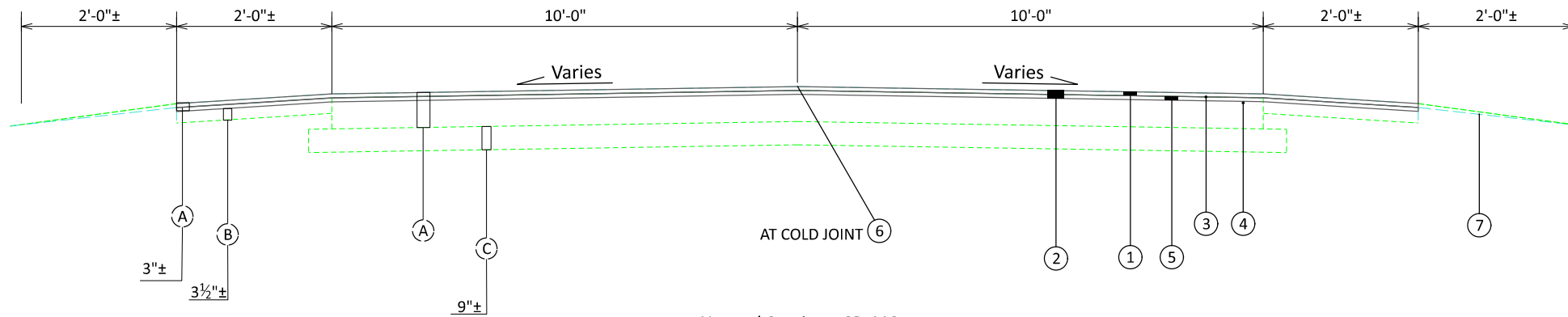
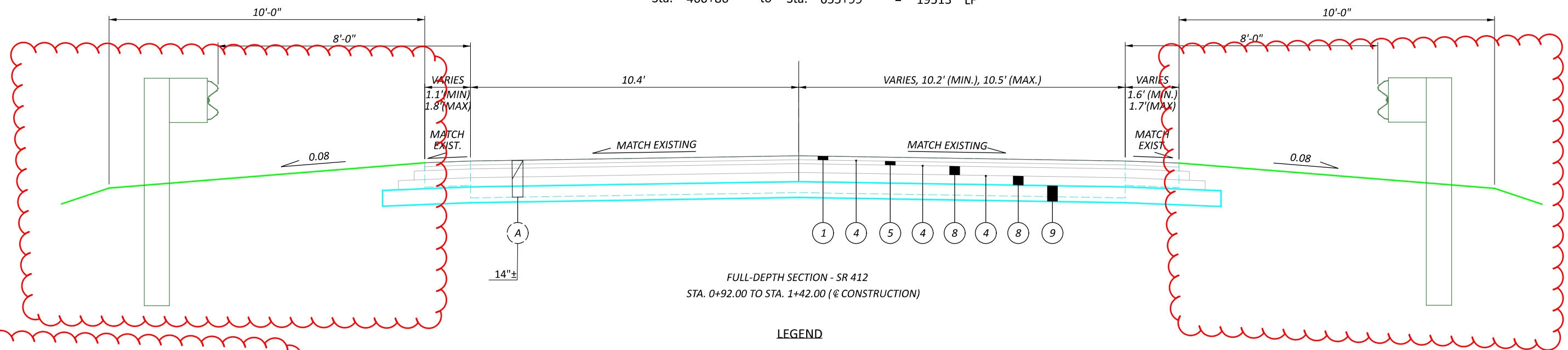


TYPICAL SECTION "A"



Normal Section - SR 412

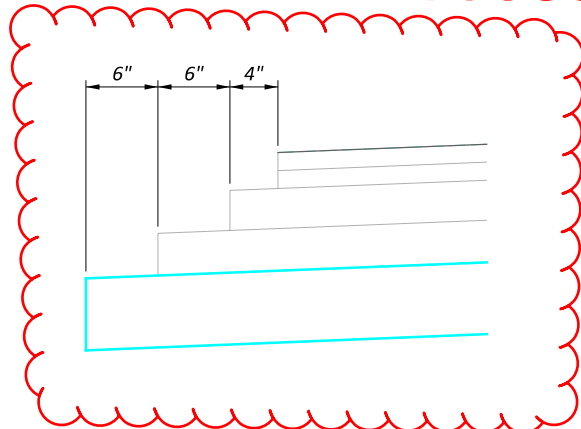
Sta. 460+86 to Sta. 655+99 = 19513 LF



FULL-DEPTH SECTION - SR 412  
 STA. 0+92.00 TO STA. 1+42.00 (@ CONSTRUCTION)

LEGEND

- |  |   |
|--|---|
| ① ITEM 424 - 1" FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B (448) AS PER PLAN | ⑧ ITEM 301 - 7" ASPHALT CONCRETE BASE, (449), PG64-22 (PLACED IN TWO LIFTS) |
| ② ITEM 254 - 3" PAVEMENT PLANING   | ⑨ ITEM 304 - 6" AGGREGATE BASE  |
| ③ ITEM 407 - TACK COAT (0.085 GAL./SQ. YD.)                                    |   |
| ④ ITEM 407 - TACK COAT (0.055 GAL./SQ. YD.)                                    |   |
| ⑤ ITEM 441 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)              |   |
| ⑥ ITEM 875 - LONGITUDINAL JOINT ADHESIVE                                       | (A) Asphalt Concrete  |
| ⑦ ITEM 617 - COMPACTED AGGREGATE & ITEM 209 LINEAR GRADING                     | (B) Crushed Aggregate   |
|  | (C) Aggregate Base  |

