Nurserymen, Inc. and in addition shall conform to sizes and descriptions in the plant list. All work to be performed by a firm specializing in Landscaping, not a subcontractor.
- E. Substitution from the specified plant list will be accepted only when satisfactory evidence in writing is submitted to the Landscape Architect, prior to submitting bid - tree list, showing that the plant material is not available. This list shall be submitted prior to submitting bid.
  - (1) Requests for approval of substitute plant material shall include common and botanical names and the size of substitute material.
  - (2) Only those substitutions of at least equivalent size and having essential characteristics similar to the originally specified material will be approved. The Landscape Architect will issue acceptance or rejection of substitute plant material in writing.
- F. Approval and selection of materials and work: The selection of all materials and the execution of all operations required under the Drawings and Specifications is subject to the approval of the owner and Landscape Architect. They have the right to reject any and all materials and work, which in their opinion does not meet the requirements of the Contract Documents at any stage of the operations. Remove rejected Work and or materials from the Project Site and replace promptly at no additional cost to the owner.
- G. Workmanship: Install all plant materials neatly.
  - (1) Make minor adjustments to layout as may be required and requested by Landscape Architect at no additional cost to the owner.
  - (2) Coordinate delivery of all plant material with time of installation to prevent any plant material from being stockpiled on site longer than 24 hours.
  - (3) Deliver materials in such manner as to not damage or decrease the health and vigor of the plant materials.
  - (4) Store materials away from detrimental elements. Coordinate with General Contractor to secure a safe staging area.
  - (5) Handle, load, unload, and transport materials carefully to avoid damage.
  - (6) Maintain and protect plant materials as necessary to insure health and vigor.
  - (7) Guarantee plant materials and lawn areas for one year from the date of substantial completion. Contractor shall replace plants that fail to grow properly with plants as originally specified at the earliest practical date following plant failure, without additional charges to the owner.
  - (8) Replacement materials will be guaranteed for one year from the date of replacement.
  - (9) The Contractor shall not be responsible for replacing plants that are damaged by abuse or improper maintenance by Owner as reported by Contractor outlined below or by acts of nature occurring after acceptance.
- H. Acts of nature may include, but may not be limited to high winds of hurricane or tornado force, sleet, hail, freezing rain and extreme cold (as determined by the Landscape Architect). Contractor agrees to replace losses due to Acts of Nature at fifteen percent (15%) less than the original contract price for the damaged work.
- I. Contractor's Periodic Inspection: During guarantee period, Contractor shall make periodic inspections of the project to satisfy himself that maintenance by the owner is adequate.
  - (1) Any methods or products that he deems not normal or detrimental to good plant growth shall be reported to the Owner in writing.
  - (2) Failure to inspect and report shall be interpreted as approval and the Contractor shall be held responsible for any and all necessary replacements.
- J. Soil Testing: Contractor shall have soil tested by a suitable laboratory chosen by the Contractor and subject to written approval of the Landscape Architect.
  - (1) Soil test shall be completed in all planting areas to determine lime and fertilizer requirements. Submit test results to Landscape Architect for approval. Contractor shall adjust pH and fertility based upon these results. No addition to or placement of soil is to be done prior to initial soil test report approval.

PART 2 - PRODUCTS

- A. Topsoil: All topsoil shall be supplied from offsite stockpile and spread by the Landscape Contractor. The Landscape Contractor shall be responsible for fine grading. Topsoil shall be fertile, friable, sandy loam and a natural surface soil obtained from areas reviewed by Landscape Architect and possessing characteristics of representative soils in the project vicinity that produce heavy growths of crops, grass, or other vegetation.
- B. Topsoil shall be free of sprout, brush, organic litter, or objectionable weeds, clay, clots, stumps, stones, roots or other material harmful to plant growth or hindrance to planting or maintenance operations. Should regenerative materials be present in the soil, Contractor shall eradicate and remove such growth, both surface and root, which may appear in the imported materials within 1 year following acceptance of the Work.
- C. Topsoil shall not be handled in a frozen muddy condition. The acidity range for topsoil in planting beds shall be between 5.0 and 7.0 inclusive. The acidity range for topsoil to be placed in areas to receive sod shall be 6.0 - 7.0. The mechanical analysis of the soil shall be as follows:
 

Sieve Size	Percent Passing
1" mesh	99 - 100 percent
3/4" mesh	97 - 99 percent
No. 100 mesh	40 - 60 percent
No. 200 mesh	20 - 40 percent
- D. Topsoil, regardless of source, shall meet all requirements of the paragraph above. Stockpile material that does not meet the requirements may, at the option of the Contractor, be improved by screening and the addition of organic matter and chemical admixtures.
- E. Planting Soil Mixture: Provide soil mix amended as per laboratory recommendations. Basic planting soil mix consists of:
  - (1) 50% topsoil (as described above)
  - (2) 50% prepared additives (by volume as follows)
  - (3) 3 parts humus (forest peat or Nature's Helper)
  - (4) 1 part sterilized cow manure, commercial fertilizer and lime as recommended in soil test analysis.
- F. The components shall be thoroughly mixed to uniform consistency by hand or machine methods prior to placement in and around plantings.
- G. Trees: All large deciduous shade trees and ornamental trees are to be field grown from rooted cuttings true to variety and not grafted material. No grafted material will be accepted for the initial installation or as guarantee replacement material.
- H. Alternate Growers - Will be considered by the Landscape Architect only if submitted with photographs of specified material within 10 days from date contract is awarded to General Contractor. The Landscape Architect will select and tag 100% of plant materials from acceptable alternate growers. The contractor will be responsible for all expenses related to tagging trips to alternate growers including usual fees charged by the Landscape Architect. The Contractor shall arrange for and provide transportation for the Landscape Architect. Contractor shall provide the Landscape Architect a minimum of three weeks advance notice. Contractor shall limit tagging trips to no more than two at

a maximum of two days each. All tagging trips will be completed within 45 days from date contract is awarded to General Contractor.

- I. Contractor will submit confirmed orders from acceptable alternate growers within ten days of tagging by the Landscape Architect. Contractor is responsible for payment of deposits required by acceptable alternate growers.
- J. Fertilizer: Fertilizer for all trees, plants and ground covers shall be Sta-Green Nursery Special delivered to the site in unopened containers.
- K. Fertilize all areas according to the manufacturer's recommended rates in accordance with the monthly maintenance guideline herein.
- L. Cultivate and waterbeds or pits thoroughly after application.
- M. Adjust fertilizer in accordance with interim soil test reports.
- N. Fertilizer for sod: Fertilizer for sod shall be Sta-Green and sod fertilizer containing the following percentages by weight:
  - 18% nitrogen
  - 24% phosphorous
  - 10% potash
- O. Nursery Special or approved equal.
- P. Fertilizer shall be uniform in composition, dry and free flowing, and shall be delivered to the site in the original, unopened container, bearing the Manufacturer's guaranteed analysis. Fertilizer shall not have been exposed to weather prior to delivery to the site. After delivery, until used, it shall be completely protected at all times. It shall not be stored in direct contact with the ground.
- Q. Plants: All plants shall conform to or surpass minimum quality standards as defined by the American Association of Nurserymen (AAN), current edition of American Standard for Nursery Stock published by the AAN, Inc. and in addition, shall conform to sizes and descriptions in the plant list.
- R. Certificates of Inspection for Plant Material: All necessary inspection certificates shall be supplied, if requested, to the Landscape Architect's representative for each shipment of plant material, as required by law. Certificates showing source of origin shall be filed with Landscape Architect prior to acceptance of the material.
- S. Inspection: All plant materials shall be subject to inspection and approval. The Landscape Architect reserves the right to reject any and all plants that fail to meet this specification at any point during the installation of the job. The Contractor at no additional cost shall promptly remove all rejected materials from the site to the owner.
- T. Quality and size: All plant materials furnished shall be well branched, proportioned width to height, or normal habit, sound, healthy and vigorous in growth. The minimum acceptable sizes of plants shall be measured before pruning with branches in normal position and shall conform to measurements specified. Plants used where symmetry is required shall be matched as closely as possible. It is the responsibility of the Landscape Contractor to determine from the planting plan where matching plants should be used. Ask for clarification by Landscape Architect when necessary and do so before bids are submitted. Plants shall meet all requirements as listed in the plant list.
- U. Source of plants: Plants shall be field nursery, container grown or collected material subject to the requirements of the Specifications.
- V. Field Tagged Plants: All deciduous and evergreen trees are to be sourced by the contractor at any of the approved nurseries, of the provided list, or equal as approved by the Landscape Architect. The owner will pay the Landscape Architect for tree tagging trips. The contractor should anticipate accompanying the Landscape Architect on the tagging trips but is not required to do so.
- W. Insect, Pests and Plant Diseases: All plants shall be of healthy stock, free from disease, insects, eggs, larvae and parasites of an objectionable or damaging nature.
- X. Substitutions: Substitutions from the specified list will be accepted only when satisfactory evidence in writing is submitted to the Landscape Architect, showing that the plant specified is not available. Requests for approval of substitute material shall include common and botanical names and size of plant material. Only those substitutions or at least equivalent size and having the essential characteristics similar to the originally specified material will be approved. The Landscape Architect will issue acceptance or rejection of substitute plant materials in writing. Substitutions may be made only prior to bidding of the project.
- Y. Balled and burlapped plant material are to be wrapped with organic burlap wrapping only. Synthetic material will not be accepted. Remove all nursery-leading straps once plant material is placed in the pit.
- Z. Guying of trees: Stakes for supporting trees shall be sound timber, straight, sized as shown in planting details and of sufficient length to adequately support the plant. All visible surfaces shall be painted flat black.
- AA. Deadmen or stakes for anchoring guy wires in the ground shall be of size, material and strength adequate to hold guy taut and maintain tree firmly in an upright position.
- BB. Wire shall be # 12 gauge galvanized wire in double twisted strand to adjust tension.
- CC. Hose for encasing guy wires shall be new or suitable used 3/4" diameter rubber or plastic garden hose, black in color.
- DD. Wrapping material for trees with 2" caliper trunks or larger shall be standard crinkled paper cemented together with bituminous material in strips 8 to 10" wide.
- EE. Twine for tying wrapping material shall be lightly tarred, medium or sisal yarn, no synthetic cord shall be used.
- FF. Mulch: Single shredded 2-3" long pinebark/hardwood mulch shall be clean, fresh, free of noxious weeds, seed, fire ants, Japanese beetles and/or fired grubs. No nuggets will be accepted.
- GG. Sod: Sod shall be 100% specified grass, free of weeds, freshly dug.
- HH. Lime: Ground dolomitic limestone not less than 85 percent total carbonates and magnesium, ground so that 50 percent passes 100 mesh sieve and 90 percent 20 mesh sieve.
- II. Inoculants: Pure culture of nitrogen-fixing bacteria prepared specifically for the legume species. A mixing medium as recommended by the manufacturer shall be used to bond the inoculant to the seed.
- JJ. All necessary hand tools and materials typically used in planting operations.
- KK. Plastic labels or tags on which identification can be made.
- MM. "Nature's Helper" Soil conditioner
- NN. Foliar insecticide as needed to control damage
- OO. Anti-desiccant spray for minimizing transpiration during storage
- PP. Baling twine
- QQ. Burlap - 36" wide, rolled.

