SITE DEVELOPMENT PLANS

CVS pharmacy #7747

SWC - DRUID LN. & PRESTON RD.

UNIVERSITY PARK, TX

ZONED: GR

6709 PRESTON RD.

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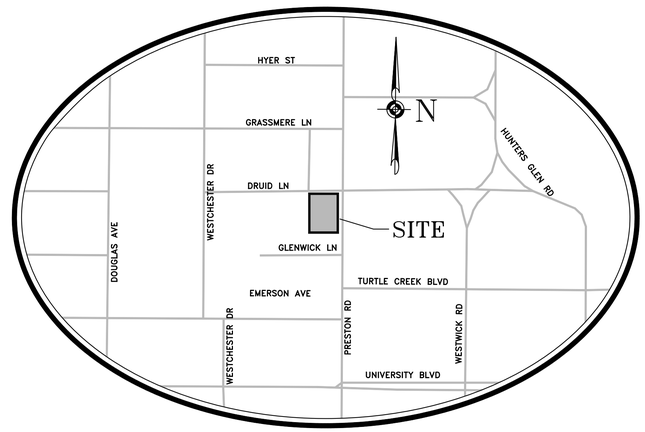

VICINITY MAP
NTS

DEVELOPED BY:

ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

ENGINEER:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons, Bartlett, TN 38133
Phone (901) 384-0404 Fax (901) 384-0710

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UNIVERSITY PARK, TX 75205
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3800 UNIVERSITY BLVD
UNIVERSITY PARK, TX 75205
PHONE: (214) 363-1644

Texas811
Know what's below.
Call before you dig.

ALL SITEWORK SHALL MEET OR EXCEED THE CVS/CAREMARK PHARMACY SITEWORK SPECIFICATIONS.

ALL NECESSARY INSPECTIONS, APPROVALS, AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR AUTHORITIES SHALL BE COMPLETED PRIOR TO THE ANNOUNCED BUILDING POSSESSION AND THE FINAL CERTIFICATION OF SERVICES.

CARLSON CONSULTING ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-9624
7068 LEDGESTONE COMMONS
BARTLETT, TN 38133

DATE	09 OCTOBER 2020	CS NUMBER	109133

REVISIONS

NO.	DESCRIPTION:	INITIALS:	DATE:

GENERAL NOTES

A. DESIGN DATA PROVIDED IN ELECTRONIC FORMAT IS FOR INFORMATION PURPOSES ONLY AND SHOULD BE USED AT YOUR OWN RISK, AND IS PROVIDED WITHOUT REPRESENTATIONS AND WARRANTIES.ANY CONFLICT BETWEEN THE INFORMATION REFLECTED ON THE LATEST REVISION OF THE SEALED PLAN SHEETS AND THAT PROVIDED VIA ELECTRONIC FORMAT SHALL BE RESOLVED IN FAVOR OF THE SEALED PLAN SHEETS.

B. UTILITIES: THERE MAY BE ADDITIONAL EXISTING UTILITIES NOT SHOWN ON THESE PLANS. EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN. FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. NOTIFY THE OWNER AND ENGINEER IF DISCREPANCIES ARE FOUND THAT WILL AFFECT THE CONSTRUCTION PROJECT. PROTECT ALL EXISTING UTILITIES.

C. TEMPORARY PROVISIONS: SEQUENCE THE WORK AND PROVIDE TEMPORARY MEASURES AS NEEDED TO MAINTAIN ACCESS TO THE SITE THROUGH ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION. TEMPORARY PROVISIONS MAY INCLUDE, BUT ARE NOT LIMITED TO: BARRICADES, FLASHING LIGHTS, FLAGMAN, TEMPORARY PAVEMENT, AND DIRECTIONAL SIGNAGE.

D. EQUIPMENT STORAGE: DO NOT PARK EQUIPMENT OR STORE MATERIALS IN STATE, COUNTY, OR CITY RIGHT-OF-WAY.

E. NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE SURVEY SHOWN ON THE PLANS BEFORE PROCEEDING WITH ANY NEW CONSTRUCTION.

F. OBTAIN ALL REQUIRED CONSTRUCTION RELATED PERMITS, INCLUDING DEMOLITION PERMIT, BEFORE STARTING WORK. RETAIN COPIES OF ALL PERMITS AT THE PROJECT SITE AT ALL TIMES.

G. APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.

H. SIGNS (LOCATION, NUMBER, AND SIZE) ARE NOT APPROVED UNDER THE GENERAL DEVELOPMENT PERMIT. A SEPARATE PERMIT IS REQUIRED FOR ONSITE SIGNAGE.

I. NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL SITE IMPROVEMENTS HAVE BEEN COMPLETED ON THE SITE.

J. COMPLY WITH ALL APPLICABLE STATE, FEDERAL, AND LOCAL BUILDING AND UTILITY INSTALLATION CODES. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS UNLESS DEPARTMENT OF TRANSPORTATION STANDARDS OR LOCAL MUNICIPAL STANDARDS ARE MORE STRINGENT.

K. DO NOT DEVIATE FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.

L. WORK WITHIN D.O.T. RIGHT-OF-WAY:
1. ALL PAVEMENT MARKINGS WITHIN D.O.T. RIGHT-OF-WAY SHALL BE THERMOPLASTIC AND IN ACCORDANCE WITH D.O.T. SPECIFICATIONS.
2. RE-ESTABLISH ALL RIGHT-OF-WAY AREA, WHICH IS DAMAGED OR DISTURBED, TO ORIGINAL CONDITION OR BETTER.
3. ALL WORK IN D.O.T. RIGHT-OF-WAY SHALL COMPLY WITH D.O.T. SPECIFICATIONS.

M. ARRANGE HIGH INTENSITY LIGHTING TO CONCEAL THE SOURCE OF LIGHT FROM PUBLIC VIEW AND PREVENT INTERFERENCE WITH TRAFFIC.

N. ENSURE CORRECT HORIZONTAL AND VERTICAL ALIGNMENT OF ALL TIES BETWEEN PROPOSED AND EXISTING PAVEMENTS, CURB AND GUTTER, SIDEWALKS, WALLS, AND UTILITIES BEFORE BEGINNING WORK. NOTIFY ENGINEER IF DISCREPANCIES EXIST.

TRAFFIC CONTROL

A. IF DRAWINGS DO NOT INDICATE SITE SPECIFIC TRAFFIC CONTROL MEASURES, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TEMPORARY TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.

B. ALL TEMPORARY TRAFFIC CONTROL SIGNAGE AND MARKINGS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH THE MUTCD, LATEST EDITION.

C. CONTACT PROPERTY OWNERS TO BE AFFECTED BY CONSTRUCTION AND COORDINATE TEMPORARY DRIVEWAY CLOSURES AND SEQUENCING. MAINTAIN ACCESS FOR ALL PROPERTY OWNERS DURING CONSTRUCTION.

D. CONTROL DUST AS NECESSARY TO PREVENT INTERFERENCE WITH TRAFFIC.

E. INSPECT TRAFFIC CONTROL DEVICES ON A DAILY BASIS TO ENSURE PLACEMENT OF BARRICADES AND FUNCTION OF LIGHTS IS MAINTAINED THROUGHOUT CONSTRUCTION.

F. COORDINATE ALL LANE CLOSURES WITH THE LOCAL JURISDICTION HAVING AUTHORITY.

STRUCTURE & SITE DEMOLITION

A. VERIFY THAT UTILITIES HAVE BEEN DISCONNECTED AND CAPPED BEFORE STARTING DEMOLITION OPERATIONS.

B. VERIFY THAT HAZARDOUS MATERIALS HAVE BEEN REMEDIATED BEFORE PROCEEDING WITH BUILDING DEMOLITION OPERATIONS.

C. ENVIRONMENTAL & GEOTECHNICAL: REVIEW ALL PROJECT ENVIRONMENTAL AND GEOTECHNICAL REPORTS AND BECOME FAMILIAR WITH ALL ISSUES BEFORE DEMOLITION.

D. EXISTING UTILITIES: LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF INDICATED UTILITIES SERVING BUILDINGS AND STRUCTURES TO BE DEMOLISHED.
1. ARRANGE TO SHUT OFF INDICATED UTILITIES WITH UTILITY COMPANIES.
2. IF REMOVAL, RELOCATION, OR ABANDONMENT OF UTILITY SERVICES WILL AFFECT ADJACENT OCCUPIED BUILDINGS, THEN PROVIDE TEMPORARY UTILITIES THAT BYPASS BUILDINGS AND STRUCTURES TO BE DEMOLISHED AND THAT MAINTAIN CONTINUITY OF SERVICE TO OTHER BUILDINGS AND STRUCTURES.

E. DO NOT COMMENCE DEMOLITION OPERATIONS UNTIL TEMPORARY EROSION AND SEDIMENT CONTROL AND PLANT-PROTECTION MEASURES ARE IN PLACE.

F. OBTAIN THE DEMOLITION PERMIT FROM THE LOCAL AUTHORITY PRIOR TO STARTING DEMOLITION ACTIVITIES.

G. EXISTING FACILITIES: PROTECT ADJACENT WALKWAYS, LOADING DOCKS, BUILDING ENTRIES, AND OTHER BUILDING FACILITIES DURING DEMOLITION OPERATIONS. MAINTAIN EXITS FROM EXISTING BUILDINGS. PROMPTLY REPAIR ANY FACILITIES DAMAGED BY CONSTRUCTION OPERATIONS TO OWNER'S SATISFACTION AT NO ADDITIONAL COST TO THE OWNER.

H. EXISTING UTILITIES: MAINTAIN UTILITY SERVICES TO REMAIN AND PROTECT FROM DAMAGE DURING DEMOLITION OPERATIONS.

I. TEMPORARY PROTECTION: ERECT TEMPORARY PROTECTION, SUCH AS WALKS, FENCES, RAILINGS, CANOPIES, AND COVERED PASSAGEWAYS, WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION AND AS INDICATED.

J. REMOVE TEMPORARY BARRIERS AND PROTECTIONS WHERE HAZARDS NO LONGER EXIST. WHERE OPEN EXCAVATIONS OR OTHER HAZARDOUS CONDITIONS REMAIN, LEAVE TEMPORARY BARRIERS AND PROTECTIONS IN PLACE.

K. REMOVE DEMOLITION WASTE MATERIALS FROM PROJECT SITE AND LEGALLY DISPOSE OF THEM IN AN EPA-APPROVED LANDFILL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION

L. DO NOT BURN DEMOLISHED MATERIALS UNLESS SPECIAL WRITTEN PERMISSION IS OBTAINED FROM OWNER AND ENGINEER.

M. 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.

SITE CLEARING

1.1 PROJECT CONDITIONS
A. TRAFFIC: MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING SITE-CLEARING OPERATIONS.
B. ENVIRONMENTAL & GEOTECHNICAL: REVIEW ALL PROJECT ENVIRONMENTAL AND GEOTECHNICAL REPORTS AND BECOME FAMILIAR WITH ALL ISSUES BEFORE SITE CLEARING.
C. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE SITE CLEARING.
D. DO NOT COMMENCE SITE CLEARING OPERATIONS UNTIL TEMPORARY EROSION- AND SEDIMENTATION-CONTROLAND PLANT-PROTECTION MEASURES ARE IN PLACE.

1.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL
A. PROVIDE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS, ACCORDING TO EROSION AND SEDIMENTATION CONTROL DRAWINGS AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
B. VERIFY THAT FLOWS OF WATER REDIRECTED FROM CONSTRUCTION AREAS OR GENERATED BY CONSTRUCTION ACTIVITY DO NOT ENTER OR CROSS PROTECTION ZONES.
C. INSPECT, MAINTAIN, AND REPAIR EROSION AND SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED.
D. REMOVE EROSION AND SEDIMENTATION CONTROLS WHEN SITE IS STABILIZED AND RESTORE AND STABILIZE AREAS DISTURBED DURING REMOVAL.

1.3 TREE AND PLANT PROTECTION
REPAIR OR REPLACE TREES, SHRUBS, AND OTHER VEGETATION INDICATED TO REMAIN OR BE RELOCATED THAT ARE DAMAGED BY CONSTRUCTION OPERATIONS, IN A MANNER APPROVED BY ENGINEER.

1.4 EXISTING UTILITIES
A. LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVEDOR ABANDONED IN PLACE. ARRANGE WITH UTILITY COMPANIES TO SHUT OFF INDICATED UTILITIES.
B. INTERRUPTING EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES ACCORDING TO REQUIREMENTS INDICATED:
1. NOTIFY UTILITY OWNER NOT LESS THAN TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.
2. DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT UTILITY OWNER'S WRITTEN PERMISSION.
C. POTHOLE EXISTING WATER LINES, UNDERGROUND ELECTRICAL LINES, GAS LINES, UNDERGROUND TELEPHONE LINES, FIBER OPTIC, AND ANY OTHER EXISTING UTILITY LINES WITHIN THE PROJECT LIMITS DURING SITE CLEARING AND DEMOLITION ACTIVITIES. SURVEY THE EXISTING UTILITY ELEVATIONS AND PROVIDE THE SURVEYED FIELD LOCATIONS AND DEPTHS TO THE ENGINEER FOR REVIEW. THESE EXISTING UTILITIES MAY REQUIRE RELOCATION.

1.5 CLEARING AND GRUBBING
REMOVE OBSTRUCTIONS, CONCRETE, ASPHALT, TREES, SHRUBS, AND OTHER VEGETATION TO PERMIT INSTALLATION OF NEW CONSTRUCTION.
1. DO NOT REMOVE TREES, SHRUBS, AND OTHER VEGETATION INDICATED TO REMAIN OR TO BE RELOCATED.
2. GRIND DOWN STUMPS AND REMOVE ROOTS, OBSTRUCTIONS, AND DEBRIS TO A DEPTH OF 12 INCHES BELOW EXPOSED SUBGRADE.
3. USE ONLY HAND METHODS FOR GRUBBING WITHIN PROTECTION ZONES.
4. THE SUBGRADE TO REMAIN SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY FOLLOWING CLEARING AND GRUBBING ACTIVITIES.

1.6 TOPSOIL STRIPPING
A. REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
B. STRIP TOPSOIL IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.
C. STOCKPILE TOPSOIL AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST AND EROSION BY WATER.
D. DISPOSE OF SURPLUS TOPSOIL. SURPLUS TOPSOIL IS THAT WHICH EXCEEDS QUANTITY INDICATED TO BE STOCKPILED OR REUSED.

SITE WATER DISTRIBUTION

1.1 GENERAL
A. REGULATORY REQUIREMENTS:
1. COMPLY WITH REQUIREMENTS OF UTILITY COMPANY SUPPLYING WATER. INCLUDE TAPPING OF WATER MAINS AND BACKFLOW PREVENTION.
2. COMPLY WITH STANDARDS OF AUTHORITIES HAVING JURISDICTION FOR POTABLE-WATER-SERVICE PIPING, INCLUDING MATERIALS, INSTALLATION, TESTING, AND DISINFECTION.
B. PIPING MATERIALS SHALL BEAR LABEL, STAMP, OR OTHER MARKINGS OF SPECIFIED TESTING AGENCY.
C. INTERRUPTION OF EXISTING WATER-DISTRIBUTION SERVICE: NOTIFY OWNER AT LEAST 2 DAYS PRIOR TO INTERRUPTION OF EXISTING WATER SERVICES.
D. COORDINATE WITH UTILITY COMPANY FOR REQUIRED INSPECTIONS AND FOR CONNECTION OF WATER MAIN AND SERVICES BEFORE STARTING CONSTRUCTION.

1.2 COPPER TUBE AND FITTINGS
A. SOFT COPPER TUBE: ASTMB88, TYPE K, WATER TUBE, ANNEALED TEMPER.
COPPER, PRESSURE-SEAL FITTINGS:
1. NPS2 AND SMALLER: WROUGHT-COPPER FITTING WITH EPDM O-RING SEAL IN EACH END.
2. NPS2-1/2 TO NPS3: BRONZE FITTING WITH STAINLESS-STEEL GRIP RING AND EPDM O-RING SEAL IN EACH END.
B. BRONZE FLANGES: ASMEB16.24, CLASS150, WITH SOLDER-JOINT END. FURNISH CLASS300 FLANGES IF REQUIRED TO MATCH PIPING.
C. COPPER UNIONS: MSSSP-123, CAST-COPPER-ALLOY, HEXAGONAL-STOCK BODY WITH BALL-AND-SOCKET, METAL-TO-METAL SEATING SURFACES, AND SOLDER-JOINT OR THREADED ENDS.

1.3 DUCTILE-IRON PIPE AND FITTINGS
A. MECHANICAL-JOINT, DUCTILE-IRON PIPE: AWWAC151 PRESSURE CLASS 350 (4-12") PRESSURE CLASS 250 (14-16"), WITH MECHANICAL-JOINT BELL AND PLAIN SPIGOT END UNLESS GROOVED OR FLANGED ENDS ARE INDICATED.
1. MECHANICAL-JOINT, DUCTILE-IRON FITTINGS: AWWAC110, DUCTILE- OR GRAY-IRON STANDARD PATTERN OR AWWAC153, DUCTILE-IRON COMPACT PATTERN.
2. GLANDS, GASKETS, AND BOLTS: AWWAC111, DUCTILE OR GRAY-IRON GLANDS, RUBBER GASKETS, AND STEEL BOLTS.
B. FLANGES: ASME16.1, CLASS125, CAST IRON.

1.4 PVC PIPE AND FITTINGS
A. CERTAINTEED CERTA-LOC™ C900/RJ RESTRAINED JOINT PVC, OR APPROVED EQUAL: AWWA C900, RATED DR 14, CONTINUALLY MARKED WITH MANUFACTURES'S NAME, PIPE SIZE, CELL CLASSIFICATION, DR RATTING, AND AWWA C900 CLASSIFICATION.
B. PIPE JOINTS: CERTA-LOK™ C900/RJ COUPLINGS, ASTM D3139, WITH FACTORY SUPPLIED SPLINES, O-RING (ASTM F477), AND LUBRICANT. CONTRACTOR SHALL SPECIFY PERMANENT JOINT WHEN ORDERING

1.5 GATE VALVES
AWWA, CAST-IRON GATE VALVES: NONRISING-STEM, RESILIENT-SEATED GATE VALVES: GRAY- OR DUCTILE-IRON BODY AND BONNET; WITH BRONZE OR GRAY- OR DUCTILE-IRON GATE, RESILIENT SEATS, BRONZE STEM, AND STEM NUT.
1) STANDARD: AWWAC509.
2) MINIMUM PRESSURE RATING: 200 PSIG.
3) END CONNECTIONS: MECHANICAL JOINT.
4) INTERIOR COATING: COMPLYING WITH AWWAC550.

1.6 GATE VALVE ACCESSORIES AND SPECIALTIES
A. TAPPING-SLEEVE ASSEMBLIES: SLEEVE AND VALVE COMPATIBLE WITH DRILLING MACHINE.
1) STANDARD: MSSSP-60.
2) TAPPING SLEEVE: CAST OR DUCTILE-IRON OR STAINLESS-STEEL, TWO-PIECE BOLTED SLEEVE WITH FLANGED OUTLET FOR NEW BRANCH CONNECTION. INCLUDE SLEEVE MATCHING SIZE AND TYPE OF PIPE MATERIAL BEING TAPPED AND WITH RECESSED FLANGE FOR BRANCH VALVE.
3) VALVE: AWWA, CAST-IRON, NONRISING-STEM, RESILIENT-SEATED GATE VALVE WITH ONE RAISED FACE FLANGE MATING TAPPING-SLEEVE FLANGE.
B. VALVE BOXES: COMPLY WITH AWWAM44 FOR CAST-IRON VALVE BOXES. INCLUDE TOP SECTION, ADJUSTABLE EXTENSION OF LENGTH REQUIRED FOR DEPTH OF BURIAL OF VALVE, PLUG WITH LETTERING "WATER," AND BOTTOM SECTION WITH BASE THAT FITS OVER VALVE AND WITH A BARREL APPROXIMATELY 5 INCHES IN DIAMETER.

1.7 BACKFLOW PREVENTORS
DOUBLE-CHECK, DETECTOR-ASSEMBLY BACKFLOW PREVENTORS:
1. STANDARDS: ASSE1048 AND UL LISTED OR FMG APPROVED.
2. OPERATION: CONTINUOUS-PRESSURE APPLICATIONS.
3. PRESSURE LOSS: 5 PSIG MAXIMUM, THROUGH MIDDLE 1/3 OF FLOW RANGE.
4. BODY: CAST IRON WITH INTERIOR LINING COMPLYING WITH AWWAC550 OR THAT IS FDA APPROVED.
5. END CONNECTIONS: FLANGED.
6. CONFIGURATION: DESIGNED FOR HORIZONTAL, STRAIGHT THROUGH FLOW.

1.8 WATER METER BOXES
DESCRIPTION: CAST-IRON BODY AND COVER FOR DISC-TYPE WATER METER, WITH LETTERING "WATER METER" IN COVER; AND WITH SLOTTED, OPEN-BOTTOM BASE SECTION OF LENGTH TO FIT OVER SERVICE PIPING.

1.9 CONCRETE VAULTS
DESCRIPTION: PRECAST, REINFORCED-CONCRETE VAULT, DESIGNED FOR A-16 LOAD DESIGNATION ACCORDING TO ASTMC857 AND MADE ACCORDING TO ASTMC858.
1. LADDER: ASTMA36/A36M, STEEL OR POLYETHYLENE-ENCASED STEEL STEPS.
2. MANHOLE: ASTMA48/A48M CLASS NO.35A MINIMUM TENSILE STRENGTH, GRAY-IRON TRAFFIC FRAME AND COVER.
a. DIMENSION: 24-INCH MINIMUM DIAMETER, UNLESS OTHERWISE INDICATED.
3. DRAIN: ASMEA112.6.3, CAST-IRON FLOOR DRAIN WITH OUTLET OF SIZE INDICATED. INCLUDE BODY ANCHOR FLANGE, LIGHT-DUTY CAST-IRON GRATE, BOTTOM OUTLET, AND INTEGRAL OR FIELD-INSTALLED BRONZE BALL OR CLAPPER-TYPE BACKWATER VALVE.

1.10 FIRE HYDRANTS
DRY-BARREL FIRE HYDRANTS: FREESTANDING, WITH ONE NPS4-1/2 AND TWO NPS2-1/2 OUTLETS, 5-1/4-INCH MAIN VALVE, DRAIN VALVE, AND NPS6 MECHANICAL-JOINT INLET. INCLUDE INTERIOR COATING ACCORDING TO AWWAC550. HYDRANT SHALL HAVE CAST-IRON BODY, COMPRESSION-TYPE VALVE OPENING AGAINST PRESSURE AND CLOSING WITH PRESSURE.
1. STANDARD: AWWAC502.
2. PRESSURE RATING: 250 PSIG.

1.11 FIRE DEPARTMENT CONNECTIONS
FIRE DEPARTMENT CONNECTIONS: FREESTANDING, WITH CAST-BRONZE BODY, THREAD INLETS ACCORDING TO NFPA1963 AND MATCHING LOCAL FIRE DEPARTMENT HOSE THREADS, AND THREADED BOTTOM OUTLET. INCLUDE LUGGED CAPS, GASKETS, AND CHAINS; LUGGED SWIVEL CONNECTION AND DROP CLAPPER FOR EACH HOSE-CONNECTION INLET; 18-INCH HIGH BRASS SLEEVE; AND ROUND ESCUTCHEON PLATE.

1.12 VALVE APPLICATIONS
DRAWINGS INDICATE VALVE TYPES TO BE USED. WHERE SPECIFIC VALVE TYPES ARE NOT INDICATED, THE FOLLOWING REQUIREMENTS APPLY:
1. UNDERGROUND VALVES, NPS3 AND LARGER: AWWA, CAST-IRON, NONRISING-STEM, RESILIENT-SEATED GATE VALVES WITH VALVE BOX.
2. USE THE FOLLOWING FOR VALVES IN VAULTS AND ABOVEGROUND:
a. GATE VALVES, NPS2 AND SMALLER: BRONZE, NONRISING STEM.
b. GATE VALVES, NPS3 AND LARGER: AWWA, CAST IRON, OS&Y RISING STEM, RESILIENT SEATED.
c. CHECK VALVES: AWWAC508, SWING TYPE.

1.13 FIELD QUALITY CONTROL
A. PIPING TESTS: CONDUCT PIPING TESTS BEFORE JOINTS ARE COVERED AND AFTER CONCRETE THRUST BLOCKS HAVE HARDENED SUFFICIENTLY. FILL PIPELINE 24 HOURS BEFORE TESTING AND APPLY TEST PRESSURE TO STABILIZE SYSTEM. USE ONLY POTABLE WATER.
B. HYDROSTATIC TESTS: TEST AT NOT LESS THAN ONE-AND-ONE-HALF TIMES WORKING PRESSURE FOR TWO HOURS. INCREASE PRESSURE IN 50-PSIG INCREMENTS AND INSPECT EACH JOINT BETWEEN INCREMENTS. HOLD AT TEST PRESSURE FOR 1 HOUR; DECREASE TO 0 PSIG. SLOWLY INCREASE AGAIN TO TEST PRESSURE AND HOLD FOR 1 MORE HOUR. MAXIMUM ALLOWABLE LEAKAGE IS 2 QUARTS PER HOUR PER 100 JOINTS. REMAKE LEAKING JOINTS WITH NEW MATERIALS AND REPEAT TEST UNTIL LEAKAGE IS WITHIN ALLOWED LIMITS.
C. DISINFECTION: CLEAN AND DISINFECT POTABLE WATER MAINS AS DIRECTED BY THE LOCAL AUTHORITY, OR, IF METHOD IS NOT PRESCRIBED BY THE LOCAL AUTHORITY, USE PROCEDURE DESCRIBED IN AWWA C651.
D. PREPARE REPORTS OF TESTING ACTIVITIES AND SUBMIT TO THE ENGINEER FOR APPROVAL.

1.14 IDENTIFICATION
INSTALL CONTINUOUS UNDERGROUNDDETECTABLE WARNING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND WATER-DISTRIBUTION PIPING. LOCATE BELOW FINISHED GRADE, DIRECTLY OVER PIPING.

SITE SANITARY SEWERS

1.1 PROJECT CONDITIONS
A. INTERRUPTION OF EXISTING SANITARY SEWERAGE SERVICE: COORDINATE AS REQUIRED WITH THE LOCAL SANITARY SEWER AUTHORITY BEFORE STARTING CONSTRUCTION.
B. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE BEGINNING SANITARY SEWER INSTALLATION OPERATIONS. FIELD VERIFY ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS BY POT-HOLING THE LINES. SURVEY EXISTING UTILITIES AND PROVIDE HORIZONTAL AND VERTICAL LOCATION INFORMATION TO THE ENGINEER TO DETERMINE IF ANY UTILITIES WILL CONFLICT WITH THE PROPOSED DESIGN.

1.2 PVC PIPE AND FITTINGS
A. CERTAINTEED CERTA-LOC™ YELLOWMINE™ RESTRAINED JOINT PVC, OR APPROVED EQUAL: ASTM D2241 RATTED SDR 21. PIPE SHALL BE CONTINUALLY MARKED WITH MANUFACTURES'S NAME, PIPE SIZE, CELL CLASSIFICATION, SDR RATTING, AND ASTM D2241 CLASSIFICATION.
B. PIPE JOINTS: CERTA-LOK™ YELLOWMINE™ COUPLINGS, ASTM D3139, WITH FACTORY SUPPLIED SPLINES, O-RING (ASTM F477), AND LUBRICANT. CONTRACTOR SHALL SPECIFY PERMANENT JOINT WHEN ORDERING

1.3 CLEANOUTS
A. CAST-IRON CLEANOUTS:
1. DESCRIPTION: ASMEA112.36.2M, ROUND, GRAY-IRON HOUSING WITH CLAMPING DEVICE AND ROUND, SECURED, SCORIATED, GRAY-IRON COVER. INCLUDE GRAY-IRON FERRULE WITH INSIDE CALK OR SPIGOT CONNECTION AND COUNTERSUNK, TAPERED-THREAD, BRASS CLOSURE PLUG.
2. TOP-LOADING CLASSIFICATION: TRAFFIC RATED, HEAVY DUTY, IN ALL PAVED AREAS AND AREAS SUBJECT TO VEHICULAR TRAFFIC.
3. SEWER PIPE FITTING AND RISER TO CLEANOUT: ASTMA74, SERVICE CLASS, CAST-IRON SOIL PIPE AND FITTINGS.
B. PVC CLEANOUTS: PVC BODY WITH PVC THREADED PLUG. INCLUDE PVC SEWER PIPE FITTING AND RISER TO CLEANOUT OF SAME MATERIAL AS SEWER PIPING. USE IN LIGHT DUTY APPLICATIONS WHERE THERE IS PEDESTRIAN TRAFFIC ONLY OR IN LANDSCAPED AREAS.

1.4 MANHOLES
A. STANDARD PRECAST CONCRETE MANHOLES:
1. DESCRIPTION: ASTMC478, PRECAST, REINFORCED CONCRETE, OF DEPTH INDICATED, WITH PROVISION FOR SEALANT JOINTS.
2. DIAMETER: 48 INCHES MINIMUM UNLESS OTHERWISE INDICATED.
3. BALLAST: INCREASE THICKNESS OF PRECAST CONCRETE SECTIONS OR ADD CONCRETE TO BASE SECTION, AS REQUIRED TO PREVENT FLOTATION.
4. BASE SECTION: 6-INCH MINIMUM THICKNESS FOR FLOOR SLAB AND 4-INCH MINIMUM THICKNESS FOR WALLS AND BASE RISER SECTION; WITH SEPARATE BASE SLAB OR BASE SECTION WITH INTEGRAL FLOOR.
5. RISER SECTIONS: 4-INCH MINIMUM THICKNESS, OF LENGTH TO PROVIDE DEPTH INDICATED.
6. TOP SECTION: ECCENTRIC-CONE TYPE UNLESS CONCENTRIC-CONE OR FLAT-SLAB-TOP TYPE IS INDICATED; WITH TOP OF CONE OF SIZE THAT MATCHES GRADE RINGS.
7. JOINT SEALANT: ASTMC990, BITUMEN OR BUTYL RUBBER.
8. RESILIENT PIPE CONNECTOR - KOR-N-SEAL 106 SERIES OR APPROVED EQUAL: ASTMC923, CAST OR FITTED INTO MANHOLE WALLS, FOR EACH PIPE CONNECTION.
9. STEPS: INDIVIDUAL FRP STEPS OR FRP LADDER; WIDE ENOUGH TO ALLOW WORKER TO PLACE BOTH FEET ON ONE STEP AND DESIGNED TO PREVENT LATERAL SLIPPAGE OFF STEP. CAST OR ANCHOR STEPS INTO SIDEWALLS AT 12 TO 16-INCH INTERVALS. OMIT STEPS IF TOTAL DEPTH FROM FLOOR OF MANHOLE TO FINISHED GRADE IS LESS THAN 48 INCHES.
10. ADJUSTING RINGS: INTERLOCKING HDPE RINGS, WITH LEVEL OR SLOPED EDGE IN THICKNESS AND DIAMETER MATCHING MANHOLE FRAME AND COVER, AND WITH HEIGHT AS REQUIRED TO ADJUST MANHOLE FRAME AND COVER TO INDICATED ELEVATION AND SLOPE. INCLUDE SEALANT RECOMMENDED BY RING MANUFACTURER.
11. GRADE RINGS: REINFORCED-CONCRETE RINGS, 6 TO 9-INCH TOTAL THICKNESS, WITH DIAMETER MATCHING MANHOLE FRAME AND COVER, AND WITH HEIGHT AS REQUIRED TO ADJUST MANHOLE FRAME AND COVER TO INDICATED ELEVATION AND SLOPE.
B. MANHOLE FRAMES AND COVERS:
1. DESCRIPTION: FERROUS; 24-INCH ID BY 7 TO 9-INCH RISER, WITH 4-INCH MINIMUM-WIDTH FLANGE AND 26-INCH DIAMETER COVER. INCLUDE INDENTED TOP DESIGN WITH LETTERING CAST INTO COVER, USING WORDING EQUIVALENT TO "SANITARY SEWER."
2. MATERIAL: ASTMA536, GRADE60-40-18 DUCTILE IRON UNLESS OTHERWISE INDICATED.

1.5 IDENTIFICATION
ARRANGE FOR INSTALLATION OF GREEN WARNING TAPES DIRECTLY OVER PIPING AND AT OUTSIDE EDGES OF UNDERGROUND MANHOLES.
1. USE WARNING TAPE OR DETECTABLE WARNING TAPE OVER FERROUS PIPING.
2. USE DETECTABLE WARNING TAPE OVER NONFERROUS PIPING AND OVER EDGES OF UNDERGROUND MANHOLES.

1.6 FIELD QUALITY CONTROL
A. INSPECT INTERIOR OF PIPING TO DETERMINE WHETHER LINE DISPLACEMENT OR OTHER DAMAGE HAS OCCURRED. INSPECT AFTER APPROXIMATELY 24 INCHES OF BACKFILL IS IN PLACE, AND AGAIN AT COMPLETION OF PROJECT.
1. DEFECTS REQUIRING CORRECTION INCLUDE THE FOLLOWING:
a. ALIGNMENT: LESS THAN FULL DIAMETER OF INSIDE OF PIPE IS VISIBLE BETWEEN STRUCTURES.
b. DEFLECTION: FLEXIBLE PIPING WITH DEFLECTION THAT PREVENTS PASSAGE OF BALL OR CYLINDER OF SIZE NOT LESS THAN 92.5 PERCENT OF PIPING DIAMETER.
c. DAMAGE: CRUSHED, BROKEN, CRACKED, OR OTHERWISE DAMAGED PIPING.
d. INFILTRATION: WATER LEAKAGE INTO PIPING.
e. EXFILTRATION: WATER LEAKAGE FROM OR AROUND PIPING.
2. REPLACE DEFECTIVE PIPING USING NEW MATERIALS, AND REPEAT INSPECTIONS UNTIL DEFECTS ARE WITHIN ALLOWANCES SPECIFIED.
3. REINSPECT AND REPEAT PROCEDURE UNTIL RESULTS ARE SATISFACTORY.
B. TEST NEW PIPING SYSTEMS, AND PARTS OF EXISTING SYSTEMS THAT HAVE BEEN ALTERED, EXTENDED, OR REPAIRED, FOR LEAKS AND DEFECTS.
1. DO NOT ENCLOSE, COVER, OR PUT INTO SERVICE BEFORE INSPECTION AND APPROVAL.
2. TEST COMPLETED PIPING SYSTEMS ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
3. SCHEDULE TESTS AND INSPECTIONS BY AUTHORITIES HAVING JURISDICTION WITH AT LEAST 24 HOURS ADVANCE NOTICE.
4. SUBMIT A SEPARATE REPORT FOR EACH TEST TO THE ENGINEER FOR APPROVAL.
5. AIR TESTS: TEST SANITARY SEWERAGE ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, UNI-B-6, AND THE FOLLOWING:
a. TEST PLASTIC GRAVITY SEWER PIPING ACCORDING TO ASTMF1417.
6. MANHOLES: PERFORM HYDRAULIC TEST ACCORDING TO ASTMC969.
C. LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED.
D. REPLACE LEAKING PIPING USING NEW MATERIALS, AND REPEAT TESTING UNTIL LEAKAGE IS WITHIN ALLOWANCES SPECIFIED.

SITE STORM UTILITY DRAINAGE PIPING

1.1 PIPE AND FITTINGS GENERAL
1. ALL STORMWATER PIPE, INLETS, HEADWALLS, AND RELATED APPURTENANCES SHALL MEET LOCAL D.O.T. STANDARDS.
2. ALL STORMWATER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURERS INSTRUCTIONS.

1.2 PE PIPE AND FITTINGS
1. CORRUGATED PE DRAINAGE PIPE AND FITTINGS NPS3 TO NPS10 : AASHTOM252M; NPS12 TO NPS48: AASHTOM294M TYPE S, WITH SMOOTH WATERWAY FOR COUPLING JOINTS.
2. WATERTIGHT COUPLINGS: PE SLEEVE WITH ASTMD1056, TYPE2, CLASS A, GRADE2 GASKET MATERIAL THAT MATES WITH TUBE AND FITTINGS.

1.3 PVC CORRUGATED PIPE AND FITTINGS
CORRUGATED PVC DRAINAGE PIPE AND FITTINGS NPS 4 TO NPS 36: SMOOTH INTERIOR, ASTM F949, 46 PSI STIFFNESS WHEN TESTED IN ACCORDANCE WITH ASTM D2412. PVC COMPOUND HAVING A MINIMUM CELL CLASSIFICATION OF 12454 AS DEFINED IN ASTM D1784. FITTINGS: SMOOTH INTERIOR, ASTM F949, SECTION 5.2.3 OR F794, SECTION 7.2.4. JOINTS SHALL BE MADE WITH INTEGRALLY-FORMED BELL AND SPIGOT GASKETED CONNECTIONS. MANUFACTURER SHALL PROVIDE DOCUMENTATION SHOWING NO LEAKAGE WHEN GASKETED PIPE JOINTS ARE TESTED IN ACCORDANCE WITH ASTM D3212. ELASTOMERIC SEALS (GASKETS) SHALL MEET ASTM F477.

1.4 CONCRETE PIPE AND FITTINGS
1. REINFORCED-CONCRETE SEWER PIPE AND FITTINGS: ASTMC76. BELL-AND-SPIGOT OR TONGUE-AND-GROOVE ENDS AND GASKETED JOINTS WITH ASTMC443, RUBBER GASKETS OR SEALANT JOINTS WITH ASTMC990, BITUMEN OR BUTYL-RUBBER SEALANT. CLASS III, WALL B.
2. CAST-IRON AREA DRAINS: ASMEA112.6.3 GRAY-IRON ROUND BODY WITH ANCHOR FLANGE AND ROUND GRATE. INCLUDE BOTTOM OUTLET WITH INSIDE CALK OR SPIGOT CONNECTION, OF SIZES INDICATED.

1.5 MANHOLES
A. STANDARD PRECAST CONCRETE MANHOLES:
1. DESCRIPTION: ASTMC478, PRECAST, REINFORCED CONCRETE, OF DEPTH INDICATED, WITH PROVISION FOR SEALANT JOINTS.
2. DIAMETER: 48 INCHES MINIMUM UNLESS OTHERWISE INDICATED.
3. BALLAST: INCREASE THICKNESS OF PRECAST CONCRETE SECTIONS OR ADD CONCRETE TO BASE SECTION AS REQUIRED TO PREVENT FLOTATION.
4. BASE SECTION: 6-INCH MINIMUM THICKNESS FOR FLOOR SLAB AND 4-INCH MINIMUM THICKNESS FOR WALLS AND BASE RISER SECTION, AND SEPARATE BASE SLAB OR BASE SECTION WITH INTEGRAL FLOOR.
5. RISER SECTIONS: 4-INCH MINIMUM THICKNESS, AND LENGTHS TO PROVIDE DEPTH INDICATED.
6. TOP SECTION: ECCENTRIC-CONE TYPE UNLESS CONCENTRIC-CONE OR FLAT-SLAB-TOP TYPE IS INDICATED, AND TOP OF CONE OF SIZE THAT MATCHES GRADE RINGS.
7. JOINT SEALANT: ASTMC990, BITUMEN OR BUTYL RUBBER.
8. STEPS: INDIVIDUAL FRP STEPS OR FRP LADDER, WIDE ENOUGH TO ALLOW WORKER TO PLACE BOTH FEET ON ONE STEP AND DESIGNED TO PREVENT LATERAL SLIPPAGE OFF STEP. CAST OR ANCHOR STEPS INTO SIDEWALLS AT 12 TO 16-INCH INTERVALS. OMIT STEPS IF TOTAL DEPTH FROM FLOOR OF MANHOLE TO FINISHED GRADE IS LESS THAN 48 INCHES.
B. MANHOLE FRAMES AND COVERS:
1. DESCRIPTION: FERROUS; 24-INCH ID BY 7 TO 9-INCH RISER WITH 4-INCH MINIMUM WIDTH FLANGE AND 26-INCH DIAMETER COVER. INCLUDE INDENTED TOP DESIGN WITH LETTERING CAST INTO COVER, USING WORDING EQUIVALENT TO "STORM SEWER."
2. MATERIAL: ASTMA536, GRADE60-40-18 DUCTILE IRON UNLESS OTHERWISE INDICATED.

1.6 INLET & JUNCTION BOXES
STANDARD PRECAST CONCRETE:
1. DESCRIPTION: ASTMC478, PRECAST, REINFORCED CONCRETE, OF DEPTH INDICATED, WITH PROVISION FOR SEALANT JOINTS.
2. BASE SECTION: 6-INCH MINIMUM THICKNESS FOR FLOOR SLAB AND 4-INCH MINIMUM THICKNESS FOR WALLS AND BASE RISER SECTION, AND SEPARATE BASE SLAB OR BASE SECTION WITH INTEGRAL FLOOR.
3. RISER SECTIONS: 4-INCH MINIMUM THICKNESS, 48-INCH DIAMETER, AND LENGTHS TO PROVIDE DEPTH INDICATED.
4. TOP SECTION: ECCENTRIC-CONE TYPE UNLESS CONCENTRIC-CONE OR FLAT-SLAB-TOP TYPE IS INDICATED. TOP OF CONE OF SIZE THAT MATCHES GRADE RINGS.
5. JOINT SEALANT: ASTMC990, BITUMEN OR BUTYL RUBBER.
6. STEPS: INDIVIDUAL FRP STEPS OR FRP LADDER, WIDE ENOUGH TO ALLOW WORKER TO PLACE BOTH FEET ON ONE STEP AND DESIGNED TO PREVENT LATERAL SLIPPAGE OFF STEP. CAST OR ANCHOR STEPS INTO SIDEWALLS AT 12 TO 16-INCH INTERVALS. OMIT STEPS IF TOTAL DEPTH FROM FLOOR OF CATCH BASIN TO FINISHED GRADE IS LESS THAN 48 INCHES.
7. PIPE CONNECTORS: ASTMC923, RESILIENT, OF SIZE REQUIRED, FOR EACH PIPE CONNECTING TO BASE SECTION.

1.7 STORMWATER DETENTION STRUCTURES
A. CAST-IN-PLACE CONCRETE, STORMWATER DETENTION STRUCTURES: CONSTRUCTED OF REINFORCED-CONCRETE BOTTOM, WALLS, AND TOP; DESIGNED ACCORDING TO ASTMC890 FOR A-16 (AASHTOHS20-44), HEAVY-TRAFFIC, STRUCTURAL LOADING; OF DEPTH, SHAPE, DIMENSIONS, AND APPURTENANCES INDICATED.
1. BALLAST: INCREASE THICKNESS OF CONCRETE AS REQUIRED TO PREVENT FLOTATION.
2. GRADE RINGS: INCLUDE TWO OR THREE REINFORCED-CONCRETE RINGS, OF 6 TO 9-INCH TOTAL THICKNESS, THAT MATCH 24-INCH DIAMETER FRAME AND COVER.
3. STEPS: INDIVIDUAL FRP STEPS OR FRP LADDER, WIDE ENOUGH TO ALLOW WORKER TO PLACE BOTH FEET ON ONE STEP AND DESIGNED TO PREVENT LATERAL SLIPPAGE OFF STEP. CAST OR ANCHOR STEPS INTO SIDEWALLS AT 12 TO 16-INCH INTERVALS. OMIT STEPS IF TOTAL DEPTH FROM FLOOR OF STRUCTURE TO FINISHED GRADE IS LESS THAN 48 INCHES.
4. FORM AND CAST WEIRS AND PIPE OPENINGS AS INDICATED ON DRAWINGS.
B. MANHOLE FRAMES AND COVERS: ASTMA536, GRADE60-40-18, DUCTILE-IRON CASTINGS DESIGNED FOR HEAVY-DUTY SERVICE.

1.8 PIPE OUTLETS
A. PRE-CAST HEAD WALLS: PRE-CAST REINFORCED CONCRETE, WITH APRON AND TAPERED SIDES.
B. SLOPE PAVED HEAD WALLS: CAST-IN-PLACE REINFORCED CONCRETE AS SHOWN ON DRAWINGS.
C. RIPRAP BASINS: BROKEN, IRREGULARLY SIZED AND SHAPED, GRADED STONE ACCORDING TO NSSGA'S "QUARRIED STONE FOR EROSION AND SEDIMENT CONTROL." MINIMUM STONE SIZE AND DIMENSIONS AS SHOWN ON DRAWINGS.

1.9 PIPING INSTALLATION
A. INSTALL LOCATOR WIRE OR TAPE 6-INCHES ABOVE ALL NON-METALLIC PIPING.
B. INSTALL BEDDING AND BACKFILL IN ACCORDANCE WITH PIPE MANUFACTURERS INSTRUCTIONS.
C. BEGIN INSTALLATION AT DOWNSTREAM PIPING CONNECTION TO OUTFALL POINT.
D. CONSTRUCT ALL HEADWALLS FLUSH WITH EXISTING AND PROPOSED EMBANKMENT SLOPES.

1.10 CLEANING
A. CLEAN INTERIOR OF PIPING OF DIRT AND SUPERFLUOUS MATERIALS.FLUSH WITH POTABLE WATER.
B. CLEAN ACCUMULATED SEDIMENT FROM STORMWATER PIPES, CONVEYANCE CHANNELS, AND POND ONCE SITE IS STABILIZED WITH VEGETATION.

EARTH MOVING

1.1 PROJECT CONDITIONS
A. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE BEGINNING EARTH MOVING OPERATIONS.
B. DO NOT COMMENCE EARTH MOVING OPERATIONS UNTIL TEMPORARY EROSION- AND SEDIMENTATION-CONTROL MEASURES, ARE IN PLACE.
C. DO NOT COMMENCE EARTH MOVING OPERATIONS UNTIL PLANT-PROTECTION MEASURES ARE IN PLACE.
D. DO NOT COMMENCE EARTH MOVING OPERATIONS WITHOUT REVIEWING AND MAKING PROVISIONS FOR ALL GEOTECHNICAL RECOMMENDATIONS MADE IN THE PROJECT GEOTECHNICAL REPORT. COMPLY WITH RECOMMENDATIONS IN THE GEOTECHNICAL REPORT REGARDING GENERAL SITE PREPARATION, BUILDING PAD PREPARATION, PAVEMENT SECTIONS, FILL, AND EXCAVATION.
E. RETAIN A COPY OF THE PROJECT GEOTECHNICAL REPORT AT THE WORK SITE AT ALL TIMES. ANY DISCREPANCIES BETWEEN THESE SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT SHALL BE RESOLVED IN FAVOR OF THE PROJECT GEOTECHNICAL REPORT.
F. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTH MOVING OPERATIONS.
G. PROTECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROLS DURING EARTH MOVING OPERATIONS.