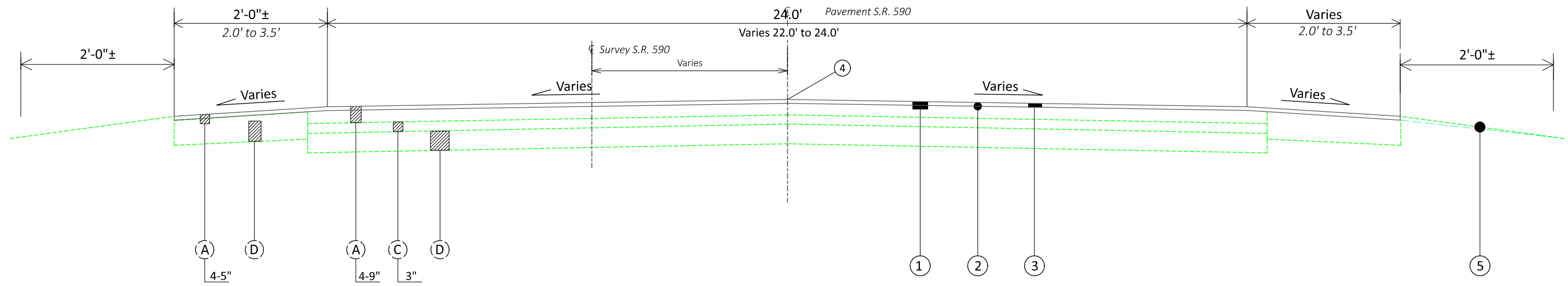


STEP DETAIL

TACK COAT NOT SHOWN FOR CLARITY

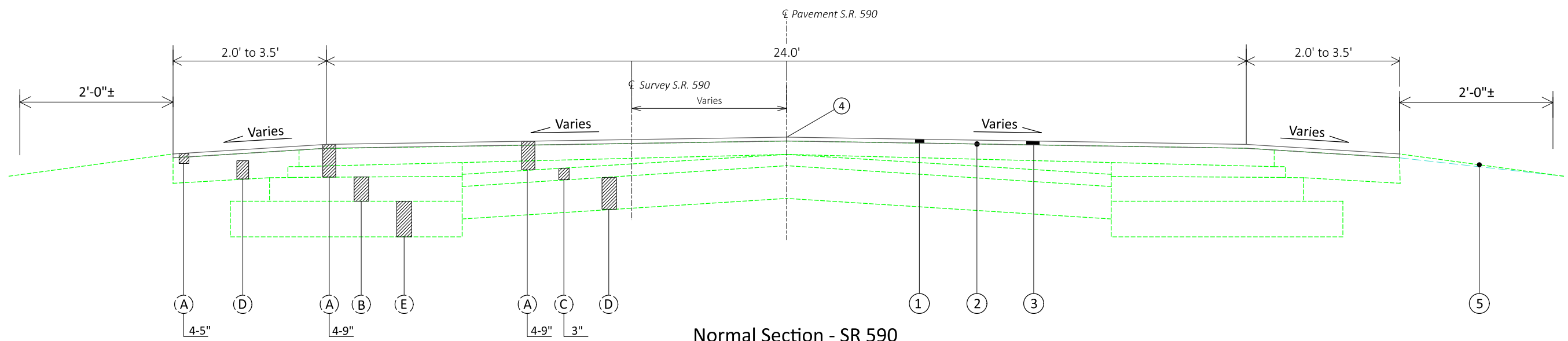


TYPICAL SECTION "A"



Normal Section - SR 590  
 STA. 356+33 TO STA. 531+99 = 17566 LF

TYPICAL SECTION "B"



Normal Section - SR 590  
 STA. 347+40 TO STA. 356+33 = 893 Ft

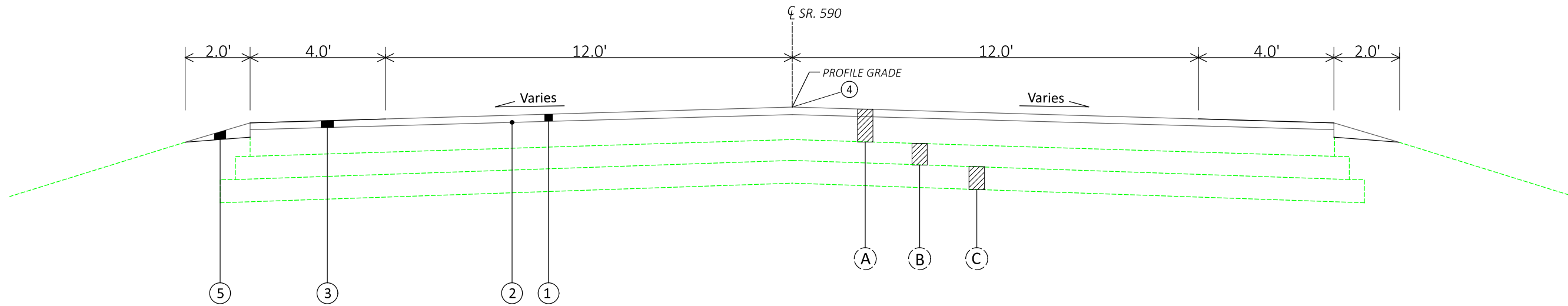
PROPOSED LEGEND

- ① ITEM 254 - 1 3/4" PAVEMENT PLANING
- ② ITEM 407 - TACK COAT (0.085 GAL./SQ. YD.)
- ③ ITEM 442 - 1-3/4" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
- ④ ITEM 875 - LONGITUDINAL JOINT ADHESIVE
- ⑤ ITEM 617 - COMPACTED AGGREGATE & ITEM 209 LINEAR GRADING

