NATURAL GAS:

AMEREN MISSOURI

2001 MAGUIRE BLVD.

573-876-3030

COLUMBIA, MO 65201

ELECTRIC/FIBER/STREET

LIGHT/TRAFFIC SIGNAL:

MODOT CENTRAL DISTRICT

573-690-3632

MNA-BLUEBIRD 573-777-4200

FIBER:

### PROJECT BENCHMARKS:

TEMPORARY BENCHMARK (TBM) #1 - CHISELED SQUARE IN NORTHWEST CORNER OF STORM INLET BETWEEN STADIUM BLVD. AND THE ADJACENT SIDEWALK, JUST SOUTHWEST OF THE PROJECT AREA.

CONTROL POINT #10 - PK N = 1130305.82E = 1688115.38

CONTROL POINT #11 - PK  $N = 11\overline{3}0425.96$ E = 1688063.43

#### **UTILITY COMPANIES:**

# LOCATES:

MISSOURI ONE CALL INC. 1022 B NORTHEAST DRIVE JEFFERSON CITY, MO 65109 1-800-344-7483

### WATER/ELECTRIC/FIBER/SEWERMAIN:

CITY OF COLUMBIA P.O. BOX 6015 WATER & LIGHT DEPARTMENT COLUMBIA, MO 65205 573-874-7325

#### TELEVISION:

MEDIACOM 1211 WILKES BLVD COLUMBIA, MO 65201 (855) 633-4226

# WATER, STORM SEWER & SECONDARY ELECTRIC:

UNIVERSITY CAMPUS FACILITY OPERATIONS 180 GENERAL SERVICES BUILDING COLUMBIA, MO 65211 573-882-8211

### **GENERAL NOTES:**

CONTRACTOR WILL BE RESPONSIBLE FOR PLACEMENT AND MAINTENANCE OF TRAFFIC CONTROL DEVICES NECESSARY TO COMPLETE THEIR PORTION OF WORK. THE DEVICES AND METHODS EMPLOYED WILL COMPLY WITH THE CURRENT VERSION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL

EXISTING UTILITIES SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE LOCATES PRIOR TO ANY EXCAVATION.

IT IS THE INTENT OF THESE PLANS TO COMPLY WITH THE REQUIREMENTS OF THE MoDNR CLEAN WATER COMMISSION.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES AND REMOVING THEM ONCE THE SITE IS STABILIZED

CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND PAVEMENT THAT IS TO REMAIN. ALL DAMAGED ITEMS OUTSIDE THE SCOPE OF

ALL PAVEMENTS, SIDEWALKS, ABANDONED SEWERS, PIPELINES, EXCESS EARTHWORK, OR OTHER OBSTRUCTIONS TO CONSTRUCTION THAT ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SPECIFICALLY NOTED AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH STATE REGULATION 10 CSR 80-2.010 (9)(A)1

ALL SLOPES ARE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.

ALL DISTURBED AREAS WITHIN THE "LIMITS OF DISTURBANCE" THAT ARE NOT TO BE PAVED, SHALL BE FINE GRADED BY CONTRACTOR TO AN ELEVATION OF 6" BELOW FINISHED GRADE FOR TURF AREAS AND 24" BELOW FINISHED GRADE FOR PLANTER AREAS. TOP SOIL AND VEGETATION WILL BE REESTABLISHED BY OWNER.

TOTAL DISTURBED AREA = 0.22 AC.

MISSOURI DNR LAND DISTURBANCE PERMIT NOT NEEDED FOR THIS PROJECT.

ALL WORK SHALL BE SCHEDULED WITH THE OWNER'S REPRESENTATIVE AND BE SUBJECT TO THE OWNER'S APPROVAL PRIOR TO PROCEEDING.

ALL STORM SEWER PIPE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL FOR PIPE BEDDING REQUIREMENTS.

### SPECIAL INSPECTIONS:

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE:

a. PLACING OF CONCRETE AND REINFORCING STEEL (CONTINUOUS OF CONCRETE SAMPLING / PERIODIC OF REINFORCING)

b. IN-SITU SOILS, EXCAVATIONS, FILLING & COMPACTION (PERIODIC)

THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

# DEFERRED SUBMITTALS:

#### **ENGINEER CERTIFICATION:**

BY SIGNING AND AFFIXING MY SEAL TO THESE PLANS, I HEREBY CERTIFY THESE DRAWINGS AND/OR SPECIFICATIONS HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE DRAWINGS AND/OR SPECIFICATIONS ARE AS REQUIRED BY AND IN COMPLIANCE WITH THE BUILDING CODES OF THE UNIVERSITY OF MISSOURI.

# FLOOD PLAIN STATEMENT:

PART OF THIS TRACT IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN AS PER THE BOONE COUNTY FIRM MAP #2900340280E DATED APRIL 19, 2017.

Sheet List	Table				
Sheet Number	Sheet Title	BID SET 03/13/2024	REVISION 1	REVISION 2	REVISION 3
CE 0	COVER SHEET	X			
CE1	PAVEMENT INVESTIGATION PLAN	X			
CE 2	DEMOLITION PLAN	X			
CE 3	GRADING PLAN	Х			
CE 4	SITE PLAN	X			
CE 5	STORM SEWER PROFILE AND DETAILS	X			
CE 6	SPECIFICATIONS AND DETAILS	X			

