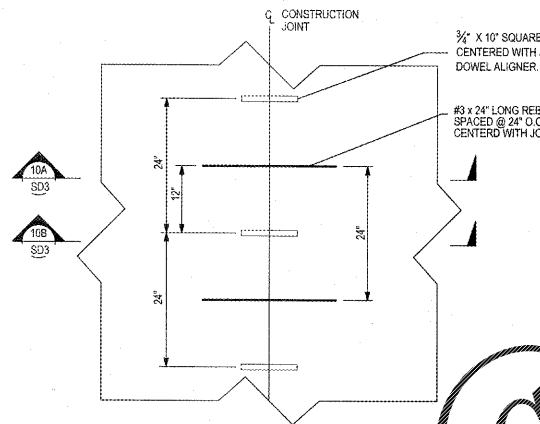


- GENERAL CONCRETE PAVEMENT NOTES**
- REVIEW AND VERIFY ALL AS-BUILT CONDITIONS WHICH AFFECT NEW CONSTRUCTION PRIOR TO SUBMISSION OF SHOP DRAWINGS AND ANY FABRICATION.
 - INDUSTRIAL STANDARD CONCRETE FINISH WORK ARE OF THE LATEST ISSUE AT THE DATE OF THIS DRAWING RELEASE.
 - ENSURE STORAGE, HANDLING, PREPARATION, INSTALLATION, ETC. OF ALL MATERIALS ARE IN ACCORDANCE WITH MANUFACTURER'S WORKERS PRINTED RECOMMENDATIONS AND INSTRUCTIONS.
- PAVEMENT SUBGRADE AND BASE NOTES**
- ENSURE TESTING AGENCY VERIFIES THE SUBGRADE IS COMPACTED TO THE SPECIFIED MAXIMUM DRY DENSITY AS DETERMINED BY THE GEOTECHNICAL ENGINEER. RECORD THE TEST RESULTS AS DIRECTED BY THE GEOTECHNICAL ENGINEER. TESTING AGENCY TO PROVIDE A LETTER REPORT TO THE OWNER'S REPRESENTATIVE STATING THAT THE SUBGRADE HAS BEEN PROPERLY COMPACTED.
 - ENSURE TESTING AGENCY EVALUATES THE SUBGRADE BY PROOF-ROLLING THROUGHOUT THE JOB BY A FULLY LOADED AND PROTECTED MOTOR VEHICLE OR OTHER EQUIPMENT. THE TEST SHALL BE PERFORMED BY THE TESTING AGENCY. TESTING AGENCY TO PROVIDE A LETTER REPORT TO THE OWNER'S REPRESENTATIVE STATING THAT THE SUBGRADE IS ACCEPTABLE. THE TEST RESULTS SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE. THE TEST RESULTS SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE.
 - ADJUST TO BASE MATERIAL
 - COURSE AGGREGATE BASE: CRUSHED RUM WITH ROCK FRAGS USE ASTM D 448 NO. 57 OR 57.5 (OR BY VALUE ONLY IF MOULD UP ALLOWED).
 - FINE AGGREGATE BASE: CLEAN SCREENINGS ASTM #48 NO. 10 WITH 6% TO 10% PASSING NO. 200 SIEVE.
- AGGREGATE BASE MATERIAL INSTALLATION**
- CONTRACT COURSE AGGREGATE BASE TO FINAL THICKNESS SHOWN IN LAYERS NOT EXCEEDING 4 INCHES WITH MINIMUM OF 3 PASSES PER LAYER WITH VIBRATORY COMPACTOR.
 - CONTRACT BASE TO THE SPECIFIED MAXIMUM DRY DENSITY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
 - CONTRACT TOP SURFACE OF COURSE AGGREGATE BASE WITH FINE AGGREGATE BASE MATERIAL DUE TO THE FOLLOWING:
 - WHERE COURSE AGGREGATE BASE MATERIAL DOES NOT MEET SUFFICIENT TOLERANCES TO PROVIDE A SURFACE THAT IS FREE OF COURSE AGGREGATE OR SURFACE VOIDAGE IMMEDIATELY PRIOR TO PAVEMENT INSTALLATION.
 - WHERE COURSE AGGREGATE BASE MATERIAL DOES NOT MEET SUFFICIENT TOLERANCES TO PROVIDE A SURFACE THAT IS FREE OF COURSE AGGREGATE OR SURFACE VOIDAGE IMMEDIATELY PRIOR TO PAVEMENT INSTALLATION.
 - COMPACT THE AGGREGATE BASE COURSE IN LAYERS WITH A MINIMUM OF 3 PASSES WITH A VIBRATORY COMPACTOR.
 - TOP SURFACE OF BASE MATERIAL TO BE DRY, SMOOTH, FLAT, DENSE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.
- ENSURE TESTING AGENCY VERIFIES AGGREGATE BASE IS COMPACTED TO THE SPECIFIED MAXIMUM DRY DENSITY AS DETERMINED BY THE GEOTECHNICAL ENGINEER. RECORD THE TEST RESULTS AS DIRECTED BY THE GEOTECHNICAL ENGINEER. TESTING AGENCY TO PROVIDE A LETTER REPORT TO THE OWNER'S REPRESENTATIVE STATING THAT THE BASE IS ACCEPTABLE.**
- NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY IF UNUSUAL SOIL CONDITIONS ARE FOUND.
 - PROTECT EXISTING STRUCTURES, UTILITIES, PROPERTY, ETC. RESTORE ALL EXISTING DAMAGE AS REQUIRED BY OWNER AT NO COST TO OWNER OR WITHOUT EXTENSION OF CONTRACT TIME.
 - DO NOT ALLOW STORED EXCAVATION MATERIAL TO OBSTRUCT PROPER DRAINAGE OF AREA. DAMAGE TO SURROUNDING AREAS OR STAIN ADJACENT CONCRETE.
 - DISPOSE OF EXCAVATED MATERIAL AS REQUIRED BY OWNER'S REPRESENTATIVE.

