

THE STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION SOLUTIONS
PLANS AND SPECIFICATIONS FOR

CONTRACT NUMBER- T201106205

CENTRAL MAINTENANCE

FEDERAL AID NUMBER- NONE

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CONTRACT TITLE- PAVEMENT & REHABILITATION – SOUTH I-V,2011

PLANS PREPARED BY:

Wm Johnson
DESIGN TECHNICIAN

UNOFFICIAL

DATE RECOMMENDED: 6/20/11

DATE RECOMMENDED: 6/30/11

Joseph McDougall
PAVEMENT MANAGEMENT ENGINEER

Jt F
GROUP ENGINEER, SOUTH I CONSTRUCTION

DATE RECOMMENDED: 7-1-11

Jt Vesny
BRIDGE ENGINEER

DATE RECOMMENDED: 7-1-11

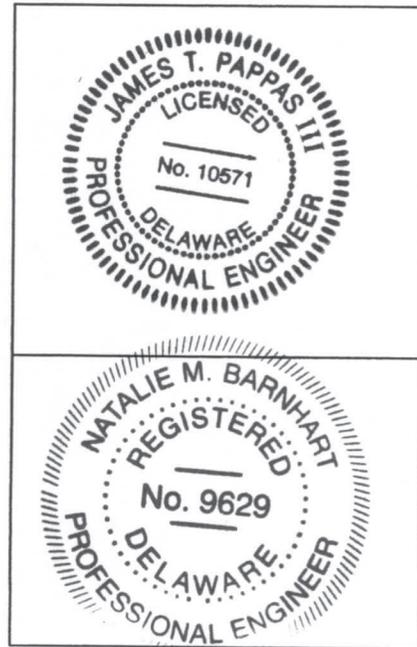
James T. Pappas III
ASSIST. DIRECTOR DESIGN

DATE RECOMMENDED: 7/5/11

Natalie Barnhart
CHIEF ENGINEER

WEBSITE

COPY



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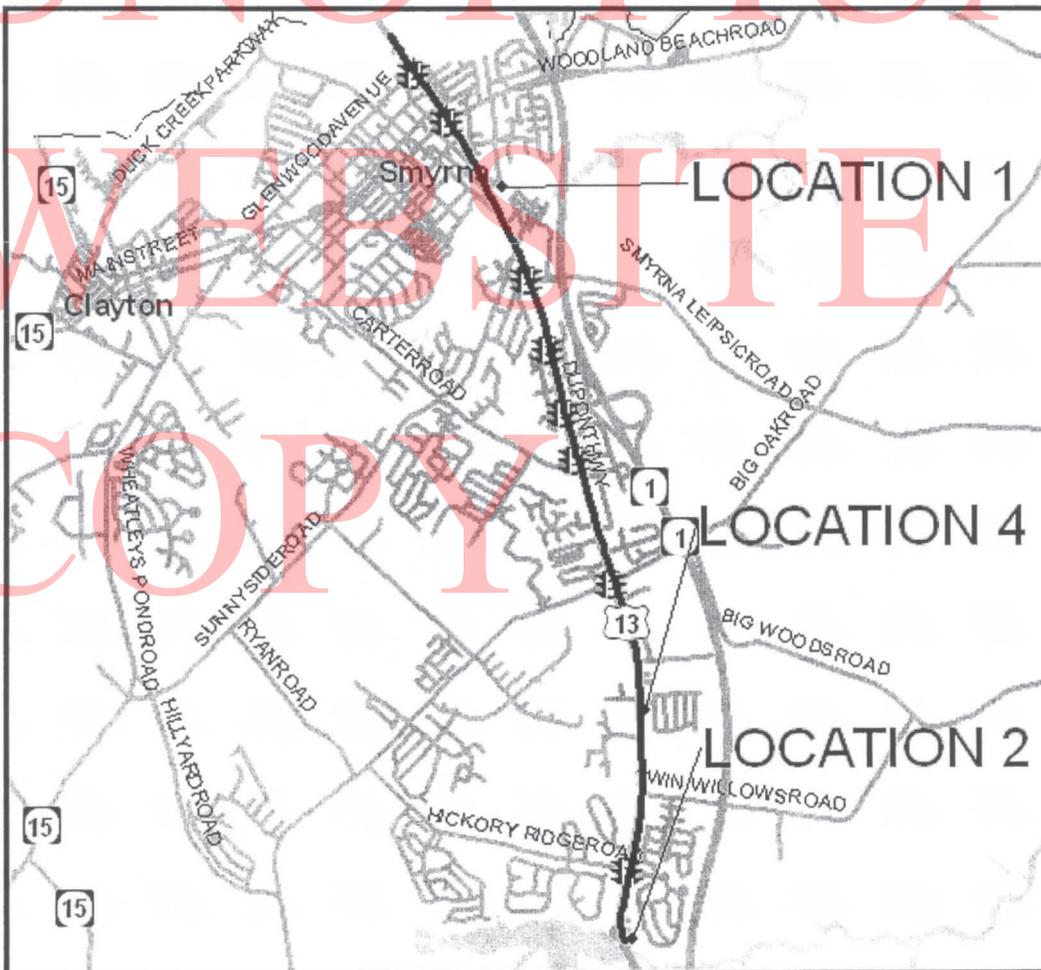
VARIOUS LOCATIONS

LOCATION MAP

LOCATION 1 - US 13 NB & SB FROM SMYRNA LEIPSIC TO DUCK CREEK BRIDGE

LOCATION 2 - GARRISON LAKE BRIDGE BARRIER REPLACEMENT

LOCATION 4 - US 13 NB & SB FROM HMJ @ MESSINA HILL TO SMYRNA LEIPSIC RD



DEPARTMENT OF TRANSPORTATION

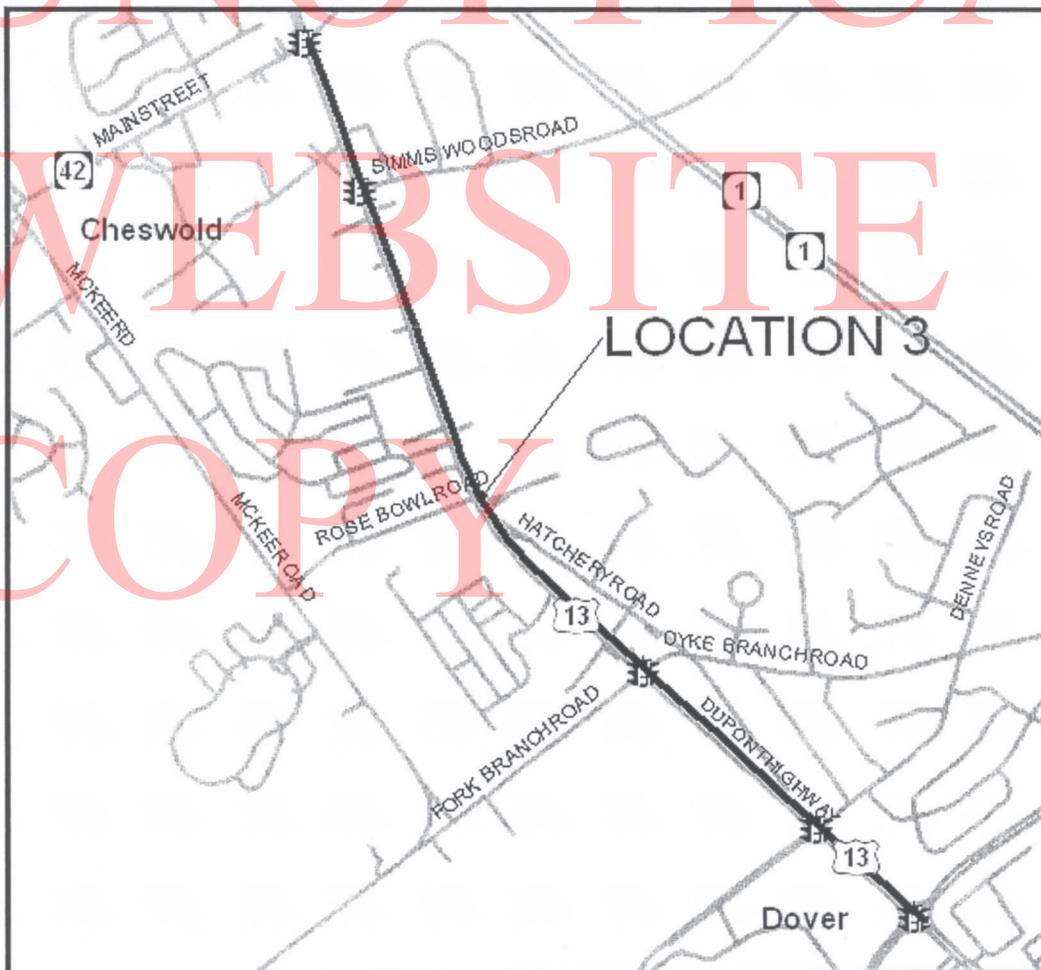
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VARIOUS LOCATIONS

LOCATION MAP

LOCATION 3 - US 13 NB & SB FROM HMJ @ SCARBOROUGH RD TO DE 42 FAST LANDING RD



GENERAL CONTRACT PLAN NOTES

REVISED 8/10

GENERAL

1. CONSTRUCTION OF THIS CONTRACT SHALL CONFORM TO DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED AUGUST 2001 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 TO INCLUDE THE REPLACEMENT OF THE EXISTING 32 INCH CONCRETE BARRIER LOCATED ALONG US 13 SOUTHBOUND AT GARRISON'S LAKE IN KENT COUNTY DELAWARE. THE CONCRETE BARRIER ON BOTH THE NORTH AND SOUTH SIDE OF BRIDGE 2-002D (US 13 SB, GARRISON'S LAKE BRIDGE) SHALL BE REMOVED AND REPLACED WITH NEW 42 INCH PCC F SHAPED BARRIER. THE NEW BARRIER SHALL BE LACED ON THE EXISTING FOOTING TO REMAIN. ADDITIONALLY, THE EXISTING BRIDGE BARRIER ON THE WEST SIDE OF THE SOUTHBOUND LANES SHALL BE EXTENDED TO MATCH THE HEIGHT 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.

5. ALL WORK IS TO BE PERFORMED ON LANDS OF THE STATE OF DELAWARE.

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

GENERAL CONTRACT PLAN NOTES

MAINTENANCE OF TRAFFIC AND PAVEMENT MARKINGS

6. AT THE PRECONSTRUCTION MEETING, THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS (INCLUDING BUT NOT LIMITED TO EXISTING STRIPING LENGTHS, LANE AND SHOULDER WIDTHS, TURN LANE LENGTHS, LOCATIONS OF STOP BARS, TURN ARROWS, CROSSWALKS AND RAILROAD CROSSINGS) THAT DEPICT THE EXISTING PAVEMENT MARKINGS FOR EACH PROJECT LOCATION. THESE DRAWINGS WILL BE REVIEWED BY THE DEPARTMENT'S TRAFFIC SECTION TO DETERMINE IF ANY CHANGES TO THE FINAL PAVEMENT MARKINGS ARE REQUIRED. FINAL PAVEMENT MARKINGS SHALL CONFORM TO ALL EXISTING PATTERNS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE DEPARTMENT WILL PROVIDE STRIPING LAYOUT AT LOCATIONS WHERE NO PAVEMENT MARKINGS PREVIOUSLY EXISTED. IF DEPARTMENT FORCES PROVIDE STRIPING LAYOUT ON LOCATIONS WHERE MARKINGS PREVIOUSLY EXISTED, THEN THE CONTRACTOR SHALL REIMBURSE THE DEPARTMENT FOR THE LAYOUT COSTS.

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 4-6-4 CONFIGURATION (2 EACH, 4" YELLOW STRIPES WITH A 6" GAP BETWEEN).

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.

7. 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.

8. 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.

9. ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLY PROVIDE THE LEAST PRACTICABLE OBSTRUCTION TO ALL ROAD USERS, INCLUDING VEHICULAR,

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

GENERAL CONTRACT PLAN NOTES

PEDESTRIAN, AND BICYCLE TRAFFIC, AND SHALL CONFORM TO THE REQUIREMENTS OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART 6, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT FOR BIDS.

10. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN, INCLUDING THE NECESSARY NCHRP 350 CERTIFICATIONS FOR ALL DEVICES THAT WILL BE UTILIZED, FOR EACH LOCATION BEFORE THE START OF THE PRE-CONSTRUCTION MEETING. WRITTEN APPROVAL MUST BE RECEIVED BEFORE THE START OF WORK AT EACH AND EVERY LOCATION.

11. ALL TRAFFIC CONTROL DEVICES SHALL BE IN NEW OR REFURBISHED CONDITION AND SHALL BE IN COMPLIANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND NCHRP 350 AS DEFINED IN SECTION "6A.01" OF THE MANUAL. THE DEVICES SHALL BE APPROVED BY THE DISTRICT SAFETY OFFICER PRIOR TO USE AND SHALL BE MAINTAINED IN GOOD CONDITION FOR THE DURATION OF THE CONTRACT.

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

13. 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 TWO FEET BEHIND THE STOP BAR, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF SEPARATE SIGNAL PLANS HAVE BEEN DEVELOPED, THE PLANS SUPERSEDE THIS NOTE.

14. EFFECTIVE 1/5/10 THE HORIZONTAL CIRCUMFERENTIAL MARKINGS ON PLASTIC DRUMS SHALL BE MADE OF FLOURESCENT ORANGE AND WHITE PRISMATIC RETROFLECTIVE SHEETING.

15. ALL PERMANENT WARNING SIGNS SHALL BE MADE OF NCHRP 350 COMPLIANT RIGID MATERIAL.

16. STOP LINES "BARS" SHALL BE PLACED AT ALL STOP SIGNS AND SHALL BE 16 INCHES WIDE AS PER THE MUTCD MANUAL SECTION 3B.16 DelDOT REVISION.

17. ALL CROSSWALKS SHALL BE NO LESS THAN 6 FEET IN WIDTH AS PER THE MUTCD MANUAL SECTION 3B.17 DelDOT REVISION.

PROJECT

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

19. 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.

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

GENERAL CONTRACT PLAN NOTES

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

21. 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.

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

23. EXCAVATION FOR P.C.C. CURBS, SIDEWALK OR VALLEY GUTTER SHALL BE INCIDENTAL TO THE BID PRICE FOR THESE RESPECTIVE ITEMS. EXCAVATED MATERIAL, NOT NEEDED ON THE PROJECT, SHALL BE REMOVED FROM THE CONTRACT AT THE CONTRACTORS EXPENSE. ITEM 732XXX, TOPSOIL, SHALL BE USED AS BACKFILL MATERIAL FOR CURB AND SIDEWALK AS DIRECTED BY THE ENGINEER. TOPSOIL SHALL BE SCREENED/SIFTED SO AS NO MATERIAL GREATER THAN .5" IS PRESENT IN MATERIAL USED FOR BACKFILL. AT EACH LOCATION, BACKFILLING SHALL BE PERFORMED IMMEDIATELY UPON REMOVAL OF FORMS FOR CURB OR SIDEWALK WORK. COMPLETE RESTORATION, TOPSOIL, SEEDING, AND REMOVAL OF ALL MATERIALS FOR CURB & GUTTER OR SIDEWALK; SEALING OF VALLEY GUTTERS AND PARGING OF CATCH BASINS, SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS OF COMPLETION OF THE ITEM OF WORK. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL OTHER CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

24. 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.

25. 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.

26. 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 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

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

GENERAL CONTRACT PLAN NOTES

MARKERS (RPM'S) SHALL BE INCIDENTAL TO THE APPLICABLE MILLING AND/OR RECLAMATION ITEMS.

27. 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.

28. **DRAINAGE INLETS**, WHICH ARE 4' GREATER IN DEPTH AND ARE SLATED FOR REPAIR WILL HAVE STEPS INSTALLED IN ACCORDANCE WITH SECTION 708.07 OF THE STANDARD SPECIFICATIONS. PAYMENT SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 710001.

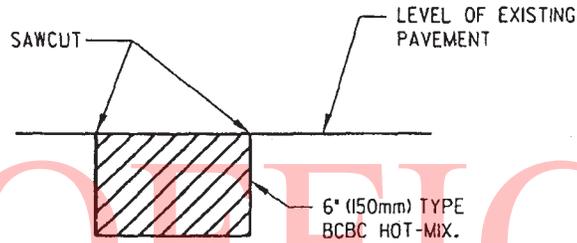
29. THE PORTLAND CEMENT CONCRETE USED WITHIN ITEM 701002 - ADJUST AND REPAIR EXISTING MAN HOLES AND ITEM 750000 - ADJUST WATER VALVE BOX SHALL CONFORM TO THE REQUIREMENTS OF CLASS A CONCRETE AS STATED WITHIN SECTION 503.02 OF THE DEPARTMENT'S STANDARD SPECIFICATIONS.

30. 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. WHERE PEDESTRIAN ROUTES ARE CLOSED OR BLOCKED, ALTERNATE PEDESTRIAN ACCESS SHALL BE PROVIDED USING CASE 16 OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR TO THE SATISFACTION OF THE ENGINEER. PEDESTRIAN DETOUR ROUTES OR ALTERNATE PEDESTRIAN FACILITIES SHALL CONSIST OF ADA COMPLIANT FACILITIES TO THE LEVEL OF WHICH EXIST ON THE EXISTING PEDESTRIAN ROUTE. THE COSTS FOR ANY PROVISIONS SHALL BE INCIDENTAL TO ITEM 763643 MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

31. **A AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR SHALL BE REQUIRED FOR ALL LOCATIONS SPECIFIED IN THE CONTRACT PLANS.**

32. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE LEGENDS "ROAD WORK 1500 FT", "ROAD WORK 1000 FT", AND "ROAD WORK 500 FT" SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AND "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 BREAK-AWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DEMUTCD. 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."

DETAILS SHEET



HOT MIX PATCH DETAIL

N.T.S.

NOTE: ALL EDGES TO BE SAWCUT. CUTTING BY USE OF AIR HAMMERS MAY BE SUBSTITUTED FOR SAWCUTTING IF THE AREA IS TO BE OVERLAID UNDER THE SAME CONTRACT. THIS DETAIL SHALL BE USED FOR ALL HOT-MIX PATCHES UNLESS OTHERWISE SHOWN ON THE PLANS.

WHEN PCC PATCHING IS REQUIRED ON A COMPOSITE PAVEMENT (HOT-MIX OVER CONCRETE), THE CONTRACTOR MAY ELECT TO ELIMINATE ANY GRADE DIFFERENCE BETWEEN THE TOP OF THE CONCRETE PATCH AND THE TOP OF THE EXISTING HOT-MIX PAVEMENT BY EITHER PLACING HOT-MIX TRM MATERIAL (PAYMENT UNDER ITEM 402000) OR PLACING CONCRETE FLUSH WITH EXISTING HOT-MIX PAVEMENT (ADDITIONAL CONCRETE PAID AS ITEM 503503). IF CONCRETE IS PLACED FLUSH WITH EXISTING HOT MIX, THE MILLING OF THE CONCRETE WILL BE PAID FOR AS MILLING HOT-MIX.

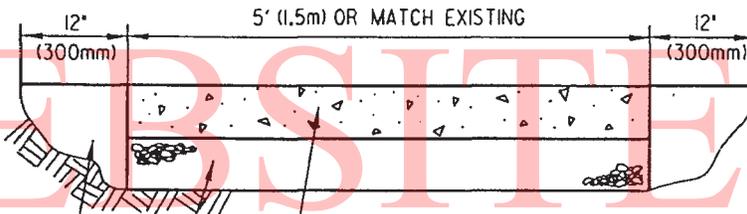
P.C.C. PATCHING NOTES

DETAILS SHEET

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COPY



BACKFILL WITH TOPSOIL

GRADED AGGREGATE BASE COURSE, TYPE B 4" (100mm) OR 6" (150mm)

PORTLAND CEMENT CONCRETE 4" (100mm) OR 6" (150mm)

P.C.C. SIDEWALK

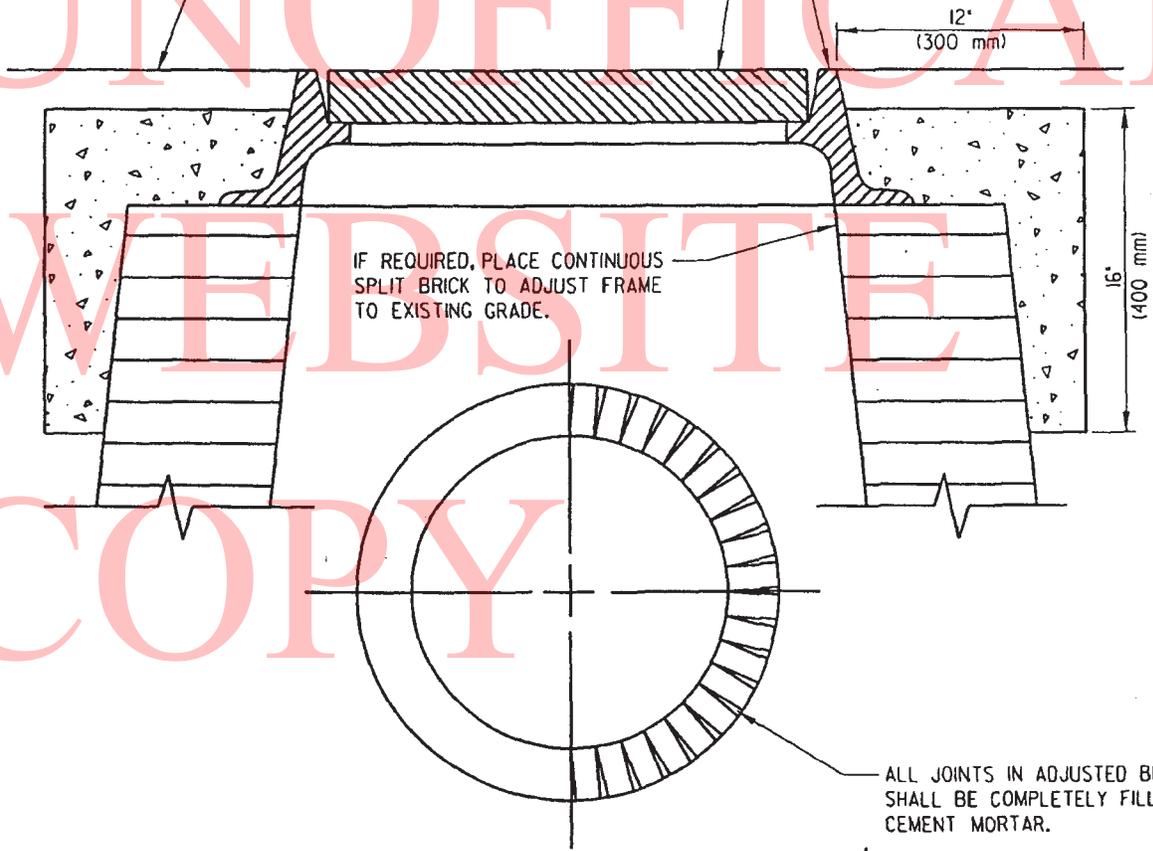
N.T.S.

• NOTE: 6" (150mm) CONCRETE OVER 6" (150mm) GRADED AGGREGATE TO BE USED FOR DRIVEWAY PLACEMENT

DETAILS SHEET

REMOVE AND DISPOSE OF EXISTING FRAME AND COVER AS DIRECTED BY OWNER IF NOT UTILIZED IN THE ADJUSTMENT. PLACE NEW OR EXISTING FRAME AND COVER (AS REQUIRED), TO CORRECT ELEVATION AND RECOLLAR. NEW FRAME AND COVER (IF REQUIRED) TO BE PROVIDED BY OWNER.

