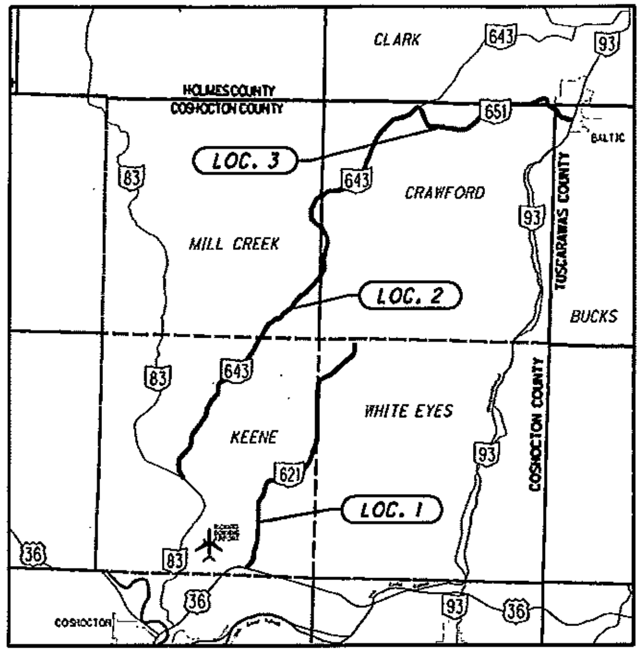
COS - SR 621/SR 643/SR 651-00.00
180222 PID - 92987
Dist 5 4/5/2018
Conformed Set
Contract Proposal Available @ www.contracts.dot.state.oh.us/home

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

COS-621/643/651-0.00

BUCKS, CLARK, CRAWFORD, KEENE, MILL CREEK, AND WHITE EYES TOWNSHIPS

COSHOCTON, HOLMES, AND TUSCARAWAS COUNTIES



LOCATION MAP

LATITUDE: 40° 19' 50" LONGITUDE: 81° 51' 48"

PORTION TO BE IMPROVED

DESIGN DESIGNATION	S.R. 621	S.R. 643	S.R. 651
FUNCTIONAL CLASSIFICATION	RMIC	RMIC	RMAC
OPENING YEAR ADT (2018)	1,200	1,000	540
DESIGN YEAR ADT (2030)	1,400	1,200	600
DESIGN HOURLY VOLUME (2030)	130	120	50
DIRECTIONAL DISTRIBUTION	57%	52%	52%
TRUCKS (24 HOUR B&C)	1%	13%	16%
DESIGN SPEED	55 MPH	55 MPH	55 MPH
LEGAL SPEED	55 MPH	55 MPH	55 MPH

RMAC = RURAL MAJOR COLLECTOR
RMIC = RURAL MINOR COLLECTOR

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig 1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE 1-800-925-0988

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5 PLANNING & ENGINEERING

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PROJECT DESCRIPTION

ASPHALT CONCRETE RESURFACING AND RELATED WORK ON S.R. 621, S.R. 643, S.R. 651 IN COSHOCTON COUNTY AND S.R. 651 IN HOLMES AND TUSCARAWAS COUNTIES ALONG WITH INTERSECTION MODIFICATION AT S.R. 83/ S.R. 643 AND DRAINAGE IMPROVEMENTS AT THE S.R. 643/ S.R. 651 INTERSECTION.

PROJECT EARTH DISTURBED AREA = 0.13 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 0.13 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA = 0.26 ACRES

LOCATION	PLAN SPLIT	COUNTY	ROUTE	BEGIN SLM	END SLM	LENGTH MILES	CITY/ VILLAGE
1	2	COS	621	0.00	5.98	5.98	
2	2	COS	643	0.00	10.59	10.59	
3A	1	COS	651	0.00	2.84	2.84	
3B	1	HOL	651	0.00	0.50	0.50	
3C	1	COS	651	2.84	3.04	0.20	
3D	1	TUS	651	0.00	0.45	0.45	BALTIC

2016 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

ENGINEER'S SEAL: STATE OF OHIO — JASON SCOTT LUTZ E-77397 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: [signature]
DATE: 1/8/18

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	TC-65.10	1/17/14			800	1/19/18
BP-4.1	7/19/13	TC-65.11	7/21/17			832	1/17/14
BP-5.1	7/19/13	TC-71.10	1/20/17				
RM-1.1	7/18/14						
CB-1.1	1/15/16						
CB-2.3	1/15/16						
MT-97.10	7/18/14					SPECIAL PROVISIONS	
MT-97.12	1/20/17						
MT-99.20	7/21/17						
MT-101.90	7/21/17						
MT-105.10	7/19/13						

APPROVED [signature]
DATE 1/8/18 DISTRICT DEPUTY DIRECTOR

APPROVED [signature]
DATE 2-5-18 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E130(882)
PID NO. 92987
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT OHIO CENTRAL RR
COS-621/643/651 0.00

GENERAL NOTES

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS FOR THE **S.R. 643/S.R. 83 INTERSECTION** AND **S.R. 651 IN NEW BEDFORD** TOGETHER WITH THEIR RESPECTIVE OWNERS:

CABLE:
Time Warner Cable TV
4547 North Leedom Road
Chandlersville, Ohio 43727
Attn: Brad St. Clair
740.303.3100

TELEPHONE:
Frontier Telephone Co.
9444 Campbell Street
Cambridge, Ohio 43725
Attn: Ashley Moran
740.432.6961

ELECTRIC:
American Electric Power Co.
(Distribution)
850 Tech Center Drive
Gahanna, Ohio 43230
Attn: Paul Paxton
614.883.6831

ELECTRIC:
The Frontier Power Company
770 South Second Street
P.O. Box 280
Coshocton, Ohio 43812
Attn: Thomas Barcroft
740.622.6755

CABLE:
AT&T Ohio
160 North Sixth Street
Zanesville, Ohio 43701
Attn: Barrett Tamasovich
740.454.3552

National Gas and Oil Coop.
120 O'Neil Drive
Hebron, Ohio 43025
Attn: Greg Wilson
740.348.1254

THERE ARE NO KNOWN UNDERGROUND UTILITIES SHOWN ON THIS PLAN. HOWEVER, AT LEAST 48 HOURS BEFORE DIGGING, THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE AT THE NUMBER LISTED ON THE TITLE SHEET TO VERIFY. NON-MEMBER UTILITY COMPANIES MUST BE CALLED DIRECTLY. THE NAMES AND ADDRESSES OF THE UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS ARE LISTED ABOVE. **SEE SHEETS 26-27 FOR LOCATIONS.**

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED **"AS DIRECTED BY THE ENGINEER"** UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

PAVEMENT MARKINGS

AUXILIARY MARKINGS (STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC.) SHOWN IN THE PLANS ARE TAKEN FROM EXISTING LOCATIONS. THE CONTRACTOR SHALL DOCUMENT ALL AUXILIARY MARKING LOCATIONS THAT WILL BE REMOVED/OBLITERATED DURING THIS PROJECT AND PLACE NEW AUXILIARY MARKINGS AT THE LOCATION OF THE EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

CENTER LINE MARKINGS SHALL BE PLACED PER THE **PASSING/ NO PASSING LOGS** FOUND ON THE WEBSITE BELOW. ANY DISCREPANCIES BETWEEN THE EXISTING MARKINGS AND THE PASSING/NO PASSING LOGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PLACEMENT.

HTTP://WWW.DOT.STATE.OH.US/DISTRICTS/D05/PRODUCTION/PAGES/CENTERLINEPASSINGANDNOPASSINGZONELOGS.ASPX,

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER A MINIMUM OF 24 HOURS PRIOR TO APPLYING PAVEMENT MARKING MATERIALS ON ANY ROUTES SO THAT ODOT PERSONNEL MAY BE PRESENT DURING PAVEMENT MARKING OPERATIONS. AS PER CMS 614.04, THE CONTRACTOR SHALL PROVIDE ODOT PERSONNEL A COPY OF THE DLS SHORT REPORT AT THE END OF EVERY WORK DAY OR AS REQUESTED THROUGHOUT THE DAY. THE CONTRACTOR SHALL NOT RECEIVE PAYMENT FOR ANY WORK DONE WITHOUT NOTIFICATION AS STATED ABOVE OR IF DSL SHORT REPORTS ARE NOT PROVIDED DAILY.

ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

AFTER PLACEMENT OF THE INTERMEDIATE COURSE, WHILE PERFORMING LINEAR GRADING, THE CONTRACTOR SHALL EXCAVATE AN AREA **10 INCHES WIDE** OUTSIDE THE EXISTING PAVED SHOULDER TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE.

DURING LINEAR GRADING, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE FROM THE ROADWAY SURFACE TO THE SHOULDER BREAK, THE EXISTING SHOULDERS SHALL BE GRADED AND SHAPED USING A GRADER OF ADEQUATE SIZE TO PERFORM THE WORK TO THE SATISFACTION OF THE ENGINEER.

ALL EXCESS MATERIAL REMAINING AFTER LINEAR GRADING IS COMPLETED THAT HAS NOT BEEN DISPOSED OF ON-SITE, SHALL BE REMOVED AND DISPOSED OFF-SITE BY THE CONTRACTOR PRIOR TO PLACEMENT OF THE SURFACE COURSE AND SAFETY EDGE.

GRADED SHOULDERS OF 12 INCHES OR LESS WHERE THE SAFETY EDGE CAN BE OMITTED, THE PREPARING SUBGRADE FOR SHOULDER PAVING CAN ALSO BE OMITTED. THE CONTRACTOR WILL ONLY BE PAID FOR AREAS WHERE THE ABOVE WORK IS BEING PREFORMED.

ALL EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED TO PERFORM LINEAR GRADING AND EXCAVATION OF SHOULDER SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN.

ITEM 251, PARTIAL DEPTH PAVEMENT REPAIR (441)

AN ESTIMATED QUANTITY FOR PAVEMENT REPAIR HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER. THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF PAVEMENT WHICH HAVE SEVERE CRACKING AT THE CONSTRUCTION JOINT ON **S.R. 651**. DEPTH OF EXCAVATION SHALL BE APPROXIMATELY **4". THE MINIMUM WIDTH OF THE REPAIRS SHALL BE 2' AND MINIMUM LENGTH OF REPAIR SHALL BE 50'.**

AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH 407 TACK COAT. REPLACEMENT MATERIAL WILL BE **4"** OF ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (PLACED AND COMPACTED AS DIRECTED).

REPAIR QUANTITIES SHALL BE USED ON MAINLINE PAVEMENT ONLY. ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR TEM 251, PARTIAL DEPTH PAVEMENT REPAIR.

ITEM 251, PARTIAL DEPTH PAVEMENT REPAIR (441)
LOCATION 3A: 50 CY
LOCATION 3B: 10 CY
LOCATION 3C: 5 CY

ITEM 253, PAVEMENT REPAIR (A)

ALL REPAIRS SHALL TAKE PLACE PRIOR TO THE PLANING/ PAVING OPERATIONS. THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF PAVEMENT WHICH HAVE COMPLETELY FAILED (PUMPING OF SUB-BASE MATERIAL) AND NOT TO CORRECT SURFACE IRREGULARITIES. DEPTH OF EXCAVATION SHALL BE **7"**. THE MINIMUM WIDTH SHALL BE **4'**. AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH ITEM 407 TACK COAT. REPLACEMENT MATERIAL WILL BE **7"** OF ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (PLACED AND COMPACTED IN TWO LIFTS).

REPAIR QUANTITIES SHALL BE USED ON THE MAINLINE PAVEMENT AND/OR ON PAVED SHOULDERS, AS DIRECTED BY THE ENGINEER. ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 253, PAVEMENT REPAIR (A).

ITEM 253, PAVEMENT REPAIR (A)
LOCATION 1: 20 CY
LOCATION 2: 850 CY
LOCATION 3D: 10 CY

ITEM 253, PAVEMENT REPAIR (B)

ALL REPAIRS SHALL TAKE PLACE PRIOR TO THE PLANING/PAVING OPERATIONS. THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF **PAVED SHOULDERS** WHICH HAVE COMPLETELY FAILED (PUMPING OF SUB-BASE MATERIAL) AND NOT TO CORRECT SURFACE IRREGULARITIES. DEPTH OF EXCAVATION SHALL BE **8"**. THE MINIMUM WIDTH SHALL BE **6'**. AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH ITEM 407 TACK COAT. REPLACEMENT MATERIAL WILL BE **7"** OF ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (PLACED AND COMPACTED IN TWO LIFTS).

REPAIR QUANTITIES SHALL BE USED ONLY ON S.R. 651 PAVED SHOULDERS, AS DIRECTED BY THE ENGINEER.

ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 253, PAVEMENT REPAIR (B).

ITEM 253, PAVEMENT REPAIR (B)
LOCATION 3A: 450 CY
LOCATION 3B: 100 CY
LOCATION 3C: 50 CY

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE

DEPTH OF PLANING ON **S.R. 621** SHALL BE **1.0"**, ON **S.R. 643** SHALL BE **1.75"** AND **2.5"** AND ON **S.R. 651** SHALL BE **1.5", 1.75"** AND **2.5"**, AS SHOWN ON THE **PAVEMENT DATA SHEE**T. PLANING SHALL BE FULL WIDTH OF PAVEMENT, INCLUDING PAVED SHOULDERS.

THE ROADWAY SHALL BE PLANED SUCH THAT POSITIVE DRAINAGE IS CREATED FROM THE CENTER LINE TO THE EDGE OF PAVEMENT IN TANGENT SECTIONS AND SHALL FOLLOW EXISTING SUPERELEVATIONS WHERE APPLICABLE. ALL REQUIREMENTS OF ITEM 254 SHALL APPLY.

ITEM 407, NON-TRACKING TACK COAT

THE RATE OF APPLICATION OF THE ITEM 407, NON-TRACKING TACK COAT SHALL BE PER **CMS TABLE 407.06-1** AND SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF **0.08 GAL/SY** FOR TACK COAT UNDER THE INTERMEDIATE AND **0.05 GAL/SY** UNDER THE SURFACE COURSE, (FOR ESTIMATING PURPOSES ONLY).

ITEM 408, PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER CMS 702) AT A RATE OF **0.40 GAL/SY** TO THE COMPLETED AGGREGATE SHOULDER. TO REDUCE AGGREGATE LOSS, **THE PRIME COAT SHALL BE APPLIED WITHIN SEVEN (7) DAYS AFTER PLACEMENT OF THE AGGREGATE SHOULDER OR LIQUATED DAMAGES PER CMS 108.07 WILL BE ASSESSED.** THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448), AS PER PLAN (PG70-22M)

ALL THE REQUIREMENTS OF **CMS 441** SHALL APPLY EXCEPT A **PG 70-22M** BINDER SHALL BE USED FOR THE TYPE 1 INTERMEDIATE COURSE. PAYMENT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448), AS PER PLAN (PG70-22M).

ITEM 516, 2" DEEP JOINT SEALER, AS PER PLAN

THE CONTRACTOR SHALL PLACE A **1" X 2" DEEP** BEAD OF JOINT SEALER (AS PER 705.04) AT THE LOCATIONS SHOWN IN PLANS. THE CONTRACTOR SHALL SAW CUT A CHANNEL FOR THE JOINT SEALER. THE COST FOR SAW CUTTING THE CHANNEL FOR THE JOINT SEALER SHALL BE INCLUDED FOR PAYMENT WITH ITEM 516, 2" DEEP JOINT SEALER, AS PER PLAN.

ITEM 617, COMPACTED AGGREGATE, AS PER PLAN

ALL AGGREGATE SHALL BE 100% CRUSHED LIMESTONE. ALL QUALITY REQUIREMENTS EXCEPT SHALE SHALL BE WAIVED. OTHER GRADATION REQUIREMENTS SHALL BE AS SPECIFIED EXCEPT THE INDEX SHALL BE WAIVED. IF SO PERMITTED, THE CONTRACTOR MAY USE ASPHALT CONCRETE PAVEMENT (RACP MEETING REQUIREMENTS OF 617.02) IN LIEU OF CRUSHED LIMESTONE.

ALL AREAS SHALL BE LOOSENED AND FREE OF VEGETATION PER 617.04 PRIOR TO PLACEMENT OF COMPACTED AGGREGATE. AGGREGATE SHOULDERS SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE ROADWAY. **AGGREGATE SHOULDERS MAY BE REDUCED TO ONE (1) FOOT WIDE WHERE NECESSARY AND MAY BE OMITTED ON SLOPES STEEPER THAN 4:1 AT THE APPROVAL OF THE ENGINEER.**

SHOULDER PREPARATION SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 617, COMPACTED AGGREGATE, AS PER PLAN.

ITEM 621, RAISED PAVEMENT MARKER REMOVED

RPM REMOVAL SHALL NOT OCCUR SOONER THAN **10 DAYS** PRIOR TO RESURFACING OF THE ROADWAY. ALL RPM'S REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

MAIL BOX TURN OUTS

A QUANTITY OF ASPHALT CONCRETE HAS BEEN PROVIDED IN THE PLAN TO COVER MAIL BOX TURN-OUTS. TURN-OUTS SHALL BE PAVED AS SHOWN IN THE DETAIL IN DRAWING BP-4.1. ANY EXTRA GRADING OF THE SHOULDERS, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE MAIL BOX TURN OUTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

ITEM 202, WEARING COURSE REMOVED
LOCATION 1: 320 SY
LOCATION 2: 670 SY
LOCATION 3D: 60 SY

ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)
LOCATION 1: 9 CY

ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M)
LOCATION 2: 19 CY

ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 70-22M
LOCATION 1: 12 CY
LOCATION 3D: 3 CY

ITEM 443, STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)
LOCATION 2: 28 CY

RESIDENTIAL AND COMMERCIAL DRIVES

AN ESTIMATED QUANTITY OF ITEM 441, ASPHALT CONCRETE, HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER TO PAVE APPROACH AREAS TO EXISTING DRIVEWAYS. PAVING SHALL EXTEND AN AVERAGE OF 4' INTO THE DRIVEWAY (MEASURED FROM THE EDGE OF PAVEMENT OR PAVED SHOULDER IF PRESENT). THE ENGINEER MAY EXTEND PAVING DISTANCE FOR ASPHALT DRIVEWAYS IN ORDER TO PROVIDE A SMOOTH TRANSITION AND/OR ELIMINATE SHORT DISTANCES OF UNDESIRABLE PROFILE. ABRUPT CHANGES IN DRIVEWAY PROFILE ARE NOT PERMITTED.

AN ESTIMATED QUANTITY OF ITEM 202, WEARING COURSE REMOVED HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER TO CREATE BUTT JOINTS FOR ALL EXISTING ASPHALT, CONCRETE, AND GRAVEL DRIVES/APRONS. FIELD DRIVES AND OIL WELL DRIVES SHALL NOT BE PAVED.

IF AN EXISTING APRON CANNOT BE PAVED OVER (FOR EXAMPLE, BROKEN INTO SMALL PIECES) AS DETERMINED BY THE ENGINEER, IT SHALL BE REMOVED BEFORE BEING PAVED BACK 4' INTO THE DRIVEWAY. ALL GRADING, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE DRIVES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

BUTT JOINTS AT THE END OF ALL DRIVEWAYS SHALL BE **1.25" OR 1.50"** IN DEPTH TO ACCOMMODATE THE SURFACE COURSE. NO WORK SHALL BE PERFORMED ON DRIVEWAYS LOCATED IN CURB SECTIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE LOCATION SUB-SUMMARIES FOR THE ABOVE DESCRIBED PURPOSE:

ITEM 202, WEARING COURSE REMOVED
LOCATION 1: 430 SY
LOCATION 2: 910 SY
LOCATION 3A: 330 SY
LOCATION 3B: 40 SY
LOCATION 3C: 50 SY
LOCATION 3D: 70 SY

ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
LOCATION 1: 15 CY
LOCATION 3D: 4 CY

ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
LOCATION 2: 38 CY
LOCATION 3A: 12 CY
LOCATION 3B: 2 CY
LOCATION 3C: 3 CY

SAFETY EDGE PLAN NOTE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CAMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANS TECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETSLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TransTech Systems, Inc.
1594 State Street
Schenectady, NY 12304
1-800-724-6306
www.transtechsys.com

Advant-Edge Paving Equipment, LLC.
P.O. Box 9163
Niskayuna, NY 12309-0163
518-280-6090
www.advantaedgepaving.com

Carlson Safety Edge End Gate
18425 50th Avenue East
Tacoma, WA 98446
253-875-8000

Troxler Electronics Laboratories, Inc.
3008 E. Cornwallis Rd.
Research Triangle Park, NC 27709
1-877-TROXLER
www.troxlerlabs.com

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 mm) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

SEE SAFETY EDGE DETAIL ON **SHEET 6** FOR ADDITIONAL INFORMATION.

