MONUFILL NEW DESIGN DESIGNATION TUS-39-13.02 STATE OF OHIO APR 04 1997 CURRENT ADT (1994) (48/ DESIGN YEAR ADT (2014) = 18,300**FEDERAL** STATE DEPARTMENT OF TRANSPORTATION PROJECT PROJECT BHF - 39(51)P.I.D. 9018 DESIGN SPEED APR 04 1997 LEGAL SPEED TUS-39-13.02 FUNCTIONAL CLASSIFICATION = PRINCIPAL ARTERIAL, URBAN DESIGN EXCEPTIONS (NONE) LIMITED ACCESS THIS IMPROVEMENT IS ESPECIALLY DESIGN FOR THROUGH CONVENTIONAL SIGNS TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN FENCE LINE POWER TELEPH. FCOMB./CABLE ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 UTILITY POLES CITY OF NEW PHILADELPHIA OF THE REVISED CODE OF OHIO. MAIL BOX TREES & STUMPS TUSCARAWAS COUNTY TREES & STUMPS TO BE REMOVED 1995 SPECIFICATIONS CENTER LINE OF ROAD THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO PROPERTY LINE DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES EXISTING RIGHT-OF-WAY AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSED RIGHT-OF-WAY PROPOSAL SHALL GOVERN THIS IMPROVEMENT. GAS VALVE - & GV., WATER VALVE - & WV., FIRE HYDRANT - A F.H. WATER LINE ------ SAN. SEWER ---- GAS LINE ------ G SOIL BORING I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE INDEX OF SHEETS CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PRO-VISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC TITLE SHEET _____1 WILL BE SET FORTH ON THE PLANS AND ESTIMATES. TYPICAL SECTIONS _____ 2-3 MAINTENANCE OF TRAFFIC _____ 4-8 (SEE SHEETS NO. 4-8) BEGIN PROJECT GENERAL NOTES _____9 & 10 STA. 65+27.75 GENERAL SUMMARY _____ 11 CALCULATIONS _____12 APPROVED Jein A. Hurst PLAN AND PROFILE _____13-15 DATE 6/30/94 CITY OF NEW PHILADELPHIA CROSS SECTIONS ______16-18 DETAILS _____ 19-20,20A END PROJECT TRAFFIC CONTROL _____ 21-24 STA. 70+10.25 LIGHTING _____ 25-27 STRUCTURE, OVER 20'_____28-48 DATE 6-30-94 DISTRICT DEPUTY DIRECTOR APPROVED B.D. Hanklammi / SEH LINE DATA B & N UNDERGROUND UTILITIES REVIEW LOCATION MAP DATE 7-26-94 ENGINEER, BUREAU OF BRIDGES & STRUCTURAL DESIGN TWO WORKING DAYS

BEFORE YOU DIG **PROJECT** STA. 65+27.75 BEGIN PROJECT SCALE IN MILES CALL TOLL FREE 800-362-2764 OHIO UTILITIES PROTECTION SERVICE STA. 70+10.25 END PROJECT NON MEMBERS LENGTH OF PROJECT 482.50 L.F. OR 0.091 MI. MUST BE CALLED DIRECTLY PORTION TO BE IMPROVED DATE 10-3-94 DEPUTY DIRECTOR, DESIGN **WORK** STATE & COUNTY HIGHWAYS BEGIN WORK STA. 63+25.00 OTHER HIGHWAYS STA. 76+60.00 END WORK SCALES IN FEET LENGTH OF WORK 13**3**5.00 L.F. OR 0.25**3** MI. DATE 10-3-94 DIRECTOR, DEPARTMENT OF TRANSPORTATION PLAN PROFILE HORIZONTAL PROFILE VERTICAL CROSS SECTIONS STRUCTURE PLANS REVIEWED BY: Burgess & Niple, Limited bin Engineers and Architects SUPPLEMENTAL SPECIFICATIONS STANDARD DRAWINGS 2/21/92 GR-3.2 5/6/91 BR-1 5/1/87 802 4/13/90 3/26/79 HL-30.22 PREPARED AND RECOMMENDED BY 5/29/79 TC-42.20 BP - 3.1ms consultants, inc. 2/21/92 GR-3A 3/18/92 BP-4.1 2/5/82 BR-2-82 1/20/84 | HL-30.31 5/1/87 11/1/82 TC-51.10 820 BP-5.1 5/6/91 EXJ-4-87 2/21/92 GR-4.2 1/5/89 TC-51.11 1/20/84 | HL-40.10 5/1/87 910 5/**2**0/91 ENGINEERS, ARCHITECTS, PLANNERS 5/1/87 931 7/26/76 RB-1-55 4/3/79 HL-50.21 CB-3 5/1/79 MC-4 2/2/59 TC-52.10 7/19/94 DEPARTMENT OF TRANSPORTATION YOUNGSTOWN, OHIO 5/1/79 MC-7 4/29/88 TC-52.20 5/1/87 942 3/18/92 10/15/76 MT-97.10 4/3/79 | HL-60.11 CB-3AFEDERAL HIGHWAY ADMINISTRATION 5/1/79 MC-9.2 5/6/91 MT-99.10 9/10/91 HL-60.31 5/2/94 11/14/86 TC-71.10 5/1/87 944 CB-2-2-A & B

7/1/92 TC-82.10

7/1/92 HL-10.11

8/29/84 | HL-10.12

8/29/84 HL-10.13

3/26/79 HL-30.11

6/18/79

8/19/77

8/29/84

5/1/87

5/1/87

5/1/87 BP-2.2

5/1/87 GR-4.1

2/21/92

5/6/91

APPROVED

DIVISION ADMINISTRATOR

DATE

6/12/75 MT-105.10

8/1/78 MT-105.11

12/18/84 TC-35.10

12/18/84 TC-41.10

11/27/81 TC-41.40

6/12/69 | TC-42.10

4/1/80 TC-41.20

5/1/76 MH-2

F-3

GR-1.1

GR - 1.2

ĠR−2.1

GR-3.1

BP-1.1

5/1/76 MC-11

5/6/91 | MH-1

5/6/91 | AS-1-81

2/21/92 SD-1-69

| HW-4B

10/30/92 MH-3

5/6/91

TUS-39-13.02

CONTRACT NO.

DATE OF LETTING

FILE

TYPICAL SECTIONS

TYPE 404 ON 301

* UNLESS OTHERWISE SHOWN ON CROSS SECTIONS

** SEE INTERSECTION DETAIL (SHEET NO. 19)

EXIST. CONC. MEDIAN

① 7.3' MAX. ~ 5.5' MIN. ② 4.64' MAX. ~ 3.5' MIN. PROJECT

STATE PROJECT

TUS-39-13.02

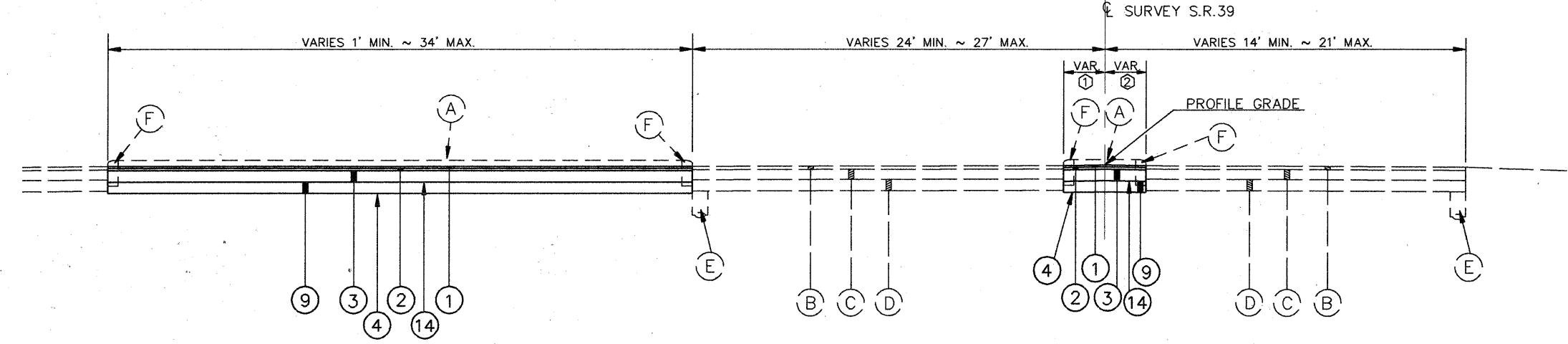
OHIO

<u>LEGEND</u>

- (1)— ITEM 404 1 1/4" ASPHALT CONCRETE, AC- 20, AS PER PLAN
- (2)— ITEM 402 1 3/4" ASPHALT CONCRETE, AC-20
- (3)— ITEM 301 8" BITUMINOUS AGGREGATE BASE, AC-20
- (4)— ITEM 203 SUBGRADE COMPACTION

BY: M.F.R. DATE: 02/94

- (5)— ITEM 407 TACK COAT
- (6)— ITEM 254 PAVEMENT PLANING, BITUMINOUS
- (7)— ITEM 609 CURB, TYPE 6
- (8)— ITEM 403 ASPHALT CONCRETE, AC-20, 0" MIN. LEVELING COURSE
- (9)— ITEM 304 8" AGGREGATE BASE
- (11)— ITEM 659 SEEDING AND MULCHING
- (12)— ITEM 660 SODDING
- 13 ITEM 611 REINFORCED CONCRETE APPROACH SLAB T=12",
- AS PER PLAN
- (14)— ITEM 408 BITUMINOUS PRIME COAT APPLIED AT 0.40 GAL./SQ. YD.
- (15)— ITEM 606 GUARDRAIL, TYPE 5
- (16) ITEM 605 AGGREGATE DRAINS
- (17)— ITEM 605 6" SHALLOW PIPE UNDERDRAINS
- (A) EXISTING CONCRETE MEDIAN
- (B) EXISTING ASPHALT PAVEMENT
- (C) EXISTING 7" WATERPROOF AGGREGATE BASE
- D EXISTING 8" SUBBASE
- (E) EXISTING 6" PIPE DRAIN (PRESERVE OUTLETS)
- (F) EXISTING CONCRETE CURB
- (G) EXISTING 8" BITUMINOUS AGGREGATE BASE
- (H) EXISTING 9" SUBBASE



NORMAL SECTION & EXISTING SECTION

STA. 63+54.00 TO STA. 63+93.00 = 39.00 L.F. (LT. SIDE ONLY) STA. 63+93.00 TO STA. 64+19.00 = 26.00 L.F. (MEDIAN ONLY)

TOTAL = 65.00 L.F.

LSURVEY S.R. 39 VARIES 24' MIN. ~ 44.54' MAX. VARIES 26' MIN. ~ 51.73' MAX. VARIES*

3.5' MIN. ~ 10' MAX. VARIES

3' MIN. ~ 11' MAX. PROFILE GRADE 4' ROUNDING <u>1/4"/FT. MAX.**</u> 1/2"/FT. 4' ROUNDING ROUNDING ROUNDING 1"/FT. DESIRABLE 1/2"/FT. MIN. ___1"/FT. DESIRABLE 1/2"/FT. MIN. NORMAL SECTION STA. 64+19.00 TO STA. 65+01.75 = 82.75 L.F.

TYPICAL SECTIONS

TYPE 404 ON 301

FOR LEGEND SEE SHEET NO. 2)
* UNLESS OTHERWISE SHOWN
ON CROSS SECTIONS

CALC BY: M.F.R. DATE: 02/94

CHKD. BY: R.B.S. DATE: 02/94

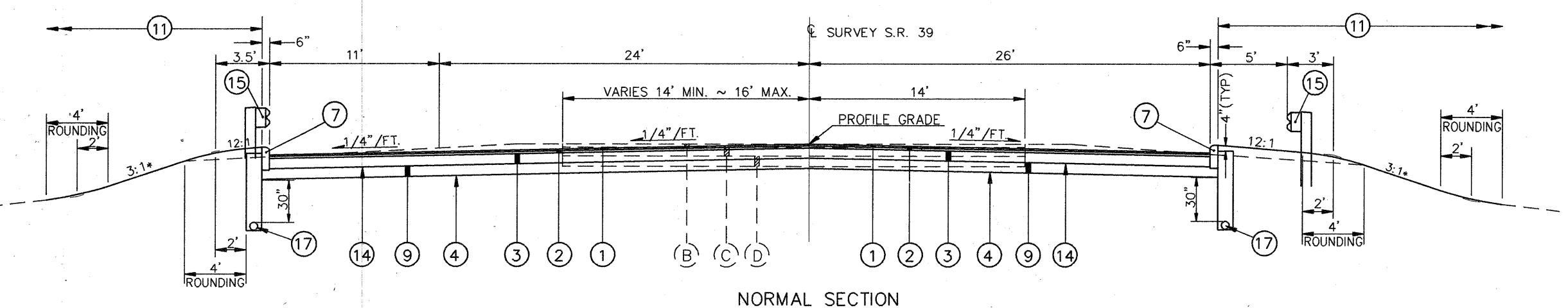
FEDERAL PROJECT

TUS-39-13.02

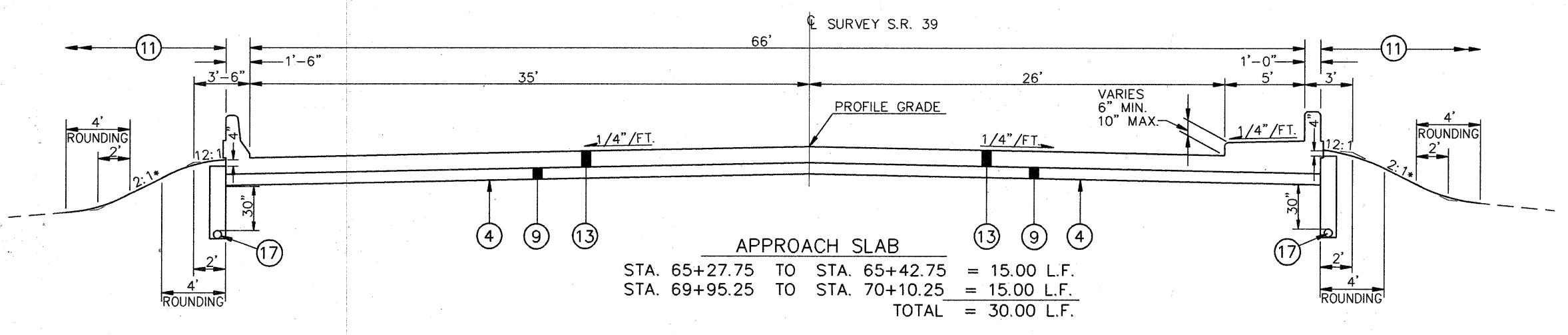
OHIO

THWA 5 REGION 5

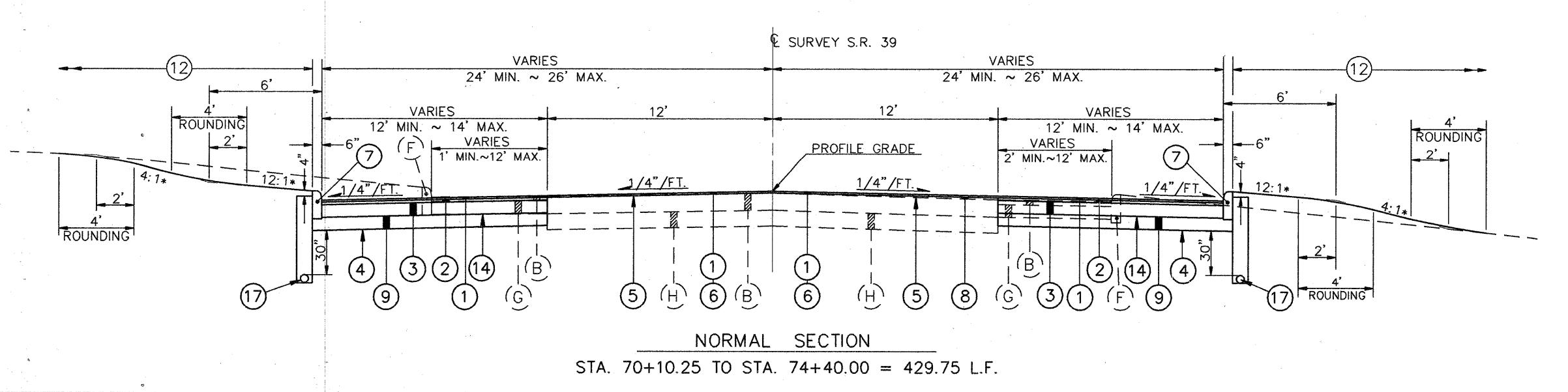
STATE PROJECT



STA. 65+01.75 TO STA. 65+27.75 = 26 L.F.



BRIDGE LIMITS (STA. 65+42.75 TO STA. 69+95.25) = 452.50 L.F.



ALL SIGNS, BARRICADES, SIGN SUPPORTS, DRUMS, LIGHTS, AND INCIDENTALS SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN CONFORMANCE WITH THE MOST RECENT REVISION, CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD). DEVICES USED TO MAINTAIN TRAFFIC SHALL BE ERECTED IMMEDIATELY PRIOR TO THE BEGINNING OF WORK AND SHALL BE REMOVED IMMEDIATELY AFTER THE TERMINATION OF SAID WORK.

AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION ON BRIDGE NO. TUS—39—13.02 AT ALL TIMES DURING THIS PROJECT EXCEPT THE CONTRACTOR SHALL BE PERMITTED TO CLOSE ONE LANE OF TRAFFIC WHEN PLACING AND REMOVING THE PORTABLE CONCRETE BARRIER (PCB). LANE BLOCKAGE SHALL NOT OCCUR DURING THE HOURS OF 7:00 AM TO 8:30 AM AND 3:00 PM TO 5:30 PM EXCEPT WITH THE PERMISSION OF THE ENGINEER. IF IT IS NECESSARY TO REDUCE TRAFFIC FLOW ON W. HIGH STREET (SR 39) TO A SINGLE LANE, FLAGGERS SHALL BE USED PER STANDARD DRAWING MT—97.10 TO CONTROL TRAFFIC CONTINUOUSLY FOR AS LONG AS THE SINGLE LANE OPERATION IS IN EFFECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE SERVICES AND SCHEDULING OF SAID FLAGGERS.

TWO-WAY TRAFFIC TO THE ADJACENT ACTIVE COMMERCIAL PROPERTIES
MUST BE MAINTAINED AT ALL TIMES. FOR PARCELS WITH TWO OR MORE DRIVES,
AT LEAST ONE DRIVE SHALL BE OPEN AT ALL TIMES. IF A PARCEL HAS ONLY
ONE DRIVE, THE CONTRACTOR SHALL MAINTAIN TRAFFIC ON AT LEAST ONE—
HALF OF THE DRIVE AT ALL TIMES.

TEN (10) WORKING DAYS PRIOR TO PLANING THE EASTBOUND LANES OF SR 39 IN THE VICINITY OF THE VEHICULAR LOOP DETECTOR (APPROXIMATE STA. 74+50, RT.), THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND CITY OF NEW PHILADELPHIA ENGINEERING DEPARTMENT IN ORDER THAT ANY NECESSARY SIGNAL TIMING CHANGES CAN BE MADE BY CITY OF NEW PHILADELPHIA PERSONNEL.

THE CONTRACTOR SHALL FOLLOW THE CONSTRUCTION SEQUENCE AND MAINTAINING TRAFFIC PROCEDURES LISTED BELOW:

MEDIAN AND ISLAND REMOVAL (STA. 63+55 - STA. 64+60)

IMMEDIATELY PRIOR TO SETTING UP THE STAGE 1 MAINTAINING TRAFFIC PLAN, THE CONTRACTOR SHALL REMOVE THE CONCRETE MEDIAN AND ISLAND FROM STA. 63+55 — STA. 64+60. PERMANENT PAVEMENT SHALL REPLACE THE ISLAND AREA AND THE PORTION OF THE MEDIAN FROM STA 63+93 TO STA. 64+19. TEMPORARY PAVEMENT SHALL BE USED IN THE MEDIAN AREA FROM STA. 64+19 TO STA. 64+60 UNTIL REMOVED IN STAGE 2A. SEE ROADWAY PLAN FOR ADDITIONAL INFORMATION AND QUANTITIES. DRUMS AND FLAGGERS SHALL BE USED AS REQUIRED TO PROVIDE PROTECTION WHEN PERFORMING THIS WORK. UPON COMPLETION OF THE ISLAND REMOVAL, MAINTENANCE OF TRAFFIC SETUP FOR STAGE 1 CAN BEGIN.

STAGE 1

THIS STAGE INCLUDES BRIDGE AND ROADWAY WORK ON THE NORTH SIDE OF SR 39 (W. HIGH). TEMPORARY GUARDRAIL SHALL BE PLACED ON THE SR 39 BRIDGE IN ORDER TO MAINTAIN TWO—WAY TWO—LANE TRAFFIC ON THE SOUTH SIDE OF THE EXISTING BRIDGE WHILE WORK IS PERFORMED ON THE NORTH SIDE. ROAD WIDENING ON THE NORTH SIDE OF SR 39 EAST OF THE BRIDGE SHALL ALSO BE PERFORMED DURING THIS STAGE. THE EXISTING SIDEWALK ON THE NORTH SIDE OF THE BRIDGE SHALL BE CLOSED TO PEDESTRIANS THROUGHOUT STAGE 1.

STAGE 2 AND 2A

THIS STAGE INCLUDES BRIDGE AND ROADWORK ON THE SOUTH SIDE OF SR 39. TEMPORARY GUARDRAIL SHALL BE PLACED ON THE SR 39 BRIDGE IN ORDER TO MAINTAIN TWO—WAY TWO—LANE TRAFFIC ON THE NORTH SIDE OF THE BRIDGE WHILE WORK IS PERFORMED ON THE SOUTH SIDE. ROAD WIDENING ON THE SOUTH SIDE OF SR 39 EAST OF THE BRIDGE SHALL ALSO BE PERFORMED DURING THIS STAGE.

UPON COMPLETION OF STAGE 2 AND DURING OR AFTER BRIDGE PLAN STAGE 2A, THE CONTRACTOR SHALL SET UP THE MAINTAINING TRAFFIC PLAN SHOWN ON SHEET 7 IN ORDER TO PERFORM THE FULL DEPTH PAVEMENT REPLACEMENT ON THE SOUTH SIDE OF S.R. 39 AND WEST OF THE S.R. 39 BRIDGE. DURATION OF THIS STAGE SHEALL BE KEPT TO A MINIMUM. THE CONTRACTOR SHALL UTILIZE A LAW ENFORCEMENT OFFICER AS DIRECTED BY THE ENGINEER TO MAINTAIN TRAFFIC AT S.R. 39 & N/B EXIT RAMP AND PREVENT TRAFFIC ON THE RAMPS FROM BACKING UP ONTO THE MAINLINE OF I.R. 77 OR U.S. 250.

UPON COMPLETION OF STAGE 2A, THE CONTRACTOR SHALL PLACE THE WEARING COURSE FOR THE ENTIRE PROJECT ONE LANE AT A TIME WITH SR 39 TRAFFIC MAINTAINED IN THE REMAINING LANES USING FLAGGER CONTROL PER STANDARD DRAWING MT—97.10.

PORTIONS OF THE NEW ROADWAY THAT ARE OPENED TO TRAFFIC DURING THE CONSTRUCTION OF THIS PROJECT, AND EXISTING PAVEMENTS THAT ARE USED TO MAINTAIN TRAFFIC DURING THE CONSTRUCTION OF THIS PROJECT, SHALL BE PROVIDED WITH TEMPORARY PAVEMENT MARKINGS AS SHOWN ON SHEETS 5, 6, AND 7 OR AS DIRECTED BY THE ENGINEER. PRIOR TO THE APPLICATION OF THE FINAL PAVEMENT MARKINGS, TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED AT THE SAME LOCATIONS AS SHOWN FOR THE FINAL MARKINGS (SEE TRAFFIC CONTROL SIGNING AND PAVEMENT MARKING PLAN SHEETS).

THE SAFETY OF PEDESTRIAN TRAFFIC SHALL BE CONSIDERED AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE LIGHTS, SIGNS, TEMPORARY FENCE, BARRICADES AND OTHER DEVICES TO WARN AND TO PHYSICALLY SEPARATE THE PEDESTRIAN FROM HAZARDS INCIDENTAL TO THE CONSTRUCTION AND/OR INSTALLATION OF THE REQUIRED STRUCTURE AND ROADWAY ITEMS SUCH AS BRIDGE DECK REPLACEMENT, OPEN EXCAVATIONS, ETC.. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, SUCH PEDESTRIAN PROTECTION SHALL UTILIZE, BUT NOT BE LIMITED TO, TEMPORARY FENCE AND TYPE A WARNING LIGHTS MOUNTED ON DRUMS OR TYPE III BARRICADES. DURING STAGE 2 AND 2A, NO SEPARATE PEDESTRIAN WALKWAY ACROSS STRUCTURE IS REQUIRED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 404	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	25	C.Y.
ITEM 410	TRAFFIC COMPACTED SURFACE, TYPE A OR B	10	C.Y.
ITEM 614	OBJECT MARKER	19	EACH
ITEM 615	TEMPORARY PAVEMENT, CLASS B	50	S.Y.
ITEM 616	CALCIUM CHLORIDE	1	TON
ITEM 616	WATER	10	M. GALS
ITEM 622	PORTABLE CONCRETE BARRIER, 32"	550	L.F.

SEPARATE PAYMENT SHALL BE MADE FOR ITEMS 404, 410, 614, 615, 616 AND 622 NOTED ABOVE. ALL OTHER WORK REQUIRED FOR TRAFFIC MAINTENANCE UNLESS PAID FOR SEPARATELY ELSEWHERE SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

TEMPORARY GUARDRAIL ON BRIDGE

TEMPORARY GUARDRAIL ON BRIDGE HAS BEEN SHOWN FOR MAINTAINING TRAFFIC ON SHEETS 5, 6, AND 7. MOVEMENT OF THE TEMPORARY GUARDRAIL BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY AND SIMULTANEOUSLY WITH THE RELOCATION OF THE PORTABLE CONCRETE BARRIER. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE GUARDRAIL IS COMPLETE AND TRAFFIC IS MAINTAINED.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE, INSTALL, RELOCATE AND REMOVE THE TEMPORARY GUARDRAIL SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR 614 MAINTAINING TRAFFIC.

ITEM 614 TEMPORARY PAVEMENT MARKING, CLASS I, AS PER PLAN

THIS ITEM SHALL BE AS PER ITEM 640 AND 740 EXCEPT TYPE 1 PAINT SHALL NOT BE PERMITTED.

ITEM 614 BARRIER REFLECTOR

ITEM 614 BARRIER REFLECTOR, TYPE A AND TYPE B SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 802 EXCEPT THAT SPACING SHALL BE AS SHOWN BELOW:

BARRIER REFLECTORS											
(see Roadway Plan for permanent Item 802 Barrier Reflector Quantities)											
Stage	Station	Side	Spacing	Ty A	pe B	Comment					
	64+20 - 65+28	LT	25'		4	On PCB					
	65+28 - 70+10	LT	25'	20		On Temp. Guardrail					
	70+10 - 70+45	LT	25'		2	On PCB					
	64+60 - 65+28	LT	25'		3	On PCB					
	65+28 - 70+10	LT	25'	20		On Temp. Guardrail					
	70+10 - 70+70	L&R	25'		3	On PCB					
IIA	64+20 - 64+60	LT	25'		2	On PCB					
	TOTAL			40	14						

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 WORK DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

ALL COSTS INVOLVED IN REMOVING AND REINSTALLING THE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 622, PORTABLE CONCRETE BARRIER.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

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

- TWO LEO'S SHALL BE PROVIDED DURING INITIAL SET-UP OF TRAFFIC CONTROL AND PORTABLE CONCRETE BARRIER FOR STAGE 1, TEAR DOWN AFTER STAGE 2A AND DURING THE MOVEMENT OF TRAFFIC CONTROL AND PORTABLE CONCRETE BARRIER BETWEEN STAGE 1 AND STAGE 2. ONE LEO SHALL BE POSITIONED AT THE IR 77 NB EXIT RAMP TERMINAL AND THE OTHER AT THE EAST END OF THE BRIDGE OR WHERE NEEDED TO ENSURE SMOOTH TRAFFIC FLOW AND MINIMAL BACKUPS ON IR 77 RAMPS.

- IF NECESSARY, TWO LEO'S SHALL ALSO BE PROVIDED DURING STAGE

1 AND STAGES 2/2A AS DIRECTED BY THE PROJECT ENGINEER AT THE IR 77

NB AND SB EXIT RAMP TERMINALS SO THAT TRAFFIC ON THE RAMPS DOES NOT

BACKUP ONTO THE MAINLINE OF IR 77 OR US 250. THESE LEO'S MAY BE

NEEDED DURING THE MORNING AND AFTERNOON PEAK HOURS.

STATE

PROJECT

BY: <u>R.A.K.</u> DATE: <u>12/93</u>

CHKD. BY: <u>D.R.B.</u> DATE: <u>1/94</u>

FEDERAL

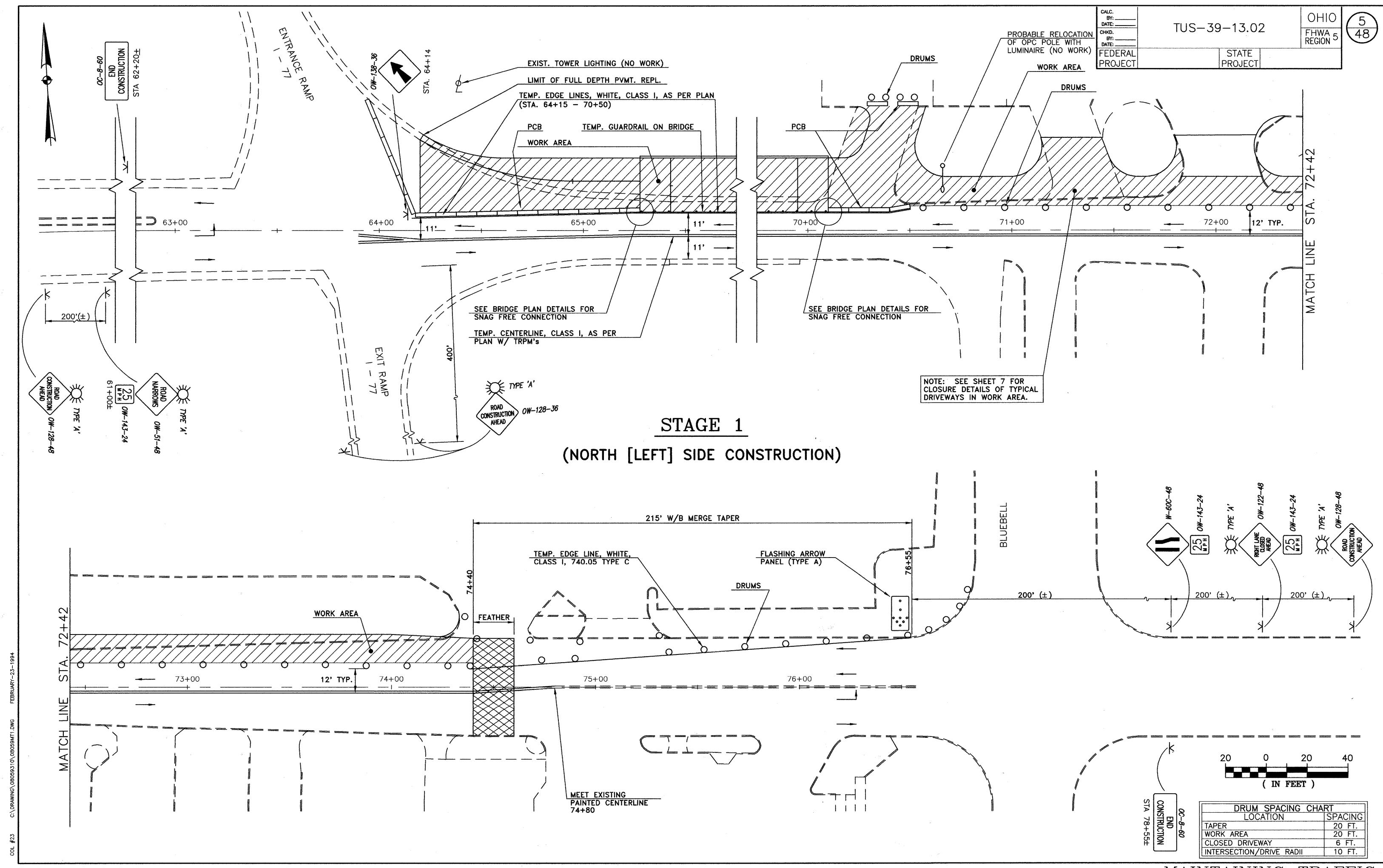
PROJECT

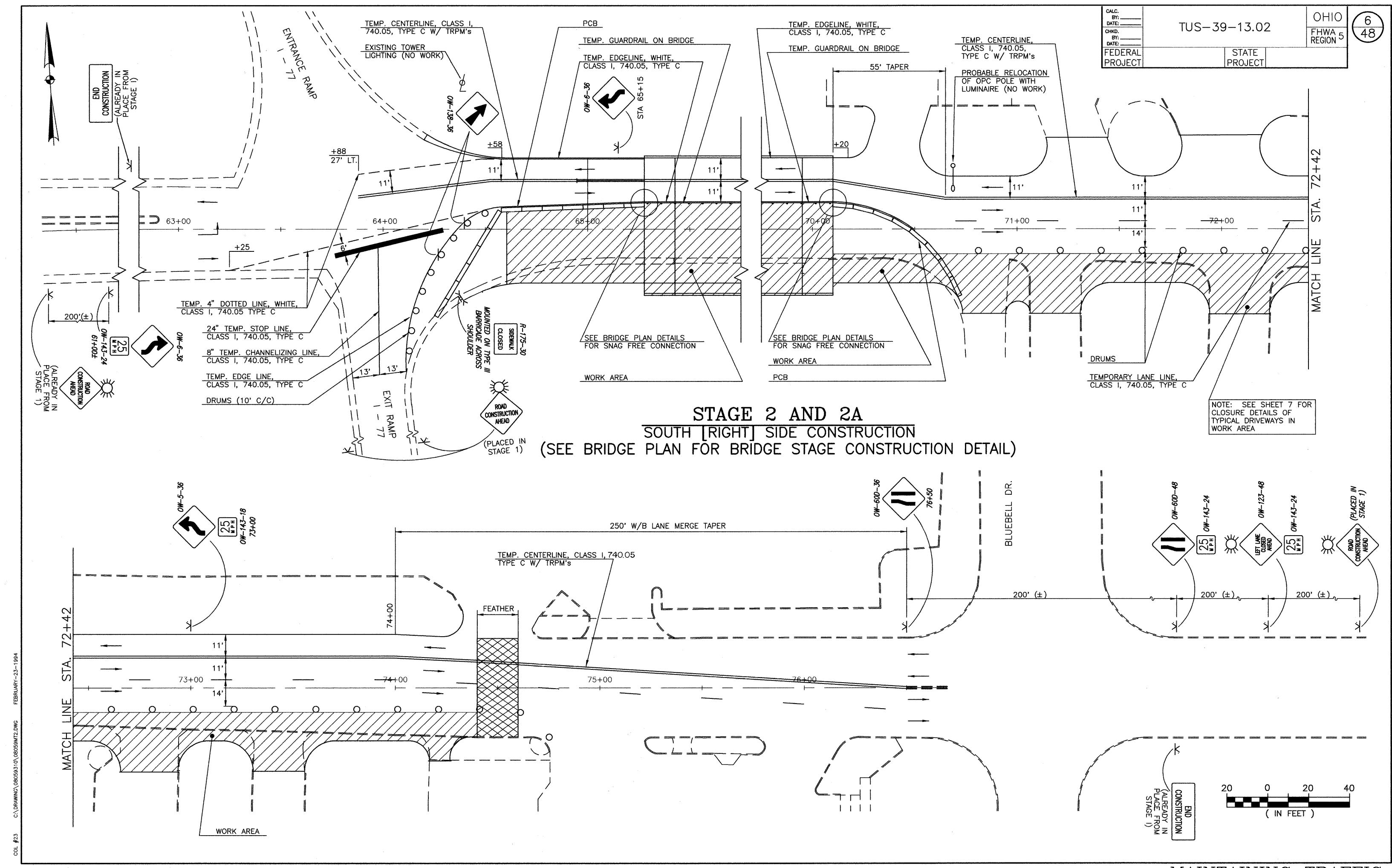
LAW ENFORCEMENT OFFICERS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR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

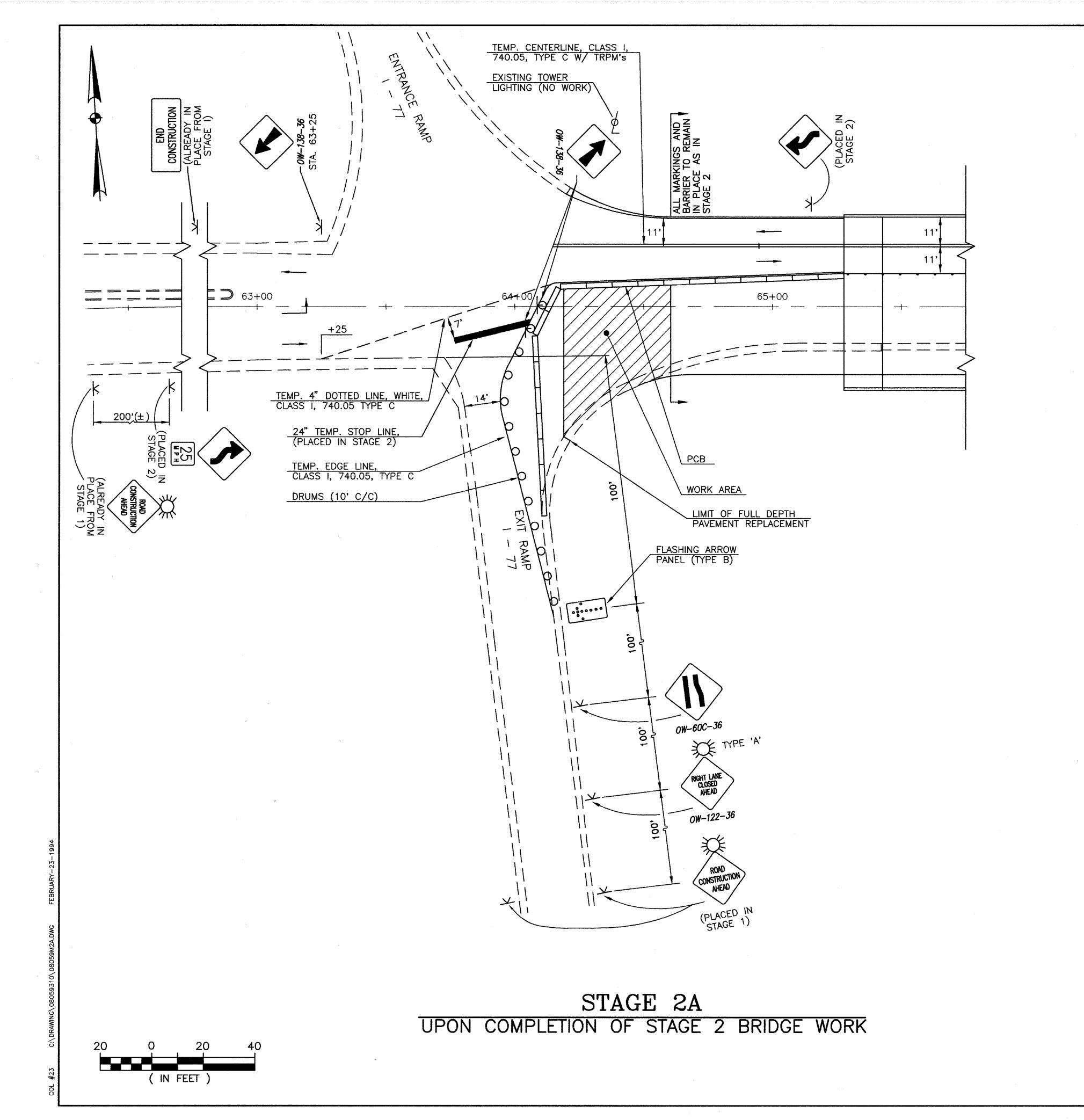
THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH: (SAFETY DIRECTOR, CITY OF NEW PHILADELPHIA, 122 2ND STREET, S.E., NEW PHILADELPHIA, OHIO, TELEPHONE: (216)343-4488).

