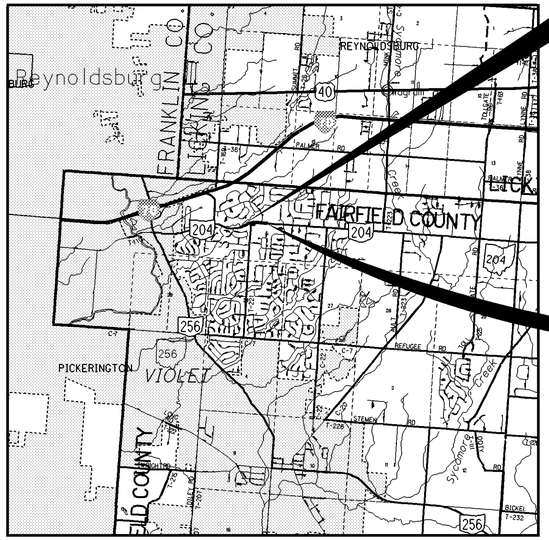

LOCATION MAP

SCALE IN MILES

0 1 2 3 4

LATITUDE: 82°46′00″
LONGITUDE: 39°50′00″

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
FAI-204-1.23
VIOLET TOWNSHIP
FAIRFIELD COUNTY

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF LEFT TURN LANES ON S.R. 204 EASTBOUND AND WESTBOUND AT HARMON ROAD (TWP. RD. 221) AND THE INSTALLATION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF HARMON ROAD AND S.R. 204.

INDEX OF SHEETS:

TITLE SHEET 1
SCHEMATIC 2
TYPICAL SECTIONS 3-5
GENERAL NOTES ..... 6-7 & 7A
MAINTENANCE OF TRAFFIC ..... 8-17 & 9A
PAVEMENT AND SHOULDER CALCULATIONS 18
ROADWAY SUB-SUMMARY 19
GENERAL SUMMARIES 20-21
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S.R. 204 CROSS SECTIONS 25-31
TRAFFIC CONTROL DETAIL SHEETS AND QUANTITIES 32-35
SIGNING DETAIL SHEETS AND QUANTITIES 36-39
TRAFFIC SIGNAL DETAIL SHEETS AND QUANTITIES 40-47

1997 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 PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS.

DESIGN DESIGNATION

CURRENT ADT (1999) 9,220
DESIGN YEAR ADT (2019) 12,400
DESIGN HOURLY VOLUME (2019) 124
DIRECTIONAL DISTRIBUTION ..... EQUAL
TRUCKS (24 HOUR B&C) 2%
DESIGN SPEED ..... 45 M.P.H.
LEGAL SPEED ..... 45 M.P.H.

DESIGN FUNCTIONAL CLASSIFICATION - COLLECTOR URBAN

DESIGN EXCEPTIONS - NONE

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

PLAN PREPARED BY:
DISTRICT NO. 5
OHIO DEPARTMENT OF TRANSPORTATION

BY _____
DATE _____

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
BP-3.1M	10/28/94	MT-105.11M	4/25/94	TC-42.20M	3/31/94			806	9/9/97	
BP-4.1M	10/28/94			TC-52.10M	7/29/94			870	8/10/99	
		RM-4.2M	10/21/97	TC-52.20M	7/29/94			877	4/13/99	
CB-1.1M	7/12/95			TC-65.10M	11/1/95			906	5/5/98	
		HL-30.11M	3/31/95	TC-65.11M	11/1/95			907	10/21/98	
DM-1.1M	10/21/97	HL-30.21M	3/31/95	TC-71.10M	9/1/93			908	1/6/99	
DM-1.2M	10/21/97	HL-30.22M	3/31/95	TC-81.10M	12/10/96					
DM-4.3M	6/30/95	HL-40.10M	3/31/95	TC-82.10M	11/19/99			1046	7/2/96	
		HL-50.11M	3/31/95	TC-83.10M	11/24/93					
MT-35.10M	11/30/95	HL-60.11M	5/1/95	TC-84.20M	11/24/93			1047	1/6/99	
MT-35.11M	11/30/95	HL-60.12M	3/31/95	TC-85.20M	11/24/93					
MT-97.10M	4/25/94							1048	9/9/97	
MT-97.11M	1/30/95	TC-21.20M	12/10/96							
MT-99.10M	1/30/95	TC-41.20M	7/1/94					1082	1/11/00	
MT-105.10M	4/24/95	TC-41.41M	3/31/94							

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. **NON FEDERAL**

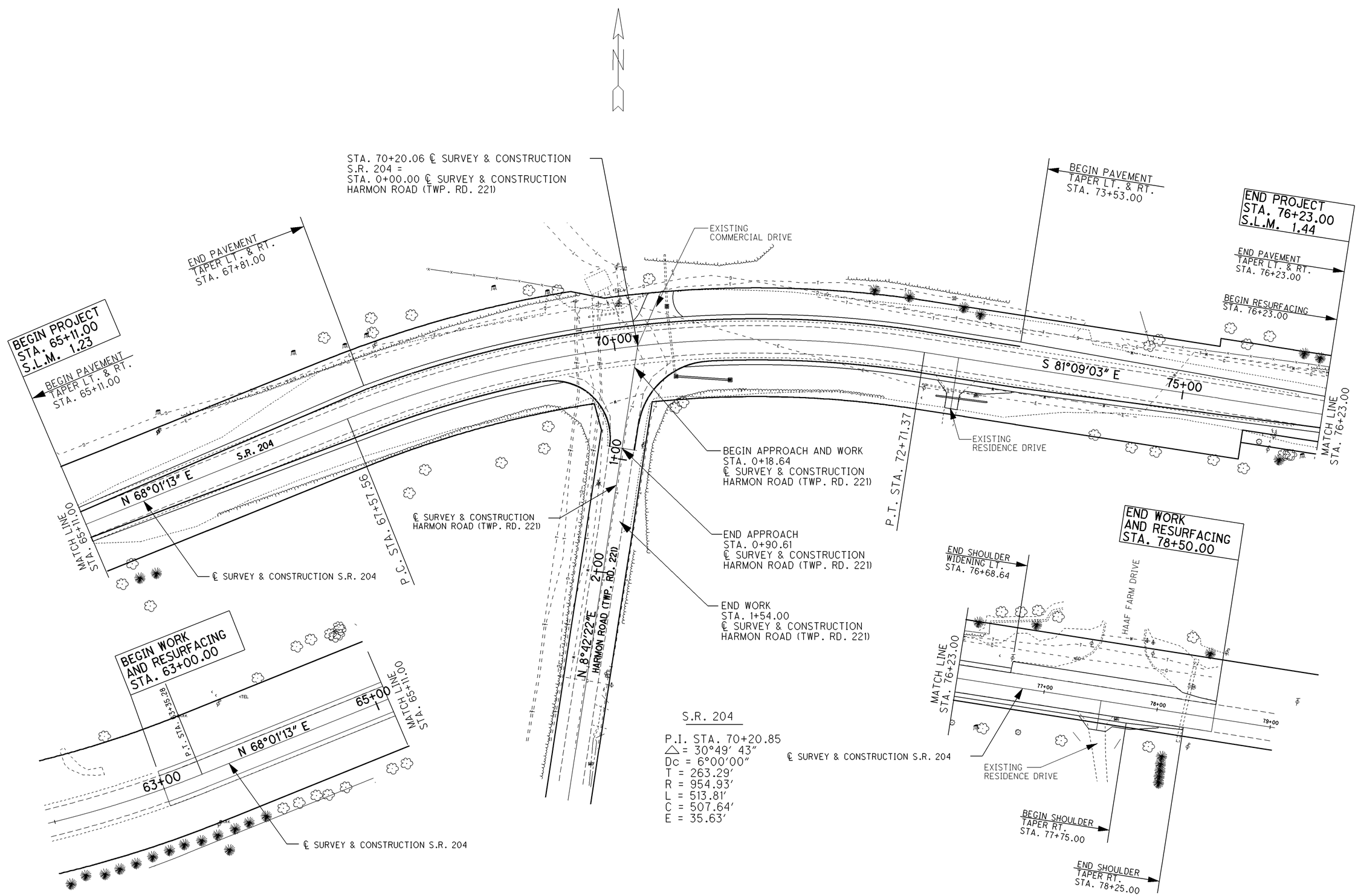
PID NO. **21047**

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT **NONE**

FAI-204-1.23

DESIGNERS: J.C., J.S., AND J.R.
F204000I.DTS 1/05/00



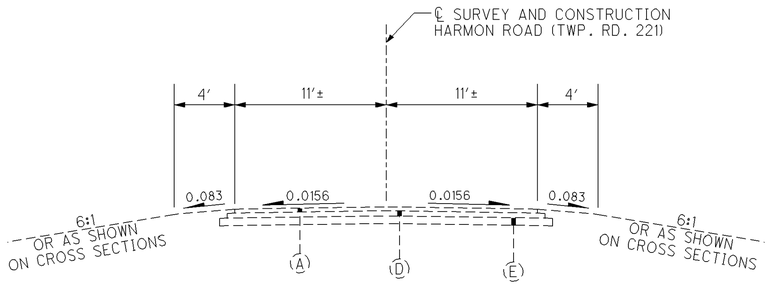
HORIZONTAL SCALE IN FEET
0 40 80

CALCULATED
CHECKED

SCHEMATIC PLAN

FAI-204-1.23

F2040001.GSP

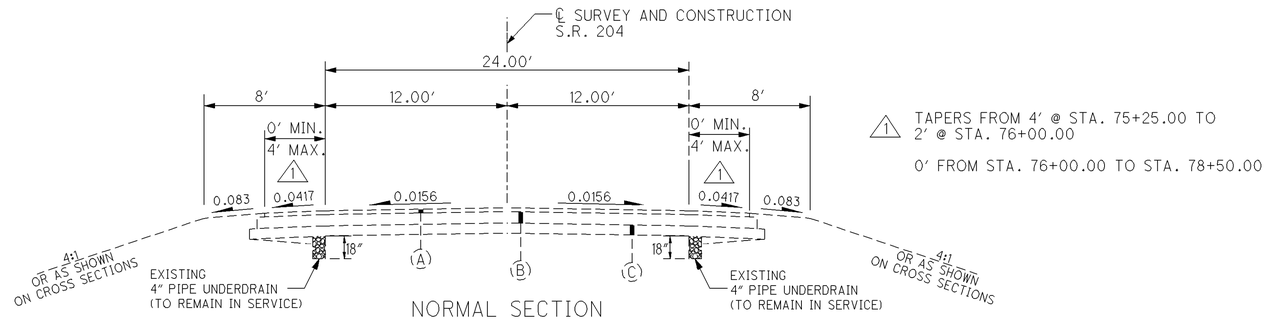


NORMAL SECTION

SECTION APPLIES:

STA. 0+18.64 TO STA. 0+90.61 = 71.79 LIN.FT.

TOTAL 71.79 LIN.FT.



1 TAPERS FROM 4′ @ STA. 75+25.00 TO 2′ @ STA. 76+00.00

0′ FROM STA. 76+00.00 TO STA. 78+50.00

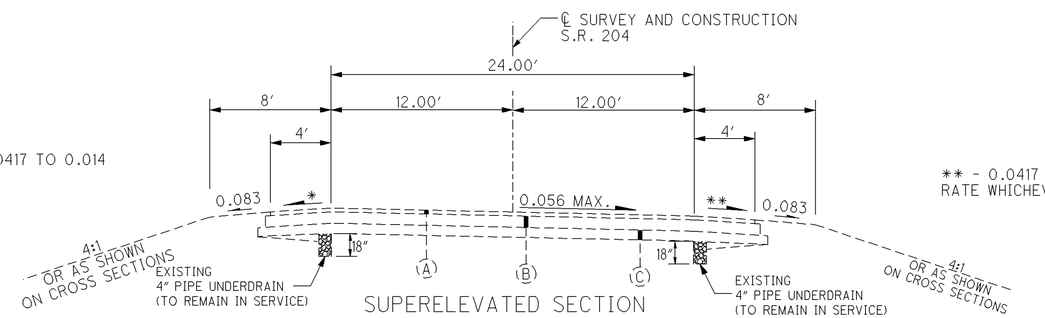
NORMAL SECTION

SECTION APPLIES:

STA. 63+00.00 TO STA. 66+42.62 = 342.62 LIN.FT.
STA. 73+85.85 TO STA. 78+50.00 = 464.15 LIN.FT.

TOTAL 806.77 LIN.FT.

* - VARIES FROM 0.0417 TO 0.014



** - 0.0417 OR SUPERELEVATION RATE WHICHEVER IS GREATER

SUPERELEVATED SECTION

SECTION APPLIES:

STA.66+42.62 TO STA. 73+85.85 = 743.23 LIN.FT. (e max. 0.056)

TOTAL 743.23 LIN.FT.

(A) EXISTING 3″± ASPHALT CONCRETE
(B) EXISTING 9″± BITUMINOUS AGGREGATE BASE
(C) EXISTING 8″± AGGREGATE BASE
(D) EXISTING 4″± BITUMINOUS AGGREGATE BASE
(E) EXISTING 6″± AGGREGATE BASE
(1) ITEM 448 1¼″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22
(2) ITEM 448 1¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22
(3) ITEM 301 9″ BITUMINOUS AGGREGATE BASE, PG 64-22
(4) ITEM 407 TACK COAT FOR INTERMEDIATE COURSE
(5) ITEM 407 TACK COAT
(6) ITEM 304 6″ AGGREGATE BASE
(7) ITEM 203 SUBGRADE COMPACTION
(8) ITEM 202 WEARING COURSE REMOVED
(9) ITEM 203 EMBANKMENT
(10) ITEM 659 SEEDING AND MULCHING
(11) ITEM 448 VARIABLE THICKNESS (0″ - 2¼″) ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22
(12) ITEM 605 AGGREGATE DRAIN

F2040001.PTS 1/05/00

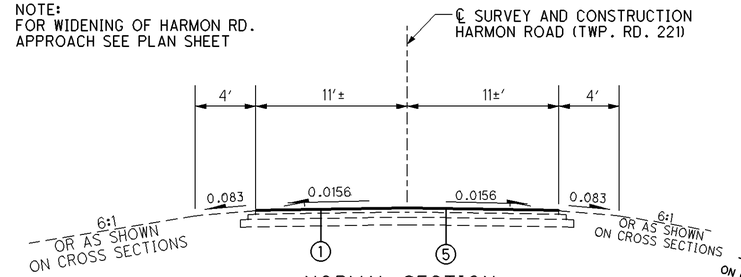
CALCULATED

CHECKED

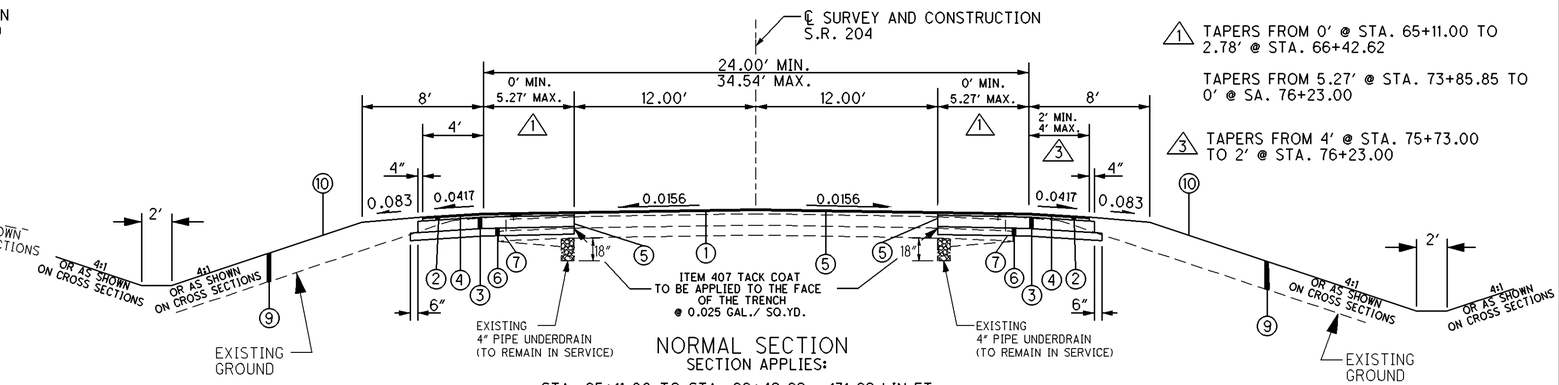
EXISTING TYPICAL SECTIONS
(S.R. 204 & HARMON ROAD (TWP. RD. 221)

FAI-204-1.23

NOTE:
FOR WIDENING OF HARMON RD.
APPROACH SEE PLAN SHEET



NORMAL SECTION
SECTION APPLIES:
STA. 0+18.64 TO STA. 0+91.61 = 71.97 LIN.FT.
TOTAL 71.97 LIN.FT.

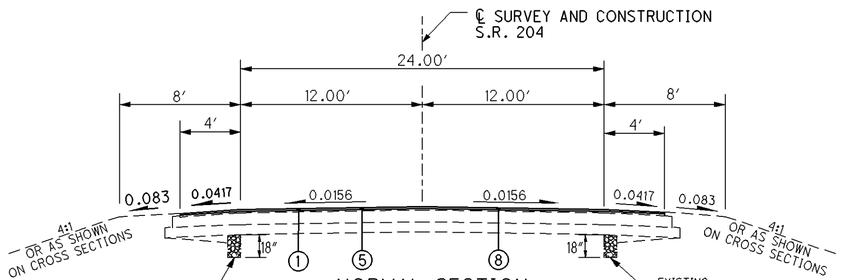


1 TAPERS FROM 0′ @ STA. 65+11.00 TO 2.78′ @ STA. 66+42.62

TAPERS FROM 5.27′ @ STA. 73+85.85 TO 0′ @ SA. 76+23.00

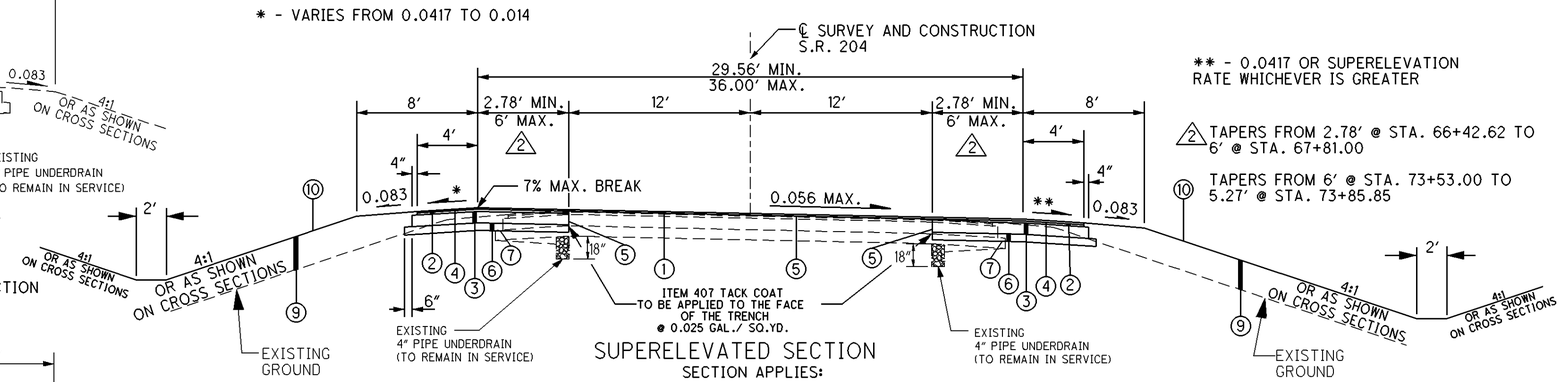
3 TAPERS FROM 4′ @ STA. 75+73.00 TO 2′ @ STA. 76+23.00

NORMAL SECTION
SECTION APPLIES:
STA. 65+11.00 TO STA. 66+42.62 = 131.62 LIN.FT.
STA. 73+85.85 TO STA. 76+23.00 = 237.15 LIN.FT.
TOTAL 368.77 LIN.FT.



NORMAL SECTION
SECTION APPLIES:
STA. 63+00.00 TO STA. 65+11.00 = 211.00 LIN.FT.
TOTAL 211.00 LIN.FT.

* - VARIES FROM 0.0417 TO 0.014

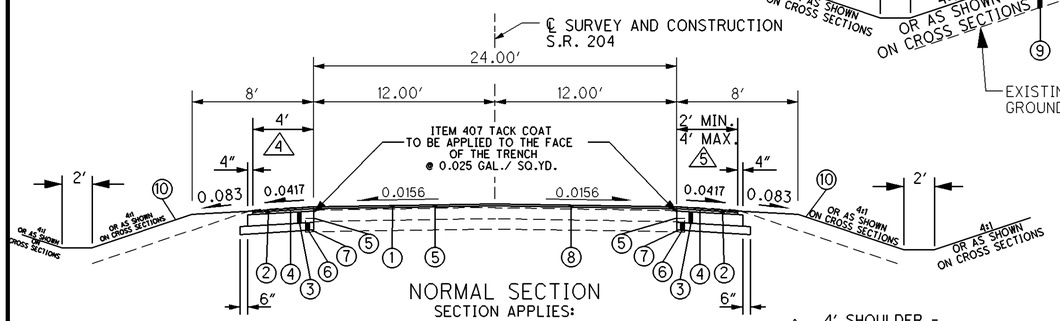


** - 0.0417 OR SUPERELEVATION RATE WHICHEVER IS GREATER

2 TAPERS FROM 2.78′ @ STA. 66+42.62 TO 6′ @ STA. 67+81.00

TAPERS FROM 6′ @ STA. 73+53.00 TO 5.27′ @ STA. 73+85.85

SUPERELEVATED SECTION
SECTION APPLIES:
STA. 66+42.62 TO STA. 67+81.00 = 138.38 LIN.FT. (emax. = 0.056)
STA. 73+53.00 TO STA. 73+85.85 = 32.85 LIN.FT. (emax. = 0.056)
TOTAL 171.23 LIN.FT.

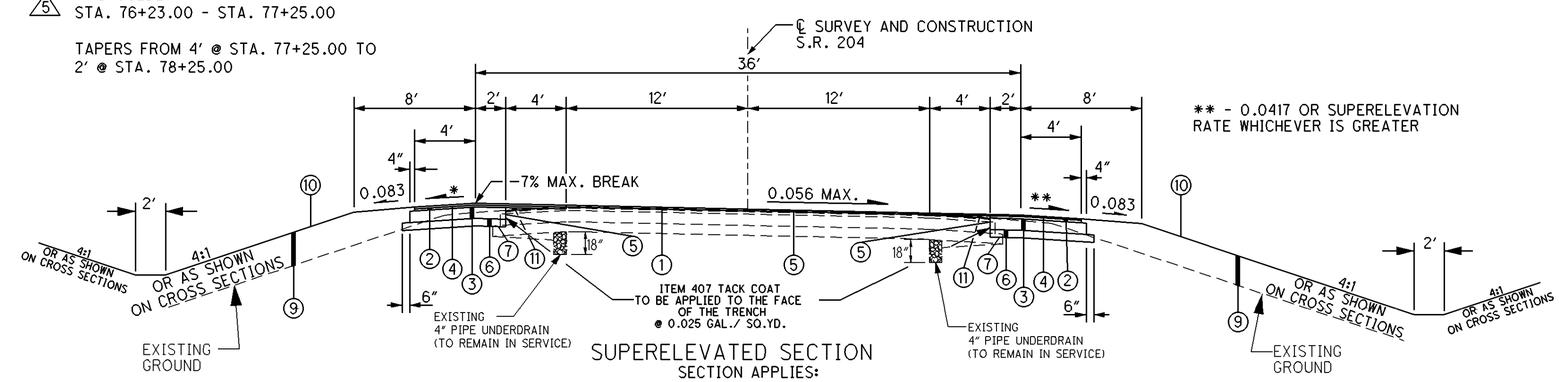


NORMAL SECTION
SECTION APPLIES:
STA. 76+23.00 TO STA. 78+50.00 = 227.00 LIN.FT.
TOTAL 227.00 LIN.FT.

4 4′ SHOULDER -
STA. 76+23.00 - STA. 76+68.64

5 4′ SHOULDER -
STA. 76+23.00 - STA. 77+25.00

TAPERS FROM 4′ @ STA. 77+25.00 TO 2′ @ STA. 78+25.00



** - 0.0417 OR SUPERELEVATION RATE WHICHEVER IS GREATER

SUPERELEVATED SECTION
SECTION APPLIES:
STA. 67+81.00 TO STA. 73+53.00 = 572.00 LIN.FT. (emax. = 0.056)
TOTAL 572.00 LIN.FT.

(A) EXISTING 3″± ASPHALT CONCRETE
(B) EXISTING 9″± BITUMINOUS AGGREGATE BASE
(C) EXISTING 8″± AGGREGATE BASE
(D) EXISTING 4″± BITUMINOUS AGGREGATE BASE
(E) EXISTING 6″± AGGREGATE BASE
(1) ITEM 448 1¼″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22
(2) ITEM 448 1¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22
(3) ITEM 301 9″ BITUMINOUS AGGREGATE BASE, PG 64-22
(4) ITEM 407 TACK COAT FOR INTERMEDIATE COURSE
(5) ITEM 407 TACK COAT
(6) ITEM 304 6″ AGGREGATE BASE
(7) ITEM 203 SUBGRADE COMPACTION
(8) ITEM 202 WEARING COURSE REMOVED
(9) ITEM 203 EMBANKMENT
(10) ITEM 659 SEEDING AND MULCHING
(11) ITEM 448 VARIABLE THICKNESS (0″ - 2¼″) ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22

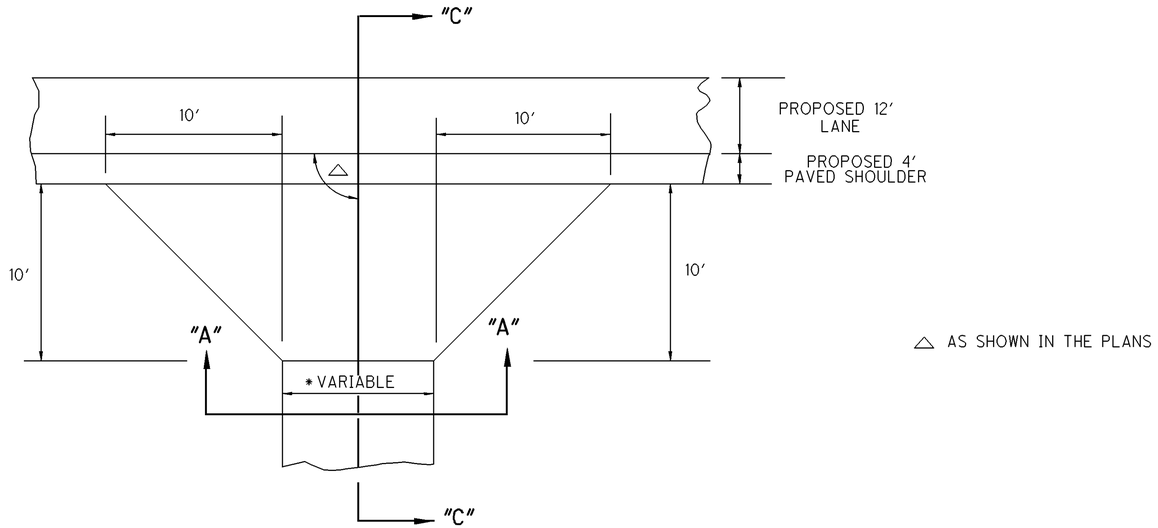
CALCULATED
CHECKED

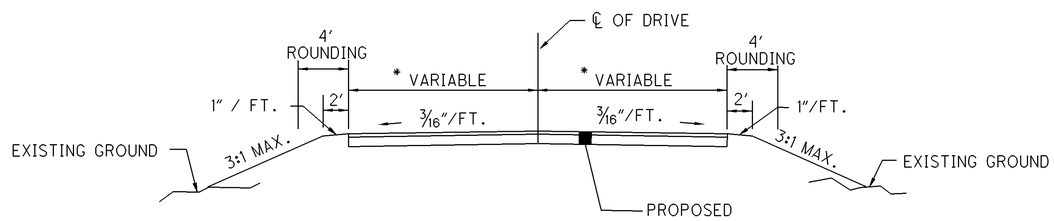
PROPOSED TYPICAL SECTIONS (S.R. 204 & HARMON ROAD (TWP. RD. 221)

FAI-204-1.23

F20400A1.PTS 1/05/00

TYPICAL SECTIONS
DRIVES





* SEE PLAN VIEW SHEETS

1¼" ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)
ON 3¾" ITEM 301 BITUMINOUS, PG 64-22 (DRIVEWAYS)
NOTE:
(HAAF FARM DR.) - ITEM 448 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS) - ONLY

SECTION A-A
RESIDENCE & COMMERCIAL DRIVES

DRIVE CALCULATIONS

MARK	STATION	SIDE	DESCRIPTION	ANGLE OF DEFLECTION	EXISTING SURFACE	AREA (TAKEN BY COMPUTER) SQ. YDS.	448 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS) CU. YD.		301 3¾" BITUMINOUS AGGREGATE BASE, PG 64-22 (DRIVEWAYS) CU. YD.	
1-DR	70+20.06	LT.	COMMERCIAL	74°27'46"	ASPHALT	98.0	3.4		10.2	
2-DR	▲73+01.66	RT.	RESIDENCE	90°	ASPHALT	61.0	2.1		6.4	
3-DR	▲77+50.45	RT.	RESIDENCE	90°	GRAVEL	50.0	1.7		5.2	
4-DR	77+62.57	LT.	HAAF FARM DR.	90°	ASPHALT	182.0	6.3			
TOTALS							13.5		21.8	

TOTALS CARRIED TO THE GENERAL SUMAMRY

▲ NOTE:
DRIVE CALCULATIONS INCLUDE MAILBOX APPROACH AS PER STANDARD DRAWING BP-4.1M

DRIVE.DGN 1/7/00

CALCULATED
CHECKED

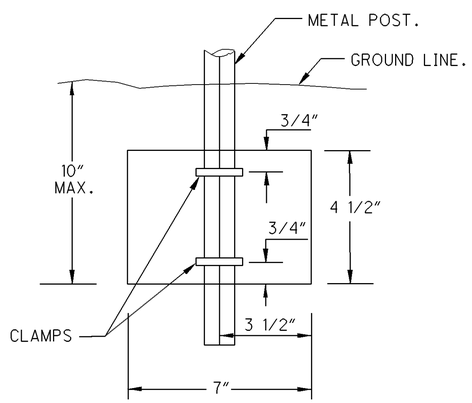
PROPOSED DRIVE TYPICAL & DRIVE CALCULATIONS

FAI-204-1.23

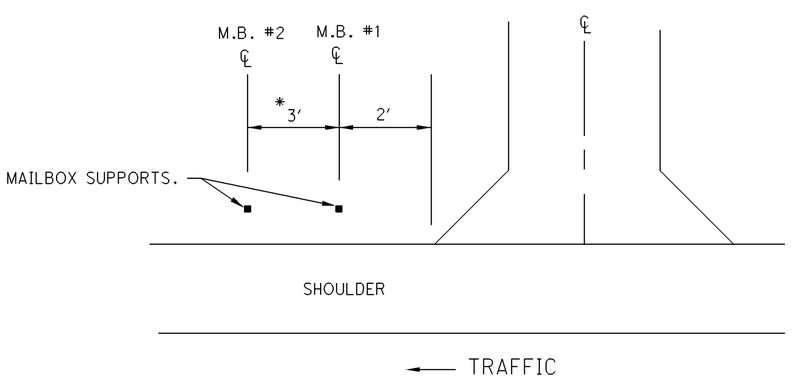
MAILBOX DETAILS

MARK	℄ DRIVE STATION	SIDE	SEE SHEET	SPECIAL: MAILBOX SUPPORT SYSTEM SINGLE	SPECIAL: MAILBOX SUPPORT SYSTEM DOUBLE
				EACH	EACH
1-MB	STA. 70+20.06	LT.	23	1	
2-MB	STA. 73+01.93	RT.	24	1	
3-MB	STA. 77+50.45	RT.	24	1	
TOTALS				3	

QUANTITIES CARRIED TO GENERAL SUMMARY.