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR EXTRA ASPHALT FOR CONSTRUCTION OF THE SAFETY EDGE:

ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 70-22M
LOCATION 1: 85 CY
LOCATION 3D: 5 CY

ITEM 443, STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)
LOCATION 2: 150 CY
LOCATION 3A: 40 CY
LOCATION 3B: 8 CY
LOCATION 3C: 3 CY

CALCULATED JLS CHECKED JSL

GENERAL NOTES

COS-621/643/651-0.00

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ITEM SPECIAL, REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS

THIS ITEM SHALL BE USED TO REINFORCE FOR PREVIOUS LONGITUDINAL WIDENING JOINT FOR THE ADDITION OF THE BUGGY LANES ON S.R. 651. PLACE REINFORCING MESH ON PLANED SURFACE, 5.0' WIDE, WITH THE PLACEMENT BEING AT THE EXISTING EDGE OF PAVEMENT/INSIDE EDGE OF BUGGY LANE (6'). REINFORCING MATERIAL SHALL BE GLASGRID CG100 OR EQUIVALENT AND SHALL BE PLACED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND THIS NOTE.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 690, SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS.

ITEM SPECIAL, REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS
LOCATION 3A: 16,662 SY
LOCATION 3B: 2,934 SY
LOCATION 3C: 1,174 SY

ITEM 611, CATCH BASIN ADJUSTED TO GRADE
ITEM 611, MANHOLE ADJUSTED TO GRADE
ITEM 623, MONUMENT BOX ADJUSTED TO GRADE
ITEM 638, VALVE BOX ADJUSTED TO GRADE

THESE ITEMS SHALL BE USED TO ADJUST CATCH BASINS, MANHOLES, MONUMENT BOXES AND WATER VALVE BOXES LOCATED THROUGH OUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER.

WHEN ADJUSTING MONUMENT BOXES TO GRADE, DO NOT DISTURB THE ACTURAL MONUMENT PROTECTED BY THE MONUMENT BOX.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DECRIBED SHALL BE INCLUDED FOR PAYMENT WITH THE ITEMS LISTED BELOW:

ITEM 611, CATCH BASIN ADJUSTED TO GRADE
LOCATION 3D: 1 EACH

ITEM 611, MANHOLE ADJUSTED TO GRADE
LOCATION 3D: 2 EACH

ITEM 623, MONUMENT BOX ADJUSTED TO GRADE
LOCATION 3D: 2 EACH

ITEM 638, VALVE BOX ADJUSTED TO GRADE
LOCATION 3D: 4 EACH

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

*THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF **25 FT**. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NO. **2017-AGL-21986-OE** IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.*

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING AN FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

CALCULATED JLS
CHECKED JSL

GENERAL NOTES

COS-621/643/651-0.00

ITEM 614, MAINTAINING TRAFFIC

A **MINIMUM** OF **1 LANE** OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON **S.R. 621, 643 AND 651** BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWINGS **MT-97.10 OR MT-97.12.**

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES INCLUDING REPAIRS.

AT NO TIME SHALL TRAFFIC BE MAINTAINED ON THE PLANED SURFACE, AT LEAST ONE COURSE OF ASPHALT CONCRETE SHALL BE IN PLACE BEFORE OPENING TO TRAFFIC. THIS RULE DOES NOT APPLY TO PLANING AT BRIDGES OR ACROSS BRIDGES UNLESS THE BRIDGE IS BEING TREATED THE SAME AS THE ADJACENT ROADWAY.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT, IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE **LUMP SUM** CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTIFICATION OF ROAD CLOSURE OR RESTRICTIONS

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF TWENTY ONE (21) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND/OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4510 OR EMAIL AT D05.PIO@DOT.OHIO.GOV

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4525 OR EMAIL AT BRIAN.BOSCH@DOT.OHIO.GOV

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

DROP-OFFS IN WORK ZONES

DROP-OFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE PLANS SHALL BE TREATED AS SHOWN ON STANDARD DRAWING MT-101.90. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE **LUMP SUM** BID FOR **ITEM 614, MAINTAINING TRAFFIC**.

BUTT JOINT

BUTT JOINTS ARE REQUIRED AT THE LOCATIONS SPECIFIED BELOW.

BUTT JOINTS SHALL BE AS PER STANDARD CONSTRUCTION DRAWING BP-3.1 UNLESS OTHERWISE SHOWN IN THE PLANS. PAYMENT FOR GRINDING BUTT JOINTS SHALL BE INCLUDED WITH PAVEMENT PLANING.

MINIMUM 10' WEDGE LENGTH FOR ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC AT ALL BUTT JOINTS.

Location	County	Route	Description	S.L.M.	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC (CY)
1	Cos.	S.R. 621	Begin Work	0.00	0.6
			End Work	5.98	0.6
Sub-Totals					1.2
Location 1 Total (Carried to Location Sub-Summary)					**2**
2	Cos.	S.R. 643	Begin Work	0.00	0.6
			Cos-643-0073	0.73	1.2
			Cos-643-0240	2.40	1.2
			End Work	10.59	0.6
Sub-Totals					3.6
Location 2 Total (Carried to Location Sub-Summary)					**4**
3a	Cos.	S.R. 651	Begin Work	0.00	0.7
Sub-Totals					0.7
Location 3a Total (Carried to Location Sub-Summary)					**1**
3d	Tus.	S.R. 651	End Work	0.45	0.7
Sub-Totals					0.7
Location 3d Total (Carried to Location Sub-Summary)					**1**

COOPERATION BETWEEN CONTRACTORS

THE STATE OF OHIO HAS CONTRACTED PROJECTS **COS-36-18.95 PID 93010**, AND **HOL-557-2.53, HOL-643-0.41/3.56 PID 99947** WHICH MAY BE CONSTRUCTED CONCURRENTLY WITH THIS PROJECT. **PAVING ON S.R. 651 MAY NEED TO BE DELAYED UNTIL THE COMPLETION OF PID 99947, DUE TO THE FACT THAT S.R. 651 WILL BE USED AS A DETOUR ROUTE FOR THAT PROJECT.** IT IS IMPERATIVE THAT THE CONTRACTORS COOPERATE FULLY WITH EACH OTHER AS OUTLINED IN SECTION 105.08 OF THE CMS MANUAL. ALL MAINTENANCE OF TRAFFIC SHALL BE COORDINATED BETWEEN PROJECTS AND NOT CONFLICT WITH ONE ANOTHER.

ITEM 614, WORK ZONE MARKING SIGN

IN ACCORDANCE WITH CMS SECTION 614.04, THE QUANTITIES OF WORK ZONE MARKING SIGN TO BE USED AS DIRECTED BY THE ENGINEER:

R4-1 (DO NOT PASS):
LOCATION 1: 20 EACH
LOCATION 2: 30 EACH
LOCATION 3A: 10 EACH
LOCATION 3B: 2 EACH
LOCATION 3C: 2 EACH
LOCATION 3D: 2 EACH

R4-2 (PASS WITH CARE):
LOCATION 1: 6 EACH
LOCATION 2: 4 EACH
LOCATION 3A: 2 EACH
LOCATION 3B: 0 EACH
LOCATION 3C: 0 EACH
LOCATION 3D: 0 EACH

W8-H12A (NO EDGE LINES):
LOCATION 1: 16 EACH
LOCATION 2: 28 EACH
LOCATION 3A: 10 EACH
LOCATION 3B: 2 EACH
LOCATION 3C: 2 EACH
LOCATION 3D: 2 EACH

IN ADDITION, THE CONTRACTOR SHALL ERECT A "GROOVED PAVEMENT" SIGN 250 FEET IN ADVANCE OF ANY SECTION OF ROADWAY WHERE TRAFFIC MUST TRAVEL ON A PLANED SURFACE. "GROOVED PAVEMENT" SIGNS SHALL BE INCLUDED FOR PAYMENT WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER CMS SECTION 614.055.

ITEM 614, WORK ZONE MARKING SIGN
LOCATION 1: 42 EACH
LOCATION 2: 62 EACH
LOCATION 3A: 22 EACH
LOCATION 3B: 4 EACH
LOCATION 3C: 4 EACH
LOCATION 3D: 4 EACH

ITEM 614, WORK ZONE PAVEMENT MARKINGS

THE CONTRACTOR SHALL PLACE ALL WORK ZONE PAVEMENT MARKINGS IN ACCORDANCE WITH **CMS 614.11** AND STANDARD DRAWING **MT-99.20** UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE QUANTITIES BELOW ARE FOR PLACEMENT OF TEMPORARY MARKINGS ON THE SURFACE COURSE FOR BOTH THE CONCRETE AND ASPHALT SECTIONS OF ROADWAY.

ITEM 614, WORK ZONE CENTER LINE, CLASS II, 642 PAINT (INTERMEDIATE)

LOCATION 1: 5.98 MILE
LOCATION 2: 10.59 MILE
LOCATION 3A: 2.84 MILE
LOCATION 3B: 0.50 MILE
LOCATION 3C: 0.20 MILE

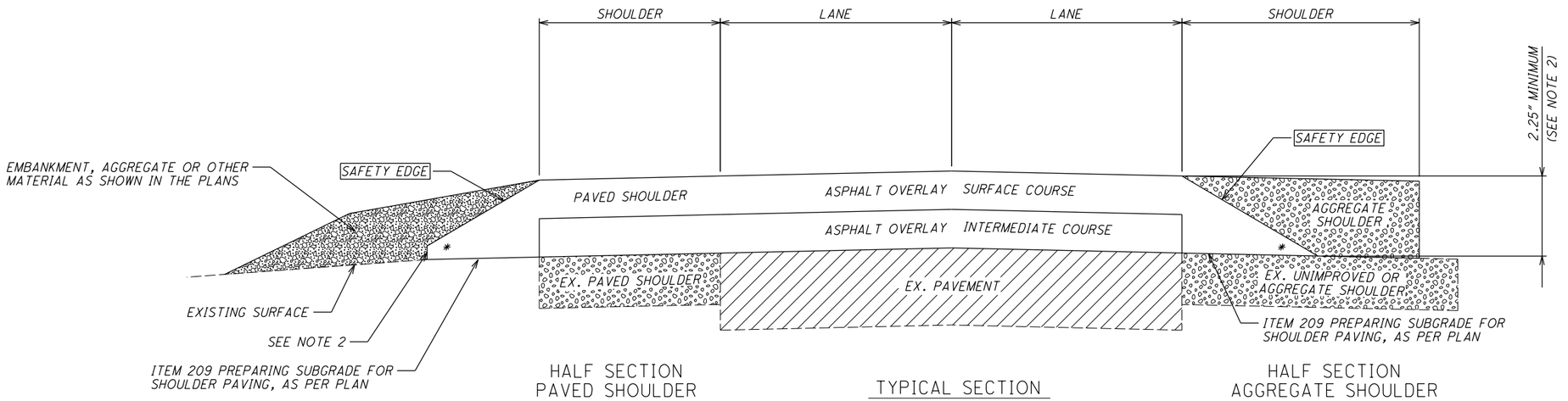
ITEM 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT (SURFACE)

LOCATION 1: 5.98 MILE
LOCATION 2: 10.59 MILE
LOCATION 3A: 2.84 MILE
LOCATION 3B: 0.50 MILE
LOCATION 3C: 0.20 MILE
LOCATION 3D: 0.45 MILE

CALCULATED JLS CHECKED JSL

MAINTENANCE OF TRAFFIC NOTES

COS-621/643/651-0.00



HALF SECTION
PAVED SHOULDER

TYPICAL SECTION

N.T.S.

HALF SECTION
AGGREGATE SHOULDER

NOTES:

1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.25" (63MM) WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6" (150MM). CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6" (150 MM).

3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

4.) FOR NEW PAVEMENT CONSTRUCT THE SAFETY EDGE THE FULL THICKNESS OF THE SURFACE AND INTERMEDIATE COURSES, NOT TO EXCEED 3.25" (82 MM).

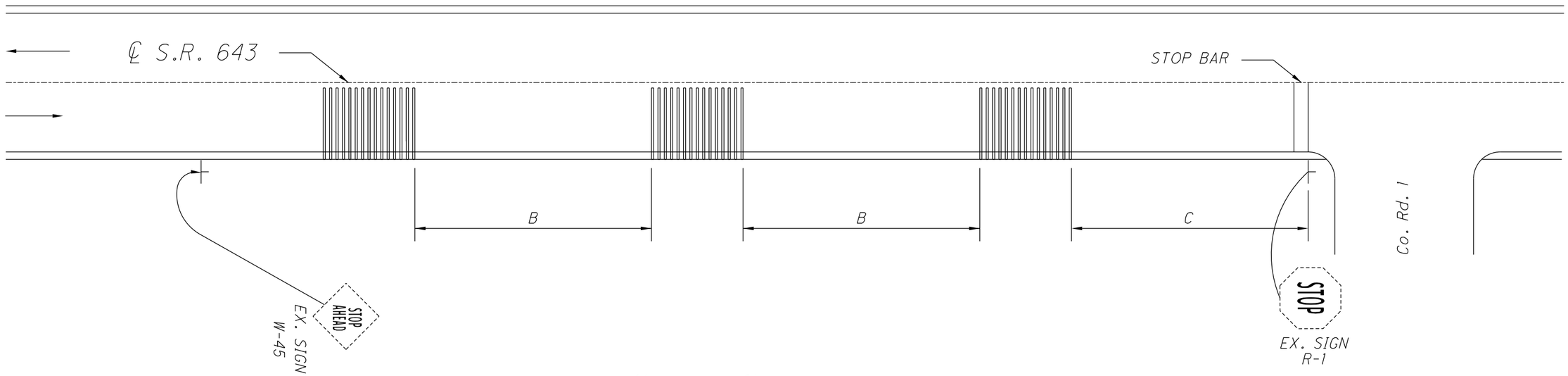
* 40° MAX

CALCULATED JLS
CHECKED JSL

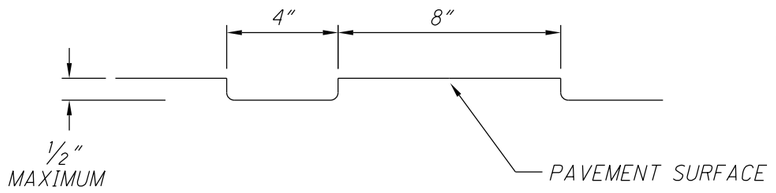
SAFETY EDGE DETAIL

COS-621/643/651-
0.00

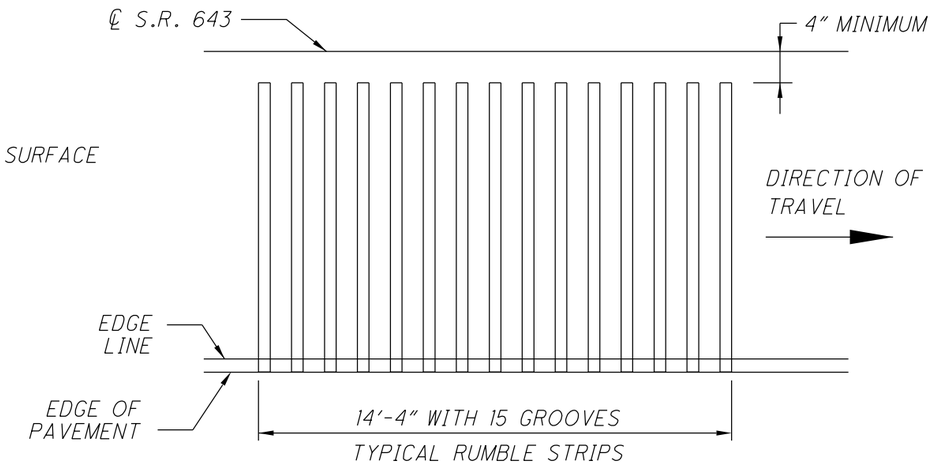
NOTE:
RUMBLE STRIPS SHALL BE CONSTRUCTED IN THE S.R. 643 S.B. LANE NORTH OF CO. RD. 1 INTERSECTION ONLY.



SPEED LIMIT	DISTANCE (FEET)	
	B	C
50-55 MPH	160-320	300 MIN



TYPICAL GROOVE DETAIL



TYPICAL RUMBLE STRIPS

GENERAL NOTES

1. ALL PROPOSED RUMBLE STRIPS SHALL CONSIST OF PARALLEL GROOVES CUT AT ONE (1) FOOT INTERVALS.

2. EACH GROOVE SHALL BE CUT TO A DEPTH OF APPROXIMATELY 1/2 INCH, WITH ALLOWANCE FOR PAVEMENT SURFACE IRREGULARITIES AND VARIATIONS. WIDTH OF THE GROOVE AT THE PAVEMENT SURFACE IS TO BE 4 INCHES.

3. ALL DIMENSIONS SHOWN ARE NOMINAL AND SHOULD BE CONSIDERED TO BE ± 1/8 INCH.

4. THIS APPLICATION STANDARD WAS DEVELOPED FOR STOP APPROACHES. THE CONTROL AREA LENGTH SHALL BE A MINIMUM OF 300 FEET FOR ALL APPLICATIONS AND MAY BE EXTENDED AS NECESSARY.

5. THE ENGINEER SHALL DETERMINE THE DISTANCE BETWEEN THE GROUPS OF RUMBLE STRIPS (DIMENSION "B" IN THE TABLE).

6. RUMBLE STRIPS SHALL NOT BE PLACED IN FRONT OF ANY BUSINESS OR RESIDENCE.

CALCULATION:

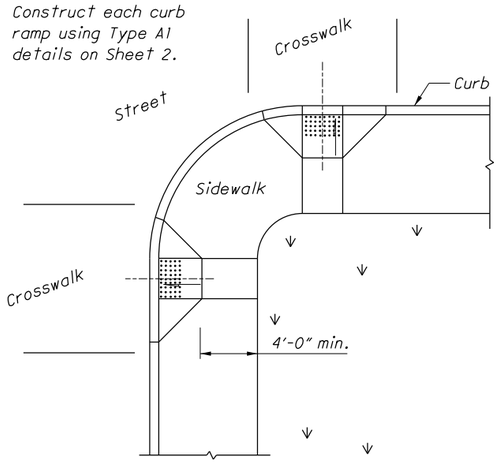
SOUTH BOUND S.R. 643, NORTH OF CO. RD. 1: 45(9.5′) = 427.5 FT

ITEM 618, RUMBLE STRIPS, (ASPHALT CONCRETE) **428 FT**
(QUANTITY CARRIED TO LOCATION 2 SUB-SUMMARY)

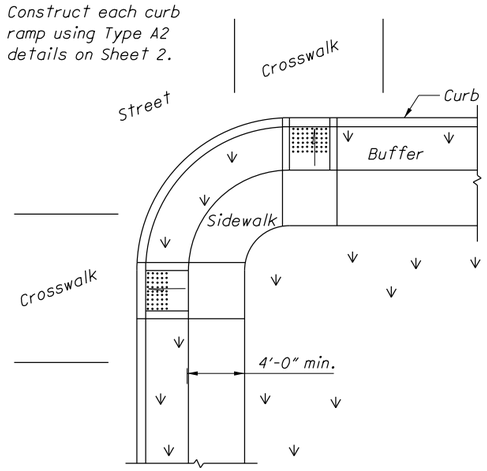
CALCULATED JLS
CHECKED JSL

RUMBLE STRIP DETAIL

COS-621/643/651-0.00

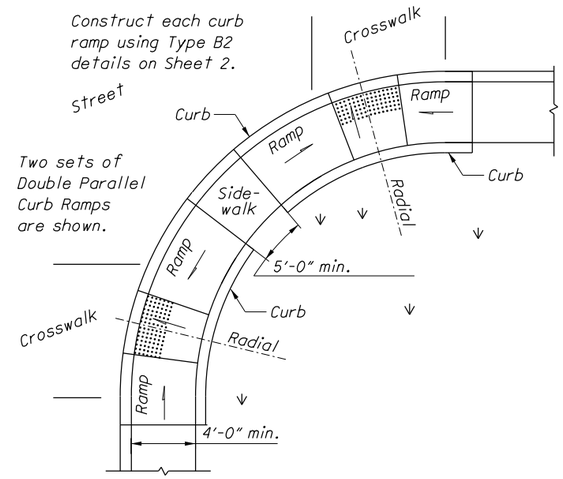


Use curb ramps with flared sides at locations with wide sidewalks.