PART 3 - EXECUTION

- A. Execution of Digging and Holding: All transplanting work, and storage of plants is to be carefully coordinated with the General Contractor. Prior to digging, thoroughly water all plant material to be dug to moisten the root area. Root prune all plants using a sharpened shovel a minimum of one week in advance of the anticipated day when digging and storage will occur. Using a shovel, root prune by encircling the plant to be dug by pushing the shovel down at a 75-85° angle not less than 10" deep. Do not attempt to lift the plant or remove it from its current location at this time. Prune the circle around the plant per the following root size schedule. Deep water each plant and foliar mist in the first day to help the plant transpire. Monitor the water and mist during the first week and until the digging occurs. Not less than one week after the root pruning carefully dig each plant by using the shovel to raise the plant slowly and onto a sheet of burlap cloth twice the size of the root ball. The plant should be then carried to the holding area supported equally on all four corners. When the plant is laid down in the holding area, the burlap is to be folded over the root ball/mass and secured with burlap twine. Then cover the entire root ball with soil conditioner. Claim's "Nature's Helper" or approved equal, and thoroughly water. Do not allow the rootball/mass dry out during the transplanting process. All dug plants are to be maintained and watered continuously where held until such time that they can be replanted. Maintenance should include pruning to thin, removal of dead branches, wilt-proof sprays, insect treatments, etc., in addition to regular watering.
- Root Ball Size:
 

Plant Height / Size	Minimum root ball diameter
10' - 12'	24" - 30"
8' - 10'	22" - 24"
4' - 8'	20" - 22"
12' - 4'	18" - 20"
1" - 12"	Spread of foliage
- B. Layout of major plants: Before commencing planting operations, location of major plants and outlines of areas to be planted shall be marked out on the ground, by the Contractor for approval by the Landscape Architect. Contact the Landscape Architect a minimum of 24 hours in advance of the anticipated review of the layout.
- C. Time and planting: Planting operations shall be during favorable weather in which conditions are neither extremely cold nor hot, nor to a point that the risk of loss is too great. The Contractor shall inform the Landscape Architect of high risks due to weather.

- D. Preparation of planting beds: Landscape Contractor will provide and spread 4" topsoil and provide final grades in all planting beds. The Landscape Contractor will fine grade and provide minimum 3% positive drainage in all beds. This is to include debris removal and any grading required bringing the finished grade to the proper level for planting trees, shrubs and ground covers. Landscape Contractor shall grade for proper drainage. Contractor shall anticipate and allow for settling of soils.
- E. Circular plant pits with vertical sides shall be dug by hand or machine methods for planting and transplanting of trees and shrubs. Sides of pits should be scarified to allow for water percolation.
- F. Shrub pit diameter shall be a minimum of one foot greater than the spread of the root mass.
- G. All transplanted material is to be replanted the same day it is dug.
- H. Test excavated plant pits to determine if sufficient drainage is present for proper plant survival.
- I. Fill the area between the pits, if the individual pits are arranged in a group, to the required grade with single shredded pinebark/hardwood mulch to a depth of 3". Plant beds shall be neatly edged and kept free of weeds until the work is accepted.
- J. Excavation for planting ground covers: Ground cover beds shall be scarified by hand or machine method to a minimum depth of 8", 4" of pine bark additive and 20 lbs. / 1000 sq. ft. of Sta-Green Nursery Special fertilizer shall be uniformly incorporated into the soil to the full 6" of minimum depth.
- K. Drainage test for trees: Tree pits shall be filled with water. If percolation is less than 100% within a period of twelve hours, drill a 12" auger hole to a depth of 6" below the bottom of the pit. Refill the pit. In case drainage is still unsatisfactory, notify Landscape Architect, in writing of the condition before planting the trees in the questionable areas. Contractor is fully responsible for warranty of the trees.
- L. Drainage Test for Plants and Ground covers: Plants and ground cover beds shall be spot tested.
  - (1) Dispose of topsoil removed from landscape excavations. Do not mix with the planting soil. Do not use as back fill or to construct saucers around pits.
  - (2) Balled and container plants shall be placed firmly upon scarified sub-grade and back filled with planting soil mixture. Remove all wire, cords, and burlap from top of root ball. Hand tamp carefully around and under ball to fill all voids. Water during back filling. Form saucer from planting soil mixture in order to retain water.
  - (3) Gently loosen outer roots of container grown plants to encourage outward growth.
  - (4) Fertilizer shall be thoroughly mixed and soaked into the top two inches of soil for all plant pits.
- M. Setting plants: Set plants uniformly 2-4" higher than surrounding grade or as necessary to provide adequate positive drainage away from roots. Slope soil gradually from saucer.
  - (1) Cut tops, wire or string from top of ball after plant has been set, turn down and bury burlap.
- N. Tree transportation: The Contractor shall be responsible not only for the safe transportation of the plants to the site but also their condition upon arrival. Trees with abrasions of the bark, sunscalds, fresh cuts, or breaks of limbs that have not completely callused will be rejected. The Contractor at no additional cost will replace trees that have been damaged during transit. All plant unit costs will reflect all above listed specifications.
- O. Tree tags: All plants accepted at the nursery by the Landscape Architect shall be tagged with serialized self-locking tags. Trees delivered to the site without these tags or with broken tags will be rejected. The tags shall remain on the trees until the Landscape Architect for their removal has given the Contractor instructions.
  - (1) Tree tags shall be removed immediately following the final Punch-List. The Contractor will replace any trees on which tags remain and become in growth.
- P. Stockpile of trees: All plant material stored on site will be untied and/or cut loose for proper staking and inspections periodically.
- Q. Pruning deciduous trees: Deciduous trees and shrubs shall be pruned only to thin out heavy growth.
  - (1) Do not top or remove terminal growing point or leader of any plant.
  - (2) Cuts over 3/4" in diameter shall be painted with tree dressing paint. No paint containing lead shall be permitted.
- R. Guy trees 2" caliper and over: Space three guys equally about each tree, attached at approximately two-fifths up the trunk. Guys should be at a 45-degree angle from the ground plane and anchored in the ground with stakes. Guy to trunks with wire loops and black rubber hose drawn snug in all directions. These guys shall be equally taut.
  - (1) Wrap trunks of deciduous trees larger than 2" caliper spirally with standard paper or fiber wrapping material from the base of the trunk to the second branch and the wrapping secured in place. Wrap the trunk with the plain side of wrapping to the outside with no writing visible. Tie off wrapping with sisal yarn at 24" intervals.
  - (2) Stake trees less than 2" caliper with two wood stakes driven two feet into the ground with the portion extending above the ground approximately 3/4 of the trunk height. Stake 1/2" from trunk, fastened at approximately two-fifths of trunk height with wire run through rubber hose.
- S. Mulch all planting beds and other areas designated to be mulched, with 3" "settled" depth of specified mulch type. Individual plants are to be mulched as detailed. Mulch is to be measured after settlement and maintained as specified.
- T. Preparation of lawn areas: Fine grade all lawn areas to finish grade. All areas shall have smooth and continual grade between the existing and final contours such as walks and curbs. Roll, scarify, rake and level as necessary to obtain true, even and firm lawn surfaces. All finished grades shall meet approval of the Landscape Architect before sodding or seeding operations begin.

- U. Areas to receive sod: Landscape Contractor will provide 4" topsoil & grade to finish grade all areas to receive sod. The Landscape Contractor will be responsible for fine grading. This is to include debris removal and any grading required bringing the finished topsoil grade to the proper level for applying sod.
  - (1) On this grade spread specified fertilizer as per manufacturer's recommendations and lime at a rate of 50 lbs. / 1000 sq. ft. evenly over all areas to receive grass. A soil test shall be made prior to the beginning of fertilizing and liming and the quantities of the lime and fertilizer shall be adjusted, if necessary, to achieve a pH of 6.0 to 7.0.
  - (2) Scarify prepared grade to depth of 6" thoroughly incorporating fertilizer and lime into the top 6" of existing soil in all areas to be grassed. Caution shall be exercised to avoid damage to underground utilities. All building debris, vegetation, sticks and stones over 3/4" in any dimension shall be removed and the surface leveled and smoothed.
- V. Sodding operations: Delivery of sod shall be scheduled so as to allow laying of sod without delay. No sod shall remain stacked longer than 24 hours. In the event that sod cannot be laid immediately upon delivery, Contractor shall lay sod on a designated site, to be approved by the Landscape Architect. No sod shall overlap and it shall be lightly watered as necessary to keep moist.
  - (1) Lay sod when bed is not excessively wet or frozen, but when soil is moist to the depth of 2" minimum.
  - (2) Lay sod so that no voids occur. Sod shall be tampered and rolled by hand methods. The completed surface shall be true to finish grade and even and firm at all points. Stagger the sod seams / joints.
  - (3) Do not move heavy objects over areas to be sodded after the soil has been prepared.
- W. Removal of existing grass: The Landscape Contractor is to remove existing grass and weeds from all areas for planting and resodding as designated on the plans. The existing stands are to be removed to a maximum depth of 1" so as not to disturb existing tree roots where present in those areas.
  - (1) Aerate with a tined tiller to break up the upper 3" lightly not to damage tree roots. Pick up solids for discarding and cut cleanly any roots damaged.
  - (2) Spread a light layer of topsoil not more than 1" in depth over the aerated area and fine grade to meet acceptance by the Landscape Architect. Apply fertilizer and lime to these areas as specified previously under "Areas to receive sod" or "Preparation of planting beds" whichever the case may be.

END OF SECTION

PART 4 - CLEANUP & PROTECTION

- A. Keep project site clean and orderly during planting operations.
- B. Clear grounds of debris, superfluous materials and all equipment upon completion of Work. Remove from site to the satisfaction of the Landscape Architect and Owner.

- C. Protect all work and materials from damage due to landscape operations and operations by other contractors, trades and trespassers. Maintain protection until Date of Substantial Completion.
- D. Contractor is responsible for theft of equipment and material at the job site before, during and after installation, until Date of Substantial Completion of Work in total.

