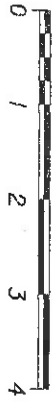


LOCATION MAP

LATITUDE: 39°35'24" LONGITUDE: 80°58'49"

SCALE IN MILES



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
MOE-7-4.32
PART 2
JACKSON TOWNSHIP
MONROE COUNTY
FOR PART 1, SEE MOE-7-3.30

INDEX OF SHEETS:

TITLE SHEET	1
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PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2006) 6800
DESIGN YEAR ADT (2026) 9300
DESIGN HOURLY VOLUME (2026) 930
DIRECTIONAL DISTRIBUTION 0.55
TRUCKS (24 HOUR B&C) 9%
DESIGN SPEED 55 mph
LEGAL SPEED 55 mph

DESIGN FUNCTIONAL CLASSIFICATION -
RURAL ARTERIAL

DESIGN EXCEPTIONS
NONE REQUIRED

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

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

PLAN PREPARED BY:
OHIO DEPARTMENT OF
TRANSPORTATION
DISTRICT 10

ENGINEER'S SEAL:



SIGNED: *[Signature]*
DATE: 5-31-2006

STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS
SEE PART 1	SEE PART 1
	SPECIAL PROVISIONS
	SEE PART 1

PROJECT DESCRIPTION
REPLACE A BRIDGE OVER DEADHORSE RUN WITH A PRECAST BOX CULVERT.

EARTH DISTURBED AREAS

1. PROJECT EARTH DISTURBED AREA: 0.29 AC.
2. ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.15 AC.
3. NOTICE OF INTENT EARTH DISTURBED AREA: 4.9 AC.

2005 SPECIFICATIONS

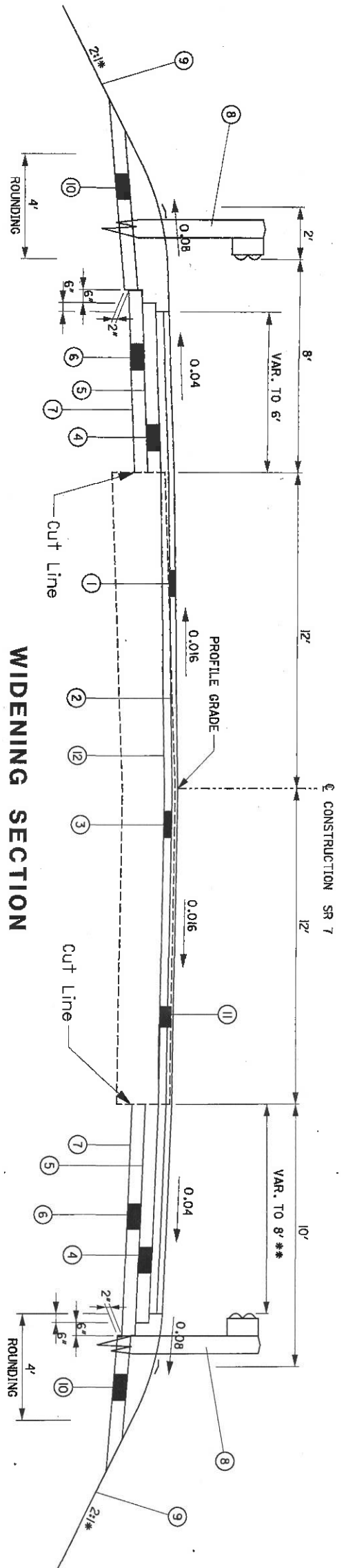
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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

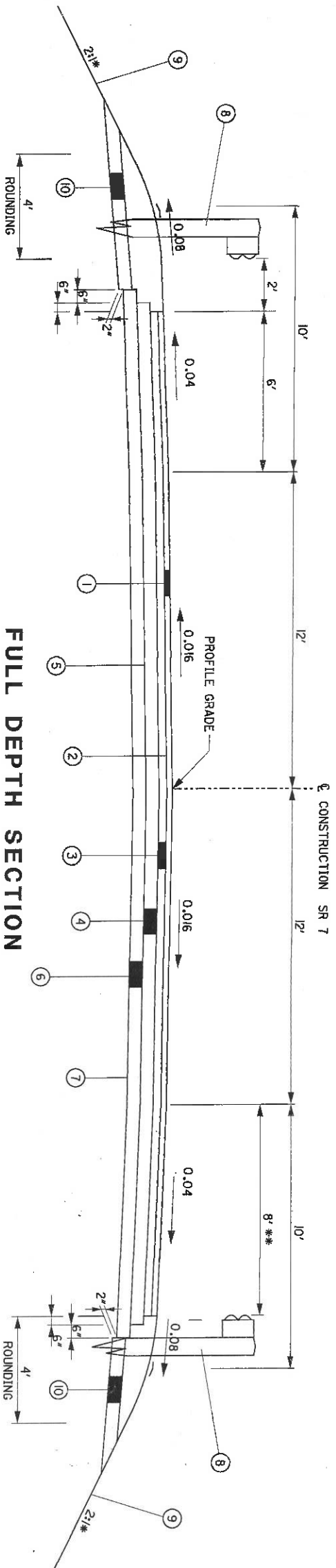
APPROVED: *[Signature]*
DATE: 5-31-06 DISTRICT DEPUTY DIRECTOR

APPROVED: *[Signature]*
DATE: 7-5-06 DIRECTOR, DEPARTMENT OF TRANSPORTATION

* UNLESS OTHERWISE SHOWN ON THE CROSS SECTIONS
 ** - PAVED TO FACE OF GUARDRAIL FOR MAINTENANCE OF TRAFFIC



WIDENING SECTION
 STA. 228+25 TO STA. 228+90 = 65.00 FT.
 STA. 229+60 TO STA. 230+25 = 65.00 FT.
 TOTAL = 130 FT.



FULL DEPTH SECTION
 STA. 228+90 TO STA. 229+60 = 70.00 FT.
 TOTAL = 70 FT.

LEGEND

- ① ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (T=1/4")
- ② ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
- ③ ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (T = 3/4")
- ④ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (T=5")
- ⑤ ITEM 408 - BITUMINOUS PRIME COAT APPLIED AT 0.4 GAL/SY
- ⑥ ITEM 304 - AGGREGATE BASE (T=6")
- ⑦ ITEM 204 - SUBGRADE COMPACTION
- ⑧ ITEM 606 - GUARDRAIL, TYPE 5
- ⑨ ITEM 659 - SEEDING & MULCHING
- ⑩ ITEM 605 - AGGREGATE DRAINS (0.04 MIN. SLOPE, 0.08 DESIRED)
- ⑪ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
- ⑫ ITEM 407 - TACK COAT

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:

Washington Electric Coop
406 Colegate Drive
Marietta, Ohio 45750
Joel Valley 740-373-2141, EXT.430

AT+T (SBC Telephone)
526 N. 4th St
Marietta, Ohio 45750
Dave Schnell 740-373-9951

Northern Industrial Development
5900 Mayfair Rd NW
North Canton, OH 44720
Randy Ogden 330-936-2217

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.

CONTINGENCY QUANTITIES

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

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

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.

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

TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE DESIGN OF THE TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER, AND CONFORM WITH 501.05. FOR APPROVAL, FIVE COPIES OF THE DRAWINGS SHALL BE SUBMITTED TO THE DIRECTOR AND CONCURRENTLY, ONE COPY TO THE OFFICE OF STRUCTURAL ENGINEERING. CONSTRUCTION OF THE SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE DIRECTOR. PORTIONS OF THE TEMPORARY SHORING COMPOSED OF STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DISCRETION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF WORK.

CLEARING AND GRUBBING

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

UNSUITABLE FOUNDATION SOILS

IF UNSUITABLE FOUNDATION SOILS ARE ENCOUNTERED IN THE AREAS UNDER THE PROPOSED CULVERT, THEY SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL MEETING THE REQUIREMENTS OF 203.08. THE LOCATIONS AND DIMENSIONS WILL BE AS DETERMINED BY THE ENGINEER.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 203 - 125 CU. YDS. GRANULAR EMBANKMENT

ITEM 203 - 125 CU. YDS. EXCAVATION

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

ROCK CHANNEL PROTECTION, TYPE B, AS PER PLAN

THE CONTRACTOR SHALL NOT USE BROKEN CONCRETE FOR THE OUTLET PROTECTION. ONLY SOUND AND DURABLE TYPE B ROCK OR STONE SHALL BE USED. THE MATERIAL SHALL BE PLACED SO AS TO INSURE A REASONABLY SMOOTH AND CONTINUOUS SURFACE CONFORMING TO THE SLOPE OR CHANNEL BOTTOM LINES SHOWN ON THE PLAN. THE MATERIAL SHALL NOT BE PLACED IN SUCH A MANNER THAT IMPEDES THE UPSTREAM OR DOWNSTREAM MIGRATION OF AQUATIC ORGANISMS DURING NORMAL FLOW CONDITIONS.

SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

THE CONTRACTOR SHALL MAINTAIN ALL SEEDED AND MULCHED AREAS UNTIL THE PROJECT IS FINALIZED. THE REPAIRS BY SHALL BE MADE PRIOR TO COMPLETION OF THE PROJECT BY THE USE OF REPAIR SEEDING AND MULCHING AND INTERSEEDING. PERFORMANCE BY SUPPLEMENTAL AGREEMENT SHALL BE WAIVED.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-31.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEANOUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

EROSION CONTROL

ITEM 601, IS PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 601. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

WORK DAY CONTRACT

THIS PROJECT SHALL UTILIZE WORK DAYS AS PER THE PROVISIONS OF PROPOSAL NOTE 120 - WORK DAY CONTRACT AND THE FOLLOWING TABLE.

Work Day Contract Table

Work Start Date	Work Days Allowed
6/27/2007	60

ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF TWO LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 30 WORK DAYS, WHEN THROUGH (ONE LANE) TRAFFIC MAY BE MAINTAINED AS SHOWN ON SHEETS 5, AND 6. A DISCONTINUATIVE OF \$200 PER WORK DAY SHALL BE ASSESSED FOR EACH WORK DAY THE TRAFFIC FLOW REMAINS RESTRICTED BEYOND THE SPECIFIED 30 WORK DAYS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

- 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B 30 CU.YD.
- 410, TRAFFIC COMPACTED SURFACE, TYPE C 20 CU.YD.
- 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 10 CU.YD.

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

ITEM 622, PORTABLE CONCRETE BARRIER

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

- 616, WATER / M. GAL.

ITEM 614 - BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO ITEM 626 EXCEPT THAT THE SPACING SHALL BE 50 FEET.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY. (SEE TABLE BELOW)

EXCAVATION FOR MAINTAINING TRAFFIC 26 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 8 CU. YD.

STATIONS	P H A S E I			
	END AREA CUT (SF)	END AREA FILL (SF)	VOLUME CUT (CU.YD.)	VOLUME FILL (CU.YD.)
227+50	0	0	1	0
228+00	1	0	4	1
228+50	3	1	6	1
229+00	3	0	5	2
229+50	2	2	5	3
230+00	3	1	4	1
230+50	1	0	1	0
231+00	0	0	1	0
TOTAL			26	8

OVERNIGHT TRENCH CLOSING (WITHOUT BARRIER)

THE BASE WIDENING (INCLUDING PAVEMENT FOR MAINTAINING TRAFFIC) SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN FIVE INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

TRENCH FOR WIDENING (WITHOUT BARRIER)

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

MAINTENANCE OF TRAFFIC ALTERNATIVES

THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE MAINTENANCE OF TRAFFIC PLAN WHICH COMPLES WITH THE REQUIREMENTS OF THE STANDARD DRAWINGS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE DROPOFFS IN WORK ZONES SHEET. THE PLAN SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL. *

* - All deviations from the Maintenance of Traffic Plan must be approved by the Engineer. It is the intent of this Maintenance of Traffic Plan to provide details and quantities for the maintenance of traffic. Any improvements to this M.O.T. Plan are encouraged.

ITEM 614 - WORK ZONE IMPACT ATTENUATOR, (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING IMPACT ATTENUATORS:

- 1) THE QUADGUARD CZ, (24" WIDE 6-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

THE LENGTH OF THE 6-BAY QUADGUARD CZ IS 20'-9". 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	DWG./ REV. DATE	ODOT APPROVAL DATE
05CZCVR-T4	QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES	5/13/99 Rev. J	8/27/99
35-40-10	QUADGUARD SYSTEM CONCRETE PAD, CZ, 06	11/19/97 Rev. D	8/27/99
35-40-16	QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, 06	7/30/99 Rev. F	8/27/99
354051Z	QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, 06, 24,30,36	5/17/99	8/27/99
35-40-18	TRANSITION ASSEMBLY, 4 OFFSET, 06	6/25/99 Rev. F	8/27/99
3540260	QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY	11/19/97 Rev. C	8/27/99

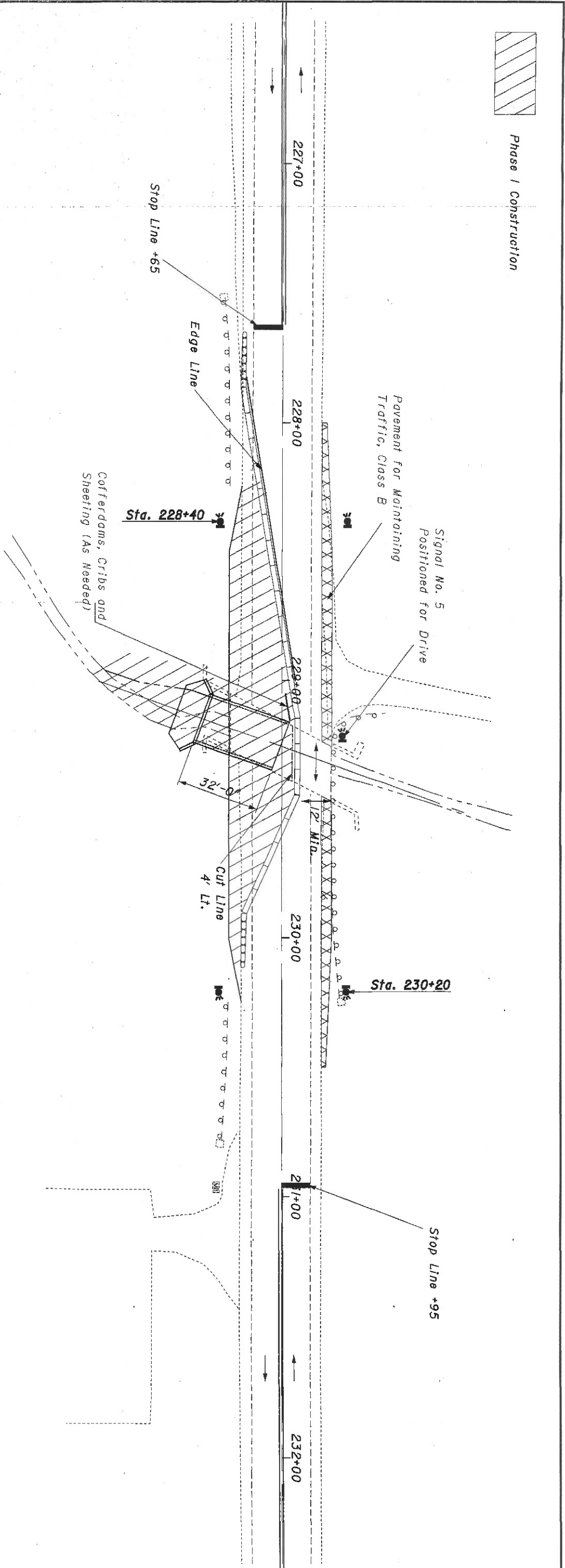
- 2) THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).
THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS450	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS	3/12/99 Rev. I	8/27/99
SS455	TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS	2/18/99	8/27/99
SS461	TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS	6/30/99 Rev. I	8/27/99
SS462	TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS	6/30/99	8/27/99

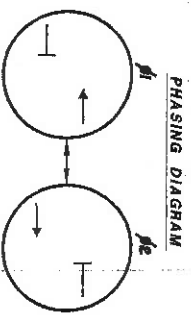
- 3) THE GREAT CZ IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS INC. THIS ATTENUATOR MAY BE USED UNTIL JANUARY 1, 2007 IF THE ITEM WAS PURCHASED BEFORE OCTOBER 1, 1998 AND IS IN THE CONTRACTOR'S INVENTORY.



Phase 1 Construction



- Phase One M.O.T.**
1. Place Temp. Pavement (Widening to Face of guardrail) as shown.
 2. Place Signals, Concrete Barrier and switch traffic as shown.
 3. Remove the outlet portion of the existing bridge
 4. Build outlet portion of culvert as shown.
 5. Backfill culvert, place pavement, shoulder, guardrail(Rt). Prepare for Phase 2 Traffic.



SIGNAL INDICATORS

SIGS.-5

COLOR SEQUENCE CHART

INDICATIONS	No	1	2	3	4	5	6
FACINGS	1234	5	6	7	8	9	10
Sta. 228+40	R	R	R	R	R	R	R
Sta. 230+50	R	R	R	R	R	R	R

TIMING CHART

INTERVAL	1	2	3	4	5	6
GREEN	23	3	23	3	23	3
YELLOW CHANGE						
ALL RED CLEARANCE						
CIRCLE LENGTH						

QUANTITIES CARRIED TO SHEET 6

PORTABLE CONCRETE BARRIER LOCATIONS	STATION	OFFSET
	227+86.2	14.9' RT
	229+14.6	6.0' LT
	229+44.6	6.0' LT
	229+90.4	14.2' RT

THE PCB OFFSETS GIVEN IN THIS PLAN ARE TO THE CENTER OF PCB.

PORTABLE CONCRETE BARRIER
WORK ZONE IMPACT ATTENUATOR

Pavement for Maintaining Traffic, Class B

Sta. 228+00 to 228+50
(Var. 2' to 4') x 50' / 9 = 17 Sq Yd
Sta. 228+50 to 229+23.6
4' x 73.6' / 9 = 33 Sq Yd
Sta. 229+45.0 to 230+00
4' x 55' / 9 = 24 Sq Yd
Sta. 230+00 to 230+50
(Var. 4' to 2') x 50' / 9 = 17 Sq Yd

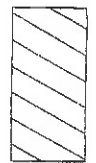
Total = 91 Sq Yd

WORK ZONE RPMs	FROM	TO	SIDE	SPACING (FT)	TYPE	TYPE A	REMARKS (LINE TYPE)		
PHASE 1	226+15	227+65	℄	20'			CENTER		
	230+95	232+45	℄	20'			CENTER		
	227+65	229+45	LT	5'		37	EDGE		
	229+45	230+95	LT	5'		31	EDGE		
	229+15	229+45	RT	5'		7	EDGE		
TOTALS						75	44	16	135

MOE-7-4.34

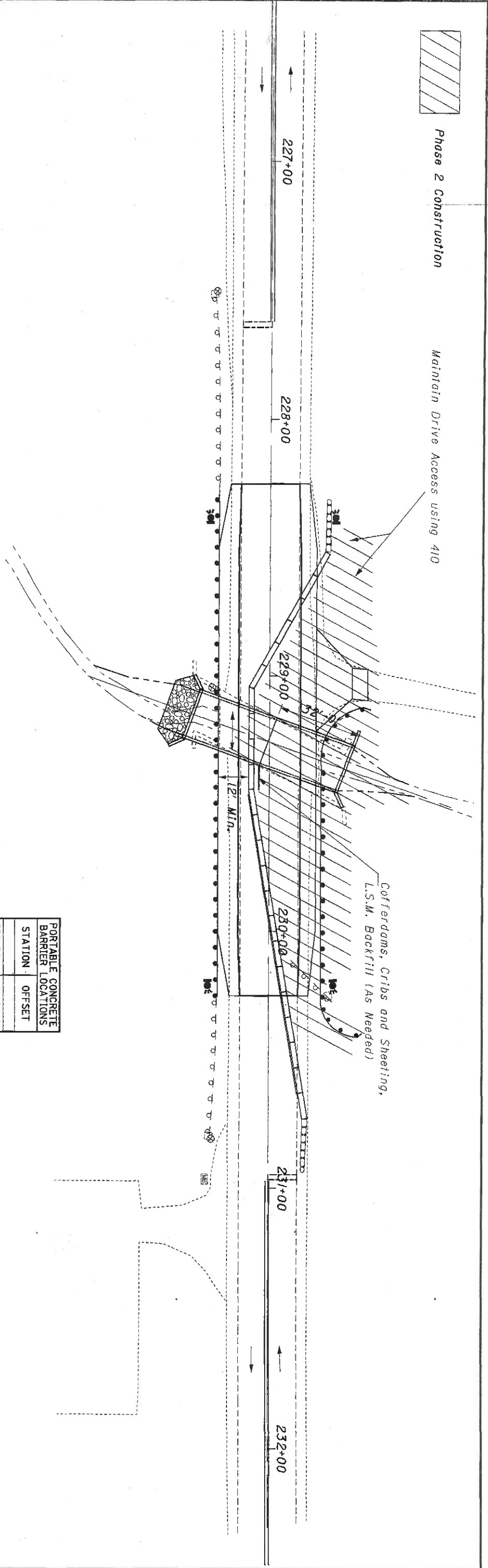
MAINTENANCE OF TRAFFIC
PHASE ONE

CALCULATED 0 20 40
CHECKED
HORIZONTAL SCALE IN FEET



Phase 2 Construction

Maintain Drive Access using 410



STATION	OFFSET
228+52.1	22.3' LT
229+04.5	7.0' RT
229+44.5	7.0' RT
230+73.0	14.0' LT

THE PCB OFFSETS GIVEN IN THIS PLAN ARE TO THE CENTER OF PCB.

--- PORTABLE CONCRETE BARRIER
 - - - - - WORK ZONE IMPACT ATTENUATOR

6. Adjust Concrete Barrier as shown.
7. Remove Remaining Portion of Bridge, Build Inlet portion of culvert as shown.
8. Backfill culvert, place pavement, shoulder, guardrail, Build Drive, extend 15' culvert.
9. Remove Barrier. Place Surface Course.