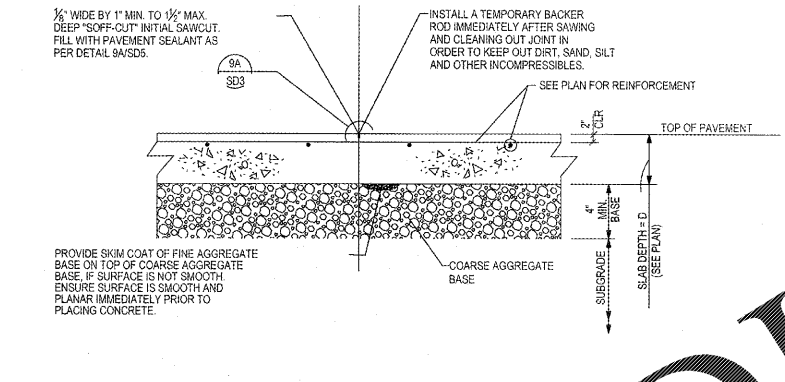
SULFATE EXPOSURE	WATER SOLUBLE SULFATE (SO4) IN WATER PPM	SULFATE (SO4) IN WATER PPM	FORTLAND CEMENT TYPE	MINIMUM W/C RATIO	CONCRETE PAVEMENTS
NEGLECTABLE	$0.00 \leq SO_4 < 0.10$	$0 \leq SO_4 < 150$	I	0.55	3000
MODERATE	$0.10 \leq SO_4 < 0.15$	$150 \leq SO_4 < 1500$	F	0.50	4000
SEVERE	$0.15 \leq SO_4 < 0.20$	$1500 \leq SO_4 < 10,000$	V	0.45	4500
VERY SEVERE	$SO_4 \geq 0.20$	$SO_4 \geq 10,000$	V PLUS HOZZULAR	0.45	4500