1.2 DEWATERING
A. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.
B. PROTECT SUBGRADES FROM SOFTENING, UNDERMINING, WASHOUT, AND DAMAGE BY RAIN OR WATER ACCUMULATION.
C. DESIGN AND PROVIDE DEWATERING SYSTEM USING ACCEPTED AND PROFESSIONAL METHODS CONSISTENT WITH CURRENT INDUSTRY PRACTICE. PROVIDE DEWATERING SYSTEM OF SUFFICIENT SIZE AND CAPACITY TO CONTROL GROUNDWATER IN A MANNER THAT PRESERVES STRENGTH OF FOUNDATION SOILS, DOES NOT CAUSE INSTABILITY OR RAVELING OF EXCAVATION SLOPES, AND DOES NOT RESULT IN DAMAGE TO EXISTING STRUCTURES. LOWER WATER LEVEL IN ADVANCE OF EXCAVATION BY UTILIZING WELLS, WELLPOINTS, OR SIMILAR POSITIVE CONTROL METHODS. MAINTAIN THE GROUNDWATER LEVEL TO A MINIMUM OF TWO (2) FEET BELOW EXCAVATIONS. PROVIDE PIEZOMETERS AS DIRECTED BY THE ENGINEER TO DOCUMENT THAT THE GROUNDWATER LEVEL IS BEING MAINTAINED.
D. BY ACCEPTABLE MEANS, CONTRACTOR SHALL CONTROL ALL WATER REGARDLESS OF SOURCE AND IS RESPONSIBLE FOR PROPER DISPOSAL OF THE WATER. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY SUPPLEMENTAL MEASURES TO CONTROL SEEPAGE, GROUNDWATER, OR ARTESIAN HEAD.

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

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SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

DATE: 29 OCTOBER 2020

TITLE: GENERAL NOTES (1 OF 2)

SHEET NUMBER:

COMMENTS:
NOT RELEASED FOR CONSTRUCTION

E. OPEN PUMPING WITH SUMPS AND DITCHES SHALL BE ALLOWED, PROVIDED IT DOES NOT RESULT IN BOILS, LOSS OF FINES, SOFTENING OF THE GROUND, OR INSTABILITY OF SLOPES. SUMPS SHALL BE LOCATED OUTSIDE OF LOAD BEARING AREAS SO THE BEARING SURFACES WILL NOT BE DISTURBED. WATER CONTAINING SILT IN SUSPENSION SHALL NOT BE PUMPED INTO SEWER LINES OR ADJACENT WATER BODIES. DURING NORMAL PUMPING AND UPON DEVELOPMENT OF WELL(S), LEVELS OF FINE SAND OR SILT IN THE DISCHARGE OF WATER SHALL NOT EXCEED FIVE (5) PPM.

F. CONTINUOUSLY MAINTAIN EXCAVATIONS IN A DRY CONDITION WITH POSITIVE DEWATERING METHODS DURING PREPARATION OF SUBGRADE, INSTALLATION OF PIPE, AND CONSTRUCTION OF STRUCTURES UNTIL THE CRITICAL PERIOD OF CONSTRUCTION AND/OR BACKFILL IS COMPLETED TO PREVENT DAMAGE OF SUBGRADE SUPPORT, PIPING, STRUCTURE, SIDE SLOPES, OR ADJACENT FACILITIES FOR FLOTATION OR OTHER HYDROSTATIC PRESSURE IMBALANCE.

G. WHEN CONSTRUCTION IS COMPLETE, PROPERLY REMOVE ALL DEWATERING EQUIPMENT FROM THE SITE, INCLUDING WELLS AND RELATED TEMPORARY ELECTRICAL SERVICE.

1.3 SUBGRADE

A. NOTIFY PROJECT GEOTECHNICAL ENGINEER WHEN EXCAVATIONS HAVE REACHED REQUIRED SUBGRADE.

B. IF PROJECT GEOTECHNICAL ENGINEER DETERMINES THAT UNSATISFACTORY SOIL IS PRESENT, CONTINUE EXCAVATION AND REPLACE WITH COMPACTED BACKFILL OR FILL MATERIAL AS DIRECTED.

C. PROOF–ROLL SUBGRADE BELOW THE BUILDING SLABS AND PAVEMENTS WITH A PNEUMATIC–TIRED AND LOADED 10–WHEEL, TANDEM–AXLE DUMP TRUCK WEIGHING NOT LESS THAN 20 TONS TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF–ROLL WET OR SATURATED SUBGRADES. EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS, AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY PROJECT GEOTECHNICAL ENGINEER, AND REPLACE WITH COMPACTED BACKFILL OR FILL AS DIRECTED.

D. IN HEAVY DUTY PAVEMENT AREAS, THE GRAVEL AGGREGATE BASE SHALL BE EXTENDED UNDER THE CURB AND GUTTER SECTION TO PROVIDE ADDITIONAL STABILITY FOR TRUCK TRAVEL.

1.4 UTILITY TRENCH BEDDING AND BACKFILL

A. PLACE AND COMPACT BEDDING COURSE ON TRENCH BOTTOMS AND WHERE INDICATED. SHAPE BEDDING COURSE TO PROVIDE CONTINUOUS SUPPORT FOR BELLS, JOINTS, AND BARRELS OF PIPES AND FOR JOINTS, FITTINGS, AND BODIES OF CONDUITS.

B. USE CLASS B BEDDING UNDER ALL PVC PIPING.

C. CAREFULLY COMPACT INITIAL BACKFILL UNDER PIPE HAUNCHES AND COMPACT EVENLY UP ON BOTH SIDES AND ALONG THE FULL LENGTH OF PIPING OR CONDUIT TO AVOID DAMAGE OR DISPLACEMENT OF PIPING OR CONDUIT.

D. BACKFILL ALL UTILITIES UNDER ROADWAYS AND TRAFFIC AREAS WITH CRUSHED STONE.

1.5 COMPACTION OF SOIL BACKFILLS AND FILLS

A. PLACE BACKFILL AND FILL SOIL 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.

B. 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 AS INDICATED ON DRAWINGS OR AS INDICATED IN THE PROJECT GEOTECHNICAL REPORT.

C. PROVIDE CONSTRUCTION PHASE MONITORING AND TESTING AS RECOMMENDED IN THE PROJECT GEOTECHNICAL REPORT. PROVIDE TEST REPORTS TO THE ENGINEER FOR REVIEW AND APPROVAL.

1.6 GRADING

A. GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED.
1. PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES.
2. CUT OUT SOFT SPOTS, FILL LOW SPOTS, AND TRIM HIGH SPOTS TO COMPLY WITH REQUIRED SURFACE TOLERANCES.

B. LANDSCAPE ISLANDS: FILL ALL CURBED ISLANDS TO TOP OF CURB WITH TOPSOIL AND APPLY SEED AND MULCH UNLESS DRAWINGS INDICATE OTHERWISE.

C. SLOPES: DO NOT CREATE CUT OR FILL SLOPES STEEPER THAN 2H:1V WITHOUT OBTAINING SPECIAL WRITTEN PERMISSION FROM THE ENGINEER OF RECORD AND PROJECT GEOTECHNICAL ENGINEER.

1.7 PROTECTION

PROTECTING GRADED AREAS: PROTECT NEWLY GRADED AREAS FROM TRAFFIC, FREEZING, AND EROSION. KEEP FREE OF TRASH AND DEBRIS. SEE EROSION AND SEDIMENT CONTROL PLAN AND NOTES FOR FURTHER INFORMATION.

ASPHALT PAVING

1.1 FIELD CONDITIONS

ENVIRONMENTAL LIMITATIONS: DO NOT APPLY ASPHALT MATERIALS IF SUBGRADE IS WET OR EXCESSIVELY DAMP, IF RAIN IS IMMINENT OR EXPECTED BEFORE TIME REQUIRED FOR ADEQUATE CURE, OR IF THE FOLLOWING CONDITIONS ARE NOT MET:
1. PRIME COAT: MINIMUM SURFACE TEMPERATURE OF 60 DEG F.
2. TACK COAT: MINIMUM SURFACE TEMPERATURE OF 60 DEG F.
3. SLURRY COAT: COMPLY WITH WEATHER LIMITATIONS IN ASTMD3910.
4. ASPHALT BASE COURSE: MINIMUM SURFACE TEMPERATURE OF 40 DEG F AND RISING AT TIME OF PLACEMENT.
5. ASPHALT SURFACE COURSE: MINIMUM SURFACE TEMPERATURE OF 60 DEG F AT TIME OF PLACEMENT.

1.2 ASPHALT MATERIALS

A. REFER TO PROJECT GEOTECHNICAL REPORT AND PROJECT DRAWINGS FOR REQUIRED ASPHALT MATERIAL DESIGN.

B. AGGREGATES SHALL MEET THE REQUIREMENTS OF THE LOCAL DEPARTMENT OF TRANSPORTATION.

C. RECLAIMED ASPHALT PAVEMENT (RAP) SHALL NOT BE USED IN THE MIX DESIGN.

1.3 PATCHING

A. ASPHALT PAVEMENT: SAW CUT PERIMETER OF PATCH AND EXCAVATE EXISTING PAVEMENT SECTION TO SOUND BASE. EXCAVATE RECTANGULAR OR TRAPEZOIDAL PATCHES, EXTENDING 12 INCHES INTO PERIMETER OF ADJACENT SOUND PAVEMENT, UNLESS OTHERWISE INDICATED. CUT EXCAVATION FACES VERTICALLY. REMOVE EXCAVATED MATERIAL. RECOMPACT EXISTING UNBOUND–AGGREGATE BASE COURSE TO FORM NEW SUBGRADE.

B. TACK COAT: BEFORE PLACING PATCH MATERIAL, APPLY TACK COAT UNIFORMLY TO VERTICAL ASPHALT SURFACES ABUTTING THE PATCH. APPLY AT A RATE OF 0.05 TO 0.15 GAL./SQ. YD.
1. ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT–MIX ASPHALT PAVING.
2. AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.

C. PLACING PATCH MATERIAL: FILL EXCAVATED PAVEMENT AREAS WITH HOT–MIX ASPHALT BASE MIX FOR FULL THICKNESS OF PATCH AND, WHILE STILL HOT, COMPACT FLUSH WITH ADJACENT SURFACE.

1.4 SURFACE PREPARATION

A. GENERAL: IMMEDIATELY BEFORE PLACING ASPHALT MATERIALS, REMOVE LOOSE AND DELETERIOUS MATERIAL FROM SUBSTRATE SURFACES. ENSURE THAT PREPARED SUBGRADE IS READY TO RECEIVE PAVING. SAWCUT EXISTING PAVEMENT TO THE JOINED TO PROVIDE VERTICAL FACES BETWEEN NEW AND EXISTING SURFACES.

B. EMULSIFIED ASPHALT PRIME COAT: APPLY UNIFORMLY OVER SURFACE OF COMPACTED UNBOUND–AGGREGATE BASE COURSE AT A RATE OF 0.10 TO 0.30 GAL./SQ. YD. PER INCH DEPTH. APPLY ENOUGH MATERIAL TO PENETRATE AND SEAL, BUT NOT FLOOD, SURFACE. ALLOW PRIME COAT TO CURE.
1. IF PRIME COAT IS NOT ENTIRELY ABSORBED WITHIN 24 HOURS AFTER APPLICATION, SPREAD SAND OVER SURFACE TO BLOT EXCESS ASPHALT. USE ENOUGH SAND TO PREVENT PICKUP UNDER TRAFFIC. REMOVE LOOSE SAND BY SWEEPING BEFORE PAVEMENT IS PLACED AND AFTER VOLATILES HAVE EVAPORATED.
2. PROTECT PRIMED SUBSTRATE FROM DAMAGE UNTIL READY TO RECEIVE PAVING.

C. TACK COAT: APPLY UNIFORMLY TO SURFACES OF EXISTING PAVEMENT AT A RATE OF 0.02 TO 0.08 GAL./SQ. YD.
1. ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT–MIX ASPHALT PAVING.
2. AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.

1.5 PLACING HOT–MIX ASPHALT

A. MACHINE PLACE HOT–MIX ASPHALT ON PREPARED SURFACE, SPREAD UNIFORMLY, AND STRIKE OFF. PLACE ASPHALT MIX BY HAND IN AREAS INACCESSIBLE TO EQUIPMENT IN A MANNER THAT PREVENTS SEGREGATION OF MIX. PLACE EACH COURSE TO REQUIRED GRADE, CROSS SECTION, AND THICKNESS WHEN COMPACTED.
1. PLACE HOT–MIX ASPHALT BASE COURSE IN NUMBER OF LIFTS AND THICKNESSES INDICATED.
2. PLACE HOT–MIX ASPHALT SURFACE COURSE IN SINGLE LIFT.
3. SPREAD MIX AT A MINIMUM TEMPERATURE OF 250 DEG F.
4. BEGIN APPLYING MIX ALONG CENTERLINE OF CROWN FOR CROWNED SECTIONS AND ON HIGH SIDE OF ONE–WAY SLOPES UNLESS OTHERWISE INDICATED.
5. REGULATE PAVER MACHINE SPEED TO OBTAIN SMOOTH, CONTINUOUS SURFACE FREE OF PULLS AND TEARS IN ASPHALT–PAVING MAT.

B. PLACE PAVING IN CONSECUTIVE STRIPS NOT LESS THAN 10 FEET WIDE UNLESS INFILL EDGE STRIPS OF A LESSER WIDTH ARE REQUIRED.

1.6 JOINTS

A. CONSTRUCT JOINTS TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING PAVING SECTIONS. CONSTRUCT JOINTS FREE OF DEPRESSIONS, WITH SAME TEXTURE AND SMOOTHNESS AS OTHER SECTIONS OF HOT–MIX ASPHALT COURSE.

B. CONSTRUCT SMOOTH TRANSITIONS BETWEEN NEW AND EXISTING PAVING SECTIONS.

1.7 COMPACTION

A. GENERAL: BEGIN COMPACTION AS SOON AS PLACED HOT–MIX PAVING WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT. COMPACT HOT–MIX PAVING WITH HOT, HAND TAMPERS OR WITH VIBRATORY–PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS. COMPLETE COMPACTION BEFORE MIX TEMPERATURE COOLS TO 185 DEG F.
1. INITIAL LIFT: AVERAGE OF 92% OF MAXIMUM THEORETICAL DENSITY.
2. TOP SURFACE LIFT: AVERAGE OF 93% OF MAXIMUM THEORETICAL DENSITY.
3. TOLERANCE: +2.0%, –1.0% OF ANY INDIVIDUAL TEST.

B. FINISH ROLLING: FINISH ROLL PAVED SURFACES TO REMOVE ROLLER MARKS WHILE HOT–MIX ASPHALT IS STILL WARM.

C. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC FOR AT LEAST 24 HOURS AFTER PLACEMENT FOR THE BINDER COURSE, AND AT LEAST 72 HOURS AFTER PLACEMENT FOR THE FINAL WEARING SURFACE.

D. IF THE AMBIENT AIR TEMPERATURE IS IN EXCESS OF 90 DEGREES FAHRENHEIT DURING THE 72 HOUR PROTECTION PERIOD, THE PAVEMENT SURFACE SHALL BE FLOODED WITH WATER TO RAPIDLY COOL THE PAVEMENT AT LEAST ONCE PER DAY.

1.8 FIELD QUALITY CONTROL

A. TESTING AGENCY: ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS.

B. CONDUCT TESTS AND REPORTS SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT.

C. TESTING AGENCY MUST INSPECT AND APPROVE THE SUBGRADE, EACH FILL LAYER, AND THE SUBBASE AND BASE COURSE.

D. PROMPTLY SEND TEST REPORTS TO THE ENGINEER FOR REVIEW AND APPROVAL.

E. REMOVE AND REPLACE OR INSTALL ADDITIONAL HOT–MIX ASPHALT WHERE TEST RESULTS OR MEASUREMENTS INDICATE THAT IT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS.

CONCRETE PAVING

1.1 PROJECT CONDITIONS

TRAFFIC CONTROL: MAINTAIN ACCESS FOR VEHICULAR AND PEDESTRIAN TRAFFIC AS REQUIRED FOR OTHER CONSTRUCTION ACTIVITIES.

1.2 STEEL REINFORCEMENT

A. PLAIN–STEEL WELDED WIRE REINFORCEMENT: ASTMA185/A185M, FABRICATED FROM AS–DRAWN STEEL WIRE INTO FLAT SHEETS.

B. REINFORCING BARS: ASTMA615/A615M, GRADE60; DEFORMED.

C. JOINT DOWEL BARS: ASTMA615/A615M, GRADE60 PLAIN–STEEL BARS. CUT BARS TRUE TO LENGTH WITH ENDS SQUARE AND FREE OF BURRS.

D. BAR SUPPORTS: BOLSTERS, CHAIRS, SPACERS, AND OTHER DEVICES FOR SPACING, SUPPORTING, AND FASTENING REINFORCING BARS, WELDED WIRE REINFORCEMENT, AND DOWELS IN PLACE. MANUFACTURE BAR SUPPORTS ACCORDING TO CRSI'S "MANUAL OF STANDARD PRACTICE" FROM STEEL WIRE, PLASTIC, OR PRECAST CONCRETE OF GREATER COMPRESSIVE STRENGTH THAN CONCRETE SPECIFIED, AND AS FOLLOWS:

1.3 CONCRETE MATERIALS

A. CEMENTITIOUS MATERIAL: USE CEMENTITIOUS MATERIALS, OF SAME TYPE, BRAND, AND SOURCE THROUGHOUT PROJECT.

B. NORMAL–WEIGHT AGGREGATES: ASTMC33,, UNIFORMLY GRADED. PROVIDE AGGREGATES FROM A SINGLE SOURCE.
1. MAXIMUM COARSE–AGGREGATE SIZE: 1 INCH NOMINAL.
2. FINE AGGREGATE: FREE OF MATERIALS WITH DELETERIOUS REACTIVITY TO ALKALI IN CEMENT.

1.4 RELATED MATERIALS

JOINT FILLERS: ASTMD1751, ASPHALT–SATURATED CELLULOSIC FIBER IN PREFORMED STRIPS.

1.5 SIDEWALKS

SIDEWALKS: SLOPE SIDEWALKS AWAY FROM BUILDING WITH A 2% CROSS–SLOPE UNLESS DRAWINGS INDICATE OTHERWISE.

1.6 PREPARATION

REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.

1.7 STEEL REINFORCEMENT

A. GENERAL: COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT.

B. CLEAN REINFORCEMENT OF LOOSE RUST AND MILL SCALE, EARTH, ICE, OR OTHER BOND–REDUCING MATERIALS.

C. ARRANGE, SPACE, AND SECURELY TIE BARS AND BAR SUPPORTS TO HOLD REINFORCEMENT IN POSITION DURING CONCRETE PLACEMENT. MAINTAIN MINIMUM COVER TO REINFORCEMENT.

D. INSTALL WELDED WIRE REINFORCEMENT IN LENGTHS AS LONG AS PRACTICABLE. LAP ADJOINING PIECES AT LEAST ONE FULL MESH, AND LACE SPLICES WITH WIRE. OFFSET LAPS OF ADJOINING WIDTHS TO PREVENT CONTINUOUS LAPS IN EITHER DIRECTION.

E. ZINC–COATED REINFORCEMENT: USE GALVANIZED–STEEL WIRE TIES TO FASTEN ZINC–COATED REINFORCEMENT. REPAIR CUT AND DAMAGED ZINC COATINGS WITH ZINC REPAIR MATERIAL.

1.8 JOINTS

A. GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGES TRUE TO LINE, WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE UNLESS OTHERWISE INDICATED.
1. WHEN JOINING EXISTING PAVING, PLACE TRANSVERSE JOINTS TO ALIGN WITH PREVIOUSLY PLACED JOINTS UNLESS OTHERWISE INDICATED.
2. ENSURE FORMS PROVIDE CORRECT HORIZONTAL AND VERTICAL ALIGNMENT BETWEEN NEW AND EXISTING PAVEMENTS, SIDEWALKS, CURB AND GUTTER, ETC.

B. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVING AND AT LOCATIONS WHERE PAVING OPERATIONS ARE STOPPED FOR MORE THAN ONE–HALF HOUR UNLESS PAVING TERMINATES AT ISOLATION JOINTS.
1. CONTINUE STEEL REINFORCEMENT ACROSS CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED. DO NOT CONTINUE REINFORCEMENT THROUGH SIDES OF PAVING STRIPS UNLESS OTHERWISE INDICATED.
2. PROVIDE TIE BARS AT SIDES OF PAVING STRIPS WHERE INDICATED.
3. KEYED JOINTS: PROVIDE PREFORMED KEYWAY–SECTION FORMS OR BULKHEAD FORMS WITH KEYS UNLESS OTHERWISE INDICATED. EMBED KEYS AT LEAST 1–1/2 INCHES INTO CONCRETE.
4. DOWELED JOINTS: INSTALL DOWEL BARS AND SUPPORT ASSEMBLIES AT JOINTS WHERE INDICATED. LUBRICATE OR COAT WITH ASPHALT ONE–HALF OF DOWEL LENGTH TO PREVENT CONCRETE BONDING TO ONE SIDE OF JOINT.

C. ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT–FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, OTHER FIXED OBJECTS, AND WHERE INDICATED.
1. LOCATE EXPANSION JOINTS AT INTERVALS OF 30 FEET UNLESS OTHERWISE INDICATED.
2. EXTEND JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT.
3. TERMINATE JOINT FILLER NOT LESS THAN 1/2 INCH OR MORE THAN 1 INCH BELOW FINISHED SURFACE IF JOINT SEALANT IS INDICATED.
4. PLACE TOP OF JOINT FILLER FLUSH WITH FINISHED CONCRETE SURFACE IF JOINT SEALANT IS NOT INDICATED.
5. FURNISH JOINT FILLERS IN ONE–PIECE LENGTHS. WHERE MORE THAN ONE LENGTH IS REQUIRED, LACE OR CLIP JOINT–FILLER SECTIONS TOGETHER.
6. DURING CONCRETE PLACEMENT, PROTECT TOP EDGE OF JOINT FILLER WITH METAL, PLASTIC, OR OTHER TEMPORARY PREFORMED CAP. REMOVE PROTECTIVE CAP AFTER CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT.

D. CONTRACTION JOINTS: FORM WEAKENED–PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE–FOURTH OF THE CONCRETE THICKNESS, AS FOLLOWS:
1. GROOVED JOINTS: FORM CONTRACTION JOINTS AFTER INITIAL FLOATING BY GROOVING AND FINISHING EACH EDGE OF JOINT WITH GROOVING TOOL TO A 1/4–INCH RADIUS. REPEAT GROOVING OF CONTRACTION JOINTS AFTER APPLYING SURFACE FINISHES.ELIMINATE GROOVING–TOOL MARKS ON CONCRETE SURFACES.
2. SAWED JOINTS: FORM CONTRACTION JOINTS WITH POWER SAWS EQUIPPED WITH SHATTERPROOF ABRASIVE OR DIAMOND–RIMMED BLADES. CUT 1/8–INCH WIDE JOINTS INTO CONCRETE WHEN CUTTING ACTION WILL NOT TEAR, ABRADE, OR OTHERWISE DAMAGE SURFACE AND BEFORE DEVELOPING RANDOM CONTRACTION CRACKS.
3. DOWELED CONTRACTION JOINTS: INSTALL DOWEL BARS AND SUPPORT ASSEMBLIES AT JOINTS WHERE INDICATED. LUBRICATE OR COAT WITH ASPHALT ONE–HALF OF DOWEL LENGTH TO PREVENT CONCRETE BONDING TO ONE SIDE OF JOINT.
4. PROVIDE JOINTS AT SPACING OF 12'–0" ON CENTERS, MAXIMUM EACH WAY.

E. EDGING: AFTER INITIAL FLOATING, TOOL EDGES OF PAVING, GUTTERS, CURBS, AND JOINTS IN CONCRETE WITH AN EDGING TOOL TO A 1/4–INCH RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES.ELIMINATE EDGING–TOOL MARKS ON CONCRETE SURFACES.

F. PAVEMENT JOINT MATERIALS: PLACE JOINT BACKER ROD, SOFT PREFORMED JOINT FILLER, AND SEALANT AT CONCRETE JOINT LOCATIONS AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
1. JOINT BACKER ROD MATERIAL: POLYETHYLENE FOAM, 100% CLOSED CELL.
2. SOFT PREFORMED JOINT FILLER (ISOLATION AND EXPANSION JOINTS):
a. CERAMAR FLEXIBLE FOAM EXPANSION JOINT, BY W.R. MEADOWS.
b. DECK–O–FOAM EXPANSION JOINT FILLER, BY W.R. MEADOWS.
c. EXPANSION JOINT FILLER, BY BASF BUILDING SYSTEMS (DEGUSSA)(FORMERLY SONNEBORN SONOLASTIC).
3. SEALANT:
a. DOW 888, BY DOW CORNING.
b. 301 NS BY PECORA.
c. SPECTRUM 800 OR 900 BY TREMCO.

1.10 FIELD QUALITY CONTROL

A. TESTING AGENCY: ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS.

B. PROMPTLY SEND TEST REPORTS TO THE ENGINEER FOR REVIEW AND APPROVAL.

C. TESTING SERVICES: TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTMC172 SHALL BE PERFORMED BY THE GENERAL CONTRACTOR'S TESTING AGENCY ACCORDING TO THE FOLLOWING REQUIREMENTS:
1. TESTING FREQUENCY: OBTAIN AT LEAST ONE COMPOSITE SAMPLE FOR EACH 100 CU. YD. OR FRACTION THEREOF OF EACH CONCRETE MIXTURE PLACED EACH DAY. WHEN FREQUENCY OF TESTING WILL PROVIDE FEWER THAN FIVE COMPRESSIVE–STRENGTH TESTS FOR EACH CONCRETE MIXTURE, TESTING SHALL BE CONDUCTED FROM AT LEAST FIVE RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN FIVE ARE USED.
2. SLUMP: ASTMC143/C143M; ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
3. AIR CONTENT: ASTMC231, PRESSURE METHOD; ONE TEST FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE.
4. CONCRETE TEMPERATURE: ASTMC1064/C1064M; ONE TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEG F AND BELOW AND WHEN IT IS 80 DEG F AND ABOVE, AND ONE TEST FOR EACH COMPOSITE SAMPLE.
5. COMPRESSION TEST SPECIMENS: ASTMC31/C31M; CAST AND LABORATORY CURE ONE SET OF THREE STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
6. COMPRESSIVE–STRENGTH TESTS: ASTMC39/C39M; TEST ONE SPECIMEN AT SEVEN DAYS AND TWO SPECIMENS AT 28 DAYS. A COMPRESSIVE–STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM TWO SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TESTED AT 28 DAYS.

D. STRENGTH OF EACH CONCRETE MIXTURE WILL BE SATISFACTORY IF AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE–STRENGTH TESTS EQUALS OR EXCEEDS SPECIFIED COMPRESSIVE STRENGTH AND NO COMPRESSIVE–STRENGTH TEST VALUE FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI.

E. TEST RESULTS SHALL BE REPORTED IN WRITING TO ENGINEER, CONCRETE MANUFACTURER, AND CONTRACTOR WITHIN 48 HOURS OF TESTING. REPORTS OF COMPRESSIVE–STRENGTH TESTS SHALL CONTAIN PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING AND INSPECTING AGENCY, LOCATION OF CONCRETE BATCH IN WORK, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIXTURE PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7– AND 28–DAY TESTS.

F. ADDITIONAL TESTS: TESTING AND INSPECTING AGENCY SHALL MAKE ADDITIONAL TESTS OF CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS, OR OTHER REQUIREMENTS HAVE NOT BEEN MET, AS DIRECTED BY ENGINEER.

G. CONCRETE PAVING WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.

H. ADDITIONAL TESTING AND INSPECTING, AT CONTRACTOR'S EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.

I. PREPARE TEST AND INSPECTION REPORTS.

1.11 REPAIRS AND PROTECTION

A. REMOVE AND REPLACE CONCRETE PAVING THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION. REMOVE WORK IN COMPLETE SECTIONS FROM JOINT TO JOINT UNLESS OTHERWISE APPROVED BY ENGINEER.

B. DRILL TEST CORES, WHERE DIRECTED BY ENGINEER, WHEN NECESSARY TO DETERMINE MAGNITUDE OF CRACKS OR DEFECTIVE AREAS. FILL DRILLED CORE HOLES IN SATISFACTORY PAVING AREAS WITH PORTLAND CEMENT CONCRETE BONDED TO PAVING WITH EPOXY ADHESIVE.

C. PROTECT CONCRETE PAVING FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVING FOR AT LEAST 14 DAYS AFTER PLACEMENT. WHEN CONSTRUCTION TRAFFIC IS PERMITTED, MAINTAIN PAVING AS CLEAN AS POSSIBLE BY REMOVING SURFACE STAINS AND SPILLAGE OF MATERIALS AS THEY OCCUR.

D. MAINTAIN CONCRETE PAVING FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP PAVING NOT MORE THAN TWO DAYS BEFORE DATE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.

1.12 CURB AND SIDEWALKS

A. JOINT CONSTRUCTION:
1. CONTRACTION JOINTS: CONSTRUCT CONCRETE CURB OR COMBINATION CONCRETE CURB AND GUTTER, WHERE SPECIFIED ON CONSTRUCTION DRAWINGS, IN UNIFORM SECTIONS OF APPROXIMATELY 10 FEET IN LENGTH. FORM JOINTS BETWEEN SECTIONS EITHER BY STEEL TEMPLATES, 1/8–INCH IN THICKNESS, OF LENGTH EQUAL TO WIDTH OF CURB AND GUTTER, AND WITH DEPTH WHICH WILL PENETRATE AT LEAST 2–INCHES BELOW SURFACE OF CURB AND GUTTER; OR WITH 3/4–INCH THICK PERFORMED EXPANSION JOINT FILLER CUT TO EXACT CROSS SECTION OF CURB AND GUTTER; OR BY SAWING TO DEPTH OF AT LEAST 2–INCHES WHILE CONCRETE IS BETWEEN 4 AND 24 HOURS OLD. IF STEEL TEMPLATES ARE USED, THEY SHALL BE LEFT IN PLACE UNTIL CONCRETE HAS SET ENOUGH TO HOLD ITS SHAPE, BUT SHALL BE REMOVED WHILE FORMS ARE STILL IN PLACE.
2. TRANSVERSE EXPANSION JOINTS: CONCRETE CURB, COMBINATION CONCRETE CURB AND GUTTER, OR CONCRETE SIDEWALK SHALL HAVE FILLER CUT TO EXACT CROSS SECTION OF CURB, GUTTER, OR SIDEWALK.

B. JOINT MATERIALS: PLACE JOINT BACKER ROD, SOFT PREFORMED JOINT FILLER, AND SEALANT AT CONCRETE SIDEWALK AND CURB, INCLUDING BUILDING CURB, JOINT LOCATIONS AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
1. JOINT BACKER ROD MATERIAL: POLYETHYLENE FOAM, 100% CLOSED CELL.
2. SOFT PREFORMED JOINT FILLER (ISOLATION AND EXPANSION JOINTS):
a. CERAMAR FLEXIBLE FOAM EXPANSION JOINT, BY W.R. MEADOWS.
b. DECK–O–FOAM EXPANSION JOINT FILLER, BY W.R. MEADOWS.
c. EXPANSION JOINT FILLER, BY BASF BUILDING SYSTEMS (DEGUSSA)(FORMERLY SONNEBORN SONOLASTIC).
3. SEALANT:
a. DOW 888, BY DOW CORING.
b. 301 NS BY PECORA.
c. SPECTRUM 800 OR 900 BY TREMCO.

PAVEMENT MARKINGS

1.1 QUALITY ASSURANCE

REGULATORY REQUIREMENTS: COMPLY WITH MATERIALS, WORKMANSHIP, AND OTHER APPLICABLE REQUIREMENTS OF STATE DOT OR LOCAL MUNICIPALITY FOR PAVEMENT–MARKING WORK.

1.2 FIELD CONDITIONS

ENVIRONMENTAL LIMITATIONS: PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES AND AT A MINIMUM AMBIENT OR SURFACE TEMPERATURE OF 40 DEG F FOR ALKYD MATERIALS, 55 DEG F FOR WATER–BASED MATERIALS, AND NOT EXCEEDING 95 DEG F.

1.3 PAVEMENT–MARKING PAINT

A. PAVEMENT–MARKING PAINT: ALKYD–RESIN TYPE, LEAD AND CHROMATE FREE, READY MIXED, COMPLYING WITH AASHTOM248; COLORS COMPLYING WITH FSTT–P–1952.
COLOR: AS INDICATED.

B. ALL PAVEMENT MARKING WITHIN D.O.T. RIGHT–OF–WAY SHALL BE THERMOPLASTIC AND IN ACCORDANCE WITH D.O.T. SPECIFICATIONS.

1.4 PAVEMENT MARKING

APPLY TWO COATS OF PAINT TO ALL STRIPING PER MANUFACTURER'S RECOMMENDED RATE. APPLY TEMPORARY PAVEMENT MARKING BEFORE TRAFFIC IS ALLOWED ON ANY NEWLY PAVED AREA OR AS SITE CONDITIONS DICTATE. ALLOW FINAL WEARING SURFACE TO AGE FOR A MINIMUM OF 30 DAYS BEFORE APPLYING FINAL PERMANENT PAVEMENT MARKING.

1.5 PROTECTING AND CLEANING

A. PROTECT PAVEMENT MARKINGS FROM DAMAGE AND WEAR DURING REMAINDER OF CONSTRUCTION PERIOD.

B. CLEAN SPILLAGE AND SOILING FROM ADJACENT CONSTRUCTION USING CLEANING AGENTS AND PROCEDURES RECOMMENDED BY MANUFACTURER OF AFFECTED CONSTRUCTION.

CHAIN LINK FENCES AND GATES

1.1 PROJECT CONDITIONS

FIELD MEASUREMENTS: VERIFY LAYOUT INFORMATION FOR CHAIN–LINK FENCES AND GATES SHOWN ON DRAWINGS IN RELATION TO PROPERTY SURVEY AND EXISTING STRUCTURES. VERIFY DIMENSIONS BY FIELD MEASUREMENTS.

1.2 WARRANTY

SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH INSTALLER AGREES TO REPAIR OR REPLACE COMPONENTS OF CHAIN–LINK FENCES AND GATES THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

1.3 CHAIN–LINK FENCE FABRIC

GENERAL: PROVIDE FABRIC IN ONE–PIECE HEIGHTS MEASURED BETWEEN TOP AND BOTTOM OF OUTER EDGE OF SELVAGE KNUCKLE OR TWIST. COMPLY WITH CLFMI PRODUCT MANUAL AND WITH REQUIREMENTS INDICATED BELOW:
1. FABRIC HEIGHT: AS INDICATED ON DRAWINGS.
2. STEEL WIRE FABRIC: WIRE WITH A DIAMETER OF 0.148 INCH.
a. MESH SIZE: 2 INCHES.
b. POLYMER–COATED FABRIC: ASTMF668, OVER ZINC–COATED STEEL WIRE.
COLOR: BLACK, COMPLYING WITH ASTMF934.
3. SELVAGE: TWISTED TOP AND KNUCKLED BOTTOM.

1.4 FENCE FRAMING

POSTS AND RAILS: COMPLY WITH ASTMF1043 FOR FRAMING, INCLUDING RAILS, BRACES, AND LINE; TERMINAL; AND CORNER POSTS. PROVIDE MEMBERS WITH MINIMUM DIMENSIONS AND WALL THICKNESS ACCORDING TO ASTMF1043 BASED ON THE FOLLOWING:
1. FENCE HEIGHT: AS INDICATED ON DRAWINGS.
2. MATERIAL
a. LINE POST: 1.9 INCHES IN DIAMETER.
b. END, CORNER AND PULL POST: 2.375 INCHES.
3. HORIZONTAL FRAMEWORK MEMBERS: TOP RAILS COMPLYING WITH ASTMF1043.
TOP RAIL: 1.66 INCHES IN DIAMETER.
4. BRACE RAILS: COMPLY WITH ASTMF1043.
5. METALLIC COATING FOR STEEL FRAMING:
TYPE A, CONSISTING OF NOT LESS THAN MINIMUM 2.0–OZ./SQ. FT. AVERAGE ZINC COATING PER ASTMA123/A123M OR 4.0–OZ./SQ. FT. ZINC COATING PER ASTMA653/A653M.

1.5 TENSION WIRE

METALLIC–COATED STEEL WIRE: 0.177–INCH DIAMETER, MARCELLED TENSION WIRE COMPLYING WITH ASTMA817 AND ASTMA824, WITH THE FOLLOWING METALLIC COATING: TYPE II, ZINC COATED (GALVANIZED) BY HOT–DIP PROCESS, WITH THE FOLLOWING MINIMUM COATING WEIGHT: MATCHING CHAIN–LINK FABRIC COATING WEIGHT.

1.6 SWING GATES

A. GENERAL: COMPLY WITH ASTMF900 FOR GATE POSTS AND SINGLE OR DOUBLE SWING GATE TYPES.
1. GATE LEAF WIDTH: AS INDICATED.
2. GATE FABRIC HEIGHT: AS INDICATED.

B. PIPE AND TUBING:
1. ZINC–COATED STEEL: COMPLY WITH ASTMF1043 AND ASTMF1083; PROTECTIVE COATING AND FINISH TO MATCH FENCE FRAMING.
2. GATE POSTS: ROUND TUBULAR STEEL.
3. GATE FRAMES AND BRACING: ROUND TUBULAR STEEL.

C. FRAME CORNER CONSTRUCTION: ASSEMBLED WITH CORNER FITTINGS.

D. HARDWARE:
1. HINGES: 360–DEGREE INWARD AND OUTWARD SWING.
2. LATCHES PERMITTING OPERATION FROM BOTH SIDES OF GATE WITH PROVISION FOR PADLOCKING ACCESSIBLE FROM BOTH SIDES OF GATE.

1.7 FITTINGS

A. GENERAL: COMPLY WITH ASTMF626.

B. POST CAPS: PROVIDE FOR EACH POST. PROVIDE LINE POST CAPS WITH LOOP TO RECEIVE TENSION WIRE OR TOP RAIL.

C. RAIL AND BRACE ENDS: FOR EACH GATE, CORNER, PULL, AND END POST.

D. RAIL FITTINGS: PROVIDE THE FOLLOWING:
1. TOP RAIL SLEEVES: PRESSED–STEEL OR ROUND–STEEL TUBING NOT LESS THAN 6 INCHES LONG.
2. RAIL CLAMPS: LINE AND CORNER BOULEVARD CLAMPS FOR CONNECTING RAILS IN THE FENCE LINE–TO–LINE POSTS.

E. TENSION AND BRACE BANDS: PRESSED STEEL.

F. TENSION BARS: STEEL, LENGTH NOT LESS THAN 2 INCHES SHORTER THAN FULL HEIGHT OF CHAIN–LINK FABRIC. PROVIDE ONE BAR FOR EACH GATE AND END POST, AND TWO FOR EACH CORNER AND PULL POST, UNLESS FABRIC IS INTEGRALLY WOVEN INTO POST.

G. TRUSS ROD ASSEMBLIES: STEEL, HOT–DIP GALVANIZED AFTER THREADING ROD AND TURNBUCKLE OR OTHER MEANS OF ADJUSTMENT.

H. TIE WIRES, CLIPS, AND FASTENERS: ACCORDING TO ASTMF626. STANDARD ROUND WIRE TIES: FOR ATTACHING CHAIN–LINK FABRIC TO POSTS, RAILS, AND FRAMES, COMPLYING WITH THE FOLLOWING: HOT–DIP GALVANIZED STEEL: 0.148–INCH DIAMETER WIRE;GALVANIZED COATING THICKNESS MATCHING COATING THICKNESS OF CHAIN–LINK FENCE FABRIC.

1.8 GROUT AND ANCHORING CEMENT

A. NONSHRINK, NONMETALLIC GROUT: PREMIXED, FACTORY–PACKAGED, NONSTAINING, NONCORROSIVE, NONGASEOUS GROUT COMPLYING WITH ASTMC1107. PROVIDE GROUT, RECOMMENDED IN WRITING BY MANUFACTURER, FOR EXTERIOR APPLICATIONS.

B. EROSION–RESISTANT ANCHORING CEMENT: FACTORY–PACKAGED, NONSHRINK, NONSTAINING, HYDRAULIC–CONTROLLED EXPANSION CEMENT FORMULATION FOR MIXING WITH POTABLE WATER AT PROJECT SITE TO CREATE POURABLE ANCHORING, PATCHING, AND GROUTING COMPOUND. PROVIDE FORMULATION THAT IS RESISTANT TO EROSION FROM WATER EXPOSURE WITHOUT NEEDING PROTECTION BY A SEALER OR WATERPROOF COATING AND THAT IS RECOMMENDED IN WRITING BY MANUFACTURER, FOR EXTERIOR APPLICATIONS.

1.9 ADJUSTING

GATES: ADJUST GATES TO OPERATE SMOOTHLY, EASILY, AND QUIETLY, FREE OF BINDING, WARP, EXCESSIVE DEFLECTION, DISTORTION, NONALIGNMENT, MISPLACEMENT, DISRUPTION, OR MALFUNCTION, THROUGHOUT ENTIRE OPERATIONAL RANGE. CONFIRM THAT LATCHES AND LOCKS ENGAGE ACCURATELY AND SECURELY WITHOUT FORCING OR BINDING.

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
HURST, TEXAS 76054
TEL (817) 285–7444
FAX (817) 285–7318

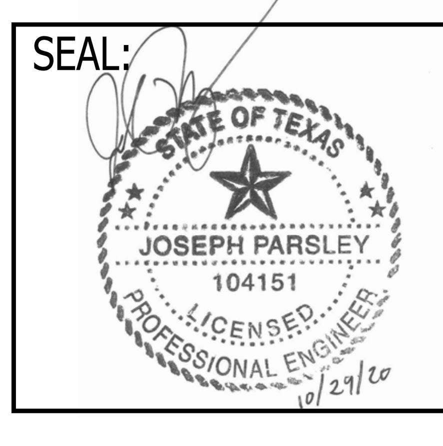
CONSULTANT:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons
Bartlett, TN 38133
Phone (901) 384-0404
Fax (901) 384-0710

DEVELOPER:

ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

SEAL:



REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

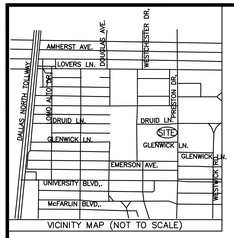
DATE: 29 OCTOBER 2020

TITLE: GENERAL NOTES (2 OF 2)

SHEET NUMBER:

3 OF 21

COMMENTS:
NOT RELEASED FOR CONSTRUCTION



VICINITY MAP (NOT TO SCALE)

TXNC GRID.

N

20 0 20

SCALE: 1" = 20'

NOTES:

1. THE STREET ADDRESS OF THE PROPERTY SHOWN ON THIS SURVEY IS ADDRESS: 6709 PRESTON, UNIVERSITY PARK, TX.

2. THE TAX PARCEL NUMBER FOR THIS PROPERTY IS 60166500040120000. THE RECORD OWNER OF LOT SHOWN HEREON IS: CORRIGAN PROPERTIES, INC.

3. THE AREA OF THE PROPERTY SURVEYED CONTAINING 21,772 SQ. FT. OR 0.50 ACRES, MORE OR LESS.

4. THE PROPERTY AREA WAS DETERMINED BY THE COORDINATE COMPUTATION METHOD.

5. DISTANCES SHOWN HEREON ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.

7. ANY UNDERGROUND UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ALTHOUGH HE DOES STATE THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. BEFORE BEGINNING ANY CONSTRUCTION OR BORINGS CONTACT THE UTILITIES PROTECTION SERVICE CENTER AT TEXAS 811 811/1-800-344-8377.

9. ALL CORNERS NOT LABELED ARE TO BE CONSIDERED POINTS.

10. THIS IS A SURVEY OF THE PROPERTY REFERENCED IN VOLUME 1, PAGE 509 M.R.D.C.T.

11. THE REFERENCE BEARING FOR THIS DRAWING IS BASED ON TEXAS SPC. PROVIDED BY OPUS OBSERVATION BY GLOBAL POSITIONING SYSTEM. NAD 83 TEXAS STATE PLANES, TXNC ZONE, US FOOT.
COMBINED FACTOR=0.99985642
CONVERGENCE ANGLE=0.92477778
ELEVATIONS FOR THIS DRAWING ARE BASED ON NAVD88
HORIZONTAL AND VERTICAL CONTROL POINTS USED:
-DF8986 TXDE DENTON CORS ARP
-DH7149 TXSG SAGINAW TX CORS ARP
-DF8982 TXCO COLLIN CORS ARP

12. THERE ARE NO VISIBLE AND/OR APPARENT ENCROACHMENTS OR PROJECTIONS OTHER THAN THOSE SHOWN ON THIS PLAT OF SURVEY.

13. AT THE TIME OF THE SURVEY, THE SURVEYOR NOTICED OBSERVABLE EVIDENCE OF THE FOLLOWING UTILITIES: SANITARY SEWER, STORM SEWER, WATER, ELECTRIC, TELEPHONE, GAS, FIBER OPTICS, CATV.

14. NO LOCAL ROADWAY MILE MARKERS APPARENT.

15. ALL ACTIVE DRAINAGE PIPES, STRUCTURES AND SANITARY MANHOLES ARE PRECAST AND IN FAIR CONDITION.

16. NO OBSERVED EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS.

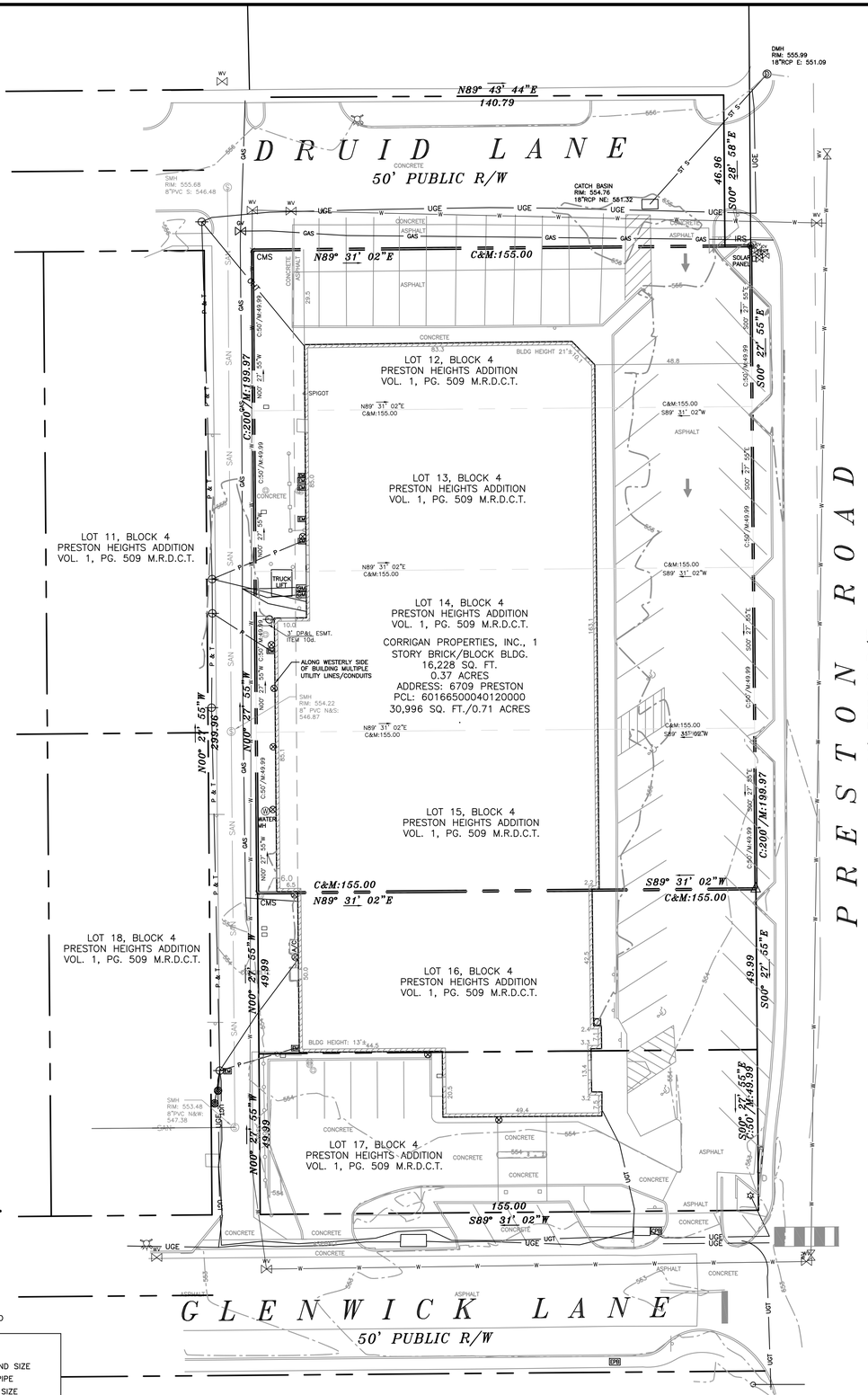
17. NO EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.