PART 5 - LANDSCAPE MAINTENANCE GUIDELINES

- A. Begin maintenance at commencement of Work of this section and continue until Substantial Completion, as part of Work of this section.
- B. Continue maintenance for a Maintenance Period of thirty calendar days after date of Substantial Completion.
- C. Provide labor, materials, equipment and means for proper maintenance of all materials and workmanship.
- D. Supervision: submit a written report and conduct joint inspection with Landscape Architect maintenance program and procedures, at inspection for Substantial Completion.
- E. Maintenance of trees, shrubs, sod and seed: Maintain all plants in a growing, well formed, healthy condition by watering, fertilizing, pruning, weeding, spraying, wrapping, straightening, replacement or by other necessary maintenance operations.
- F. Watering: Monitor owner's automatic watering system and schedule for proper watering of all plant material.
- G. Advise Landscape Architect immediately in writing of recommended alterations due to weather or other conditions.
- H. Water landscaped areas not covered by automatic watering system as frequently as necessary to maintain proper moisture level, using the following schedule as a guide:
  - J. Twice a month during March, April, May
  - K. Once a week during June, July, August, September
- I. No watering from October through February, except in drought conditions
- L. Fertilizing:
  - Mid March application of 23-3-3 (slow release nitrogen)
  - April 1 application of iron chelate
  - Mid April application of 12-6-6
  - August 1 application of 15-0-15
- M. Mowing: Mow grass to a height of 2-2 1/2" when it reaches a height of 3", or as directed by Landscape Architect. Seeded and sodded lawns shall have at least one mowing before receiving Substantial Completion.
- N. Resodding: Rework and reseed areas that fail to show a uniform stand of grass. Perform work with the same kind of sod applied and repeated until all areas are covered with a uniform stand of grass.
- O. Reseeding: Rework and reseed areas, which fail to show a uniform stand of grass. Perform work with the same kind of seed applied and repeated until all areas are covered with a uniform stand of grass.
- P. Site annual planting: Replace annual plantings according to schedule in Drawings. Blooming plants shall be in bloom at the time of planting and shall be replaced as necessary throughout specified Maintenance Period to maintain blooming condition.
- Q. Pruning: Remove dead wood as it becomes evident. Remove living portions of plants only at the direction of Landscape Architect.
- R. Wilt-proofing: Apply approved anti-desiccant to all evergreen trees during last two weeks of October (except pines).
- S. Spraying: For each spraying combine approved insecticide and fungicide to provide maximum protection for all plant materials. Three sprayings annually, in March, May and August.
  - T. Weeding: Two applications (Spring and Fall) of chemical pre-emergent spray approved. Two applications (during growing season) of chemical contact spray (Round-up, by Monsanto, or approved equal). Two days per month (every two weeks) manual weeding (by hand) during the period from March 1 through September 30; remove all visible weeds.
- U. Mulching: Keep planting areas neat and uniformly mulched to specified depth on a continuous basis. In addition to replacing and re-spreading mulch as necessitated during the maintenance period completely replenish mulch in all planting areas one time (during the last month of the one-year guarantee period or as directed by the Landscape Architect.)
- V. Straightening: Maintain plants in their stable upright position and at the proper grade by straightening and tightening staking and guying apparatus and as approved by the Architect.
- W. Clean-up: Keep all planting areas neat, weeded and uniformly mulched on a continuous basis. Clean up adjacent walks and pavement where lettered as a result of maintenance operations, on a continuous basis.
  - (1) The 30-day maintenance period following Substantial Completion will be considered a lump sum item to be addressed as an item included in the contract.

PART 6 - ACCEPTANCE & GUARANTEE

- A. Substantial Completion: Submit written requests for inspection for Substantial Completion to the Landscape Architect at least three calendar days prior to anticipated date of inspection and testing.
- B. Substantial Completion cannot be granted and at the same time no further applications for payment shall be for more than 85% or less if the owner requests of the Contract until there has been a walk-through for planting at which time a "punch-list" will be written consisting of items to be addressed and corrected by the Contractor immediately. Depending on the extent of work on the "punch-list", the Landscape Architect will determine the job to be "Substantially Complete" or pending the completion of the "Punch-List".
- C. Submit Record Drawings and Maintenance manuals to the Landscape Architect with written request for inspection.
- D. Review the "punch-list" work jointly with the Owner and Landscape Architect for Substantial Completion of the total (contract) work. (See "General Conditions" Article No. 9.)
- E. Upon completion of repairs and replacements found necessary at the time of review, the Owner and Landscape Architect will confirm the date of Substantial Completion and issue the written notice if all items on the punch-list have been completed. If necessary, another punch list will be written to itemize any deficiencies still existing and will be attached to the written notice. The contractor shall complete all "punch-list" items if possible within 30 days while continuing maintenance.
- F. The date of Substantial Completion will constitute the beginning date of the One-Year Guarantee. This date also constitutes the beginning of warranty responsibilities and acceptance by the Owner and Landscape Architect.
- G. Guarantee all work, products, equipment and materials for one year, beginning at the Date of Substantial Completion as per written notice.
- H. Make good any damage, loss destruction or failure. Repairs and replacements shall be done promptly and at no additional cost to the Owner.
- I. Repair damage to grade, plants and other work as necessary.
- J. If the replacement is not acceptable during or at the end of the Guarantee Period, the Owner may elect either subsequent replacement or credit. Replacement products shall have a similar one-year guarantee from the time of replacement.

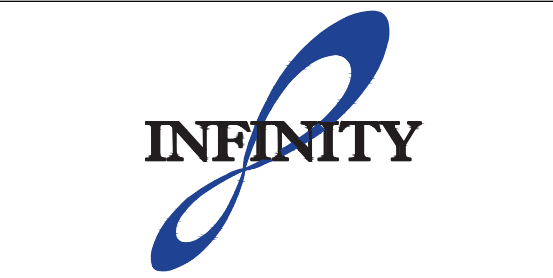


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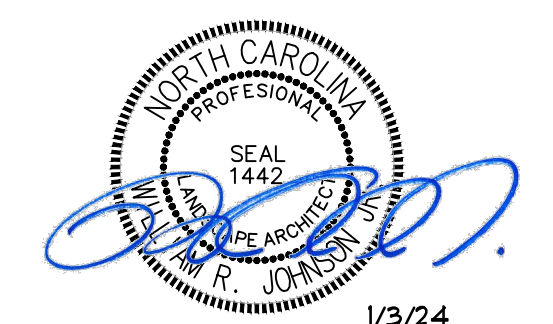
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IEG Job No. 15-309.00

SEAL



ISSUE	BY	DATE	DESCRIPTION
		08/16/24	PERMIT SET
		01/03/24	TRC ROUND 2

PROJECT INFORMATION BLOCK  
**JOB #** 230634  
**DATE:** 08/16/2024  
**DRAWN BY:** JCO  
**CHECKED BY:** WRJ

SHEET TITLE

LANDSCAPE SPECIFICATIONS

SHEET NUMBER

GL-011

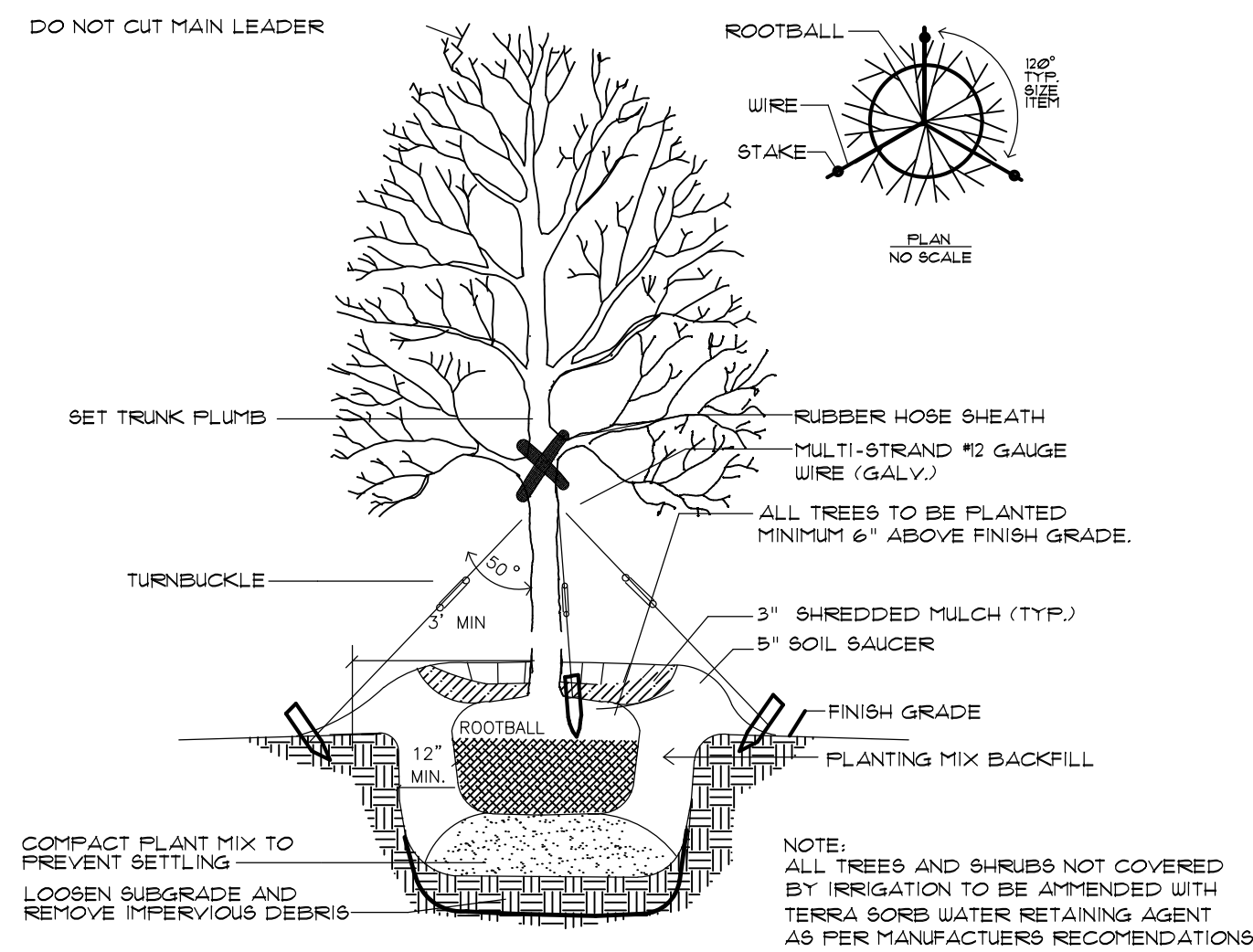


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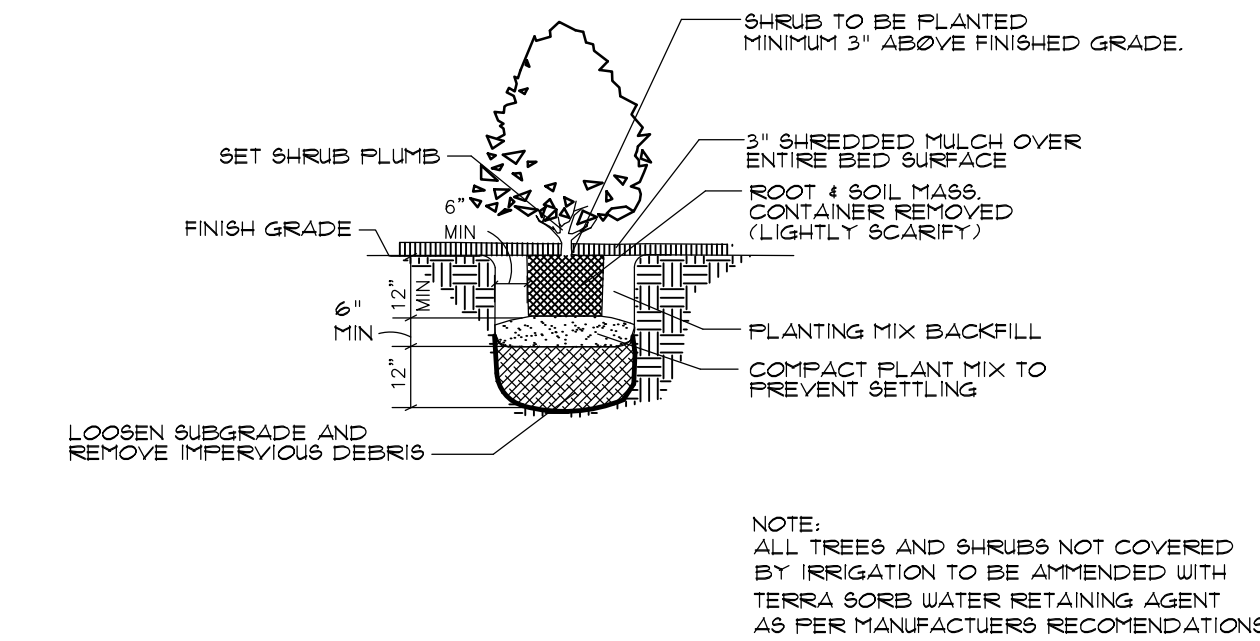




