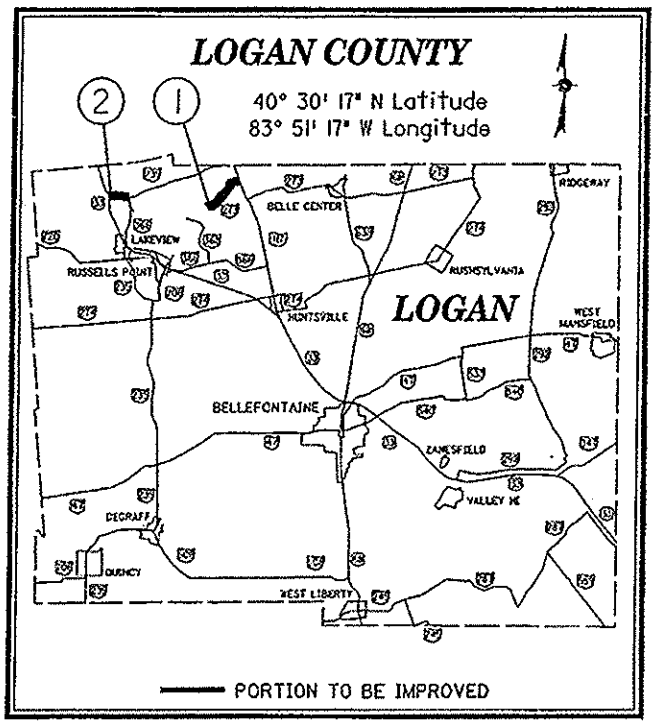
State Job No. 478245
Project No.

PID No.	77426
FED. No.	E071(101)

PLAN PREPARED BY: District D7

STATE OF OHIO
OHIO DEPARTMENT OF TRANSPORTATION
LOG-273/366-0.00/0.00

LOCATION MAP



MAINTENANCE
TWO-LANE RESURFACING

Project Earth Disturbed Area = 1.47 Acres :
Estimated Contractor Earth Disturbed Area = N/A
Notice of Intent Earth Disturbed Area = N/A

2008 SPECIFICATIONS

The Standard 2008 Specifications of the State of Ohio Department of Transportation, including changes and supplemental specifications listed in the plans and the proposal shall govern these improvements.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth in the plans and estimates.

6-30-08 — Date Approved
Rex Dickey, P.E., P.S. / PRN — District Deputy Director

8-6-08 — Date Approved
James G Beasley / SL — Director, Department of Transportation

PROJECT DESCRIPTION: The work proposed by this project consists of berm stabilization and resurfacing the existing State Route 273 and State Route 366 roadways with Item 448, Asphalt Concrete, as set forth in these plans.

(1) LOG-273-0.00 (Long Island to State Route 117)

(2) LOG-366-0.00 (U. S. Route 33 to State Route 235)

1 - Title Sheet
2 - Pavement Data
3 - Berm Stabilization
4 - Approach Typicals
5 & 6 - General Notes
7 & 8 - Bridge Sheets
9 - Raised Pavement Markers
10 - General Summary

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

ENGINEER'S SEAL

STATE OF OHIO
PHILIP N. STORMER
No. 55019
REGISTERED PROFESSIONAL ENGINEER

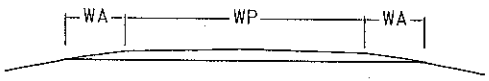
Signed Philip N Stormer
Date 6-30-2008

STANDARD DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	10-19-07	MT-99.20M	1-30-95	TC-52.10	1-19-07		
				TC-52.20	1-19-07	800-2008	7-18-08
DM-4.3	7-19-02	MT-105.10	10-18-02				
DM-4.4	7-19-02	MT-105.11	10-18-02	TC-65.10	1-21-05	832	4-25-06
				TC-65.11	1-21-05		
MT-97.10	9-5-06	TC-41.20	1-19-01				
MT-97.12	9-5-06	TC-42.20	7-16-04	TC-71.10	1-19-07		

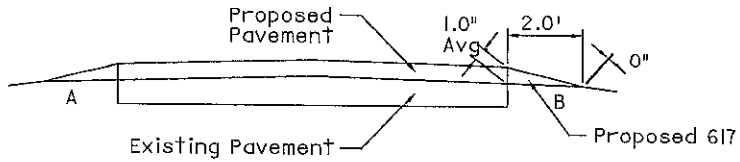
LOG - SR-273/366-0.00/0.00
080588 PID - 77426
Dist 7 10/22/2008

PLAN NO.