PHASE	DESCRIPTION	UNIT	QUANTITY
PHASE 1 M.O.T.	Cofferdams Cribbs, and Sheeting, As Per Plan	LUMP	503
	Low Strength Mortar Backfill	CU YD	613
	Work Zone Impact Attenuator (Bidirectional)	EACH	614
	Work Zone Raised Pavement Markers	EACH	614
	Barrier Reflector, Type B2	EACH	614
	Object Marker, Two Way	EACH	614
	Work Zone Center Line, Class 1, 642 Paint		614
	Work Zone Edge Line, Class 1, 642 Paint	MILE	614
	Work Zone Stop Line, Class 1, 642 Paint	MILE	614
	Pavement for Maintaining, Traffic, Class B	SO YD	615
PHASE 2 M.O.T.	Roads for Maintaining Traffic	LUMP	615
	Portable Concrete Barrier, 32"	FT	622
TOTALS TO GEN. SUMM.	Portable Concrete Barrier, 32", Bridge Mounted	FT	622
			30

FROM	TO	SIDE	SPACING (FT)	TYPE	REMARKS	
PHASE 2						
226+15	227+65	C	20'	B	CENTER	
230+95	232+45	C	20'	B	CENTER	
229+05	229+45	LT	5'	9	EDGE	
227+65	229+05	RT	5'	29	EDGE	
229+05	230+95	RT	5'	39	EDGE	
TOTALS				77	48	16

SHEET NUMBER

3	4	6	8	9	15	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
<u>ROADWAY</u>											
LUMP						201	11000	LUMP		CLEARING AND GRUBBING	
						LUMP 202	11200	LUMP		PORTIONS OF STRUCTURE REMOVED	
				10		202	35100	10	FT	PIPE REMOVED, 24" AND UNDER	
				325		202	38000	325	FT	GUARDRAIL REMOVED	
				3		202	54000	3	EACH	RAISED PAVEMENT MARKER REMOVED	
125			292			203	10000	417	CU YD	EXCAVATION	
			74			203	20000	74	CU YD	EMBANKMENT	
125						203	35000	125	CU YD	GRANULAR EMBANKMENT	
			468			204	10000	468	SQ YD	SUBGRADE COMPACTION	
			332			254	01000	332	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
				325		606	13000	325	FT	GUARDRAIL, TYPE 5	
				2		606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T	
<u>EROSION CONTROL</u>											
					22	601	32101	22	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, AS PER PLAN	3
		1403				659	10000	1403	SQ YD	SEEDING AND MULCHING	
		0.1				659	20000	0.1	TON	COMMERCIAL FERTILIZER	
		0.3				659	31000	0.3	ACRE	LIME	
		4				659	35000	4	M GAL	WATER	
						832	15000	LUMP		STORM WATER POLLUTION PREVENTION PLAN	
						832	30000	1500	EACH	EROSION CONTROL	
<u>DRAINAGE</u>											
		LUMP				503	11101	LUMP		COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN	3
						LUMP 503	21300	LUMP		UNCLASSIFIED EXCAVATION	
						3508 509	10000	3508	POUND	EPOXY COATED REINFORCING STEEL	
					8.3	511	46000	8.3	CU YD	CLASS C CONCRETE	
					27.5	511	46500	27.5	CU YD	CLASS C CONCRETE, FOOTING	
					32	512	10100	32	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
					117	512	33000	117	SQ YD	TYPE 2 WATERPROOFING	
					152	512	33010	152	SQ YD	TYPE 3 WATERPROOFING	
					34	516	13600	34	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	
					LUMP	518	21231	LUMP		POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	18
				0.3		602	20000	0.3	CU YD	CONCRETE MASONRY	
				16		603	06100	16	FT	15" CONDUIT, TYPE C	
					64	603	96467	64	FT	18' X 6' CONDUIT, TYPE A, 706.05, AS PER PLAN	15
			64			605	31100	64	FT	AGGREGATE DRAINS	
		20			135	613	41200	155	CU YD	LOW STRENGTH MORTAR BACKFILL	
<u>PAVEMENT</u>											
			101			301	46000	101	CU YD	ASPHALT CONCRETE BASE, PG64-22	
			75	11		304	20000	86	CU YD	AGGREGATE BASE	
			33			407	10000	33	GALLON	TACK COAT	
			44			407	14000	44	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
			288			408	10000	288	GALLON	PRIME COAT	
			47			448	46050	47	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
			30			448	47020	30	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
<u>TRAFFIC CONTROL</u>											
				5		626	00300	5	EACH	BARRIER REFLECTOR, TYPE A2	
				1		630	84900	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				1		630	86002	1	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
						642	00090	0.30	MILE	EDGE LINE	
						642	00290	0.15	MILE	CENTER LINE	
<u>MAINTENANCE OF TRAFFIC</u>											
30						410	12000	30	CU YD	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
20						410	13000	20	CU YD	TRAFFIC COMPACTED SURFACE, TYPE C	
		4				614	12338	4	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
		276				614	12800	276	EACH	WORK ZONE RAISED PAVEMENT MARKER	
10						614	13000	10	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		11				614	13302	11	EACH	BARRIER REFLECTOR, TYPE B2	
		11				614	13360	11	EACH	OBJECT MARKER, TWO WAY	
		0.12				614	21100	0.12	MILE	WORK ZONE CENTER LINE, CLASS 1, 642 PAINT	
		0.06				614	22100	0.06	MILE	WORK ZONE EDGE LINE, CLASS 1, 642 PAINT	
		48				614	26200	48	FT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT	
		LUMP				615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
		91				615	25000	91	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
1						616	10000	1	MGAL	WATER	
		410				622	40020	410	FT	PORTABLE CONCRETE BARRIER, 32"	
		30				622	40040	30	FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED	
						614	11000	LUMP		MAINTAINING TRAFFIC	
						619	16000	5	MONTH	FIELD OFFICE, TYPE A	
						623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
						624	10000	LUMP		MOBILIZATION	

- ① Sta. 228+25 to 228+50
(Var. 30.6' to 38.0') x 25' = 857.5 SF
Sta. 228+50 to 230+00
38' x 150' = 5700 SF
Sta. 230+00 to 320+25
(Var. 38.0' to 30.6') x 25' = 857.5 SF
Additional Area (Over Box)
Inlet - 226.5 SF
Outlet - 204.5 SF
TOTAL: 7846 SF x 0.05 / 9 = 44 GAL
- ② Sta. 228+25 to 228+50
(Var. 30.6' to 38.0') x 25' = 857.5 SF
Sta. 228+50 to 230+00
38' x 150' = 5700 SF
Sta. 230+00 to 320+25
(Var. 38.0' to 30.6') x 25' = 857.5 SF
Additional Area (Over Box--See sht 14)
Inlet - 226.5 SF
Outlet - 204.5 SF
TOTAL: 7846 SF x 0.05 / 9 = 44 GAL
- ③ Sta. 228+25 to 228+50
(Var. 30.6' to 38.0') x 25' = 857.5 SF
Sta. 228+50 to 230+00
38' x 150' = 5700 SF
Sta. 230+00 to 320+25
(Var. 38.0' to 30.6') x 25' = 857.5 SF
Mainline: 7415 SF x 1.75" / 12 / 27 = 40 CY
Additional Area (Over Box--See sht 14)
Inlet - 226.5 SF x 5.1" avg = 3.6 CY
Outlet - 204.5 SF x 5.0" avg = 3.2 CY
TOTAL: = 47 CU YD
- ④ Sta. 228+25 to 228+90
Lt - (434 SF) x 6" / 12 / 27 = 8.04 CY
Rt - (537 SF) x 6" / 12 / 27 = 9.94 CY
Sta. 228+90 to 229+15.10
(W=39') x 25.1' x 6" / 12 / 27 = 18.13 CY
Sta. 229+15.10 to 229+36.39, T-Varies (Over Box)
(37.9 SF) x (L=21.29') / 27 = 29.9 CY
Sta. 229+36.39 to 229+60.00
(W=39') x (L=23.61') x 6" / 12 / 27 = 17.05 CY
Sta. 229+60 to 230+25
Lt - (436 SF) x 6" / 12 / 27 = 8.07 CY
Rt - (550 SF) x 6" / 12 / 27 = 10.19 CY
TOTAL: 101 CU YD
- ⑤ Sta. 228+25 to 228+90
Lt - (434 SF)
Rt - (537 SF)
Sta. 228+90 to 229+15.10
(W=39') x 25.1' = 979 SF
Sta. 229+15.10 to 229+36.39 (Top of Box)
(21.29') x (62') = 1320 SF
Sta. 229+36.39 to 229+60
(W=39') x (L=23.61') = 921 SF
Sta. 229+60 to 230+25
Lt - (436 SF)
Rt - (550 SF)
TOTAL: 5177 SF x 0.5 / 9 = 288 GAL
- ⑥ Sta. 228+25 to 228+90
Lt - (467 SF)
Rt - (570 SF)
Sta. 228+90 to 229+15.10
(W=40') x 25.1' = 1004 SF
Sta. 229+15.10 to 229+36.39 (Over Box)
0 SF
Sta. 229+36.39 to 229+60
(W=40') x (L=23.61') = 944 SF
Sta. 229+60 to 230+25
Lt - (469 SF)
Rt - (583 SF)
TOTAL: 4037 SF x 6" / 12 / 27 = 75 CU YD
- ⑦ Sta. 228+25 to 228+90
Lt - (499 SF)
Rt - (602 SF)
Sta. 228+90 to 229+15.10
(W=41') x 25.1' = 1029 SF
Sta. 229+15.10 to 229+36.39 (Over Box)
0 SF
Sta. 229+36.39 to 229+60
(W=41') x (L=23.61') = 968 SF
Sta. 229+60 to 230+25
Lt - (501 SF)
Rt - (615 SF)
TOTAL: 4214 SF / 9 = 468 SQ YD
- ⑧ Sta. 228+25 to 228+90
Lt - (499 SF)
Rt - (602 SF)
Sta. 228+90 to 229+15.10
(W=41') x 25.1' = 1029 SF
Sta. 229+15.10 to 229+36.39 (Over Box)
0 SF
Sta. 229+36.39 to 229+60
(W=41') x (L=23.61') = 968 SF
Sta. 229+60 to 230+25
Lt - (501 SF)
Rt - (615 SF)
TOTAL: 4214 SF / 9 = 468 SQ YD
- ⑨ Sta. 228+25 to 228+90
4 EA x 8 FT = 32 FT
Sta. 229+36.39 to 230+25
4 EA x 8 FT = 32 FT
TOTAL: 64 FT
- ⑩ Sta. 228+25 to 228+90
65' x 23' = 1495 SQ FT
Sta. 229+60 to 230+25
65' x 23' = 1495 SQ FT
TOTAL: 2990 SF / 9 = 332 SQ YD
- ⑪ Sta. 228+25 to 228+90
65' x 23' = 1495 SQ FT
Sta. 229+60 to 230+25
65' x 23' = 1495 SQ FT
TOTAL: 2990 SF / 9 = 332 SQ YD
- ⑫ Sta. 228+25 to 228+90
65' x 23' = 1495 SQ FT
Sta. 229+60 to 230+25
65' x 23' = 1495 SQ FT
TOTAL: 2990 SF / 9 = 332 SQ YD

PAVEMENT CALCULATION LEGEND

- ① ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (T-1 1/4")
- ② ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
- ③ ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (T-1 3/4")
- ④ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (T-6")
- ⑤ ITEM 408 - PRIME COAT
- ⑥ ITEM 304 - AGGREGATE BASE (T-6")
- ⑦ ITEM 204 - SUBGRADE COMPACTION
- ⑩ ITEM 605 - AGGREGATE DRAINS (0.04 MIN. SLOPE, 0.08 DESIRED)
- ⑪ ITEM 254 - PAVEMENT PLANING
- ⑫ ITEM 407 - TACK COAT

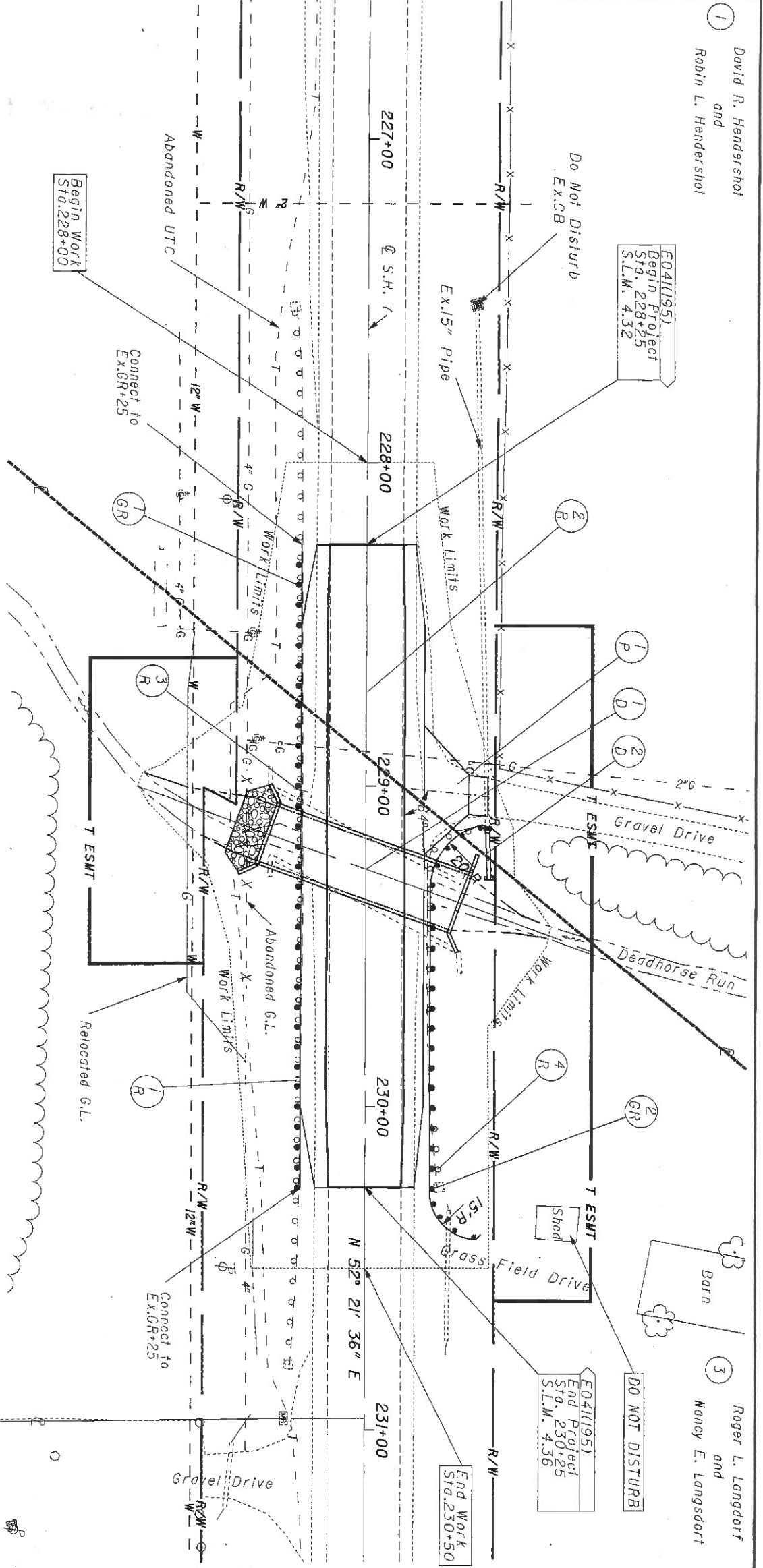
Sheet No.	Item 203 Excavation (CU.YD.)	Item 203 Embankment (CU.YD.)	Item 659 Seeding & Mulching (SQ.YD.)
11	0	0	0
12	96	38	648
13	141	36	755
14	0	0	0
22	27	0	0
23	28	0	0
	292	74	1403

ESTIMATED QUANTITIES

- ITEM 659 - COMMERCIAL FERTILIZER
1403 x 0.00009 = 0.1 TON
- ITEM 659 - LIME
1403 x 9 / 43560 = 0.3 ACRE
- ITEM 659 - WATER
1403 x 0.0027 = 4 MGAL

1
David R. Hendershot
and
Robin L. Hendershot

E041(195)
Begin Project
Sta. 228+25
S.L.M. 4.32



E041(195)
End Project
Sta. 230+25
S.L.M. 4.36

3
Roger L. Langdorf
and
Nancy E. Langsdorf

2
Guy L. Brown
and
Josephine G. Brown

620	637.03	637.00	637.00	637.01	637.05	637.12	637.12	637.24	637.30	637.34	637.48	637.46	637.67	637.85	638.03	638.21	638.40	638.58	638.58	638.87	639.17	639.49	639.82	640	645	
625																										
630																										
635																										
640																										
645																										
227																										
228																										
229																										
230																										
231																										

REF NO.	STATION		SIDE	202	202	202	304	602	603	606	606	626	630	630
	FROM	TO		RPM Removed	Guardrail Removed	Pipe Removed <24"	Aggregate Base (T-8")	Concrete Masonry	15" Conduit, Type C	Guardrail, Type 5	Anchor Assembly, Type T	Barrier Reflector, Type A2	Removal of Ground Mounted Sign and Disposal	Removal of Ground Mounted Post and Disposal
				EA	FT	FT	CU YD	CU YD	FT	FT	EA	EA	EA	EA
1-R	228+25	230+25	Rt		200									
2-R	228+25	230+25	C	3										
3-R	229+02	230+25	Rt											
4-R	229+12	230+40	Lt		125									
1-D	229+25.74	See Sht. 15 for Est. Quantities												
2-D	229+12	229+30	Lt			10		0.27	16					
1-GR	228+25	230+25	Rt							200		3		
2-GR	229+12	230+40	Lt							125	2	2		
1-P	228+99.5		Lt				11							
TOTALS CARRIED TO GENERAL SUMMARY				3	325	10	11	0.27	16	325	2	5	1	1