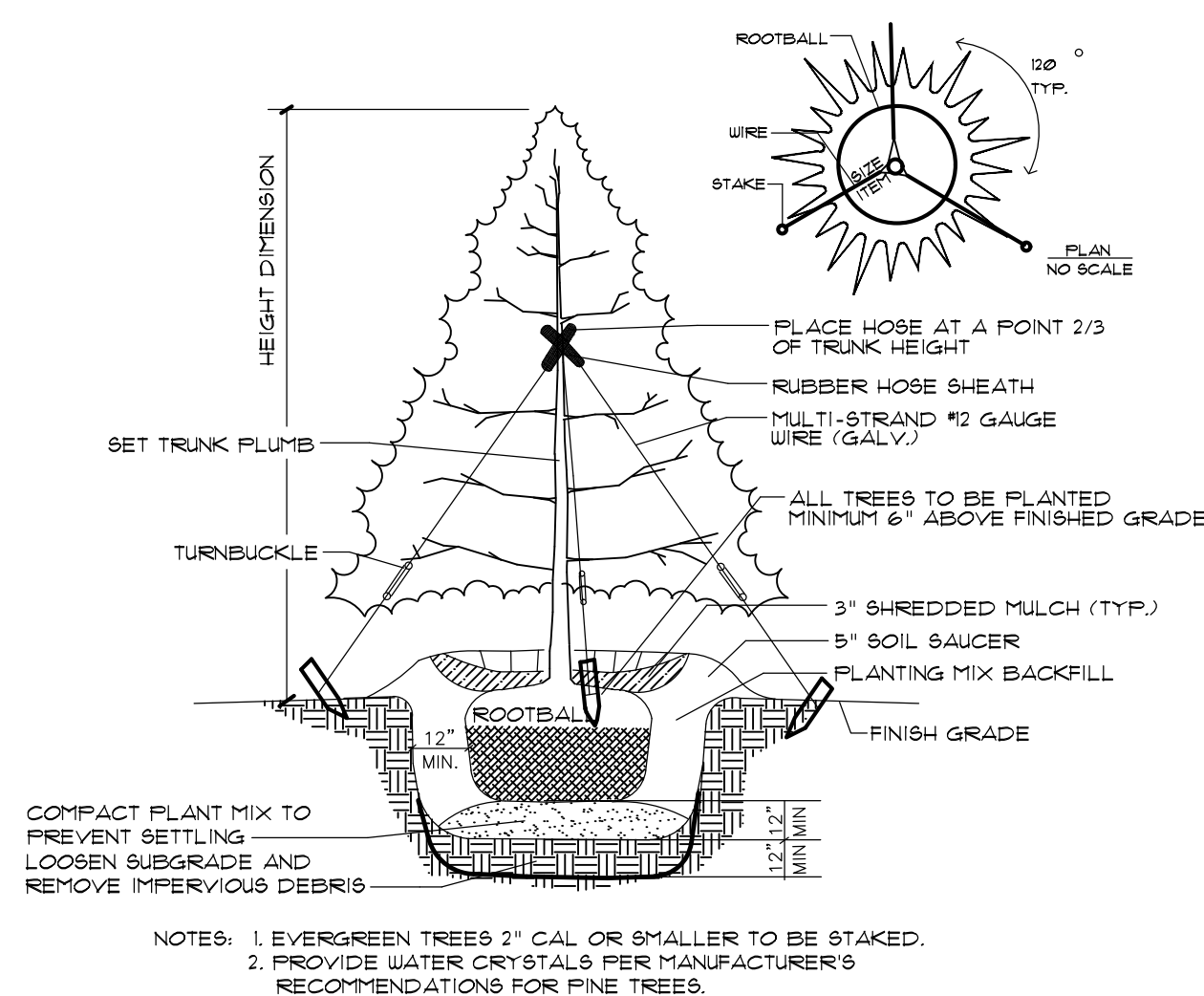




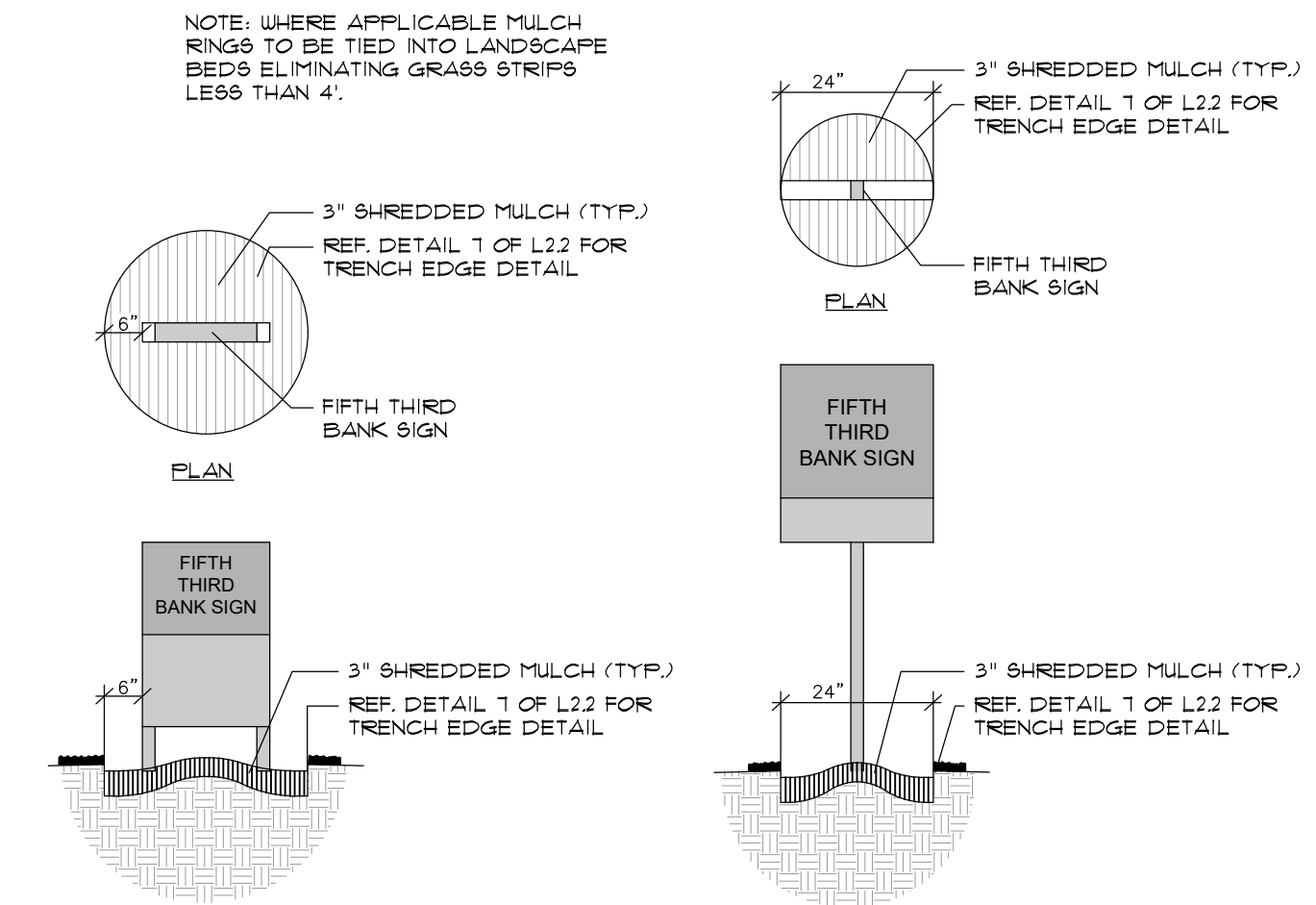
1 DETAIL TYPICAL TREE PLANTING AND GUYING  
NOT TO SCALE



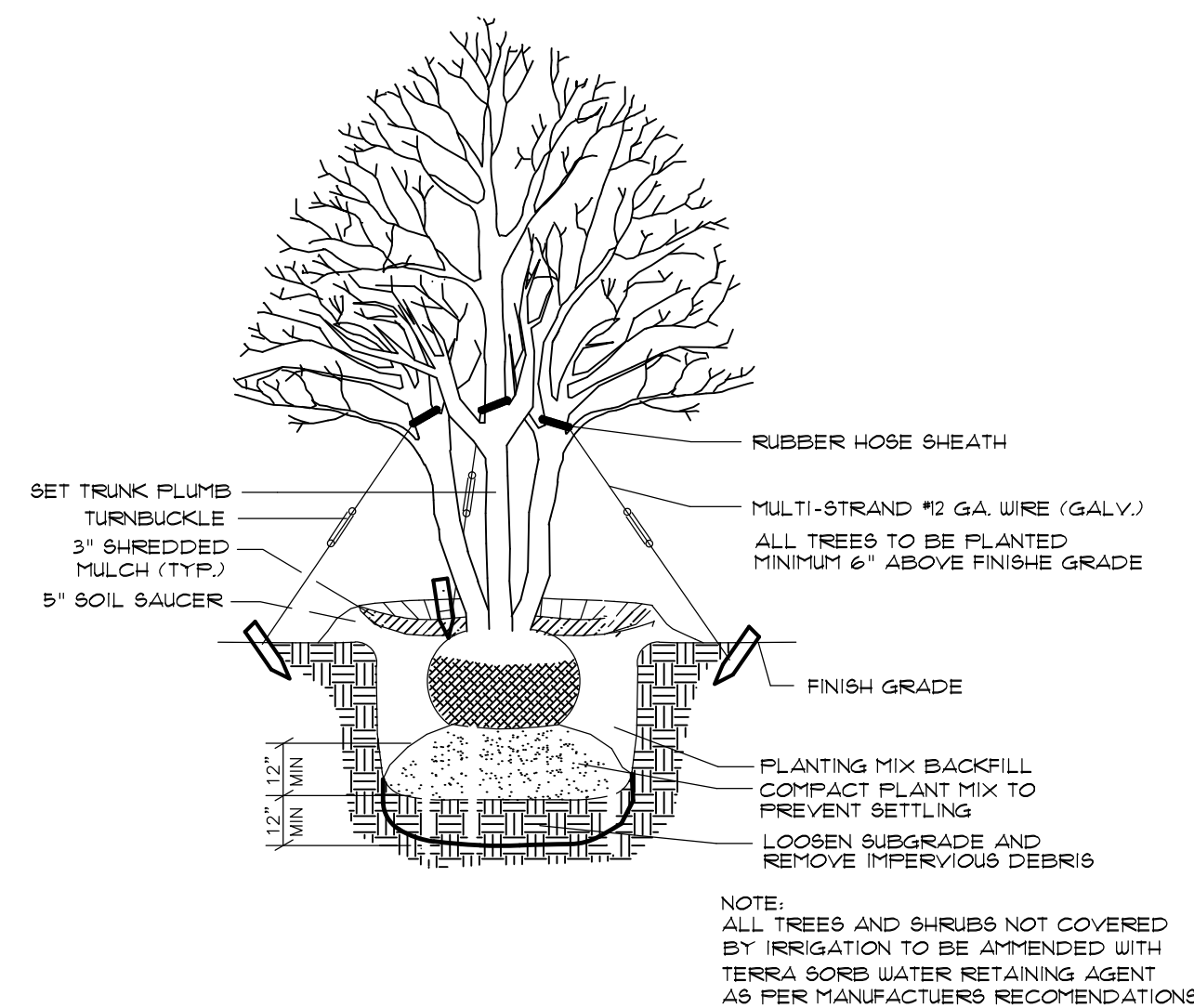
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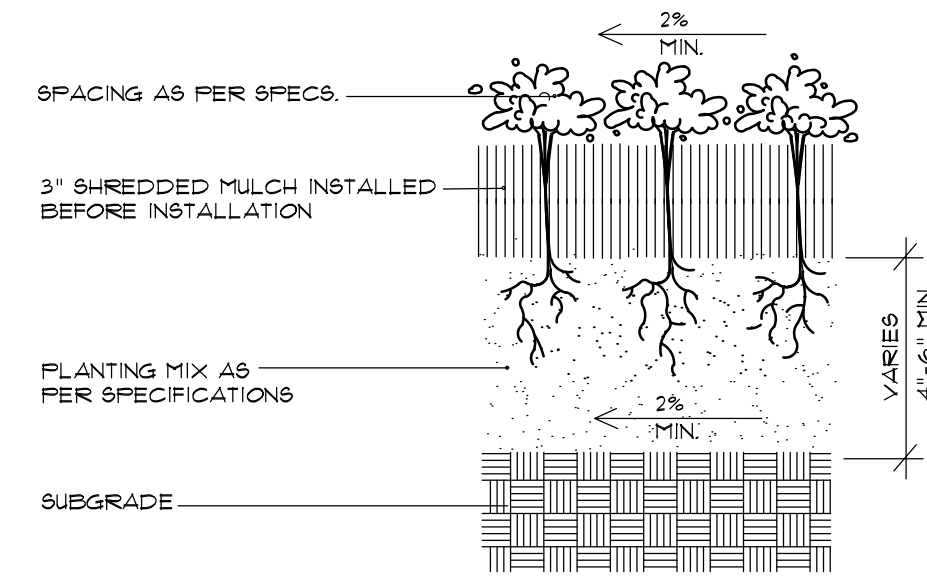
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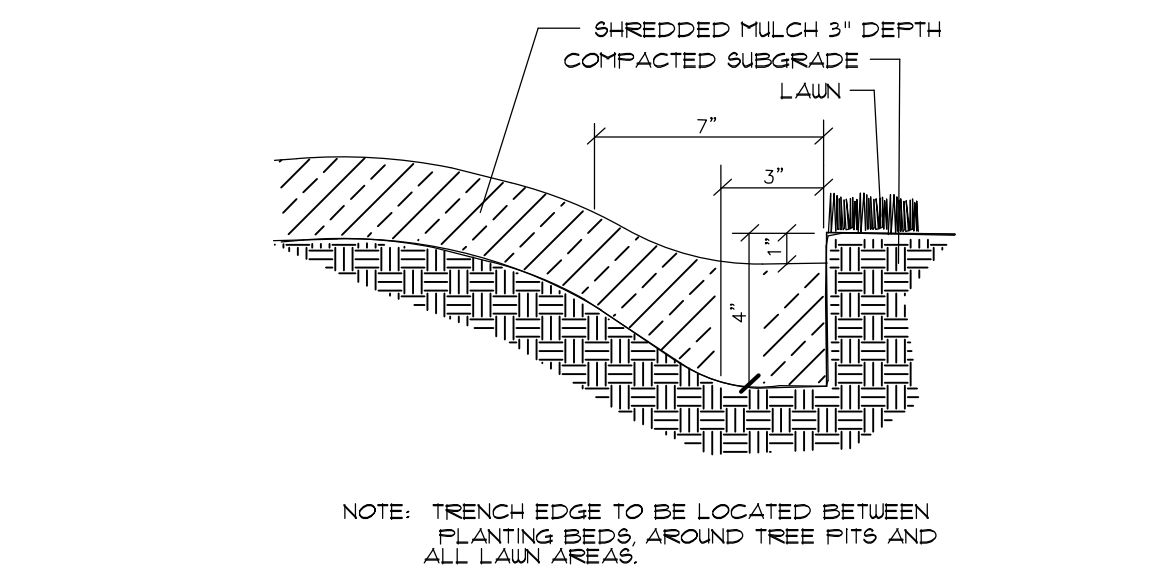
4 MULCH DETAIL FOR ALL SIGNS IN LAWN AREA  
NOT TO SCALE



5 DETAIL MULTI-TRUNKED TREE PLANTING  
NOT TO SCALE



6 GROUND COVER DETAIL  
NOT TO SCALE



7 TRENCH EDGER DETAIL FOR ALL BEDS  
NOT TO SCALE

GENERAL NOTES

CONTRACTOR SHALL BE RESPONSIBLE FOR THE SITE INSPECTION PRIOR TO LANDSCAPE CONSTRUCTION AND INSTALLATION