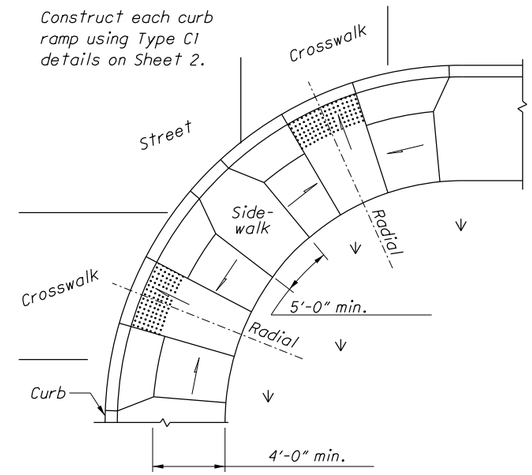
Use curb ramps with returned curbs where buffer is wide enough to accommodate ramp slope.

PERPENDICULAR CURB RAMPS



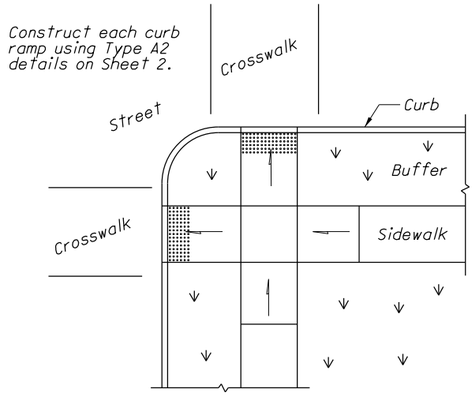
Place on streets having wide turning radius and where sidewalks are narrow.

PARALLEL CURB RAMPS



Curb ramp placement where streets have wide turning radius, and sufficient sidewalks width.

COMBINATION CURB RAMPS



LEGEND

[1] *May be reduced to 3'-4" in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.*

NOTES

GENERAL: *This drawing shows curb ramp types details and placement examples for curb ramp construction, including the installation of detectable warnings.*

Curb ramp types are shown on Sheet 2 and include Perpendicular, Parallel, and Combined types as specified to be constructed in the locations shown on the project plans.

Curb ramps added to an existing intersection or walk should be individually detailed on the project plans to assure that the design is appropriate for site constraints and all items can be constructed to ADA standards. The contractor may adjust the placement of curb ramps if existing field conditions warrant with the approval of the Engineer.

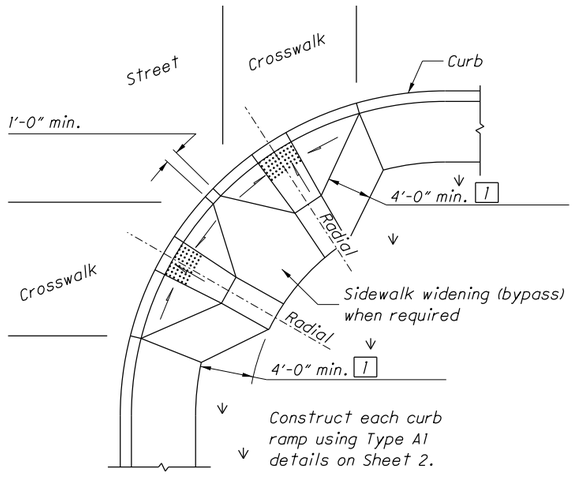
METHOD OF MEASUREMENT: *The Department will measure Curb Ramps by the number of each completed curb ramp. The Department will measure Detectable Warnings in existing curb ramps and at grade crossings by the number of square feet completed.*

Concrete Walk and Curb, Item 608 and 609, will be measured through out the curb ramp area and paid for under their respective Items.

METHOD OF PAYMENT: *New Curb Ramps constructed in new or existing Walk are paid for under Item 690 Special Misc.: Curb Ramp, Type __ (A1, A2, B1, B2, B3, C1, C2, or D) each, and includes the cost of any additional materials and installation (including detectable warnings), grading, forming and finishing.*

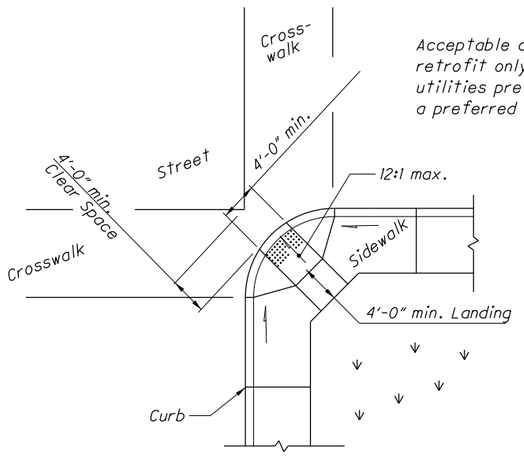
Detectable Warnings constructed in existing curb ramps or for at-grade crossing locations are paid for under Item 690-Special Misc.: Detectable Warning (Sq. Ft.) and is full compensation for excavation, backfill, base course material, reinforcing steel, expansion joint materials, and any incidentals required to complete the installation as specified. The work to cast the tiles in place will also require removal of existing pavement or sidewalk (Item 202) to the nearest joint, or if no joint exists, a minimum of 4 feet.

Removal of existing curb, pavement, walk (or existing curb ramps) are paid under Item 202.



Acceptable design on corners with wide turning radius where user is able to maneuver within crosswalk limits so as not to encroach into adjacent traveled lanes.

PERPENDICULAR RAMPS



Use this design only for existing walks, and when site constraints prohibit other designs. The diagonal Type D ramp may be constructed as either a Perpendicular, Parallel or Combination curb ramp type. Avoid using where curb radii are less than 20'-0" .

DIAGONAL RAMP (Type D)

ACCEPTABLE CONSTRUCTION PLACEMENT

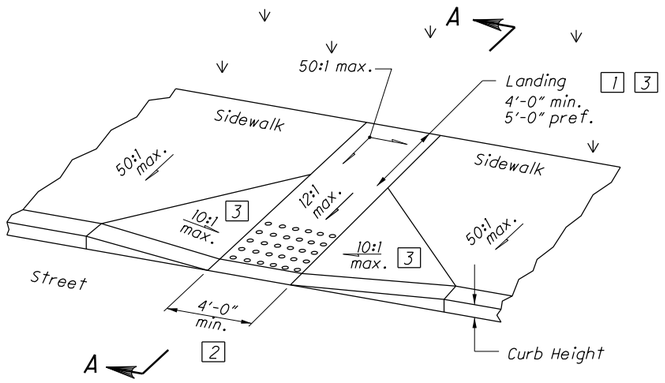
CALCULATED JLS CHECKED JSL

CURB RAMP AND DETECTABLE WARNING DETAILS

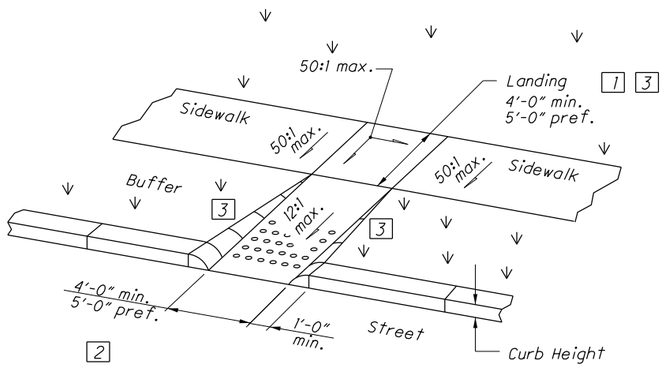
COS-621/643/651-0.00

1 / 3

8 / 39

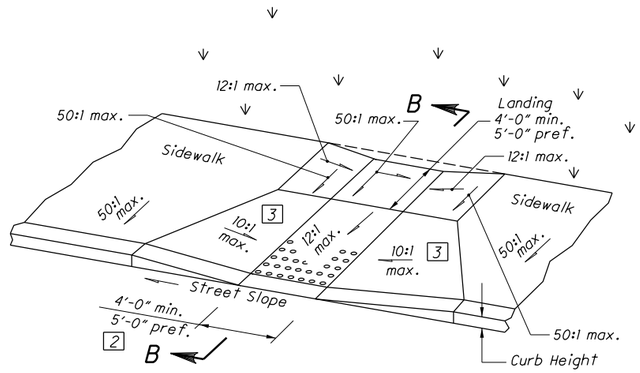


Type A1 (Perpendicular with flared sides)

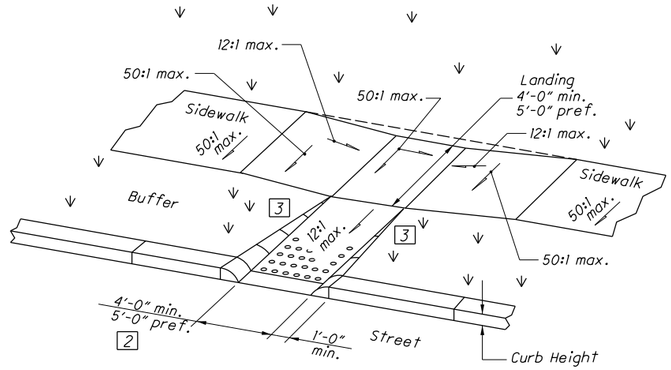


Type A2 (Perpendicular with returned curb)

PERPENDICULAR CURB RAMP DETAILS

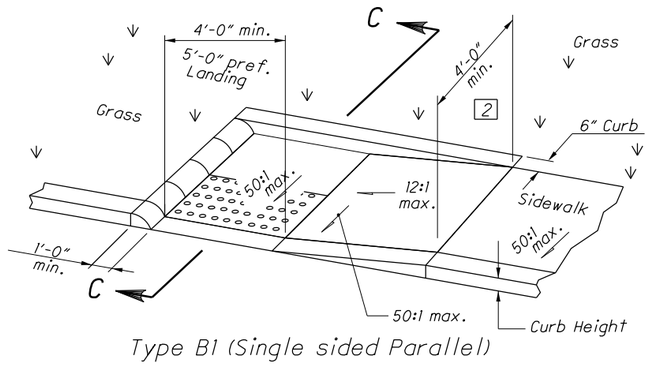


Type C1 (Combined with flared sides)

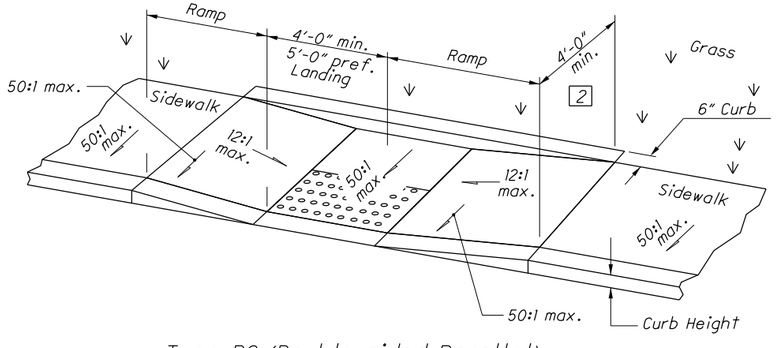


Type C2 (Combined with returned curb)

COMBINED CURB RAMP DETAILS



Type B1 (Single sided Parallel)



Type B2 (Double sided Parallel)

PARALLEL CURB RAMP DETAILS

NOTES CONTINUED

The running slope of the ramp is preferred to be 12:1 or flatter. In existing sidewalks, where the maximum ramp slope is not feasible due to site constraints (e.g. utility poles or vaults, right-of-way limits) it may be reduced as follows:

A) 10:1 for a max. rise of 6",
B) 8:1 for a max. rise of 3",
C) 6:1 over a max. run of 2'-0" for historic areas where a flatter slope is not feasible.

To prevent chasing the grade indefinitely, the transition from exisiting sidewalk to the curb ramp area is not required to exceed 15 feet in length.

While ramps may be skewed to the crosswalk, the entire lower landing area must fall within the cross walk that the ramp serves and cannot be located in the traveled lane of opposing traffic.

The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transitions shall be 20:1 ot flatter.

The bottom edge of the ramp shall change planes perpendicular to the landing.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

Ramp landings shall be 4' min. x 4' min. with a 50:1 or flatter cross slope and running slope, unless otherwise shown.

DETECTABLE WARNINGS: Install Detectable warnings on each curb reamp with approved materials as shown on Sheet 3. Install these proprietary products as per manufacturer's written instructions.

DRAINAGE: Contractor is to ensure the base of each constructed ramp allows for proper drainage, without exceeding allowable cross slope or ramp slope. Vertical change in level exceeding ⅛" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed.

JOINTS: Provide expansion joints in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. Provide a ½" Item 705.03 expansion joint filler around the edge of ramps built in existing concrete walks. Lines shown on this drawing indicate the ramp edges and slope changes and do not necessarily indicate joint lines.

SURFACE TEXTURE: Texture concrete surfaces by coarse brooming transverse to the ramp slopes to be rougher than the adjacent walk.

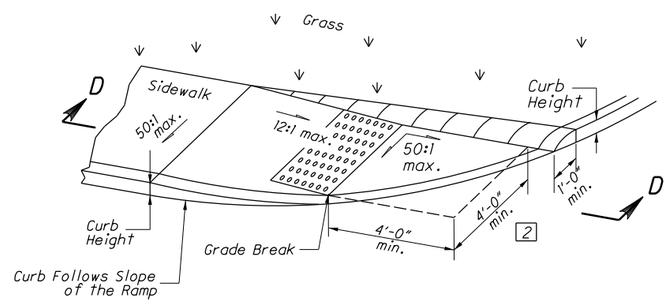
LEGEND

1 Dimension may be reduced to 3'-0" in existing sidewalks if the landing is unconstrained along the back edge.

2 May be reduced to 3'-4" in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.

3 Where landing width (D) has been reduced to 3'-0" the flared sides shall have a maximum slope of 12:1. Flared sides are not required where the edges of a curb ramp are protected by landscaping or other barriers to travel by wheelchair users or pedestrians across the edge of the curb ramp. However, if the flared sides are used in these areas, they may be of any slope.

See Sheet 3 for Sections.



Type B3 (Single sided Parallel)

I:\Projects\Data\BCOS\B02987\Design\Roadway\Sheets\B02987_GA004.dgn Sheet 1/4/2018 11:34:33 AM jlutz1

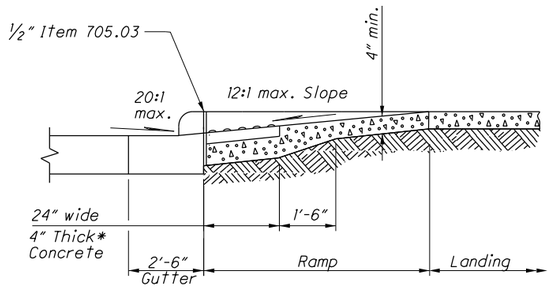
CALCULATED JLS CHECKED JSL

CURB RAMP AND DETECTABLE WARNING DETAILS

COS-621/643/651-0.00

2 / 3

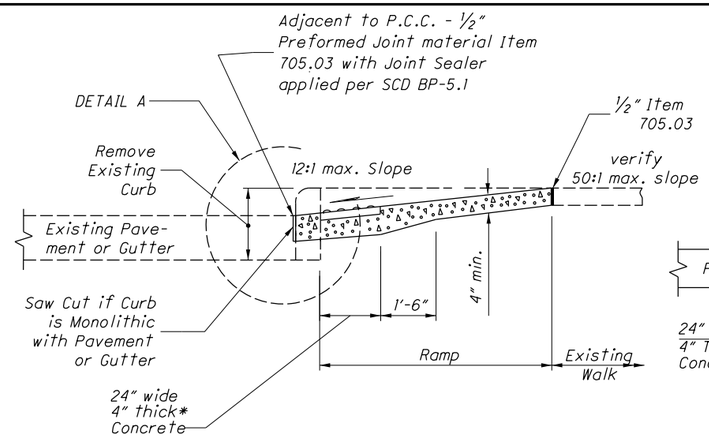
9 / 39



New gutter shown.

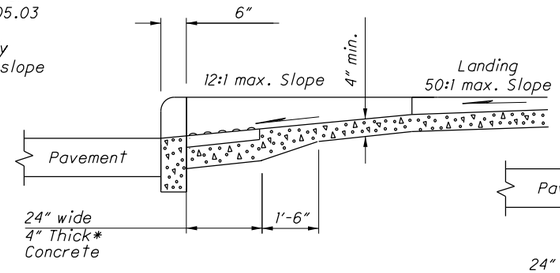
SECTION A-A NORMAL DETAIL

See Sheet 2.



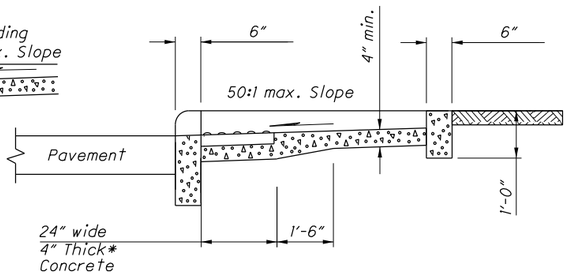
SECTION A-A EXISTING WALK DETAIL

See Sheet 2.



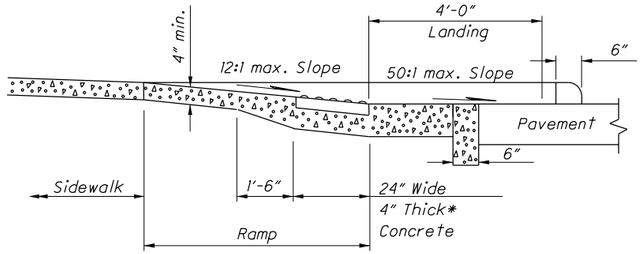
SECTION B-B

See Sheet 2.



SECTION C-C

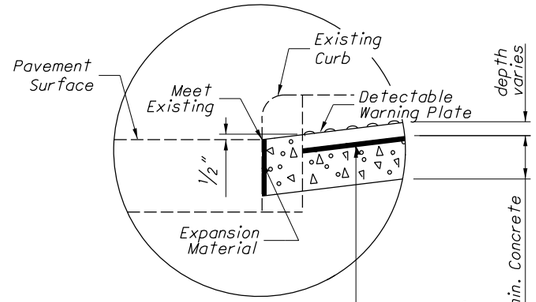
See Sheet 2.