ANTI-TWIST PLATE



* ADD 3' FOR EACH ADDITIONAL MAILBOX.

ITEM SPECIAL - MAILBOX SUPPORT

DESCRIPTION

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATION SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING POSTS AND OTHER MATERIAL NOT CONSIDERED SALVAGEABLE AND DISPOSED OF IN ACCORDANCE WITH 202.02.

MATERIALS

WOOD POSTS SHALL BE NOMINAL 4" x 4" SQUARE OR 4 1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

THE WOOD PLATE THAT IS ATTACHED TO THE TOP OF THE POST SHALL BE PRESSURE TREATED WOOD.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

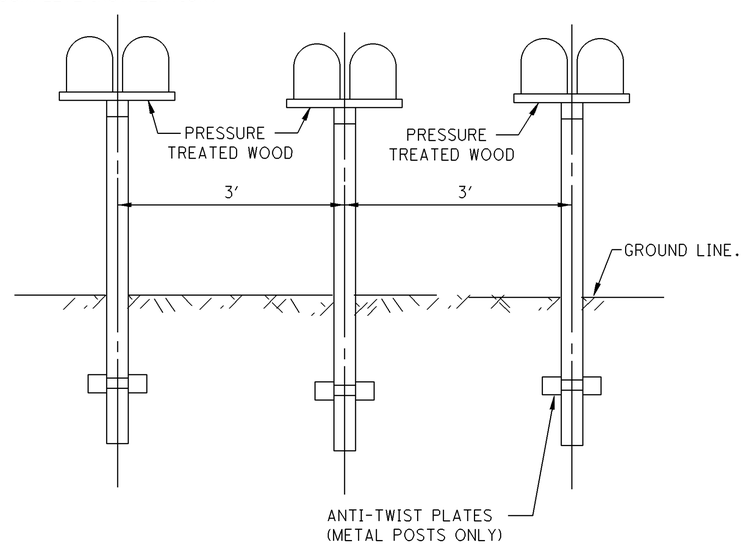
SETTING POSTS

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03 AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

MOUNTING BOXES

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.



GROUP MAILBOX INSTALLATION

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

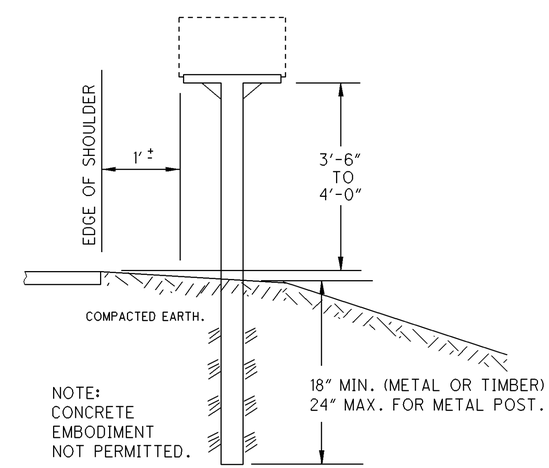
BASIS OF PAYMENT

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR THE TYPE SPECIFIED, COMPLETE IN PLACE.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	EACH	MAILBOX SUPPORT SYSTEM SINGLE
SPECIAL	EACH	MAILBOX SUPPORT SYSTEM DOUBLE



TYPICAL MAILBOX LOCATION AND MOUNTING HEIGHT

CALCULATED
CHECKED

MAILBOX DETAILS AND QUANTITIES

FAI-204-1.23

MAILBOX.DGN 1/1/00

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON SEA LEVEL DATUM OF 1929.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ROUNDING

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

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.

UNDERGROUND UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

UTILITY OWNERSHIPS

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

AMERITECH OF OHIO
150 E. GAY ST.
ROOM 6C
COLUMBUS, OHIO 43215
(614) 223-6294
ATTN: JACKIE PARZINGER

COLUMBIA GAS OF OHIO
6901 AMERICAN PARKWAY
REYNOLDSBURG, OHIO 43068
(614) 868-5230
ATTN: SEAMUS MULLIGAN

FAIRFIELD UTILITIES
11050 TUSSING RD.
PICKERINGTON, OHIO 43147
(614) 864-3370
ATTN: FRANK WISEMAN

INSITE CABLE T.V.
3770 E. LIVINGSTON AVE.
COLUMBUS, OHIO 43227
(614) 236-1292
ATTN: MARK ROCKWELL

SOUTH CENTRAL POWER
P.O. BOX 250
LANCASTER, OHIO 43130-0250
(740) 681-4488
ATTN: RALPH JONES

CONSTRUCTION PLAN

REFERENCE IS HEREBY MADE TO THE FOLLOWING DESIGNATED PLAN FOR FORMER CONSTRUCTION PROJECT, PORTIONS OF WHICH COVER AREAS INCLUDED IN THIS PROPOSED IMPROVEMENT.

FAI-204-0.75

MOBILIZATION

THE CONTRACTOR SHALL ON ANY CONTRACT FOR WHICH HIS BID EXCEEDS $50,000.00 INCLUDE AN AMOUNT TO COVER ANY APPLICABLE EXPENDITURES REFERRED TO UNDER ITEM 624 OF THE 1997 CONSTRUCTION AND MATERIAL SPECIFICATIONS. PAYMENT SHALL BE THE LUMP SUM BID PRICE FOR ITEM 624, MOBILIZATION.

ITEM 407, TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE ITEM 407, TACK COAT TO BE APPLIED PRIOR TO PLACING ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, SHALL BE 0.050 GALLONS PER SQUARE YARD.

ITEM 407, TACK COAT

THE RATE OF APPLICATION OF THE ITEM 407, TACK COAT TO BE APPLIED PRIOR TO PLACING ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, SHALL BE 0.075 GALLONS PER SQUARE YARD. THIS RATE SHALL APPLY TO THE AREA OF THE RESURFACING ONLY.

ITEM 407, TACK COAT

THE RATE OF APPLICATION OF THE ITEM 407, TACK COAT TO BE APPLIED TO THE FACE OF THE TRENCH, PRIOR TO THE PLACING OF THE ASPHALT, SHALL BE 0.025 GALLONS PER SQUARE YARD. THIS RATE SHALL APPLY TO THE FACE OF THE TRENCH ONLY.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE PROJECT ENGINEER FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL.

ITEM 877, TEMPORARY PERIMETER, DITCH CHECK OR INLET PROTECTION FILTER FABRIC FENCE	2700 LIN. FT.

ITEM 870, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, WITHIN THE CONSTRUCTION LIMITS OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 870, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS PLUS 10 FEET.

THE FOLLOWING ESTIMATED QUANTITIES HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 870, AGRICULTURAL LIMING	3 TON
ITEM 870, COMMERCIAL FERTILIZER	1 TON
ITEM 870, WATER	12 M.GAL.

CONSTRUCTION NOTIFICATION

IN ORDER FOR ODOT TO PROPERLY PERMIT OVERSIZED LOADS, PREPARE PROPER SIGNING WHEN REQUIRED AND FURTHER TO NOTIFY THE GENERAL MOTORING PUBLIC, THE CONTRACTOR SHALL NOTIFY (IN WRITING) THE DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR WITH COPIES FOR THE DISTRICT 5 ROADWAY SERVICES MANAGER AND PROJECT ENGINEER NOT LESS THAN 21 DAYS BEFORE ACTIVATING SUCH CLOSURE OR LANE RESTRICTION.
SEND NOTIFICATION TO:
TONY VOGEL
DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR
P.O. BOX 306
JACKSONTOWN, OHIO 43030
PH. (740) 323-5240

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616 WATER	50 M.GAL.
ITEM 616 CALCIUM CHLORIDE	5 TON

ITEM 201, CLEARING AND GRUBBING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 201, THE FOLLOWING REQUIREMENTS SHALL APPLY. THE EXISTING SLOPE AREAS WHERE EMBANKMENT IS TO BE PLACED SHALL REQUIRE DISKING OR A METHOD APPROVED BY THE ENGINEER, PRIOR TO PLACEMENT OF THE EMBANKMENT.

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

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 201, CLEARING AND GRUBBING, AS PER PLAN	LUMP

CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

ITEM 202 RAISED PAVEMENT MARKER REMOVED FOR STORAGE

AN ESTIMATED NUMBER HAS BEEN CARRIED TO THE GENERAL SUMMARY FROM SHEET 32 FOR THE ABOVE ITEM. ACTUAL PAY QUANTITY SHALL BE THE ACTUAL NUMBER REMOVED IN THE FIELD.

TEMPORARY ACCESS TO DRIVES AND APPROACHES

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC TO DRIVES AND APPROACHES.

ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	25 CU.YD.
ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE A OR B	10 CU.YD.
ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE C	10 CU.YD.

ENVIRONMENTALLY SENSITIVE SITE ADJACENT TO THE RIGHT OF WAY

AS A RESULT OF AN ENVIRONMENTAL SURVEY, AN ENVIRONMENTALLY SENSITIVE SITE HAS BEEN IDENTIFIED ADJACENT TO THE EXISTING RIGHT OF WAY. THE SITE IS MARKED ON THE PLAN SHEETS AND ARE AT THE FOLLOWING STATIONS:

STA. 67+00.00, LEFT
STA. 68+00.00, LEFT

THESE AREAS CANNOT BE USED FOR BORROW AREA, WASTE OR ANY OTHER PROJECT RELATED ACTIVITIES, SUCH AS TEMPORARY OFF SITE STORAGE OR FIELD OFFICE PLACEMENT.

CROSSING AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

MATERIALS SUPPLIED BY THE DEPARTMENT

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RTM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY". THE QUANTITY AND TYPE OF DEPARTMENT SUPPLIED MATERIALS ARE SHOWN ON SHEET 16 OF THIS PLAN.

THE CONTRACTOR SHALL PICK UP THE DEPARTMENT SUPPLIED RPM MATERIALS AT THE DIRECTION OF THE PROJECT ENGINEER.

FOR SOME PROJECTS HAVING QUANTITIES OF LESS THAN 20 RPMs THE CONTRACTOR MAY PICK UP RPM MATERIALS AT THE DISTRICT OFFICES. QUANTITIES OVER 20 RPMs WILL BE PICKED UP AT THE RECYCLER'S WHAREHOUSE OR AS ARRANGED WITH THE DISTRICT. THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATIONS FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED RAISED PAVEMENT MARKER AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO THE PICK UP OF THE RPMs. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND/OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO THE PICK UP OF THE DEPARTMENT SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THE RPMs WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTING RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO THE DEPARTMENT.

LOADING OF MATERIALS SUPPLIED BY THE DEPARTMENT AT THE RECYCLER'S WAREHOUSE

TRUCKS SHALL HAVE A LOADING HEIGHT OF 48 INCHES AND BE ABLE TO BACK UP FLUSH TO THE LOADING DOCK. TRUCKS SHALL NOT HAVE ANY OBSTRUCTIONS OR PROTRUSIONS THAT PREVENT THE LOADING BY A STANDARD FORKLIFT OR LIFT TRUCK.

SEMI TRUCKS OR 20 FOOT COMMERCIAL TRUCKS ARE THE MOST APPROPRIATE TRUCKS FOR LOADS IN EXCESS OF 4 PALLETS (ONE PALLET = 21 BOXES = 2100 LBS.). STAKE BODY TRUCKS ARE APPROPRIATE TO LOAD LESS THAN 4 PALLETS, PROVIDED THE TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT BY CHAINING OR STRAPPING DOWN AS NEEDED.

PICKUP TRUCKS ARE APPROPRIATE FOR LOADS OF APPROXIMATELY ONE PALLET, PROVIDED THE PICKUP TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT.

DUMP TRUCKS, TILT BED TRUCKS AND NON COMMERCIAL MOVING VANS WILL NOT BE LOADED BY THE RECYCLER'S WAREHOUSE.

THE WAREHOUSE SUPERVISOR WILL REFUSE TO LOAD ANY TRUCK THAT IS UNSAFE TO LOAD OR UNSUITABLE FOR THE LOAD BEING PLACED ON THE TRUCK.

RETURN OF NON-PERFORMED RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT

RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT, THAT ARE NON-PERFORMED, SHALL BE CAREFULLY REPACK OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM THE DEPARTMENT. CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER.

THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER THE COLOR OF THE PRISMATIC RETRO-REFLECTOR, THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORIZED OR NON REFLECTORIZED) AND NO MORE THAN 420 RPMs (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE. NON PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

IF THE DEPARTMENT HAS TO REPACKAGE THE RPMs CORRECTLY, THE CONTRACTOR WILL BE ASSESSED THE ACTUAL COST FOR REPACKING THE MATERIALS BY THE DEPARTMENT'S FORCES.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE A SOLAR POWERED TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. THE LIST CURRENTLY CONTAINS CLASS III WITHIN MINIMUM LEGIBILITY DISTANCES OF 650 FT.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLE-SHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF A 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLE-SHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OF PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ONBOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHOULD BE EMPLOYED. ALTHOUGH THREE-PHRASES MAY BE USED IN USUAL CONDITIONS. THE PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03(C). THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE TO THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER SIGN-MONTH FOR EACH ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

THIS PROJECT SHALL REQUIRE 3 (THREE) ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 6 SIGN MONTH

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (REPLACEMENT) 2 SIGN MONTH

ITEM SPECIAL REPLACEMENT DRUM

DRUM FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM SPECIAL REPLACEMENT DRUM AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 10 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

COVERING OF SIGNS

WHERE THE PLANS CALL FOR OR AS DIRECTED BY THE PROJECT ENGINEER FOR A PERMANENT SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN FACE IS STRICTLY PROHIBITED.

TRENCH FOR WIDENING AT APPROACHES

TRENCH EXCAVATION FOR PAVEMENT TO REMAIN OPEN TO TRAFFIC SHALL BE ONLY ON ONE SIDE OF THE APPROACH AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE TRENCH WIDTH THAT IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING AT APPROACHES

THE APPROACH PAVEMENT TO REMAIN OPEN TO TRAFFIC SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN THE CASE WHERE THE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS. THE TRENCH FOR THE UNCOMPLETED APPROACH PAVEMENT SHALL BE BACK FILLED AT THE DIRECTION OF THE PROJECT ENGINEER.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

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

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH: STATE HIGHWAY PATROL AND CITY OF COSHOCTON POLICE DEPARTMENT.

LAW ENFORCEMENT OFFICERS (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. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR 50 HOURS

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

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

ITEM 614 MAINTAINING TRAFFIC

TRAFFIC SHALL BE MAINTAINED AS PER THE DETAIL SHEETS AND SPECIFICATIONS AND AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE OPERATIONS SECTIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS LATEST REVISION. IN ADDITION, THE FOLLOWING REQUIREMENTS SHALL APPLY:

THE CONTRACTOR SHALL SUBMIT, IN WRITING A SCHEDULE OF OPERATIONS TO THE DISTRICT DEPUTY DIRECTOR AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF A PERSON OR PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IMMEDIATELY, AS PER 614.03 (C).

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

DRUMS SHALL BE PROPERLY REFLECTORIZED PLASTIC DRUMS AND WEIGHTED.

THE CONTRACTOR SHALL ARRANGE HIS OPERATIONS SO AS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIME TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.

AFTER WORK ON S.R. 204 EASTBOUND AND WESTBOUND LANES HAS BEEN COMPLETED, TRAFFIC SHALL BE RETURNED TO ITS ORIGINAL PATTERN AND THE CONTRACTOR SHALL REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES.

FOR SAFETY PURPOSES NO EQUIPMENT, VEHICLES OR MATERIAL SHALL BE PARKED OR STORED WITHIN THIRTY (30) FEET FROM THE EDGE OF THE PAVEMENT OF THE TRAVELED LANES.

THE PLANS INDICATE THE MINIMUM SIGNAGE WHICH MUST BE INSTALLED AND/OR MAINTAINED DURING ALL PHASES OF CONSTRUCTION.

EXISTING SIGNS OR CONTRACTOR SUPPLIED SIGNS SHALL BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION.

ANY CONFLICTING SIGNS WHETHER INSIDE OR OUTSIDE THE WORK LIMITS SHALL BE REMOVED OR COVERED AND TEMPORARY SIGNS ERECTED WHEN APPLICABLE BY THE CONTRACTOR.

THE ENGINEER SHALL RECORD INSTALLATION AND REMOVAL OF PROPOSED SIGNS, COVERED OR REMOVED AND UNCOVERED OR REERECTED SIGNS IN THE PROJECT DIARY.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 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 AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY:

ITEM 614 MAINTAINING TRAFFIC LUMP

SEQUENCE OF OPERATIONS

PHASE 1, STEP 1 (S.R. 204) (WESTBOUND LANE)
TIME RESTRICTION FOR WORKING HOURS 9:00 A.M. TO 11:00 P.M.

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING DRUMS AND FLAGGERS FOR WIDENING

CONSTRUCT PAVEMENT AND SHOULDER WIDENING ON S.R. 204, STA. 65+11.00 TO STA. 76+68.64. AS PER TYPICAL SECTIONS.
CONSTRUCT ITEM 304 6" AGGREGATE BASE AND ITEM 301 BITUMINOUS AGGREGATE BASE, PG 64-22
(ITEM 301 SHALL BE PLACED IN A 6" LIFT DURING THIS PHASE)
EXCLUDING THE FINAL 3" OF ITEM 301 BITUMINOUS AGGREGATE BASE, PG 64-22
1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 AND
1¼" OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE,
TYPE 1, PG 64-22

INSTALL ALL PERTINENT ITEMS NEEDED FOR THE TRAFFIC SIGNAL AT THE INTERSECTION OF S.R. 204 AND HARMON ROAD.

PHASE 1, STEP 2 (S.R. 204) (WESTBOUND LANE)
TIME RESTRICTION FOR WORKING HOURS 9:00 A.M. TO 4:00 P.M.

INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING DRUMS AND FLAGGERS AS PER STANDARD CONSTRUCTION DRAWING MT-97.10M

CONSTRUCT THE PAVEMENT WIDENING AND ALL RELATED WORK IN THE WESTBOUND LANES OF S.R. 204 STA. 65+11.00 TO STA. 76+68.64, AS PER TYPICAL SECTIONS.
CONSTRUCT THE FINAL 3" OF ITEM 301 BITUMINOUS AGGRERGATE BASE, PG 64-22 AND
1¾" OF ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22, EXCLUDING THE 1¼" OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22.

INSTALL ALL PERTINENT ITEMS NEEDED FOR THE TRAFFIC SIGNAL AT THE INTERSECTION OF S.R. 204 AND HARMON ROAD

PHASE 2, STEP 1 (S.R. 204) (EASTBOUND LANE) & HARMON ROAD
TIME RESTRICTION FOR WORKING HOURS 9:00 A.M. TO 11:00 P.M.

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING DRUMS AND FLAGGERS FOR WIDENING

CONSTRUCT PAVEMENT AND SHOULDER WIDENING ON S.R. 204, STA. 65+11.00 TO STA. 78+25.00. AS PER TYPICAL SECTIONS.
CONSTRUCT ITEM 304 6" AGGREGATE BASE AND ITEM 301 BITUMINOUS AGGREGATE BASE, PG 64-22
(ITEM 301 SHALL BE PLACED IN A 6" LIFT DURING THIS PHASE)
EXCLUDING THE FINAL 3" OF ITEM 301 BITUMINOUS AGGREGATE BASE, PG 64-22
1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 AND
1¼" OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE,
TYPE 1, PG 64-22

INSTALL ALL PERTINENT ITEMS NEEDED FOR THE TRAFFIC SIGNAL AT THE INTERSECTION OF S.R. 204 AND HARMON ROAD.

PHASE 2, STEP 2 (S.R. 204) (EASTBOUND LANE) & HARMON ROAD
TIME RESTRICTION FOR WORKING HOURS 9:00 A.M. TO 4:00 P.M.

INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING DRUMS AND FLAGGERS AS PER STANDARD CONSTRUCTION DRAWING MT-97.10M

CONSTRUCT THE PAVEMENT WIDENING AND ALL RELATED WORK IN THE EASTBOUND LANES OF S.R. 204 STA. 65+11.00 TO STA. 78+25.00, AS PER TYPICAL SECTIONS.
CONSTRUCT THE FINAL 3" OF ITEM 301 BITUMINOUS AGGRERGATE BASE, PG 64-22 AND
1¾" OF ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22, EXCLUDING THE 1¼" OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22.

INSTALL ALL PERTINENT ITEMS NEEDED FOR THE TRAFFIC SIGNAL AT THE INTERSECTION OF S.R. 204 AND HARMON ROAD

PHASE 3 (S.R. 204 & HARMON RD.)
TIME RESTRICTION FOR WORKING HOURS 9:00 A.M. TO 4:00 P.M.

INSTALL THE PROPOSED LOOP DETECTORS FOR THE TRAFFIC SIGNAL AS PER DETAIL SHEETS, SEE SHEETS 40-47, UTILIZING FLAGGERS AS NEEDED.

PLACE THE ITEM 1¼" OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, UTILIZING FLAGGERS AS NEEDED FOR THIS PROCEDURE.

INSTALL ALL PERMANENT TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS.

LIQUIDATED DAMAGES:

THE CONTRACTOR SHALL BE ACCESSED IN THE AMOUNT OF $1,500.00 PER HOUR THAT TRAFFIC IS NOT RETURNED TO ITS ORIGINAL PATTERN FOR THE TIME RESTRICTIONS STATED FOR EACH PHASE OF CONSTRUCTION.

GENERAL:

IT IS THE INTENT OF THIS SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC.

THE CONTRACTOR SHALL COMPLETE ALL WORK AS DESCRIBED IN THE SEQUENCE OF OPERATIONS, FOR EACH PHASE OF CONSTRUCTION, BEFORE STARTING WORK ON THE NEXT PHASE OF CONSTRUCTION.

THE CONTRACTOR SHALL NOT BE ALLOWED TO START WORK ON ANY PHASE OF CONSTRUCTION UNTIL APPROVAL HAS BEEN GRANTED BY THE PROJECT ENGINEER.

ALTERNATE METHODS:

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

WORK ZONE INSPECTIONS

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL, OTHER THAN THE SUPERINTENDENT, AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO INSPECT ALL TRAFFIC CONTROL DEVICES IN THE WORK ZONE AT THE BEGINNING AND AT THE END OF EACH WORK DAY. DAILY, A RECORD OF THE REVIEW SHALL BE GIVEN TO THE PROJECT ENGINEER, IN WRITING, AND SHALL INCLUDE A RECORD OF DEFICIENCIES AND RESOLUTION OF THE DEFICIENCIES. A MINIMUM OF TWO REVIEWS EACH WEEK SHALL BE PERFORMED DURING THE HOURS OF DARKNESS. ONE OF THE NIGHT INSPECTIONS SHALL BE PERFORMED ON A SATURDAY OR SUNDAY NIGHT.

THE FOLLOWING ITEMS SHALL BE INCLUDED IN EACH REVIEW:

TRAFFIC CONTROL DEVICE CONDITIONS, PLACEMENT, VISIBILITY, TRAFFIC FLOW CONDITIONS, INCIDENTS, CONGESTION POINTS, DELAYS, INTERACTION OR WORK VEHICLES AND TRAFFIC, EVIDENCE OF ACCIDENTS, PROPER STORAGE OF MATERIALS AND EQUIPMENT, CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, ADEQUACY OF THE TRAFFIC CONTROL PLAN, CONFLICTING OR NON-CONFORMING PAVEMENT MARKINGS. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGES OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

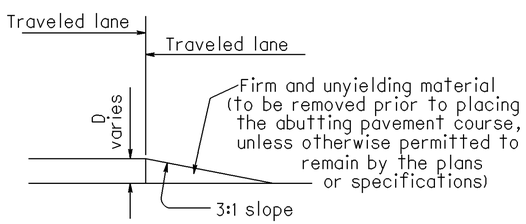
GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
2. While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
3. In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
4. The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
5. Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing MC-9.2 and Item 622.
6. When drums are specified for a dropoff condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
7. When OW-151 (Low Shoulder) signs or OW-171 (Uneven Lanes) and OWP-171 signs are required, they shall be placed 750′ in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the dropoff condition extends more than one-half mile, additional signs should be erected at intervals of one mile or less.
8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
9. Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10′, drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5″ and approval is granted by the Project Engineer.
10. Pavement Repairs (or similar work):
    a. Lengths greater than 60 feet - utilize appropriate treatment from Condition I.
    b. Lengths of 60 feet or less - repairs shall be effected in accordance with 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT

(MILLING OR RESURFACING)

1. This treatment may be used when permitted for Condition I only.
2. OW-171 and OWP-171 signs required.



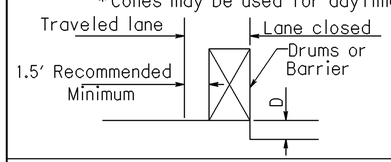
CONDITION I

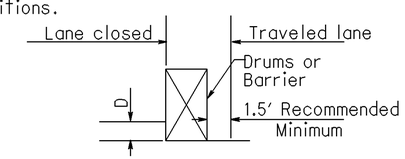
DROPOFFS BETWEEN TRAVELED LANES

1. These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D (In.)	Treatment
≤1½	Erect OW-171 and OWP-171 signs.
>1½-3	1) Lane closure utilizing drums as *shown below OR 2) Optional Wedge Treatment
>3-5	Lane closure utilizing drums as shown below.
>5	Lane closure utilizing portable concrete barrier as shown below.

*Cones may be used for daytime only conditions.





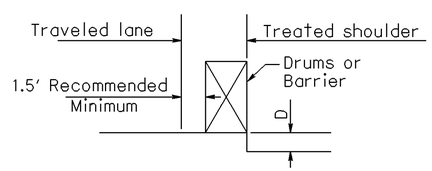
CONDITION II

DROPOFFS WITHIN GRADED SHOULDER AREA

1. The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
2. The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials, or concrete). For the purposes herein, its maximum width shall be considered to be twelve (12) feet.

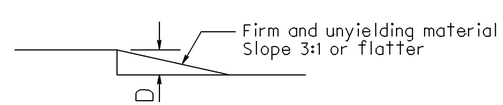
D (In.)	Treatment
≤1½	1) If edgelines are present, no treatment necessary OR 2) Erect OW-171 and OWP-171 signs.
>1½-5	1) If min. lane width *requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width *requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
>5-12 Daylight only	If min. lane width *requirements can be met, maintain lanes utilizing drums as shown below.
>5-24	1) If min. lane width *requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If min. lane width *requirements cannot be met, close adjacent lane utilizing drums.
>24	Lane closure utilizing portable concrete barrier as shown below.

*Minimum lane widths shall be 10′ unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

1. This treatment may not be used within a bituminous shoulder where a hot longitudnal joint per 401.15 is required.
2. OW-151 signs required.



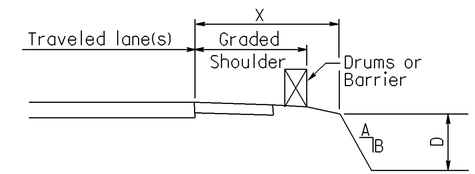
CONDITION III

DROPOFFS BEYOND GRADED SHOULDER OR BACK OF CURB

1. See Note 2 under Condition II.
2. Use Chart A or B below, as applicable.

CHART A

USE FOR: 1. Uncurbed Facilities.
2. Curbed Facilities, where:
   a. Curbs are less than 6″ in height.
   b. Curbs are 6″ or greater in height and the legal speed is greater than 40 mph.

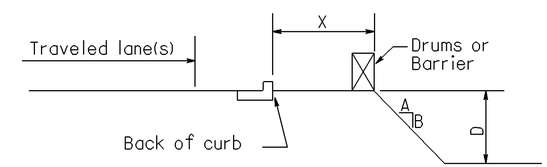


X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-4	Any	Any	(a)	(a)
4-30	Any	3:1 or Flatter	None	None
4-12	≤3	Steeper than 3:1	None	None
4-12	>3-≤12	Steeper than 3:1	Drums	Drums
4-12	>12	Steeper than 3:1	Drums	Barrier
>12-20	≤12	Steeper than 3:1	None	None
>12-20	>12-≤24	Steeper than 3:1	Drums	Drums
>12-20	>24	Steeper than 3:1	Drums	Barrier
>20-30	≤24	Steeper than 3:1	None	Drums
>20-30	>24	Steeper than 3:1	Drums	Barrier
>30	Any	Any	None	None

(a) Use treatment specified under Condition II.

CHART B

USE FOR: Curbed facilities, where the curb is 6″ or greater in height and the legal speed is 40 mph or less.



X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-10	<12	Any	None	Drums
0-10	>12	Any	Drums	Drums
>10	Any	Any	None	None

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN

DROPOFFS IN WORK ZONES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

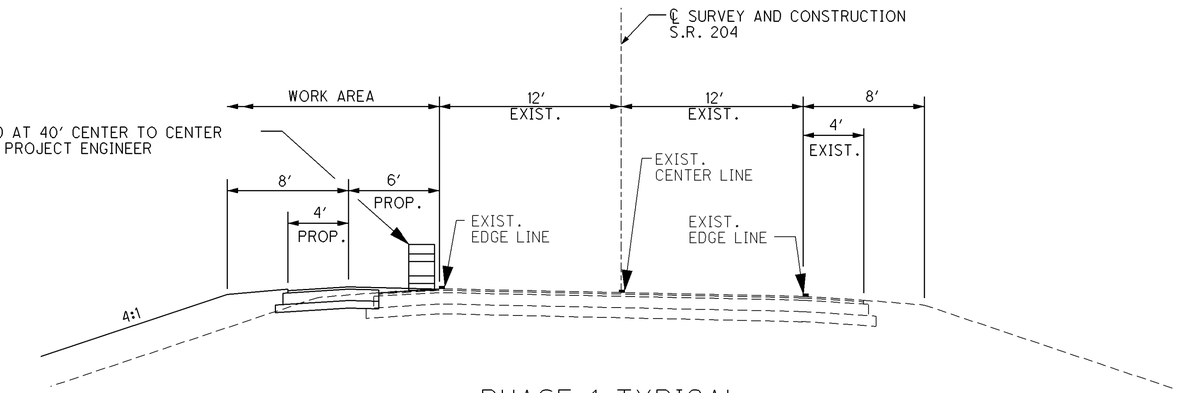
CALCULATED | CHECKED

DROPOFFS IN WORK ZONES

FAI-204-1.23

DROP.DGN 1/20/00

NOTE:
DRUMS TO BE SPACED AT 40′ CENTER TO CENTER
AS DIRECTED BY THE PROJECT ENGINEER



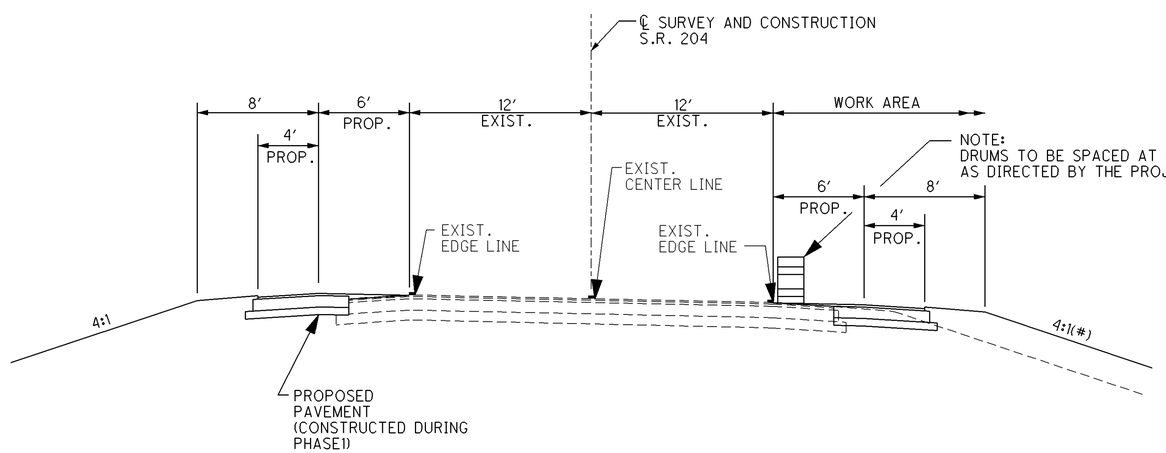
PHASE 1 TYPICAL
(STEP 1 & 2)

NOTE:
EXISTING PAVEMENT MARKINGS SHALL BE
USED FOR THE MAINTENANCE OF TRAFFIC
DURING PHASE 1 & 2.

