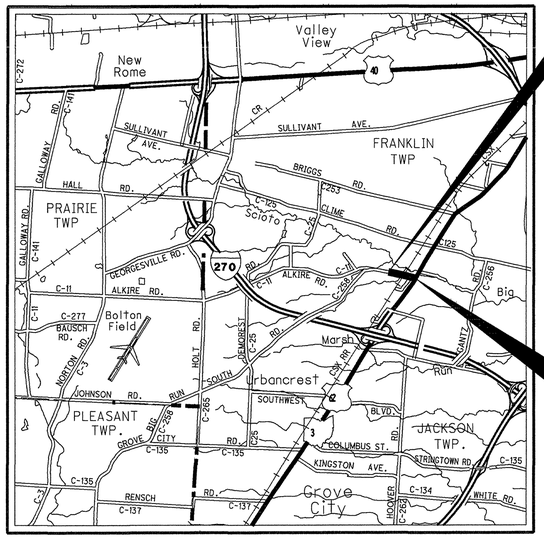


BEGIN PROJECT STA. 113+50.00

END PROJECT STA 132+97.79

LOCATION MAP

LATITUDE: N 39°54'56" LONGITUDE: E 83°04'09"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION ALKIRE ROAD

CURRENT ADT (2009)	13600
DESIGN YEAR ADT (2029)	27550
DESIGN HOURLY VOLUME (2029)	1900
DIRECTIONAL DISTRIBUTION	68%
TRUCKS (24 HOUR B&C)	6%
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH

DESIGN FUNCTIONAL CLASSIFICATION - URBAN MINOR ARTERIAL

DESIGN EXCEPTIONS

NONE

PROJECT SITE DATA	
PROJECT EARTH DISTURBED AREA	4.58 – AC
CONTRACTOR EARTH DISTURBED AREA	1.25 – AC
NOTICE OF INTENT EARTH DISTURBED AREA	5.83 – AC

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:

TranSystems

1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

ENGINEERS SEAL: FOR STRUCTURES

STATE OF OHIO
JONATHAN DAVID HREN
69952
REGISTERED PROFESSIONAL ENGINEER

SIGNED:
DATE: 9-11-2009

ENGINEERS SEAL: FOR ENTIRE PLAN EXCEPT STRUCTURES

STATE OF OHIO
MICHAEL D. WEEKS
#52001
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Michael D Weeks
DATE: 9-14-09

FRANKLIN COUNTY, OHIO
OFFICE OF THE COUNTY ENGINEER

FRA-CR11-10.49 (ALKIRE ROAD)

FRANKLIN TOWNSHIP
CITY OF COLUMBUS
FINAL SUBMITTAL

INDEX OF SHEETS:

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CROSS SECTIONS US-62	48-49
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* SHEET 9 NOT USED

REVISIONS

NO.	DESCRIPTION	APPROVAL	DATE

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	10-19-07	HW-2.1	4-21-06	TC-21-20	1-16-09	MT-95.31	9-5-06	CITY OF COLUMBUS		800	4-17-09
BP-4.1	7-16-04	HW-2.2	4-21-06	TC-41.20	1-19-01	MT-95.32	9-5-06			815	1-19-07
BP-5.1	7-28-00			TC-42.20	7-16-04	MT-94.10	9-5-06	AA-S102	5-16-97	832	4-25-06
BP-7.1	1-19-07	DM-1.1	4-21-06	TC-52.10	1-19-07	MT-97.11	9-5-06	AA-S125	12-15-93	906	10-17-08
		DM-1.2	10-21-05	TC-52.20	1-19-07	MT-101.60	9-5-06	AA-S133	12-15-93		
GR-1.1	7-16-04	DM-1.4	4-21-06	TC-71.10	1-16-09	MT-105.10	1-16-09	AA-S165	12-15-93		
GR-2.1	1-16-04	DM-4.3	7-18-02	TC-81.10	1-16-09						
GR-3.1	1-19-07	DM-4.4	7-18-02	TC-82.10	4-19-02	HL-20.11	1-19-07	2020	1-1-07		
GR-3.2	1-19-07			TC-83.10	1-19-07	HL-30.11	1-25-05	2201	1-1-07		
GR-4.2	1-19-07	WQ-1.2	10-17-08	TC-83.20	1-19-07	HL-30-.22	1-21-05	2202	1-1-07		
				TC-84.20	1-19-07	CITY OF COLUMBUS		2210	1-1-07		
RM-1.1	7-18-08			TC-84.21	1-19-07			2220	1-1-07		
RM-4.5	1-19-07			TC-85.10	4-19-02	L-6637	11-30-01	2300	1-1-07		
RM-4.6	1-16-04			TC-85.20	05-01-00	L-7401	04-01-01	2303	1-1-07		
						L-8502	11-01-01	2319	1-1-07		

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

ACOE NWP #14

FRANK. CO. NFIP PERMIT 08-21

PROJECT DESCRIPTION

THE PROJECT INVOLVES THE CONSTRUCTION OF A NEW INDIANA & OHIO RAILWAY COMPANY BRIDGE OVER ALKIRE ROAD JUST WEST OF U.S. 62. THE NEW BRIDGE WILL BE LENGTHENED TO ACCOMMODATE FOUR LANES IN THE FUTURE, ALTHOUGH THE CURRENT CONFIGURATION WILL BE ONE LANE IN EACH DIRECTION WITH A CENTER TURN LANE. A LEISURE PATH WILL ALSO BE LOCATED ON THE NORTH SIDE OF ALKIRE ROAD.

2008 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 EXCEPT FOR THE FOLLOWING:

DATE	AGENCY	DESCRIPTION

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL 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 AND ESTIMATES.

JKP

APPROVED Dan C. Ridge
DATE 9-28-09 FRANKLIN COUNTY ENGINEER

APPROVED
DATE 9/28/09 FRANKLIN COUNTY CHIEF DEPUTY ENGINEER

APPROVED Clarence Mingo II
DATE 9.29.09 FRANKLIN COUNTY AUDITOR

WE THE COMMISSIONERS OF FRANKLIN COUNTY, IN FORMAL SESSION, HEREBY APPROVE THESE PLANS.

DATE 9/29/09

FRANKLIN COUNTY COMMISSIONERS

CITY OF COLUMBUS SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

10-1-09
DESIGN AND PLAN SERVICES ENGINEER, TRANSPORTATION DIVISION — DATE

10-4-09
ADMINISTRATOR, DIVISION OF POWER AND WATER — DATE

MDT DAX J. BLAKE 10-6-09
ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE — DATE

10/6/09
DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES — DATE

Oct 1, 2009
HYDRANT SUPERVISOR, DIVISION OF FIRE — DATE

OCT. 1, 2009
ADMINISTRATOR, DIVISION OF TELECOMMUNICATIONS — DATE

1 OCT 2009
DIRECTOR, DEPARTMENT OF RECREATION AND PARKS — DATE

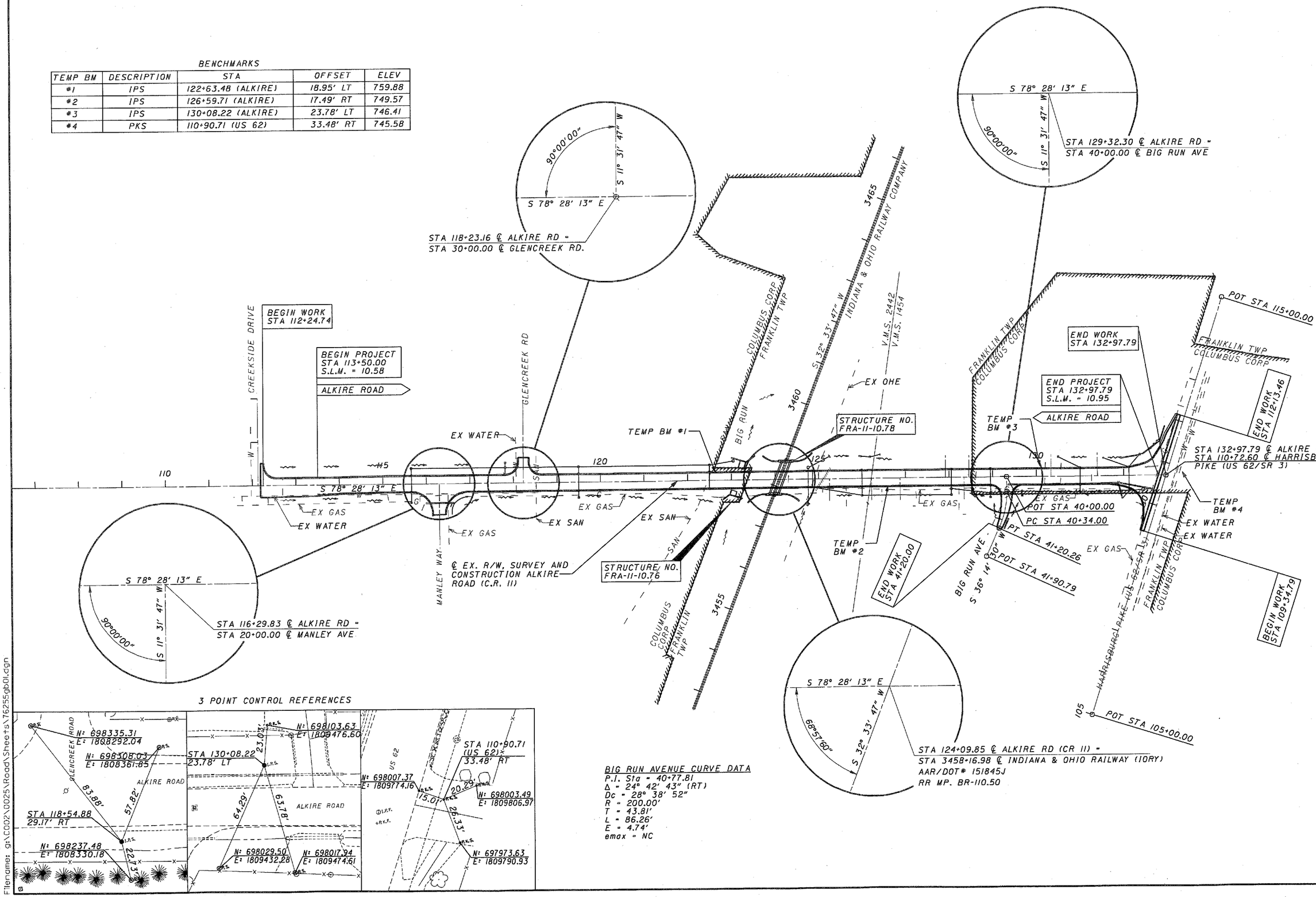
10-7-09
CITY ENGINEER, TRANSPORTATION DIVISION — DATE

10/13/09
DIRECTOR, DEPARTMENT OF PUBLIC SERVICE — DATE

FEDERAL PROJECT NO. E036(321)
FECO NO. 1135
PID NO. 76255
WORK I.D. 101566
RAILROAD INVOLVEMENT INDIANA & OHIO RAILWAY COMPANY
FRA-CR11-10.49 (ALKIRE ROAD)
PID 76255
FCEO 1135
COC 2354-E
1 / 118

BENCHMARKS

TEMP BM	DESCRIPTION	STA	OFFSET	ELEV
#1	IPS	122+63.48 (ALKIRE)	18.95' LT	759.88
#2	IPS	126+59.71 (ALKIRE)	17.49' RT	749.57
#3	IPS	130+08.22 (ALKIRE)	23.78' LT	746.41
#4	PKS	110+90.71 (US 62)	33.48' RT	745.58



3 POINT CONTROL REFERENCES

BIG RUN AVENUE CURVE DATA

P.I. Sta = 40+77.81
Δ = 24° 42' 43" (RT)
Dc = 28° 38' 52"
R = 200.00'
T = 43.81'
L = 86.26'
E = 4.74'
emax = NC

HORIZONTAL SCALE IN FEET
0 50 100 200

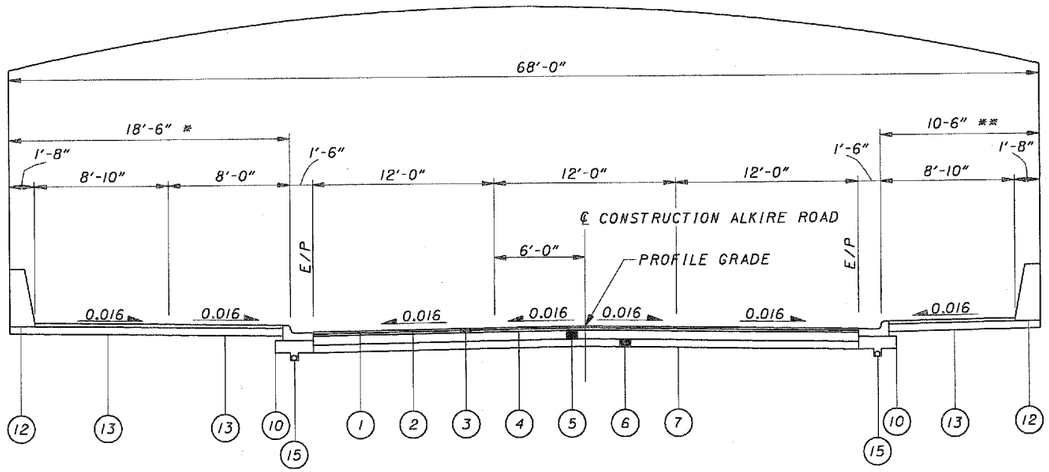
SCHEMATIC PLAN

FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

2 / 118

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NORMAL ROADWAY SECTION UNDER INDIANA & OHIO RAILWAY COMPANY OVERPASS (ALKIRE ROAD)

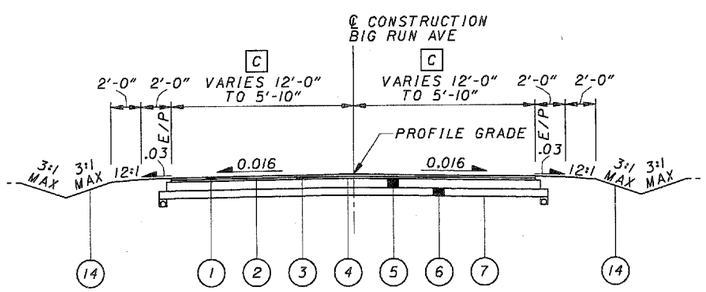
SECTION APPLIES:
STA 123+56.51 TO STA 124+42.42 = 85.91 LIN FT
TOTAL LENGTH = 85.91 LIN FT

* STA 123+84.66 TO
STA 124+42.42 (LT)

** STA 123+56.51 TO
STA 124+14.32 (RT)

LEGEND

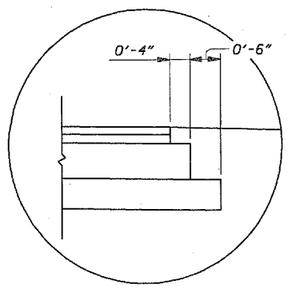
(1) ITEM 404 - 1.5" ASPHALT CONCRETE SURFACE COURSE, PG64-22 (2002 COC)
(2) ITEM 407 - TACK COAT @ 0.040 G/SQ YD
(3) ITEM 402 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, PG64-22 (2002 COC)
(4) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE @ 0.04 G/SQ YD
(5) ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22 (2002 COC)
(6) ITEM 304 - 6" AGGREGATE BASE
(7) ITEM 204 - SUBGRADE COMPACTION
(8) ITEM 408 - PRIME COAT @ 0.40 G/SQ YD
(9) ITEM 606 - GUARDRAIL, TYPE 5
(10) ITEM 609 - SPECIAL 8" CONCRETE COMBINED CURB & GUTTER (COC STD DWG 2020)
(11) ITEM 608 - 4" CONCRETE SIDEWALK (AS PER PLAN - COC STD DWG 2300)
(12) ITEM 622 - CONCRETE BARRIER TYPE D
(13) LEISURE PATH (AS PER PLAN - COC STD DWG 2302)
(14) ITEM 659 - SEEDING AND MULCHING
(15) 4" PIPE UNDERDRAIN
(16) ITEM 254 - ASPHALT PLANING (2.0")



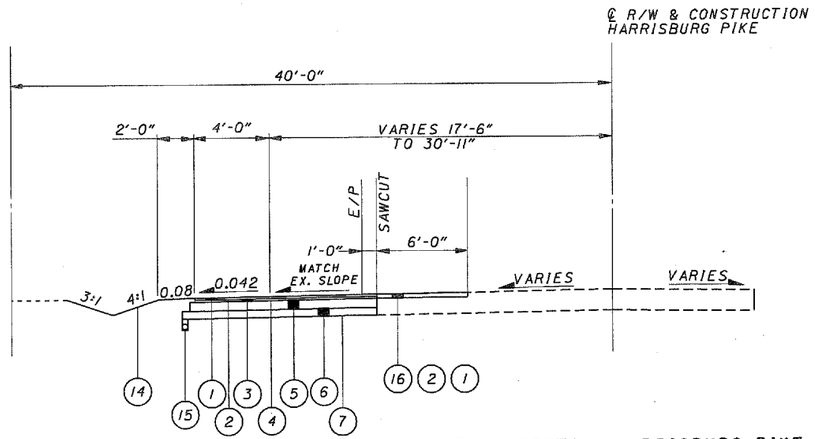
NORMAL ROADWAY SECTION (BIG RUN AVENUE)

SECTION APPLIES:
STA 40+41.60 TO STA 41+20.00 = 78.40 LIN FT
TOTAL LENGTH = 78.40 LIN FT

C STA 40+50.00 TO STA 41+20.00



BASE AND SUBBASE STEP DETAIL (BIG RUN AVENUE)



NORMAL SECTION-HARRISBURG PIKE

SECTION APPLIES:
STA 111+34.52 TO STA 112+13.46 = 78.94 LIN FT
TOTAL LENGTH = 78.94 LIN FT

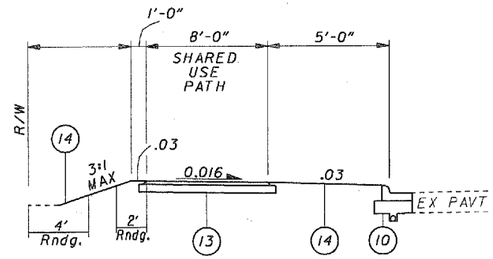
TYPICAL SECTIONS

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135

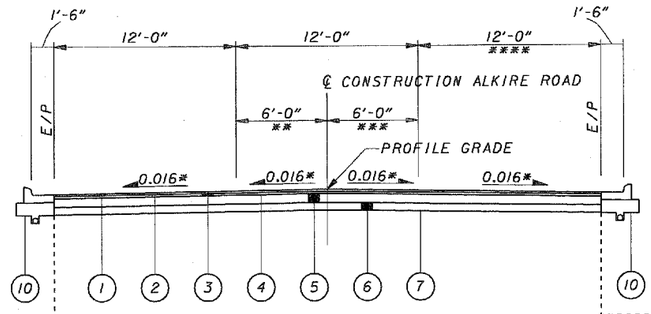
3
118

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CURB & GUTTER ONLY SECTION (ALKIRE ROAD)

SECTION APPLIES:
STA 112+56.50 TO STA 113+50.00 = 93.50 LIN FT
TOTAL LENGTH = 93.50 LIN FT

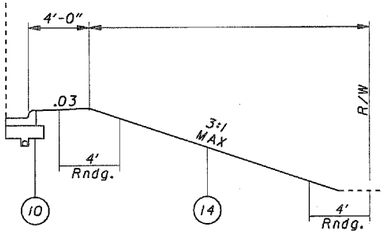


NORMAL ROADWAY SECTION (ALKIRE ROAD)

SECTION APPLIES:
STA 113+50.00 TO STA 123+56.51 = 1006.51 LIN FT
STA 124+42.42 TO STA 131+59.96 = 717.54 LIN FT
TOTAL LENGTH = 1724.05 LIN FT

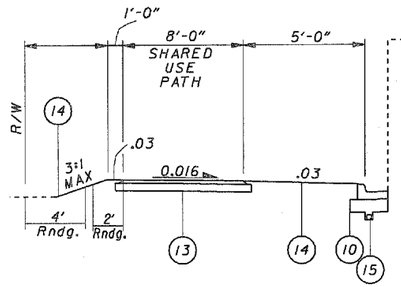
FOR TYPICAL SECTION UNDER RR BRIDGE SEE SHEET 3

* TRANSITION FROM EXISTING CROSS SLOPE TO PROPOSED CROSS SLOPE BETWEEN STATIONS 13+50.00 AND 14+00.00
** VARIES FROM 3.98' @ STA 113+50.00 TO 6.00' @ STA 115+00.00
*** VARIES FROM 8.90' @ STA 113+50.00 TO 6.00' @ STA 115+00.00
**** VARIES FROM 14.91' @ STA 113+50.00 TO 12.00' @ STA 114+00.00



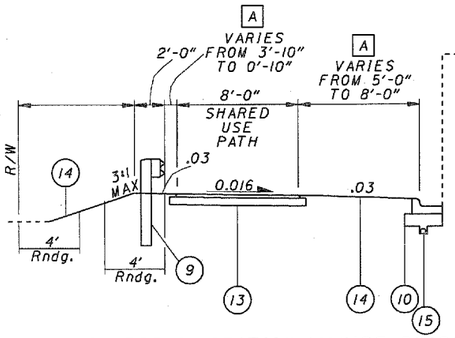
NO SIDEWALK SECTION (ALKIRE ROAD)

SECTION APPLIES:
STA 113+50.00 TO STA 114+50.00 = 100.00 LIN FT
STA 117+04.39 TO STA 121+02.36 = 397.97 LIN FT
TOTAL LENGTH = 497.97 LIN FT



LEISURE PATH SECTION (ALKIRE ROAD)

SECTION APPLIES:
STA 113+50.00 TO STA 117+71.56 = 421.56 LIN FT
STA 118+74.64 TO STA 122+99.16 = 424.52 LIN FT
STA 124+42.42 TO STA 132+00.43 = 758.01 LIN FT
TOTAL LENGTH = 1604.09 LIN FT



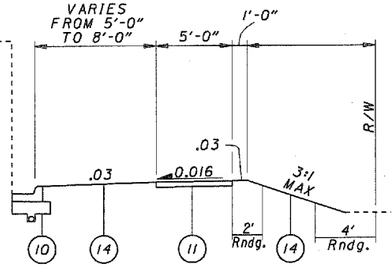
GUARDRAIL SECTION (ALKIRE ROAD)

SECTION APPLIES:
STA 122+99.16 TO STA 123+84.66 = 85.50 LIN FT
TOTAL LENGTH = 85.50 LIN FT

[A] STA 123+25.00 TO STA 123+75.00

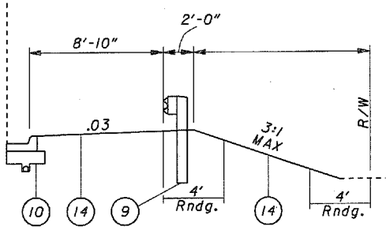
[B] 5'-0" FROM STA 114+50.00 TO STA 115+55.99
8'-0" FROM STA 124+48.91 TO STA 128+85.91
5'-0" FROM STA 129+79.13 TO STA 131+59.96

FOR PAVEMENT LEGEND SHEET SEE SHEET 3



SIDEWALK SECTION (ALKIRE ROAD)

SECTION APPLIES:
STA 114+50.00 TO STA 115+55.99 = 105.99 LIN FT
STA 124+48.91 TO STA 128+85.91 = 437.00 LIN FT
STA 129+79.13 TO STA 131+59.96 = 180.83 LIN FT
TOTAL LENGTH = 723.82 LIN FT



GUARDRAIL SECTION (ALKIRE ROAD)

SECTION APPLIES:
STA 121+02.36 TO STA 123+56.51 = 254.15 LIN FT
TOTAL LENGTH = 254.15 LIN FT

TYPICAL SECTIONS

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135

4
118

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ROUNDING

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

UTILITIES

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

ELECTRIC

AMERICAN ELECTRIC POWER
850 TECH CENTER DRIVE
GAHANNA, OH 43230
CONTACT: ROBERT IVINSKAS
614-883-0800

GAS

MARATHON ASHLAND OIL
245 SOUTH MILL STREET
LEXINGTON, OH 44904
CONTACT: DAVID WISNER
419-421-2211

COMMUNICATIONS

AT&T
150 EAST GAY STREET, ROOM 6C
COLUMBUS, OH 43215
CONTACT: ROY ADKINS
614-223-6088

MCI WORLDCOM
ATTN: INVESTIGATIONS
DEPARTMENT 42864 LOC 107
2400 N GLENVILLE
RICHARDSON, TX 75082
CONTACT: RONNIE ADCOX
614-656-6016

TIME WARNER COMMUNICATIONS
1266 DUBLIN ROAD
COLUMBUS, OH 43215
CONTACT: ARTHUR L. PLANTZ
614-481-5304

CITY OF COLUMBUS,
DIVISION OF POWER & WATER
(POWER)
3500 INDIANOLA AVE.
COLUMBUS, OH 43214
CONTACT: MIHAI ORBOCEA
614-645-6851

CITY OF COLUMBUS,
DIVISION OF SEWERAGE &
DRAINAGE
910 DUBLIN ROAD
COLUMBUS, OH 43215
614-645-3242 (FAX)
614-645-7102

RAILROAD ENGINEERING (IORY):
BILL RIEHL III, P.E.
DIRECTOR OF STRUCTURES
RAIL AMERICA, INC.
7411 FULLEERTON ST.
SUITE 300
JACKSONVILLE, FL. 32256
904-538-6062

RAILROAD SIGNALS
AND COMM. (IORY):
BIFF KONRAD
ASSISTANT GENERAL MANAGER
INDIANA & OHIO CENTRAL
RAILROAD
2856 CYPRESS WAY
CINCINNATI, OH 45212
513-860-1000 EXT. 133

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.

PRIOR TO EXCAVATION THE CONTRACTOR SHALL GIVE A 48-HOUR NOTICE TO THE OHIO UTILITIES PROTECTION SERVICE (OUPS) BY CALLING (800) 362-2764.

IN ADDITION BEFORE YOU EXCAVATE, PLEASE CONTACT THE FOLLOWING CITY OF COLUMBUS UTILITY DIVISIONS FOR EXCAVATION APPROVAL:

- DIVISION OF POWER & WATER (WATER):	FAX: 614-645-0220 PHONE: 614-645-7788
- DIVISION OF SEWERAGE & DRAINAGE	FAX: 614-645-3242 PHONE: 614-645-7102
- DIVISION OF POWER & WATER (POWER):	FAX: 614-645-7150 PHONE: 614-645-7627
- TRANSPORTATION DIVISION:	FAX: 614-645-5967 PHONE: 614-645-7393
- COMMUNICATIONS:	FAX: 614-645-6588 PHONE: 614-645-7344 EXT. 125
- TELECOMMUNICATIONS:	FAX: 614-645-6627 PHONE: 614-645-645-1501

RAILROAD PROPERTY RIGHT OF ENTRY

THE RAILROAD RIGHT-OF-WAY SHOWN IN THESE PLANS IS THE PROPERTY OF CSX TRANSPORTATION, AND IS LEASED TO THE INDIANA AND OHIO RAILWAY COMPANY (IORY). ANY ENTRY OR CONSTRUCTION ACTIVITIES BY THE CONTRACTOR ON THE RAILROAD RIGHT-OF-WAY MUST BE AUTHORIZED BY THE IORY (THE LEASEHOLDER) IN WRITING. WRITTEN AUTHORIZATION IS OBTAINED THROUGH A CONTRACTOR OCCUPENCY AND ACCESS AGREEMENT. THE APPLICATION FOR THE AGREEMENT MAY BE OBTAINED VIA THE INTERNET AT
: http://www.railamerica.com/files/ROE/.pdf

ITEM 619 - FIELD OFFICE, TYPE , AS PER PLAN (SEE PROPOSAL NOTE)

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9 PM AND 7 AM. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM NAVD 1988.
REFERENCE BENCHMARKS:
FRANKLIN COUNTY MONUMENT - MI15, NAVD 88, ELEV 746.66

THE DIVISION OF POWER AND WATER (POWER)

THE DIVISION OF POWER AND WATER, CITY OF COLUMBUS, OHIO, HAS AN UNDERGROUND STREET LIGHT CONTROL BOX AND UNDERGROUND STREET LIGHTING IN THE PROJECT AREA. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT THE DIVISION OF WATER AND POWER BY FAX (614) 645-7150 FORTY EIGHT HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA. THE D.O.P.W. DISPATCH OFFICE NUMBER IS :(614) 645-7627.

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR ANY OTHER RELATED ACTIVITY CONCERNED WITH THE CITY'S STREET LIGHTING SYSTEM IN THE CONSTRUCTION AREA IS TO BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECTION OF THE D.O.P.W. (P) PERSONNEL AND AT THE EXPENSE OF THE PROJECT. D.O.P.W. (P) SHALL MAKE ALL FINAL CONNECTIONSTO THE D.O.P.W. (P) EXISTING ELECTRICAL SYSTEM AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM BY FOLLOWING D.O.P.W. "MATERIALS AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS" (CMS). ANY NEW OR REINSTALLED UNDERGROUND STREETLIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1000.18 OF THE CMS MANUAL. THE CONTRACTOR SHALL CONFORM TO D.O.P.W. (P)'S EXISTING CONDUCTOR SAFETY POLICY AND HOLD CARD SYSTEM, MIS-95 COPIES OF WHICH ARE AVAILABLE FROM DOPW(P)'S. IF YOU ANY QUESTIONS, CALL MIHAI ORBOCEA AT (614)645-6851 OR CHRIS VOGEL AT (614)645-5963.

IF ANY ELECTRIC FACILITIES BELONGING TO THE D.O.P.W IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, ITS AGENTS, SERVANTS, OR EMPLOYEES, AND REQUIRES EMERGENCY REPAIRS THE D.O.P.W. SHALL MAKE ALL NECESSARY REPAIRS, AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO THE D.O.P.W., CITY OF COLUMBUS, OHIO.

BENCHMARKS AND MONUMENTATION

FRANKLIN COUNTY ENGINEER'S MONUMENTATION - THE CONTRACTOR SHALL CONTACT THE FRANKLIN COUNTY ENGINEER'S OFFICE, SURVEY DEPARTMENT AT (614-462-2489) TWO WORKING DAYS BEFORE DISTURBING ANY FRANKLIN COUNTY GEODETIC MONUMENTS (VERTICAL AND/OR HORIZONTAL) FOR REFERENCE AND REPLACEMENT.

COUNTY MONUMENT BOX-OUT (FOR CONCRETE BASE PROJECTS) -

OFFICE, SURVEY DEPARTMENT AT (614-462-2489) 5 WORKING DAYS PRIOR TO PAVING CONCRETE BASE TO COORDINATE BOX-OUTS FOR RESETTING COUNTY MONUMENTS.
THE CONTRACTOR SHALL CONTACT THE FRANKLIN COUNTY ENGINEER'S

WORK LIMITS

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

EXPOSE NOTE

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT, STORM SEWER, WATERLINE, OR OTHER CONSTRUCTION TO 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, STORM SEWER, WATERLINE, OR OTHER CONSTRUCTION. IF IT IS DETERMINED THAT THE EXISTING CONDUIT OR EXISTING APPURTENANCE TO BE CONNECTED DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLANNED WORK, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED WORK WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS. PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT ITEMS.

CLEARING AND GRUBBING

REMOVE ALL TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18" [0.5 m]	7	0	7
30" [0.8 m]	1	0	1

ANY WORK TO TREES IN ROW THAT NEED INSPECTION FOR SAFETY, CONTACT: CITY FORESTER @ 614-645-6648

TREE PROTECTION DURING CONSTRUCTION:

PUBLIC TREES WILL BE PROTECTED AGAINST INJURY OR DAMAGE TO BRANCHES,TRUNKS, OR ROOTS FROM CONSTRUCTION AND EXCAVATION.

1. HEAVY EQUIPMENT WILL NOT BE ALLOWED TO COMPACT THE SOIL OVER THE ROOT ZONE OF EXISTING TREES. RESTRICTED EQUIPMENT ACCESS ROUTES WILL BE ESTABLISHED BEFORE WORK IS BEGUN.

TEMPORARY PAVING MATERIALS SUCH AS PLYWOOD, LUMBER OR OR RUBBER MATTING SPREAD OVER THE ROOT ZONE MAY BE REQUIRED TO PREVENT COMPACTION.

2. INSTALLATION OF UTILITIES UNDER THE DRIPLINE OF EXISTING TREES MUST BE DIRECTIONALLY BORED OR DRILLED BELOW THE ROOT ZONE. TOP OF THE BORE OR TUNNEL SHOULD BE NO HIGHER THAN 3 FEET DEEP. OPEN TRENCHES WITHIN THE ROOT ZONE MUST BE AVOIDED.

3. WHERE GRADE CHANGE IS REQUIRED WITHIN THE ROOT ZONE OF PUBLIC TREES, A SUFFICIENT RESIDUAL ROOT ZONE TO PROVIDE FOR THE GOOD HEALTH OF THE TREES SHOULD REMAIN UNDISTURBED AND PROTECTED BY EITHER A DRY WELL OR RETAINING WALL IF THE GRADE IS TO BE RAISED OR LOWERED.

4. CONSTRUCTION MATERIALS, EXCAVATION DEBRIS, CHEMICALS, FUEL, EQUIPMENT OR VEHICLES ARE NOT TO BE STOCKPILED, STORED, DUMPED OR PARKED WITHIN THE DRIPLINE OF PUBLIC TREES.

5. FIRES ARE NOT PERMITTED WITHIN THE DRIPLINE OF ANY TREES.

6. ALL EXISTING TREES DESIGNATED FOR PRESERVATION WILL BE PROTECTED WITH A GOOD, SUBSTANTIAL FENCE, FRAME OR BOX NOT LESS THAN FOUR FEET HIGH AND AS FAR FROM THE TREE AS POSSIBLE. DRIPLINE IS PREFERABLE, HOWEVER, ACTUAL LOCATION WILL BE DETERMINED BY SITE LIMITATIONS.

7. FENCING WILL BE INSTALLED BEFORE COMMENCING SITE PREPARATION WORK. FENCE MUST BE MAINTAINED DURING THE FULL CONSTRUCTION PERIOD.

8. INTERFERING BRANCHES OF TREES MAY BE REMOVED WHEN ACCEPTABLE TO THE CITY FORESTER AND SHALL BE PRUNED IN ACCORDANCE WITH THESE STANDARDS.

9. ANY TREES DAMAGED OR DESTROYED DUE TO CONTRACTOR NEGLIGENCE WILL BE TREATED OR REMOVED AT THE CONTRACTOR'S EXPENSE. IF DAMAGED BEYOND REPAIR, THE CITY WILL REQUIRE REIMBURSEMENT FOR THE VALUE OF THE TREE AS DETERMINED BY THE CURRENT EDITION OF THE "GUIDE FOR PLANT APPRAISAL" PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.

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.

CROSSINGS 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.

LOCATION OF SERVICE LATERAL

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICE LATERALS. ANY DAMAGE TO MAIN SEWER LINES OR SERVICE LATERALS IS THE RESPONSIBILITY OF THE CONTRACTOR.

ALL REPAIRS MUST BE PREFORMED BY A LICENSED SEWER CONTRACTOR, UNDER A SEPERATE SEWER PERMIT.

HORIZONTAL AND VERTICAL SEWER CLEARANCE'S

MAINTAIN A MINIMUM CLEARANCE OF 3' HORIZONTAL AND 1' VERTICAL FROM ALL SEWER LINES AND 10' HORZ., 5' VERT. FROM ALL BRICK SEWERS.

CLEARANCE IS MEASURED FROM EDGE TO NEAREST EDGE (NOT CENTER TO CENTER).

UNTREATED SEPTIC CONNECTIONS (ATTACHED)

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY UNTREATED SEPTIC DRAINAGE INTO THE HIGHWAY DRAINAGE SYSTEM. ANY PIPE POSSIBLY CARRYING UNTREATED SEPTIC FLOW SHALL BE LEFT EXPOSED. CALL FRANKLIN COUNTY HEALTH DPT AT 462-3909 FOR DIRECTION ON WHETHER OR NOT TO TIE THE PIPE INTO THE HIGHWAY DRAINAGE SYSTEM OR PLUG THE PIPE AT R/W LINE W/ CLASS C CONCRETE. PAYMENT FOR PLUGGING SHALL BE INCLUDED IN CONTRACT PRICE FOR THE PERTINENT 202 OR 203 ITEM

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYP, SIZE AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

THE FOLLOWING CONDUIT TYPES ARE TO BE USED: 707.33, 707.41, NON-PERFORATED OR 707.42.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE "AS DIRECTED BY THE ENGINEER" FOR THE WORK NOTED ABOVE: ITEM 603 6" CONDUIT, FOR DRAINAGE CONNECTION 200 LIN FT

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE COUNTY, REPRESENTATIVES OF THE COUNTY AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE COUNTY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE COUNTY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

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

RAILROAD FLAGGING AND PROTECTIVE SERVICES

RAILROAD FLAGGER AND PROTECTIVE SERVICES AND DEVICES WILL BE REQUIRED AND FURNISHED WHEN CONTRACTOR'S WORK ACTIVITIES ARE LOCATED OVER, UNDER, OR WITHIN THE RAILROAD RIGHT-OF-WAY. THE CONTRACTOR SHALL PROVIDE THE RAILROAD A MINIMUM OF 72 HOURS NOTICE IN ADVANCE OF ANY WORK PERFORMED WITHIN OR ADJACENT TO THE RAILROAD RIGHT-OF-WAY. TO SCHEDULE A RAILROAD FLAGGER THE FOLLOWING RAILROAD PERSONNEL SHOULD BE NOTIFIED:

RYAN RATLEDGE - GENERAL MANAGER
INDIANA AND OHIO RAILWAY COMPANY (IORY)
2856 CYPRESS WAY
CINCINNATI, OHIO 45212
OFFICE: 513-458-4369
MOBILE: 513-505-3157
EMAIL: Ryan.Ratledge@RailAmerica.com
OR
BIFF CONRAD - ASST. GENERAL MANAGER
INDIANA AND OHIO RAILWAY COMPANY (IORY)
2856 CYPRESS WAY
CINCINNATI, OHIO 45212
OFFICE: 513-860-1000
MOBILE: 513-505-3155
EMAIL: Biff.Konrad@RailAmerica.com

CALCULATED JFA CHECKED

GENERAL NOTES

FRA-CR11-10.49

WATER MAIN AND FIRE HYDRANT NOTES

THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2002 EDITION, INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THATARE A PART OF THIS PLAN, UNLESS OTHERWISE NOTED

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF POWER AND WATER (WATER).

ALL WATER MAINS SHALL BE CLEANED AND FLUSHED, ALSO ANY WATER MAIN 12-INCH AND LARGER MUST BE PROPERLY PIGGED, IN ACCORDANCE WITH SECTION 801.11 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIALS SPECIFICATIONS

CONTRACTOR SHALL WRAP ALL DUCTILE IRON PIPE WITH TUBE STYLE 8 MIL LINEAR LOW DENSITY POLYETHYLENE (LLDPE) FILM MADE FROM VIRGIN POLYETHYLENE ONLY (NO RECYCLE MATERIAL (PER A.W.W.A. C-105. THE COLOR SHALL BE BLACK WITH NOMINAL 2% CAARBON BLACKUV INHIBITOR AND PRINTED PER THE A.W.W.A C-105 STANDARD. INSTALLATION SHALL BE DONE IN ACCORDANCE WITH THE "POLYETHYLENE ENCASEMENT INSTALLATION GUIDE" WRITTEN BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA)

ALL LUMPS OF CLAY, MUD, CINDERS, ECT ON THE PIPE SURFACE SHALL BE REMOVED BEFORE THE PIPE IS COVERED WITH POLYETHYLENE. WHEN LIFTING POLYETHYLENE-ENCASED PIPE USE A FABRIC TYPE SLING OR PADDED CABLE. JOINTS SHALL BE OVERLAPPED AND TAPED. FOLD EXCESS SLACK OVER THE TOP OF THE PIPE AND TAPE EVERY THREE (3) FEET. SMALL HOLES OR TEARS SHALL BE REPAIRED WITH A PIECE OF TAPE PLACED OVER THE HOLE. LARGE HOLES OR TEARS SHOULD BE REPAIRED BY TAPPING ANOTHER PIECE OF POLYETHYLENE OVER THE HOLE. TO AVOID DAMAGE DURING BACKFILLING ALLOW ADEQUATE SLACK IN THE FILM TUBE AT JOINTS. BACKFILL MATERIAL SHALL BE FREE OF CINDERS, ROCKS BOULDERS, NAILS, STICKS OR OTHER MATERIAL THAT WILL DAMAGE THE POLYETHYLENE SLEEVE.

APPURTENANCES SUCH AS BOLTED JOINTS, VALVES, SERVICE TAPS SHALL ALSO BE WRAPPED. FOR SERVICE TAPS, WRAP TWO/THREE LAYERS OF TAPE COMPLETELY AROUND THE POLYETHYLENE-ENCASED PIPE TO COVER THE AREA WHERE TAPPING MACHINE WILL CONTACT THE PIPE. INSTALL CORPORATION STOP DIRECTLY THROUGH THE TAPE AND POLYETHYLENE. WRAP COPPER SERVICE AT LEAST THREE FEET BACK FROM INSTALLATION WITH TAPE AND ADDITIONAL POLYETHYLENE FILM TO PREVENT ELECTROLYSIS.

ALL WORK NECESSARY TO FURNACE AND INSTALL THE POLYETHYLENE ENCASEMENT SHALL BE INCLUDED IN ITEM 801.

FIRE HYDRANT RELOCATIONS SHALL CONFORM TO APPLICABLE SECTIONS OF ITEM 809 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. WORK SHALL CONSIST OF REMOVING THE EXISTING HYDRANT, INSTALLING NEW 6" PIPE AND FITTING AS REQUIRED TO LOCATE THE FIRE HYDRANT 2 FEET FROM BACK OF PROPOSED CURB OR 8 FEET OFF EDGE OF PAVEMENT, RESETTING HYDRANT AND BLOCKING AS REQUIRED. ALL 6" PIPE SHALL BE INSTALLED AT 4'-0" MINIMUM COVER. HYDRANT EXTENSIONS SHALL BE PROVIDED PER ITEM 810, AS REQUIRED. RELOCATED FIRE HYDRANTS SHALL BE ADJUSTED TO PROPER GRADE AND FACED IN THE PROPER DIRECTION. WHEN A HYDRANT IS RELOCATED TEN (10) FEET OR MORE FROM THE "TYPICAL HYDRANT SETTING" VALVE LOCATION (SEE L-6409 & L-6637), AN ADDITIONAL VALVE SHALL BE INSTALLED, AND RESTRAINED, WITHIN TWO (2) FEET OF THE RELOCATED HYDRANT PAYMENT IS TO BE INCLUDED UNDER ITEM 809, FIRE HYDRANT RELOCATED.

THE CONTRACTOR SHALL NOTIFY THE DIVISION OF FIRE ALARM OFFICE, 221-3132, WHENEVER FIRE HYDRANTS ARE TAKEN OUT OF SERVICE AND PLACED BACK IN SERVICE.

RELOCATED FIRE HYDRANTS SHALL BE PUT BACK IN SERVICE AS SOON AS POSSIBLE.

MAINTAINING AND REPLACEMENT OF MAILBOXES

IN ADDITION TO THE REQUIREMENTS OF SECTION 107.10 OF THE SPECIFICATIONS,THE CONTRACTOR SHALL REPLACE THE EXISTING MAILBOXES WITH MATERIAL SUPPLIED BY THE FRANKLIN COUNTY ENGINEER. THEY SHALL BE REPLACED WITH A PLASTIC BOX MOUNTED ON A 2-IN O.D. X 4-FT LONG THIN WALL GALVANIZED STEEL POST. THE BASE POST SUPPORT SYSTEM IS A FLUSH TO THE GROUND SOCKET AS MANUFACTURED BY FORESIGHT INDUSTRIES, INC. THE CONTRACTOR SHALL ERECT THE MAILBOXES IN ACCORDANCE WITH POSTAL REGULATIONS. THE CONTRACTOR SHALL OBTAIN THE NECESSARY MATERIALS AT 970 DUBLIN RD, AT WHICH TIME DETAILS AND INSTALLATION REQUIREMENTS SHALL BE FURNISHED. PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202. MAILBOX REMOVED AND REPLACED, AS PER PLAN.

8" CURB RAMP, (COL. 2319 DR. A)

24" DETECTABLE WARNING (COL. SS 1551)

CURB RAMPS SHALL BE BUILT AS PER CITY OF COLUMBUS STANDARD DRAWING 2319 DR A.

CURB RAMPS SHALL HAVE DETECTABLE WARNINGS INSTALLED AS PER CITY OF COLUMBUS SS-1551.

ITEM 204 PROOF ROLLING

AN ESTIMATED QUANTITIY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 204 PROOF ROLLING 5 HOURS

ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN

ITEM 452 NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN SHALL BE CLASS MS CONCRETE AS PER ODOT CONSTRUCTION SPECIFICATION 499.05.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0" ℄ 15.24M℄, INCLUSIVE OF TWO 25'-0" ℄ 7.62 m℄ LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DATE	DATE
SSS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS AND HBA POSTS 1-4 PLAN, ELEVATION AND SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224, (TELEPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" ℄ 15.24 m℄, INCLUSIVE OF FOUR 12'-6" ℄ 3.81 m℄ LONG RAIL ELEMENTS.
INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DATE	DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18' X 18' 450 mm X 450 mm.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4-INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27-3/4 INCHES FROM THE EDGE OF THE SHOULDER ON-SITE GRADING IS REQUIRED IF THE TOP OF .THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT IS MORE THAN 4-INCHES ABOVE THE GROUND LINE

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSISTIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

TEMPORARY TRAFFIC CONTROL ITEMS

1. ALL TEMPORARY TRAFFIC CONTROL TO DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS (CURRENT EDITION). COPIES ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223.

NOTE: ALL DEVICES SHALL COMPLY, FOR CONDITION AND LOCATION, WITH THE CURRENT EDITION OF THE NCHRP 350 CRASH TESTING GUIDELINES.

2. CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY THE TRANSPORTATION DIVISION INSPECTOR. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND THE REMOVAL OF CONFLICTING TRAFFIC CONTROLS, THEIR PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE TERMINATED.

3. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE INSTALLED A MINIMUM OF 10 DAYS PRIOR TO CLOSURE OF A ROADWAY. THE MESSAGE SHALL ADVISE THE MOTORIST OF THE DATES, TIMES, AND DURATION OF THE CLOSURE. THE PCMS SHALL REMAIN IN PLACE FOR 7 DAYS AFTER THE START OF THE CLOSURE.

4. THE CONTRACTOR SHALL GIVE ADVANCE NOTIFICATION (WRITTEN AND VERBALLY) TO THE TEMPORARY TRAFFIC CONTROL COORDINATOR AT 645-6269 OR 645-5845, THE COLUMBUS PAVING THE WAY PROGRAM COORDINATOR AT 645-7283 OR 645-6016, AND THE PROJECT MANAGER, INFORMING THEM OF ALL UPCOMING TRAFFIC PATTERN CHANGES. NOTIFICATION SHALL INCLUDE, BUT NOT BE LIMITED TO, WHAT, WHERE, WHEN, AND HOW PEDESTRIAN AND VEHICULAR TRAFFIC WILL BE AFFECTED, AND THE TEMPORARY TRAFFIC CONTROL PROCEDURES THE CONTRACTOR IS PLANNING TO USE. THE TYPE OF TRAFFIC CHANGE SHALL DETERMINE THE LENGTH OF ADVANCE NOTIFICATION REQUIRED:

TYPE OF CHANGE	ADVANCE NOTIFICATION NEEDED
DETOURS/ROAD CLOSURES	30-DAY NOTIFICATION PRIOR TO CLOSURE
LANE CLOSURES LASTING 2 WEEKS OR MORE	2-WEEKS
LANE CLOSURES OF LESS THAN 2 WEEKS	3-DAYS
LANE CLOSURES OF 2 DAYS OR LESS	1-DAY

ANY OTHER UNFORESEEN IMPACTS TO TRAFFIC SHALL BE IMMEDIATELY REPORTED AS THEY OCCUR.

5. A TTC PLAN (TTCP) INCLUDING PEDESTRIAN CONTROL SHALL BE SUBMITTED TO THE TTC COORDINATOR AT 645-6269 OR 645-5845 AT THE PRE-CONSTRUCTION MEETING OR A MINIMUM OFTEN (10) WORKING DAYS PRIOR TO BEGINNING WORK. COPIES OF THE APPROVED TTCP SHALL BE GIVEN TO THE PROJECT ENGINEER AND KEPT ON SITE ALONG WITH THE STREET CLOSURE/OCCUPANCY PERMIT.

6. STEADY-BURNING TYPE C LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT. ONLY 42" REFLECTORIZED CHANNELIZING DEVICES (CONES) SHALL BE PERMITTED FOR NIGHTTIME WORK WITH THE APPROVAL OF THE TTC COORDINATOR AT 645-6269 OR 645-5845 PER O.D.O.T. STANDARDS.

7. A FLASHING ARROW PANEL (48"X 96"-TYPE C) SHALL BE USED IN LANE CLOSURES AS PER THE OHIO MANUAL.

8. ALL TRENCHES WITHIN THE ROAD RIGHT-OF-WAY SHALL BE BACKFILLED OR SECURELY PLATED PER (CITY OF COLUMBUS GENERAL POLICY ON STEEL PLATE USAGE DATED 11/15/2006 AND 2007 STD. DWG. 1441) DURING NON-WORKING HOURS.

9. ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

10. ALL TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC FROM 6:00 TO 9:00 A.M. AND 4:00 TO 6:00 P.M., 6:00 TO 9:00 A.M. AND 3:00 TO 6:00 P.M. COLUMBUS PARKING/BUSINESS DISTRICT AREA, MONDAY THROUGH FRIDAY ON ALKRIE RD, HARRISBURG PIKE, ONE LANE MAY BE CLOSED TO TRAFFIC DURING WORKING HOURS.

11. TWO-WAY, ONE-LANE TRAFFIC MAY BE MAINTAINED DURING CONSTRUCTION OPERATIONS ON ALKIRE RD. PER FIGURE TA-10 TYPICAL APPLICATION 10 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. A UNIFORINED LAW ENFORCEMENT OFFICER-(LEO) SHALL BE-SUBSTITUTED FOR EACH FLAGGER POSITION SHOWN AND SHALL BE PRESENT WHENEVER TWO-WAY, ONE-LANE OPERATION IS IN EFFECT.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND, OR DETOURED AWAY FROM THECONSTRUCTION SITE. TRAFFIC CONTROL FOR PEDESTRIAN MOVEMENT SHALL BE AS PER FIGURES TA-28 AND TA-29 OF PART VI OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

13. TEMPORARY "EMERGENCY NO PARKING" SIGNS SHALL BE INSTALLED AND REMOVED BY THE CONTRACTOR IN AREAS WITH PARKING METERS.

THE SIGNS SHALL HAVE THE INSTALLATION DATE, WORKING DATES, AND HOURS OF RESTRICTION SHOWN ON EACH SIGN.

THESE SIGNS MAY BE OBTAINED FROM THE TRANSPORTATION DIVISIONS' PERMIT OFFICE.

THE POLICE DIVISION REQUIRES THE "EMERGENCY NO PARKING" SIGNS BE POSTED A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY VEHICLES BEING TOWED. WITHIN TWENTY-FOUR (24) HOURS OF POSTING, THE CONTRACTOR SHALL SUPPLY THE INSPECTION SECTION WITH A WRITTEN RECORD OF POSTED LOCATIONS (FAX: 645-3298).

14. THE TRANSPORTATION DIVISION SHALL LOCATE AND MARK ALL UNDERGROUND TRAFFIC CONTROL CABLES. THE TRAFFIC ENGINEERING SHOP SHALL BE NOTIFIED 645-7393 (FAX 645-5967) AT LEAST FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE BEGINNING OF ANY WORK WITHIN 450 FEET OF ANY SIGNALIZED INTERSECTION(S) OR WITHIN ANY POSTED AREA WHERE THE DIVISION HAS UNDERGROUND CABLE. SIGNALS MANAGEMENT PERSONNEL 645-6418 SHALL BE NOTIFIED SIX (6) WEEKS IN ADVANCE FOR SIGNAL REVISIONS OR POLE RELOCATIONS

15. NO EXCAVATION SHALL BE MADE WITHIN FIVE (5) FEET OF ANY POLE THAT SUPPORTSTRAFFIC SIGNAL DISPLAYS OR SIGNS BY MAST ARM OR SIGNAL SPAN. EXCAVATION WITHIN EIGHT (8) FEET, BUT MORE THAN FIVE (5) FEET SHALL REQUIRE ADDITIONAL SUPPORT (DOWN GUY, HEAD GUY, BASE GUY, ETC.). THE CONTRACTOR SHALL CONTACT TRANSPORTATION DIVISION SIGNALS MANAGEMENT PERSONNEL AT 645-0423(CELL 419-450I) AT LEAST FORTY-EIGHT(48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE BEGINNING OF SUCH EXCAVATION SO THAT THE CITY CAN APPROVE THE STABILIZATION SETUP BY THE CONTRACTOR. STABILIZATION WILL BE DONE BY THE CONTRACTOR AT THE OWNER/CONTRACTING AGENCYS EXPENSE.

16. WHEN ANY TRAFFIC CONTROL DEVICE, CONDUIT, OR CABLE IS DAMAGED, THE CONTRACTORSHALL NOTIFY THE TRAFFIC ENGINEERING MAINTENANCE SHOP AT 645-7393 BETWEEN 8:00 AM AND.4:30 PM, MONDAY THROUGH FRIDAY. AT OTHER TIMES, LEAVE A MESSAGE ON THE ANSWERING MACHINE.

17. THE ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS APPROVED BY THE ENGINEER, ARE INSTALLED. THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE STOP, YIELD, ONE WAY, DO NOT ENTER AND RESTRICTED TURN SIGNS. OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

18. THE ROADWAY OR ANY SECTION OF ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL ALL TEMPORARY, NON-REFLECTIVE, BLACKOUT TAPE HAS BEEN COMPLETELY REMOVED FROM NON-COUFFICTING PERMANENT PAVEMENT MARKINGS FOR THAT AREA OF THE ROADWAY, OR UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THIS IS SUPPLEMENTAL TO CMS-614.11-F, AND SHALL BE PAID FOR THROUGH THE 614-LUMP SUM.

19. THE CONTRACTOR SHALL MAINTAIN ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS THROUGHOUT THIS PROJECT.

PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED OR COVERED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, OR IMPROPERLY PLACED SIGNS.

20. ANY WORK DONE BY THE TRANSPORTATION DIVISION, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTORS EXPENSE.

21. WHENEVER YELLOW CENTERLINES OR TURN-LANE LINES ARE PAVED OVER, REMOVED, OR OTHERWISE UNSERVICEABLE, THE CONTRACTOR SHALL INSTALL CLASS II TEMPORARY STRIPING (MINIMUM 4 LONG SEGMENTS). TEMPORARY PAINT SHALL BE USED ON ALL MILLED SURFACES.

TEMPORARY TAPE SHALL BE USED ON ALL FINAL COURSES OF ASPHALT.

PAINT OR TAPE MAY BE USED ON INTERMEDIATE COURSES OF ASPHALT.

IF APPROVED BY THE ENGINEER, DRUMS WITH STEADY BURNING TYPE C LIGHTS AND "KEEP RIGHT" SIGNS MAY BE SUBSTITUTED FOR CENTERLINE MARKINGS.

22. CLASS II TEMPORARY STRIPING (MINIMUM 4 LONG SEGMENTS) SHALL BE AS PER ITEM 614 - WORK ZONE PAVEMENT MARKING AND SHALL BE PLACED WITHIN ONE (1) FOOT LONGITUDINAL TOLERANCE OF THE PERMANENT STRIPE(S). ALL TEMPORARY STRIPING NOT TO WITHIN ONE (1) FOOT TOLERANCE SHALL BE REMOVED AND REPLACED IN THE PROPER LOCATION BY THE CONTRACTOR. CLASS II TEMPORARY STRIPING SHALL BE OF THE APPROPRIATE COLOR AND SPACED A MAXIMUM OF FORTY (40) FEET CENTER TO CENTER.

EXISTING PERMANENT TRAFFIC CONTROL ITEMS

1. ALL OVERHEAD CABLE, DOWN GUYS OR BACK GUYS SHALL NOT BLOCK ANY PORTION OF A TRAFFIC SIGNAL, TRAFFIC CONTROL SIGN, OR OTHER TRAFFIC CONTROL DEVICE SUCH THAT VISIBILITY OR OPERATION.OF THE TRAFFIC CONTROL DEVICES IMPAIRED.

2. THE ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS APPROVED BY THE ENGINEER, ARE INSTALLED. THE CRITICAL PERMANENT TRAFFIC CONTROLS ARE STOP, YIELD, ONE WAY, DO NOT ENTER AND RESTRICTED TURN SIGNS. OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

3. ALL PERMANENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS AS SHOWN ON THIS PLAN SHALL BE INSTALLED BY THE CONTRACTOR AT THE PROJECTS EXPENSE. THE TRANSPORTATION DIVISION, PAVEMENT MARKING SECTION SHALL BE NOTIFIED AT 645-8376 A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE INSTALLATION OF PERMANENT MARKINGS TO INSPECT AND APPROVE THE PAVEMENT MARKING LAYOUT PRIOR TO PLACING THE PERMANENT MARKINGS.

CALCULATED JFA CHECKED

GENERAL NOTES

FRA-CR11-10.49

EXISTING PERMANENT TRAFFIC CONTROL ITEMS (CONT.)

4. ANY WORK DONE BY THE TRANSPORTATION DIVISION, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTORS' EXPENSE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING CONSTRUCTION. PERMANENT TRAFFIC CONTROL NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY.

6. PERMANENT STRIPING OR CLASS I TEMPORARY STRIPING SHALL BE INSTALLED NO LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER THE FINAL PAVING COURSE IS COMPLETED. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE STRIPING CONTRACTOR TO INSURE THE PERMANENT STRIPING IS INSTALLED WITHIN THE FOURTEEN (14) CALENDAR DAY LIMIT.

7. AT ANY LOCATION WHERE THE CONTRACTOR DAMAGES DETECTORS AND/OR THEIR LEAD-IN CABLES THE CONTRACTOR SHALL REPLACE THEM.

AT ANY LOCATION WHERE DETECTION IS CHANGED FROM RUNG PROBE UNITS TO LOOPS, THE CONTRACTOR SHALL REPLACE THE PROBE LEAD-IN WITH LOOP LEAD-IN CABLE.

ALL REPATRS TO DETECTION SHALL BE COMPLETED WITHIN 21 DAYS FROM DAMAGE TO DETECTION ON A PER INTERSECTION BASIS. ANY CONTRACTOR FAILING TO COMPLY WITH THESE GUIDELINES SHALL BE SUBJECT TO PENALTY TO TILE SUM OF $100.00 PER DAY FOR EACH DAY BEYOND THE 21 DAY REPAIR PERIOD ON A PER INTERSECTION BASIS, UNTIL CONDITIONS ARE MET TO THE SATISFACTION OF THE SIGNALS MANAGEMENT ENGINEER.

THIS PENALTY DEDUCTION SHALL BE SPECIFIC FOR EACH SIGNALIZED INTERSECTION EFFECTED BY THIS PROJECT AND SEPARATE FROM ANY LIQUIDATED DAMAGES FOR THE PROJECT AS A WHOLE. THE WORK TO INSTALL THE DETECTION SHALL CONFORM TO O.D.O.T.STANDARD CONSTRUCTION DRAWING TC-82.10 (DATED 4/19/02 OR LATER) AND TO THE CURRENT STATE OF OHIO CONSTRUCTION AND MATERIAL SPECFFICATIONS WITH THE FOLLOWING PROVISIONS:

9. IF THE 21 DAY REPAIR REQUIREMENT CANNOT BE SATISFIED AT ANY LOCATION WHERE THE CONTRACTOR DAMAGES DETECTORS AND/OR THEIR LEAD-IN CABLES, THE CONTRACTOR, AT THE DISCRETION OF TRANSPORTATION DIVISION PERSONNEL, MAY BE REQUIRED TO INSTALL TEMPORARY MICROWAVE DETECTION OR TEMPORARY LOOP DETECTION.

A) THE CONTRACTOR SHALL PROVIDE THE TRANSPORTATION DIVISION REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF WORK, THE IMSA (INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION) CERTIFICATION PAPERS FOR ALL SIGNAL TECHNICIANS WORKING ON THIS PROJECT.

B) LOCATIONS OF THE REPLACEMENT DETECTION SHALL BE FIELD MARKED OR DIMENSIONED DRAWINGS SUBMITTED TO THE INSPECTION SECTION BY RIGHT-OF-WAY MANAGEMENT SECTION PERSONNEL. LOCATION OF FINAL PAVEMENT MARKINGS OR THE MARKINGS THEMSELVES SHALL BE CLEARLY INDICATED ON THE ASPHALT PRIOR TO DETECTOR LOCATIONS BEING MARKED.

THE CONTRACTOR SHALL LAYOUT THE LOOPS ON THE PAVEMENT IF DRAWINGS ARE SUBMITTED. IF DRAWINGS HAVE NOT BEEN PROVIDED, CONTACT SIGNALS MANAGEMENT PERSONNEL AT 645-0423/645-7393/CELL 419-4501 AT LEAST TWO WORKING DAYS PRIOR TO NEEDING THE LOCATION MARKED.

C) THE SAWSLOT DEPTH FOR LOOP WIRE INSTALLATION SHALL BE FOUR (4) INCHES WITH SIX (6) INCHES AT THE CONDUIT ENTRANCE. IF ADVERSE PAVEMENT CONDITIONS WARRANT, DEPTH MAY BE INCREASED TO SIX (6) INCHES THROUGHOUT. THIS WILL BE DETERMINED BY THE TRANSPORTATION DIVISION REPRESENTATIVE.

D) EACH LOOP SHALL HAVE IT'S OWN CONDUIT FROM EDGE OF PAVEMENT TO PULL BOX UNLESS SPECIFIED OTHERWISE BY THE TRANSPORTATION DIVISION REPRESENTATIVE.

E) THE PULLBOX ASSEMBLY SHALL BE RATED AS MEDIUM TO HEAVY DUTY, TO BE INSTALLED IN CONCRETE WALKWAYS, AND SHALL HAVE ALL STAINLESS STEEL HARDWARE. THE PULIBOX COVER SHALL HAVE THE WORD "TRAFFIC" ON IT.

THE COVER SHALL BE BOLTED TO THE BOX AND SHALL BE EITHER POLYMER CONCRETE OR STEEL PLATE. THE COVER PLUS HOUSING AS A UNIT SHALL BE RATED TO WITHSTAND A MINIMUM 20,000 LB. STATIC LOAD OVER A 10" X 10" AREA AS PER ASTM C-857. THE BOX DEPTH SHALL BE 18 INCHES MINIMUM TO 30 INCHES MAXIMUM. IF THE PROJECT DOES NOT SPECIFY 713.08 CONCRETE PULL BOXES, THE SUPPLIED ASSEMBLIES SHALL BE AS FOLLOWS: CDR SYSTEMS MODEL SA32-1015-18, OR SYNERTECH MODEL 11"X18". SIX (6) INCHES OF #4 AGGREGATE SHALL BE PLACED AT THE BOTTOM OF THE PULLBOX. NO CONDUIT SHALL PROTRUDE MORE THAN THREE (3) INCHES INSIDE THE PULLBOX.

CONDUIT ELLS OR EXTENSIONS MAY BE USED TO ALIGN THE CONDUIT WITH THE HOUSING. THE COST FOR EXTENSIONS OR ELLS IF NEEDED SHALL BE INCIDENTAL TO THE PER UNIT PRICE

F) WHEN A PULLBOX IS NOT USED, THE SOLDERED SPLICE SHALL BE MADE IN AN ANCHOR BASE STRAIN POLE OR A CONDUIT RISER SPECIFIED BY THE TRANSPORTATION DIVISION REPRESENTATIVE, EXCEPT WHERE A CONTROLLER CABINET IS MOUNTED ON THAT POLE IN WHICH CASE THE LOOP WIRE SHALL BE ROUTED DIRECTLY INTO THE CABINET.

G) THE CONTRACTOR SHALL NOT MAKE ANY WIRING CONNECTIONS OR ADJUSTMENTS INSIDE THE CONTROL CABINET. WHEN SUCH CONNECTIONS ARE REQUIRED,

THE CONTRACTOR SHALL NOTIFY THE TRAFFIC ENGINEERING MAINTENANCE SHOP 645-7393, MON.,FRI., 8 AM TO 4 PM, TO SCHEDULE CITY FORCES FOR MAKING THE ACTUAL CONNECTIONS. THE CONTRACTOR SHALL BE AVAILABLE AT THE AGREED TIME. THE CONTRACTOR WILL BE BILLED FOR ANY TIME THAT CITY FORCES ARE REQUIRED TO WAIT FOR THE CONTRACTORS' WORK TO BE COMPLETED.

H) CONDUIT PLACED IN "RIGHT OF WAY" AREAS BEARING NO TRAFFIC FOR DETECTOR LEAD IN SHALL BE ODOT 713.07 DB. CONDUIT PLACED UNDER A ROADWAY OR IN AREAS THAT MAY BEAR TRAFFIC SHALL BE ODOT 713.04 (SIZES AND TYPE TO BE DETERMINED BY TRANSPORTATION DIVISION REPRESENTATIVE. ALL CONDUITS SHALL BE PLACED AT A MINIMUM DEPTH OF 24 INCHES.

I) LOOP WIRE SHALL BE IDENTIFIED WITH A PLASTIC TAG (WBLT, EBRT, ETC.) AT THE SPLICE POINT OR AT ENTRANCE TO THE CABINET IF LEAD-IN CABLE IS NOT USED.

J) THE ITEMS AND ESTIMATED QUANTITIES FOR THE REPLACEMENT OF TRANSPORTATION DIVISION DETECTION ITEMS SHALL BE INCLUDED IN THESE PLANS. THESE ESTIMATES ARE FOR THE PURPOSE OF BIDDING THE PROJECT. THE FOLLOWING IS A LIST OF THE ITEMS AND QUANTITIES PROJECTED FOR USE IN DETECTOR REPLACEMENT FOR THIS PROJECT:

ITEM	QUANTITY	UNIT	ITEM DESCRIPTION
202	16	SF	WALK REMOVED
608	16	SF	4" CONCRETE WALK
632	1	LF	CONDUIT RISER, 1 OR 2 INCH DIAMETER
625	100	LF	CONDUIT 1, 1 1/2, OR 2 INCH (AS PER PLAN)
625	100	LF	TRENCH
625	1	EACH	PULLBOX(AS PER PLAN)
632	1	EACH	DETECTOR LOOP
632	150	LF	LOOP DETECTOR LEAD-IN CABLE
632	50	LF	LASH / UNLASH CABLE

THE CONTRACTOR SHALL NOTIFY SIGNALS MANAGEMENT PERSONNEL AT 645-0423/ 645-7393/CELL 419-4501 AFTER ALL LOOPS HAVE BEEN INSTALLED AT EACH INTERSECTION. THE TRANSPORTATION DIVISION SHALL INSPECT ALL SENSORS AND TEST AS NECESSARY. THE CONTRACTOR SHALL REPLACE ANY LOOPS NOT MEETING SPECIFICATIONS.

ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN

1. THE FOLLOWING IS A SUGGESTED SEQUENCE OF CONSTRUCTION FOR THIS PROJECT. THE CONTRACTOR MAY IN LIEU OF THIS METHOD OF OPERATION, SUBMIT IN WRITING, HIS OWN METHOD OF OPERATION TO THE ENGINEER FOR REVIEW AND APPROVAL. HOWEVER, THE CONTRACTOR SHALL PROVIDE AT THE PRECONSTRUCTION CONFERENCE A SET OF REPRODUCIBLE PRINTS (SCALE 1" = 40' OR 1" = 20') SHOWING HOW HE PLANS TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THE OMUTCD AND THESE TRAFFIC MAINTENANCE NOTES. THESE PLANS WILL HAVE TO BE REVIEWED AND APPROVED BY THE FRANKLIN COUNTY ENGINEER, THE CONTRACTOR WILL BE ADVISED AS TO THE REVIEW RESULTS IN WRITING WITHIN THIRTY (30) DAYS

2. THE CONTRACTOR SHALL NOTIFY THE COUNTY ENGINEER'S TRAFFIC DEPARTMENT AT 462-6036 TWO WEEKS PRIOR TO BEGINNING WORK AND WEEKLY THEREAFTER TO DISCUSS ANY CHANGESTO THE MAINTENANCE OF TRAFFIC PLAN AND/OR COMPLETION DATE. BEFORE WORK IS STARTED ON THIS PROJECT THE CONTRACTOR SHALL SUBMIT A WRITTEN SCHEDULE OF OPERATION AND A TRAFFIC MAINTENANCE CONTROL PLAN FOR APPROVAL. NO WORK SHALL BE STARTED THAT WILL RESTRICT ANY LANE USAGE UNLESS IT IS THE INTENT OF THE CONTRACTOR TO WORK FULL TIME WITH A FULL FORCE IN ORDER TO COMPLETE THE WORK WITH NO UNNECESSARY DELAYS

3. THE FOLLOWING DEVICES MUST MEET NCHRP 350 OR MASH-08 BEFORE THE DEVICES ARE INSTALLED ON THE PROJECT: DRUMS, CONES, VERTICAL PANELS AND THE PANEL SUPPORT, PORTABLE SIGN SUPPORTS, TEMPORARY IMPACT ATTENUATORS, TEMPORARY CONCRETE BARRIER, AND BARRICADES.

4. ALL CONSTRUCTION SIGNAGE SHALL BE INSTALLED AND COVERED BEFORE CONSTRUCTION SHALL BEGIN. AFTER CONSTRUCTION SIGN INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE FRANKLIN COUNTY TRAFFIC ENGINEER AT 462-3054 THREE WORKING DAYS BEFORE WORK BEGINS AND REQUEST AN INSPECTION OF ALL SIGNAGE.

5. FACES OF CONSTRUCTION SIGNS AND REFLECTIVE SHEETING ON BARRICADES SHALL BE MADE TYPE H (VIP). ALL ORANGE CONSTRUCTION SIGNS SHALL BE FLUORESCENT ORANGE. ALL SHEETING WILL BE TESTED FOR REFLECTIVITY PER ODOT 730.192. VERTICAL PANELS AND DRUM BANDS SHALL BE REFLECTORIZED WITH TYPE C (HIGH INTENSITY) SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19. ALL SIGNS AND BARRICADES, VERTICAL PANELS, AND DRUMS WILL BE LIKE NEW AND IN GOOD CONDITION IN CONFORMANCE WITH "QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES" PUBLISHED TY ATSSA.

6. MAINTENANCE OF ALL CONTRACTOR SUPPLIED SIGNS, BARRICADES, VERTICAL PANELS AND DRUMS IS THE CONTRACTOR'S RESPONSIBILITY. IF THE CONTRACTOR FAILS TO CORRECT DEFICIENCIES WITHING FOUR HOURS OF NOTIFICATION, FRANKLIN COUNTY SHALL CORRECT OR OR HIRE SOMEONE TO CORRECT THE DEFICIENCIES. THE CONTRACTOR SHALL THEN BE BACK CHARGED PER ODOT SPECIFICATION 614. IN THE CASE THAT BACK CHARGING THE CONTRACTOR IS NOT APPLICABLE, THE COUNTY WILL RESCIND AND WITHHOLD ALL PERMITS ISSUED TO THE CONTRACTOR TO WORK WITHIN COUNTY RIGHT OF WAY UNTIL THE ISSUE IS SETTLED.

7. THESE PROVISIONS SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF ANY OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC.

8. ALL BARRICADES AT CLOSURES SHALL HAVE YELLOW TYPE A LOW INTENSITY FLASHING WARNING LIGHTS. REFLECTIVE MATERIAL IS REQUIRED ON BOTH SIDES OF ALL BARRICADES (ODOT STANDARD CONSTRUCTION DRAWING MT101.60). CONES ARE NOT APPROVED FOR USE AT NIGHT. ALL BARRELS SHALL HAVE YELLOW TYPE C STEADY BURN LIGHTS. ALL SIGNS NINE SQUARE FEET (36" X 36") AND OVER SHALL HAVE YELLOW TYPE A LOW INTENSITY FLASHING WARNING LIGHTS AND TWO FLAGS

9. DRUMS SHALL BE PLACED AS FOLLOWS: 25' C/C ON TAPERS, AND 8' C/C ON RADII.

10. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ODOT CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE LATEST VERSION OF THE OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

EXISTING TRAFFIC SIGN MAINTENANCE

SPECIAL CARE SHALL BE TAKEN TO MAINTAIN EXISTING STREET NAME SIGNS AND STOP SIGNS. IF NECESSARY, THE CONTRACTOR SHALL RELOCATE THESE SIGNS OUT OF WAY OF CONSTRUCTION, BUT IN CONFORMANCE WITH OMUTCD. ANY DAMAGED SIGN SHALL BE REPLACED AT TEH EXPENSE OF THE CONTRACTOR.

PERMANENT TRAFFIC CONTROL

ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS SHALL BE MAINTAINED THROUGHOUT THE PROJECT BY THE CONTRACTOR. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING DAMAGED, AND IMPROPERLY PLACED TRAFFIC CONTROL DEVICES.

ITEM 614- LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

IN ADDITION TO THE REQUIREMENTS OF ODOT CMS 614 AND THE OMUTCD, A UNIFORMED LAW ENFORCEMENT OFFICER (L.E.O.) AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS, SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS.

1. FOR ALL LANE CLOSURES. L.E.O.'S SHALL BE USED WHERE THE OMUTCD INTENDS FLAGGERS BE USED.

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

3. DURING A TRAFFIC SIGNAL INSTALLATION.

THE L.E.O.'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 ENGINEER SHALL HAVE CONTROL OF THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

LOCAL ACCESS

INGRESS AND EGRESS SHALL BE MAINTAINED TO ALL RESIDENTIAL AND COMMERCIAL PROPERTIES. DRIVEWAY CLOSURE MAY BE NECESSARY TO ENABLE WORK ON OR IN FRONT OF THE DRIVE. THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING OWNERS, RESIDENTS, OR BUSINESS OPERATORS IN WRITING AT LEAST 48 HOURS BUT NOT MORE THAN 72 HOURS PRIOR TO CLOSURE. THE ENGINEER SHALL BE GIVEN A LIST OF THE PERSONS THAT WERE GIVEN NOTICES WITH THE DATE OF NOTICE INCLUDED. CLOSURE IS PERMITTED ONLY DURING WORK HOURS AND ACCESS MUST BE RETURNED AT THE END OF EACH WORKING DAY. PROPERTIES WITH MULTIPLE DRIVES MAY HAVE ONE DRIVE CLOSED AT A TIME, WHILE WORK IS PERFORMED IN THE AREA OF THE CLOSED DRIVE.

PORTABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE, TWO CHANGEABLE MESSAGE SIGN(S) FOR THE DURATION OF THE PROJECT. THE SIGN(S) SHALL BE OF A TYPE APPROVED BY THE COUNTY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO ADJUST THE BRIGHTNESS UNDER VARYING LIGHT CONDITIONS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL HAVE OPERATION INSTRUCTIONS TO ENABLE ON-SITE OPERATION AND TROUBLESHOOTING. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

THE PCMS SHALL BE IN PLACE 1 WEEK PRIOR TO CONSTRUCTION TO ADVISE THE PUBLIC. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE LOCATION, YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9 INCH BY 15 INCH MINIMUM SIZE FACING TRAFFIC.

THE CONTRACTOR IS RESPONSIBLE FOR CHANGING MESSAGES WITHIN 2 HOURS FOLLOWING NOTIFICATION FROM THE ENGINEER.

THE SIGN SHALL HAVE A CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THE PCMS SHALL HAVE A FULL MATRIX DISPLAY WITH THE ABILITY TO SHOW MULTIPLE LINE FORMATS WITH UP TO SIX MESSAGE PHASES.

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

THE PCMS SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR. 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 COUNTY TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. ANY COSTS ACCRUED BY THE COUNTY WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE IN 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.

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, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 630- CORP SIGNS, AS PER PLAN

ALL ENTER/LEAVE SIGNS SHALL BE FURNISHED BY THE FRANKIN COUNTY ENGINEER'S OFFICE. THE CONTRACTOR SHALL PICK UP THE SIGNS FROM THE ENGINEER'S OFFICE AT 970 DUBLIN ROAD COLUMBUS, OHIO, 43215. THE CONTRACTOR SHALL NOTIFY THE COUNTY'S TRAFFIC DEPARTMENT (614) 462-5318 TEN DAYS IN ADVANCE OF INSTALLATION. THIS ITEM DOES NOT INCLUDE ANY HARDWARE NECESSARY FOR SIGN INSTALLATION.

ITEM 630- SIGN FLAT SHEET, AS PER PLAN

IN ADDITION TO 630, ALL SIGN SHEET MATERIAL SHALL BE DIAMOND GRADE DG3 MANUFACTURED BY 3M COMPANY OR APPROVED EQUAL.

ITEM 625- GROUND MOUNTED SIGN SUPPORTS, AS PER PLAN

GROUND MOUNTED POST SUPPORTS SHALL BE A SQUARE POST WITH ANCHOR BASE AS PER DETAIL ON ODOT STANDARD DRAWING TC-41.20. ALL POSTS SHALL BE 2" X 2" 12 GUAGE SQUARE TUBING WITH OPEN HOLES AND ALL ANCHOR BASES SHALL BE 2 1/4" X 2 1/4" 12 GUAGE SQUARE TUBING WITH OPEN HOLES.

ITEM SPECIAL- STREET NAME SIGNS AND SIGN SUPPORTS

THE CONTRACTOR AS PART OF THIS PROJECT SHALL PROPERLY REMOVE ALL OF THE EXISTING STREET NAME SIGNS, AND REPLACE ALL OF THE STREET NAME SIGN SUPPORT POLES. THIS SHALL APPLY TO ALL STREET NAME SIGNS AND SUPPORTS THAT ARE LOCATED WITHIN THE LIMITS OF THIS PROJECT. EXISTING STREET NAME SIGNS SHALL BE REMOVED BY CUTTING THE STAINLESS STEEL STRAPS THAT BAND IT TO THE SUPPORT POLE. THE SIGNS SHALL BE HANDLED IN A MANNER TO AVOID SCRATCHING THE SHEETING OR CAUSING OTHER DAMAGE TO IT OR THE ASSEMBLY. EXISTING SUPPORT POLES SHALL BE REMOVED AND DISPOSED OF AS PART OF THE NORMAL DEMOLITION PHASE OF THE PROJECT. REPLACEMENT SUPPORT POLES (PURCHASED BY THE CONTRACTOR) ALONG WITH THE REMOVED AND UNDAMAGED EXISTING STREET NAME SIGNS SHALL BE DELIVERED TO THE TRAFFIC MAINTENANCE SHOP AT 1820 EAST 17TH AVENUE. PLEASE CALL THE SHOP AT (614) 645-7393 AT LEAST 24 HOURS (7:30AM TO 4:00PM MON THRU FRI) IN ADVANCE OF MAKING THE DELIVERY. ANY STREET NAME SIGN THAT IS DAMAGED SHALL BE REPLACED BY THE CITY OF COLUMBUS, DIVISION OF TRANSPORTATION WITH THE INCURRING REPLACEMENT COST BEING CHARGED TO THE CONTRACTOR. PERFORMANCE OF AND PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE SUPPORT POLES. PLEASE SEE THE SIGNAGE PLANS &/OR GENERAL SUMMARY FOR QUANTITIES.

THE CONTRACTOR AS PART OF THIS PROJECT SHALL REPLACE ALL CITY OF COLUMBUS TRAFFIC SIGNS THAT ARE LOCATED INSIDE THE LIMITS OF THE PROJECT. THE CONTRACTOR SHALL REMOVE ALL TRAFFIC SIGNS AND SIGN SUPPORTS AND DELIVER THEM TO THE TRAFFIC MAINTENANCE SHOP AT 1820 EAST 17TH AVENUE (614) 645-7393). THE CONTRACTOR SHALL PURCHASE NEW SIGNS AND SIGN SUPPORTS TO INSTALL AS INDICATED ON THE PLANS OR IF NOT SHOWN THEN AT THE PREVIOUS LOCATION FOR THE SIGN BEING REPLACED. PERFORMANCE OF AND PAYMENT FOR THIS WORK SHALL BE AS PER ITEM 630 "TRAFFIC SIGNS AND SIGN SUPPORTS" FROM THE COC CONSTRUCTION AND MATERIALS SPECIFICATIONS.

C.O.T.A. - BUS AND/OR BUS STOPS

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT JIM HUTCHERSON OF THE CENTRAL OHIO TRANSIT AUTHORITY (C.O.T.A.) AT PH-(614)308-4373, FAX - (614) 275-5933, OR BY EMAIL- HUTCHERSONJM@COTA.COM TO COORDINATE PROPER BUS MOVEMENTS THROUGH OR AROUND THE JOB SITE DURING THE PROJECT. THIS WILL INCLUDE, BUT NOT BE LIMITED TO, THE TEMPORARY RELOCATION OR REMOVAL OF C.O.T.A. SIGNS AND/OR BUS STOP LOCATIONS.

CALCULATED JFA CHECKED

GENERAL NOTES

FRA-CR11-10.49

ITEM 632 MICROWAVE UNIT, AS PER PLAN

THE MICROWAVE UNIT SHALL BE A MICROWAVE SENSORS, INC. MODEL TC-26B. THIS UNIT SHALL BE USED THROUGHOUT THE PROJECT DURATION UNTIL ALL PROPOSED NEAR THROUGH SENSORS ARE FUNCTIONING FOR THAT GIVEN APPROACH. THE CONTRACTOR SHALL HAVE THIS UNIT OPERATING WHEN ANY NEAR THROUGH APPROACH SENSOR THAT THE UNIT WILL REPLACE HAS BEEN DESTROYED BECAUSE OF ROADWAY CONSTRUCTION. THE UNIT NEED NOT OPERATE IF THE EXISTING NEAR APPROACH SENSORS ARE STILL OPERATING. THE UNIT SHALL BE BRACKET MOUNTED (BANDED TO POLE) AT 20 TO 25 FEET ABOVE GROUND LEVEL AND AIMED SO THE UNIT DETECTS INCOMING VEHICLES AT A DISTANCE FROM THE STOP LINE BACK 100 TO 200 FEET FOR THE MAINLINE AND 30 TO 50 FEET FOR THE SIDESTREET. THE FINAL POSITIONING OF THIS UNIT SHALL BE APPROVED BY TRAFFIC ENGINEERING DIVISION PERSONNEL. THE CONNECTING CABLE SHALL BE 1/4" IN DIAMETER, SHIELDED AND HAVE FOUR 18-22 AWG WIRES. THE CONNECTING CABLE SHALL BE TEMPORARILY ROUTED OVER EXISTING OR PROPOSED SPAN AND ATTACHED BY USING PLASTIC TIE WRAPS. IN CASES WHERE NO SPAN EXISTS, THE CONTRACTOR SHALL INSTALL 1/4" MESSENGER WIRE. THE COST OF ITS INSTALLATION IS TO BE INCIDENTAL TO THIS ITEM. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR ANY RADIO INTERFERENCE CAUSED BY THIS UNIT. THE CONTRACTOR SHALL AIM THE UNIT TO DECREASE OR ELIMINATE THE INTERFERENCE.

ALL UNITS EXCLUDING CABLE SHALL BE DELIVERED TO THE TRAFFIC ENGINEERING DIVISION'S MAINTENANCE SHOP (1820 EAST 17TH AVENUE) IN GOOD WORKING CONDITION AFTER THE PROJECT NO LONGER NEEDS THE UNIT. ANY NONFUNCTIONING UNIT SHALL BE REPAIRED AND THEN DELIVERED TO THE SHOP.

TEMPORARY SIGNAL HEAD LOCATION AND SPACING REQUIREMENTS

THE CONTRACTOR SHALL CONTACT THE TRANSPORTATION DIVISION SIGNAL MAINTENANCE SHOP SUPERVISOR (645-7933) 3 WORK DAYS PRIOR TO THE NEED FOR THE DIVISION TO REWIRE THE EXISTING CONFLICT MONITOR SO THE "MOT" PHASING WILL WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SHIFTING EXISTING HEADS AS PER PLAN AND MAKING WEATHERPROOF SPLICES IN EXISTING CABLE. THE CONTRACTOR MAY CONNECT SIGNAL WIRING TO CABINET FIELD TERMINALS ONLY UNDER THE SUPERVISION OF DIVISION SIGNAL MAINTENANCE PERSONNEL.

POSITION HEADS 4 TO 5 FEET ON EACH SIDE OF THE EAST-BOUND THROUGH LANE FOR EACH "MOT" PHASE OR AS DIRECTED BY THE ENGINEER.

NO VEHICULAR SIGNAL HEAD LOCATION ADJUSTMENTS ARE REQUIRED FOR NORTHBOUND OR SOUTHBOUND HARRISBURG PIKE (US 62) APPROACHES.

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

EROSION AND SEDIMENT CONTROL:

LAND DISTURBANCE AREAS LESS THAN ONE ACRE AND NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT ARE NOT REQUIRED TO SUBMIT TO THE CITY OF COLUMBUS A FULL SCALE EROSION AND SEDIMENT CONTROL PLAN FOR APPROVAL. THE LAND DISTURBING ACTIVITIES PROPOSED UNDER THESE CONSTRUCTION DRAWINGS; HOWEVER, MUST COMPLY WITH ALL OF THE PROVISIONS OF THE CURRENT DIVISION OF SEWERAGE AND DRAINAGE EROSION AND SEDIMENT CONTROL REGULATION. ALL LAND DISTURBING ACTIVITIES SHALL BE SUBJECT TO INSPECTION AND SITE INVESTIGATION BY THE CITY OF COLUMBUS TO DETERMINE COMPLIANCE WITH CITY STANDARDS AND REGULATIONS. FAILURE TO COMPLY WITH SAID REGULATIONS MAY SUBJECT THE SITE TO ENFORCEMENT ACTION BY THE CITY.

QUESTION REGARDING EROSION AND SEDIMENT CONTROL MAY BE REFERRED TO THE STORMWATER MANAGEMENT OFFICE AT 614-645-6311.

ON SITE CONTACT:
CONTACT PHONE:
CONTACT FAX:
CONTACT E-MAIL:
THIS SITE IS TRIBUTARY TO: BIG RUN

EROSION CONTROL - SEE PROPOSAL NOTES

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES WERE MEASURED ON THE PLAN AND PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL FURNISHED AND PLACED, AS PER PROPOSAL NOTE, 765 CU. YD

659, SEEDING AND MULCHING, CLASS 1, AS PER PROPOSAL NOTE 6980 SQ. YD.

659, SEEDING AND MULCHING, CLASS 3B, AS PER PROPOSAL NOTE, 2200 SQ. YD.

659, REPAIR SEEDING AND MULCHING 460 SQ. YD

659, COMMERCIAL FERTILIZER 1.2 TON

659, WATER 50 M. GAL.

SEEDING AND MULCHING CALCULATIONS

TOPSOIL:
9180 SQ YD X (0.25' DEPTH/3' YD) = 765 CU YD
SEEDING AND MULCHING:

1) RESIDENTIAL AREAS & BTW/ CURB AND R/W
ALKIRE RD. AND US 62
- ODOT CLASS 1 LAWN MIXTURE (ITEM 659): 6980 SQ YD

2) RAILROAD, SIDE SLOPES WITH IN
R.O.W. - ODOT CLASS 3B
LOW GROWING SLOPE MIXTURE (ITEM 659): 2200 SQ YD

TOTAL SEEDING AND MULCHING= 9180 SQ YD.
REPAIR SEEDING AND MULCHING:
9180 SQ YD X 0.05 = 460 SQ YD.

COMMERCIAL FERTILIZER:
[(9180 SQ YD X 9) X (30 LBS / 1000 SQ FT)] / 2000
= 1.2 TONS

WATER:
[((9180 SQ YD X 9) X (300 GAL / 1000 SQ FT)) X 2] /
1000 = 50 M GAL

ENVIRONMENTAL NOTES

WATER GENERATED AS A RESULT OF DEWATERING ACTIVITIES WILL NOT BE PLACED DIRECTLY BACK INTO BIG RUN.

BEST MANAGEMENT PRACTICES WILL BE UTILIZED FOR EROSION CONTROL TO MINIMIZE IMPACTS TO STREAMS AND WETLANDS.

WATER QUALITY PROTECTION

NO TOXIC OR HAZARDOUS MATERIALS SUCH AS SEALANTS, PAINT, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTE-WATER, FUELS OR DEBRIS OF ANY KIND SHALL BE DISCHARGED TO ANY STREAMS, DRAINAGE COURSES, OR BODIES OF WATER. ALL ASPHALT OR CONCRETE GRINDINGS, EXCESS ASPHALTIC OR CONCRETE MATERIALS OR ANY OTHER DEBRIS GENERATED DURING RESURFACING OR OTHER SIMILAR ACTIVITIES SHALL BE NOT BE DISPOSED OF WITHIN A FLOODPLAIN BELOW THE 100-YEAR FLOOD ELEVATION.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT LIQUIDS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE STRUCTURE (I.E. PAINT, SEALER, SOLVENT) FROM ENTERING STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE

INDIANA BAT HABITAT

CLEARING OF ANY TREES THAT HAVE SUITABLE SUMMER BROOD REARING OR ROOSTING HABITAT FOR THE FEDERALLY ENDANGERED INDIANA BAT (LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES), SHALL OCCUR ONLY DURING THE PERIOD BEFORE APRIL 15 OR AFTER SEPTEMBER 15, WHEN THIS SPECIES WOULD NOT BE USING SUCH HABITAT.

HOURS OF OPERATION WILL CONFORM WITH ANY PERTINENT LOCAL ORDINANCES THAT MAY EXIST.

CALCULATED JFA CHECKED

GENERAL NOTES

FRA-CR11-10.49

NOT

USED

CALCULATED | CHECKED

GENERAL NOTES

FRA-CR11-10.49

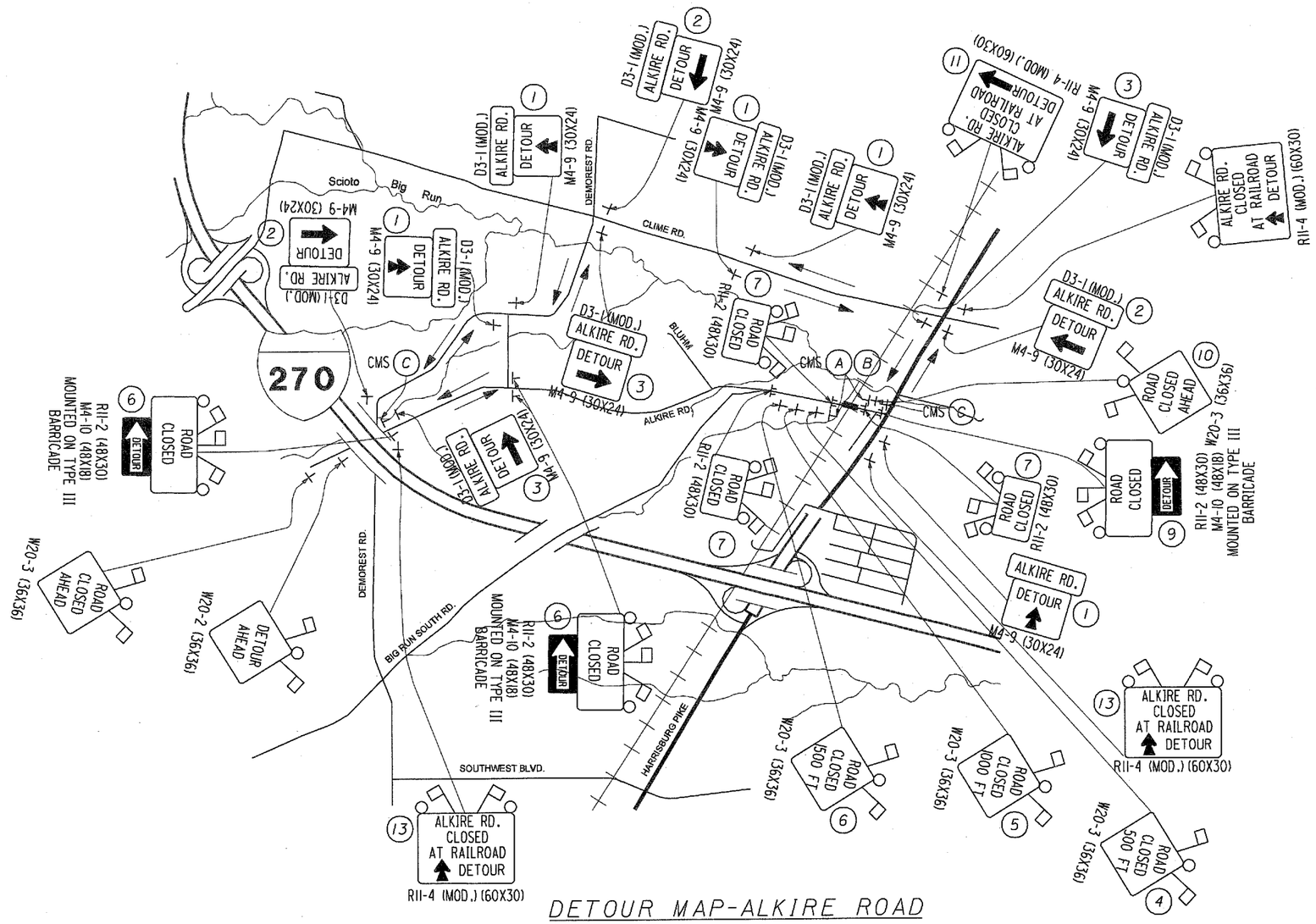
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CMS (A) (B) — ALKIRE RD CLOSES — 3 SEC | BEGINNING __/__/2010 — 3 SEC | FOR INFO CALL 462-3074 — 3 SEC

PRIOR TO CLOSURE

CMS (C) — ALKIRE RD CLOSED — 3 SEC | USE DEMOREST RD — 3 SEC

DURING CLOSURE



DETOUR MAP-ALKIRE ROAD

NOTE:
IF THE LEFT TRUN ONTO CLIME ROAD FROM HARRISBURG PIKE IS RESTRICTED DURING AN ODOT PROJECT, THE DETOUR MAY NEED TO BE REVISED USING SOUTHWEST BOULEVARD.

NOTE:
ALKIRE ROAD WILL BE CLOSED TO THROUGH TRAFFIC AT THE BRIDGE DURING A PORTION OF THE BRIDGE CONSTRUCTION. DETAILS ON THE TIMING FOR THIS CLOSURE ARE INCLUDED IN THE BRIDGE SHEETS. THE DETOUR IS SHOWN ON THIS PAGE. DURING THIS CLOSURE, CONSTRUCTION ON ALKIRE ROAD WILL BE PERFORMED. WEST OF THE BRIDGE, LOCAL ACCESS TO MANLEY WAY AND GLENCREEK ROAD WILL BE MAINTAINED BY DETOUR ON LOCAL STREETS. LOCAL TRAFFIC FROM US 62 TO BIG RUN AVENUE AND DRIVES EAST OF THE BRIDGE WILL BE MAINTAINED DURING CONSTRUCTION.