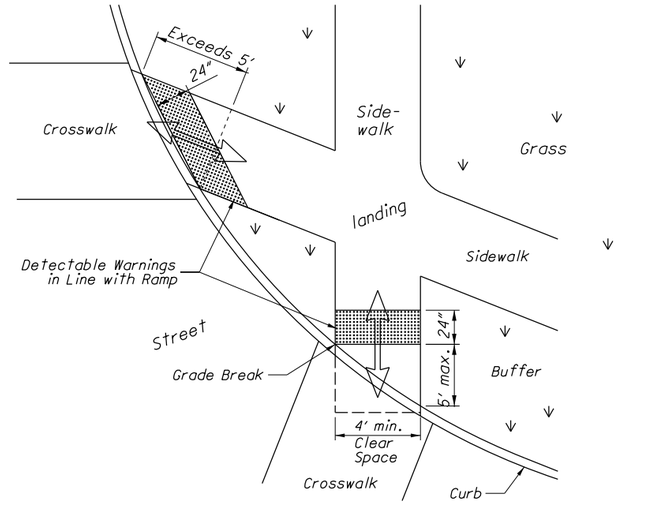
SECTION D-D

See Sheet 2.

*Where possible, pour ramp area integral with the curb, otherwise use 6" thick walk.



DETAIL A



DETECTABLE WARNING ALIGNMENT

DETECTABLE WARNINGS NOTES

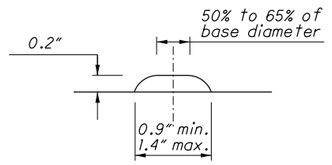
GENERAL: *Detectable Warnings are a distinctive surface pattern of truncated domes which are detectable by cane or underfoot to alert people with vision impairments of their approach to streets and hazardous drop-offs.*

PLACEMENT: *Detectable warnings are to be installed at any location where pedestrians might cross paths with vehicular traffic lanes, such as the base of curb ramps or at blended curbs. A 24" strip of domes is to be installed for the full width of the ramp or walk. Typical street corner placement locations are shown on Sheet 2.*

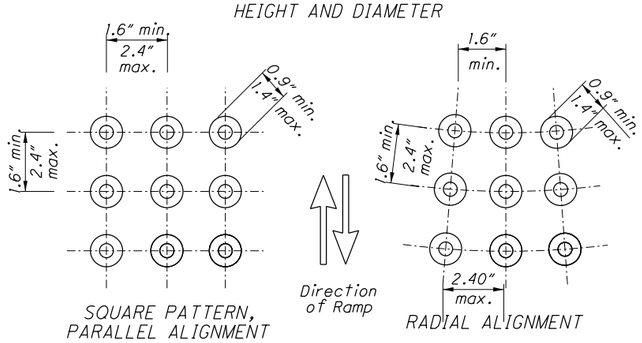
The depth of concrete underneath detectable warning products shall be a minimum of 4". See DETAIL A.

ALIGNMENT: *Truncated domes should be aligned with the primary direction of the ramp as shown on the DETECTABLE WARNING ALIGNMENT Detail. Normally the detectable warnings should be flush with the back of the curb, but in skewed conditions see DETECTABLE WARNING ALIGNMENT DETAIL. For non-standard layouts, detectable warning materials may have to be mitered and placed segmentally.*

PRODUCTS & COLORS: *Color of the detectable warnings should contrast with surrounding concrete walk and ramp. Black is not an acceptable color. Approved products and guidance on color may be found on the Office of Roadway Engineering Service's Detectable Warnings Approved List. Install products as per manufacturer's printed instructions.*



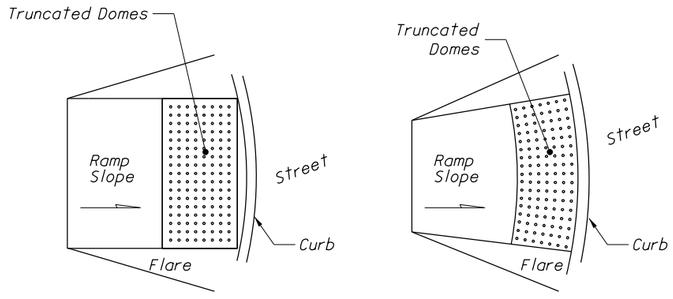
HEIGHT AND DIAMETER



SQUARE PATTERN, PARALLEL ALIGNMENT

RADIAL ALIGNMENT

TRUNCATED DOMES DETAILS



DOME ALIGNMENT ON RADIUSED CURB

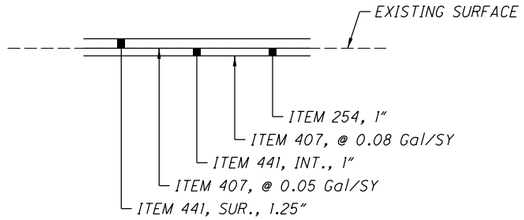
CURB RAMP AND DETECTABLE WARNING DETAILS

CALCULATED JLS
CHECKED JSL

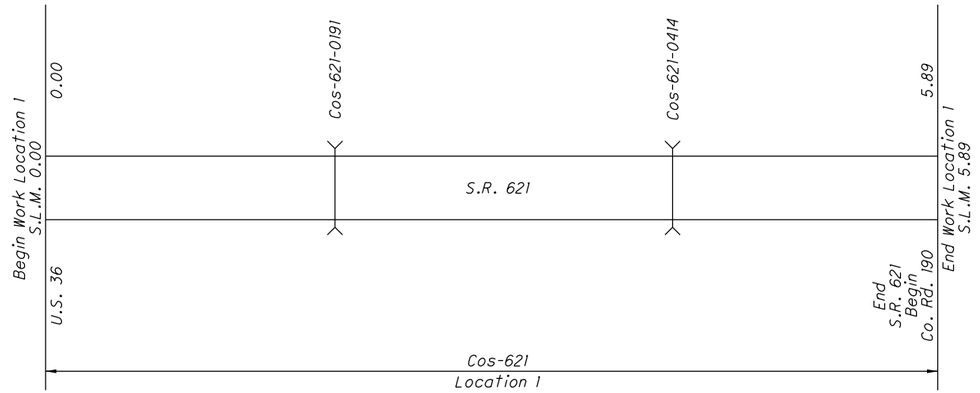
COS-621/643/651-0.00

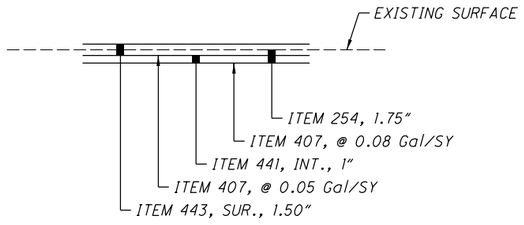
3 / 3

10 / 39

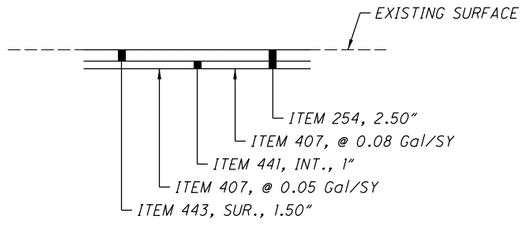


S.L.M. 0.00 - S.L.M. 5.89

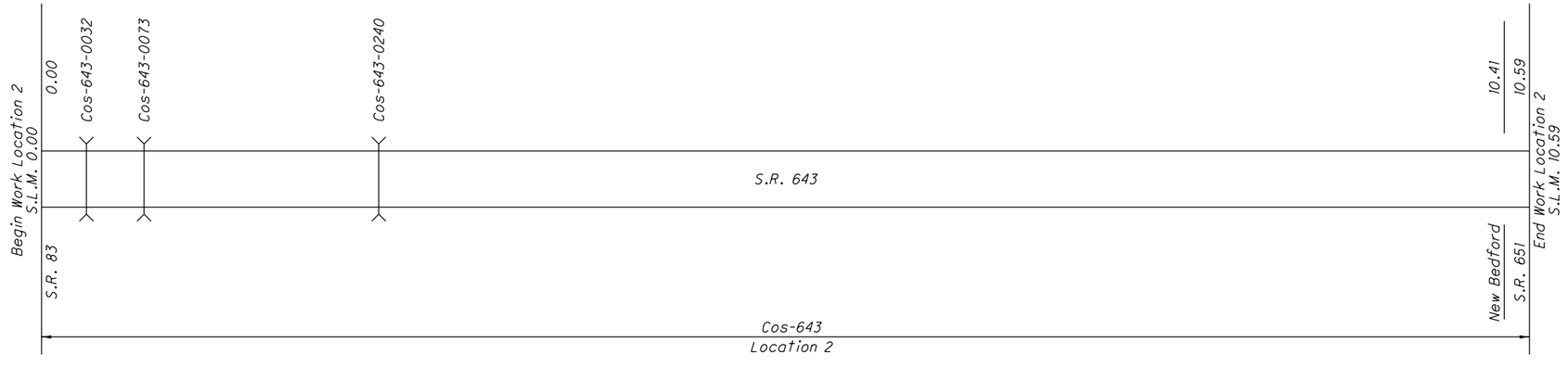




S.L.M. 0.00 - S.L.M. 10.41



S.L.M. 10.41 - S.L.M. 10.59



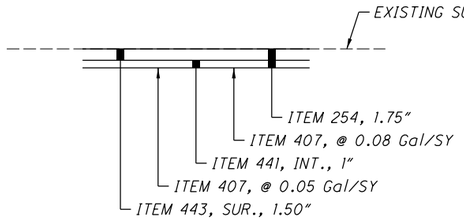
CALCULATED JLS
CHECKED JSL

STRAIGHT LINE DIAGRAM (LOCATIONS 1, 2)

COS-621/643/651-0.00

11
39

I:\Projects\Data\COS\92987\Design\Roadway\Sheets\92987_GM001.dgn Sheet 1/4/2018 11:34:35 AM jlutzl



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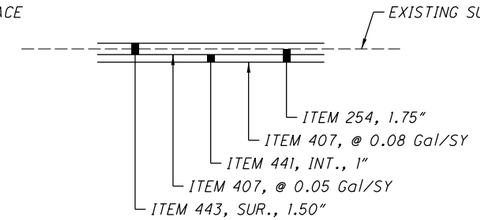
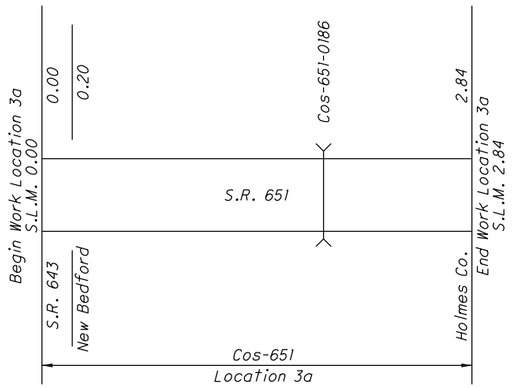
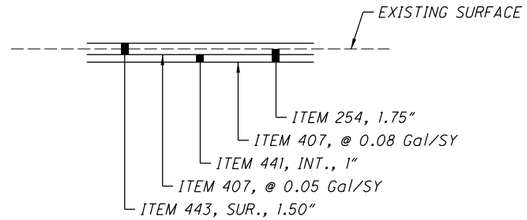


S.L.M. 0.20 - S.L.M. 2.84





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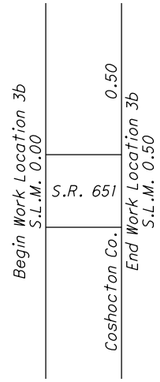
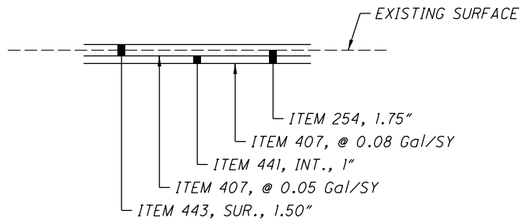
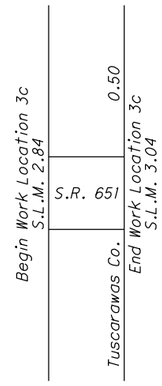
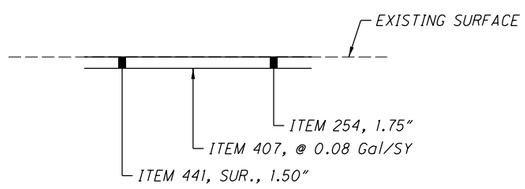


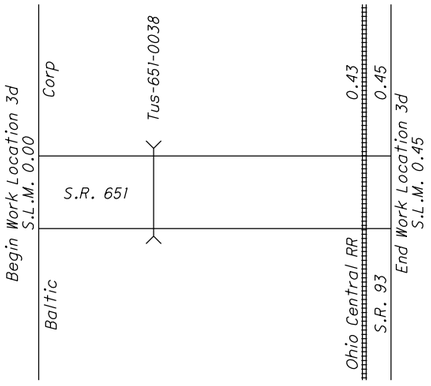


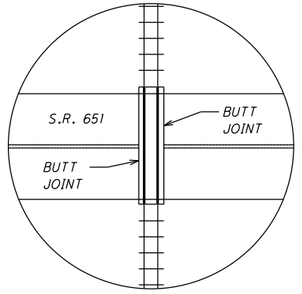
S.L.M. 0.00 - S.L.M. 0.50





S.L.M. 0.00 - S.L.M. 0.45



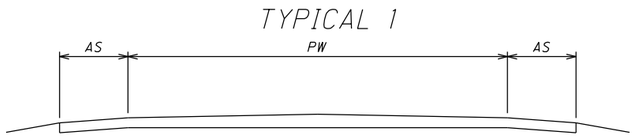


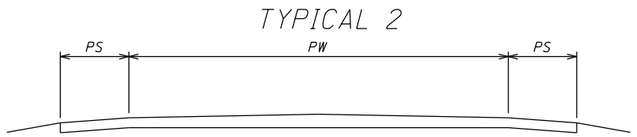
OHIO CENTRAL
RAILROAD CROSSING
AARDOT - 474244T
(SUSPEND AND RESUME)

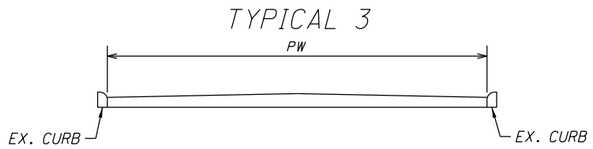
CALCULATED JLS
CHECKED JSL

STRAIGHT LINE DIAGRAM (LOCATIONS 3A, 3B, 3C, 3D)

COS-621/643/651-0.00







AS - AGGREGATE SHOULDER
PS - PAVED SHOULDER
PW - PAVEMENT WIDTH

FOR STRAIGHT LINE DIAGRAM, SEE SHEETS 11-12

Pavement Data

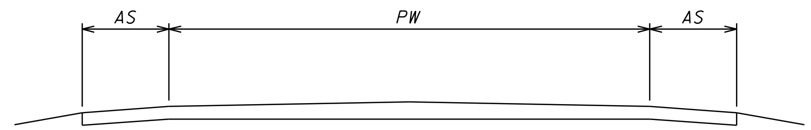
Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Pavement Width (FT)	Typical	Pavement Area (SY)	254				407		441						443	
					Miles	Lin. Ft.				PAVEMENT PLANING, ASPHALT CONCRETE, 1.00"	PAVEMENT PLANING, ASPHALT CONCRETE, 1.50"	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"	PAVEMENT PLANING, ASPHALT CONCRETE, 2.50"	NON-TRACKING TACK COAT (@ 0.050 Gal/SY)	NON-TRACKING TACK COAT (@ 0.080 Gal/SY)	Thickness	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448)	Thickness	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448), AS PER PLAN (PG70-22M)	Thickness	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	Thickness	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)
										SY	SY	SY	SY	GAL	GAL	Inches	CY	Inches	CY	Inches	CY	Inches	CY
1	Cos.	S.R. 621	0.00	5.98	5.98	31,574.40	21.0	1	73,673.6	73,673.6				3,683.7	5,893.9	1.00	2,046.5			1.25	2,558.2		
			Extra Areas for Radii at U.S. 36					1	200.0	200.0				10.0	16.0	1.00	5.6			1.25	7.0		
Sub-Totals									73,873.6				3,693.7	5,909.9		2,052.1				2,565.2		
Location 1 Totals (Carried to Location Sub-Summary)									**73,874**				**9,604**			**2,053**				**2,566**		
2	Cos.	S.R. 643	S.R. 643/ S.R. 83 Intersection					1	551.4			551.4	27.6	44.2			1.00	15.4	1.25	19.2		
			0.04	10.41	10.37	54,753.60	20.0	1	121,674.7			121,674.7	6,083.8	9,734.0			1.00	3,379.9			1.50	5,069.8
			10.41	10.59	0.18	950.40	20.0	1	2,112.0			2,112.0	105.6	169.0			1.00	58.7			1.50	88.0
			Extra Areas for Radii at S.R. 651					1	200.0			200.0	10.0	16.0			1.00	5.6			1.50	8.4
			Bridge Deductions (Bridge Length x Pavement Width)						(406.6)			(406.6)	(20.3)	(32.5)			1.00	(11.2)			1.50	(16.9)
Sub-Totals												121,268.1	2,863.4	6,206.7	9,930.7				3,448.4		19.2		5,149.3
Location 2 Totals (Carried to Location Sub-Summary)												**121,269**	**2,864**	**16,138**					**3,449**		**20**		**5,150**
3a	Cos.	S.R. 651	0.00	0.09	0.09	475.20	20.0	1	1,056.0				1,056.0	52.8	84.5			1.00	29.4			1.50	44.0
			0.20	2.84	2.64	13,939.20	24.0	2	37,171.2			37,171.2		1,858.6	2,973.7			1.00	1,032.6			1.50	1,548.8
			Extra Areas for Radii at S.R. 643					1	200.0				200.0	10.0	16.0			1.00	5.6			1.50	8.4
Sub-Totals												37,171.2	1,256.0	1,921.4	3,074.2				1,067.6				1,601.2
Location 3a Totals (Carried to Location Sub-Summary)												**37,172**	**1,256**	**4,996**					**1,068**				**1,602**
3b	Hol.	S.R. 651	0.00	0.50	0.50	2,640.00	24.0	2	7,040.0			7,040.0		352.0	563.2			1.00	195.6			1.50	293.4
Sub-Totals												7,040.0		352.0	563.2				195.6				293.4
Location 3b Totals (Carried to Location Sub-Summary)												**7,040**		**916**					**196**				**294**
3c	Cos.	S.R. 651	2.84	3.04	0.20	1,056.00	24.0	2	2,816.0			2,816.0		140.8	225.3			1.00	78.3			1.50	117.4
Sub-Totals												2,816.0		140.8	225.3				78.3				117.4
Location 3c Totals (Carried to Location Sub-Summary)												**2,816**		**367**					**79**				**118**
3d	Tus.	S.R. 651	0.00	0.28	0.28	1,478.40	22.0	1	3,613.9	3,613.9					289.2					1.50	150.6		
			0.28	0.45	0.17	897.60	40.0	3	3,989.3	3,989.3					319.2					1.50	166.3		
Sub-Totals										7,603.2					608.4						316.9		
Location 3d Totals (Carried to Location Sub-Summary)										**7,604**				**609**							**317**		