# LEGEND OF SYMBOLS:

LLOLIND OI	STIVIDOLO.			
	EXISTING CURB	FF=XXX.X	FINISH FLOOR OF STRUCTURE	
	PROPOSED CURB	(XXX.XX TC)	PROPOSED TOP OF CURB ELEVATION	
	RIP RAP	(XXX.XX TP)	PROPOSED TOP OF PAVEMENT ELEVATION	
	EXISTING STRUCTURE	(XXX.XX FG)	PROPOSED FINISH GRADE ELEVATION	
	EXISTING TREELINE	(XXX.XX TW)	PROPOSED TOP OF WALL	
~~~~	PROPOSED TREELINE	XX	LOT NUMBER	
000	EDGE OF WATERWAY		STORM SEWER STRUCTURE LABEL	
— — W — —	EXISTING WATERLINE	$\langle X \rangle$		
——— w ———	PROPOSED WATERLINE	V	SANITARY SEWER STRUCTURE LABEL	
—— G ——	EXISTING GAS LINE	(X)		
G	PROPOSED GAS LINE	H.P.	HIGH POINT	
— — —UT — — —	EXISTING UNDERGROUND TELEPHONE	L.P.	LOW POINT	
- $ -$ UTV $ -$	EXISTING UNDERGROUND CABLE TELEVISION	<del>-</del> 0	EXISTING SIGNS	
— — – HVE— — —	EXISTING HIGH VOLTAGE ELECTRIC	Ø	EXISTING POWER POLE	
—— OE ——	EXISTING OVERHEAD ELECTRIC	GV	EXISTING GAS VALVE	
— — —UE — — —	EXISTING UNDERGROUND ELECTRIC	$\bowtie$	EXISTING WATER VALVE	
——— OETV ——	EXISTING OVERHEAD ELEC. & TV	©	EXISTING GAS METER	
— — ОЕТVТ — —	EXISTING OVERHEAD ELEC., TV & TELE.	W	EXISTING WATER METER	
s	EXISTING SANITARY SEWER	À	EXISTING FIRE HYDRANT	
s	PROPOSED SANITARY SEWER	©		
·····XXX······	EXISTING MINOR CONTOUR	•	MANHOLE  EVICTING CANUTARY SEWER LATERAL	
	EXISTING MAJOR CONTOUR		EXISTING SANITARY SEWER LATERAL	
XXX	PROPOSED MINOR CONTOUR	<b>—</b> •	PROPOSED SANITARY SEWER LATERAL	
———XXX———	PROPOSED MAJOR CONTOUR	18	PROPOSED TRACER WIRE TEST STATION BOX	
	100 YEAR FLOOD PLAIN	AC	EXISTING AIR CONDITIONER	
	FLOODWAY		EXISTING TELEPHONE PEDESTAL	
·	ORDINARY HIGH WATER MARK	<b></b>	EXISTING ELECTRICAL TRANSFORMER	
<del></del>	STREAM SIDE BUFFER	<b>E</b>	EXISTING ELECTRIC METER	
	OUTER STREAM BUFFER	¤	EXISTING LIGHT POLE	
	DEMOLITION LIMITS	→ <b>~</b>	EXISTING GUY WIRE	
		×	CONSTRUCTION BARRIER FENCING  EVISTING LITHLITY LOCATED BY MADDING ONLY	
	SILT FENCE	— — <u>XX</u> * — —	EXISTING UTILITY LOCATED BY MAPPING ONLY	

| REVISIONS: THIS SHEET HAS BEEN SIGNED, SEALED AND

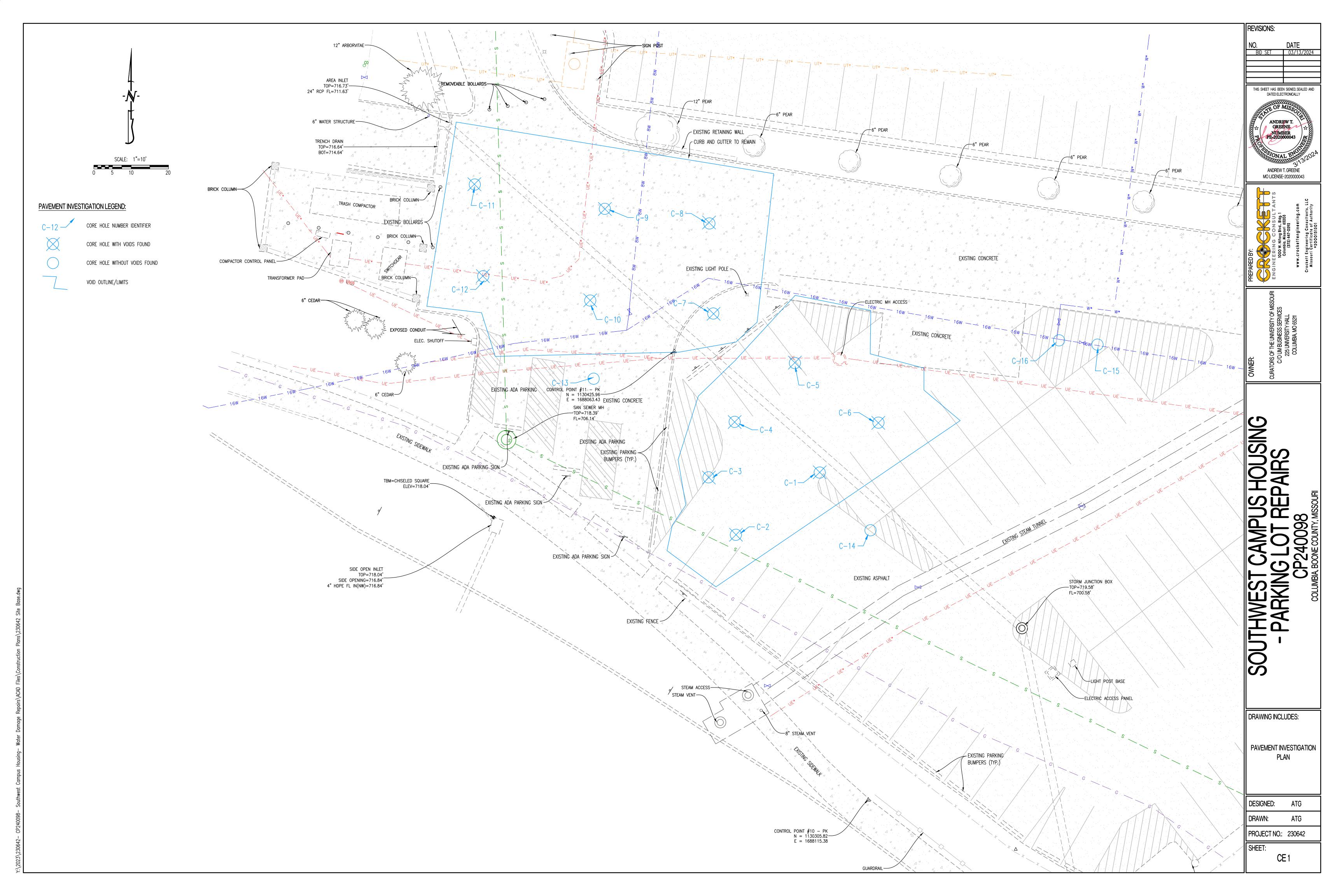
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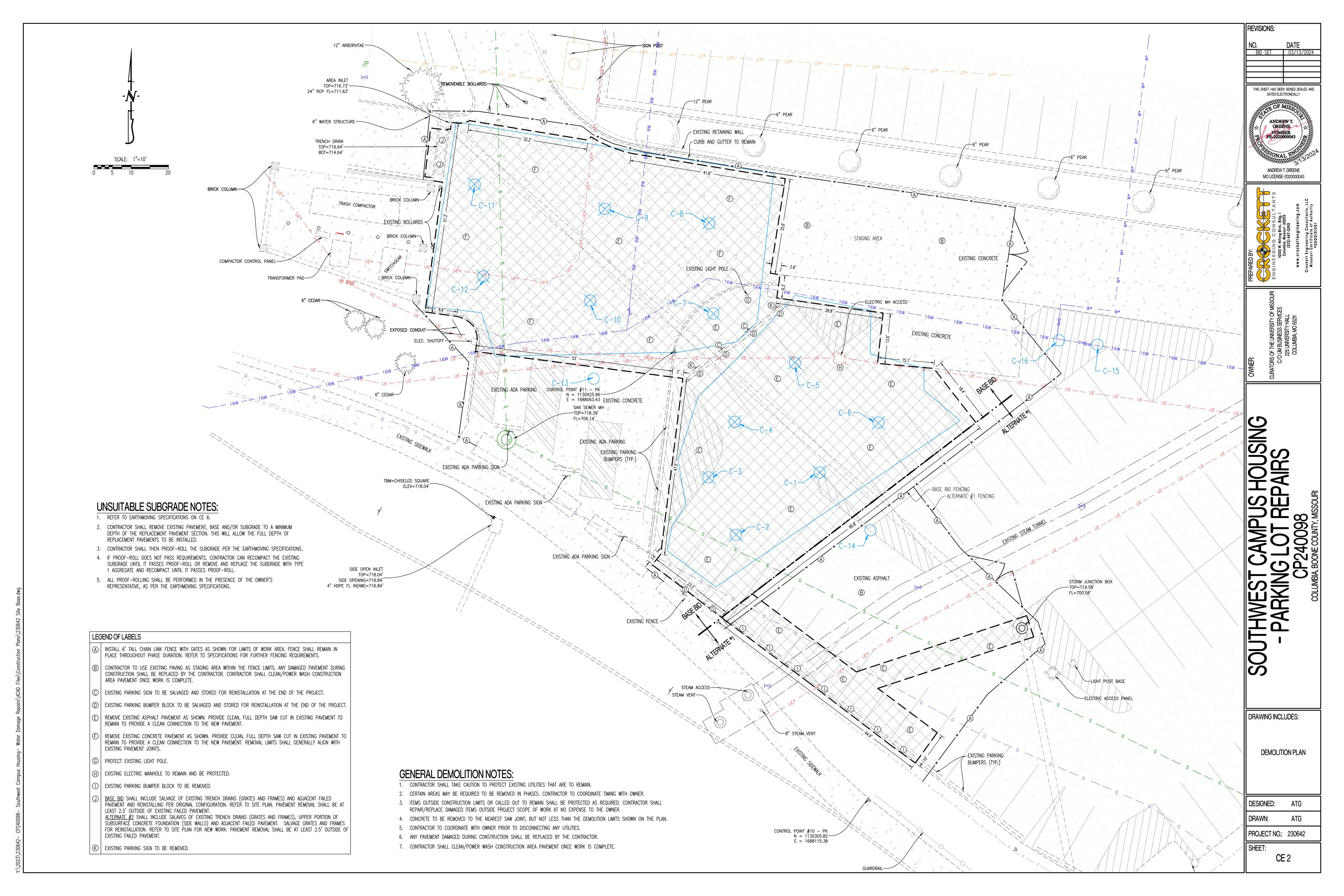
**COVER SHEET** 

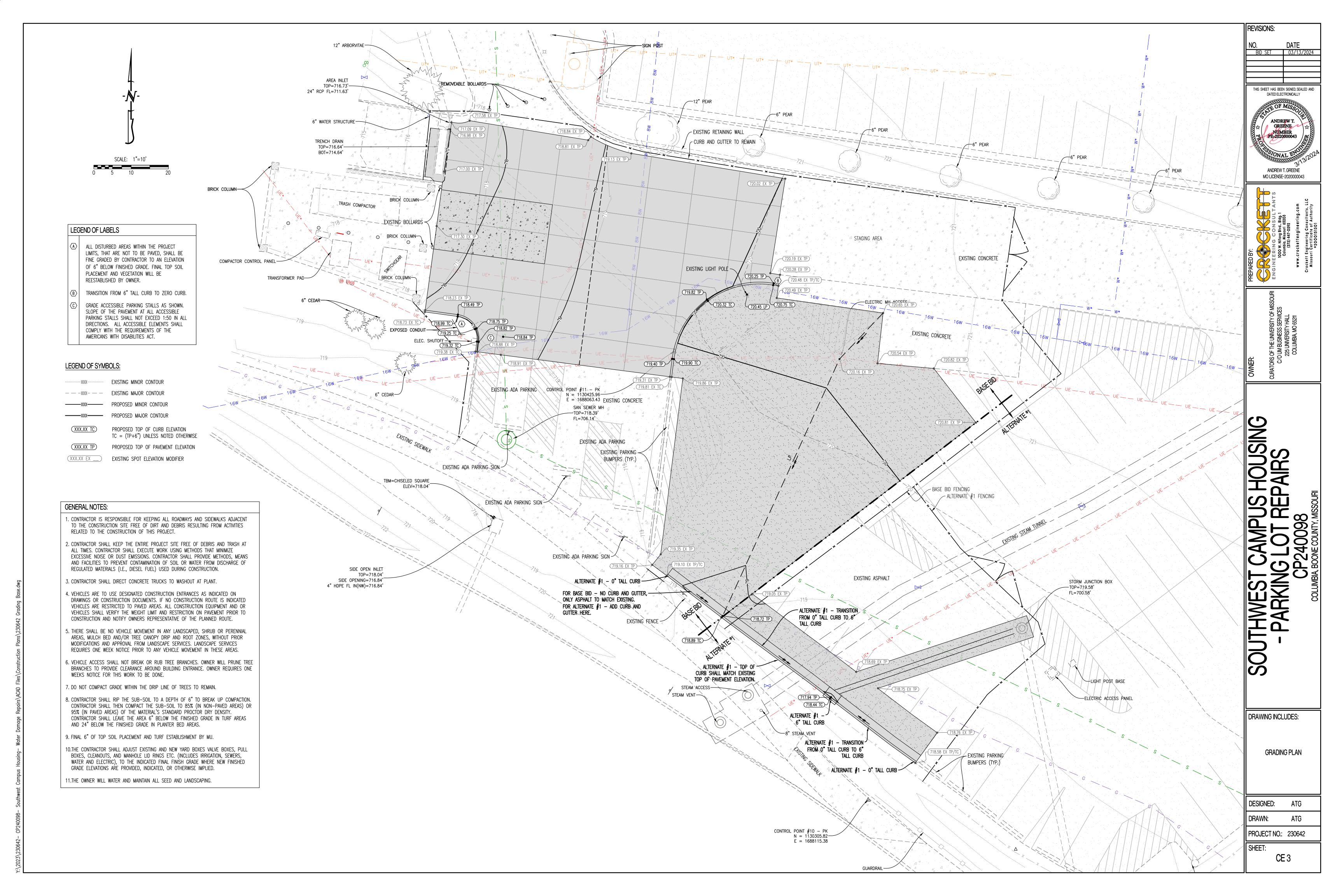
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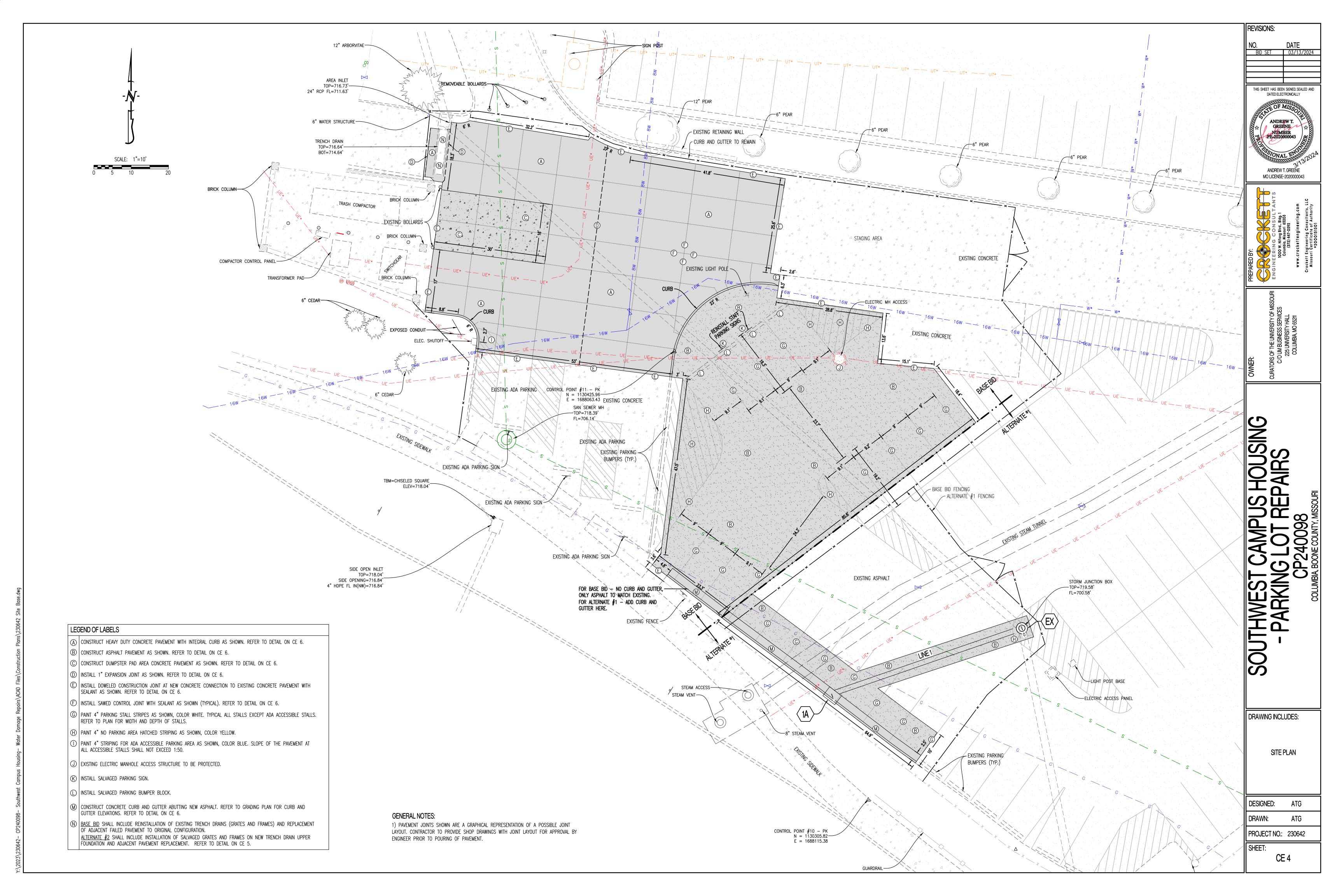
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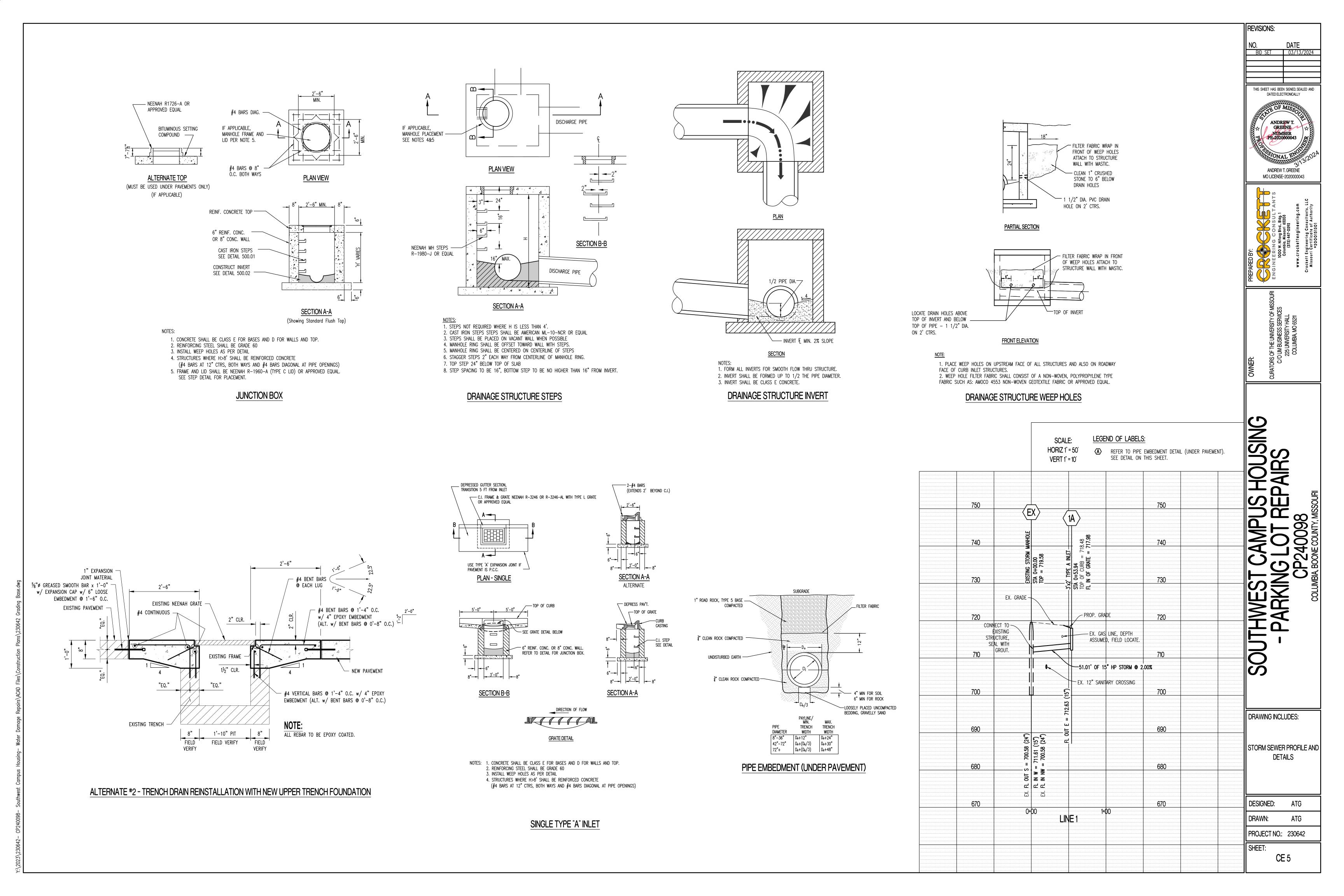
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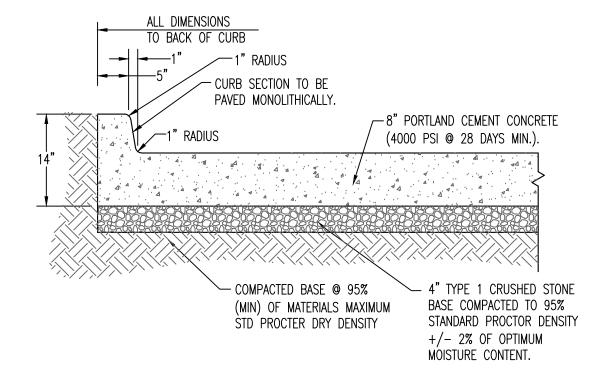




NOTES: 1. ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOINTS NO LARGER THAT 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.

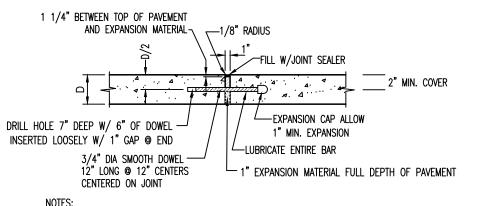
2. CONCRETE SHALL BE CLASS AA REINFORCING STEEL SHALL BE

## CONCRETE PAVEMENT CROSS SECTION (DUMPSTER PAD AREA)



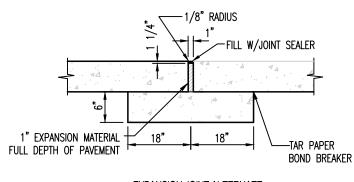
NOTES: 1. ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOINTS NO LARGER THAT 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.

#### CONCRETE PAVEMENT W/INTEGRAL CURB (HEAVY DUTY)

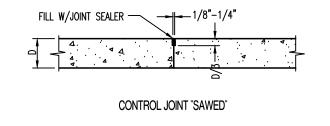


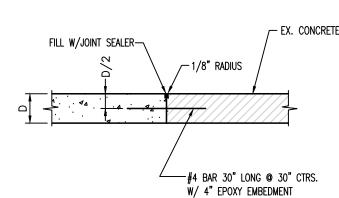
1. ALL BARS TO BE INSTALLED PERPENDICULAR TO EDGE AND IN SAME PLANE TO PREVENT LOCKING OF JOINT. 2. EDGE OF PAVEMENT TO BE SAWED/FORMED TO A CLEAN EDGE FOR

INSTALLATION OF EXPANSION JOINT. **EXPANSION JOINT** 



EXPANSION JOINT ALTERNATE CONCRETE SILL





CONSTRUCTION JOINT

#### JOINT DETAILS (P.C. CONCRETE PAVEMENT)

#### PAVEMENT MARKINGS:

APPLIES TO PAVEMENT MARKINGS IN PARKING LOTS, ROADWAYS, SAFETY ZONES, ADA ZONES, LOADING ZONES, AND NO PARKING ZONES AS INDICATED ON DRAWINGS.