- CONCRETE PAVEMENT NOTES**
- CONFORM TO ACI 308 AND 117 FOR THE DESIGN AND PLACEMENT OF CONCRETE, REINFORCING, AND RELATED ITEMS.
 - CONFORM TO ACI 308 FOR GOOD WEATHER CONCRETE AND ACI 309 FOR HIGH TEMPERATURE CONCRETE. CONSIDER RELATIVE HUMIDITY, AND WIND VELOCITY TEND TO IMPAIR THE QUALITY OF THE CONCRETE. REJECT CONCRETE IF ITS TEMPERATURE AT TIME OF PLACEMENT IS EITHER FAIRWEATHER BY OR ABOVE. PROTECT SURFACES OF EXPOSED CONCRETE FROM FROST DAMAGE UNTIL ADEQUATE STRENGTH IS GAINED TO PREVENT DAMAGE.
 - CONFORM TO ACI 302.1R, 309R, 308R AND 347R FOR CONCRETE, FORM WORK, CURING, AND RELATED ITEMS. CONFORM TO CERM MANUAL OF STANDARD PRACTICE AND USE PLACING REINFORCING BARS FOR PLACING REINFORCING.
 - THE GEOTECHNICAL ENGINEERING REPORT INDICATES THAT THE SOILS ON-SITE HAVE A 2000000 SULFATE EXPOSURE. WHERE INDICATED FULL OR BASE MATERIALS ARE IN CONTACT WITH CONCRETE, THE SULFATE CONTENT AND EXPOSURE OF THESE MATERIALS SHALL BE DETERMINED BY TEST. SUBMIT ALL TEST RESULTS WITH CONCRETE MIX DESIGNS. FAILURE TO PROVIDE SUPPORTING TEST RESULTS FROM AN ACCREDITED TESTING LABORATORY WILL REQUIRE THE CONCRETE MIX TO BE PROPORTIONED FOR VERY SEVERE SULFATE EXPOSURE AT NO ADDITIONAL COST OR DELAY IN THE PROJECT SCHEDULE.
 - CONCRETE SHALL BE PROPORTIONED TO MEET THE PROJECT SPECIFICATIONS AND THE MINIMUM CRITERIA LISTED IN TABLE A (THIS SHEET) BASED ON THE SULFATE EXPOSURE FROM ANY ALLUUVIAL SOILS OR ALL MATERIALS.
 - ADDITIONALLY, EXTENSION OF CURING TO PREVENT TEMPERATURES AND/OR GALT OR DESIGN CHEMICALS SHALL HAVE AIR ENTRAINMENT AND THE CEMENT CONTENT APPROPRIATE FOR THE EXPECTED EXPOSURE. SEE SPECIFICATIONS FOR MORE INFORMATION.
 - CONCRETE TO MEET DURABILITY REQUIREMENTS OF ACI 308.1 FREEZING AND THAWING EXPOSURE CATEGORY TO BE (F1) (F1) (F2) (F3). SULFATE EXPOSURE CATEGORY TO BE (S1) (S1) (S2) (S3). AND CHLORIDE PROTECTION EXPOSURE CATEGORY TO BE (C1) (C1) (C2). PROVIDE A MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS OF 4000 PSI (1.00 MPa), 11000 PSI (1000 PSI) WITH MAXIMUM WATER-CEMENT RATIO OF 0.55 (0.55) (0.45) (0.40).
 - ENSURE REINFORCING BARS CONFORM TO ASTM A618 GRADE 60, DATUMED.
 - PROVIDE CLASS B TENSION LAP SPICES PER ACI 308. FOR CONCRETE STRENGTH AND BAR LOCATIONS NOTED.
 - MAINTAIN FULL THICKNESS FOR DEPRESSION OR SLOPED PAVEMENT.
 - DO NOT ADD WATER OR PLAIN CEMENT TO ANY PAVEMENT SURFACE DURING FINISHING OPERATIONS.
 - PERFORM NO FINISHING OPERATION WHILE WATER IS PRESENT ON PAVEMENT SURFACE.
 - STRIVE OFF CONCRETE TO AVOIDER ELEVATIONS AND IMMEDIATELY START FINISHING OPERATIONS. FINISHING OPERATIONS ARE NO MORE THAN NECESSARY TO REMOVE PROJECTIONS AND MEET SPECIFIED TOLERANCES. USE A HIGHLY EXPANDED 10 FT. WIDE MINIMUM, UNLESS OTHERWISE ALLOWED BY OWNER'S REPRESENTATIVE, IN ORDER TO CUT OFF HIGH SPOTS AND FILL IN LOW SPOTS. PROTECT FINISHING OPERATIONS AS NECESSARY TO ENSURE PAVEMENT WILL DRAIN WELL. USE ONLY FINISH SURFACE TO STRIVE PREVIOUSLY FINISHED BY CONTRACTOR. FINISHING DO NOT ALLOW SURFACE TO DRY DURING FINISHING OPERATIONS AND BEFORE CURING OPERATIONS. USE CURING OPERATIONS AS NECESSARY TO PREVENT SURFACE CRACKING AND TO AVOID SHRINKAGE CRACKS.
 - FOR TOLERANCES CONFORM TO ACI 117 AND ACI 309, EXCEPT AS NOTED BELOW.
 - PAVEMENT AGGREGATE BASE FINE GRADE: -3/4 INCH
 - MINIMUM PAVEMENT THICKNESS TOLERANCE: 3/4 INCH
 - WHEN COMPUTING THE AVERAGE OF ALL SAMPLES, SAMPLES WITH A THICKNESS MORE THAN 3/4 IN. ABOVE THE SPECIFIED THICKNESS SHALL BE ASSUMED TO HAVE A THICKNESS 3/4 IN. MORE THAN THE SPECIFIED THICKNESS.
 - AVERAGE PAVEMENT THICKNESS TOLERANCE: 0.
 - THICKNESS SAMPLES ARE TO BE RANDOMLY LOCATED FROM EACH PAVEMENT PLACEMENT AND NOT EXCEED 1000 SQUARE FEET OF PAVEMENT SURFACE AREA.
 - START SAWING PAVEMENT CONTRACTION JOINTS USING A "SOFF-CUT" SAW BLADES AND SHIP PLATES AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT TRAVELING OR COLLAPSE OF AGGREGATE. UNLESS PAVEMENT OR DISCLOSURE OCCURS, COMPLETE SAWING OF JOINTS WITHIN THE MAXIMUM ELAPSED TIME LISTED BELOW, BUT PREFERABLY 1 HOUR. THE SPECIFIED TIME FOR ANY ONE LOCATION STARTS WHEN FINISHING OPERATIONS ARE COMPLETE FOR THAT LOCATION. THE SPECIFIED TOLERANCE IS THE MAXIMUM AIR TEMPERATURE IN CONCRETE AT JOINTS THAT OCCURS WITHIN THE SPECIFIED TIME LIMIT. THE ELAPSED TIME MAY NEED TO BE SHORTENED EVEN MORE IF DRY AND OR WINDY CONDITIONS ARE PRESENT. ENSURE JOINTS ARE CLEANED AFTER SAWING AND REMAIN CLEAN UNTIL SEALED.
 - MAX. ELAPSED HOURS