IN ORDER TO ACQUAINT HIMSELF WITH EXISTING CONDITIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING CONSTRUCTION.

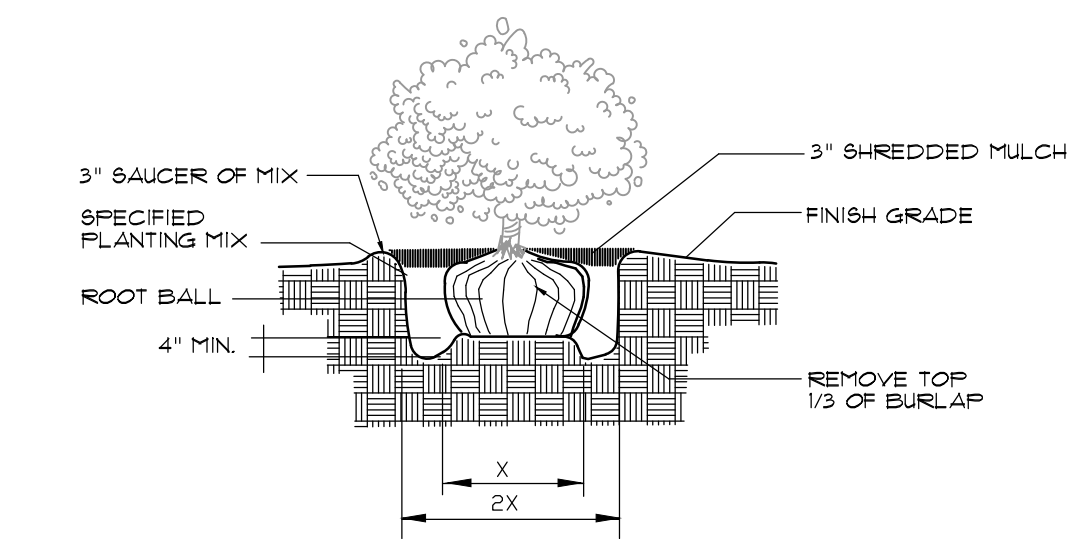
CONTRACTOR SHALL VERIFY PLANT COUNT FROM PLAN AND REPORT DIFFERENCES.

ALL TREES AND SPECIMEN PLANT MATERIAL SHALL BE LOCATED BY THE CONTRACTOR AT APPROVED NURSERIES OR THEIR EQUAL APPROVED PRIOR TO BIDDING.

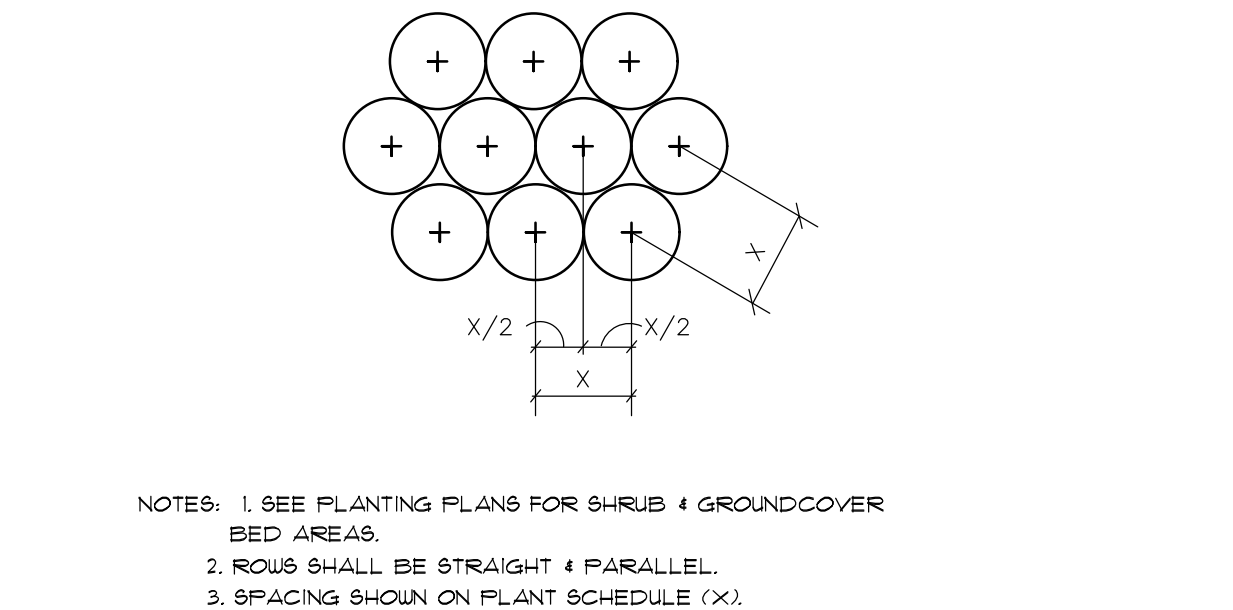
ALL PLANT MATERIALS ARE SUBJECT TO APPROVAL OR REFUSAL BY THE LANDSCAPE ARCHITECT AT THE JOB SITE.

CONTRACTOR SHALL LAYOUT TREES AND BED LINES FOR REVIEW BY LANDSCAPE ARCHITECT PRIOR TO PLANTING. A MINIMUM 24 HOUR NOTICE SHOULD BE GIVEN AND ANTICIPATED BY THE CONTRACTOR FOR THIS REVIEW.