A QUANTITY OF ITEM 614 TEMPORARY PAVEMENT
MARKINGS HAS BEEN INCLUDED IN THE PLAN
TO BE USED AS DIRECTED BY THE PROJECT ENGINEER
FOR PHASE 3 MAINTENANCE OF TRAFFIC, SEE SHEET 11.

NOTE:
HARMON ROAD TRAFFIC SHALL BE MAINTAINED AT
ALL TIMES

NOTE:
DRUM PLACEMENT AS SHOWN IS FOR NON WORKING HOURS.
DRUM PLACEMENT FOR WORKING HOURS SHALL BE AS PER
STANDARD DRAWING MT-97.10M AND AS SHOWN IN THE
MAINTENANCE OF TRAFFIC SHEETS 12-17



PHASE 2 TYPICAL
(STEP 1 & 2)

CALCULATED
X.X.
12/XX/99
CHECKED
X.X.
12/XX/99

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

FAI-204-1.23

F2040002.MNS 12/30/99

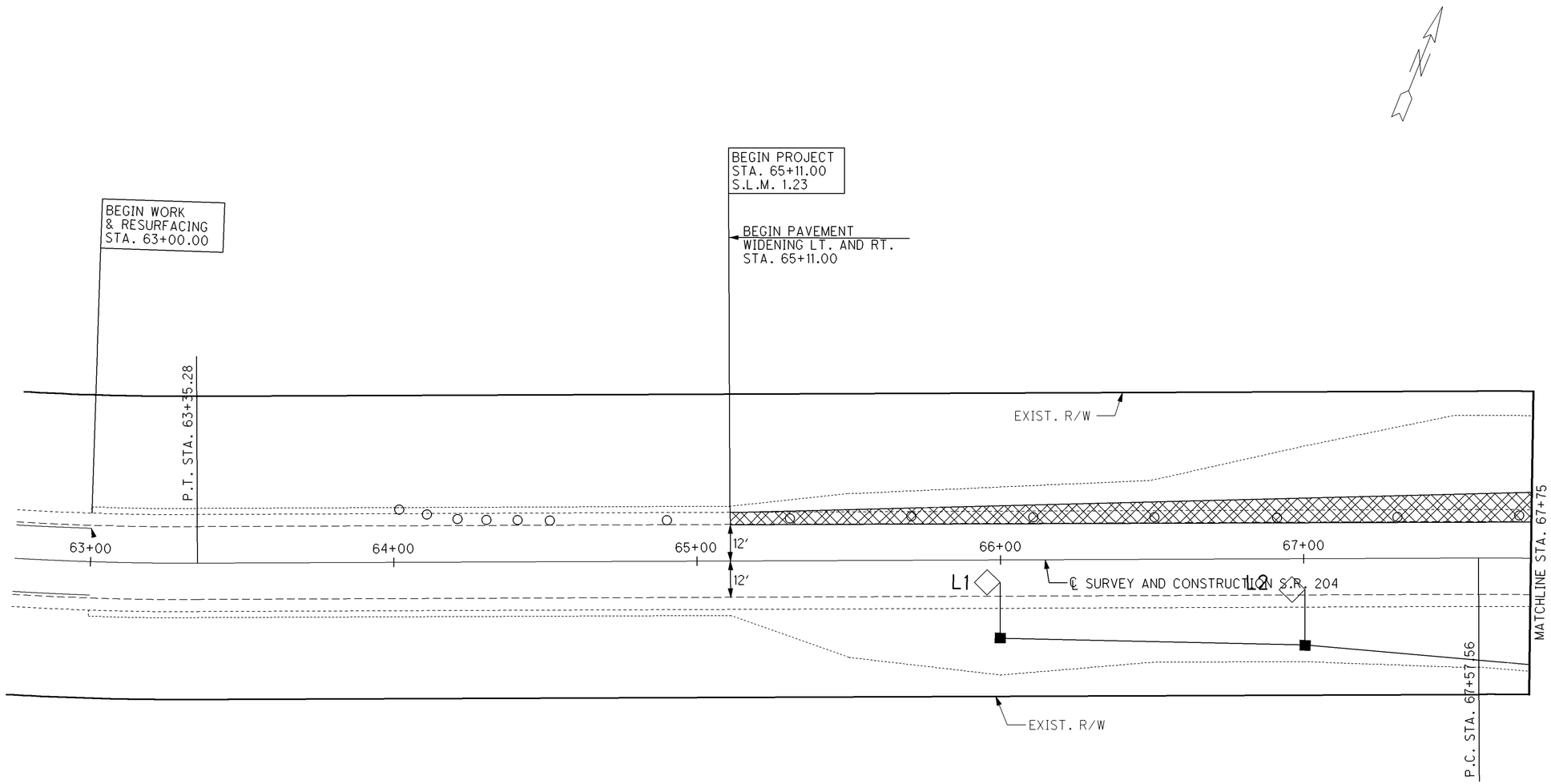
SEE SHEETS	℄ SURVEY AND CONSTRUCTION S.R. 204	614										
		TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT (WHITE)	TEMPORARY CENTER LINE, CLASS II, 642 PAINT, (DOUBLE SOLID) (YELLOW)	TEMPORARY STOP LINE, CLASS I								
		LIN. FT.	MILE	LIN. FT.								
	PHASE 3 MAINTENANCE OF TRAFFIC											
37-39	STA. 63+00.00 - STA. 78+50.00	235	0.294	48								
38	STA. 0+53.0 (HARMON RD.)			11								
TOTALS (CARRIED TO THE GENERAL SUMMARY)		235	0.294	59								

CALCULATED X.X.X 12/00/98
CHECKED X.X.X 12/31/98

MAINTENANCE OF TRAFFIC SUB-SUMMARY

FAI-204-1.23

F2040001.MSS 1/10/99



WORK AREA THIS PHASE

NOTE:
FOR CONSTRUCTION SIGN PLACEMENT
SEE STANDARD CONSTRUCTION DRAWING MT-97.10M

NOTE:
DRUMS PLACEMENT AS SHOWN IS FOR NON WORKING HOURS
DRUM PLACEMENT FOR WORKING HOURS SHALL BE AS PER
STANDARD CONSTRUCTION DRAWING MT-97.10M
AND AS DIRECTED BY THE PROJECT ENGINEER.

NOTE:
EXISTING PAVEMENT MARKINGS SHALL BE UTILIZED FOR THE
MAINTENANCE OF TRAFFIC DURING THIS PHASE.

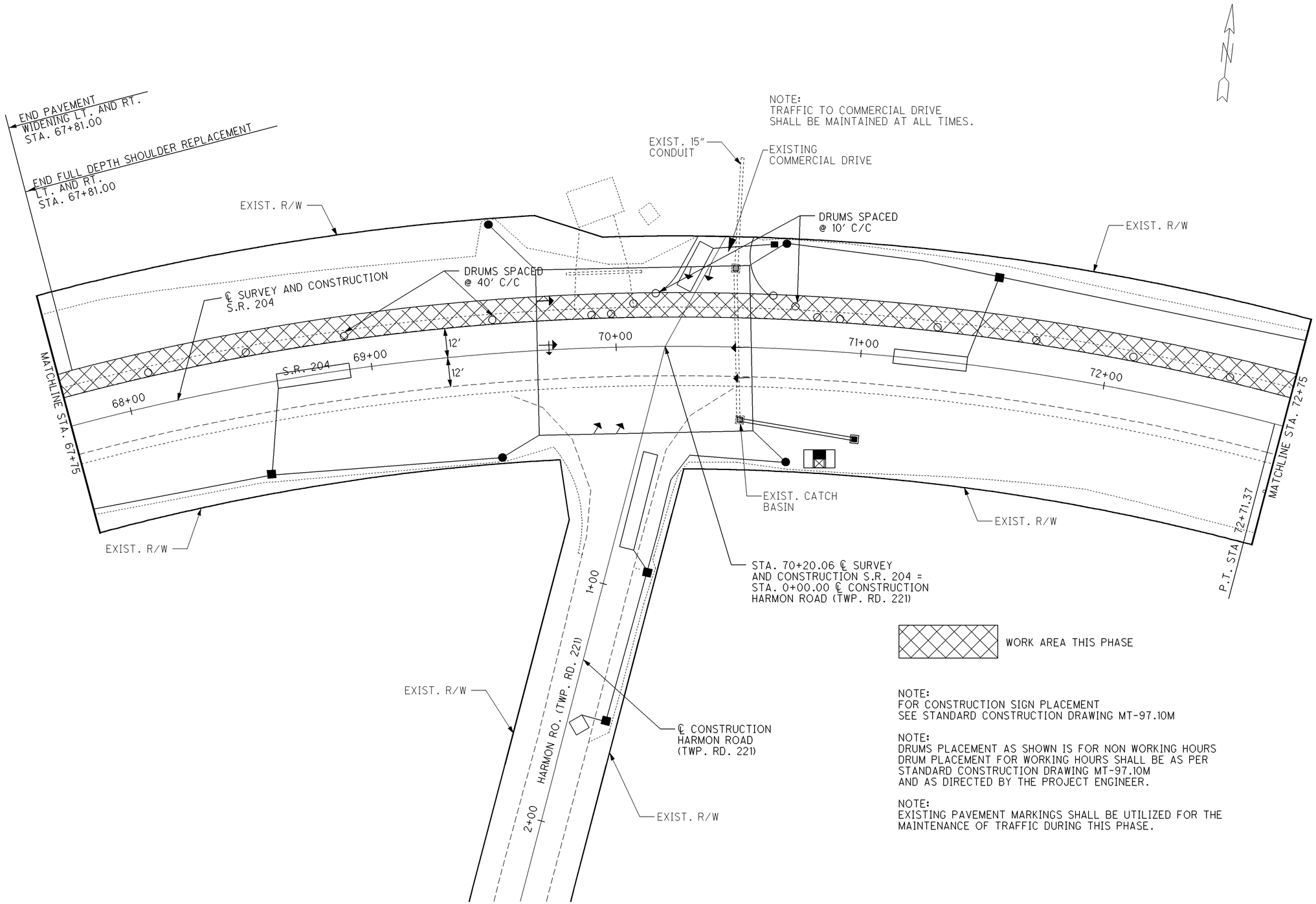
0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 65+11 TO STA. 67+75

FAI-204-1.23

F2040001.MDS 1/8/00



NOTE:
FOR CONSTRUCTION SIGN PLACEMENT
SEE STANDARD CONSTRUCTION DRAWING MT-97.10M

NOTE:
DRUMS PLACEMENT AS SHOWN IS FOR NON WORKING HOURS
DRUM PLACEMENT FOR WORKING HOURS SHALL BE AS PER
STANDARD CONSTRUCTION DRAWING MT-97.10M
AND AS DIRECTED BY THE PROJECT ENGINEER.

NOTE:
EXISTING PAVEMENT MARKINGS SHALL BE UTILIZED FOR THE
MAINTENANCE OF TRAFFIC DURING THIS PHASE.

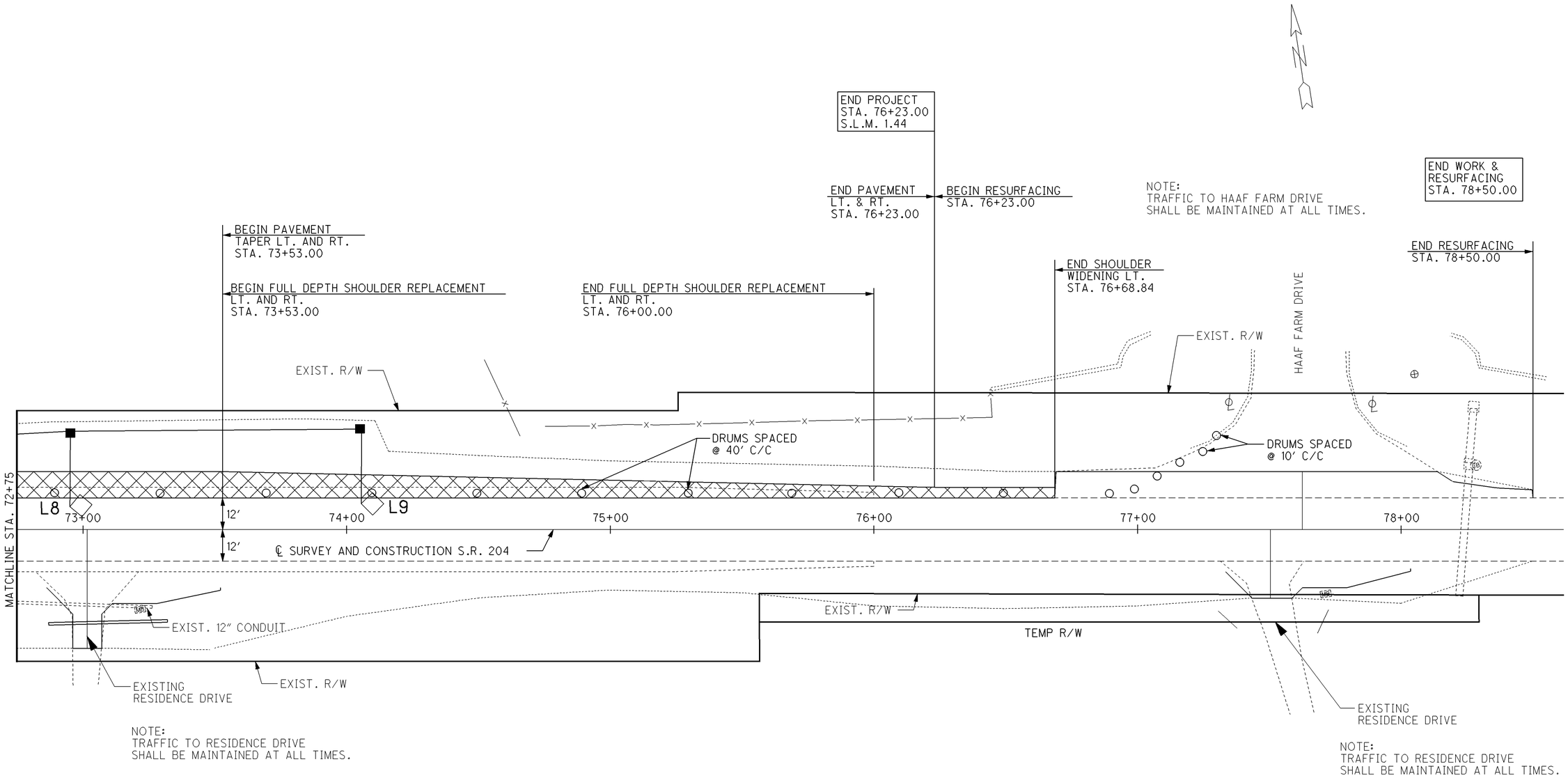
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 67+75 TO STA. 72+75

FAI-204-1.23

F2040002.MDS 1/10/00



WORK AREA THIS PHASE

NOTE:
FOR CONSTRUCTION SIGN PLACEMENT
SEE STANDARD CONSTRUCTION DRAWING MT-97.10M

NOTE:
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DRUM PLACEMENT FOR WORKING HOURS SHALL BE AS PER
STANDARD CONSTRUCTION DRAWING MT-97.10M
AND AS DIRECTED BY THE PROJECT ENGINEER.

NOTE:
EXISTING PAVEMENT MARKINGS SHALL BE UTILIZED FOR THE
MAINTENANCE OF TRAFFIC DURING THIS PHASE.

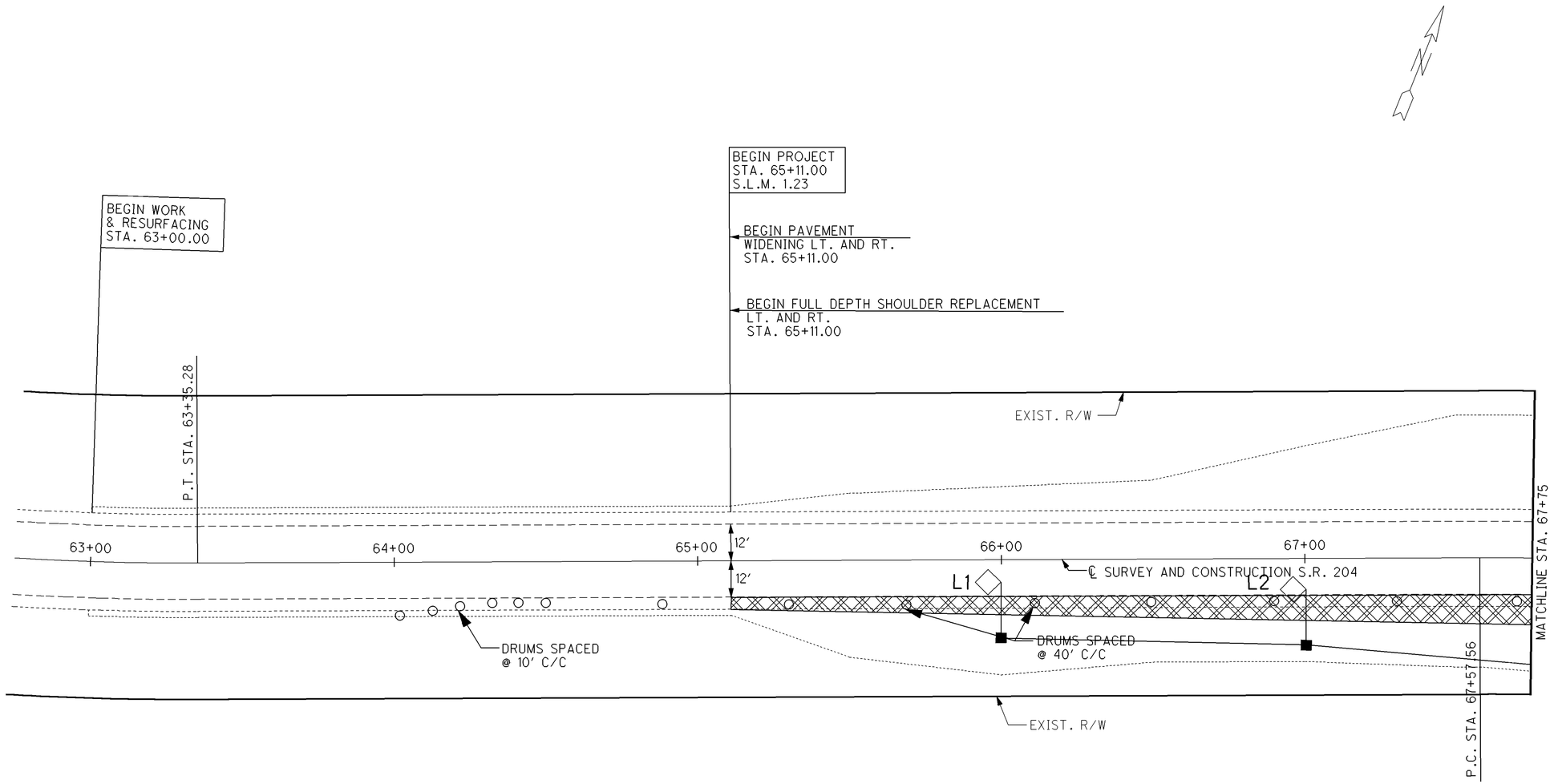
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC - PHASE 1
STA. 72+75 TO STA. 78+50

FAI-204-1.23

F2040003.MDS 1/10/00



WORK AREA THIS PHASE

NOTE:
FOR CONSTRUCTION SIGN PLACEMENT
SEE STANDARD CONSTRUCTION DRAWING MT-97.10M

NOTE:
DRUMS PLACEMENT AS SHOWN IS FOR NON WORKING HOURS
DRUM PLACEMENT FOR WORKING HOURS SHALL BE AS PER
STANDARD CONSTRUCTION DRAWING MT-97.10M
AND AS DIRECTED BY THE PROJECT ENGINEER.

NOTE:
EXISTING PAVEMENT MARKINGS SHALL BE UTILIZED FOR THE
MAINTENANCE OF TRAFFIC DURING THIS PHASE.

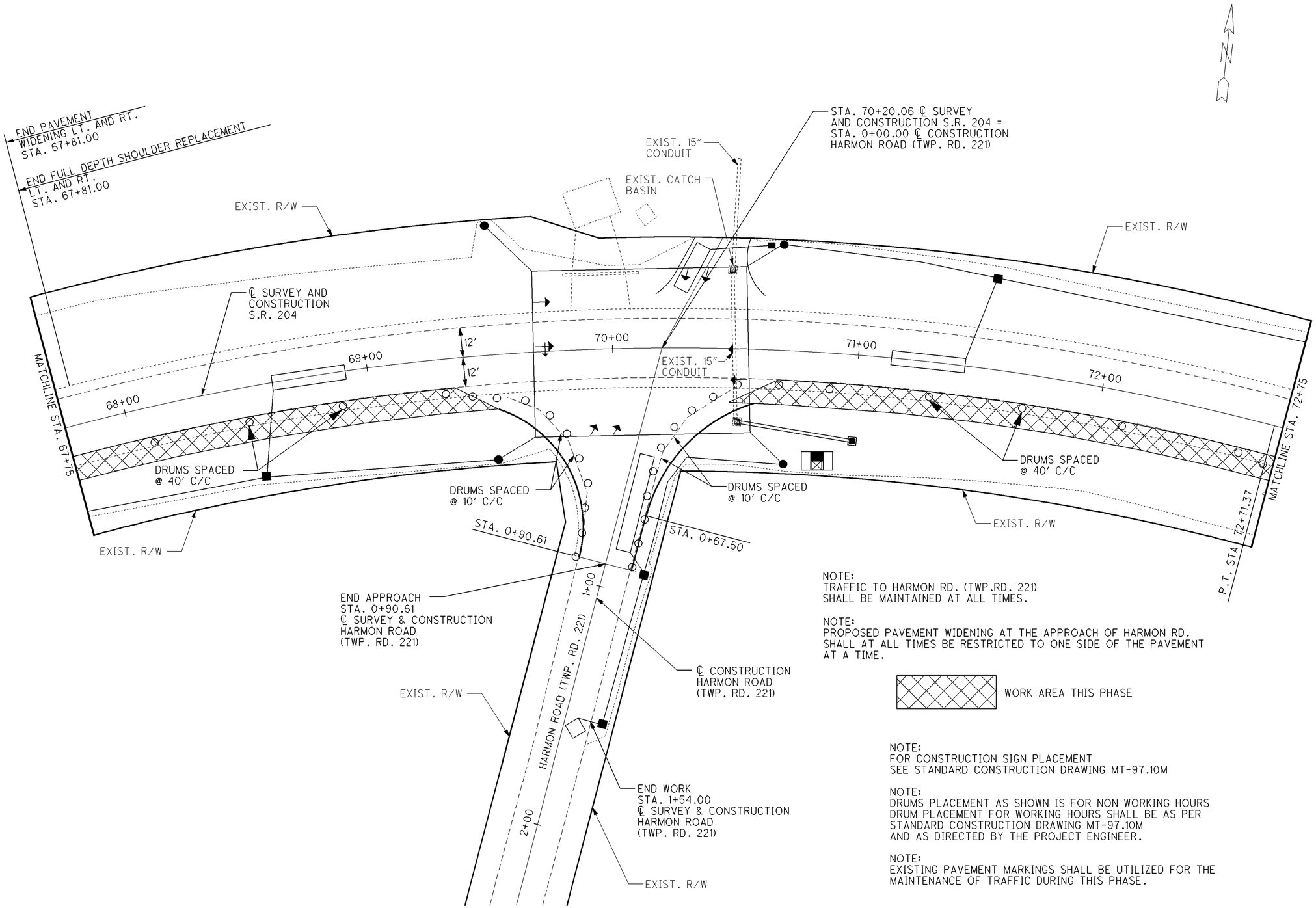
0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 65+11 TO STA. 67+75

FAI-204-1.23

F2040004.MDS 1/10/00



NOTE:
TRAFFIC TO HARMON RD. (TWP.RD. 221) SHALL BE MAINTAINED AT ALL TIMES.

NOTE:
PROPOSED PAVEMENT WIDENING AT THE APPROACH OF HARMON RD. SHALL AT ALL TIMES BE RESTRICTED TO ONE SIDE OF THE PAVEMENT AT A TIME.

WORK AREA THIS PHASE

NOTE:
FOR CONSTRUCTION SIGN PLACEMENT SEE STANDARD CONSTRUCTION DRAWING MT-97.10M

NOTE:
DRUMS PLACEMENT AS SHOWN IS FOR NON WORKING HOURS DRUM PLACEMENT FOR WORKING HOURS SHALL BE AS PER STANDARD CONSTRUCTION DRAWING MT-97.10M AND AS DIRECTED BY THE PROJECT ENGINEER.

NOTE:
EXISTING PAVEMENT MARKINGS SHALL BE UTILIZED FOR THE MAINTENANCE OF TRAFFIC DURING THIS PHASE.

HORIZONTAL SCALE IN FEET 0 20 40

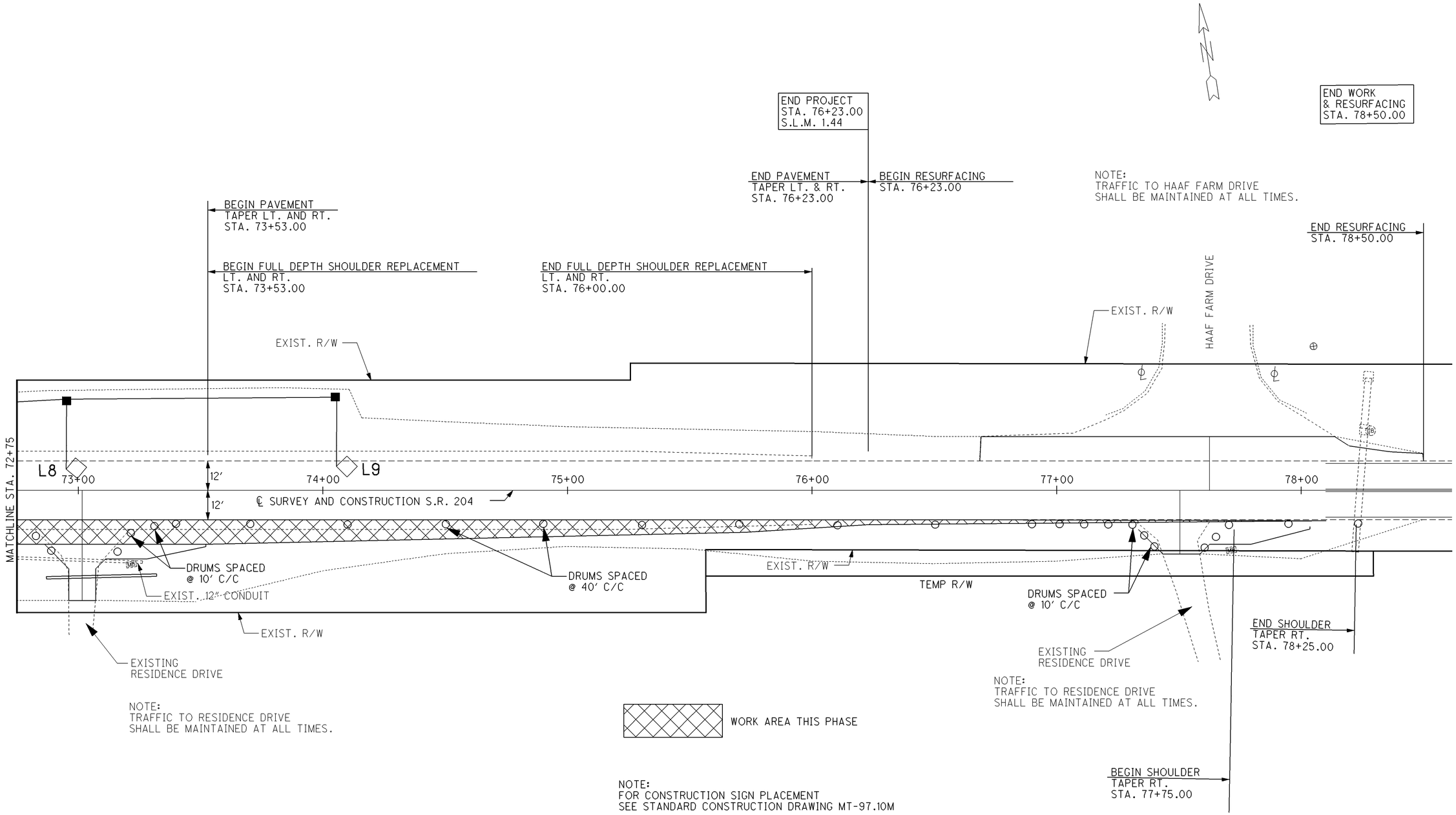
CALCULATED

CHECKED

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 67+75 TO STA. 72+75

FAI-204-1.23

F2040005.MDS 1/12/00



NOTE:
FOR CONSTRUCTION SIGN PLACEMENT
SEE STANDARD CONSTRUCTION DRAWING MT-97.10M

NOTE:
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AND AS DIRECTED BY THE PROJECT ENGINEER.

NOTE:
EXISTING PAVEMENT MARKINGS SHALL BE UTILIZED FOR THE
MAINTENANCE OF TRAFFIC DURING THIS PHASE.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 72+75 TO STA. 78+50

FAI-204-1.23

F2040006.MDS 1/10/00

STATION TO STATION ℄ SURVEY AND CONSTRUCTION S.R. 204 & HARMON RD.	SIDE	LENGTH	PAVEMENT WIDTH	PAVEMENT AREA	202 WEARING COURSE REMOVED	203 SUBGRADE COMPACTION	301 9" BITUMINOUS AGGREGATE BASE, PG 64-22 L x (W.B. + .3333') x 0.75' ÷ 27 =	304 6" AGGREGATE BASE L x (W.B. + 0.833') x 0.5' ÷ 27 =	407 TACK COAT @ 0.025 GAL./SQ. YD. (FACE OF TRENCH) 1.40' x L ÷ 9 x 0.025 =	407 TACK COAT @ 0.075 GAL./SQ. YD.	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./SQ. YD.	448 1¾" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, PG 64-22	448 1¼" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG 64-22
S.R. 204		LIN. FT.	FEET	SQ. YD.	SQ. YD.	SQ. YD.	CU. YD.	CU. YD.	GAL.	GAL.	GAL.	CU. YD.	CU. YD.
PAVEMENT WIDENING (LEFT)													
65+11.00 - 67+81.00	LT.	270.0	5.0 AVG.	150.0		150.0	40.0	29.2	1.1		7.5	7.3	5.2
67+81.00 - 73+53.00	LT.	572.0	6.0	381.3		381.3	100.0	72.4	2.2		19.1	(1) 78.1	13.2
73+53.00 - 75+73.00	LT.	220.0	5.6 AVG.	136.9		136.9	36.3	26.2	0.9		6.8	6.7	4.8
75+73.00 - 76+23.00	LT.	50.0	4.0	22.2		22.2	6.0	4.5	0.2		1.1	1.1	0.8
76+23.00 - 76+68.84	LT.	45.84	4.0	20.4		20.4	5.5	4.1	0.2		1.0	1.0	0.7
S.R. 204 PAVEMENT WIDENING (RIGHT)													
65+11.00 - 67+81.00	RT.	270.0	5.0 AVG.	150.0		150.0	40.0	29.2	1.1		7.5	7.3	5.2
67+81.00 - 69+31.33	RT.	150.53	6.0	100.4		100.4	26.5	19.0	0.6		5.0	(2) 30.0	3.5
70+81.47 - 73+53.00	RT.	271.53	6.0	181.0		181.0	47.8	34.4	1.1		9.1	(3) 54.1	6.3
73+53.00 - 75+73.00	RT.	220.0	5.6 AVG.	136.9		136.9	36.3	26.2	0.9		6.8	6.7	4.8
75+73.00 - 76+23.00	RT.	50.0	3.6 AVG.	20.0		20.0	5.5	4.1	0.2		1.0	1.0	0.7
76+23.00 - 77+75.00	RT	152.0	4.0	67.6		67.6	18.3	13.6	0.6		3.4	3.3	2.3
77+75.00 - 78+25.00	RT.	50.0	3.0 AVG.	16.7		16.7	4.6	4.5	0.2		0.8	0.8	0.2
S.R. 204 RESURFACING													
63+00.00 - 65+11.00	℄	211.0	32.0	750.2	750.2					56.3			26.0
65+11.00 - 76+23.00	℄	1112.0	24.0	2965.3						222.4			103.0
76+23.00 - 78+50.00	℄	227.0	24.0	605.3	605.3					45.4			21.0
HARMON ROAD (TWP. RD. 221) APPROACH WIDENING													
0+18.64 - 0+90.61 (RAD.)	RT.	96.22	4.0 AVG.	* 41.0	* AREA BY COMPUTER		11.6	8.6	0.4		2.1	2.0	1.4
0+18.64 - 0+67.50 (RAD.)	LT.	89.34	4.0 AVG.	* 49.0	* AREA BY COMPUTER		10.8	8.0	0.3		2.5	2.4	1.7
RESURFACING													
0+18.64 - 0+90.61	℄	71.97	VAR.	* 365.0	* AREA BY COMPUTER					27.4			12.7
SUB-TOTALS									10.0	351.5			
TOTALS (CARRIED TO THE GENERAL SUMMARY)					1355.5	1383.4	389.2	284.0	361.5		73.7	201.8	213.5

(1) ADDITIONAL:
(FOR LEVELING COURSE)
STA. 67+81.00± TO STA. 73+53.00±
LEFT - 2.5' WIDE x 572' x 1.125' AVG. ÷ 27 = 59.6 C.Y.