CALCULATED JLS CHECKED JSL

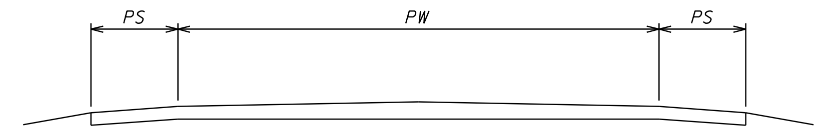
PAVEMENT DATA

COS-621/643/651-0.00

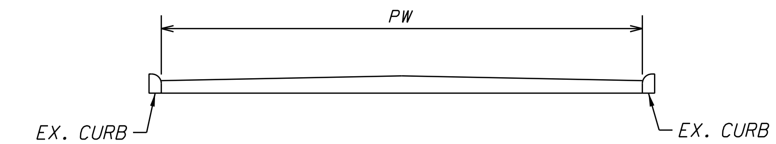
TYPICAL 1



TYPICAL 2



TYPICAL 3



AS - AGGREGATE SHOULDER
PS - PAVED SHOULDER
PW - PAVEMENT WIDTH

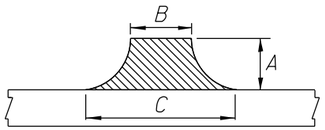
Shoulder Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Typical	Paved Shoulder Width (FT.) (Widths are Average Throughout Section)		Shoulder Area (SY)	209	254		407		408	441				443		617	
											PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"	PAVEMENT PLANING, ASPHALT CONCRETE, 2.50"	NON-TRACKING TACK COAT (@ 0.050 Gal/SY)	NON-TRACKING TACK COAT (@ 0.080 Gal/SY)	PRIME COAT, AS PER PLAN (@ 0.40 Gal/SY)	Thickness	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448), AS PER PLAN (PG70-22M)	Thickness	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	Thickness	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)	Thickness	COMPACTED AGGREGATE, AS PER PLAN (2' Width)
					Miles	Lin. Ft.		A	B		MILE	SY	SY	GAL	GAL	GAL	Inches	CY	Inches	CY	Inches	CY	Inches	CY
1	Cos.	S.R. 621	0.00	5.98	5.98	31,574.40	1				11.96					5,613.3							2.00	779.6
Sub-Totals																5,613.3								779.6
Location 1 Totals (Carried to Location Sub-Summary)											**11.96**					**5,614**								**780**
2	Cos.	S.R. 643	0.00	10.59	10.59	55,915.20	1				21.18					9,940.5							2.00	1380.6
Sub-Totals																9,940.5								1,380.6
Location 2 Totals (Carried to Location Sub-Summary)											**21.18**					**9,941**								**1,381**
3a	Cos.	S.R. 651	0.09	2.84	2.75	14,520.00	2	6.0	6.0	19,360.0	5.50	19,360.0		968.0	1,548.8	1,290.7	1.00	537.8			1.50	806.7	2.00	179.3
Sub-Totals												19,360.0		968.0	1,548.8	1,290.7		537.8				806.7		179.3
Location 3a Totals (Carried to Location Sub-Summary)											**5.50**	**19,360**		**2,517**		**1,291**		**538**				**807**		**180**
3b	Hol.	S.R. 651	0.00	0.50	0.50	2,640.00	2	6.0	6.0	3,520.0	1.00	3,520.0		176.0	281.6	234.7	1.00	97.8			1.50	146.7	2.00	32.6
Sub-Totals												3,520.0		176.0	281.6	234.7		97.8				146.7		32.6
Location 3b Totals (Carried to Location Sub-Summary)											**1.00**	**3,520**		**458**		**235**		**98**				**147**		**33**
3c	Cos.	S.R. 651	2.84	3.04	0.20	1,056.00	2	6.0	6.0	1,408.0	0.40	1,408.0		70.4	112.7	93.9	1.00	39.2			1.50	58.7	2.00	13.0
Sub-Totals												1,408.0		70.4	112.7	93.9		39.2				58.7		13.0
Location 3c Totals (Carried to Location Sub-Summary)											**0.40**	**1,408**		**184**		**94**		**40**				**59**		**13**
3d	Tus.	S.R. 651	0.00	0.28	0.28	1,478.40	1	2.0	2.0	657.1	0.56					262.9							2.00	36.5
Sub-Totals																262.9								36.5
Location 3d Totals (Carried to Location Sub-Summary)											**0.56**					**263**								**37**

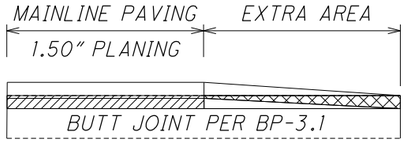
CALCULATED JLS CHECKED JSL

SHOULDER DATA

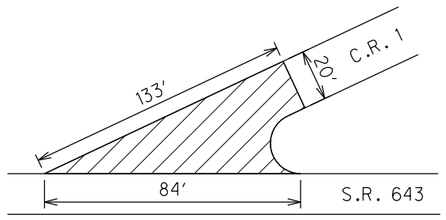
COS-621/643/651-0.00



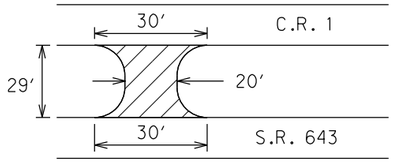
$$AREA = \left[A \frac{(B + C)}{2} \right] / 9$$



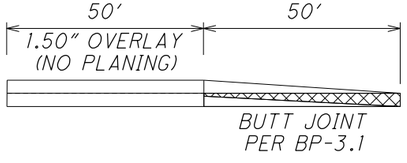
DETAIL 1



DETAIL 2



DETAIL 3
(C.R. 190 PROFILE ADJUSTMENT)



Extra Area Data

Location	County	Route	Description	Side	Intersections (FT) A	B	C	Extra Area (SY)	202 WEARING COURSE REMOVED (SY)	407 NON-TRACKING TACK COAT (@ 0.08 Gal/SY) (GAL)	441 Thickness (Inches)	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (CY)
1	Cos.	S.R. 621	Co. Rd. 193	Lt.	110	38	113	922.8	922.8	73.9	1.50	38.5
			Twp. Rd. 192	Rt.	30	20	80	166.7	166.7	13.4	1.50	7.0
			Twp. Rd. 200	Lt.	35	22	80	198.4	198.4	15.9	1.50	8.3
			Twp. Rd. 200	Rt.	25	17	56	101.4	101.4	8.2	1.50	4.3
			Co. Rd. 406	Lt.	50	25	106	363.9	363.9	29.2	1.50	15.2
			Twp. Rd. 191	Rt.	107	42	116	939.3	939.3	75.2	1.50	39.2
			Co. Rd. 186	Lt.	60	20	120	466.7	466.7	37.4	1.50	19.5
			Twp. Rd. 186	Rt.	35	20	70	175.0	175.0	14.0	1.50	7.3
			Twp. Rd. 190	Rt.	75	19	80	412.5	412.5	33.0	1.50	17.2
			Twp. Rd. 171	Rt.	50	23	112	375.0	375.0	30.0	1.50	15.7
			Twp. Rd. 188	Lt.	50	21	106	352.8	352.8	28.3	1.50	14.7
			Sub-Totals						4,474.5	358.5		186.9
			Location 1 Totals (Carried to Location Sub-Summary)						**4,475**	**359**		**187**
2	Cos.	S.R. 643	Co. Rd. 1	Lt.	See Detail 1			170.0	170.0	13.6	1.50	7.1
			Co. Rd. 1	Lt.	See Detail 2			75.0	75.0	6.0	1.50	3.2
			Twp. Rd. 1205	Rt.	24	22	39	81.4	81.4	6.6	1.50	3.4
			Twp. Rd. 198	Lt.	43	18	75	222.2	222.2	17.8	1.50	9.3
			Twp. Rd. 198	Rt.	44	16	71	212.7	212.7	17.1	1.50	8.9
			Co. Rd. 186	Rt.	65	18	112	469.5	469.5	37.6	1.50	19.6
			Twp. Rd. 206	Lt.	33	18	94	205.4	205.4	16.5	1.50	8.6
			Twp. Rd. 195	Rt.	35	13	83	186.7	186.7	15.0	1.50	7.8
			Twp. Rd. 212	Lt.	51	15	104	337.2	337.2	27.0	1.50	14.1
			Twp. Rd. 189	Rt.	20	19	63	91.2	91.2	7.3	1.50	3.8
			Co. Rd. 190 (See Detail 3)	Rt.	100	16	70	477.8	167.3	38.3	1.50	20.0
			Twp. Rd. 214	Lt.	30	17	48	108.4	108.4	8.7	1.50	4.6
			Twp. Rd. 11	Rt.	52	11	86	280.3	280.3	22.5	1.50	11.7
			Twp. Rd. 215	Lt.	41	16	82	223.3	223.3	17.9	1.50	9.4
			Twp. Rd. 219	Lt.	30	18	64	136.7	136.7	11.0	1.50	5.7
			Twp. Rd. 227	Rt.	71	20	127	579.9	579.9	46.4	1.50	24.2
			Twp. Rd. 214B	Rt.	14	18	34	40.5	40.5	3.3	1.50	1.7
			Twp. Rd. 220	Lt.	41	18	74	209.6	209.6	16.8	1.50	8.8
			Co. Rd. 12	Lt.	20	25	50	83.4	83.4	6.7	1.50	3.5
			Sub-Totals						3,880.7	336.1		175.4
			Location 2 Totals (Carried to Location Sub-Summary)						**3,881**	**337**		**176**

CALCULATED JLS
CHECKED JSL

EXTRA AREA DATA

COS-621/643/651-
0.00

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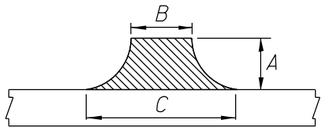
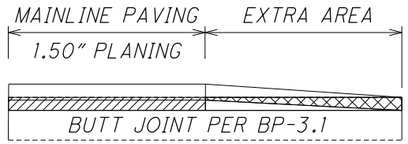


$$AREA = \left[\frac{A\ (B + C)}{2} \right] / 9$$



Extra Area Data

Location	County	Route	Description	Side	Intersections (FT) A	B	C	Extra Area (SY)	202 WEARING COURSE REMOVED SY	407 NON-TRACKING TACK COAT (@ 0.08 Gal/SY) GAL	441 Thickness Inches	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 CY
3a	Cos.	S.R. 651	6' Wide Paved Shoulder (NewBedford)	Lt.	See Sheet 27			240.0	240.0	19.2	1.50	10.0
			2' Wide Paved Shoulder (NewBedford)	Rt.	See Sheet 27			12.6	12.6	1.1	1.50	0.6
			Co. Rd. 10 (Lower Profile Through Intersection)	Rt.	30	21	83	173.4	173.4	13.9	1.50	7.3
			Twp. Rd. 272	Rt.	29	16	47	101.5	101.5	8.2	1.50	4.3
			Twp. Rd. 85	Rt.	51	18	169	529.9	529.9	42.4	1.50	22.1
			Twp. Rd. 231	Rt.	79	15	125	614.5	614.5	49.2	1.50	25.7
			Twp. Rd. 178	Lt.	52	21	103	358.3	358.3	28.7	1.50	15.0
Sub-Totals									2,030.2	162.7		85.0
Location 3a Totals (Carried to Location Sub-Summary)									**2,031**	**163**		**85**
3b	Hol.	S.R. 651	Twp. Rd. 177	Lt.	20	41	90	145.6	145.6	11.7	1.50	6.1
Sub-Totals									145.6	11.7		6.1
Location 3b Totals (Carried to Location Sub-Summary)									**146**	**12**		**7**
3c	Cos.	S.R. 651	No Extra Areas						No Extra Areas			
Sub-Totals												
Location 3c Totals (Carried to Location Sub-Summary)												
3d	Tus.	S.R. 651	Sunset Dr.	Lt.	59	20	55	245.9	245.9	19.7	1.50	10.3
			West St.	Lt.	51	18	95	320.2	320.2	25.7	1.50	13.4
			Cherry Dr.	Lt.	10	24	24	26.7	26.7	2.2	1.50	1.2
			N. Butler St.	Lt.	12	40	59	66.0	66.0	5.3	1.50	2.8
			S. Butler St.	Rt.	12	40	59	66.0	66.0	5.3	1.50	2.8
			N. Park Dr.	Lt.	12	18	23	27.4	27.4	2.2	1.50	1.2
			S. Park Dr.	Rt.	12	18	23	27.4	27.4	2.2	1.50	1.2
Sub-Totals									779.6	62.6		32.9
Location 3d Totals (Carried to Location Sub-Summary)									**780**	**63**		**33**

CALCULATED JLS CHECKED JSL

EXTRA AREA DATA

COS-621/643/651-0.00

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CALCULATED JLS
CHECKED JSL

BRIDGE TREATMENT DATA

Bridge Treatment:

Location 1:
Cos-621-0191: Culvert - Mill/Fill Same as Roadway
Cos-621-0414: Culvert - Mill/Fill Same as Roadway

Location 2:
Cos-643-0032: Culvert - Mill/Fill Same as Roadway
Cos-643-0073: Butt Joint at Backwalls
Cos-643-0240: Butt Joint at Approach Slabs

Location 3a:
Cos-651-0186: Culvert - Mill/Fill Same as Roadway

Location 3d:
Tus-651-0038: Culvert - Mill/Fill Same as Roadway

Note:

For Bridge Deck Treatment Details, See Sheet 18

Bridge Treatment Data

Location	Bridge No.	Bridge Length (FT)	Bridge Width (FT)	Bridge Area (SY)	Approach Slab Length (FT)	Approach Slab Width (FT)	Approach Slab Area (SY) (Includes both Approach Slabs)	Detail	Pavement Deductions (SY) (Bridge L + App. Slab L x Pavement Width) (Carried to Sheet 11)	Shoulder Deductions (SY) (Bridge L + App. Slab L x Shoulder Width) (Carried to Sheet 12)	516 2" DEEP JOINT SEALER, AS PER PLAN FT
2	Cos-643-0073	19.0	20.0	42.3				1	42.2		40
2	Cos-643-0240	114.0	20.0	253.4	25.0	20.0	111.2	2	364.4		40
		Bridge Deductions							(406.6)		
Sub-Totals											80
Location 2 Totals (Carried to Location Sub-Summary)											**80**

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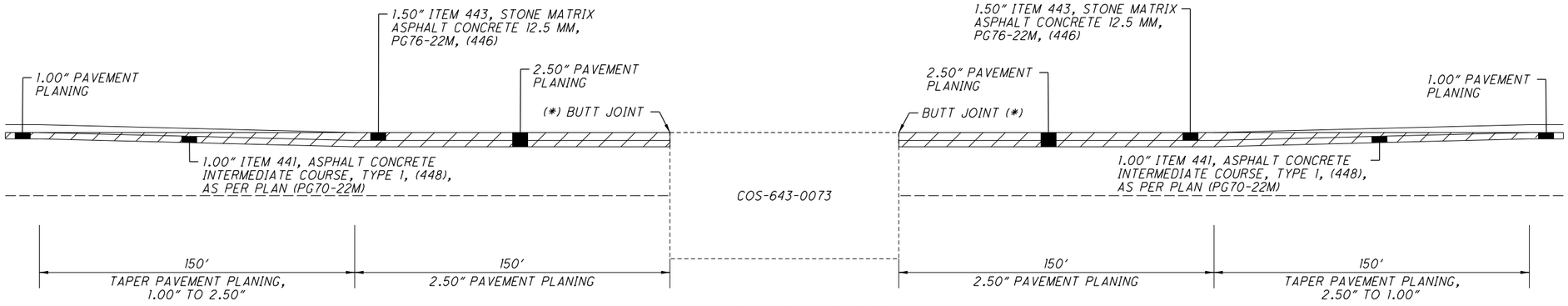
CALCULATED JLS
CHECKED JSL

DETAIL 1

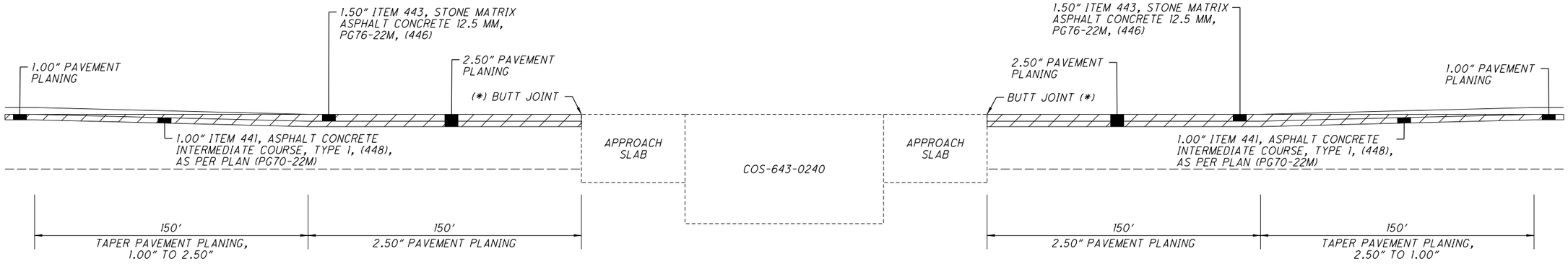


BUTT JOINTS AT BACKWALLS

(*) - ITEM 516, 2" DEEP JOINT SEALER, AS PER PLAN

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE

DETAIL 2



BUTT JOINTS AT APPROACH SLABS

(*) - ITEM 516, 2" DEEP JOINT SEALER, AS PER PLAN

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE

BRIDGE TREATMENT DETAILS

COS-621/643/651-0.00

Curb Ramp Data										
REFERENCE NO.	SHEET NO.	LOCATION	SIDE	202		608	609	690		COMMENTS
				WALK REMOVED	CURB REMOVED	4" CONCRETE WALK, (Curb Ramp Area)	CURB, TYPE 6	SPECIA L- MISC.: CURB RAMPS		
								TYPE A2	TYPE D	
			LT./RT.	SF	FT	SF	FT	EACH	EACH	
1-CR	25	S.R. 651 and Alley	Lt.	42	14	42	14		1	New Curb Ramp in Baltic
2-CR	25	S.R. 651 and Alley	Rt.		8	20	8	1		New Curb Ramp in Baltic
	Location 3d Totals (Carried to Location Sub-Summary)			42	22	62	22	1	1	
	Location 3d Totals (Carried to Location Sub-Summary)			42	22	62	22	1	1	

CALCULATED JLS
CHECKED JSL

CURB RAMP DATA

COS-621/643/651-
0.00

Edge Line Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length (Miles)	Information Only						644	Remarks
						White Edge Line (Quantities)			Yellow Ege Line (Quantities)			EDGE LINE, 6"	
						Total Miles	Highway Miles	Ramp Miles	Total Miles	Highway Miles	Ramp Miles	MILE	
1	Cos.	S.R. 621	0.00	5.98	5.98	11.96	11.96					11.96	From U.S. 36 to C.R. 190
Location 1 Total (Carried to Location Sub-Summary)												**11.96**	
2	Cos.	S.R. 643	0.00	10.59	10.59	21.18	21.18					21.18	From S.R. 83 to S.R. 651
Location 2 Total (Carried to Location Sub-Summary)												**21.18**	
3a	Cos.	S.R. 651	0.00	2.84	2.84	5.68	5.68					5.68	From S.R. 643 to Holmes Co. Line
Location 3a Total (Carried to Location Sub-Summary)												**5.68**	
3b	Hol.	S.R. 651	0.00	0.50	0.50	1.00	1.00					1.00	From Holmes Co. Line to Coshocton Co. Line
Location 3b Total (Carried to Location Sub-Summary)												**1.00**	
3c	Cos.	S.R. 651	2.84	3.04	0.20	0.40	0.40					0.40	From Holmes Co. Line to Tuscarawas Co. Line
Location 3c Total (Carried to Location Sub-Summary)												**0.40**	
3d	Tus.	S.R. 651	0.00	0.28	0.28	0.56	0.56					0.56	From Tuscarawas Co. Line to Curb Section in Baltic
Location 3d Total (Carried to Location Sub-Summary)												**0.56**	

CALCULATED JLS
CHECKED JSL

PAVEMENT MARKING DATA (EDGE LINE)