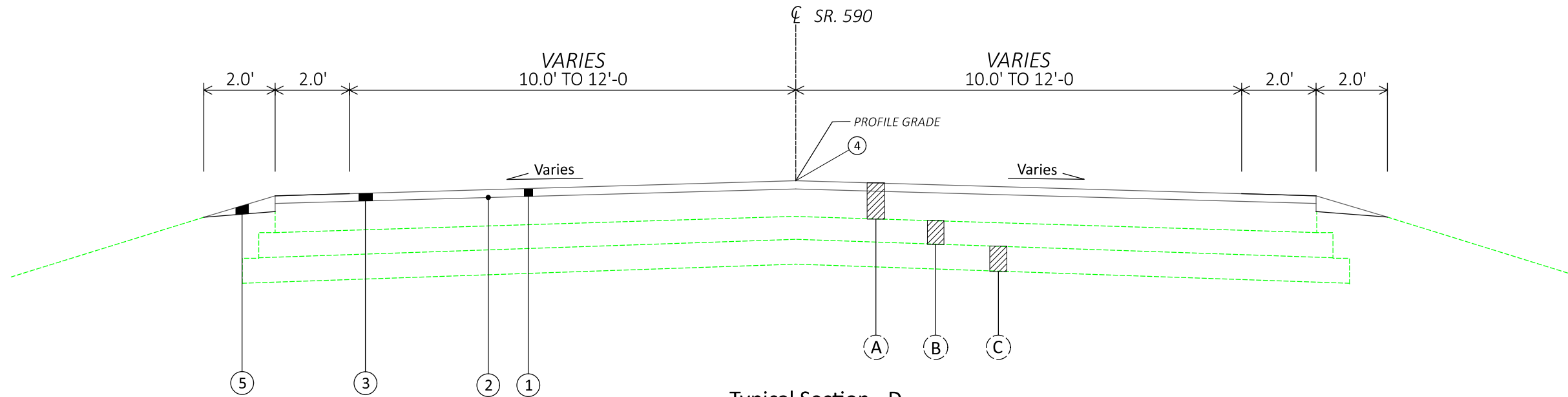
EXSITING LEGEND

- (A) EXISTING ASPHALT (THICKNESS AS SHOWN)
- (B) 6" EXISTING AGGREGATE BASE
- (C) BITUMINOUS MACADAM (THICKNESS AS SHOWN)
- (D) WATERBOUND MACADAM (UNDETERMINED THICKNESS)
- (E) 8" SUBBASE





**Typical Section - C**  
 534+77 TO STA. 600+07 = 6,530 FT.



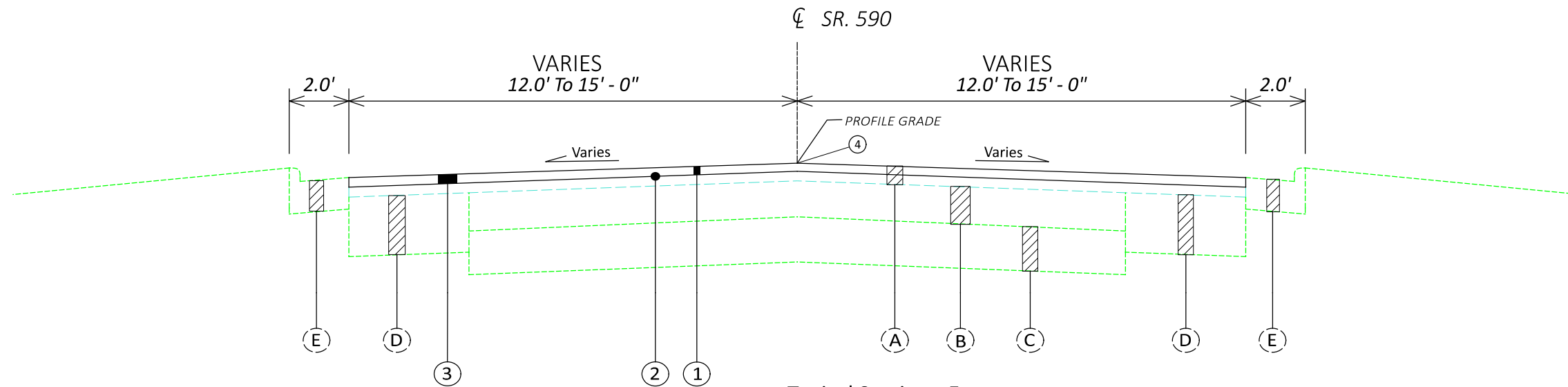
**Typical Section - D**  
 STA. 645+50 TO STA. 689+45 = 4395 FT.  
 STA. 692+02 TO STA. 700+30 = 828 FT.  
 STA . 701+20 TO STA. 773+26 = 7,206 FT.  
 12,429 FT.

**LEGEND**

- ①—ITEM 254 - 1-3/4" PAVEMENT PLANING
- ②—ITEM 407, TACK COAT (0.085 GAL./SQ. YD.)
- ③—ITEM 442 - 1-3/4" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
- ④—ITEM 875 - LONGITUDINAL JOINT ADHESIVE
- ⑤—ITEM 617, COMPACTED AGGREGATE & ITEM 209 LINEAR GRADING

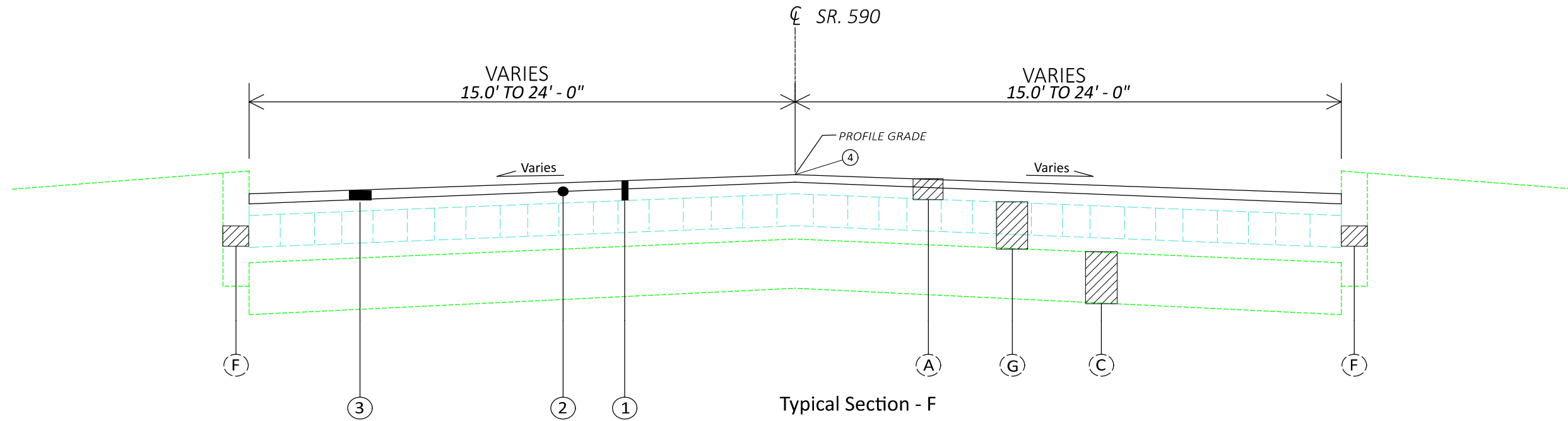
- Ⓐ—ASPALT CONCRETE, AC-20, 3" +/-
- Ⓑ—BITUMINOUS AGGREGATE BASE, AC-20, 5" +/-
- Ⓒ—COMPACTED AGGREGATE BASE, 6" +/-
- Ⓓ—CONCRETE PAVEMENT, 8" +/-
- Ⓔ—2' - 0" CONCRETE CURB AND GUTTER
- Ⓕ—CURB, TYPE 6. MATERIALS INCLUDE CONCRETE AND LIMESTONE
- Ⓖ—BRICK PAVEMENT





Typical Section - E

SR 590 STA. 600+07 TO STA. 605+65 : 558 FT.  
 SR 590 STA. 607+34 TO STA. 620+55 : 1321 FT.  
 1879 FT.



