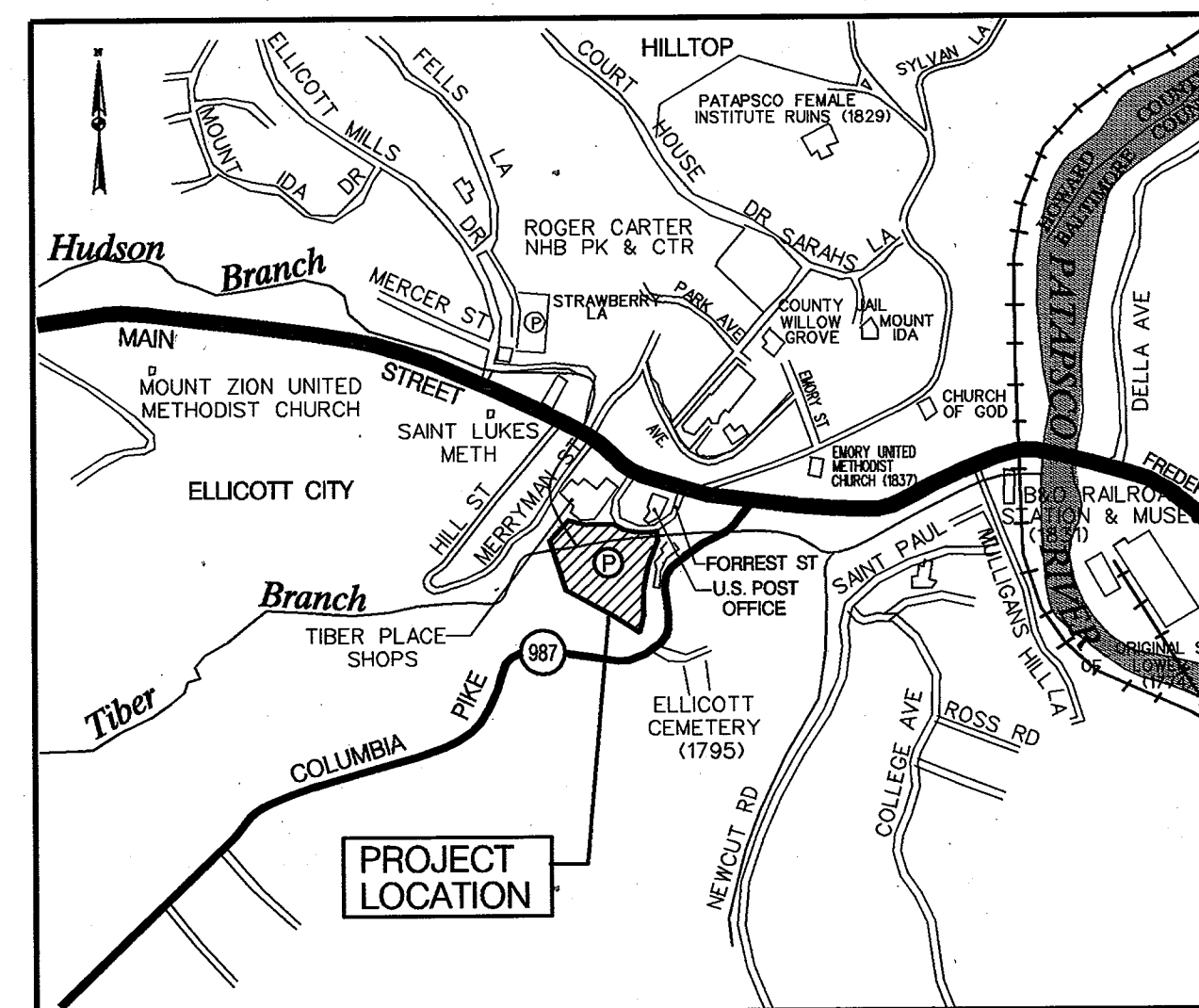


HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

SUPERSTRUCTURE REPLACEMENT AND
SUBSTRUCTURE REHABILITATION FOR THE
ELLICOTT CITY PARKING LOT CULVERT
OVER THE TIBER - HUDSON CHANNEL

CAPITAL PROJECT NO. B-3848



LOCATION MAP
SCALE 1" = 600'

GENERAL NOTES

- COORDINATES ARE BASED ON THE MARYLAND STATE GRID SYSTEM.
- THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ON THE PLANS ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION BEFORE STARTING CONSTRUCTION. NEITHER THE ENGINEER NOR THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS WARRANTS OR GUARANTEES THE COMPLETENESS OR CORRECTNESS OF THE INFORMATION SHOWN.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES. ANY DAMAGE OWING TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. CLEAR ALL UTILITIES BY A MINIMUM OF 6 INCHES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM OF 1929.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PLACE REGULATORY AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, THE CONTRACTOR SHALL ABIDE BY THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" AND THE SPECIAL PROVISIONS. IN THE EVENT OF ANY DISCREPANCY BETWEEN THESE TWO SOURCES, THE SPECIAL PROVISIONS SHALL GOVERN.
- STANDARD DETAILS FOR THIS CONTRACT SHALL BE THE HOWARD COUNTY STANDARD DETAILS AS SUPPLEMENTED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAILS.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN HEREON:
MISS UTILITY 1-800-257-7777.
BALTIMORE GAS & ELECTRIC CO., NEW BUSINESS AND CONSTRUCTION (410) 850-4620
COLONIAL PIPELINE COMPANY (410) 549-4128
HOWARD COUNTY BUREAU OF UTILITIES (410) 313-4982
HOWARD COUNTY TRAFFIC DIVISION (410) 313-2430
HOWARD COUNTY CABLE TV (410) 461-1156
- WATERWAY CONSTRUCTION PERMIT REQUIREMENTS**
TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM. THIS PROJECT HAS BEEN DETERMINED TO HAVE CLASS I WATERS. IN-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD MARCH 1ST THROUGH JUNE 15TH INCLUSIVE, DURING ANY YEAR. (REGIONAL LETTER OF AUTHORIZATION NO. 96-NT-0752)
- RIGHT-OF-WAY LINES AS SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES. FOR OFFICIAL FEE RIGHT-OF-WAY AND EASEMENT INFORMATION REFER TO THE APPROPRIATE RIGHT-OF-WAY PLANS.
- FOR THE CONVENIENCE AND INFORMATION OF BIDDERS, PRINTS OF PLANS OF EXISTING PERTINENT STRUCTURE (S) ARE INCLUDED WITH THIS CONTRACT. NO RESPONSIBILITY FOR THEIR ACCURACY OR COMPLETENESS IS ASSUMED BY HOWARD COUNTY. DIMENSIONS, DETAILS, ETC. AS SHOWN HEREON MAY NOT BE ASBUILT. INCLUDED FOR YOUR USE ARE SHEETS:
A. SHEET 2A OF 2: CAPITAL PROJECT D-1102
B. SHEETS 10, 11, 14, 15 & 18: CAPITAL PROJECT C-0219

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	GENERAL PLAN AND SECTIONAL ELEVATION
3	STAGE I CONSTRUCTION
4	STAGE II CONSTRUCTION
5	DEMOLITION PLAN AND DETAILS
6	GEOMETRIC LAYOUT
7	SLAB LAYOUT AND ELEVATION - SHEET 1
8	SLAB LAYOUT AND ELEVATION - SHEET 2
9	SECTIONS AND DETAILS
10	DETAILS
11	SCOUR REPAIR DETAIL
12	EROSION AND SEDIMENT CONTROL

CERTIFICATION BY THE OWNER/DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

Rudolph J. Jepsen
SIGNATURE OF THE OWNER/DEVELOPER

7/30/97
DATE

CERTIFICATION BY THE ENGINEER

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Stephen M. Muth
SIGNATURE OF THE ENGINEER

7-28-97
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

APPROVED *John B. Johnson* DATE 8/1/97
HOWARD S.C.D.

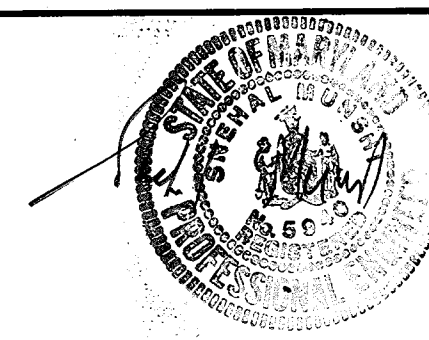
Clayton Simmons DATE 8/1/97
SIGNATURE
NATURAL RESOURCES CONSERVATION SERVICE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Oliver M. Thompson 8/13/97
DIRECTOR OF PUBLIC WORKS DATE

Ed L. Lauer 8/13/97
CHIEF, BUREAU OF ENGINEERING DATE

JDCI
CONSULTING ENGINEERS
COLUMBIA, MARYLAND



DES: F.R.

DRN: E.V.C.

CHK: T.N.G.

DATE: 7/28/97

BY	NO.	DATE

ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH

TITLE SHEET

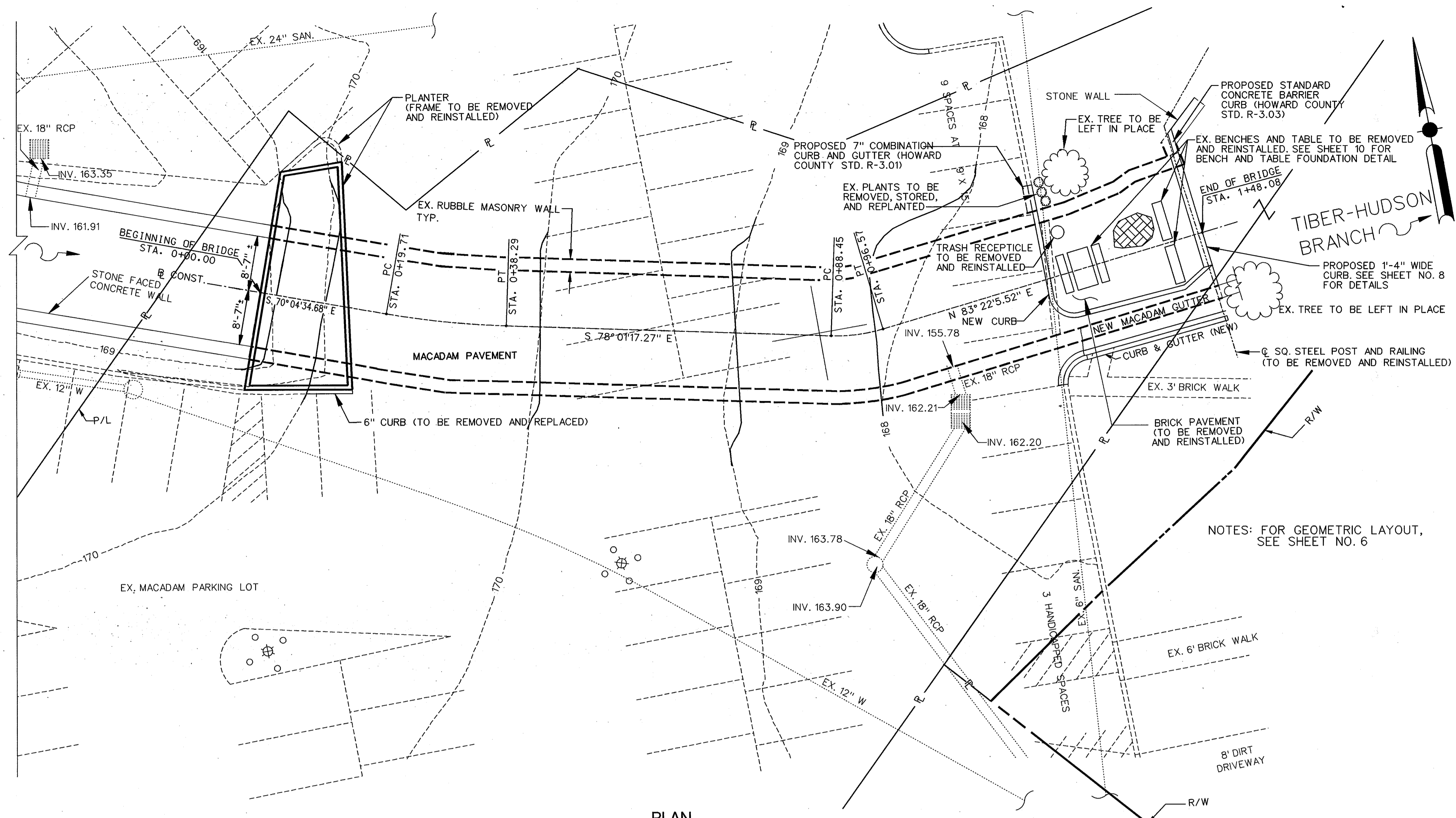
CAPITAL PROJECT No. B-3848

SCALE
AS SHOWN

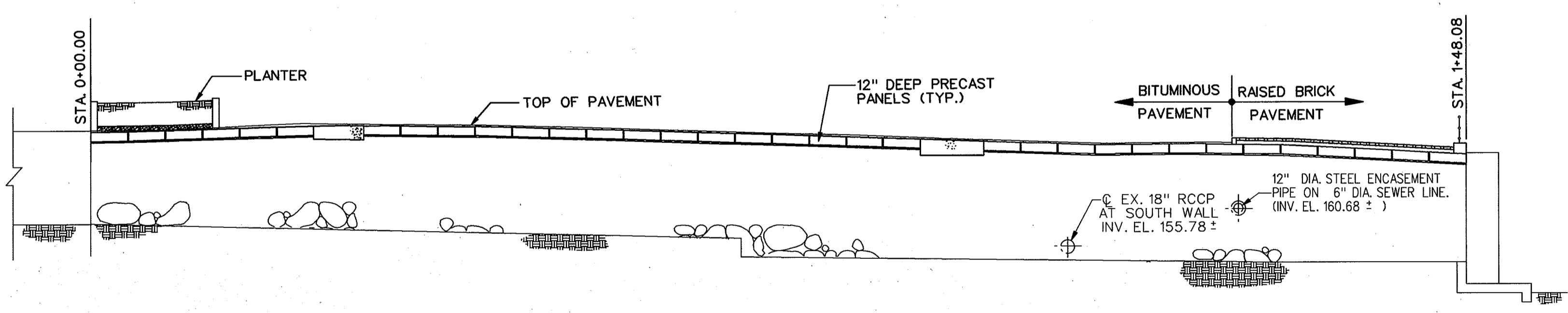
SHEET
1 OF 12

C-1821G 2 of 4181

B-1077-01



PLAN
SCALE 1" = 10'



SECTIONAL ELEVATION
SCALE 1" = 10'

GENERAL NOTES

- SPECIFICATIONS:**
- HOWARD COUNTY VOLUME IV DESIGN MANUAL, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION DATED OCTOBER, 1990.
 - MD. SHA SPECIFICATIONS DATED OCTOBER, 1993
 - REVISIONS THEREOF AND ADDITIONS THERETO AND SPECIAL PROVISIONS FOR MATERIALS AND CONSTRUCTION
- AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1996 FOR DESIGN, INCLUDING ALL INTERIM SPECIFICATIONS.
- CONCRETE DESIGN: SERVICE LOAD DESIGN METHOD $f_c = 1,200$ PSI FOR CONCRETE OTHER THAN PRESTRESSED CONCRETE.
- REINFORCING STEEL DESIGN: $f_s = 24,000$ PSI.
- LOADING:** HS-27, WITH PROVISIONS FOR FUTURE 2" WEARING SURFACE.
- CAST-IN-PLACE CONCRETE:** CONCRETE CURBS ON SUPERSTRUCTURE, SLABS AND SLAB BEARINGS SHALL BE MIX NO. 6 (4,500 PSI). SEE SPECIAL PROVISIONS. ALL OTHER CAST-IN-PLACE STRUCTURE CONCRETE SHALL BE MIX NO. 3 (3,500 PSI).
- PRESTRESSED CONCRETE:** CONCRETE FOR PRESTRESSED SLABS SHALL HAVE A STRENGTH $f'c = 6,000$ PSI AND A STRENGTH $f'ci = 5,000$ PSI AT TRANSFER OF PRESTRESS.
- ONE 21-FT LONG SLAB SHALL BE SUBJECTED TO A TEST LOADING WHICH PRODUCES A MOMENT OF 207 KIP-FT AT MIDSPAN. SEE SECTION 421.03.15 OF THE SPECIFICATIONS.
- PRESTRESSED STEEL:** PRESTRESSING STEEL SHALL BE 1/2" SEVEN-WIRE, STRESS RELIEVED STRANDS CONFORMING TO AASHTO M-203, GRADE 270.
- PRETENSIONING:** EACH 1/2" STRAND SHALL BE PRETENSIONED TO 28,900 LBS. (0.70 f's), HAVE AN ULTIMATE STRENGTH OF 41,300 LBS, AND A YIELD STRENGTH OF 35,100 LBS.
- REINFORCING STEEL:** ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60. MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS OTHERWISE NOTED. ALL SPLICES NOT SHOWN SHALL BE LAPPED AS PER LAP CHART SHOWN ON SHEET NO. 10
- FOR TIES AND STIRRUPS: STANDARD ACI BENDING TOLERANCES ARE MODIFIED TO PLUS (+) ZERO INCHES, MINUS (-) NORMAL ACI BENDING TOLERANCES.
- REINFORCING STEEL IN THE FOLLOWING AREAS SHALL BE EPOXY COATED:
ALL REINFORCING STEEL EXCEPT PRESTRESSING STEEL.
- KEYS:** ALL KEYS ARE NOMINAL SIZE.
- EXISTING STRUCTURE:** EXISTING STRUCTURE SHOWN IN DASHED LINES. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND ELEVATIONS BEFORE FABRICATION OF PRECAST PANELS.