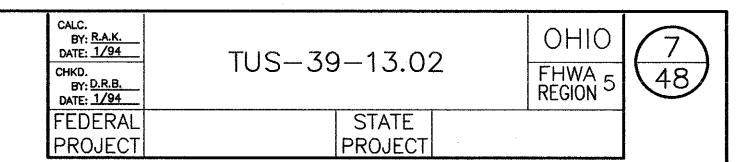
LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM SPECIAL—LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM SPECIAL - LAW ENFORCEMENT OFFICER WITH PATROL CAR 200 HOURS.

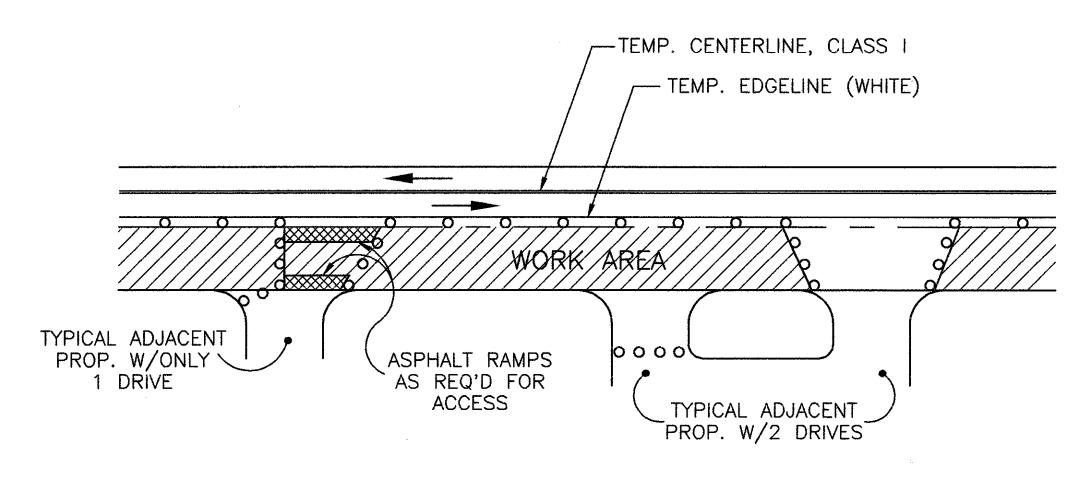








ESTIMATED QUANTITIES OF TEMPORARY PAVEMENT MARKINGS * = 740.05, TYPE C											
LANE LANE LINES, CENTER CENTER LINES, EDGE CHAN. DOTTED CHAN. ST LINES,								STOP LINES, CLASS I			
STAGE 1			1115			635	215				
STAGE 2	550			1265			1250		190	60	57
STAGE 2A				45			175		95		
PRIOR TO FINAL MARKINGS		2125			1220			300			
TOTAL (L.F.)	550	2125	1115	1310	1220	635	1640	300	285	60	57
TOTAL (MILES)	0.10	0.40	0.21	0.25	0.23	0.12	0.31				



TYPICAL DRIVEWAYS WITHIN WORK AREA

MATERIAL

ALL MARKERS SHALL BE OF SUFFICIENT STRENGTH AND PROPERLY SHAPED SO AS NOT TO BE DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR DAMAGED BY IMPACTS FROM VEHICLES TIRES, INCLUDING THOSE OF HIGH PRESSURE TRUCK TIRES LOADED TO 4500 POUNDS.

RETROREFLECTORS SHALL BE PROVIDED IN **O**NE OR TWO DIRECTIONS ON EACH MARKER AS REQUIRED BY THE USAGE AND **SH**ALL RETURN WHITE OR YELLOW LIGHT AS IS APPROPRIATE FOR THE APPLICATION.

THE REFLECTOR SHALL HAVE AN EFFECTIVE AREA OF 0.35 SQUARE INCHES FOR TYPE A OR 3.0 SQUARE INCHES FOR TYPE B. ITS BRIGHTNESS OR SPECIFIC INTENSITY (WHEN TESTED AT 0.2 DEGREE ANGLE OF OBSERVATION AND THE FOLLOWING ANGLES OF INCIDENCE) SHALL MEET OR EXCEED THE FOLLOWING

SPECIFIC INTENSITY

	TYPE A	
INCIDENCE	<u>WHITE</u>	<u>YELLOW</u>
ANGLE		
(DEGREES)		
0	1.0	0.6
20	0.4	0.24
45	· 	
	TYPE B	
	WHITE	YELLOW
0	3.0	1.8
20	1.2	0.72
45	0.3	0.2

ANGLE OF INCIDENCE FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE NORMAL TO THE LEADING EDGE OF THE MARKER FACE (ALSO HORIZONTAL ENTRANCE ANGLE).

ANGLE OF OBSERVATION FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE RETURNED RAY FROM THE MARKER TO THE MEASURING RECEPTOR.

SPECIFIC INTENSITY IS THE MEAN CANDLEPOWER OF THE REFLECTED LIGHT (AT GIVEN INCIDENCE AND DIVERGENCE ANGLES) FOR EACH FOOT-CANDLE AT THE REFLECTOR (ON A PLANE PERPENDICULAR TO THE INCIDENT LIGHT).

TYPE A MARKERS ARE INTENDED TO PROVIDE HIGH VISIBILITY BOTH DAY AND NIGHT. THEIR DAYTIME VISIBILITY SHALL BE ASSURED BY SIZE, SHAPE AND COLOR AS FOLLOWS:

- 1) THE MARKERS SHALL BE A HIGH VISIBILITY YELLOW OR WHITE COLOR WHICH WILL NOT DEGRADE SUBSTANTIALLY DUE TO TRAFFIC WEAR AND WHICH WILL MATCH THE COLOR OF THE REFLECTOR.
- 2) WHEN VIEWED FROM ABOVE, THE MARKERS SHALL HAVE A VISIBLE AREA OF NOT LESS THAN 14 SQUARE INCHES.
- 3) WHEN VIEWED FROM THE FRONT, PARALLEL TO THE PAVEMENT, AS FROM APPROACHING TRAFFIC, THE MARKER SHALL HAVE A WIDTH OF APPROXIMATELY 4 INCHES AND A VISIBLE AREA OF NOT LESS THAN 1.5 SQUARE INCHES.

TYPE B MARKERS ARE INTENDED TO PROVIDE HIGH VISIBILITY AT NIGHT BY RETROREFLECTING AUTOMOTIVE HEADLIGHT BACK TO DRIVER.

INSTALLATION

TEMPORARY RAISED PAVEMENT MARKERS SHALL BE ATTACHED TO CLEAN, DRY PAVEMENT BY A BUTYL ADHESIVE PAD, A BITUMINOUS ADHESIVE OR OTHER CONSTRUCTION GRADE ADHESIVES (SUCH AS FRANKLIN PANEL AND METAL ADHESIVE) SUITABLE TO ANCHOR THE MARKER UNDER THE ABOVE CONDITIONS. WHEN IT IS NECESSARY TO ATTACH MARKERS TO NEW CONCRETE PAVEMENT WITH CURING COMPOUND REMAINING, THE CURING COMPOUND MEMBRANE SHALL BE REMOVED BY SANDBLASTING OR OTHER MECHANICAL CLEANING METHOD. MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL IMMEDIATELY REPLACE, AT HIS EXPENSE, ANY MARKERS WHICH FAIL (BROKEN HOUSING, HOUSING WORN TO THE EXTENT THAT DAYTIME VISIBILITY IS SIGNIFICANTLY DIMINISHED OR OF AN UNACCEPTABLE COLOR, DETACHED OR BROKEN REFLECTOR, HOUSING DETACHED FROM ADHESIVE).

MARKERS ARE LIKELY TO BE REMOVED BY SNOW PLOWING OPERATIONS, THUS THEY ARE NOT CONSIDERED SUITABLE FOR USE DURING THE PERIOD FROM OCTOBER 15 UNTIL APRIL 30. THE CONTRACTOR IS ADVISED TO SCHEDULE HIS WORK AND/OR THE USE OF THESE DEVICES TO AVOID THIS PERIOD. SHOULD THE CONTRACTOR CHOOSE TO USE TRPM'S DURING THIS PERIOD AND THEY ARE SUBSEQUENTLY REMOVED OR DESTROYED BY SNOW AND ICE CONTROL ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY, AT HIS EXPENSE, PROVIDE A SUBSTITUTE TRAFFIC GUIDANCE SYSTEM EFFECTIVE DURING DAY AND NIGHT AND WHICH IS ACCEPTABLE TO THE ENGINEER.

THE MARKERS SHALL BE PLACED ACCURATELY TO DEPICT STRAIGHT OR UNIFORMLY CURVING LINES. WHEN USED TO SUPPLEMENT TEMPORARY PAVEMENT MARKINGS, THEY SHALL BE PLACED ON OR IMMEDIATELY ADJACENT TO THE PAVEMENT MARKING. LOCATIONS SHALL BE ADJUSTED UP TO ONE FOOT LONGITUDINALLY OR SIX INCHES LATERALLY TO AVOID PLACEMENT ON JOINTS, OR ON CRACKED OR DETERIORATED PAVEMENT. MARKERS SHALL NOT BE PLACED DIRECTLY ON PAVEMENT MARKINGS IF THIS DETRACTS FROM THEIR ABILITY TO REMAIN ATTACHED TO THE PAVEMENT.

APPLICATION

1) WHEN REQUIRED TO SUPPLEMENT PAVEMENT MARKING, TEMPORARY RAISED PAVEMENT MARKERS SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A DR B	20' C/C
LANE LINE	A OR B	40' C/C*
ENTER LINE	A OR B	40' C/C*
(SINGLE/BRUKEN)	н пк р	40 C/C*
CENTER LINE	A OR B	2 UNITS
(DOUBLE/SOLID)	A UK D	SIDE BY SIDE
		4 INCHES APART
		20' C/C
CHANNELIZING LINE	A CD D	10/ 6/6
(INCLUDES EXIT GORE NOSE)	A OR B	10' C/C

*CENTERED IN GAP

2) WHEN USED TO SIMULATE (REPLACE) PAVEMENT MARKING,
TEMPORARY RAISED PAVEMENT MARKERS SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	Α	5′ C/C
LANE LINE		4 @ 3.33′ C/C
	Α	30' GAP
		(40' CYCLE)
CENTER LINE	A	2 UNITS
(DOUBLE/SOLID)	H	SIDE BY SIDE
		5′ C/C
CENTER LINE		4 @ 3.33′ C/C
(SINGLE/BROKEN)	A	30'GAP
		(40' CYCLE)
CHANNELIZING LINE	A	5′ C/C
(INCLUDES EXIT GORE NOSE)	H	J 6/6
EDGE LINE	. ^	DACK TO DACK
(TWO COLOR)	Α	BACK TO BACK
(WHITE/YELLOW)		5′ C/C

CALC. BY: R.A.K. DATE: 10/93 CHKD. BY: D.R.B. DATE: 10/93

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YELLOW MARKERS USED TO SEPARATE OPPOSITE FLOWS OF TRAFFIC (CENTER LINES) SHALL INCLUDE REFLECTIONS FOR BOTH DIRECTIONS. ALL OTHER YELLOW AND WHITE MARKERS SHALL PROVIDE RETROREFLECTIVITY FOR ONE DIRECTION ONLY.

REMOVAL

REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT LITTLE OR NONE OF THE ADHESIVE REMAINS ON THE PAVEMENT. PERMANENT PAVEMENT SURFACES SHALL NOT BE SCARRED, BROKEN OR ROUGHENED SIGNIFICANTLY.

PAVEMENT

BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH MARKER AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTAL'S REQUIRED TO PERFORM THE WORK. IT SHALL ALSO INCLUDE REPLACEMENT AT NO ADDITIONAL COST OF ALL TEMPORARY RAISED PAVEMENT MARKERS WHICH, IN THE JUDGEMENT OF THE ENGINEER, FAIL FOR ANY REASON, EXCEPT DUE TO FAILURE OF THE PAVEMENT TO WHICH THEY ARE ATTACHED.

ITEM

UNIT EACH DESCRIPTION

TEMPORARY RAISED
PAVEMENT MARKER

STATIONING			SPACING	SPACING 1		TYPE A		TYPE B OR A			REMARKS
FROM	TO	SIDE	(FT)	W	Υ	Y		W	Υ	X	(LINE TYPE)
STAGE 1	4-44-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4										
63+90	74+60	RT.	20′C/C							108	CENTERLINE SOLID DOUBLE
STAGE 2											
63+90	76+50	LT.	20′C/C							128	CENTERLINE SOLID DOUBLE
	÷					į	:			E	
STAGE 2A	***************************************										
64+15	64+60	LT.	20′C/C							6	CENTERLINE SOLID DOUBLE
T											
		. <u>、</u>			e				normal two data	242	

PRELIMINARY
PREPARED BY
TECHNICAL SUPPORT SECTION
ALF H. HANSEN P.E.
WALTER C. CHADWICK D.S.

VISED BY: De	ATE:
210120	DATE 03/30/88
614 TEMPORARY RAISED PAVEMENT MARKINGS	03/23/90 03/28/90 03/28/90 07/03/90
PLAN INSERT SHEET	

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.

ROUNDING

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

CLEARING AND GRUBBING

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

EROSION CONTROL

ITEMS 601 AND 660 ARE 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 ITEM 660. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

ITEM 207 TEMPORARY SEEDING

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

		,	AND MULCHING	<u>425</u> S.Y.
	ITEM	207	STRAW OR HAY BALES	EACH
	ITEM	207	FILTER FABRIC FENCE	400 _L.F.
	ITEM	601	ROCK CHANNEL PROTECTION TYPE 'C' WITHOUT FILTER	
n 's	ITÉM	659	WATER	MGAL.
us.	ITEM	659	COMMERCIAL FERTILIZER	TON
	ITEM	659	REPAIR SEEDING AND	

<u>26</u> S.Y.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

MULCHING

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAN RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

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.

GENERAL NOTES

ITEM 659 SEEDING AND MULCHING ITEM 660 SODDING

SEEDING AND MULCHING OR SODDING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL WITHIN THE CONSTRUCTION LIMITS.

QUANTITY CALCULATIONS FOR ITEM, 659 SEEDING AND MULCHING, OR ITEM 660 SODDING ARE BASED ON THESE LIMITS.

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

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

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.19 PS46 MIN, 707.17 NON-PERFORATED, SS931 OR SS944.

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

/ LOOVE.	•	
603,	4 " CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	100 L.F.
603,	6 " CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	<u>100</u> L.F.
603,	6 " CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	<u>100</u> L.F.

DUST CONTROL

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

616, WATER <u>10</u> M. GAL. 616, CALCIUM CHLORIDE <u>1</u> TONS

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING 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-3.1.

ITEM 407 TACK COAT

THE RATE OF APPLICATION OF ITEM 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING 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 THE EXCAVATION OPERATIONS. THE LENGTH OF THE TRENCH WIDENING 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.

CURBING ON APPROACH SLABS

THE SHAPE OF THE CURBING ON APPROACH SLABS SHALL BE TRANSITIONED, FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE, WITHIN THE LIMITS OF THE APPROACH SLAB.

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS (SEE SHEET NO. 19) AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER. WOOD POSTS SHALL BE NOMINAL 4"X 4" SQUARE OR 4-1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2"
I.D., AND CONFORM TO AASHTO M 181. HARDWARE
(PLATES, SCREWS, BOLTS, ETC.) SHALL BE
COMMERCIAL—GRADE GALVANIZED STEEL.

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

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

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

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

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

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

PAYMENT WILL BE MADE UNDER:
ITEM QUANTITY UNIT DESCRIPTION

IIEM	QUANTITY	UNII	DESCRIP HON
SPECIAL	1	EACH	MAILBOX SUPPORT, SINGLE
SPECIAL	1	EACH	MAILBOX SUPPORT, DOUBLE

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 607, FENCE REBUILT, TYPE 47

THIS ITEM SHALL INCLUDE THE CAREFUL RECONDITIONING AND RE-ERECTION OF FENCE AND COMPONENT PARTS AS DETAILED ON THE PLANS AND AS DIRECTED BY THE ENGINEER. FENCE OR COMPONENT PARTS WHICH ARE DAMAGED OR ARE OTHERWISE UNSATISFACTORY FOR REUSE SHALL BE REPLACED IN KIND BY THE CONTRACTOR. ANY NEW PARTS WHICH ARE NEEDED, AS DETERMINED BY THE ENGINEER, SHALL BE SUPPLIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.

THE AMOUNT OF REBUILT FENCE TO BE PAID FOR WILL BE THE NUMBER OF LINEAR FEET REBUILT, COMPLETE IN PLACE AND MEASURED AS PROVIDED FOR IN 607.10.

THE FOOTAGE MEASURED AS ABOVE WILL BE PAID FOR AT THE CONTRACT PRICE PER LINEAR FOOT FOR ITEM 607, FENCE REBUILT, TYPE 47.

ITEM 404 ASPHALT CONCRETE, AC-20, AS PER PLAN

MATERIALS FURNISHED FOR FINE AND COURSE AGGREGATES USED IN THIS ITEM SHALL EXCLUDE ALL STONE AND CRUSHED CARBONATE STONE.

TREES AND SHRUBS

WITHIN THE LIMITS OF THIS PROJECT NUMEROUS SMALL SHRUBS AND TREES ARE LOCATED. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DISTURBING THOSE PLANTINGS THAT ARE NOT WITHIN THE WORK SHOWN ON THE CROSS — SECTIONS. IF NECESSARY, MINOR GRADING ADJUSTMENTS MAY BE MADE AS DIRECTED BY THE ENGINEER TO AVOID DISTURBING THESE PLANTINGS.

ITEM 611 REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN

THE PROPOSED APPROACH SLABS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 611 OF O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS, STANDARD BRIDGE DRAWINGS NO. AS-1-81, AND DETAILS AS SHOWN IN THESE PLANS. THE PROPOSED CAST IN PLACE CONCRETE DEFLECTOR PARAPETS, RAILINGS AND SIDEWALKS MOUNTED ONTO THE PROPOSED APPROACH SLABS SHALL BE CONSTRUCTED AS SHOWN ON SHEET NOs. 3, 44 & 45.

FULL COMPENSATION, UNLESS OTHERWISE INDICATED IN THESE PLANS, FOR ALL LABOR AND MATERIALS TO CONSTRUCT THE APPROACH SLABS WITH DEFLECTOR PARAPETS, RAILINGS AND SIDEWALKS SHALL BE INCLUDED IN THE PER UNIT PRICE BID FOR ITEM 611 REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN.

WATERING PERMANENT SEEDED AREAS

SEE SHEET NO. 12 FOR AN ESTIMATED QUANTITY OF WATER TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS PER 659.09:

ITEM 604 MANHOLE, NO. 3, AS PER PLAN

ALL SANITARY SEWER MANHOLES SHALL CONFORM TO ITEM 604 OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND TO THE DETAIL SHOWN BELOW.

FULL COMPENSATION FOR ALL LABOR AND MATERIALS TO CONSTRUCT THE MANHOLES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604 MANHOLE, NO. 3, AS PER PLAN.

CALC. BY: M.F.R. DATE: 02/94 CHKD. BY: R.B.S. DATE: 02/94 FEDERAL PROJECT TUS-39-13.02 OHIO 9 FHWA5 REGION 5 STATE PROJECT

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

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

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

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

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

UTILITIES

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

OHIO POWER COMPANY 301 CLEVELAND AVE. S.W. CANTON, OHIO 44701-4400 PHONE: (216)438-7383

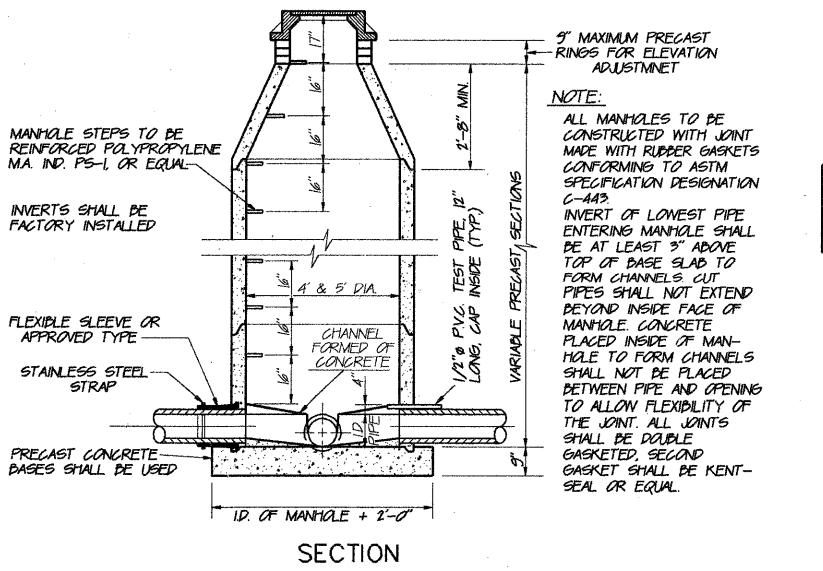
GTE TELEPHONE OPERATIONS
P.O. BOX 629
NEW PHILADELPHIA, OHIO 44663
PHONE: (216)364-0363

TIMES MIRROR CATV 617 TUSCARAWAS AVE. NEW PHILIDELPHIA, OHIO 44663 PHONE: (216)364-6634 EAST OHIO GAS COMPANY 4725 SOUTHWAY ST. S.W. CANTON, OHIO 44706 PHONE: (216)478-3142

CITY OF NEW PHILADELPHIA WATER DEPARTMENT AND SAN. SEWER DEPT. 166 E. HIGH AVENUE NEW PHILADELPHIA, OHIO 44663 PHONE: (216)364-4491

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.

(GENERAL NOTES CONTINUED ON SHEET NO. 15)



SECTION
PRECAST MANHOLE NO. 3,
AS PER PLAN

CONNECTION TO EXISTING WATER MAIN

AT PLACES WHERE PLANS PROVIDE FOR PROPOSED WATER MAIN TO BE CONNECTED TO THE EXISTING WATER MAIN, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO DEPTH AND LOCATION BEFORE HE STARTS TO LAY THE NEW PIPE.

WATER MAIN ON PROPOSED STRUCTURE

THE PROPOSED 12 INCH DUCTILE IRON WATER MAIN, WITH RESTRAINED MECHANICAL JOINTS ON THE PROPOSED STRUCTURE FROM THE VERTICAL BEND AT STA. 65+32 TO STA. 70+05, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS ON THIS SHEET TOGETHER WITH THE DETAILS ON SHEET NO. 20 OF THE STRUCTURE PLANS, AND O.D.O.T. SPECIFICATION ITEM 638.

EXPANSION JOINT

EXPANSION JOINTS SHALL BE FURNISHED AND INSTALLED AS SHOWN ON THE PLANS. THE JOINTS SHALL BE OF SINGLE END EXPANSION TYPE THAT PROVIDE FOR A MAXIMUM OF TEN (10) INCH EXPANSION AT EACH JOINT.

THE EXPANSION JOINTS SHALL BE 12 INCH DRESSER, STYLE 63, TYPE 1 FLANGED ENDS WITH LIMIT RODS OR ROCKWELL TYPE 611 FLANGED ENDS WITH LIMIT RODS OR APPROVED EQUAL.

EXPANSION JOINTS SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS: STA. 65+53 & STA. 69+85. THE INSULATION SHALL BE INSTALLED SO AS NOT TO INTERFERE WITH THE DESIGN CAPABILITIES OF THE EXPANSION JOINTS.

HANGERS FOR WATER MAIN

THE CONTRACTOR SHALL FURNISH AND INSTALL THE HANGERS, PIPE COVERING PROTECTION SADDLES, ROLLERS, BOLTS AND ALL OTHER INCIDENTALS NECESSARY FOR THE INSTALLATION OF THE PROPOSED WATER MAIN IN ACCORDANCE WITH THE DETAIL ON SHEET 20 OF THE STRUCTURE PLANS.

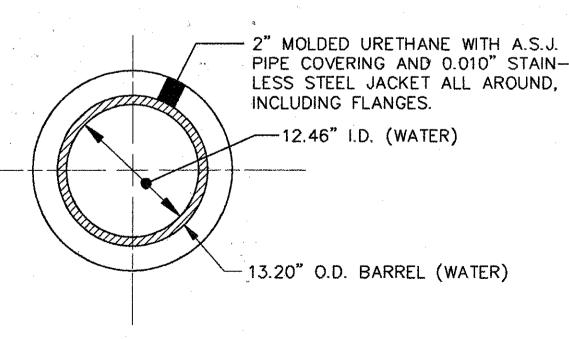
COPPER CONDUCTOR STRAPS

THE JOINTS OF ALL PROPOSED WATER *MAIN FROM STA. 65+32 TO STA. 70+05 SHALL BE PROVIDED WITH COPPER CONDUCTOR STRAPS FOR ELECTRICAL THAWING. THE STRAPS SHALL BE RATED AT 600 AMP SUSTAINED CURRENT.

WATER MAIN INSULATION

THE PROPOSED WATER MAIN ON THE PROPOSED STRUCUTURE BETWEEN STA. 65+32 AND STA.70+05 SHALL BE INSULATED.

THE INSULATION SHALL BE 2 INCHES OF MOLDED URETHANE WITH A.S.J. PIPE COVERING AND 0.010 INCH STAINLESS STEEL JACKET AROUND ALL PIPE, FITTINGS AND EXPANSION JOINTS.



INSULATION DETAIL

PAYMENT FOR THE PROPOSED WATER MAIN, COMPLETE IN PLACE SHALL INCLUDE ALL LABOR AND MATERIALS FOR THE PIPE, JOINTS, FITTINGS, REDUCERS, EXPANSION JOINTS, BRIDGE ATTACHMENTS AND HANGERS, SADDLES, INSULATION, CONDUCTOR STRAPS AND INSTALLATION (ALL WATER MAIN PIPE JOINTS ON THE PROPOSED STRUCTURE SHALL HAVE MECHANICAL JOINT RETAINER GLANDS.)

PAYMENT SHALL BE MADE UNDER THE PER LINEAR FOOT BID PRICE FOR ITEM 638 12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, MECHANICAL JOINTS AND FITTINGS, AS PER PLAN.

GENERAL NOTES

FORCE MAIN ON PROPOSED STRUCTURE

THE PROPOSED 8 INCH DUCTILE IRON FORCE MAIN, WITH RESTRAINED MECHANICAL JOINTS ON THE PROPOSED STRUCTURE FROM THE VERTICAL BEND STA. 65+38 TO STA. 70+00, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS ON THIS SHEET TOGETHER WITH THE DETAILS ON SHEET NO. 14 OF THE STRUCTURE PLANS, AND O.D.O.T. SPECIFICATION ITEM 603.

EXPANSION JOINT

EXPANSION JOINTS SHALL BE FURNISHED AND INSTALLED AS SHOWN ON THE PLANS. THE JOINTS SHALL BE OF SINGLE END EXPANSION TYPE THAT PROVIDE FOR A MAXIMUM OF TEN (10) INCH EXPANSION AT EACH JOINT.

THE EXPANSION JOINTS SHALL BE 8 INCH DRESSER, STYLE 63, TYPE 1 FLANGED ENDS WITH LIMIT RODS OR ROCKWELL TYPE 611 FLANGED ENDS WITH LIMIT RODS OR APPROVED EQUAL. EXPANSION JOINTS SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS:

STA. 65+53 & STA. 69+85. THE INSULATION SHALL BE INSTALLED SO AS NOT TO INTERFERE WITH THE DESIGN CAPABILITIES OF THE EXPANSION JOINTS.

HANGERS FOR FORCE MAIN

THE CONTRACTOR SHALL FURNISH AND INSTALL THE HANGERS, PIPE COVERING PROTECTION SADDLES, ROLLERS, BOLTS AND ALL OTHER INCIDENTALS NECESSARY FOR THE INSTALLATION OF THE PROPOSED FORCE MAIN IN ACCORDANCE WITH THE DETAIL ON SHEET 14 OF THE STRUCTURE PLANS.

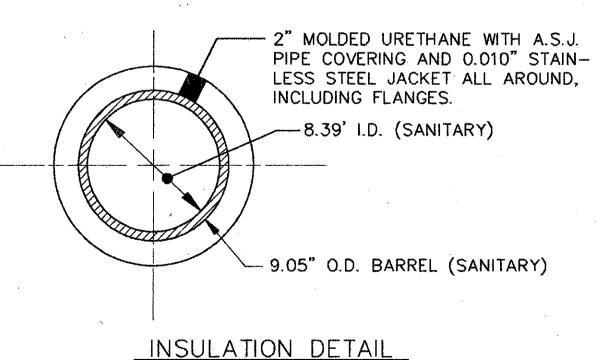
COPPER CONDUCTOR STRAPS

THE JOINTS OF ALL PROPOSED FORCE MAIN FROM STA. 65+32 TO STA. 70+05 SHALL BE PROVIDED WITH COPPER CONDUCTOR STRAPS FOR ELECTRICAL THAWING. THE STRAPS SHALL BE RATED AT 600 AMP SUSTAINED CURRENT.

FORCE MAIN INSULATION

THE PROPOSED FORCE MAIN ON THE PROPOSED STRUCUTURE BETWEEN STA. 65+38 AND STA.70+00 SHALL BE INSULATED.

THE INSULATION SHALL BE 2 INCHES OF MOLDED URETHANE WITH A.S.J. PIPE COVERING AND 0.010 INCH STAINLESS STEEL JACKET AROUND ALL PIPE, FITTINGS AND EXPANSION JOINTS.



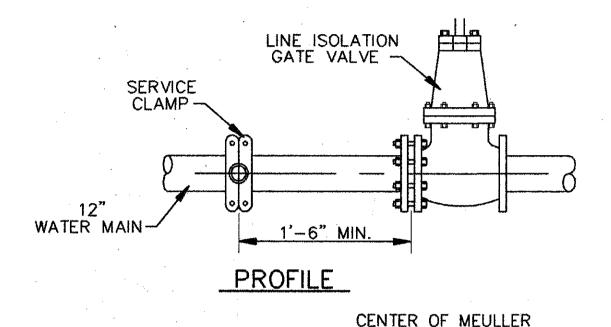
PAYMENT FOR THE PROPOSED FORCE MAIN, COMPLETE IN PLACE SHALL INCLUDE ALL LABOR AND MATERIALS FOR THE PIPE, JOINTS, FITTINGS, REDUCERS, EXPANSION JOINTS, BRIDGE ATTACHMENTS AND HANGERS, ROLLERS, INSULATION, CONDUCTOR STRAPS AND INSTALLATION (ALL FORCE MAIN PIPE JOINTS ON THE PROPOSED STRUCTURE SHALL HAVE MECHANICAL JOINT RETAINER GLANDS.)