(2) ADDITIONAL:
(FOR LEVELING COURSE)
STA. 67+81.00± TO STA. 69+31.53±
RIGHT - 4.0' WIDE x 150.53' x 1.125' AVG. ÷ 27 = 25.1 C.Y.

(3) ADDITIONAL:
(FOR LEVELING COURSE)
STA. 70+81.47± TO STA. 73+53.00±
RIGHT - 4.0' WIDE x 271.53' x 1.125' AVG. ÷ 27 = 45.3 C.Y.

CALCULATED X.X. 12/30/98
CHECKED X.X. 12/31/98

PAVEMENT AND SHOULDER CALCULATIONS

FAI-204-1.23

MARK	SEE SHEET	℄ SURVEY AND CONSTRUCTION S.R. 204	603		604
			12″ CONDUIT, TYPE D	15″ CONDUIT, TYPE C	CATCH BASIN, NO. 2-2B
			LIN. FT.	LIN. FT.	EACH
1-D	23	STA. 70+51.3 - STA. 71+00.0		48.0	
2-D	23	STA. 71+00.0			1
3-D	24	STA. 72+87.0 - STA. 73+32.0	45.0		
TOTALS (CARRIED TO THE GENERAL SUMMARY)			45.0	48.0	1

MARK	SEE SHEET	℄ SURVEY AND CONSTRUCTION S.R. 204	202		
			PIPE REMOVED, 24″ AND UNDER		CATCH BASIN ABANDONED AND CONNECTED THRU
			LIN. FT.		EACH
1-R	23	STA. 70+51.3			1
2-R	24	STA. 72+73.9 - STA. 73+26.3	53.0		
TOTALS (CARRIED TO THE GENERAL SUMMARY)			53.0		1

CALCULATED X.X. 12/07/98
CHECKED X.X. 12/31/98

ROADWAY SUB-SUMMARIES

FAI-204-1.23

F2040002.GSS 1/05/00

SHEET NUMBER											ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	18	19		31	32	43								
															ROADWAY	
		LUMP									201	11001	LUMP		CLEARING AND GRUBBING, AS PER PLAN	7
			1356								202	23500	1356	SQ. YD.	WEARING COURSE REMOVED	
				53.0							202	35100	53.0	LIN. FT.	PIPE REMOVED, 24" AND UNDER	
							39				202	54100	39	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE	
				1							202	58500	1	EACH	CATCH BASIN ABANDONED AND CONNECTED THRU	
						1072					203	12000	1072	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
						562					203	20000	562	CU. YD.	EMBANKMENT	
			1384								203	50000	1384	SQ. YD.	SUBGRADE COMPACTION	
	3										SPECIAL	69050100	3	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	6
															EROSION CONTROL	
						5701					870	10000	5701	SQ. YD.	SEEDING AND MULCHING	
		1									870	20000	1	TON	COMMERCIAL FERTILIZER	
		3									870	30000	3	TON	AGRICULTURAL LIMING	
		12									870	35000	12	M.GAL	WATER	
		2700									877	30000	2700	LIN.FT.	TEMPORARY PERIMETER, DITCH CHECK OR INLET PROTECTION FILTER FABRIC FENCE	
															DRAINAGE	
								350.0			603	00400	350.0	LIN. FT.	4" CONDUIT, TYPE E	
				45.0							603	04900	45.0	LIN. FT.	12" CONDUIT, TYPE D	
				48.0							603	06100	48.0	LIN. FT.	15" CONDUIT, TYPE C	
				1							604	04500	1	EACH	CATCH BASIN, NO. 2-2B	
															PAVEMENT	
			390								301	46000	390	CU. YD.	BITUMINOUS AGGREGATE BASE, PG 64-22	
22											301	48000	22	CU. YD.	BITUMINOUS AGGREGATE BASE, PG 64-22 (DRIVEWAYS)	
			284								304	20000	284	CU. YD.	AGGREGATE BASE	
			362								407	10000	362	GAL.	TACK COAT	
			74								407	14000	74	GAL.	TACK COAT FOR INTERMEDIATE COURSE	
			202								448	46050	202	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22	
			214								448	47020	214	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	
14											448	48020	14	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)	
															TRAFFIC CONTROL	
							70				621	00200	70	EACH	RAISED PAVEMENT MARKER, INSTALLATION ONLY	
							0.552				642	00102	0.552	MILE	EDGE LINE	
							0.396				642	00300	0.396	MILE	CENTER LINE	
							235				644	00400	235	LIN.FT.	CHANNELIZING LINE	
							59				644	00500	59	LIN.FT.	STOP LINE	
							440				644	00700	440	LIN.FT.	TRANSVERSE LINE	
							3				644	01300	3	EACH	LANE ARROW	
							1				644	01410	1	EACH	WORD ON PAVEMENT, 96"	

CALCULATED A.J. 12/30/98
CHECKED A.K. 12/31/98

GENERAL SUMMARY

FAI-204-1.23

F2040001.GGS 1/03/00

SHEET NUMBER											ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
		7	8	9	11		36	47								
															TRAFFIC CONTROL CON'T.	
							141.0				630	02100	141.0	LIN.FT.	GROUND MOUNTED SUPPORTS, NO. 2 POST, TYPE S	
							30.0				630	80100	30.0	SQ.FT.	SIGN, FLAT SHEET	
							4				630	84900	4	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
							6				630	85100	6	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
							8				630	86002	8	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
															SIGNALS	
								785			625	25502	785	LIN FT	CONDUIT, 3", 713.07	
								785			625	29003	785	LIN FT	TRENCH, 24" DEEP, AS PER PLAN	43
								6			625	30700	6	EACH	PULL BOX, 713.08, 18"	
								4			625	30706	4	EACH	PULL BOX, 713.08, 24"	
								4			625	32000	4	EACH	GROUND ROD	
								2			630	79001	2	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE, AS PER PLAN	43
								10			630	80100	10	SQ FT	SIGN, FLAT SHEET	
								10			630	83000	10	SQ FT	COVERING OF SIGN	
								7			632	00301	7	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN	43
								1			632	00501	1	EACH	VEHICULAR SIGNAL HEAD, 5 SECTION, 12" LENS, 1-WAY, AS PER PLAN	43
								8			632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
								9			632	26500	9	EACH	DETECTOR LOOP	
								312			632	30200	312	LIN FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
								570			632	40700	570	LIN FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
								4			632	64000	4	EACH	STRAIN POLE FOUNDATION	
								2635			632	65200	2635	LIN FT	LOOP DETECTOR LEAD-IN CABLE	
								100			632	68200	100	LIN FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
								1			632	70000	1	EACH	POWER SERVICE	
								4			632	82701	4	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 7, AS PER PLAN	43
								1			632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
								1			633	39100	1	EACH	CONTROLLER, TYPE 170E, WITH MODEL 332 CABINET AND ACCESSORIES	
								1.9			633	70000	1.9	CU YD	CONCRETE FOR CABINET FOUNDATION	
								30			633	70500	30	SQ FT	CONTROLLER WORK PAD	
															MAINTENANCE OF TRAFFIC	
		10									410	12000	10	CU.YD.	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
		10									410	13000	10	CU.YD.	TRAFFIC COMPACTED SURFACE, TYPE C	
			50								614	11100	50	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
			10								SPECIAL	61412600	10	EACH	REPLACEMENT DRUM	8
		25									614	13000	25	CU. YD.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
			6								614	18601	6	SIGN MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8
			2								614	18601	2	SIGN MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (REPLACEMENT)	8
					0.294						614	21500	0.294	MILE	TEMPORARY CENTER LINE, CLASS II, 642 PAINT	
					235						614	23200	235	LIN.FT.	TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT	
					59						614	26000	59	LIN. FT.	TEMPORARY STOP LINE, CLASS I	
		50									616	10000	50	M. GAL.	WATER	
		5									616	20000	5	TON	CALCIUM CHLORIDE	
				LUMP							614	11000	LUMP		MAINTAINING TRAFFIC	
											623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
											624	10000	LUMP		MOBILIZATION	
											806	16000	2	MONTH	FIELD OFFICE, TYPE A	

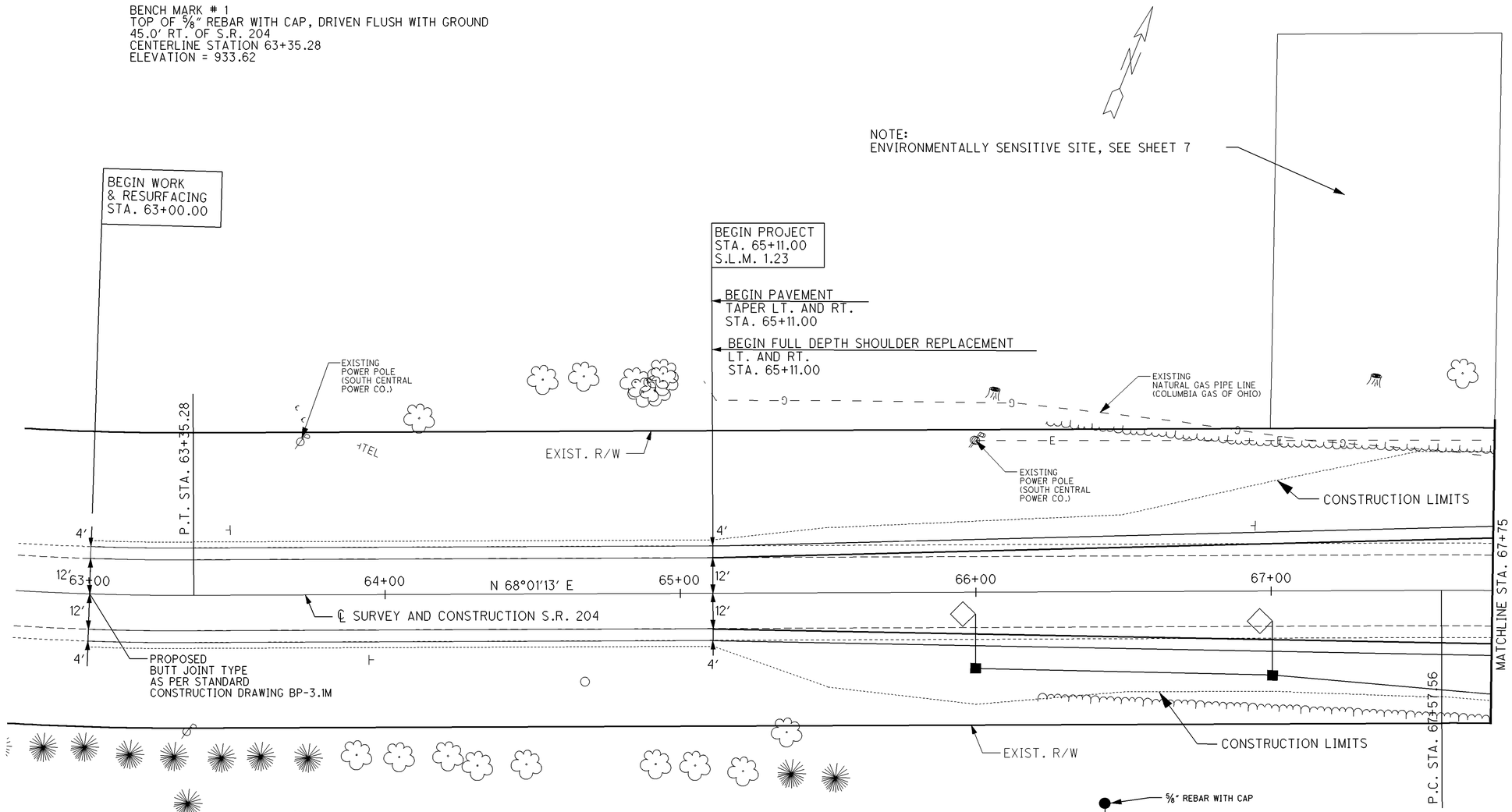
CALCULATED A.J.J. 12/30/00/98
CHECKED A.A.A. 12/31/98

GENERAL SUMMARY

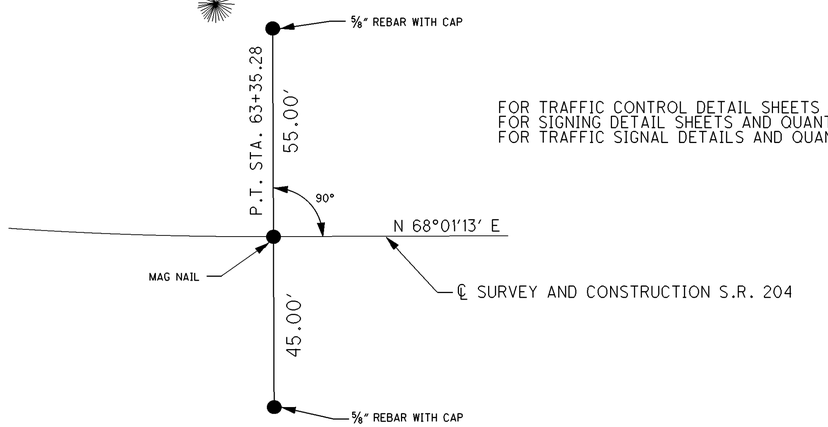
FAI-204-1.23

F2040002.GGS 1/03/00

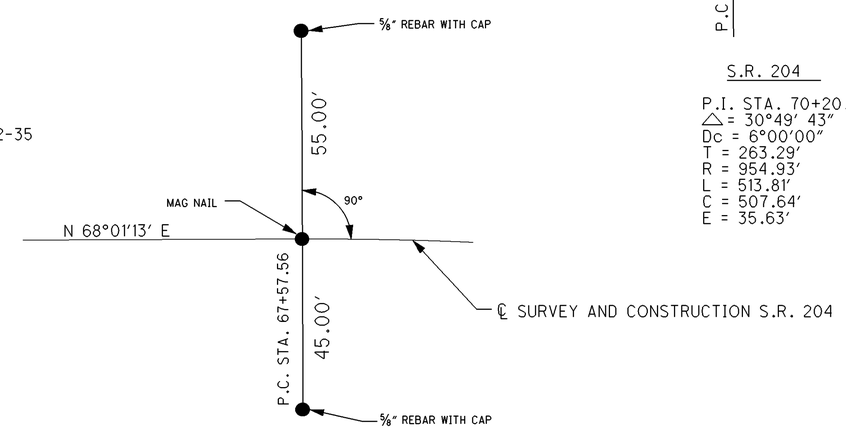
BENCH MARK # 1
TOP OF 5/8" REBAR WITH CAP, DRIVEN FLUSH WITH GROUND
45.0' RT. OF S.R. 204
CENTERLINE STATION 63+35.28
ELEVATION = 933.62



FOR TRAFFIC CONTROL DETAIL SHEETS AND QUANTITIES SEE SHEETS 32-35
FOR SIGNING DETAIL SHEETS AND QUANTITIES SEE SHEETS 36-39
FOR TRAFFIC SIGNAL DETAILS AND QUANTITIES SEE SHEETS 40-47



CENTERLINE REFERENCE
P.T. STA. 63+35.28
℄ SURVEY & CONSTRUCTION S.R. 204



CENTERLINE REFERENCE
P.C. STA. 67+57.56
℄ SURVEY & CONSTRUCTION S.R. 204

S.R. 204

P.I. STA. 70+20.85
△ = 30°49' 43"
Dc = 6°00'00"
T = 263.29'
R = 954.93'
L = 513.81'
C = 507.64'
E = 35.63'

HORIZONTAL SCALE IN FEET
0 20 40

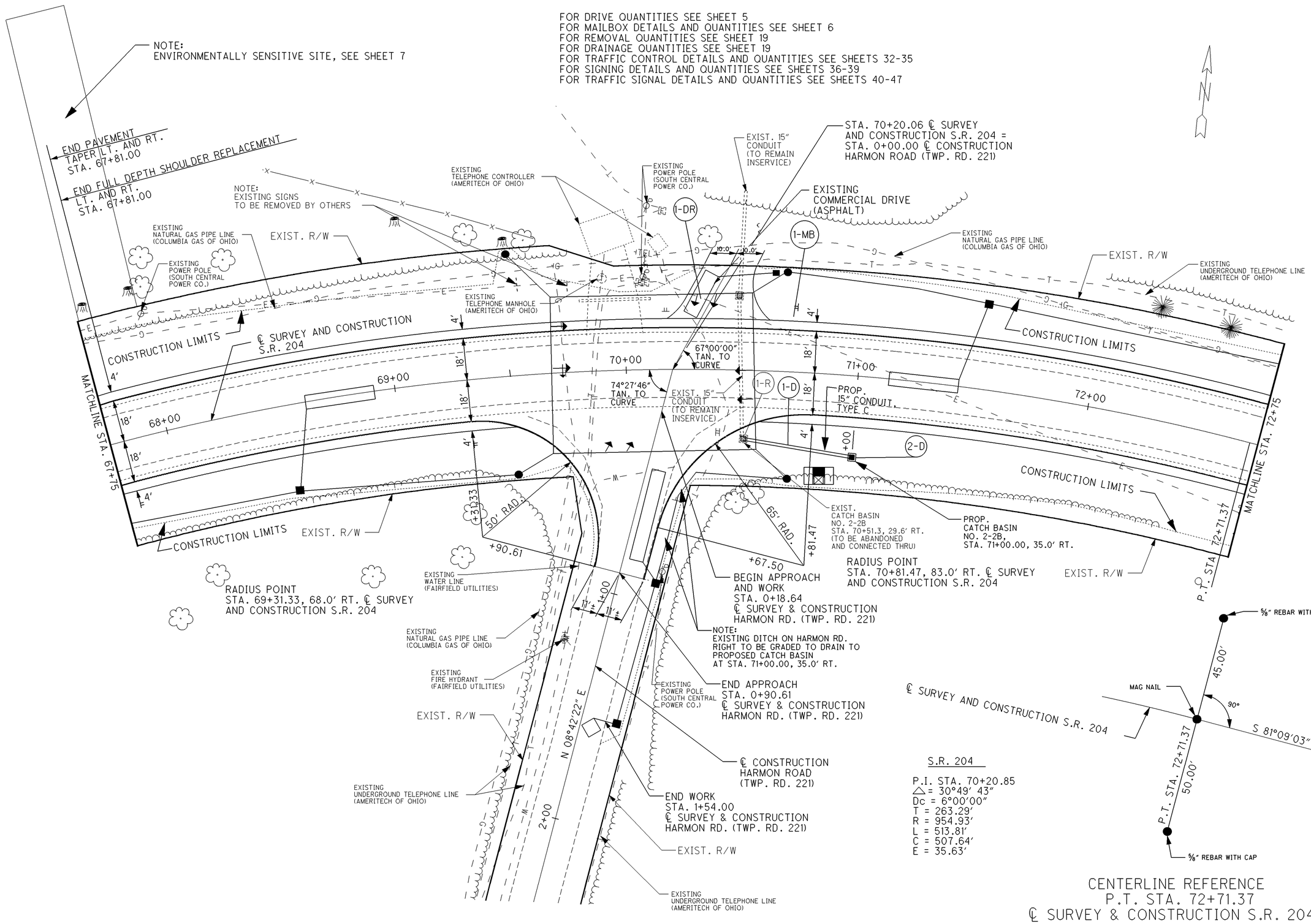
CALCULATED
CHECKED

PLAN VIEW - S.R. 204
STA. 65+11 TO STA. 67+75

FAI-204-1.23

F2040001.PPP 1/10/00

FOR DRIVE QUANTITIES SEE SHEET 5
FOR MAILBOX DETAILS AND QUANTITIES SEE SHEET 6
FOR REMOVAL QUANTITIES SEE SHEET 19
FOR DRAINAGE QUANTITIES SEE SHEET 19
FOR TRAFFIC CONTROL DETAILS AND QUANTITIES SEE SHEETS 32-35
FOR SIGNING DETAILS AND QUANTITIES SEE SHEETS 36-39
FOR TRAFFIC SIGNAL DETAILS AND QUANTITIES SEE SHEETS 40-47



HORIZONTAL SCALE IN FEET 0 20 40

CALCULATED

CHECKED

PLAN VIEW
STA. 67+75 TO STA. 72+75

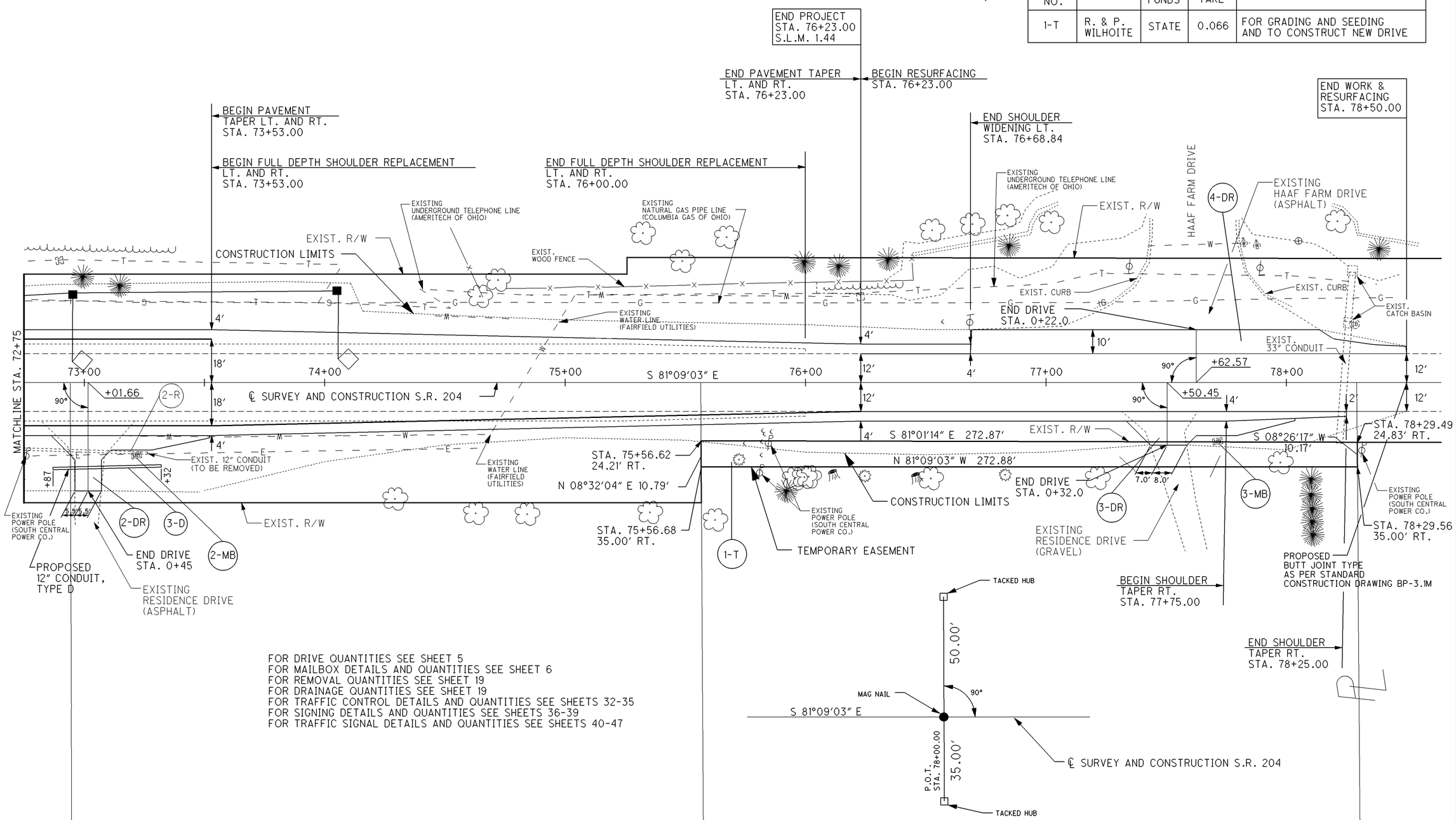
FAI-204-1.23

F2040002.PPP 1/10/00

BENCH MARK # 2
TOP OF 5/8" REBAR WITH CAP, DRIVEN FLUSH WITH GROUND
55.0' LT. OF S.R. 204
CENTERLINE STATION 72+71.37
ELEVATION = 949.28

BENCH MARK #3
TOP OF 1" REBAR, DRIVEN FLUSH WITH GROUND
58.9' LT. OF S.R. 204
CENTERLINE STATION 78+05.00
ELEVATION = 945.51

PARCEL NO.	OWNER	TYPE FUNDS	NET TAKE	REMARKS
1-T	R. & P. WILHOITE	STATE	0.066	FOR GRADING AND SEEDING AND TO CONSTRUCT NEW DRIVE



FOR DRIVE QUANTITIES SEE SHEET 5
FOR MAILBOX DETAILS AND QUANTITIES SEE SHEET 6
FOR REMOVAL QUANTITIES SEE SHEET 19
FOR DRAINAGE QUANTITIES SEE SHEET 19
FOR TRAFFIC CONTROL DETAILS AND QUANTITIES SEE SHEETS 32-35
FOR SIGNING DETAILS AND QUANTITIES SEE SHEETS 36-39
FOR TRAFFIC SIGNAL DETAILS AND QUANTITIES SEE SHEETS 40-47

CENTERLINE REFERENCE
P.O.T. STA. 78+00.00
℄ SURVEY & CONSTRUCTION S.R. 204

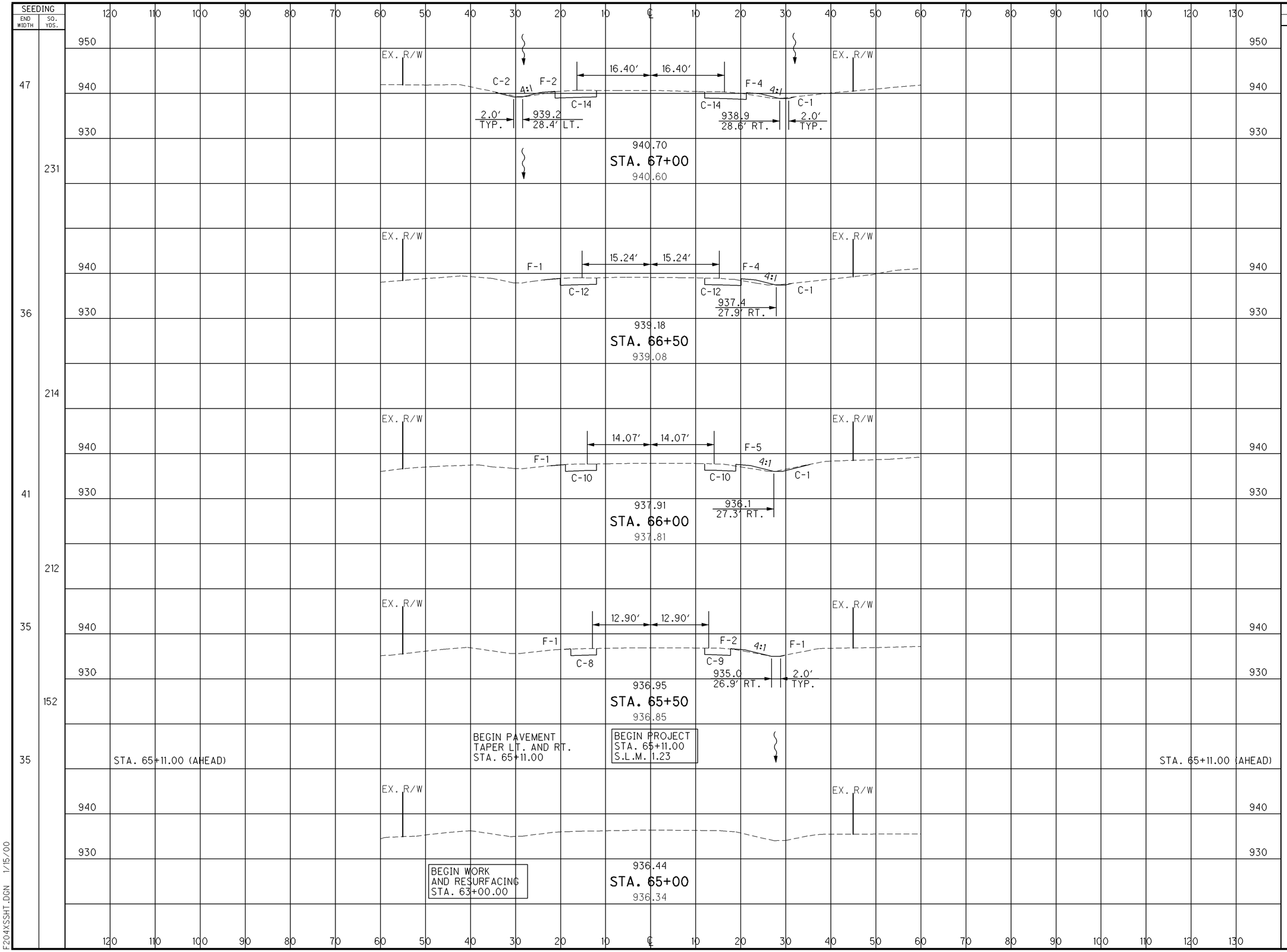
HORIZONTAL SCALE IN FEET 0 20 40

CALCULATED
CHECKED

PLAN VIEW - S.R. 204
STA. 72+75 TO STA. 78+50

FAI-204-1.23

F2040003.PPP 2/05/00



CALCULATED

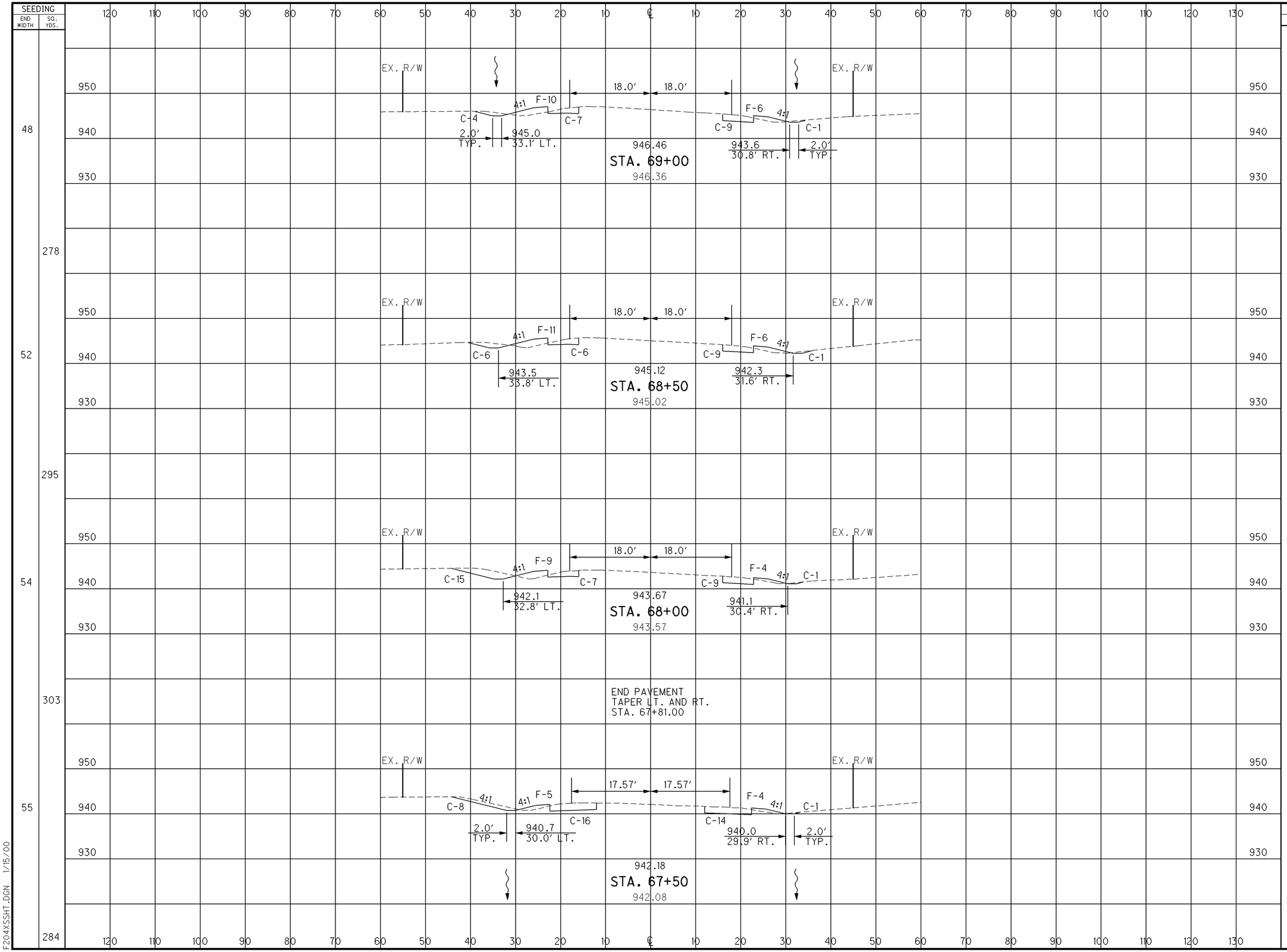
CHECKED

CROSS SECTIONS - S.R. 204
STA. 65+00 TO STA. 67+00

FAI-204-1.23

F204XSSHT.DGN 1/15/00

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
48	278	21	16	40	31
52	295	22	17	50	28
54	303	32	13	66	21
55	284	39	9	65	14