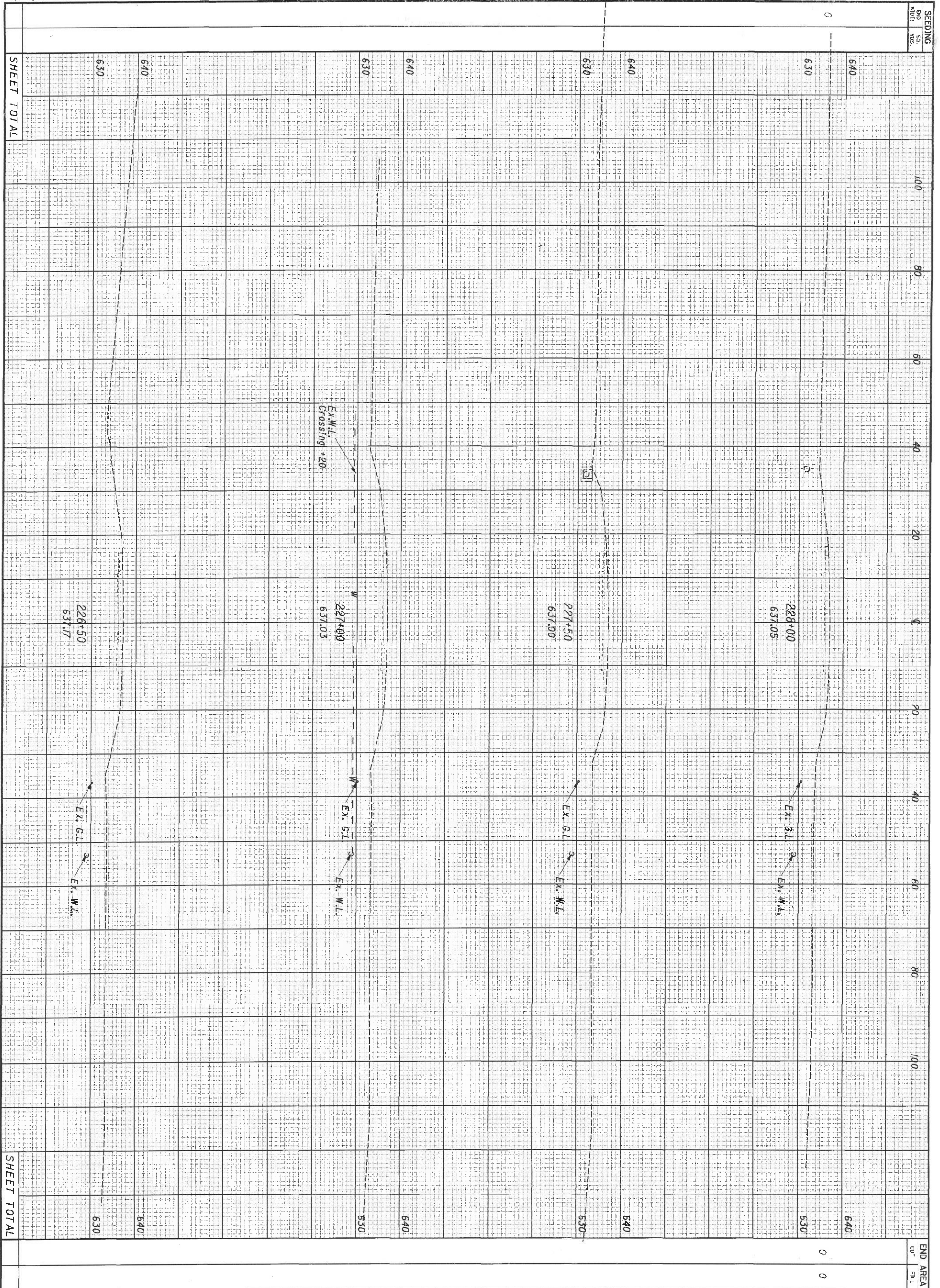
MOE-7-4.32

PLAN AND PROFILE

CHECKED

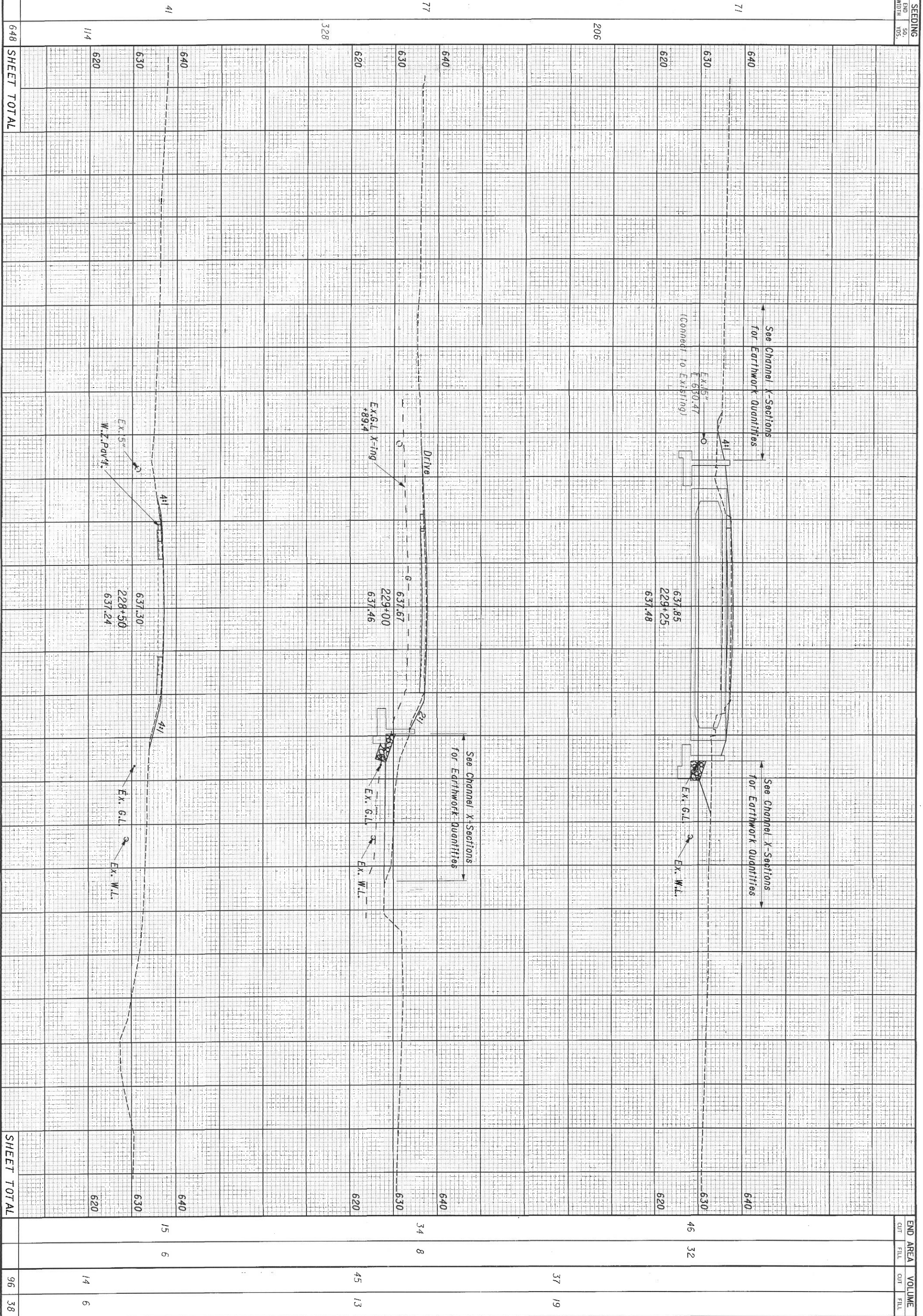
0 20 40

HORIZONTAL SCALE IN FEET



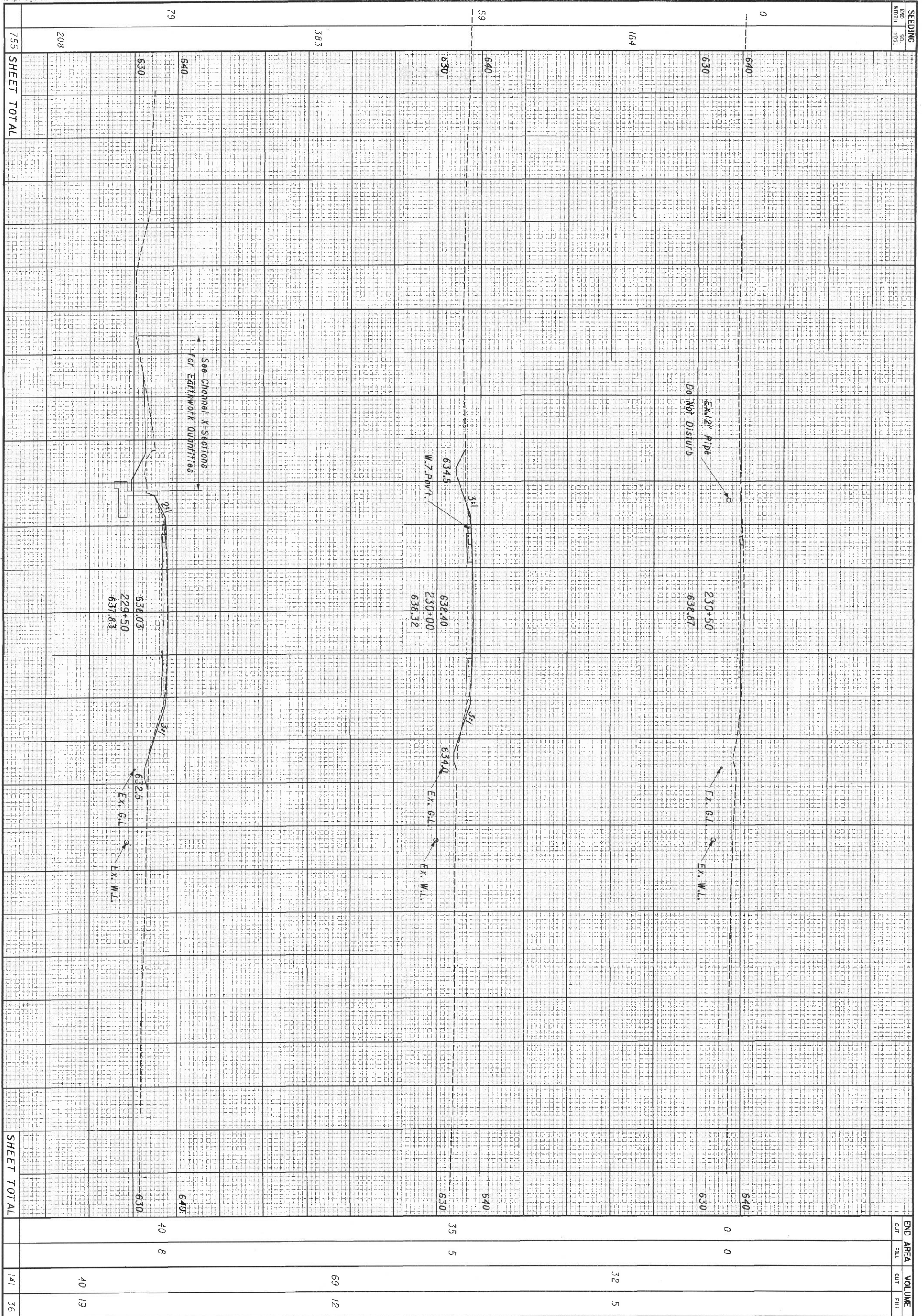
SHEET TOTAL

SHEET TOTAL



648	648	37	19
630	630	45	32
640	640	34	8
630	630	45	13
640	640	15	6
620	620	14	6
SHEET TOTAL	SHEET TOTAL	96	38

**CROSS SECTIONS
STA. 228+50 TO 229+25**



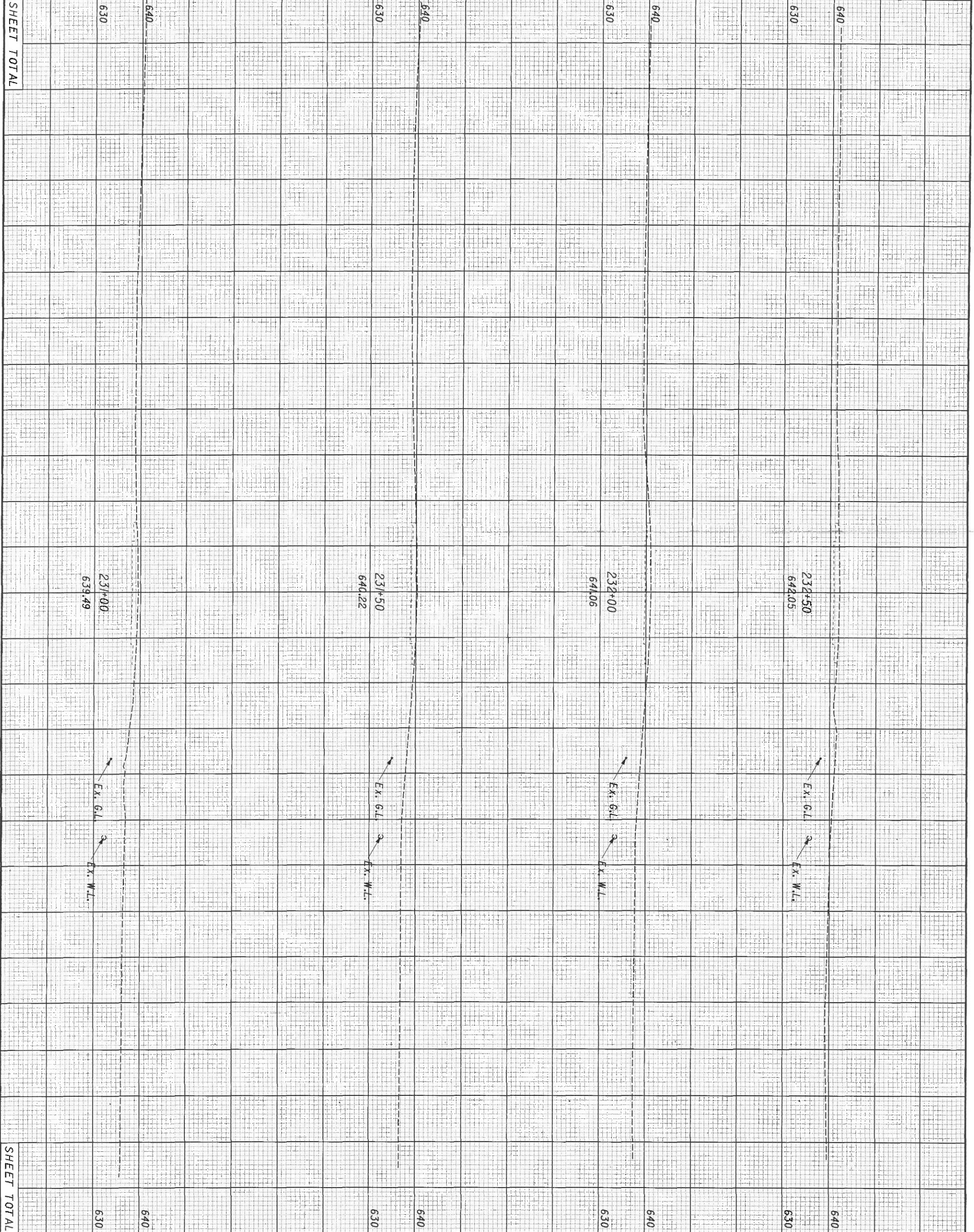
SEEDING	END SO. WIDTH	VOLUME	CUT	FILL	CUT	FILL	CALCULATED	CHECKED
0	640	0	0	0	0	0		
630	640	0	0	0	0	0		
164	640	32	5	32	5	32		
59	640	35	5	35	5	35		
383	640	69	12	69	12	69		
79	640	40	8	40	8	40		
208	640	40	19	40	19	40		
755	SHEET TOTAL	141	36	141	36	141		

**CROSS SECTIONS
STA. 229+50 TO 230+50**

MOE-7-4.32



SEEDING
END SO.
WIDTH VOLS.



END AREA
CUT FILL
VOLUME
CUT FILL

CALCULATED
CHECKED

**CROSS SECTIONS
STA. 231+00 TO 232+50**

MOE-7-4.32

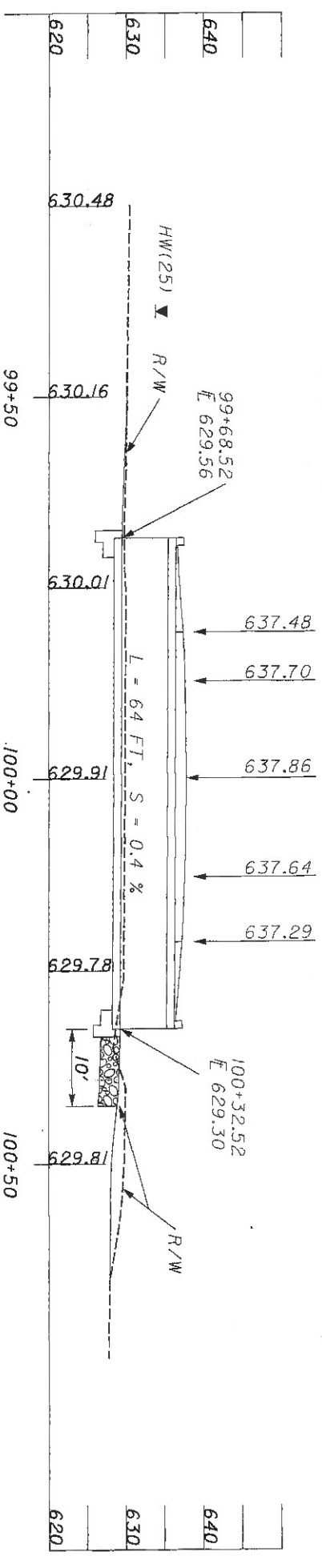
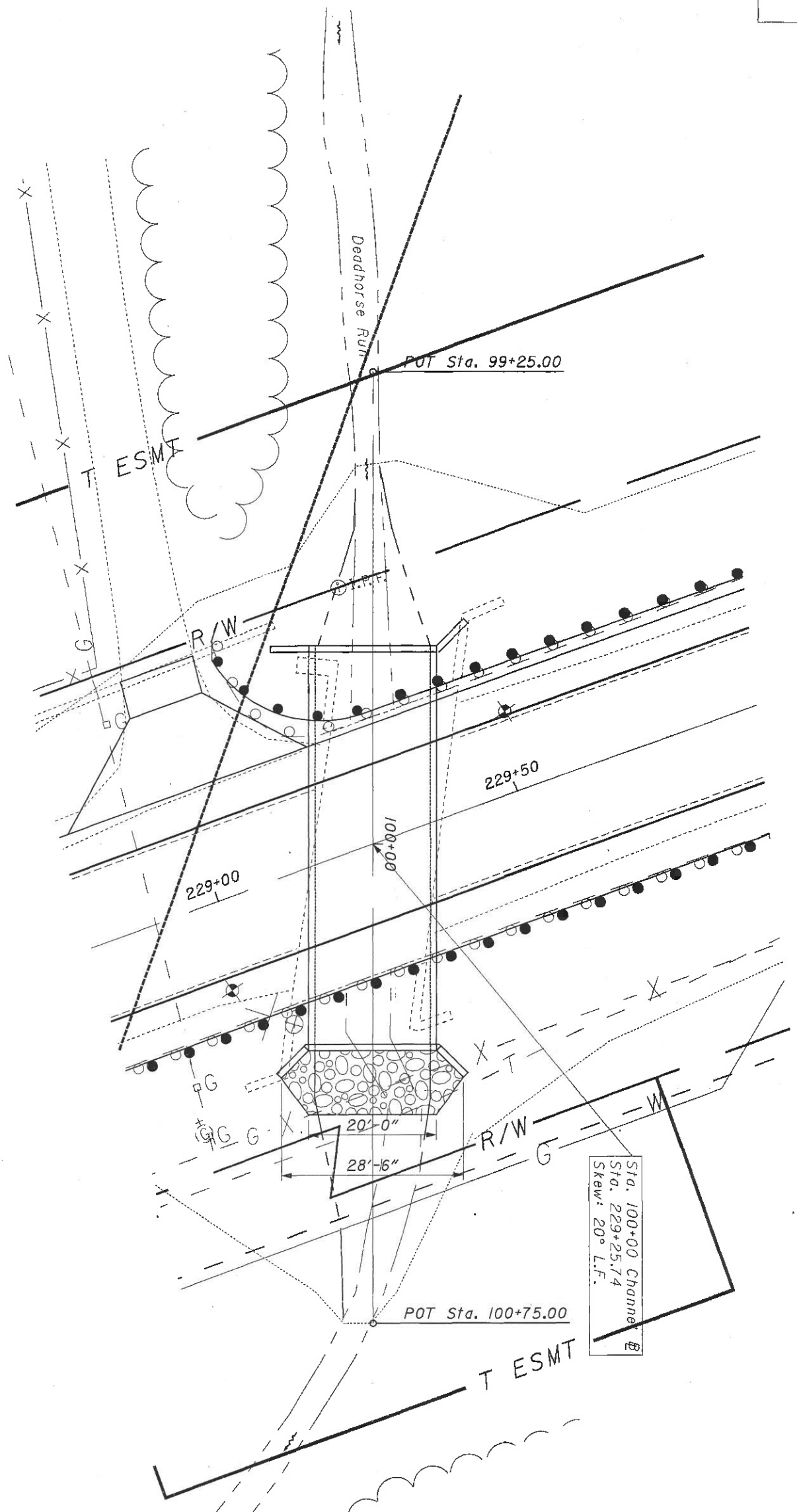
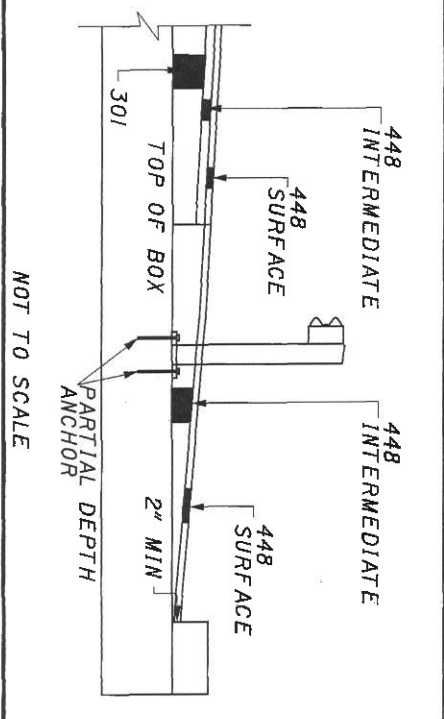
13
27

Proposed Structure: Precast Reinforced Concrete Box Culvert
 Span: 18'-0" Rise: 6'-0"
 Skew: 20° L.F.
 Wearing Surface: Asphalt
 Alignment: Tangent

Existing Bridge
 Type: Concrete Slab Bridge
 Clear Span: 20'-0"
 Skew: 27°-10' L.F.
 Wearing Surface: Asphalt
 Alignment: Tangent

Q(25): 475 cfs
 HW(25): 633.8'
 V(25): 11.7 fps
 Q(100): 688 cfs
 HW(100): 635.0'
 V(100): 13.2 fps

Additional Asphalt - Over Culvert (Details):



GENERAL NOTES

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE INTERIM SPECIFICATIONS THROUGH 1999 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS25 AND THE ALTERNATE MILITARY LOADING.

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES
CONCRETE CLASS C - 4,000 PSI SUBSTRUCTURE
REINFORCING STEEL - ASTM A615, A616, OR A617
Fy - 60,000 psi.

PRECAST STRUCTURES, FOR BOX AND PIPE CULVERTS SEE CMS SECTION 603.

REMOVAL OF EXISTING STRUCTURE:

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.

UTILITY LINES:

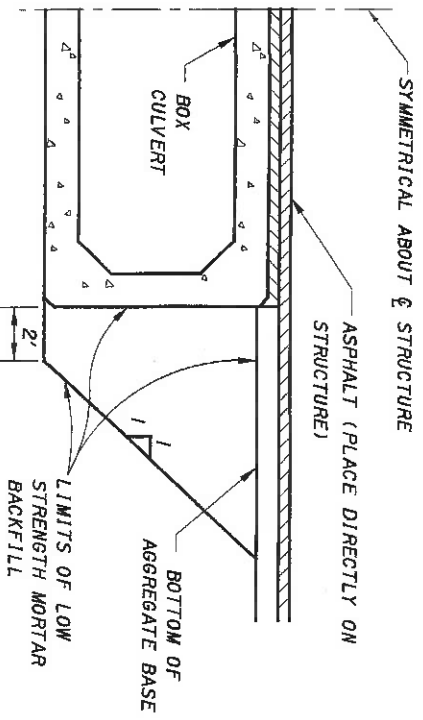
ALL EXPENSES INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNER(S). THE CONTRACTOR AND OWNER(S) ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

UNCLASSIFIED EXCAVATION:

EXCAVATION LIMITS FOR THE PROPOSED STRUCTURE SHALL BE AS DEFINED IN 503.11. EXCAVATION OUTSIDE THESE LIMITS NECESSARY TO REMOVE THE EXISTING STRUCTURE SHALL BE INCLUDED IN 202 FOR PAYMENT.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL

LOW STRENGTH MORTAR BACKFILL SHALL BE PLACED AS SHOWN AND LATHELY TO THE EDGE OF SHOULDER. SEE PROPOSAL NOTE FOR REMAINING REQUIREMENTS. 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 613 - LOW STRENGTH MORTAR BACKFILL

ESTIMATED QUANTITIES

ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
202	11200	LUMP		PORTIONS OF STRUCTURE REMOVED
503	21300	LUMP		UNCLASSIFIED EXCAVATION (WINGWALL FOOTING)
509	10000	3508	POUND	EPOXY COATED REINFORCING STEEL
511	46000	8.3	CU. YD.	CLASS C CONCRETE
511	46500	27.5	CU. YD.	CLASS C CONCRETE, FOOTING
512	10100	32	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33000	117	SQ. YD.	TYPE 2 WATERPROOFING
512	33010	152	SQ. YD.	TYPE 3 WATERPROOFING
516	13600	34	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER
518	21231	LUMP		POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN
601	32101	22	CU. YD.	ROCK CHANNEL PROTECTION, TYPE B, WITH FILTER, APP
603	96467	64	FT.	18" X 6' CONDUIT, TYPE A, 706.05, AS PER PLAN
613	41200	135	CU. YD.	LOW STRENGTH MORTAR BACKFILL

NOTE: TOTALS CARRIED TO GENERAL SUMMARY SHEET

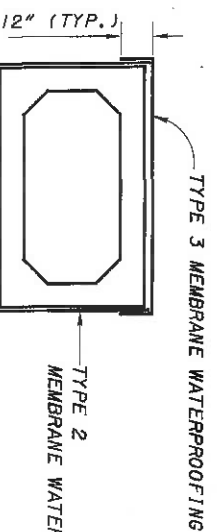
7/27

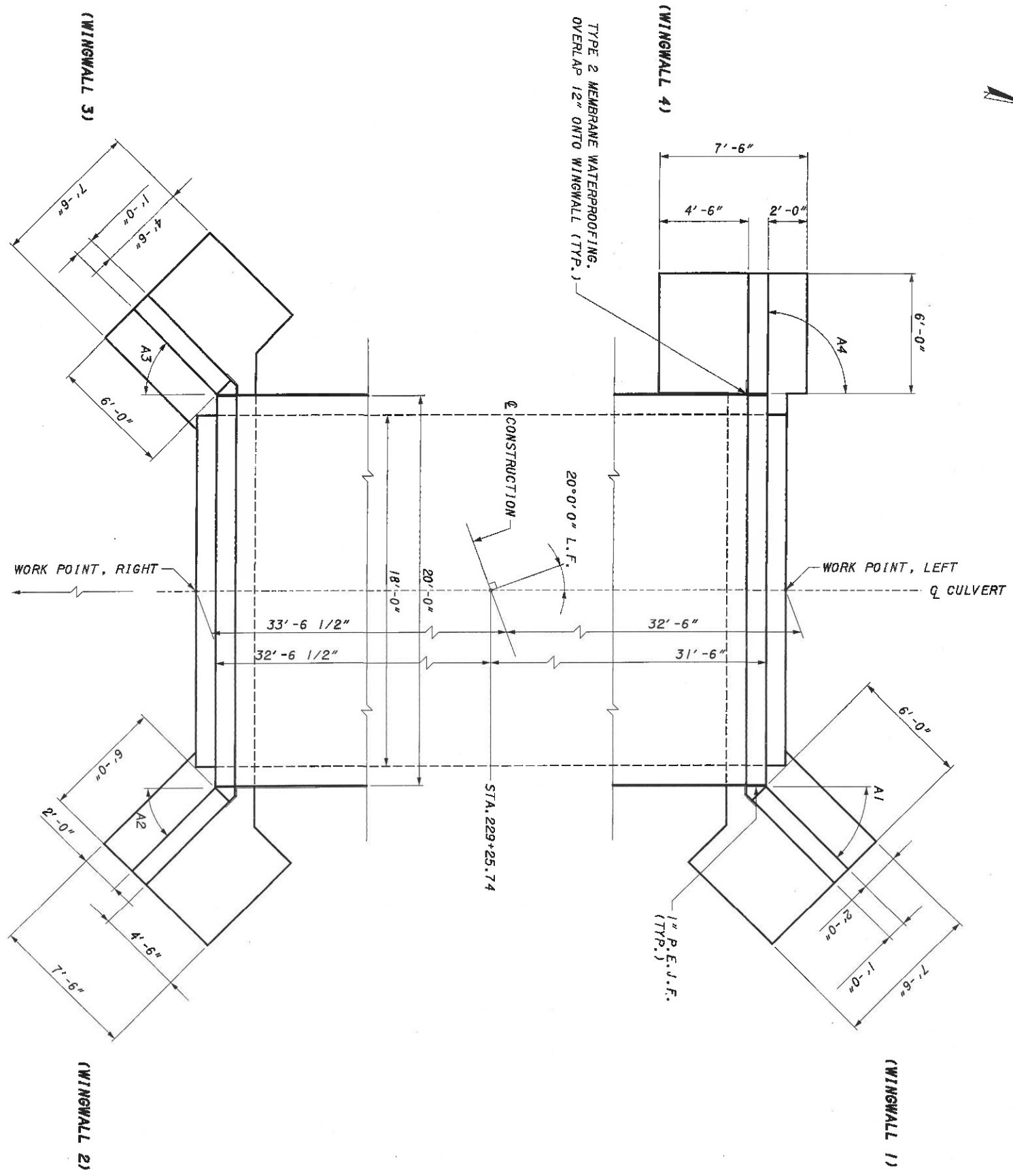
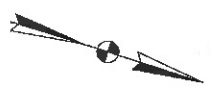
ITEM 603 18" X 6' CONDUIT, TYPE A, 706.05, AS PER PLAN

ALL REQUIREMENTS OF 706.05 AND ASTM C1422 SHALL BE MET EXCEPT AS DETAILED. SEE DETAIL (3/8'), FOR BOX REINFORCING.

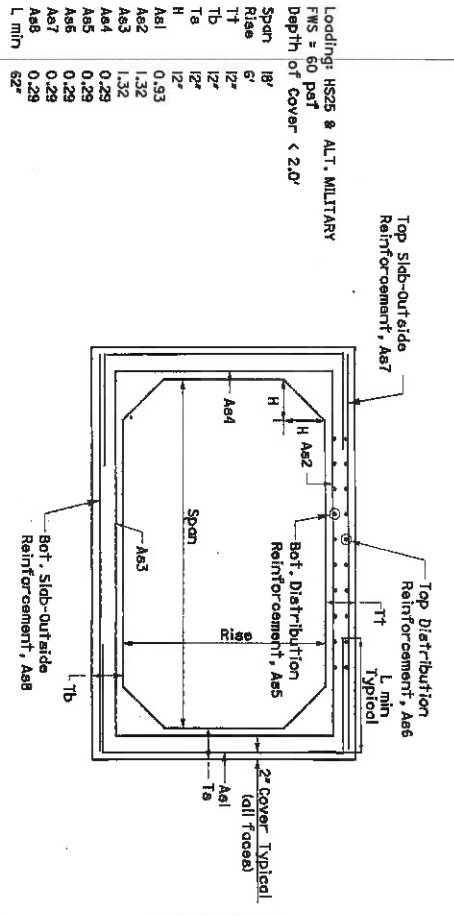
ITEM 512 - TYPE 3 WATERPROOFING SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND ITEM 512 TYPE 2 WATERPROOFING SHALL EXTEND VERTICALLY DOWN ALL SIDES FOR THE PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 603.06 AND CONCRETE SEALING AS SPECIFIED IN 603.08 ARE NOT REQUIRED UNDER THE LIMITS OF THE WATERPROOFING. PAYMENT FOR WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQ. YD. FOR ITEM 512 - TYPE 2 WATERPROOFING, AND ITEM 512 - TYPE 3 WATERPROOFING.

GUARDRAIL POSTS OVER THE CULVERT SHALL BE ANCHORED AS PER STANDARD DRAWING GR-2.2a (COVER DEPTH LEFT), USING A PARTIAL DEPTH ANCHOR. SEE STANDARD DRAWING FOR FURTHER DETAILS.