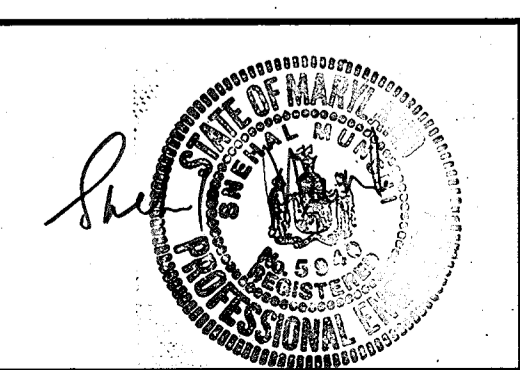
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Alan M. ... 8/13/97
DIRECTOR OF PUBLIC WORKS DATE

Ed. Calve 8/13/97
CHIEF, BUREAU OF ENGINEERING DATE

Robert ... 8/13/97
CHIEF, DIVISION OF TRANSPORTATION, DATE
PROJECTS & WATERSHED MANAGEMENT

EDCI
CONSULTING ENGINEERS
COLUMBIA, MARYLAND



DES: F.R.				
DRN: E.V.C./T.V.				
CHK: T.N.G.				
DATE: 7/28/97	BY:	NO.		DATE

ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH

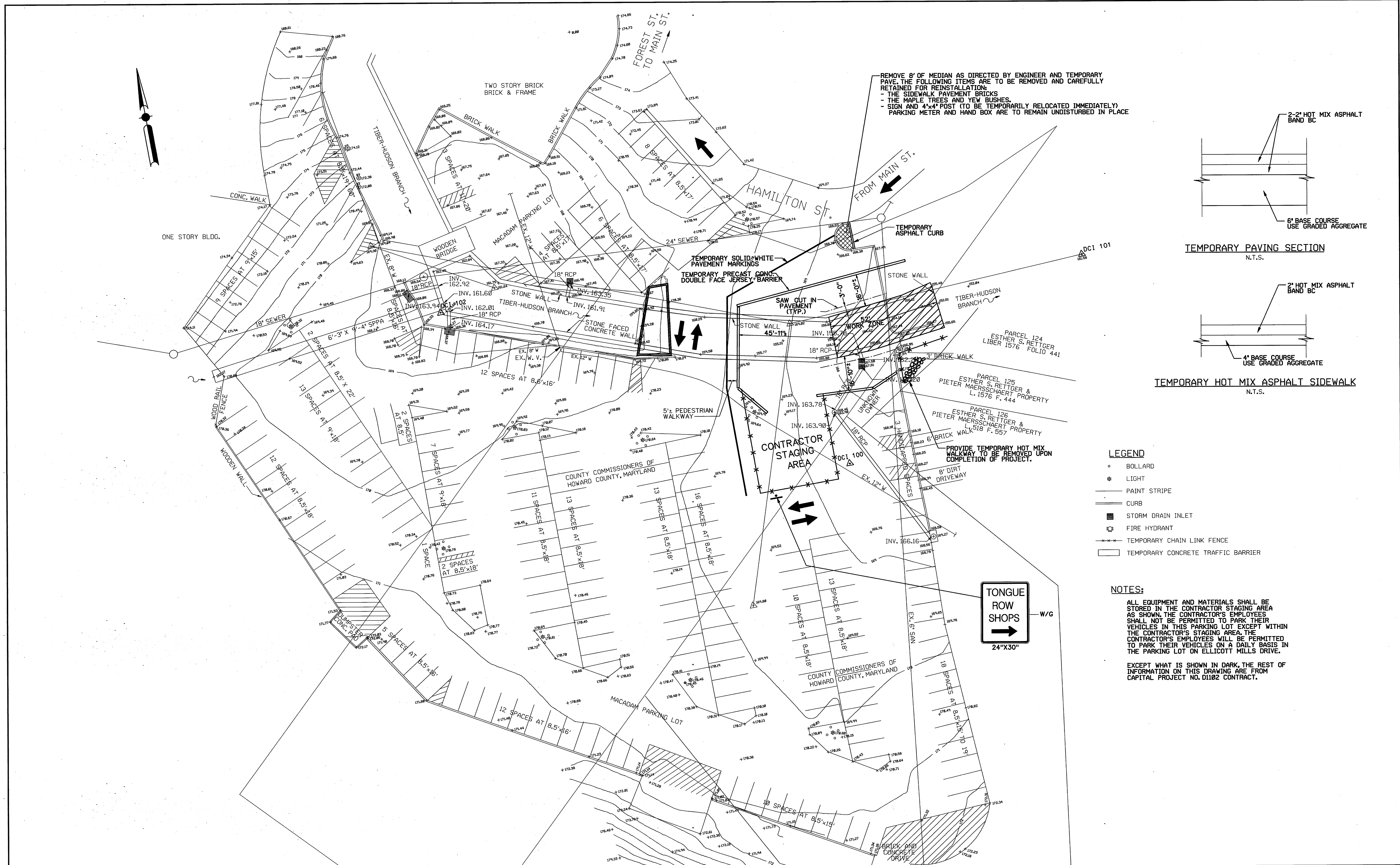
GENERAL PLAN AND ELEVATION

CAPITAL PROJECT No. B-3848

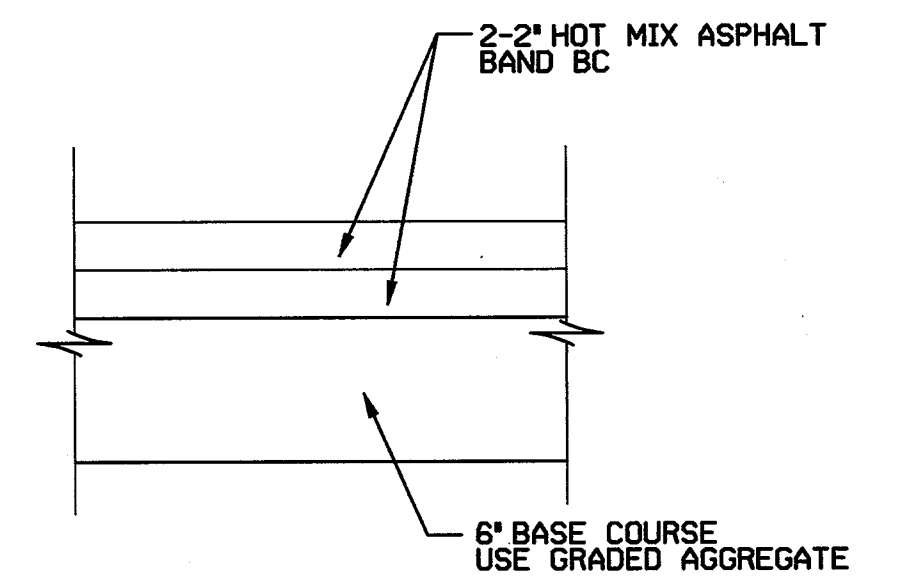
SCALE AS SHOWN

SHEET 2 OF 12

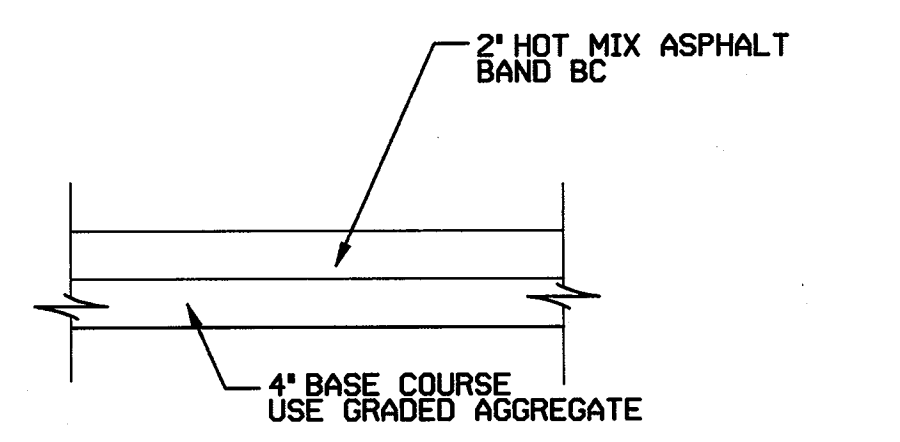
B1077-02



REMOVE 8' OF MEDIAN AS DIRECTED BY ENGINEER AND TEMPORARY PAVE. THE FOLLOWING ITEMS ARE TO BE REMOVED AND CAREFULLY RETAINED FOR REINSTALLATION:
 - THE SIDEWALK PAVEMENT BRICKS
 - THE MAPLE TREES AND YEW BUSHES.
 - SIGN AND 4"x4" POST (TO BE TEMPORARILY RELOCATED IMMEDIATELY)
 PARKING METER AND HAND BOX ARE TO REMAIN UNDISTURBED IN PLACE



TEMPORARY PAVING SECTION
N.T.S.



TEMPORARY HOT MIX ASPHALT SIDEWALK
N.T.S.

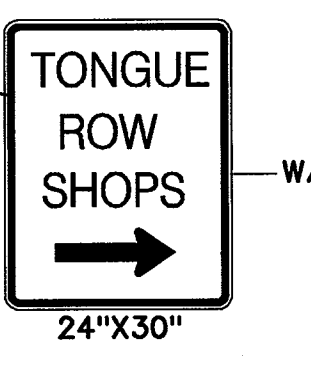
LEGEND

- BOLLARD
- ⊛ LIGHT
- PAINT STRIPE
- CURB
- STORM DRAIN INLET
- ⊕ FIRE HYDRANT
- TEMPORARY CHAIN LINK FENCE
- TEMPORARY CONCRETE TRAFFIC BARRIER

NOTES:

ALL EQUIPMENT AND MATERIALS SHALL BE STORED IN THE CONTRACTOR STAGING AREA AS SHOWN. THE CONTRACTOR'S EMPLOYEES SHALL NOT BE PERMITTED TO PARK THEIR VEHICLES IN THIS PARKING LOT EXCEPT WITHIN THE CONTRACTOR'S STAGING AREA. THE CONTRACTOR'S EMPLOYEES WILL BE PERMITTED TO PARK THEIR VEHICLES ON A DAILY BASIS IN THE PARKING LOT ON ELLICOTT MILLS DRIVE.

EXCEPT WHAT IS SHOWN IN DARK, THE REST OF INFORMATION ON THIS DRAWING ARE FROM CAPITAL PROJECT NO. D1102 CONTRACT.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

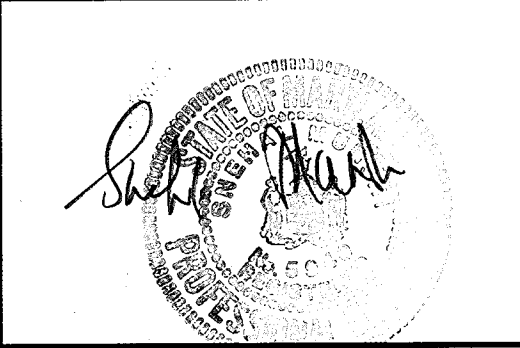
Alan M. Denson 8/13/97
Acting DIRECTOR OF PUBLIC WORKS DATE

Ed. L. Lala 8/13/97
Acting CHIEF, BUREAU OF ENGINEERING DATE

Andrew M. Daniels 8-13-97
CHIEF, BUREAU OF HIGHWAYS DATE

Elizabeth Anderson Lala 8/13/97
CHIEF, DIVISION OF TRANSPORTATION, DATE
PROJECTS & WATERSHED MANAGEMENT

DCI
CONSULTING ENGINEERS
COLUMBIA, MARYLAND



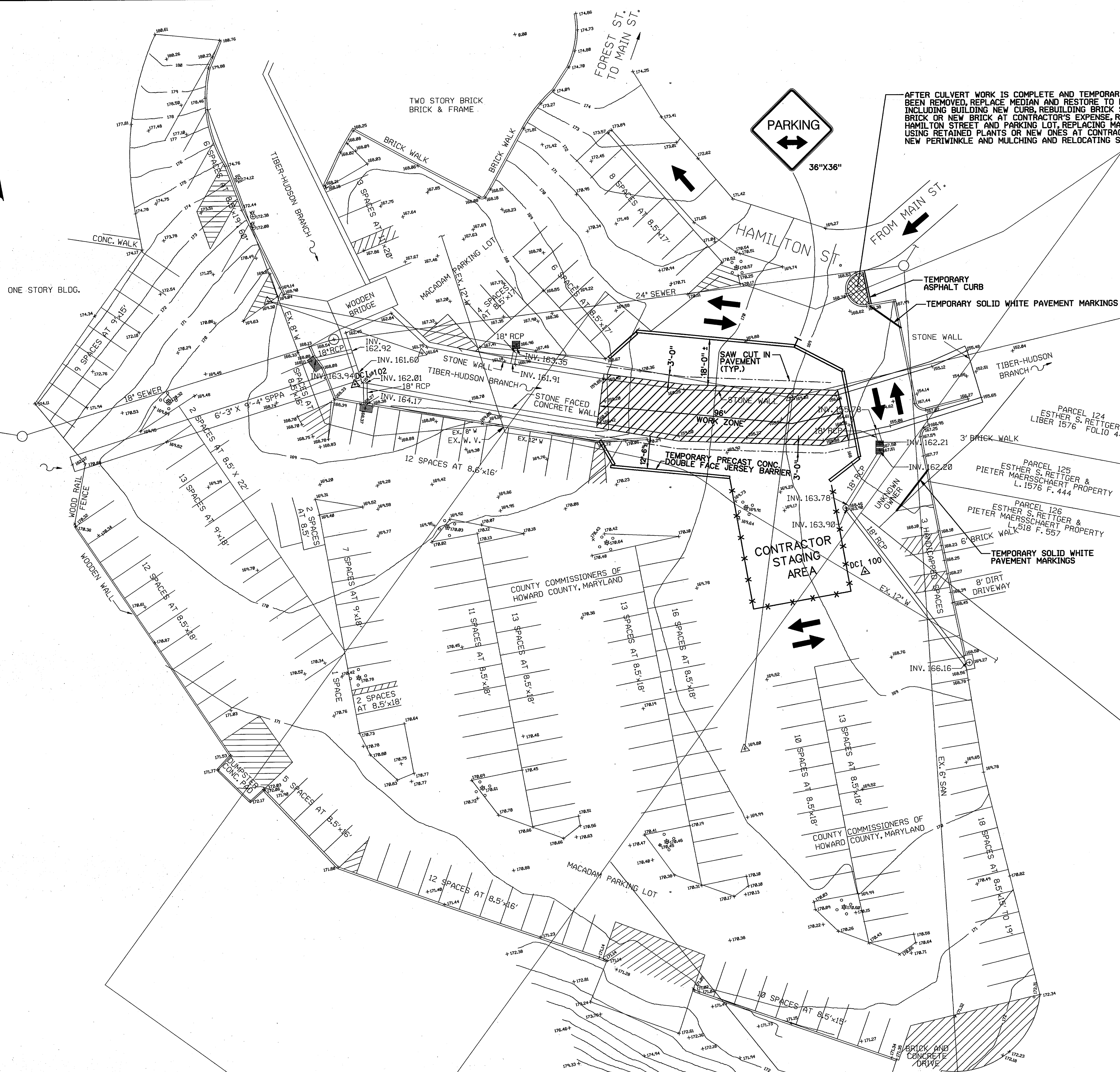
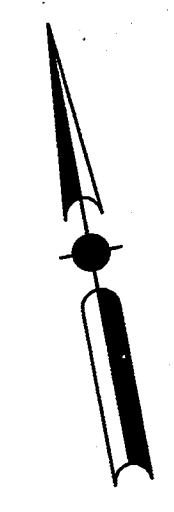
DES:	R.L.S.				
DRN:	E.V.C./T.V.				
CHK:	R.L.S.				
DATE:	7/28/97	BY:	NO.		DATE

ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH
STAGE I CONSTRUCTION
CAPITAL PROJECT No. B-3848

SCALE
1" = 20'

SHEET
3 OF 12

B1077-03



AFTER CULVERT WORK IS COMPLETE AND TEMPORARY CONCRETE BARRIERS HAVE BEEN REMOVED, REPLACE MEDIAN AND RESTORE TO PRECONSTRUCTION CONDITION, INCLUDING BUILDING NEW CURB, REBUILDING BRICK SIDEWALK USING RETAINED BRICK OR NEW BRICK AT CONTRACTOR'S EXPENSE, REPAIRING PAVEMENT IN HAMILTON STREET AND PARKING LOT, REPLACING MAPLE TREES AND YEW BUSHES USING RETAINED PLANTS OR NEW ONES AT CONTRACTOR'S EXPENSE, PLANTING NEW PERIWINKLE AND MULCHING AND RELOCATING SIGN.

LEGEND

- BOLLARD
- ☆ LIGHT
- PAINT STRIPE
- CURB
- STORM DRAIN INLET
- ⊕ FIRE HYDRANT
- TEMPORARY CHAIN LINK FENCE
- ▭ TEMPORARY CONCRETE TRAFFIC BARRIER

NOTES:

- 1) ALL EQUIPMENT AND MATERIALS SHALL BE STORED IN THE CONTRACTOR STAGING AREA AS SHOWN. THE CONTRACTOR'S EMPLOYEES SHALL NOT BE PERMITTED TO PARK THEIR VEHICLES IN THIS PARKING LOT EXCEPT WITHIN THE CONTRACTOR'S STAGING AREA. THE CONTRACTOR'S EMPLOYEES WILL BE PERMITTED TO PARK THEIR VEHICLES ON A DAILY BASIS IN THE PARKING LOT ON ELLICOTT MILLS DRIVE.
- 2) UPON COMPLETION OF THIS PHASE THE CONTRACTOR SHALL REMOVE ALL TEMPORARY PAVEMENT MARKINGS AND RESTORE PARKING LOT TO ITS ORIGINAL CONFIGURATION.
- 3) EXCEPT WHAT IS SHOWN IN DARK, ALL OTHER INFORMATION SHOWN ON THIS DRAWING ARE FROM CAPITAL PROJECT NO. D1102 CONTRACT.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

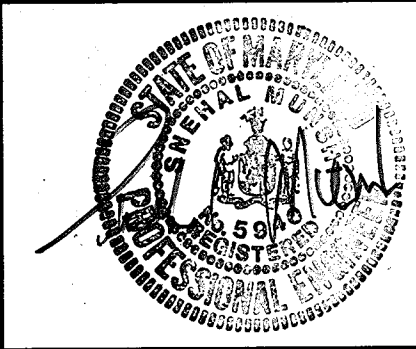
Calvin M. Deagan 8/13/97
DIRECTOR OF PUBLIC WORKS DATE

Robert M. Dandy 8-13-97
CHIEF, BUREAU OF HIGHWAYS DATE

Sal Calca 8/13/97
CHIEF, BUREAU OF ENGINEERING DATE

Elizabeth Anderson Calca 8/13/97
CHIEF, DIVISION OF TRANSPORTATION, DATE
PROJECTS & WATERSHED MANAGEMENT

JDCJ
CONSULTING ENGINEERS
COLUMBIA, MARYLAND



DES: R.L.S.			
DRN: E.V.C./T.V.			
CHK: R.L.S.			
DATE: 7/28/97	BY	NO.	DATE

ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH

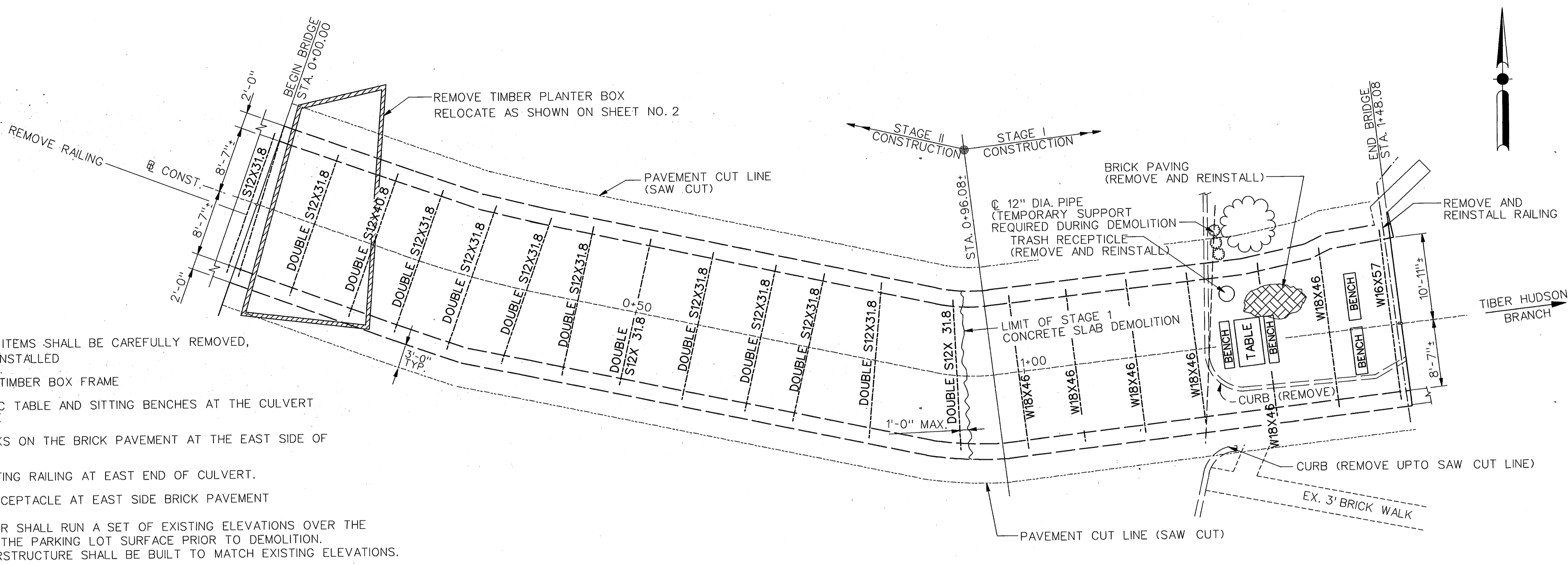
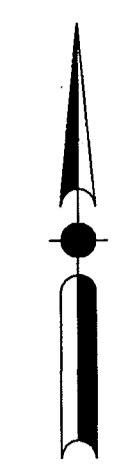
STAGE II CONSTRUCTION

CAPITAL PROJECT No. B-3848

SCALE
1" = 20'