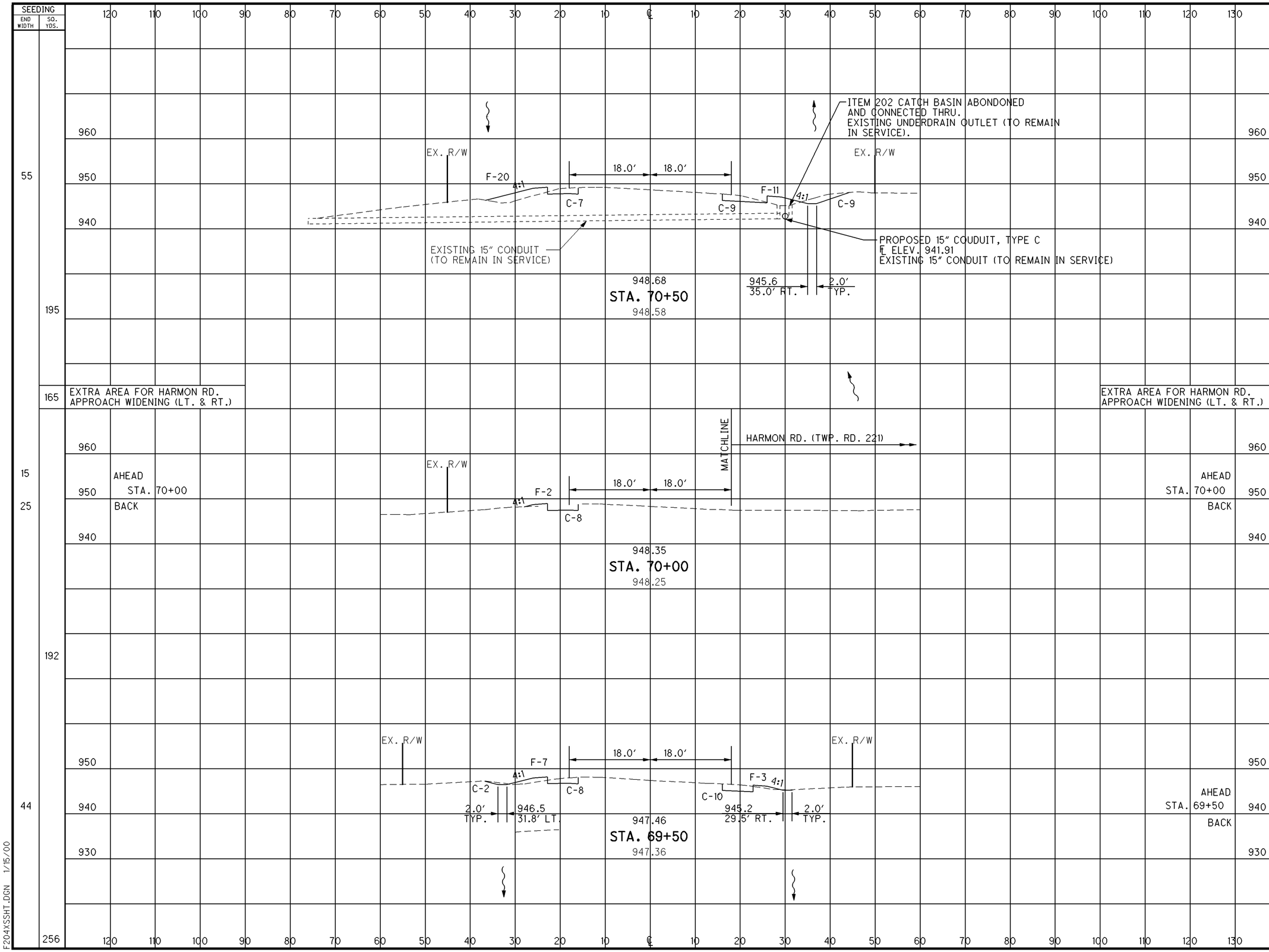
CALCULATED

CHECKED

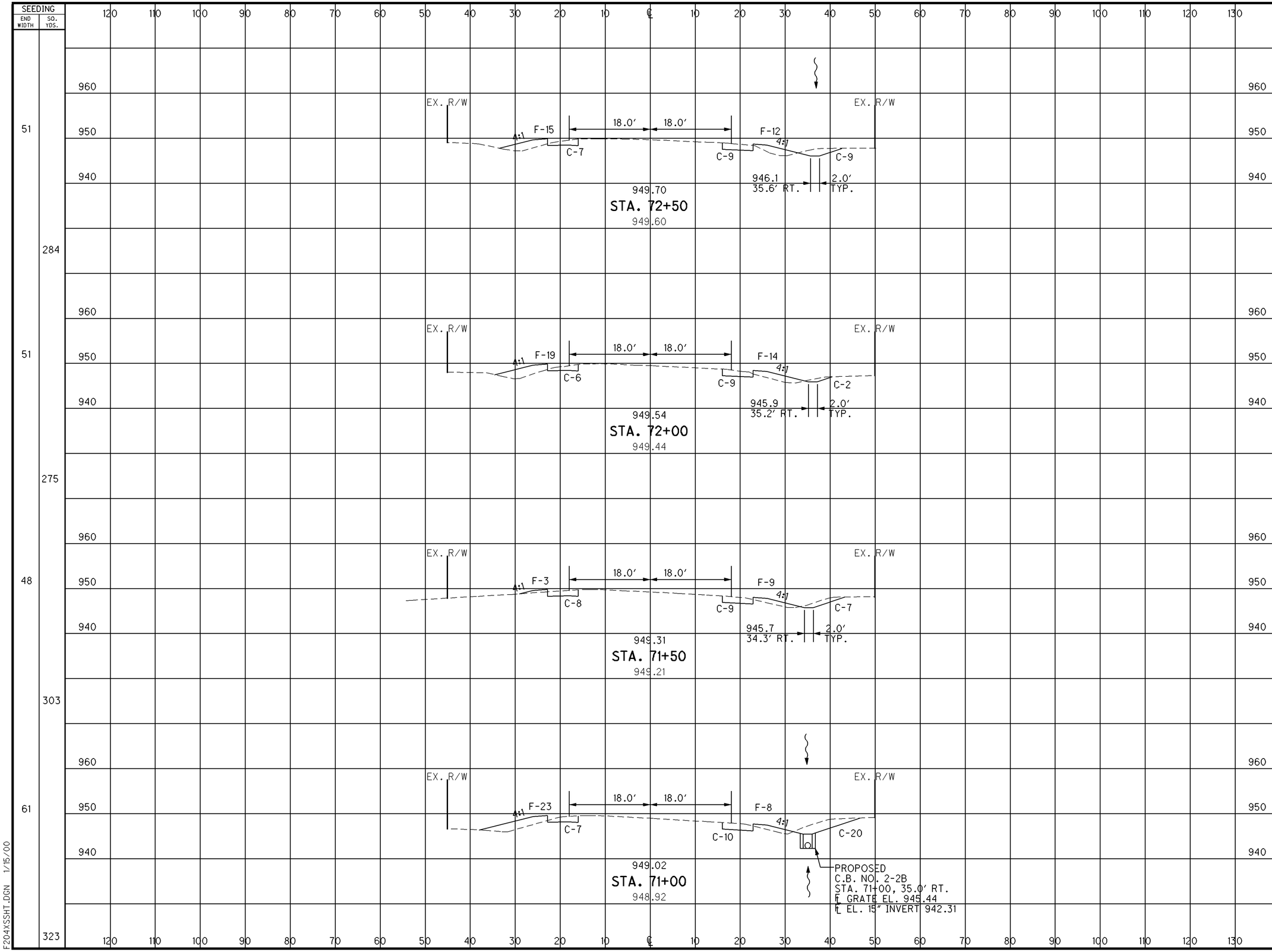
CROSS SECTIONS - S.R. 204
STA. 67+50 TO STA. 69+00

FAI-204-1.23

F204XSSHT.DGN 1/15/00


SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
CALCULATED
CHECKED
960
950
940
930
55
195
165
EXTRA AREA FOR HARMON RD. APPROACH WIDENING (LT. & RT.)
15
25
192
44
256
ITEM 202 CATCH BASIN ABONDONED AND CONNECTED THRU. EXISTING UNDERDRAIN OUTLET (TO REMAIN IN SERVICE).
EX. R/W
F-20
4:1
C-7
18.0'
18.0'
C-9
F-11
4:1
C-9
EXISTING 15" CONDUIT (TO REMAIN IN SERVICE)
PROPOSED 15" COUDUIT, TYPE C
℄ ELEV. 941.91
EXISTING 15" CONDUIT (TO REMAIN IN SERVICE)
948.68
STA. 70+50
948.58
945.6
35.0' RT.
2.0'
TYP.
MATCHLINE
HARMON RD. (TWP. RD. 221)
AHEAD
STA. 70+00
BACK
F-2
C-8
948.35
STA. 70+00
948.25
F-7
C-2
2.0'
TYP.
946.5
31.8' LT.
F-3
C-10
945.2
29.5' RT.
AHEAD
STA. 69+50
BACK
947.46
STA. 69+50
947.36
25
31
31
31
50
4
8
2
8
2
17
9
10
7
20
10
38
25
CROSS SECTIONS - S.R. 204
STA. 69+50 TO STA. 70+50
FAI-204-1.23
27
47
F204XSSHT.DGN 1/15/00

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
51	284	25	27	39	56
51	275			38	42
48	303	24	12	57	40
61	323	37	31	58	58



CALCULATED

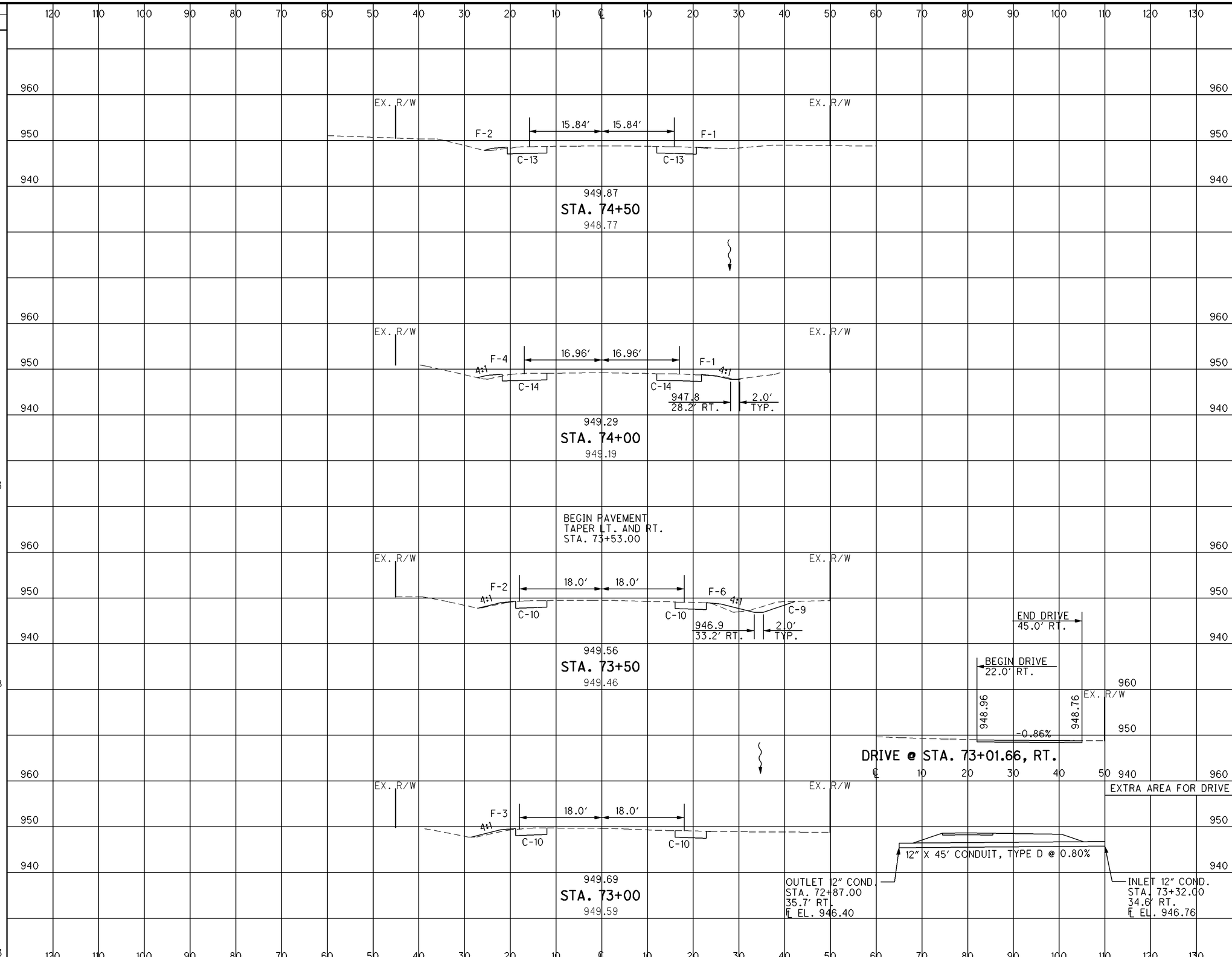
CHECKED

CROSS SECTIONS - S.R. 204
STA. 71+00 TO STA. 72+50

FAI-204-1.23

F204XSSHT.DGN 1/15/00

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
28		26	3		
	55			50	8
31		28	5		
	223			53	13
49		29	8		
	248			46	11
				EXTRA AREA FOR DRIVE	6
40		20	3		
	253			42	28



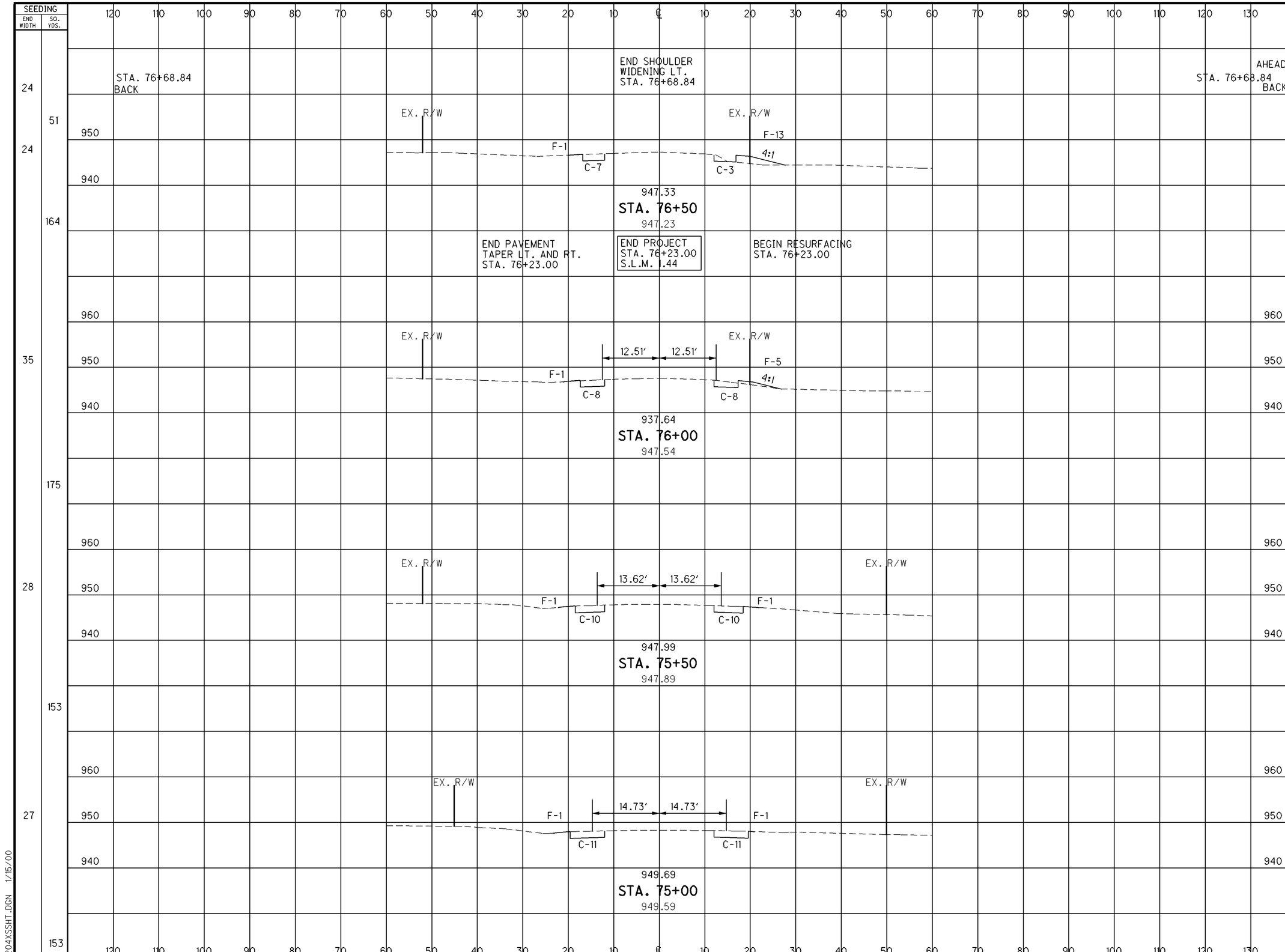
CALCULATED

CHECKED

CROSS SECTIONS - S.R. 204
STA. 73+00 TO STA. 74+50

FAI-204-1.23

F204XSSHT.DGN 1/15/00

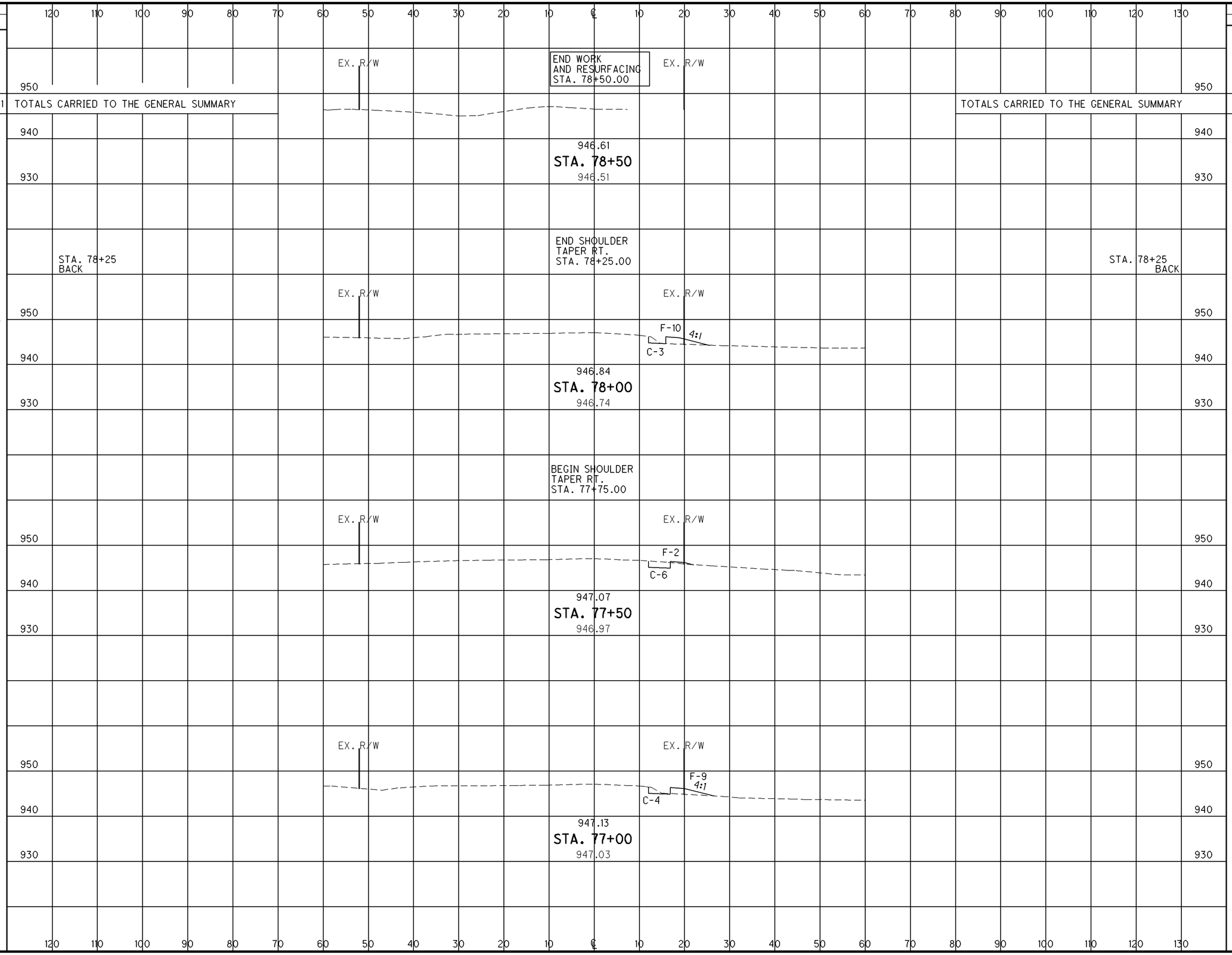


CROSS SECTIONS - S.R. 204
STA. 75+00 TO STA. 76+50

FAI-204-1.23

F204XSSHT.DGN 1/15/00

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	5701			1072	562
20	56	3	10	3	19
20		3	10		
	33			9	12
15		6	2		
	98			10	11
20		4	9		
	77			5	11



CALCULATED

CHECKED

CROSS SECTIONS - S.R. 204
STA. 77+00 TO STA. 78+50

FAI-204-1.23

F204XSSHT.DGN 1/15/00

MARK	SEE SHEET	℄ SURVEY AND CONSTRUCTION S.R. 204	642		644								
			EDGE LINE, TYPE 2 (WHITE)	CENTER LINE, TYPE 2 (DOUBLE SOLID YELLOW)	CHANNELIZING LINE	STOP LINE	TRANSVERSE LINE	LANE ARROW	WORD ON PAVEMENT, 96" "ONLY"				
			MILE	MILE	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH				
		S.R. 204											
1-PM	34	STA. 63+00 - STA. 65+11		0.040									
2-PM	34-36	STA. 63+00 - STA. 76+68.84	0.259										
3-PM	34-35	STA. 63+00 - STA. 69+31	0.120										
4-PM	34-35	STA. 65+11 - STA. 68+31		0.121									
5-PM	34-35	STA. 65+11 - STA. 68+31					220						
6-PM	35	STA. 68+31 - STA. 69+31		0.019									
7-PM	35	STA. 69+31				24							
8-PM	35	STA. 68+81 - STA. 69+31			50								
9-PM	35	STA. 69+01						1					
		HARMON ROAD											
10-PM	35	RADIUS	0.013										
11-PM	35	STA. 0+53 - STA. 0+91		0.007									
12-PM	35	STA. 0+53				11							
13-PM	35	RADIUS	0.012										
		S.R. 204											
14-PM	35	STA. 70+73				24							
15-PM	35	STA. 70+73 - STA. 72+53			185								
16-PM	35	STA. 71+03						1					
17-PM	35	STA. 71+74							1				
18-PM	35	STA. 72+45						1					
19-PM	35-36	STA. 70+73 - STA. 73+03		0.045									
20-PM	35-36	STA. 70+73 - STA. 78+50	0.148										
21-PM	35-36	STA. 73+03 - STA. 76+23		0.121									
22-PM	35-36	STA. 73+03 - STA. 76+23					220						
23-PM	36	STA. 76+23 - STA. 78+50		0.043									
TOTALS (CARRIED TO THE GENERAL SUMMARY)			0.552	0.396	235	59	440	3	1				

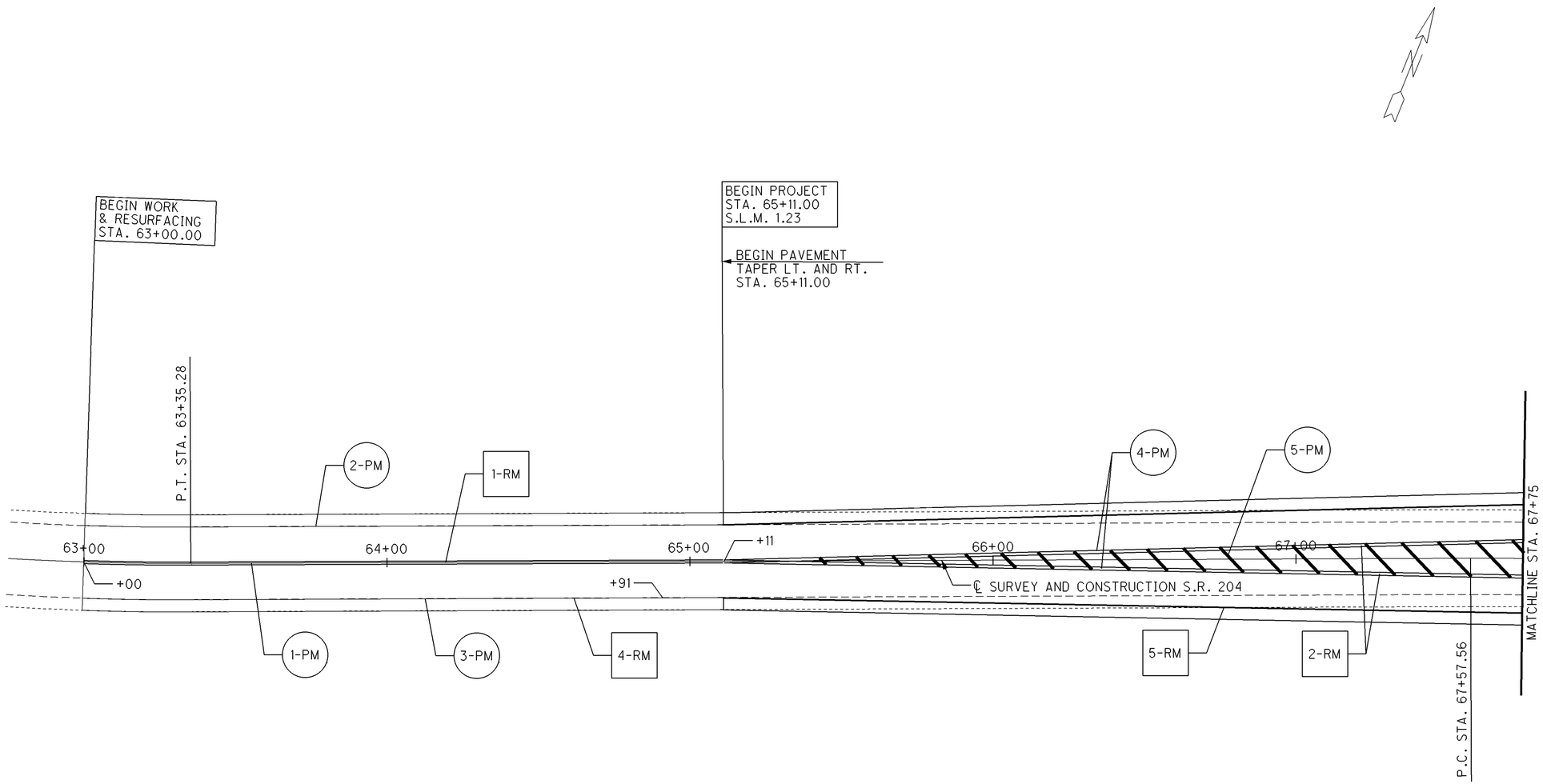
MARK	SEE SHEET	℄ SURVEY AND CONSTRUCTION S.R. 204	SPACING C/C	202	621								
				RAISED PAVEMENT MARKER REMOVED FOR STORAGE FIELD COUNTED	RAISED PAVEMENT MARKER, INSTALLATION ONLY	1-WAY WHITE INFORMATION ONLY	2-WAY WHITE/RED INFORMATION ONLY	2-WAY YELLOW/ YELLOW INFORMATION ONLY					
			FEET	EACH	EACH	EACH	EACH	EACH					
1-RM	34	STA. 63+00 - STA. 65+11	80		4			4					
2-RM	34-35	STA. 65+11 - STA. 68+31	80		9			9					
3-RM	35	STA. 68+31 - STA. 69+31	80		2			2					
4-RM	34	STA. 63+00 - STA. 64+91	80		4	4							
5-RM	34-35	STA. 64+91 - STA. 69+31	40		11	11							
6-RM	35	STA. 68+81 - STA. 69+31	40		3		3						
7-RM	35-36	STA. 70+73 - STA. 75+08	40		11	11							
8-RM	35	STA. 70+73 - STA. 72+53	40		6		6						
9-RM	35-36	STA. 70+73 - STA. 73+03	80		4			4					
10-RM	36	STA. 73+03 - STA. 76+23	80		9			9					
11-RM	36	STA. 75+08 - STA. 76+68.84	80		3	3							
12-RM	36	STA. 76+23 - STA. 78+50	80		4			4					
TOTALS (CARRIED TO THE GENERAL SUMMARY)				39	70	29	9	32					

CALCULATED X.X. 12/00/98
CHECKED X.X. 12/31/98

TRAFFIC CONTROL SUB-SUMMARY

FAI-204-1.23

F2040001.GSS 1/11/99



NOTE:

FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET 32.