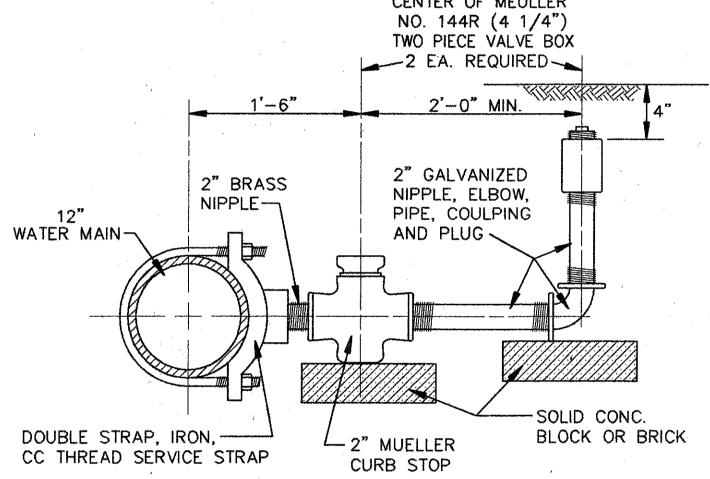
PAYMENT SHALL BE MADE UNDER THE PER LINEAR FOOT BID PRICE FOR ITEM 603 8" CONDUIT, TYPE B DUCTILE IRON PIPE ANSI CLASS 52, MECHANICAL JOINTS AND FITTINGS, AS PER PLAN.

ITEM 638 WATER MAIN BLOW-OFF ASSEMBLY

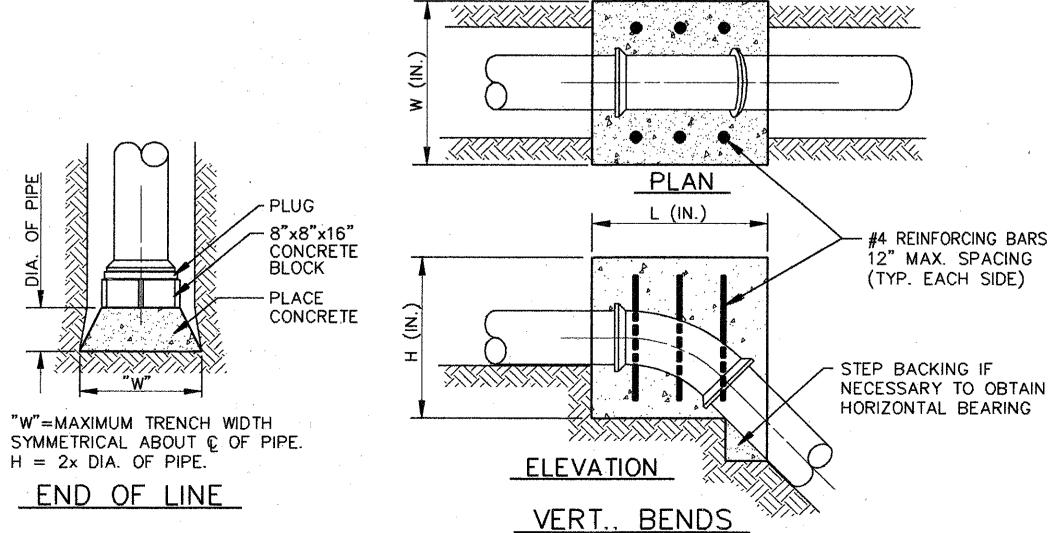
ITEM 638 WATER MAIN BLOW-OFF ASSEMBLY
SHALL BE CONSTRUCTED IN ACCORDANCE WITH O.D.O.T. CONST.
AND MATERIAL SPECIFICATIONS FOR ITEM 638, EXCEPT AS SHOWN
IN THESE PLANS. PAYMENT FOR THE PROPOSED WATER MAIN
BLOW-OFF ASSEMBLY, COMPLETE IN PLACE SHALL INCLUDE
ALL LABOR AND MATERIALS FOR THE THREAD SERVICE STRAP,
CURB STOP VALVE, VALVE BOXES, PIPE, JOINTS, FITTINGS AND
PLUG. (SEE DETAIL BELOW)

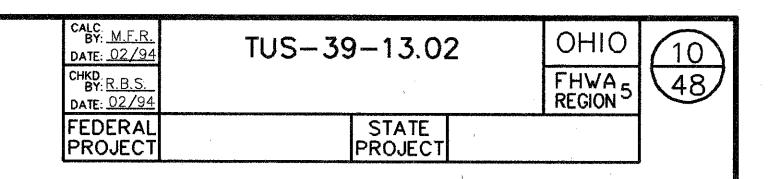
PAYMENT SHALL BE MADE UNDER THE PER EACH BID PRICE FOR ITEM 638 WATER MAIN BLOW-OFF ASSEMBLY. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS ITEM.

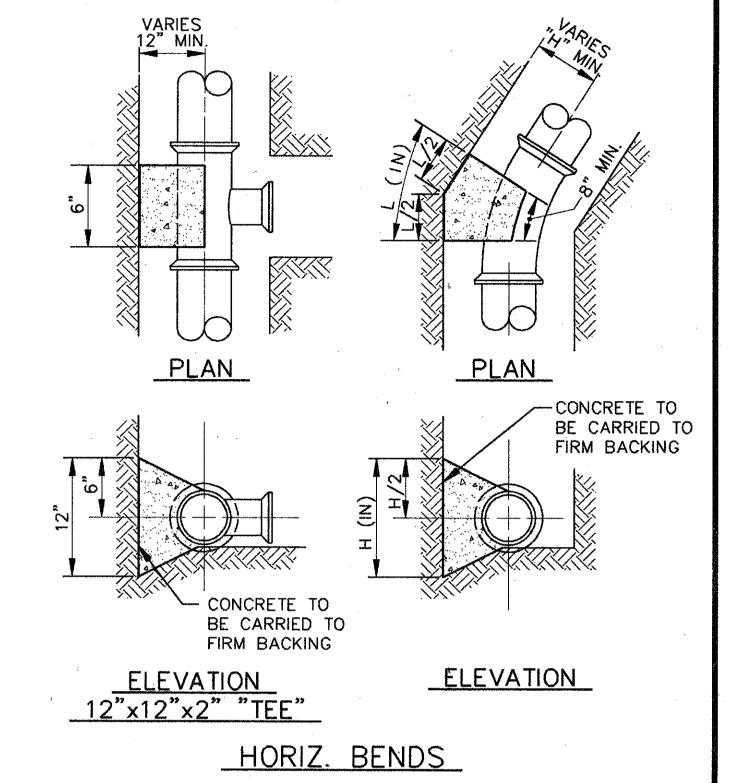




ELEVATION __WATER_MAIN_ _BLOW-OFF_ASSEMBLY







								
THRUST BLOCKING HORIZONTAL BENDS								
SIZE	DEC	GREE (OF BE	ND				
OF	11	1/4*	45°					
PIPE	L	H	L	H				
8"	8	80	19	13				
12"	12	12	24	22				
			ž.					
1	:							

THRUST BLOCKING VERTICAL BENDS												
SIZE	:	DEC	GREE (OF BE	ND							
OF				2	2 1/2	•						
PIPE				L	W	H						
8"				28	48	22						
12"				36	60	30						
<u> </u>												
· .				1 5.								

NOTES:

- 1) BLOCKING TO BE CENTERED ON BEND HORIZONTALLY
 2) ALL CONCRETE SHALL BE ITEM 602 CONC. MASONEY
- 2) ALL CONCRETE SHALL BE ITEM 602, CONC. MASONRY
 3) L & W & H DIMENSIONS ARE IN INCHES
- 4) BLOCKING DESIGN BASED ON A WORKING PRESSURE OF 125 P.S.I. AND A SOIL BEARING 3000 LB./S.F.
- 5) THRUST BLOCKING WILL BE REQUIRED ON ALL VERTICAL AND HORIZONTAL BENDS EXCEPT ON STRUCTURE FROM STA. 65+42.75 TO STA. 69+95.25

GENERAL SUMMARY

CALC: BY: M.F.R. DATE: 02/94

CHKD: BY: R.B.S. BY: R.B.S. DATE: 02/94

FEDERAL PROJECT

TUS-39-13.02

OHIO

FHWA: 11

AB

STATE PROJECT

				•						. ,					•	·					<i>y</i>			FEDERAL STATE PROJECT PROJECT
TC	TAL FF	ROM S	SHEET	NO.	PARTIC	IPATION	ITEM	ITEM	GRAN[DIINIT	DESCRIPTION		TOT	AL FRO	OM SH	HEET N	10.	PARTIC	CIPATION	ITEM	ITEM	GRAND	LINIT	
	9 1	12 1.	3 14	15	100% CITY	BHF		EXT.	GRANI TOTAL	-	DESCRIPTION	4	7	8 9	12	13	14 15	5 100% CITY	BHF		EXT.	GRAND TOTAL	ONIT	DESCRIPTION
							201	11000			ROADWAY								500	05.4	04000	500		PAVEMENT
	LUMP 8	37	-		·	LUMP 87	201	11000 22900	LUMP 87	S.Y.	CLEARING AND GRUBBING APPROACH SLAB REMOVED				599 508				599 508	254 301	01000 10002	599 508	S. Y. C. Y.	PAVEMENT PLANING, BITUMINOUS BITUMINOUS AGGREGATE BASE, AC-20
		26	673	132		1074	202	32000	1074		CURB REMOVED				599 508 570/2 23	2			592	304	20000	592	C.Y.	AGGREGATE BASE (SEE PROPOSAL NOTE)
·			153			153	202	22900 32000 32800 35100 35200	153	S.Y.	CONCRETE SLOPE PROTECTION REMOVED PIPE REMOVED, 24" AND UNDER		***************************************						23	305	12000	23	5. Y.	8" CONCRETE BASE
			8			8	202	35200	8	L.F.	PIPE REMOVED, OVER 24"				111/2	1			115 18		20000		C.Y.	ASPHALT CONCRETE, AC-20 ASPHALT CONCRETE, AC-20
		25	50 100			350	202	38000	350	L.F.	GUARDRAIL REMOVED								10				V. I.	ASPHALI CONCRETE, AC-20
		·	3			3	202	58100 58500	3	EA.	CATCH BASIN REMOVED CATCH BASIN ABANDONED				122				122	404 404	20001 25000	122	C.Y.	ASPHALT CONCRETE, AC-20, AS PER PLAN, (SEE SHEET NO. 9 ASPHALT CONCRETE, AC-20 (DRIVEWAYS)
		5	0	4		40	202 202 202	58500 75200 98400	40	L.F.	FENCE REMOVED FOR REUSE								90	407	10000	90	GAL.	TACK COAT
- 1		109	90			1090	202	98400	1090	S.F.	OCONCRETE MEDIAN OREMOVAL MISC.:				90 910/3 5 0 7 394	9			949 5 0 7	408 452	10000 12000	949 5 0 7	GAL. S.Y.	BITUMINOUS PRIME COAT 8" PLAIN CONCRETE PAVEMENT
		340				1340	203	12000	1340	C.Y.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION				394				507 394	609	14000	394	L.F.	CURB, TYPE 2A
		58 501			· · · · · · · · · · · · · · · · · · ·	1340 658 2501	203 203 203	12000 20000 50000	658 2501	C.Y. S.Y.	EMBANKMENT SUBGRADE COMPACTION				66 228		296 10	2 :	516 228	609 611	26000 10001	516 228	L.F. S.Y.	CURB, TYPE 6 REINFORCED CONCRETE APPROACH SLAB, (T=12") AS PER PLA
**************************************																								(SEE SHEET NO. 9)
		1	25 81.25			306.25	606	25000	306.25	EA.	GUARDRAIL, TYPE 5 ANCHOR ASSEMBLY, TYPE A													
			1			1 7	606	26500	1	EA.	ANCHOR ASSEMBLY, TYPE T								A	670	10000	, A	F- A	WATER WORK
		4	1			1	606 606	35000 35100	1		BRIDGE TERMINAL ASSEMBLY, TYPE 1 BRIDGE TERMINAL ASSEMBLY, TYPE 2					75	18	93	4	638 638	10800 02500	93	EA. L.F.	VALVE BOX ADJUSTED TO GRADE 12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52,
		4(0			40	607	16000	40	L.F.	FENCE REBUILT, TYPE 47					462		462	,	638	02501	462		MECHANICAL JOINTS AND FITTINGS 12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52,
	1					1		L 6905010		EA.						102						102		MECHANICAL JOINTS AND FITTINGS, AS PER PLAN (SEE SHT. NO. 10
	1			.		1	SPECIA	L 6905020	0 1	EA.	MAILBOX SUPPORT SYSTEM, DOUBLE					1	1	2		638	98000	2	EA.	WATER MAIN BLOW-OFF ASSEMBLY (SEE SHT. NO. 10
																								WATER WORK, MIDE
											EROSION CONTROL					,								SANITARY SEWER
	425					425	207	10000	425	S.Y.	TEMPORARY SEEDING AND MULCHING				190			190		603	01906	190	L.F.	8" CONDUIT, TYPE B, DUCTILE IRON PIPE ANSI CLASS 52,
	400 100					400 100	207	10000 30000 70000	400 100		FILTER FABRIC FENCE (SEE PROPOSAL NOTE) STRAW OR HAY BALES		·		462			462	·	603	01907	462	L.F.	MECHANICAL JOINTS AND FITTINGS 8" CONDUIT, TYPE B, DUCTILE IRON PIPE ANSI CLASS 52,
															1			1		604	31501	1	EA.	MECHANICAL JOINTS AND FITTINGS, AS PER PLAN (SEE SHT. NO. 10
		22	40			462	601	32104	462		ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER									004	31301		L/\.	MANTOLE NO. 3, AS TEN TEAN (SEE SHELT NO9_)
	10					10	601	34200	10	C.Y.	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER													MAINTENANCE OF TRAFFIC
		519				519	659	10000	519	S.Y.	SEEDING AND MULCHING	25						•••••••••••••••••••••••••••••••••••••••	25 .	404	35000	25	C.Y.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
5	26 0.02 0.	.19				26 0.21	659 659	14000 20000	0.21		REPAIR SEEDING AND MULCHING COMMERCIAL FERTILIZER	10 2 00							200	410	12000 11100	10 200	C.Y. HR.	TRAFFIC COMPACTED SURFACE, TYPE A OR B LAW ENFORCEMENT OFFICER WITH PATROL CAR
	0.	96		4.		0.96 6	659	30000 35000	0.96	TON	AGRICULTURAL LIMING WATER	40		242			2		242 46	614 614	12800 13200	242 46	EA.	TEMPORARY RAISED PAVEMENT MARKER BARRIER REFLECTOR, TYPE A
	1	3.	2			_e 32	660	20000	32 1605	S.Y.	REINFORCED SODDING	14				2	10		26	614	13300	26	EA.	BARRIER REFLECTOR, TYPE B
	16	505				1605	660	30000	1605	S.Y.	SODDING	19							19	614	13350	19	EA.	OBJECT MARKER
													0.10						0.10	614	20300	**************************************	MILE	
			1.09			1.09	602	20000	1.09	C.Y.	DRAINAGE CONCRETE MASONRY		0.40 0.21 0.25					;	0.40	614 614	20400 21001	0.40 0.21		• · · · · · · · · · · · · · · · · · · ·
	100					100	603	00400	100	L.F.	4" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION 6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION		0.25 0.23						0.25	614	21300	0.25	MILE	TEMPORARY CENTER LINE, CLASS I, 740.05, TYPE C
	100	:				100	603	01500	100	L.F.	6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION									614			IVIILE	TEMPORARY CENTER LINE, CLASS II
		3.	3 15	20		68	603	01500	68	L.F.	6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR 35, SS931 OR SS944		0.12 0.31 300 60						0.12 0.31	614 614	22001 22300	0.12 0.31	MILE MILE	TEMPORARY EDGE LINE, CLASS I, AS PER PLAN (SEE SHT. NO. 4 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C
			29	10		39	603	04400	39	L.F.	12" CONDUIT, TYPE B		300						300	614	23001	300	L.F.	TEMPORARY CHANNELIZING LINE, CLASS I, AS PER PLAN (SEE SHT. NO. 1
A			93	17		110 20	603 603	04400 04600 05900	110 20	L.F.	12" CONDUIT, TYPE C 15" CONDUIT, TYPE B 706.02		60 285						60 285	614 614	23600 24600	60 285	L.F.	
				3		3	603	07400	3	L.F.	18" CONDUIT, TYPE B 706.02		285 57						57	614	26600	57	L.F.	TEMPORARY STOP LINE, CLASS I, 740.05, TYPE C
	-		1 1	2		3	604	00500	3	EA.	CATCH BASIN, NO. 3 WITH V GRATE	50		10					50 20	615 616	25000 10000	50 20	S.Y. M GAL.	TEMPORARY PAVEMENT, CLASS B WATER
		<u> </u>	4	1		4	604 604			EA.	CATCH BASIN, NO. 3A WITH V GRATE	1 550		1					2 550	616	20000	2	TON	CALCIUM CHLORIDE
			1			1	604 604	04500 31500 31510	1 1	EA. EA.	CATCH BASIN, NO. 2-2B MANHOLE NO. 3	330							330	022	40020	550	L.F.	PORTABLE CONCRETE BARRIER, 32"
	·		.1	1 1		1 2	604 604	31510 34500	1 .	EA.	MANHOLE, NO. 3 WITH FLAT TOP MANHOLE, ADJUSTED TO GRADE									·		FOR LIC	HTING	GENERAL SUMMARY SEE SHEET NO. <u>25</u>
		2				2	SPECIAL	_ 60436600	d 2	EA.	SPECIAL- PRECAST REINFORCED CONCRETE OUTLET											FOR TR	AFFIC C	CONTROL GENERAL SUMMARY SEE SHEET NO. 21
		. 8		20 75		510 401	605 605	1110 0 13300	510 401	L.F.	6" SHALLOW PIPE UNDERDRAIN 6" UNCLASSIFIED PIPE UNDERDRAIN								LIIMP	Special	419250/0		KUCTUR	COMPUTER FRUIPMENT FOR TYPE B OFFICE
	5	58				58	605			L.F.	AGGREGATE DRAIN	LUMP							·	614		LUMP LUMP		COMPUTER EQUIPMENT FOR TYPE B OFFICE MAINTAINING TRAFFIC FIELD OFFICE TYPE B
		· .								,									LUMP LUMP	623	15010 10000	LUMP LUMP		FIELD OFFICE, TYPE B CONSTRUCTION LAYOUT STAKES
												· į							LUMP	624	10000	LUMP		MOBILIZATION

CALCULATIONS

CALC. BY: M.F.R. DATE: 02/94		OHIO	(12)
CHKD: R.B.S. BY: R.B.S. DATE: 02/94	*	FHWA ₅ REGION ⁵	48
FEDERAL PROJECT	STATE PROJECT		

ITEM 203 SUBGRADE COMPACTION STA, 63+54.00 TO STA, 63+93.00 (ISLAND)* $(649 \text{ S.F.}) \div 9$ = 72.11 S.Y. STA. 63+93.20 TO STA. 64+19.00 (MEDIAN) $(25.80')(10.44' \text{ AVG.}) \div 9 = 29.93 \text{ S.Y.}$ STA. 64+19.00 TO STA. 64+72.51 (RT.) $(53.51')(36.70' \text{ AVG.}) \div 9 = 218.20 \text{ S.Y.}$ STA. 64+72.51 TO STA. 65+27.75 (RT.) $(55.24')(26.00') \div 9 = 159.58 \text{ S.Y.}$ STA. 64+19.00 TO STA. 64+62.64 (LT.) $(43.64')(40.76' \text{ AVG.}) \div 9 = 197.64 \text{ S.Y.}$ STA. 64+62.64 TO STA. 65+27.75 (LT.) $(65.11')(35.00') \div 9 = 253.21 \text{ S.Y.}$ STA. 65+27.75 TO STA. 65+42.75

STA. 69+95.25 TO STA. 70+10.25

STA. 70+10.25 TO STA. 70+27 (LT.) *

(APPROACH SLABS)

STA. 70+10.25 TO STA. 73+99.17 $(388.92')(28.00) \div 9 = 1,209.97 \text{ S.Y.}$ STA. 73+99.17 TO STA. 74+40.00 $(40.83')(26.00 \text{ AVG.}) \div 9 = 117.95 \text{ S.Y.}$ TOTAL = 2500.71 S.Y.

 $(15.00')(2)(68.50) \div 9 = 228.33 \text{ S.Y.}$

USE 2501 S.Y.

 $124 \div 9 = 13.78 \text{ S.Y.}$

ITEM 254 PAVEMENT PLANNING, BITUMINOUS

STA. 70+10.25 TO STA. 71+75.00 $(164.75')(24.00) \div 9 = 439.33 \text{ S.Y.}$

STA. 74+00.00 TO STA: 74+60.00 $(60.00')(24.00') \div 9$ = 160.00 S.Y. TOTAL = 599.33 S.Y.USE 599 S.Y.

ITEM 301 BITUMINOUS

AGGREGATE BASE, AC-20 STA. 63+54.00 TO STA. 63+93.00 (ISLAND)* $(649 \text{ S.F.})(0.67) \div 27 = 16.10 \text{ C.Y.}$ STA, 63+93.20 TO STA, 64+19.00 (MEDIAN) $[(25.80')(10.44' \text{ AVG.})(0.67)] \div 27 = 6.68 \text{ C.Y.}$ STA. 64+19.00 TO STA. 64+72.51 (RT.) $[(53.51')(36.70' \text{ AVG.})(0.67)] \div 27 = 48.73 \text{ C.Y.}$ STA. 64+72.51 TO STA. 65+27.75 (RT.) $[(55.24')(26.00')(0.67)] \div 27 = 35.64 \text{ C.Y.}$ STA. 64+19.00 TO STA. 64+62.64 (LT.) $[(43.64')(40.76' \text{ AVG.})(0.67)] \div 27 = 44.14 \text{ C.Y.}$ STA. 64+62.64 TO STA. 65+27.75 (LT.) $[(65.11')(35.00')(0.67)] \div 27 = 56.55 \text{ C.Y.}$ STA. 70+10.25 TO STA. 70+27.00 (LT.)* $[(124.00 \text{ S.F.})(0.67)] \div 27 = 3.08 \text{ C.Y.}$ STA. 70+10.25 TO STA. 73+99.17 $[(388.92')(28.00')(0.67)] \div 27 = 270.23 \text{ C.Y.}$ STA. 73+99.17 TO STA. 74+40.00

 $[(40.83')(26.00, AVG.)(0.67)] \div 27 = 26.34 \text{ C.Y.}$

 $[(16.00')(2.00')(0.67)] \div 27 = 0.79 \text{ C.Y.}$

TOTAL = 508.28 C.Y.

USE 508 C.Y.

STA. 74+25.00 TO END OF CURB (LT.)

ITEM 304 AGGREGATE BASE

STA. 63+54.00 TO STA. 63+93.00 (ISLAND)* $(649 \text{ S.F.})(0.67) \div 27 = 16.10 \text{ C.Y.}$ STA. 63+93.20 TO STA. 64+19.00 (MEDIAN) $[(25.80')(10.44' \text{ AVG.})(0.67)] \div 27 = 6.68 \text{ C.Y.}$ STA. 64+19.00 TO STA. 64+72.51 (RT.) $[(53.51')(36.70' \text{ AVG.})(0.67)] \div 27 = 48.73 \text{ C.Y.}$ STA. 64+72.51 TO STA. 65+01.75 (RT.) $[(29.24')(26.00')(0.67)] \div 27 = 19.12 \text{ C.Y.}$ STA. 64+19.00 TO STA. 64+62.64 (LT.) $[(43.64')(40.76' \text{ AVG.})(0.67)] \div 27 = 44.14 \text{ C.Y.}$ STA. 64+62.64 TO STA. 65+01.75 (LT.) $[(39.11')(35.00')(0.67)] \div 27 = 33.97 \text{ C.Y.}$ STA. 65+01.75 TO STA. 65+27.75 $[(26.00')(62.00)(0.67)] \div 27 = 40.00 \text{ C.Y.}$ STA. 65+27.75 TO STA. 65+42.75 $[(15.00')(68.50)(0.67)] \div 27 = 25.50 \text{ C.Y.}$ STA. 69+95.25 TO STA. 70+10.25 $[(15.00')(68.50)(0.67)] \div 27 = 25.50 \text{ C.Y.}$ STA. 70+10.25 TO STA. 73+99.17 $[(388.92')(29.00')(0.67)] \div 27 = 279.88 \text{ C.Y.}$ STA. 73+99.17 TO STA. 74+40.00 $[(40.83')(27.00' \text{ AVG.})(0.67)] \div 27 = 27.36 \text{ C.Y.}$ STA. 70+10.25 TO STA. 70+27.00 (LT.)* $[(124 \text{ S.F.})(0.67)] \div 27$ = 3.08 C.Y. TOTAL = 570.06 C.Y.USE 570 C.Y.

ITEM 402 ASPHALT CONCRETE, AC-20

STA. 63+54.00 TO STA. 63+93.00 (ISLAND)* $(649 \text{ S.F.})(0.146) \div 27 = 3.51 \text{ C.Y.}$ STA. 63+93.20 TO STA. 64+19.00 (MEDIAN) $[(25.80')(10.44' \text{ AVG.})(0.146)] \div 27 = 1.46 \text{ C.Y.}$ STA. 64+19.00 TO STA. 64+72.51 (RT.) $[(53.51')(36.70' \text{ AVG.})(0.146)] \div 27 = 10.62 \text{ C.Y.}$ STA. 64+72.51 TO STA. 65+27.75 (RT.) $[(55.24')(26.00')(0.146)] \div 27 = 7.77 \text{ C.Y.}$ STA. 64+19.00 TO STA. 64+62.64 (LT.) [(43.64')(40.76' AVG.)(0.146)] = 27 = 9.62 C.Y.STA. 64+62.64 TO STA. 65+27.75 (LT.) $[(65.11')(35.00')(0.146)] \div 27 = 12.32 \text{ C.Y.}$ STA. 70+10.25 TO STA. 70+27.00 (LT.)* $[(124.00 \text{ S.F.})(0.146)] \div 27 = 0.67 \text{ C.Y.}$ STA. 70+10.25 TO STA. 73+99.17 $[(388.92')(28.00')(0.146)] \div 27 = 58.89 \text{ C.Y.}$ STA. 73+99.17 TO STA. 74+40.00 $[(40.83')(26.00, AVG.)(0.146)] \div 27 = 5.74 \text{ C.Y.}$ STA. 74+25.00 TO END OF CURB (LT.) $[(16.00')(2.00')(0.146)] \div 27 = 0.17 \text{ C.Y.}$ TOTAL = 110.76 C.Y.

ITEM 403 ASPHALT CONCRETE, AC-20 STA.71+75 TO STA.73+75

= 17.78 C.Y. $(24.00')(200')(0.10 \text{ AVG.}) \div 27$ TOTAL = 17.78 C.Y.USE 18 C.Y.

USE 111 C.Y.

ITEM 404 ASPHALT CONCRETE, AC-20,

AS PER PLAN STA. 63+54.00 TO STA. 63+93.00 (ISLAND) * $(649 \text{ S.F.})(0.104) \div 27 = 2.50 \text{ C.Y.}$ STA. 63+93.20 TO STA. 64+19.00 (MEDIAN) $[(25.80')(10.44' \text{ AVG.})(0.104)] \div 27 = 1.04 \text{ C.Y.}$ STA. 64+19.00 TO STA. 64+72.51 (RT.) $[(53.51')(36.70' \text{ AVG.})(0.104)] \div 27 = 7.56 \text{ C.Y.}$ STA. 64+72.51 TO STA. 65+27.75 (RT.) $[(55.24')(26.00')(0.104)] \div 27 = 5.53 \text{ C.Y.}$ STA. 64+19.00 TO STA. 64+62.64 (LT.) $[(43.64')(40.76' \text{ AVG.})(0.104)] \div 27 = 6.85 \text{ C.Y.}$ STA. 64+62.64 TO STA. 65+27.75 (LT.) $[(65.11')(35.00')(0.104)] \div 27 = 8.78 \text{ C.Y.}$ STA. 70+10.25 TO STA. 70+27.00 (LT.)* $[(124)(0.104)] \div 27 = 0.48 \text{ C.Y.}$ STA. 70+10.25 TO STA. 73+99.17 $[(388.92)(26.00)(2.00)(0.104)] \div 27 = 77.90 \text{ C.Y.}$ STA, 73+99.17 TO STA, 74+40.00 $[(40.83)(52.00+48.00)(0.104)] \div 27 = 7.86 \text{ C.Y.}$ STA. 74+40.00 TO STA. 74+60.00 (FEATHER AREA) $[(20.00)(24.00)(2.00)(0.104)] \div 27 = 3.70 \text{ C.Y.}$ TOTAL = 122.19 C.Y.USE 122 C.Y.

ITEM 407 TACK COAT

STA. 70+10.25 TO STA. 74+60.00 $[(449.75')(24.00') \div 9](0.075) = 89.95 \text{ GAL}.$ TOTAL = 89.95 GAL.USE 90 GAL

ITEM 408 BITUMINOUS PRIME COAT

STA. 63+54.00 TO STA. 63+93.00 (ISLAND)* $[(649 \text{ S.F.}) \div 9](0.40) = 28.84 \text{ GAL}.$ STA. 63+93.20 TO STA. 64+19.00 (MEDIAN) $[(25.80')(10.44' \text{ AVG.}) \div 9](0.40) = 11.97 \text{ GAL.}$ STA. 64+19.00 TO STA. 64+72.51 (RT.) $[(53.51')(36.70' \text{ AVG.}) \div 9](0.40) = 87.28 \text{ GAL.}$ STA. 64+72.51 TO STA. 65+27.75 (RT.) $[(55.24')(26.00') \div 9](0.40) = 63.83 \text{ GAL}.$ STA. 64+19.00 TO STA. 64+62.64 (LT.) $[(43.64')(40.76' \text{ AVG.}) \div 9](0.40) = 79.06 \text{ GAL.}$ STA. 64+62.64 TO STA. 65+27.75 (LT.) $[(65.11')(35.00') \div 9](0.40) = 101.28 \text{ GAL}.$ STA. 70+10.25 TO STA. 70+27.00 (LT.) * $[(124.00 \text{ S.F.}) \div 9](0.40) = 5.51 \text{ GAL}.$ STA. 70+10.25 TO STA. 73+99.17 $[(388.92')(28.00') \div 9](0.40) = 483.99 \text{ GAL}.$ STA. 73+99.17 TO STA. 74+40.00 $[(40.83')(26.00, AVG.) \div 9](0.40) = 47.18 GAL.$ STA. 74+25.00 TO END OF CURB (LT.)

 $[(16.00')(2.00') \div 9](0.40) = 1.42 \text{ GAL}.$ TOTAL = 910.36 GAL.USE 910 GAL.

ITEM 601 ROCK CHANNEL PROTECTION. TYPE B WITH FABRIC FILTER

STA. 65+44.00 TO STA. 65+67.00 (N.W. COR. BRIDGE) $(22+18)(24)(2.5) \div 27 = 44.44 \text{ C.Y.}$ (S.W. COR. BRIDGE) $(22+7)(22)(2.5) \div 27 = 29.54 \text{ C.Y.}$ (UNDER BRIDGE) $(68.5)(20)(2.5) \div 27 = 126.85 \text{ C.Y.}$ STA. 69+60.00 TO STA. 69+94.00 (N.E. COR. BRIDGE) $(26+29)(8)(2.5) \div 27 = 20.37 \text{ C.Y.}$ $(33)(12)(2.5) \div 27 = 36.67 \text{ C.Y.}$ (S.E. COR. BRIDGE) $(11+8)(7)(2.5) \div 27 = 6.16 \text{ C.Y.}$ (UNDER BRIDGE) $(31+9)(38)(2.5) \div 27 = 70.37 \text{ C.Y.}$ $(31)(30.5)(2.5) \div 27 = 87.55 \text{ C.Y.}$ TOTAL = 421.95 C.Y.

ITEM 611 REINFORCED CONCRETE APPROACH SLABS T = 12". AS PER PLAN

STA.65+27.75 TO STA.65+42.75 STA.69+95.25 TO STA.70+10.25 $(15)(2)(68.5) \div 9 = 228.33 \text{ S.Y.}$ TOTAL = 228.33 S.Y.USE 228 S.Y.

USE 422 C.Y.

ITEM 202 EXISTING APPROACH SLABS REMOVED

STA.65+27.75 TO STA.65+42.75 STA.69+95.25 TO STA.70+10.25 $(28+24)(15)(2) \div 9 = 86.67 \text{ S.Y.}$ TOTAL = 86.67 S.Y.USE 87 S.Y.