REMOVE HOT MIX AND CONCRETE COLLAR FROM AROUND MANHOLE.



ADJUSTING AND REPAIRING MANHOLE

N.T.S.

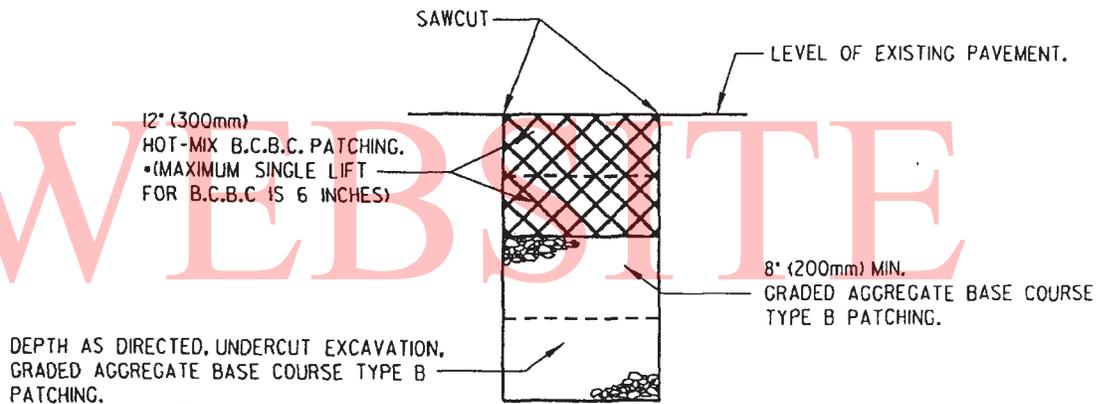
NOTE: MANHOLES IN CONCRETE ROADWAYS SHALL BE SAWCUT FULL DEPTH TO THE SPECIFIED DIMENSION PRIOR TO ANY ADJUSTMENT BEING MADE. THE SAWCUTTING SHALL BE INCIDENTAL TO ITEM 710002.

DETAILS SHEET

UNOFFICIAL

WEBSITE

COPY



HOT-MIX PATCH CONCRETE DETAIL

N.T.S.

NOTE: ALL EDGES TO BE SAWCUT. CUTTING BY USE OF AIR HAMMERS MAY BE SUBSTITUTED FOR SAWCUTTING IF THE AREA IS TO BE OVERLAID UNDER THE SAME CONTRACT. THIS DETAIL SHALL BE USED FOR ALL HOT-MIX PATCHES UNLESS OTHERWISE SHOWN ON THE PLANS.

REMOVAL OF EXISTING PORTLAND CONCRETE CEMENT SHALL BE INCIDENTAL TO ITEM 406002.

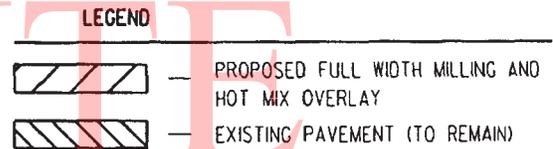
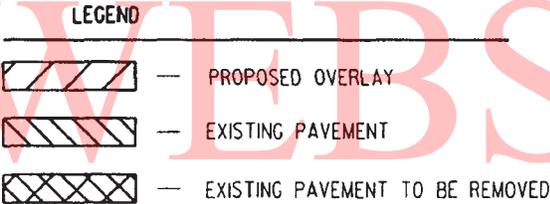
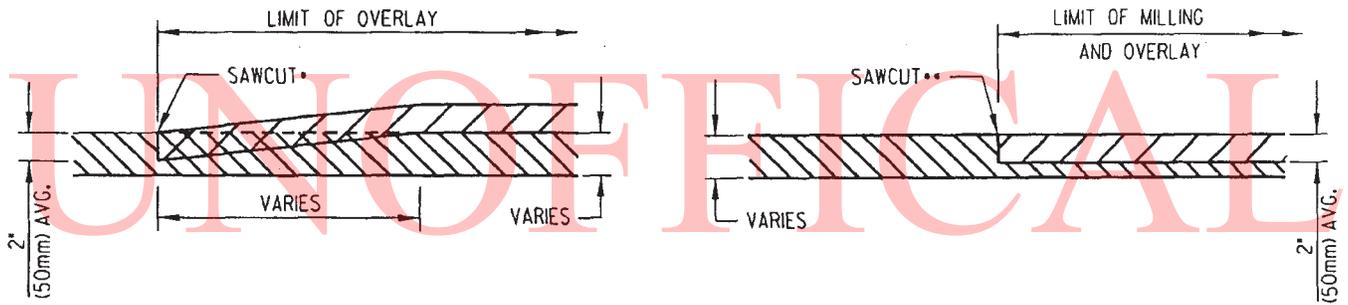
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CENTRAL MAINTENANCE VARIOUS LOCATIONS

DETAILS SHEET



**BUTT JOINT
FOR OVERLAY SECTION•**

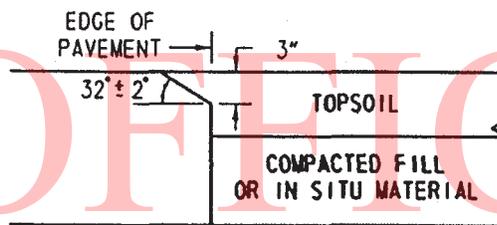
PAYMENT UNDER ITEM 761001.
•SAWCUT IS INCIDENTAL TO ITEM 761001.

**HOT MIX JOINT
FOR FULL WIDTH MILLING SECTION••**

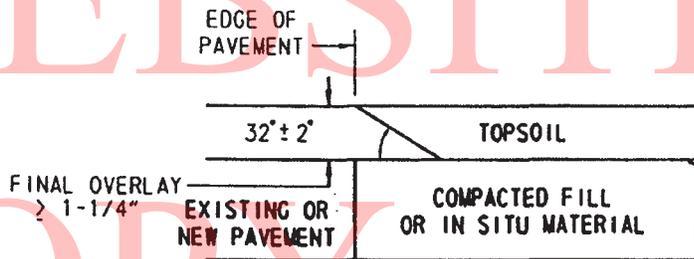
PAYMENT INCIDENTAL TO ITEM 760XXX, MILLING.
••SAWCUT SHALL BE PAID UNDER ITEM 762001.

•NOTE: THE FOLLOWING LENGTHS ARE BASED ON THE POSTED SPEED OF THE ROADWAY:
LESS THAN 50 MPH = 20 FT (6m) PER 1" (25mm) OF OVERLAY DEPTH,
EQUAL TO OR GREATER THAN 50 MPH = 30 FT (9.1m) PER 1" (25mm) OF OVERLAY DEPTH,
AT STOP SIGNS = 15 FT (4.6m) PER 1" (25mm) OF OVERLAY DEPTH.

DETAILS SHEET



CONCRETE PAVEMENTS
NOT TO SCALE



HOT-MIX PAVEMENTS AND OVERLAYS
NOT TO SCALE

SAFETY EDGE DETAIL
NOT TO SCALE

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CENTRAL MAINTENANCE VARIOUS LOCATIONS

DETAILS SHEET

Section 100 Project Note:

Unless otherwise noted on the plans, the Contractor shall, as part of his Project Schedule, submit to the Engineer an estimate of the monthly payments expected to be received on the contract. This will be referenced as the "Monthly Payment Chart".

A chart in Microsoft Excel, Microsoft Word, or hand written format will be acceptable for this purpose. The chart should include, as a minimum, columns for the month, year, and estimated monthly payments. The total of all estimated monthly payments should equal the awarded contract total bid price.

The Engineer may request an updated "Monthly Payment Chart" at his discretion, depending on the accuracy of the initial estimates and according to the overall needs of the Department.

The "Monthly Payment Chart" will not be considered a binding document by either the Contractor or the Department and is considered solely informational.

On projects requiring CPM Schedules, the Contractor may, but is not required to, "Cost Load" the CPM Schedule in order to generate the monthly payment estimates.

Costs to prepare and/or update the "Monthly Payment Chart" are addressed as follows:

- a. On Contracts requiring CPM Schedules and Updates, preparation of the initial chart shall be incidental to Item 763508. Updates shall be incidental to Item 763509.
- b. On contracts not requiring CPM Schedules, the cost to prepare and update the "Monthly Payment Chart" shall be included in Item 763000, Initial Expense.

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CENTRAL MAINTENANCE VARIOUS LOCATIONS

DETAILS SHEET

Station	Footer Elev.	Gutter Elev.	Top of Proposed Barrier (42" above gutter)	Total Ht (in) of Proposed Barrier (above footer)	Comments
0+00	See note 3	22.07			See note 1 and 3
0+12	19.19	19.19	22.69	42.00	
0+24	19.01	19.01	22.51	42.00	
0+36	18.77	18.77	22.27	42.00	
0+48	18.32	18.32	21.82	42.00	See note 2
0+60	18.01	18.03	21.53	42.24	
0+72	17.77	17.80	21.30	42.36	
0+84	17.55	17.73	21.23	44.16	
0+96	17.24	17.51	21.01	45.24	
1+08	16.83	17.14	20.64	45.72	
1+20	16.43	16.64	20.14	44.52	
1+32	16.09	16.24	19.74	43.80	
1+44	15.85	15.93	19.43	42.96	
1+56	15.63	15.69	19.19	42.72	
1+68	15.33	15.49	18.99	43.92	
1+80	15.11	15.25	18.75	43.68	
1+92	14.81	15.01	18.51	44.40	
2+04	14.53	14.71	18.21	44.16	
2+16	14.23	14.52	18.02	45.48	
2+28	14.07	14.28	17.78	44.52	
2+40	13.83	14.15	17.65	45.84	
2+52	13.70	14.16	17.66	47.52	
2+64	13.37	14.08	17.58	50.52	
2+76	13.14	14.02	17.52	52.56	
2+88	12.94	13.93	17.43	53.88	
3+00	12.77	13.74	17.24	53.64	
3+12	12.69	13.55	17.05	52.32	

See details for modified bridge parapet

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT NUMBER- T201106205

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CENTRAL MAINTENANCE VARIOUS LOCATIONS

DETAILS SHEET

4+00	11.85	12.46	15.96	49.32
4+12	11.66	12.17	15.67	48.12
4+24	11.49	11.99	15.49	48.00
4+36	11.18	11.72	15.22	48.48
4+48	10.96	11.49	14.99	48.36
4+60	10.95	11.21	14.71	45.12
4+72	10.77	10.91	14.41	43.68
4+84	10.57	10.76	14.26	44.28
4+96	10.45	10.52	14.02	42.84
5+08	10.45	10.59	14.09	43.68
5+20	10.38	10.56	14.06	44.16
5+32	10.28	10.54	14.04	45.12
5+44	10.38	10.65	14.15	45.24
5+56	10.52	10.77	14.27	45.00
5+68	10.48	10.85	14.35	46.44
5+80	10.54	10.95	14.45	46.92
5+92	10.60	11.01	14.51	46.92
6+04	10.70	11.18	14.68	47.76
6+16	10.83	11.28	14.78	47.40
6+28	11.02	11.43	14.93	46.92
6+40	11.19	11.55	15.05	46.32
6+52	11.30	11.68	15.18	46.56
6+64	11.43	11.76	15.26	45.96
6+76	11.61	11.84	15.34	44.76
6+88	11.78	11.95	15.45	44.04
7+00	12.04	12.10	15.60	42.72

NOTE 1 - END OF PARAPET IS BURIED IN EXISTING GROUND. GRADE TO TOP OF PROPOSED BARRIER AT STA 0+00, THEN TRANSITION AT A 4:1 SLOPE ALONG FACE OF BARRIER TO STA 0+12

NOTE 2 - PAVED SHOULDER MEETS FACE OF PARAPET AT STA 0+54, ELEV. 18.25

NOTE 3 = FOOTER ELEVATION AT END UNKNOWN. HOLD TOP OF PARAPET ELEVATION AND ADJUST HEIGHT IF NECESSARY

NOTE 4 - STATION 0+00 IS EXTREME NORTH END OF BARRIER WITH STATIONING ALONG THE BARRIER GUTTER LINE.