TYPICAL 1



Item 407, Tack Coat, calculated at 0.10 gallon per square yard
Apply 0.075 gallon per square yard for Intermediate Course
Apply 0.025 gallon per square yard for Surface Course



TYPICAL - COMPACTED AGGREGATE

PAVEMENT DATA

ROUTE	LOG POINT TO LOG POINT SLM	LENGTH MILE	LENGTH FEET	PAVEMENT WIDTH FEET	TYPICAL	PAVEMENT AREA SQ. YD.	PROPOSED PAVEMENT 407 TACK COAT @0.10 gal./sq. yard GALLONS	ASPHALT CONCRETE 448 THICK INCH AVG.	448 CUBIC YARD	448 THICK INCH	448 CUBIC YARD	202 WEARING COURSE REMOVED (BUTT JT.) SQ. YD.	254 PAVEMENT PLANING AVERAGE 1.0" SQ. YD.	617 APP COMPACTED AGGREGATE THICK INCH AVG.	617 APP COMPACTED AGGREGATE CUBIC YARD
SR 273	0.00 - 2.02	2.02	10666	20.0	1	23702	2370	1.0	658	1.5	988	389			
Intersections (6)						1889	189	1.0	53	1.5	79	120			
Drives & Mailboxes (6)						126	13	1.0	4	1.5	5	176			
Total State Route 273		2.02	10666			25717	2572		715		1072	685			
SR 366	0.00 - 0.91	0.91	4805	24.5	1	13080	1308			1.5	545		13080	1.0	59
Intersections (5)						1444	144			1.5	60		1444		
Drives & Mailboxes (16)						452	45			1.5	19		45		
Total State Route 366		0.91	4805			14976	1497				624		14976		59

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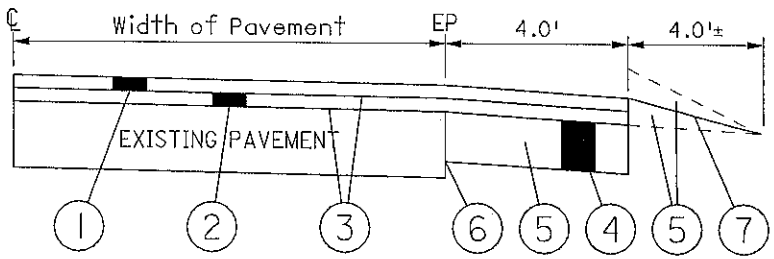
LOGAN COUNTY
LOG-273/366-0.00/0.00

PAVEMENT DATA

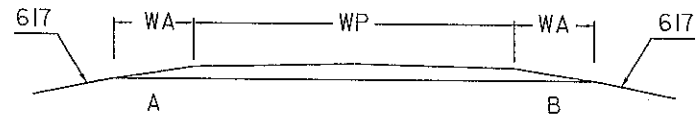
BERM STABILIZATION



1. Item 448 - Asphalt Concrete Surface Course
2. Item 448 - Asphalt Concrete Intermediate Course
3. Item 407 - Tack Coat
4. Item 301 - Asphalt Concrete Base, PG 64-22
5. Item 209 - Linear Grading
6. Asphalt Material
7. Item 659 - Seeding and Mulching

PLAN NO.

TYPICAL 1



NOTES:

One Station = 100.0 Feet

** Stationing of linear grading shall be measured along each edge of pavement. No extra payment will be made for excavating adjacent approaches.

A quantity of Item 617, Compacted Aggregate has been included in the plans, to be used as directed, for the purpose of backing up drives.