DESIGNED AS | CHECKED MW

MAINTENANCE OF TRAFFIC-ALKIRE ROAD

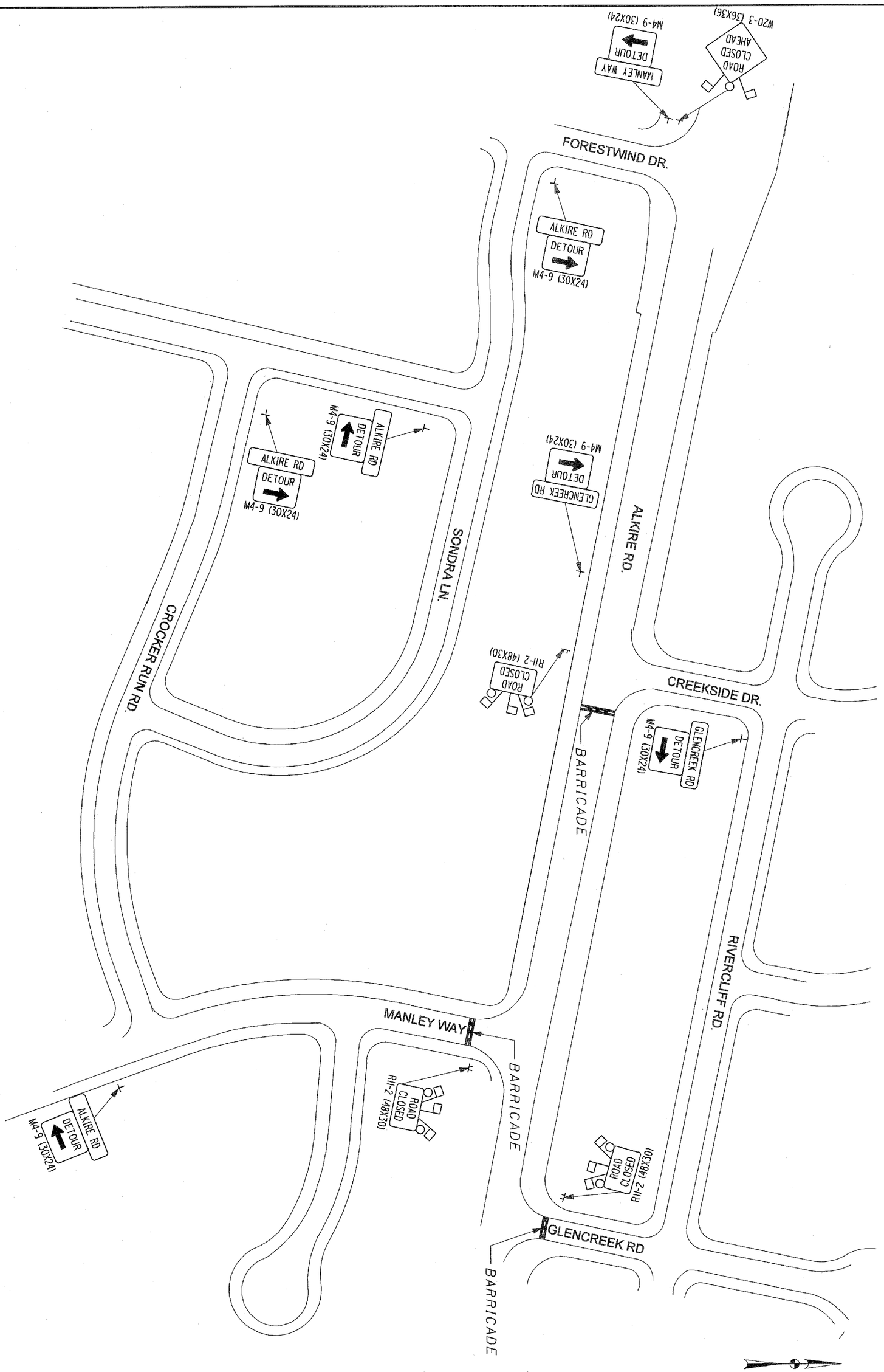
FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255

FCEO 1135

10 / 118

Plotted By: acscheiderer Date: 8/12/2009 Time: 1:46:07 PM
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11/118	PID 76255 FCEO 1135	FRA-CR11-10.49 (ALKIRE ROAD)	MAINTENANCE OF TRAFFIC-GLENCREEK RD/MANLEY WAY	CALCULATED CHECKED

MAINTENANCE OF TRAFFIC DURING BRIDGE CONSTRUCTION AND ALKIRE ROAD WIDENING.

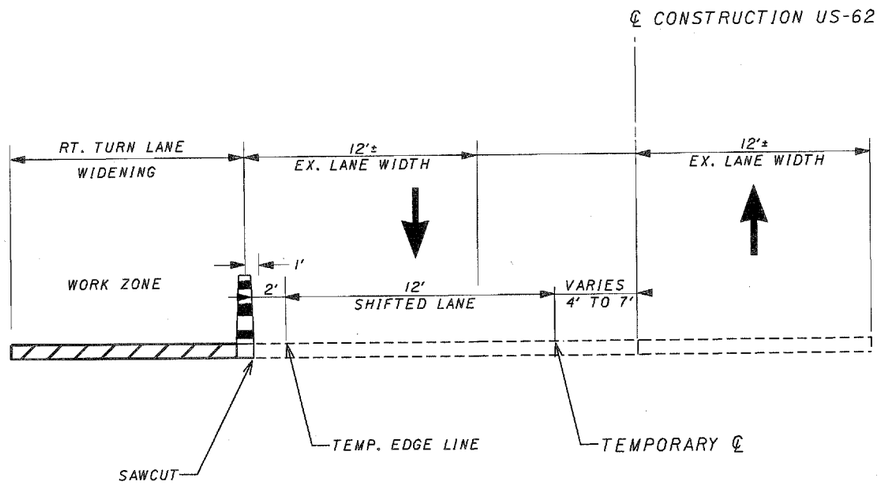
THE CONTRACTOR SHALL CONSTRUCT THE WIDENING OF ALKIRE ROAD DURING THE PERIOD OF TIME THE ROAD WILL BE CLOSED FOR COSTRUCTION OF THE OVERHEAD RAILROAD BRIDGE. DEVIATION FROM THIS REQUIREMENT SHALL BE APPROVED BY THE FRANKLIN COUNTY ENGINEER'S OFFICE.

DURING CLOSURE OF ALKIRE ROAD FOR THE OVERHEAD RAILROAD BRIDGE CONSTRUCTION AND ROADWAY WIDENING, TRAFFIC WILL BE DETOURED USING THE DETOUR PLAN ON SHEET 10.

LOCAL TRAFFIC TO DRIVEWAYS AND BIG RUN AVENUE EAST OF THE RAILROAD SHALL BE MAINTAINED AT ALL TIMES. LOCAL TRAFFIC WEST OF THE RAILROAD SHALL BE MAINTAINED AT ALL TIMES USING THE ALTERNATE ROUTE PLAN ON SHEET 11.

MAINTENANCE OF TRAFFIC FOR US-62/ALKIRE RD RIGHT TURN LANE

REFER TO OMUTCD FIGURE 6H-6, TYPICAL APPLICATION 6 SHOULDER WORK WITH MINOR ENCROACHMENT IN THE MAINTENANCE OF TRAFFIC FOR THE RIGHT TURN LANE CONSTRUCTION ON US-62. THE CONSTRUCTION OF THE TURN LANE SHALL BE DURING THE CLOSURE OF ALKIRE ROAD.



TYPICAL SECTION FOR S.B. RIGHT TURN LANE AND SHOULDER CONSTRUCTION ON US-62

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

12/118

SHEET NUMBER										PARTICIPATION			ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
6	8	15	16	17	18	19	26	45	47	SHEET TOTAL	ELIGIBLE FED STP FUNDS	NON-ELIGIBLE FED STP FUNDS					
																ROADWAY	
										1	1		201	1	LUMP	CLEARING AND GRUBBING	
					146					146	146		202	146	SQ FT	WALK REMOVED	
					6					6	6		202	6	EACH	GATE REMOVED	
					512					512	512		202	512	FT	GUARDRAIL REMOVED	
					2					2	2		202	2	EACH	HEADWALL REMOVED	
					702					702	702		202	702	FT	PIPE REMOVED, 24" AND UNDER	
					59					59	59		202	59	FT	PIPE REMOVED, OVER 24"	
					1					1	1		202	1	EACH	ANCHOR ASSEMBLY REMOVED	
					2					2	2		202	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
					1505					1505	1505		202	1505	FT	FENCE REMOVED	
					4					4	4		202	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
					5					5	5		202	5	EACH	MAILBOX REMOVED AND REPLACED, AS PER PLAN	6
					1					1	1		202	1	EACH	CATCH BASIN REMOVED	
					1					1	1		202	1	EACH	MANHOLE REMOVED	
					15					15	15		SPECIAL	15	EACH	PARKING BLOCK REMOVAL	
					1					1	1		202	1	EACH	PULL BOX REMOVED	
								7874	198	8072	8072		203	8072	CU YD	EXCAVATION	
								4763	29	4792	4792		203	4792	CU YD	EMBANKMENT	
5										5	5		204	5	HOUR	PROOF ROLLING	
										11780	11780		204	11780	SQ YD	SUBGRADE COMPACTION	
						237.5				237.5	237.5		606	237.5	FT	GUARDRAIL, TYPE 5	
						75				75	75		606	75	FT	GUARDRAIL, TYPE 5, LONG SPAN	
						1				1	1		606	1	EACH	ANCHOR ASSEMBLY, TYPE T	
						2				2	2		606	2	EACH	ANCHOR ASSEMBLY, TYPE E-98	
						2				2	2		606	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
						1				1	1		606	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
						5542				5542	4489	1053	608	5542	SQ FT	4" CONCRETE WALK (AS PER PLAN-COC STD DWG 2300)	
						4				4	4		SPECIAL	4	EACH	CURB RAMP TYPE C (COL. 2319 DR A)	
						13				13	10	3	SPECIAL	13	EACH	CURB RAMP TYPE A (COL. 2319 DR A)	
						17				17	14	3	SPECIAL	17	EACH	24" DETECTABLE WARNING (COL.SS 1551)	
																EROSION CONTROL	
	50									50	50		659	50	M GAL	WATER, AS PER PROPOSAL NOTE	
	6980									6980	6980		659	6980	SQ YD	SEEDING AND MULCHING, CLASS 1, AS PER PROPOSAL NOTE	
	2200									2200	2200		659	2200	SQ YD	SEEDING AND MULCHING, CLASS 3B, AS PER PROPOSAL NOTE	
	765									765	765		659	765	CU YD	TOP SOIL FURNISHED AND PLACED, AS PER PROPOSAL NOTE	
	460									460	460		659	460	SQ YD	REPAIR SEEDING AND MULCHING	
	1.2									1.2	1.2		659	1.2	TON	COMMERCIAL FERTILIZER	
																TRAFFIC CONTROL	
			132							132	132		630	132	FT	GROUND MOUNTED SUPPORT, NO. 3 POST, A.P.P.	7
			2							2	2		630	2	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
			71							71	71		630	71	SQ FT	SIGN, FLAT SHEET, A.P.P.	7
			23							23	23		630	23	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
			1							1	1		630	1	EACH	REMOVAL OF GROUND MOUNTED SIGN, A.P.P.	
			9							9	9		630	9	SQ FT	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
			17							17	17		630	17	EACH	REMOVAL OF GROUND MOUNTED SUPPORT AND DISPOSAL	
			3							3	3		SPECIAL	3	EACH	4.0 INCH NPS STREET NAME SIGN SUPPORT, FURNISH ONLY (COL. ITEM 637)	
			18							18	18		SPECIAL	18	SQ FT	STREET NAME SIGN (COL. ITEM 637)	
																SEE SHEET 7 FOR EXISTING PERMANENT TRAFFIC CONTROL CONTINGENCY ITEMS	
																PAVEMENT MARKING	
		.51								.51	.51		644	.51	MILE	CENTERLINE, 6" (DOUBLE YELLOW)	
		360								360	360		644	360	FT	CHANNELIZING LINE, 12"	
		68								68	68		644	68	FT	STOP LINE, 24"	
		267								267	267		644	267	FT	CROSSWALK LINE, 24"	
		285								285	285		644	285	FT	TRANSVERSE/DIAGONAL LINE, 24"	
		11								11	11		644	11	EACH	LANE ARROW, A.P.P.	
		.19								.19	.19		644	.19	MILE	CENTERLINE, 6" (SOLID YELLOW)	
																PAVEMENT	
						665				665	665		254	665	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, 3.25"	
							217			217		217	254	217	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, 2.0"	
										545	468	77	404	545	CU YD	ASPHALT CONCRETE SURFACE COURSE, PG 64-22, AS PER PROPOSAL NOTE	
										7.5	5	2.5	404	7.5	CU YD	ASPHALT CONCRETE SURFACE COURSE, PG 64-22, AS PER PROPOSAL NOTE, FOR DRIVEWAYS	
										470	409	61	402	470	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, PG 64-22, AS PER PROPOSAL NOTE	
										7.5	5	2.5	402	7.5	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, PG 64-22, AS PER P.N. FOR DRIVEWAYS	
										358	310	48	407	358	GAL	TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	
										1743	1500	243	301	1743	CU YD	ASPHALT CONCRETE BASE, PG 64-22	
										15	10	5	301	15	CU YD	ASPHALT CONCRETE BASE, PG 64-22, FOR DRIVEWAYS	
										1850	1605	245	304	1850	CU YD	AGGREGATE BASE	
										190	166	24	452	190	SQ YD	6" NON-REINFORCED CONCRETE PAVEMENT (MS CONCRETE), A.P.P.	
										23	23		452	23	SQ YD	8" NON-REINFORCED CONCRETE PAVEMENT (MS CONCRETE), A.P.P.	
						4194				4194	3760	434	609	4194	FT	COMBINED CURB AND GUTTER (COCSTD DWG 2020)	

CALCULATED

CHECKED

GENERAL SUMMARY

FRA-CR11-10.49

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SHEET NUMBER																									PARTICIPATION			ITEM	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
5	7	15	16	17	18	19	45	47																	SHEET TOTAL	ELIGIBLE FED STP FUNDS	NON-ELIGIBLE FED STP FUNDS					
						1																			1	1		SPECIAL	1	EACH	WATER WORK FIRE HYDRANT RELOCATED (COL. 809, L-8502)	
						1																			1	1		SPECIAL	1	EACH	FIRE HYDRANT, ADJUST TO GRADE	
						2																			2	2		SPECIAL	2	EACH	VALVE BOX, ADJUST TO GRADE	
																														DRAINAGE	
200																									200	200		603	200	FT	6" CONDUIT, FOR DRAINAGE CONNECTION	
				20																					20	20		603	20	FT	8" CONDUIT, TYPE C	
				768																					768	768		603	768	FT	12" CONDUIT, TYPE B	
				1051																					1051	1051		603	1051	FT	12" CONDUIT, TYPE C	
				113																					113	113		603	113	FT	15" CONDUIT, TYPE B	
				373																					373	373		603	373	FT	15" CONDUIT, TYPE C	
				52																					52	52		603	52	FT	18" CONDUIT, TYPE B	
				82																					82	82		603	82	FT	36" CONDUIT, TYPE B	
				57																					57	57		603	57	FT	36" CONDUIT, TYPE C	
				10																					10	10		604	10	EACH	TYPE "C" MANHOLE (COC STD DWG AA-S102)	
				10																					10	10		604	10	EACH	STANDARD CATCH BASIN (COC STD DWG AA-S133)	
				19																					19	19		604	19	EACH	CURB AND GUTTER INLET (COC STD DWG AA-S125)	
				3																					3	3		604	3	EACH	CAST IN PLACE PIPE CULVERT ENDWALLS (COC STD DWG AA-S165)	
				1																					1	1		604	1	EACH	CATCH BASIN 12" DIAMETER (COC STD DWG AA-S130)	
				122																					122	122		SPECIAL	122	FT	PRECAST TRENCH DRAIN	
				2																					2	2		SPECIAL	2	EACH	MANUFACTURED SYSTEM	
				2																					2	2		603	2	EACH	MASONRY COLLAR	
				2																					2	2		601	2	EACH	RIPRAP CUTOFF WALL	
				3798																					3798	3798		604	3798	FT	4" BASE PIPE UNDERDRAIN	
																														TRAFFIC SIGNALS	
																														SEE SHEET 76 FOR TRAFFIC SIGNAL QUANTITIES	
																														STRUCTURES	
																														SEE SHEET 59 FOR CULVERT QUANTITIES	
																														SEE SHEET 80 FOR TEMPORARY STRUCTURE QUANTITIES	
																														SEE SHEET 93 FOR PERMANENT STRUCTURE QUANTITIES	
																														TRACKWORK	
																														SEE SHEET 118 FOR TRACKWORK QUANTITIES	
																														MISCELLANEOUS	
																									1	1		614	1	LUMP	MAINTAINING TRAFFIC, AS PER PLAN	
																									1	1		619	1	LUMP	FIELD OFFICE, TYPE C, AS PER PROPOSAL NOTE	
																									1	1		623	1	LUMP	CONSTRUCTION LAYOUT STAKES	
																									1	1		624	1	LUMP	MOBILIZATION	
	1																								1	1		832	1	LUMP	STORM WATER POLLUTION PREV. PLAN, AS PER PROPOSAL NOTE	
	1																								200000	200000		832	200000	EACH	EROSION CONTROL, AS PER PROPOSAL NOTE	

CALCULATED

CHECKED

GENERAL SUMMARY

FRA-CR11-10.49

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SHEET NO.	STATION FROM	STATION TO	SIDE	644 CENTER LINE, 6" (DOUBLE, YELLOW)	644 CHANNELIZING LINE, 12"	644 STOP LINE, 24"	644 CROSSWALK LINE, 24"	644 TRANSVERSE/DIAGONAL LINE, 24"	644 LANE ARROW, AS PER PLAN	644 CENTERLINE 6" SOLID (YELLOW)
	FROM	TO		FT	FT	FT	FT	FT	EACH	FT
65	112+55	115+66	L	311						
65	112+55	115+66	R	331						
65	112+55	115+66	C					114		
65	116+53	116+00	R	47						
65	116+53	116+93	L		40					
65	116+65		C						1	
65	116+84		C							
66	117+00	117+03	R	3						
66	117+03	117+53	C	50						
66	117+53	118+03	L	50						
66	117+61	118+03	R		42					
66	117+72		C							
66	117+91		C						1	
66	118+65	122+00	L	335						
66	118+65	122+00	R	335						
66	118+65	122+00	C					109		
68	122+00	127+00	L	500						
68	122+00	127+00	R	500						
68	122+00	123+50	L,R					62		
68	124+00	127+00	L							300
68	124+00	127+00	R							300
68	124+40		C						1	
68	12468		C						1	
68	127+00	128+95	L							195
68	127+00	128+95	R							195
68	128+28		C						1	
68	129+69	131+00	L	131						
68	129+69	131+00	R		131					
68	129+84		R						1	
68	130+41		C						1	
68	130+58		R						1	
69	131+00	132+05	L	105						
69	131+00	132+18	R		118					
69	131+75		C						1	
69	131+88		R						1	
69	132+05		C			12				
69	132+18		R			23				
69	132+39		C				68			
69	132+53		C				91			
69	111+05 (US 62)		C				56			
69	111+14(US 62)		C				52			
69	111+23 (US 62)		L			33				
69	111+23 (US 62)	111+52 (US 62)	L		29					
69	111+30 (US 62)		L						1	
TOTALS CARRIED TO GENERAL SUMMARY				2698	360	68	267	285	11	990

CALCULATED

CHECKED

PAVEMENT MARKING SUBSUMMARY

FRA-CR11-10.49

REF. NO.	SHEET NO.	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED	630 SIGN, FLAT SHEET, AS PER PLAN	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED SIGN, AS PER PLAN	SPECIAL 4.0 INCH NPS STREET NAME SIGN SUPPORT, FURNISH ONLY (COL. ITEM 637)	SPECIAL STREET NAME SIGN (COL. ITEM 637)
						FT	FT	SQ FT	EACH	SQ FT	EACH	EACH	EACH	SQ FT
S1	65	114+00	RT	R2-1-24	24X36	13		6						
S2	65	116+53	RT	R1-1-30	30X30			6.25						
S3	65	116+53	RT	SPECIAL BY CITY	36X12								1	3
S4	65	116+53	RT	SPECIAL BY CITY	36X12									3
S5	66	117+03	RT	R3-8-30	30X30	13		6.25						
S6	66	117+03	LT	RE-8-30	30X30	13		6.25						
S7	66	118+06	LT	R1-1-30	30X30			6.25						
S8	66	118+06	LT	SPECIAL BY CITY	36X12								1	3
S9	66	118+06	LT	SPECIAL BY CITY	36X12									3
S10	67	122+60	LT	SUPPLIED BY FCEO	24X18	13								
S11	67	122+60	LT	SUPPLIED BY FCEO	24X18									
S12	68	127+25	LT	R2-1-24	24X36	13		6						
S14	68	128+57	RT	SUPPLIED BY FCEO	24X18	13								
S15	68	128+57	RT	SUPPLIED BY FCEO	24X18									
S16	68	40+47 (BIG RUN AVE)	RT	W5-1-36	36X36	15		9						
S17	68	40+47 (BIG RUN AVE)	RT	W14-2-30	30X30			6.25						
S18	68	40+43 (BIG RUN AVE)	LT	R1-1-30	30X30			6.25						
S19	68	40+43 (BIG RUN AVE)	LT	SPECIAL BY CITY	36X12								1	3
S20	68	40+43 (BIG RUN AVE)	LT	SPECIAL BY CITY	36X12									3
S20A	68	130+00	RT	R3-H8bd-30	30X30	13		6.25						
S21	69	112+13 (US 62)	LT	R3-H8bb-30	30X30	13		6.25						
S22	69	111+23 (US 62)	LT	RELOCATE		13				3				
S23	69	111+05 (US 62)	LT	RELOCATE								1		
S24	69	132+39	RT	RELOCATE			1			3				
S25	69	132+39	RT	RELOCATE			1			3				
SR1	65	116+49	RT	REMOVAL					1					
SR2	65	116+53	RT	REMOVAL					1					
SR3	65	116+53	RT	REMOVAL					1		1			
SR4	66	117+72	RT	REMOVAL					1		1			
SR5	66	117+00	LT	REMOVAL					1		1			
SR6	66	118+03	LT	REMOVAL					1		1			
SR7	66	118+03	LT	REMOVAL					1					
SR8	66	118+05	LT	REMOVAL					1		1			
SR9	66	121+92	RT	REMOVAL					1		1			
SR10	67	122+60	LT	REMOVAL					1		1			
SR11	67	123+37	LT	REMOVAL					1		1			
SR12	67	123+43	RT	REMOVAL					1		1			
SR13	67	124+80	LT	REMOVAL					1		1			
SR14	67	124+82	RT	REMOVAL					1		1			
SR15	68	127+45	RT	REMOVAL					1		1			
SR16	68	127+33	LT	REMOVAL					1		1			
SR17	68	128+57	RT	REMOVAL					1		1			
SR18	68	128+57	RT	REMOVAL					1					
SR19	68	129+45	RT	REMOVAL					1		1			
SR20	68	129+75	RT	REMOVAL					1		1			
SR21	68	129+80	RT	REMOVAL					1					
SR22	68	129+80	RT	REMOVAL					1					
SR23	69	132+53	LT	REMOVAL					1		1			
TOTALS CARRIED TO GENERAL SUMMARY						132	2	71	23	9	17	1	3	18

CALCULATED

CHECKED

SIGNING SUBSUMMARY

FRA-CR11-10.49

REFERENCE NO.	STATION		SIDE	603	603	603	603	603	603	603	603	604	604	604	604	604	SPECIAL	SPECIAL	603	601	604		
				8" CONDUIT, TYPE C	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	36" CONDUIT, TYPE B	36" CONDUIT, TYPE C	TYPE "C" MANHOLE (COC STD DWG AA-S102)	STANDARD CATCH BASIN (COC STD DWG AA-S133)	CURB AND GUTTER INLET (COC STD DWG AA-S125)	CAST IN PLACE PIPE CULVERT ENDWALLS (COC STD DWG AA-S165)	CATCH BASIN 12" DIAMTER (COC STD DWG AA-S130)	PRECAST TRENCH DRAIN	MANUFACTURED SYSTEM	MASONRY COLLAR	RIPRAP CUTOFF WALL	4"BASE PIPE UNDERDRAIN		
	FROM	TO		FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	FT		
D1	115+66		R			24							1										
D2	115+66		R		39									1									
D3	115+66		L			17								1									
D4	115+66	117+82	L			216						1											
D5	117+82		L			17								1									
D6	117+82	119+50	L		169							1											
D7	117+82		L			11							1										
D8	119+50		R			16							1										
D9	119+50		R		39									1									
D10	119+50		L			17								1									
D11	119+50	122+50	L					300				1											
D12	122+50		R		39									1									
D13	122+50		L			17								1									
D14	122+50	123+08	L					59				1											
D15	123+08		L					7										1					
D16	124+76		R							82					1					1			
D17	124+86	126+00	R			116								1									
D18	124+86		L		39									1									
D19	124+76		L								57	1			1								
D20	126+00		R			206							1										
D21	126+00		R			20								1									
D22	126+00		L		39									1									
D23	126+19		L			25							1							1			
D25	126+00	126+19	L			21									1						1		
D26	128+05		L		39									1									
D27	128+05		R			7								1									
D28	128+05	128+95	R			91						1											
D29	128+05		R			14							1										
D30	128+95		L		39									1									
D31	128+95		R			18								1									
D32	128+95	129+68	R		82							1											
D33	128+95		R			10							1										
D34	129+68		R			10							1										
D35	129+68		R		133							1											
D35A	130+50	131+00	L			56							1										
D36	131+00		L		39									1									
D37	131+00		R	20			113							1					1				
D38	131+00		R			17							1										
D39	132+37		L			38						1					122						
D40	132+13		L		49									1									
D40A	131+50	132+13	L			67										1							
D41	132+13		R			7								1									
D42	132+13	132+17	R		23				5			1											
D43	132+17	132+64	R						47									1					
	112+25	118+11	L																		681		
	113+50	116+15	R																		300		
	116+44	129+20	R																		1322		
	118+34	132+86	L																		1495		
TOTALS CARRIED TO GENERAL SUMMARY				20	768	1051	113	373	52	82	57	10	10	19	3	1	122	2	2	2	3798		

CALCULATED

CHECKED

DRAINAGE SUBSUMMARY

FRA-CR11-10.49

REF. NO.	SHEET NO.	STATION TO STATION		SIDE	202 FENCE REMOVED	202 GATE REMOVED	202 MAILBOX REMOVED	202 HEADWALL REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 WALK REMOVED	202 GUARDRAIL REMOVED	202 ANCHOR ASSEMBLY REMOVED	202 ANCHOR ASSEMBLY REMOVED TYPE A	SPECIAL PARKING BLOCK REMOVED	625 PULL BOX REMOVED	202 BRIDGE TERMINAL ASSEMBLY REMOVED		
		FROM	TO		FT	EACH	EACH	EACH	FT	FT	EACH	EACH	SQ FT	FT	EACH	EACH	EACH	EACH	EACH		
R-1	21	112+38	117+96	LT.	592																
R-2	21	115+98	11+62	RT.					65												
R-3	22	117+78									1										
R-4	22	29+52	29+42	LT.									74								
R-5	22	29+52	29+42	RT.									72								
R-6	22-23	118+49	122+83	LT.	436																
R-7	22	120+57	121+10	LT.	53																
R-8	22-23	121+03	123+55	LT.										175		1			2		
R-9	22-23	121+81	123+47	RT.										87.5		1			2		
R-10	22-23	121+54	122+06	RT.	52																
R-11	23	122+05		LT.		1															
R-12	23	124+75	127+03	LT.										202	1						
R-13	23	124+74	125+01	RT.										27							
R-14	23	124+94	125+27	LT. & RT				2		59											
R-15	23	125+41		LT			1														
R-16	23	126+15	126+32	RT.					18												
R-17	23	126+27		LT			1														
R-18	23	126+20	126+42	LT					22												
R-19	23	126+80	126+98	RT.					19												
R-20	23	126+84		LT			1														
R-21	24	127+10	127+14	RT.					4												
R-22	24	127+10	127+12	RT.										20							
R-23	24	127+81	130+54	LT					273												
R-24	24	128+02		LT													2				
R-25	24	128+39		LT													1				
R-26	24	128+56		LT													1				
R-27	24	128+64		LT			2														
R-28	24	128+79	130+00	RT.	121																
R-29	24	129+36	129+79	RT.					44												
R-30	24	129+25	130+26	RT.	163																
R-31	24	130+26	130+46	RT.		2															
R-32	24	130+46	131+16	RT.	74																
R-33	24	130+21	130+53	RT.																	
R-34	24	130+24	130+53	RT.		2			33												
R-35	24	130+44	130+45	LT	14																
R-36	25	131+17		LT		1															
R-37	25	131+10	132+64	RT.					193			1									
R-38	25	131+24	132+33	RT.													5				
R-39	25	132+36	132+75	LT.													6				
R-40	25	132+50	132+80	LT.					31												
R-41	25	132+70		LT.														1			
TOTALS CARRIED TO GENERAL SUMMARY					1505	6	5	2	702	59	1	1	146	511.5	1	2	15	1	4		

CALCULATED

CHECKED

REMOVAL SUBSUMMARY

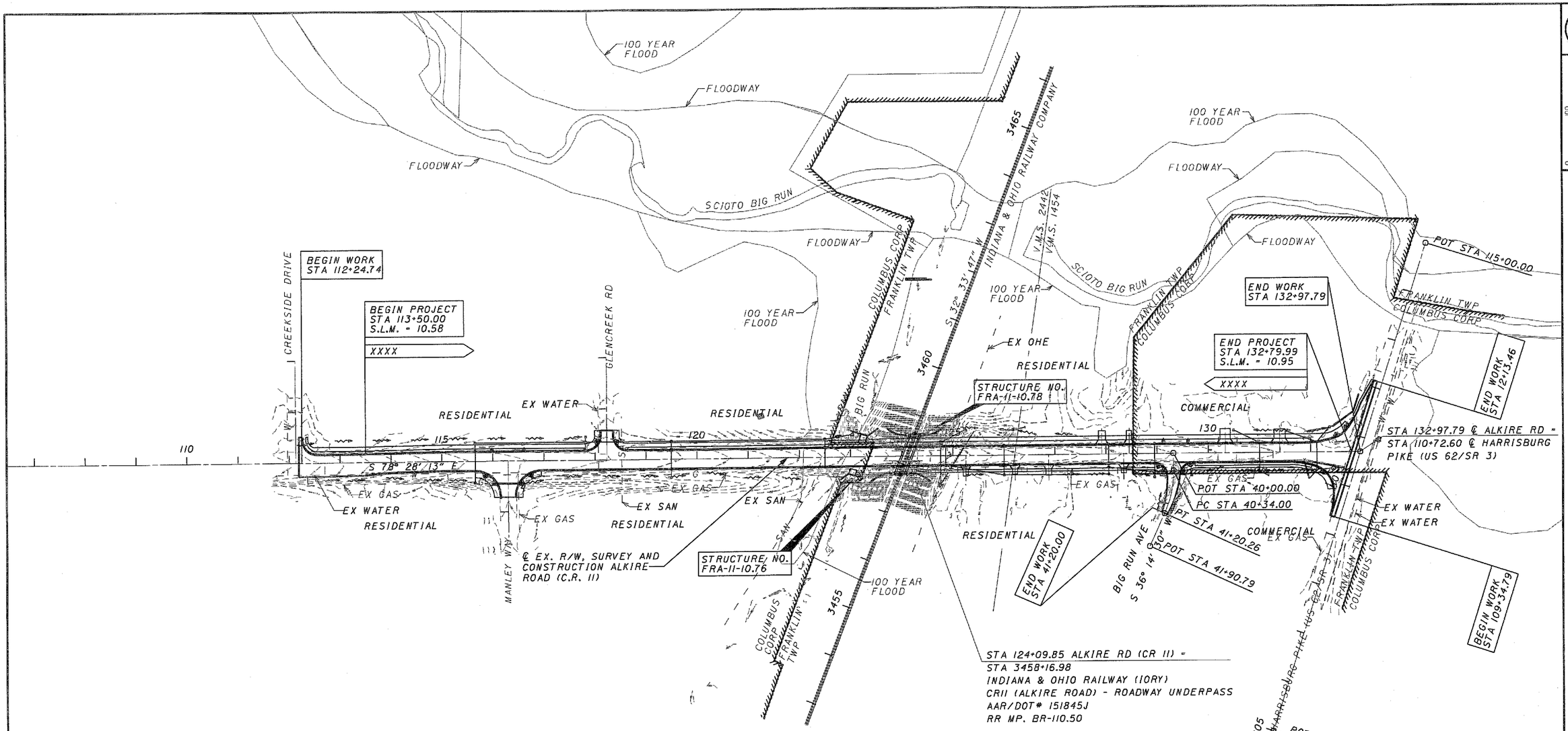
FRA-CR11-10.49

REF. NO.	SHEET NO.	STATION TO STATION		SIDE	606 GUARDRAIL, TYPE 5 FT	606 GUARDRAIL, TYPE 5, LONG SPAN FT	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	606 ANCHOR ASSEMBLY, TYPE T EACH	606 ANCHOR ASSEMBLY, TYPE E-98 EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	608 4" CONCRETE SIDEWALK (AS PER PLAN-COC STD DWG 2300) SQ FT	609 8" CONCRETE COMBINED CURB & GUTTER, (COC STD DWG 2020) FT	SPECIAL CURB RAMP, TYPE A EACH	SPECIAL CURB RAMP, TYPE C EACH	SPECIAL 24" DETECTABLE WARNING (COL, SS, 1551) EACH	SPECIAL FIRE HYDRANT VALVE-ADJ. TO GRADE EACH	SPECIAL FIRE HYDRANT RELOCATE EACH	SPECIAL VALVE BOX- ADJ. TO GRADE EACH	254 PAVEMENT PLANING-3.25" SQ YD	254 PAVEMENT PLANING-2.0" SQ YD		
		FROM	TO																				
G-1	22-23	120+96	122+83	RT.	187.5																		
G-2	23	123+26		RT.			1																
G-3	23	122+97		LT.				1															
G-4	23	123+47	123+59	LT.	12.5																		
G-5	23	123+60		LT						1													
G-6	23	124+85	125+23	LT.	37.5																		
G-7	23	125+35		LT.					1														
G-8	23	124+85		LT.			1																
G-9	23	123+09	123+47	LT.		37.5																	
G-10	23	122+83	123+20	RT.		37.5																	
G-11	22	120+96		RT.					1														
C-1	21-22	112+25	118+11	LT								681											
C-2	21-22	113+50	116+15	RT.								300											
C-3	21-24	116+44	129+20	RT.								1322											
C-4	22-25	118+34	132+86	LT.								1495											
C-5	22-25	129+44	132+38	RT.								396											
W-1	21	115+66	116+13	RT.							663												
W-2	21	116+46	116+94	RT.							646												
W-3	23-24	124+28	129+18	RT.							2334												
W-4	24-25	129+46	132+43	RT.							1899												
	21	115+86		RT.									1		1								
	21	116+05		RT.									1		1								
	21	116+54		RT.									1		1								
	21	116+73		RT.									1		1								
	24	129+04		RT.									1		1								
	24	129+16		RT.									1		1								
	24	129+48		RT.									1		1								
	24	129+64		RT.									1		1								
	25	132+27		RT.									1		1								
	21	115+98		LT.										1	1								
	21	116+61		LT.										1	1								
	22	118+06		LT.									1		1								
	22	118+40		LT.									1		1								
	24	129+13		LT.										1	1								
	24	129+61		LT.										1	1								
	25	132+51		LT.									1		1								
	25	132+72		LT.									1		1								
U-1	21	115+11		RT.												1							
U-2	21	115+13		RT.													1						
U-3	21	116+06		RT.														1					
U-4	22	118+49		RT.														1					
	21	112+19	113+50																	665			
	26	132+82																			217		
TOTALS CARRIED TO GENERAL SUMMARY					237.5	75	2	1	2	1	5542	4194	13	4	17	1	1	2	665	217			

CALCULATED | CHECKED

ROADWAY SUBSUMMARY

FRA-CR11-10.49



PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY)	5.04 AC
PROJECT EARTH DISTURBED AREA	4.58 AC
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	1.25 AC
NOI EARTH DISTURBED AREA	5.83 AC
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.71
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.77
IMPERVIOUS AREA FOR PRE-CONSTRUCTION SITE	1.97 AC
IMPERVIOUS AREA FOR POST-CONSTRUCTION SITE	2.83 AC
SOIL SURVEY OF FRANKLIN COUNTY, OHIO	SHEET 44
IMMEDIATE RECEIVING WATERS	SCIOTO BIG RUN
SUBSEQUENT RECEIVING WATERS	SCIOTO RIVER
TOTAL MAXIMUM DAILY LOAD (MIAMI RIVER)	N/A

PROJECT DESCRIPTION

THE PROJECT INVOLVES THE CONSTRUCTION OF A NEW INDIANA & OHIO RAILWAY COMPANY BRIDGE OVER ALKIRE ROAD JUST WEST OF S.R. 62. THE NEW BRIDGE WILL BE LENGTHENED TO ACCOMODATE FOUR LANES IN THE FUTURE, ALTHOUGH THE CURRENT CONFIGURATION WILL BE ONE LANE IN EACH DIRECTION WITH A CENTER TURN LANE. A SHARED USE P ATH WILL ALSO BE LOCATED ON THE NORTH SIDE OF ALKIRE ROAD.

USGS QUADRANT - SOUTHWEST COLUMBUS, OHIO
LATITUDE: N 39° 54' 56"
LONGITUDE: E 83° 04' 09"
FEMA FIRM MAP NO. 39049C0240 G
FEMA FIRM MAP NO. 39049C0241 H

HORIZONTAL SCALE IN FEET
0 50 100 200

PROJECT SITE PLAN

FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

20
118

BEGIN WORK
STA 112+24.74

BEGIN PROJECT
STA 113+50.00
S.L.M. - 10.58

ALKIRE ROAD

DONALD R. PILKINGTON
3019 RIVERCLIFF RD

VIOLA E. CALDERON
& ENRIQUE CALDERON
3005 RIVERCLIFF RD

TERESA E. GINN &
ALLISON J. PERTUSET
2997 RIVERCLIFF RD

RHONDA K. BENNETT
2985 RIVERCLIFF RD

ROBERT J. KENDRICK &
CINDY A. KENDRICK
2977 RIVERCLIFF RD

TERESA W. CASE &
STEVEN J. COCHRAN
2971 RIVERCLIFF RD

NELSON C. JONES
2965 RIVERCLIFF RD

JOHN A. LOCKHART &
TERRI L. GRIMMETT
2959 RIVERCLIFF RD

JOHN B. HANNA &
JANICE A. HANNA
2953 RIVERCLIFF RD

KENNETH L. DAVY, SR.
& O.I. DAY
2064 SONDRA LANE

PAUL O. SAUNDERS, JR.
2056 SONDRA LANE

BENJAMIN J. HEADINGTON
2048 SONDRA LANE

SAMUEL HERNANDEZ &
RUTH HERNANDEZ
2040 SONDRA LANE

EVELYN F. HARRIS
1931 MANLEY WAY

TARIK GIBSON
2908 CREITH COURT

BEG FENCE REMOVE & REBUILT
+38.02
53.04' LT
+38.05
41.1' LT

EX OUT-BUILDING

4' CHAIN LINK FENCE REMOVED AND REBUILT

EX OUT-BUILDING

EX OUT-BUILDING

℄ CONST CREEKSIDE DR
N 11° 31' 47" E

CONST LIMITS

S ESMT

S ESMT

10' SLOPE EASEMENT

S ESMT

R/W

R/W

R/W

R/W

R/W

14"

6"

4"

6'

6'

20"

30'

90°

C-1

R-1

LEISURE PATH

MH TYPE C

12"-C

2"-C

12"-B

C&G

C&G INLET

15.98' LT

112

113

114 ℄ CONST & R/W ALKIRE RD
S 78° 28' 13" E

115

116

117

18'-0"

18'-0"

18'-0"

STA 112+13.16, ALKIRE RD=
STA 10+00.00, CREEKSIDE DR

STA 116+29.83, ALKIRE RD=
STA 20+00.00, MANLEY WAY

BEGIN TAPER
+50.00', 23.81' RT

END TAPER
+19.94', 18.00' RT

C-2

EX FH
VALVE
ATG

U-1

C&G

C&G INLET

02

EXPOSE
WATER MAIN

C-3

C&G

W-2

R-2

27.0'+/-W/L

39'-10"

EX EOP

12" WATER

RELOCATE FH TO
2' B/C

STD CB

01

EX 8"
VALVE
ATG

U-2

U-3

℄ CONST MANLEY WAY

LIGHT POLE
TO REMAIN

FLOWER BED
(DND)

FLOWER BED
(DND)

DOPWP UNDERGROUND
STREET LIGHTING

MATCH LINE 117+00

EX PLASTIC
FENCE (DND)

(93-67)

S ESMT

U ESMT

U ESMT

U ESMT

U ESMT

U ESMT

8" CB
(DND)

EX CB
(DND)

CONST
LIMITS

EX CB
(DND)

28'-10"

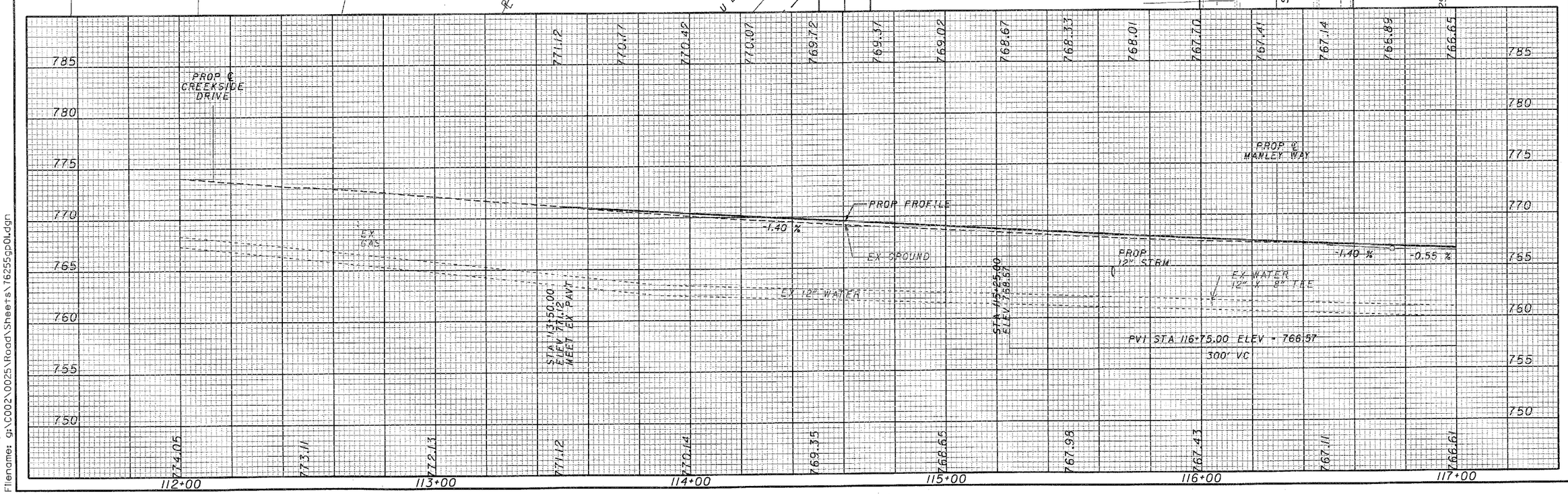
BUTT
JOINT

S 11° 31' 47" W

20

21

3.25" MILL AND FILL



PLAN AND PROFILE
BEGIN WORK TO STA 117+00

FRA-CR11-10.49

21
118

CALCULATED
CHECKED

HORIZONTAL
SCALE IN FEET
0 10 20 40

Plotted By: acscheiderer Date: 8/13/2009 Time: 4:16:01 PM
Filename: g:\C002\0025\Road\Sheets\76255gp01.dgn

DANIEL R. WASEM & JUDITH A. WASEM
2941 RIVERCLIFF ROAD

JOHN B. HANNA & JANICE A. HANNA
2953 RIVERCLIFF ROAD

WILLIAM YAEKLE & DANIELLE YAEKLE
2927 RIVERCLIFF ROAD

CATHY L. MOTT
2919 RIVERCLIFF ROAD

CHARLES CUMMINGS & PATRICIA CUMMINGS
2915 RIVERCLIFF ROAD

ROCHELLE HOWARD
2909 RIVERCLIFF ROAD

DAVID L. JORDAN, JR. & DAREN M. JORDAN
2903 RIVERCLIFF ROAD

END FENCE REMOVE & REBUILT
+95.83
60.0' LT

CONST LIMITS
4' CHAIN LINK FENCE REMOVED AND REBUILT
T ESMT
STD CB
S ESMT

EX 8" VALVE

N 11° 31' 47" E 29

℄ CONST GLENCREEK RD

23'-1"

4' CHAIN LINK FENCE REMOVED AND REBUILT

+49.27
40.6' LT

EX OUT-BUILDING

6' WOOD FENCE REMOVED AND REBUILT

+18.18
40.4' LT

+18.18
40.3' LT

S ESMT

+56.93
41.4' LT

6' WOOD FENCE REMOVED AND REBUILT

CONST LIMITS

10' SLOPE EASEMENT

+09.67
40.7' LT

15"-C

12"-C

12"-B

MH TYPE C

LEISURE PATH

R=30'

C&G INLET

℄ CONST & R/W ALKIRE RD
S 78° 28' 13" E

STA 118+23.16, ALKIRE RD=
STA 30+00.00, GLENCREEK RD

90°

8" SAN

18'-0"

12'-1"

C&G

12" VALVE ATG

EX STREET LIGHTING CONTROLLER TO REMAIN

12" WATER

(93-67)

STD CB

DOPWP UNDERGROUND STREET LIGHTING

EX PLASTIC FENCE (DND)

CONST LIMITS

+53.80
40.9' RT

4' PLASTIC FENCE REMOVED AND REBUILT

TYPE E-98

GR TYPE 5

U ESMT

CAROL S. BALL
2900 CREITH COURT

TARIK GIBSON
2908 CREITH COURT

BRYAN K. BORGMAN & MELISSA D. BORGMAN
2894 CREITH COURT

ROGER M. SENERIUS & DENISE E. SENERIUS
2886 CREITH COURT

DELORES C. GRAVES & AUDREY GRAVES
2880 CREITH COURT

DONALD L. SCHABLIN & MARY A. SCHABLIN
2872 CREITH COURT

MATCH LINE 117+00

MATCH LINE 122+00

PROP ℄ GLENCREEK ROAD

EX WATER 12" x 8" TEE

EX 12" WATER

PVI STA 116+75.00 ELEV = 766.57
300' VC

STA 118+05.00 ELEV 765.71

EX 8" SAN

EX GROUND

PROP PROFILE

PROP 12" STRM

EX THRUST BLOCK AND PLUG

0.55 %

-2.60 %

STA 120+00.00 ELEV 764.78

PVI STA 121+00.00 ELEV = 764.23
200' VC

STA 122+00.00 ELEV 761.63

EX TEL

766.65 766.44 766.24 766.06 765.89 765.75 765.61 765.47 765.33 765.20 765.06 764.92 764.79 764.61 764.38 764.08 763.79 763.29 762.80 762.25 761.63

766.61 766.34 766.11 765.84 765.66 765.21 764.72 764.19 763.55 762.92 762.02

780 775 770 765 760 755 750 745

117+00 118+00 119+00 120+00 121+00 122+00

PLAN AND PROFILE
STA 117+00 TO STA 122+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED
CHECKED

FRA-CR11-10.49

22
118

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PLAN AND PROFILE
STA 122+00 TO STA 127+00

FRA-CR11-10.49

23
118

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED
CHECKED

WILLIAM M. TAYLOR & SHERRY D. TAYLOR
2897 RIVERCLIFF ROAD
+83.49 89.5' LT

TEMP BM #1
IPS
STA 122+63.48
OFFSET - 18.95' LT
ELEV 759.88

CSX TRANSPORTATION INC / B & O RR
RAILROAD COMPANY

STA 124+09.85 ALKIRE RD (CR 11) =
STA 3458+16.98
INDIANA & OHIO RAILWAY (IORY)
CRII (ALKIRE ROAD) - ROADWAY UNDERPASS
AAR/DOT# 151845
RR MP. BR-110.50

LARRY H. MULFORD & MARY A. MULFORD
2436 ALKIRE ROAD

3' CHAIN LINK FENCE REMOVED AND REBUILT

4' CHAIN LINK FENCE REMOVED AND REBUILT

4' PLASTIC FENCE REMOVED AND REBUILT

MATCH LINE 122+00

MATCH LINE 127+00

CONST LIMITS

CONC BARRIER END SECTION, TYPE D

BTA, TYPE 2

BTA TYPE 1

BARRIER, TYPE D

MH TYPE C

GR TYPE 5 LONG SPAN

GR TYPE 5

C&G INLET

R/W +64.70 41.5' LT

SL ESMT

U ESMT

T ESMT

+84.66

+55.96 51.4' RT

+04.60 50.5' RT

+36.51

RIPRAP CUTOFF WALL (ODOT SCD DM-1.1)

ENDWALL (AA-S165)

STD CB

MASONRY COLLAR

EX 12" STM

TYPE E-98 ANCHOR ASSEMBLY

LEISURE PATH

℄ CONST & R/W ALKIRE RD

S 78° 28' 13" E

SIDEWALK

INDIANA & OHIO RAILWAY COMPANY

℄ CONST INDIANA & OHIO RAILWAY COMPANY

COLUMBUS CORP. BD. FRANKLIN TWP.

GEORGE C. SMITH
2473 ALKIRE ROAD

EX GRAVEL DRIVE

EX 2 STORY FRAME

LINDA L. WILBURN TR
2459 ALKIRE ROAD

LINDA L. WILBURN TR
2451 ALKIRE ROAD

EX 2.5 STORY FRAME

TEMP BM # 2
IPS
STA 126+59.71
OFFSET - 17.49' RT
ELEV 749.57

V.M.S. 2442
V.M.S. 1454

I.R.S.

R-5 R-6 R-8 R-9 R-10 R-11 R-12 R-13 R-14 R-15 R-16 R-17 R-18 R-19 R-20

G-1 G-2 G-3 G-4 G-5 G-6 G-7 G-8 G-9 G-10

W-3

122 123 124 125 126

3457 3458 3459

NOTE:
1. THE RAILROAD RIGHT-OF-WAY SHOWN IS THE PROPERTY OF CSX TRANSPORTATION (AKA: BALTIMORE & OHIO RAILROAD CO.). THE TRACKS LOCATED WITHIN THIS RIGHT-OF-WAY ARE OWNED BY THE INDIANA & OHIO RAILWAY CO. (IORY). THE (IORY) LEASES THE PROPERTY FROM CSX TRANSPORTATION.

EX GROUND

PROP PROFILE

-2.60 %

PROP ℄ INDIANA & OHIO RAILWAY COMPANY

PROP ℄ DRIVE

PROP 12" STRM

PROP 18" STRM

EX 9'X2' BOX CULVERT PROP EXTENSION AT NORTH & SOUTH INVERTS

EX GAS

EX 36" RCP (TBR)

EX 30" SAN

STA 125+50.00 ELEV 752.53

PVI STA 126+25.00 ELEV = 750.58
150' VC

-0.83 %

STA 127+00.00 ELEV 749.96

761.63 760.98 760.33 759.68 759.03 758.38 757.73 757.08 756.43 755.78 755.13 754.48 753.83 753.18 752.53 751.92 751.36 750.91 750.52 750.20 749.96

762.02 760.85 759.69 758.50 757.39 756.23 754.92 753.61 752.61 751.92 751.47

770 765 760 755 750 745 740 735

122+00 123+00 124+00 125+00 126+00 127+00

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LARRY H. MULFORD & MARY A. MULFORD 2436 ALKIRE ROAD

EX 12" STM

EX GRAVEL DRIVE

EX 2 STORY FRAME

FRANKLIN TWP

COLUMBUS CORP

TEMP BM #3
IPS
STA 130+08.22
OFFSET = 23.78' LT
ELEV 746.41

CHAIN LINK FENCE REMOVED AND REBUILT

CHAIN LINK FENCE REMOVED AND REBUILT LECO II, LTD 2404 ALKIRE ROAD

+00.43
40.7' LT

+79.28
40.6' LT

CONST LIMITS

EX ASPHALT DRIVE

POOL

+43.88
53.8' LT

+44.51
40.7' LT

STD CB

T ESMT

ESMT

R/W

LEISURE PATH

MATCH LINE 127+00

MATCH LINE 131+00

C&G

C&G INLET

STA 129+32.30, ALKIRE RD=
STA 40+00.00, BIG RUN AVE

℄ CONST & R/W ALKIRE RD
S 78° 28' 13" E

+92.3

+45.3

+34.8

+33.6

18'-0"

12"-B

12"-C

R=25°

SIDEWALK

MH TYPE C

SAWCUT

STD CB

LINDA L. WILBURN TR
2451 ALKIRE ROAD

LINDA L. SMITH
2435 ALKIRE ROAD

CONST LIMITS

EX 2.5 STORY FRAME

EX 2 STORY FRAME

+76.58
39.0' RT

EX 6.5' CHAIN LINK FENCE TO BE REMOVED

PROP FENCE, TYPE CL

GEORGE C. SMITH
2155 HARRISBURG PIKE

℄ CONST BIG RUN AVE

R-21 R-22 R-23 R-24 R-25 R-26 R-27 R-28 R-29 R-30 R-31 R-32 R-33 R-34 R-35 W-4 CR-7

D26 D27 D28 D29 D30 D31 D32 D33 D34 D35 D36 D37 D38 D39

765 760 755 750 745 740 735 730

749.96 749.75 749.54 749.33 749.12 748.91 748.71 748.50 748.29 748.08 747.87 747.66 747.45 747.25 747.04 746.83 746.62

751.47 751.01 750.39 749.79 749.31 748.77 748.19 747.70 747.33

PROP ℄ DRIVE

PROP ℄ DRIVE

PROP ℄ DRIVE

PROP ℄ BIG RUN AVENUE

PROP ℄ DRIVE

EX GROUND

PROP PROFILE

-0.83 %

EX GAS

PROP 12" STRM

127+00 128+00 129+00 130+00 131+00

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED

CHECKED

PLAN AND PROFILE

STA 127+00 TO STA 131+00

FRA-CR11-10.49

24
118

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END PROJECT
STA 132+79.99
S.L.M. - 10.95

END WORK
STA 132+97.79

EX 1 STORY BRICK

LECO PROPERTIES, LTD.
2125 HARRISBURG PIKE

ALKIRE ROAD

EX 1.5 STORY FRAME

EX ASPHALT DRIVE

EX POST & CHAIN FENCE TO BE REMOVED & REBUILT AT ALTERNATE LOCATION

CONST LIMITS

CANOPY SL ESMT

SL ESMT

STD CB

040A

039

R/W

12"

12" C

LEISURE PATH 12" C

R-36

R-41

R-45°

R-39

040

C&G

C&G INLET

MATCH LINE 131+00

18'-0"

39.9

90°

S 78° 28' 13" E

132

℄ CONST & R/W ALKIRE RD

12"-B

R-37

R-38

C-5

R-37

C&G INLET

041

042

SIDEWALK

+17.10
39.0' RT

STD CB

15"-B

MH TYPE C

CONST LIMITS

+16.15
46.3' RT

PROP FENCE, TYPE CL

EX 6.5' CHAIN LINK FENCE TO BE REMOVED

GEORGE C. SMITH
2155 HARRISBURG PIKE

STA 132+17.26, 34.2' LT
RESERVED AREA FOR MANUFACTURED SYSTEM TYPE I

T R/W

T ESMT

EX 1 STORY STUCCO & FRAME

N 29° 27' 22" E
111
HARRISBURG PIKE (US62/SR3)

107° 50' 38"

R-40

12"

16.54'

℄ CONST & R/W

18"-B

R-50°

COLUMBUS CORP
FRANKLIN TWP

7'

N 29° 15' 10" E
110

24" STRM

20"

12" WATER

8" WATER

TEMP BM #4
PKS
STA 110+90.71
OFFSET = 33.48' RT
ELEV 745.58

STA 132+97.79, ALKIRE RD=
STA 110+72.60, HARRISBURG PIKE (US62/SR3)

2.0" MILL AND FILL

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED

CHECKED

PLAN AND PROFILE

STA 131+00 TO STA 132+97.79

FRA-CR11-10.49

25
118

760
755
750
745
740
735
730
725

746.62
746.41
746.21
746.04
745.95
745.95
746.04
746.16
747.33
746.86
746.56
746.25

PROP ℄ DRIVE

EX GROUND

PROP PROFILE

STA 132+79.99
ELEV 746.19
MEET EX PAVT

-0.83 %

+0.50 %

18" STRM (TBR)

EX GAS

PROP 12" STRM

STA 131+50.00
ELEV 746.21

PVI STA 132+00.00
ELEV = 745.79
100' VC

STA 132+50.00
ELEV 746.04

EX 10" GAS

EX MH
STA 132+63.76
30.68' RT
TG 746.03
E 24" (N,S) 740.85
ITO REMAIN

EX OPEN-ENDED 18"
STA 131+10.09
17.73' RT
℄ 18" (E) 744.55
(TBR)

EX CO
STA 131+87.60
16.70' RT
TG 745.69
E 18" (E) 742.84
E 18" (W) 742.86
E 6" (S) 743.56
(TBR)

131+00

132+00

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2.0" MILL AND FILL

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED

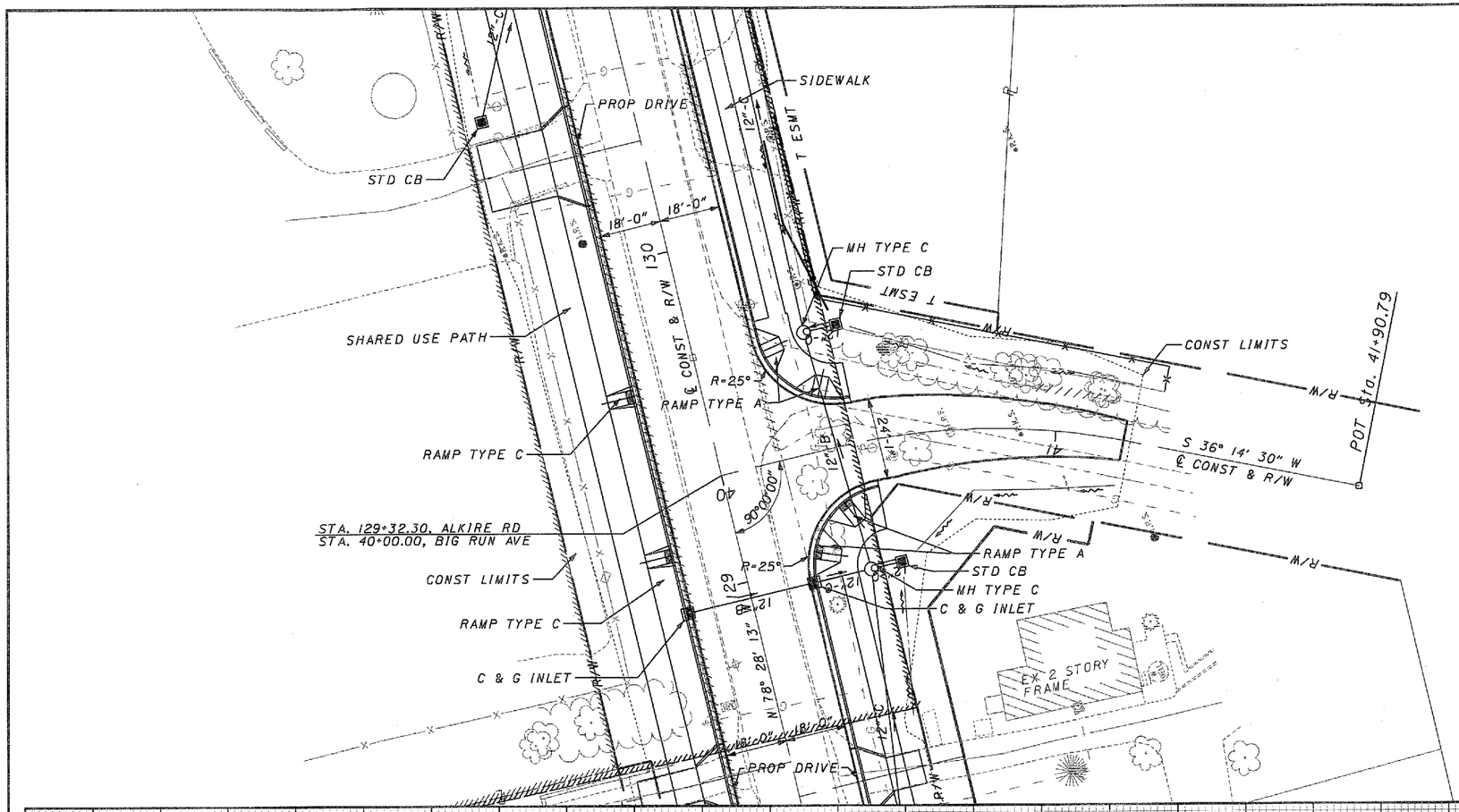
CHECKED

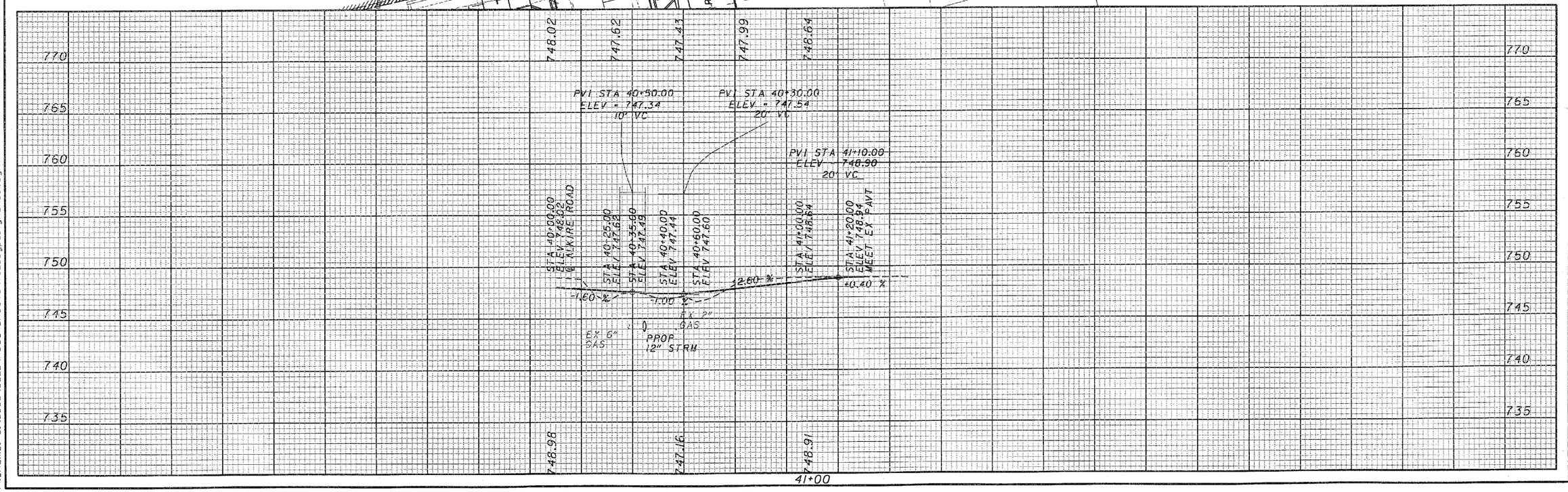
PLAN VIEW

ALKIRE ROAD/US 62 INTERSECTION

FRA-CR11-10.49

Plotted By: acscheiderer Date: 8/13/2009 Time: 4:05:44 PM
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HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED
CHECKED

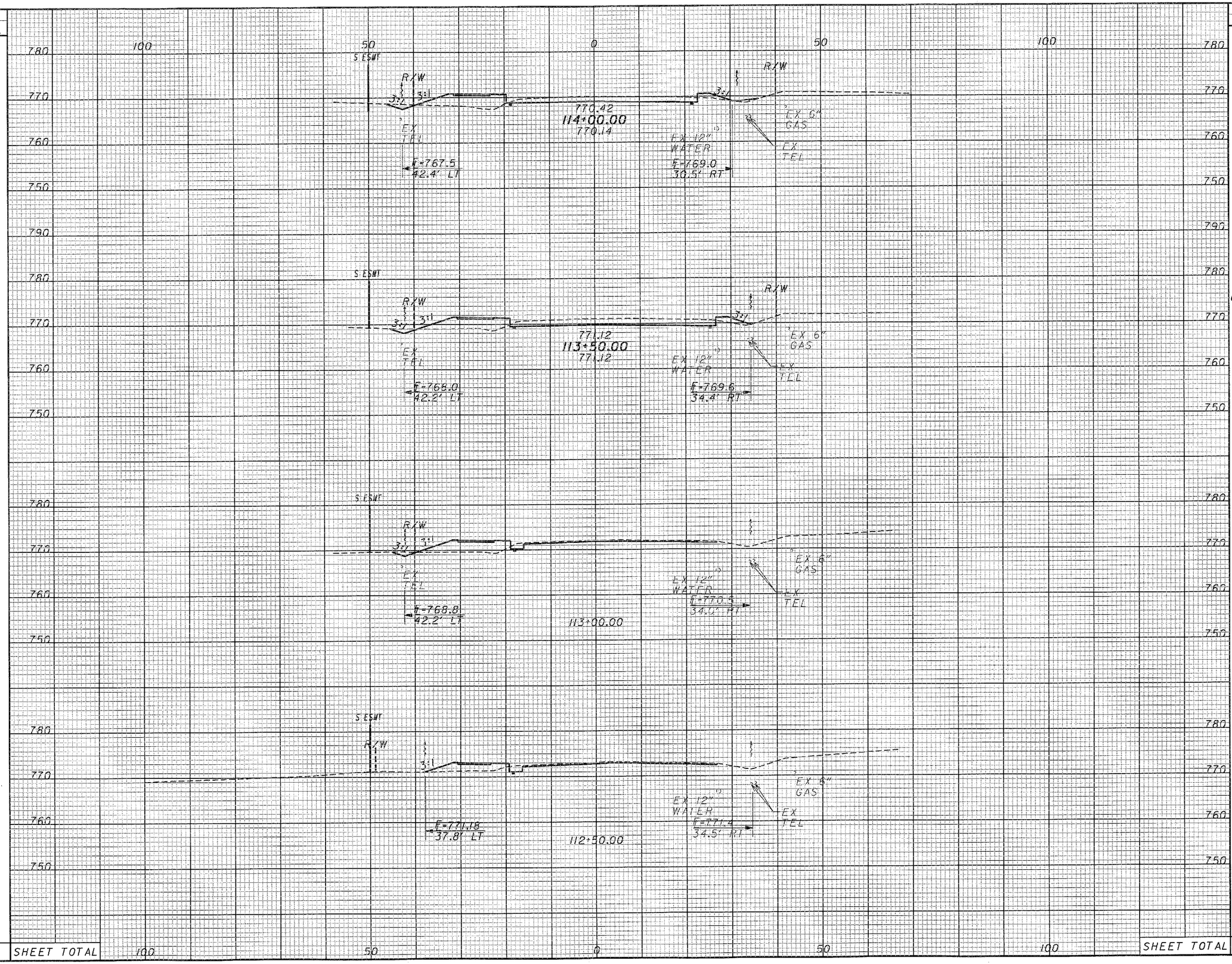
PLAN AND PROFILE BIG RUN AVENUE
STA 40+00 TO STA 41+20.26

FRA-CR11-10.49

27
118

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SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		
		730	958		
46	50.1				
		919	790		
64.3	44.7				
		680	708		
17.3	40.3				
		272	528		
15.3	23				
SHEET TOTAL	142.9	158.1	2601	2984	

CROSS SECTIONS
ALKIRE ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

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SEEDING		END AREA		VOLUME		
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	
						CALCULATED
						CHECKED
				213	376	
		40.1	71			
				633	1243	
		35.8	78.1			
				645	1192	
		41.6	64.9			
SHEET TOTAL		117.5	214	1491	2810	

100 50 0 50 100

780 770 760 750 740

S ESWT

R/W 3:1 3:1

EX TEL

F=765.2 44.1' LT

768.33
115+50.00
767.98

EX 12" WATER

EX 6" GAS

EX TEL

F=766.4 37.4' RT

R/W 3:1 8:1

S ESWT

R/W 3:1 3:1

EX TEL

F=766.3 44.0' LT

769.02
115+00.00
768.65

EX 12" WATER

EX 6" GAS

EX TEL

F=767.6 36.8' RT

R/W 3:1

S ESWT

R/W 3:1 3:1

EX TEL

F=766.9 42.8' LT

769.72
114+50.00
769.35

EX 12" WATER

EX 6" GAS

EX TEL

F=768.6 36.1' RT

R/W 3:1

100 50 0 50 100

CROSS SECTIONS
ALKIRE ROAD

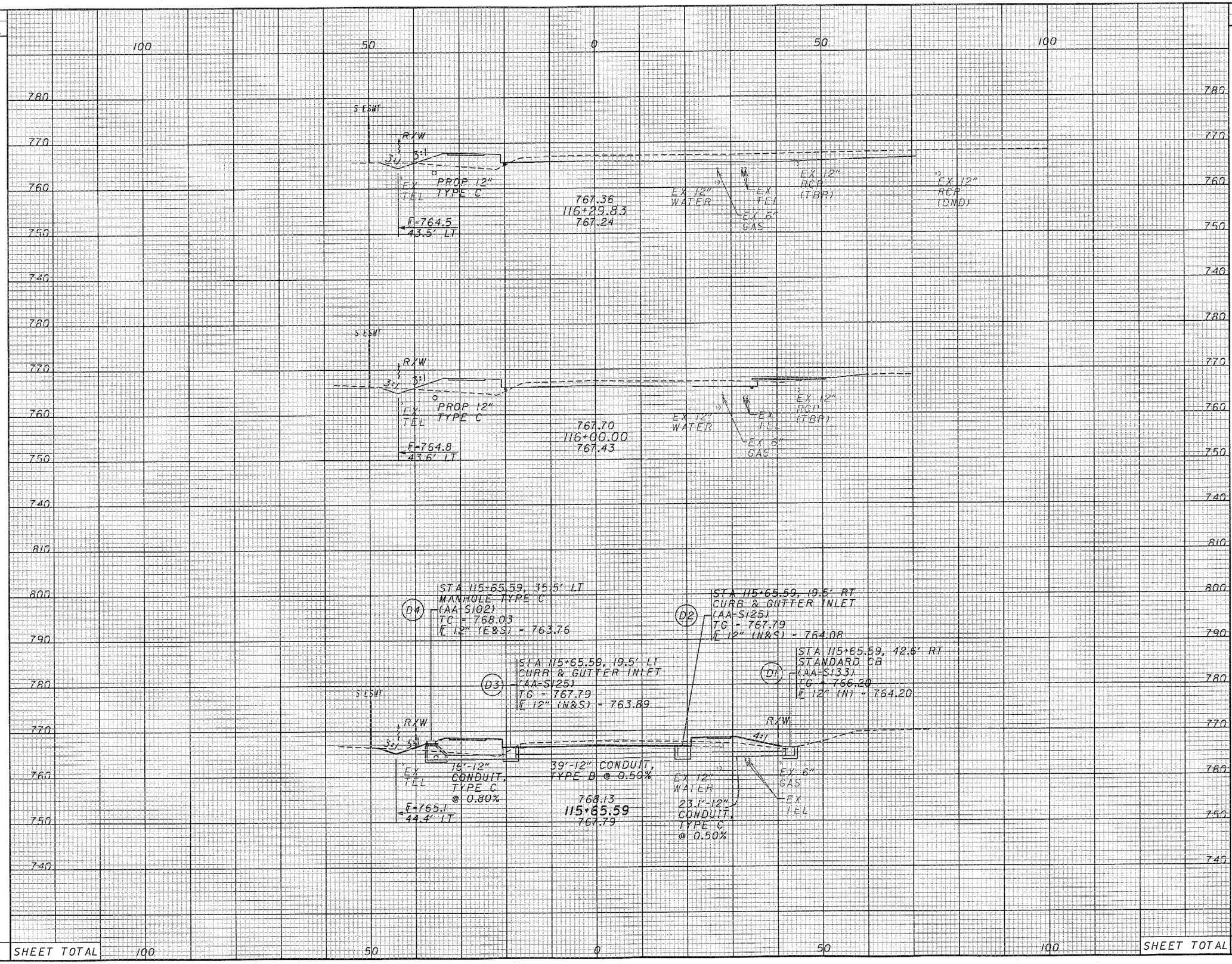
FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

29
118

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		880	299
137	45.4		
		994	495
62.9	54.1		
		601	734
41.9	73.8		
SHEET TOTAL 241.8	173.3	2475	1527

CALCULATED

CHECKED

CROSS SECTIONS ALKIRE ROAD

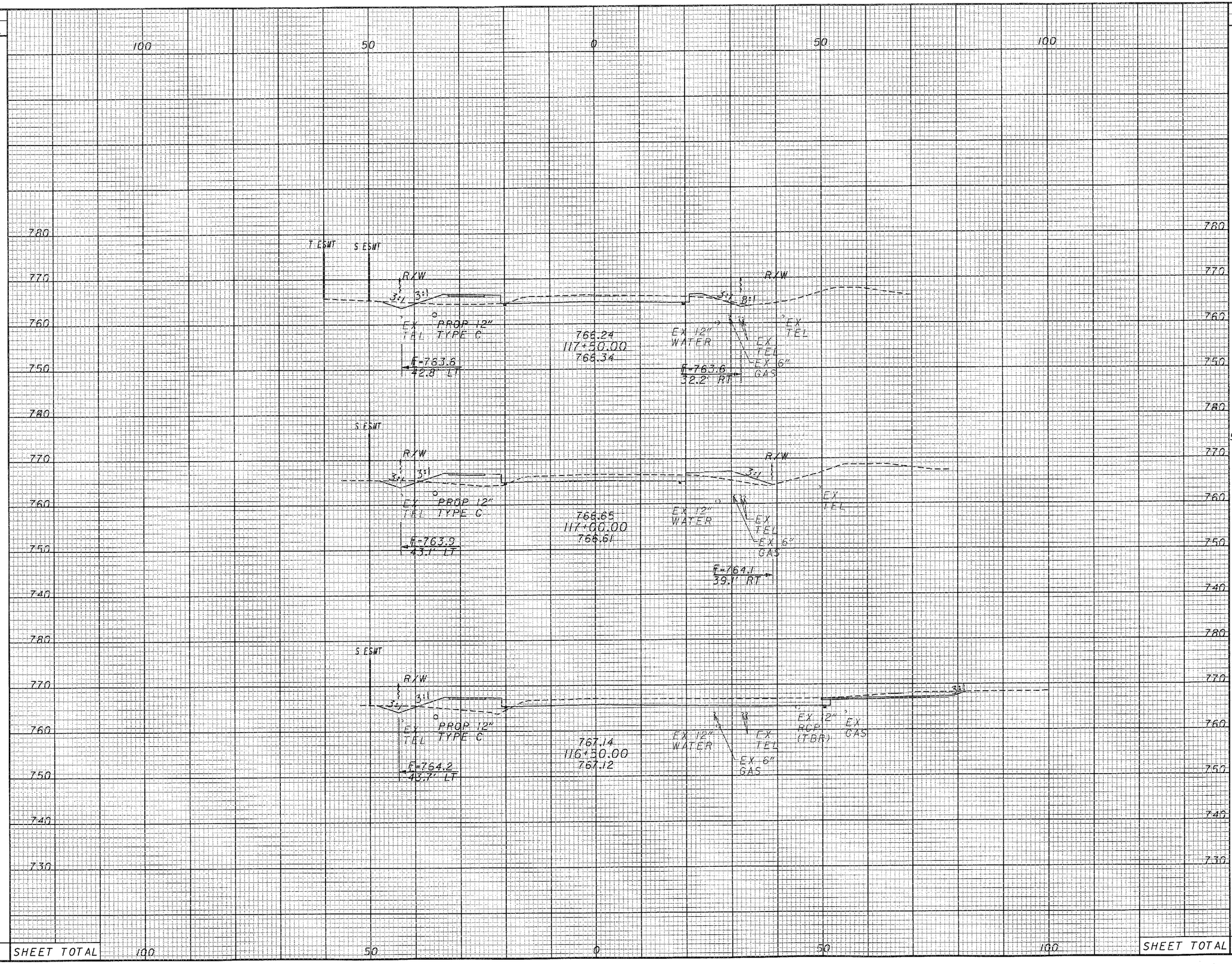
FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255

FCEO 1135

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SEEDING	
END WIDTH	SQ. YDS.



SHEET TOTAL	100	50	0	50	100

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		752	334
62.8	33.4		
		1002	758
57.4	57.5		
		1519	842
124.9	43.5		
SHEET TOTAL 245.1	134.4	3273	1933

CALCULATED

CHECKED

CROSS SECTIONS ALKIRE ROAD

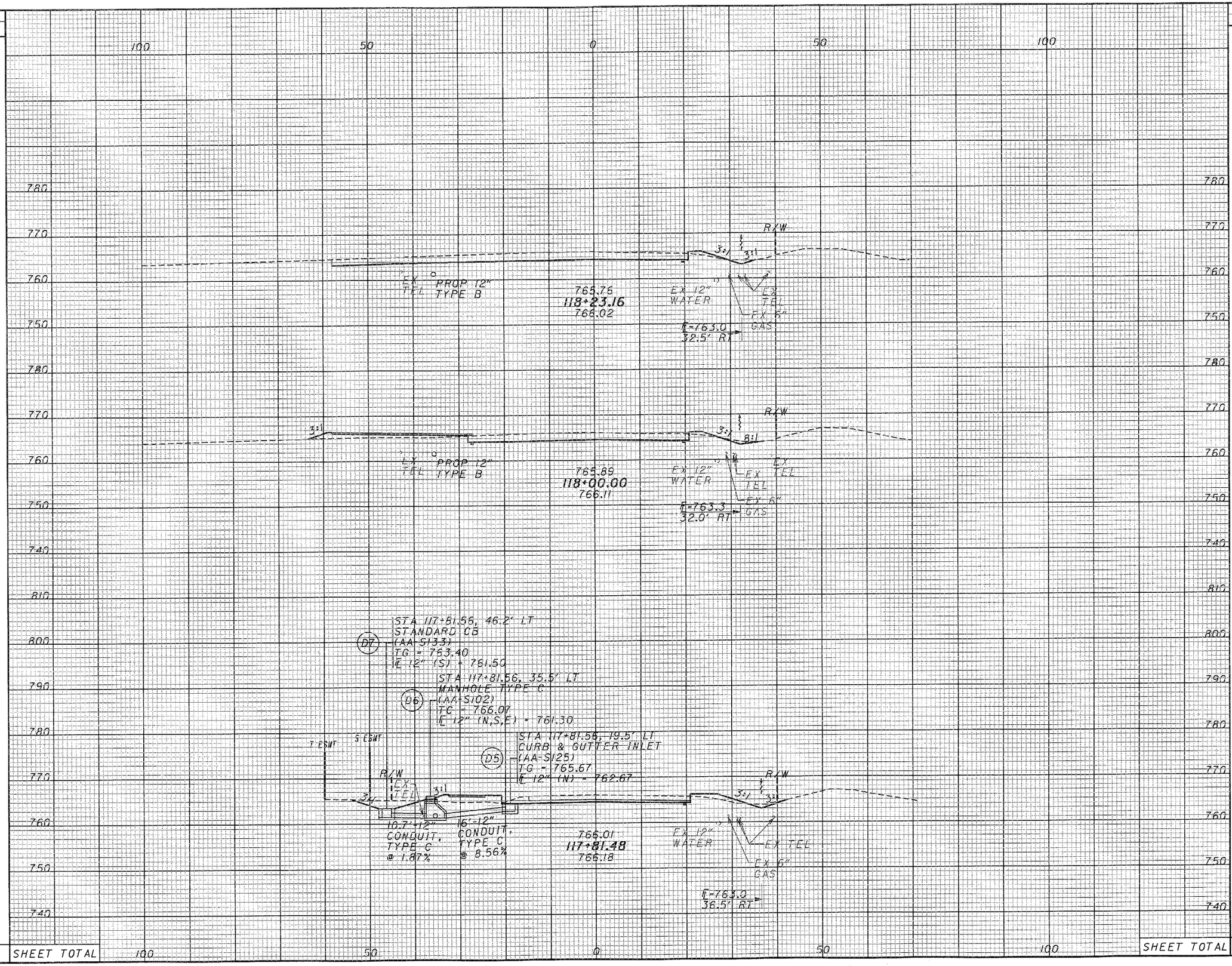
FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255

FCEO 1135

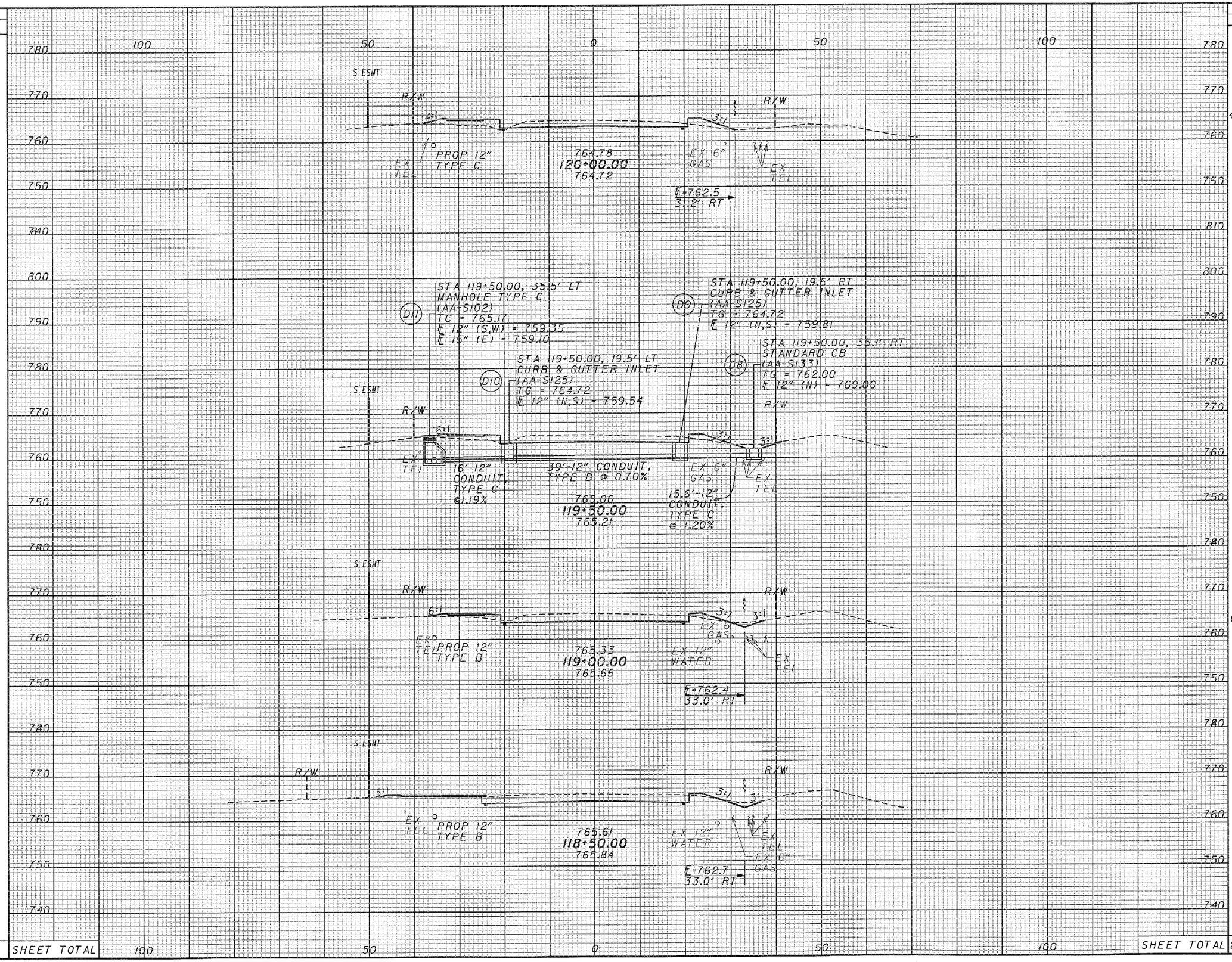
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SEEDING	
END WIDTH	SQ. YDS.



SHEET TOTAL											

SEEDING	
END WIDTH	SQ. YDS.



		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
				732	603
		46.6	29.3		
				901	422
		61.5	21.3		
				1076	302
		67.6	14.9		
				1223	164
		79.1	4.8		
SHEET TOTAL	100 50 0 50 100	254.8	70.3	3931	1490

CALCULATED | CHECKED

CROSS SECTIONS
ALKIRE ROAD

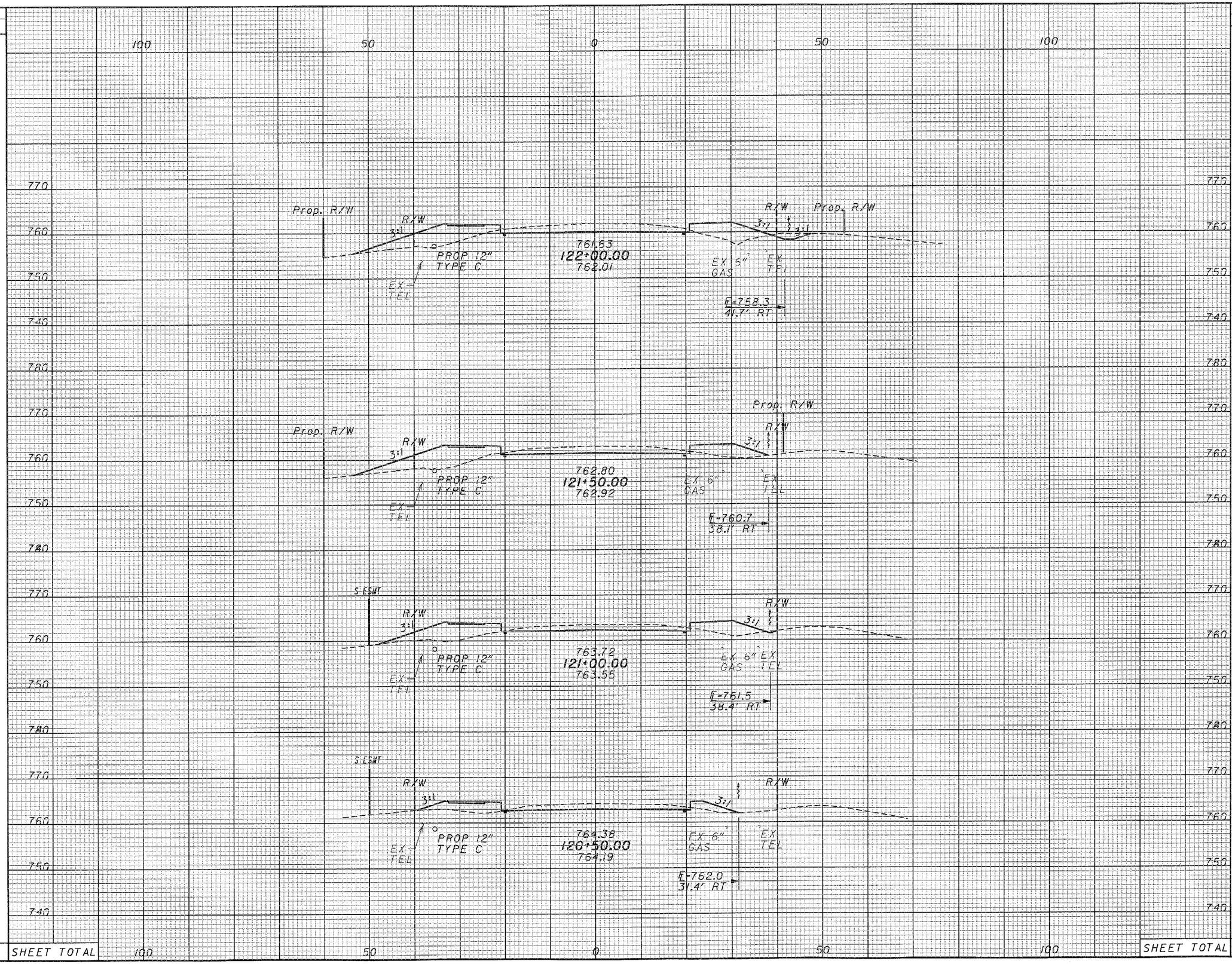
FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

33
118

SEEDING	
END WIDTH	SQ. YDS.
SHEET TOTAL	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1224	2007
69.3	124.9		
		1004	2045
51.2	120.5		
		787	1804
43.2	96		
		703	1158
41.2	43		
SHEET TOTAL	204.9	384.4	3718	7014

CALCULATED

CHECKED

CROSS SECTIONS ALKIRE ROAD

FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255

FCEO 1135

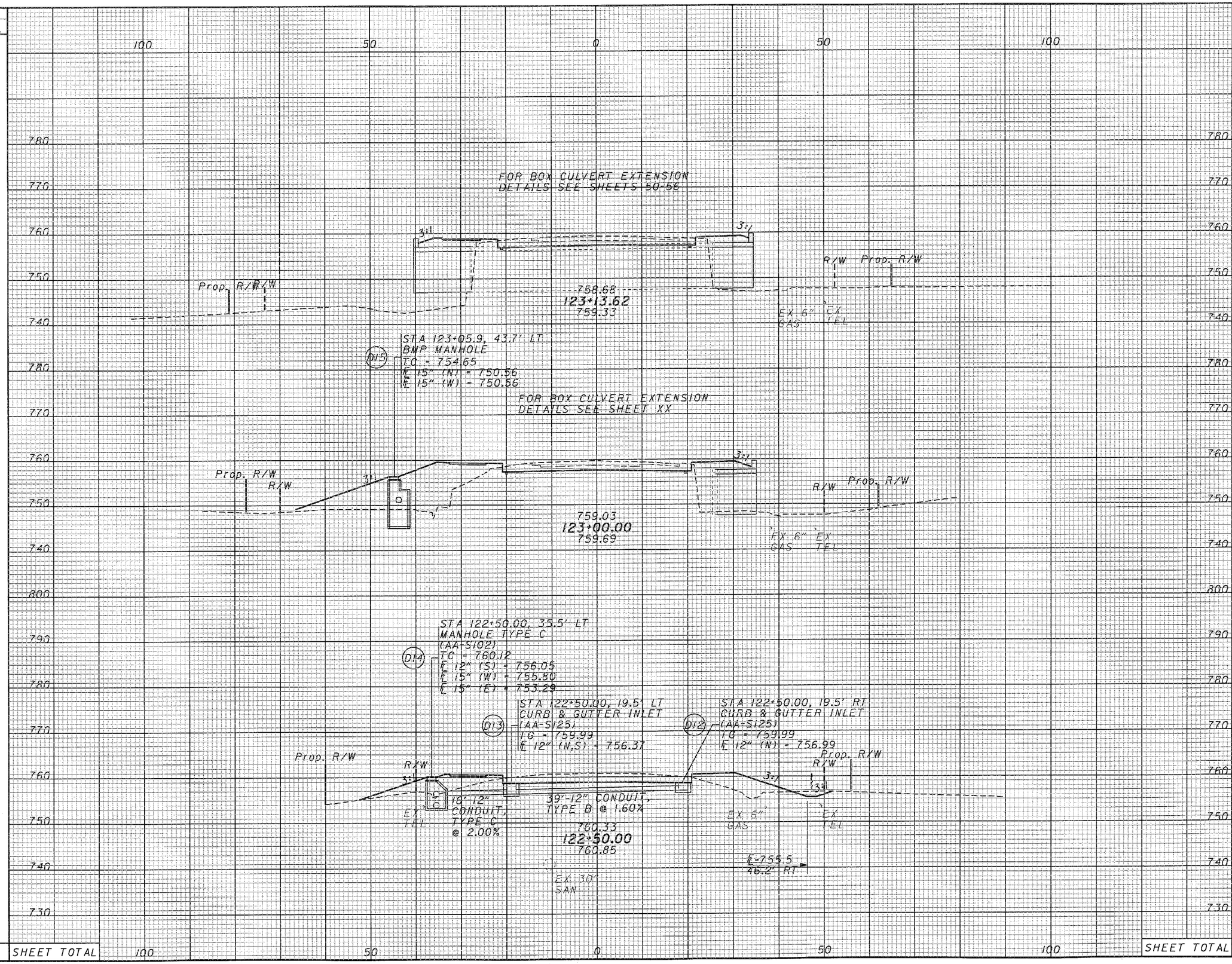
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SEEDING	
END WIDTH	SQ. YDS.
SHEET TOTAL	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		2687	3097
83.2	282.1		
		361	1465
75.9	363.3		
		1279	3993
77.6	115.9		
236.7	761.3	4328	8556

CALCULATED

CHECKED



SHEET TOTAL 100 50 0 50 100

CROSS SECTIONS
ALKIRE ROAD

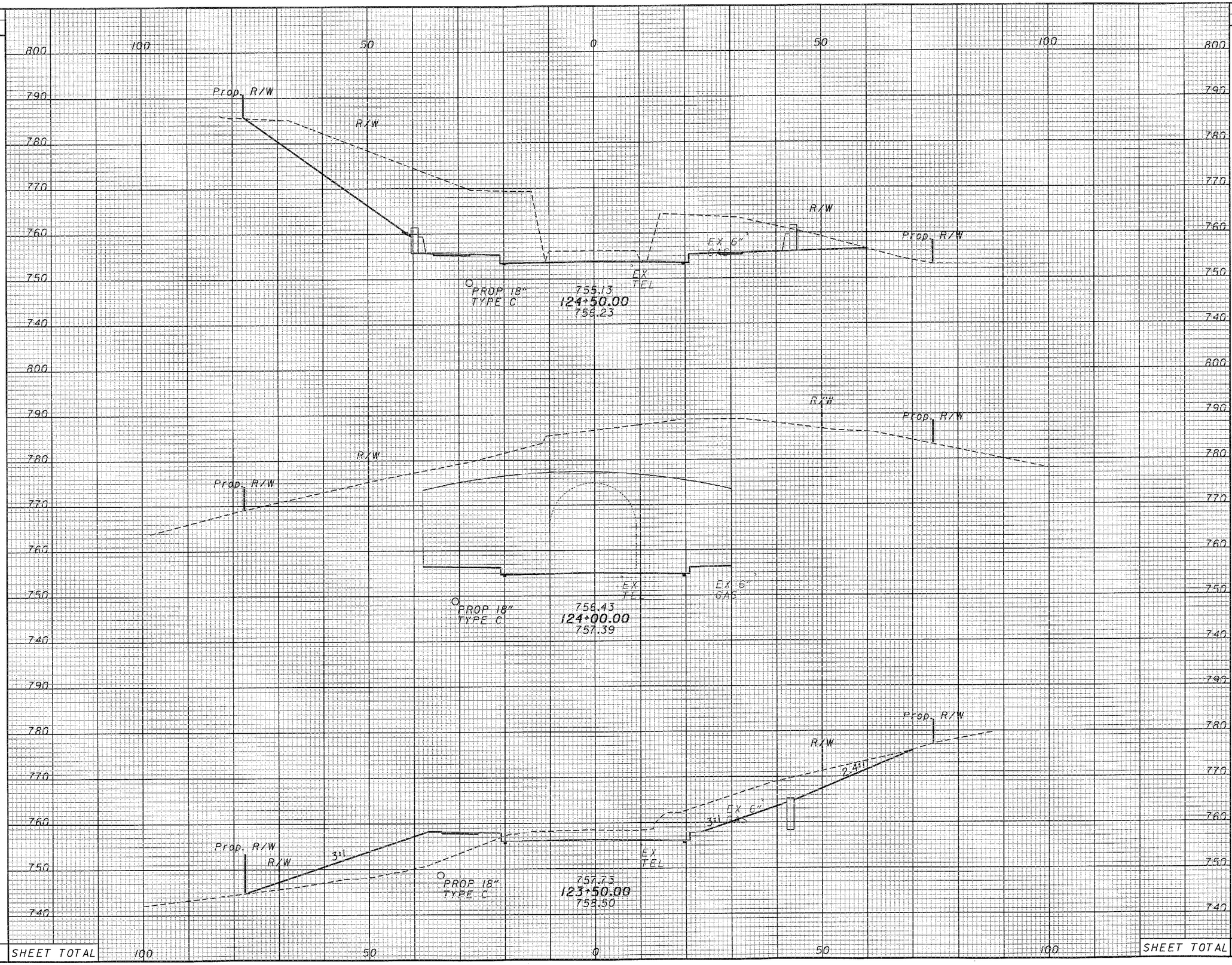
FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

35
118

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		3951	1269
810.9	0		
		19515	3812
SEE BRIDGE PLANS	SEE BRIDGE PLANS	19515	3812
360	228.7		
1170.9	228.7	42981	8892

SHEET TOTAL

CALCULATED

CHECKED

CROSS SECTIONS
ALKIRE ROAD

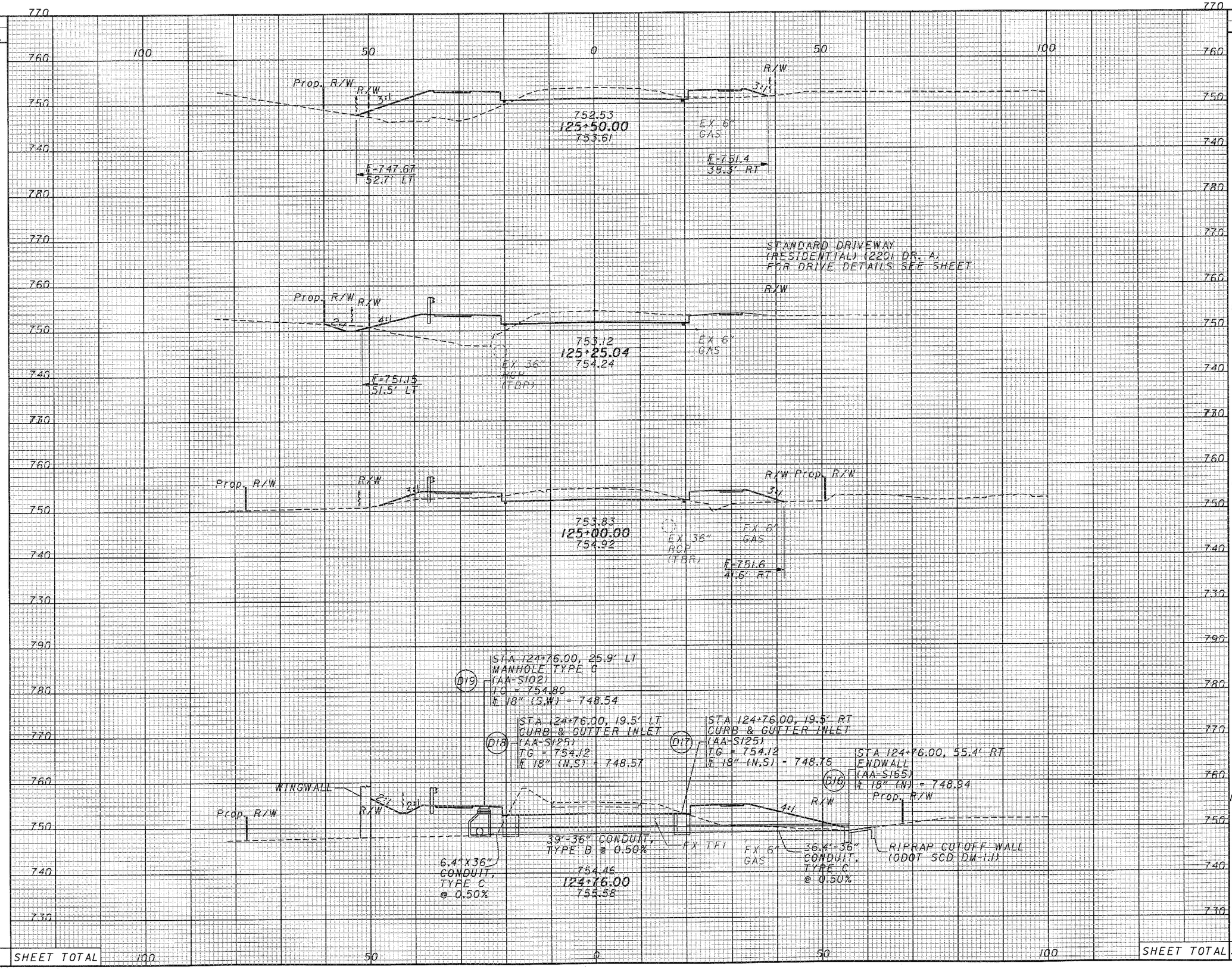
FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

36
118

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1327	2535
72	171.6		
		660	1307
86.6	142.6		
		692	877
79.1	67.6		
		720	1442
100.9	292.8		
SHEET TOTAL			
338.6	674.6	3398	6161

CALCULATED

CHECKED

CROSS SECTIONS
ALKIRE ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

37
118

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		
		437	38		
112.8	11				
		1257	300		
88.2	36.9				
		844	519		
		641	742		
90.5	72.9				
87.2	132.6				
SHEET TOTAL 378.7	253.4	3180	1598		

STANDARD DRIVEWAY
(RESIDENTIAL) (2201 DR. A)
FOR DRIVE DETAILS SEE SHEET

R/W
3:1
750.06
126+87.52
751.59
EX 12" CPP (DNE)
E=749.4
39.9' LT
EX 6" GAS

Prop. R/W
R/W
3:1
750.52
126+50.00
751.92
EX 12" CPP (DNE)
E=749.1
42.4' LT
EX 6" GAS

STA 126+18.60, 49.1' LT
STANDARD CB
(AA-S133)
TG = 748.90
E 12" (E,S,W) = 746.30
D23

STANDARD DRIVEWAY
(RESIDENTIAL) (2201 DR. A)
FOR DRIVE DETAILS SEE SHEET

Prop. R/W
R/W
18:1
4:1
750.95
126+21.65
752.23
EX 6" GAS

STA 125+98.52, 50.5' LT
ENDWALL
(AA-S165)
E 12" (E) = 746.10
D25

STA 126+00.00, 19.5' LT
CURB & GUTTER INLET
(AA-S125)
TG = 751.04
E 12" (N,S) = 747.75
D22

STA 126+00.00, 19.5' RT
CURB & GUTTER INLET
(AA-S125)
TG = 751.04
E 12" (N,S) = 747.94
D21

STA 126+00.00, 38.5' RT
STANDARD CB
(AA-S133)
TG = 750.70
E 12" (N) = 749.12
D20

Prop. R/W
R/W
5:1
3:1
39'-12" CONDUIT, TYPE B @ 0.50%
19'-12" CONDUIT, TYPE C @ 6.20%
EX 6" GAS
FOR DRAINAGE PROFILES SEE SHEET
751.38
126+00.00
752.61

770 760 750 740 730 780 790

100 50 0 50 100

SHEET TOTAL 100 50 0 50 100

CROSS SECTIONS
ALKIRE ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

38
118

SEEDING	
END WIDTH	SQ. YDS.