EARTHWORK (SEE CROSS SECTIONS SHEETS 16 THRU 18)

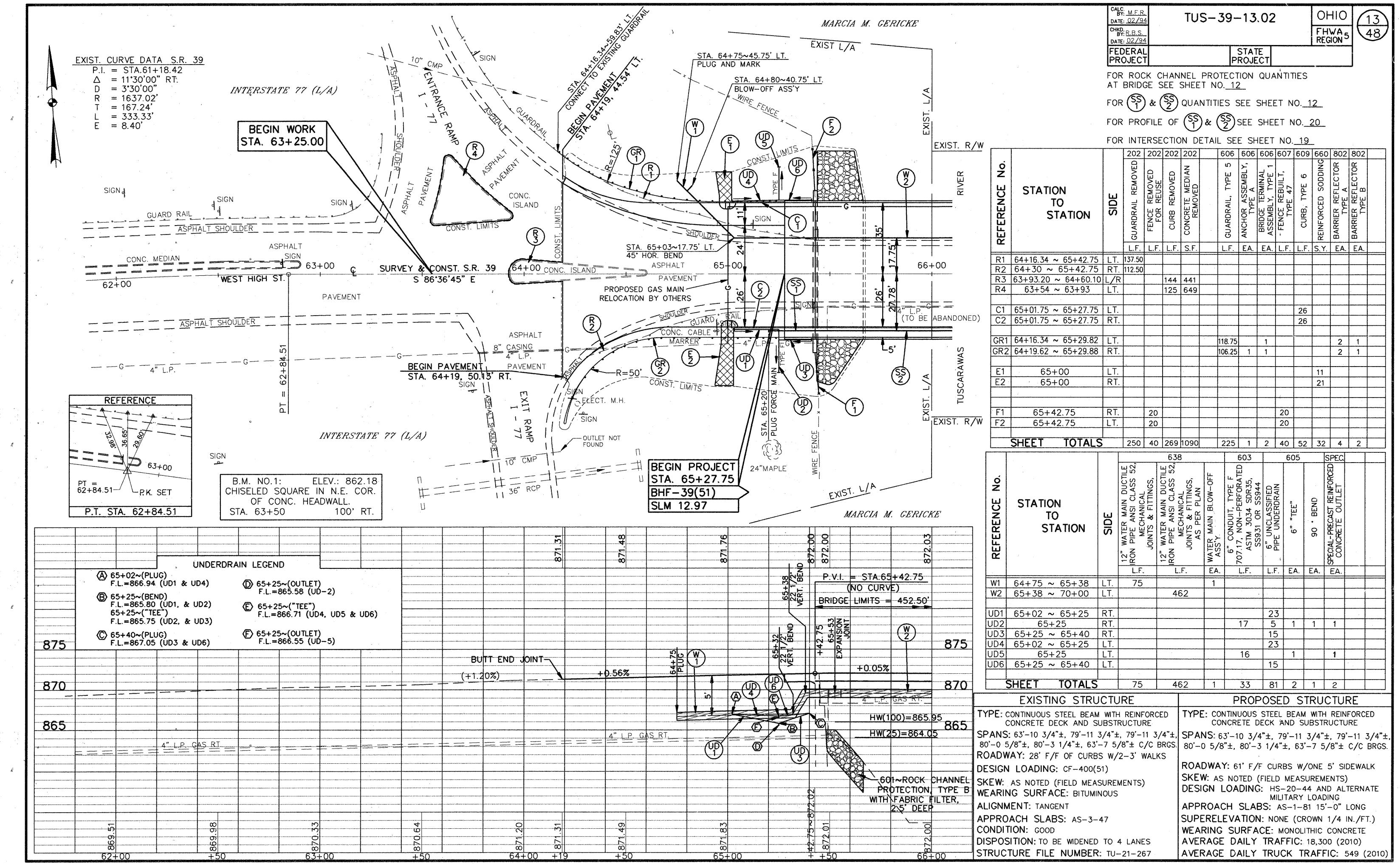
(SEE CROSS SECTIONS, SHEETS TO THRU TO	<u></u>
ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	= <u>1340 C.Y.</u>
ITEM 203 EMBANKMENT	= <u>658 C.Y.</u>
ITEM 659 SEEDING AND MULCHING	= <u>519 S.Y.</u>
TOTAL ITEM 660 SODDING	= <u>1605 S.Y.</u>
ITEM 659 COMMERCIAL FERTILIZER [(519+1605)(9)(20) ÷ 1000] ÷ 2000	= <u>0.19 TON</u>
ITEM 659 AGRICULTURAL LIMING	
$[(519+1605)(9)(100) \div 1000] \div 2000$	= <u>0.96 TON</u>
ITEM 659 WATER [(519+1605)(9)(120)(2) ÷ 1000] ÷ 1000	= 4.59 M GAL. USE 5 M GAL.
\cdot	

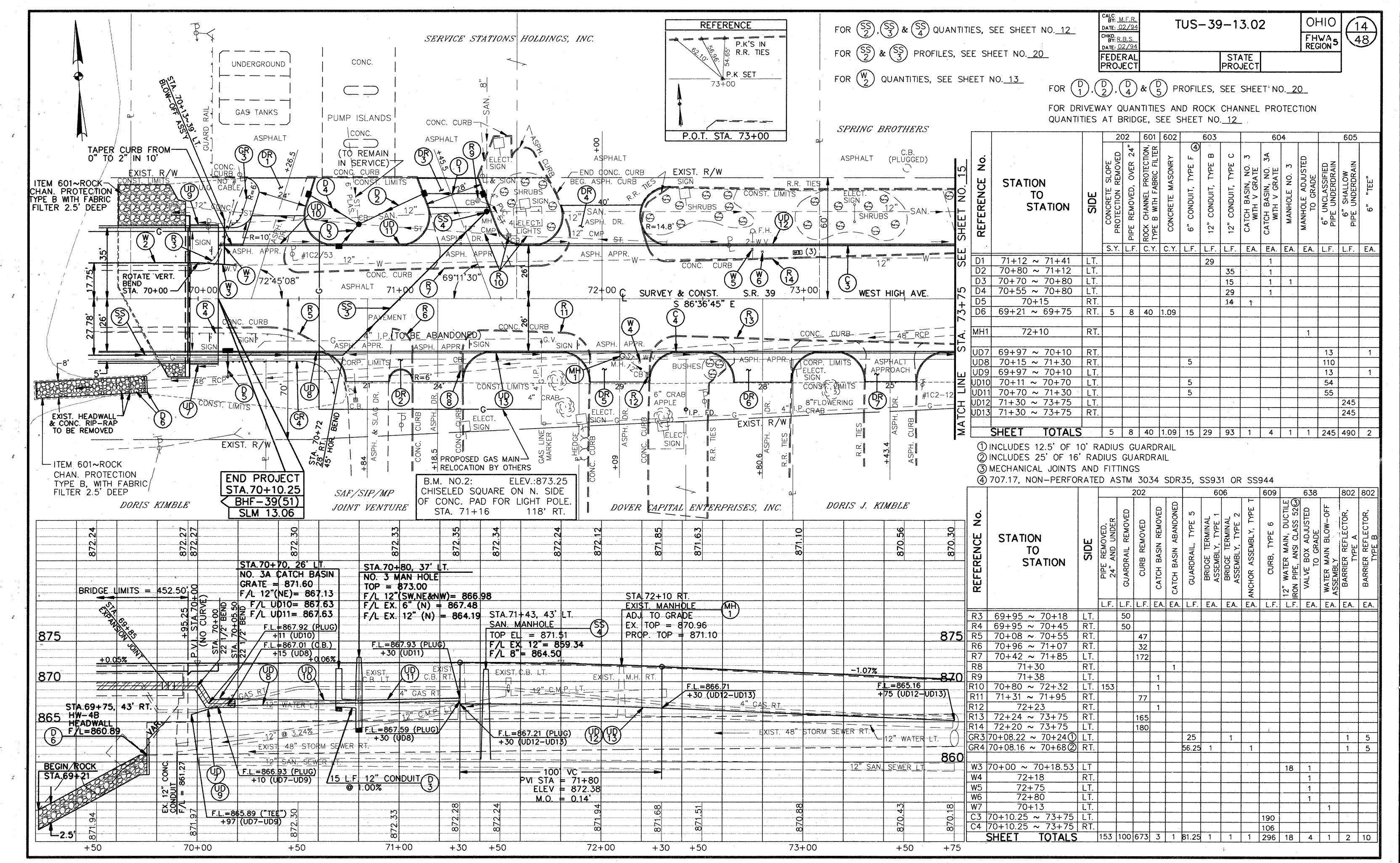
			·····				· · · · · · · · · · · · · · · · · · ·			
	··	DRIVE	WA'	Y QU	ANTIT	TES				
				304	402	404	408	452	609	609
FROM SHEET No.	REFERENCE No.	STATION	SIDE	AGGREGATE BASE	ASPHALT CONCRETE, AC-20	ASPHALT CONCRETE, AC-20 (DRIVEWAYS)	BITUMINOUS PRIME COAT	8" PLAIN CONCRETE PAVEMENT	CURB, TYPE 2A	CURB, TYPE 6
				C.Y.	C.Y.	C.Y.	GAL.	S.Y.	L.F.	L.F.
14	DR1	70+26.50	LT.	12	2	2	21	50	53	20
14	DR2	71+00	RT.					96	66	
14	DR3	71+45.50	LT.	10	2	2	18	76.8	46	31
14	DR4	72+00	LT.			*		96.1	57	15
14	DR5	72+09	RT.					60.3	47	·
14	DR6	72+80.6	RT.					58.4	47	
14	DR7	73+43.4	RT.			-		52.7	47	
15	DR8	74+22	RT.					17.1	31	
		TOTALS		22	4	4	39	507	394	66

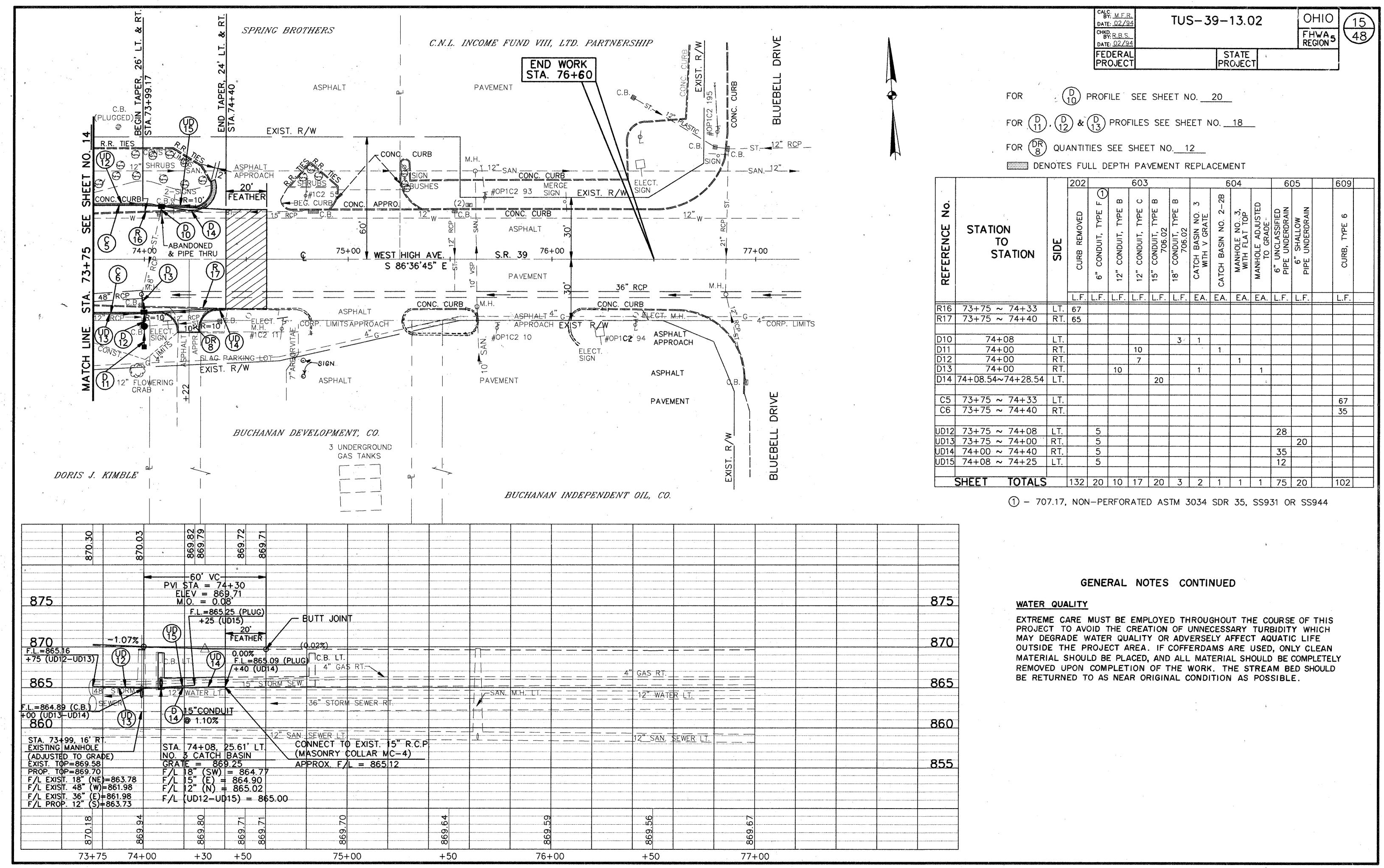
		SANITA	ARY	FORCE	MAIN			
				6	03	604	305	
FROM SHEET NO.	REFERENCE No.	STATION	SIDE		8" CONDUIT, TYPE B, DUCTILE IRON PIPE ANSI CLASS 52, MECHANICAL JOINTS AND FITTINGS, AS PER PLAN	MANHOLE, NO. 3, AS PER PLAN	8" CONCRETE BASE	
				L.F.	L.F.	EA.	S.Y.	
13	SS1	65+20 ~ 65+38	RT.	18				
13	SS2	65+38 ~ 70+00	RT.		462			
14	SS3	70+00 ~ 71+43	R/L	172			23	
14	SS4	71+43	LT.			1		
						_		
		TOTALS		190	462	1	23	

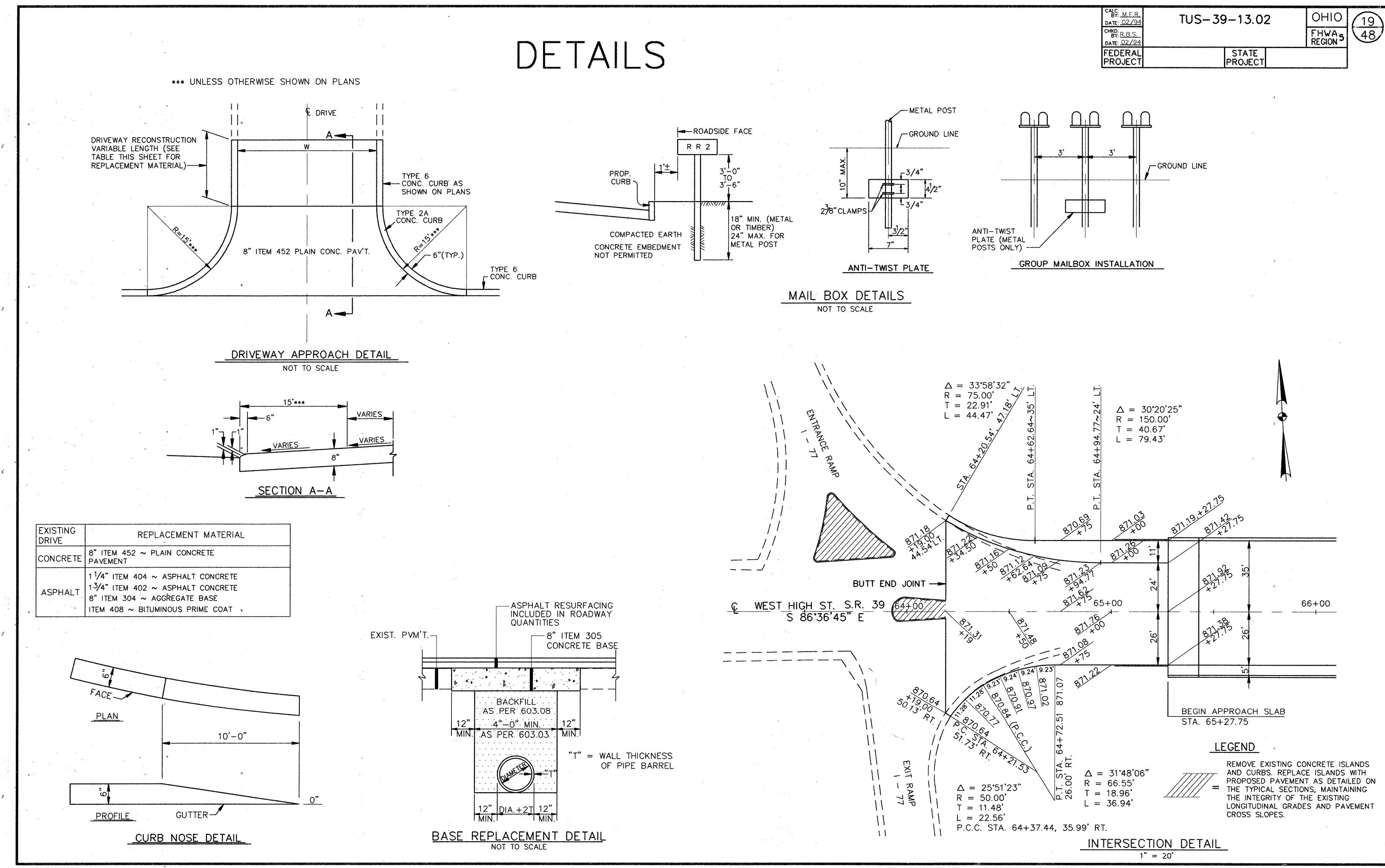
1 - FOR DETAIL OF PAVEMENT REPLACEMENT, SEE SHT. NO. 19

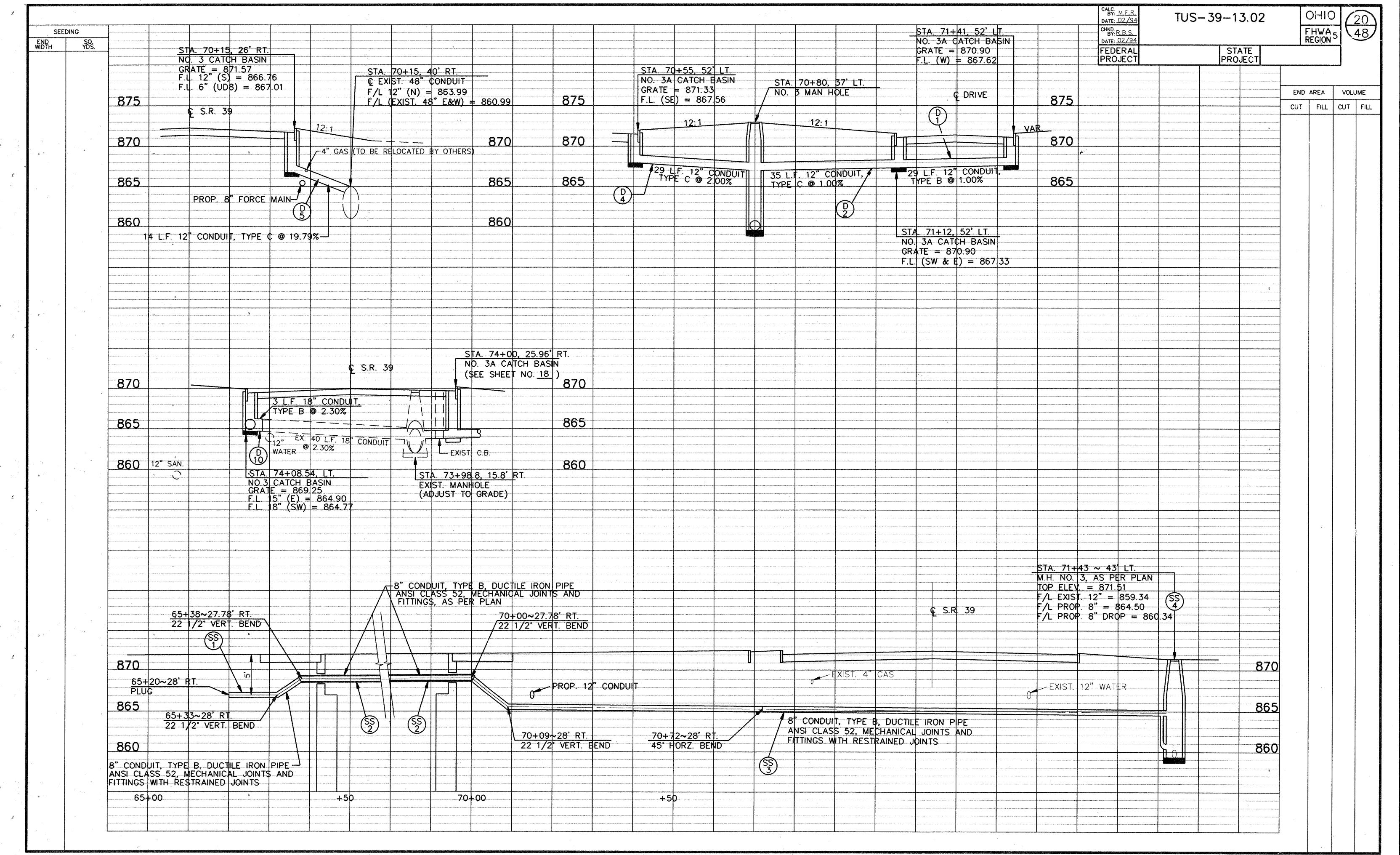
ITEM 605 /	AGGREGATI	E DRAINS
STATION	SIDE	LENGTH
64+25	LT.	10 L.F.
64+50	LT.	10 L.F.
64+50	RT.	14 L.F.
64+90	LT.	10 L.F.
64+90	RT.	14 L.F.
TOTAL ITEM AGGREGATE		58 L.F.

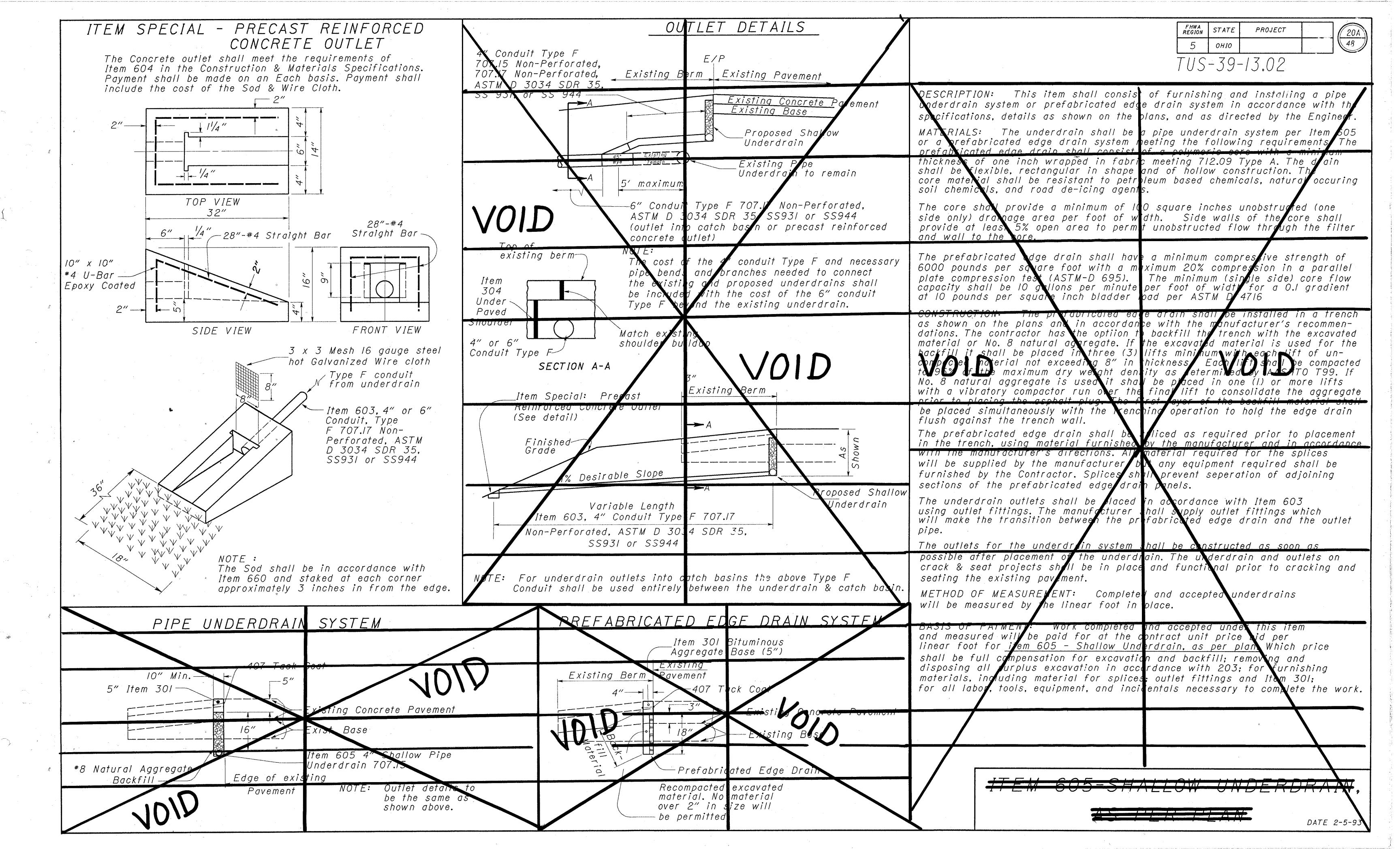












TRAFFIC CONTROL GENERAL NOTES

TRAFFIC CONTROL GENERAL SUMMARY

BY: <u>R.A.K.</u> DATE: <u>1/94</u> СНК**D.** ВҮ: <u>D.R.B.</u> DATE: 1/94 FEDERAL

TUS-39-13.02

STATE PROJECT

OHIO FHWA 5 REGION 5

(48)

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS.

SEE SHEET 9 FOR ADDITIONAL UTILITY INFORMATION.

TRAFFIC CONTROL STANDARAD CONSTRUCTION DRAWINGS

REFERENCES TO SUPPLEMENTAL SPECIFICATIONS 847 AND 947, 857, 858, 861, 957, 958 AND 961 ON THE TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS IN THESE PLANS SHALL BE CONSIDERED TO READ AS RESPECTIVE REFERENCES TO ITEMS 645, 630, 631, 633, 730, 731 AND 733.

LOOP DETECTOR REPLACEMENT

THE CONTRACTOR SHALL REPLACE AND TEST ALL VEHICLE LOOP DETECTORS DISTURBED BY HIS OPERATIONS. FOLLOWING THE COMPLETION OF REQUIRED ROADWAY WIDENING, MILLING OPERATIONS, SHOULDER IMPROVEMENTS, AND PLACEMENT OF ITEM 402, THE CONTRACTOR SHALL INSTALL NEW VEHICLE LOOP DETECTORS AND RELATED ITEMS AT THEIR ORIGINAL LOCATIONS. THIS WORK SHALL BE COMPLETED PRIOR TO THE PLACEMENT OF ITEM 404. THE CONTRACTOR SHALL TEST THE NEW LOOP AS PER THE APPROPRIATE SECTIONS OF 632.27. THE LOOP TESTING SHALL BE PERFORMED BEFORE SPLICING THE NEW LOOP WIRE TO THE EXISTING LOOP LEAD-IN CABLE. FOLLOWING PLACEMENT OF THE FINAL SURFACE COURSE THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND THE CITY OF NEW PHILADELPHIA ENGINEERING DEPARTMENT REGARDING SPLICING THE LOOP DETECTOR WIRE TO THE EXISTING LOOP LEAD-IN AND IMPLEMENTING CONTROLLER TIMING CHANGES THE LOOP DETECTOR WIRE SHALL INCLUDE POURED EPOXY INSULATED SPLICES.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY:

632 LOOP DETECTOR PAVEMENT CUTTING

51 L.F.

632 LOOP DETECTOR WIRE, TYPE E, AS PER PLAN 120 L.F.

A SINGLE 6' X 18' RECTANGULAR-SHAPED LOOP DETECTOR CURRENTLY EXISTS AT STA. 74+51.

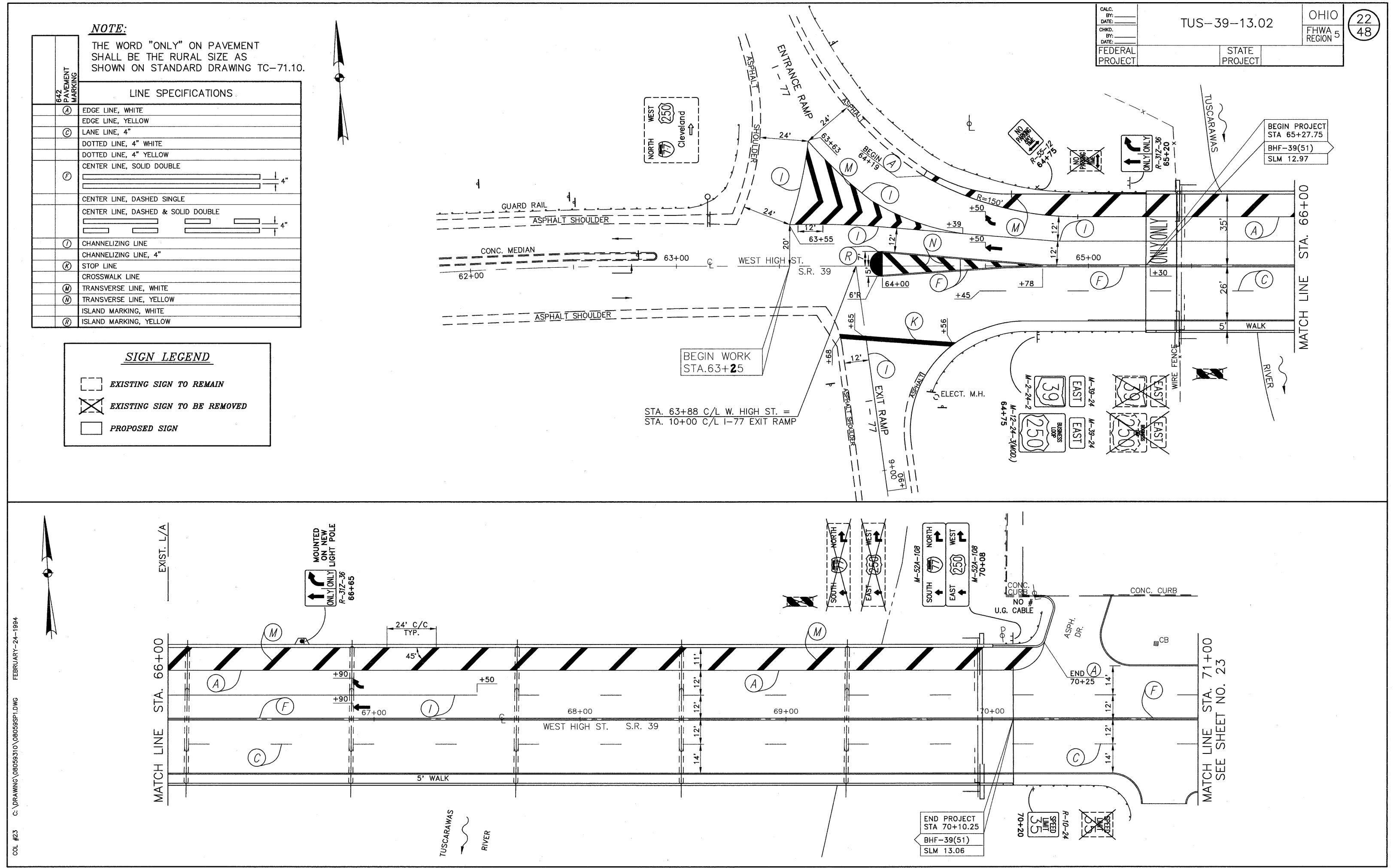
ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS REQUIRED TO PROVIDE A FUNCTIONAL LOOP DETECTOR COMPLETE AND IN PLACE IN ACCORDANCE WITH THESE SPECIFICATIONS SHALL BE INCLUDED IN THE PAYMENT OF THESE ITEMS.

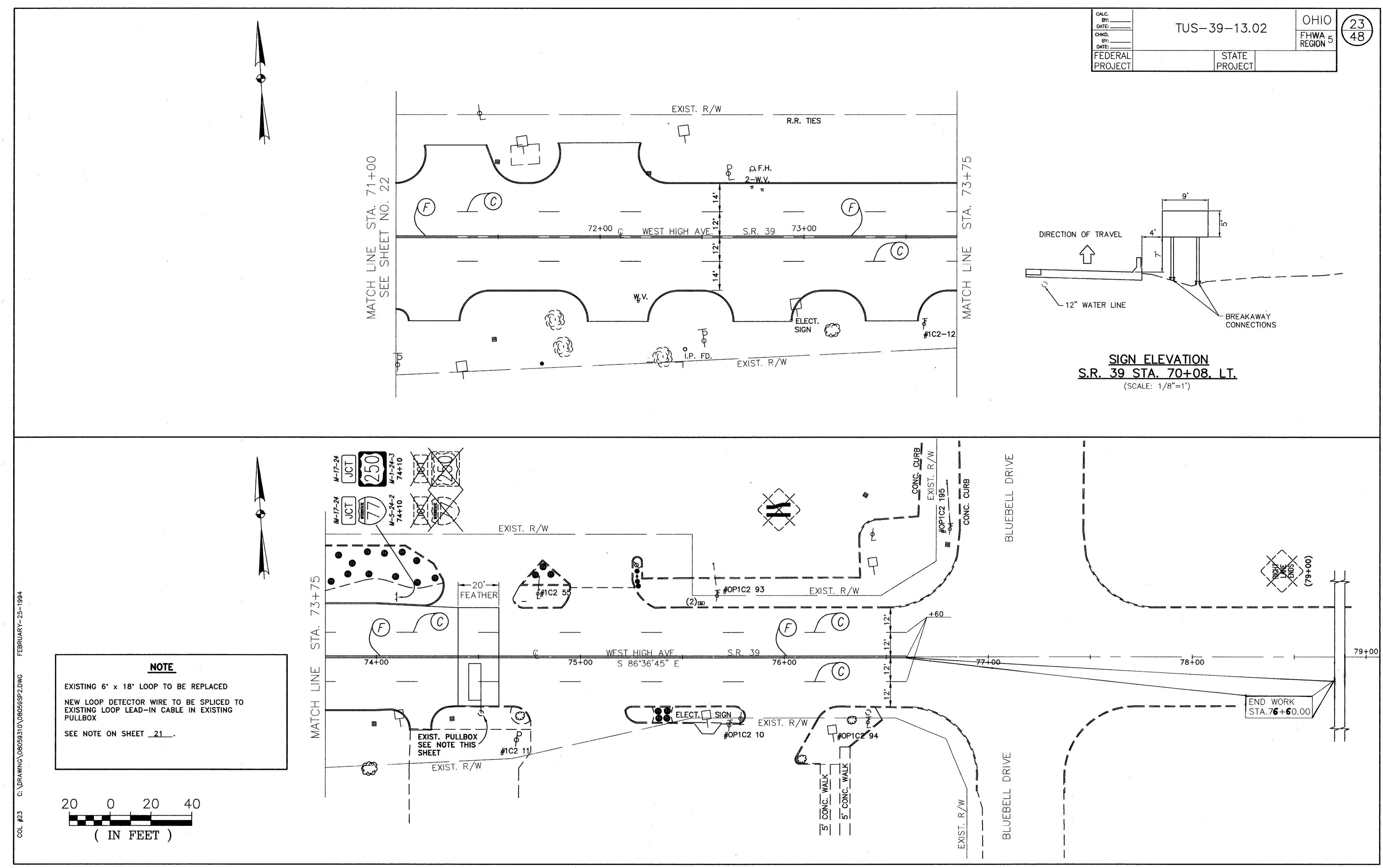
630 REMOVAL OF GROUND MOUNTED SIGNS AND SUPPORTS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND STORING OR DISPOSING OF ALL EXISTING GROUND MOUNTED SIGNS AND POST/BEAM SUPPORTS INDICATED ON THE PLANS AS PER 630.12 AND 630.14. THE APPROXIMATE LOCATIONS OF THE ITEMS TO BE REMOVED ARE SHOWN IN THE PLANS. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER: 630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE 630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL 11 EACH 630 REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL 3 EACH

PAYMENT FOR 630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE, 630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, AND 630 REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL WILL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH SIGN AND POST SUPPORT REMOVED AND STORED OR DISPOSED OF, INCLUDING MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS.

