

THE STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION  
OFFICE OF TRANSPORTATION SOLUTIONS  
PLANS AND SPECIFICATIONS FOR

CONTRACT NUMBER - T201806201  
FEDERAL AID NUMBER - NONE

CENTRAL MAINTENANCE  
PAGE 1 OF 17+ SIGNING, STRIPING,  
& DETOUR PLANS

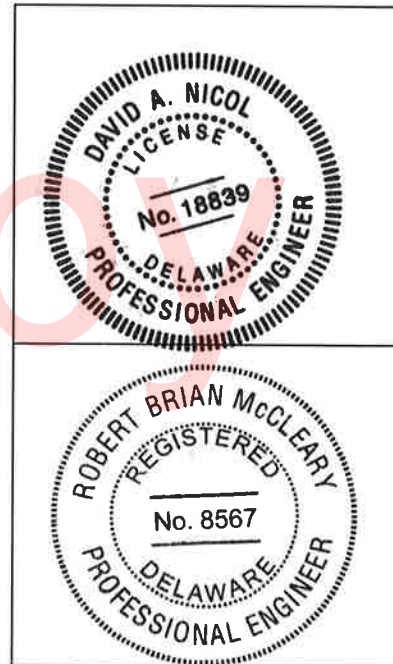
CONTRACT TITLE- WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

PLANS PREPARED BY: Mike Beulah  
DESIGN TECHNICIAN

DATE RECOMMENDED: 1/19/2018  
Bradford L. Selms  
GROUP ENGINEER, CONSTRUCTION – GROUP 3

DATE RECOMMENDED: 1-19-18  
David A. Neal  
ASSIST. DIRECTOR, ENGINEERING SUPPORT

DATE RECOMMENDED: 1/19/18  
Robert Brian McCleary  
CHIEF ENGINEER



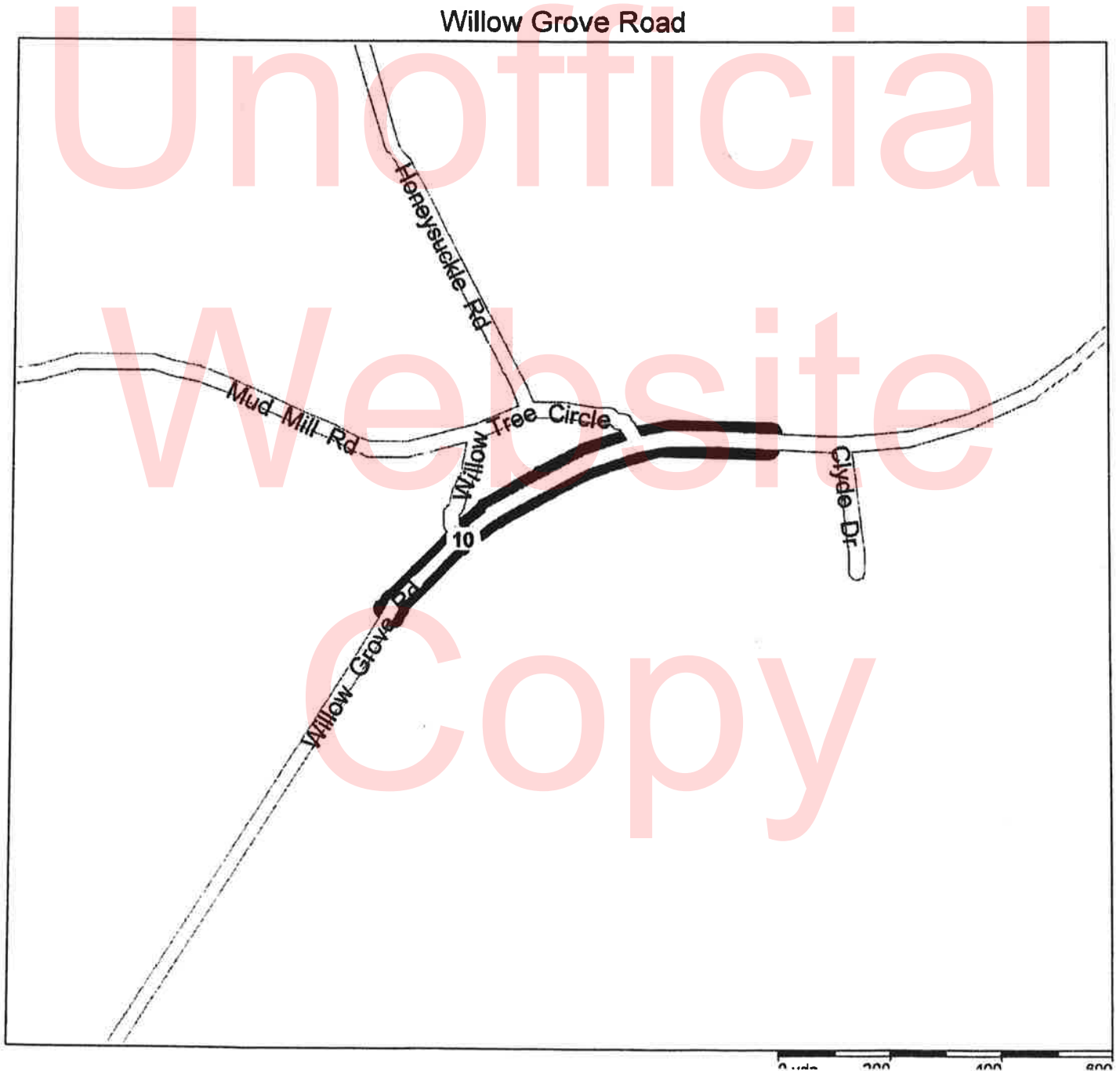
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WILLOW GROVE RD FROM BEGIN 1600' BEFORE WILLOW TREE CIRCLE TO END  
CONCRETE 700' AFTER WILLOW TREE CIRCLE

LOCATION MAP



WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

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**GENERAL CONTRACT PLAN NOTES**

**REVISED 10/2016**

**GENERAL**

1. CONSTRUCTION OF THIS CONTRACT SHALL CONFORM TO DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED AUGUST 2016 AS AMENDED BY THE SUPPLEMENTAL SPECIFICATIONS, THE SPECIAL PROVISIONS, THE MOST RECENT STANDARD CONSTRUCTION DETAILS, DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THESE PLANS.