18" X 6" REINFORCING DETAILS

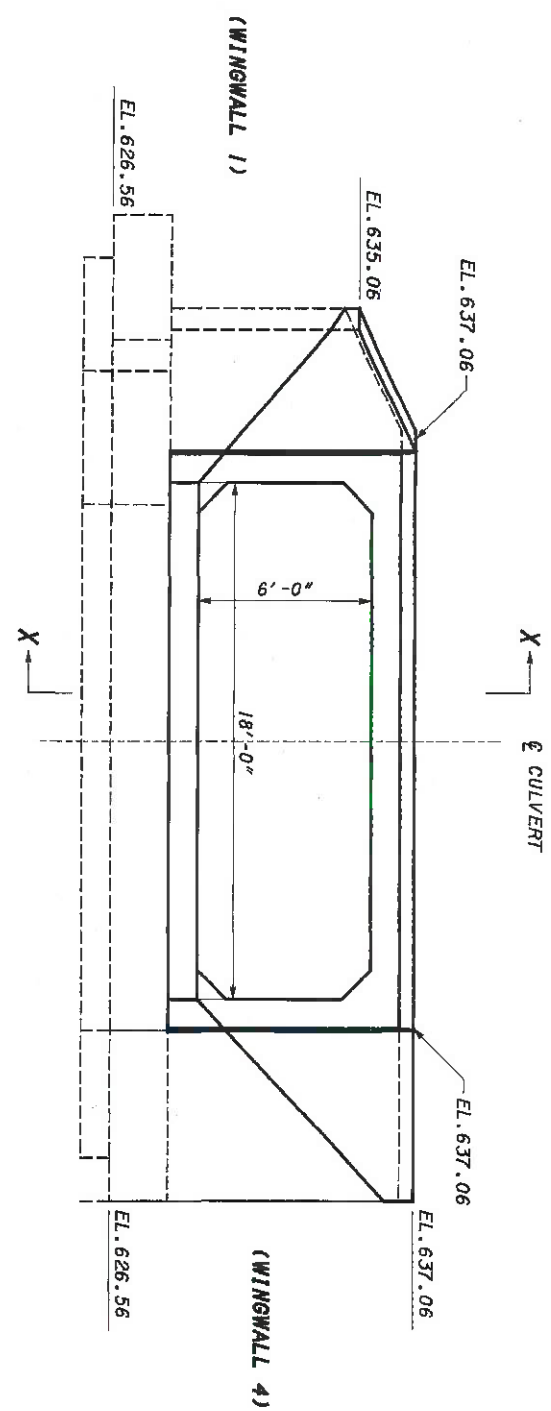


Notes: Maximum spacing of reinforcing shall be 4".
The minimum concrete compressive strength shall be 5000 psi.
As min = 0.002 X Gross Section Area

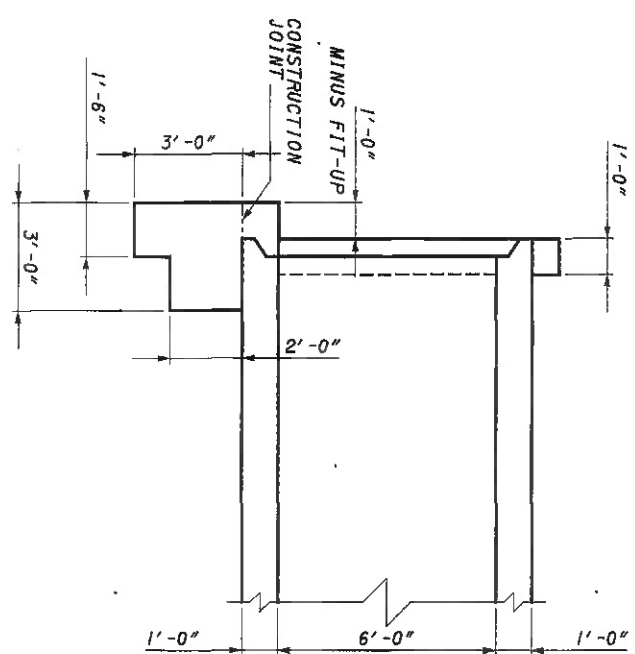
WINGWALL ANGLES	
A1	45° 0' 0"
A2	45° 0' 0"
A3	45° 0' 0"
A4	90° 0' 0"

WORK POINTS		
LOCATION	STATION	OFFSET
LEFT	229+36.85	30' - 6 1/2"
RIGHT	229+14.28	31' - 6"

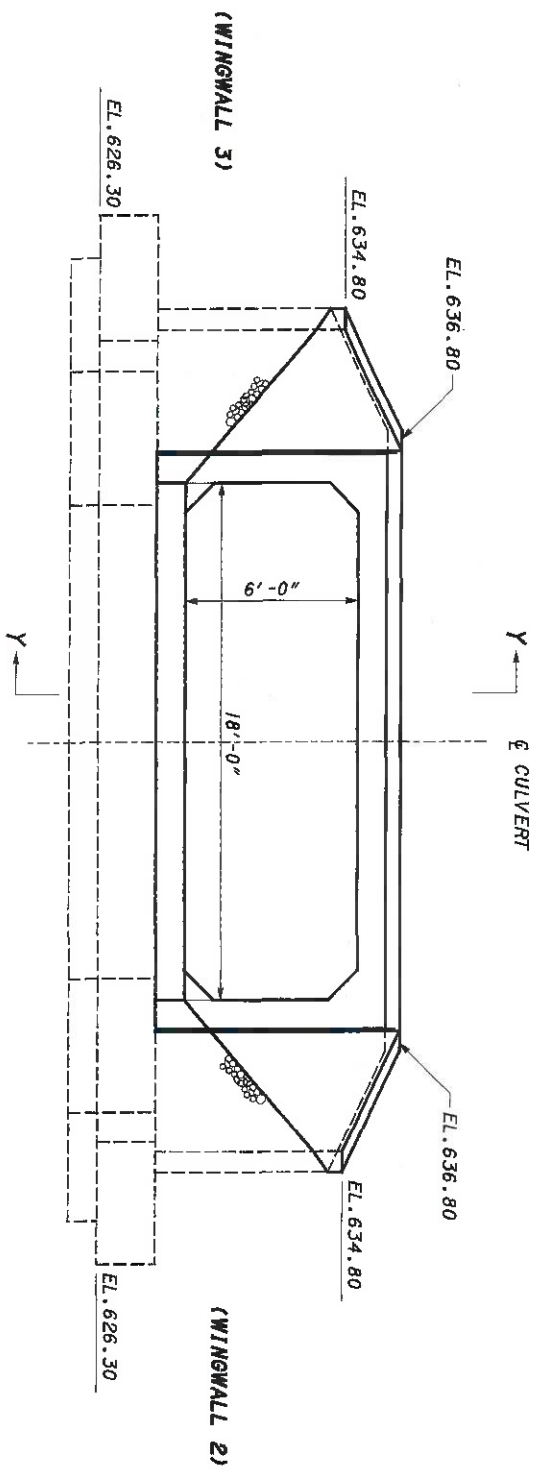
CULVERT & WINGWALL LAYOUT



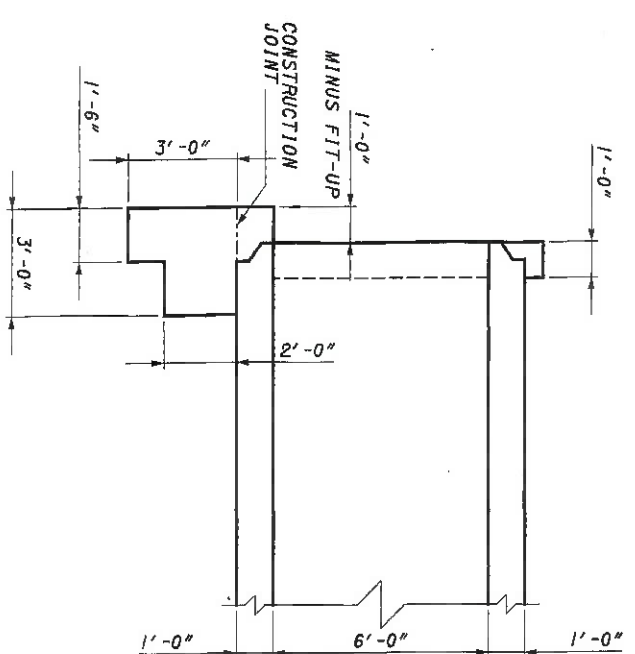
INLET ELEVATION
FLOWLINE ELEVATION: EL. 629.56



SECTION X-X

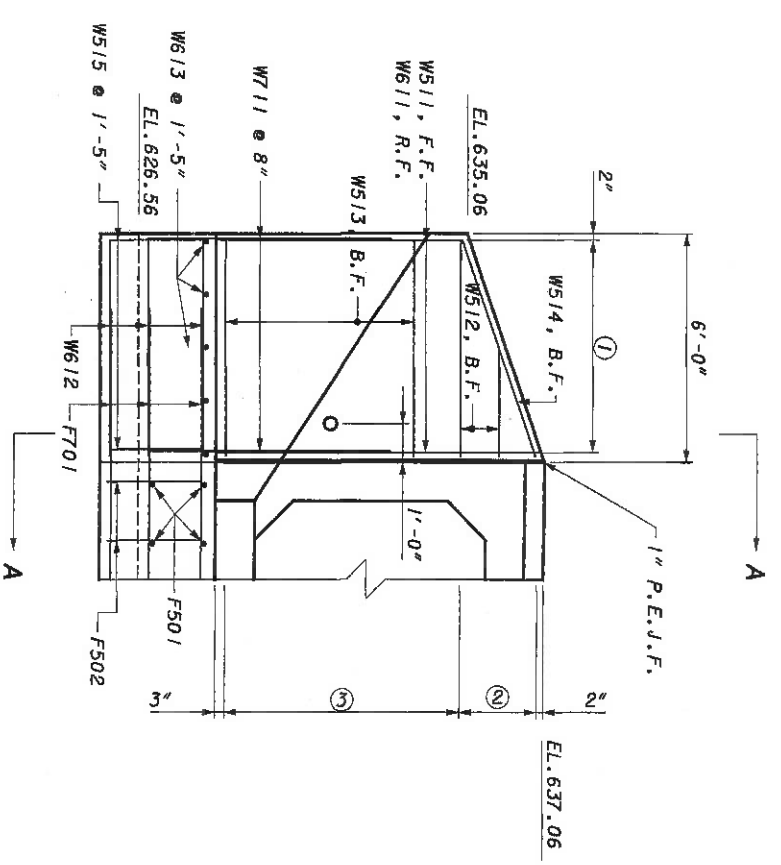


OUTLET ELEVATION
FLOWLINE ELEVATION: EL. 629.30



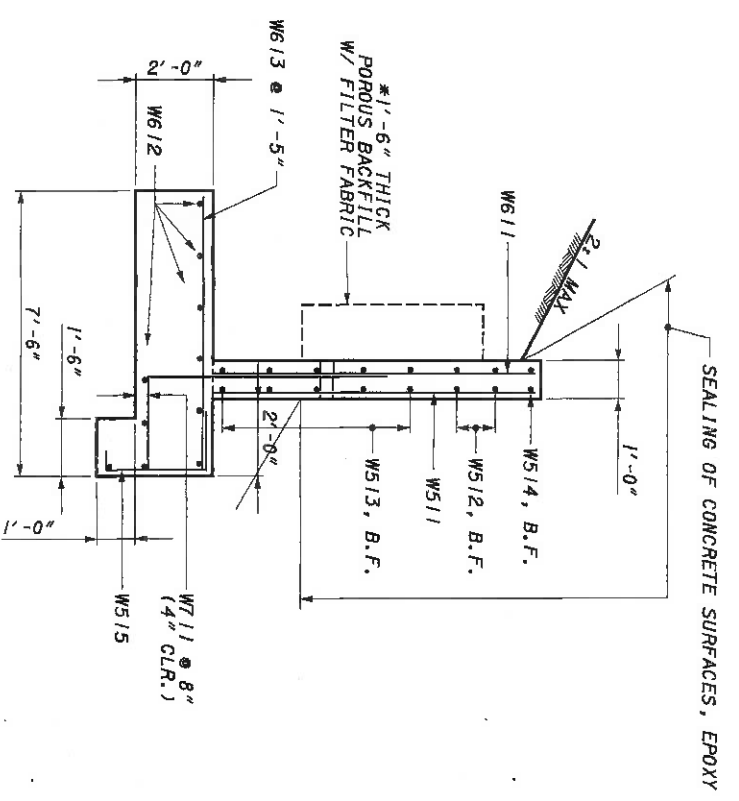
SECTION Y-Y

LEGEND
 F.F. - FRONT FACE
 R.F. - REAR FACE
 B.F. - BOTH FACES



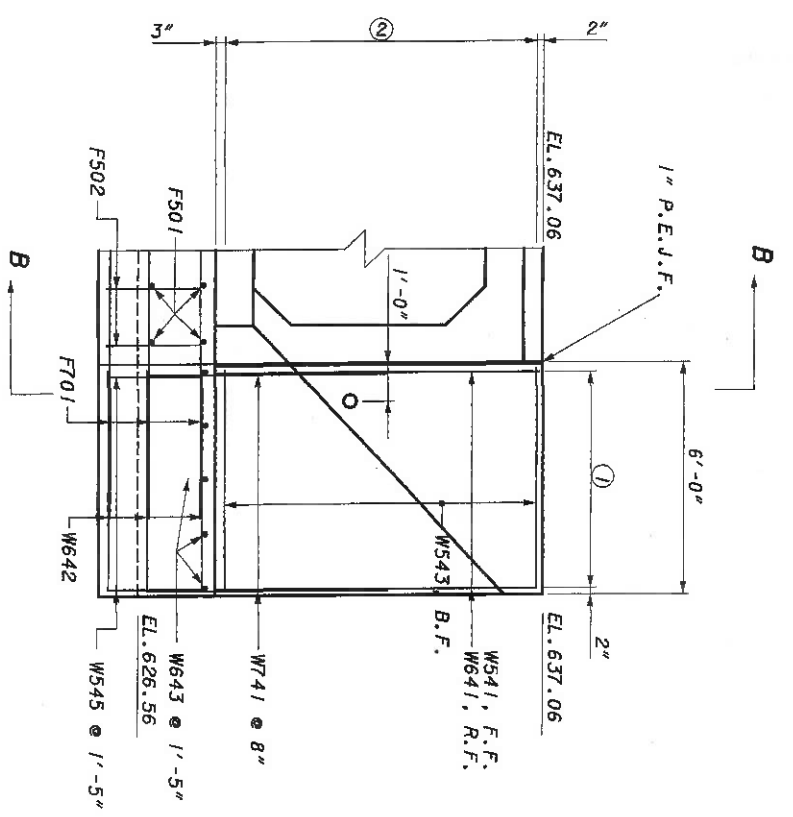
WINGWALL 1 ELEVATION
 NOTE: 4" DIA. WEEPHOLE
 ELEV. - 631.350

- ① SER. OF 5 @ 1'-5"
- ② 2 SPACES @ 1'-0"
- ③ 5 SPACES @ 1'-3"



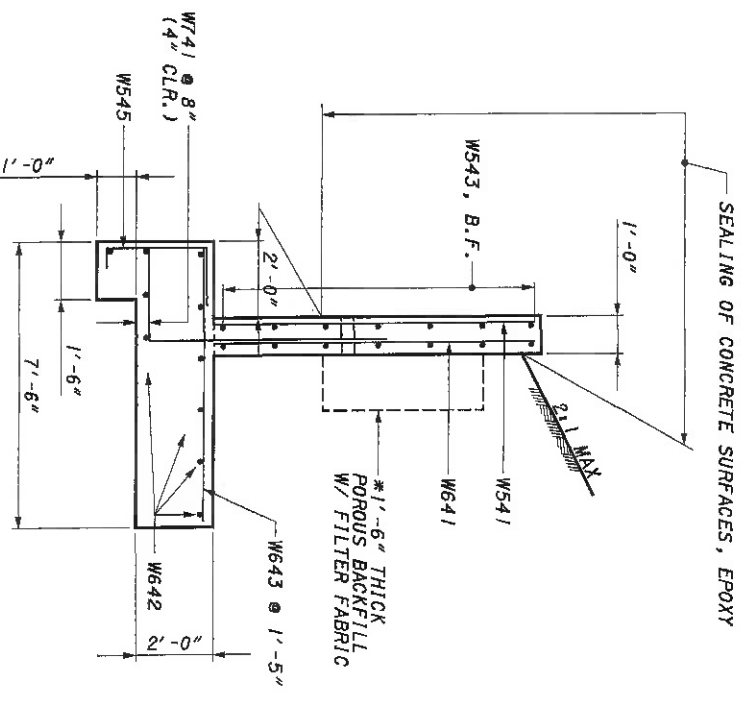
SECTION A-A

*SEE NOTES, THIS SHEET

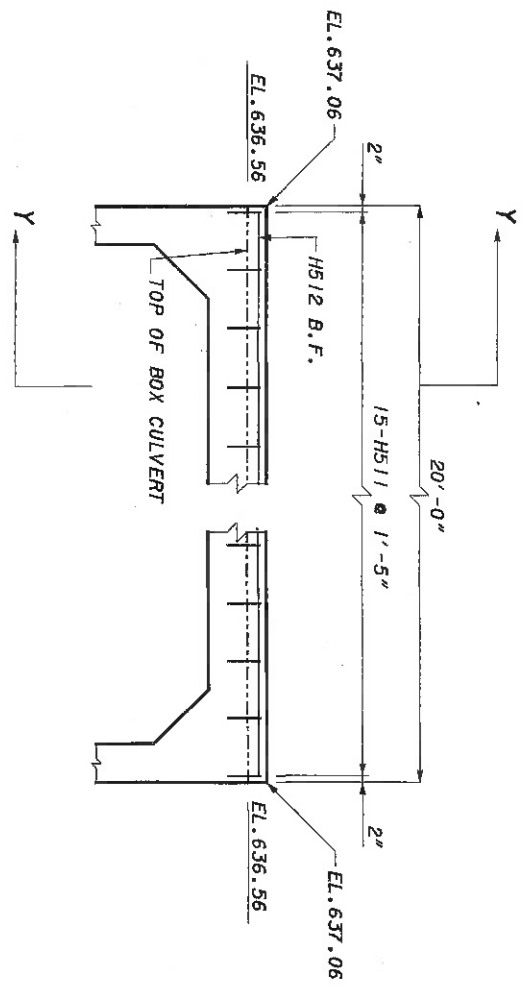


WINGWALL 4 ELEVATION
 NOTE: 4" DIA. WEEPHOLE
 ELEV. - 631.920

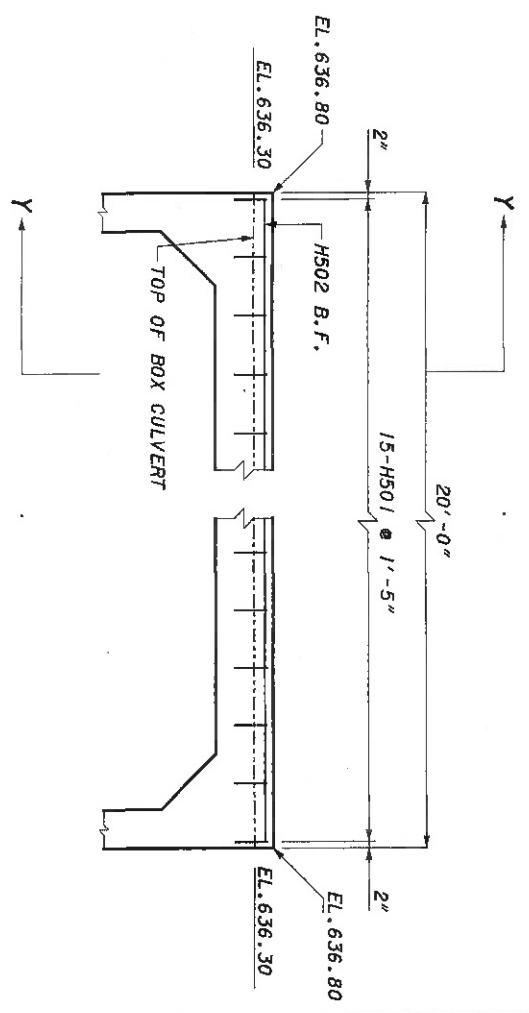
- ① 4 SPACES @ 1'-5"
- ② 6 SPACES @ 1'-4"



SECTION B-B



INLET HEADWALL REINFORCING DETAIL
 SEE SHEET 6/8 FOR SECTION Y-Y



OUTLET HEADWALL REINFORCING DETAIL
 SEE SHEET 6/8 FOR SECTION Y-Y

NOTES:

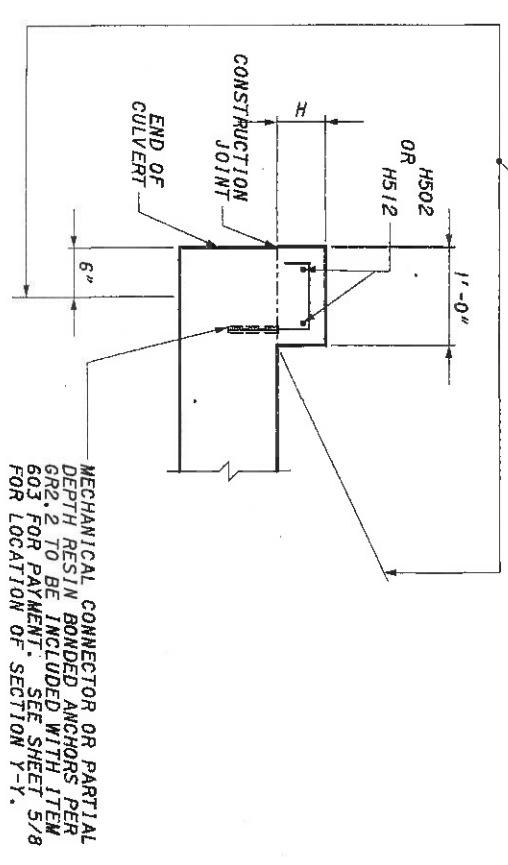
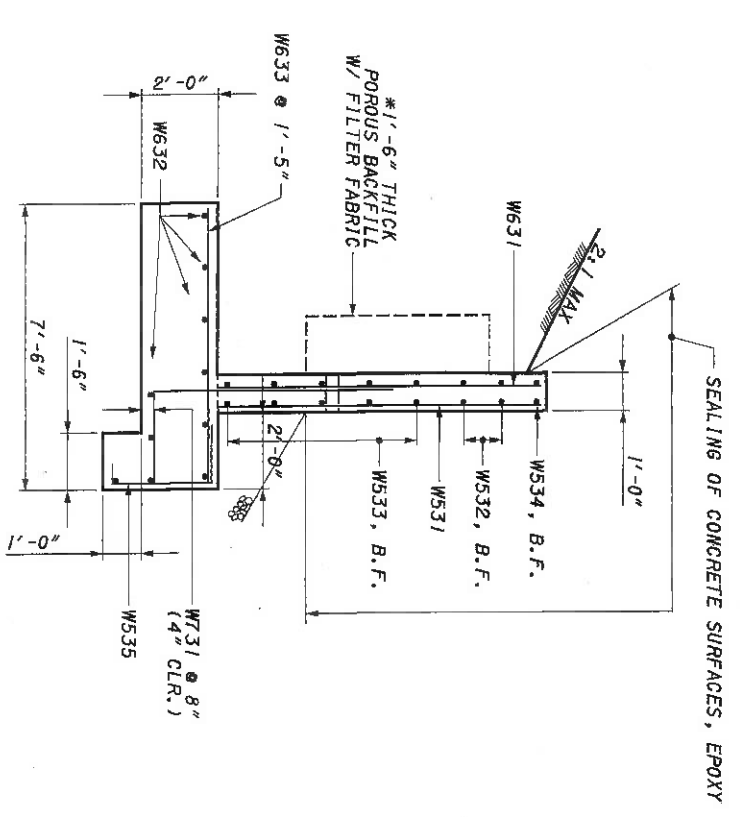
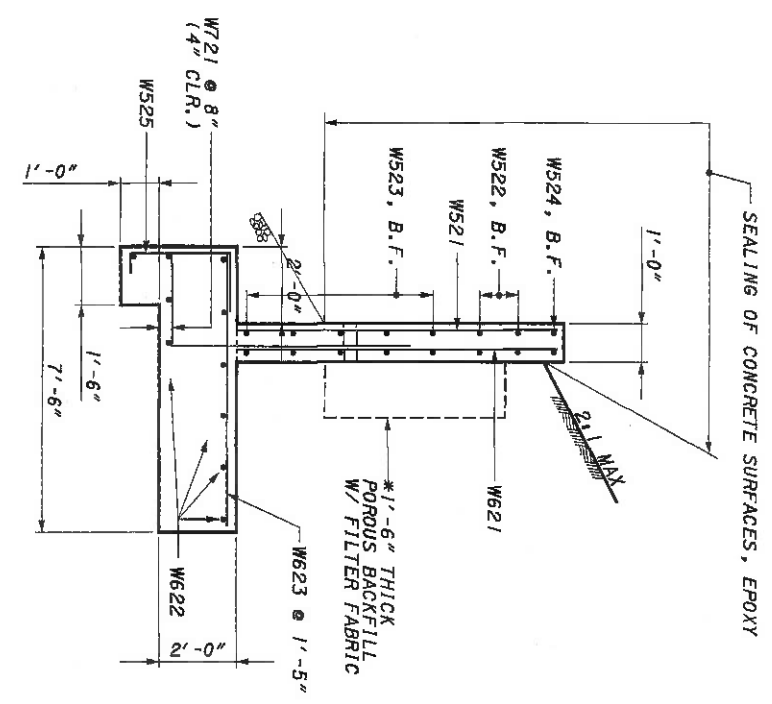
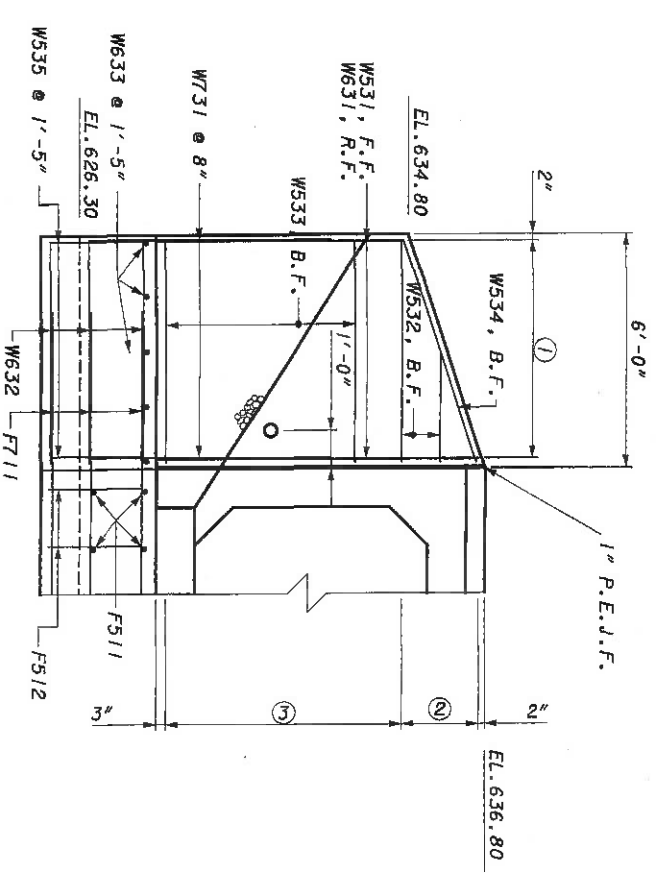
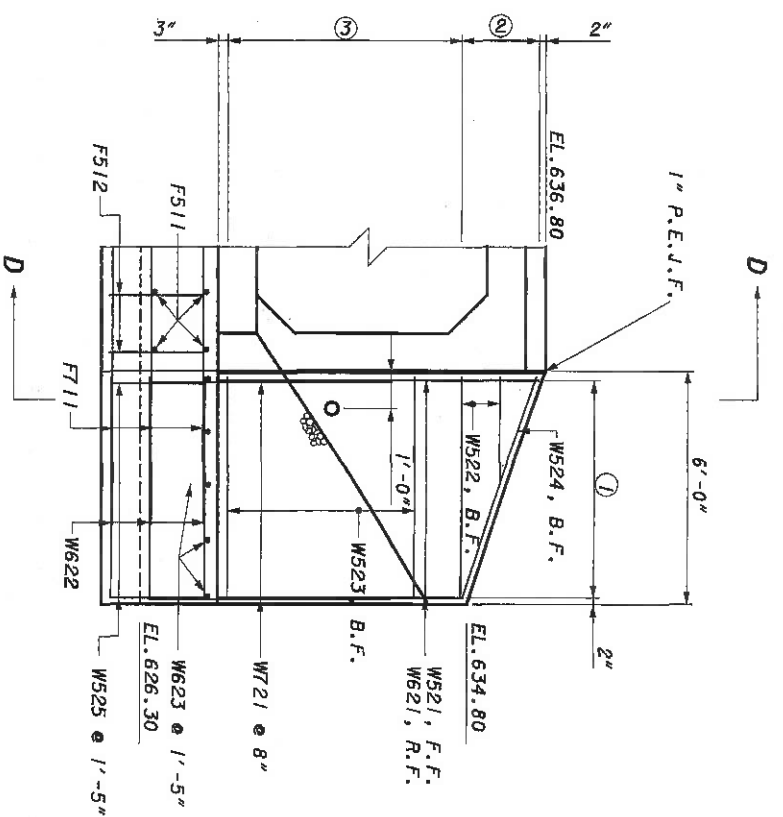
ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.
 1" PREFORMED EXPANSION JOINT FILLER SHALL BE EXTENDED FROM TOP OF FOOTING TO TOP OF WALL.