S.R. 204

P.I. STA. 70+20.85
△ = 30°49′ 43″
Dc = 6°00′00″
T = 263.29′
R = 954.93′
L = 513.81′
C = 507.64′
E = 35.63′

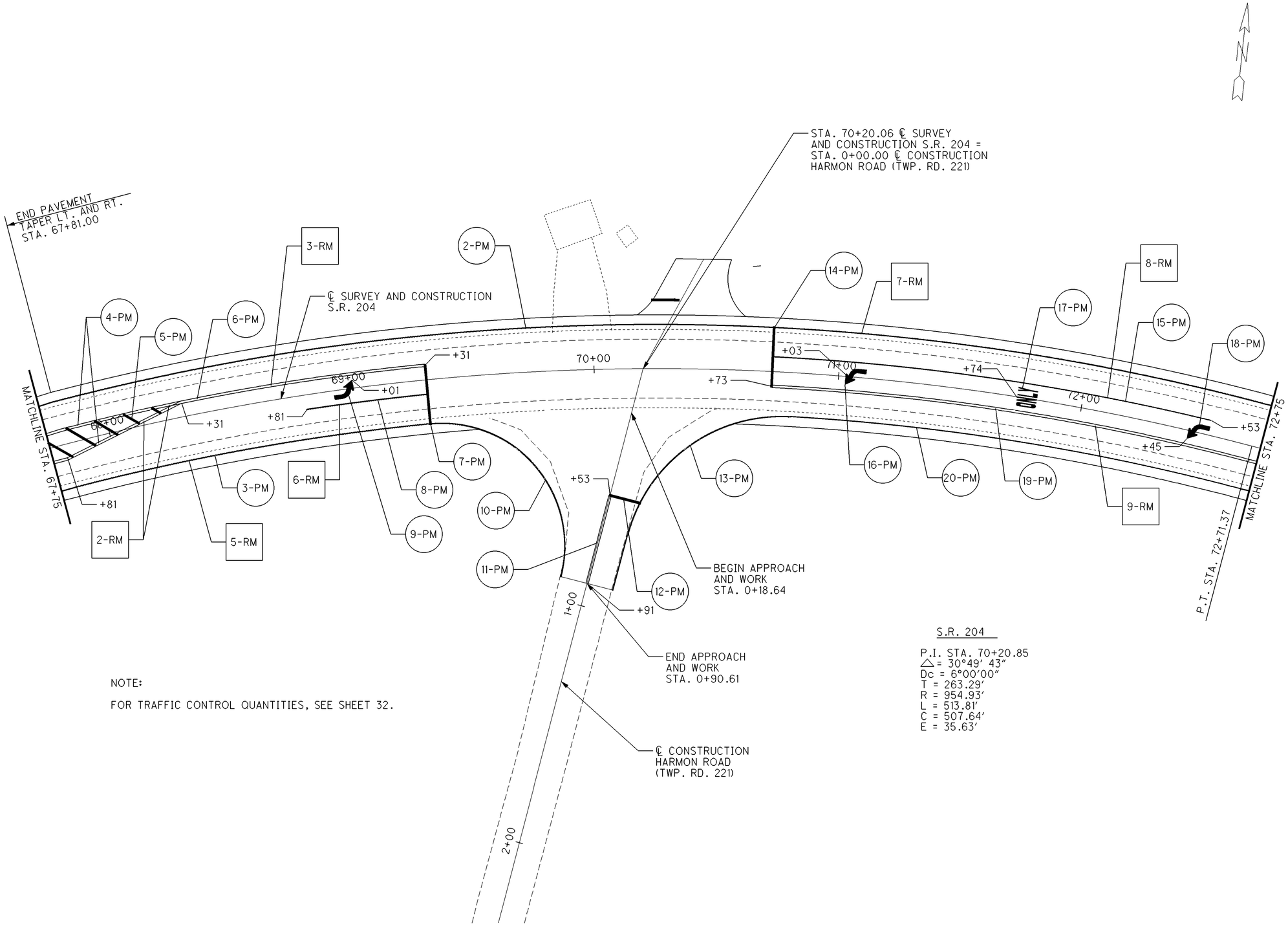
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED
CHECKED

TRAFFIC CONTROL SHEET - S.R. 204
STA. 65+11 TO STA. 67+75

FAI-204-1.23

F2040001.TCS 1/11/00



NOTE:

FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET 32.

S.R. 204

P.I. STA. 70+20.85
△ = 30°49′ 43″
Dc = 6°00′00″
T = 263.29′
R = 954.93′
L = 513.81′
C = 507.64′
E = 35.63′

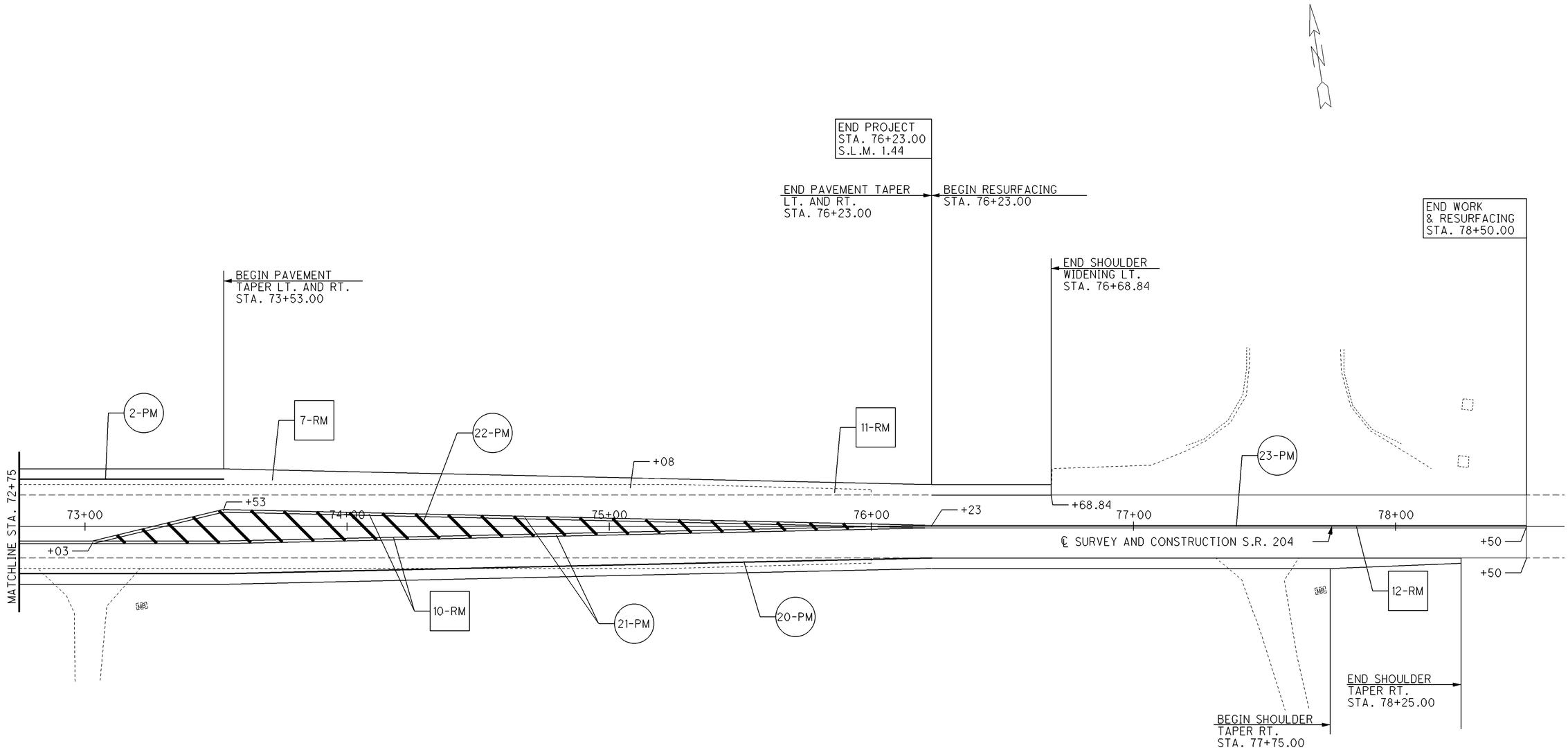
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED
CHECKED

TRAFFIC CONTROL SHEET - S.R. 204
STA. 67+75 TO STA. 72+75

FAI-204-1.23

F2040002.TCS 1/12/00



NOTE:

FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET 32.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED

CHECKED

TRAFFIC CONTROL SHEET - S.R. 204
STA. 72+75 TO STA. 78+50

FAI-204-1.23

F2040003.TCS 1/11/00

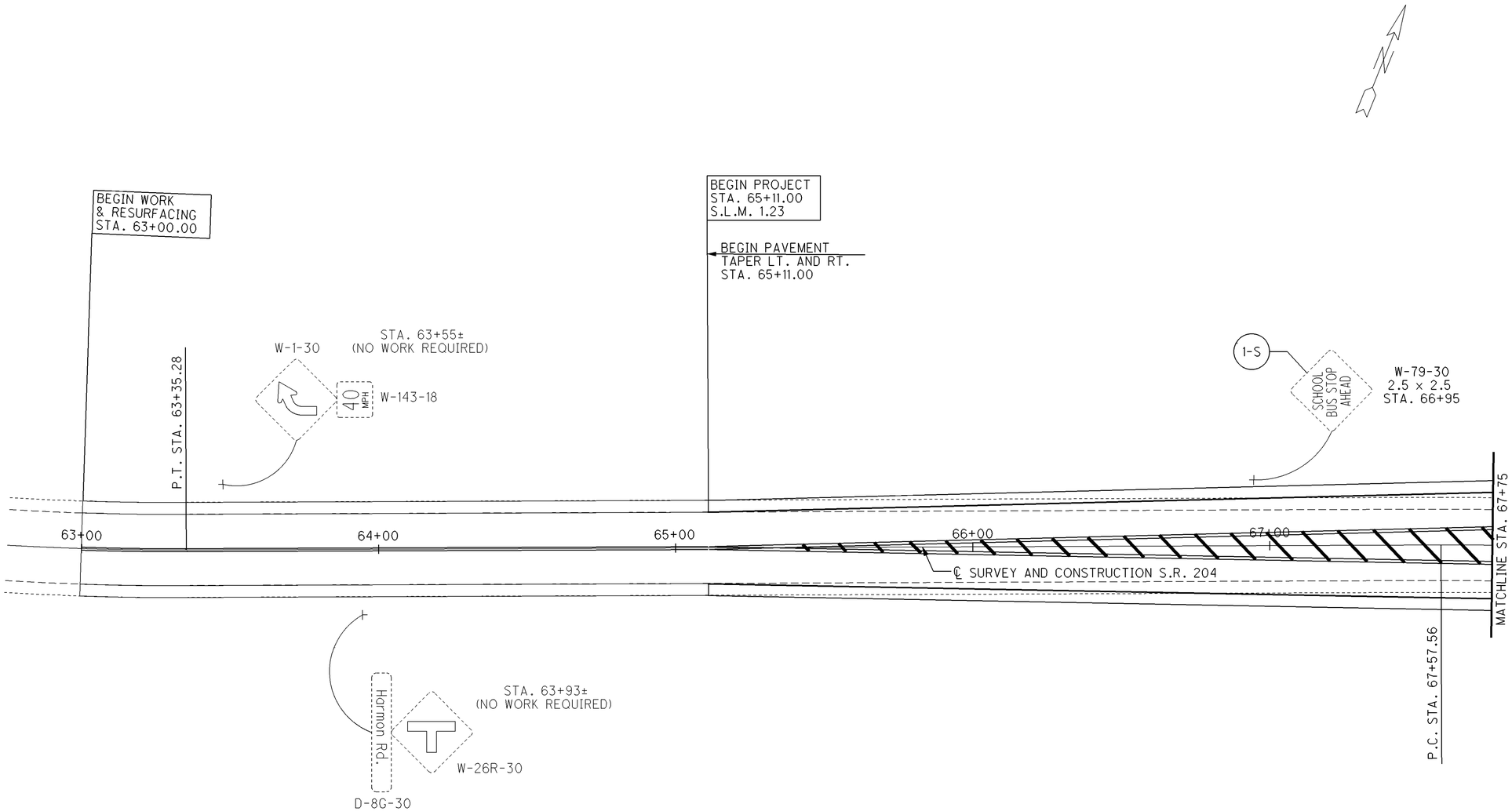
MARK	SEE SHEET	℄ SURVEY AND CONSTRUCTION	SIDE	SIGN REFERENCE NUMBER	SIZE	630 GROUND MOUNTED SUPPORTS, NO. 2 POST, TYPE S	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL			
						LIN. FT.	SQ. FT.	EACH	EACH	EACH			
		S.R. 204											
1-S	37	STA. 66+95.00	LT.	W-79-30	2.5 x 2.5	11			1	1			
2-S	38	STA. 67+81.00	RT.	R-31A-36	3 x 2.5	11-11	7.5						
3-S	38	STA. 69+31.00	RT.	R-31A-36	3 x 2.5	11-11	7.5						
4-SA	38	STA. 70+15.00	LT.	W-30-48				1		2			
4-SB	38	STA. 70+15.00	LT.	X-4-18				1					
4-SC	38	STA. 70+15.00	LT.	X-4-18				1					
		HARMON ROAD											
5-S	38	STA. 0+53.00	LT.	R-1-30				1		1			
		S.R. 204											
6-SA	38	STA. 70+73.00	RT.	D-7-48	4 x 0.83	10-10			1	2			
6-SB	38	STA. 70+73.00	RT.	D-7-48	4 x 0.83				1				
7-S	38	STA. 70+73.00	LT.	R-31A-36	3 x 2.5	11-11	7.5						
8-S	39	STA. 73+53.00	LT.	R-31A-36	3 x 2.5	11-11	7.5						
9-SA	39	STA. 75+80.00	LT.	W-26L-30	2.5 x 2.5	11			1	1			
9-SB	39	STA. 75+80.00	LT.	D-8G-48	4 x 0.67				1				
10-S	39	STA. 75+80.00	RT.	R-10-24	2 x 2.5	11			1	1			
TOTALS (CARRIED TO THE GENERAL SUMMARY)						141	30.0	4	6	8			

CALCULATED X.X. 12/00/98
CHECKED X.X. 12/31/98

SIGNING SUB-SUMMARY

FAI-204-1.23

F2040001.TSS 1/18/99



NOTE:

FOR SIGNING QUANTITIES, SEE SHEET 36.

S.R. 204

P.I. STA. 70+20.85
△ = 30°49′ 43″
Dc = 6°00′00″
T = 263.29′
R = 954.93′
L = 513.81′
C = 507.64′
E = 35.63′

PROPOSED SIGN

EXISTING SIGN, TO REMAIN

EXISTING SIGN, TO BE REMOVED

F2040001.TSD 1/18/00

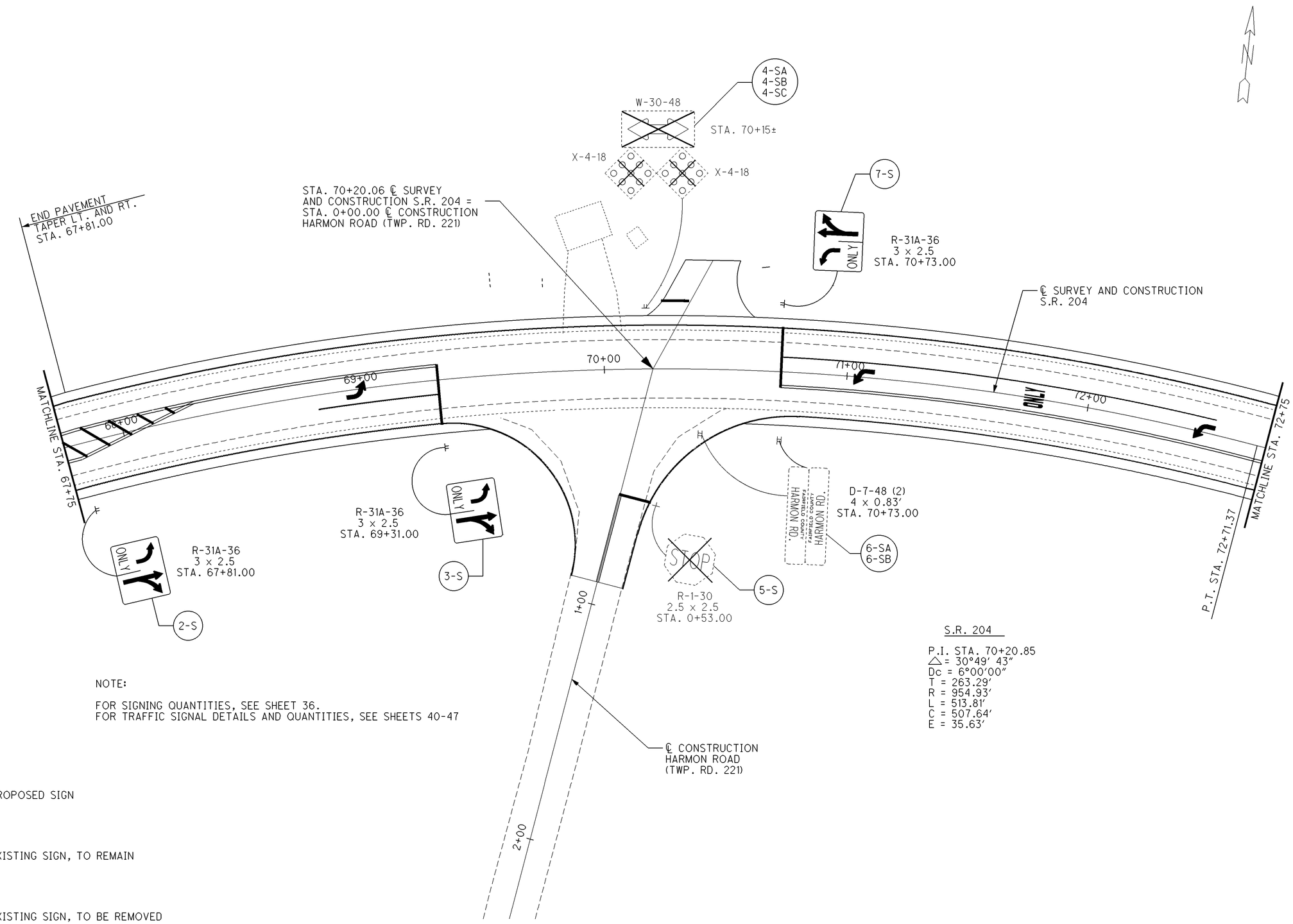
HORIZONTAL SCALE IN FEET 0 20 40

CALCULATED

CHECKED

SIGNING DETAIL SHEET - S.R. 204
STA. 65+11 TO STA. 67+75

FAI-204-1.23



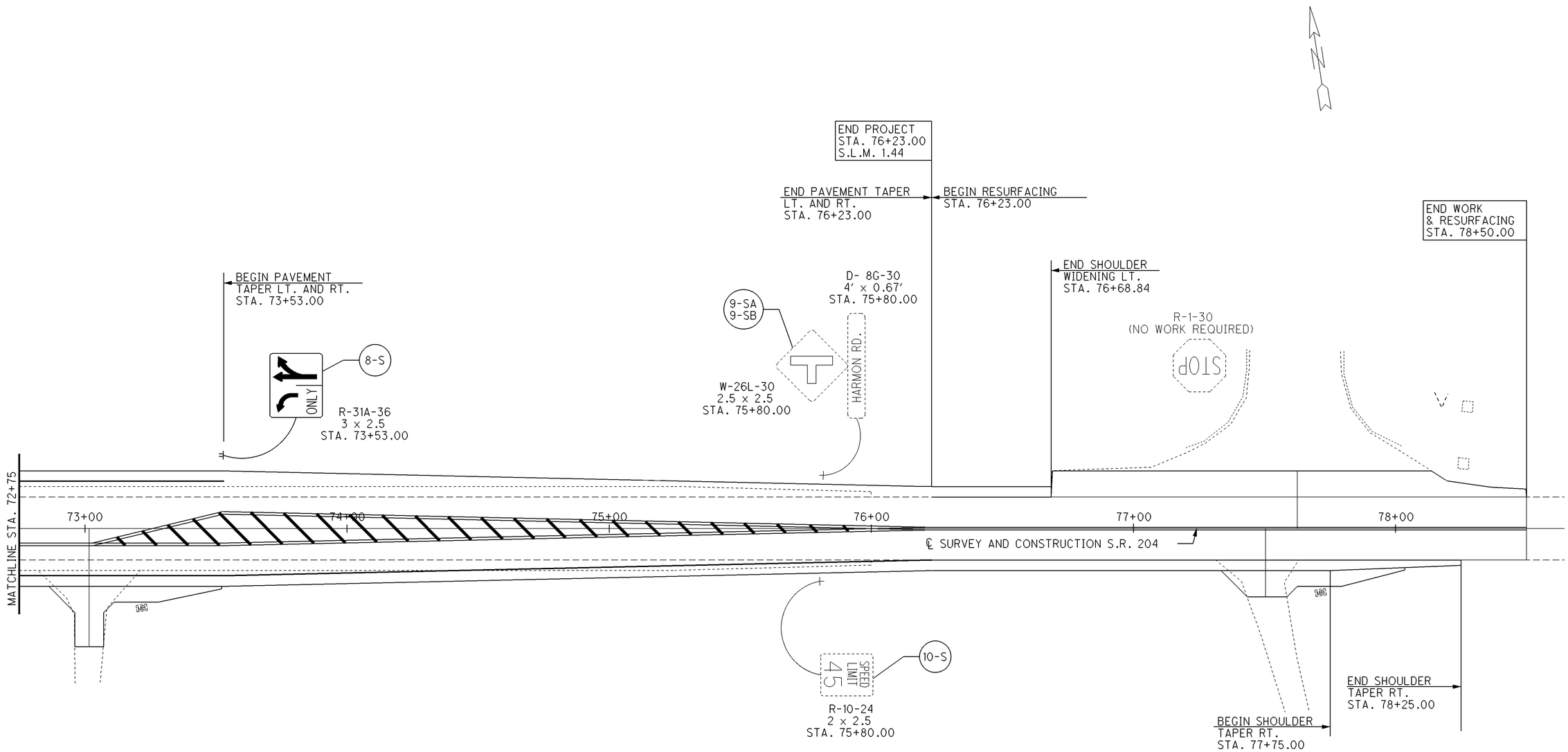
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED
CHECKED

SIGNING DETAIL SHEET - S.R. 204
STA. 67+75 TO STA. 72+75

FAI-204-1.23

F2040002.TSD 1/18/00



NOTE:

FOR SIGNING QUANTITIES, SEE SHEET 36.

PROPOSED SIGN

EXISTING SIGN, TO REMAIN

EXISTING SIGN, TO BE REMOVED

F2040003.TSD 1/18/00

HORIZONTAL SCALE IN FEET 0 20 40

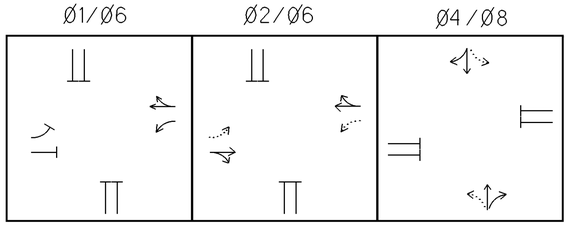
CALCULATED

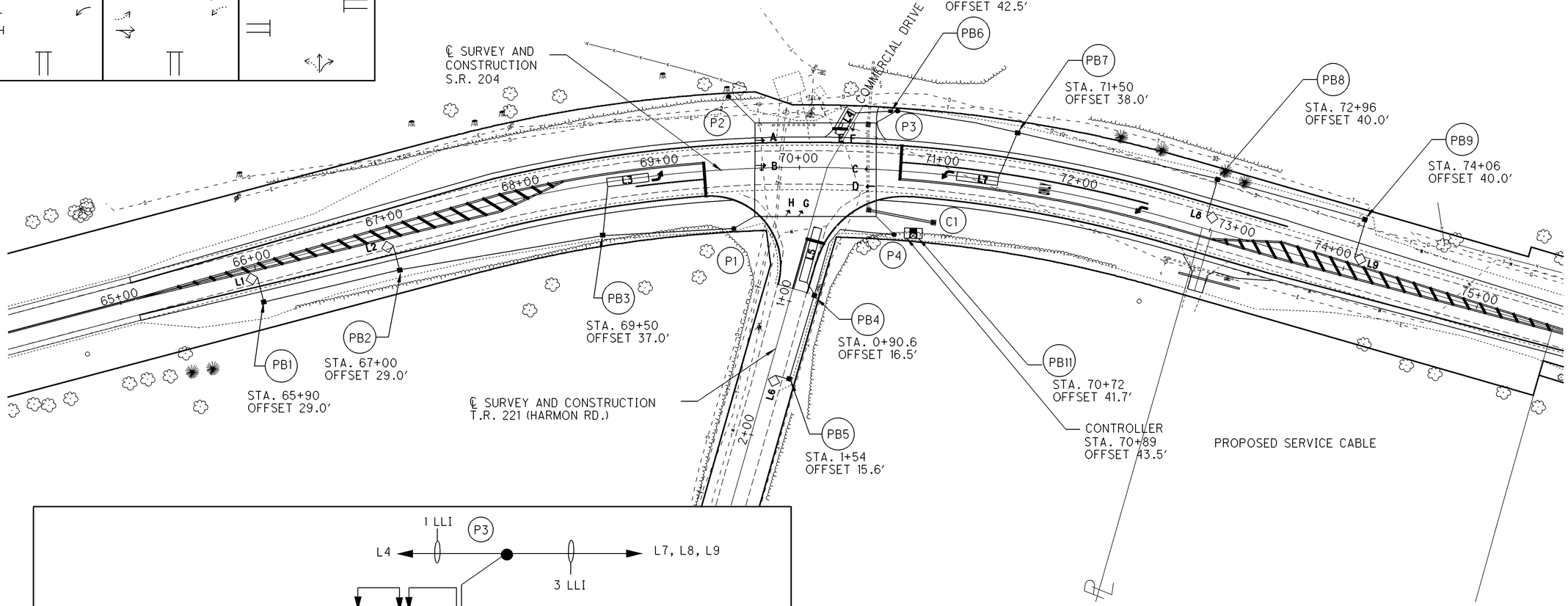
CHECKED

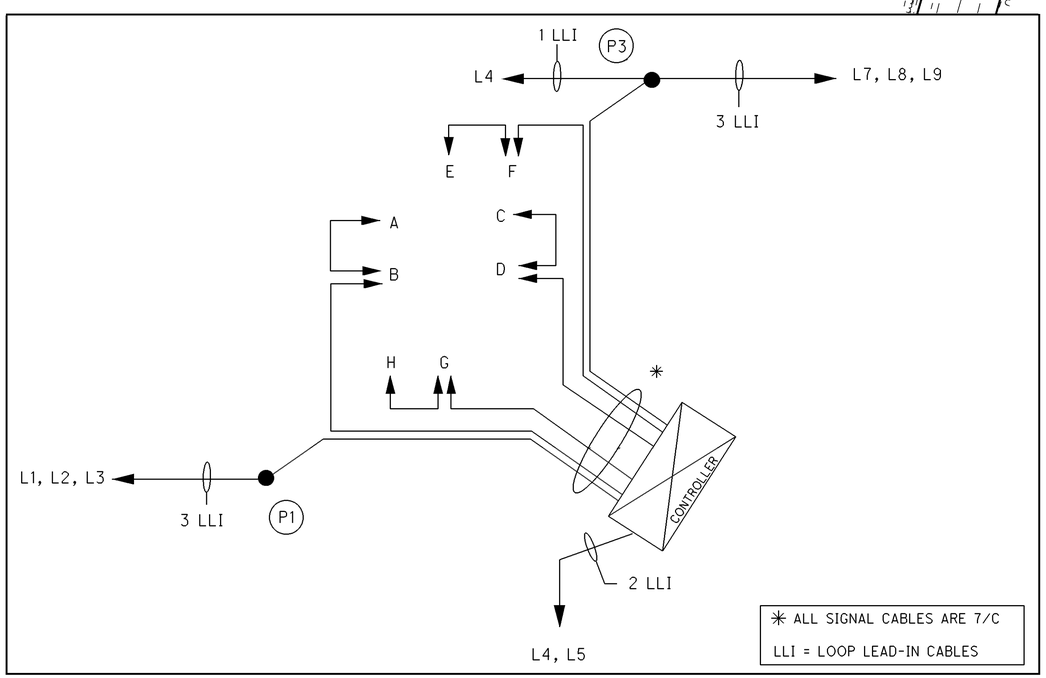
SIGNING DETAIL SHEET - S.R. 204
STA. 72+75 TO STA. 78+50

FAI-204-1.23

SIGNAL PHASING







LOOP	SIZE	ASSOC. PHASE	DELAY	MODE	INPUT FILE	SLOT	CHANNEL	FIELD TERMINAL	WAPITI DELAY CODE
L-1	5′ X 5′	2	—	PULSE	I	2	1	I2-D,E	
L-2	5′ X 5′	2	—	PULSE	I	2	2	I2-J,K	
L-3	6′ X 30′	2	—	PRESENCE	I	3	1	I3-D,E	
L-4	6′ X 20′	8	6 SEC.	PRESENCE	J	6	1	J6-D,E	D+3+9
L-5	6′ X 40′	4	5 SEC.	PRESENCE	I	6	1	I6-D,E	D+2+9
L-6	5′ X 5′	4		PULSE	I	7	2	I7-J,K	
L-7	6′ X 30′	1	6	PRESENCE	I	1	1	I1-D,E	D+2+0
L-8	5′ X 5′	6	—	PULSE	J	2	1	J2-D,E	
L-9	5′ X 5′	6	—	PULSE	J	2	2	J2-J,K	

HORIZONTAL SCALE IN FEET
0 40 80

CALCULATED D.H. / J.J.R.
CHECKED D.H.