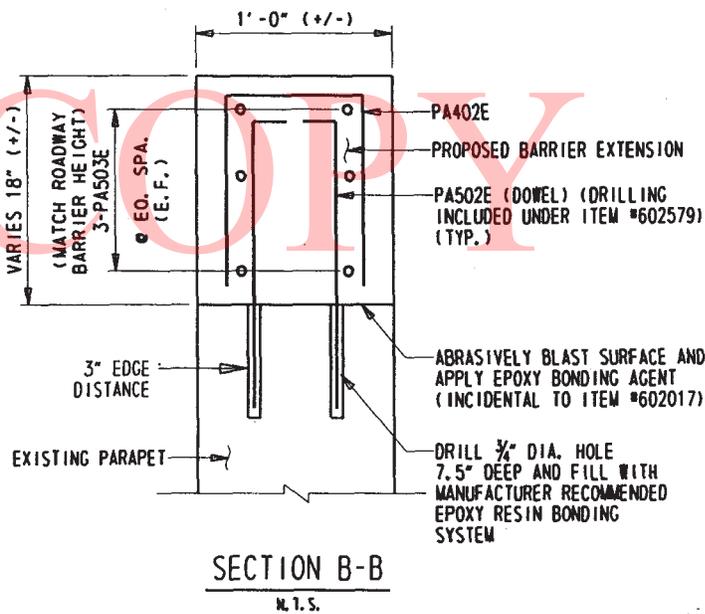
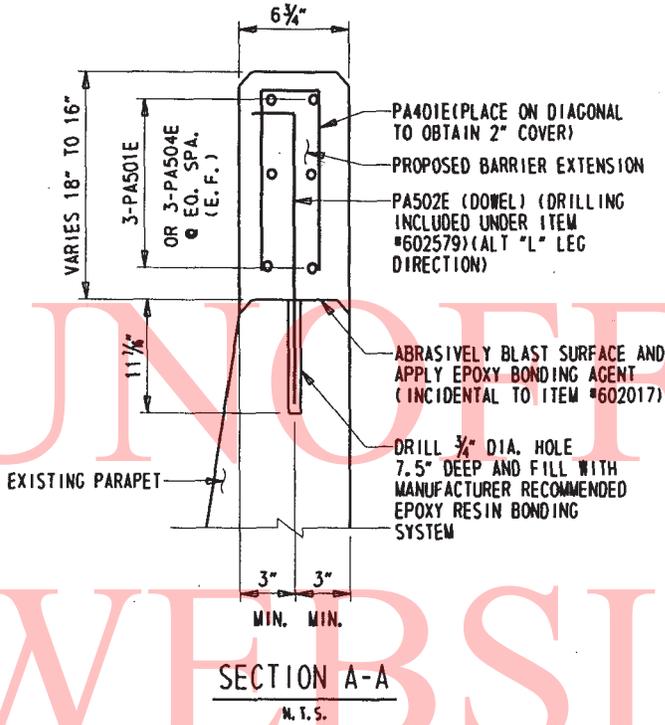
DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT NUMBER- T201106205

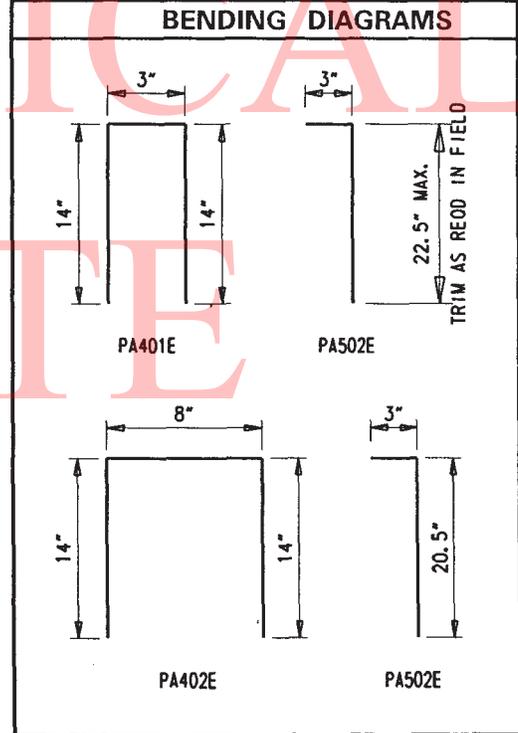
PAGE 18 OF 40

CENTRAL MAINTENANCE VARIOUS LOCATIONS

DETAILS SHEET



REINFORCING BAR LIST				
MARK	SIZE	NUMBER	TYPE	LENGTH
PA401E	4	60	17	31"
PA402E	4	32	17	38"
PA501E	5	12	STR.	8' - 11"
PA502E	5	120	17	VARIES
PA503E	5	12	STR.	15' - 2"
PA504E	5	24	STR.	9 - 1 1/2"



DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT NUMBER- T201106205

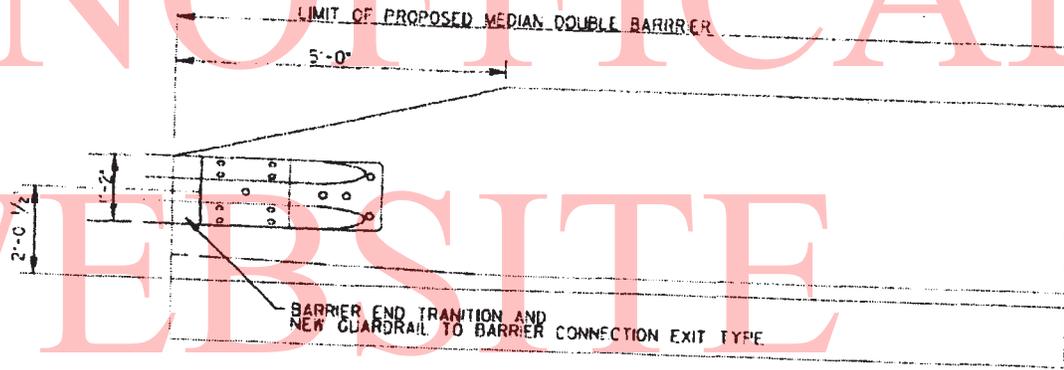
PAGE 20 OF 40

CENTRAL MAINTENANCE VARIOUS LOCATIONS

DETAILS SHEET

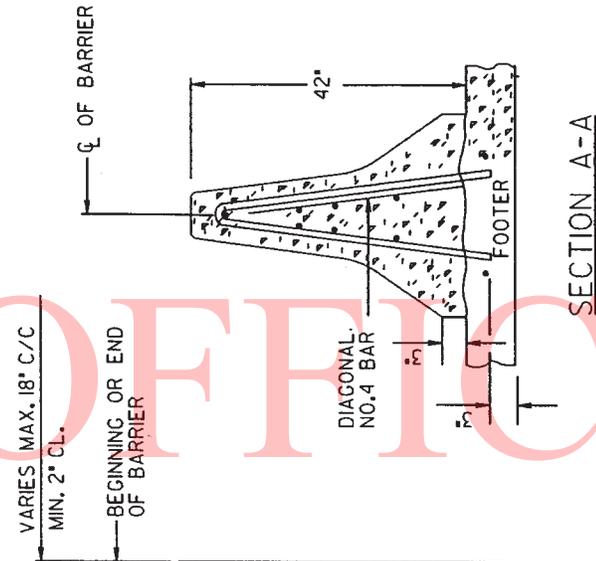
BARRIER END TRANSITION

UNOFFICIAL
WEBSITE
COPY

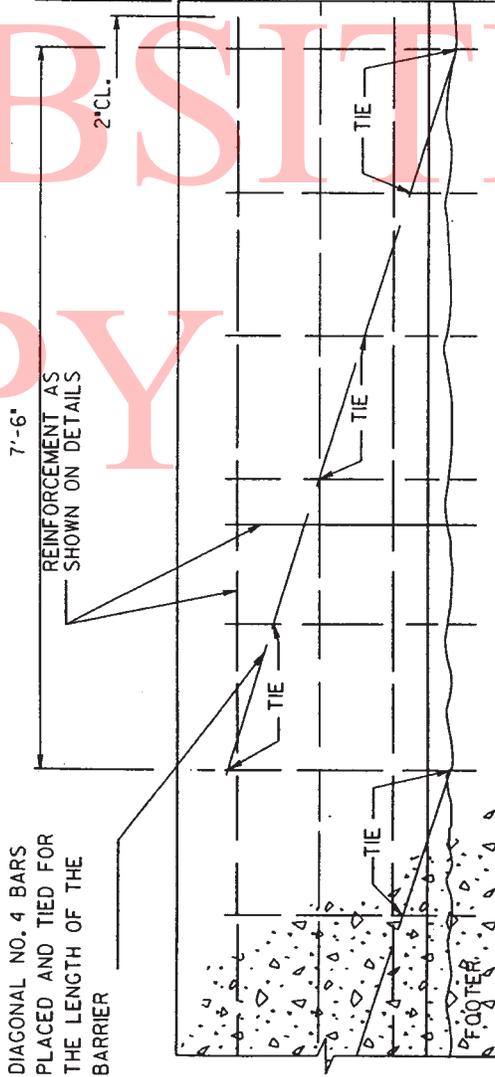


ELEVATION AT CONNECTION

DETAILS SHEET



SECTION A-A
DIAGONAL BAR DETAILS



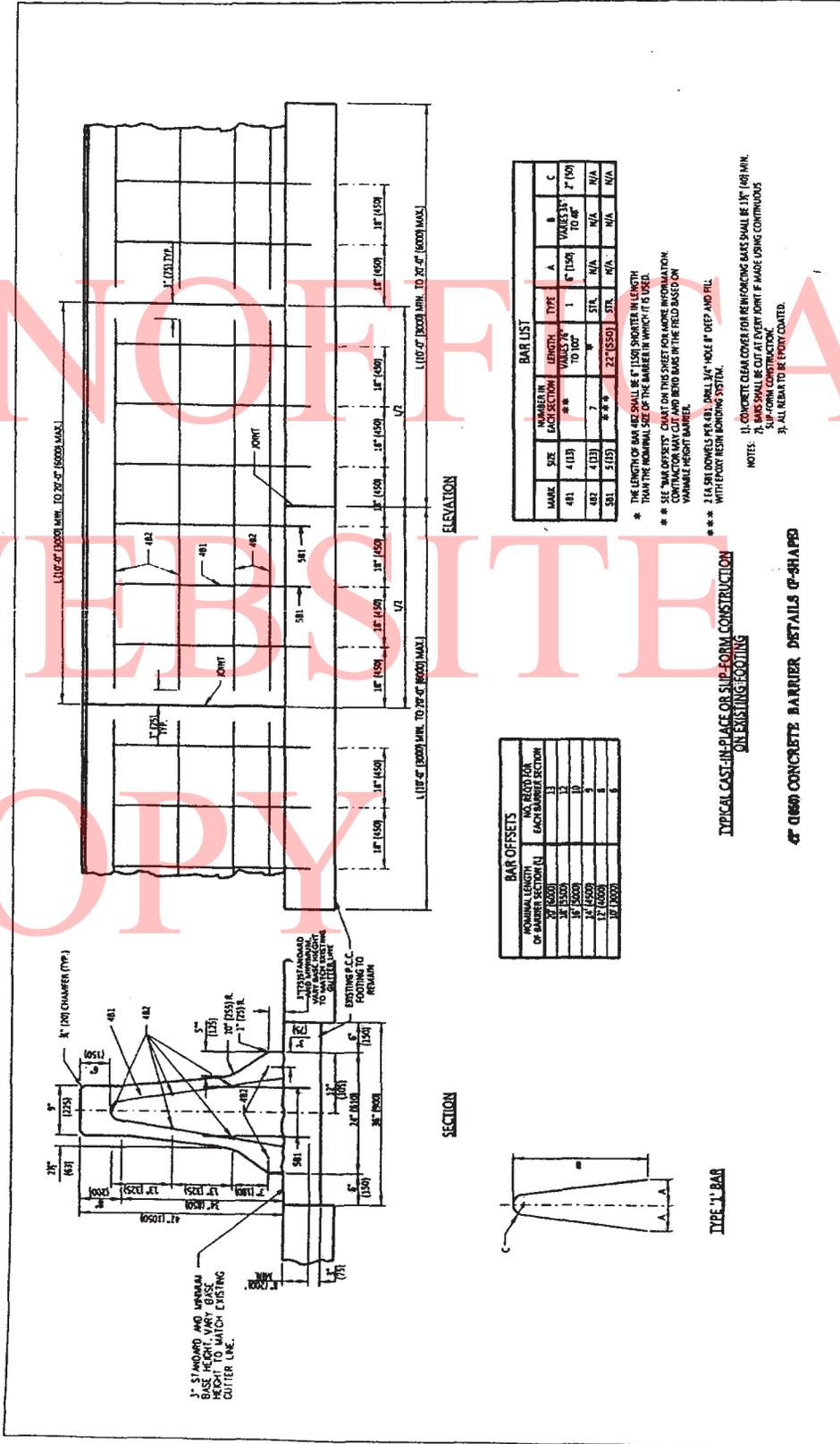
ELEVATION

DIAGONAL BAR NOTES:

1. APPLICABLE TO SLIP FORM CONSTRUCTION METHOD ONLY.
2. REFER TO DETAILS FOR SPACING OF VERTICAL AND HORIZONTAL REINFORCEMENT.
3. DIAGONAL NO. 4 BARS SHALL BE ASTM A 615, GRADE 60.
4. ALL REINFORCEMENT BARS, INCLUDING ENDS AND TIES, SHALL BE EPOXY COATED.
5. THIS DETAIL IS ONLY INTENDED TO SHOW THE REQUIREMENTS RELATED TO DIAGONAL REINFORCING. REFER TO SHEET 22 FOR ALL OTHER BARRIER DETAILS.

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WEBSITE
COPY

DETAILS SHEET



BAR LIST

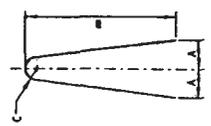
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH TO TOP	TYPE	A	B	C
481	4 (13)	**	1' 8" (134)	1	1' 8" (134)	1' 8" (134)	2' (50)
482	4 (13)	7	**	5TL	N/A	N/A	N/A
581	5 (15)	**	22' (550)	5TL	N/A	N/A	N/A

* THE LENGTH OF BAR 482 SHALL BE 1' (30) SHORTER IN LENGTH THAN THE NOMINAL SIZE OF THE BARRIER IN WHICH IT IS USED.
 ** SEE "BAR OFFSETS" COLUMN ON THIS SHEET FOR MORE INFORMATION.
 *** WITH FOUR REINFORCING BARS IN THE FIELD BASED ON VARIABLE HEIGHT BARRIER.
 **** WITH FOUR REINFORCING BARS IN THE FIELD BASED ON SLIP-FORM CONSTRUCTION.
 ***** WITH FOUR REINFORCING BARS IN THE FIELD BASED ON EXISTING FOOTING.

BAR OFFSETS

NOMINAL LENGTH OF BARRIER SECTION (L)	MAX. READ FOR EACH BARRIER SECTION
20' (6000)	13
22' (6600)	13
24' (7200)	13
26' (7800)	13
28' (8400)	13
30' (9000)	13

TYPICAL CAST-IN-PLACE OR SLIP-FORM CONSTRUCTION ON EXISTING FOOTING
 4' (1600) CONCRETE BARRIER DETAILS OF SHAPES



TYPE 1 BAR

1/22/2015

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201106205

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CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 1 US13, NORTH DUPONT BLVD - (K1) (SMYRNA) N.B. &S.B FROM SMYRNA-LEIPSIC RD(K12) TO DUCK CREEK BRIDGE

LENGTH 4511.0400 m 14800.0000 L.F. AADT 22594

GENERAL IMPROVEMENTS

HM PATCHING, 2" MILLING AND 2" WARM-MIX OVERLAY.

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 1

202000	EXCAVATION AND EMBANKMENT	8.00 C.Y.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	65.00 TON
302008	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	1.00 C.Y.
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	210.00 TON
401801	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	3,000.00 TON
401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	5.00 TON
401833	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON- CARBONATE STONE)	4,485.00 TON
402000	HOT-MIX BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	64.00 TON
406001	HOT-MIX PATCHING	90.00 SY-IN
503501	CRACK AND JOINT SEALING LESS THAN 3/4" WIDE	2,650.00 L.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	140.00 S.F.
705008	CURB RAMP, TYPE 1	180.00 S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	2,090.00 S.F.
708500	REPLACING CATCH BASIN GRATES	1.00 EACH
708504	REPLACING CATCH BASIN FRAMES	1.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	6.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	25.00 EACH
720573	ADJUSTING GUARDRAIL HEIGHT	1,400.00 L.F.
732004	TOPSOIL (TON)	407.00 TON
734013	PERMANENT GRASS SEEDING, DRY GROUND	4,933.00 S.Y.
743003	ARROWPANELS, TYPE C	24.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	14.00 EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	95.00 EA-DY
743007	** TRAFFIC OFFICERS	237.00 HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	24.00 EA-DY
743051	** FLAGGER, KENT COUNTY, STATE	1,184.00 HOUR
743063	** FLAGGER, KENT COUNTY, STATE, OVERTIME	178.00 HOUR

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201106205

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**CENTRAL
MAINTENANCE**

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

**LOCATION 1 US13, NORTH DUPONT BLVD - (K1) (SMYRNA) N.B. &S.B FROM SMYRNA-LEIPSIC
RD(K12) TO DUCK CREEK BRIDGE**

LENGTH 4511.0400 m 14800.0000 L.F. AADT 22594

GENERAL IMPROVEMENTS

HM PATCHING, 2" MILLING AND 2" WARM-MIX OVERLAY.

COMMENTS:

 Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 1

744520	CONDUIT JUNCTION WELL, TYPE 1, 20" X 20" PRECAST CONCRETE	1.00 EACH
745527	SUPPLY OF 2 1/2" GALVANIZED STEEL CONDUIT	130.00 L.F.
745542	INSTALLATION OF CONDUIT UNDER EXISTING PAVEMENT-DIRECTIONAL BORE	63.00 L.F.
745543	INSTALLATION OF CONDUIT UNDER EXISTING PAVEMENT-OPEN CUT	50.00 L.F.
745544	INSTALLATION OF CONDUIT IN UNPAVED TRENCH	17.00 L.F.
746776	LOOP DETECTOR SPLICE	16.00 EACH
746850	POLE BASE, TYPE 4	2.00 EACH
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLASTIC	924.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	82,000.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	1,848.00 S.F.
748502	RAISED/RECESSED PAVEMENT MARKER	185.00 EACH
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	40,700.00 L.F.
748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	12.00 EACH
750000	ADJUST WATER VALVE BOXES	2.00 EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	8.00 S.Y.
760507	PROFILE MILLING, HOT-MIX	128,160.00 SY-IN
760511	BIKE-FRIENDLY RUMBLE STRIPS, HOT-MIX	29,600.00 L.F.
762001	SAW CUTTING, HOT MIX	1,900.00 L.F.
763621	CONSTRUCTION ENGINEERING, RE-SURFACING	1.00 L.S.

** DENOTES FIXED PRICE ITEM

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201106205

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CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 1 US13, NORTH DUPONT BLVD - (K1) (SMYRNA) N.B. &S.B FROM SMYRNA-LEIPSIC
RD(K12) TO DUCK CREEK BRIDGE

COMMENTS:

RECOMMENDED M.O.T. CASE NO. 7 (TRAVEL LANES)
CASE NO. 3 (SHOULDERS)
CASE NO. 16 (SIDEWALK)

NIGHTTIME WORK HOURS: 8:00P - 6:00A.

WORKDAY RESTRICTIONS: PRIOR TO SEPTEMBER 15
NB - MONDAY PM THROUGH SATURDAY AM
SB - SUNDAY PM THROUGH FRIDAY AM

WORKDAY RESTRICTIONS: AFTER SEPTEMBER 15
NB & SB - SUNDAY PM THROUGH FRIDAY AM

ANTICIPATED RIGHT OF WAY IMPACTS AT INTERSECTIONS
US 13 & SR 300
US 13 & SR 6

ANY WORK OR ACTIVITIES INCLUDING ADA REQUIREMENTS ASSOCIATED WORK THAT CANNOT
BE COMPLETED DUE TO RIGHT-OF-WAY ISSUES WILL BE DELETED FROM THE CONTRACT.

CONTRACTOR MUST COORDINATE WITH PROJECT MANAGER OF T201020008 SMYRNA STREETSCAPE
IMPROVEMENTS PHASE II PRIOR TO ANTICIPATED START DATE. CONTACT INFORMATION IS JEFF
NIEZGODA AND HE CAN BE REACHED
AT 302-760-2178.

RESEAL THE PERIMETER JOINTS FOR ALL P.C.C. PADS, TO BE PAID UNDER CRACK & JOINT
SEALING ITEM 503501.

DO NOT REMOVE THE CONCRETE PAD INTERSECTIONS WITHIN THE TOWN LIMITS OF SMYRNA

HOT-MIX OVERLAY NOTES*

USE 76-22(NC) TYPE C WARM-MIX TRAVEL LANES.
USE 64-22 TYPE C WARM-MIX FOR TURN LANES, MEDIAN CROSSOVERS, AND OUTSIDE SHOULDERS.

THE REMOVAL OF EXISTING RAISED PAVEMENT MARKERS SHALL BE INCIDENTAL TO THE OVERLAY
INCLUDING PLACING BACK COMPACTED HOT-MIX MATERIAL TO FILL THE EXPOSED VOID.

300 TONS OF MILLED MATERIAL SHALL REMAIN THE PROPERTY OF THE DEPARTMENT OF
TRANSPORTATION AND BE DELIVERED TO THE MIDDLETOWN YARD, AREA 9. DELIVERY SHALL BE
INCIDENTAL TO THE MILLING ITEM.

CONTACT AND NOTIFY THE YARD SUPERVISOR, MARIO TIBERI, PHONE NO. 378-2721,
1 WEEK PRIOR TO DELIVERY.

DISTANCE TO YARD: APPROX. 11 MILES.