SHEET
4 OF 12

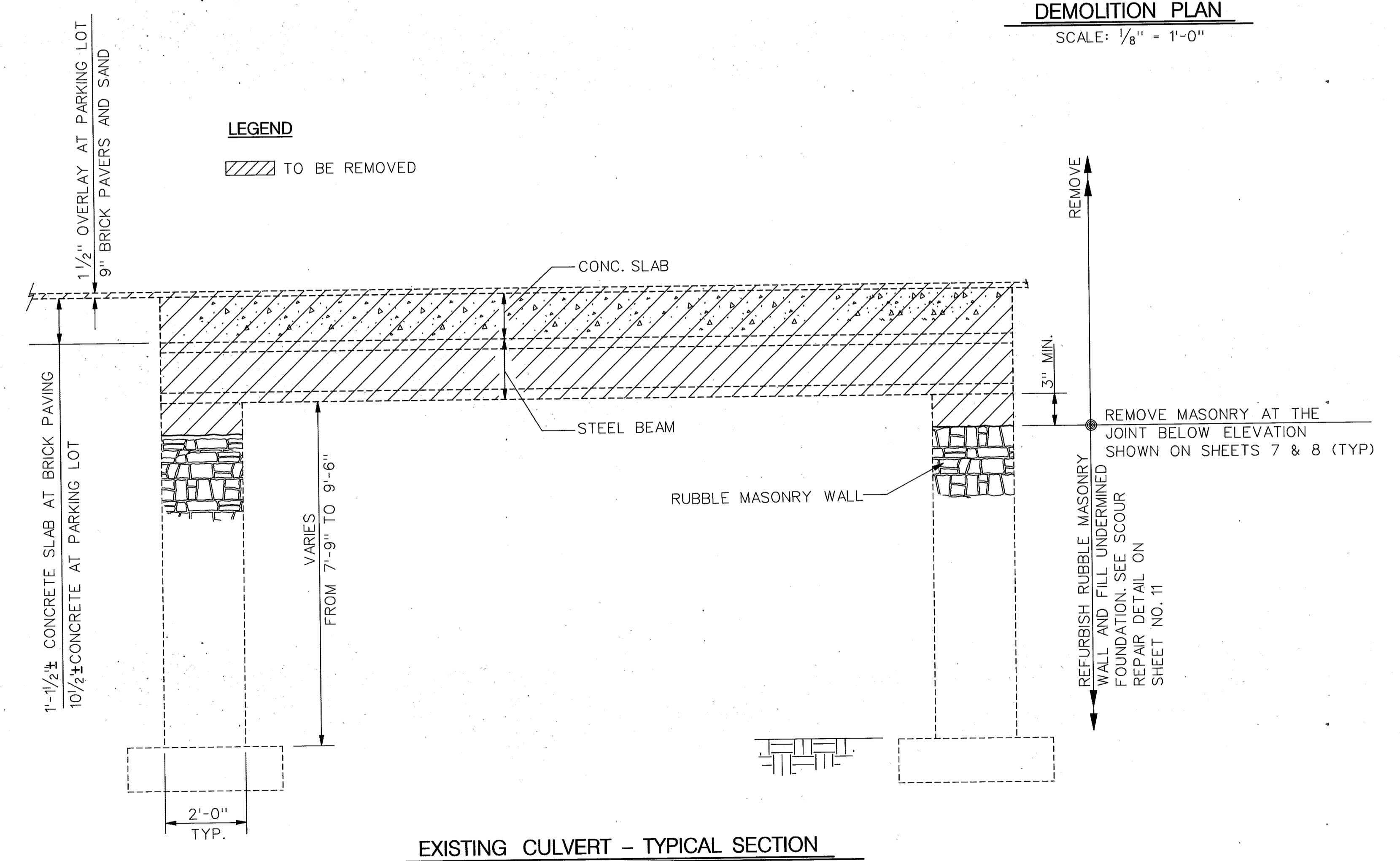
B1077-04



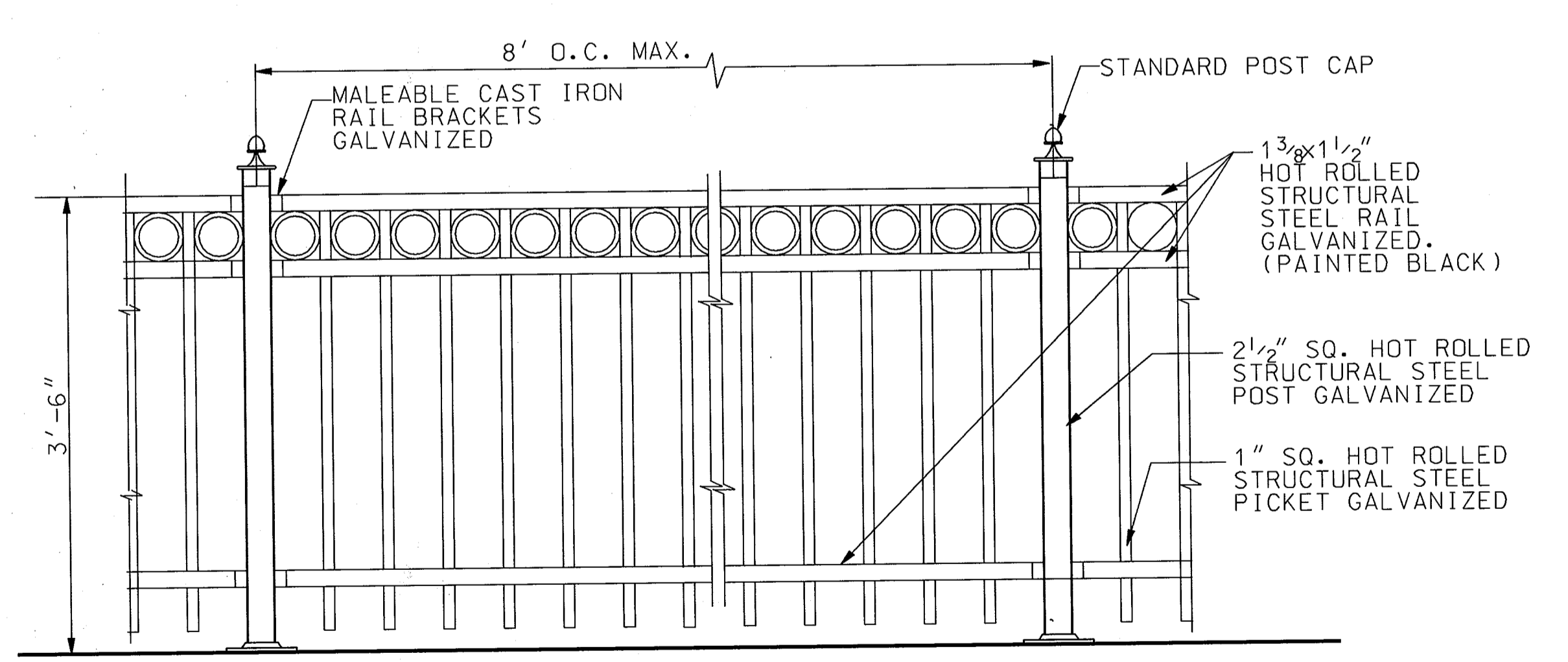
- NOTES:**
- THE FOLLOWING ITEMS SHALL BE CAREFULLY REMOVED, STORED AND REINSTALLED
 - PLANTER TIMBER BOX FRAME
 - THE PICNIC TABLE AND SITTING BENCHES AT THE CULVERT EAST SIDE
 - THE BRICKS ON THE BRICK PAVEMENT AT THE EAST SIDE OF CULVERT
 - THE EXISTING RAILING AT EAST END OF CULVERT.
 - TRASH RECEPTACLE AT EAST SIDE BRICK PAVEMENT
 - THE CONTRACTOR SHALL RUN A SET OF EXISTING ELEVATIONS OVER THE ABUTMENTS ON THE PARKING LOT SURFACE PRIOR TO DEMOLITION. THE NEW SUPERSTRUCTURE SHALL BE BUILT TO MATCH EXISTING ELEVATIONS.

DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

LEGEND
 TO BE REMOVED



EXISTING CULVERT - TYPICAL SECTION
SCALE: 1/2" = 1'-0"



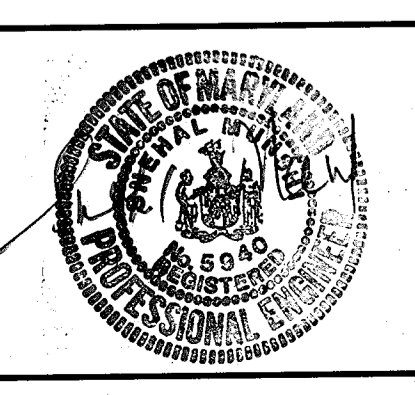
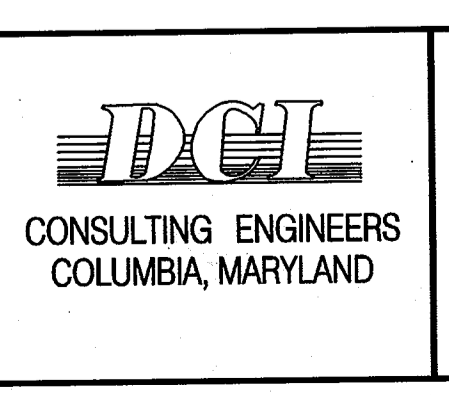
EXISTING RAILING AT CULVERT EAST END
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Alma M. ... 8/13/97
 Director of Public Works
 Chief, Bureau of Highways

Elizabeth ... 8/13/97
 Chief, Bureau of Engineering

... 8/13/97
 Chief, Division of Transportation
 Projects & Watershed Management



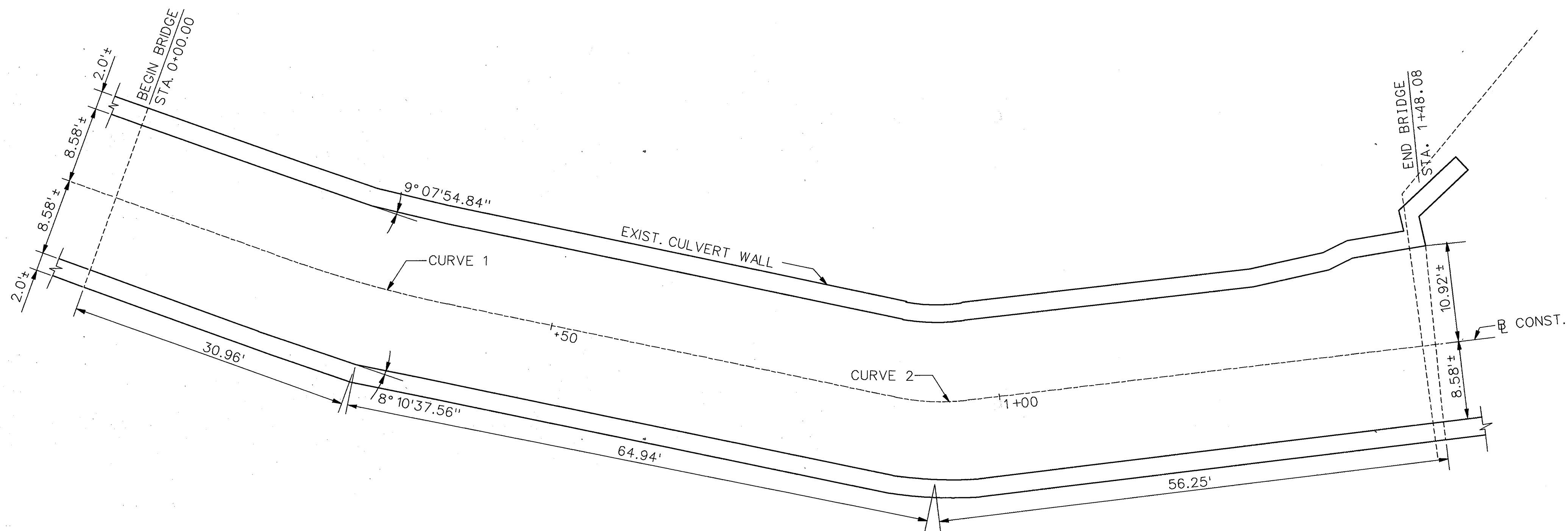
DES: F.R.			
DRN: E.V.C./T.V.			
CHK: T.N.G.			
DATE: 7/28/97	BY:	NO.:	DATE:

ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH

DEMOLITION PLAN AND DETAILS

CAPITAL PROJECT No. B-3848
 81077-05

SCALE AS SHOWN
 SHEET 5 OF 12



CURVE 1 DATA

Δ = 07° 56' 42.59"
 Dc = 42° 45' 29.55"
 R = 134.00'
 T = 9.31'
 L = 18.58'
 E = 0.32'

CURVE 2 DATA

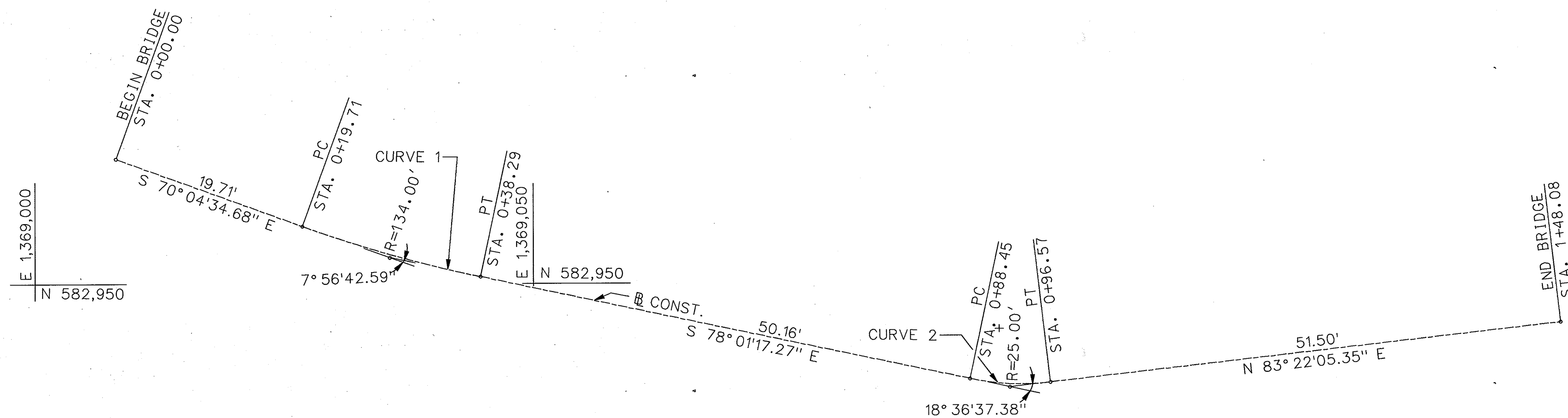
Δ = 18° 36' 37.38"
 Dc = 229° 11' 02.40"
 R = 25.00'
 T = 4.10'
 L = 8.12'
 E = 0.33'

CULVERT PLAN

SCALE: 1/8"=1'-0"

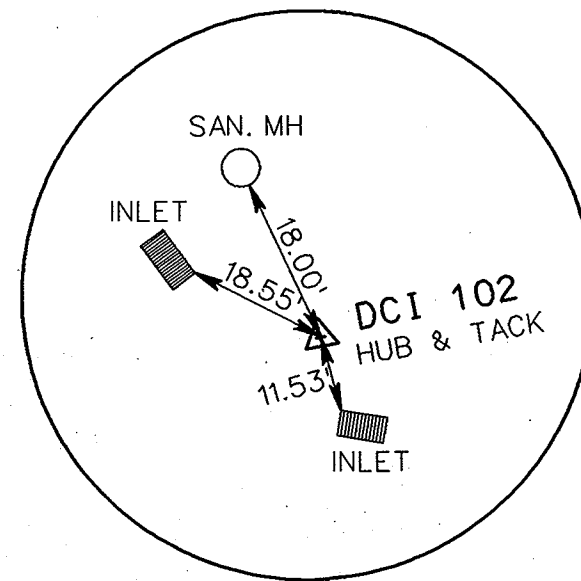
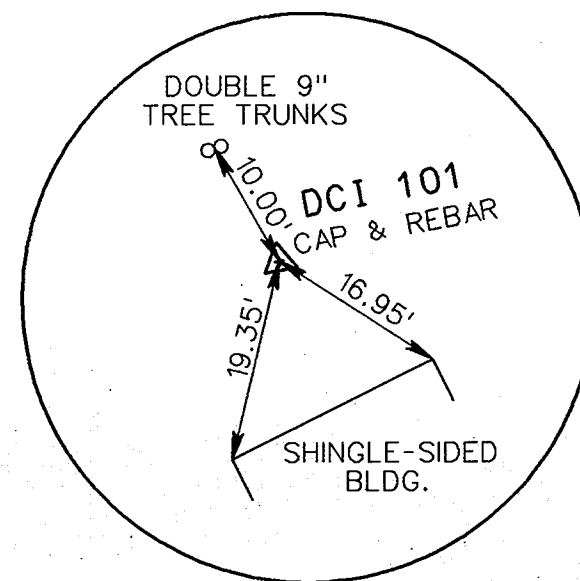
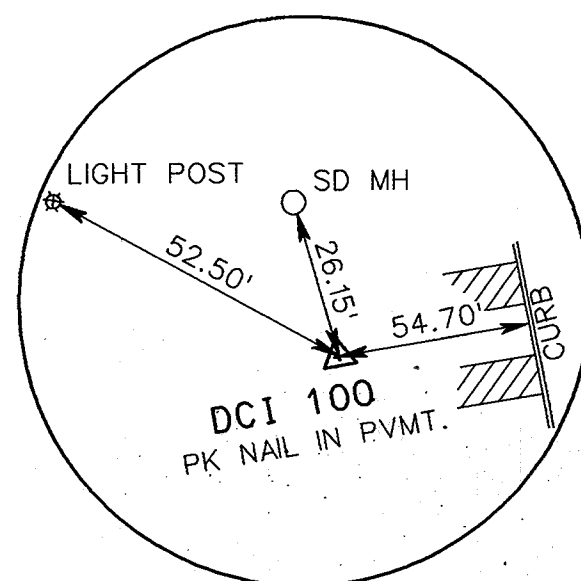
LOCATION	COORDINATES	
	NORTHING	EASTING
⊠ STA. 0+00.00	582,948.9030	1,369,003.3950
⊠ STA. 0+19.71	582,942.1868	1,369,021.9245
⊠ STA. 0+38.29	582,937.0843	1,369,039.7764
⊠ STA. 0+88.45	582,926.6731	1,369,088.8474
⊠ STA. 0+96.57	582,926.2960	1,369,096.9233
⊠ STA. 1+48.08	582,932.2440	1,369,148.0810
DCI 100	582,864.88	1,369,9091.7876
DCI 101	582,945.59	1,369,9221.83
DCI 102	582,974.18	1,368,8909.2060

NOTE: SEE SHEETS NO. 3 AND 4 FOR DCI100, DCI101
 DCI102 LOCATION ON PLAN.