TOTA	<u> </u>		1 SH	IEET	NO.	1	IPATION TOTAL	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
21		24										
		0.66						630	00100	0.66	C.Y.	CONCRETE FOR EMBEDDED FOUNDATION
		12				***************************************		630	02100	12	L.F.	GROUND MOUNTED SUPPORT, NO. 2 POST
		54						630	03100	54	L.F.	GROUND MOUNTED SUPPORT, NO. 3 POST
		29						630	04100	29	L.F.	GROUND MOUNTED SUPPORT, NO. 4 POST
		38						630	06500	38	L.F.	GROUND MOUNTED SUPPORT, W6×9 BEAM
		2						670	00000	2	- A	DDEALAWAY DEAM CONNECTION
		_						630	09000	1	EA.	BREAKAWAY BEAM CONNECTION
		52						630	79500	52	EA. S.F.	SIGN SUPPORT ASSEMBLY, POLE MOUNTED SIGN, FLAT SHEET
		45						630 630	80100 8020/ 4	45		SIGN, FLAT SHEET SIGN, EXTRUSHEET, TYPE G
		1 43						0.30	00204	70	٥,١,	SIGN, EXTROSPILLE, TTPE G
16								630	85000	16	EA.	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE
11								630	86002	11	EA.	REMOVAL OF GROUND MOUNTED POST SUPPORT & DISPOSAL
3								630	86102	3	EA.	REMOVAL OF GROUND MOUNTED BEAM SUPPORT & DISPOSAL
51								632	27500	51	L.F.	LOOP DETECTOR PAVEMENT CUTTING
120								632	64901	120		LOOP DETECTOR WIRE, TYPE E, AS PER PLAN
120								- -				
		0.11						642	00102	0.11	MI.	EDGE LINE, TYPE 2
		0.40						642	00202	0.40	MI.	LANE LINE, TYPE 2
		0.25						642	00302	0.25	MI.	CENTER LINE, TYPE 2
		601						642	00402	601	L.F.	CHANNELIZING LINE, TYPE 2
		54						642	00502	54	L.F.	STOP LINE, TYPE 2
		518						642	00702	518	L.F.	TRANSVERSE LINE, TYPE 2
		56			·			642	00902	56	S.F.	ISLAND MARKING, TYPE 2
		4						642	01302	4	EA.	LANE ARROW, TYPE 2
		2						642	01412	2	EA.	WORD ON PAVEMENT, 96", TYPE 2
	 											FOR ROADWAY QUANTITIES, SEE SHEET 11
		ļ										FOR LIGHTING QUANTITIES, SEE SHEET 25
												FOR STRUCTURE QUANTITIES, SEE SHEET 31
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CALC.
BY: R.A.K.
DATE: 1/94
CHKD.
BY: D.R.B.
DATE: 2/94
FEDERAL
PROJECT PAVEMENT MARKING SIGNING TUS-39-13.02 SIGN SUPPORT LENGTHS REFLECT THE URBAN DESIGN STANDARD OF 7' VERTICAL CLEARANCE FROM BOTTOM OF SIGN TO TOP OF CURB OR EDGE OF ROADWAY. SUB-SUMMARY SUB-SUMMARY STATE PROJECT SIGNING QUANTITIES SIGN CODE NUMBER & SIZE A C F I K M N R 630 630 630 LOCATION LOCATION LOCATION

LIGHTING GENERAL NOTES

LIGHTING GENERAL SUMMARY

CALC.
BY: R.A.K.
DATE: 2/94 TUS-39-13.02 CHKD. BY: <u>D.R.B.</u> DATE: <u>2/94</u> FEDERAL

PROJECT

STATE

PROJECT

FHWA 5

625 POWER SERVICE, AS PER PLAN

THIS ITEM OF WORK SHALL CONFORM TO 625.18 AND 713.19 EXCEPT THAT A PHOTOELECTRIC CELL AND CONTACTOR WILL NOT BE INSTALLED. INSTEAD. SEPERATE PHOTOELECTRIC CONTROL SHALL BE REQUIRED FOR EACH LUMINAIRE (SEE NOTE ENTITLED "625.07 - 713.11 LUMINAIRES"). THE CONTRACTOR SHALL NOTIFY THE OHIO POWER COMPANY (OPC) WHEN THE CIRCUIT(S) ARE READY FOR POWER AND OPC WILL MAKE THE POWER SERVICE CONNECTION AT THE TOP OF THE SERVICE POLE.

POWER SUPPLIED SHALL BE 120 VOLT, TWO-WIRE, ONE GROUNDED. THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

> P. O. BOX 391 NEW PHILADELPHIA, OH 44663 216-339-6626 CONTACT: GARY ENAMA

OHIO POWER COMPANY

THE CONTRACTOR SHALL PAY ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. AFTER ACCEPTANCE OF THIS PROJECT, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCIES NOTED IN THE PLANS. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT.

PAYMENT FOR ITEM 625 POWER SERVICE, AS PER PLAN WILL BE MADE AT THE CONTRACT PRICE FOR EACH INSTALLATION SPECIFIED IN THE PLANS INCLUDING ALL MATERIALS, EQUIPMENT, AND INCIDENTALS COMPLETE IN PLACE.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

UNDERGROUND UTILITIES

SEE SHEET 9 FOR ADDITIONAL UTILITY INFORMATION.

UNDERDRAINS FOR PULLBOXES

REFERENCE IS MADE TO STANDARD DRAWINGS FOR DETAILS OF DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ESTIMATED QUANTITY OF "ITEM 603, 4" CONDUIT, TYPE E" IS INCLUDED FOR THIS PURPOSE.

625.07 - 713.11 LUMINAIRES

STYLE B LUMINAIRES SHALL HAVE SINGLE RATED 120 VOLT, 150 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M400, CROUSE HINDS OVM, AMERICAN 25/26, OR EQUAL APPROVED BY THE ENGINEER.

THE LUMINAIRES SHALL INCLUDE INDIVIDUAL PHOTOELECTRIC CONTROL.

713.14 LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", PHILIPS "CERAMALUX", SLYVANIA "LUMALUX", OR EQUAL APPROVED BY THE ENGINEER.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA, WILSON BOHANNAN 660A, OR EQUAL APPROVED BY THE ENGINEER AND SHALL BE KEYED IN ACCORDANCE WITH 631.08, PARAGRAPH 3. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEMS BEING LOCKED.

625 TRENCH	T
TRENCH SHALL BE AS PER 625.12. IN ADDITION, ALL TRENCHING SHALL BE	
PERFORMED PRIOR TO THE PLACEMENT OF THE SUBBASE COURSE AND THE	
PLACEMENT OF SIDEWALKS.	

EXPANSION FITTINGS AND GROUNDS

THE EXPANSION FITTINGS OR GROUNDS SHOWN ARE NOT TO BE CONSIDERED COMPLETE IN NUMBER OR MORE THAN APPROXIMATE IN LOCATION.

CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR CONDUIT ON STRUCTURES SHALL BE OZ TYPE AX. CROUSE-HINDS TYPE XJ-4, APPLETON TYPE XJ-4, OR EQUAL APPROVED BY THE ENGINEER, FOR THE SR 39 BRIDGE.

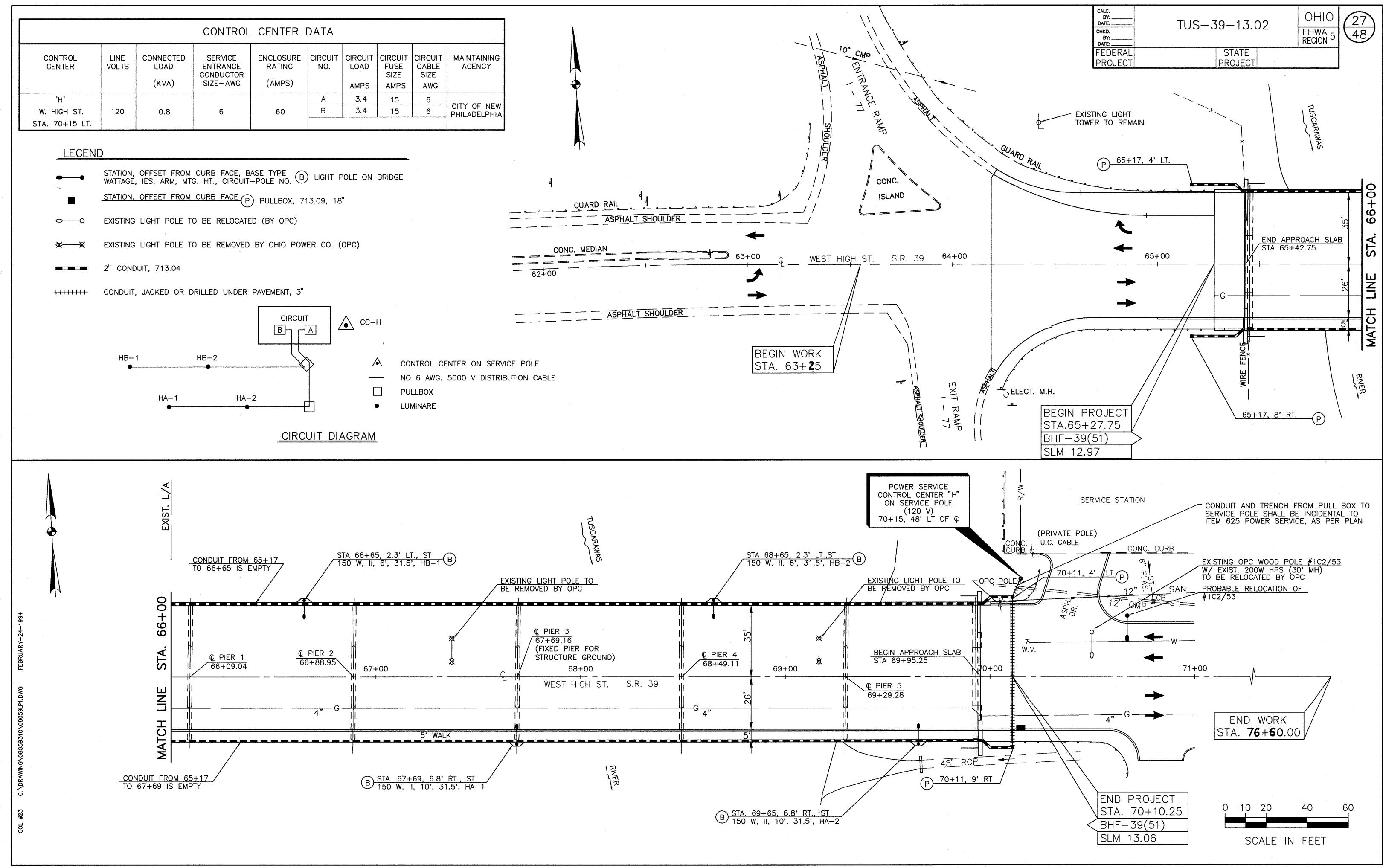
EACH EXPANSION FITTING SHALL HAVE A COPPER EXTERNAL BONDING JUMPER.

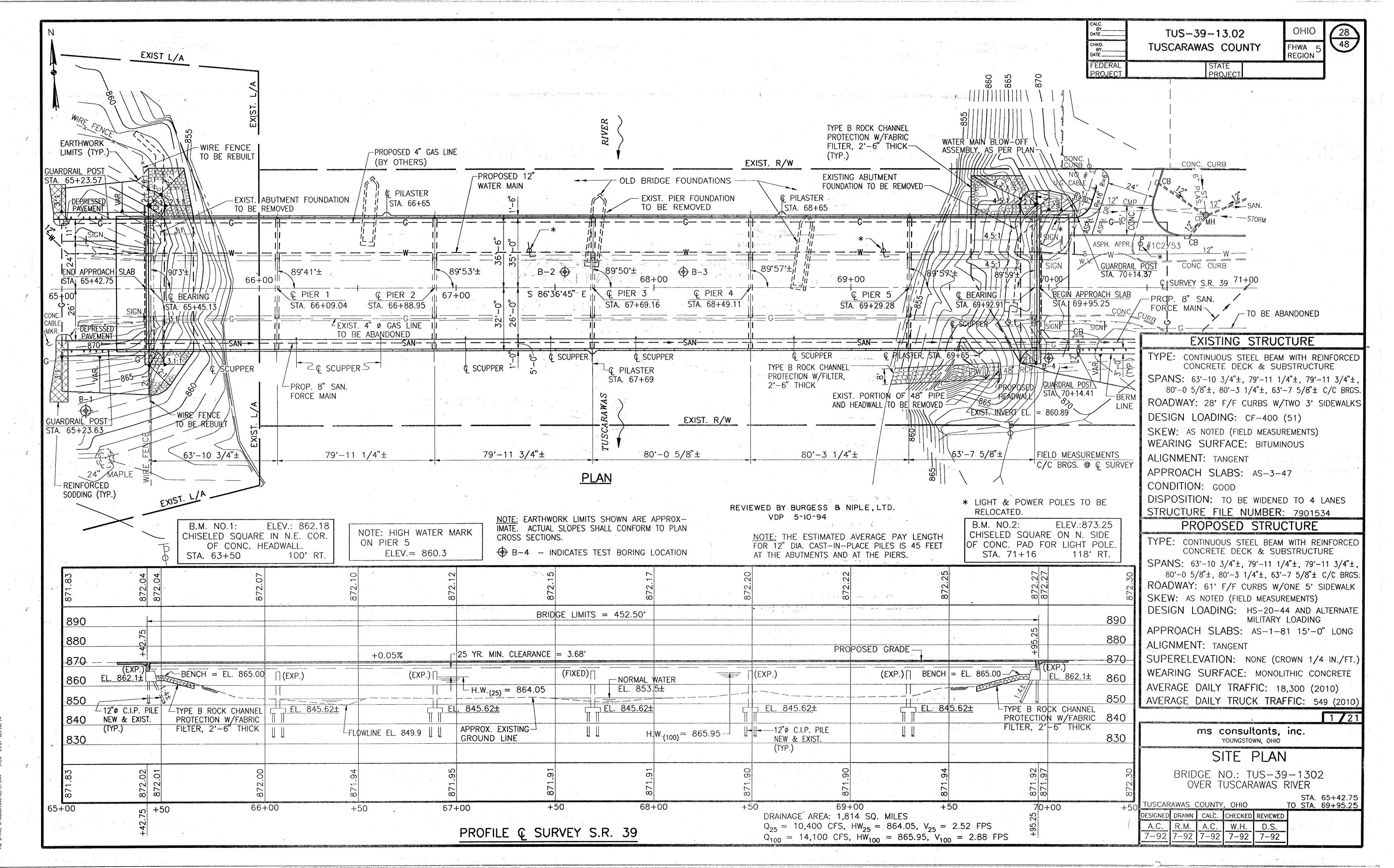
HIGH VOLTAGE DIRECT CURRENT TEST

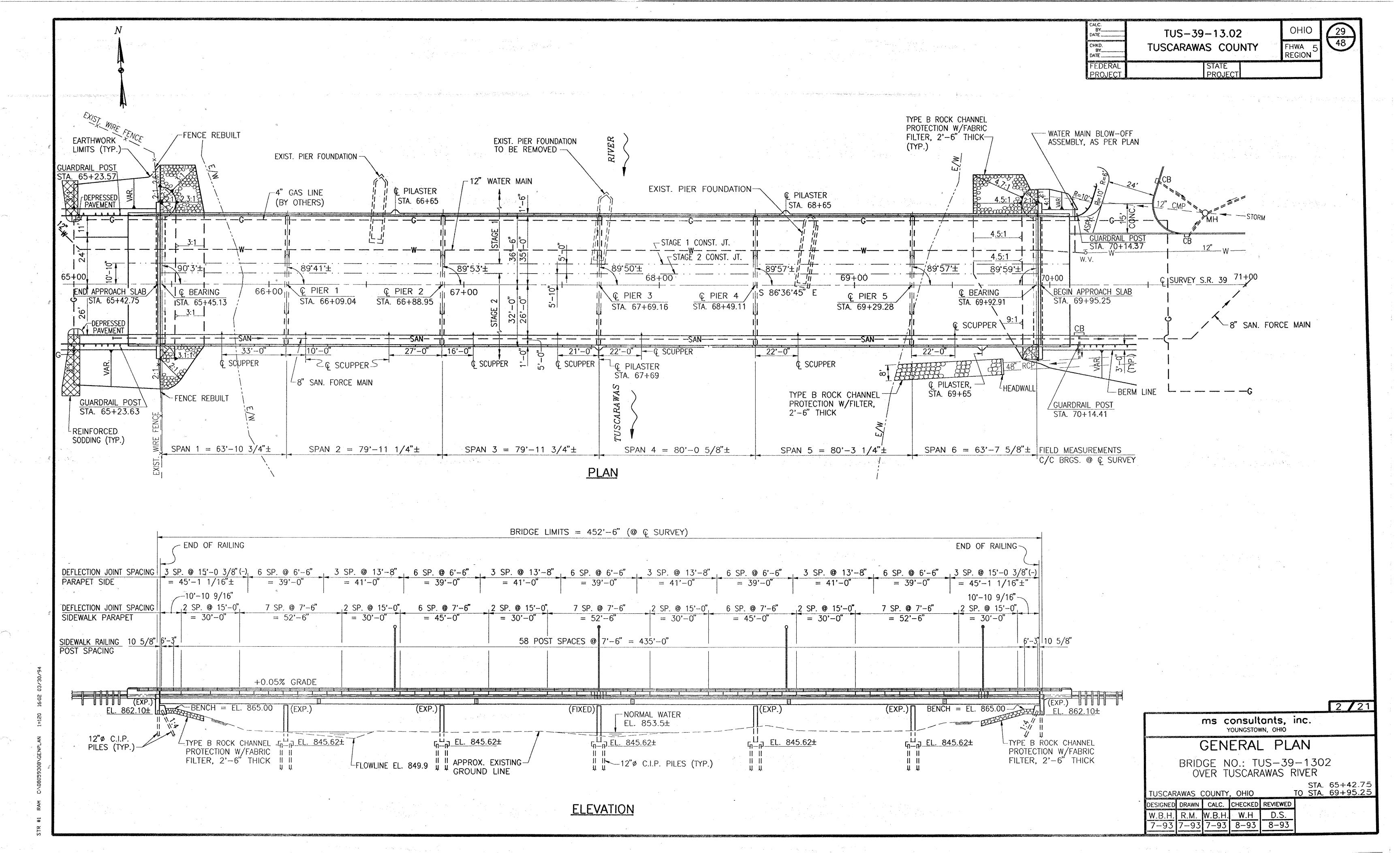
THE CONTRACTOR SHALL PERFORM A HIGH VOLTAGE DIRECT CURRENT TEST AS DESCRIBED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR THIS ITEM.

TOT	AL F	ROM	SH	EET	NO.	PARTIC SUB-	PATION TOTAL	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
25	26								_,,,,	101/12		
	90	-						607	00400	80	,	4° CONDUIT TYPE E
	80							603 625	00400 00500	80		4" CONDUIT, TYPE E CONNECTOR KIT, TYPE II
	4							625	00600	4		CONNECTOR KIT, TYPE III
	2							625	10500	2		LIGHT POLE, DESIGN ST6B31.5
	2							625	10500	2	· · · · · · · · · · · · · · · · · · ·	LIGHT POLE, DESIGN STOBS1.5
								020	10000	2	<u> </u>	* LIGHT POLE, MISC.:
	16							625	10620	16	EA.	LIGHT POLE ANCHOR BOLTS, MISC.
	10					,		020	10020		L/\•	BOTT TOLL ANOTHER BOLTS, MICC.
	1504							625	23302	1504	L.F.	NO. 6 AWG 5000 VOLT DISTRIBUTION CABLE
	316							625	23400	316		NO. 10 AWG POLE AND BRACKET CABLE
	988							625	25400	988		CONDUIT, 2", 713.04
	74							625	25900	74		CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"
	, ,							020	20000		Name + 1 +	ONDON, ONORLO ON BRIELLO ONDER TAREFULLY, O
	4							625	27600	4	EA. ⊕	LUMINAIRE, STYLE B, TYPE II, 150 WATT HIGH PRESSURE SODIUM,
	•											713.11, 120 VOLT, WITH PE CELL
	84							625	29002	84	LF.	TRENCH, 24" DEEP
		:								-		
	4							625	30500	4	EA.	PULLBOX, 713.09, 18"
	1							625	33000	1		STRUCTURE GROUNDING SYSTEM
-	1		· · · · · · · · · · · · · · · · · · ·					625	34001	1		POWER SERVICE, AS PER PLAN
LUMP								625	38000	LUMP		HIGH VOLTAGE TEST
		-										
												O LUMINAIRE, MISC.:
									·			
		,										
												
												FOR ROADWAY QUANTITIES SEE SHEET 11
												FOR TRAFFIC CONTROL QUANTITIES SEE SHEET 21
												FOR STRUCTURE QUANTITIES SEE SHEET 31
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							<u></u>			1		ENIEDAL NIOTEC AND OFNIEDAL CUMANADY

TUS-39-13.02 LIGHTING QUANTITIES SUB-SUMMARY STATE PROJECT LOCATION FROM — TO EA. EA. EA. EA. EA. SR 39 — (W. HIGH ST 20 65+17 65+17 - 66+65 LT 148 26 POLE HB-LT 75 66+65 - 68+65 LT 420 200 LT POLE HB-2 5'-0" WALK 1 | 1 | 1 LT 68+65 - 70+11 146 16 LT 70+11 20 65+17 1'-10 1/4" 1'-10 1/4" 65+17 - 67+69 RT 252 26 1/4" /FT. 67+69 RT POLE HA-83 RT 67+69 - 69+65 196 69+65 POLE HA-2 RT 69+65 - 70+11 70+11 20 TYPICAL POLE MOUNTING DETAIL FOR S.R. 39(W. HIGH ST.) BRIDGE Ç S.R. 39 Ç S.R. 39 TYPICAL POLE MOUNTING DETAIL FOR S.R. 39(W. HIGH ST.) BRIDGE 70 + 1174 (NOT TO SCALE) (NOT TO SCALE) 70+11 - 70+15 LT 70+15 LT CC-H C/L 67+69 27 TOTAL SHT. 27 4 4 2 2 16 1504 316 988 4 74 84 4 1 1 80 -POLE AND BRACKET CABLES 120 VOLT 2-WIRE GROUNDED NEUTRAL SUPPLY UNFUSED "Y" CONNECTOR—KIT, TYPE III FUSED 3 POLE DISCONNECT — — SEE DETAIL "A" HL-60.11 FUSED "Y" CONNECTOR— KIT, TYPE II (SEE NOTE 3 HL-60.11) SOLID NEUTRAL --GROUND CABLE GROUNDED NEUT.-- GROUNDED NEUT. ENCLOSURE OUTLINE -STRUCTURE GROUNDING SYSTEM SINGLE UNIT 120 VOLT, 2-WIRE GROUNDED NEUTRAL TRANSFORMER BASE POLE 120 VOLT, TWO-WIRE, GROUNDED NEUTRAL (NOT TO SCALE)







GENERAL NOTES

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

	SD-1-69	DATED	6-12-69
	AS-1-81 - CENTENNIS E	DATED	11-27-8
_	BR-2-82	DATED	11-1-82
	EXJ-4-87	DATED	1-5-89
	RB-1-55	REVISED	2-2-59
	GR-1.1	REVISED	5-6-91
	GR-1.2	REVISED	10-30 -92
	GR-3.1	REVISED	5-6-91

AND TO SUPPLEMENTAL SPECIFICATION:

910 DATED 5-20-91

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1992 AND THE OHIO SUPPLEMENT TO THESE SPECIFICATIONS.

DESIGN LOADING

HS20-44 CASE II AND THE ALTERNATE MILITARY LOADING.

DESIGN STRESSES

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI

REINFORCING STEEL - ASTM A615, A616, OR A617 GRADE 60 - YIELD STRENGTH 60,000 PSI

STRUCTURAL STEEL ASTM A572 YIELD STRENGTH 50,000 PSI (NEW) ASTM A373 YIELD STRENGTH 33,000 PSI (EXISTING BEAMS) ASTM A7 OR A373 YIELD STRENGTH 33,000 PSI (OTHER EXISTING STRUCTURAL STEEL)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL, TOP AND BOTTOM MAT, 2 1/2" TOP CONCRETE COVER, AND SEALING OF CONCRETE SURFACES.

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

PILES

THE DESIGN LOAD IS <u>26</u> TONS PER PILE FOR THE ABUTMENT PILES AND <u>30</u> TONS PER PILE FOR THE PIER PILES.

RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL, USING SHRINKAGE COMPENSATING CEMENT)

SHALL CONFORM TO THE PERTINENT SECTIONS OF THE PROPOSAL NOTE FOR SHRINKAGE COMPENSATING CEMENT AND TO 517 OF THE CMS. PAYMENT FOR RAILING SHALL CONFORM WITH 517.07 OF THE CMS

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

UTILITY LINES

ALL EXPENSE 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.

STRUCTURAL STEEL FOR REPLACEMENT OF CROSSFRAMES

STEFI MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES. DRAWINGS, TABLES, ETC. THE ENGINEERS SHALL HAVE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE BUREAU OF BRIDGES. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.07. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE BUREAU OF BRIDGES FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL. THE FABRICATOR SHALL FURNISH A 35 MILLIMETER MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN 501.05.

STEEL MEMBERS INCLUDED IN THIS ITEM ARE THE CROSSFRAMES LOCATED BETWEEN EXISTING BEAMS NO. 5 AND NO. 6.

MODIFICATIONS TO EXISTING CONCRETE SUBSTRUCTURE MEMBERS

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP AND REMOVE CONCRETE TO A ROUGH SURFACE. AT ABUTMENT BACK—WALLS, AT LEAST 2'-4" LENGTH OF PROTRUDING REINFORCING STEEL SHALL BE LEFT IN PLACE. EXISTING REINFORCING SHALL BE BENT AS NECESSARY TO ALIGN WITH AND CLEAR PROPOSED CONCRETE SURFACES BY AT LEAST 2 INCHES. AT PIERS, THE EXISTING REINFORCING SHALL BE REMOVED ALONG THE CUT LINE AND REPLACED WITH DOWELS HAVING AT LEAST 1'-6" EMBEDMENT INTO THE REMAIN—ING SUBSTRUCTURE AS SHOWN ON SHEET 11/21 AND PER CMS, ITEM 510.

PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. AT THE SIDE FACES OF EXISTING ABUTMENTS AND PIERS, THE SURFACE CONCRETE SHALL BE ROUGHENED TO A FULL AMPLITUDE OF 1/4 INCH MINIMUM. THE JOINT SURFACES AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE—RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 85 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

OPTIONAL PROCEDURES: AT THE ABUTMENTS, THE CONTRACTOR HAS THE OPTION TO REMOVE THE EXISTING REINFORCING STEEL COMPLETELY FROM THE BACKWALLS INSTEAD OF SALVAGING THE VERTICAL BARS. IF THIS OPTION IS SELECTED, DOWELS SHALL BE PROVIDED WITH AT LEAST 1'-9" EMBEDMENT INTO THE REMAINING SUBSTRUCTURE AS PER ITEM 510 AT NO EXTRA COST TO THE STATE. THE SPACING, SIZE AND NUMBER OF DOWELS SHOULD MATCH THAT OF THE EXISTING BARS.

AT THE PIERS, THE CONTRACTOR HAS THE OPTION TO SALVAGE THE EXISTING HORIZONTAL BARS AT THE PIER NOSINGS (INSTEAD OF REMOVING THE BARS AT THE CUT LINE) AND REPLACING THEM WITH DOWELS HAVING AT LEAST 1'-6" EMBEDMENT INTO THE REMAINING SUBSTRUCTURE AT NO EXTRA COST TO THE STATE.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSUABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT HIS COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSUABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 100 POUNDS IS INCLUDED IN ITEM 509 FOR THIS PURPOSE.

MECHANICAL CONNECTORS

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE OF CONNECTOR IS FURNISHED, THE MINIMUM DOWEL BAR LENGTH TO BE INCLUDED WITH THE CONNECTOR SHALL BE AS GIVEN BY THE DIMENSION "L" SHOWN ON THE PLANS.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATION.

CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM WITH ITEM 509 AND BE INCLUDED IN THE BID PRICE PER POUND FOR ITEM 509.

PAINTING OF STRUCTURAL STEEL

NEW STEEL SHALL BE CLEANED AND PRIME PAINTED IN THE SHOP AND FIELD PAINTED WITH AN INTERMEDIATE AND FINISH COAT OF PAINT USING SYSTEM IZEU. EXISTING STEEL SHALL BE FIELD CLEANED AND PAINTED WITH A PRIME, INTERMEDIATE, AND FINISH COAT OF PAINT USING SYSTEM OZEU. FOR PAY PURPOSES, CLEANING AND PRIME PAINTING NEW STEEL IS INCLUDED IN 513, INTERMEDIATE AND FINISH PAINTING OF NEW STEEL IN ITEM 514, AND FIELD CLEANING AND PAINTING EXISTING STEEL IN THE SEVERAL OZEU ITEMS. THE SURFACE AREA PAY QUANTITIES ARE BASED ON THE SURFACE AREA OF MAIN MEMBERS INCREASED BY 25 PERCENT TO ACCOUNT FOR THE AREA OF CROSSFRAMES, BEARINGS, AND OTHER STEEL INCIDENTALS BEING CLEANED AND PAINTED.

HIGH STRENGTH BOLTS

HIGH STRENGTH BOLTS SHALL BE GALVANIZED 1" DIAMETER ASTM A325.

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

SUBSTRUCTURE AND ALL OTHER REMOVALS NOT INCLUDED IN ITEM 202 — PORTION OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN SHALL BE INCLUDED UNDER ITEM 202 — PORTIONS OF STRUCTURE REMOVED, AS PER PLAN FOR PAYMENT.

ITEM 202 - PORTION OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN (CONCRETE DECKS)

DESCRIPTION: THIS WORK SHALL CONSIST OF THE REMOVAL OF CONCRETE DECK INCLUDING SIDEWALKS, CURBS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, CROSSFRAMES, ETC.). CARE SHALL BE TAKEN DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT, THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK SHALL BE DRAWN ON THE SURFACE OF DECK. SMALL DIAMETER PILOT HOLES SHALL BE DRILLED 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. DURING CUTTING OF THE DECK SLAB, CARE SHALL BE TAKEN NOT TO DAMAGE STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE.

REMOVAL METHODS: CONCRETE MAY BE REMOVED BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVAL ABOVE STEEL MEMBERS, LIGHT HAMMERS APPROVED BY THE ENGINEER SHALL BE USED TO ENSURE ADEQUATE DEPTH CONTROL AND TO PREVENT NICKING OR GOUGING PRIMARY STEEL MEMBERS.

TUS-39-13.02

CHKD. TUSCARAWAS COUNTY
BY DATE STATE
PROJECT

TUSCARAWAS COUNTY
STATE
PROJECT

30

48

DECK REMOVALS: DUE TO THE POSSIBLE PRESENCE OF WELDED ATTACHMENTS TO EXISTING STRUCTURAL STEEL (FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.), CARE SHALL BE TAKEN DURING DECK REMOVAL TO AVOID DAMAGING MEMBERS WHICH ARE TO REMAIN. MEMBERS DAMAGED BY THE CONTRACTOR'S REMOVAL OPERATIONS SHALL, AT NO COST TO THE PROJECT, BE REPLACED OR REPAIRED. PROPOSED REPAIRS, DEVELOPED BY A REGISTERED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL BY THE DIRECTOR.

EXTRANEOUS MEMBERS: EXISTING EXTRANEOUS MEMBERS (I.E., FINISHING MACHINE AND FORM SUPPORTS, ETC., AND THE SUPPORT FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) ATTACHED BY WELDED CONNECTIONS TO PORTIONS OF THE TOP FLANGES DESIGNATED "TENSION" SHALL BE REMOVED AND THE FLANGE SURFACES GROUND SMOOTH. GRINDING SHALL BE CAREFULLY DONE AND PARALLEL TO THE FLANGES.

LOADING LIMITATIONS: NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED BY MORE THAN ONE—THIRD THE ALLOWABLE UNIT STRESSES GIVEN IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. STRUCTURAL ANALYSIS COMPUTATIONS, BY AN ENGINEER REGISTERED BY THE STATE OF OHIO, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE CONTRACTOR'S METHODS OR EQUIPMENT SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO THE START OF THE WORK.

PAYMENT: THIS WORK SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

REMOVALS OVER WATER

REASONABLE CARE SHALL BE USED BY THE CONTRACTOR TO PREVENT REMOVED MATERIALS FROM FALLING INTO THE WATER. ANY DROPPED MATERIALS SHALL BE IMMEDIATELY RECOVERED AND DISPOSED OF AWAY FROM THE SITE EXCEPT FOR APPROVED MASONRY MATERIAL WHICH MAY BE USED AS BANK PROTECTION AS DIRECTED BY THE ENGINEER. REFER TO 104.06 OF THE ODOT CMS FOR ADDITIONAL REQUIREMENTS.

INSPECTION OF STRUCTURAL STEEL

THE ENGINEER SHALL BE GIVEN THE OPPORTUNITY TO VISUALLY INSPECT ALL EXISTING BUTT-WELDED TOP FLANGE SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THAT THEY ARE FREE OF DEFECTS. THE DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS SHALL NOT BE ERECTED UNTIL AFTER THE ENGINEER HAS COMPLETED THIS INSPECTION. THIS INSPECTION SHALL NOT TAKE PLACE UNTIL AFTER THE TOP FLANGES ARE CLEANED AS SPECIFIED IN 511.08, BUT IT SHALL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE COST ASSOCIATED WITH THIS INSPECTION SHALL BE INCLUDED WITH ITEM 511, SUPERSTRUCTURE CONCRETE FOR PAYMENT.

GENERAL NOTES ARE CONTINUED ON SHEET 4/21.

ms consultants, inc.

GENERAL NOTES

3 / 21

BRIDGE NO.: TUS-39-1302 OVER TUSCARAWAS RIVER

TUSCARAWAS COUNTY, OHIO

TO STA. 65+42.75

TO STA. 65+42.75

TO STA. 69+95.25

 DESIGNED
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 CHECKED
 REVIEWED

 W.B.H.
 R.M.
 W.B.H.
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EMBANKMENT CONSTRUCTION

THE EMBANKMENTS SHALL BE CONSTRUCTED TO THE LEVEL OF THE SUBGRADE. EXCAVATION MAY THEN BE MADE FOR THE ABUTMENTS AND PILES DRIVEN.

SEALING OF CONCRETE SURFACES

A CONCRETE SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES DESIGNATED ON THE PLANS IN ACCORDANCE WITH THE PROPOSAL NOTE.

AN EPOXY SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES AS SHOWN ON ABUTMENT DETAIL SHEET 10/21.

AN EPOXY OR NON-EPOXY SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES AS SHOWN ON PIER DETAILS SHEET 11/21 AND SUPERSTRUCTURE SHEET 12/21. THE SIDEWALK AND DEFLECTOR PARAPET RAILINGS ON THE APPROACH SLABS SHALL ALSO BE SEALED AS SHOWN ON SHEETS 17/21 & 18/21.

REFURBISHING EXISTING ROCKER BEARINGS

THE EXISTING ROCKER BEARINGS AT THE ABUTMENTS AND THE ROCKER BEARING FOR BEAM 3 AT PIER 4 SHALL BE REFURBISHED AND RESET AFTER THE EXISTING DECK AND END DAM HAVE BEEN REMOVED AND PRIOR TO PLACEMENT OF THE NEW DECK. SPECIAL CONSIDERATION SHALL BE GIVEN FOR SUPPORTING BEAM 6, SINCE IT WILL REMAIN ACTIVE DURING STAGE CONSTRUCTION.