100 50 0 50 100

760 750 740 730 770

R/W 3:1 — EX 12" CPP (DND) — EX 12" RCP (TBR) — R/W Prod. R/W 3:1 3:1 — EX 6" GAS

749.12
128+00.00
750.39
E=748.1
38.2' RT

STANDARD DRIVEWAY
(RESIDENTIAL) (2201 DR. A)
FOR DRIVE DETAILS SEE SHEET

R/W — EX 12" CPP (DND) — EX 12" RCP (TBR) — R/W Prod. R/W 3:1 3:1 — EX 6" GAS

749.17
127+92.30
750.50
E=748.2
37.9' RT

R/W 2.5' — EX 12" CPP (DND) — R/W Prod. R/W 3:1 3:1 — EX 6" GAS

749.54
127+50.00
751.01
E=748.4
38.5' RT

R/W 3:1 — EX 12" CPP (DND) — R/W 4:1 — EX 6" GAS

E=749.3
40.0' LT
749.96
127+00.00
751.47

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		168	28
94.5	13.8		
		252	26
101.5	6.4		
		1375	180
93.5	19.1		
		1591	222
97.4	7.5		
SHEET TOTAL			
386.9	46.8	3385	455

CALCULATED | CHECKED

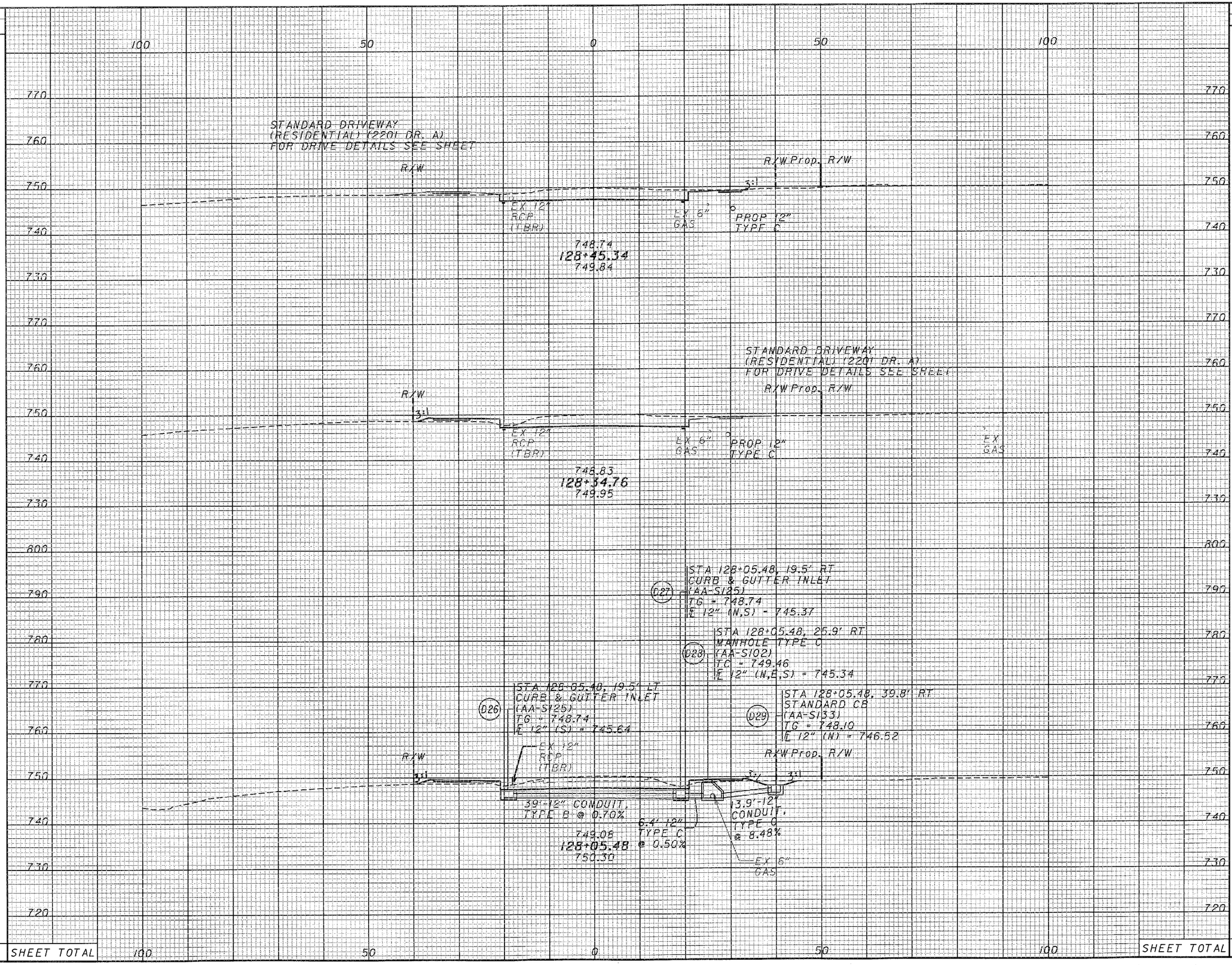
CROSS SECTIONS
ALKIRE ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135

39
118

SEEDING	
END WIDTH	SQ. YDS.
SHEET TOTAL	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		145	14
94.8	9.8		
		329	35
91.6	10.1		
		882	130
89.2	16.6		
SHEET TOTAL 275.6	36.5	1356	179

CALCULATED

CHECKED

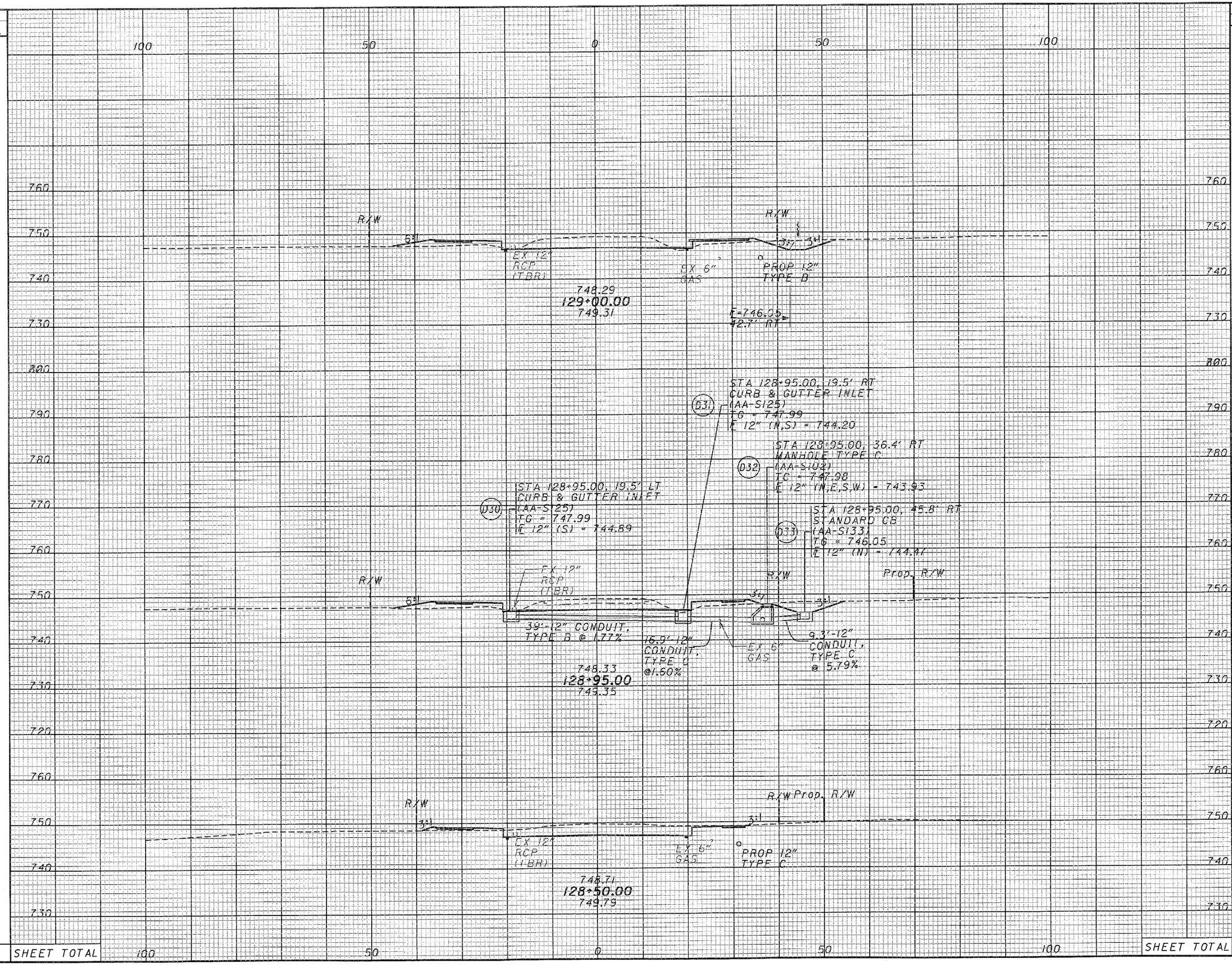
CROSS SECTIONS
ALKIRE ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1378	303
88.3	32.3		
		149	58
90.2	37.5		
		1368	341
92.2	8		
SHEET TOTAL	270.7	77.8	2895	702

CALCULATED

CHECKED

CROSS SECTIONS
ALKIRE ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

41
118

SEEDING	
END WIDTH	SQ. YDS.

100 50 0 50 100

760 750 740 730 720 710 760 770 760 750 740 730 760 750 740 730 760 750 740 730

R/W 6:1 EX 12" RCP (1 BR) 747.46 130+00.00 748.19 R/W 3:1 EX 6" GAS PROP 12" TYPE C E-746.7 34.0' RT

STA 129+67.51, 33.4' RT MANHOLE TYPE C (AA-5102) (D35) TC = 747.67 E 12" (S,E) = 743.56

STA 129+67.51, 43.1' RT STANDARD CB (AA-5133) (D34) TG = 745.65 E 12" (N) = 744.07

R/W 5:1 3:1 3:1 EX 6" GAS 9.7' 12" CONDUIT, TYPE C @ 5.25% 747.73 129+67.51 748.55

R/W 5:1 EX 12" RCP (1 BR) EX 12" RCP (1 BR) EX 6" GAS 5:1 EX 2" GAS PROP 12" TYPE B R/W 747.87 129+50.00 748.77

R/W 5:1 EX 12" RCP (1 BR) EX 6" GAS PROP 12" TYPE B EX 2" GAS 748.02 129+32.30 748.98

		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
				771	287
		59.5	38.5		
				815	373
		91	30.3		
				581	161
		108	24.9		
				813	144
		167.7	24		
SHEET TOTAL	100 50 0 50 100	426.2	117.7	2980	965

CALCULATED

CHECKED

CROSS SECTIONS ALKIRE ROAD

FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255

FCEO 1135

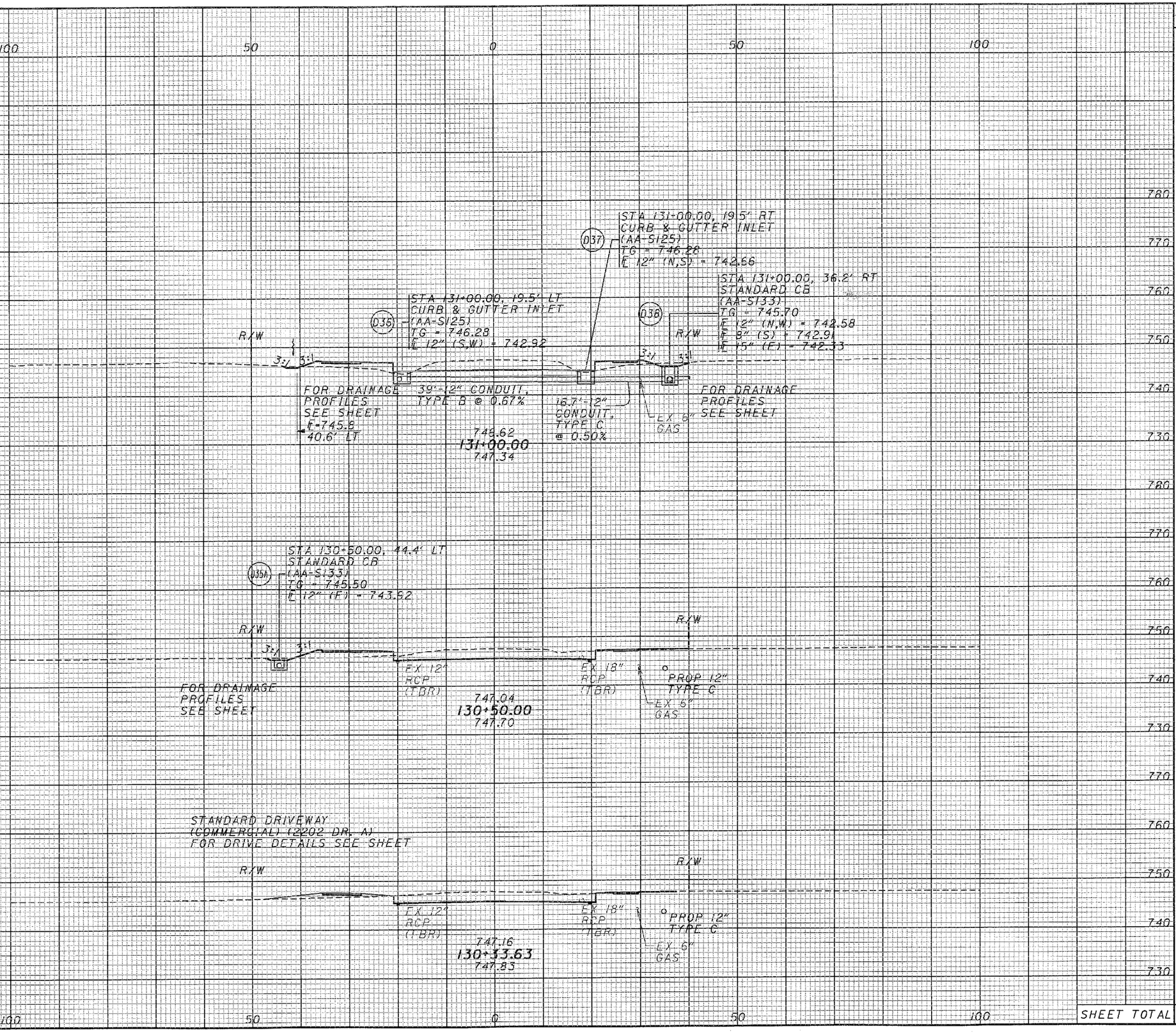
42 / 118

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		849	234
62	33.1		
		1129	471
73.5	23.4		
		414	98
78.1	12.7		
213.6	69.2	2392	803

CALCULATED

CHECKED



SHEET TOTAL

CROSS SECTIONS
ALKIRE ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

43
118

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME			
CUT	FILL	CUT	FILL	CALCULATED	CHECKED
		84	2		
103.5	2.1				
		412	18		
91.1	6.3				
		1383	176		
74.9	14.8				
		364	49		
79.9	6				
349.4	29.2	2243	244		

SHEET TOTAL

100 50 0 50 100

790 780 770 760 750 740 730 720

CURB & GUTTER INLET
(AA-S125)
STA 132+12.50, 29.1' RT
TG = 745.45
E 12" (N,S) = 742.06
(D41)

MANHOLE TYPE C
(AA S102)
STA 132+12.50, 34.5' RT
TC = 746.03
E 12" (N,S) = 742.02
E 15" (W) = 741.77
E 18" (E) = 741.52
(D42)

CURB & GUTTER INLET
(AA-S125)
STA 132+12.50, 19.9' LT
TG = 745.59
E 12" (NE,S) = 742.31
(D40)

Prop. R/W R/W
3:1 4:1
FOR DRAINAGE PROFILES SEE SHEET
E=745.00
41.1' LT

49' 12" CONDUIT TYPE B @ 0.50%

745.94
132+12.70
746.49

EX 18" RCP (TBR)
5.4'-12" CONDUIT, TYPE C @ 0.65%
EX 6" GAS

Prop. R/W
R/W
3:1
FOR DRAINAGE PROFILES SEE SHEET

Prop. R/W R/W
3:1 6:1
E=745.05
40.8' LT

745.95
132+00.00
746.56

EX 18" RCP (TBR)
PROP 15" TYPE B
EX 6" GAS

R/W
3:1

Prop. R/W R/W
3:1 6:1
E=745.3
40.8' LT

746.21
131+50.00
746.86

EX 18" RCP (TBR)
PROP 15" TYPE B
EX 6" GAS

R/W
6:1

STANDARD DRIVEWAY
(RESIDENTIAL) (2201 DR. A)
FOR DRIVE DETAILS SEE SHEET

R/W
6:1

746.32
131+35.90
746.99

EX 18" RCP (TBR)
PROP 15" TYPE B
EX 6" GAS

R/W
6:1

CROSS SECTIONS ALKIRE ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

44
118

SEEDING	
END WIDTH	SQ. YDS.
SHEET TOTAL	

100 50 0 50 100

760 750 740 730 720

Prop. R/W R/W 3:1 3:1

EX 12" CLAY (TBR)

746.04
132+50.00
746.23

℄-744.8
49.0' LT

EX 18" RCP (TBR)

PROP 18" TYPE B

EX 6" GAS

EX 24" STL (BND)

EX 10" GAS

Prop. R/W R/W 3:1 3:1

EX 18" RCP (TBR)

PROP 18" TYPE B

EX 6" GAS

745.94
132+15.12
746.48

℄-745.0
41.3' LT

END AREA		VOLUME	
CUT	FILL	CUT	FILL
189	23.5	1709	148
105	2		
SHEET TOTAL	294	25.5	1709	148
QUANTITY CARRIED TO GENERAL SUMMARY	GRAND TOTAL	5834	3516	90534	46793

CALCULATED

CHECKED

CROSS SECTIONS
ALKIRE ROAD

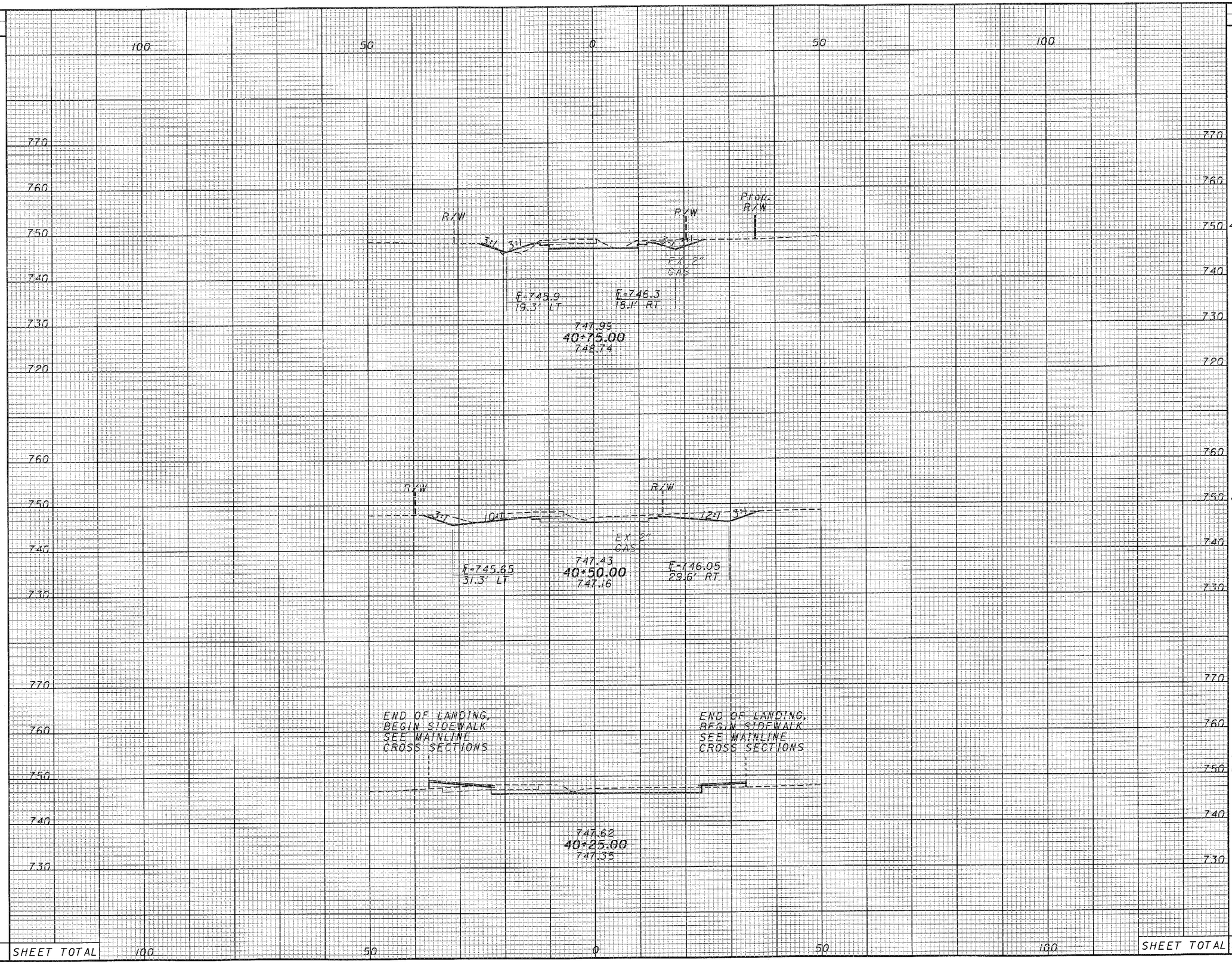
FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

45
118

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME		
CUT	FILL	CUT	FILL	
		382	81	
47.7	5.3			
		566	23	
88.1	0.3			
		637	58	
64.8	13.7			
200.6	19.3	1585	162	SHEET TOTAL

CALCULATED

CHECKED

CROSS SECTIONS
BIG RUN AVE

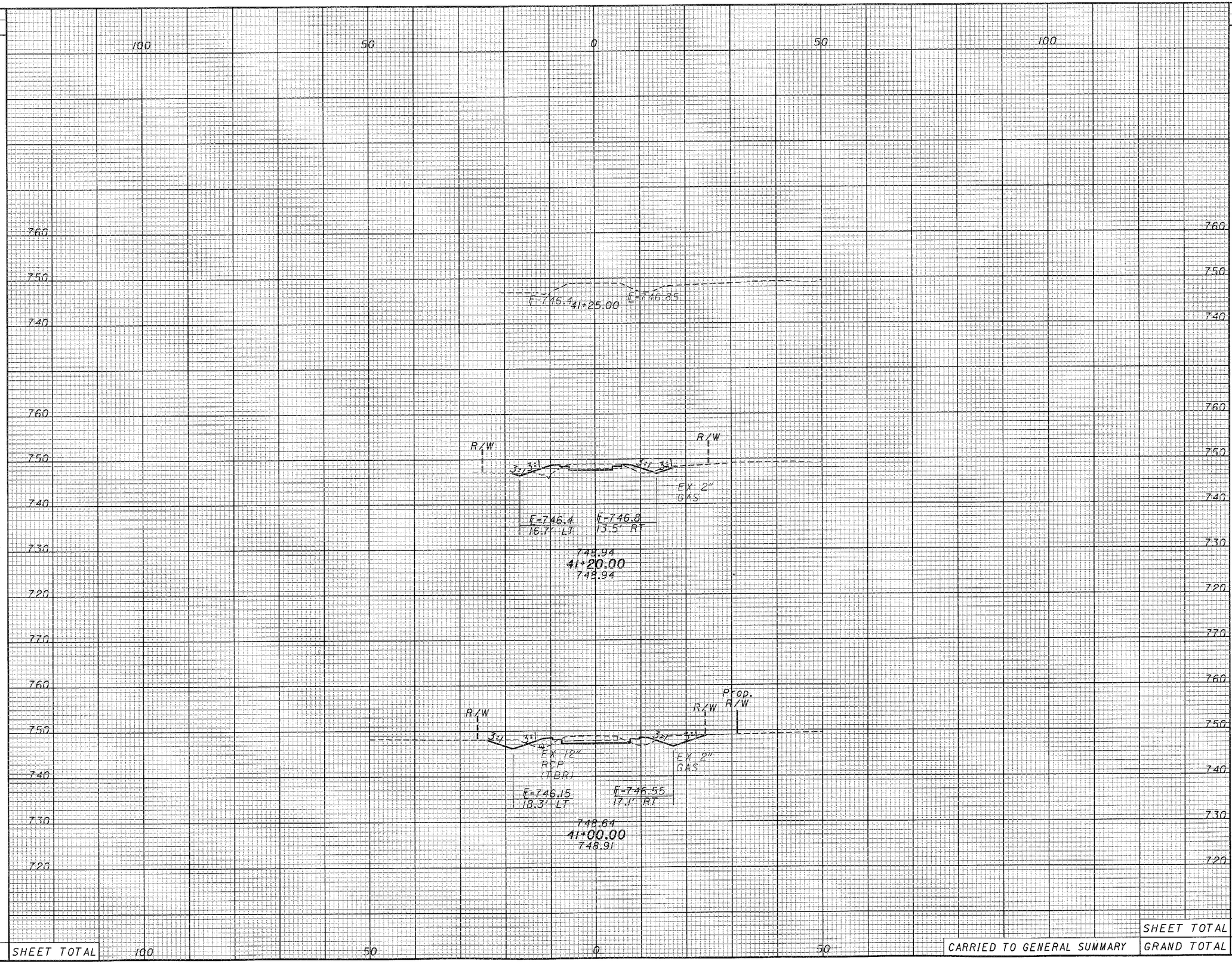
FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

46
118

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
17.6	13.1		
		205	91
44.0	14.2		
SHEET TOTAL	61.6	27.3	205	91
CARRIED TO GENERAL SUMMARY	GRAND TOTAL	262.2	46.6	1790	253

CALCULATED

CHECKED

CROSS SECTIONS
BIG RUN AVE

FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255

FCEO 1135

47
118

SHEET TOTAL

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED

100 50 0 50 100

770
760
750
740
730
720

R/W

746.29
111+50.00

Prop. R/W

R/W

746.28
111+25.00

Prop. R/W

R/W

746.11
111+00.00

SHEET TOTAL

SHEET TOTAL

CROSS SECTIONS
US-62/ RIGHT TURN LANE

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED

100 50 0 50 100

760
750
740
730
720
770
760
750
740
730
720

R/W

746.43
112+00.00

R/W

746.34
111+75.00

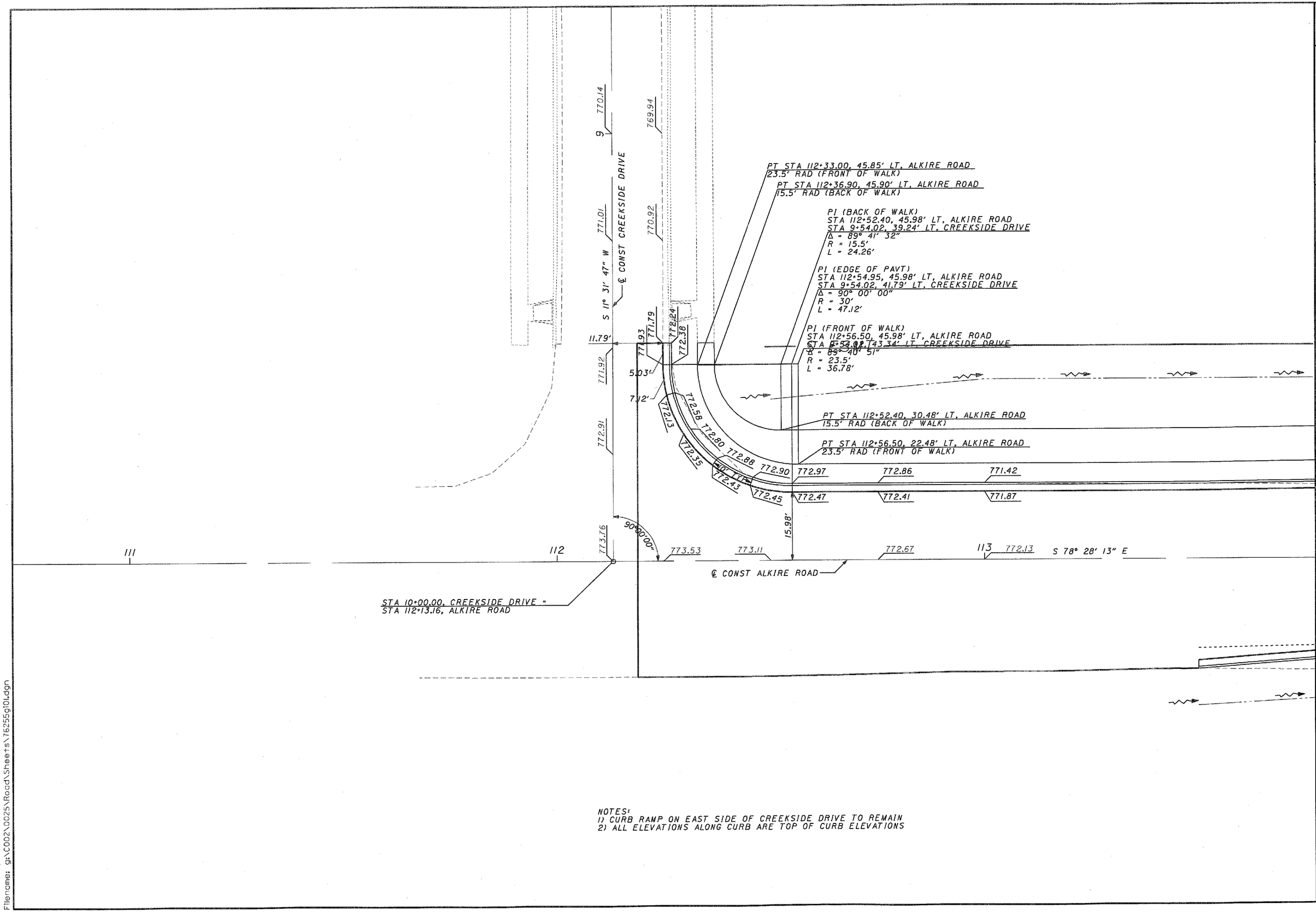
SHEET TOTAL 100 50 0 50 100 SHEET TOTAL

CROSS SECTIONS
US-62/ RIGHT TURN LANE

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255

FCEO 1135



NOTES:
1) CURB RAMP ON EAST SIDE OF CREEKSIDE DRIVE TO REMAIN
2) ALL ELEVATIONS ALONG CURB ARE TOP OF CURB ELEVATIONS

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED
CHECKED

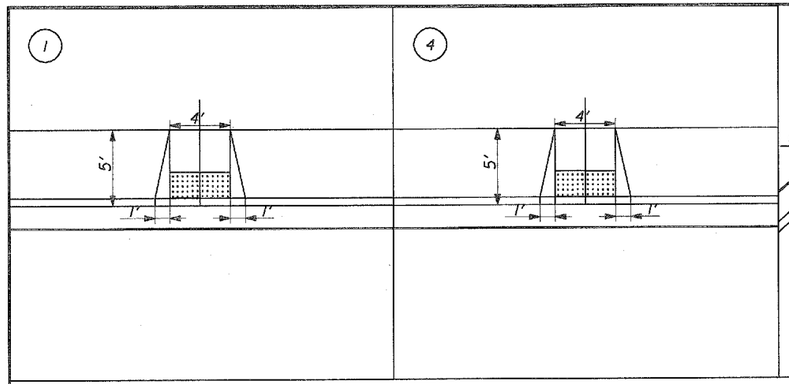
INTERSECTION DETAIL - CREEKSIDE DRIVE

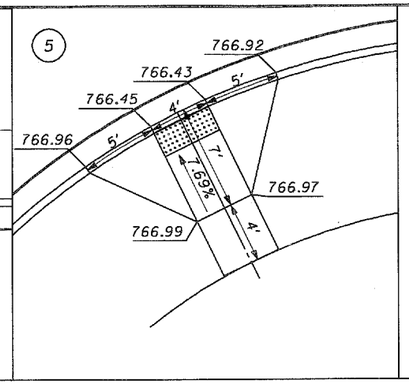
FRA-CR11-10.49 (ALKIRE ROAD)

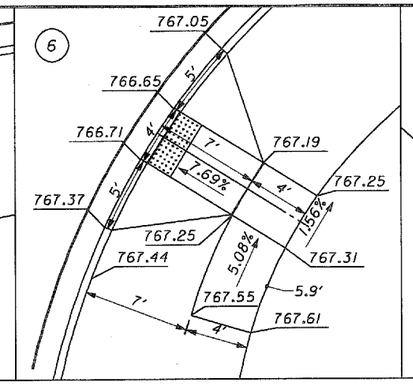
PID 76255
FCEO 1135
COC 2354-E

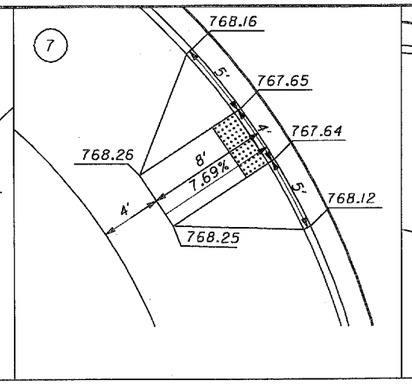
50
118

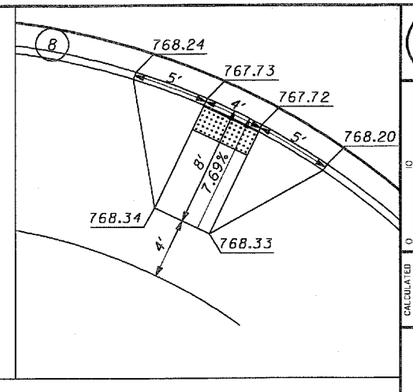
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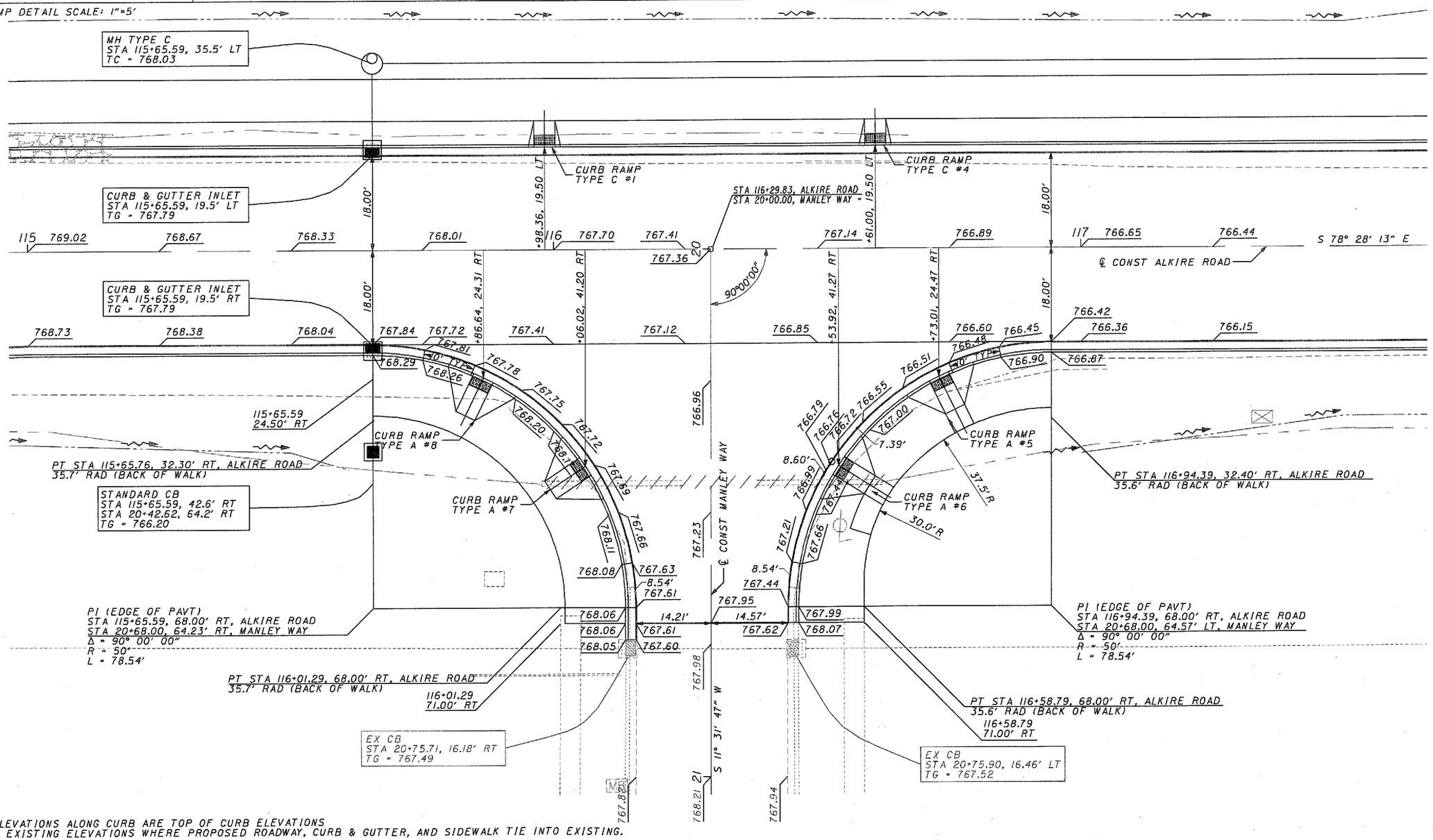








CURB RAMP DETAIL SCALE: 1"=5'



NOTES:
1) ALL ELEVATIONS ALONG CURB ARE TOP OF CURB ELEVATIONS
2) MEET EXISTING ELEVATIONS WHERE PROPOSED ROADWAY, CURB & GUTTER, AND SIDEWALK TIE INTO EXISTING.

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED
CHECKED

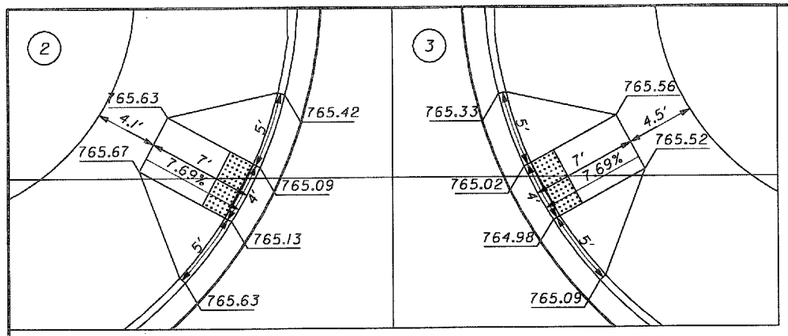
INTERSECTION DETAIL - MANLEY WAY

FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

51
118

Plotted By: cfrobinson Date: 8/14/2009 Time: 8:46:40 AM
Filename: g:\C002\0025\Road\Sheets\76255gl02.dgn



CURB RAMP DETAIL SCALE: 1"=5'

PT STA 117+99.26, 48.00' LT, ALKIRE ROAD
15.5' RAD (BACK OF WALK)

PI (BACK OF WALK)
STA 117+83.77, 48.00' LT, ALKIRE ROAD
STA 29+52.00, 39.40' RT, GLENCREEK ROAD
Δ = 90° 00' 00"
R = 15.5'
L = 24.35'

PI (EDGE OF PAVT)
STA 117+81.57, 48.00' LT, ALKIRE ROAD
STA 29+52.00, 41.60' RT, GLENCREEK ROAD
Δ = 90° 00' 00"
R = 30'
L = 47.12'

STANDARD CB
STA 117+81.56, 46.2' LT
STA 29+53.83, 41.6' RT
TG = 763.40

MANHOLE TYPE C
STA 117+81.56, 35.5' LT
STA 29+64.50, 41.6' RT
TG = 766.07

PT STA 117+83.76, 32.50' LT, ALKIRE ROAD
15.5' RAD (BACK OF WALK)

EX CB
TO BE REMOVED

CURB & GUTTER INLET
STA 117+81.56, 19.5' LT
TG = 765.67

CURB RAMP
TYPE A #2

CURB RAMP
TYPE A #3

PT STA 118+47.37, 48.00' LT, ALKIRE ROAD
15.5' RAD (BACK OF WALK)

PI (BACK OF WALK)
STA 118+62.87, 48.00' LT, ALKIRE ROAD
STA 29+42.00, 39.71' LT, GLENCREEK ROAD
Δ = 90° 00' 00"
R = 15.5'
L = 24.35'

PI (EDGE OF PAVT)
STA 118+64.64, 48.00' LT, ALKIRE ROAD
STA 29+52.00, 41.48' LT, GLENCREEK ROAD
Δ = 90° 00' 00"
R = 30'
L = 47.12'

PT STA 118+62.87, 32.50' LT, ALKIRE ROAD
15.5' RAD (BACK OF WALK)

℄ CONST GLENCREEK ROAD
S 11° 31' 47" W

℄ CONST ALKIRE ROAD

STA 30+00.00, GLENCREEK ROAD =
STA 116+29.83, ALKIRE ROAD

S 78° 28' 13" E

NOTES:
1) ALL ELEVATIONS ALONG CURB ARE TOP OF CURB ELEVATIONS
2) MEET EXISTING ELEVATIONS WHERE PROPOSED ROADWAY, CURB & GUTTER, AND SIDEWALK TIE INTO EXISTING.

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED
CHECKED

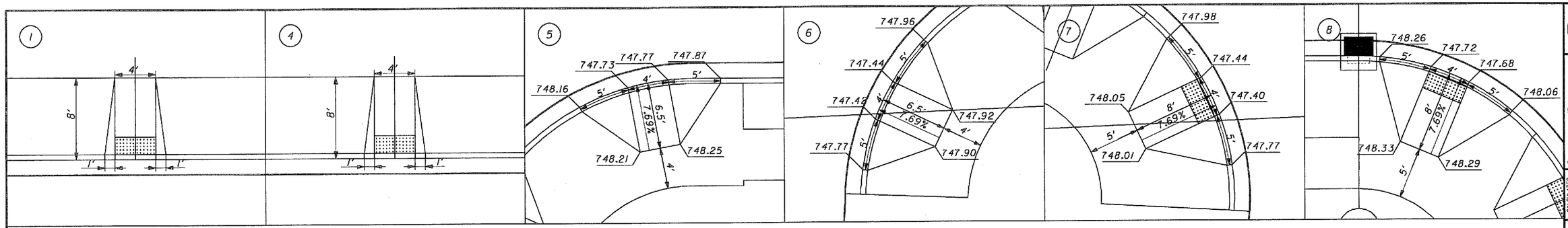
INTERSECTION DETAIL - GLENCREEK ROAD

FRA-CR11-10.49
(ALKIRE ROAD)

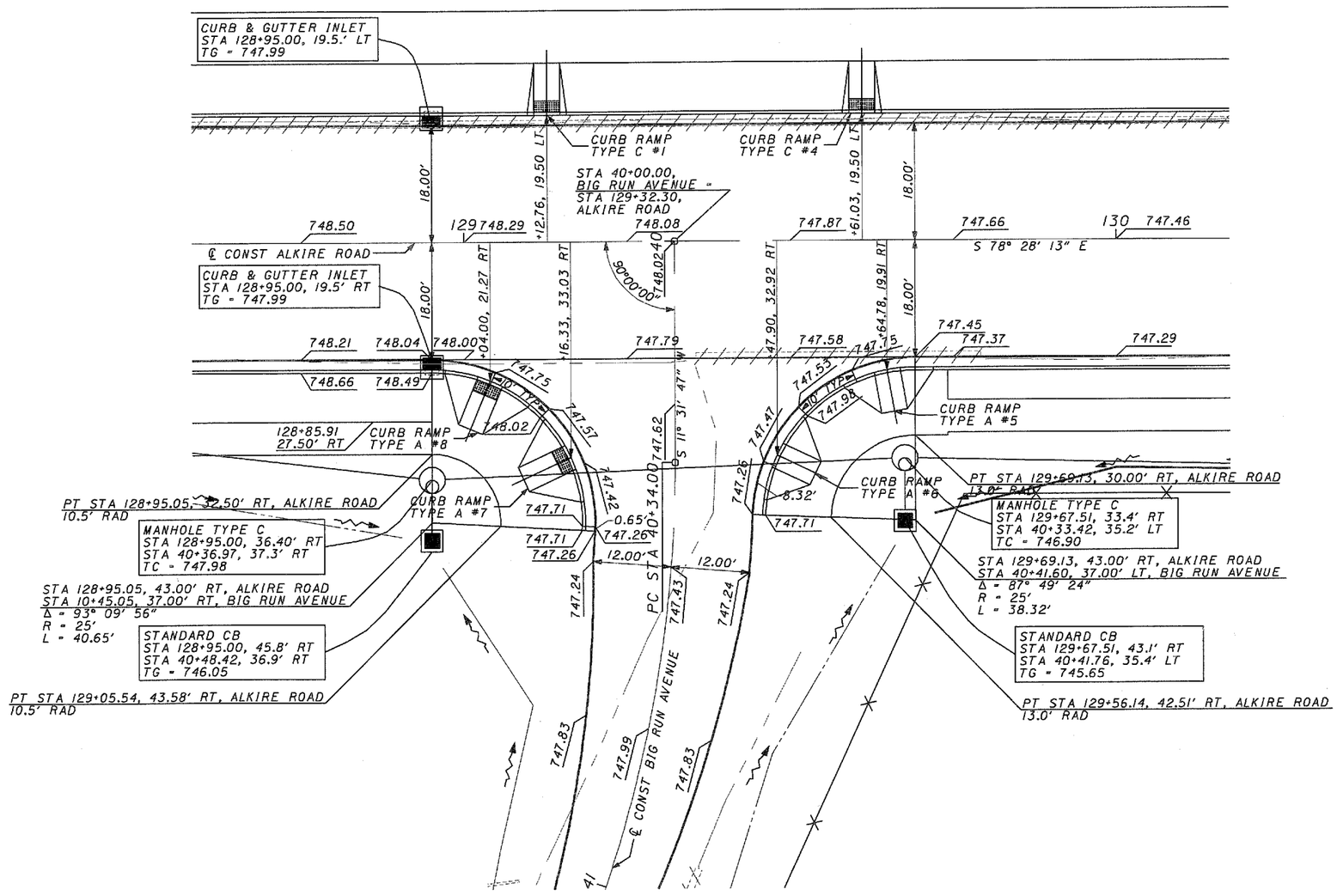
PID 76255
FCEO 1135
COC 2354-E

52
118

Plotted By: acschelderer Date: 8/12/2009 Time: 9:56:46 AM
Filename: G:\C002\0025\Road\Sheets\76255gl03.dgn



CURB RAMP DETAIL SCALE: 1"=5'



NOTES:
1) ALL ELEVATIONS ALONG CURB ARE TOP OF CURB ELEVATIONS

HORIZONTAL SCALE IN FEET
0 5 10 20
CALCULATED
CHECKED

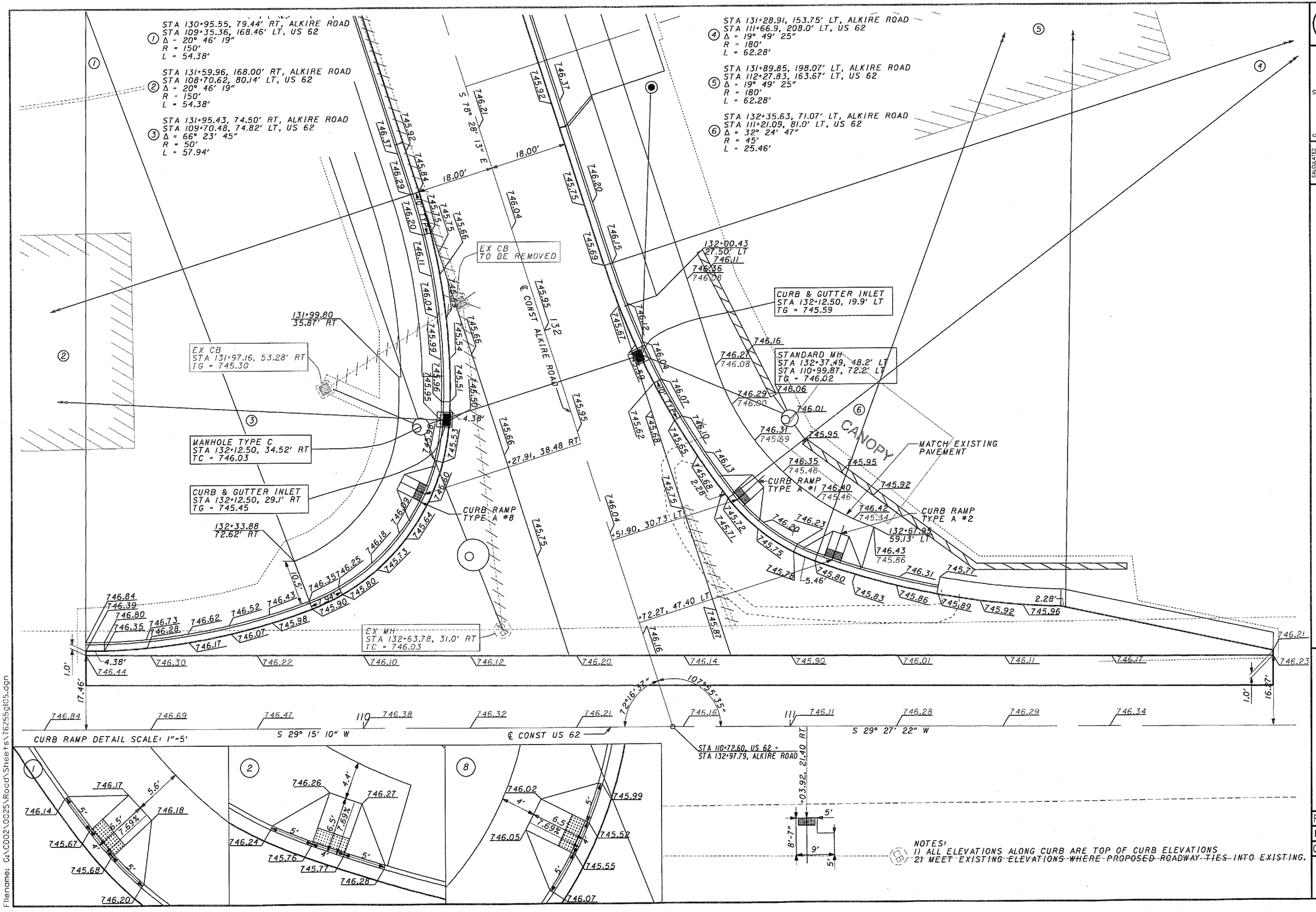
INTERSECTION DETAIL - BIG RUN AVENUE

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

53
118

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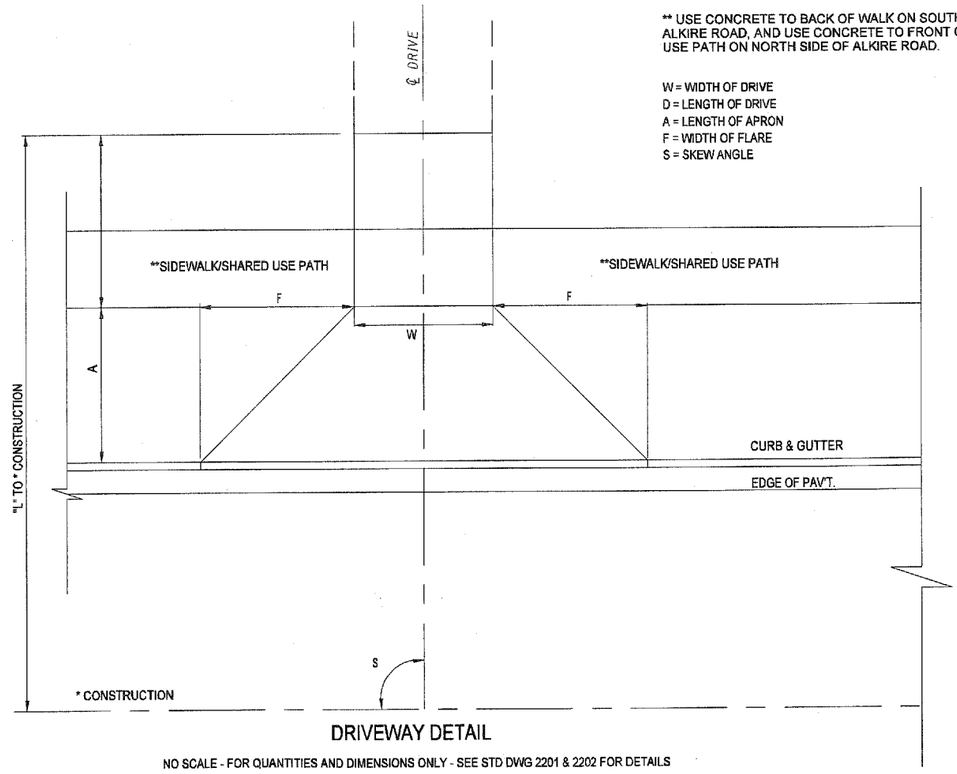

STA 130+95.55, 79.44' RT, ALKIRE ROAD
STA 109+35.36, 168.46' LT, US 62
① Δ = 20° 46' 19"
R = 150'
L = 54.38'
STA 131+59.96, 168.00' RT, ALKIRE ROAD
STA 108+70.62, 80.14' LT, US 62
② Δ = 20° 46' 19"
R = 150'
L = 54.38'
STA 131+95.43, 74.50' RT, ALKIRE ROAD
STA 109+70.48, 74.82' LT, US 62
③ Δ = 66° 23' 45"
R = 50'
L = 57.94'
STA 131+28.91, 153.75' LT, ALKIRE ROAD
STA 111+66.9, 208.0' LT, US 62
④ Δ = 19° 49' 25"
R = 180'
L = 62.28'
STA 131+89.85, 198.07' LT, ALKIRE ROAD
STA 112+27.83, 163.67' LT, US 62
⑤ Δ = 19° 49' 25"
R = 180'
L = 62.28'
STA 132+35.63, 71.07' LT, ALKIRE ROAD
STA 111+21.09, 81.0' LT, US 62
⑥ Δ = 32° 24' 47"
R = 45'
L = 25.46'
EX CB
TO BE REMOVED
EX CB
STA 131+97.16, 53.28' RT
TG = 745.30
MANHOLE TYPE C
STA 132+12.50, 34.52' RT
TC = 746.03
CURB & GUTTER INLET
STA 132+12.50, 29.1' RT
TG = 745.45
CURB RAMP
TYPE A #8
CURB & GUTTER INLET
STA 132+12.50, 19.9' LT
TG = 745.59
STANDARD MH
STA 132+37.49, 48.2' LT
STA 110+99.87, 72.2' LT
TG = 746.02
CANOPY
MATCH EXISTING
PAVEMENT
CURB RAMP
TYPE A #1
CURB RAMP
TYPE A #2
EX MH
STA 132+63.78, 31.0' RT
TC = 746.03
℄ CONST ALKIRE ROAD
℄ CONST US 62
S 78° 28' 13" E
S 29° 15' 10" W
S 29° 27' 22" W
STA 110+72.60, US 62 =
STA 132+97.79, ALKIRE ROAD
CURB RAMP DETAIL SCALE: 1"=5'
NOTES:
1) ALL ELEVATIONS ALONG CURB ARE TOP OF CURB ELEVATIONS
2) MEET EXISTING ELEVATIONS WHERE PROPOSED ROADWAY TIES INTO EXISTING.
HORIZONTAL SCALE IN FEET
CALCULATED
CHECKED
INTERSECTION DETAIL - US 62
FRA-CR11-10.49
(ALKIRE ROAD)
PID 76255
FCEO 1135
COC 2354-E
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Plotted By: acscheiderer Date: 8/12/2009 Time: 9:56:46 AM
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DRIVEWAY APPROACH QUANTITIES

DRIVEWAY STATION	SIDE	℄ OFFSET TO EDGE OF CURB AND GUTTER	TYPE OF DRIVE (RESIDENTIAL OR COMMERCIAL)	SKEW ANGLE S	FLARE DIMENSION F	WIDTH OF DRIVE W	WIDTH OF DRIVE AT EDGE OF CURB AND GUTTER F+W+F	LENGTH OF DRIVE D	AREA OF DRIVE	LENGTH OF APRON A	AREA OF APRON	PROPOSED DRIVE MATERIAL				404	402	301	304	408	452	
																2" ASPHALT CONCRETE FOR DRIVEWAYS	2" ASPHALT CONCRETE FOR DRIVEWAYS	4" BITUMINOUS AGGREGATE BASE	4" AGGREGATE BASE	BITUMINOUS PRIME COAT APPLIED @ 0.4 G/SY	6" PLAIN CONCRETE PAVEMENT	8" PLAIN CONCRETE PAVEMENT
		FT	TYPE	°	FT	FT	FT	FT	SQ. FT.	FT	SQ. FT.	TYPE				CU YD	CU YD	CU YD	CU YD	GAL	SQ YD	SQ YD
125+25.00	RT	19.5	RES	90	5.0	10.0	20.0	12.5	125.0	8.0	120.0	CONCRETE							7		28	
126+21.65	RT	19.5	RES	90	5.0	10.0	20.0	10.0	100.0	8.0	120.0	CONCRETE							6		25	
126+87.52	RT	19.5	RES	90	5.0	10.9	20.9	12.5	136.3	8.0	127.2	CONCRETE							7		30	
127+92.30	LT	19.5	RES	90	5.0	13.9	23.9	18.0	250.2	8.0	151.2	CONCRETE				1	1	2	7		33	
128+34.76	RT	19.5	RES	90	5.0	10.0	20.0	10.0	100.0	8.0	120.0	CONCRETE							6		25	
128+45.34	LT	19.5	RES	90	5.0	10.0	20.0	18.0	180.0	8.0	120.0	CONCRETE				1.5	1.5	3	6		25	
130+33.63	LT	19.5	COM	90	5.0	20.0	30.0	20.0	400.0	8.0	200	ASPHALT				2.5	2.5	5	5			23
131+39.90	LT	19.5	RES	90	5.0	22.2	31.5	18.0	399.6	8.0	215.0	ASPHALT				2.5	2.5	5	5		24	
															SUB TOTAL DRIVEWAYS	7.5	7.5	15	49		190	23
															TOTAL DRIVEWAYS	7.5	7.5	15	49		190	23

** USE CONCRETE TO BACK OF WALK ON SOUTH SIDE OF ALKIRE ROAD, AND USE CONCRETE TO FRONT OF SHARED USE PATH ON NORTH SIDE OF ALKIRE ROAD.

W = WIDTH OF DRIVE
D = LENGTH OF DRIVE
A = LENGTH OF APRON
F = WIDTH OF FLARE
S = SKEW ANGLE



DRIVEWAY DETAIL

NO SCALE - FOR QUANTITIES AND DIMENSIONS ONLY - SEE STD DWG 2201 & 2202 FOR DETAILS

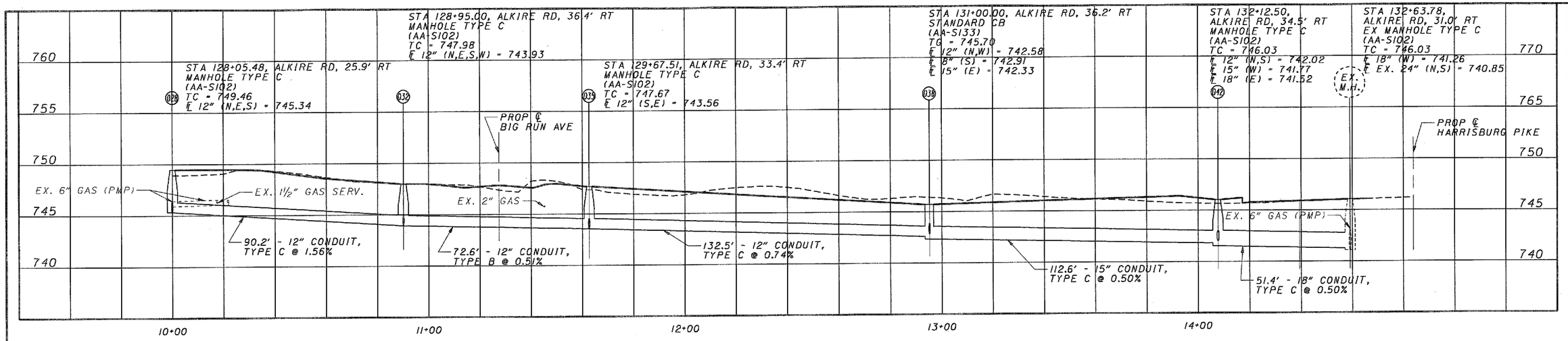
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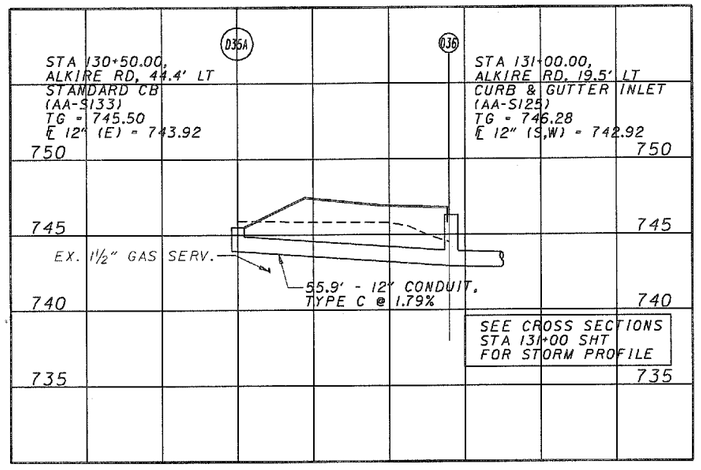
DRIVEWAY SUBSUMMARY

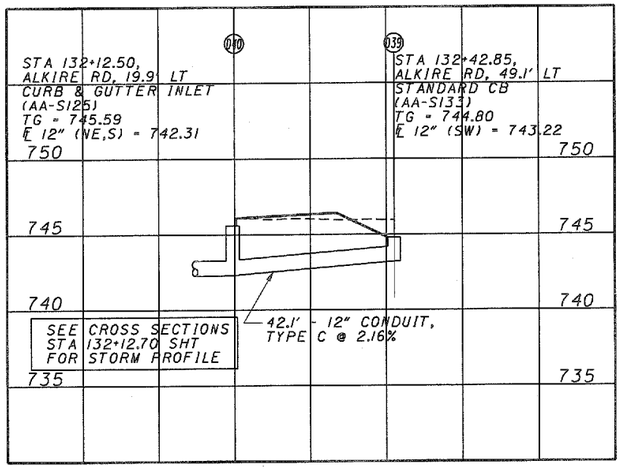
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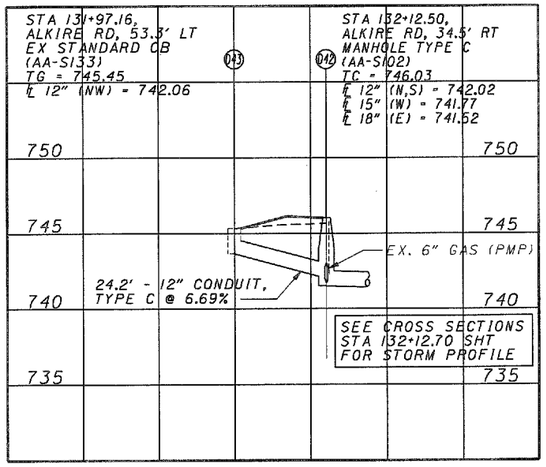
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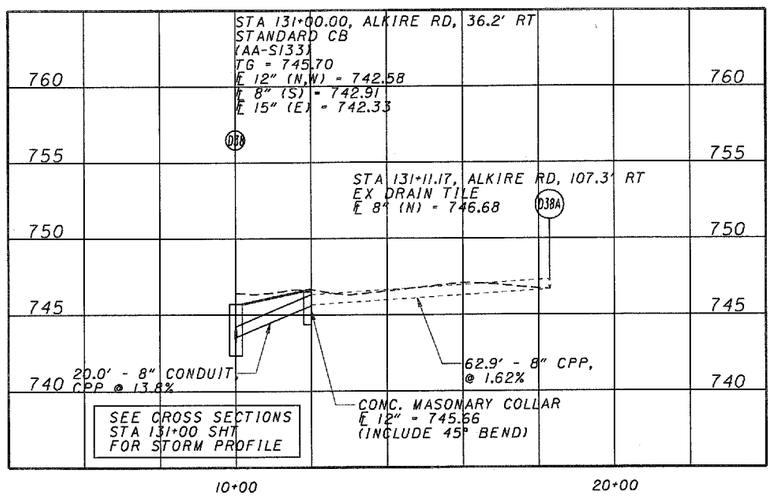
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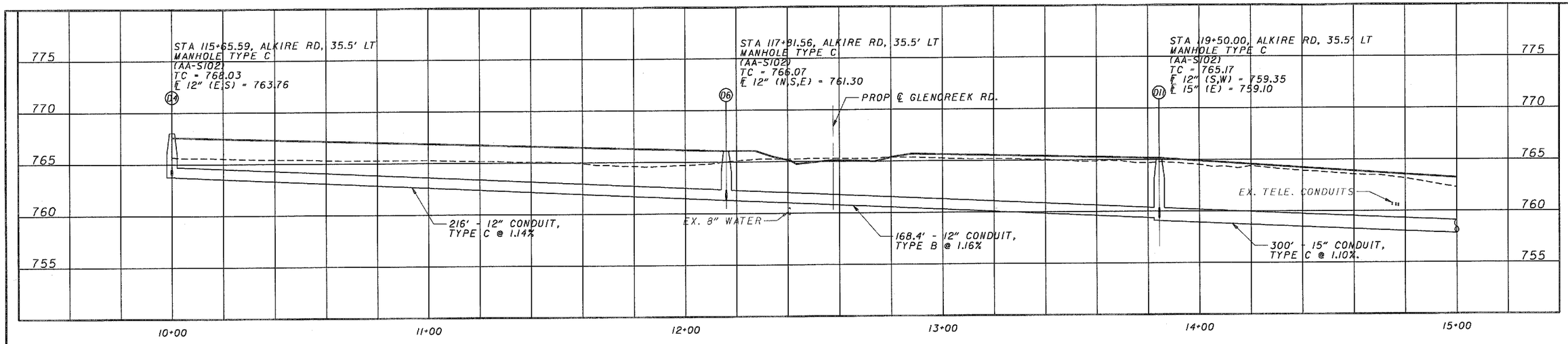
LONGITUDINAL SEWER PROFILE

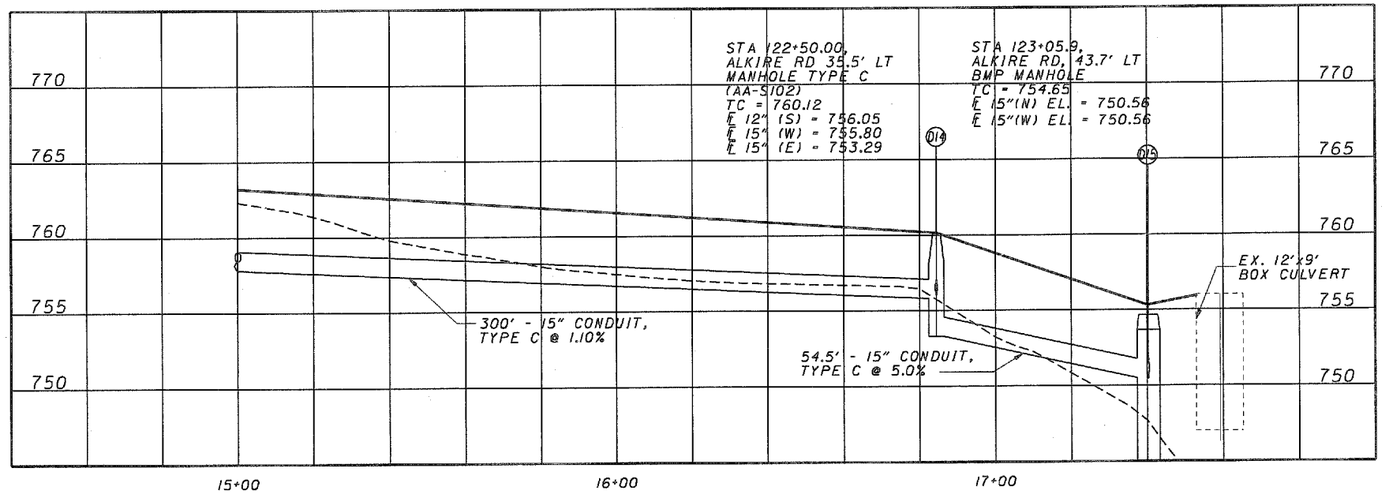
FRA-CR11-10.49
(ALKIRE ROAD)

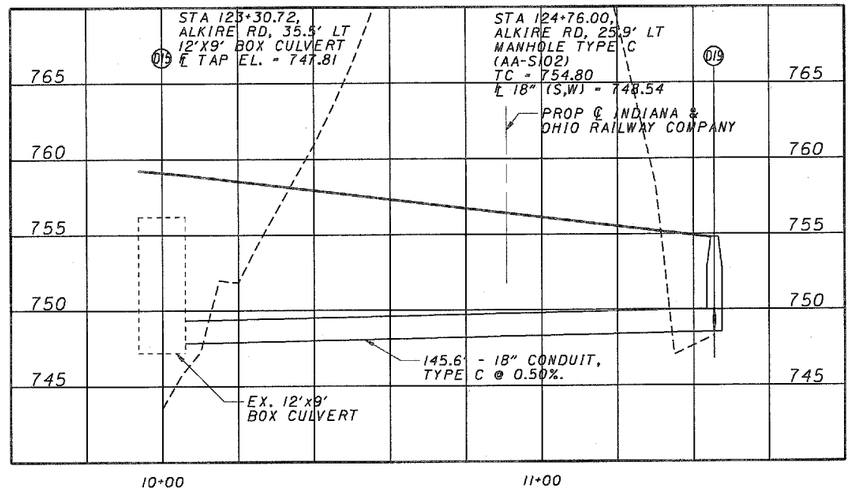
PID 76255
FCEO 1135
COC 2354-E

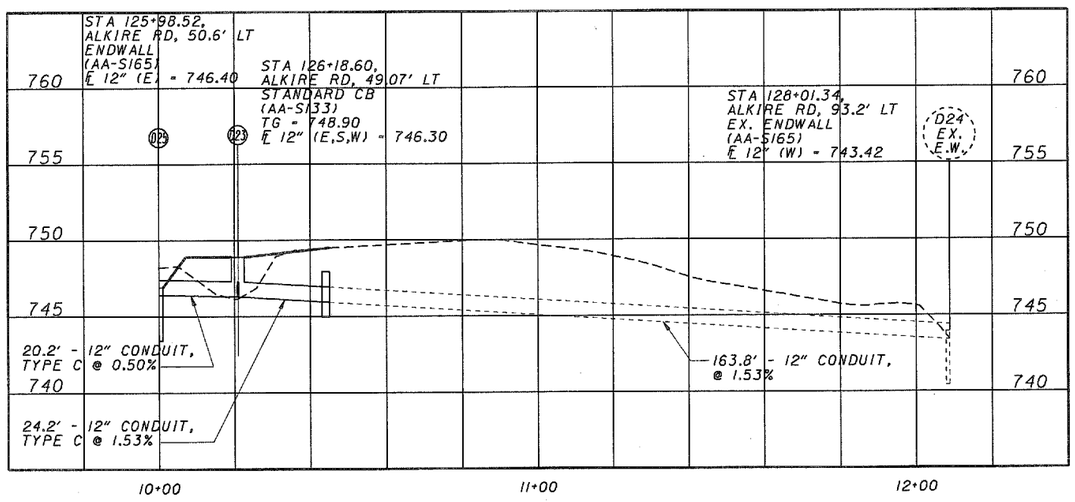
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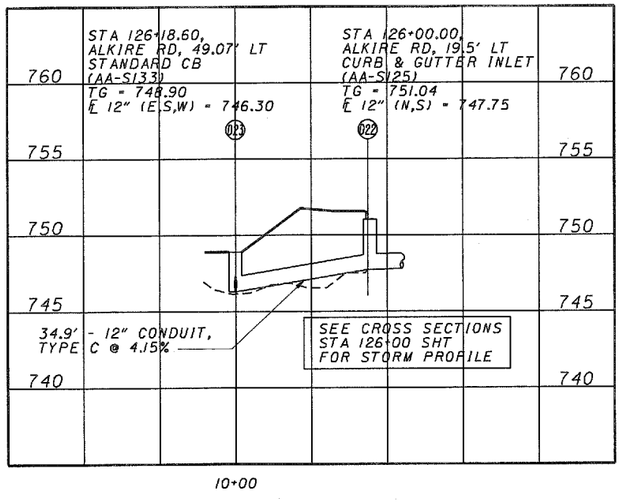
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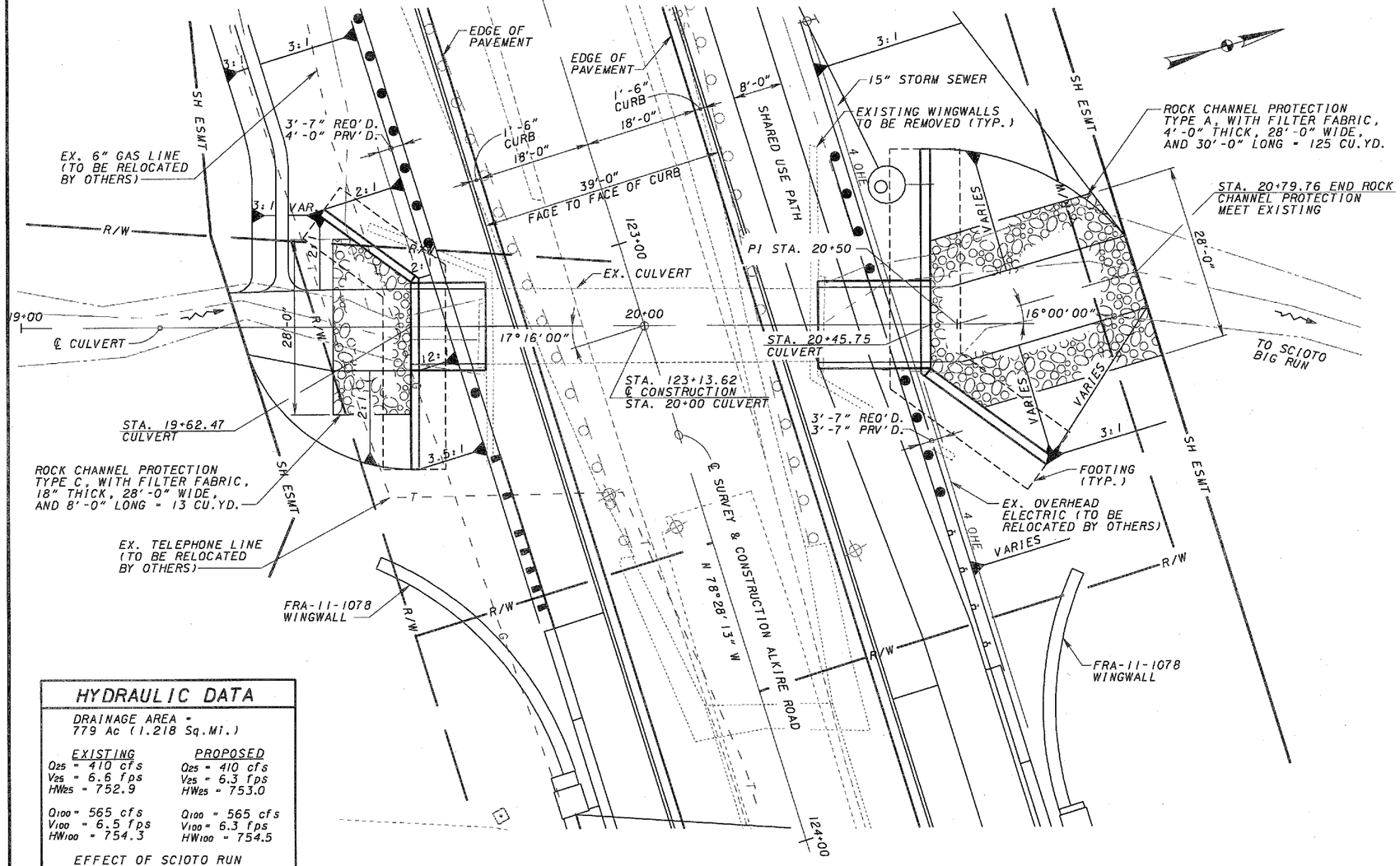
LONGITUDINAL SEWER PROFILE

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

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Plotted By: ascheiderer Date: 8/12/2009 Time: 9:58:00 AM
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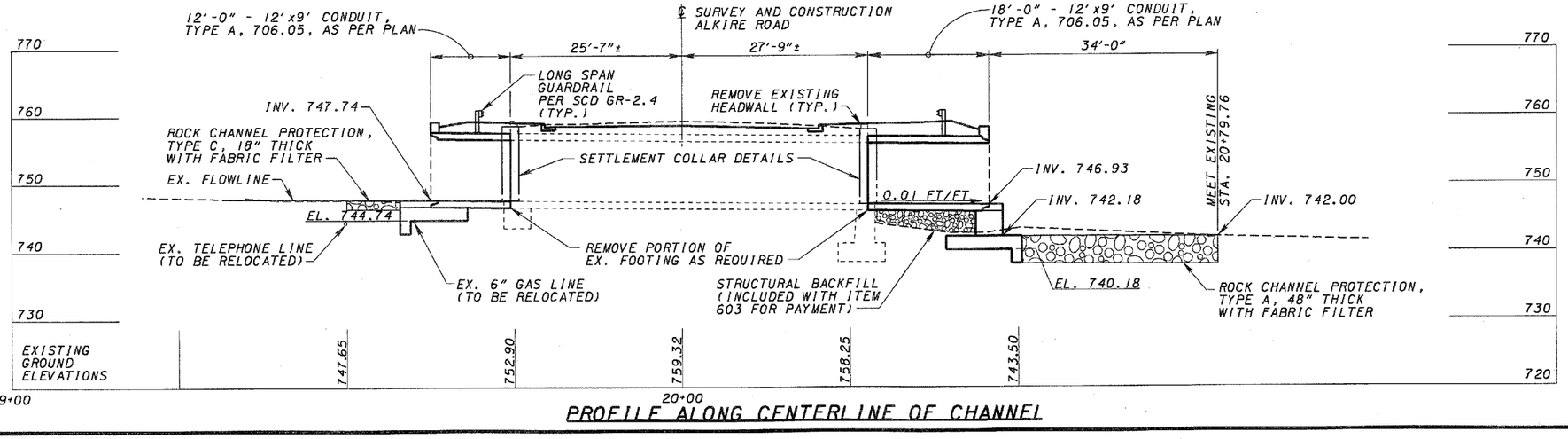
PLAN

HYDRAULIC DATA

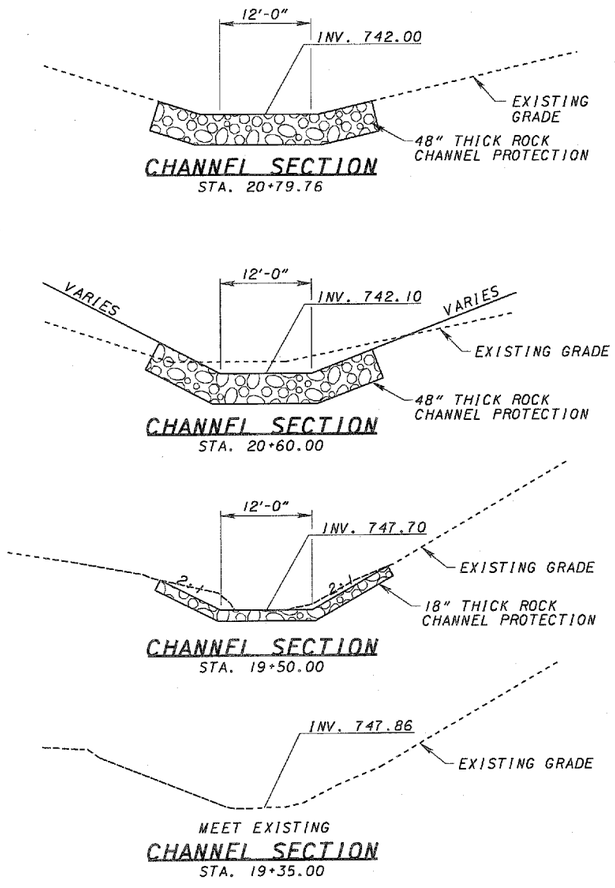
DRAINAGE AREA = 779 Ac (1.218 Sq.Mi.)

EXISTING	PROPOSED
Q_{25} = 410 cfs	Q_{25} = 410 cfs
V_{25} = 6.6 fps	V_{25} = 6.3 fps
HW_{25} = 752.9	HW_{25} = 753.0
Q_{100} = 565 cfs	Q_{100} = 565 cfs
V_{100} = 6.5 fps	V_{100} = 6.3 fps
HW_{100} = 754.3	HW_{100} = 754.5

EFFECT OF SCIOTO RUN BACKWATER NOT INCLUDED



PROFILE ALONG CENTERLINE OF CHANNEL



CHANNEL SECTION
STA. 20+79.76

CHANNEL SECTION
STA. 20+60.00

CHANNEL SECTION
STA. 19+50.00

MEET EXISTING
CHANNEL SECTION
STA. 19+35.00

EXISTING STRUCTURE

TYPE: PRECAST BOX CULVERT WITH HEADWALLS AND WINGWALLS
SIZE: 12' WIDE x 9' HIGH
LENGTH: 53 FEET
SKEW: 17°14'01' LEFT FORWARD
DATE BUILT: 1992
STRUCTURE FILE No.: 2535319

PROPOSED WORK

EXTEND EXISTING BOX CULVERT USING 12'x9' PRECAST CONCRETE BOX SECTIONS AND CAST-IN-PLACE CONCRETE HEADWALL AND WINGWALLS. REGRADE INLET AND OUTLET CHANNEL AND LINE WITH ROCK CHANNEL PROTECTION AS SHOWN IN THE PLANS.

DESIGN AGENCY: Trans Systems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	7/30/09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		2535319	

SITE PLAN
BRIDGE NO. FRA-11-1076
ALKIRE ROAD (CR11) OVER TRIBUTARY TO SCIOTO BIG RUN

FRA-CR11-10.49
PID 76255
FCEO 1135

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GENERAL NOTES:

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS20-44 WITH COVER LESS THAN 2 FEET

DESIGN DATA:

MAXIMUM FOUNDATION BEARING PRESSURE = 2000 P.S.F.

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (FOOTING, WINGWALL, AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A616, OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI - ALL REINFORCING SHALL BE EPOXY COATED

PRECAST CONCRETE OPTION:

AT THE CONTRACTOR'S OPTION AND EXPENSE, ALTERNATE PRECAST HEADWALLS AND WINGWALLS MAY BE SUBSTITUTED. IF THIS OPTION IS EXERCISED, THE COMPLETE DESIGN, REVIEW, AND DETAILING, OF THE ALTERNATE DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE CONTRACTOR'S FABRICATOR. THE PRECAST WINGWALL ALTERNATE SHALL INCLUDE A CAST-IN-PLACE FOUNDATION.

PRECAST WALLS SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM REQUIREMENTS:

DESIGN LOADING AS SHOWN IN THE PLAN NOTES. ALLOWABLE FOUNDATION BEARING PRESSURE AS SHOWN IN THE PLAN NOTES. FACTOR OF SAFETY OF AT LEAST 1.5 FOR SLIDING AND 2.0 FOR OVERTURNING. ADDITIONALLY, PRECAST WALLS THAT ARE NOT RIGIDLY CONNECTED TO A SPREAD FOOTING WITH A MOMENT CONNECTION SHALL BE MECHANICALLY ANCHORED TO THE ADJACENT BOX CULVERT SECTION.

AS THERE ARE MANY DIFFERENT PRECAST WINGWALL SYSTEMS AVAILABLE, DETAILED PLANS FOR THE SELECTED SYSTEM SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF OHIO. THE PLANS SHALL BE COMPLETE WITH FOUNDATION REQUIREMENTS AND DETAIL ANY NECESSARY MECHANICAL CONNECTIONS AT THE CULVERT INTERFACE.

PLANS AND SPECIFICATIONS DO NOT WARRANT NOR DESCRIBE AN IMPROVEMENT THAT IS SUITABLE FOR THE USE OF PRECAST WINGWALLS. THE CONTRACTOR SHALL VERIFY SUBSURFACE CONDITIONS, INCLUDING UTILITY LOCATIONS, PRIOR TO FABRICATING PRECAST WINGWALLS. NO ADDITIONAL PAYMENT WILL BE MADE FOR ADJUSTMENTS TO PIPES, GRADES, UTILITIES, OR ANY OTHER ITEM RESULTING FROM THE USE OF PRECAST WINGWALLS. PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR THE WINGWALLS, IN PLACE AND ACCEPTED, AS IF CAST-IN-PLACE.

THE CONTRACTOR SHALL FURNISH A COMPLETE SET OF SHOP DRAWINGS FOR THE PRECAST WINGWALL SYSTEMS (IF APPLICABLE) FOR REVIEW. FRANKLIN COUNTY WILL REVIEW THE SIZE, LOCATION, AND DIMENSIONS, SOLELY FOR GEOMETRIC CONFORMANCE TO THE PLANS.

FOUNDATION WALL ANCHOR DOWELS:

ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH OF 5". PAYMENT FOR DOWEL HOLES, GROUT, AND INSTALLATION SHALL BE INCLUDED WITH ITEM 511.

AS AN ALTERNATIVE TO RESIN BONDING, THREADED INSERTS OR NONPROTRUDING MECHANICAL CONNECTORS CAST INTO THE CULVERT BY THE MANUFACTURER MAY BE USED PROVIDED THEY CAN RESIST AN ULTIMATE PULL-OUT STRENGTH OF 12 KIPS AND MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB, MECHANICAL CONNECTORS MUST PROVIDE AN "L-SHAPED" BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS SHALL BE INCLUDED WITH ITEM 603.

BACKFILL LIMITATIONS:

WHEN THE DESIGN HEIGHT IS GREATER THAN 10 FT. THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED.

POTIONS OF STRUCTURE REMOVED, AS PER PLAN:

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:
REMOVE INLET AND OUTLET WINGWALLS AND FORESLOPE WALLS TO THE BOTTOM OF THE PROPOSED PRECAST CULVERT . REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNTCHISEL TOOLS. HYDRAULIC HOE RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCH OF PORTIONS TO BE PRESERVED. OUTSIDE OF THE 18 INCH LIMIT, THE CONTRACTOR WAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. PAYMENT FOR THIS ITEM SHALL INCLUDE REMOVAL OF THE ITEMS LISTED AND ANY ADDITIONAL ITEMS REQUIRED TO CONSTRUCT THE PROPOSED WORK.