2. THE PURPOSE OF THIS CONTRACT IS TO MAKE GENERAL IMPROVEMENTS TO ROADS AND/OR STREETS WITHIN THE DISTRICT HEREIN SPECIFIED. DEPENDING ON FUND AVAILABILITY, THE DEPARTMENT RESERVES THE RIGHT TO ADD OR DELETE LOCATIONS AND/OR QUANTITIES FOR THIS CONTRACT. SUCH LOCATION OR QUANTITY ADDITIONS OR DELETIONS SHALL NOT BE CAUSE FOR AN INCREASE OR DECREASE IN ANY CONTRACT UNIT BID PRICES. NO ITEM PRICES ARE TO BE RENEGOTIATED DUE TO EITHER AN INCREASE OR DECREASE IN QUANTITY USAGE RESULTING FROM SAID ADDITIONS OR DELETIONS.

3. THE CONTRACTOR SHALL PROVIDE ALL RESIDENTS AND BUSINESSES WHO LIVE ADJACENT TO THE WORK ZONE A MINIMUM 48 HR. PRIOR WRITTEN NOTICE FOR THE START OF CONSTRUCTION WORK. THIS NOTIFICATION SHALL INCLUDE THE SCOPE OF WORK, WORKING HOURS, ANTICIPATED START AND COMPLETION DATES, CONTRACTOR NAME & ADDRESS, AND DELDOT CONTACT NUMBERS. FAILURE TO GIVE PROPER NOTICE WILL RESULT IN A SUSPENSION OF WORK REQUIRING NOTICE, UNTIL PROPER NOTICE IS PROVIDED. ACCESS TO ALL BUSINESSES AND RESIDENCES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS CONTRACT. ANY TEMPORARY CLOSURE OF A DRIVEWAY FOR TIE-IN PURPOSES SHALL BE COORDINATED WITH THE ENGINEER AND/OR PROPERTY OWNER IN ADVANCE OF THE CLOSURE.

4. THE CONTRACTOR SHALL SUBMIT THE REQUIRED COPIES OF A DETAILED PROGRESS SCHEDULE (PSC) AS OUTLINED IN STANDARD SPECIFICATION 108.04 PRIOR TO OR AT THE PRECONSTRUCTION MEETING. DETAILS SHALL INCLUDE A DESCRIPTION OF EACH WORK ACTIVITY, THE PLANNED DAYS OF WORK, MULTIPLE CREWS OR SHIFTS, AND SCHEDULED WORKING HOURS. DURING THE CONTRACT, THE CONTRACTOR SHALL SUBMIT TWO-WEEK (OR AS REQUIRED) "LOOK AHEAD" SCHEDULES TO THE AREA ENGINEER/ MANAGER NO LATER THAN NOON OF EACH THURSDAY. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

**MAINTENANCE OF TRAFFIC**

5. THE CONTRACTOR SHALL BE REQUIRED TO SHOW PROOF THAT HE HAS SUFFICIENT APPROVED STRIPING MATERIALS ON HAND TO ENSURE STRIPING IS COMPLETED PRIOR TO FULL OPENING ROADWAY TO TRAFFIC.

6. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE

## WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

## GENERAL CONTRACT PLAN NOTES

LEGENDS "ROAD WORK AHEAD" AND "END ROAD WORK" SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN "END ROAD WORK" SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM FROM THE WORK AREA. ON INTERSECTING ROADWAYS WITHIN THE PROJECT LIMITS, A "ROAD WORK AHEAD" SIGN SHALL BE PLACED AT A DISTANCE NOT LESS THAN 500 FEET DOWNSTREAM OF THE WORK AREA. ALL PERMANENT ADVANCE WARNING SIGNS SHALL BE GROUND-MOUNTED ON TWO NCHRP-350 OR MASH APPROVED BREAKAWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DE-MUTCD. PERMANENT ADVANCE WARNING SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE ROADWAY TO THE BOTTOM OF THE SIGN. THE USE OF SKID-MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE ENGINEER; OR CONCRETE MEDIANS PREVENT THE INSTALLATION OF THE PERMANENT SIGNS IN THE APPROPRIATE LOCATION.

7. AT THE END OF EACH DAY'S OPERATION AND BEFORE TRAFFIC IS RETURNED TO UNRESTRICTED ROADWAY USE, TEMPORARY STRIPING SHALL BE UTILIZED AT LOCATIONS THAT REQUIRE PERMANENT STRIPING. TEMPORARY PAVEMENT STRIPING MUST MATCH PERMANENT PAVEMENT STRIPING IN ALL REGARDS. TEMPORARY PAVEMENT MARKINGS SHALL BE PAID AT THE APPLICABLE CONTRACT UNIT PRICE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE TEMPORARY MARKINGS IN GOOD CONDITION SUCH THAT THE PAVEMENT IS PROPERLY DELINEATED AT ALL TIMES. ANY REFRESHING OF THE TEMPORARY MARKINGS WILL BE AT THE CONTRACTOR'S EXPENSE.

8. ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLY PROVIDE THE LEAST PRACTICABLE OBSTRUCTION TO ALL ROAD USERS, INCLUDING VEHICULAR, PEDESTRIAN AND BICYCLE TRAFFIC, AND SHALL CONFORM TO THE REQUIREMENTS OF THE 2011 DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART 6, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT FOR BIDS.