GEOMETRIC LAYOUT OF BASELINE OF CONSTRUCTION

SCALE: 1/8"=1'-0"



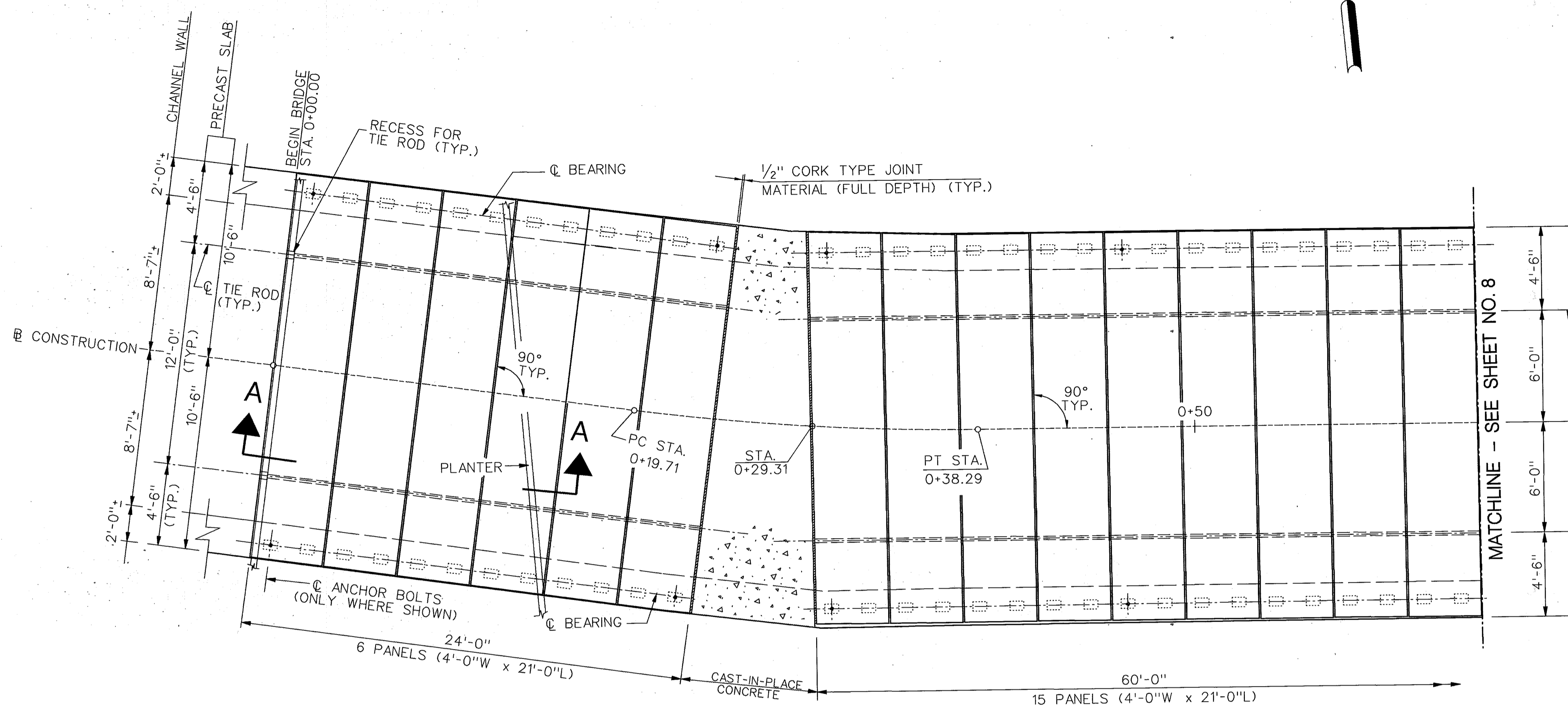
E 1,369,050
 N 582,900

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director: *Calvin M. [Signature]* 8/13/97
 Chief, Bureau of Engineering: *Elizabeth [Signature]* 8/13/97
 Chief, Bureau of Highways: *[Signature]* 8-13-97
 Chief, Division of Transportation, Projects & Watershed Management: *[Signature]* 8/13/97

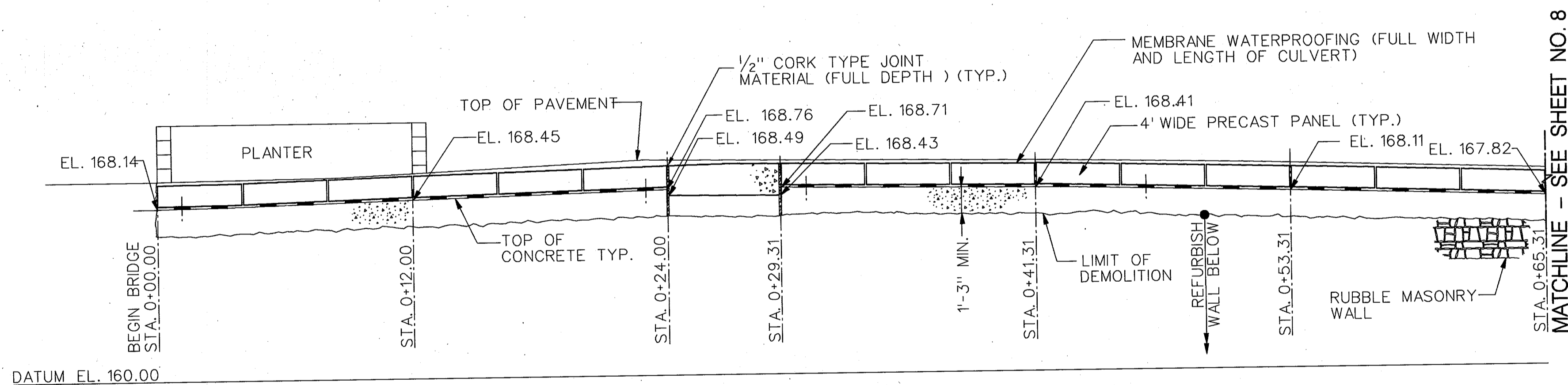
JDCJ
 CONSULTING ENGINEERS
 COLUMBIA, MARYLAND
[Signature]

DES: F.R.			
DRN: E.V.C./T.V.			
CHK: T.N.G.			
DATE: 7/28/97	BY	NO.	DATE

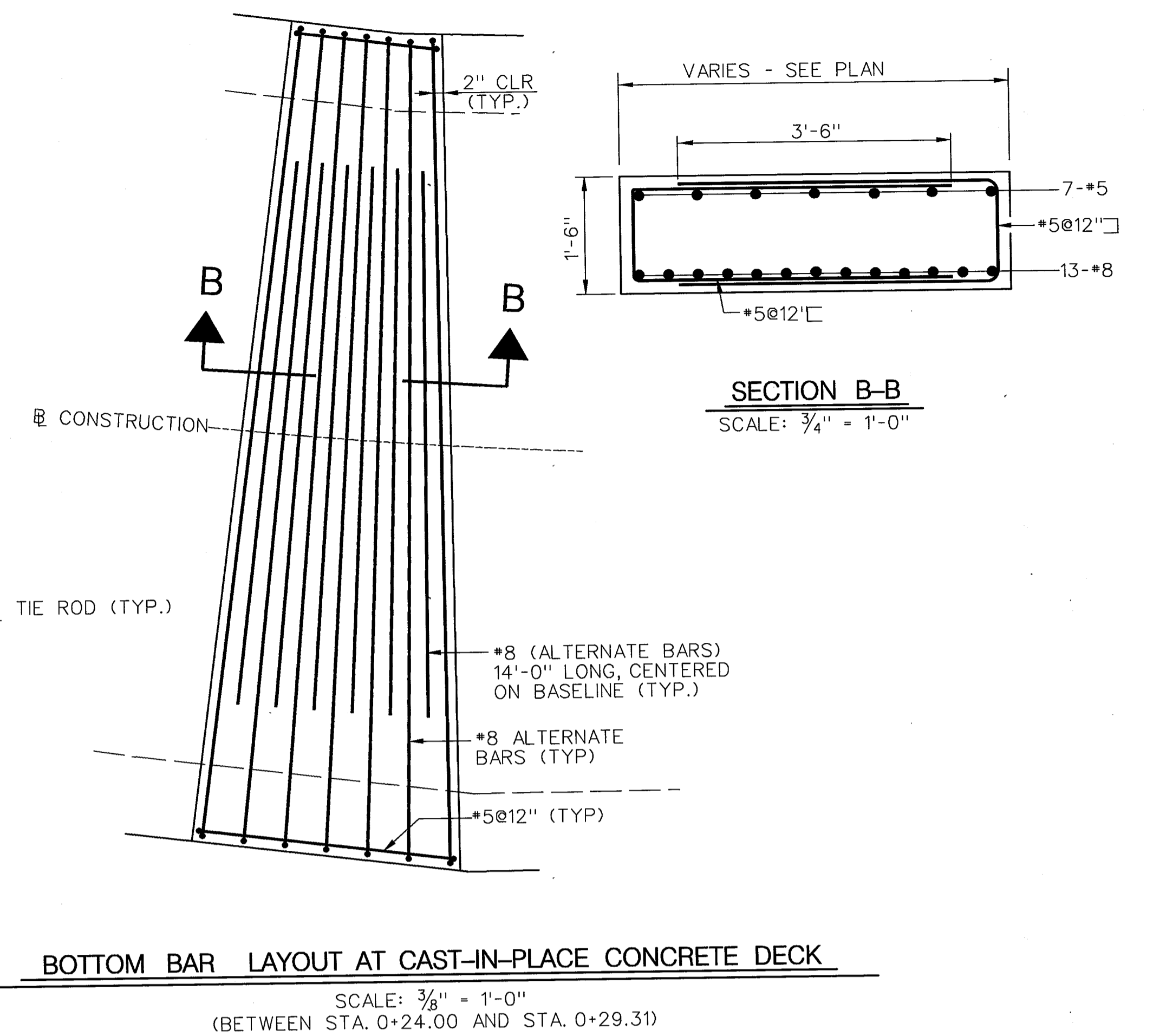
ELLICOTT CITY PARKING LOT CULVERT OVER
 TIBER - HUDSON BRANCH
GEOMETRIC LAYOUT
 CAPITAL PROJECT No. B-3848
 SCALE AS SHOWN
 SHEET 6 OF 12



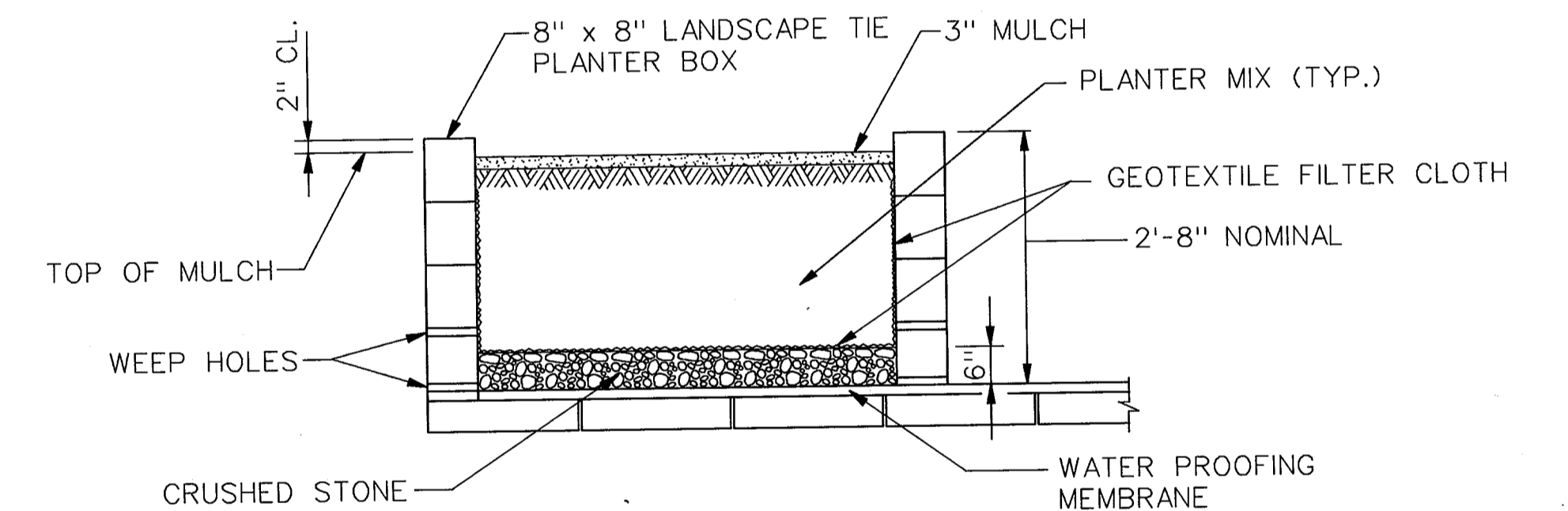
SLAB LAYOUT
SCALE: 1/4" = 1'-0"



SECTIONAL ELEVATION ALONG BASELINE
SCALE: 1/4" = 1'-0"



BOTTOM BAR LAYOUT AT CAST-IN-PLACE CONCRETE DECK
SCALE: 3/8" = 1'-0"
(BETWEEN STA. 0+24.00 AND STA. 0+29.31)



NOTE: TIMBER BOX SHALL BE REMOVED AND REINSTALLED AFTER INSTALLATION OF PRECAST PANELS. TIMBER BOX SHALL BE REINSTALLED TO ALIGN WITH EDGE OF NEW CULVERT AS SHOWN.

SECTION A-A
NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL BEARING PAD ELEVATIONS FROM THE TOP OF EXISTING PAVEMENT BEFORE PLACING CONCRETE SEAT.
2. FOR GENERAL NOTES, SEE SHEET NO. 9.
3. FOR BEAM BEARING DETAILS, SEE SHEET NO. 9.
4. FOR TYPICAL PRECAST DECK SECTION, SEE SHEET NO. 9.
5. THE BEARING ELEVATIONS SHOWN ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL RUN A SET OF EXISTING ELEVATIONS OF THE PARKING LOT SURFACE PRIOR TO DEMOLITION AND ADJUST THE BEARING SEAT ELEVATIONS TO MATCH IT.
6. THE CAST-IN-PLACE CONCRETE DECK SHALL NOT BE POURED UNTIL ADJACENT PRECAST SLAB UNITS ARE COMPLETE IN PLACE.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Clayton M. Dancy 8/13/97
DIRECTOR OF PUBLIC WORKS DATE

Robert M. Dancy 8-13-97
CHIEF, BUREAU OF HIGHWAYS DATE

Robert M. Dancy 8/13/97
CHIEF, BUREAU OF ENGINEERING DATE

Robert M. Dancy 8/13/97
CHIEF, DIVISION OF TRANSPORTATION, PROJECTS & WATERSHED MANAGEMENT DATE



DES: F.R.					
DRN: E.V.C./T.V.					
CHK: T.N.G.					
DATE: 04/04/97	BY	NO.			DATE

ELLCOTT CITY PARKING LOT CULVERT OVER TIBER - HUDSON BRANCH

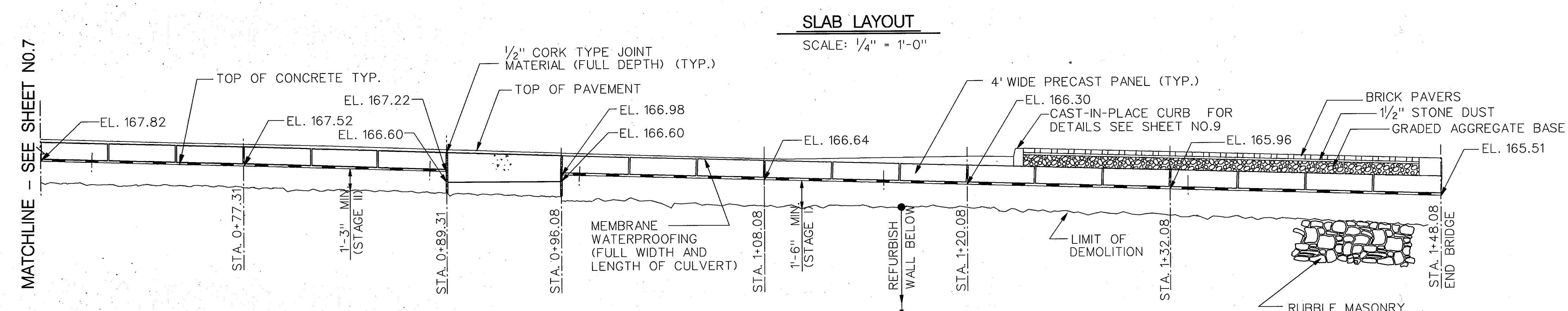
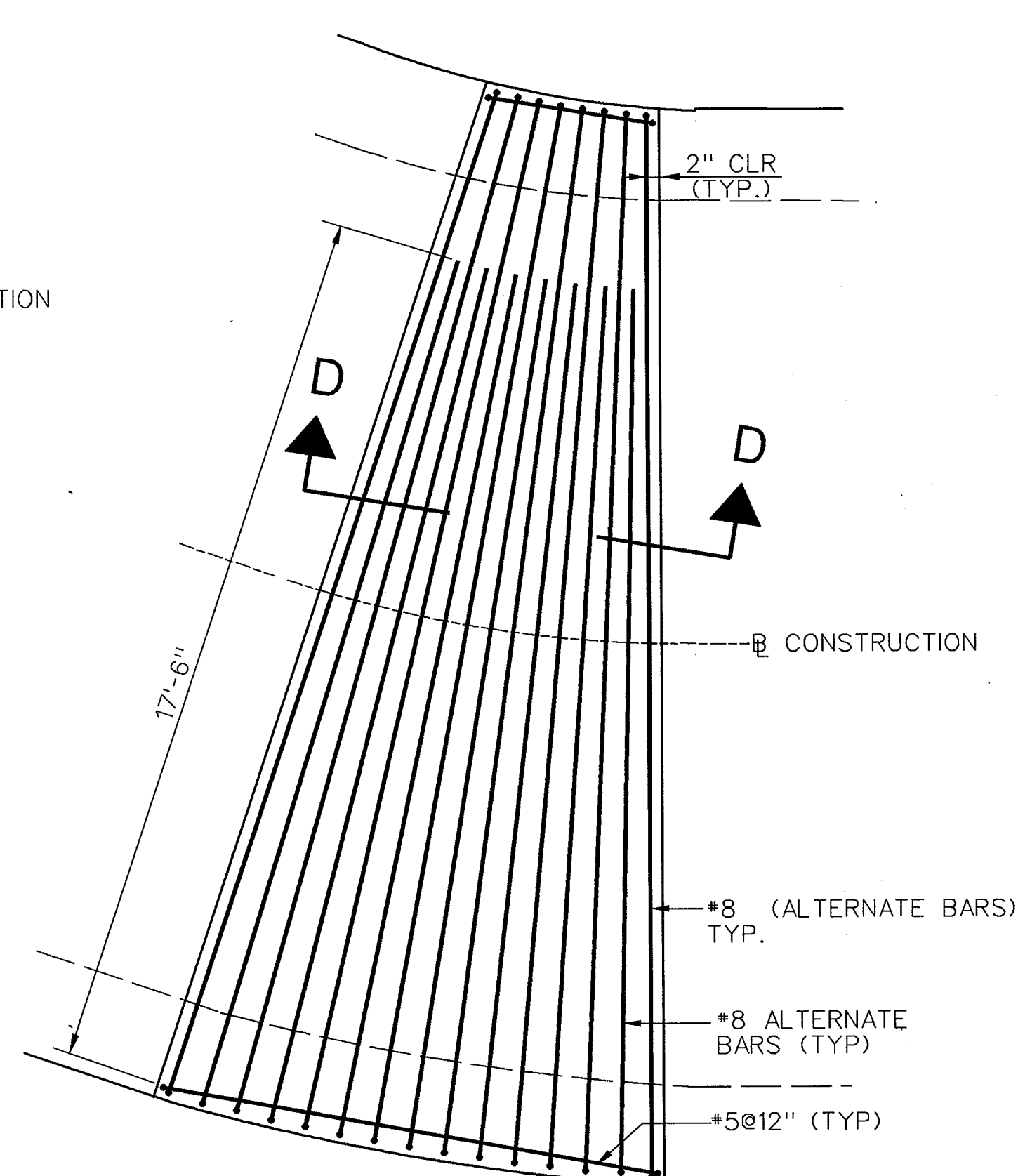
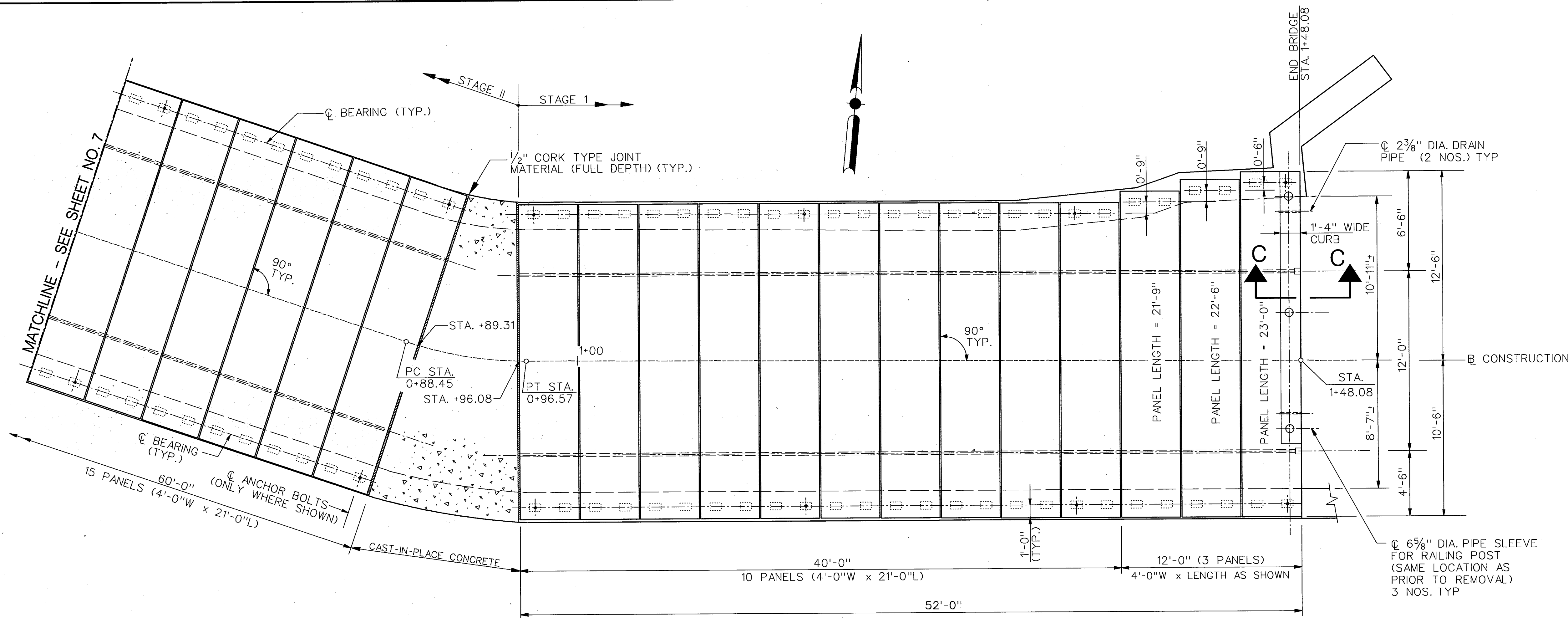
SLAB LAYOUT AND ELEVATION - SHEET 1