UTILITY LINES:

THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES.THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION:

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

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE COUNTY WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

POROUS BACKFILL WITH FILTER FABRIC:

2'-0" THICK POROUS BACKFILL WITH FILTER FABRIC SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

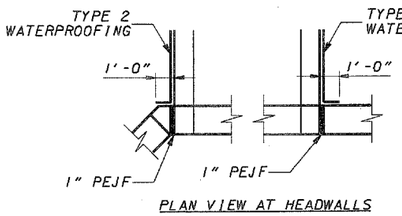
WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

PREFORMED EXPANSION JOINT FILLER (PEJF):

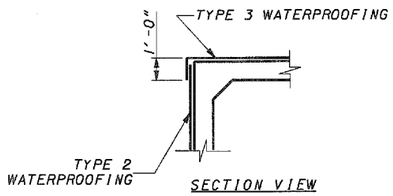
PEJF CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

SEALING OF FORESLOPE WALL AND WINGWALLS

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

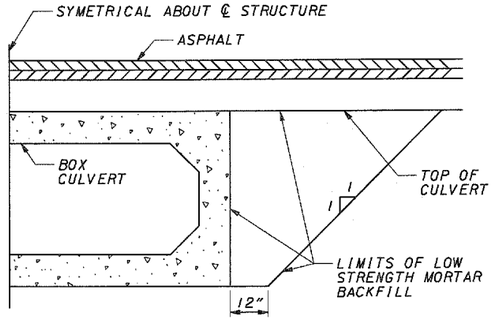


PLAN VIEW AT HEADWALLS

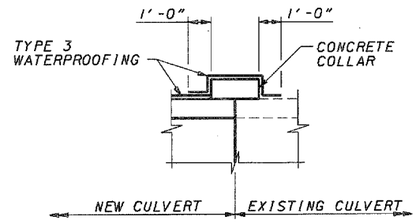


SECTION VIEW

WATERPROOFING DETAILS



ITEM 613 - LOW STRENGTH MORTAR BACKFILL



SECTION VIEW AT SETTLEMENT COLLAR

WATERPROOFING:

TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT THAT SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

TYPE 3 WATERPROOFING, PER CMS 512.10 AND 711.29 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.

LOW STRENGTH MORTAR BACKFILL (LSMB), TYPE 1:

THIS WORK SHALL CONSIST OF THE PLACEMENT OF A FLOWABLE MATERIAL CONSISTING OF PORTLAND CEMENT, FLY ASH AND/OR SAND WITH AN EXPECTED 28 DAY UNCONFINED COMPRESSIVE STRENTH LESS THAN 100 POUNDS PER SQUARE INCH. THIS ITEM SHALL BE PLACED AT A SLOPE OF 1:1 AS SHOWN ON THE PLANS. PAYMENT FOR LOW STRENGTH MORTAR BACKFILL SHALL BE MADE ONLY FOR BACKFILL PLACED TO THE LIMITS SHOWN . THE EXCAVATION REQUIRED FOR THE PLACEMENT OF THE LSM SHALL BE INCLUDED IN ITEM 603 FOR PAYMENT.

ITEM SPECIAL - FORM LINER:

FOR THE ARCHITECTURALLY TREATED ABUTMENT AND WINGWALLS, FORM LINERS IN ACCORDANCE WITH 508.03 SHALL BE USED. FORM LINERS SHALL BE USED TO PRODUCE THE TEXTURED SURFACES ACCORDING TO THE LIMITS SHOWN ON THE PLANS.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE FORM LINERS BY THE NUMBER OF SQUARE FEET. THE DEPARTMENT WILL DETERMINE THE AREA OF THE FORM LINER USING NOMINAL DIMENSIONS AS SHOWN ON THE PLANS. THE DEPARTMENT WILL NOT ADJUST PAY QUANTITIES FOR JOINT RUSTIFICATIONS OR OTHER FORM LINER CONSTRUCTION DETAILS.

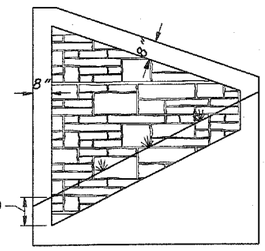
BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR FALSEWORK, STRUCTURAL FORMWORK, FURNISHING, PLACING, CONSOLIDATION, FINISHING, AND CURING PORTLAND CEMENT CONCRETE SEPARATELY. PAYMENT FOR ITEM SPECIAL, FORM LINERS INCLUDES ALL MATERIALS AND LABOR REQUIRED TO PRODUCE THE TEXTURED CONCRETE SURFACES SHOWN ON THE PLANS AND DESCRIVED HEREIN.

PLASTICIZED POLYVINYL CHLORIDE FORMLINERS SHALL BE AS MANUFACTURED BY THE FOLLOWING COMPANIES OR AN APPROVED EQUAL FORMLINER:

THERMOFORM VACUUM-FORMED FORMLINER
NO. 13301 (RANDOM BLOCK ASHLAR STONE)
DAYTON/RICHMOND COMPANY
721 RICHARD STREET
MIAMISBURG, OH 45342
(800) 745-3700 WWW.DAYTONRICHMOND.COM

GREENSTREAK ARCHITECTURAL FORM LINER
STYLE NO. 330 (ASHLAR STONE)
GREENSTREAK, INC.
3400 TREE COURT
ST. LOUIS, MO 63122
(800) 325-9504 WWW.GREENSTREAK.COM

FITZGERALD VACUUM-FORMED FORMLINER
NO. 16986
FITZGERALD FORMLINERS
1341 EAST POMONA STREET
SANTA ANA, CA 92705
(800) 547-7760 WWW.FORMLINERS.COM



FORM LINER DETAILS

ESTIMATED QUANTITIES

ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
203	10000	95	CU. YD.	EXCAVATION
203	20000	20	CU. YD.	EMBANKMENT
503	11100	LUMP		COFFERDAMS, CRIBS, AND SHEETING
503	21300	LUMP		UNCLASSIFIED EXCAVATION (WINGWALL FOOTING)
509	10000	19466	LB.	EPOXY COATED REINFORCING STEEL
510	10000	16	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALIC GROUT
511	46500	113	CU. YD.	CLASS C CONCRETE, FOOTING
511	46600	71	CU. YD.	CLASS C CONCRETE, HEADWALLS
512	10050	124	SQ. YD.	SEALING OF CONCRETE SURFACES (NON-EPOXY)
512	33000	78	SQ. YD.	TYPE 2 WATERPROOFING
512	33010	54	SQ. YD.	TYPE 3 WATERPROOFING
516	13200	181	SQ. FT.	½" PREFORMED EXPANSION JOINT FILLER
516	13600	80	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC
SPECIAL	53013000	591	SQ. FT.	SPECIAL - FORM LINER
601	32000	125	CU. YD.	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
601	32200	13	CU. YD.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
603	96011	30	LIN. FT.	12' x 9' CONDUIT, TYPE A, 706.05 ASTM C1433, AS PER PLAN
613	41250	159	CU. YD.	LOW STRENGTH MORTAL BACKFILL (TYPE 1)

NOTE: ALL QUANTITIES SHOWN ARE ELIGIBLE FOR FEDERAL STP FUNDS

DESIGN AGENCY: TranSystems, 155 East Broad Street, Columbus, Ohio 43215

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	7/30/09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		25355/9	

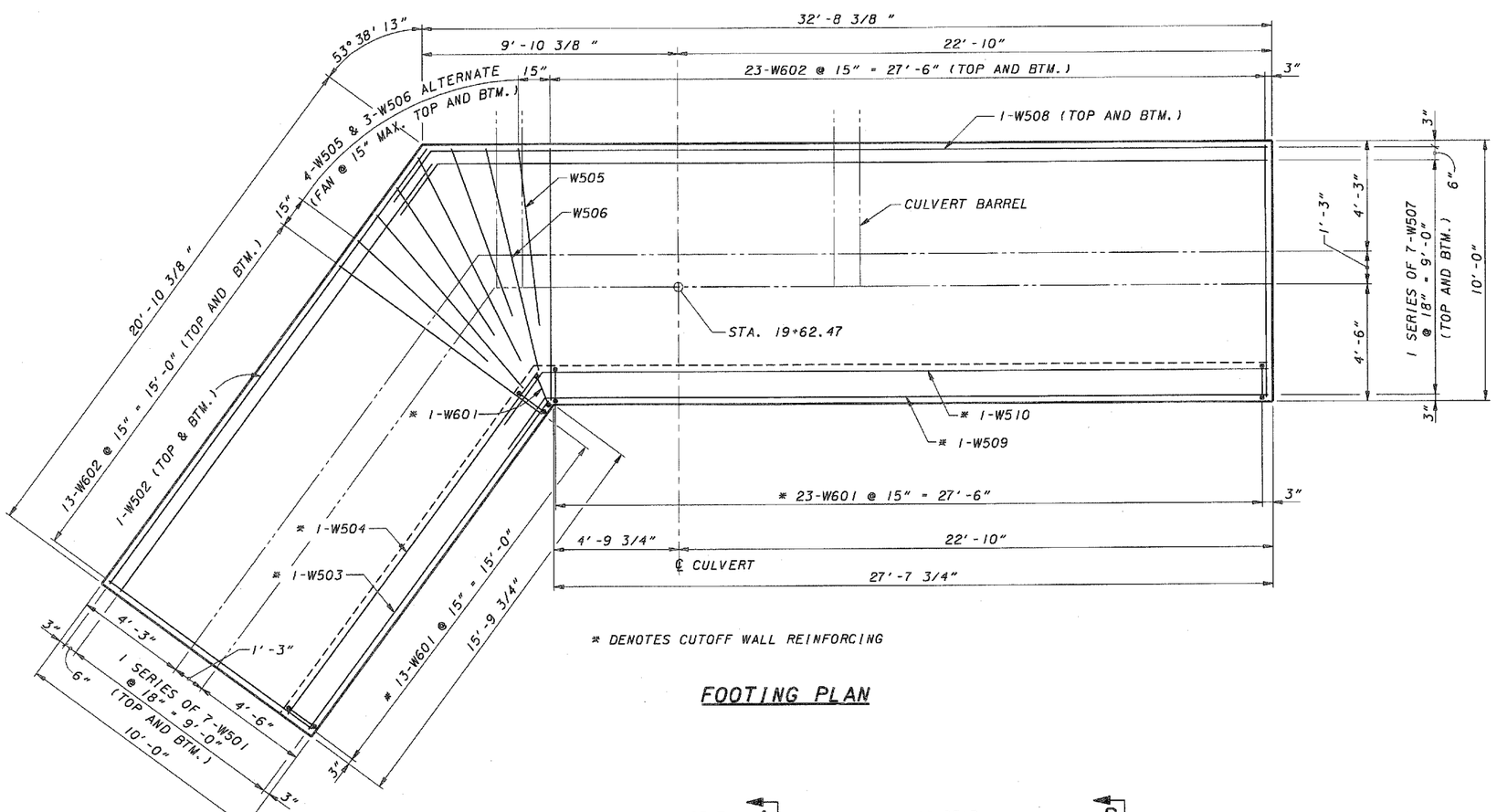
GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. FRA-11-1076
ALKIRE ROAD (CR11) OVER TRIBUTARY TO SCIOTO BIG RUN

FRA-CR11-10.49
PID 76255
FCEO 1135

2 / 7

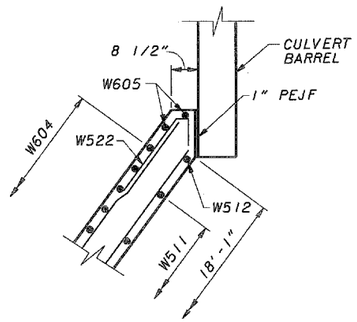
59 / 118

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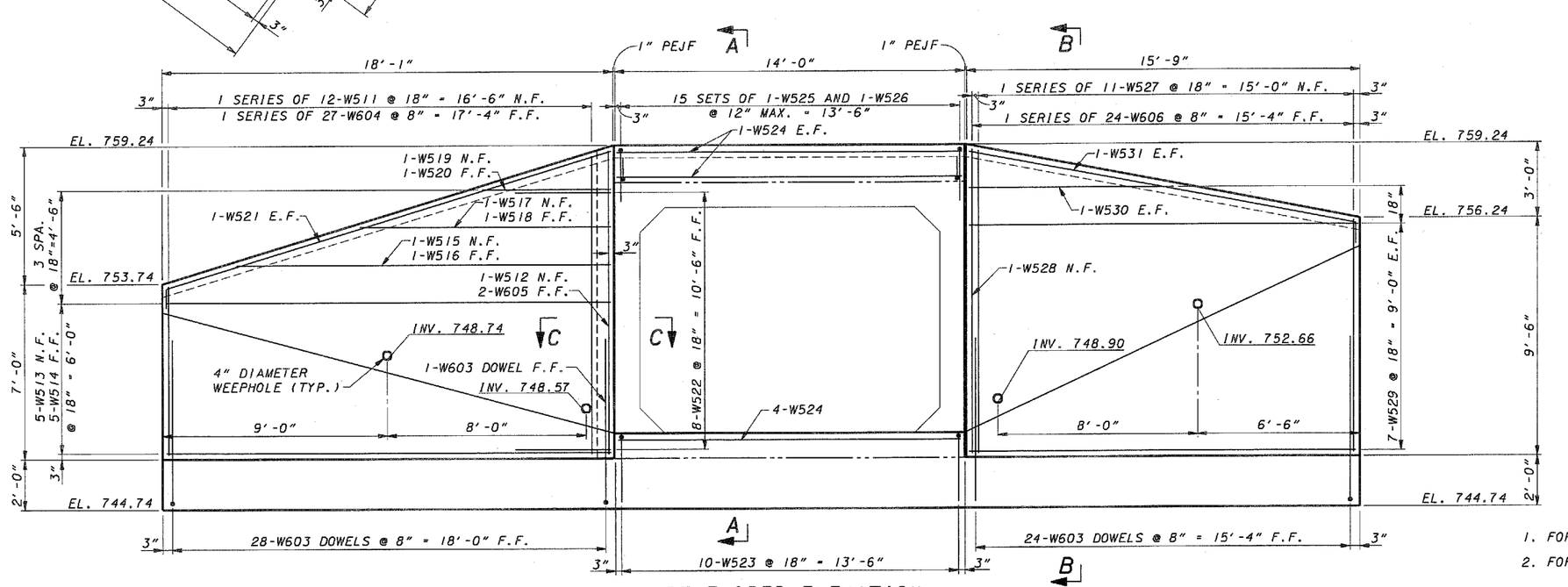


* DENOTES CUTOFF WALL REINFORCING

FOOTING PLAN



SECTION C-C



DEVELOPED ELEVATION

(CUTOFF WALL NOT SHOWN)

LEGEND:

C.J.	CONSTRUCTION JOINT
E.F.	EACH FACE
F.F.	FAR FACE
N.F.	NEAR FACE
MAX.	MAXIMUM
BTM.	BOTTOM
TYP.	TYPICAL
PEJF	PREFORMED EXPANSION JOINT FILLER

NOTES

1. FOR CULVERT LOCATION PLAN, SEE SHEET 1/7.
2. FOR SECTION A-A AND B-B, SEE SHEET 4/7.

DESIGN AGENCY: Trans Systems, 1105 SCHROCK ROAD, SUITE 900, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	7/30/09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		2535319	

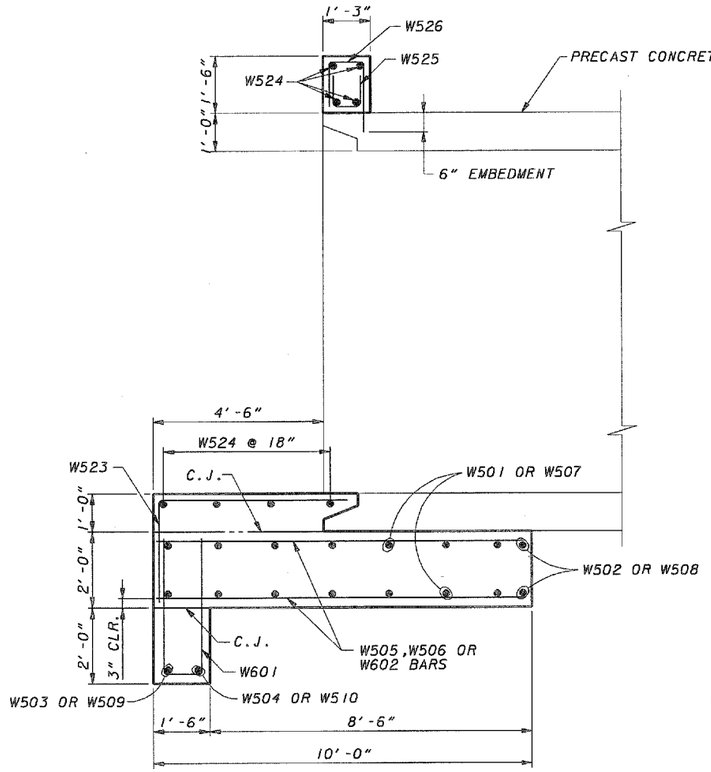
INLET HEADWALL DETAILS
BRIDGE NO. FRA-11-1076
ALKIRE ROAD (CR11) OVER TRIBUTARY TO SCIOTO BIG RUN

FRA-CR11-10.49
PID 76255
FCEO 1135

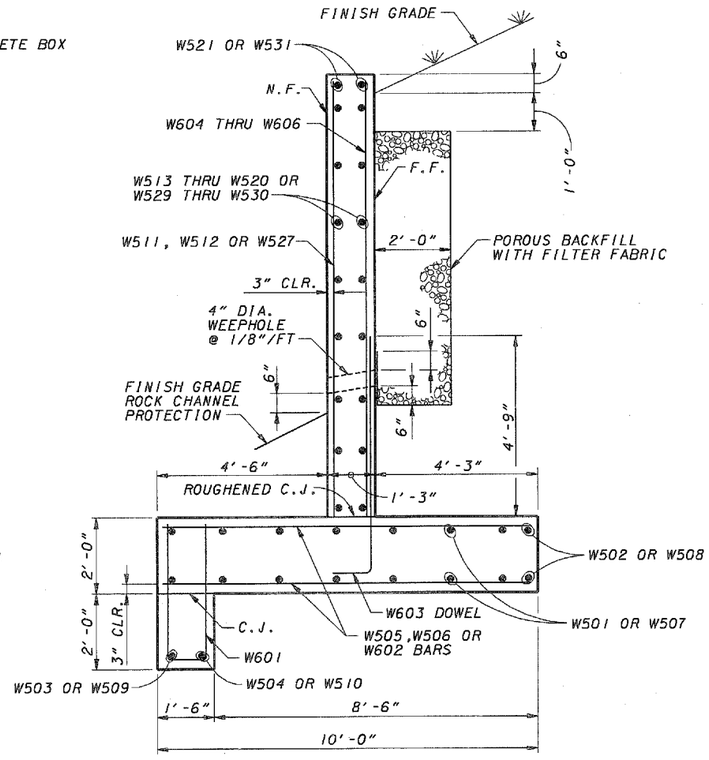
3/7

60/118

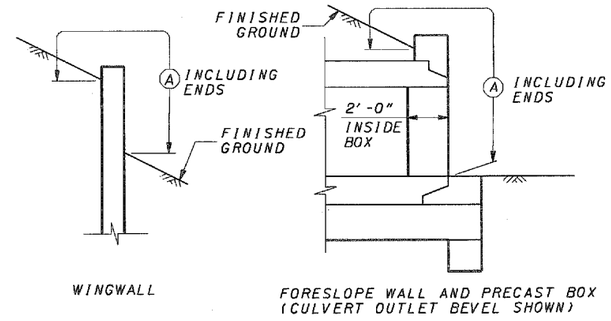
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SECTION A-A

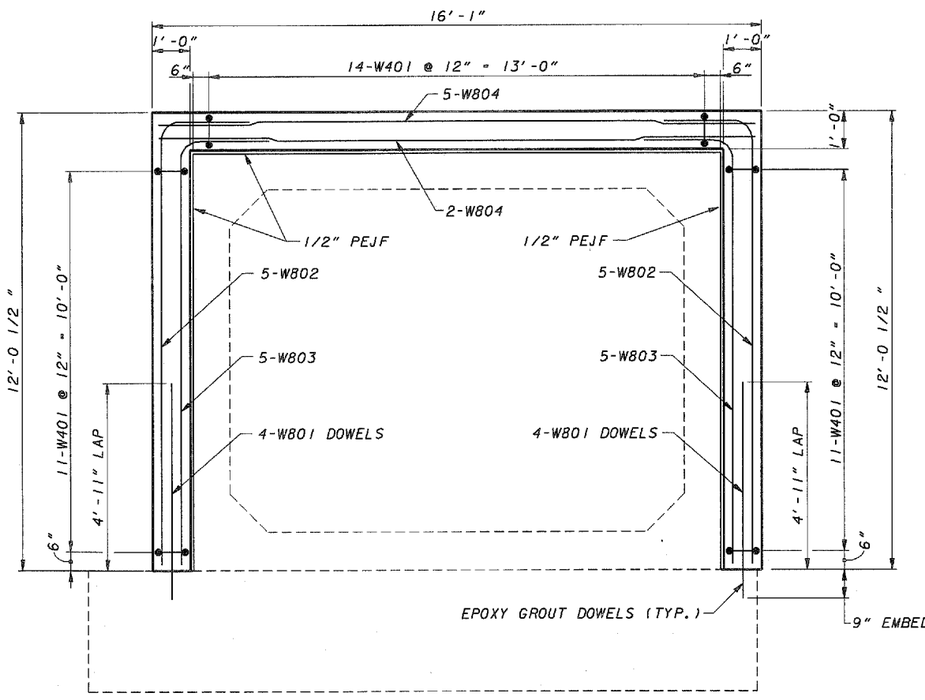


SECTION B-B

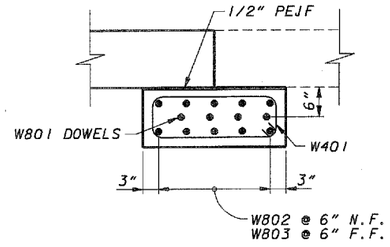


LIMITS OF ITEM 512-SEALING CONCRETE SURFACES

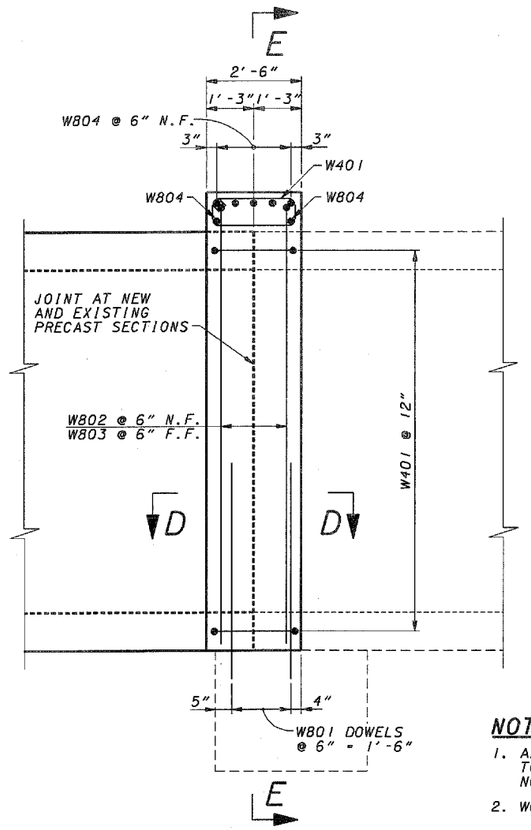
Ⓐ - SEAL ENTIRE CONCRETE SURFACE AREA



SECTION E-E



SECTION D-D



SETTLEMENT COLLAR DETAIL

LEGEND:

C.J.	CONSTRUCTION JOINT
E.F.	EACH FACE
F.F.	FAR FACE
N.F.	NEAR FACE
MAX.	MAXIMUM
BTM.	BOTTOM
TYP.	TYPICAL
CLR.	CLEARANCE
PEJF	PREFORMED EXPANSION JOINT FILLER

NOTES

1. ALL REINFORCING HAS A 2" CLEARANCE TO FACE OF CONCRETE UNLESS OTHERWISE NOTED.
2. WORK THIS SHEET WITH SHEET 3/7 .

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 7/30/09 | STRUCTURE FILE NUMBER 2535319 | CHECKED PJP | REVISED | REVISED

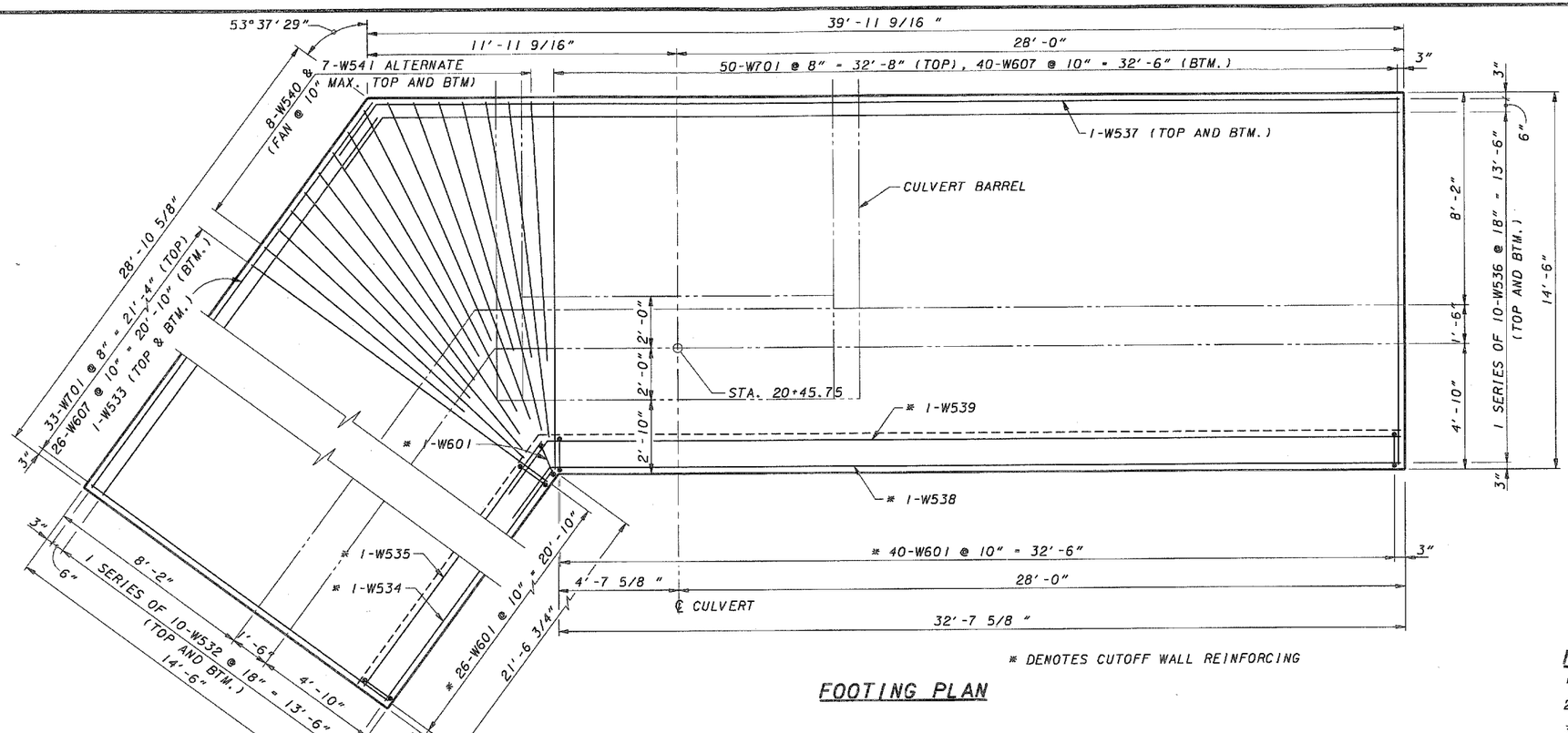
INLET HEADWALL DETAILS
BRIDGE NO. FRA-11-1076
ALKIRE ROAD (CR11) OVER TRIBUTARY TO SCIOTO BIG RUN

FRA-CR11-10.49
PID 76255
FCEO 1135

4 / 7

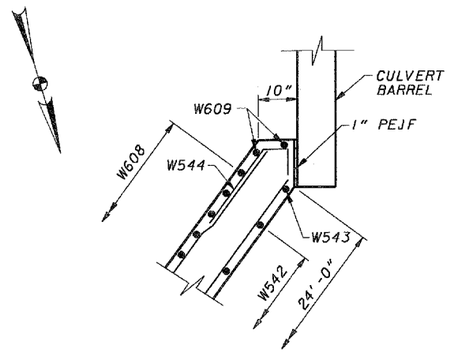
61 / 118

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* DENOTES CUTOFF WALL REINFORCING

FOOTING PLAN



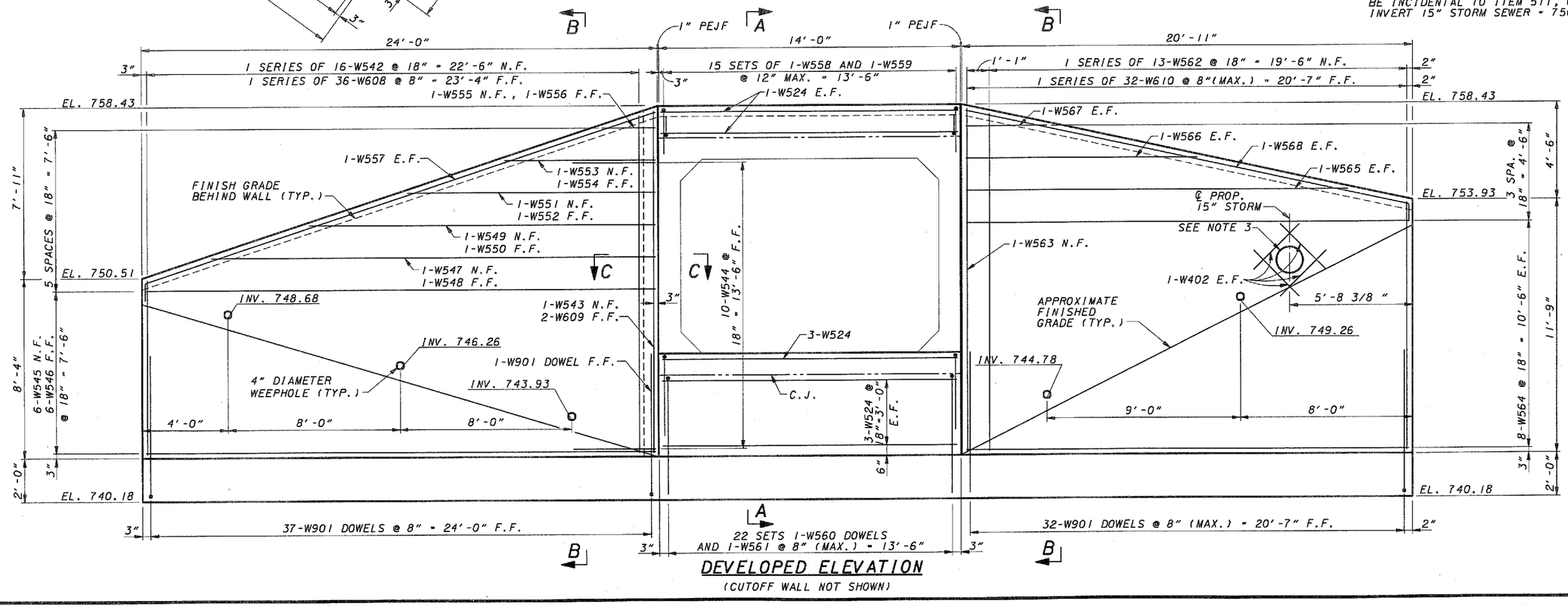
SECTION C-C

LEGEND:

C.J.	CONSTRUCTION JOINT
E.F.	EACH FACE
F.F.	FAR FACE
N.F.	NEAR FACE
MAX.	MAXIMUM
BTM.	BOTTOM
TYP.	TYPICAL
PEJF	PREFORMED EXPANSION JOINT FILLER

NOTES

1. FOR CULVERT LOCATION PLAN, SEE SHEET 1/7.
2. FOR SECTION A-A AND B-B, SEE SHEET 6/7.
3. PIPE SLEEVE FOR 15" DIA. STORM SEWER, COST TO BE INCIDENTAL TO ITEM 511, CLASS C CONCRETE. INVERT 15" STORM SEWER = 750.5



DEVELOPED ELEVATION

(CUTOFF WALL NOT SHOWN)

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	7/30/09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		2535319	

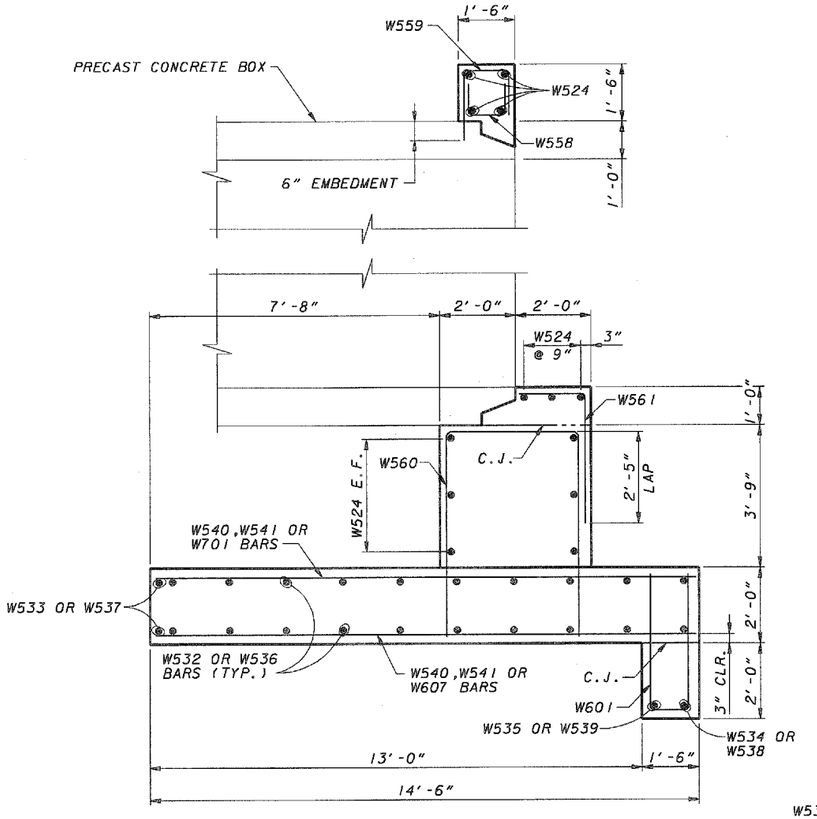
OUTLET HEADWALL DETAILS
BRIDGE NO. FRA-11-1076
ALKIRE ROAD (CR11) OVER TRIBUTARY TO SCIOTO BIG RUN

FRA-CR11-10.49
PID 76255
FCEO 1135

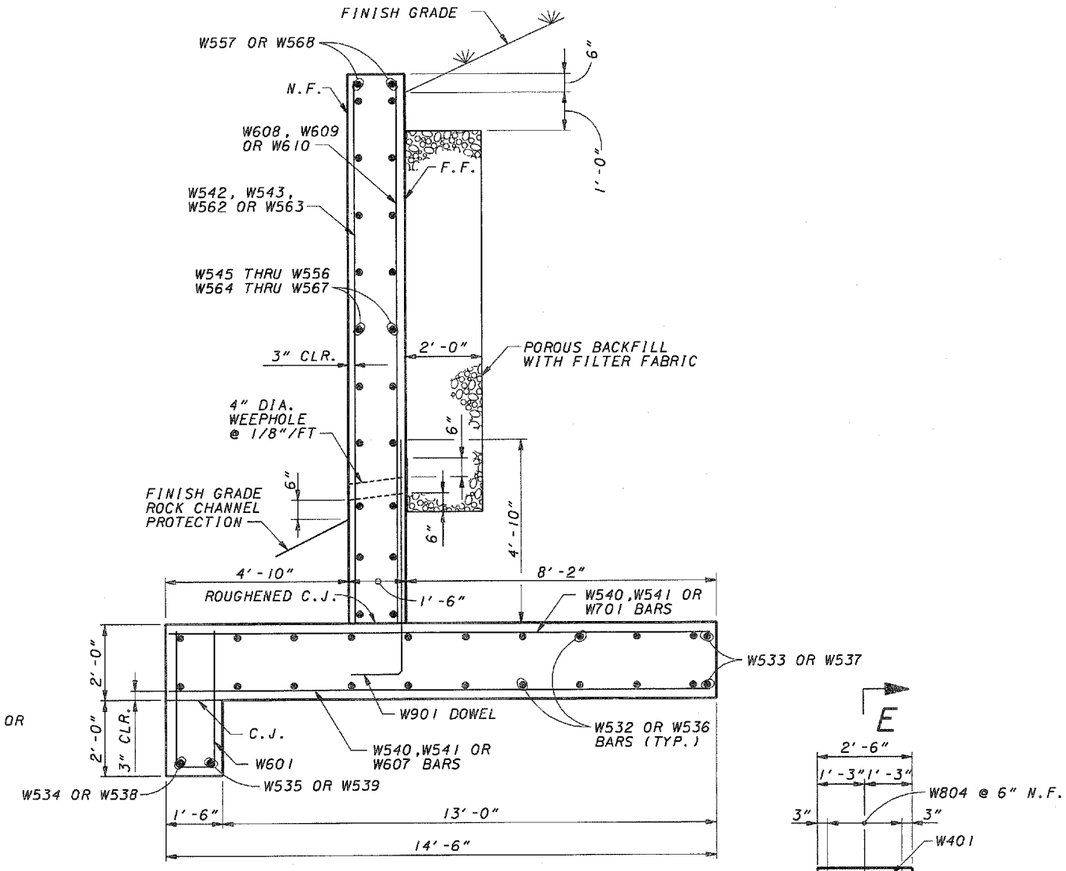
5 / 7

62 / 118

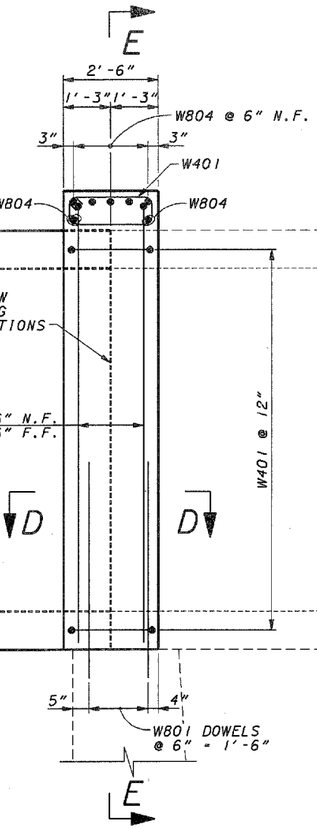
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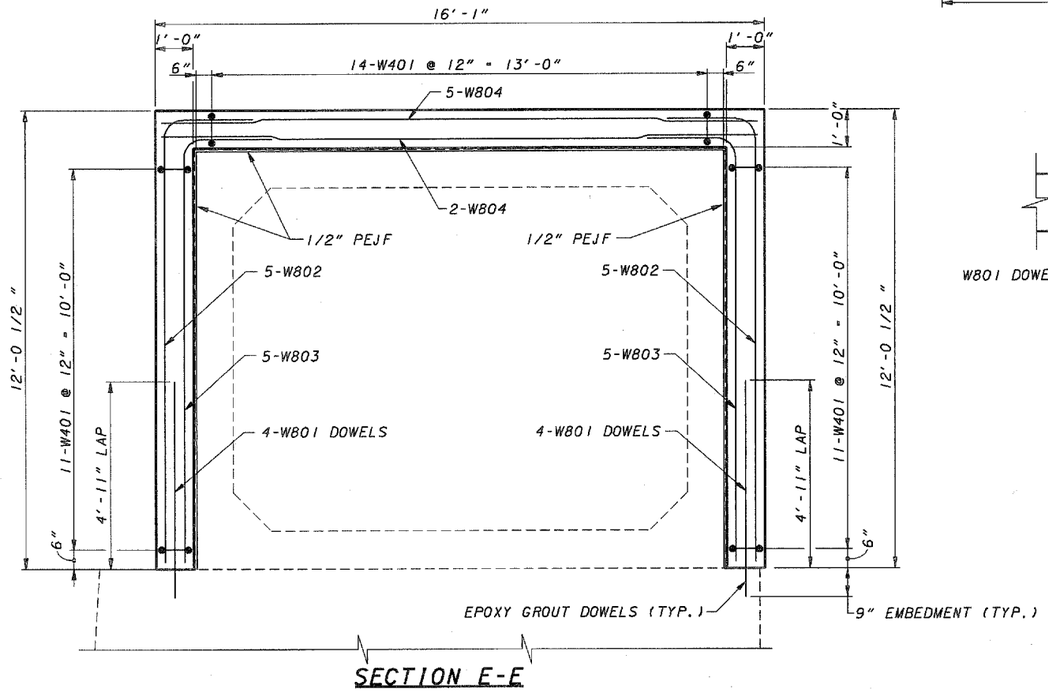
SECTION A-A



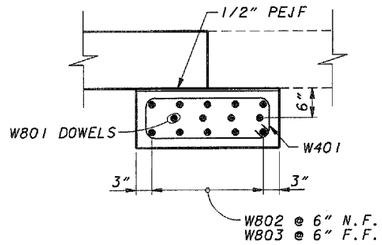
SECTION B-B



SETTLEMENT COLLAR DETAIL



SECTION E-E



SECTION D-D

LEGEND:

C.J.	CONSTRUCTION JOINT
E.F.	EACH FACE
F.F.	FAR FACE
N.F.	NEAR FACE
MAX.	MAXIMUM
BTM.	BOTTOM
TYP.	TYPICAL
CLR.	CLEARANCE
PEJF	PREFORMED EXPANSION JOINT FILLER

NOTES

1. ALL REINFORCING HAS A 2" CLEARANCE TO FACE OF CONCRETE UNLESS OTHERWISE NOTED.
2. WORK THIS SHEET WITH SHEET [5/7].

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 100, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	7/30/09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		2535319	

OUTLET HEADWALL DETAILS

BRIDGE NO. FRA-II-1076
ALKIRE ROAD (CRII) OVER TRIBUTARY TO SCIOTO BIG RUN

FRA-CRII-10.49
PID 76255
FCEO 1135

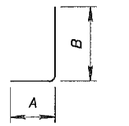
6 / 7

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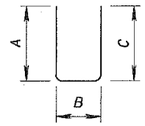
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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	R
W401	72	6' - 2"	297	3	2'-2"	8"				
W402	8	3' - 0"	17	STR.						
	2	VAR. 15'-8"								
W501	SER. OF	TO 20'-2"	262	STR.						
	7	BY 9"								
W502	2	20' - 8"	44	STR.						
W503	1	15' - 8"	17	STR.						
W504	1	16' - 3"	17	STR.						
W505	8	6' - 10"	58	STR.						
W506	6	8' - 9"	55	STR.						
	2	VAR. 30'-1"			VAR. 27'-8"					
W507	SER. OF	TO 30'-7"	473	19	TO 32'-2"	1'-5"	1'-11 1/2"			
	7	BY 9"			BY 9"					
W508	2	34' -10"	73	19	32'-5"	1'-5"	1'-11 1/2"			
W509	1	30' - 1"	32	19	27'-8"	1'-5"	1'-11 1/2"			
W510	1	30' - 6"	32	19	28'-1"	1'-5"	1'-11 1/2"			
	1	VAR. 6'-11"								
W511	SER. OF	TO 11'-11"	119	STR.						
	12	BY 5 1/2"								
W512	1	12' - 4"	13	STR.						
W513	5	17' - 10"	94	STR.						
W514	5	18' - 5"	97	STR.						
W515	1	15' - 0"	16	STR.						
W516	1	15' - 6"	17	STR.						
W517	1	10' - 1"	11	STR.						
W518	1	10' - 7"	12	STR.						
W519	1	5' - 2"	6	STR.						
W520	1	5' - 8"	6	STR.						
W521	2	19' - 5"	41	19	18'-7"	3"	9"			
W522	8	4' - 2"	35	10	1'-9"	2'-5"	5"	10"		
W523	10	7' - 1"	74	1	4'-6"	2'-8"				
W524	21	13' - 8"	300	STR.						
W525	15	3' - 0"	47	2	1'-2"	11"	1'-2"			
W526	15	3' - 11"	62	2	1'-2"	11"	1'-10"			
	1	VAR. 9'-4"								
W527	SER. OF	TO 12'-3"	124	STR.						
	11	BY 3 1/2"								
W528	1	12' - 3"	13	STR.						
W529	14	15' - 5"	226	STR.						
W530	2	8' - 1"	17	STR.						
W531	2	16' - 6"	35	19	15'-8"	2"	10"			
	2	VAR. 26'-6"								
W532	SER. OF	TO 28'-3"	519	STR.						
	10	BY 9"								
W533	2	28' - 8	60	STR.						
W534	1	21' - 6	23	STR.						
W535	1	22' - 1	24	STR.						
	2	VAR. 35'-1"			VAR. 27'-8"					
W536	SER. OF	TO 41'-10"	803	19	TO 32'-2"	1'-5"	1'-11 1/2"			
	10	BY 9"			BY 9"					
W537	2	42' - 1	88	19	39'-8"	1'-5"	1'-11 1/2"			
W538	1	35' - 0	37	19	32'-7"	1'-5"	1'-11 1/2"			
W539	1	3' - 6	4	19	33'-1"	1'-5"	1'-11 1/2"			
W540	8	10' - 0	84	STR.						
W541	7	13' - 0	95	STR.						
	1	VAR. 8'-3"								
W542	SER. OF	TO 15'-9"	201	STR.						
	16	BY 6"								
W543	1	16' - 0"	17	STR.						
W544	10	3' - 11"	41	10	1'-1"	6"	1'-11"	2'-5"		

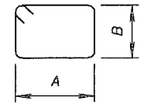
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	R
W545	6	23' - 9"	149	STR.						
W546	6	24' - 6"	154	STR.						
W547	1	20' - 8"	22	STR.						
W548	1	21' - 5"	23	STR.						
W549	1	16' - 1"	17	STR.						
W550	1	16' - 10"	18	STR.						
W551	1	11' - 7"	13	STR.						
W552	1	12' - 4"	13	STR.						
W553	1	7' - 0"	8	STR.						
W554	1	7' - 9"	9	STR.						
W555	1	2' - 6"	3	STR.						
W556	1	3' - 3"	4	STR.						
W557	2	25' - 9"	54	19	24'-11"	3"	9"			
W558	15	3' - 3"	51	2	1'-2"	1'-2"	1'-2"			
W559	15	3' - 11"	62	2	1'-2"	1'-2"	1'-10"			
W560	22	14' - 2"	326	2	5'-4"	3'-8"	5'-4"			
W561	22	5' - 0"	115	1	1'-8"	3'-5"				
	1	VAR. 11'-7"								
W562	SER. OF	TO 15'-7"	185	STR.						
	13	BY 4"								
W563	1	16' - 0"	17	STR.						
W564	16	20' - 7"	344	STR.						
W565	2	17' - 9"	38	STR.						
W566	2	10' - 9"	23	STR.						
W567	2	3' - 9"	8	STR.						
W568	2	21' - 10"	46	19	21'-0"	2"	10"			
W601	104	8' - 0"	1250	2	3'-7"	1'-2"	3'-7"			
W602	72	9' - 8"	1046	STR.						
W603	53	7' - 4"	584	1	1'-0"	6'-6"				
	1	VAR. 6'-11"								
W604	SER. OF	TO 12'-0"	384	STR.						
	27	BY 2 3/8"								
W605	2	12' - 4"	38	STR.						
	1	VAR. 9'-4"								
W606	SER. OF	TO 12'-3"	389	STR.						
	24	BY 1 1/2"								
W607	66	14' - 2"	1405	STR.						
	1	VAR. 8'-3"								
W608	SER. OF	TO 15'-6 1/2"	644	STR.						
	36	BY 2 1/2"								
W609	2	16' - 0"	49	STR.						
	1	VAR. 11'-6"								
W610	SER. OF	TO 16'-0"	661	STR.						
	32	BY 1 3/4"								
W701	83	14' - 2"	2404	STR.						
W801	16	5' - 8"	242	STR.						
W802	20	13' - 11"	743	1	2'-4"	11'-9"				
W803	20	13' - 5"	716	1	2'-4"	11'-3"				
W804	14	15' - 8"	586	STR.						
W901	70	7' - 11"	1885	1	1'-7"	6'-7"				
		TOTAL = 19,466								



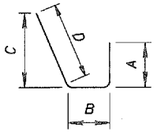
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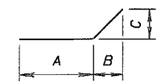
TYPE-2



TYPE-3



TYPE-10



TYPE-19

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 603
COLUMBUS, OHIO 43229

REVIEWED	DATE
MSL	7/30/09
STRUCTURE FILE NUMBER	
DRAWN	REVISED
JDG	
DESIGNED	CHECKED
MTN	PJP

REINFORCING STEEL LIST

BRIDGE NO. FRA-11-1076
ALKIRE ROAD (CR11) OVER TRIBUTARY TO SCIOTO BIG RUN

FRA-CR11-10.49
PID 76255
FCEO 1135

7 / 7

64
118

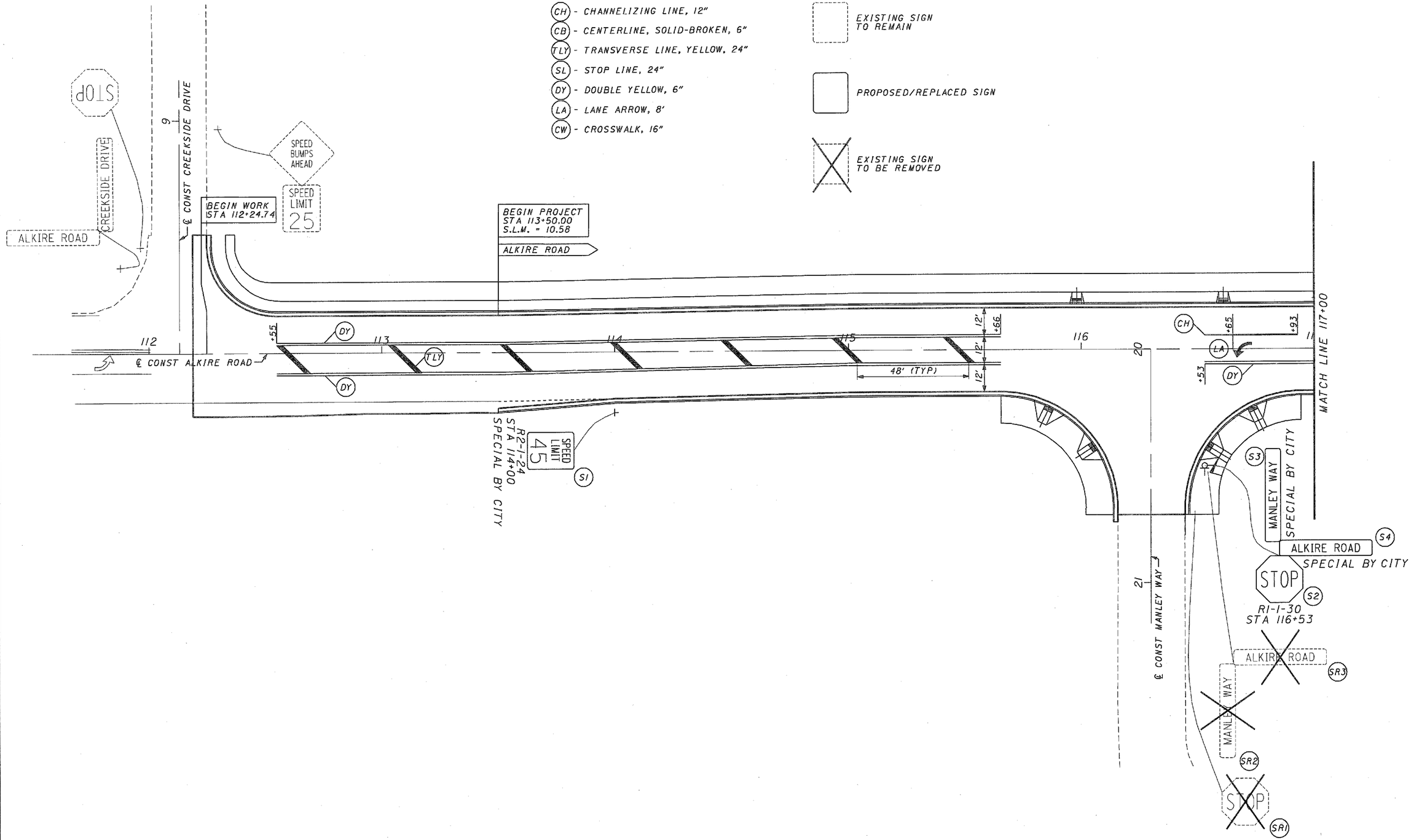
8/7/2009 4:00:29 PM G:\C002\0025\Hydraulics\76255_0003.dgn

PAVEMENT MARKING LEGEND

- (CH) - CHANNELIZING LINE, 12"
- (CB) - CENTERLINE, SOLID-BROKEN, 6"
- (TLY) - TRANSVERSE LINE, YELLOW, 24"
- (SL) - STOP LINE, 24"
- (DY) - DOUBLE YELLOW, 6"
- (LA) - LANE ARROW, 8'
- (CW) - CROSSWALK, 16"

SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- PROPOSED/REPLACED SIGN
- EXISTING SIGN TO BE REMOVED



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED

CHECKED

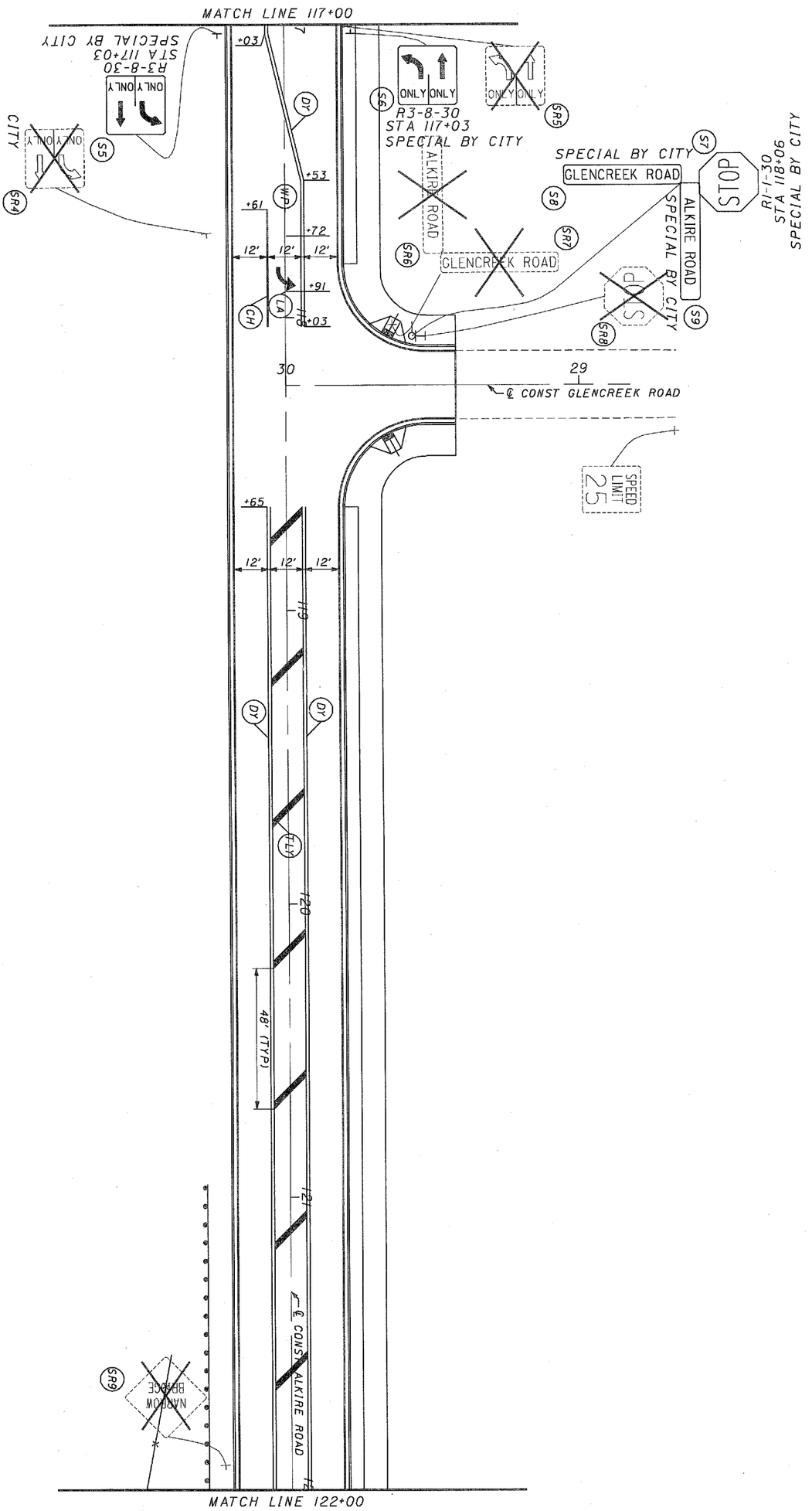
TRAFFIC CONTROL
BEGIN WORK TO STA 117+00

FRA-CR11-10.49

65
118

Plotted By: acscheiderer Date: 8/13/2009 Time: 4:03:42 PM
Filename: G:\C002\0025\Road\Sheets\76255tp01.dgn

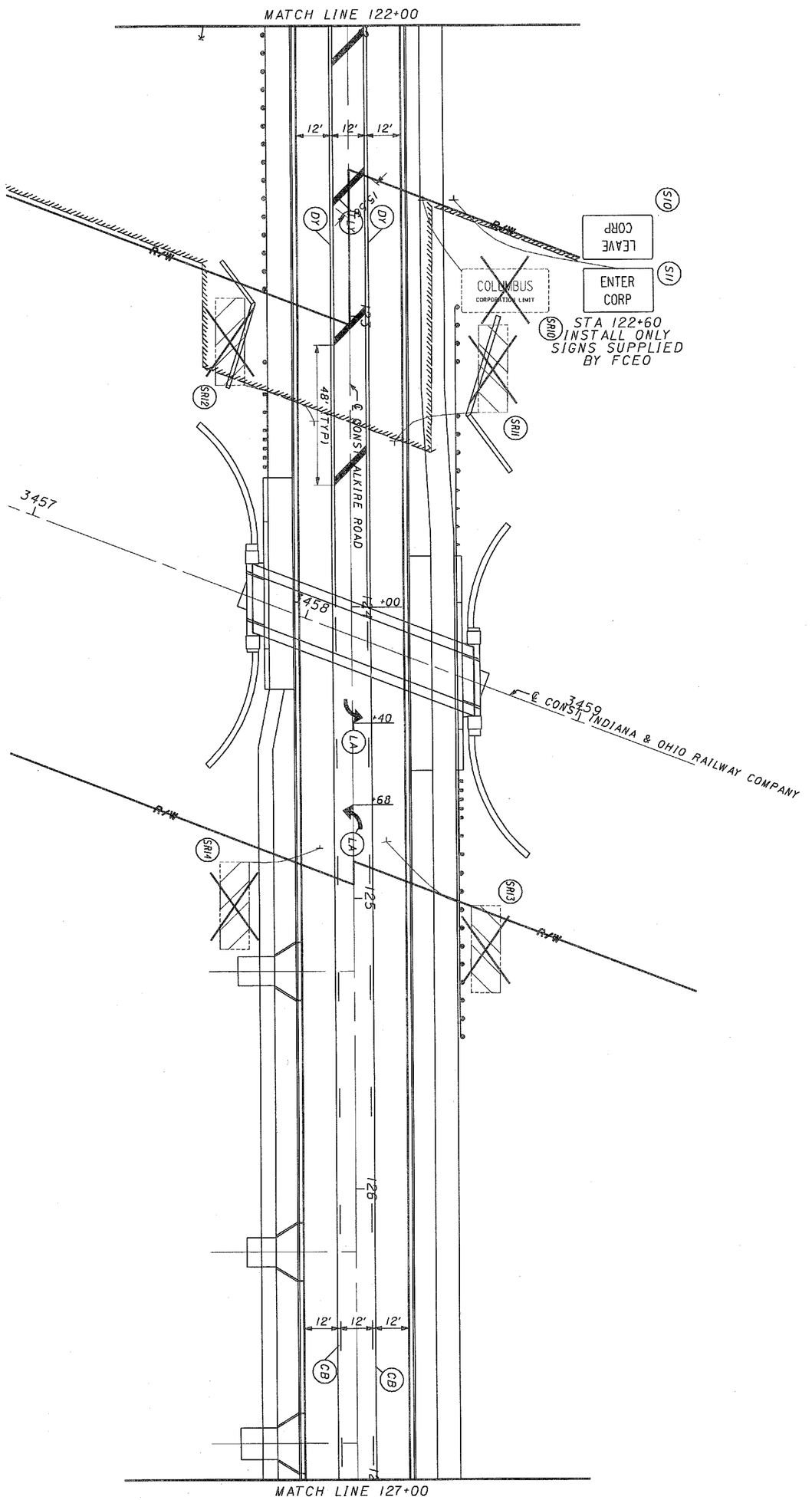
Plotted By: acschelderer Date: 8/13/2009 Time: 4:03:42 PM
Filename: G:\C002\0025\Road\Sheets\76255tp02.dgn



NOTE:
11 SEE SHEET 65 FOR SIGNING AND PAVEMENT MARKING LEGENDS.

118 / 99	FRA-CR11-10.49	TRAFFIC CONTROL STA 117+00 TO STA 122+00	CALCULATED CHECKED	0 20 10 40 HORIZONTAL SCALE IN FEET

Plotted By: acscheiderer Date: 8/13/2009 Time: 4:03:43 PM
Filename: G:\C002\0025\Road\Sheets\76255tp03.dgn



NOTE:
1) SEE SHEET 65 FOR SIGNING AND PAVEMENT MARKING LEGENDS.

NOTE:
THE RAILROAD RIGHT-OF-WAY SHOWN IS THE PROPERTY OF CSX TRANSPORTATION (aka: BALTIMORE AND OHIO RAILROAD CO.) AND IS LEASED TO THE INDIANA AND OHIO RAILWAY CO. (IORY).

67
118

FRA-CR11-10.49

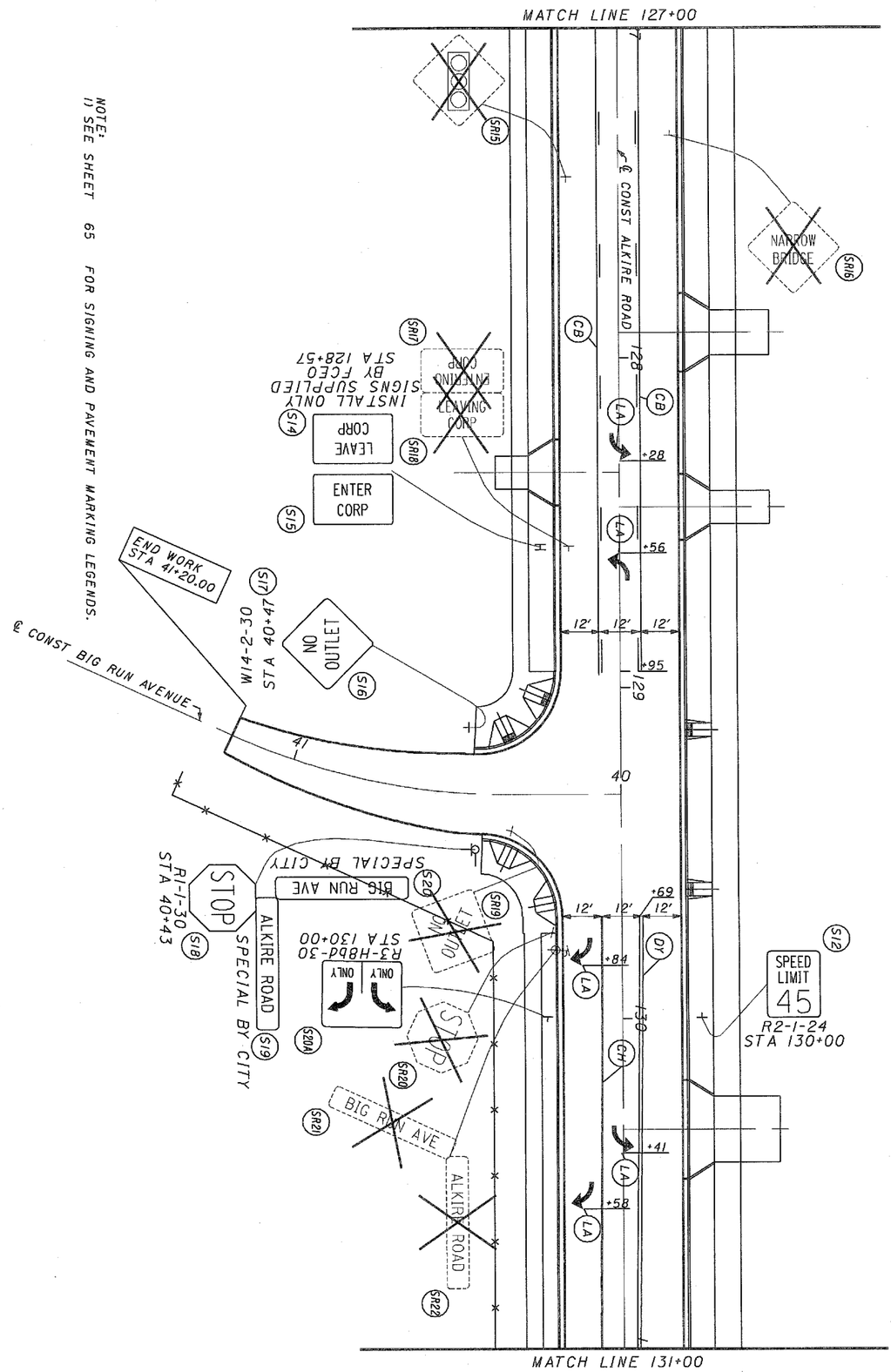
TRAFFIC CONTROL
STA 122+00 TO STA 127+00

CALCULATED
CHECKED

0 20
10 40
HORIZONTAL SCALE IN FEET

N

Plotted By: acschelderer Date: 8/13/2009 Time: 4:03:43 PM
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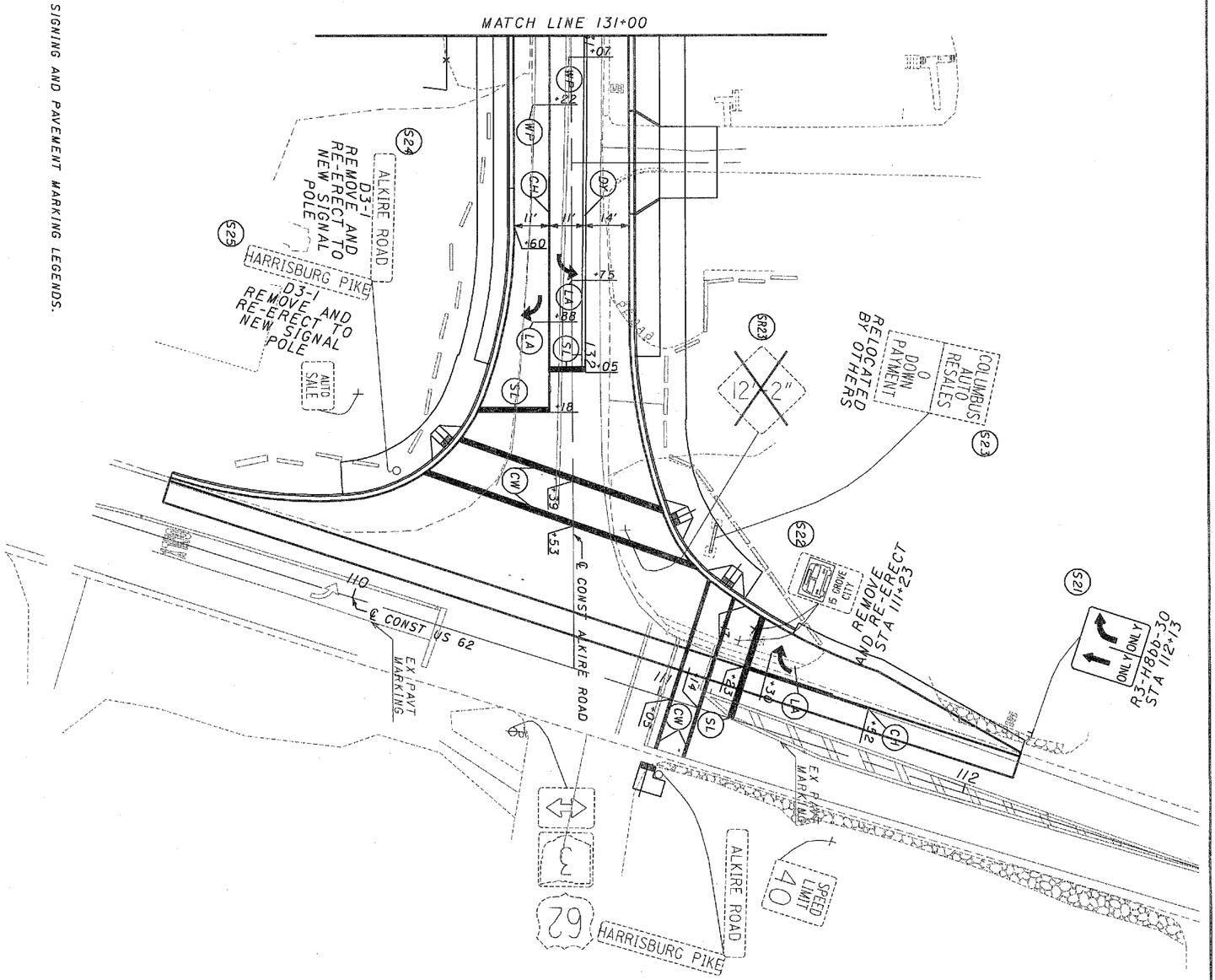


NOTE:
1) SEE SHEET 65 FOR SIGNING AND PAVEMENT MARKING LEGENDS.

68 / 811	FRA-CR11-10.49	TRAFFIC CONTROL STA 127+00 TO STA 131+00	CALCULATED CHECKED	0 20 10 40 HORIZONTAL SCALE IN FEET

Plotted By: acschelderer Date: 8/13/2009 Time: 4:03:43 PM
Filename: G:\C002\0025\Road\Sheets\76255tp05.dgn

NOTE:
1) SEE SHEET 65 FOR SIGNING AND PAVEMENT MARKING LEGENDS.



69 / 811	FRA-CR11-10.49	TRAFFIC CONTROL STA 131+00 TO END PROJECT	CALCULATED CHECKED	0 20 0 40 HORIZONTAL SCALE IN FEET

THE TRANSPORTATION DIVISION IS A SUBUNIT OF THE CITY OF COLUMBUS, PUBLIC SERVICE DEPARTMENT AND IS OWNER OF PART OR ALL OF THE FACILITIES COVERED BY THESE PLANS.

ALL INCIDENTAL WORK ITEMS CALLED FOR IN THESE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AND THE TOTAL COST OF SAID ITEMS SHALL BE INCLUDED IN THE PRICE OF ITS ASSOCIATED BID ITEM.

ACCEPTANCE OF SIGNAL

THE TRANSPORTATION DIVISION SHALL BE THE SOLE AGENCY TO ACCEPT ANY TRAFFIC SIGNAL INSTALLATION ON BEHALF OF THE CITY. THE DIVISION WILL NOT GIVE PERMISSION TO THE CONTRACTOR TO EITHER PLACE A PROPOSED SIGNAL ON FLASH OR ACTIVATE IT OR ACCEPTED ANY SIGNAL INSTALLATION IF ANY ELECTRICAL CLEARANCE REGULATIONS OR ANY OSHA ELECTRICAL SAFETY CLEARANCES ARE IN VIOLATION. IF ANY PROPOSED AERIAL CABLE IS ATTACHED TO ANY NON-DIVISION OWNED POLE, THEN PERMISSION TO ATTACH MUST BE GRANTED BY THE POLE OWNER AND ATTACHMENT CONFIRMATION RECEIVED BY THIS DIVISION BEFORE THE SIGNAL WILL BE ACCEPTED. IF A RECORDED EASEMENT IS REQUIRED, A COPY OF THE RECORDED EASEMENT MUST BE DELIVERED TO THE DIVISION'S TRAFFIC ENGINEER BEFORE THE SIGNAL INSTALLATION IS ACCEPTED.

PROJECT SIGNAL INSPECTION, SIGNAL PLAN CHANGES & NOTIFICATION

IN ADDITION TO PROJECT PERSONNEL, A REPRESENTATIVE FROM THE TRANSPORTATION DIVISION, SIGNAL DESIGN SERVICES SECTION, SHALL BE PRESENT TO INSPECT THE SIGNAL INSTALLATION AT ALL SIGNALS WITHIN THE JURISDICTION OF THE CITY OF COLUMBUS. ANY CHANGE TO THE SIGNAL PLANS SHALL BE APPROVED BY THE SIGNAL DESIGN SECTION PRIOR TO ITS IMPLEMENTATION. THE CONTRACTOR SHALL CONTACT BOTH THE PROJECT PERSONNEL AND SIGNAL DESIGN SERVICES SECTION PERSONNEL (614-645-7883) TO ARRANGE A TIME AND DATE FOR A SIGNAL PRECONSTRUCTION CONFERENCE TO DISCUSS THIS PROJECT. NO SIGNAL WORK SHALL START PRIOR TO THIS MEETING.

EXISTING UTILITIES

THE TRANSPORTATION DIVISION ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OR THE DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THESE PLANS. SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE VARIOUS ITEMS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AND THE FOLLOWING CITY UTILITIES SO THEIR RESPECTIVE UTILITIES CAN BE MARKED. THE PROJECT ENGINEER SHALL NOT AUTHORIZE THE START OF ANY SIGNAL UNDERGROUND WORK UNTIL ALL UTILITIES HAVE BEEN MARKED.

SEWERS & DRAINS 645-7102 (FAX -3242)
ELECTRICITY 645-7627 (FAX -7150)
TRANSPORTATION 645-7393 (FAX -5967)
WATER 645-7788 (FAX -0220)
TELECOMMUNICATIONS 645-1501 (FAX 6627)
COMMUNICATIONS 645-7344 (FAX 6588)

PLAN AND SPECIFICATION COMPLIANCE

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC SIGNAL DEVICES IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, THE 2005 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ITS SUPPLEMENTAL SPECIFICATIONS, OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND THE "TC" STANDARD CONSTRUCTION DRAWINGS ISSUED BY THE ODOT OFFICE OF TRAFFIC ENGINEERING (SUPPLEMENTS THE PLAN SPECIFICATIONS). THE CITY OF COLUMBUS, TRANSPORTATION DIVISION, SHALL DETERMINE WHETHER THE SUPPLIED ITEMS MEET OR EXCEED THESE SPECIFICATIONS.

TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL MEET OR EXCEED THE STANDARDS SPECIFIED IN THE FOLLOWING DOCUMENTS.

(A) SPECIFICATIONS LISTED IN THIS PLAN;

(B) APPLICABLE SECTIONS OF NEMA STANDARDS PUBLICATION NO. TS2-1998 AND/OR TSI 1989;

(C) 2005 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS 625, 632, 633, 725, 732 & 733; OTHER ODOT DRAWINGS AND SUPPLEMENTALS.

IN CASE OF A CONFLICTING SPECIFICATION STATEMENT, THE SPECIFICATION DOCUMENT HIERARCHY SHALL BE IN THE ORDER LISTED FROM (A), HIGHEST, TO (C), LOWEST.

SIGNAL INSTALLATION & MAINTENANCE PERSONNEL REQUIREMENTS

THE CONTRACTOR SHALL ASSIGN A PROJECT SUPERVISOR. THE SUPERVISOR SHALL BE A FULL TIME EMPLOYEE OF THE CONTRACTOR. THE CONTRACTOR SHALL NOT CHANGE THE PROJECT SUPERVISOR WITHOUT GIVING THE PROJECT ENGINEER WRITTEN NOTICE. THE CONTRACTOR SHALL PROVIDE INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION (IMSA) CERTIFIED DOCUMENTATION FOR THEIR EMPLOYEES IF REQUESTED BY PROJECT OR DIVISION PERSONNEL.

ALL CONTROLLER WORK AS DEFINED BELOW IN ITEMS 1 THROUGH 4 SHALL BE PERFORMED BY AN IMSA LEVEL TWO CERTIFIED TECHNICIAN.

1. BACK PANEL WIRING TERMINATIONS
2. PROGRAMMING
3. TESTING OR TURN ON
4. TROUBLESHOOTING

THE CONTRACTOR SHALL ALSO HAVE A FOREMAN ASSIGNED TO EACH CREW PERFORMING WORK FOR THIS PROJECT. A FOREMAN SHALL BE PRESENT AT ALL TIMES WHEN WORK IS PERFORMED BY THE CREW. EACH FOREMAN SHALL BE AN IMSA LEVEL ONE CERTIFIED TECHNICIAN. THE CONTRACTOR SHALL PROVIDE PRIOR VERBAL NOTICE TO THE PROJECT ENGINEER IN ORDER TO REPLACE A CREW FOREMAN.

IN ADDITION, ANY TRADE PERSON PERFORMING WORK AS DEFINED BELOW IN ITEMS 1 THROUGH 7 SHALL BE AN IMSA LEVEL ONE CERTIFIED TECHNICIAN.

1. CABLE SPLICE
2. SIGNAL HEAD INSTALLATION
3. CABLE AND WIRE INSTALLATION
4. POWER SERVICE INSTALLATION
5. GROUND ROD TESTING
6. CABLE INSULATION TESTING
7. FIELD WIRING TERMINATIONS

MATERIAL INFORMATION SUBMITTAL

THE CONTRACTOR SHALL SUBMIT ALL REQUIRED MATERIALS FOR APPROVAL TO THE CITY OF COLUMBUS, TRANSPORTATION DIVISION, 109 NORTH FRONT STREET 3rd FLOOR, COLUMBUS, OHIO 43215-9023, ATTN: SPENCER HALL. THE MATERIAL SUBMISSION SHALL CONTAIN ONE (1) COMPLETE SET OF CATALOG CUTS, DIAGRAMS, SHOP DRAWINGS, BROCHURES OR OTHER DESCRIPTIVE MATERIAL FOR THE SIGNAL ITEMS THAT THE CONTRACTOR INTENDS TO FURNISH THAT HAVE NOT BEEN SPECIFICALLY NAMED IN THESE PLANS BY PRODUCT MODEL NUMBER. THE CONTRACTOR SHALL ALSO PROVIDE A DETAILED LIST OF ALL VARIANCES FROM ODOT SPECIFICATIONS AND FROM THE SPECIFICATIONS CONTAINED HEREIN FOR EACH NONSPECIFIED ITEM THAT DOES NOT COMPLY 100% WITH THESE SPECIFICATIONS. UNLESS OTHERWISE STATED BY THE CONTRACTOR THE SUPPLIED ITEMS WILL BE CONSIDERED AS BEING IN STRICT ACCORDANCE WITH ALL SPECIFICATIONS.

CABINET ASSEMBLY TESTING BY THE CITY OF COLUMBUS

THE CITY OF COLUMBUS, TRANSPORTATION DIVISION, SHALL BENCH TEST THE INTERSECTION CONTROLLER AND ITS COMPLETE CABINET ASSEMBLY PRIOR TO THE EQUIPMENT BEING INSTALLED IN THE FIELD. TESTING SHALL NOT BEGIN UNLESS COMPLETE AND CORRECT CABINET ASSEMBLY WIRING SCHEMATICS, LOOP DETECTOR UNITS AND, IF SPECIFIED, THE INTERSECTION TRANSCEIVER UNIT ARE SUBMITTED WITH THE CABINET. THE TEST PROCEDURES SHALL CONSIST OF OPERATING THE EQUIPMENT FOR A MINIMUM OF FORTY-EIGHT (48) HOURS. THE CONTRACTOR SHALL DELIVER THE CONTROLLER AND COMPLETE CABINET ASSEMBLY FOR TESTING TO THE TRANSPORTATION DIVISION TRAFFIC MAINTENANCE SHOP AT 1820 EAST 17th AVENUE; COLUMBUS, OHIO 43219. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOADING AND UNLOADING ALL EQUIPMENT AND OBTAINING A RECEIPT FROM SHOP PERSONNEL THAT LISTS ALL DELIVERED MATERIALS BY MANUFACTURER, MODEL NUMBER, AND SERIAL NUMBER. THE DIVISION WILL COMPLETE TESTING ON THE CONTROLLER AND CABINET ASSEMBLY WITHIN TEN (10) CITY WORKING DAYS. UPON COMPLETION OF THE TESTING THE DIVISION WILL NOTIFY THE CONTRACTOR THAT THE EQUIPMENT CAN BE PICKED UP. ANY DEVICE FOUND TO BE UNSATISFACTORY SHALL BE REPLACED, REPAIRED OR CORRECTED AS NECESSARY BY THE CONTRACTOR AND RESUBMITTED FOR TESTING. THE DIVISION WILL SCHEDULE TESTING OF THIS RETURNED EQUIPMENT AS QUICKLY AS POSSIBLE BUT WILL ONLY PROVIDE A FORTY-FIVE (45) DAY GUARANTEE FOR THE TURN AROUND TIME PERIOD. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DELAY CAUSED BY THIS TESTING. CONTROL EQUIPMENT WHICH HAS NOT PASSED TESTING OR WHICH HAS NOT BEEN TESTED BY THE DIVISION SHALL NOT BE INSTALLED IN THE FIELD TO CONTROL TRAFFIC. IT IS RECOMMENDED THAT THE CONTRACTOR HAVE A REPRESENTATIVE IN ATTENDANCE DURING THE TESTING PROCESS. THERE ARE NO COSTS ASSOCIATED WITH THE TESTING. ANY COST ASSOCIATED WITH THE DELIVERY AND PICK-UP SHALL BE INCIDENTAL TO THE COST OF THE EQUIPMENT. CONTACT THE ELECTRONIC SYSTEMS COORDINATOR AT 614-645-7933 FOR EQUIPMENT STATUS.

CONTRACTOR TESTING OF ELECTRONIC SIGNAL COMPONENTS BEFORE PRIMARY POWER INSTALLATION

IF ANY TESTING OF THE SIGNAL INSTALLATION OR ANY ASPECT THEREOF IS PLANNED BY THE CONTRACTOR PRIOR TO AN APPROVED FLASH OR SIGNAL TURN-ON, THE CONTRACTOR SHALL NOTIFY THE DIVISIONS' ELECTRONIC SHOP SUPERVISOR AT 614-645-7933 ONE DIVISION WORKING DAY IN ADVANCE AND SHALL HAVE A SPECIAL DUTY OFFICER PRESENT FOR THE TEST TO CONTROL TRAFFIC AS NEEDED. TESTING AND/OR TROUBLESHOOTING SHALL BE PERFORMED BY AN IMSA LEVEL TWO CERTIFIED TECHNICIAN. IF PORTABLE POWER IS USED, IT SHALL BE PROPERLY CONNECTED TO A GROUND ROD READING 10 OHMS OR LESS AND HAVE A PROPER REGULATING DEVICE TO SMOOTH CURRENT.

FLASH OPERATION FOR RE-ACTIVATED SIGNAL

THE SIGNAL SHALL NOT BE PLACED ON FLASH UNTIL THE CITY OF COLUMBUS, TRANSPORTATION DIVISION, HAS CHECKED THE SIGNAL INSTALLATION AND HAS GIVEN THE CONTRACTOR APPROVAL TO FLASH THE SIGNAL. IF ANY OSHA ELECTRICAL CLEARANCES ARE FOUND TO BE IN VIOLATION, THEN THE SIGNAL SHALL NOT BE PLACED ON FLASH UNTIL ALL VIOLATIONS ARE CORRECTED. ANY SIGNAL WITHIN AN ACTIVE INTERCONNECTED SYSTEM SHALL NOT BE PLACED ON FLASH UNTIL THE SYSTEM HAS ESTABLISHED RELIABLE COMMUNICATION WITH THE CONTROLLER. ALSO, THE SIGNAL WILL NOT BE PLACED ON FLASH UNTIL ALL ADA RAMP/PATHWAYS, PERMANENT PAVEMENT MARKINGS AND LANE CONTROL SIGNS HAVE BEEN PROPERLY INSTALLED. TEMPORARY PAVEMENT MARKINGS MAY BE USED IN LIEU OF PERMANENT PAVEMENT MARKINGS IF THEY REFLECT THE PERMANENT PAVEMENT MARKING LAYOUT. THE STOP LINES SHALL BE IN PLACE PRIOR TO THE SIGNAL BEING PLACED ON REGULAR OPERATION. THE SIGNAL SHALL FLASH FOR SEVEN (7) DAYS PRIOR TO BEING PLACED ON REGULAR OPERATION. IF THE SIGNAL FLASH SEQUENCE IS DIFFERENT FROM THE "AS PER PLAN" FLASH SEQUENCE, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING CHANGES AS NEEDED TO OBTAIN THE PROPER FLASH SEQUENCE FOR EACH TIME PERIOD. DURING THE SIGNAL FLASH PERIOD THE MAINLINE SIGNALS SHALL FLASH YELLOW.

TEN DAY TEST REQUIREMENTS

THE TRANSPORTATION DIVISION, REQUIRES A 10 DAY TEST TO START AFTER THE SIGNAL INSTALLATION IS 100% COMPLETE WHICH INCLUDES ESTABLISHING DATA COMMUNICATION IF PRESENT. NO PARTIAL TESTS WILL BE CONDUCTED. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE DIVISION'S SIGNAL DESIGN SERVICES ENGINEER AT 109 N. FRONT STREET, 3RD FLOOR; COLUMBUS, OH 43215-9023 STATING THAT THE SIGNAL INSTALLATION IS 100% COMPLETE AND A START DATE FOR THE TEN DAY TEST IS REQUESTED. THIS DIVISION SHALL MONITOR THE TEST AND SHALL BE THE SOLE AGENCY TO ACCEPT THE SIGNAL INSTALLATION ON BEHALF OF THE CITY. IF LESS THAN 100% COMPLETION IS DETECTED UPON INSPECTION BY THIS DIVISION OR ANY MALFUNCTION IS DETECTED, THEN THE TEN DAY TEST SHALL BE COMPLETELY RESTARTED. CONTACT THE DIVISION AT 645-8376. FAX TRANSMISSION IS ACCEPTABLE. FAX NUMBER IS 614-645-7921 (ATTN. SPENCER HALL).

INSTALLATION LAYOUT

ALL TRAFFIC SIGNAL STRAIN POLES, PEDESTALS OR SIGNAL SUPPORTS AND ALL OTHER STATIONED SIGNAL ITEMS SHALL BE LOCATED AND MARKED BY A PROFESSIONAL SURVEYOR USING THE STATION NUMBERS AND OFFSETS PROVIDED IN THESE PLANS. THE SURVEYOR SHALL ALSO SET CONTROLS FOR MASTARM STRUCTURES WHEN PRESENT SO THE MASTARM ALIGNMENT CAN BE SET PROPERLY. THE SURVEYOR SHALL SET PROPER POLE, PEDESTAL AND CABINET FOUNDATION ELEVATIONS AND STAKE ALL ASSOCIATED RADII SO FOUNDATIONS CAN BE ALIGNED PROPERLY. TRANSPORTATION DIVISION PERSONNEL SHALL APPROVE ALL FOUNDATION LOCATIONS AND ELEVATIONS PRIOR TO THE CONTRACTOR INSTALLING THEM. THE SURVEYOR SHALL ALSO STAKE THE RIGHT-OF-WAY ANYTIME A STATIONED TRAFFIC SIGNAL ITEM IS WITHIN ONE (1) FOOT OF THE RIGHT-OF-WAY. WHEN REQUESTED BY PROJECT PERSONNEL, THE SURVEYOR SHALL SET AND MARK A PROPOSED TOP-OF-CURB ELEVATION STAKE AT THE BACK-OF-CURB OR IF NO CURB AN EDGE-OF-PAVEMENT ELEVATION STAKE AT THE PROPOSED EDGE-OF-PAVEMENT. RADIALLY ALIGN THIS ELEVATION STAKE WITH THE RADIUS HUB AND SIGNAL/SUPPORT POLE LOCATION STAKE. COSTS INCURRED FOR THIS SERVICE SHALL BE INCIDENTAL TO THE COST OF THE PROJECT OR PROVIDED UNDER A CONSTRUCTION LAYOUT STAKE ITEM.

NOTES CONTINUE NEXT SHEET.

CALCULATED | CHECKED

TRAFFIC SIGNAL GENERAL NOTES

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATIONS

A) PROPOSED TRAFFIC SIGNAL INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PROPOSED TRAFFIC SIGNAL DEVICES UNDER THE FOLLOWING CONDITIONS FROM THE TIME OF INSTALLATION UNTIL THE DEVICE HAS BEEN ACCEPTED BY THE TRANSPORTATION DIVISION.

THE CONTRACTOR SHALL PROVIDE ONE OR MORE CONTACT PERSONS WHO CAN RECEIVE ALL DEVICE OUT-OF-SERVICE CALLS THAT FALL UNDER THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL DISPATCH MAINTENANCE PERSONNEL TO CORRECT THE PROBLEM. THE CONTRACTOR SHALL PROVIDE THIS DIVISION AND THE PROJECT ENGINEER WITH ADDRESSES AND PHONE NUMBERS OF THESE CONTACT PERSONS. MAINTENANCE PERSONNEL MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS CONTINUOUSLY AVAILABLE TWENTY-FOUR (24) HOURS A DAY AND SEVEN (7) DAYS A WEEK. THE CONTRACTOR SHALL PROVIDE MAINTENANCE SERVICE ENTIRELY WITH HIS PERSONNEL.

THE CONTRACTOR SHALL CORRECT ALL BULB OUTAGES, DEVICE MALFUNCTIONS OF ANY TYPE, INTERNAL CABINET POWER LOSES, SPAN OR CABLE PROBLEMS AND MISALIGNED OR DAMAGED VEHICULAR OR PEDESTRIAN SIGNAL HEADS WITHIN TWO (2) HOURS AFTER THE CONTRACTOR'S CONTACT PERSON HAS BEEN NOTIFIED OF ANY ONE OF THE ABOVE. IN THE EVENT A NEW SIGNAL DEVICE IS DAMAGED PRIOR TO ACCEPTANCE, THE DAMAGED DEVICE EXCEPT POLES SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THIS DIVISION. ANY DAMAGED CABINET ASSEMBLY DEVICE IF REPAIRED SHALL BE TESTED ONCE AGAIN BY THIS DIVISION BEFORE THE DEVICE CAN BE INSTALLED.

IN THE EVENT OF A LOSS OF POWER TO THE SIGNAL INDICATIONS OTHER THAN AN ELECTRIC COMPANY GENERAL POWER OUTAGE, THE CONTRACTOR AT HIS EXPENSE SHALL IMMEDIATELY TAKE ACTION [WITHIN 30 MINUTES] TO PROPERLY ERECT TEMPORARY STOP SIGN(S) AND PROVIDE POLICE OFFICER(S) TO DIRECT TRAFFIC UNTIL THE SIGNAL IS BACK ON "FLASH" OR OPERATING PROPERLY.

IF A TRAFFIC STRAIN, SUPPORT OR PEDESTAL POLE IS DAMAGED AND THAT DAMAGE CAUSED POLE INSTABILITY, THEN THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION (WITHIN 2 HOURS) TO STABILIZE IT. THE CONTRACTOR SHALL STILL BE RESPONSIBLE FOR PROVIDING THE PROJECT WITH A NEW UNDAMAGED POLE.

WHERE OUT-OF-SERVICE CALLS ARE THE DIRECT RESULT OF A VEHICULAR ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COLLECTION OF ANY COMPENSATION FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE TO THE CONTRACTOR'S MATERIALS.

WHERE THE CONTRACTOR HAS FAILED TO RESPOND OR CANNOT RESPOND TO AN OUT-OF-SERVICE CALL WITHIN THE TIME PERIOD SPECIFIED ABOVE AT LOCATIONS UNDER HIS RESPONSIBILITY, THIS DIVISION MAY TAKE ACTION AS IT DEEMS NECESSARY TO CORRECT THE SITUATION. THIS ACTION MAY INCLUDE CONTROLLING THE INTERSECTION USING COLUMBUS POLICE OFFICERS, COMPLETELY REMOVING OR REPLACING ANY MALFUNCTIONING TRAFFIC CONTROL DEVICE, AND/OR INSTALLING ANY DEVICE(S) REQUIRED TO RETURN THE INTERSECTION TO REGULAR SIGNAL OPERATION. ALL COSTS ASSOCIATED WITH THESE ACTIONS SHALL BE BILLED DIRECTLY TO THE CONTRACTOR AND NOT INCLUDED IN ITEM 614 MAINTAINING TRAFFIC.

ANY NON-OPERATING VEHICULAR OR PEDESTRIAN SIGNAL HEAD OR PUSHBUTTON SHALL BE COVERED AS REFERENCED TO IN THESE PLANS. ALL SIGNAL HEADS WHILE COVERED SHALL BE DARK BY DISCONNECTING POWER TO THE SIGNAL INDICATIONS. NO COVERED HEAD SHALL BLOCK THE VIEW OF AN OPERATING HEAD. A MINIMUM OF TWO (2) VEHICULAR SIGNAL HEADS PER TRAVELLED DIRECTION (SPACED 8' APART MINIMUM AND 12' MAXIMUM) SHALL BE OPERATING AT ALL TIMES. **NO EXCEPTIONS!**

B) TEMPORARY CONTROLLER OR TRAFFIC SIGNALS

IN ADDITION TO ITEM 614.10, THE FOLLOWING SHALL APPLY.

IF THE CONTRACTOR IS REQUIRED TO ERECT AND/OR INSTALL ANY TEMPORARY TRAFFIC CONTROL DEVICE OR TEMPORARY SIGNAL/SUPPORT POLE THAT IS NOT SPECIFIED IN THESE PLANS, THEN THE CONTRACTOR SHALL SUBMIT THE DESIGN CHANGE TO THE CITY OF COLUMBUS, TRANSPORTATION DIVISION, FOR APPROVAL PRIOR TO THEIR INSTALLATION. THIS DIVISION ALSO RESERVES THE RIGHT TO MAKE OR HAVE THE CONTRACTOR MAKE CHANGES TO THE TRAFFIC SIGNAL OPERATION.

IF THE CONTRACTOR NEEDS TO INSTALL A TEMPORARY CONTROLLER AND/OR A TS1 CABINET ASSEMBLY AT ANY INTERSECTION, THEN THE EQUIPMENT SHALL MEET NEMA STANDARDS TS1-1989 OR TS2-1998 (TYPE 2) AND SHALL BE APPROVED BY THE CITY OF COLUMBUS, TRANSPORTATION DIVISION.