PAVED SHOULDER DATA

ROUTE	LOG POINT TO LOG POINT SLM	LENGTH MILE	LENGTH FEET	TYPICAL	PROPOSED WIDTH FEET A	PROPOSED WIDTH FEET B	SHOULDER AREA SQUARE YARDS	209 LINEAR GRADING DEPTH INCH	209 LINEAR GRADING ** STA.	407 TACK COAT TACK COAT @0.10 gal./sq. yard GALLONS	ASPHALT CONCRETE 301 A. C. Base THICK INCH	301 A. C. Base CUBIC YARD	448 Intermed. THICK INCH AVG.	448 Intermed. CUBIC YARD	448 Surface THICK INCH	448 Surface CUBIC YARD	617 COMPACTED AGGREGATE THICK INCH AVG.	617 COMPACTED AGGREGATE CUBIC YARD
SR 273	0.03 - 0.05	0.02	106	1	3.0		35	6.0	1	4	6.0	6	1.0	1	1.5	2		
	0.05 - 0.64	0.59	3115	1	3.0	3.0	2077	6.0	62	208	6.0	346	1.0	58	1.5	87		
	0.64 - 2.02	1.38	7286	1	2.0	2.0	3238	6.0	146	324	6.0	540	1.0	90	1.5	135		
Drives & Mailboxes (31)							1426	6.0	**	143	6.0	238	1.0	40	1.5	54		100
Total State Route 273		1.99	10507				6776		209	679		1130		189		278		100

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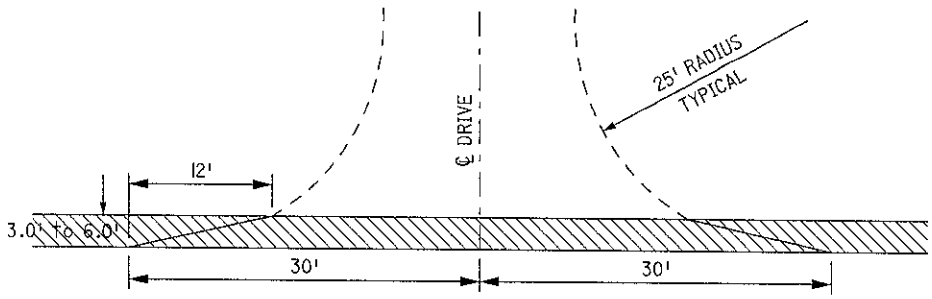
LOGAN COUNTY
LOG-273/366-0.00/0.00

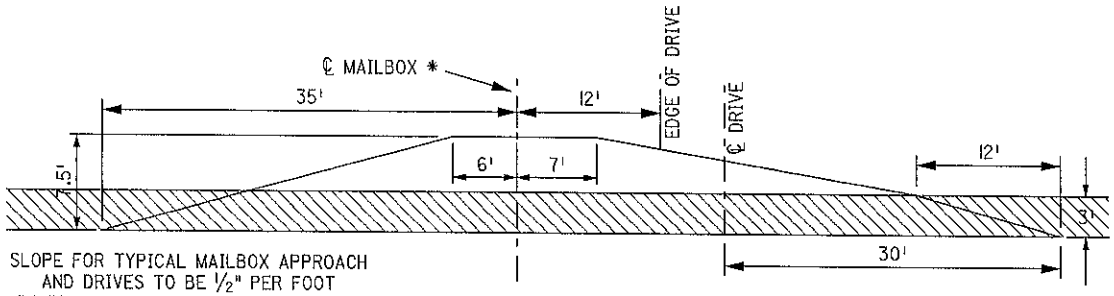
BERM STABILIZATION

3/10

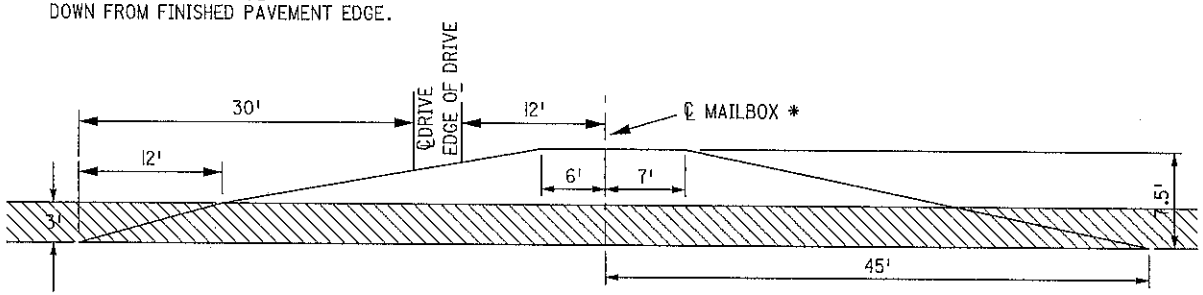
PLAN NO.