COS-621/643/651-0.00

Center Line Data									
						Information Only		644	
Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length (Miles)	Center Line (Quantities)		CENTER LINE	Remarks
						Total Miles	Equivalent Solid Line	MILE	
1	Cos.	S.R. 621	0.00	5.98	5.98	5.98	10.939	5.98	From U.S. 36 to C.R. 190
Location 1 Total (Carried to Location Sub-Summary)								5.98	
2	Cos.	S.R. 643	0.00	10.59	10.59	10.59	21.139	10.59	From S.R. 83 to S.R. 651 (See Sheet 26 for
									S.R. 643/ S.R. 83 Intersection Modification)
Location 2 Total (Carried to Location Sub-Summary)								10.59	
3a	Cos.	S.R. 651	0.00	2.84	2.84	2.84	5.426	2.84	From S.R. 643 to Holmes Co. Line
Location 3a Total (Carried to Location Sub-Summary)								2.84	
3b	Hol.	S.R. 651	0.00	0.50	0.50	0.50	1.000	0.50	From Holmes Co. Line to Coshocton Co. Line
Location 3b Total (Carried to Location Sub-Summary)								0.50	
3c	Cos.	S.R. 651	2.84	3.04	0.20	0.20	0.400	0.20	From Holmes Co. Line to Tuscarawas Co. Line
Location 3c Total (Carried to Location Sub-Summary)								0.20	
3d	Tus.	S.R. 651	0.00	0.45	0.45	0.45	0.852	0.45	From Tuscarawas Co. Line to S.R. 93 in Baltic
Location 3d Total (Carried to Location Sub-Summary)								0.45	

CALCULATED JLS
CHECKED JSL

PAVEMENT MARKING DATA (CENTER LINE)

COS-621/643/651-0.00

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39

Auxiliary Marking Data

Location	County	Route	Description	Side	644							Remarks (Place as directed by the Project Engineer) and/or any additional details listed.
					STOP LINE (24")	CROSSWALK LINE	TRANSVERSE/ DIAGONAL LINE, 24"	RAILROAD MARKING SYMBOL	SCHOOL SYMBOL MARKING, 96"	PARKING LOT STALL MARKING		
							Yellow			White	Yellow	
					FT	FT	FT	EACH	EACH	FT	FT	
1	Cos.	S.R. 621	at U.S. 36 Intersection	CL	13							
			Co. Rd. 193	Lt.	27							
			Twp. Rd. 192	Rt.	20							
			Twp. Rd. 200	Lt.	30							
			Twp. Rd. 200	Rt.	14							
			Co. Rd. 406	Lt.	28							
			Twp. Rd. 191	Rt.	38							
			Co. Rd. 186	Lt.	28							
			Twp. Rd. 186	Rt.	20							
			Twp. Rd. 190	Rt.	10							
			Twp. Rd. 171	Rt.	35							
			Twp. Rd. 188	Lt.	30							
Location 1a Totals (Carried to Location Sub-Summary)					**293**							
2	Cos.	S.R. 643	at S.R. 83 Intersection	CL	17		198					See Sheet 26 for Details
			on S.R. 643 at Co. Rd. 1	CL	10							
			Co. Rd. 1	Lt.	9							
			Co. Rd. 1	Lt.	9							
			Twp. Rd. 1205	Rt.	8							
			Twp. Rd. 198	Lt.	20							
			Twp. Rd. 198	Rt.	12							
			Co. Rd. 186	Rt.	10							
			Twp. Rd. 206	Lt.	12							
			Twp. Rd. 195	Rt.	12							
			Twp. Rd. 212	Lt.	28							
			Twp. Rd. 189	Rt.	12							
			Co. Rd. 190	Rt.	10							
			Twp. Rd. 214	Lt.	12							
			Twp. Rd. 11	Rt.	12							
			Twp. Rd. 215	Lt.	12							
			Twp. Rd. 219	Lt.	12							
			Twp. Rd. 227	Rt.	20							
			Twp. Rd. 2148	Rt.	10							
			Twp. Rd. 220	Lt.	11							
			Co. Rd. 12	Lt.	16							
			on S.R. 643 at S.R. 651 Intersection (East Bound)	CL	16							
			on S.R. 643 at S.R. 651 Intersection (West Bound)	CL	10							
Location 2 Totals (Carried to Location Sub-Summary)					**300**		**198**					

CALCULATED JLS
CHECKED JSL

PAVEMENT MARKING DATA (AUXILIARY)

COS-621/643/651-0.00

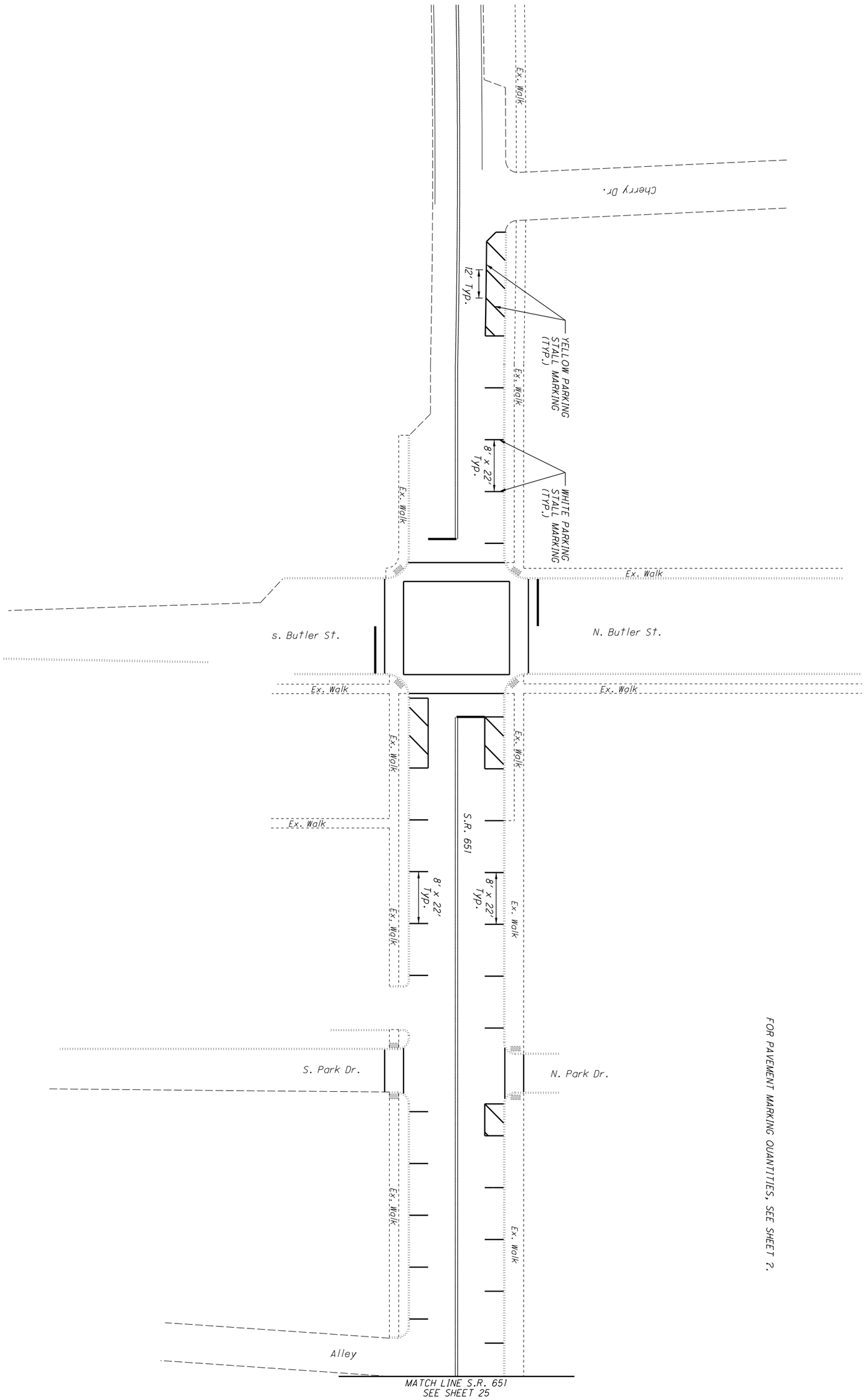
Auxiliary Marking Data

Location	County	Route	Description	Side	644 STOP LINE (24")	644 CROSSWALK LINE	644 TRANSVERSE/DIAGONAL LINE, 24" Yellow	644 RAILROAD MARKING SYMBOL	644 SCHOOL SYMBOL MARKING, 96"	644 PARKING LOT STALL MARKING White	644 PARKING LOT STALL MARKING Yellow	Remarks (Place as directed by the Project Engineer) and/or any additional details listed.
					FT	FT		EACH	EACH	FT	FT	
3a	Cos.	S.R. 651	on S.R. 651 at S.R. 643 Intersection	CL	12							
			Co. Rd. 10	Rt.	15							
			Twp. Rd. 272	Rt.	8							
			Twp. Rd. 85	Rt.	15							
			Twp. Rd. 231	Rt.	12							
			Twp. Rd. 178	Lt.	15							
			S.L.M. 2.48	Rt.					1			Place at existing school sign
			S.L.M. 2.72	Lt.					1			Place at existing school sign
Location 3a Totals (Carried to Location Sub-Summary)					**77**				**2**			
3b	Hol.	S.R. 651	Twp. Rd. 177	Lt.	20							
Location 3b Totals (Carried to Location Sub-Summary)					**20**							
3c	Cos.	S.R. 651	No Extra Areas									
Location 3c Totals (Carried to Location Sub-Summary)												
3d	Tus.	S.R. 651	Sunset Dr.	Lt.	18							
			West St.	Lt.	25							
			Cherry Dr.	Lt.	12							
			on S.R. 651 before Butler St. Intersection	CL	12	88						Place at existing location.
			N. Butler St.	Lt.	20	80						Place at existing location.
			S. Butler St.	Rt.	20	80						Place at existing location.
			on S.R. 651 after Butler St. Intersection	CL	12	88						Place at existing location.
			N. Park Dr.	Lt.		38						Place at existing location.
			S. Park Dr.	Rt.		38						Place at existing location.
			S.L.M. 0.37	Lt./Rt.		88						Place at existing location.
			S.L.M. 0.38	Rt.				1				Place at existing location.
			S.L.M. 0.44	Lt.				1				Place at existing location.
			on S.R. 651 before S.R. 93 Intersection	CL	12	88						Place at existing location.
			On-Street Parking in Baltic							336	580	See Sheets 24-25 for Details
Sub-Totals										336	580	
Location 3d Totals (Carried to Location Sub-Summary)					**131**	**588**		**2**		**916**		

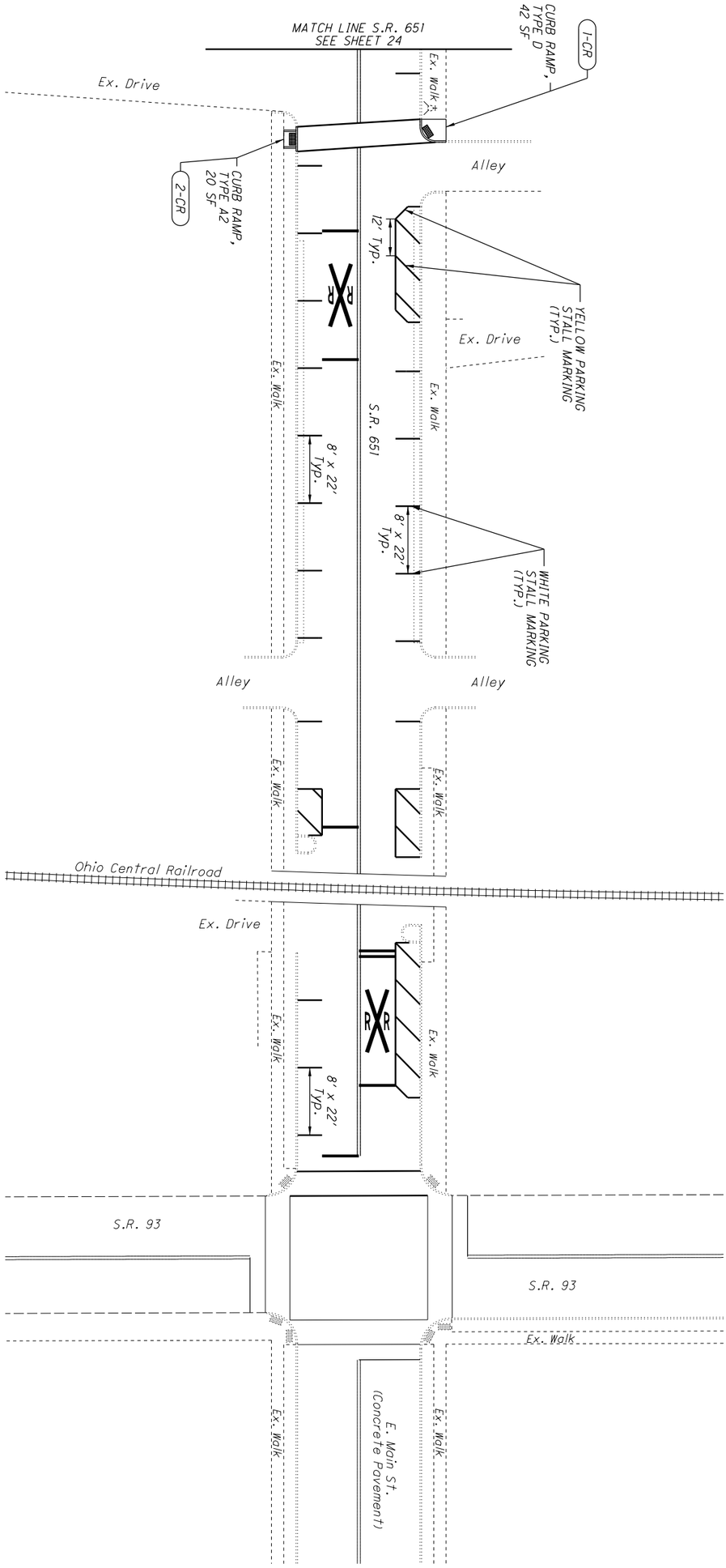
CALCULATED JLS
CHECKED JSL

PAVEMENT MARKING DATA (AUXILIARY)

COS-621/643/651-0.00



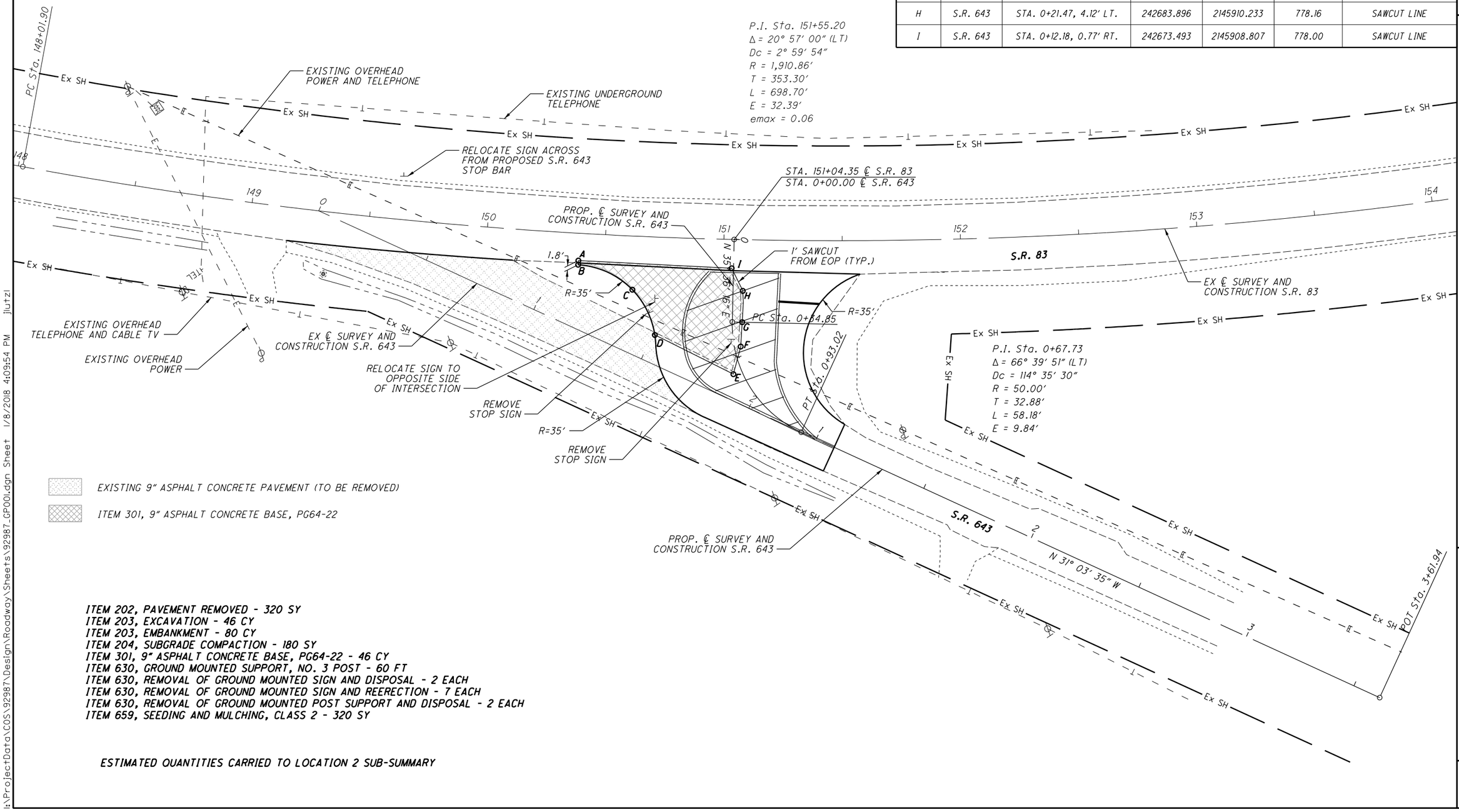
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET ?.



FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 7.
FOR CURB RAMP QUANTITIES, SEE SHEET 19

CN PT	LOCATION	STATION & OFFSET	NORTHING	EASTING	ELEVATION	FEATURE CODE
SV1	S.R. 83	STA. 148+91.02, 24.44' LT.	242512.262	2146050.898	777.14	1" REBAR W/ ALUM. ODOT CAP
SV2	S.R. 83	STA. 151+61.85, 36.30' RT.	242726.941	2145874.077	777.31	1" REBAR W/ ALUM. ODOT CAP

PT	ROUTE	STATION & OFFSET	NORTHING	EASTING	ELEVATION	COMMENTS
A	S.R. 83	STA. 150+39.14, 11.53' RT.	242634.307	2145960.486	778.09	SAWCUT LINE
B	S.R. 83	STA. 150+39.14, 13.30' RT.	242635.715	2145961.552	778.12	PROP SHLD
C	S.R. 643	STA. 0+22.19, 42.51' RT.	242657.331	2145948.570	778.87	RADIUS
D	S.R. 643	STA. 0+38.62, 32.82' RT.	242678.482	2145951.499	779.61	SAWCUT LINE
E	S.R. 643	STA. 0+55.99, 3.75' RT.	242710.874	2145933.414	779.95	SAWCUT LINE
F	S.R. 643	STA. 0+45.84, 2.67' LT.	242702.985	2145924.284	779.12	SAWCUT LINE
G	S.R. 643	STA. 0+34.85, 4.18' LT.	242694.800	2145917.977	778.63	SAWCUT LINE
H	S.R. 643	STA. 0+21.47, 4.12' LT.	242683.896	2145910.233	778.16	SAWCUT LINE
I	S.R. 643	STA. 0+12.18, 0.77' RT.	242673.493	2145908.807	778.00	SAWCUT LINE



ITEM 202, PAVEMENT REMOVED - 320 SY
ITEM 203, EXCAVATION - 46 CY
ITEM 203, EMBANKMENT - 80 CY
ITEM 204, SUBGRADE COMPACTION - 180 SY
ITEM 301, 9" ASPHALT CONCRETE BASE, PG64-22 - 46 CY
ITEM 630, GROUND MOUNTED SUPPORT, NO. 3 POST - 60 FT
ITEM 630, REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL - 2 EACH
ITEM 630, REMOVAL OF GROUND MOUNTED SIGN AND REERECTION - 7 EACH
ITEM 630, REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL - 2 EACH
ITEM 659, SEEDING AND MULCHING, CLASS 2 - 320 SY

ESTIMATED QUANTITIES CARRIED TO LOCATION 2 SUB-SUMMARY

HORIZONTAL SCALE IN FEET
0 10 20 40

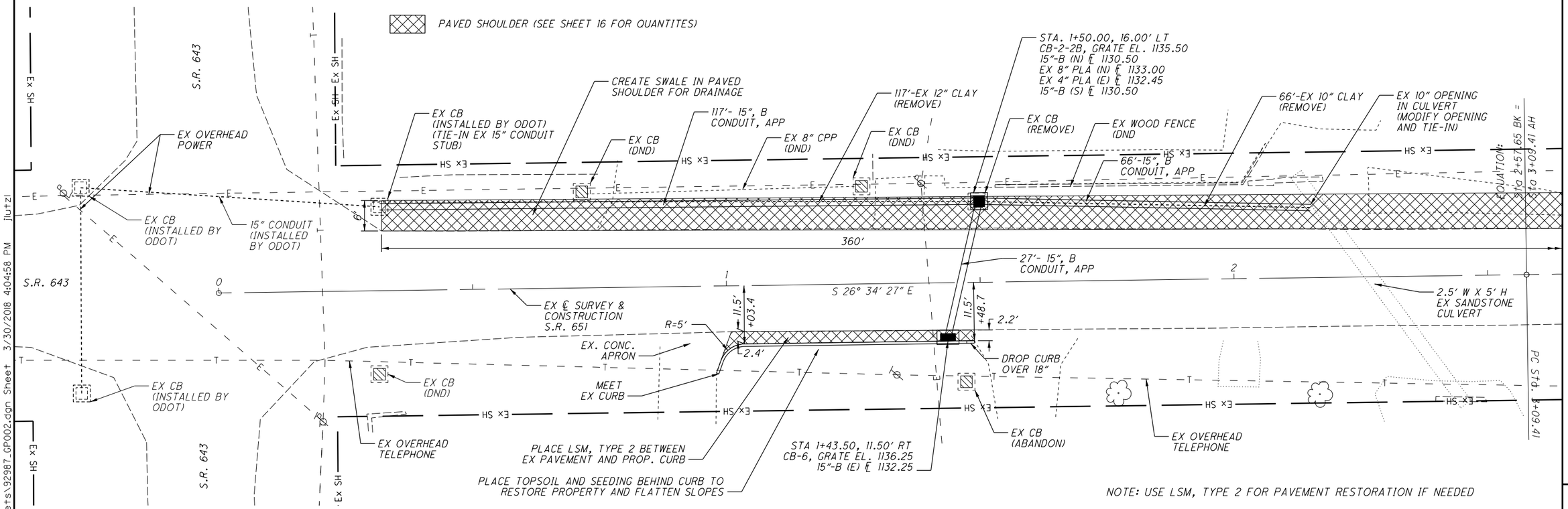
CALCULATED JLS
CHECKED JSL

S.R. 83/ S.R. 643
PLAN SHEET

COS-621/643/651-
0.00

26
39

CN PT	LOCATION	STATION & OFFSET	NORTHING	EASTING	ELEVATION	FEATURE CODE
SV1	S.R. 651	STA. 5+08.67, 27.31' RT.	283816.364	2173226.979	1137.98	1" REBAR W/ ALUM. ODOT CAP
SV2	S.R. 651	STA. 0+44.58, 17.01' LT.	284205.589	2173085.527	1145.50	1" REBAR W/ ALUM. ODOT CAP



NOTE: USE LSM, TYPE 2 FOR PAVEMENT RESTORATION IF NEEDED

ITEM 202, PIPE REMOVED, 24" AND UNDER - 183 FT
ITEM 202, CATCH BASIN REMOVED - 1 EACH
ITEM 202, CATCH BASIN ABANDONED - 1 EACH
ITEM 203, EXCAVATION - 5 CY
ITEM 609, CURB, TYPE 4-C - 54 FT
ITEM 611, 15" CONDUIT, TYPE B, AS PER PLAN - 210 FT
ITEM 611, CATCH BASIN, NO. 6 - 1 EACH
ITEM 611, CATCH BASIN, NO. 2-2B - 1 EACH
ITEM 613, LOW STRENGTH MORTAR BACKFILL, TYPE 2 - 10 CY
ITEM 653, TOPSOIL, FURNISHED AND PLACED - 5 CY
ITEM 659, SEEDING AND MULCHING, CLASS 2 - 20 SY

ESTIMATED QUANTITIES CARRIED TO LOCATION 3A SUB-SUMMARY

ITEM 611, 15" CONDUIT, TYPE B, AS PER PLAN

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL INCIDENTALS NECSSARY TO TIE-IN THE PROPOSED 15" CONDUIT TO EXISTING CATCH BASIN AND CULVERT.

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED JLS
CHECKED JSL

S.R. 643/ S.R. 651
PLAN SHEET

COS-621/643/651-
0.00

27
39

I:\ProjectData\COS\92987\Design\Roadway\Sheets\92987_GP002.dgn Sheet 3/30/2018 4:04:58 PM Jlutzi

Detail	See SCD TC-65.11
1	Tapered Acceleration Lane
2	Deceleration Lane
3	Multilane Divided/Controlled Access
4	4 Lane Divided to 2 Lane Transition
5	4 Lane Undivided to 2 Lane Transition
6	One Lane Bridge
7	Stop Approach

Detail	See SCD TC-65.11
8	Thru Approach
9	Two-Way Left Turn Lane
10	Approach with Left Turn Lane
11	Horizontal Curve 40' Spacing
12	Horizontal Curve 20' Spacing
Gap	Center Line at 80' Typical Spacing
Rem	See Remarks

Raised Pavement Marker Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Detail	621		Prismatic Retro-Reflector Colors				Remarks
										Information Only				
										One-Way		Two-Way		
					Miles	Lin. Ft.		RPM EACH	RAISED PAVEMENT MARKER REMOVED EACH	White	Yellow	White/ Red	Yellow/ Yellow	
1	Cos.	S.R. 621	0.00	0.11	0.11	580.8	7,12	35	35	16			19	PC 0.00, PT 0.11, L = 158', 22 Deg. Curve (Stop Approach at U.S. 36)
			0.11	0.20	0.09	475.2	11	12	12				12	PC 0.11, PT 0.15, L = 211', 9 Deg. Curve
			0.20	0.38	0.18	950.4	12	30	30				30	PC 0.31, PT 0.35, L = 211', 9 Deg. Curve
			0.38	0.49	0.11	580.8	12	17	17				17	PC 0.38, PT 0.40, L = 106', 14 Deg. Curve
			0.49	0.65	0.16	844.8	Gap	11	11				11	
			0.65	0.86	0.21	1,108.8	12	32	32				32	PC 0.74, PT 0.77, L = 158', 10 Deg. Curve
			0.86	1.73	0.87	4,593.6	Gap	58	58				58	
			1.73	1.78	0.05	264.0	11	7	7				7	PC 1.73, PT 1.78, L = 264', 8 Deg. Curve
			1.78	1.92	0.14	739.2	Gap	10	10				10	
			1.92	2.03	0.11	580.8	11	15	15				15	PC 1.92, PT 2.03, L = 581', 8 Deg. Curve
			2.03	2.24	0.21	1,108.8	12	34	34				34	PC 2.10, PT 2.15, L = 264', 26 Deg. Curve
			2.24	2.44	0.20	1,056.0	Gap	14	14				14	
			2.44	2.49	0.05	264.0	11	7	7				7	PC 2.44, PT 2.49, L = 264', 6 Deg. Curve
			2.49	2.76	0.27	1,425.6	Gap	18	18				18	
			2.76	2.81	0.05	264.0	11	7	7				7	PC 2.76, PT 2.81, L = 264', 8 Deg. Curve
			2.81	4.85	2.04	10,771.2	Gap	135	135				135	
			4.85	5.00	0.15	792.0	11	20	20				20	PC 4.85, PT 5.00, L = 792', 8 Deg. Curve
			5.00	5.79	0.79	4,171.2	Gap	53	53				53	
			5.79	5.92	0.13	686.4	11	18	18				18	PC 5.79, PT 5.92, L = 686', 7 Deg. Curve
			5.92	5.98	0.06	316.8	Gap	4	4				4	End at Co. Rd. 190
Sub-Totals										**16**			**521**	
Location 1 Totals (Carried to Location Sub-Summary)								**537**	**537**					

CALCULATED JLS CHECKED JSL

RAISED PAVEMENT MARKER DATA

COS-621/643/651-0.00

Detail	See SCD TC-65.11
1	Tapered Acceleration Lane
2	Deceleration Lane
3	Multilane Divided/Controlled Access
4	4 Lane Divided to 2 Lane Transition
5	4 Lane Undivided to 2 Lane Transition
6	One Lane Bridge
7	Stop Approach

Detail	See SCD TC-65.11
8	Thru Approach
9	Two-Way Left Turn Lane
10	Approach with Left Turn Lane
11	Horizontal Curve 40' Spacing
12	Horizontal Curve 20' Spacing
Gap	Center Line at 80' Typical Spacing
Rem	See Remarks

Raised Pavement Marker Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Detail	621		Prismatic Retro-Reflector Colors Information Only				Remarks
					Miles	Lin. Ft.		RPM	RAISED PAVEMENT MARKER REMOVED	One-Way		Two-Way		
								EACH	EACH	White	Yellow	White/ Red	Yellow/ Yellow	
2	Cos.	S.R. 643	0.00	0.16	0.16	844.8	7	27	27	16			11	Stop Approach at S.R. 83
			0.16	0.32	0.16	844.8	Gap	11	11				11	
			0.32	0.46	0.14	739.2	12	21	21				21	PC 0.41, PT 0.43, L = 106', 17 Deg. Curve
			0.46	0.57	0.11	580.8	12	17	17				17	PC 0.46, PT 0.41, L = 106', 23 Deg. Curve
			0.57	0.64	0.07	369.6	Gap	5	5				5	
			0.64	0.84	0.20	1,056.0	12	29	29				29	PC 0.73, PT 0.75, L = 106', 19 Deg. Curve
			0.84	0.97	0.13	686.4	12	21	21				21	PC 0.87, PT 0.90, L = 158', 16 Deg. Curve
			0.97	1.07	0.10	528.0	12	17	17				17	PC 0.97, PT 1.00, L = 158', 16 Deg. Curve
			1.07	1.19	0.12	633.6	12	20	20				20	PC 1.07, PT 1.10, L = 158', 13 Deg. Curve
			1.19	2.15	0.96	5,068.8	Gap	64	64				64	
			2.15	2.37	0.22	1,161.6	12	37	37				37	PC 2.24, PT 2.30, L = 317', 13 Deg. Curve
			2.37	2.40	0.03	158.4	12	6	6				6	PC 2.37, PT 2.39, L = 106', 19 Deg. Curve
			2.40	2.45	0.05	264.0	12	9	9				9	PC 2.40, PT 2.42, L = 106', 57 Deg. Curve
			2.45	2.57	0.12	633.6	12	20	20				20	PC 2.45, PT 2.48, L = 158', 25 Deg. Curve
			2.57	2.64	0.07	369.6	Gap	5	5				5	
			2.64	2.85	0.21	1,108.8	12	32	32				32	PC 2.73, PT 2.76, L = 158', 11 Deg. Curve
			2.85	3.36	0.51	2,692.8	Gap	34	34				34	
			3.36	3.51	0.15	792.0	12	24	24				24	PC 3.45, PT 3.48, L = 158', 13 Deg. Curve
			3.51	3.62	0.11	580.8	12	17	17				17	PC 3.51, PT 3.53, L = 106', 19 Deg. Curve
			3.62	3.87	0.25	1,320.0	Gap	17	17				17	
			3.87	4.11	0.24	1,267.2	12	40	40				40	PC 3.96, PT 4.02, L = 317', 10 Deg. Curve
			4.11	4.17	0.06	316.8	12	12	12				12	PC 4.14, PT 4.17, L = 158', 9 Deg. Curve
			4.17	4.27	0.10	528.0	12	19	19				19	PC 4.17, PT 4.21, L = 211', 13 Deg. Curve
			4.27	4.40	0.13	686.4	12	27	27				27	PC 4.27, PT 4.34, L = 370', 12 Deg. Curve
			4.40	4.45	0.05	264.0	12	9	9				9	PC 4.40, PT 4.42, L = 106', 14 Deg. Curve
			4.45	4.57	0.12	633.6	12	20	20				20	PC 4.45, PT 4.48, L = 158', 15 Deg. Curve
			4.57	4.76	0.19	1,003.2	12	31	31				31	PC 4.67, PT 4.72, L = 158', 15 Deg. Curve
			4.76	4.89	0.13	686.4	12	23	23				23	PC 4.76, PT 4.80 L = 158', 15 Deg. Curve
			4.89	5.64	0.75	3,960.0	Gap	50	50				50	
			5.64	5.81	0.17	897.6	12	27	27				27	PC 5.73, PT 5.76, L = 158', 13 Deg. Curve
			5.81	5.89	0.08	422.4	11	10	10				10	PC 5.81, PT 5.89, L = 422', 8 Deg. Curve
			5.89	6.12	0.23	1,214.4	Gap	16	16				16	
			6.12	6.26	0.14	739.2	12	21	21				21	PC 6.21, PT 6.23, L = 106', 14 Deg. Curve
Sub-Totals										16			722	
Location 2 Totals (Carried to Sheet ?)								738	738					

CALCULATED JLS
CHECKED JSL

RAISED PAVEMENT MARKER DATA

COS-621/643/651-0.00

29
39

Detail	See SCD TC-65.11
1	Tapered Acceleration Lane
2	Deceleration Lane
3	Multilane Divided/Controlled Access
4	4 Lane Divided to 2 Lane Transition
5	4 Lane Undivided to 2 Lane Transition
6	One Lane Bridge
7	Stop Approach

Detail	See SCD TC-65.11
8	Thru Approach
9	Two-Way Left Turn Lane
10	Approach with Left Turn Lane
11	Horizontal Curve 40' Spacing
12	Horizontal Curve 20' Spacing
Gap	Center Line at 80' Typical Spacing
Rem	See Remarks

Raised Pavement Marker Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Detail	621		Prismatic Retro-Reflector Colors				Remarks
										Information Only				
								RPM	RAISED PAVEMENT MARKER REMOVED	One-Way		Two-Way		
					Miles	Lin. Ft.				White	Yellow	White/ Red	Yellow/ Yellow	
								EACH	EACH					
2	Cos.	S.R. 643	6.26	6.38	0.12	633.6	12	20	20				20	PC 6.26, PT 6.29, L = 158', 13 Deg. Curve
			6.38	6.50	0.12	633.6	11	18	18				18	PC 6.38, PT 6.50, L = 634', 6 Deg. Curve
			6.50	6.58	0.08	422.4	Gap	6	6				6	
			6.58	6.60	0.02	105.6	11	3	3				3	PC 6.58, PT 6.60, L = 106', 9 Deg. Curve
			6.60	6.91	0.31	1,636.8	Gap	21	21				21	
			6.91	7.11	0.20	1,056.0	12	31	31				31	PC 7.00, PT 7.03, L = 158', 28 Deg. Curve
			7.11	7.32	0.21	1,108.8	12	32	32				32	PC 7.20, PT 7.23, L = 158', 25 Deg. Curve
			7.32	7.35	0.03	158.4	Gap	2	2				2	
			7.35	7.57	0.22	1,161.6	12	35	35				35	PC 7.44, PT 7.48, L = 211', 14 Deg. Curve
			7.57	7.64	0.07	369.6	Gap	5	5				5	
			7.64	7.89	0.25	1,320.0	12	42	42				42	PC 7.7,3 PT 7.80, L = 370', 14 Deg. Curve
			7.89	8.07	0.18	950.4	Gap	12	12				12	
			8.07	8.15	0.08	422.4	11	11	11				11	PC 8.0,7 PT 8.15, L = 422', 6 Deg. Curve
			8.15	8.18	0.03	158.4	Gap	2	2				2	
			8.18	8.38	0.20	1,056.0	12	29	29				29	PC 8.2,7 PT 8.29, L = 106', 19 Deg. Curve
			8.38	8.51	0.13	686.4	12	23	23				23	PC 8.44, PT 8.48, L = 211', 21 Deg. Curve
			8.51	8.62	0.11	580.8	12	17	17				17	PC 8.51, PT 8.53, L = 106', 14 Deg. Curve
			8.62	8.80	0.18	950.4	12	30	30				30	PC 8.66, PT 8.71, L = 264', 15 Deg. Curve
			8.80	9.75	0.95	5,016.0	Gap	63	63				63	
			9.75	9.77	0.02	105.6	11	3	3				3	PC 9.75, PT 9.77, L = 106', 9 Deg. Curve
			9.77	10.02	0.25	1,320.0	Gap	17	17				17	
			10.02	10.22	0.20	1,056.0	12	29	29				29	PC 10.11, PT 10.13, L = 106', 14 Deg. Curve
			10.22	10.39	0.17	897.6	Gap	12	12				12	
			10.39	10.42	0.03	158.4	11	4	4				4	PC 10.39, PT 10.42, L = 158', 9 Deg. Curve
			10.42	10.59	0.17	897.6	Gap	28	28	16			12	Stop Approach at S.R. 651
Sub-Totals										16			479	
Location 2 Totals (This Sheet)								495	495					
Location 2 Totals (Carried From Sheet 29)								738	738	16			722	
Sub-Totals										**32**			**1,201**	
Location 2 Totals (Carried to Location Sub-Summary)								**1,233**	**1,233**					

CALCULATED JLS
CHECKED JSL

RAISED PAVEMENT MARKER DATA

COS-621/643/651-0.00

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Detail	See SCD TC-65.11
1	Tapered Acceleration Lane
2	Deceleration Lane
3	Multilane Divided/Controlled Access
4	4 Lane Divided to 2 Lane Transition
5	4 Lane Undivided to 2 Lane Transition
6	One Lane Bridge
7	Stop Approach

Detail	See SCD TC-65.11
8	Thru Approach
9	Two-Way Left Turn Lane
10	Approach with Left Turn Lane
11	Horizontal Curve 40' Spacing
12	Horizontal Curve 20' Spacing
Gap	Center Line at 80' Typical Spacing
Rem	See Remarks