CAPITAL PROJECT No. B-3848

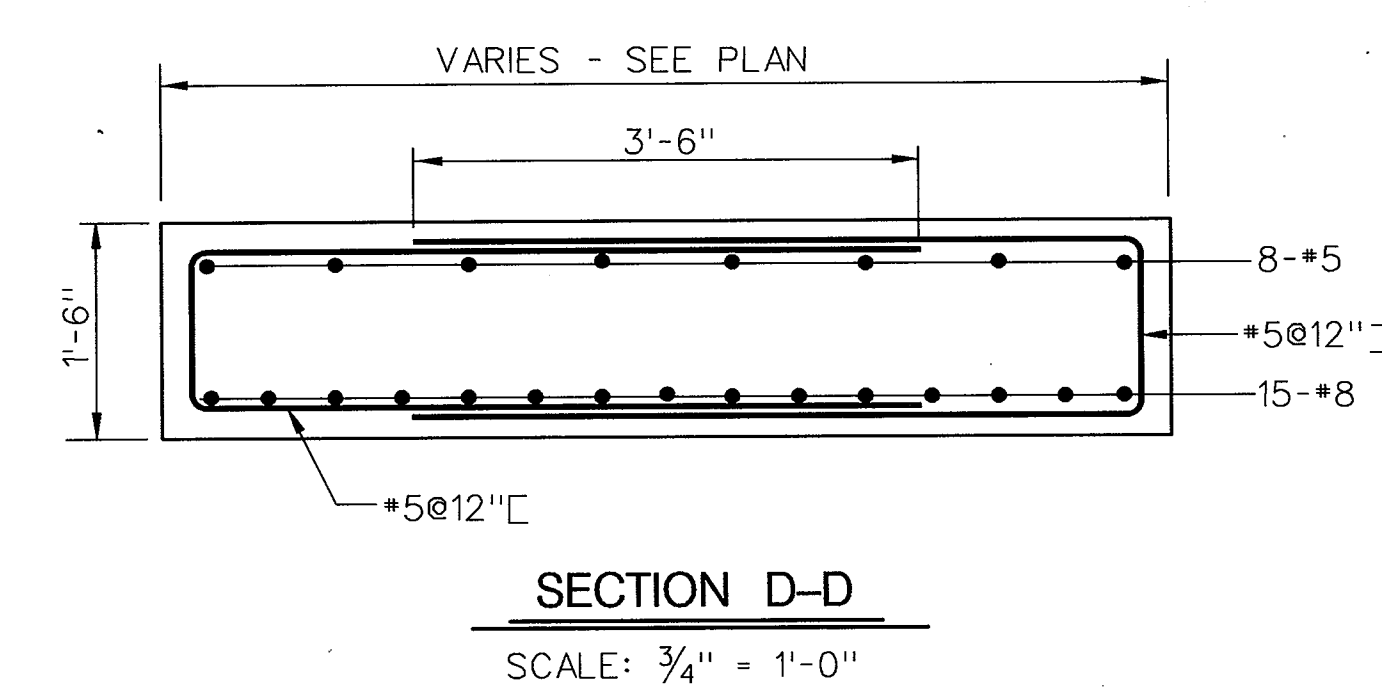
SCALE AS SHOWN

SHEET 7 OF 12

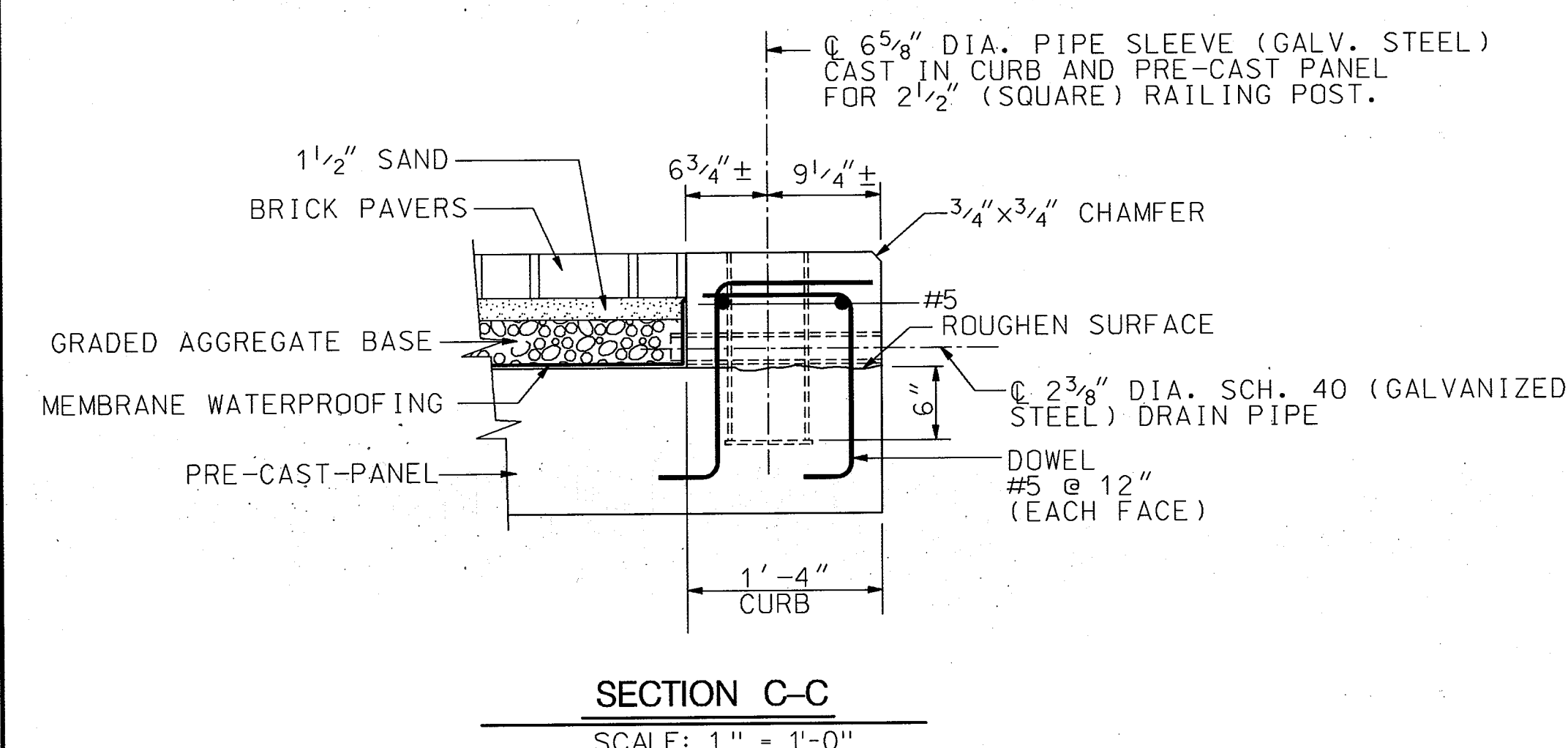
B1077-07



BOTTOM BAR LAYOUT AT CAST-IN-PLACE CONCRETE DECK
 SCALE: 3/8" = 1'-0"
 (BETWEEN STA. 0+89.31 AND STA. 0+96.08)



SECTIONAL ELEVATION ALONG BASELINE
 SCALE: 1/4" = 1'-0"



- NOTES:**
1. THE CONTRACTOR SHALL VERIFY ALL BEARING PAD ELEVATIONS FROM THE TOP OF EXISTING PAVEMENT BEFORE PLACING CONCRETE SEAT.
 2. FOR GENERAL NOTES, SEE SHEET NO. 2.
 3. FOR BEAM BEARING DETAILS, SEE SHEET NO. 9.
 4. FOR TYPICAL PRECAST DECK SECTION, SEE SHEET NO. 9.
 5. THE BEARING ELEVATIONS SHOWN ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL RUN A SET OF EXISTING ELEVATIONS OF THE PARKING LOT SURFACE PRIOR TO DEMOLITION AND ADJUST THE BEARING SEAT ELEVATIONS TO MATCH IT.
 6. THE CAST-IN-PLACE CONCRETE DECK SHALL NOT BE PLACED UNTIL ADJACENT PRECAST SLAB UNITS ARE COMPLETE IN PLACE.

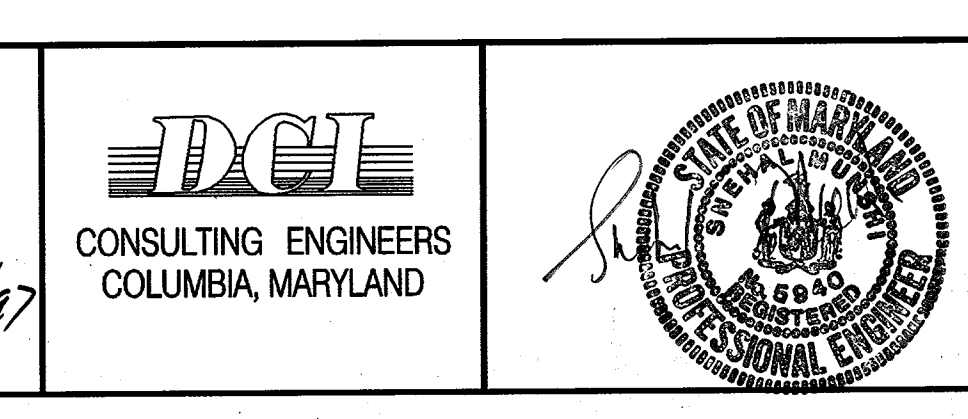
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Ch. M. [Signature] 8/13/97
 DIRECTOR OF PUBLIC WORKS DATE

[Signature] 4/13/97
 CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 8/13/97
 CHIEF, BUREAU OF HIGHWAYS DATE

[Signature] 8/13/97
 CHIEF, DIVISION OF TRANSPORTATION, PROJECTS & WATERSHED MANAGEMENT DATE



DES: F.R.					
DRN: E.V.C./T.V.					
CHK: T.N.G.					
DATE: 04/04/97	BY:	NO.:		DATE:	

ELLICOTT CITY PARKING LOT CULVERT OVER TIBER - HUDSON BRANCH

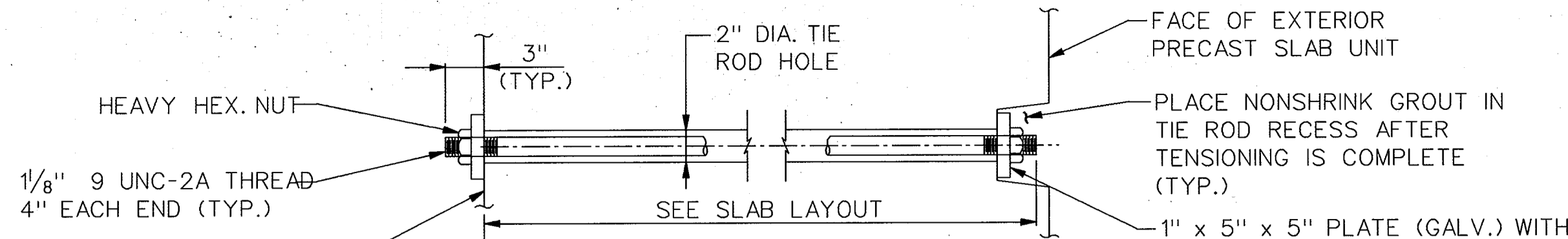
SLAB LAYOUT AND ELEVATION - SHEET 2

CAPITAL PROJECT No. B-3848

SCALE AS SHOWN

SHEET 8 OF 12

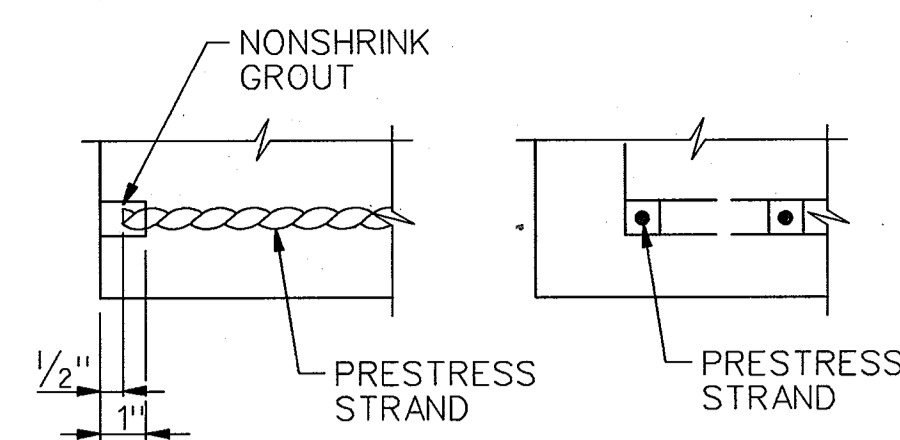
B1077-08



NOTES:

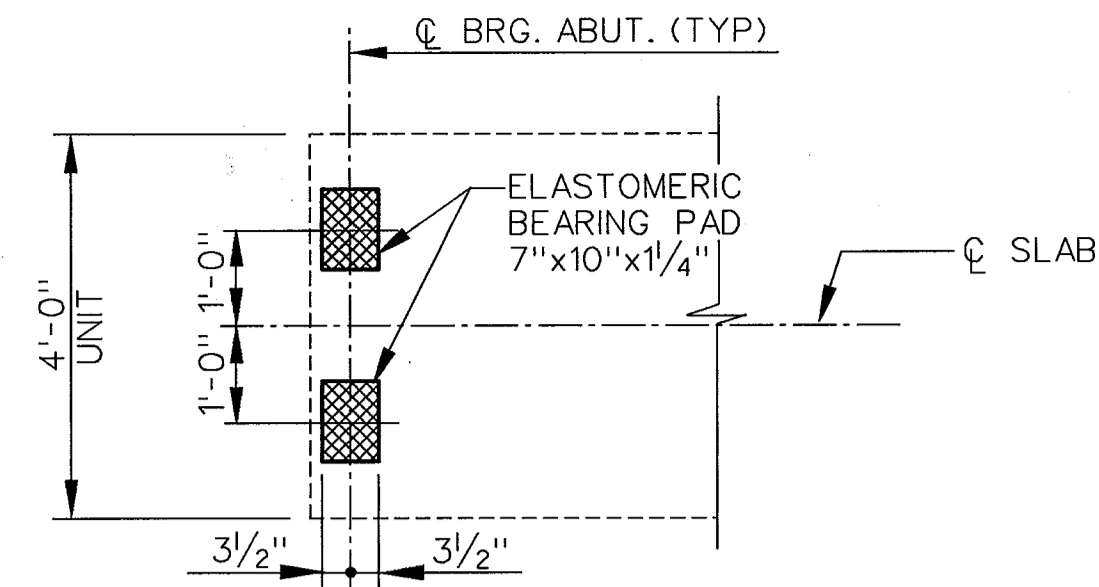
ALL MATERIAL FOR TIE ROD AND PLATES SHALL BE A 709 GRADE 36 GALVANIZED STEEL.

THE TIE-ROD SHALL BE TENSIONED TO 17,000 LBS.



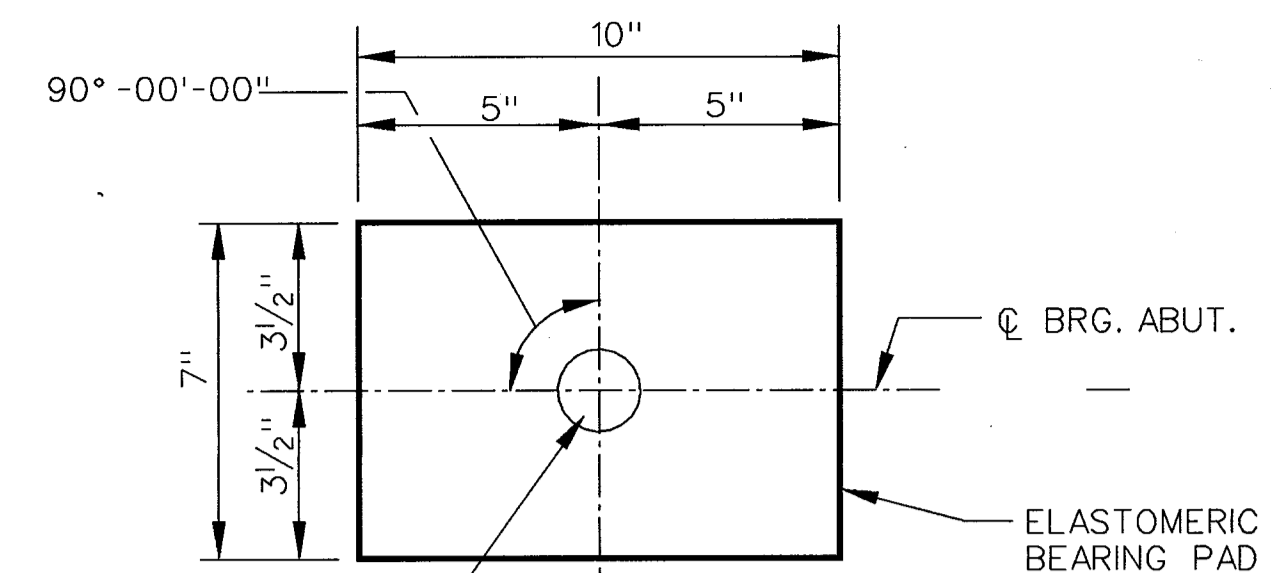
GRAUTED RECESS FOR STRANDS AT BEAM ENDS

NOT TO SCALE



BEARING ORIENTATION PLAN

SCALE: 1/2" = 1'-0"