9. CURB RAMP AND/OR SIDEWALK CONSTRUCTION (NOT INCLUDING MEDIAN ISLANDS) SHALL BE COMPLETED DURING A SINGLE OPERATION. THE RAMP/SIDEWALK SHALL BE REMOVED AND PLACED BACK THE SAME NIGHT/DAY AND OPEN TO PEDESTRIAN TRAFFIC THE FOLLOWING DAY. THE USE OF A MONOLITHIC POUR SHALL BE PERMITTED WITH A BOND BREAKER TO BE PLACED AT THE BACK OF THE CURB AND EDGE OF SIDEWALK. IF THE CURB RAMP/SIDEWALK CANNOT BE COMPLETED IN A SINGLE OPERATION THE EXCAVATED AREA MUST BE BACKFILLED TO GRADE WITH COMPACTED MILLING MATERIAL ONLY. THIS MATERIAL WILL BE INCIDENTAL TO THE CURB RAMP ITEM. THE DRESSING UP OF THE AREA BEING PAID AS A CURB RAMP WITH TOPSOIL AND SEED WILL BE INCIDENTAL TO THE CURB RAMP ITEMS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO AND ALONG PEDESTRIAN FACILITIES AT ALL TIMES DURING CONSTRUCTION. EARTH, STONE AND GRAVEL SURFACES ARE NOT ACCEPTABLE FOR PROVIDING PEDESTRIAN ACCESS. IF CURB RAMP CANNOT BE COMPLETED IN A SINGLE OPERATION AND PEDESTRIAN ROUTES ARE CLOSED OR BLOCKED, ALTERNATE PEDESTRIAN ACCESS SHALL BE PROVIDED USING TA-28 AND/OR TA-29 OF THE 2011 DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR TO THE SATISFACTION OF THE ENGINEER. PEDESTRIAN DETOUR ROUTES OR ALTERNATE PEDESTRIAN FACILITIES SHALL

WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

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**GENERAL CONTRACT PLAN NOTES**

CONSIST OF ADA COMPLIANT FACILITIES TO THE LEVEL OF WHICH EXISTS ON THE PEDESTRIAN ROUTE. THE COST FOR ANY PROVISIONS SHALL BE INCIDENTAL TO ITEM 801XXX - MAINTENANCE OF TRAFFIC - ALL INCLUSIVE.

PEDESTRIAN MAINTENANCE OF TRAFFIC: THIS WORK SHALL CONSIST OF PROVIDING AND MAINTAINING AN ACCESSIBLE PEDESTRIAN ROUTE THROUGHOUT THE PROJECT'S LIMITS IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990 (ADA) TITLE II, PARAGRAPH 35.130.

THE CONTRACTOR SHALL BE REQUIRED TO REVIEW EACH CURB RAMP LOCATION AND SUBMIT THE APPROPRIATE MAINTENANCE OF TRAFFIC DETAIL AND DEVICES TO THE ENGINEER FOR EACH LOCATION AT LEAST 2 WEEKS BEFORE CONSTRUCTION FOR REVIEW, COMMENT, AND APPROVAL BY THE DISTRICT TRAFFIC SAFETY OFFICER

THE FOLLOWING CONSIDERATIONS SHALL BE TAKEN INTO ACCOUNT WHEN ADDRESSING ACCESSIBLE PEDESTRIAN MAINTENANCE OF TRAFFIC:

ALL PEDESTRIANS, INCLUDING PERSONS WITH DISABILITIES, SHALL BE PROVIDED WITH A REASONABLY SAFE, CONVENIENT AND ACCESSIBLE PATH THAT REPLICATES AS MUCH AS PRACTICABLE THE EXISTING PEDESTRIAN FACILITIES.

MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES.

PROVIDE PEDESTRIAN ACCESS THROUGH OR AROUND THE WORK ZONE. IF A DETOUR IS CHOSEN THE CONTRACTOR MUST SUBMIT THE DETOUR ROUTE TO THE ENGINEER FOR REVIEW AND APPROVAL. THE DETOUR ROUTE MUST MEET OR EXCEED THE CURRENT CONDITIONS.

WORK SHOULD BE PHASED SO THAT ALL AREAS OF AN INTERSECTION/SIDEWALK PATH ARE NOT UNDER CONSTRUCTION AT THE SAME TIME UNLESS A CLEAR PATH IS PROVIDED AND IDENTIFIED.

TRAFFIC CONTROL DEVICES AND OTHER CONSTRUCTION MATERIALS AND FEATURES SHALL NOT INTRUDE INTO THE USABLE WIDTH OF THE SIDEWALK, TEMPORARY PATHWAY OR OTHER PEDESTRIAN FACILITY.

SIGNS AND OTHER DEVICES MOUNTED LOWER THAN 7 FT ABOVE THE TEMPORARY PEDESTRIAN PATHWAY SHALL NOT PROJECT MORE THAN 4 IN. INTO ACCESSIBLE PEDESTRIAN ROUTE.

A SMOOTH, CONTINUOUS HARD SURFACE SHALL BE PROVIDED THROUGHOUT THE ENTIRE LENGTH AND WIDTH OF THE PEDESTRIAN ROUTE THROUGHOUT CONSTRUCTION. THERE SHALL BE NO CURBS OR VERTICAL ELEVATION CHANGES GREATER THAN ¼ IN. IN GRADE OR TERRAIN THAT COULD CAUSE TRIPPING OR BE A BARRIER TO WHEELCHAIR USE.

WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

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**GENERAL CONTRACT PLAN NOTES**

10. AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR SHALL BE REQUIRED FOR ALL LOCATIONS SPECIFIED IN THE CONTRACT PLANS. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. A COPY OF THE CERTIFICATION CARD FOR THE ATSSA TRAFFIC CONTROL SUPERVISOR SHALL BE SUBMITTED AT THE PRECONSTRUCTION MEETING. THE PAPER CERTIFICATE IS NOT ACCEPTABLE.

11. MESSAGE BOARDS SHALL BE PLACED 10 DAYS IN ADVANCE OF THE WORK AND SHALL REMAIN IN PLACE FOR 5 DAYS AFTER THE START OF WORK. LOCATIONS OF MESSAGE BOARDS AND MESSAGES DISPLAYED SHALL BE REVIEWED AND APPROVED BY THE DISTRICT SAFETY OFFICER.