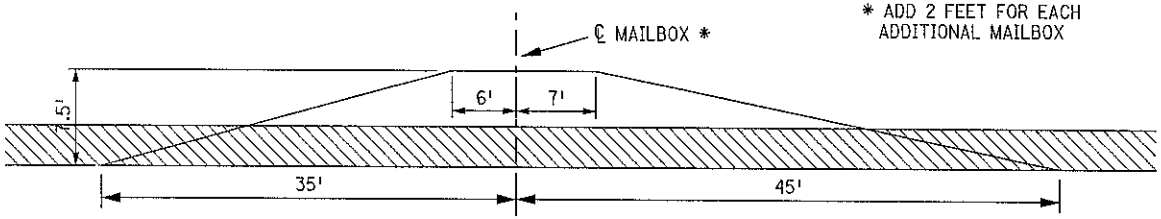
TYPICAL DRIVEWAY



SLOPE FOR TYPICAL MAILBOX APPROACH AND DRIVES TO BE ½" PER FOOT DOWN FROM FINISHED PAVEMENT EDGE.

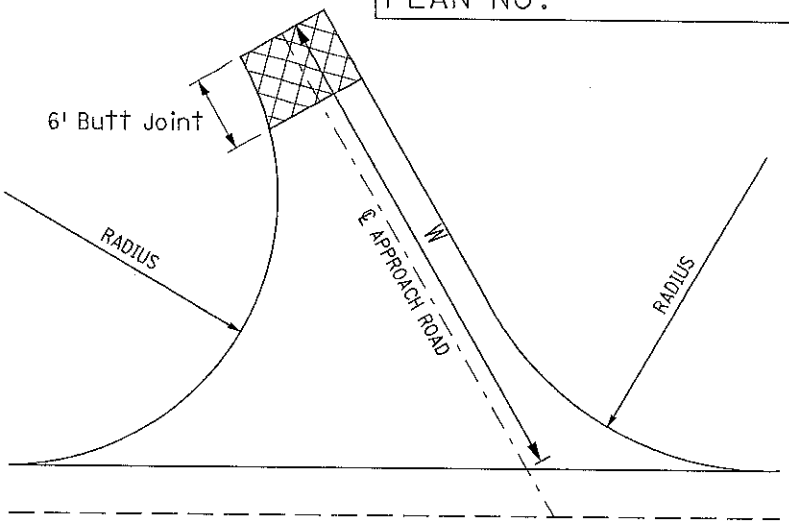


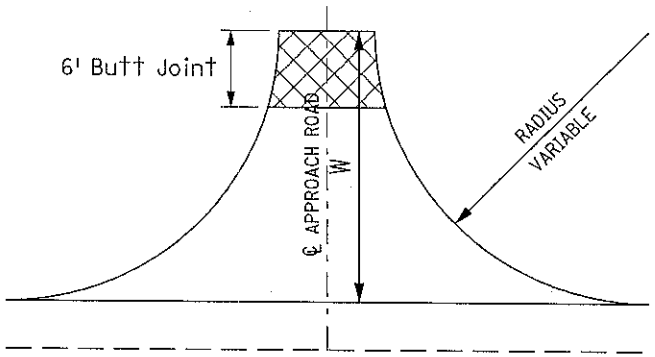
TYPICAL COMBINATION DRIVE & MAILBOX APPROACHES



TYPICAL MAILBOX APPROACH

* ADD 2 FEET FOR EACH ADDITIONAL MAILBOX





TYPICAL APPROACH ROAD PAVING

W = To Back of Radius or As Directed By the Engineer

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT SEVEN MAINTENANCE

TYPICAL APPROACHES FOR ROADS, DRIVES AND MAILBOXES

APPROVED

CALCULATED BY	LOGAN COUNTY	APPROACH TYPICALS	4
CHECKED BY	LOG-273/366-0.00/0.00		10

GENERAL NOTES

PLAN NO.

ITEM 209, LINEAR GRADING

This work shall consist of preparing a subgrade for the shoulder paving by excavating the existing shoulder material to the depths shown on the plan, or as directed by the Engineer, to remove any unstable material and by shaping and compacting the subgrade. The unsound or broken edge of asphalt concrete pavement shall first be trimmed to a line established by the Engineer. The existing shoulder shall then be excavated and the subgrade shaped and compacted. Compaction shall be carried out to the satisfaction of the Engineer by means of a trench roller, 401.13. Areas graded in excess of depths specified or directed by the Engineer shall be backfilled to the desired grade using 617 Compacted Aggregate at the Contractor's expense. Excavated material shall be disposed of as indicated in the plan.