C) EXISTING TRAFFIC SIGNAL DEVICES

THE CITY OF COLUMBUS, TRANSPORTATION DIVISION (ELECTRONICS MAINTENANCE SHOP 645-7933), SHALL PERFORM ROUTINE MAINTENANCE ON ALL EXISTING CABINET ASSEMBLY ITEMS ONLY. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL OTHER EXISTING TRAFFIC SIGNAL DEVICES ONCE ANY PROJECT SIGNAL WORK HAS STARTED. IF, IN THE COURSE OF WORK, THE GENERAL CONTRACTOR OR ANY PROJECT SUB-CONTRACTOR CAUSED DAMAGE TO ANY EXISTING TRAFFIC SIGNAL DEVICE OTHER THAN THE CABINET ASSEMBLY, THEN THE CONTRACTOR AT THE CONTRACTOR'S COST SHALL REPAIR AND/OR REPLACE THE DAMAGED DEVICE TO THE SATISFACTION OF THIS DIVISION. DAMAGE TO THE CABINET ASSEMBLY BY ANY PROJECT CONTRACTOR SHALL BE REPAIRED BY THIS DIVISION AND BILLED TO THE GENERAL CONTRACTOR.

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

ITEM 625 GROUND ROD, AS PER PLAN

THE GROUND WIRE CABLE SHALL BE CROSS-LINKED POLYETHYLENE, #6 AWG COPPER, STRANDED, RHW INSULATED, 600 VOLT RATED AND EXOTHERMICALLY WELDED TO THE GROUND ROD WITH INSULATING VARNISH APPLIED TO THE WELD. THE COPPER USED IN THE GROUND WIRE SHALL BE HARD ENOUGH TO WITHSTAND THE EXOTHERMAL WELDING PROCESS BUT SOFT ENOUGH TO MELT AND FORM A SOLID BOND TO THE ROD. THE OHM READING AT THE END OF THE UNATTACHED GROUND WIRE THROUGH THE GROUND ROD SHALL BE 10 OHMS OR LESS FOR THE GROUNDING SYSTEM ATTACHED TO THE CONTROL CABINET OR TO ANY OTHER ELECTRONIC CABINET AND 25 OHMS OR LESS FOR THE GROUNDING SYSTEM ATTACHED TO THE SIGNAL STRAIN, SUPPORT OR PEDESTAL POLE. ANY ELECTRONIC CABINET, POLE OR BASE MOUNTED, SHALL HAVE TWO (2) GROUND RODS INSTALLED ONE (1) FOOT APART. A GROUND WIRE JUMPER THAT IS WELDED TO EACH ROD SHALL CONNECT THE RODS. THE SIGNAL STRAIN/SUPPORT POLE THAT HAS A POLE MOUNTED CABINET ATTACHED TO IT SHALL ALSO HAVE A SEPARATE POLE GROUND ROD AND WIRE. THE GROUND WIRE ATTACHED TO THE CABINET SIGNAL POLE SHALL HAVE A SEPARATE "EMT" AND BE ON THE OPPOSITE SIDE OF THE FOUNDATION FROM THE CABINET GROUNDING SYSTEM.

QUALIFIED TRANSPORTATION DIVISION TECHNICAL PERSONNEL SHALL BE PRESENT WHEN ANY GROUND ROD READING IS TAKEN. THE CONTRACTOR SHALL HAVE ON SITE A CALIBRATION CERTIFICATE FOR EACH TESTING DEVICE FROM A CERTIFIED, INDEPENDENT INSTRUMENT CALIBRATION COMPANY AND SHALL HAVE ON SITE THE OPERATING INSTRUCTION MANUAL FOR ALL TEST DEVICES SO DIVISION TECH PERSONNEL CAN FIELD VERIFY THE TEST PROCEDURE AND RESULTS. DEVICE CALIBRATION SHALL BE PER ITS MANUFACTURER'S STANDARDS. THE CERTIFICATE OF CALIBRATION FOR EACH TEST DEVICE MUST BE DATED WITHIN 6 MONTHS OF THE TEST. NO TEST SHALL BE CONDUCTED IF ANY TEST REQUIREMENT IS NOT MET.

ITEM 625 PULLBOX, AS PER PLAN

THE PULLBOX ASSEMBLY SHALL BE RATED AS MEDIUM TO HEAVY DUTY, SHALL BE RATED FOR INSTALLATION IN CONCRETE AREAS AND SHALL HAVE ALL STAINLESS STEEL HARDWARE. THE PULLBOX COVER SHALL HAVE THE WORD "TRAFFIC" ON IT. THE COVER SHALL BE BOLTED TO THE BOX USING HEX HEAD BOLTS AND SHALL BE EITHER POLYMER CONCRETE OR STEEL PLATE. THE BOX DEPTH SHALL BE 15 INCHES MINIMUM TO 30" MAXIMUM. THE SUPPLIED PULLBOX ASSEMBLY SHALL BE A MODIFIED 18" ODOT STANDARD PULLBOX WITH STANDARD ODOT KNOCKOUTS AND PICK HOLE, A CARSON-BROOKS HIGH PERFORMANCE SERIES MODEL 1419-15 OR A CDR SYSTEMS MODEL SA32-1015-18. CONDUIT ELLS MAY BE USED TO BRING THE CONDUIT UP INTO THE HOUSING. EXTENSIONS, IF AVAILABLE, CAN BE USED TO ELIMINATE THE NEED FOR CONDUIT ELLS.

THE MODIFIED 18" ODOT PULLBOX SHALL HAVE AN EMBOSSED 'TRAFFIC' TAG SECURED TO THE COVER BY THREE (3) RIVETS, ONE ON EACH END AND ONE IN THE MIDDLE. THE FRAME FOR THIS PULLBOX SHALL BE DESIGNED SO THE COVER BOLT HOLES ARE OFFSET FROM THE FRAME CORNER BY A NOMINAL 1-1/2". THIS OFFSET SHALL ALLOW THE BOLT HOLE TO REMAIN FREE OF DEBRIS AT ALL TIMES. A HEAVY DUTY, THREADED 3/8" x 16 UNIT THAT IS SECURELY INSERTED INTO THE FRAME BOLT HOLE OPENING SHALL BE USED TO SECURE THE PULLBOX COVER. THE 1/8" x 1-1/4" FRAME (20" SQ. OD) AND COVER (19 3/4" SQ. OD) SHALL BE MADE FROM A36 STEEL AND GALVANIZED AFTER FABRICATION PER A123. THE COVER SHALL HAVE A 3/4" PICK HOLE THAT IS ON THE COVER CENTERLINE AND 4" FROM THE EDGE. COUNTERSUNK COVER BOLT HOLES ARE NOT REQUIRED.

ITEM 632 SIGNALIZATION, MISC.: VEHICULAR SIGNAL HEAD, INSTALLATION ONLY

ADDITIONAL VEHICULAR SIGNAL REQUIRED FOR THIS PROJECT SHALL BE OBTAINED FROM THE CITY OF COLUMBUS BY CONTACTING THE TRANSPORTATION DIVISION SIGNAL OPERATIONS ENGINEER (614-645-8376) FOUR WEEKS IN ADVANCE OF ANTICIPATED INSTALLATION.

ITEM 632 SIGNALIZATION, MISC.: PEDESTRIAN SIGNAL HEAD, INSTALLATION ONLY

ADDITIONAL VEHICULAR SIGNAL REQUIRED FOR THIS PROJECT SHALL BE OBTAINED FROM THE CITY OF COLUMBUS BY CONTACTING THE TRANSPORTATION DIVISION SIGNAL OPERATIONS ENGINEER (614-645-8376) FOUR WEEKS IN ADVANCE OF ANTICIPATED INSTALLATION.

ITEM 632 PEDESTRIAN PUSHBUTTON, AS PER PLAN

THE EXTERIOR PUSHBUTTON HOUSING SHALL BE YELLOW. THE PUSHBUTTON SHALL BE A POLARA BULLDOG MODEL BDLM2-Y OR APPROVED EQUAL. THE PUSHBUTTON SHALL BE RATED FOR MEDIUM OR HEAVY DUTY USAGE. TWO ALUMINUM SIGNS SHALL BE SUPPLIED WITH EACH PUSHBUTTON. THE BOTTOM OF THE SIGNS SHALL BE MOUNTED JUST ABOVE THE TOP OF THE PUSHBUTTON. MOUNT THE CENTER OF THE PUSHBUTTON 42" ABOVE THE PEDESTRIAN PATHWAY SURFACE.

ITEM 632 DETECTOR LOOP, AS PER PLAN

THE LOOP SLOT DEPTH SHALL BE 4 INCHES. IF AN EXISTING PAVED SHOULDER IS 4.5 INCHES THICK OR MORE, THEN THE LOOP WIRE MAY BE INSTALLED IN A SAW SLOT CUT ACROSS THE SHOULDER. WHERE PAVED SHOULDERS ARE LESS THAN 4.5 INCHES THICK, LOOP WIRE AND ITS CONDUIT RACEWAY SHALL BE INSTALLED AS PER STANDARD DRAWING TC-82.10. THE CONTRACTOR SHALL TAKE CARE IN THE PLACEMENT OF LOOP SEALANT SO THAT ALL SEALANT IS PLACED IN THE SAW SLOT. LOOP DETECTOR WIRE SHALL MEET IMSA 51-5 SPECIFICATIONS AND THE ENCASING TUBE SHALL BE POLYETHYLENE. THE LOOP WIRE SHALL BE TWISTED THREE (3) TO FIVE (5) TURNS PER FOOT FROM THE EXITING LOOP SPOT TO THE HOMERUN CABLE SPLICE. ONE 3/4" TO 1" RIGID CONDUIT RACEWAY SHALL BE USED FOR EACH LOOP LEAD-IN. RACEWAYS AND LOOP WIRE LEAD-INS SHALL BE SPACED ONE (1) FOOT APART. ALL WIRES SHALL BE SOLDERED AT ALL LOOP WIRE SPLICES AND AT ALL HOMERUN WIRE TERMINAL CONNECTORS.

NOTES CONTINUE NEXT SHEET.

CALCULATED | CHECKED

TRAFFIC SIGNAL GENERAL NOTES

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

ITEM 632 STRAIN POLE FOUNDATION, AS PER PLAN
ITEM 632 PEDESTAL FOUNDATION, AS PER PLAN

THE ANCHOR BASE POLE FOUNDATION SIDES SHALL BE ORIENTATED PARALLEL TO THE SIDEWALK OR BACK-OF-CURB OR EDGE-OF-PAVEMENT AS SHOWN ON THE SIGNAL PLANS. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH ANY ADJACENT SIDEWALK OR CONCRETE AREA EXCEPT WHERE THE GROUND RISES STEEPLY BEHIND THE SIDEWALK OR CONCRETE AREA. THEN THE BACK SIDE OF THE FOUNDATION SHALL MATCH THE GROUND SLOPE AND THE STREET SIDE OF THE FOUNDATION SHALL BE ABOVE THE SIDEWALK OR CONCRETE AREA AND COMPLETELY OUT OF THE SIDEWALK OR CONCRETE AREA. A MINIMUM OF TWO 2" CONDUIT ELLS, USED OR UNUSED, SHALL BE INSTALLED IN EACH POLE FOUNDATION. SEE POLE ORIENTATION CHART FOR ANGULAR POSITION. THE ANCHOR BOLTS AND CONDUIT ELLS ARE INCIDENTAL TO THIS ITEM. THE POLE FOUNDATION TOP SHALL BE EDGED USING A ½" SIDEWALK EDGER AND NOT CHAMFERED.

ITEM 632 SLEEVE FOR ANCHOR BASE FOUNDATION, AS PER PLAN

A GALVANIZED CORRUGATED PIPE OR A CARDBOARD-LIKE CONCRETE FORM WITH THE SAME DIAMETER AND DEPTH DIMENSIONS AS THE SPECIFIED FOUNDATION SHALL BE USED AT THE DISCRETION OF THE PROJECT ENGINEER OR AS CALLED FOR IN THE PLANS. THE SLEEVE SHALL BE MEASURED AS A COMPLETE UNIT INSTALLED AND PROPERLY BACKFILLED. BACKFILL SHALL BE A COMPACTABLE GRANULAR MATERIAL THAT IS COMPACTED IN 4" LIFTS OR CONTROLLED DENSITY FILL RATED AT 150 PSI.

ITEM 632 STRAIN POLE, TYPE TC-81.10, ANCHOR BASE, DESIGN 7, 30 FOOT, AS PER PLAN

STRAIN POLES SHALL BE MANUFACTURED BY UNION METAL OR VALMONT ONLY. THE POLES SHALL BE GALVANIZED THEN COATED WITH A DARK BRONZE POWDER COATING. THE GALVANIZING SHALL BE PROPERLY PREPARED SO THE POWDER COATING WILL ADHERE TO THE GALVANIZING. ANCHOR BOLTS SHALL HAVE ROLLED THREADS FOR ALL POLE DESIGNS UP TO AND INCLUDING DII. CUT THREADS ARE TO BE USED FOR 2.5" DIAMETER BOLTS OR LARGER. THE BOLTS CAN BE A36/M55 FOR DESIGN 7 OR SMALLER POLES. FOR LARGER POLES THE ANCHOR BOLTS SHALL MEET ODOT REQUIREMENTS OR BE AS SPECIFIED BY THE MANUFACTURER. BOLT-NUT COVERS SHALL BE INSTALLED AND BE COATED DARK BRONZE.

ITEM 632 POWER CABLE, 2 CONDUCTOR, CU, #8 AWG, AS PER PLAN

POWER SHALL BE SUPPLIED BY AMERICAN ELECTRIC POWER (AEP), SHALL BE 120VAC, AND SHALL BE FROM THE APPROXIMATE LOCATION AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONTACT AEP AND MAKE ARRANGEMENTS FOR THE CONNECTION OF POWER TO THE CONTROLLER CABINET. CONTACT GREG ZORICH (SW/NW AREAS 614-883-7935) OR MARCIA HARVEY (NE/SE AREAS 614-883-7955) A MINIMUM OF FOUR (4) WORK WEEKS PRIOR TO THE NEED FOR POWER.

ITEM 632 COVERING OF VEHICULAR/PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON, AS PER PLAN

ALL SIGNAL HEADS AND PUSHBUTTONS ALONG WITH THEIR SIGNS THAT ARE INSTALLED PRIOR TO BEING USED TO CONTROL TRAFFIC OR PEDESTRIANS SHALL BE COVERED. IF PLASTIC BAGS ARE USED TO COVER THE HEADS, THEN ONLY HEAVY DUTY PLASTIC BAGS SHALL BE PERMITTED. TWO BAGS PER HEAD SHALL BE USED. THE BAGS SHALL BE SECURELY LASHED DOWN SO THE WIND DOES NOT RIP THEM FROM THE SIGNAL HEAD. IF VEHICULAR SIGNAL HEADS WILL BE COVERED FOR MORE THAN TWO WEEKS, THEN CANVASS COVERS SHALL BE USED. ALL SIGNAL HEADS WHILE COVERED SHALL BE DARK BY DISCONNECTING POWER TO THE SIGNAL INDICATIONS. NO COVERED HEAD SHALL BLOCK THE VIEW OF AN OPERATING HEAD. ANY EXISTING VEHICULAR OR PEDESTRIAN HEAD THAT IS NOT FUNCTIONAL SHALL BE REMOVED IMMEDIATELY OR COVERED.

ITEM 633 CONTROLLER UNIT TS2/A2, W/CABINET 4 PH, M36, BASE MOUNT, AS PER PLAN

IN ADDITION TO THE OTHER REQUIREMENTS OF ODOT 633 & 733, THE CONTROLLER (TS2, TYPE 2/TSI COMPATIBLE) SHALL BE ECONOLITE ASC/2S-2100 MODEL OR EAGLE GENESIS EPAC 3108-M40 MODEL. THE TSI CABINET ASSEMBLY SHALL BE COMPLETELY WIRED (INCLUDES ALL PANELS & HARNESSES) FOR THE PHASE OPERATION, DETECTION AND ALL ADDITIONAL DEVICES AS CALLED FOR IN THE PLANS INCLUDING THE EXISTING SPREAD SPECTRUM RADIO EQUIPEMNET. THE COLUMBUS MUTCD FLASH CIRCUITRY SHALL BE INSTALLED AS A PANEL MOUNTED, CABINET ASSEMBLY ITEM. THE CABINET ASSEMBLY SHALL MEET ALL CITY STANDARDS AS SET FORTH BETWEEN THE SUPPLIERS AND THIS DIVISION. CONTACT THE TRANSPORTATION DIVISION'S ELECTRONIC SYSTEMS SUPERVISOR FOR DETAILS (614-645-7933).

THE LOOP DETECTOR UNIT SHALL BE A SOLID STATE, 2 CHANNEL, SHELF MOUNTED INTERSECTION DEVELOPMENT CORPORATION (IDC) MODEL 921-2TCSS-1, RENO A&E MODEL T-210-SS OR CANOGA MODEL.

IN ADDITION TO THE OTHER SPECIFICATION DOCUMENTS, THE CABINET ASSEMBLY SHALL MEET THE FOLLOWING SPECIFICATIONS.

(A) ALL LABELS SHALL BE PERMANENTLY SECURED TO THE CABINET. PLASTIC LABEL MAKER TAPE IS NOT CONSIDERED TO BE PERMANENT. CROY TYPE LABELS ARE ACCEPTABLE.

(B) IN LIEU OF A LAMP ASSEMBLY, A DOOR MOUNTED FLEX LIGHT THAT ILLUMINATES THE ENTIRE BACK PANEL SHALL BE INSTALLED. THE 120 VAC, CONVENIENCE OUTLET ASSEMBLY (GFI TYPE) SHALL BE MOUNTED ON THE RIGHT CABINET SIDE PANEL NEAR THE DOOR HINGE AREA AND FACE THE DOOR OR THE CENTER INTERIOR PORTION OF THE CABINET. THE OUTLET & FLEX LIGHT ASSEMBLIES SHALL NOT INTERFERE WITH THE REMOVAL OR INSTALLATION OF ANY EQUIPMENT.

(C) LOAD SWITCHES SHALL BE EDI MODEL 510 WITH LIGHTS PERMANENTLY LABELLED AS R, Y, G OR A, B, C. A LOAD SWITCH SHALL BE PROVIDED FOR EACH BACK PANEL LOAD SWITCH SOCKET POSITION WHETHER USED OR UNUSED. ALL LOAD SWITCHES SHALL REST IN A SUPPORT RACK. LOAD SWITCH POSITIONS 5-8 (4PH) OR 9-12 (8PH) SHALL BE USED FOR EITHER A PEDESTRIAN OR OVERLAP LOAD SWITCH UNLESS SPECIFIED OTHERWISE.

(D) LIGHTNING PROTECTION DEVICES SUCH AS ITT, SURRESTOR, GENERAL ELECTRIC, OR APPROVED EQUAL (AS DETERMINED BY THE COLUMBUS TRANSPORTATION DIVISION) SHALL BE PROVIDED.

(E) THE MAIN CABINET DOOR LOCK (CCL ENCLOSURE LOCK 1548IRS) SHALL HAVE A LOCK KEYHOLE COVER AND SHALL BE KEYED TO THE CITY OF COLUMBUS MASTER, # 2 KEY (IR 6380). THE POLICE PANEL DOOR LOCK (CCL ENCLOSURE LOCK # R357SGS) SHALL HAVE A LOCK KEYHOLE COVER AND SHALL BE SUPPLIED WITH A R4266 KEY.

(F) THE NEMA 3R CABINET SHALL BE MADE BY APX ENCLOSURES, CALIFORNIA CHASSIS, EAGLE OR ECONOLITE. IT SHALL BE OF STANDARD SIZE AND SHALL BE SUPPLIED WITH A COMPLETE BACK PANEL AS PER PLAN. THE CABINET MATERIAL SHALL BE 5052 MARINE GRADE, .125 INCH THICK ALUMINUM SHEETING WITH A 32 HARDNESS IN ITS NATURAL COLOR AND SHALL BE PAINTED WHITE ON THE INSIDE. THE INSIDE OF THE CABINET SHALL BE TREATED WITH A THREE (3) STAGE IRON PHOSPHATE COATING AND A ZINC CHROMATE PRIMER COATING. A BAKED WHITE ALKALI ENAMEL FINISH SHALL THEN BE APPLIED. ALL COATINGS SHALL BE PROPERLY DRIED AND APPLIED SUCH THAT THE INSIDE WHITE PAINT WILL NOT PEEL FOR A GUARANTEED PERIOD OF TWO (2) YEARS. ALL EXTERIOR SEAMS SHALL BE EITHER CONTINUOUSLY WELDED, TACK WELDED, SEALED WITH A 15 TO 20 YEAR SILICONE SEALER, AND/OR OVERLAPPED SUCH THAT WATER DOES NOT ENTER THE CABINET. ALL CABINET EDGES SHALL BE SMOOTH (FREE OF ANY SHARP EDGES). THE CABINET DOOR SHALL BE HINGED USING A HEAVY GAUGE CONTINUOUS HINGE THAT HAS A STAINLESS STEEL HINGE PIN. THE HINGE SHALL BE BOLTED TO THE CABINET SO THE DOOR CAN BE REMOVED. THE BOLTS AND NUTS SHALL BE MADE OF STAINLESS STEEL, TAMPERPROOF AND SECURELY FASTENED TO PREVENT VIBRATIONS FROM LOOSENING THE NUTS. THE DOOR, SEALED WITH A NEOPRENE GASKET, SHALL BE EQUIPPED WITH A THREE (3) POINT LATCHING MECHANISM AND A HANDLE WHICH CAN BE PADLOCKED. THE DOOR SHALL BE DESIGNED SUCH THAT THE DOOR CAN BE LOCKED IN AN OPEN POSITION AT 90, 135, AND 180 DEGREES TO THE CABINET FACE (NOMINAL VALUES). THE POLICE DOOR AND MAIN CABINET DOOR SHALL HAVE A KEYHOLE COVER. BOLT PATTERN SHALL CONSIST OF AN ANCHOR BOLT POSITIONED IN EACH CABINET CORNER. (M36 CABINET SIZE - 50"H x 36"W x 17"D; DOOR OPENING - 39" H x 33.5" W; P44 CABINET SIZE - 55"H x 44"W x 26"D; DOOR OPENING - 44" H x 41.5" W)

(G) A THYRECTOR SURGE PROTECTOR WITH A RMS INPUT OF 150 VOLTS AND INPUT PEAK OF 210 VOLTS SHALL BE PROVIDED IN ADDITION TO ANY LIGHTNING PROTECTION DEVICE. THE THYRECTOR SHALL BE PLACED ACROSS THE INPUT AC POWER LINE.

(H) A 35 AMP LINE FILTER SHALL BE SUPPLIED AND SHALL BE MOUNTED ON THE POWER DISTRIBUTION PANEL.

(I) TWO (2) CIRCUIT SOLID STATE FLASHER, EDI MODEL 810, RATED AT 15 AMPS (MINIMUM) PER CIRCUIT SHALL BE PROVIDED (NEMA TYPE 3). CIRCUIT 1 SHALL CONTROL THE MAINLINE FLASHING SIGNAL INDICATIONS. CIRCUIT 2 SHALL CONTROL THE SIDE STREET FLASHING SIGNAL INDICATIONS.

(J) ONE (1) 30 AMP CIRCUIT BREAKER, LABELLED AS "MAIN", SHALL BE WIRED AS THE MAIN POWER DISTRIBUTION BREAKER. A SECOND CIRCUIT BREAKER, LABELLED AS "PED" AND RATED AT 10 AMPS, SHALL BE SUPPLIED FOR THE PEDESTRIAN SIGNAL LOAD ONLY. THE PEDESTRIAN SIGNAL BREAKER SHALL BE WIRED IN SERIES WITH BUT AFTER THE MAIN POWER BREAKER. A THIRD CIRCUIT BREAKER, LABELLED AS "AUX" AND RATED AT 15 AMPS, SHALL SUPPLY A SEPARATE BRANCH OF AC+ POWER TO THE VENTILATING FAN, CONVENIENCE 'GFI' OUTLET AND LIGHT SO THAT THEY MAY OPERATE INDEPENDENTLY OF THE MAIN POWER BREAKER. THE POWER TO THE FAN AND LIGHT SHALL ALSO BE INTERRUPTED BY THE 'GFI' OUTLET. ALL BREAKERS SHALL BE MOUNTED SIDE-BY-SIDE ON THE POWER DISTRIBUTION PANEL.

(K) ALL CONTROLLER MS CONNECTOR HARNESSES SHALL HAVE A CONDUCTOR FOR EACH PLUG PIN EXCEPT THE REMOTE RESET FUNCTION FOR THE CONFLICT MONITOR. THE CONTROLLER AND CONFLICT MONITOR MS HARNESS CONDUCTORS SHALL BE CONNECTED TO A BACK PANEL TERMINAL STRIP WHICH IS ACCESSIBLE FROM THE FRONT OF THE PANEL. DETECTOR UNIT HARNESS CONDUCTORS SHALL BE CONNECTED TO A LEFT SIDE CABINET MOUNTED TERMINAL STRIP. OTHER EQUIPMENT SHALL BE CONNECTED AS APPROPRIATE.

(L) THE CABINET ASSEMBLY SHALL CONTAIN ALL PEDESTRIAN SIGNAL CIRCUITRY FOR EACH NEMA DEFINED THROUGH PHASE.

(M) A POLICE DOOR MOUNTED SIGNAL SHUTDOWN SWITCH WITH SWITCH POSITIONS LABELED AS "SIG ON" AND "SIG OFF" SHALL BE INSTALLED.

(N) A POLICE DOOR MOUNTED SIGNAL FLASH SWITCH WITH SWITCH POSITIONS LABELLED AS "ON SIG" AND "ON FLASH" SHALL NOT ONLY PLACE THE SIGNALS ON FLASH BUT ALSO STOP-TIME THE CONTROLLER UNIT. A RUN/STOP-TIME SWITCH WITH SWITCH POSITIONS LABELLED AS "CONT. RUN" AND "STOP-TIME" SHALL BE INSTALLED ON THE INSIDE OF THE CABINET DOOR. THE RUN/STOP-TIME SWITCH SHALL ALLOW THE CONTROLLER UNIT TO TIME NORMALLY BUT KEEP THE SIGNALS ON FLASH. THE SIGNAL FLASH SWITCH SHALL NOT RETURN THE SIGNALS TO NORMAL OPERATION UNLESS THE RUN/STOP-TIME SWITCH IS RESET TO THE STOP-TIME POSITION SO THE SIGNAL FLASH SWITCH CAN AGAIN STOP-TIME THE CONTROLLER UNIT. THE SIGNAL FLASH SWITCH SHALL NOT REMOVE POWER TO THE CONTROLLER UNIT OR ITS AUXILIARY EQUIPMENT.

(O) A POLICE DOOR MOUNTED AUTO MANUAL TRANSFER SWITCH WITH SWITCH POSITIONS LABELLED AS "AUTO" AND "MANUAL" SHALL BE INSTALLED. A MANUAL PUSH BUTTON CONTROL SHALL NOT BE INSTALLED UNLESS SPECIFIED, BUT WIRING FOR A PUSH BUTTON CONTROL SHALL BE PROVIDED UP TO THE POINT WHERE THE PUSH BUTTON WOULD HAVE BEEN CONNECTED.

(P) A CONTROLLER SHUTDOWN SWITCH WITH SWITCH POSITIONS LABELLED AS "CONT ON" AND "CONT OFF" AND A COORDINATED/FREE SWITCH WITH SWITCH POSITIONS LABELLED AS "COORD" AND "FREE" SHALL BE INSTALLED INSIDE THE CABINET NEXT TO THE RUN/STOP-TIME SWITCH. A COORDINATED/FREE SWITCH SHALL NOT BE REQUIRED IF THE CONTROLLER HAS A BUILT-IN COORD/FREE SWITCH.

(Q) AFTER A NEMA DEFINED POWER INTERRUPTION THE CONFLICT MONITOR SHALL CAUSE THE INTERSECTION SIGNALS TO FLASH AS PER PLAN FOR 10 SECONDS BEFORE THE INITIALIZED CONTROLLER UNIT TAKES CONTROL OF THE INTERSECTION SIGNALS. THE CONFLICT MONITOR SHALL BE EDI MODEL SERIES SSM LE AND SHALL CONTAIN SUFFICIENT CHANNELS AS CALLED FOR IN THESE PLANS.

(R) THE CONFLICT MONITOR SHALL BE CONNECTED DIRECTLY TO THE FIELD TERMINALS. USING JUMPERS OR LINKS ON THE BACK PANEL TO FORM A CIRCUIT FOR THE CONFLICT MONITOR SHALL NOT BE ACCEPTABLE.

(S) THE CONFLICT MONITOR SETTINGS FOR MINIMUM YELLOW TIMING ON ALL CHANNELS SHALL BE SET AT THREE AND ONE HALF (3.5) SECONDS.

(T) THE WATCH DOG TIMER SHALL CAUSE THE CONTROLLER TO GO INTO A FLASH OPERATION IF A MICROPROCESSOR FAILURE IS DETECTED.

(U) ALL BACK PANEL HARDWARE SHALL BE MOUNTED WITH SCREWS. ALL SCREWS SHALL BE COMPLETELY SCREWED DOWN. RIVETS OR OTHER NON REMOVABLE FASTENERS ARE NOT ACCEPTABLE.

(V) WIRE CONNECTIONS ON THE BACK PANEL SHALL BE MADE WITH CRIMP TERMINALS AND THREADED FASTENERS. TELEPHONE TYPE KNIFE CONNECTORS (SOLDERED OR OTHERWISE) ARE NOT ACCEPTABLE.

(W) ALL WIRES FASTENED TO THE LOAD SWITCH AND FLASHER PLUGS SHALL BE SOLDERED IN PLACE.

(X) THE BACK PANEL AND POWER DISTRIBUTION PANEL SHALL HAVE SILK SCREENED TERMINAL/SOCKET FUNCTION IDENTIFICATION LABELS SUCH AS AC COM, PHASE 3 GREEN, 115 VAC, SIGNAL BUS, ETC. REFERENCE NUMBERS SHALL NOT BE ACCEPTABLE IN LIEU OF FUNCTION LABELS BUT THEY CAN SUPPLEMENT THEM. ADDITIONAL TERMINAL BLOCKS AND AUXILIARY PANELS SHALL USE SILK SCREENED REFERENCE NUMBERS TO IDENTIFY TERMINAL CONNECTIONS.

(Y) ALL TERMINAL STRIPS IN CLOSE PROXIMITY OF SHELF MOUNTED CONTROL DEVICE EQUIPMENT SHALL BE COVERED WITH NON-CONDUCTIVE MATERIAL TO PREVENT ACCIDENTAL CONTACT WITH THE DEVICES. ALL TERMINAL STRIPS SHALL BE READILY ACCESSIBLE WITHOUT REMOVAL OF ANY EQUIPMENT.

(Z) THE CABINET SHALL HAVE TWO (2) NON VENTED (SOLID) SHELVES SPACED AT LEAST 9" APART. BOTH SHELVES SHALL HAVE A WIDTH OF 13" AND THE BACK EDGE OF THE SHELF SHALL BE LIPPED WITH THE LIP POINTING UP. THE FRONT EDGE OF THE SHELF SHALL BE LIPPED WITH THE LIP POINTING DOWN. ALL LIP EDGES SHALL BE ROUNDED. THE SHELVES SHALL BE ATTACHED TO THE CABINET SIDE PANELS. THE SHELF ARRANGEMENT SHALL BE DESIGNED SO ALL SHELF DEVICES FIT ON THEM.

(AA) THERE SHALL BE A MINIMUM OF ONE (1) INCH EMPTY SPACE BETWEEN ALL ITEMS ATTACHED TO THE DOOR AND ALL SHELF-MOUNTED DEVICES INCLUDING ITS CONNECTING HARNESS(ES), ALL LOAD SWITCHES, FLASHER AND ALL SIDE-PANEL-MOUNTED ITEMS.

NOTES CONTINUE NEXT SHEET.

CALCULATED | CHECKED

TRAFFIC SIGNAL GENERAL NOTES

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

(BB) "P" AND "M" SIZED CABINETS SHALL HAVE TWO VENTILATION FANS. THE THERMOSTAT CONTROLLING THE VENTILATING FAN CIRCUIT SHALL BE SET AT 95 DEGREES FAHRENHEIT.

(CC) ALL FLASH TRANSFER RELAYS SHALL BE WIRED FOR FAIL SAFE OPERATION (ENERGIZED DURING NORMAL OPERATION) AND WIRED WITH A MAXIMUM OF TWO PHASES PER RELAY.

(DD) THE CONTROLLER ASSEMBLY, WHEN PLACED IN OR COMING OUT OF AN AUTOMATIC FLASHING MODE, SHALL CONFORM TO THE AUTOMATIC FLASHING CRITERIA SET FORTH IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, SECTION 4D 12, INCLUDING THE FOLLOWING ADDITIONS.

1) A VEHICULAR CALL SHALL BE PLACED ON ALL PHASES IMMEDIATELY PRIOR TO ENTERING THE "FLASH" MODE SO THE CONTROLLER WILL CYCLE TO THE "FLASH" POINT. IT IS OPTIONAL TO HAVE ONE EXTERNAL VEHICULAR CALL PLACED IMMEDIATELY ON ALL PHASES WHEN THE "FLASH" MODE TERMINATES. THE CONTROLLER SHALL OPERATE NORMALLY ONCE THE "FLASH" MODE SEQUENCE IS TERMINATED.

2) THE CONTROLLER SHALL ENTER THE "FLASH" MODE AT THE END OF THE THROUGH SIDE STREET PHASE(S) YELLOW (OR DURING THE SIDESTREET PHASE(S) RED CLEARANCE INTERVAL) BUT JUST PRIOR TO ANY MAIN STREET GREEN.

THE FLASH TRANSFER LOGIC DEVICE SHALL TRIGGER THE "FLASH" OPERATION, SHALL BE SOLID STATE, SHALL BE EXTERNAL TO THE CONTROLLER (A CABINET ASSEMBLY DEVICE), AND SHALL FUNCTION WITH ANY NEMA CONTROLLER. THIS CIRCUITRY SHALL BE SUPPLIED IN ADDITION TO ANY INTERNAL CONTROLLER FLASH LOGIC PROVIDED BY THE CONTROLLER.

EXCEPTION: FOR ON-STREET MASTER ARTERIAL CONTROLLERS ONLY, INTERNAL IC LOGIC CAN BE USED IN LIEU OF AN EXTERNAL DEVICE AS LONG AS THE INTERNAL IC LOGIC MEETS THE STANDARDS SET FORTH ABOVE.

(EE) THE POWER CABLE SHALL BE CONNECTED TO AN ACCESSIBLE TERMINAL STRIP THAT SHALL BE LOCATED NEAR THE BOTTOM OF THE CABINET AND SHALL BE OF SUFFICIENT SIZE TO ACCEPT A SUPPLIED #8 WIRE LUG. THE TERMINAL STRIP SHALL BE COVERED OR SHIELDED TO MINIMIZE ACCIDENTAL CONTACT DURING NORMAL SERVICING OPERATIONS. THE COVER SHALL BE SNAPPED ON/OFF OR SECURED BY STANDARD SCREWS. THE POWER CABLE LUG TERMINAL CONNECTION SHALL BE LOCATED IMMEDIATELY BELOW THE MAIN POWER DISTRIBUTION BREAKER. POWER SHALL BE JUMPERED TO THE MAIN POWER DISTRIBUTION BREAKER. THE POWER DISTRIBUTION PANEL SHALL BE LOCATED IN THE BOTTOM RIGHT SIDE OF THE CABINET OR IT SHALL BE AN INTEGRAL PART OF THE RIGHT SIDE OF THE BACK PANEL. THERE SHALL BE A MINIMUM OF TWO (2) INCHES CLEARANCE BETWEEN THE POWER TERMINAL AND THE BOTTOM OF THE CABINET.

(FF) A #4 WIRE LUG SHALL BE PROVIDED FOR ATTACHING A GROUNDING WIRE FROM A GROUND ROD. THE GROUNDING WIRE LUG SHALL BE ATTACHED TO THE POWER DISTRIBUTION PANEL (LOWER LEFT CORNER), OR IF NONE, TO THE BACK PANEL (BOTTOM MIDDLE). IT SHALL BE DIRECTLY GROUNDED TO THE CABINET.

(GG) A SINGLE POLE MERCURY PLUNGER RELAY SHALL BE INSTALLED WHICH WILL ALLOW POWER TO BE REMOVED FROM THE VEHICULAR AND PEDESTRIAN POWER BUSES. THE MERCURY RELAY SHALL BE RATED AT 35 AMPS AND THE RELAY COIL WIRED WITH A NOISE SUPPRESSION DEVICE.

(HH) ALL EXTERNAL RELAY COILS SHALL HAVE NOISE SUPPRESSION DEVICES.

(II) THE DOOR FILTER (U.L. LISTED CLASS 2, STANDARD 900) SHALL CONSIST OF THREE DISTINCT LAYERS OF FILTERING MEDIA. THE FIRST AIR ENTERING LAYER SHALL BE COMPOSED OF A DUAL FIBER BLEND OF 100% NON-WOVEN POLYESTER TO TRAP LARGER SIZED PARTICLES. THE NEXT LAYER SHALL BE A DUAL PLY, DUAL DENIER, 100% NON-WOVEN POLYESTER OF SMALLER SIZE TO TRAP FINER PARTICLES PASSING THROUGH THE FIRST LAYER. A NON-TOXIC, NON-MIGRATORY, ODORLESS TACKIFIER SHALL BE APPLIED TO THESE LAYERS. ADHESIVES SPRAYED ON THE LAYERS ARE NOT ACCEPTABLE. THE TACKIFIER SHALL BE INCORPORATED INTO THE LAYER MEDIA DURING THE MANUFACTURING PROCESS OF THE RAW MATERIAL. A 10 GAUGE MESH SHALL BE INCORPORATED IN THE FILTER DESIGN FOR RIGIDITY. SUFFICIENT MEDIA OVERLAP SHALL BE PRESENT ABOUT THE WIRE PERIMETER TO INSURE POSITIVE SELF SEAL. THE DOOR FILTER HOLDER SHALL BE DESIGNED SO THE FILTER MAKES POSITIVE CONTACT WITH THE CABINET DOOR AT ALL TIMES AND UNDER ALL CONDITIONS AND SITUATIONS.

FOUR (4) SETS OF CABINET WIRING SCHEMATICS, TWO (2) SERVICE MANUALS AND TWO (2) INSTRUCTIONAL MANUALS SHALL BE PROVIDED PER CABINET. DELIVERY OF THESE DIAGRAMS & MANUALS SHALL ACCOMPANY THE CABINET. THE CONTRACTOR SHALL CLEARLY NOTE ANY DEVIATIONS, CHANGES, ADDITIONS OR OTHER MODIFICATIONS ON THE DIAGRAMS AND MANUALS THAT ARE APPROPRIATE TO REFLECT THE EXACT EQUIPMENT TO BE PROVIDED. THE COST FOR THIS MATERIAL SHALL BE INCIDENTAL TO THE COST OF THE SIGNAL EQUIPMENT. THE COPIES OF DIAGRAMS AND MANUALS SHALL BE STORED IN A PLASTIC ENVELOPE MOUNTED HORIZONTALLY AND SECURELY FASTENED TO THE INSIDE OF THE MAIN CABINET DOOR. THE ENVELOPE OPENING SHALL BE TO THE RIGHT OR LEFT. THE ENVELOPE SHALL NOT BLOCK ANY PART OF THE AIR FILTER OR THE AIR INTAKE LOCATED IN THE DOOR.

SERVICE & INSTRUCTIONAL MANUALS SHALL INCLUDE SECTIONS COVERING THE GENERAL DESCRIPTION OF EQUIPMENT, EQUIPMENT INSTALLATION PROCEDURES, EQUIPMENT PROGRAMMING PROCEDURES, THEORY OF OPERATION WITH SYSTEM DESCRIPTION INCLUDING BLOCK DIAGRAMS AND DETAILED CIRCUIT DIAGRAMS, PREVENTIVE MAINTENANCE, FIELD TROUBLE ANALYSIS, BENCH TROUBLE ANALYSIS, TROUBLESHOOTING ANALYSIS CHART, WAVE FORMS, VOLTAGE MEASUREMENTS, VOLTAGE MEASUREMENT CHARTS, PARTS LIST, ELECTRICAL INTERCONNECTION DRAWINGS, SCHEMATIC AND LOGIC DIAGRAMS, ASSEMBLY DRAWINGS WITH PICTORIAL DIAGRAMS SHOWING PHYSICAL LOCATIONS AND IDENTIFICATION OF EACH COMPONENT.

ITEM 633, CONTROLLER ITEM, MISC.: REMOVE AND REERECT WIRELESS COMMUNICATION EQUIPMENT

THIS ITEM OF WORK SHALL CONSIST OF REMOVAL AND REERECTION OF EXISTING SPREAD SPECTRUM RADIO EQUIPMENT REMOVED FROM AN EXISTING STRAIN POLE. THE EQUIPMENT WILL BE INSTALLED ON A NEW STRAIN POLE AS INDICATED IN THE PLAN.

IN ADDITION, ALL WORK SHALL BE CONSISTENT WITH THAT INCLUDED IN ODOT'S SUPPLEMENTAL SPECIFICATIONS 815 AND 906 TO THE EXTENT APPLICABLE.

ANY NEW CABLE, INSTALLATION HARDWARE OR OTHER INCIDENTAL EQUIPMENT REQUIRED TO COMPLETE THIS WORK SHALL BE INCLUDED IN THIS ITEM.

THE CONTRACTOR SHALL CONTACT THE CITY OF COLUMBUS TRANSPORTATION DIVISION AT 614-645-7933 FOR REQUIREMENTS AND TIME RESTRICTIONS FOR REMOVING THE EXISTING EQUIPMENT FROM SERVICE. A THREE (3) DIVISION WORKDAY NOTICE SHALL BE GIVEN.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER LUMP SUM UNDER CMS ITEM 633, "CONTROLLER ITEM, MISC.: REMOVE AND REERECT WIRELESS COMMUNICATION EQUIPMENT" FOR COMPLETE REERECTION OF THE EQUIPMENT WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CONTRACTOR ACCESS TO EXISTING CONTROL CABINET

A REPRESENTATIVE FROM THE TRANSPORTATION DIVISION SHALL BE PRESENT ANYTIME THE CONTRACTOR REQUIRES ENTRY INTO AN EXISTING CONTROL CABINET TO PERFORM ANY CABINET FIELD WIRING CHANGE OR FIELD WIRING HOOKUP. THE CONTRACTOR SHALL CONTACT THE DIVISION'S ELECTRONIC SHOP SUPERVISOR AT 614-645-7933 TO MAKE ARRANGEMENTS. A THREE (3) CITY WORKDAY NOTICE SHALL BE GIVEN. THE REPRESENTATIVE SHALL ACT IN A SUPERVISORY AND/OR INFORMATIONAL CAPACITY ONLY UNLESS OTHERWISE STATED IN THESE PLANS. EXISTING CABINET WIRING THAT WAS PREVIOUSLY DISCONNECTED BY THIS DIVISION SHALL BE CONNECTED BY THIS DIVISION IF CONNECTION IS REQUIRED FOR PROPER OPERATION OF THE TRAFFIC SIGNAL. ALL CONTRACTOR INSTALLED CABLE SHALL BE CONNECTED BY THE CONTRACTOR BUT OVERSEEN BY THE DIVISION'S REPRESENTATIVE. THERE IS NO CHARGE FOR THIS REPRESENTATIVE BETWEEN THE HOURS OF 8AM AND 3PM, MONDAY THROUGH FRIDAY. PRIOR TO OR AFTER THESE HOURS AND ON SATURDAYS THE HOURLY CHARGE IS $30 WITH A MINIMUM CHARGE OF $120 ON SATURDAY. SUNDAY HOURLY CHARGE IS $40 WITH A MINIMUM CHARGE OF $160.

ITEM 632 REUSE OF VEHICULAR/PEDESTRIAN SIGNAL HEAD

FOR REUSE OF VEHICULAR AND/OR PEDESTRIAN HEADS THE CONTRACTOR SHALL PROPERLY RELAMP ALL REUSED UNITS.

CALCULATED | CHECKED

TRAFFIC SIGNAL GENERAL NOTES

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

73
118

INTERSECTION LAYOUT SHEET NOTES:

1. THE CONTRACTOR SHALL ENSURE THAT ALL SIDEWALKS/ PATHWAYS MEET ADA GUIDELINES PER CITY SPECIFICATIONS.

2. ALL CABLES UNLESS SPECIFIED IN THE PLANS ARE TO BE ROUTED INSIDE THE ANCHOR BASE SIGNAL SUPPORT POLE OR PEDESTAL.

3. POWER AND SERVICE CABLE SHALL BE CONTINUOUS WITH NO SPLICES EXCEPT AS NOTED.

4. FOR SIGNING AND PAVEMENT MARKINGS, SEE SHEET 69.

5. CENTER ALL LOOPS IN THE CENTER OF THEIR LANE UNLESS SPECIFIED OTHERWISE. INSTALL LOOPS AFTER THE ASPHALT SURFACE COURSE IS LAID.

6. THE TOP OF THE POLE BASE FOUNDATION SHALL BE EDGED USING A ONE-HALF INCH SIDEWALK EDGER INSTEAD OF BEING CHAMFERED.

7. THE TRANSPORTATION DIVISION PERSONNEL SHALL APPROVE BOLT ALIGNMENT, POLE/PEDESTAL FOUNDATION LOCATION AND ELEVATION PRIOR TO THE CONTRACTOR INSTALLING THE FOUNDATION.

8. TAGGING OF CABLE IN THE PULLBOX IMMEDIATELY ADJACENT TO THE CONTROL CABINET IS NOT REQUIRED EXCEPT FOR TAGGING OF CERTAIN CABLE AS DIRECTED BY THE PROJECT ENGINEER OR AS PER PLAN.

9. THE PEDESTRIAN SIGNAL HEAD UNIT SHALL BE AIMED AT THE CENTERLINE OF THE CROSSWALK AREA (NOT THE CURB RAMP) THAT IS OPPOSITE OF THE UNIT. THE PEDESTRIAN UNIT SHALL ALSO HAVE A SLIGHT DOWNWARD ANGLE TO IT.

10. DO NOT ENCASE THE GROUND ROD, THE GROUNDING WIRE OR THE EMT CONDUIT ENDS IN CONCRETE THAT FALL OUTSIDE OF THE FOUNDATION. FULL ACCESS TO THESE ITEMS MUST BE MAINTAINED AT ALL TIMES. PERMANENTLY MARK THE TOP OF CONCRETE, IF VISIBLE, WITH A MARKER OR SYMBOL SO THE ROD LOCATION CAN BE KNOWN BY OTHERS.

11. ANY SIGNAL SUPPORT BASE FOUNDATION WITHIN OR ADJACENT TO A SIDEWALK AREA SHALL BE FLUSH WITH THE TOP OF THE SIDEWALK UNLESS OTHERWISE STATED.

12. THE CONTRACTOR SHALL NOT INSTALL POLE FOUNDATIONS UNTIL THE POLE LOCATION AREA IS AT FINISHED GRADE.

13. UNDERGROUND CONDUIT AND TRENCH THAT ARE UNDER PROPOSED SIDEWALK OR ROADWAY AREAS SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF SIDEWALKS OR ANY ASPHALT OR CONCRETE ROADWAY COURSE.

14. THE CONTRACTOR SHALL PROVIDE AND INSTALL POWER AND/OR SERVICE CABLE BETWEEN THE CONTROL CABINET AND THE DESIGNATED POWER SOURCE LOCATION. THE DUPLEX POWER SERVICE CABLE SHALL BE RUN SEPARATELY AND SHALL NOT BE BUNDLED WITH ANY OTHER CABLE.

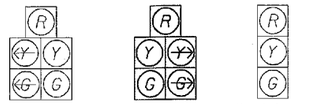
15. THE CONTROL CABINET DOOR SHALL BE LOCATED ON THE WEST SIDE OF THE CABINET.

16. THE CABINET FOUNDATION SHALL BE PLACED ADJACENT TO THE BACK OF THE SIDEWALK. THE TOP SURFACE OF A CABINET FOUNDATION LOCATED NEXT TO SIDEWALK AREAS SHALL BE 4" ABOVE THE SURROUNDING WALK. EXPANSION MATERIAL SHALL BE USED BETWEEN ALL FOUNDATIONS AND ADJACENT SIDEWALK. WORK PAD SIZE SHALL BE 48"W X 36"D X 4"H.

17. UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY. A PREFORMED PVC CONDUIT ELBOW SHALL BE USED TO CHANGE THE PVC CONDUIT DIRECTION BEYOND WHAT ITS NATURAL BENDING FLEX WOULD YIELD. RIGID METAL CONDUIT CAN BE BENT TO FORM AN ELBOW OR ANY OTHER BENDING ANGLE REQUIRED ONLY IF A PROPER CONDUIT BENDING MACHINE IS USED. THE ELBOW RADIUS FOR ANY NON-INTERCONNECT CONDUIT SHALL BE 24" OR LARGER WHEN USED IN A HORIZONTAL OR VERTICAL MANNER.

18. ALL CLAMPS AND BANDING MATERIAL SHALL BE PAINTED TO MATCH THE SIGNAL SUPPORTS.

VEHICULAR SIGNAL

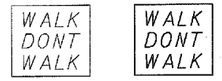


RELOCATE EX. 7 | 2 | RELOCATE EX. 1,3,4,8

ALL 12" LENS

HEAD DESIGNATIONS 5 & 6 (WESTBOUND) NOT USED

PEDESTRIAN SIGNAL HEADS

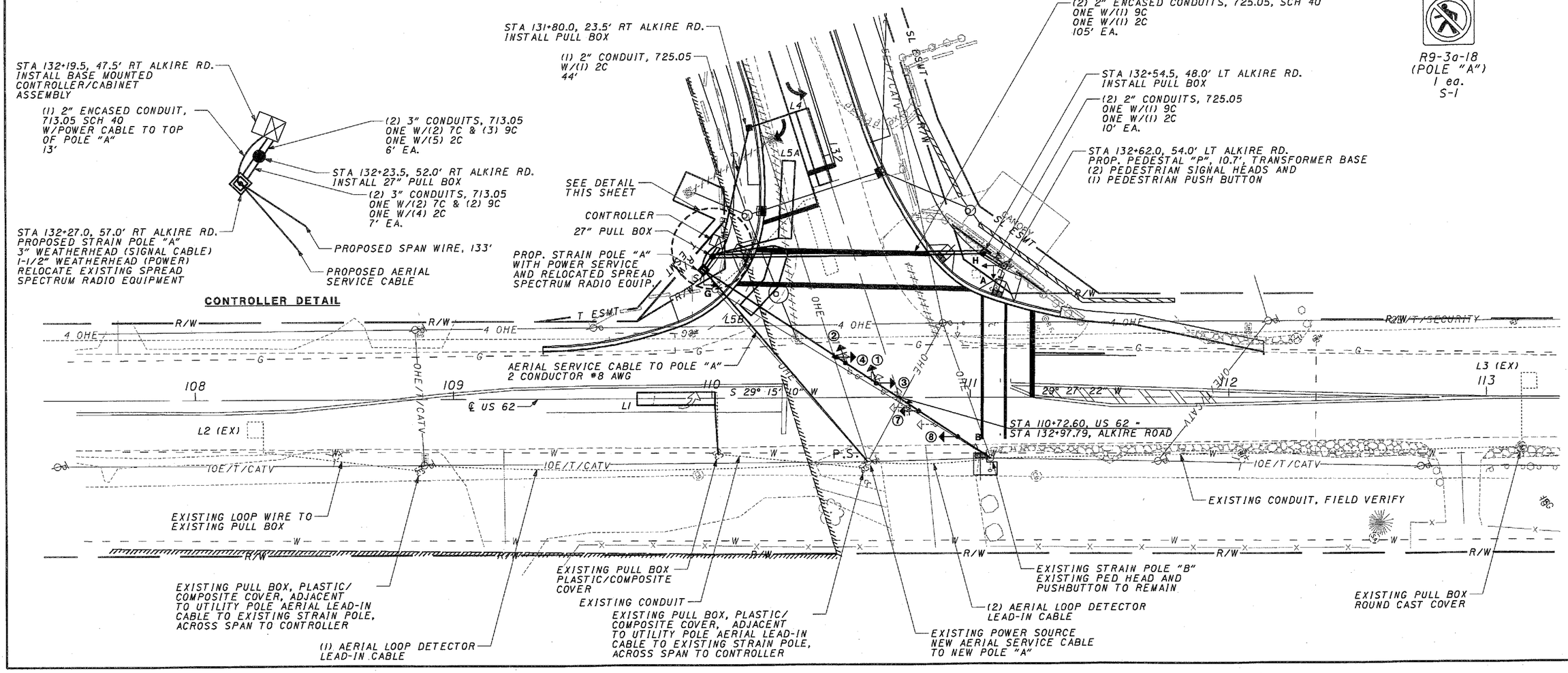


EX. B | A,G,H

SIGNS



R9-3a-18 (POLE "A") 1 ea. S-1



TRAFFIC SIGNAL PLAN

FRA-CR11-10.49 (ALKIRE ROAD)

HORIZONTAL SCALE IN FEET 0 20 40

CALCULATED | CHECKED

PID 76255

FCEO 1135

COC 2354-E

74 / 118

NOTES:

1. SET CONFLICT MONITOR FOR 10 SEC FLASH.

2. LOOP DETECTOR LEAD-IN CABLE SHALL BE USED FOR THE PEDESTRIAN PUSHBUTTONS. GROUND THE SHIELD ONLY AT THE CABINET.

3. SET ALL MAINLINE FAR (F) LOOP CHANNELS ON PRESENCE MODE. SET ALL OTHER 6'x6' LOOP CHANNELS TO PULSE MODE. SET EXTENSION TIME TO 1.6 SECONDS ON ALL FAR (F) LOOP UNITS. SET ALL PRESENCE LOOP CHANNELS TO COUNT MODE.

4. ALL LOOP SPADE TERMINALS SHALL HAVE THE LOOP HOMERUN WIRE SOLDERED TO THE SPADE TERMINAL. THE LOOP HOMERUN WIRES SHALL BE TWISTED TOGETHER AS CLOSE TO THE SPADE TERMINAL SCREWS AS POSSIBLE. THE CABLE DRAIN WIRE SHALL BE CONNECTED TO THE CLOSEST GROUNDING POINT. SOLDER THE LOOP WIRE AND HOMERUN CONNECTION.

5. BACK PANEL WIRING (FRONT SIDE JUMPERS ONLY)
   A) HARD WIRE 'PED RECYCLE' TO GROUND.
   B) USE DIODES TO PREVENT FEEDBACK ON MULTI-USE TERMINALS.
   C) INSTALL A DIODE BETWEEN TERMINALS, ϕ1 'PHASE ON' OUTPUT AND ϕ4 'OMIT' INPUT, SO THE LEFT TURN PHASE (ϕ4) IS OMITTED DURING THE THROUGH PHASE (ϕ1).

6. CONTROLLER SOFTWARE PROGRAMMING
   A) INITIALIZE IN ϕ1 GREEN
   B) ENABLE ACTUATED REST-IN-WALK. ACTIVATE PHASE ϕ1.

7. EPOXY THE END OF ALL FUTURE-USE CABLES. COIL 5 FEET OF CABLE IN EACH PULLBOX.

8. CONTROLLER NUMBER IS #1090.

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

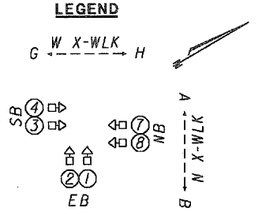
REMOVED ITEM DESCRIPTION	DELIVEVER TO 1820 E 17th AVE	REUSE OF ITEM BY PROJECT	DISPOSED OF BY PROJECT
(1) POLE MOUNTED CABINET ASSEMBLY	X		
CABLE & ANY MESSENGER WIRE			X
VEHICULAR SIGNAL HEADS (5) 3-SECTION		X	
(1) PEDESTRIAN SIGNAL HEAD		X	
(2) PUSHBUTTONS W/SIGNS			
(1) ANCHOR BASE POLE	X		
(1) PEDESTAL/POLE FOUNDATION			X
ABANDONED TRAFFIC PULLBOX			X
ABANDONED TRAFFIC CABLE			X
(2) STREET NAME SIGNS		X	
SPREAD SPECTRUM RADIO EQUIP.		X	

REMOVE CABLE AND MESSENGER WIRE BACK TO ITS RESPECTIVE TERMINUS POINT.

AT THE DIRECTION OF TRANSPORTATION DIVISION PERSONNEL, THE CONTRACTOR SHALL REMOVE SIGNAL HEADS FOR STORAGE. SIGNAL HEADS SHALL EITHER BE REUSED, DELIVERED TO THE CITY OR PROPERLY DISPOSED OF AS DIRECTED BY THE ENGINEER.

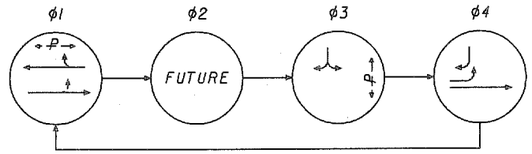
REERECTION OF STREET NAME SIGNS SHALL INCLUDE NEW HARDWARE AS REQUIRED.

LEGEND



PHASE DIAGRAM

INT #1090



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1 (EB)	R	ϕ3 R	R
	Y	ϕ3 Y	
	G	ϕ3 G	
2 (EBRT)	R	OLA R	R
	Y	OLA Y	
	G	OLA G	
	~~Y~~	ϕ4 Y	
	~~G~~	ϕ4 G	
3,4 (SB)	R	ϕ1 R	Y
	Y	ϕ1 Y	
	G	ϕ1 G	
7,8 (NB)	R	OLA R	Y
	Y	OLA Y	
	G	OLA G	
AB (NORTH)	W	OLD G (ϕ3)	OUT
	DW	OLD R (ϕ3)	
GH (WEST)	W	OLC G (ϕ1)	OUT
	DW	OLC R (ϕ1)	

OLA = ϕ1+ϕ4
OLA = LS 5
OLB = LS 6
OLC = LS 7
OLD = LS 8

DETECTOR ASSIGNMENT CHART

DETECTOR SENSOR NUMBER	DETECTOR UNIT		PHASE NUMBER	LOOP SIZE	# OF TURNS	DELAY DATA SEC	DELAY DATA ϕ GREEN INHIBIT	DET UNIT & CABLE LABEL	EXT. (SEC)
L1	1	1	4	5x30	2	3	4	NBLT	
L2	2	1	1	EX.				NBF	1.6
L3	3	1	1	EX.				SBF	1.6
L4	4	1	3	5x30	2			EBLT	
L5A	4	2	3	5x30	2	12	3	EBRT	
L5B	4	2	3	6x30	2	12	3	EBRT	

ABBREVIATIONS - LT-LEFT TURN, RT-RIGHT TURN, N-NEAR, F-FAR

LOOPS ARE TO BE HOOKED TO THE UNIT AND CHANNEL AS INDICATED TO ENHANCE LOOP PERFORMANCE AND DECREASE LOOP CROSSTALK.

SIGNAL HEAD & CABINET FIELD WIRING HOOKUP

SIGNAL DISPLAY	WIRE COLOR PER APPROACH
THRU R	RED
THRU Y	ORANGE
THRU G	GREEN
L/T R	BLACK (FUTURE USE ONLY)
L/T ~~Y~~	WHITE W/BLACK TRACER
L/T ~~G~~	BLUE
R/T R	NOT USED BY CITY
R/T ~~Y~~	RED W/BLACK TRACER
R/T ~~G~~	GREEN W/BLACK TRACER

WHITE SHALL BE USED FOR THE COMMON. SPLICE ALL WIRES IN THE SIGNAL HEAD OR PED UNIT. USE A #14 AWG 2 WIRE SPADE TERMINAL FOR EVERY 2 WIRES PER CONNECTION AND A #14 AWG 1 WIRE SPADE TERMINAL FOR EACH SINGLE WIRE CONNECTION TO CONNECT ALL WIRES TO ALL FIELD TERMINALS. USE BUTT SPLICES ON ALL THROUGH WIRES. ALL UNUSED WIRES SHALL BE SPLICED THROUGH AND SHALL HAVE A DEAD-END TERMINAL AT THE END OF THE WIRE.

TIMING CHART

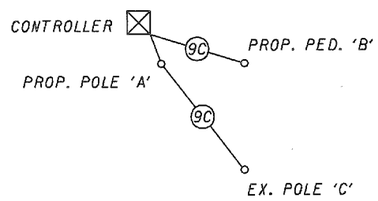
PHASE	ϕ1	ϕ2	ϕ3	ϕ4
MOVEMENT	NB/SB		EB	NBLT
MIN GREEN	30		20	15
PASS/EXT	2.7		3.7	3.7
MAX GRN 1	60	F	60	30
MAX GRN 2	60	U	60	30
YELLOW	4.0	T	3.6	3.6
RED CLR	0.8	U	0.7	0.7
WALK	7	R	7	
PED CLR	20	E	17	
PED RECALL	ON		OFF	OFF
VEH RECALL	MIN		OFF	OFF
MEMORY	ON		OFF	OFF

1. ALL OTHER TIME SETTINGS ARE SET TO "OFF" OR "ZERO".
2. INSTALL A LOOP HARNESS FOR EACH 'FUTURE' PHASE.
3. ϕ1 FAR LOOP DETECTION SET TO 1.6 SECOND EXTENSION.

PED UNIT FIELD WIRING HOOKUP (9/C)

PED UNIT LOCATION	CROSSWALK DISPLAY	WIRE COLOR
NORTH (AB)	WALK	GREEN
CROSSWALK	DONT WALK	RED
WEST (GH)	WALK	BLUE
CROSSWALK	DONT WALK	WHITE W/BLACK TRACER

PED UNIT CABLE ROUTING



PUSHBUTTON & SIGN INSTALLATION



1. CONTACT THE TRANSPORTATION DIVISION FOR CM-R73 SIGN DETAILS.

2. MOUNT THE CENTER OF THE PUSHBUTTON 42" ABOVE THE PEDESTRIAN PATHWAY. MOUNT THE SIGNS JUST ABOVE THE PUSHBUTTON HOUSING.

CALCULATED | CHECKED

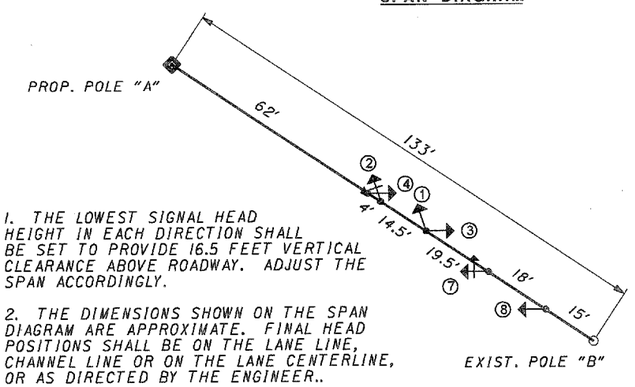
TRAFFIC SIGNAL DETAILS

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

75
118

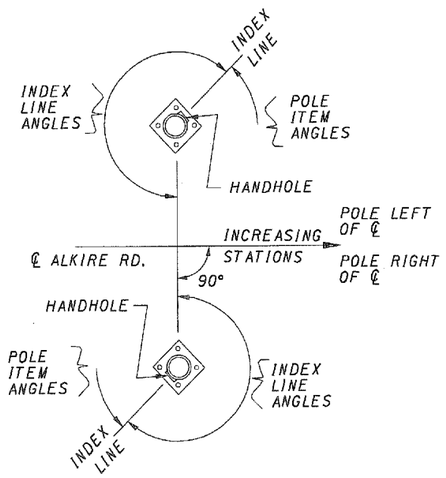
SPAN DIAGRAM



1. THE LOWEST SIGNAL HEAD HEIGHT IN EACH DIRECTION SHALL BE SET TO PROVIDE 16.5 FEET VERTICAL CLEARANCE ABOVE ROADWAY. ADJUST THE SPAN ACCORDINGLY.

2. THE DIMENSIONS SHOWN ON THE SPAN DIAGRAM ARE APPROXIMATE. FINAL HEAD POSITIONS SHALL BE ON THE LANE LINE, CHANNEL LINE OR ON THE LANE CENTERLINE, OR AS DIRECTED BY THE ENGINEER..

STRAIN POLE ORIENTATION DETAIL



NOTES:

1. ALL ANGLES ARE MEASURED CLOCKWISE.
2. THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.

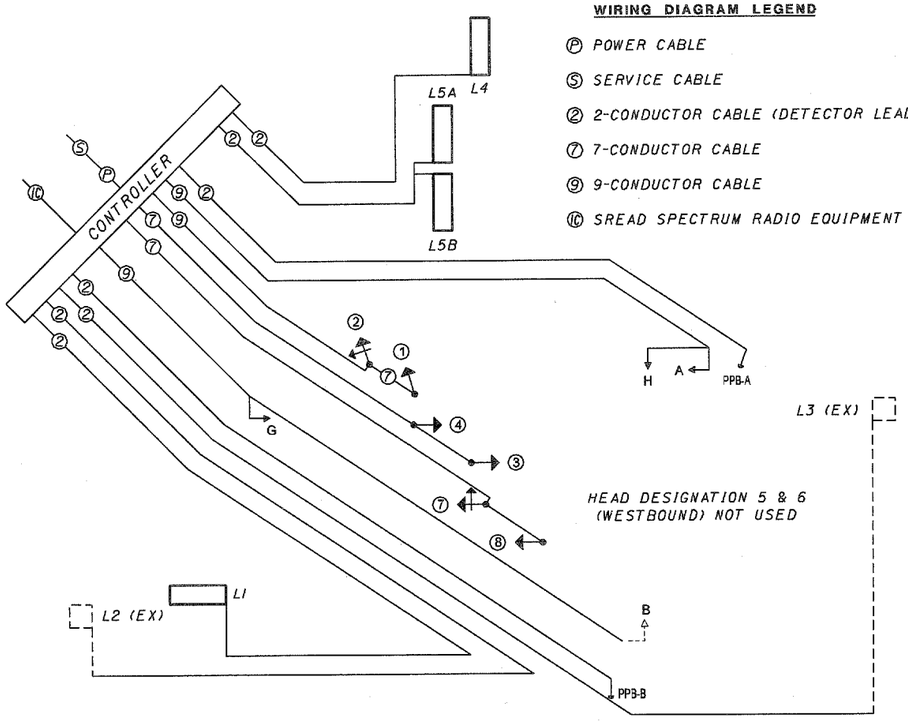
ORIENTATION CHART FOR STRAIN POLES

FROM SHEET NO.	REFERENCE STREET ℄ ALKIRE ROAD. STATION & OFFSET	POLE NO.	DESIGN NO.	POLE HEIGHT (FT.)	SPAN WIRE ATTACH. HT. (FT.)	INDEX ANGLE (DEG.)	ANGLES (DEG.) FROM INDEX LINE							FOUNDATION ELEVATION
							PEDESTRIAN SIGNALS		PEDESTRIAN PUSH BUTTONS	POWER SERVICE 1-1/2" WEATHERHEAD	CABLE ENTRANCE 3" WEATHERHEAD 12" FROM TOP			
74	132+27, 57' RT	"A"	7	30	28	231	304		190	196	180			746.4
74	EXISTING	"B"												

ORIENTATION CHART FOR PEDESTRIAN PEDESTAL

74	132+62, 54' LT	"P"		10.7		128	(2) 232		180				746.4

WIRING DIAGRAM



WIRING DIAGRAM LEGEND

- Ⓟ POWER CABLE
- ⑤ SERVICE CABLE
- ② 2-CONDUCTOR CABLE (DETECTOR LEAD-IN CABLE)
- ⑦ 7-CONDUCTOR CABLE
- ⑨ 9-CONDUCTOR CABLE
- ⑯ SREAD SPECTRUM RADIO EQUIPMENT CABLE

TRAFFIC SIGNAL GENERAL SUMMARY

ITEM	QUANT.	UNIT	DESCRIPTION	SEE SHEET NO.
625	3	EACH	GROUND ROD, AS PER PLAN	71
625	2	EACH	PULLBOX, AS PER PLAN	71
625	1	EACH	PULLBOX, 27", 'R5900F', AS PER PLAN	77
625	184	FT	TRENCH, 30"	
625	64	FT	CONDUIT, 725.05 SHC 40, TC-2, 2 INCH	
625	26	FT	CONDUIT, 725.05 SCH 40, TC-2, 3 INCH	
625	223	FT	CONDUIT, 725.05 SCH 40, ENCASED, 2 INCH	
630	1	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
630	2.25	SQ FT	SIGNS, FLAT SHEET, TYPE H	
630	2.25	SQ FT	COVERING OF SIGN	
630	2	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: POLE MOUNTED	75
			STREET NAME SIGN AND REERECTION	
632	1	EACH	SIGNALIZATION, MISC.: VEHICULAR SIGNAL HEAD, INSTALLATION ONLY	71
632	3	EACH	SIGNALIZATION, MISC.: PEDESTRIAN SIGNAL HEAD, INSTALLATION ONLY	71
632	2	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	71
632	4	EACH	DETECTOR LOOP, AS PER PLAN	71
632	1	EACH	MICROWAVE UNIT, AS PER PLAN	7
632	1	EACH	STRAIN POLE FOUNDATION, AS PER PLAN	72
632	1	EACH	PEDESTAL FOUNDATION, AS PER PLAN	72
632	1	EACH	SLEEVE FOR ANCHOR BASE FOUNDATION, AS PER PLAN	72
632	1	EACH	STRAIN POLE, DESIGN 7, ANCHOR BASE, 30 FEET, AS PER PLAN	72
632	1	EACH	PEDESTAL, 10.7', TRANSFORMAER BASE, AS PER PLAN	77
632	1	EACH	CONDUIT RISER, 2-INCH DIAMETER, 725.04	
632	133	FT	MESSENGER WIRE, 7 STRAND, 3/8 INCH DIAMETER WITH ACCESSORIES	
632	373	FT	SIGNAL CABLE, 7-CONDUCTOR, NO. 14 AWG	
632	592	FT	SIGNAL CABLE, 9-CONDUCTOR, NO. 14 AWG	
632	1705	FT	LOOP DETECTOR LEAD-IN CABLE IMSA 50-2	
632	65	FT	POWER CABLE, 2-CONDUCTOR, NO. 8 AWG, CU, AS PER PLAN	72
632	120	FT	SERVICE CABLE, 2 CONDUCTOR, NO. 6 AWG, ALUM	
632	6	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	72
632	4	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD, AS PER PLAN	72
632	2	EACH	COVERING OF PEDESTRIAN PUSHBUTTON, AS PER PLAN	72
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	75
632	5	EACH	REMOVAL OF VEHICUALR SIGNAL HEAD FOR STORAGE	
632	3	EACH	REMOVAL OF PEDESTRIAN SIGNAL HEAD FOR STORAGE	
632	5	EACH	REUSE OF VEHICULAR SIGNAL HEAD, AS PER PLAN	73
632	3	EACH	REUSE OF PEDESTRIAN SIGNAL HEAD, AS PER PLAN	73
633	1	EACH	CONTROLLER UNIT TS2/A2, W/CABINET, 4 PH, M36, BASE, AS PER PLAN	72
633	1	EACH	CABINET FOUNDATION, AS PER PLAN	77
633	1	EACH	CONTROLLER WORK PAD (48"W x 36"D x 4"H)	
633	1	EACH	CONTROLLER ITEM, MISC.: REMOVE AND REERECT WIRELESS COMMUNICATION EQUIPMENT	73

CALCULATED | CHECKED

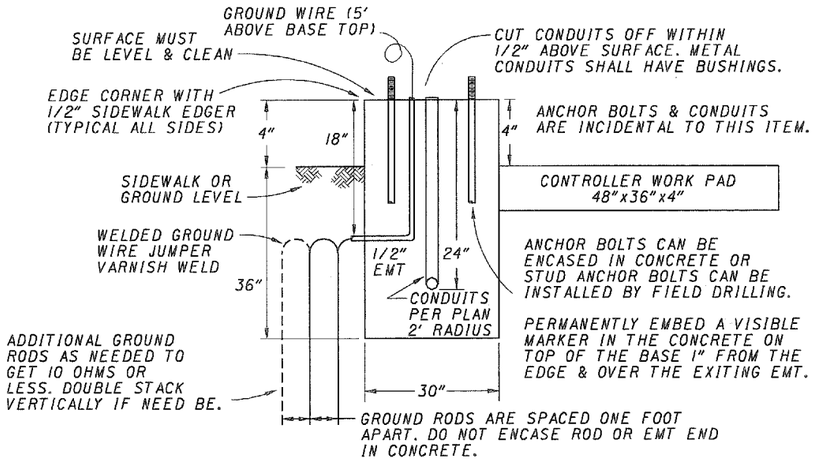
TRAFFIC SIGNAL DETAILS

FRA-CR11-10.49
(ALKIRE ROAD)

PID 76255
FCEO 1135
COC 2354-E

76
118

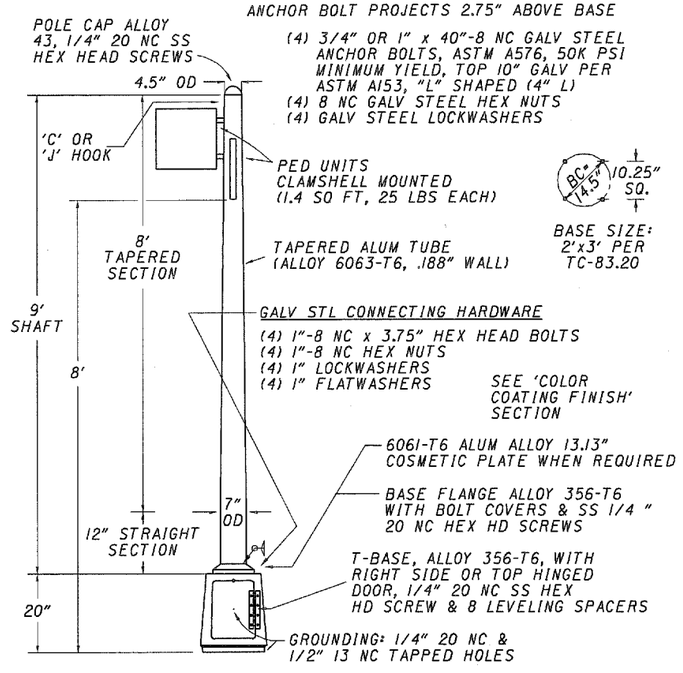
CABINET FOUNDATION BASE (48"x30"x40")



USE EXPANSION MATERIAL BETWEEN THE BASE CONCRETE & OTHER CONCRETE AREAS.

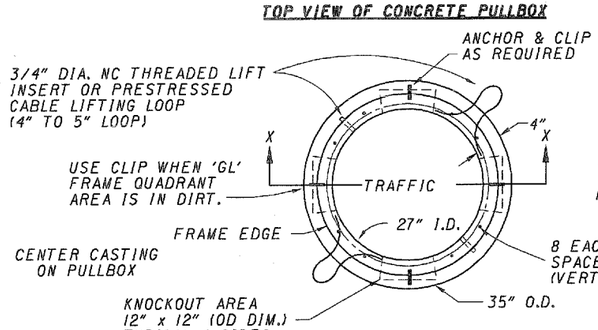
PEDESTAL, 10.7', TRANSFORMER BASE

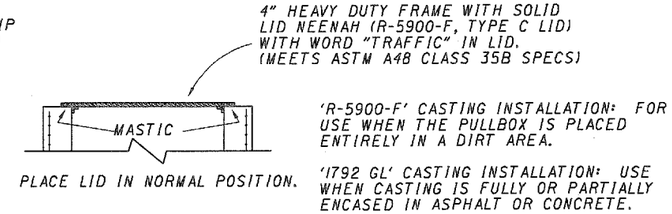
ANCHOR BOLT PATTERN

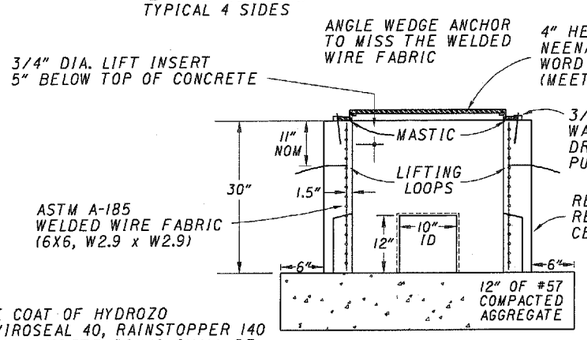


ITEM 625 PULLBOX, 27", AS PER PLAN

TOP VIEW OF CONCRETE PULLBOX



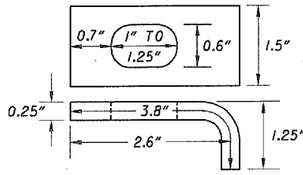




ONE COAT OF HYDROZO ENVIROSEAL 40, RAINSTOPPER 140 OR CHEMTRETE BSM40 SHALL BE APPLIED TO THE INSIDE & OUTSIDE OF THE PULLBOX.

SECTION X-X PULLBOX WITH FRAME AND LID

THE CLIP SHALL BE MADE FROM A36 METAL, HD GALV (ASTM A123) AND IN THE SHAPE SHOWN.



CLIP PROFILE
(NOM. VALUES)

CONCRETE SHALL HAVE AIR ENTRAPMENT OF 6% ± 2% AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. LID RING LOAD TRANSFER IS TO BE DISTRIBUTED BY USE OF A PRE-FORMED MASTIC JOINT MATERIAL. CONCRETE MATERIALS SHALL MEET ODOT SPECIFICATIONS. STANDARD PLACEMENT FOR WIRE MESH & REBAR SHALL BE USED. CUT OFF CONDUITS SO THEY EXTEND NO MORE THAN THREE INCHES BEYOND THE INSIDE PULLBOX WALL. CONDUIT SHALL ENTER THE PULLBOX VIA A KNOCKOUT. CONDUIT WHEN APPROVED BY SIGNAL PERSONNEL MAY ENTER THE BOX THRU ITS WALL ONLY IF THE OPENING IS SAWN OR CORE DRILLED.

THE WEDGE ANCHOR ASSEMBLY SHALL BE OMITTED WHENEVER THE ENTIRE AREA ABOVE THE KNOCKOUT (1/4 OF THE CASTING) IS EITHER ENCASED IN CONCRETE OR ASPHALT. THE ENCASEMENT SHALL BE CENTERED AROUND THE KNOCKOUT.

ENLARGING THE KNOCKOUT AREA IF REQUIRED SHALL BE DONE BY SAW CUTTING THE CONCRETE. NO OTHER METHOD IS ALLOWED. CONTRACTOR SHALL REPLACE THE CONCRETE HOUSING IF DAMAGED AT HIS EXPENSE.

A PULL LINE (POLYOLEFIN, #14 CU WIRE OR NYLON ROPE) SHALL BE INSTALLED IN EACH CONDUIT (USED OR UNUSED) AND SHALL BE SECURELY FASTENED AT BOTH CONDUIT ENDS. ALL UNUSED CONDUITS SHALL BE CAPPED AND THE CAPS SECURED TO THE CONDUIT WITH TAPE.

ANY CONDUIT THAT EXITS A PULLBOX, CONTAINS CABLE AND DIRECTLY ENTERS ANY ELECTRONIC CABINET, SHALL BE FOAM SEALED IN THE PULL-BOX. PULLBOX BEARING CAPACITY TO EXCEED 40,000#

AFTER THE CONDUITS HAVE BEEN INSTALLED, ANY OPENING IN THE PULLBOX WALL SHALL BE TOTALLY FILLED WITH MORTAR OR CONCRETE AND FINISHED FLUSH WITH THE INSIDE PULLBOX WALL. (NO VOIDS)

CALCULATED | CHECKED

TRAFFIC SIGNAL DETAILS

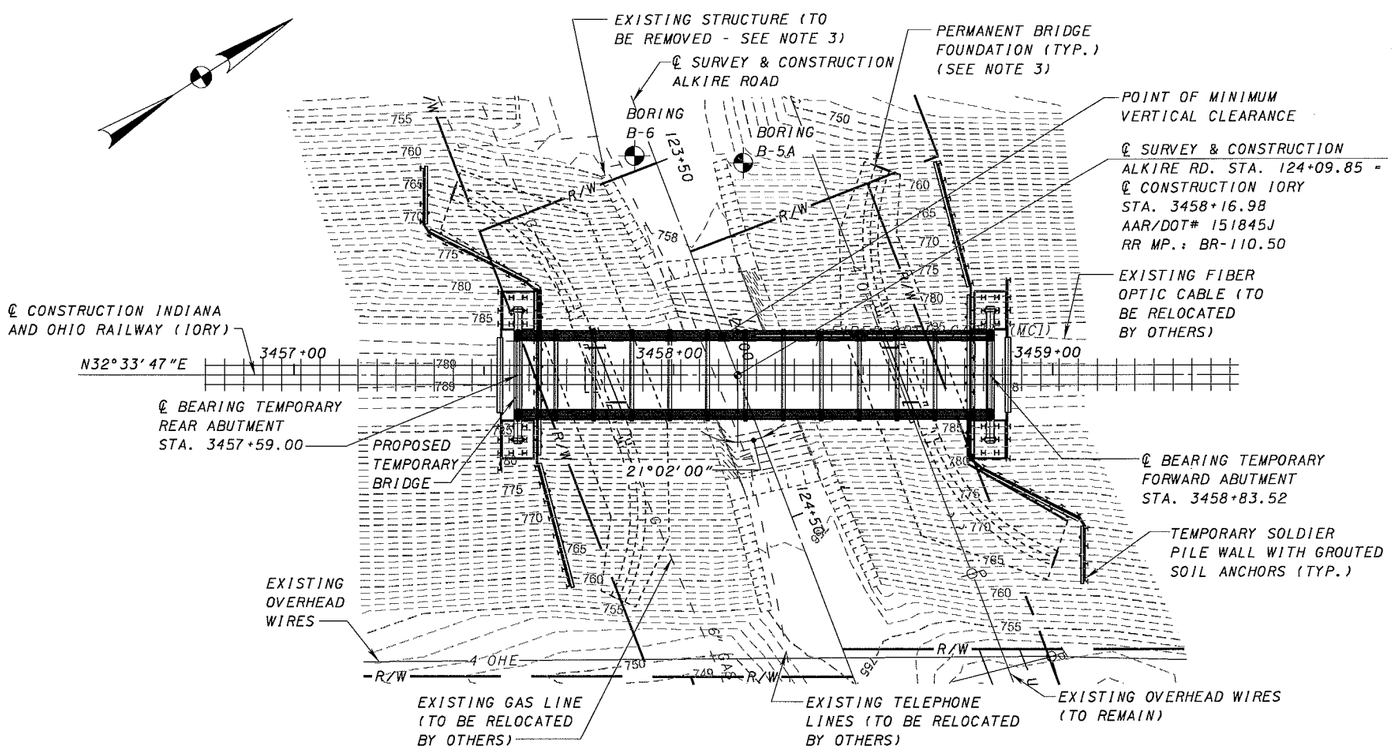
FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255

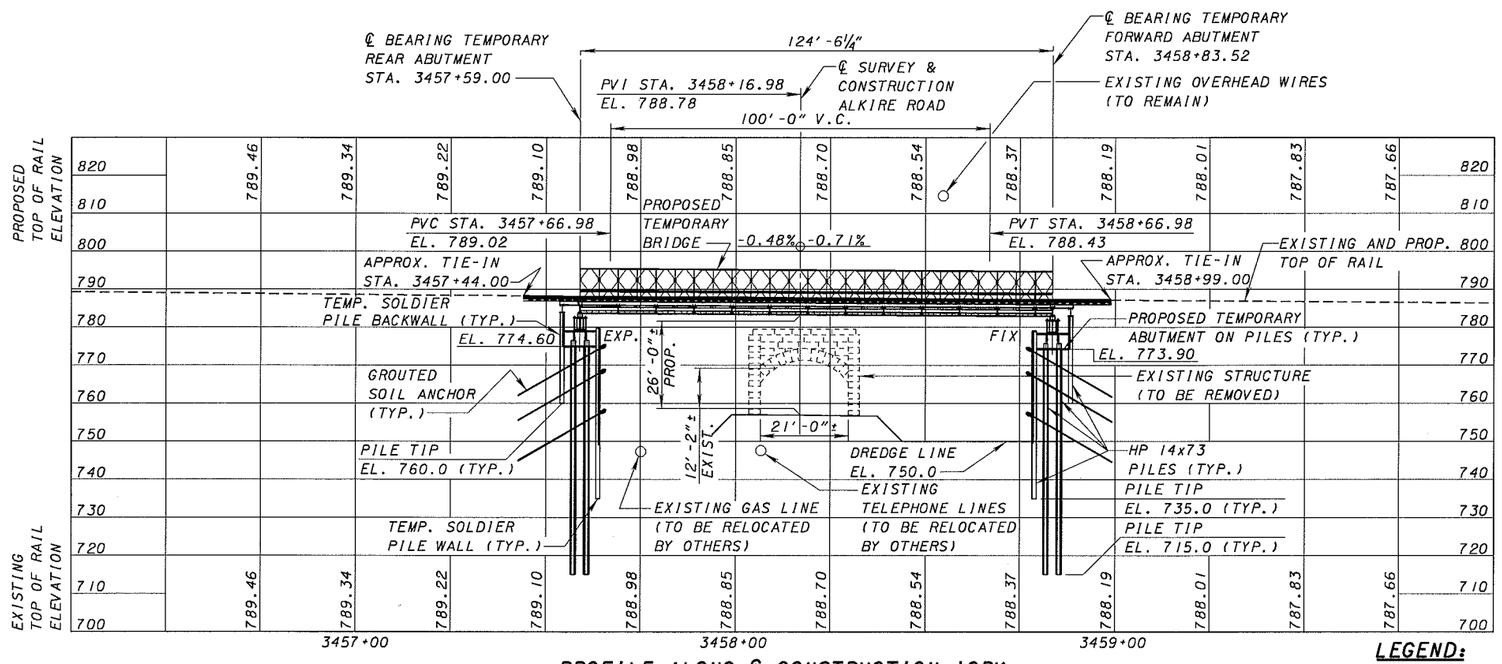
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COC 2354-E

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PLAN



PROFILE ALONG ℄ CONSTRUCTION IORY
(PERMANENT BRIDGE NOT SHOWN)

BENCHMARK 1
IRON PIN SET - EL. 759.88 STA. 122+63.48 (℄ SURVEY & CONSTRUCTION ALKIRE ROAD) OFFSET 18.95' LEFT STA. 3457+82.13 (℄ CONSTRUCTION IORY) OFFSET 143.42' LEFT

BENCHMARK 2
IRON PIN SET - EL. 750.58 STA. 125+34.68 (℄ SURVEY & CONSTRUCTION ALKIRE ROAD) OFFSET 52.66' LEFT STA. 3459+10.93 (℄ CONSTRUCTION IORY) OFFSET 97.61' RIGHT

TRAFFIC DATA
INDIANA & OHIO RAILROAD TRAIN TRAFFIC - 2 TRAINS/DAY OPERATING SPEED - 10 MPH

BORING LOCATIONS

BORING NO.	STATION	OFFSET
B-5A	3458+18.33	55.96 LT.
B-6	3457+89.55	57.97 LT.

EXISTING STRUCTURE
TYPE: SINGLE BARREL STONE ARCH BRIDGE WITH BALLASTED DECK SPAN: 21'-0"± MEASURED CLEAR INSIDE ARCH WIDTH: 64'-11"± LOADING: UNKNOWN SKEW: 21°02'16"± DATE BUILT: 1902 STRUCTURE FILE No.: 2530252 AAR/DOT# 151845J RR MP.: BR-110.50

PROPOSED STRUCTURE
TYPE: SIMPLE SPAN STEEL THROUGH TRUSS, DIRECT FIXATION DECK, AND GROUTED TIED-BACK TEMPORARY RETAINING WALLS SPAN: 124'-6¼" C-C OF BEARING WIDTH: 20'-9¾" ℄ TRUSS TO ℄ TRUSS LOADING: COOPER E-80 WITH DIESEL IMPACT SKEW: 0°00'00" ALIGNMENT: TANGENT LONGITUDE: W 83°04'09" LATITUDE: N 39°54'56"

NOTES:

1. FOR PROPOSED EARTHWORK AND GRADING LIMITS, SEE PERMANENT BRIDGE SITE PLAN AND PLAN CROSS SECTIONS.
2. EXISTING VERTICAL CLEARANCE IS AS POSTED AT THE BRIDGE. PROPOSED VERTICAL CLEARANCE IS CALCULATED FROM THE LOW STEEL ELEVATION AT THE CROWN OF ALKIRE ROAD.
3. SEE PERMANENT BRIDGE PLANS FOR PROPOSED STRUCTURE, FOUNDATIONS AND REMOVALS NOT INCLUDED WITH THESE PLANS.
4. THE CONSTRUCTION SEQUENCE SHOWN ON THIS SHEET IS ONE REPRESENTATIVE PROCEDURE FOR THE REMOVAL AND CONSTRUCTION OF THE BRIDGES. THE CONTRACTOR MAY CHOOSE AN ALTERNATIVE PROCEDURE, BUT THIS WORK MUST BE COORDINATED WITH THE RAILROAD. REFERENCE SHEET 3/11 FOR MAINTENANCE OF TRAFFIC NOTES.
5. THE RAILROAD RIGHT-OF-WAY IN THESE PLANS IS THE PROPERTY OF CSX TRANSPORTATION (aka: BALTIMORE & OHIO RAILROAD CO.). THE TRACKS LOCATED WITHIN THIS RIGHT-OF-WAY ARE OWNED BY THE INDIANA AND OHIO RAILWAY CO. (IORY). THE IORY LEASES THE PROPERTY FROM CSX TRANSPORTATION.

FOUNDATION DATA:

1. ABUTMENT PILES FOR TEMPORARY BRIDGE SHALL BE HP 14x73 FRICTION PILES.
2. THE ESTIMATED AVERAGE PAY LENGTHS OF THE PROPOSED FOOTING PILES ARE AS FOLLOWS:
   TEMPORARY REAR ABUTMENT - 65 FEET
   TEMPORARY FORWARD ABUTMENT - 65 FEET

LEGEND:

⊕ - DENOTES SOIL BORING LOCATION

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229
DATE: 05/13/07
REVIEWED: RER
STRUCTURE FILE NUMBER: 2530171
DRAWN: JLV
REVISED:
DESIGNED: JDH
CHECKED: GHD

FRANKLIN COUNTY
STA. 3457+59.00
STA. 3458+83.52

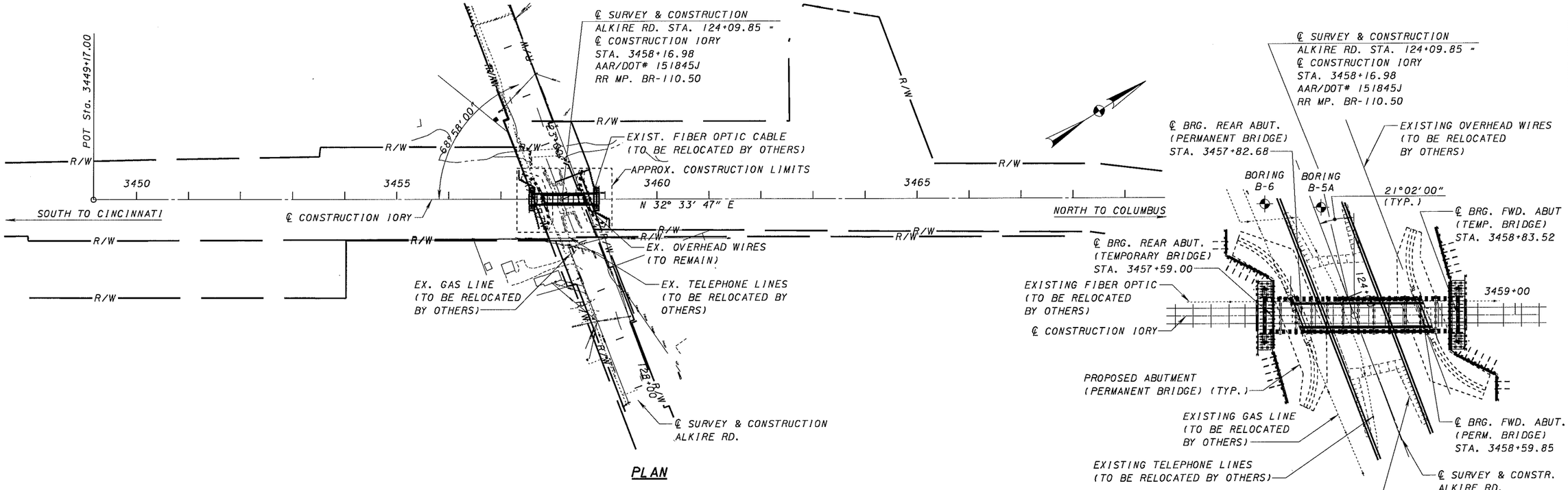
TEMPORARY BRIDGE SITE PLAN
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

1/11

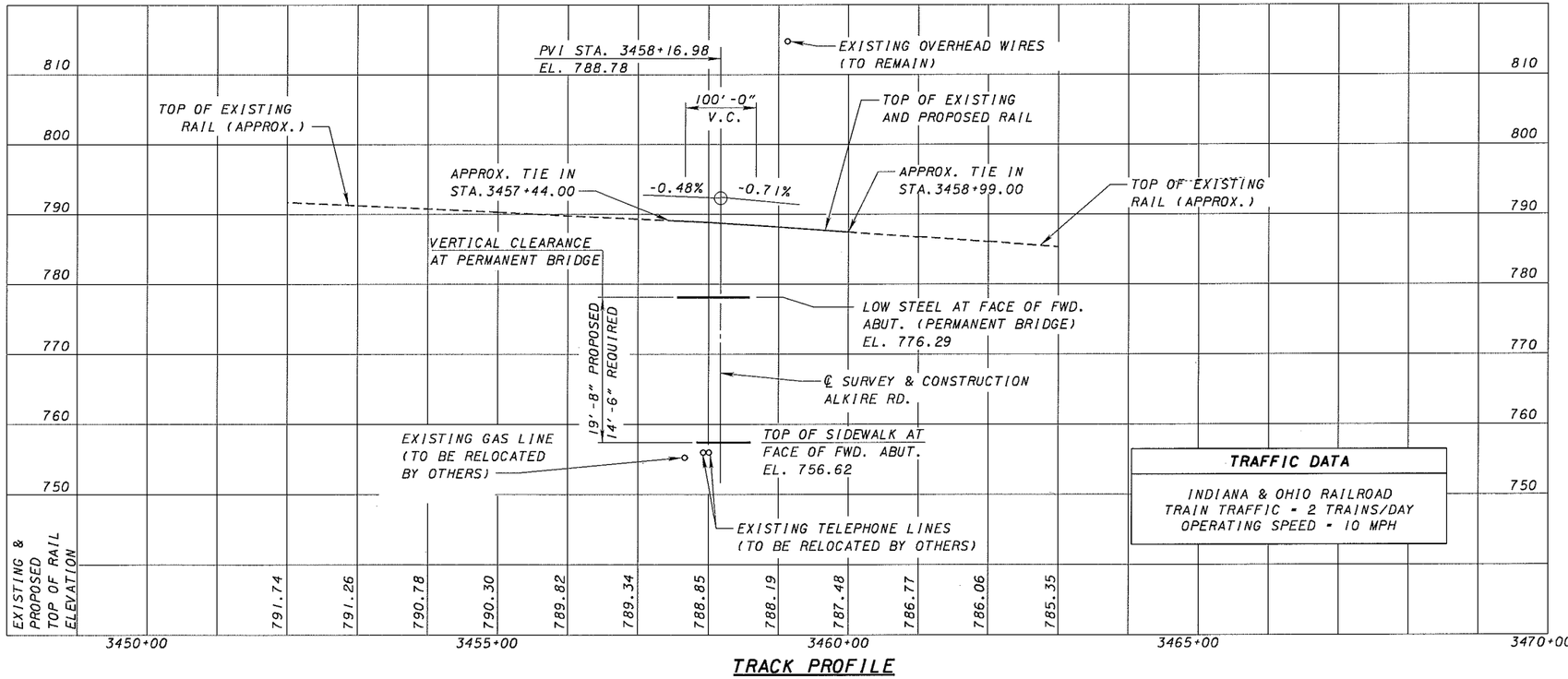
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PLAN

PARTIAL ENLARGED PLAN



TRAFFIC DATA

INDIANA & OHIO RAILROAD
TRAIN TRAFFIC - 2 TRAINS/DAY
OPERATING SPEED - 10 MPH

TRACK PROFILE

(PROFILE ALONG ℄ CONSTRUCTION IORY)

UTILITIES:

CABLE: TIME WARNER CABLE 1266 DUBLIN ROAD COLUMBUS, OHIO 43215 (614)481-5304 ARTHUR L. PLANTZ	**ELECTRIC:** AMERICAN ELECTRIC POWER 850 TECH CENTER DRIVE GAHANNA, OHIO 43230 (614)883-7833 RICH WOODS
TELEPHONE: AMERITECH 150 E. GAY STREET, RM. 7A COLUMBUS, OHIO 43215 (614)223-6088 ROY ADKINS	**FIBER OPTIC:** MCI WORLD COMMUNICATIONS OSP NATIONAL SUPPORT/ INVESTIGATIONS DEPT. 42864 LOC. 107 2400 N. GLENVILLE RICHARDSON, TEXAS 75082 (972)729-6016 RONNIE ADCOX
GAS: COLUMBIA GAS OF OHIO 920 W. GOODALE COLUMBUS, OHIO 43212 (614)280-7372 ERIC HUNDLEY	 MARATHON ASHLAND OIL 245 S. MILL STREET LEXINGTON, OHIO 44904 (419)884-0800 X236 GREG NEWMAN
WATER; STORM; SANITARY: CITY OF COLUMBUS DIVISION OF WATER 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614)645-7677 CHUCK TURNER	 CITY OF COLUMBUS SEWER AND DRAINAGE DIV. 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614)645-7677 TERRI STEEGE

NOTE:

1. FOR TEMPORARY BRIDGE, SEE TEMPORARY BRIDGE PLANS.
   FOR PERMANENT BRIDGE, SEE PERMANENT BRIDGE PLANS.

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 100, COLUMBUS, OHIO 43229

DATE: 05/13/07
REVIEWED: RER
STRUCTURE FILE NUMBER: 2530171
DRAWN: RRC
REVISED:
DESIGNED: JDH
CHECKED: JLV

FRANKLIN COUNTY
STA. 3457+59.00
STA. 3458+83.52

SUPPLEMENTAL SITE PLAN
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

2/11

79/118

Plotted By: cscheiderer Date: 9/24/2009 Time: 4:52:04 PM
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TEMPORARY STRUCTURE GENERAL NOTES

DESIGN SPECIFICATIONS

EXCEPT FOR REINFORCED CONCRETE ITEMS, THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "MANUAL FOR RAILWAY ENGINEERING" BY THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION, 2008 EDITION. DESIGN OF REINFORCED CONCRETE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" AASHTO, 17TH EDITION, AND THE ODOT BRIDGE DESIGN MANUAL.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

STATE OF OHIO, DEPARTMENT OF TRANSPORATION, DATED JANUARY 1, 2008.