**12. HOLIDAY AND SPECIAL EVENTS**

TRAVEL LANE AND RAMP CLOSINGS ON MULTILANE HIGHWAYS AND INTERSTATES SHALL NOT BE PERMITTED DURING THE FOLLOWING HOLIDAY/EVENT PERIODS:

- DECEMBER 24 THROUGH DECEMBER 27 (CHRISTMAS DAY)
- DECEMBER 31 THROUGH JANUARY 3 (NEW YEAR'S DAY)
- FRIDAY PRIOR TO EASTER THROUGH EASTER SUNDAY
- THURSDAY PRIOR TO MEMORIAL DAY THROUGH THE TUESDAY FOLLOWING MEMORIAL DAY
- DOVER INTERNATIONAL SPEEDWAY RACE WEEKENDS (THURSDAY PRIOR TO THE RACE EVENT THROUGH THE DAY AFTER THE RACE EVENT)
- JULY 3 THROUGH JULY 5 (INDEPENDENCE DAY)
- THURSDAY PRIOR TO LABOR DAY THROUGH THE TUESDAY FOLLOWING LABOR DAY
- WEDNESDAY PRIOR TO THANKSGIVING DAY THROUGH THE MONDAY FOLLOWING THANKSGIVING DAY
- FIREFLY MUSIC FESTIVAL WEDNESDAY PRIOR TO THE EVENT THROUGH THE MONDAY FOLLOWING THE EVENT

ADDITIONAL TIME RESTRICTIONS MAY APPLY AS NOTED IN THE PROJECT PLANS OR AS DIRECTED BY THE ENGINEER. ANY REQUESTS TO WAIVE ANY RESTRICTIONS MUST BE MADE IN WRITING TO THE ENGINEER FOR REVIEW AND APPROVAL. A COPY OF THE REQUEST SHALL BE PROVIDED TO THE DISTRICT SAFETY OFFICER FOR REVIEW.

**PAVEMENT MARKINGS**

13. SIGNING AND STRIPING PLANS WILL BE PROVIDED AT THE PRECONSTRUCTION MEETING. THE CONTRACTOR WILL NOT BE REQUIRED TO SUBMIT DETAILED DRAWINGS OF THE EXISTING PAVEMENT MARKINGS.

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**GENERAL CONTRACT PLAN NOTES**

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, WHITE EDGE LINES SHALL WRAP AROUND THE RADIUS OF ALL SIDE STREETS AND MAJOR COMMERCIAL ENTRANCES TO A TANGENT POINT. YELLOW CENTERLINES SHALL BE CONTINUOUS AROUND MEDIAN ISLANDS. ALL DOUBLE YELLOW CENTERLINES SHALL BE PLACED IN A 5-6-5 CONFIGURATION (2 EACH, 5" YELLOW STRIPES WITH A 6" GAP BETWEEN).

14. ANY ERRONEOUS MARKING WILL NOT BE PAID FOR AND SHALL BE CORRECTED IMMEDIATELY AT THE CONTRACTORS EXPENSE. ERRONEOUS MARKINGS OR SHADOWS THAT EXCEED ONE (1) INCH IN WIDTH SHALL BE REMOVED BY EITHER SAND OR WATER BLASTING AS DIRECTED BY THE ENGINEER. NO OTHER REMOVAL METHODS WILL BE ALLOWED. A FLAT BLACK PAINT OR DRIVEWAY SEALER SHALL BE APPLIED IN THE AREA OF THE REMOVED MARKING TO MASK THE REPAIR. ANY DAMAGE TO THE PAVEMENT CAUSED BY REMOVAL OF ERRONEOUS MARKINGS SHALL BE REPAIRED / REPLACED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTORS EXPENSE.

15. STOP LINES "BARS" SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 3B.16 OF THE 2011 DELAWARE MUTCD.

16. ALL CROSSWALKS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 3B.18 OF THE 2011 DELAWARE MUTCD.

**TRAFFIC SIGNAL NOTES**

17. TRAFFIC DETECTION LOOPS SHALL BE PLACED IN THE FINAL WEARING SURFACE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

18. TRAFFIC DETECTION LOOPS THAT ARE CURRENTLY 5'x7' SHALL BE REPLACED WITH LOOPS THAT ARE 6'x6' AT THE SAME LOCATION. STOP BAR DETECTION LOOPS SHALL BE THE SAME SIZE AS CURRENTLY EXISTING, AND SHOULD BE PLACED STARTING ONE FOOT BEHIND THE STOP BAR, BUT PLACEMENT MAY BE ADJUSTED TO ADDRESS FIELD REQUIREMENTS. IF SEPARATE SIGNAL PLANS HAVE BEEN DEVELOPED, THE PLANS SUPERSEDE THIS NOTE.

**PROJECT**

19. UNLESS SPECIFIED, OVERLAY WIDTHS SHALL MATCH EXISTING WIDTHS.

20. THE COST OF CLIPPING BACK THE EDGES OF THE ROADWAY, SHOULDERS, AND THE FIRST 3' OF UNPAVED DRIVEWAY ENTRANCES, PICKING UP AND DISPOSING OF WASTE AND EXCESS MATERIAL, AND CLEANING THE EXISTING PAVEMENT PRIOR TO OVERLAY SHALL BE INCIDENTAL TO SECTION 401( ). PREPARING UNPAVED DRIVEWAY ENTRANCES BEYOND THE FIRST 3' SHALL BE PAID UNDER THE APPROPRIATE CONTRACT ITEMS: 202000 AND/OR 30200X.