Excavation for widening or shoulder work shall be only on one side of the pavement at a time. The length of the shoulder trench which is open at any one time shall be held to a minimum and at all times be subject to the approval of the Engineer. There are two (2) concrete drives that shall be saw cut and removed to accommodate the berm stabilization.

The open trench shall be adequately maintained and protected with work zone guide markers, lights, drums, barricades or flaggers at all times. Placement of proposed materials to final grade shall follow as close as possible behind the excavation operations.

The shoulder paving on this project shall be completed even with the existing pavement by the end of the work day, except for a short length of work section (25.0 feet or less at the end of the trench). No trench shall be left open overnight. In case work must be suspended because of inclement weather or other reasons, the trench for the uncompleted shoulder paving shall be backfilled as directed.

Excavated material shall be used to back up the finished pavement. Where there is an excess of material at any location, it shall be moved, as directed, to other areas where material is needed. The balance is to be disposed of as directed by the Engineer. All graded areas shall be finished as set forth under Item 659 - Seeding and Mulching. It is estimated that 40% of the area has residential yards abutting the pavement.

There has been a quantity of Item 659 - Seeding and Mulching carried to the General Summary for the purpose of seeding and mulching the areas of linear grading and all areas where Item 209 - Borrow has been placed.

Item 659 - Seeding and Mulching = 7115.0 square yards
Item 659 - Commercial Fertilizer = 0.64 Tons

ITEM 209 - BORROW

There has been a quantity of Item 209 - Borrow carried to the General Summary for the purpose of backing up the new pavement. All borrow shall be from processed material free of stones, bricks and debris.

Payment is full compensation for furnishing all labor, equipment, materials and incidentals necessary to complete this work. The estimated width is four feet (4.0') or as directed by the Engineer.

Item 209 - Borrow = 300.0 cubic yards

ITEM 253 - PAVEMENT REPAIR, AS PER PLAN

Pavement Repair shall be in accordance with Item 253 - Pavement Repair, with the following additions.

The pavement repair areas shall be roughly rectangular in shape and sawed or milled to a neat line. The depth of removal, as directed by the Engineer, shall be sufficent to remove all deteriorated pavement. The replacement material shall be Item 301 - Asphalt Concrete Base, PG 64-22.

The estimated pavement repair areas shall be six feet (6.0') in width and six inches (6.0") in depth and shall be finished to accomodate the proposed overlay.

Item 253 - Pavement Repair, As Per Plan = 850.0 square yards

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (SR 366)

An estimated quantity of Item 254 - Pavement Planing, Asphalt Concrete has been carried to the General Summary and included in the plans to be used as directed by the Engineer.

All planed cuttings shall become the property of the Contractor and shall be removed from the limits of the project.

The width of pavement planing shall be twenty-four and one-half feet (24.5') including all drives and intersections.

The Contractor is to arrange his work schedule and begin placement of Item 448 - Asphalt Concrete Surface Course within forty-eight (48) hours after Item 254 - Pavement Planing, Asphalt Concrete is completed on a daily operation.

Item 254 - Pavement Planing, Asphalt Concrete,
outside of curbed areas = 14,976.0 square yards

GENERAL NOTES

PLAN NO.

ITEM 301, ASPHALT CONCRETE BASE

The Contractor shall furnish all labor, material and equipment to haul, place and compact Item 301 - Asphalt Concrete Base to add stabilized berms right and left. Uniform spreading and compacting shall be as described herein and shall be in accordance with the specifications and as directed by the Engineer.

Prior to placing an asphalt concrete mixture for shoulder paving, the edge of the existing pavement, for the full depth of the trench, shall be coated with asphalt material in accordance with 401.14.

The Contractor shall provide a shield to prevent the spraying or drifting of the asphalt material onto the edge of the pavement or edgelines. The attention of the Contractor is directed to 107.10 of the specifications.

UNDERGROUND UTILITIES

The locations of the underground utilities listed on the plans are as obtained from the owners of the utility as required by Section 153.64 ORC. Ohio Utility Protection Service at 1-800-362-2764.