Typical Section - F

SR 590 STA. 620+55 TO STA. 645+00 = 2,445 FT.

LEGEND

- ①—ITEM 254 - 1-3/4" PAVEMENT PLANING
- ②—ITEM 407, TACK COAT (0.085 GAL./SQ. YD.)
- ③—ITEM 442 - 1-3/4" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
- ④—ITEM 875 - LONGITUDINAL JOINT ADHESIVE

- (A)—ASPALT CONCRETE, AC-20, 3" +/-
- (B)—BITUMINOUS AGGREGATE BASE, AC-20, 5" +/-
- (C)—COMPACTED AGGREGATE BASE, 6" +/-
- (D)—CONCRETE PAVEMENT, 8" +/-
- (E)—2' - 0" CONCRETE CURB AND GUTTER
- (F)—CURB, TYPE 6. MATERIALS INCLUDE CONCRETE AND LIMESTONE
- (G)—BRICK PAVEMENT



**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

COLUMBIA GAS OF OHIO, INC. 2901 E. MANHATTAN BLVD. TOLEDO, OHIO 43611 419-539-6066  
CHARTER TELECOMMUNICATIONS 3760 INTERCHANGE DR. COLUMBUS, OHIO 43204 614-255-6340

FRONTIER 300 WEST GYPSY LANE RD, SUITE A BOWLING GREEN, OHIO 43402 419-354-9452  
OHIO EDISON 2508 W. PERKINS AVE. SANDUSKY, OHIO 44870 419-627-6887

SANDUSKY CO. SANITARY ENGINEER 2100 COUNTRYSIDE DR. #1 FREMONT, OHIO 43420  
VILLAGE OF LINDSAY 240 S. MAIN STREET LINDSAY, OHIO 43442 419-665-2311

**ELEVATION DATUM**

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND GEOID2018 GEOID (GPS DERIVED). HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE NORTH ZONE, A LAMBERT CONFORMAL CONIC MAP PROJECTION, THE NORTH AMERICAN DATUM OF 1983 ADJUSTED TO THE NATIONAL SPATIAL REFERENCE SYSTEM OF 2011 (NAD 83(NSRS 2011)), AND THE GRS80 ELLIPSOID.

**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

**PROFILE AND ALIGNMENT**

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

**CLEARING AND GRUBBING**

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM , CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

**SURVEYING PARAMETERS**

THE FOLLOWING VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS WERE USED FOR ALL SURVEYING ON THIS PROJECT:

POSITIONING METHOD: ODOT REAL TIME NETWORK (2011)  
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING -  
ORTHOMETRIC HEIGHT DATUM: NAVD 88  
GEOID: 2018

HORIZONTAL POSITIONING -  
REFERENCE FRAME: NAD83 (2011) (EPOCH 2010.0)  
ELLIPSOID: GRS 80  
COORDINATE SYSTEM: CUSTOM O.D.O.T. SANDUSKY LDP \*  
SANDUSKY LDP PROJECTION PARAMETERS:  
PROJECTION: LCC 1 PARALLEL  
CENTRAL LATITUDE: N 41°24'00"  
CENTRAL LONGITUDE: W 83°06'00"  
FALSE NORTHING: 100,000 METERS  
FALSE EASTING: 50,000 METERS  
PROJECTION SCALE FACTOR: 1.000026

\*THE LOW DISTORTION PROJECTION (LDP) IS A LOCAL COUNTY PROJECTION DEVELOPED BY O.D.O.T. THE DISTORTION BETWEEN GROUND AND GRID IS SO MINIMAL THAT THERE IS NO NEED FOR ASCALE FACTOR TO ADJUST BETWEEN GRID AND GROUND COORDINATES. CONTACT THE DISTRICT SURVEY DEPARTMENT FOR FURTHER INFORMATION OR QUESTIONS.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

**EXISTING MONUMENT BOXES**

DURING CONSTRUCTION, IF THE CONTRACTOR REMOVES OR DISTURBS ANY MONUMENT BOX ASSEMBLIES, THE CONTRACTOR SHALL HAVE A REGISTERED SURVEYOR CERTIFY THAT THE MONUMENTS HAVE BEEN RESET AT THE ORIGINAL LOCATION AS PER OHIO ADMINISTRATIVE CODE, CHAPTER 4733-37, STANDARDS FOR BOUNDARY SURVEYS. THE CONTRACTOR SHALL FORWARD A COPY OF SAID CERTIFICATION TO THE PROJECT ENGINEER, AND THE DISTRICT SURVEY OPERATIONS MANAGER FOR REVIEW. THE CERTIFICATION SHALL BE SIMILAR TO THE FOLLOWING:

I, JOHN D. DOE, P.S. HEREBY CERTIFY THAT THE CENTERLINE MONUMENTATION HAS BEEN RESET AT THE PRECONSTRUCTION LOCATIONS DURING PROJECT CTY-RT-SEC, PID 000000. ALL OF MY WORK CONTAINED HEREIN WAS CONDUCTED IN ACCORDANCE WITH OHIO ADMINISTRATIVE CODE 4733-37 COMMONLY KNOWN AS "A MINIMUM STANDARDS FOR BOUNDARY SURVEYS IN THE STATE OF OHIO" UNLESS OTHERWISE NOTED. THE WORDS I AND MY, AS USED HEREIN, ARE TO MEAN MYSELF OR SOMEONE UNDER MY DIRECT SUPERVISION.

ALL SURVEY MONUMENTS SET AND/OR RESET BY THE CONTRACTOR'S SURVEYOR SHALL BE CONSTRUCTED ACCORDING TO SCD RM-1.1.

ALL COSTS ASSOCIATED WITH THE RE-SETTING OF THE MONUMENT BOXES SHALL BE AT THE CONTRACTORS' EXPENSE.