18. DATE OF THE FIELD SURVEY: 9/25/2019

19. PROPERTY CORNERS SET ----.

20. THE SUBJECT PROPERTY IS NOT LOCATED IN ANY AREA SUBJECT TO A MORATORIUM OR RATIONING OF WATER OR SEWER OR OTHER UTILITY SERVICES.

21. THE PROPERTY IS NOT LOCATED WITHIN ANY OTHER SPECIAL DISTRICT SUCH AS, BUT NOT LIMITED TO, ANY HISTORICAL OR RESTRICTED PARKING DISTRICT.



Know what's below.
Call before you dig.

TEXAS DIG INFORMATION
TICKET NUMBER: 1975319795 AND

ATMOS MIDTX-GAS LINE MARKED BY PROVIDER/NO MAPS PROVIDED
CHARTER COMMUNICATIONS-TELEPHONE MARKED BY PROVIDER/NO MAPS PROVIDED
ONCOR ELECTRIC DISTRIBUTION-UGE MARKED BY PROVIDER/NO MAPS PROVIDED
AT&T-TELEPHONE MARKED BY PROVIDER/NO MAPS PROVIDED

SYMBOLS LEGEND

- CONC. MONUMENT
- IRF — IRON REBAR FOUND
- IRS — 5/8" CAPPED IRON REBAR SET
- CMS — CHISELED MARK SET
- 1"IPF — IRON PIPE FOUND
- PKF — PK NAIL FOUND
- SMH — SANITARY MANHOLE
- SCO — SANITARY CLEANOUT
- GT — GREASE TRAP
- DMH — DRAINAGE MANHOLE
- CI — CURB INLET
- CATCH BASIN
- SURFACE DOWN SPOUT
- UNDERGROUND DOWN SPOUT
- HYDRANT
- WM — WATER METER
- WV — WATER VALVE
- IRRIGATION CONTROL VALVE
- WS — WATER SPIGGOT
- MB — MAILBOX
- GM — GAS METER
- GV — GAS VALVE
- LIGHT — AREA LIGHT
- LIGHT — CONCRETE BASE LIGHT POLE
- WALL MOUNTED FLOOD LIGHT
- E — ELECTRIC MANHOLE
- EM — ELECTRIC METER
- EPB — ELECTRIC PULLBOX
- EV — ELECTRIC VAULT
- T — TELEPHONE MANHOLE
- TP — TELEPHONE PEDESTAL
- TPB — TELEPHONE PULLBOX
- CP — CABLE T.V. PEDESTAL
- PP — POWER POLE
- TBM — TEMPORARY BENCHMARK
- SIGN

TRAFFIC CONTROL LEGEND

- HANDICAP PARKING
- PAINTED SOLID WHITE LINE
- PAINTED SOLID YELLOW LINE
- PAINTED DASHED WHITE LINE
- PAINTED DASHED YELLOW LINE
- TRAFFIC FLOW
- LEFT TURN ONLY LANE
- RIGHT TURN ONLY LANE
- STRAIGHT OR LEFT TURN LANE
- STRAIGHT OR RIGHT TURN LANE
- NO PARKING HATCH

LINE LEGEND

- OHT — OVERHEAD TELEPHONE
- ST S — DRAIN. SEWER LINE TYPE AND SIZE
- W — WATER LINE AND SIZE OF PIPE
- SAN — SANITARY SEWER LINE AND SIZE
- P&T — OVERHEAD POWER & TELEPHONE CABLE
- UGE — UNDERGROUND ELECTRIC CABLE
- UGT — UNDERGROUND TELEPHONE CABLE
- FO — UNDERGROUND FIBER OPTIC CABLE
- GAS — GAS LINE AND SIZE
- FENCE
- P&CATV — OVERHEAD POWER AND CATV

CHICAGO TITLE INSURANCE COMPANY
SCHEDULE B
EXCEPTIONS FROM COVERAGE

Commitment No.: FAH19008495 GF No.: FTH-18-FAH190084950B
Effective Date: September 15, 2019 at 8:00 AM

In addition to the Exclusions and Conditions and Stipulations, your Policy will not cover loss, costs, attorney's fees, and expenses resulting from:

1. The following restrictive covenants of record itemized below (We must either insert specific recording data or delete this exception):

Item 1, Schedule B is hereby deleted.

2. Any discrepancies, conflicts, or shortages in area or boundary lines, or any encroachments or protrusions, or any overlapping of improvements. ***Building on subject parcel is a strip shopping center, No "Party Wall" , footing or flashing agreement was provided in the commitment.***

3. Homestead or community property or survivorship rights, if any of any spouse of any insured. ***Not a survey related item.***

(Applies to the Owner Policy only.)

4. Any title or rights asserted by anyone, including, but not limited to, persons, the public, corporations, governments or other entities,

a. to tidelands, or lands comprising the shores or beds or navigable or perennial rivers and streams, lakes, bays, gulfs or oceans, or ***(Does not affect subject parcel)***

b. to lands beyond the line of the harbor or bulkhead lines as established or changed by any government, or ***(Does not affect subject parcel)***

c. to filled-in lands, or artificial islands, or ***(Does not affect subject parcel)***

d. to statutory water rights, including riparian rights, or ***(Does not affect subject parcel)***

e. to the area extending from the line of mean low tide to the line of vegetation, or the rights of access to that area or easement along and across that area. ***(Does not affect subject parcel)***

(Applies to the Owner Policy only.)

5. Standby fees, taxes and assessments by any taxing authority for the year 2019 and subsequent years; and subsequent taxes and assessments by any taxing authority for prior years due to change in land usage or ownership; but not those taxes or assessments for prior years because of an exemption granted to a previous owner of the property under Section 11.13, Texas Tax Code, or because of improvements not assessed for a previous tax years. ***Not a survey related item.***

6. The terms and conditions of the documents creating your interest in the land. ***Not a survey related item.***

7. Materials furnished or labor performed in connection with planned construction before signing and delivering the lien document described in Schedule A, if the land is part of the homestead of the owner. (Applies to the Mortgagee Title Policy Binder on Interim Construction Loan only, and may be deleted if satisfactory evidence is furnished to us before a binder is issued.) ***Not a survey related item.***

8. Liens and leases that affect the title to the land, but that are subordinate to the lien of the insured mortgage. ***Not a survey related item.***

(Applies to Mortgagee Policy (T-2) only.)

9. The Exceptions from Coverage and Express Insurance in Schedule B of the Texas Short Form Residential Mortgagee Policy of Title Insurance (T-2R). (Applies to Texas Short Form Residential Mortgagee Policy of Title Insurance (T-2R) only. Separate exceptions 1 through 8 of this Schedule B do not apply to the Texas Short Form Residential Mortgagee Policy of Title Insurance (T-2R). ***Not a survey related item.***

10. The following matters and all terms of the documents creating or offering evidence of the matters (We must insert matters or delete this exception):

a. Rights of parties in possession. ***Not a survey related item.***

b. The following exception will appear in any policy issued (other than the T-1R Residential Owner Policy of Title Insurance and the T-2R Short-Form Residential Mortgagee Policy) if the Company is not provided a survey of the Land, acceptable to the Company, for review at or prior to closing:

Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land. ***See item 2.***

Note: Upon receipt of a survey acceptable to the Title Company, this exception will be deleted. The Company reserves the right to except additional items and/or make additional requirements after reviewing said survey.

c. All leases, grants, exceptions or reservations of coal, lignite, oil, gas and other minerals, together with all rights, privileges, and immunities relating thereto, appearing in the Public Records whether listed in Schedule B or not. There may be leases, grants, exceptions or reservations of mineral interest that are not listed. ***Not a survey related item.***

d. Easement(s) and rights incidental thereto, as granted in a document:

Granted to: Dallas Power & Light Company
Purpose: As provided in said document
Recording Date: December 26, 1968
Recording No: Volume 68249, Page 35, Deed Records, Dallas County, Texas ***Affects subject parcel and is shown hereon.***

e. Easements, or claims of easements, which are not recorded in the public records. (Owners Policy only). ***See Item 2***

f. Rights of tenants in possession, as tenants only, under unrecorded lease agreements. ***Not a survey related item.***

g. If any portion of the proposed loan and/or the Owner's Title Policy coverage amount includes funds for immediately contemplated improvements, the following exceptions will appear in Schedule B of any policy issued as indicated: ***Not a survey related item.***

Owner and Loan Policy(ies): Any and all liens arising by reason of unpaid bills or claims for work performed or materials furnished in connection with improvements placed, or to be placed, upon the subject land. However, the Company does insure the insured against loss, if any, sustained by the Insured under this policy if such liens have been filed with the County Clerk of County, Texas, prior to the date hereof.

Owner Policy(ies) Only: Liability hereunder at the date hereof is limited to $ 0.00. Liability shall increase as contemplated improvements are made, so that any loss payable hereunder shall be limited to said sum plus the amount actually expended by the insured in improvements at the time the loss occurs. Any expenditures made for improvements, subsequent to the date of this policy, will be deemed made as of the date of this policy. In no event shall the liability of the Company hereunder exceed the face amount of this policy. Nothing contained in this paragraph shall be construed as limiting any exception or any printed provision of this policy.

Loan Policy(ies) Only: Pending disbursement of the full proceeds of the loan secured by the lien disbursed, but increase as each disbursement is made in good faith and without knowledge of any defect in, or objections to, the title up to the face amount of the policy. Nothing contained in this paragraph shall be construed as limiting any exception under Schedule B, or any printed provision of this policy.

REVISIONS

NO.	DATE	DESCRIPTION

ALTA/NSPS LAND TITLE SURVEY FOR CVS #7747

IN THE CITY OF UNIVERSITY PARK, DALLAS COUNTY, TEXAS

CARLSON CONSULTING ENGINEERS, INC.
TEXAS COA#
7068 LEDGESTONE COMMONS
BARTLETT, TENNESSEE 38133
PH. (901) 384-0404 • FX. (901) 384-0710

SCALE: 1" = 20'	DRAWING FILE: CVS	JOB No. UNIVERSITY PARK
DATE: 10/08/2020	DRAWN BY: ETB/JSL	SHEET 1 OF 2

CHICAGO TITLE INSURANCE COMPANY
SCHEDULE A

Commitment No.: FAH19008495 GF No.: FTH-18-FAH19008495DB
Effective Date: September 15, 2019 at 8:00 AM

4. Legal description of land:

Lots 12 to 15, both inclusive in Block 4, Preston Heights Addition, an addition to the Town of University Park, according to the Map recorded in Volume 1, Page 509, Map Records Dallas County, Texas.

SURVEY LEGAL DESCRIPTION

SITUATED IN THE CITY OF UNIVERSITY PARK, COUNTY OF DALLAS AND STATE OF TEXAS AND KNOWN AS BEING LOTS 12 THROUGH 15 IN BLOCK 4 OF THE PRESTON HEIGHTS ADDITION AS SHOWN BY PLAT RECORDED IN VOLUME 1, PAGE 509 MAP RECORDS DALLAS COUNTY, TEXAS AND IS FURTHER BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A 5/8" IRON REBAR WITH PLASTIC CAP MARKED "BECKWITH PLS 6689" SET AT THE INTERSECTION OF THE WESTERLY RIGHT-OF-WAY LINE OF PRESTON ROAD, 60 FEET WIDE, WITH THE SOUTHERLY RIGHT-OF-WAY LINE OF DRUID LANE, 50 FEET WIDE;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 00°27'55" EAST A DISTANCE OF 199.97 FEET TO A MAG NAIL WITH STEEL WASHER MARKED "BECKWITH PLS 6689" SET AT THE NORTHEASTERLY CORNER OF LOT 16, BLOCK 4 IN SAID PRESTON HEIGHTS ADDITION;

THENCE ALONG THE NORTHERLY LINE OF SAID LOT 16, SOUTH 89°31'02" WEST A DISTANCE OF 155.00 FEET TO A CHISELED CROSS SET AT THE NORTHWESTERLY CORNER THEREOF LYING IN THE EASTERLY SIDELINE OF A 15 FOOT WIDE ALLEY;

THENCE ALONG SAID EASTERLY SIDELINE, NORTH 00°27'55" WEST A DISTANCE OF 199.97 FEET TO A CHISELED CROSS SET IN SAID SOUTHERLY RIGHT-OF-WAY LINE OF DRUID LANE;

THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, NORTH 89°31'02" EAST A DISTANCE OF 155.00 FEET TO THE PLACE OF BEGINNING CONTAINING 30,996 SQUARE FEET OR 0.71 ACRES OF LAND, MORE OR LESS.

SURVEYOR'S CERTIFICATE:

THE UNDERSIGNED CERTIFIES TO CVS HEALTH CORPORATION, ITS AFFILIATES AND SUBSIDIARIES AND THEIR SUCCESSORS, NOMINEES AND ASSIGNS; CHICAGO TITLE INSURANCE COMPANY; AND CORRIGAN PROPERTIES, INC., A TEXAS CORPORATION AS OF THE DATE OF THIS SURVEY THAT TO THE BEST OF THE UNDERSIGNED'S PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF:

A. THIS SURVEY SHOWS, ON THE BASIS OF A FIELD INSTRUMENT SURVEY WHICH MEETS THE STANDARDS, IF ANY, ESTABLISHED BY THE STATE IN WHICH THE PROPERTY IS LOCATED AND IN THE EVENT THAT NO SUCH STANDARDS HAVE BEEN ESTABLISHED, THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS" EFFECTIVE FEBRUARY 23, 2016, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2005, AND INCLUDES ITEMS 1-6, 7(A), 7(B)(1), 8, 9, 10(A), 11(B), 13, 14, AND 15-19, 20(A), 21, 22 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF TEXAS, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.

1. A FIXED AND DETERMINABLE POSITION AND LOCATION OF THE LAND (THE "PROPERTY") DESCRIBED ON THIS SURVEY (INCLUDING THE POSITION OF THE POINT OF COMMENCEMENT (IF ANY) AND THE POINT OF BEGINNING);

2. THE LOCATION OF ALL BUILDINGS, VISIBLE STRUCTURES, AND OTHER VISIBLE ABOVE-GROUND IMPROVEMENTS SITUATED ON THE PROPERTY; AND

3. ALL DRIVEWAYS OR OTHER CUTS IN THE CURBS ALONG ANY STREET UPON WHICH THE PROPERTY ABUTS; AND THAT

B. NO EASEMENTS OR RIGHTS-OF-WAY OVER ABUTTING PROPERTIES ARE REQUIRED FOR (i) ACCESS TO AND EGRESS FROM THE PROPERTY, (ii) DRAINAGE OF SURFACE OR OTHER WATER OFF THE PROPERTY, (iii) ANY UTILITIES WHICH SERVE THE PROPERTY AND (iv) STORM SEWER AND SANITARY SEWER FACILITIES SERVING THE PROPERTY, OR IF SUCH OFF-SITE EASEMENTS ARE REQUIRED, THEY ARE SHOWN ON THE SURVEY AND DULY RECORDED EASEMENTS HAVE BEEN OBTAINED FROM ALL LAND OWNERS WHOSE PROPERTY ARE AFFECTED;

C. NO FENCES, WATERWAYS, DITCHES, PONDS, BUILDING RESTRICTIONS (OR, IF BUILDING RESTRICTION LINES EXIST, THE LINES HAVE NOT BEEN VIOLATED), OR PARTY WALLS AFFECTING THE PROPERTY EXIST;

D. NO ENCROACHMENTS, PROTRUSIONS, OVERLAPS, OR OVERHANGS OF ANY IMPROVEMENTS LOCATED ON THE PROPERTY EXIST UPON ANY EASEMENTS OR RIGHTS-OF-WAY ENCUMBERING OR APPURTENANT TO THE PROPERTY OF ADJACENT LAND; ***NO PARTY WALL AGREEMENT WAS PROVIDRD IN THE COMMITMENT.***

E. NO ENCROACHMENTS, PROTRUSIONS, OVERLAPS, OR OVERHANGS OF ANY IMPROVEMENTS LOCATED ON ADJACENT LAND EXIST UPON THE PROPERTY OF ANY EASEMENTS OR RIGHTS-OF-WAY ENCUMBERING OR APPURTENANT TO THE PROPERTY; ***NONE APPARENT. NO PARTY WALL AGREEMENT WAS PROVIDRD IN THE COMMITMENT.***

F. THIS SURVEY REFLECTS BOUNDARY LINES OF THE PROPERTY WHICH CLOSE BY MATHEMATICAL CALCULATION;

G. THE ONLY EXCEPTIONS TO THE FACTS CERTIFIED IN THIS SURVEY ARE AS FOLLOWS:
(i)***NONE APPARENT.***

H. WITHOUT INTENDING TO LIMIT ANY OF THE FOREGOING CERTIFICATIONS, THE UNDERSIGNED MADE A SPECIFIC EXAMINATION WITH RESPECT TO THE FOLLOWING ITEMS AND REPORTS AS FOLLOWS (INDICATE "NONE" OR IDENTIFY SPECIFIC MATTERS, AS APPROPRIATE):

(i) RIGHTS-OF-WAY, OLD HIGHWAYS, OR ABANDONED ROADS, LANES OR DRIVEWAYS AND VISIBLE DRAINS, SEWER, WATER, GAS OR OIL PIPE LINES ACROSS THE PROPERTY. EXISITNG SERVICE LINES LOCATED ON PROPERTY. ***SHOWN HEREON.***

(ii) VISIBLE ABOVE GROUND SPRINGS, STREAMS RIVERS, PONDS, LAKES, SWAMPS OR DRAINAGE DITCHES LOCATED, BORDERING ON OR RUNNING THROUGH THE PROPERTY. ***NONE APPARENT.***

(iii) VISIBLE, ABOVE GROUND CEMETERIES OR FAMILY BURIAL GROUNDS LOCATED ON THE PROPERTY. ***NONE APPARENT.***

(iv) VISIBLE, ABOVE GROUND TELEPHONE, TELEGRAPH, ELECTRIC POWER OR OTHER UTILITY POLES, WIRES, LINES OR TRANSFORMERS OVERHANGING OR CROSSING OR LOCATED ON THE PROPERTY. ***SHOWN HEREON.***

(v) JOINT DRIVEWAYS OR WALKWAYS AND PARTY WALLS OR RIGHTS OF SUPPORT AFFECTING THE PROPERTY. ***SHOWN HEREON.***

(vi) PHYSICAL EVIDENCE OF BOUNDARY LINES OF THE PROPERTY. ***SHOWN HEREON.***

(vii) PROPOSED CHANGES IN STREET LINES. ***NONE APPARENT.***

(viii) DISPUTED BOUNDARIES. ***NONE APPARENT***.

(ix) CURBING AND CURB CUTS. ***SHOWN HEREON***.

ALL OF THE SAME FOUND TO EXIST ARE SHOWN UPON THE SURVEY IN THE LOCATIONS DESCRIBED ABOVE;

SURVEYOR'S CERTIFICATE: (CONTINUED)

I. THE UNDERSIGNED HAS EXAMINED THE APPLICABLE ZONING ORDINANCE OF THE CITY OF UNIVERSITY PARK AND DETERMINED THAT THE PROPERTIES ARE CURRENTLY ZONED GR (COMMERCIAL) GENERAL RETAIL ZONING DISTRICT UNDER THE APPLICABLE ZONING ORDINANCE OF THE CITY OF UNIVERSITY PARK PLANNING DEPARTMENT WHICH DISTRICT ALLOWS THE PROPOSED IMPROVEMENTS LOCATED ON THE PROPERTIES. THE FOLLOWING OVERLAY DISTRICTS INCLUDE THE PROPERTY: NONE.

J. THE FOLLOWING PROVISION OF THE ZONING ORDINANCE APPLY TO THE PROPERTY

1. FRONT YARD SETBACK: ***NONE***
   REAR YARD SETBACK: ***12.5 FEET***
   SIDE YARD SETBACK: ***0 FEET***

2. MAXIMUM HEIGHT: ***40 FEET***
   MAXIMUM BUILDING COVERAGE: ***MAXIMUM FLOOR AREA RATIO = 1.5***
   MAXIMUM IMPERVIOUS COVERAGE: ***90% OF LOT AREA.***

3. MINIMUM LOT SIZE: ***MINIMUM LOT AREA 5,000 SQ. FT.***
   MINIMUM LOT WIDTH: ***50 FEET***

4. ON SITE PARKING REQUIREMENTS: ***1 PARKING SPACE PER 200 SQ. FT. OF BUILDING.***

5. OTHER (AS NEEDED TO OBTAIN 3.1 ZONING ENDORSEMENT FROM TITLE COMPANY FOR IMPROVEMENTS TO BE BUILT):

THE UNDERSIGNED HAS EXAMINED THE ABOVE PROVISIONS AND ALL OTHER APPLICABLE MATERIALS RELATIVE TO THOSE TYPES OF RESTRICTIONS AND REQUIREMENTS SOMETIMES REFERRED TO AS USE, DIMENSIONAL, BULK AND PARKING RESTRICTIONS AND REQUIREMENTS WHICH RELATED TO THE PROPERTY AND HAS DETERMINED THAT THE SURVEY AND THE EXISTING IMPROVEMENTS SHOWN THEREON DO CONFORM OR CAN BE MADE TO CONFORM UPON DEMOLITION, PROPERTY DESIGN AND NEW CONSTRUCTION, TO ALL OF THE RESTRICTIONS AND REQUIREMENTS WHICH ARE APPLICABLE TO THE PROPERTY UNDER THE TERMS OF THE APPLICABLE ZONING ORDINANCE. THE UNDERSIGNED DOES NOT HAVE ANY CONTROL OVER PROPOSED USE OR DESIGN.

K. THE PROPERTY SHOWN ON THE SURVEY HAS ACCESS TO AND FROM A DEDICATED PUBLIC ROAD CONTIGUOUS TO THE PROPERTY, WHICH ACCESS BETWEEN THE PROPERTY AND SAID ROADWAY AS SHOWN UPON SAID SURVEY EXISTS WITHOUT RESTRICTION AND IS SUFFICIENT TO MEET REASONABLE NEEDS OF THE CURRENT OR PROPOSED USE, AS THE CASE MAY BE, OF THE PROPERTY AND ALL APPLICABLE REQUIREMENTS OF PUBLIC AUTHORITIES.

L. WATER SUPPLY, SANITARY WATER, SANITARY SEWER, STORM DRAINAGE, ELECTRICITY, GAS AND OTHER UTILITIES ARE AVAILABLE IN ADEQUATE QUANTITIES AT THE LOT LINES OF THE PROPERTY AT THE LOCATIONS INDICATED ON THE FOREGOING SURVEY, AND THE BUILDING IMPROVEMENTS ARE CONNECTED AND TIED INTO THE SAME.

M. ALL EASEMENTS AND OTHER RIGHTS IN THE PROPERTY APPEARING IN THE TITLE REPORT SUBMITTED TO THE UNDERSIGNED WHICH ARE CAPABLE OF LOCATION ON A SURVEY HAVE BEEN LOCATED ON THE SURVEY AND THE UNDERSIGNED HAS NOT BEEN ADVISED OF ANY OTHER EASEMENTS OR RIGHTS-OF-WAY AFFECTING THE PROPERTY, NOR IS THERE ANY VISIBLE EVIDENCE OF POSSIBLE UNRECORDED EASEMENTS OR RIGHTS-OF-WAY AFFECTING THE PROPERTY UNLESS OTHERWISE SHOWN AND DETAILED ON THE SURVEY, NO EASEMENTS OVER LAND OF OTHERS ARE REQUIRED FOR:
(i) ACCESS TO AND EGRESS FROM THE PROPERTY,
(ii) DRAINAGE OF SURFACE OR OTHER WATER OFF THE PROPERTY,
(iii) ANY UTILITIES WHICH SERVE THE PROPERTY AND SAID IMPROVEMENTS, SUCH AS WATER, ELECTRICITY, GAS AND TELEPHONE, OR
(iv) STORM SEWER AND SANITARY SEWER FACILITIES SERVING THE PROPERTY AND SAID IMPROVEMENTS.

N. AS OF THE DATE OF SURVEY, THE PROPERTY DOES NOT LIE WITHIN ANY FLOOD PLAIN OR FLOOD PRONE AREA, OR A FLOOD PLAIN AREA HAVING SPECIAL FLOOD HAZARDS IDENTIFIED AS SUCH UNDER THE FLOOD DISASTER PROTECTION ACT OF 1973.

O. THE UNDERSIGNED HAS REVIEWED THE MOST RECENT FLOOD INSURANCE RATE MAP ISSUED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY UNDER THE NATIONAL FLOOD INSURANCE PROGRAM APPLICABLE TO THE PROPERTY ***(MAP 48113C0335K, DATED JULY 7, 2014)*** AND HAS DETERMINED THAT THE PROPERTY IS IN ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

Earl T. Beckwith
EARL T. BECKWITH, PLS No. 6689
CARLSON CONSULTING ENGINEERS, INC.

10/08/2020.
DATE

STATE OF TEXAS
REGISTERED
EARL T BECKWITH
6689
PROFESSIONAL
LAND SURVEYOR

REVISIONS

NO.	DATE	DESCRIPTION

ALTA/NSPS LAND TITLE SURVEY
FOR
CVS #7747

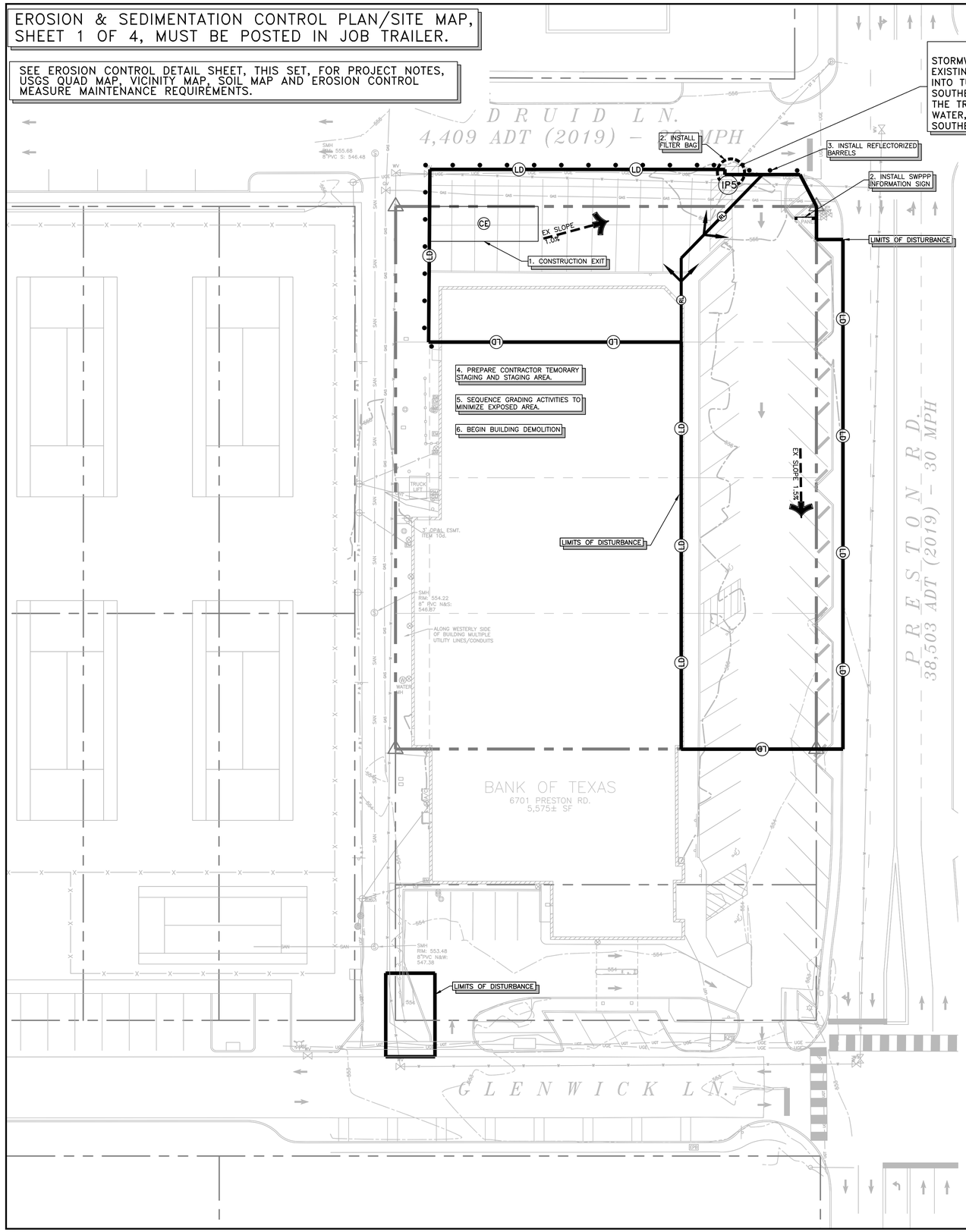
IN THE CITY OF UNIVERSITY PARK, DALLAS COUNTY, TEXAS

CARLSON
CONSULTING
ENGINEERS, INC.
TEXAS COA#
7088 LEDGESTONE COMMONS
BARTLETT, TENNESSEE 38133
PH. (901) 384-0404 • FX. (901) 384-0710

SCALE: TEXT
DATE: 10/08/2020
DRAWING FILE: CVS
DRAWN BY: ETB/JSL
JOB No. UNIVERSITY PARK
SHEET 2 OF 2

EROSION & SEDIMENTATION CONTROL PLAN/SITE MAP, SHEET 1 OF 4, MUST BE POSTED IN JOB TRAILER.

SEE EROSION CONTROL DETAIL SHEET, THIS SET, FOR PROJECT NOTES, USGS QUAD MAP, VICINITY MAP, SOIL MAP AND EROSION CONTROL MEASURE MAINTENANCE REQUIREMENTS.



STORMWATER OUTFLOW

STORMWATER FROM THE SITE DISCHARGES TO AN EXISTING STORM SEWER SYSTEM WHICH EMPTIES INTO TURTLE CREEK, LOCATED 0.5 MILES SOUTHEAST. TURTLE CREEK DISCHARGES INTO THE TRINITY RIVER, THE ULTIMATE RECEIVING WATER, LOCATED APPROXIMATELY 5.00 MILES SOUTHEAST.

DEVELOPER:
ORANGE DEVELOPMENT, LLC
147 RESOURCE CENTER PARKWAY SUITE 102
BIRMINGHAM, AL 35242
(205) 909-3792

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

ACREAGE SUMMARY

TOTAL PROJECT AREA	0.71 ACRES
ON-SITE DISTURBED AREA	0.33 ACRES
OFF-SITE DISTURBED AREA	0.06 ACRES
TOTAL DISTURBED AREA	0.39 ACRES
IMPERVIOUS AREA AT COMPLETION	0.69 ACRES
PERVIOUS/SEEDED AREA AT COMPLETION	0.02 ACRES
TOTAL AREA	0.71 ACRES

N

20 0 20

CVS PARCEL 0.71± ACRES

LEGEND

- DRAINAGE PATTERN
- SWPPP INFORMATION SIGN
- LD – LIMITS OF DISTURBANCE
- EE – EROSION EELS
- PS – BLOCK AND AGGREGATE INLET PROTECTION
- CE – CONSTRUCTION EXIT ON EXISTING PAVEMENT
- RL – RIDGELINES
- REFLECTORIZED BARRELS

BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION, NOTE ALL AREAS WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

PHASE I – EROSION CONTROL SEQUENCING

1. *INSTALL SWPPP INFORMATION SIGN.*
2. *INSTALL FILTER BAG WHERE SHOWN.* CONTRACTOR SHALL USE EROSION EELS IN AREAS NEEDING PROTECTION AS CONSTRUCTION PROGRESSES. CONTRACTOR SHALL UPDATE THE SITE MAPS ACCORDINGLY.
3. *INSTALL REFLECTORIZED BARRELS.*
4. PREPARE CONTRACTOR TEMPORARY STAGING AND STORAGE AREA.
5. SEQUENCE GRADING ACTIVITIES TO MINIMIZE EXPOSED AREAS.
6. BEGIN BUILDING DEMOLITION.

PHASE II – EROSION CONTROL SEQUENCING

1. TEMPORARILY STABILIZE, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE. ALL AREAS AT FINAL GRADE MUST BE PAVED OR STABILIZED WITH SPECIFIED GROUNDCOVER PER LANDSCAPE PLAN WITHIN 14 DAYS AFTER COMPLETION OF WORK IN THESE AREAS.
2. INSTALL, REPLACE, REPAIR, OR MAINTAIN INLET PROTECTION, EROSION EELS, CONSTRUCTION EXIT, REFLECTORIZED BARRELS, AND SWPPP INFORMATION SIGN AS NEEDED.
3. PREPARE/MAINTAIN TEMPORARY STAGING AND STORAGE AREA AS NEEDED.
4. *BEGIN INSTALLATION OF STORMWATER PIPES WITH INLET PROTECTION AS SOON AS POSSIBLE FOR USE AS SEDIMENT TRAPS.*
5. COMPLETE ALL OTHER GRADING ACTIVITIES AT THIS TIME.
6. *IMMEDIATELY INSTALL PERMANENT GROUNDCOVER, FERTILIZE, MULCH, AND WATER AREAS IN ACCORDANCE WITH THE LANDSCAPE PLAN AND SITEWORK SPECIFICATIONS.*
7. CONTINUE INSPECTION REQUIREMENTS UNTIL FINAL STABILIZATION HAS BEEN OBTAINED AND THE NOTICE OF TERMINATION HAS BEEN FILED PER THE GENERAL PERMIT.

NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY ONLY IF ALL PRECEDING BMPS HAVE BEEN COMPLETELY INSTALLED. BMP-RELATED STEPS IN THE ABOVE SEQUENCE ARE ITALICIZED FOR CLARITY.

RECEIVING WATERS
- STORMWATER FROM THE SITE DISCHARGES TO AN EXISTING STORM SEWER SYSTEM WHICH EMPTIES INTO TURTLE CREEK, LOCATED 0.5 MILES SOUTHEAST. TURTLE CREEK DISCHARGES INTO THE TRINITY RIVER, THE ULTIMATE RECEIVING WATER, LOCATED APPROXIMATELY 5.00 MILES SOUTHEAST.

POTENTIAL AREAS WHERE STORM WATER MAY ENTER GROUNDWATER
- THIS PROPERTY WILL DRAIN VIA OVERLAND FLOW TO AN EXISTING STORM SEWER. IT IS EXPECTED THAT MINIMAL GROUNDWATER INFILTRATION WILL OCCUR IN GRASSED AREAS.

BORROW AREAS
- AN OFFSITE BORROW AREA WILL BE USED IF ANY BORROW MATERIAL IS REQUIRED ONCE DEVELOPMENT BEGINS. THE LOCATION OF THE OFFSITE BORROW AREA WILL BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PREPARE THE SWPPP AND FILE A NOTICE OF INTENT FOR THE SELECTED BORROW SITE PRIOR TO INITIATING EARTH DISTURBING ACTIVITIES AT THAT SITE.

WETLANDS
- ACCORDING TO THE NATIONAL WETLANDS INVENTORY AND SINCE THE SITE IS DEVELOPED, THERE ARE NO WETLANDS IN THE VICINITY OF THE PROJECT SITE.

NATURE AND PURPOSE OF PROJECT
- THE NATURE AND PURPOSE OF THIS PROJECT IS TO CONSTRUCT A CVS/PHARMACY TO SERVE THE CITY OF UNIVERSITY PARK, TEXAS, AND THE SURROUNDING COMMUNITIES.

EXISTING VEGETATION
- ENTIRE SITE CONSISTS OF EXISTING BUILDINGS, PAVED PARKING LOTS, DRIVES, GRASS, AND TREES

100 YEAR FLOODPLAINS, FLOODWAY FRINGES, AND FLOODWAYS
- THIS PROPERTY LIES IN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. INFORMATION PROVIDED BY FEMA'S FLOOD INSURANCE RATE MAP NUMBER 48113C0335K WITH AN EFFECTIVE DATE OF JULY 7, 2014.

SOIL TYPE
- THERE IS ONE SOIL TYPE FOR THE PROJECT SITE LISTED IN THE SOIL SURVEY OF DALLAS COUNTY, TEXAS, AS FOLLOWS:

SYMBOL	SOIL NAME	SLOPE	HYDRIC CLASSIFICATION
– 75	URBAN LAND	N/A	NON-HYDRIC

TEMPORARY SEEDING:
- SEED: MIXTURE 70% RYEGRASS/30% WINTER WHEAT – 4 LB / 1,000 SQ FT
- AREAS TO RECEIVE SEED ARE TO BE FERTILIZED WITH A COMPLETE FERTILIZER (13-13-13), 25 LBS PER 1,000 SF

PERMANENT SOD:
- TURF TYPE "TIFTON 419" BERMUDA SOD
- AREAS TO RECEIVE SOD ARE TO BE FERTILIZED PER THE LOCAL EXTENSION SERVICE'S RECOMMENDATIONS.

–CAUTION NOTICE TO CONTRACTOR–

IF PROPERLY IMPLEMENTED, THIS PLAN WILL PROVIDE AN EFFECTIVE MEANS FOR CONTROLLING EROSION. HOWEVER, IT IS ACKNOWLEDGED THAT NO ONE PLAN CAN BE PREPARED THAT WILL DEPICT ALL POSSIBLE CONTROL MEASURES NECESSARY FOR VARIOUS STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL INCLUDE IN THE BASE BID ADEQUATE FUNDS TO PROVIDE ALL EROSION CONTROL MEASURES NECESSARY TO COMPLY WITH CODES FOR THE DURATION OF THE CONSTRUCTION PROJECT.

LIMITS OF DISTURBANCE

CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH THE EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ELIMINATE TRACK-OUT FROM THE LIMITS OF DISTURBANCE. NO STOCKPILING, TEMPORARY STORAGE OR STAGING OF EITHER NEW, SALVAGED OR WASTE MATERIAL SHALL BE ALLOWED BEYOND THE LIMITS OF BMP PROTECTED AREAS. THE CONTRACTOR SHALL INSTALL APPROPRIATE BMP'S AROUND THE TOE OF ANY STOCKPILED MATERIAL AS NEEDED TO CONTROL SEDIMENT. ANY GROUND DISTURBING ACTIVITIES BEYOND THE PROJECT LIMITS OF DISTURBANCE IS STRICTLY PROHIBITED.

BMP NOTICE

THE CONTRACTOR MUST CONTINUALLY INSPECT BMP'S TO ENSURE ANY PONDING DOES NOT PRESENT HAZARDS TO THE PUBLIC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MODIFY BMP'S AS NEEDED TO PROTECT THE PUBLIC AT ALL TIMES AND PROVIDE PROTECTION FROM SEDIMENT RELEASE.

SPECIFICATIONS REQUIREMENTS

THE REQUIREMENTS SHOWN ON THIS PLAN ARE SUPPLEMENTED BY THE SWPPP CONTAINED WITHIN THE PROJECT SPECIFICATIONS. IN CASE OF CONFLICTS BETWEEN THE PLANS, SWPPP SPECIFICATIONS AND THE ACTUAL GENERAL PERMIT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE IMPROVEMENTS SHOWN BY THESE PLANS.

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS																								
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LANDSCAPING/SEED/FINAL STABILIZATION																								

1) CONTRACTOR SHALL UPDATE THE TABLE BY DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
HURST, TEXAS 76054
TEL (817) 285-7444
FAX (817) 285-7318

CONSULTANT:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons
Bartlett, TN 38133
Phone (901) 384-0404
Fax (901) 384-0710

DEVELOPER:
ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

DATE: 29 OCTOBER 2020

TITLE: PHASE I EROSION & SEDIMENTATION CONTROL PLAN

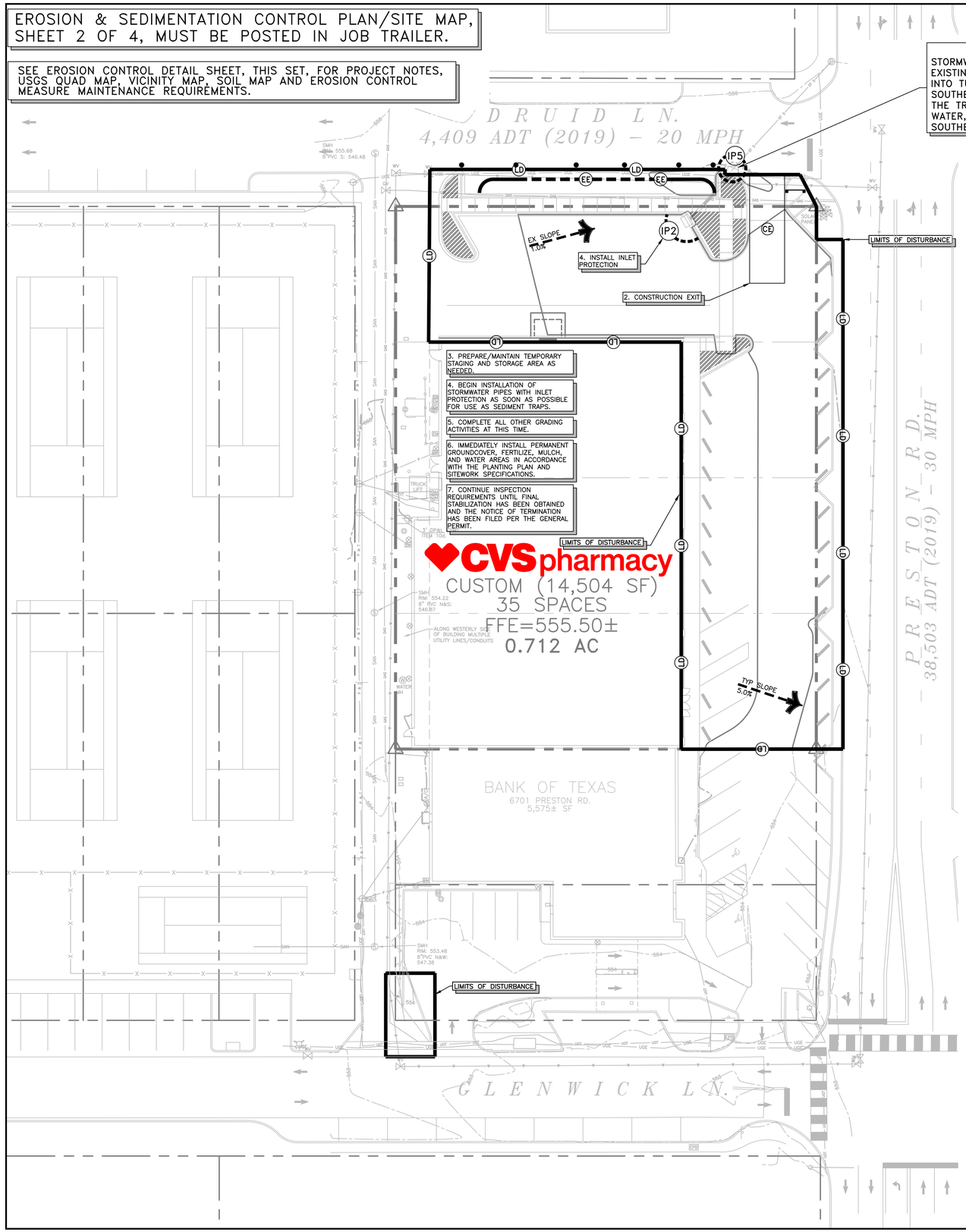
SHEET NUMBER:

6 OF 21

COMMENTS:
NOT RELEASED FOR CONSTRUCTION

EROSION & SEDIMENTATION CONTROL PLAN/SITE MAP, SHEET 2 OF 4, MUST BE POSTED IN JOB TRAILER.

SEE EROSION CONTROL DETAIL SHEET, THIS SET, FOR PROJECT NOTES, USGS QUAD MAP, VICINITY MAP, SOIL MAP AND EROSION CONTROL MEASURE MAINTENANCE REQUIREMENTS.



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ACREAGE SUMMARY

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TOTAL AREA	0.71 ACRES

N

20 0 20

CVS PARCEL 0.71± ACRES

LEGEND

- IP2 – BLOCK AND AGGREGATE INLET PROTECTION
- IP5 – FILTER BAG
- DRAINAGE PATTERN
- REFLECTORIZED BARRELS
- SWPPP INFORMATION SIGN
- LD – LIMITS OF DISTURBANCE
- EE – EROSION EELS
- CE – CONSTRUCTION EXIT ON EXISTING PAVEMENT
- PLANTING BED
- SODDED AREA

BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC, IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION, NOTE ALL AREAS WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

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WETLANDS
- ACCORDING TO THE NATIONAL WETLANDS INVENTORY AND SINCE THE SITE IS DEVELOPED, THERE ARE NO WETLANDS IN THE VICINITY OF THE PROJECT SITE.

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- ENTIRE SITE CONSISTS OF EXISTING BUILDINGS, PAVED PARKING LOTS, DRIVES, GRASS, AND TREES

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SYMBOL	SOIL NAME	SLOPE	HYDRIC CLASSIFICATION
– 75	URBAN LAND	N/A	NON-HYDRIC

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- SEED: MIXTURE 70% RYEGRASS/30% WINTER WHEAT – 4 LB / 1,000 SQ FT
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PERMANENT SOD:
- TURF TYPE "TIFTON 419" BERMUDA SOD
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LIMITS OF DISTURBANCE

CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH THE EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ELIMINATE TRACK-OUT FROM THE LIMITS OF DISTURBANCE. NO STOCKPILING, TEMPORARY STORAGE OR STAGING OF EITHER NEW, SALVAGED OR WASTE MATERIAL SHALL BE ALLOWED BEYOND THE LIMITS OF BMP PROTECTED AREAS. THE CONTRACTOR SHALL INSTALL APPROPRIATE BMP'S AROUND THE TOE OF ANY STOCKPILED MATERIAL AS NEEDED TO CONTROL SEDIMENT. ANY GROUND DISTURBING ACTIVITIES BEYOND THE PROJECT LIMITS OF DISTURBANCE IS STRICTLY PROHIBITED.

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SPECIFICATIONS REQUIREMENTS

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SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS																								
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1) CONTRACTOR SHALL UPDATE THE TABLE BY DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
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CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
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SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

DATE: 29 OCTOBER 2020

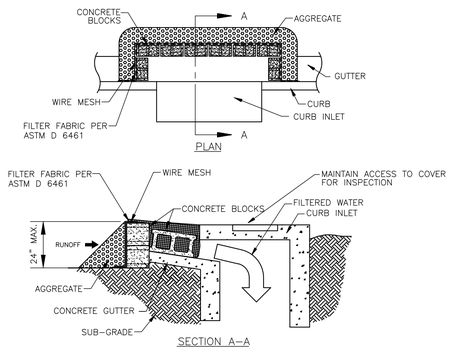
TITLE: PHASE II EROSION & SEDIMENTATION CONTROL PLAN

SHEET NUMBER:

7 OF 21

COMMENTS:
NOT RELEASED FOR CONSTRUCTION

EROSION CONTROL DETAILS,
SHEET 3 OF 4, MUST BE POSTED IN JOB TRAILER.