THIS LOCATION SHALL MEET THE TOLERANCES OF SUBSECTION 401580 - RIDE QUALITY OF
HOT-MIX PAVEMENT REQUIREMENTS, AS SPECIFIED IN THE SPECIAL PROVISIONS.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201106205

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CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 2

GARRISONS LAKE BARRIER REPLACEMENT AT BRIDGE 2-002D

LENGTH

GENERAL IMPROVEMENTS

BARRIER REPLACEMENT

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 2

209001	BORROW, TYPE A	20.00 C.Y.
211523	REMOVAL OF P.C.C. BARRIER	610.00 L.F.
401827	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON- CARBONATE STONE)	30.00 TON
406001	HOT-MIX PATCHING	45.00 SY-IN
602017	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	4.00 C.Y.
602579	DRILLING HOLES AND INSTALLING DOWELS	120.00 EACH
602586	REHABILITATION OF CONCRETE STRUCTURE	100.00 C.F.
602646	SILICONE ACRYLIC CONCRETE SEALER	5,127.00 S.F.
603000	BAR REINFORCEMENT	960.00 LB
712005	RIPRAP, R-4	35.00 S.Y.
720544	REFLECTORS, WHITE, CONCRETE	15.00 EACH
720567	FURNISH AND MAINTAIN PORTABLE P.C.C. SAFETY BARRIER	800.00 L.F.
720587	P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED	610.00 L.F.
725001	GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE 31)	1.00 EACH
732000	TOPSOIL, 4" DEPTH	35.00 S.Y.
734013	PERMANENT GRASS SEEDING, DRY GROUND	35.00 S.Y.
734015	PERMANENT GRASS SEEDING, WET GROUND	20.00 S.Y.
735533	SOIL RETENTION BLANKET MULCH, TYPE 3	35.00 S.Y.
743003	ARROWPANELS, TYPE C	60.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	54.00 EA-DY
743006	PLASTIC DRUMS	1,400.00 EA-DY
743007	** TRAFFIC OFFICERS	60.00 HOUR
743008	REFLECTOR PANELS	18.00 EACH
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	50.00 EA-DY
743051	** FLAGGER, KENT COUNTY, STATE	320.00 HOUR
743063	** FLAGGER, KENT COUNTY, STATE, OVERTIME	100.00 HOUR
743504	WARNING SIGNS	6.00 EACH

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201106205

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CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 2

GARRISONS LAKE BARRIER REPLACEMENT AT BRIDGE 2-002D

LENGTH

GENERAL IMPROVEMENTS

BARRIER REPLACEMENT

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 2

743525	TEMPORARY WARNING SIGNS	400.00 EA-DY
762003	SAW CUTTING, CONCRETE, VARIABLE DEPTH	500.00 L.F.
763501	CONSTRUCTION ENGINEERING	1.00 L.S.
763508	PROJECT CONTROL SYSTEM DEVELOPMENT PLAN	1.00 L.S.
763509	CPM SCHEDULE UPDATES AND/OR REVISED UPDATES	2.00 EA-MO

** DENOTES FIXED PRICE ITEM

COPY

CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 2 GARRISONS LAKE BARRIER REPLACEMENT AT BRIDGE 2-002D

COMMENTS:

PROJECT NOTES

THE PURPOSE OF THIS PROJECT IS TO REPLACE THE EXISTING 32 INCH CONCRETE BARRIER LOCATED ALONG US 13 SOUTHBOUND AT GARRISON'S LAKE IN KENT COUNTY DELAWARE. THE CONCRETE BARRIER ALONG US 13 NORTH AND SOUTH OF BRIDGE 2-002D (US 13 SB, GARRISON'S LAKE BRIDGE) SHALL BE REMOVED AND REPLACED WITH NEW 42 INCH PCC F SHAPED BARRIER. THE NEW BRIDGE BARRIER SHALL BE PLACED ON THE EXISTING FOOTING TO REMAIN. ADDITIONALLY, THE EXISTING BRIDGE BARRIER ON THE WEST SIDE OF THE SOUTHBOUND LANES SHALL BE EXTENDED TO MATCH THE HEIGHT OF THE NEW ROADWAY BARRIER.

THIS PROJECT HAS BEEN COORDINATED WITH THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC) DIVISION OF FISH AND WILDLIFE. TWO WEEKS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY DNREC, MS. CATHY MARTIN, PHONE: 302-735-8650 AND PROVIDE THE PLANNED CONSTRUCTION SCHEDULE.

ORIGINAL PLANS OF THE EXISTING BARRIER TO BE REMOVED CAN BE REQUESTED BY SUCCESSFUL BIDDER AT THE TIME OF AWARD.

PAYMENT FOR EXISTING BARRIER REMOVAL SHALL BE PAID UNDER ITEM 211523, REMOVAL OF PCC BARRIER. THE EXISTING BARRIER SHALL BE REMOVED FROM THE TOP OF ITS EXISTING CONCRETE FOOTING WITHOUT DAMAGING THE FOOTING TO REMAIN. THE CONTRACTOR'S METHOD FOR REMOVAL OF THE BARRIER FROM ITS FOOTING SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER TWO WEEKS PRIOR TO WORK COMMENCING.

- A. NO OPEN CUT EARTH WORK SHALL BE ALLOWED.
- B. EXISTING BARRIER SHALL BE HAULED AWAY AND BECOME THE PROPERTY OF THE CONTRACTOR. THIS SHALL BE INCIDENTAL TO ITEM 211523.
- C. UPON REMOVAL OF THE EXISTING BARRIER, THE CONCRETE FOOTING SHALL BE CLEANED BY ABRASIVE BLASTING AND SOUNDED IN THE PRESENCE OF THE ENGINEER TO ENSURE ITS INTEGRITY.
- D. ANY UNSOUND CONCRETE IN THE FOOTING SHALL BE SAW-CUT, REMOVED AND REPAIRED. PAYMENT FOR FOOTING REPAIRS SHALL BE UNDER ITEM 602586, REHABILITATION OF CONCRETE STRUCTURES WHERE COST OF SAW CUTTING THE CONCRETE SHALL BE INCLUDED IN THIS ITEM. THIS ITEM HAS BEEN ADDED AS A CONTINGENCY ITEM IF REQUIRED.
- E. ANY REPAIRS TO THE FOOTING REQUIRED DUE TO THE CONTRACTOR'S BARRIER REMOVAL OPERATION SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE DEPARTMENT.
- F. ANY UNDERMINED AREAS OF THE FOOTING SHALL HAVE LOOSE MATERIAL REMOVED AND THE UNDERMINED AREA FILLED AND BLOCKED WITH CONCRETE. THIS WORK SHALL BE INCIDENTAL TO ITEM 720587. THE ERODED AREA SHALL BE BACKFILLED WITH BORROW TYPE A, TOPPED WITH RIPRAP, TOPSOIL, SEED AND MULCH.

THE NEW BARRIER SHALL BE PLACED IN THE SAME LOCATION AS THE EXISTING BARRIER AND ON TOP OF THE EXISTING BARRIER FOOTING. THE 42 INCH PCC F SHAPED BARRIER SHALL BE MODIFIED AS REQUIRED BY EXTENDING ITS VERTICAL BASE TO ENSURE THAT 42 INCHES OF BARRIER IS EXPOSED ABOVE THE FINISHED GRADE OF HOT MIX ON THE ROADWAY SIDE.

- A. FURNISHING AND PLACING THE NEW PCC BARRIER SHALL BE PAID UNDER ITEM 720587, PCC BARRIER PERMANENT DOUBLE FACE, MODIFIED, WHICH SHALL INCLUDE ALL MATERIAL, LABOR, AND EQUIPMENT TO FURNISH, CONSTRUCT AND INSTALL THE BARRIER.
- B. REINFORCEMENT SHALL BE MODIFIED IN THE FIELD BY LENGTHENING VERTICAL BARS AND ADDING HORIZONTAL BARS AS REQUIRED TO MAINTAIN THE SAME OR SMALLER BAR SPACING AND GEOMETRY AS SHOWN IN THE DETAIL. THE CONTRACTOR MAY ORDER THE LONGEST VERTICAL BAR LENGTH REQUIRED AND BEND AND CUT BARS IN THE FIELD.
- C. ALL REINFORCING BARS SHALL BE FUSION BONDED EPOXY COATED. ALL BAR LAPS SHALL BE 30 BAR DIAMETERS. ALL BARS SHALL BE TIED TOGETHER. ALL BARS SHALL CONFORM TO AASHTO M31 GRADE 60. ALL REINFORCEMENT IN THE BARRIER SHALL BE INCLUDED IN ITEM 720587, PCC SAFETY BARRIER, PERMANENT, DOUBLE MODIFIED, AND NO SEPERATE PAYMENT WILL BE MADE.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201106205

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CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 2 GARRISONS LAKE BARRIER REPLACEMENT AT BRIDGE 2-002D

- D. NEW BARRIER MAY BE CONSTRUCTED BY SLIP FORMING OR CAST IN PLACE METHOD. CONCRETE MUST MEET 4500 PSI WITH AN AIR CONTENT OF 4-7%.
- E. BARRIER FORMS, IF USED, SHALL BE REMOVED BEFORE HOT MIX PATCHING ADJACENT TO THE BARRIER
- F. SPACING OF CONTRACTION JOINTS SHALL BE A MAXIMUM OF 20 FEET REGARDLESS OF THE CONSTRUCTION METHOD.
- G. TOLERANCES IN DIMENSIONS SHOWN SHALL BE WITHING 1/4".
- H. WHEN BARRIER IS CONSTRUCTED USING THE SLIP FORM METHOD, DIAGONAL NO. 4 BARS ARE REQUIRED.
- I. CONTRACTOR SHALL ATTACH WHITE REFLECTORS TO THE BARRIER FACING TRAFFIC. REFLECTOR SHALL HAVE A RED REFLECTOR ON THE BACK. SPACING OF THE REFLECTORS ON THE P.C.C. SAFETY BARRIER SHALL BE 50 FEET. TOP OF REFLECTORS SHALL BE INSTALLED 34 INCHES ABOVE THE GUTTER-LINE. ALL COST SHALL BE INCLUDED IN ITEM 720544, REFLECTORS, WHITE, CONCRETE.
- J. ADJUST REINFORCEMENT FOR TRANSITION AND SLOPED BARRIER ENDS.
- K. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING THE LINES AND GRADES OF THE BARRIER. LINES AND GRADES OF THE BARRIER SHALL SHOW THE BASE ELEVATION AND TRANSITION IN HEIGHT TO MATCH THE EXISTING AND FINISHED GRADE OF HOT MIX IN FRONT OF THE BARRIER. WITH 42" OF BARRIER EXPOSED ON THE TRAFFIC SIDE OF THE BARRIER. BAR LIST SHALL BE SUBMITTED FOR APPROVAL BASED ON THE VARIABLE BARRIER HEIGHT AND TRANSITION. PAYMENT SHALL BE INCLUDED UNDER ITEM 763501, CONSTRUCTION ENGINEERING.

- EXCAVATION OF SOIL, SAW CUTTING HOT MIX AND REMOVAL OF HOT MIX IS LIMITED TO ONLY THAT AMOUNT NECESSARY TO EXPOSE THE EXISTING FOOTING FOR REMOVAL AND REPLACEMENT OF THE BARRIER.
- A. SAW CUTTING HOT MIX SHALL BE PAID UNDER ITEM 762003, SAW CUTTING HOT MIX VARIABLE DEPTH.
- B. IT IS THE INTENT THAT THE HOT MIX SAW CUT SHALL BE DIRECTLY ABOVE THE EDGE OF FOOTING. NO ADDITIONAL PAYMENT SHALL BE MADE FOR PATCHING ADDITIONAL HOT MIX.
- C. WHERE HOT MIX IS LOCATED AGAINST THE BARRIER AND ABOVE THE FOOTING, THE CONTRACTOR MAY CUT A VERTICAL SURFACE IN THE HOT MIX AND USE THIS FOR FORMING THE TRAFFIC SIDE OF NEW BARRIER'S EXTENDED HEIGHT BASE. ANY HOT MIX CUT USED AS A FORM SHALL BE NEAT, CLEAN AND APPROVED BY THE ENGINEER PRIOR TO USE.

HOT MIX PATCHING SHALL MATCH THE EXISTING GUTTER LINE ELEVATION ON THE TRAFFIC SIDE OF THE BARRIER. HOT MIX PATCHING SHALL BE PAID UNDER ITEMS: 406001, HOT MIX PATCHING; 401821, WMA SUPERPAVE TYPE C PATCHING; 762003, SAW CUTTING HOT MIX VARIABLE DEPTH.

THE NEW BARRIER AND EXISTING BRIDGE BARRIER ON BOTH SIDES OF BRIDGE 2-002D SHALL BE COATED WITH WHITE SILICONE BASED ACRYLIC CONCRETE SEALER IN ACCORDANCE WITH AND PAID UNDER ITEM 602646.

AT THE SOUTHERN END OF THE NEW CONCRETE BARRIER, INSTALL NEW GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE) IN ACCORDANCE WITH DELDOT STANDARD NO. B-5 (2010). GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE) SHALL BE PAID UNDER ITEM 725001. REMOVAL AND ADJUSTMENT OF EXISTING GUARDRAIL AS REQUIRED TO INSTALL NEW GUARDRAIL SHALL BE INCIDENTAL TO ITEM 725001.