MATERIAL SHALL BE AN EPOXY PAVEMENT MARKING MATERIAL WITH DROP-ON GLASS BEADS IN ACCORDANCE WITH MODOT SPECIFICATIONS, 620.20.3, 1048.20.2, AND 1048.30 OR GEVEKO PLASTICROUTE (MMA) OR APPROVED EQUAL AT LOCATIONS SHOWN ON THE PLANS.

MATERIAL TYPE MUST BE COMPATIBLE WITH THE SURFACES TO BE MARKED MARKINGS SHALL BE APPLIED PER THE FOLLOWING COLOR CODE: WHITE FOR STANDARD PARKING SPACE LINES, SIDEWALK CROSSINGS, AND DRIVE

LANES AS NOTED ON THE PLANS. BLUE FOR ADA PARKING STALL AND SYMBOLS AND ASSOCIATED CROSS-HATCHED AREAS. YELLOW FOR DRIVE LANES AS NOTED ON THE PLANS.

DELIVER MATERIALS TO THE SITE IN ORIGINAL CONTAINERS WITH SEALS UNBROKEN AND LABELS INTACT.

#### PROTECT ALL MATERIAL FROM FREEZING.

DO NOT ALLOW MATERIAL TO SETTLE, CAKE, OR THICKEN IN THE CONTAINER. READILY STIR WITH A PADDLE TO A SMOOTH CONSISTENCY.

MATERIAL SHALL ARRIVE ON THE JOB COLOR-MIXED EXCEPT FOR TINTING OF UNDERCOATS AND POSSIBLE THINNING.

PRIOR TO BEGINNING CLEANING OR MARKING OPERATIONS, CONTRACTOR SHALL PROTECT ALL ITEMS OR SURFACES NOT INCLUDED IN AREA TO BE MARKED. PROTECT VEHICLES, EQUIPMENT, STRUCTURES, OR OTHER ITEMS FROM MATERIAL SPATTERS, OVER SPRAY, OR DAMAGE.

CONTRACTOR SHALL PROVIDE BARRICADES AND ANY SIGNAGE NEEDED TO PROTECT ALL MARKED AREAS FROM PEDESTRIAN AND VEHICULAR TRAFFIC UNTIL ACHIEVING SUFFICIENT DRYING TIME.

PERFORM PAVEMENT MARKINGS AS SOON AS FEASIBLE AND PRACTICAL AFTER THE FINISHING OF THE PAVEMENT OR AS DIRECTED BY THE OWNER'S

ADEQUATE LIGHTING SHALL BE AVAILABLE AT THE TIME OF PAVEMENT MARKING.

THE SURFACE ON WHICH PERMANENT PAVEMENT MARKING IS TO BE PLACED SHALL BE CLEAN. DRY AND FREE OF ALL DEBRIS. LAITANCE. CURING COMPOUND AND ANY OTHER CONTAMINANTS THAT MAY HINDER THE ADHESION OF THE SYSTEM TO THE SURFACE. PERMANENT PAVEMENT MARKING SHALL NOT BE APPLIED IN DAMP CONDITIONS OR IF THERE IS ANY EVIDENCE OF SURFACE MOISTURE ON THE PAVEMENT. EXAMINE ALL SURFACES TO RECEIVE PAVEMENT MARKING TO MAKE SURE THERE ARE NO DEFECTS IN THE SURFACE TO BE STRIPED. DO NOT MARK PAVEMENT OVER RUST. SCALE, GREASE, OIL, FUEL, DUST, WET PAVEMENT, OR OTHER CONDITIONS DETRIMENTAL TO PAVEMENT MARKING ADHESION. REMOVE GREASE, OIL, OR FUEL ON ANY SURFACE BEFORE MARKING PAVEMENT. CORRECT ALL SURFACE DEFECTS BEFORE MARKING PAVEMENT.

CONTRACTOR SHALL EXAMINE AREAS TO HAVE PAVEMENT MARKING. NOTIFY THE OWNERS REPRESENTATIVE IN WRITING OF CONDITIONS THAT MIGHT DELAY TIMELY COMPLETION OF THE WORK.

THE PAVEMENT MARKING SHALL ONLY BE APPLIED DURING DRY WEATHER AND ON DRY PAVEMENT SURFACES. THE PAVEMENT SURFACE TEMPERATURE AND AMBIENT AIR TEMPERATURE SHALL BE IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S RECOMMENDATIONS THROUGHOUT THE APPLICATION AND DURING THE SPECIFIED TIME FOR CURING OF THE MATERIAL.

AREAS TO BE MARKED SHALL NOT NOT LESS THAN 25 MILS THICKNESS WITH THE PROPER APPLICATION OF GLASS BEADS. IN LOCATIONS REQUIRING MULTIPLE COATS, PRIOR COAT SHALL BE DRY TO MANUFACTURER'S RECOMMENDATIONS BEFORE APPLYING THE NEXT COAT.

FINISHED WORK SHALL BE UNIFORM, OF APPROVED COLOR, FREE OF RUNS, DRIPS, DEFECTIVE BRUSHING, SPRAYING, AND CLOGGING. PARKING LINES AND SYMBOLS SHALL BE NEAT AND WELL DEFINED. ONLY SKILLED APPLICATORS SHALL APPLY PAVEMENT MARKINGS.

REMOVE PAVEMENT MARKING SPLATTER FROM ADJACENT AREAS OR AREAS NOT DESIGNATED TO RECEIVE PAVEMENT MARKING.

CONTRACTOR SHALL REPAIR OR TOUCH UP ANY SURFACES IF EXPOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, AT NO ADDITIONAL COST TO THE OWNER.