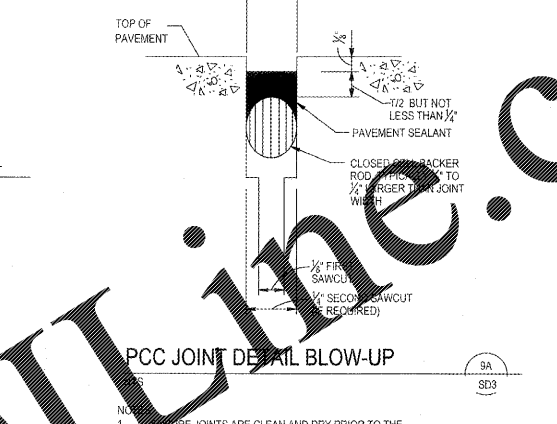
MAX. DEG. F.	MAX. ELAPSED HOURS
80 AND ABOVE	1
70-79	2
60-69	3
50-59	4
 - START CURING AS SOON AS CONCRETE SURFACE IS NOT DAMAGED BY CURING OPERATIONS. CURING CONCRETE CONTINUES FOR A MINIMUM OF 7 CONSECUTIVE DAYS.
 - ENSURE PAVEMENT SURFACE IS PROTECTED FROM EQUIPMENT, TRAFFIC, IMPACT ABRASIONS, STAINS, ETC. REPAIR PAVEMENT AS DIRECTED BY OWNER'S REPRESENTATIVE. REMOVE AND COVER ALL UNDESIRABLE PROMOTED UNTIL THE COMPLETION OF PAVEMENT FINISHING OPERATIONS. VEHICLES AND EQUIPMENT ARE DAMAGED TO PROTECT FROM STAINING THE PAVEMENT.
 - REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL, AND OTHER DRAWINGS FOR ALL REQUIRED PENETRATIONS, DOORS, AND TRACES.
 - PNE-CONSTRUCTION JOINTS TO BE SCHEDULED AT LEAST 7 DAYS BEFORE STARTING CONCRETE PLACEMENT.
 - ATTENDANCE TO PENETRATIONS BY THE OWNER'S REPRESENTATIVE AND THE FOLLOWING:
 - CONTRACTOR TO PROVIDE AND MAINTAIN QUALITY CONTROL PERSONNEL AND SUBCONTRACTORS OF SLOPE AND BASE PREPARATION, REINFORCING, FINISHING OR OTHER MEANS OF CONCRETE PLACEMENT, FINISHING, SAWING, CHAIRING, AND CURING TO PREVENT PORTIONS OF WORK REPRESENTATIVE TO BE PERSONNEL WHO ARE DIRECTLY INVOLVED IN PROJECT AND WHO HAVE AUTHORITY TO CONTROL WORK.