**ITEM 253, PAVEMENT REPAIR**

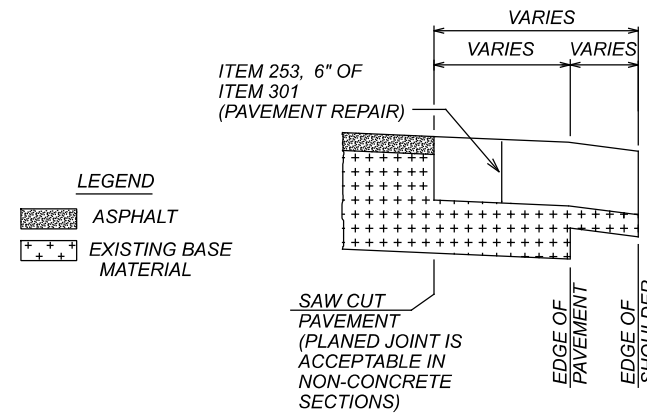
PAVEMENT SHALL BE PLANED BEFORE PAVEMENT REPAIRS ARE PERFORMED.

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED FOR PAVEMENT REPAIR AS DIRECTED BY THE ENGINEER AND BASED ON VARYING WIDTHS ON BOTH SIDES OF THE ROAD.

6" AT 15% OF TOTAL AREA FOR S.R. 412, 1303 CU. YDS.  
8" AT 8% OF TOTAL AREA FOR S.R. 590, 2116 CU. YDS.

ITEM 253, PAVEMENT REPAIR 3419 CUBIC YARDS

ESTIMATED QUANTITIES CARRIED TO THE GENERAL SUMMARY



NOTE: THE ENGINEER SHALL FIELD VERIFY ALL LOCATIONS PRIOR TO THE BEGINNING OF WORK. ANY ADJUSTMENTS NECESSARY SHALL BE AS DIRECTED BY THE ENGINEER.

**ASPHALT CONCRETE FOR DRIVEWAYS**

THE FOLLOWING ESTIMATED QUANTITY FOR ASPHALT CONCRETE IS TO BE USED FOR ADJUSTING DRIVEWAYS AS DIRECTED BY THE ENGINEER:

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), (DRIVEWAYS) 175 CU YD

TOTALS CARRIED TO GENERAL SUMMARY.

THE PROJECT WILL NOT BE CONSIDERED COMPLETE UNTIL ALL DRIVEWAYS HAVE BEEN TREATED AS DIRECTED BY THE ENGINEER.

**ROUNDING**

THE FOLLOWING ITEMS HAVE BEEN INCLUDED AS A CONTINGENCY QUANTITY TO BE APPROVED BY THE PROJECT ENGINEER AND CARRIED TO THE GENERAL SUMMARY:

ITEM 659 - SEEDING AND MULCHING 5 SY

**ITEM 209 - PREPARING SUBGRADE FOR SHOULDER PAVING**

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

S.R. 412 7.4 MILE  
S.R. 590 14.5 MILE

**SAFETY EDGE**

ITEM 441 - SURFACE COURSE  
ITEM 441 - INTERMEDIATE COURSE

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR CONSTRUCTION OF THE SAFETY EDGE:

S.R. 412  
ITEM 424 - FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448) AS PER PLAN

$\frac{19364 \text{ FT} * 0.045}{27} \times 2 = 65 \text{ CU YD}$

ITEM 441 - ASPHALT CONC. INTERMEDIATE COURSE, TYPE 2, (446)

$\frac{19364 \text{ FT} * 0.018}{27} \times 2 = 26 \text{ CU YD}$

S.R. 590  
ITEM 441 - ASPHALT CONC. SURFACE COURSE, 12.5MM, TYPE A (446)

$\frac{38136 \text{ FT} * 0.045}{27} \times 2 = 128 \text{ CU YD}$

**ITEMS ADJUSTED TO GRADE**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

S.R. 590  
ITEM 611, CATCH BASIN TO BE ADJUSTED TO GRADE: 12 EA  
ITEM 611, MANHOLE TO BE ADJUSTED TO GRADE: 2 EA

**ITEM 424 - FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448) AS PER PLAN**

PER CMS 424.04, 448 DENSITY APPLIES TO THIS PROJECT.  
DENSITY WILL BE TESTED ACCORDING TO SUPPLEMENT 1055 PER CMS 448.02. THE DENSITY DISINCENTIVE PORTION OF TABLE 448.04-3. WILL BE WAIVED PROVIDING THAT THE CONTRACTOR MAKES EVERY EFFORT TO OBTAIN DENSITY AND DOES NOT USE VIBRATORY ROLLERS.

**ITEM 442 ASPHALT CONCRETE, MISC: BUTT JOINTS INTERSECTIONS**

FOR THE WORK AT THE INTERSECTIONS THE CONTRACTOR SHALL PLACE ONE OF FOLLOWING TREATMENTS:  
MILL THE BUTT JOINT AREA OF THE INTERSECTION THE THICKNESS OF THE ASPHALT BEING PLACED, PLACE ITEM 407 NON TRACKING COAT ON THE MILLED SURFACE AND PLACE 1" ITEM 424 FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B (449)  
OR  
MILL THE BUTT JOINT AREA OF THE INTERSECTION THE THICKNESS OF THE ASPHALT BEING PLACED, PLACE ITEM 407 NON TRACKING COAT ON THE MILLED SURFACE. PLACE 1 1/2" ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A, (449)  
WHICH EVER METHOD THE CONTRACTOR CHOOSES ALL WORK SHALL BE PAID FOR UNDER ITEM 442 ASPHALT CONCRETE, MISC: BUTT JOINT INTERSECTION CY. FOR QUANTITY CALCULATIONS A THICKNESS OF 1 1/2" WAS USED FOR ONE COURSE AND 3" FOR TWO COURSE APPLICATION.

Table with project details: DESIGN AGENCY, DESIGNER (DEK), REVIEWER (JMF), PROJECT ID (92370), SHEET (P.6), TOTAL (33).

**ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS**

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:

- ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
- AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,
- AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
  - THE ACTIVE WORK AREA LATERALLY CLOSEST TO THE OPEN TRAVELED LANE; OR
  - OTHER LOCATION AS APPROVED BY THE ENGINEER.
- THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 40 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

**FARM DRAINS**

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE (RIGHT OF WAY)( CONSTRUCTION) LIMITS WITH ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY DITCH USING ITEM 611, TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS IS DETERMINED BY THE ENGINEER AND PAYMENT MADE ON FINAL MEASUREMENTS.