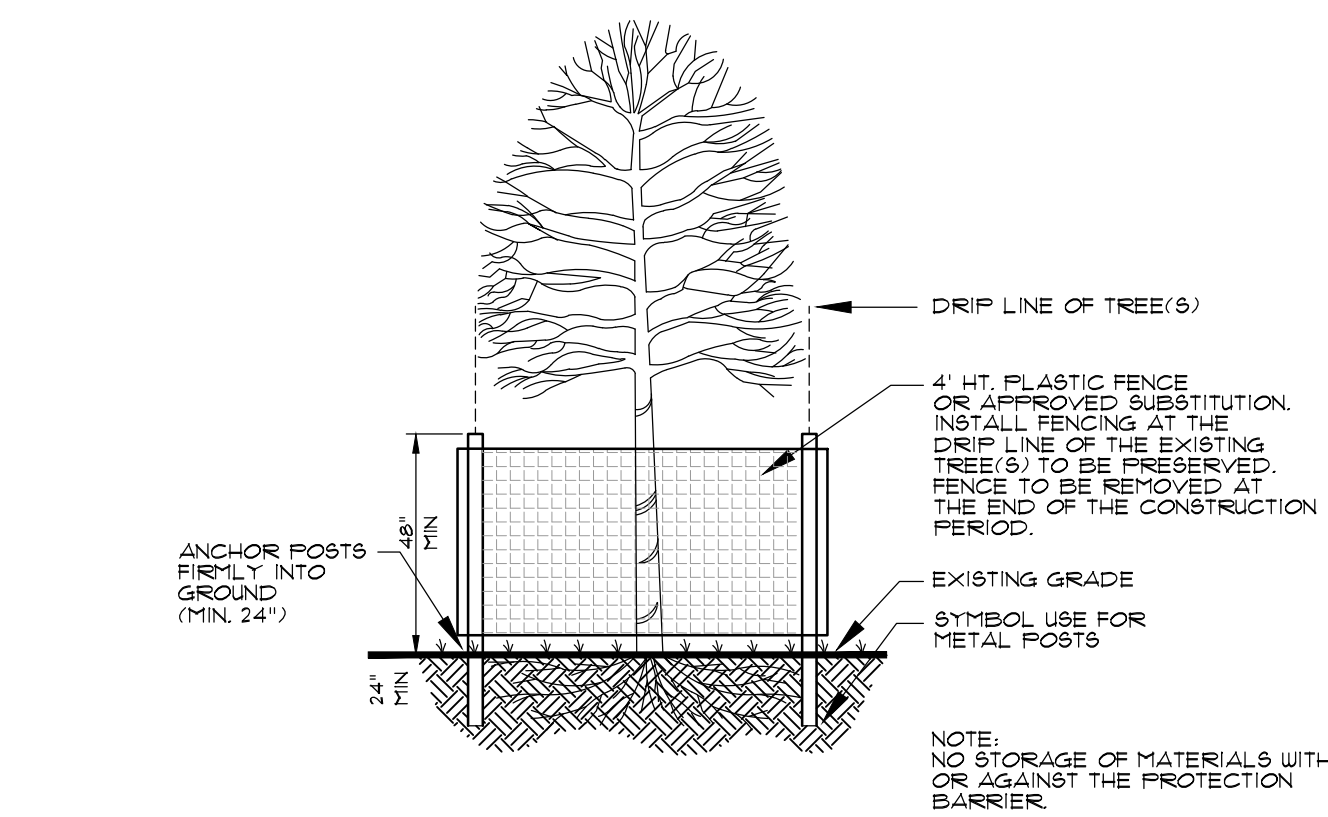
CONTRACTOR SHALL SUPPLY AND SPREAD 4\"/>



8 B4B SHRUB DETAIL  
NOT TO SCALE



9 DETAIL TYPICAL STAGGERED ROW SPACING  
NOT TO SCALE



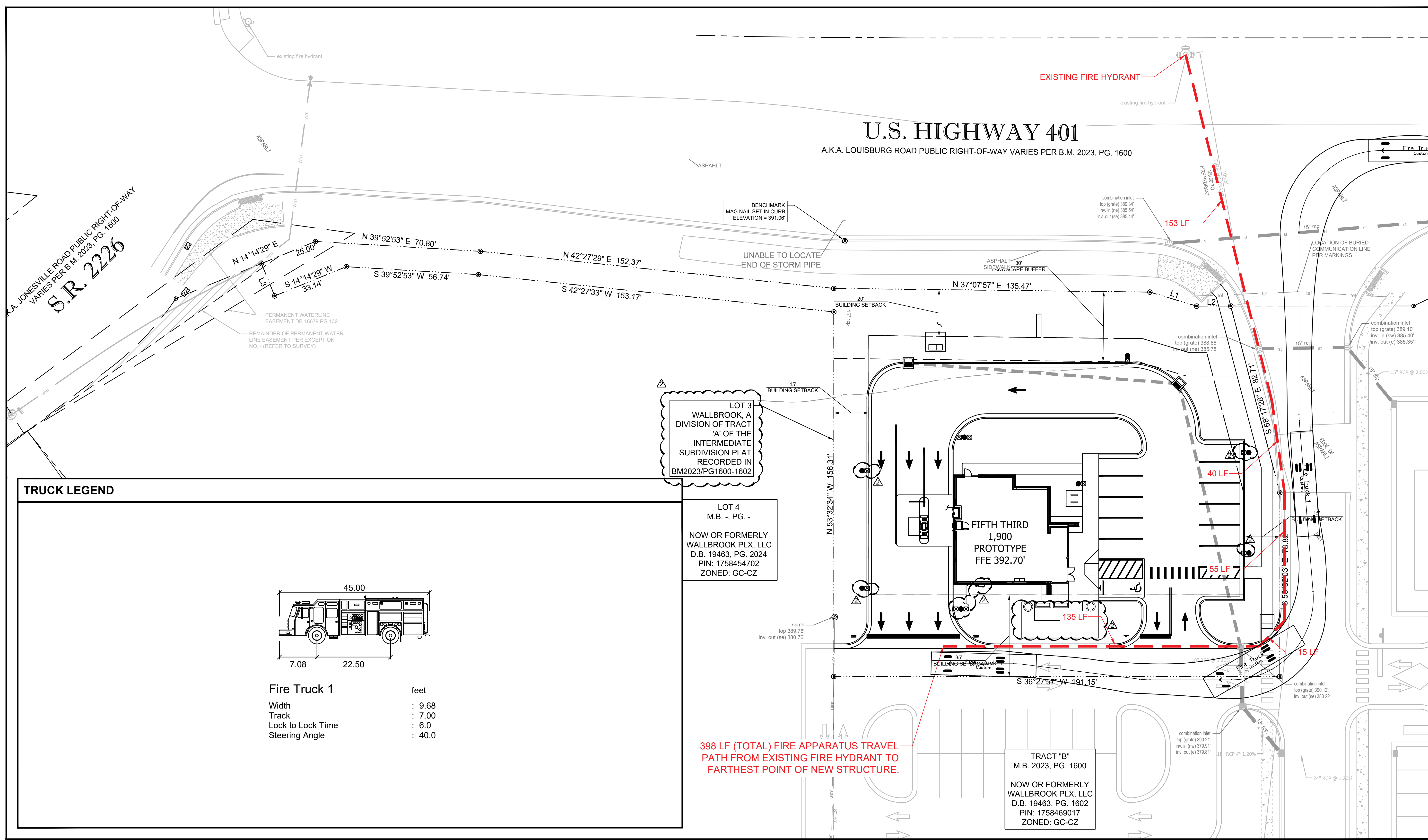
10 TREE PROTECTION DETAIL  
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ISSUE	BY	DATE	DESCRIPTION
Δ		08/16/24	PERMIT SET
		01/03/24	TRC ROUND 2

PROJECT INFORMATION BLOCK

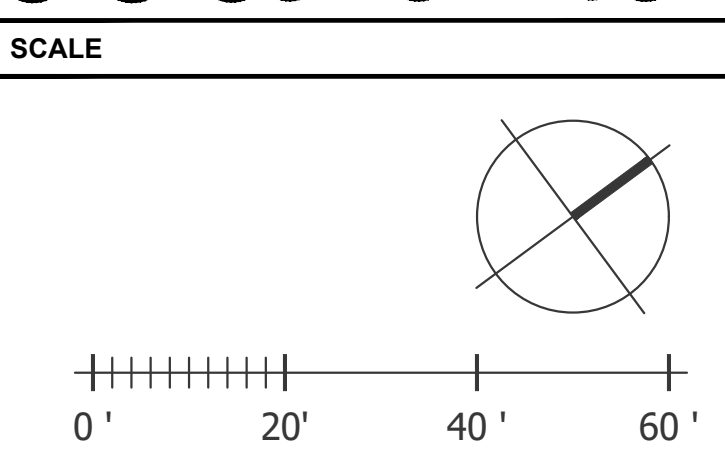
JOB #	230634
DATE:	08/16/2024
DRAWN BY:	JCO
CHECKED BY:	WRJ





PLAN VIEW  
SCALE AS SHOWN

**SDP-24-07**



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SEAL  
NISIT SAPPARKHAO, P.E.  
NC REG. NO. 38066

01/03/2025  
DATE

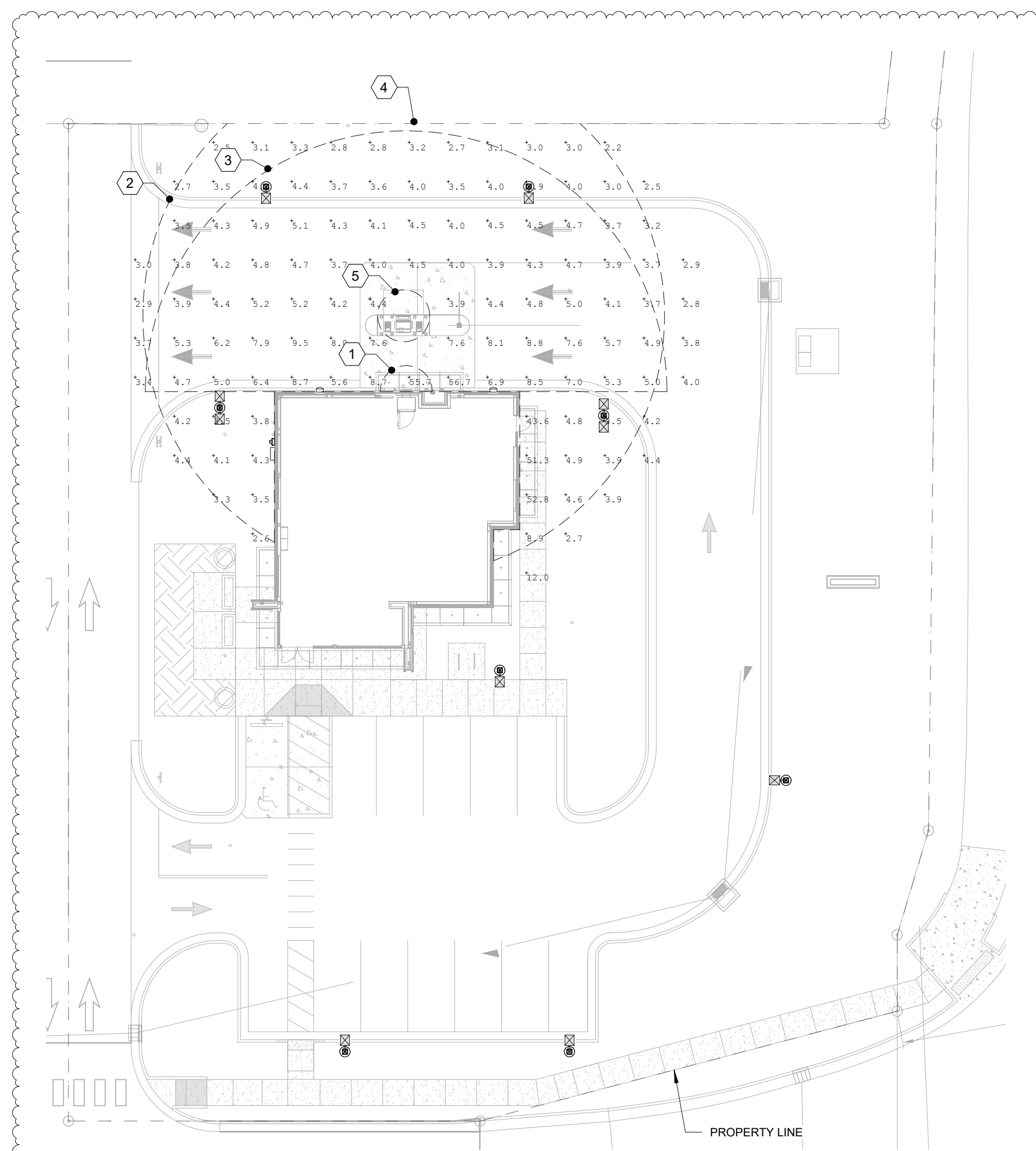
ISSUE	BY	DATE	DESCRIPTION
△		08/16/24	PERMIT SET
		01/03/25	TRC ROUND 2