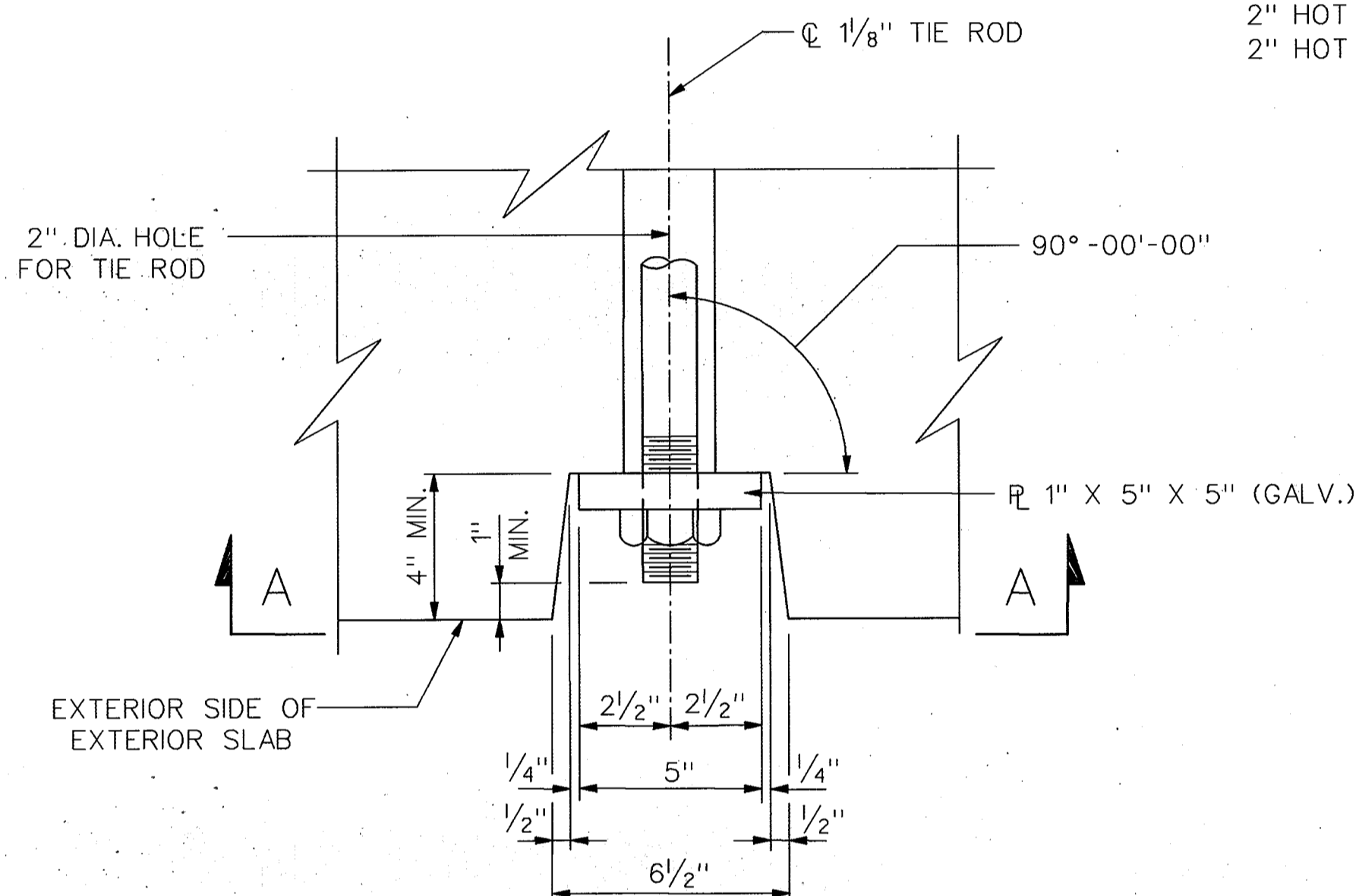


PLAN

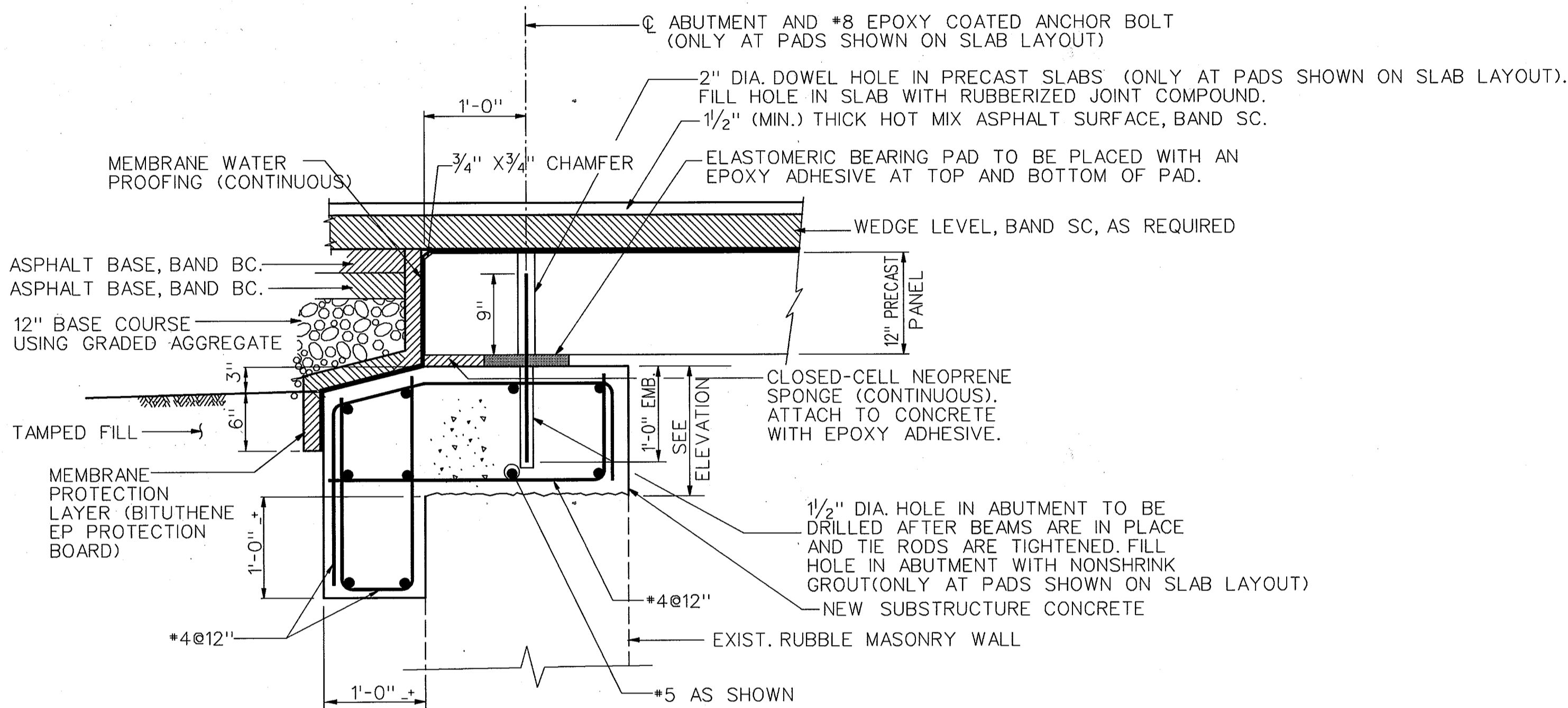
SCALE: 3" = 1'-0"

LATERAL TIE ROD DETAIL (SECTION THRU TIE ROD)

SCALE: 1/2" = 1'-0"



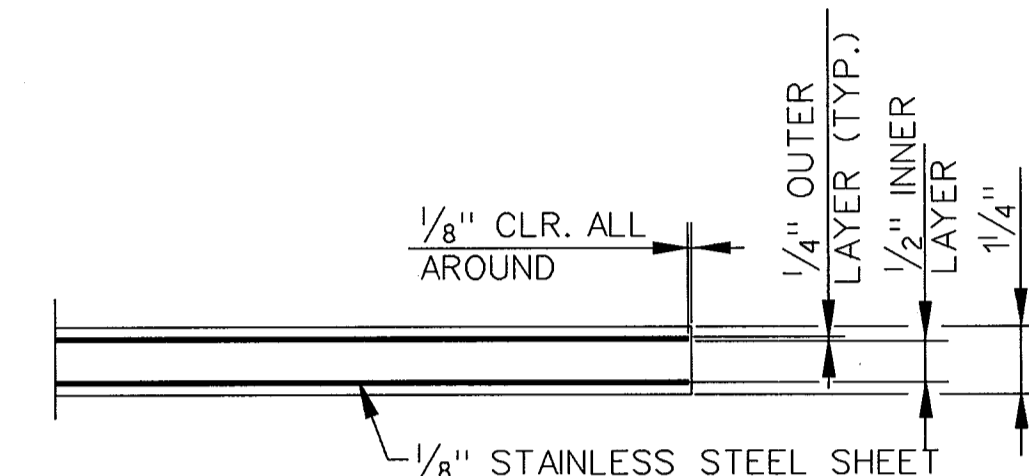
PLAN VIEW



PRECAST BEAM BEARING DETAIL

SCALE: 1" = 1'-0"

NOTE: SEE SHEET NO. 10 FOR BEARING DETAIL AT CAST-IN-PLACE DECK



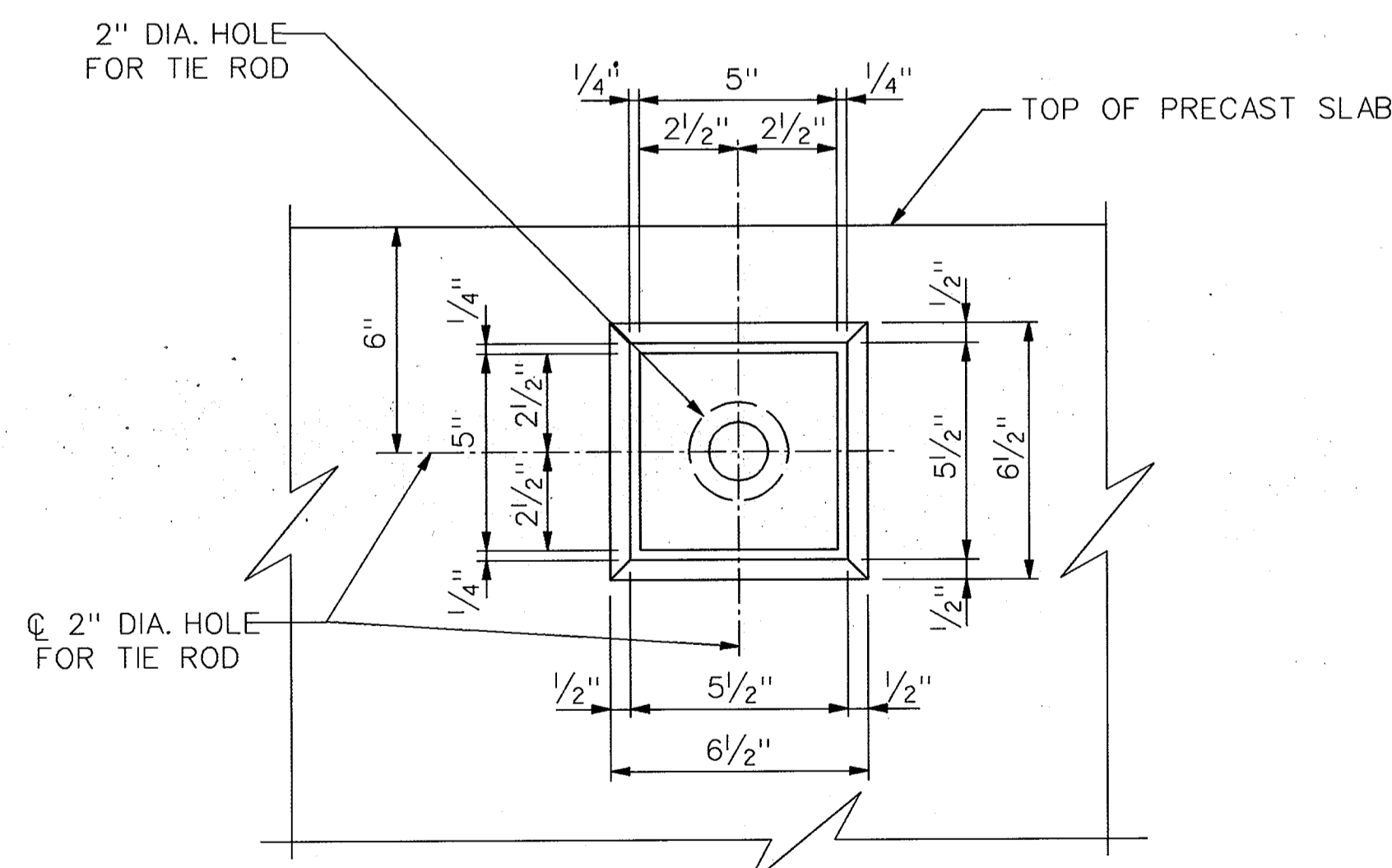
ELEVATION

SCALE: 3" = 1'-0"

NOTE:

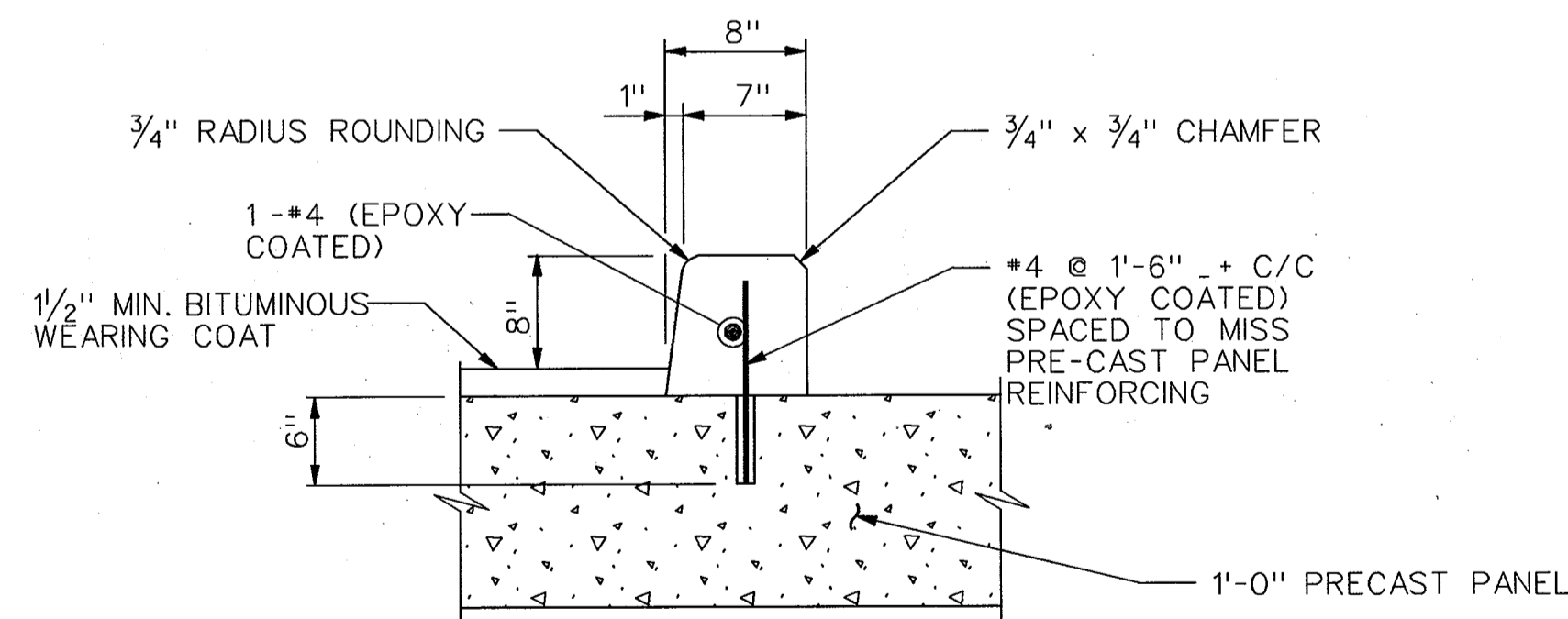
FOR TESTING PURPOSE THE DESIGN LOAD FOR ELASTOMERIC BEARING PAD, DL-6.3 KIPS, LL-33 KIPS ELASTOMERIC BEARING PADS SHALL BE 60 DUROMETER HARDNESS.

ELASTOMERIC BEARING PAD SHALL BE AFFIXED TO SLAB AND CONCRETE BEARINGS WITH AN EPOXY ADHESIVE.



**VIEW A-A
TIE ROD RECESS DETAIL**

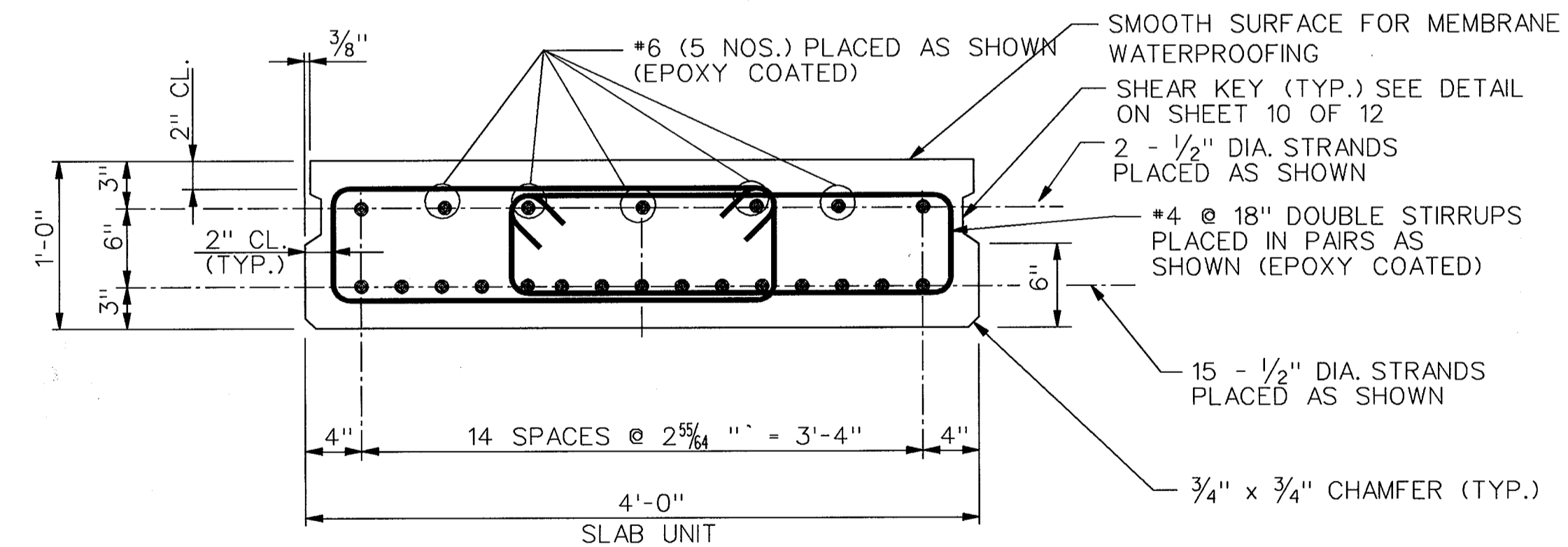
SCALE: 3" = 1'-0"



TYPICAL CURB DETAIL

SCALE: 1/2" = 1'-0"

NOTE: DECK SLAB TO BE DRILLED AND #4 BAR SET AND GRAUTED WITH NON-SHRINKING GRAUT. USE EPOXY COATED REINFORCEMENT FOR THE CURB.



TYPICAL PRECAST DECK PANEL SECTION

SCALE: 1/2" = 1'-0"

NOTE:

BEAM MANUFACTURER MAY PROPOSE ALTERNATE HORIZONTAL SPACING OF THE 15-1/2" DIA. STRANDS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Alan M. Benjamin 8/14/97
Acting DIRECTOR OF PUBLIC WORKS DATE

Eric Colea 8/13/97
CHIEF, BUREAU OF ENGINEERING DATE

Richard M. Gandy 8-13-97
CHIEF, BUREAU OF HIGHWAYS DATE

Elizabeth Anderson Colea 8/13/97
CHIEF, DIVISION OF TRANSPORTATION, DATE
PROJECTS & WATERSHED MANAGEMENT

JDGL
CONSULTING ENGINEERS
COLUMBIA, MARYLAND



DES: F.R.			
DRN: E.V.C./T.V.			
CHK: T.N.G.			
DATE: 7/28/97	BY	NO.	DATE

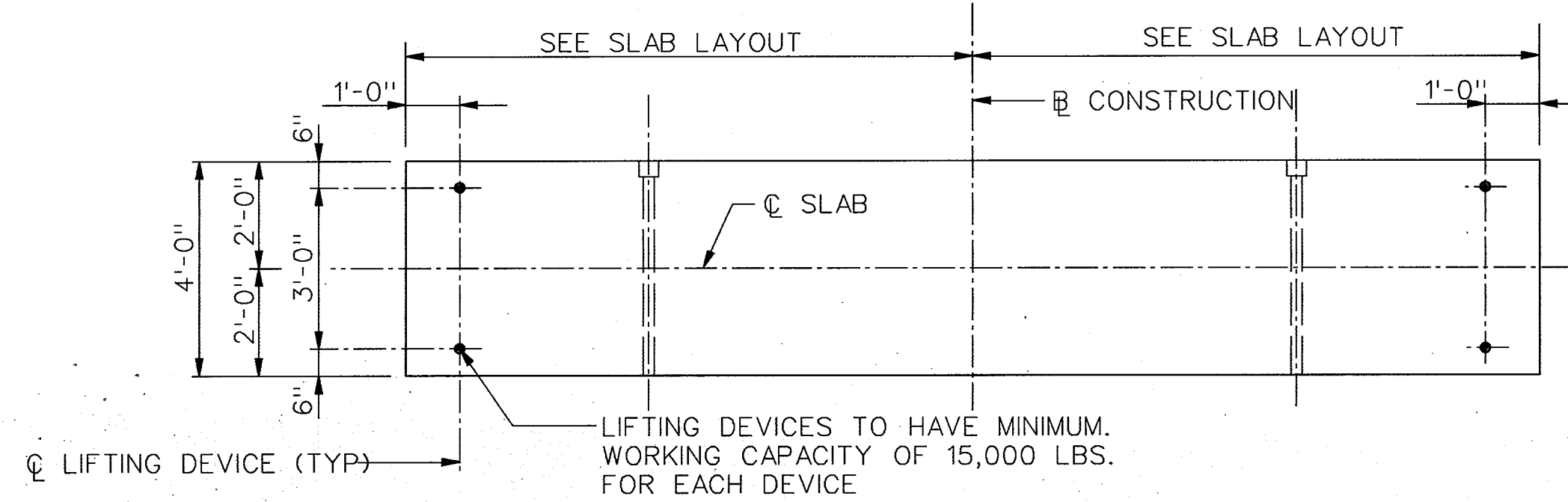
ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH

SECTIONS AND DETAILS

CAPITAL PROJECT No. B-3848

SCALE AS SHOWN

SHEET 9 OF 12



PRECAST PANEL LOCATION OF LIFTING DEVICES
SCALE: 1/2" = 1'-0"

BAR SIZE	LOCATION CATEGORY		
	A	B	C
*4	2'-9"	2'-0"	1'-7"
*5	3'-6"	3'-6"	2'-0"
*6	4'-2"	3'-0"	2'-5"
*7	4'-11"		2'-10"
*8	6'-6"		3'-9"
*9	8'-2"		4'-8"
*10	10'-5"		6'-0"
*11	12'-9"		7'-4"

BAR LAP DIMENSIONS

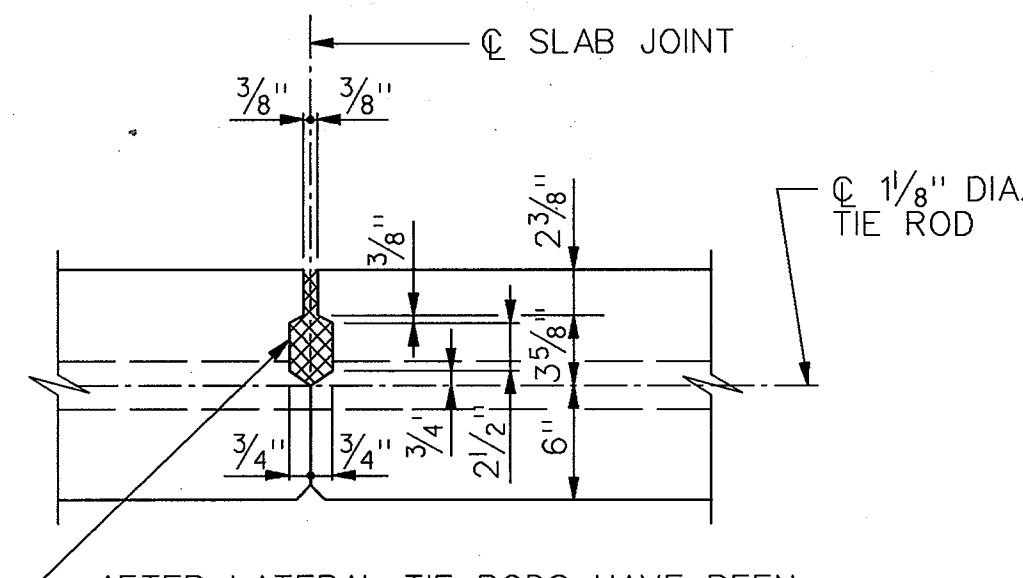
(EPOXY COATED; GRADE 60 STEEL; 4500 PSI CONCRETE)

LOCATION CATEGORY

- A - BARS IN HORIZONTAL LAYERS IN TOP OF CONCRETE PLACEMENT WITH 12" OR MORE OF CONCRETE BELOW THEM SUCH AS IN: FOOTINGS, PIER CAPS, ETC.
- B - ALL BARS NOT IN CATEGORY A SPACED LESS THAN 6 INCHES APART.
- C - ALL BARS NOT IN CATEGORY A SPACED 6 INCHES OR MORE APART.