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 611 15" CONDUIT, TYPE B 25 FT.
- 611 12" CONDUIT, TYPE E 50 FT.
- 611 6" CONDUIT, TYPE F 25 FT.

DESIGN AGENCY



DESIGNER

DEK

REVIEWER

JMF 08/15/24

PROJECT ID

92370

SHEET TOTAL

P.8 | 33

SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
			6	7	8	11	12	29	30	31	32	01/STR/05	EXT	TOTAL					
							935						935	202	30000	935	SF	ROADWAY WALK REMOVED	
						327			18				345	203	10000	345	CY	EXCAVATION	
						231							231	203	20000	231	CY	EMBANKMENT	
						28							28	203	35110	28	CY	GRANULAR MATERIAL, TYPE B	
									18				18	203	35120	18	CY	GRANULAR MATERIAL, TYPE C	
						81							81	203	35130	81	CY	GRANULAR MATERIAL, TYPE D	
						24							24	209	60500	24	MILE	LINEAR GRADING	
						100							100	606	15050	100	FT	GUARDRAIL, TYPE MGS	
						75							75	606	17360	75	FT	GUARDRAIL, TYPE MGS, LONG-SPAN	
						4							4	606	26150	4	EACH	ANCHOR ASSEMBLY, MGS TYPE E	
							935						935	608	52000	935	SF	CURB RAMP	
							104						104	608	53020	104	SF	DETECTABLE WARNING	
							98						98	609	26000	98	FT	CURB, TYPE 6	
																		EROSION CONTROL	
						10							10	601	32200	10	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
						100							100	659	00300	100	CY	TOPSOIL	
			5			896							901	659	10000	901	SY	SEEDING AND MULCHING	
						45							45	659	14000	45	SY	REPAIR SEEDING AND MULCHING	
						45							45	659	15000	45	SY	INTER-SEEDING	
						1							1	659	20000	1	TON	COMMERCIAL FERTILIZER	
						1							1	659	31000	1	ACRE	LIME	
						1							1	659	35000	1	MGAL	WATER	
						160							160	670	00720	160	SY	DITCH EROSION PROTECTION MAT, TYPE B	
						1,000							1,000	832	30000	1,000	EACH	EROSION CONTROL	
																		DRAINAGE	
							47						47	202	35100	47	FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
									36				36	202	35200	36	FT	PIPE REMOVED, OVER 24" DIAMETER	
							2						2	202	58100	2	EACH	CATCH BASIN REMOVED	
									18				18	512	10050	18	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
									LS				LS	518	21220	LS		POROUS BACKFILL	
									15.2				15.2	602	20000	15.2	CY	CONCRETE MASONRY	
						25							25	611	01500	25	FT	6" CONDUIT, TYPE F	
						50							50	611	05100	50	FT	12" CONDUIT, TYPE E	
						25							25	611	05900	25	FT	15" CONDUIT, TYPE B	
							54						54	611	10400	54	FT	24" CONDUIT, TYPE B	
									44				44	611	53000	44	FT	38" X 60" CONDUIT, TYPE A, 706.04	
							2						2	611	98510	2	EACH	CATCH BASIN, NO. 2-3	
			12										12	611	98630	12	EACH	CATCH BASIN ADJUSTED TO GRADE	
			2										2	611	99654	2	EACH	MANHOLE ADJUSTED TO GRADE	
																		PAVEMENT	
			21.9										21.9	209	72050	21.9	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING	
			3,419										3,419	253	02000	3,419	CY	PAVEMENT REPAIR	
						118,430	1,280						119,710	254	01000	119,710	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"	
						52,095	540						52,635	254	01000	52,635	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 3"	
						32							32	301	56000	32	CY	ASPHALT CONCRETE BASE, PG64-22, (449), 7"	
							34						34	304	20000	34	CY	AGGREGATE BASE, 6"	
						17,360	185						17,545	407	10000	17,545	GAL	TACK COAT	
			65			1,448							1,513	424	14001	1,513	CY	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448), AS PER PLAN, 1"	6
			26			2,895							2,921	441	10200	2,921	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446), 2"	
			175										175	441	70500	175	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	
			128				5,758						5,886	442	10000	5,886	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), 1.75"	
													108	442	90000	108	CY	ASPHALT CONCRETE, MISC.: BUTT JOINTS INTERSECTIONS	12
						2,344							2,344	617	10100	2,344	CY	COMPACTED AGGREGATE	
						10,208							10,208	875	10000	10,208	LB	LONGITUDINAL JOINT ADHESIVE	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER DEK

REVIEWER JMF 08/15/24


PROJECT ID 92370

SHEET TOTAL P.9 33

REF NO.	SHEET NO.	STATION TO STATION		202	202	203	203	203	203	606	606	606	601	659	659	659	659	659	659	670	611	611		
				PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	EXCAVATION	EMBANKMENT	GRANULAR MATERIAL, TYPE B	GRANULAR MATERIAL, TYPE D	GUARDRAIL, TYPE MGS	GUARDRAIL, TYPE MGS, LONG-SPAN	ANCHOR ASSEMBLY, MGS TYPE E	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	TOPSOIL	SEEDING AND MULCHING	REPAIR SEEDING AND MULCHING	INTER-SEEDING	COMMERCIAL FERTILIZER	LIME	WATER	DITCH EROSION PROTECTION MAT, TYPE B	24" CONDUIT, TYPE B	CATCH BASIN, NO. 2-3	
				FT	EACH	CY	CY	CY	CY	FT	FT	EACH	CY	CY	SY	SY	SY	TON	ACRE	MGAL	SY	FT	EACH	
GR1	23	0+04.03	TO	2+28.99						50	75	2												
GR2	23	0+03.99		2+29.00						50	75	2												
R1	23	1+10.82			47	2																		
	24	0+00.00		1+00.00			172	103	12	35														
	25	1+50.00		2+50.00			155	128	16	46														
	24															384								
	25															512								
	23												10											
	23	1+30.00		2+16.50																	160			
														100		45	45	0.12	0.19	1				
D1	23	1+10.82																			54	2		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					47	2	327	231	28	81	100	150	4	10	100	896	45	45	0.12	0.19	1	160	54	2