NOTES:

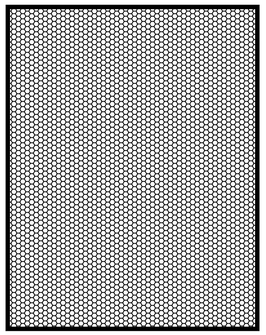
1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF CURB INLET ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES. USE STACKS OF 4", 8", OR 12" BLOCKS. TOP OF BARRIER MUST BE LOWER THAN TOP OF CURB ELEVATIONS ADJACENT TO INLET. MAX. HEIGHT SHALL BE 24".
3. PLACE HARDWARE CLOTH/WIRE MESH W/ MAX. 1/2" OPENINGS OVER VERTICAL FACE OF CONCRETE BLOCKS.
4. THE AGGREGATE SHALL BE 3/4" – 2" ANGULAR CLEAN STONE WHICH WILL SLOW THE FLOW OF WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE ENTERING THE INLET.
5. IF ROAD OR PARKING AREA IS OPEN TO PUBLIC, VERIFY SUITABILITY OF BMP WITH AGENCIES HAVING JURISDICTION AND WITH CEC.

MAINTENANCE NOTES:

1. INLET PROTECTION DEVICES MUST BE INSPECTED FOR SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN (IF USING INSERT–TYPE DEVICE) OR UPGRADIENT OF THE INLET.
2. REMOVAL OF SEDIMENT ACCUMULATED IN OR ADJACENT TO A STORM DRAIN INLET MUST BEGIN IMMEDIATELY UPON DISCOVERY, WITH COMPLETION OF THE ACTIVITY OCCURING NO LATER THAN THE END OF THE FOLLOWING BUSINESS DAY.
3. INLET PROTECTION DEVICES SHALL BE INSPECTED FOR UNINTENDED BYPASS OR IMPROPER FLOW–RATES THAT MAY CAUSE DOWNSTREAM FLOODING.
4. CONTACT THE CEC FOR ALTERNATE INLET PROTECTION IF THE DESIGNED PROTECTION MAY IMPACT DOWNSTREAM BMPS, ADJACENT SLOPES, ETC., DUE TO PONDING ISSUES. ENSURE THAT NO UNDERMINING OF INLET PROTECTION DEVICES HAS OCCURRED.
5. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.

IP2 BLOCK AND AGGREGATE CURB INLET PROTECTION
N.T.S.

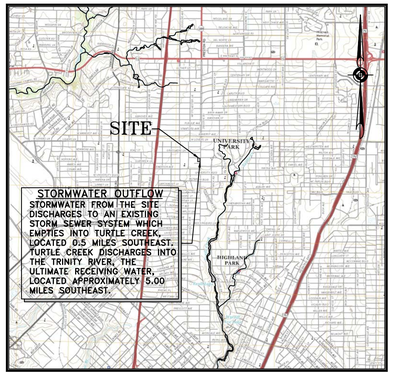
BLOCK AND AGGREGATE CURB INLET PROTECTION



SOIL MAP
NTS

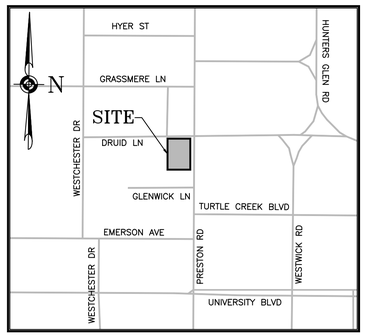
SOIL SURVEY AREA MAP UNIT SYMBOL	SOIL NAME	SLOPES	HYDRIC CLASSIFICATION
75	URBAN LAND	N/A	NON–HYDRIC

SOIL MAP



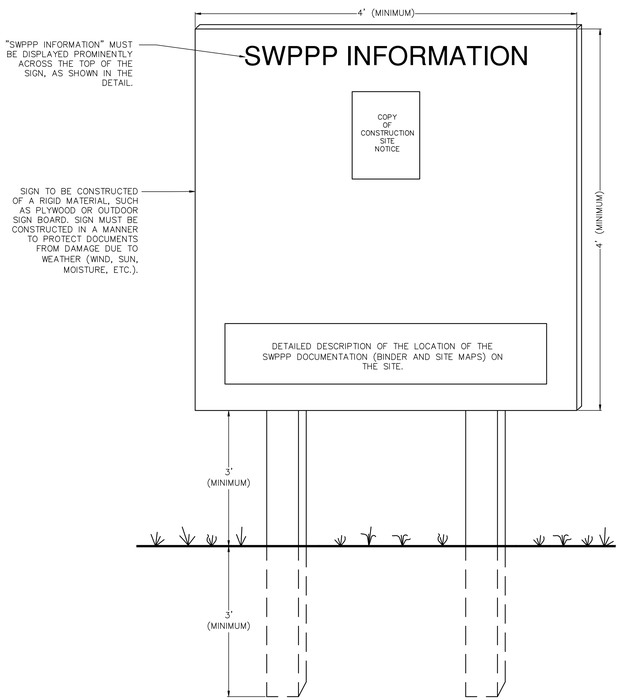
USGS QUADRANGLE MAP
SCALE=1"=4,500 FEET

QUADRANGLE MAP



VICINITY MAP
SCALE=NTS

VICINITY MAP

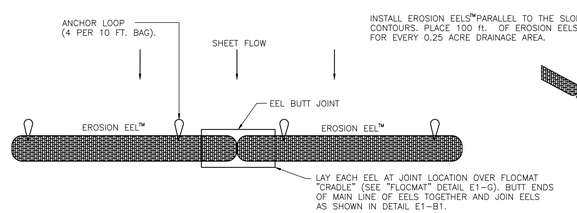


SWPPP INFORMATION SIGN (SS)
N.T.S.

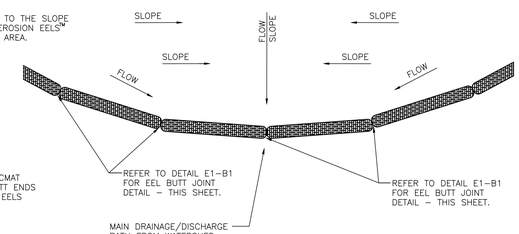
NOTES:
1) THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE CONSTRUCTION EXIT OF THE SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A SAFETY HAZARD.
2) ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION.
3) CONTRACTOR SHALL POST OTHER STORM WATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.
4) SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT–OF–WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.
5) CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY OF THE SWPPP INFORMATION SIGN.

SWPPP INFORMATION SIGN (SS)
N.T.S.

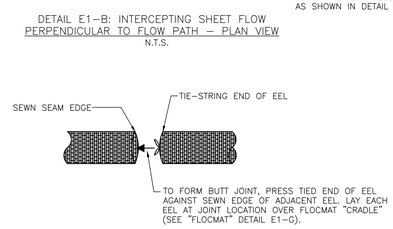
SWPPP INFORMATION SIGN



DETAIL E1–B: INTERCEPTING SHEET FLOW PERPENDICULAR TO FLOW PATH – PLAN VIEW
N.T.S.



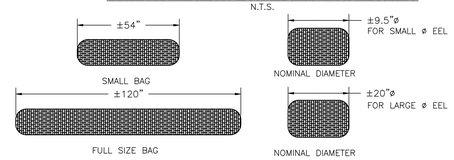
DETAIL E1–F: PLAN VIEW – TYPICAL ARRANGEMENT OF EELS USED FOR PERIMETER CONTROL
N.T.S.



BUTT JOINT DETAIL E1–B1
N.T.S.

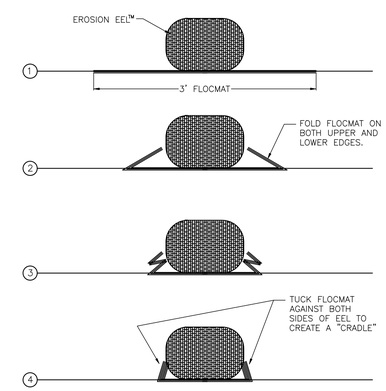
SPACING RECOMMENDATIONS FOR THE EROSION EEL™ FOR PERIMETER CONTROLS AND INTERCEPTING SHEET FLOW ON SLOPES

SLOPE(%)	SINGLE EEL SPACING(ft)
0.5	300
1	200
2	160
3	80
4	50
5	40
6	35
8	30
10	25
15	+17
20	+12
25	N/A
33	N/A
50	N/A



DETAIL E1–A: EROSION EELS™
N.T.S.

NOTE:
ALL EROSION EELS™ USED FOR PERIMETER CONTROL SHALL USE MIXTURE SPECIFICATIONS 1.0 AND 2.0



INSTALL FLOCMAT AT MAIN DISCHARGE LOCATIONS FOR WATERSHED.

DETAIL E1–G: SECTION – FLOCMAT
N.T.S.

CONTACT INFORMATION

FRIENDLY ENVIRONMENT
100 PRINCE STREET
SHELBYVILLE, TN 37160
1–866–H2O–EELS

INFO@FRIENDLYENVIRONMENTUS.COM
http://FRIENDLYENVIRONMENTUS.COM

GENERAL NOTES

1. EROSION EELS™ USED IN PERIMETER CONTROL APPLICATIONS SHALL HAVE A SPECIFICATION MIXTURE 1.0 OR 2.0.
   A. MIXTURE SPECIFICATION 1.0. A FILTER MATERIAL COMPRISED OF 100% RUBBER SHREDS. THE RUBBER SHALL BE DERIVED FROM RECYCLED TIRES AND SHALL BE SHREDDED TO PRODUCE A MAXIMUM PARTICLE SIZE OF +/– 3/4 INCH.
   B. MIXTURE SPECIFICATION 2.0. A FILTER MIXTURE COMPRISED OF 100% SHREDDED RUBBER DERIVED FROM RECYCLED TIRES. MAXIMUM PARTICLE SIZE IS ±2 INCHES.
2. LENGTHS OF EROSION EELS™ SHALL BE EITHER A NOMINAL +/–10 FT. OR +/– 4.5 FT. NOMINAL DIAMETER SHALL BE +/–9.5 INCHES FOR PERIMETER CONTROLS AND +/–20 INCHES FOR CHECK DAM APPLICATIONS.
3. EROSION EELS™ CAN BE PLACED AT THE TOP, ON THE FACE, OR AT THE TOE OF SLOPES TO INTERCEPT RUNOFF, REDUCE FLOW VELOCITY, RELEASE THE RUNOFF AS SHEET FLOW AND PROVIDE REMOVAL OF SEDIMENT FROM THE RUNOFF.
4. EROSION EELS™ SHALL BE INSTALLED ALONG THE GROUND CONTOUR, AT THE TOE OF SLOPES, AT AN ANGLE TO THE CONTOUR TO DIRECT FLOW AS A DIVERSION BERM, AROUND INLET STRUCTURES, IN A DITCH AS A CHECK DAM TO HELP REDUCE SUSPENDED SOLIDS LOADING AND RETAIN SEDIMENT, OR AS A GENERAL FILTER FOR ANY DISTURBED SOIL AREA.
5. NO TRENCHING IS REQUIRED FOR INSTALLATION OF EROSION EELS™.
6. PREPARE BED FOR EEL INSTALLATION BY REMOVING ANY LARGE DEBRIS INCLUDING ROCKS, SOIL CLODS, AND WOODY VEGETATION. EROSION EELS™ CAN ALSO BE PLACED OVER PAVED SURFACES INCLUDING CONCRETE AND ASPHALT WITH NO SURFACE PREPARATION REQUIRED.
7. RAKE BED AREA WITH A HAND RAKE OR BY DRAG HARROW.
8. DO NOT PLACE EEL DIRECTLY OVER RILL AND GULLIES UNTIL AREA HAS BEEN HAND–EXCAVATED AND RAKED TO PROVIDE A LEVEL BEDDING SURFACE. ALL SURFACES SHALL BE UNIFORMLY COMPACTED FOR MAXIMUM SEATING OF EELS IN PLACE.
9. FOR LOCATIONS WHERE EELS WILL BE PLACED IN CONCENTRATED FLOWS (SUCH AS CHECK DAMS, INLET PROTECTION) AND FOR PERIMETER CONTROLS, BED THE EELS IN A FLOCMAT CRADLE PER THE DETAILED DRAWINGS.
10. FOR DITCH APPLICATIONS, THE MAXIMUM DRAINAGE AREA SHALL BE 10 ACRES.
11. IF MORE THAN ONE EROSION EEL™ IS PLACED IN A ROW, PREPARE JOINTS PER DETAIL E1–B1.
12. EROSION EELS™ SHALL REMAIN IN PLACE UNTIL FULLY ESTABLISHED VEGETATION HAS COMPLETELY DEVELOPED OR UNTIL THE STORAGE CAPACITY/FUNCTIONAL LIFE OF THE EEL HAS BEEN EXHAUSTED (REQUIRING REPLACEMENT WITH NEW EELS).
13. ANCHORING POSTS FOR CHECK DAM APPLICATIONS SHALL HAVE A MINIMUM WEIGHT OF 1.25 LBS/FT STEEL T–POSTS (5 TO 7 FT. LENGTHS) ROLLED FROM HIGH CARBON STEEL. POSTS SHOULD BE HOT–DIP GALVANIZED OR COATED WITH A WEATHER–RESISTANT PAINT FOR STEEL APPLICATION. POSTS SHOULD BE EQUIPPED WITH A METAL ANCHOR PLATE.
14. PLACE T–POSTS THROUGH HANDLE OF BAGS. DO NOT DRIVE POSTS THROUGH EROSION EELS™. T–POSTS ARE TO BE EMBEDDED A MINIMUM OF 3 FT. INTO GROUND ON STEEP SLOPES GREATER THAN 25%.

EE EROSION EEL
N.T.S.

EROSION EEL

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747
SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
HURST, TEXAS 76054
TEL (817) 285–7444
FAX (817) 285–7318

CONSULTANT:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons
Bartlett, TN 38133
Phone (901) 384-0404
Fax (901) 384-0710

DEVELOPER:

ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

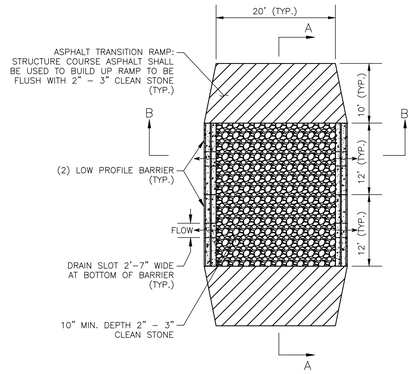
SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER
DRAWING BY: K. PRESLEY
DATE: 29 OCTOBER 2020
TITLE: EROSION CONTROL DETAILS
SHEET NUMBER:

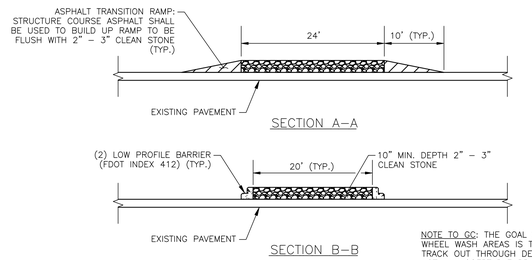
COMMENTS:
NOT RELEASED FOR CONSTRUCTION



PLAN VIEW

NOTES:

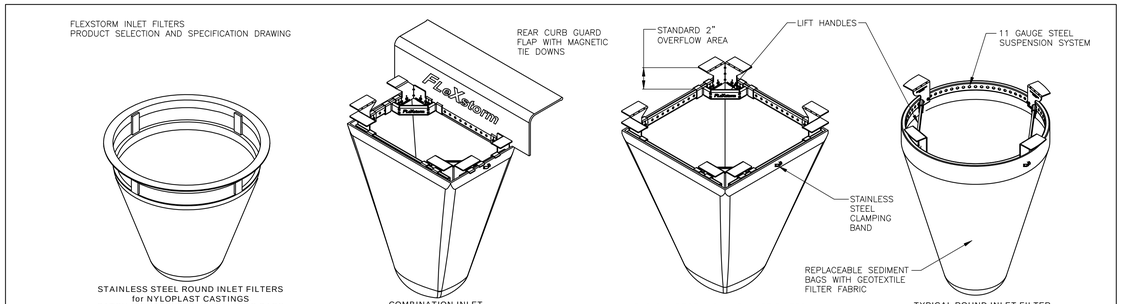
1. ALL SITE ACCESS MUST BE CONFINED TO THE CONSTRUCTION EXIT(S). BARRICADE TO PREVENT USE OF ANY LOCATIONS OTHER THAN THE CONSTRUCTION EXIT(S) WHERE VEHICLES OR EQUIPMENT MAY ACCESS THE SITE.
2. CONTRACTOR TO LOCATE TEMPORARY CONSTRUCTION FENCING, JERSEY BARRIERS, OR BOTH ALONG THE SIDES OF THE CONSTRUCTION EXIT TO PREVENT CONSTRUCTION TRAFFIC FROM SHORT CIRCUITING/BYPASSING THE EXIT.
3. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION EXIT(S) IS NOT SUFFICIENT TO PREVENT TRACKING OF DIRT, DUST OR MUD, THEN TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. ALL WASH WATER MUST BE ROUTED TO A SEDIMENT TRAP OR OTHER TREATMENT AREA AND SHALL NOT BE DIRECTLY DISCHARGED OFF–SITE.
4. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE MUST BE INSPECTED FOR EVIDENCE OF SEDIMENT TRACKING BEYOND THE PERMITTED PROJECT AREA. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
6. ANY SEDIMENT DEPOSITED ON THE ROADWAY SHALL BE SWEPT AS NECESSARY (AND WITHIN THE SAME DAY AS DISCOVERY) AND DISPOSED OF IN AN APPROPRIATE MANNER. SEDIMENT SHALL NOT BE WASHED INTO STORM SEWER SYSTEMS.
7. EXIT(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD BEYOND THE EXIT(S). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXIT(S) AS CONDITIONS DEMAND.
8. CONTRACTOR SHALL BE PERMITTED TO TURN THE STONE WHEN THE SURFACE BECOMES SMOOTH AND SURFACE VOIDS ARE FILLED TO MAINTAIN EFFECTIVENESS OF CONSTRUCTION EXIT UNTIL SUCH TIME THAT VOIDS BELOW THE SURFACE BECOME FILLED AND THE CONSTRUCTION EXIT IS NO LONGER EFFECTIVE. AT SUCH A TIME THE CONTRACTOR SHALL REMOVE THE INEFFECTIVE STONE AND REPLACE PER DETAIL.
9. IF EXIT BMP IS STILL INEFFECTIVE, GC MUST CONTACT THE ENGINEER AND SUBMIT AN RFI AS NECESSARY.

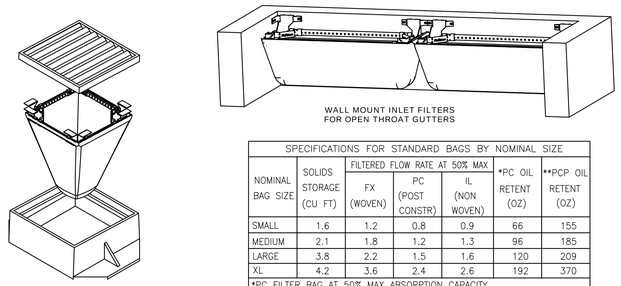


NOTE TO GC: THE GOAL OF A CONSTRUCTION EXIT AND ASSOCIATED WHEEL WASH AREAS IS TO ELIMINATE TRACK OUT. SIMPLY MANAGING TRACK OUT THROUGH DESIGNATED OR CONTINUAL STREET SWEEPING IS NOT AN ACCEPTABLE PRACTICE. WHILE STREET SWEEPING IS AN ACCEPTABLE PRACTICE FOR REMOVING DUST AND MINIMAL AMOUNTS OF FINE SEDIMENT, OBSERVABLE TRACK OUT FROM THE PROJECT SHOULD TRIGGER THE USE OF ADDITIONAL MEASURES (WHEEL WASH). CONSIDERATION OF ALTERNATE EXITS, OR DISCONTINUING VEHICLE TRAFFIC UNTIL CONDITIONS ON–SITE HAVE IMPROVED. TRACK OUT IS A SEDIMENT RELEASE. ALL SEDIMENT RELEASES MUST BE REPORTED TO THE SWCT VIA THE ONLINE CRITICAL INCIDENT REPORT.

CEP CONSTRUCTION EXIT ON EXISTING PAVEMENT
N.T.S.

CONSTRUCTION EXIT ON EXISTING PAVEMENT





1. IDENTIFY YOUR FRAME STYLE, SIZE, AND MATERIAL			
STYLE	FRAME STYLE AND SIZE	FRAME P/N:
ROUND	SMALL ROUND (UP TO 20.0" DIA GRATES (A) DIM)	62SRD
	MED ROUND (UP TO 20.1"–26" DIA GRATES (A) UP TO 25" DIA OPENINGS (B))	62MRD
	LARGE ROUND (UP TO 26.1"–32.0" DIA GRATES (A) UP TO 30" OPENINGS (B))	62LRD
	XL ROUND (UP TO 32.1"–39" DIA GRATES (A) UP TO 37" DIA OPENING (B))	62XLRD
RECT/ SQUARE	SMALL RECT / SQUARE (UP TO 16" (B) x 16" (D) OPENINGS OR 64" PERIMETER)	62SSQ
	MED RECT / SQUARE (UP TO 24" (B) x 24" (D) OPENINGS OR 96" PERIMETER)	62MSQ
	LARGE RECT / SQUARE (UP TO 36" (B) x 24" (D) OPENINGS OR 120" PERIMETER)	62LSQ
	XL RECT/SQUARE (SIDE BY SIDE 2 PC SET TO FIT UP TO 48" (B)x36" (D) OPENINGS)	62XLSQ
COMBO INLETS	SMALL RECT / SQUARE (REF RECT SIZING; SHIPPED WITH MAGNETIC CURB FLAPS)	62SCB
	MED RECT / SQUARE (REF RECT SIZING; SHIPPED WITH MAGNETIC CURB FLAPS)	62MCB
	LARGE RECT / SQUARE (REF RECT SIZING; SHIPPED WITH MAGNETIC CURB FLAPS)	62LCB
	XL RECT / SQUARE (REF RECT SIZING; SHIPPED WITH MAGNETIC CURB FLAPS)	62XLCB
NYLOPLAST	12" DIAMETER NYLOPLAST CASTINGS (STAINLESS STEEL FRAMING STANDARD)	6212NY
	15" DIAMETER NYLOPLAST CASTINGS (STAINLESS STEEL FRAMING STANDARD)	6215NY
	18" DIAMETER NYLOPLAST CASTINGS (STAINLESS STEEL FRAMING STANDARD)	6218NY
	24" DIAMETER NYLOPLAST CASTINGS (STAINLESS STEEL FRAMING STANDARD)	6224NY
	30" DIAMETER NYLOPLAST CASTINGS (STAINLESS STEEL FRAMING STANDARD)	6230NY
WALL MOUNT	OPEN THROAT GUTTERS – CURB OPENING SIZE	
	UP TO 4' (1 FILTER AND MOUNTING HARDWARE)	62WM1
	BETWEEN 4' AND 8' (2 FILTERS AND MOUNTING HARDWARE)	62WM2
	BETWEEN 8' AND 12' (3 FILTERS AND MOUNTING HARDWARE)	62WM3
	BETWEEN 12' AND 16' (4 FILTERS AND MOUNTING HARDWARE)	62WM4
UPGRADED FRAMING MATERIAL OPTIONS (STANDARD IS ZINC PLATED)		SUFFIX
CHROME PLATED FRAMING FOR HIGH SALT EXPOSURE		–CHR
STAINLESS STEEL FRAMING FOR HIGH SALT AND / OR CHEMICAL EXPOSURE		–SS

2. SELECT YOUR FILTER BAG PART NUMBER				
FLEXSTORM FILTER BAGS	(22" DEPTH) STD BAG P/N	(12" DEPTH) SHORT BAG P/N	CLEAN WATER FLOW RATE (GPM/SQFT)	MIN A.O.S. (US SIEVE)
FX: STANDARD WOVEN BAG	FX	FX–S	200	40
FX+: WOVEN W/ MYCELX	FXP	FXP–S	200	40
FXO: WOVEN W/OIL BOOM	FXO	FXO–S	200	40
PC: POST CONSTRUCTION BAG	PC	PC–S	137	140
PC+: PC BAG W/ MYCLEX	PCP	PCP–S	137	140
LL: LITTER AND LEAF BAG	LL	LL–S	HIGH	3.5
IL: IDOT NON–WOVEN BAG	IL	IL–S	145	70

INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE						
NOMINAL BAG SIZE	SOLIDS STORAGE (CU FT)	FILTERED FLOW RATE AT 50% MAX			*PC OIL RETENT (OZ)	**PCP OIL RETENT (OZ)
		FX (WOVEN)	PC (POST CONSTR)	IL (NON WOVEN)		
SMALL	1.6	1.2	0.8	0.9	66	155
MEDIUM	2.1	1.8	1.2	1.3	96	185
LARGE	3.8	2.2	1.5	1.6	120	209
XL	4.2	3.6	2.4	2.6	192	370
*PC FILTER BAG AT 50% MAX ABSORPTION CAPACITY						
**PC FILTER BAG AT 50% CAPACITY AND MYCLEX SKIMMER AT 100% CAPACITY						

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER			
		–	
FRAME P/N FROM STEP 1	FILTER BAG P/N STEP 2		FRAMING MATERIAL

NOTICE TO CONTRACTOR

WHERE FILTER BAGS ARE SPECIFIED, THE CONTRACTOR SHALL USE FLEXSTORM INLET FILTERS BY NYLOPLAST® FOR INLET PROTECTION. SINCE THE INLET FILTERS ARE CUSTOMIZED FOR EACH INLET, THE DETAIL PROVIDED SHALL BE USED FOR GENERAL INFORMATION ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ORDER THE APPROPRIATE FLEXSTORM INLET FILTER FOR EACH EXISTING, OR PROPOSED, INLET TYPE REQUIRING PROTECTION. THE CONTRACTOR SHALL CONTACT THE LOCAL NYLOPLAST® SALES REPRESENTATIVE, FOR ORDERING INFORMATION. AT A MINIMUM, THE CONTRACTOR SHALL BE PREPARED TO PROVIDE THE NYLOPLAST® SALES REPRESENTATIVE INFORMATION RELATED TO INLET TYPE AND DIMENSIONS FOR EACH INLET REQUIRING PROTECTION.

Nyloplast®
A division of ADS

GARVIN COX
303 W.M. BAUGH LANE
BROWNWOOD, TX 76801

CELL: (915) 309–8259
FAX: (866) 843–1147
garvin.cox@ads-pipe.com

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC DISTRIBUTED BY ADS
WWW.INLETFILTERS.COM
(866) 287–8655 PH
(630) 355–3477 FX
INFO@INLETFILTERS.COM

SIZE	DWG NO	REV
C	FLEXSTORM_SPECS	
SCALE	SHEET 1 OF 1	

IP5 FILTER BAG
N.T.S.

FILTER BAG

EROSION CONTROL DETAILS, SHEET 4 OF 4, MUST BE POSTED IN JOB TRAILER.

NOTES:

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, SPECIFICATIONS SECTION 02370 ("SWPPP"), PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND ARE FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWN STREAM SIDES IN COMPLIANCE WITH 02370 SPECIFICATION.
H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN–UP FUEL OR CHEMICAL SPILLS AND LEAKS.
J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
M. ALL DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE, MUST BE STABILIZED TEMPORARILY WITH THE USE OF FAST–GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKETS AS SHOWN ON SITE MAP.
N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEEDED, SODDED, AND/OR VEGETATED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.
P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
R. ON–SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCE, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.
U. SEE SITE PLAN FOR PERMANENT SIGNAGE.
V. GENERAL CONTRACTOR IS TO DESIGNATE/INDENTIFY AREAS ON THE SITE MAPS, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
W. REFER TO THE SWPPP FOR REPORTABLE SPILL QUANTITIES OF PETROLEUM PRODUCTS AND/OR HAZARDOUS WASTES.
X. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.
Y. REFER TO 02370 SPECIFICATION FOR RUN–OFF SAMPLING/MONITORING REQUIREMENTS IF APPLICABLE TO SITE DURING CONSTRUCTION.

MAINTENANCE REQUIREMENTS:

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE–HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXISTS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREAS SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. AND DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE IMPROVEMENTS SHOWN BY THESE PLANS.

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
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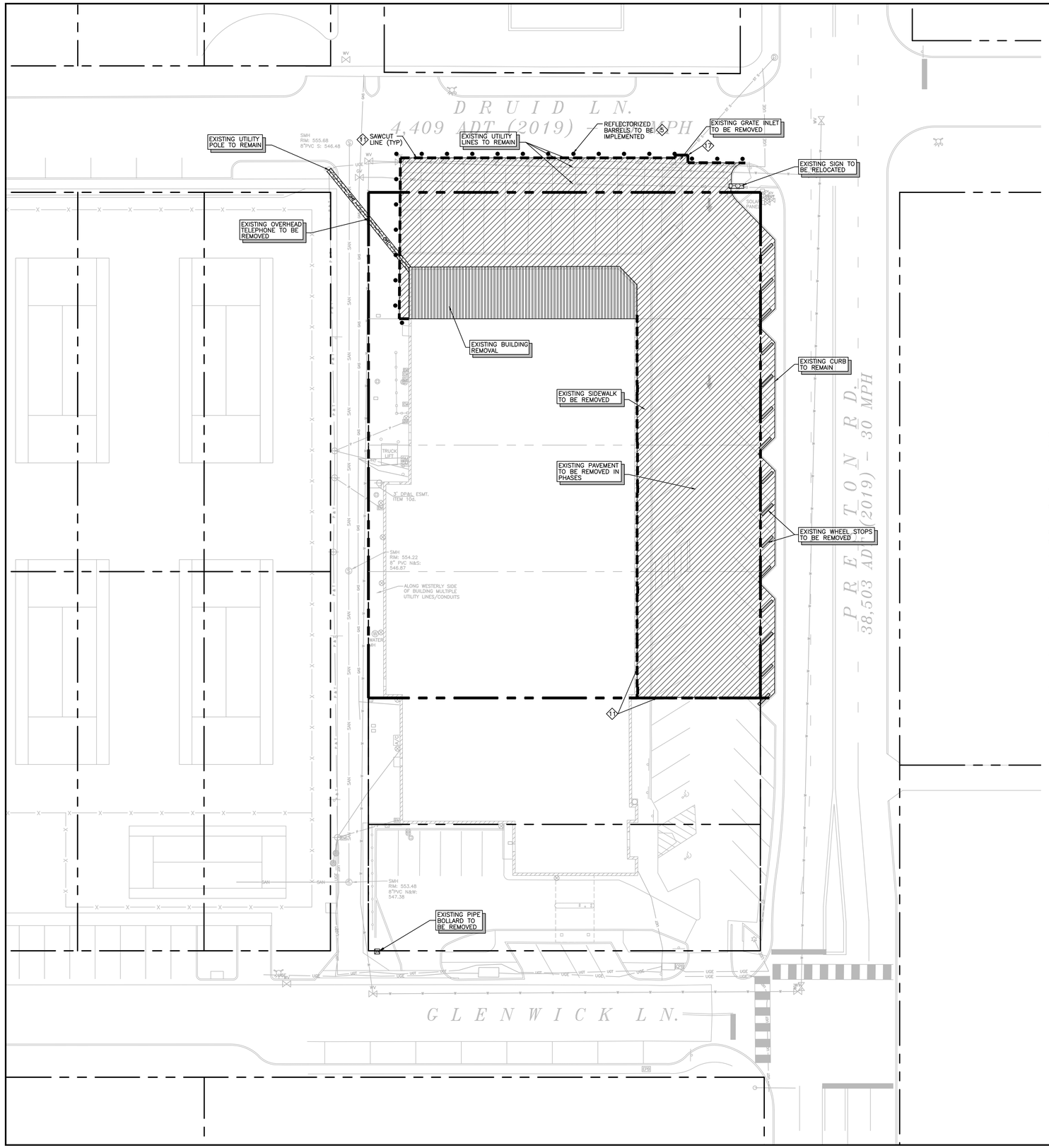
SEAL:

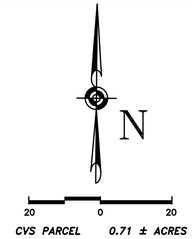
STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER
DRAWING BY: K. PRESLEY
DATE: 29 OCTOBER 2020
TITLE: EROSION CONTROL DETAILS
SHEET NUMBER:

COMMENTS:
NOT RELEASED FOR CONSTRUCTION





LEGEND

- EXISTING BUILDING, SIGNAGE, AND APPURTENANCES TO BE DEMOLISHED AND REMOVED
- APPROXIMATE LIMITS OF EXISTING PAVEMENT, CURB & GUTTER, GRAVEL, AND SIDEWALK REMOVAL
- EXISTING UTILITIES & APPURTENANCES TO BE REMOVED
- SAWCUT LINE
- REFLECTORIZED BARRELS

◇ NOTES:

1. THIS PLAN IS INTENDED TO GIVE AN OVERVIEW OF THE DEMOLITION WORK REQUIRED FOR THE CONSTRUCTION OF THE NEW CVS. IT HAS BEEN PREPARED FROM THE PROJECT SURVEY AND SHOWS ITEMS REPRESENTED ON THE SURVEY. IT DOES NOT, HOWEVER, NECESSARILY REPRESENT ALL ITEMS PRESENT IN THE FIELD. THE INTENT OF THIS DRAWING IS TO REMOVE/RELOCATE ALL ITEMS WHICH CONFLICT WITH THE PLANNED IMPROVEMENTS. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE TO THE LEVEL NECESSARY TO INCLUDE THIS WORK IN THE BASE BID.
2. ALL SITE WORK SHALL MEET OR EXCEED THE CVS SITE WORK SPECIFICATIONS.
3. ALL NECESSARY INSPECTIONS, APPROVALS, AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR AUTHORITIES SHALL BE COMPLETED PRIOR TO THE ANNOUNCED BUILDING POSSESSION AND THE FINAL CERTIFICATION OF SERVICES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING DAMAGE DONE TO ANY EXISTING ITEMS THAT WILL REMAIN IN PLACE AFTER CONSTRUCTION AND DEMOLITION ARE COMPLETE, THOSE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, DRAINAGE SYSTEMS, UTILITIES, CURBING, BUILDING, RETAINING WALL, ETC. REPAIRS SHALL BE EQUAL TO, OR BETTER THAN, EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ANY EXISTING DAMAGE AND NOTIFYING THE CVS CONSTRUCTION MANAGER.
5. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROTECT THE PUBLIC AT ALL TIMES. FENCING, BARRICADES, ENCLOSURES, BARRELS, ETC. SHALL BE USED IN THE BEST POSSIBLE MANNER.
6. IT WILL BE NECESSARY TO RELOCATE OR ADJUST LOCATION OF VARIOUS EXISTING UTILITIES AS A RESULT OF GRADING ASSOCIATED WITH THIS PROJECT. SEE OTHER PLAN SHEETS FOR SPECIFIC INFORMATION.
7. ALL VOIDS SHALL BE FILLED IN ACCORDANCE WITH THE SPECIFICATIONS.
8. SEE OTHER PLAN SHEETS FOR PLANNED IMPROVEMENTS.
9. THE CONTRACTOR SHALL DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIAL RESULTING FROM DEMOLITION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
10. CONTRACTOR SHALL CONTACT APPROPRIATE UTILITY COMPANIES PRIOR TO DEMOLITION OF ANY EXISTING UTILITIES.
11. CONTRACTOR TO SAWCUT ALONG EDGE OF EXISTING PAVEMENT TO ENSURE CLEAN, STRAIGHT JOINT BETWEEN OLD & NEW PAVING SECTIONS. CONTRACTOR SHALL REMOVE ALL PAVEMENT, BASE MATERIAL, CURBING, ETC. WITHIN SAWCUT LIMITS.
12. ALL SOLID WASTE MATERIALS, INCLUDING WITHOUT LIMITATION, HOUSEHOLD TRASH, USED TIRES, CONSTRUCTION DEBRIS, ETC. SHALL BE PROPERLY DISPOSED OF IN A SOLID WASTE LANDFILL.
13. ALL EXISTING STRUCTURES ON-SITE INCLUDING BUT NOT LIMITED TO: BUILDING, CANOPIES, CONCRETE WALKS, ASPHALT DRIVES AND PARKING AREAS, CURBS, UTILITIES, SIGNS, CONCRETE PADS, ETC TO BE DEMOLISHED AND DISPOSED OF PROPERLY BY CONTRACTOR. ALL APPURTENANCES, FOOTINGS, UTILITIES, ETC ASSOCIATED WITH THE EXISTING BUILDINGS SHALL BE REMOVED. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS. ALL DISPOSAL OF ITEMS THAT ARE BEING REMOVED SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, OR FEDERAL REQUIREMENTS. THIS PLAN WAS PREPARED FROM THE PROJECT SURVEY AND SHOWS ITEMS REPRESENTED ON THE SURVEY. IT DOES NOT HOWEVER, NECESSARILY REPRESENT ALL ITEMS PRESENT IN THE FIELD. REFER TO THE UTILITY PLAN FOR THE LIMITS OF EXISTING UTILITY REMOVAL AND RELOCATION. THE INTENT OF THESE PLANS IS TO REMOVE ALL ITEMS WHICH CONFLICT WITH THE IMPROVEMENTS. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE TO THE LEVEL NECESSARY TO INCLUDE THIS WORK IN THE BID.
14. CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE COMPANY TO ENSURE THAT ADJACENT PROPERTY OWNERS HAS SERVICE PRIOR TO DISTURBING EXISTING SERVICE.
15. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR DEMOLITION AND RELOCATION OF EXISTING SERVICE LINES AND FACILITIES AS SOON AS THE JOB IS AWARDED TO PREVENT DELAYS.
16. CONTRACTOR SHALL COORDINATE WITH TERRACON AND APPROPRIATE GOVERNMENT AGENCIES TO ENSURE MONITORING WELLS ARE ABANDONED PER ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS. COORDINATE WITH TERRACON FOR LOCATION OF NEW MONITORING WELLS.
17. CONTRACTOR SHALL ADJUST TOPS OF CLEANOUTS, MANHOLES, VALVES, ETC TO MATCH FINAL GRADE.

PHASING REQUIREMENTS

THE CONTRACTOR SHALL NOT IMPEDE TRAFFIC TO THE EXISTING BANK, SOUTH OF THE CVS PROJECT. CONTRACTOR SHALL PHASE PAVEMENT REMOVAL TO ALLOW SAFE PASSAGE THROUGH THE CVS PROJECT SITE TO THE BANK PROPERTY. THIS SHALL BE MAINTAINED AT ALL TIMES. PROVIDE TEMPORARY SIGNAGE/TRAFFIC CONTROL TO DIRECT BANK CUSTOMERS WHERE TO ACCESS THE SITE AND PROVIDE SUFFICIENT CURING TIME BEFORE OPENING UP NEWLY POURED PAVEMENT TO TRAFFIC.

NOTE:
DEMOLITION OF A PORTION OF THE EXISTING STRUCTURE SHALL INCLUDE REMOVAL OF ALL FOUNDATION AND SLAB-ON-GRADE ELEMENTS, PAVEMENT, AND UNCONTROLLED FILL RESULTING FROM DEMOLITION OF THE EXISTING STRUCTURES.

CAUTION – NOTICE TO CONTRACTOR

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CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
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CONSULTANT:

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DEVELOPER:

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PH. (205) 909-3792

SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

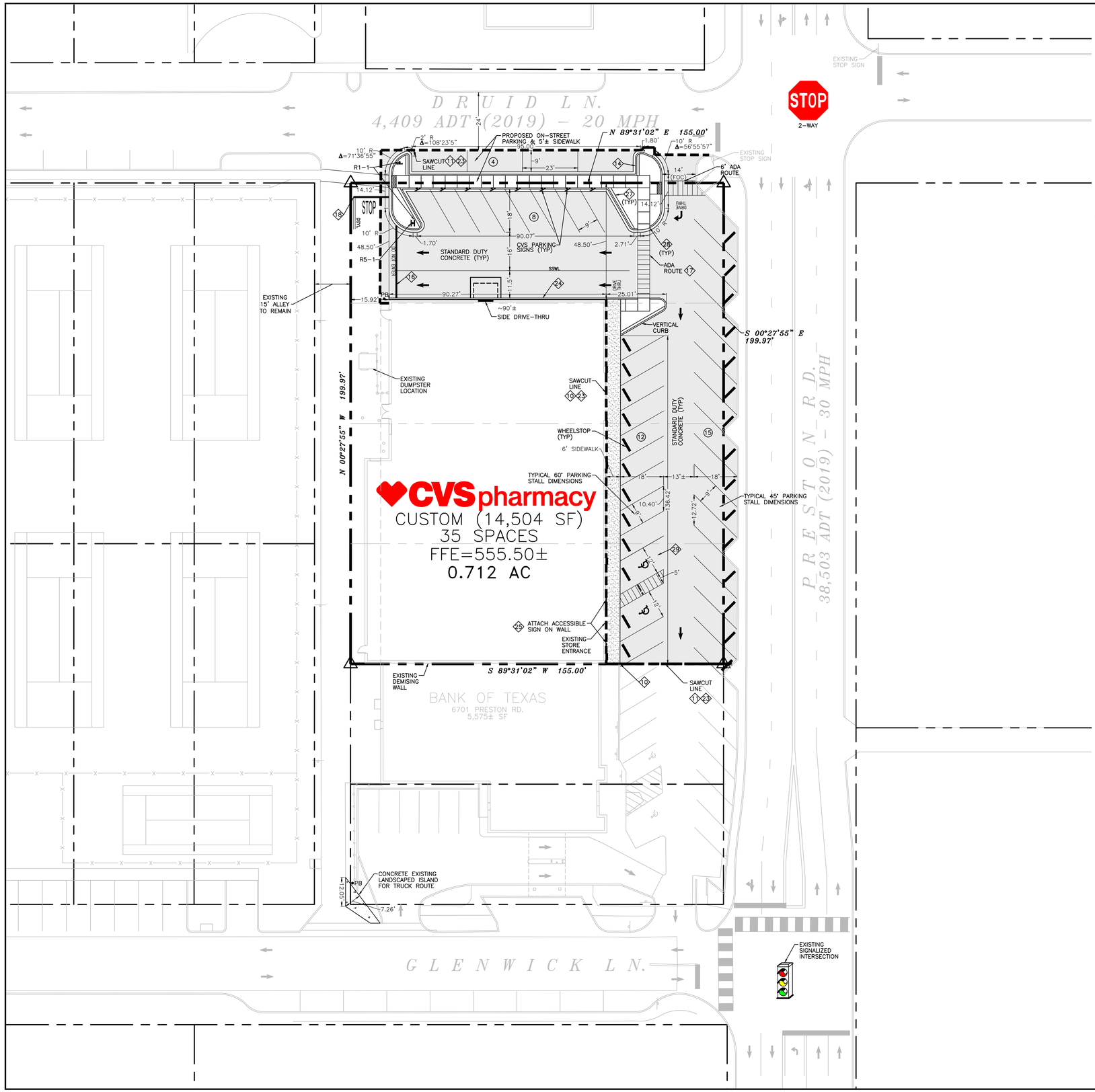
DATE: 29 OCTOBER 2020

TITLE: DEMOLITION PLAN

SHEET NUMBER:

10 OF 21

COMMENTS:
NOT RELEASED FOR CONSTRUCTION



LEGEND

	– PROPERTY LINE		– 6" RAISED CONCRETE CURB
	– STANDARD DUTY CONCRETE	XX	– CUSTOMER PARKING COUNT
	– HEAVY DUTY CONCRETE		– SIGN
	– BUILDING SIDEWALK	SSWL	– SINGLE SOLID WHITE LINE
	– DETECTABLE WARNING STRIP	DSYL	– DOUBLE SOLID YELLOW LINE
•PB	– PIPE BOLLARD		– SAWCUT LINE
(FOC)	– FACE OF CURB	♿	– ACCESSIBLE SYMBOL

CVS SITE DATA	
SITE AREA	0.712 ACRES (30,996 SF)
PERVIOUS AREA	0.017 ACRES (2.4%)
IMPERVIOUS AREA	0.695 ACRES (97.6%)
MAXIMUM IMPERVIOUS AREA	–
BUILDING AREA	14,504 SF
BUILDING DENSITY	14,504 SF (BUILDING) / 31,000 SF (LOT) =(46.79%)
MAXIMUM BUILDING DENSITY	–
PARKING SPACES (EXISTING)	54
PARKING SPACES (PROPOSED)	39
PARKING RATIO	1:200
PROPOSED LAND USE	–
DWELLING UNITS	0

◇ NOTES:

1. DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT U.N.O.
2. ALL CURBS SHALL BE CONCRETE CURB & GUTTER U.N.O. SEE DETAIL SHEET FOR ADDITIONAL INFORMATION.
3. SEE THE UTILITY PLAN FOR PARKING LOT LIGHTING.
4. TRAFFIC SIGN NUMBERS REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. ALL RADII TO BE 3' U.N.O.
6. BUILDING TIES SHOWN FROM THE CORNER OF BUILDING TO A POINT PERPENDICULAR TO THE PROPERTY LINE.
7. ALL NECESSARY INSPECTIONS, APPROVALS, AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR AUTHORITIES SHALL BE COMPLETED PRIOR TO THE ANNOUNCED BUILDING POSSESSION AND THE FINAL CERTIFICATION OF SERVICES.
8. ALL DELTA ANGLES ARE 90° U.N.O.
9. ALL PAINTED PAVEMENT MARKINGS SUCH AS ACCESSIBLE SYMBOLS AND LETTERING SHALL BE PAINTED USING TEMPLATES. ALL PARKING LOT STRIPING SHALL BE PAINTED YELLOW.
10. CONNECT TO EXISTING CURB AND/OR SIDEWALK. MATCH EXISTING IN GRADE, TYPE AND ALIGNMENT.
11. CONNECT TO EXISTING EDGE OF PAVEMENT. MATCH EXISTING IN GRADE AND ALIGNMENT.
12. REFER TO THE ARCHITECTURAL PLANS FOR PIPE BOLLARD PLACEMENT AROUND THE BUILDING.
13. SURVEYED PROPERTY LIES IN ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. INFORMATION PROVIDED BY FEMA'S FLOOD INSURANCE RATE MAP NUMBER 48113C0335K, WITH AN EFFECTIVE DATE OF JULY 7, 2014.
14. TYPE B CURB & GUTTER.
15. 6" VERTICAL CURB.
16. 1' WIDE "DO NOT ENTER" STOP LINE.
17. PEDESTRIAN CROSSING STRIPING. 4" WHITE STRIPES 90'–2' O.C. (TYP), W/6" END STRIPES. SEE DETAIL.
18. STOP BARS SHALL BE PLACED 4' IN ADVANCE OF CROSSWALKS.
19. COORDINATE FIRE LANE STRIPING AND SIGN REQUIREMENTS WITH LOCAL FIRE DEPARTMENT. PROVIDE ALL REQUIRED SIGNS AND STRIPING AS A PART OF THE CONTRACT.
20. SEE DETAIL SHEET FOR CONCRETE PAVEMENT JOINT REQUIREMENTS.
21. REFERENCE STRUCTURAL PLANS FOR SIDEWALK TIES AT BUILDING ENTRIES.
22. THE CONTRACTOR'S BASE BID SHALL INCLUDE STANDARD DUTY ASPHALT, HEAVY DUTY ASPHALT, AND TRUCK PAD CONCRETE IN THE AREAS AS SHOWN ON THE SITE PLAN. THE CONTRACTOR SHALL INCLUDE AS AN ALTERNATE TO THE BASE BID THE SUBSTITUTION OF STANDARD DUTY CONCRETE FOR STANDARD DUTY ASPHALT AND HEAVY DUTY CONCRETE FOR HEAVY DUTY ASPHALT. IF THE CONCRETE ALTERNATES ARE APPROVED BY THE OWNER, THE CONTRACTOR SHALL SUBMIT A PAVEMENT JOINTING PLAN TO THE ENGINEER FOR APPROVAL 30 DAYS PRIOR TO PAVING.
23. CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT AS SHOWN TO ALLOW FOR A CLEAN, STRAIGHT JOINT BETWEEN OLD AND NEW SURFACES. CONTRACTOR SHALL REMOVE ALL PAVEMENT, BASE MATERIALS, CURBING, ETC. WITHIN SAWCUT LIMITS OF CONSTRUCTION.
24. 8" WIDE CURB ALONG DRIVE–THRU WALL.
25. REFER TO HANDICAP SIGNAGE DETAIL, ON ADA PLAN, FOR BOLLARD REQUIREMENTS AT HANDICAP SIGNS.
26. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND PER CITY OF UNIVERSITY PARK REQUIREMENTS.
27. 12" WIDE CONCRETE STRIP (4" THICK) BEHIND CURB AND ADJACENT TO PARKING AT LOCATIONS SHOWN.
28. TRANSITION FROM 6" CURB TO FLUSH CURB WITHIN 2' ON EITHER SIDE OF ADA RAMP, WHERE SHOWN.
29. SLOPE ON ALL ADA ACCESSIBLE ROUTES SHALL NOT EXCEED 1:20 IN THE DIRECTION OF TRAVEL AND 1:50 CROSS SLOPE. THE SLOPE WITHIN ALL ADA ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. SEE ADA PLAN, THIS SET, FOR ADDITIONAL INFORMATION.