WHEN COLOR, DIRT, STAINS, EXISTING PAVEMENT MARKINGS, ETC., SHOW THROUGH THE FINAL COAT, REMARK THE SURFACE UNTIL THE FILM IS UNIFORM IN FINISH, COVERAGE, COLOR, AND APPEARANCE

PLACEMENT OF ASPHALTIC CONCRETE, IN ONE OR MORE COURSES, ON PREPARED BASE OR UNDERLYING COURSE IN CONFORMITY WITH THE LINE, GRADE, THICKNESS, AND TYPICAL CROSS SECTION SHOWN ON THE DRAWINGS.

MATERIALS AND COMPOSITION OF PLANT MIX BITUMINOUS BASE SHALL CONFORM TO MODOT 401.2 THROUGH 401.4.5 INCLUSIVE.

EQUIPMENT SHALL MEET THE REQUIREMENTS OF MODOT 403.7 THROUGH 403.9.

ASPHALT SHALL NOT BE PLACED WHEN EITHER THE AIR TEMPERATURE OR THE TEMPERATURE OF THE SURFACE ON WHICH THE MIXTURE IS TO BE PLACED IS BELOW 50 DEGREES FAHRENHEIT FOR THE SURFACE COURSE OR BELOW 40 DEGREES FAHRENHEIT FOR THE SUBSURFACE COURSES. IT SHALL NOT BE PLACED ON ANY WET OR FROZEN SURFACE. IT SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT THE PROPER HANDLING OR FINISHING OF THE MIXTURE.

SPREADING AND FINISHING SHALL CONFORM TO MODOT 403.13 THROUGH 403.16.2

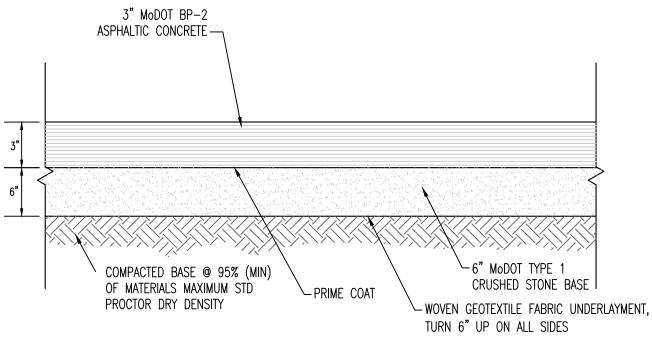
SPOT WEDGING AND SURFACE LEVELING SHALL CONFORM TO MODOT 402.10.4 THROUGH 402.10.9

THE SURFACE OF EACH LAYER SHALL BE SUBSTANTIALLY FREE FROM WAVES OR IRREGULARITIES

PRIME COAT SHALL CONFORM TO MODOT SECTION 408. GEOTEXTILE FABRIC SHALL BE MIRAFI 600X OR APPROVED EQUAL.

ALL DIMENSIONS TO BACK OF CURB - 6" PORTLAND CEMENT CONCRETE (4000 PSI, 6-SACK MINIMIX). -1" RADIUS - ASPHALT PAVING RADIUS SEE GRADING PLAN 4" MoDOT TYPE 5 CRUSHED -COMPACTED BASE @ 95% LIMESTONE BASE MATERIAL (MIN) OF MATERIALS MAXIMUM (CLBM) STD PROCTOR DRY DENSITY

#### 6" TALL CURB ABUTTING ASPHALT



#### TYPICAL ASPHALT PAVEMENT CROSS SECTION

#### SITE CLEARING & DEMOLITION:

IT IS THE INTENT THAT THE DEMOLITION BE COMPLETE AND ADEQUATE FOR THE INTENDED PURPOSE. THIS WORK SHALL INCLUDE THE REMOVAL OF ALL ITEMS, WHETHER IN VIEW OR HIDDEN UNDERNEATH THE SURFACE OF THE GROUND, REGARDLESS OF WHETHER SHOWN ON THE DRAWINGS OR ENCOUNTERED DURING

CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING MATERIALS, METHODS OF WORK, AND DISPOSAL OF

ERECT BARRIERS TO PROTECT PERSONNEL, STRUCTURES AND UTILITIES REMAINING INTACT.

PROTECT ALL EXISTING OBJECTS INTENDED TO REMAIN. IN CASE OF DAMAGE, MAKE REPAIRS OR REPLACEMENTS NECESSARY AT NO ADDITIONAL COST TO THE

MINIMIZE INTERFERENCE WITH ROADS. STREETS. DRIVEWAYS. SIDEWALKS. AND ADJACENT FACILITIES.

DO NOT CLOSE OR OBSTRUCT STREETS, SIDEWALKS, ALLEYS OR PASSAGEWAYS WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.

IF CLOSURE IS PERMITTED, PROVIDE SIGNAGE INDICATING CLOSURE AND SIGNAGE TO DIRECT TRAFFIC TO ALTERNATE ROUTE.

MOISTEN SURFACES AS REQUIRED TO PREVENT DUST FROM BEING A NUISANCE TO THE PUBLIC, NEIGHBORS, AND CONCURRENT PERFORMANCE OF OTHER WORK ON

PROVIDE THE OWNER'S REPRESENTATIVE A MINIMUM OF TWO BUSINESS DAYS' NOTICE PRIOR TO COMMENCING WORK OF THIS SECTION.

THE CONTRACTOR SHALL LOCATE EXISTING UTILITY LINES AND SERVICES TRAVERSING THE SITE AND DETERMINE THE REQUIREMENTS FOR THEIR PROTECTION. THE CONTRACTOR SHALL PRESERVE ACTIVE UTILITIES ON THE SITE THAT ARE DESIGNATED TO REMAIN.

BEFORE STARTING SITE OPERATIONS, THE CONTRACTOR SHALL DISCONNECT OR ARRANGE FOR THE DISCONNECTION OF ALL UTILITY SERVICES DESIGNATED TO BE REMOVED. THE CONTRACTOR SHALL PERFORM ALL SUCH WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY OR AGENCY INVOLVED IN REMOVING PAVEMENT, CURB AND GUTTER, SIDEWALKS, ETC., WHERE A PORTION IS LEFT IN PLACE, REMOVAL SHALL BE TO AN EXISTING JOINT OR TO A JOINT SAWED TO A MINIMUM DEPTH OF 2" WITH A TRUE SAW LINE AND A VERTICAL FACE. REMOVE SUFFICIENT PAVEMENT TO PROVIDE FOR PROPER GRADE AND