21. BUTT JOINTS SHALL BE PLACED AT ALL INTERSECTING HOT MIX ROADS AND ANY OTHER

## WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

## GENERAL CONTRACT PLAN NOTES

LOCATIONS AS DIRECTED BY THE ENGINEER. BUTT JOINTS AT DRAINAGE STRUCTURES NOT TO BE RESURFACED SHALL BE AS PER THE INCLUDED PLAN DETAIL OR LOCATION NOTES. BUTT JOINTS CUT PRIOR TO THE DAY OF THE PAVEMENT OVERLAY SHALL BE RAMPED WITH HOT MIX TRM. IN MILLING AREAS, THERE WILL BE NO SEPARATE PAYMENT FOR BUTT JOINTS. AFTER PAVEMENT MILLING, ALL TRANSVERSE VERTICAL DIFFERENCES, RAISED EDGES OF MANHOLES, CATCH BASINS, WATER VALVE BOXES, ETC...SHALL BE RAMPED WITH HOT-MIX TRM AT A 20:1 OR FLATTER SLOPE PRIOR TO OPENING THE ROADWAY TO TRAFFIC. PAVEMENT MILLINGS WILL NOT BE ALLOWED FOR USE AS RAMPING MATERIAL.

22. TAPER MILLING IS INTENDED FOR MILLING IN THE AREA OF FIXED STRUCTURES (I.E. CURBS GUARDRAIL, ETC.) THE MILLED DEPTH AT THE STRUCTURE SHALL BE THE DEPTH OF THE PROPOSED OVERLAY AND 0" AT A DISTANCE OF +/- 6½' FROM THE STRUCTURE. THE COMPUTED DEPTH FOR PAYMENT PURPOSES IS THE AVERAGE OF THE TWO DEPTHS.

23. ALL MILLED MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE STATED.

24. EXCAVATION UP TO 18" IN FRONT OF CURB WILL BE INCIDENTAL TO ITEM 701XXX. HOT MIX PLACED IN FRONT OF CURB WILL BE PAID UNDER ITEM 401XXX. USE OF CONCRETE AS FILL IN FRONT OF CURB WILL NO LONGER BE ACCEPTED UNLESS DIRECTED BY THE ENGINEER. AT EACH LOCATION, BACKFILLING SHALL BE PERFORMED IMMEDIATELY UPON REMOVAL OF FORMS FOR CURB OR SIDEWALK. TOPSOIL, SEEDING, SEALING OF VALLEY GUTTERS, REMOVING OF FORMS, AND PARGING OF CATCH BASINS, SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS OF COMPLETION OF THE ITEM OF WORK. ITEM 908XXX, TOPSOIL, SHALL BE USED AS BACKFILL MATERIAL BEHIND CURB AND AROUND SIDEWALK OR/AS DIRECTED BY THE ENGINEER. TOPSOIL SHALL BE SCREENED/SIFTED SO AS NO MATERIAL GREATER THAN .5" IS PRESENT IN MATERIAL USED FOR BACKFILL. EXCAVATED MATERIAL, NOT NEEDED ON THE PROJECT, SHALL BE REMOVED FROM THE CONTRACT AT THE CONTRACTORS EXPENSE. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL OTHER CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

25. ALL ADJUSTMENTS SHALL BE MADE NO MORE THAN SEVEN (7) CALENDAR DAYS PRIOR TO THE PLACEMENT OF THE FINAL COURSE OF HOT MIX UNLESS OTHERWISE APPROVED BY THE ENGINEER. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL OTHER CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

26. ALL PAVING, INCLUDING TURN LANES, SHOULDERS AND INTERSECTIONS, IS TO BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS FROM THE TIME THE AREA WAS MILLED. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL OTHER CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

27. THE CONTRACTOR SHALL TAKE CARE IN REMOVING PAVEMENT AROUND UTILITIES, BUTT JOINTS, CURBS, ETC. SO THAT EXISTING PAVEMENT BEYOND THE SPECIFIED DEPTHS IS NOT DAMAGED. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS MAY RESULT IN



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**GENERAL CONTRACT PLAN NOTES**

PLACING LEVELING COURSES AT THE CONTRACTOR'S EXPENSE. THE REMOVAL AND CLEAN UP OF THE HOT MIX RESIDUE WEDGE REMAINING AFTER MILLING OPERATIONS SHALL BE INCIDENTAL TO THE MILLING ITEM. THE REMOVAL OF EXISTING RAISED PAVEMENT MARKERS (RPM'S) SHALL BE INCIDENTAL TO THE APPLICABLE MILLING AND/OR RECLAMATION ITEMS.

28. ALL PORTLAND CEMENT CONCRETE MUST BE RECEIVED FROM AN APPROVED PRODUCTION PLANT UNLESS OTHERWISE APPROVED BY THE ENGINEER. ONLY CALIBRATED VOLUMETRIC CONCRETE TRUCKS WILL BE PERMITTED TO PROVIDE ON-SITE MIXTURES. THIS PERTAINS TO BOTH WORK OCCURRING DURING NORMAL WORKING HOURS AND NIGHTTIME RESTRICTED WORK.

29. DRAINAGE INLETS, WHICH ARE 4' GREATER IN DEPTH AND ARE SLATED FOR REPAIR WILL HAVE STEPS INSTALLED IN ACCORDANCE WITH SECTION 602.03 OF THE STANDARD SPECIFICATIONS. PAYMENT SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 602XXX.

30. THE PORTLAND CEMENT CONCRETE USED FOR ITEM 602130 - ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET, ITEM 602132 - ADJUST AND REPAIR EXISTING MAN HOLES AND ITEM 710002 - ADJUST WATER VALVE BOX SHALL CONFORM TO THE REQUIREMENTS OF CLASS A CONCRETE (6 HOUR ROADWAY MIX) AS STATED WITHIN SECTION 503.03.7 OF THE DEPARTMENT'S STANDARD SPECIFICATIONS. ALSO, THE PERIMETER OF THE UTILITY ADJUSTMENT WILL BE SEALED AND WILL BE CONSIDERED INCIDENTAL TO THE APPLICABLE ADJUSTMENT ITEM.

31. WHEN JACKHAMMERING OR THE USE OF A BREAKER IS NECESSARY ON CONTRACTS THAT OCCUR DURING THE NIGHTTIME HOURS THE JACKHAMMERING AND BREAKING MUST CEASE AT 12:00AM REGARDLESS OF ANY NOISE WAIVER THAT MAY EXIST.