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY CLEAN, PAINT, AND REALIGN THE SELECTED ROCKER BEARINGS. INCLUDED SHALL BE THE JACKING NECESSARY TO REMOVE THE BEARING, HAND TOOL OR SAND BLAST CLEANING (GRINDING IF NECESSARY), PAINTING AS REQUIRED BY SYSTEM OZEU, REPLACE-MENT OF ANY DAMAGED SHEET LEAD (711.19), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, AND RESETTING THE BEARINGS BY RELOCATING THE MASONRY PLATE SO THAT THE ROCKER IS VERTICAL AT 60° F. THE CONTRACTOR SHALL BE SURE THAT ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT THE OPTION OF THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE STATE. NEW BEARINGS OF THE TYPE AS THE EXISTING MAY BE INSTALLED IN LIEU OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR'S PLANS AND PROVISIONS FOR JACKING AND SUPPORTING THE SUPERSTRUCTURE WHILE THE BEARINGS ARE BEING RESET AND/OR SHIMMED SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO JACKING OPERATIONS. ALL MAIN SUPERSTRUCTURE MEMBERS AT A SUPPORT (ABUTMENT OR PIER) SHALL BE RAISED AND LOWERED SIMULTANEOUSLY AND AT A UNIFORM RATE. JACKING SHALL NOT OVERSTRESS THE PRIMARY MEMBERS OF THE SUPERSTRUCTURE. PAYMENT FOR ALL THE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516, 46801, EACH, "REFURBISH AND RESET BEARINGS, AS PER PLAN".

ELASTOMERIC SEALS

THE JOINT SEAL FOR EACH DECK JOINT SHALL BE FURNISHED IN ONE CONTINUOUS PIECE.

DECK JOINT PAINTING

AFTER CLEANING IN THE FIELD AS DIRECTED, AND PREFERABLY AFTER INSTALLATION OF JOINT SEALS, ALL UPPER EXPOSED STEEL SURFACES EXCLUDING ROADWAY SURFACES IN TRAVELED LANES SHALL BE PAINTED WITH A SYSTEM OZEU PRIME, INTERMEDIATE, AND FINISH COAT OF PAINT AS DESCRIBED IN THE PROPOSAL. COST FOR FIELD CLEANING AND PAINTING SHALL BE INCLUDED IN THE PRICE BID PER LINEAL FOOT FOR THE DECK EXPANSION JOINTS.

DECK JOINT MATERIALS

STEEL FOR DECK JOINTS THAT IS TO BE FULLY ENCASED IN CONCRETE MAY BE UNPAINTED ASTM A36 OR A588. ALL OTHER STEEL PORTIONS OF THE JOINTS SHALL BE ASTM A588. STEEL SHALL BE ABRASIVELY CLEANED IN THE SHOP PRIOR TO FINAL ASSEMBLY. STEEL RETAINERS AND ELASTOMERIC STRIP SEALS SHALL BE PROVIDED BY THE SAME MANUFACTURER. A CLOSED-CELL ELASTOMERIC BACKER ROD SHALL BE INSTALLED IN RETAINERS BY THE JOINT FABRICATOR AFTER STEEL CLEANING TO PROTECT GROOVE SURFACES FROM CONTAMINATION PRIOR TO SEAL INSTALLATION OR FIELD PAINTING. SHOP PAINTING IS NOT REQUIRED.

OHIO BY____ TUS-39-13.02 TUSCARAWAS COUNTY FHWA REGION PROJECT PROJECT

31

48

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GENERAL
202	11301	54	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	, , , , , , , , , , , , , , , , , , , ,	42	12	
202	11203	LUMP SUM	f	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (CONCRETE DECK)				LUMP SUM
202	23500	1400	SQ YD	WEARING COURSE REMOVED				1400
503	11100	LUMP SUM		COFFERDAMS, CRIBS AND SHEETING (SEE PROPOSAL NOTE)			<u> </u>	LUMP SUM
503	21100	750	CU YD	UNCLASSIFIED EXCAVATION		136	614	
505	11100	LUMP SUM	,	PILE DRIVING EQUIPMENT MOBILIZATION				LUMP SUM
507	22200	5130	<u> </u>	12" CAST-IN-PLACE REINFORCED CONCRETE PILES		1080	4050	
509	15840	293,049	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60	258,403	11,521	23,025	100
510	12200	534	LIN FT	DOWEL HOLES		24.	510	
511	31511	1063	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN	1063			
511 *	33405	1063	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, USING SHRINKAGE COMPENSATING CEMENT, AS PER PLAN (SEE PROPOSAL NOTE)	1063		· ·	
511*	33410	LUMP SUM	4.1.	CLASS S CONCRETE, USING SHRINKAGE COMPENSATING CEMENT, FOR PRE-PLACEMENT TESTING (SEE PROPOSAL NOTE)	LUMP SUM			
511	40500	260	CU YD	CLASS C CONCRETE, PIER ABOVE FOOTING			260	
511	43500	130	CU YD	CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING		130		
511	46500	128	CU YD	CLASS C CONCRETE, FOOTING			128	
512	44400	12	SQ YD	TYPE B WATERPROOFING		12		
SPECIAL	51267500	1293	SQ YD	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)				1293
SPECIAL	51267502	157	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)		157		
513 *	11400	332,781	POUND	STRUCTURAL STEEL, A572-50 AISC CATEGORY I	332,781			
513	20000	9228	EACH	WELDED STUD SHEAR CONNECTOR	9228			
SPECIAL	51400050]	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)	20,555			
	51400056		ł	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)	20,555			
	51400060		SQ FT	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)	20,555			
	51400066		SQ FT	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)	20,555		· · · · · · · · · · · · · · · · · · ·	
SPECIAL**	51400500	100	LIN FT	CAULKING (SEE PROPOSAL NOTE)	100		· · · · · · · · · · · · · · · · · · ·	
SPECIAL	51400504	54	MNHR	GRINDING FINS, TEARS, SLIVERS (SEE PROPOSAL NOTE)	54			
514	00610	332,781	<u> </u>	FIELD PAINTING OF NEW STEEL, SYSTEM IZEU (SEE PROPOSAL NOTE)	332,781			
516	11210	134	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL (SEE PROPOSAL NOTE)	134	ý.		
516	46000	4	EACH	BEARING DEVICE, BOLSTER			4	
516	46200	24	EACH	BEARING DEVICE, ROCKER		8	16	
516	46801	9	EACH	REFURBISH AND RESET BEARING, AS PER PLAN		8	1	· · · · · · · · · · · · · · · · · · ·
517	71500	482	LIN FT	RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL) (SEE PROPOSAL NOTE)	482		•	
517+	71510	482	LIN FT	RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL USING SHRINKAGE COMPENSATING CEMENT) (SEE PROPOSAL NOTE)				
518	12200	8	 	SCUPPER, INCLUDING SUPPORTS (SEE PROPOSAL NOTE)	8			
518	21200	44		POROUS BACKFILL WITH FILTER FABRIC	-	44		
	2.200	• •						
518	41100	162	LIN FT	6" PERFORATED HELICAL CORRUGATED STEEL PIPE, 707.01		162		
518	41200	33	LIN FT	6" NON-PERFORATED HELICAL CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01		33		
519	11100	23	SQ FT	PATCHING CONCRETE STRUCTURE		2	21	
625				SEE LIGHTING SUMMARY			, <u>, , , , , , , , , , , , , , , , , , </u>	

- * ALTERNATE BID ITEM: THESE TWO ITEMS SHALL CONSTITUTE ONE ALTERNATE BID TO CLASS S CONCRETE, SUPERSTRUCTURE.
- + ALTERNATE BID ITEM.
- ** CAULKING SHALL BE APPLIED AT BOLTED BEAM SPLICES TO FILL VOIDS ON ALL NEW STEEL BEAMS. REFER TO OZEU PROPOSAL NOTE FOR CAULKING REQUIREMENTS.

CONCRETE DECK SLAB

AFTER DECK SLAB CONCRETE HAS BEEN DRY AIR CURED FOR NOT LESS THAN 28 DAYS, AND IMMEDIATELY AFTER A MINIMUM 48 HOUR PERIOD WITHOUT PRECIPITATION, VERTICAL CONSTRUCTION JOINTS IN THE DECK SLAB SHALL BE SEALED WITH A HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) RESIN. SEALANT SHALL BE APPLIED BY BRUSH, SPRAY, OR OTHER SUITABLE APPLICATOR ALONG THE SURFACE OF THE JOINTS. IF NECESSARY, MULTIPLE APPLICATIONS SHALL BE MADE UNTIL COMPLETE JOINT PENE-TRATION HAS BEEN ACHIEVED. AFTER SEALANT HAS BEEN CURED, IT SHALL BE ABRASIVELY BLASTED TO ROUGHEN THE SEALANT SURFACE AND RESTORE ITS SUITABILITY FOR VEHICULAR TRAFFIC. SEALING CONSTRUCTION JOINTS, AS DESCRIBED ABOVE, SHALL BE INCLUDED WITH THE DECK SLAB CONCRETE FOR PAYMENT.

TEMPORARY RAILING

FURNISHING, INSTALLING, MAINTAINING, AND REMOVING TEMPORARY RAILING, INCLUDING THE COMPLETE OR PARTIAL REMOVAL OF ANCHOR HARDWARE AND THE FILLING OF THE ANCHOR VOIDS WITH NONSHRINKING GROUT, SHALL BE INCLUDED IN ITEM 614 (ROADWAY PLANS) FOR PAYMENT.

IS TO BE PAID 100% BY EAST OHIO GAS.

TOTAL INCLUDES 7008 LBS. FOR THE WATER MAIN AND FORCE MAIN SUPPORT

BRACKETS THAT IS TO BE PAID 100% BY THE CITY OF NEW PHILADELPHIA. THE

TOTAL ALSO INCLUDES 324 LBS. FOR THE GAS LINE SUPPORT BRACKETS THAT

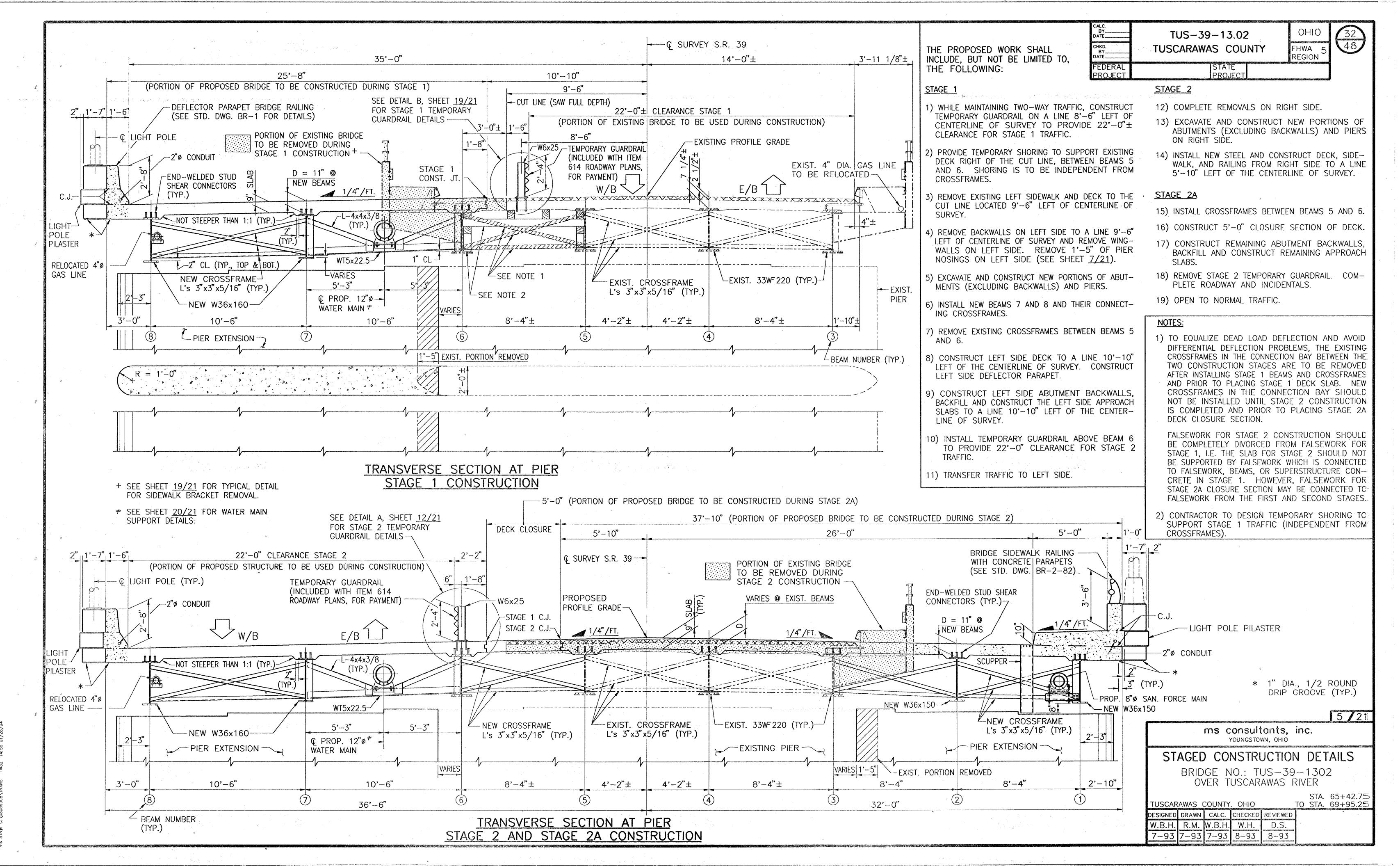
ms consultants, inc. YOUNGSTOWN, OHIO

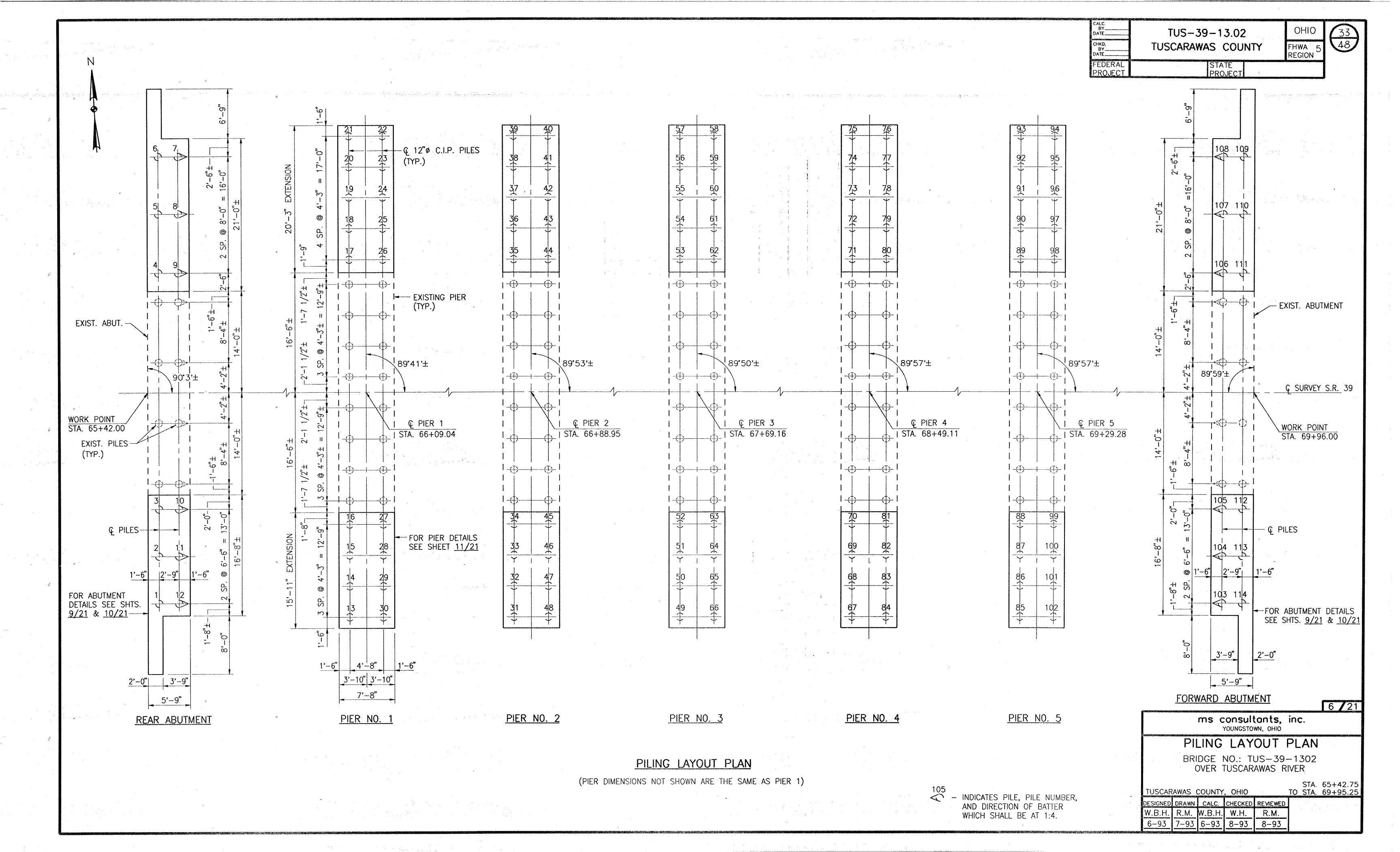
4 / 21

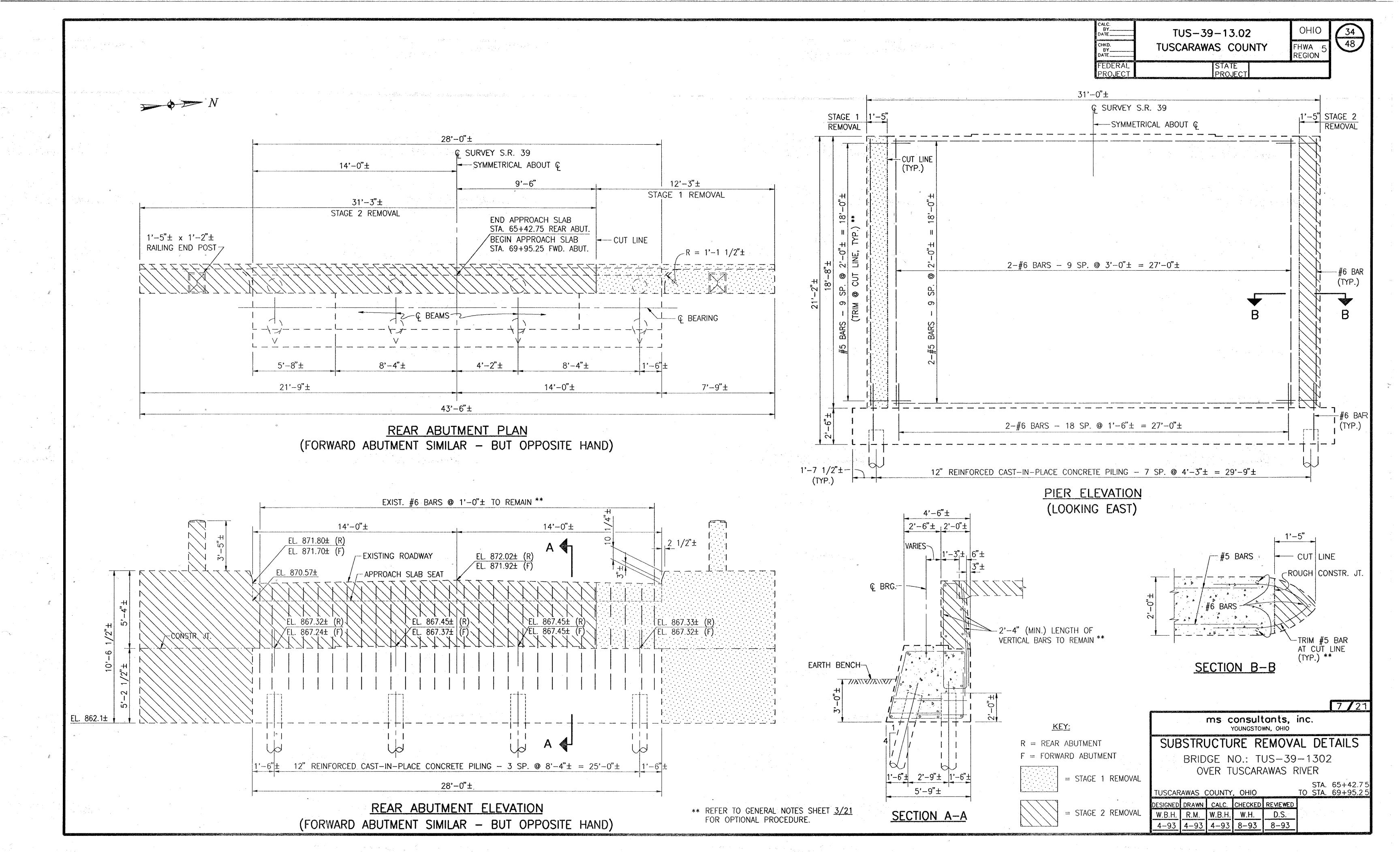
GENERAL NOTES (CONT'D.) & ESTIMATED QUANTITIES BRIDGE NO.: TUS-39-1302

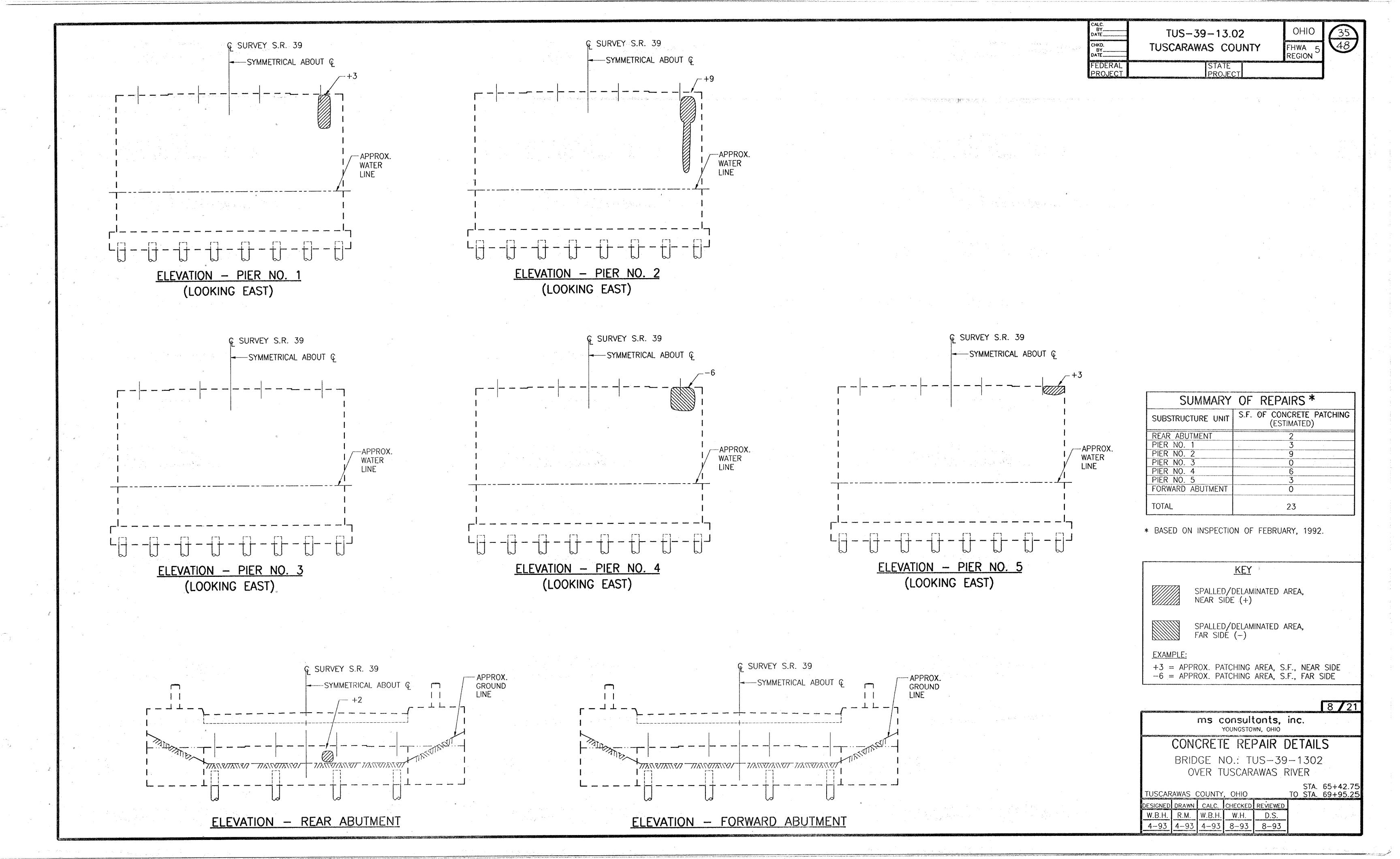
OVER TUSCARAWAS RIVER STA, 65+42.75 TUSCARAWAS COUNTY, OHIO TO STA. 69+95.25

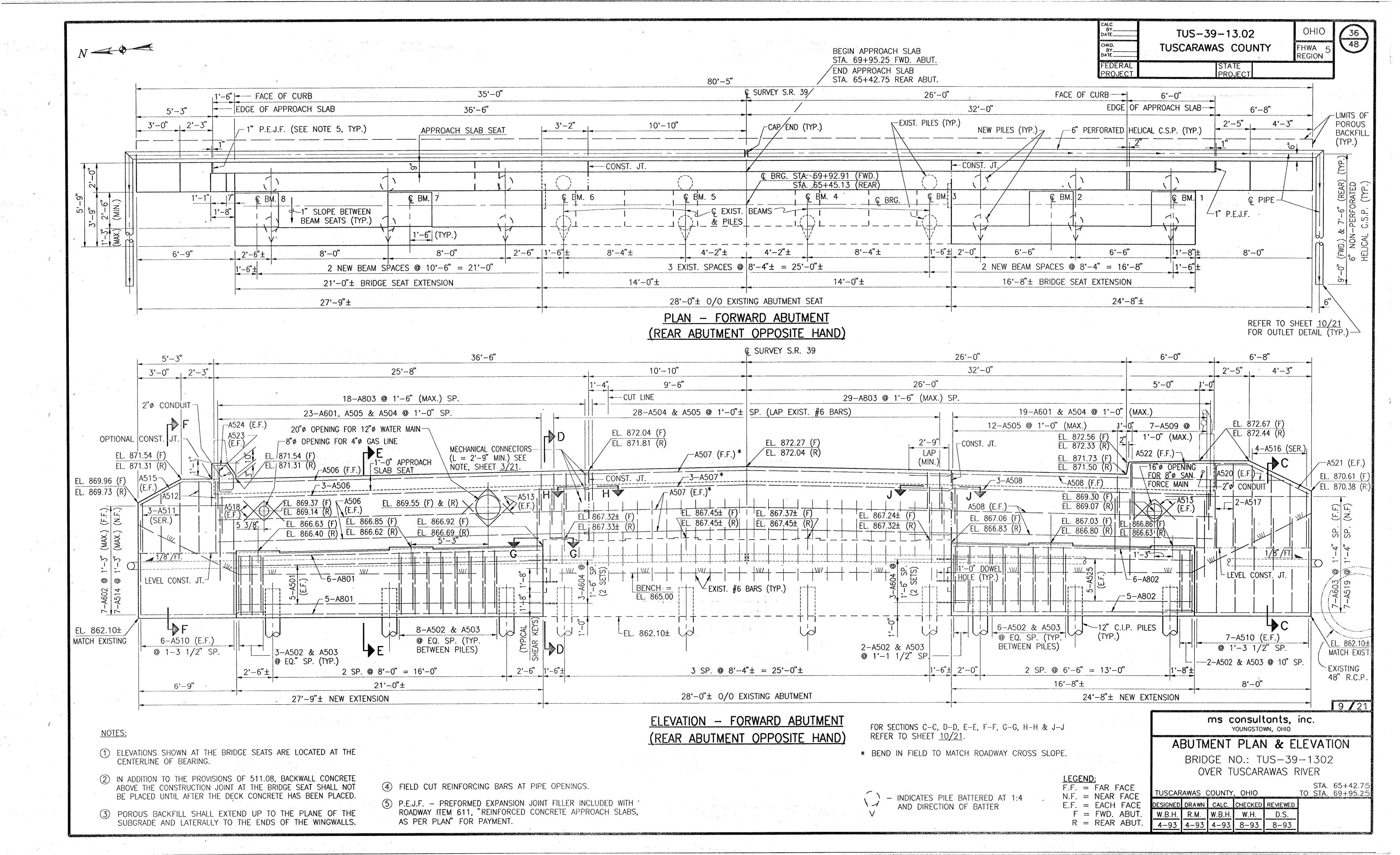
DESIGNED DRAWN CALC. CHECKED REVIEWED W.B.H. R.M. W.B.H. W.H. D.S. 6-93 | 6-93 | 6-93 | 8-93 | 8-93