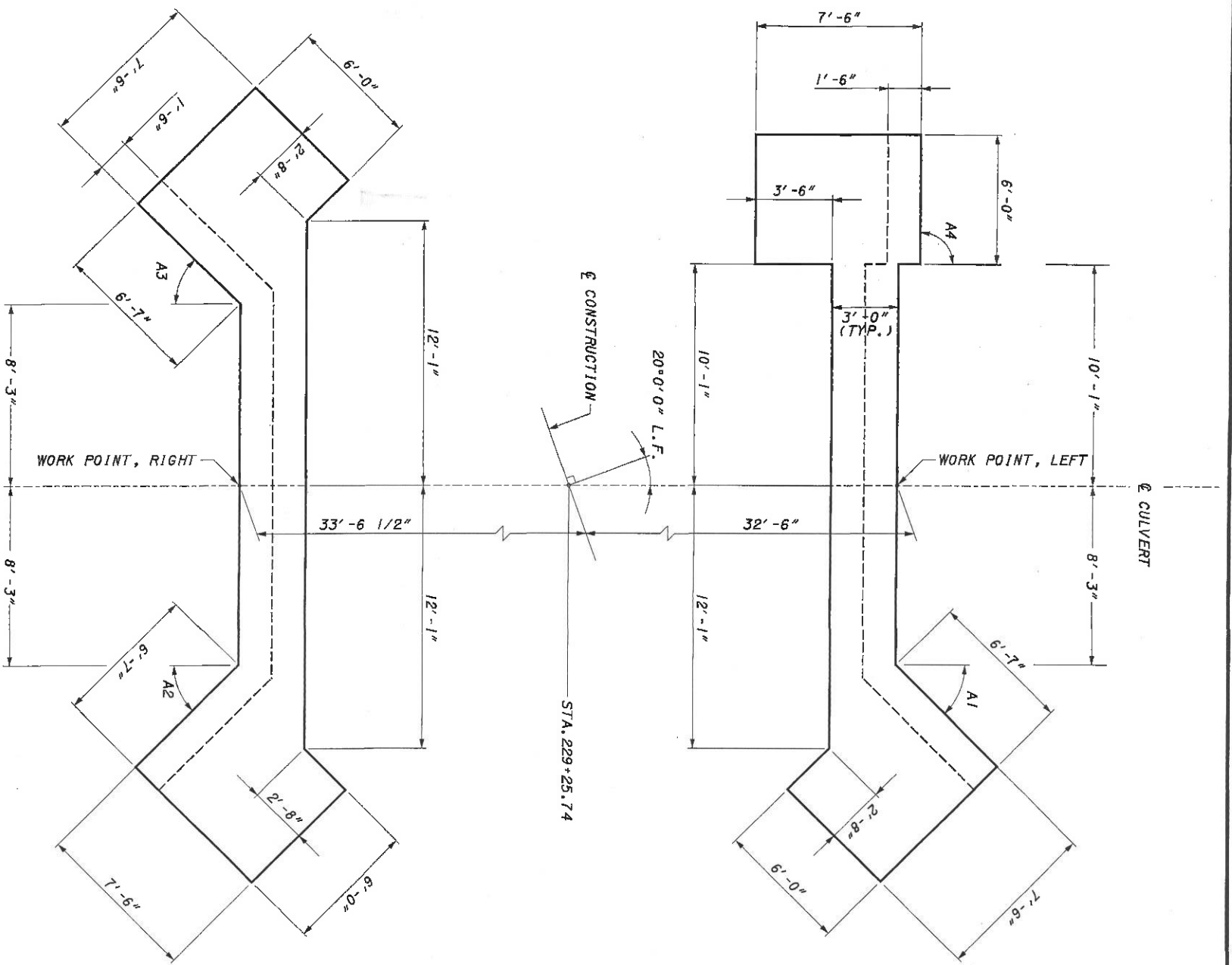
DATE	06/24/05
BY	ADP
CHECKED	SWL
DATE	XXX
BY	ARM

STRUCTURE DETAILS
 MOE-7-0432
 DEADHORSE RUN

MOE-7-04.32

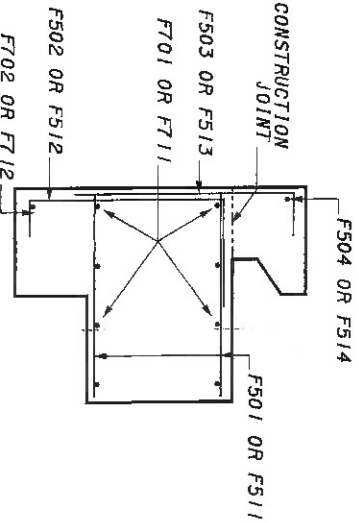
LEGEND
 F.F. - FRONT FACE
 R.F. - REAR FACE
 B.F. - BOTH FACES



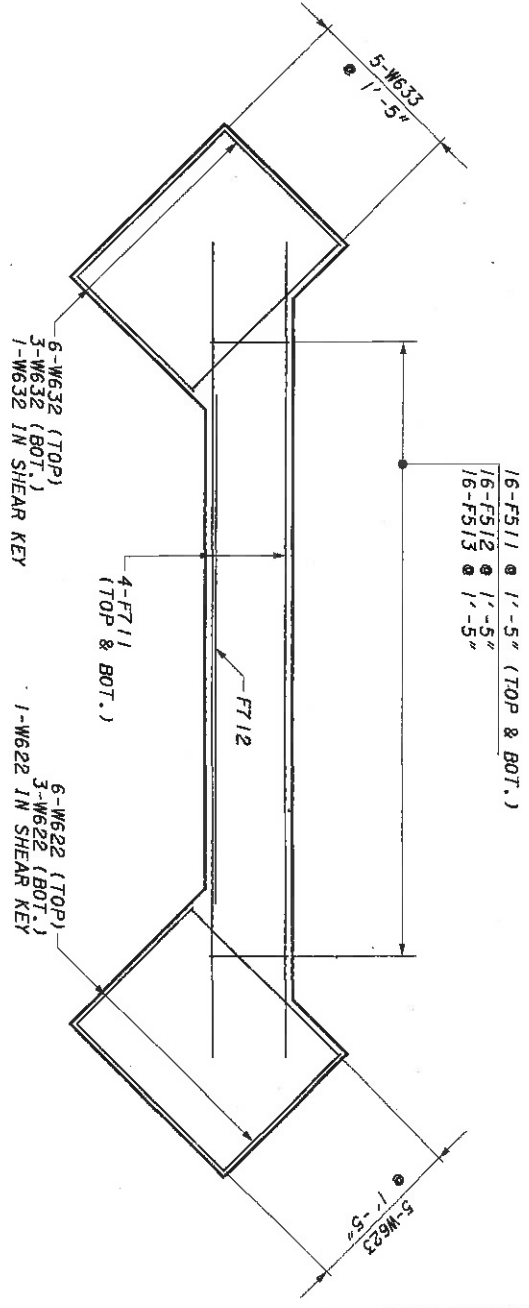


SEE TABLE ON SHEET 3/8 FOR VALUES OF A1 THRU A4 FOR WORKPOINT STATIONS AND OFFSETS SEE SHEET 3/8

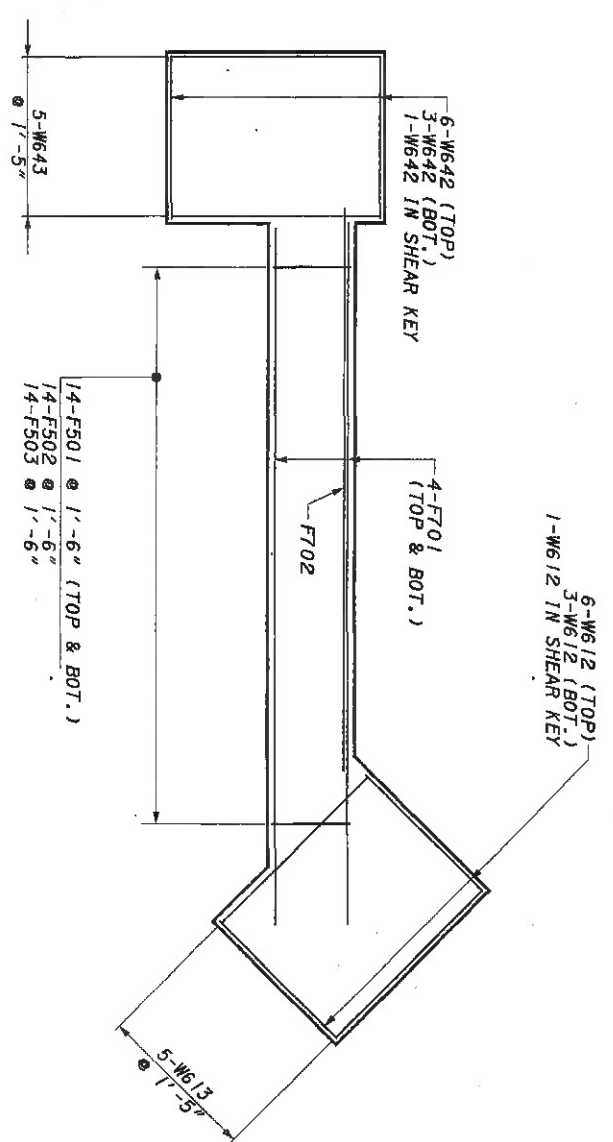
FOOTING LAYOUT



FOOTING REINFORCING DETAIL



FOOTING REINFORCING



STRUCTURE DETAILS
MOE-7-0432
DEADHORSE RUN

DESIGNED SWL	DRAWN ADP	CHECKED	DATE 06/24/05
		APPROVED FOR CONSTRUCTION XXX	

MOE-7-04.32

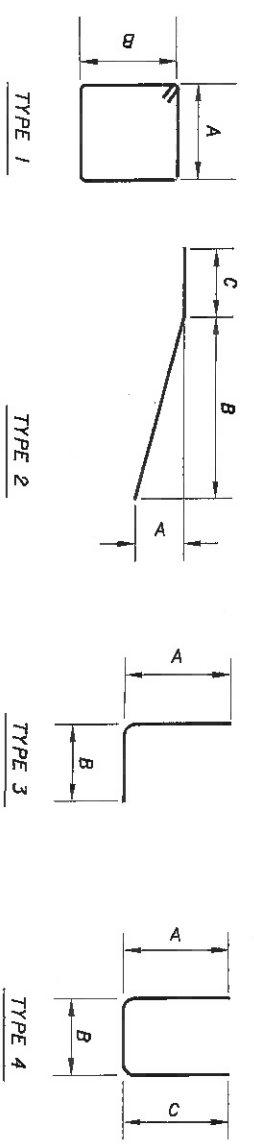
EPOXY COATED REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR
WINGWALL 1								
W511	1	6'-4"	38	STR				6"
	S.O.	TO						
W512	2	2'-9"	17	STR				2'-10"
	S.O.	TO						
W513	2	5'-7"	58	STR				
W514	2	5'-11"	12	STR				
W515	5	4'-4"	23	4	1'-6"	2'-7"	6"	
W611	1	6'-4"	55	STR				6"
	S.O.	TO						
W612	10	5'-8"	85	STR				
W613	5	7'-2"	54	STR				
W711	9	8'-6"	156	3	6'-2"	2'-6"		
	SUBTOTAL		498 LBS					
WINGWALL 2								
W521	1	6'-4"	38	STR				6"
	S.O.	TO						
W522	2	2'-9"	17	STR				2'-10"
	S.O.	TO						
W523	10	5'-7"	58	STR				
W524	2	5'-11"	12	STR				
W525	5	4'-4"	23	4	1'-6"	2'-7"	6"	
W621	1	6'-4"	55	STR				6"
	S.O.	TO						
W622	10	5'-8"	85	STR				
W623	5	7'-2"	54	STR				
W721	9	8'-6"	156	3	6'-2"	2'-6"		
	SUBTOTAL		498 LBS					

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR
WINGWALL 4								
W541	5	8'-4"	43	STR				
W543	14	5'-7"	82	STR				
W545	5	4'-4"	23	4	1'-6"	2'-7"	6"	
W641	5	8'-4"	63	STR				
W642	10	5'-8"	85	STR				
W643	5	7'-2"	54	STR				
W741	9	8'-6"	156	3	6'-2"	2'-6"		
	SUBTOTAL		506 LBS					
CULVERT FOOTING								
F501	28	2'-8"	78	STR				
F502	14	4'-5"	64	4	6"	2'-8"	1'-6"	
F503	14	3'-7"	52	3	3'-0"	9"		
F504	1	17'-8"	18	STR				
F511	32	2'-8"	89	STR				
F512	16	4'-5"	74	4	6"	2'-8"	1'-6"	
F513	16	3'-7"	60	3	3'-0"	9"		
F514	1	17'-8"	18	STR				
F701	8	24'-0"	392	STR				
F702	1	19'-4"	40	STR				
F711	8	28'-2"	461	STR				
F712	1	17'-6"	36	STR				
	SUBTOTAL		1382 LBS					
HEADWALL								
H501	15	1'-5"	22	4	10"	8"	2"	
H502	2	19'-8"	41	STR				
H511	15	1'-5"	22	4	10"	8"	2"	
H512	2	19'-8"	41	STR				
	SUBTOTAL		126 LBS					

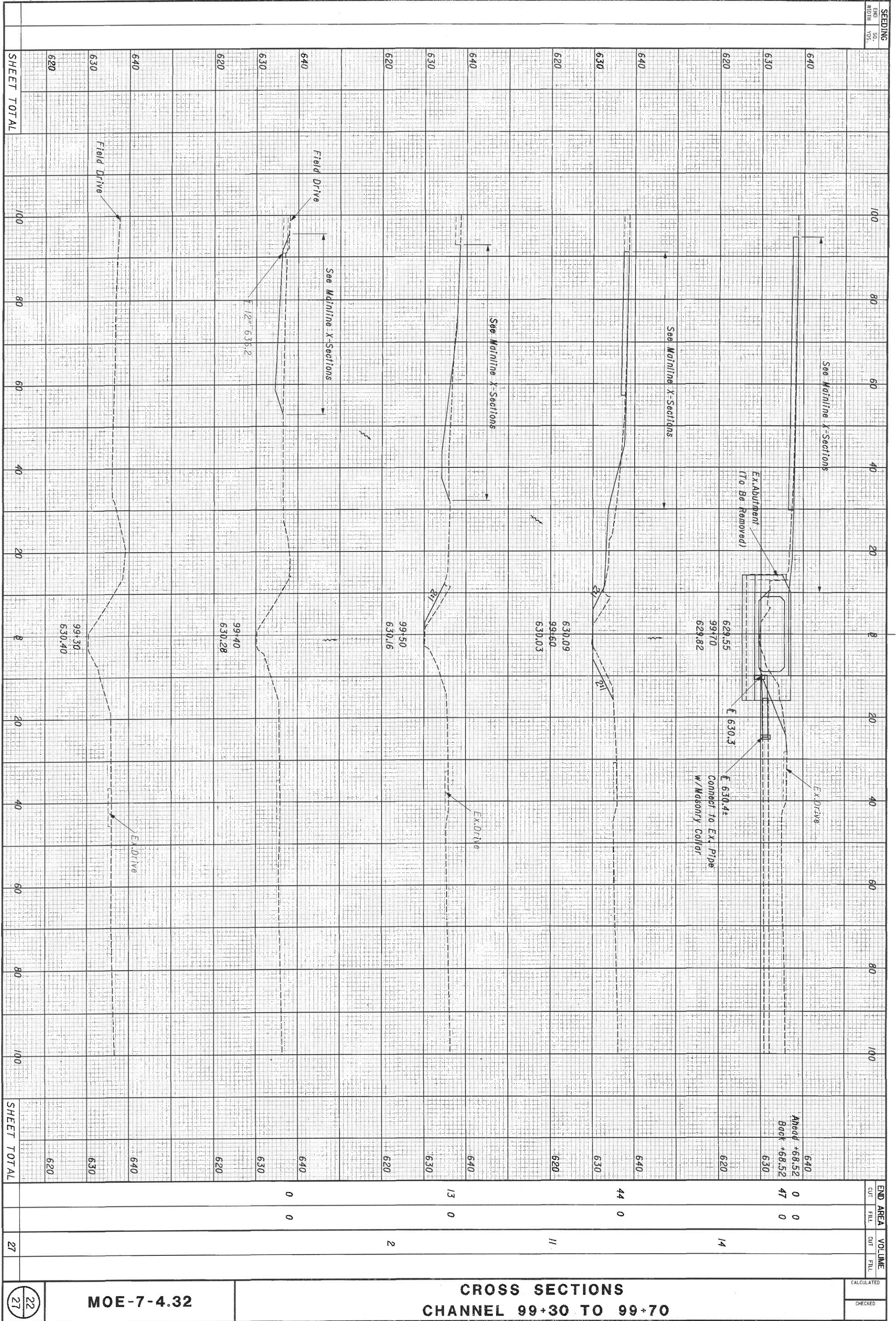
THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, W601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ALL REINFORCING STEEL TO BE EPOXY COATED.