NOTE:

WHEN BAR LAP IS NOT SPECIFIED ON THE PLANS, THE ABOVE DIMENSIONS SHALL BE USED.



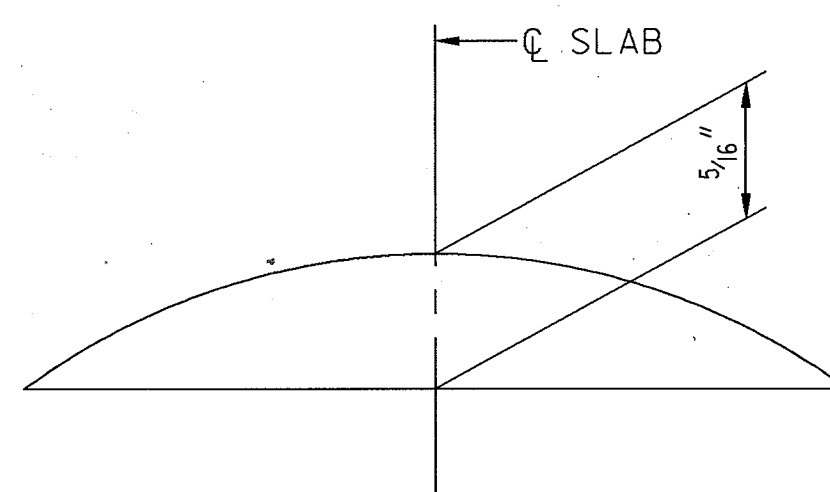
AFTER LATERAL TIE RODS HAVE BEEN PLACED AND TENSIONED, SHEAR KEYS SHALL BE FILLED WITH AN APPROVED HIGH STRENGTH NONSHRINK GROUT. (SHOWN HATCHED)

NOTE:

THE SHEAR KEY SHALL NOT BE PLACED ON THE EXPOSED FACE OF THE EXTERIOR SLAB UNITS.

SHEAR KEY DETAIL

SCALE: 1/2" = 1'-0"



CAMBER DIAGRAM

N.T.S.

CAMBER NOTES

CAMBER SHOWN IS ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF PRECAST PRESTRESSED SLAB AT TIME OF ERECTION

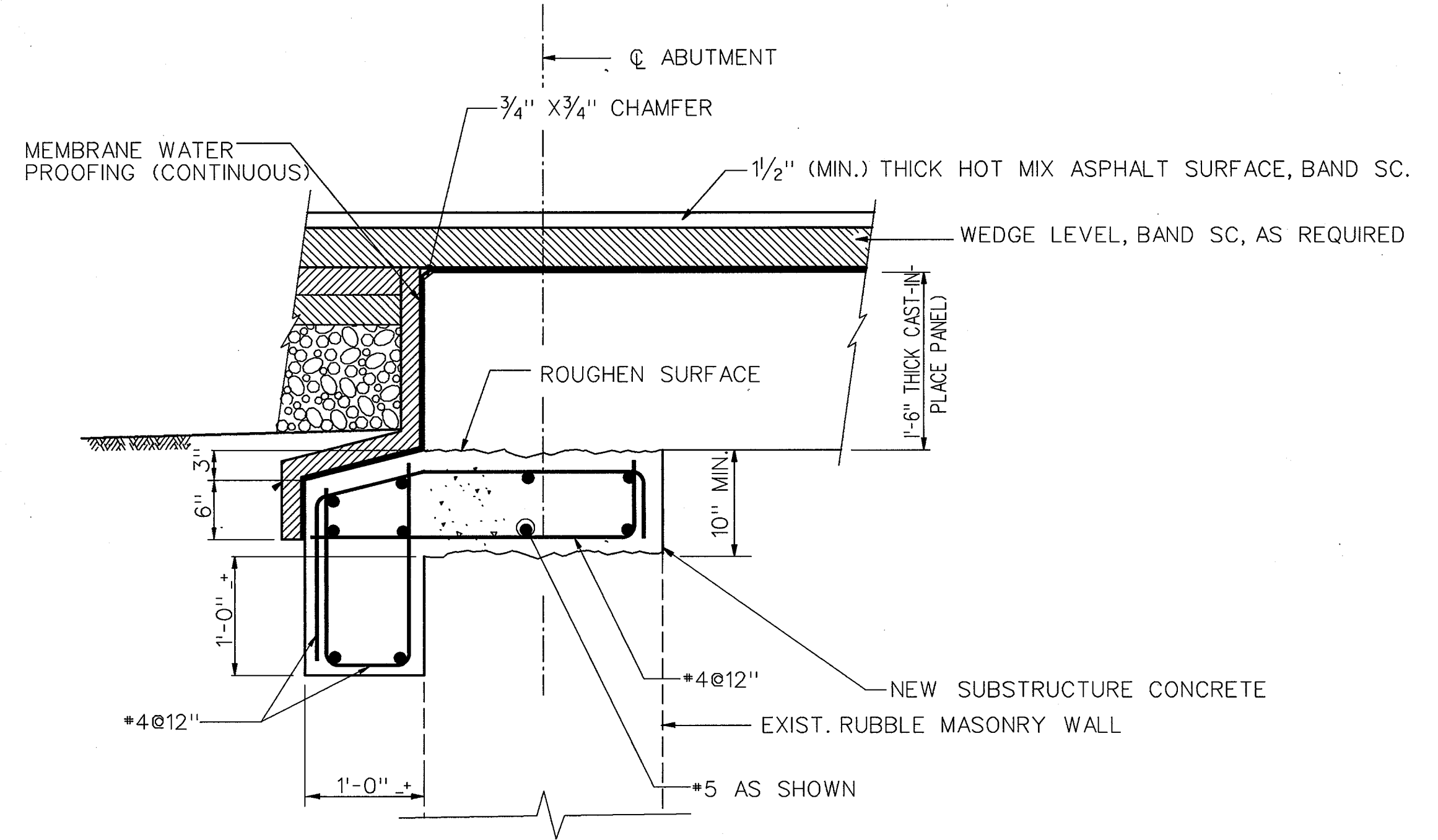
DEFLECTION DUE TO DEAD LOAD OF CAST-IN-PLACE OVERLAY IS NEGLIGIBLE

CAMBER VALUE SHOWN IN INCHES

CAMBER DUE TO PRESTRESS PLUS SLAB DEAD LOAD TO BE CHECKED IN THE FIELD.

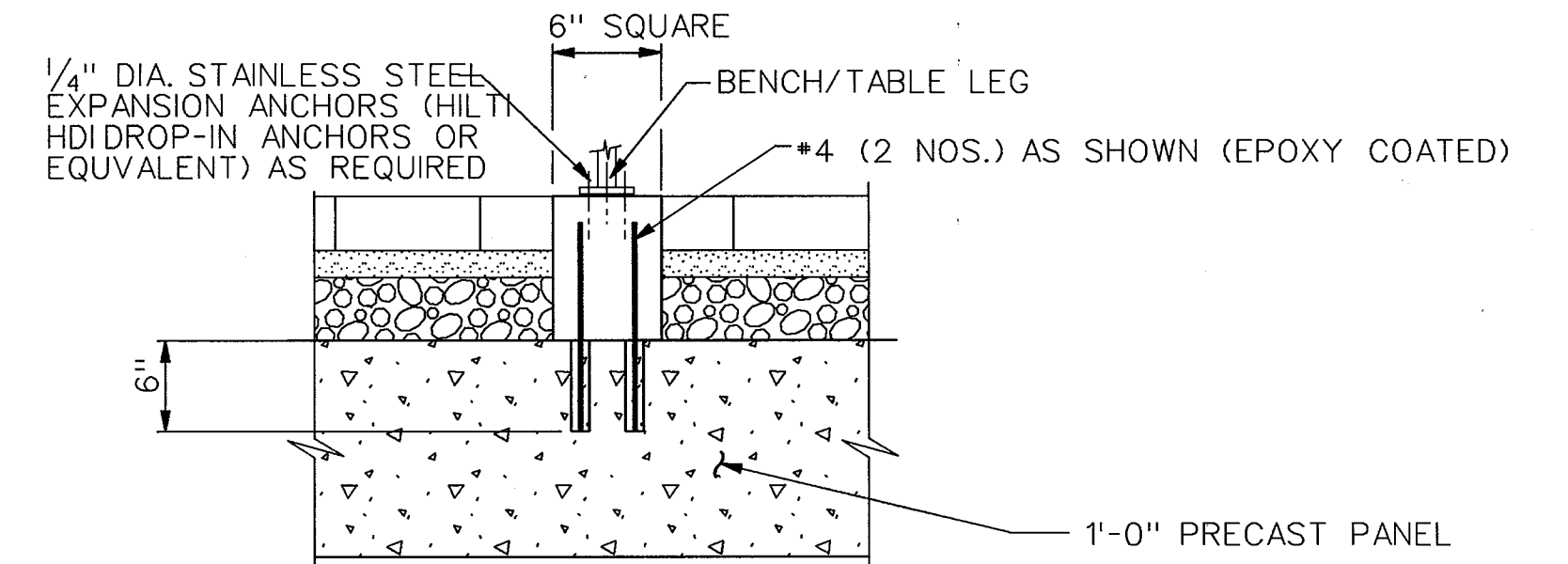
THE THICKNESS OF THE BITUMINOUS CONCRETE OVERLAY SHALL BE VARIED TO COMPENSATE FOR ANY INACCURACIES IN THE CAMBER OF SLAB.

PRESTRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN ARE THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS, PRESTRESS LOSSES AND TIME DURATIONS BETWEEN FABRICATION AND ERECTION.



CAST-IN-PLACE DECK BEARING DETAIL

SCALE: 1" = 1'-0"



NOTE:

DECK SLAB TO BE DRILLED AND #4 BAR SET AND GROUTED WITH NON-SHRINKING GROUT. USE EPOXY COATED REINFORCEMENT

BENCH AND TABLE FOUNDATION DETAIL

SCALE: 1/2" = 1'-0"

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

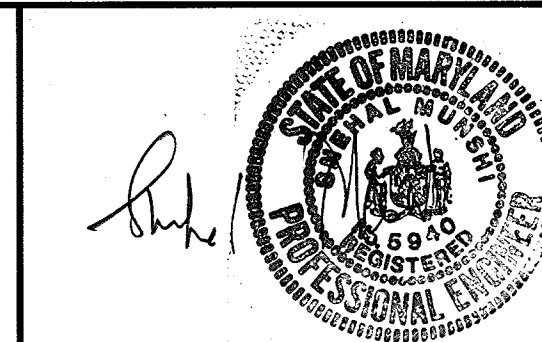
Alan M. Payne 8/13/97
DIRECTOR OF PUBLIC WORKS DATE

Ed A. Calia 9/13/97
CHIEF, BUREAU OF ENGINEERING DATE

Andrew M. Daniels 8/13/97
CHIEF, BUREAU OF HIGHWAYS DATE

Elizabeth Anderson Calia 9/13/97
CHIEF, DIVISION OF TRANSPORTATION, DATE
PROJECTS & WATERSHED MANAGEMENT

JDCI
CONSULTING ENGINEERS
COLUMBIA, MARYLAND



DES: F.R.				
DRN: E.V.C./T.V.				
CHK: T.N.G.				
DATE: 7/28/97				
BY	NO.			DATE

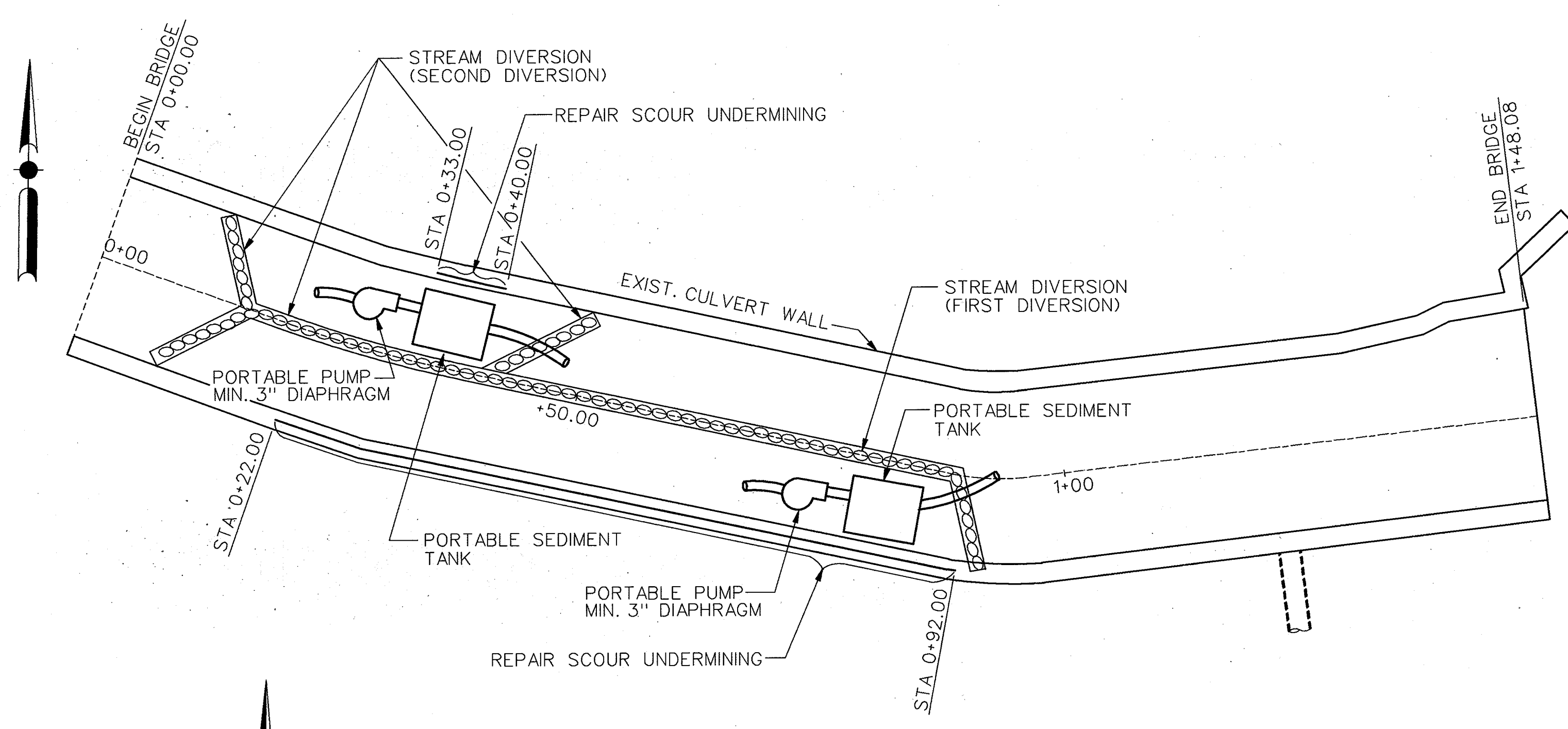
ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH