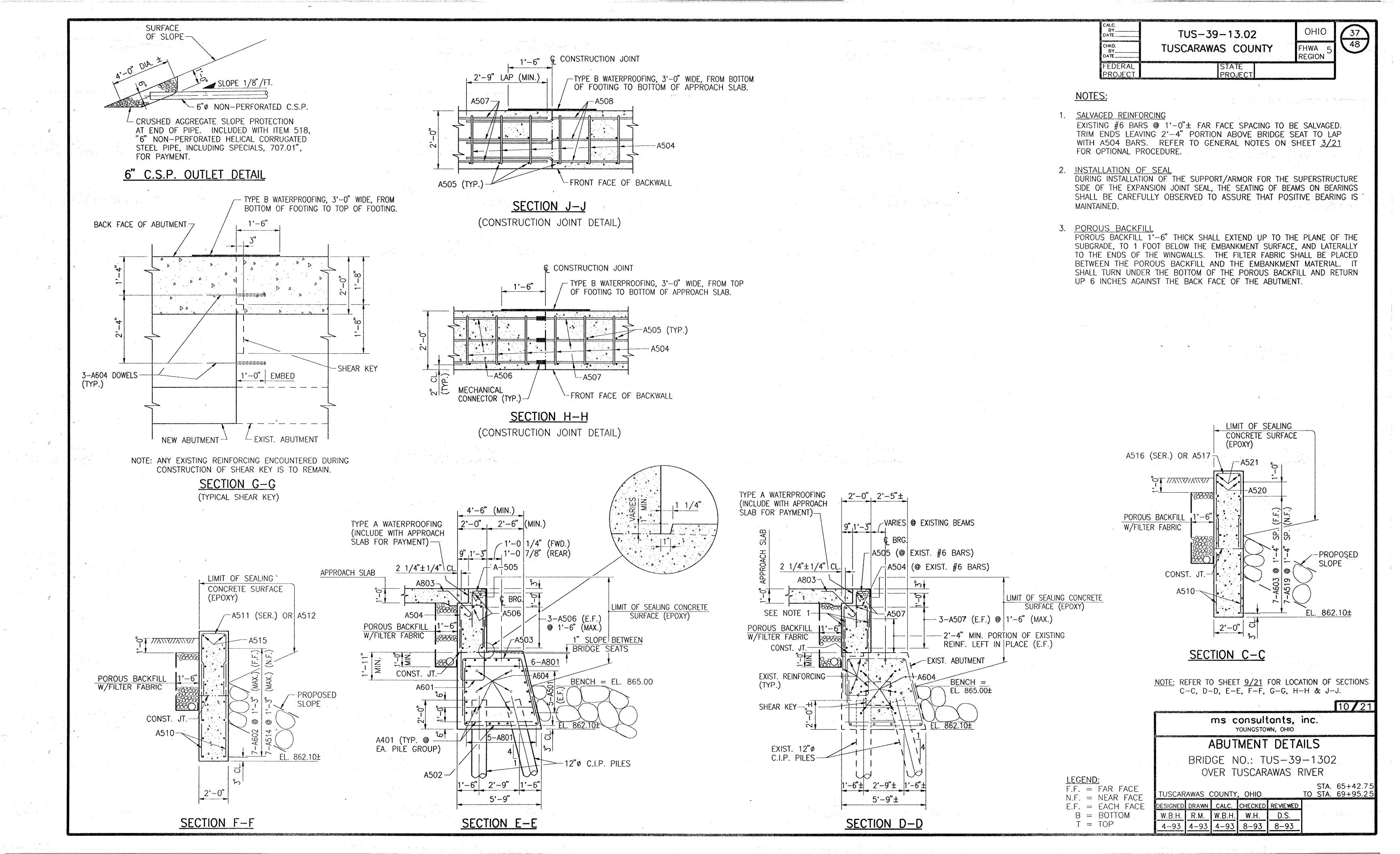


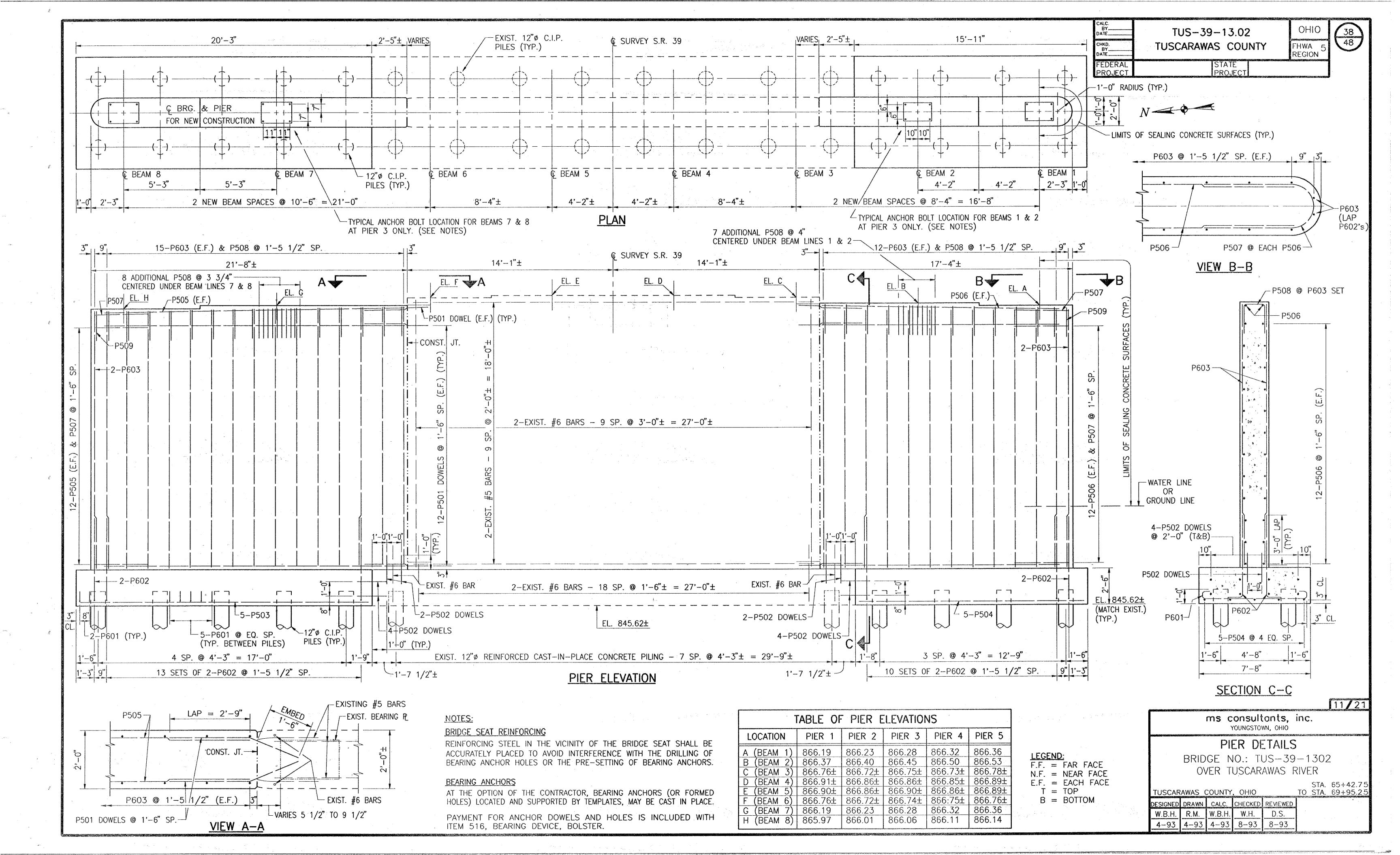


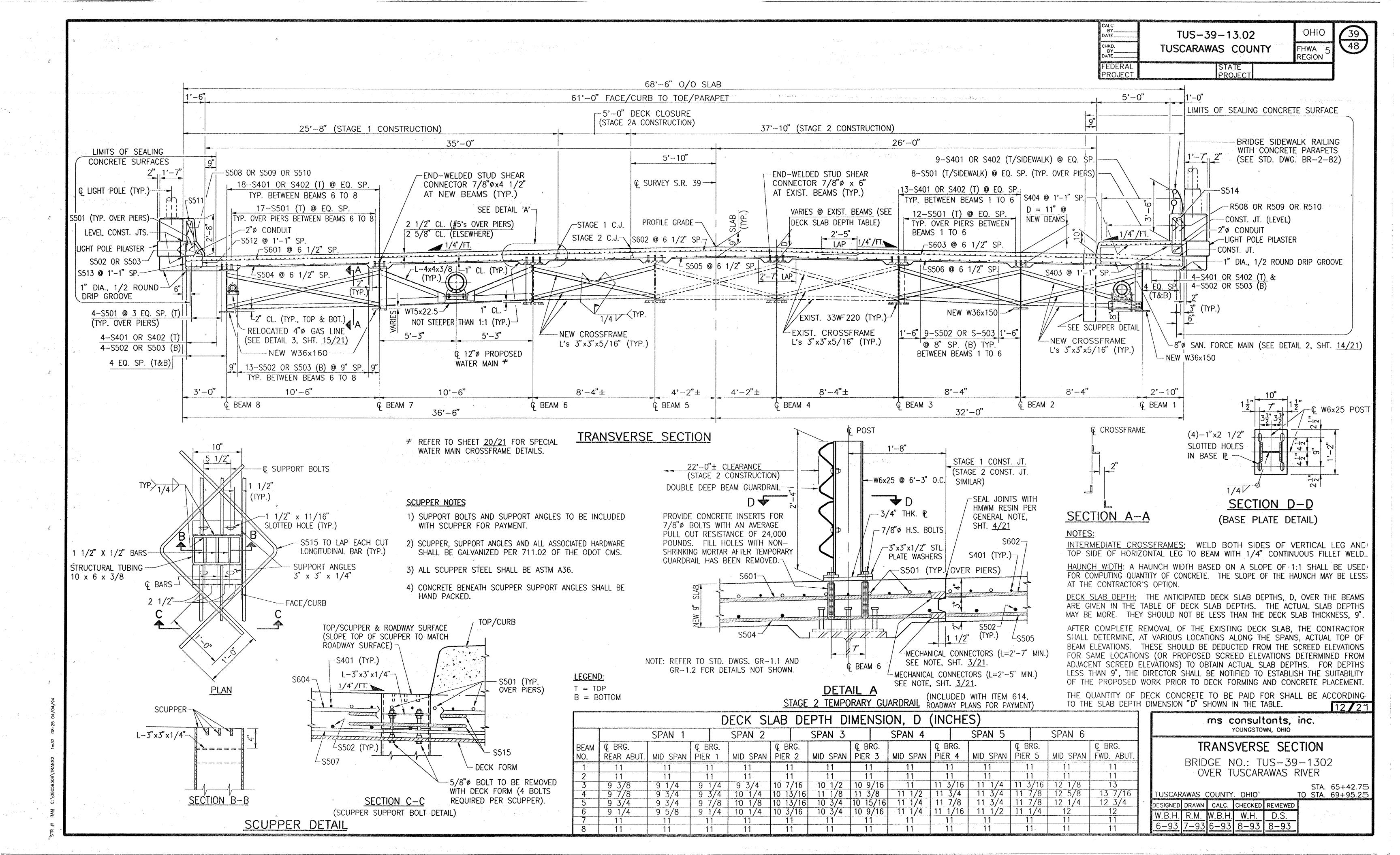


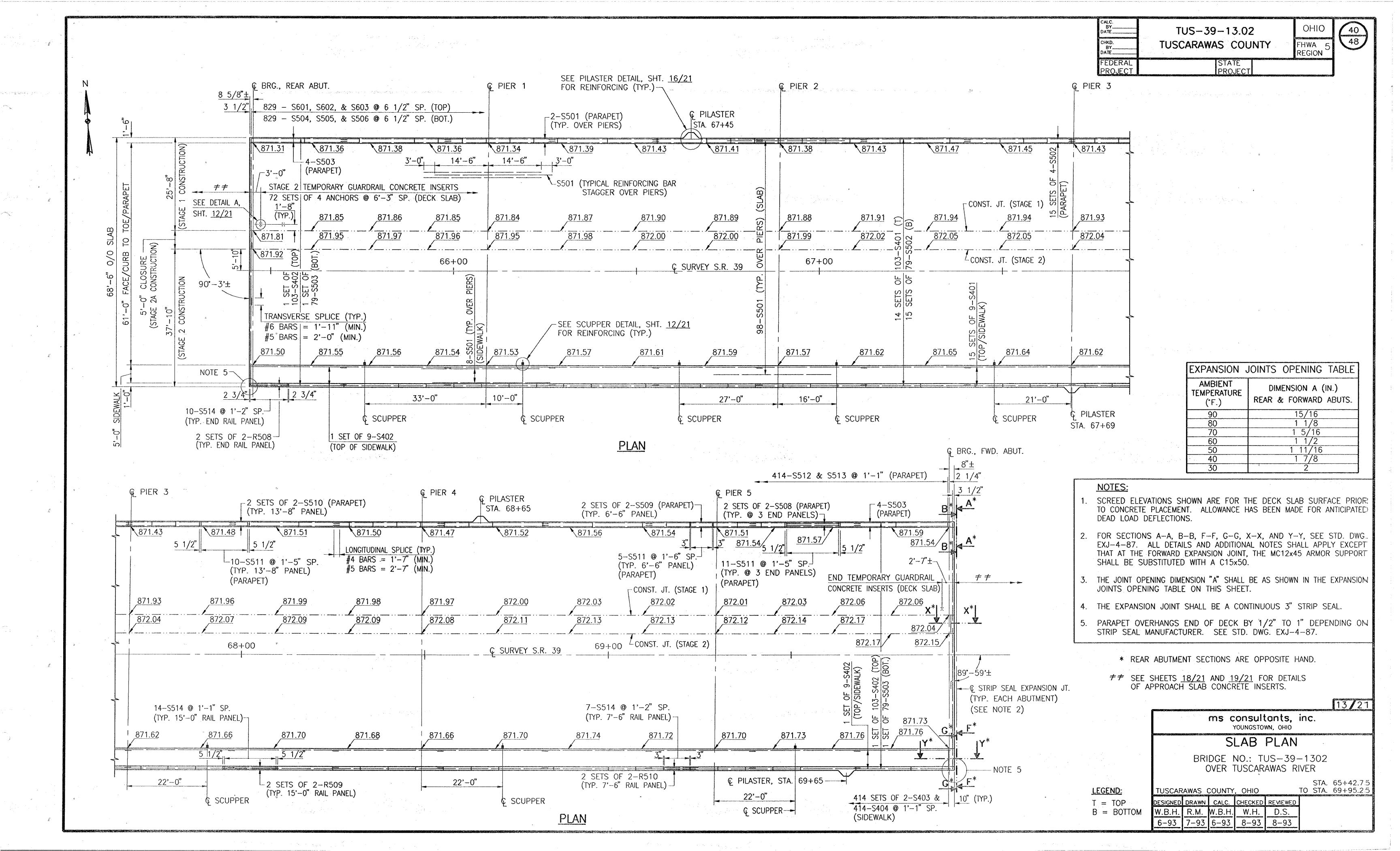


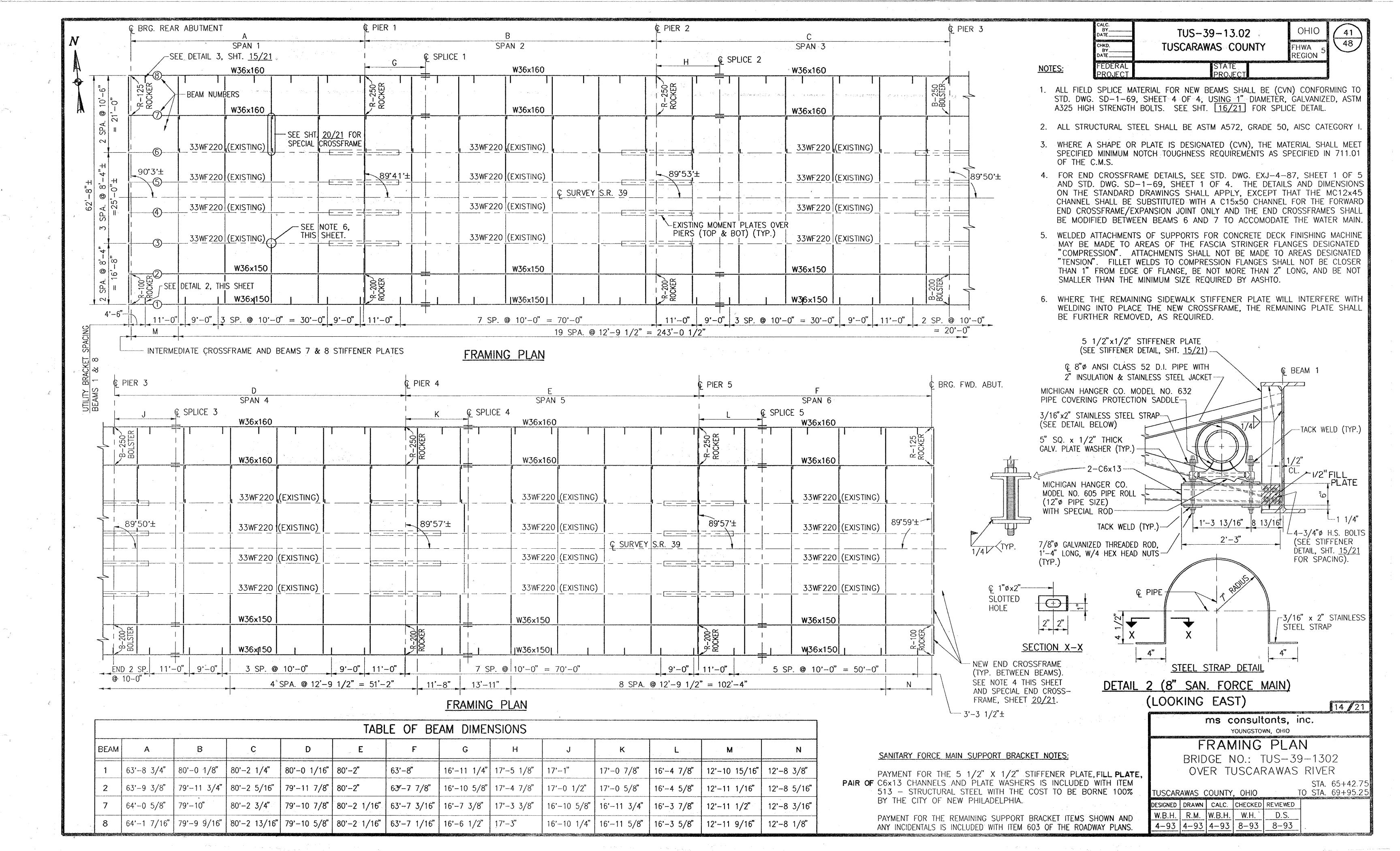


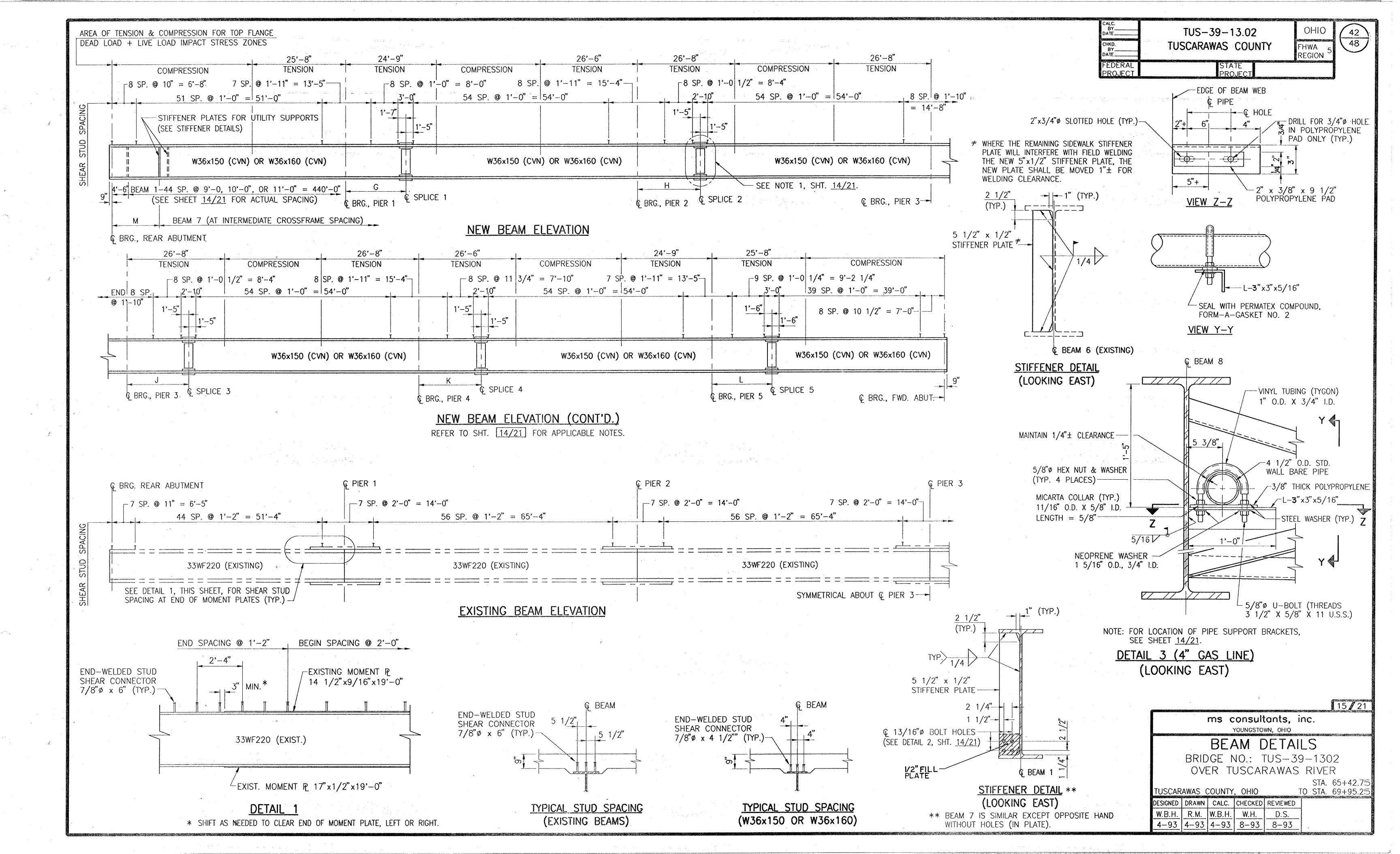


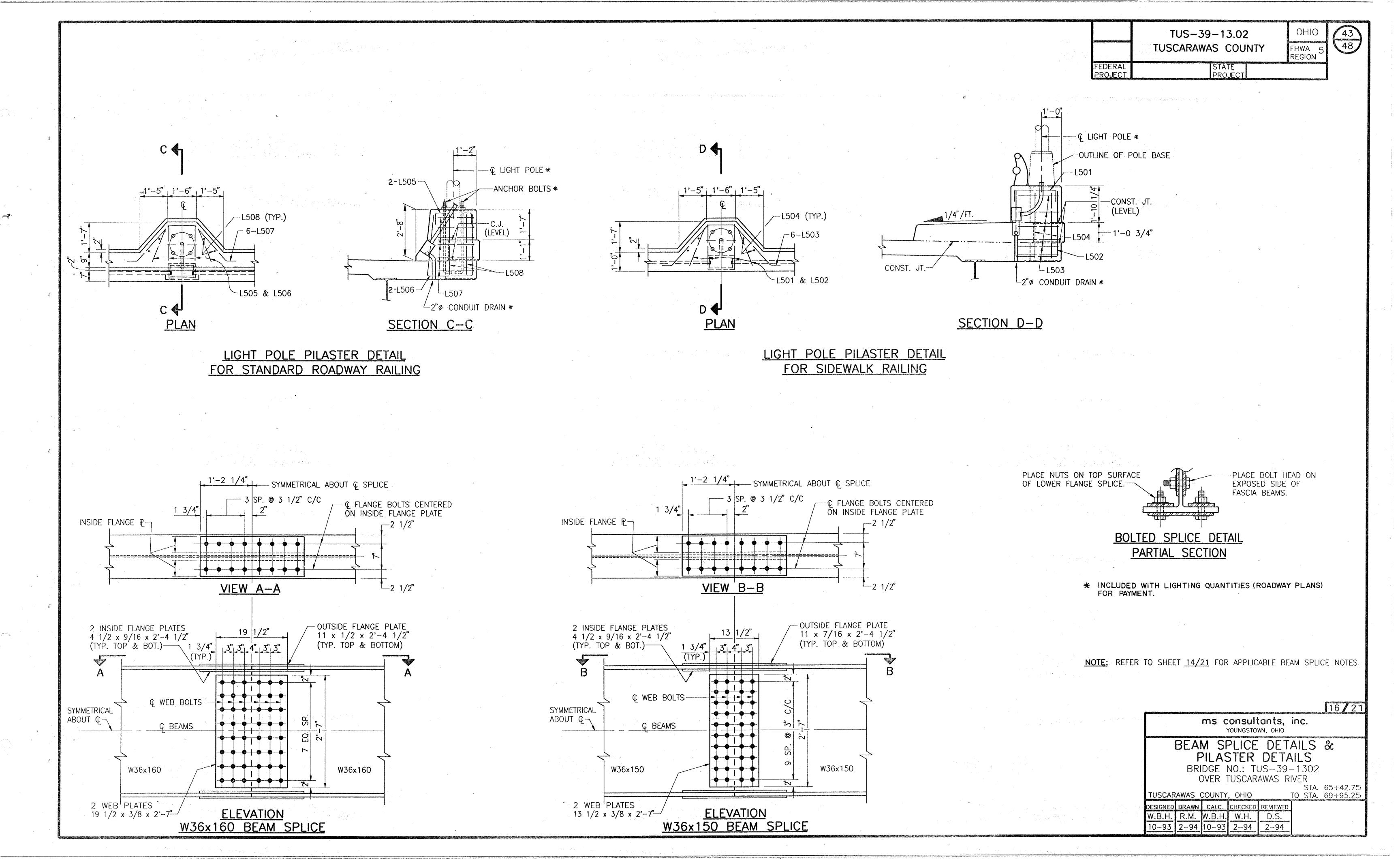


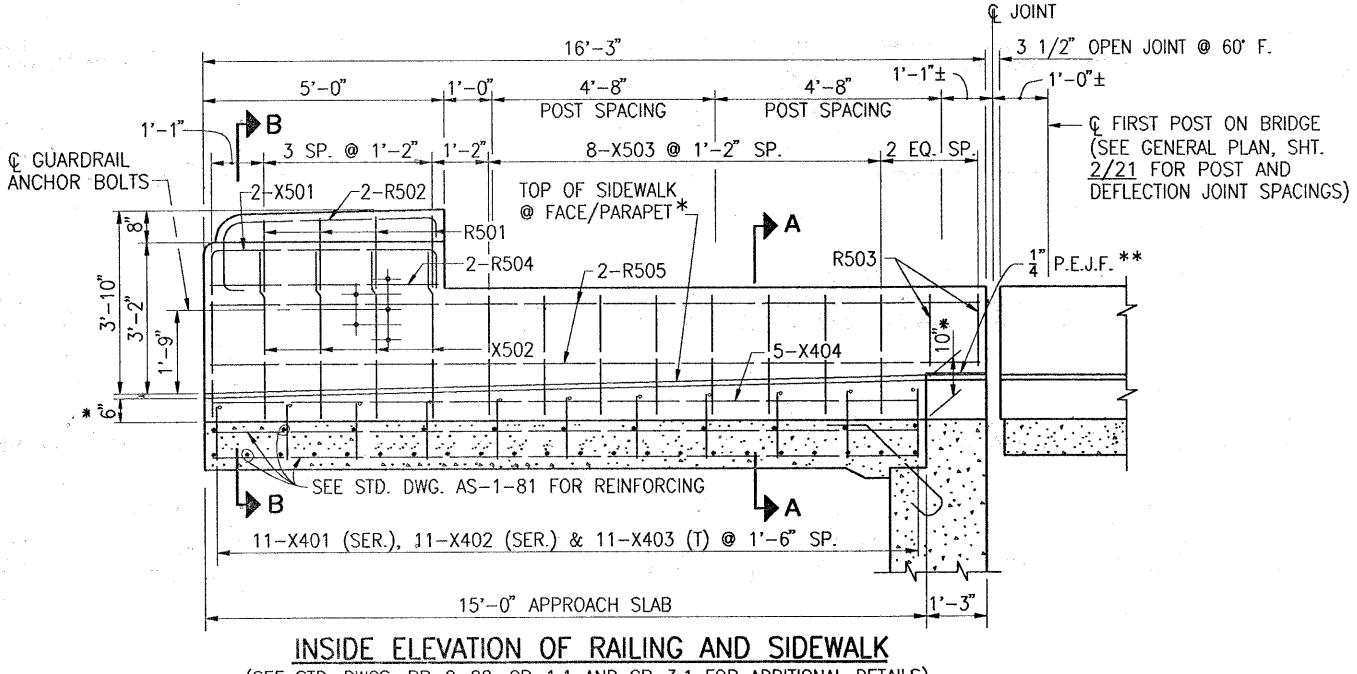












LIMIT OF SEALING OF CONCRETE SURFACES 5'-0" - X501 (E.F.) R504 -LEVEL CONST. JT. -X401 (SER.) X402 (SER.) 5-X404 @ EQ. SP.

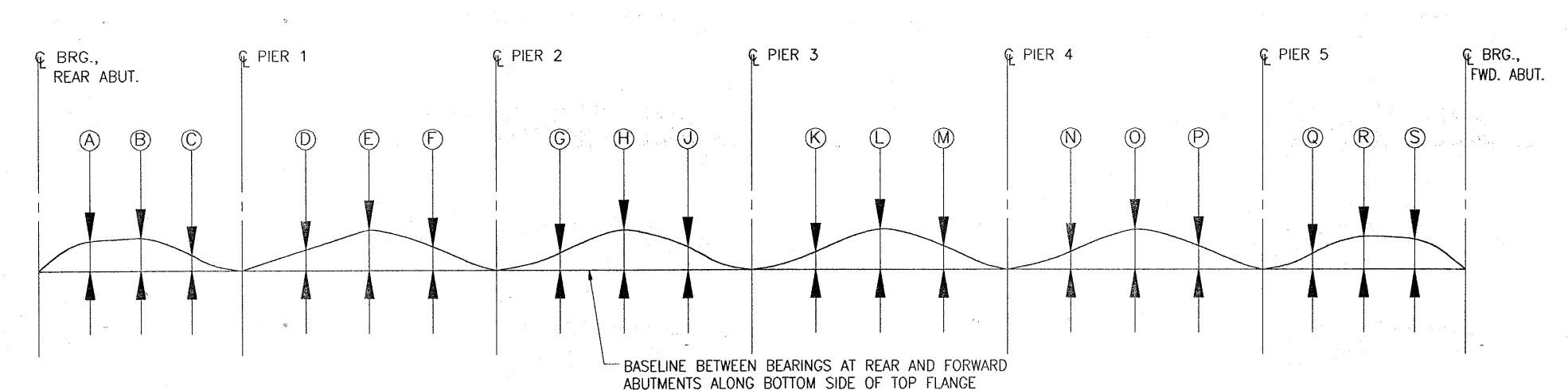
SECTION B-B

(SEE STD. DWGS. BR-2-82, GR-1.1 AND GR-3.1 FOR ADDITIONAL DETAILS)

NOTES: ALL MATERIALS AND LABOR FOR SIDEWALK ON APPROACH SLABS IS INCLUDED WITH ROAD-WAY ITEM 611, "REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN" FOR PAYMENT.

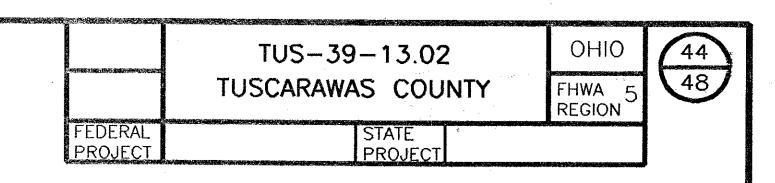
ALL MATERIALS AND LABOR NECESSARY FOR INSTALLATION OF CONCRETE PARAPET WITH DOUBLE PIPE RAIL ABOVE SIDEWALK SHALL BE INCLUDED WITH ITEM 517, "RAILING FOR PAYMENT. CONCRETE FOR SIDEWALKS AND PARAPETS ON APPROACH SLABS SHALL BE CLASS 'S', fc' = 4500 PSI.

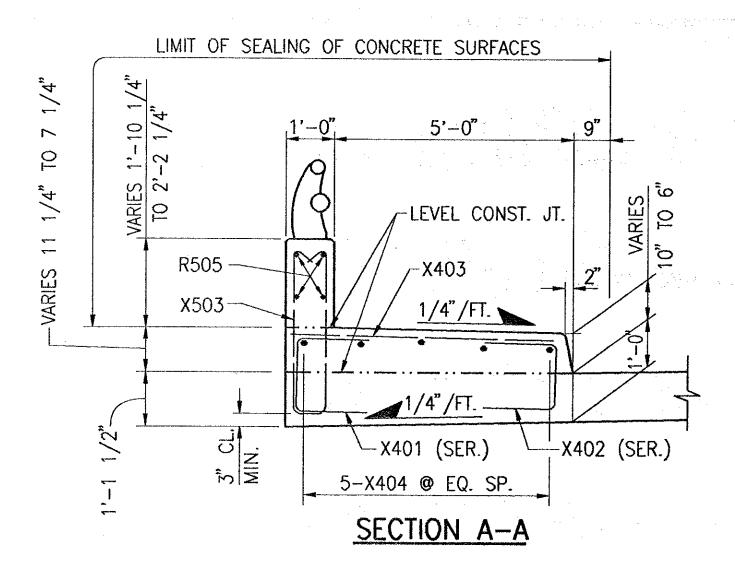
- * SIDEWALK CURB HEIGHT TO BE TRANSITIONED FROM 10" TO 6" OVER LENGTH OF APPROACH SLAB.
- ** INCLUDED WITH ITEM 517, RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL) FOR PAYMENT.



CAMBER DIAGRAM

					DEFLE	CTION	AND	CAMBE	R TAB	LE (IN	ICHES))							
		<u> </u>	SPAN 1		SPAN 2				SPAN 3		SPAN 4				SPAN 5			SPAN 6	
POINT	BEAM NO.	1/4 PT. (A)	1/2 PT. B	3/4 PT.	SPL 1	1/2 PT. E	3/4 PT. F	SPL 2	1/2 PT. H	3/4 PT.	SPL. 3	1/2 PT.	3/4 PT. M	SPL. 4	1/2 PT.	3/4 PT. P	SPL. 5	1/2 PT. ®	3/4 PT ⑤
DEFLECTION DUE TO WEIGHT OF STEEL	BEAMS (1), (2), (7), (8)	1/16	3/32	1/32	1/16	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/16	1/32	3/32	1/16
DEFLECTION DUE TO REMAINING	BEAM ① BEAM ②*	7/16 1/2	17/32 17/32	1/4 1/4	9/32 11/32	19/32 21/32	3/8 3/8	9/32 9/32	19/32 21/32	5/16 5/16	9/32 9/32	19/32 21/32	3/8 3/8	9/32 11/32	1	3/8 3/8	1/4 1/4	17/32 17/32	7/16 1/2
NON-COMPOSITE DEAD LOADS	BEAM (7) BEAM (8)	19/32 15/32	21/32 17/32	5/16 1/4	13/32 11/32		15/32 13/32	11/32 11/32	13/16 11/16	15/32 13/32	11/32 9/32	13/16 11/16	15/32 13/32	11/32 11/32	1	15/32 13/32	5/16 1/4	21/32° 17/32	19/32 15/32
DEFLECTION DUE	BEAM ① BEAM ②	1/16 1/16	1/16 1/16	1/32 1/32	1/32 1/32	3/32 3/32	1/16 1/16	1/32 1/32	3/32 3/32	1/16 1/16	1/32 1/32	3/32 3/32	1/16 1/16	1/32 1/32	3/32 3/32	1/16 1/16	1/32 1/32	1/16 1/32	1/16 1/16
TO COMPOSITE DEAD LOADS	BEAM ⑦ BEAM ⑧	1/32	1/16	1/32	1/32	1/16 1/16	1/32 1/32	1/32 1/32	1/16 1/16	1/32 1/32	1/32 1/32	1/16 1/16	1/32 1/32	1/32 1/32	1/16 1/16	1/32 1/32	1/32 1/32	1/16 1/16	1/32 1/32
REQUIRED	BEAM ① BEAM ②	9/16 5/8	11/16 11/16	5/16 5/16	3/8 7/16	13/16 7/8	1/2	3/8 3/8	13/16 7/8	7/16 7/16	3/8 3/8	13/16 7/8	1/2 1/2	3/8 7/16	13/16 7/8	1/2 - 1/2	5/16 5/16	11/16 11/16	9/16 5/8
SHOP CAMBER	BEAM (7) BEAM (8)	11/16 9/16	13/16 11/16	3/8 5/16	1/2 7/16	1 7/8	9/16 1/2	7/16 7/16	1 7/8	9/16	7/16 3/8	7/8	9/16 1/2	7/16 7/16	1 7/8	9/16 1/2	3/8 5/16	13/16 11/16	11/16 9/16