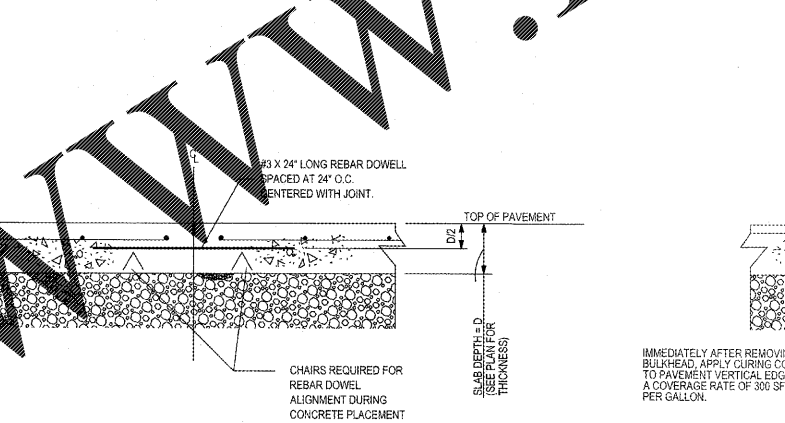
CONSTRUCTION JOINT PARTIAL PLAN DETAIL



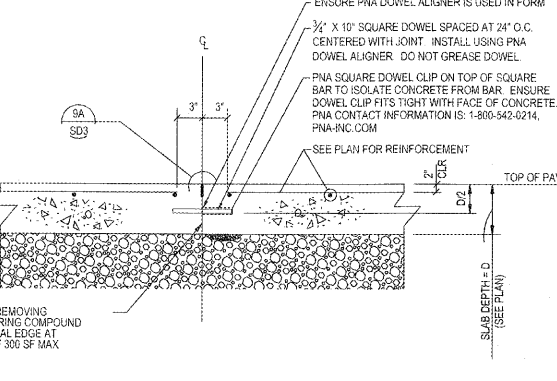
SLAB CONTRACTION JOINT SECTION



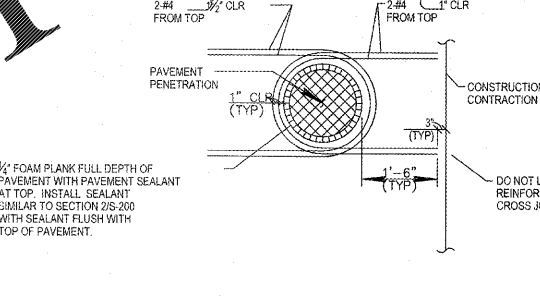
PCC JOINT DETAIL BLOW-UP



SLAB CONTRACTION JOINT SECTION



SLAB CONTRACTION JOINT SECTION



SLAB PENETRATIONS DETAIL

NOTES:
1. SEE CONTRACTION JOINT FOR INFO NOT SHOWN

NOTES:
1. SEE CONTRACTION JOINT FOR INFO NOT SHOWN

- REVISIONS**
- | NO. | REVISIONS | DATE | BY |
|-----|---------------|---------|-----|
| 3 | CITY COMMENTS | 9/05/18 | TAA |
| 2 | CITY COMMENTS | 8/08/18 | TAA |
| 1 | CITY COMMENTS | 5/31/18 | TAA |

STANDARD DETAILS - 3

RaceTrac
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CARTERSVILLE, BARTOW COUNTY, GEORGIA
LAND LOT 80, 4TH DISTRICT, 3RD SECTION, PARCEL C98-0360-01

SCALE: 1" = 30'

DATE: 03/28/2018

DRAWN: MAT

JOB NO.: 005031