32. ANY MILLING MATERIAL REQUIRED TO MAKE AREAS ADA COMPLIANT IF NOT COMPLETED IN THE SAME SHIFT AT CURB, SIDEWALK, CURB RAMPS, ISLANDS, ETC. WILL BE INCIDENTAL TO THE PAY ITEM ASSOCIATED WITH THE WORK. MILLING MATERIAL IS THE ONLY APPROVED MATERIAL FOR THIS PRACTICE.

33. WHEN CONTRACT INCLUDES ITEMS 503001 AND 503002 PATCHES WILL BE PRESUMED TO BE STANDARD PATCH SIZES AND LOCATIONS WILL BE DETERMINED AT THE CONSTRUCTION PRE-WALK. THE USE OF STEEL PLATES WILL BE PROHIBITED. ROADWAY MUST BE RETURNED TO UNRESTRICTED USE AT THE END OF EACH WORK DAY. ALL PCC PAVEMENT WILL BE PRESUMED TO BE 9".

34. ITEM 763621 CONSTRUCTION ENGINEERING, REHABILITATION WILL COMPENSATE THE CONTRACTOR FOR THE FOLLOWING SURVEY ACTIVITIES. ANY LAYOUT ASSOCIATED WITH ADA IMPROVEMENTS, PROVIDING GRADES FOR UTILITY ADJUSTMENTS IF NECESSARY, THE LAYOUT OF LANE LINES FOR PAVING, GRADES FOR THE INSTALLATION OF DRAINAGE STRUCTURES OR OTHER ITEMS OF WORK AS DETERMINED BY THE ENGINEER OR PROGRAM

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**GENERAL CONTRACT PLAN NOTES**

MANAGER. THIS ITEM WILL NOT COMPENSATE THE CONTRACTOR FOR THE LAYOUT OF STRIPING AS THIS IS THE RESPONSIBILITY OF THE STRIPING SUBCONTRACTOR. THE HOURLY PAYMENT WILL BE BASED UPON ACTUAL HOURS OF SURVEYING PERFORMED IN THE FIELD. IT WILL NOT INCLUDE TIME SPENT IN VEHICLE OR OFFICE. THE SURVEY CREW WILL BE RESPONSIBLE UPON ARRIVAL AND DEPARTURE ON THE JOBSITE TO CONTACT A MEMBER OF THE INSPECTION STAFF SO THAT HOURS CAN BE TRACKED FOR PAYMENT. THE CONSEQUENCE FOR NOT DOING THIS WILL BE NON-PAYMENT FOR THE SURVEYING SERVICES.

35. UPON RECEIPT OF THE MONTHLY PAY ESTIMATE ANY ISSUES OR DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER/PROGRAM MANAGER IF POSSIBLE BEFORE THE ISSUANCE OF THE NEXT PAY ESTIMATE. TO ALLOW FOR INVOICES FROM SUBCONTRACTORS ETC., A 60 DAY TIME PERIOD TO REPORT DISCREPANCIES WILL BE PERMITTED. ANY DISCREPANCIES BEYOND THE 60 DAY TIME PERIOD WILL NOT BE ENTERTAINED.

36. FOR ITEM 806001 TRAFFIC OFFICERS, REQUIRED INVOICES WILL BE REVIEWED FOR ACCURACY. ANY MAJOR INACCURACIES WILL BE ADJUSTED ACCORDINGLY. FOR EXAMPLE, IF INVOICE SHOWS CHARGED HOURS ON A CERTAIN DATE AND WE HAVE DOCUMENTATION THAT NO WORK OCCURED THAT DATE OR NO OFFICERS WERE PRESENT THE INVOICE WILL BE ADJUSTED ACCORDINGLY.

37. PCC PATCHING: WHEN THE PATCH SURFACE WILL BE PART OF THE FINAL SURFACE OF THE ROADWAY, THE PATCH SURFACE SHALL BE FINISHED TO MATCH THE TEXTURE OF THE ADJACENT PAVEMENT. THE PATCH SURFACE CROSS SECTION SHALL MATCH THE PRECEDING AND FOLLOWING PAVEMENT SURFACES. THE ENGINEER MAY TEST FOR EXCESSIVE DEVIATIONS WITH A 10 FOOT STRAIGHTEDGE. WHEN TESTED WITH A STRAIGHTEDGE, EXCESSIVE DEVIATIONS ARE SURFACE DEVIATIONS GREATER THAN 1/8 INCH FROM A REFERENCE LINE BETWEEN POINTS NOT GREATER THAN 10 FEET APART ALONG THE DIRECTION OF TRAFFIC. THE CONTRACTOR SHALL CORRECT UNACCEPTABLE DEVIATIONS IN THE PATCH AREAS.

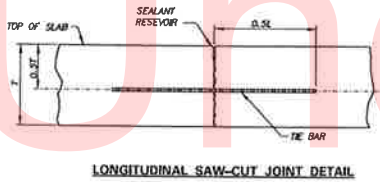
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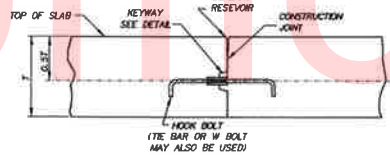
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CENTRAL MAINTENANCE WILLOW GROVE RD FROM BEGIN 1600' BEFORE WILLOW TREE CI

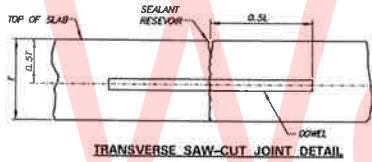
DETAILS SHEET



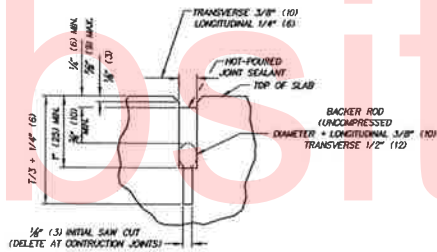
LONGITUDINAL SAW-CUT JOINT DETAIL



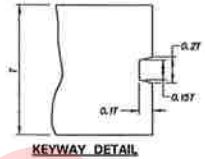
LONGITUDINAL CONSTRUCTION JOINT DETAIL



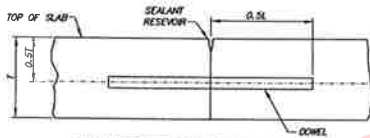
TRANSVERSE SAW-CUT JOINT DETAIL



SEALANT DETAIL- TRANSVERSE & LONGITUDINAL JOINTS



KEYWAY DETAIL



TRANSVERSE CONSTRUCTION JOINT DETAIL

NOTES:

- 1). AS DIMENSIONED, THE WIDTH OF THE TRANSVERSE SEALANT RESERVOIR IS APPLICABLE WHEN THE TEMPERATURE OF THE PAVEMENT SURFACE IS BETWEEN 80°F (18°C) AND 80°F (127°C). WHEN THE TEMPERATURE IS BELOW 80°F (18°C), THE SEALANT RESERVOIR SHALL BE CUT 1/2" (12) WIDER. WHEN THE TEMPERATURE IS ABOVE 80°F (127°C), THE SEALANT RESERVOIR SHALL BE CUT 1/8" (2) NARROWER.
- 2). "T" REFERS TO THE ACTUAL CONSTRUCTED SLAB THICKNESS.
- 3). TOLERANCE ON ALL JOINT SEALANT DETAIL DIMENSIONS SHOWN WITHOUT RANGES SHALL BE PLUS 1/6" (2), MINUS 0" (0).
- 4). THE TOP EDGES OF THE CONTACT SURFACES OF THE SEALANT MATERIAL ON BOTH SIDES OF THE JOINT RESERVOIR SHALL BE AT THE SAME ELEVATION.
- 5). TRANSVERSE JOINT MATERIAL SHALL BE PLACED BEFORE LONGITUDINAL JOINT MATERIAL; THE TRANSVERSE JOINT MATERIAL SHALL BE CONTINUOUS FOR THE FULL WIDTH OF ALL ADJACENT P.C.C. PAVEMENT SLABS.
- 6). LONGITUDINAL JOINT MATERIAL SHALL BE PLACED WITHOUT GAPS WHENEVER INTERRUPTED BY THE TRANSVERSE JOINT MATERIAL.
- 7). TRANSVERSE JOINT SEAL TO BE RECESSED 1/8" (5) TO 3/8" (8) BELOW THE TOP OF THE SLAB.
- 8). A 45° CHAMFER SHALL BE CUT 1/8" (3) TO 3/4" (6) DEEP AT THE TOP OF THE SLAB ALONG BOTH SIDES OF THE TRANSVERSE SEALANT RESERVOIR.

JOINT AND SEALANT DETAILS

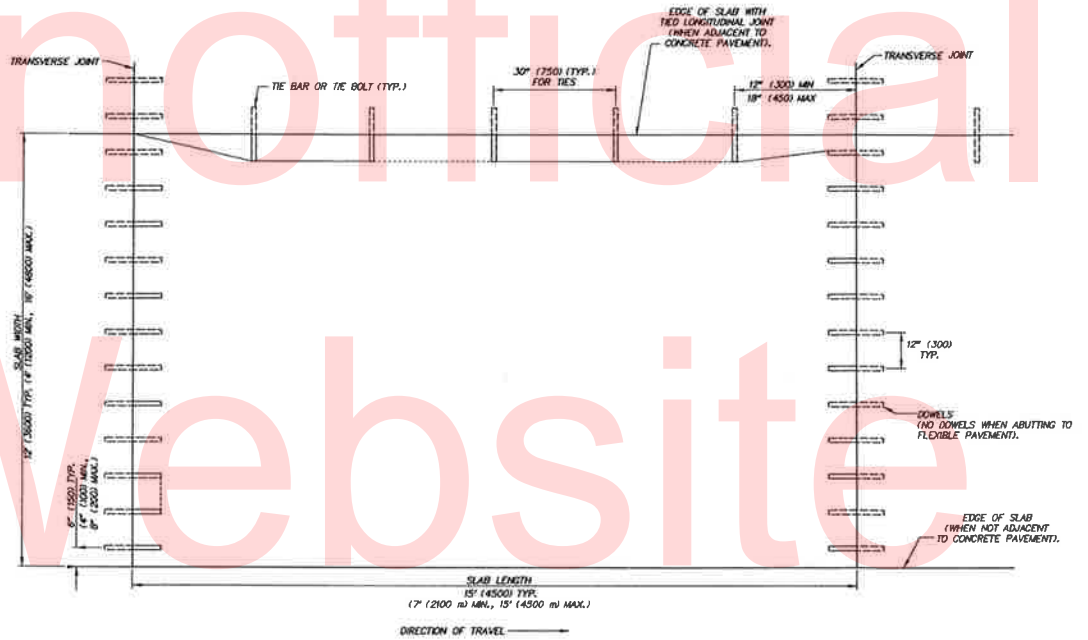
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CENTRAL MAINTENANCE WILLOW GROVE RD FROM BEGIN 1600' BEFORE WILLOW TREE CI

DETAILS SHEET



- NOTES:
- 1). TRANSVERSE JOINTS ARE PERPENDICULAR TO THE CENTERLINE OF THE PAVEMENT WHEN THE PAVEMENT IS STRAIGHT.
  - 2). TRANSVERSE JOINTS ARE PERPENDICULAR TO A TANGENT LINE TO THE OUTSIDE ARC OF THE PAVEMENT WHEN THE PAVEMENT IS CURVED.
  - 3). ALIGN THE TRANSVERSE JOINTS FOR ALL ADJACENT SLABS WITH EACH OTHER.
  - 4). ABRUPT CHANGES IN PAVEMENT WIDTH MAY OCCUR ONLY AT THE TRANSVERSE JOINT LINE; LONGITUDINAL JOINTS SHALL BE CONTINUOUS WHENEVER POSSIBLE.
  - 5). LONGITUDINAL JOINTS SHOULD NOT BE LOCATED WITHIN PROPOSED WHEEL PATHS. THE WHEEL PATH IS GENERALLY LOCATED 2' (600) INSIDE OF THE LANE EDGE LINE OR CENTERLINE.