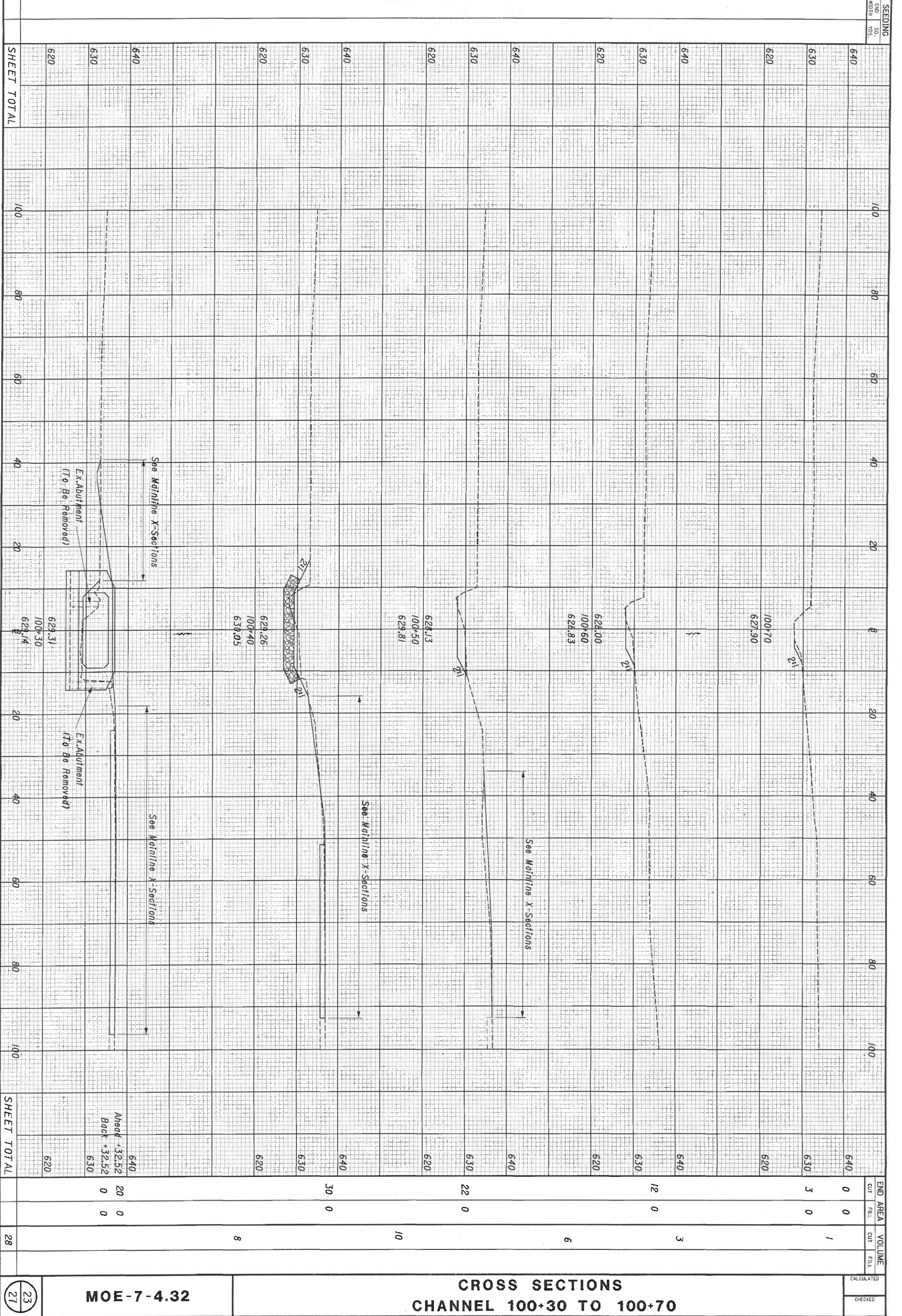
BENDING DIAGRAMS

S.O. - SERIES OF



**CROSS SECTIONS
CHANNEL 99+30 TO 99+70**

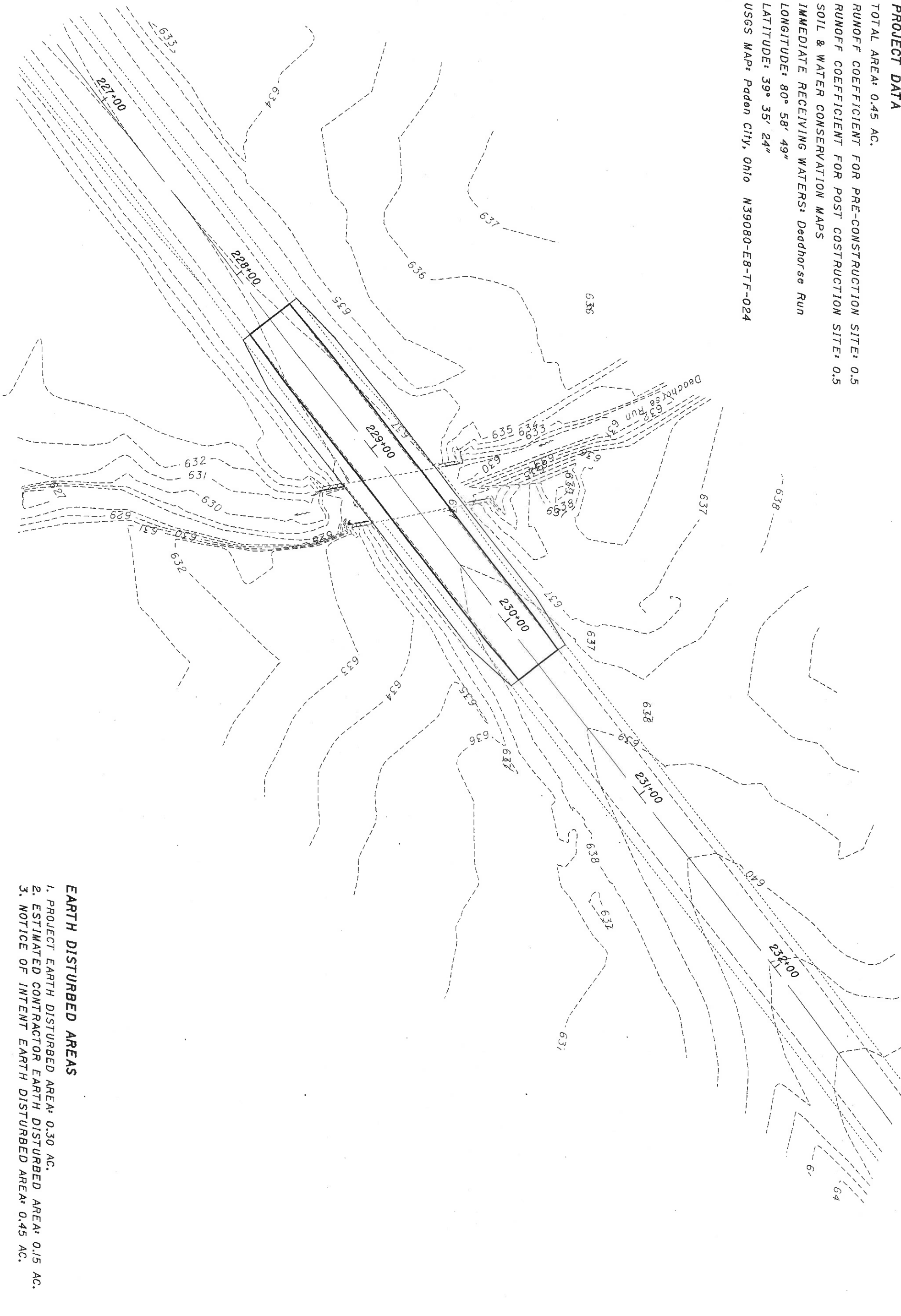
MOE-7-4.32



CROSS SECTIONS
CHANNEL 100+30 TO 100+70

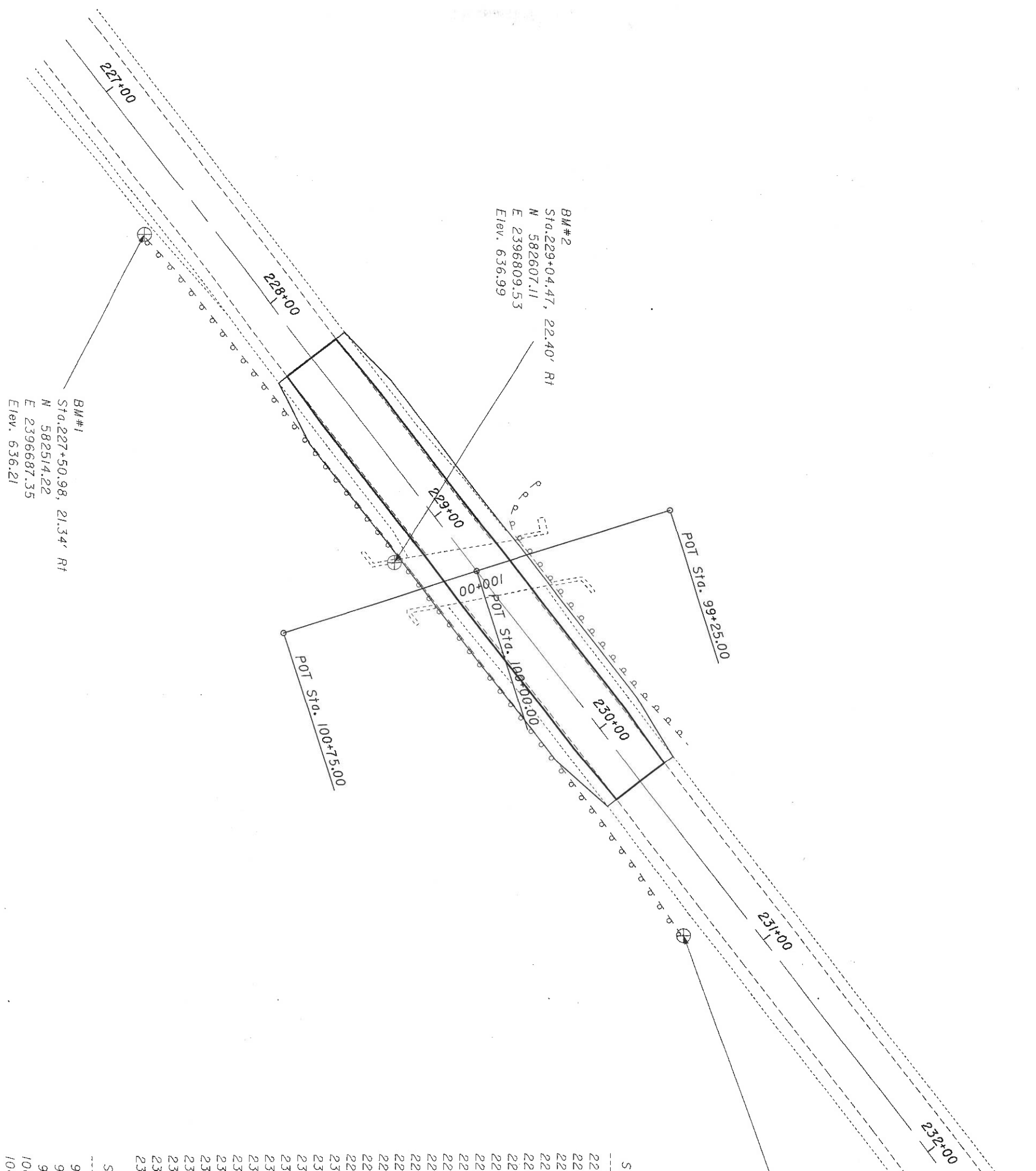
PROJECT DATA

TOTAL AREA: 0.45 AC.
 RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE: 0.5
 RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE: 0.5
 SOIL & WATER CONSERVATION MAPS
 IMMEDIATE RECEIVING WATERS: Deadhorse Run
 LONGITUDE: 80° 58' 49"
 LATITUDE: 39° 35' 24"
 USGS MAP: Paden City, Ohio N39080-E8-TF-024



EARTH DISTURBED AREAS

1. PROJECT EARTH DISTURBED AREA: 0.30 AC.
2. ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.15 AC.
3. NOTICE OF INTENT EARTH DISTURBED AREA: 0.45 AC.



Station	North	East
99+25.0000	582,709.3124	2,396,789.9707
99+50.0000	582,685.4879	2,396,797.5464
99+75.0000	582,661.6634	2,396,805.1222
100+00.0000	582,637.8388	2,396,812.6979
100+25.0000	582,614.0143	2,396,820.2737
100+50.0000	582,590.1898	2,396,827.8495
226+00.0000	582,438.9097	2,396,554.7562
226+25.0000	582,454.1772	2,396,574.5528
226+50.0000	582,469.4447	2,396,594.3493
226+75.0000	582,484.7121	2,396,614.1459
227+00.0000	582,499.9796	2,396,633.9425
227+25.0000	582,515.2471	2,396,653.7391
227+50.0000	582,530.5145	2,396,673.5356
227+75.0000	582,545.7820	2,396,693.3322
228+00.0000	582,561.0495	2,396,713.1288
228+25.0000	582,576.3169	2,396,732.9254
228+50.0000	582,591.5844	2,396,752.7220
228+75.0000	582,606.8519	2,396,772.5185
229+00.0000	582,622.1193	2,396,792.3151
229+25.0000	582,637.3868	2,396,812.1117
229+50.0000	582,652.6543	2,396,831.9083
229+75.0000	582,667.9218	2,396,851.7048
230+00.0000	582,683.1892	2,396,871.5014
230+25.0000	582,698.4567	2,396,891.2980
230+50.0000	582,713.7242	2,396,911.0946
230+75.0000	582,728.9916	2,396,930.8911
231+00.0000	582,744.2591	2,396,950.6877
231+25.0000	582,759.5266	2,396,970.4843
231+50.0000	582,774.7940	2,396,990.2809
231+75.0000	582,790.0615	2,397,010.0774
232+00.0000	582,805.3290	2,397,029.8740
232+25.0000	582,820.5964	2,397,049.6706
232+50.0000	582,835.8639	2,397,069.4672
232+75.0000	582,851.1314	2,397,089.2637
233+00.0000	582,866.3988	2,397,109.0603

**REFERENCE POINTS
BENCHMARKS**

CALCULATED
CHECKED

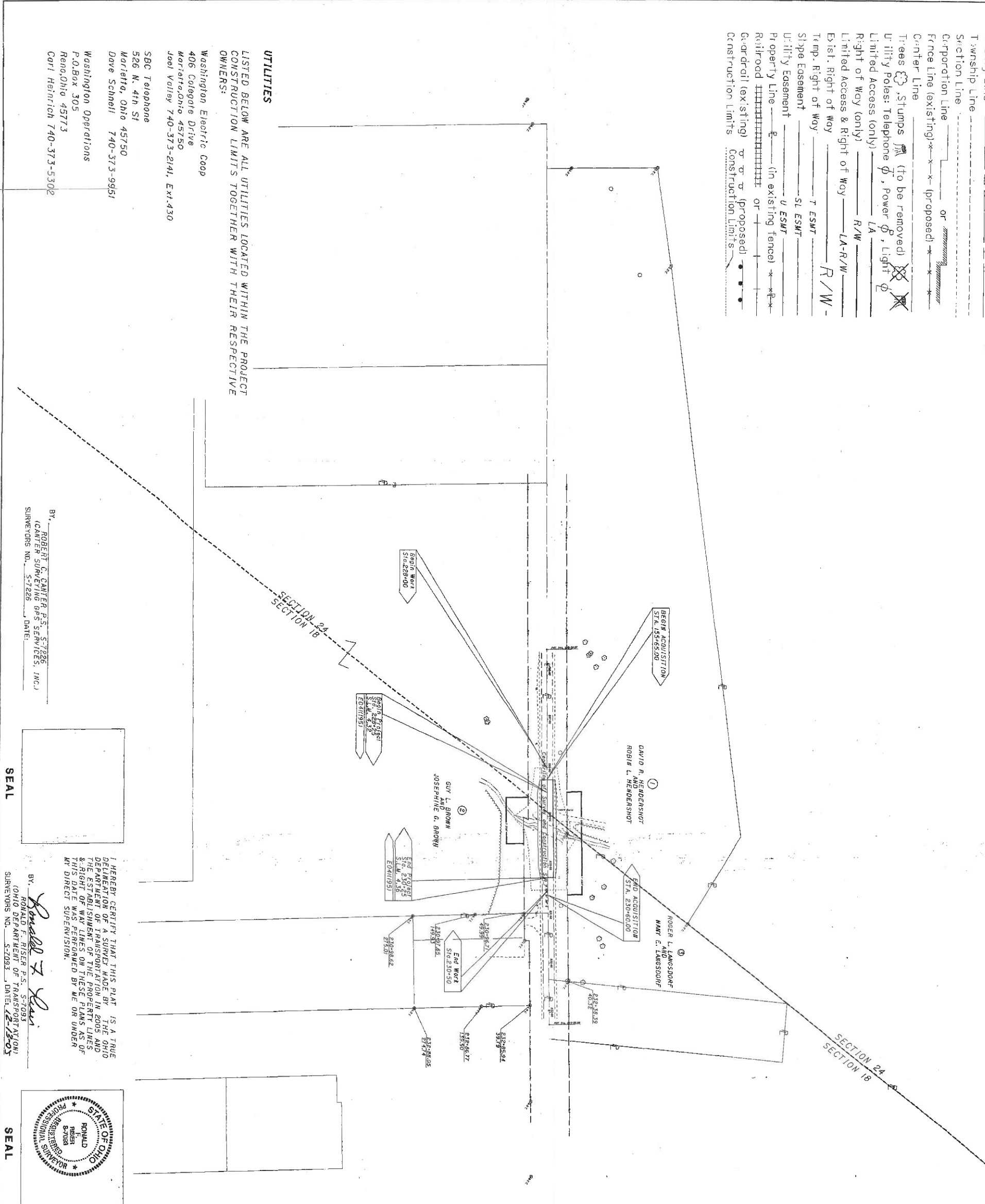
0 20 40
HORIZONTAL SCALE IN FEET

MOE-7-4.32

CONVENTIONAL SIGNS

- County Line _____
- Township Line _____
- Section Line _____
- Corporation Line _____ or _____
- Fence Line (existing) _____ (proposed) _____
- Center Line _____
- Trees (to be removed) (to be removed)
- Utility Poles: Telephone , Power , Light
- Limited Access (only) _____ R/W _____
- Limited Access & Right of Way _____ LA-R/W _____
- East. Right of Way _____ R/W _____
- Temp. Right of Way _____ T ESWT _____
- Slope Easement _____ S ESWT _____
- Utility Easement _____ U ESWT _____
- Property Line _____ (in existing fence) _____
- Railroad _____ or _____
- Guardrail (existing) _____ or _____ (proposed)
- Construction Limits _____

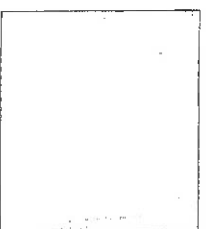
MONROE COUNTY, JACKSON TOWNSHIP
SECTION 24 & 18, T.1N, R.4W



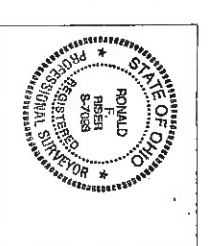
UTILITIES
LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

- Washington Electric Coop
406 Colgate Drive
Marietta, Ohio 45750
Joel Valley 740-373-2141, Ext. 430
- SBC Telephone
526 N. 4th St
Marietta, Ohio 45750
Dave Schnell 740-373-9951
- Washington Operations
P.O. Box 305
Remo, Ohio 45773
Carl Heinrich 740-373-5302

BY: **ROBERT C. CAMERON P.S. 57226**
(CANTER SURVEYING GPS SERVICES, INC.)
SURVEYORS NO. 5-7226 DATE: _____



BY: **RONALD F. RISER P.S. 57093**
(OHIO DEPARTMENT OF TRANSPORTATION)
SURVEYORS NO. 5-7093 DATE: _____



I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE BY THE OHIO DEPARTMENT OF TRANSPORTATION IN 2005 AND THE ESTABLISHMENT OF THE PROPERTY LINES & RIGHT OF WAY LINES ON THESE PLANS AS OF THE DATE THIS DATE WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

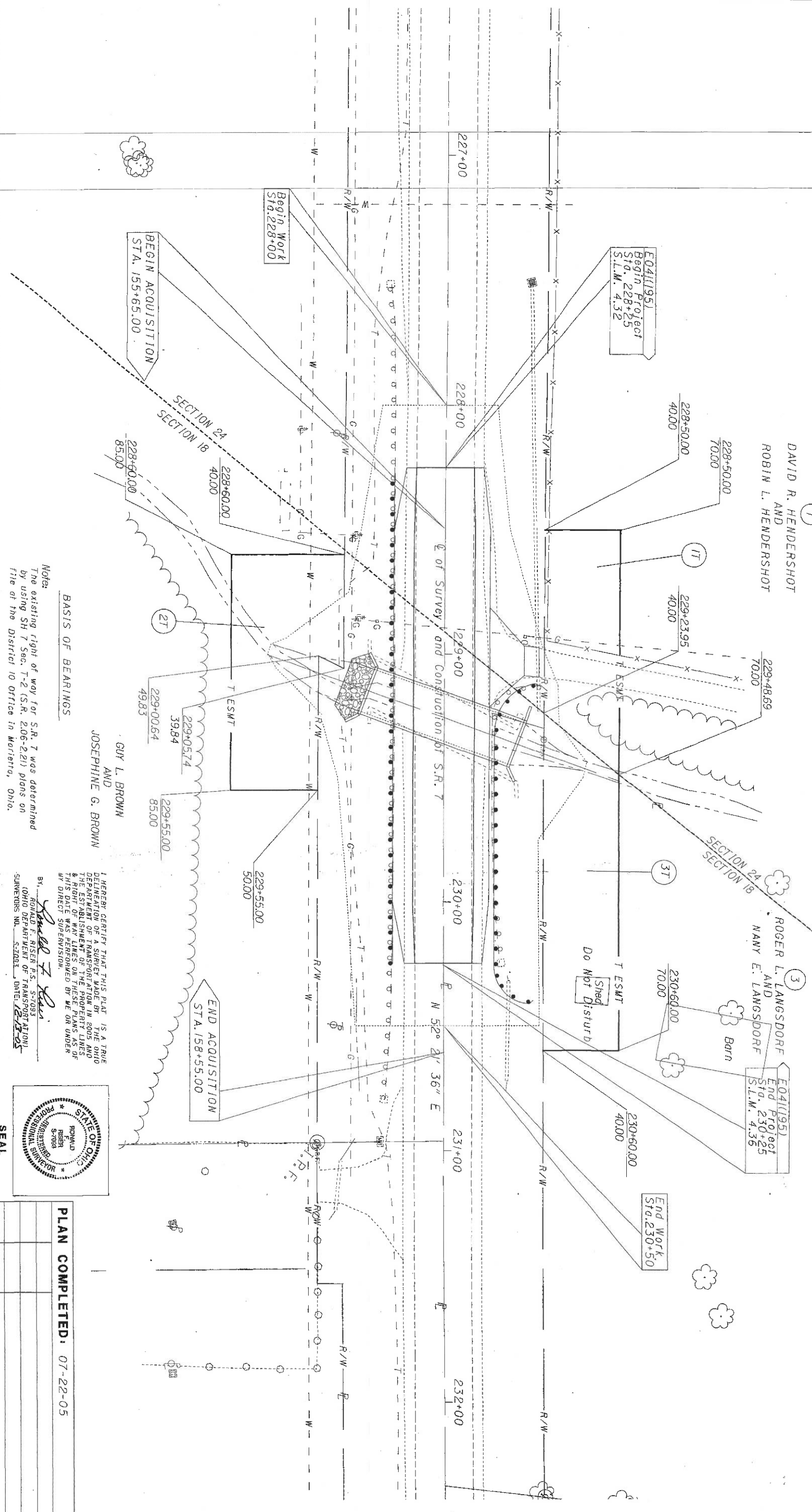
- MONUMENT LEGEND**
- EXISTING R/W MONUMENT BOX
 - PROPOSED R/W MONUMENT BOX
 - EXISTING CONCRETE MONUMENT
 - PROPOSED CONCRETE MONUMENT
 - RAILROAD SPIKE FOUND
 - RAILROAD SPIKE SET
 - IRON PIN FOUND w/ ID CAP
 - IRON PIN SET w/ ID CAP
 - IRON PIPE FOUND
 - IRON PIPE SET
 - P.K. MAIL FOUND
 - P.K. MAIL SET

- STRUCTURE KEY**
- RESIDENTIAL
 - COMMERCIAL

Note:
The existing right of way for S.R. 7 was determined by using SH 7, Sec. 7-2 (S.R. 2,06-2,21) plans on file at the District 10 Office in Marietta, Ohio.

REV	DATE	DESCRIPTION
1	03-09-05	PLAN COMPLETED
2		

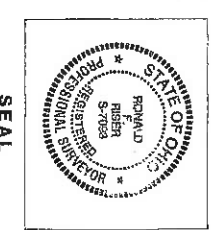
MONROE COUNTY, JACKSON TOWNSHIP
SECTION 24 & 18, T.1N, R.4W



Notes:
The existing right of way for S.R. 7 was determined by using SH 7 Sec. 1-2 (S.R. 2,06-2,21) plans on file at the District 10 Office in Marietta, Ohio.

I HEREBY CERTIFY THAT THIS PLAN IS A TRUE DELINEATION OF A SURVEY MADE BY THE OHIO DEPARTMENT OF TRANSPORTATION IN 2005 AND THE ESTABLISHMENT OF THE PROPERTY LINES & RIGHT OF WAY LINES ON THESE PLANS AS OF THIS DATE WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

BY: *Donald F. Riser*
DONALD F. RISER, P.E., S-7093
JOHN DEWANEY, P.E., S-7093
SURVEYORS NO. 52481 DATE: 2/27/05



* TEMPORARY OF 24 MONTH DURATION

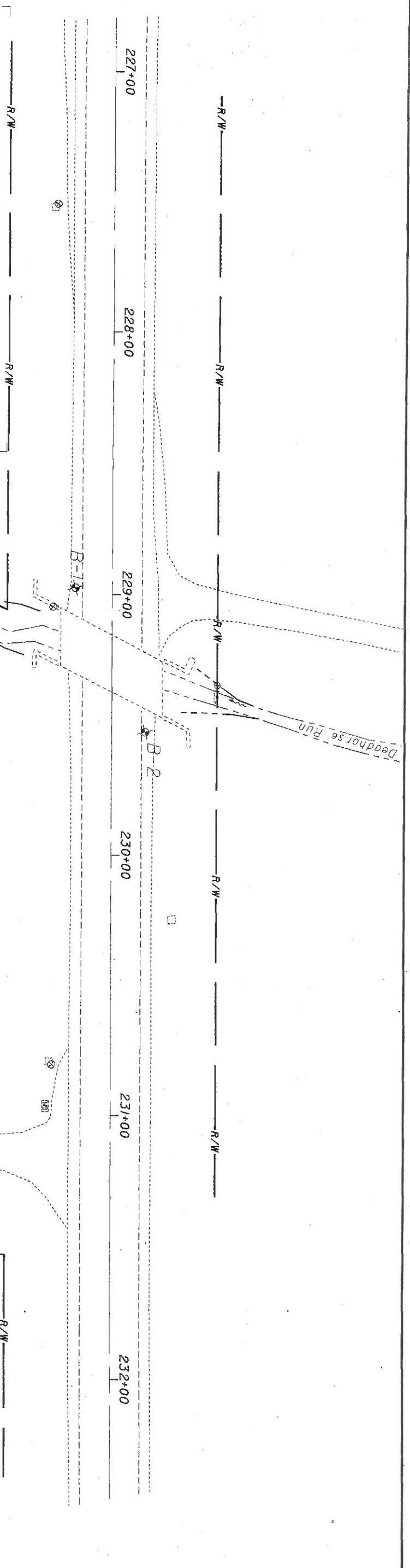
PARCEL NO.	OWNER	SHEET NO.	OWNERS BOOK	RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY
1-T	DAVID R. HENDERSHOT AND ROBIN L. HENDERSHOT	198	402	10-016017.0000	10,256 Ac.	0,059 Ac.	0,000 Ac.	0,059 Ac.	0,059 Ac.	0,000 Ac.		10,256 Ac.			Additional Area For Contractor to work
2-T	GUY L. BROWN AND JOSEPHINE G. BROWN	OR 31	644	10-015008.0000	11,906 Ac.	0,086 Ac.	0,000 Ac.	0,086 Ac.	0,086 Ac.	0,000 Ac.		11,906 Ac.			Additional Area For Contractor to work
3-T	ROGER L. LANGSDORF AND NANCY E. LANGSDORF	OR 89	214	10-015002.0000	1,94 Ac.	0,085 Ac.	0,000 Ac.	0,085 Ac.	0,085 Ac.	0,000 Ac.		1,94 Ac.			Additional Area For Contractor to work

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

* CALCULATED AREA ALL AREAS IN ACRES

REV	DATE	DESCRIPTION	AS ACQUIRED BOOK	PAGE

PLAN COMPLETED: 07-22-05



State of Ohio
Department of Geotechnical Engineering
Office of Geotechnical Engineering
LOG OF BORING

Boring No. B-1 Station & Offset: 228+27.47 L.R.L.

Static Water Elev.: 627.5'

Project Identification: MOE-7-4.34

Client: OHIO DEPARTMENT OF TRANSPORTATION

Date Started: 8/18/02
Date Completed: 8/28/02
Boring No.: B-1 Station & Offset: 228+27.47 L.R.L.