The underground utility companies with buried services within the project limits on State Route 273 are as follows:

Sprint/United Telephone Company
125 North Main Street
Sidney, Ohio 45365
Phone: (937) 498-5204

Indian Lake Sanitary
8100 State Route 708
Russells Point, Ohio 43348
Phone: (937) 843-3328

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

The Metric Standard Drawings referenced in this plan shall be converted to English units using the SI (Metric) to English conversion factors provided in Section 109.02 of the 2008 Construction and Material Specifications. Conversions shall be appropriately precise and shall reflect standard industry English values where suitable.

TRAFFIC

Traffic shall be maintained at all times. The length of restricted traffic zones shall be kept to a minimum consistent with the specification requirements for protection of completed courses.

ALIGNMENT AND PROFILE

The work proposed by this project consists of pavement planing and resurfacing of the existing pavement. The alignment of the existing pavement will not be changed and the profile of the proposed surface will be similar to that of the existing pavement.

INTERMEDIATE COURSE

This material shall be placed in a separate operation where and as directed by the Engineer.

NOTIFICATION

The Contractor shall notify the Ohio Department of Transportation District Seven Construction Engineer two (2) weeks prior to beginning any work. Phone: (937) 497-6848.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN IN THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATION AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE STRUCTURE AND PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO THE CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS, WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD. PLANS OF THE EXISTING STRUCTURES MAY BE EXAMINED AT THE DISTRICT SEVEN OFFICE IN SIDNEY, OHIO OR THE OFFICE OF STRUCTURAL ENGINEERING AT COLUMBUS, OHIO.

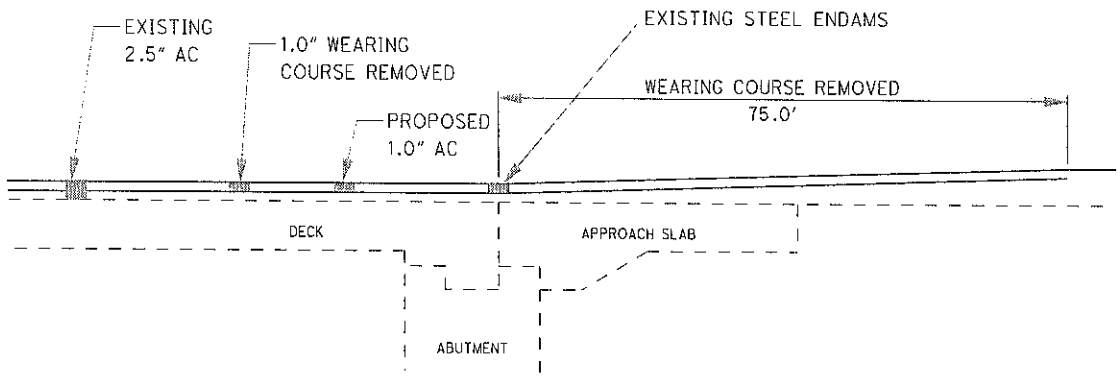
PROPOSED WORK - LOG-273-0002

GRIND BACK 75.0' FROM EACH END OF THE BRIDGE FOR A SMOOTH TRANSITION. REMOVE 1.0" ASPHALT CONCRETE WEARING COURSE. OVERLAY THE BRIDGE DECK WITH 1.0" OF ASPHALT CONCRETE.

PROPOSED WORK - LOG-336-0038

OVERLAY AS REGULAR ROADWAY.

LOG-273-0002



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LOGAN COUNTY
LOG-273/366-0.00/0.00

BRIDGE - PROPOSED WORK

PART	LOG-273 0002	LOG-336 0038					ITEM	ITEM EXTENSION	GRAND TOTAL	UNIT	DESCRIPTION
	442						202	23500	442	SQ. YD.	WEARING COURSE REMOVED
	-	-								EACH	Wedges
	1.0"	1.5"									Proposed Asphalt Concrete Thickness
	1.0"	-									Wearing Course Removed Thickness

BRIDGE NO.	LENGTH (Bridge Limits) FT.	WIDTH FT.	BRIDGE DECK AREA S.Y.	STRUCTURE FILE NUMBER	COMMENTS (Wearing Course)
LOG-273-0002	27.18	36.00	109	0002-SLM-72	2.5" Existing Asphalt Concrete
LOG-366-0038	CULVERT			4603435	Existing Asphalt Concrete

Quantities to be carried to the General Summary

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LOGAN COUNTY
LOG-273/366-0.00/0.00

BRIDGE SUMMARY

RAISED PAVEMENT MARKERS

PLAN NO.