DESIGN DATA

DESIGN LOADING: COOPER E-80 WITH DIESEL IMPACT

CONCRETE: CLASS C, COMPRESSIVE STRENGTH, f'c = 4000 PSI

REINFORCING STEEL: ASTM A615, GRADE 60, YIELD STRENGTH = 60 KSI

STRUCTURAL STEEL: ASTM A709 GRADE 50, UNIT STRESS = 27 KSI

DECK TIMBER: TIES - AREMA CHAPTER 7, SECTION 1.14, MINIMUM UNIT STRESS: BENDING = 1,550 PSI; SHEAR = 125 PSI

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ULTIMATE BEARING VALUE IS 85 TONS PER PILE FOR THE TEMPORARY ABUTMENT PILES.

ABUTMENT PILES:
24 PILES, 70 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEMS

ALL PILES ARE FRICTION TYPE PILES.

MAINTENANCE OF TRAFFIC

THE TEMPORARY AND PERMANENT BRIDGE CONSTRUCTION REQUIRES COORDINATION OF BOTH RAIL AND LOCAL ROAD TRAFFIC TO ENSURE CONTINUTITY OF SAFE OPERATIONS AND MINIMAL INTERFERENCE. SPECIFICALLY, TEMPORARY RAILROAD OUTAGES WILL BE REQUIRED IN ORDER TO CONSTRUCT BOTH THE TEMPORARY AND PERMANENT BRIDGES. THESE OUTAGES MUST BE CARFULLY COORDINATED WITH THE RAILROAD, AS THE FREQUENCY AND SCHEDULE OF TRAINS ON THIS LINE IS SEASONAL. HOWEVER, AT NO TIME SHALL RAIL TRAFFIC BE INTERRUPTED OR DELAYED DUE TO LOCAL ROADWAY CONSTRUCTION WORK.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION WITH THE RAILROAD BEFORE ANY CONSTRUCTION OPERATIONS ARE PEFORMED ON THEIR RIGHT-OF-WAY. THE FOLLOWING CONTACT INFORMATION SHALL BE USED:

W.S. RIEHL, III, P.E.
DIRECTOR STRUCTURES
RAIL AMERICA, INC.
7411 FULLERTON STREET, SUITE 300
JACKSONVILLE, FL 32256
904-538-6062

FOR BRIDGE STAGE CONSTRUCTION DETAILS AND RAILROAD MAINTENANCE OF TRAFFIC, SEE SHEET 4/11.

*ALL QUANTITIES ARE ELIGIBLE FOR FEDERAL STP FUNDS.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM. REFERENCE THE SUPPLEMENTAL SITE PLAN, SHEET 2/11, FOR UTILITY LOCATIONS AND CONTACT INFORMATION.

ITEM 502 - STRUCTURE FOR MAINTAINING TRAFFIC (RAILROAD), AS PER PLAN

THIS WORK SHALL INCLUDE THE INSTALLATION AND REMOVAL OF A TEMPORARY THROUGH TRUSS BRIDGE WITH ASSOCIATED BEARINGS. TRUSS AND BEARINGS ARE TO BE DESIGNED AND SUPPLIED BY THE CONTRACTOR, AND DESIGNED IN ACCORDANCE WITH 2008 AREMA. IN ADDITION TO THE REQUIREMENTS OF ITEM 502, THIS WORK SHALL INCLUDE THE INSTALLATION AND REMOVAL OF THE TIES, RAIL AND ASSOCIATED HARDWARE BETWEEN TIE-IN POINTS LOCATED ON THE APPROACH EMBANKMENT. SEE SITE PLAN, SHEET 1/11, FOR TIE-IN POINTS.

TIES SHALL BE 11'-0"x9"X9" AND SPACING SHALL BE DETERMINED BY THE CONTRACTOR. RAIL SHALL BE 6⅝" IN HEIGHT AND 115 LB/FT.

THE CONTRACTOR SHALL SUBMIT DETAILED CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, IN ACCORDANCE WITH ITEM 501.05. THE DESIGN OF THE TEMPORARY STRUCTURE SHALL BE PER THE DESIGN DATA LOADING REQUIREMENT AS SHOWN IN THE PLANS.

THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 502, STRUCTURES FOR MAINTAINING TRAFFIC (RAILROAD), AS PER PLAN

ITEM 503 - COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN

THIS ITEM SHALL INCLUDE THE INSTALLATION OF SOLDIER PILE AND LAGGING WALLS, SOLDIER PILE AND LAGGING WALLS WITH TIE-BACKS, AND SHEETING WALLS, AS SHOWN IN THE PLANS.

THE SHEETING PARALLEL TO THE IORY SHALL BE REMOVED PRIOR TO THE INSTALLATION OF THE TRANSFER GIRDERS. THE SOLDIER PILES SHALL BE CUT TO 3'-0" BELOW THE TOP OF EMBANKMENT, AND SHALL REMAIN IN PLACE. THE TIE-BACKS SHALL BE REMAIN IN PLACE.

THE DESIGNS SHOWN ON THE PLANS FOR THE TEMPORARY SUPPORT OF THE EXCAVATION ARE REPRESENTATIVE DESIGNS THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGNS SHOWN ON THE PLANS OR PREPARE ALTERNATE DESIGNS TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH CMS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN." NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 507 - STEEL PILES HP 14X73, FURNISHED
ITEM 507 - STEEL PILES HP 14X73, DRIVEN

THESE ITEMS INCLUDE PILES FOR ABUTMENT FOOTINGS ONLY AND DO NOT INCLUDE PILES FOR ITEM 503. ABUTMENT PILES ARE TO BE LEFT IN PLACE AFTER THEY ARE NO LONGER REQUIRED.

ITEM 511 - CLASS C CONCRETE, FOOTING, AS PER PLAN

CMS ITEM 511.18 SHALL NOT APPLY. PAYMENT FOR ITEM 511 SHALL ALSO INCLUDE THE REMOVAL OF THE ABUTMENT FOOTINGS AFTER THEY ARE NO LONGER REQUIRED.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

THIS WORK SHALL INCLUDE INSTALLATION AND REMOVAL OF THE FOLLOWING: TRANSFER GIRDERS, THREADED BARS AND ANGLES, AND ASSOCIATED HARDWARE, SIMPLE SPAN STRINGERS BETWEEEN TEMPORARY THROUGH TRUSS AND CANTILEVERED SOLDIER PILE BACKWALL, AND BACKWALL BEAM SUPPORT.

THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, INCIDENTALS AND LABOR FOR THE INSTALLATION OF THE TRANSFER GIRDER, INCLUDING THE ANGLES, AND THREADED BARS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN.

THE STRUCTURAL STEEL NEED NOT BE PAINTED.

CONSTRUCTION CLEARANCE

MAINTAIN A CONSTRUCTION CLEARANCE OF 10 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 23 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL. ADDITIONALLY, A CONSTRUCTION CLEARANCE OF 13 FEET VERTICALLY SHALL BE MAINTAINED OVER ALKIRE ROAD.

INDEX OF SHEETS

1/11	TEMPORARY BRIDGE SITE PLAN
2/11	SUPPLEMENTAL SITE PLAN
3/11	TEMPORARY BRIDGE GENERAL NOTES AND QUANTITIES
4/11	STAGE CONSTRUCTION DETAILS
5/11	TEMPORARY BRIDGE PILE LAYOUT PLAN
6/11	REAR ABUTMENT TEMPORARY TIED-BACK WALL ELEVATION
7/11	FORWARD ABUTMENT TEMPORARY TIED-BACK WALL ELEVATION
8/11	TEMPORARY TIED-BACK SOLDIER PILE WALL DETAILS
9/11	TEMPORARY BACKWALL DETAILS
10/11	TEMPORARY ABUTMENT FOOTING DETAILS
11/11	TEMPORARY BRIDGE STRUCTURAL STEEL DETAILS

MADE BY JDH DATE 5/03/07
CHECKED BY GHD DATE 5/4/07

*ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	REAR ABUTMENT	FORWARD ABUTMENT	SUPERSTRUCTURE	GENERAL	AS PER PLAN REFERENCE SHEET NUMBER
502	12301	LUMP		STRUCTURE FOR MAINTAINING TRAFFIC (RAILROAD), AS PER PLAN			LUMP		3/11
503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN	LUMP	LUMP			3/11
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00300	1680	FT	STEEL PILES HP 14X73, FURNISHED	840	840			
507	00350	1560	FT	STEEL PILES HP 14X73, DRIVEN	780	780			
507	93300	24	EACH	STEEL POINTS OR SHOES	12	12			
509	10000	2642	POUND	EPOXY COATED REINFORCING STEEL	1321	1321			
511	46501	50	CU YD	CLASS C CONCRETE, FOOTING, AS PER PLAN	25	25			3/11
513	10151	LUMP		STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN	LUMP	LUMP			3/11
516	44200	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (18"x29"x3.37")	2	2			
523	20000	1	EACH	DYNAMIC LOAD TESTING				1	

DESIGN AGENCY: TranSystems, 100 SCHMIDT ROAD, SUITE 400, GLENVILLE, OHIO 43125

REVIEWED RER DATE 05/13/07
STRUCTURE FILE NUMBER 2530171
DRAWN JDH REVISED
DESIGNED JDH CHECKED GHD

TEMPORARY BRIDGE GENERAL NOTES AND QUANTITIES
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

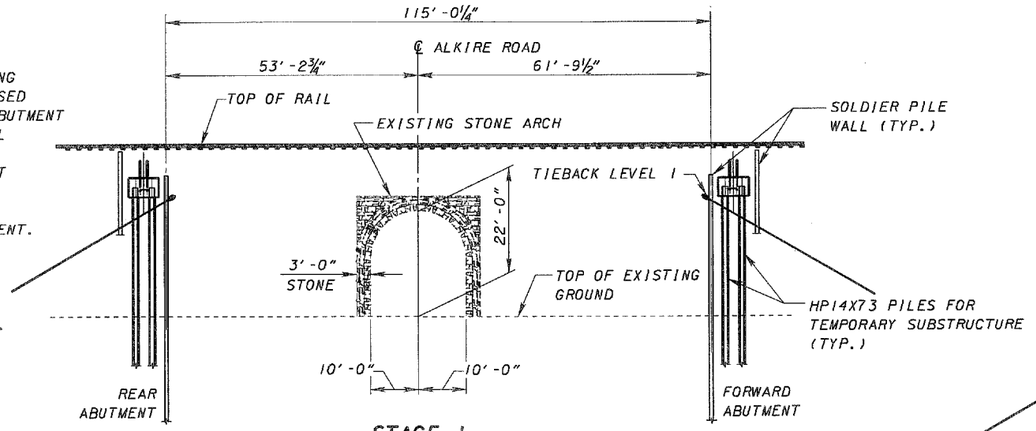
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STAGE 1:

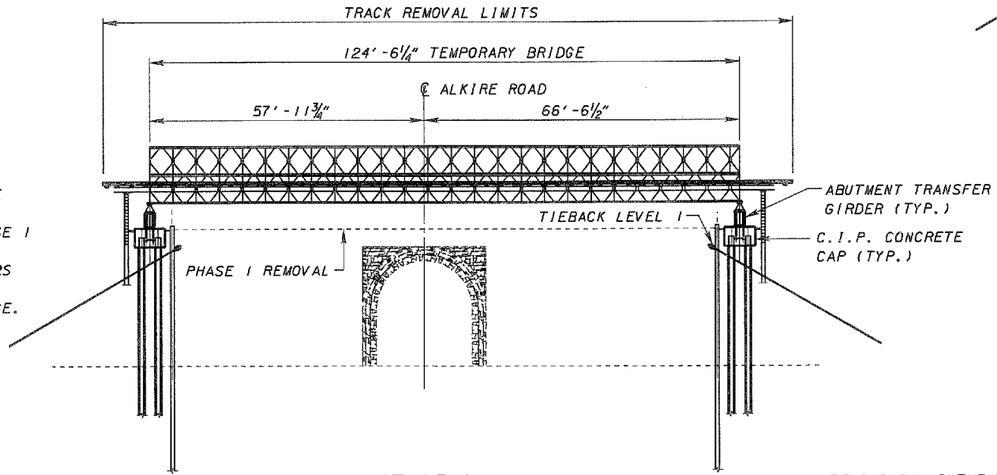
1. CLOSE RAIL TRAFFIC.
2. REMOVE ONE RAIL SECTION INCLUDING TIES AND BALLAST OVER THE PROPOSED SHORING LOCATIONS AT THE REAR ABUTMENT
3. DRIVE SOLDIER PILES FOR BACKWALL AND TEMPORARY ABUTMENT.
4. RE-INSTALL RAIL SECTION, BALLAST AND TIES.
5. OPEN RAIL TRAFFIC.
6. MOVE EQUIPMENT TO FORWARD ABUTMENT.
7. REPEAT STEPS 1 THRU 4 AT THE FORWARD ABUTMENT.
8. INSTALL TEMPORARY SHORING FOR C.I.P. CONCRETE CAPS.
9. DRIVE H-PILES AND INSTALL C.I.P. CONCRETE CAPS WITH EMBEDED POST-TENSIONING RODS.
10. CLOSE ALKIRE ROAD TO TRAFFIC.
11. INSTALL TIEBACK LEVEL 1.
12. ASSEMBLE TEMPORARY BRIDGE IN THE STAGING AREA ON ALKIRE ROAD.



STAGE 1

STAGE 2:

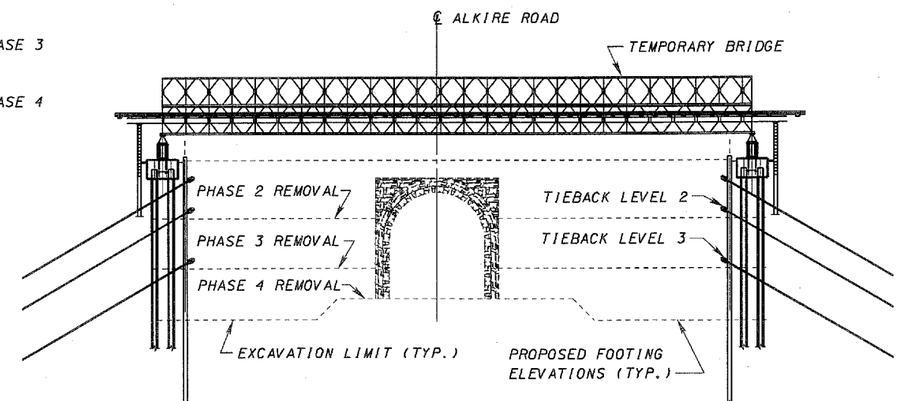
1. CLOSE RAIL TRAFFIC.
2. REMOVE TRACK TO THE LIMIT OF THE TEMPORARY BRIDGE AND EXCAVATE EXISTING GROUND AS SHOWN IN PHASE 1 REMOVAL LIMIT.
3. SET THE ABUTMENT TRANSFER GIRDERS AT BOTH ABUTMENTS.
4. LIFT AND SET THE TEMPORARY BRIDGE.
5. INSTALL TRACK.
6. OPEN RAIL TRAFFIC.



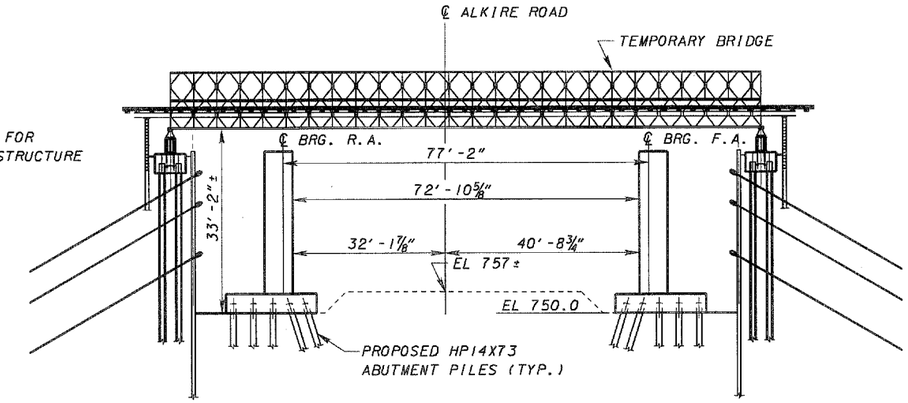
STAGE 2

STAGE 3:

1. EXCAVATE EXISTING GROUND TO PHASE 2 REMOVAL LIMIT.
2. INSTALL TIEBACK LEVEL 2.
3. EXCAVATE EXISTING GROUND TO PHASE 3 REMOVAL LIMIT.
4. INSTALL TIEBACK LEVEL 3.
5. EXCAVATE EXISTING GROUND TO PHASE 4 REMOVAL LIMIT.
6. REMOVE STONE ARCH.



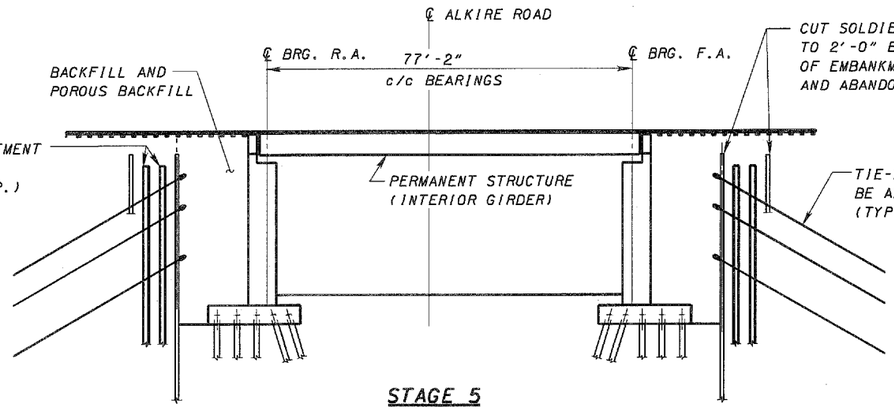
STAGE 3



STAGE 4

STAGE 4:

1. INSTALL PROPOSED ABUTMENT PILES.
2. CONSTRUCT PERMANENT SUBSTRUCTURE TO GIRDER SEAT ELEVATIONS.
3. SET PERMANENT SUPERSTRUCTURE BEARINGS.
4. ASSEMBLE PERMANENT SUPERSTRUCTURE IN STAGING AREA ON ALKIRE ROAD.



STAGE 5

STAGE 5:

1. CLOSE RAIL TRAFFIC.
2. REMOVE EXISTING TEMPORARY BRIDGE, INCLUDING TRANSFER GIRDERS AND TEMPORARY ABUTMENT FOOTINGS.
3. INSTALL BACKWALLS.
4. BACKFILL BEHIND ABUTMENTS.
5. CUT SOLDIER PILES TO LIMITS SHOWN ON PLANS.
6. LIFT AND SET PERMANENT SUPERSTRUCTURE IN PLACE.
7. INSTALL TRACK.
8. OPEN RAIL TRAFFIC.

NOTE:

1. THE CONSTRUCTION SEQUENCE SHOWN ON THIS SHEET IS ONE REPRESENTATIVE PROCEDURE FOR THE REMOVAL AND CONSTRUCTION OF THE BRIDGES. THE CONTRACTOR MAY CHOOSE AN ALTERNATIVE PROCEDURE, BUT THIS WORK MUST BE COORDINATED WITH THE RAILROAD.

DESIGN AGENCY: TranSystems, 100 S. STATE ST. SUITE 600, COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
JDH	GHD	RER	05/13/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GHD		2530171	

STAGE CONSTRUCTION DETAILS

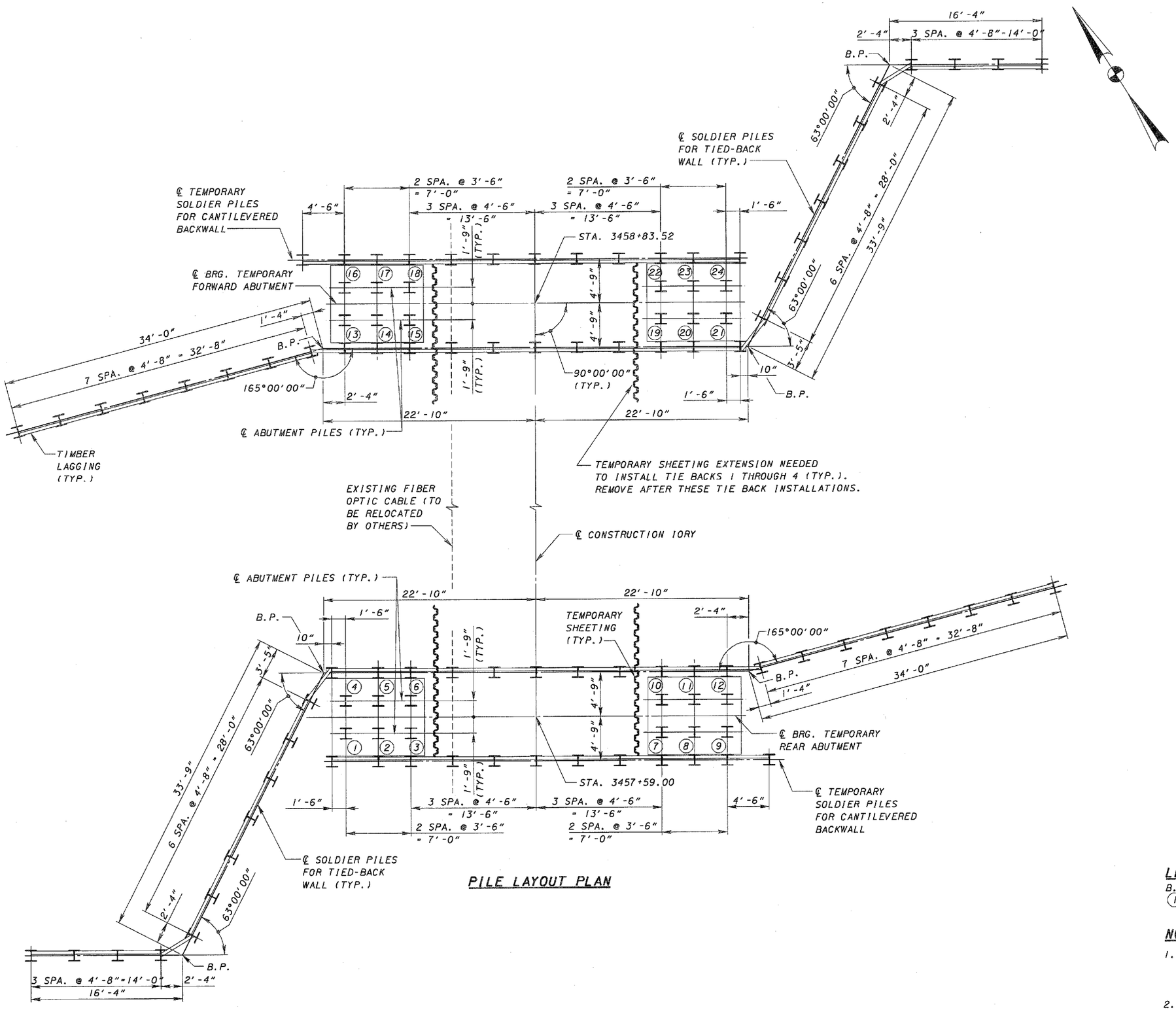
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

4/11

81/118

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:30:58 PM
Filename: .....



PILE LAYOUT PLAN

LEGEND:
B.P. = BEND POINT
(1) = PILE FOR ABUTMENT FOOTING

NOTES:
1. ALL PILES FOR TEMPORARY ABUTMENT FOOTINGS AND TEMPORARY SOLDIER PILE WALLS ARE HP14x73 STEEL PILES.
2. FOR FOUNDATION DATA, SEE SHEET 11/11.

DESIGN AGENCY: TranSystems, 465 SCIENCE DRIVE SUITE 400, COLUMBUS, OHIO 43235
DESIGNED GHD | DRAWN JLV | REVIEWED RER | DATE 05/13/07 | REVISED | CHECKED JDH
STRUCTURE FILE NUMBER 2530171

TEMPORARY BRIDGE PILE LAYOUT PLAN

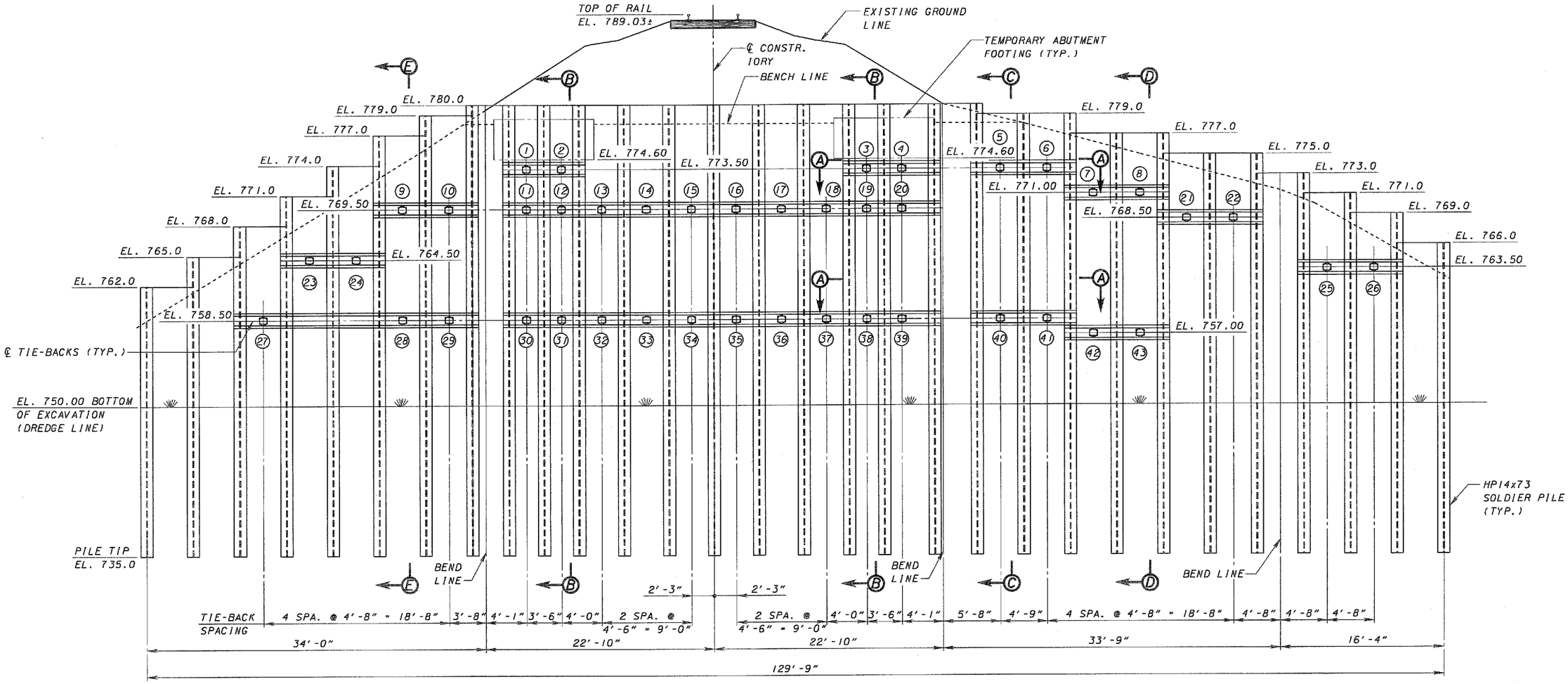
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

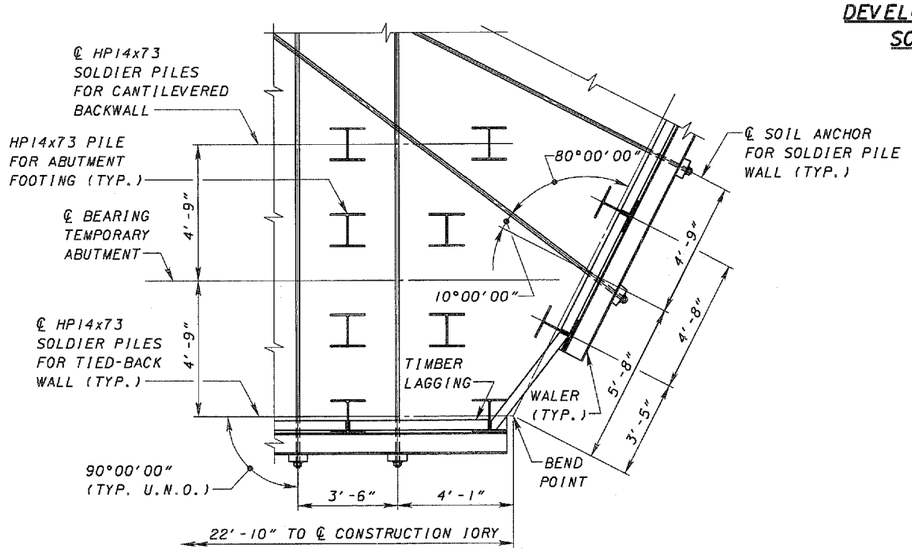
5 / 11

82 / 118

Plotted By: cscheiderer Date: 8/7/2009 Time: 2:3h00 PM
Filename: .....



DEVELOPED ELEVATION - TEMPORARY TIED-BACK SOLDIER PILE WALL AT REAR ABUTMENT



SECTION A-A

TIE-BACK DESIGN LOAD TABLE

TIE-BACK NUMBER	DESIGN LOAD*
5, 13 THRU 18 AND 40	140 KIPS
1 THRU 4, 9 AND 10	120 KIPS
21, 22 AND 28 THRU 39	100 KIPS
6 THRU 8, 11, 12, 19, 20, 23 THRU 27 AND 41 THRU 43	70 KIPS

*DESIGN LOADS ARE IN THE DIRECTION OF THE TIE-BACK (AS SHOWN IN THE PLANS).

TIE-BACK INCLINATION TABLE

TIE-BACK NUMBER	VERTICAL ANGLE	HORIZONTAL ANGLE
1 THRU 4, 9 THRU 20, 23, 24 AND 27 THRU 39	30°	0°
6 THRU 8, 21, 22, 25, 26, AND 41 THRU 43	15°	0°
5 AND 40	19°	10°

LEGEND:

U.N.O. - UNLESS NOTED OTHERWISE
(1) - TIE-BACK NUMBER

NOTES:

1. FOR PLAN AND SPACING OF PILES FOR TEMPORARY SOLDIER PILE WALLS, SEE SHEET 5/11.
2. FOR SECTIONS B-B THRU E-E AND ADDITIONAL SOLDIER PILE WALL DETAILS AND NOTES, SEE SHEET 8/11.
3. FOR FORWARD ABUTMENT TEMPORARY TIED-BACK WALL ELEVATION , SEE SHEET 7/11.

DESIGN AGENCY: TranSystems, 100 SCIENCE PARK, SUITE 400, COLUMBUS, OHIO 43235

DESIGNED	DRAWN	REVIEWED	DATE
GHD	JLV	RER	05/13/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDH		2530171	

REAR ABUTMENT TEMPORARY TIED-BACK WALL ELEVATION

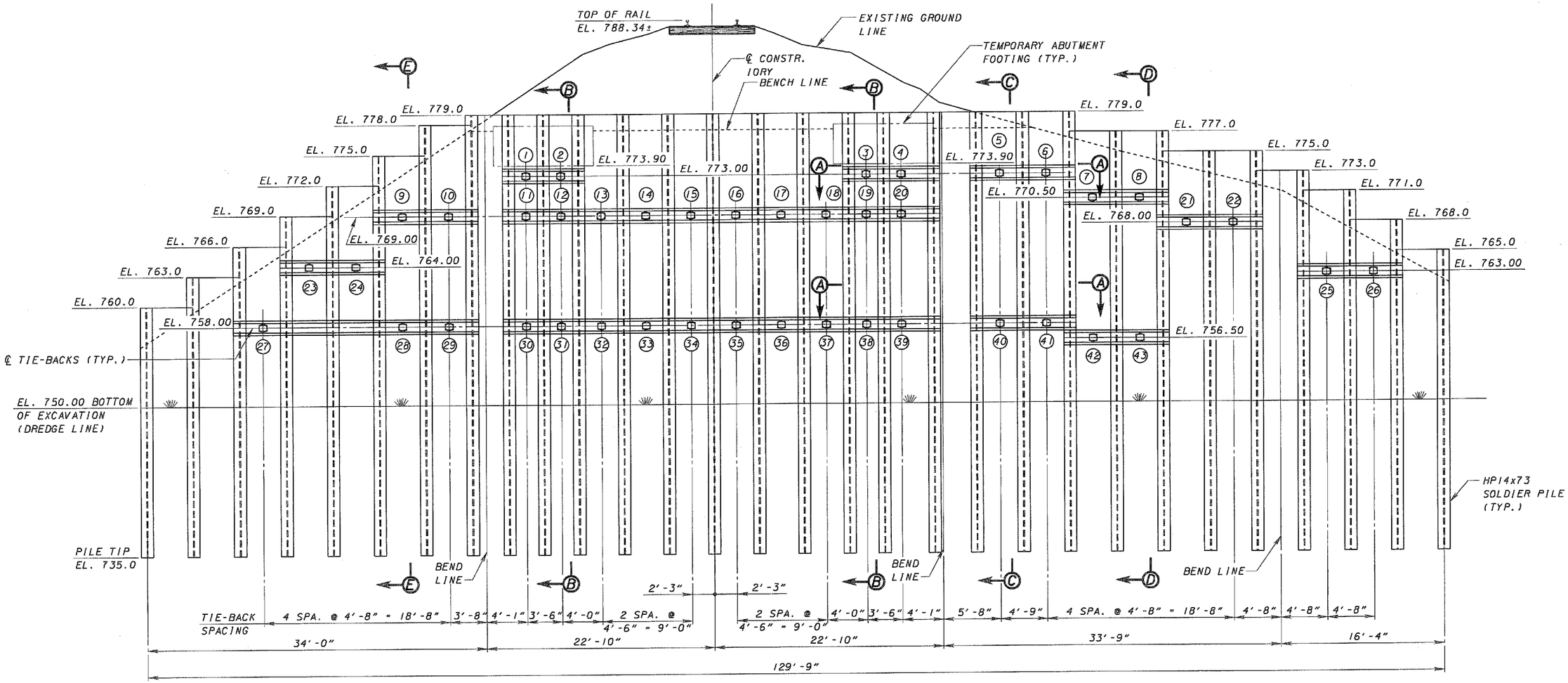
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

6/11

83/118

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:31:01PM
Filename: "\\\"



DEVELOPED ELEVATION - TEMPORARY TIED-BACK SOLDIER PILE WALL AT FORWARD ABUTMENT

TIE-BACK DESIGN LOAD TABLE	
TIE-BACK NUMBER	DESIGN LOAD*
5, 13 THRU 18 AND 40	140 KIPS
1 THRU 4, 9 AND 10	120 KIPS
21, 22 AND 28 THRU 39	100 KIPS
6 THRU 8, 11, 12, 19, 20, 23 THRU 27 AND 41 THRU 43	70 KIPS

*DESIGN LOADS ARE IN THE DIRECTION OF THE TIE-BACK (AS SHOWN IN THE PLANS).

TIE-BACK INCLINATION TABLE		
TIE-BACK NUMBER	VERTICAL ANGLE	HORIZONTAL ANGLE
1 THRU 4, 9 THRU 20, 23, 24 AND 27 THRU 39	30°	0°
6 THRU 8, 21, 22, 25, 26, AND 41 THRU 43	15°	0°
5 AND 40	19°	10°

LEGEND:

(1) - TIE-BACK NUMBER

NOTES:

1. FOR PLAN AND SPACING OF PILES FOR TEMPORARY SOLDIER PILE WALLS, SEE SHEET 5/11.
2. FOR SECTION A-A, SEE SHEET 6/11.
3. FOR SECTIONS B-B THRU E-E AND ADDITIONAL SOLDIER PILE WALL DETAILS AND NOTES, SEE SHEET 8/11.
4. FOR REAR ABUTMENT TEMPORARY TIED-BACK WALL ELEVATION, SEE SHEET 6/11.

DESIGN AGENCY: Trans Systems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
GHD	JLV	RER	05/13/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDH		2530171	

FORWARD ABUT. TEMPORARY TIED-BACK WALL ELEVATION

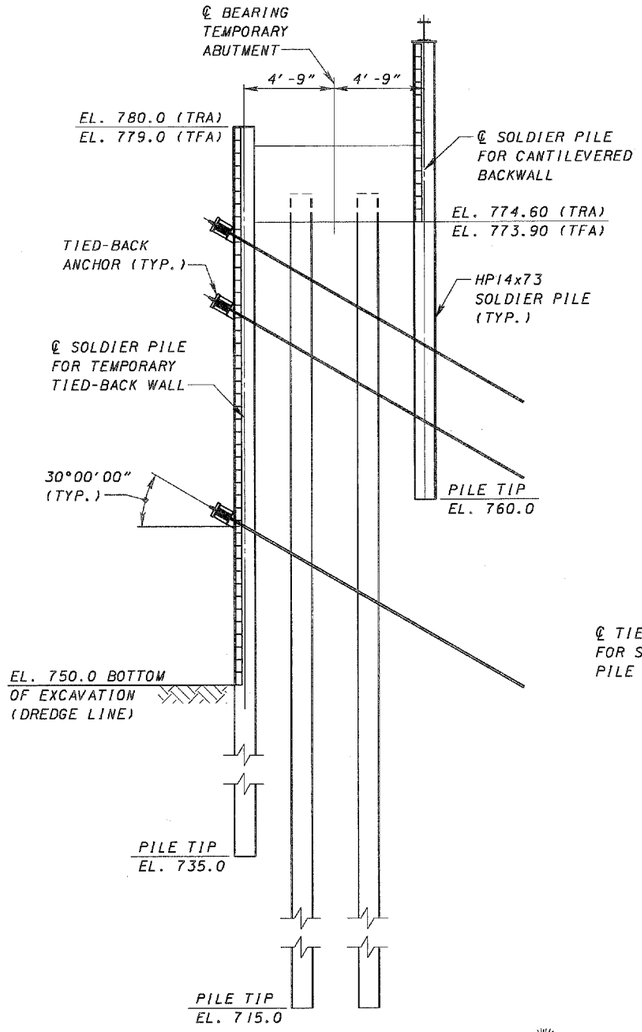
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

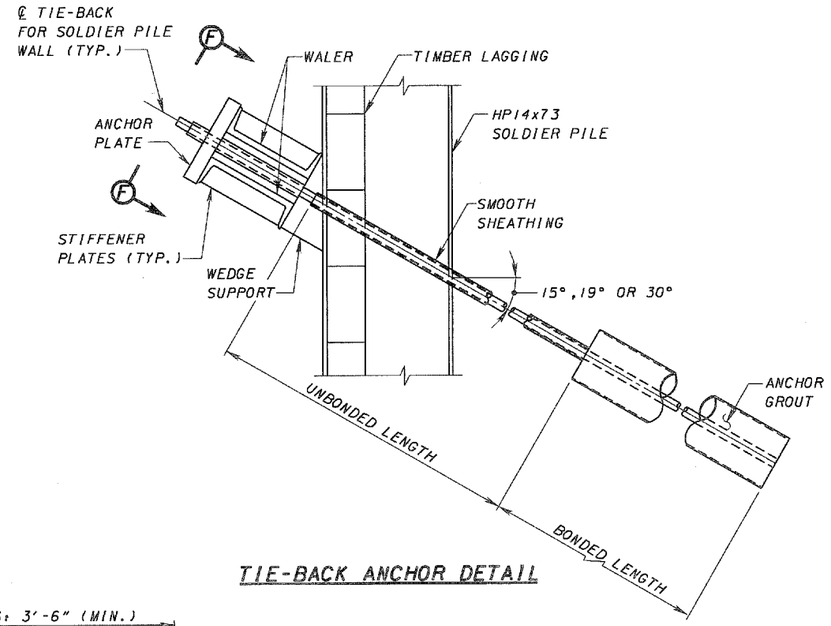
7/11

84/118

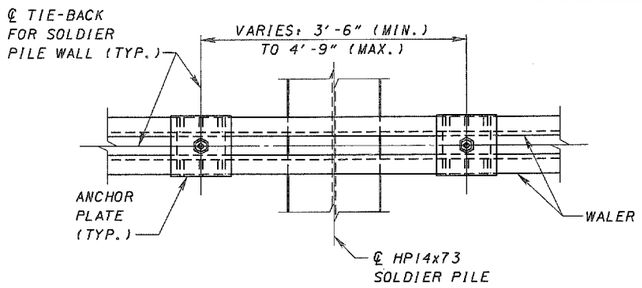
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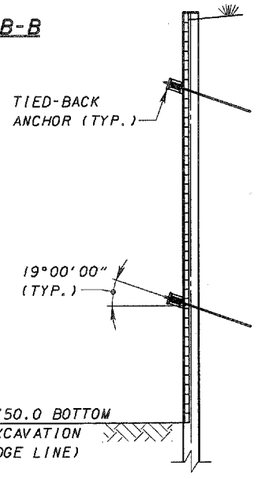
SECTION B-B



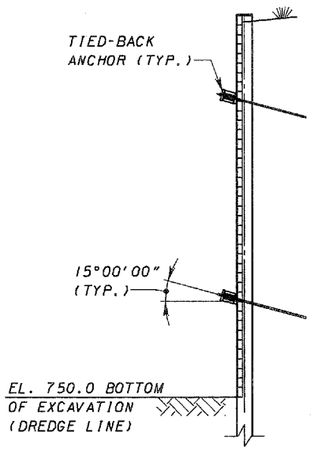
TIE-BACK ANCHOR DETAIL



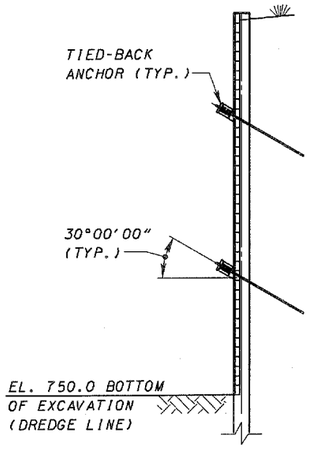
VIEW F-F



SECTION C-C



SECTION D-D



SECTION E-E

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE TIE-BACKS, WALERS AND ANCHORAGE DETAILS NECESSARY TO SUPPORT THE SIDES OF EXCAVATION. PREPARE AND SUBMIT PLANS AND CALCULATIONS FOR THESE ITEMS IN ACCORDANCE WITH CMS 501.05. DESIGN, INSTALL AND TEST TIE-BACKS IN ACCORDANCE WITH "RECOMMENDATIONS FOR PRESTRESSED ROCK AND SOIL ANCHORS", 4TH EDITION, 2004, BY THE POST-TENSIONING INSTITUTE (PTI).
2. ADJUST THE VERTICAL AND HORIZONTAL ANGLES OF THE TIE-BACKS TO ACCOMMODATE THE PROPOSED METHOD OF INSTALLATION AND TO AVOID ANY OBSTRUCTIONS. HOWEVER, AS THE VERTICAL AND HORIZONTAL ANGLES OF THE TIE-BACKS INCREASE THE COMPONENT OF THE TIE-BACK DESIGN LOAD PERPENDICULAR TO THE WALL WILL DECREASE. THUS THE DESIGN LOAD IN THE TIE-BACK SHALL BE ADJUSTED ACCORDINGLY SUCH THAT THE COMPONENT OF THE DESIGN LOAD PERPENDICULAR TO THE WALL IS NOT REDUCED. SEE TEMPORARY TIED-BACK WALL ELEVATIONS, SHEET 6/11 AND 7/11.
3. ENSURE THAT TIE-BACKS DO NOT CONFLICT WITH EXISTING AND PROPOSED STRUCTURES AND EXISTING UTILITIES.
4. THE CONTRACTOR HAS THE OPTION OF USING THREAD BAR (ASTM A722 GRADE 150) OR STRAND TENDON (ASTM A416 GRADE 270) TYPE OF TEMPORARY TIE-BACKS.
5. TEMPORARY TIE-BACKS REQUIRE CLASS II CORROSION PROTECTION AS THEY ARE TO REMAIN IN PLACE.
6. PERFORMANCE TEST THE FIRST TIE-BACK INSTALLED FOR EACH WALL AND PROOF TEST ALL OTHER TIE-BACKS. USE THE TEST PROCEDURES AND ACCEPTANCE CRITERIA RECOMMENDED BY PTI. CREEP TESTING OF TEMPORARY TIE-BACKS IS NOT REQUIRED.
7. PAYMENT FOR TIE-BACKS, WALERS, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN".
8. FOR ADDITIONAL TIE-BACK REQUIREMENTS AND ALTERNATE DESIGN PROVISIONS, SEE TEMPORARY BRIDGE GENERAL NOTES.
9. FOR PLAN AND SPACING OF PILES FOR TEMPORARY SOLDIER PILE WALLS, SEE SHEET 5/11.
10. FOR REAR ABUTMENT TEMPORARY TIED-BACK WALL ELEVATION INCLUDING THE LOCATIONS OF SECTIONS B-B THRU E-E, SEE SHEET 6/11.
11. FOR FORWARD ABUTMENT TEMPORARY TIED-BACK WALL ELEVATION INCLUDING THE LOCATIONS OF SECTIONS B-B THRU E-E, SEE SHEET 7/11.

LEGEND:

TRA = TEMPORARY REAR ABUTMENT
TFA = TEMPORARY FORWARD ABUTMENT

DESIGN AGENCY
TranSystems
100 STURGIS ROAD, SUITE 400
COLUMBUS, OHIO 43229

REVISED	DATE
RER	05/13/07
STRUCTURE FILE NUMBER	
2530171	
DRAWN	REVISED
JLV	
DESIGNED	CHECKED
GHD	JDH

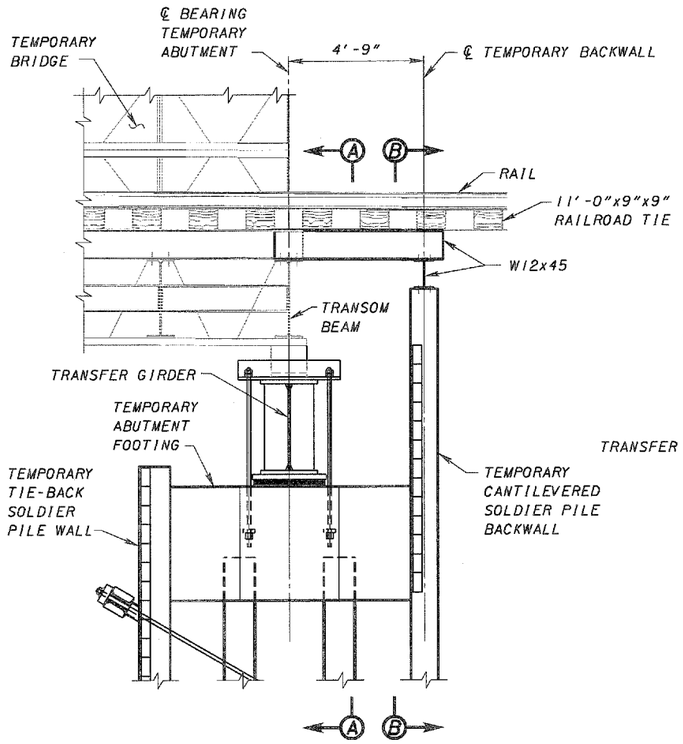
TEMPORARY TIED-BACK SOLDIER PILE WALL DETAILS
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

8/11

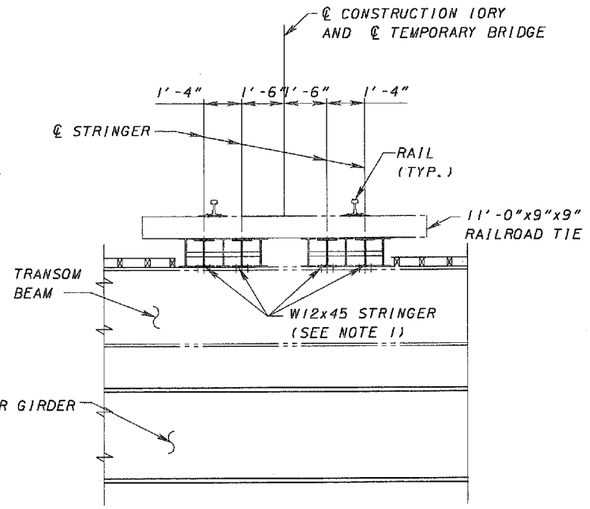
85/118

Plotted By: ascheiderer Date: 8/7/2009 Time: 2:31:02 PM
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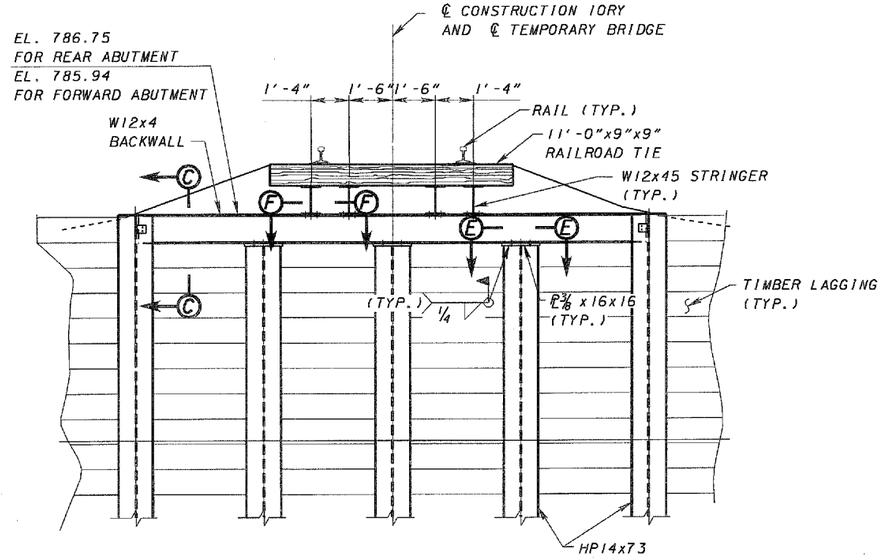


ELEVATION AT FORWARD ABUTMENT

(REAR ABUTMENT SIMILAR)



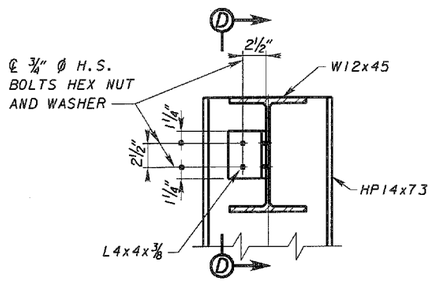
SECTION A-A



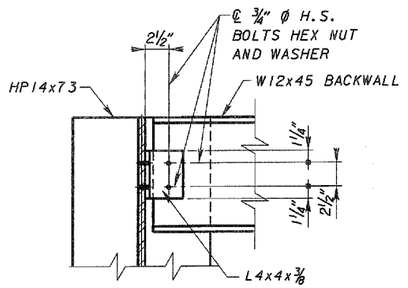
SECTION B-B

NOTES:

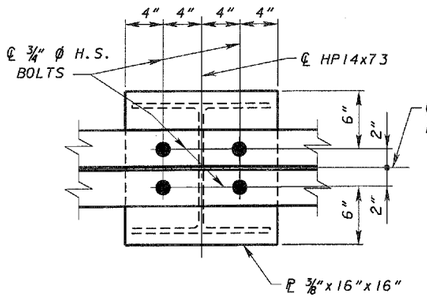
1. THE CONTRACTOR SHALL PROVIDE CONNECTION DETAILS BETWEEN W12x45 STRINGER AND THE TEMPORARY BRIDGE TRANSOM BEAM. THIS CONNECTION SHALL BE A FIXED CONNECTION.
2. FOR TEMPORARY ABUTMENT FOOTING DETAILS, SEE SHEET 10 11.
3. FOR TEMPORARY TRANSFER GIRDER DETAILS, SEE SHEET 11 11.
4. FOR TEMPORARY SOLDIER PILE WALL DETAILS, SEE SHEET 5 11 THRU 8 11.



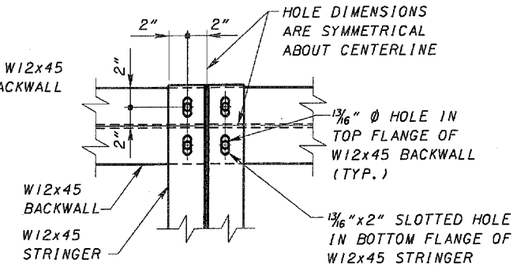
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

DESIGN AGENCY: TranSystems, 100 CHAMBERS ROAD, SUITE 400, COLUMBUS, OHIO 43212

DESIGNED	DRAWN	REVIEWED	DATE
JDH	RCK	RER	05/13/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
GHD		2530171	

TEMPORARY SOLDIER PILE BACKWALL DETAIL

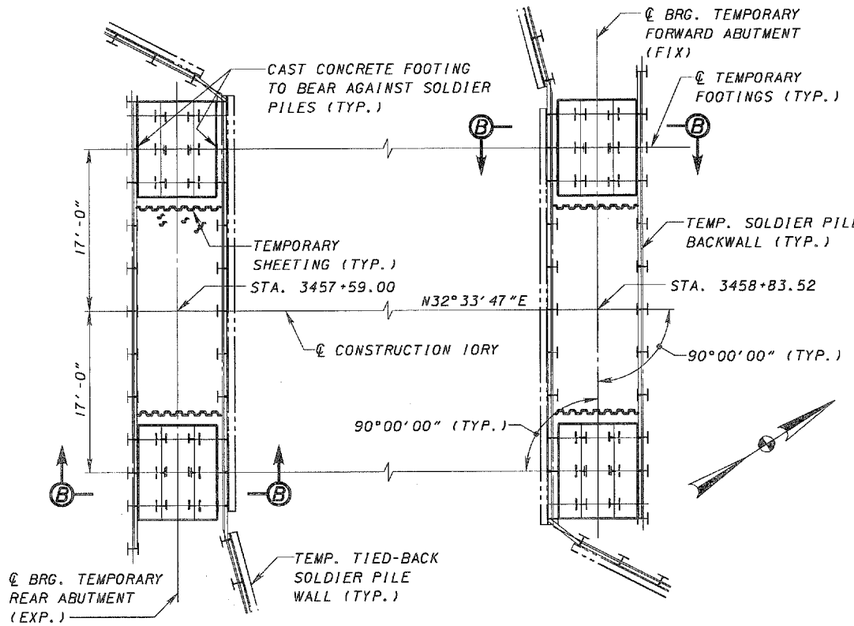
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

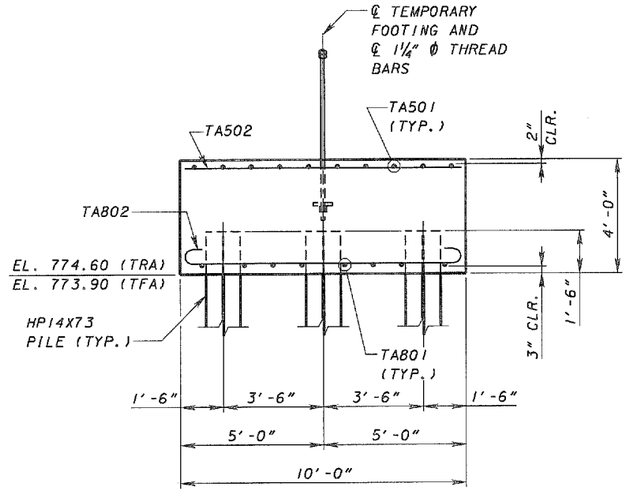
9 11

86
118

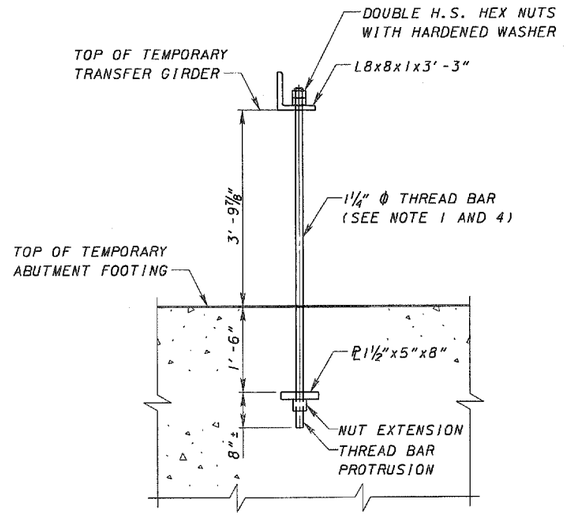
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Filename: \\\\



PLAN

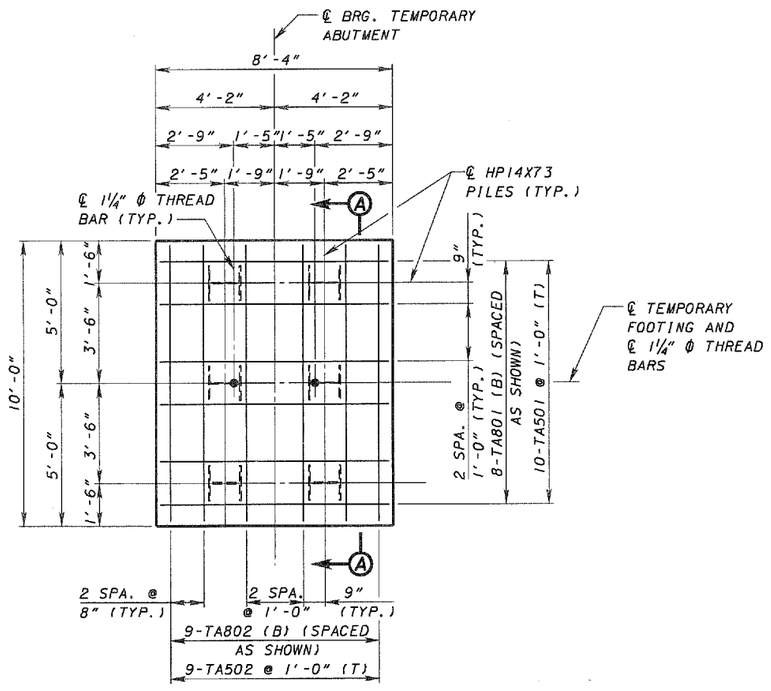


SECTION A-A

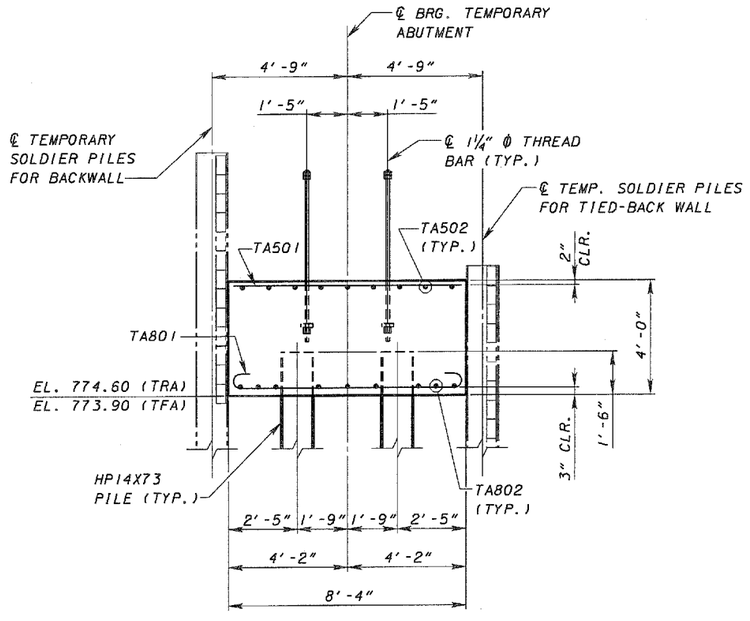


THREAD BAR DETAIL

(TRANSFER GIRDER, BEARING AND FOOTING REINFORCING NOT SHOWN)



TYPICAL FOOTING PLAN



SECTION B-B

BAR SCHEDULE					
MARK	NUMBER	LENGTH	WEIGHT	TYPE	A
TEMPORARY ABUTMENT FOOTINGS					
TA501	40	8'-0"	334	STR.	
TA502	36	9'-8"	363	STR.	
TA801	32	9'-10"	840	17	8'-0"
TA802	36	11'-6"	1105	17	9'-8"
TOTAL WEIGHT = 2642 LBS.					



TYPE-17

LEGEND:

TRA = TEMPORARY REAR ABUTMENT
TFA = TEMPORARY FORWARD ABUTMENT
T = TOP
B = BOTTOM

NOTES:

1. THE THREAD BARS SHALL BE ASTM A722 GRADE 150.
2. FOR PILE LAYOUT PLAN, SEE SHEET 5/11 .
3. FOR TEMPORARY SOLDIER PILE WALL DETAILS, SEE SHEET 6/11 THRU 9/11 .
4. FOR ABUTMENT TRANSFER GIRDER DETAILS AND ADDITIONAL THREAD BAR DETAILS, SEE SHEET 11/11 .

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
GHD	JLV	RER	05/13/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDH		2530171	

TEMPORARY ABUTMENT FOOTING DETAILS

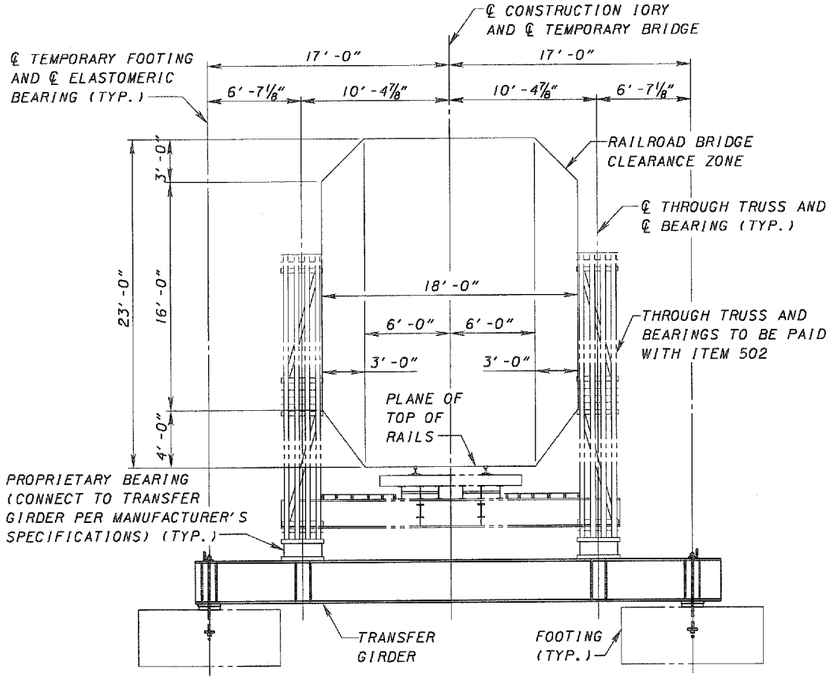
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

10 / 11

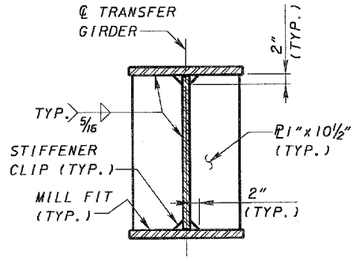
87 / 118

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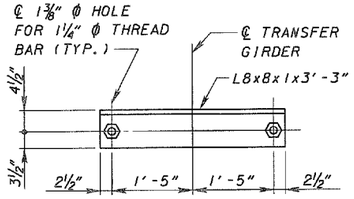


TYPICAL SECTION AT TEMPORARY ABUTMENTS

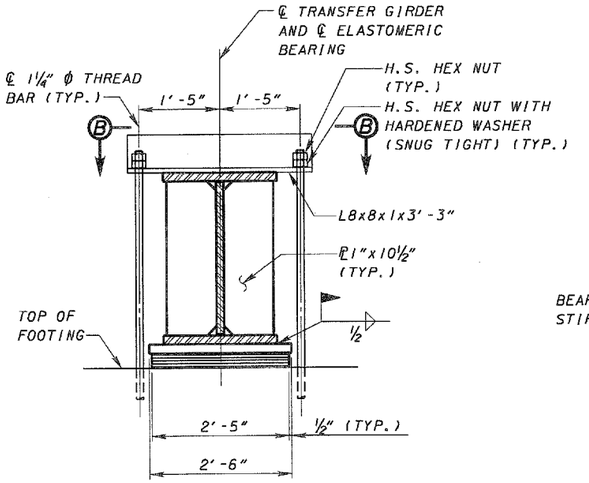
(PILES NOT SHOWN)



BEARING STIFFENER DETAIL

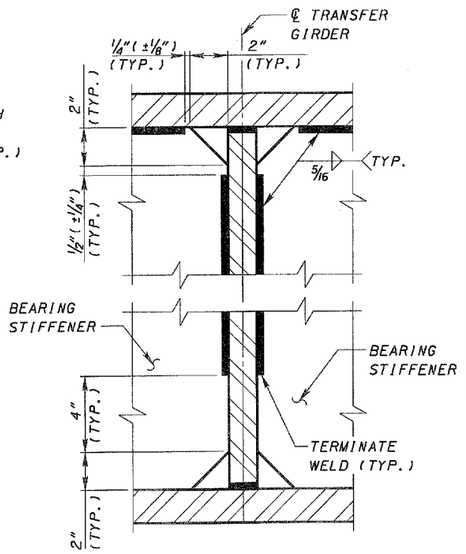


VIEW B-B



SECTION A-A

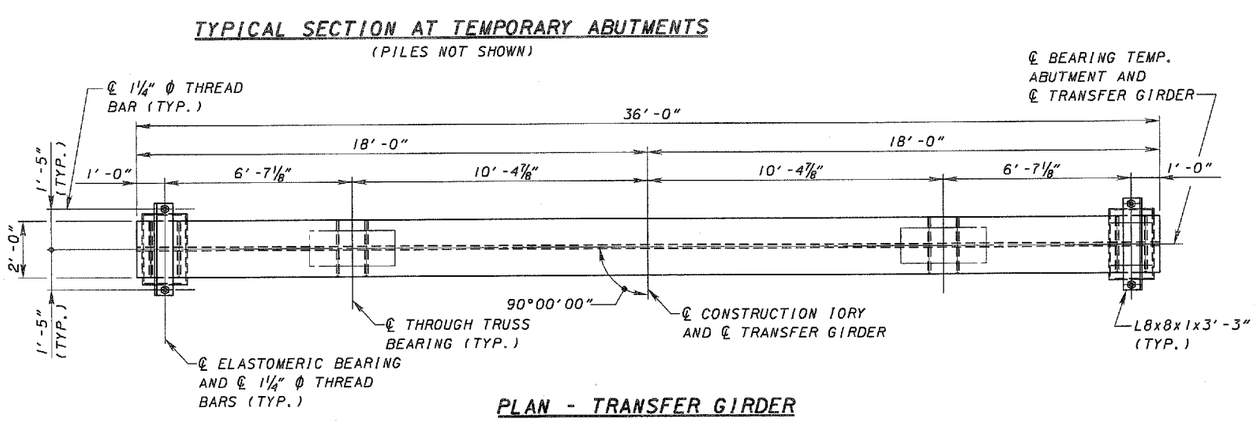
(FOR DETAILS NOT SHOWN SEE BEARING STIFFENER DETAIL)



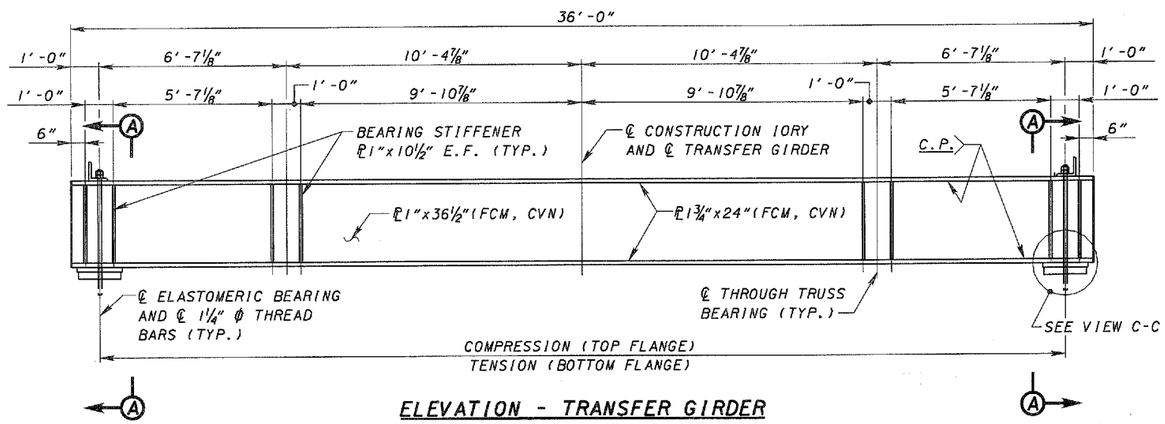
STIFFENER WELD DETAIL

ELASTOMERIC BEARING NOTES:

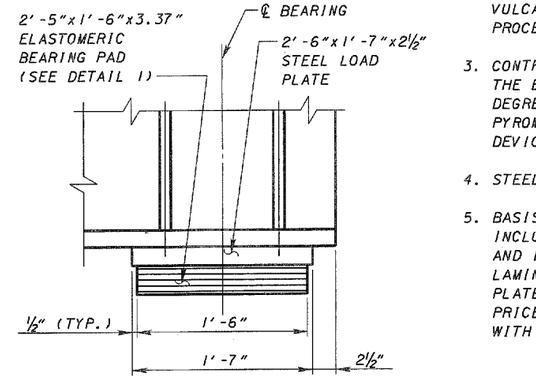
1. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER.
2. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
3. CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 DEGREES FAHRENHEIT AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
4. STEEL FOR LOAD PLATES SHALL BE ASTM A709 GRADE 50.
5. BASIS OF PAYMENT - THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, SHOP PAINTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS AND STEEL LOAD PLATES. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).



PLAN - TRANSFER GIRDER

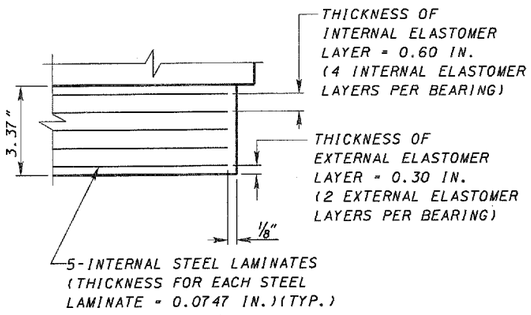


ELEVATION - TRANSFER GIRDER



VIEW C-C

(THREAD BAR NOT SHOWN)



DETAIL 1

STEEL NOTES:

1. WHERE A PLATE OR SHAPE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN AREMA TABLE 15-1-14.
2. ALL ITEMS DESIGNATED (FCM) ARE FRACTURE CRITICAL MEMBERS AND COMPONENTS AND SHALL BE FURNISHED AND FABRICATED ACCORDING TO THE REQUIREMENTS OF SECTION 12 OF THE AASHTO/AWS BRIDGE WELDING CODE D1.5.
3. C.P. INDICATES COMPLETE PENETRATION WELD.
4. FOR PAYMENT, SEE ESTIMATED QUANTITIES ITEM 513 SHEET 3|11.

NOTES:

1. FOR TEMPORARY ABUTMENT FOOTING DETAILS, SEE SHEET 10|11.
2. FOR THREAD BAR DETAILS, SEE SHEET 10|11.

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
GHD	JLV	RER	05/13/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDH		2530252	

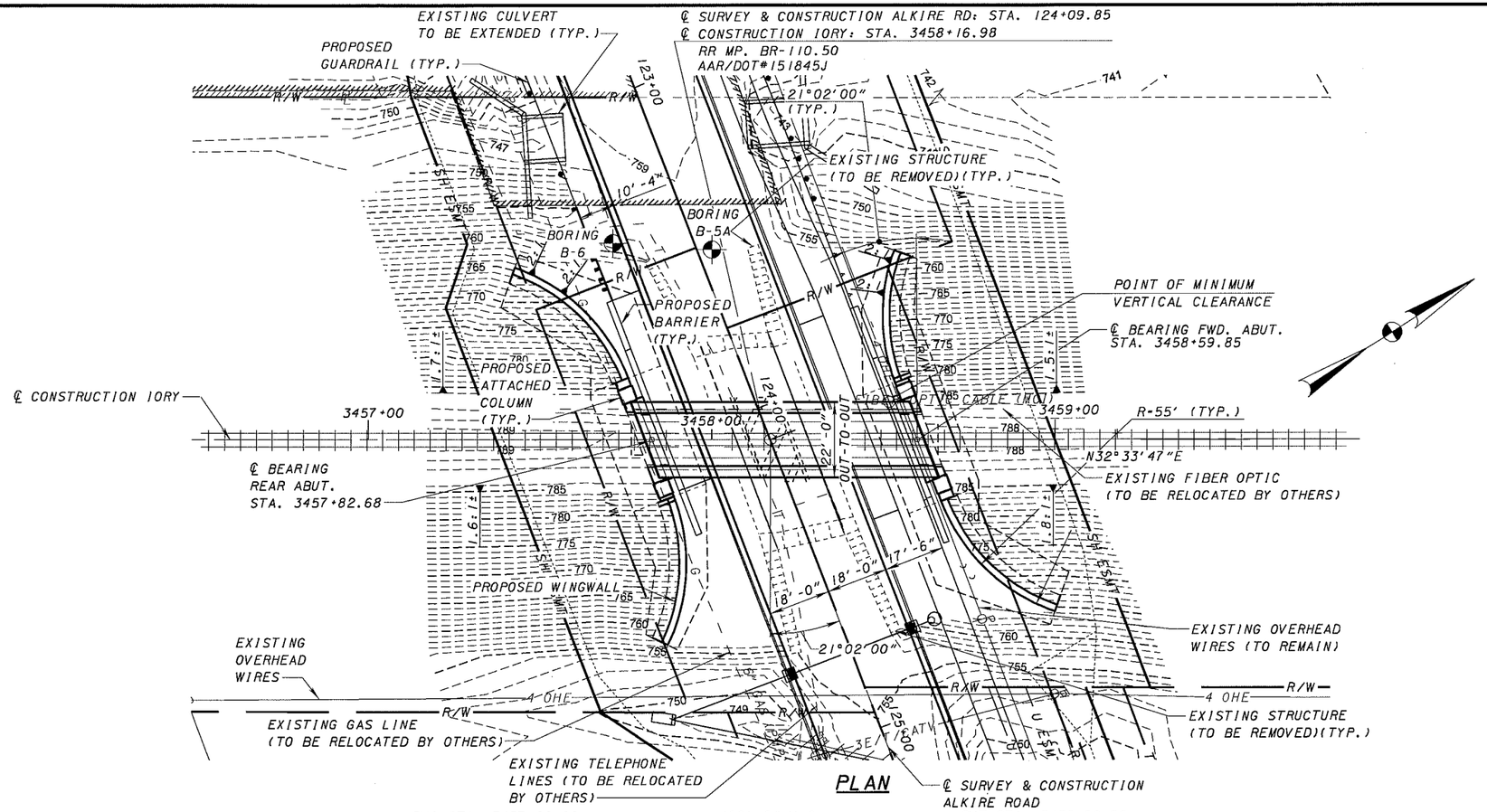
TEMPORARY BRIDGE STRUCTURAL STEEL DETAILS
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

11 / 11

88
118

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:31:04 PM
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BENCHMARK 1

IRON PIN SET - EL. 759.88
STA. 122+63.48 (℄ SURVEY & CONSTRUCTION ALKIRE ROAD)
OFFSET 18.95' LEFT
STA. 3457+82.13 (℄ CONSTRUCTION IORY)
OFFSET 143.42' LEFT

BENCHMARK 2

IRON PIN SET - EL. 750.58
STA. 125+34.68 (℄ SURVEY & CONSTRUCTION ALKIRE ROAD)
OFFSET 52.66' LEFT
STA. 3459+10.93 (℄ CONSTRUCTION IORY)
OFFSET 97.61' RIGHT

BORING LOCATIONS

BORING NO.	STATION	OFFSET
B-5A	3458+18.33	55.96 LT.
B-6	3457+89.55	57.97 LT.

TRAFFIC DATA

INDIANA & OHIO RAILROAD (IORY)
TRAIN TRAFFIC - 2 TRAINS/DAY
OPERATING SPEED - 10 MPH

EXISTING STRUCTURE

TYPE: SINGLE BARREL STONE ARCH BRIDGE WITH BALLASTED DECK
SPAN: 21'-0"± MEASURED CLEAR INSIDE ARCH
WIDTH: 64'-11"±
LOADING: UNKNOWN
SKEW: 21°02'16"±
DATE BUILT: 1902
STRUCTURE FILE No.: 2530252
AAR/DOT#151845J
RR MP. BR-110.50

PROPOSED STRUCTURE

TYPE: ONE SIMPLE SPAN DECK PLATE GIRDER BRIDGE WITH STEEL PLATE GIRDERS, STEEL PLATE BALLASTED DECK, AND REINFORCED CONCRETE SUBSTRUCTURES ON PILES.
SPAN: 77'-2" C-C OF BEARING
WIDTH: 22'-0" OUT-TO-OUT OF PARAPETS
LOADING: COOPER E-80 WITH DIESEL IMPACT
SKEW: 21°02'00" RIGHT FORWARD
ALIGNMENT: TANGENT
LONGITUDE: W 83°04'09"
LATITUDE: N 39°54'56"

NOTES:

1. THE EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE TEMPORARY BRIDGE PLANS FOR DETAILS AND STAGE CONSTRUCTION.
3. EXISTING VERTICAL CLEARANCE IS AS POSTED AT THE BRIDGE. PROPOSED VERTICAL CLEARANCE IS CALCULATED FROM THE LOW STEEL ELEVATION AT THE NORTH SHOULDER OF ALKIRE ROAD.
4. SEE CULVERT PLANS FOR CULVERT EXTENSION DETAILS.
5. THE RAILROAD RIGHT-OF-WAY IN THESE PLANS IS THE PROPERTY OF CSX TRANSPORTATION (aka: BALTIMORE & OHIO RAILROAD CO.). THE TRACKS LOCATED WITHIN THIS RIGHT-OF-WAY ARE OWNED BY THE INDIANA AND OHIO RAILWAY CO. (IORY). THE IORY LEASES THE PROPERTY FROM CSX TRANSPORTATION.

FOUNDATION DATA:

ALL NEW PILES SHALL BE HP 12X53 PILES.

THE ESTIMATED PAY LENGTHS OF THE PROPOSED PILES ARE AS FOLLOWS:
REAR ABUTMENT - 40 FEET
FORWARD ABUTMENT - 40 FEET
TIP ELEVATION - 714.00

LEGEND:

⊕ - DENOTES SOIL BORING LOCATION

DESIGN AGENCY: TranSystems, 105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDH		2530171	

FRANKLIN COUNTY
STA. 3457+78.39
STA. 3458+64.13

PERMANENT BRIDGE SITE PLAN

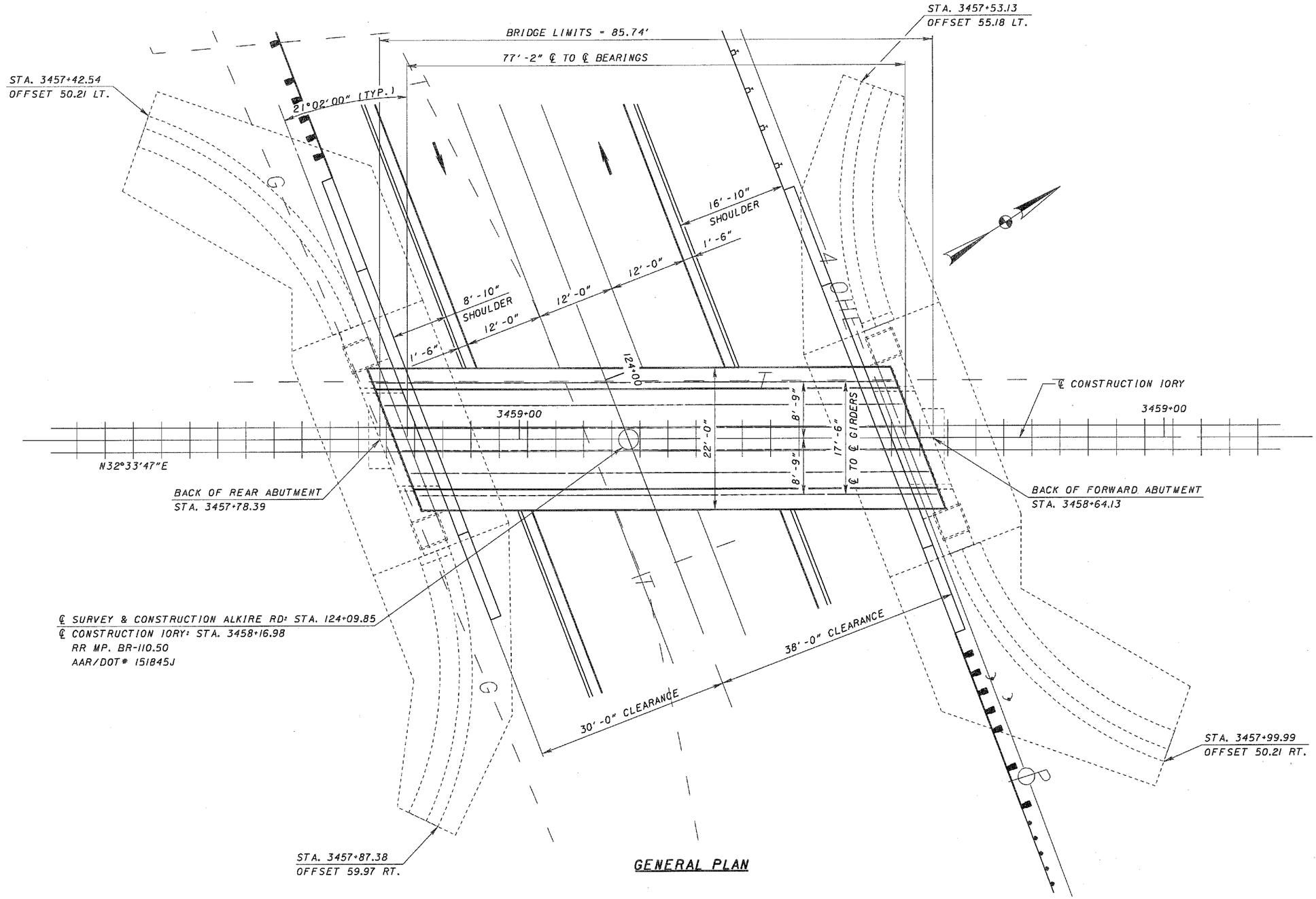
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

1 / 28

89 / 118

Plotted By: cscheiderer Date: 9/24/2009 Time: 4:58:41 PM
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GENERAL PLAN

DESIGN AGENCY: TranSystems, 105 SCHMOCK ROAD SUITE 400, COLUMBUS, OHIO 43228

DESIGNED	DRAWN	REVISED	DATE
PEJ	MEP		10/16/07
CHECKED	REVIEWED		STRUCTURE FILE NUMBER
JRN	RER		2530171

GENERAL PLAN
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

2/28

90/118

Plotted By: aschneiderer Date: 8/7/2009 Time: 2:45:18 PM
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RAIL STRUCTURE GENERAL NOTES

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

898 DATED 7-21-06

DESIGN SPECIFICATIONS

EXCEPT FOR REINFORCED CONCRETE ITEMS, THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "MANUAL FOR RAILWAY ENGINEERING" BY THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION, 2006 EDITION. DESIGN OF REINFORCED CONCRETE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" AASHTO, 17TH EDITION, AND THE ODOT BRIDGE DESIGN MANUAL.

CONSTRUCTION AND MATERIAL SPECIFICATIONS:

STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, DATED JANUARY 1, 2005.

DESIGN DATA:

DESIGN LOADING: COOPER E-80 WITH DIESEL IMPACT

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615, GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI.

STRUCTURAL STEEL - A709 GRADE 50W ALLOWABLE STRESS 27,000 PSI.

ITEM 202, STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

REMOVE EXISTING STONE BARREL ARCH TO ELEVATION 755.0

CONTRACTOR SHALL TAKE CARE TO PRESERVE EXISTING STONES FROM THE ARCH. THESE STONES SHALL BE SET ASIDE FOR FRANKLIN COUNTY. FRANKLIN COUNTY WILL TRANSPORT THE STONES TO THEIR YARD.

PROPOSED WORK:

1. EXCAVATE AND DRIVE PILES AT THE ABUTMENTS AND WINGWALLS.
2. CONSTRUCT ABUTMENT AND WINGWALL FOOTINGS.
3. CONSTRUCT ABUTMENT WALLS AND WINGWALLS TO BRIDGE SEAT ELEVATION.
4. INSTALL ABUTMENT DRAINAGE PIPES.
5. BACKFILL TO 1 FT. BELOW BEAM SEAT ELEVATION.
6. ASSEMBLE GIRDERS, DIAPHRAGMS AND DECK PLATE.
7. STOP RAIL TRAFFIC.
8. REMOVE TEMPORARY BRIDGE.
9. CONSTRUCT ABUTMENT BACKWALLS AND PILASTERS.
10. BACKFILL TO FINISHED GRADE.
11. INSTALL BEARINGS AND ERECT GIRDERS, DIAPHRAGMS AND DECK PLATE.
12. CONSTRUCT DECK CONCRETE.
13. SEAL THE DECK AND INSTALL DECK DRAINAGE PIPES.
14. LAY BALLAST, TIES AND RAILS.
15. RESUME RAIL TRAFFIC.
16. CONSTRUCT CONCRETE PARAPETS.
17. SEAL CONCRETE SURFACES.
18. INSTALL RAILING.

ITEM 511, CONCRETE, MISC.: CLASS C CONCRETE, ABUTMENT, HIGH EARLY STRENGTH:

PROVIDE CONCRETE MEETING THE REQUIREMENTS OF CLASS C CONCRETE ACCORDING TO CMS 511. TO MEET THE CONSTRUCTION SCHEDULE, HIGH EARLY STRENGTH CONCRETE WILL BE UTILIZED FOR THE CONSTRUCTION OF THE ABUTMENT ABOVE THE BEAM SEATS. THE ADDITIONAL COST ASSOCIATED WITH THE HIGH EARLY STRENGTH CONCRETE MIX ABOVE THE BEAM SEATS SHALL BE INCLUDED WITH THIS ITEM.

ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

SEAL SUPERSTRUCTURE AND SUBSTRUCTURE CONCRETE IN THE LIMITS SHOWN ON PLANS WITH EPOXY-URETHANE SEALER. THE SECOND SEALING COAT SHALL BE FEDERAL COLOR NO. 30257.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 140 TONS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES.
REAR ABUTMENT: 121 PILES, 45 FEET LONG, ORDER LENGTH
FORWARD ABUTMENT: 119 PILES, 45 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM.

LOW HEADROOM PILE DRIVING EQUIPMENT WILL BE REQUIRED WHILE INSTALLING PILES FOR THE ABUTMENTS UNDERNEATH THE TEMPORARY BRIDGE.

STAGE CONSTRUCTION DETAILS:

FOR STAGE CONSTRUCTION DETAILS, SEE SHEET 4/11 OF THE TEMPORARY BRIDGE PLANS.

BATTERED PILES:

THE BLOW COUNT FOR BATTERED PILES SHALL BE THE BLOW COUNT DETERMINED FOR VERTICAL PILES OF THE SAME ULTIMATE BEARING VALUE DIVIDED AN EFFICIENCY FACTOR (D). COMPUTE THE EFFICIENCY FACTOR (D) AS FOLLOWS:

$$D = \frac{1-UG}{\sqrt{(1+G^2)}}$$

U = COEFFICIENT OF FRICTION, WHICH IS ESTIMATED AT 0.05 FOR DOUBLE-ACTING AIR OPERATED OR DIESEL HAMMERS; 0.1 FOR SINGLE-ACTING AIR OPERATED OR DIESEL HAMMERS; AND 0.2 FOR DROP HAMMERS.
G = RATE OF BATTER (1/3, 1/4, ETC.)

MAINTENANCE OF TRAFFIC:

THE CONSTRUCTION PROGRAM WILL REQUIRE CLOSE COORDINATION AND COOPERATION WITH IORY PERSONNEL FOR ALL OPERATIONS THAT INVOLVE TRACK WORK AND RAIL SERVICE. THE TIME OF SPECIFIC TRACK CLOSINGS, OPENINGS, SWITCHING AND OTHER REQUIRED RAIL, TIE AND BALLAST WORK IN ALL CASES SHALL BE ALSO SUBJECT TO IORY APPROVAL.

THE PERMANENT BRIDGE CONSTRUCTION REQUIRES COORDINATION OF BOTH RAIL AND LOCAL ROAD TRAFFIC TO ENSURE CONTINUTITY OF SAFE OPERATIONS AND MINIMAL INTERFERENCE. ALKIRE ROAD MAY BE CLOSED DURING CONSTRUCTION OF PERMANENT BRIDGE SUPERSTRUCTURE.
FOR ROADWAY MAINTENANCE OF TRAFFIC NOTES AND PLANS, SEE SHEET 9/108.
FOR TEMPORARY BRIDGE STAGE CONSTRUCTION DETAILS, SEE SHEET 4/11.
FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES, SEE SHEET 3/11.

CONSTRUCTION CLEARANCE:

EXCEPT DURING AGREED UPON OUTAGES, MAINTAIN A CONSTRUCTION CLEARANCE OF 10.0 FEET HORIZONTALLY FROM THE CENTER OF ACTIVE TRACKS AND 23.0 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AT ALL TIMES.

OVERHEAD POWER LINES:

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE LOCATION OF THESE UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO DURING CONSTRUCTION AND ERECTION OF STRUCTURES. OVERHEAD POWER LINES PARALLEL TO ALKIRE RD. ARE TO BE REMAIN. HOWEVER, THEY CAN BE DEENERGIZED FOR BRIEF PERIODS WITH PROPER COORDINATION BETWEEN THE CONTRACTOR AND AEP. THE APPROXIMATE DISTANCE FROM THE BOTTOM WIRE TO THE TOP OF THE RAIL IS 28.8 FEET, TO BE VERIFIED BY THE CONTRACTOR. OVERHEAD LINES PARALLEL TO IORY ARE TO REMAIN.

UTILITY LINES:

ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE REMAINING AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM. REFERENCE THE SUPPLEMENTAL SITE PLAN, SHEET 2/11, FOR UTILITY LOCATIONS AND CONTACT INFORMATION.

DESIGN AGENT: TranSystems, 105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED PEJ | DRAWN MEP | REVIEWED RER | DATE 10/16/07
CHECKED JDH | REVISED | STRUCTURE FILE NUMBER 2530171

GENERAL NOTES
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

3 / 28

91 / 118

Plotted By: acscheiderer Date: 9/24/2009 Time: 4:59:41 PM
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RAIL STRUCTURE GENERAL NOTES

ITEM 512, SPECIAL - BUTYL RUBBER MEMBRANE WATERPROOFING:
SEE CHAPTER 29 OF AREMA SPECIFICATIONS.