PROJECT INFORMATION BLOCK  
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DATE: 08/16/2024  
DRAWN BY: IEG  
CHECKED BY: DC

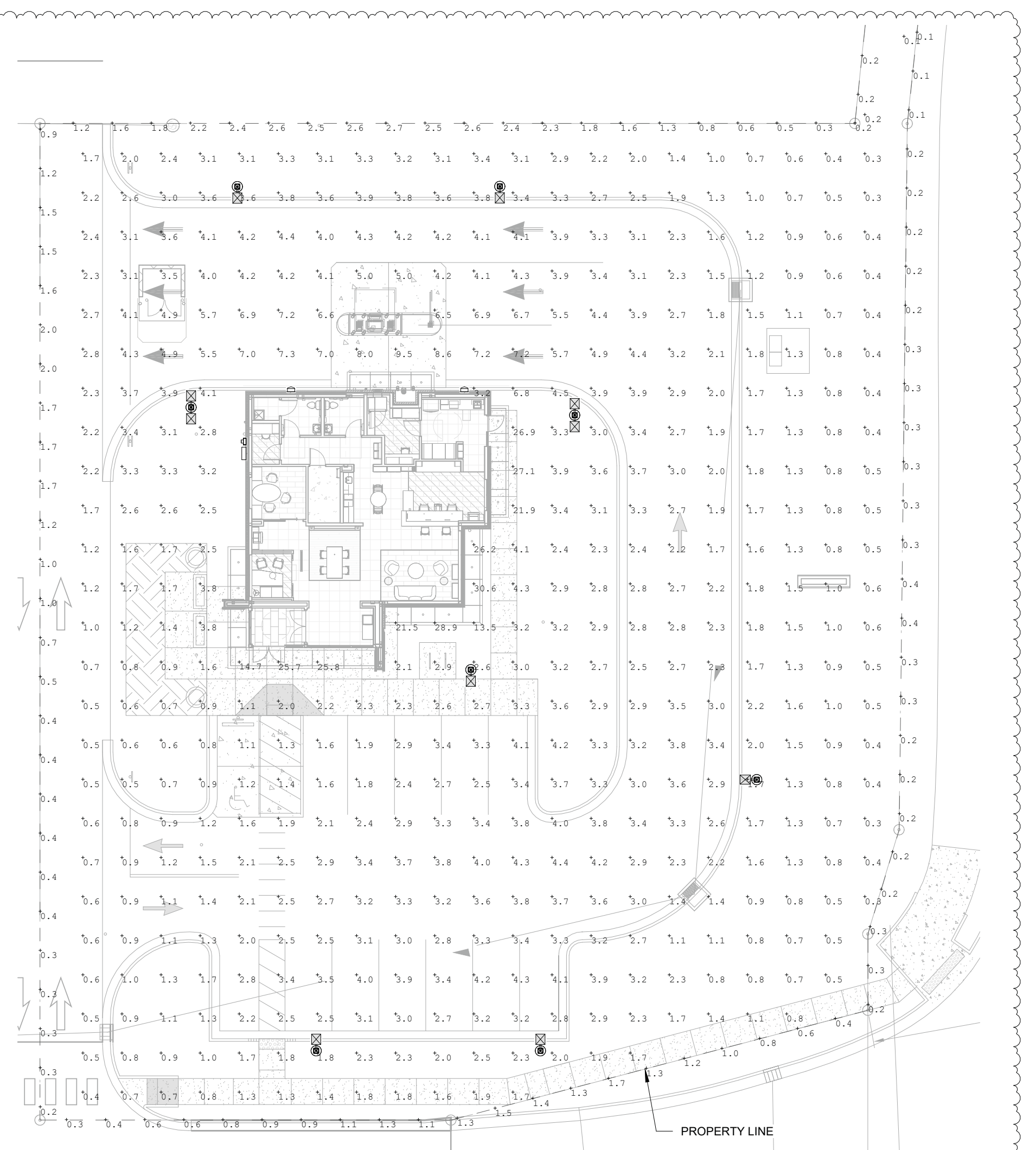
SHEET TITLE  
**SITE ACCESS PLAN**

SHEET NUMBER  
**SA01.01**





2 ELECTRICAL PHOTOMETRIC SITE PLAN AT 3'-0"  
1" = 20'-0"



1 ELECTRICAL PHOTOMETRIC SITE PLAN AT GRADE  
1" = 20'-0"

**CALCULATION SUMMARY AT 36" AFG**

LABEL	CALCTYPE	UNIT	AVG	MAX	MIN	AVG/MIN	MAX/MIN
DRIVE-UP ATM - 5FT COMPLIANCE	ILLUMINANCE	FC	PROVIDED BY CANOPY MANUFACTURER				
DRIVE-UP ATM - 50FT COMPLIANCE	ILLUMINANCE	FC	6.21	73.8	2.1	2.96	35.14
NIGHT DEPOSITORY - 5FT COMPLIANCE	ILLUMINANCE	FC	56.27	73.1	42.1	1.34	1.74
NIGHT DEPOSITORY - 50FT COMPLIANCE	ILLUMINANCE	FC	5.94	73.8	2.7	2.20	27.33

**CALCULATION SUMMARY AT GRADE**

LABEL	CALCTYPE	UNIT	AVG	MAX	MIN	AVG/MIN	MAX/MIN
PARKING LOTS	ILLUMINANCE	FC	3.15	9.5	0.5	6.30	19.00
PROPERTY LINE	ILLUMINANCE	FC	0.66	2.7	0.0	N/A	N/A

**SHEET NOTES:**

- PHOTOMETRY CALCULATION: PHOTOMETRIC VALUES SHOWN HEREIN ARE INTENDED FOR DESIGN AND EVALUATION PURPOSES ONLY. THE CALCULATED POINT-BY-POINT VALUES SHOWN ON THIS SHEET ARE BASED ON A COMPUTER LIGHTING PROGRAM WITH APPROXIMATED PARAMETERS. AS A RESULT, PHOTOMETRIC VALUES MAY VARY FROM ACTUAL FIELD MEASUREMENTS.

**LIGHTING STANDARDS:**

- MINIMUM STANDARD**
- A MINIMUM OF TEN (10) FOOT CANDLE POWER AT THE FACE OF THE ATM OR AFTER-HOUR DEPOSITORY EXTENDING OUTWARD FIVE (5) FEET IN ALL UNOBSTRUCTED DIRECTIONS.
  - A MINIMUM OF TWO (2) FOOT CANDLE POWER EXTENDING OUTWARDS IN ALL UNOBSTRUCTED DIRECTIONS FIFTY (50) FEET FROM THE FACE OF THE ATM AND AFTER-HOUR DEPOSITORY.
  - A MINIMUM OF TWO (2) FOOT CANDLE POWER IN DEFINED PARKING AREAS WITHIN SIXTY (60) FEET OF THE ATM AND AFTER-HOUR DEPOSITORY. IN THE EVENT THE ATM OR AFTER-HOUR DEPOSITORY IS LOCATED WITHIN TEN (10) FEET OF THE CORNER OF THE BUILDING AND IS GENERALLY ACCESSIBLE FROM THE ADJACENT SIDE, THERE SHALL BE A MINIMUM OF TWO (2) FOOT CANDLE POWER ALONG THE FIRST FORTY (40) UNOBSTRUCTED FEET OF THE ADJACENT SIDE OF THE BUILDING.
  - IF THE ATM OR AFTER-HOUR DEPOSITORY IS LOCATED INSIDE A ACCESSIBLE VESTIBULE DURING ANY HOURS OF DARKNESS, A MINIMUM OF 10 FOOT CANDLE POWER AT THE FACE OF THE ATM OR AFTER-HOUR DEPOSITORY EXTENDING OUTWARD FIVE (5) FEET IN ALL UNOBSTRUCTED DIRECTIONS. THERE WILL BE A MINIMUM OF TWO (2) FOOT CANDLE POWER AT THE INSIDE OF THE VESTIBULE ENTRY/EXIT DOOR(S). A MINIMUM OF TWO (2) FOOT CANDLE POWER EXTENDING OUTWARDS IN ALL UNOBSTRUCTED DIRECTIONS FIFTY (50) FEET FROM THE VESTIBULE ENTRY/EXIT DOOR. A MINIMUM OF TWO (2) FOOT CANDLE POWER IN DEFINED PARKING AREAS WITHIN SIXTY (60) FEET OF THE VESTIBULE ENTRY/EXIT DOOR. IN THE EVENT THE VESTIBULE ENTRY/EXIT DOOR IS LOCATED WITHIN TEN (10) FEET OF THE CORNER OF THE BUILDING AND IS GENERALLY ACCESSIBLE FROM THE ADJACENT SIDE, THERE SHALL BE A MINIMUM OF TWO (2) FOOT CANDLE POWER ALONG THE FIRST FORTY (40) UNOBSTRUCTED FEET OF THE ADJACENT SIDE OF THE BUILDING. IN URBAN SETTINGS FOR WHICH THERE IS NO DEFINED BANK PARKING AND THE ONLY ACCESS AREA IS A PUBLIC SIDEWALK, A MINIMUM 2 FOOT CANDLE POWER SHALL BE FOR THE FIRST 5 UNOBSTRUCTED FEET FROM THE DOOR. THE MINIMUM FOOT CANDLE READING WILL ALSO BE LIMITED TO BANK CONTROLLED PROPERTY LINES.
  - A MINIMUM OF TWO (2) FOOT CANDLE POWER IN THE IMMEDIATE AREA OF THE DESIGNATED ASSOCIATE ENTRANCE/EXIT TO THE FACILITY. ALL LIGHTING MEASUREMENTS ARE TO BE TAKEN AT 36 INCHES ABOVE THE GROUND ON A HORIZONTAL PLANE, UNLESS OTHERWISE SPECIFIED BY STATE LAW OR REGULATION (S07).
  - THE MINIMUM STANDARD SHALL APPLY UNLESS A GREATER STANDARD IS REQUIRED BY AN APPLICABLE LAW FOR A PARTICULAR FACILITY LOCATION.