LOCATION			DETAIL	RPM	PRISMATIC RETRO-REFLECTOR TYPES					REMARKS
		SLM SECTION			ONE-WAY		TWO-WAY			
ROUTE	FROM	TO			WHITE	YELLOW	WHITE/ WHITE	YELLOW/ YELLOW	WHITE/ RED	
SR 273	0.00	1.87	15	247				247		
	1.87	2.02	6	27	16			11		State Route 117
	TOTAL SR 273			274	16			258		
SR 366	0.00	0.15	6	27	16			11		U. S. Route 33
	0.15	0.76	GAP	40				40		
	0.76	0.91	6	36	22			14		State Route 235
	TOTAL SR 366			103	38			65		

PAVEMENT MARKING NOTES

Lane Width - State Route 273 = 10.0 feet
Lane Width - State Route 366 = 11.0 feet

Solid Line Equivalent - SR 273 = 3.49 miles
Solid Line Equivalent - SR 366 = 1.56 miles

The Edge Line shall be continued around all radii to match the Edge Line of the intersecting route. If the intersecting route has a Center Line, the Center Line shall be re-striped over the area of the resurfacing.

1	Multilane Divided	5	Multilane Divided / Expressway	10	4 Lane Divided to 2 Lane Transition	15	Horizontal Curve
1	Typical Spacing	6	Stop Approach	11	4 Lane Undivided to 2 Lane Transition	16	Horizontal Curve Alt.
2	Tapered Acceleration Lane	7	1 Lane Approach w/Left Turn Lane	12	Two Lane Narrow Bridge	17	Stop Approach Alt.
3	Deceleration Lane	8	Thru Approach	13	Two Way Left Turn Lane	GAP	Centerline at 80 feet Typical
4	Parallel Acceleration Lane	9	2 Lane Approach w/Left Turn Lane	14	One Lane Bridge		

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LOGAN COUNTY
LOG-273/366-0.00/0.00

RAISED PAVEMENT MARKERS

GENERAL SUMMARY

PLAN NO.

SR 273	SR 366	ITEM	ITEM EXTENSION	GRAND TOTAL	UNIT	DESCRIPTION
1127		202	23500	1127	SQ. YD.	Wearing Course Removed
209		209	60200	209	STATION	Linear Grading
300		209	70000	300	CU. YD.	Borrow
850		253	01001	850	SQ. YD.	Pavement Repair, As Per Plan
	14976	254	01000	14976	SQ. YD.	Pavement Planing, Asphalt Concrete
1130		301	46000	1130	CU. YD.	Asphalt Concrete Base, PG 64-22
3251	1497	407	10000	4748	GALLON	Tack Coat
904		448	46020	904	CU. YD.	Asphalt Concrete Intermediate Course, Type I, PG 64-22
1350	624	448	46904	1974	CU. YD.	Asphalt Concrete Surface Course, Type I, PG 70-22M
18	6	614	12460	24	EACH	Work Zone Marking Sign
4.04	1.82	614	21400	5.86	MILE	Work Zone Center Line, Class II
100	59	617	10100	159	CU. YD.	Compacted Aggregate
274	103	621	00100	377	EACH	RPM
305		621	54000	305	EACH	Raised Pavement Marker Removed
4.04	1.82	642	00090	5.86	MILE	Edge Line
2.02	0.91	642	00290	2.93	MILE	Center Line
24	62	644	00500	86	FEET	Stop Line
7115		659	10000	7115	SQ. YD.	Seeding and Mulching
0.64		659	20000	0.64	TON	Commercial Fertilizer
25		SPECIAL	690 50350	25	EACH	Mailbox Removed and Reset
1000		832	30000	1000	EACH	Erosion Control
LUMP	LUMP	614	11000	LUMP		Maintaining Traffic
LUMP	LUMP	624	10000	LUMP		Mobilization

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LOGAN COUNTY
LOG-273/366-0.00/0.00

GENERAL SUMMARY