CONNECTIONS IN THE NEW WORK REGARDLESS OF ANY LIMITS INDICATED ON THE DRAWING. EXISTING CASTINGS AND CULVERTS, IF SALVAGEABLE AND REMOVED INTACT, REMAIN THE PROPERTY OF THE CONTRACTOR.

ALL SEWERS AND DRAINAGE PIPES, WHICH HAVE BEEN OR ARE TO BE ABANDONED, SHALL BE PERMANENTLY SEALED AT THE ENDS WITH BULKHEADS CONSTRUCTED OF CONCRETE, HAVING A MINIMUM THICKNESS OF 8".

ABANDON STORM OR SANITARY SEWER STRUCTURES BY BREAKING THE CONCRETE BOTTOM OF THE STRUCTURE INTO PIECES NO LARGER THAN 12" IN ANY DIRECTION AND REMOVING THE TOP OF THE STRUCTURE TO 3" BELOW FINISHED GRADE. PLUG ALL PIPES WITH CONCRETE AND FILL STRUCTURE WITH 1" CLEAN

ALL DEBRIS SHALL BE DISPOSED OF OFF-SITE

DO NOT STORE OR BURN MATERIALS ON-SITE UNLESS PERMITTED BY THE GOVERNING JURISDICTION.

ALL ASPHALT OR CONCRETE MATERIALS SHALL BE DISPOSED OF OFF-SITE.

MATERIAL ACQUIRED THROUGH DEMOLITION, OTHER THAN THOSE REQUIRED TO COMPLETE THE CONSTRUCTION PROJECT AND DESIGNATED FOR RETURN TO OWNER, WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE. THE MATERIAL WILL BE DISPOSED OF IN A LEGAL MANNER.

THE CONTRACTOR'S OPERATIONS SHALL BE RESTRICTED TO THOSE AREAS INSIDE THE CONSTRUCTION LIMITS INDICATED ON THE DRAWINGS. IF LIMITS ARE NOT INDICATED, RESTRICT WORK TO THE OWNER'S PROPERTY, EASEMENT, OR PUBLIC RIGHTS-OF-WAY.

COMPLETE WORK WITHIN PUBLIC RIGHTS-OF-WAY UNDER THE PERMISSION OF THE GOVERNING AGENCY.

IF ITEMS OUTSIDE THE LIMITS OF DISTURBANCE GET DAMAGED, OWNER COMPLETES THE REQUIRED REPAIRS AND CHARGES THE CONTRACTOR.

THE CONTRACTOR IS RESPONSIBLE FOR THE ADJUSTMENT OF ALL MANHOLES, CASTINGS, WATER VALVES IRRIGATION BOXES, CLEAN OUTS AND ETC. WITHIN THE GRADING LIMITS TO MATCH THE FINISHED SURFACE. ADJUSTMENTS SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO CONSTRUCTION UNLESS NOTED AS A BID ITEM. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITY STRUCTURES AND APPURTENANCES THAT OCCURS DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

#### EARTHMOVING:

CONTRACTOR TO SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.

TEST REPORTS: SUBMIT FOR APPROVAL TEST REPORTS, LIST OF MATERIALS AND GRADATIONS PROPOSED FOR USE. OBTAIN SAMPLES OF ANY PROPOSED FILL MATERIAL AND CONTRACTOR TO PROVIDE STANDARD PROCTOR TEST REPORTS TO ENGINEER.

COMPACTION REQUIREMENTS ARE AS FOLLOWS:

UNDER STEPS, PAVEMENTS, AND WALKWAYS, 95 PERCENT STANDARD PROCTOR MINIMUM DENSITY, ASTM D 698.

UNDER LAWNS OR UNPAVED AREAS, 85 PERCENT, ASTM D 698.

GRADING TOLERANCES OUTSIDE BUILDING LINES ARE AS FOLLOWS: LAWNS, UNPAVED AREAS, AND WALKS, PLUS OR MINUS 1 INCH.

PAVEMENTS. PLUS OR MINUS 1/2 INCH. ALL ADA ROUTES AND PARKING ARE TO MEET ADA REQUIREMENTS AT ALL TIMES.

ALL ACTIVITIES WILL BE CONTAINED WITHIN CONSTRUCTION BOUNDARIES INDICATED ON SITE PLAN. SPECIFIED EXCAVATION REQUIREMENTS, PRECAUTIONS, AND PROTECTIVE SYSTEMS WILL BE OBSERVED AT ALL TIMES.

MOVEMENT OF TRUCKS AND EQUIPMENT ON OWNER'S PROPERTY WILL BE IN ACCORDANCE WITH OWNER'S INSTRUCTIONS.

TOPSOIL WILL BE STRIPPED FROM THE CONSTRUCTION SITE AND WILL BE DISPOSED OF LEGALLY OFF SITE.

TRENCHES WILL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE COMPLETED AND THE UTILITY SYSTEMS, AS INSTALLED, CONFORM TO REQUIREMENTS SPECIFIED BY THE CONTRACT DOCUMENTS.

EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE REGARDLESS OF MATERIALS ENCOUNTERED. REPAIR EXCAVATIONS BEYOND ELEVATIONS AND DIMENSIONS INDICATED AS FOLLOWS: AT STRUCTURE: CONCRETE OR COMPACTED STRUCTURAL FILL

ELSEWHERE: BACKFILL AND COMPACT AS DIRECTED. MAINTAIN STABILITY OF EXCAVATIONS; CONTRACTOR TO BE RESPONSIBLE FOR DESIGN AND COORDINATION OF SHORING AND BRACING AS REQUIRED. PREVENT SURFACE AND SUBSURFACE WATER FROM ACCUMULATING IN EXCAVATIONS. STOCKPILE SATISFACTORY MATERIALS FOR REUSE, ALLOW FOR PROPER DRAINAGE AND DO NOT STOCKPILE MATERIALS WITHIN DRIP LINE OF TREES TO REMAIN.

COMPACT MATERIALS AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 698 BY AERATION OR WETTING TO THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY:

- STRUCTURE, PAVEMENT, WALKWAYS: SUBGRADE AND EACH FILL LAYER TO 95% (-2%+4%) OF STANDARD PROCTOR MAXIMUM DRY DENSITY TO SUITABLE DEPTH. COMPACTION TESTING SHALL BE PERFORMED IMMEDIATELY PRIOR TO THE PLACEMENT OF REINFORCING STEEL AND NEW PAVING MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING TESTING WITH OWNERS DESIGNATED TESTING AGENCY.
- UNPAVED AREAS: TOP 6" OF SUBGRADE AND EACH FILL LAYER TO 90% MAXIMUM DRY DENSITY. A PROOF-ROLL SHALL BE REQUIRED OF THE SUBGRADE PRIOR TO PLACEMENT OF THE BASE COURSE. PROOF ROLLING SHALL CONSIST OF PASSING A LOADED, 20-TON, TANDEM DUMP TRUCK OVER THE PREPARED SUBGRADE SOIL WITH A MAXIMUM ALLOWABLE DISPLACEMENT OF 1". ANY AREAS THAT DISPLACE MORE THAN 1" SHALL BE COMPACTED UNTIL THIS CRITERION IS MET, OR THOSE AREAS MAY BE EXCAVATED AND BACKFILLED WITH COMPACTED
- TYPE 1 AGGREGATE USED FOR BASE MATERIAL. ALL PROOF ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. CUT AREAS UNDER PROPOSED ASPHALT OR CONCRETE PAVEMENTS SHALL BE CUT AND COMPACTED. AFTER GRADING TO SUBGRADE ELEVATION, SCARIFY THE TOP SIX INCHES OF THE SUB-BASE AND COMPACT AS OUTLINED ABOVE.

PLACE ACCEPTABLE MATERIALS IN LAYERS NOT MORE THAN 8" LOOSE DEPTH FOR MATERIALS COMPACTED BY HEAVY EQUIPMENT AND NOT MORE THAN 4" LOOSE DEPTH FOR MATERIALS COMPACTED BY HAND EQUIPMENT TO SUBGRADES INDICATED AS FOLLOWS: STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS ON GRADE IN LAYERS AS INDICATED.

- DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.
- LANDSCAPE AREA FILL: ALL SUB-GRADE AREAS SHALL BE "RIPPED" TO A MINIMUM 6" DEEP AND A MAXIMUM OF 12" APART IN OPPOSITE DIRECTIONS WITH MINIMAL TIRE TRAFFIC TO FOLLOW.
- CONTRACTOR TO LEAVE AREAS 6" OR 18" (PLANTER AREAS) BELOW FINISH GRADE. OWNER TO PLACE TOPSOIL AND ALL PLANTINGS. ANY FILL SOIL WITHIN 36" OF FINISHED GRADE IN LAWN AND PLANTER AREAS SHALL BE COHESIVE SOILS IN SOIL CLASSIFICATIONS GROUPS ML, CL, CH OR A COMBINATION THEREOF, FREE OF ROCK OR GRAVEL LARGER THAN 1" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIAL, VEGETATION
- AND OTHER DELETERIOUS MATTER. 4. SUB-BASE MATERIAL: USE UNDER PAVEMENT, WALKS, STEPS, PIPING AND CONDUIT.

GRADE TO WITHIN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE AND WITHIN A TOLERANCE OF 1/2" IN 10'.

PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. RECOMPACT AND REGRADE SETTLED, DISTURBED AND DAMAGED AREAS AS NECESSARY TO RESTORE QUALITY, APPEARANCE, AND CONDITION OF WORK

CONTROL EROSION TO PREVENT RUNOFF INTO SEWERS OR DAMAGE TO SLOPED OR SURFACED AREAS.

CONTROL DUST TO PREVENT HAZARDS TO ADJACENT PROPERTIES AND VEHICLES. IMMEDIATELY REPAIR OR REMEDY DAMAGE CAUSED BY DUST INCLUDING AIR FILTERS IN EQUIPMENT AND VEHICLES. CLEAN SOILED SURFACES.