17/21

ms consultants, inc. YOUNGSTOWN, OHIO

SIDEWALK RAILING AND BEAM DEFLECTION & CAMBER

BRIDGE NO.: TUS-39-1302 OVER TUSCARAWAS RIVER STA. 65+42.75

TO STA. 69+95.25

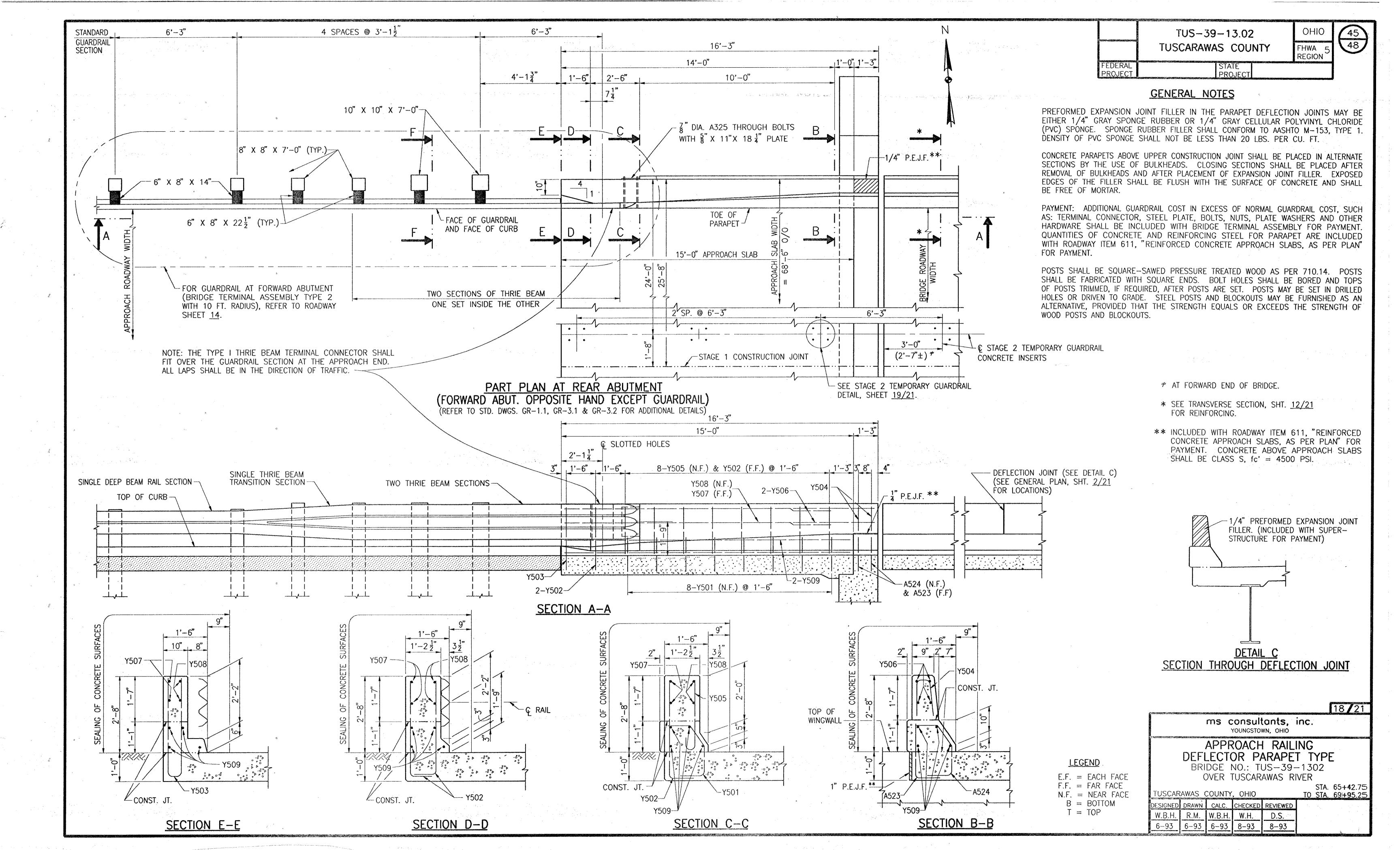
<u>LEGEND</u>

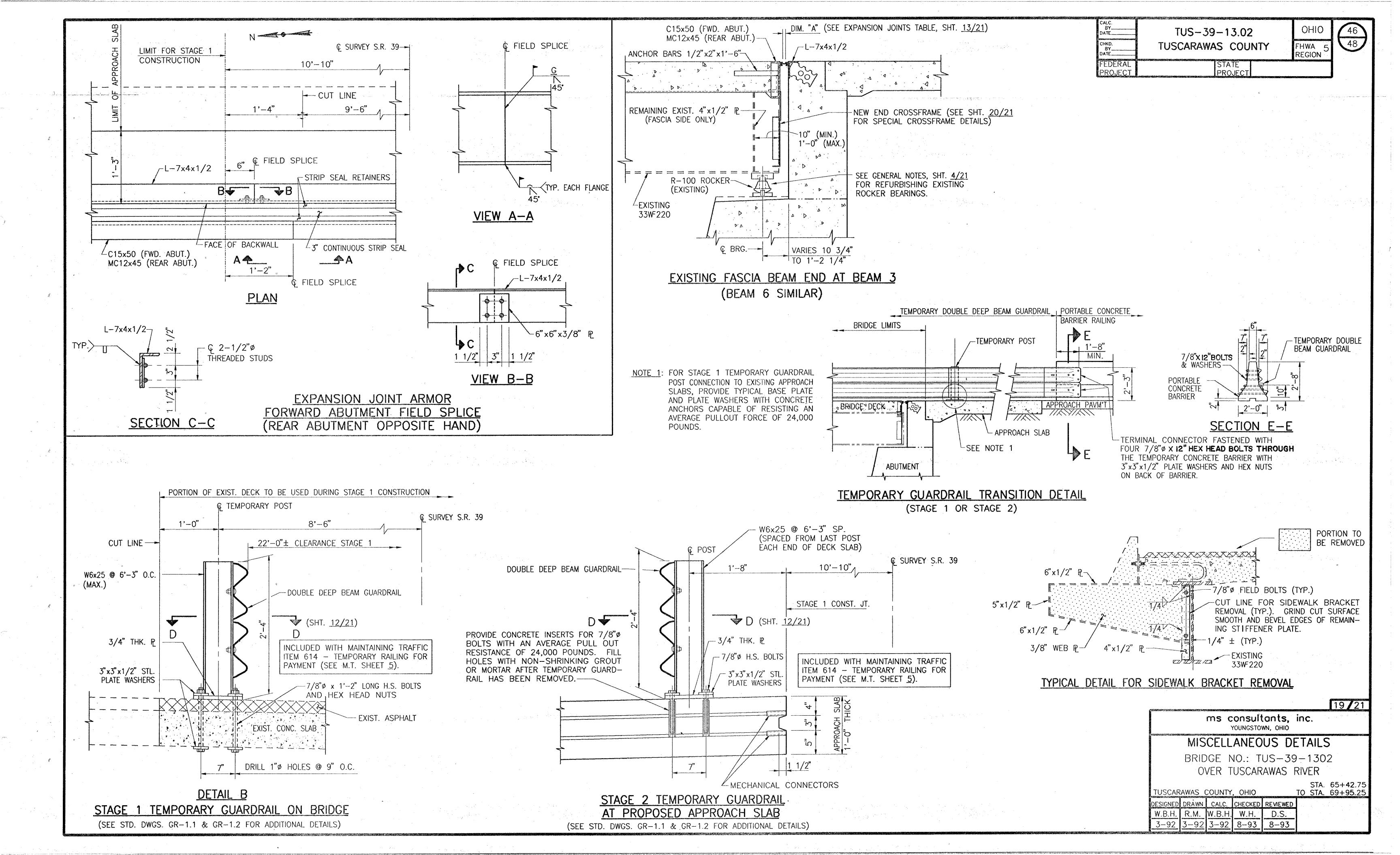
E.F. = EACH FACE

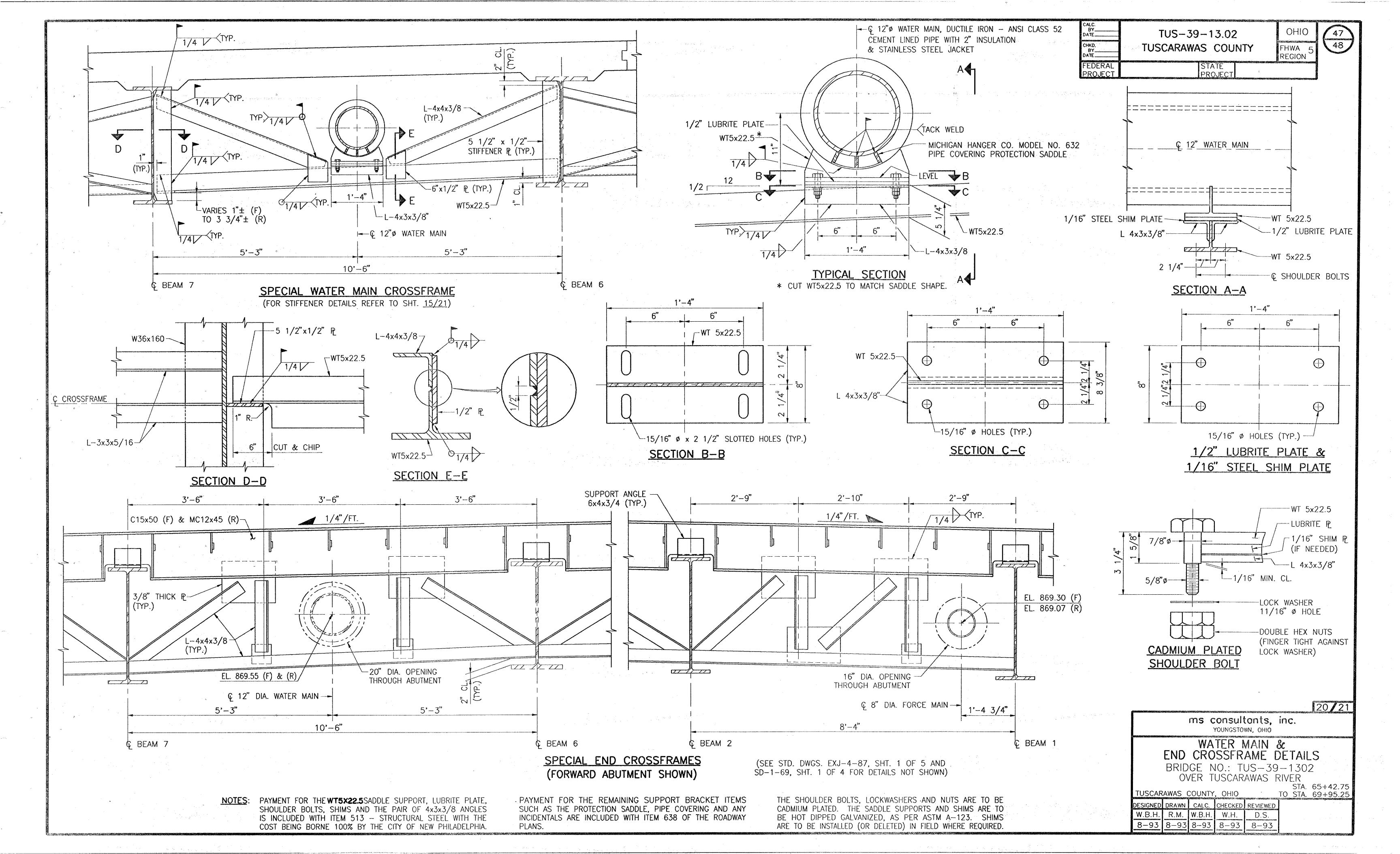
F.F. = FAR FACE

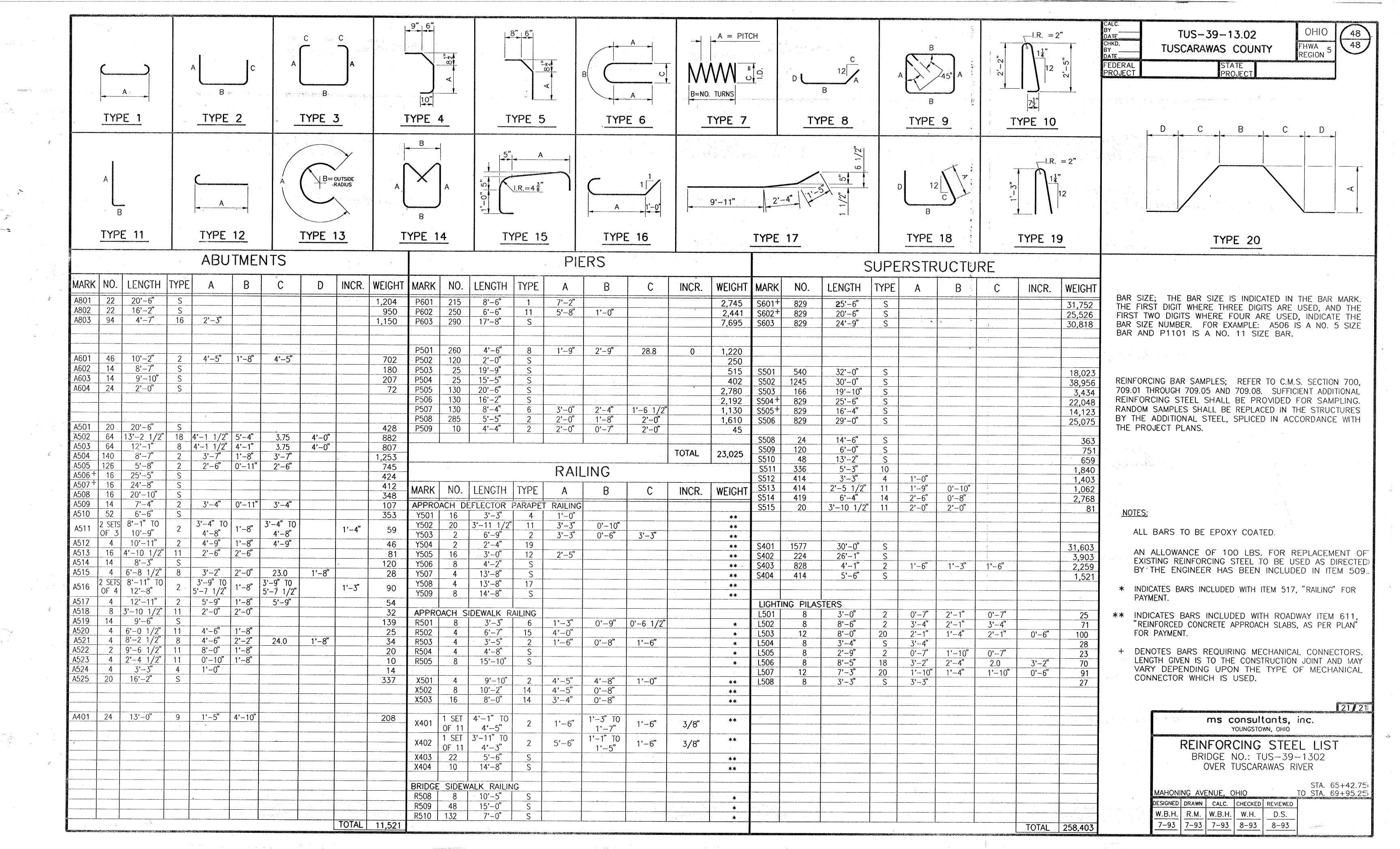
N.F. = NEAR FACE

B = BOTTOMT = TOP









THE STRUCTURE SITE IS LOCATED IN THE DISSECTED UNGLACIATED PORTION OF THE ALLEGHENY PLATEAU REGION, ON THE FLOODPLAIN OF AND OVER THE TUSCARAWAS RIVER. IN AN AREA WHERE EXTREMELY DEEP ALLUVIAL DEPOSITS OVERLIE BEDROCK OF PENNSYLVANIAN AGE.

THE EXPLORATION CONSISTED OF FOUR DRIVE SAMPLE BORINGS MADE BY MEANS OF A MECHANICALLY-POWERED HOLLOW STEM ROTARY AUGER MOUNTED ON A MOBILE PLATFORM. PERFORMED BETWEEN MARCH 25 AND APRIL 7, 1992.

INVESTIGATIONAL FINDINGS AND OBSERVATIONS

THE TEST BORINGS ENCOUNTERED INTERVALS OF LOOSE TO EXTREMELY DENSE UNSTRATIFIED BASIC SAND AND GRAVEL MODIFIED WITH SILT AND VARYING AMOUNTS OF EACH OTHER THAT GRADUALLY INCREASE IN DENSITY WITH INCREASE IN DEPTH. TEST BORING B-1 (MADE IN THE GENERAL VICINITY OF THE REAR ABUTMENT) PENETRATED TO A DEPTH OF 71.5 FEET, ELEVATION 791.4 FEET AND WAS TERMINATED AFTER PENETRATING IN EXCESS OF 54 FEET OF MATERIAL REQUIRING IN EXCESS OF 30 BLOWS PER FOOT IN THE STANDARD PENETRATION TEST IMMEDIATELY PRIOR TO TERMINATION. RUNNING SAND WHICH HEAVED IN THE AUGER FLIGHTS WAS ENCOUNTERED IN BORING B-1 AT 25.0, 30.0, 40.0, 45.0, 50.0, 65.0 AND 70.0 FOOT DEPTHS, ELEVATIONS 837.9, 832.9, 822.9, 817.9, 812.9, 797.9 AND 792.9 FEET RESPECTIVELY. TEST BORING B-2 (MADE IN THE TUSCARAWAS RIVER) PENETRATED TO A DEPTH OF 51.5 FEET, ELEVATION 801.0 FEET AND WAS TERMINATED AFTER PENETRATING IN EXCESS OF 39 FEET OF MATERIAL REQUIRING IN EXCESS OF 30 BLOWS PER FOOT IN THE STANDARD PENETRATION TEST IMMEDIATELY PRIOR TO TERMINATION. RUNNING SAND WHICH HEAVED IN THE AUGER FLIGHTS WAS ENCOUNTERED IN BORING B-2 AT 25.0, 30.0, 40.0 AND 50.0 FOOT DEPTHS, ELEVATIONS 827.5, 822.5, 812.5 AND 802.5 FEET RESPECTIVELY. TEST BORING B-3 (MADE IN THE TUSCARAWAS RIVER) PENETRATED TO A DEPTH OF 51.5 FEET, ELEVATION 801.7 FEET AND WAS TERMINATED AFTER PENETRATING IN EXCESS OF 41.5 FEET OF MATERIAL REQUIRING IN EXCESS OF 30 BLOWS PER FOOT IN THE STANDARD PENETRATION TEST IMMEDIATELY PRIOR TO TERMINATION. RUNNING SAND WHICH HEAVED IN THE AUGER FLIGHTS WAS ENCOUNTERED IN BORING B-3 AT 25.0, 35.0, 40.0, AND 50.0 FOOT DEPTHS, ELEVATIONS 828.2, 818.2, 813.2 AND 803.2 FEET RESPECTIVELY. TEST BORING B-4 (MADE IN THE GENERAL VICINITY OF THE REAR ABUTMENT) PENETRATED TO A DEPTH OF 81.5 FEET, ELEVATION 788.4 FEET AND WAS TERMINATED AFTER PENETRATING IN EXCESS OF 54 FEET OF MATERIAL REQUIRING IN EXCESS OF 30 BLOWS PER FOOT IN THE STANDARD PENETRATION TEST IMMEDIATELY PRIOR TO TERMINATION. RUNNING SAND WHICH HEAVED IN THE AUGER FLIGHTS WAS ENCOUNTERED IN BORING B-4 AT 30.0, 45.0, 55.0, 70.0 AND 80.0 FOOT DEPTHS, ELEVATIONS 839.9, 824.9, 814.9, 799.9 AND 789.9 FEET RESPECTIVELY.

BEDROCK SURFACE WAS NOT ENCOUNTERED IN ANY OF THE TEST BORINGS PERFORMED.

FREE WATER WAS OBSERVED AND MEASURED IN TEST BORING B-1 AND B-4 AT 15.0 AND 15.0 FOOT DEPTH RESPECTIVELY, ELEVATIONS 847.9 AND 854.9 FEET. TEST BORING B-2 AND B-3 WERE MADE IN THE TUSCARAWAS RIVER, NORMAL WATER ELEVATION 853.5 ± FEET. NON-PLASTIC MATERIAL WITH A HIGH WATER CONTENT WAS FOUND ABOVE THE FREE WATER LEVEL AT 5.0 FOOT DEPTH, ELEVATION 857.9 FEET.

-	Auger Boring Location - Plan View	H	HorizontalBar on Boring Log Indicates the Depth the Sample Was Taken
-	Press and/or Drive Sample and/or Core Boring Location - Plan View	X/Y/Z	Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test
TR	Top Of Rock	à.	X = Number of Blows for First 6 inches Y = Number of Blows for Second 6 inches Z = Number of Blows for Third 6 inches
W	Indicates Free Water Elevation	av.	

Indicates Static Water Elevation

SYMBOLS OF ROCK TYPES

	the second secon	211110000		
The second secon	Coal			Fire Clay or Underclay
	Weathered Mudstone			Weathered Sandstone
	Mudstone			Sandstone
	Claystone			Leached Dolomite
	Weathered Shale			Dolomite
	Shale			Leached Limestone
FEE	Weathered Siltstone			Limestone
	Siltstone			Boulders or Cobbles
			•	

GENERAL INFORMATION

DRIVE SAMPLE BORINGS - DRIVE-PRESS SAMPLE BORINGS

Drive sample borings are made by means of a rotary-type drill rig, employing a 2° 0.D., 1-3/8° 1.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140 pound hammer with a free fall of 30 inches. The number of blows required to drive the sampler 18 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., I-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by coninuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in three 6-inch increments, depth of press samples, field sample number sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of stregth and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that a sampler cannot be driven, a wash sample is produced for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

	12"	3	3"	2.9	0 mm	0.	42 mm	0.0)74 mm	0.005	mm
Boulders		Cobbles	,	Gravel	Coarse	Sand	Fine	Sand	SII+		Clay
	ŀ	· ·	1	No. 10	sieve	No. 40	sieve	No. 300	sieve	1	

NOTE: ALL AVAILABLE SOIL AND BEDROCK -INFORMATION WHICH MAY BE CONVENIENTLY SHOWN ON THE STRUCTURE FOUNDATION INVESTI-GATION SHEETS HAS BEEN SO REPORTED. ADD-TIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF MAY BE INSPECTED IN THE DISTRICT DEPUTY 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE BUREAU OF LOCATION AND DESIGN OR IN THE BRIDGE BUREAU AT 25, SOUTH FRONT STREET.

REVISED 7/ 6 /94

Note: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS-TESTING LABORATORY 1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. TUS-39-1302

OVER TUSCARAWAS RIVER SEC. TUS - 39-13.02

CHECKED BY REVIEWED BY DATE A.F. 5/27/92

M.R.S.

ms STR#1 C:\08059308\SITEPLAN 1=20 09:57 02/18/9

OG OF BORIN

Date Started 4/6/92 Sampler: Type SS Dia. 1 3/8

Water Elev. 847.9

Date Completed $\frac{4/7/92}{}$ Boring No. $\frac{B-1}{}$ Station & Offset 65+12, 62' RT. (REAR ABUT.) Surface Elev. 862.91

<u>i</u>		Ctd B	Rec. II c	88	° Description	Sample	-,-	Ph;	/sloc	Char				w C	SHTL Class
	Depth	Std. _(N) Pen.	LAT.	<u> </u>	<u> </u>	No.	Ağq	CS.	F.S.	Siit	Cĺġy	Lol	P.I.	W.C.	ISUAL
2.9	<u> </u>	AUGERED			TOPSOIL	<u> </u>	} _						1	1	
	2	AUCEDED	DDOMN	CANDV	CLAY (DRILLER'S DESCRIPTION)] _	_	-	_		-	-	· -	/ISUAL
	4	AUGERED	BROWN	SANDI	CEAT (DRIEDER O DECOME OF THE OWNER OWNE										
7.9			<u> </u>				9	5	49	35	11	NP	NP	27	A-4A
.4	6	1/2/2	BROWN	SANDY	SILT	1	1	50	27	13	4	NP	NP		A-1-B
1.9	8	1/2/4	BROWN	SILTY	GRAVELLY SAND	2	16	1	23	9	2	NP	NP		A-1-B
3.4	10	3/1/2	BROWN	SILTY	GRAVELLY SAND	3	25	41	1		1	NP	NP		A-1-B
1.9	10_	1/2/8	BROWN	SILTY	GRAVELLY SAND	4	25	36	28	10	1	NP	NP	i · i	A-1-A
0.4	12	6/7/8	BROWN	SILTY	SANDY GRAVEL	5	58	14	18	9				!!	VISUAL
8.9	14	13/16/11	BROWN	SANDY	GRAVEL	6	-	-	-	-	-	-	-	1	VISUAL
		10/10/10	1	SANDY	GRAVEL	7	-	-	-	-	-	-	_	10	ATONI
	16	1						,							
15.4	18			CENTRY	CODANEL	8	-	-	-	-	-	-	-	18	VISUAL
42 Q	20	16/16/18	BROWN	SANDY	GRAVEL										
TC . J	. E.		BROWN	SANDY	GRAVEL	9	-	-	-	-	-	-	_	9	VISUAL
40.4	22	13/19/22	DIVOR	oruio.							_		_	17	VISUAL
	24	16/18/22	BROWN	SANDY	GRAVEL	10	-	-	-	-	-	-		"	
37.9	۱ _	-			ALCER ELICHTS	11	_	_	_	-	-	_	-	17	VISUAI
	26	12/16/19	BROW	(SAND)	GRAVEL, SAND HEAVED IN AUGER FLIGHTS										
	28										ŀ			Ì	
32.9	30	₫				<u> </u>			1.5		١.	NP	NP	13	A-1-E
	7.5	12/15/22	2 GRAY	GRAVE	LLY SAND, SAND HEAVED IN AUGER FLIGHTS	12	40	40	15	4]	l nr	MF	13	7-1-1
	132														
	34														
327 .9	36		e l ens v	ODAVE	HITH CAND	13	. -] -	-	. -	_ _	-	-	24	VISUA
· 			4 GKAT	GKAVE	L WITH SAND			•							
	3	<u> </u>													
822	<u>.9 41</u>				<u> </u>	1.6		,	_	_ _	. _	14	VISUA
-	1	10/14/2	22 GRA	Y GRAVI	EL WITH SAND, SAND HEAVED IN AUGER FLIGHTS	14		-	_						
	13	*				1						i			
	4	4											'		
817	.9 4	6 18/23/	20 CDA	V CDAV	EL WITH SAND, SAND HEAVED IN AUGER FLIGHTS	15	ł	-	-	-	- •	- -	- -	12	VISU
		10/23/	ZB GKA	I GIVAV	LL HIM JAND, SAND III.										
	19	8													
812	2.9 5	ō				16			_	_	_	_ .	_ _	. 1	2 VISU
		18/30/	44 GRA	Y GRAV	EL WITH SAND, SAND HEAVED IN AUGER FLIGHTS	100	'	_]							
										,				ŀ	
ຂຄາ	7 0	4									-			١,	1 VISU
00.	ئا	22/34/	41 GR/	Y GRAV	/EL WITH SAND	17	7	-	-	-	-	-	- -	_ _	1 1130
		58													
					•										
80	2.9			4V 00=	WEI WITH SAND	1	В	-	-	-	-	-	-	- 1	2 VISU
		62 ^{15/40}	/42 GR	AT GKA	VEL WITH SAND										
79	7.9	64					,				_	_	_	_ .	3 VIS
	1	66 14/17	/39 GR	AY GRA	VEL WITH SAND, SAND HEAVED IN AUGER FLIGHTS	1	9	-	-	-	_				
		68													
		**			©				j						
1	92.9			44 00*	VEL WITH SAND, SAND HEAVED IN AUGER FLIGHTS		0]					-		10 VIS
7	91.4	72 12/17	/45 GF	AY GRA			٠.					•			
	<u> </u>	···			LBOTTOM OF BORING	-	•					•			

			A / 1 / Q 2		Type SS 67+55, 8' LT	Water Elev. 853.5 Surface Elev. 852.5										
ov De	pth Std. _(N) Pe	Rec. L)\$6	<u> </u>	escription		Sami	ole			Char			CS	ws	SHTL Class
	0		TT				No	Aĝo	c.s.	F.S.	sít	Clay	L.L.	Pala	Webs	CIGOO
	2			*												•
50.0	4 29/17/1	BROWN	SANDY GRA	VEL.	,			52	22	19	7	0	NP	NP	16	A-1-A
47.5	\Box			•	•			28	3 39	26	7	0	NP	NP	16	A-1-B
	6/6/8	BROWN	GRAVELLY	SAND						-			ND.	ND	1.4	A-1-B
- }	10/10/1	5 BROWN	SILTY GRA	VELLY SANI	D			3 1	5 40	33	.12	0	NP	NP	14	W-T-D
42.5	7/8/11	BROWN	GRAVELLY	SAND				1 3	9 17	36	8	0	NP	NP	20	A-1-B
40.0	12 175711							5 2	9 40	24	7	0	NP	NP	15	A-1-B
37.5	8/10/31	BROWN	GRAVELLY	SAND				, '		-		-				
	12/30/5	2 BROWN	GRAVEL WI	TH SAND			,	6 -	-	-	-	-	-	-	17	VISUAL
35.0	18	1 0004	(GRAVEL W	TH CAND				7 -	-	-	-	-	-	-	17	VISUAI
32.5	17/23/3 20	1	A GKWAEL MI	III SAND							1_				18	VISUA
L	22 21/27/3	4 BROW	N GRAVEL W	TH SAND				8 -	-	-	-					
030.01	24 16/17/	1	N GRAVEL W	TH SAND				9 -	_	-	-	-	-	-	16	VISUA
827.5		1		,	SAND HEAVED IN	AUGER FLIGHTS]	o -	. -	-	-	_	-	-	9	VISUA
.	28.	O BKOM	N GRAVEL W	III SAND	SAND HEAVED IN											
822.5	14/21/	24 BROW	N GRAVEL W	ITH SAND,S	SAND HEAVED IN	AUGER FLIGHTS		.1	• -	-	-	-	-	-	13	VISUA
-	32															
817.5	34												_	_	11	VISUA
	20/20/	24 BROW	N GRAVEL W	ITH SAND				12	- -	-	7	-	-	-	1 **	3.1.000
-	38									Ì						
812.5	40		e ·		•		,							. _	. 17	VISUA
	42 12/19/	27 BROW	IN GRAVEL W	IITH SAND,	SAND HEAVED IN	AUGER FLIGHTS		13						***************************************	-	
	44			**												
807.5	46 10 (04	20 220	MI ODBUFI 1	ITTU CAND				14	_ -	- -	. -	-		- -	- 14	VISU
	18/24/ 48	30 RKO	IN GRAVEL I	ITIU ƏVNA												
802.5				ś	·											
8U2.5	18/27	50 RRÖI	N GRAVEL 1	ITH SAND,	SAND HEAVED IN A	UGER FLIGHTS		15	<u>- ·</u>	- -	<u>· </u>	<u> </u>		<u>- </u>	- 12	VISU/

REVISEDZ/ 6 /94

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - TESTING LABORATORY
1600 WEST BROAD STREET COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. TUS-39-1302

OVER TUSCARAWAS RIVER
TUS-39-13.02

BORING DATA

TYPED BY CHECKED BY REVIEWED BY DATE

Date Started 3/30/92 Sampler: Type SS Dia. 1 3/8"

Date Completed 3/30/92

Boring No. B-3 Station & Offset 68+15, 8' LT. (FWD. PIER)

Surface Elev. 853.2

LIOV.	hah	Std. _(N) Pen.	## T#		Description		Sample					acte				SH
353 <u>.2</u>	0	N					No.	Ağq	ČS.	F.S.	Sílt	Clay	L.L.	P.I.	W.C.	Cla
350.7	2										,					
	4	17/10/33	BROWN GRAV	ELLY SAND		.*	. 1	33	30	28	9	0	NP	NP	18	A-1
348.2	6	11/42/22	BROWN SAND	Y GRAVEL			2	68	16	9	6	1.	NP	NP.	15	A-1
345.7	· 8	6/12/10	BROWN SILT				3	13	38	34	13	2	NP	NP	16	A-1
43.2	10					·	,						•			
40.7	12	12/18/23	BROWN SILT	Y GRAVELLY	SAND .		4	36	22	21	18	3	NP	NP.	20	
38.2	14	10/13/26	BROWN SILT	Y GRAVELLY	SAND		5	27	28	32	9	4	NP	NP	15	A-1
35.7	16 	10/22/50	BROWN GRAV	EL WITH SAM	D	,	6	-	-	-	_	-	_	-	19	VIS
33.2	18 20	15/22/38	BROWN GRAV	EL WITH SAM	D		7	-	-	-	_	-	-	-	19	VIS
	22	12/18/24	BROWN GRAV	'EL WITH SAM	D		8	-	-	-	-	-	-	-	20	VIS
30.7	24	15/22/38	BROWN GRAV	'EL WITH SAN	D		9	_	_	_	-	_	-	-	19	VIS
28.2	26				D,SAND HEAVED IN AUGER FLIGI	ATS	10	_		-	-	_	-	-	12	N12
	28	11/13/30	DROWN GIVE	EL WITH SA	/ / / / / / / / / / / / / / / / / / /	113	10									
23.2	30															
		17/31/46	BROWN GRAV	'EL WITH SAN	D	-	11	-	-	-	-	-	-	-	20	VIS
18.2	34															
- A	36	16/23/30	BROWN GRAV	EL WITH SAN	D,SAND HEAVED IN AUGER FLIG	нтѕ	12	-	- - -] - [-	-	- 	-	13	VIS
Q12 2	38 40	:														
U1J. C		12/16/24	BROWN GRAV	EL WITH SAN	D,SAND HEAVED IN AUGER FLIG	HTS	13	-		-	-	-	-	-	12	VIS
	44	W e		€		,										
B08.2	46	AUGERED	BROWN GRAV	EL WITH SAN	n		<u> </u>	_			_	_	_		_	VIS
	48	. AUGLILLU	SIVMIT UNIT	er will syll	.		_	_	-		-				_	
	50											·			,	
801.7	52-	21/24/38	BROWN GRAV	EL WITH SAN	D, SAND HEAVED IN AUGER FLIGH	ITS	14			L <u>-</u> ,	-				21	VIS
	I			- BOTTOM	OF BORING											

LOG OF	BORING
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Date Started 3/25/92 Sampler: Type SS Dia. 1 3/8"

Date Completed 3/26/92

Boring No. B-4 Station & Offset 70+00, 36' RT. (NORTH ABUT.)

Water Elev. 854.9'

Surface Elev. 869.91

		Std. _(N) Pen.	- 40- LQ	£9			Descri	<u>iption</u>			•	Sample			7		racto			1	SHTL
869 <u>.9</u> 869.4	0	AUGERED			L		TOPS01L					No.	Aĝq	LC'S	F ŝ.	Sft	Clay	L.L.	P.I.	W.C.	Cicas VISUA
	2		DDAFAI	C1 AV	AND C					• •										9	. Z.
	4	AUGERED	BKUNN	CLAT	AMD 2	พพท์ (ถ	ORILLER'	2 DE2CI	KIPITU	1)		_	-	-	-	-	-	-	_	-	VISUAI
864.9	6					. 			, <u></u>				ļ		<u> </u>	<u> </u>					
		2/4/8	BROWN	SANDY	Y SILT	'						1	0	1	34	40	25	26	1.	16	A-4A
	0									•			-								
59.9	10																	,			
	12	9/9/11	BROWN	SANDY	Y SILT							. 2	0	8	48	32	12	NP	NP	14	A-4A
	14		•		Ψ								,				·			, .	
54.9	16																				
52.4		8/8/12	BROWN	SILTY	Y GRAV	ELLY S	AND					3	39	20	22	14	5	NP	NP	17	A-1-E
	18	6/8/4	BROWN	GRAVE	EL WIT	H SAND)				-	4	_	_		_	_	-	_	14	VISUAL
49.9		,												1							
47.4	22	9/9/12	BROWN	GRAVE	EL WIT	H SAND)					5	-	_	-	-		-	-	21	VISUAL
est of sign	24	6/6/10	BROWN	GRAVE	EL WIT	H SAND)					6	_	_	_	-	_	_	_	14	VISUAL
44.9	26		•																	,	
42.4		8/10/12	BROWN	GRAVE	EL WIT	H SAND	I _.					7	-	-	-	-	-		- .	23	VISUA
***	28	18/26/30	BROWN	GRAVE	EL WIT	H SAND)					.8	_	_	_	_	_ '	-	-	17	VISUAL
39.9	30				-		•														
37.4	32	20/22/25	BROWN	GRAVE	EL WITH	H SAND	,SAND HE	EAVED I	n augei	R FLIGHT	S	9	-	-	-	-	-	-		9	VISUAI
	34	20/28/55	BROWN	GRAVE	EL WITH	H SAND	, -					10	-			_		-	-	18	VISUAL
34.9	36	15 (02 (52	2221	~~	~									,							
		16/23/60	BROWN	GKAVE	:F MTII	H SAND	1		Mark 7 7 2 5		of the second se	11	/ - ,	**	er webergen d					-23	VISUAI
	38	,																,			·
29.9	40	,					•		•												
·-	42	22/31/46	BROWN	GRAVE	L WITH	1 SAND						12	_	-		+	-	-	-	9	VISUA
	44																				
24.9	46						,														
		15/20/20	GRAY S	ANDY	GRAVEL	_,SAND	HEAVED	IN AUG	SER FL	GHTS		13	48	24	19	7	2	NP	NP	9	A-1-B
	48								,								·				
19.9	50																				
	52	20/30/47	GRAY G	RAVEL	. WITH	SAND				t		14	-	-	-		-	-	-	11	VISUAI
	54								٠.												
14.9	56	19/14/00	onav c	nave:	i sarar	CESIC	04 No ::=	A) (CO				3 F*								20	VTCII
	58	12/14/20	GKAY G	KAVEL	, WITH	SAND,	SAND HEA	aved in	AUGEF	FLIGH	S	15 ⁻	-	-	-	-	-	-	-	22	VISUA
		-				•															
09.9	1	16/21/50	GRAY G	DAVE	LITTU	CAND						16					_			16	VISUA
ŀ	62	10/ 71/ 20	ם ואחם	IV4 V E L	. WTIU	JANU						10	-	_	-	-	-	_	-	10	FISUAL
	64	1																			
04.9	66	22/28/31	GRAY G	DAVEI	Miln	CVNU	,					17			_	_	_	_	_	21	VISUA
	68	CC/ CO/ 31	uivi U	IVA I EL	, 4111	JANU						17	-	_	-	-			_	<u>_</u>	TAUM
00 0							1				•										
99.9		11/24/30	GRAV C	RAVEI	WITU	SAND 4	SAND HEA	V//E/D =	(E ALIAC:	ם ואויי	re	18	_	_			_	_	_	Q	VISUAI
}	72	11/ L4/ JU		.w. 7 L.L	. mill	ouin,	SHIND HEA	אא⊏ה וע	v AUGEI	. FLIGH	13	70		_		_				ر	TOUR
94.9	74																				
27.3	76	16/23/30	GRAY G	RAVEI	WITU	SAND						19	_	_	_	_	_	_	_	10	VISUAL
	78	10, 20, 30	GIVAL U	withl	. M. III	JAHU						13	_						-	10	TJUNI
ļ								00		OBING .	**********		ı			i	l.	. !	- 1		
	80							BOTTO	OM OF E	OKING -	/							į			

REVISED 7/6 /94

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - TESTING LABORATORY
1500 WEST BROAD STREET COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. TUS-39-1302 OVER TUSCARAWAS RIVER

TUS-39-13.02

BORING DATA CHECKED BY REVIEWED BY DATE
A. F. M,R,S. 5/27/92