REF NO.	SHEET NO.	STATION TO STATION		CADD GENERATED AREA	209	254	254	301	304	407	424	441	442	617	875								
					LINEAR GRADING	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"	PAVEMENT PLANING, ASPHALT CONCRETE, 3"	ASPHALT CONCRETE BASE, PG64-22, (449), 7"	AGGREGATE BASE, 6"	TACK COAT	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448), AS PER PLAN, 1"	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446), 2"	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), 1.75"	COMPACTED AGGREGATE	LONGITUDINAL JOINT ADHESIVE								
				SY	MILE	SY	SY	CY	CY	GAL	CY	CY	CY	CY	LB								
<b>SR-412</b>																							
16		460+86.00	TO	505+50.00	12050	1.69		12050	31.11	33.06	1687.00	334.72	669.44		192.89	744.00							
17		505+50.00	TO	507+89.00	655	0.09		655			91.70	18.19	36.39		10.33	39.83							
18		508+89.00	TO	551+50.00	11575	1.61		11575			1620.50	321.53	643.06		184.12	710.17							
19		551+50.00	TO	611+50.00	16115	2.27		16115			2256.10	447.64	895.28		259.26	1000.00							
20		611+50.00	TO	649+50.00	10090	1.44		10090			1412.60	280.28	560.56		164.20	633.33							
20		649+50.00	TO	655+50.00	1610	0.23		1610			225.40	44.72	89.44		25.93	100.00							
<b>SR-590</b>																							
29		347+40.00	TO	374+50.00	6825	1.03		6825			580.13				331.77	108.73	451.67						
30		374+50.00	TO	531+99.00	38900	5.97		38900			3306.50				1890.97	631.90	2624.83						
31		534+77.00	TO	535+50.00	325	0.03		325			27.63				15.80	2.93	12.17						
32		535+50.00	TO	604+50.00	24415	2.61		24415			2075.28				1186.84	258.80	1150.00						
33		604+50.00	TO	605+65.00	310	0.04		310			26.35				15.07	19.17							
34		607+34.00	TO	619+50.00	3280	0.46		3280			278.80				159.44	202.67							
35		619+50.00	TO	634+50.00	5800	0.57		5800			493.00				281.94	250.00							
36		634+50.00	TO	669+50.00	10525	1.33		10525			894.63				511.63	98.30	583.33						
37		669+50.00	TO	689+45.00	5475	0.76		5475			465.38				266.15	80.05	332.50						
38		692+02.00	TO	773+26.00	22575	3.08		22575			1918.88				1097.40	325.96	1354.00						
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					24		118430	52095	32	34	17360	1448	2895	5758	2344	10208							

SUBSUMMARIES

DESIGN AGENCY  
  
 DESIGNER  
**ADB**  
 REVIEWER  
 DEK 10/04/24  
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SAN-412/590-8.86/6.56

MODEL: Sheet\_SurvFl\_PAPER SIZE: 17x11 (in.) DATE: 1/8/2025 TIME: 5:48:14 PM USER: dkasem1 pvc:\hoboc-pw-bentley.com\shahidoc-pw-02\Documents\01 Active Projects\Distrit 02\Sandusky\92370\400-Engineering\Roadway\Sheets\92370\_GS002.dgn

REF NO.	SHEET NO.	STATION TO STATION		621	621	642	642	642	642	644	644	644	644	644							
				RPM	RAISED PAVEMENT MARKER REMOVED	EDGE LINE, 6", TYPE 1	CENTER LINE, TYPE 1, DASHED SOLID	CENTER LINE, TYPE 1, DOUBLE SOLID	CENTER LINE, TYPE 1, DASHED	TRANSVERSE/DIAGONAL LINE, WHITE	STOP LINE	PARKING LOT STALL MARKING	HANDICAP SYMBOL MARKING	CROSSWALK LINE, 12"							
				EACH	EACH	MILE	MILE	MILE	MILE	FT	FT	FT	EACH	FT							
SR-412																					
16	460+86.00	TO	505+50.00	56	56	1.69	0.45	0.09	0.30												
17	505+50.00	TO	507+89.00	3	3	0.09			0.05												
18	508+89.00	TO	551+50.00	53	53	1.61	0.08		0.75												
19	551+50.00	TO	611+50.00	75	75	2.27	0.21	0.17	0.78												
20	611+50.00	TO	649+50.00	48	48	1.44	0.34	0.13	0.14		12										
21	649+50.00	TO	655+50.00	8	8	0.23		0.11													
SR-590																					
29	347+40.00	TO	374+50.00	34	34	1.03	0.17	0.10	0.24												
30	374+50.00	TO	531+99.00	197	197	5.97	0.50	0.19	2.29												
31	534+77.00	TO	535+50.00	1	1	0.03	0.01														
32	535+50.00	TO	604+50.00	86	86	2.44	0.05		1.29												
33	604+50.00	TO	605+65.00	1	1				0.02												
34	607+34.00	TO	619+50.00	15	15		0.18		0.08												
35	619+50.00	TO	634+50.00	19	19		0.08	0.01	0.16	200		915	2	120							
36	634+50.00	TO	669+50.00	44	44	0.91	0.10	0.04	0.50												
37	669+50.00	TO	689+45.00	25	25	0.76	0.28	0.06	0.03												
38	692+02.00	TO	773+26.00	102	102	3.08		0.05	1.54												
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>				766	766	21.54	2.46	0.96	8.18	200	12	915	2	230							

SUBSUMMARIES

REF NO.	SHEET NO.	STATION TO STATION		254	254	407	442		
				PAVEMENT PLANING, ASPHALT CONCRETE, 1.75"	PAVEMENT PLANING, ASPHALT CONCRETE, 3"	TACK COAT	ASPHALT CONCRETE, MISC.: BUTT JOINTS INTERSECTIONS		
				SY	SY	GAL	CY		
<b>INTERSECTIONS</b>									
<b>SR 412</b>									
18									
					45	6.3	3.8		
21					155	21.7	12.9		
21					45	6.3	3.8		
21					295	41.3	24.6		
<b>SR 590</b>									
29				215		18.3	10.5		
36				165		14.0	8.0		
39				75		6.4	3.6		
42				115		9.8	5.6		
43				150		12.8	7.3		
44				80		6.8	3.9		
44				225		19.1	10.9		
44				185		15.7	9.0		
51				70		6.0	3.4		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>				1280	540	185	108		