Raised Pavement Marker Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Detail	621		Prismatic Retro-Reflector Colors				Remarks
										Information Only				
								RPM	RAISED PAVEMENT MARKER REMOVED	One-Way		Two-Way		
					Miles	Lin. Ft.				White	Yellow	White/ Red	Yellow/ Yellow	
								EACH	EACH					
3a	Cos.	S.R. 651	0.00	0.16	0.16	844.8	7	27	27	16			11	Stop Approach at S.R. 643
			0.16	0.37	0.21	1,108.8	Gap	14	14				14	
			0.37	0.57	0.20	1,056.0	12	29	29				29	PC 0.46, PT 0.48, L = 106', 51 Deg. Curve
			0.57	1.08	0.51	2,692.8	Gap	34	34				34	
			1.08	1.28	0.20	1,056.0	12	29	29				29	PC 1.17, PT 1.19, L = 106', 14 Deg. Curve
			1.28	1.44	0.16	844.8	12	24	24				24	PC 1.33, PT 1.35, L = 106', 55 Deg. Curve
			1.44	1.56	0.12	633.6	Gap	8	8				8	
			1.56	1.75	0.19	1,003.2	12	29	29				29	PC 1.64, PT 1.66, L = 106', 14 Deg. Curve
			1.75	1.88	0.13	686.4	Gap	9	9				9	
			1.88	2.08	0.20	1,056.0	12	29	29				29	Pc 1.97, PT 1.99, L = 106', 28 Deg. Curve
			2.08	2.17	0.09	475.2	Gap	6	6				6	
			2.17	2.31	0.14	739.2	12	23	23				23	PC 2.26, PT 2.29, L = 158', 25 Deg. Curve
			2.31	2.34	0.03	158.4	12	6	6				6	PC 2.31, PT 2.33, L = 106', 28 Deg. Curve
			2.34	2.47	0.13	686.4	12	23	23				23	PC 2.34, PT 2.38, L = 211', 38 Deg. Curve
			2.47	2.74	0.27	1,425.6	Gap	18	18				18	
			2.74	2.84	0.10	528.0	12	9	9				9	PC 2.83, PT 2.84, L = 53', 40 Deg. Curve; End at Hol. Co. Line
Sub-Totals										**16**			**301**	
Location 3a Totals (Carried to Location Sub-Summary)								**317**	**317**					
3b	Hol.	S.R. 651	0.00	0.50	0.50	2,640.0	Gap	33	33				33	Begin at Cos./Hol. Co. Line; End at Hol./Cos. Co. Line
Sub-Totals													**33**	
Location 3b Totals (Carried to Location Sub-Summary)								**33**	**33**					
3c	Cos.	S.R. 651	2.84	2.93	0.09	475.2	12	18	18				18	Begin at Cos./Hol. Co. Line
			2.93	3.04	0.11	580.8	Gap	8	8				8	End at Cos./Tus. Co. Line
Sub-Totals													**26**	
Location 3c Totals (Carried to Location Sub-Summary)								**26**	**26**					
3d	Tus.	S.R. 651	0.00	0.45	0.45	2,376.0		No RPM's						From Tus. Co. Line to S.R. 93 in Baltic
Sub-Totals														
Location 3d Totals (Carried to Location Sub-Summary)														

CALCULATED JLS
CHECKED JSL

RAISED PAVEMENT MARKER DATA

COS-621/643/651-0.00

Location 1 Sheet Totals										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	5	13	14	15	20	21	22	28					
														ROADWAY
	750				4,475					202	23500	5,225	SY	WEARING COURSE REMOVED
				11.96						209	72051	11.96	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
														PAVEMENT
20										253	02000	20	CY	PAVEMENT REPAIR (A)
			73,874							254	01000	73,874	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.00"
			9,604		359					407	20000	9,963	GAL	NON-TRACKING TACK COAT
				5,614						408	10001	5,614	GAL	PRIME COAT, AS PER PLAN
					187					441	50000	187	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
	112		2,566							441	50100	2,678	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
	9		2,053							441	50200	2,062	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)
				780						617	10101	780	CY	COMPACTED AGGREGATE, AS PER PLAN
														TRAFFIC CONTROL
									537	621	00100	537	EACH	RPM
									537	621	54000	537	EACH	RAISED PAVEMENT MARKER REMOVED
						11.96				644	00104	11.96	MILE	EDGE LINE, 6"
							5.98			644	00300	5.98	MILE	CENTER LINE
								293		644	00500	293	FT	STOP LINE
														MAINTENANCE OF TRAFFIC
		42								614	12460	42	EACH	WORK ZONE MARKING SIGN
		2								614	13000	2	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
		5.98								614	21500	5.98	MILE	WORK ZONE CENTER LINE, CLASS II, 642 PAINT
		5.98								614	21550	5.98	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT

CALCULATED JLS
CHECKED JSL

LOCATION 1 SUB-SUMMARY

COS-621/643/651-0.00

Location 2 Sheet Totals													ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	5	7	13	14	15	17	20	21	22	26	30					
																	ROADWAY
											320		202	23000	320	SY	PAVEMENT REMOVED
	1,580					3,881							202	23500	5,461	SY	WEARING COURSE REMOVED
											46		203	10000	46	CY	EXCAVATION
											80		203	20000	80	CY	EMBANKMENT
											180		204	10000	180	SY	SUBGRADE COMPACTION
					21.18								209	72051	21.18	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
																	EROSION CONTROL
											320		659	00510	320	SY	SEEDING AND MULCHING, CLASS 2
																	PAVEMENT
850													253	02000	850	CY	PAVEMENT REPAIR (A)
				121,269									254	01000	121,269	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"
				2,864									254	01000	2,864	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 2.50"
											46		301	46000	46	CY	ASPHALT CONCRETE BASE, PG64-22
				16,138		337							407	20000	16,475	GAL	NON-TRACKING TACK COAT
					9,941								408	10001	9,941	GAL	PRIME COAT, AS PER PLAN
	38					176							441	50000	214	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
				20									441	50100	20	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
	19			3,449									441	50201	3,468	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN
	178			5,150									443	12000	5,328	CY	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)
							80						516	31011	80	FT	2" DEEP JOINT SEALER, AS PER PLAN
					1,381								617	10101	1,381	CY	COMPACTED AGGREGATE, AS PER PLAN
			428										618	40100	428	FT	RUMBLE STRIPS, (ASPHALT CONCRETE)
																	TRAFFIC CONTROL
												1,233	621	00100	1,233	EACH	RPM
												1,233	621	54000	1,233	EACH	RAISED PAVEMENT MARKER REMOVED
											60		630	03100	60	FT	GROUND MOUNTED SUPPORT, NO. 3 POST
											2		630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
											7		630	85100	7	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION
											2		630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
								21.18					644	00104	21.18	MILE	EDGE LINE, 6"
									10.59				644	00300	10.59	MILE	CENTER LINE
										300			644	00500	300	FT	STOP LINE
										198			644	00700	198	FT	TRANSVERSE/DIAGONAL LINE
																	MAINTENANCE OF TRAFFIC
		62											614	12460	62	EACH	WORK ZONE MARKING SIGN
		4											614	13000	4	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
		10.59											614	21550	10.59	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT
		10.59											614	21550	10.59	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT

CALCULATED JLS
CHECKED JSL

LOCATION 2 SUB-SUMMARY

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Location 3A Sheet Totals												ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	4	5	13	14	16	20	21	23	27	31					
																ROADWAY
	330					2,031						202	23500	2,361	SY	WEARING COURSE REMOVED
										183		202	35100	183	FT	PIPE REMOVED, 24" AND UNDER
										1		202	58100	1	EACH	CATCH BASIN REMOVED
										1		202	58500	1	EACH	CATCH BASIN ABANDONED
										5		203	10000	5	CY	EXCAVATION
					5.50							209	72051	5.50	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
										54		609	24510	54	FT	CURB, TYPE 4-C
																EROSION CONTROL
										5		653	10000	5	CY	TOPSOIL FURNISHED AND PLACED
										20		659	00510	20	SY	SEEDING AND MULCHING, CLASS 2
																DRAINAGE
										210		611	05901	210	FT	15" CONDUIT, TYPE B, AS PER PLAN
										1		611	98370	1	EACH	CATCH BASIN, NO. 6
										1		611	98470	1	EACH	CATCH BASIN, NO. 2-2B
										10		613	41300	10	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 2)
																PAVEMENT
50												251	01010	50	CY	PARTIAL DEPTH PAVEMENT REPAIR (441)
450												253	02000	450	CY	PAVEMENT REPAIR (B)
				37,172	19,360							254	01000	56,532	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"
				1,256								254	01000	1,256	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 2.50"
				4,996	2,517	163						407	20000	7,676	GAL	NON-TRACKING TACK COAT
					1,291							408	10001	1,291	GAL	PRIME COAT, AS PER PLAN
	12					85						441	50000	97	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
				1,068	538							441	50201	1,606	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN
	40			1,602	807							443	12000	2,449	CY	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)
					180							617	10101	180	CY	COMPACTED AGGREGATE, AS PER PLAN
		16,662										690	12050	16,662	SY	SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS
											317	621	00100	317	EACH	**TRAFFIC CONTROL** RPM
											317	621	54000	317	EACH	RAISED PAVEMENT MARKER REMOVED
							5.68					644	00104	5.68	MILE	EDGE LINE, 6"
								2.84				644	00300	2.84	MILE	CENTER LINE
									77			644	00500	77	FT	STOP LINE
									2			644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"
			22									614	12460	22	EACH	**MAINTENANCE OF TRAFFIC** WORK ZONE MARKING SIGN
			1									614	13000	1	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			2.84									614	21500	2.84	MILE	WORK ZONE CENTER LINE, CLASS II, 642 PAINT
			2.84									614	21550	2.84	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT

CALCULATED JLS
CHECKED JSL

LOCATION 3A SUB-SUMMARY

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Location 3b Sheet Totals											ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	4	5	13	14	16	20	21	23	31					
															ROADWAY
	40					146					202	23500	186	SY	WEARING COURSE REMOVED
					1.00						209	72051	1.00	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
															PAVEMENT
10											251	01010	10	CY	PARTIAL DEPTH PAVEMENT REPAIR (441)
100											253	02000	100	CY	PAVEMENT REPAIR (B)
				7,040	3,520						254	01000	10,560	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"
				916	458	12					407	20000	1,386	GAL	NON-TRACKING TACK COAT
					235						408	10001	235	GAL	PRIME COAT, AS PER PLAN
	2					7					441	50000	9	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
				196	98						441	50201	294	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN
	8			294	147						443	12000	449	CY	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)
					33						617	10101	33	CY	COMPACTED AGGREGATE, AS PER PLAN
		2,934									690	12050	2,934	SY	SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS
															TRAFFIC CONTROL
										33	621	00100	33	EACH	RPM
										33	621	54000	33	EACH	RAISED PAVEMENT MARKER REMOVED
							1.00				644	00104	1.00	MILE	EDGE LINE, 6"
								0.50			644	00300	0.50	MILE	CENTER LINE
									20		644	00500	20	FT	STOP LINE
															MAINTENANCE OF TRAFFIC
			4								614	12460	4	EACH	WORK ZONE MARKING SIGN
			0.50								614	21500	0.50	MILE	WORK ZONE CENTER LINE, CLASS II, 642 PAINT
			0.50								614	21550	0.50	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT

CALCULATED JLS
CHECKED JSL

LOCATION 3B SUB-SUMMARY

COS-621/643/651-0.00

Location 3c Sheet Totals									ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	4	5	13	14	20	21	31					
													ROADWAY
	50								202	23500	50	SY	WEARING COURSE REMOVED
					0.40				209	72051	0.40	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
													PAVEMENT
5									251	01010	5	CY	PARTIAL DEPTH PAVEMENT REPAIR (441)
50									253	02000	50	CY	PAVEMENT REPAIR (B)
				2,816	1,408				254	01000	4,224	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"
				367	184				407	20000	551	GAL	NON-TRACKING TACK COAT
					94				408	10001	94	GAL	PRIME COAT, AS PER PLAN
	3								441	50000	3	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
				79	40				441	50201	119	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN
	3			118	59				443	12000	180	CY	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)
					13				617	10101	13	CY	COMPACTED AGGREGATE, AS PER PLAN
		1,174							690	12050	1,174	SY	SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS
													TRAFFIC CONTROL
								26	621	00100	26	EACH	RPM
								26	621	54000	26	EACH	RAISED PAVEMENT MARKER REMOVED
						0.40			644	00104	0.40	MILE	EDGE LINE, 6"
							0.20		644	00300	0.20	MILE	CENTER LINE
													MAINTENANCE OF TRAFFIC
			4						614	12460	4	EACH	WORK ZONE MARKING SIGN
			0.20						614	21500	0.20	MILE	WORK ZONE CENTER LINE, CLASS II, 642 PAINT
			0.20						614	21550	0.20	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT

CALCULATED JLS
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LOCATION 3C SUB-SUMMARY

COS-621/643/651-0.00

Location 3d Sheet Totals											ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	4	5	13	14	16	19	20	21	23					
															ROADWAY
	130					780					202	23500	910	SY	WEARING COURSE REMOVED
							42				202	30000	42	SF	WALK REMOVED
							22				202	32000	22	FT	CURB REMOVED
					0.56						209	72051	0.56	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
							62				608	10000	62	SF	4" CONCRETE WALK
							22				609	26000	22	FT	CURB, TYPE 6
		2									623	39500	2	EACH	MONUMENT BOX ADJUSTED TO GRADE
							1				690	98000	1	EACH	SPECIAL - MISC.: CURB RAMP, TYPE A2
							1				690	98000	1	EACH	SPECIAL - MISC.: CURB RAMP, TYPE D
															DRAINAGE
		1									611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE
		2									611	99654	2	EACH	MANHOLE ADJUSTED TO GRADE
		4									638	10800	4	EACH	VALVE BOX ADJUSTED TO GRADE
															PAVEMENT
10											253	02000	10	CY	PAVEMENT REPAIR (A)
				7,604							254	01000	7,604	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"
				609		63					407	20000	672	GAL	NON-TRACKING TACK COAT
					263						408	10001	263	GAL	PRIME COAT, AS PER PLAN
						33					441	50000	33	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
	12			317							441	50100	329	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
					37						617	10101	37	CY	COMPACTED AGGREGATE, AS PER PLAN
															TRAFFIC CONTROL
								0.56			644	00104	0.56	MILE	EDGE LINE, 6"
									0.45		644	00300	0.45	MILE	CENTER LINE
										131	644	00500	131	FT	STOP LINE
										588	644	00600	588	FT	CROSSWALK LINE
										2	644	01000	2	EACH	RAILROAD SYMBOL MARKING
										916	644	01200	916	EACH	PARKING LOT STALL MARKING
															MAINTENANCE OF TRAFFIC
			4								614	12460	4	EACH	WORK ZONE MARKING SIGN
			1								614	13000	1	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			0.45								614	21550	0.45	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT

CALCULATED JLS
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LOCATION 3D SUB-SUMMARY

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Location Totals						Plan Splits		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
1	2	3A	3B	3C	3D	01/STR/PV (Loc. 3A-D)	02/NFA/PV (Loc. 1,2)						
	320						320	202	23000	320	SY	PAVEMENT REMOVED	
5,225	5,461	2,361	186	50	910	3,507	10,686	202	23500	14,193	SY	WEARING COURSE REMOVED	
					42	42		202	30000	42	SF	WALK REMOVED	
					22	22		202	32000	22	FT	CURB REMOVED	
		183				183		202	35100	183	FT	PIPE REMOVED, 24" AND UNDER	
		1				1		202	58100	1	EACH	CATCH BASIN REMOVED	
		1				1		202	58500	1	EACH	CATCH BASIN ABANDONED	
	46	5				5	46	203	10000	51	CY	EXCAVATION	
	80						80	203	20000	80	CY	EMBANKMENT	
	180						180	204	10000	180	SY	SUBGRADE COMPACTION	
11.96	21.18	5.50	1.00	0.40	0.56	7.46	33.14	209	72051	40.60	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	2
					62	62		608	10000	62	SF	4" CONCRETE WALK	
		54				54		609	24510	54	FT	CURB, TYPE 4-C	
					22	22		609	26000	22	FT	CURB, TYPE 6	
					2	2		623	39500	2	EACH	MONUMENT BOX ADJUSTED TO GRADE	
					1	1		690	98000	1	EACH	SPECIAL - MISC.: CURB RAMP, TYPE A2	8, 9, 10
					1	1		690	98000	1	EACH	SPECIAL - MISC.: CURB RAMP, TYPE D	8, 9, 10
												EROSION CONTROL	
		5				5		653	10000	5	CY	TOPSOIL FURNISHED AND PLACED	
	320	20				20	320	659	00510	340	SY	SEEDING AND MULCHING, CLASS 2	
												DRAINAGE	
		210				210		611	05901	210	FT	15" CONDUIT, TYPE B, AS PER PLAN	27
		1				1		611	98370	1	EACH	CATCH BASIN, NO. 6	
		1				1		611	98470	1	EACH	CATCH BASIN, NO. 2-2B	
					1	1		611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
					2	2		611	99654	2	EACH	MANHOLE ADJUSTED TO GRADE	
		10				10		613	41300	10	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 2)	
					4	4		638	10800	4	EACH	VALVE BOX ADJUSTED TO GRADE	
												PAVEMENT	
		50	10	5		65		251	01010	65	CY	PARTIAL DEPTH PAVEMENT REPAIR (441)	2
20	850				10	10	870	253	02000	880	CY	PAVEMENT REPAIR (A)	2
		450	100	50		600		253	02000	600	CY	PAVEMENT REPAIR (B)	2
73,874							73,874	254	01000	73,874	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.00"	
					7,604	7,604		254	01000	7,604	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.50"	
	121,269	56,532	10,560	4,224		71,316	121,269	254	01000	192,585	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"	
	2,864	1,256				1,256	2,864	254	01000	4,120	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 2.50"	

CALCULATED JLS
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GENERAL SUMMARY

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Location Totals						Plan Splits		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
1	2	3A	3B	3C	3D	01/STR/PV (Loc. 3A-D)	02/NFA/PV (Loc. 1,2)						
												PAVEMENT (CONT'D)	
	46						46	301	46000	46	CY	ASPHALT CONCRETE BASE, PG64-22	
9,963	16,475	7,676	1,386	551	672	10,285	26,438	407	20000	36,723	GAL	NON-TRACKING TACK COAT	
5,614	9,941	1,291	235	94	263	1,883	15,555	408	10001	17,438	GAL	PRIME COAT, AS PER PLAN	2
187	214	97	9	3	33	142	401	441	50000	543	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
2,678	20				329	329	2,698	441	50100	3,027	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	
2,062							2,062	441	50200	2,062	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	
	3,468	1,606	294	119		2,019	3,468	441	50201	5,487	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M)	2
	5,328	2,449	449	180		3,078	5,328	443	12000	8,406	CY	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)	
	80						80	516	31011	80	FT	2" DEEP JOINT SEALER, AS PER PLAN	3
780	1,381	180	33	13	37	263	2,161	617	10101	2,424	CY	COMPACTED AGGREGATE, AS PER PLAN	3
	428						428	618	40100	428	FT	RUMBLE STRIPS, (ASPHALT CONCRETE)	7
		16,662	2,934	1,174		20,770		690	12050	20,770	SY	SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS	4
												TRAFFIC CONTROL	
537	1,233	317	33	26		376	1,770	621	00100	2,146	EACH	RPM	
537	1,233	317	33	26		376	1,770	621	54000	2,146	EACH	RAISED PAVEMENT MARKER REMOVED	
	60						60	630	03100	60	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
	2						2	630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
	7						7	630	85100	7	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
	2						2	630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
11.96	21.18	5.68	1.00	0.40	0.56	7.64	33.14	644	00104	40.78	MILE	EDGE LINE, 6"	
5.98	10.59	2.84	0.50	0.20	0.45	3.99	16.57	644	00300	20.56	MILE	CENTER LINE	
293	300	77	20		131	228	593	644	00500	821	FT	STOP LINE	
					588	588		644	00600	588	FT	CROSSWALK LINE	
	198						198	644	00700	198	FT	TRANSVERSE/DIAGONAL LINE	
					2	2		644	01000	2	EACH	RAILROAD SYMBOL MARKING	
		2				2		644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
					916	916		644	01200	916	EACH	PARKING LOT STALL MARKING	
												MAINTENANCE OF TRAFFIC	
42	62	22	4	4	4	34	104	614	12460	138	EACH	WORK ZONE MARKING SIGN	
2	4	1			1	2	6	614	13000	8	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
5.98	10.59	2.84	0.50	0.20		3.54	16.57	614	21500	20.11	MILE	WORK ZONE CENTER LINE, CLASS II, 642 PAINT	
5.98	10.59	2.84	0.50	0.20	0.45	3.99	16.57	614	21550	20.56	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
												INCIDENTALS	
								614	11000		LS	MAINTAINING TRAFFIC	
						1	2	619	16000	3	MNTH	FIELD OFFICE, TYPE A	
								623	10000		LS	CONSTRUCTION LAYOUT STAKES AND SURVEYING	
								624	10000		LS	MOBILIZATION	

CALCULATED JLS
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