THE CONTRACTOR SHALL FILL THREE SCOUR HOLES WHERE THE EARTH BANK HAS ERODED UNDER THE FOOTING. AREAS WHERE EROSION OF THE LAKE SHORE BANK IS UNDERMINING THE FOOTING SHALL BE FILLED WITH BORROW TYPE A (ITEM 209001) UNDER A 1.5 FOOT LAYER OF R-4 RIPRAP (ITEM 712005). ALL RIPRAP PLACED SHALL BE CHOKED WITH DELAWARE #57 STONE FILLED WITH TOPSOIL, SEEDED AND MULCHED WITH SOIL RETENTION BLANKET MULCH TYPE 3 (ITEM 735533). PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4-INCH TOPSOIL LAYER SHALL BE PLACED

ON TOP OF THE RIPRAP. SEEDING SHALL BE PERMANENT GRASS SEEDING WET GROUND (ITEM 734015) FROM WATER LEVEL TO 2 FEET UP THE SLOPE AND PERMANENT GRASS SEEDING DRY GROUND (ITEM 734013) ON THE REMAINING SLOPE. ALL WORK STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING SHALL BE COMPLETED PRIOR TO

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CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 2 GARRISONS LAKE BARRIER REPLACEMENT AT BRIDGE 2-002D

ANY RAIN EVENT. PAYMENT FOR DELAWARE #57 STONE SHALL BE INCIDENTAL TO THE RIPRAP ITEM.
ALL OTHERS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

THE CONTRACTOR SHALL SUBMIT THE REQUIRED COPIES OF A DETAILED PROGRESS SCHEDULE (PSC) AS OUTLINED IN THE 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/PROJECT MANAGER NO LATER THAN NOON EACH WEDNESDAY. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

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.

NO ADDITIONAL PAYMENTS SHALL BE MADE IF THE CONTRACTOR ELECTS TO DO WORK AT NIGHT.

BRIDGE 2-2D BARRIER EXTENSION PROJECT NOTES:

PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS.

CONCRETE FOR THE LENGTH OF THE BRIDGE PARAPET AND WING WALLS SHALL BE PAID FOR UNDER ITEM 602017, PORTLAND CEMENT CONCRETE MASONRY, PARAPET CLASS A. ABRASIVE BLASTING THE EXISTING CONCRETE PARAPET SURFACE IS INCIDENTAL TO ITEM NO. 602017. STEEL REINFORCEMENT FOR PARAPET EXTENSION ALONG THE BRIDGE AND WING WALL TO BE PAID FOR UNDER ITEM NO. 603000, BAR REINFORCEMENT.

CHAMFER EXPOSED CONCRETE EDGES 3/4" X 3/4".

DRILLING HOLES AND INSTALLING DOWELS TO BE PAID FOR UNDER ITEM NO. 602579, DRILLING HOLES AND INSTALLING DOWELS.

VERIFY ALL DIMENSIONS AND GEOMETRY OF EXISTING PARAPET IN THE FIELD AS NECESSARY PRIOR TO SUBMITTING SHOP DRAWINGS.

THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DROPPING MATERIAL OR EQUIPMENT IN THE CHANNEL.

MAINTENANCE OF TRAFFIC NOTES:

ROADWAY SHOULDER ADJACENT TO THE BARRIER MAY BE PLACED UNDER A PERMANENT CLOSURE AT THE ROADWAY EDGE LINE IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION MUTCD FOR STREETS AND HIGHWAYS, CASE 3 MODIFIED. MODIFY THE CHANNELIZING DEVICE WITH PORTABLE PCC BARRIER. TMA SHALL NOT BE REQUIRED BEHIND THE PCC CHANNELIZING DEVICE. PORTABLE PCC BARRIER AT THE NORTH APPROACH SHALL BE FLARED 30 FEET BEYOND THE ROADWAY SHOULDER AND TERMINATE WITH A TAPERED END SECTION.

THE RIGHT LANE OF US 13 SB MAY BE CLOSED TEMPORARILY DURING OFF PEAK HOURS

A. AT NIGHT FROM SUNDAY TO THURSDAY, BETWEEN THE HOURS OF 7PM TO 5AM.

B. DURING THE DAY FROM MONDAY TO FRIDAY FROM 9AM TO 3 PM.

C. TEMPORARY LANE CLOSURE SHALL BE IN ACCORDANCE WITH THE MUTCD FOR STREETS AND HIGHWAYS, CASE 7.

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PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 2 GARRISONS LAKE BARRIER REPLACEMENT AT BRIDGE 2-002D

THE PUBLIC PARKING LOT ENTRANCE TO GARRISON'S LAKE FISHING AREA, ON THE NORTH SIDE OF THE PROJECT, SHALL REMAIN OPEN FOR PUBLIC ACCESS AT ALL TIMES.

ONE WEEK PRIOR TO THE START OF CONSTRUCTION, VARIABLE MESSAGE BOARD SHALL BE PLACED WITH THE FOLLOWING MESSAGE, "ROAD WORK US 13 SB" AND "STARTING XX/XX/XX".

SECTION 100 PROJECT NOTES:

UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL, AS PART OF HIS PROJECT SCHEDULE, SUBMIT TO THE ENGINEER AS AN ESTIMATE FOR THE MONTHLY PAYMENTS AS EXPECTED TO BE RECEIVED ON THE CONTRACT. THIS WILL BE REFERENCED AS THE "MONTHLY PAYMENT CHART".

- A. A CHART IN MICROSOFT EXCEL, MICROSOFT WORD, OR HAND WRITTEN FORMAT WILL BE ACCEPTABLE FOR THIS PURPOSE. THE CHART SHOULD INCLUDE, AS A MINIMUM, COLUMNS FOR THE MONTH, YEAR, AND ESTIMATED MONTHLY PAYMENTS. THE TOTAL OF ALL ESTIMATED MONTHLY PAYMENTS SHOULD EQUAL THE AWARDED CONTRACT TOTAL BID PRICE.
- B. THE ENGINEER MAY REQUEST AN UPDATED "MONTHLY PAYMENT CHART" AT HIS DISCRETION, DEPENDING ON THE ACCURACY OF THE INITIAL ESTIMATES AND ACCORDING TO THE OVERALL NEEDS OF THE DEPARTMENT. THE "MONTHLY PAYMENT CHART" WILL NOT BE CONSIDERED A BINDING DOCUMENT BY EITHER THE CONTRACTOR OR THE DEPARTMENT AND IS CONSIDERED SOLELY INFORMATIONAL.

ON PROJECTS REQUIRING CPM SCHEDULES, THE CONTRACTOR MAY, BUT IS NOT REQUIRED TO, "COST LOAD" THE CPM SCHEDULE IN ORDER TO GENERATE THE MONTHLY PAYMENT ESTIMATES.

COSTS TO PREPARE AND/OR UPDATE THE "MONTHLY PAYMENT CHART" ARE ADDRESSED AS FOLLOWS:

- A. ON CONTRACTS REQUIRING CPM SCHEDULES AND UPDATES, PREPARATION OF THE INITIAL CHART SHALL BE INCIDENTAL TO ITEM 763509.
- B. ON CONTRACTS NOT REQUIRING CPM SCHEDULES, THE COST TO PREPARE AND UPDATE THE "MONTHLY PAYMENT CHART" SHALL BE INCLUDED IN ITEM 763000, INITIAL EXPENSE.

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CENTRAL
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PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 3 US13, NORTH DUPONT HWY(K2) N.B. & S.B. FROM HMJ @ SCARBOROUGH(K294)
TO DE42, FAST LANDING RD(K42)

LENGTH 5638.8000 m 18500.0000 L.F. AADT 50681

GENERAL IMPROVEMENTS

HM PATCHING, TAPER MILL IN SPOTS, 2" WARM-MIX OVERLAY.

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 3

302005	GRADED AGGREGATE BASE COURSE, TYPE B	20.00 TON
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	270.00 TON
401801	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	4,350.00 TON
401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	92.00 TON
401833	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON- CARBONATE STONE)	6,540.00 TON
406001	HOT-MIX PATCHING	1,600.00 SY-IN
705002	P.C.C. SIDEWALK, 6"	63.00 S.F.
708500	REPLACING CATCH BASIN GRATES	3.00 EACH
708504	REPLACING CATCH BASIN FRAMES	3.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	3.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	28.00 EACH
732004	TOPSOIL (TON)	509.00 TON
734013	PERMANENT GRASS SEEDING, DRY GROUND	6,167.00 S.Y.
743003	ARROWPANELS, TYPE C	25.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	14.00 EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	100.00 EA-DY
743007	** TRAFFIC OFFICERS	250.00 HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	25.00 EA-DY
743051	** FLAGGER, KENT COUNTY, STATE	1,250.00 HOUR
743063	** FLAGGER, KENT COUNTY, STATE, OVERTIME	188.00 HOUR
746776	LOOP DETECTOR SPLICE	5.00 EACH
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	2,003.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	46,250.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	2,003.00 S.F.
748027	PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 12"	120.00 L.F.
748502	RAISED/RECESSED PAVEMENT MARKER	232.00 EACH
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	46,250.00 L.F.

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CENTRAL
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PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 3 US13, NORTH DUPONT HWY(K2) N.B. & S.B. FROM HMJ @ SCARBOROUGH(K294)
TO DE42, FAST LANDING RD(K42)

LENGTH 5638.8000 m 18500.0000 L.F. AADT 50681

GENERAL IMPROVEMENTS

HM PATCHING, TAPER MILL IN SPOTS, 2" WARM-MIX OVERLAY.

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 3

748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	10.00 EACH
750000	ADJUST WATER VALVE BOXES	2.00 EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	7.00 S.Y.
760502	PAVEMENT MILLING, TAPER CUT	3,333.00 SY-IN
760511	BIKE-FRIENDLY RUMBLE STRIPS, HOT-MIX	37,000.00 L.F.
761001	BUTT JOINTS, HOT MIX	2,386.00 S.Y.
762001	SAW CUTTING, HOT MIX	2,220.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	20.00 L.F.

** DENOTES FIXED PRICE ITEM

COPY

CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 3 US13, NORTH DUPONT HWY(K2) N.B. & S.B. FROM HMJ @ SCARBOROUGH(K294) TO DE42, FAST LANDING RD(K42)

COMMENTS:

RECOMMENDED M.O.T. CASE NO 7 (TRAVEL LANES) .
CASE NO 3 (SHOULDERS)

□□□□
NIGHTTIME WORK HOURS: 8:00P - 6:00A.

WORKDAY RESTRICTIONS: PRIOR TO SEPTEMBER 15
NB - MONDAY PM THROUGH SATURDAY AM
SB - SUNDAY PM THROUGH FRIDAY AM

WORKDAY RESTRICTIONS: AFTER SEPTEMBER 15
NB & SB - SUNDAY PM THROUGH FRIDAY AM

GABC ITEM 302005 AND QUANTITY IS FOR UNIMPROVED DRIVEWAYS.

P.C.C. REMOVAL AND 6" SIDEWALK ITEMS ARE FOR CONCRETE DRIVEWAYS.

ITEM 748027 12" THERMO-PLASTIC SHALL BE USED FOR THE GORE STRIPING.

2" TAPER MILL IN FRONT OF EXISTING CURB.

CHESWOLD WALMART IS CURRENTLY UNDER CONSTRUCTION WITHIN LIMITS OF LOCATION 3
CONTRACTOR WILL NEED TO COORDINATE LIMITS OF WORK WITHIN WALMARTS CONTRACTOR AND
SOUTH I PERSONNEL
HOT-MIX OVERLAY NOTES*

USE 76-22 (NC) TYPE C WARM-MIX FOR TRAVEL LANES AND INTERSECTIONS.
USE 64-22 (C) TYPE C WARM-MIX FOR TURN LANES, MEDIAN CROSSOVERS AND OUTSIDE SHOULDERS.

THE REMOVAL OF EXISTING RAISED PAVEMENT MARKERS SHALL BE INCIDENTAL TO THE OVERLAY
INCLUDING PLACING BACK COMPACTED HOT-MIX MATERIAL TO FILL THE EXPOSED VOID.