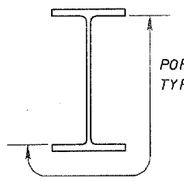
1. USE 3/32" THICK BUTYL RUBBER MEMBRANE WATERPROOFING CONFORMING TO THE REQUIREMENTS OF ARTICLE 2.3.5 ON THE ENTIRE DECK AND BALLAST RETAINERS.
2. ADHESIVE MUST BE APPLIED TO THE ENTIRE SURFACE TO BE WATERPROOFED.
3. NO.3 TONGUE AND GROOVE SPLICE, SHOWN ON FIGURE 2-2, PAGE 29.2.14, SHALL BE USED FOR SPLICING BUTYL RUBBER MEMBRANE.
4. STEEL SURFACES THAT ARE TO BE COVERED WITH THE BUTYL RUBBER MEMBRANE WATERPROOFING SHALL NOT BE PAINTED.

PAYMENT SHALL BE AT CONTRACT PRICE BID FOR ITEM 512, SPECIAL - BUTYL RUBBER MEMBRANE WATERPROOFING WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

ITEM 512, SPECIAL - ASPHALTIC PANEL:
TWO LAYERS OF ½" THICK ASPHALTIC PANELS SHALL BE PLACED WITH STAGGERED JOINTS, SET IN COMPATIBLE ADHESIVE AND SHALL CONFORM TO AREMA CHAPTER 29, ARTICLE 2.4.3. BALLAST MUST BE PLACED AS SOON AS PRACTICABLE FOLLOWING PLACEMENT OF ASPHALTIC PANELS AND BITUMINOUS WATERPROOFING. EDGES AND PROTRUSIONS OF PANELS ARE TO BE COATED IN ACCORDANCE WITH ARTICLE 2.8.4.4(A)&(B). PAYMENT SHALL BE AT CONTRACT PRICE BID FOR ITEM 512 - SPECIAL - ASPHALTIC PANEL, WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

FINISH COAT SHALL BE AS FOLLOWS:
- FEDERAL COLOR STANDARD 595B NO. 30108 (REDDISH BROWN FLAT)
- FASCIA GIRDERS - PAINT ENTIRE LENGTH AS SHOWN.
- INTERIOR GIRDERS - DO NOT PAINT EXCEPT AS NOTED BELOW.
- ALL GIRDERS - PAINT 10'-0" ALL AROUND AT EACH END.



ITEM 518, STRUCTURE DRAINAGE, MISC.: 8" Ø NON-PERFORATED, GALVANIZED AND BITUMINOUS COATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS
MATERIALS SHALL BE AS PER 707.01 AND BITUMINOUS COATED AS PER 707.05. SEE PLANS FOR ADDITIONAL DETAILS.

ITEM 518, STRUCTURE DRAINAGE, MISC.: 8" Ø PERFORATED HALF ROUND 12 GAGE, GALVANIZED AND BITUMINOUS COATED CORRUGATED STEEL DRAIN, WITH TROUGH
MATERIALS SHALL BE AS PER 707.01 AND BITUMINOUS COATED AS PER 707.05. SEE PLANS FOR ADDITIONAL DETAILS.

ABBREVIATIONS
- E.F. - EACH FACE
- N.F. - NEAR FACE
- F.F. - FAR FACE
- EL. OR ELEV. - ELEVATION
- TYP. - TYPICAL
- CLR. - CLEAR
- C.V.N. - CHARPY V-NOTCH
- MIN. - MINIMUM
- MAX. - MAXIMUM
- P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
- E.S. - EACH SIDE
- IORY - INDIANA & OHIO RAILWAY
- BTN. - BETWEEN
- SPA. - SPACED

ITEM SPECIAL - FORM LINER:
FOR THE ARCHITECTURALLY TREATED ABUTMENT AND WINGWALLS, FORM LINERS IN ACCORDANCE WITH 508.03 SHALL BE USED. FORM LINERS SHALL BE USED TO PRODUCE THE TEXTURED SURFACES ACCORDING TO THE LIMITS SHOWN ON THE PLANS. THE FORM LINERS USED TO PRODUCE THE ARCHITECTURAL SURFACE TEXTURES SHALL BE APPROVED BY THE COUNTY.

PROJECT SPECIFIC REQUIREMENTS: A DRY STACK PATTERN CHOSEN FROM THE MANUFACTURERS LISTED BELOW OR APPROVED EQUAL.

DAYTON SUPERIOR
WWW.DAYTONSUPERIOR.COM
PATTERN #1508 - LARGE DRY STACK STONE

FITZGERALD FORMLINER
WWW.FORMLINERS.COM
PATTERN #17911 - SAN DIEGO DRY STACK

GREEN STREAK
WWW.GREENSTREAK.COM
PATTERN #328 - DRYSTACK RANDOM STONE

METHOD OF MEASUREMENT: THE COUNTY WILL MEASURE FORM LINERS BY THE NUMBER OF SQUARE FEET. THE COUNTY WILL DETERMINE THE AREA OF THE FORM LINER USING NOMINAL DIMENSIONS AS SHOWN ON THE PLANS. THE COUNTY WILL NOT ADJUST PAY QUANTITIES FOR JOINT RUSTIFICATIONS OR OTHER FORM LINER CONSTRUCTION DETAILS.

BASIS OF PAYMENT: THE COUNTY WILL PAY FOR FALSEWORK, STRUCTURAL FORMWORK, FURNISHING, PLACING, CONSOLIDATING, FINISHING, AND CURING PORTLAND CEMENT CONCRETE SEPARATELY. PAYMENT FOR ITEM SPECIAL, FORM LINER INCLUDES ALL MATERIALS AND LABOR REQUIRED TO PRODUCE THE TEXTURED CONCRETE SURFACES SHOWN ON THE PLANS AND DESCRIBED HEREIN.

FOR SEALING OF CONCRETE SURFACES, SEE SHEET 3/28.

RAILROAD MOT AND QUANTITIES AND NOTES

SEE SHEET Spr110458 AND Spr110468 FOR RR QUANTITIES, NOTES AND DESCRIPTIONS.

ITEM 507 - PILING, MISC.: STEEL PILE SPLICE:
A. DESCRIPTION
THIS ITEM SHALL CONSIST OF PROVIDING AND INSTALLING STEEL PILE SPLICES ACCORDING TO CMS 507.09. LOW HEADROOM PILE DRIVING EQUIPMENT AND 20-FT PILE SECTIONS WILL BE REQUIRED WHILE INSTALLING PILES FOR THE ABUTMENTS UNDERNEATH THE TEMPORARY BRIDGE.

B. MATERIALS
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
262 RUTHERFORD BLVD.
CLIFTON, NEW JERSEY 07014

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

C. MEASUREMENT AND PAYMENT
THE QUANTITY OF STEEL PILE SPLICE WILL BE MEASURED BY EACH AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM 507 - PILING, MISC.: STEEL PILE SPLICE. THIS PRICE SHALL BE PAYMENT IN FULL FOR ALL MATERIAL, LABOR, EQUIPMENT, INSTALLATION AND INCIDENTALS REQUIRED TO COMPLETE THE WORK AS SPECIFIED.

INDEX OF SHEETS:

SITE PLAN 1/28
GENERAL PLAN 2/28
GENERAL NOTES 3/28 AND 4/28
ESTIMATED QUANTITIES 5/28
STRUCTURE & PILE LAYOUT DIAGRAM 6/28
REAR ABUTMENT DETAILS 7/28 THRU 10/28
FORWARD ABUTMENT DETAILS 11/28 THRU 14/28
ABUTMENT DETAILS 15/28
AESTHETIC DETAILS 16/28
FRAMING PLAN 17/28
TRANSVERSE SECTION 18/28
GIRDER ELEVATION 19/28
DIAPHRAGM DETAILS 20/28
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DRAINAGE DETAILS 22/28
BEARING DETAILS 23/28
RAILING DETAILS 24/28
REINFORCING STEEL LIST 25/28 THRU 28/28

DESIGN AGENCY: TranSystems, 100 SCIENCE PARK ROAD, SUITE 400, COLUMBUS, OHIO 43229
DESIGNED PEJ | DRAWN MEP | REVIEWED RER | DATE 10/16/07
CHECKED JDH | REVISED | STRUCTURE FILE NUMBER 2530171
GENERAL NOTES
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)
FRA-CR11-10.49
PID 76255
FCEO 1135
4/28
92/118
Plotted By: aschelderer Date: 8/7/2009 Time: 2:45:9 PM
Filename: "..."

MADE BY: JRN DATE: 10/01/07
CHECK'D BY: PEJ DATE: 10/11/07

ESTIMATED QUANTITIES

STRUCTURE FILE NUMBER: 2530171

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	REAR ABUTMENT	FORWARD ABUTMENT	SUPER-STRUCTURE	GENERAL	AS PER PLAN REFERENCE
202	11003	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	3
503	21101	6043	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN	3100	2943			3
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00200	10755	FT	STEEL PILES HP12X53, FURNISHED	5445	5310			
507	00250	9560	FT	STEEL PILES HP12X53, DRIVEN	4840	4720			
507	93300	239	EACH	STEEL POINTS OR SHOES	121	118			
507	98010	239	EACH	PILING, MISC.: STEEL PILE SPLICE	121	118			3
509	10000	186464	POUND	EPOXY COATED REINFORCING STEEL	91642	88506	6316		
511	34002	73	CU YD	CLASS S CONCRETE, HIGH EARLY STRENGTH			73		
511	45500	841	CU YD	CLASS C CONCRETE, ABUTMENT	428	413			
511	45501	78	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	39	39			3, 7, 10
511	46500	734	CU YD	CLASS C CONCRETE, FOOTING	374	360			
512	10100	1462	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	646	622	194		3, 4
512	33000	66	SQ YD	TYPE 2 WATERPROOFING	33	33			
512	56100	57	SQ YD	SPECIAL - BUTYL RUBBER MEMBRANE WATERPROOFING			57		3
512	56202	113	SQ YD	SPECIAL - ASPHALTIC PANEL			113		3
513	10300	246428	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 5			246428		
513	20000	462	EACH	WELDED STUD SHEAR CONNECTORS			462		
514	00060	5380	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			5380		3
514	00066	5380	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			5380		3
516	13200	496	SQ FT	1/2" PREFORMED EXPANSION JOINT FILLER	248	248			
516	13400	26	SQ FT	3/4" PREFORMED EXPANSION JOINT FILLER	13	13			
516	44201	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (12''x22''x3.8'')			12		23
517	76300	156	FT	RAILING, MISC.: AESTHETIC STEEL RAILING			156		
518	21200	430	CU YD	POROUS BACKFILL WITH FILTER FABRIC	219	211			
518	42201	247	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN	126	121			4
518	42301	78	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN	41	37			
518	62100	64	FT	STRUCTURE DRAINAGE, MISC.: 8" NON-PERFORATED, GALVANIZED AND BITUMINOUS COATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS		64			
518	62100	176	FT	STRUCTURE DRAINAGE, MISC.: 8" HALF ROUND 12 GAGE, GALVANIZED AND BITUMINOUS COATED CORRUGATED STEEL DRAIN, WITH TROUGH			176		
523	20000	1	EACH	DYNAMIC LOAD TESTING				1	
SPECIAL	53013000	4918	SQ FT	SPECIAL - FORM LINER	2509	2409			4, 16

NOTES:

1. ALL QUANTITIES ARE ELIGIBLE FEDERAL STP FUNDS.

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED PEJ | DRAWN MEP | REVIEWED RCR | DATE 10/16/07
CHECKED JRN | REVISED | STRUCTURE FILE NUMBER 2530171

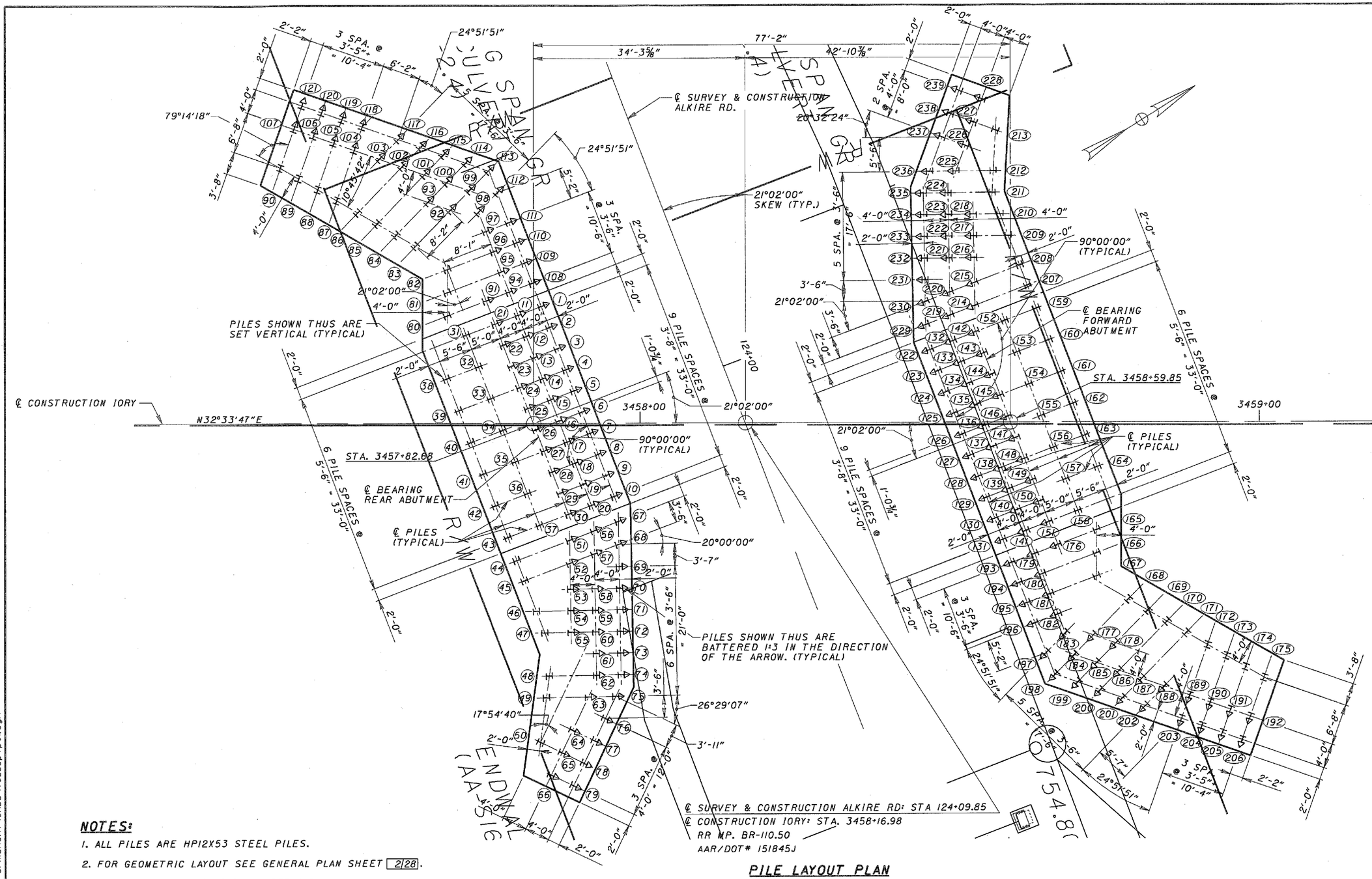
ESTIMATED QUANTITIES
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

5 / 28

93 / 118

Plotted By: ascheiderer Date: 8/7/2009 Time: 3:36:40 PM
Filename: "\\\\



PILE LAYOUT PLAN

NOTES:

1. ALL PILES ARE HP12X53 STEEL PILES.
2. FOR GEOMETRIC LAYOUT SEE GENERAL PLAN SHEET 2/28.
3. FOR ABUTMENT AND WINGWALL DETAILS SEE SHEETS 7/28 TO 15/28.
4. PILE LAYOUT DIMENSIONS ARE MEASURED ALONG THE BOTTOM OF THE FOOTING.
5. FOR ABBREVIATIONS, SEE SHEET 4/28.
6. LOW HEADROOM PILE DRIVING EQUIPMENT WILL BE REQUIRED WHILE INSTALLING PILES FOR THE ABUTMENTS UNDERNEATH THE TEMPORARY BRIDGE.

LEGEND:

⊢▷ - INDICATES BATTERED PILE 1:3 IN THE DIRECTION SHOWN.

⊢ - INDICATES VERTICAL PILE

DESIGN AGENCY: TranSystems, 400 NOS. STARKE, SUITE 400, COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRN		253017.1	

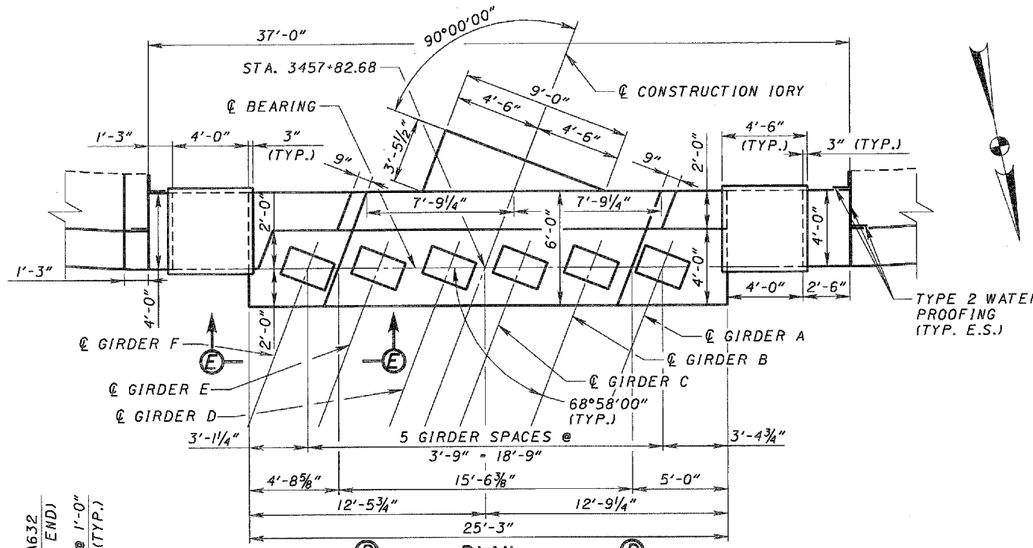
PILE LAYOUT PLAN
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

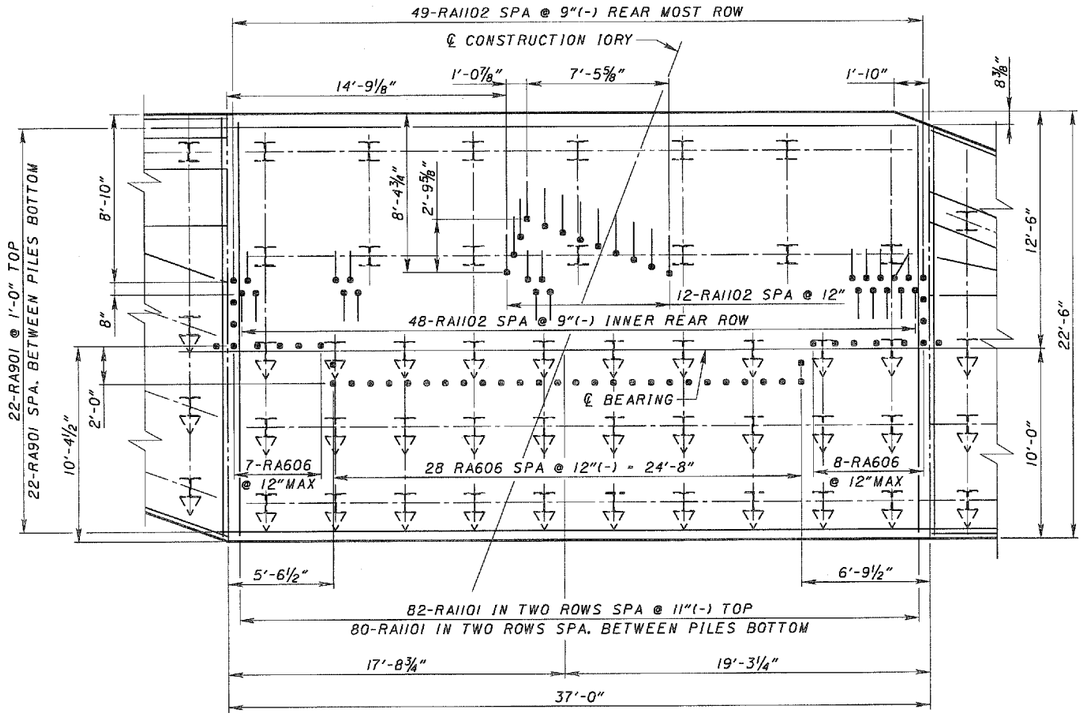
FRA-CR11-10.49
PID 76255
FCEO 1135

6 / 28

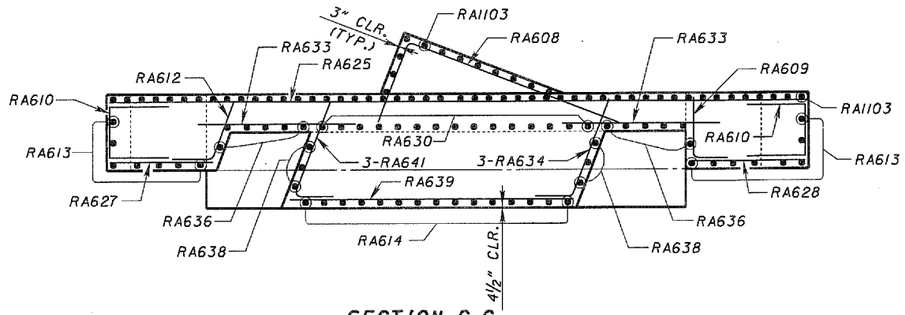
94 / 118

Plotted By: acscheiderer Date: 8/1/2009 Time: 4:43:15 PM
Filename: g:\C002\0025\Bridge\Permanent\CADD\76255prfp01.dgn





FOOTING PLAN



SECTION G-G

NOTES:

1. FOR SECTIONS A-A THRU F-F, ABUTMENT DETAILS AND THE LAP LENGTH TABLE, SEE SHEET 15/28.
2. FOR PILE LAYOUT, SEE SHEET 6/28.
3. FOR REINFORCING SCHEDULE, SEE SHEETS 25/28, AND 26/28.
4. FOR DETAILS A AND B, SEE SHEET 15/28.
5. TO MEET THE CONSTRUCTION SCHEDULE, HIGH EARLY STRENGTH CONCRETE WILL BE UTILIZED FOR THE CONSTRUCTION OF THE ABUTMENT ABOVE THE BEAM SEAT EL. OF 779.76 FOR THE REAR ABUTMENT AND EL. 779.30 FOR THE FORWARD ABUTMENT. THE ADDITIONAL COSTS ASSOCIATED WITH THE HIGH EARLY STRENGTH CONCRETE MIX ABOVE THE BEAM SEATS SHALL BE INCLUDED WITH ITEM 511, CLASS C CONCRETE, ABUTMENT, AS PER PLAN.

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AFK		2530171	

REAR ABUTMENT PLAN AND ELEVATION

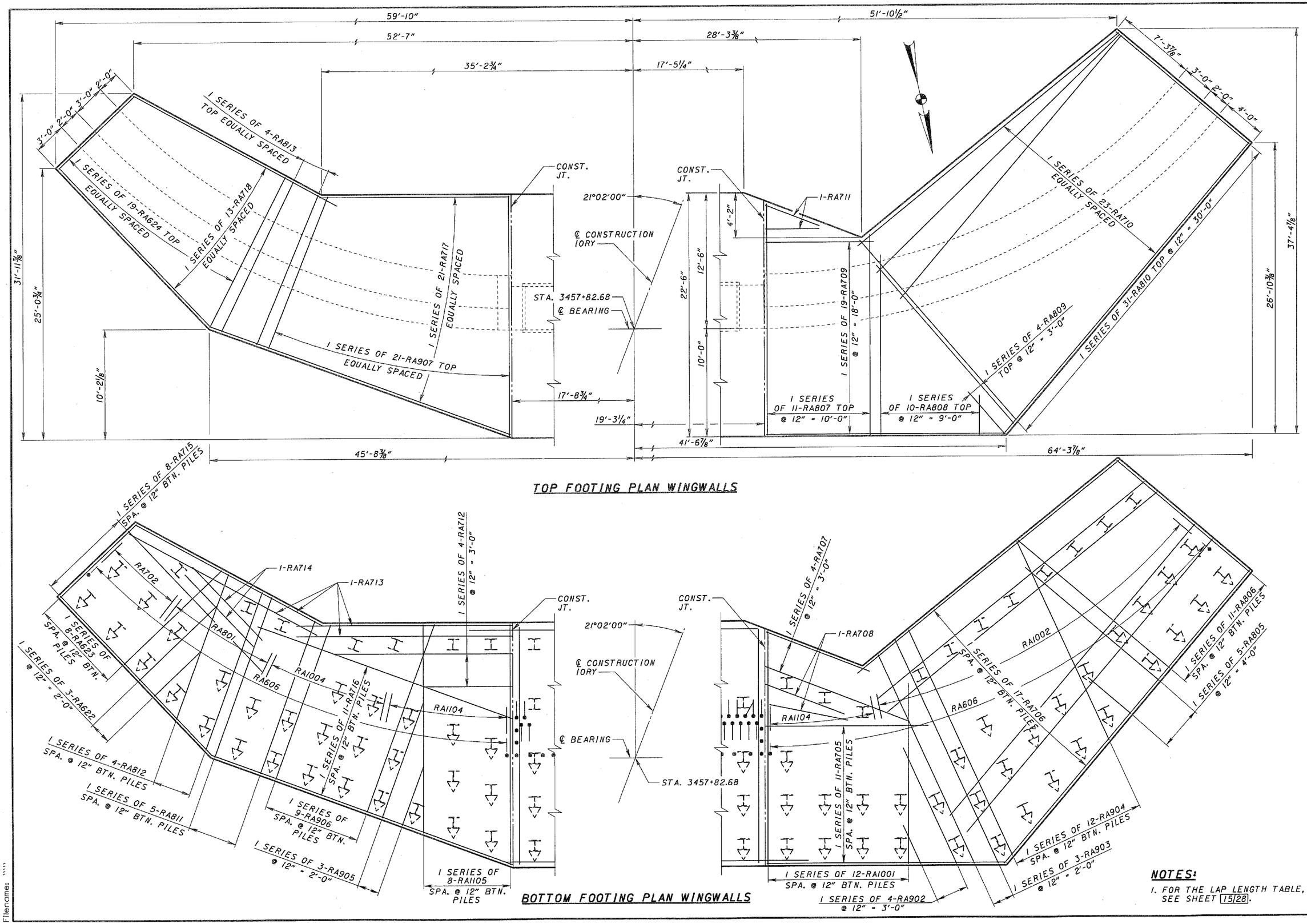
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 111)

FRA-CR11-10.49
PID 76255
FCEO 1135

7 / 28

95 / 118

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:45:20 PM
Filename: "\"



NOTES:

1. FOR THE LAP LENGTH TABLE, SEE SHEET 15/28.

DESIGN AGENCY: TranSystems, 100 SCIENCE PARK ROAD, SUITE 100, COLUMBUS, OHIO 43235

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRN		2530171	

REAR ABUTMENT FOOTING PLAN

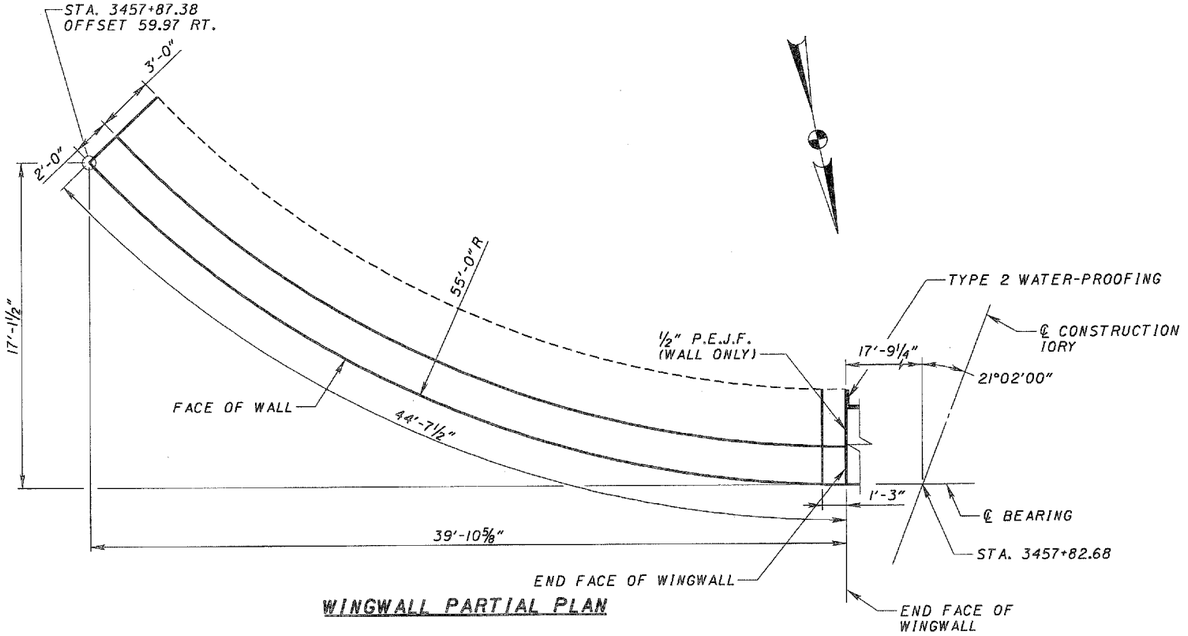
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

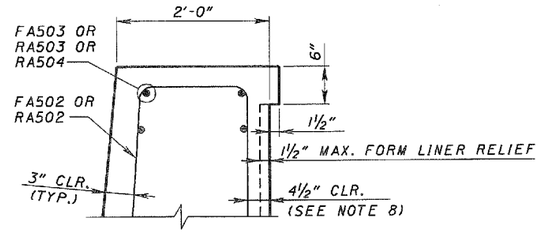
8/28

96/118

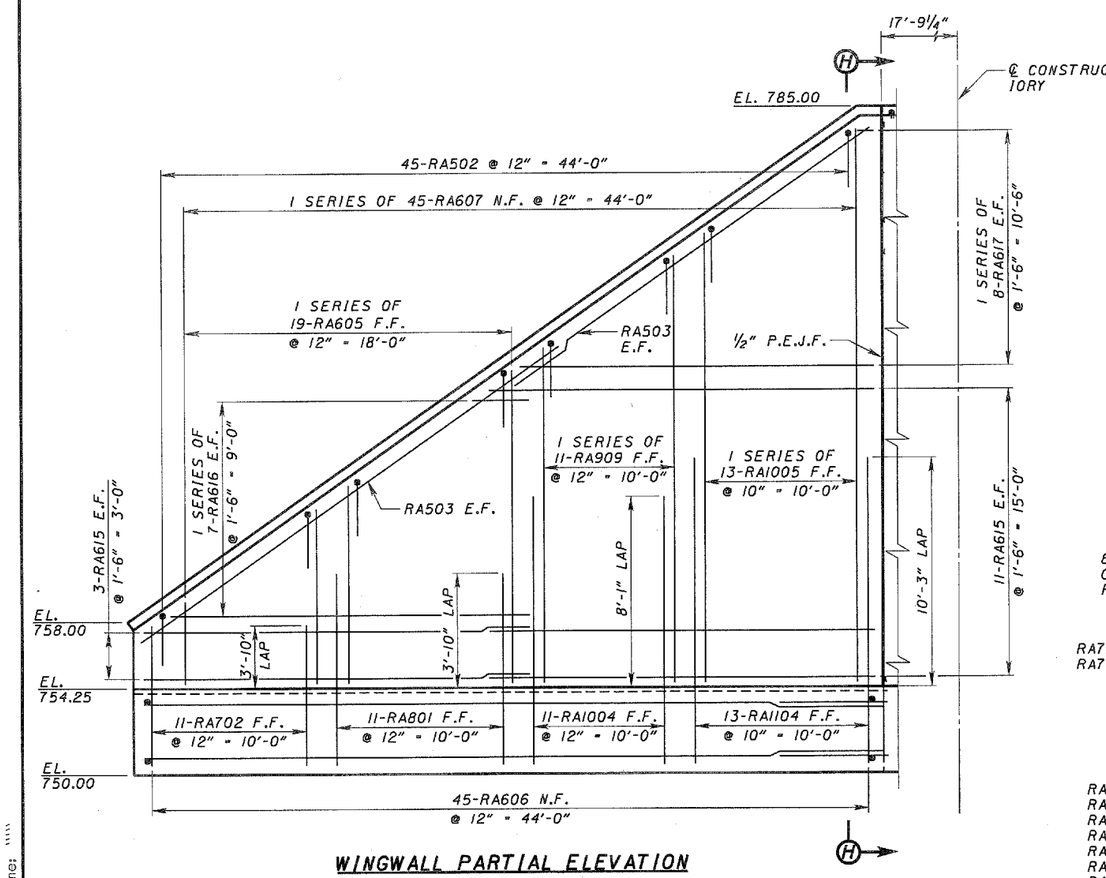
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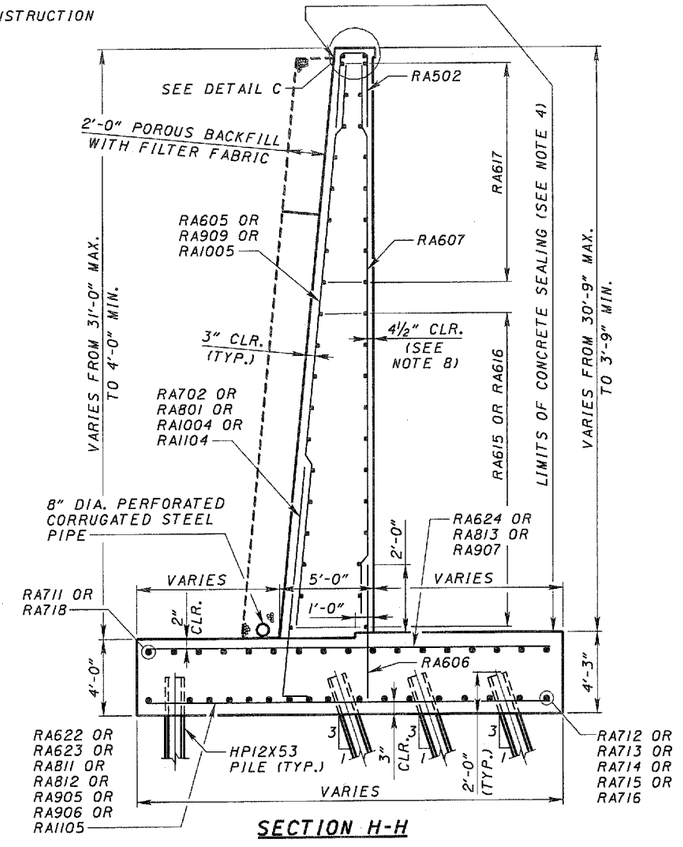
WINGWALL PARTIAL PLAN



DETAIL C



WINGWALL PARTIAL ELEVATION



SECTION H-H

NOTES:

1. FOR REINFORCING SCHEDULE, SEE SHEETS 25/28, AND 26/28.
2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEET 7/28.
3. FOR AESTHETIC DETAILS, SEE SHEET 16/28.
4. FOR SEALING OF CONCRETE SURFACES NOTE, SEE SHEET 3/28.
5. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE TO 1 FOOT BELOW EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF WINGWALLS.
6. THE SLOPE OF THE WALL VARIES, SLOPE REINFORCEMENT TO MATCH SLOPE OF WALL.
7. FOR THE LAP LENGTH TABLE, SEE SHEET 15/28.
8. 4½" CLEARANCE TO THE STEEL REINFORCEMENT INCLUDES 1½" MAX. FORMLINER RELIEF.

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AFK		2530171	

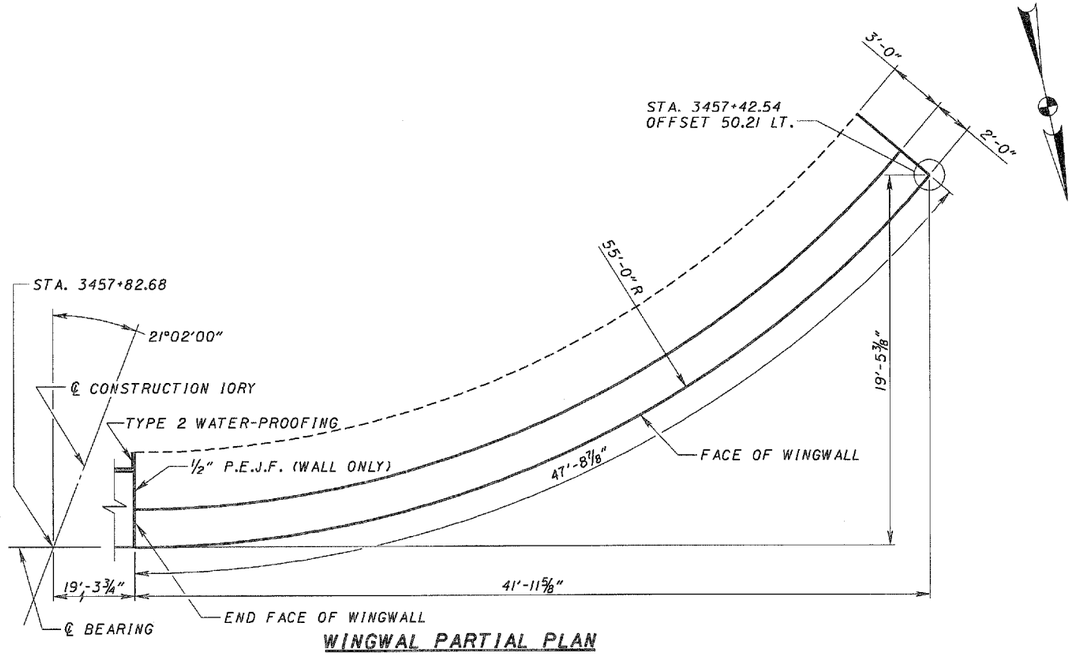
REAR ABUTMENT DETAILS
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

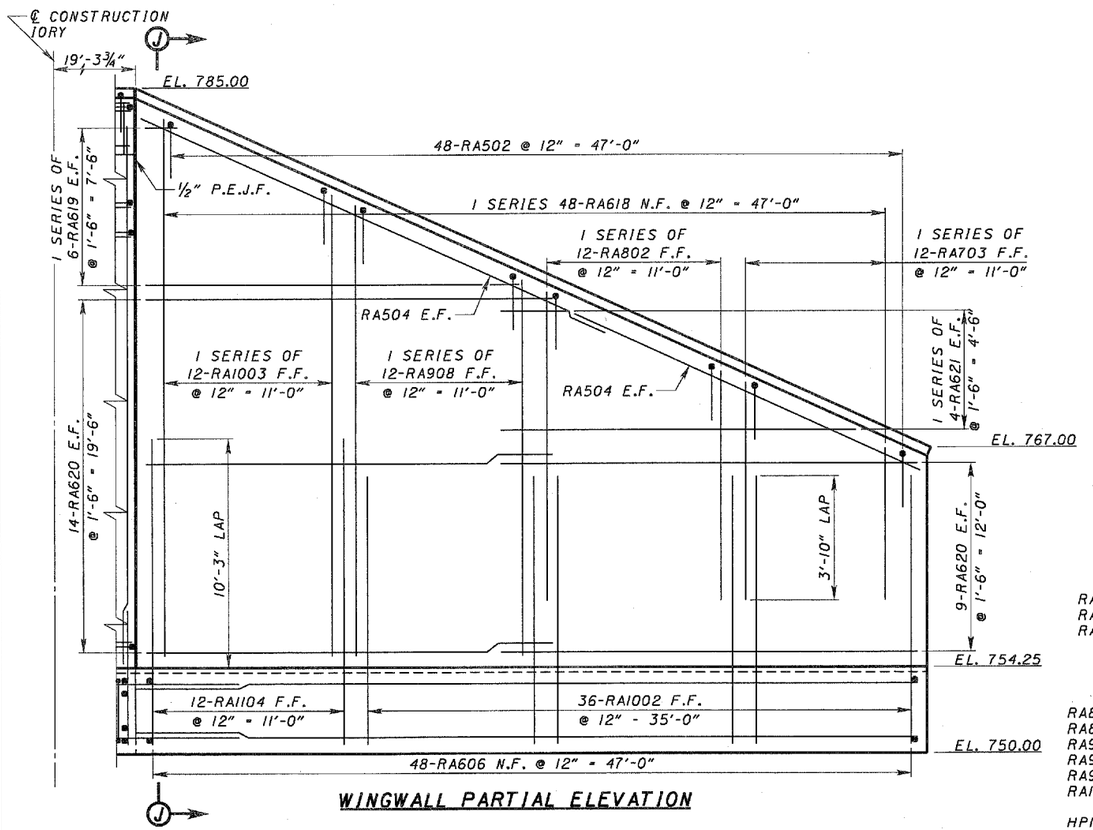
9/28

97/118

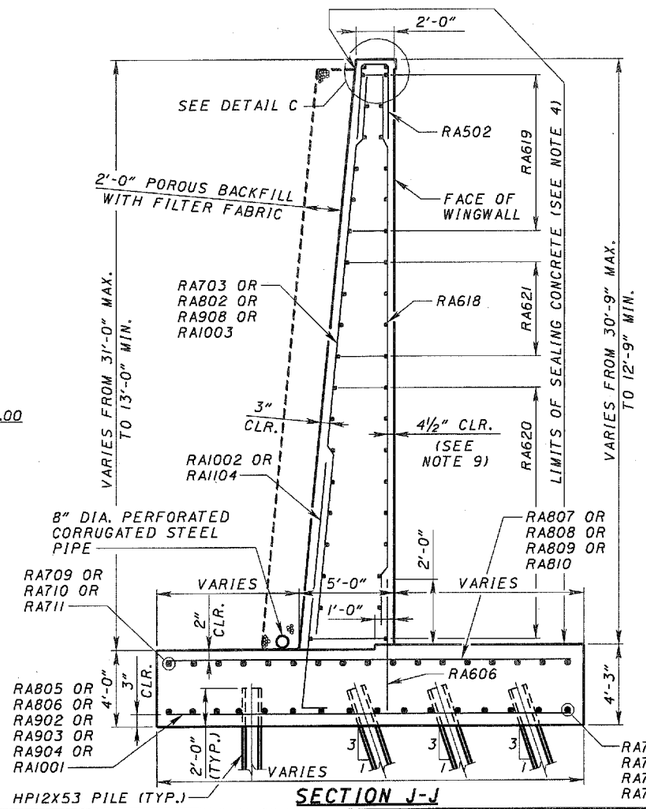
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WINGWAL PARTIAL PLAN



WINGWALL PARTIAL ELEVATION



SECTION J-J

NOTES:

1. FOR REINFORCING SCHEDULE, SEE SHEETS 25/28, AND 26/28.
2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEET 7/28.
3. FOR AESTHETIC DETAILS, SEE SHEET 16/28.
4. FOR SEALING OF CONCRETE SURFACES NOTE, SEE SHEET 3/28.
5. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE TO 1 FOOT BELOW EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF WINGWALLS.
6. FOR DETAIL C, SEE SHEET 9/28.
7. THE SLOPE OF THE WALL VARIES, PLACE REINFORCEMENT ACCORDINGLY.
8. FOR LAP LENGTH TABLE, SEE SHEET 15/28.
9. 4 1/2" CLEARANCE TO STEEL REINFORCEMENT INCLUDES 1 1/2" MAX FORMLINER RELIEF.

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AFK		2530171	

REAR ABUTMENT DETAILS

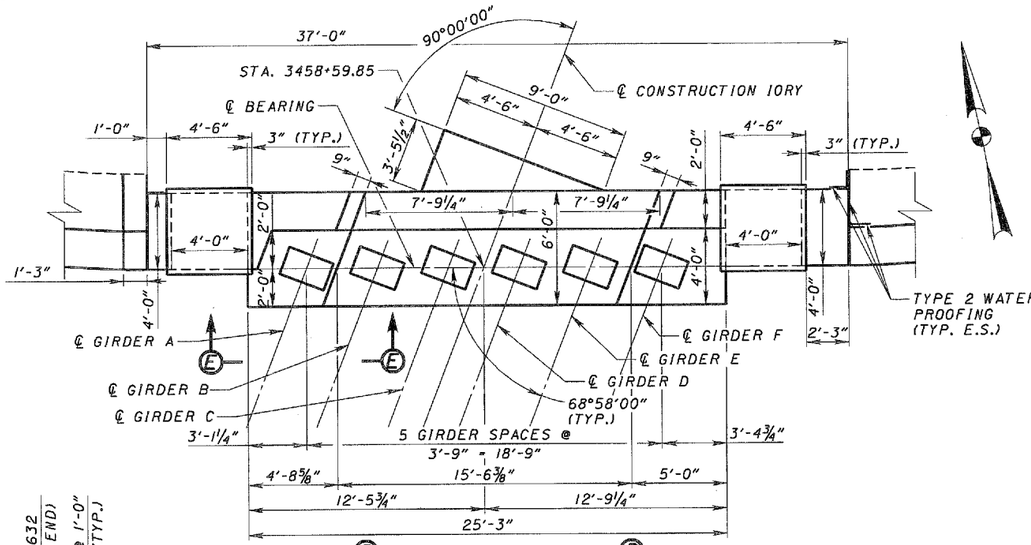
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 111)

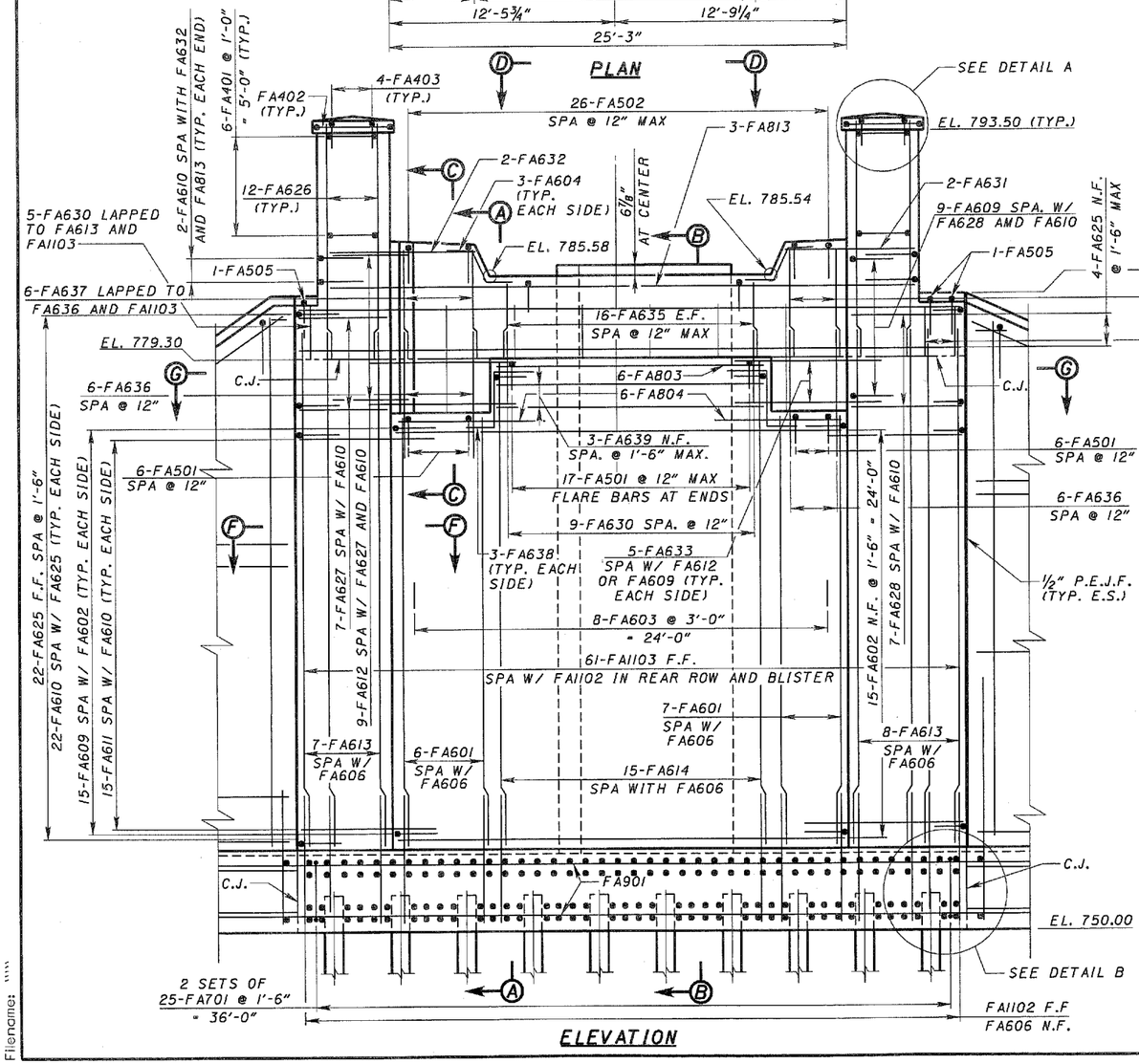
FRA-CR11-10.49
PID 76255
FCEO 1135

10/28

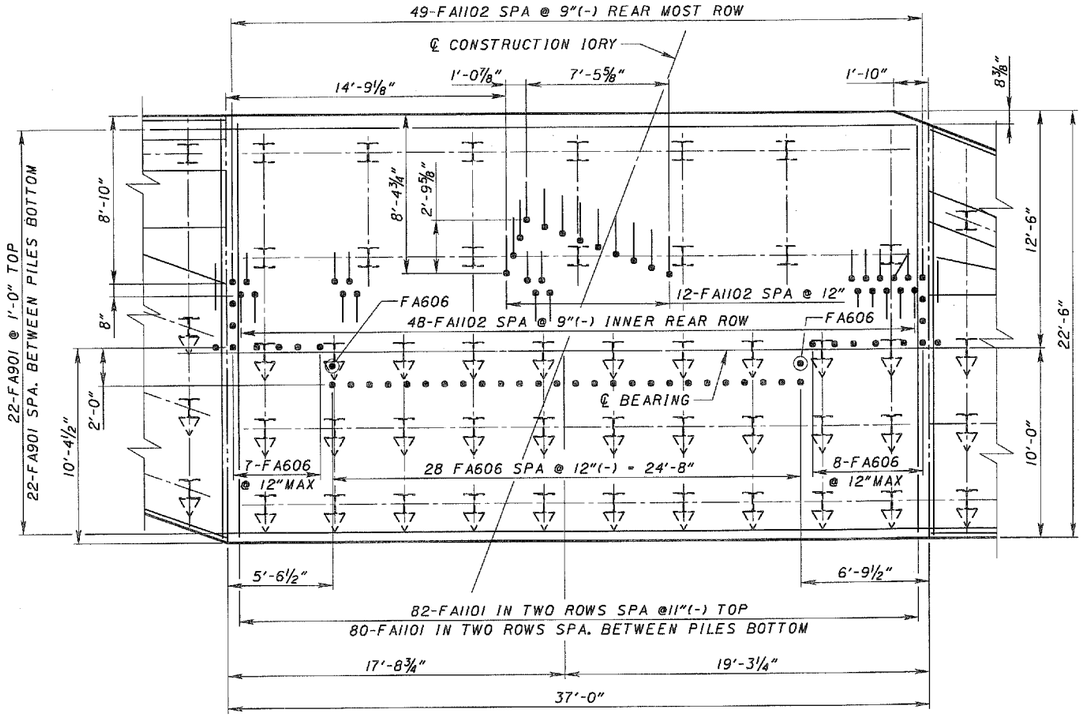
98/118

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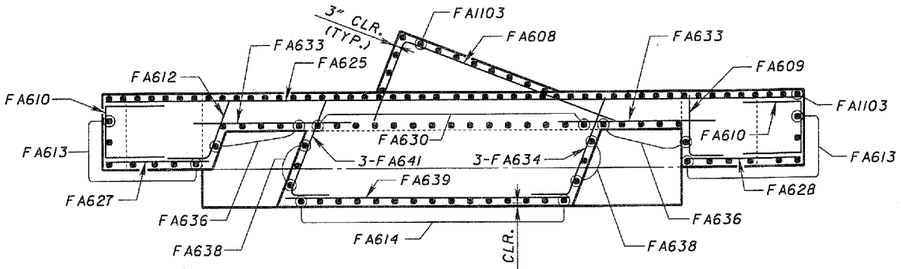




ELEVATION



FOOTING PLAN



SECTION G-G

NOTES:

1. FOR SECTIONS A-A THRU F-F, LAP LENGTH TABLE AND ABUTMENT DETAILS, SEE SHEET 13/28.
2. FOR PILE LAYOUT, SEE SHEET 6/28.
3. FOR REINFORCING SCHEDULE, SEE SHEETS 26/28, THRU 28/28.
4. FOR DETAIL A AND B, SEE SHEET 15/28.
5. TO MEET THE CONSTRUCTION SCHEDULE, HIGH EARLY STRENGTH CONCRETE WILL BE UTILIZED FOR THE CONSTRUCTION OF THE ABUTMENT ABOVE THE BEAM SEAT ELEVATION OF 779.76 FOR THE REAR ABUTMENT AND EL. 779.30 FOR THE FORWARD ABUTMENT. THE ADDITIONAL COSTS ASSOCIATED WITH THE HIGH EARLY STRENGTH CONCRETE MIX ABOVE THE BEAM SEATS SHALL BE INCLUDED WITH ITEM 511, CLASS C CONCRETE, ABUTMENT, AS PER PLAN.

DESIGN AGENCY: TranSystems, 148 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AFK		2530171	

FORWARD ABUTMENT PLAN AND ELEVATION

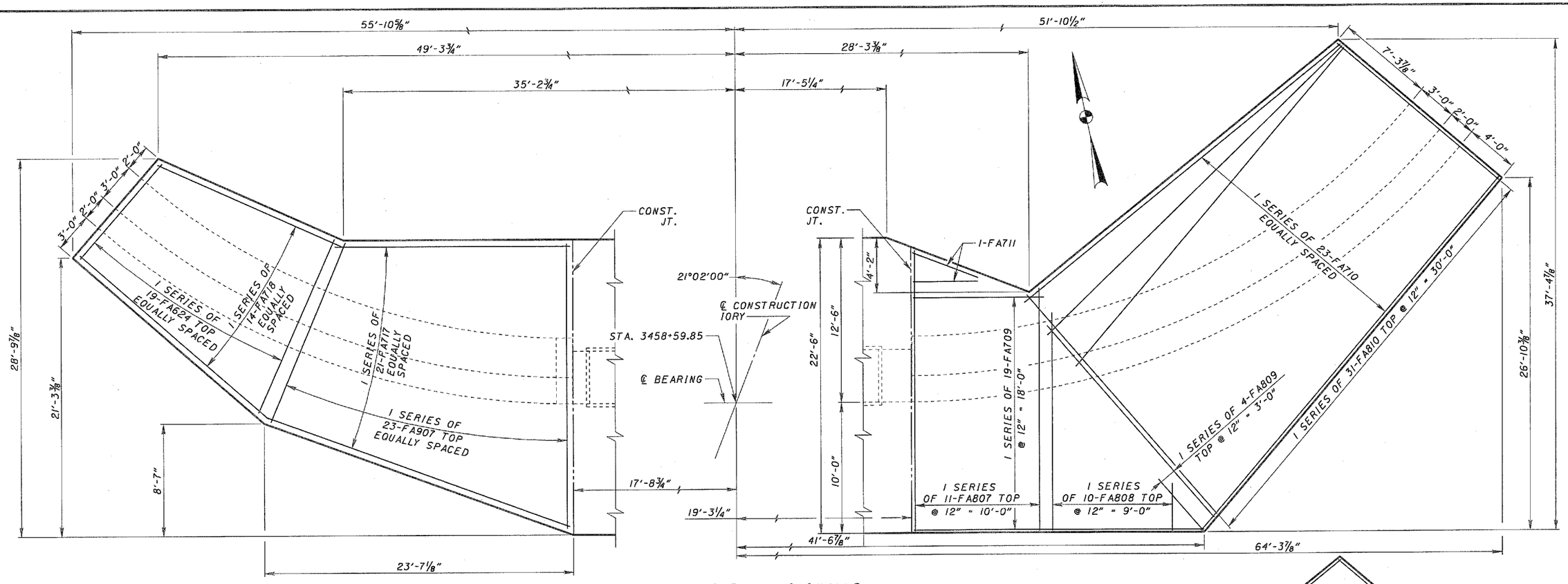
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

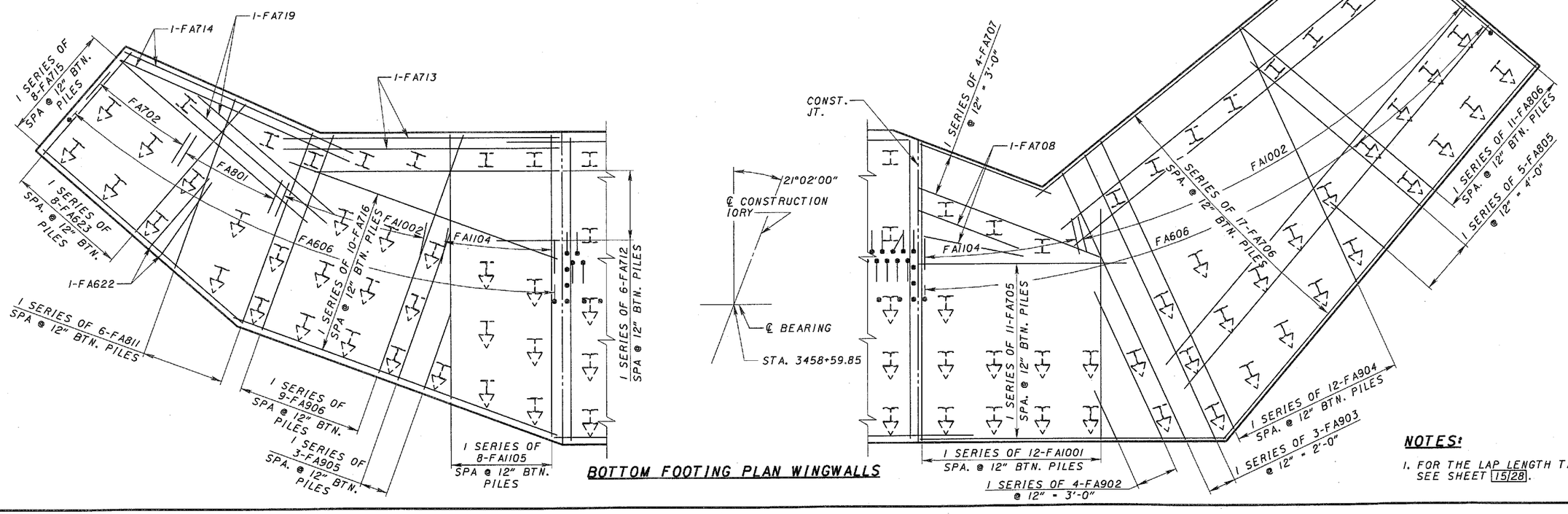
11/28

99/118

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:45:21PM
Filename: ""



TOP FOOTING PLAN WINGWALLS



BOTTOM FOOTING PLAN WINGWALLS

NOTES:

1. FOR THE LAP LENGTH TABLE, SEE SHEET 15/28.

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRN		2530171	

FORWARD ABUTMENT FOOTING PLAN

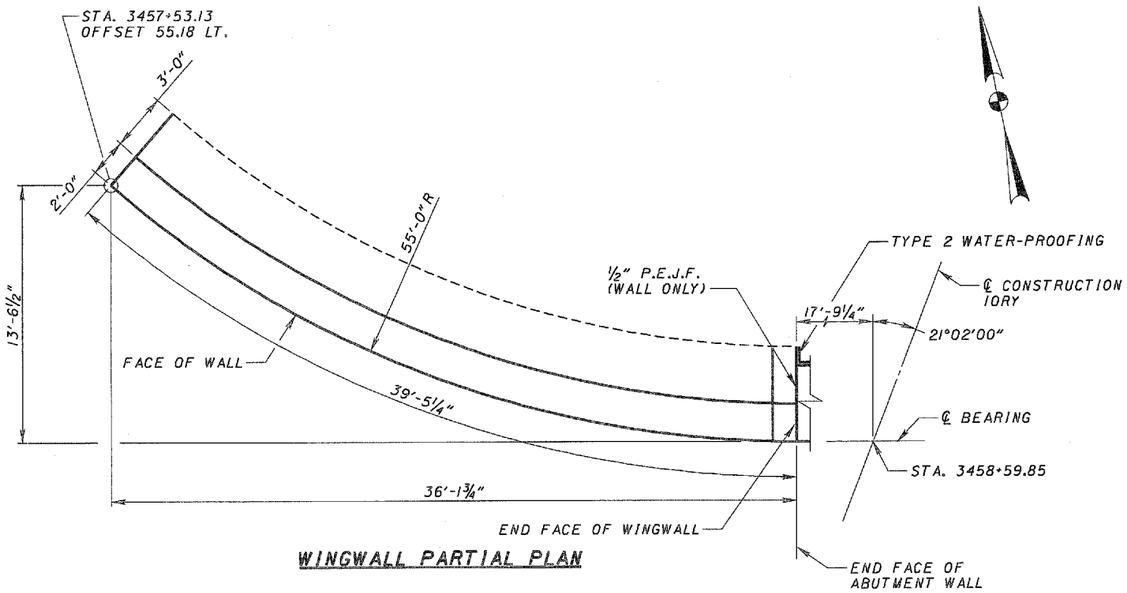
BRIDGE NO. FRA-11-1078
10CR OVER ALKIRE ROAD (CR 111)

FRA-CR11-10.49
PID 76255
FCEO 1135

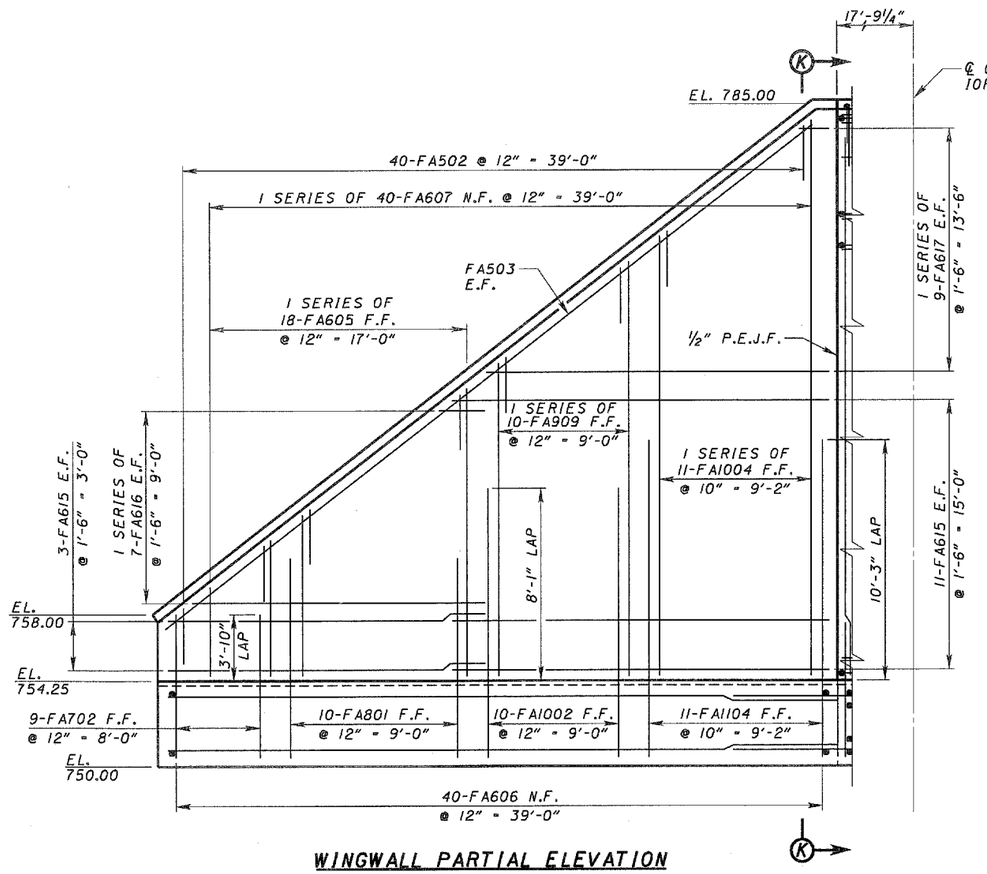
12/28

100/118

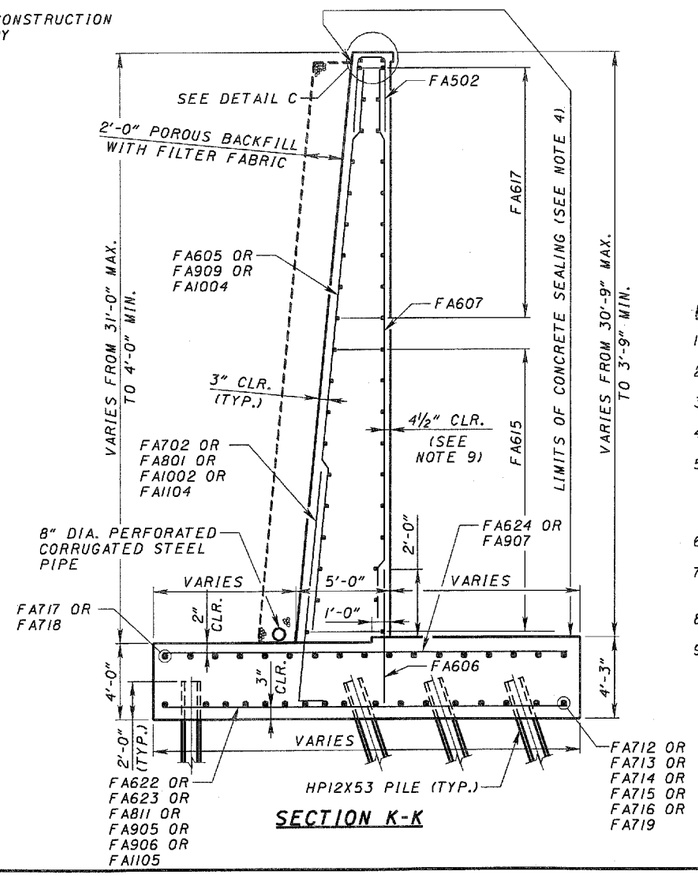
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Filename: "\\\"



WINGWALL PARTIAL PLAN



WINGWALL PARTIAL ELEVATION



SECTION K-K

NOTES:

1. FOR REINFORCING SCHEDULE, SEE SHEETS 26/28, THRU 28/28.
2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEET 11/28.
3. FOR AESTHETIC DETAILS, SEE SHEET 16/28.
4. FOR SEALING OF CONCRETE SURFACE NOTE, SEE SHEET 3/28.
5. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE TO 1 FOOT BELOW EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF WINGWALLS.
6. FOR DETAIL C, SEE SHEET 9/28.
7. THE SLOPE OF THE WALL VARIES, SLOPE REINFORCEMENT TO MATCH SLOPE OF WALL.
8. FOR THE LAP LENGTH TABLE, SEE SHEET 15/28.
9. 4½" CLEARANCE TO STEEL REINFORCEMENT INCLUDES 1½" MAX FORMLINER RELIEF.

DESIGN AGENCY
TranSystems
105 SYNDER ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AFK		2530171	

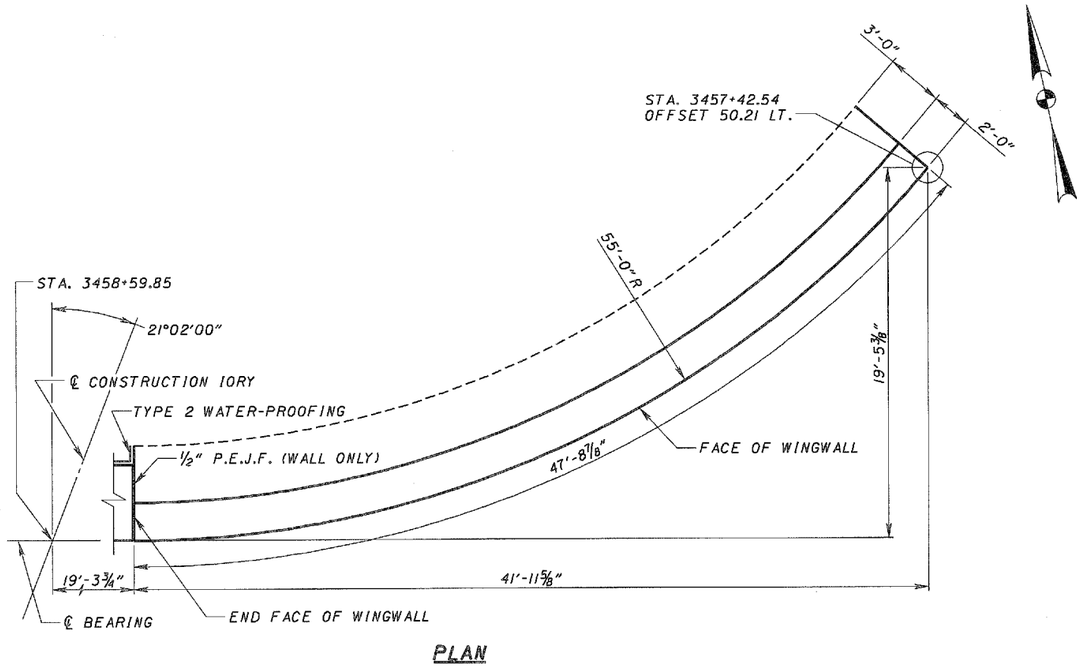
FORWARD ABUTMENT DETAILS
BRIDGE NO. FRA-11-1078
JORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

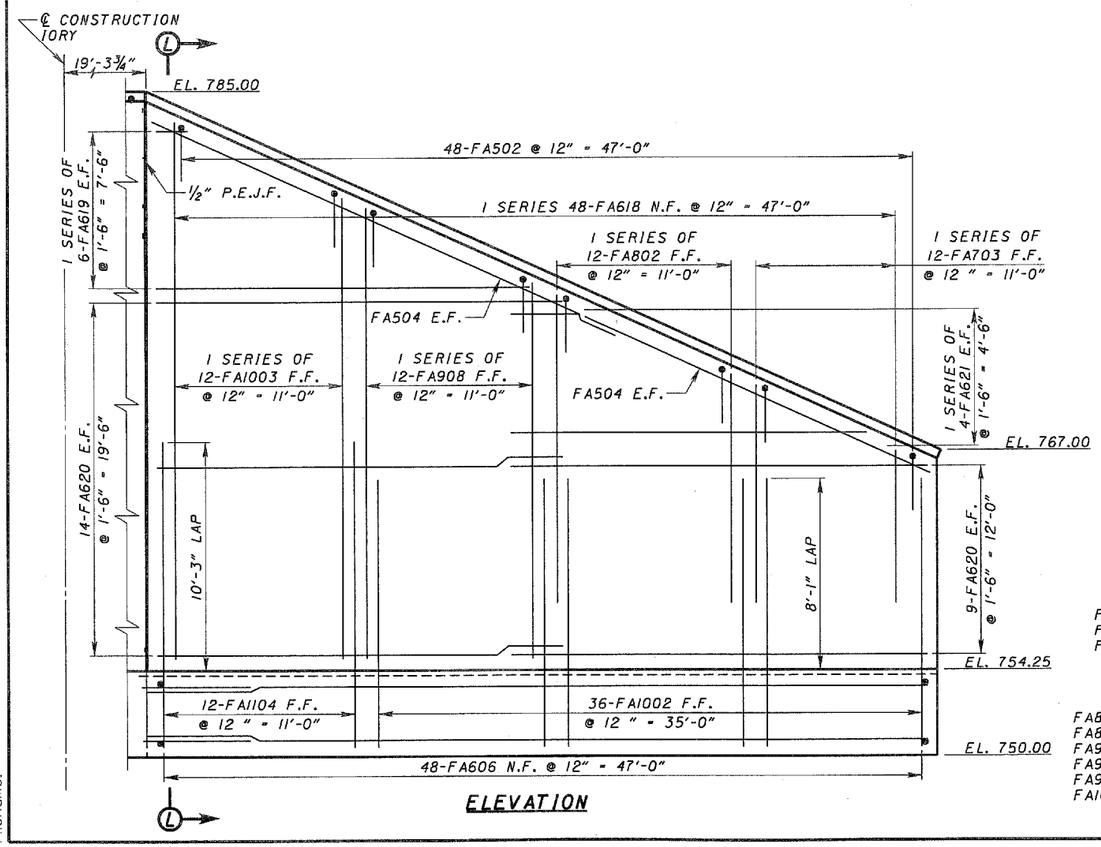
13/28

101
118

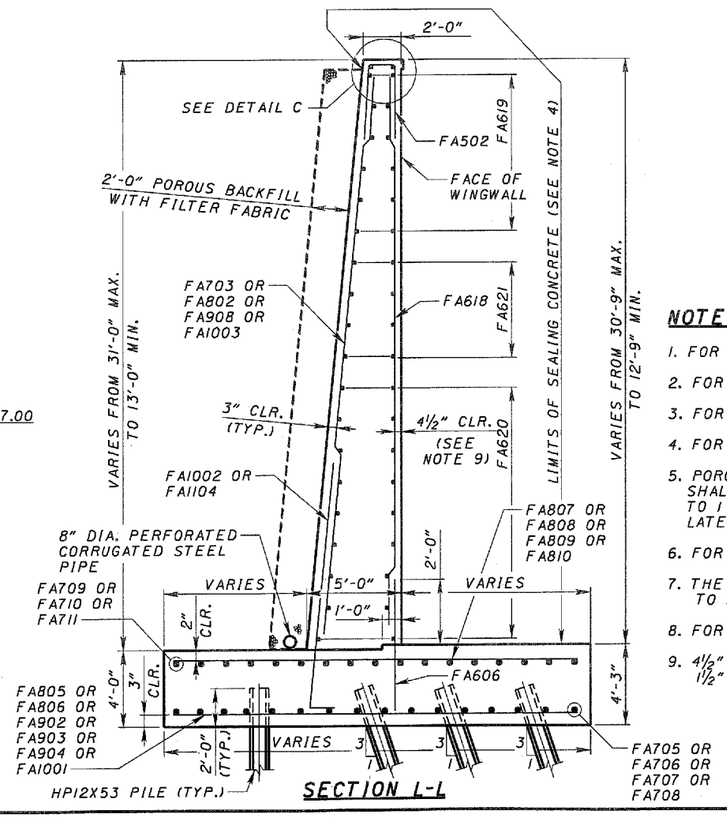
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Filename: \\\\\



PLAN



ELEVATION



SECTION L-L

NOTES:

1. FOR REINFORCING SCHEDULE, SEE SHEETS 26/28, THRU 28/28.
2. FOR ABUTMENT PLAN AND ELEVATION, SEE SHEET 11/28.
3. FOR AESTHETIC DETAILS, SEE SHEET 16/28.
4. FOR SEALING OF CONCRETE SURFACES NOTE, SEE SHEET 3/28.
5. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE TO 1 FOOT BELOW EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF WINGWALLS.
6. FOR DETAIL C, SEE SHEET 9/28.
7. THE SLOPE OF THE WALL VARIES, SLOPE REINFORCEMENT TO MATCH SLOPE OF WALL.
8. FOR THE LAP LENGTH TABLE, SEE SHEET 15/28.
9. 4½" CLEARANCE TO STEEL REINFORCEMENT INCLUDES 1½" MAX. FORMLINER RELIEF.

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AFK		2530171	

FORWARD ABUTMENT DETAILS

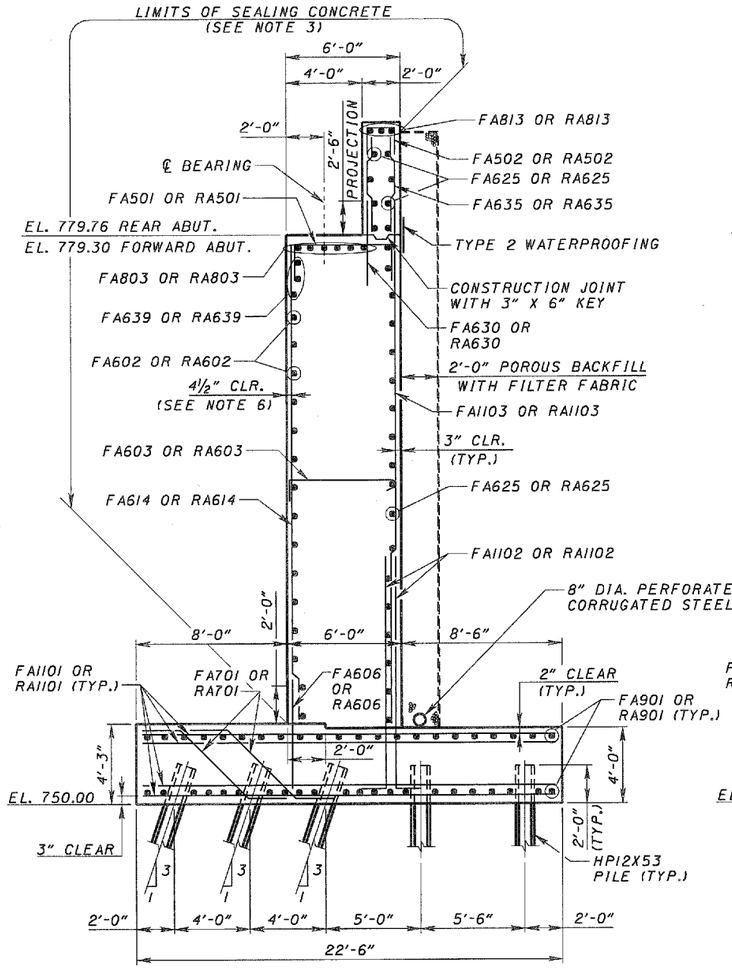
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

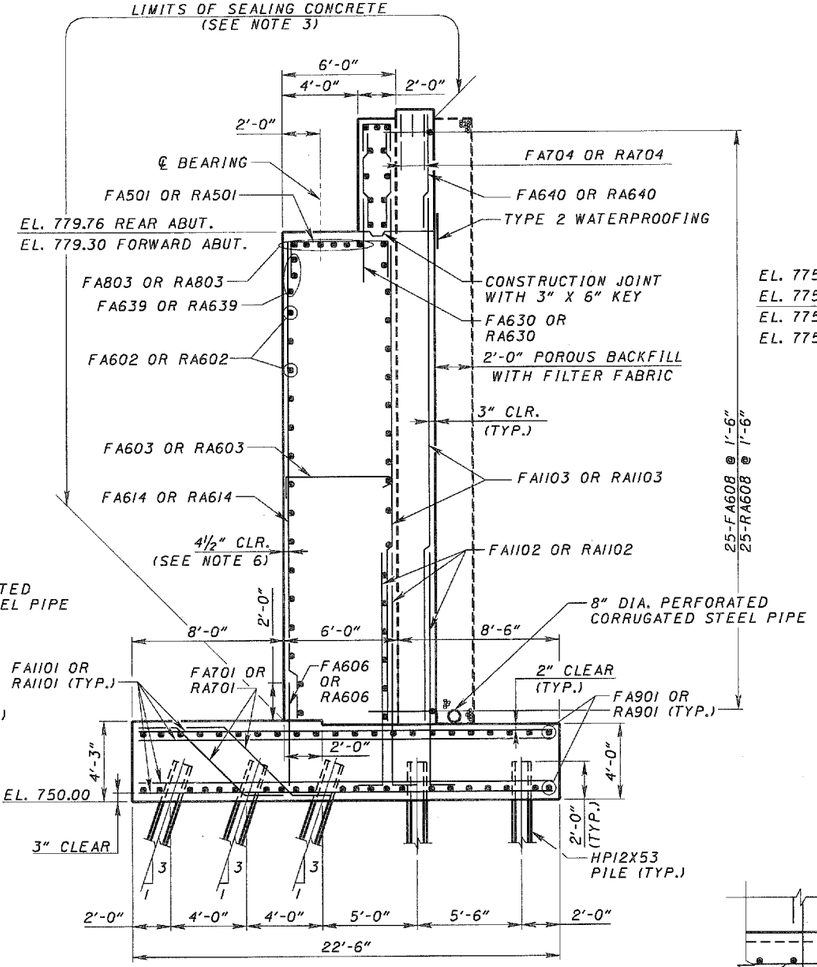
14/28

102/118

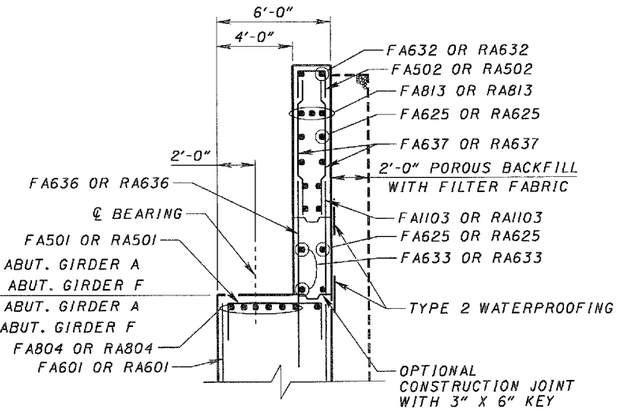
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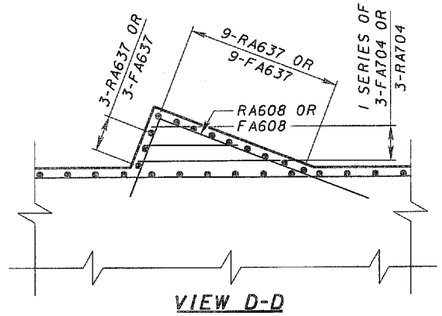
SECTION A-A



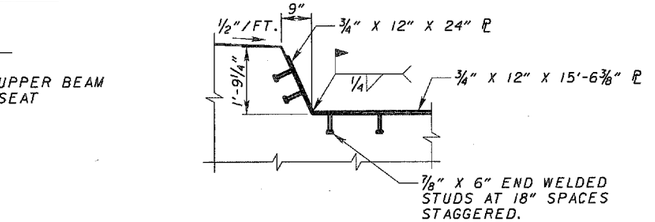
SECTION B-B



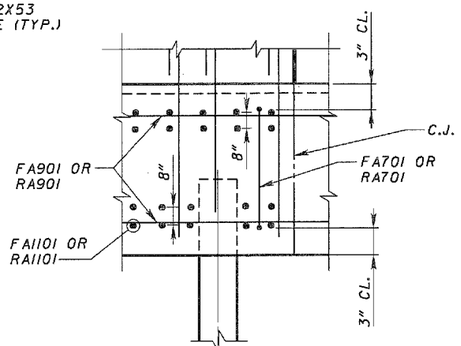
SECTION C-C



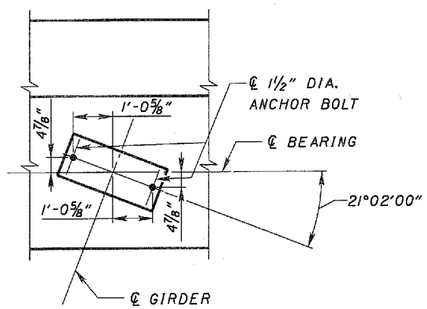
VIEW D-D



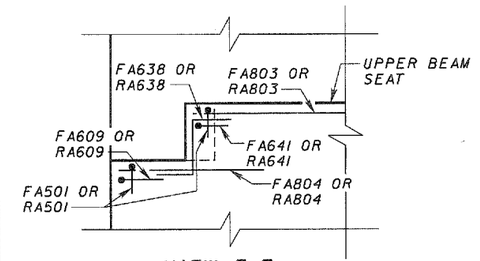
ABUTMENT PLATE DETAIL



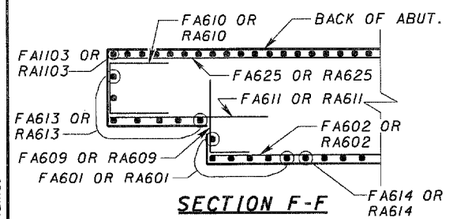
DETAIL B



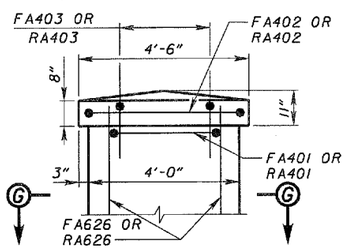
ANCHOR BOLT LAYOUT



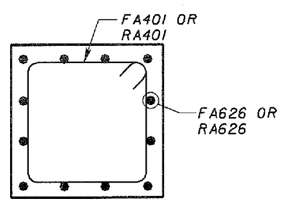
VIEW E-E



SECTION F-F



DETAIL A



SECTION G-G

LAP LENGTH TABLE	
BAR	MIN. REQUIRED LAP LENGTH
#5 HORIZONTAL	2'-0"
#6 HORIZONTAL	2'-6"
#6 VERTICAL	3'-10"
#6 (RA606)	2'-0"
#8	6'-5"
#9	8'-1"
#10	10'-3"
#11	12'-7"

NOTES:

1. FOR ANCHOR BOLT AND BEARING DETAILS, SEE SHEET 23/28.
2. TYPE 2 WATERPROOFING, 3'-0" WIDE SHALL BE CENTERED ON THE JOINT AND EXTEND THE FULL LENGTH OF THE CONSTRUCTION JOINT.
3. FOR SEALING OF CONCRETE SURFACES NOTE, SEE SHEET 3/28.
4. FOR SECTIONS A-A THROUGH G-G, SEE SHEETS 7/28 AND 11/28.
5. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.
6. 4½" CLEARANCE TO STEEL REINFORCEMENT INCLUDES 1½" MAX. FORMLINER RELIEF.

DESIGN AGENCY: TranSystems, 100 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRN		2530171	

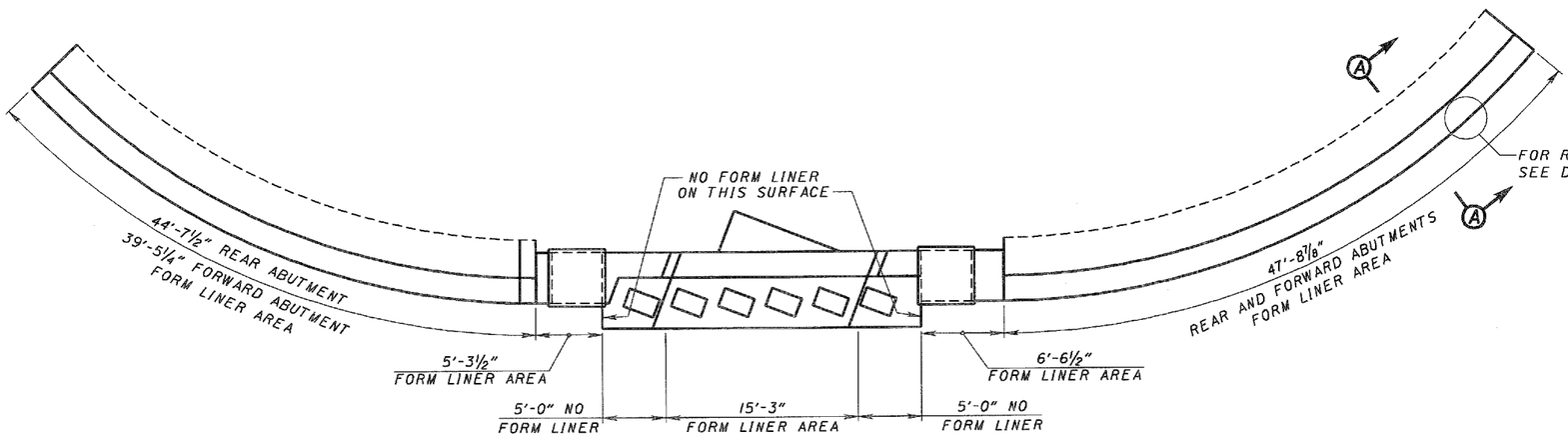
ABUTMENT DETAILS
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IORY OVER ALKIRE ROAD (CR 111)

FRA-CR11-10.49
PID 76255
FCEO 1135

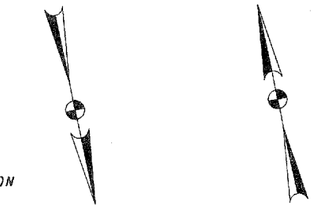
15/28

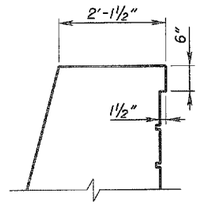
103/118

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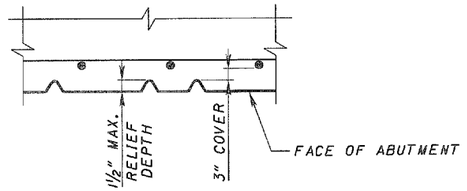


PLAN

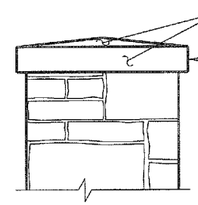




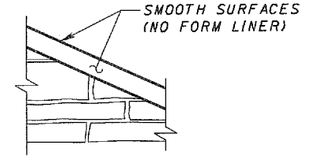
SECTION A-A



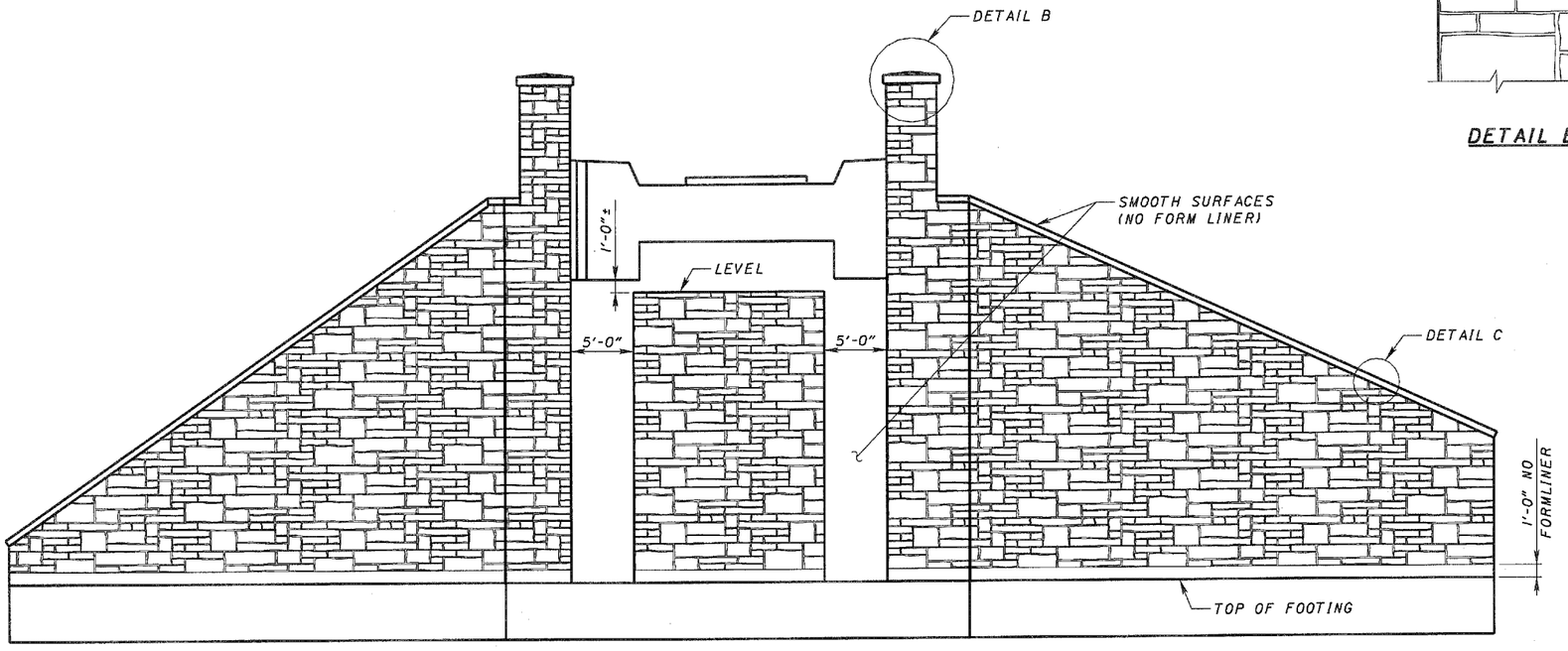
DETAIL A



DETAIL B



DETAIL C



ELEVATION

NOTES:

1. FOR FORM LINER NOTES, SEE SHEET 4/28.
2. FOR ABUTMENT PLAN, ELEVATION AND DETAILS, SEE SHEETS 7/28 THRU 15/28.

DESIGN AGENCY
TranSystems
105 SEMINOLE ROAD SUITE 400
COLUMBUS, OHIO 43209

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	DJL	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRN		2530171	

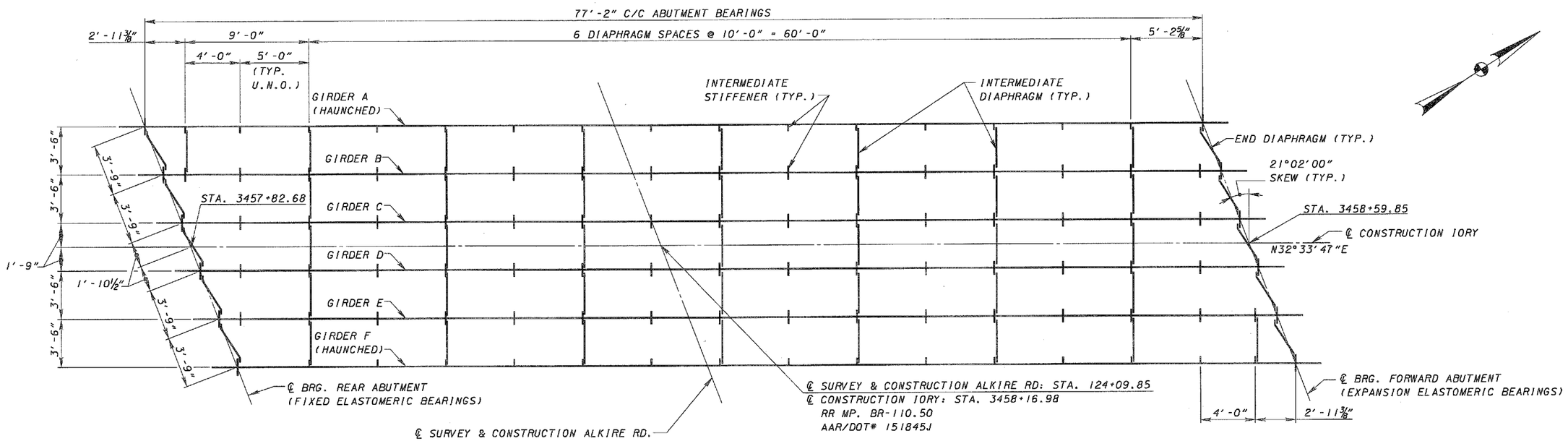
AESTHETIC DETAILS
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

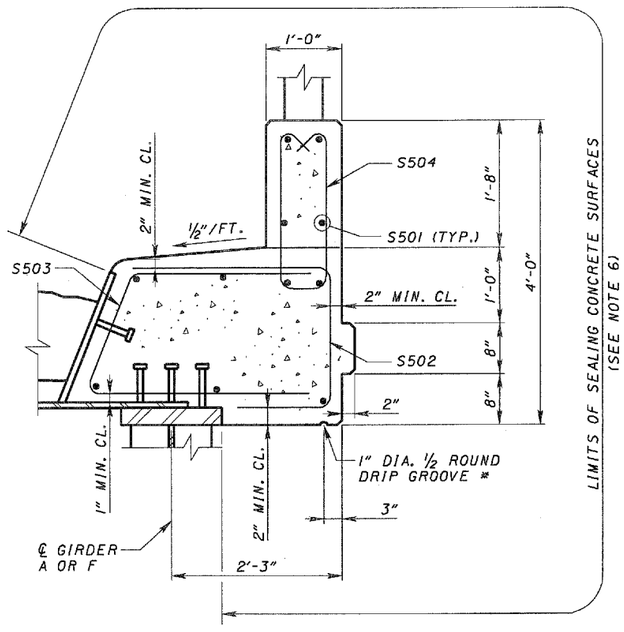
16/28

104
118

Plotted By: aschelderer Date: 6/7/2009 Time: 2:45:23 PM
Filename: \\\\



FRAMING PLAN



TYPICAL PARAPET SECTION

* DRIP GROOVE SHALL TERMINATE 3'-0" FROM END OF DECK.