DISPOSAL OF EXCAVATION WASTE AND UNSUITABLE MATERIALS SHALL BE THE RESPONSIBILITY OF THE SITE WORK CONTRACTOR. NO SPECIFIC OR PRE-APPROVED LOCATION IS BEING PROVIDED BY THE OWNER.

#### **CONCRETE PAVING JOINT SEALANTS:**

DELIVER MATERIALS TO PROJECT SITE IN ORIGINAL UNOPENED CONTAINERS OR BUNDLES WITH LABELS INDICATING MANUFACTURER, PRODUCT NAME AND DESIGNATION, COLOR, EXPIRATION DATE. POT LIFE, CURING TIME, AND MIXING INSTRUCTIONS FOR MULTICOMPONENT MATERIALS.

STORE AND HANDLE MATERIALS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS TO PREVENT THEIR DETERIORATION OR DAMAGE DUE TO MOISTURE, HIGH OR LOW

TEMPERATURES, CONTAMINANTS, OR OTHER CAUSES.

DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS UNDER THE FOLLOWING CONDITIONS:

1. WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 DEG F.

WHEN JOINT SUBSTRATES ARE WET OR COVERED WITH FROST.

3. WHERE JOINT WIDTHS ARE LESS THAN THOSE ALLOWED BY JOINT—SEALANT MANUFACTURER FOR APPLICATIONS INDICATED. 4. WHERE CONTAMINANTS CAPABLE OF INTERFERING WITH ADHESION HAVE NOT YET BEEN REMOVED FROM JOINT SUBSTRATES.

PROVIDE JOINT SEALANTS. BACKING MATERIALS. AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

COLD-APPLIED JOINT SEALANTS ARE TO BE TYPE NS SILICONE SEALANT FOR CONCRETE: SINGLE-COMPONENT, LOW-MODULUS, NEUTRAL-CURING, NONSAG SILICONE SEALANT COMPLYING WITH ASTM D 5893 FOR TYPE NS. PRODUCTS ALLOWED ARE: CRAFCO INC.: ROADSAVER SILICONE, DOW CORNING CORPORATION; 888, PECORA NS 301, OR

CONTRACTOR TO PROVIDE JOINT-SEALANT BACKER MATERIALS THAT ARE NONSTAINING; ARE COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMERS, AND OTHER JOINT FILLERS; AND ARE APPROVED FOR APPLICATIONS INDICATED BY JOINT-SEALANT MANUFACTURER BASED ON FIELD EXPERIENCE AND LABORATORY TESTING. ROUND BACKER RODS FOR COLD-APPLIED SEALANTS: ASTM D 5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL SEALANT DEPTHAND PREVENT BOTTOM-SIDE ADHESION OF SEALANT.

PRIOR TO JOINT INSTALLATION. CONTRACTOR IS TO EXAMINE JOINTS INDICATED TO RECEIVE JOINT SEALANTS. WITH INSTALLER PRESENT. FOR COMPLIANCE WITH REQUIREMENTS FOR JOINT CONFIGURATION, INSTALLATION TOLERANCES, AND OTHER CONDITIONS AFFECTING JOINT - SEALANT PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

CLEAN OUT JOINTS IMMEDIATELY BEFORE INSTALLING JOINT SEALANTS TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS.

COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS

COMPLY WITH RECOMMENDATIONS IN ASTM C 1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.

INSTALL BACKER MATERIALS OF TYPE INDICATED TO SUPPORT SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY. DO NOT LEAVE GAPS BETWEEN ENDS OF BACKER MATERIALS. DO NOT STRETCH, TWIST, PUNCTURE, OR TEAR BACKER MATERIALS. REMOVE ABSORBENT BACKER MATERIALS THAT HAVE BECOME WET BEFORE SEALANT APPLICATION AND REPLACE THEM WITH DRY MATERIALS.

NSTALL SEALANTS USING PROVEN TECHNIQUES THAT COMPLY WITH THE FOLLOWING AND AT THE SAME TIME BACKING ARE INSTALLED:

1. PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET JOINT SUBSTRATES.

2. COMPLETELY FILL RECESSES PROVIDED FOR EACH JOINT CONFIGURATION. 3. PRODUCE UNIFORM, CROSS-SECTIONAL SHAPES AND DEPTHS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.

IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS ACCORDING TO REQUIREMENTS SPECIFIED BELOW TO FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED: TO ELIMINATE AIR POCKETS: AND TO ENSURE CONTACT AND ADHESION OF SEALANT WITH SIDES OF JOINT. REMOVE EXCESS SEALANTS FROM SURFACES ADJACENT TO JOINT.USE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY JOINT-SEALANT MANUFACTURER AND THAT DO NOT DISCOLOR SEALANTS OR ADJACENT SURFACES.