THIS LOCATION SHALL MEET THE TOLERANCES OF SUBSECTION 401580 - RIDE QUALITY OF
HOT-MIX PAVEMENT REQUIREMENTS, AS SPECIFIED IN THE SPECIAL PROVISIONS.

DELAWARE DEPARTMENT OF TRANSPORTATION

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PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 4 US13, NORTH DUPONT HWY(K2) NB & SB FROM HMJ @ MESSINA HILL RD(K102)
TO SMYRNA-LEIPSIC RD(K12)

LENGTH 11277.6000 m 37000.0000 L.F. AADT 36455

GENERAL IMPROVEMENTS

TAPER MILL IN AREAS, PATCHING AND 2" WARM-MIX OVERLAY.

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 4

212001	UNDERCUT EXCAVATION, PATCHING	4.00 C.Y.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	15.00 TON
302008	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	36.00 C.Y.
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	345.00 TON
401801	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	8,058.00 TON
401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	110.00 TON
401833	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON- CARBONATE STONE)	13,081.00 TON
406002	HOT-MIX PATCHING, CONCRETE	4,480.00 SY-IN
708500	REPLACING CATCH BASIN GRATES	6.00 EACH
708504	REPLACING CATCH BASIN FRAMES	6.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	10.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	4.00 EACH
720573	ADJUSTING GUARDRAIL HEIGHT	2,150.00 L.F.
732004	TOPSOIL (TON)	1,018.00 TON
734013	PERMANENT GRASS SEEDING, DRY GROUND	12,333.00 S.Y.
743003	ARROWPANELS, TYPE C	40.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	14.00 EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	160.00 EA-DY
743007	** TRAFFIC OFFICERS	401.00 HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	40.00 EA-DY
743051	** FLAGGER, KENT COUNTY, STATE	2,006.00 HOUR
743063	** FLAGGER, KENT COUNTY, STATE, OVERTIME	301.00 HOUR
746776	LOOP DETECTOR SPLICE	27.00 EACH
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLASTIC	2,366.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	92,500.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	2,366.00 S.F.
748027	PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 12"	450.00 L.F.

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CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 4 US13, NORTH DUPONT HWY(K2) NB & SB FROM HMJ @ MESSINA HILL RD(K102)
TO SMYRNA-LEIPSIC RD(K12)

LENGTH 11277.6000 m 37000.0000 L.F. AADT 36455

GENERAL IMPROVEMENTS

TAPER MILL IN AREAS, PATCHING AND 2" WARM-MIX OVERLAY.

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 4

748502	RAISED/RECESSED PAVEMENT MARKER	463.00 EACH
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	92,500.00 L.F.
748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	20.00 EACH
750000	ADJUST WATER VALVE BOXES	4.00 EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	160.00 S.Y.
760502	PAVEMENT MILLING, TAPER CUT	5,173.00 SY-IN
760507	PROFILE MILLING, HOT-MIX	34,700.00 SY-IN
760511	BIKE-FRIENDLY RUMBLE STRIPS, HOT-MIX	74,000.00 L.F.
761001	BUTT JOINTS, HOT MIX	3,042.00 S.Y.
762001	SAW CUTTING, HOT MIX	3,090.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	600.00 L.F.

** DENOTES FIXED PRICE ITEM

CENTRAL
MAINTENANCE

PAVEMENT & REHABILITATION, SOUTH I-V, 2011

LOCATION 4 US13, NORTH DUPONT HWY(K2) NB & SB FROM HMJ @ MESSINA HILL RD(K102) TO SMYRNA-LEIPSIC RD(K12)

COMMENTS:

RECOMMENDED M.O.T. CASE NO. 7 (TRAVEL LANES).
CASE NO. 3 (SHOULDERS)

□□□□

NIGHTTIME WORK HOURS: 8:00P - 6:00A.

WORKDAY RESTRICTIONS: PRIOR TO SEPTEMBER 15
NB - MONDAY PM THROUGH SATURDAY AM
SB - SUNDAY PM THROUGH FRIDAY AM

WORKDAY RESTRICTIONS: AFTER SEPTEMBER 15
NB & SB - SUNDAY PM THROUGH FRIDAY AM

ANTICIPATED RIGHT OF WAY INTERSECTIONS
US 13 & SR 1 RAMPS

ANY WORK OR ACTIVITIES INCLUDING ADA REQUIREMENTS ASSOCIATED WORK THAT CANNOT BE COMPLETED DUE TO RIGHT-OF-WAY ISSUES WILL BE DELETED FROM THE CONTRACT.

LOCATION 2 MUST BE COMPLETED PRIOR TO WORK STARTING ON LOCATION 4

GABC ITEM 302005 AND QUANTITY IS FOR UNIMPROVED DRIVEWAYS.

ITEM 748027 12" THERMO-PLASTIC SHALL BE USED FOR THE GORE STRIPING.

2" TAPER MILL IN FRONT OF EXISTING CURB AND P.C.C. BARRIERS AS DIRECTED BY THE FIELD ENGINEER.

2" MILL FULL WIDTH 100' IN EACH DIRECTION FROM CENTER LINE OF CULVERTS/BRIDGES AND PLACE BACK 2" HOT-MIX TYPE C OVERLAY AS DIRECTED BY THE FIELD ENGINEER.

2" MILL FULL WIDTH FROM SMYRNA-LEIPSIC RD TO THE END OF THE P.C.C. CURB IN MEDIAN. APPROX. 1700LF.

HOT-MIX OVERLAY NOTES*

USE 76-22(NC) TYPE C WARM-MIX FOR TRAVEL LANES AND INTERSECTIONS.
USE 64-22(C) TYPE C WARM-MIX FOR TURN LANES, MEDIAN CROSSOVERS AND OUTSIDE SHOULDERS.

THE REMOVAL OF EXISTING RAISED PAVEMENT MARKERS SHALL BE INCIDENTAL TO THE OVERLAY INCLUDING PLACING BACK COMPACTED HOT-MIX MATERIAL TO FILL THE EXPOSED VOID.

THIS LOCATION SHALL MEET THE TOLERANCES OF SUBSECTION 401580 - RIDE QUALITY OF HOT-MIX PAVEMENT REQUIREMENTS, AS SPECIFIED IN THE SPECIAL PROVISIONS.

DELAWARE DEPARTMENT OF TRANSPORTATION

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CENTRAL PAVEMENT & REHABILITATION, SOUTH I-V, 2011
MAINTENANCE

CONTRACT QUANTITIES SUMMARY SHEET

202000	EXCAVATION AND EMBANKMENT	8.00 C.Y.
209001	BORROW, TYPE A	20.00 C.Y.
211523	REMOVAL OF P.C.C. BARRIER	610.00 L.F.
212001	UNDERCUT EXCAVATION, PATCHING	4.00 C.Y.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	100.00 TON
302008	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	37.00 C.Y.
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	825.00 TON
401801	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	15,408.00 TON
401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	207.00 TON
401827	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON- CARBONATE STONE)	30.00 TON
401833	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON- CARBONATE STONE)	24,106.00 TON
402000	HOT-MIX BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	64.00 TON
406001	HOT-MIX PATCHING	1,735.00 SY-IN
406002	HOT-MIX PATCHING, CONCRETE	4,480.00 SY-IN
503501	CRACK AND JOINT SEALING LESS THAN 3/4" WIDE	2,650.00 L.F.
602017	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	4.00 C.Y.
602579	DRILLING HOLES AND INSTALLING DOWELS	120.00 EACH
602586	REHABILITATION OF CONCRETE STRUCTURE	100.00 C.F.
602646	SILICONE ACRYLIC CONCRETE SEALER	5,127.00 S.F.
603000	BAR REINFORCEMENT	960.00 LB
705002	P.C.C. SIDEWALK, 6"	63.00 S.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	140.00 S.F.
705008	CURB RAMP, TYPE 1	180.00 S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	2,090.00 S.F.
708500	REPLACING CATCH BASIN GRATES	10.00 EACH
708504	REPLACING CATCH BASIN FRAMES	10.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	19.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	57.00 EACH

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CENTRAL PAVEMENT & REHABILITATION, SOUTH I-V, 2011
MAINTENANCE

CONTRACT QUANTITIES SUMMARY SHEET

712005	RIPRAP, R-4	35.00 S.Y.
720544	REFLECTORS, WHITE, CONCRETE	15.00 EACH
720567	FURNISH AND MAINTAIN PORTABLE P.C.C. SAFETY BARRIER	800.00 L.F.
720573	ADJUSTING GUARDRAIL HEIGHT	3,550.00 L.F.
720587	P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED	610.00 L.F.
725001	GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE 31)	1.00 EACH
732000	TOPSOIL, 4" DEPTH	35.00 S.Y.
732004	TOPSOIL (TON)	1,934.00 TON
734013	PERMANENT GRASS SEEDING, DRY GROUND	23,468.00 S.Y.
734015	PERMANENT GRASS SEEDING, WET GROUND	20.00 S.Y.
735533	SOIL RETENTION BLANKET MULCH, TYPE 3	35.00 S.Y.
743003	ARROWPANELS, TYPE C	149.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	96.00 EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	355.00 EA-DY
743006	PLASTIC DRUMS	1,400.00 EA-DY
743007	** TRAFFIC OFFICERS	948.00 HOUR
743008	REFLECTOR PANELS	18.00 EACH
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	139.00 EA-DY
743051	** FLAGGER, KENT COUNTY, STATE	4,760.00 HOUR
743063	** FLAGGER, KENT COUNTY, STATE, OVERTIME	767.00 HOUR
743504	WARNING SIGNS	6.00 EACH
743525	TEMPORARY WARNING SIGNS	400.00 EA-DY
744520	CONDUIT JUNCTION WELL, TYPE 1, 20" X 20" PRECAST CONCRETE	1.00 EACH
745527	SUPPLY OF 2 1/2" GALVANIZED STEEL CONDUIT	130.00 L.F.
745542	INSTALLATION OF CONDUIT UNDER EXISTING PAVEMENT-DIRECTIONAL BORE	63.00 L.F.
745543	INSTALLATION OF CONDUIT UNDER EXISTING PAVEMENT-OPEN CUT	50.00 L.F.
745544	INSTALLATION OF CONDUIT IN UNPAVED TRENCH	17.00 L.F.
746776	LOOP DETECTOR SPLICE	48.00 EACH

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT: T201106205

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CENTRAL PAVEMENT & REHABILITATION, SOUTH I-V, 2011
MAINTENANCE

CONTRACT QUANTITIES SUMMARY SHEET

746850	POLE BASE, TYPE 4	2.00 EACH
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	5,293.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	220,750.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	6,217.00 S.F.
748027	PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 12"	570.00 L.F.
748502	RAISED/RECESSED PAVEMENT MARKER	880.00 EACH
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	179,450.00 L.F.
748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	42.00 EACH
750000	ADJUST WATER VALVE BOXES	8.00 EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	175.00 S.Y.
760502	PAVEMENT MILLING, TAPER CUT	8,506.00 SY-IN
760507	PROFILE MILLING, HOT-MIX	162,860.00 SY-IN
760511	BIKE-FRIENDLY RUMBLE STRIPS, HOT-MIX	140,600.00 L.F.
761001	BUTT JOINTS, HOT MIX	5,428.00 S.Y.
762001	SAW CUTTING, HOT MIX	7,210.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	620.00 L.F.
762003	SAW CUTTING, CONCRETE, VARIABLE DEPTH	500.00 L.F.
763000	INITIAL EXPENSE	LUMP SUM
763501	CONSTRUCTION ENGINEERING	1.00 L.S.
763508	PROJECT CONTROL SYSTEM DEVELOPMENT PLAN	1.00 L.S.
763509	CPM SCHEDULE UPDATES AND/OR REVISED UPDATES	2.00 EA-MO
763621	CONSTRUCTION ENGINEERING, RE-SURFACING	1.00 L.S.
763643	MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP SUM

** DENOTES FIXED PRICE ITEM