PHASING REQUIREMENTS

THE CONTRACTOR SHALL NOT IMPEDE TRAFFIC TO THE EXISTING BANK, SOUTH OF THE CVS PROJECT. CONTRACTOR SHALL PHASE PAVEMENT REMOVAL TO ALLOW SAFE PASSAGE THROUGH THE CVS PROJECT SITE TO THE BANK PROPERTY. THIS SHALL BE MAINTAINED AT ALL TIMES. PROVIDE TEMPORARY SIGNAGE/TRAFFIC CONTROL TO DIRECT BANK CUSTOMERS WHERE TO ACCESS THE SITE AND PROVIDE SUFFICIENT CURING TIME BEFORE OPENING UP NEWLY POURED PAVEMENT TO TRAFFIC.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES, APPURTENANCES AND IMPROVEMENTS WHICH CONFLICT WITH THE IMPROVEMENTS SHOWN BY THESE PLANS.

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

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SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

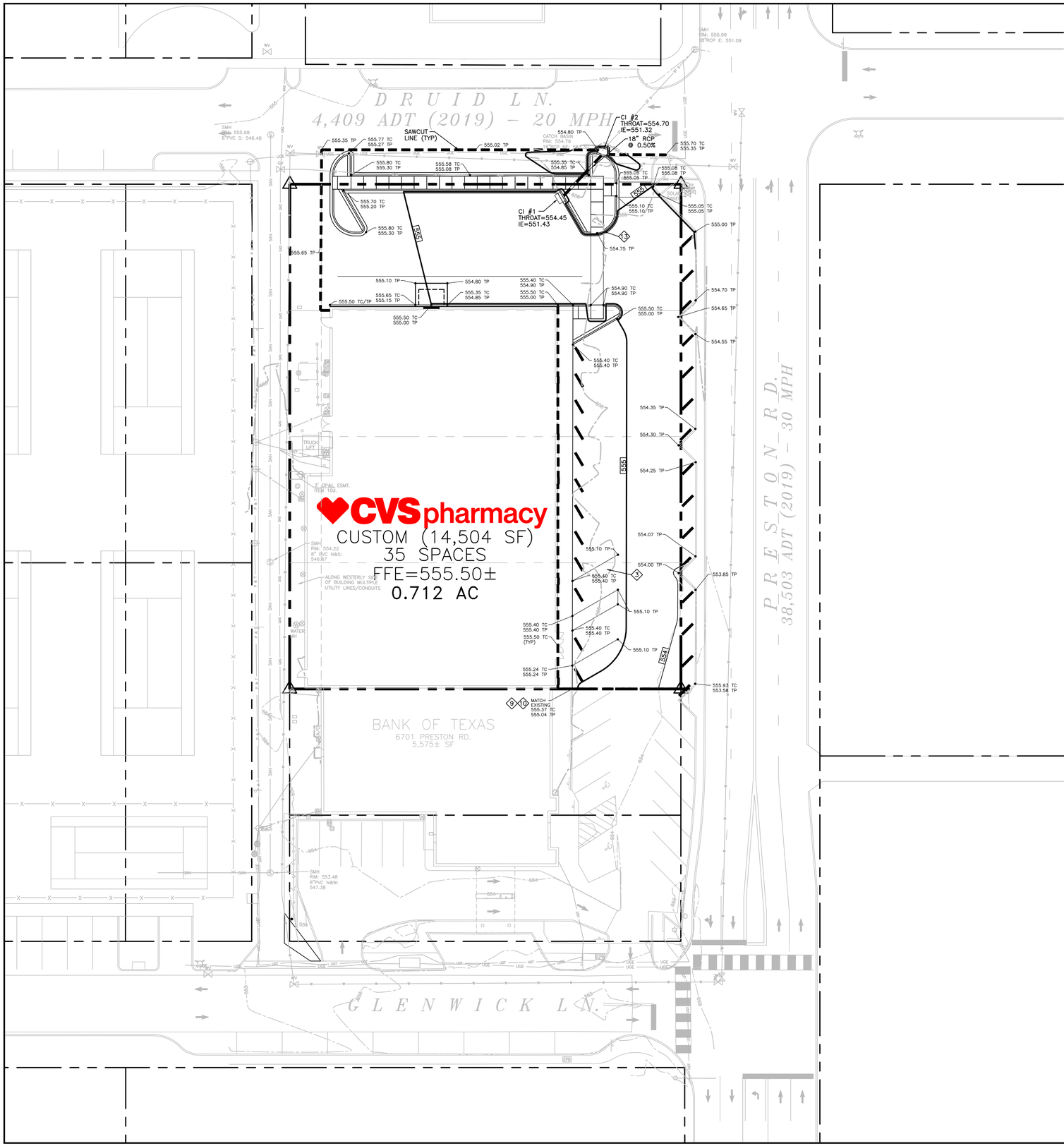
DRAWING BY: K. PRESLEY

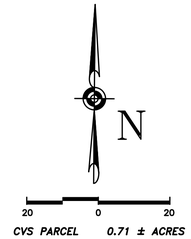
DATE: 29 OCTOBER 2020

TITLE: SITE PLAN

SHEET NUMBER:

COMMENTS:
NOT RELEASED FOR CONSTRUCTION





LEGEND

0000.00 TC	– TOP OF CURB
0000.00 TP	– TOP OF PAVEMENT
	– SAWCUT LINE

NOTES:

1. ALL UNSURFACED AREAS SHALL RECEIVE 6" TOPSOIL AND SOD. WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
2. THERE WILL BE NO SUBSTITUTIONS ALLOWED FOR PIPES SHOWN TO BE RCP.
3. SLOPE ON ALL ADA ACCESSIBLE ROUTES SHALL NOT EXCEED 1:20 IN THE DIRECTION OF TRAVEL AND 1:50 CROSS SLOPE. THE SLOPE WITHIN ALL ADA PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. SEE ADA PLAN, THIS SET, FOR ADDITIONAL INFORMATION.
4. THE CONTRACTOR SHALL HAVE ANY RIGHT–OF–WAY MONUMENTS LOCATED BY A LICENSED SURVEYOR PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES WITHIN THE RIGHT–OF–WAY. ANY MONUMENTS WHICH ARE DESTROYED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED.
5. PRIOR TO THE START OF CONSTRUCTION OF, OR CONNECTION TO ANY STORM DRAIN, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER OF RECORD AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER OF RECORD AND HIS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.
6. ALL EXISTING STRUCTURES ON–SITE INCLUDING BUT NOT LIMITED TO: BUILDING, CANOPIES, CONCRETE WALKS, ASPHALT DRIVES AND PARKING AREAS, CURBS, UTILITIES, SIGNS, CONCRETE PADS, ETC TO BE DEMOLISHED AND DISPOSED OF PROPERLY BY CONTRACTOR. ALL APPURTENANCES, FOOTINGS, UTILITIES, ETC ASSOCIATED WITH THE EXISTING BUILDINGS SHALL BE REMOVED. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS. ALL DISPOSAL OF ITEMS THAT ARE BEING REMOVED SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, OR FEDERAL REQUIREMENTS. THIS PLAN WAS PREPARED FROM THE PROJECT SURVEY AND SHOWS ITEMS REPRESENTED ON THE SURVEY. IT DOES NOT HOWEVER, NECESSARILY REPRESENT ALL ITEMS PRESENT IN THE FIELD. REFER TO THE DEMOLITION AND UTILITY PLANS FOR THE LIMITS OF EXISTING UTILITY REMOVAL AND RELOCATION. THE INTENT OF THESE PLANS IS TO REMOVE ALL ITEMS WHICH CONFLICT WITH THE IMPROVEMENTS. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE TO THE LEVEL NECESSARY TO INCLUDE THIS WORK IN THE BID.
7. REFER TO STRUCTURAL PLANS FOR OVEREXCAVATION AND PAD PREPARATION REQUIREMENTS.
8. CONTRACTOR SHALL ADJUST TOPS OF MANHOLES, CLEANOUTS, VALVES, ETC. TO MATCH FINAL GRADE.
9. CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT AS SHOWN TO ALLOW FOR A CLEAN, STRAIGHT JOINT BETWEEN OLD AND NEW SURFACES. CONTRACTOR TO REMOVE ALL PAVEMENT, BASE MATERIALS, CURBING, ETC. WITHIN SAWCUT LIMITS OF CONSTRUCTION.
10. CONNECT TO EXISTING CURB AND GUTTER AND/OR SIDEWALK. MATCH EXISTING IN GRADE, TYPE & ALIGNMENT.
11. CONTRACTOR TO USE EXTREME CAUTION WHEN INSTALLING STORM SEWER AND STORM SEWER STRUCTURES CVS FOUNDATIONS, BUILDING SIDEWALKS, & DUMPSTER ENCLOSURE TO AVOID DISTURBANCE TO EXISTING UTILITY LINES.
12. CONTRACTOR SHALL COORDINATE WITH TERRACON AND APPROPRIATE GOVERNMENT AGENCIES TO ENSURE EXISTING MONITORING WELLS ARE ABANDONED AND NEW WELLS ARE INSTALLED PROPERLY.
13. TRANSITION FROM FLUSH CURB TO 6" CURB WITHIN 2' OF SIDEWALK.
14. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION.
15. CONTRACTOR SHALL RE–INSTALL ALL EXISTING STREET SIGNS, IF DISTURBED BY CONSTRUCTION ACTIVITIES, PER CITY OF UNIVERSITY PARK AND TXDOT REQUIREMENTS.

PHASING REQUIREMENTS

THE CONTRACTOR SHALL NOT IMPEDE TRAFFIC TO THE EXISTING BANK, SOUTH OF THE CVS PROJECT. CONTRACTOR SHALL PHASE PAVEMENT REMOVAL TO ALLOW SAFE PASSAGE THROUGH THE CVS PROJECT SITE TO THE BANK PROPERTY. THIS SHALL BE MAINTAINED AT ALL TIMES. PROVIDE TEMPORARY SIGNAGE/TRAFFIC CONTROL TO DIRECT BANK CUSTOMERS WHERE TO ACCESS THE SITE AND PROVIDE SUFFICIENT CURING TIME BEFORE OPENING UP NEWLY POURED PAVEMENT TO TRAFFIC.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES, APPURTENANCES AND IMPROVEMENTS WHICH CONFLICT WITH THE IMPROVEMENTS SHOWN BY THESE PLANS.

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

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SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

DATE: 29 OCTOBER 2020

TITLE: GRADING PLAN

SHEET NUMBER:

COMMENTS:
NOT RELEASED FOR CONSTRUCTION

PLANT SCHEDULE

NOTE: ALL SIZES AND CONDITION OF NURSERY STOCK SHALL MEET THE STANDARDS ESTABLISHED IN THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE (BOTH MIN'S TO BE MET)	SPACING	CONDITION	REMARKS
TREES:							
2		QUERCUS TEXANA	TEXAS RED OAK	2" – 2-1/2" C / 10' – 12' HT	AS SHOWN	B&B	STRONG CENTRAL LEADER, FULL HEAD
1		ILEX VOMITORIA	NATIVE YAUPON HOLLY (TREE FORM)	5' – 6' HT	AS SHOWN	B&B/CONT	FULL HEAD w/UNIF. GROWTH 3' CLEAR TRUNK
SHRUBS:							
11		RHAPHIOLEPIS x DELACOURII 'GEORGIA PETITE'	'GEORGIA PETITE' INDIAN HAWTHORN	#3 (GAL) / 18' – 24" HT	42" O.C.	CONT	ROUND, FULL HEAD
GROUNDCOVERS:							
234		TRACHELOSPERMUM ASIATICUM	ASIATIC JASMINE	1 GAL	12" O.C.	CONT	(3) 12" RUNNERS MIN., FREE OF FIRE ANTS
FILL AREA		SHREDDED HARDWOOD MULCH	DOUBLE – HAMMERED	4" MIN DEPTH	SOLID	BULK	BROWN COLOR – DEPTH TO BE MEASURED AFTER SETTING

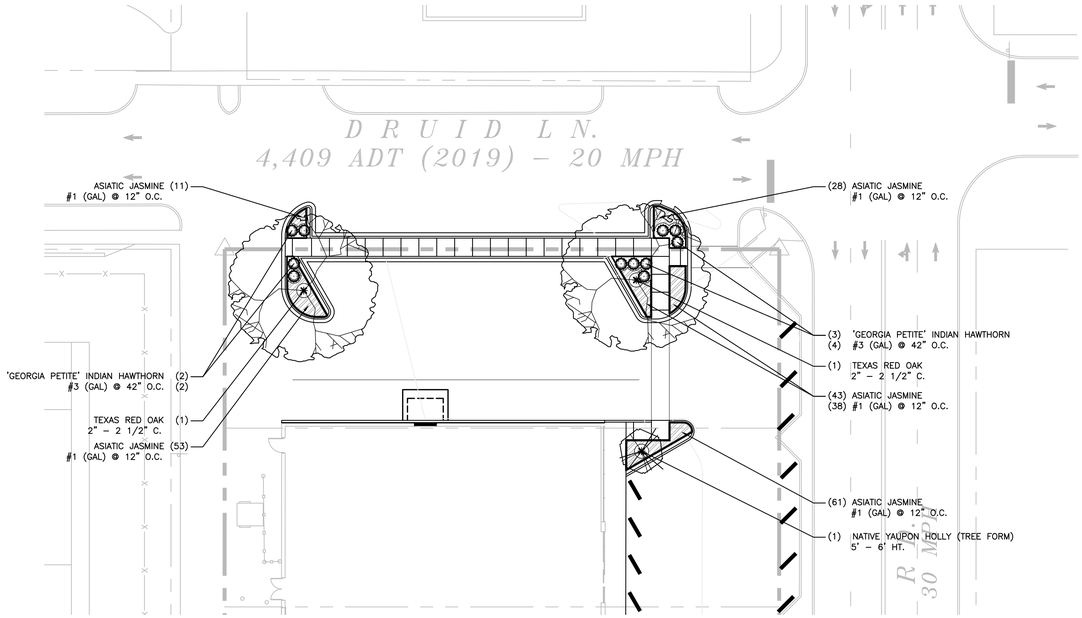
NOTE: SYMBOLS SHOWN IN TABLE ABOVE ARE FOR SPECIES IDENTIFICATION ONLY. PLANT SIZE SHOWN IN THE TABLE IS NOT INTENDED TO BE REPRESENTATIVE OF THE PLANT AT EITHER INSTALLATION OR MATURITY. SIZE OF SYMBOL SHOWN IN TABLE ABOVE MAY VARY FROM THOSE SHOWN ON PLANS.

NOTE: NO SUBSTITUTIONS OF PLANT MATERIALS ARE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT.

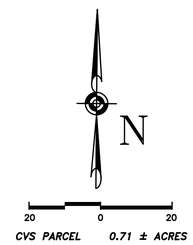
CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL MAINTENANCE AND A WARRANTY ON ALL PLANT MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.

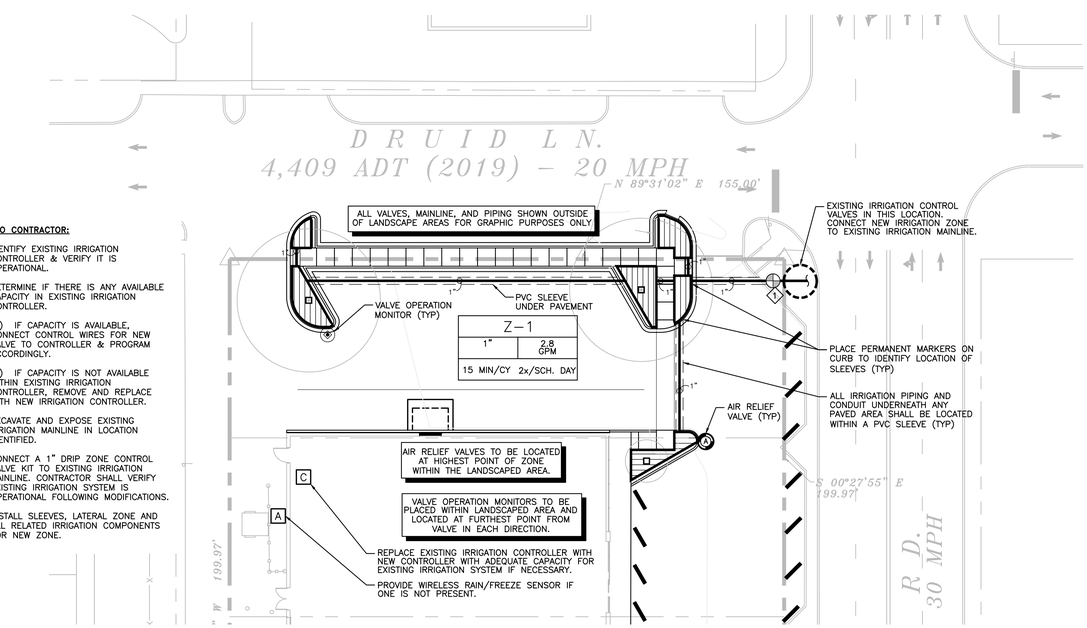
UNLESS SHOWN OTHERWISE, ALL LARGE CANOPY TREES SHALL MAINTAIN 25' HORIZONTAL CLEARANCE FROM ALL OVERHEAD UTILITY LINES AND 10' HORIZONTAL CLEARANCE FROM ALL UNDERGROUND UTILITY LINES.

ALL LANDSCAPE AREAS SHALL BE FULLY IRRIGATED AS SHOWN ON THE IRRIGATION PLAN. SEE IRRIGATION PLAN, THIS SET, FOR ADDITIONAL INFORMATION.



PLANTING PLAN:





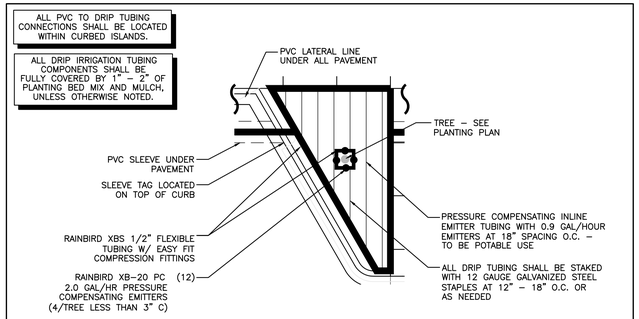
NOTE TO CONTRACTOR:

1. IDENTIFY EXISTING IRRIGATION CONTROLLER & VERIFY IT IS OPERATIONAL.
2. DETERMINE IF THERE IS ANY AVAILABLE CAPACITY IN EXISTING IRRIGATION CONTROLLER.
3. (a) IF CAPACITY IS AVAILABLE, CONNECT CONTROL WIRES FOR NEW VALVE TO CONTROLLER & PROGRAM ACCORDINGLY.
3. (b) IF CAPACITY IS NOT AVAILABLE WITHIN EXISTING IRRIGATION CONTROLLER, REMOVE AND REPLACE WITH NEW IRRIGATION CONTROLLER.
4. EXCAVATE AND EXPOSE EXISTING IRRIGATION MAINLINE IN LOCATION IDENTIFIED.
5. CONNECT A 1" DRIP ZONE CONTROL VALVE KIT TO EXISTING IRRIGATION MAINLINE. CONTRACTOR SHALL VERIFY EXISTING IRRIGATION SYSTEM IS OPERATIONAL FOLLOWING MODIFICATIONS.
6. INSTALL SLEEVES, LATERAL ZONE AND ALL RELATED IRRIGATION COMPONENTS FOR NEW ZONE.

IRRIGATION PLAN:

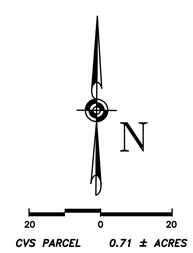
ALL PVC TO DRIP TUBING CONNECTIONS SHALL BE LOCATED WITHIN CURBED ISLANDS.

ALL DRIP IRRIGATION TUBING COMPONENTS SHALL BE FULLY COVERED BY 1" – 2" OF PLANTING BED MIX AND MULCH, UNLESS OTHERWISE NOTED.



NOT TO SCALE

IRRIGATION ENLARGEMENT 1



CHARLES WALKER
Certified Irrigation Designer
CID
Irrigation Association
006705
10/29/20

MAINLINE FOR IRRIGATION SYSTEM SHALL BE BEDDED WITHIN TRENCH AS PER WATERLINE SPECIFICATIONS. LATERAL LINES MAY BE AND SHALL BE BACKFILLED AS PER SPECIFICATIONS IN A COMMON TRENCH WITH THE MAIN LINE PROVIDED MINIMIUM SEPARATION IS PROVIDED

MAINLINE FOR IRRIGATION SYSTEM SHALL NOT ENCROACH UPON R.O.W. OR OTHER LOTS. ALL COMPONENTS OF THE IRRIGATION SYSTEM SHALL REMAIN ON OWNERS PROPERTY.

GENERAL CONTRACTOR SHALL ENSURE THAT SLEEVES INSTALLED ARE LARGE ENOUGH TO ACCOMMODATE ALL NECESSARY PIPING, AS PER SPECIFICATIONS.

PERMANENT MARKERS SHALL BE PLACED ON CURBS TO IDENTIFY LOCATIONS OF ALL IRRIGATION SLEEVES.

CONTRACTOR SHALL CONTACT 811 FOR LOCATION OF ALL UTILITIES AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

Texas811
Know what's below.
Call before you dig.

IRRIGATION LEGEND

	CONTRACTOR PROVIDED COMPONENTS
C	NEW IRRIGATION CONTROLLER TO BE WALL MOUNTED IN LOCKING CABINET–RAINBIRD ESP–ME SERIES. AVAILABLE CAPACITY TO ACCOMODATE EXISTING IRRIGATION SYSTEM IF NECESSARY.
A	WIRELESS RAIN/FREEZE SENSOR – HUNTER MINI–CLIK
	IRRIGATION CONNECTION COMPONENTS
I	IRRIGATION WATER TAP AND CITY WATER METER ON POTABLE WATER UTILITY LINE WITH BACKFLOW PREVENTER. PROVIDED BY CONTRACTOR. COORDINATE SOURCE LOCATION WITH GENERAL CONTRACTOR. SEE UTILITY PLAN FOR SIZE.
	REDUCED PRESSURE BACKFLOW DEVICE (LINE SIZE). PER LOCAL CODES: PROVIDE GREEN FIBERGLASS INSULATED ENCLOSURE, VERIFY EXACT LOCATION IN FIELD. FEBCO 825Y, OR EQUAL.
	ISOLATION VALVE (LINE SIZE). PROVIDE 15" VALVE BOX WITH EXTENSIONS. BRONZE THREAD ON TYPE WITH WHEEL HANDLE.
	VALVE OPERATION MONITOR – CAPPED IRRIGATION SPRAY HEAD
A	AIR RELIEF VALVES WITH REMOVABLE FLUSH CAPS TO BE LOCATED AT ALL ZONES WHERE INLINE EMITTER TUBING IS USED.
X	1" MEDIUM FLOW VALVE WITH 40 PSI PRESSURE REDUCER MOUNTED IN 15" STANDARD PLASTIC VALVE BOX. "X" IS ZONE DESIGNATION. **FOR USE IN ZONES WHERE THE FLOW RATE IS BETWEEN 4.0 GPM AND 15.0 GPM.**
UFW	UNDERGROUND FEEDER WIRE NO. 14 AWG DIRECT BURIAL RUN IN CONDUIT.
	PVC SLEEVE SCHEDULE 40 PVC UNDER ALL PAVED SURFACES. SEE SCHEDULE FOR SIZE. PLACE PERMANENT MARKERS ON CURB TO IDENTIFY LOCATION.
SIZE	PVC MAINLINE PIPE. SCHEDULE 40, PVC PIPE, 2.5" AND SMALLER–SOLVENT WELD PIPE AND PVC SOLVENT WELD FITTINGS. PVC SLEEVES SHALL BE REQUIRED UNDER SIDEWALKS, CURBS, OR ANY PAVED SURFACES. REFER TO SPECIFICATIONS FOR SIZES OF SLEEVES.
SIZE	PVC LATERAL PIPE. CLASS 200, SOLVENT WELD, PVC PIPE FOR PIPE OVER 1" IN DIAMETER. SIZE LATERAL PIPE AS SHOWN AT VELOCITIES OF 5 FEET PER SECOND OR LESS. PVC SLEEVES SHALL BE REQUIRED UNDER SIDEWALKS, CURBS, OR ANY PAVED SURFACES. REFER TO SPECIFICATIONS FOR SIZES OF SLEEVES.
SIZE	PVC LATERAL PIPE. CLASS 315, SOLVENT WELD, PVC PIPE FOR PIPE 1" IN DIAMETER OR LESS. SIZE LATERAL PIPE AS SHOWN AT VELOCITIES OF 5 FEET PER SECOND OR LESS. PVC SLEEVES SHALL BE REQUIRED UNDER SIDEWALKS, CURBS, OR ANY PAVED SURFACES. REFER TO SPECIFICATIONS FOR SIZES OF SLEEVES.
	RAINBIRD 1/2" POLYETHYLENE TUBING TO BE EITHER: • PRESSURE COMPENSATING INLINE EMITTER TUBING WITH 0.9 GAL/HOUR EMITTERS AT 18" SPACING O.C. OR • XBS 1/2" BLANK TUBING, AS LABELED ON PLANS.
1"	PIPE SIZE – UNLABELED PIPE BETWEEN 2 SIZES SHALL BE THE LARGER SIZE.
	PIPE JOINT
	PIPES CROSS. DO NOT INTERSECT
Z-3 / 1" / 4G / 12 MIN/CY 4x/SCH. DAY	XX.XX – CONTROLLER STATION NUMBER; X – GALLONS PER MINUTE; X – SIZE OF VALVE; XX.XX.XX – FREQUENCY AND DURATION OF ZONE RUN TIME
	1. THE POINT OF CONNECTION IS A WATERLINE STUBBED AT THE NORTHEAST CORNER OF THE SITE. SERVICE COMES FROM METER AND BACKFLOW PREVENTER. 2. REFER TO UTILITY PLAN, THIS SET, FOR ADDITIONAL INFORMATION.

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

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SEAL:

REGISTERED LANDSCAPE ARCHITECT
CHARLES R. WALKER
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STATE OF TEXAS
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

DATE: 29 OCTOBER 2020

TITLE: LANDSCAPE AND IRRIGATION PLAN

SHEET NUMBER:

COMMENTS:
NOT RELEASED FOR CONSTRUCTION

PLANTING NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION TO OWNER'S SATISFACTION, AT NO ADDITIONAL COST. NO PLANTING SHALL BE INSTALLED IN CONFLICT WITH UTILITIES.
2. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON THE BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF UTILITY LINES ON THE PROJECT SITE AND ADJACENT TO THE WORK AREA. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD.
3. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING SITE CONDITIONS PRIOR TO PROCEEDING. IF UNFORESEEN CIRCUMSTANCES ARE ENCOUNTERED, THE CONTRACTOR IS TO STOP WORK AND CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY.
4. SAFE, CLEARLY MARKED PEDESTRIAN AND VEHICULAR ACCESS TO ALL ADJACENT PROPERTIES MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
5. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
6. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
7. ALL PLANTS MUST BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
8. ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
9. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
10. ALL LANDSCAPED AREAS SHALL BE SPRAYED WITH HERBICIDE 4 WEEKS PRIOR TO INSTALLATION OF LANDSCAPING. THE EXISTING MATERIAL SHALL BE REMOVED BEFORE ANY INSTALLATION OF PLANT MATERIAL OR SEED.
11. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
12. ALL NEW TREES SHALL HAVE 'MYCOR TREE SAVER' OR EQUAL MYCORIZAL FUNGAL TREATMENT INSTALLED AT RATE RECOMMENDED BY MANUFACTURER AT THE TIME OF INSTALLATION.
13. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
14. ALL SHRUB BED AREAS SHALL RECEIVE A MIN OF 8" OF PLANTING BED MIX AS DESCRIBED IN PLANTING BED PREP DETAIL (THIS PAGE).
15. GRADE PLANTING BEDS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. ALL BED AREAS SHALL BE BERMED TO PROMOTE GOOD BED DRAINAGE (AFTER GENTLE TOPSOIL TAMPING).
16. ALL CONSTRUCTION AREAS ON THE SUBJECT CVS PHARMACY SITE TO RECEIVE TURFGRASS SHALL RECEIVE A 6" MIN DEPTH OF SUITABLE TOPSOIL MIX PER DETAILS AND SPECIFICATIONS.
17. PRIOR TO PLANTING OR SEEDING, MULTIPLE REPRESENTATIVE SAMPLES OF THE TOPSOIL SOURCE SHALL BE TAKEN AND SENT TO A QUALIFIED TESTING AGENCY FOR ANALYSIS. FERTILIZE SUITABLE TOPSOIL IN TURFGRASS AREAS AS PER TESTING AGENCY'S RECOMMENDATIONS FOR TURFGRASS SPECIES SPECIFIED ON PLANS. THE PLANTING BED MIX TO BE USED IN SHRUB PLANTING BEDS IS TO BE FERTILIZED AS PER TESTING AGENCY'S RECOMMENDATIONS FOR ORNAMENTAL PLANTINGS.
18. ALL PLANTING BEDS SHALL HAVE 'SURFLAN' OR EQUAL PRE-EMMERGENT HERBICIDE BROADCAST AT RATE RECOMMENDED BY MANUFACTURER.
19. PLANTING OPERATIONS SHOULD ONLY TAKE PLACE DURING SUITABLE WEATHER CONDITIONS. PLANTS ARE NOT TO BE INSTALLED WHEN THE SOIL IS EITHER HIGHLY SATURATED OR FROZEN.
20. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
21. DURING THE GROWING SEASON ALL ANNUALS SHALL REMAIN IN A HEALTHY, VIABLE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
22. ALL PLANTING AREAS, SHRUB, GROUND COVER AND SEASONAL COLOR ANNUAL PLANTING BEDS, ARE TO BE COMPLETELY COVERED WITH SHREDDED HARDWOOD MULCH AND SHALL MAINTAIN A MINIMUM LAYER OF FOUR INCHES (4") IN DEPTH AFTER SETTLING.
23. THERE IS NO SEPARATE PAY ITEM FOR DRESSING OUT SHRUB BEDS OR TREE SAUCERS WITH SHREDDED HARDWOOD MULCH, IT SHALL BE INCLUDED WITH THE COST OF ALL PLANT MATERIALS.
24. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK. ALL PLANT MATERIALS QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN.
25. ALL UNSURFACED AREAS, EXCEPT FOR THE UNSURFACED PARCEL ADJACENT TO THE SUBJECT CVS PARCEL, SHALL RECEIVE A 6" LAYER OF SUITABLE TOPSOIL AND SOD. THE UNSURFACED PARCEL ADJACENT TO THE CVS PARCEL SHALL RECEIVE A 2" LAYER OF SUITABLE TOPSOIL AND SEED. WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
26. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC) OF THE PLANTING AREAS AND LAWN UNTIL APPROVED BY THE LANDSCAPE ARCHITECT AND THE WORK IS ACCEPTED IN TOTAL BY THE OWNER.
27. ALL PLANT MATERIALS SHALL BE UNCONDITIONALLY GUARANTEED IN ACCORDANCE WITH THE FOLLOWING SPECIAL WARRANTY GUIDELINES AGAINST ALL DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH.
   - WARRANTY PERIOD FOR TREES AND SHRUBS: ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
   - WARRANTY PERIOD FOR GROUND COVER AND PLANTS: SIX MONTHS FROM DATE OF SUBSTANTIAL COMPLETION.
28. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL GUY WIRES AT THE END OF THE 1 YEAR WARRANTY PERIOD FOR TREES.
29. REFER TO PROJECT SITEWORK SPECIFICATIONS FOR ALL INFORMATION NEEDED FOR IMPLEMENTATION OF PLANTING PLANS.

PLANTING NOTES

PARKING LOT ISLAND PREPARATION

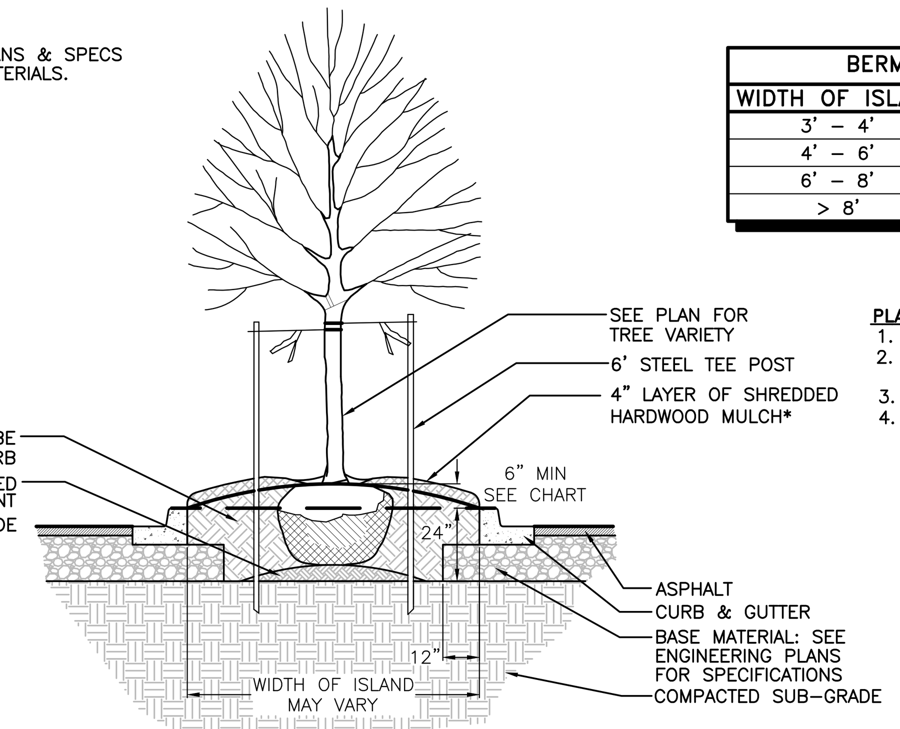
1. REMOVE ALL THE COMPACTED STONE AND FILL DIRT OUT OF THE CENTER OF THE ISLANDS DOWN TO A DEPTH OF 24" BELOW THE TOP OF THE CONCRETE CURB.
2. ADD PLANTING BED MIX AND FIRMLY TAMP TO CREATE A SETTING BED (6" MIN) UNDER ROOTBALL.
5. ADD 24" OF SUITABLE PLANTING BED MIX ON TOP OF THE WASHED GRAVEL. LIGHTLY TAMP THE PLANTING BED MIX IN 8" LIFTS.
6. ADD ANOTHER LAYER OF PLANTING BED MIX IN ADDITION TO THE 24" LAYER TO ACHIEVE THE REQUIRED BERMING EFFECT. MAKE SURE TO ADD THE NECESSARY AMOUNT OF PLANTING BED MIX TO ACHIEVE THE CORRECT BERMING HEIGHT.

USE THE BERMING CHART ABOVE TO CALCULATE BERM HEIGHTS FOR EACH ISLAND.

ALL TREE STAKING MATERIAL IS TO BE REMOVED AFTER THE FIRST FULL GROWING SEASON

*MULCH TO BE KEPT AWAY FROM THE TRUNK OF ALL PLANT MATERIAL.

NOTE:
SEE PLANS & SPECS FOR MATERIALS.



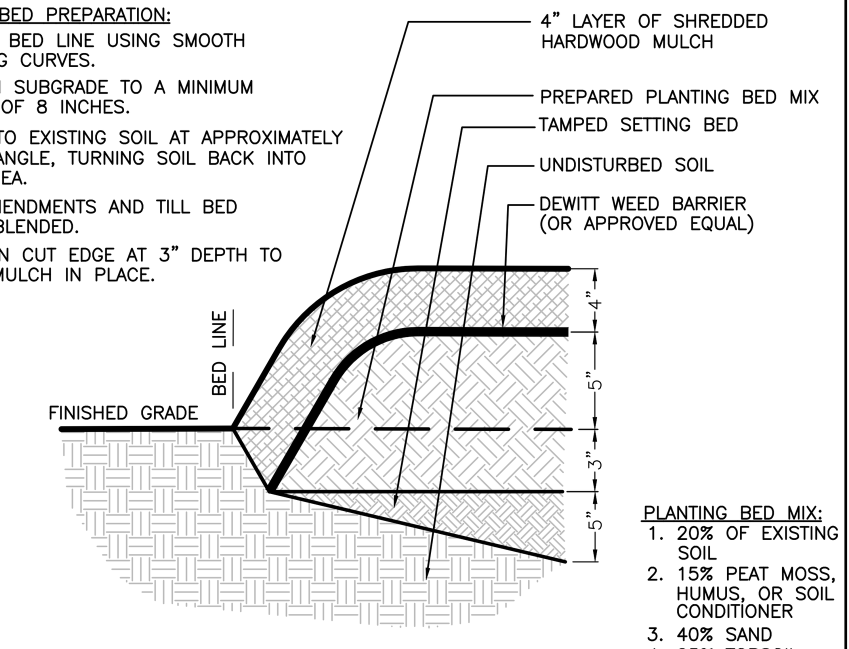
BERMING CHART	
WIDTH OF ISLAND	BERM HEIGHT
3' – 4'	6"
4' – 6'	8"
6' – 8'	12"
> 8'	1-1/2" / 1'-0" WIDTH

PLANTING BED MIX:
1. 20% OF EXISTING SOIL
2. 15% PEAT MOSS, HUMUS, OR SOIL CONDITIONER
3. 40% SAND
4. 25% TOPSOIL

TYPICAL ISLAND

NTS

PLANTING BED PREPARATION:
1. LAYOUT BED LINE USING SMOOTH FLOWING CURVES.
2. LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 8 INCHES.
3. CUT INTO EXISTING SOIL AT APPROXIMATELY A 60° ANGLE, TURNING SOIL BACK INTO BED AREA.
4. ADD AMENDMENTS AND TILL BED UNTIL BLENDED.
5. MAINTAIN CUT EDGE AT 3" DEPTH TO HOLD MULCH IN PLACE.



*MULCH TO BE KEPT 3" AWAY FROM THE TRUNK OF ALL PLANT MATERIAL.

NTS

PLANTING BED MIX:
1. 20% OF EXISTING SOIL
2. 15% PEAT MOSS, HUMUS, OR SOIL CONDITIONER
3. 40% SAND
4. 25% TOPSOIL
5. FERTILIZE AS RECOMMENDED BY QUALIFIED TESTING AGENCY FOR ORNAMENTAL PLANTINGS.

PLANTING BED PREP

	SHADE AND FLOWERING TREES				
	CALIPER	HEIGHT TYPE 1	HEIGHT TYPE 2	MINIMUM DIAMETER BALL	BALL DEPTH
	INCHES	FEET	FEET	INCHES	INCHES
MEASURED 6" ABOVE GRADE	1"	8'-10'	6'-7'	16"	12"
	1-1/2"	10'-12'	8'-9'	20"	15"
	2"	12'-14'	8'-10'	24"	16"
	2-1/2"	12'-14'	8'-10'	28"	18"
	3"	14'-16'	10'-12'	32"	19"
	3-1/2"	14'-16'	10'-12'	38"	23"
	4"	16'-18'	10'-12'	42"	25"
MEASURED 12" ABOVE GRADE	4-1/2"	16'-18'	10'-12'	48"	29"
	5"	18'+	12'+	54"	32"
	5-1/2"	18'+	12'+	57"	34"
	6"	20'+	14'+	60"	36"
	7"	24'+	16'+	70"	42"
	8"	26'+	18'+	80"	48"

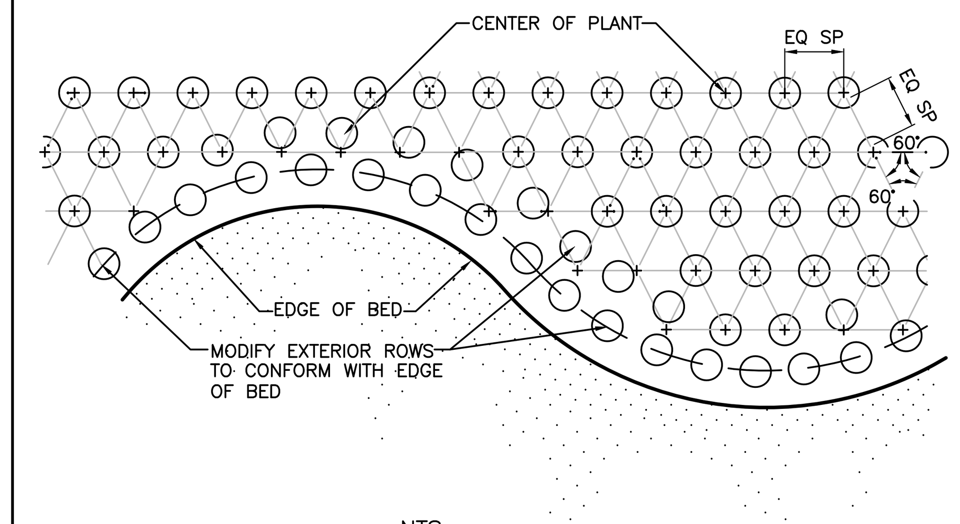
SOURCE: AMERICAN STANDARD FOR NURSERY STOCK – CALIPER TAKES PRECEDENCE OVER HEIGHT FOR TYPE I SHADE TREES.

TYPE 1 (LARGE SHADE TREES)	TYPE 2 (MEDIUM/SLOW SHADE TREES)	TYPE 3 (SMALL UPRIGHT TREES)	TYPE 4 (SMALL SPREADING TREES)
ACER RUBRUM	AESCULUS *SPP*	ACER CAMPESTRE	ACER PALMATUM
ACER SACCHARUM	CELTIS *SPP*	AMELANCHIER *SPP*	ACER GRISEUM
BETULA *SPP*	CLADRASTIS LUTEA	CARPINUS *SPP*	CORNUS *SPP*
GINKGO *SPP*	FAGUS SYLVATICA	CERCIS *SPP*	LAGERSTROMIA *SPP*
GLEDITISA *SPP*	KOELREUTERIA *SPP*	CRATAEGUS *SPP*	MAGNOLIA SOULANGIANA
PLATANUS *SPP*	LABURNUM *SPP*	OXYDENDRUM *SPP*	MAGNOLIA STELLATA
QUERCUS *SPP*	LIQUIDAMBAR *SPP*	MAGNOLIA VIRGINIANA	VITEX *SPP*
TAXODIUM *SPP*	MAGNOLIA GRANDIFLORA	PRUNUS *SPP*	
SALIX *SPP*	NYSSA *SPP*	PYRUS *SPP*	
ZELKOVA *SPP*	OLEA EUROPA	STYRAX *SPP*	
	QUERCUS ALBA	SYRINGA RETICULATA	
	SORBUS *SPP*		
	TILIA CORDATA		
	ULMUS PARVIFOLIA		

ALL MINIMUM SIZES SHALL BE MET: CALIPER, HEIGHT, AND ROOT BALL

TREE SIZE/ROOT BALL RELATIONSHIP

SPACING VARIES WITH PLANT SPECIES. SEE PLAN FOR SPACING.



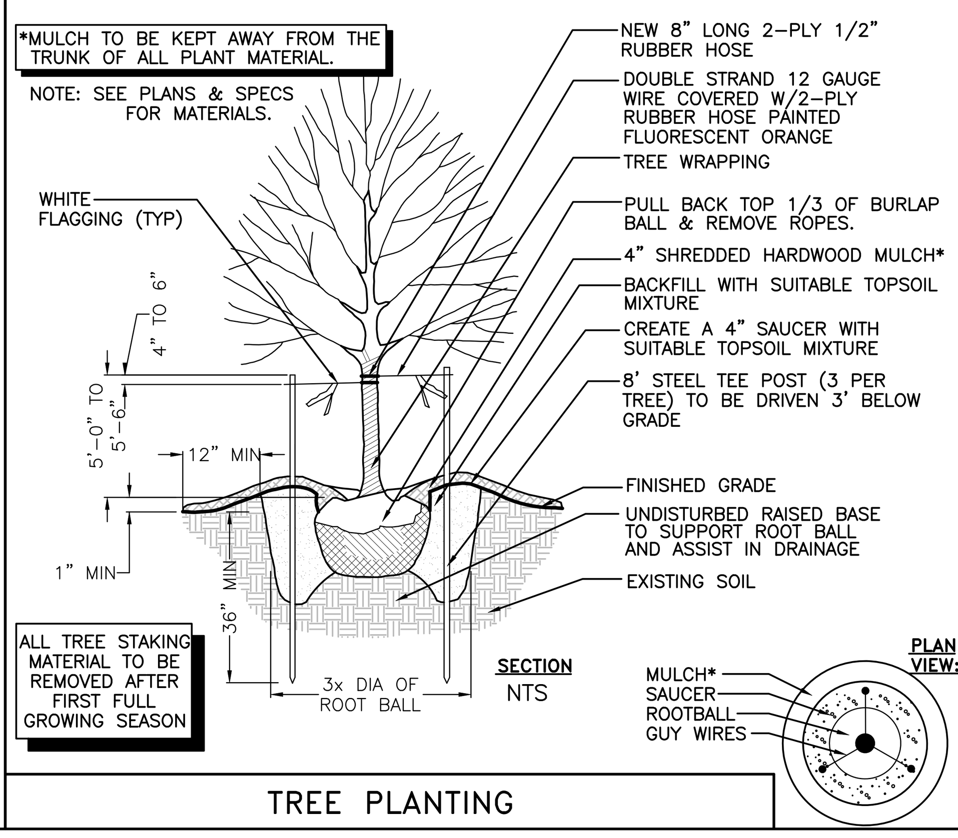
NTS

*MULCH TO BE KEPT AWAY FROM THE TRUNK OF ALL PLANT MATERIAL.