Blow	Depth (ft)	Pen. (ft)	Reg. (ft)	Description	Sample No.	Soils	Notes
1	34	9	21	BROWN SILTY SANDY GRAVEL	1	NP	NP
2	16	10	25	BROWN GRAVELLY SANDY SILT	2	NP	NP
3	18	12	26	BROWN GRAVELLY SANDY SILT	3	NP	NP
4	34	10	23	BROWN SILTY SANDY GRAVEL	4	NP	NP
5	40	11	18	BROWN SILTY SANDY GRAVEL	5	NP	NP
6	52	9	16	BROWN SILTY SANDY GRAVEL	6	NP	NP
7	56	14	17	BROWN SILTY SANDY GRAVEL	7	NP	NP
8	57	15	18	BROWN SANDY GRAVEL	8	NP	NP
9	60	15	16	BROWN SILTY SANDY GRAVEL	9	NP	NP
10	43	22	24	BROWN SILTY SANDY GRAVEL	10	NP	NP
11	32	10	17	BROWN SILTY SANDY GRAVEL	11	NP	NP
12	16	54	22	BROWN GRAVELLY SAND	12	NP	NP
13	17	48	26	BROWN GRAVELLY SAND	13	NP	NP
14	26	32	30	BROWN SILTY SAND WITH BOULDERS	14	NP	NP
15	24	4	25	BROWN SILTY SAND WITH BOULDERS	15	NP	NP
16	19	43	29	BROWN GRAVELLY SAND	16	NP	NP

State of Ohio
Department of Geotechnical Engineering
Office of Geotechnical Engineering
LOG OF BORING

Boring No. B-2 Station & Offset: 230+27.14 L.R.L.

Static Water Elev.: 628.5'

Project Identification: MOE-7-4.34

Client: OHIO DEPARTMENT OF TRANSPORTATION

Date Started: 8/18/02
Date Completed: 8/28/02
Boring No.: B-2 Station & Offset: 230+27.14 L.R.L.

Blow	Depth (ft)	Pen. (ft)	Reg. (ft)	Description	Sample No.	Soils	Notes
1	4	2	2	BROWN GRAVELLY SANDY SILT	22	NP	NP
2	6	6/8	8	BROWN SILTY SANDY GRAVEL WITH BOULDERS	23	NP	NP
3	8	3/7/2	7	BROWN SILTY SANDY GRAVEL	24	NP	NP
4	10	7/9/9	7	BROWN SILTY SANDY GRAVEL	25	NP	NP
5	12	3/4/7	10	BROWN SILTY SANDY GRAVEL	26	NP	NP
6	14	6/9/7	14	BROWN SILTY SANDY GRAVEL	27	NP	NP
7	16	3/5/7	14	BROWN SILTY SANDY GRAVEL	28	NP	NP
8	18	6/7/9	18	BROWN SILTY SANDY GRAVEL	29	NP	NP
9	20	8/5/14	20	BROWN SILTY SANDY GRAVEL	30	NP	NP
10	22	9/2/14	22	BROWN SILTY SANDY GRAVEL	31	NP	NP
11	24	14/3/16	24	BROWN SILTY SAND	32	NP	NP
12	26	8/1/14	26	BROWN FINE SAND	33	NP	NP

State of Ohio
Department of Geotechnical Engineering
Office of Geotechnical Engineering
LOG OF BORING

Boring No. B-2 Station & Offset: 230+27.14 L.R.L.

Static Water Elev.: 628.5'

Project Identification: MOE-7-4.34

Client: OHIO DEPARTMENT OF TRANSPORTATION

Date Started: 8/18/02
Date Completed: 8/28/02
Boring No.: B-2 Station & Offset: 230+27.14 L.R.L.

Blow	Depth (ft)	Pen. (ft)	Reg. (ft)	Description	Sample No.	Soils	Notes
1	4	2	2	BROWN GRAVELLY SAND	34	NP	NP
2	6	6/20/13	6	BROWN GRAVELLY SAND	35	NP	NP
3	8	5/3/9	8	BROWN GRAVELLY SAND	36	NP	NP
4	10	9/6/18	10	BROWN FINE SAND WITH BOULDERS	37	NP	NP
5	12	7/1/10	12	BROWN GRAVELLY SAND AND COAL BOSSOM	38	NP	NP
6	14	2/28/29	14	BROWN SILTY SAND WITH BOULDERS	39	NP	NP

Boring No. B-1 Station & Offset: 228+27.47 L.R.L.

Static Water Elev.: 627.5'

Project Identification: MOE-7-4.34

Client: OHIO DEPARTMENT OF TRANSPORTATION

Date Started: 8/18/02
Date Completed: 8/28/02
Boring No.: B-1 Station & Offset: 228+27.47 L.R.L.

Blow	Depth (ft)	Pen. (ft)	Reg. (ft)	Description	Sample No.	Soils	Notes
1	34	9	21	BROWN SILTY SANDY GRAVEL	1	NP	NP
2	16	10	25	BROWN GRAVELLY SANDY SILT	2	NP	NP
3	18	12	26	BROWN GRAVELLY SANDY SILT	3	NP	NP
4	34	10	23	BROWN SILTY SANDY GRAVEL	4	NP	NP
5	40	11	18	BROWN SILTY SANDY GRAVEL	5	NP	NP
6	52	9	16	BROWN SILTY SANDY GRAVEL	6	NP	NP
7	56	14	17	BROWN SILTY SANDY GRAVEL	7	NP	NP
8	57	15	18	BROWN SANDY GRAVEL	8	NP	NP
9	60	15	16	BROWN SILTY SANDY GRAVEL	9	NP	NP
10	43	22	24	BROWN SILTY SANDY GRAVEL	10	NP	NP
11	32	10	17	BROWN SILTY SANDY GRAVEL	11	NP	NP
12	16	54	22	BROWN GRAVELLY SAND	12	NP	NP
13	17	48	26	BROWN GRAVELLY SAND	13	NP	NP
14	26	32	30	BROWN SILTY SAND WITH BOULDERS	14	NP	NP
15	24	4	25	BROWN SILTY SAND WITH BOULDERS	15	NP	NP
16	19	43	29	BROWN GRAVELLY SAND	16	NP	NP

Boring No. B-2 Station & Offset: 230+27.14 L.R.L.

Static Water Elev.: 628.5'

Project Identification: MOE-7-4.34

Client: OHIO DEPARTMENT OF TRANSPORTATION

Date Started: 8/18/02
Date Completed: 8/28/02
Boring No.: B-2 Station & Offset: 230+27.14 L.R.L.

Blow	Depth (ft)	Pen. (ft)	Reg. (ft)	Description	Sample No.	Soils	Notes
1	4	2	2	BROWN GRAVELLY SANDY SILT	22	NP	NP
2	6	6/8	8	BROWN SILTY SANDY GRAVEL WITH BOULDERS	23	NP	NP
3	8	3/7/2	7	BROWN SILTY SANDY GRAVEL	24	NP	NP
4	10	7/9/9	7	BROWN SILTY SANDY GRAVEL	25	NP	NP
5	12	3/4/7	10	BROWN SILTY SANDY GRAVEL	26	NP	NP
6	14	6/9/7	14	BROWN SILTY SANDY GRAVEL	27	NP	NP
7	16	3/5/7	14	BROWN SILTY SANDY GRAVEL	28	NP	NP
8	18	6/7/9	18	BROWN SILTY SANDY GRAVEL	29	NP	NP
9	20	8/5/14	20	BROWN SILTY SANDY GRAVEL	30	NP	NP
10	22	9/2/14	22	BROWN SILTY SANDY GRAVEL	31	NP	NP
11	24	14/3/16	24	BROWN SILTY SAND	32	NP	NP
12	26	8/1/14	26	BROWN FINE SAND	33	NP	NP

Boring No. B-2 Station & Offset: 230+27.14 L.R.L.

Static Water Elev.: 628.5'

Project Identification: MOE-7-4.34

Client: OHIO DEPARTMENT OF TRANSPORTATION

Date Started: 8/18/02
Date Completed: 8/28/02
Boring No.: B-2 Station & Offset: 230+27.14 L.R.L.

Blow	Depth (ft)	Pen. (ft)	Reg. (ft)	Description	Sample No.	Soils	Notes
1	4	2	2	BROWN GRAVELLY SAND	34	NP	NP
2	6	6/20/13	6	BROWN GRAVELLY SAND	35	NP	NP
3	8	5/3/9	8	BROWN GRAVELLY SAND	36	NP	NP
4	10	9/6/18	10	BROWN FINE SAND WITH BOULDERS	37	NP	NP
5	12	7/1/10	12	BROWN GRAVELLY SAND AND COAL BOSSOM	38	NP	NP
6	14	2/28/29	14	BROWN SILTY SAND WITH BOULDERS	39	NP	NP

SPECIAL PROVISIONS

NATIONWIDE PERMIT #3 - MAINTENANCE

Activities related to:

(i) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards which are necessary to make repair, rehabilitation, or replacement, are permitted, provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement are minimal. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction. This NWP authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the District Engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(ii) Discharges of dredged or fill material, including excavation, into all waters of the United States to remove accumulated sediments and debris in the vicinity of, and within, existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and the placement of new or additional rip rap to protect the structure, provided the permittee notifies the District Engineer in accordance with General Condition 13. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. The placement of rip rap must be the minimum necessary to protect the structure or to ensure the safety of the structure. All excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the District Engineer under separate authorization. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the District Engineer.

(iii) Discharges of dredged or fill material, including excavation, into all waters of the United States for activities associated with the restoration of upland areas damaged by a storm, flood, or other discrete event, including the construction, placement, or installation of upland protection structures and minor dredging to remove obstructions in water of the US. (Uplands lost as a result of a storm, flood, or other discrete event can be replaced without a Section 404 permit provided the uplands are restored to their original pre-event location. This NWP is for the activities in waters of the US associated with the replacements of the uplands.) The permittee must notify the District Engineer, in accordance with General Condition 13, within 12 months of the date of the damage and the work must commence, or be under contract to commence, within two years of the date of the damage. The permittee should provide evidence, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration. The restoration of the damaged areas cannot exceed the contours,

WATERWAY PERMITS

FOR

MOE-7-3.42/4.34 (PID 25080)

Bridge Replacements over Millers Run and Deadhorse Run

U.S. ARMY CORPS OF ENGINEERS

PERMIT NUMBER - Nationwide Permit #3

OHIO EPA

PERMIT NUMBER - Does not apply

EFFECTIVE DATE - May 30, 2006

or ordinary high water mark, that existed before the damage. The District Engineer retains the right to determine the extent of the pre-existing conditions and the extent of any restoration work authorized by this permit. Minor dredging to remove obstructions from the adjacent waterbody is limited to 50 cubic yards below the plane of the ordinary high water mark, and is limited to the amount necessary to restore the pre-existing bottom contours of the waterbody. The dredging may not be done primarily to obtain fill for any restoration activities. The discharge of dredged or fill material and all related work needed to restore the upland must be part of a single and complete project. This permit cannot be used in conjunction with NWP 18 or NWP 19 to restore damaged upland areas. This permit cannot be used to reclaim historic lands lost, over an extended period, to normal erosion processes.

This permit does not authorize maintenance dredging for the primary purpose of navigation and beach restoration. This permit does not authorize new stream channelization or stream relocation projects. Any work authorized by this permit must not cause more than minimal degradation of water quality, more than minimal changes to the flow characteristics of the stream, or increase flooding (See General Conditions 9 and 21).

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure of fill that does not qualify for the Section 404(D) exemption for maintenance.

Nationwide 3 Specific Regional Conditions

- i Notification required prior to the use of vertical sheet piling and closed structures in the special habitat waters of Lake Erie (See General Conditions, Critical Resource waters (1)).
- ii The Pre-Construction Notification (PCN) for activities involving the removal of accumulated sediments and debris in the vicinity of existing structures, to restore the waterway to the approximate dimensions that existed when the structure was built, must include evidence of such dimensions. If this information is not available, the PCN must include evidence of the existing depths immediately outside the proposed work area.

WATER QUALITY CERTIFICATION

Pursuant to Section 401 of the Clean Water Act, the Ohio Environmental Protection Agency hereby certifies that activities authorized by these Permits, undertaken in accordance with all of the special and general conditions listed below, will comply with the applicable provisions of the Clean Water Act and applicable Ohio water quality standards. Those NWPs with no special Water Quality Certification (WQC) conditions remain subject to general WQC conditions unless otherwise indicated (Reference 1 below).

Water Quality Certification - Special Conditions:

The Ohio State Certification General Limitations and Conditions apply to this nationwide

permit.

Ohio State Water Quality Certification Special Conditions and Limitations:

1. Total surface water and vegetation impacts on either side of the replacement structure shall be limited to the greater of 25 feet beyond the structure, or 25 feet beyond the toe of the slope of the structure's approach embankment. [Where the use of a crane is necessary to conduct a maintenance activity, total impacts shall not exceed 50 feet on either side of the structure or approach embankment]. In either case, total impacts, including the structure, shall not exceed 200 feet [except for stabilization projects]. Width shall be measured at the structure's narrowest point as it crosses the waterbody, and be measured parallel to stream flow.
2. Culvert replacement:
 - a. This Certification shall only authorize minor deviations from the existing structure's centerline and minor deviations in culvert dimensions, unless these deviations are necessary to follow current safety standards
3. Bridge Replacement:
 - a. This Certification shall only authorize minor deviations from the existing structure's centerline, unless these deviations are necessary to follow current safety standards.
 - b. Bridge replacements shall not result in additional lanes unless necessary to follow current safety standards.
4. Maintenance or repair of existing fills (stabilization projects):
 - a. Impacts from maintenance or repair of existing fills shall not exceed the dimensions of the fill prior to the damage; and
 - b. This nationwide shall not authorize the replacement of existing structures that are open to the flow of water with structures that are not open to the flow of water.
5. For replacement vertical bulkheads, the following conditions apply:
 - a. For ship channels and harbors adjacent to federal navigation channels within the following harbors: Sandusky Harbor, Huron Harbor, Vermilion Harbor, Lorain Harbor, Conneaut Harbor, Port Clinton Harbor, Rocky River Harbor, Cleveland Harbor, Fairport Harbor, Ashabua Harbor, and Toledo Harbor, 1,000 feet of existing vertical bulkheads may be replaced if recessed areas for aquatic habitat, or other aquatic habitat improvements, are incorporated within the design and construction of the replacement vertical bulkhead.
 - b. For all other areas, except Lake Erie, Lake Erie Islands, or Sandusky Bay, up to 1,000 feet of existing vertical bulkheads may be replaced. Toe stone shall be placed at the base of these replacement vertical bulkheads except in areas where the shoreline is composed of bedrock and slopes are predominately greater than 75 percent;
 - c. Replacement vertical bulkheads are not to be placed more than one foot waterward of the intersection of the ordinary high water level of the waterbody and the existing shoreline;
 - d. Minor dredging necessary for the installation of the replacement vertical bulkhead is

authorized;

e. Placement of fill between the replacement vertical bulkhead and existing shoreline is authorized; and

f. Toe stone shall be placed at the base of these replacement vertical bulkheads except in areas where the original shoreline is composed of bedrock and slopes are predominately greater than 75 percent or where the placement of toe stone would interfere with shipping activity. When required, toe stone shall be placed at an average rate of one-third the total height of the replacement vertical bulkhead at a 2:1 slope

6. Removal of accumulated sediment:

a. Removal of accumulated sediment shall occur only once per year, except in cases of emergency situations which threaten life of property.

B. Removal of accumulated sediments shall be limited to low-flow conditions whenever practicable, except in cases of emergency situations which threaten life or property.

NATIONWIDE PERMIT CONDITIONS

GENERAL CONDITIONS:

The following general conditions must be followed in order for any authorization by a NWP to be valid:

1. **Navigation.** No activity may cause more than a minimal adverse effect on navigation.

2. **Proper Maintenance.** Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety

3. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittes are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

4. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions

5. **Equipment** Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance

6. **Regional and Case-By-Case Conditions** The activity must comply with any regional conditions which may have been added by the division engineer (see 33 CFR 330.4(e) and with

any case specific conditions added by the Corps or by the State or tribe in its section 401 Water Quality Certification and Coastal Zone management Act consistency determination.

7. **Wild and Scenic Rivers.** No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g. National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

8. **Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

9. Water Quality.

(a) In certain States and tribal lands an individual Section 401 water quality certification must be obtained or waived (see 33 CFR 330.4(c)).

(b) For NWPs 12, 14, 17, 18, 32, 39, 40, 42, 43, and 44, where the State or tribal 401 certification (either generically or individually) does not require or approve water quality management measures, the permittee must provide water quality management measures that will ensure that the authorized work does not result in more than minimal degradation of water quality (or the Corps determines that compliance with state or local standards, where applicable, will ensure no more than minimal adverse effect on water quality) An important component of water quality management includes stormwater management that minimizes degradation of the downstream aquatic system, including water quality (refer to General Condition 21 for stormwater management requirements). Another important component of water quality management is the establishment and maintenance of vegetated buffers next to open waters, including streams (refer to General Condition 19 for vegetated buffer requirements for the NWPs). This condition is only applicable to projects that have the potential to affect water quality. While appropriate measures must be taken, in most cases it is not necessary to conduct detailed studies to identify such measures or to require monitoring.

10. **Coastal Zone Management.** In certain states, an individual state coastal zone management consistency concurrence must be obtained or waived (see Section 330.4(d)).

11. Endangered Species.

(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which is likely to destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or critical habitat might be affected or is in the vicinity of the project, or is located in the designated critical habitat and shall not begin work on the activity

until notified by the District Engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that may affect Federally-listed endangered or threatened species or designated critical habitat, the notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. As a result of formal or informal consultation with the FWS or NMFS, the District Engineer may add species-specific regional endangered species conditions to the NWP's.

(b) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the National Marine Fisheries Service (NMFS), both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their World Wide Web pages at <http://www.fws.gov/9endspp/endspp.html> and http://www.nmfs.noaa.gov/prot_res/overview/wes.html, respectively.

12. Historic properties No activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the District Engineer has complied with the provisions of 33 CFR Part 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the notification must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

13. Notification.

(a) **Timing:** where required by the terms of the NWP, the prospective permittee must notify the District Engineer with a preconstruction notification (PCN) as early as possible. The District Engineer must determine if the PCN is complete within 30 days of the date of receipt and can request the additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the District Engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the District Engineer. The prospective permittee shall not begin the activity:

- (1) Until notified in writing by the District Engineer that the activity may proceed under the NWP with any special conditions imposed by the District or Division

Engineer; or

- (2) If notified in writing by the District or Division Engineer that an individual permit is required; or
- (3) Unless 45 days have passed from the District Engineer's receipt of the complete notification and the prospective permittee has not received written notice from the District or Division Engineer. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) **Contents of Notification:** The notification must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) Brief description of the proposed project, the project's purpose, direct and indirect adverse environmental effects the project would cause; any other NWP(s), Regional General Permit(s), or Individual Permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP (Sketches usually clarify the project and when provided result in a quicker decision.);
- (4) For NWPs 7, 12, 14, 18, 21, 34, 38, 39, 40, 41, 42, and 43, the PCN must also include a delineation of affected special aquatic sites, including wetlands, vegetated shallows (e.g., submerged aquatic vegetation, seagrass beds), and riffle and pool complexes (see paragraph 13(F));
- (5) For NWP 7 (Outfall Structures and Maintenance), the PCN must include information regarding the original design capacities and configurations of those areas of the facility where maintenance dredging or excavation is proposed
- (6) For NWP 14 (Linear Transportation Crossings), the PCN must include a compensatory mitigation proposal to offset permanent losses of waters of the US and a statement describing how temporary losses of waters of the US will be minimized to the maximum extent practicable;
- (7) For NWP 21 (Surface Coal Mining Activities), the PCN must include an Office of Surface Mining (OSM) or state-approved mitigation plan, if applicable. To be authorized by this NWP, the District Engineer must determine that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are minimal both individually and cumulatively and must notify the project sponsor of this determination in writing;
- (8) For NWP 27 (Stream and Wetland Restoration Activities), the PCN must include documentation of the prior condition of the site that will be reverted by the permittee.
- (9) For NWP 29 (Single-Family Housing), the PCN must also include:
 - (1) Any past use of this NWP by the individual permittee and/or the permittee's spouse;

- (ii) A statement that the single-family housing activity is for a personal residence of the permittee;
- (iii) A description of the entire parcel, including its size, and a delineation of wetlands. For the purpose of this NWP, parcels of land measuring 1/4 acre or less will not require a formal on-site delineation. However, the applicant shall provide an indication of where the wetlands are and the amount of wetlands that exists on the property. For parcels greater than 1/4 acre in size, formal wetland delineation must be prepared in accordance with the current method required by the Corps. (See paragraph 13(f));
- (iv) A written description of all land (including, if available, legal descriptions) owned by the prospective permittee and/or the prospective permittee's spouse, within a one mile radius of the parcel, in any form of ownership (including any land owned as a partner, corporation, joint tenant, co-tenant, or as a tenant-by-the-entirety) and any land on which a purchase and sale agreement or other contract for sale or purchase has been executed;
- (10) For NWP 31 (Maintenance of Existing Flood Control Facilities), the prospective permittee must either notify the District Engineer with a PCN prior to each maintenance activity or submit a five year (or less) maintenance plan. In addition, the PCN must include all of the following
 - (i) Sufficient baseline information identifying the approved channel depths and configurations and existing facilities. Minor deviations are authorized, provided that the approved flood control protection or drainage is not increased;
 - (ii) A delineation of any affected special aquatic sites, including wetlands; and,
 - (iii) Location of the dredged material disposal site;
- (11) For NWP 33 (Temporary Construction, Access, and Dewatering), the PCN must also include a restoration plan of reasonable measures to avoid and minimize adverse effects to aquatic resources;
- (12) For NWPs 39, 43, and 44, the PCN must also include a written statement to the District Engineer explaining how avoidance and minimization for losses of waters of the US were achieved on the project site;
- (13) For NWP 39 and NWP 42, the PCN must include a compensatory mitigation proposal to offset losses of waters of the US or justification explaining why compensatory mitigation should not be required. For discharges that cause the loss of greater than 300 linear feet of an intermittent stream bed, to be authorized, the District Engineer must determine that the activity complies with the other terms and conditions of the NWP, determine adverse environmental effects are minimal both individually and cumulatively, and waive the limitation on stream impacts in writing before the permittee may proceed;
- (14) For NWP 40 (Agricultural Activities), the PCN must include a compensatory mitigation proposal to offset losses of waters of the US. This NWP does not authorize the relocation of greater than 300 linear-feet of existing serviceable

- drainage ditches constructed in non-tidal streams unless, for drainage ditches constructed in intermittent non-tidal streams, the District Engineer, waives this criterion in writing, and the District Engineer has determined that the project complies with all terms and conditions of this NWP, and that any adverse impacts of the project on the aquatic environment are minimal, both individually and cumulatively;
- (15) For NWP 43 (Stormwater Management Facilities), the PCN must include, for the construction of new stormwater management facilities, a maintenance plan (in accordance with state and local requirements, if applicable) and a compensatory mitigation proposal to offset losses of waters of the US. For discharges that cause the loss of greater than 300 linear feet of an intermittent stream bed, to be authorized, the District Engineer must determine that the activity complies with the other terms and conditions of the NWP, determine adverse environmental effects are minimal both individually and cumulatively, and waive the limitation on stream impacts in writing before the permittee may proceed;
- (16) For NWP 44 (Mining Activities), the PCN must include a description of all waters of the US adversely affected by the project, a description of measures taken to minimize adverse effects to waters of the US, a description of measures taken to comply with the criteria of the NWP, and a reclamation plan (for all aggregate mining activities in isolated waters and non-tidal wetlands adjacent to headwaters and any hard rock/mineral mining activities);
- (17) For activities that may adversely affect Federally-listed endangered or threatened species, the PCN must include the name(s) of those endangered or threatened species that may be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work, and
- (18) For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

(c) Form of Notification: The standard Individual Permit application form (Form ENG 4345) may be used as the notification but must clearly indicate that it is a PCN and must include all of the information required in (b) (1)-(18) of General Condition 13. A letter containing the requisite information may also be used.

(d) District Engineer's Decision: In reviewing the PCN for the proposed activity, the District Engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. The prospective permittee may submit a proposed mitigation plan with the PCN to expedite the process. The District Engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. If the District Engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation,

the District Engineer will notify the permittee and include any conditions the District Engineer deems necessary. The District Engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee is required to submit a compensatory mitigation proposal with the PCN, the proposal may be either conceptual or detailed. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the District Engineer will expeditiously review the proposed mitigation plan. The District Engineer must review the plan within 45 days of receiving a complete PCN and determine whether the conceptual or specific proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the District Engineer to be minimal, the District Engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP. If the District Engineer determines that the adverse effects of the proposed work are more than minimal, then the District Engineer will notify the applicant either:

- (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an Individual Permit;
- (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level; or
- (3) that the project is authorized under the NWP with specific modifications or conditions.