REF NO.	SHEET NO.	STATION		SIDE	202	608	608	609
					WALK REMOVED	CURB RAMP	DETECTABLE WARNING	CURB, TYPE 6
					SF	SF	SF	FT
<b>CURB RAMPS</b>								
CR-1	51		620+69.00	RT.	50	50	8	6
CR-2	51		620+92.00	RT.	50	50	8	6
CR-3	52		628+92.00	LT.	60	60	8	7
CR-4	52		630+00.00	LT.	60	60	8	6
CR-5	52		630+65.00	LT.	400	400	16	35
CR-6	52		634+80.00	LT.	60	60	8	7
CR-7	52		638+20.00	LT.	70	70	8	6
CR-8	52		638+60.00	LT.	75	75	16	10
CR-9	52		638+60.00	LT.	110	110	24	15
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					935	935	104	98

DESIGN AGENCY



DESIGNER  
DEK

REVIEWER  
JMF 08/15/24

PROJECT ID  
92370

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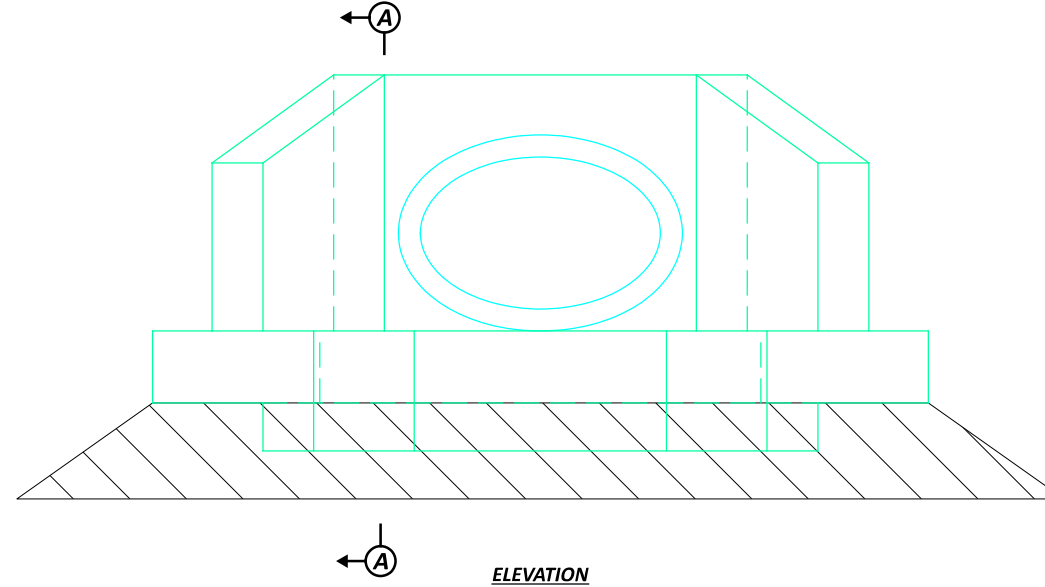
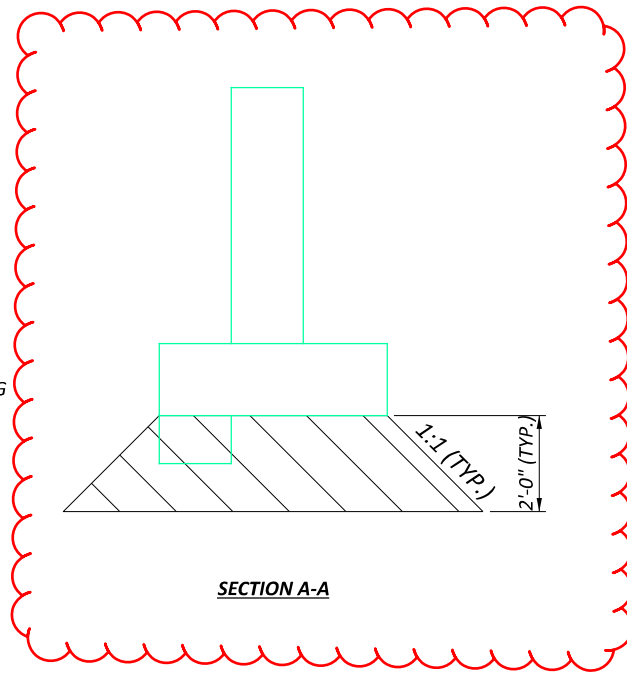
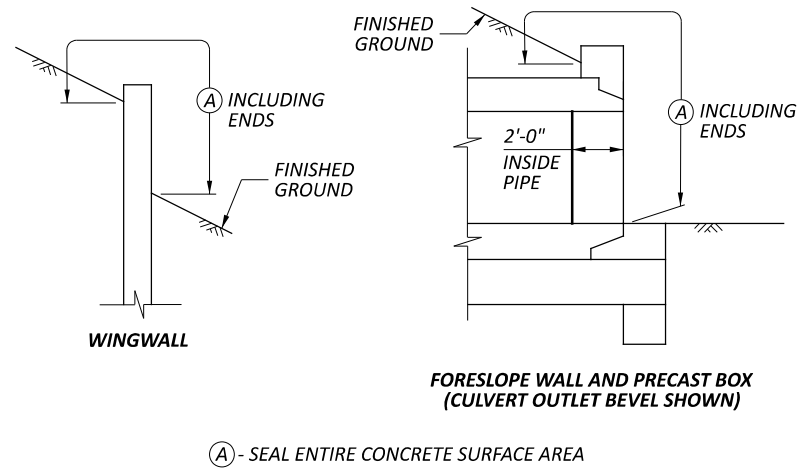
**NOTES**

THE UNDERCUT DESCRIBED ON THIS SHEET SHALL BE APPLIED TO BOTH HEADWALLS.  
 FOR HEADWALL DIMENSIONS, SEE STANDAD CONSTRUCTION DRAWING HW-1.1.  
 THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203 EXCAVATION	18 CY
ITEM 203 GRANULAR MATERIAL, TYPE C	18 CY

**SEALING OF FORESLOPE WALL AND WINGWALLS**

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH NON-EPOXY SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.



**LIMITS OF ITEM 512-SEALING CONCRETE SURFACES DETAILS**