PLANT SPACING

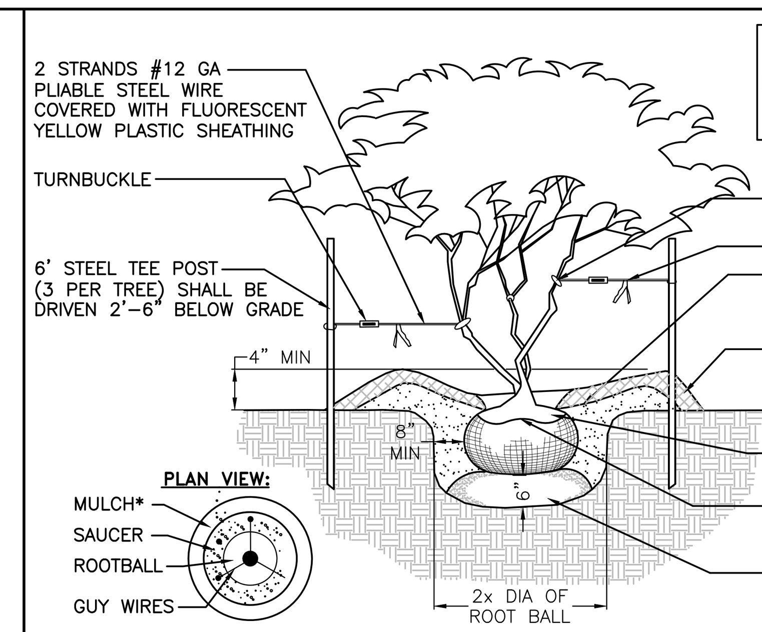
*MULCH TO BE KEPT AWAY FROM THE TRUNK OF ALL PLANT MATERIAL.

NOTE: SEE PLANS & SPECS FOR MATERIALS.



ALL TREE STAKING MATERIAL TO BE REMOVED AFTER FIRST FULL GROWING SEASON

TREE PLANTING



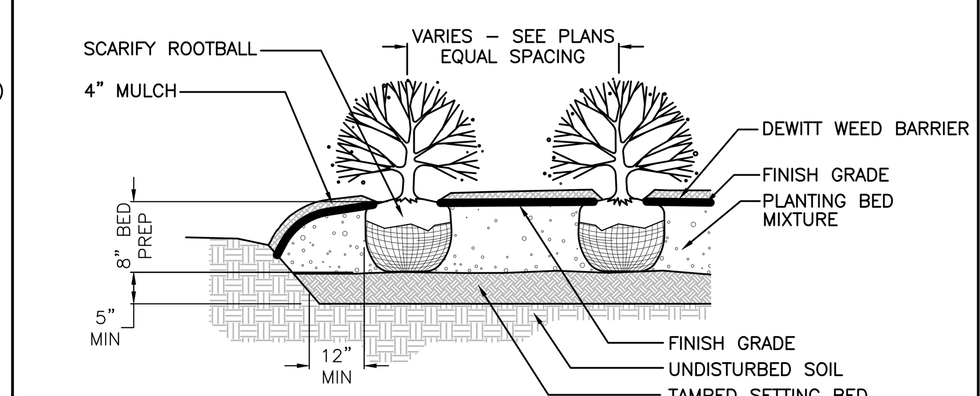
*MULCH SHALL BE KEPT AWAY FROM THE TRUNK OF ALL PLANT MATERIAL.

NOTE:
1. WITH MULTI-TRUNK PLANTS ATTACH GUYS TO VARIOUS LIMBS.
2. SELECT PRUNE 1/3 BRANCHING HABIT CONFORM TO HORT PRACTICES AS EST BY AMERICAN ASSOC OF NURSERYMEN-AMERICAN STD FOR NURSERY STOCK, LATEST EDITION. (TYP FOR ALL TREE AND SHRUB PLANT MATL). RECEIVE LANDSCAPE ARCH'S APPROVAL.
3. TREES OF SAME SPECIES SHALL BE MATCHED IN GROWTH AND UNIFORMITY.

ALL TREE STAKING MATERIAL SHALL BE REMOVED AFTER FIRST FULL GROWING SEASON

MULTI-TRUNKED TREE PLANTING

TYPICAL BED LAYOUT:
1. LAYOUT PERIMETER PLANTING SPACED AS PER PLAN.
2. FILL IN PLANTING BED WITH TRIANGULAR SPACING.
3. ADJUST AS PER LANDSCAPE ARCHITECT'S INSTRUCTIONS.



NTS

*** NOTE:**
MULCH SHALL BE A 4" LAYER OF SHREDDED HARDWOOD MULCH AFTER SETTLING – UNLESS OTHERWISE NOTED

*MULCH SHALL BE KEPT AWAY FROM THE TRUNK OF ALL PLANT MATERIAL.

SHRUB PLANTINGS

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
HURST, TEXAS 76054
TEL (817) 285-7444
FAX (817) 285-7318

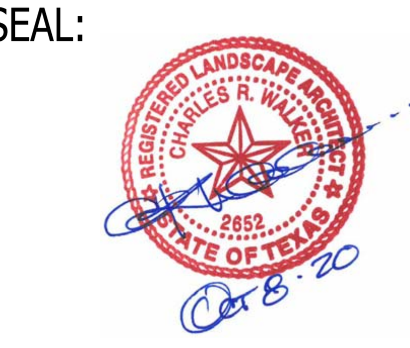
CONSULTANT:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons
Bartlett, TN 38133
Phone (901) 384-0404
Fax (901) 384-0710

DEVELOPER:

ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

SEAL:



REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

DATE: 29 OCTOBER 2020

TITLE: LANDSCAPE DETAILS

SHEET NUMBER: 14 OF 21

COMMENTS: NOT RELEASED FOR CONSTRUCTION

SITE LAWNS AND GRASSES

PART 1– GENERAL

1.1 DELIVERY, STORAGE, AND HANDLING
SOD: HARVEST, DELIVER, STORE, AND HANDLE SOD ACCORDING TO REQUIREMENTS IN TPI'S "SPECIFICATIONS FOR TURFGRASS SOD MATERIALS" AND "SPECIFICATIONS FOR TURFGRASS SOD TRANSPLANTING AND INSTALLATION" IN ITS "GUIDELINE SPECIFICATIONS TO TURFGRASS SODDING."

PART 2 – PRODUCTS

2.1 SEED
SEED SPECIES: STATE–CERTIFIED SEED OF GRASS SPECIES, AS FOLLOWS:
FULL SUN: TURF TYPE "TIFTON 419" BERMUDA SODA

2.2 TURFGRASS SOD
TURFGRASS SOD: NUMBER 1 QUALITY/PREMIUM, INCLUDING LIMITATIONS ON THATCH, WEEDS, DISEASES, NEMATODES, AND INSECTS, COMPLYING WITH TPI'S "SPECIFICATIONS FOR TURFGRASS SOD MATERIALS" IN ITS "GUIDELINE SPECIFICATIONS TO TURFGRASS SODDING." FURNISH VIABLE SOD OF UNIFORM DENSITY, COLOR, AND TEXTURE, STRONGLY ROOTED, AND CAPABLE OF VIGOROUS GROWTH AND DEVELOPMENT WHEN PLANTED.
TURFGRASS SPECIES: TURF TYPE "TIFTON 419" BERMUDA SOD.

2.3 PLANTING MATERIALS
A. TOPSOIL: ASTM D 5268, PH RANGE OF 5.5 TO 7, A MINIMUM OF 3 PERCENT ORGANIC MATERIAL CONTENT; FREE OF STONES 1 INCH OR LARGER IN ANY DIMENSION AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH. IMPORT TOPSOIL FROM EITHER OF THE FOLLOWING SOURCES:
B. TOPSOIL: REUSE SURFACE SOIL STOCKPILED ON–SITE AND SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF–SITE SOURCES WHEN QUANTITIES ARE INSUFFICIENT. VERIFY SUITABILITY OF STOCKPILED SURFACE SOIL TO PRODUCE TOPSOIL. AMEND EXISTING IN–PLACE SURFACE SOIL TO PRODUCE TOPSOIL. VERIFY SUITABILITY OF SURFACE SOIL TO PRODUCE TOPSOIL. SURFACE SOIL MAY BE SUPPLEMENTED WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF–SITE SOURCES.
C. LIME: ASTM C 602, CLASS T, AGRICULTURAL LIMESTONE CONTAINING A MINIMUM 80 PERCENT CALCIUM CARBONATE EQUIVALENT.
D. SULFUR: GRANULAR, BIODEGRADABLE, CONTAINING A MINIMUM OF 90 PERCENT SULFUR, WITH A MINIMUM 99 PERCENT PASSING THROUGH NO. 6 (3.35–MM) SIEVE AND A MAXIMUM 10 PERCENT PASSING THROUGH NO. 40 (0.425–MM) SIEVE.
E. COMPOST: WELL–COMPOSTED, STABLE, AND WEED–FREE ORGANIC MATTER, PH RANGE OF 5.5 TO 8.
F. PEAT: SPHAGNUM PEAT MOSS, PARTIALLY DECOMPOSED, FINELY DIVIDED OR GRANULAR TEXTURE, WITH PH RANGE OF 3.4 TO 4.8. FINELY DIVIDED OR GRANULAR TEXTURE, WITH PH RANGE OF 6 TO 7.5, CONTAINING PARTIALLY DECOMPOSED MOSS PEAT, NATIVE PEAT, OR REED–SEDGE PEAT AND HAVING WATER–ABSORBING CAPACITY OF 1100 TO 2000 PERCENT.
G. WOOD DERIVATIVES: DECOMPOSED, NITROGEN–TREATED SAWDUST, GROUND BARK, OR WOOD WASTE; OF UNIFORM TEXTURE, FREE OF CHIPS, STONES, STICKS, SOIL, OR TOXIC MATERIALS.
H. BONEMEAL: COMMERCIAL, RAW OR STEAMED, FINELY GROUND; A MINIMUM OF 4 PERCENT NITROGEN AND 20 PERCENT PHOSPHORIC ACID.
I. SUPERPHOSPHATE: COMMERCIAL, PHOSPHATE MIXTURE, SOLUBLE; A MINIMUM OF 20 PERCENT AVAILABLE PHOSPHORIC ACID.
J. COMMERCIAL FERTILIZER: COMMERCIAL–GRADE COMPLETE FERTILIZER OF NEUTRAL CHARACTER, CONSISTING OF FAST – AND SLOW–RELEASE NITROGEN, 50 PERCENT DERIVED FROM NATURAL ORGANIC SOURCES OF UREA FORMALDEHYDE, PHOSPHOROUS, AND POTASSIUM IN THE FOLLOWING COMPOSITION:
K. COMPOSITION: NITROGEN, PHOSPHOROUS, AND POTASSIUM IN AMOUNTS RECOMMENDED BY A QUALIFIED TESTING AGENCY.
L. SLOW–RELEASE FERTILIZER: GRANULAR OR PELLETED FERTILIZER CONSISTING OF 50 PERCENT WATER–INSOLUBLE NITROGEN, PHOSPHORUS, AND POTASSIUM IN THE FOLLOWING COMPOSITION:
M. COMPOSITION: NITROGEN, PHOSPHOROUS, AND POTASSIUM IN AMOUNTS RECOMMENDED BY A QUALIFIED TESTING AGENCY.
N. STRAW MULCH: PROVIDE AIR–DRY, CLEAN, MILDEW– AND SEED–FREE, SALT HAY OR THRESHED STRAW OF WHEAT, RYE, OATS, OR BARLEY.
O. PEAT MULCH: SPHAGNUM PEAT MOSS, PARTIALLY DECOMPOSED, FINELY DIVIDED OR GRANULAR TEXTURE, WITH PH RANGE OF 3.4 TO 4.8.
P. PEAT MULCH: FINELY DIVIDED OR GRANULAR TEXTURE, WITH PH RANGE OF 6 TO 7.5, CONTAINING PARTIALLY DECOMPOSED MOSS PEAT, NATIVE PEAT, OR REED–SEDGE PEAT AND HAVING WATER–ABSORBING CAPACITY OF 200 PERCENT.
Q. COMPOST MULCH: WELL–COMPOSTED, STABLE, AND WEED–FREE ORGANIC MATTER, PH RANGE OF 5.5 TO 8.

PART 3 – EXECUTION

3.1 LAWN PREPARATION
A. NEWLY GRADED SUBGRADES ON THE SUBJECT CVS SITE: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
B. APPLY SUPERPHOSPHATE FERTILIZER DIRECTLY TO SUBGRADE BEFORE LOOSENING. THOROUGHLY BLEND PLANTING SOIL MIX OFF–SITE BEFORE SPREADING OR SPREAD TOPSOIL, APPLY SOIL AMENDMENTS AND FERTILIZER ON SURFACE, AND THOROUGHLY BLEND PLANTING SOIL MIX.
C. SPREAD PLANTING SOIL MIX TO A DEPTH OF 6 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
D. NEWLY GRADED SUBGRADES ON THE UNSURFACED PARCEL ADJACENT TO THE CVS SITE: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 2 INCHES. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
E. APPLY SUPERPHOSPHATE FERTILIZER DIRECTLY TO SUBGRADE BEFORE LOOSENING THOROUGHLY BLEND PLANTING SOIL MIX OFF–SITE BEFORE SPREADING OR SPREAD TOPSOIL, APPLY SOIL AMENDMENTS AND FERTILIZER ON SURFACE, AND THOROUGHLY BLEND PLANTING SOIL MIX.
F. SPREAD PLANTING SOIL MIX TO A DEPTH OF 2 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.

3.2 UNCHANGED SUBGRADES:
A. IF LAWNS ARE TO BE PLANTED IN AREAS UNALTERED OR UNDISTURBED BY EXCAVATING, GRADING, OR SURFACE SOIL STRIPPING OPERATIONS, PREPARE SURFACE SOIL AS FOLLOWS:
B. REMOVE EXISTING GRASS, VEGETATION, AND TURF. DO NOT MIX INTO SURFACE SOIL. LOOSEN SURFACE SOIL TO A DEPTH OF AT LEAST OF 6 INCHES. APPLY SOIL AMENDMENTS AND FERTILIZERS ACCORDING TO PLANTING SOIL MIX PROPORTIONS AND MIX THOROUGHLY INTO TOP 6 INCHES OF SOIL. TILL SOIL TO A HOMOGENEOUS MIXTURE OF FINE TEXTURE. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, TRASH, AND OTHER EXTRANEOUS MATTER. LEGALLY DISPOSE OF WASTE MATERIAL, INCLUDING GRASS, VEGETATION, AND TURF, OFF OWNER'S PROPERTY.

3.3 FINISH GRADING:
A. GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/2 INCH OF FINISH ELEVATION. ROLL, RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINE GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE. MOISTEN PREPARED LAWN AREAS BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL. RESTORE AREAS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING AND BEFORE PLANTING.

3.3 SODDING
A. **LAY SOD WITHIN 24 HOURS OF HARVESTING.** DO NOT LAY SOD IF DORMANT OR IF GROUND IS FROZEN OR MUDDY.
B. LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD; DO NOT STRETCH OR OVERLAP. STAGGER SOD STRIPS OR PADS TO OFFSET JOINTS IN ADJACENT COURSES. AVOID DAMAGE TO SUBGRADE OR SOD DURING INSTALLATION. TAMP AND ROLL LIGHTLY TO ENSURE CONTACT WITH SUBGRADE, ELIMINATE AIR POCKETS, AND FORM A SMOOTH SURFACE. WORK SIFTED SOIL OR FINE SAND INTO MINOR CRACKS BETWEEN PIECES OF SOD; REMOVE EXCESS TO AVOID SMOTHERING SOD AND ADJACENT GRASS.
C. LAY SOD ACROSS ANGLE OF SLOPES EXCEEDING **1:6**. ANCHOR SOD ON SLOPES **1:3** OR STEEPER WITH WOOD PEGS OR STEEL STAPLES SPACED AS RECOMMENDED BY SOD MANUFACTURER BUT NOT LESS THAN 2 ANCHORS PER SOD STRIP TO PREVENT SLIPPAGE.
D. SATURATE SOD WITH FINE WATER SPRAY WITHIN TWO HOURS OF PLANTING. DURING FIRST WEEK, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF 1–1/2 INCHES BELOW SOD.

3.4 SATISFACTORY LAWNS
A. SATISFACTORY SODDED LAWN: AT END OF MAINTENANCE PERIOD, A HEALTHY, WELL–ROOTED, EVEN–COLORED, VIABLE LAWN HAS BEEN ESTABLISHED, FREE OF WEEDS, OPEN JOINTS, BARE AREAS, AND SURFACE IRREGULARITIES.
B. REESTABLISH LAWNS THAT DO NOT COMPLY WITH REQUIREMENTS AND CONTINUE MAINTENANCE UNTIL LAWNS ARE SATISFACTORY.
C. INITIATE GRASS CUTTING AFTER GRASS HAS ATTAINED A HEIGHT OF 3 INCHES.

SITE PLANTING

PART 1 – GENERAL

1.1 SECTION INCLUDES
1. PREPARATION AND EXCAVATION OF PLANTING BEDS.
2. PLANTING OF TREES, SHRUBS, GROUNDCOVER AND ASSOCIATED MATERIALS.

1.2 SUBMITTALS
BEFORE ORDERING OR PURCHASING MATERIALS, PROVIDE SAMPLES UPON REQUEST. SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS, VERIFYING TYPE AND PURITY. UNLESS OTHERWISE AUTHORIZED BY OWNER, NOTIFY OWNER AT LEAST 48 HOURS IN ADVANCE OF ANTICIPATED DELIVERY DATE OF PLANT MATERIALS. LEGIBLE COPY OF INVOICE, SHOWING KINDS AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT, SHALL BE FURNISHED TO OWNER. INFORM OWNER OF DATE WHEN PLANTING SHALL COMMENCE.

1.3 REFERENCES
A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
B. ANSI Z60.1 – AMERICAN STANDARD FOR NURSERY STOCK
C. AMERICAN SOD PRODUCER ASSOCIATION (ASPA)
D. AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA)

1.4 QUALITY ASSURANCE
A. CONDITION OF PLANTS SHALL BE APPROVED BY THE OWNER. OWNER MAY INSPECT AND REJECT PLANTS AT ANY TIME.
B. TREES AND SHRUBS SHALL MEET REQUIREMENTS FOR SPREAD, HEIGHT, OR CONTAINER SIZE STATED IN THE DRAWINGS.
C. MEASUREMENTS SHALL BE TAKEN FROM GROUND LEVEL TO AVERAGE HEIGHT OF SHRUB AND NOT TO LONGEST BRANCH.
D. HEIGHT AND SPREAD DIMENSIONS SPECIFIED HEREIN REFER TO MAIN BODY OF TREES MEASURED FROM CROWN OF ROOTS TO TIP OF TOP BRANCH.
E. CALIPER MEASUREMENTS SHALL BE TAKEN AT POINT ON TREE TRUNK 6 INCHES ABOVE NATURAL GROUND LINE FOR TREES UP TO 4 INCHES IN CALIPER, AND AT POINT 12 INCHES ABOVE NATURAL GROUND LINE FOR TREES EXCEEDING 4 INCHES IN CALIPER.
F. IF RANGE OF SIZES IS GIVEN, NO PLANT SHALL BE LESS THAN MINIMUM SIZE, AND AT LEAST 50 PERCENT OF PLANTS SHALL BE AS LARGE AS UPPER HALF OF RANGE SPECIFIED.
G. MEASUREMENTS SPECIFIED ARE MINIMUM SIZE ACCEPTABLE AND, WHERE PRUNING IS REQUIRED, ARE MEASUREMENTS AFTER PRUNING.

1.5 PROJECT CONDITIONS
PERFORM WORK ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO HEALTH AND WELFARE OF PLANTS. OWNER SHALL DETERMINE SUITABILITY OF SUCH WEATHER CONDITIONS.

PART 2 – PRODUCT

2.1 WOODY PLANT MATERIALS
FURNISH NURSERY–GROWN TREES AND SHRUBS COMPLYING WITH ANSIZ60.1 AND THE FOLLOWING REQUIREMENTS:
A. PROVIDE PLANTS WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING.
B. DO NOT PRUNE PLANTS BEFORE DELIVERY.
C. TREES WITH FRESH CUTS OF LIMBS OVER 1 1/4–INCH, WHICH HAVE NOT COMPLETELY CALLOUSED, SHALL BE REJECTED.
D. PROVIDE PLANTS TYPICAL OF THEIR SPECIES OR VARIETY AND EXHIBITING A NORMAL HABIT OF GROWTH AND BE LEGIBLY TAGGED WITH PROPER NAME. PROVIDE PLANTS GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE OF SITE OR HAVE BEEN ACCLIMATED TO SUCH CONDITION FOR AT LEAST 2 YEARS.
E. PLANTS DESIGNATED BALL AND BURLAP SHALL BE MOVED WITH ROOT SYSTEMS AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH BURLAP.
F. BALLS SHALL REMAIN INTACT DURING ALL OPERATIONS.
G. HEEL–IN PLANTS THAT CANNOT BE PLANTED IMMEDIATELY BY SETTING IN GROUND AND COVERING BALLS WITH SOIL OR MULCH AND THEN WATERING.
H. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS USED, TWINE SHALL BE CUT FROM AROUND TRUNK AND BURLAP SHALL BE REMOVED.
I. PROVIDE SINGLE TRUNK TREES GROWING FROM SINGLE UNMUTILATED CROWN OR ROOTS. NO PART OF TRUNK SHALL BE CONSPICUOUSLY CROOKED AS COMPARED WITH NORMAL TREES OF SAME VARIETY.
J. PROVIDE SHRUBS WITH THICKNESS CORRESPONDING TO TRADE CLASSIFICATION "NO.1". SINGLE–STEMMED OR THIN PLANTS SHALL NOT BE ACCEPTED. SIDE BRANCHES SHALL BE GENEROUS, WELL TWIGGED, AND PLANT AS A WHOLE WELL BRANCHED TO GROUND. PLANTS SHALL BE IN MOIST CONDITION, FREE FROM DEAD WOOD, BRUISES, OR OTHER ROOT OR BRANCH INJURIES.

2.2 TOPSOIL
A. NATURAL, FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING CHARACTERISTICS OF REPRESENTATIVE TOPSOIL IN THE VICINITY THAT PRODUCES HEAVY GROWTH. TOPSOIL SHALL HAVE A PH RANGE OF 5.5 TO 7.4 PERCENT, FREE FROM SUBSOIL, OBJECTIONABLE WEEDS, LITTER, SOD, STIFF CLAY, STONES LARGER THAN 1–INCH IN DIAMETER, STUMPS, ROOTS, TRASH, TOXIC SUBSTANCES, OR ANY OTHER MATERIAL WHICH MAY BE HARMFUL TO PLANT GROWTH OR HINDER PLANTING OPERATIONS. TOP SOIL SHALL CONTAIN A MINIMUM OF THREE PERCENT ORGANIC MATERIAL.
B. VERIFY AMOUNT STOCKPILED IF ANY, AND SUPPLY ADDITIONAL AS NEEDED FROM NATURALLY WELL–DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4 INCHES DEEP. DO NOT OBTAIN TOPSOIL FROM BOGS OR MARSHES.

2.3 PLANTING SOIL MIX
A. MIX "BACK TO EARTH" SOIL CONDITIONER OR PEAT MOSS WITH TOPSOIL AT A RATIO OF 1:4.

2.4 FERTILIZER
A. DELIVER FERTILIZER, MIXED AS SPECIFIED, IN ORIGINAL UNOPENED STANDARD SIZE BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. CONTAINERS SHALL BEAR MANUFACTURER'S GUARANTEED STATEMENT OF ANALYSIS, OR MANUFACTURER'S CERTIFICATE OF COMPLIANCE COVERING ANALYSIS SHALL BE FURNISHED TO OWNER. STORE FERTILIZER IN SUCH MANNER THAT IT SHALL BE KEPT DRY.
B. COMMERCIAL FERTILIZER: BASE PERCENTAGES OF NITROGEN, PHOSPHORUS, AND POTASH ON LABORATORY TEST RECOMMENDATIONS AS APPROVED BY OWNER. FOR BIDDING ASSUME 10 PERCENT NITROGEN, 6 PERCENT PHOSPHORUS, AND 4 PERCENT POTASH BY WEIGHT. AT LEAST 50 PERCENT OF TOTAL NITROGEN SHALL CONTAIN NO LESS THAN 3 PERCENT WATER IN SOLUBLE NITROGEN. AT LEAST 60 PERCENT OF NITROGEN CONTENT SHALL BE DERIVED FROM SUPER PHOSPHATE CONTAINING NOT LESS THAN 18 PERCENT PHOSPHORIC ACID OR BONE MEAL CONTAINING 30 PERCENT PHOSPHORIC ACID AND 3 PERCENT NITROGEN. POTASH SHALL BE DERIVED FROM MURIATE OF POTASH CONTAINING 60 PERCENT POTASH.
C. SLOW–RELEASE FERTILIZER: OZMOCOTE GRANULAR FERTILIZER OR APPROVED EQUAL COMPOSED OF 20 PERCENT NITROGEN, 10 PERCENT PHOSPHOROUS AND 10 PERCENT POTASSIUM, BY WEIGHT.

2.5 MANURE:
WELL–ROTTED, UNLEACHED, STABLE OR CATTLE MANURE CONTAINING NOT MORE THAN 25 PERCENT BY VOLUME OF STRAW, SAWDUST, OR OTHER BEDDING MATERIALS; FREE OF TOXIC SUBSTANCES, STONES, STICKS, SOIL, WEED SEED, AND MATERIAL HARMFUL TO PLANT GROWTH.

2.6 PEAT MOSS:
A. MICHIGAN PEAT MOSS OR APPROVED EQUAL IN COLOR AND CONSISTENCY. PEAT MOSS SHALL BE MOSS PEAT, FINELY SHREDDED TO PASS 1/2–INCH MESH AND SHALL BE NO LESS THAN 90 PERCENT ORGANIC MATERIAL BY WEIGHT, WITH ASH CONTENT BY IGNITION OF NO MORE THAN 10 PERCENT. MATERIAL SHALL CONTAIN 35 – 66 PERCENT MOISTURE BY WEIGHT, BUT SHALL HAVE WATER HOLDING CAPACITY OF 200 PERCENT. MATERIAL SHALL HAVE PH VALUE OF 4 TO 5. MATERIAL MAY BE IMPORTED SUPPLIED IN BALES OR DOMESTIC FURNISHED IN BULK. IF FURNISHED IN BULK, MATERIAL AND ITS SOURCE SHALL BE ACCEPTABLE TO OWNER.

2.7 STAKING MATERIAL:
A. **PROVIDE 8–FT STEEL TEE POSTS STAKES.** USE THREE STAKES FOR EACH TREE UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
B. WIRE USED FOR TREE STAKING SHALL BE PLIABLE NO. 12 GALVANIZED SOFT STEEL WIRE UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
C. HOSE SHALL BE 2-PLY FIBERED BEARING RUBBER GARDEN HOSE, NOT LESS THAN 1/2–INCH INSIDE DIAMETER, BLACK OR GREEN, AND OF SUITABLE LENGTH UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

2.8 WATER:
FURNISH POTABLE WATER, HOSE, AND OTHER WATERING EQUIPMENT.

2.9 WEED MAT:
PROVIDE 4.1 OZ., WOVEN POLYPROPYLENE, NEEDLE–PUNCHED FABRIC, WEED BARRIER.

2.10 STEEL EDGING
FURNISH 1/8–INCH X 4–INCH INTERLOCKING STEEL EDGING, STAKED WITH METAL STAKES SUFFICIENTLY TO HOLD IN PLACE.

PART 3 – EXECUTION

3.1 PREPARATION
A. IF PROJECT COMPLETION DATE PROHIBITS IN SEASON PLANTING, PREPARE FOR OUT OF SEASON SEEDING OR SODDING SO THAT LAWNS SHALL BE COMPLETED AND READY FOR ACCEPTANCE AT TIME OF PROJECT COMPLETION.
B. LOCATIONS CONTAINING UNSUITABLE SUBSOIL SHALL BE TREATED BY ONE OR MORE OF THE FOLLOWING:
C. WHERE UNSUITABILITY IS DEEMED BY OWNER TO BE DUE TO EXCESSIVE COMPACTION CAUSED BY HEAVY EQUIPMENT AND WHERE NATURAL SUBSOIL IS OTHER THAN AASHTO CLASSIFICATION OF A6 OR A7, LOOSEN SUCH AREAS WITH SPIKES, DISKING, OR OTHER MEANS TO LOOSEN SOIL TO CONDITION ACCEPTABLE TO OWNER. LOOSEN SOIL TO MINIMUM DEPTH OF 12 INCHES WITH ADDITIONAL LOOSENING AS REQUIRED TO OBTAIN ADEQUATE DRAINAGE. CONTRACTOR MAY INTRODUCE PEAT MOSS, SAND, OR ORGANIC MATTER INTO THE SUBSOIL TO OBTAIN ADEQUATE DRAINAGE. SUCH REMEDIAL MEASURES SHALL BE CONSIDERED AS INCIDENTAL, WITHOUT ADDITIONAL COST TO OWNER.
D. WHERE UNSUITABILITY IS DEEMED BY OWNER TO BE DUE TO PRESENCE OF BOARDS, MORTAR, CONCRETE, OR OTHER CONSTRUCTION MATERIALS IN SUBGRADE AND WHERE NATURAL SUBSOIL IS OTHER THAN AASHTO CLASSIFICATION OF A6 OR A7, REMOVE DEBRIS AND OBJECTIONABLE MATERIAL. SUCH REMEDIAL MEASURES SHALL BE CONSIDERED AS INCIDENTAL, WITHOUT ADDITIONAL COST TO OWNER.
E. WHERE UNSUITABILITY IS DEEMED BY OWNER TO BE BECAUSE NATURAL SUBSOIL FALLS INTO AASHTO CLASSIFICATION OF A6 OR A7 AND CONTAINS MOISTURE IN EXCESS OF 30 PERCENT, THEN INSTALLATION OF SUBDRAINAGE SYSTEM OR OTHER MEANS DESCRIBED ELSEWHERE IN SPECIFICATIONS SHALL BE USED. WHERE SUCH CONDITIONS HAVE NOT BEEN KNOWN OR REVEALED PRIOR TO PLANTING TIME AND THEY HAVE NOT BEEN RECOGNIZED IN PREPARATION OF THE DRAWINGS AND SPECIFICATIONS, THEN OWNER SHALL ISSUE PRICING ORDER TO INSTALL PROPER REMEDIAL MEASURES.
F. PERFORM PLANTING OPERATIONS AT STEADY RATE OF WORK UNLESS WEATHER CONDITIONS MAKE IT IMPOSSIBLE TO WORK. NO PLANT MATERIAL SHALL BE PLANTED IN FROZEN GROUND.
G. DISK, DRAG, HARROW, OR HAND RAKE SUBGRADE TO DEPTH OF 4 INCHES AND **REMOVE STONES LARGER THAN 1 INCH** TO PROVIDE BOND FOR TOPSOIL. TOPSOIL, WHICH MUST BE TRANSPORTED ACROSS FINISHED SIDEWALKS, SHALL BE DELIVERED IN SUCH MANNER THAT NO DAMAGE WILL BE DONE TO SIDEWALKS.
H. DO NOT PLACE TOPSOIL UNTIL SUBGRADE HAS BEEN APPROVED.
I. BEFORE PLACING TOPSOIL, RAKE SUBSOIL SURFACE CLEAR OF STONES, DEBRIS, AND ROOTS. COMPACT TOPSOIL TO FORM LAYER WITH MINIMUM DEPTH OF 4 INCHES IN LAWN AREAS AND 12 INCHES IN SHRUB BEDS.
J. PLACE TOPSOIL SO THAT AFTER FINAL SETTLEMENT THERE WILL BE POSITIVE DRAINAGE CONFORMING TO ELEVATIONS SHOWN ON THE DRAWINGS.

3.2 TREE AND SHRUB PREPARATION
A. DIG BALL AND BURLAP PLANTS WITH FIRM NATURAL BALLS OF EARTH OF DIAMETER AND DEPTH TO INCLUDE FIBROUS ROOTS.
B. PROTECT ROOTS OR BALLS OF PLANTS AT ALL TIMES FROM SUN AND DRYING WINDS.
C. BALL AND BURLAP PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY UPON DELIVERY SHALL BE SET ON GROUND AND PROTECTED WITH SOIL, WET MOSS, OR OTHER ACCEPTABLE MATERIAL. ALL SHALL BE KEPT MOIST.
D. OPEN AND SEPARATE BUNDLES OF PLANTS BEFORE ROOTS ARE COVERED. PREVENT AIR POCKETS AMONG ROOTS. DURING PLANTING OPERATIONS, COVER BARE ROOTS WITH CANVAS, HAY, OR OTHER SUITABLE MATERIAL. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE WHICH WILL RESULT IN DAMAGE TO BARK OR BRANCHES.

3.3 GROUNDCOVER BED PREPARATION:
A. SET OUT AND SPACE GROUNDCOVER AS SHOWN IN PLANT SCHEDULE.
B. DIG HOLES LARGE ENOUGH TO ALLOW SPREADING OF ROOTS, AND BACKFILL WITH PLANTING SOIL.
C. REMOVE GROUNDCOVER FROM POTS. WORK SOIL AROUND ROOTS TO ELIMINATE AIR POCKETS AND LEAVE A SLIGHT SAUCER INDENTION AROUND PLANTS TO HOLD WATER. WATER THOROUGHLY AFTER PLANTING TAKING CARE NOT TO COVER PLANT CROWNS WITH WET SOIL. PROTECT PLANTS FROM HOT SUN AND WIND; REMOVE PROTECTION WHEN PLANTS SHOW EVIDENCE OF RECOVERY FROM TRANSPLANTING SHOCK.

3.4 PROTECTION:
A. BEFORE COMMENCING WORK, TREES AND SHRUBS THAT ARE TO BE SAVED SHALL BE PROTECTED FROM DAMAGE BY PLACEMENT OF FENCING FLAGGED FOR VISIBILITY OR SOME OTHER SUITABLE PROTECTIVE PROCEDURE SHOWN IN DETAILS.
B. TRUCKS OR OTHER EQUIPMENT SHALL NOT BE DRIVEN OR PARKED WITHIN DRIP LINE OF ANY TREE UNLESS TREE OVERSPREADS PAVED AREA.
C. USE PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, SIDEWALKS, PAVEMENTS, UTILITIES, AND OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED.
D. ADJUST DEPTH OF EARTHWORK AND TOPSOIL WHEN WORKING IMMEDIATELY ADJACENT TO AFORE MENTIONED FEATURES IN ORDER TO PREVENT DISTURBING TREE ROOTS, UNDERMINING SIDEWALKS AND PAVEMENTS, AND DAMAGE IN GENERAL TO OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED.
E. COVER PLANTS TRANSPORTED TO PROJECT IN OPEN VEHICLES WITH TARPAULINS OR OTHER SUITABLE COVERS SECURELY FASTENED TO BODY OF VEHICLE TO PREVENT INJURY TO PLANTS. CLOSED VEHICLES SHALL BE ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF PLANTS. EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DIGGING, CARELESSNESS WHILE IN TRANSIT, OR IMPROPER HANDLING OR STORAGE SHALL BE CAUSE FOR REJECTION. PLANTS SHALL BE KEPT MOIST, FRESH, AND PROTECTED. SUCH PROTECTION SHALL ENCOMPASS ENTIRE PERIOD DURING WHICH PLANTS ARE IN TRANSIT, BEING HANDLED, OR ARE IN TEMPORARY STORAGE.
F. PLANTS SHALL NOT BE DELIVERED TO THE SITE MORE THAN SEVEN DAYS PRIOR TO PLANTING. PLANTS NOT PLANTED WITHIN 48 HOURS OF DELIVERY, SHALL BE HEALED IN (COVERED WITH SAWDUST, SOIL OR MULCH), AND THE CONTAINERS OR BALLS PROTECTED FROM WIND AND TEMPERATURE AND KEPT MOIST UNTIL PLANTING.
G. WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN DRIP LINE OF TREES THAT ARE TO REMAIN, WORK SHALL BE PERFORMED AS FOLLOWS:
H. TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, TREE ROOTS SHALL NOT BE CUT BUT TRENCH SHALL BE TUNNELED UNDER OR AROUND ROOTS BY CAREFUL HAND DIGGING WITHOUT INJURY TO ROOTS.

3.5 RAISING GRADES:
WHERE FILL NOT EXCEEDING 16 INCHES IS REQUIRED, CLEAN, WASHED GRAVEL GRADED FROM 1 INCH TO 2 INCHES IN SIZE SHALL BE PLACED DIRECTLY AROUND TREE TRUNK. EXTEND GRAVEL OUT FROM TRUNK ON ALL SIDES MINIMUM OF 18 INCHES AND FINISH APPROXIMATELY 2 INCHES ABOVE FINISHED GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH TRUNKS OF TREES REQUIRING FILL. WHERE FILL EXCEEDING 16 INCHES IS REQUIRED, CONSTRUCT DRY–LAID TREE WELL AROUND TRUNK OF TREE. TREE WELL SHALL EXTEND OUT FROM TRUNK ON ALL SIDES MINIMUM OF 3 FEET AND TO 3 INCHES ABOVE FINISH GRADE. PLACE COARSE–GRADED ROCK DIRECTLY AROUND TREE WELL EXTENDING OUT TO DRIP LINE OF TREE. PLACE CLEAN, WASHED GRAVEL GRADED FROM 1 INCH TO 2 INCHES IN SIZE DIRECTLY OVER COARSE ROCK TO DEPTH OF 3 INCHES. PLACE APPROVED BACKFILL MATERIAL DIRECTLY OVER WASHED GRAVEL TO DESIRED FINISH GRADE.

3.6 LOWERING GRADES:
EXISTING TREES IN AREAS WHERE NEW FINISH GRADE IS TO BE LOWERED SHALL HAVE REGRADING WORK DONE BY HAND TO ELEVATION INDICATED ON THE DRAWINGS. ROOTS AS REQUIRED SHALL BE CUT CLEANLY 3 INCHES BELOW FINISHED GRADE AND SCARS COVERED WITH TREE PAINT. TREES MARKED FOR PRESERVATION THAT ARE MORE THAN 6 INCHES ABOVE PROPOSED GRADES SHALL STAND ON BROAD ROUNDED MOUNDS AND GRADED SMOOTHLY INTO LOWER LEVEL. TREES LOCATED MORE THAN 16 INCHES ABOVE PROPOSED GRADES SHALL HAVE DRY–LAID STONE WALL OR OTHER RETAINING STRUCTURE AS DETAILED ON THE DRAWINGS CONSTRUCTED MINIMUM OF 5 FEET FROM TRUNK. EXPOSED OR BROKEN ROOTS SHALL BE CUT CLEAN AND COVERED WITH TOPSOIL.

3.7 TREE AND SHRUB PLANTING
A. PLANTS TOO LARGE FOR 2 PERSONS TO LIFT IN AND OUT OF HOLES SHALL BE PLACED WITH SLING. DO NOT ROCK TREES IN HOLES TO RAISE.
B. IF ROCK OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, OWNER MAY REQUIRE PLANT PITS TO BE RELOCATED, PITS ENLARGED, OR PLANTS DELETED FROM PROJECT.
C. MAKE ADJUSTMENTS IN LOCATIONS AS DIRECTED. IN EVENT THAT PITS OR AREAS FOR PLANTING ARE PREPARED AND BACKFILLED WITH TOPSOIL TO GRADE PRIOR TO COMMENCEMENT OF LAWN OPERATIONS, THEY SHALL BE SO MARKED THAT WHEN PLANTING PROCEEDS, THEY CAN BE READILY LOCATED. IN CASE UNDERGROUND OBSTRUCTIONS SUCH AS LEDGES OR UTILITIES ARE ENCOUNTERED, CHANGE LOCATION UNDER DIRECTION OF OWNER WITHOUT CHARGE.
D. HOLES FOR TREES SHALL BE AT LEAST **2 FEET GREATER IN DIAMETER** THAN SPREAD OF ROOT SYSTEM AND AT LEAST **6 INCHES DEEPER THAN ROOT BALL. HOLES FOR SHRUBS SHALL BE AT LEAST 2 FEET GREATER IN DIAMETER THAN SPREAD OF ROOT SYSTEM** AND AT LEAST 2 FEET DEEP. HOLES FOR VINES SHALL BE AT LEAST 12 INCHES GREATER IN DIAMETER THAN THE SPREAD OF ROOTBALL AT LEAST 12 INCHES DEEP.
E. BACKFILL TREE HOLES AND SHRUB BEDS WITH PLANTING SOIL MIX. APPLY OZMOCOTE FERTILIZER AT A RATE OF **ONE AND ONE HALF POUNDS (1 1/2#) PER 100 SQUARE FEET FOR BEDS AND ONE QUARTER POUND (1/4#) PER CALIPER INCH FOR TREES.** INCORPORATE FERTILIZER INTO THE TOP 6" OF THE PLANT SOIL MIX IN THE BED AREAS AND INTO THE BACKFILL PLACED IN TREE PITS.
F. PLANTS SHALL BE PLANTED IN CENTER OF HOLES AND AT SAME DEPTH AS THEY HAD PREVIOUSLY GROWN. BACKFILL PLANTING SOIL MIX IN LAYERS OF NOT MORE THAN 8 INCHES AND EACH LAYER WATERED SUFFICIENTLY TO SETTLE BEFORE NEXT LAYER IS PLACED. TAMP PLANTING SOIL MIX UNDER EDGES OF BALLED PLANTS. USE ENOUGH PLANTING SOIL MIX TO BRING SURFACES TO FINISH GRADE WHEN SETTLED.
G. PROVIDE SAUCER AROUND EACH PLANT AS SHOWN ON THE DRAWINGS.
H. SOAK PLANTS WITH WATER TWICE WITHIN FIRST 24 HOURS AFTER TIME OF PLANTING. APPLY WATER WITH LOW PRESSURE SO AS TO SOAK IN THOROUGHLY WITHOUT DISLODGING TOPSOIL.

3.8 MISCELLANEOUS INSTALLATIONS
A. **ROCK MULCH: – (NOT USED)**
B. USE 4 INCHES OF STONE MULCH OR APPROVED EQUAL AS TOP DRESSING IN PLANTING BEDS. MULCH SINGLE TREES OR SHRUBS TO OUTSIDE EDGE OF SAUCER. PLACE WEED MAT UNDER PLANTING AREAS THAT WILL NOT TO BE SEEDED AND IN ANY OTHER LOCATIONS AS SHOWN ON THE DRAWINGS. COVER WEED MAT WITH 4 INCHES OF STONE MULCH AND SECURE IN PLACE WITH SOIL STAPLES.
A. AREAS TO BE COVERED WITH EROSION CONTROL BLANKETS SHALL BE PROPERLY PREPARED, FERTILIZED, AND SEEDED BEFORE BLANKET IS APPLIED. WHEN BLANKET IS UNROLLED, NETTING SHALL BE ON TOP AND FIBERS IN CONTACT WITH SOIL. IN DITCHES, APPLY BLANKET IN DIRECTION OF FLOW OF WATER. ON SLOPES, APPLY BLANKETS VERTICALLY ON SLOPE. OVERLAP ENDS AND SIDES 6 INCHES AND STAPLE TO MANUFACTURER'S RECOMMENDATIONS.

3.9 MAINTENANCE OF GRASSES AND PLANT MATERIAL DURING CONSTRUCTION
A. BEGIN MAINTENANCE OPERATIONS IMMEDIATELY AFTER EACH PLANT IS PLANTED AND CONTINUE AS REQUIRED UNTIL ACCEPTANCE. WATER, MULCH, WEED, PRUNE, SPRAY, FERTILIZE, CULTIVATE, AND OTHERWISE MAINTAIN AND PROTECT PLANTS. RESET SETTLED PLANTS TO PROPER GRADE AND POSITION, RESTORE PLANTING SAUCERS, AND REMOVE DEAD, DISEASED, OR UNHEALTHY PLANT MATERIAL. TIGHTEN AND REPAIR STAKES AND WIRES. CORRECT DEFECTIVE WORK AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
B. UPON COMPLETION OF THE PLANTING OPERATIONS, CLEAN UP LANDSCAPED AREAS TO BE FREE OF STONES, CONTAINERS, TRASH, AND OTHER WASTE AND DEBRIS TO LEAVE AREA IN A NEAT AND WELL GROOMED APPEARANCE.
C. SUPPLEMENT RAINFALL AS REQUIRED TO PROVIDE AN EQUIVALENT OF 1 INCH OF WATER PER WEEK UNTIL THE PLANTS HAVE ROOTED AND ARE ESTABLISHED.
D. MAINTAIN ALL PLANT MATERIAL IN A HEALTHY, VIGOROUS GROWING CONDITION.
E. MAKE WEEKLY INSPECTIONS TO DETERMINE MOISTURE CONTENT OF SOIL AND ADJUST WATERING SCHEDULE ESTABLISHED BY IRRIGATION SYSTEM INSTALLER TO FIT CONDITIONS.
F. WATER IN SUCH MANNER AND AS FREQUENTLY AS IS DEEMED NECESSARY BY OWNER TO ASSURE CONTINUED GROWTH OF HEALTHY GRASS. WATER AREAS OF SITE IN SUCH A MANNER AS TO PREVENT EROSION DUE TO EXCESSIVE QUANTITIES APPLIED OVER SMALL AREAS AND TO AVOID DAMAGE TO FINISHED SURFACE DUE TO WATERING EQUIPMENT.
G. PROVIDE WATER FOR EXECUTION AND MAINTENANCE AT NO EXPENSE TO OWNER. FURNISH PORTABLE TANKS, PUMPS, HOSE, PIPE, CONNECTIONS, NOZZLES, AND ANY OTHER EQUIPMENT REQUIRED TO TRANSPORT WATER FROM AVAILABLE OUTLETS AND APPLY IT TO SOD AREAS IN APPROVED MANNER.
H. REMOVE HEAVY CUTTINGS OF GRASS TO PREVENT DESTRUCTION OF UNDERLYING TURF. IF WEEDS OR OTHER UNDESIRABLE VEGETATION THREATEN TO SMOTHER PLANTED SPECIES, SUCH VEGETATION SHALL BE MOWED OR, IN CASE OF RANK GROWTHS, SHALL BE UPROOTED, RAKED AND REMOVED FROM AREA BY METHODS APPROVED BY OWNER.
I. REMOVE WEEDS AND OTHER UNDESIRABLE VEGETATION BY APPLYING HERBICIDES AS RECOMMENDED BY THE MANUFACTURER OR BY UPROOTING. RAKE AND REMOVE UPROOTED VEGETATION FROM AREA BY METHODS APPROVED BY OWNER.
J. PROTECT SODDED AREA FROM PEDESTRIAN OR VEHICULAR TRESPASSING WHILE GRASS IS GERMINATING. PROVIDE FENCES, SIGNS, BARRIERS, OR OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. REPAIR DAMAGE RESULTING FROM TRESPASS, EROSION, WASHOUT, SETTLEMENT, OR OTHER CAUSES.
K. REMOVE FENCES, SIGNS, BARRIERS, OR OTHER TEMPORARY PROTECTIVE DEVICES AFTER FINAL ACCEPTANCE.
L. REMOVE AND REPLACE DISEASED, DISTRESSED, DEAD, OR REJECTED PLANTS PRIOR TO SUBSTANTIAL COMPLETION DATE.
M. REPLACEMENTS SHALL BE PLANTS OF SAME VARIETY AND SIZE SPECIFIED ON THE DRAWINGS. FURNISH AND PLANT AS SPECIFIED HEREIN. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES WILL BE APPROVED AND PAID FOR BY OWNER.
N. GRASSED AREAS DAMAGED DURING PROCESS OF WORK SHALL BE RESTORED OR REPAIRED TO CONDITION SATISFACTORY TO THE OWNER. FILL, GRADE, REFERTILIZE, REPLANT, OR MULCH AS REQUIRED TO RESTORE TO CONTRACT REQUIREMENTS.