DETAILS

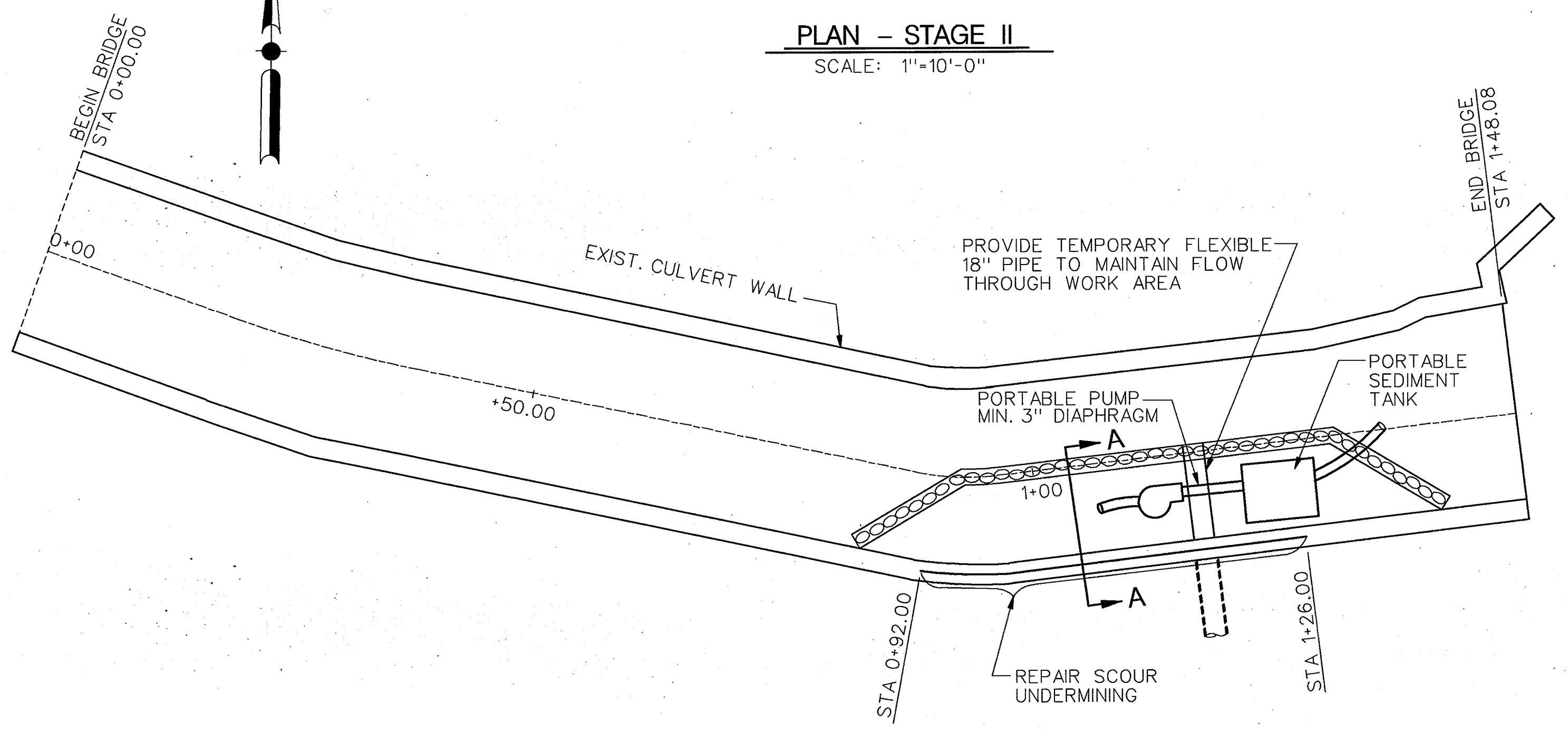
CAPITAL PROJECT No. B-3848

SCALE AS SHOWN

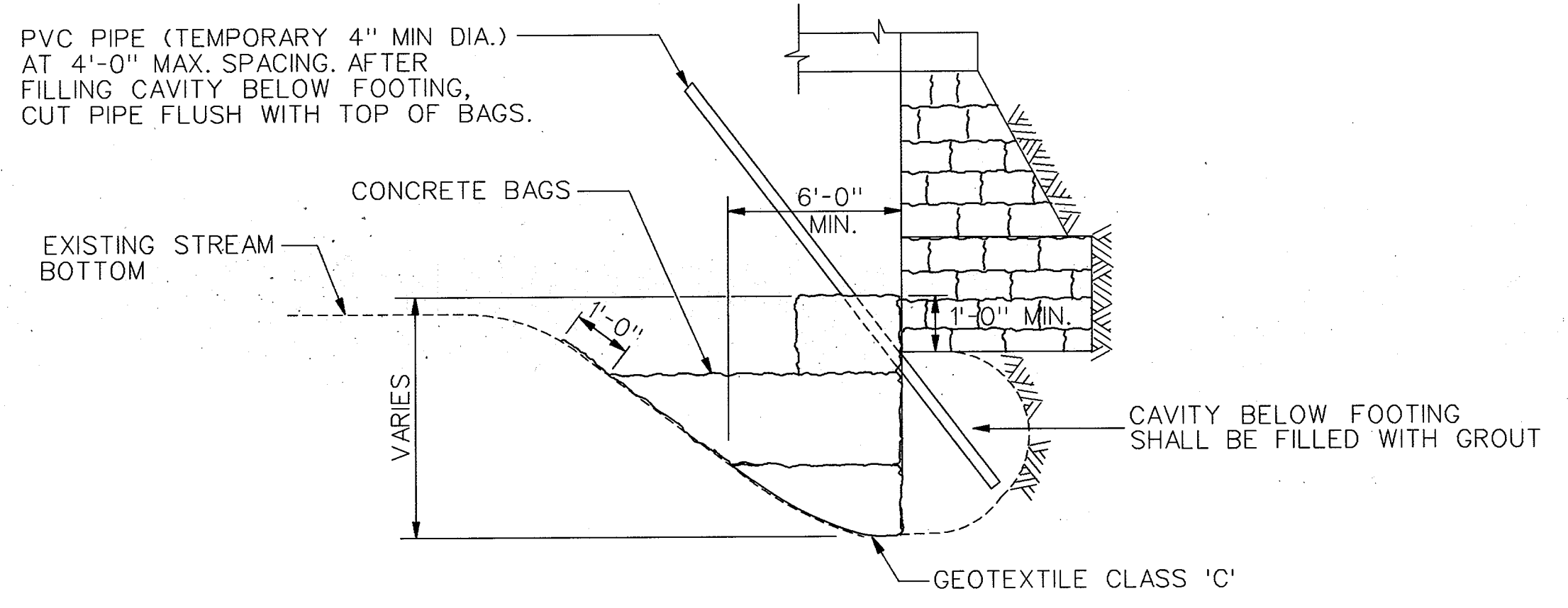
SHEET 10 OF 12



PLAN - STAGE II
SCALE: 1"=10'-0"



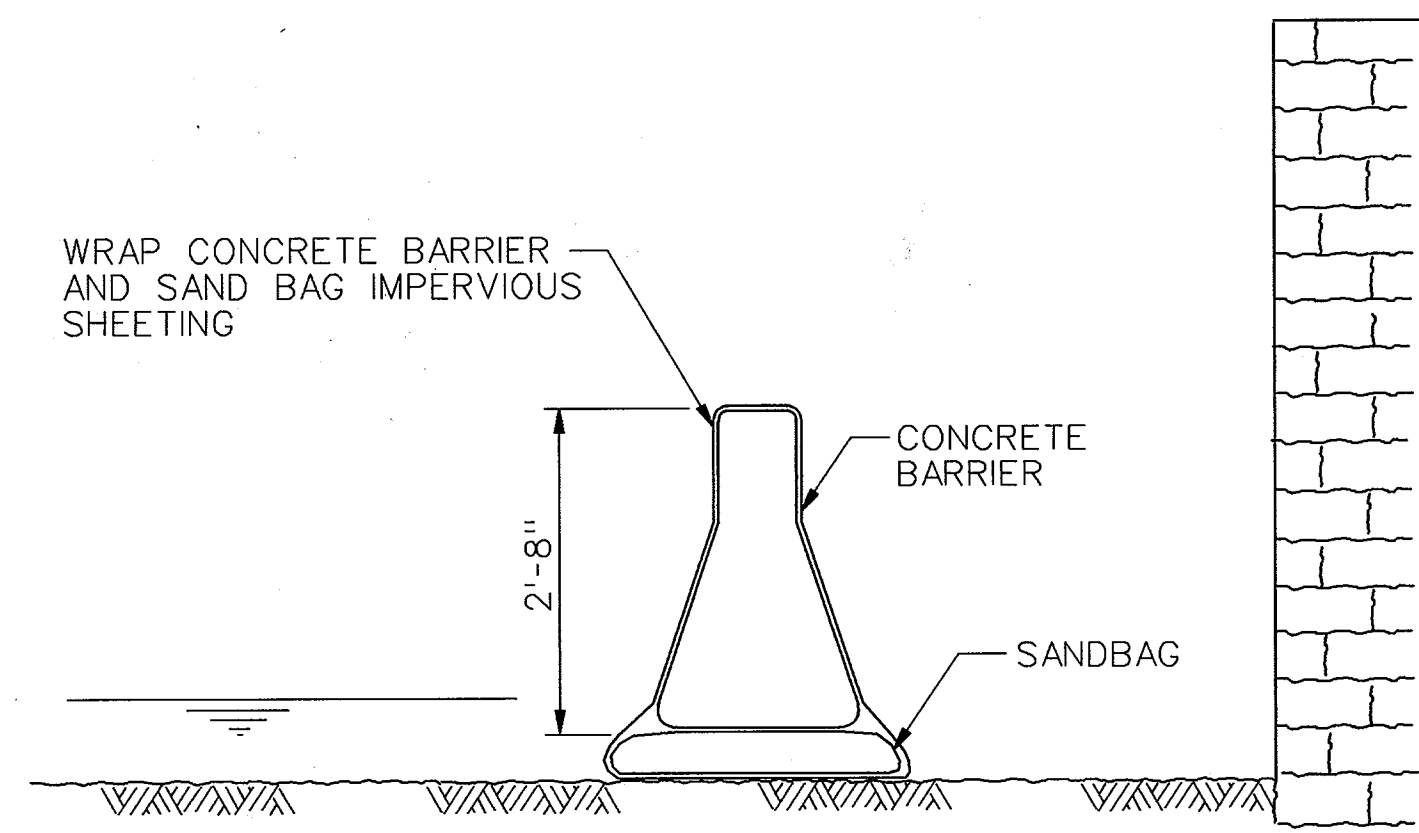
PLAN - STAGE I
SCALE: 1"=10'-0"



UNDERMINING REPAIR DETAIL
N.T.S.

NOTES:

1. STACK SEVERAL LAYERS OF CONCRETE BAGS ALONG THE FACE OF THE ABUTMENT IN FRONT OF THE UNDERMINED AREAS.
2. ONCE THE VENT/FILL PIPES HAVE BEEN INSTALLED AND THE BAGS ARE FILLED, PUMP THE GROUT INTO THE UNDERMINED AREA. CUT THE VENT/FILL PIPES FLUSH WITH THE TOP OF BAGS AFTER THE PUMPING OPERATION IS COMPLETED.
3. ADEQUATE VENTING OF THE WATER TO BE DISPLACED IN TO THE UNDERMINED AREAS IS IMPORTANT. THE WATER MUST BE ABLE TO ESCAPE WHEN IT IS DISPLACED BY THE GROUT PUMPED INTO THE CAVITY. A 4' MAXIMUM SPACING OF THE VENT/FILL PIPES SHALL BE PROVIDED.
4. KEEP THE NOZZLE BURIED IN THE GROUT DURING THE PUMPING
5. CLEAN OUT UNSTABLE MATERIAL ALONG THE BOTTOM OF THE UNDERMINED AREA PRIOR TO FILLING WITH GROUT.



SECTION A - A
STREAM DIVERSIONS
N.T.S.

STREAM DIVERSION

- I. DESCRIPTION
THE WORK SHALL CONSIST OF INSTALLING A FLOW DIVERSION STRUCTURE WITHIN THE STREAM CHANNEL.
- II. MATERIAL SPECIFICATIONS
 1. CONCRETE BARRIER SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAIL MD 648.32
 2. SANDBAG: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRAVIOLET RADIATION, TEARING AND PUNCTURE AND SHALL BE WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (I.E., SAND FINE GRAVEL, ETC.)
 3. SHEETING: SHEETING SHALL CONSIST OF POLYETHYLENE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEARING. (2 MIL/MIN.)
- III. CONSTRUCTION REQUIREMENTS
 1. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
 2. THE HEIGHT OF THE DIVERSION STRUCTURE SHALL BE AS INDICATED IN SECTION A-A THE SANDBAGS AND CONCRETE BARRIERS SHALL BE PLACED ON A SMOOTH, PREPARED SURFACE.
 3. ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF IN AN APPROVED DISPOSAL AREA OUTSIDE THE 100-YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 4. ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A PORTABLE SEDIMENT TANK.
 5. SHEETING SHALL BE OVERLAPPED A MINIMUM OF 18 INCHES.
 6. SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.
- IV. CONTRACTOR MAY PROPOSE A DIFFERENT STREAM DIVERSION METHOD FOR APPROVAL. RETEN TO THE SPECIAL PROVISIONS

SEQUENCE OF CONSTRUCTION FOR REPAIRS TO BRIDGE ABUTMENT WALLS

- STAGE I - DOWNSTREAM OF CULVERT
1. OBTAIN GRADING PERMIT.
 2. INSTALL SEDIMENT CONTROL DEVICES AS NECESSARY. (1 WEEK)
 3. AFTER CULVERT DECK HAS BEEN REMOVED, INSTALL STREAM DIVERSION, DIVERTING WATER AWAY FROM THE SOUTH ABUTMENT. (1 WEEK)
 4. DEWATER AND REPAIR SOUTH CULVERT ABUTMENT WALL, STABILIZE WITH METHODS ACCEPTED BY THE ADMINISTRATION.
 5. REMOVE THE DIVERSION UPON PERMISSION FROM SEDIMENT CONTROL INSPECTOR. (1WEEK)
 6. CLEAN UP THE CONSTRUCTION SITE.
 7. REMOVE SEDIMENT CONTROL DEVICES UPON PERMISSION FROM SEDIMENT CONTROL INSPECTOR.
- STAGE II - UPSTREAM HALF OF CULVERT
1. INSTALL SEDIMENT CONTROL DEVICES AS NECESSARY. (1 WEEK)
 2. AFTER CULVERT DECK HAS BEEN REMOVED, INSTALL STREAM DIVERSION, DIVERTING WATER AWAY FROM THE SOUTH ABUTMENT. (1 WEEK)
 3. DEWATER AND REPAIR SOUTH CULVERT ABUTMENT WALL, STABILIZE WITH METHODS ACCEPTED BY THE ADMINISTRATION.
 4. REDIRECT THE CHANNEL WITH CONCRETE BARRIER TO PROTECT THE NORTH ABUTMENT UPON PERMISSION FROM SEDIMENT CONTROL INSPECTOR. (1 WEEK)
 5. DEWATER AND REPAIR THE NORTH CULVERT ABUTMENT WALL AND STABILIZE THE AREA.
 6. REMOVE THE DIVERSION UPON PERMISSION FROM SEDIMENT CONTROL INSPECTOR. (1 WEEK)
 7. CLEAN UP THE CONSTRUCTION SITE.
 8. REMOVE ANY SEDIMENT CONTROL DEVICES NOT NEEDED FOR STAGE II UPON PERMISSION FROM SEDIMENT CONTROL INSPECTOR.

NOTE: DURATIONS INDICATED IN THE SEQUENCE OF CONSTRUCTION ARE FOR THE SOLE PURPOSE OF EVALUATING SEDIMENT AND EROSION CONTROL MEASURES. ACTUAL DURATIONS WILL VARY. THE CONTRACTOR MAY DEVELOP A DIFFERENT SEQUENCE OF CONSTRUCTION AND SUBMIT IT TO THE ENGINEER FOR REVIEW, GRADING PERMIT MODIFICATION, AND APPROVAL.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Alan M. ... 8/13/97
DIRECTOR OF PUBLIC WORKS DATE

Ed ... 8/13/97
CHIEF, BUREAU OF ENGINEERING DATE

Elizabeth Anderson ... 8/13/97
CHIEF, DIVISION OF TRANSPORTATION, DATE
PROJECTS & WATERSHED MANAGEMENT

DCI
CONSULTING ENGINEERS
COLUMBIA, MARYLAND



DES: R.L.S.				
DRN: E.V.C./T.V.				
CHK: R.L.S.				
DATE: 7/28/97	BY:	NO.		DATE

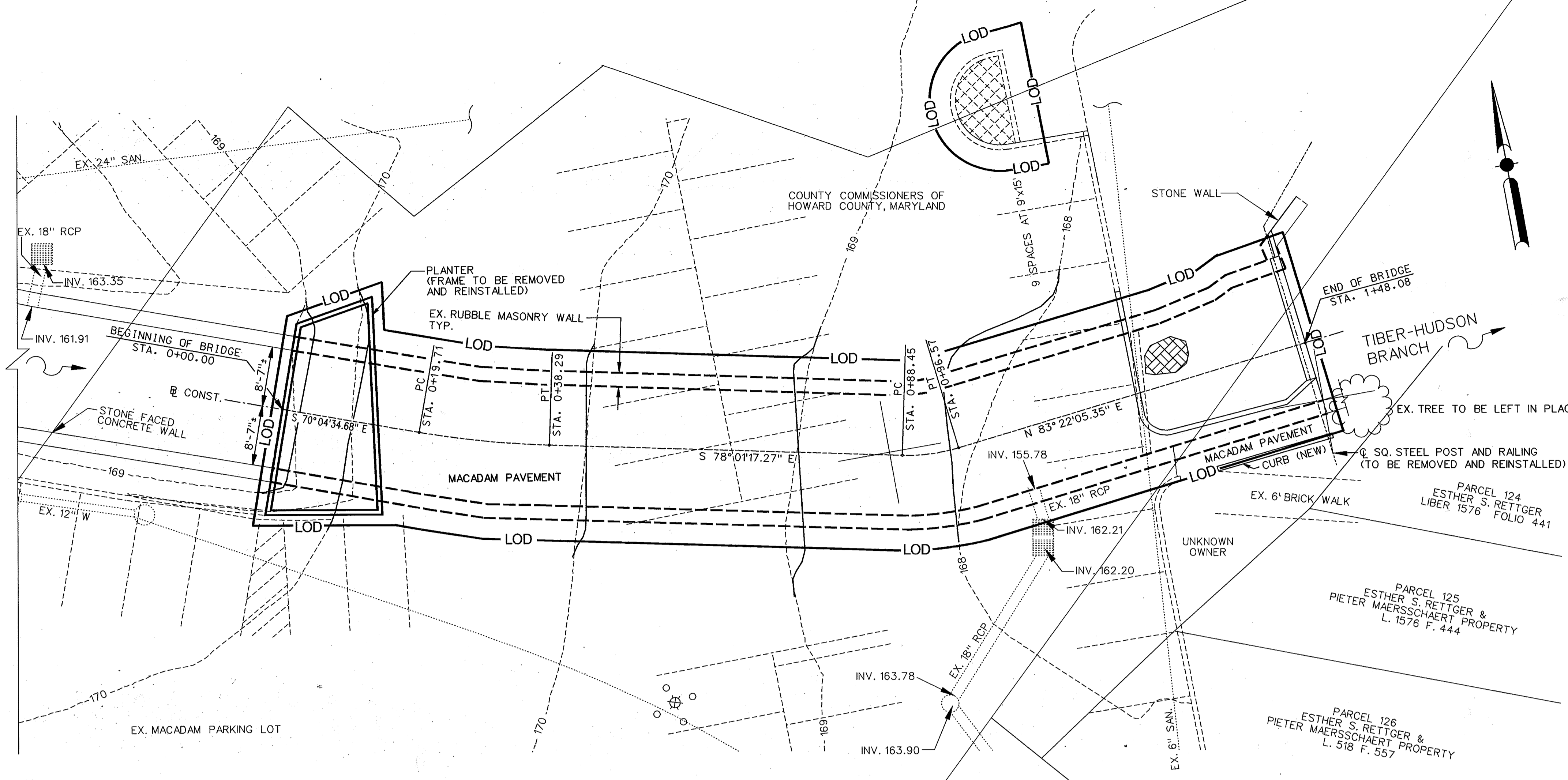
ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH

SCOUR REPAIR DETAIL

CAPITAL PROJECT No. B-3848

SCALE AS SHOWN

SHEET 11 OF 12



EROSION AND SEDIMENT CONTROL
SCALE: 1" = 10'

**HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES**

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
- All vegetative and structural practices are to be installed according to the provisions to this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes steeper than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 7 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec.G). Temporary stabilization with mulch alone shall only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	= 0.10 Acres
Area Disturbed	= 0.10 Acres
Area to be roofed or paved	= 0.10 Acres
Area to be vegetatively stabilized	= <0.01 Acres
Total Cut	= 130 CY.
Total Fill	= 130 CY.
Offsite waste/borrow area location	= N/A
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day-of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspecting approvals may not be authorized until this initial approval by the inspecting agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Preferred** - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
- Acceptable** - Apply 2 tons/ acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 - April 30, and August 1 - October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 - July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 - February 28, protect site by: Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed preparation: - Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: - Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)

Seeding: - For periods March 1 - April 30 and from August 15 - October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 - February 18, protect site by applying 2 tons/acre of well-anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: - Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 ft. or higher, use 348 gal. per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL additional rates and methods not covered.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

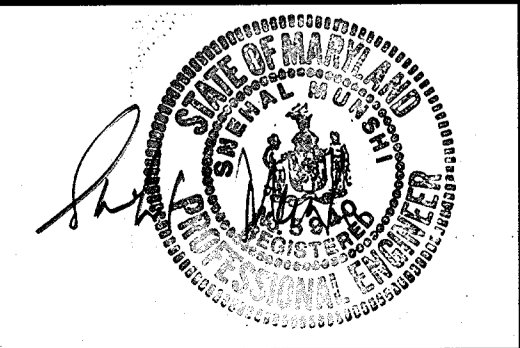
Ch. M. Ryan 8/13/97
DIRECTOR OF PUBLIC WORKS DATE

Carol 8/13/97
CHIEF, BUREAU OF ENGINEERING DATE

Robert M. Smith 8-13-97
CHIEF, BUREAU OF HIGHWAYS DATE

Elizabeth Anderson Cole 8/13/97
CHIEF, DIVISION OF TRANSPORTATION, DATE
PROJECTS & WATERSHED MANAGEMENT

JDCJ
CONSULTING ENGINEERS
COLUMBIA, MARYLAND



DES:	R.L.S.				
DRN:	E.V.C./T.V.				
CHK:	R.L.S.				
DATE:	7/28/97	BY:	NO.	DATE	

ELLICOTT CITY PARKING LOT CULVERT OVER
TIBER - HUDSON BRANCH

EROSION AND SEDIMENT CONTROL

CAPITAL PROJECT No. B-3848

SCALE
AS SHOWN

SHEET
12 OF 12

B1077-12

C1851 B-01-1181-C1851 B-15-1181