Where the District Engineer determines that mitigation is required in order to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level. When conceptual mitigation is included, or a mitigation plan is required under item (2) above, no work in waters of the US will occur until the District Engineer has approved a specific mitigation plan.

(e) Agency Coordination: The District Engineer will consider any comments from Federal and State agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level. For activities requiring notification to the District Engineer that result in the loss of greater than 1/2 acre of waters of the US, the District Engineer will provide immediately (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy to the appropriate Federal or state offices (USFWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the District Engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the District Engineer will wait an additional 15 calendar days before making a decision on the notification. The District Engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The District Engineer

will indicate in the administrative record associated with each notification that the resource agencies' concerns were considered. As required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act, the District Engineer will provide a response to NMFS within 30 days of receipt of any Essential Fish Habitat conservation recommendations. Applicants are encouraged to provide the Corps multiple copies of notifications to expedite agency notification.

(f) Wetland Delineations: Wetland Delineations must be prepared in accordance with the current method required by the Corps (For NWP 29 see paragraph (b)(9)(iii) for parcels less than 1/4-acre in size). The permittee may ask the Corps to delineate the special aquatic site. There may be some delay if the Corps does the delineation. Furthermore, the 45-day period will not start until the wetland delineation has been completed and submitted to the Corps, where appropriate.

14. Compliance Certification. Every permittee who has received NWP verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

- (a) A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;
- (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

15. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the US authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit (e.g. if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the US for the total project cannot exceed 1/3-acre).

16. Water Supply Intakes. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in the proximity of a public water supply intake except where the activity is for repair of the public water supply intake structures or adjacent bank stabilization.

17. Shellfish Beds. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4

18. Suitable Material. No activity, including structures and work in navigable waters of the US discharges of dredged or fill material, may consist of unsuitable material (e.g. trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the CWA)

19. Mitigation. The District Engineer will consider the factors discussed below when determining the acceptability of appropriate and practicable mitigation necessary to offset adverse effects on the aquatic environment that are more than minimal.

(a) The project must be designed and constructed to avoid and minimize adverse effects to waters of the US to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland impacts requiring a PCN, unless the District Engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. Consistent with National policy, the District Engineer will establish a preference for restoration of wetlands as compensatory mitigation, with preservation used only in exceptional circumstances.

(d) Compensatory mitigation (i.e., replacement or substitution of aquatic resources for those impacted) will not be used to increase the acreage losses allowed by the acreage limits of some of the NWPs. For example, 1/4-acre of wetlands cannot be created to change a 3/4-acre loss of wetlands to a 1/2-acre loss associated with NWP 39 verification. However, 1/2-acre of created wetlands can be used to reduce the impacts of a 1/2-acre loss of wetlands to the minimum impact level in order to meet the minimal impact requirement associated with NWPs.

(e) To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of the overall project purposes. Examples of mitigation that may be appropriate and practicable include, but are not limited to reducing the size of the project; establishing and maintaining wetland or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferably in the same watershed.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., easements, deed restrictions) of vegetated buffers to open waters. In many cases, vegetated buffers will be the only compensatory mitigation required. Vegetated buffers should consist of native species. The width of the vegetated buffers required will address documented water quality or aquatic habitat loss concerns. Normally, the vegetated buffer will be 25 to 50 feet wide on each side of the stream, but the District Engineer may require slightly wider vegetated buffers to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the Corps will determine the appropriate compensatory mitigation (e.g., stream buffers or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where vegetated buffers are determined to be the most appropriate form of compensatory mitigation, the District Engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland impacts.

(g) Compensatory mitigation proposals submitted with the "notification" may be either conceptual or detailed. If conceptual plans are approved under the verification, then the Corps will condition the verification to require detailed plans be submitted and approved by the Corps

prior to construction of the authorized activity in waters of the US.

(h) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases that require compensatory mitigation, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

20. Spawning Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., excavate, fill, or smother downstream by substantial turbidity) of an important spawning area are not authorized.

21. Management of Water Flows. To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters) and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions. Stream channelizing will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. In most cases, it will not be a requirement to conduct detailed studies and monitoring of water flow. This condition is only applicable to projects that have the potential to affect waterflows. While appropriate measures must be taken, it is not necessary to conduct detailed studies to identify such measures or require monitoring to ensure their effectiveness. Normally, the Corps will defer to state and local authorities regarding management of water flow.

22. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to the acceleration of the passage of water, and/or the restricting its flow shall be minimized to the maximum extent practicable. This includes structures and work in navigable waters of the US, or discharges of dredged or fill material.

23. Waterfowl Breeding Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

24. Removal of Temporary Fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

25. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, National Wild and Scenic Rivers,

critical habitat for Federally listed threatened and endangered species, coral reefs, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the District Engineer after notice and opportunity for public comment. The District Engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Except as noted below, discharges of dredged or fill material into waters of the US are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, and 44 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. Discharges of dredged or fill materials into waters of the US may be authorized by the above NWPs in National Wild and Scenic Rivers if the activity complies with General Condition 7. Further, such discharges may be authorized in designated critical habitat for Federally listed threatened or endangered species if the activity complies with General Condition 11 and the USFWS or the NMFS has concurred in a determination of compliance with this condition.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with General Condition 13, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The District Engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

26. Fills Within 100-Year Floodplains. For purposes of this General Condition, 100-year floodplains will be identified through the existing Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps or FEMA-approved local floodplain maps.

(a) Discharges in Floodplain; Below Headwaters. Discharges of dredged or fill material into waters of the US within the mapped 100-year floodplain, below headwaters (i.e., five cfs), resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, 43, and 44.

(b) Discharges in Floodway; Above Headwaters. Discharges of dredged or fill material into waters of the US within the FEMA or locally mapped floodway, resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, and 44.

(c) The permittee must comply with any applicable FEMA-approved state or local floodplain management requirements.

27. Construction Period. For activities that have not been verified by the Corps and the project was commenced or under contract to commence by the expiration date of the NWP (or modification or revocation date), the work must be completed within 12-months after such date (including any modification that affects the project). For activities that have been verified and the project was commenced or under contract to commence within the verification period, the work must be completed by the date determined by the Corps. For projects that have been verified by the Corps, an extension of a Corps approved completion date may be requested. This request must be submitted at least one month before the previously approved completion date.

FURTHER INFORMATION

1 District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2 NWPs do not obviate the need to obtain other Federal, state, or local permits, approvals, or authorizations required by law.

3 NWPs do not grant any property rights or exclusive privileges.

4 NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

DEFINITIONS

Best Management Practices (BMPs): BMPs are policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural. A BMP policy may affect the limits on a development.

Compensatory Mitigation: For purposes of Section 10/4/04, compensatory mitigation is the restoration, creation, enhancement, or in exceptional circumstances, preservation of wetlands and/or other aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Creation: The establishment of a wetland or other aquatic resource where one did not formerly exist.

Enhancement: Activities conducted in existing wetlands or other aquatic resources that increase one or more aquatic functions

Ephemeral Stream: An ephemeral stream has flowing water only during and for a short duration after precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Farm Tract: A unit of contiguous land under one ownership that is operated as a farm or part of a farm.

Flood Fringe: That portion of the 100-year floodplain outside of the floodway (often referred to as "floodway fringe").

Floodway: The area regulated by Federal, state, or local requirements to provide for the discharge of the base flood so the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as set by the National Flood Insurance Program) within the 100-year floodplain

Independent Utility: A test to determine what constitutes a single and complete project in the

Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent Stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water from stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of Waters of the US: Waters of the US that include the filled area and other waters that are permanently adversely affected by flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent above-grade, at-grade, or below-grade fills that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the US is the threshold measurement of the impact to existing waters for determining whether a project may qualify for an NWP. It is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and values. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Impacts to ephemeral streams are not included in the linear foot measurement of loss of stream bed for the purpose of determining compliance with the linear foot limits of NWPs 39, 40, 42, and 43. Water of the US temporarily filled, flooded, excavated, or drained, but restored to preconstruction contours and elevations after construction, are not included in the measurement of loss of waters of the US.

Non-tidal Wetland: A non-tidal wetland is a wetland (i.e., a water of the US) that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b) Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open Water: An area that, during a year with normal patterns of precipitation, has standing or flowing water for sufficient duration to establish an ordinary high water mark. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. The term "open water" includes rivers, streams, lakes, and ponds. For the purposes of the NWPs, this term does not include ephemeral waters.

Perennial Stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Permanent Above-grade Fill: A discharge of dredged or fill material into waters of the US, including wetlands, that results in a substantial increase in ground elevation and permanently

converts part or all of the waterbody to dry land. Structural fills authorized by NWPs 3, 25, 36, etc. are not included.

Preservation: The protection of ecologically important wetlands or other aquatic resources in perpetuity through the implementation of appropriate legal and physical mechanisms. Preservation may include protection of upland areas adjacent to wetlands as necessary to ensure protection and/or enhancement of the overall aquatic ecosystem.

Restoration: Re-establishment of wetland and/or other aquatic resource characteristics and function(s) at a site where they have ceased to exist, or exist in a substantially degraded state.

Riffle and Pool Complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Single and Complete Project: The term single and complete project is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers (see definition of independent utility). For linear projects, the single and complete project (i.e., a single and complete crossing) will apply to each crossing of a separate water of the US (i.e., a single waterbody) at that location. An exception is for linear projects crossing a single waterbody several times at separate and distant locations. Each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies.

Stormwater Management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater Management Facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and BMPs, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream Bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream Channelization: The manipulation of a stream channel to increase the rate of water flow through the stream channel. Manipulation may include deepening, widening, straightening, armoring, or other activities that change the stream cross-section or other aspects of stream channel geometry to increase the rate of water flow through the stream channel. A channelized stream remains a water of the US, despite the modifications to increase the rate of water flow.

Tidal Wetland: A tidal wetland is a wetland (i.e., water of the US) that is inundated by tidal waters. The definition of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line (i.e., spring high tide line) and are inundated by tidal waters two times per lunar month, during spring high tides.

Vegetated Buffer: A vegetated upland or wetland area next to rivers, streams, lakes, or other open waters which separates the open water from developed areas, including agricultural land. Vegetated buffers provide a variety of aquatic habitat functions and values (e.g., aquatic habitat for fish and other aquatic organisms, moderation of water temperature changes, and detritus for aquatic food webs) and help improve or maintain local water quality. A vegetated buffer can be established by maintaining an existing vegetated area or planting native trees, shrubs, and herbaceous plants on land next to open waters. Mowed lawns are not considered vegetated buffers because they provide little or no aquatic habitat functions and values. The establishment and maintenance of vegetated buffers is a method of compensatory mitigation that can be used in conjunction with restoration, creation, enhancement, or preservation of aquatic habitats to ensure that activities authorized by NWRPs result in minimal adverse effects to the aquatic environment. (See General Condition 19.)

Vegetated Shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: A waterbody is any area that in a normal year has water flowing or standing above ground to the extent that evidence of an ordinary high water mark is established. Wetlands contiguous to the waterbody are considered part of the waterbody.

REGIONAL GENERAL CONDITIONS

1. Notifications for all Nationwide permits should include a location map (USGS topographical map) and project drawings on 8.5" x 11" paper.
2. Nationwide Permits shall not authorize any activity which impact bogs and/or fens.

3. No Nationwide permit may be used in Lake Erie for purposes of diverting water from the Great Lakes
4. In order to determine if a project meets the terms and conditions of the Ohio EPA's 401 water quality certification, two copies of the following information is necessary:

(a) All wetland delineations must include the latest approved version of the Ohio Rapid Assessment Method (ORAM) for wetland evaluation, long form. (This will assist OEPA in determining the category of wetland the applicant proposes to impact.)

(b) Photographs of the wetland.

NOTE: This information is in addition to the required information listed under General Condition 13 (Notification) of the NWP.

5. Notification is required for all work in the following designated Critical Resource Waters

Special Habitat water of Lake Erie: Special habitat waters of Lake Erie including the shoreline, off shore islands, rock outcrops, and adjacent waters within the boundaries defined as 82° 22' 30" West Longitude, 83° 07' 30" West Longitude, 41° 33' 00" North Latitude and 42° 00' 00" North Latitude.

Piping Plover Critical Habitat: In Ohio, two areas have been designated critical habitat for the piping plover (*Charadrius melodus*) and are defined as lands 0.62 miles inland from normal high water line. Unit OH-1, extends from the mouth of Sawmill Creek to the western property boundary of Sheldon Marsh State Natural Area, Erie County, encompassing approximately 2.0 miles. Unit OH-2, extends from the eastern boundary line of Headland Dunes Nature Preserve to the western boundary of the Nature Preserve and Headland Dunes State Park, Lake County, encompassing approximately 0.5 mile.

Big and Little Darby Creeks (National Wild and Scenic River System): Big Darby Creek from Champaign-Union County line downstream to the Conrail railroad trestle and from the confluence with the Little Darby Creek downstream to the Scioto River. Little Darby Creek from the Lafayette-Plain City Road Bridge downstream to within 0.8 mile from the confluence with Big Darby Creek. Total designation is approximately 82 miles.

Little Beaver Creek (National Wild and Scenic River System): Little Beaver Creek main stem, from the confluence of West Fork with Middle Fork near Williamsport to mouth; North Fork from confluence of Brush Run and North Fork to confluence of North Fork with main stem at Fredericktown; Middle Fork from vicinity of Co. Rd. 901 (Elkton Road) bridge crossing to confluence of Middle Fork with West Fork near Williamsport; West Fork from vicinity of Co. Rd. 914 (Y-Camp Road) bridge crossing east to confluence of West Fork with Middle Fork near Williamsport. Total designation is 33

miles

Little Miami River: (Scenic component of the National System from Clifton to Foster) The portion from Foster to the Ohio River was designated a Recreational component of the National System. Total designation is 92 miles.

6. Notification is required for all activities in state Wild and Scenic Rivers (see list below). The following are **State Wild and Scenic Rivers**:

Little Miami River - Clermont County line at Loveland to headwaters, including North Fork, Clermont County line at Loveland to confluence with East Fork and from the confluence with East Fork to Ohio River. Miles designated (approximate): 105

Sandusky River - US Rt. 30 in Upper Sandusky to Roger Young Memorial Park in Fremont. Miles designated (approximate): 65

Olentangy River - Delaware Dam to Old Wilson Road in Worthington. Miles designated (approximate): 22

Little Beaver Creek - Wild segments - West Fork from 1/4 mile downstream from Twp. Rd. 914 to confluence with Middle Fork. North Fork from Twp. Rd. 952 to confluence with Little Beaver Creek. Little Beaver Creek from confluence of West and Middle Forks downstream to 3/4 mile north of Grimm's Bridge. Scenic segments - North Fork from Ohio-Pennsylvania line downstream to Jackman Road. Middle Fork from Elkton Rd. (Twp. Rd. 901) downstream to confluence with West Fork. Little Beaver Creek from 3/4 mile north of Grimm's Bridge downstream to the Ohio-Pennsylvania line. Miles designated (approximate): Wild 20, Scenic 16

Grand River - Wild segment - from Harpersfield covered bridge downstream to Norfolk and Western Railroad trestle south of Painesville. Scenic segment - from St Rt 322 bridge in Ashtabula County downstream to Harpersfield covered bridge. Miles designated (approximate): Scenic 33, Wild 23

Upper Cuyagoga River - Troy-Burton Township line in Geauga County to US Rt. 14. Miles designated (approximate): 25

Maumee River - Scenic segment - Ohio-Indiana line to St Rt. 24 bridge west of Defiance. Recreational segment - St. Rt. 24 bridge west of Defiance to US Rt. 25 bridge near Perrysburg. Miles designated (approximate): Scenic 43, Recreational 53

Stillwater River System - Recreational segment - Englewood dam to confluence with Great Miami River. Scenic segments - Stillwater River from Riffle Road bridge in Darke Co. to Englewood dam. Greenville Creek from the Ohio-Indiana state line to the confluence with the Stillwater. Miles designated (approximate): Scenic 83, Recreational

10

Chagrin River - Aurora Branch from St. Rt. 82 bridge downstream to confluence with Chagrin. Chagrin River from confluence with Aurora Branch downstream to St. Rt. 6 bridge. East Branch from Heath Road bridge downstream to confluence with Chagrin. Miles designated (approximate): 49

Big and Little Darby Creeks - Big Darby Creek from the Champaign-Union County line downstream to the U.S. Rt. 40 Bridge, from the northern boundary of Battelle-Darby Creek Metro Park to the confluence with the Little Darby Creek downstream to the Scioto River. Little Darby Creek from the Lafayette-Plain City Road Bridge downstream to the confluence with Big Darby Creek. Miles designated (approximate): 84

Kokosing River - Knox/Morrow County line to confluence with Mohican River. North Branch of Kokosing from confluence with East Branch downstream to confluence with main stem. Miles designated (approximate): 48

OHIO STATE CERTIFICATION GENERAL LIMITATIONS AND CONDITIONS (WATER QUALITY CERTIFICATION)

1. Streams

- a) Temporary or permanent impacts to intermittent and perennial streams for any single and complete project are limited to a maximum of two hundred (200) linear feet [except for NWP's 3, 12, 21, 27, and 41];
- b) Temporary or permanent impacts to ephemeral streams for any single and complete project are limited to a maximum of three hundred (300) linear feet [except for NWP's 3, 12, 21, 27, and 41];
- c) Temporary or permanent impacts to Exceptional Warmwater Habitat (EWH), Cold Water Habitat (CWH), Seasonal Salmonid (SS), or any equivalent designation, or with an anti-degradation category of State Resource Water, Superior High Quality Water (except as it applies to Lake Erie), Outstanding National Resource Waters, or Outstanding High Quality Waters are prohibited [except for NWP 3 and maintenance activities covered under NWP 7, 12, and 33];
- d) Temporary or permanent impacts to the designated portions of national or state scenic rivers are prohibited [except for NWP 3 and maintenance activities under NWP 12];
- e) Stream reconstruction activities shall adhere to natural channel design techniques;
- f) Off-site stream or buffer improvements and/or mitigative measures required by the Corps;

i. In order of priority, these measures shall focus on 1) the stream segment being impacted, 2) upstream segments and tributaries, 3) the receiving stream. The measures should, to the extent practicable, consider the causes and sources of impairment of the stream where the measures would be undertaken if the stream is listed as impaired in the most recent final report submitted to the United States environmental protection agency by the director of Ohio EPA to fulfill the requirements of Section 303(d) of the Clean Water Act. The current list of impaired streams, as of the date of this certification, can be found on the Ohio EPA web site at (Tables 1 through 6):
<http://www.epa.state.oh.us/dsw/fmdl/303dnotc.html>

ii. If the applicant cannot find appropriate mitigation on streams listed in section a) above, mitigation shall be in the Ohio EPA 8-digit watershed.

g) On-site stream or buffer improvements and/or mitigative measures required by the Corps.

i. Vegetative buffers on both stream banks an appropriate length; and

ii. A minimum width of 25 feet for preservation of existing vegetative buffers; or
iii. A minimum width of 50 feet for re-vegetating buffers cleared during construction

h) Compensatory mitigation for linear projects (e.g., highways) in streams may be mitigated for by the following, in descending order of practicability.

i. Stream impacts associated with a linear project may be mitigated on-site, defined as within one mile of the linear project, in each Ohio EPA 8-digit watershed as shown in OAC 3745-1-54(P)(2); or

ii. Stream impacts associated with a linear project may be mitigated at a single stream mitigation location or stream mitigation bank (if and when such a bank is established), acceptable to the director, within each Ohio EPA 8-digit watershed in which the impacts occur; or

iii. If no stream mitigation bank, acceptable to the director, is located within the Ohio EPA 8-digit watershed in which the impact occurs, then mitigation may occur in another Ohio EPA 8-digit watershed impacted by the linear project; at a single stream mitigation location, or a stream mitigation bank acceptable to the director; or

iv. In no stream mitigation bank exists within any of the watersheds connected with the linear project, then mitigation should occur within the watershed in which the largest impacts (in terms of area) occur.

2. Wetlands

a) Temporary or permanent impacts to Category 3 wetlands are prohibited.

b) Temporary or permanent impacts to Category 1 and 2 wetlands for any single and

complete project are limited to a maximum total of 1/2 acre [except for NWP 21 & 27]

c) Wetland mitigation shall adhere to the requirements set forth in Ohio EPA's Wetland Water Quality Standards (OAC 3745-1-50 through 54). [In the event that suitable mitigation cannot be located on-site (within one mile) or within the watershed, mitigation may be located outside of the watershed if there are significant ecological reasons to do so].

3. General

a) Impacts shall be measured linearly from upstream to downstream, including the length of stream impoundments, when calculating the total length of stream impacts [except for NWP 12, for which impacts shall be measured bank-to-bank].

b) NWPs cannot be combined to increase any of the aforementioned limitations

c) Authorization under this Certification does not relieve the permittee from the responsibility of obtaining any other federal, state or local permits, approvals or authorizations required by law including without limitation, National Pollutant Discharge Elimination System (NPDES) permits or Permits to install (PTIs).

d) In order to control pollution of public waters by soil sediment from accelerated stream channel erosion and flood plain erosion caused by accelerated stormwater runoff from development areas, permittees shall comply with Ohio Administrative Code 1501:15-1-05 Stream Channel and Floodplain Erosion, or successor rule, as applicable to the project pursuant to OAC 1501.15-1-02.

e) OAC 1501:15-1-05 states that the peak rates of runoff from an area after development may be no greater than the peak rates of runoff from the same area before development for all twenty-four-hour storms from one to one-hundred-year frequency.

f) Locally required post development stormwater ponds shall incorporate specific design features for water quality such as those listed in Chapter One of the Ohio Department of Natural Resource's Rainwater and Land Development: Ohio's Standards for Stormwater Management, Land Development and Urban Stream Protection, 2nd Ed. Mecklenburg, Dan, Ohio Department of Natural Resources, Division of Soil and Water Conservation, 1996 (or successor document), to the extent allowed by local stormwater requirements. These features include: infiltration trenches, extended detention, wet pools, forebays, aquatic benches and wetlands, optimum flow length, reverse flow pipe, optimum pool depth, shading and buffer plants, and runoff reuse.

g) The Best Management Practices (BMPs) listed below shall be utilized with all NWPs when applicable.

i. The filling of, and discharge of dredged material into, Category 3 wetlands is prohibited under this permit;

- ii. Only suitable material, free of toxic contaminants in other than trace quantities, shall be used as fill material;
- iii. The use of asphalt and rubber tires as fill is prohibited under this permit;
- iv. All hydric topsoil removed from a trench shall be separated and saved for later placement as the topmost backfill layer when the trench is refilled;
- v. The stockpiling of side-cast dredged material in wetlands in excess of three (3) months is prohibited;
- vi. The applicant will comply with all requirements for final stabilization of the site contained in applicable NPDES construction stormwater permits for the site;
- vii. Vegetated buffer strips extending to the top of both stream banks and beyond as stipulated by the Corps or Ohio EPA, using native tree and shrub species with rapid growth characteristics, shall be planted as soon as practicable after impacting stream channel slopes;
- viii. Impacts to surface water buffer vegetation shall be minimized to the maximum extent practicable;
- ix. Excavating equipment shall not be placed below the Ordinary High Water Mark (OHWM) of any surface water, except when no other alternative is practicable. When no other alternative is practicable to placing excavating equipment below the OHWM, entry to surface waters shall be through a single point of access per stream bank whenever practicable to minimize disturbance to buffer vegetation;
- x. In-stream activities shall not result in the permanent destabilization of the stream banks or stream bed so that aquatic habitat from turbidity, erosion or scouring is minimized;
- xi. In-stream work shall be conducted during low-flow conditions whenever practicable in order to minimize adverse impacts to water quality away from the project site, except in cases of emergency situations which threaten life or property;
- xii. All dredged material placed at an upland site shall be controlled so that sediment runoff to remaining streams and wetlands is minimized to the maximum extent practicable; and
- xiii. Disturbed areas shall be controlled so that sediment runoff to remaining streams and wetlands is minimized to the maximum extent practicable

INFORMATION ON NATIONWIDE PERMIT VERIFICATION

Verification of the applicability of this Nationwide permit is valid for two years from the date of affirmation unless the Nationwide permit is modified, suspended or revoked. Thus verification will remain valid for two years if during this two year period the Nationwide permit is reissued without modification or your activity complies with any subsequent permit modification. Please note that if you commence or are under contract to commence this activity in reliance of your permit prior to the date this Nationwide permit is suspended or revoked, or is modified such that your activity no longer complies with the terms and conditions, you have

twelve months from the date of permit modification, expiration, or revocation to complete the activity under the present terms and conditions of this permit, unless this permit has been subject to the provisions of discretionary authority.

It is your responsibility to remain informed of changes to the Nationwide Permit program. A public notice announcing any changes will be issued when they occur. Finally, note that if your activity is not undertaken within the two year period or the project specifications have changed, you must immediately notify this office to determine the need for further approval or reverification.

Possession of this permit does not obviate you of the need to contact all appropriate state and/or local government officials to insure that the project complies with their requirements.