3.10 EXTENDED MAINTENANCE
EXTENDED MAINTENANCE / WARRANTY CHART.
EXTENDED MAINTENANCE / WARRANTY EXPIRATION DURATION: DECEMBER – MAY 17 MONTHS, JANUARY – MAY 16 MONTHS, FEBRUARY – MAY 15 MONTHS, MARCH – MAY 14 MONTHS, APRIL – MAY 13 MONTHS, MAY – MAY 12 MONTHS, JUNE – JUNE 12 MONTHS, JULY – JULY 12 MONTHS, AUGUST – AUGUST 12 MONTHS, SEPTEMBER – SEPTEMBER 12 MONTHS, OCTOBER – OCTOBER 12 MONTHS, NOVEMBER – NOVEMBER 12 MONTHS.

GENERAL LANDSCAPING:
LANDSCAPE MAINTENANCE SHALL INCLUDE NECESSARY WATERING, CULTIVATION, WEEDING, PRUNING, WOUND DRESSING, DISEASE AND INSECT PEST CONTROL, PROTECTIVE SPRAYING, STRAIGHTENING PLANTS WHICH LEAN OR SAG, ADJUSTMENTS OF PLANTS WHICH SETTLE OR ARE PLANTED TOO LOW, MOWING, REPLACEMENT OF MULCH THAT HAS BEEN DISPLACED, REPAIRING AND RESHAPING OF SAUCERS, AND RESEEDING OR REPLANTING OF THOSE AREAS AFFECTED. REMOVE RUBBISH, WASTE, TOOLS, AND EQUIPMENT USED AT END OF EACH WORKDAY.
WATERING
UTILIZE THE OWNER'S IRRIGATION SYSTEM FOR WATERING. FAILURE OF SYSTEM DOES NOT RELIEVE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING DESIRED LEVEL OF MOISTURE NECESSARY TO MAINTAIN VIGOROUS, HEALTHY GROWTH.
APPLY WATER IN QUANTITIES SUFFICIENT TO PENETRATE SOIL TO MINIMUM DEPTH OF 8–INCHES IN SHRUB BEDS AND 6–INCHES IN TURF AREAS AT RATE THAT WILL PREVENT SATURATION OF SOIL. SUPPLEMENTAL ONSITE WATER WILL BE FURNISHED BY OWNER. CONTRACTOR SHALL FURNISH HOSE AND OTHER WATERING EQUIPMENT AS REQUIRED FOR SUPPLEMENTAL WATERING.
WEEDING:
MAINTAIN ALL SHRUB AND GROUNDCOVER AREAS FREE FROM WEEDS AND UNDESIRABLE GRASSES.
DISEASE AND INSECT PEST CONTROL:
INSPECT PLANT MATERIAL AT LEAST ONCE EACH MONTH TO LOCATE ANY DISEASE OR INSECT PEST INFESTATIONS. UPON DISCOVERY OF INFESTATION, NATURE OR SPECIES OF INFESTATION SHALL BE IDENTIFIED. SPRAY OR TREAT AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE.
SUPPLEMENT RAINFALL AND IRRIGATION SYSTEM AS REQUIRED TO PROVIDE ADEQUATE WATER FOR VIGOROUS AND HEALTHY GROWTH OF TREES.
TURF WEED CONTROL:
DEVELOP AND MAINTAIN A BROADLEAF WEED AND FOREIGN GRASS CONTROL PROGRAM CONSISTING OF BOTH POST AND PRE–EMERGENT CHEMICAL CONTROL. MAINTAIN TURF IN A WEED–FREE CONDITION.
PRUNING AND REPAIR:
PRUNE AS REQUIRED TO REMOVE DEAD OR INJURED BRANCHES, TO COMPENSATE FOR LOSS OF ROOTS AS RESULT OF TRANSPLANTING OPERATIONS, AND TO MAINTAIN SAFETY IN TRAVELED AREAS. PRUNING SHALL NOT CHANGE THE NATURAL HABIT OR ATTRACTIVE, BALANCED SHAPE OF PLANT. CUTS SHALL BE MADE AT THE OUTSIDE EDGE OF THE BRANCH COLLAR.
MOWING:
MOW TURF AREAS AT REGULAR INTERVALS TO KEEP TURF HEIGHT FROM EXCEEDING 3–INCHES. MAINTAIN GRASS HEIGHT AT 2 1/2 TO 3 INCHES AT SUBSEQUENT CUTTINGS DEPENDING ON TIME OF YEAR. REMOVE NO MORE THAN 1/3 OF GRASS LEAF AT ANY CUTTING. MOW TURF AT INTERVALS OF NOT MORE THAN 10 DAYS DURING GROWING SEASON. MOW IN SUCH MANNER AS TO PREVENT CLIPPINGS FROM BLOWING ONTO PAVED AREAS AND SIDEWALKS. CLEANUP AFTER MOWING SHALL INCLUDE SWEEPING OR BLOWING TO CLEAR MOWING DEBRIS.
EDGING:
MECHANICALLY EDGE TURF AREAS ADJACENT TO SIDEWALKS, CURBS AND OTHER PAVED SURFACES WITH A BLADE TYPE EDGER. PERFORM EDGING WITH EACH MOWING INTERVAL.
TRIMMING:
TRIM GRASS AROUND VALVE BOXES, POLES AND OTHER STRUCTURES WITH STRING TYPE TRIMMERS. DO NOT TRIM GRASS AROUND TREE TRUNKS WITH MECHANICAL TRIMMER. REMOVE GRASS ADJACENT TO TREE TRUNK BY METHODS THAT WILL NOT CAUSE DAMAGE TO TREES.
REMOVE TREE STAKES AND WIRES ONE YEAR AFTER FINAL ACCEPTANCE.
CLEAN UP:
DURING COURSE OF MAINTENANCE, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED AT END OF EACH WORKDAY.

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747
SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX
PROJECT TYPE: EXPANSION
DEAL TYPE: N/A
CS PROJECT NUMBER:109133

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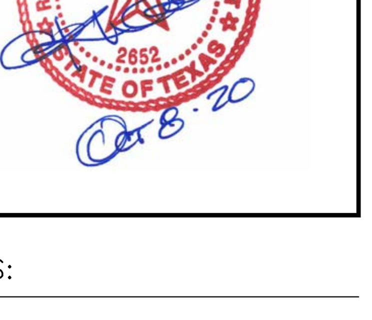
SEAL:



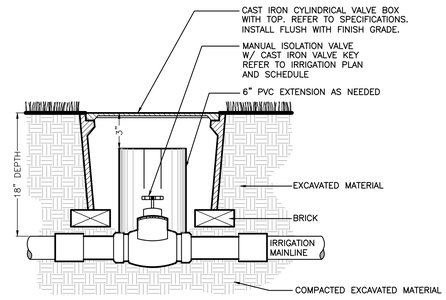
REVISIONS:

CVS PROJECT MANAGER: J. MUTTER
DRAWING BY: K. PRESLEY
DATE: 29 OCTOBER 2020
TITLE: LANDSCAPE SPECIFICATIONS
SHEET NUMBER: 15 OF 21
COMMENTS: NOT RELEASED FOR CONSTRUCTION

IRRIGATION NOTES

1. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR OBTAINING A COPY OF THE PROJECT SPECIFICATIONS PRIOR TO BIDDING. THE PROJECT SPECIFICATIONS ARE A PART OF THESE PLANS AND SHALL BE CONSULTED BY THE IRRIGATION CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING WORK AS SPECIFIED IN THE PROJECT SPECIFICATIONS AND ON THE PLANS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS AND LABOR TO FULLY EXECUTE, GUARANTEE, AND MAINTAIN THE SYSTEM AS REQUIRED. THE TOTAL WORK SHOWN ON THIS PLAN SHALL BE DONE IN ACCORDANCE WITH SPECIFICATIONS, AND ALSO AS PER INSTRUCTIONS OF THE CONTRACTING OFFICER.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, EQUIPMENT QUANTITIES, AND UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
4. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES IN PLANS OR SPECIFICATIONS PRIOR TO BEGINNING OR CONTINUING WORK.
5. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS OR APPROVALS.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTANCES, ETC WHICH OCCURS AS A RESULT OF THE IRRIGATION CONSTRUCTION TO OWNER'S SATISFACTION, AT NO ADDITIONAL COST.
7. NO PART OF THE IRRIGATION SYSTEM SHALL BE INSTALLED IN CONFLICT WITH UTILITIES. THE CONTRACTOR SHALL MAKE ANY NECESSARY ADJUSTMENTS IN THE PROPOSED IRRIGATION SYSTEM TO AVOID CONFLICTS WITH EXISTING STRUCTURES, PAVING, AND UTILITIES.
8. ALL CALCULATIONS INDICATED ON THIS SHEET ARE SAMPLE CALCULATIONS AND SHOULD NOT BE CONSTRUED AS ACCURATE.
9. 22.2 PSI STATIC WATER PRESSURE IS REQUIRED FOR THE EFFICIENT OPERATION OF THE IRRIGATION SYSTEM AS DESIGNED. VERIFY 65.0 PSI STATIC WATER PRESSURE IS AVAILABLE AT THE PROJECT SITE PRIOR TO BEGINNING THE IRRIGATION INSTALLATION. NOTIFY THE LANDSCAPE ARCHITECT IF THE MINIMUM WATER PRESSURE IS NOT AVAILABLE.
10. IRRIGATION CONTRACTOR TO VERIFY ACTUAL AVAILABLE WATER PRESSURE BEFORE BEGINNING INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF AVAILABLE WATER PRESSURE EXCEEDS 5 PSI HIGHER OR LOWER THAN MINIMUM REQUIRED WATER PRESSURE.
11. IF STATIC WATER PRESSURES ARE NOT ADEQUATE TO OPERATE IRRIGATION SYSTEM, A PUMP SYSTEM IS TO BE DESIGNED BY AN IRRIGATION SYSTEM DESIGNER. IRRIGATION PUMP INSTALLATION MUST BE COORDINATED WITH THE ELECTRICAL CONTRACTOR. PUMP MUST BE INSTALLED WITHIN A TAMPER PROOF ENCLOSURE.
12. IF STATIC WATER PRESSURES EXCEEDS 75 PSI, PRESSURE COMPENSATING HEADS MUST BE USED.
13. IRRIGATION SYSTEMS CONNECTED TO POTABLE WATER SUPPLY SHALL HAVE A WATTS, FEBCO, OR WILKINS REDUCED PRESSURE BACKFLOW PREVENTER (ASSE# 1013) INSTALLED, OR AS REQUIRED BY LOCAL CODES.
14. ELECTRICAL SERVICE TO ALL EQUIPMENT SHALL BE PROVIDED TO A JUNCTION BOX AT THE EQUIPMENT LOCATION.
15. THE LOCATION OF THE AUTOMATIC CONTROL CLOCK IS GENERALLY INDICATED ON THE DRAWING AND WILL BE SPECIFICALLY LOCATED ON-SITE BY THE CONTRACTING OFFICER. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL CONNECTIONS FROM CONTROL VALVES TO THE CONTROL CLOCK.
16. EACH CONTROL CLOCK HAS STATIONS THAT ARE NOT BEING UTILIZED. THERE IS TO BE A FIELD WIRE INSTALLED TO THE FURTHEST CONTROL VALVE IN ANY ONE DIRECTION FROM THE CONTROL CLOCK FOR EVERY VACANT STATION PLUS ONE SPARE WIRE IS TO BE INSTALLED IN CASE OF A FAULTY WIRE.
17. VALVE WIRE SHALL BE #14 GAUGE UL-UF SINGLE STRAND DIRECT BURIAL COPPER RUN IN A BURIED CONDUIT. ALL SPLICES ARE TO BE MADE WITH MANUFACTURER'S PACKAGED KIT CONSISTING OF INSULATING, SPRING-TYPE CONNECTOR OR CRIMPED JOINT AND EPOXY RESIN MOISTURE SEAL; SUITABLE FOR DIRECT BURIAL. COIL WIRE EVERY 100' FOR EXPANSION AND CONTRACTION PURPOSES.
18. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO HAVE ALL PLANTING AREAS FLAGGED BY THE LANDSCAPE CONTRACTOR PRIOR TO INSTALLATION. REFER TO THE PLANTING PLANS WHEN TRENCHING TO AVOID TREES AND SHRUBS.
19. EXISTING TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE. DO NOT TRENCH OR EXCAVATE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
20. THE CONTRACTOR SHALL PROTECT ALL EXISTING LANDSCAPE IMPROVEMENTS DURING THE EXECUTION OF THIS WORK. NO SOIL SHALL BE PLACED DIRECTLY UPON EXISTING LANDSCAPING. ANY MATERIALS WHICH, IN THE OPINION OF THE LANDSCAPE ARCHITECT, ARE DAMAGED DURING THE EXECUTION OF THIS WORK SHALL BE IMMEDIATELY REPLACED BY THE IRRIGATION CONTRACTOR AT HIS EXPENSE.
21. 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 OTHER SITE AMENITIES. LINES MAY BE SHOWN OFFSET IN SOME HARDSCAPE AREAS AND OUTSIDE OF PROPERTY LINES FOR GRAPHIC CLARITY ONLY. ADJUST HEADS AND LINE LOCATIONS ON SITE TO ACCOMMODATE EXISTING JOB CONDITIONS AND ACHIEVE COMPLETE COVERAGE. PIPE LINES DRAWN SIDE BY SIDE MAY BE LAID IN THE SAME TRENCH, BUT THEY MUST MAINTAIN A MINIMUM OF 3" HORIZONTAL AND VERTICAL CLEARANCE FROM ALL OTHER PIPES.
22. ALL HEADS, VALVES, AND ACCESSORIES SHALL BE NELSON, HUNTER, RAIN BIRD, OR APPROVED EQUAL.
23. ALL CONTROL VALVES, GATE VALVES, AND QUICK COUPLERS SHALL BE INSTALLED IN LOCKING VALVE BOXES.
24. ALL VALVE BOXES ARE TO BE LOCATED IN PLANT BED OR NATURAL AREAS WHENEVER POSSIBLE.
25. ALL MAIN LINES AND SLEEVES SHALL BE SCHEDULE 40 PVC, ALL LATERAL LINES SHALL BE 125 PSI, STANDARD INSIDE DIMENSION RATIO (SIDR) 11.5 POLYETHYLENE PIPE.
26. POLYETHYLENE (PE) PIPE SHALL BE CONNECTED WITH BARBED FITTINGS AND CLAMPED. WITH STAINLESS STEEL CLAMPS. THE CLAMP SHOULD BE PLACED OVER THE BARBED PORTION. FOR PIPES 1-1/2" AND LARGER, TWO STAINLESS STEEL CLAMPS PER BARB SHALL BE USED.
27. ALL MAIN LINES SHALL BE INSTALLED A MAXIMUM OF 2' FROM THE BACK OF CURB WHERE POSSIBLE. LATERAL LINES SHALL BE INSTALLED LIKEWISE WHERE POSSIBLE.
28. ALL LINES LOCATED BENEATH WALKS, CURBS, OR CONCRETE PAVING SHALL BE LOCATED WITHIN SLEEVES. ALL IRRIGATION SLEEVING TO BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL UNDER PAVING SLEEVING IS TO BE ACCESSIBLE AND FREE OF OBSTRUCTION. SLEEVE SIZES ARE TO BE ACCORDING TO THE ATTACHED SLEEVE SCHEDULE. ELECTRICAL WIRES FOR IRRIGATION VALVES AND IRRIGATION LINES ARE TO BE PLACED IN SEPARATE SLEEVES. SEE SLEEVING DETAIL.
29. UNSIZED PIPE BETWEEN TWO (2) GIVEN SIZES IS ASSUMED TO BE THE LARGER SIZE.
30. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR AND WITHIN 1/2" OF FINISHED GRADES. ALL SPRINKLER HEADS SHALL BE INSTALLED A MINIMUM OF EIGHTEEN INCHES FROM THE BACK OF CURBS AND A MINIMUM OF TWO INCHES FROM SIDEWALKS.
31. ALL IRRIGATION HEADS AT THE LOWER ELEVATIONS OF EACH CONTROL VALVE ZONE SHALL HAVE POP-UP BODIES WITH BUILT-IN CHECK VALVES TO PREVENT LOW HEAD DRAINAGE.
32. EACH CONTROL VALVE ZONE SHALL HAVE AN AUTOMATIC DRAIN VALVE AND A 12" x 24" GRAVEL SUMP INSTALLED AT THE LOWEST POINT WITHIN THE ZONE.
33. ALL RISERS SHALL BE INSTALLED 18" FROM ANY WALL AND A MINIMUM OF 12' FROM ANY SIDEWALK OR ROAD AND SHALL HAVE 2 COATS OF SEMI-FLAT BLACK ENAMEL PAINT.
34. THE CONTRACTOR SHALL ADJUST THE RADIUS AND ARC OF EACH HEAD TO PROVIDE 100% COVERAGE OF ALL PLANTED OR GRASSED ISLANDS, TO MINIMIZE "OVERTHROW", AND TO ELIMINATE DRY SPOTS.
35. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPLY AND INSTALLATION OF ADDITIONAL HEADS TO COVER "DRY SPOTS" OR SLIGHT VARIATIONS FROM THE PLAN TO THE SITE. THE IRRIGATION CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS, DELETIONS, OR ADDITIONS TO THIS PLAN FOR APPROVAL.
36. THROTTLE ALL IRRIGATION CONTROL VALVES AS REQUIRED TO PREVENT FOGGING.
37. FINAL ADJUSTMENTS TO IRRIGATION SYSTEM & SPRAY PATTERNS ARE TO BE MADE PRIOR TO FINAL INSPECTION.
38. ALL BACKFILLED TRENCHES SHALL BE THOROUGHLY COMPACTED. SEE SPECIFICATIONS FOR BACKFILL MATERIAL AND COMPACTION REQUIREMENTS.
39. THE CONTRACTOR SHALL SET THE IRRIGATION CONTROL SYSTEM TO OPERATE BETWEEN THE HOURS OF 2:00 am AND 6:00 am OR AS DIRECTED BY STORE MANAGER.
40. IRRIGATION CONTRACTOR SHALL OPTIMIZE WATER USAGE AND WATER CONSERVATION TIME ALLOTTED FOR INDIVIDUAL ZONE OPERATION SHALL ALLOW FOR WATER PENETRATION TO A MINIMUM DEPTH OF 8" IN SHRUB BEDS AND 6" IN TURF AREAS.
41. IRRIGATION CONTRACTOR SHALL REVIEW WINTERIZATION PROCEDURES FOR IRRIGATION SYSTEM WITH THE OWNER'S REPRESENTATIVE.
42. THE CONTRACTOR SHALL BE RESPONSIBLE AT TIME OF COMPLETION FOR PROVIDING "AS BUILT" DRAWINGS TO INCLUDE THE EXACT LOCATIONS OF ALL CONTROL VALVES (AUTOMATIC AND MANUAL), QUICK COUPLER VALVES, BACKFLOW DEVICES, AND CONTROLLER, WITH TRIANGULATED MEASUREMENTS TO EACH; AS WELL AS ANY DEVIATIONS IN LOCATION OF PIPING AND HEADS REPRESENTED AS REPRESENTED BY THE CONTRACT DOCUMENTS.
43. ALL WORK, ADJUSTMENTS, AND INSPECTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
44. REFER TO SITEWORK SPECIFICATIONS FOR ADDITIONAL INFORMATION NEEDED FOR IMPLEMENTATION OF IRRIGATION PLANS.

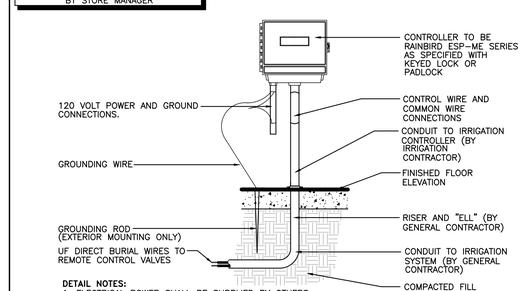
IRRIGATION NOTES



VALVE SCHEDULE:
SMALLER THAN 3": FULL PORT BRASS BALL VALVE WITH 600 WOG RATING.
3" OR LARGER: CAST IRON AND BRONZE MECHANICAL JOINT VALVE.

MANUAL ISOLATION VALVE — NTS

NOTE: CONTROLLER SHALL BE PROGRAMMED TO BE OPERATIONAL BETWEEN THE HOURS OF 2:00AM AND 6:00AM OR AS DIRECTED BY STORE MANAGER

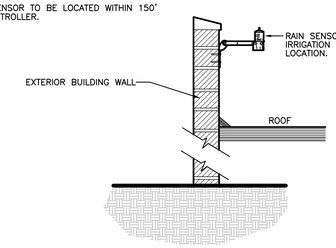


DETAIL NOTES:
1. ELECTRICAL POWER SHALL BE SUPPLIED BY OTHERS. COORDINATE WITH ELECTRICAL CONTRACTOR.
2. ALL WIRING SHALL BE INSTALLED PER LOCAL CODES.
3. CONTROLLER SHALL BE GROUNDED AS PER LOCAL CODES. GROUNDING ROD IS ONLY REQUIRED FOR EXTERIOR APPLICATIONS.
4. SEE ELECTRICAL PLANS FOR EXACT LOCATION OF CONTROLLER.
5. CONTROLLER SHALL BE MOUNTED APPROXIMATELY 5'-0" ABOVE FINISHED FLOOR ELEVATION.

WALL MOUNTED CONTROLLER — NTS

DETAIL NOTES:
1. HUNTER INDUSTRIES WIRELESS MINI-CLIK -WRC OR WRFC WIRELESS RAIN/FREEZE-CLIK.
2. IRRIGATION CONTRACTOR TO INSTALL DEVICE WHERE RAIN CAN FALL INTO CUP.
3. RAINFALL TRIGGER TO BE SET TO 1/2".
4. RAIN SENSOR TO BE LOCATED WITHIN 150' OF CONTROLLER.

*NOTE: LOCATE WHERE RAIN CAN FALL DIRECTLY INTO DEVICE. WIRE AND CONNECTIONS BY IRRIGATION CONTRACTOR.

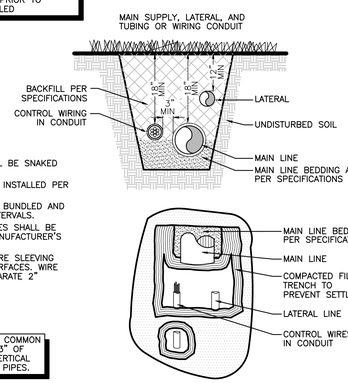


A CONDUIT IS NOT REQUIRED FOR THIS DEVICE.

NOTE:
MOUNT MINI-CLIK ON ANY SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN THE PATH OF SPRINKLER SPRAY.

HUNTER: WIRELESS MINI-CLIK AUTOMATIC RAIN SHUT-OFF DEVICE — NTS

NOTE: CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR REQUIRED INSPECTION OF MAINLINE PRIOR TO TRENCHES BEING BACKFILLED



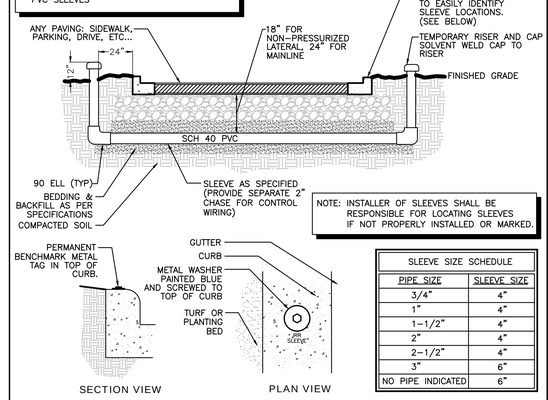
DETAIL NOTES:
1. ALL PVC PIPING SHALL BE SNAKED IN TRENCHES.
2. ALL WIRING SHALL BE INSTALLED PER LOCAL CODES.
3. ALL WIRING SHALL BE BUNDLED AND AND TAPED AT 10' INTERVALS.
4. ALL MAIN SUPPLY LINES SHALL BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
5. PROVIDE PIPE AND WIRE SLEEVING UNDER ALL PAVED SURFACES. WIRE SHALL BE WITHIN SEPARATE 2" ELECTRICAL CHASE.

NOTE: MULTIPLE PIPES IN COMMON TRENCH SHALL MAINTAIN 3" OF BOTH HORIZONTAL AND VERTICAL CLEARANCE BETWEEN ALL PIPES.

A SEPARATE CONDUIT IS REQUIRED FOR CONTROL AND POWER SUPPLY WIRING.

TYPICAL TRENCHING — NTS

ANY IRRIGATION PIPING LOCATED UNDERNEATH PAVED AREAS SHALL BE LOCATED WITHIN PVC SLEEVES



NOTE: INSTALLER OF SLEEVES SHALL BE RESPONSIBLE FOR LOCATING SLEEVES IF NOT PROPERLY INSTALLED OR MARKED.

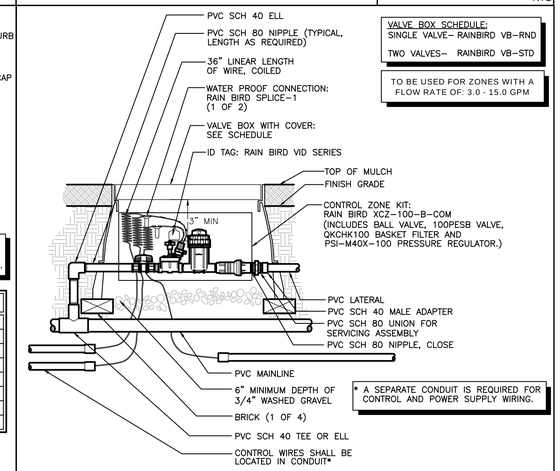
SLEEVE SIZE SCHEDULE

PIPE SIZE	SLEEVE SIZE
3/4"	4"
1"	4"
1-1/2"	4"
2"	4"
2-1/2"	4"
3"	6"
NO PIPE INDICATED	6"

PVC SLEEVE UNDER PAVING — NTS

VALVE BOX SCHEDULE:
SINGLE VALVE- RAINBIRD VB-RND
TWO VALVES- RAINBIRD VB-STD

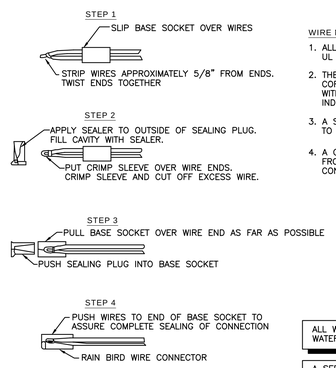
TO BE USED FOR ZONES WITH A FLOW RATE OF: 3.0 - 15.0 GPM



* A SEPARATE CONDUIT IS REQUIRED FOR CONTROL AND POWER SUPPLY WIRING.

1" MEDIUM FLOW CONTROL ZONE KIT — NTS

WIRE CONNECTION PROCESS



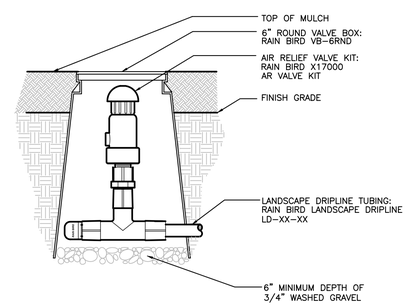
WIRE NOTES:
1. ALL WIRES TO BE #14 COPPER WIRE UL APPROVED FOR DIRECT BURIAL.
2. THE WIRE FOR EACH ZONE IS TO BE CORRECTLY COLOR-COORDINATED WITHIN THE CONTROLLER FOR THE INDIVIDUAL CONTROL VALVES.
3. A SINGLE WIRE IS TO BE CONNECTED TO EACH CONTROL VALVE.
4. A COMMON NEUTRAL WIRE IS TO RUN FROM THE CONTROLLER TO EACH CONTROL VALVE.

ALL WIRE CONNECTORS TO BE 3M DBY WATERTIGHT CONNECTORS.

A SEPARATE CONDUIT IS REQUIRED FOR CONTROL AND POWER SUPPLY WIRING.

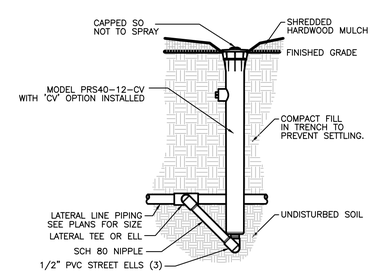
WIRE CONNECTIONS — NTS

AIR RELIEF VALVES ARE TO BE INSTALLED AT ALL HIGH POINTS OF SUB-SURFACE ZONES. MORE THAN 1 AIR RELIEF VALVE MAY BE REQUIRED DEPENDING ON LAYOUT AND TOPOGRAPHY.



AIR RELIEF VALVE — NTS

ALL POP-UP HEADS TO BE USED AS ZONE MARKERS SHALL BE CAPPED AND SHALL NOT SPRAY. HEAD SHALL SERVE AS A VISUAL MARKER TO IDENTIFY THE END OF ZONE AND SHOW THAT THE VALVE IS OPERATIONAL.



HUNTER MP ROTATOR POP-UP - VALVE OPERATION MONITOR — NTS

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

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ORANGE DEVELOPMENT
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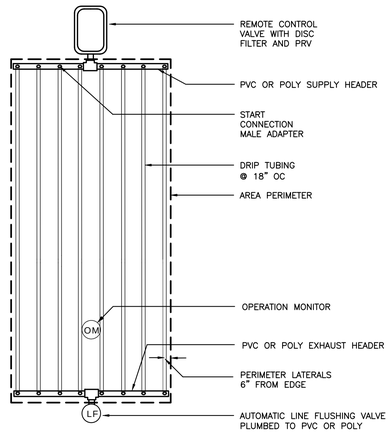
SEAL:

REVISIONS:

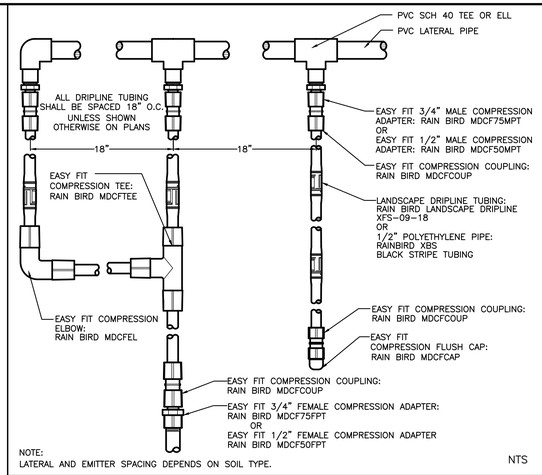
CVS PROJECT MANAGER: J. MUTTER
DRAWING BY: K. PRESLEY
DATE: 29 OCTOBER 2020
TITLE: IRRIGATION DETAILS
SHEET NUMBER:

COMMENTS:
NOT RELEASED FOR CONSTRUCTION



LANDSCAPE DRIPLINE HEADER LAYOUT

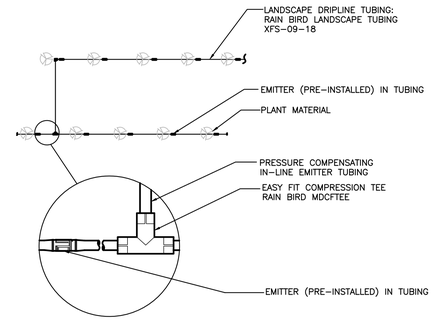
NTS



NOTE:
LATERAL AND EMITTER SPACING DEPENDS ON SOIL TYPE.

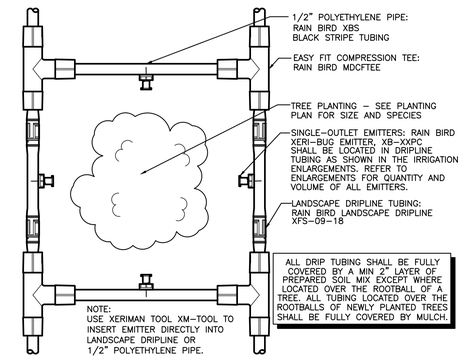
NTS

LANDSCAPE DRIPLINE LATERALS: FITTINGS & ADAPTERS (POTABLE)



DRIPLINE CONNECTIONS (POTABLE)

NTS



NOTE:
USE XERIMAN TOOL XM-TOOL TO INSERT EMITTER DIRECTLY INTO LANDSCAPE DRIPLINE OR 1/2" POLYETHYLENE PIPE.

DRIPLINE WITH SUPPLEMENTAL EMITTERS

NTS

CHARLES WALKER
Certified Irrigation Designer
CID
006765
10-8-20

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

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SEAL:

REGISTERED LANDSCAPE ARCHITECT
CHARLES R. WALKER
2652
STATE OF TEXAS
10-8-20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER
DRAWING BY: K. PRESLEY
DATE: 29 OCTOBER 2020
TITLE: IRRIGATION DETAILS
SHEET NUMBER:

COMMENTS:
NOT RELEASED FOR CONSTRUCTION

SITE IRRIGATION SYSTEM

PART 1 – GENERAL

1.1 SUMMARY
A. ASTM D2239 – POLYETHYLENE (PE) PLASTIC PIPE (SIDR–PR) BASED ON CONTROLLED INSIDE DIAMETER.
B. ASTM D2241 – POLY (VINYL CHLORIDE) (PVC) PRESSURE–RATED PIPE (SDR–SERIES).
C. ASTM D2564 – SOLVENT CEMENT FOR POLY (VINYL CHLORIDE) (PVC) PLASTIC PIPE AND FITTINGS.
D. ASTM D2609 – PLASTIC INSERT FITTINGS FOR POLYETHYLENE (PE) PLASTIC PIPE.
E. ASTM D2855 – MAKING SOLVENT–CEMENTED JOINTS WITH POLY (VINYL CHLORIDE) (PVC) PIPE AND FITTINGS.
F. NFPA 70 – NATIONAL ELECTRICAL CODE (NEC).
G. ASSE 1013 – PERFORMANCE REQUIREMENTS FOR REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTERS AND REDUCED PRESSURE FIRE PROTECTION PRINCIPLE BACKFLOW PREVENTERS.
H. ASSE 1015 – PERFORMANCE REQUIREMENTS FOR DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLIES AND DOUBLE CHECK FIRE PROTECTION BACKFLOW PREVENTION ASSEMBLIES.

1.2 SUBMITTALS
A. PROJECT RECORD DOCUMENTS:
B. AS–BUILT DRAWINGS: FURNISH TWO SETS, NOTING EXACT LOCATIONS OF ELEMENTS AND CHANGES TO CONSTRUCTION DRAWINGS.
C. OPERATION MANUAL: FURNISH TWO COPIES, BOUND IN 1 INCH DIAMETER THREE RING BINDERS, INDEXED AND TABBED FOR EASY REFERENCE, AND LABELED ON SPINE AND COVER. MANUAL SHALL INCLUDE FOLLOWING:
D. APPROVED SUBMITTALS AS SPECIFIED HEREIN.
E. INSTALLATION INSTRUCTIONS INCLUDING MOUNTING DETAILS FOR CONTROL VALVES.
F. OPERATING INSTRUCTIONS:
G. WINTERIZATION PROCEDURES.
H. MAINTENANCE INSTRUCTIONS:
I. MANUFACTURERS' PRODUCT DATA, AND MAINTENANCE INSTRUCTIONS. COPIES OF COMPLETED WARRANTY INFORMATION. CONTRACTOR TO COMPLETE AND MAIL NECESSARY WARRANTY REGISTRATION INFORMATION TO MANUFACTURER KEEPING COPIES FOR OWNER.
J. CONTROLLER CHART: PREPARE COLOR CODED CHART, REDUCED IN SIZE, CONTAINING SAME PLAN INFORMATION AS AS–BUILT DRAWINGS, AND LAMINATED IN PLASTIC ON BOTH SIDES, WITH FOLLOWING SPECIFIC INFORMATION: NOTE ROUTING OF CONTROL WIRES. IDENTIFY VALVES AS TO SIZE, STATION NUMBER SHOWN ON CONTROLLER, AND TYPE OF IRRIGATION HEAD (E.G. SPRAY HEAD, TURF HEAD) ON EACH VALVE.

1.3 PROJECT CONDITIONS
A. VISIT SITE AND BECOME FAMILIAR WITH NATURE AND LOCATION OF WORK, EXISTING CONDITIONS.
B. PROVIDE WATER METER FOR SPRINKLER SYSTEM IF REQUIRED OR SHOWN ON THE DRAWINGS.

PART 2 – PRODUCTS

2.1 MANUFACTURERS:
1. HUNTER INDUSTRIES, INC.
2. RAIN BIRD CORPORATION COMMERCIAL TURF DIVISION.
3. THE TORO COMPANY – IRRIGATION DIVISION.
4. L.R. NELSON CORPORATION – TURF DIVISION.

2.2 PIPE:
A. POLYVINYL CHLORIDE (PVC): PIPE GREATER THAN 1 INCH DIAMETER SHALL CONFORM TO ASTM D2241, SDR 21, AND CLASS 200.
B. POLYVINYL CHLORIDE (PVC): PIPE 1 INCH DIAMETER AND UNDER SHALL CONFORM TO ASTM D2241, SDR 13.5, AND CLASS 315.
C. FLEXIBLE POLYETHYLENE (PE): PIPE SHALL CONFORM TO ASTM D2239, SDR 11.5, PE23, RATED AT 100 PSI, NATIONAL SANITATION FOUNDATION (NSF) APPROVED. SUBJECT TO APPROVAL OF OWNER, PE SHALL BE USED FOR LATERALS IN AREAS WHERE GROUND IS SUBJECT TO FREEZING FOR EXTENDED PERIODS OF TIME EACH YEAR.

2.3 JOINTS: PIPE SIZES 2 1/2 INCH OR SMALLER SHALL HAVE BELL AND SOCKET JOINTS.

2.4 FITTINGS:
A. POLYVINYL CHLORIDE (PVC) FITTINGS: FITTINGS SHALL CONFORM TO ASTM D2241, SCHEDULE 40, AND MOLDED.
B. FLEXIBLE POLYETHYLENE (PE) LATERAL LINE FITTINGS: FITTINGS SHALL CONFORM TO ASTM D2609, TYPE 1 PVC INSERT FITTINGS DESIGNED FOR USED WITH THIS TYPE OF PIPE. PIPE AND FITTINGS SHALL BE JOINED WITH STAINLESS STEEL PINCH CLAMPS OR WORM GEAR CLAMPS, INCLUDING STAINLESS STEEL SCREW.
C. RISERS ABOVE FINISHED GRADE SHALL BE BLACK IN COLOR OR RECEIVE 2 COATS OF BLACK EXTERIOR SEMI–GLOSS ENAMEL PAINT IF A COLOR OTHER THAN BLACK.

2.5 ACCESSORIES
A. SLEEVES: SLEEVES FOR PIPES PASSING BENEATH PAVING SHALL CONFORM TO ASTM D2241, SCHEDULE 40. **MINIMUM DIAMETER OF 2 INCH OR 2 SIZES LARGER THAN PIPE SCHEDULED TO PASS THROUGH THEM.**
B. PVC SOLVENT CEMENT: CEMENT SHALL CONFORM TO ASTM D2564.
C. SWING JOINT CONNECTIONS: CONNECTIONS BETWEEN HEADS AND LATERALS SHALL BE THICK WALL, FLEXIBLE, POLYETHYLENE PIPE, WITH FITTINGS THAT HAVE MALE BARBS ON ONE END AND EITHER MALE OR FEMALE SCREW ENDS OPPOSITE. GLUE FITTINGS AND FEMALE BARB ADAPTERS ARE NOT ALLOWED.

2.6 CUTOFF OR ISOLATION VALVES
A. 3 INCHES OR SMALLER: PROVIDE FULL PORT BRASS BALL VALVES WITH 600 WOG RATING.
B. LARGER THAN 3 INCHES: PROVIDE CAST IRON AND BRONZE MECHANICAL JOINT VALVES, FUSION BONDED EPOXY COATED EXTERIOR AND INTERIOR,
C. PROVIDE A VALVE KEY AND CAST IRON CYLINDRICAL VALVE BOX WITH TOP WITH EACH VALVE.

2.7 QUICK COUPLER VALVES:
RAIN BIRD MODEL 44NP VALVE WITH MODEL 44K KEY, HUNTER MODEL HQ–44LRC WITH MODEL HK–44 KEY, TORO 470 SERIES VALVE AND COUPLER KEY. NELSON MODEL 7643 VALVE WITH MODEL 7640 COUPLER KEY AND MODEL 8649 LOCKING TOP WRENCH. PROVIDE EACH VALVE WITH KEY HAVING 3/4 INCH MALE TOP PIPE THREADS FOR HOSE CONNECTION.

2.8 ELECTRIC CONTROL VALVES:
1. HUNTER ICV SERIES ELECTRIC REMOTE CONTROL VALVES,
2. RAIN BIRD PEB SERIES ELECTRIC REMOTE CONTROL VALVES,
3. NELSON MODEL 9515/9520 SERIES PLASTIC VALVES,
4. TORO P220 SERIES PLASTIC VALVES,
PROVIDE 3M DBY WATERTIGHT CONNECTORS.

2.9 MASTER VALVES
A. MASTER VALVES SHALL BE ELECTRIC CONTROL VALVE AS SPECIFIED HEREIN. SIZE OF VALVE SHALL BE SAME AS DIAMETER OF MAIN LINE PIPE AS NOTED ON THE DRAWINGS. PROVIDE WATERTIGHT CONNECTORS AS SCOTCH LOCK OR RAIN BIRD SNAP TIGHT CONNECTORS WITH SEALANT FOR WIRING CONNECTIONS.

2.10 FITTINGS:
A. POLYVINYL CHLORIDE (PVC) FITTINGS: FITTINGS SHALL CONFORM TO ASTM D2241, SCHEDULE 40, AND MOLDED.
B. FLEXIBLE POLYETHYLENE (PE) LATERAL LINE FITTINGS: FITTINGS SHALL CONFORM TO ASTM D2609, TYPE 1 PVC INSERT FITTINGS DESIGNED FOR USED WITH THIS TYPE OF PIPE. PIPE AND FITTINGS SHALL BE JOINED WITH STAINLESS STEEL PINCH CLAMPS OR WORM GEAR CLAMPS, INCLUDING STAINLESS STEEL SCREW. RISERS ABOVE FINISHED GRADE SHALL BE BLACK IN COLOR OR RECEIVE 2 COATS OF BLACK

2.11 SPRINKLER HEADS
A. FULL OR PART CIRCLE POP–UP FIXED SPRAY SPRINKLER:
1. RAIN BIRD 1800 SERIES NOZZLES WITH 1800 SERIES SPRINKLERS HAVING PRESSURE REGULATING (PRS) AND SEAL–A–MATIC (SAM) FEATURES.
2. TORO 570ZXF SERIES PLASTIC NOZZLES WITH 570Z PRX SERIES SPRINKLERS HAVING PRESSURE REGULATING, (PR) OPTIONAL CHECK VALVE UNIT (COM) FEATURES AND X FLOW DEVICE.
3. NELSON 6400 SERIES WITH ANTI–DRAIN VALVES (ADV) WITH PRESSURE COMPENSATING SCREENS (PCS). HUNTER INSTITUTIONAL SPRAY HEAD SERIES WITH PRESSURE REGULATING AND CHECK VALVE (CV) FEATURES.

2.12 UNLESS OTHERWISE SHOWN ON THE DRAWINGS, POP–UP HEIGHTS SHALL BE:
TURF – 4 INCHES, SHRUB AND GROUNDCOVER BEDS – 12 INCHES.
A. FULL OR PART CIRCLE POP–UP GEAR DRIVEN ROTOR SPRINKLER.
1. RAIN BIRD ROTOR POP–UP SPRINKLER SERIES, 5000 SERIES AND 3500 SERIES WITH SEAL–A–MATIC (SAM) CHECK VALVE.
2. TORO SUPER 700 SPRINKLERS SERIES 570OC COMMERCIAL, WITH CHECK VALVE OR TORO TR–XTP SERIES WITH FACTORY INSTALLED CHECK VALVE, TRAJECTORY ADJUSTMENT, AND X FLOW DEVICE.
3. NELSON PRO 6500 SERIES GEAR DRIVES WITH ANTI–DRAIN VALVES (ADV). HUNTER PGP AND PGJ SERIES POP–UP ROTORS, WITH CHECK VALVE.

2.13 VALVE BOX:
A. VALVE BOXES SHALL BE MANUFACTURED BY AMETEK, RAINBIRD CORPORATION OR EQUAL. NO IRRIGATION VALVE BOX SHALL BE PLACED IN PAVEMENT AREAS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
1. WHEN USED WITH SINGLE VALVE, PROVIDE ECONOMY TURF BOX OR RAIN BIRD MODEL VB–RND WITH GREEN COLORED SNAP FIT COVER LABELED "VALVE BOX". WHEN USED WITH 2 OR MORE VALVES, PROVIDE JUMBO BOX OR RAIN BIRD MODEL VB–STD WITH 20 INCH X 14 INCH COVER OPENING WITH COVER LABELED "CONTROL VALVE".

2.14 AUTOMATIC LOW POINT DRAIN VALVES:
A. AUTOMATIC DRAIN VALVES SHALL BE RAIN BIRD MODEL NUMBER 16A–FDV OR EQUAL.

2.15 AUTOMATIC CONTROLLER:
A. CONTROLLER SHALL BE AS SHOWN ON DRAWINGS, WEATHERPROOF, LOCKABLE CABINET WITH INTERNAL TRANSFORMER. RAIN BIRD ESP–MC SERIES OR ESP–LXME PLUS, TORO TMC MODULAR SERIES CONTROLLER OR TCC SERIES CONTROLLER, NELSON 8600 EZ PRO SERIES CONTROLLER, HUNTER ICC SERIES.

2.16 CONTROL WIRE
A. NUMBER 14–SIZE MINIMUM COPPER WIRE, U. L. APPROVED FOR UNDERGROUND DIRECT BURIAL.
1. COLORED WIRE SHALL HAVE SAME COLOR–CODING AS SHOWN ON CONTROLLER.
2. PROVIDE SINGLE WIRE FROM CONTROLLER TO EACH VALVE.
3. PROVIDE COMMON NEUTRAL FROM CONTROLLER TO EACH VALVE.