PROVIDE JOINT CONFIGURATION TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS, UNLESS OTHERWISE INDICATED.

PROVIDE RECESSED JOINT CONFIGURATION FOR SILICONE SEALANTS OF RECESS DEPTH AND AT LOCATIONS INDICATED.

CLEAN OFF EXCESS SEALANTS OR SEALANT SMEARS ADJACENT TO JOINTS AS THE WORK PROGRESSES BY METHODS AND WITH CLEANING MATERIALS APPROVED BY MANUFACTURERS OF JOINT SEALANTS AND OF PRODUCTS IN WHICH JOINTS OCCUR.

PROTECT JOINT SEALANTS DURING AND AFTER CURING PERIOD FROM CONTACT WITH CONTAMINATING SUBSTANCES AND FROM DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS OR OTHER CAUSES SO SEALANTS ARE WITHOUT DETERIORATION OR DAMAGE AT TIME OF SUBSTANTIAL COMPLETION. IF, DESPITE SUCH PROTECTION, DAMAGE OR DETERIORATION OCCURS, CUT OUT AND REMOVE DAMAGED OR DETERIORATED JOINT SEALANTS IMMEDIATELY AND REPLACE WITH JOINT SEALANT SO INSTALLATIONS WITH REPAIRED AREAS ARE INDISTINGUISHABLE FROM THE ORIGINAL WORK.

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH: FOUNDATIONS 3,000 PSI CAST-IN-PLACE WALLS 3.500 PSI FLOOR SLAB 4,000 PSI EXTERIOR SLABS, WALLS AND CURBS 4,000 PSI

2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL. 3. CHLORIDE- BASED ADMIXTURES ARE PROHIBITED IN ALL CONCRETE.

CAST AGAINST AND EXPOSED TO EARTH.......3 INCHES

D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.

4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60. 5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION

5. Continuous reinforcing bars lap length shall be a minimum of 48 bar diameters unless noted otherwise 7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C- 143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT

THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS. 8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE.

DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%. 9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE

10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94. 11. CONCRETE WORK EXECUTION A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS. B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON

EXPOSED TO EARTH OR WEATHER......2 INCHES NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH...... .....1 ½ INCHES C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.

. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING. 12. FLINT AND CHERT WILL BE LIMITED TO 1% MAXIMUM, BY WEIGHT OF THE COURSE AGGREGATE, IN ALL EXPOSED CONCRETE (CAST-IN-PLACE OR PRECAST). LIGNITE WILL BE LIMITED TO 0.5%, BY WEIGHT OF THE FINE AGGREGATE IN ALL EXPOSED CONCRETE. SOME APPLICATIONS MAY BE REQUIRED TO BE LIGNITE

13. CONCRETE SHALL NOT BE PLACED UPON FROZEN SUBGRADE. ALL CONCRETE SHALL BE EFFECTIVELY PROTECTED FROM FREEZING UNTIL A MINIMUM STRENGTH OF 3,500 PSI HAS BEEN ATTAINED. THE CONTRACTOR SHALL PROVIDE A METHOD, MEETING THE APPROVAL FROM THE ENGINEER, OF MONITORING THE CONCRETE THAT DEMONSTRATES THAT THE CONCRETE HAS BEEN PROTECTED FROM FREEZING. REGARDLESS OF PRECAUTIONS TAKEN, THE CONTRACTOR SHALL ASSUME ALL RISKS, AND ALL FROZEN REPLACED AT THE CONTRACTOR'S EXPENSE. CONCRETE SHALL BE

| REVISIONS:

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

ANDREW T. GREENE MO LICENSE-2020000043

DRAWING INCLUDES:

**IISPECIFICATIONS AND DETAILS** 

DESIGNED:

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