NOTES:

1. FOR GIRDER ELEVATIONS, SEE SHEET 19/28.
2. FOR STIFFENER DETAILS, AND INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE SHEETS 19/28 AND 20/28.
3. FOR ABBREVIATIONS, SEE SHEET 4/28.
4. FOR REINFORCING SCHEDULE, SEE SHEET 28/28.
5. FOR ABUTMENT PLATE DETAILS, SEE SHEET 15/28.
6. FOR SEALING OF CONCRETE SURFACE NOTE, SEE SHEET 3/28.
7. FOR A PLAN OF THE PARAPETS, REINFORCING SPACING, RAILING DETAILS AND ANCHOR BOLT PLACEMENT, SEE SHEET 24/28.
8. FOR DECK PLATE DETAILS, SEE SHEET 21/28.

DESIGN AGENCY: TranSystems, 105 SCHIRICK, ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	RCK	RCR	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
IAS		2530171	

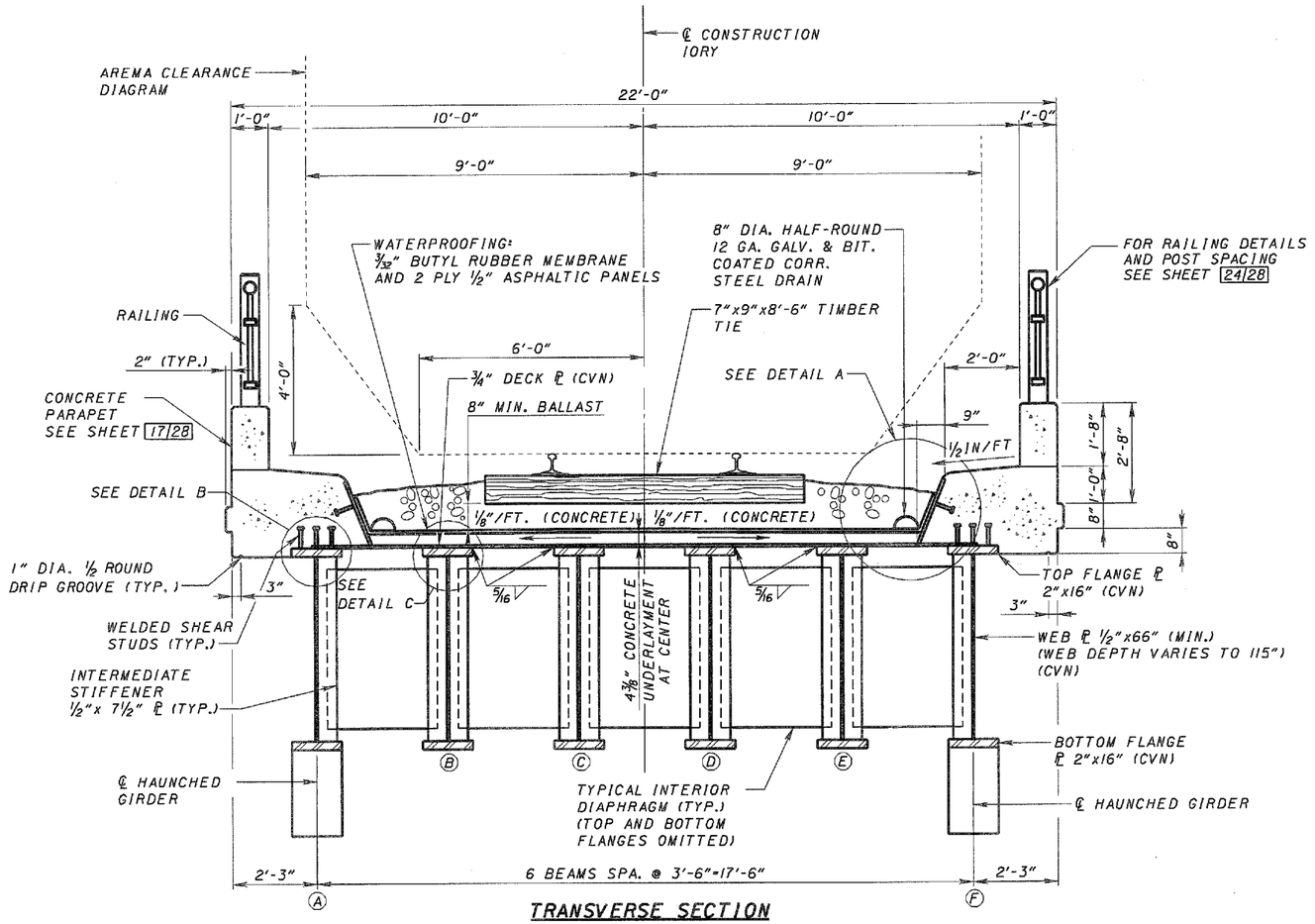
FRAMING PLAN
BRIDGE NO. FRA-II-1078
IOCR OVER ALKIRE ROAD (CR 111)

FRA-CRII-10.49
PID 76255
FCEO 1135

17/28

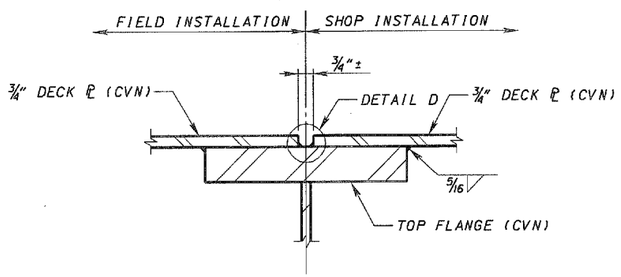
105/118

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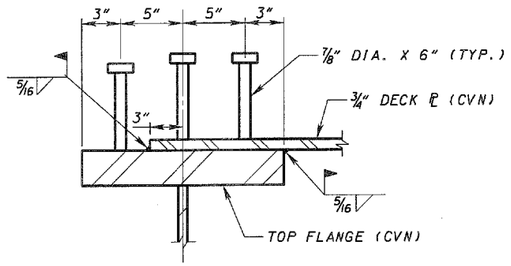


TRANSVERSE SECTION
(LOOKING UPSTATION)

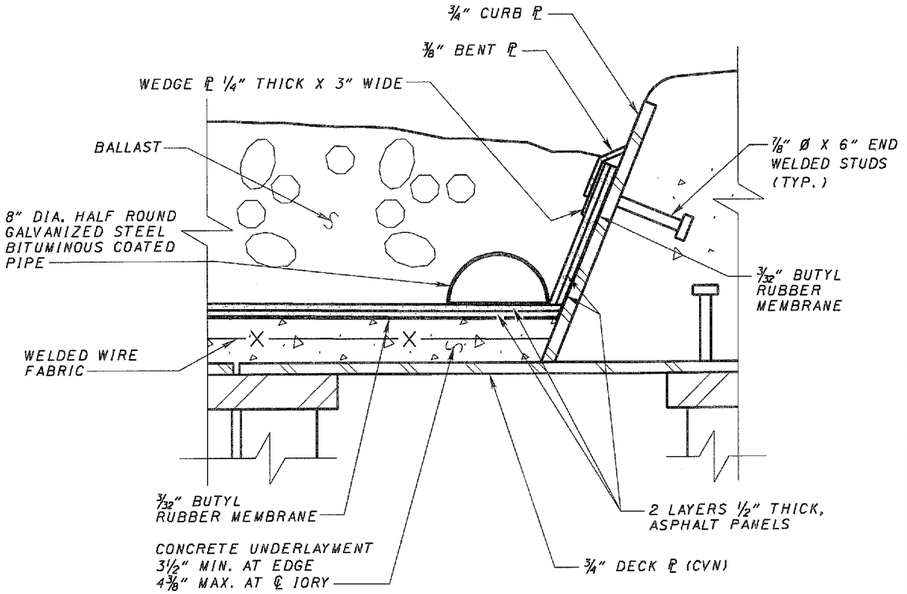
DETAIL D



DETAIL C
(GIRDER B SHOWN, GIRDER D SIMILAR, GIRDER C AND E OPPOSITE HAND)



DETAIL B
(GIRDER A SHOWN, GIRDER F OPPOSITE HAND)



DETAIL A

NOTES:

1. SHOP ASSEMBLE GIRDERS B, C, D AND E.
2. THE WELDED WIRE FABRIC REINFORCEMENT FOR THE CONCRETE UNDERLAYMENT SHALL BE INCLUDED IN THE PAYMENT WITH ITEM 511 AND SHALL BE W4 WITH 4" SQUARE SPACING.
3. THE RAILROAD ITEMS SHALL HAVE THE FOLLOWING DIMENSIONS:
   TIES SHALL BE 8'-6"x9"x7" AND SPACED AT 1'-9" CENTERS.
   RAIL SHALL BE 6 5/8" IN HEIGHT AND 115LB/FT.
   BALLAST SHALL BE A MINIMUM DEPTH OF 8" UNDER THE TIES AND SHALL BE PER AREMA CHAPTER 1, ARTICLE 2.4.
4. FOR ADDITIONAL DECK PLATE DETAILS, SEE SHEET 21/28.
5. SUPERSTRUCTURE CONCRETE SHALL BE CLASS S CONCRETE, HIGH EARLY STRENGTH.

DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
IAS		2530171	

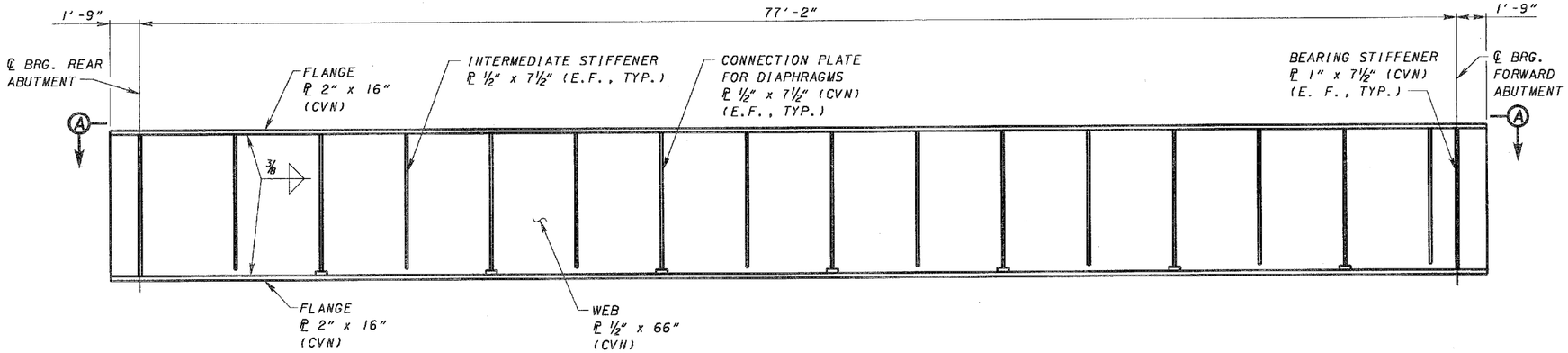
TRANSVERSE SECTION
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

18/28

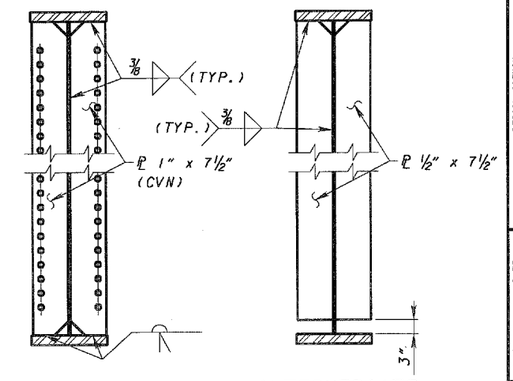
106/118

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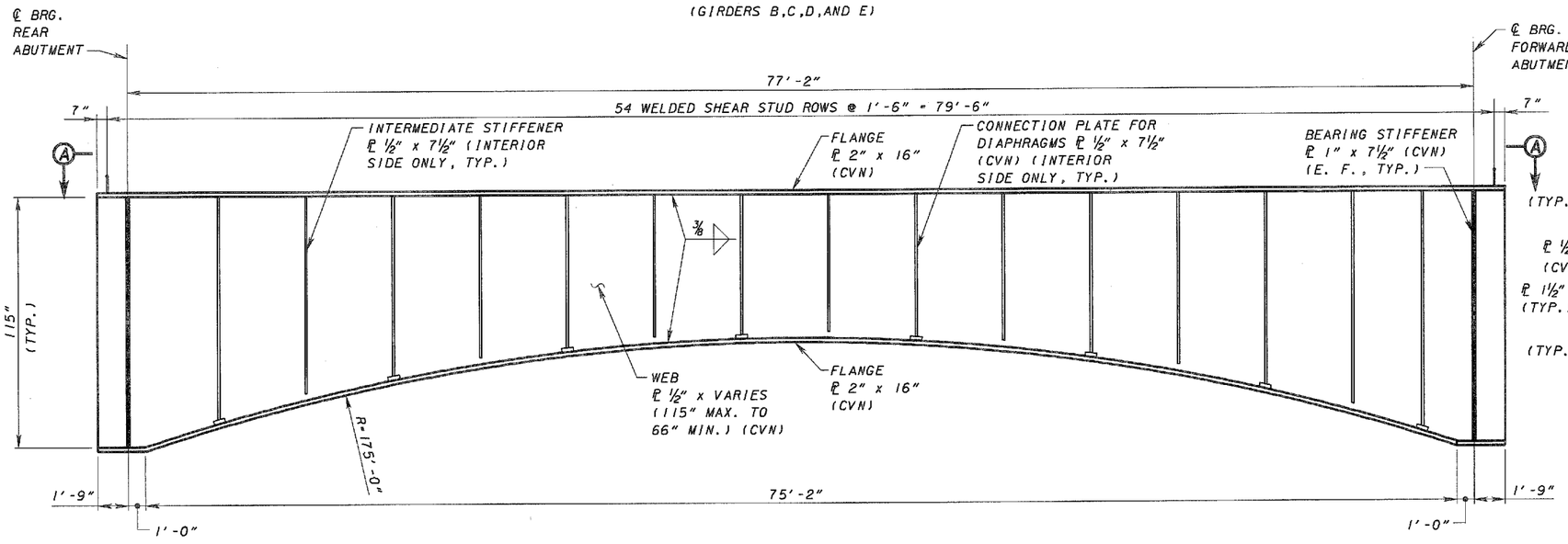
INTERIOR GIRDER ELEVATION

(GIRDERS B,C,D,AND E)



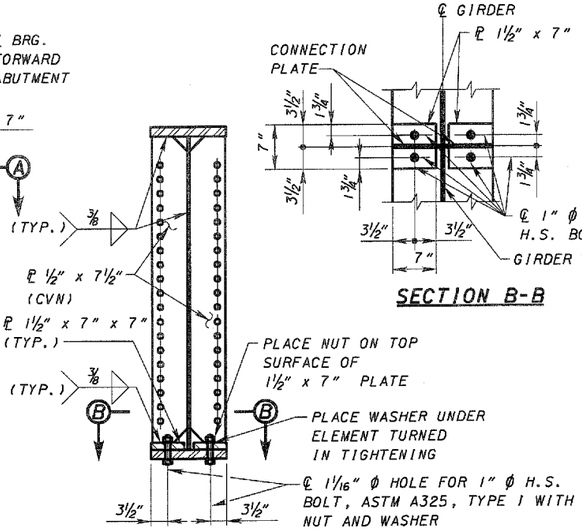
BEARING STIFFENER

INTERMEDIATE STIFFENER BETWEEN DIAPHRAGMS



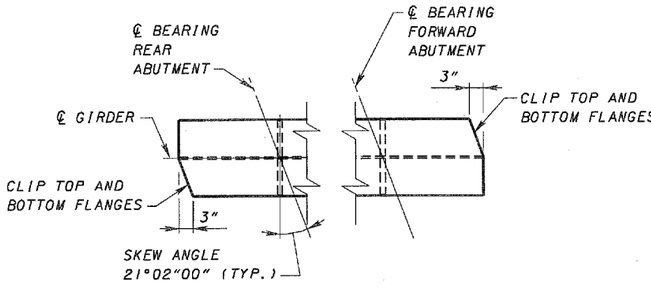
HAUNCHED FASCIA GIRDER ELEVATION

(GIRDER A SHOWN, GIRDER F OPOSITE HAND)

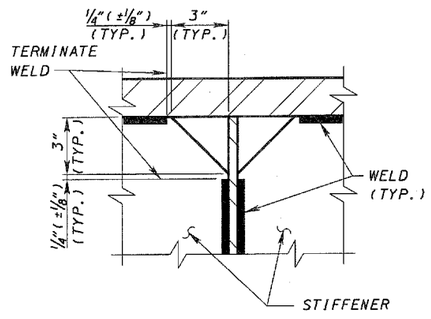


CONNECTION PLATE FOR DIAPHRAGM

SECTION B-B



VIEW A-A



STIFFENER WELD TERMINATION AND CLIPPING DETAIL

NOTES:

1. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER A325 UNLESS OTHERWISE NOTED.
2. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS PER AREMA CHAPTER 15, TABLE 1-2 (-30° F MIN. SERVICE TEMPERATURE FOR NON-FRACTURE CRITICAL MEMBERS) AND CHAPTER 15, TABLE 1-15 (-30° F MIN. SERVICE TEMPERATURE FOR FRACTURE CRITICAL MEMBERS).
3. FOR FRAMING PLAN, DIAPHRAGM AND STIFFENER SPACING, SEE SHEET 17/28.
4. FOR ABBREVIATIONS, SEE SHEET 4/28.
5. FOR WELDED SHEAR STUDS, SEE DETAIL B SHEET 18/28.
6. HAUNCHED GIRDERS: NEAR THE BEARING, AT THE INTERSECTION OF THE HORIZONTAL BOTTOM FLANGE WITH THE CURVED (HAUNCHED) PORTION OF THE BOTTOM FLANGE, THE CONTRACTOR'S FABRICATOR SHALL HOT BEND THE FLANGE IN ACCORDANCE WITH AASHTO DIVISION II, SECTION 11.4.3.3.3 OR PROVIDE A FULL PENETRATION WELD, WITH 100% RADIOGRAPHIC INSPECTION.

DESIGN AGENCY: TranSystems, 100 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED PEJ | CHECKED JAS | DRAWN RCK | REVISED | REVIEWED RER | DATE 10/16/07 | STRUCTURE FILE NUMBER 2530171

GIRDER ELEVATIONS

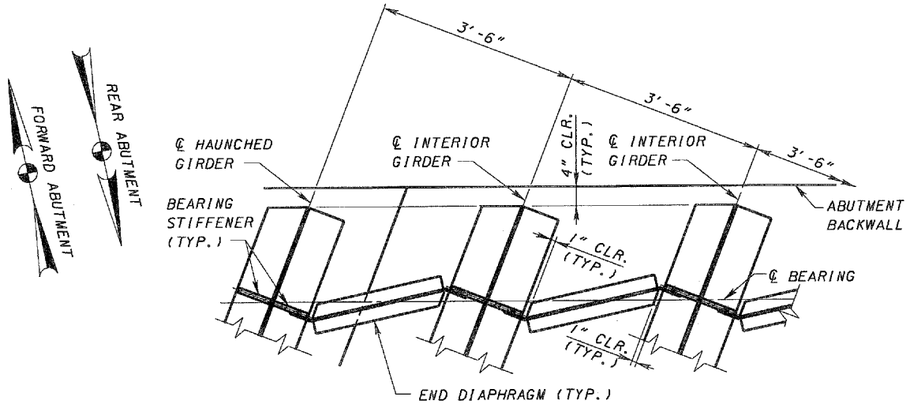
BRIDGE NO. FRA-11-1078
10CR OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

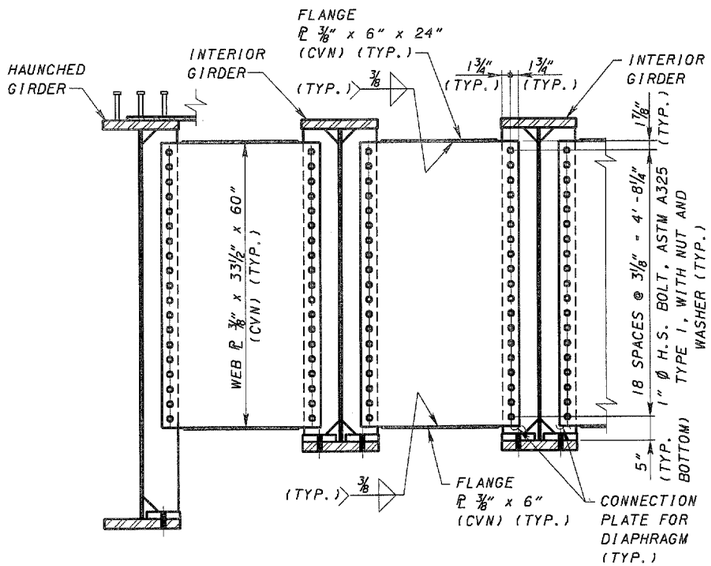
19/28

107/118

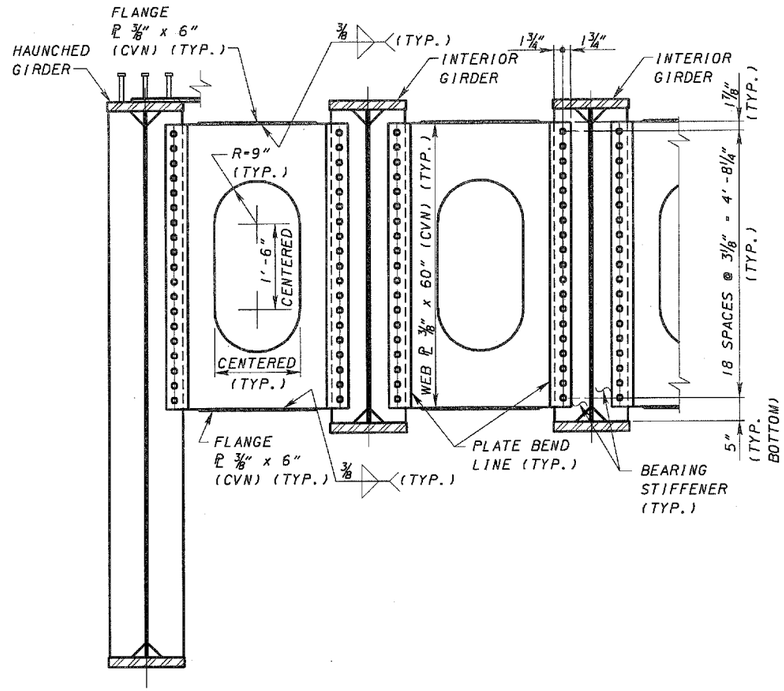
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Filename: "\"



PARTIAL PLAN OF END DIAPHRAGMS



INTERMEDIATE DIAPHRAGM ELEVATION



END DIAPHRAGM ELEVATION

NOTES:

1. FOR FRAMING PLAN, SEE SHEET 17/28.
2. FOR GIRDER ELEVATION, SEE SHEET 19/28.
3. FOR ADDITIONAL BEARING STIFFENER, INTERMEDIATE STIFFENER AND CONNECTION PLATE FOR DIAPHRAGM DETAILS, SEE SHEET 19/28 .
4. FOR ABBREVIATIONS, SEE SHEET 4/28.

DESIGN AGENCY: TranSystems, 100 SEVENTY FIRST ROAD, SUITE 100, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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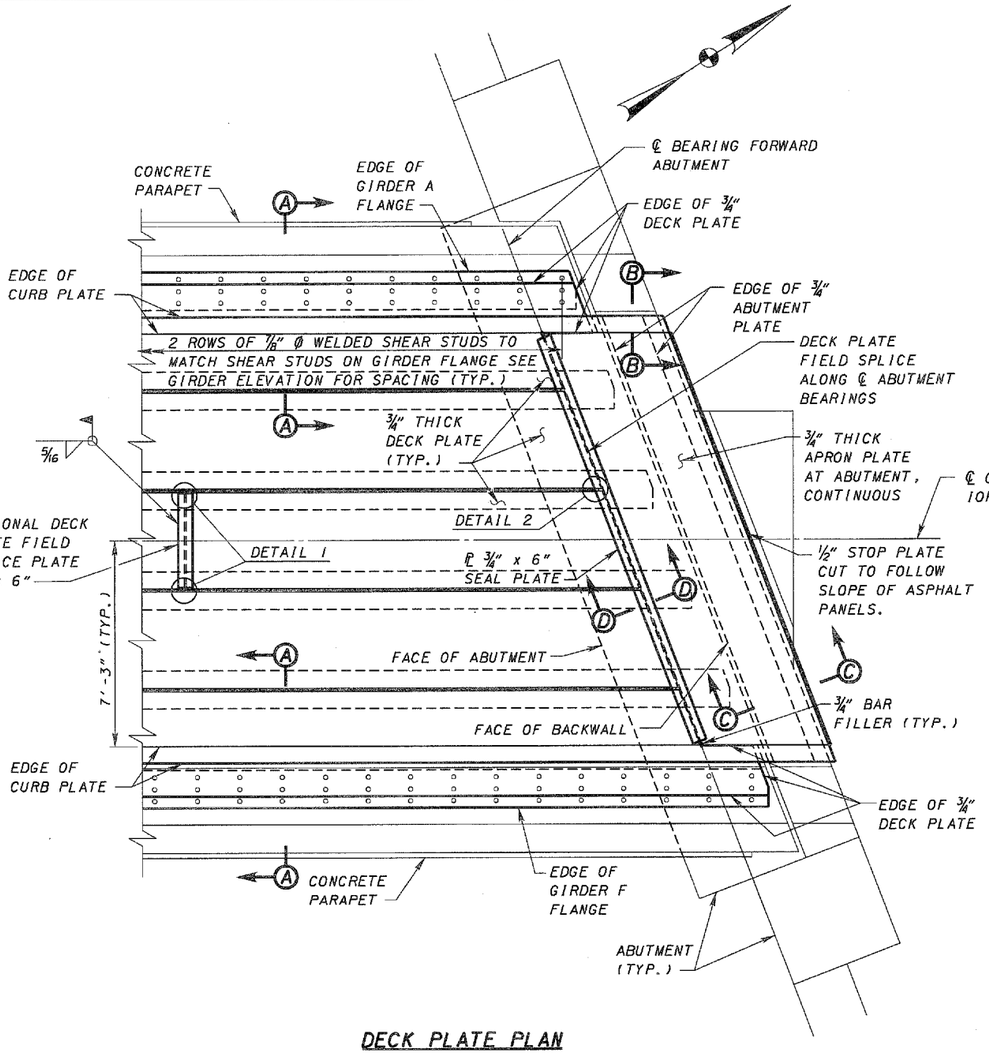
STEEL DIAPHRAGM DETAILS
BRIDGE NO. FRA-11-1078
10CR OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

20/28

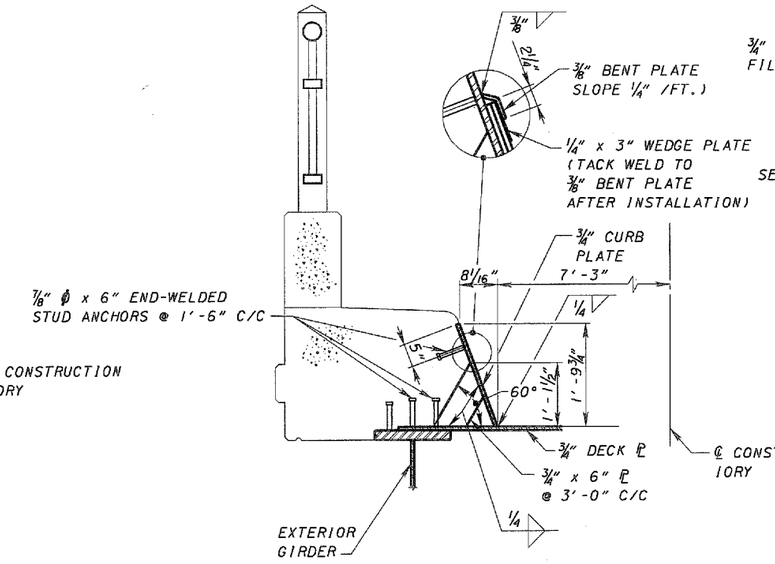
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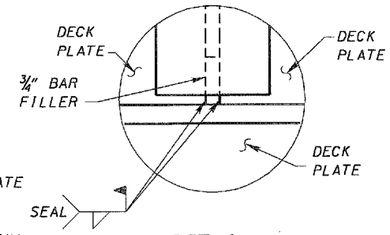


DECK PLATE PLAN

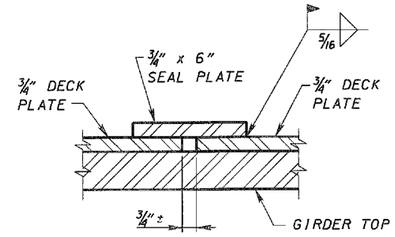
(FORWARD END OF STRUCTURE SHOWN REAR END OF STRUCTURE SIMILAR)



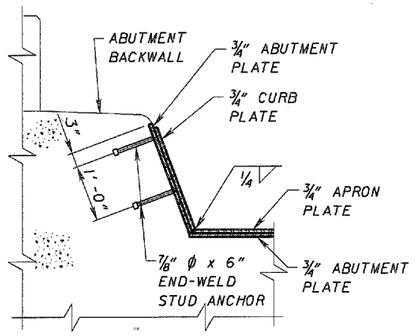
SECTION A-A



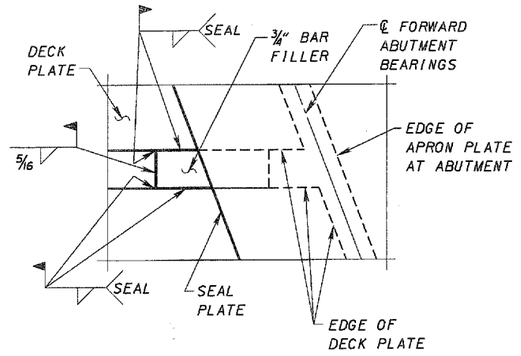
DETAIL 1



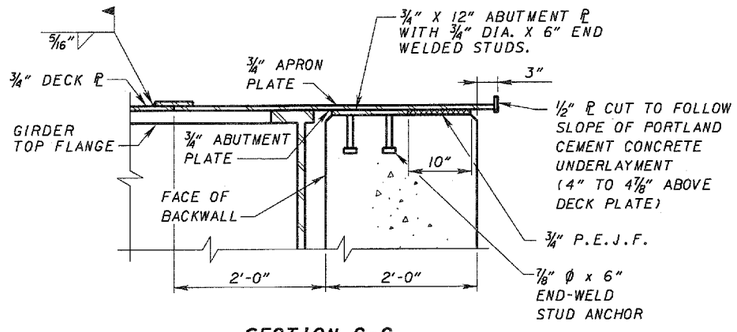
SECTION D-D



SECTION B-B



DETAIL 2



SECTION C-C

NOTE:

1. FOR FRAMING PLAN, SEE SHEET 17/28.
2. FOR TRANSVERSE SECTION, SEE SHEET 18/28.
3. FOR ABUTMENT PLATE DETAILS, SEE SHEET 15/28.
4. FOR GIRDER ELEVATION, SEE SHEET 19/28.

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	RCK	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
IAS		2530171	

DECK PLATE DETAILS

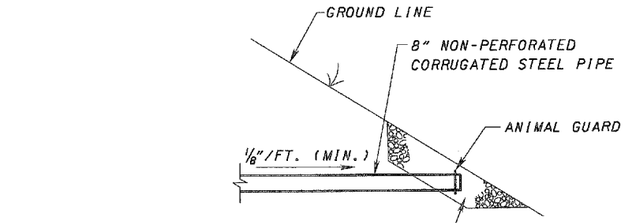
BRIDGE NO. FRA-11-1078
10CR OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

21/28

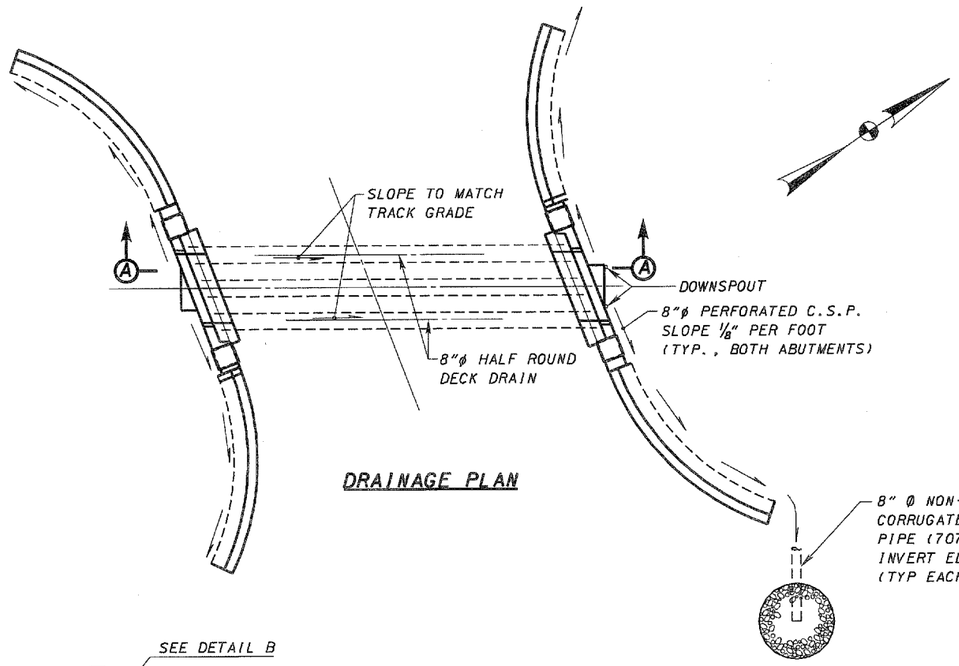
(109/118)

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:45:26 PM
Filename: \\\\

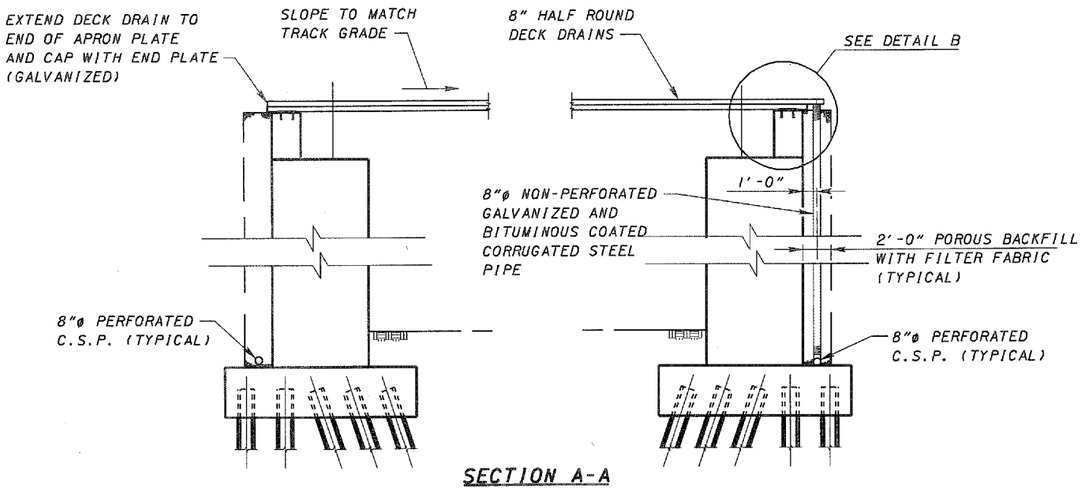


4'-0"x1'-0" THICK CRUSHED AGGREGATE SLOPE PROTECTION, INCLUDE WITH ITEM 518 - 8" NON-PERFORATED C.S.P., INCLUDING SPECIALS, AS PER PLAN FOR PAYMENT.

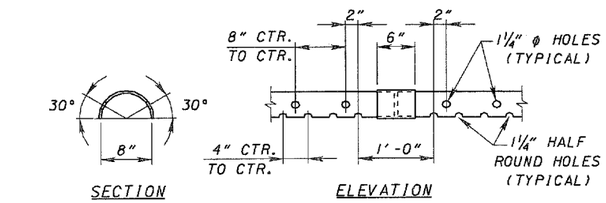
PIPE TERMINATION DETAIL



DRAINAGE PLAN



SECTION A-A

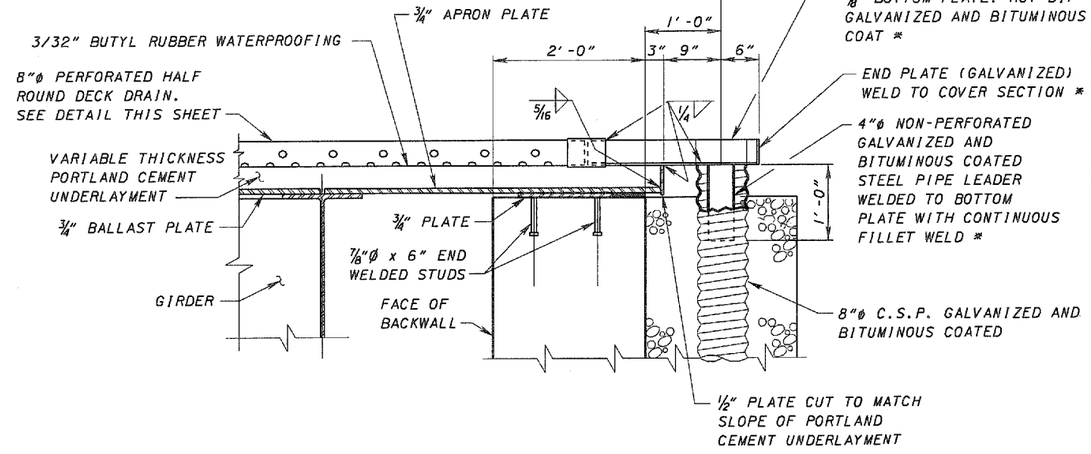


PLAN

DETAIL OF PERFORATED DRAIN

NOTE:

AT THE OPTION OF THE CONTRACTOR A STANDARD CORRUGATED DECK DRAIN COMPLETE WITH BOTTOM PAN (12 GAGE BITUMINOUS COATED) MAY BE SUBSTITUTED FOR THE HALF ROUND PERFORATED PIPE.



DETAIL B

* INCLUDED WITH ITEM 518 STRUCTURE DRAINAGE, MISC.: 8" NON-PERFORATED, GALVANIZED AND BITUMINOUS COATED CORRUGATED STEEL DRAIN, WITH TROUGH

NOTES:

1. FOR DETAILS OF THE APRON PLATE SEE SHEET 21/28.
2. C.S.P. INDICATES CORRUGATED STEEL PIPE.
3. FOR ABBREVIATIONS, SEE SHEET 4/28.
4. FOR TRANSVERSE SECTION, SEE SHEET 18/28.

DESIGN AGENCY: TranSystems, 1105 SCHROCK ROAD, SUITE 400, COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	DJL	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRN		2530171	

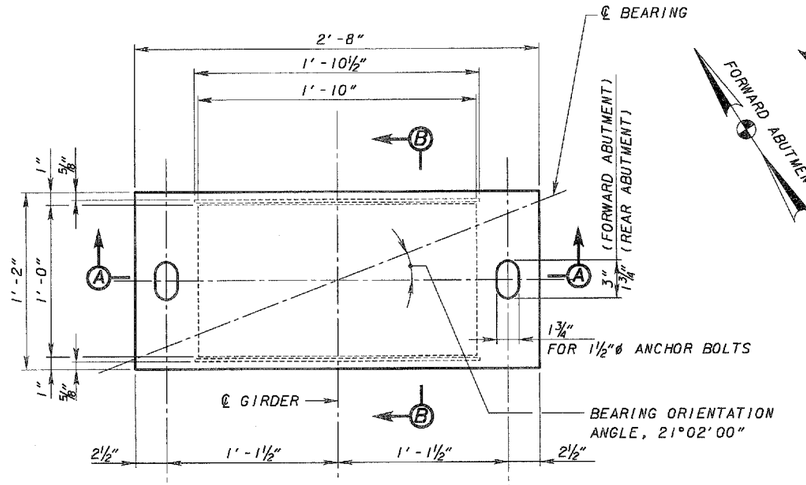
DRAINAGE DETAILS
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

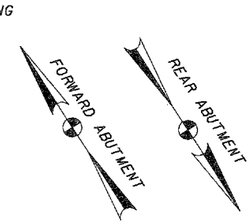
22/28

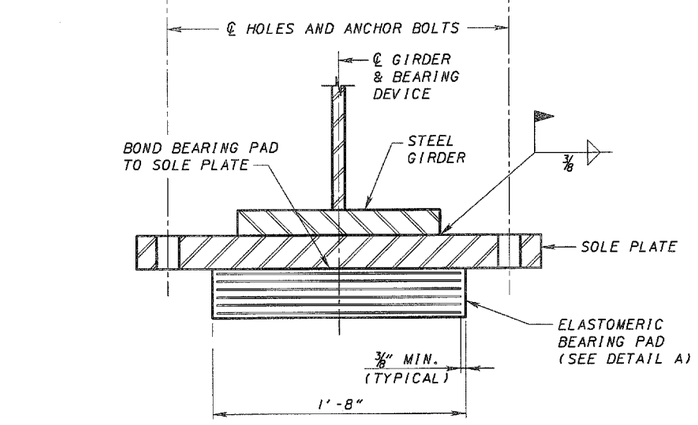
110/118

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:45:26 PM
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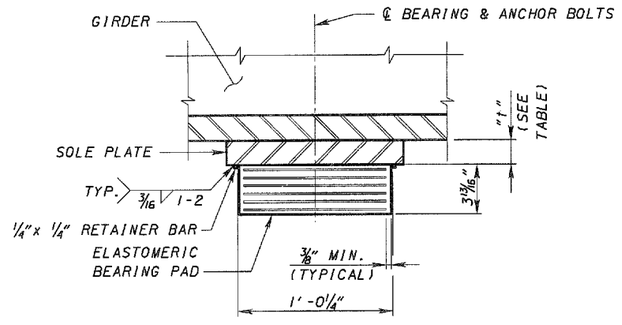


PLAN

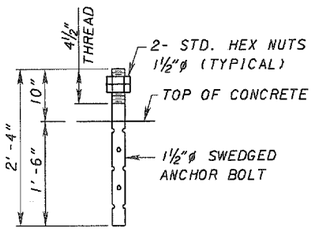




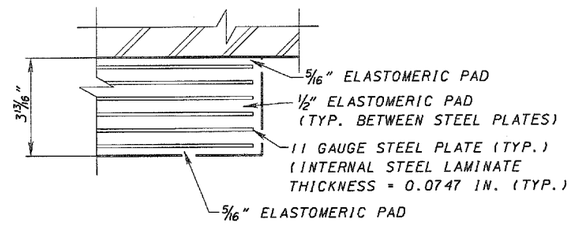
SECTION A-A



SECTION B-B



SWEDGED ANCHOR BOLT DETAIL



DETAIL A

STEEL SOLE PLATE DATA			
REAR ABUTMENT (FIXED)		FORWARD ABUTMENT (EXPANSION)	
GIRDER	"t"	GIRDER	"t"
A	2"	A	2"
B	2 5/16"	B	2 5/16"
C	2 3/16"	C	2 3/16"
D	2⅛"	D	2⅛"
E	2"	E	2"
F	2"	F	2"

NOTES:

1. SOLE PLATES, RETAINER BARS AND ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A709 GRADE 50.
2. THE NUTS FOR THE ANCHORS SHALL BE ASTM F563.
3. THE STEEL REINFORCEMENT SHALL BE ASTM A570, GRADE 36 OR ASTM A611, GRADE D.
4. THE ELASTOMER SHALL HAVE A HARDNESS OF 60 DUROMETER AND A SHEAR MODULUS G OF 140 PSI AT 73° F.
5. STEEL LOAD PLATES SHALL BE ASTM A709 GRADE 50 AND SHALL BE SHOP PAINTED WITH INORGANIC ZINC PRIMER AS SPECIFIED IN CMS 513.27. PAYMENT IS INCLUDED IN THE UNIT PRICE BID FOR EACH BEARING. APPLY FIELD PAINT TO EXPOSED SURFACES IN ACCORDANCE WITH CMS 514.
6. DO NOT PAINT STEEL SURFACES IN CONTACT WITH ELASTOMERIC PAD.
7. ANCHOR BOLT NUTS SHALL BE SNUGGED AND JAMMED WITH JAM NUTS AT FIXED BEARINGS. AT EXPANSION BEARINGS, PROVIDE ¼" CLEARANCE BETWEEN JAM NUT AND SOLE PLATE UNDER ALL TEMPERATURE CONDITIONS PRIOR TO JAMMING. THE ANCHOR BOLTS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.
8. ELASTOMERIC PLATE, SOLE PLATE, SWEDGED ANCHOR BOLTS AND MISCELLANEOUS HARDWARE SHALL BE INCLUDED IN THE BID PRICE FOR BEARING DEVICE.
9. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F ±10°F, RAISE THE GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ±10°F
10. CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
11. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
12. BASIS OF PAYMENT - THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
13. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS. SEE SHEET 15/28.

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	DJL	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAS		2530171	

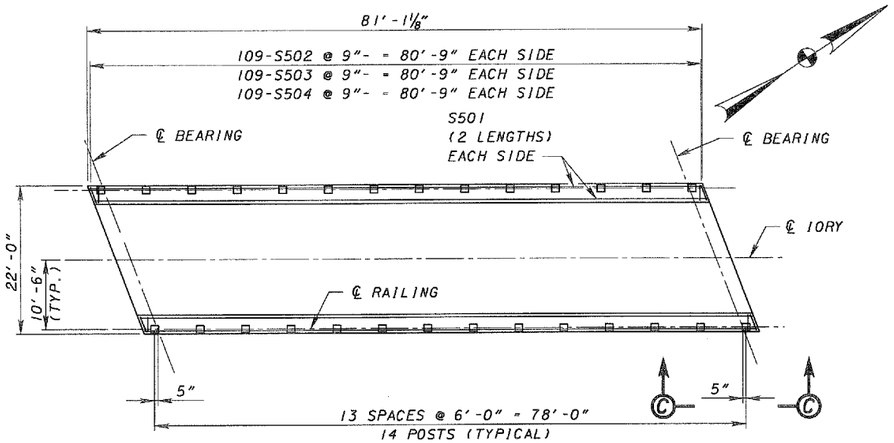
BEARING DETAILS
BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 111)

FRA-CR11-10.49
PID 76255
FCEO 1135

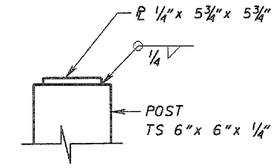
23/28

111
118

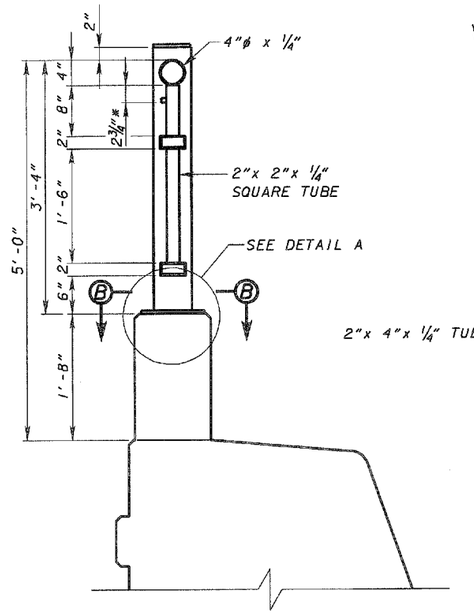
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Filename: "\"



PARAPET AND RAILING PLAN

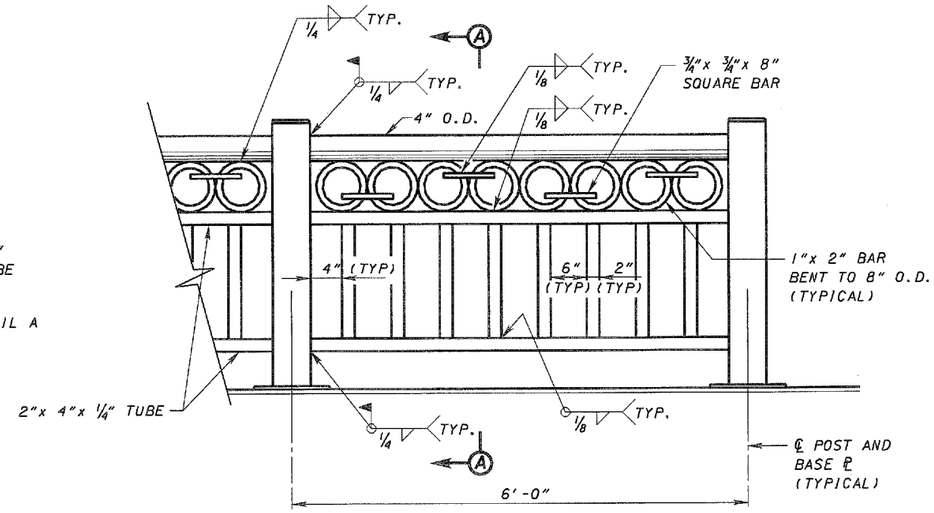


POST CAP DETAIL



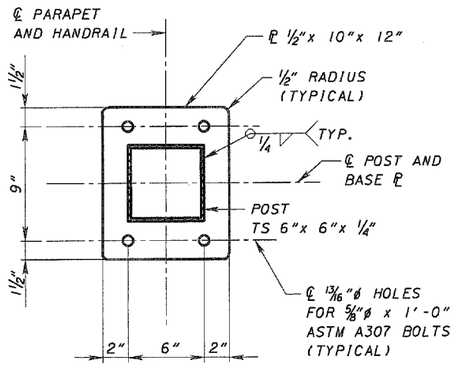
SECTION A-A

(* ALTERNATE TOP AND BOTTOM)

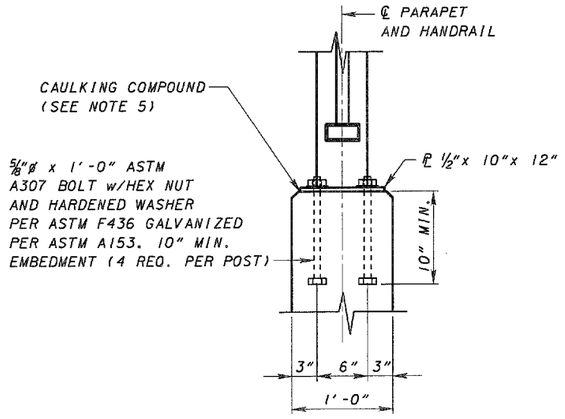


VIEW C-C RAILING DETAIL

(ANCHOR BOLTS NOT SHOWN)



SECTION B-B



DETAIL A

NOTES:

1. FOR TRANSVERSE SECTION, SEE SHEET 18/28.
2. FOR REINFORCEMENT DETAILS, SEE SHEET 28/28.
3. UNLESS OTHERWISE SPECIFIED, ALL STEEL FOR THE RAILING SHALL CONFORM TO ASTM A36.
4. THE RAILING SHALL BE SHOP PAINTED ACCORDING TO CMS ITEM 514 AND HAVE A MATTE BLACK FINISH COAT. SAMPLES OF THE COATED RAILING MATERIAL SHALL BE SUBMITTED TO THE COUNTY FOR APPROVAL, PRIOR TO FABRICATION.
5. CAULKING COMPOUND SHALL MEET FEDERAL SPECIFICATIONS TT-S-002506 TYPE II, CLASS A BLACK. PROVIDE A 1" OPENING THROUGH CAULKING ON LOW SIDE OF BASE PLATE.

DESIGN AGENCY
TranSystems
100 SCIOTO ROAD, SUITE 400
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	DJL	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRN		2530171	

RAILING DETAILS
BRIDGE NO. FRA-II-1078
IORY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

24/28

112
118

Plotted By: ascheiderer Date: 8/7/2009 Time: 2:45:27 PM
Filename: "\\"

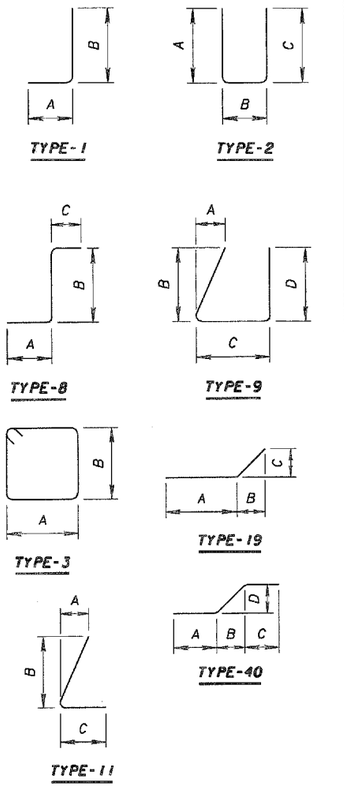
BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
REAR ABUTMENT											
RA401	12	15'-1"	121	3	3'-4"	3'-4"					
RA402	2	16'-6"	22	3	4'-0"	4'-0"					
RA403	8	5'-6"	29	2	1'-2"	3'-4"	1'-2"				
RA501	29	9'-5"	285	2	2'-2"	5'-4"	2'-2"				
RA502	119	4'-5"	548	2	1'-8"	1'-4"	1'-8"				
RA503	4	27'-0"	113	STR.							
RA504	4	26'-6"	111	STR.							
RA505	3	6'-5"	20	2	1'-6"	3'-8"	1'-6"				
RA601	13	21'-4"	417	STR.							
RA602	15	24'-11"	561	STR.							
RA603	8	6'-10"	82	9	3 3/4"	5 1/2"	5'-4"	1'-2"			
RA604	6	7'-2"	65	40	2'-6"	9"	2'-6"	2'-1"			
	1	5'-2"									
RA605	SERIES OF	TO	304	STR.							7 3/8"
	19	16'-2"									
RA606	136	6'-0"	1226	STR.							
	1	4'-3"									
RA607	SERIES OF	TO	1174	STR.							7 1/8"
	45	30'-6"									
RA608	25	16'-6"	620	1	4'-10"	11'-10"					
RA609	39	5'-8"	332	1	2'-0"	4'-0"					
RA610	48	7'-2"	517	2	2'-2"	3'-2"	2'-2"				
RA611	30	8'-6"	383	STR.							
RA612	9	7'-6"	101	19	3'-9"	1'-4 1/8"	3'-6"				
RA613	15	28'-0"	631	STR.							
RA614	15	25'-3"	569	STR.							
RA615	28	23'-8"	995	STR.							
	2	6'-0"									
RA616	SERIES OF	TO	282	STR.							2'-5 5/8"
	7	20'-10"									
	2	4'-3"									
RA617	SERIES OF	TO	310	STR.							2'-5 3/4"
	8	21'-7"									
	1	12'-8"									
RA618	SERIES OF	TO	1556	STR.							4 1/2"
	48	30'-6"									
	2	3'-6"									
RA619	SERIES OF	TO	243	STR.							4'-0"
	6	23'-6"									
RA620	46	25'-2"	1739	STR.							
	2	9'-4"									
RA621	SERIES OF	TO	184	STR.							4'-0"
	4	21'-4"									
	1	6'-0"									
RA622	SERIES OF	TO	36	STR.							2'-0"
	3	10'-0"									
	1	9'-9"									
RA623	SERIES OF	TO	134	STR.							4 3/4"
	8	12'-6"									

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
REAR ABUTMENT											
	1	9'-8"									
RA624	SERIES OF	TO	361	STR.							4"
	19	15'-8"									
RA625	22	36'-8"	1212	STR.							
RA626	24	14'-9"	532	STR.							
RA627	7	5'-5"	57	STR.							
RA628	7	6'-2"	65	STR.							
RA630	20	5'-0"	150	STR.							
RA631	2	6'-4"	19	STR.							
RA632	2	8'-4"	25	STR.							
RA633	10	8'-3"	124	STR.							
RA634	3	9'-8"	44	19	2'-0"	2'-1 1/2"	5'-6"				
RA635	32	8'-0"	385	STR.							
RA636	12	8'-8"	156	STR.							
RA637	28	8'-1"	340	STR.							
RA638	6	8'-9"	79	8	2'-6"	4'-1"	2'-6"				
RA639	3	15'-2"	68	STR.							
RA640	12	6'-5"	116	STR.							
RA641	3	9'-6"	43	11	2'-1 1/2"	5'-6"	2'-0"				
RA701	50	9'-5"	962	40	2'-1"	3'-8"	2'-1"	3'-8"			
RA702	11	8'-4"	187	1	1'-2"	7'-4"					
	1	10'-5"									
RA703	SERIES OF	TO	309	STR.							4 3/4"
	12	14'-9"									
	1	5'-2"			1'-6"	2'-6"	1'-6"				
RA704	SERIES OF	TO	49	2							3'-9"
	3	10'-8"			1'-6"	8'-0"	1'-6"				
	1	15'-0"									
RA705	SERIES OF	TO	417	STR.							8 1/2"
	11	22'-1"									
	1	31'-0"									
RA706	SERIES OF	TO	1147	STR.							3"
	17	35'-0"									
	1	10'-4"									
RA707	SERIES OF	TO	100	STR.							1'-3"
	4	14'-1"									
RA708	2	8'-0"	33	STR.							
	1	10'-2"									
RA709	SERIES OF	TO	628	STR.							8"
	19	22'-2"									
	1	31'-4"									
RA710	SERIES OF	TO	1559	STR.							2"
	23	35'-0"									
RA711	2	6'-0"	25	STR.							
	1	8'-2"									
RA712	SERIES OF	TO	100	STR.							2'-9"
	4	16'-5"									
RA713	4	19'-6"	159	STR.							
RA714	2	9'-6"	39	STR.							
	1	18'-0"									
RA715	SERIES OF	TO	313	STR.							4"
	8	20'-4"									

BAR BENDING DIAGRAMS



DESIGN AGENCY
TranSystems
105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CCC		2530171	

REINFORCING STEEL LIST

BRIDGE NO. FRA-11-1078
10RY OVER ALKIRE ROAD (CR 11)

FRA-CR11-10.49
PID 76255
FCEO 1135

25 / 28

113 / 118

Plotted By: aschelderer Date: 8/7/2009 Time: 2:45:28 PM
Filename: \\\\\

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
REAR ABUTMENT											
	1	25'-1"									
RA716	SERIES OF	TO	615	STR.							5½"
	11	29'-8"									
	1	17'-6"									
RA717	SERIES OF	TO	1010	STR.							7¼"
	21	29'-7"									
	1	20'-4"									
RA718	SERIES OF	TO	554	STR.							1"
	13	21'-4"									
RA801	11	9'-2"	269	1	1'-4"	8'-0"					
	1	16'-10"									
RA802	SERIES OF	TO	609	STR.							4¾"
	12	21'-2"									
RA803	6	15'-2"	243	STR.							
RA804	12	8'-0"	256	STR.							
	1	5'-0"									
RA805	SERIES OF	TO	140	STR.							5'-9"
	5	16'-0"									
	1	16'-0"									
RA806	SERIES OF	TO	502	STR.							2⅝"
	11	18'-2"									
	1	17'-6"									
RA807	SERIES OF	TO	570	STR.							4½"
	11	21'-4"									
	1	3'-9"									
RA808	SERIES OF	TO	250	STR.							1'-3"
	10	15'-0"									
	1	4'-6"									
RA809	SERIES OF	TO	112	STR.							4'-0"
	4	16'-6"									
	1	16'-0"									
RA810	SERIES OF	TO	1562	STR.							2¼"
	31	21'-9"									
	1	15'-0"									
RA811	SERIES OF	TO	205	STR.							2"
	5	15'-8"									
	1	14'-3"									
RA812	SERIES OF	TO	159	STR.							5"
	4	15'-6"									
RA813	3	32'-10"	263	STR.							
RA901	44	36'-8"	7181	STR.							
	1	3'-0"									
RA902	SERIES OF	TO	102	STR.							3'-0"
	4	12'-0"									
	1	21'-2"									
RA903	SERIES OF	TO	224	STR.							8"
	3	22'-10"									
	1	20'-1"									
RA904	SERIES OF	TO	875	STR.							3"
	12	22'-10"									

BAR SCHEDULE

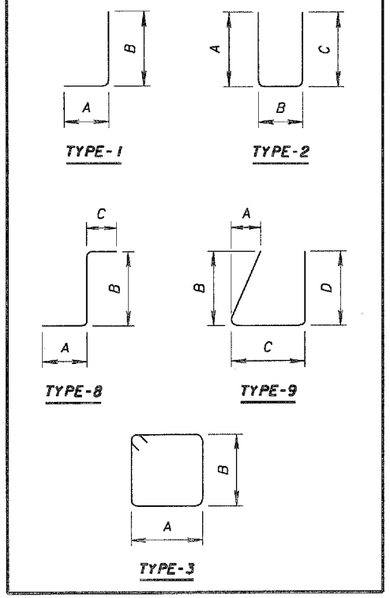
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
FORWARD ABUTMENT											
	1	5'-9"									
RA905	SERIES OF	TO	87	STR.							2'-9"
	3	11'-3"									
	1	15'-1"									
RA906	SERIES OF	TO	513	STR.							5"
	9	18'-5"									
	1	15'-1"									
RA907	SERIES OF	TO	1330	STR.							4½"
	21	22'-2"									
	1	22'-4"									
RA908	SERIES OF	TO	1001	STR.							4¾"
	12	26'-9"									
	1	17'-10"									
RA909	SERIES OF	TO	784	STR.							7½"
	11	24'-1"									
	1	16'-4"									
RA1001	SERIES OF	TO	975	STR.							5½"
	12	21'-5"									
RA1002	36	13'-7"	2104	1	1'-10"	12'-1"					
	1	26'-4"									
RA1003	SERIES OF	TO	1472	STR.							4¾"
	12	30'-8"									
RA1004	11	13'-7"	643	1	1'-10"	12'-1"					
	1	24'-9"									
RA1005	SERIES OF		1552	STR.							6"
	13	30'-9"									
RA1101	162	22'-2"	19079	STR.							
RA1102	109	18'-3"	10569	1	2'-0"	16'-7"					
RA1103	61	28'-9"	9318	STR.							
RA1104	25	16'-0"	2125	1	2'-0"	14'-4"					
	1	19'-2"									
RA1105	SERIES OF	TO	877	STR.							5"
	8	22'-1"									

TOTAL WEIGHT REAR ABUTMENT = 91,642 LBS

FORWARD ABUTMENT

FA401	12	15'-1"	121	3	3'-4"	3'-4"						
FA402	2	16'-6"	22	3	4'-0"	4'-0"						
FA403	8	5'-6"	29	2	1'-2"	3'-4"	1'-2"					
FA501	29	9'-5"	285	2	2'-2"	5'-4"	2'-2"					
FA502	114	4'-5"	525	2	1'-8"	1'-4"	1'-8"					
FA503	4	27'-0"	113	STR.								
FA504	4	26'-6"	111	STR.								
FA505	3	6'-5"	20	2	1'-6"	3'-8"	1'-6"					
FA601	13	20'-10"	407	STR.								
FA602	15	24'-11"	561	STR.								

BAR BENDING DIAGRAMS



DESIGN AGENCY: TranSystems, 100 E. BROAD, SUITE 400, COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CCC		2530171	

REINFORCING STEEL LIST

BRIDGE NO. FRA-11-1078
1.0RY OVER ALKIRE ROAD (CR 111)

FRA-CR11-10.49
PID 76255
FCEO 1135

26 / 28

114 / 118

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:45:29 PM
Filename: \\\\

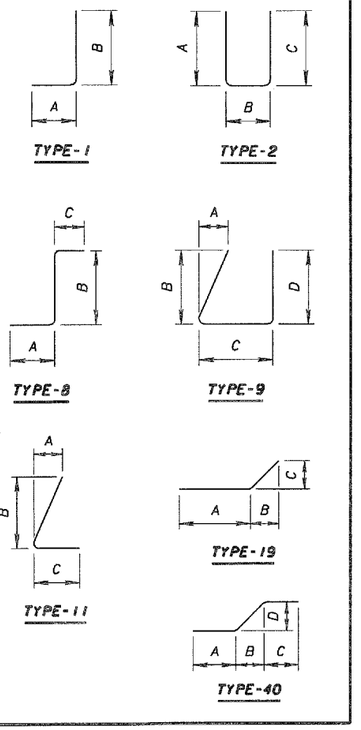
BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
FORWARD ABUTMENT											
FA603	8	6'-10"	82	9	3¾"	5½"	5'-4"	1'-2"			
FA604	6	7'-2"	65	40	2'-6"	9"	2'-6"	2'-1"			
	1	4'-6"									
FA605	SERIES OF	TO	287	STR.							8½"
	18	16'-9"									
FA606	131	6'-0"	1181	STR.							
	1	4'-6"									
FA607	SERIES OF	TO	1051	STR.							8"
	40	30'-6"									
FA608	25	16'-6"	620	1	5'-4"	11'-10"					
FA609	39	5'-8"	332	1							
FA610	48	7'-2"	517	2	2'-2"	3'-2"	2'-2"				
FA611	30	8'-6"	383	STR.							
FA612	9	7'-6"	101	19	3'-6"	1'-3⅛"	3'-3¼"				
FA613	15	27'-6"	620	STR.							
FA614	15	24'-9"	558	STR.							
FA615	28	21'-9"	915	STR.							
	2	6'-10"									
FA616	SERIES OF	TO	275	STR.							2'-1"
	7	19'-4"									
	2	2'-9"									
FA617	SERIES OF	TO	302	STR.							2'-1¼"
	9	19'-7"									
	1	12'-8"									
FA618	SERIES OF	TO	1556	STR.							4½"
	48	30'-6"									
	2	3'-6"									
FA619	SERIES OF	TO	243	STR.							4'-0"
	6	23'-6"									
FA620	46	25'-2"	1739	STR.							
	2	9'-4"									
FA621	SERIES OF	TO	184	STR.							3'-11¾"
	4	21'-3"									
FA622	2	6'-6"	20	STR.							
	1	9'-9"									
FA623	SERIES OF	TO	134	STR.							4¾"
	8	12'-6"									
	1	9'-8"									
FA624	SERIES OF	TO	348	STR.							3⅜"
	19	14'-9"									
FA625	26	36'-8"	1432	STR.							
FA626	24	14'-9"	532	STR.							
FA627	7	5'-5"	57	STR.							
FA628	7	6'-2"	65	STR.							
FA630	20	5'-6"	165	STR.							
FA631	2	6'-4"	19	STR.							
FA632	2	8'-4"	25	STR.							
FA633	10	8'-3"	124	STR.							
FA634	3	9'-8"	44	19	2'-0"	2'-1½"	5'-6"				
FA635	32	8'-0"	385	STR.							
FA636	12	8'-8"	156	STR.							

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
FORWARD ABUTMENT											
FA637	21	8'-1"	255	STR.							
FA638	6	8'-9"	79	8	2'-6"	4'-1"	2'-6"				
FA639	3	15'-2"	68	STR.							
FA640	12	6'-5"	116	STR.							
FA641	3	9'-6"	43	11	2'-1½"	5'-6"	2'-0"				
FA701	50	9'-5"	962	8	2'-0"	5'-5"	2'-0"				
FA702	9	8'-8"	159	1	1'-2"	7'-8"					
	1	10'-5"									
FA703	SERIES OF	TO	309	STR.							4¾"
	12	14'-9"									
	1	5'-2"			1'-6"	2'-6"	1'-6"				
FA704	SERIES OF	TO	49	2							2'-9"
	3	10'-8"			1'-6"	8'-0"	1'-6"				
	1	9'-0"									
FA705	SERIES OF	TO	251	STR.							5¼"
	11	13'-4"									
	1	31'-0"									
FA706	SERIES OF	TO	1147	STR.							3"
	17	35'-0"									
	1	10'-4"									
FA707	SERIES OF	TO	100	STR.							1'-3"
	4	14'-1"									
FA708	2	8'-0"	33	STR.							
	1	10'-2"									
FA709	SERIES OF	TO	628	STR.							8"
	19	22'-2"									
	1	31'-4"									
FA710	SERIES OF	TO	1559	STR.							2"
	23	35'-0"									
FA711	2	6'-0"	25	STR.							
	1	4'-6"									
FA712	SERIES OF	TO	137	STR.							2'-8"
	6	17'-10"									
FA713	2	20'-0"	82	STR.							
FA714	2	18'-0"	74	STR.							
	1	17'-0"									
FA715	SERIES OF	TO	295	STR.							3½"
	8	19'-1"									
	1	21'-6"									
FA716	SERIES OF	TO	476	STR.							4¾"
	10	25'-1"									
	1	18'-0"									
FA717	SERIES OF	TO	925	STR.							4¼"
	21	25'-1"									
	1	15'-10"									
FA718	SERIES OF	TO	500	STR.							3"
	14	19'-1"									
FA719	2	14'-0"	57	STR.							
FA801	10	9'-2"	245	1	1'-4"	8'-0"					
	1	16'-10"									
FA802	SERIES OF	TO	609	STR.							4¾"

BAR BENDING DIAGRAMS



DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
PEJ	MEP	RER	10/16/07
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CCC		2530171	

REINFORCING STEEL LIST

BRIDGE NO. FRA-11-1078
IORY OVER ALKIRE ROAD (CR 111)

FRA-CR11-10.49
PID 76255
FCEO 1135

27/28

115/118

Plotted By: acscheiderer Date: 8/7/2009 Time: 2:45:29 PM
Filename: \\\\

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
FORWARD ABUTMENT											
FA803	6	15'-2"	243	STR.							
FA804	12	8'-0"	256	STR.							
	1	15'-0"									
FA805	SERIES OF	TO	229	STR.							1'-1"
	5	19'-4"									
	1	16'-0"									
FA806	SERIES OF	TO	502	STR.							2 5/8"
	11	18'-2"									
	1	17'-6"									
FA807	SERIES OF	TO	570	STR.							4 1/2"
	11	21'-4"									
	1	3'-9"									
FA808	SERIES OF	TO	250	STR.							1'-3"
	10	15'-0"									
	1	4'-6"									
FA809	SERIES OF	TO	112	STR.							4'-0"
	4	16'-6"									
	1	16'-0"									
FA810	SERIES OF	TO	1562	STR.							2 1/4"
	31	21'-9"									
	1	13'-0"									
FA811	SERIES OF	TO	222	STR.							4"
	6	14'-8"									
FA812	NOT USED										
FA813	3	32'-10"	263	STR.							
FA901	44	36'-8"	5485	STR.							
	1	3'-0"									
FA902	SERIES OF	TO	102	STR.							3'-0"
	4	12'-0"									
	1	19'-3"									
FA903	SERIES OF	TO	211	STR.							1'-5"
	3	22'-1"									
	1	12'-5"									
FA904	SERIES OF	TO	587	STR.							4 1/4"
	12	16'-4"									
	1	6'-0"									
FA905	SERIES OF	TO	92	STR.							3'-0"
	3	12'-0"									
	1	15'-0"									
FA906	SERIES OF	TO	509	STR.							4 7/8"
	9	18'-3"									
	1	14'-10"									
FA907	SERIES OF	TO	1443	STR.							4"
	23	22'-1"									
	1	22'-4"									
FA908	SERIES OF	TO	1001	STR.							4 3/4"
	12	26'-9"									
	1	17'-6"									
FA909	SERIES OF	TO	704	STR.							8 1/2"
	10	23'-11"									

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
FORWARD ABUTMENT											
	1	16'-4"									
FA1001	SERIES OF	TO	975	STR.							5 1/2"
	12	21'-5"									
FA1002	46	13'-7"	2689	1	1'-10"	12'-1"					
	1	26'-4"									
FA1003	SERIES OF	TO	1472	STR.							4 3/4"
	12	30'-8"									
	1	24'-3"									
FA1004	SERIES OF	TO	1420	STR.							7"
	12	30'-9"									
FA1101	162	22'-2"	19079	STR.							
FA1102	109	18'-3"	10569	1	2'-0"	16'-7"					
FA1103	61	28'-3"	9156	STR.							
FA1104	24	16'-0"	2040	1	2'-0"	14'-4"					
	1	19'-2"									
FA1105	SERIES OF	TO	877	STR.							5"
	8	22'-1"									
TOTAL WEIGHT FORWARD ABUTMENT = 88,506 LBS											
SUPERSTRUCTURE											
S501	44	42'-3"	1939	STR.							
S502	218	5'-8"	1288	2	2'-8"	2'-0"	1'-3"				
S503	218	8'-6"	1933	29	3'-5"	1'-10"	9"	2'-8"			
S504	218	5'-1"	1156	4	8"	1'-10"					

THE FOLLOWING MATERIALS ARE INCLUDED WITHIN THE RAIL SPECIAL PAY ITEMS:

SUBBALLAST

SUBBALLAST SHALL BE CRUSHER-RUN STONE (DENSE GRADED AGGREGATE), LIMESTONE OR GRANITE MATERIAL AND SHALL MEET THE REQUIREMENTS AS SET OUT IN CHAPTER 1, PART 2, SECTION 2.11, "SUBBALLAST SPECIFICATIONS " OF THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA) MANUAL.

GRADATION AS FOLLOWS:

SIEVE SIZE	2"	1"	3/8"	NO.10	NO.40	NO.200
%PASSING SIZE (OPTIMUM)	100	95	67	38	21	7
PERMISSIBLE RANGE %PASSING	100	90-100	50-84	26-50	12-30	0-10

SUBBALLAST SHALL BE SPREAD ON A GRADED ROADBED AS A BASE, WITH SUFFICIENT WIDTH TO ACCOMMODATE THE DESIRED NUMBER OF TRACKS. THE SUBBALLAST SHALL BE COMPACTED TO 95 PERCENT OF IT'S MAXIMUM DRY DENSITY AND HAVE A MINIMUM DEPTH OF 6 INCHES. (FOR 6 INCHES OF COMPACTED SUBBALLAST ON A SINGLE TRACK ROADBED USE APPROXIMATELY 1.66 TON PER FOOT OF TRACK.)

BALLAST

MATERIAL FOR BALLAST SHALL BE CLEAN CRUSHED STONE WITH A MINIMUM DEPTH OF 12 INCHES FOR MAINS (18" FOR BALLASTED BRIDGE TRACK SECTIONS) INDUSTRY TRACKS BETWEEN BOTTOM OF CROSSTIE AND TOP OF SUBBALLAST. CRIBS (SPACING BETWEEN THE CROSSTIES) SHALL BE FILLED WITH BALLAST TO THE TOP OF THE TIES.

STONE FOR USE AS BALLAST ON TRACKS, OR PORTIONS OF TRACKS, TO BE OWNED BY THE RAILWAY COMPANY, SHALL BE FURNISHED BY A COMPANY APPROVED QUARRY, AND SHALL BE CRUSHED STONE (GRANITE) CONFORMING TO THE REQUIREMENTS OF RAIL AMERICA. IN SOME REGIONS, IF APPROVED BY THE RAILWAY'S CHIEF ENGINEER, LIMESTONE MAY BE USED.

GRADATION SHALL CONFORM TO THE FOLLOWING TABLE:

SIEVE DESIGNATION	SIEVE OPENING	#3 BALLAST (MODIFIED) %PASSING SIEVE	#5 BALLAST %PASSING SIEVE
2½"	2.5"	100	-
2"	2"	95-100	-
-	1.5"	30-65	100
1"	1"	0-15	90-100
-	0.75"	-	40-75
-	0.5"	0-5	15-35
3/8"	0.375"	-	0-15
NO. 4	0.187"	-	0-5
NO. 200	0.0029"	0.5 MAX	0.5 MAX

#5 BALLAST SHALL BE USED.

RAIL

RAIL SHALL BE NEW OR NO. 1 RELAY OF GOOD QUALITY, WITH MINIMUM SECTION OF 115 POUNDS. RAIL SHOULD BE FREE FROM LOCAL BENDS, KINKS, BATTERED ENDS, EXCESSIVE ENGINE BURNS AND SURFACE CORRUGATIONS.

RAIL SHOULD BE FURNISHED IN LENGTHS NOT LESS THAN 31 FEET AND SHOULD BE DRILLED TO ACCEPT THE PROPER SIZE JOINT BARS FOR THE SECTION OF RAIL BEING USED.

IF WELDED RAIL IS USED, THE TYPE OF WELDING SHOULD HAVE APPROVAL OF THE COMPANY'S CHIEF ENGINEER OR HIS REPRESENTATIVE.

RAILS SHOULD BE LAID ONE AT A TIME. THE BOTTOM OF THE RAIL AND THE BEARING SURFACE OF THE TIE PLATE SHOULD BE CLEANED OF ALL DEBRIS BEFORE THE RAIL IS LAID. JOINTS IN OPPOSITE RAILS SHALL BE STAGGERED NOT LESS THAN 8 FEET AND NOT MORE THAN 14 FEET APART, EXCEPT AS CLOSE JOINTS MAY BE REQUIRED AT INSULATED JOINTS OR TURNOUTS. TO MINIMIZE THE CUTTING OF FULL LENGTH RAILS, SHORT RAILS OF NOT LESS THAN 15 FEET MAY BE USED IN ADJUSTING FOR PROPER SPACING OF JOINTS. PROPER ALLOWANCE FOR EXPANSION SHOULD BE PROVIDED AT RAIL JOINTS BY INSTALLING RAIL EXPANSION SHIMS CONFORMING TO THE SECTION OF RAIL BEING USED.

WHEN NECESSARY TO CUT AND/OR DRILL A RAIL, IT SHOULD BE CUT WITH AN APPROVED RAIL SAW, AND DRILLED WITH AN APPROVED RAIL DRILL. FLAME CUTTING OF RAIL WILL NOT BE PERMITTED.

CROSSTIES

CROSSTIES SHOULD BE NEW AND CONFORM TO RAIL AMERICA SPECIFICATIONS FOR 7"x8"x8'-6"- GRADE 4, OR 7"x9"x8'-6" - GRADE 5 FOR OAK AND MIXED HARDWOOD TIES. ALL TIES SHALL BE AIR DRIED TO A MAXIMUM OF 50% MOISTURE CONTENT FOR OAK AND 40% FOR MIXED HARDWOODS BEFORE TREATMENT.

THE TIES MUST BE STERILIZED DURING TREATMENT BY HOLDING THEM IN 190°-210° F TEMPERTURE CREOSOTE FOR AT LEAST SIX HOURS. THIS TIME SHALL NOT INCLUDE CREOSOTE FILLING OR EMPTYING, NOR TEMPERATURE ADJUSTMENTS OR FINAL VACUUM TIME. FINAL RETENTIONS SHALL BE 8#/CF IN OAK AND 10#/CF FOR MIXED HARDWOODS. EXCEPT AS NOTED ABOVE, ALL TREATMENT SHALL BE GOVERNED BY AMERICAN WOOD-PRESERVERS' ASSOCIATION STANDARDS C1, C6, M1, M3, AND M4. A 60/49 CREOSOTE-COAL TAR SOLUTION CONFORMING TO AWPA STANDARD P-2 SHALL BE USED. THE SOLUTION SHALL BE TESTED ACCORDING TO AWPA STANDARD A-1.

CROSSTIES TO BE USED IN TRACKS TO BE OWNED BY THE RAILWAY COMPANY SHALL BE PURCHASED FROM A RAIL AMERICA APPROVED CROSSTIE SUPPLIER. CERTIFICATION OF THE TIES MUST BE FURNISHED FROM THE CONTRACTOR AND/OR SUPPLIER BASED ON RAIL AMERICA SPECIFICATIONS.

CROSSTIES SHALL BE PLACED ON THE PREPARED SUBBALLAST AT RIGHT ANGLES OR NORMAL TO THE CENTERLINE OF THE TRACK. CROSSTIES SHALL BE SPACED 20 INCHES, CENTER TO CENTER (60 TIES PER 100 FEET) WITH THE ENDS OF THE TIES ALONG ONE SIDE OF THE CENTERLINE ON TANGENT TRACK AND ALONG THE INSIDE ON CURVED TRACK BEING PLACED 1'-10" FROM THE GAGE OF THE NEAREST RAIL.

TIE PLATES

TIE PLATES SHOULD BE NEW OR SECOND HAND, OF GOOD QUALITY AND OF AN APPROVED DESIGN FOR THE WEIGHT OF RAIL TO BE USED. TWO TIE PLATES PER TIE, UNDER THE BASE OF RAIL, MUST BE USED.

THE TIE PLATES SHALL BE DOUBLE SHOULDERED AND HAVE A MINIMUM SIZE OF 7"x11" WITH PROPER PUNCHING TO FIT THE BASE OF THE RAIL BEING USED. THE DOWN SLOPE (1:40 CANT) OF THE TIE PLATE SHALL BE DIRECTLY OVER AND PARALLEL WITH THE CENTERLINE OF THE CROSSTIE. THE TIE PLATE SHALL BE SET SO THAT THE OUTSIDE SHOULDER OF THE TIE PLATE SHALL BEAR SQUARELY AGAINST THE BASE OF THE RAIL, HAVING A FULL BEARING FOR THE RAIL AND AT THE SAME TIME, A FULL BEARING ON THE CROSSTIE.

RAIL JOINTS

JOINTS SHOULD BE EITHER NEW OR SECOND HAND, OF GOOD QUALITY AND OF THE SIZE, DRILLING, AND HOLE SPACING TO FIT THE RAIL BEING USED.

JOINT BARS SHOULD BE PROPERLY INSTALLED WITH THE FULL NUMBER OF AND THE CORRECT SIZE OF BOLTS, NUTS AND SPRING WASHERS. BOLTS SHALL BE PLACED WITH NUTS ALTERNATELY ON INSIDE AND OUTSIDE OF RAIL AND SHALL BE DRAWN TIGHT BEFORE SPIKING. BOLTS SHALL BE TIGHTENED BY THE USE OF APPROVED TRACK WRENCHES OR TRACK BOLT MACHINES.

WHEN DIFFERENT SIZE RAILS ARE TO BE CONNECTED, FORGED COMPROMISE JOINTS SHALL BE USED. THE ABOVE MENTIONED RECOMMENDATION FOR RAIL JOINTS SHOULD APPLY TO COMPROMISE JOINTS.

ANY FIELD FABRICATION OF COMPROMISE JOINTS WILL BE STRICTLY PROHIBITED, THAT IS, THE CUTTING DOWN OF LARGER STANDARD JOINTS TO FIT SMALLER RAIL WILL NOT BE ALLOWED.

BOLTS AND NUTS

BOLTS AND NUTS FOR THE TRACK AND TURNOUTS SHOULD BE NEW OR APPROVED RELAY AND OF THE CORRECT DIAMETER AND LENGTH TO FIT THE RAIL AND JOINTS BEING USED. BOLTS AND NUTS MUST CONFORM TO THE LATEST AREMA SPECIFICATIONS.

LOCK WASHERS

LOCK WASHERS SHOULD BE NEW AND OF CORRECT DIAMETER TO FIT THE BOLTS BEING USED. EACH TRACK BOLT SHOULD BE EQUIPPED WITH A SPRING LOCK WASHER, CONFORMING TO THE MOST CURRENT AREMA SPECIFICATIONS FOR SPRING WASHERS.

RAIL ANCHORS (JOINTED RAIL)

RAIL ANCHORS SHOULD BE NEW OR RELAY OF GOOD QUALITY AND SHOULD BE THE CORRECT SIZE AND OF APPROVED DESIGN FOR THE RAIL USED. ANCHORS SHOULD BE APPLIED SO AS TO BOX ANCHOR EVERY FOURTH TIE, I.E., THE NUMBER OF ANCHORS SHALL BE EQUAL TO THE NUMBER OF TIES. RAIL ANCHORS TO BE USED ON TRACKS TO BE OWNED BY THE RAILWAY COMPANY SHALL CONFORM TO RAIL AMERICA SPECIFICATIONS AND BE PURCHASED FROM A RAIL AMERICA APPROVED SUPPLIER.

TRACK SPIKES

ONLY STANDARD NEW 5/8"x6" TRACK SPIKES SHOULD BE USED AND SHOULD CONFORM TO THE MOST CURRENT AREMA SPECIFICATIONS FOR LOW CARBON STEEL TRACK SPIKES. A MINIMUM OF TWO SPIKES PER TIE PLATE IS REQUIRED ON TANGENT TRACK. TRACK SPIKES TO BE USED ON TRACKS TO BE OWNED BY THE RAILWAY COMPANY SHALL CONFORM TO RAIL AMERICA SPECIFICATIONS AND BE PURCHASED FROM A RAIL AMERICA APPROVED SUPPLIER.

DERAILS

DERAILS SHOULD BE NEW OR APPROVED RELAY AND MUST BE THE TYPE INDICATED ON THE APPROVED PLANS AT THE NEW DESIGNATED LOCATION. WHERE DOUBLE SWITCH POINT DERAILS ARE REQUIRED THEY MUST BE INSTALLED IN ACCORDANCE WITH THE STANDARD PLAN FOR DERAILS. DERAILS OTHER THAN DOUBLE SWITCH POINT DERAILS SHALL BE HAYES SLIDING DERAIL, MODEL HB OR APPROVED EQUAL. THEY MUST BE SIZED TO FIT THE RAIL AND THROWN WITH AN OPERATING STAND. OPERATING STANDS MUST BE FURNISHED WITH TARGETS. CARE MUST BE TAKEN WHEN INSTALLING DERAILS TO INSURE THAT THEY ARE INSTALLED IN THE PROPER DIRECTION TO DERAIL CARS AWAY FROM THE MAIN TRACK.

CALCULATED MPH CHECKED JDH

TRACKWORK MATERIAL NOTES

FRA-CR11-10.49 (ALKIRE ROAD)

PID 76255

FCEO 1135

117 / 118

Plotted By: acscheiderer Date: 8/1/2009 Time: """"
Filename: """"

SPECIFICATIONS AND RESPONSIBLE PARTIES

ALL TRACK WORK AND MATERIALS SHALL BE CONSTRUCTED AS SPECIFIED HEREIN IN ACCORDANCE WITH THE LATEST REVISION OF RAIL AMERICA STANDARD SPECIFICATIONS AND APPLICABLE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE ASSOCIATION (AREMA) RECOMMENDED PRACTICES. RESPONSIBILITY FOR THE SEVERAL NECESSARY ITEMS OF WORK SHALL BE AS SET FORTH IN SECTION 3 OF THE RAILROAD AGREEMENT BETWEEN THE COUNTY OF FRANKLIN AND RAIL AMERICA, INC., AND THE PROJECT BID SPECIFICATIONS.

RAILROAD OPERATIONS

THE CONTRACTOR'S WORK SHALL NOT INTERRUPT THE NORMAL OPERATIONS OF THE RAILROAD WITHOUT PROPER WRITTEN APPROVAL OF THE ENGINEER AND RAIL AMERICA REPRESENTATIVES.

RAILROAD SAFETY RULES

THE CONTRACTOR, ITS EMPLOYEES, AGENTS, INVITEES, AND SUBCONTRACTORS SHALL TAKE THE PRECAUTIONS AND FOLLOW THE PROCEDURES SET FORTH IN SECTION 170 - SAFETY OF THE RAIL AMERICA, INC. STANDARD CONSTRUCTION SPECIFICATIONS. A COPY OF THE SPECIFICATIONS IS INCLUDED IN THE PROJECT BID DOCUMENTS.

ITEM SPECIAL - RAIL ITEM, MISC:, REMOVAL OF TRACK COMPLETE

THIS ITEM SHALL CONSIST OF REMOVING ALL TRACK WITHIN THE LIMITS SHOWN ON THE PLAN. REMOVAL SHALL CONSIST OF ALL TRACK STRUCTURE, INCLUDING BUT NOT LIMITED TO ALL RAIL, TIES, FASTENERS, AND OTHER TRACK MATERIAL. ALL MATERIALS, EXCEPT CROSS TIES, ARE TO BE REMOVED USING METHODS THAT WILL NOT DAMAGE ANY SALVAGEABLE MATERIAL FOR FUTURE REUSE. ALL REMOVED MATERIALS ARE TO REMAIN THE PROPERTY OF RAIL AMERICA, INC. AND SHALL BE DISMANTLED, SEGREGATED, AND NEATLY STACKED BY PATTERN WEIGHT IN A SPACE DESIGNATED BY THE RAILROAD.

ITEM SPECIAL - RAIL ITEM MISC.: SUB BALLAST FOR PERMANENT TRACK

THIS ITEM SHALL CONSIST OF PLACING AND COMPACTING SUB BALLAST WHERE THE EXISTING SUB BALLAST HAS BEEN REMOVED DUE TO CONSTRUCTION ACTIVITIES. SUB BALLAST SHALL BE PLACED AND COMPACTED IN ONE OR MORE COURSES OF AGGREGATE ON A PREPARED SUBGRADE SURFACE IN ACCORDANCE WITH AREMA MANUAL AND SPECIFICATIONS, CHAPTER 1, PART 2, SECTION 2.H, "SUB BALLAST SPECIFICATIONS", AND IN CONFORMITY WITH THE EXISTING LINES, GRADES, THICKNESS, AND TYPICAL SECTION AS ESTABLISHED BY RAIL AMERICA REPRESENTATIVES. FOR PURPOSES OF QUANTITY ESTIMATION, FULL SUB BALLAST SECTION WAS ASSUMED BETWEEN THE TEMPORARY SHORING LOCATIONS AND PERMANENT BRIDGE ABUTMENTS AT 1.66 TON PER TRACK FOOT.

ITEM SPECIAL - RAIL ITEM, MISC, SURFACE AND LINE TRACK TO GRADE

THIS ITEM SHALL CONSIST OF SURFACE AND LINING THE TRACK STRUCTURE WITHIN THE LIMITS SHOWN ON THE PLANS TO THE PROPOSED PROFILE GRADE SHOWN ON THE PLANS. SURFACING AND LINING OPERATIONS SHALL BE ACCOMPLISHED BY METHODS WHICH PREVENT UNDUE BENDING OF THE RAIL OR STRAINING OF THE JOINTS. ALL OPERATIONS WILL BE CONDUCTED SO AS TO PREVENT ENDANGERING THE HORIZONTAL AND VERTICAL STABILITY OF THE TRACK. ALL TIES PULLED LOOSE DURING THE SURFACING OPERATION SHALL BE RESPIKED IN ACCORDANCE WITH THE TRACK WORK MATERIAL NOTES.

FINAL SURFACE AND LINING OPERATION TO BE COMPLETED THROUGH ALL PROPOSED OR ADJUSTED TRACK WORK AND IS CONSIDERED TO BE PART OF THIS ITEM.

ITEM SPECIAL - RAIL ITEM, MISC:, BALLAST (MATERIAL ONLY)

THIS ITEM CONSISTS OF FURNISHING AND DELIVERING BALLAST TO THE PROJECT SITE. BALLAST SHALL CONFORM TO THE TRACK WORK MATERIAL NOTES.

ITEM SPECIAL - RAIL ITEM, MISC.: INSTALL TRACK COMPLETE, REGULAR BALLAST SECTION

THIS ITEM SHALL CONSIST OF CONSTRUCTING NEW TRACK THAT IS NOT ON THE TEMPORARY BRIDGE STRUCTURE, INCLUDING BUT NOT LIMITED TO, PLACEMENT AND INSTALLATION OF BALLAST, TIES, RAIL, FASTENERS, AND NECESSARY OTHER TRACK MATERIAL. SUB BALLAST IS NOT INCLUDED IN THIS PAY ITEM. ALL WORK SHALL BE IN ACCORDANCE WITH RAIL AMERICA CONSTRUCTION SPECIFICATIONS FOR MAINLINE TRACKS.

ITEM SPECIAL - RAIL ITEM, MISC.: TRACK CONSTRUCTION, TEMPORARY BRIDGE SECTION

THIS ITEM SHALL CONSIST OF CONSTRUCTING NEW TRACK ON A TEMPORARY, OPEN DECK STRUCTURE, INCLUDING, BUT NOT LIMITED TO, CROSS TIES, RAILS, FASTENERS, AND OTHER TRACK MATERIAL. ALL WORK SHALL BE IN ACCORDANCE RAIL AMERICA CONSTRUCTION SPECIFICATIONS FOR MAINLINE TRACKS AND INSTRUCTIONS PROVIDED BY THE MANUFACTURER OF THE TEMPORARY BRIDGE, IF REQUIRED.

TRACK CONSTRUCTION SHALL BE AS SHOWN IN THE TEMPORARY BRIDGE TRANSVERSE SECTION AND PLAN, AND SHALL CONFORM TO THE TRACK WORK MATERIAL SPECIFICATIONS.

RAIL MOT TRACKWORK (FORCE ACCOUNT)

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	225	TRACK FT	RAIL ITEM MISC.: REMOVAL OF TRACK COMPLETE
SPECIAL	115	TON	RAIL ITEM MISC.: BALLAST (MATERIAL ONLY)
SPECIAL	100	TRACK FT	RAIL ITEM MISC.: INSTALL TRACK COMPLETE, REGULAR BALLAST SECTION
SPECIAL	125	TRACK FT	RAIL ITEM MISC.: INSTALL TRACK COMPLETE, TEMP BRIDGE SECTION
SPECIAL	450	TRACK FT	RAIL ITEM MISC.: SURFACE AND LINE TRACK
SPECIAL	3	DAY	RAIL ITEM MISC.: WORK TRAIN

PERMANENT TRACKWORK (FORCE ACCOUNT)

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	175	TRACK FT	RAIL ITEM MISC.: REMOVAL OF TRACK COMPLETE
SPECIAL	225	TON	RAIL ITEM MISC.: BALLAST (MATERIAL ONLY)
SPECIAL	175	TRACK FT	RAIL ITEM MISC.: INSTALL TRACK COMPLETE, REGULAR BALLAST SECTION
SPECIAL	225	TRACK FT	RAIL ITEM MISC.: SURFACE AND LINE TRACK
SPECIAL	2	DAY	RAIL ITEM MISC.: WORK TRAIN
SPECIAL	89	TRACK FT	RAIL ITEM MISC.: SUB BALLAST FOR PERMANENT TRACK
SPECIAL	198	DAY	RAIL ITEM MISC.: RAILROAD FLAGMAN

CALCULATED MPH
CHECKED JDH

TRACKWORK GENERAL NOTES AND SUMMARY

FRA-CR11-10.49
(ALKIRE ROAD)

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FCEO 1135

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