2.17 BACKFLOW PREVENTOR
A. COMPLY WITH REQUIREMENTS AND CODES OF LOCAL GOVERNING AUTHORITY REGARDING BACKFLOW PREVENTION.
B. PROVIDE THE NECESSARY MATERIALS, INSULATION/DRAINING CAPABILITIES, AND INSULATED FIBERGLASS ENCLOSURE, DARK GREEN IN COLOR.
C. BACKFLOW PREVENTORS SHALL BE TYPE SUITABLE FOR USE IN HIGH HAZARD CROSS CONNECTION TO POTABLE WATER SYSTEM AS MANUFACTURED BY ONE OF THE FOLLOWING MANUFACTURER'S: WATTS REGULATOR COMPANY, FEBCO, OR WILKINS.
D. REDUCED PRESSURE BACKFLOW PREVENTORS SHALL BE ASSE # 1013 AND LABELED ACCORDINGLY.
E. DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTORS SHALL BE ASSE # 1015 AND LABELED ACCORDINGLY.
F. IN ABSENCE OF LOCAL CODES OR REQUIREMENTS, PROVIDE DOUBLE CHECK ASSEMBLY BACKFLOW PREVENTOR INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
G. ALL BACKFLOW PREVENTOR ASSEMBLY MUST BE IN A LOCKING HOT BOX.

2.18 RAINFALL SENSOR:
PROVIDE WIRELESS RAINFALL SENSOR TO CANCEL OPERATION OF CONTROLLER DURING SUBSTANTIAL RAINFALL. ACCEPTABLE PRODUCTS INCLUDE: MINI–CLICK WIRELESS RAIN SENSOR MANUFACTURED BY HUNTER INDUSTRIES – WRC OR WRFC WITH FREEZE SENSOR.

2.19 METER: METER BOX SHALL CONFORM TO REQUIREMENTS OF LOCAL UTILITY COMPANY.

PART 3 – EXECUTION

3.1 PREPARATION:
A. PRESSURE/FLOW TEST: PROVIDE WRITTEN CALCULATIONS TO THE OWNER INCLUDING THE FOLLOWING SITE INFORMATION: STATIC OR RESIDUAL PRESSURE AT THE POC. CALCULATION OF PRESSURE FOR "WORST CASE" SPRINKLER HEAD. CALCULATION OF GPM PER ZONE.
B. PRIOR TO INSTALLATION, RECEIVE APPROVAL FROM GENERAL CONTRACTOR TO PROCEED WITH CONSTRUCTION.
C. CONTRACTOR SHALL FIELD VERIFY ALL ABOVEGROUND AND UNDERGROUND UTILITIES PRIOR TO START OF WORK.

3.2 EXCAVATION: TRENCHING AND BACKFILLING:
EXCAVATE TRENCH TO PROPER DEPTH AS SHOWN OR SPECIFIED. **MINIMUM TRENCH WIDTH SHALL BE 3 1/2 INCHES.** OVER EXCAVATE TRENCHES DEEPER THAN REQUIRED IN SOILS CONTAINING ROCK OR OTHER HARD MATERIAL THAT MIGHT DAMAGE PIPE AND BACKFILL TO PROPER DEPTH WITH SELECTED FINE EARTH OR SAND. BACKFILL AND HAND TAMP OVER EXCAVATION PRIOR TO INSTALLING PIPING. KEEP TRENCHES FREE OF OBSTRUCTIONS AND DEBRIS THAT WOULD DAMAGE PIPE. SPRINKLER PIPING SHALL NOT BE INSTALLED IN SAME TRENCH AS HEATING DUCT, ELECTRIC DUCTS, STORM AND SANITARY SEWER LINES, WATER AND GAS MAINS. DO NOT CUT SIDEWALKS, PAVED AREAS, OR CURB AND GUTTER WHEN TRENCHING FOR PIPING UNLESS OTHERWISE NOTED ON THE DRAWINGS. PROVIDE SLEEVES AS SPECIFIED IN PART 2 ABOVE UNDER PAVING PRIOR TO INSTALLATION OF PAVING. AUGER, BORE, OR TUNNEL UNDER EXISTING PAVING WITHOUT DISTURBING PAVEMENT. DAMAGED PAVEMENT SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH PAVING NOTES.

3.3 PIPING INSTALLATION:
A. MINIMUM COVER FROM TOP OF PIPING TO FINISHED GRADE SHALL BE PROVIDED AS FOLLOWS:
1. LAWN AND PLANTING AREAS: LINE FROM METER TO BUILDING **42 INCHES.** MAINS AND CONTROL VALVES: **24 INCHES.** LATERALS: **18 INCHES.** DRIVES OR PARKING AREAS: **24 INCHES.**
B. CLEARANCES: MAINTAIN 3 INCH MINIMUM HORIZONTAL CLEARANCE BETWEEN PARALLEL LINES IN SAME TRENCH OR VERTICAL CLEARANCE BETWEEN LINES CROSSING AT ANGLES.
C. SPECIAL REQUIREMENTS – PVC AND PE PIPE:
1. SNAKE PIPE IN TRENCH AT LEAST **1 FOOT PER 100 FEET** OF PIPE TO ALLOW FOR THERMAL EXPANSION. PIPE LATERALS SHALL BE LAID TO DRAIN TO LOW POINT DRAINS LOCATED AT LOWEST ELEVATIONS OF EACH ZONE.
D. REST FULL LENGTH OF PIPE SECTION ON BED OF TRENCH, EXCAVATING RECESSES TO ACCOMMODATE JOINTS. DO NOT LAY PIPE ON UNSTABLE MATERIAL OR BLOCKING, OR WHEN IN OPINION OF OWNER CONDITIONS ARE UNSUITABLE.
E. THREADED PLASTIC PIPE JOINTING:
1. DO NOT USE SOLVENT CEMENT ON THREADED JOINTS. WRAP JOINTS WITH TEFLON TAPE OR USE VIRGIN TEFLON LUBRICANT.
F. BELL AND SOCKET PLASTIC PIPE JOINTING: CEMENT JOINTS IN ACCORDANCE WITH ASTM D2855.

3.4 SLEEVING
A. PROVIDE SLEEVES FOR BOTH PIPING AND CONTROL WIRING WHERE EITHER PASSES UNDER PAVED SURFACES. DEPTHS OF SLEEVES SHALL BE SAME AS THAT REQUIRED FOR PIPING AT EACH LOCATION OR CONDITION. EXTEND SLEEVES 12 INCHES BEYOND PAVING AT EACH END. INSTALL PERMANENT BENCHMARK AT TOP OF CURBS FOR REFERENCE TO SLEEVE LOCATIONS.

3.5 AUTOMATIC DRAIN VALVES
A. PROVIDE AUTOMATIC LOW POINT DRAINS ON ALL ZONES. PROVIDE TWO VALVES AT LOWEST POINTS OF EACH ZONE, WITH EACH DRAIN INSTALLED ABOVE A 12 INCH X 12 INCH X 12 INCH DEEP AREA OF COARSE GRAVEL.

3.6 VALVES
A. DO NOT LOCATE BENEATH PAVED SURFACES. INSTALL PLUMB TO WITHIN 1/16 INCH. LOCATE WITHIN VALVE BOX WITH 6 INCH DEEP LAYER OF COARSE GRAVEL BENEATH BOTTOM OF VALVE.
B. TOP OF QUICK COUPLER VALVES SHALL BE 6 INCHES TO TOP OF VALVE BOX. TOP OF GRAVEL LAYER SHALL BE 3 INCHES BELOW TOP OF VALVE.
C. MASTER VALVE (IF REQUIRED ON THE DRAWINGS):
1. LOCATE IMMEDIATELY BEHIND BACKFLOW PREVENTOR.
2. VALVE SHALL BE ENERGIZED BY MASTER VALVE CIRCUIT ON AUTOMATIC CONTROLLER.

3.7 SPRINKLERS
A. INSTALL PLUMB TO WITHIN 1/16 INCH WITH TOP COLLAR, NOT NOZZLE, FLUSH WITH FINISH GRADE.
B. PROVIDE SWING JOINT WITH EACH ROTARY SPRINKLER WHERE ENTIRE HEAD IS RAISED ABOVE GRADE AND/OR WHERE RIGID RISER PIPING IS REQUIRED. FUNNY PIPE IS ACCEPTABLE FOR SPRAY HEADS ONLY.
C. HEADS ADJACENT TO PAVING AND CURB: LOCATE BETWEEN 6 AND 12 INCHES FROM EDGE OF PAVING OR BACK OF CURB TO PREVENT CAR OVERHANG TO CONFLICT WITH A FULLY EXTENDED SPRINKLER.

3.8 ELECTRICAL CONNECTIONS AND CONTROL WIRE
A. PROVIDE ELECTRICAL CONNECTION TO SYSTEM AS DESIGNATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
B. WIRE PLACEMENT:
1. DO NOT RUN CONTROL AND POWER SUPPLY WIRING IN SAME CONDUIT. PROVIDE CONTINUOUS RUNS OF WIRE BETWEEN CONTROLLER AND VALVES.
C. SPLICES SHALL BE MADE WITH ONE OF FOLLOWING:
1. WATERTIGHT BELOW GROUND ELECTRICAL JUNCTION BOXES.
2. WATER–TIGHT CONNECTORS, SUCH AS UTILIZED FOR VALVES, AND LOCATED WITHIN VALVE BOX FOR EASE OF LOCATING.
3. THE LOCATION OF ELECTRICAL SPLICES SHALL BE SHOWN ON THE AS–BUILT DRAWINGS.
4. BURY CONTROL WIRE BESIDE PIPE IN SAME TRENCH. BUNDLE AND TAPE TOGETHER AT NOT MORE THAN 10 FT INTERVALS.
D. EXPANSION LOOPS: CONSTRUCT BY WRAPPING WIRE AROUND 1/2 INCH DIAMETER PIPE TO CREATE COIL. **A 3 FOOT SECTION OF WIRE SHALL BE USED TO CREATE 12 INCH COIL** WITH 6 FOOT SECTION BEING USED TO CREATE 24 INCH COIL.
E. PROVIDE 12 INCH COILS AT EACH WIRE SPLICE, NOT INCLUDING VALVES, AND AT EACH CHANGE OF WIRE DIRECTION.
F. PROVIDE **24 INCH COILS AT EACH CONTROL VALVE AND WHERE EACH VALVE ENTERS CONDUIT FOR AUTOMATIC CONTROLLER.**

3.9 BACKFILLING
A. SAND OR FINE–GRAINED SOILS SHALL BE USED FOR INITIAL BACKFILL TO SUFFICIENT DEPTH TO PREVENT DAMAGE TO PIPE FROM ROCKS OR OTHER DEBRIS DURING COMPACTION OF SUBSEQUENT BACKFILL.
B. FILL TRENCH TO WITHIN 3 INCHES OF FINISH GRADE WITH EXCAVATED SOIL AND COMPACT.
C. FILL TOP 3 INCHES WITH EXISTING TOPSOIL IN PLANTING OR TURF AREAS AND WHEEL ROLL UNTIL COMPACTION OF BACKFILL IS SAME AS SURROUNDING SOIL.
D. GRADE BACKFILLED TRENCH UNIFORM WITH SURROUNDING GRADES.

3.10 BACKFLOW PREVENTOR
A. COMPLY WITH LOCAL CODES FOR INSTALLATION OF BACKFLOW PREVENTOR. IN ABSENCE OF LOCAL CODES, INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
B. PROVIDE COMBINATION OF DRAINS AND QUICK COUPLER VALVES TO ACCOMMODATE WINTERIZATION OF ENTIRE SYSTEM BY FORCED AIR. SUBMIT MATERIALS AND METHODS TO OWNER FOR CONSIDERATION AND RECEIVE APPROVAL PRIOR TO INSTALLATION OF WORK.

3.11 AUTOMATIC CONTROLLER
A. LOCATION AND INSTALLATION SHALL BE AS SHOWN ON THE DRAWINGS AND APPROVED BY OWNER PRIOR TO INSTALLATION.
B. PROVIDE RIGID CONDUITS FOR BOTH POWER SUPPLY AND CONTROL WIRING.
1. **CONTROL WIRE CONDUIT SHALL EXTEND TO 18 INCHES BELOW GRADE.**
2. SECURE CONDUIT TO WALL WITH ANCHORS AND SCREWS.
C. PROVIDE ELECTRICAL GROUNDING FOR CONTROLLER IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

3.12 RAINFALL SENSOR
A. LOCATE ON AN AREA LIGHT POLE WITHIN **150 FEET OF THE AUTOMATIC CONTROLLER.**
1. MINIMUM MOUNTING HEIGHT SHALL BE 12 FEET. SET RAINFALL TRIGGER TO 1/2 INCH.

3.13 FIELD QUALITY CONTROL
A. INSPECTION AND ADJUSTMENTS: FOLLOWING INSTALLATION, MAKE FINAL ADJUSTMENTS TO SITE IRRIGATION SYSTEM PRIOR TO OWNER'S FINAL INSPECTION.
B. FLUSH SYSTEM COMPLETELY, WITH NOZZLES AND SCREENS REMOVED, TO EXTRACT DEBRIS.
C. DEMONSTRATION: FOLLOWING FINAL ADJUSTMENT, OPERATE ENTIRE INSTALLATION TO DEMONSTRATE COMPLETE AND SUCCESSFUL OPERATION OF EQUIPMENT.
D. GENERAL IRRIGATION: CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN GOOD OPERATING CONDITION AND COORDINATE THE OPERATION OF THE SYSTEM WITH THE STORE MANAGER THROUGH MONTHLY INSPECTIONS OF SYSTEM COMPONENTS AND MAKE REPAIRS OR REPLACEMENT OF PARTS AS NECESSARY. THIS INCLUDES CHECKING AND VERIFYING OPERATION IN EACH ZONE, ALIGNMENT OF HEADS, RAIN SENSORS, CONTROLLER, AND CHECKING LEAKS. IN THE EVENT OF IRRIGATION SYSTEM FAILURE, PROVIDE MANUAL WATERING TO KEEP THE PLANT MATERIAL IN A VIGOROUS, HEALTHY CONDITION UNTIL SYSTEM IS RESTORED.
E. WINTERIZATION: WHEN COLD WEATHER APPROACHES AND CHANCE FOR FREEZING CONDITIONS EXIST, THE IRRIGATION SYSTEM SHALL BE DRAINED AFTER EACH USE.

3.14 WINTERIZATION PROCEDURE SHALL INCLUDE THE FOLLOWING:
A. SHUT WATER OFF AT MAIN GATE VALVE.
B. OPEN MANUAL DRAIN VALVES.
C. BLOW OUT EACH SECTION TWICE WITH COMPRESSED AIR.
D. SET CONTROLLER TO CYCLE THROUGH EACH SECTION MINIMUM TIME AVAILABLE, ONCE EACH DAY THROUGH WINTER MONTHS.
E. IF BACKFLOW PREVENTOR IS INSTALLED WITH UNIONS, REMOVE AND STORE OUT OF WEATHER.

3.15 SPRING START–UP: SPRING START–UP PROCEDURE SHALL INCLUDE THE FOLLOWING:
A. REINSTALL BACKFLOW PREVENTION DEVICE.
B. CLOSE MANUAL DRAIN VALVES.
C. SLOWLY TURN WATER ON.
D. CHECK FOR LEAKS AND PROPER ALIGNMENT OF HEADS.
E. REPAIR AND ADJUST SYSTEM AS REQUIRED FOR PROPER OPERATION.

CHARLES WALKER
Certified Irrigation Designer
CID
006765
Oct 8 '20

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747
SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
HURST, TEXAS 76054
TEL (817) 285–7444
FAX (817) 285–7318

CONSULTANT:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons
Bartlett, TN 38133
Phone (901) 384-0404
Fax (901) 384-0710

DEVELOPER:

ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

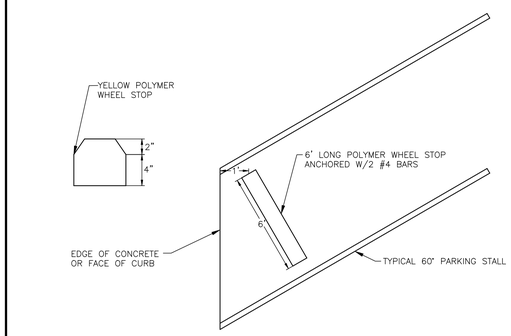
SEAL:

REGISTERED LANDSCAPE ARCHITECT
CHARLES R. WALKER
2652
STATE OF TEXAS
Oct 8 '20

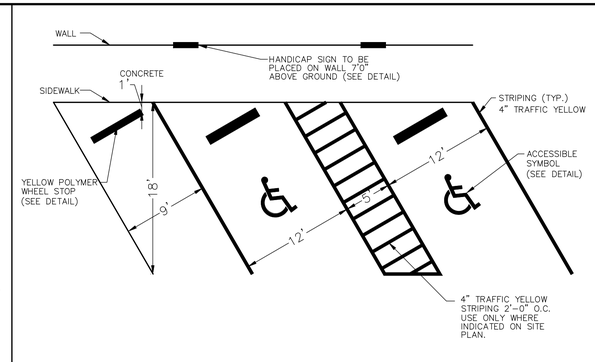
REVISIONS:

CVS PROJECT MANAGER: J. MUTTER
DRAWING BY: K. PRESLEY
DATE: 29 OCTOBER 2020
TITLE: IRRIGATION SPECIFICATIONS
SHEET NUMBER:

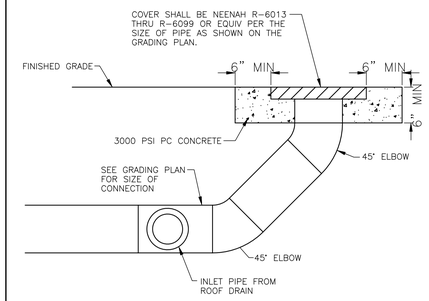
COMMENTS:
NOT RELEASED FOR CONSTRUCTION



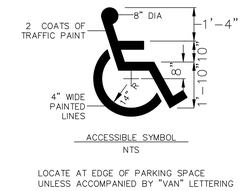
YELLOW POLYMER WHEEL STOP



PARKING SPACE STRIPING



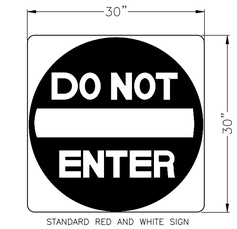
STORM SEWER CLEANOUT



ACCESSIBLE SYMBOL
NTS

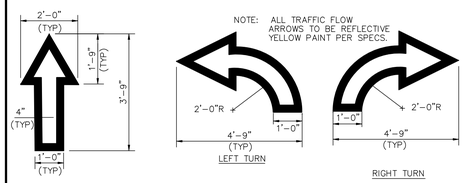
LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

ACCESSIBLE SYMBOL

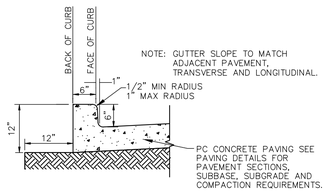


STANDARD RED AND WHITE SIGN
R5-1
"DO NOT ENTER" SIGN
NTS

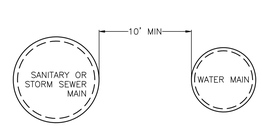
DO NOT ENTER SIGN



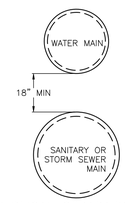
DIRECTIONAL ARROWS



TYPE "B" CURB & GUTTER

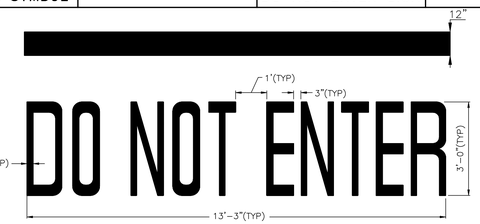


HORIZONTAL SEPARATION

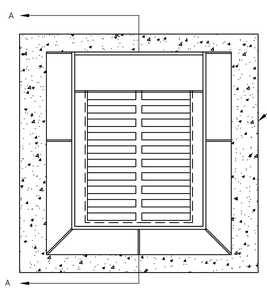


VERTICAL SEPARATION

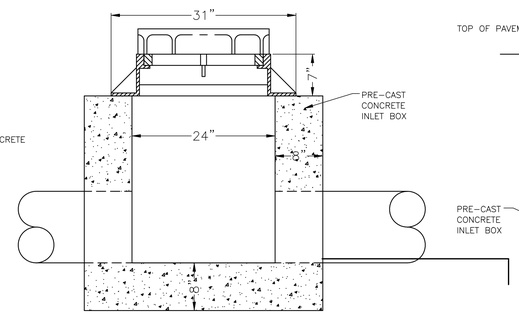
WATER/SEWER CROSSING



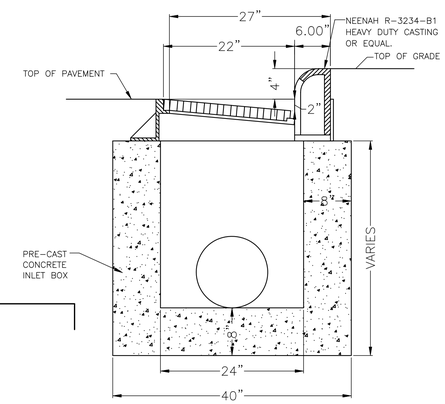
"DO NOT ENTER" PAVEMENT PAINTING



TOP VIEW



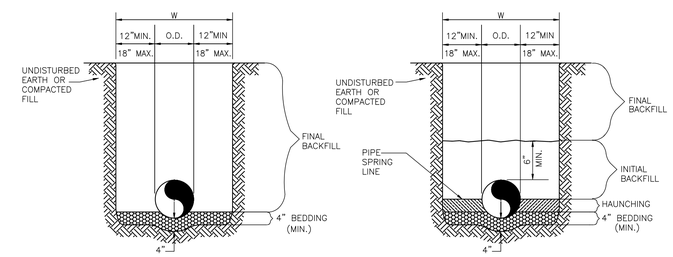
FRONT VIEW



SECTION A-A

CURB INLET DETAIL

CURB INLET DETAIL
N.T.S.



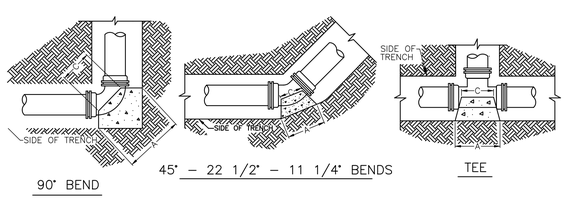
REINFORCED CONCRETE PIPE (RCP) AND SPIRAL RIB PIPE SMALLER THAN 60"ø
N.T.S.

ALL OTHER PIPES INCLUDING SPIRAL RIB PIPE 60"ø AND LARGER
N.T.S.

GENERAL NOTES

1. BEDDING SHALL BE CLASS I WORKED BY HAND OR CLASS II COMPACTED TO 90% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I OR CLASS II COMPACTED TO 90% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I WORKED BY HAND OR CLASS II COMPACTED TO 90% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED TO 98% STANDARD PROCTOR.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-11.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)
11. ANY OPEN-GRADED MATERIAL MEETING THE REQUIREMENTS OF ASTM D 2321-11 MAY BE USED ONLY IF THE MATERIAL IS WRAPPED IN AN APPROVED FILTER OR DRAINAGE FABRIC (REFER TO SITEWORK SPECIFICATION SECTION 02300 FOR TYPE) AND WITH WRITTEN PERMISSION FROM THE CEC.
12. THE UPPER 12" OF FINAL BACKFILL (MAY BE REDUCED TO 9" IN LIMITED AREAS WHERE BURIAL DEPTH WILL NOT ALLOW FOR 12" CAP) FOR ALL TRENCHES IN NON-PAVEMENT AREAS SHALL BE A LOW PLASTICITY COHESIVE FILL. REFER TO SITEWORK SPECIFICATION SECTION 02300 FOR ALLOWABLE "SATISFACTORY MATERIALS" AND COMPACTION REQUIREMENTS.
13. BEDDING, HAUNCHING, AND INITIAL AND FINAL BACKFILL MATERIALS USED IN CONJUNCTION WITH ANY PIPES WHICH PENETRATE A LEVEE OR ROAD EMBANKMENT, SHALL BE A LOW PERMEABILITY, COHESIVE SOIL. SOILS EXHIBITING HIGH SHRINK/SWELL POTENTIAL OR CONTAINING GREATER THAN 5% ORGANICS SHALL NOT BE USED.

STORMSEWER BACKFILL



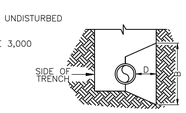
90° BEND

45° – 22 1/2° – 11 1/4° BENDS

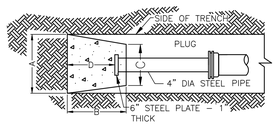
TEE

POURED AGAINST UNDISTURBED EARTH.

CONCRETE TO BE 3,000 PSI MINIMUM.



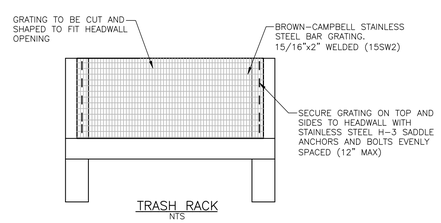
TYPICAL SECTION



PLUG

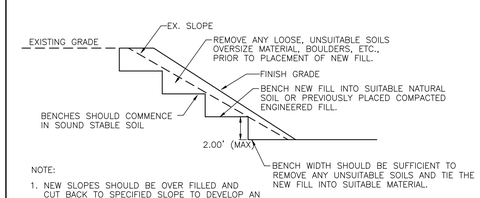
THRUST BLOCKING

90 DEGREE BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	16"	16"	26"	33"	40"	50"	70"
B	16"	16"	24"	33"	40"	50"	70"
C	9"	9"	12"	12"	15"	16"	22"
D	6"	8"	12"	16"	20"	25"	24"
45 DEGREE BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	12"	12"	18"	24"	31"	37"	52"
B	12"	12"	18"	24"	31"	37"	52"
C	8"	8"	10"	12"	14"	16"	14"
D	6"	6"	9"	12"	15"	18"	18"
22-1/2" DEGREE BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	9"	13"	18"	23"	26"	40"
B	9"	9"	13"	18"	23"	26"	40"
C	8"	8"	10"	12"	14"	16"	15"
D	4"	4"	6"	9"	11"	13"	16"
PLUG							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	26"	26"	26"	34"	43"	52"	70"
B	26"	26"	26"	34"	43"	52"	70"
C	12"	12"	12"	12"	12"	12"	30"
D	11"	11"	11"	15"	22"	32"	32"
11-1/4 DEGREE BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	9"	11"	13"	16"	18"	30"
B	9"	9"	11"	13"	16"	18"	30"
C	8"	8"	10"	12"	14"	16"	15"
D	4"	4"	5"	6"	8"	9"	16"
TEE							
SIZE MAIN	2"-6"	8"-12"	8"-10"	12"	12"	12"	18"
SIZE BRANCH	2"-6"	2"-6"	8"-10"	2"-6"	8"-10"	12"	16"-18"
A	26"	26"	43"	26"	43"	52"	70"
B	26"	26"	43"	26"	43"	52"	70"
C	12"	12"	12"	12"	12"	12"	30"
D	13"	13"	21"	13"	21"	26"	24"



TRASH RACK
NTS

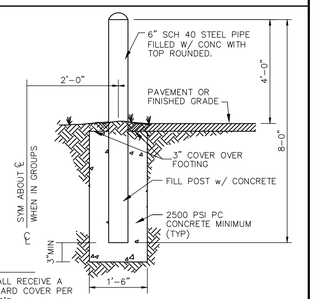
TRASH RACK DETAIL



NOTE:

1. NEW SLOPES SHOULD BE OVER FILLED AND CUT BACK TO SPECIFIED SLOPE TO DEVELOP AN ADEQUATELY COMPACTED SLOPE FACE.
2. THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY.

FILL SLOPE CONSTRUCTION METHOD



NOTE:

ALL PIPES SHALL RECEIVE A POLYMER BOLLARD COVER PER MANUFACTURER'S SPECIFICATIONS.

POLYMER BOLLARD COVER CONTACT:
MARK CASTONGUAY NATIONAL ACCOUNT MANAGER
W.W. GRAINGER, INC. OFFICE:
(401) 467-9160 CELL: (774) 274-2729 EMAIL:
mark.castonguay@grainger.com

PIPE BOLLARD

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
HURST, TEXAS 76054
TEL (817) 285-7444
FAX (817) 285-7318

CONSULTANT:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons
Bartlett, TN 38133
Phone (901) 384-0404
Fax (901) 384-0710

DEVELOPER:

ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

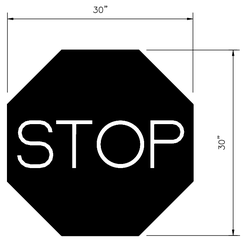
REVISIONS:

CVS PROJECT MANAGER: J. MUTTER
DRAWING BY: K. PRESLEY
DATE: 29 OCTOBER 2020
TITLE:

DETAILS

SHEET NUMBER:

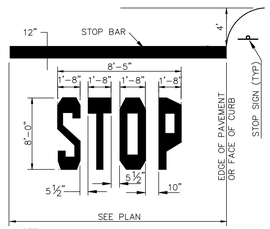
COMMENTS:
NOT RELEASED FOR CONSTRUCTION



WHITE LEGEND RED BACKGROUND

R1-1
"STOP" SIGN

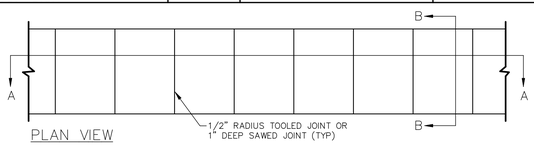
NTS



NOTE:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS
2. THESE WORDS AND BAR ARE TO BE PAINTED REFLECTIVE WHITE.

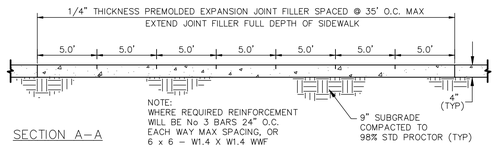
STOP SIGN

PAINTED STOP BAR



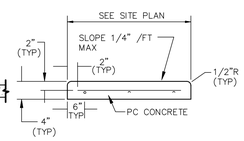
PLAN VIEW

NOTE: PROVIDE 1/2" EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS



NOTE:
WHERE REQUIRED REINFORCEMENT WILL BE No 3 BARS 24" O.C. EACH WAY MAX SPACING, OR 6 x 6 – W1.4 X W1.4 WWF

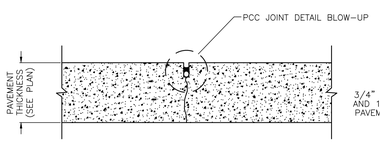
SECTION A–A



SECTION B–B

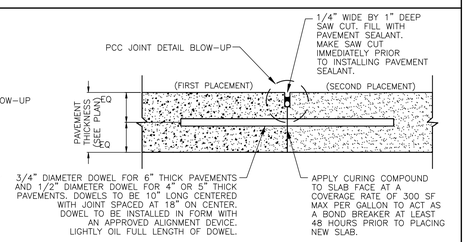
TYPICAL SIDEWALK

SIDEWALK

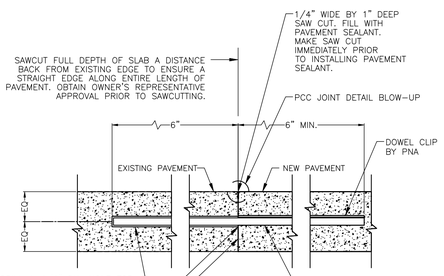


NOTE:
1. SEE PLAN FOR JOINT SPACING.

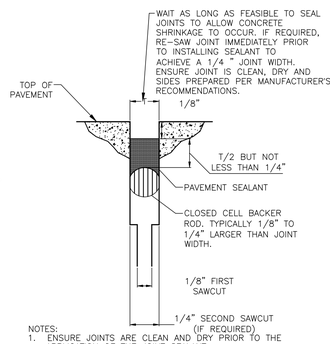
CONTRACTION JOINT



CONSTRUCTION JOINT



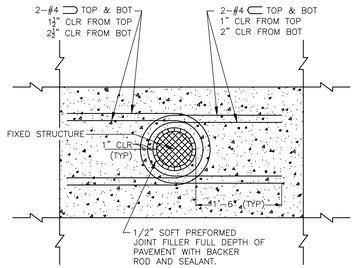
CONSTRUCTION JOINT TO EXISTING PAVEMENT



NOTES:
1. ENSURE JOINTS ARE CLEAN AND DRY PRIOR TO THE APPLICATION OF THE JOINT SEALANT.
2. INSTALL CLOSED CELL BACKER ROD AFTER JOINTS HAVE BEEN CLEANED AND DRIED IN ACCORDANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.
3. INSTALL BACKER rOD AT CONSISTENT AND UNIFORM DEPTH.
4. JOINT SEALANT APPLICATION SHALL BE IN STRICT COMPLIANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.
5. DEPTH OF CUT SHALL BE 1/4 THE THICKNESS OF THE SLAB.

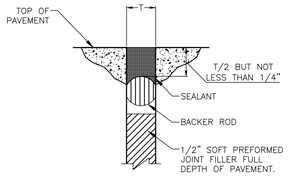
PCC JOINT DETAIL BLOW-UP (TYP.)

CONCRETE PAVEMENT JOINTS

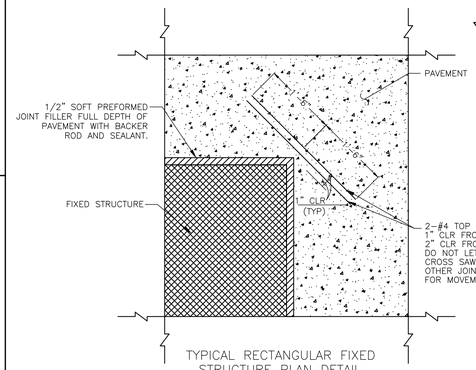


TYPICAL ROUND FIXED STRUCTURE PLAN DETAIL

USES: MANHOLES, LIGHT POLE BASES AND BOLLARDS

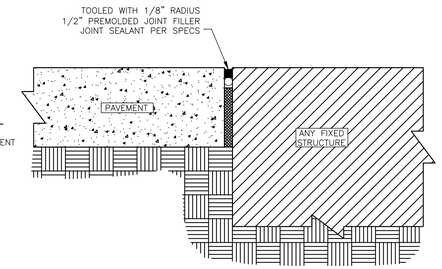


BACKER ROD AND SEALANT SECTION AT FIXED STRUCTURE



TYPICAL RECTANGULAR FIXED STRUCTURE PLAN DETAIL

USES: BUILDINGS, RETAINING WALLS/DOCK WALLS AND DROP INLETS



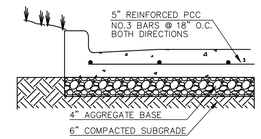
ISOLATION JOINT

NOTES:

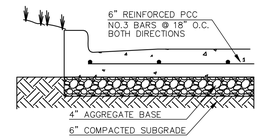
ISOLATION JOINT TO BE USED FOR FIXED STRUCTURES SUCH AS BUILDINGS, RETAINING WALLS/DOCK WALLS, DROP INLETS, MANHOLES, LIGHT POLE BASES AND BOLLARDS.

PAVEMENT IS NOT CONSIDERED A FIXED STRUCTURE.

ISOLATION JOINT



STANDARD DUTY CONCRETE PAVING

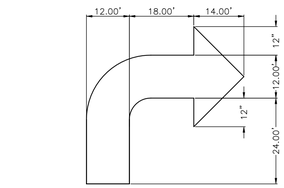


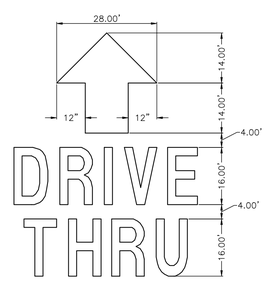
HEAVY DUTY CONCRETE PAVING

PORTLAND CEMENT CONCRETE PAVING

1. FOR PREPARATION OF PAVEMENT SUBGRADE, FILL PLACED IN 9 INCH MAXIMUM LIFTS TO FINISHED SUBGRADE ELEVATION SHALL BE COMPACTED TO AT LEAST 95% OF THE MATERIAL'S MAXIMUM STANDARD PROCTOR DRY DENSITY (ASTM D-698). THE SOIL'S MOISTURE CONTENT SHALL BE 0 TO +3% OF THE SOIL'S OPTIMUM MOISTURE VALUE AT TIME OF COMPACTION.
2. IMMEDIATELY BEFORE PAVING, CONTRACTOR TO PROOFROLL WITH A LOADED TANDEM AXLE DUMP TRUCK AND REPAIRING DEEP SUBGRADE DEFICIENCIES. THE ENTIRE SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 6 INCHES AND UNIFORMLY COMPACTED TO AT LEAST 95% OF STANDARD PROCTOR.
3. THE PORTLAND CEMENT CONCRETE PAVEMENT MIXTURE SHALL BE IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION WITH 4.5± 1.5% AIR-ENTRAINED CONCRETE. 3,000 PSI IN LIGHT DUTY AREAS AND 3500 PSI IN HEAVY DUTY AND DUMPSTER AREAS.
4. THE AGGREGATE BASE COURSE SHOULD BE CRUSHED LIMESTONE CONFORMING TO TXDOT STANDARD SPECIFICATIONS 2014 ITEM 247, TYPE A, GRADE 1 OR 2. BASE COURSE SHOULD BE PLACED IN LIFTS WITH A MAXIMUM LOOSE THICKNESS OF 6 INCHES AND COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DENSITY AT A MOISTURE CONTENT WITHIN THE RANGE OF 3% BELOW OR 3% ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.

PAVING SECTIONS





NOTES:
1. PAINT COLOR TO BE "YELLOW" FOR ARROW AND LETTERS. "DRIVE-THRU" AND "STOP" LETTERS TO BE ELONGATED HELEVETICA MEDIUM – 4" WIDE STROKES.
2. PAINT 2" BLACK OUTLINE AROUND ARROW AND LETTERS FOR PROJECTS WITH CONCRETE PARKING LOTS.

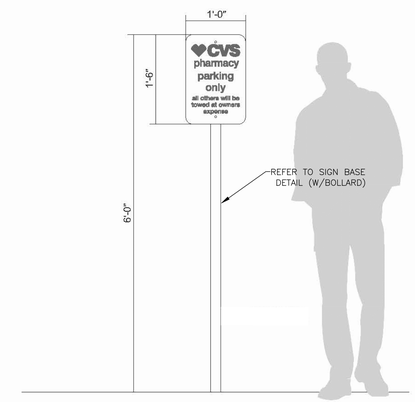
"DRIVE-THRU" PAVEMENT PAINTING

Parking Panel with Posts | Qty 8

Scope of Work:

Manufacture and Install (8) parking panels with posts.
Posts are 2" x 2" square tube to be direct set or plate mounted.

3M 3630-53 Cardinal Red
.080 Aluminum Panel Painted White
Aluminum Posts Painted White



atlas
National Headquarters: 1077 West Blue Heron Blvd.
West Palm Beach, Florida 33404
800.772.7932
www.atlasbtw.com

Revisions:
Added 05.24.2019 TLD

S09

PM: A.Q	Address: Preston & Druid
Drawn By: TLD	City State: Dallas, TX
Date: 06/11/2019	Drawing Number: 102537-S09

CVS PARKING SIGN

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
HURST, TEXAS 76054
TEL (817) 285-7444
FAX (817) 285-7318

CONSULTANT:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons
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Phone (901) 384-0404
Fax (901) 384-0710

DEVELOPER:

ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER

DRAWING BY: K. PRESLEY

DATE: 29 OCTOBER 2020

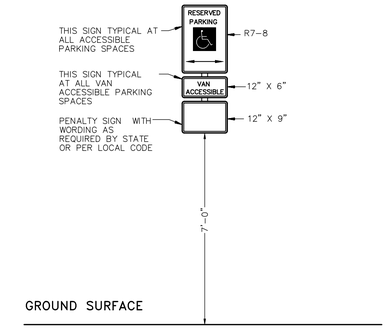
TITLE:

DETAILS

SHEET NUMBER:

20 OF 21

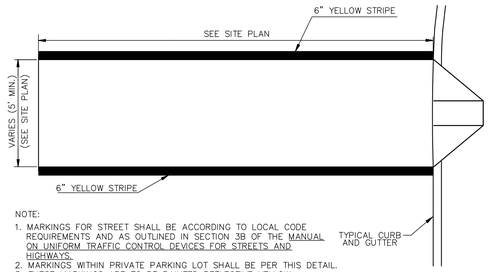
COMMENTS:
NOT RELEASED FOR CONSTRUCTION



WALL MOUNTED ACCESSIBLE SIGN DETAIL

N.T.S.

WALL MOUNTED ACCESSIBLE SIGNAGE



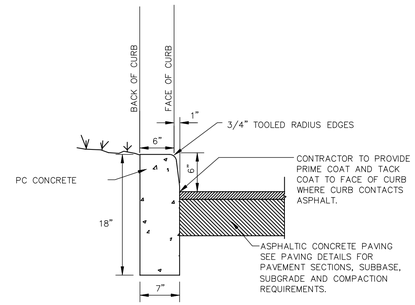
NOTE:

1. MARKINGS FOR STREET SHALL BE ACCORDING TO LOCAL CODE REQUIREMENTS AND AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. MARKINGS WITHIN PRIVATE PARKING LOT SHALL BE PER THIS DETAIL.
3. THESE MARKINGS ARE TO BE PAINTED REFLECTIVE YELLOW.

CROSSWALK/PED. CROSSING

N.T.S.

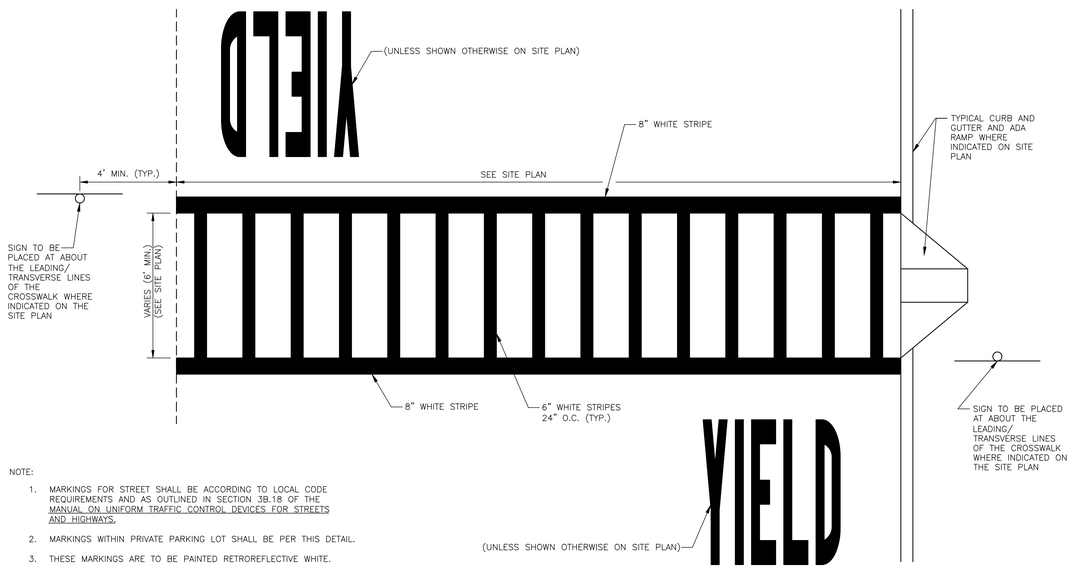
ROW PEDESTRIAN CROSSING



VERTICAL CURB

N.T.S.

VERTICAL CURB



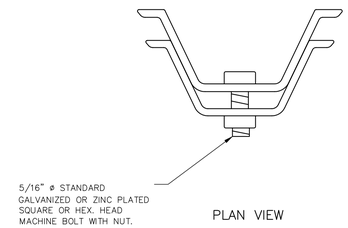
NOTE:

1. MARKINGS FOR STREET SHALL BE ACCORDING TO LOCAL CODE REQUIREMENTS AND AS OUTLINED IN SECTION 3B.18 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. MARKINGS WITHIN PRIVATE PARKING LOT SHALL BE PER THIS DETAIL.
3. THESE MARKINGS ARE TO BE PAINTED RETROREFLECTIVE WHITE.

CROSSWALK MARKING W/ LONGITUDINAL STRIPES

N.T.S.

CROSSWALK

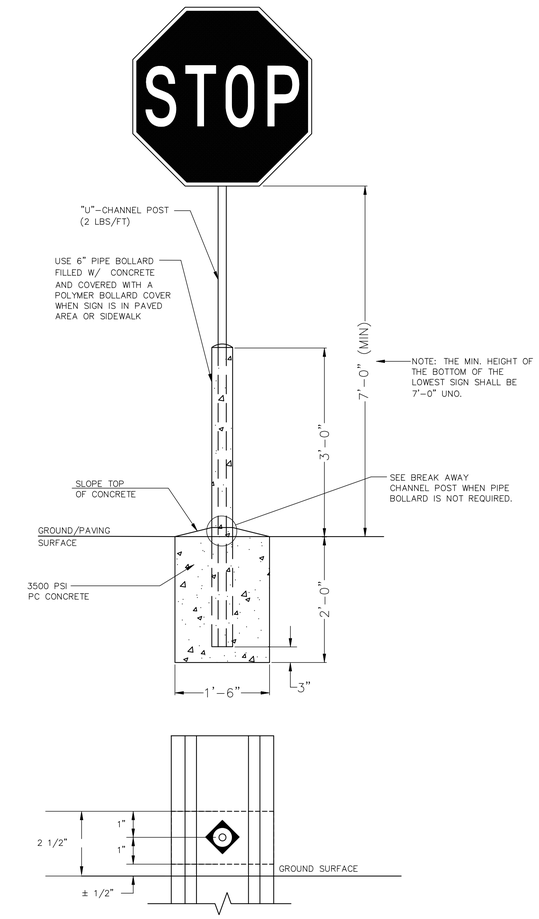


PLAN VIEW

BREAK AWAY CHANNEL POST

N.T.S.

ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.



PARTIAL ELEVATION

SITE SIGN BASE DETAILS

N.T.S.

SIGN BASE

CVS pharmacy

AS-IS (14,504 SF)
LEFT CENTER ENTRY
RIGHT SIDE DRIVE-THRU

STORE NUMBER: 7747

SWC - DRUID LN. & PRESTON RD.
UNIVERSITY PARK, TX

PROJECT TYPE: EXPANSION
DEAL TYPE: N/A

CS PROJECT NUMBER:109133

ARCHITECT OF RECORD

GENESIS DESIGN GROUP, INC.
421 W HARWOOD ROAD
SUITE 100
HURST, TEXAS 76054
TEL (817) 285-7444
FAX (817) 285-7318

CONSULTANT:

CARLSON CONSULTING ENGINEERS, INC.
7068 Ledgestone Commons
Bartlett, TN 38133
Phone (901) 384-0404
Fax (901) 384-0710

DEVELOPER:

ORANGE DEVELOPMENT
147 RESOURCE CENTER PARKWAY
SUITE 102
BIRMINGHAM, AL 35242
PH. (205) 909-3792

SEAL:

STATE OF TEXAS
JOSEPH PARSLEY
104151
LICENSED
PROFESSIONAL ENGINEER
10/29/20

REVISIONS:

CVS PROJECT MANAGER: J. MUTTER
DRAWING BY: K. PRESLEY
DATE: 29 OCTOBER 2020
TITLE:

DETAILS

SHEET NUMBER:

COMMENTS:
NOT RELEASED FOR CONSTRUCTION