TRAFFIC SIGNAL SHEET

FAI-204-1.23

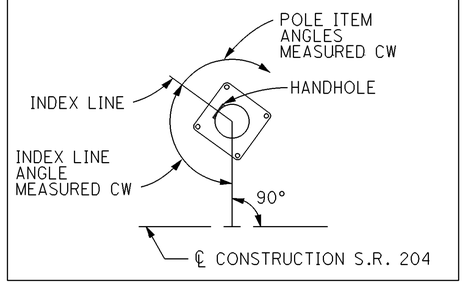
23-JUN-2015 2:05PM gvanhove

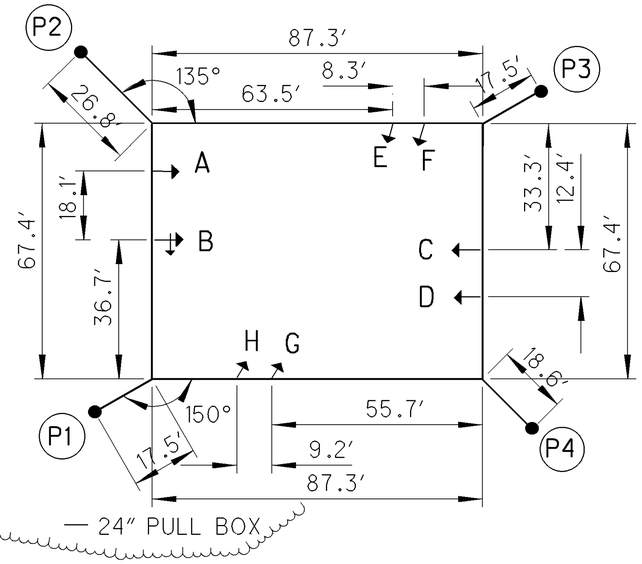
POLE ORIENTATION CHART

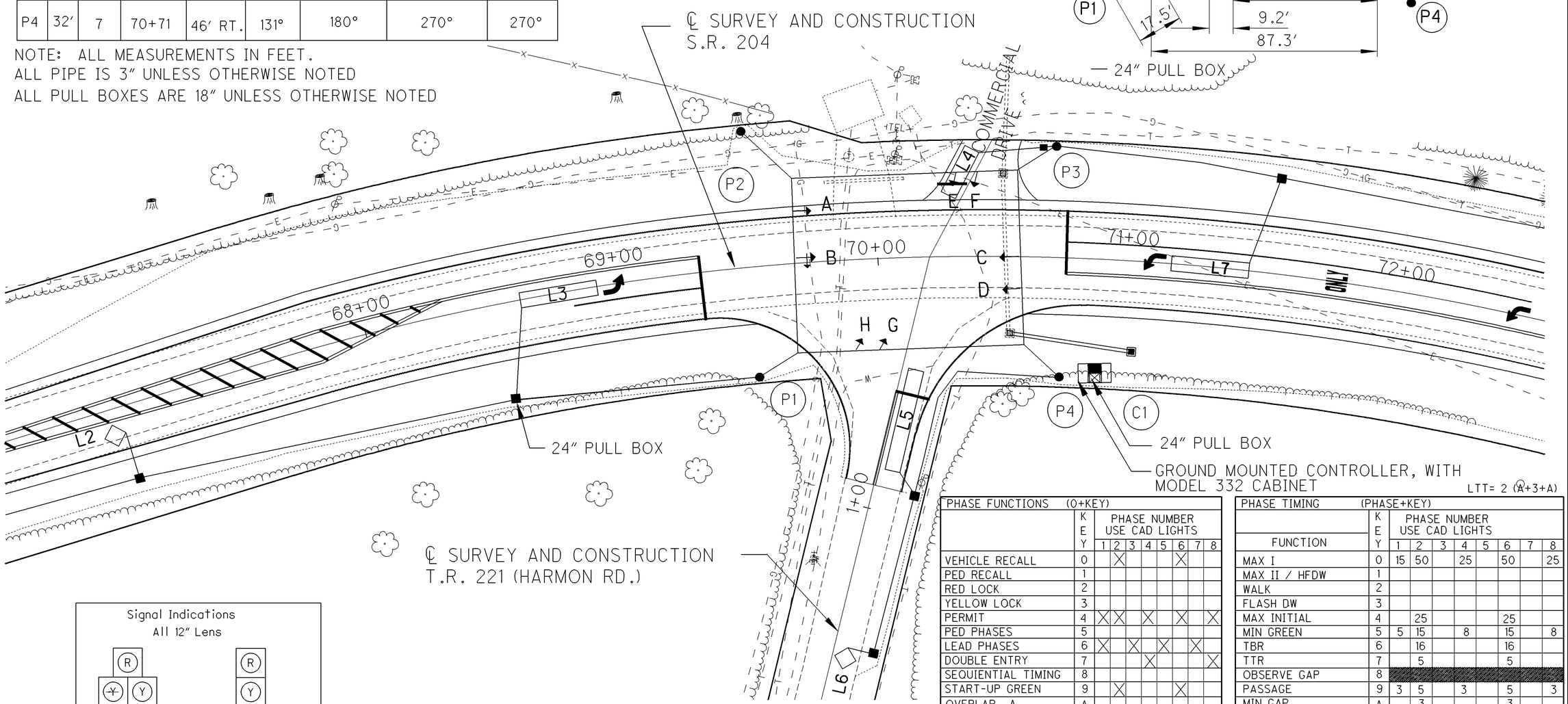
TAPERED TUBE STRAIN POLES, TYPE TC-81.10 FOUNDATIONS, TYPE TC-21.20								
						ANGLES FROM INDEX LINE		
POLE	LENGTH	DESIGN NO.	STATION	OFFSET	INDEX LINE ANGLE	SIGNAL CABLE ENTRANCE	CONTROLLER	POWER SERVICE
P1	32′	7	69+50	42′ RT.	243°	180°	—	—
P2	32′	7	69+52	53′ LT.	138°	180°	—	—
P3	32′	7	70+68	43′ LT.	236°	180°	—	—
P4	32′	7	70+71	46′ RT.	131°	180°	270°	270°

NOTE: ALL MEASUREMENTS IN FEET.
ALL PIPE IS 3″ UNLESS OTHERWISE NOTED
ALL PULL BOXES ARE 18″ UNLESS OTHERWISE NOTED

POLE DIAGRAM







LTT= 2 (A+3+A)

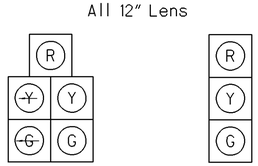
PHASE FUNCTIONS (0+KEY)

	KEY	PHASE NUMBER USE CAD LIGHTS 1	2	3	4	5	6	7	8
VEHICLE RECALL	0		X				X		
PED RECALL	1								
RED LOCK	2								
YELLOW LOCK	3								
PERMIT	4	X	X		X		X		X
PED PHASES	5								
LEAD PHASES	6	X		X		X		X	
DOUBLE ENTRY	7				X				X
SEQUIENTIAL TIMING	8								
START-UP GREEN	9		X				X		
OVERLAP A	A								
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
EXCLUSIVE	E								
SIMULTANEOUS GAP	F		X				X		

PHASE TIMING (PHASE+KEY)

FUNCTION	KEY	PHASE NUMBER USE CAD LIGHTS 1	2	3	4	5	6	7	8
MAX I	0	15	50		25		50		25
MAX II / HFDW	1								
WALK	2								
FLASH DW	3								
MAX INITIAL	4		25				25		
MIN GREEN	5	5	15		8		15		8
TBR	6		16				16		
TTR	7		5				5		
OBSERVE GAP	8								
PASSAGE	9	3	5		3		5		3
MIN GAP	A		3				3		
ADDED ACTUATION	B		1				1		
YELLOW	C	3	4		4		4		4
RED CLEAR	D	2	1.5		2		1.5		1.5
RED REVERT	E								
WALK II	F								

Signal Indications
All 12″ Lens



Signal: B Signal: A,C,D,E,F,G,H

HORIZONTAL SCALE IN FEET 0 20 40

CALCULATED JLR CHECKED DH

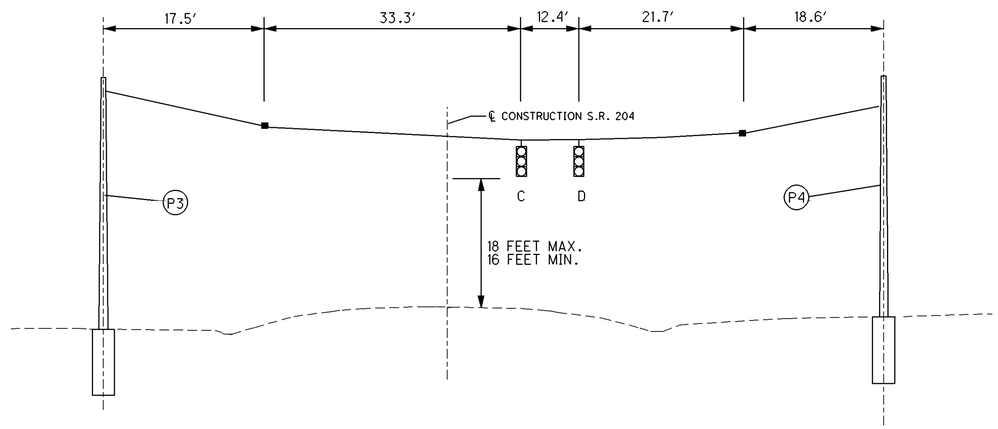
TRAFFIC SIGNAL DETAIL

FAI-204-1.23

F2040002.SDS 1-26-00

S.R. 204

FOR INFORMATION ONLY

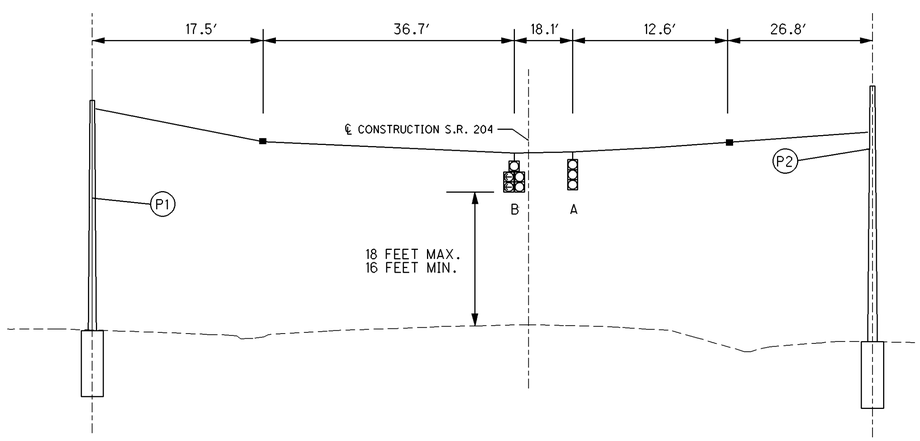


EAST BOUND S.R. 204

(NOT TO SCALE)

* DIMENSIONS SHOWN ARE MEASURED BEGINNING AT P3 FOR EASTBOUND AND P1 FOR WESTBOUND

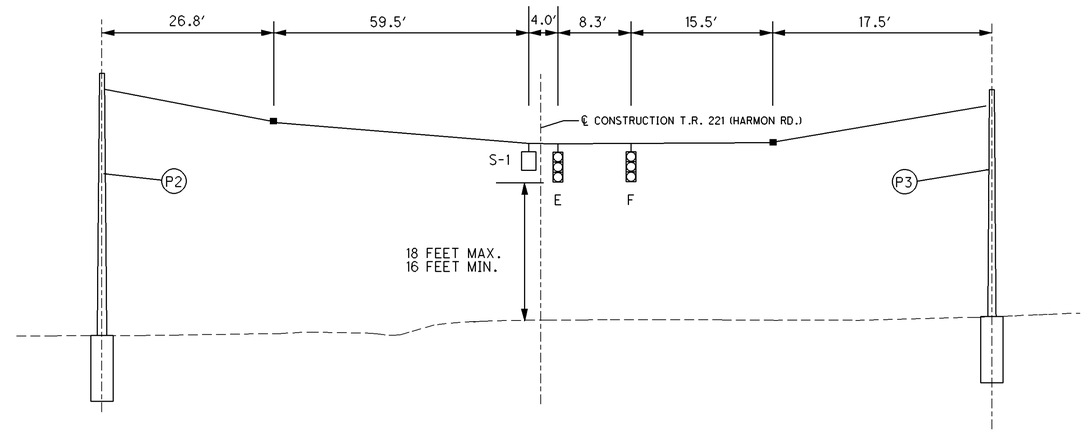
FOR INFORMATION ONLY



WEST BOUND S.R. 204

(NOT TO SCALE)

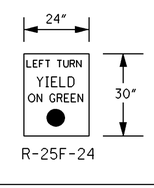
FOR SIGN LOCATION ONLY



NORTH BOUND HARMON RD.

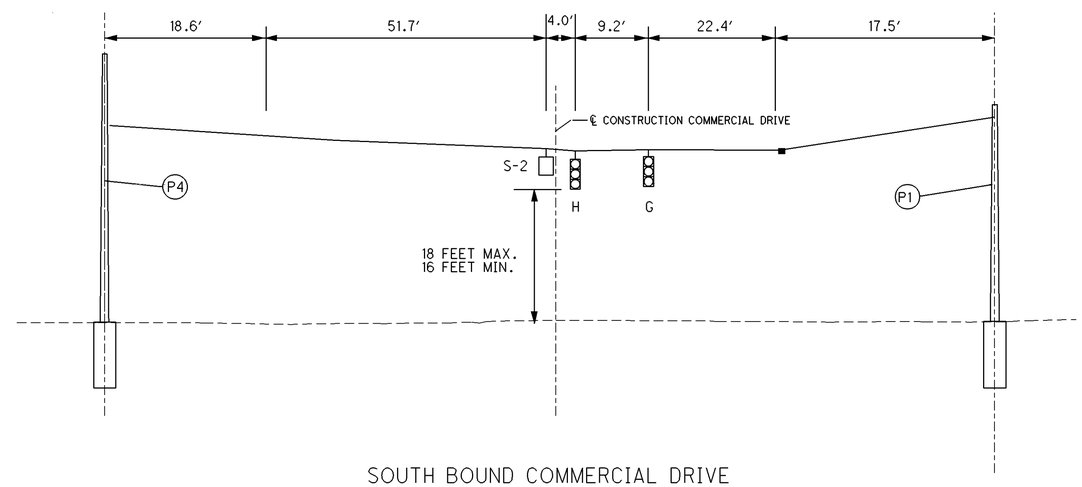
(NOT TO SCALE)

S1 & S-2 SIGN DETAIL



* DIMENSIONS SHOWN ARE MEASURED BEGINNING AT P2 FOR NORTHBOUND AND P4 FOR SOUTHBOUND

FOR SIGN LOCATION ONLY



SOUTH BOUND COMMERCIAL DRIVE

(NOT TO SCALE)

CALCULATED B.F.B. 05/09/98
CHECKED J.C. 05/09/98

SIGNAL PROFILE SHEET

FAI-204-1.23

F2040004.SDS 1-20-00

TRAFFIC SIGNAL GENERAL NOTES

GENERAL

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC CONTROL EQUIPMENT AND MATERIALS IN CONFORMANCE TO THESE PLANS AND SPECIFICATIONS AND THE 1995 STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ALL SUPPLEMENTAL SPECIFICATIONS. THE CONTRACTOR SHALL INSTALL ALL TRAFFIC CONTROL EQUIPMENT IN CONFORMANCE TO THE OHIO MANUAL OF TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND IN CONFORMANCE TO THE OHIO DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC ENGINEERING STANDARD CONSTRUCTION DRAWINGS.

REFERENCE TO A PARTICULAR TRADE NAME, MANUFACTURER'S CATALOG OR MODEL NUMBER ARE MADE FOR DESCRIPTIVE PURPOSES TO GUIDE THE BIDDER IN INTERPRETING THE REQUIREMENTS OF THE CONTRACT. IT SHOULD NOT BE CONSTRUED AS EXCLUDING PROPOSALS FOR OTHER MATERIAL, EQUIPMENT OR SUPPLIES THAT ARE EQUAL TO OR BETTER THAT THOSE WHICH ARE REFERENCED.

ITEM 632 VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY, AS PER PLAN
ITEM 632 VEHICULAR SIGNAL HEAD, 5-SECTION, 12" LENS, 1-WAY, AS PER PLAN

BALANCE ADJUSTERS, SHOWN ON TC-85.20 OF THE STANDARD CONSTRUCTION DRAWINGS SHALL NOT BE USED.

ALL WIRE ENTRANCE FITTINGS SHALL UTILIZE TRI-STUD TYPE HARDWARE TO MOUNT THE SIGNAL HEAD TO THE WIRE ENTRANCE .

THE SIGNAL HANGER SHALL UTILIZE TRI-STUD TYPE MOUNTI NG HARDWARE TO ATTACH THE SIGNAL HEAD TO THE HANGER.

THIS ITEM SHALL CONFORM TO ITEM 632 EXCEPT THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD CONSTRUCTION DRWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET.

AN ESTIMATED QUANTITY OF 350 LINEAR FEET OF ITEM 603, 4"CONDUIT TYPE E IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 603 4" CONDUIT, TYPE E 350 LIN. FT.

632 POWER SERVICE

ELECTRIC POWER SHALL BE OBTAINED FOR THE SIGNAL INSTALLATIONS FROM THE UTILITY LISTED BELOW AT THE LOCATIONS INDICATED ON THE PLAN.

COLUMBUS SOUTHERN OHIO ELECTRIC (AEP)
215 NORTH FRONT STREET
COLUMBUS, OH 43215
ATTN: ROD SLONEKER
(614) 464-7397

POWER SUPPLY SHALL BE: 120/240 VOLT, SINGLE PHASE, 3-WIRE GROUNDED NEUTRAL.

ITEM 630 SIGN HANGER ASSEMBLY, SPAN WIRE, AS PER PLAN

TYPE 2 SIGN HANGER ASSEMBLIES. REFER TO STANDARD DRAWING TC-41.41 FOR FURTHER DETAILS.

THIS ITEM SHALL COVER ALL COSTS AND INCIDENTALS FOR INSTALLING THE SIGN ON THE SPECIFIED HANGER.

ITEM 633 CONCRETE FOR CABINET FOUNDATION, AS PER PLAN

THIS ITEM SHALL MEET ALL REQUIREMENTS OF 633.09 WITH THE FOLLOWING EXCEPTION. THE TOP OF THE CONCRETE FOUNDATION SHALL BE REDUCED FROM 3" TO 12" ABOVE THE GROUND LINE.

ITEM 614 MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

A) FOR EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES, OR OTERWISE DISTRUBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME THE INSTALLATIONS ARE FIRST DISTURBED UNTIL THEY HAVE BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

B) FOR NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. THE CONTRACTOR SHALL PROVIDE THE STATE AND THE ENGINEER ADDRESSES AND PHONE NUMBERS WHERE THE CONTRACTOR'S MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL ALSO PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS CONTINUALLY AVAILABLE 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGHNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATICFACTION OF THE ENGINEER WITH THE SIGNAL BACK INTO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUPMENT EXCEPT POLES AND CONTROL EQUPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND THE SIGNAL SHALL BE BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHEN MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHEN OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATIONS FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHEN THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, WITHEN THE PERIODS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15. ANY SUBSEQUENT BILLINGS TO THE STATE FOR POLICE SERVICES AND MAINTENANCE SERVICES BY STATE FORCES WILL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS WHICH REQUIRE HANKLING DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.,

DUST CONTROL

THE CONTRACTOR SHALL PROVIDE AND EFFECTIVE MEANS OF REMOVING RESIDUE FROM THE DRY SAW BLADE CUTTING OF LOOP DETECTOR LEAD-IN SLOTS IN THE PAVEMENT. THE RESIDUE SHALL BE REMOVED BY VACUUM OR OTHER EFFECTIVE MEANS BEFOR IT IS BLOWN BY TRAFFIC ACTION OR THE WIND.

THE COST OF THE DUST CONTROL SHALL BE CONSIDERED AS INCIDENTAL TO AND INCLUDED IN THE UNIT BID PRICE OF ITEM 632 LOOP DETECTOR.

DEPARTMENT OF INDUSTRIAL RELATIONS, INSPECTION

THERE IS A RULE THAT ALL NEW OR RELOCATED ELECTRIC SERVICE ENCLOSURES ARE TO BE INSPECTED BY A LICENSED STATE INSPECTOR PRIOR TO CONNECTION TO A UTILITY DISTRIBUTION LINE. THIS RULE IS NOW BEING ENFORCED BY THE UTILITY COMPANIES AND THE OHIO DEPARTMENT OF INDUSTRIAL RELATIONS. THIS IS A NEW SITUATION FOR ODOT BECAUSE STATE INSPECTION ARE NOW BEING REQUIRED FOR TRAFFIC CONTROL DEVICES AND LIGHTING INSTALLATIONS.

THE CONTRACTOR SHALL APPLY FOR THE INDUSTRIAL RELATION INSPECTION(S): PAY THE APPROPRIATE FEE(S) TO THE INDUSTRIAL RELATIONS DEPARTMENT, AND ADVISE THE DISTRICT ROADWAY SERVICES MANAGE OF THE TIME OF THE INSPECTION(S) SO THAT HE MAY HAVE A REPRESENTATIVE IN ATTENDANCE. IT IS TO BE NOTED THAT THE INDUSTRIAL TELATIONS INSPECTION DOES NOT SUBSTITUTE FOR ODOT'S FINAL INSPECTION, NOR DOES IT SUPER-SEDE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

THE COST OF THE INDUSTRIAL RELATIONS INSPECTIONS SHALL BE CONSIDERED AS INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE LIGHTING INSTALLATIONS OR TRAFFIC CONTROL DEVICES.

ITEM 632 STRAIN POLE, TYPE TC-81.10M, DESIGN 7, INSTALLATION ONLY, AS PER PLAN

IN ADDITION TO ITEM 632 THIS ITEM SHALL ALSO INCLUDE THE TRANSPORTATION OF THE STRAIN POLE FROM THE DISTRICT OFFICE COMPLEX AT 9600 JACKSONTOWN ROAD, JACKSONTOWN, OHIO TO THE PROJECT SITE. THE PROPOSED POLE HEIGHTS ARE 32 FEET. PLEASE CONTACT MR. BRIAN BOSCH AT THE DISTRICT 5 OFFICE (740) 323-4400 TO SCHEDULE STRAIN POLE PICKUP.

ITEM 625 - TRENCH, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625.12 AND THE STANDARD CONSTRUCTION DRAWINGS, WITHIN EACH TRENCH, THE LOCATION OF UNDERGROUND CABLE OR CONDUIT SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY 6" WIDE, COMPOSED OF POLYETHYLENE PLASTIC, HIGHLY RESISTANT TO ALKALIC, ACIDS OR OTHER CHEMICAL COM-PONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE BRIGHT RED WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. TAPES SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOSLY THE FULL LENGTH OF THE TAPE. IDENTIFYING TAPES SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED APPROXIMATELY 8" TO 12" BELOW THE FINISHED GRADE. THE TAPE SHALL BE PLACED PARALLEL WITH TEH FINISHED SURFACE. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE TAPE IS NOT PULLED, DISTORTED OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILL. THE TAPE SHALL BE ALLEN SYSTEM'S, TERRA TAPE OR EQUAL, AS APPROVED BY THE ENGINNEER. THIS ITEM SHALL BE PAID FOR PER LINEAR FOOT OF ITEM 625 TRENCH, AS PER PLAN COMPLETE AND IN PLACE.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10 DAY PERFORMANCE TEST. IN THE EVENT OF AN UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY, EQUIPMENT, MATERIALS AND LABOR COSTS INCUREED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BY BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, DETECTOR UNITS, INTERCONNECT ITEMS AND THE MASTER CONTROL EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FORGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

633 ITEM SPECIAL CONTROLLER, MODEL 170E, WITH MODEL 332 CABINET AND ACCESSORIES

THE CONTROLLER SUPPLIED SHALL BE COMPLETE WITH THE SPECIFIED CABINET INCLUDING ALL NECESSARY COMPONENTS AND CABLES NOT SPECIFICALLY MENTIONED BELOW. ALL EQUIPMENT AND CABINETS SHALL CONFORM TO ODOT SPECIFICATIONS 633, 733 AND THE FOLLOWING:

MODEL 170E CONTROLLERS:

SPECIFICATIONS FOR THESE CONTROLLERS SHALL BE "TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATIONS", CALIFORNIA DEPARTMENT OF TRANSPORTATION, NOVEMBER 19, 1998, INCLUDING ALL ADDENDA. THE CONTROLLER UNITS SHALL CURRENTLY BE LISTED ON THE CALTRANS "QUALIFIED PRODUCTS LIST".

IN ADDITION:

1. THE CONTROLLER UNIT SHALL NOT BE SUPPLIED WITH THE M170E BOARD.

2. FOR CABINETS THAT ARE TO BE INCLUDED IN A HARDWIRE (TWISTED PAIR) INTERCONNECTED SIGNAL SYSTEM, THE CONTROLLER UNIT SHALL INCLUDE A MODEL 400 MODEM AND COMMUNICATION SYSTEM INTERFACE AS SPECIFIED IN THE CALTRANS SPECIFICATIONS. IN ADDITION TO THE CALTRANS SPECIFICATION, MODEMS SHALL BE DESIGNED SUCH THAT IF ONE MODEM LOSES COMMUNICATION WITH THE MASTER, SUBSEQUENT MODEMS SHALL STILL BE ABLE TO COMMUNICATE.

3. A 412C PROM MODULE SHALL BE SUPPLIED FOR MEMORY SELECT #4 CONFIGURATION WITHOUT CONTROLLER SOFTWARE TO THE ODOT DISTRICT OFFICE 14 DAYS IN ADVANCE OF WHEN SOFTWARE IS NEEDED. THE DISTRICT WILL PROVIDE THE LOCAL PROGRAM / AND THE SIGNAL TIMING.

4. AS PER CALTRANS REQUIREMENTS, ALL MEMORY, MICROPROCESSOR AND ACIA DEVICES SHALL BE SOCKET MOUNTED. SOCKETS SHALL HAVE MACHINED BERYLLIUM COPPER CONTACTS WITH GOLD PLATING.

5. A CABLE HARNESS, APPROXIMATELY 4 FT. LONG, SHALL BE SUPPLIED TO CONNECT A LAPTOP COMPUTER WITH THE CONTROLLER FOR THE TRANSFER OF DATA. THE CABLE SHALL HAVE A DB-9 CONNECTOR ON ONE END, AND A CONNECTOR ON THE OTHER END TO MATE WITH THE C2 ON THE BACK OF THE CONTROLLER.

6. ALL CIRCUIT BOARDS SHALL BE VERTICALLY MOUNTED.

7. THE POWER SUPPLY SHALL BE MODULAR AND EASILY REMOVABLE FROM THE CHASSIS.

8. THE UNIT SHALL CONTAIN SEPARATE INPUT AND OUTPUT MODULES.

9. IF A TELEPHONE DROP IS SHOWN IN THE PLANS, ALL NECESSARY COMMUNICATION MODULES, MODEM, LIGHTNING PROTECTION AND CABLES FOR AUTO DIAL/ANSWER TELEPHONE CONNECTION SHALL BE PROVIDED.

10. IF THE CONTROLLER IS PART OF AN INTERCONNECTED SIGNAL SYSTEM, THE CONTROLLER SHALL INCLUDE MODEMS, PORTS AND CABLES FOR SYSTEM COMMUNICATION.

2 SETS OF CONTROLLER SCHEMATICS AND SERVICE MANUALS SHALL BE SUPPLIED WITH EACH CONTROLLER.

CONFLICT MONITORS, TYPE 2010:

CONFLICT MONITORS SHALL BE ON THE ODOT PRE-APPROVED LIST (S.S. 962). TWO SETS OF OPERATIONS INSTRUCTIONS AND MONITOR SCHEMATICS SHALL BE SUPPLIED WITH EACH MONITOR. PERMISSIVE CHANNELS SHALL BE PROGRAMMED WITH THE USE OF A DIODE CARD (CALTRANS STANDARD) WHICH SHALL BE INCLUDED WITH THE MONITOR.

CABINET, MODEL 332:

MODEL 332 CABINETS SHALL MEET THE SPECIFICATIONS "TRAFFIC SIGNAL CONTROL EQUIPMENT SPECIFICATIONS", CALIFORNIA DEPARTMENT OF TRANSPORTATION, JANUARY 1989, OR LATEST EDITION, AND SHALL CURRENTLY BE ON THE CALTRANS "QUALIFIED PRODUCTS LIST" (QPL) FOR 332 CABINETS.

CABINETS SHALL BE CONSTRUCTED OF ALUMINUM AND SHALL BE SUPPLIED UNPAINTED. ANODIC COATING IS NOT REQUIRED. CABINETS SHALL BE FULLY EQUIPPED WITH CONFLICT MONITOR, FLASHERS, AC ISOLATORS, DC ISOLATORS, AND FLASH TRANSFER RELAYS. THE APPROPRIATE NUMBER OF SWITCH PACKS AND MODEL 222 LOOP DETECTOR SENSOR UNITS SHALL BE SUPPLIED TO OPERATE THE INTERSECTION AS SHOWN IN THE PLANS. ALL COMPONENTS SHALL MEET CALTRANS SPECIFICATIONS AND SHALL BE ON THE OPL AS APPLICABLE.

CABINETS SHALL BE FITTED WITH A PDA-2 POWER DISTRIBUTION ASSEMBLY. CABINETS SHALL BE EQUIPPED WITH AN EDCO SHA12-10 OR APPROVED EQUAL SURGE PROTECTOR IN LIEU OF THE CALTRANS SPECIFIED SURGE PROTECTION. THE SHA12-10 UNIT SHALL BE INSTALLED IN AN ENCLOSURE WITHIN THE CABINET.

THE FRONT OF THE INPUT AND OUTPUT FILES SHALL BE LABELED USING A WRITABLE TAPE. IN THE CASE OF THE OUTPUT FILE, THE TAPE SHALL CLEARLY DESIGNATE THE PURPOSE OF THE CORRESPONDING SWITCH PACK. AN EXAMPLE OF SWITCH PACK LABELING IS "PHASE 2" OR "PHASE 2 PED". IN THE CASE OF THE INPUT FILE, THE TAPE SHALL CLEARLY DESIGNATE THE PURPOSE OF THE CORRESPONDING DETECTOR UNIT. EVERY USED CHANNEL OF THE 222 DETECTOR SHALL BE LABELED. AN EXAMPLE OF DETECTOR UNIT LABELING IS "PHASE 2 C" OR "PHASE 2 EC" OR "PHASE 2 EXT" WHERE:

C - IS A CALL INPUT ONLY DURING RED
EC - IS EXTEND AND CALL DURING RED, YELLOW AND GREEN
EXT - IS AN EXTENSION ONLY DURING GREEN

CABINET WIRING SHALL COMPLY WITH THE FOLLOWING:

1. OUTPUT FILES SHALL BE "HARDWIRED". NO PRINTED CIRCUIT WIRING SHALL BE USED IN THE OUTPUT FILE EXCEPT FOR THE RED MONITOR BOARD.

2. CABINETS SHALL HAVE RED MONITOR CABLING INSTALLED. A PROGRAM BOARD SHALL BE INSTALLED TO ENABLE/DISABLE RED MONITORING. CABINETS SHALL BE SHIPPED WITH THE RED MONITOR JUMPERS SET IN THE 'ENABLE' POSITION.

3. PEDESTRIAN YELLOW LOADSWITCH OUTPUTS SHALL NOT BE CONNECTED TO THE CONFLICT MONITOR CARD-EDGE CONNECTOR.

4. FIELD WIRING FOR LOOP DETECTOR LEAD-IN CABLES AND PEDESTRIAN DETECTORS SHALL BE TERMINATED ON A LOWER LOOP INPUT PANEL. EDCO MODEL SRA-6LCA, SRA-6LCB OR SRA-6LC SURRESTORS SHALL BE PROVIDED ON THE LOWER INPUT PANEL FOR PROTECTION AGAINST INCOMING ELECTRICAL SURGES AND LIGHTNING. FIELD WIRING TERMINALS ON THE LOWER INPUT PANEL SHALL BE LABELED BY A PERMANENT SCREENING PROCESS TO IDENTIFY THE INPUT FILE (I OR J), THE INPUT FILE SLOT NUMBER (1-14) AND THE CHANNEL TERMINAL (D, E, J OR K). AN EXAMPLE IS "I4-K" STANDING FOR INPUT FILE "I"; SLOT 4; CHANNEL TERMINAL "K". ALL TERMINALS ON THESE DETECTOR PANELS SHALL BE EASILY ACCESSIBLE WITHOUT REMOVING EQUIPMENT FROM THE MOUNTING RACK. TAGGING OF WIRES SHALL NOT BE CONSIDERED ACCEPTABLE TO SATISFYING TERMINAL LABELING.

5. FOR CABINETS THAT ARE TO BE INCLUDED IN A HARDWIRE (TWISTED PAIR) INTERCONNECTED SIGNAL SYSTEM, INCOMING INTERCONNECT CABLE SHALL BE TERMINATED ON AN APPROPRIATE TERMINAL BASE THAT IS MOUNTED ON THE SIDE OF THE CABINET. PROTECTION FROM INCOMING ELECTRICAL SURGES/LIGHTNING ON INTERCONNECT PAIRS SHALL BE PROVIDED BY INSTALLATION OF EDCO PC642 SURGE ARRESTORS ON THE TERMINAL BASE. THE PROTECTED OUTPUTS FROM THE TERMINAL BASE SHALL THEN BE ROUTED THROUGH TO THE CONTROLLER.