SLAB PLAN (WITH DOWEL AND TIE LOCATIONS)

CENTRAL  
MAINTENANCE

WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

**LOCATION 1**                      **53(WILLOW GROVE ROAD) FROM BEGIN 1600' BEFORE WILLOW TREE CIRCLE  
TO END CONCRETE 700' AFTER WILLOW TREE CIRCLE**

LENGTH        740.0544 m                      2428 L.F.                      AADT    3633

**GENERAL IMPROVEMENTS**

PCC PAVEMENT RECONSTRUCTION - REMOVAL OF EXISTING PCC PAVEMENT AND HOT-MIX SHOULDERS ADJACENT TO PCC PAVEMENT AND REPLACE WITH 6" GABC & 10" PCC PAVEMENT IN BOTH TRAVEL LANE AND SHOULDER

**COMMENTS:**

Please see attached sheets for comments

**MATERIAL ESTIMATE FOR LOCATION 1**

202000	EXCAVATION AND EMBANKMENT	3,705.00 C.Y.
209004	BORROW, TYPE C	10.00 C.Y.
211001	REMOVAL OF PORTLAND CEMENT CONCRETE PAVEMENT, CURB AND SIDEWALK	6,600.00 S.Y.
301001	GRADED AGGREGATE BASE COURSE, TYPE B	2,100.00 C.Y.
401006	SUPERPAVE TYPE C, PG 70-22 (CARBONATE STONE)	325.00 TON
401015	SUPERPAVE TYPE B, PG 70-22	155.00 TON
401020	BITUMINOUS CONCRETE, SUPERPAVE BITUMINOUS CONCRETE BASE COURSE, 160 GYRA PG 64-22	255.00 TON
401696	ENTRANCE, DRIVEWAY, AND INTERSECTING STREET PAVING SURCHARGE	115.00 TON
403000	BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS (TRM) CONCRETE	50.00 TON
501004	PORTLAND CEMENT CONCRETE PAVEMENT, 10"	11,000.00 S.Y.
601054	REINFORCED CONCRETE PIPE, 18", CLASS V	70.00 L.F.
760002	BIKE-FRIENDLY RUMBLE STRIPS, BITUMINOUS PAVEMENT	450.00 L.F.
760003	BIKE-FREINDLY RUMBLE STRIPS, CONCRETE	5,000.00 L.F.
760008	RUMBLE STRIPS, CENTER LINE, BITUMINOUS PAVEMENT	450.00 L.F.
760009	RUMBLE STRIPS, CENTER LINE, CONCRETE	2,800.00 L.F.
760010	PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT	1,800.00 SY-IN
763501	CONSTRUCTION ENGINEERING	1.00 L.S.
803001	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	40.00 EA-DY
808002	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	15.00 EA-DY
811002	FLAGGER, KENT COUNTY, STATE	450.00 HOUR
811014	FLAGGER, KENT COUNTY, STATE, OVERTIME	45.00 HOUR
817002	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	80.00 S.F.
817003	TEMPORARY MARKINGS, PAINT, 4"	10,000.00 L.F.
817012	RETROREFLECTIVE PREFORMED PATTERNED MARKINGS, SYMBOL/LEGEND	80.00 S.F.
817013	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	11,200.00 L.F.
817018	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 3"	5,200.00 L.F.
817024	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 9"	50.00 L.F.

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CENTRAL  
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WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

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**LOCATION 1**                    **53(WILLOW GROVE ROAD) FROM BEGIN 1600' BEFORE WILLOW TREE CIRCLE  
TO END CONCRETE 700' AFTER WILLOW TREE CIRCLE**

LENGTH        740.0544 m                    2428 L.F.                    AADT    3633

**GENERAL IMPROVEMENTS**

PCC PAVEMENT RECONSTRUCTION - REMOVAL OF EXISTING PCC PAVEMENT AND HOT-MIX SHOULDERS ADJACENT TO PCC PAVEMENT AND REPLACE WITH 6" GABC & 10" PCC PAVEMENT IN BOTH TRAVEL LANE AND SHOULDER

**COMMENTS:**

Please see attached sheets for comments

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**MATERIAL ESTIMATE FOR LOCATION 1**

817027	RAISED/RECESSED PAVEMENT MARKER	135.00 EACH
819018	INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	15.00 EACH
908004	TOPSOIL, 6" DEPTH	1,200.00 S.Y.
908014	PERMANENT GRASS SEEDING, DRY GROUND	1,200.00 S.Y.

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**LOCATION 1 53(WILLOW GROVE ROAD) FROM BEGIN 1600' BEFORE WILLOW TREE CIRCLE TO  
END CONCRETE 700' AFTER WILLOW TREE CIRCLE**

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**COMMENTS:**

Reconstruction of PCC pavement travel lanes and shoulders

Pavement section on both ends of PCC pavement shall be 100' of 6" GABC, 5" type BCBC, 3" type B, and 200' of 2" type C

Construction Engineering Item 763501 shall include survey of existing grades, slopes, and intersections, all construction layout required for installation of proposed PCC roadway reconstruction and final as-builts.

Provided within the plans are the Slab Plan (with dowel and tie locations) Details and Joint and Sealant Details

Detour phases will be incidental to Item 801500

Willow Tree Circle, driveways, and entrances shall be milled 2" and 2" of type C hot-mix placed back.

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WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

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CONTRACT QUANTITIES SUMMARY SHEET

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760009	RUMBLE STRIPS, CENTER LINE, CONCRETE	2,800.00 L.F.
760010	PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT	1,800.00 SY-IN
763000	INITIAL EXPENSE/DE-MOBILIZATION	LUMP SUM
763501	CONSTRUCTION ENGINEERING	1.00 L.S.
801500	MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP SUM
803001	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	40.00 EA-DY
808002	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	15.00 EA-DY
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MAINTENANCE

WILLOW GROVE RD PCC PAVEMENT RECONSTRUCTION

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CONTRACT QUANTITIES SUMMARY SHEET

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