**KEYED NOTES:**

- AFTER-HOUR DEPOSITORY FIVE FOOT COMPLIANCE AREA: A MINIMUM OF TEN (10) FOOT CANDLE POWER AT THE FACE OF THE ATM/AFTER-HOUR DEPOSITORY EXTENDING OUTWARD FIVE (5) FEET IN ALL UNOBSTRUCTED DIRECTIONS.
- ATM FIFTY FOOT COMPLIANCE AREA: A MINIMUM OF TWO (2) FOOT CANDLE POWER EXTENDING OUTWARD IN ALL UNOBSTRUCTED DIRECTIONS FIFTY (50) FEET FROM THE FACE OF THE ATM AND AFTER-HOUR DEPOSITORY.
- AFTER-HOUR DEPOSITORY SIXTY FOOT COMPLIANCE AREA: A MINIMUM OF TWO (2) FOOT CANDLE POWER EXTENDING OUTWARD IN ALL UNOBSTRUCTED DIRECTIONS FIFTY (50) FEET FROM THE FACE OF THE ATM AND AFTER-HOUR DEPOSITORY.
- BANK CONTROLLED PROPERTY LINES: THE MINIMUM FOOT CANDLE READING WILL BE LIMITED TO BANK CONTROLLED PROPERTY LINES.
- ATM FIVE FOOT COMPLIANCE AREA: A MINIMUM OF TEN (10) FOOT CANDLE POWER AT THE FACE OF THE ATM/AFTER-HOUR DEPOSITORY EXTENDING OUTWARD FIVE (5) FEET IN ALL UNOBSTRUCTED DIRECTIONS TO BE PROVIDED BY OWNER'S PREMANUFACTURED ATM CANOPY.



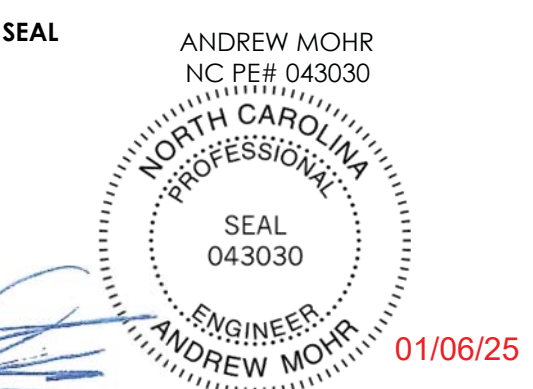
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 Phone: 813.434.4770  
 NC Cert. of Auth# P-0967

ISSUE	BY	DATE	DESCRIPTION
1	K	01/03/25	TRC ROUND 2

PROJECT INFORMATION BLOCK	
JOB #	230634/15-309.00
DATE:	01/03/2025
DRAWN BY:	KL
CHECKED BY:	AM

SHEET TITLE  
**ELECTRICAL  
 PHOTOMETRIC SITE  
 PLAN**

SHEET NUMBER

**SDP-24-07**

**E-011**



**LEGEND**

	EXISTING BUILDING		FIRE HYDRANT
	LAND LOT LINE (LLL)		WATER VALVE
	PROPERTY LINE		GAS VALVE
	UTILITY POLE (UP), OVERHEAD LINES & GUY		WATER METER
	FIBER OPTIC CABLE		GAS METER
	TREE LINE		MONITORING WELL
	SANITARY SEWER MANHOLE		POST INDICATOR VALVE
	SANITARY CLEAN-OUT (SCO)		MAILBOX
	SANITARY SEWER STUB OUT		STREET SIGN
	TELEPHONE MANHOLE/PEDESTAL		TRAFFIC SIGNAL POLE
	STORM DRAIN PIPE WITH HEADWALL		TRAFFIC SIGNAL BOX
	DOUBLE-WING CATCH BASIN		BACKFLOW PREVENTER
	SINGLE-WING CATCH BASIN		FIRE DEPT. CONNECTION
	JUNCTION BOX (JB)		FIBER OPTIC BOX
	DROP OR CURB INLET (DI OR CI)		IRRIGATION CONTROL VALVE
	FENCE		DRAINAGE MANHOLE
	DRAINAGE DITCH OR SWALE		RIGHT-OF-WAY
	EXISTING 10 FOOT CONTOUR		REBAR PIN FOUND
	EXISTING 2 FOOT CONTOUR		OPEN TOP PIPE FOUND
	EXISTING GRADE SPOT ELEVATION		CRIMP TOP PIPE FOUND
	DIRECTION OF SURFACE FLOW		CONCRETE MONUMENT FOUND
	RECORDED DATA		BRASS DISK FOUND
	PARKING SPACE COUNT		AXLE FOUND
	LIGHT POLE (LP)		REBAR PIN SET
	ELECTRICAL TRANSFORMER BOX		CORRUGATED METAL PIPE
	ELECTRICAL METER		REINFORCED CONC. PIPE
	ELECTRICAL STUB OUT		HIGH-DENSITY POLYETHYLENE PIPE
	UNKNOWN UTILITY STUB OUT		DUCTILE IRON PIPE
	WATER STUB OUT		POLYVINYL CHLORIDE PIPE

**LINE TABLE**

LINE	BEARING	DISTANCE
L1	N 53°08'21" E	20.88'
L2	N 36°26'23" E	14.62'
L3	N 75°45'31" W	15.00'



**GreenbergFarrow**  
 1230 Peachtree St. NE, Suite 2900  
 Atlanta, GA 30309  
 Phone: (770) 422-8181  
 Fax: (770) 422-8101  
 www.greenbergfarrow.com

**LEGAL DESCRIPTION**

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

**TITLE EXCEPTIONS**

THIS SURVEY WAS PERFORMED WITH THE BENEFIT OF [TITLE COMPANY] COMMITMENT FOR TITLE INSURANCE NUMBER [NO.] DATED [DATE & TIME].  
 SURVEYORS COMMENTS ARE WITH RESPECT TO THAT PARCEL CONVEYED TO ...[OWNER] BY VIRTUE OF [INSTRUMENT] RECORDED IN [DB, PG].  
 SURVEY RELATED SCHEDULE B - SECTION 2 EXCEPTIONS

- EXCEPTION #1...

**GENERAL NOTES**

- SURVEY PROCEDURES: THIS SURVEY IS BASED ON MEASUREMENTS OBTAINED USING A SPECTRA PRECISION FOCUS 35 ROBOTIC INSTRUMENT CAPABLE OF READING ANGULAR MEASUREMENTS DIRECTLY TO A MINIMUM OF 3 SECONDS OF ARC AND LINEAR DIMENSIONS DIRECTLY TO 0.01 FEET AND/OR A GEOMAX ZENITH 80 DUAL FREQUENCY BASE AND RECEIVER, CAPABLE OF AN ACCURACY OF 8 MM HORIZONTAL AND 15 MM VERTICAL.
- THIS PLAN HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 133,661 FEET.
- TITLE TO THE SURVEYED PROPERTY IS CURRENTLY VESTED IN [OWNER] BY VIRTUE OF A [INSTRUMENT TYPE] RECORDED IN [D.B. & PG.] [COUNTY] COUNTY RECORDS.
- I HAVE EXAMINED FEMA FLOOD INSURANCE RATE MAP NO. 3720175800K, LAST REVISED ON JULY 19, 2022 AND HAVE DETERMINED BASED SOLELY BY GRAPHICALLY SCALING THE LOCATION ON THE MAP THAT THIS PROPERTY IS SHOWN NOT TO BE LOCATED WITHIN THE LIMITS OF A DESIGNATED FLOOD HAZARD AREA.
- THE BASIS OF BEARING USED FOR THIS SURVEY IS N.C. STATE GRID (NAD 83). ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON NAVD 88.
- THE SURVEYED PROPERTY IS ZONED GC-CZ (GENERAL COMMERCIAL-CONDITIONAL ZONING DISTRICT) ACCORDING TO THE TOWN OF ROLESVILLE, NORTH CAROLINA PLANNING & ZONING DEPARTMENT AND IS SUBJECT TO THE REQUIREMENTS AND RESTRICTIONS OF THIS ZONING CLASSIFICATION. THE SETBACK REQUIREMENTS FOR THIS ZONING CLASSIFICATION ARE:  
 FRONT 20 FT.  
 SIDE 15 FT.  
 REAR 35 FT.  
 CORNER 25 FT.  
 MAXIMUM BUILDING HEIGHT 35 FT.
- THE TAX PARCEL ID FOR THE SUBJECT PROPERTY IS 1758454702.
- UTILITY INFORMATION SHOWN ON THIS SURVEY IS BASED ON ABOVE GROUND EVIDENCE OBSERVED AT THE TIME OF FIELD SURVEY. NO CERTIFICATION, GUARANTEE, OR WARRANTY OF ANY KIND IS MADE AS TO THE ACCURACY OR THOROUGHNESS OF THE INFORMATION CONCERNING UTILITIES SHOWN OR NOT SHOWN ON THIS SURVEY.
- THERE WAS EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED DURING THE PROCESS OF CONDUCTING THE FIELDWORK.
- THERE WERE NO KNOWN PROPOSED CHANGES IN STREET RIGHT OF WAY LINES. THERE WAS EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED DURING THE PROCESS OF CONDUCTING THE FIELDWORK.
- THE CONTOURS SHOWN ON THIS SURVEY ARE AT 1.0 FOOT INTERVALS.
- ALL DISTANCES SHOWN ON THIS SURVEY ARE GROUND DISTANCES.
- AREA COMPUTED BY COORDINATES.

I CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN D.B. ---, PG. --- & B.M. ---, PG. ---, WAKE COUNTY, NORTH CAROLINA RECORDS) AND THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DASHED LINES AND ARE DRAWN FROM INFORMATION IN OTHER REFERENCE SOURCES (M.B. 2023, PG. 1600), WAKE COUNTY, NORTH CAROLINA RECORDS; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY EXCEEDS 1:10,000±; AND THAT THIS MAP MEETS THE REQUIREMENTS OF A CLASS A SURVEY PER THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56.1600).  
 AND I CERTIFY FURTHER THAT THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THIS GROUND SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL (2 SSM) TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS; THAT THE VERTICAL ACCURACY MEETS AND EXCEEDS THE VERTICAL ACCURACY REQUIREMENTS OF THE NATIONAL MAP ACCURACY STANDARDS AND THAT THE ORIGINAL DATA WAS OBTAINED ON MAY 14, 2024; THAT THE SURVEY WAS COMPLETED ON ---, THAT CONTOURS SHOWN AS BROKEN LINES MAY NOT MEET THE STATED STANDARD; AND ALL COORDINATES ARE BASED ON NC STATE GRID NAD 83 AND ALL ELEVATIONS ARE BASED ON NAVD 88.  
 THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2024

SIGNED: \_\_\_\_\_  
 RODNEY E. ABNEY, JR.  
 NORTH CAROLINA PLS NO. L-4510

**CERTIFICATION**

TO: \_\_\_\_\_  
 THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(a)(b), 7(a)(b)(1)(2)(c), 8, 9, 11(a)(b), 13, 14, 16, 17, AND 18 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MAY 14, 2024.  
 DATE OF PLAT OR MAP: \_\_\_\_\_

RODNEY E. ABNEY, JR.  
 NORTH CAROLINA PLS NO. L-4510

DATE \_\_\_\_\_

**PRELIMINARY**

THIS SURVEY IS A WORK IN PROGRESS AND IS NOT FOR DISTRIBUTION

DRAWING SCALE:	1" = 20.0 FT.	
FIELDWORK DATE:	05-14-24	
RELEASE DATE:		
DRAWN BY:	RWS	
CHECKED BY:	PCG	
NO.	DATE	DESCRIPTION
1		
2		
3		

**LOT 3 ~ B.M. ~ PG. -**  
**U.S. HIGHWAY 401**  
**ROLESVILLE, NC 27571**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ALTA/NSPS LAND TITLE SURVEY FOR  
**BDG ARCHITECTS, LLP**

PROJECT NO.	24-118-0
DRAWING FILE:	24-118-0 SURVEY.DWG
SHEET NO.	<b>S-1</b>
1 OF 1	