6. ON THE OUTPUT FILE, PIN NUMBER 11 OF EACH SWITCHPACK SHALL BE WIRED TO AC-, SO THAT THE OUTPUT INDICATORS ON DUAL INDICATOR SWITCHPACKS WILL DISPLAY PROPERLY. SWITCHPACKS SHALL HAVE BOTH INPUT AND OUTPUT INDICATORS FOR EACH SWITCH.

THE FOLLOWING AUXILIARY ITEMS SHALL BE SUPPLIED:

1. CABINETS SHALL HAVE TWO FLUORESCENT LIGHTS (FRONT AND REAR) WITH DOOR SWITCHES.

2. A RACK MOUNTED DETECTOR TEST PANEL SHALL BE FURNISHED WITH SEPARATE TEST SWITCHES FOR ALL POSSIBLE VEHICLE AND PEDESTRIAN PHASES. THE SWITCHES SHALL BE THREE (3) POSITION "ON/OFF/MOMENTARY ON" SWITCHES.

3. EACH CABINET SHALL BE PROVIDED WITH A POLICE PANEL WHICH WILL INCLUDE A PUSHBUTTON WITH CORD AND THREE SWITCHES LABELED AUTO/FLASH, SIGNALS ON/OFF, AND AUTO/MANUAL. THE PUSHBUTTON CORD SHALL NOT BE WIRED THROUGH AN AC ISOLATOR, BUT SHALL BE CONNECTED TO THE CONTROLLER HARNESS WIRING BY A MOLEX PLUG CONNECTION. WHEN PLACED IN THE MANUAL POSITION, MANUAL CONTROL ENABLE SHALL BE APPLIED TO THE CONTROLLER AND "RECALL" SHALL BE APPLIED TO ALL PHASES. ACTIVATION OF THE PUSHBUTTON SHALL "ADVANCE" THE CONTROLLER EXCEPT THAT MANUAL ADVANCEMENT WILL BE PROHIBITED IN THE MINIMUM GREEN, YELLOW AND RED INTERVALS.

4. AN ALUMINUM SHELF WITH INTEGRAL STORAGE COMPARTMENT SHALL BE PROVIDED IN THE RACK BELOW THE CONTROLLER. THE STORAGE COMPARTMENT WILL HAVE TELESCOPING DRAWER GUIDES FOR FULL EXTENSION. THE COMPARTMENT TOP SHALL HAVE A NON-SLIP PLASTIC LAMINATE ATTACHED.

5. CABINETS SHALL BE SUPPLIED WITH GALVANIZED ANCHOR BOLTS WITH NUTS AN WASHERS. ANCHOR BOLTS SHALL BE 3/4" (19mm) DIAM. BY 16" (406mm) MINIMUM LENGTH WITH AN "L" BEND ON THE UNTHREADED END.

TWO SETS OF CABINET WIRING DIAGRAMS, SERVICE MANUALS, PROGRAMING AND MAINTENANCE INSTRUCTIONS SHALL BE FURNISHED FOR EACH CABINET AND EQUIPMENT ITEM. THE CABINET WIRING DIAGRAMS SHALL BE SUPPLIED IN A CLEAR PLASTIC POUCH FASTENED TO THE INSIDE OF THE CONTROLLER CABINET.

GENERATOR POWER PANEL:

THIS ITEM SHALL ALLOW SIGNAL ELECTRICIANS TO OPERATE THE TRAFFIC SIGNAL DURING POWER OUTAGES, WITHOUT OPENING THE CABINET DOOR OR CONNECTING OR DISCONNECTING PERMANENT POWER CABLES. THE ENCLOSURE SHALL BE INSTALLED ON THE POWER PANEL SIDE OF THE CONTROLLER CABINET. DESIGN AND LAYOUT OF THE CONTROLLER CABINET SHALL DETERMINE EXACT PLACEMENT OF THE ENCLOSURE BUT IT SHOULD BE PLACED NEAR THE TOP OF GROUND MOUNTED CABINETS AND ABOUT 5 FEET FROM THE GROUND ON POLE MOUNTED CABINETS. THE ENCLOSURE SHALL BE SEALED WITH A HIGH QUALITY SILICON CAULK AND ALL HOLES DRILLED INTO THE SIDE OF THE CONTROLLER CABINET SHALL BE CAULKED AND SEALED AFTER THE ELECTRICAL EQUIPMENT IS INSTALLED. ALL ELECTRICAL CONNECTIONS, SOLDERED OR SCREW TYPE TERMINALS, SHALL BE COVERED WITH A CLEAR SILICON CAULK.

THE GENERATOR INLET SHALL BE 30 AMP, LOCKING, FOUR WIRE GROUNDING AND MEET THE NEMA 114-30-P 30A 125/250V SPECIFICATION. THE INLET SHALL BE A HUBBLE CATALOG #2715.

THE LINE VOLTAGE GENERATOR SWITCH SHALL BE 30 AMP, 125/250V AC, TWO (2) POLE, THREE (3) POSITION, (ON, OFF, ON HUBBLE #1388).
THE LINE VOLTAGE INDICATOR LIGHT SHALL BE 125V AC LIGHT EMITTING DIODE WITH A RED LENS.
THE LINE VOLTAGE CIRCUIT BREAKER SHALL BE SINGLE POLE SINGLE THROW AND A MINIMUM OF 30 AMPS. THE AMPERAGE SHALL BE INCREASED TO ACCOMMODATE GREATER LOADS, IF NECESSARY. THE GAUGE OF THE POWER CABLE SHALL BE OF PROPER SIZE PER THE NATIONAL ELECTRICAL CODE (NEC).

DESIGNER NOTE: CABINET RISER IS OPTIONAL. IF USED AN "AS PER PLAN" CONTROLLER FOUNDATION NOTE IS NEEDED TO LOWER THE TOP OF THE FOUNDATION TO A 3" (76mm) CLEARANCE ABOVE THE SURROUNDING GROUND LINE.

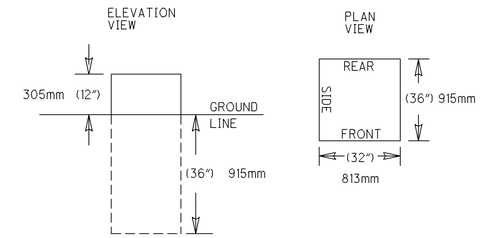
CABINET RISER:

AN ALUMINUM RISER SHALL BE PROVIDED WITH EACH BASE MOUNTED CABINET WHICH WILL RAISE THE CABINET APPROXIMATELY 8" (203mm) ABOVE THE CONCRETE FOUNDATION. THE BOTTOM OF THE RISER SHALL BOLT TO THE STANDARD CABINET FOUNDATION ANCHOR BOLTS AND THE TOP OF THE RISER SHALL BOLT TO THE BOTTOM OF THE CABINET. ALL NECESSARY BOLTS, WASHERS AND NUTS SHALL BE SUPPLIED.

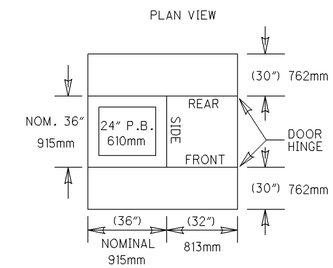
PAYMENT:

COST FOR ALL OF THE ABOVE INCLUDING LABOR, MATERIAL, TOOLS AND EQUIPMENT TO PROVIDE AND INSTALL A COMPLETELY OPERATIONAL CABINET AND CONTROLLER SHALL BE INCLUDED IN THE BID ITEM PRICE FOR 633 ITEM SPECIAL, CONTROLLER, MODEL 170E, WITH MODEL 332 CABINET AND ACCESSORIES.

332 CABINET FOUNDATION



332 CONTROLLER WORK PAD



NOTE: PULLBOX SHALL BE PLACED ON OPPOSITE SIDE OF DOOR HINGE

INPUT FILE ASSIGNMENT FOR 332 CABINET

	SLOT 1	SLOT 2	SLOT 3	SLOT 4	SLOT 5	SLOT 6	SLOT 7	SLOT 8	SLOT 9	SLOT 10	SLOT 11	SLOT 12	SLOT 13	SLOT 14
Channel #1	1 EC	2 EC	2 EC	2 C	3 EC	4 EC	4 EC	4 C	1 EC	SPARE	MAN. CTRL. ADV.	2 PPB	6 PPB	FLSH
Field Term.	I 1-D,E	I 2-D,E	I 3-D,E	I 4-D,E	I 5-D,E	I 6-D,E	I 7-D,E	I 8-D,E	I 9-D,E	I 10-D,E	I 11-D,E	I 12-D,E	I 13-D,E	I 14-D,E
Channel #2	(1 EC)	2 EC	2 EXT	(2 C)	(3 EC)	4 EC	4 EXT	(4 C)	3 EC	SPARE	ADV. ENAB.	4 PPB	8 PPB	STOP TIME
Field Term.	I 1-J,K	I 2-J,K	I 3-J,K	I 4-J,K	I 5-J,K	I 6-J,K	I 7-J,K	I 8-J,K	I 9-J,K	I 10-J,K	I 11-J,K	I 12-J,K	I 13-J,K	I 14-J,K

FRONT VIEW OF TOP INPUT FILE I

	SLOT 1	SLOT 2	SLOT 3	SLOT 4	SLOT 5	SLOT 6	SLOT 7	SLOT 8	SLOT 9	SLOT 10	SLOT 11	SLOT 12	SLOT 13	SLOT 14
Channel #1	5 EC	6 EC	6 EC	6 C	7 EC	8 EC	8 EC	8 C	5 EC	SPARE	SPARE	EV-A	EV-B	RR-1
Field Term.	J 1-D,E	J 2-D,E	J 3-D,E	J 4-D,E	J 5-D,E	J 6-D,E	J 7-D,E	J 8-D,E	J 9-D,E	J 10-D,E	J 11-D,E	J 12-D,E	J 13-D,E	J 14-D,E
Channel #2	(5 EC)	6 EC	6 EXT	(6 C)	(7 EC)	8 EC	8 EXT	(8 C)	7 EC	SPARE	SPARE	EV-C	EV-D	RR-2
Field Term.	J 1-J,K	J 2-J,K	J 3-J,K	J 4-J,K	J 5-J,K	J 6-J,K	J 7-J,K	J 8-J,K	J 9-J,K	J 10-J,K	J 11-J,K	J 12-J,K	J 13-J,K	J 14-J,K

FRONT VIEW OF BOTTOM INPUT FILE J

SEPARATE BID ITEMS:

625 PULLBOX, 713.08, 24"
633 CONTROLLER WORK PAD
633 CONC. FOR CAB. FOUNDATION

INPUT FILE TERMINAL ASSIGNMENT

TERM.	PIN	FUNCTION
1	SP	SPARE
2	F	CHANNEL 1 OUTPUT
3	W	CHANNEL 2 OUTPUT
4	D	CHANNEL 1 INPUT
5	E	CHANNEL 1 INPUT
6	J	CHANNEL 2 INPUT
7	K	CHANNEL 2 INPUT
8	L	EQUIPMENT GROUND

( ) - JUMPERED TO UPPER CHANNEL
C - INPUT ONLY DURING RED
EC - EXTEND AND CALL (RED, YELLOW, GREEN)
EXT - INPUT ONLY DURING GREEN

TERMINATION OF FIELD WIRING SHALL CONFORM TO THE ABOVE CHART. THE CONTRACTOR SHALL DUPLICATE THE INPUT ASSIGNMENT CHART AND INCLUDE IT IN THE CABINET DOCUMENTATION. THE CHART SHALL CLEARLY INDICATE WHICH INPUT FILE SLOTS AND CHANNEL TERMINALS ARE USED IN THE CABINET. A RED PEN SHALL BE USED TO CIRCLE SLOT NUMBERS AND CHANNEL TERMINALS THAT ARE USED.

REVISED BY: DATE:

DATE
08/12/98
11/24/99

ODOT MAINTAINED
MODEL 170E CONTROLLER WITH
MODEL 332 CABINET AND ACCESSORIES

PLAN INSERT SHEET

F2040002.SGN 1-19-00

JAM

MATERIAL SPECIFICATIONS FOR GENERATOR POWER PANEL EQUIPMENT

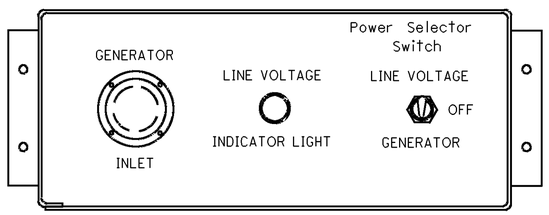
GENERATOR POWER PANEL ENCLOSURE --- This item can be fabricated to meet the attached specifications, or it can be purchased through Gammatronix at 6279 Shier Rings Road, Dublin, Ohio 43017. Phone number 614-889-2511.

GENERATOR INLET --- The inlet shall be 30 amp, 125/250V, locking, four (4) wire grounding and meet the NEMA configuration number L14-30-P 30A 125/250V specification. The inlet shall be a Hubbell catalog #2715.

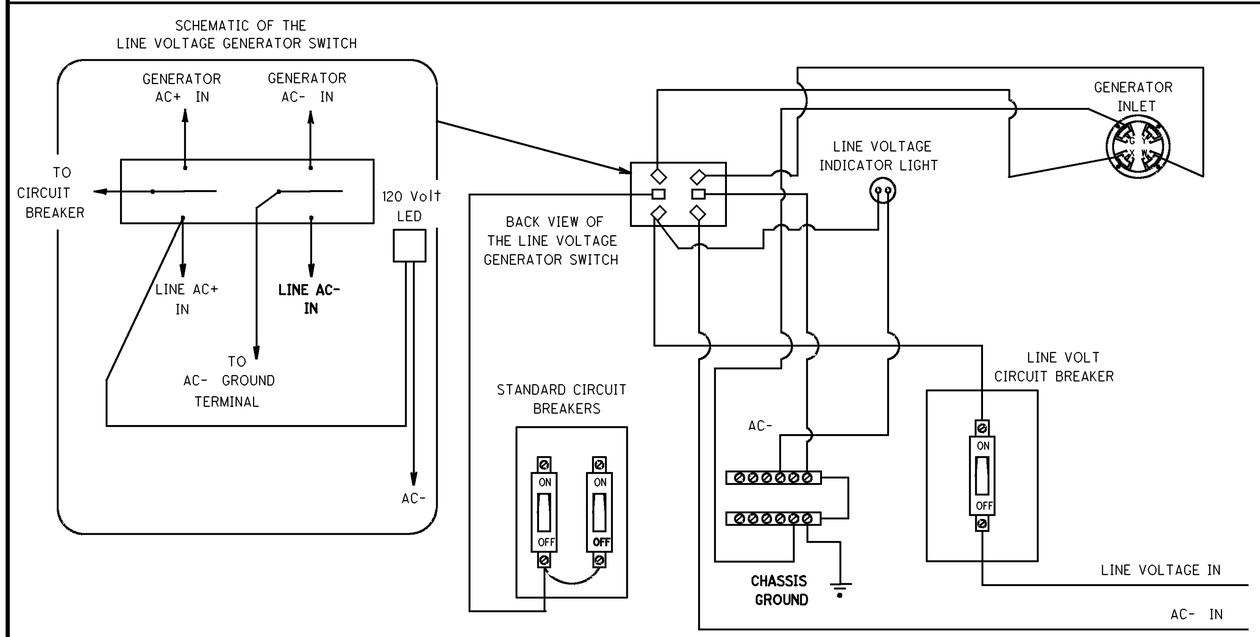
LINE VOLTAGE GENERATOR SWITCH --- The switch shall be 30 amp, 125/250V AC, two (2) pole, three (3) position. (On, Off, On, Hubbell 1388.)

LINE VOLTAGE INDICATOR LIGHT --- The indicator light shall be 125V AC light emitting diode with a red lens.

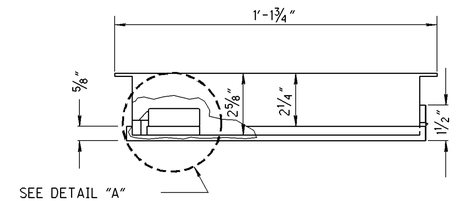
LINE VOLTAGE CIRCUIT BREAKER --- The circuit breaker shall be single pole single throw and a minimum of 30 amps. The amperage shall be increased to accomodate greater loads, if necessary. The gauge of the power cable shall be of proper size per the N.E.C.



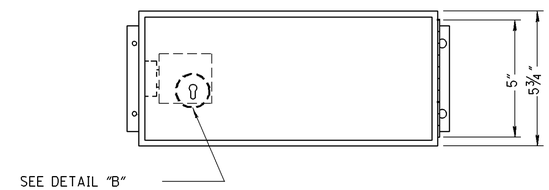
FRONT VIEW OF GENERATOR POWER PANEL



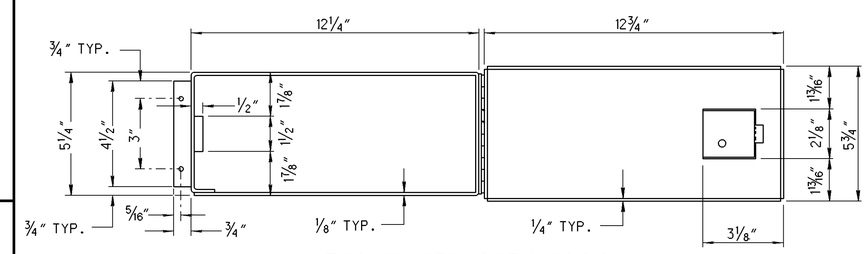
ELECTRICAL HOOKUP DETAIL FOR THE GENERATOR POWER PANEL



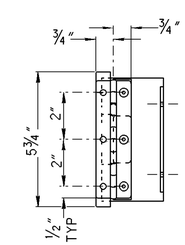
TOP VIEW



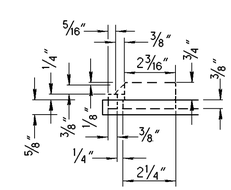
FRONT VIEW CLOSED DOOR



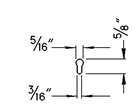
FRONT VIEW OPEN DOOR



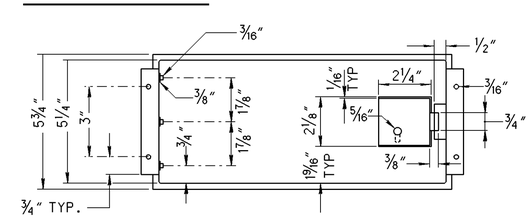
RIGHT SIDE VIEW CLOSED DOOR



DETAIL "A"



DETAIL "B"



BACK VIEW CLOSED DOOR

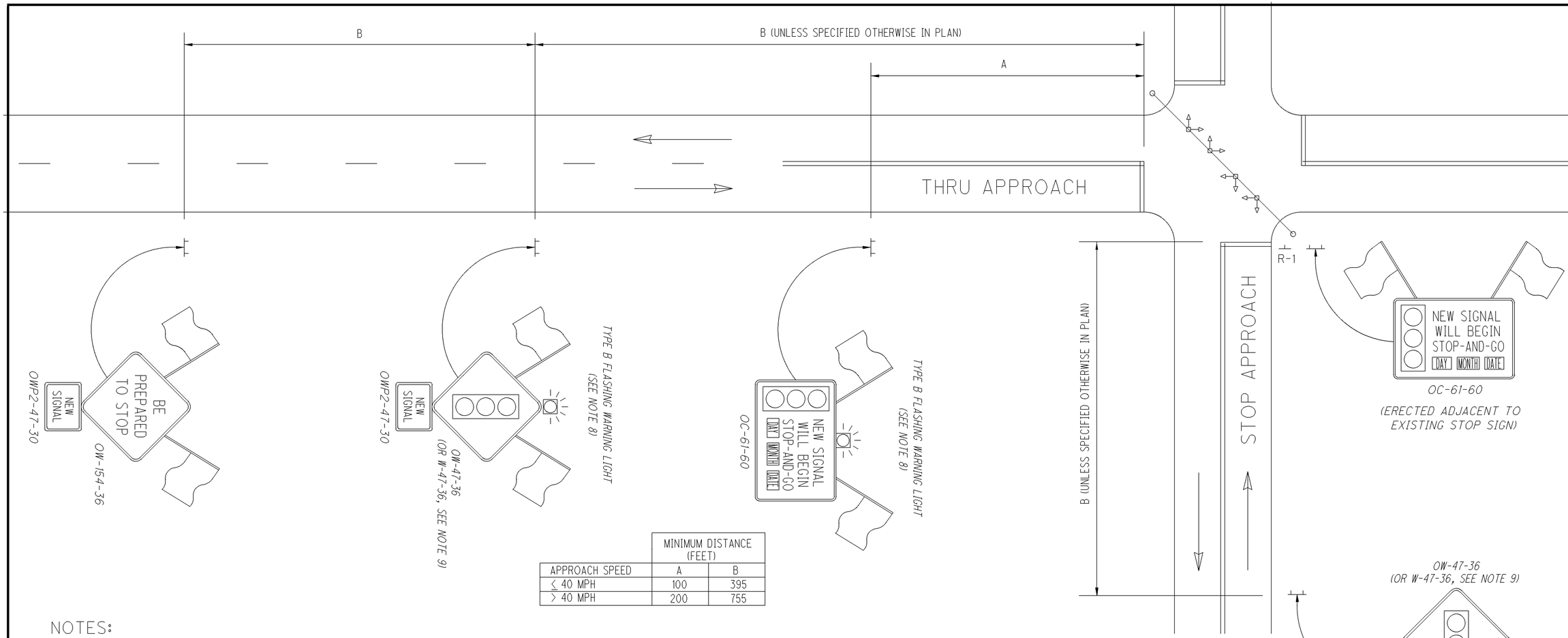
GENERATOR POWER PANEL ENCLOSURE

NOTES:

1. THE ENCLOSURE SHALL BE CONSTRUCTED OF ⅛" THICK ALUMINUM.
2. THE LOCK SHALL BE THE STANDARD POLICE DOOR TYPE, KEYED WITH THE STANDARD FLASHER DOOR SKELETON KEY.
3. THE DOOR SHALL BE SEALED WITH A FOAM RUBBER GASKET TO PREVENT MOISTURE FROM ENTERING THE ENCLOSURE.
4. THE ENCLOSURE SHALL BE MOUNTED ONTO THE OUTSIDE OF THE CONTROLLER CABINET WITH NON-ACCESSIBLE BOLTS AND SEALED WITH A HIGH QUALITY SILICON CAULK AT ALL SURFACES TOUCHING THE CABINET.
5. THE HINGE SHALL BE OF STAINLESS STEEL OR EQUIVALENT CORROSIVE-RESISTANT MATERIAL.

PLAN INSERT SHEET	
TRAFFIC CONTROL	DATE 1/94 REV.-6/94 REV.-10/94
GENERATOR POWER PANEL	
	45/47

F2040004.SGN 1-28-00



	MINIMUM DISTANCE (FEET)	
APPROACH SPEED	A	B
≤ 40 MPH	100	395
> 40 MPH	200	755

NOTES:

1. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN ALL SIGNS, FLASHING WARNING LIGHTS (WHEN REQUIRED) AND FLAGS AS SHOWN ABOVE, INCLUDING SUPPORTS AND ALL NECESSARY MOUNTING HARDWARE.
2. AFTER RECEIVING APPROVAL FROM THE ENGINEER TO ACTIVATE THE SIGNAL, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TEN (10) DAYS PRIOR TO PLACING SIGNAL IN STOP-AND-GO MODE TO ALLOW THE ENGINEER TIME TO NOTIFY LOCAL MEDIA AND LAW ENFORCEMENT OF THE SCHEDULED SIGNAL ACTIVATION.
3. A PERMANENT NEW SIGNAL OR SIGNAL UPGRADE FROM A FLASHER, SHALL OPERATE IN FLASH MODE FOR THREE (3) TO TEN (10) CONSECUTIVE DAYS BEFORE BEING PLACED IN A STOP-AND-GO MODE FOR THE TEN (10) DAY BURN TEST, AS DIRECTED BY THE ENGINEER.
4. THE CONTRACTOR SHALL ERECT THE OC-61-60 (WITH ACTIVATION DAY, MONTH, AND DATE; E.G. MON AUG 12) SIGNS EQUIPPED WITH ORANGE FLAGS AND FLASHING WARNING LIGHTS (WHEN REQUIRED) AS SHOWN ABOVE ON EACH APPROACH OF THE INTERSECTION AT THE TIME THE SIGNAL IS PLACED IN FLASH MODE.
5. IMMEDIATELY BEFORE PLACING THE NEW SIGNAL INSTALLATION IN STOP-AND-GO MODE, THE CONTRACTOR SHALL REMOVE THE OC-61-60 SIGNS AND INSTALL OR UNCOVER THE (O)W-47 AND OW-154 SIGN ASSEMBLIES AS SHOWN ABOVE.
6. IMMEDIATELY AFTER CHANGING THE SIGNAL TO STOP-AND-GO OPERATION, THE CONTRACTOR SHALL REMOVE THE EXISTING STOP SIGNS AND POST SUPPORTS.
7. THE CONTRACTOR SHALL REMOVE THE FLASHING WARNING LIGHTS, FLAGS, BRACKETS, OWP2-47, OW-47, AND OW-154 SIGNS 21-30 DAYS AFTER THE SIGNAL IS PLACED IN STOP-AND-GO MODE.
8. FLAGS SHALL BE ERECTED AS SHOWN ABOVE. THE FLAGS SHALL BE 18 INCHES X 18 INCHES IN SIZE, MADE OF ORANGE VINYL MATERIAL, AND SECURELY FASTENED TO THE SIGN OR SIGN SUPPORT. WHEN REQUIRED BY PLAN NOTE, TYPE B FLASHING WARNING LIGHTS SHALL BE INSTALLED AS SHOWN ABOVE.
9. THE OW-154 SIGN INSTALLATION (INCLUDING THE OWP2-47 SIGN AND FLAGS) ON THE THRU APPROACH SHALL BE OMITTED WHEN A PERMANENT "PREPARE TO STOP WHEN FLASHING" (W-44) SIGN IS ERECTED. WHEN SPECIFIED IN THE PLAN, A W-47 SIGN SHALL BE USED IN PLACE OF THE OW-47 SIGN ON THE THRU APPROACH. THE "NEW SIGNAL" (OWP2-47) SIGN, FLAGS, AND FLASHING WARNING LIGHT, WHEN REQUIRED, SHALL BE INSTALLED WITH THE W-47 SIGN AS SHOWN. WHEN SPECIFIED IN THE PLAN, A W-47 SIGN SHALL BE USED IN PLACE OF THE OW-47 SIGN ON THE STOP APPROACH. THE "NEW SIGNAL" (OWP2-47) SHALL BE INSTALLED WITH THE (O)W-47 SIGN AS SHOWN.
10. ON MULTILANE THRU APPROACHES, REPLACE THE OW-154-36 SIGN WITH AN OW-154-48 SIGN, AND REPLACE THE OW-47-36 SIGN WITH AN OW-47-48 SIGN. ON MULTILANE DIVIDED THRU APPROACHES, ERECT SIGNS IN MEDIAN IDENTICAL TO THOSE ON RIGHT TO CREATE DUAL INSTALLATIONS, INCLUDING SUPPLEMENTAL SIGNS AND FLAGS, AND, WHEN REQUIRED BY PLAN NOTE, FLASHING WARNING LIGHTS.
11. FOR MULTI-WAY STOP APPROACHES, EACH APPROACH CONTROLLED BY A STOP SIGN SHALL BE TREATED AS SHOWN ABOVE FOR THE STOP APPROACH.
12. THE SIGNAL SHALL NOT BE ACTIVATED TO STOP-AND-GO OPERATION ON A FRIDAY, SATURDAY OR SUNDAY, OR THE DAY PRECEDING OR DURING A NATIONAL HOLIDAY, (NEW YEARS, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING, OR CHRISTMAS).
13. PERMANENT SUPPORTS, PERMANENT SIGNS (W-44 AND W-47), AND TYPE B FLASHING WARNING LIGHTS SHALL BE PAID FOR UNDER SEPARATE PAY ITEM IN THE PLAN. PAYMENT FOR ALL OTHER LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR 614 MAINTAINING TRAFFIC.

CALCULATED
CHECKED
DATE 5/01/98

NEW SIGNAL ACTIVATION

FAI-204-1.23

f2040005.sgn 1-19-00

SHEET NO.	LOCATION	SIDE	ITEM 625								ITEM 630				ITEM 632															ITEM 633				
				CONDUIT, 3", 713.07		TRENCH, 24" DEEP, AS PER PLAN	PULL BOX, 713.08 18"	PULL BOX, 713.08 24"	GROUND ROD		SIGN HANGER ASSEMBLY, SPAN WIRE, AS PER PLAN	SIGN, FLAT SHEET	COVERING OF SIGN			VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY, AS PER PLAN	VEHICULAR SIGNAL HEAD, 5-SECTION, 12" LENS, 1-WAY, AS PER PLAN	COVERING OF VEHICULAR SIGNAL HEAD	DETECTOR LOOP	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	SIGNAL CABLE, 7 CONDUCTOR NO. 14 AWG	STRAIN POLE FOUNDATION	LOOP DETECTOR LEAD-IN CABLE	POWER CABLE 2-CONDUCTOR NO. 6 AWG	POWER SERVICE	STRAIN POLE, TYPE TC-81.10, DESIGN 7, AS PER PLAN		REMOVAL OF TRAFFIC SIGNAL INSTALLATION		CONTROLLER, TYPE 170E, WITH MODEL 332 CABINET AND ACCESSORIES	CONCRETE FOR CABINET FOUNDATION	CONTROLLER WORK PAD	
				LIN.FT.		LIN.FT.	EACH	EACH	EACH		EACH	SQ.FT.	SQ.FT.			EACH	EACH	EACH	EACH	LIN.FT.	LIN.FT.	EACH	LIN.FT.	LIN.FT.	EACH	EACH		EACH		EACH	CU. YD.	SQ. FT.	
40	STA. 65+90	RT.					1												1															
40	STA. 65+90 TO STA. 67+00	RT.		110		110																	518											
40	STA. 67+00	RT.					1												1															
40	STA. 67+00 TO STA. 69+50	RT.		260		260																	628											
40	STA. 69+50	RT.						1											1															
40	STA. 1+54	LT.					1												1															
40	STA. 1+54 TO STA. 0+90.6	LT.		65		65																	195											
40	STA. 0+90.6	LT.						1											1															
40	STA. 0+90.6 TO STA. 70+72			103		103																	279											
40	STA.70+63	LT.						1											1															
40	STA.70+63 TO STA. 71+50	LT.		87		87																	200											
40	STA. 71+50	LT.					1												1															
40	STA. 71+50 TO STA.72+00	LT.		50		50																	285											
40	STA. 72+96	LT.					1												1															
40	STA. 72+96 TO STA. 74+06	LT.		110		110																	530											
40	STA. 74+06	LT.					1												1															
40	STA. 70+72 TO C1	RT.						1																	1			1			1	1.9	30	
40	C1 TO P4	RT.																						100										
40	P1 TO P2	RT/LT							1							1	1	2		68	190	1				1								
40	P2 TO P3	LT.							1		1	5	5			2		2		88	160	1				1								
40	P3 TO P4	RT/LT							1							2		2		68	100	1				1								
40	P4 TO P1	RT.							1		1	5	5			2		2		88	120	1				1								
TOTALS CARRIED TO GENERAL SUMMARY				785		785	6	4	4		2	10	10			7	1	8	9	312	570	4	2635	100	1	4		1			1	1.9	30	

CALCULATED J.L.R. 12-8-99
CHECKED B.J.T. 12-15-99

TRAFFIC SIGNAL SUBSUMMARY

FAI-204-1.23

F2040001.SSS 12-8-99